ARMY TM 11-7440-219-15
NAVY NAVELEX 0967-LP-324-0057
AIR FORCE TO 31W4-2G-61

OPERATOR'S ORGANIZATIONAL, DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS

READER, PUNCHED TAPE RP-154(P)/G
AND
TRANSMISSION IDENTIFICATION GENERATOR KIT MK-1583/G
(NSN 7440-00-997-8812)

This copy is a reprint which includes current pages from Changes 1 through 8. Title was changed by Change 7 as shown above.

DEPARTMENTS OF THE ARMY, THE NAVY, AND THE AIR FORCE
DECEMBER 1968

WARNING

DANGEROUS VOLTAGES EXIST IN THIS EQUIPMENT

Be careful when working anywhere within the inclosure of this equipment. Serious injury or death may result from contact with high voltage terminals.

DON'T TAKE CHANCES!

TM 11-7440-219-15
NAVELEX 097-LP-324-058
TO 31W4-2041
C8

CHANGE
No. 8

DEPARTMENTS OF THE ARMY,
THE NAVY, AND THE AIR FORCE
WASHINGTON, DC, *11 February 1980*

Operator's Organizational, Direct Support, General Support, and Depot Maintenance Manual for
READER, PUNCHED TAPE RP-154(P)/G
AND
TRANSMISSION IDENTIFICATION GENERATOR KIT MK-1583/G
(NSN 7040-00-997-8812)

TM 11-7440-219-15/NAVELEX 0967-324-0050/TO 31W4-2G-61, 27 December 1968, is changed as follows:

1. The title is changed as shown above.
2. New or changed material is indicated by a vertical bar in margin of the page.
3. Added or revised illustrations are indicated by a vertical bar adjacent to the illustration identification number.
4. Remove old pages and insert new pages as indicated below.

Remove pages	*Insert pages*
A through D	None
i through v	i through v
1-1 and 1-1.1	1-1 and 1-2
1-2	1-2.1
3-16.1	3-16.1
3-33 and 3-34	3-33 and 3-34
3-83 and3-84	3-83 and 3-84
4-3and4-4	4-3and4-4
4-13and4-14	4-13through4-14.1
4-25 and 4-26	4-25 and 4-26
4-32 through 4-34	4-31 through 4-33
4-37 and 4-38	4-37 and 4-38
4-38.1 and 4-38.2	4-38.1 and 4-38.2
4-38.5 and 4-38.6	4-38.5 and 4-38.6
4-38.8.1	4-38.8.1 and 4-38.8.2
4-39 through 4-42	4-39 through 4-42
4-61 and 4-62	4-61 and 4-62
8-9	8-9
8-17	8-17
8-23	8-23
8-24.1	8-24.1
8-48.1	8-48.1
D-1 through D-151(D-16 blank)	None
1 through 2371(238 blank)	None

5. File this change sheet in the front of the manual for reference purposes.

By Order of the Secretaries of the Army, the Navy, and the Air Force:

E. C. MEYER
General, United States Army
Chief of Staff

Official:
J. C. PENNINGTON
Major General, United States Army
The Adjutant General

EARL B. FOWLER
Rear Admiral, United States Navy
Commander, Naval Electronic Systems Command

LEW ALLEN, JR., *General USAF*
Chief of Staff

Official:
BRYCE POE II, *General USAF*
Commander, Air Force
Logistics Command

DISTRIBUTION:
Active Army:
- USAINSCOM (2)
- HISA (Ft Monmouth) (21)
- DCSFOR (2)
- DARCOM (1)
- TRADOC (2)
- OS Maj Comd (5)
- USARJ (5)
- USACOMZEUR (5)
- USAREUR (5)
- TECOM(2)
- USACC (10)
- USACC-PAC (2)
- USACC-EUR (25)
- USACC-SO(1O)
- USACC-A (5)
- HQ, 7th Sig Comd (5)
- Sig Gp (USACC) Japan (3)
- Sig Gp (USACC) Taiwan (3)
- USASATCOMA (2)
- USACSA (4)
- USASIGS (5)
- USAICS (5)
- 7th & 8th Armies (4)
- Corps (2)
- Sig Dep (2)
- Sig Sec GENDEPS (I)
- USAERDAA (1)
- USAERDAW (1)
- Army Dep (2) except
  - ATAD (10)
  - LBAD(10)
  - SAAD (25)
  - TOAD (14)
- GENDEPS (2) except
  - Pirmasens (10)
- Ft Carson (5)
- Ft Richardson (CERCOM Ofc) (1)
- Units org under fol TOE:
  - 11-75(1)
  - 11-85(1)
  - 11-95(1)
  - 11-98(1)
  - 11-137(1)
  - 11-302(1)
  - 11-347(1)
  - 11-367(1)
  - 11-368(1)
  - 11-500(AA-AC)(1)
  - 29-134(1)
  - 29-136(1)

NG: NONE
USAR: NONE
For explanations of abbreviations used see AR 310-50.

TM 11-7440-219-15

NAVSHI PS 0967-324-0050

TO 31W4-2G-61

Technical Manual
No. 11-7440-219-16
NAVSHIPS 0967-324-0050
Technical Order
No. 31W4-2G-61

DEPARTMENTS OF THE ARMY,

THE NAVY, AND THE AIR FORCE

WASHINGTON, DC., *27 December 1968*

Operator' s, **Organizational, Direct Support, General Support, and Depot**

Maintenance Manual

for

READER, PUNCHED TAPE RP-154(P)/G

AND

TRANSMISSION IDENTIFICATION GENERATOR KIT MK-1583/G

(NSN 7040-00-997-8812)

LIST OF ILLUSTRATIONS

LIST OF TABLES

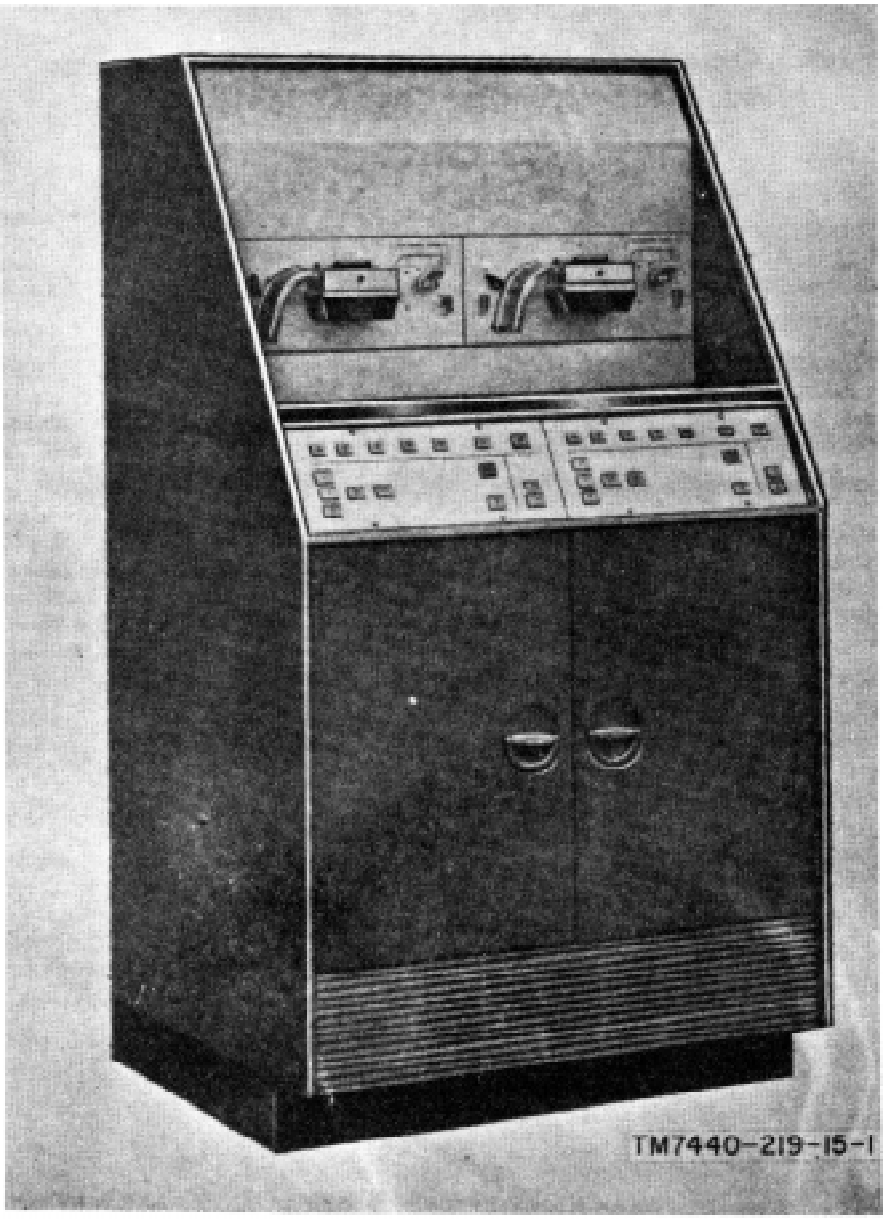


Figure 1-1. Reader, Punched Tape RP-154(P)/G, lee running spares.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual describes Reader, Punched Tape RP-154(P)/G (punched tape reader) (fig. 1-1), and contains operation and maintenance information. It also covers detailed functioning of the punched tape reader and includes the maintenance allocation chart (app. C). Refer to TM 11-7440-239-15/TO 31W4-4-11 NAVSHIPS 0967-324-0110 for installation and checkout procedures.

1-2. Indexes of Publications

a. DA Pam 310-4. Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work orders (MWO's) pertaining to the equipment.

1-3. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

b. Report of Packaging and Handling Deficiencies. Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR 700-8/NAVSUPINST 4030.29/AFR 71-13/MCO P4030.29A, and DSAR 4145.8.

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33/AFM 75-18/ MCO P4610.19A, and DSAR 4500.15.

1-3.1. Reporting of Errors

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms), and forwarded direct to Commander, US Army Electronics Command, ATTN: DRSEL-MA-Q, Fort Monmouth, NJ 07703 (Army); USAFLC Form 252 (Request for TO Revision or Change) and forward direct to prime ALC/MST {Air Force); or forward to: Commander, Naval Electronics Systems Command, Code 4903, Washington, D.C. 20360 (Navy).

1-3.2. Reporting Equipment Improvement Recommendations (EIR)

EIR will be prepared using DA Form 2407, Maintenance Request. Instructions for preparing EIR's are provided in TM 38-750, The Army Maintenance Management System. EIR's should be mailed directly to Commander, US Army Electronics Command, ATTN: DRSEL-MA-Q, Fort Monmouth, NJ 07703. A reply will be furnished directly to you.

1-3.3. Administrative Storage.

For procedures, forms, and records, and inspections required during administrative storage of this equipment, refer to TM 740-90-1.

1-3.4. Destruction of Electronic Materiel

Demolition and destruction of electronic equipment will be under the direction of the commander and in accordance with TM 750-244-2.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

a. The punched tape reader (fig. 1-1) is used as a message input component of Digital Subscriber Terminal Equipment (DSTE) sets in the Automatic Digital Network (AUTODIN) military communications system. It reads messages prepared on paper tape by paper tape punch devices in eight-bit American Standard Code for Information Interchange (ASCII) or five-bit International Telegraphic Alphabet No. 2 (ITA-2). It uses the perforated message tape to establish the information in electrical form and transmits the information in ASCII code to the common control unit (CCU) component of the DSTE set (fig. 1-2).

b. The punched tape reader is capable of reading eight-track, 1-inch paper tape; and five-track 11/16-inch, 7/8-inch, and 1-inch paper tape in accordance with MIL.STD-188B. At high speed, the punched tape reader reads fully perforated paper tape and transfers data at a rate sufficient to maintain a line modulation rate up to and including 1,200 baud. At low speed the punched tape reader reads either fully perforated or chadless paper tape and transfers data at line modulation rates up to and including 150 baud.

c. The cabinet housing the punched tape reader is designed to contain one or two complete punched tape reader units each consisting of several assemblies. The option depends on whether one or two separate punched tape reader inputs to the CCU are required.

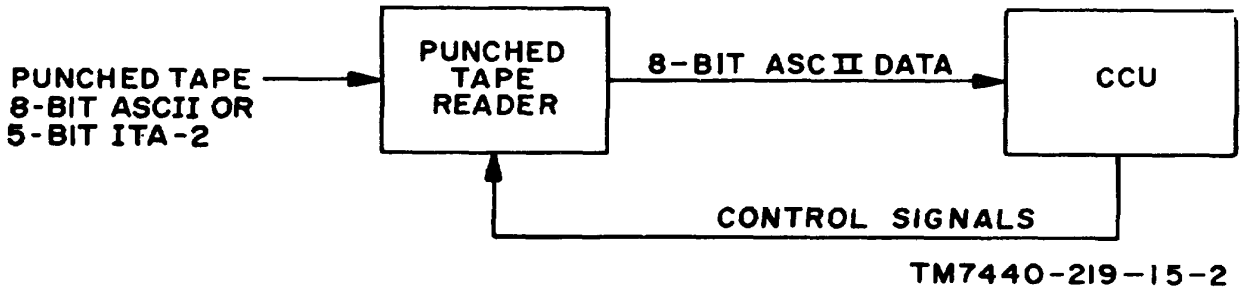


Figure 1-2. Typical system application, block diagram.

1-5. Technical Characteristics of Punched Tape Reader

Input data.....Paper tape perforated with either eight-bit ASCII or five-bit ITA-2 code and selected character printed on tape.

Output data.....Eight-bit electrical data in ASCII form transferred on a bit-parallel, character-serial basis with the eighth bit maintaining odd parity.

Electrical interface .....In accordance with MIL-STD-188B.

Tape sizes .....Eight-track, 1-inch paper tape, five track, 11/18., 7/8., or 1-inch paper tape.

Operating speed.....Sufficient to maintain standard line modulation rates of 150, 300, 600, and 1,200 baud when connected to CCU.

Power requirements .....120-volts I+12, -24), 50 Hz (:t 2.5) or 60 Hz (:t3), single-phase, 4.3 amperes running current; 17 amperes starting current.

1-6. Items Comprising an Operable Equipment

a. Components.

NSN	QTY	Nomenclature, part No., and mfr code	Dimension (in)			Wt
			Height	Width	Depth	(lbs)
		NOTE The part number is followed by the applicable 5-digit Federal supply code for manufacturers (FSCM) identified in SB 708-42 and used to identify manufacturer, distributor, or Government agency, etc.				
7440-00-800-0706		Reader, Punched Tape RP-154(P)/G: A6450-002; 58189				
7440-00-800-0706		Reader, Punched Tape RP-154(P)/G: A64750-001; 58189	64	35	30	320
		Consisting of:				
	1	Conversion Kit, 50 Cycle: 347910; 12344				
	12	Clip, Tape				

b. Common Names. The following list provides the reference designation, official name, common name used in this manual, and the manufacturer's part number of each item listed. Although the full reference designations are shown below, abbreviated reference designations for subassemblies and subassembly components are frequently used in this manual. Prefix the abbreviated reference designation with the applicable assembly or subassembly identification.

Reference designation	Item name	Common name	Mfg part No
A1, A4	Logic assembly.....	Logic assembly	A64752-001
A1A1, A4A1	PC card	Solenoid driver	A65209-001
A1A3, A4A3	PC card	Lamp driver	SM-E-546659
A1A4, A4A4	PC card	Interface control (A65223-001or	A65215-001*
A1A5, A4A5	PC card	Polar interface (A65227-001or	A65205-001*
A1A6, A4A6	PC card	Character decoder	A65421-001
A1A7, A4A7	PC card	Data register	A65425-001
A1A8, A4A8	PC card	ITA input code converter.....	A53418-001

Reference designation	Item name	Comm6n name	Mfg part No.
A1A9, A4A9	PC card	Decode matrix	A53725-001
A1A10, A4A10	PC card	Encode matrix	A53721-001
A1A11, A4A11	PC card	Decode matrix	A53725-001
AIA12, A4A12	PC card	Encode matrix	A53721-001
A1A13, A4A13	PC card	ASCII output code converter	A53434-001
A1A14, A4A14	PC card	Timing generator	A65433-001
A1A15, A4A15	PC card	Continuous step and alarm logic	A65437-001
A1A16, A4A16	PC card	Control logic	A65429-001
A2, A5	Reader mechanism assembly	Reader mechanism	A64757-001
A3, A6	Control panel assembly	Control panel	A64758-001, A64758-002
B1	Blower	Blower	SM-C-546250
FL1	Filter assembly	Filter	A64761-001
PS1, PS2	Power supply	Power supply	810003-103
PS1A1, PS2A1	PC card	+4.75-volt regulator	38864
PS1A2, PS2A2	PC card	+12-volt and - 12-volt regulators	38869
PS1A3, PS2A3	PC card	-48-volt regulator	38874
PS1A12, PS2A12	PC card	Sequence module	38982

* The two PC cards listed are interchangeable.

1-7. Description of Punched Tape Reader

When ready for operation, the components of the punched tape reader are assembled as shown in figure 1-1. The punched tape reader consists of one or two identical logic assemblies A1 and A4, one or two identical reader mechanisms A2 and A5, one or two identical control panels A3 and A6, one or two identical power supplies PS1 and PS2, a blower B1, and a filter assembly FL1. Since the two logic assemblies, reader mechanisms, control panels, and power supplies are identical, the following information covers the A1, A2, A3, and PS1 assemblies, but is also applicable to the A4, A5, A6, and PS2 assemblies, respectively.

a. Logic Assembly A1 (fig. 1-3). Logic assembly A1 contains a chassis which supports 15 printed circuit (PC) cards and the appropriate interconnection cabling required for the logic functions of the punched tape reader. Logic assembly A1 is slide-mounted in the inclosure. The slides and the handle on the front panel provide easy access to the chassis for maintenance.

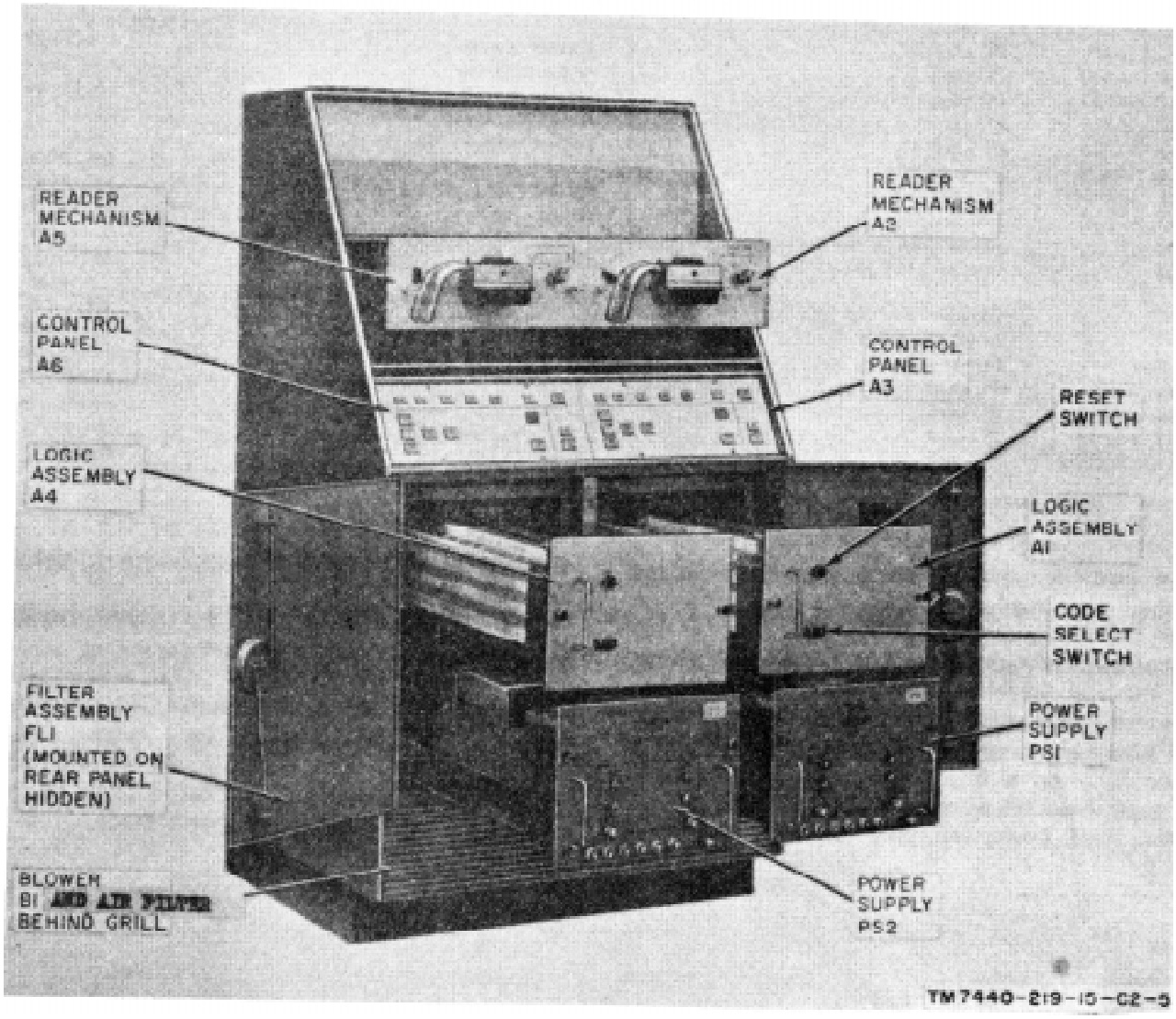


Figure 1-3. Punched tape reader, showing location of major assemblies.

b. Reader Mechanisms (fig. 1-3). Each of the reader mechanisms (A2 and A5) is a slide-mounted chassis consisting of a tape deck assembly, capstan drive mechanism assembly, read head and track assembly, network assembly, and amplifier assembly. The tape deck assembly, which contains the sensors and lamps, and the read head and track assembly protrudes from the front of the panel, while the capstan drive mechanism assembly, network assembly, amplifier assembly, drive motor, timing belts, and pulleys are mounted on the shelf at the rear of the panel. Two electrical connectors are located at the rear of the chassis for interconnection of each reader mechanism with its associated logic assembly and power supply (mounted directly below reader mechanism).

c. Control Panels (fig. 1-3). Each of the control panels (A3 and A6) consists of a panel containing pushbutton controls and indicators necessary for operation of the punched tape reader. Each control panel is mounted on the sloping surface of the inclosure below it's associated reader mechanism. This location provides for simultaneous viewing of the punched tape and the indicators on control panel.

d. Power Supply (fig. 1-3). Each of the power supplies (PS1 and PS2) is a slide-mounted chassis which supplies +4.75, -12, +12, and -48 volts dc, and 15 volts ac for operation of its associated paper tape reader.

Each power supply is mounted directly below its associated logic assembly, and consist of a chassis containing all the regulated dc power supplies required for its associated tape reader. The front panel of each power supply chassis contains a separate fuse for each dc power supply, and fuses which protect the drive motor, the fan, and the indication lamps of the control panel. Spare fuses are also mounted on the front panel. The function and value of each fuse is marked in the front panel.

e. Blower B1 (fig. 1-3). Blower B1 is mounted behind the grill in the bottom of the inclosure. Blower B1 provides cooling air to the assemblies in the inclosure.

f. Filter Assembly FL1 (fig. 1-3). Filter assembly FL1 is mounted at the left lower rear of the inclosure. Filter assembly FL1 filters the high frequency line noise from the ac power input to the power supplies.

g. Inclosure (fig. 1-3). The inclosure is a freestanding cabinet that provides mounting surfaces for two logic assemblies, two reader mechanisms, two control panels, two power supplies, one blower, and one filter assembly. Access to the logic assemblies, power supplies, blower, and filter assembly is provided by two hinged doors at the front of the inclosure, and a hardware-mounted removable cover at the rear of the inclosure.

Section III. DESCRIPTION AND DATA, TRANSMISSION IDENTIFICATION GENERATOR KIT, MK-1583/G

1-8. Purpose and Use

The transmission identification generator (TIG) is used on some punched tape readers to provide channel designation and channel sequence numbers in message transmission where traffic is introduced into the AUTODIN via DSTE, AN/FYA-71V. The TIG, when installed in the Punched Tape Reader RP-154(P)/G, is for use with the Common Control Unit (CCU) C-8120 (P)/G.

1-9. Technical Characteristics of the Transmission Identification Generator

Input data ---------- Seven-bit electrical data in ASCII form transferred on a bit-parallel, character-serial basis from the punched tape reader.

Output data ---------- Eight-bit electrical data in ASCII form transferred on a bit-parallel, character-serial basis with the eighth bit maintaining odd parity.

Operating speeds -------- Sufficient to maintain standard line modulation rates of 150, 300, 600, and 1,200 baud when connected to the CCU.

Power requirements ----- 15 VAC. + 4.75 VDC, + 12 VDC, and -12 VDC.

1-10. Components and Dimensions of Transmission Identification Generator Kit

a. Components. The TIG chassis is 31,/2 inches high, 17 inches wide, and 13 inches deep. Major components of the TIG kit are-

Quantity	*Item*
1	Electrical chassis assembly
1	EM signal cable assembly
1	TIG to TIG cable assembly
1	Control logic PC card (punched tape reader A1A2).

b. Common Names. The following list suppliments the list in paragraph 1-6c after the TIG kit has been installed in the punched tape reader. The list includes the reference designation, official name, common name used in this manual, and the manufacturer's part number of each item listed. Although the full reference designations are shown below, abbreviated reference designations for subassemblies and subassembly components are frequently used in this manual. Prefix the abbreviated reference designation with the applicable assembly or subassembly identification.

Reference designation	Item name	Common name	Mfr part No.
A1A2, A4A2	PC card	Control logic	12-890081
A7, A8	Transmission identification generator.	TIG assembly	00-001501
A7A1, A8A1	PC card	Counter logic	12-890082

c. On-Site Parts Kit. A TIG on-sites repair parts kit, General Dynamics, Electronics Division, part number 05-001283 (FSN 7440-042-8876), is available containing sufficient repair parts to provide a 12-month maintenance support of the TIG assembly.

1-11. Description of the Transmission Identification Generator

When ready for operation, the TIG assembly is secured to the top of the punched tape reader. Refer to figure 1-3. In single punched tape readers, the TIG is installed in the location designated A7 which is on the top of the enclosure directly above the reader mechanism A2. In dual punched tape readers, either one or two TIG kits may be installed. If the TIG assembly is to be used with the punched tape reader No. 1, it will be installed in the location designated A7 which is on the top of the inclosure directly above the reader mechanism A2. If it is to be used with punched tape reader No. 2, it will be installed in the location designated A8 which is on the top of the inclosure directly above the reader mechanism A5. The TIG kit consists of TIG assemblies A7 or A8, control logic PC card A1A2 or A4A2, EM signal cable assembly, TIG to TIG cable assembly, and mounting hardware. Since the two TIG assemblies A7 and A8 are identical, information in this manual refers to TIG assembly A7, logic assembly A1, and power supply PS1, but is also applicable to TIG assembly A8, logic assembly A4, and power supply PS2, respectively.

a. TIG Assembly A7 (fig. 1-4). The TIG assembly A7 consists of a chassis containing a control panel and a cable assembly providing TIG connection to the punched tape reader. The control panel contains the TIG controls and indicators and supports the counterl logic PC card A7-A1. The control panel is hinge-mounted for easy access to controls and PC card for maintenance.

b. Control Logic PC Card A1A2 (fig. 1-4). The control logic assembly Al functions to inhibit normal paper tape reader operation during generation of a transmission identification sequence of ASCII coded alphabetical, numerical, and machine function characters at the start of each message.

c. EM Signal Cable Assembly. The EM signal cable is used to connect 15 VAC power from the power supply to the logic assembly and to connect the EM interface signal from the logic assembly to the interface plate.

d. TIG to TIG Cable Assembly. Although supplied in all TIG kits, the TIG to TIG cable assembly is used only in installations having both TIG assembly A7 and TIG assembly A8 installed. The cable functions to enable counters in both TIG assemblies to be simultaneously incremented regardless of which TIG,/punched tape reader is transmitting the message.

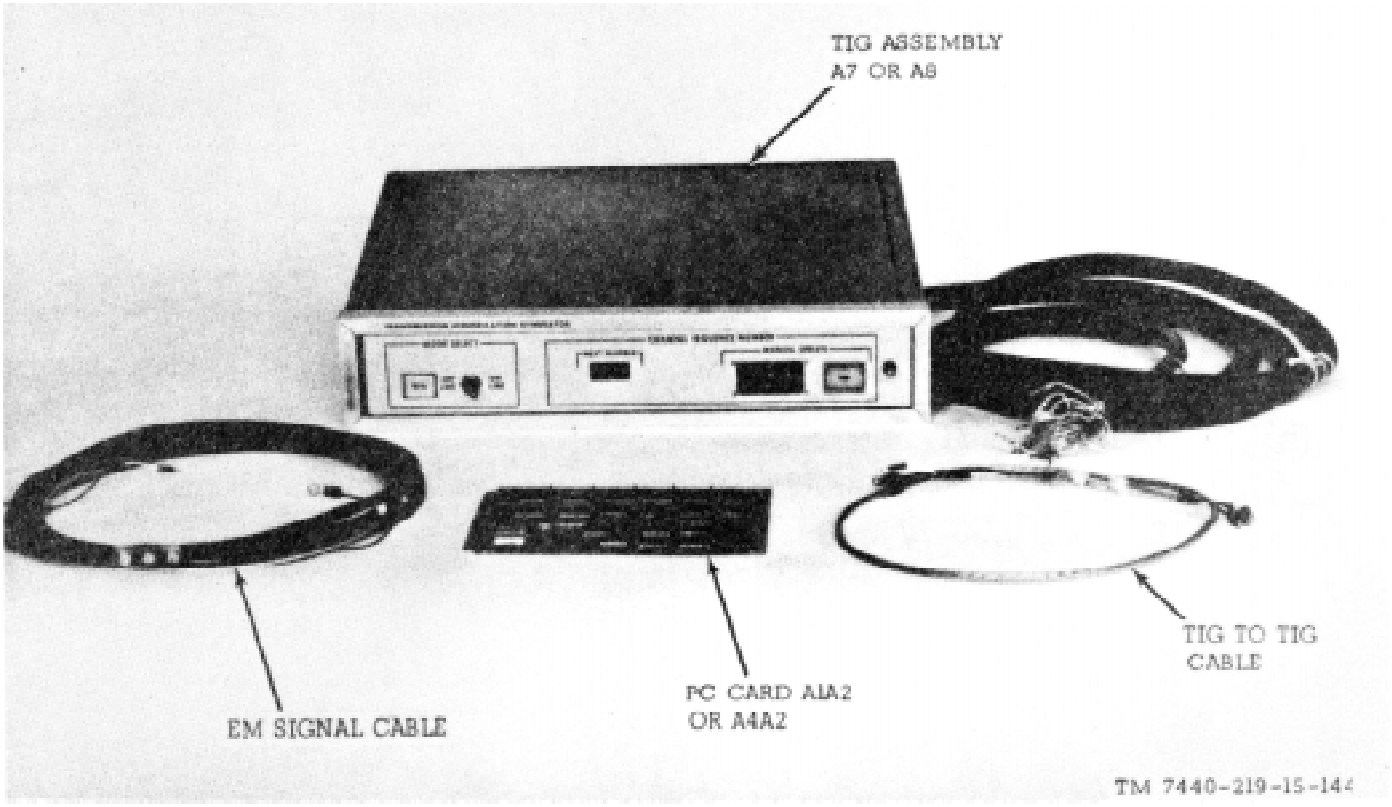


Figure 1-4. Transmission identification generator kit, showing major components.

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. PUNCHED TAPE READER

2-1. Operator's Controls and Indicators

a. Control Panel Controls and Indicators (fig. 2-1)

Control or Indicator	Function
AUDIBLE RESET switch (Z1).	When pressed, discontinues audible alarm at CCU which was sounding to indicate punched tape reader malfunction.
A.C. POWER switch-indicator (Z2).	Controls and indicates when ac power is applied. Lights (white) when ac power is applied.
HIGH SPEED/ LOW SPEED switch-indicator (Z3).	HIGH SPEED position selects 1200 baud tape reader rate; LOW SPEED position selects 150 baud tape reader rate. Selected speed indicator lights (white).
LAMP TEST switch (Z4).	Lights all indicators (except AC POWER and DC POWER indicators).
PILOT HEADER switch-indicator (ZS).	Depression of PILOT HEADER switch-indicator permits punched tape reader to stay on-line with CCU after tape has run out, to permit insertion of new message tape without loss of CCU assignment.
SINGLE FEED switch-indicator (Z6).	When momentarily depressed, causes tape to advance one character position.
START switch-indicator (Z7).	Operation of START switch places the punched tape reader out of the stop mode, and the start indicator indicates punched tape reader condition. When lighted *green*, indicates punched tape reader is available for selection by CCU. When lighted *white*, indicates punched tape reader is selected by CCU. Does not light if fault condition is present, or if punched tape reader is stopped, or is operating in either local test mode or PILOT HEADER condition.
STOP switch-Indicator (Z8).	When pressed, stops operation of punched tape reader and causes switch-indicator to light *red*. Also lights red to indicate punched tape reader is stopped by a cancel signal from CCU or by detection of fault condition (TIGHT TAPE, TAPE OUT, MOTION FAIL, or INVALID CHARACTER indicator lighted.)
LOCAL TEST switch-indicator (Z9).	Operation of LOCAL TEST switch-indicator lights indicator *amber* and initiates local processing of tape when punched tape reader is not assigned and is in stop mode.
DC POWER indicator (DSI).	Lights *white* when all dc voltages are present in tape reader.
CANCEL indicator (DS2).	Lights *red* when cancel signal is received from CCU.
INVALID CHARACTER indicator (DS3).	Lights *red* when character is either invalid or is not contained in list of permissible characters.
MOTION FAIL indicator (DS4).	Lights *red* upon detection of tape motion failure.
TAPE OUT indicator (DS5).	After start-of-message signal is received, lights *red* when end of tape passes through tape reader before end-of-message function is received.
TIGHT TAPE indicator (DS6).	Lights *red* when tight tape condition is present.
NOT ASSIGNED indicator (DS7).	Lights *amber* when punched tape reader is not assigned at CCU.

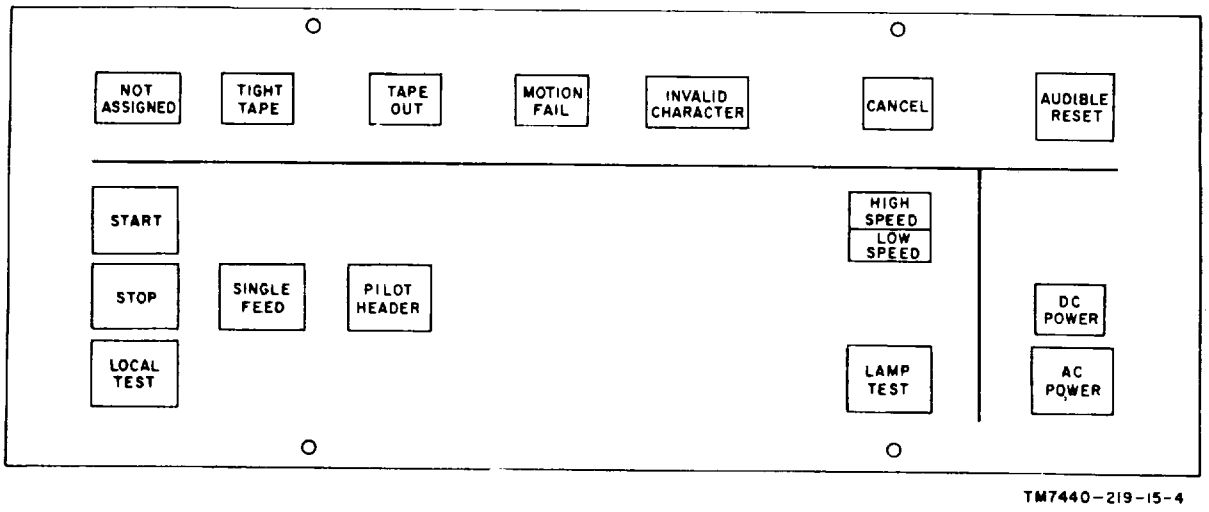


Figure 2-1. Control panel, controls and indicators.

b. Other Controls and Indicators.

Control or indicator	Function
Code select switch S1 (fig. 1-3).	Arranges punched tape reader circuitry for operation with either ASCII or ITA 2 message tape.
RESET switch S2 (fig. 1-3).	Used by maintenance personnel only.
Slew lever (fig. 2-2).	Permits free movement of tape through the tape deck,
Tape stops (fig. 2-2).	When in lower position, adjusts tape deck slot for 7/8-and 11/16 in. wide tape; placed in upper position for 1-in. wide tape.
Tight tape sensor (fig. 2-2).	When pivoted counterclockwise, stops transmission automatically until tight tape condition is corrected.
Power supply blown fuse indicators (fig. 2-3).	Light to indicate blown fuse.
DRIVE MOT switch S1 (tit. 2-3)	Permits turning off drive motor without powering down unit. retaining TIG display number.

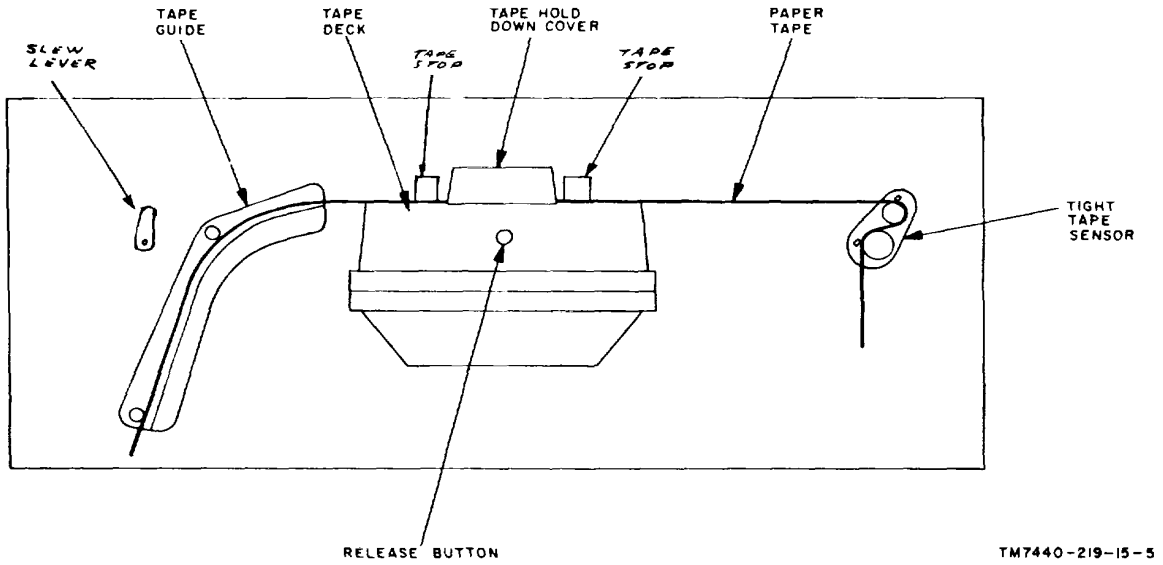


Figure 2-2. Reader mechanism controls.

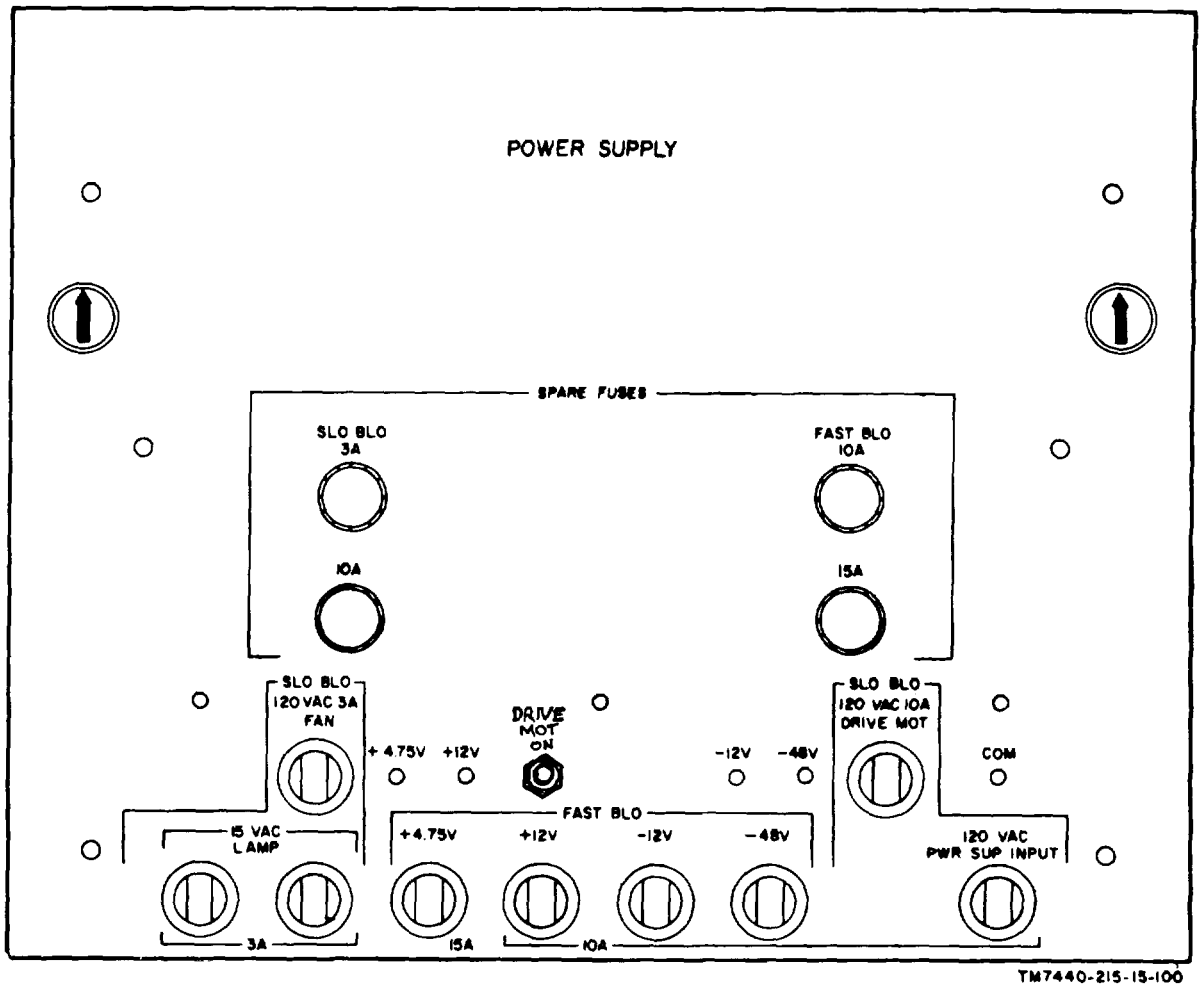


Figure 2-3. Power supply, front panel.

2-2. Types of Operation

a. The punched tape reader can be operated in either the on-line or local test mode of operation. Selection of the on-line mode of operation transfers control of the punched tape reader to the CCU. The local test mode is used for test and maintenance functions.

b. Perform the following sequence of procedures when operating the punched tape reader:

(1) Preliminary starting procedure (para 2-3).
(2) Loading procedure (para 2-4).
(3) Starting procedure (para 2-5).
(4) Operating procedure (para 2-6).
(5) Stopping procedure (para 2-7).

2-3. Preliminary Starting Procedure

a. Set the tape stops (fig. 2-2) in the proper position for the width of tape to be used (up for 1-in. wide tape; down for 7/8 or 11/16-in wide tape).

b. Operate the code select switch (fig. 1-3) to ITA 2 for five-track tape or to ASCII for 8-track message tape, as appropriate.

c. Press the AC POWER switch indicator on the control panel (fig. 2-1). Check to be sure that the AC POWER and DC POWER indicator are lighted.

2-4. Loading Procedure

a. Check the tape for correct headers and format.

b. While holding tape hold down cover assembly, press release button and allow spring-loaded hold down cover to move to open position. See caution below.

CAUTION

When unloading tapes, always use the fingers to prevent excessively fast upward movement of tape hold down cover to avoid a sharp impact of cover against equipment panel. Failure to observe this precaution will result in a broken plastic hold down cover.

c. Thread tape through the tight tape sensor as shown in figure 2-2.

d. Turn slew lever (fig. 2-2) to release wheel and sprocket gear assembly. Channel the tape across the tape deck. (Insure that sprocket feed holes are *away* from operator.) Be sure that the sprocket pins are aligned with the sprocket feed holes.

e. Press release button (fig 2-2), move tape hold down cover to closed position, then release button. See caution below.

CAUTION

When closing the tape hold down cover, always press release button. Failure to observe this precaution will result in broken parts and premature wear and replacement of the carrier.

f. Manually move tape back and forth to insure that it is properly seated in the tape deck. This procedure also aligns star wheels and sprocket pins with the punched holes in the tape. Return slew lever (fig. 2-2) to the position that engages and locks the wheel and sprocket gear assembly. See caution below.

CAUTION

During operation, the slew lever must always be in the locked position. If it is necessary to start the tape at a particular character, use the slew lever to release the assembly to permit manual movement of the tape to the desired character in the reader.

g. Press SINGLE FEED switch three or four times to advance the tape through the tape path. Be sure the tape advances and that the MOTION FAIL indicator does not light.

h. Press the CANCEL switch on the common control unit (CCU) before transmitting a message. This clears any random characters that may be in the CCU logic and also checks the line between the digital subscriber terminal (DST) and the automatic digital message switching center (ADMSC).

2-5. Starting Procedures

a. Press the START switch-indicator on the control panel.

b. Check to see that the following indicator lamps are not lighted:

(1) STOP switch-indicator.

(2) All fault alarm indicators (TIGHT TAPE, TAPE OUT, MOTION FAIL, and INVALID CHARACTER indicators).

2-6. Operating Procedure

a. On-Line Mode. To read a message tape in the on-line mode, press the START switch-indicator; the START -switch-indicator should be lighted green. The tape is then read in response to select and step commands from the CCU. During tape reading, the START switch-indicator lights white.

b. Local Test Mode. To operate in the local test mode, the NOT ASSIGNED indicator and STOP switch-indicator must be lighted. When these conditions exist, press the LOCAL TEST switch indicator and check to see that the STOP switch indicator lamp goes out and that the punched tape reader processes tape.

2-7. Stopping Procedure

a. Standby Condition. Normally, when the punched tape reader is not used for short periods of time during a work shift, the power is left on so that the drive motor runs continuously and the equipment, in effect, is in a standby condition. When in the on-line or local test mode, stop the punched tape reader by pressing the STOP switch-indicator.

b. Power-Down. To power-down the punched tape reader, press the STOP switch-indicator, then press the AC POWER switch-indicator.

2-8. Correcting Fault Condition

Whenever a fault condition occurs, the punched tape reader is automatically placed into the stop condition.

When this occurs, check ,the control panel indicators to determine the cause of the fault. After taking appropriate action to correct the fault, press the START switch-indicator to restore the punched tape reader to the on-line condition.

2-9. Operation Checkout Procedure

To insure that the punched tape reader is providing correct output copy, operate it with the CCU as described in TM 11-7440-238-15.

Section II. TRANSMISSION IDENTIFICATION GENERATOR

2-10. Operator's Controls and Indicators

a. Control Panel Controls and Indicators (fig. 2-4).

Control or indicator	*Function*
ON-LINE /OFF-LINE switch(S1).	ON-LINE position enables TIG assembly A7 or A8 to generate a 13 to 16 character TI sequence at the beginning of each message. OFF-LINE position enables punched tape reader to function in a normal manner.
MANUAL SEQUENCE NUMBER switch (S2).	UPDATE Three section, 10 position each, switch used to select a count to be manually loaded into the channel sequence counter. Operates in conjunction with LOAD switch S3.
LOAD switch(S3)	When momentarily depressed causes the count set into the MANUAL UPDATE SEQUENCE NUMBER switch S2 to be loaded into channel sequence counter. This switch is inoperative if the punched tape reader START switch indicator Z7 is illuminated white.
TIG ON indicator (DS1)	Lights white when the ON-LINE,/OFF-LINE switch (S1) is in the ON-LINE position.
NEXT NUMBER indicator (DS2).	Three section visual display of the channel sequence number to be transmitted as a part of the TI sequence of the next message. Power-up of the punched tape reader will clear the display to 000. Display counter can be manually loaded to any number from 000 through 999 by using the MANUAL UPDATE SEQUENCE NUMBER switch (S2) and the LOAD switch (S3).

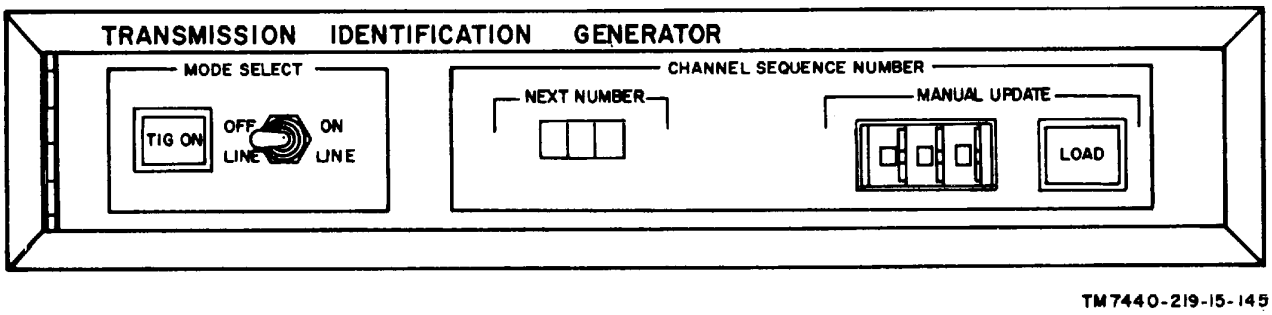


Figure 2-4. TIG control panel, controls and indicators.

2-11. Types of Operation

a. The punched tape reader with TIG installed can be operated in either the on-line or local test mode of operation. Selection of the on-line mode of operation transfers control of the punched tape readel to the CCU. When the punched tape reader is in on-line mode, it can also operate with the TIG assembly in either the on-line or off-line mode. When the TIG is in the off-line mode, the punched tape reader will function in the same manner as described in section I above. If the TIG is placed in the on-line mode, the 13 to 16 character transmission identification sequence will be transmitted at the beginning of each message. The punched tape reader local test mode is used for test and maintenance functions. The TIG is inoperative when the punched tape reader is in the local test mode.

b. Perform the following sequence of procedures when operating the punched tape reader with TIG installed:

(1) Preliminary starting procedure (para 2-12).

(2) Punched tape reader operation (para 2-13).

2-12. Preliminary Starting Procedure

a. Perform the preliminary starting procedures outlined for the punched tape reader in paragraph 2-3.

b. After pressing the AC POWER switch indicator on the punched tape reader control panel, check to be sure the TIG control panel NEXT NUMBER indicators read "000."

c. Determine mode of TIG operation.

(1) *TIG off-line mode*. Place the TIG ON-LINE, OFF-LINE switch in the OFF-LINE position. Check to be sure the TIG ON indicator is not lighted and then operate punched tape reader following procedures outlined in paragraphs 2-4 through 2-9.

(2) *TIG on-line mode*. Place the TIG ON-LINE OFF-LINE switch in the ON-LINE position. Check to be sure the TIG ON indicator is lighted white. If the next channel sequence number is to be other than 000, set the MANUAL UPDATE SEQUENCE NUMBER thumbwheel switch desired message number and press the LOAD switch. Check to be sure the NEXT NUMBER displays the proper count.

NOTE

If operating at a terminal with two TIG assemblies that are both in the on-line mode, it is necessary to load the same channel sequence number into both TIG assemblies.

2-13. Punched Tape Reader Operation

Operate the punched tape reader in the normal manner following procedures outlined in paragraphs 2-4 through 2-9. In addition, observe that the NEXT NUMBER indicator count increments by one at the start of each message.

CHAPTER 3

FUNCTIONING OF PUNCHED TAPE READER

Section I. GENERAL FUNCTIONING

3-1. Punched Tape Reader, Block Diagram (fig. 3-1)

All of the tape handling and reading functions of the punched tape reader are performed by the reader mechanism. With this mechanism, the message tape is advanced one character at a time and the punched holes are read. Processing of the data read from the tape and control of the tape advance are performed by electronic circuits in the logic assembly and by manual switches on the control panel. These functions are described in paragraphs 3-2 through 3-8.

3-2. Read Cycle

The tape is advanced by one character each time a new character is to be read. The advance command is given to the reader mechanism in the form of a solenoid advance pulse. This pulse is produced by a timing generator which goes through a timing sequence called a read cycle each time the tape is to be advanced. The solenoid advance pulse is produced at the beginning of each read cycle. The data read from the character which is advancing in the reading position is then evaluated at a later point in the read cycle. Read cycles may be initiated under remote control or under local control.

3-3. Remote Control of Read Cycle

When the punched tape reader is operated with the Common Control Unit (CCU), the tape is advanced in response to a step/data acknowledge pulse from the CCU whenever the CCU is prepared to receive a new character.

a. Automatic tape feed under control of the CCU is accomplished by operation of an appropriate start switch on the control panel. This supplies a ready signal to the CCU and enables advance control circuits in the logic assembly to operate under CCU control.

b. Upon receipt of a ready signal from the punched tape reader (fig. 3-2), the CCU operator must assign the punched tape reader to operate with the CCU, by operating a front panel switch on the CCU. This action results in an assigned signal which is routed from the CCU through receive interface circuits to the advance control circuits in the logic assembly of the punched tape reader. This permits the CCU to select the punched tape reader for a message by sending a select signal and a step/data acknowledge pulse. These signals enable the advance control circuits to begin tape advance operations.

Note. Most signals shown in figure 3-2 are high when active. This is the format used in the punched tape reader. Conversion by the receiver and transmit interface circuits causes most of the actual received and transmitted control signals to be inverse (low when active) on the signal lines connecting the CCU and punched tape reader.

c. Initially, when the start switch on the control panel is operated, the tape advances to the beginning of a message. This is controlled automatically by the advance control circuits which begin operation in a mode called the remote continuous step mode. In this mode, the ready signal to the CCU is disabled. Thus, the CCU cannot begin controlling tape advance until the punched tape reader has stepped through the leader tape.

d. The advance control circuits generate an advance signal which allows the timing generator to go through repeated read cycles as long as the punched tape reader remains in the remote continuous step mode. At the beginning of each read cycle, a solenoid advance pulse is generated which causes the tape to be advanced to a new character position by momentarily energizing a solenoid in reader mechanism.

e. It is necessary to check the idle characters (space, blank, line feed, carriage return, etc) in the leader portion of the tape since the first non-idle character indicates the start of the message. Sensing switches in the reader mechanism read out the punched hole pattern in the form of logic signals. The hole pattern consists of eight bits when the tape is coded in ASCII and five bits when the tape is coded in ITA-2. In either case, the signals are generated on parallel lines and stored in a data register. Each character is stored under control of an input data sample pulse which is produced at a point in the read cycle when the switch contacts are sensing the hole pattern. This is based on the fact that a fixed time delay exists between the time the solenoid advance pulse is received by reader mechanism and when the new character is in position to be read.

f. The data remains stored in the input register from the beginning of the data sample pulse until the beginning of the next read cycle. During this time, the data is checked for invalid characters and transmitted to the CCU. If an ASCII tape is used, the data is routed through data select gates to a character decoder which decodes the data and monitors for idle or invalid characters. If an ITA-2 is used, the data must be converted to ASCII before it can be decoded by the character decoder. This function is performed by an ITA-2 to ASCII converter. The ASCII data is then routed through the data select gates to the character decoder. Selection between ITA-2 and ASCII operation is controlled by code select switch S1 on the maintenance panel of logic assembly.

g. As long as idle characters are read from the tape, the character decoder supplies an idle character signal to the advance control circuits. This permits continued advance of the tape.

When the first non-idle character is detected, the advance control circuits are switched out of the remote continuous step mode and into the ready mode. In this mode, the ready line to the CCU is activated.

h. When the CCU is ready to accept the message, the select and step/data acknowledge lines to the punched tape reader are activated, which permits the advance control circuits to cause the generation of one read cycle. The data stored in the input data register is now made available through the data select gates (and, if necessary, the ITA-2 to ASCII converter) for transmission to the CCU through the transmit interface circuits. No significant delays occur in any of the circuits between the input data register and the CCU.

i. To insure evaluation of the data bit lines by the CCU at the proper time, the timing generator sends out a data strobe pulse through the transmit interface circuits to the CCU. The data strobe pulse is generated after the data has been stored in the input data register.

j. The data strobe pulse allows the CCU to read the contents of the data bit lines and also causes the CCU to deactivate the step/data acknowledge line, to prevent another read cycle from being initiated until the CCU has had the opportunity to evaluate the character. When evaluation is complete, the step/data acknowledge line is again activated and another read cycle is initiated.

k. The read cycle process continues until 80 characters have been transmitted to the CCU. The CCU processes data in 80-character blocks. Thus, the delay in activating the step/data acknowledge line after the 80th character is somewhat longer than after the other characters. The CCU marks the end of the block by transmitting an end of block (EOB) signal to the tape reader. This signal extends from the 80th character data strobe to the first character data strobe of the next block. An additional signal with the same timing is supplied by the CCU following the end of message sequence in the last block in a message. This signal is called the end of message (EOM) signal.

l. Both the EOB and EOM signals are routed through the receive interface circuits. When these signals are received simultaneously, the advance control circuits consider the message completed and reactivate the remote continuous step mode. This action allows the tape to be automatically stepped through the idle characters between messages until the first non-idle character of the next message is detected or the end of tape is reached.

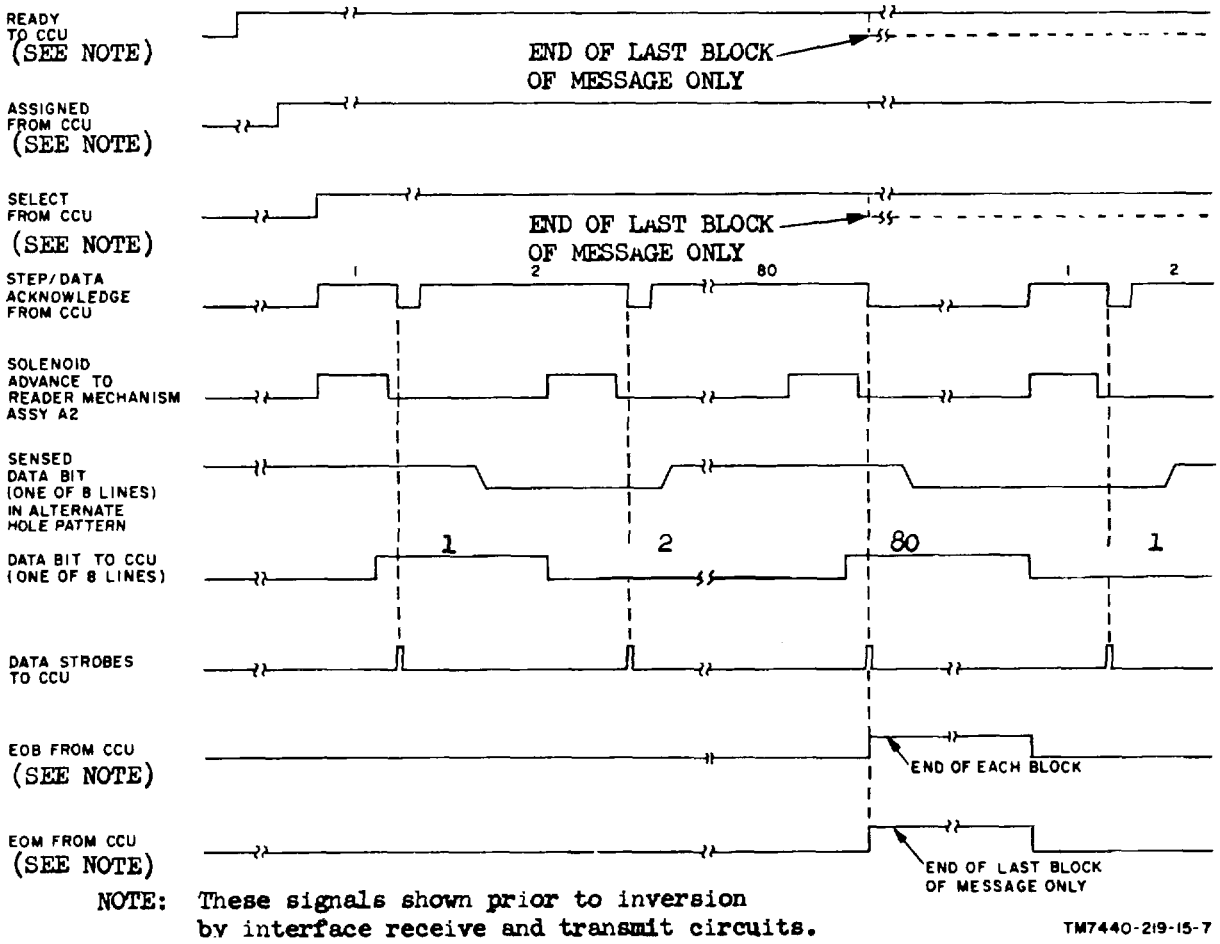


Figure 3-2. Punched tape reader, timing diagram.

3-4. Local Control of Read Cycle

When the assigned line from the CCU is inactive, the operator can initiate read cycles manually by operation of appropriate switches on the control panel. Continuous read cycles are enabled when the local test mode is selected. Single read cycles can be initiated by each operation of a SINGLE FEED switch.

3-5. Alarm Functions

Various operations of the punched tape reader are continuously checked by a group of alarm circuits in the logic assembly.

a. Alarm Stop. When the critical alarm condition occurs, an alarm stop signal is generated which disables the advance control circuits, thereby interrupting the ready signal to the CCU. The alarm stop signal is also supplied directly through the transmit interface circuits to the CCU, which causes an audible alarm at the CCU to be activated. The following fault conditions can cause an alarm stop:

(1) *Invalid character.* An invalid character read from the tape is a sign of a defective tape or defective punched tape reader circuits. This condition is indicated by the character decoder which monitors the ASCII data bit output lines for invalid character codes.

(2) *Tape. motion.* Since the evaluation of data read from the tape by the punched tape reader depends on proper tape motion, spurious character readouts may occur if the tape fails to advance.

The tape advance is sensed by a tape motion sensor in the reader mechanism. If the tape fails to advance or advances too slowly, a corresponding tape alarm signal is produced to activate the alarm circuits in the logic assembly.

(3) *Tape-out.* A tape-out condition caused by the end of the tape or a break in the tape is sensed by a tape out sensor switch in the reader mechanism. When a tape out condition occurs during a message, a corresponding tape alarm signal is produced.

(a) A special case arises if a special header (a two-tape) message is being read by the punched tape reader. When the tape out condition occurs at the end of the header tape, it is undesirable to transmit an alarm stop signal to the CCU, since no alarm condition exists and the message is still in progress.

(b) To prevent this, a special pilot header switch is used as the control switch to start operation for the header tape. This action allows normal read cycle control by the CCU, but causes a pilot header signal to be produced which disables the tape-out alarm stop function.

(c) At the end of the header tape, the tape-out signal activates an operator's stop command to the advance control circuits. Thus, read cycles are stopped and the ready line to the CCU is deactivated. The CCU must now wait for the punched tape reader to be ready again before transmitting another step/data acknowledge pulse. When the second message tape is loaded, the tape reader operator initiates tape feed operation in the normal manner, thereby restoring the ready signal to the CCU.

(4) *Cancel.* An alarm stop signal is generated whenever a cancel signal is received from the CCU. This signal, routed through the receive interface circuits, is generated when the CCU discovers a parity error in the data or when the CCU receives a reject message (RM) instruction from the switching network to which the data is routed by the CCU. The CCU operator may also initiate a cancel manually by operation of a front panel switch.

b. Operator Alarm. When a tight tape condition is sensed in the reader mechanism, the resulting tape alarm signal to the alarm circuits causes an operator alarm signal to be generated. This signal is routed through the transmit interface circuits to the CCU and is also fed back to the advance control circuits to disable tape advance and to interrupt the ready signal to the CCU.

c. Audible Alarm Reset. When the audible alarm is sounded in the CCU as a result of a punched tape reader alarm condition, this alarm can be reset by operating the Audible Reset switch on the panel. Operation of this switch results in transmission of an audible alarm reset signal through the transmit interface circuits to the CCU.

3-6. Signaling Code

a. The signaling code used by the punched tape reader to transmit data to the CCU is the eight-bit ASCII code shown in the signaling code chart (fig. 3-3). Seven of the ASCII bits contain the data. The eighth is a parity bit which is added or left out, as necessary, to have odd parity for each character.

b. The data on the message tape may be in the five-bit ITA-2 code or the eight-bit ASCII code. The ITA-2 code for each character is shown in figure 3-3. Seven of the characters which can be read by the punched tape reader are idle characters which may be used for leader tape. These are identified by an asterisk in figure 3-3.

NOTE: ASCII code signals transmitted from the punched tape reader to the CCU are ODD parity as shown in figure 3-3. ASCII code signals read from the punched tape are EVEN parity (column 8 (parity signal) opposite to those shown in figure 3-3).

CHARACTER		ASCII punched code 8 (P) 7654 321 (columns)		ITA-2 punched code 543 21 (columns)
Symbol	Name			
-	Hyphen	1	0101 101	000 11
.	Period	1	0101 110	111 00
/	Slant	0	0101 111	111 01
ø	Zero	1	0110 000	101 10
1	One	0	0110 001	101 11
2	Two	0	0110 010	100 11
3	Three	1	0110 011	000 01
4	Four	0	0110 100	010 10
5	Five	1	0110 101	100 00
6	Six	1	0110 110	101 01
7	Seven	0	0110 111	001 11
8	Eight	0	0111 000	001 10
9	Nine	1	0111 001	110 00
:	Colon	1	0111 010	011 10
;	Semicolon	0	0111 011	111 10
<	Less than	1	0111 100	
=	Equals	0	0111 101	
>	Greater than	0	0111 110	
?	Question mark	1	0111 111	110 01
`	Grave accent	0	1000 000	
A	A	1	1000 001	000 11
B	B	1	1000 010	110 01

TM 7440-219-15-8 ②

Figure 3-3 (1). Signaling code chart (part 1 of 4).

CHARACTER		ASCII punched code 8 (P) 7654 321 (columns)		ITA-2 punched code 543 21 (columns)
Symbol	Name			
*NUL	Null (blank)	1	0000 000	000 00
BEL	Bell	0	0000 111	001 01
*LF	Line feed	1	0001 010	000 10
*CR	Carriage return	0	0001 101	010 00
*SO	Shift out (figures)	0	0001 110	110 11
*SI	Shift in (letters)	1	0001 111	111 11
*SP	Space	0	0100 000	001 00
DC4		1	0010 010	
!	Exclamation point	1	0100 001	011 01
EM		0	0011 001	
"	Quotation mark	1	0100 010	100 01
#	Number sign	0	0100 011	101 00
$	Dollar sign	1	0100 100	010 01
%	Percent sign	0	0100 101	
&	Ampersand	0	0100 110	110 10
'	Apostrophe	1	0100 111	010 11
(	Opening parenthesis	1	0101 000	011 11
)	Closing parenthesis	0	0101 001	100 10
*	Asterisk	0	0101 010	
+	Plus	1	0101 011	
,	Comma	0	0101 100	011 00

TM 7440-219-15-8 (1)

Figure 3-3 (2). Signaling code chart (part 2 of 4).

CHARACTER		ASCII punched code 8(P) 7654 321 (columns)		ITA-2 punched code 543 21 (columns)
Symbol	Name			
C	C	0	1000011	011 10
D	D	1	1000 100	010 01
E	E	0	1000 101	000 01
F	F	0	1000 110	011 01
G	G	1	1000 111	110 10
H	H	1	1001 000	101 00
I	I	0	1001 001	001 10
J	J	0	1001 010	010 11
K	K	1	1001 011	011 11
L	L	0	1001 100	100 10
M	M	1	1001 101	111 00
N	N	1	1001 110	011 00
O	O	0	1001 111	110 00
P	P	1	1010 000	101 10
Q	Q	0	1010 001	101 11
R	R	0	1010 010	010 10
S	S	1	1010 011	001 01
T	T	0	1010 100	100 00
U	U	1	1010 101	001 11
V	V	1	1010 110	111 10
W	W	0	1010 111	100 11

TM 7440-219 15-8 (3)

Figure 3-3. Signaling code chart (part 3 of 4).

CHARACTER		ASCII punched code 8(P) 7654 321 (columns)		ITA-2 punched code 543 21 (columns)
Symbol	Name			
X	X	0	1011 000	111 01
Y	Y	1	1011 001	101 01
Z	Z	1	1011 010	100 01
[	Opening bracket	0	1011 011	
~	Tilde	1	1011 100	
^	Circumflex	0	1011 110	
-	Underline	1	1011 111	
@	Commercial at	1	1100 000	
*DEL	Delete	0	1111 111	

*Idle characters

TM 7440-219-15-8 (4)

Figure 3-3 (4) Signaling code chart (part 4 of 4).

Section II. MECHANICAL FUNCTIONING

3-7. General

The mechanical portion of the punched tape reader consists of a reader mechanism assembly A2 which is covered in the following paragraphs.

3-8. Reader Mechanism Assembly A2, Block Diagram

(fig. 3-4)

a. The reader mechanism receives prepunched paper tape which is fed to the tape deck and read head and track assembly, where the information in the tape is sensed, and transmitted to the logic circuitry.

b. The operation begins with a solenoid drive pulse from the logic section being applied to the electromagnet on the forward escapement assembly. A clutch within the mechanism assembly, operating in response to the step command signal, allows the drive motor to turn the capstan through a gearing arrangement within the mechanism assembly, The capstan, which is essentially a toothed wheel, engages the sprocket holes of the punched tape, and advances the tape through the tape deck, one character for each drive pulse.

c. Electrical contacts within the read head and track assembly sense the presence or absence of data holes in the punched tape, through eight read switches (one per tape track). The condition of each switch becomes the bit output data information which is transmitted to the logic circuitry through an electrical connector.

d. The punched tape reader incorporates several sensing devices to provide signals to the logic circuitry if malfunctions occur. These devices consist of an end of tape switch, a tight tape sensor, and a tape motion sensor. The tight tape sensor provides an indication to the logic circuitry if an obstruction occurs which prevents the punched tape from advancing. The end of tape switch provides an indication to the logic circuitry four to six characters before the end of the tape. The tape motion sensor provides a continuous indication to the logic circuitry (through a

photocell and amplifier circuit) where the timing is checked to make sure that the tape is advancing properly in response to commands. The three alarm circuit outputs provide panel lamp indications any of the three malfunctions occur.

e. A slew lever on the front panel disengages the mechanism and allows the tape to be manually slewed through the read head for proper positioning. When the tape is positioned as desired, releasing the slew lever indexes the tape for the next reading command.

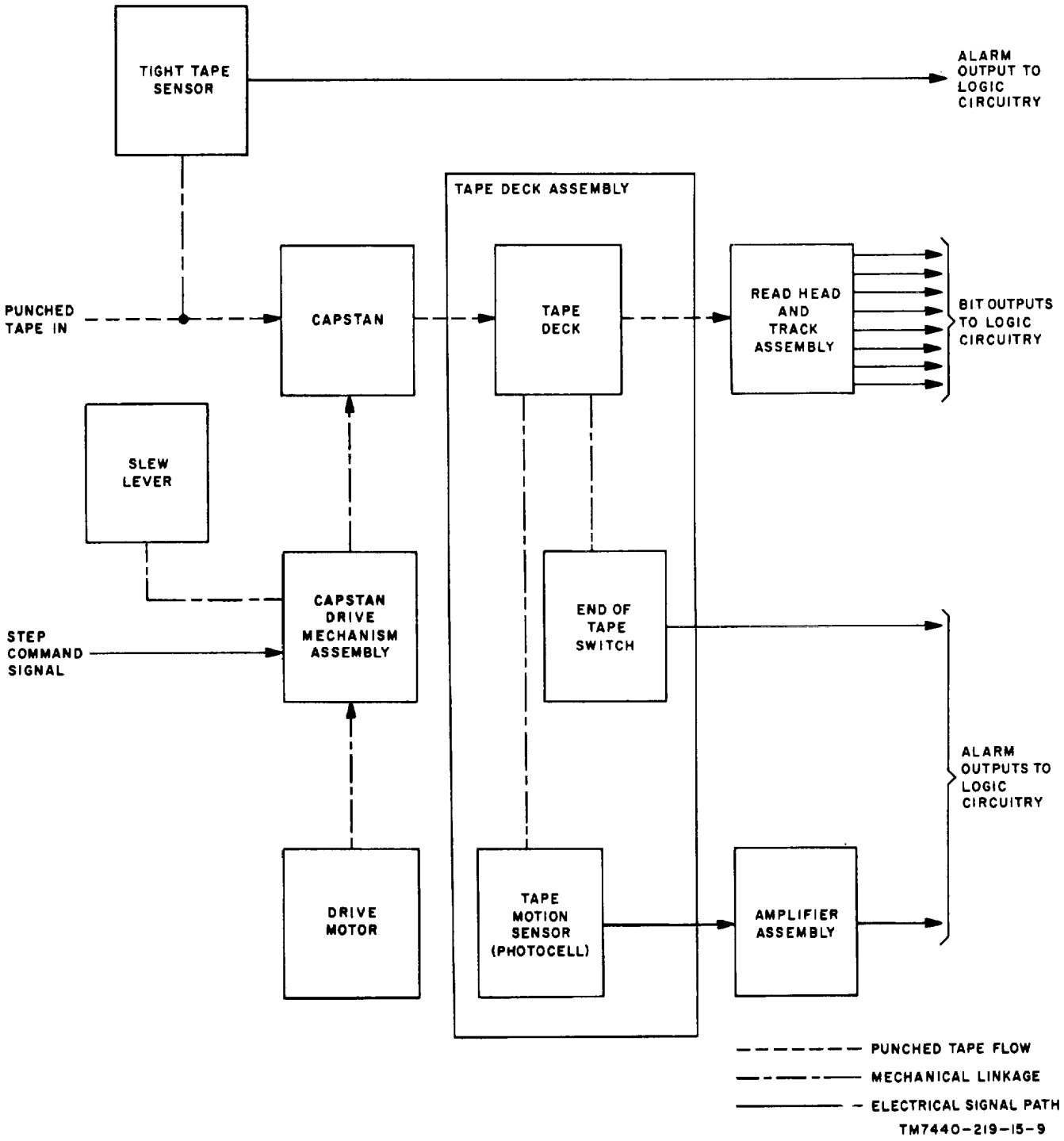


Figure 3-4. Reader mechanism assembly, block diagram.

3-9. Capstan Drive Mechanism Assembly

(fig. 3-5)

Power is applied from the motor drive pulley through a belt to the driven pulley which turns a shaft and gear assembly. A bevel gear transfers the power to a friction clutch through a clutch drive gear. When no step command signal is received. the escapement coil armature is engaged with the friction clutch, causing the clutch to slip, and the capstan is stationary. When the solenoid drive pulse energizes the escapement coil, the armature releases the friction clutch momentarily, and the capstan rotates one step (character) forward. The armature latches against the next tooth of the friction clutch, stopping the motion until the next drive pulse.

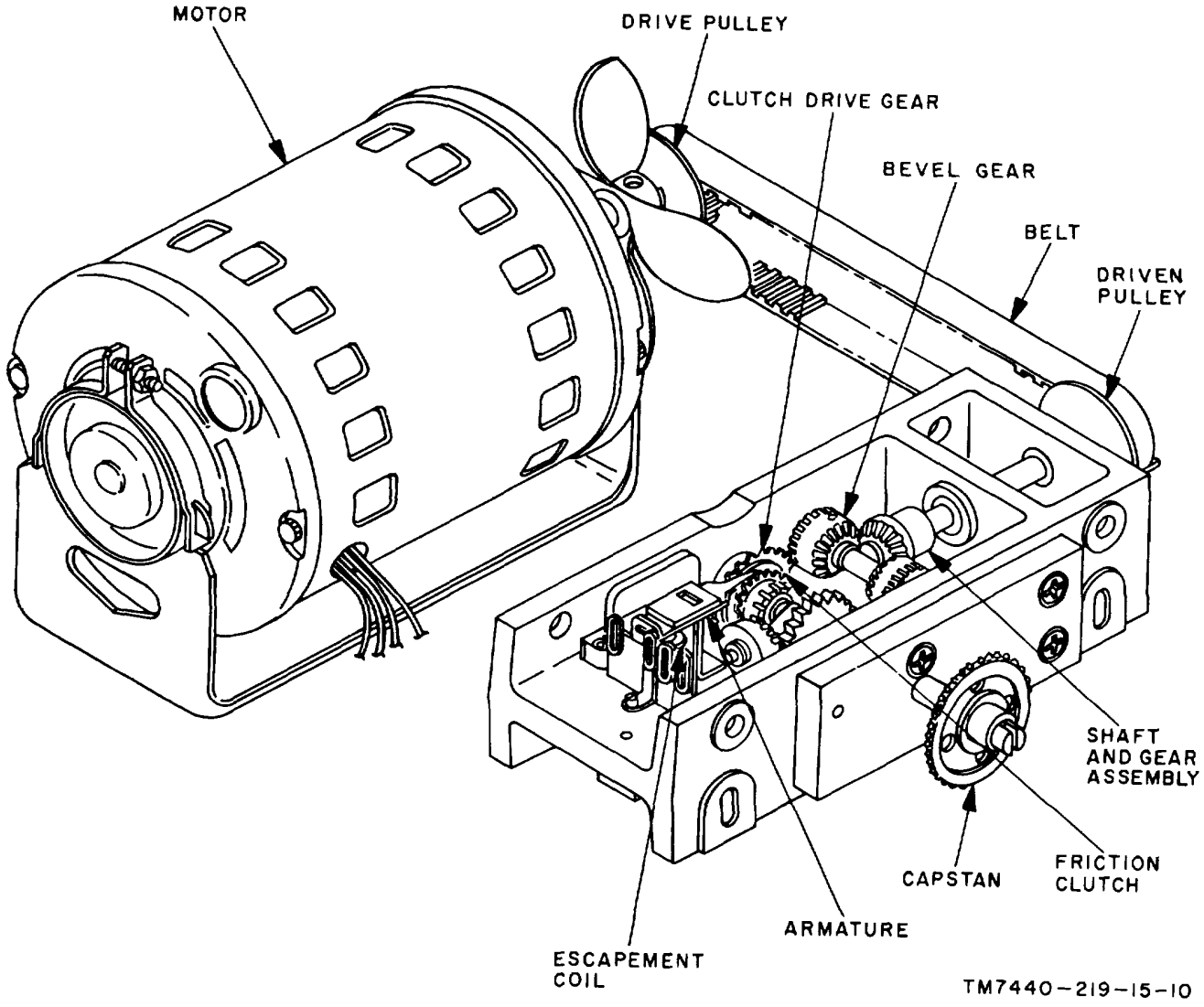


Figure 3-5. Capstan drive mechanism assembly.

3-10. Read Head and Track Assembly

(fig. 3-6)

The read head and track assembly consists of eight identical sets of read switches, one for each data track on the punched tape. The read switches sense the presence or absence of holes in the tape in the following manner: When a hole (perforation) in the tape moves into position as the punched tape rides along the capstan, one of the four points in the starwheel rises through the hole. Since the starwheel lever is free to pivot about a pin, pressure from a movable wire con-

tact causes the contact to switch to the upper fixed contact position. An electrical pulse sent through the movable wire contact to the upper fixed contact provides the output indication to the logic circuitry for this condition. In the same way, when a no-hole condition in the tape is in position, the starwheel does not go through the tape, and the pressure exerted causes the movable wire contact to switch to the lower fixed contact.

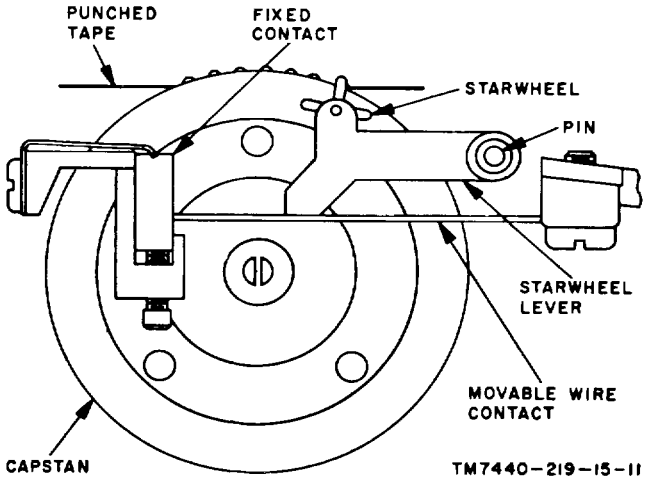


Figure 3-6. Read head and track assembly.

3-11. Tape Deck Assembly

(fig. 3-7)

The tape deck assembly contains the end of tape switch, tape motion sensor, tape holddown assembly, and tape guides to maintain the punched tape in the proper position.

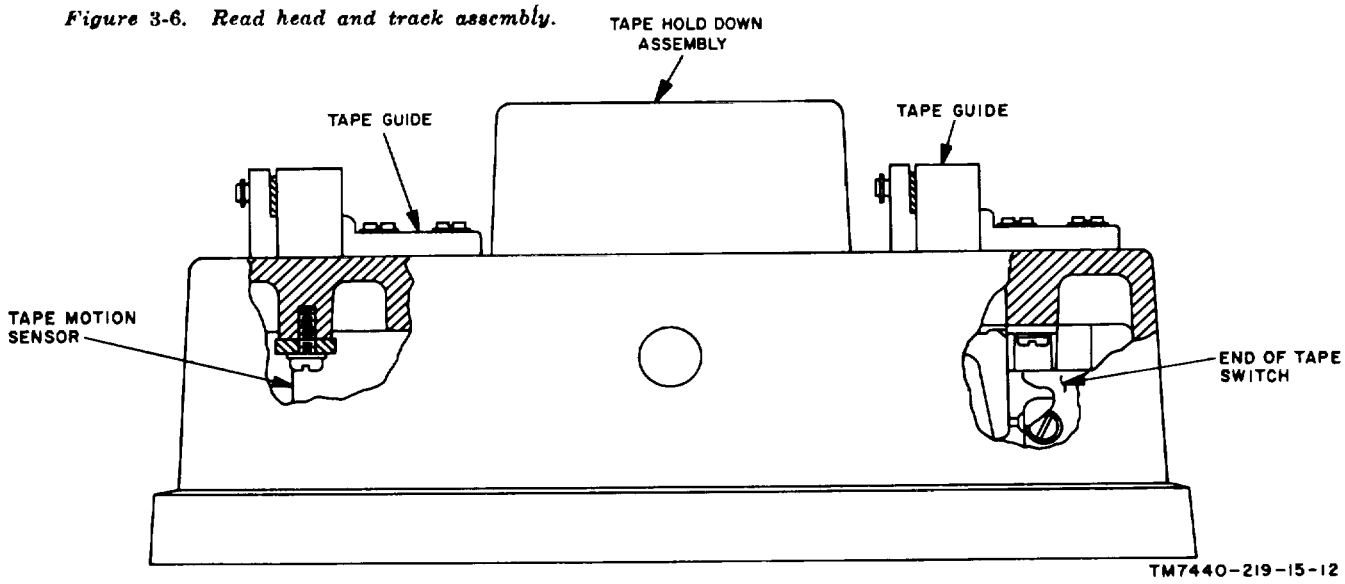


Figure 3-7. Tape deck assembly.

3-12. End of Tape Switch

(fig. 3-8)

The end of tape switch provides a switch contact transfer to indicate the end of the punched tape. Both the normally open and normally closed contacts are electrically connected so that an indication is always present. In the unactuated position as shown in figure 3-8, the actuator protrudes through the tape path. When the tape passes over the sensing area, the actuator pivots about a pin

and closes the switch contact. Only two contacts of the switch are used. When tape is in read head, the switch is open. When no tape is in read head, the switch is closed.

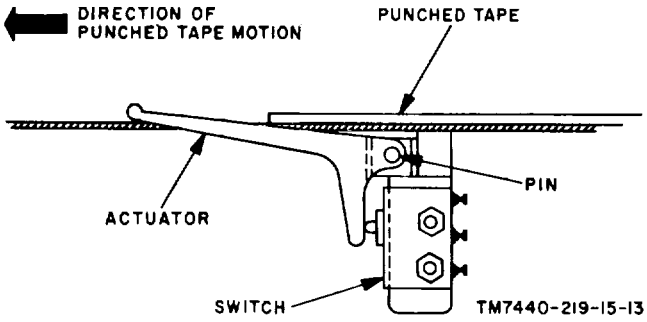


Figure 3-8. End of tape switch.

3-13. Tape Motion Sensor
(fig. 3-9)

The tape motion sensor consists of a light source (part of lamp mounting card assembly), a photo-cell (part of light sensor mounting card assembly), and a tape-driven capstan (with shutter holes), rotating between them, all mounted in a housing under the left side of the tape deck assembly. As the tape rotates the capstan, the shutter holes act as a focal plane shutter between the light source and the photocell to provide a dark-light-dark sequential input for each character step of the tape. The sensor output pulse is shaped and amplified by the amplifier assembly (fig. 34), and then sent to the logic circuitry for timing comparisons.

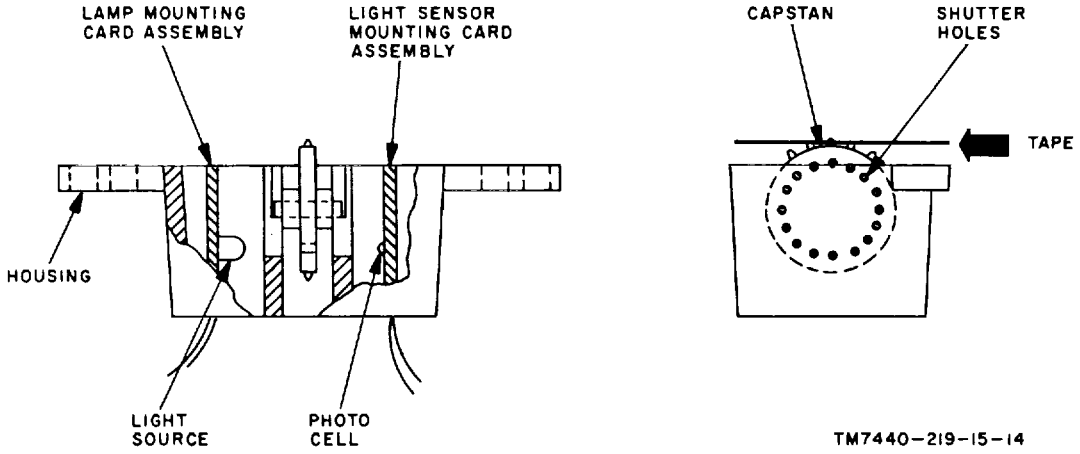


Figure 3-9. Tape motion sensor(

3-14. Tight Tape Sensor
(fig. 3-10)

The tight tape sensor consists of rollers, a cam, a switch, and an actuator, designed to close the switch if a malfunction occurs that involves a jam caused by tangled tape or other conditions which stop the tape at the sensor. During normal operation, the roller support is in the position shown as the tape feeds to the tape deck. The switch is unactuated, and the logic circuits establish a +4.5-volt level at the normally open switch terminal. In a tight tape condition, the capstan pulls the tape, which now resists the pull, and the roller support, which pivots about a shaft on the center of the large roller, rotates counterclockwise. This rotation causes the cam, which is mounted on the same shaft as the large roller, to turn so that the larger diameter of the cam moves the actuator forward, closing the switch and providing a ground output at the normally open contact.

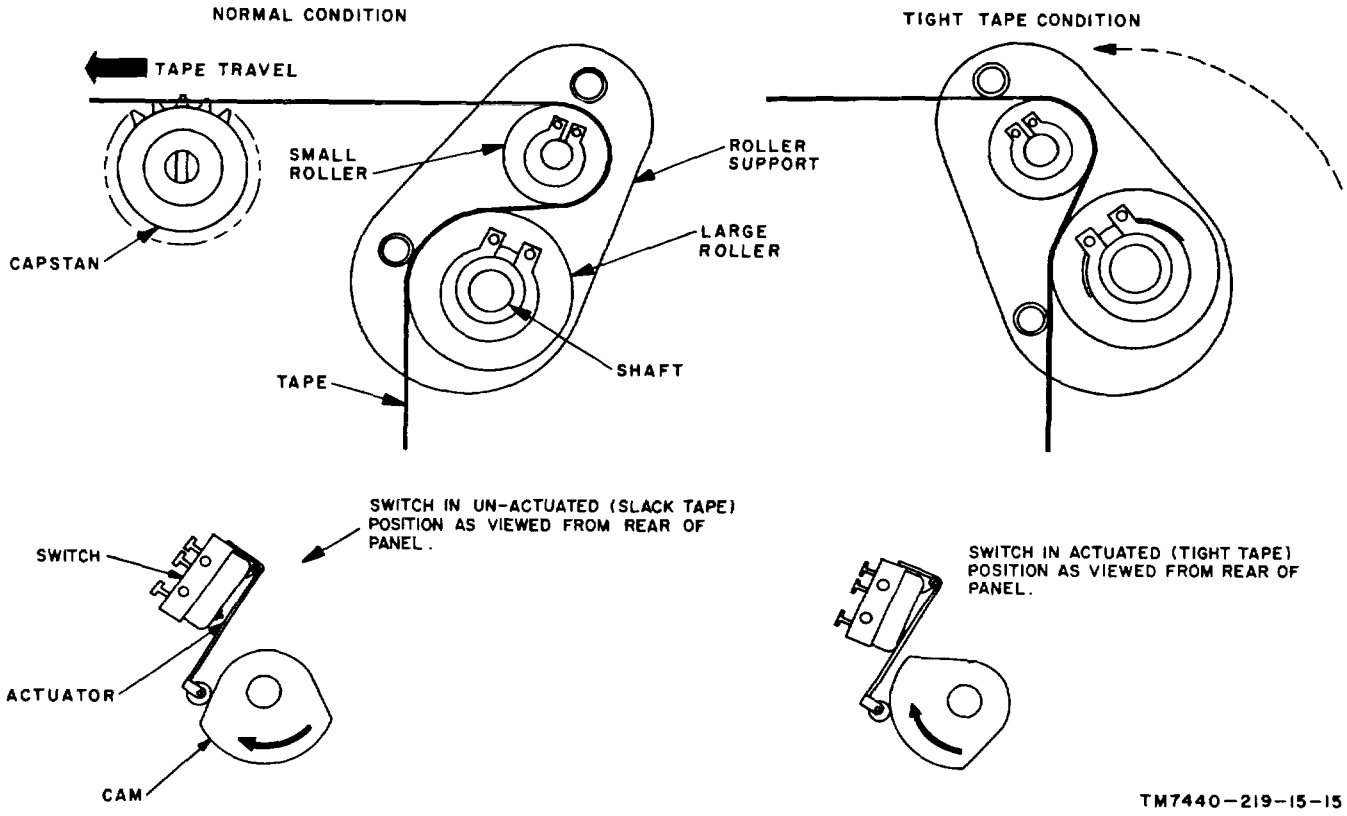


Figure 3-10. Tight tape sensor.

Section III. ELECTRICAL FUNCTIONING

3-15. Logic Diagrams

a. Most of the data processing and control functions of the punched tape reader are performed by logic circuits on the printed circuit cards in logic assembly Al. Thus, the electrical operation of each PC card is represented in chapter 8 by a logic diagram rather than a conventional schematic diagram. The logic diagram shows all input and output connections of the PC card including power connections but does not show the circuit components which make up the individual logic elements.

b. Most of the logic elements in the punched tape reader are mounted in integrated circuit modules. Thus, detailed circuit components are not applicable. (Each integrated circuit logic element is considered to be a single electrical component.) For those logic elements that are made up of discrete circuit components, the schematic representation and a description of the circuit operation for each type of logic element are given in paragraphs 3-70 through 3-73.

Note. For convenience, all PC cards in logic assembly Al are identified only by their distinguishing reference designations (Al, A2, A3, etc.). These designations should be prefixed by Al to form the complete designation.

3-16. Logic Signal Notation

a. In general, logic signals in the punched tape reader switch between a high level of +4.5 volts and a low level of 0 volt. Some signal lines are considered activated when the level is high while others are considered activated when the level is low. The state indicators (small circles) at the input and output of logic elements indicate which lines are activated by a high level (state indicator absent) and which lines are activated by a low level (state indicator present).

*b. A*ll significant logic signals are assigned a functional name or designation. To permit the active state of a signal to be indicated by its functional name, the high level is arbitrarily designated true or logical for signal naming purposes and the low level is arbitrarily designated false

or logic 0. Thus, the signal is a true-function if it is active on a high level and a not-function if it is active on a low level. Not-function signal names are prefixed by the letter N (for example: NASG: not assigned).

c. In the functional descriptions, the terms high and low are used for +4.5-volt and 0-volt levels. Pulses or steps going from 0 volt to +4.5 volts are called positive pulses or steps and those going from +4.5 volts to 0 volt are called negative pulses or steps.

3-17. Logic Diagram Symbol Notation

a. Typical integrated circuits and discrete circuit logic elements are shown in figure &-10. Inputs and outputs of integrated circuit logic elements are identified by the wire terminal numbers of the integrated circuit modules in which the elements are located.

b. Three tagging lines are used within each logic symbol for identification purposes.

(1) The first tagging line in each symbol identifies the logic element type. The various types of integrated circuits and discrete circuit logic elements are described in paragraphs 3-18 through 3-22.

(2) The second tagging line in each logic symbol identifies the reference designation of the logic element. This reference designation must be preceded by the PC card reference designation to form the complete designation of the logic element.

3-18. Integrated Circuit Modules

a. The integrated circuit modules used in the punched tape reader are of several types as described in the following subparagraphs. However, all are of standard construction and wired to the printed circuit cards through 10 terminals (1 through 10). Reference designations for the integrated circuit modules are Z1, Z2, Z3, etc.

b. Some of the integrated circuit modules contain only one logic element while others contain two. Where two logic elements are contained in one integrated circuit module, the two elements are shown separately on the logic diagrams and are designated A and B (for example: Z1A and Z1B). The output signal terminal of the A element in each integrated circuit module is always terminal 2 and the output signal terminal of the B element is always terminal 10.

c. Power supply inputs to the individual logic elements are not shown on the logic diagrams because there is no provision for them in logic symbology. However, all integrated circuit modules receive power supply inputs of 44.5 volts at terminal 6, and ground at terminal 1.

d. Since the integrated circuits are of a standard construction, not all inputs to AND gates and OR gates are used in each application. Unused gating inputs are always wired to one of the used gating inputs. Thus, more than one terminal may be listed at an input on the logic diagram symbol.

e. Most integrated circuit logic elements can 8function in more than one way. Thus, every AND gate for high inputs is an OR gate for low inputs and every OR gate for low inputs is an AND gate for high inputs. A noninverting OR gate becomes a simple buffer if the inputs are wired together and an inverting OR gate becomes an inverter if the inputs are wired together.

f. The logic operation of each integrated circuit module type is described in paragraph 3-19.

3-19. Operation of Individual Integrated Circuit Modules

The operation of the individual integrated circuit modules used in the punched tape reader is described below. Logic symbols are given for each type of module, using typical tagging lines.

a. Type A-1 Module. Two type A-1 gates are located on each type A-1 module (fig. 3-11). These gates may be noninverting AND gates for high inputs (case A) or noninverting OR gates for low inputs (case B). Open circuit inputs are equivalent to high levels.

b. Type A-2 Module. One type A-2 gate is located on each type A-2 module (fig. 3-12). This gate may be a noninverting AND gate for high inputs (case A) or a noninverting OR gate for low inputs (case B). Open circuit inputs are equivalent to high levels. Terminal 10 is not used on type A2 modules.

c. Type E-i Module. Two type E-1 gates are located on each type E-1 module (fig. 3-13). These gates may be noninverting OR gates for high inputs (case A) or noninverting AND gates for low inputs. The type E-1 gate outputs are used only as expander inputs for N-3 and 0-3 modules (f and h, below). Open circuit inputs to type El gates are equivalent to low levels.

PAPER TAPE READER LOGIC SIGNALS-MNEMONICS AND FUNCTIONAL NAMES

AAR	-	AUDIBLE ALARM RESET
ASG	-	ASSIGNED
AS -	-	ADVANCE SOLENOID
NASD	-	ADVANCE SOLENOID DRIVE
AM -	ALARM	
AR -	-	ALARM RESET
ARO	-	AUDIBLE RESET OPEN
ARC	-	AUDIBLE RESET CLOSED
ASW	-	ASC II SWITCH
BEL	-	BELL
CR -	CARRIAGE RETURN	
CB -	-	CLOSE BRACKET
CSTP	-	CONTINUOUS STEP TEST POINT
CC -	CYCLE COMPLETE	
CYCL	-	CYCLE
CRST	-	COUNTER RESET
DST	-	DATA STROBE
DTMF	-	DISPLAY TAPE MOTION FAILURE
DCAN	-	DISPLAY CANCEL
DTO	-	DISPLAY TAPE OUT
DINC	-	DISPLAY INVALID CHARACTER
DTT	-	DISPLAY TIGHT TAPE
DINH	-	DATA INHIBIT
DSW	-	DISPLAY START WHITE
DSG	-	DISPLAY START GREEN
DEL	-	DELETE
EOM	-	END OF MESSAGE
EOB	-	END OF BLOCK
GS -	GATED STEP	
HSI -	HIGH SPEED INHIBIT	
HSC	-	HIGH SPEED COUNT
IDC -	IDLE CHARACTER	
INC -	INVALID CHARACTER	
ISW	-	ITA SWITCH
IDS -	INPUT DATA STROBE	
INH -	INHIBIT	
LF -		LINE FEED
LTR	-	LETTERS
LSI -	LOW SPEED INHIBIT	
LTO	-	LOCAL TEST OPEN
LTC	-	LOCAL TEST CLOSED
LT -		LOCAL TEST
LSC	-	LOW SPEED COUNT
LFS	-	LETTERS FIGURES STROBE
MES	-	MESSAGE
NADV	-	NOT ADVANCE
NOT	-	NOT OUT OF TAPE
NRSS	-	NOT REMOTE CONTIN. STEP STROBE
NOA	-	NOT OPERATOR ALARM
NAST	-	NOT ALARM STOP
NAR	-	NOT AUDIBLE RESET
NSEL	-	NOT SELECT
NDTM	-	NOT DISPLAY TAPE MOTION FAILURE
NRSR	-	NOT REMOTE CONTINUOUS STEP RESET
NUL	-	NULL
NCAN	-	NOT CANCEL
NTMS	-	NOT TAPE MOTION STROBE
OSC	-	OSCILLATOR
OS -		OFFSET SOLENOID
OSD	-	OFFSET SOLENOID DRIVE
PRO	-	PILOT HEADER OPEN
PHC	-	PILOT HEADER CLOSED
PH -		PILOT HEADER
PRST	-	POWER ON RESET
RDY	-	READY
RST	-	RESET
RRST	-	REGISTER RESET
RSTO	-	RESET NORMALLY OPEN
RCS	-	REMOTE CONTINUOUS STEP
RCSR	-	REMOTE CONTINUOUS STEP RESET
RASD	-	RESET ADVANCE SOLENOID DRIVE
STPO	-	STOP NORMALLY OPEN
SF	-	SINGLE FEED
SFO	-	SINGLE FEED OPEN
SFC	-	SINGLE FEED CLOSED
STC	-	START CLOSED
STO	-	START OPEN
SASD	-	SET ADVANCE SOL.. DRIVE
STP	-	STOP
SOS	-	SET OPERATOR STOP
SO	-	SHIFT OUT
SI		SHIFT IN
SP	-	SPACE
SEL	-	SELECT
SDA	-	STEP DATA ACKNOWLEDGE
SINH	-	STEP INHIBIT
TDST	-	TRANSMIT DATA STROBE
TT	-	TIGHT TAPE
TMS	-	TAPE MOTION SET
TM	-	TAPE MOTION
ALS	-	ALARM STOP
ARC	-	AUDIBLE RESET (NC)
ARO	-	AUDIBLE RESET (NO)
BS	-	BACKSPACE
CAN	-	CANCEL
CCAN	-	CCU CANCEL
CDB1	-	CCU DATA BIT 1 (2, etc through 8)
CDC	-	CCU DATA CONTROL
CDS	-	CCU DATA STROBE
CLK1	-	CLOCK 1
CLXK	-	CLOCK 2
CNA	-	CCU NOT ASSIGNED
CODB	-	CODE SELECT B
CSEL	-	CCU SELECT
DB1	-	DATA BIT 1 (2, et through 8)
DC	-	DATA CONTROL
DR	-	DATA REQUEST
DR1	-	DATA REQUEST INHIBIT
DS	-	DATA STROBE
DSS		SHIFT L/F GENERATOR
EB1	-	ECHO BIT 1 (2, etc through 8)
ECOE	-	ECHO ERROR
EEST	-	ECHO ERROR STROBE
EPC	-	ECHO & PARITY CHECk
ERB	-	ERROR RESET B
FDR	-	FIRST DATA REQUEST
FLT1	-	FAULT 1
FLT	-	FAULT 2
FLTS	-	FAULT S
IDR	-	INTERNAL DATA REQUEST
IDS	-	INTERNAL DATA STROBE
INDP	-	INDEPENDENT
INH1	-	INHIBIT 1
INH	-	UNIVERSAL KYB INHIBIT
ISEL	-	INTERNAL SELECT
ITA1	-	ITA BIT 1 (2, etc through S)
IUKE	-	INHIBIT UK ENABLE

d. Type N-1 Module. Two type N-1 gates are located on each type N-1 module (fig. 3-14). These gates may be inverting OR gates for high inputs (case A) or inverting AND gates for low inputs (case B). The type N-1 gates may also act as simple inverters (case C). This is accomplished by tying all input terminals together. Open circuit inputs are equivalent to low levels.

e. Type N-2 Module. One type N-2 gate is located on each type N-2 module (fig. 3-15). This gate may be an inverting OR gate for high inputs (case A) or an inverting AND gate for low inputs (case B).

f. Type N-S Module. Two type N-3 gates are located on each type N-3 module (fig. 3-16). These gates may be inverting OR gates for high inputs (case A) or inverting AND gates for low inputs (case B). The type N-3 gates are used with an expander input supplied by type E-1 OR gates for case A and by type E-1 AND gates for case B. Open circuit inputs are equivalent to low levels.

g. Type 0-1 Module. Two type 0-1 gates are located on each type 0-1 module (fig. 3-17). These gates may be noninverting OR gates for high inputs (case A) or noninverting AND gates for low inputs (case B). The type 0-1 gates may also act as simple buffers (case C). This is accomplished by tying all input terminals together. Open circuit inputs are equivalent to low levels.

h. Type 0-$ Module. Two type 0-3 gates are located on each type 0-3 module (fig. 3-17). These gates may be noninverting OR gates for high inputs (case A) or non-inverting AND gates for low inputs (case B). The type 0-3 gates are used with an expander input supplied by type E1 OR gates for case A and by type El AND gates for case B. Open circuit inputs are equivalent to low levels.

i. Type FF-1 Module. One type FF-1 flip-flop is located on each type FF-1 module (fig. 3-17).

(1) In the case A configuration, the flip-flop can be : let by either a high level at the S input or a high level at the J input which is clocked by a negative step at the CL input. The flip-flop can be cleared by either a high level at the C input or a high level at the K input which is clocked by a negative step at the CL input. The clocked inputs are inoperative unless the J and K inputs are low.

(2) In the case B configuration, terminals 4, 5, and 7 are tied together to form a T input. When the S and C inputs are low, the flip-flop is toggled between the set and clear states by negative steps at the T input. Otherwise, the flipflop is set by a high level at the S input and cleared by a high level at the C input.

(3) Open circuits at the J, K, CL, or T inputs are equivalent to high levels. Open circuits at the S or C inputs cause intermittent erroneous changes of state.

(4) Unused J and K inputs are wired to terminal 1 (O volt). To permanently enable J, K, or CL inputs, these inputs are wired to terminal 6 (+4.5 volts).

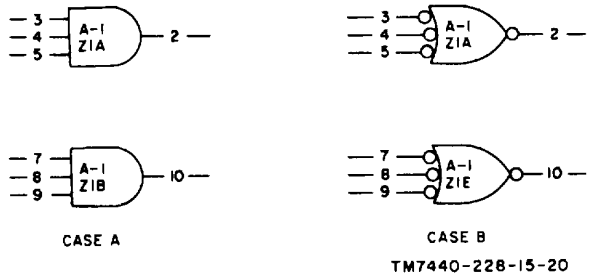


Figure 3-11. Type A-1 module, logic symbols.

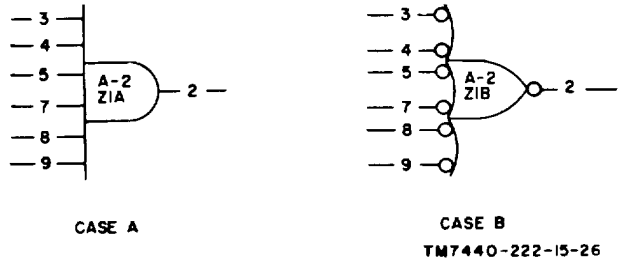


Figure 3-12. Type A-2 module, logic symbols.

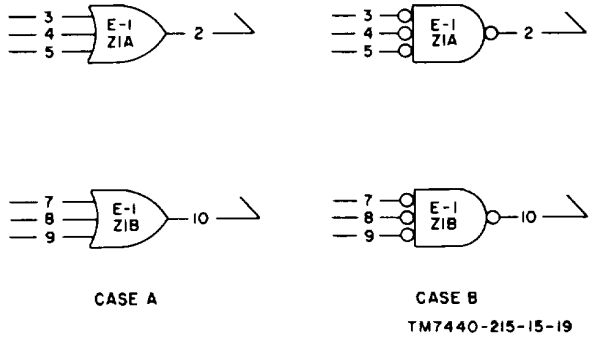


Figure 3-13. Type E-l1 module, logic symbols.

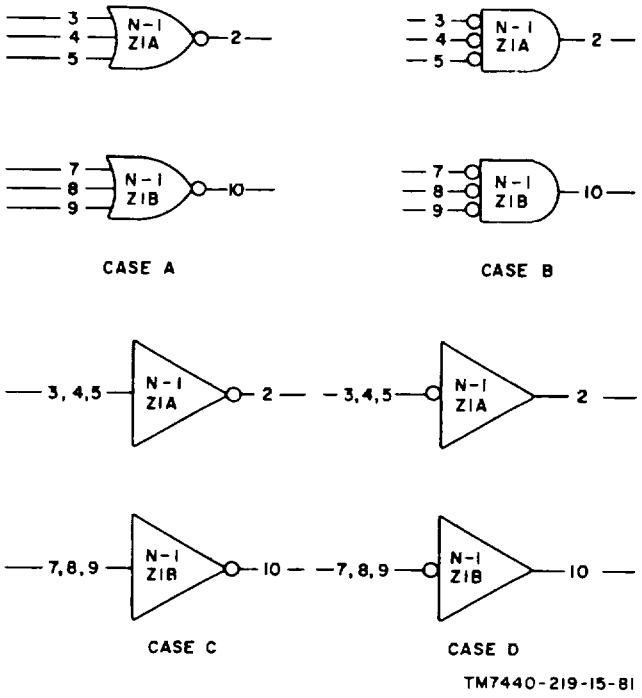


Figure 3-14. Type N-1 module, logic symbols.

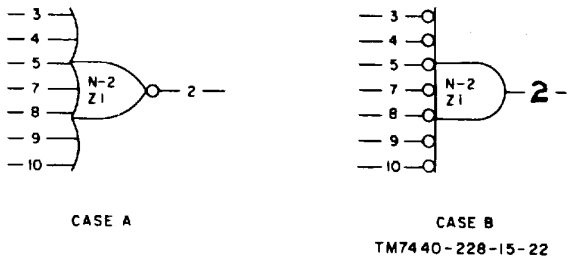


Figure 3-15. Type N-2 module, logic .symbols.

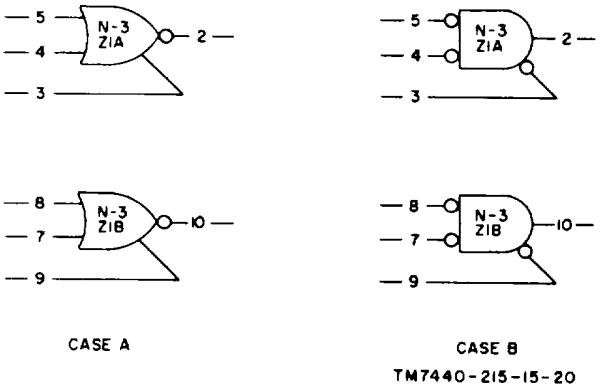


Figure 3-16. Type N-3 module, logic symbols.

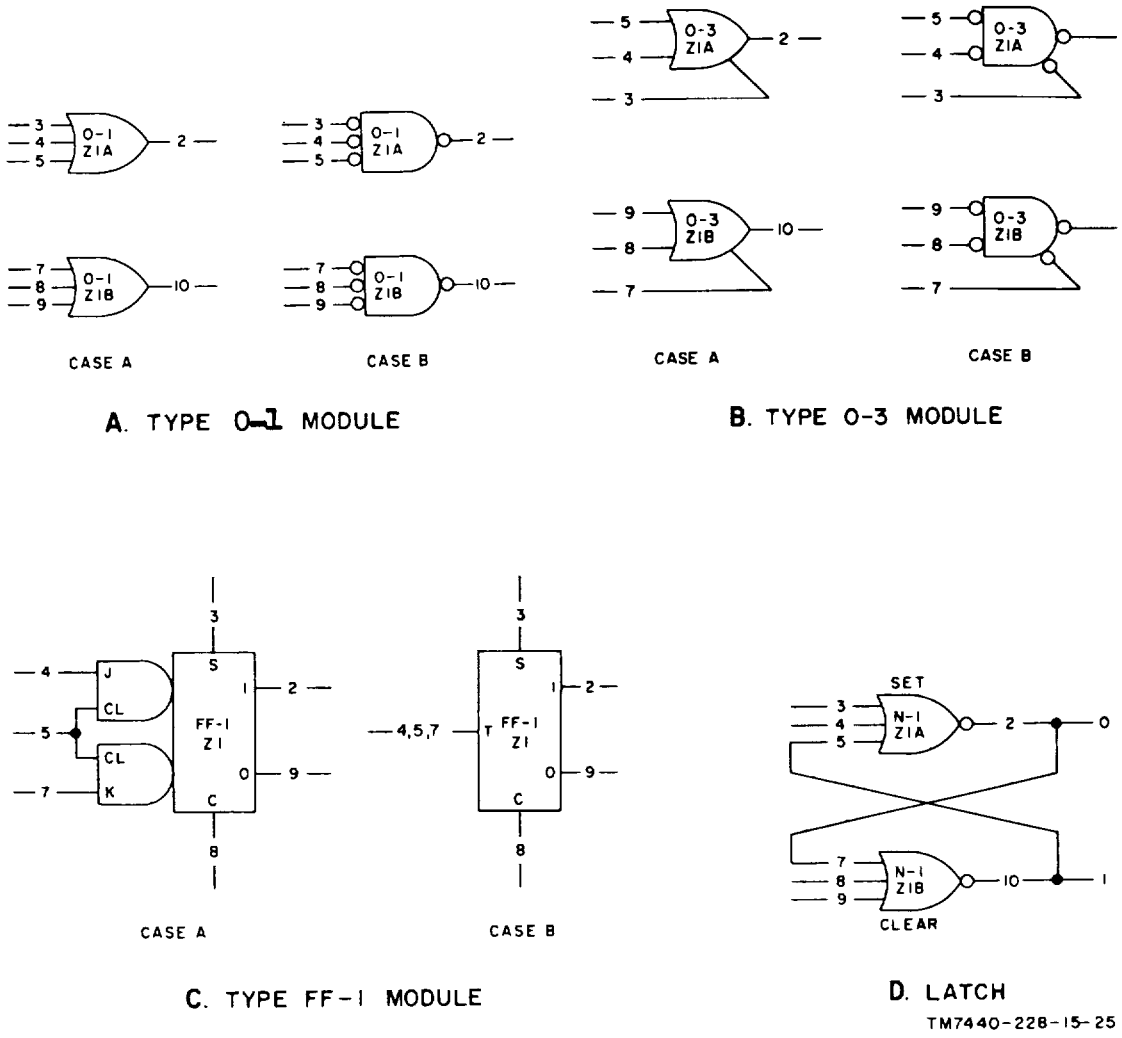


Figure 3-17. Type 0-1, 0-3, FF-1, and latch module, logic symbols.

3-20. Integrated Circuit Latch

a. A special combination of N-1 OR gates called a latch (fig. 3-14) is used extensively in the punched tape reader logic circuits. The latch functions as a flip-flop to register the occurrence of momentary signals. The two OR gates which make up the latch are called the set and clear sides of the latch. The 1 output of the latch which goes high when the latch is set is produced by the set side and the 0 output which goes low when the latch is cleared is produced by the clear side of the latch.

b. To set the latch, both inputs to the clear side must be low, and a high level must occur at either of the two inputs to the set side. The resulting low output of the set side then causes the clear side to produce a high level on the 1 line. This high level reinforces the external input to the set side so that even if the external input goes low, the latch remains set.

c. To clear the latch, both inputs to the set side must be low and a high level must be applied-ther clear side input, This action causes the ' output to go low and the O output to go high. Thus, the clear condition is reinforced and remains even after the high level to the clear side goes low again.

3-21. Discrete Circuit Logic Elements

a. Several types of discrete circuit logic elements are described in paragraph 3-22. Each discrete circuit logic element consists of a combination of standard circuit components such as resistors, diodes, etc. Thus, wire terminal numbers

for inputs and outputs are not assigned as for integrated circuit logic elements.

b. Reference designations for discrete circuit logic elements are (A), (B), (C), etc., prefixed by the reference designation of the printed circuit card on which they are located.

3-22. Operation of Discrete Circuit Logic Elements

The logic operation of each discrete circuit logic element type is described below. Logic symbols for each type are given, using typical tagging lines. The logic elements are grouped by the PC card on which they are located. Schematic diagrams and detailed circuit operation of each type of discrete circuit logic element are given in paragraphs 3-74 through 3-77.

a. PC Card A4. The following discrete circuit logic elements are located on PC card A4 (fig. 3-18).

(1) Type XMTR-IA. The type XMTR-1A interface transmitter converts a low level input from the punched tape reader to an open circuit for the CCU and a high level input to 0 volt for the CCU.

(2) Type XMTR-1B. The type XMTR-1B interface transmitter transmits 0 volt to the CCU when both inputs are high. When one or both inputs go low, an open ckt is sent to the CCU

(3) Type RCVR-1A. The type RCVR-1A interface receiver converts a 0-volt input from the CCU to +4.5 volts and an open circuit input from the CCU to 0 volt.

(4) Type RCVR-I1B. The type RCVR-1B interface receiver converts a 0-volt input from CCU to +4.5 volts and an open circuit input from the CCU to 0 volt.

(5) Type RCVR-2. The type RCVR-2 interface receiver converts a +6.2-volt input from the CCU to +4.5 volts and a 6.2 volt input *to 0 volt.*

b. PC Card A5. PC card A5 contains a single type of discrete circuit logic element. This is the type XMTR-2 interface transmitter (fig. 3-18) which transmits +6.2 volts to the CCU when both inputs are high. When one or both inputs go low, -6.2 volts is transmitted to the CCU.

3-22.1 Microcircuit Logic Elements

a. Lamp driver circuits used in the punched tape reader consist of thick film circuit components encapsulated within a square plastic case. These circuits are type SM-63 microcircuits, and are wired to the printed circuit cards through 10 terminals (1 through 10). Reference designations of the microcircuit modules are Z1, Z2, Z3, etc.. Each module contains three separate circuits. These circuits are shown separately on the logic diagrams and are designated as A, B, C, etc. (For example)le: Z1A Z1B, Z1C.) The output terminal from the A circuit is always terminal I; for the B circuit, terminal 3, and for the C circuit, terminal 5 (fig. 3-18.1).

b. Power supply inputs to the individual microcircuit modules are not shown on the logic diagrams since there is no provision for them in logic symbology; however, all lamp driver (SM63) microcircuit modules receive power supply inputs of +12 volts at terminal 7, -12 volts at terminal 8, and ground at terminal 10.

c. The lamp driver provides a current return path for indicator lamps. One side of the indicator lamp is connected to + 15 volts ac and the other side is connected to the output terminal of the lanmp driver. With no input (O volts) to the lamp driver, an internal resistor provides a high resistance path to ground to maintain a warming current on the lamp even though it is not lit. When a high logic level is applied to the input to the lamp driver, the output terminal becomes a low resistance, high current path to ground for the lamp, and the lamp lights.

d. Terminal 9 of all lamp driver modules is wired to 1,AMIP TEST switch A3Z4 which applies +12 volts de to the lamp driver module -when actuated. This switches the lamp driver on to light the associated lamp.

3-22.2 Transmitter and Receiver Microcircuit Logic Elements

Some models of the punched tape reader use thick film microcircuits as interface transmitters and receivers on PC cards A4 and A-). The microcircuits are constructed similar to the microcircuit lamp drivers (para. 3-22.1) but are wired to the printed circuit board through 14 terminals (1 through 14). Four types of transmitter and receiver microcircuits are supplied. Operation of each type is described as follows:

a. Type Polar Transmitter. Polar transmitters convert a 0 volt logic level to a -6 volt output, and a +4.5 volt input to a +6 volt output. Provisions are made to AND up to three input signals to the polar transmitter. When

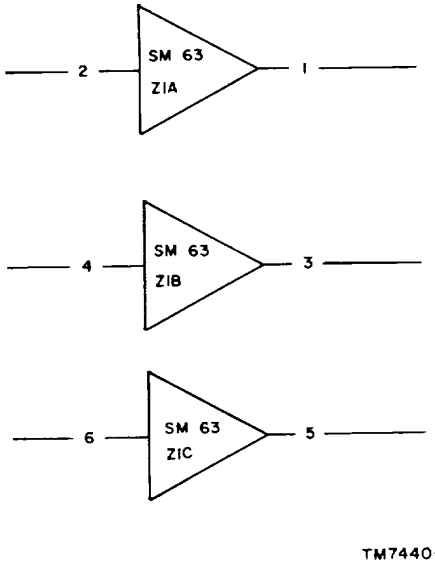


Figure 3-18.1. Micro circuit lamp driver logic symbol.

this option is used, all inputs must be high before +6 volts is transmitted. When one or more inputs are low, -6 volts is maintained at the output. Five slightly different variations of polar transmitter microcircuit modules exist, because of different output rise and fall time characteristics and number of inputs that may be ANDed together. Inputs are ANDed by applying the signals to terminals of the microcircuit module designated as diode inputs. If the input signal is applied to the direct input terminal, the output signal switches between -6 and + 6 volts as the input signal varies between 0 and +4.5 volts, as described previously. Each type of polar transmitter is identified by the basic type number (T00023) and a dash number. Power supply inputs, and input and output terminals for each dash number polar transmitter is shown below. A dash in the chart indicates no connection for that function. Terminals not listed are not used.

	Terminal Number T00023				
Function	**-001**	**-002**	**-003**	**-004**	**-005**
Direct input ----------	14	14	14	14	14
Diode input 1--------	2	2	-	2	-
Diode input 2---------	3	3	-	-	-
Diode input 3---------	12	-	-	-	-
Output ----------	8	8	8	8	8
+ 12 volt dc supply__	13	13	13	13	13
- 12 volt de supply__	1	1	1	1	1
Ground ----------	7	7	7	7	7

b. Type T00024 Polar Receiver. Polar receivers convert a +6 volt input to +4.5 volts and a -6 volt input to 0 volts. Provision is also made to allow the receiver output to be clamped to the 0 volt output level by applying a high level on

the inhibit input. Two variations of polar receiver microcircuit module are supplied. One (T00024-001) contains two separate but identical circuits inside the module while the other (T00024-002) contains a single receiver circuit. Power supply and input and output connections for the polar receivers are shown below. A dash in the chart indicates no connection for that function. Terminals not listed are not connected.

	Terminal Number T00024	
Function	**-001**	**-002**
Input No. 1 ----------	1	1
Output No. 1 ----------	11	11
Inhibit No. 1 ----------	13	1
Input No. 2 ----------	7	-
Output No. 2----------	9	-
Inhibit No. 2 ----------	2	-
+ 12 volt dc supply---------	12	12
- 12 volt de supply----------	6	6
+4.5 volt dc supply---------	10	10
Ground----------	4	4

*c. Typ*e T00121 Neutral Receiver. Neutral receivers convert a 0 volt input from the CCU to +4..) volts and an open circuit input to 0 volts. In addition, some variations of the microcircuit neutral receivers have provisions for maintaining the output at 0 volts by application of a separate inhibit signal. Four variations of neutral receiver microcircuits are supplied, with the differences being in the number)er of separate circuits contained in each module and inhibit levels used. Microcircuits T00121-001 and -002 contain three similar, but separate, receiver circuits, while T00121-003 and -004 modules contain only two. The T00121-002 and -004 modules also provide connections for inhibit signals. Inhibit A requires a high level to clamp the output to 0 volts, and inhibit B requires a low level (O volt) signal to maintain the 0 volt output. The chart below show-s input, output, and power supply connections for the neutral receivers. A dash in the chart indicates no connection for that function. Terminals not listed are not connected.

	Terminal Number T000121			
Function	**-001**	**-002**	**-003**	**-004**
Circuit 1:				
Direct input----------	14	14	14	14
Diode Input----------	12	-	-	-
Inhibit A[a]----------	-	-	-	-
Inhibit B[b]----------	-	3	-	-
Output----------	8	8	8	8

	Terminal Number T000121			
Function	**-001**	**-002**	**-003**	**-004**
Circuit 2:				
Direct input----------	13	13	13	13
Diode Input----------	2	-	-	-
Inhibit B[b]----------	-	-	-	-
Output----------	10	10	10	10
Circuit 3:				
Diode input----------.	9	9	-	-
Output----------.	6	6	-	-
+ 12 volt dc supply	11	11	11	11
- 12 volt dc supply	1	1	1	1
+4.5 volt dc supply---	7	7	7	7
Ground	5	5	5	5

[a]. Requires high level to inhibit.
[b] Requires low level to inhibit.

d. Type T00122 Neutral Transmitter. Neutral transmitters convert +4.5 volt logic levels to 0 volts for transmission and low level inputs to an open circuit. Four variations of neutral transmitter are supplied, with each having two or three similar, but separate, circuits and diode inputs which may be connected to provide an AND function for input signals. The following chart lists the input, output, and power supply connections for the neutral transmitters. A dash in the chart indicates no connection for that function. Terminals not listed are not connected.

	Terminal Number T000122			
Function	**-001**	**-002**	**-003**	**-004**
Circuit 1:				
Direct input----------	13	13	13	13
Diode Input----------	2	2	-	2
Diode Input----------	3	3	-	3
Output----------	1	1	1	1
Circuit 2:				
Diode input ----------	10	-	-	-
Diode input----------	11	-	-	-
Output----------	5	-	-	-
Circuit 3:				
Direct input----------	8	8	8	8
Diode input----------	9	9	-	-
Diode input----------	6	6	-	-
Output----------	7	7	7	7
+ 12 volt dc supply--	12	12	12	12
- 12 volt dc supply---	14	14	14	14
Ground----------	4	4	4	4

e. Connection of Transmitter and Receiver Mlicrocircuit Modules. Transmitter and receiver microcircuit modules are connected through 14 terminals. Figure 5-1.2 shows the location of these terminals.

	Terminal Number

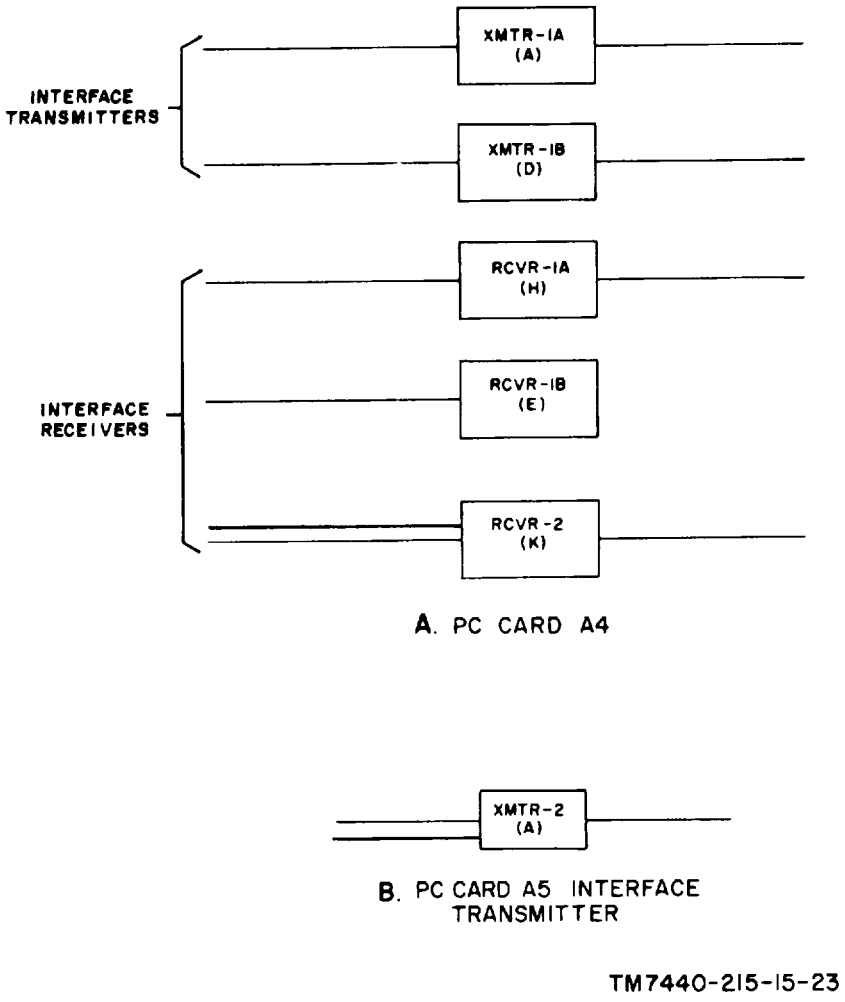


Figure 3-18. PC cards A4 A5 and discrete circuit logic element symbols.

3-23. Ac Circuits

(fig. 8-3)

The ac input circuit receives the external ac power and distributes the power to the various circuits of the punched tape reader. The 120-volt single-phase input power is routed through power filters FL1 and FL2 in filter assembly FL1 to power supply PS1 terminal board TB1 and (when power supply PS-2 is used), through power filters FL3 and FL4 in filter assembly FL1 to power supply PS2 terminal board TB1. The filters eliminate high frequency noise from the ac input. The power supplies provide power for identical punched tape reader component chains. The components associated with power supply PS1 will be discussed. The ac power is switched through power supply PS1 to cabinet blower B1 and to reader mechanism assembly A2. Switching control to PS1 is provided by AC POWER pushbutton Z2 on control panel As. rower supply PS1 produces a 24-volt de output which, when returned through the closed contacts of AC POWER switch-indicator Z2 and sequence module A12 in the power supply, turns on ac power to reader mechanism assembly A2 drive motor and cabinet blowers. When power is turned on the 24-volt de output turns on the indicator in AC POWER pushbutton Z2. The power supply also provides 15-volt ac power for illuminating the various indicator lamps on control panel A3.

3-24. Dc Circuits

(fig. 8-3)

The de voltages required by the punched tape reader are generated in the power supply. The following regulated voltages are supplied: +12 volts dc, -12 volts dc, +4.25 volts dc and -48 volts dc. These voltages are automatically turned

on in a specific sequence, as controlled by a sequencing module in the power supply, in order to supply bias voltages to circuit elements in such a way that no damage is done to these elements. Also, in case of a failure in any one of the dc supplies, or when the equipment is turned off, the power supplies are turned off in a predetermined sequence. Turn-on and turn-off of the dc power supplies are controlled by AC POWER switchindicator Z2. DC POWER indicator DS1 on the control panel indicates when the dc power supplies have been turned on. The reason for using the same switch to turn on ac and dc power is because the sequence of power turn-on requires ac power to be supplied to the drive motor and blowers before turning on the dc power supplies.

3-25. Power Supply, Block Diagram

The power supply consists of four similar regulator circuits, each containing overvoltage and current-limiting circuits, which provide regulated +4.75 vdc, +12 vdc, -12 vdc, -48-volt dc power for the punched tape reader. Also included in the power supply is a sequencing circuit which turns on and off the regulators and the ac power to the drive motor and fans in a predetermined manner, when the punched tape reader is started or stopped. The sequencing circuit also turns off the regulators and the drive motor and fans if there is a failure in any portion of the power supply. Fuses mounted on the front panel of the power supply protect each regulator assembly, the ac powerlines to the drive motor and fans, and the main ac power transformer in the power supply. The AC POWER switch-indicator on the control panel of the punched tape reader is used to turn the power supply on and off. The sequencing circuit lights the lamps in the pushbutton switch when the power supply is on.

3-26. Rectifiers and Voltage Regulators

(fig. 3-19)

a. The power supply receives 120-volt, 50or 60-Hz ac power, which is applied to the primary of the main power transformer. Ac voltages from the secondary windings are applied to five fullwave rectifier and filter networks, four of which supply input dc voltages to the four regulator circuits; the fifth rectifier supplies the unregulated 24-volt dc power required by the sequence module.

b. The four regulating circuits operate similarly; therefore only the +4.75-vdc regulator is illustrated in figure 3-19 and described in (1) through (3) below.

(1) A nominal +10 vdc is supplied from the rectifier and filter to a series regulator circuit in the +4.75-volt regulator. The series regulator, under the control of the regulator control circuit, acts as a variable resistance load which reduces the unregulated 10 volts dc to an accurately regulated +4.75 volts dc. Variations in the output voltage from this value are sensed by the voltage sensor network, which applies a corresponding control voltage to the regulator control circuit. This circuit, in turn, controls the series regulator in a way which changes the voltage drop across this circuit by the proper amount to maintain the output voltage at +4.75 volts dc.

(2) As a safety feature, an overvoltage sensor circuit and an over-current sensor circuit are included in the regulator circuits. If the output voltage momentarily rises above 115 percent of the rated output, this is sensed by the overvoltage sensor. A control voltage is then applied to the regulator control circuit to cause the series regulator to produce a sharp drop in the output voltage. This action should return the regulator circuit to the proper output voltage. If the overvoltage condition is due to a failure in the regulator circuit, rather than to a transient condition, it cannot be corrected by the overvoltage circuit. In this case, the excessive voltage causes the fuse at the input of the series regulator circuit to blow, protecting the regulator from further damage.

(3) If the output current rises above 120 percent of rated value, this is sensed by the overcurrent sensor, which provides a control voltage to the regulator control circuit to cause the series regulator to produce a sharp output voltage drop which practically turns off the series regulator. A corresponding severe current drop is produced. This action produces current-limiting during load faults in which the short circuit currents are less than the rated currents, effectively minimizing power dissipation at these times.

3-27. Power Turn-On and Turn-Off Sequencing Control

(fig. 3-20)

a. In order to minimize the initial power drain upon turn-on of the punched tape reader (by means of the AC POWER switch-indicator), and to protect the electronic circuits in the punched tape reader from damage due to the improper sequence of application of bias and control voltages when power is initially turned on, the various dc voltages required by these circuits are supplied by the power supply in a specific predetermined sequence. Also, if the punched tape reader is turned off by means of the AC POWER switchindicator, the power supplies are automatically shut down in the opposite sequence to turn-on, with certain specific delays between individual power turn-off being included. In addition, if there is a failure in any of the circuits of the power supply, the complete power supply is automatically shut down in a specific sequence, again protecting the punched tape reader circuits from damage due to improper operating voltages. The sequencing circuit also controls the turn-on and turn-off of the ac power to the drive motor and the fans, assuring that this power is supplied before the various de voltages are supplied, and turning off this power when the punched tape reader is shut down or when there is a failure in the power supply. The 15-volt ac lamp power for the AC POWER switch-indicator and the other indicators of the punched tape reader control panel are also controlled by the sequencing circuits. When power is turned off, all lamps will be dark.

b. All of the automatic power sequencing circuits are mounted on sequencing module A12, and consist basically of two types of voltage level sensors. One type senses whether each of the regulated dc output voltages is within 90 percent of rated output level and the other type senses when the output level of certain of the power supplies falls below 1.8 volt or 10 percent of rated value, whichever is higher. The 90 percent of rated value represents the minimum output voltage level at which a regulator is considered on and operating normally. During the turn-on sequence, these sensors determine when a particular regulator is on and providing the proper output voltage amplitude, and then provide the control to turn on the next regulator in the power turn-on sequence. The 90 percent sensors are also used to sense if there is a less-than-normal output from a regulator, indicating a failure in this regulator. If this occurs the particular sensor involved initiates an automatic turn-off procedure which turns off all the regulators in the proper sequence.

c. The turn-off procedure for each regulator is a two-stage action. First the regulator output voltage is reduced to a value of approximately 10 percent of rated value (or 1.8 volt, as applicable). The regulator is then considered to be off. At a later stage of the turn-off sequence, a second control action is applied from the sequence module to the regulator to completely turn off the output voltage.

d. The operating voltage for the sequence module is supplied by the 24-volt rectifier-filter. This voltage is converted to a regulated 15.0 volts dc, which is used as the bias and collector voltages for the transistors of the sequence module. A 90 percent fault sensor monitors the output of this regulator as part of the overall power failure monitoring control. The sequence module operates as follows:

(1) When the AC POWER switch-indicator is depressed to start operation of the punched tape reader, it momentarily applies the 24 volts dc from the 24-volt dc rectifier-filter network to a self-latching relay in the sequence module. This action energizes the relay, which holds itself energized after the AC POWER switch-indicator is released. The latching relay applies the 24 volts dc to a relay driver in the sequence module, which then energizes the ac power relay. This action

applies the auxiliary ac power to the drive motor, the fans, and to all control panel indicator lamps.

The AC POWER switch-indicator lights to indicate that the ac power is now on. In addition, the 24 volts dc is applied to the 15.0-Nvolt dc regulator in the sequence module which produces a regulated 15.0-volt dc output. which is required to operate the other circuits of the sequence module. This action is the start of the automatic turn-on for the four regulators. The regulators are turned on in the following sequence: 12 volt, de, +4.75 volt de, + 12 volt dc, and -48 volt dc.

(2) When the output of the 15.0-volt regulator reaches 90 percent of rated value (12 volts dc), the + 15.0-volt 90 percent sensor applies a bias voltage to the series regulator of the 12-volt. regulator circuit. Until this bias is applied, the regulator circuit is disabled and produces no output. A sample of the outputs of all the regulators are applied to individual 90 percent sensors on the sequence module. Thus, when the output of the --12-volt regulator builds up to at least 90 percent of rated value (-10 volts de), the -12-volt 90 percent sensor applies a turn-on bias to the + 4.75-volt regulator, to turn on this regulator. This action continues, with the applicable 90 percent sensors applying a turn-on bias to the corresponding voltage regulator.

(3) The turn-off sequence is started by again pressing in the AC POWER switch-indicator. This action applies the 24-volt dc power to a pulse generator which produces a pulse which is applied to the overvoltage sensor circuit of the -48-volt regulator to cause this circuit to sharply reduce the output voltage of the -48-volt regulator. When the output voltage drops to 10 percent of rated value, or less, the regulator is considered to be off. A -48-volt 10 percent voltage sensor senses that the voltage has dropped to the off amplitude and it applies a gate voltage to the overvoltage sensor circuit in the + 12-volt regulator to turn off this regulator. As the output voltage of the + 12-volt regulator now drops below 90 percent of rated value, this is sensed by the + 12-volt 90 percent sensor. The sensor now removes the series regulator bias from the -48-volt regulator circuit (previously turned off to less than 10 percent of rated output), completely turning off the 48-volt regulator. As the output of the + 12-volt regulator continues falling to 10 percent of rated value, the + 12-volt 10 percent level sensor senses this condition and applies a gate voltage to the overvoltage sensor circuit, of the +4.75-volt regulator. This action turns off the +4.75-volt regulator. The action continues in a manner similar to that previously described in the following sequence. The +4.75-volt 90 percent sensor turns off the +12-volt regulator completely. Then the + 4.75-volt 10 percent sensor applies a voltage to the relay driver clamp, which deenergizes the ac power relay removing the ac power from the drive motor and fans. At the same time, the voltage from the +4.75-volt 10 percent sensor is applied to a 300-ms timer. Approximately 300-nls later, the timer circuit operates a pulse generator which generates a pulse to turn off the -12-volt regulator. The 12-volt 90 percent sensor then completely turns off the +4.75-volt regulator. The pulse produced by the pulse generator is also applied to the turn-off control for the latching relay. The. turn-off control then deenergizes the relay, interrupting the 24-volt de power applied to the +15.0-volt dc regulator. This completes the sequenced power turn-off procedure.

e. If there is a failure on any of the power supplies, the complete power supply is automatically shut down in a predetermined sequence which is somewhat different from the normal shut down sequence. A regulator is assumed to have failed if its output voltage drops to 90 percent or less, of rated output. If the -48-volt, +12-volt, or +4.75-volt supply fails all of these three supplies are turned off simultaneously and then, after the same 300 ms time delay required for the normal turn-off procedure, the -12-volt supply is turned off, as is the ac power and the regulator +15.0-volt supply. If the -12-volt supply has failed, the other supplies are turned off simultaneously and almost immediately, and if the 15-volt regulator in the sequence module fails, this initiates turn-off of the -12-volt supply to produce complete power shutdown. A failure in a supply is sensed by the 90 percent sensor associated with that supply. The sensor then operates a silicon control rectifier (SCR) driver to initiate turn-off by firing the associated SCR in the applicable regulator. A single SCR driver is controlled by any one of the 90 percent sensors for the four regulators, and this SCR turns off the -48-volt, -+4.75-volt, and +12-volt regulators simultaneously. The -12-volt regulator is then turned off in the normal manner, as previously described.

f. The SCR driver used for turn-off if a failure is detected must be prevented from operating during power turn-on. This is accomplished by the driver clamp timer and driver clamp circuit, which inhibits the SCR driver for a period of 1.8 second after the start of power turn-on. The

same circuit inhibits the operation of the 10 percent sensors during turn-on, since these sensors would also interfere with the turn-on sequence. During the normal turn-off sequence the SCR driver must again be inhibited otherwise it would interfere with the normal turn-off sequence. This is accomplished by the 80 ms timer.

3-28. Detailed Circuit Description of Rectifiers and Voltage Regulators (fig. 8-4)

a. Input Rectifier Circuits. The power supply receives 115-volt, 50or 60-Hz ac power at terminals 1 and 2 of terminal board TB1. A 10-ampere fuse, A10 F5, is included in the line from the terminal board to the primary of transformer A9TI,The secondary of this transformer provides ac voltages to four full-wave rectifiers. The full-wave rectifiers are as follows: Diodes A4CR4 and A4CR3, with filter capacitor A9C6, provide a nominal -68-volt dc input to the 48-volt de regulator circuit. Diodes A5CR3 and A5CR4, with filter capacitor A9C5, provide a nominal -2ClIt dc input to the -12-volt dc regulator circuit. Diodes A5CR1 and A5CR2 and filter capacitor A9C4 provide a nominal +20-volt dc input to the +12-volt dc regulator circuit. Diodes A4CR1 and A4CR2, with filter capacitors A9C2 and A9C3, provide a nominal +10-volts dc for the +4.75-volt dc regulator.

(1) A pair of ac outputs are picked off taps 9 and 7 and 5 and 7 of the secondary of transformer A9TI to provide 15-0-15-volt ac power for the indicator lamps of the punched tape reader. Fuses A10 F9 and AlOF10 are included in each line to protect the transformer from an overload. The application of the 15-volt ac lamp illumination power is controlled by relay A9K1, as is the ac power to the drive motor and fan. The relay is energized by the sequence module as part of the power turn-on procedure.

(2) A second output winding, taps 12 and 13 on the transformer, provides a nominal 23volt ac input to a full-wave bridge rectifier, A15CRI, CR2, CR3, CR4, and filter capacitor A9C1 which provides a nominal 24-volt dc input to the sequence module (para 3-29).

b. +4.5-Volt Dc Regulator Circuit

(1) Voltage regulation. The unregulated 10 volt-dc output of rectifier A4CR1 and CR2 is applied through fuse A1OFX1 to the series regulator consisting of transistors A4Q1 and Q2 connected in parallel. The transistors act as a variable resistance in series with the 10 volts de to drop this voltage to +4.75 volts at the output of the regulator (junction of A4R1 and R2). The regulator control circuit senses variations in the output voltage from +4.75 volts and adjusts the voltage drop across the series regulator transistors to compensate for these variations, thus maintaining a +4.75-volt dc output.

(a) The 10 volts de is applied to the collectors of transistors A4Q1 and Q2 connected in parallel. The voltage drop across the transistors is controlled by the base voltage applied to the transistors, which is supplied by the regulator control circuit. The outputs of the two transistors are taken from their emitters and coupled through emitter resistors A4R1 and R2, respectively to a junction point and to the regulator output terminal, pin 2 of TB2. The resistors provide emitter degeneration to assure satisfactory current sharing between the two series regulator transistors.

(b) Zener reference diode A1CR6 provides a regulated voltage to a voltage divider consisting of A1R23, A1R24, and A1R25, which provides a fixed bias to the base of A1Q5 (part of differential amplifier A1Q5 and Q6). A sample of the output voltage of the regulator is applied to the base of Q6. The wiper arm of potentiometer A1R24 is set so that during the stable condition of the regulator the proper voltage is picked off this voltage divider to operate the regulator circuit to provide a +4.75-volt dc output. Should the output voltage vary from this value, the voltage at the base of Q6 increases or decreases proportionately, producing a corresponding variation in the output voltage of Q6. Since the base of A1Q5 is held at a constant voltage by Zener regulator diode A1CR6, the common emitter of Q5 and Q6 is held at a voltage which only varies with variations in transistor characteristics or variations in bias. However, since transistors Q6 and Q5 are of the same type, temperature variations, bias voltage variations, aging and other variations of this type have the same effect on both transistors and there is no net change in the base-to-emitter voltage at Q6. Only a change in the base voltage at Q6 produces a net change in the collector voltage at Q6. The voltage at the collector of Q6 is applied to the base of AIQI. If there has been an increase in the regulator output voltage above 4-4.75 volts, the voltage ap-

plied to Q1 decreases, decreasing the voltage at the base of emitter follower A4Q3, which reduces the voltage at the parallel bases of series regulators A4Q1 and Q2. The voltage drop across these transistors increases, reducing the output voltage back down to +4.75 volts dc. A similar analysis applies if the output voltage has fallen below +4.75 volts dc.

(c) The emitter follower stage A4Q3 is used as a current amplifier to provide adequate current amplification for the series regulator.

(2) Current limiting. The sum of the currents at the emitters of series regulators A4QI and Q2 is the output current of the voltage regulator. Parallel connected resistors A1R4 through R9 comprise a summing network which samples this current and provides a proportional voltage at the base of Q4. By biasing diode A1CR4 in a forward direction the net base-emitter threshold voltage for Q4 is set to cut off Q4 during normal operation. The use of diode CR4 to establish base bias provides temperature stabilization and permits operation at low signal levels. If the load current on the series regulator increases to 120 percent of rated value, the voltage drop across current-sensing resistors A1R4 through R9 increases sufficiently to turn on A1Q4. This causes a sharp voltage drop at the collector of Q4, which is connected to the base of Q1, producing a corresponding voltage drop at the base of. Q1 which severely reduces the conduction of series regulators A4Q2 and Q1. This action causes a sharp decrease in output voltage, further forward-biasing A1Q4, and reinforcing the current-limiting action. As a result, current-limiting occurs at lower load currents. This type of current control, where the current reference is a function of the output voltage, results in short circuit currents that are less than rated currents, which minimizes power dissipation in the series regulator stage during load faults.

(3) Overvoltage protection. Zener reference diode A1CR5 provides a constant voltage to a voltage divider consisting of A1R29, A1R30 and A1R31, which provides a fixed bias to the base of A1Q7. Transistor A1Q7 is part of differential amplifier A1Q7 and A1Ql. A sample of the output voltage is applied to the base of A1Q5. The wiper arm of potentiometer A1R30 is adjusted so that with normal output voltage A1Q8 is cutoff because of the emitter bias across common emitter resistor A1R35. With A1Q8 cutoff, the base of A1Q9 is at supply potential and A1Q9 is also cutoff. If the output voltage should exceed the normal value of 4.75 volts by 115 percent (5.5 volts), the portion of the voltage coupled to the base of A1C causes A1Q to conduct. The voltage drop across collector load resistor A1R34 lowers the base bias on A1Qg, driving it into conduction, When A1Q9 conducts it applies a positive level to voltage divider A15R5,A15R6 which fires silicon control rectifier A14CR2, causing the diode to conduct heavily and drop the rectifier output voltage to a low level.

(4) Overcurrent Protection. 'The overcurrent protection transistor A1Q4 operates at a relatively small positive voltage level in the 4.75-volt supply, since this is the level of the output voltage being monitored. As a result, because of transistor characteristics the bias levels are insufficient to guarantee that the transistor will actually turn on if an overload condition is reached. To assure that the transistor turns on, it is supplied with a regulated negative bias from emitter follower AlQ3, which is connected to regulator Zener diode AICR1. The negatives bias supplied is approximately -11.5 volts. This same bias is supplied to the +12-volt supply but is not required by the negative voltage regulators.

c. Turn-On and Turn-Off. The regulator circuit is automatically turned on and/or turned off by the sequence module, A12. Turn-on is accomplished by the sequence module, which turns on a transistor whose collector is connected to pin W of A9J4. Before turn-on by the sequence module, an open circuit exists at pin W and A1Q2 cannot conduct. When the transistor in the sequence module is turned on, it provides a ground at pin W and current now flows through A1CR2 and CR3 and transistor Q2 is driven to the conduction state. This action produces a base bias for Q1 and collector bias for Q6. The base bias for Q1 causes it to conduct and produce a current source for A4Q3 which then turns on the series regulator A4Q1 and Q2. Turn off is accomplished by firing the over-voltage protection SCR A14CR2 thus dropping the output voltage to near zero. Refer to paragraph 3-29 for a description of the operation of the sequencing module. Diodes A1CR2 and A1CR3 provide protection

for transistor A1Q2 against excessive back bias.

d. Other Regulator Circuits. The -8 vdc regulator, +12 vdc regulator, and -12 vdc regulator operate in a manner similar to the +4.75volt regulator. The differences are as follows:

(1) In the -48-volt supply, transistor A3Q4 controls the turn-on in response to the switching action in the sequence module. To turn on the -48-volt supply, a bias level of approximately +15 volts is applied at pin N of A9J4 to the emitter of Q4. This supplies a current source to the series regulator in A6. Current overload protection is provided by current sensor A6R2 and current overload transistor A3Q1. If there is a current overload, A3Q1 is turned on, reducing the negative voltage level at the collector of Q1, turning on Q2. This turns off the regulator stage, dropping the output voltage, as described for the +4.75-volt regulator. Normal voltage regulation is provided by differential amplifier A3Q6, Q7 which controls regulator control transistor A3Q3, through voltage splitter Q5. Transistor Q5 permits lower bias levels to be used than those normally available from the relatively high voltage levels which exist in the -48-volt supply.

(2) For the -12-volt supply, turned-on control from the sequence module consists of supplying a bias of approximately +15 volts at pin V of A9J4 to transistor A2Q8, turning it on. This supplies the required current source to the -12volt series regulator. Other circuit operations are the same as for the +4.75-volt supply previously described.

3-29. Detailed Circuit Description of Sequence Module (A12)

(fig. 8-5)

The sequence module turns the complete power supply on and/or off in a predetermined manner when the AC POWER switch on the control panel is operated. Also, the failure of any one regulated output turns off the remaining outputs in a proper sequence.

a. Input Circuit and Ac Relay Control. The 24volt dc full-wave rectifier on module i15 supplies unregulated 24 vdc power to the normally open contacts of relay K1 on the sequence module, and to the AC POWER switch-indicator on the punched tape reader control panel. When this switch-indicator is operated, its contacts are momentarily closed, applying the 24 vdc through diode CR21 and resistor R60 to the coil of relay K1, energizing it. The relay is then latched on by the 24 vdc through its now closed contacts, through diode CR32 and resistor R60. Thus, this relay stays energized when the AC POWER switch is released. The voltage applied to the coil of relay K1 is also applied to the base of Q1, which turns it on, causing it to conduct current. This action energizes the auxiliary ac power relay, A9K1 (shown on the regulator circuit), applying the auxiliary 115 vac power to the fans, the drive motor, and the AC POWER lamp and the other indicator lamps.

b. Voltage Regulator. The unregulated 24 vdc power is coupled through the contacts of energized relay K1 on the sequence module to the 15volt regulator. The regulator converts the unregulated 24-volt dc power to regulated 15.0-volt dc power. The 24 volts is applied to series regulator Q33, which acts as a variable load in series with the input voltage, varying its internal impedance to maintain the output voltage at +15.0 vdc. The series regulator is controlled in the following manner:

(1) The output voltage of the regulator is developed across voltage divider R72, R73 and R74. Capacitor C10 removes high frequency variations on this voltage. Potentiometer R73 is adjusted to obtain the required +15.0-volt output when the overall control loop is stabilized. Should the output voltage tend to change from +15.0 volts, the voltage applied to the base of Q35 changes proportionately. The emitter of Q35 is held at a constant voltage by Zener regulator diode CR27 so that only a variation in base voltage can cause a change in collector voltage of Q35. The voltage change at the collector of Q35 is applied to the base of emitter follower Q32, which, in turn, changes the voltage at the base of Q33. This action varies the voltage drop across Q33 proportionately, returning the output voltage to the required level. For example, an increase in the output voltage produces an increase in the voltage at the base of Q35, which results in a subsequent decrease in the voltage at the base of Q32 and Q33. This increases the voltage drop across Q33, lowering the output voltage to the required value. Transistor Q31 is connected from the base to collector of Q32 and acts as a shunt path for base current of Q32. In this manner Q31 tends to maintain a constant current source at the base of Q32, minimizing excessive current variations through the series regulator.

(2) For normal output currents, transistor Q34 is reverse biased by voltage divider R67 and R68 and is cut off. If the output current rises above approximately 500 ma, a sufficient voltage drop is developed across resistor R69 to overcome the back bias on Q34, causing it to conduct. This creates a shunt path for the output current, limiting the output current to a maximum of 500 ma.

c. Turn-On Sequence. After latching relay K1 has been energized, causing the voltage regulator to provide the regulated +15.0-vdc output, the regulators are turned on automatically as follows: -12 vdc, t4.75 vdc, +12 vdc, and -48 vdc. The sequence module performs this turn-on action as follows:

(1) -12 volt turn-on. The +15.0-vdc output of the +15-vdc regulator in the sequencing module is applied to voltage divider R89 and R80. The voltage at the junction of R89 and R80 is applied to the base of Q39 whereas a reference voltage from Zener diode CR30 is applied to the emitter of Q39. The reference voltage keeps Q39 cut off until the voltage applied to voltage divider R89 and R80 reaches a level of at least 12 volts dc. This occurs after the 15-volt regulator has been turned on and reaches 90 percent of rated output. Conduction of Q39 drives Q38 into conduction, providing the bias voltage required to operate the series regulator in the -12 volt regulator. This turns on this regulator. The collector of Q39 is at approximately -24 volts dc before it is turned on and at approximately +15 volts dc after it is turned on.

(2) -12-volt output sense (90 percent). A sample of the output of the -12-volt regulator is applied to the base of transistor Q36 of differential amplifier Q36, Q37. Voltage divider R75 and R76, connected across the output of the 15.0volt dc regulator, provides a reference voltage to the base of Q37, The output at the common emitter of Q36 and Q37 keeps Q36 cut off until the -12-volt regulator output reaches at least -10.80 volts. When the output of the -12-vdc regulator exceeds the -10.80 volts, Q36 is driven into conduction. The collector of Q36 is connected to the +4.75-vdc regulator turn-on circuit, to control turn-on of this regulator.

(3) +4.75 volt turn-on. When Q36 is driven into conduction, its collector goes from approximately +15 volts de to -3 volts de causing Q21 to conduct. This, in turn, causes Q18 to conduct, providing the turn-on bias to the series regulator of the +4.75-volt regulator. Before conduction, the collector of Q18 is at approximately 15 volts dc and after conduction it is at approximately 0.25 volt dc.

(4) +4.75-volt, output sense (90 percent). A sample of the output of the +4.75-volt regulator is applied to the emitter of Q4. The base of Q4 receives a regulated reference voltage from voltage divider R9 and R10, supplied by the +15.0-volt regulator. When the output of the +4.75-volt regulator reaches 90 percent of rated output (4.275 volts), Q4 conducts, causing its collector to go from 0 volt to approximately +4.0 volts to turn on the +12-vdc supply.

(5) +12-volt turn-on. The conduction of Q4 causes Q5 to turn on, which provides a turnon bias to the series regulator of the +12-volt regulator. The collector voltage of Q5 is approximately +24 volts dc prior to turn-on and approximately 0.25 volt dc after turn-on.

(6) +12 volt output, sense (90 percent). A sample of the output voltage from the +12volt regulator is applied to the emitter of Q9. A reference voltage, provided by voltage divider R18 and R19, from the regulated +15.0-volt regulator is applied to the base of Q9. When the output of the +12 volt regulator reaches 90 percent of rated value (10.80 volts), Q9 conducts, causing its collector voltage to go from 0 volt to approximately 10 volts to turn on the -48 volt supply.

(7) -48-volt turn-on. The conduction of Q9 causes Q10 to turn on. Conduction of Q10 provides a current flow through voltage divider R16 and R17, causing Q8 to conduct. This action supplies emitter current to Q15, turning it on and it then supplies the required bias for the series regulator of the -48-volt supply.

(8) -48-volt output, sense. A sample of the output voltage of the -48-volt supply is applied to the base of transistor Q29, which acts as the 90 percent sensor for the -48-volt supply. This sensor is only used in the turn-off sequence when a fault occurs.

d. Turn-Off Sequence. When the AC POWER switch on the punched tape reader is pressed in order to turn off power, the sequence module turns off the regulators in a sequence opposite to the turn-on sequence ((1) through (10) below).

(1) -48-volt regulator power reduction. When the AC POWER switch is depressed, the

24 volts dc from the 24-volt dc rectifier is applied through the momentarily closed contacts of the switch to the RC pulse-forming network of I 7 and R62 and pulse transformer T1. The primary if T1 forms a pulse which is coupled to the secondary, which applies this pulse to the silicon control rectifier (SCR) overvoltage turn-off diode in the 48-volt regulator. This reduces the output of this power supply to less than 10 percent of rated output, which, in effect, turns it off. The pulse forming network produces only a short-duration single pulse upon operation of the AC POWER switch and when the switch is released, turn-off has been initiated and continues automatically. The action of this circuit has no effect during the power turn-on sequence since the -48 volt supply is the last supply to be turned on, and the pulse forming network will have been discharged before turn-on of the -48volt supply is accomplished.

(2) -48-volt, +12-volt, +4.75-volt 90 percent sensor inhibit. The pulse formed in transformer T1 is coupled through a second output winding to the base of Q12. Transistors Q12 and Q13 comprise a single-shot multivibrator which produces an output pulse with a duration of 80 ms. During this time duration that the single-shot is fired, it turns on amplifier Q14, which is normally cut off, which in turn, causes Q20 to conduct. Transistor Q20 acts as a clamp, clamping the base of Q19 to a low level, through diode CR8 'during the first 80 ms of the turn-off sequence. This action inhibits the operation of Q19 during the sequenced shutdown accomplished by operating the AC POWER switch. Transistor Q19 is only used to turn off the -48-volt, +4.75volt and +12-volt supplies in case of a regulator failure (e below).

(3) -48-volt, output 10 percent sensor. As described in (1) above, the operation of the AC POWER switch fires the overvoltage SCR in the -48-volt regulator, reducing the output voltage from this supply. A sample of the -48-volt output voltage is applied to the base of Q3o. When the output of the -48-volt supply is normal, the base voltage is sufficiently negative to keep Q30 cut off. As the output of the -48-volt supply is reduced towards zero during turn-off, the base bias will become sufficiently less negative to cause Q30 to conduct which initiates power reduction of the +12-volt supply.

(4) +12-volt power reduction and -48-volt turn-off. Conduction of transistor Q30 applies a negative voltage through diode CR19 to the base of Q27, causing it to conduct. This action applies a pulse through diode CR17 of OR gate CR17, CR18 to the SCR in the overvoltage protection circuit of the +12 volt regulator, initiating turnoff of this regulator to reduce its output voltage to less than 10 percent of rated value. The 90 percent level detector, Q9, across the output of the +12volt supply senses that the output of the +12-volt regulator drops below 90 percent of rated value and removes the turn-on bias from the series regulator of the -48-volt regulator, completely turning of this regulator.

(5) +12-volt output 10 percent sensor. A sample of the +12-volt regulator output is applied to the emitter of Q28, and the base of Q28 receives a reference voltage from voltage divider R50 and R51, connected across the 15.0-volt regulated supply. Transistor Q28 is normally cut off by the high emitter voltage. However, during the turn-off sequence, when the output of the +12-volt regulator drops to 1.8 volt, Q28 conducts, to initiate reduction of the output voltage of the +4.75-volt supply.

(6) +4.75-volt regulator output voltage reduction and +12-volt regulator turn-off. Conduction of Q28 applies a negative voltage through diode CR15 to the base of SCR driver Q36, causing it to conduct and apply a positive voltage through diode CR13 of OR gate CR13, CR14 to the SCR overvoltage turn-off diode in the 4.75volt regulator. This action reduces the output of the 4.75-volt regulator to less than 1.8 volt, thus, in effect, turning it off. The 90 percent level detector (Q4) across the output of the 4.75-volt supply senses that the voltage is below 90 percent of rated value. This results in Q5 being cut off, which removes the turn-on bias from the +12-volt regulator, to turn off this power supply completely.

(7) +4.75-volt, output 10 percent sensor -AC power turn-off. A sample of the output voltage of the +4.75-volt regulator is applied to the emitter of Q23. The base of Q23 receives a reference bias from the voltage divider consisting of R44 aid R45 connected across the 15.0-volt regulator. The emitter bias keeps Q23 normally cut off. When the emitter voltage drops to 1.8 volt during the turn-off sequence, Q23 is driven into conduction. This produces a voltage drop at the base of Q22, through diode CR10, causing it to conduct and apply a positive voltage of approximately 15 volts to the base-emitter voltage

divider, R2 and R3, of relay control amplifier Q2. Amplifier Q2 now conducts heavily, reducing the base voltage on relay driver Q1 sufficiently to turn off Q1. This action removes excitation from the coil of the ac power relay A9K1, turning off ac power for the drive motor, the fans and also the AC POWER lamp and the other indicator lamps. The unlighted AC POWER lamp indicates that the ac power is turned off.

(8) -12-volt regulator voltage reduction and +4.75-volt turn-off. The conduction of Q22 also applies +15 volts dc to the RC timer circuit of R4 and C1. During the time that the voltage builds up on C1, transistor Q3 is biased to be cut off and the voltage across C1 is applied to SCR CR33. After approximately 300 ms, the ,-voltage across CR33 builds up to 8 + 1 volts dc, at which time CR33 conducts. Conduction of CR33, causes a sharp reduction in base voltage of Q3, driving it into conduction. Capacitor C1 now discharges through Q3 and the resulting current flow through R8 to the SCR in the overvoltage protection circuit of the -12-volt regulator causes the output voltage of the regulator to drop to less than -2 volts dc. The drop in output voltage of the -12-volt supply below the 90 percent level is sensed by 90 percent level sensor Q36 and Q37 connected across the output of the -12volt supply. This results in transistor Q21 being turned off, which removes the bias from the series regulator in the +4.75-volt supply, completely turning off this power supply.

(9) Turn-off of -12-volt supply and power turn-off in sequence module. The discharge of capacitor C1 through transistor Q3 applies a discharge current through R7 and diode CR2, into SCR CR24 across the coil of relay K1. This voltage drop is also coupled through diode CR29 to the base of Q39. This action back-biases Q39, turning it off, which in turn, cuts off Q38, to remove the bias voltage from the series regulator in the -12-volt regulator, and completely turning off this power supply. The pulse applied to SCR CR24 fires this SCR, shorting out the coil of relay K1 (deenergizing K1). This action removes the 24-volt dc power from the 15.0-volt regulator, removing all power from the circuits of the sequencing module to complete the turn-off procedure.

(10) Transistor protection. Those level detector transistors which could be subject to relatively high reverse base-emitter voltages are protected by diodes connected between the base and the emitter. The diodes short out excess reverse base-emitter voltages.

e. Fault Sensing and Turn-Off. If the -48-volt, +12-volt, or +4.75-volt supply fails, the others must be turned off at the same time. After this is accomplished the -12-volt supply is turned off. If the -12-volt supply fails, the other three supplies must be simultaneously turned off within 50 ms after this failure. Turn-off is accomplished by means of the 90 percent sensors which sense when the output voltage of a regulator has fallen to 90 percent, or less, of rated output.

(1) Should the +4.75-volt regulator output fall to less than 90 percent of rated value, this is sensed by the +4.75-volt 90 percent sensor (Q4) which turns off Q6, which in turn turns on Q7. The collector of Q7 is reduced to near ground level, applying a negative voltage through diode CR8 to the base of Q19. This action turns on Q19, providing a positive voltage through diodes CR6, CR14, CR18 to the --48-volt SCR, the +4.75volt SCR, and the +12-volt SCR, turning off these supplies simultaneously. Transistor Q19 is also operated by either the -48-volt 90 percent sensor (Q29), the +12-volt 90 percent sensor (Q9, Q10, Q11) or the -12-volt 90 percent sensor (Q36 and Q17), if any of these power supplies fail. The -48-volt SCR is operated by Q19 firing SCR CR34 across pulse forming network C4 and R30. The output pulse is supplied to T1 for application to the SCR in the 48-volt supply.

(2) After the -48-volt, +4.75-volt, and +12-volt supplies are simultaneously turned off, the -12-volt supply is turned off as previously described. If the +15-volt regulator in the sequence module fails (power output drops to less than 90 percent of rated output), this is sensed by the +15.0-volt 90 percent sensor which turns off the bias to the -12-volt series regulator. This action turns off this regulator, initiating the previously(,sly described shutdown procedure.

f. Override Timer Circuit for Turn-On Circuit. As previously described, the turn-off circuits include sensors which operate when output voltages are below 1.8 volt dc or 10 percent of rated output, whichever is higher. In addition, the 90 percent detectors function as fault detectors if the output voltage of any regulator drops below 90 percent of rated value (e above). Both of these sensors must be inhibited during the power turnon, since they would interfere with the power

turn-on sequence. This is accomplished by the action of driver clamp Q24. When the 24 volt dc is initially applied to the 15.0-volt regulator to produce the regulated 15-volt output, the +15volt output is applied to the emitter and base of driver clamp Q24, causing it to conduct, producing a positive voltage at its collector. This positive voltage is coupled through diodes CR20, CR16, CR11, and CR9 to the -48-volt 10 percent sensor (Q30), the +12-volt 10 percent sensor (Q28), the +4.75-volt 10 percent sensor (Q23), and the 90 percent fault sensor line to Q19. It thus blocks diodes CR19, CR15, CR10, and CR8, preventing the 10 percent and 90 percent fault sensors from operating and turning off the power supplies. At the same time that Q24 is turned on, the +15 volts is applied to timer circuit R84 and C12. The RC time constant of this circuit is selected so that the voltage on C12 builds up to a sufficient level to turn on Q16 in approximately 1.8 second. Zener diode CR30 establishes the turn-on bias for Q16. When Q16 is turned on it supplies base current for Q25, turning it on. This produces a positive voltage at the base of Q24 which turns off Q24, removing the inhibiting voltage from diodes %7R19, CR15, CR10 and CR8. The 10 percent sensors and 90 percent fault sensor, Q19, are no longer inhibited, since after 1.8 second all power has been turned on and the fault sensors should now operate.

3-30. Voltage Regulation for +6.2-Volt and -6.2-Volt Dc Power

Voltage regulator circuits are located on PC card A5 (fig. 8-10) and produce 6.2-volt and -6.2-volt power for use by the receive and transmit interface circuits.

a. The -6.2-volt power is derived from the -12-volt source by Zener diode VR1 and resistor R91. Capacitor C11 minimizes the effect of switching transients on the -12-volt power.

b. The t6.2-volt power is derived from the ,-12-volt source by Zener diode VR2 in conjunction with resistor R92. Capacitor C0O minimizes the effect of switching transients on the A 12-volt power.

3-31. Power On Reset Control Circuits

When power is turned on to the punched tape reader, a reset signal is generated to clear various latches in logic assembly Al in preparation for a new read cycle. The power on reset (PRST) signal is initiated by operation of AC POWER pushbutton on control panel A3 (para 2-1). When this pushbutton is pressed, -48 volts dc is applied to the power on reset circuit on PC card Al (fig. 8-7 and para 3-74a). The resulting PRST signal is routed to the control circuits on PC card A15.

3-32. Receive Interface Circuits

a. All control signals between the CCU and punched tape reader switch between levels of 6 volt and an open kct except for the step data,/acknowledge signal which switches between -6.2 volts and +6.2 volts. These signals are generated by transmitter circuits in the CCU RF1. The receive interface circuits provide an impedance match for the CCU signals, convert them to the punched tape reader logic format (+4.5 volts active and 0 volt inactive), and restore the sharp turn-on, turn-off required for reliable logic operation in the punched tape reader.

b. The receive interface circuits consist of interface receivers (E) through (K) on PC card A4 (fig. 8-9). Interface receivers (E) through (J) provide level shifting and inversion, converting inputs of 0 volt to outputs of +4.5 volts and open circuit input to outputs of 0 volt. Four of the received inputs are active at a low level so that the outputs are active at a high level. These signals are end of message (EOM), end of block (EOB), assigned (ASG), and select (SEL A). A fifth signal (cancel) is received on the RCAN line as a high level when active. After inversion, this results in a low level on not-function cancel line NCAN, indicating a cancel command.

c. interface receiver (K) differs from the other interface receivers in that, although there is level shifting, there is no inversion. Thus, a positive received step 'data acknowledge pulse input (RSDA) results in a corresponding positive output pulse (SDA), whereas a negative receive step data acknowledge pulse results in a nonactive logic level. An inhibit input (SINH) to this receiver is not used and wired to ground.

3-33. Advance Control Circuit

a. The advance control circuit generates the advance signal which allows the read cycle control circuit to initiate a new read cycle. The advance function is normally disabled by a stop signal from the stop control portion of the advance control circuit. When any one of four switch-indi-

cators on control panel A3 is operated, a start pulse is supplied to the stop control to remove the stop condition. This action allows the advance control circuits to generate the advance signal in a way dependent upon the switch-indicator used.

b. For normal operation with the CCU, START switch-indicator Z7 is used. This permits the advance signal to be continuously generated during the header portion of the tape and then generated once for each step/data acknowledge command from the CCU. The remote continuous step control is described in paragraph 339.

c. For the header tape of a two-tape message, PILOT HEADER switch-indicator Z5 is used. This has the same effect as START switch-indicator Z7 but prevents the generation of an alarm stop signal to the CCU when the tape out condition occurs at the end of the tape. For continuous tape feed under local control, LOCAL TEST switch-indicator Z9 is used. This results in a continuous advance signal. For single-frame operation under local control, SINGLE FEED switchindicator Z6 is used. Each operation of Z6 results in an advance signal which lasts long enough to initiate one read cycle only.

3-34. Start Operation

For normal operation of the punched tape reader with the CCU, the advance control circuit is actuated by operation of START switch-indicator Z7 on control panel A3.

a. When START switch-indicator Z7 is operated, this transfers a high level from start closed line STC to start open line STO. The STO signal enables AND gate Z3A on PC card A16 (fig. 821) if the punched tape reader is in a stop condition (stop signal from OR gate Z19B in the stop control circuit is high). The resulting high output of AND gate Z3A sets latch Z7A, Z11A. The high output of this latch activates OR gate Z14B.

b. Prior to activation of Z14B, the high level at the Z14B output clears flip-flop Z17. The low output of OR gate Z14B is monitored by AND gate Z14A, which is conditioned by the low level at the 1 output of flip-flop Z17 and is enabled by the first negative CLK clock pulse input. Thus, the negative transition produced by Z14A at the trailing edge of the pulse sets flip-flop Z17. The resulting high output of Z17 disables Z14A, preventing Z14A from being enabled by the next CLK clock pulse. The effect is that a single positive pulse is generated by Z14A.

c. The positive pulse produced by AND gate Z14A is supplied to the stop control circuit to remove the stop condition of the punched tape reader by clearing latch Z13.

d. The high output of latch Z7A, Z11A also sets latch Z15 which, in turn, supplies a high level from the Z15B output to clear local test latch Z23, thereby removing a local test condition. In addition, the low level at the Z15A output conditions AND gates Z16A and Z16B. As long as the punched tape reader has not yet been selected by the CCU, the SEL A line from the receive interface circuit is low. This conditions AND gate Z16B. Finally, since the punched tape reader now is not in a stop condition, the stop signal from OR gate Z19A in the stop control circuits is low. This enables AND gate Z16B to produce a high level on line DSG. The DSG line activates a lamp driver on PC card A3 to energize the green indicator in START switch-indicator Z7.

e. The white indicator is not energized until the punched tape reader is selected by the CCU. At that time, the SEL A line goes high. This disables AND gate Z16B and is inverted to a low level by inverter Z12B to condition AND gate Z16A. If the punched tape reader is in ready state, OR gate Z8A in the ready control circuit supplies a low level to enable AND gate Z16A.

f. While the punched tape reader is still feeding header tape, the advance signal for the read cycle control circuit is controlled by remote continuous step line RCS which is high until the beginning of the message is reached. The RCS line activates OR gate Z12A to supply a low level to condition AND gate Z20A. The other input to Z20A is the stop signal from the stop control circuit which goes low as soon as the start pulse is supplied to the stop control circuit. Thus, Z20A produces a low level on not advance line NADV to the read cycle control circuit.

g. When the beginning of the message is reached, the RCS line goes low. However, if the punched tape reader is selected by the CCU, the SEL A line to AND gate Z4B is high. Each step.' data acknowledge signal received from the CCU results in a positive pulse on the SDA line from the receive interface circuits which enables AND gates Z4B. Thus, Z4B produces a positive pulse on gated step line GS. This pulse is coupled through OR gate ZSB to activate OR gate Z12A. The resulting low level conditions AND gate Z20A to generate the

NADV signal. Thus, each SDA pulse results in a corresponding NADV pulse.

h. Normally, the start condition of the punched tape reader remains until the operator operates STOP switch-indicator Z8 on the control panel. When Z8 is operated, the stop control circuit generates a stop signal at the end of a read cycle of the output of OR gate Z19B which clears latch Z15, extinguishing the light in the switch-indicator. The stop signal also disables AND gate Z20A, forcing the NADV signal to go high.

3-35. Pilot Header Operation

The PILOT HEADER switch-indicator (Z5) on control panel A3 is used to remove the stop condition in the stop control circuits for the header tape of a message consisting of two tapes. When this is done, the punched tape reader operates Z8 is now operated, the stop control circuit produces a low level at the Z13A output of latch Z13. This action enables AND gate Z18A to supply a high level to OR gate Z19A. In addition, if the punched tape reader is deassigned, the pilot header condition can be removed by operating RESET switch S1 on logic assembly Al. This results in a high level on the R8T line to OR gate Z19A.

3-36. Local Test Operation

When continuous tape feed under local control is desired, LOCAL TEST switch-indicator Z9 on control panel A3 is used to activate the advance control circuit.

a. When LOCAL TEST switch-indicator Z9 is operated, a high level is switched to local test open line LTO from local test closed line LTC, conditioning AND gate Z3B on PC card A16 (fig. 8-21). This gate also monitors the stop (STP) and not assigned (NASG) signals. Both of these signals are high if the punched tape reader is in a stop condition and has not been assigned by the CCU. The resulting high output of Z3B sets latch Z7B, Z1iB.

b. The high output of this latch activates OR gate Z14B, resulting in a pulse from AND gate ZI4A the same way as for start operation and pilot header operation. This pulse is fed to the .top control circuit to remove the stop condition.

c. In addition, the high output of Z7B, Z11B sets latch Z23 to produce a high level on local test line LT. This signal activates a lamp driver on PC card A3 to energize the filament in LOCAL TEST switch-indicator Z9. The LT signal also activates OR gate Z12A to cause the generation of a not advance (NADV) signal the same way as the single feed operation. Normally, the NADV signal remains low until STOP switch-indicator Z8 is operated. When Z8 is operated, the stop control circuit generates a stop signal at the output of OR gate Z19B which clears latch Z23, thereby removing the local test condition.

3-37. Single Feed Operation

For single frame feed of the tape under manual control, SINGLIE FEED switch-indicator Z6 on control panel A3 is used to activate the advance control circuit.

a. When SINGLE FEED switch-indicator Z6 is operated, a high level (4.5 volts dc) is transferred to single feed open line SFO from single feed closed line SFC, conditioning AND gate Z2A on PC card A16 (fig. 8-21). Since this AND gate monitors stop signal STP, it is inhibited unless the punched tape reader is in a stop condition. When Z2A is enabled, the high output sets the latch formed by OR gates Z6A and ZIOA which removes the effects of switch bounce from the signal. The resulting high level output conditions AND gate Z5A and also activates OR gates Z9B and Z14B.

b. The action described in a above results in a single start pulse from AND gate Z14A to latch Z13 to remove the stop condition in the stop control circuit. The start pulse also sets flip-flop Z1 through AND gate Z5A. The resulting high output of Z1 on single feed line SF lights SINGLE FEED switch-indicator Z6 by activating a lamp driver on FC card A3.

c. Single feed signal SF also enables AND gate Z4A unless the punched tape reader has been assigned by the CCU. In this case, the assigned line ASG is inverted to a low level by inverter Z21A to disable AND gate Z4A. This prevents automatic advance of a character position under control of the SINGLE FEED switchindicator; however, tape can still advance under control of the step data acknowledge interface signal SDA from the CCU, gated through AND gate Z4B.

d. When not assigned to the CCU, AND gate Z4A produces a high level when SINGIE FEED switch-indicator Z6 is operated. If assigned, AND gate Z4B produce a high level when step data acknowledge signal

SDA is received from the CCU. These signals are routed through OR gate Z8B to OR gate Z12A which feeds a low level to AND gate Z20A. If the other conditioning input to Z20A is low, a low level is produced on not advance line NADV and routed to the read cycle control circuit on PC card A16.

e. Normally, the NADV signal remains low until the end of the read cycle. At that time the stop line goes high and disables AND gate Z20A. This line also clears single feed flip-flop Z1A, disabling AND gate Z4A. Thus, another read cycle is not initiated until SINGLE FEED switch-indicator Z6 is operated again. Even if switch-indicator Z6 is held in the depressed state so that latch Z6A, Z10A remains set, AND gate Z5A does not set flip-flop Z1 again. This is because flip-flop Z17 is not cleared until SINGLE FEED switchindicator Z6 is released. At that time, the L4.5volt level is switched back to the SFC line, clearing latch Z6A, ZIOA and, in turn, deactivating OR gate Z14B. The high output of Z14B then clears flip-flop Z17. (See para. 3-38f.)

3-38. Stop Control

The stop control portion of the advance control circuits generates a stop command for each condition in which it is required to stop the advance control circuit. Normally, the stop command is removed by a start pulse from the advance control circuit when one of the four advance switchindicators on the control panel is operated (PILOT HEADER (Z5), SINGLE FEED (Z6) START (Z7), or LOCAL TEST (Z9)). In the case of SINGLE FEED switch-indicator Z6, the stop command is renewed during the first read cycle. In the case of the other three switch-indicators, the stop command is not normally renewed until STOP switch-indicator Z8 is operated. However, a stop command is automatically generated in case of a tape out, alarm stop, or an operator's alarm condition. A stop command is also generated at initial power turn-on and when RESET switch S1 on logic assembly Al is operated.

a. The stop command is generated by OR gate A19B on PC card A16 (fig. 8-21). Whenever the output of Z19B goes high, AND gate Z20A in the advance control circuit is disabled, thereby preventing a new read cycle from being initiated. The Z19B output is also passed through buffer amplifier Z20B to the STP line. This activates a lamp driver on PC card A3 which energizes STOP switch-indicator Z6 on control panel A3.

b. If the alarm circuits on PC card A15 detect an alarm stop condition, a stop command is produced. The alarm stop condition is indicated by a low level on not alarm stop line NAST. This signal is routed to the interface circuits for transmission to the CCU and is also inverted to a high level by inverter Z24B to activate OR gate Z19B.

The NAST signal is generated by OR gate Z16B on PC card A15 (fig. 8-20). This QR gate is activated by a high level when the cancel control circuit detects a cancel command from the CCU and places a high level on cancel line DCAN. In addition, OR gate Z16B is activated when OR gate Z23A produces a high level output. This is caused by a high level from AND gate Z20A in case of a tape out condition in the middle of message but not in the header tape, by a high level on invalid character line DINC in case an invalid character is detected, and by a high level on tape motion failure line DTMF in case the tape speed is too fast or too slow.

c. If the tight tape alarm circuit on PC card A15 detects a tight tape condition, a low level is produced on not operator's alarm line NOA. This signal is routed to the interface circuits for transmission to the CCU and is also inverted to a high level by inverter Z22B on PC card A16. The high output of Z22B activates OR gate Z19B to cause a stop command.

d. The third input to OR gate Z19B causes a stop command only after a read cycle, which may be in progress, has been completed. Thus, AND gate Z22A supplies a high level output only when the CYCL signal from the read cycle control circuit on PC card A14 is low. The stop conditions which control the other input to Z22A are controlled by latch Z13.

e. One of the ways to initiate a stop command through latch Z13 is to operate STOP switch-indicator Z8 on the control panel. The normally open switch contacts then place a high level on stop open line STPO. This is filtered by resistors R14 and R13 and capacitor C3. The high level sets latch Z13, resulting in a low enabling level for AND gate Z22A and a high level at the output of Z19B at the time the CYCL signal from PC card A14 is low.

f. Automatic generation of a stop command after initiation of a read cycle by SINGLE FEED switch-indicator Z6 is controlled by AND gate Z5B. This AND gate is conditioned by a high level which appears on line SF from single feed

flip-flop Z1 at the start of the read cycle. At the count of 30 (read cycle time of 3016), tape motion set line TMS from PC card A14 goes high, enabling Z5B. The resulting high output is passed through OR gate Z9A to set latch Z13.

g. If a tape out condition occurs at any time, even though this may not result in an alarm stop condition (when not operating with the CCU or in the header tape), it does result in a stop command. This is controlled by set operator stop line SOS to OR gate Z9A. A high level is received on the SOS line from OR gate Z7B on PC card A15 whenever a low not out of tape signal NOT is received from the reader mechanism. This signal is inverted to a high level by inverter Z15A to activate OR gate Z7B.

h. The SOS line is also activated when power is first turned on to the punched tape reader and when RESET switch S1 on the logic assembly is operated in the not assigned mode. Power on reset results in a high level on line PRST to OR gate Z11B; operation of RESET switch S1 results in a ground connection on line RSTO to enable AND gate Z15B if assigned line ASG is low. In either case, a high level is received at the output of Z11B to activate OR gate Z7B, placing a high level on the SOS line.

3-39. Remote Continuous Step Control

The remote continuous step control circuit allows automatic continuous stepping of the leader portion of the tape when the punched tape reader is under remote (CCU) control.

a. The remote control step (RCS) signal for the advance control circuits is generated by flipflop Z10 on PC card A15 (fig. 8-20). This flipflop is initially set when power is first turned on to the punched tape reader. Thus, a high level on reset line RST is coupled through OR gate Z6B to the continuous step line (CSTP) which sets Z10. The resulting high level on the RCS line to the advance control circuit ensures that continuous stepping is permitted to begin immediately when one of the two remote advance switchindicators (START or PILOT HEADER) is operated. At the same time, the high level on the RCS line is fed to the data strobe decoder on PC card A14 to disable generation of data strobes. In addition, latch Z26 is cleared by a 9.6-kc clock pulse from the oscillator (OSC) on PC card A1. Thus, a low level is placed on remote continuous step reset line RCSR. This is fed to PC card A14 to permit initiation of read cycles.

b. Although characters are read from the tape, no data strobes are generated until the first nonidle character is read. Thus, AND gate Z17A monitors idle character line IDC. This line goes high when any one of seven idle characters is being read. Thus, if this line is low during the read cycle, the character being read is not an idle character. The status of the IDC line is checked early in the read cycle to allow time for generation of a data strobe if the line proves to be low. Thus, AND gate Z17A is strobe by not remote continuous step strobe NRSS from PC card A14. The NRSS signal is a negative pulse which is generated once each read cycle at the count of 3 (read cycle time 208). The third input to Z17A (NRCS) prevents enabling of this AND gate unless the punched tape reader is in remote continuous step operation.

c. When the first nonidle character is detected, AND gate Z17A is enabled to pass the negative NRSS pulse at the count of 3 (time 312) in the read cycle. This conditions AND gate Z21A for this duration (104 ,sec). The negative step which appears on oscillator line OSC at the end of this time to advance the timing counter to the next count also enables AND gate Z21A, unless the detected character is an N. The positive step at Z21A output sets latch Z26, thereby placing a high level on line RCSR. This clears flip-flop Z10 so that the RCS line goes low. Thus, data strobe generation at the count of 21 (time 2030) in the read cycle is permitted. Latch Z26 is immediately reset at the count of 4 (read cycle time 416) by the next positive transition on the OSC line.

d. If the first detected character happens to be an N, AND gate 21 does not become enabled because of the high level which appears on the N line. Separate control is used to terminate the remote continuous step mode in this case (g below).

e. Normally, flip-flop Z10 remains set until the end of the message after which the tape is again presumed to be leader tape until a new nonidle character is detected. The end of message is detected by AND gate Z2B which is conditioned by the SEL A line when the punched tape reader is selected by the CCU. After the last block in the message, both the EOB (end of block) and EOM (end of message) lines are simultaneously activated by pulses from the CCU. Thus, AND gate Z2B becomes enabled to pass a positive pulse through buffer amplifier Z6A to flip-flop Z10. The flip-flop is clocked to the set state by the

negative transition which occurs at the end of the positive pulse.

f. If the message does not proceed to a normal end of message conclusion, but is canceled, a cancel signal on the DCAN line from the cancel control circuit is passed through OR gate Z6B to set flip-flop Z10. Also, if a tape out condition occurs with the punched tape reader not in the pilot header mode, AND gate Z19B is enabled to produce a high level which is passed through OR gate Z6B to set flip-flop Z10. It is assumed that the first portion of the next tape will be leader tape unless the first tape was the header tape of a two-tape message (pilot header mode).

g. As described in e above, flip-flop Z10 is set when simultaneous EOM and EOB signals are received from the CCU. The EOM signal indicates that the CCU has decoded an end of message sequence from the tape message. This end of limit sequence consists of two carriage return (CR) characters, eight line feed (LF) characters, and four or more N's. The EOM signal is generated by the CCU as soon as the complete end of message sequence is detected. However, since subsequent N's do not indicate the start of a new message, AND gate Z2ZA does not respond to N's as described in d above. However, if one or more idle characters appear after the last N in a message, the next N is considered the start of a new message. This is determined with the aid of latch Z5 as described in h and i below.

h. Each decoded N character results in a high level on the N line to inverter Z13B. The resulting low output of Z13B is strobed at the count of 3 (time 208) in the read cycle by the negative NRSS pulse to AND gate Z17B. The third input to Z17B is the low level supplied by flip-flop Z10 as long as the punched tape reader is in the remote continuous step mode. This occurs at the beginning of a new tape or after the fourth N in an end of message sequence. The resulting low output of Z17B enables Z21B to set latch Z26 if a low level is received from latch Z5. As soon as the EOM pulse from the CCU is detected, latch Z5 is set by the high output of buffer amplifier Z6A, thereby disabling AND gate Z21B. Thus, subsequent N's have no effect on Z21B.

i. To condition AND gate Z21B, the sequence of N's must be interrupted by one or more idle characters. These are detected by AND gate Z9A which monitors idle character line IDC. This line is strobed at the count of three in the read cycle by the positive pulse produced by inverter Z13A from the negative NRSS pulse input. The third input to Z9A is the RCS line which prevents Z9A from being enabled until the end of message has been detected and the punched' tape reader has returned to the remote continuous stepping mode. If an idle character is then detected, AND gate Z 9A clears latch Z5B to provide a low conditioning level for Z21B. Thus, the first N after one or more idle characters causes latch Z26 to be set, thereby terminating the remote continuous step mode. To insure that latch Z5 is cleared in case the message is not ended with a conventional end of message sequence, the CSTP line is also fed to the clear side of the latch. This line goes high at power turn-on, operation of RESET switch S1, cancel, or a tape condition (nonpilot header).

3-40. Ready Control Circuit

The ready control circuit generates the ready signal for the CCU unless the punched tape reader is in the local test mode, the remote continuous step mode, or a stop condition.

a. The ready signal is controlled by OR gate Z8A on PC card A16 (fig. 8-21). This OR gate becomes activated if any of the following three conditions exist

(1) The stop condition as indicated by a high level from stop control OR gate Z19B.

(2) The local test mode as indicated by local test signal LT from local test latch Z23.

(3) The remote continuous step mode as indicated by a high level on the RCS line from PC card A15.

b. When none of the inputs to OR gate Z8A is high, a low output is produced. This is inverted to a high level on RDY line by inverter Z24A. The RDY output is fed to the transmit interface circuits for transmission to the CCU.

3-41. ITA-2 to ASCII Converter, Block Diagram (fig. 3-21)

a. ITA-2 Decoding. To convert the 58 characters encoded in five ITA-2 data bits into the equivalent characters encoded in eight ASCII data bits, it is first necessary to decode each of the 58 ITA-2 character codes. This is accomplished as follows:

(1) First, the characters represented by the five ITA-2 bits are converted to a two-digit octal

code. The first three bits of the ITA-2 code (designated 11, 12, and 14) specify the least significant digit of the octal code. These three bits are converted to their octal equivalent (0 through 7) by a binary to octal converter which identifies the rows in an 8 by 8 matrix (table 3-1). The last two bits of the ITA-2 code (designated 18 and I16 1) are used in specifying the most significant (digit of the octal code. This digit identifies the columns in the 8 by 8 matrix.

(2) Any character in the 8 by 8 matrix is defined by the intersection of the row and column. Thus, the row and column select signals from row and column binary to octal converters are decoded by a decode matrix which activates 1 of 64 output lines depending on the intersection of row and column.

(3) The 8 by 8 matrix in table 3-1 consists of two halves with the characters in columns 0 through 3 being figures characters and those in columns 4 through 7 being letters characters as defined by the ITA-2 code. The shift between letters and figures is determined by the LET and FIG characters. These characters appear in both the letters and figures halves of the matrix When a letters code is detected, a letters-figures register is set to the letters position. This activates a simulated sixth bit (132) to the column binary to octal converter. The sixth bit is necessary since three binary bits are needed to specify the eight octal digits. Alternately, when a figures code is detected, the letters-figures register is set to the figures position and the 132 is deactivated.

Table 3-1. ITA-2 Matrix

Rows	Data bits				Columns							
				I16	0	0	1	1	0	0	1	1
	I4	I2	I1	I8	0	1	0	1	0	1	0	1
0	0	0	0		NUL	CR	5	9	NUL	CR	T	O
1	0	0	1		3	$	"	?	E	D	Z	B
2	0	1	0		LF	4	)	&	LF	R	L	G
3	0	1	1		-	'	2	FIG	A	J	W	FIG
4	1	0	0		SP	,	#	.	SP	N	H	M
5	1	0	1		BEL	!	6	/	S	F	Y	X
6	1	1	0		8	:	0	;	I	C	P	V
7	1	1	1		7	(	1	LET	U	K	Q	LET
						Figures shift				Letters shift		

(4) Besides the letters and figures codes (LET and FIG), four other codes appear in both halves of the matrix. These are the CR, NUL, LF & SP codes. Since a total of six codes appears twice, there is a total of only 58 different characters which can be detected.

b. ASCII Encoding. Once the 58 ITA-2 characters are decoded onto 58 separate lines, the conversion to an eight-bit ASCII code can be performed. This is done as follows:

(1) First, the 58 characters are encoded as two octal digits represented by eight lines each. The two octal digits (designated F and G) for each character can be represented by the ASCII matrix in table 3-1.

BITS 7 6 5 4 / Rows 3 2 1	A 0	B 0	Columns 0	1	2	3	4	5	6	7	
	0	0	0	0	0	0	1	1	1	1	1
	0	0	1	1	1	1	0	0	0	1	1
	0	0	0	0	1	1	0	0	1	1	1
	0	1	0	1	0	1	0	1	0	1	1
0 0 0	NUL		SP	(	0	8		H	P	X	
0 0 1			!	)	1	9	A	I	Q	Y	
0 1 0		LF	"		2	:	B	J	R	Z	
0 1 1			#		3	;	C	K	S		
1 0 0			$		4		D	L	T		
1 0 1		CR			5		E	M	U		
1 1 0		SO	&	.	6		F	N	V		
1 1 1	BEL	SI	'	/	7	?	G	O	W		DEL

Table 3-2. ASCII MATRIX.

(2) The circuit which converts the 58 separate lines to the octal row and column code is called an encode matrix. This circuit activates a different combination of a column line and a row line for each of the 58 characters.

(3) Once the conversion to octal coding is complete, the two-digit octal code is converted into its ASCII equivalent by encoding each octal digit into the binary codes specified in figure 3-3. The parity bit is made active or inactive, as necessary, to make the total sum odd.

(4) The final conversion into ASCII is made by an octal to binary converter. This circuit converts each row selected into a three-bit binary code which represents the first three bits of the ASCII code. The next four bits are determined by the octal column selection. However, more than eight combinations of these four ASCII bits are needed. Therefore, the octal to ASCII conversion must make allowance for six of the characters which are in two extra columns. These are shown in table 3-2, in columns labeled A and B. The columns are defined by the combination of binary bits which specify them.

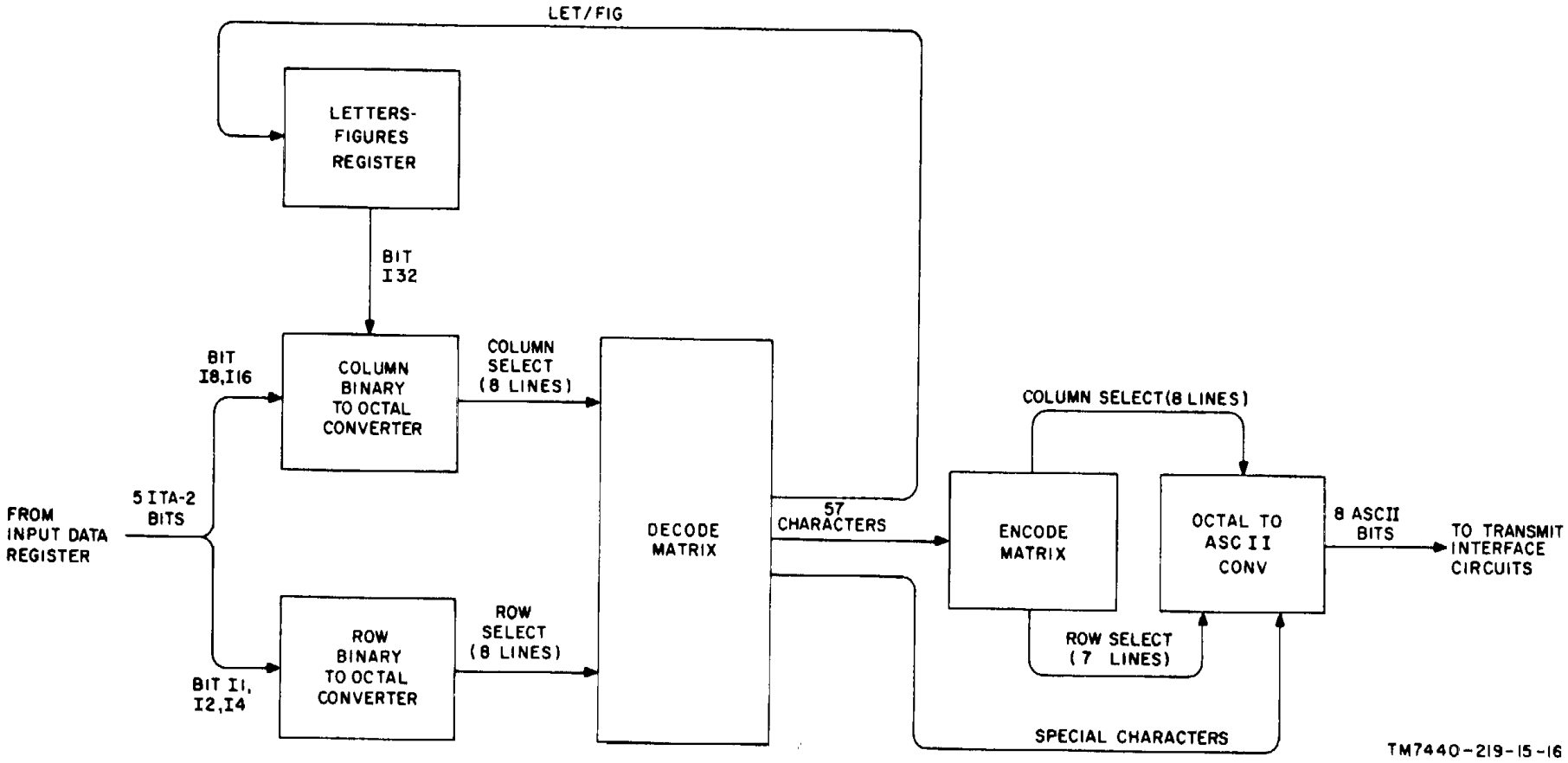


Figure 3-21. ITA-2 to ASCII converter, block diagram.

3-42. Column Binary-to-Octal Converter

a. The column binary-to-octal converter decodes the states of the two most significant ITA2 bits (I8 and 116) and the letters/figures bit (I32) to activate one of eight different output lines corresponding to each of the eight possible combinations of the three bits. The eight output lines select the eight columns in the 8 by 8 matrix. Each octal column value is equivalent to the binary value of the three input bits.

b. The I8 and I16 bits are amplified and converted to complementary form by inverters Z10A, * Z11B, Z11A, and Z10B on PC card A8 (fig. 813). These bits and the complementary 32 (letters) and 32 (figures) bits for the letters/figures register are then applied in eight different combinations to eight decoder AND gates. The decoding is similar to that for the row binary-to-octal converter. Thus, for octal column 5, the ~~I8,~~ I16, and ~~32~~ lines are monitored by AND gate Z14B. These lines are all low when the code for the I8, I16, I32 bits is 101.

3-43. Row Binary-to-Octal Converter

The row binary-to-octal converter decodes the states of the three least significant ITA-2 bits (I1, I2, and I4) to activate one of eight different output lines for each of the eight possible combinations of the three bits. The eight output lines select the eight rows in the 8 by 8 matrix. Each octal row value is the equivalent of the binary value of the ITA-2 bits.

a. The three least significant ITA-2 bits (I1, I2, and I4) are initially amplified and inverted by inverters Z20A, Z24A, and Z28A on PC card A8 (fig. 8-13). The resulting not-function bits are inverted again by inverters Z20B, Z24B, and Z28B to provide the true-function of each bit. The complementary bit signals are applied in Fight different combinations to eight decoder AND gates. Only one of the eight AND gates is enabled at any time, depending on the combination of input. data bit levels. Thus, if all three data bits are 0's, the true-function (I1, 12, and 14) at the outputs of inverters Z20B, Z24B, and Z28B are low, thereby enabling AND gate Z15P to place a low level on line ~~00~~. This selects row 0. When data bits 11, 12, and 14 are 1, 0, and 0, respectively, AND gate Z15A is enabled to place a low level on line 01 since this gate monitors the not-function of the 11 bit (I1) from inverter 19-15/NAVSHIPS 0967-324-0056/TO 31W4-2G.61 Z20A and the true-functions (12 and 14) of the other two.

b. The other AND gates operate in a similar manner, each gate monitoring a combination of the binary bits corresponding to the binary value of the octal row selection. Thus, for row 5, the binary value is 101. Therefore, AND gate Z23A which controls line 05 becomes enabled when the states of binary bits 11, I2, and 14 are 1, 0, and 1, respectively. At that time all inputs to Z23A are low and a low output occurs on line ~~05.~~

3-44. Letters/Figures Register

a. The letters/figures register generates an I32 bit for the column binary-to-octal converter. This is done by monitoring the decoded letters and figures characters from the matrix decoder. Each figures character switches the register to a 0 for the 132 bit. This condition remains until the next decoded letters character which switches the register to 1 for the I32.

b. The matrix decoder operates from a six-bit code, one bit of which is the 32 bit which is determined by the letters/figures character. Thus, the coding for the letters/figures character is contained in only five bits. Since there are only 32 possible combinations of five bits, the five-bit code of the letters character may activate either of two possible decoder matrix outputs, depending on the previous state of the letters/figures register. However, either of these two lines represents a valid letters character and must be used to set the letters/figures register to the letters state. Alternately, the five-bit code of the figures character may activate one of two possible matrix outputs, either of which must be used to set the letters/figures register to the figures state.

c. The two letters decoder matrix output lines (LTR A and LTR B) are monitored by OR gate Z4A on PC card A7 (fig. 8-12).:When either line is activated, Z4A produces a low output on the LTR C line. Similarly, when either the FIG A or FIG B decoder matrix output is activated, OR gate Z4B produces a low level on the FIG C line.

d. The LTR C and FIG C lines are routed to PC card A8 (fig. 8-13) where they are gated with letters.-figures strobe LFS line from PC card A14. The LFS line goes low for each character being read. When the character is a figures character, AND) gate Z7R is enabled by low levels at both the LFS and FIG C inputs. Thus Z7B sets

latch Z6 to place a high level on line $\overline{32}$ and a low level on line 32. The latch remains in this state until a letters character is read. This enables AND gate Z7A to set the latch to the alternate state, placing a high level on line 32 and low level on line $\overline{132}$.

3-45. Decode Matrix

a. The decode matrix decodes the two octal digits from the row and column binary-to-octal converters onto 64 output lines representing the 64 characters specified by the 64 possible combinations of the two octal digits (table 3-1). The matrix consists (,f 64 (decoder AND gates, each of which monitors a different combination of the two octal digit,. The 64 decoder AND gates are located on identical PC cards A9 and All (figs.8-14 and 8-16)

b. PC card All contains 32 AND gates which decode the characters in the first four columns of the matrix and PC card A9 contains 32 AND gates which decode the characters in the last four columns of the matrix.

c. The AND gate, which receives a low level at both it. rows select and column select inputs, is enabled to produce a high level output representing the selected character All other AND gates specifying the other 63 characters are inhibited since any row-column combination can satisfy only one AND gate at a time.

d. For example, if the character T is punched on the tape, the binary-to-octal converters activate column 6 and row 0 of the matrix as shown in table 3-1. Thus $\overline{\text{COLUMN 6}}$ and $\overline{\text{ROW 0}}$ inputs to PC card A9 are both low The only AND gate which monitors both these lines is AND gate Z17A on PC card A9. Therefore, only Z17A is enabled to produce a high output

3-46. Encode Matrix

a. The encode matrix encodes the 64 characters from the decode matrix into two octal digits representing the row and column of the 8 by 8 portion of the ASCII matrix (table 3-2). The encode matrix consists of a set of OR gates located on identical PC cards A10 and A12 (figs. 8-15 and 8-17).

b. Each of the 64 characters (except those in row 0 and column 0) is routed to two OR gates, one defines the column digit of the output octal code and the other defines the row digit (table 3-3). The OR gates controlling columns G0, G1, G2, and G3 of table 3-3 are located on PC card A10, and the OR gates controlling columns G4, G5, G6, and G7 are located on PC card A12,

c. In addition, OR gates are provided for each of rows F1 through F7 on both cards A10 and A12. The respective row outputs are wired together external to the two cards. For example, the output of row 1 OR gate Z11 on PC card A12 is wired to the output of row 1 OR gate Z11 on PC card A01. Thus, if either A10Z11 or A12Z11 is activated, a high output is produced on the common row Fl output line to the octal-to-ASCII converter. No OR gate is used for row F0 since this row is assumed to be active whenever the other rows are inactive.

d. As an example of encode matrix operation, assume that the character T is punched on the tape. As indicated in table 3-3 this character is defined by the intersection of row F4 and column G2 in the encode matrix. Thus, the line representing this character is routed to OR gate Z2B on P1 card A10 which controls the line representing column G2 and to OR gate Z14B which controls the line representing row F4. The high level, on the character T line causes both Z2B and Z14B produce high outputs.

3-47. Octal-to-ASCII Converter

The row and column octal digits from the encode matrix are converted into the corresponding eight-bit ASCII code by the octal-to-ASCII converter. The eight ASCII bits consist of seven bits (1 through 7), which define the characters, and one parity bit.

3-48. Generation of ASCII Bits 1, 2, 4, 8, 16, 32, and 64

a. ASCII data bits 1, 2, and 4 are defined by rows 0 through 7 of the encode matrix. The signals identifying the seven rows (F1 through F7) are coupled through buffer amplifiers on PC card A13 (fig. 8-18) to three expanded OR gates which convert the octal row selection digit into the equivalent three-bit binary code on ASCII data bit lines 1, 2, and 4. These lines correspond to the binary value of data bits 1, 2, and 3 respectively Each row selection digit (F0 through F7) is encoded by feeding it to the OR gates which control the binary equivalent

lines. For example, F6 converts to 110 (binary 6) on data bit lines 4, 2, and 1 of the ASCII output. When none of the seven row select digits is activated, a row F0 selection is indicated. In this case, all the three binary output lines remain low (000).

Rows (F)	DATA BITS				Columns (G)							
					0	1	2	3	4	5	6	7
				64	1	1	1	1	0	0	0	0
				32	0	0	0	0	1	1	1	1
				16	0	0	1	1	0	0	1	1
	4	2	1	8	0	1	0	1	0	1	0	1
0	0	0	0			H	P	X	SP	(	0	8
1	0	0	1		A	I	Q	Y	!	)	1	9
2	0	1	0		B	J	R	Z	"		2	:
3	0	1	1		C	K	S		#		3	;
4	1	0	0		D	L	T		$	'	4	
5	1	0	1		E	M	U			-	5	
6	1	1	0		F	N	V		&	.	6	
7	1	1	1		G	O	W		'	/	7	?

Table 3-3. Encode Matrix

b. ASCII data bits 8, 16, 32, and 64 are defined by columns G0 through G7 of the matrix. Thus, the column selection from the encoder matrix is converted into the equivalent four-bit binary code as specified by table 3-3. This is accomplished by feeding the column G0 through G7 lines to four sets of expanded OR gates on PC card A13 which control data bits 8, 16, 32, and 64 and then modifying the results with additional gating to compensate for the special characters in columns A and B of the ASCII matrix in table 3-2.

3-49. Generation of ASCII Parity Bit

a. The parity bit is developed by determining whether the sum of the other seven data bits is odd or even. This determination is made in two stages. First, a determination as to whether the sum of data bits 1, 2, and 4 is odd or even and as to whether the sum of data bits 8, 16, 32, and 64 is odd or even. Then, these two sums are compared to determine if the total sum is odd or even.

b. There are four possible combinations of data bits 1, 2, and 4 involving an odd sum (001, 010, 100, and 111). These combinations are represented by the octal row select digits Fl, F2, F4, and F7. Thus, if the character read from the tape is in rows F1, F2, F4, and F7 of the ASCII matrix, the sum of data bits 1, 2, and 4 is odd. This condition is detected by routing the row F1, F2, F4, and F7 lines to expanded OR gate Z5A, Z17A on. PC card A13 (fig. 8-18). If any of the lines are high, the OR output is low, indicating an odd sum.

c. The parity detection for data bits 8, 16, 32, and 64 is performed in a similar manner. Thus, the combinations of these bits involving an odd sum is represented by column select digits G0, G3, G4, and G7. If the character read from the tape involves an even sum of data bits 8, 16, 32, and 64, a high level is applied to expanded OR gate Z5B, Z17B and a low level output is produced.

d. The odd and even sum outputs for the two sets of data bits are fed to the comparator circuit formed by AND gates Z2A and Z6A, and OR gate Z7B for final parity evaluation. Thus, AND gate Z2A receives both high inputs only if both the bit 1, 2, 4 sum is even and the bit 8, 16, 32, 64 sum is even and AND gate Z6A receives both low inputs only if the two sums are odd. In either case, a high output activates OR gate Z7B to result in a low level which is inverted by AND gate Z11A. The resulting high level on the parity bit line (128) keeps the total bit sum odd.

3-50. Timing Generator

The timing generator controls the timing sequence for each read cycle. The read cycle lasts for 64 counts of a 104-µsec oscillator period (6.66 ms) for high speed operation of the punched tape reader and 512 count (53.4 ms) for low speed operation. The timing generator consists of three circuits: a read cycle control circuit which starts the cycle on receipt of an advance signal; the timing counter and its associated decoders which control the length of the read cycle and the events which occur during it by generating a series of time sequenced pulses; and a cycle complete control which terminates the read cycle after 64 counts or 512 counts of the 104-µsec increment. The circuits of the timing generator are described in paragraphs 3-51 through 3-62.

3-51. Read Cycle Control

The read cycle control allows the timing counter to begin counting 9.6-kc clock pulses (104-µsec period) from an oscillator on PC card Al when an advance command is received from the advance control circuit. Normally, counting is permitted to continue until the cycle complete control detects the end of the read cycle (64 counts or 512 counts, depending on the mode).

a. The advance command is received in the form of a low level on not advance line NADV at AND gate Z9B on PC card A14. This conditions Z9B to become enabled by negative 9.6-kc OSC pulses from the oscillator. A second conditioning input for Z9B is provided by remote continuous step reset line RCSR. This line is low as long as the message part of the tape is being read. Thus, the first negative OSC pulse after the NADV line goes low results in a positive pulse at the output Z9B, setting read cycle latch Z13. This starts the read cycle interval and places a high level on line CYCL. The latch also supplies a low conditioning level to AND gate Z9A in the timing counter circuit to permit counting operation.

b. The read cycle normally continues until a cycle complete signal is received on line CC from the cycle complete control. The high level on line CC is passed through OR gate Z1A to clear latch Z13.

c. To insure that no read cycle occurs if the portion of the tape passing through the read head is not the message portion, when a high level occurs or. line RCSR, the signal is passed through OR gate Z1A to clear latch Z13.

d. Latch Z13 is also cleared when power is first turned on to the equipment and .when RESET switch indicator S1 on logic assembly Al is operated. In either case, a high level is applied to OR gate Z1A on reset line RST.

3-52. Timing Counter

The timing counter is a binary counter which goes through a 64-count sequence for each read cycle in high speed operation and 512-count sequence in low speed operation.

a. The timing counter consists essentially of 10 flip-flops on PC card A14 (fig. 8-19). Prior to the start of a read cycle, a high level is produced by read cycle control latch Z13 at the Z13A output. This level is directly applied to the clear inputs of the first four counter stages (Z17, Z21, Z25, and Z26). In addition, this level is coupled through buffer amplifier Z19B to counter reset line CRST which clears the remaining counter flip-flops.

b. Counting operation is allowed to begin when the Z13A output goes low at the start of a new read cycle. This conditions AND gate Z9A which is then strobed by successive negative 9.6-kc pulses on line OSC from the oscillator. Thus, Z9A produces positive pulses at 9.6 ke on count 0 line CO. The first stage of the timing counter (Z17) is clocked at each negative transition of the 9.6kc clock pulses. The gated set input to Z17 also receives the 9.6-kc clock pulses to permit alternating setting of the flip-flop. Alternate clearing of the flip-flop is permitted by a high level on the CYCL line from latch Z13 to the gated clear input to Z17.

c. Each subsequent stage of the timing counter is clocked by the 1 output of the preceding stage. Thus, each stage changes state when the preceding stage is cleared (the 1 output goes low). This satisfies the requirements for conventional binary counter operation. Thus, the successive stages become set for the first time at the counts of 1, 2, 4, 8, 16, 32, 64, 128, 256, and 512. However, if the punched tape reader is in high speed operation, the high level which appears at the 1 output of flip-flop Z24 when the count of 64 is reached causes the cycle complete control circuit to terminate the read cycle. This causes the Z13A output of read cycle latch Z13 to go high, disabling AND gate Z9A and preventing further clocking of the first counter stage. Also, the Z13A output simultaneously clears all counter stages. Thus, the timing counter is never permitted to exceed the count of 64 in high speed operation.

d. In low speed operation, the cycle complete control circuit does not become activated until the last stage of timing counter (Z18) becomes set at the count of 512. Thus, a complete 512-count read cycle is permitted in low speed operation.

e. The 1 outputs of the first six counter stages are designated C1 through C6. These outputs go high at the counts of 1, 2, 4, 8, 16, and 32. The C1 through C6

outputs, as well as the subsequent flip-flop output, are monitored by decoder AND gates to generate signals at specific times in the timing counter time cycle.

3-53. Timing Decoder

The timing decoder consists essentially of AND gates on PC card A14 (fig. 8-19) which decode specific counts in the timing counter to produce sequenced control signals during each read cycle. The decoder functions are described in paragraphs 3-54 through 3-61. The timing relationships explained in these paragraphs are summarized in figure 3-22

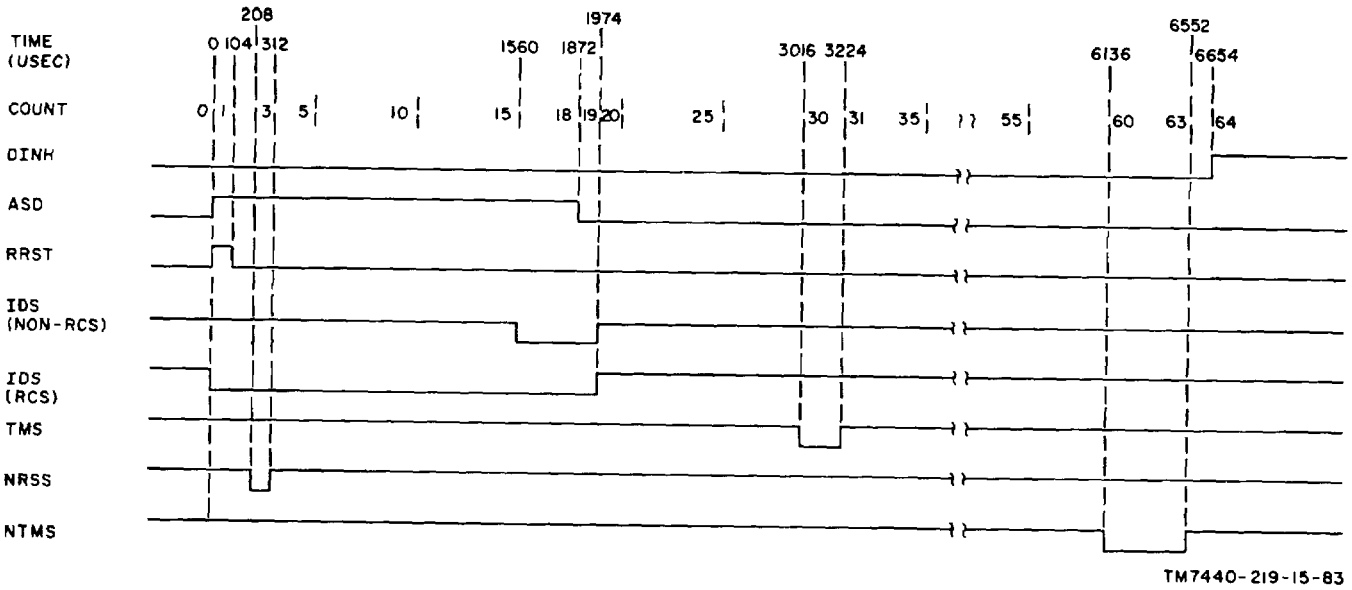


Figure 3-22. Timing decoder, overall timing diagram

3-54. Decode Inhibit

All of the timing decoder signals are generated during the first 64 counts of the timing counter. Thus, only the first five stages of timing counter (1, 2, 4, 8, 16, 32) are monitored. However, in low speed operation when the count goes up to 512, it is necessary to inhibit the generation of the decoded signals in subsequent count cycles of the first five stages after the count of 64. This is accomplished by AND gates Z14A and Z14B which operate effectively as a single AND gate that monitors the 1 outputs of the last four counter stages (64, 128, 256, 512). As long as the count has not yet reached 64, these 1 outputs are all low (the flip-flops are cleared). Thus, the AND gates are enabled and a low level is placed on decode inhibit line DINH. After the count of 64, one or more of the last four flip-flops is set. Thus, at least one of the inputs to the AND gates is high and a high output is produced on the DINH. This inhibits the other decoder AND gates.

3-55. Advance Solenoid Drive

a. The advance solenoid drive pulse for the advance solenoid in the reader mechanism is initiated on the count of 1 and extends up to the count of 18. To initiate this pulse, AND gate Z15 monitors the I outputs of the counter flip-flops corresponding to the counts of 4, 8, 16, and 32. These lines are all initially low. However, AND gate Z15 does not become enabled until the count of 1 when the 1 count flip-flop (Z17) is set. The low level at the 0 output of Z17 enables Z15 to produce a high output which sets latch Z4. This places a low level on advance solenoid driver line ASD. Line ASD is connected to solenoid driver SOL DR on PC card Al which sends a high current ground level through advance solenoid line AS. This is the drive pulse line for the drive solenoid in reader mechanism assembly A2 (fig. 8-6).

b. To terminate the advance solenoid drive pulse, AND gate Z16B on PC card A14 monitors the 0 outputs of the 2 and 16-count flip-flops (Z21 and Z27). The first time these flip-flops are

set simultaneously is at the count of 18. At that time, Z16B produces a high output on reset advance solenoid driver line RASD which clears latch Z4.

c. The advance solenoid drive pulse is also terminated when a stop command is generated by the stop control circuits. Thus, when a high level is received on stop line STP, OR gate Z19 is activated to clear latch Z4.

d. To insure that latch Z4 is initially in the clear state when power is first turned on, a high level received on reset line RST from PC card A15 is passed through OR gates Z1A and Z19A to clear latch Z4.

3-56. Register Reset

The register reset signal resets the input data register at the beginning of each cycle. This signal is generated as a high level on the count of 1 in the timing counter. This is controlled by AND gate Z8B which monitors count-of-2 line C2 and the output of inverter Z16& The C2 line goes high for the counts of 2 and 3, 6 and 7, etc. (fig. 3-23). As described for the remote stepping strobe, the Z16 output goes low for the counts of 1 and 3 only. Thus, AND gate Z8B is enabled for the count of 1 and places a high level on line RRST for this count.

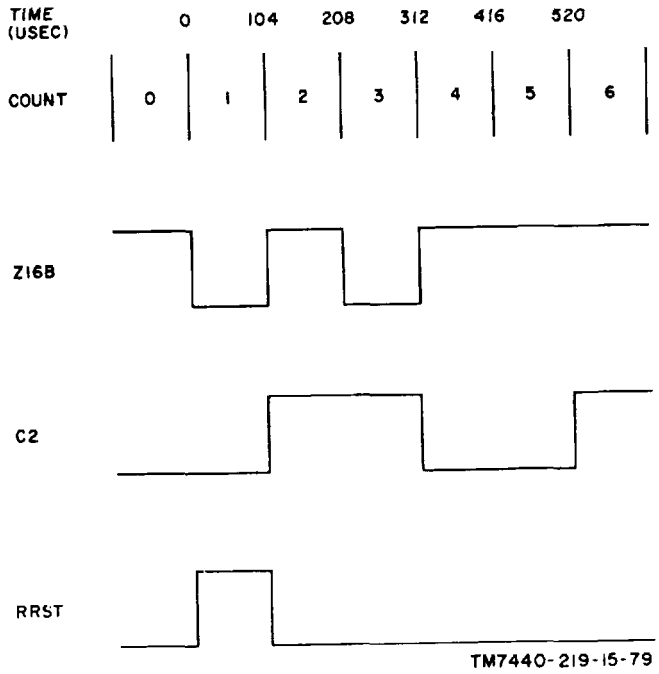


Figure 3-23. Register reset, timing diagram.

3-57. Input Data Sample

a. The input data sample signal is used to gate data into the input data register. This signal is generated as a low level on line IDS from the counts of 16 through 20 for each normal data read cycle. For each read cycle in remote continuous stepping operation, the IDS goes low for the counts of 1 through 20.

b. Operation for normal data read cycles is controlled by AND gates Z11 Band Z7B which function together effectively as a single AND gate that produces a high level at the Z7B when all inputs to both AND gates are low. The two AND gates monitor the 0 output of the count of 16 flip-flop (Z27) and the 1 outputs of the count of 4 and 8 flip-flops. All these lines are low only for the counts of 16 through 19 (fig. 3-24). Thus, Z7B produces a high output for this duration. The Z7B output is integrated by capacitor C1 and resistor R3 to slow the rise time at the leading edge of the signal. After inversion in OR gate Z7A, the Z7B output results in a negative pulse on the IDS line for the counts of 16 through 19.

c. During remote continuous step operation, AND gate Z8A becomes conditioned by a low level on not remote continuous step line NRCS. During the counts of 1 through 17, the advance solenoid drive line (ASD) is low, enabling Z8A to produce a corresponding high output. This is combined with the Z7B output in OR gate Z7A to produce a low level on the IDS for the counts of 1 through 19.

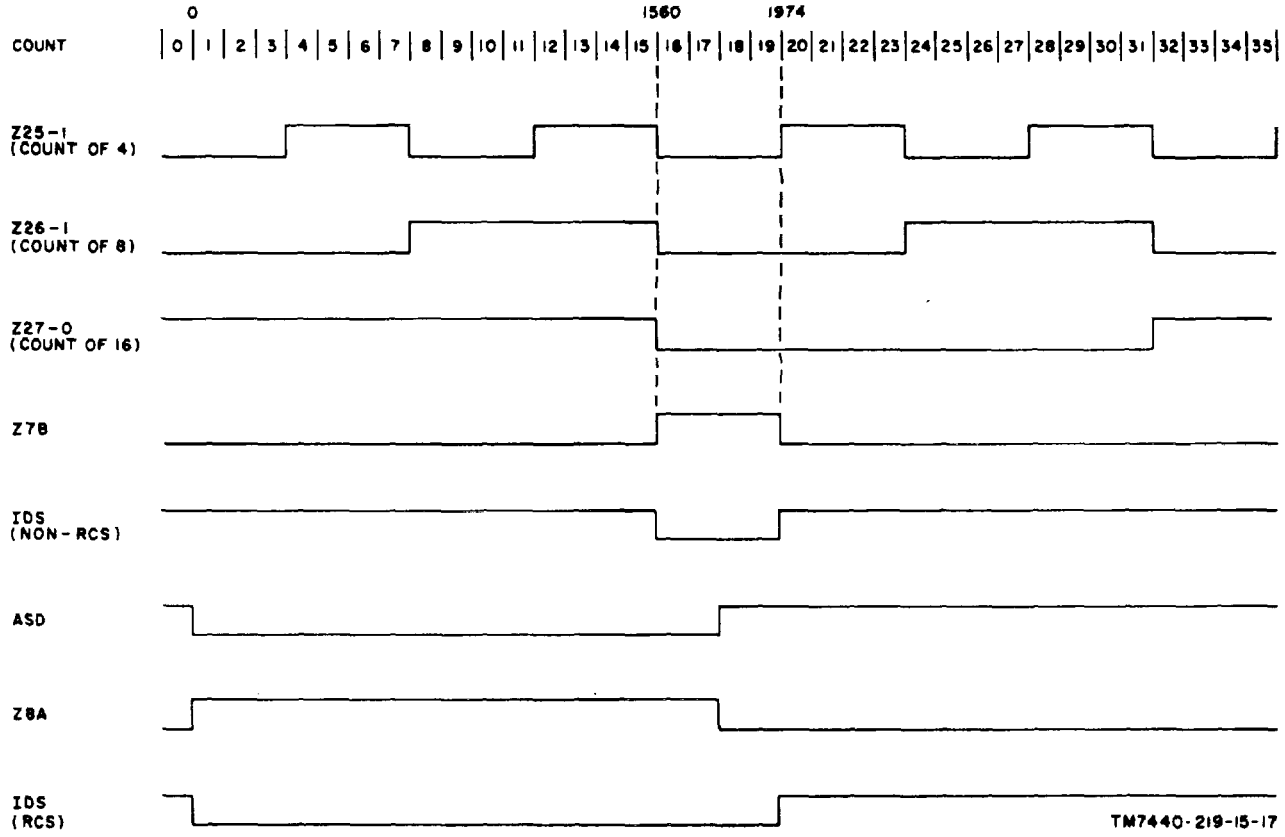


Figure 3-24. Input data sample, timing diagram.

3-58. Tape Motion Set

The tape motion set signal is used in the alarm circuits for tape motion sensing alarm control. This signal is generated as a high level on line TMS for the counts of 30 and 31 in the timing counter. This is controlled by AND gate Z10A which monitors the inverted reset advance solenoid driver line (RASD) and the output of AND gate Z12B.

a. The inputs to AND gate Z12B are the 0 outputs of the 4 and 8 count flip-flops (Z25 and Z26) and the 1 output of the 32 count flip-flop (Z28). Thus, AND gate Z12B is enabled for the counts of 12 through 15 and 28 through 31 (fig. 3-25).

b. The RASD line is controlled by AND gate Z16B which monitors the 0 outputs of the 2 and 16 count flip-flops . Z21 and Z27) Thus, Z16B is enabled for the counts of 15 and !9, 22 and 23, 26 and 27, and 30 and 31. The resulting high level on line RASD during these counts is inverted to a level by inverter Z10B. Since Z10B and Z12B produce low levels simultaneously only during the counts of 30 and 31, AND gate Z10A is enabled only for these two counts. Thus, a high level is produced on tape motion set line TMS only for the counts of 30 and 31.

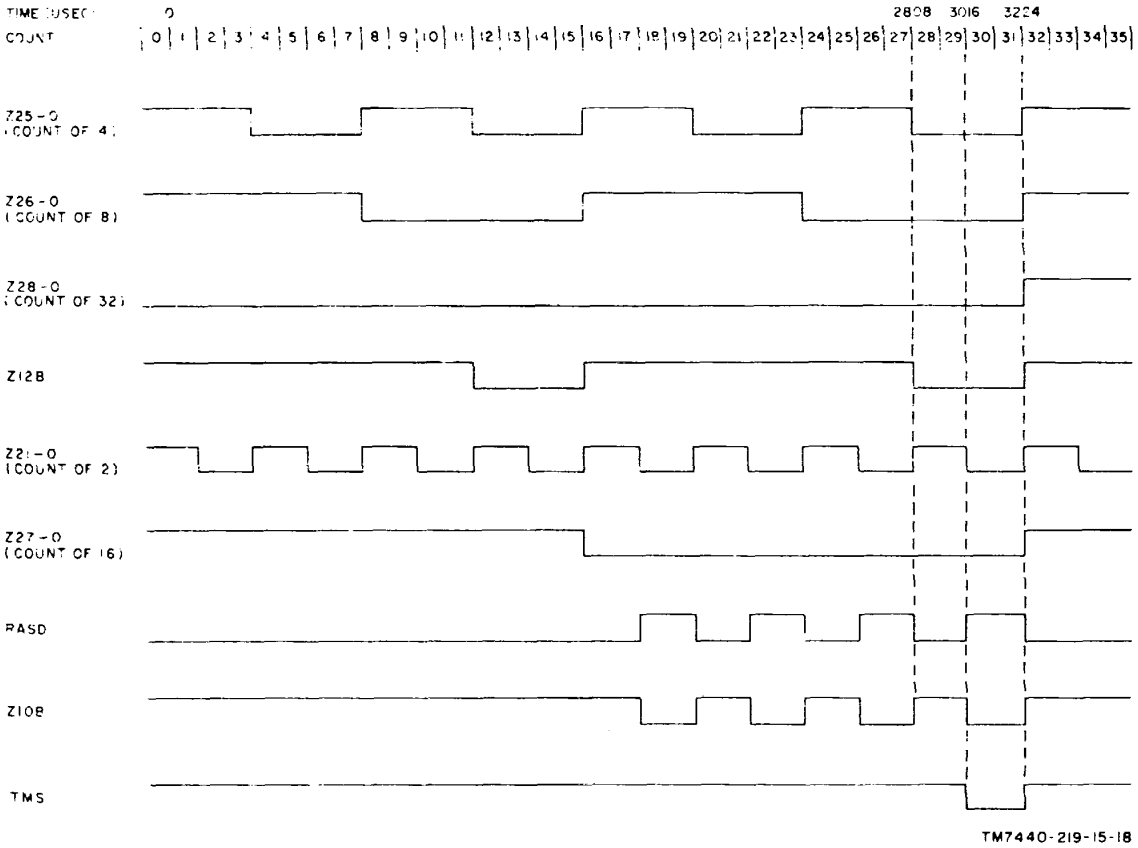


Figure 3-25. Tape motion set, timing diagram.

3-59. Not Remote Continuous Step Strobe

a. The remote stepping strobe, which is used to allow the advance control circuits to check idle characters when in the remote continuous step mode. is generated as a low level on line NRSS for the count of 3. in the timing counter. This is controlled by AND gate Z6B which monitors the 0 output of the count-of-2 timing counter flip-flop (Z21) and the output of inverter Z16A.

b. Flip-flop 7Z21 is set for the counts of 2 and 3, 6 an(d 7, etc. (fig. .2-2f6). Thus, the Z21-0 line is low for these counts. However, AND gate Z6B also monitors the output of AND gate Z15A after inversion by inverter Z16A. As described for the advance solenoid drive decoding, AND gate Z15 monitors the 1 outputs of the flip-flops corresponding to the counts of 4, 8, 16, and 32. Thus, this AND gate is disabled from the count of 4 and on. Up to the count of 4, Z15 is enabled only when the count-of-I flip-flop (Z17) is set. This occurs for the counts of 1 and 3. Thus, Z!5 produces a high level and Z16A, in turn, produces a low. level for these two counts. Thus, AND gate Z6B is enabled for the count of 3 only and produces a low level on line NRSS for this count.

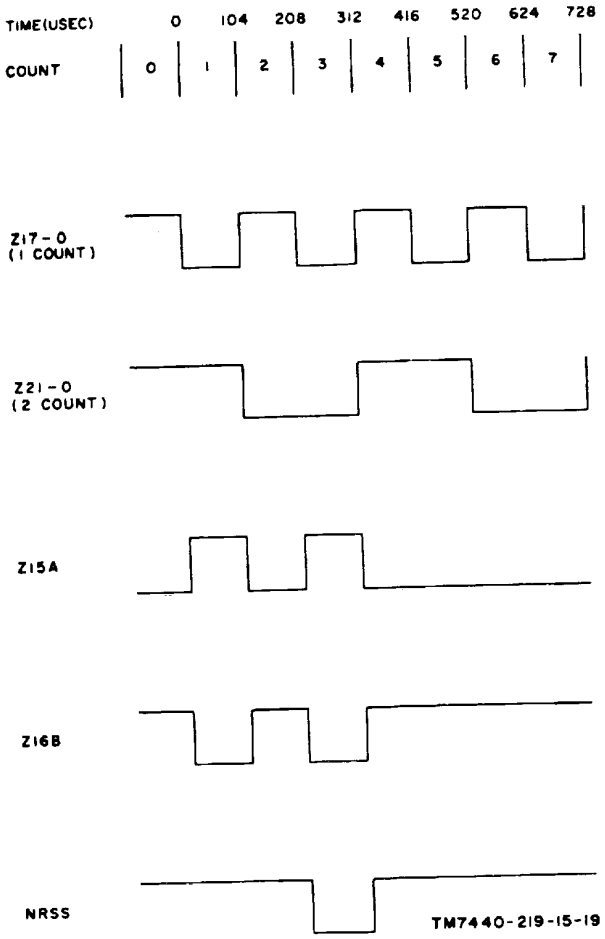


Figure 3-26. Remote stepping strobe, timing diagram.

3-60. Tape Motion Strobe

The tape motion strobe is used in tape motion alarm generation by the alarm circuits. This signal is generated as a low level on line NTMS for the counts of 60 through 63 in the timing counter. This is controlled by AND gates Z6A and Z11A which function effectively as a single AND gate. The two AND gates monitor the 0 outputs of the 4, 8, 16, and 32 count flip-flops (Z25, Z26, Z27, and Z28). Thus, all flip-flops must be set before the AND gates are enabled. This occurs at the count of 60 (4 + 8 + 16 + 32=60) and continues until the count of 64 when decode inhibit line DINH inhibits all decoding. Thus, a low level is produced by AND gate Z6A on line NTMS for the counts of 60 through 63.

3-61. Data Strobes

a. Data strobes are generated as high levels on line DST for the count of 21 in each read cycle. This is controlled by AND gate Z20 which monitors the 0 outputs of the 1, 4, and 16 count flip-flops (Z17, Z25, and Z27). Thus, all flip-flops must be set before the AND gate is enabled. This occurs at the count of 21 (1 -4 + 16 = 21). The AND gate also monitors the 1 outputs of the 2 and 8 count flip-flops (Z21 and Z26), both of which are low at the count of 21.

b. In addition, the 1 output of 32 count flip-flop (Z28) is monitored through AND gate Z12 to prevent the generation of another data strobe at the count of 53 (32 + 21). Thus, the high level from Z28 disables Z12 from the count of 32 to 64. From the count of 64 and on, Z20 is disabled by the decode inhibit line (DINH).

c. To prevent the generation of data strobes during the idle characters between messages and at the start of a tape, the high level which appears on remote continuous step line RCS during these portions of the tape disables AND gate Z12A. The high output of Z12A, in turn, disables Z20. In addition, to prevent generation of data strobes when the advance control circuits are in a stop condition, a high level on stop line STP from PC card A16 disables AND gate Z12A.

3-62. Cycle Complete Control

In high speed operation, the cycle complete control circuit generates a cycle complete signal when the timing counter has reached a count of 64. In low speed operation, the cycle complete signal is not generated until the timing counter has reached a count of 512.

a. Selection between high and low speed operation is made by operating HIGH SPEED/LOW SPEED switch-indicator Z3 on the control panel (fig. 8-2). When this push-to-set/push-to-reset device is operated to the low speed state, the common dc return is connected to low speed input line LSI. This low level activates lamp driver Z1B on PC card A3. The resulting ground output lights the LOW SPEED filaments in the switch-indicator.

b. The LSI low level signal is also fed to PC card A14 (fig. 8-19) to condition AND gate Z5B. When the count 512 flip-flop (Z18) in the timing counter becomes set, its 0 output places a low level on low speed complete line LSC. This enables Z5B to produce a high output which is routed

through OR gate Z1B to cycle complete line CC. The high output from Z1B resets latch Z13, which resets all counter stages to 0 and prepares the timing generator for the beginning of a new read cycle.

c. Similarly, when the switch-indicator is operated to the high speed state, the common dc return is connected to high speed input line HSI. This low level activates lamp driver Z2A on PC card A3. The resulting ground output energizes the HIGH SPEED filaments in the switch-indicator. The HSI low level signal also conditions AND gate Z5A on PC card A14. When the count 6 64 flip-flop (Z2P) in the timing counter is set, its 0 output places a low level on high speed complete line HSC. This enables Z5A to produce a high output which is routed through OR gate Z1B to cycle complete line CC. The high output from Z1B resets latch Z13, which resets all counter stages to 0 and prepares the timing generator for the beginning of a new read cycle.

3-63. Data Register

The data register stores the five ITA-2 data bits or eight ASCII bits for each character from the reader mechanism to insure that all data bits are available to the CCU when the data strobe is transmitted.

a. The data bit signals are generated by eight sensing switches (S1 through S8) on reader mechanism assembly A2 (fig. 8-6). These switches control corresponding data bit lines (B1 through BS) to the data register on PC card A7 (fig. 8-12). When no hole is sensed by any switch, a ground connection is made to the corresponding p line. When a hole is sensed by any line, the line goes to a high level (+4.5 volts) established by a corresponding voltage divider on PC card A7 which is returned to +6.2 volts. The +6.2 volt source is developed by Zener diode VR1 operating from a +12-volt source.

b. When reading an ASCII t ape, all eight data bit lines represent valid data bits on the tape. When reading an ITA-2 tape, data bit lines B2 through B6 represent the five data bits on the tape for each frame. Data bits B1, B7, and B8 are disregarded.

c. Simultaneous storage for data bit signals B1 through B8 is provided by eight latches on PC card A7. All eight latches are placed in the set state at the start of each read cycle. This is accomplished by a high level which appears on register reset line RRST at the count of the 1 in the timing counter. The RRST signal is passed through OR gate Z16B to the set side of the eight latches.

d. The eight data bit signals are gated to the set inputs of the eight latches by corresponding AND gates. For each read cycle, the input AND gates are conditioned for counts of 16 through 19 of the timing counter. This is controlled by the input data sample signal (IDS) from the timing counter. The IDS signal, which is low from the count of 16 through 19, is passed through OR gate Z16A to condition the eight input AND gates. Thus, at the count of 16 the data is passed through the input AND gates, clearing those latches for which a 1 data bit is not received and leaving the others set. The resulting levels at the 1 outputs of the eight latches are routed to the output data gates on PC card A7 for use in ASCII operation. For ITA-2 operation, the five latch outputs for bits B2 through B6 are designated I1, 12, I14, 18, and 116, and are routed to the ITA-2 decoder.

3-64. Output Data Gates

The output data gates select either the eight ASCII data bits from the data register or the ITA-2/ASCII converter for transmission to the CCU.

a. The selection between ASCII and ITA-2 operation is made by setting the code select switch S2 on the logic assembly panel to either the ASCII or ITA-2 position. In the ASCII position of the switch, a +4.5-volt level is connected to ASCII switch line ASW. This enables eight AND gates on PC card A7 (fig. 8-12) which monitor the outputs of the eight latches in the data register. These outputs are then passed through output OR gates which control the eight data bit lines to the interface transmitters. The output lines are designated by the binary weight of the data bits (IA, 2A, 4A, 8A, 16A, 32A, 64A, and 128A).

b. When code select switch S2 is set to ITA-2, a +4.5-volt level is connected to line ISW which conditions an alternate set of eight AND gates on PC card A7. These gates monitor the eight data bit outputs (1, 2, 4, 8, 16, 32, 64 and 128) of the ITA-2/ASCII converter. The data bits are then fed through the output OR gates to the interface transmitters.

3-65. Character Decoder

a. The character decoder monitors the ASCII output of the output data gates for the occurrence of 13 special characters. One of these is the N character which is used in end of message detection by the remote continuous step control circuit. Another seven are idle characters which are monitored by the idle character detection. One of the special characters (CB) is an invalid character and is monitored by the invalid character detection. The remaining four special characters (BEL, EM, DC4, AT) are not invalid but are also used by the invalid character detector together with some of the idle characters to aid in checking for invalid characters.

b. The 13 special characters are detected by 13 decoder AND gates on PC card A6 (fig. 8-11). Each of these gates monitors a combination of the first seven ASCII bits corresponding to the character being detected. The eighth bit is a parity bit and is not a factor in determining the character. When all seven inputs to any AND gate are low, the AND gate is enabled to place a high level on the corresponding detected character output line. Thus, each AND gate monitors the true-functions of those bits which are O's for that character and the not-functions of those bits which are 1's for that character. Seven input inverters receive the true-function input bits from the data register and convert them to not-function form for use as needed.

c. The idle character detector consists of OR gate Z10 and inverter Z6B. The OR gate monitors seven idle character outputs of the character decoder. When any one of the seven idle characters is detected, the OR gate produces a low output which is inverted to a high level on idle character line IDC by inverter Z6A. This is routed to the remote continuous step control circuit on PC card A15.

d. The invalid character detection is performed by OR gate Z3B which produces a high output on invalid character line INC when an invalid character is detected. One of the invalid characters is the CB character detected by AND gate Z28. When this character is detected, Z28 produces a high output which activates OR gate Z3B.

e. The other two inputs to Z3B are supplied by AND gates Z7B and Z4B which monitors invalid characters involving l's in bits C and 7 and C's in bits 6 and 7. Thus, if bits 6 and 7 are both 0's the 32A(6) and 64A(7) lines to AND gate Z3A are both low. This results in a low output which enables AND gate Z7B unless the character is one of eight special characters which are not considered invalid even though bits 6 and 7 are 0's. All other characters with O's for bits 6 and 7 are invalid. The eight special characters are detected by OR gates Z11 and Z12B. When any one of these special characters is detected, Z11 produces a low output which is inverted by inverter Z7A to disable AND gate Z7B. If none of these characters is detected, Z7B produces a high output which activates OR gate Z3B.

f. Similarly, if bits 6 and 7 are both 1's, the N32A and N64A inputs to AND gate Z8B are low, enabling Z8B to produce a low output which enables AND gate Z4B unless a DEL or AT character is detected. These are the only two characters in which l's for bits 6 and 7 are not considered cause for rejection as invalid. When either of these two special characters is detected, Z8A is disabled by a high input and supplies a corresponding high input to disable AND gate Z4B. Otherwise, Z8A supplies a low level to Z4B which becomes enabled to activate OR gate Z3B when both bits 6 and 7 are 1's.

3-66. Alarm Circuits

a. Alarm Stop. The alarm stop signal (NAST) is generated as a low level by an alarm stop circuit on PC card A 15 (fig. 8-20). This circuit consists of OR gates Z23A and Z16A which monitor alarm signals from the following separate alarm circuits:

(1) Cancel control circuit (para 3-67).
(2) Tape out alarm circuit (para 3-68).
(3) Tape motion alarm circuit (para 3-69).
(4) Invalid character alarm circuit (para 3-70).

b. Operator Alarm. The operator alarm signal (NOA) is generated as a low level by the tight alarm circuit (para 3-71) when a tight tape condition is sensed.

c. Audible Alarm Reset. The audible alarm reset signal (AR) is controlled by the audible alarm reset control circuit (para 3-72).

3-67. Cancel Control Circuit

a. When a cancel signal is received from the CCU during a data block, Lilt, cancel control circuit causes CANCEL indicator DS2 on the control panel to light.

b. The cancel signal is detected by AND gate Z4A on PC card A15, (fig. 8-20). If the cancel signal is received from the CCU during a data block when the select line is active, the receive interface circuits supply low levels on lines NCAN and NSEL. These enable AND gate Z4A which sets latch Z8. The resulting high output of the latch on the DCAN line activates a lamp driver on PC card A3 to energize CANCEL indicator DS2 on control panel A3. Also, alarm stop line NAST goes low and the punched tape reader stops. If tie cancel signal comes at the end of a message, NAST goes low and remote continuous step line RCS goes high. The punched tape reader then steps in the remote continuous step mode to the next nonidle character of the next message or to the end of the tape.

3-68. Tape Out Alarm Circuit

The tape out alarm circuit monitors the status of the end of tape sensor switch in reader mechanism assembly A5. If a tape out condition is sensed when a message is in progress and the tape is rot a header tape, an alarm stop is indicated and TAPE OUT indicator DS5 on the control panel is lighted. If the tape reader is not assigned to the CCU, the tape out condition also causes the TAPE OUT indicator to be lighted. However, instead of an alarm stop, a simple nonalarm stop is generated instead.

a. The NC contacts of the end of tape sensor switch on the reader mechanism (fig. 8-6) are held open by the presence of tape in the read station. When the end of the tape is reached, the contacts close and a ground level no tape signal is produced. This is routed to AND gates Z14B, Z19A, and Z19B on PC card A15 (fig. 8-20) on no tape line NOT. If a message is in progress, the AND gate Z14B is enabled to produce a high output which sets latch Z18. The resulting high level at the Z18A latch output is passed through OR gate Z23B to detected tape out line DTO. This line activates lamp driver Z3A on PC card A3 to energize TAPE OUT indicator DS5. At the same time, the low level at the Z18B output of the latch enables AND gate Z20A unless a high level is received on pilot header line PH from the pilot header detector on PC card A16. Thus, unless the punched tape reader is in pilot heads Z20A produces a high output which activates the alarm stop circuit.

b. The detection of an in-message condition is made by latch Z3. When a message is initiated, the first step/data acknowledge signal from the CCU causes a gated stop pulse (GS) from PC card A16 to set the latch. The resulting low level at the Z3A output conditions AND gate Z14B to accept a no tape indication.

c. The end of a message is identified by simultaneous end of block (EOB) and end of message (EOM) signals from the CCU. The resulting high levels on the EOB and EOM lines enable AND gate Z2B which produces a high level if the select signal from the CCU is still present (SELA is high). The resulting high output from Z2B is coupled through buffer amplifier Z6A and OR gate Z7A to clear latch Z3. If a message is canceled, latch Z3 is also cleared. In this case, OR gate Z7A receives a high level on the DCAN line from the cancel control circuit. Also, if the punched tape reader becomes deassigned in midmessage, a high level on not assigned line NASG clears latch Z3. In addition, latch Z3 is cleared by a high level to OR gate Z7A on reset line RST when RESET switch S1 on logic assembly A4 is operated and when power is first turned on to the equipment.

d. If the punched tape reader is not assigned to the CCU, a low level on assigned line ASG conditions AND gate Z19A. Thus, if no tape line NOT goes low, Z19A is enabled to produce a high output which activates OR gate Z23B, causing TAPE OUT indicator DS5 to light. The NOT signal is also inverted to a high level by inverter Z15A to activate OR gate Z7B which supplies a stop signal to the stop control circuit on PC card A16.

3-69. Tape Motion Alarm Circuit

The tape alarm circuit monitors the tape motion pulses from reader mechanism A2. If these pulses are not received within a specified portion of each read cycle, a tape motion failure signal is generated which initiates an alarm stop and causes MOTION FAIL indicator DS4 on the control panel to light.

a. In the reader mechanism (fig. 8-6), tape motion is sensed by light from a lamp passing through a shutter which is controlled by the tape drive mechanism. The shutter allows light to ,pass once each read cycle. This is sensed by a photocell, and causes the photocell to conduct electricity during the time that the shutter is open in each read cycle. One end of the photocell is

connected to a +12-volt source of dc and the photocell produces a +1.2-volt positive pulse once each read cycle. This pulse is amplified by a photocell amplifier on circuit card A2 in the reader mechanism (figs. 4-15 and 8-6, part 2). The photocell amplifier consists of a three stage dc-coupled amplifier, the last stage being an emitter follower. When the photocell is activated, it produces a closed circuit from pins E2 to E3 of amplifier A2, producing the 1.2-volt dc positive pulse from the +12-volt supply and voltage-dropping resistor R1. The positive pulse is amplified by stages Q1 and Q2, limited by Zener diode limiter D1, and applied through emitter follower Q3 to pin E6 of the amplifier as the output tape motion pulse on the H SIGNAL OUT line.

b. The positive output tape motion pulse produced at the output of the photocell amplifier provides an indication of tape speed since the time from the start of the read cycle to the occurrence of the read pulse increases as the tape slows down and decreases as the tape speeds up. For the purposes of the tape motion alarm circuit, the tape motion pulse is considered satisfactory if it is high after the count of 32 in the timing counter but goes low before the count of 60.

c. The tape motion pulse is routed on line TM to latch Z27 and inverter Z20B on PC card A15 (fig. 8-20). Latch Z27 is initially held in the set state during counts 30 and 31 of the timing counter by tape motion set signal TMS from the timing control decoding circuits on PC card A14. If the TM line goes high after this time, the latch is set. However, if the TM line has not gone high when the count of 60 is reached, an alarm is generated. This alarm is controlled by AND gate Z2RB which is conditioned at the count of 60 by a low level on not tape motion strobe line NTMS, from PC card A14. The NTMS line goes low for the counts of 60 through 63. If latch Z27 is still set at the count of 60, AND gate Z28B is enabled to produce a high output which sets latch Z24.

d. When latch Z24 is set, a high level is produced on tape motion failure line DTMF. This high level activates the alarm stop control circuit on PC card A15 and is also routed to PC card A3 to activate lamp driver Z2B. The resulting ground output of Z2B energizes MOTION FAIL indicator DS4 on the control panel.

e. The TM pulse is also inverted by inverter Z20B and is applied as a negative pulse to AND gate Z28A. This AND gate is also conditioned during the counts of 60 through 63 by the NTMS signal. Thus, if the TM pulse extends into count 60, Z28A is enabled to produce a high output which sets latch Z24.

3-70. Invalid Character Alarm Circuit The invalid character alarm circuit monitors the output of the invalid character detector on PC card A6. To insure that the invalid character indication from the invalid character detector is meaningful, this indication is sampled during data strobe time by AND gate Z2A on PC card A15.

Thus, if invalid character signal INC is high when data strobe pulse DST is generated, AND gate Z2A produces a high output which sets latch Z22. The resulting high level on invalid character line DINC activates the alarm stop circuit and is also routed to lamp driver Z1C on PC card A3. This energizes INVALID CHARACTER indicator DS3 on the control panel.

3-71. Tight Tape Alarm Circuit

The tight tape alarm circuit samples the tight tape signal from reader mechanism once each read cycle. If a tight tape condition is present, an operator's alarm is activated and TIGHT TAPE indicator DS6 on the control panel lights. The N.O. contacts of the tight tape sensor switch on the reader mechanism (fig. 8-6) are open as long as the tape is not too tight. However, when a tight tape condition occurs, the contacts close. causing a ground level tight tape signal to be sent on line TT to AND gate Z14A on PC card A15. This AND gate is strobed once each read cycle by not remote step strobe NRSS. This signal goes low during the count of 3 at the beginning of each read cycle. If the TT signal is also low, Z14A produces a positive pulse output which sets latch Z12. The resulting high level on line DST activates a lamp driver on PC card A3 to energize TIGHT TAPE indicator DS6 on control panel A3. The DTT signal is also inverted by OR gate Z16A to place a low level on not operator alarm line NOA.

3-72. Audible Alarm Reset Control Circuit

If the punched tape reader is assigned by the CCU, the audible alarm reset control circuit generates an audible alarm reset signal (AAR) when AUDIBLE RESET switch Z1 on the control panel is pressed. This signal is fed through the transmit interface circuits to the CCU to reset

the audible alarm.

a. Closure of the AUDIBLE RESET switch Z1 contacts transfers a high level to line ARO which is fed to debouncing latch Z25 on PC card A16 (fig. 8-21). The resulting positive step at the Z25B output of the latch is converted into a sharp positive pulse by differentiator C1, R11. The pulse is then coupled through OR gate Z26B which activates line AAR. Positive feedback through capacitor C2 makes the OR gate function as a single shot. The pulse width is determined by the time required to charge up C2 through resistor R12 to a potential at which the feedback voltage is insufficient to keep Z26B activated. At that time, the Z26B output returns to a low level and C2 quickly discharges through diode CR1.

b. To prevent generation of the AAR pulse when the punched tape reader is not assigned by the CCU, a low level on assigned line ASG from the receive interface circuits is inverted to a high level by inverter Z21A. This action prevents Z25 from initiating a step when the pushbutton is pressed.

3-73. Transmit Interface Circuits

The ready signal from the ready control circuit is shifted from the punched tape reader switching levels (0 volt and +4.5 volts) to CCU interface switching levels (+6.2 volts and 0 volt) by the transmit interface circuits. This permits the CCU to send the select signal through the receive interface circuits. When the select signal is present, the eight output ASCII data bits and the data strobe are gated through the transmit interface circuits to the CCU.

a. Ready Signal. The ready signal from the ready control circuit on PC card A16 is inverted to an active level of 0 volt and an inactive level of +6.2 volts by transmitter (A) on PC card A4 (fig. 8-9). The resulting transmit ready (TRDY) output is sent to the CCU.

b. Data Strobe. The data strobe (DST) from the data strobe control circuits on PC card A14 is gated into transmitter (J) on PC card AS by the SEL B select line from the receive interface circuits (fig. 8-10). When the select input from the CCU is active, the SEL B line is high and the positive DST strobe pulses are accepted and converted to polar pulses (TDST) to the CCU, switching from +6.2 volts to -6.2 volts.

c. ASCII Outputs. The eight output ASCII data bits (DB1 through DB8) from the input register are gated into transmitters (A) through (H) on PC card A5 by the select line from the receive interface circuits. The SEL A select input is buffered by OR gates Z1A and Z1B to condition the eight transmitters. When the CCU has selected the punched tape reader, a high level on each input bit line results in a +6.2-volt output. A low level on each input line results in a -6.2-volt output.

d. Alarm Stop and Operator Alarm Signal. The not alarm stop (NAST) and not operator alarm (NOA) signals from the alarm logic controls circuits on PC card A1S are applied to transmitters (B) and (C), respectively, on PC card A4 (fig. 8-9). The resulting transmit TAST and TOA outputs are at +6.2 volts when an alarm condition exists and at 0 volt when no alarm condition exists.

e. Audible Alarm Reset Signal. The audible alarm reset signal (AAR) from the alarm control circuits is fed to transmitter (D) on PC card A4. When the punched tape reader is assigned to the CCU, the ASG line from the receive interface circuit goes high. This conditions transmitter (D) to produce an open circuit on line TAAR to the CCU, resetting the audible alarm in the CCU. If either input goes low, the TAAR output goes to 0 volt.

3-74. Detailed Operation of Discrete Circuits on PC card A1 (fig. 8-7)

a. Power On Reset Circuit. The power on reset circuit produces a power on reset pulse when power is turned on. Power turn-on results in the +4.5-volt dc supply level being coupled through resistor R3 to the circuit output. However, at the same time, the 48-volt supply current gradually charges up capacitor C1 through resistor R2. As the voltage at the junction of C1 and R2 reaches approximately -11.5 volts, voltage dropping Zener diode VR1 starts to conduct, allowing the output voltage to drop below +4.5 volts. As the charge continues to build up, the output voltage continues to drop until it reaches 0 volt. The output is prevented from going below this value by diode CR1.

b. Solenoid Drivers. Solenoid driver Q1, Q2, Q3 is activated by a 0-volt input to resistor R5. This results in a negative voltage at the junction of voltage divider R5, R6 to drive transistor Q1 into conduction. Conduction of Q1 causes a 0-volt level at the Q1

collector, which supplies base current for Q2. This allows transistor Q2 to go into conduction s, that a -12-volt level is coupled through resistor R10 to drive transistor Q3 into conduction. The Q3 collector is connected through the external solenoid winding to the -48-volt supply. Thus, the solenoid draws current from the -48-volt return line (ground) through Q3. If the input to the solenoid driver goes to +4.5 volts, all operations are reversed and Q3 is cut off so that the solenoid is deenergized. Capacitor C2 slows down the rise and fall times of the Q3 output and diode CR3 sets the bias for the base of Q3 at +0.7 volt when Q2 is cut off. Solenoid driver Q4, Q5, Q6 operates in a similar manner.

c. Oscillator Circuit. The oscillator circuit produces 9.6-kc clock pulses. When power is turned on, current flows from the +12-volt power source through resistor R18, diode CR6, potentiometer R20, and resistor R19 to charge capacitor C5. The output voltage from the oscillator is +4.5 volts at this time, as determined by the voltage regulator circuit consisting of Zener diode VR2, resistor R18, and filter capacitor C4. The 9-volt output of the voltage regulator is applied to voltage divider R22, R23 to produce the +4.5-volt output. When the voltage across C5 is sufficient to fire unijunction transistor Q7, the charging current is bypassed through Q7 and resistor R21. The resulting positive voltage across R21 drives transistor Q8 into conduction, thereby causing the output of the circuit to fall to 0 volt. After capacitor C5 has discharged through the emitter of Q7, the current into the emitter of Q7 is insufficient to maintain conduction. Thus, Q7 goes into cutoff. The resulting 0 volt output across R21 causes Q8 to go into cutoff. Thus, the output voltage returns to 4.5 volts. Capacitor C5 now begins charging again as described above. The cycle repeats indefinitely as long as power is present. The repetition rate is determined by the time required to charge capacitor C5. This is adjusted by potentiometer R20.

3-75. Detailed Operation of Discrete Circuit Logic Elements

The detailed circuit operation of discrete circuit logic elements is described in paragraphs 3-76 and 3-77. The component makeup of each type of logic element is shown in figures 3-27 through 3-32. However, since one example of each type is shown in these figures, refer to table 3-4 for a detailed listing of the corresponding components in the logic element of each type.

3-76. Detailed Operation of Discrete Circuit Logic Elements on PC Card A4

a. Type RCVR-LA Interface Receiver (fig. 327). The RCVR-1A receiver converts a 0-volt input from the CCU to +4.5 volts and an open circuit input from CCU to 0 volt. When the transmitting source becomes an open circuit, the input signal becomes +6.2 volts. This signal is coupled by resistor R25 and bias network R27, and Zener diode VR4 to the base of transistor Q8, driving Q8 into conduction. This action results in a 0-volt output at the Q8 collector. When the input signal goes to 0 volt, transistor Q1 is cut off and a +4.5-volt output is coupled through resistor R28 to the load.

b. Type RCVR-1B Interface Receiver (fig. 328). The type RCVR-1B receiver operates in the same way as the RCVR-1A (a above), except coupling is accomplished by constant voltage drop diode CR3, and resistor R13.

c. Type RCVR-2 Interface Receiver (fig. 3-29). The type RCVR-2 interface receiver converts a +6.2-volt input from the CCU to +4.5 volts and a -6.2-volt input to 0 volt. A +6.2-volt input causes transistor Q10 of differential amplifier composed of Q10 and Q11 to go into conduction and causes transistor Q11 to go into cutoff. The negative voltage at the collector of Q10 is coupled through resistor R38 to drive transistor Q12 into cutoff. Thus, the output assumes the +4.5-volt level supplied through resistor R41. If, however, the input to the circuit is -6.2 volts, the base of Q10 assumes a negative potential established through resistors R33 and R34. Thus, Q10 is driven into cutoff and Q11 into conduction. The positive level at the collector of Q10 drives Q12 into conduction so that the output goes to 0 volt.

d. Type XMTR-1A Interface Transmitter (fig. 3-30). Inputs from the punched tape reader logic circuits switching between 0 volt and +4.5 volts are coupled through impedance matching network R1, R2, R3 to the base of inverter Q1. When the input is 0 volt, Q1 is cut off and supplies an open circuit to the CCU which provides a connection through a load resistor to +6.2 volts. When the input is +4.5 volts, Q1 is driven into conduction, resulting in a 0-volt output to the CCU.

e. Type XMTR-1B Interface Transmitter (fig.

3-31). The type XMTR-1B transmitter operates in the same way as the XMTR-1A transmitter described in d above, except diodes CR1 and CR2 are added to provide an AND function for two input signals, both of which must be + 4.5 volts to produce the 0 output.

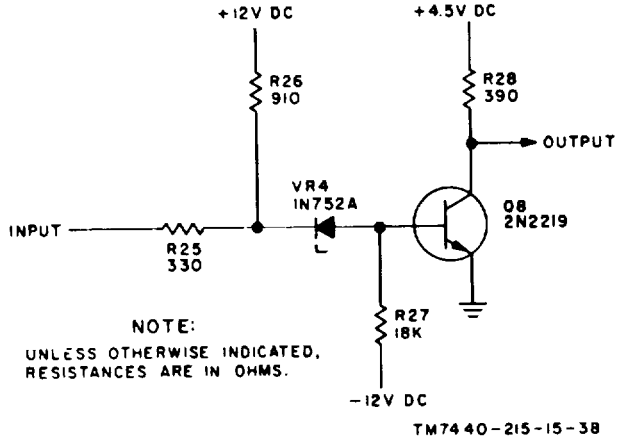


Figure 3-27. Type RCVR-1A interface receiver, schematic diagram.

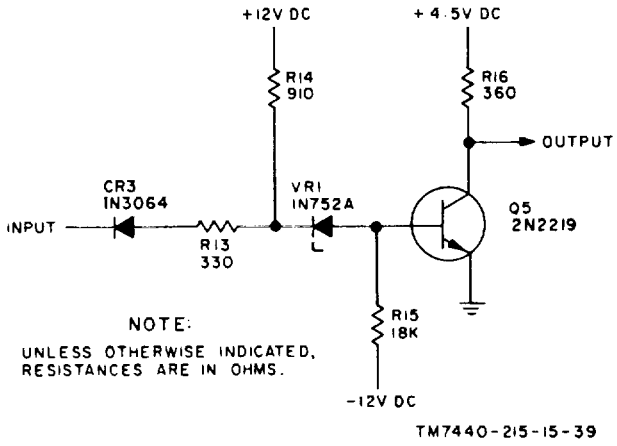


Figure 3-28. Type RCVR-1B interface receiver, schematic diagram.

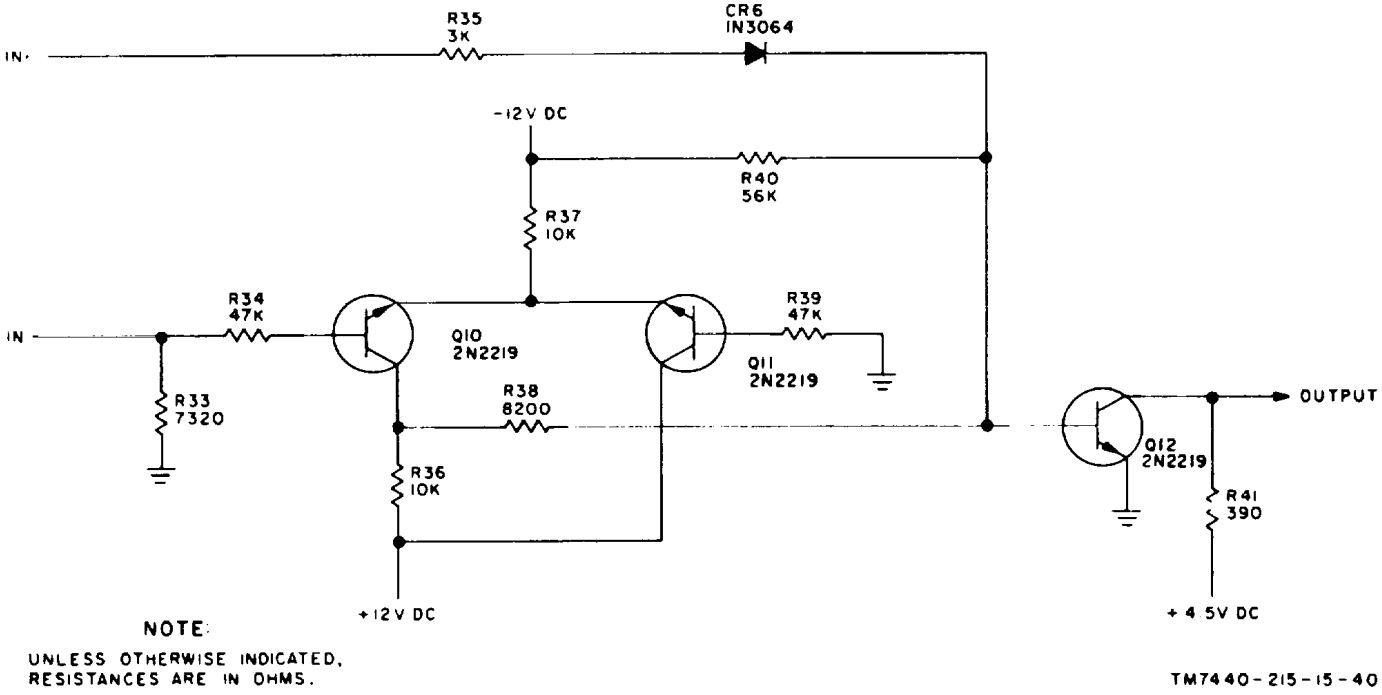


Figure 3-29. RCVR-1C interface receiver, schematic diagram.

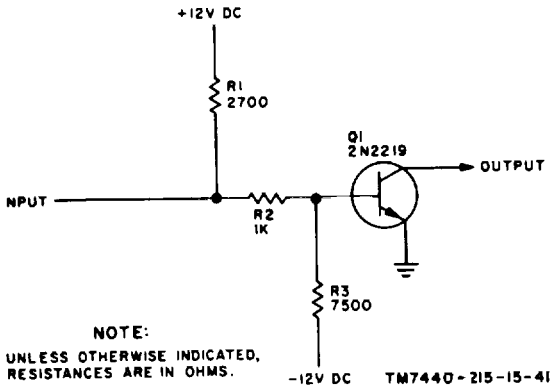


Figure 3-30. Type XMTR-1A interface transmitter, schematic diagram.

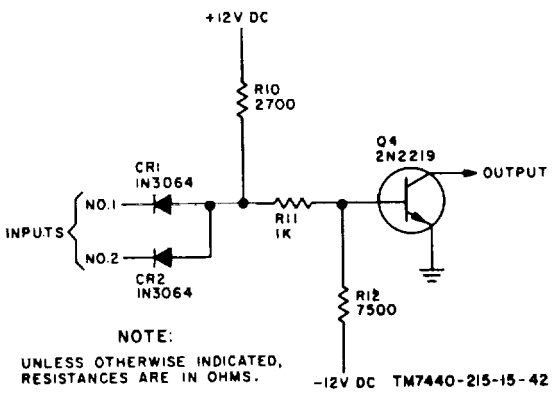


Figure 3-31. Type XMTR-1B interface transmitter, schematic diagram.

Table 3-4. Discrete Circuit Logic Element Components

PC card	Logic element type	Logic element reference designation	Component reference designation
A4	XMTR-1A	(A)	R1 R2 R3 Q1
		(B)	R4 R5 R6 Q2
		(C)	R7 R8 R9 Q3
	XMTR-1B	(D)	R10 R11 R12 CR1 CR2 Q4
	RCVR-1A	(E)	R13 R14 R15 R16 CR3 Q5 VR1
		(F)	R17 R18 R19 R20 CR4 Q6 VR1
		(G)	R21 R22 R23 R24 CR5 Q7 VR3
	RCVR-1B	(H)	R25 R26 R27 R28 Q8 VR4
		(J)	R29 R30 R31 R32 Q9 VR5
	RCVR-1C	(K)	R33 R34 R35 R36 R37 R38 R39 R40 R41 CR6 Q10 Q11 Q12
AS	XMTR-2	(A)	R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 C1 Q1 Q2 Q3 Q4 CR1 CR2
		(B)	R11 R12 R13 R14 R15 R16 R17 R18 R19 R20 C2 Q5 Q6 Q7 Q8 CR3 CR4
		(C)	R21 R22 R23 R24 R25 R26 R27 R28 R29 R30 C3 Q9 Q10 Q11 Q12 CR5 CR6
		(D)	R31 R32 R33 R34 R35 R36 R37 R38 R39 R40 C4 Q13 Q14 Q15 Q16 CR7 CR8
		(E)	R41 R42 R43 R44 R45 R46 R47 R48 R49 R50 C5 Q17 Q18 Q19 Q20 CR9 CR10
		(F)	R51 R52 R53 R54 R55 R56 R57 R58 R59 R60 C6 Q21 Q22 Q23 Q24 CR11 CR12
		(G)	R61 R62 R63 R64 R65 R66 R67 R68 R69 R70 C7 Q25 Q26 Q27 Q28 CR13 CR14
		(H)	R71 R72 R73 R74 R75 R76 R77 R78 R79 R80 C8 Q29 Q30 Q31 Q32 CR15 CR16
		(J)	R81 R82 R83 R84 R85 R86 R87 R88 R89 R90 C9 Q33 Q34 Q35 Q36 CR17 CR18

3-77. Detailed Operation of Discrete Circuit Logic Elements on PC Card A5

a. The type XMTR-2 interface transmitter on PC card A5 (fig. 3-32) receives card reader inputs switching between 0 and +4.5 volts de at AND gate diodes CR1 and CR2. When both inputs are +4.5 volts, the diodes are cut off and bias network R1, R2, R3 drives transistor Q1 into conduction. Loading for Q1 is provided by resistors R4 and R5. The low voltage at the junction of R4 and R5 turns on transistor Q2 to result in a positive level at the Q2 collector. This drives transistor Q3 into conduction and transistor Q4 into cutoff. Thus, the + 6.2-volt supply voltage is drawn through (43and resistor R8 to the circuit output.

b. When a 0-volt level is applied to either input diode CR1 or CR2, bias network R1, R2, R3 allows QI to go into cutoff. The resulting positive output of Q1 drives Q2 into cutoff so that a negative voltage appears at the Q2 collector. This voltage drives q3 into cutoff and ,4 into conduction. Thus, the -6.2-volt supply is drawn through Q4 and resistor R9 to the circuit output.

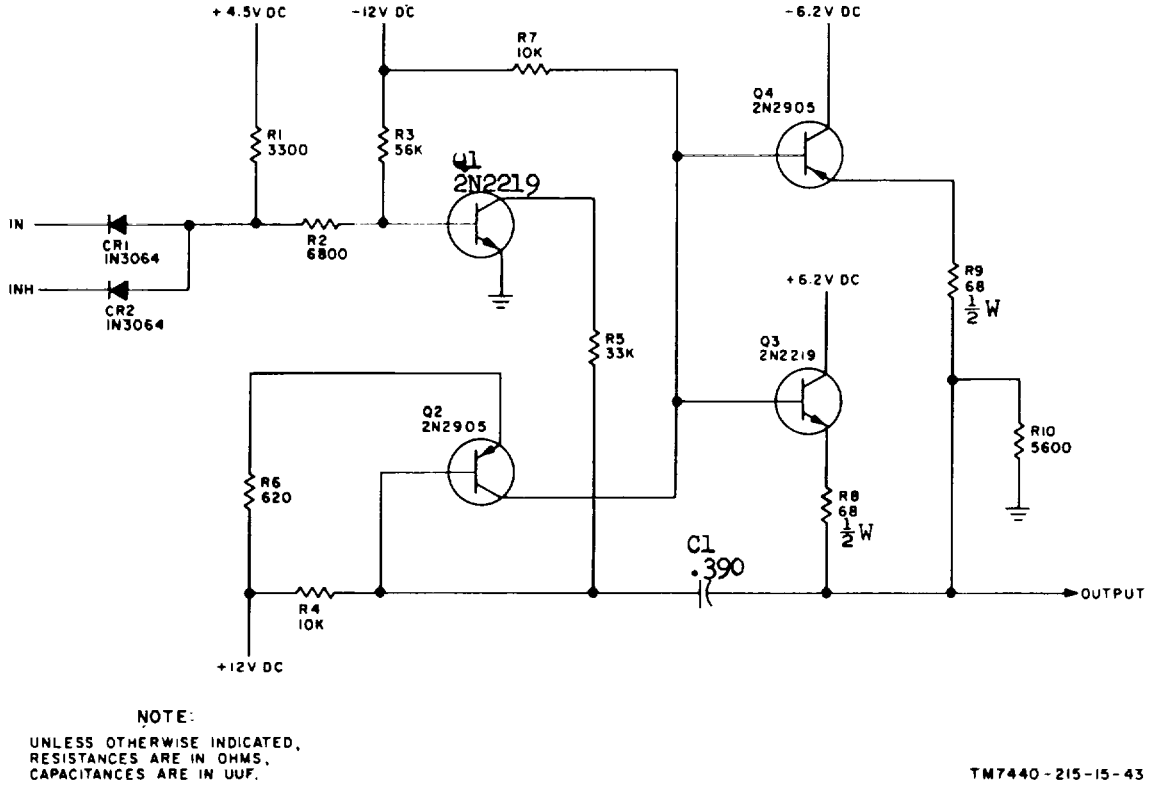


Figure 3-32. Type XMTR-2 interface transmitter, schematic diagram.

Section IV. GENERAL FUNCTIONING OF TRANSMISSION IDENTIFICATION GENERATOR

3-78. Transmission Identification Generator, Block Diagram (fig. 3-33)

The transmission identification generator (TIG), when installed in the punched tape reader and used with the CCU, provides the automatic generation of a transmission identification (TI) character sequence. The TI sequence precedes the first data character of each message read and transmitted by the punched tape reader to the CCU. The T1 characters generated by the TIG are a programmable sequence of ASCII alphabetic, numeric, and machine function characters as defined in paragraph 3-84. Processing of the data generated by the TIG is performed by electronic circuits located both in the punched tape reader logic assembly and in the TIG assembly and by manual switches located on the TIG control panel. These functions are described in paragraphs 3-79 through 3-84.

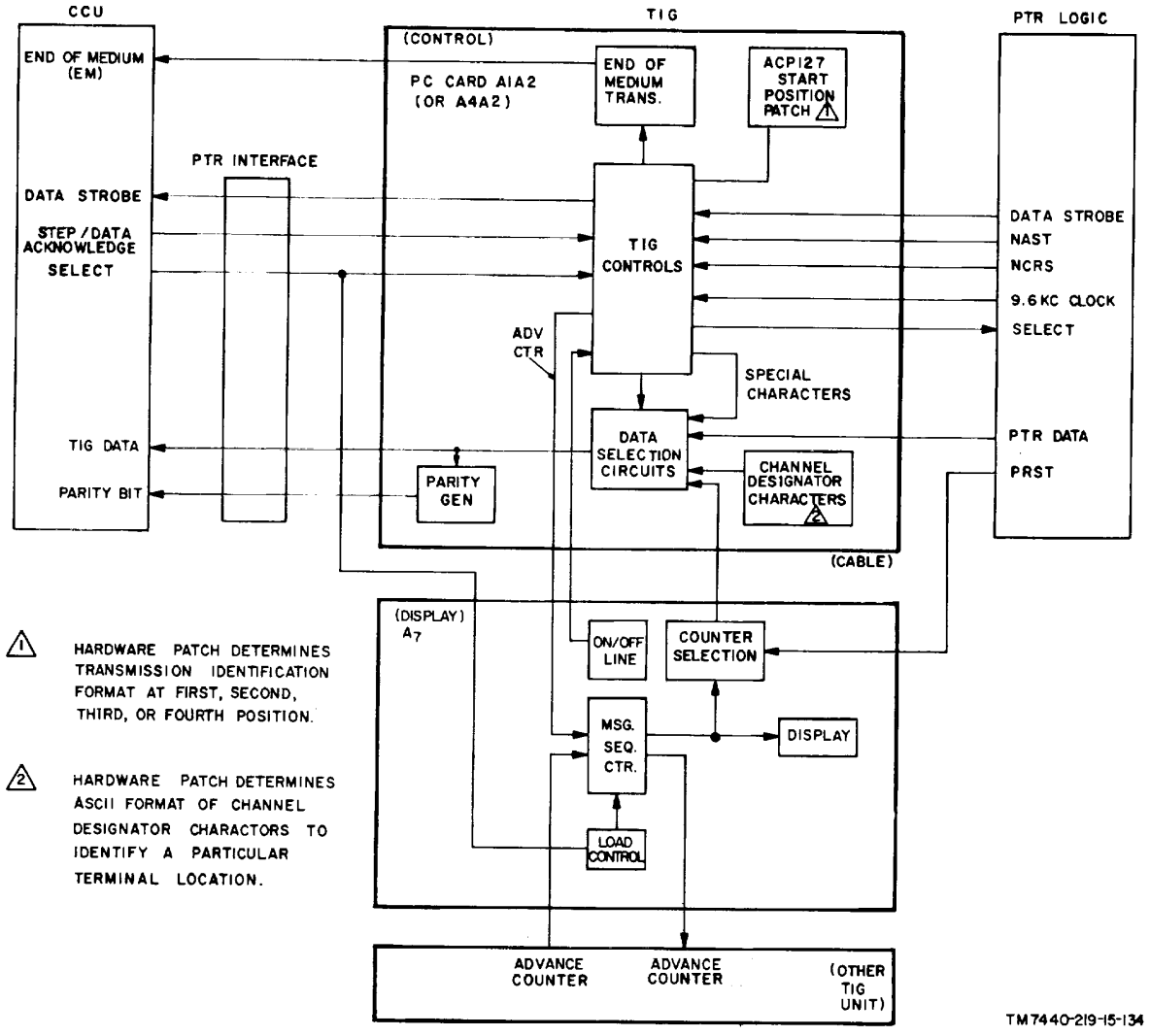


Figure 3-33. Transmission identification generator, block diagram.

3-79. Interface with Punched Tape Reader (fig. 3-34)

Punched tape readers having a TIG installed modifies punched tape reader operation during generation of the TI character sequence. Figure 3-34 provides a timing diagram showing transfer of both TI sequence characters to the CCU and transfer of punched tape data read by the punched tape reader.

a. Data interface lines between the punched tape reader and the CCU are gated through data multiplex circuits in the TIG. During the TI generation at the start of each message, the data multiplex circuitry will inhibit data being read from the punched tape and enable transmission of TIG generated special characters, channel designation characters, and numerical message sequence characters.

b. The SELECT line from the CCU and the DATA STROBE line to the CCU are gated through the TIG control circuitry. These interface control lines are inhibited between the punched tape reader and the CCU during the generation of the TI sequence. At the start of each message, these signals are used by the TIG to control the transfer of TI sequence characters. During TI sequence generation, the TIG control circuitry will enable gating of one character on the ASCII data lines to the CCU, each time a positive step data acknowledge pulse is received from the CCU providing the select line is high and the TIG has completed its previous character. The data character is then accompanied by a TIG generated positive data strobe pulse. After the completion of the TI sequence, the TIG control circuitry will then enable transfer of these signals between the punched tape reader and the CCU, and the punched tape reader will then transfer data characters in the normal manner.

c. Other interface with the punched tape reader includes the 9.6 KC clock signal to provide timing functions for the TIG circuitry. NCRS, NAST, and PRST signals enable reseting of TIG circuitry upon power turn-on, detection of end of message, cancel, and alarm stop conditions.

3-80. End of Medium

The last character of the TI sequence is the end of medium (EM) character. The ASCII coding of EM character is generated by the CCU in response to an active level on the EM interface line thus, during generation of the EM level, the TIG will place a NUL character on the ASCII data lines. The EM character signifies to the CCU and to the AUTODIN message switch that a short block (less than 80 characters) is being transmitted (TM 11-7440-214-15).

3-81. Message Sequence Function

The message sequence counter maintains a record of the number of messages transmitted. This counter is incremented by each paper tape message transmitted by the terminal having the TI sequence included. A visual display of the next message sequence number is provided on the TIG front panel. Manual controls on the front panel enable presetting of the message sequence counter to any number from 000 to 999. The counter multiplex enables transmission of the count in the message sequence counter as a part of the TI sequence by gating only one of three numerical characters at a time to the data selection circuits.

3-82. Dual TIG Installations

At terminals having dual punched tape readers, dual TIG assemblies may be installed. In this case, interface between the two TIG units consist of advance counter pulses. Thus, regardless which punched tape reader, TIG unit transmits the message, the message sequence counters in both TIG assemblies are incremented by one.

NOTE

To initially obtain the same count in both sequence counters, manually set both counters to the same number. Once the counters are set, they will then remain in step.

3-83. Off-Line Function

An OFF-LINE/ON-LINE switch is contended on the TIG control panel. When you have the TIG in the off-line mode, data transfer between the punched tape reader and the CCU is functionally the same as operation in units without a TIG installed. In the off-line mode, the TIG functions only to enable gating of the punched tape reader/ CCU interface lines. In the on-line mode, the TI sequence is generated at the beginning of each message.

3-84. Signaling Code

a. Data Signal Code. The signaling code used for all data transfer between the punched tape reader and the TIG and between the TIG and

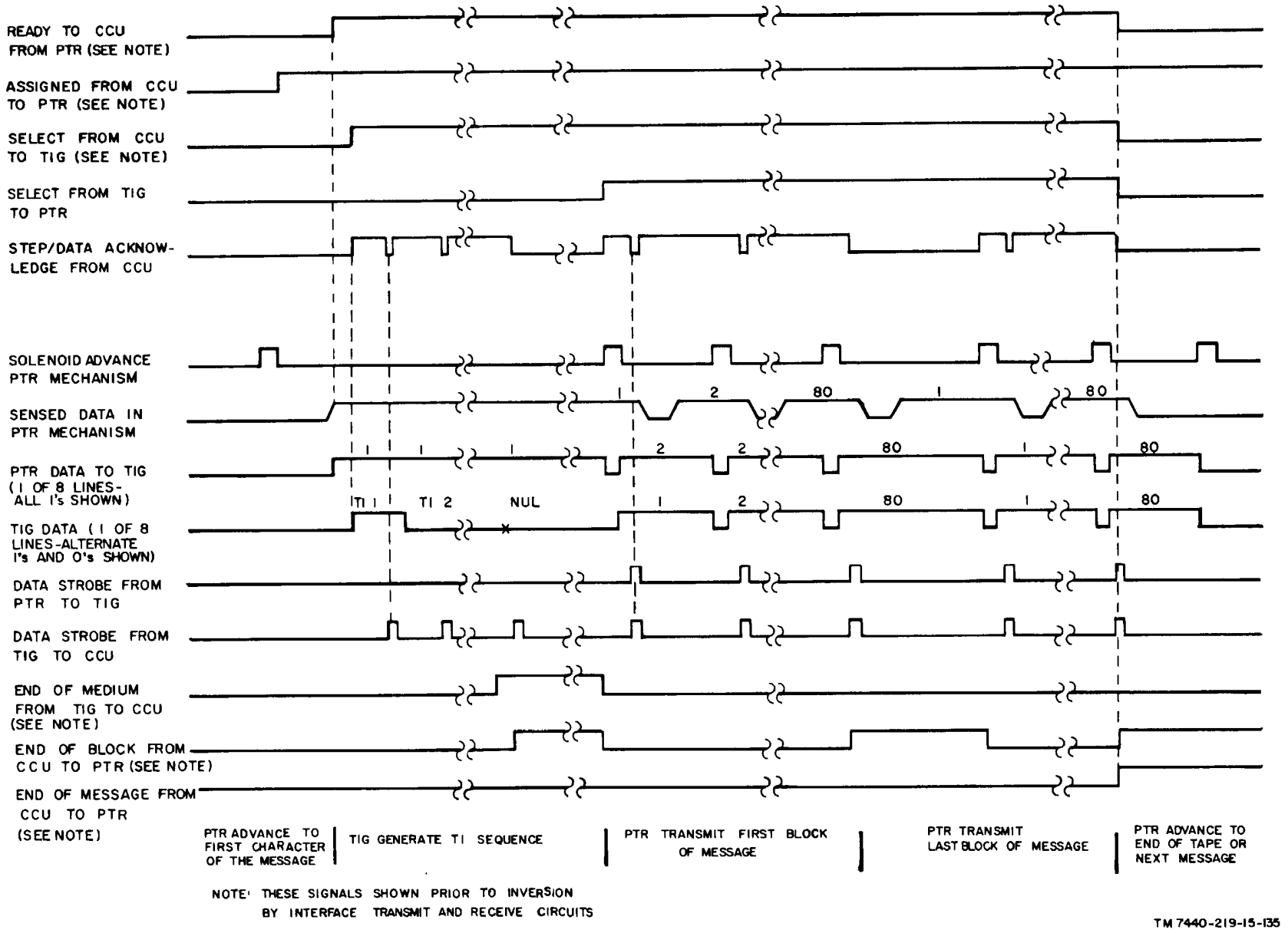


Figure 3-34. Punched tape reader/TIG, timing diagram

the CCU is eight-bit ASCII code. Refer to the signaling code chart (fig. 3-3). Seven of the ASCII bits contain the data. The eighth is the parity bit which is high or low, as necessary, to have odd parity for the transmitted character.

b. Transmission Identification Format. The TIG will generate a transmission identification (TI) format to precede each message transmitted from the punched tape reader. The TI format provides for a channel designator sequence, a channel sequence number, ASCII machine function control characters SI, SO, CR, and LF, and the ASCII character NUL. The TI sequence consists of thirteen to sixteen ASCII characters formated for transmission as follows:

Position NR	1 2 3	4	5 6 7	8	9 10 11	12	13 14	15	16
Character	Z C Z	C	A B C	S O	1 2 3	S I	C C R R	L F	N U L

(1) *Positions 1, 2, and 3.* The function of the "ZCZ" characters is to identify ACP-127 start of message. A stran)ing capability, to be accomplished at time of TIG installation, is provided on the PC card you install in the A1A2 (or A4A2) logic assembly. This strapping enables optional transmission or nontransmission of the part or all of the three characters. Thus, the T1 format may begin with position 1, 2, 3, or 4.

(2) *Position 4.* The function of the "C" character is to identify a modified ACP-127 start of message sequence.

(3) *Positions 5, 6, and 7.* Three alphabetical characters are placed in these positions to identify the channel designator for your particular terminal location. A strapping capability to be accomplished at time of TIG installation is provided on the PC card you install in the AA2 (or A4A2) logic assembly. This strapping enables generation of any ASCII character in each of the three positions.

(4) *Position 8.* The shift out (SO) control character is used for machine control.

(5) *Positions 9, 10, and 11.* One numeric character from 0 to 9 is placed in each position. These characters identify the channel sequence number of the message to be transmitted. The message number placed in these positions is the number displayed on the TIG front panel at the start of message transmission.

(6) *Positions 12, 13, 14, and 15.* Shift in (S1), two carriage returns (CR), and one line feed (LF) character are placed in these positions for machine control.

(7) *Position 16.* The null (NUL) character (all lines except parity have a low level) is required for proper operation of the CCU when the end of medium (EM) line is activated by the TIG.

3-85. Logic Diagrams

a. The data processing and control functions of the transmission identification generator are performed by logic circuits on two printed circuit (PC) cards. One of these you will find located in the punched tape reader logic basket A1A2 or A4A2 locations and the other is fastened to the TIG front panel. Thus, the electrical operation of each PC card is represented in chapter 8 by a logic diagram rather than a conventional schematic diagram. The logic diagrams show all input and output connections of the card including power connections but do not show the circuit components which make up the individual logic elements. Basic descriptions of the logic elements are given in paragraphs 3-88 and 3-90.

b. One of the logic elements in the transmission identification generator is made of discrete circuit components. The schematic representation and a description of the circuit operation for this type of logic element is given in paragraph 3-92.

3-86. Logic Signal Notation

a. In general, logic signals in the transmission identification generator switch between a high level of + 4.5 volts and a low level of 0 volt. Some signal lines are considered activated when the level is high whereas others are considered activated when the level is low. The state indicators (small circles) at the input and outputs of logic elements indicate which lines are activated by a high level (state indicator absent) and which lines are activated by a low level (state indicator present).

b. All significant logic signals are assigned a functional name. Many of the functional names are also assigned mnemonic designations. To permit the active state of a signal to be identified by its functional name or mnemonic designation, the high level is arbitrarily designated true or logic 1 for signal naming purposes, whereas the low level is arbitrarily designated not-true or 0 logic 0. Thus, the signal is a true-function if it is

active on a high level and a not-function if it is active on a low level. Not-function signals are prefixed by the Letter N (for example: NSELECT:not selected). Refer to the following chart for identification of mnemonic designations used in the TIG modification to the punched tape reader.

TIG logic signals—mnemonics and functional names

Mnemonic	Functional name	Mnemonic	Functional name
CTR 2^0	COUNTER BIT 2^0 2^1, 2^2, and 2^3).	NROM A1	NOT READ ONLY MEMORY BIT A1 (A2).
DST	DATA STROBE	NSELECT	NOT SELECT
EM	END OF MEDIUM	PRST	POWER ON RESET
LED V_{cc}	ISOLATOR–MCD2 (LIGHT EMMITTING DIODE) VOLTAGE.	SDA	STEP DATA ACKNOWLEDGE
NAST	NOT ALARM STOP	SELA	SELECT A
NEMPULSE	NOT END OF MEDIUM PULSE.	TIGDST	TIG DATA STROBE
NOFFLINE	NOT OFF-LINE	TIGSELA	TIG SELECT A
NINTIG	NOT INCREMENT OTHER TIG COUNTER.	TIG 1A	TIG DATA BIT 1A (2A, A4, through 128A).
NRCS	NOT REMOTE CONTINUOUS STEP.	1A	DATA BIT 1A (2A, 4A, through 128).

c. In the functional descriptions, the terms high and low are used for +4.5-volt and 0-volt levels. Pulses or steps going from 0 volt to +4.5 volts are called positive pulses or steps and those going from +4.5 volts to 0 volt are called negative pulses or steps.

3-87. Logic Diagram Symbol Notation

a. Typical integrated circuits and discrete circuit logic elements are shown in figure 8-21.2. Inputs and outputs of integrated circuit logic elements are identified by the wire terminal numbers of the integrated circuit modules in which the elements are located.

b. Two tagging lines are used within each logic symbol for identification purposes.

(1) The first tagging line in each symbol identifies the logic element type. The various types of integrated circuits and discrete circuit logic elements are described in paragraphs 3-88 through 3-92.

(2) The second tagging line in each logic symbol identifies the reference designation of the logic element. This reference designation must be preceded by the PC card reference designation to form the complete designation of the logic element.

3-88. Integrated Circuit Modules

a. The integrated circuit modules used in the TIG are of several types as described in the following paragraphs. Reference designations for the integrated circuit modules are Z1, Z2, Z3, etc.

b. Some of the integrated circuit modules contain only one logic element, whereas others contain two or more. In those cases where two or more logic elements are contained in one integrated circuit module and the elements are shown separately on the logic diagram, you will find designations A, B, C, and D; for example Z1A, Z1B, etc.

c. Power supply inputs to the individual logic elements are not shown on the logic diagrams, however, discussion on the individual circuits identifies power pins. In addition, you will find a chart on each logic diagram in chapter 8, identifying the power inputs to the various modules.

3-89. Operation of Individual Integrated Circuit Modules

The operation of the individual integrated circuit modules used in the TIG is described below. Logic symbols are given for each type of module, using typical tagging lines. Since some of the modules are classified as medium scale integration (MSI), functional block diagrams are also illustrated in those cases.

a. Type 7402 Module. Four two-input type 7402 gates are located on each type 7402 module (fig.3-35). These may be either inverting AND gates for low inputs (case A) or inverting OR gates for high inputs (case B), by tying both inputs together, type 7402 gates may also function as inverters (case C). Terminal 14 of type 7402 module is connected to +Vcc and ground is applied to terminal 7.

b. Type 7410 Module. Three-input type 7410

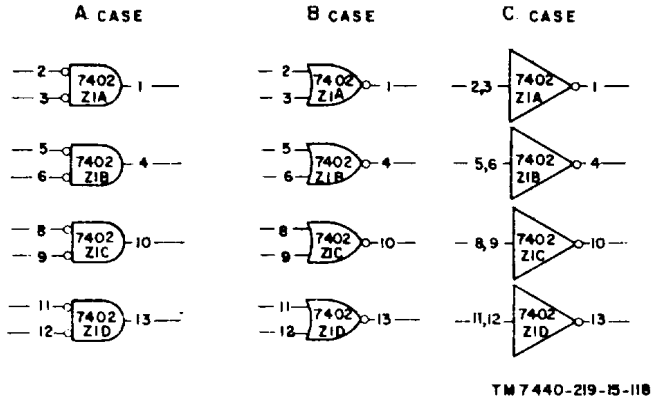


Figure 3-35. Type 7402 module, logic symbols.

gates are located on each type 7410 module (fig. 3-36). These may be either inverting AND gates for high inputs (case A) or inverting OR gates for low inputs (case B). Terminal 14 of the type 7410 module is connected to +Vcc and ground is applied to terminal 7.

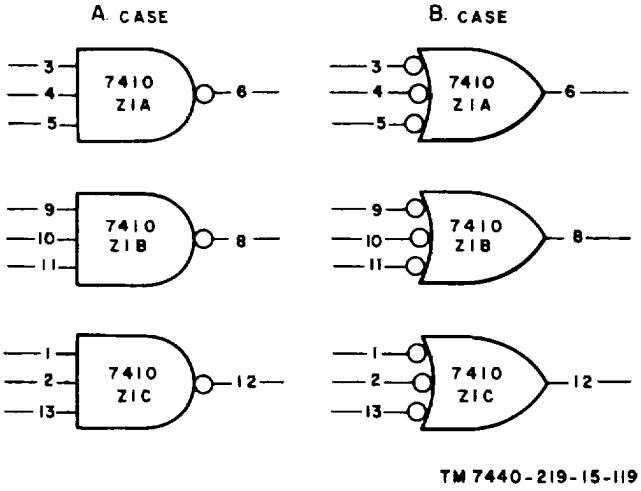


Figure 3-36. Type 7410 module, logic symbols.

c. Type FF-7474 Module. Two type 7474 flip-flops are located on each type FF-7474 module (fig. 3-37).

(1) The flip-flops can be set either by a low level at the S input or by a high level at the D input which is clocked by a positive step on the clock (CLK) input. The flip-flops can be cleared by either a low level on the C input or by a low level on the D input which is clocked by a positive step on the CLK input.

(2) Open circuits on the S, C, or D inputs are equivalent to a high level. The type 7474 flip-flop module receives power inputs of +Vcc on terminal 14 and ground on terminal 7.

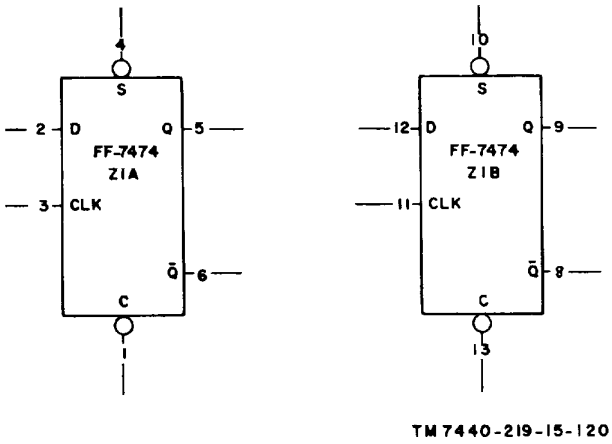


Figure 3-37. Type FF-7474 module, logic symbols.

d. Type MLPX-74151 Module. One data selector, multiplexer circuit is contained in each type MLPX-74151 module (A, fig. 3-38). This circuit will select one of eight data sources as the data output. A functional block diagram of the circuit is provided for your analysis of circuit operation (B, fig. 3-38).

(1) A low level must be applied to the E (enable) input. When this occurs, one of the eight data inputs (Do through D,-) is gated through to output Y and W depending upon the binary value of the three data select inputs (20, 2', and 22). Output Y will have the same value as the selected data input line and output VW will develop an inverted level. The following truth table shows output levels for each of the input combinations:

Inputs												Outputs	
2^2	2^1	2^0	E	D_0	D_1	D_2	D_3	D_4	D_5	D_6	D_7	Y	W
X	X	X	1	X	X	X	X	X	X	X	X	0	1
0	0	0	0	0	X	X	X	X	X	X	X	0	1
0	0	0	0	1	X	X	X	X	X	X	X	1	0
0	0	1	0	X	0	X	X	X	X	X	X	0	1
0	0	1	0	X	1	X	X	X	X	X	X	1	0
0	1	0	0	X	X	0	X	X	X	X	X	0	1
0	1	0	0	X	X	1	X	X	X	X	X	1	0
0	1	1	0	X	X	X	0	X	X	X	X	0	1

Inputs											Outputs	
2^2	2^1	2^0	E	D_0	D_1	D_2	D_3	D_4	D_5	D_6	D_7	Y	W
0	1	1	0	X	X	X	1	X	X	X	X	1	0
1	0	0	0	X	X	X	X	0	X	X	X	0	1
1	0	0	0	X	X	X	X	1	X	X	X	1	0
1	0	1	0	X	X	X	X	X	0	X	X	0	1
1	0	1	0	X	X	X	X	X	1	X	X	1	0
1	1	0	0	X	X	X	X	X	X	0	X	0	1
1	1	0	0	X	X	X	X	X	X	1	X	1	0
1	1	1	0	X	X	X	X	X	X	X	0	0	1
1	1	1	0	X	X	X	X	X	X	X	1	1	0

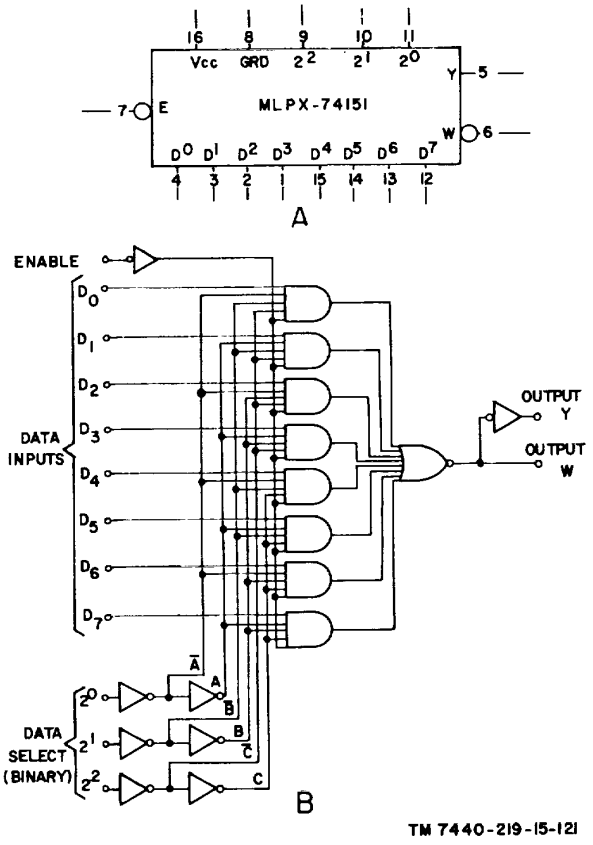


Figure 3-38. Type MLPX-74151 module, logic symbol and functional diagram.

(2) Power inputs consist of +Vcc applied to terminal 16 and ground connected to terminal 8.

e. Type MLPX-74153 Module. Two data selector/multiplexer circuits are contained in each type MLPX-74153 module (A, fig. 3-39). Each circuit will select one of four data sources and gate a single data line output. A functional block diagram of the circuit is provided for analysis of circuit operation (B, fig. 3-39). Power inputs consist of +Vcc applied to pin 16 and ground applied to pin 8. Common address lines ($2^0$and 2^1) are used to select one of four input data lines to each circuit within the module. However, selection of one of the four data input lines ($1D_0$ through $1D_3$, or $2D_0$ through $2D_3$) is individually controlled through a separate enable line (1E or 2E) to each circuit. Look at the following truth table to determine output level for the various input combinations:

f. Type BDC CTR-74160 Module. One four-bit binary coded decimal (BCD) counter is located on each type BCD CTR-74160 module (A, fig. 3-40). This counter can be either reset to all low outputs or preset to provide a binary output equivalent to any decimal number 0 through 9. When clocked, this counter will count from 0 through 9 and back to 0. A carry output is provided at a count of 9. A functional block diagram

Address		Inputs					Output	Inputs					Output
2^1	2^0	1E	$1D_0$	$1D_1$	$1D_2$	$1D_3$	1Y	2E	$2D_0$	$2D_1$	$2D_2$	$2D_3$	2Y
X	X	1	X	X	X	X	0	1	X	X	X	X	0
0	0	0	0	X	X	X	0	0	0	X	X	X	0
0	0	0	1	X	X	X	1	0	1	X	X	X	1
0	1	0	X	0	X	X	0	0	X	0	X	X	0
0	1	0	X	1	X	X	1	0	X	1	X	X	1
1	0	0	X	X	0	X	0	0	X	X	0	X	0
1	0	0	X	X	1	X	1	0	X	X	1	X	1
1	1	0	X	X	X	0	0	0	X	X	X	0	0
1	1	0	X	X	X	1	1	0	X	X	X	1	1

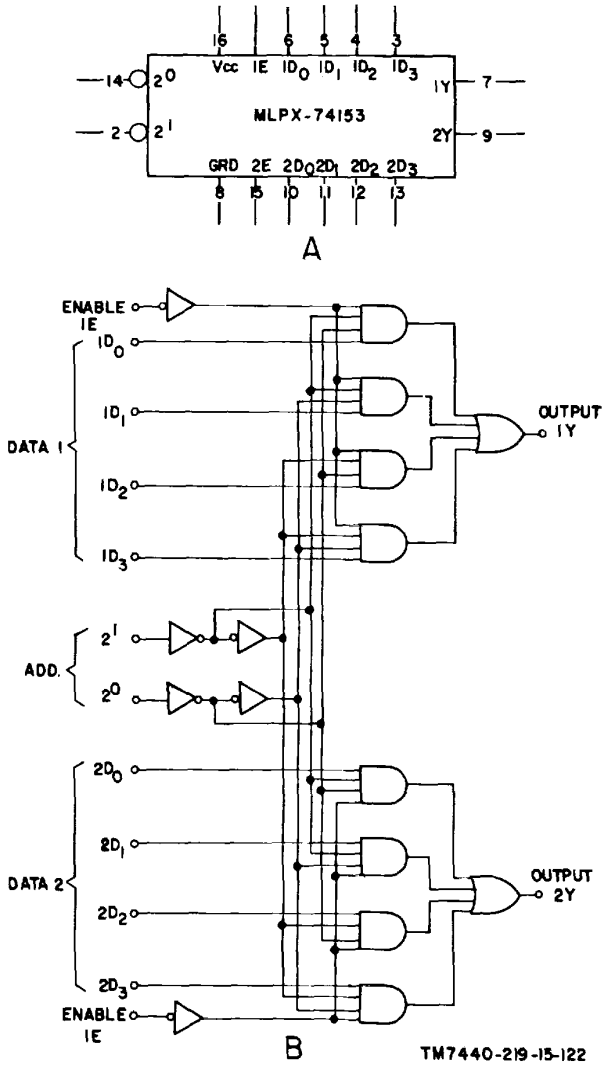


Figure 3-39. Type MLPX-74153 module, logic symbol and functional diagram.

(1) Power inputs consist of +Vcc applied to pin 16 and ground applied to pin 8. BCD outputs from the counter (QA through QD) are provided on pins 11 through 14 with the QA output being the least significant bit.

(2) The reset (RST) input to the module is asynchronous and a negative step on the RST input will reset all four flip-flops causing the QA and Q,, outputs to go low. The counter then is inhibited from counting until the RST input goes to a high level. Refer to timing diagram on figure 3-41.

(3) Presetting of the counter requires two conditions; a low level on the LOAD input and

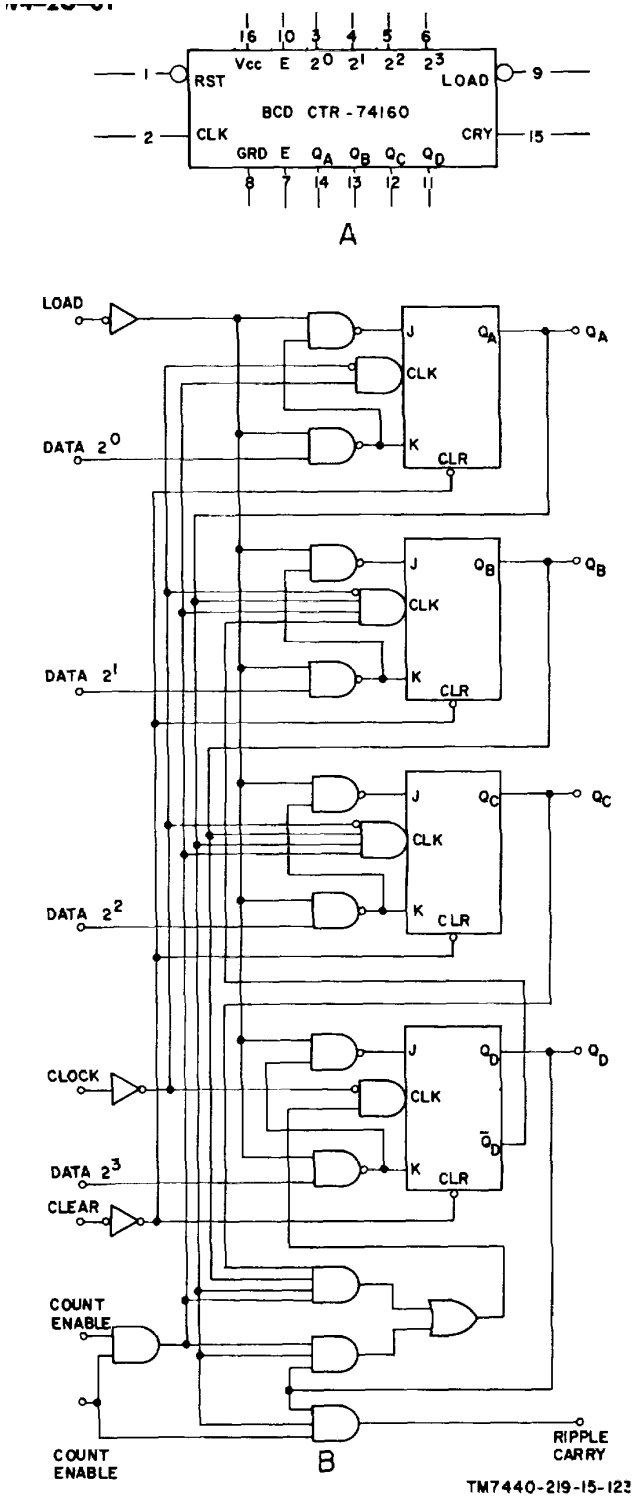


Figure 3-40. Type BCD CTR-7416;0 module, logic symbol and functional diagram.

a positive step on the clock (CLK) input. When this occurs, the Q_A through Q_A outputs will as-

sume the level provided on the 2^0 through 2^3 data input lines. This is illustrated on the timing diagram (fig. 341) by showing presetting of the counter to the value of 7 Q_D through Q_A = 0111 respectively). The value of 7 is arbitrarily selected, thus note that counter may be set to the binary equivalent of any decimal value 0 through 9.

(4) The two E (enable) inputs must have a high level applied to enable counting. See timing chart on figure 3-41 which shows that a low on either E input will

ILLUSTRATED BELOW IS THE FOLLOWING SEQUENCE:

1. **CLEAR OUTPUTS TO ZERO.**
2. **PRESET TO BCD SEVEN.**
3. **COUNT TO EIGHT, NINE, ZERO, ONE, TWO, AND THREE.**
4. **INHIBIT**

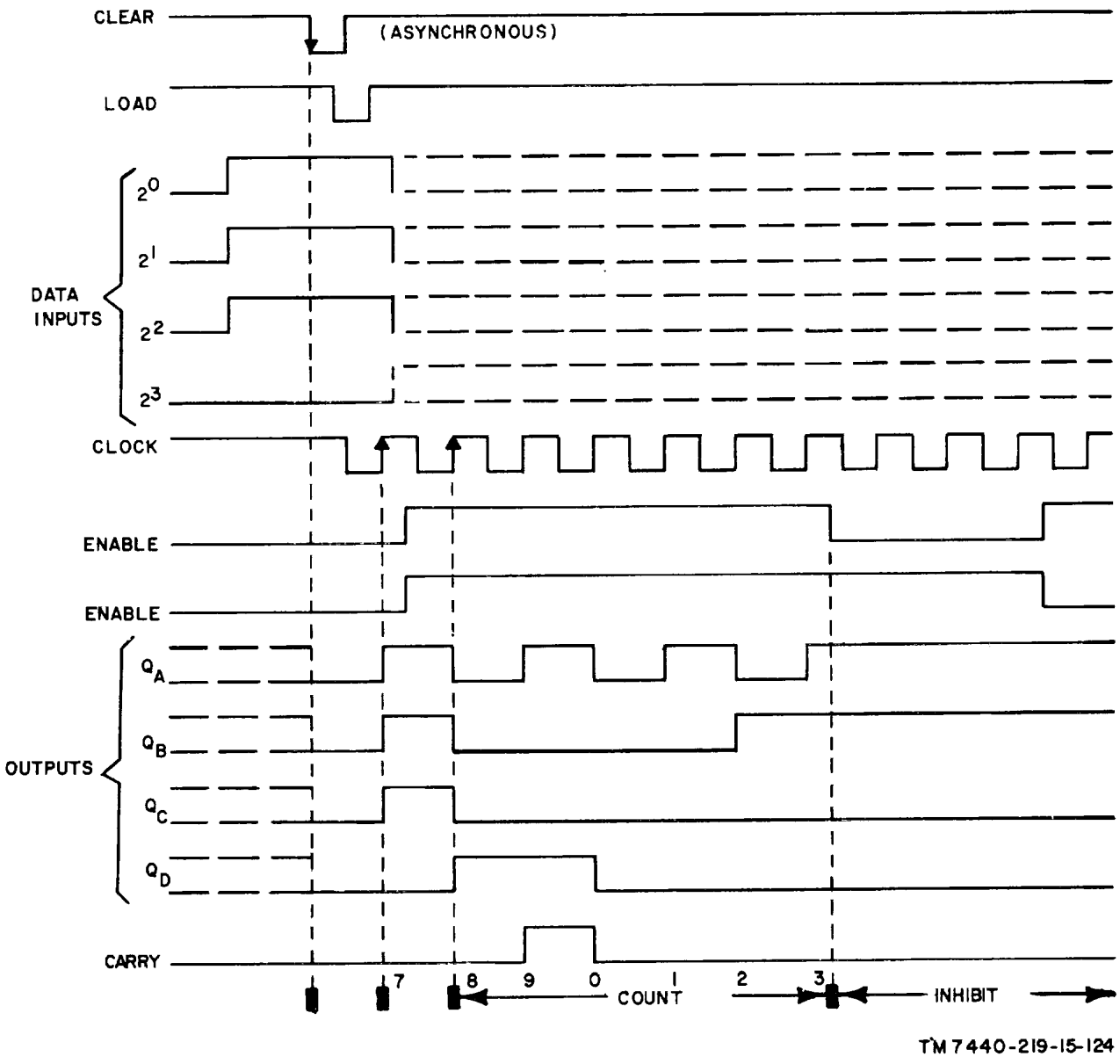


Figure 3-41. Type BCD CTR-74160 module, timing diagram.

inhibit counting. Also note that the carry (CRY) output develops a high level when the counter outputs Q_A through Q_D equal a binary equivalent of 9. If the CRY output of one type BCD CTR74160 module is connected to the E inputs of a second module, stepping of the second module would then be inhibited except for every 10th clock pulse.

g. Type PAR GEN-74180 Module. One eight-bit input parity generator is located on each type PAR GEN-74180 module providing both even and odd parity output capability (A, fig. 3-42). A functional block diagram of the circuit is provided in B figure 3-42.

(1) Levels are applied to module pins 3 (even) and 4 (odd) to determine the state of the complimentary sum odd and sum even outputs. As utilized in this equipment, a low enable level is applied to odd input and a high inhibit level is placed on the even input.

(2) Data bit inputs are applied to the 1 through 7 inputs. Module circuitry will make a comparison of the sum of high level inputs and develop a level on the two output pins as indicated in the following truth table:

Inputs			Outputs	
SUM of 1's at 1 through 7	EVEN	ODD	SUM EVEN	SUM ODD
ODD ----------	1	0	1	0
EVEN ----------	1	0	0	1

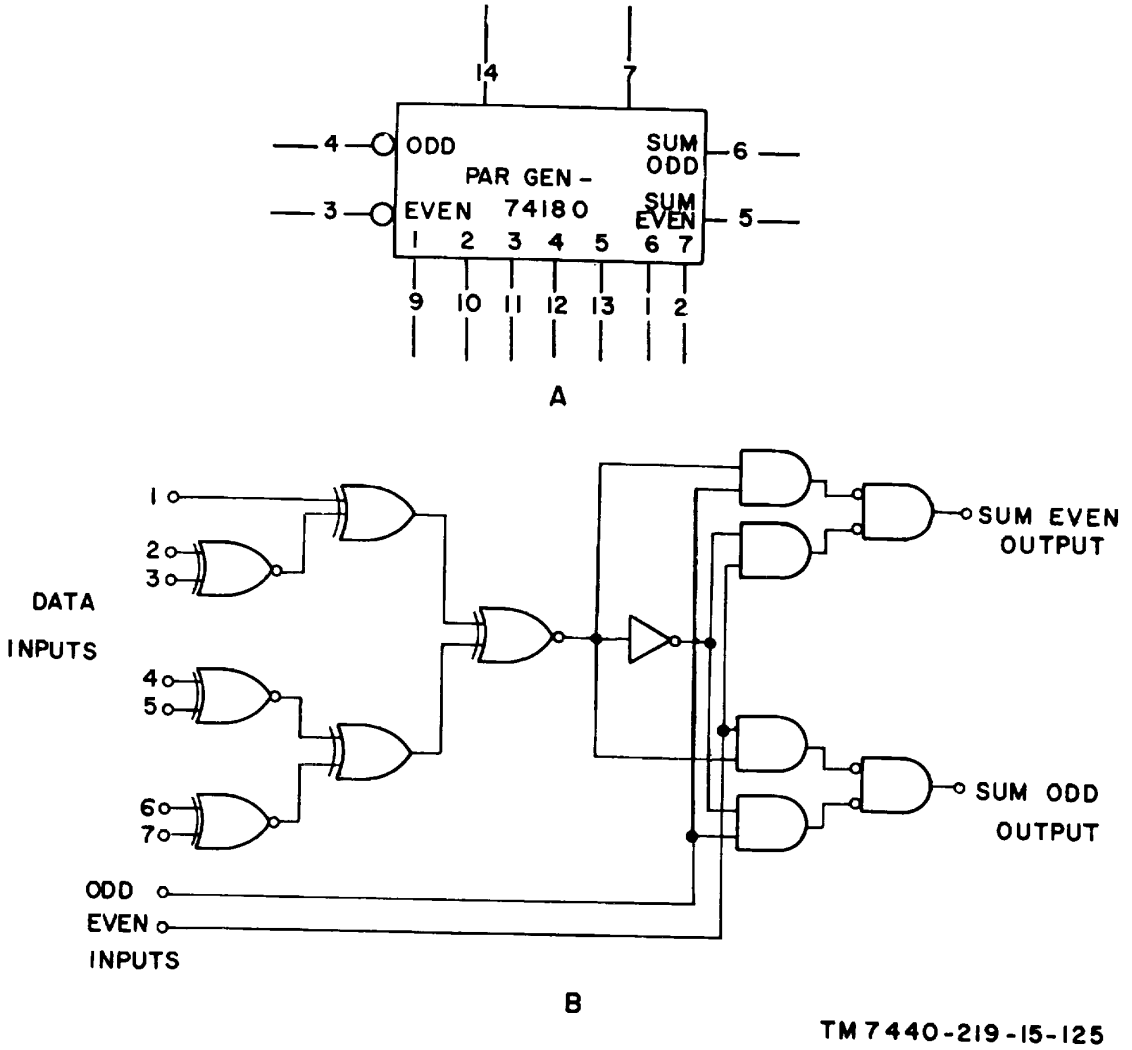


Figure 3-42. Type PAR GEN-74180 module, logic symbol and functional diagram.

(3) Power inputs to module are applied to terminals 14 (V_{CC}) and 7 (ground).

h. Type REG-74195 Module. One four-bit register is located on each type REG-74195 module. The register will operate in two modes; shift (in direction Q_A toward Q_D) and parallel (broad-side) load. The two modes are illustrated in A and B, figure 3-43 and a functional block diagram is provided for understanding of the operation in C, figure 3-43.

(1) The clear (CLR) input line must remain at a high level during loading and shifting of the register. Referring to the functional block diagram, note that a low level on the CLR input will reset the four flip-flops to a cleared state.

(2) In the case A configuration, loading of the Q_A flip-flop and shifting of all four flip-flops is accomplished synchronously when the shift/load (S/L) input is high and a positive step occurs on the clock (CLK) line. After each shift,

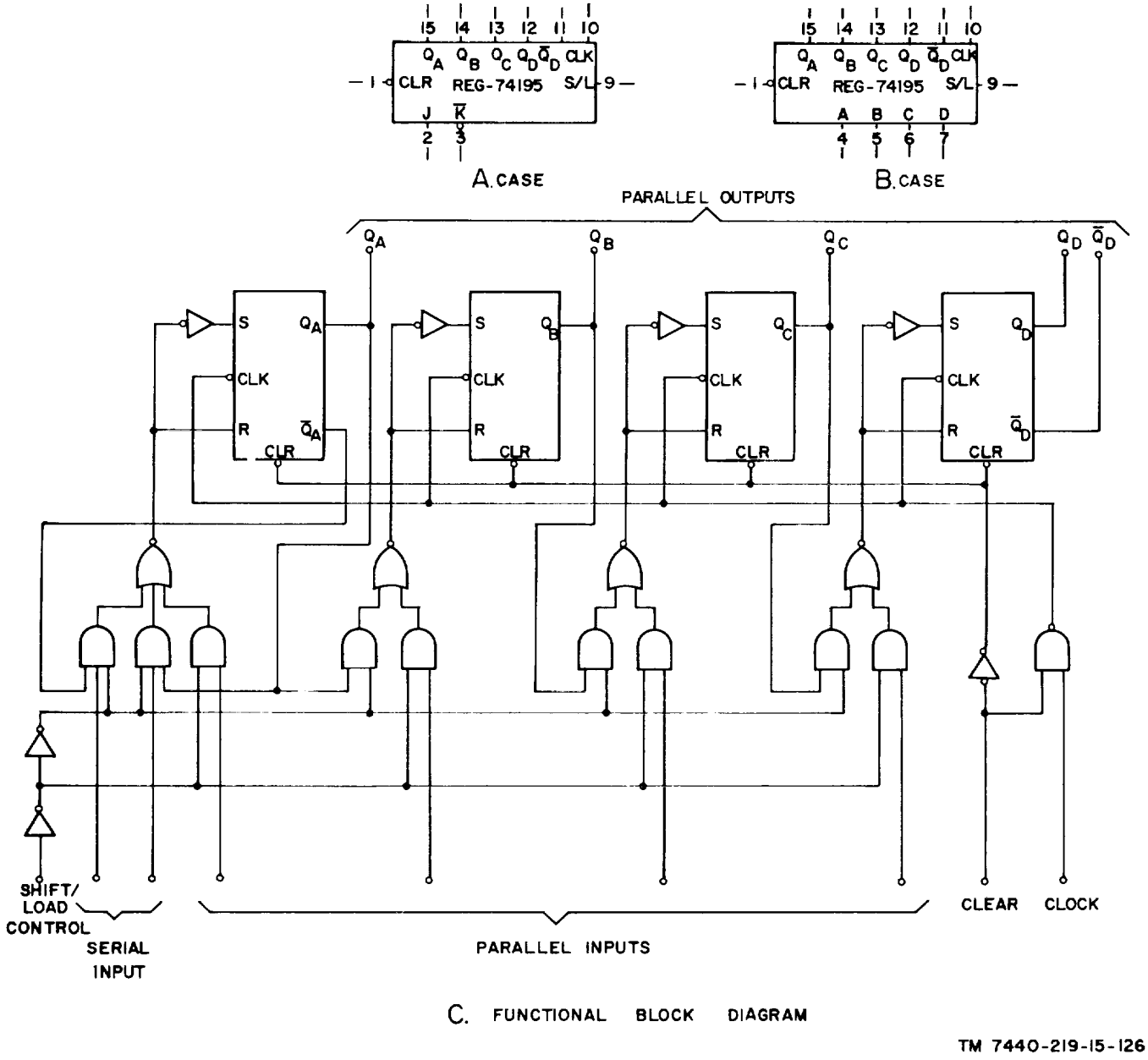


Figure 3-43. Type REG-74195 module, logic symbols and functional diagram.

Q, flip-flop assumes the state indicated in the following truth table as determined by the level on the J and K inputs:

Inputs at t_n		Output at t_{n+1}	Notes
J	K	Q_A	H = high level
L	H	No change	L = low level
L	L	L	t_n = bit time before clock pulse
H	H	H	t_{n+1} = bit time after clock pulse
H	L	Toggle	

(3) In the case B configuration, parallel loading is accomplished by gating four bits of data applied to the A, B, C, and D inputs with a negative enable level on the S/L input. Referring to the functional block diagram, note that the next positive step on the CLK line will cause the four flip-flops to assume the state determined by the level on each of the four respective parallel input lines. By connecting the S, 'L line to ground serial shifting is inhibited.

(4) In both case A and B configurations, $+V_{CC}$ is applied to terminal 16 of the module and ground is connected to terminal 8.

i. Type CONTROL74H87 Module. One 4-bit true/complement/one/zero element with common control lines are contained in the CONTROL74H87 module (A, fig. 344). The functional block diagram for this circuit is illustrated in B, figure 344.

(1) Power inputs consist of $+V_{CC}$ applied to terminal 14 and ground applied to terminal 7.

(2) This circuit will either gate the true levels applied to the four input pins (D_1 through D_4) or invert them to compliment form, or set all four outputs (Y_1 through Y_4) to a low level logical 0 or a high level logical 1 independent of the state of the data inputs.

(3) The following truth table shows module outputs:

Control inputs		Outputs			
B	C	Y_1	Y_2	Y_3	Y_4
0	0	D_1	D_2	D_3	D_4
0	1	D_1	D_2	D_3	D_4
1	0	1	1	1	1
1	1	0	0	0	0

j. Type ISOLATORMCD2 Module. One isolator circuit is contained in each type ISOLATOR- MCD2 module (A, fig. 345). The circuit consists of two parts; a light emitting diode (LED) which is optically coupled to a photo diode. Refer to B, figure 345 for a functional diagram of the circuit. Power consists of $+V_{CC}$ applied to terminals 1 and 5. Terminals 3 and 6 have no connections. A high level applied to terminal 2 will develop a low output from terminal 4. When the circuit is activated with a low input to terminal 2, the output at terminal 4 will go to a high level.

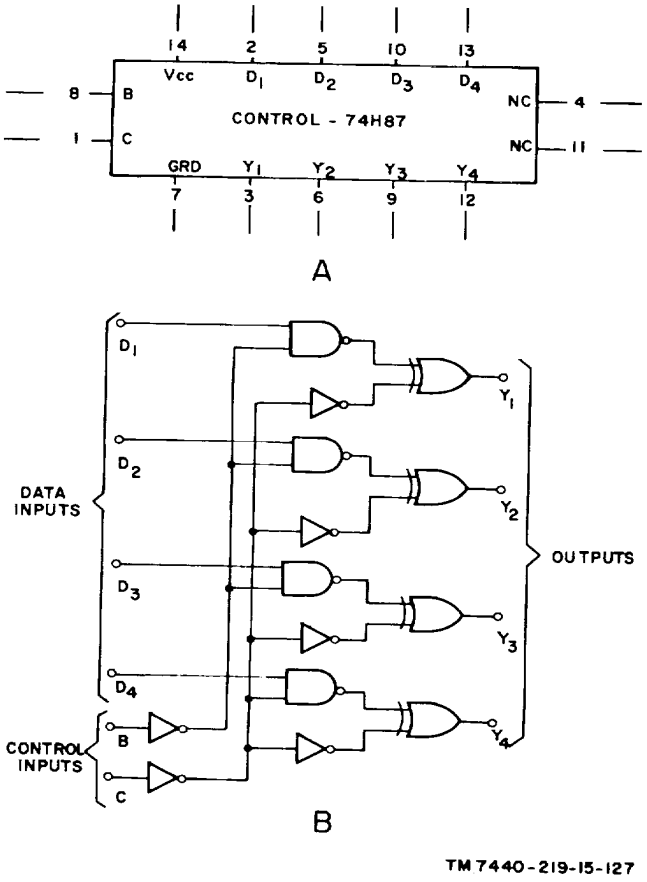


Figure 3-44. Type CONTROL-74H87 module, logic symbol and functional diagram.

k. Type 2A1 Module. Two type N1 gates are located on each type N1 module (fig. 346' These function as inverting OR gates for high inputs. Power is applied by $+V_{CC}$ to terminal 6 and ground to terminal 1.

l. Type DATAROM Module. One 256 bit read only memory, organized as 32 words of eight bits each is contained in the DATAROM module (fig. 347).

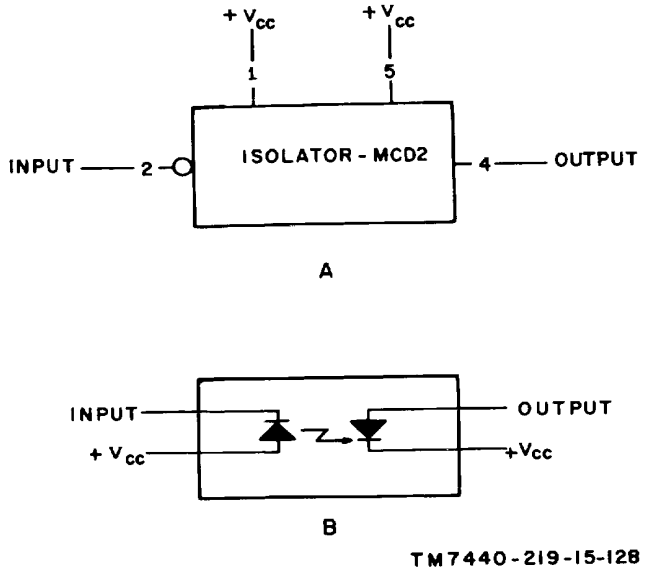


Figure 3-45. Type ISOLATOR-MCD2 module, logic symbol and functional diagram.

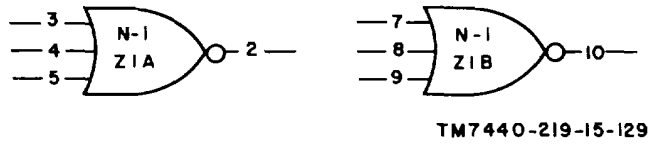


Figure 3-46. Type N-1 module, logic symbols.

(1) An overriding memory-enable input (E) is provided which, when a high level, will inhibit the 32 address gates and cause all eight outputs (B_0 through B_7) to develop a high level.

The addressing of one of the 32 eight-bit words is accomplished through five binary input lines with the memory enable input at a low level.

This enables one of 32 preprogramed eight-bit words to appear on the module output pins.

Truth table for this module as used in this equipment is furnished on figure 821.2.

(2) Power is applied to the module with $+V_{CC}$ on terminal 16 and ground on terminal 8.

m. Type ADDRESSROM Module. One 256 bit read only memory, organized as 32 words of eight bits each, is contained in the ADDRESS-ROM module (fig. 347). The ADDRESS-ROM module is identical in construction and operation as the DATA-ROM described above. The only difference between the two modules is the format of the data words that have been preprogramed into the modules. See figure 821.2 for truth table of the ADDRESS-ROM module.

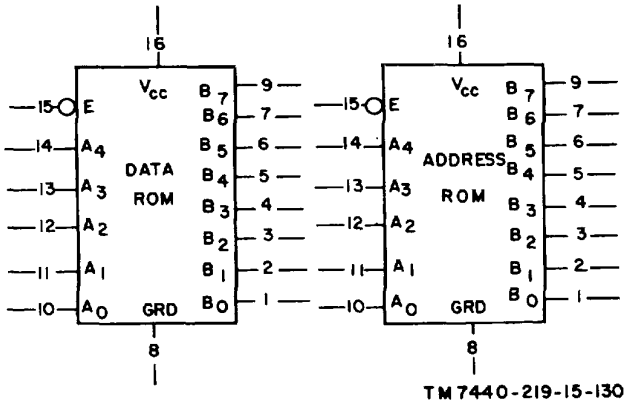


Figure 3-47. Type ROM module, logic symbols.

n. Type DISPLAY1 Module. One solid state numeric display is contained in each DISPLAY1 module (fig. 348). The module stores levels received on a four-wire BCD input and converts these BCD levels to forward bias the appropriate light emitting diodes to visually display the numerals 0 through 9. Displays will follow changes on the BCD inputs as long as the enable (E) line is held low. When the enable line goes to a high level, the display will retain the number at the time of the positive step and will no longer be affected by changes on the BCD input lines. Power is provided with $+V_{CC}$ to terminal 7 and ground to terminal 6.

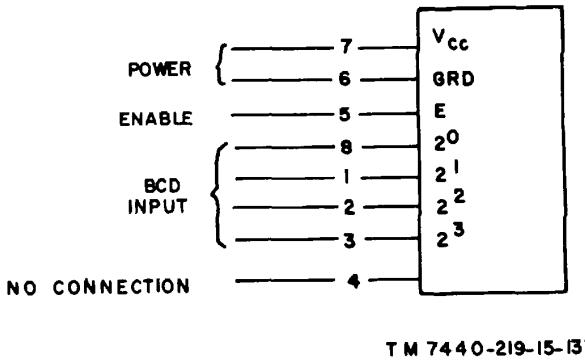


Figure 3-48. Type DISPLAY-1 module, logic symbol.

3-90. Integrated Circuit Latch

a. A special combination of type 7410 OR gates called a latch (fig. 349) is used in the TIG. The latch functions as a flip-flop to register the occurrence of momentary signals. The two OR gates which make up the latch are identified as the set and clear sides of the latch. The 1 output of the latch, which goes high when the latch is set, is produced by the set side and the 0 output,

which goes high when the latch is cleared, is produced by the clear side of the latch.

NOTE

Compare this circuit with the latch used in the punched tape reader (fig. 317). This latch uses low level pulses for set and clear, thus the 1 and 0 outputs are reversed.

b. To set the latch, both inputs to the clear side must be high, and a low level must occur at either of the two inputs to the set side. The resulting high output of the set side then causes the clear side to produce a low level on the 0 line. This low level reinforces the external input to the set side so that even if the external input goes high, the latch remains set.

c. To clear the latch, both inputs to the set side must be high and a low level must be applied to either clear side input. This action causes the 0 output to go high. Thus, the clear condition is reinforced and remains even after the low level input to the clear side goes high again.

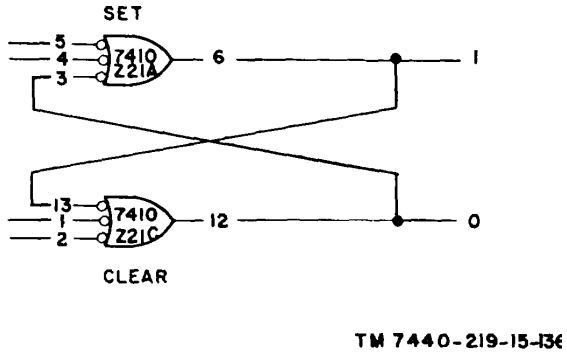


Figure 3-49. Integrated circuit latch, logic symbol.

3-91. Operation of Discrete Circuit Logic Elements

a. Discrete Circuit. The operation of the discrete circuit logic element used in the TIG is described below. Logic symbol is given, using typical tagging lines. Schematic diagram and detailed circuit operation of the discrete logic element is given in paragraph 392.

b. Type XMTR1C.The type XMTR1C interface transmitter is located on PC card A1A2 or A4A2 (fig. 350). This circuit converts a low input from the TIG to an open circuit for the CCU. When both inputs go high, a 0 volt level is transmitted to the CCU.

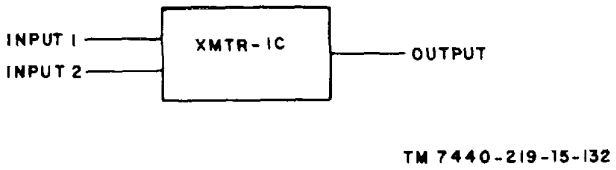


Figure 3-50. Type XMTR-1C interface transmitter, logic symbol.

3-92. Detailed Operation of Discrete Circuit Logic Element on PC Card A2

Type XMTR1C interface transmitter (fig. 351), inputs from TIG logic circuits switching between 0 volt and +4.5 volts are coupled through diodes CR1 and CR2 and bias network R1, R2, and R3 to the base of inverter Q1. When either input is 0 volt, Q1 is cut off and supplies an open circuit to the CCU which pulls up the interface line through a load resistor to +6 volts. Since CR1 and CR2 provide an AND function when both inputs have +4.5 volts applied, Q1 will be driven into conduction. This results in a 0 volt output to the CCU.

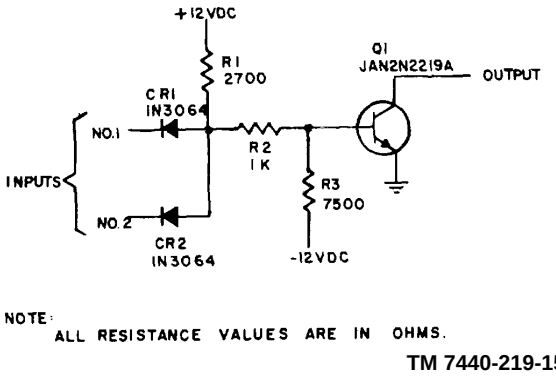


Figure 3-51. Type XMTR-1C interface transmitter, schematic diagram.

Section V. ELECTRICAL FUNCTIONING OF TIG

3-93. Data Selection Circuits

The data selection circuits gate seven bit characters from either the TIG or the punched tape reader to the CCU. In addition, the data selection circuits gate the odd parity bit for all data characters.

a. The seven MLPX-74151 modules Z5, Z2, Z1, Z4, Z8, Z13, and Z18 on PC card A2 (fig.

8-21.2), select one of eight input sources for bits 1 through 7 respectively. The outputs of these modules (TIG 1A through TIG 64A) are applied to the polar transmitters on PC card A5 (fig. 8-10.2 or 810.3) for transmission over the data interface lines to the CCU. The enable (E) inputs to the MLPX-74151 modules are connected to ground, thus the input levels 20, 21, and 22 determine which input data level will be selected. Refer to the following for determination of input to output line selection:

Control input lines			Output equals input data line
2^2	2^1	2^0	
0	0	0	D_0
0	0	1	D_1
0	1	0	D_2
0	1	1	D_3
1	0	0	D_4
1	0	1	D_5
1	1	0	D_6
1	1	1	D_7

b. The CONTROL74H87 module Z9 (fig. 821.2) outputs Y_1, $_{Y2}$, and Y_3 control the data selection by the MLPX74151 modules. The levels on the B and C inputs to the CONTROL-74H87 module control output Y_1 through Y_3 levels. Outputs Y_1 through Y_3 can be all low, equal to the levels applied to inputs D_1 through D_3 or all high.

(1) When the TIG front panel ON-LINE/ OFF-LINE switch A7S1 (fig. 8-21.1) is in the online position, $+V_{CC}$ is applied through S1 terminals 3 to 2 and a high level is placed on the NOFFLINE signal. Refer to figure 821.2 and note that the NOFFLINE high level is applied by PC card A2 terminal M to the C input on the CONTROL-74H87 module Z9. At several points during the generation of the sixteen character T1 sequence, data characters which are preprogramed into the DATA ROM memory locations are transmitted to the CCU. When this is required, the ADDRESS ROM module Z10 output B_4 will develop a low level. When this occurs, note that the output B_4 from the Address ROM is applied to the D input of the REG-74195 module Z20. When a signal is applied to the CLK input of Z20, a flip-flop is cleared and a low level is developed by the Q_D output of Z20. This low level is then inverted by OR gate Z14C and applied to the B input of CONTROL74H87 module Z9. Since both the B and C inputs to Z9 module are high, the Y_1 through Y_3 outputs will all be low. Thus, the Do inputs to all of the MLPX-74151 modules are enabled. Refer to figure 821.2 and note that the D_0 inputs of all MLPX-74151 modules are connected to REG74195 modules Z20 and Z24 outputs. The Z20 Q_A ,Q_B , and Q_C outputs and all outputs from Z24 will contain the seven data bits for one of the T1 sequence characters when read out of the DATA ROM module Z15. The flip-flops in the Z20 and Z24 REG-74195 modules were loaded with the DATA ROM character at same time the ADDRESS ROM output B, was loaded, as explained above. To summarize, note that DATA ROM character is applied to the TIG output data lines when the CONTROL-74H87 inputs PB and C both have a high level applied.

(2) If the NOFFLINE signal on PC card A2 terminal M and the Q_D output of REC, Z20 is high, the CONTROL-74H87 module Y_1 through Y_3 outputs will be the same as the 3 least significant bits stored in the register module Z19. The Q1, output of module Z20 is then inverted by OR gate Z14C and a low is applied to the CONTROL74H87 module Z9 input B. ADDRESS ROM outputs B_0 through B_2 are stored in the REG74195 module Z19 flip-flops Q_D, Q_C, and Q_B, respectively. Bits which have been preprogramed into the ADDRESS ROM will cause the outputs of the ADDRESS ROM module Z10 to equal one of the seven binary values from 001 through 111. These levels are passed by the CONTROL-74H87 module Z9 to the select inputs of the seven MLPX-74151 modules. Therefore, one of the six data inputs (D_1 through D_6) of the MLPX-74151 modules will be enabled. When the 5th, 6th, and 7th TI characters are to be transmitted, the D_1, D_2, and D_3 inputs respectively will be enabled. These three positions of the TI sequence are ASCII coded alphabetical characters used to identify the channel designator for a particular terminal location. During installation, jumper wires were connected from either 0 or 1 terminals to the A, B, and C terminals which are connected to the D_1, D_2, and D_3 inputs of each MLPX-74151 module. Thus, as the TI sequence is being transmitted, bits preprogramed into the ADDRESS ROM enable transmission of the proper alphabetical character to identify the three channel designator characters. During transmission of the 9th, 10th, and 11th characters of the TI sequence, a numerical count to reflect the message sequence number must be transmitted. Outputs from the MLPX-74153 modules Z7 and Z8 on the PC card A7A1 (fig. 821.3) consist of a binary coded decimal count from one of the three BCD CTR-74160 modules Z1, Z2, or Z3. During transmission of the 9th TI sequence character, the count in the hundreds counter Z3 on A7A1 is

gated through MLPX-74153 modules Z7 and Z8 (fig. 8-21.3) to the D_4, D_5, , and D_6 inputs of the MLPX-74151 modules Z5, Z2, Z1, and Z4 on PC card A2 (fig. 8-21.2). At this time, the D, input is enabled. In the same manner, the tens counter, PC card A7A1 module Z2, is gated on the 10th character by the D_5, input of the PC card A2 MLPX-74151 modules and the units counter, PC card A7A1 module Z1, is gated by the D6 input of the PC card A2 MLPX-74151 modules on the 11th TI sequence character. Since bits 5, 6, and 7 of ASCII coded numerical characters are 110, the D_4, D_5, and D6, inputs of the MLPX-74151 modules Z8, Z13, and Z18 (fig. 8-21-2) are wired to 1 and 0 as required.

(3) The selection of the D_7inputs to the PC card A2 MLPX-74151 modules can be accomplished in one of two ways. First-after the last TI sequence character has been generated, the ADDRESS ROM module Z10 outputs B_0, B_1, and B_2 will all remain high. These levels are applied through the REG-74195 module Z19 and the CONTROL-74H87 module Z9 to apply all highs on the 2^0, 2^1, 2^2 inputs to the MLPX-74151 modules on PC card A2. Therefore, the D_7 inputs are enabled. When data characters are read from the punched paper tape, the data is stored in the data register on PC card A7 (fig. 8-12.1) (para 3-63). The outputs from data gates on PC card A7 are then applied to the D, inputs of PC card A2 MLPX-74151 modules. The second manner in which the punched tape reader data can be gated through the PC card A2 MLPX -74151 gates is in the case of TIG off-line operation. When the ON-LINE/OFF-LINE switch A7S1 (fig. 8-1.1) is in the off-line position, a low level is developed on the NOFFLINE signal by the switch terminal 1 to 2 contacts. This low is then applied to input C of the CONTROL-74H87 module Z9 on PC card A2 (fig. 8-21.2) and to OR gate Z14C which inverts the level and a high is placed on the B input to the Z9 module. This high on the B input and the low on the C input will cause the CONTROL-74H87 module Z9 to generate all high outputs regardless of the levels on the D_1 through D_3 inputs. The high Y_1 through Y_3 outputs will then enable the MLPX-74151 modules to gate punched tape reader data through the D_7 inputs to the interface drivers on PC card A5.

c. The PAR GEN-74180 module Z23 on PC card A2(fig. 8.21.2) samples the seven data line outputs of the MLPX-74151 modules. Since the EVEN input to module Z23 is connected to a high and the ODD input is connected to ground, the SUM ODD output will generate an odd parity bit on the TIG 128A signal line. Thus, if the TIG 1A through TIG 64A lines have an even number of high level bits, the TIG 128A signal will be high. Also, if TIG 1A through TIG 64A have an odd number of high levels, the TIG 128A signal will be low. The TIG 128A signal is applied to PC card A5 (fig. 8-10.2 or 8-10.3) polar transmitter for transmission to the CCU. Note on figure 8-21.2 that the output of the PAR GEN-74180 module at PC card A2 terminal AA is connected to the output of AND gate Z3A at PC card A2 terminal 11. This connection functions as a WIRE-OR as illustrated on figure 8-21.2. Thus, if either terminal AA or terminal 11 have a low level, the low will be transmitted to the CCU by the interface transmitter on PC card A5. This WIRE-OR along with inverter Z3B, AND gate Z3A, and PAR GEN-74180 module Z23 function to detect the majority of parity errors read from the ASCII coded paper tape. The level of the parity bit (signal 128A) from PC card A7 (fig. 8-12.1) is applied through inverter Z3B on PC card A2 (fig. 8-21.2) to AND gate Z3A. The other input to AND gate Z3A is the signal TIG SELA on PC card A2. The signal TIG SELA is a high level only during the time the punched tape reader data is being transmitted to the CCU. Thus, during TI sequence generation the output of AND gate Z3A is always high and the WIRE-OR function of terminals AA and 11 will follow the output of the PAR GEN-74180 module Z23. When the TI sequence is completed, the TIG SELA signal will go to a high level enabling AND gate Z3A thus allowing both inputs to the WIRE-OR function of terminals AA and 11 to develop the parity bit. Under normal operation both inputs to the WIRE-OR should have the same level and correct parity is transmitted to the CCU. However, if the parity bit to the CCU should be transmitted as a high level, and a low level is provided by the punched tape reader data register parity bit, the low level will be transmitted to the CCU, causing the CCU to detect a parity error thus stopping the operation and canceling the message transmission. It is possible for a character to be incorrectly sent to the CCU without detection of parity error. This would, occur when the seven ASCII data bits of the character have an even number of "1's" but one of the data bits is misread. Thus, the PAR GEN-74180 module Z23 will develop a low output

and an incorrect character with valid parity is sent to the CCU.

3-94. TIG Control Circuits

The TIG control circuits are contained on PC card A2 (fig. 8-21.2). These circuits contain several functional units to generate timing and reset signals and to provide mode and sequence control of the TIG operation. Detailed theory of operation of the control circuits is provided in paragraphs 3-95 through 3-98. Refer to figure 3-52 for timing diagram of the control signal generation.

3-95. TIG Timing Generator

The TIG timing generator controls the timing sequence for transmission of each character during the TI sequence. Each cycle lasts for 6 counts of a 104-μsec clock period or a total of 624 μsec. The timing generator consists of six flip-flops connected as a shift register and associated start control gates.

a. To start the timing generator, an active high level signal must be received from the CCU on both the select and the step/data acknowledge interface lines. When this occurs, high levels are applied from PC card A4 (fig. 8-9.2 or 8-9.3) to AND gate Z17A inputs on PC card A2. The SDA line is applied directly and the SELA line is gated through inverters Z26A and Z26D. If the generator is not in a cycle, the third input to AND gate Z17A will be a high level. The low output of AND gate Z17A is then applied to the D input of flip-flop Z12B which is in a set state when the timing generator is not cycling. Thus, on the next positive step on the 9.6KC clock line from PC card A1, the Z12B flip-flop will clear. The now high Q output of Z12B is applied to the J and. K inputs of the four stage REG74195 module Z22. The positive step of the next four 9.6KC clock pulses will sequentially set the four flip-flops in the Z22 module. Each of the four REG-74195 module flip-flops will remain set for one clock pulse since the QA output clears flip-flop Z12B through OR gate Z11D. (See timing diagram in figure 3-52). After the positive step of the fifth clock pulse, the Z22 module Q_D output will be low. The Z22 module Q_D signal is applied to the flip-flop Z12A CLK input which was set on the second clock pulse by the high level Z22 module QA output through invertor Z11C. When the sixth 9.6KC clock pulse occurs, the Z22 module Q_D output will go high. Since flip-flop Z12A input D is connected to ground, the resulting positive step on the CLK input will clear flip-flop Z12A. Note that the flip-flop Z12A output Q is applied to the start control AND gate Z17A. Thus, the maximum cycle rate of the timing generator is one character every 624 μsec.

b. Outputs from the timing generator are applied to the TIG data strobe gate Z27B, EM control gate Z14B and sequence control registers Z19, Z20, and Z24.

3-96. Reset Gates

The reset gates are used to reset the TIG upon power on and at the end of each message. The reset gates consist of AND gate Z17B and OR gates Z11D and Z17C.

a. In the on-line mode, $+V_{CC}$ is coupled through terminals 1 to 2 of the ON-LINE/OFFLINE switch A7S1 (fig. 8-1.1) to develop a high level on the NOFFLINE signal. The NOFFLINE high level is applied to PC card A2 partially enabling AND gate Z17B. The other input to AND gate Z17B is from OR gate Z17C which will have a high output if a low is placed on the NAST line from PC card A4 or on the NRCS line from PC card A14. The alarm stop signal NAST is generated on PC card A15 (fig. 8-20.1) and will develop a low level under message cancel, tape out alarm, tape motion alarm, and invalid alarm conditions (para 3-66). The not remote continuous step signal NRCS is also generated on PC card A15 and will normally develop a low level under initial power-up of the punched tape reader and also upon detection of the end of a message (para 3-39). Once a low level is placed on the NRCS line, it will remain low until the detection of the first valid character of the next message read from the paper tape.

b. The low NAST or NRCS signals are double inverted by OR gates Z17C and Z11D on PC card A2 to set the timing generator Z12B flip-flop. The low output from AND gate Z17B is applied to the TIG/PTR mode latch Z21C to place it in the TIG data mode when in TIG on-line mode. The low output from AND gate Z17B is also applied to clear the timing generator modules Z22 and Z12A and the sequence control registers Z19, Z20, and Z24.

3-97. Mode Control

In the TIG on-line mode, the TIG/PTR mode control latch and OR gates Z21A and Z21C, are used to control transmission of data to the CCU consisting of the TI sequence characters or data read by the punched tape

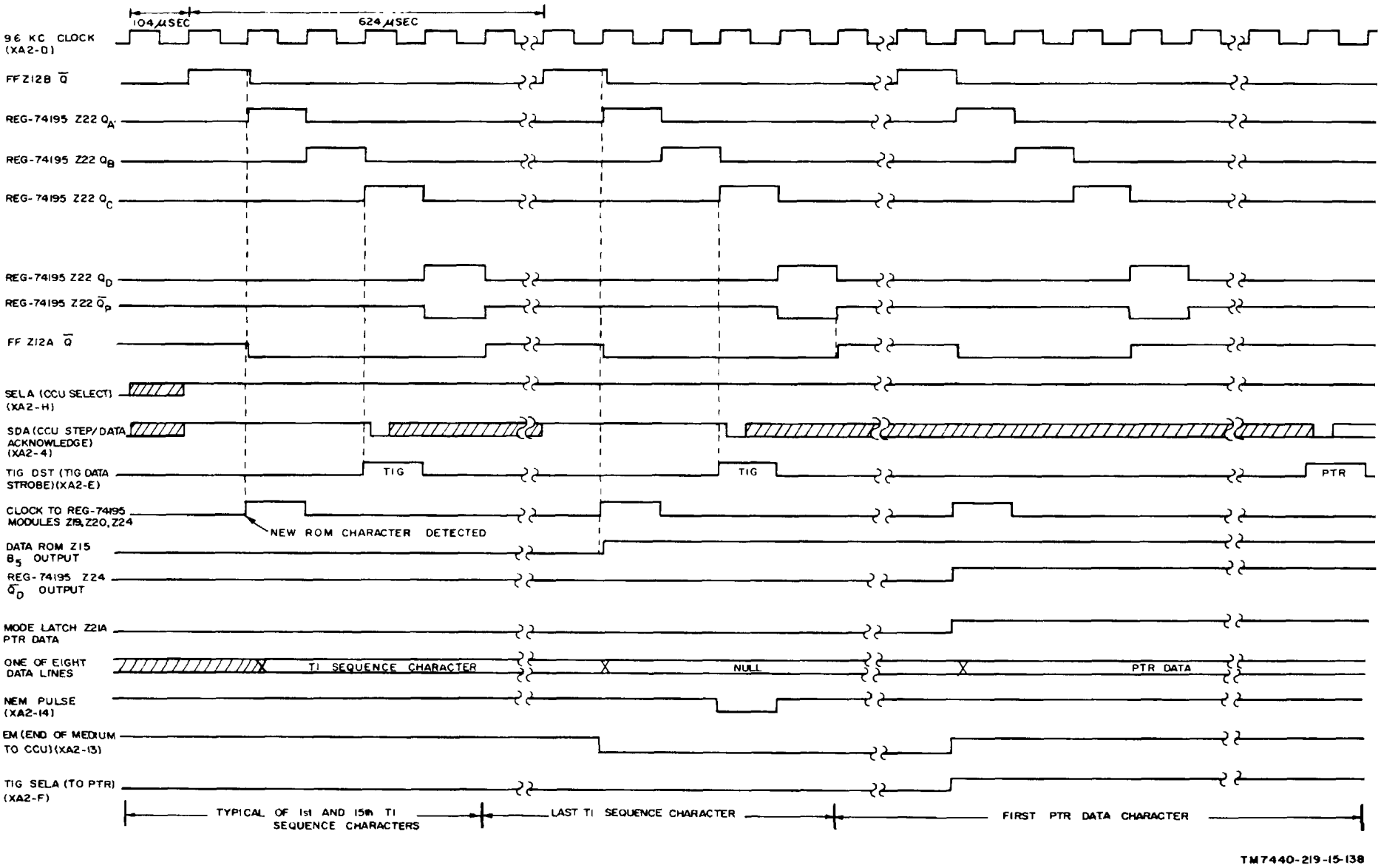


Figure 3-52. TIG control circuits, overall timing diagram.

reader. Outputs from the latch are applied to the TIG select and data strobe circuits to control punched tape reader operation and data strobe generation to the CCU. Refer to timing diagram (fig. 3-52) illustrating signals in following description:

a. Before the start of each message, the TIG/PTR mode latch is cleared to TIG mode by a low input to OR gate Z21C from the reset gates. In this state, the high output of OR gate Z21C inhibits generation of a high TIG SELA signal to the PC card A15. This signal prevents punched tape reader operation until the completion of the transmission of the TI sequence. A high level from latch Z21C is also applied to AND gate Z27B. This enables the high output from the timing generator Z22 module output Q_C to be gated through AND gate Z27B and OR gate Z27C to place a high level on the TIG DST line to the CCU through PC card AS. The low output from OR gate Z21A is applied to AND gate Z27A thus inhibiting any high DST data strobe signals received from PC card A14.

b. Once the TI sequence has been completed, each cycle of timing generator will cause a preprogramed character to be read out of the DATA ROM module Z15 which contains a 1 bit in the B5 position (para 3-98). This high level in the DATA ROM B5 position will then be stored in the sequence control register module Z24 flip-flop Q., . When this occurs, the Z24 module in output will go low causing the TIG/PTR mode latch Z21A and Z21B to change state to reflect the PTR data mode. Now the TIG SELA gate is enabled and the SELA signal from PC card A4 is gated through inverter Z26B, AND gate Z26A and applied to the PC card A15 to allow punched tape reader operation. The high DST pulses generated on PC card A14 can now be gated through AND gate Z27A, and OR gate Z27C to place high pulses on the TIG DST line to the CCU through the polar transmitter on PC card A5. At the same time, the low output of the TIG/ PTR mode latch OR gate Z21C to AND gate Z27B to inhibit generation of TIG DST pulses from the timing generator Z22 module outputs.

c. In the TIG off-line mode, the low NOFFLINE signal to OR gate Z21B forces the TIG/ PTR latch into the PTR mode.

3-98. Sequence Control

The sequence control circuits on PC card A2 provide for the selection of TI character sequence transmission, ASCII coded alphabetical and machine function characters, and ACP 127 start position strapping option. These circuits consist of three REG-74195 modules, two ROM modules, and start patch circuitry. The three REG-74195 modules Z19, Z20, and Z21 function as a twelve bit storage register. The DATA ROM Z15 contains the preprogramed ASCII coded characters and PTR mode control Bit. The ADDRESS ROM Z10 contains preprogramed binary addresses to control character sequence. The start position circuitry consists of a dual MLPX-74153 module Z6 and associated gates and strapping terminals.

Should future requirements necessitate a change in the sequence of transmission, the modification can be made by simply removing present ROM modules and replacing them with new modules having different programs. The twelve pull-up resistors R5 through R16 are used to provide a high level output when a logical I is stored in the read only memory.

CAUTION

Since modules Z10 and Z15 on PC card A2 have different programs, they are not interchangeable.

a. DATA ROM Module Z15. The DATA ROM module is an addressable 256 bit read only memory arranged in 32 words of eight bits each, however only 18 words of seven bits each are used. The enable (E) input is connected to ground, allowing outputs B0 through B6 to reflect the data character stored in the address location selected by the binary A_0 through A_4 inputs. Refer to the ROM program chart on figure 8-21.2 for the contents of the characters programmed into the various memory addresses. Observe that the ROM program table is arranged in the order of the TI sequence transmission. Refer to the memory location column which shows both the decimal location and the binary values applied to the A_0 through A_4 inputs to the DATA ROM module. Also note the DATA ROM output B_5 has a dual function; in all sixteen TI character locations, B_5 is a 0 indicating "TI data function" but in the two locations used during transmission of the PTR data characters a "1" bit is placed in the B_5 position. This high level B_5 output is applied to the sequence register module Z24 flip-flop D. The low level inverted Q_D , signal is then applied to the TIG/PTR mode latch OR gate Z21A to place the TIG into PTR data mode.

b. ADDRESS ROM Module Z10. The ADDRESS ROM module is an addressable 256 bit read only

memory arranged in 32 words of eight hits each, however only 18 words of five bits each are used. The enable (E) input is connected to ground allowing outputs B_0 , through B_4 to reflect the address word stored in the address location selected by the binary A_0 through A_4 inputs. Refer to the ROM program chart on figure 8-21.2 for the contents of the bits programmed into the various memory addresses. Observe that the ROM program table is arranged in the order of the TI sequence transmission. If you refer to the memory location column, you can identify both the decimal location and the binary values applied to the A, through A, inputs of the ADDRESS ROM module. The contents of the ADDRESS ROM memory locations perform two prime functions as follows:

(1) Provides the 5 bit binary memory address of the next memory word to be used. *For example*: refer to the ROM program table in figure 8-21.2 and note that the contents of first ADDRESS ROM word (ADDRESS 00000) is 00001 which is the location where the second memory N word is stored in the DATA and ADDRESS ROM's.

(2) ADDRESS ROM output B controls the mode of operation of the CONTROL-74H87 module Z9. The output B, is stored in sequence register module Z20 Q_D flip-flop which, in turn, provides an inverted input to the CONTROL-74H87 module Z9 input B through OR gate Z14C. When the ADDRESS ROM output B, is low, the DATA ROM outputs are applied to the CCU intetrface lines through the seven MLPX-74151 modules (para 3-93b(1)). When the ADDRESS ROM output B, is high, data gated to the interface line by the seven ML, PX-74151 modules will be the channel designator for a particular terminal, the channel sequence number from the counter on the TIG front panel, or data characters read by the punched tape reader (para 3-93c(2) and (3)).

c. Sequence Control Register. The sequence control register functions as a 12 bit flip-flop storage register to store the data read out of the ADDRESS and DATA ROM's. The sequence control register consists of the three REG-74195 modules Z19, Z20, and Z24 on PC card A2. Upon power up and at the end of each message the low level to the CLR input the three modules from the AND gate Z17B will reset all 12 flip-flops to the clear state. The flip-flops will assume the state indicated by the ROM outputs on the positive step of the CLK input from the timing generator.

The S/L input is connected to ground to enable parallel loading of the register by the CLK input. Refer to figure 3-52, overall timing diagram which illustrates an example of the timing relationship of ROM outputs to loading of the sequence control register. Outputs from the sequence control register perform the following functions:

(1) Module Z24 output Q_D is applied to the TIG PTR mode latch Z21A to start the PTR data mode after the last TI sequence character has been transmitted.

(2) Module Z24 outputs Q_A Q_B Q_C, and Q_D and module Z20 outputs Q_A, Q_B, and Q_C are applied to the data selection circuits to enable transmission of TI sequence characters stored in the DATA ROM.

(3) Module Z20 output Q_D, and module Z19 outputs $Q_{A,}$ and Q_C are applied to AND gate Z21B to provide end of medium detection.

(4) Module Z20 output $Q_{D,}$ is applied to data selection circuit OR gate Z14C to provide selection of data from either the DATA ROM or from other sources.

(5) Module Z19 outputs Q_B, Q_C, and Q_D are applied to data selection circuit CONTROL 74H87 module Z9 to control selection of transmission of characters other than DATA ROM storage.

(6) Module Z19 output Q_C and Q_D, are applied through inverters Z16A and Z16B to the counter selection circuits on PC card A7A1 (fig. 8-21.3) to determine which digit of the message sequence count is to be gated to the interface line during transmission.

(7) Module Z20 output Q_D and module Z19 outputs $Q_{A,}$ Q_B, Q_C, and Q_D are applied to the address inputs and start patch of the DATA and ADDRESS ROM's to enable selection of the next character to be transmitted.

d. Start Strap. The first three characters of the TI sequence identify the ACP-127 start of message. The start strap enables optional transmission or nontransmission of part or all of the three characters. Thus, the TI format may begin with character 1, 2, 3, or 4. The start circuits consist of AND gates Z3C, Z11A, Z11B, and MLPX-74153 module Z6, plus associated standoff terminals. The AND gates Z3C, Z11A, and Z11B function as a "start TI sequence" decoder. Either upon power-up or after the end of each message, the sequence control register is cleared.

This enables all decoder inputs causing the output from Z3C to go low. Once the TI sequence has started, at least one input to AND gates Z11A or Z11B will be high, thus, AND gate Z3C will develop a high level. On the first character of the TI sequence only, the low levels on 2^0 and 2^1 inputs to module Z6 will cause the strapped inputs $1D_0$ and $2D_0$ to be gated to the 1Y and 2Y outputs. On all other character transmissions, the high level on the 2^0 input and low level on the 2^1 input gates the ADD 2^0 and ADD 2^1 lines through the $1D_1$ and $2D_1$ inputs to the 1Y and 2Y outputs. Upon installation of the TIG, it is necessary to put jumper wires from the terminals 2^0 and 2^1 to either terminals 0 or 1 on PC card A2. The following identifies patches to select desired start positions:

Desired TI sequence start position	Strap terminal 2^0 TO-	Strap terminal 2^1 TO-
First character-Z	0	0
Second character -C	1	0
Third character-Z	0	1
Fourth character -C	1	1

The 1Y and 2Y outputs of MLPX-74153 address are applied to ROM modules Z10 and Z15 as the two least significant bits of memory address. Once the first character for memory (any of the four characters identified in above table) has been loaded into the sequence control register, the ADDRESS ROM module will then sequentially transmit the remaining characters in the TI sequence.

3-99. End of Medium

The last character of the TI sequence to be transmitted is a NUL character which is accompanied by an active level on the EM interface control line. In addition, during transmission of the EM function, the message sequence counter on the TIG control panel must be incremented by one. The circuits performing these functions are on PC card A2 (fig. 8-21.2) consisting of AND gates Z21B and Z14B, inverter Z16, and neutral discrete circuit interface transmitter XMTR-1C.

a. When the NUL character in ROM location 9 is loaded into the sequence control register, AND gate Z21B is enabled. The inverted output of AND gate Z21B through inverter Z16C is a high level partially enabling AND gate Z14B and XMTR-1C. When the TIG is in the on-line mode, the high level NOFFLINE signal is also applied to both AND gate Z14B and the XMTR1C interface transmitter. A high level on both inputs to the XMTR-1C will cause a 0-volt level on the end of medium (EM) interface line to the CCU. Refer to timing diagram figure 3-52. The EM line will remain low until the TIG timing generator cycles in response to the CCU requesting the next character. At this time, the output from AND gate Z21B will be a high level and the EM interface line will revert to an open.

b. AND gate Z14B also is further enabled by timing generator module Z22 flip-flop Q_C output. Thus, 208 μsec after the EM line develops an active level, a 104 μsec low pulse will be developed on the NEM PULSE line. This pulse is applied to the counter clocking circuitry on the TIG control panel PC card A7 (fig. 8-21.3) which increments the message sequence counter in both the A7 and A8 TIG assemblies.

3-100. On-Line/Off-Line Control

The ON-LINE/OFF-LINE switch A7S1 provides operator control over the transmission or nontransmission of the TI sequence at the start of each message. Depending upon the position of the switch A7S1 (fig. 8-1.1), either $+V_{CC}$ or ground is coupled through the switch to develop a high or a low level on the NOFFLINE signal line. This line is applied to PC card A2 to enable TI sequence generation when the line has a high level. TI sequence generation is inhibited when the NOFFLINE signal is at a low level. The A7S1B contacts provide for a 15 VAC RTN path to the TIG ON indicator A7DS1. The TIG ON indicator is illuminated when the ON-LINE/OFFLINE switch is in the ON-LINE position.

3-101. Message Sequence Counter

The message sequence counter maintains a record of the number of messages transmitted from the terminal. The counter is incremented by one during the transmission of the TI sequence. The count stored in the message sequence counter is also transmitted as a part of the TI sequence. The counter resets to 000 upon power-up, however, TIG front panel controls enable operator to manually load any number from 000 to 999 into the counter. In those terminals having dual TIG assemblies installed, the message sequence counter in both TIG assemblies will be incremented regardless of which punched tape reader/ TIG unit is transmitting the message. In this case however, both counters must initially be loaded to the same count to insure transmission of the proper message sequence numbers when reading from both punched tape readers. The

message sequence counter circuits are all contained on the TIG assembly front panel (fig. 81.1) or on the PC card A7A1 (fig. 8-21.3) which is mounted to the TIG assembly front panel. All integrated circuit components on this PC card plug into dual ill-line sockets for ease of maintenance.

a. Binary Coded Decimal Counter. The three stare binary coded decimal counter on PC card A7A1 consists of three BCD CTR-74160 modules Z1, Z2, and Z3. Module Z1 functions as the units counter, module Z2 is the tens counter, and module Z3 is the hundreds counter. Upon power-up a positive pulse from PC card Al is coupled through inverter Z6A to reset all outputs of the counter to a low level. Capacitor C2 functions as a noise filter to prevent accidental clearing of the counter. If the two enable (E) inputs to the counter module are high, the counter modules will increment on a positive step of the CLK input. Note the E inputs of module Z1 are connected to $+V_{CC}$ enabling this module to step on each clock pulse. The CR' output of module Z1 is high only during the count of 9. Since this CRY output is connected to the E inputs of module Z2, the tens stage can be stepped only on every 10th clock pulse. In a similar manner, module Z3 can be stepped only on every 100th clock pulse. The three stages of the counter can also be manually preset by the counter load control circuits as described below. The binary coded outputs from the counter modules are applied to the counter selection gates and to the visual display DS2.

b. Visual Display DS2. The three visual display modules DS2U, DS2T, and DS2H are all mounted in a single dual in-line socket on PC card A7A1.Note that figure 8-21.1 identifies both socket and individual module terminal numbers. In addition, the display DS2 is mounted on the reverse side of the PC card to enable observation through the aperature in the TIG assembly control panel.

c. Counter Clocking. During the transmission of the last TI sequence character to the CCU, the low level 104 μsec NEMPULSE is generated on PC card A2 and is applied through OR gate Z5A to the CLK input of the three counter modules Z1, Z2, and Z, 3 on PC card A7A1. The positive pulse on the CLK inputs to these modules will increment the three stage counter by one. Refer to If below for description of incrementing counter from other TIG.

d. Counter Load Control. The counter load control enables manual presetting of the message sequence counter. The circuit consists of latch ZS5B and Z5C, Inverter Z6B, OR gates Z9A and Z5A on PC card A2 (fig. 8-21.1) the TIG front panel pushbutton LOAD switch A7S3 (fig. 8-1.1) and the three section MANUAI, UPDATE thumbwheel switch A7S2. (fig. 8-1.1). Each of the thumbwheel switches have 10 positions and are connected to one stage of the binary coded sequence counter. Each section of the switch receives power from PC card A7A1 and provides a four line binary coded decimal output. The binary code levels on the output lines depend upon which one of the ten positions to which the switch is manually set. The output of each switch is applied to the 2°, 2^1, and 2^3, inputs of the respective counter module. Normally a high output from latch Z5B output is applied to the LOAD inputs of modules Z1, Z2, and Z3 to inhibit the switch outputs from affecting counter module operation. To manually preset the counter, depress the LOAD pushbutton switch A7S3. Ground is then coupled through the A7S3 common to normally-open contacts to change the state of latch Z5B and Z5C. Resistors R1 and R2 are connected to $+V_{CC}$ to insure a high level is generated from the open side of the switch. The low level from Z5B will set the counter modules when a positive transition occurs on the CLK inputs to modules Z1, Z2, and Z3. This is accomplished by a low level output from latch Z5B gated through inverter Z6B, OR gate Z9A, and OR gate Z5A to apply a positive pulse to the counter module CLK inputs. This positive pulse causes the four flip-flops in each BCD CTR74160 to assume the state indicated by the thumbwheel switches. Note that there is a time delay between the time the low level LOAD input is detected by the counter modules and the time the positive CLK input is applied. This is caused by the tiransistion time of the positive pulse from latch Z5B through the inverter Z6B, OR gates Z9A and Z5A, and the effect of the capacitor C3. If the TIG 'punched tape reader is selected by the CCU, manual loading of the counter is inhibited. A low level NSELECT signal from PC card A2 is applied to latch OR gate Z5B on PC card A7A1. When this signal is present, a low level output from latch Z5B is inhibited even if the pushbutton LOAD switch A7S3 is depressed.

e. Counter Selection. The 9th, 10th, and 11th TI sequence characters to be transmitted consist of numerical ASCII characters indicating the

contents of the hundred counter Z3, tens counter Z2, and units counter Z1. Outputs from each of the four flip-flops in the three counter modules on PC card A7A1 are applied to the two MLPX74153 modules Z7 and Z8. Address bits from the ADDRESS ROM module Z10 on PC card A2 (fig. 8-21.2) are applied through sequence control REG-74195 module Z19, inverters Z16A, Z16B to PC card Z7A1 counter selection modules Z7, Z8 inputs 2^0 and 2^1. Therefore, when inputs 2^1 and 2° are both high during the 9th TI sequence position, the counter selection module outputs reflect the count in the hundreds counter module Z3. In a similar manner, the state of the tens counter is gated for the 10th character and the units counter is gated for the 11th character.

f. Increment Other TIG. In dual TIG installations, a low NEMPULSE signal must also increment the message sequence counter in the other TIG. This circuitry consists of inverters Z6C and Z6D and ISOLATOR-MCD2 module Z4 on PC card A7A1 (fig. 8-21.2). The active low level NEMPULSE from PC card A2 is double inverted by inverters Z6C and Z6D and applied to terminal board A7TB1 terminal 5 (fig. 8-1.1). Also $+V_{CC}$ is connected to terminal board A7TB1 terminal 4 to provide power for the ISOLATOR-MCD2 module Z4 in the other TIG. The NINTIG signal on terminal board A7TB1 terminal 5 is connected to terminal board A8TB1 terminal 8 (fig. 8-1.1). The $+V_{CC}$, signal on terminal board A7TB1 terminal 4 is connected to terminal board A8TB1 terminal 7. In a similar manner A8TB1-5 is connected to A7TB1-8 and A8TB1-4 is connected to A7TB1-7. Thus, the LED VCC signal from the other TIG is received on terminal board TP, 1 terminal 7 and is applied to the ISOLATORMCD2 module Z4 (fig. 8-21.2) through current limiting resistor R3. When a low level pulse is received from the other TIG on terminal board TB1 terminal 8, a high level pulse is developed on the ISOLATOR-MCD2 module Z4 output terminal 4. This pulse is then gated through OR gates Z9A and Z5A to the BCD CTR-74160 CLK inputs to increment the message sequence counter by one.

CHAPTER 4
MAINTENANCE INSTRUCTIONS

Section I. GENERAL

4-1. Scope of Maintenance

a. This chapter includes instructions for performing preventive and corrective maintenance procedures on all major assemblies. subassemblies, and components (except PC cards) of the punched tape reader. Maintenance procedures for the PC cards are provided in chapter 5.

b. Maintenance of the punched tape reader includes the following:

(1) Preventive maintenance (paras 4-3 through 4-8).
(2) Troubleshooting (paras 4-9 through 4-15).
(3) Removal and replacement (paras 4-16 through 4-43).
(4) Repairs and adjustments (paras 4-44 through 4-62).

4-2. Tools, Materials, and Test Equipment Required

a. Tools and Test Equipment. Refer to appendix C for a list of the tools and test equipment required for maintenance of the punched tape reader.

b. Materials. The following maintenance mate rials are required in addition to the maintenance materials furnished as part of the tool kits listed in appendix C:

(1) Lint-free cleaning cloth, NSN 8305-00-267-3015.
(2) Fine sandpaper (0000), NSN 5350-00-235-0124.
(3) Primer, zinc chromate, FED SPEC TT-P-664, NSN 8010-00-936-3372 (pt.)
(4) lacquer, semigloss, blue (No. 25184 per FED STD 595), NSN 8010-00-721-9753 (pt).
(5) Enamel, semigloss, gray (No. 26492 per FED STD 595), NSN 8010-00-087-0109 (qt).
(6) Enamel, semigloss, black (No. 27038 per FED STD 595), NSN 8010-00-844-4792 (qt).
(7) Trichloroethane, FED SPEC O-T-620, Type I, NSN 6810-00-292-9625 (qt), or NSN 6810-00-664-0387 (gal).
(8) Trichlorotriflorethane (Freon TF), MIL-C-81302B, Type II, NSN 6850-00-033-8851 (1 gal).
(9) Sealing compound, retaining (LOCTITE, Grade A), NSN 8030-00-081-2339 (1 gal).
(10) Scaling compound, retaining (LOCTITE, Grade E), NSN 8030-00-081-2328 (10CC btl).
(11) Primer, sealing compound (LOCTITE, Grade T), NSN 8030-00-145-0001 (6 oz can).
(12) Compound, antiseize, MIL SYMB A-907C, NSN 8030-00-292-1102 (8 oz).
(13) Adhesive (GLYPTAL No. 1153), NSN 5970-00-162-7523 (pt)
(14) Coater, filter, NSN 4130-00-860-0042 (pt).
(15) Compound, silicone (heat sink), Dow corning 340, NSN 6850-00-181-6995 (2 oz), or NSN 6850-00-927-9461 (5 oz).
(16) Oil, lubricating, Grade 0E-30, MIL SYMB 0-180, NSN 9150-00-265-9433 (qt).
(17) Oil, lubricating, general purpose, nondetergent, MIL SYMB 2110TH, NSN 9150-00-985-7235 (pt).
(18) Groase, silicone, Dow Corning No. 44, NSN 9150-00-257-5358 (8 oz).

Section II. PREVENTIVE MAINTENANCE

4-3. Scope of Preventive Maintenance

a. Preventive maintenance is the systematic care, inspection, and servicing of the punched tape reader, to maintain it in serviceable condition, prevent breakdowns, and assure maximum operational capability. Preventive maintenance includes inspection, testing, and replacement of parts, subassemblies, or units that inspection and tests indicate would probably fail before the next scheduled periodic service.

b. The preventive maintenance checks and services procedures outline functions necessary to maintain the punched tape reader in good operating condition.

c. Weekly and monthly preventive maintenance periods are specified as follows: A week and a month are defined as approximately 7 and 30 calendar days of 8houraday operation, respectively. If the punched tape reader is operated 16 hours a day, the weekly and monthly preventive maintenance checks and services should be performed at 4day and 15day intervals, respectively. Adjustment of the preventive maintenance interval should be made to compensate for any unusual operating conditions.

d. Refer to paragraph 13d for information on the records and reports of preventive maintenance.

4-4. Daily Preventive Maintenance Checks and Services

Press LAMP TEST switch and check to be sure that pressing the switch causes all indicators on the control panel to light (except POWER indicators). Clean paper lint and dust from the top of the tape deck assembly as follows:

a. Press the button on the front of the read head to permit the tape holddown assembly to tilt upward.

b. Use a soft brush or a hand vacuum cleaner

to remove lint and dust from the tape track.

4-5. Weekly and Monthly Preventive Maintenance

a. Weekly. Replace the cabinet air filter with a clean air filter. When time permits, clean the removed filter and install it during the next weekly maintenance procedure (para 48.1).

b. Monthly. Remove the bottom cover (10, fig. 412) to gain access to the read head starwheels and the starwheel levers (fig. 36). Clean paper lint and dust from the starwheels and starwheel levers with a soft brush or a hand vacuum cleaner.

NOTE

Removal of paper lint and dust from starwheels and starwheel levers must be accomplished on a regular monthly basis, or after 250 hours of operation, to prevent contamination of electrical contacts. Do not blow or use air pressure to remove dust from the starwheel area. If a soft brush is used to dislodge dirt, always brush away from the contact area and use the vacuum cleaner after brushing.

4-6. 250-Hour, 1000-Hour and 2000-Hour Preventive Maintenance Checks and Services

a. 1000-Hour Checks and Services. Remove 2 screws (6, fig. 412) and lift the assembled fan and capstan drive guards to gain access to the capstan drive mechanism (64). Use the hand vacuum cleaner to remove loose dirt from the capstan drive mechanism and the motor and fan. Inspect Blower B-1 blades for dirt buildup. If blades are caked with dirt, disassemble blower assembly and clean.

b. 250Hour Checks and Services. Clean and lubricate the capstan drive mechanism (para 48).

c. 2000Hour Checks and Services. Remove the capstan drive mechanism and inspect thoroughly for worn parts. Replace worn parts as required.
Clean, lubricate, and adjust the mechanism as described in this chapter and replace in the assembly.

4-7. Cleaning and Touchup Painting

a. External Cleaning. Use a hand vacuum cleaner and a lintfree cloth to clean the punched tape reader externally.

b. Internal Cleaning. Use a hand vacuum cleaner and a lintfree cloth to clean the punched tape reader internally.

Caution. Do not use a stiff-bristled brush for cleaning the read head.

c. Cleaning of Read Head and Starwheels. Clean the read head and starwheels as described in paragraph 45b. If movement of the starwheel levers (fig. 36) becomes sticky, clean their pivot bearings with trichloroethane.

Caution. Do not use trichloroethane to clean the capstan drive mechanism. Also, take care that the trichloroethane does not get into the contact area.

d. Cleaning Capstan Drive Mechanism. Clean the capstan drive mechanism (64, fig. 412) as described in paragraph 46a. Use a lintfree cloth to wipe excess lubricant and sticky residue from all parts of the mechanism.

e. Touchup Painting Instructions. Remove rust and corrosion from metal surfaces by lightly sanding them with a fine grade of sandpaper.
Brush two light coats of the appropriate paint (para 42) to the cleaned surfaces (See TB 74610 (App A).)

4-8. Lubrication

a. The only lubrication required for the punched tape reader is lubrication of the capstan drive mechanism and the motor. Use only those lubricants specified in paragraph 42*b*. Do not mix lubricants or overlubricate the mechanism and motor. When only one or two drops of lubricant are specified, dip a piece of wire into the lubricant and apply it to the lubrication point carefully. Before lubricating the capstan drive mechanism, clean the mechanism as described in paragraph 4-6*a.*

b. Lubricate the punched tape reader as indicated in the following chart:

Item No. fig. 4-1	Lubrication point	Lubrication interval	Method and quantity
1	Bearings on shafts and idler gears of capstan drive mechanism.	Every250 hours of operation.	Apply 1 or 2 drops of Bardol BOA 30.
2	Escapement armature felt pad.	Every 1, 000 hours of operation.	After wiping escapement armature and adjacent pole face with lint-free cloth, apply I or 2 drops of SAE 30 oil to the felt pad. *Caution.* **Do not spill oil on adjacent friction clutch.**
3	Friction clutch escapement teeth	Every 1, 000 hours of operation.	Clean previous lubricant off the friction clutch escapement teeth. Relubricate escapement teeth with a light coat of silicone grease, Dow Corning No. 44.
4	Motor	Every 4, 000 hours of operation or 2 years, whichever occurs first.	Apply 8 drops of lubricating oil, general purpose (2110TH) into the oil-hole on each side of the motor.

48.1 Cleaning Cabinet Air Filter

Remove loose dust and dirt from the cabinet air filter after each 50 hours of operation (a and b below). Wash and recoat the filter after each 250 hours of operation (c below).

a. Pry the upper corners of the grill assembly forward slightly and lift the assembly upward to remove it from the cabinet. Lift the exposed filter upward slightly and then forward to remove it from the equipment cabinet.

b. Use a hand vacuum cleaner to remove loose dust and dirt from both sides of the filter.

c. Wash and recoat air filter as follows:

(1} Vacuum the air filter using the procedure outlined in step b above.

(2) Prepare a solution of warm water and detergent in a suitable container large enough to permit immersion of the filter.

(3) Place the filter in the solution of warm water and detergent; allow the filter to soak for several minutes in the solution.

(4) Thoroughly wash the filter by agitating, raising and lowering the filter in the solution, thus permitting the solution to run through the woven filter material.

(5) Thoroughly rinse the filter in clean, clear water using the same procedure as was used for washing.

(6) Shake the filter to remove as much water as possible; then set filter aside to drain and dry at room temperature or use a low pressure source (15 psi) of dry compressed air to dry the filter.

(7) Hold a spray can of Coater, Filter (FSN 41308600042) about 12 inches from the dry filter and press the button while moving the can to apply an even thin coat to the filter. Then apply an even thin coat to the opposite side of the filter.

Repeat this procedure to apply a total of three thin coats to each side of the filter.

d. To install the clean air filter, reverse the removal procedure (a above).

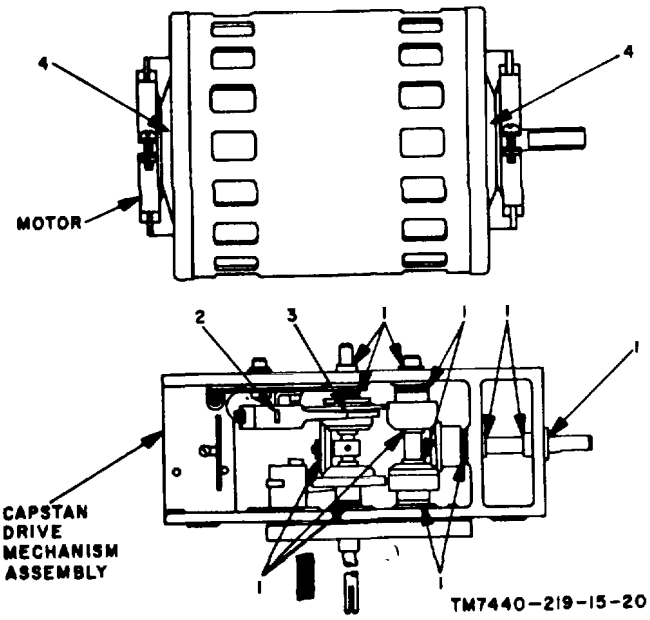


Figure 4-1. Capstan drive mechanism and motor lubrication points.

Section III. TROUBLESHOOTING

4-9. Use of Troubleshooting Charts

a. Detailed procedures for troubleshooting a faulty punched tape reader are presented in two troubleshooting charts (paras 4-10 and 4-11). Refer to the troubleshooting chart in paragraph 410 to localize the fault to one of the components of the punched tape reader and to isolate the fault to the defective part or maladjustment of all components except the power supply. Refer to the troubleshooting chart in paragraph 4-11 to locate troubles in the power supply.

b. When starting a troubleshooting procedure, place the punched tape reader into operation and note the first apparent symptom of the trouble. Refer to the equivalent symptom in the troubleshooting chart, note the probable trouble, and take the indicated corrective action for each probable trouble. If the indicated corrective action does not restore the equipment to an operable condition, report the deficiency in accordance with prescribed station procedures. When a particular trouble symptom is observed, it can be corrected by repairing or replacing one or more of the components listed in the *checks and corrective measures* column. First check resistors, capacitors, relays, and other nonplug-in electrical or mechanical components before replacing the component. When a PC card trouble is suspected, check the PC card by substituting a new card. Always recheck the punched tape reader operation after repairs or replacements are performed.

4-10. Punched Tape Reader Troubleshooting Chart

Item No.	Trouble symptom	Probable cause	Checks and corrective measures
1	Fan does not operate.	Blown fuse at power supply PS1.	Replace FAN fuse at front panel of power supply.
2	Drive motor does not operate.	Blown fuse at power supply PS1.	Replace DRIVE motor fuse at front panel of power supply.
3	Indicator lamps do not light.	Blown fuse at power supply PS1.	Replace 15 VAC LAMP fuses at front panel of power supply.
4	Equipment shuts off or cannot be turned on.	Failure in one or more of the regulators in power supply PS1.	Check for blown 120 VAC PWR SUP INPUT fuse, or -12V, +412V, or +4.75 FAST BLO fuses at front panel , of power supply

Item No.	Trouble symptom	Probable cause	Checks and corrective measures
5	Excessive contact bounce.	*a.* Low contact force (less than minimum specified in fig. 4-23).	*a.* Adjust fixed contact down and movable contact up to increase hole contact force para (4-48).
		b. Improperly deflashed fixed contact.	*b.* Replace fixed contact (paras 4-48, 4-49 and 4-51).
		c. Defective starwheel too loosely held by lever.	*c.* Replace starwheel lever assembly (para 4-35).
		d. Switch timing incorrect (data holes not correctly phased with star-wheels).	d. Adjust for correct switch timing as specified in para 4-52.
		e. Tape drag high lover 345 grm- /inch on 2 x 2 paper/mylar/ paper sandwich tape).(Two all-hole characters, two nohole characters, in alternate fashion. Measured with capstan drive mechanism spider gear removed and by pulling tape through closed tape holddown.)	*e.* Correct as follows: (1) Adjust read head contact (pare 4-49). (2) Be sure that capstan and capstan shaft turn freely without binding or rubbing on adjacent parts. (3) Measure capstan height (para 4-13).
5.1	Intermittent, erratic, or no output from read head	a. Dirty contacts.	*a.* Check for waveshape as shown in figure 4-23.1. If improper, proceed as follows: (1) Remove bottom cover (10, fig. 4-12) and tape deck assembly (para 4-32a). (2) Clean contacts using freon bath (or equivalent solvent that will not deteriorate plastic), allow to dry and vacuum to remove any remaining particles of dirt. **CAUTION** Take care not to bend contacts. (3) Replace tape deck assembly. (para 4-32b) and bottom cover.
		b. Defective read head.	*b.* Replace read head (para 4-34).
6	Tape fails to advance.	*a.* Insufficient armature tip clearance.	*a.* Adjust armature tip clearance (para 4-59).
		b. Excessive heel gap.	*b.* Adjust heel gap (para 4-58).
		c. Excessive spring tension.	*c.* Adjust spring tension (para 4-57).
		d. Mechanical bind on capstan or shaft.	*d.* Correct as follows: (1) Be sure that capstan and capstan shaft turn freely without binding or rubbing on adjacent parts. (2) Measure capstan height (para 4-13).
		e. Slewing lever disengaged.	*e.* Check slewing lever for possible disengagement. Re-arrange slewing lever.
		f. No solenoid drive pulse.	*f.* Replace PC cards A1 (A66209), A14 (A65433), and A16 (A65429).
		g. Alarm STOP condition present.	*g.* Check fault indicator and correct fault.
7	Tape skips (advances two or more steps on one pulse).	*a.* Excessive armature tip clearance.	*a.* Adjust armature tip clearance (para 4-59).
		b. Insufficient spring tension (fig. 4-27)	*b.* Adjust spring tension (para4-57).
		c. Broken or chipped escapement teeth.	*c.* Replace friction clutch (para 4-39).
8	Punched tape reader alarm conditions.		
	a. Inability to reset out of stop.	*a.* One or more of following (1) Alarm stop condition present. (2) Operator alarm condition present.	*a.* Proceed as follows: (1) Check error indicators and correct fault. (2) Check for tight tape condition.

Item No.	Trouble symptom	Probable cause	Checks and corrective measures
		(3) Defective PC card.	(3) Replace PC cards A16 (A65429) and A16 (A65437). Check OSC output on PC card A1 (A65209).
	b. No stop indication.	*b.* One or more of following: (1) Defective control logic. (2) Defective lamp. (3) Defective lamp driver. (4) Defective power on reset. (5) Defective stop switch Z8.	*b.* Proceed as follows: (1) Replace PC card A16 (A65428). (2) Replace lamp. (3) Replace PC card A3 (SM-E-546669). (4) Replace PC card A1 (A65209). (5) Replace switch.
9	Correct or incorrect alarms or lamp indications.		

Item No.	Trouble symptom	Probable cause	Checks and corrective measures
	a. Invalid character	*a.* One or more of following: (1) Improper character on tape (2) Defective character decoding (3) Defective PC card (4) Failure to sense tape-out	*a.* Proceed as follows: (1) Check tape for invalid character and correct tape if necessary. (2) Replace PC card A6 (A665421). (3) Replace PC card A15 (A65437). (4) Replace PC card A7 (A66426).
	b. No or improper invalid character alarm with an invalid character	*b.* One or more of following: (1) Defective character decoding (2) Defective alarm logic (3) Defective lamp DS2 (4) Defective lamp driver	*b.* Proceed as follows: (1) Replace PC card A6 (A65421). (2) Replace PC card A15 (A65437). (3) Replace lamp. (4) Replace PC card A3 (SM-E-546659).
	c Tight tape	*c* One or more of following: (1) Tight tape condition (2) Defective tape microswitch. (3) Defective alarm logic.	*c* Proceed as follows: (1) Check tape threading and clear tight tape condition. (2) Replace microswitch. (3) Replace PC card A16 (A66437).
	d. Improper or no tight tape alarm with tight tape condition.	*d.* One or more of following: (1) Defective microswitch. (2) Defective alarm logic. (3) Defective lamp DS6. (4) Defective lamp driver. (5) Tight tape sensing arm spring tension	*d.* Proceed as follows: (1) Replace microswitch. (2) Replace PC card A15 (A65437). (3) Replace lamp. (4) Replace PC card A3 (SM-D-546686). (5) Check spring tension (para 4-46a).
	e. Tape out indication.	*e.* One or more of following: (1) Tape out condition. (2) Defective alarm logic.	*e.* Proceed as follows: (1) Check for torn tape. (2) Replace PC card A16 (A665437).
	f. End of tape condition.	*f.* Defective tape out microswitch.	*f.* Replace or reposition microswitch.
	g. Improper or no tape out alarm with end of tape condition.	*g.* One or more of following: (1) Defective alarm logic. (2) Defective end of tape microswitch. (3) Misaligned tape holddown comb assembly. (4) Defective lamp DS6. (5) Defective lamp driver.	*g.* Correct as follows: (1) Replace PC card A-15 (A65437). (2) Replace microswitch. (3) Check and realign comb assembly. (4) Replace lamp. (5) Replace PC card A3 (SM-D-5656).
	h. Improper or no cancel alarm with cancel condition present.	*h.* One or more of following: (1) Defective interface card. (2) Defective alarm logic. (3) Defective lamp DS2. (4) Defective lamp driver.	*h.* Proceed as follows: *(1) Replace PC card A4 65216). (2) Replace PC card A16 (A665437). (3) Replace lamp. (4) Replace PC card A3 (SM-D-546656).
	i. Motion fail indication.	*i.* One or more of following: (1) Defective tape. (2) Defective alarm logic. (3) Defective timing. (4) Motion sensor adj. (5) Defective motion sensor. (6) Defective motion sensor amplifier. (7) Misaligned tape holddown. (8) Defective friction clutch. (9) Improper armature tip clearance. 4-59). (10) Spring tension on armature tip.	*i.* Proceed as follows: (1) Check tape for torn sprocket holes. (2) Replace PC card A16 (A65437n. (3) Replace PC card A14 (A665433). (4) Adjust motion sensor (para 4-60). (5) Replace card lamp or card sensor in motion sensor assembly (para 4-33). (6) Replace amplifier in reader mechanism (para 4-36). (7) Check for proper clearance. (8) Check for broken or worn teeth and replace (pare 4-39). (9) Check tip clearance and adjust (para (10) Check spring tension and adjust (pare 4-57).

Item No.	Trouble symptom	Probable cause	Checks and corrective measures
	j. No or improper motion fail indication with motion fail (A65433). condition	*j.* One or more of following: (1) Defective alarm logic (2) Defective timing (3) Defective lamp DS4 (4) Defective lamp driver	*j.* Proceed as follows: (1) Replace PC card A15 (A65437). (2) Replace PC card A14 (3) Replace lamp. (4) Replace PC card A3 (SM-D-546656).
	k. No local test mode or indication. (A65429).	*k.* One or more of following: (1) Defective control logic (2) Defective oscillator (A65209). (3) Tape cannot advance (4) Defective timing logic (A65433). (5) Defective lamp Z9 (6) Defective lamp driver (7) Defective switch Z9.	*k.* Proceed as follows: (1) Replace PC card A16 (2) Replace PC card A1 (3) Replace PC card A1 (A65209). (4) Replace PC card A14 (5) Replace lamp. (6) Replace PC card A3 (SM-D-546656). (7) Replace switch.
	l. No feed mode or indication.	*l.* One or more of following: (1) Defective control logic (2) Defective oscillator (A65209). (3) Defective timing logic (4) Defective lamp Z6 (5) Defective single feed switch (6) No tape advance (A65209). (7) Defective lamp driver 546656).	*l.* Proceed as follows: (1) Replace PC card A16 (A65429). (2) Replace PC card A1 (3) Replace PC card A14 (A65433). (4) Replace lamp. (5) Replace switch. (6) Replace PC card A1 (7) Replace PC card A3 (SM-D-
	m. No pilot header or indication.(1) Defective control logic	*m.* One or more of following:	*m.* Proceed as follows: (1) Replace PC card A16 (A65429). (2) Replace PC card A14 (A65433). (3) Replace PC card A1 (A65209). (4) Replace PC A1 (A65209). (5) Replace lamp. (6) Replace PC card A3 (SM-D-546656).
	n. No assigned mode indication. (A65216).	*n.* One or more of following: (1) Defective interface receiver (2) Defective control logic (3) Defective lamp DS7 (4) Defective lamp driver	*n.* Proceed as follows: *(1) Replace PC card A4 (2) Replace PC card A16 (A65429). (3) Replace lamp. (4) Replace PC card A3 (SM-D-646656).
	o. No high speed mode or low speed mode indication	*o.* One or more of following: (1) Defective timing (A65433). (2) Defective lamp driver (3) Defective lamp Z3 (4) Defective switch Z3	*o.* Proceed as follows: (1) Replace PC card A14 (2) Replace PC card A3 (SM-D-546656). (3) Replace lamp. (4) Replace switch.
10	Data or transmission trouble.		
	a. Punched tape reader fails to transmit ready (start fails to turn green).	*a.* One or more of following: (1) Alarm stop or operator alarm. (2) Defective control logic (3) Defective interface transmitter.001). (4) Defective alarm logic (5) Defective power on reset (6) Defective lamp Z7 (7) Defective lamp driver	*a.* Proceed as follows: (1) Check for proper tape loading. (2) Replace PC card A16 (A65429). *(3) Replace PC card A4 (A65215- (4) Replace PC card A15 (A65437). (5) Replace PC card A1 (A65209). (6) Replace lamp. (7) Replace PC card A3 (SM-D-546656).

Item No.	Trouble symptom	Probable cause	Checks and corrective measures
	b. Punched tape reader fails to be selected (start fails to turn white).***	*b.* One or more of following: (1) Defective interface receiver (2) Defective control logic (3) Defective lamp driver (4) Defective lamp Z7.	*b.* Proceed as follows: *(1) Replace PC card A4 (A65215). (2) Replace PC card A16 (A65429). (3) Replace PC card A3 (SM-D-546656). (4) Replace lamp.
	c. Punched tape reader fails to step to first nonidle message character	*c.* One or more of following: (1) Tape handling (2) Continuous step (3) Defective control logic	*c.* Proceed as follows: (1) Check for proper tape loading. (2) Replace PC card A15 (A65437). (3) Replace PC card A16 (A65429).
	d. Read error in ASCII.***	*d.* One or more of following: (1) Defective input register (2) Incorrect read head timing (3) Improperly set ASCII/ ITA-2 switch. (4) Defective polar interface (5) Timing generator	*d.* Proceed as follows: (1) Replace PC card A7 (A65425). (2) Check data bit switching for correct timing and minimum switching noise Adjust timing if necessary. (3) Check to verify correct mode. **(4) Replace PC card A5 (A65205). (5) Replace PC card A14 (A65433)
	e. Read error in ITA mode.***	*e.* One or more of following: (1) Improperly set ASCII/ ITA-2 switch. (2) Defective input register (3) ITA cede converter input (4) Defective decode matrix (5) Defective encode matrix (6) Defective decode matrix (7) Defective encode matrix (8) ASCII code converter output. (9) Defective polar interface.	*e.* Proceed as follows: (1) Check to verify correct mode. (2) Replace PC card A7 (A65425). (3) Replace PC card A8 (A53418). (4) Replace PC card A9 (A53725). (5) Replace PC card A10 (A53721). (6) Replace PC card All (A53725). (7) Replace PC card A12 (A53721). (8) Replace PC card A13 (A53434). **(9) Replace PC card A5 (A65205).
	f. Parity error at CCU.***	*f.* One or more of following: (1) Defective input register. (2) Defective polar interface. (3) Incorrect read head timing. (4) Bad parity on ASCII tape.	*f.* Proceed as follows: (1) Replace PC card A7 (A65425-001). **(2) Replace PC card A5 (A65205-001). (3) Check data bit switching for correct timing and minimum switching noise. Adjust timing if necessary. (4) Check tape and replace if necessary.
	g. No data transmission to CCU when selected.***	*g.* One or more of the following: (1) Defective timing (2) Defective control logic (3) Defective receiver (4) Defective transmitter	*g.* Proceed as follows: (1) Replace PC card A14(A65433). (2) Replace PC card A16 (A65429). *(3) Replace PC card A4(A65215). **(4) Replace PC card A5(A65205).
11	Irregular or no capstan drive mechanism operation.	*a.* Binding or broken gears. *b.* Defective drive belt *c.* Defective friction clutch *d.* Defective drive motor	*a.* Check gear drive train and replace any defective gears (para 4-39). *b.* Replace broken drive belt. *c.* Replace clutch (para 4-39). *d.* Check for drive motor operation and replace if necessary (para 4-40).

NOTES

*PC cards No. A65215 and A65223 are interchangeable.

**PC cards No, A65205 and A65227 are interchangeable.

***Supplemental data is provided in paragraph 4-10.1 for punched tape readers that have been modified by the addition of a TIG assembly.

4-10.1 Punched Tape Reader/Transmission Identification Generator Troubleshooting Chart

The trouble symptoms listed under item 10 of the following troubleshooting chart are supplemental items to data provided in paragraph 4-10 above. The trouble symptoms listed in items 12 through 14 are applicable only to the TIG assembly operation. To troubleshoot a punched tape reader having been modified by the addition of a TIG assembly, refer to the troubleshooting charts in both paragraph 4-10 and this paragraph.(NOTE: In many instances, defective read heads (especially on those assemblies having intermittent or erratic outputs) can be repaired by cleaning of contacts)

Item No.	Trouble symptom	Probable cause	Checks and corrective measures
10	b. Punch tape reader fails to he selected (start fails to turn white).	(5) Defective TIG control logic.	(5) Replace PC card A2 (12-890081).
	d. Read error in ASCII.	(6) Defective TIG control logic.	(6) Replace PC card A2 (12-890081).
	e. Read error in ITA mode.	(10) Defective TIG control logic.	(10) Replace PC card A2 (12-890081).
	f. Parity error at CCU.	(5) Defective TIG control logic.	(5) Replace PC card A2 (12 890081).
	g. No data transmission to CCU when selected.	(5) Defective TIG control logic.	(5) Replace PC card A2 (12-890081).
12	*a.* Improper TIG mode or indication. (TIG on lamp fails to turn white).	*a.* One or m-re of the following: (1) Defective TIG control logic. (2) Defective switch A7S1 ..... (3) Defective lamp A7DS1	*a.* Processed as follows. (1) Replace PC card A2 (12-980081). (2) Replace switch A7S1. (3) Replace lamp A7DS1
13	Transmission identification sequence trouble.		
	a. No data transmission	*a.* One or more of the following: (1) Defective TIC control logic. (2) Defective interface transmitter or receiver.A65223). (3) Defective alarm logic ..... (4) Defective punched tape reader control logic.	*a.* Proceed as follows: (1) Replace PC card A2 (12-890081). (2) Replace PC card A4 (Afi5215 or (3) Replace PC card A15 (A65437). (4) Replace PC card A16 (A65429).
	b. Improper data transmission.	*b.* One or more of following: (1) Defective TIG control logic. (2) Defective oscillator ..... (3) Defective neutral interface. (4) Defective polar interface (5) Defective alarm logic-	*b.* Proceed as follows: (1) Replace PC card A2 (12-890081). (2) Replace PC card A1 (AP5209). (3) Replace PC card A4 (A65215 or A69.223). (4) Replace PC card A5 (A65205 or A65227). (5) Replace PC card A15 (A65437).
14	Sequence counter trouble.		
	a. Counter cannot be manually loaded.	*a.* One or m-re of following: (1) Defective units counter (2) Defective tens counter.-..... (3) Defective hundreds counter. (4) Defective units display. ..... (5) Defective tens display..... (6) Defective hundreds display (7) Defective units switch ..... (8) Defective tens switch	*a.* Proceed as follows: (1) Replace counter module A7A1Z1. (2) Replace counter module A7A1Z2. (3) Replace counter module A7AIZ3. (4) Replace display module A7AID-S2U. (5) Replace display module A7A1-DS2T. (6) Replace display module A7A1D-S2H (7) Replace switch A7S2U. (8) Replace switch A7S2T.

Item No.	Trouble symptom	Probable cause	Checks and corrective measures
		(9) Defective hundreds switch.	(9) Replace switch A7S2H.
		(10) Defective load switch.	(10) Replace switch A7S3.
		(11) Defective load latch	(11) Replace or module A7A1Z6.
	b. Counter does not reset to 000 on power-up	*b.* One or more of the following:	*b.* Proceed as follows:
		(1) Defective invertor module	(1) Replace inverter module A7A1Z6.
		(2) Defective units counter	(2) Replace counter module A7A1Z1.
		(3) Defective tens counter	(3) Replace counter module A7A1Z2.
		(4) Defective hundreds counter.	(4) Replace counter module A7A1Z3.
		(5) Defective reset control logic.	(5) Replace PC card A1 (A65209).
	c. Counter fails to increment. (See *e* below.)	*c.* One or more of the following:	*c.* Proceed as follows:
		(1) Defective TIG control logic.	(1) Replace PC card A2 (12-890081).
		(2) Defective OR logic	(2) Replace OR module A7A1ZS.
		(3) Defective units counter	(3) Replace counter module A7A1Z1.
		(4) Defective tens counter	(4) Replace counter module A7A1Z2.
		(5) Defective hundreds counter.	(4) Replace counter module A7A1Z3.
	d. Sequence counter displays proper count, but incorrect sequence count is transmitted to the CCU. selection module.	*d.* One or more of the following:	*d.* Proceed as follows:
		(1) Defective TIG control logic.	(1) Replace PC card A2 (12-890081).
		(2) Defective sequence counter selection module.	(2) Replace selection module A7A1Z7.
		(3) Defective sequence counter	(3) Replace selection module A7A1Z8.
	e. Only one counter in dual TIG installations increments.	*e.* One or more of the following:	*e.* Proceed as follows:
		(1) Defective inverter logic	(1) Replace inverter module A7A-1Z6.
		(2) Defective OR logic	(2) Replace OR module A7A1Z9.
		(3) Defective isolator logic	(3) Replace isolator module A7A1Z4.

4-11. Power Supply Troubleshooting Procedure

a. If there is any malfunction in any of the regulated supplies in the power supply the sequence module A12, in this supply automatically shuts down the entire supply. In order to troubleshoot the power supply, the sequence module must be removed and in its place a manual control card (Saratoga Industries part No. 39245) (fig. 5-22), must be installed. This control card contains manually operated switches which permit the regulated supplies to be turned on one at a time.

b. In order to use the manual control card to troubleshoot the power supply, first operate all the SR switches of the manual control card in the following sequence: -12v, +4.75v, +12V, and +48v. This should turn on all the regulated supplies, which can be monitored at the test jacks

WARNING

120 VAC is present on Power Supply PS1 (and PS2 in Dual Paper Tape Readers) Sequencer PC Card A12. Do not remove PC Card PS1A12 prior to removing AC voltage to the Punched Tape Reader from the AC power source.

at the front of the power supply, as described in paragraph 463 (which describes the adjustment procedure for the regulated supplies). If the regulated supplies all go on and are providing outputs within 90 percent of rated value the malfunction was in the sequence module A12. If the output voltage of one (or more) of the regulated supplies does not meet the required specification, the voltage regulator, or its associated rectifier-filter network is defective, as summarized in the chart in e below. If all regulated supplies are not operating the ac power transformer (A9T1) is defective or a front panel ac fuse is blown.

c. If it is suspected that there may be ripple in the output voltage of any one of the regulated supplies, connect an oscilloscope to the output test jacks at the front of the power supply normally monitored by means of a digital voltmeter (para 463). The ac ripple should not exceed the following peak-to-peak values:

Test points	Test point monitored Maximum ripple (volts, peak to peak)
+4.75 and COM	0.012
+ 12 and COM	0.02
-12 and COM	0.02
-48 and COM	0.02

d. If one of the power supplies is completely off, check the front panel fuse associated with this supply. If the fuse is n, defective, the cause of trouble is in the corresponding voltage regulator card specified in the troubleshooting chart in e below.

e. Refer to the following chart to locate troubles in the power supply:

Item No.	Trouble symptom	Probable cause	Checks and corrective measures
1	Power supply shuts off but can be made to operate when manual control card is installed.	Sequence module PS1A12 defective	Replace module PS1A12.
2	+4.75-volt output out of tolerance.	*a.* Incorrectly adjusted +4.75-volt regulator.	*a.* Adjust +4.75-volt regulator as described in paragraph 4-63.
		b. Defective +4.75-volt regulator	*b.* Replace module PS1A1.
		c. Defective rectifier-filter network.	c. Replace heatsink component assembly PS1A4.
3	+12-volt output out of tolerance.	*a.* Incorrectlyadjusted+12-volt regulator.	*a.* Adjust +12-volt regulator as described in paragraph 4-63.
		b. Defective + 12-volt regulator	*b.* Replace module PS1A2.
		c. Defective rectifier-filter network.	*c.* Replace heatsink component assembly PS1AS.
4	-12-volt output out of tolerance.	*a.* Incorrectly adjusted -12-volt regulator.	*a.* Adjust -12-volt regulator as described in paragraph 4-63.
		b. Defective -12-volt regulator	*b.* Replace module PS1A2.
		c. Defective rectifier-filter network.	*c.* Replace heatsink component assembly PS1A5..
5	-48-volt output out of tolerance.	*a.* Incorrectly adjusted-48-volt regulator.	a. Adjust -48-volt regulator as described in paragraph 4-63.
		b. Defective -48-volt regulator	*b.* Replace module PS1A3 or PS1A6.
		c. Defective rectifier-filter network.	*c.* Replace heatsink component assembly PS1A4.
6	Excessive ripple in regulated dc outputs:		
	a. +4.75-volt output	*a.* Defective filter capacitor A9C2 or A9C3.	*a.* Replace filter capacitor(s).
	b. + 12-volt output	*b.* Defective filter capacitor A9C4	*b.* Replace filter capacitor.
	c. -12-volt output	c. Defective filter capacitor A9C5	*c.* Replace filter capacitor.
	d. -48-volt output	*d.* Defective filter capacitor A9C6	*d.* Replace defective filter capacitor.

Note. The supplementary troubleshooting information in paragraphs 4-12 through 4-15 is provided to permit restoration of the punched tape reader to normal performance when no adjustments can be made to correct the deficiency.

4-12. Friction Clutch Torque Measurement

Note. Operate the motor of the punched tape reader for at least 5 minutes prior to performing this procedure because the friction clutch must be at operating temperature to obtain an accurate torque measurement.

a. Attach the torque arm 226620 to the idler shaft and the 100-to-00-gram gage to the torque arm as shown in figure 4-2. Check the friction clutch torque as follows:

(1) Operate the motor, but do not pulse the reader.

(2) Carefully pull the upper end of the torque arm in the direction shown and note the gage indication when the escapement tooth is moved slightly away from the armature actuator tip. Allow the torque arm to return slightly and note the gage indication before the escapement tooth comes in contact with the armature actuator tip. The sum of the two indications read must be between 250 and 300 grams.

b. If the friction clutch torque is not between 250 and 300 grams, replace the friction clutch. (25 thru 30, fig. 4-16) as described in paragraphs 4-38 and 4-39.

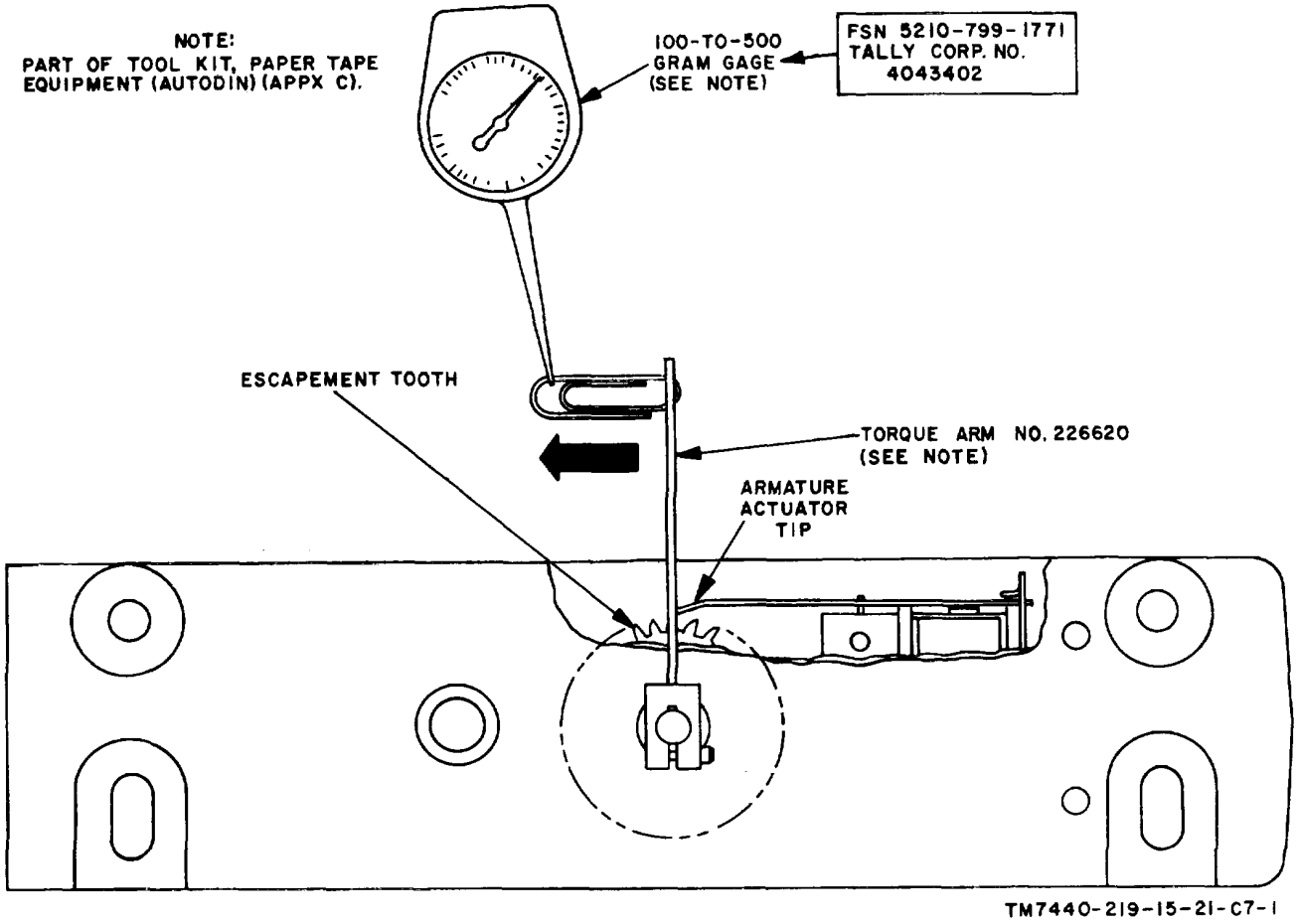


Figure 4-2. Friction clutch torque measurement.

4-13. Capstan Height Measurement

Remove tape deck assembly (47, fig. 4-12) as described in paragraph 4-32. Mount capstan height gage 375560 on the read head with screws (46, fig. 4-12) as shown in figure 4-3.

a. *Requirement.* The capstan rim (not the teeth) must be flush with the top of gage.

b. *Adjustment.* Loosen the two read head mounting screws (52, fig. 4-12) and sight along top of gage. Move read head up or down, as required. Tighten read head mounting screws. If correct capstan height cannot be obtained with this adjustment, replace the read head (64, fig. 4-12), adapter plate (2, fig. 4-16), or capstan shaft (31, fig. 4-16), as required.

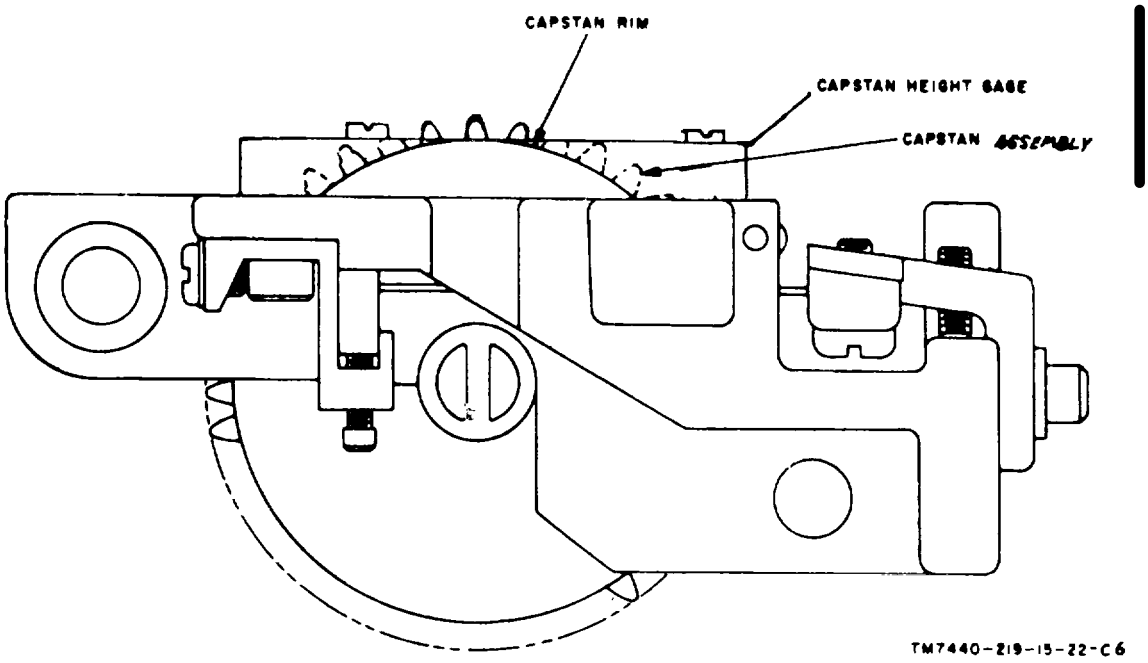


Figure 4-3. Capstan height measurement.

4-14.Tape Pull Measurement

a. Insert a short length of paper tape having sprocket holes punched into the reader mech.

b. Hook gram gage 4043402 to the end of the tape.

c. Pulse the armature at a slow rate to release the escapement and observe the gage indication when the tape stalls. The gage should indicate a force of at least 450 grams.

d. If the gage indication is not at least 450 grams check for free rotation of the capstan shaft by turning SLEW lever to the left, then turning shaft by hand. If the shaft does not turn freely, remove the capstan drive mechanism assembly (para 4-38), and reposition adapter plate (2, fig. 4-16) to realign the shaft. If the shaft does rotate freely, and the force in **c** above is still under 450 grams, replace the friction clutch (para 4-38 and 4-39).

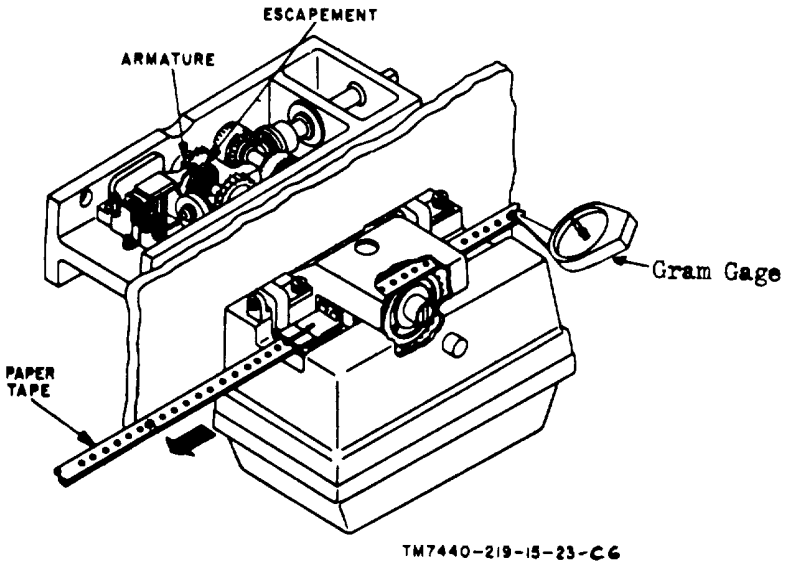


Figure 4-4. Tape pull measurement

4-15. Troubleshooting Reference Data

a. Coil and Frame Assembly Voltage. The voltage rating of the coil in the coil and frame assembly (51, fig. 4-16) is 48 volts.

b. Relay K1 *Resistance.* The resistance of relay K1 is 72 (+ 10 percent) ohms. Relay K1 is used only with units containing two tape readers.

c. Transformer PSlA9TI. Proper resistance for PS1A9T1 are as follows:

Winding terminals	Maximum resistance (ohms)
1-2	0.270
3-7	0.270
4-7	0.021
5-7	0.048
6-7	0.011
7-8	0.011
7-9	0.048
7-10	0.021
7-11	0.270
12-13	0.510

d. Transformer PS1A12T1 Winding Resistances. The winding resistances of transformer PS1A12T1 are listed below.

Winding terminals	Maximum resistance (ohms) (+ 15 percent)
1-6	1.250
2-4	0., 90
3-5	0.370

e. Additional Reference Data. Refer to the interconnection and schematic diagrams (figs. 8-1 through 8-23) for detailed circuitry information when troubleshooting the punched tape reader.

Section IV. REMOVAL AND REPLACEMENT

4-16. General

The following paragraphs describe the removal and replacement of major assemblies, subassemblies, and components of the punched tape reader. These paragraphs also describe the disassembly and reassembly of major assemblies and subassemblies when not in the order of index numbers on exploded views or when special tools and procedures are required. Use these procedures in conjunction with the troubleshooting, lubrication, repair, and adjustment procedures described in paragraphs 4-9 through 4-15, 4-8, 4-45, .and 4-62, respectively.

a. Removal and Disassembly.

(1) Disassemble the punched tape reader only to the extent necessary to inspect, clean, lubricate, and replace a defective part, or to adjust the assembly that is in need of maintenance.

(2) When removing shims, note the number and thickness of 'shims used at each point. Be sure to replace the same thickness of shims at each point (unless otherwise specified) when reassembling the assembly.

(3) When removing springs that are very similar in appearance, tag or otherwise identify each spring to insure proper identification during reassembly.

b. Reassembly and Replacement.

(1) Inspect all removed parts for evidence of excessive wear or damage. Install only parts that are unquestionably serviceable.

(2) Apply a coat of antiseize compound to all steel screws that are installed in aluminum castings.

(3) Check to be sure that mating gears and me-chanical linkages are properly engaged before tightening the mounting screws or nuts.

CAUTION

When securing parts in place, be careful not to tighten the mounting screws or nuts excessively.

(4) Apply sealing compound (SM-B-583244-008) to the areas indicated by the note on figure 4-5.

c. Post Replacement Checks. After replacing a past or an assembly, perform the operation checkout procedures given in section II of chapter 2.

NOTE

A quick and efficient method of repairing loose or stripped cabinet frame back panel nuts is to install a floating nut, NSN 5310-00-864-5274, P/N FZ9589-3-1, in its place.

4-17. Removal and Replacement of Control Panel Assemblies A3 and A6

a. Removal. Remove the eight screws (1, fig. 4-5), flat washers (2), and lockwashers (3), and separate control panel assemblies (4 and 5) from reader inclosure (27).

NOTE

At this point, the attaching cables are still clamped to the enclosure. To completely remove the front panel, the cables connecting to power supply PS1 and logic assembly A1 must be removed. This is not necessary for replacement of front panel components, however.

b. Replacement. To replace control panel assemblies (4 and 5, fig. 4-5), reverse the removal procedure in a above.

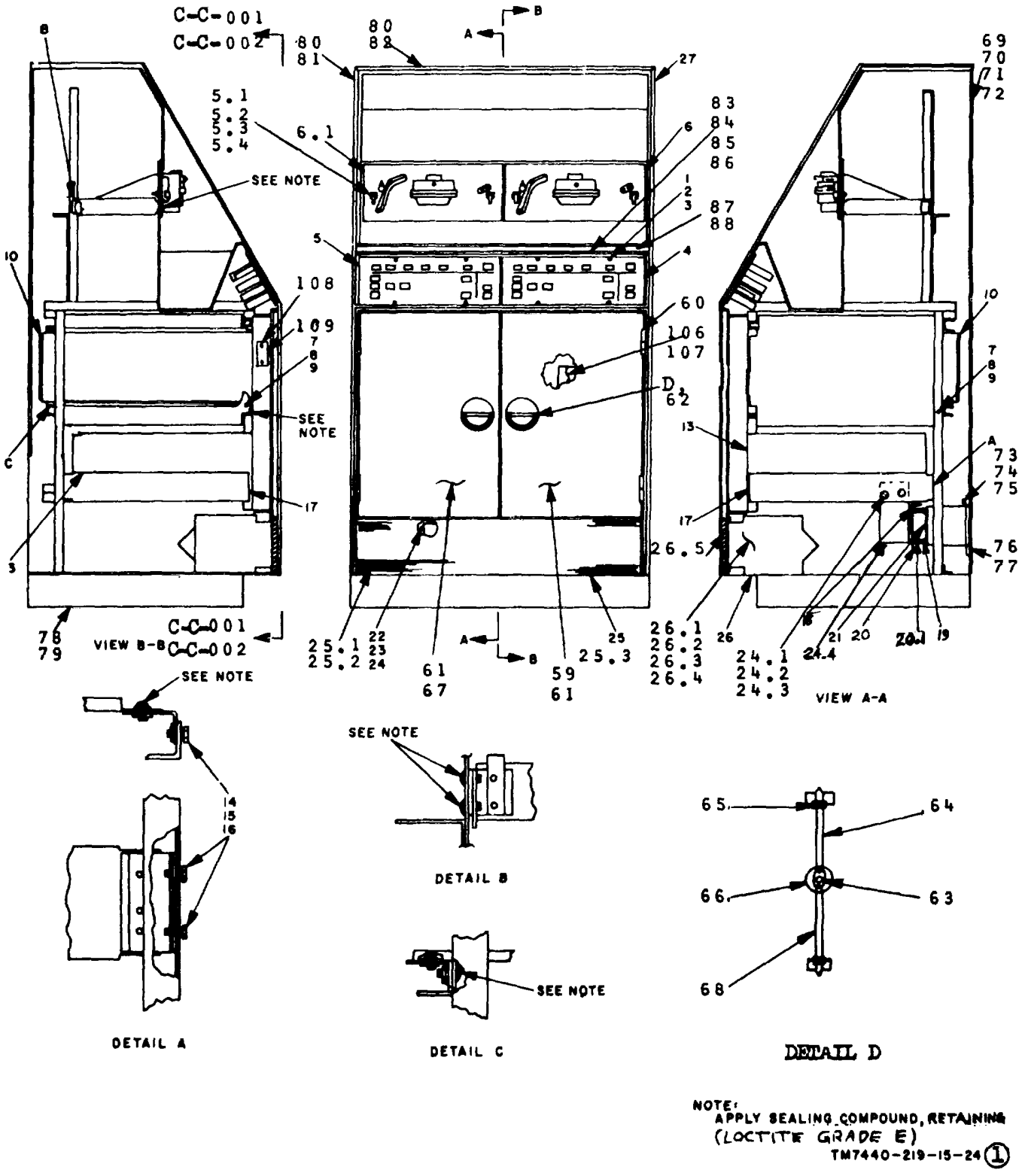


Figure 4-5. Punched tape reader, component location diagram. (Sheet 1 of 4).

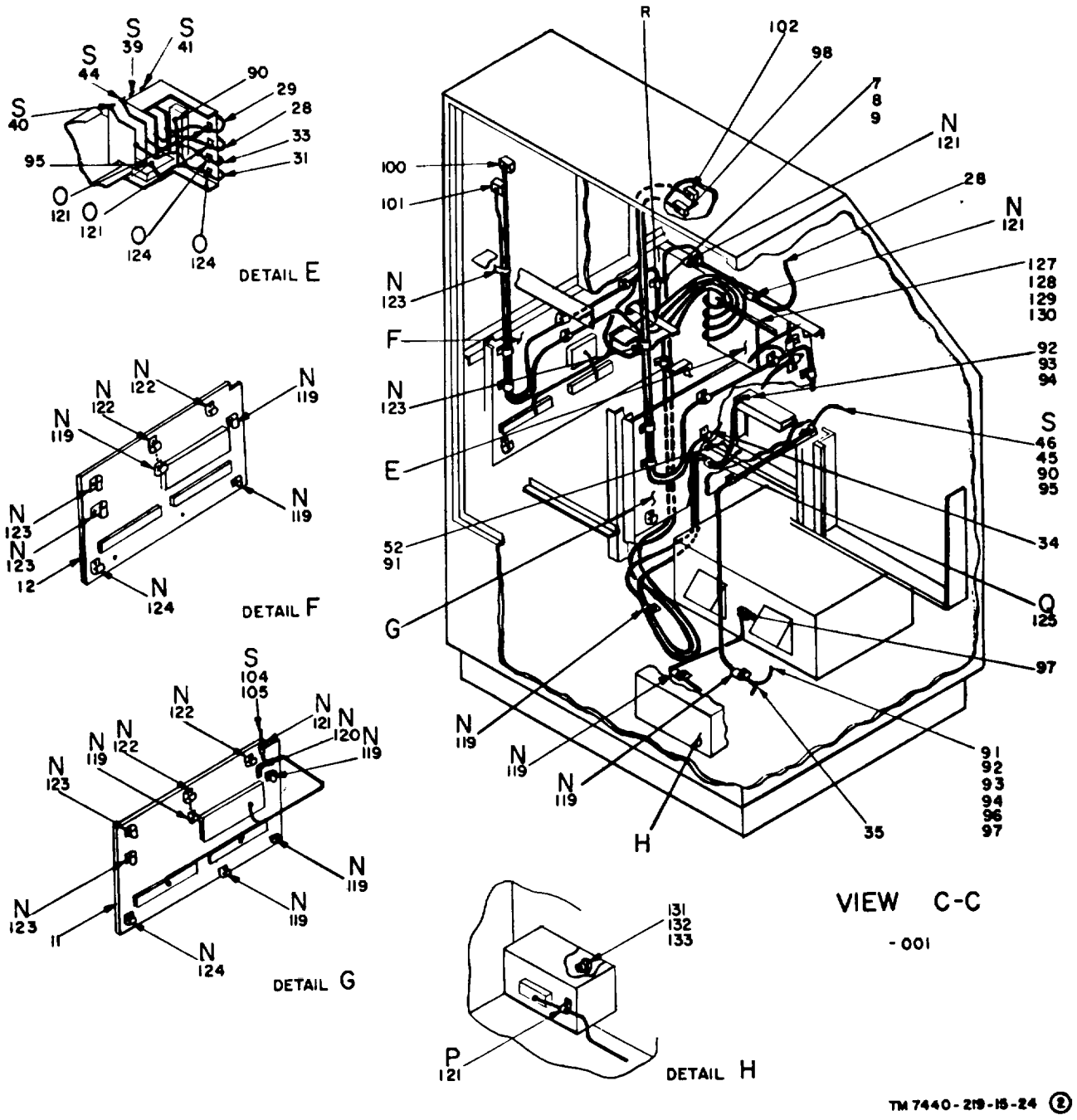


Figure 4-5. Punched tape reader, component location diagram. (Sheet 2 of 4)

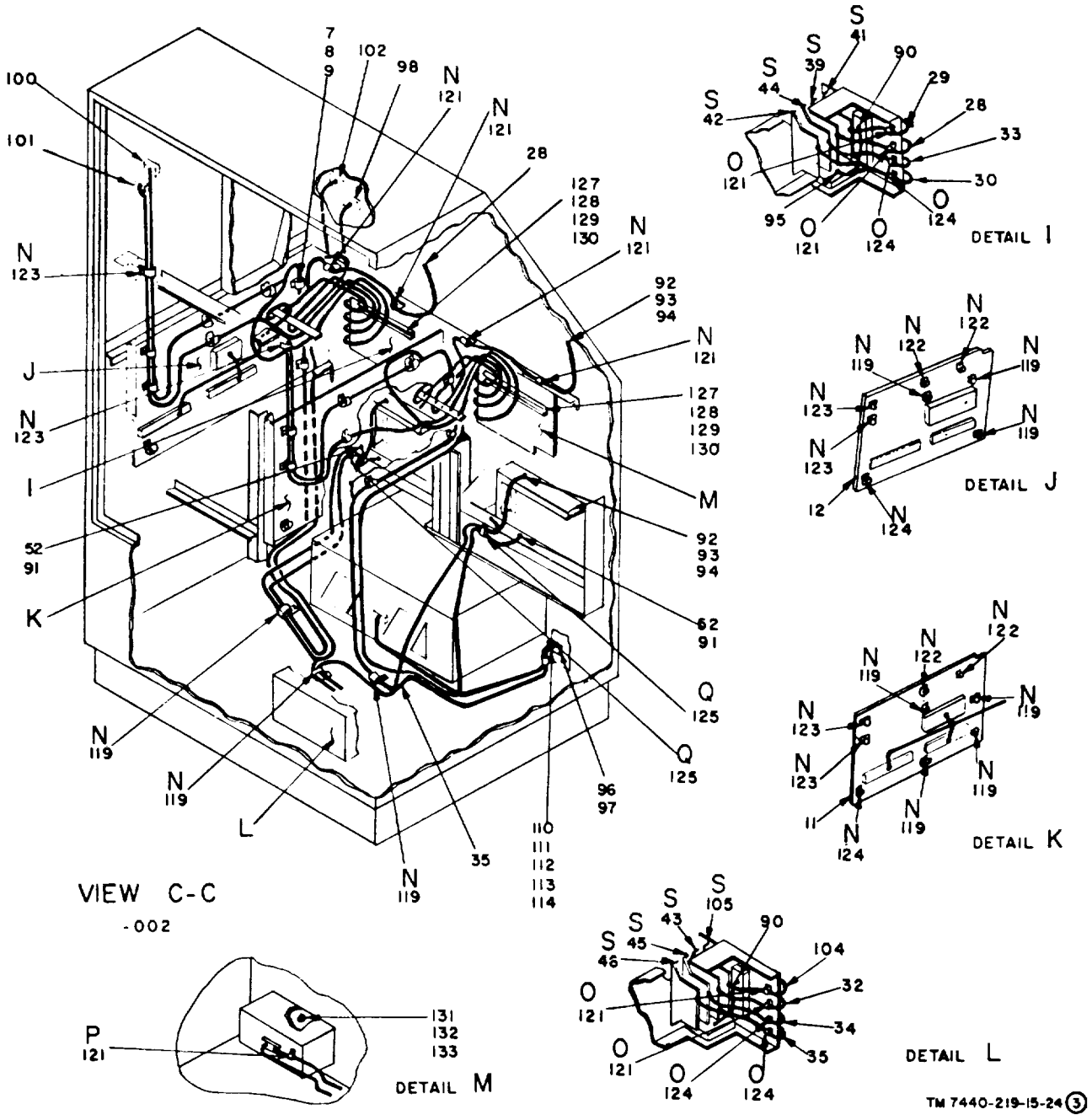
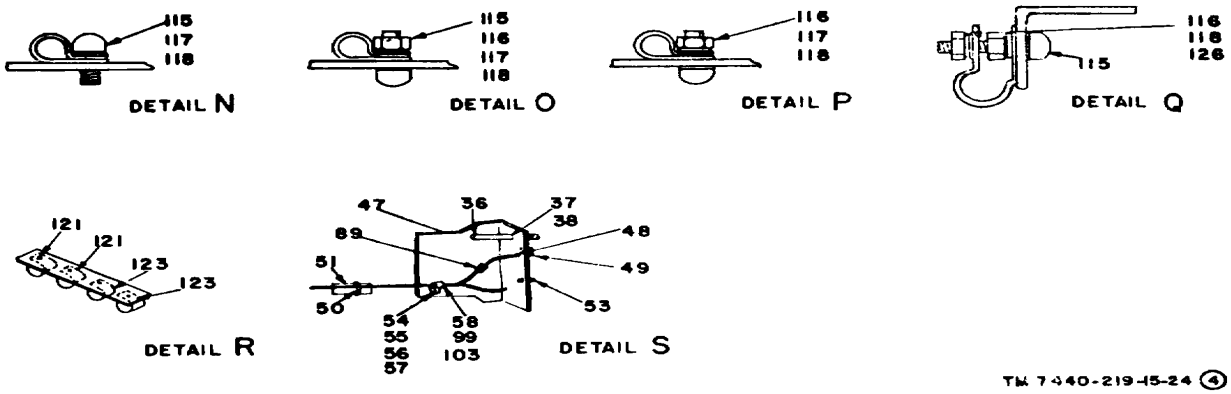


Figure 4-5. Punched tape reader, component location diagram. (Sheet 3 of 4)



1	Screw panhead, No. 8-82, 7/16 in. long	27	Reader enclosure	75	Washer, flat, No. 10
2	Washer, fat, No. 8	28	Control panel (A3) wiring harness	76	Mounting plate
3	Lockwasher, No. 8	29	PTR 1 interface wiring harness	77	Support plate
4	Control panel assembly (As)	30	PTR 1 power wiring harness[b]	78	Screw, sheetmetal, No. 10, 1/2 in. long
5	Control panel assembly (A6)[a] Blank panel[b]	31	PTR power wiring harness	79	Base
5.1	Nut, hex, No. 10-32	32	Control panel (A6) wiring harness	80	Retaining clip
5.2	Screw, panhead, No. 10-32, 8/4 in. long '	33	Cable assembly (W1)	81	Vertical metal trim
5.3	Lockwasher, No. 10[b]	34	Cable assembly (W2)	82	Horizontal metal trim
5.4	Washer, flat, No. 10[b]	35	PTR 2 power wiring harness	83	Screw, flathead, No. 10-32, 3/8 in. long
6	Reader mechanism assembly (A2)	36	Locking screw	84	Nut. hex, No. 10-32
6.1	Reader mechanism assembly (A5)[a] Tape clip panel[b]	37	Washer, flat, No. 6	85	Lockwasher, No. 10
7	Screw, panhead, No. 8-32, 1/2 in. long	38	Lockwasher, No. 6	86	Washer, fiat, No. 10
8	Washer, flat, No. 8	39	Contact assembly P2(A1J2)	87	Metal logo trim
9	Lockwasher, No. 8	40	Contact assembly P3(A1J4)	88	Logo strip
10	**Logic** assembly (A1, A4)	41	Contact assembly P1(A1J1)	89	Solder ferrule
11	Interface plate assembly	42	Contact assembly P3(A1J4)	90	Terminal lug
12	Interface plate assembly	43	Contact assembly P2(A4J2)	91	Terminal lug
13	Power supply (PSI, PS2)	44	Contact assembly W1P1(A1J3)	92	Terminal lug
14	Screw, hex head, No. 10-32	45	Contact assembly W2P1(A4J3)	93	Terminal lug
15	Washer, flat, No. 10	46	Contact assembly P3(A4J4)	94	Terminal lug
16	Lockwasher, No. 10	47	Angle bracket	95	Terminal lug
17	Slide	48	Insulator bushing	96	Terminal lug
18	Screw, panhead, No. 10-32	49	Electrical contact	97	Terminal lug
19	Lockwasher. No 10	50	Cable strap	98	Connector receptacle P4(ASJ2)
20	Shield assembly	51	Cable identification plate	99	Cable clamp.
21	Filter assembly (FL1)	52	Terminal lug	100	Connector receptacle P4(A2J2)
22	Screw, panhead, No. 8-32, 7/16 in.	53	Keying pin	101	Connector -receptacle W1P2 (A2J1)
23	Washer, flat, No. 8	54	Nut, hex, No. 4-40	102	Connector receptacle 2 (A5J1)
24	Lockwasher, No. 8	55	Screw, flathead, No. 4-40, 5/8 in. long	103	Cable clamp
24.1	Screw, panhead, No. 10-32, 1/2 in. long	56	Lockwasher, No. 4	104	PTR 2 interface wiring harness
24.2	Washer, flat, No. 10	57	Washer, flat, No. 4	105	Contact assembly P1(A4J1)
24 3	Lockwasher No. 10	58	Cable clamp	106	Reference plate[b]
24.4	Relay and filter assembly	59	Right hand do-r assembly	107	Reference plate[a]
25	Grill assembly	60	Headless straight pin	108	Drive screw
25.1	Stud	61	Door shell	109	Identification plate
25.2	Nut, self-locking	62	Handle	110	Nut, hex, No. 6-32
25.3	Grill	63	Cam	111	Screw, panhead, No. 6-32, 1/2 in. long
26	Blower (B1)	64	Rod	112	Lockwasher, No. 6
26.1	Capacitor	65	Nylon grommet	113	Washer, flat, No. 6
26 2	Clockwise blower wheel	66	Mylar liner	114	Cable clamp
26.3	Counter-clockwise blower wheel	67	Left hand door assembly	115	Screw, panhead, No. 8-32, 5/8 in. long
26.4	Blower motor	68	Lower left door rod	116	Nut, hex. No. 8-32
26.6	Filter,	69	Screw, panhead, No. 10-32, 1/2 in. long	117	Lockwasher, No. 8
20.1	Standoff	70	Washer, fat, No. 10	118	Washer, flat, No. 8
		71	Lockwasher, No. 10	119	Cable clamp
		72	Rear panel	120	Cable clamp
		73	Nut, hex No. 10-32		
		74	Lockwasher, No. 10		

Figure 4-5(4) Punched tape reader, component location diagram (sheet 4 of 4).

[a]Used on dual punched tape reader unit.
[b]Used on single punched tape reader unit.

121 Cable clamp
122 Cable clamp
123 Cable clamp
124 Cable clamp
125 Cable support clamp
126 Lockwasher, external tooth, No. No. 8
127 Nut, hex, No. 10-32
128 Lockwasher, No. 10
129 Washer, flat, No. 10
130 Cable bar clamp
131 Nut, hex, No. 8-32
132 Lockwasher, No. 8
133 Washer, flat, No. 8

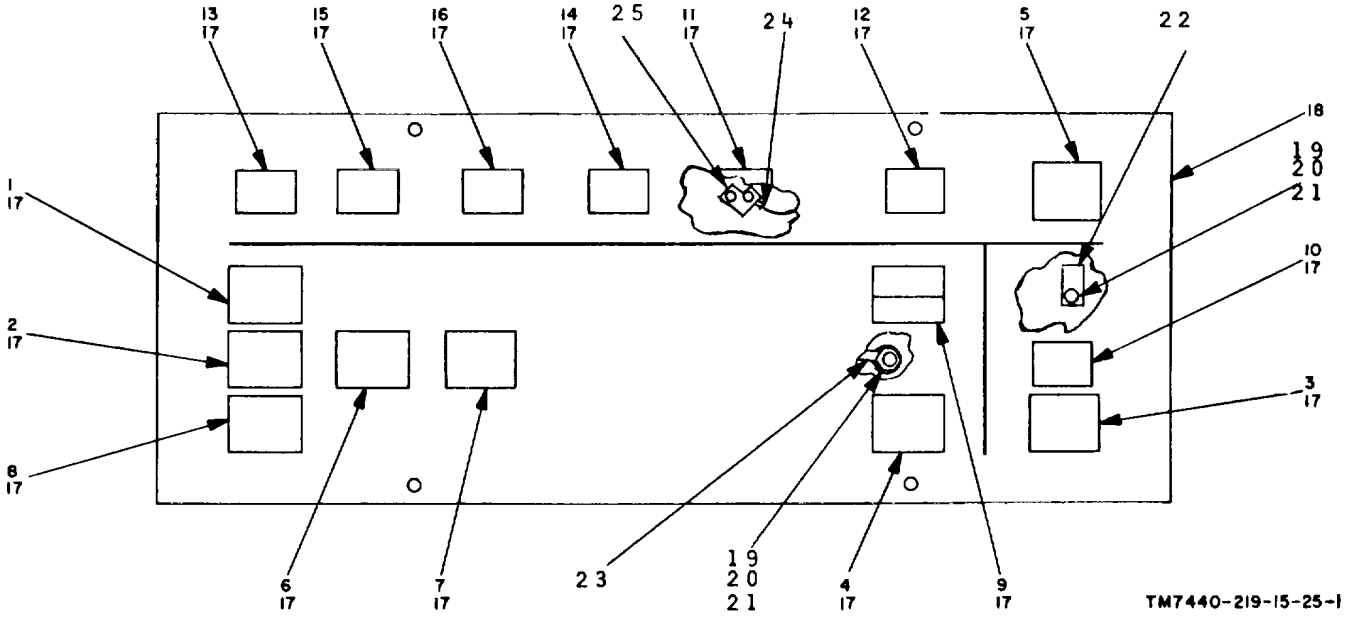
Figure 4-5-Continued.

4-18. Disassembly and Reassembly of Control Panel Assemblies A3 and A6

(fig. 4-6)

a. Disassembly. Disassemble control panel assemblies (4 and 5,fig3.[4-5]) by following the sequence of index numbers' in figure 4-6.

b. Reassembly. To reassemble control panel assemblies (4 and 5,fig. 4-5), reverse the disassembly procedure in a above.



1	Push switch (Z7)	10	Indicator light (DS1)	19	Nut, hex, No. 10-32
2	Push switch (Z8)	11	Indicator light (DS3)	20	Lockwasher, No. 10
3	Push switch (Z2)	12	Indicator light (DS2)	21	Washer, flat, No 10
4	Push switch (Z4)	13	Indicator light (DS7)		
5	Push switch (Z1)	14	Indicator light (DS4)	22	Cable clamp
6	Push switch (Z6)	15	Indicator light (DS6)	23	Terminal lug
7	Push switch (Z5)	16	Indicator light (DS5)	24	Terminal lug
8	Push switch (Z9)	17	Lamp	25	Jumper
9	Push switch (Z3)	18	Control panel		

Figure 4-6. Control panel assembly, component location diagram.

4-19. Removal and Replacement of Reader Mechanism Assemblies A2 and AS

a. Removal. Remove the reader mechanism assemblies (6 and 6.1, fig 4-5) as follows:

(1) Pull the two fastener handles on the mechanism assembly panel so that the handles extend straight out.

(2) Rotate the fastener handles 90° to release the fasteners.

(3) Grasp the handles and pull the assembly out on its slides until the slides lock in place.

(4) Disconnect the two connectors at the rear of the assembly.

(5) Depress the slide stop catches on the left and right slide assemblies.

(6) Remove the assembly from the inclosure.

b. Replacement. To replace the reader mechanism assemblies (6 and 6.1, fig. 4-5), reverse the removal procedure in a above.

4-20. Disassembly and Reassembly of Reader Mechanism Assemblies A2 and A5
(fig. 4-7)

a. Disassembly. Disassemble the reader mechanism assemblies (6 and 6.1, fig. 4-5) by following the sequence of index numbers in figure 4-7.

b. Reassembly. To reassemble the reader mechanism assemblies, reverse the disassembly procedure in a above.

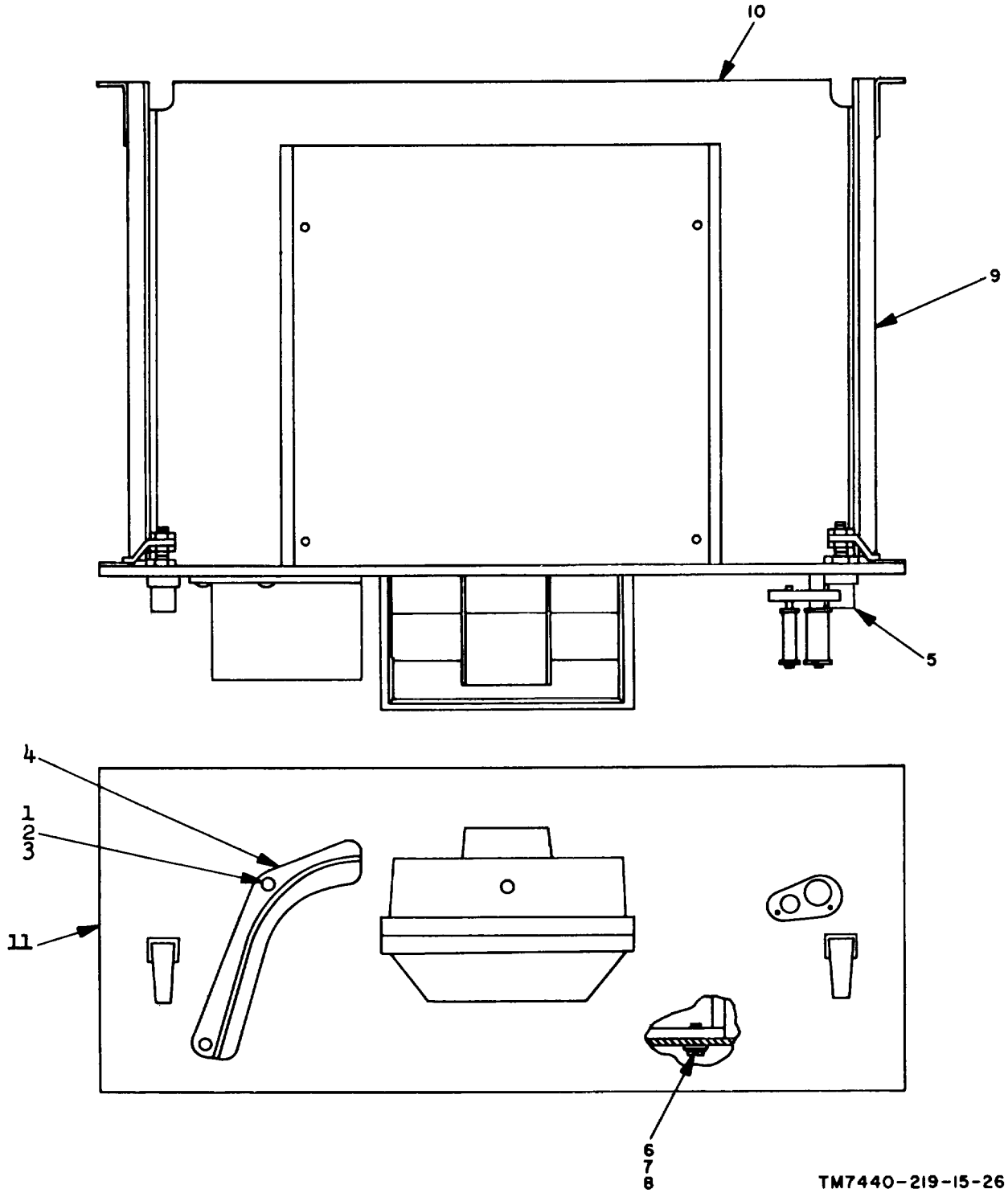


Figure 4-7. Punched tape reader mechanism assembly, component location diagram.

1	Screw, panhead 6-32, 3/8 in. Long	5	Panel fastener handle	9	Slide
2	Lockwasher, No. 6	6	Screw, panhead, 10-32, 5/8 in. long	10	Reader chassis
3	Washer, flat, No. 6	7	Lockwasher, No. 10	11	Reader mechanism assembly (A2)
4	Tape guide	8	Washer, flat, No. 10		

4-21. Removal and Replacement of Logic Assemblies Al and A4

a. Removal. Remove logic assemblies (10, fig. 4-5) as follows:

(1) Open the front doors of the enclosure.

(2) Release the panel fasteners by rotating the knobs until the arrow is vertical.

(3) Slide the logic assembly forward until the slides lock in place.

(4) Remove the four interface connectors which mate with J1 through J4.

(5) Remove the wires attached to the A sides of terminal blocks TB2 and TB3.

(6) Remove the four individual cable clamps located adjacent to TB2.

(7) Remove the bar clamp (2 nuts, washers, and lockwashers) which holds the cables to the rear surface of the logic assembly. All connecting cables are now free from the logic assembly.

(8) Depress the slide stop catches (located midway along each of the top and bottom slide assemblies) and remove the logic assembly from the inclosure.

b. Replacement. To replace logic assemblies (10, fig. 4-5), reverse the removal procedure in *a* above.

4-22. Disassembly and Reassembly of Logic Assemblies A1, A4

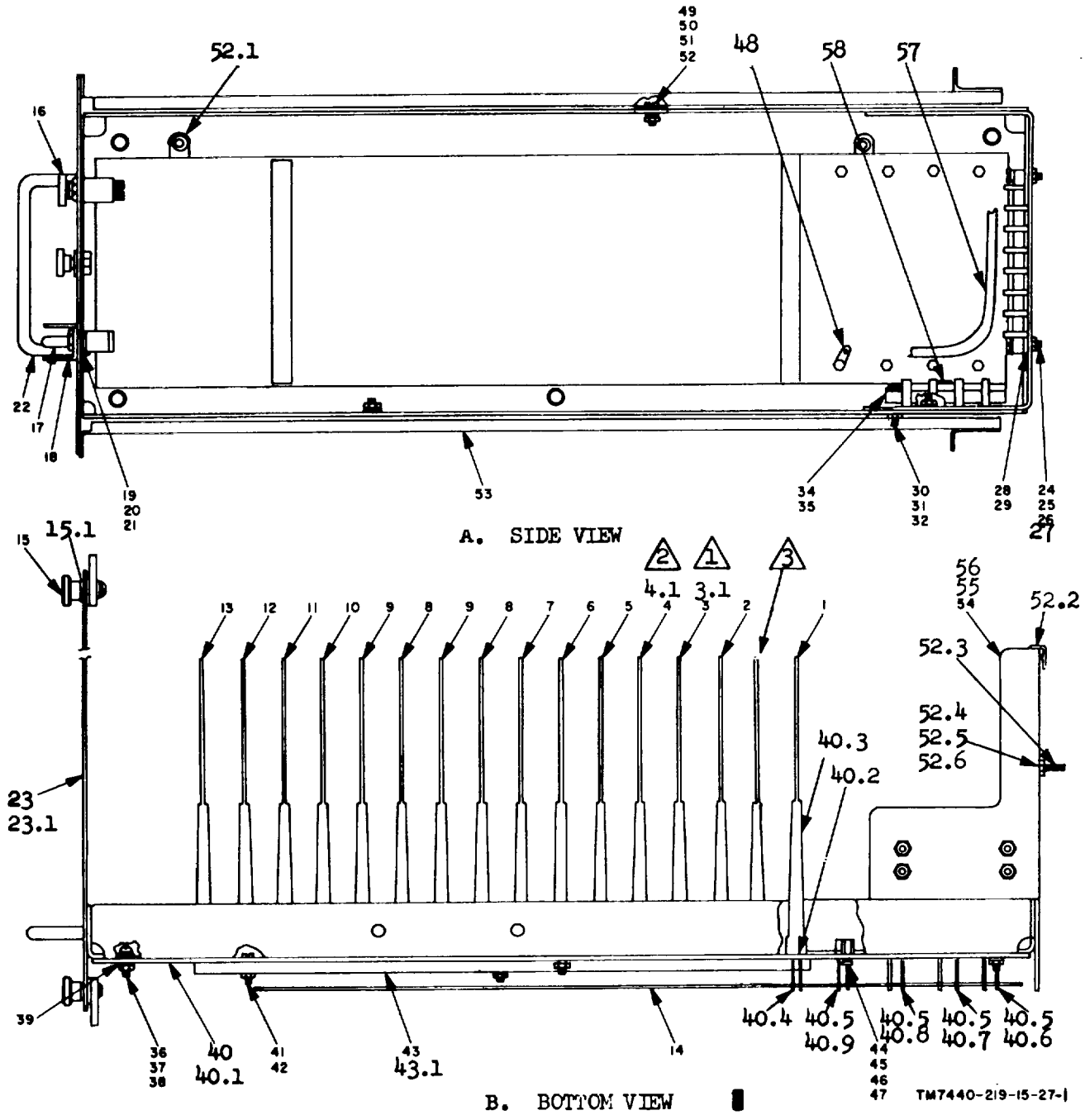
(fig. 4-8)

a. Disassembly. Disassemble logic assemblies (10, fig. 4-5) by following the sequence of index numbers in figure 4-8.

b. Reassembly. To reassemble logic assemblies (10, fig. 4-5), reverse the disassembly procedure in *a* above.

1 PC card Al (No. A65209)
2 PC card A3 (No. SM-E-546659)
3 PC card A4 (No. A65215) (See note 1)
3.1 PC card A4 (No. A65223) See note 1)
4 PC card A5 (No. A65205) (See note 2)
4.1 PC card A5 (No A65227) (See note 2)
5 PC card Afi (No A65421)
6 PC card A7 (No. AF5425)
7 PC card A8 (No. A53418)
8 PC card A9 All (No A53725)
9 PC card A10, A12 (No. A53721)
10 PC card A13 (No. A53434)
11 PC card A14 (No. A65433)
12 PC card A15 (No. A65437)
13 PC card A16 (No. A65429)
14 Pin identification overlay
15 Panel latch
15.1 Washer, flat, No. 12
16 Push switch S1 (RESET)
17 Toggle switch S2 (ASCII-ITA-2 CODE SELECT)
18 Toggle switch guard
19 Screw, panhead, 10-32, 3,'4 in. lg.
20 Lockwasher, No. 10
21 Washer, flat, No. 10
22 Bow handle
23 Front panel
23.1 Panel assembly
24 Screw, panhead, 8-32, 3.'4 in lg.
25 Lockwasher. No. 8
26 Nut, hex., No. 8-32
27 Washer. fiat, No. 8
28 Terminal block (TB2)
29 Marker strip
30 Screw, panhead, 6-32, 7/8 in. lg.
31 Lockwasher. No 6
32 Nut. hex.. No. 6-32
33 Washer. flat, No. 6
34 Terminal block, (TB3)
35 Marker strip
36 Screw, panhead, 10-32, 5/8 in. lg.
37 Lockwasher, No. 10
38 Nut. hex.. No. 10-32
39 Washer, flat, No. 10
40 Contact plate
40 1 Contact plate assembly
40.2 Screw, panhead, 6-32, 5,;16 in. lg.
40.3 PC card insulator
40.4 PC card electrical contact
40 5 Connector insulator
40.6 Contact pin (A1J1, A4J1)
40.7 Contact pin (AIJ2, A4J2)
40.8 Contact pin (A1J3, A4J3)
40 9 Contact pin (A1J4, A4J4)
41 Screw, nylon, 6-32, 1 '2 in. lg.
42 Nut, hex., nylon, 6-32
43 Laminated bus (TBI)
43 1 Insulating strip
44 Screw, panhead, 6-32, 3/8 in lg.
45 Lockwasher, No. 6
46 Washer, flat, No. 6
47 Spacer
48 Terminal lug
49 Screw, panhead, 10-32, 1/'2 in lg.
50 Nut, hex, No 10-32
51 Lockwasher, No. 10
52 Washer, flat, No. 10
52.1 Rubber grommet
52.2 Plastic trim
52.3 Screw, panhead, No. 10-32, ½ in. lg.
52.4 Nut, hex, No 10-32
52 5 Lockwasher, No 10
52 6 Washer, flat, No. 10
53 Slide
54 Chassis
55 Logic chassis assembly
5, Chassis assembly
57 Wiring harness
58 Terminal lug

Figure 4-8-Continued.



NOTES:
1. PC cards A65215 and A65223 are interchangeable in the A4 position.
2. PC cards A65205 and A65227 are interchangeable in the A5 position.
3. PC card A2 and its associated connector are used only in punched tape readers that have been converted to include a Transmission Identification Generator (TIG) assembly.

Figure 4-8. Logic assembly, component location diagram.

4-23. Removal and Replacement of Interface Plate Assemblies

a. Removal. Remove interface plate assemblies (11 and 12, fig. 4-5) as follows:

(1) Remove ac power from the punched tape reader.

(2) Open the front doors of the reader inclosure.

(3) Remove the logic assembly from the reader as described in paragraph 4-21.

(4) Remove the interface cable to the CCU from terminal strips TB1, TB2, and TB3 (or TB4, TB5, and TB6, as the case may be).

(5) Remove the two heavy brown wires from terminals 1 and 2 of TB3 (or TB6).

(6) Remove cable clamps fastening cables to the interface plate.

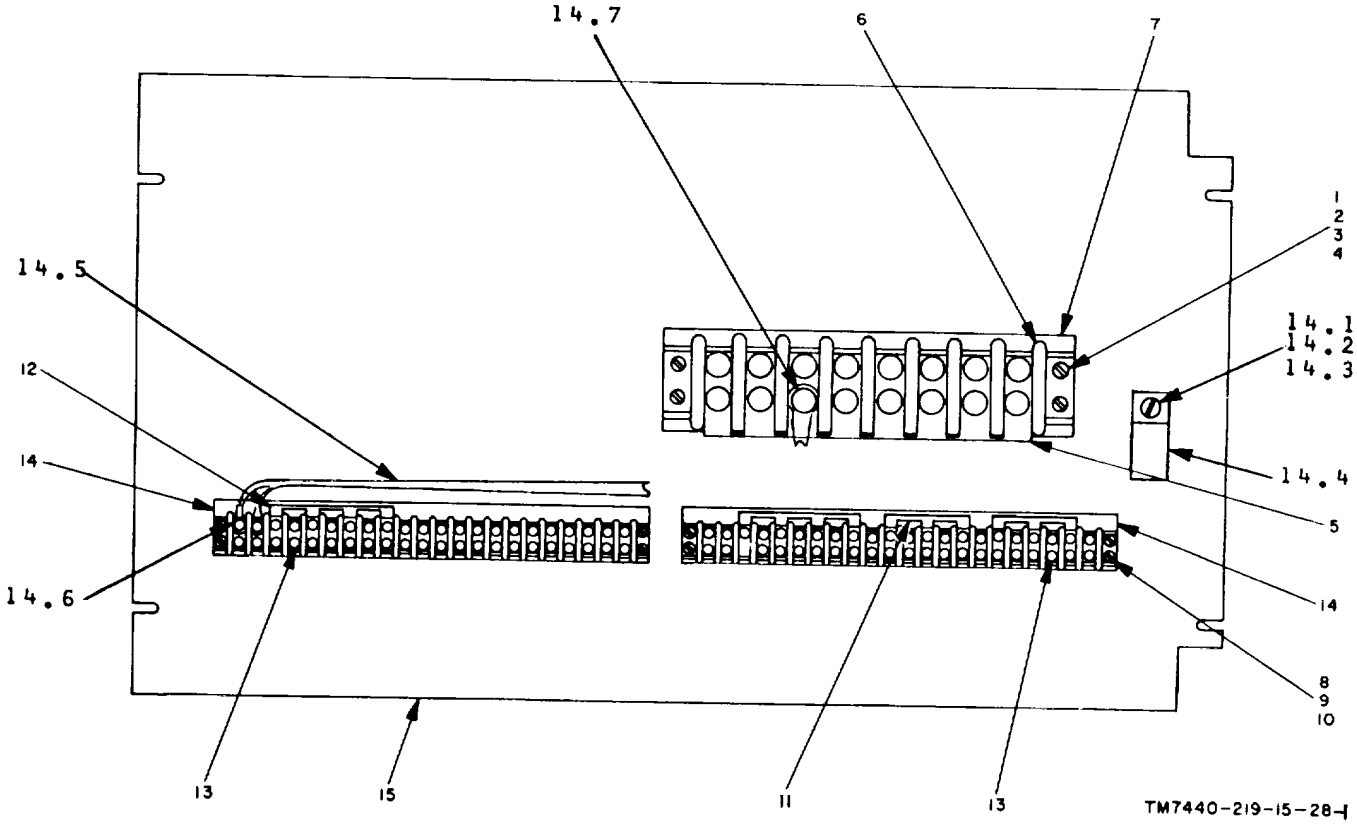
(7) Remove the four screws which fasten the interface plate to the enclosure. (8) Remove the interface plate with hanging cable through the entrance area vacated by the logic assembly.

b. Replacement. To replace the interface plate assemblies (11 and 12, fig. 4-5), reverse the removal procedure in *a* above.

4-24. Disassembly and Reassembly of Interface Assemblies

a. Disassembly. Disassemble interface plate assemblies (11 and 12, fig. 4-5) by following the sequence of index numbers in figure 4-9.

b. Reassembly. To reassemble interface plate assemblies, reverse the disassembly procedure in *a* above.



1 Screw, panhead, 8-32, 1 in. long
2 Nut, hex, No. 8
3 Lockwasher, No. 8
4 Washer, flat, No. 8
5 Jumper plate
6 Terminal block (TB3)
7 Marker strip
8 Screw, panhead, 6-32, 5/8 in. long
9 Nut, hex, No. 6
10 Lockwasher, No. 6
11 Alternate jumper
12 Alternate jumper
13 Terminal block (TB1, TB2)
14 Marker strip
14.1 Screw, panhead, No. 8-32, 5/8 in. long
14.2 Lockwasher, No. 8
14.3 Washer, flat, No. 8
14.4 Cable Clamp
14.5 Solder ferrule
14.6 Terminal lug
14.7 Terminal lug
15 Interface plate

Figure 4-9. Interface plate assembly, component location diagram.

4-25. Removal and Replacement of Power Supplies PS1 and PS2

***Warning*. Two persons are required for removal of the power supplies (13, fig. 4-5) from the reader inclosure (27). Use extreme care in handling the power supplies (13), to avoid injury to personnel or damage to equipment; no good grasping areas are present in the rear of these units.**

a. Removal. Remove the power supplies (13,fig. 4-5) as follows:

(1) Remove ac power from the punched tape reader.

(2) Open the front doors of the inclosure.

(3) Rotate the two fastener knobs until the arrows are vertical.

(4) Use the two handles to pull the power supply out on its slides until the slides lock in. place.

(5) Remove the external cables from terminal boards TB1 and TB2.

(6) Remove the cable clamp at the rear of the power supply.

(7) Depress the slide stop catches on the left and right slide assemblies. Pull the power supply off the slides.

b. Replacement. To replace the power supplies, reverse the removal procedure in a above.

c. Removal of Power Supply PS-1 for Troubleshooting and Repair.

CAUTION

Power unit weighs 70 pounds. This procedure should never be undertaken by less than two persons.

(1) Open the circuit breaker supplying power to the equipment. Even with the unit AC POWER switch in the OFF position, 120 VAC is present at the power supply.

(2) Depress the power supply assembly slide latches and pull the power supply out to the stops on the slide.

(3) Remove the cable clamp on the rear of the power supply which secures the cables connected to the power supply assembly.

(4) Depress the power supply slide latches and pull the power supply forward until it is free of the slide.

(5) Rotate the power supply assembly 1800 in a counter-clockwise direction so the bottom of the chassis is facing up.

(6) Replace the power supply in the slides. Close the power supply far enough to enable the slides to support the assembly. Power can now be applied and the necessary maintenance performed.

(7) To restore the power supply to its operating position, insure the circuit breaker supplying power to the unit is OFF, then reverse the procedures in (1) through (6) above.

NOTE

When reinstalling the power supply to the operating position, always rotate power supply in a clockwise direction back to the upright position to prevent twisting the power cables.

4-26. Disassembly and Reassembly of Power Supplies PSI and PS2

Disassemble the power supply in the order of index numbers in figure 4-10. Assemble the power supply in the reverse order of index numbers.

Caution: When replacing semiconductor components of heat sink subassemblies A4 (fig. 5-18), A5 (fig. 5-19), or A6 (fig. 5-20), clean mating surfaces of semi-conductor and heat sink chassis and apply a light coat of Dow Corning DC340 silicone grease to mating surfaces before mounting the semiconductor.

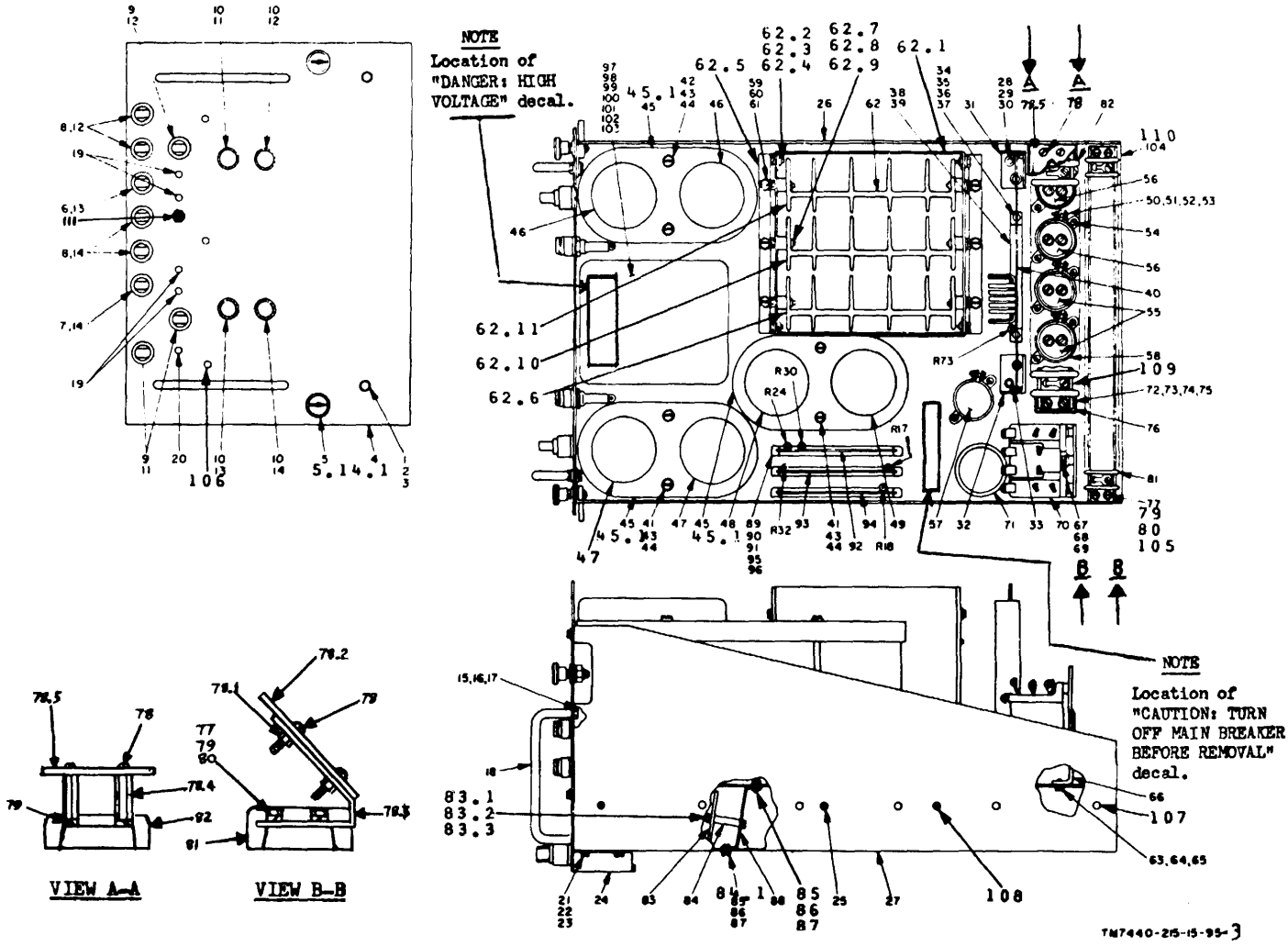


Figure 4-10. Power supply component location diagram.

LEGEND FOR FIGURE 4-10:

1	Screw, hex head, No. 8-32, 3/8 in. long
2	Lockwasher, No. 8
3	Washer, flat, No. 8
4	Front panel assembly (A10)
4.1	Front panel
5	Latch
5.1	Washer, flat, No. 12
6	Fuse holder (XF1)
7	Fuse holder (XF4)
8	Fuse holder (XF2, XF3, XF9, XF10)
9	Fuse holder (XF5, XF7, XF9)
10	Fuse holder (spare)
11	Fuse, 10 amp, slow blow (F5, F8 and spare)
12	Fuse, 3 amp, slow blow (F7, F9, F10 and spare)
13	Fuse, 15 amp, fast blow (F1 and spare)
14	Fuse, 10 amp, fast blow (F2, F3, F4 and spare)
15	Screw, hexhead, No. 10-32, 5/8 in. long
16	Lockwasher, No. 10
17	Washer, flat, No. 10
18	Handle
19	Test point jack (TP2 thru TP5)
20	Test point jack (TP1)
21	Screw, hexhead, No. 6-32, 3/8 in. long
22	Lockwasher, No. 6
23	Washer, flat, No. 6
24	Fuse cover
25	Screw, flathead, No. 6-32, 5/16 in. long
26	Side plate, left hand
27	Side plate, right hand
28	Screw, hexhead, No. 8-32, 3/8 in. long
29	Lockwasher, No. 8
30	Washer, fiat, No. 8
31	Sequence module bracket, left hand
32	Sequence module bracket, right hand
33	Card guide
34	Screw, hexhead, No. 4-40, 1/ in. long
35	Lockwasher, No. 4
36	Washer, flat, No. 4
37	Nut, hex. No. 4-40
38	Polarization key
39	Electrical receptacle connector (A9J4)
40	Sequence module component board assembly (A12)
41	Screw, hexhead, No. 10-32, 4-7/8 in. long
42	Screw, hexhead, No. 10-32, 6- 3/8 in. long
43	Lockwasher, No. 10
44	Washer, fiat, No. 10
45	Capacitor nest
45.1	Insulator
46	Capacitor, 82,000 of, 15 vdc (A9C2, A9C3)
47	Capacitor, 44,000 Of, 25 vdc (A9C4, A9C5)
48	Capacitor, 6700 uf, 100 vdc (A9C6)
49	Capacitor, 1500 of, 75 vdc (A9C1)
50	Screw, hexhead, No. 6-32, 5/8 in. long
51	Washer, flat, No. 6
52	Lockwasher, No. 6
53	Nut, hex, No. 6-32
54	Screw, hexhead, No. 6-32, 3/8 in. long
55	Capacitor, 9200 of, 10 vdc (A9C7, A9C11)
56	Capacitor, 4600 µ 20 vdc (A9C8, A9C9)
57	Capacitor, 1200 µf, 75 vdc (A9C10)
58	Capacitor bracket
59	Screw, hexhead, No. 6-32, 3/8 in. long
60	Lockwasher, No. 6
61	Washer, flat, No. 6
62	Heatsink assembly (All)
62.1	Endplate
62.2	Screw, panhead, No. 6-32, ½ in. long
62.3	Lockwasher, No. 6
62.4	Washer, flat, No. 6
62.5	Side cover
62.6	Heatsink assembly (A4)
62.7	Screw, panhead, No. 6-32, 7/8 in. long
62.8	Lockwasher, No. 6
62.9	Washer, flat, No. 6
62.10	Heatsink assembly (A5)
62.11	Heatsink assembly (A6)
63	Screw, hexhead, No. 8-32, 3/8 in. long
64	Lockwasher, No. 8
65	Washer, flat, No. 8
66	Relay bracket
67	Screw, hexhead, No. 8-32, 3/8 in. long
68	Lockwasher, No. 8
69	Washer, flat, No. 8
70	Relay, 24 vdc (A9K1)
`71	Grommet
72	Screw, hexhead, No. 6-32, 1/ in. long
73	Lockwasher, No. 6
74	Washer, flat, No. 6
75	Terminal board bracket
76	Stiffener
77	Screw, hexhead, No. 6-32, 5/8 in. long
78	Screw, hexhead, No. 6-32, 3/8 in. long
78.1	Hex nut, No. 6-32
78.2	Shield
78.3	Bracket
78.4	Standoff
78.5	Shield assembly
79	Lockwasher, No. 6
80	Washer, flat, No. 6
81	Terminal board (TB1)
82	Terminal board (TB2)
83	Component board assembly (A15)
84	Spacer
83.1	Screw, hexhead, No. 6-32, 5/16 in. long
83.2	Lockwasher, No. 6
83.3	Washer, flat, No. 6
84	Spacer
84.1	Nut, hex, No. 6-32
85	Screw, hexhead, No. 6-32, 3/8 in. long
86	Lockwasher, No. 6
87	Washer, flat, No. 6
88	Connector bracket assembly (A14)
89	Screw, hexhead, No. 4-40, 5/16 in. long
90	Lockwasher, No. 4
91	Washer, flat, No. 4
92	Component board assembly (Al)
93	Component board assembly (A2)
94	Component board assembly (A3)
95	Electrical receptacle connector (A9J1, A9J2, A9J3)
96	Polarization key
97	Nut, hex, No. 10-32
98	Lockwasher, No. 10
99	Washer, flat, No. 10
100	Nut, hex, 1/-20
101	Lockwasher, 1/4
102	Washer, flat, '/
103	Power transformer (A9T1)
104	Chassis
105	Clinch fastener, No. 6-32
106	Clinch fastener, No. 8-32
107	Clinch fastener, No. 10-32
108	Clinch fastener, No. 6-32
109	Eyelet
110	Chassis assembly
111	Drive motor on-off switch (TIG equipped units only)

4-27. Removal and Replacement of Filter Assembly FLI

a. Removal. Remove filter assembly (21, fig. 4-5) as follows:

(1) Remove ac power from the punched tape reader.

(2) Remove the power supply PS2 as described in paragraph 4-25.

(3) Remove the cables attaching to TB2 and E2. (Remove the cable clamp.)

(4) Remove the six nuts and pull out the filter assembly.

(5) Remove the external power cable from TB1.

b. Replacement. To replace the filter assembly, reverse the removal procedure in a above.

4.28. Disassembly and Reassembly of Filter Assembly FLI

a. Disassembly. Disassemble filter assembly (21, fig. 4-5) by following the sequence of index numbers in figure 4-11.

b. Reassembly. To reassemble filter assembly, reverse the disassembly procedure in a above.

4-28.1 . Removal and Replacement of Relay and Filter Assembly

a. Removal. Remove relay bracket assembly (24.4, fig. 4-5) as follows:

(1) Remove ac power from the punched tape reader.

(2) Remove the power supply PS2 as described in paragraph 4-25.

(3) Remove the wire.? attached to relay and filter assembly. (Be careful to note location for ease in replacing.)

(4) Remove the two screws, flat washers, and lockwashers (24.1, 24.2, and 24.2I, fig. 4-5) and pull out the relay assembly.

b. Replacement To replace the Relay and Filter Assembly, reverse the removal procedures in *a* above.

4-28.2 Disassembly and Reassembly of Relay and Filter Assembly

a. Disassembly. Disassemble relay and filter assembly (24.4, fig. 4-5) by following the sequence of index number in figure 4-1--111

b. Reassembly. To reassemble relay and filter assembly, reverse the disassembly procedure in *a* above.

4-28.3 Removal and Replacement of Tape Clip Panel

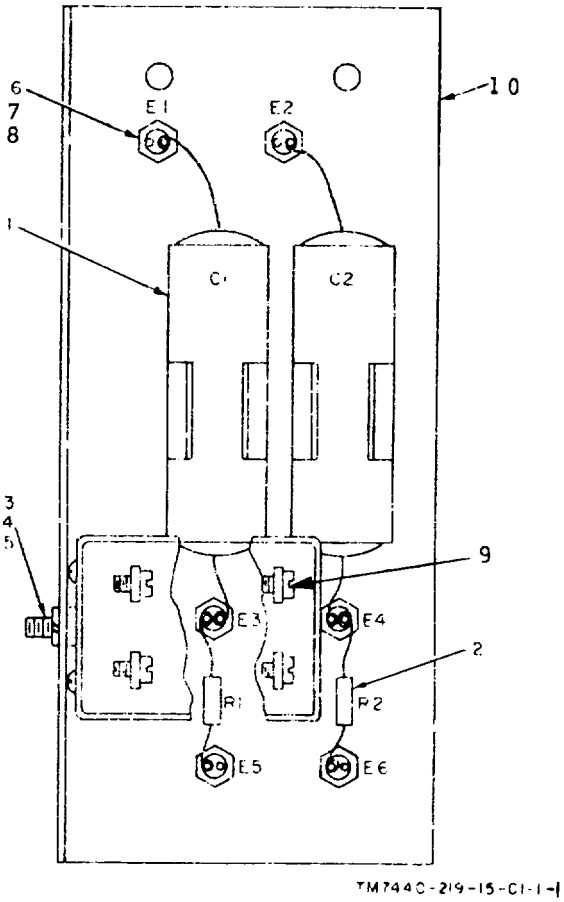
a. Removal. Remove tape clip panel (6.1, fig. 4-5) by removing the eight screws (1, fig. 4-5), flat washers (2), and lockwashers (3), and separate the tape clip panel from the reader inclosure (27).

b. Replacement. To replace tape clip panel, reverse the removal procedure in *a* above.

4-28.4 . Disassembly and Reassembly of Tape Clip Panel

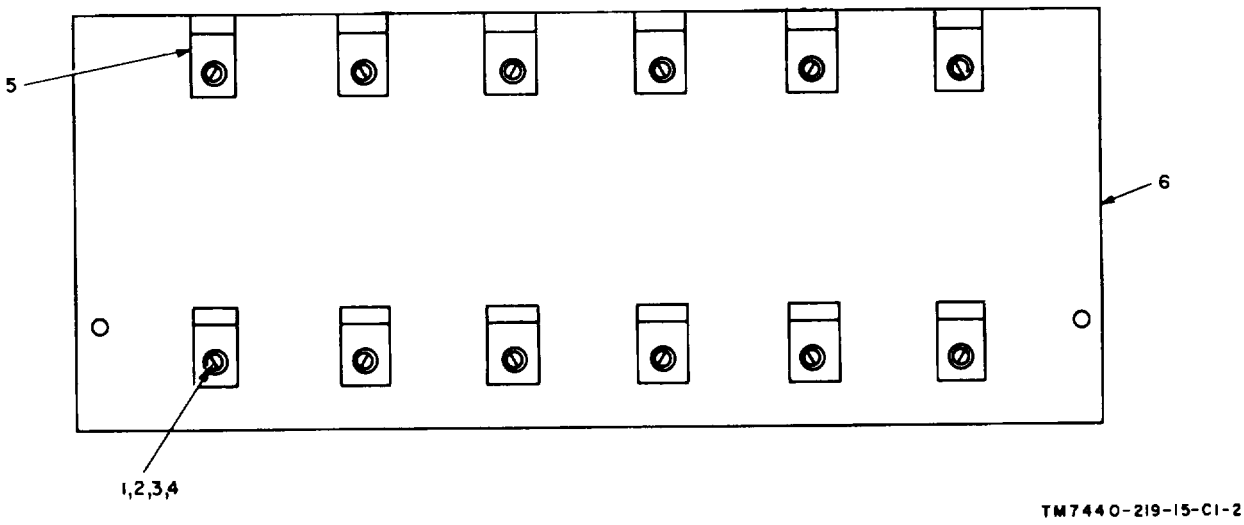
a. Disassembly. Disassemble tape clip panel by following the sequence of index numbers in figure 4-11.2.

b. Reassembly. To reassemble the tape clip panel, reverse the disassembly procedure in *a* above.



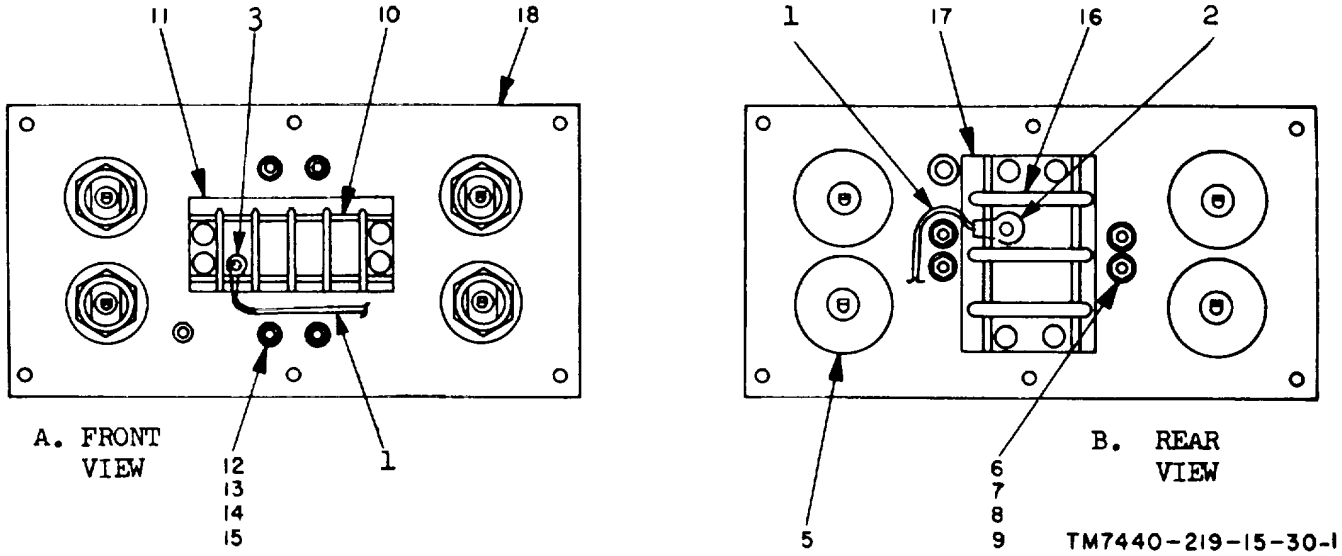
1 Capacitor, 47µf, 600vdc (C1, C2)
2 Resistors, 220 ohms (R1, R2)
3 Nut, Plain Hex, 8-32
4 Lock-washer, No. 8
5 Relay K1
6 Terminal standoff (E1 through E6)
7 Screw, panhead, No. 6-32, ¼ in. long
8 Lockwasher, No. 6
9 Terminal lug
10 Relay and filter assembly chassis

Figure 4-11.1. Relay and filter assembly, component location diagram.



1 Hex nut, No. 4–40
2 Lockwasher, No. 4
3 Washer, No. 4
4 Screw, panhead, No. 4–40, 1/2 in. long
5 Tape clip
6 Panel

Figure 4-11.2. Tape clip panel, component location diagram.



1 Wiring harness
2 Terminal lug
3 Terminal lug
4 Not used
5 Filter (FL1, FL2, FL3, FL4)
6 Screw, panhead, 8-32, 7/8 in. long
7 Nut, hex, No. 8
8 Lockwasher, No. 8
9 Washer, flat, No. 8
10 Terminal block (TB2)
11 Marker strip
12 Screw, panhead, 6-32, 7/8 in. long
13 Nut, hex, No. 6
14 Lockwasher, No. 6
15 Washer, flat, No. 6
16 Terminal block (TB1)
17 Marker strip
18 Filter plate

Figure 4-11. Filter assembly, component location diagram.

Section V. DISASSEMBLY AND REASSEMBLY OF READER MECHANISM A2

4-29. General

Disassembly and reassembly of reader mechanism A2 is effected by removal and replacement of assemblies, subassemblies, and components as described in the following paragraphs. These paragraphs also describe the disassembly and reassembly of assemblies and subassemblies when not in the order of index numbers on exploded views. Use these procedures in conjunction with the trouble-shooting, repair, and adjustment procedures described in paragraphs 4-9 through 415, and 4-45 through 4-62, respectively.

4-30. Removal and Replacement of Roller Support Assembly

a. Removal. Remove roller support (23, fig. 4-12) and the items mounted on it from panel (66) by loosening setscrews (24, 27, and 29) and screw (31).

b. Replacement. Insert roller support shaft (22) in panel (66) and assemble cam (28), tight tape spring (26), spring retainer (25), and stop (32) on the shaft. Position cam (28) so that when the roller support assembly is rotated counterclockwise in the tight tape condition, actuator (39) closes switch (40) when the tension on roller (16) is 105 to 120 grams. See para 4-61 for adjustment procedures.

4-31. Disassembly and Reassembly of Roller Support Assembly

a. Disassembly. Disassemble the roller support assembly in the order of the index numbers 15 through 23 in figure 4-12.

b. Reassembly. Reassemble the roller support assembly in the reverse order of disassembly in *a* above.

→Secure by tightening screw (31) and setscrews (24, 27 and 28). 4-30

4-32. Removal and Replacement of Tape Deck Assembly

a. Removal. Remove tape deck assembly (47, fig. 4-12) from panel (66) as follows:

(1) Remove screw (8) and washers (8.1 and 9) and remove bottom cover (10).

(2) Remove carrier cover assembly (30, fig. 4-13).

(3) Remove screws (36), springs (37), and comb assembly (38).

(4) Remove two screws (46, fig. 4-12). Carefully lift tape deck assembly and disconnect wires from the connector.

b. Replacement. Replace the tape deck assembly in the reverse order of removal in a above.

4-33. Disassembly and Reassembly of Tape Deck Assembly

a. Disassembly. Disconnect leads and disassemble tape deck assembly (47, fig. 4-12) in the order of the index numbers in figure 4-13.

b. Reassembly. Reassemble tape deck assembly in the reverse order of disassembly in a above, except perform the tape motion sensor adjustment described in paragraph 4-60 before installing tape motion sensor (index numbers 14 through 19, fig. 4-13) in tape deck assembly (47, fig. 4-12). Before installing screw (22, fig. 4-13) and setscrew (28), prime the threads with Loctite primer, grade T. Secure screw (22), set screws (28) with Loctite sealant, Grade A.

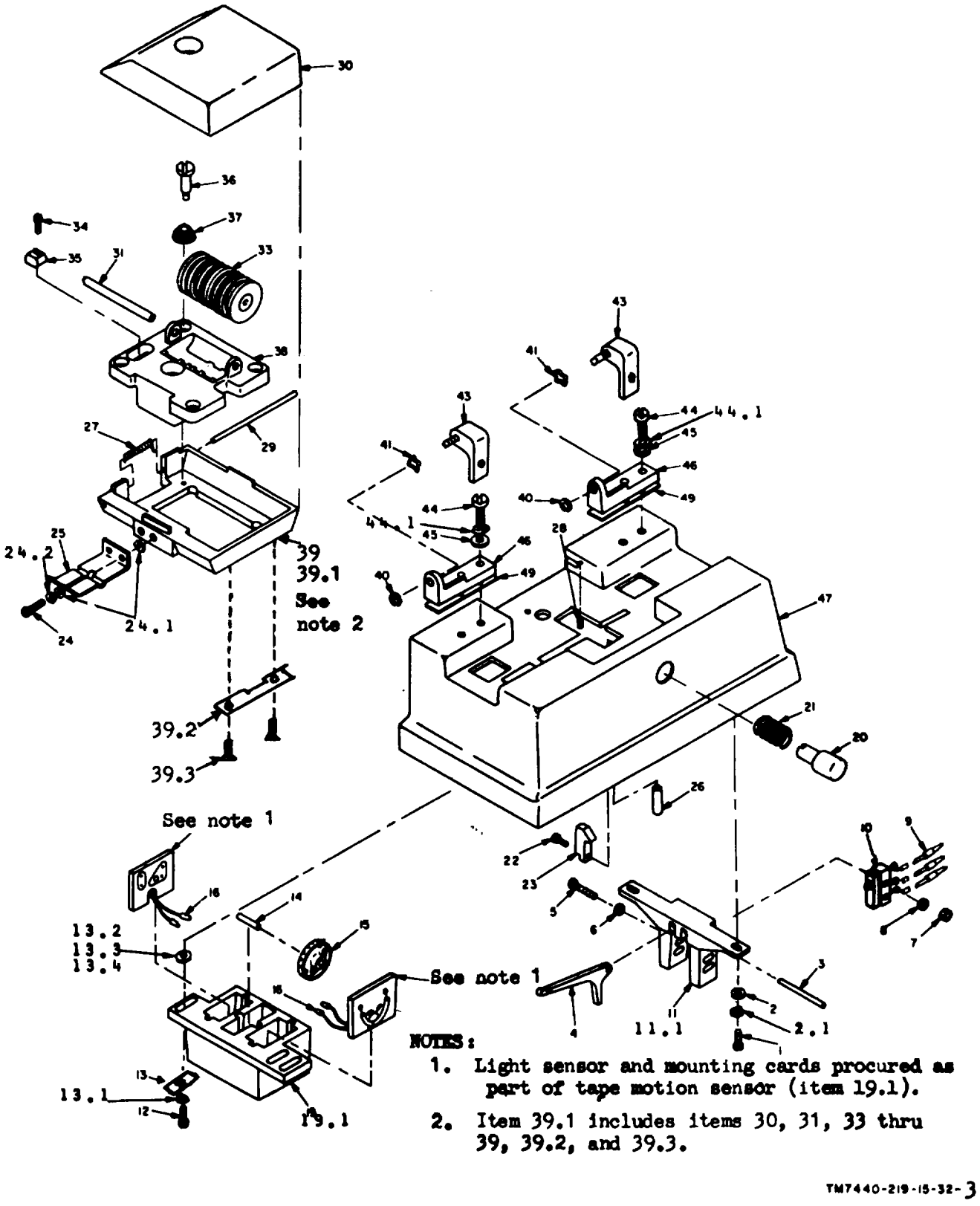


Figure 4-13. Tape deck assembly, exploded view.

1	Screw, panhead, 4-40, A/ in. long
2	Washer, plain, No. 4
2.1	Lockwasher, internal tooth, No. 4
3	Pivot pin
4	Actuator
5	Screw, panhead, 2-56, '/2 in. long
6	Lockwasher, internal tooth, No. 2
7	Nut, hex, 2-56
8	Washer, flat, No. 2
9	Taper pin
10	Switch
11	Bracket
11.1	End of tape assembly
12	Screw, panhead, 4 -40, 5116 in. long
13	Tape motion sensor holdown
13.1	Lockwasher, internal tooth, No. 4
13.2	Shim, .003 in. thick
13.3	Shim, .0)5 in. Thick
13.4	Shim, .010 in. thick
14	Capstan shaft
15	Capstan
16	Taper pin
17	Not used
18	Not used
19	Housing
19.1	Tape motion sensor
20	Button assembly
21	Catch bolt spring
22	Screw, sockethead, 0-80, 3116 in. Long
23	Catch
24	Screw, panhead, 2-56, '/4 in. long
24.1	Washer, flat, No 2
24.2	Lockwasher, internal tooth, No 2
25	Tape motion sensor holddown
26	Dowel pin, 0125 dia x 7116 in lg
27	Holddown spring
28	Setscrew, socket, 4-40, 3/16 in long
29	Carrier shaft
30	Carrier cover assembly
31	Roller shaft
32	Not used
33	Roller
34	Screw, sockethead, 0-80, '.4 in. long
35	Adjusting block
36	Shoulder screw
37	Comb spring
38	Comb
39	Carrier
39.1	Tape holddown assembly
39.2	Insert, latch
39.3	Screw, flat head, 1-72, 3116 in. lg
40	Grip ring
41	Dip spring waslier
42	Not used
43	Tape guide assembly*
44	Screw, panhead, 2-56, 1/4 in. long
44.1	Lockwasher, internal tooth, No 2
45	Washer, plain, No 2
46	Bracket assembly
47	Tape deck
48	Not used
49	Bracket shim, 010 in. thick

**Includes set screws.*

Figure 4-13-Continued

4-34. Removal and Replacement of Read Head and Track Assembly

a. Removal. Remove read head and track assembly (54, fig. 4-12) as follows:

(1) Remove tape deck assembly (47) as described in paragraph 4-32a.

(1.1) Disconnect taper pins from terminal block using pin removal tool No. 380305-1 (NSN 5120-00-772-2467).

(2) Remove two screws (52) and lockwashers (53) and carefully lift read head and track assembly (54) off capstan (51) and away from capstan drive mechanism assembly (64).

(3) Clean the assembly in a bath of Freon TF. Allow the solution to dry, then use a vacuum cleaner to remove any remaining dust particles.

CAUTION

Take care not bend the spring contacts while cleaning.

b. Replacement. Perform adjustment procedures described in paragraphs 4-48, 4-49, and 4-50 before replacing the read head and track assembly. Replace as follows:

(1) Carefully place read head and track assembly (54) over capstan (51) and against capstan drive mechanism assembly (64), and secure by installing two screws (52) and lockwashers (53).

(2) Perform the capstan height measurement as outlined in paragraph 4-13.

(3) Replace wiring by inserting taper pins in terminal blocks (fig. 8-6).

(4) Perform the contact pressure adjustment as outlined in paragraph 4-5).

(5) Replace the tape deck assembly as described in paragraph 4-32b.

(6) Perform the timing adjustment procedures as outlined in paragraph 4-52.

4-35. Disassembly and Reassembly of Read Head and Track Assembly

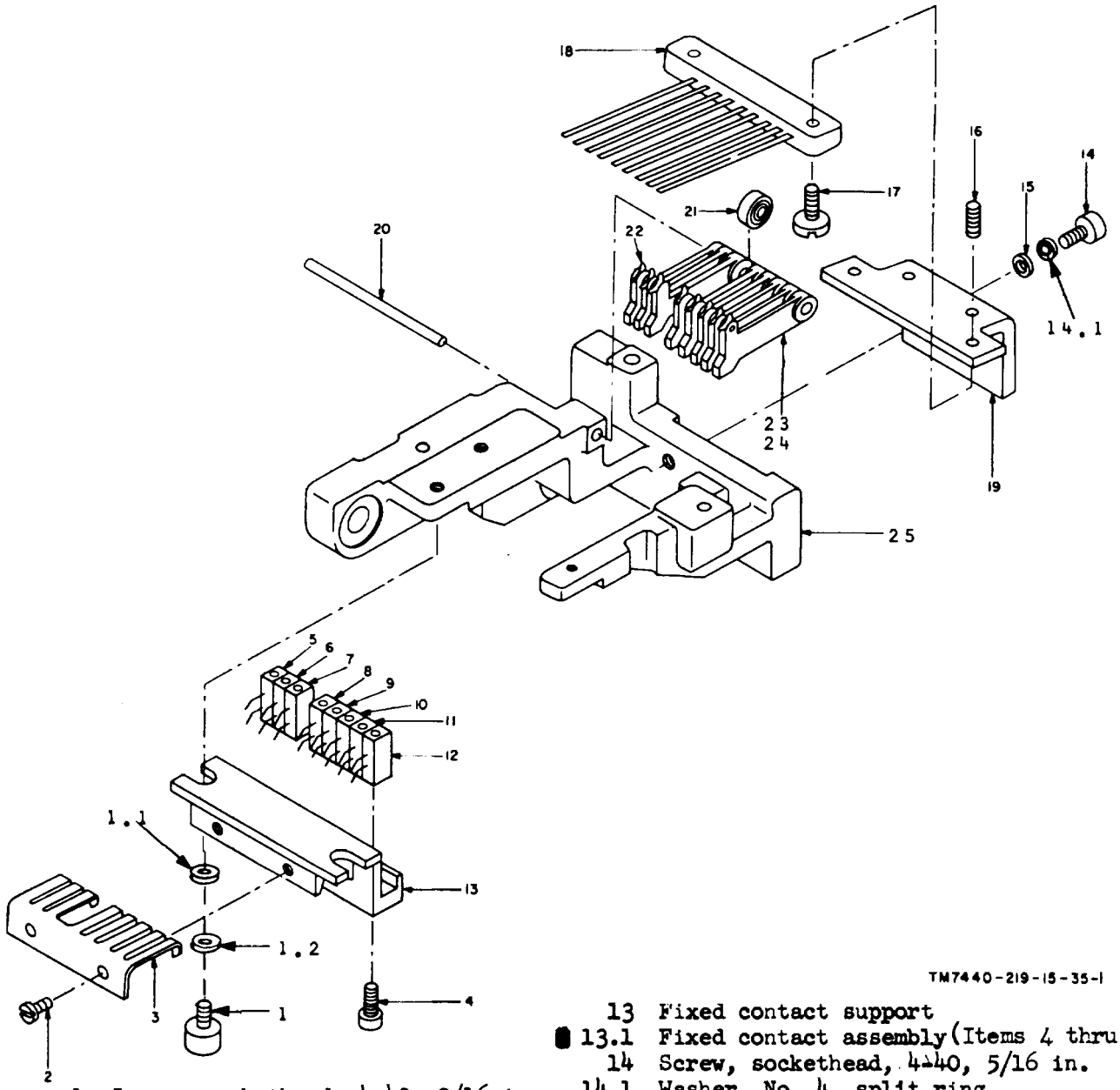
a. Disassembly. Disassemble read head and track assembly (54, fig. 4-12) in the order of the index numbers in figure 4-14.

b. Reassembly. Reassemble read head and track assembly in the reverse order of disassembly in a above. Before installing screws (2, 4, fig. 4-14) prime the threads with primer, sealing compound, NSN 8030-00-145-0001 (Locktite, grade T). Secure screws (2 and 4) with sealing compound, retaining, NSN 8030-00-081-2339 (Locktite, grade A).

CAUTION

When soldering wires to plastic contacts, use an adequate heat sink to prevent heat damage to the plastic contacts.

Perform the adjustments described in paragraphs 4-48, 4-49 and 4-50.



1 Screw, sockethead, 4-40, 3/16 in.
1.1 Washer, flat, No. 4
1.2 Lockwasher, No. 4
2 Screw, panhead, 2-56, 1/8 in. long
3 Sensing contact retainer
4 Screw, sockethead, 0-80, 1/4 in. long
5 Fixed contact assembly
6 Fixed contact assembly
7 Fixed contact assembly
8 Fixed contact assembly
9 Fixed contact assembly
10 Fixed contact assembly
11 Fixed contact assembly
12 Fixed contact assembly
13 Fixed contact support
13.1 Fixed contact assembly (Items 4 thru 13)
14 Screw, sockethead, 4-40, 5/16 in.
14.1 Washer, No. 4, split ring
15 Washer, plain, No. 4
16 Screw, sockethead, 4-40, 1/4 in. long
17 Screw, panhead, 4-40, 1/4 in. long
18 Movable contact base assembly
19 Wire contact bracket
19.1 Movable contact assembly (Items 17,18,19)
20 Pin
21 Bushing
22 Starwheel
23 Starwheel lever
24 Starwheel assembly
25 Read head and track support

Figure 4-14. Read head and track assembly, exploded view.

4-36. Removal and Replacement of Amplifier Assembly

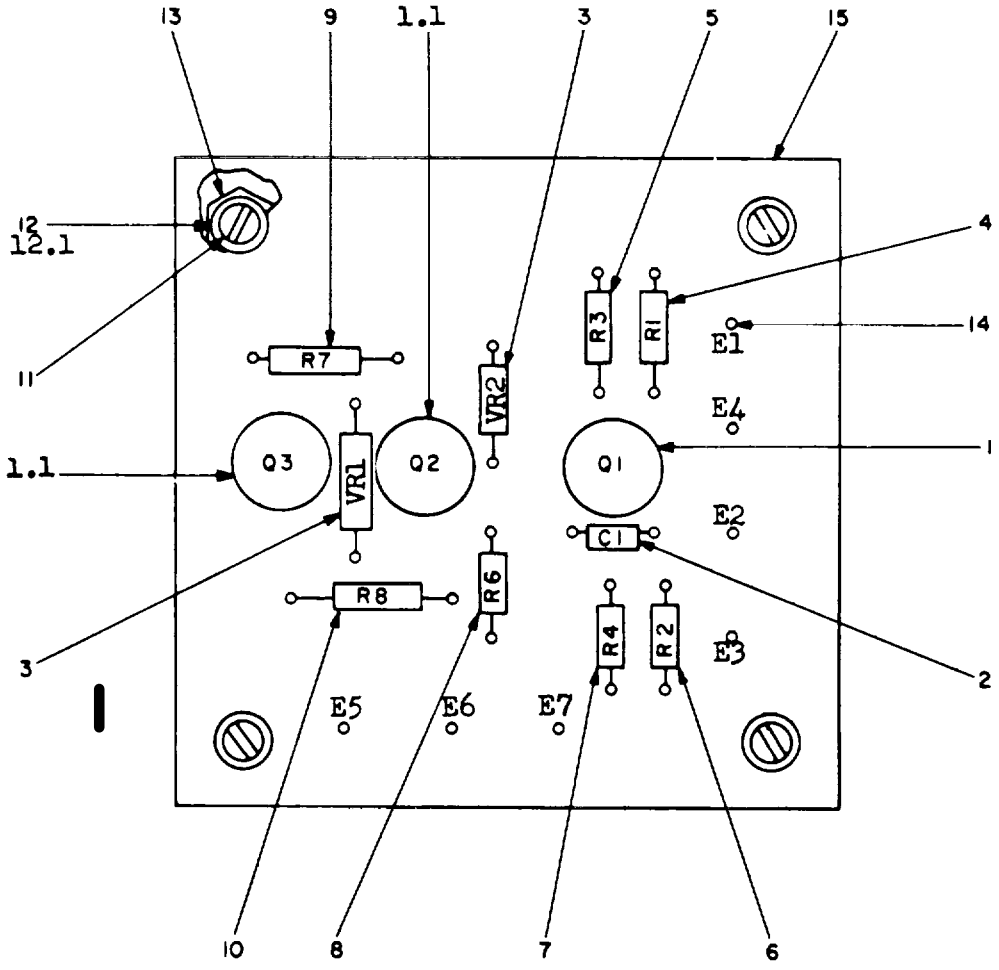
a. Removal. Remove amplifier assembly (61, fig 4-12) by disconnecting the leads and removing four screws (60).

b. Replacement. Replace the amplifier assembly by placing it against chassis gusset (110), installing four screws (60), and connecting the leads as shown in figure 8-6.

4-37. Disassembly and Reassembly of Amplifier Assembly

a. Disassembly. Disconnect leads and disassemble amplifier assembly (61, fig. 4-1) in the order of the index numbers in figure 4-15.

b. Reassembly. Reassemble the amplifier assembly in the reverse order of disassembly in a above.



1.1 Transistor (Q2 and Q3, 2N697)
2 Transistor (Q1, 2N3565)
2 Capacitor, 470 μμf (C1)
3 Diode, zener, 4.7 volts (VR1 and VR2)
4 Resistor, 20K ±5%, 1/4 watt (R1)
5 Resistor, 6.8K ±10%, 1/4 watt (R3)
6 Resistor, 100K ±10%, 1/4 watt (R2)
7 Resistor, 100 ohms ±10%, 1/4 watt (R4)
8 Resistor, 4.7K ±10%, 1/2 watt (R6)
9 Resistor, 330 ohms ±10%, 1/2 watt
10 Resistor, 1K ±10%, 1/2 watt (R8)
11 Screw, panhead, 6-32, 1/4 in. long
12 Washer, plain, No. 6
12.1 Lockwasher, internal tooth, No. 6
13 Standoff
14 Terminal lug
15 Etched circuit board

Figure 4-15. Amplifier assembly, A2, part location diagram.

4-38. Removal and Replacement of Capstan Drive Mechanism Assembly

a. Removal. Remove capstan drive mechanism assembly (64, fig. 4-12) as follows.

(1) Remove screw (3) and lockwasher (4) and lift capstan drive guard (5) off capstan drive mechanism assembly (64).

(2) Remove two screws (6) and lift off fan guard (7).

(3) Slide drive belt (48). off 14-tooth pulley (50).

(4) Loosen setscrew (49) and slide 14-tooth pulley (50) off shaft and gear assembly (38, fig. 4-16).

(5) Remove tape deck assembly (47, fig. 4-12) as described in paragraph 4-32a.

(6) Remove read head and track assembly (54) as described in paragraph 4-34a.

(7) Slide capstan (51) off capstan shaft (31, fig. 4-16).

(8) Disconnect the leads.

(8.1) Loosen setscrew (56, fig. 4-12), remove slew lever (58), and push out slew cam (55). Pull out push rod (94) far enough to clear capstan drive assembly (64).

(9) Remove four screws (62, fig. 4-12) and lockwashers (63) and carefully lift capstan drive mechanism assembly (64) back out of panel (66).

b. Replacement. Replace capstan drive mechanism assembly as follows:

(1) Carefully place capstan drive mechanism assembly (64) in position against panel (66) and secure by installing screws (62) and lockwashers (63).

(2) Connect leads.

(3) Slide capstan (51) on capstan shaft (31, fig. 4-16).

(4) Replace read head and track assembly (54, fig. 4-12) as described in paragraph 4-34b.

(5) Replace tape deck assembly (47) as described in paragraph 4-32b.

(6) Slide 14-tooth pulley (50) on shaft and gear assembly (38, fig. 4-16), align with pulley on drive motor (68, fig. 4-12), and secure by tightening setscrew (49).

(7) Slide drive belt (48) on 14-tooth pulley (50).

(8) Place fan guard (7) in position and secure by installing two screws (6).

(9) Place capstan drive guard (5) in position and secure by installing screw (3) and lockwasher (4).

(10) Replace push rod (94), slew cam (55), slew lever (58), and tighten setscrew (56). Then perform the slew lever adjustment procedure as outlined in paragraph 4-60.1.

(11) Perform timing adjustment as described in paragraph 4-52.

4-39. Disassembly and Reassembly of Capstan Drive Mechanism Assembly

a. Disassembly. Disassemble capstan drive mechanism assembly (64, fig. 4-12) in the order of the index numbers in figure 4-16.

b. Reassembly. Reassemble capstan drive mechanism assembly in the reverse order of disassembly in a above, except as follows:

(1) When assembling wheel and gear assembly (17, fig. 4-16), differential spider bevel gear (22), differential spider assembly (23), capstan shaft (31), shaft and gear assembly (38), and associated parts, install the proper thickness of shims (18, 21, and 37) necessary to meet the end play requirements specified in paragraphs 4-53 through 4-56.

(2) After assembling the magnetic actuator assembly (index numbers 41 through 51), but before attaching the assembly to adjusting plate assembly (56), perform the adjustment procedures described in paragraphs 4-57 and 4-58.

(3) When attaching bracket (50, fig. 4-16) to frame (51), assure that the shoulder of bracket (50) is flush with the top edge of frame assembly (51) to within .001 inch. After attaching the magnetic actuator assembly to the adjusting plate assembly (56, fig. 4-16) with screws (39), attach adjusting plate assembly to frame (61). Torque the adjusting plate lock screw (53) to 17 to 21 inch pounds, Perform the adjustment procedure described in paragraph 4-59. Apply glyptol to screw head (52, fig. 4-16) and to setscrew (52).

(4) Before replacing bushings (57 through 60, fig. 4-16), prime them with Loctite, Grade T sealing compound. Insure a press fit by applying Loctite, Grade A sealing compound between each bushing and frame (61).

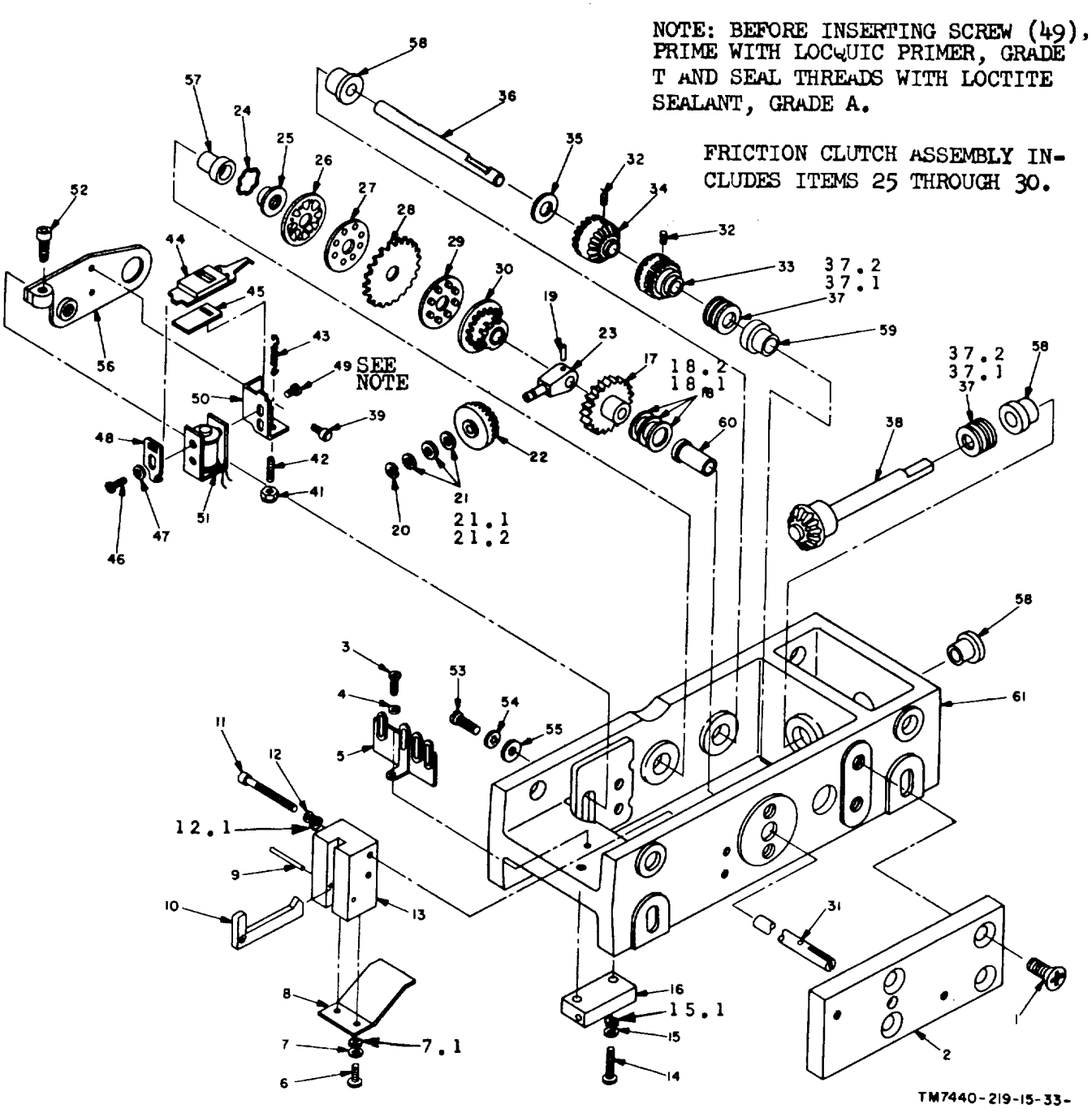


Figure 4-16. Capstan drive mechanism assembly, exploded view.

1 Screw, flathead, No. 8-32, 1/2 in. long
2 Adapter plate
3 Screw, pinhead, No. 4-40, 1/4 in. long
4 Lockwasher, internal tooth, No. 4
5 Terminal strip
6 Screw, panhead, No. 4-40, 1/4 in. long
7 Lockwasher, internal tooth, No. 4
7.1 Washer, flat, No. 4
8 Tape slewing spring
9 Pivot pin
10 Latch assembly
11 Screw, sockethead, No. 4-40, 1 in. long
12 Lockwasher, internal tooth, No. 4
12.1 Washer, flat, No. 4
13 Latch pivot block
14 Screw, sockethead, No. 8-32, 1/2 in. long
15 Lockwasher, internal tooth, No. 8
15.1 Washer, flat, No. 8
16 Rod mounting block
17 Wheel and gear assembly
18 Shim, .003 in. thick
18.1 Shim, .005 in. thick
18.2 Shim, .010 in. thick
19 Roll p;h
20 Retaining ring
21 Shim, .003 in. thick
21.1 Shim, .005 in. thick
21.2 Shim, .010 in. thick
22 Differential spider drive gear
23 Differential spider capstan
23.1 Spider gear assembly
24 Wave washer
25 Screw cap'
26 Spring washer'
27 Friction washer'
28 Clutch drive gear'
29 Friction washer '
30 Hub friction clutch assembly'
31 Capstan shaft
32 Setscrew, socket, No. 4-40, 3/16 in. long
33 Cluster gear assembly
34 Cluster gear assembly
35 Thrust washer
36 Idler shaft
37 Shim, .003 in. thick
37.1 Shim, .005 in. thick
37.2 Shim, .010 in. thick
38 Shaft and gear assembly
39 Screw, sockethead, No. 4-40, 1/8 in. long
40 Not used
41 Stop nut, No. 6-32
42 Spring tension adjust screw
43 Actuator spring
44 Armature assembly
45 Antiresidual shim
46 Screw, panhead, No. 4-48, 1/8 in. long
47 Washer, split ring, No. 4
48 Escapement limit
49 Screw, panhead, No. 4-48, 1/8 in. long
50 Actuator bracket
51 Coil and frame assembly
51.1 Actuator assembly
52 Setscrew, sockethead, No. 6-32, 1/2 in. long
53 Screw, sockethead, No. 6-32, 1/2 in. long
54 Lockwasher, internal tooth, No. 6
55 Washer, flat, No. 6
56 Adjusting plate assembly
57 Bushing
58 Bushing
59 Bushing
60 Bushing
61 Frame

Figure 4-16-Continued.

*Friction clutch drive assembly FSN 7440487-8469 includes items 25 through 30.

4-40. Removal and Replacement of Motor

a. Removal. Remove motor (75, fig. 4-12) as follows:

(1) Remove screw (3) and lockwasher (4), and lift capstan drive guard (5) off capstan drive mechanism assembly (64).

(2) Remove screw (6) and lift off fan guard (7).

(3) Slide drive belt (48) off 10-tooth pulley (68).

(4) Loosen setscrew (67) and slide 10-tooth pulley (68) off the motor shaft.

NOTE

Motor pulley is 12 tooth for 50 cps power and 10 tooth for 60 cps power.

(5) Loosen setscrew (69) and slide fan (70) off the motor shaft.

(6) Disconnect terminals (71).

(7) Remove two screws (72), lockwashers (73), and flat washers (74) and carefully lift motor (75) off base chassis assembly (111).

b. Replacement. Replace the motor as follows.

(1) Carefully place motor (75) in position on base chassis assembly (111) and loosely secure by installing two screws (72), lockwashers (73), and flat washers (74).

(2) Connect terminals (71).

(3) Slide fan (70) on the motor shaft and secure by tightening setscrew (69).

(4) Slide 10-tooth pulley (68) on the motor shaft and secure by tightening setscrew (67).

(5) Slide drive belt (48) on 10-tooth pulley (68). Adjust belt tension and tighten motor mounting screws as described in paragraph 4-53.1.

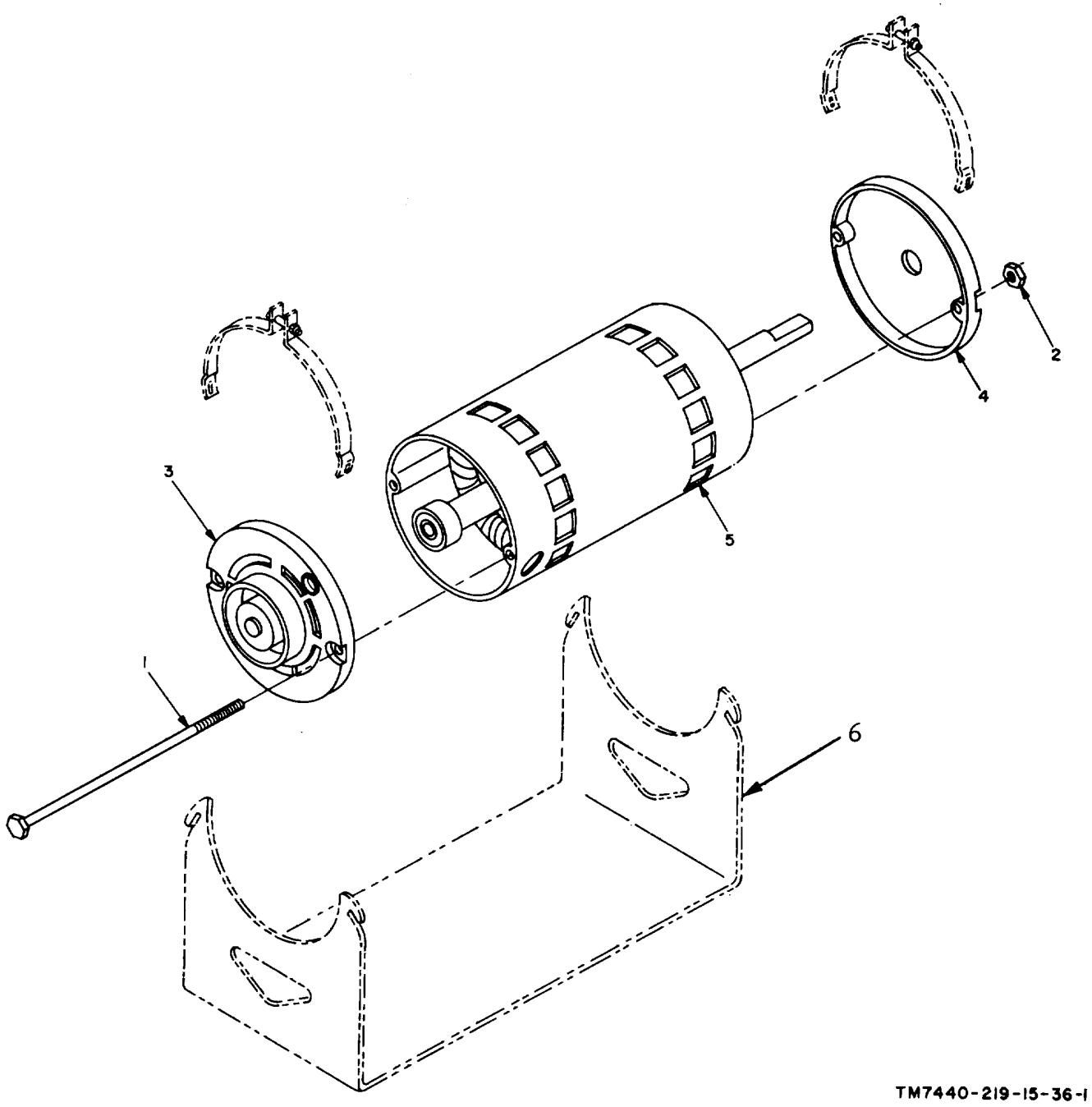
(6) Place the fan guard (7) into position and secure it in place with two screws (6).

(7) Place capstan drive guard (5) in position and secure by installing screw (3) and lockwasher (4).

4-41. Disassembly and Reassembly of Motor

a. Disassembly. Disassemble motor (75, fig. 4 12) in the order of the index numbers in figure 4-17.

b. Reassembly. Reassemble the motor in the reverse order of disassembly in a above.



1 Screw
2 Nut
3 Front end housing
4 Rear end housing
5 Main housing
6 Motor base

Figure 4-17. Motor, exploded view.

4-42. Removal and Replacement of Wiring Harness Assembly

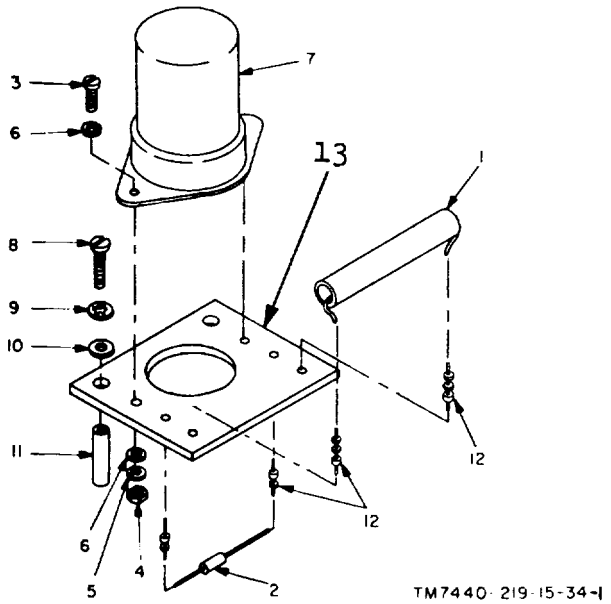
a. Removal. Remove network assembly (89, fig. 4-12), bracket (92), and the items mounted on them from base chassis assembly (111) by removing two screws (76), two plain washers (77), two plastic clamps (78), three screws (79), three lockwashers (80), lockwasher (81), two screws (82), two screws (83), two nuts (84), two lockwashers (85), and two plain washers (86). Disconnect all leads and lift wiring harness assembly (index numbers 87 through 93) off base chassis assembly (111).

b. Replacement. Replace wiring harness assembly (index numbers 87 through 93, fig. 4-12) by placing it in position on base chassis assembly (111), connecting all leads as shown in figure 8-6, and installing all attaching hardware removed in a above.

4-43. Disassembly and Reassembly of Wiring Harness Assembly

a. Disassembly. Disassemble the wiring harmless assembly in order of the index numbers 87 through 93 in figure 4-12. Disassemble the network assembly (89) in the order of the index numbers in figure 4-18.

b. Reassembly. Reassemble wiring harness assembly (index numbers 87 through 93, fig. 4-12) in the reverse order of disassembly in a above.



1 Resistor, 75 ohms, 1 watt (R1)
2 Diode (CR1)
3 Screw, panhead, 4-40, 3/8 in. long
4 Nut, hex 4-40
5 Lockwasher, internal tooth, No. 4
6 Washer, plain, No. 4
7 Capacitor, dual, 100 uf, 50 volts (C1)
8 Screw, panhead, 6-32, 3/8 in. long
9 Lockwasher, internal tooth, No. 6
10 Washer, plain, No. 6
11 Standoff
12 Standoff terminal
13 Component mounting board

Figure 4-18. Network assembly A1, exploded view.

Section VI. REPAIRS AND ADJUSTMENTS

4-44. General

The following paragraphs describe the mechanical repairs and electrical and mechanical adjustments required to maintain the punched tape reader. All adjustments to reader mechanism A2 must be made when the unit is cold. If the unit has been operating, wait at least ten minutes before making any adjustment, since temperatures rise enough during operation to expand tolerances.

4-45. Repair

Repair normally consists of removing and replacing a defective part as described in the removal and replacement or disassembly and reassembly procedures given in sections IV and V.

4-46. Spring Data

Use the following data to determine whether a spring meets the tension or compression requirement and also as a menas of identifying springs.

Replace all springs that do not meet the torsion, compression, or tension requirements.

a. Tight Tape Spring. The tight tape spring (26, fig. 4-12) is shown in A, figure 4-19. The torque required to deflect the spring to its final position is 105 gram-in.

b. Catch Bolt Spring. The catch bolt spring (21, fig. 4-13) is shown in B, figure 4-19. The force required to compress the spring to its compressed length is 14 to 18 oz.

c. Holddown Spring. The holddown spring (27, fig. 4-13) is shown in C, figure 4-19. The torque required to deflect the spring to its final position is 118 to 138 gram-in

d. Comb Spring. The comb spring (37, fig 4-13) is shown in D, figure 4-19.

e. Actuator Spring. The actuator spring (43, fig. 4-16) is shown in E, figure 4-19. The force required to provide initial tension on the spring is 120 to 170 grams.

4-47. Adjustments

The following paragraphs describe adjustment and alignment procedures and tolerance requirements for the punched tape reader. Adjustment procedures are arranged in the proper sequence for a complete readjustment of the punched tape reader. When making individual adjustments, check all related adjustments. Where removal of parts or subassemblies is necessary to make an adjustment, reference is made to specific paragraphs for removal and replacement instructions. (Also, see para. 4-12 thru 4-14.)

NOTE

Before proceeding with the read head adjustment, check the roller (33, fig. 4-13), to determine if it is worn and replace if necessary.

4-48. Read Head Fixed Contact Adjustment

Remove the tape deck assembly as described in paragraph 4-32 and adjust read head and track assembly as follows:

a. Requirement. Each of the eight fixed contact assemblies must extend above the fixed contact support between 0.290 and 0.300 inch.

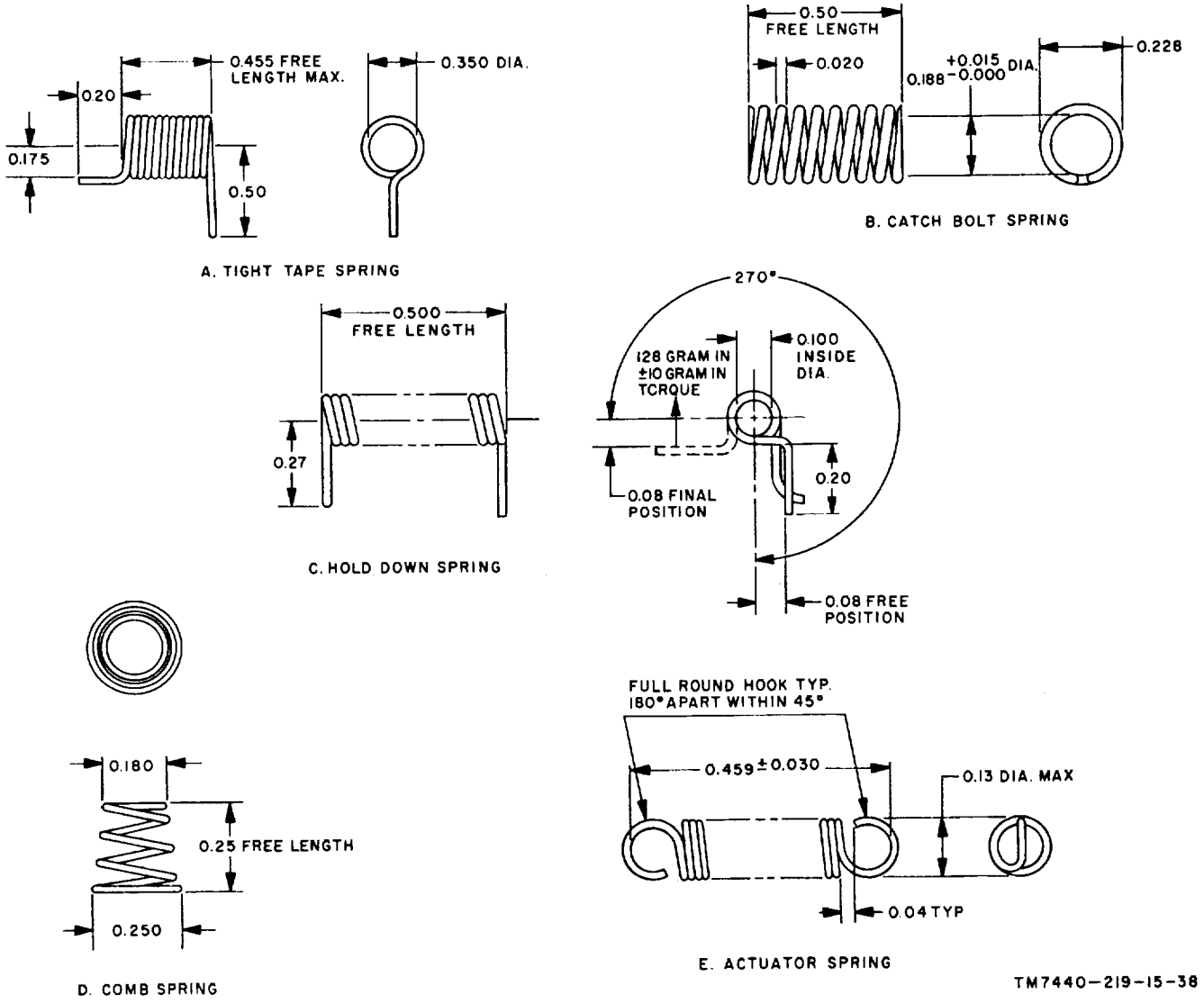


Figure 4-19. Spring data

b. Adjustment. Adjust the appropriate height adjustment screws on the fixed contact support to achieve the required fixed contact height.

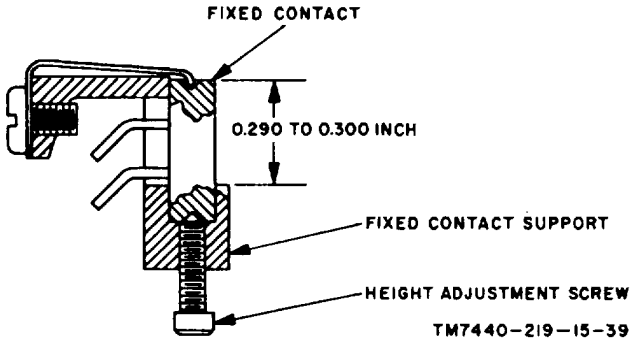
Note. It may become necessary to readjust individual fixed contact assemblies for proper contact switching. Do not readjust all fixed contact assemblies to the required height unless complete read head readjustment or replacement is required. Refer to paragraph 4-52c(2) for additional requirements for individual fixed contact adjustments.

4-49. Read Head Movable Contact Adjustment (fig. 4-21).

Remove the tape deck assembly as described in paragraph L-32 and adjust the read head movable contact as follows:

a. Requirement. The movable wire contacts must be free to move up and down in the gap of the fixed contact.

b. Adjustment. Correct improper alignment by laterally adjusting the fixed contact support. To adjust, loosen the support mounting screws and carefully move the fixed contact support until all wire contacts are centered in the fixed contact gaps. Retighten the mounting screws.



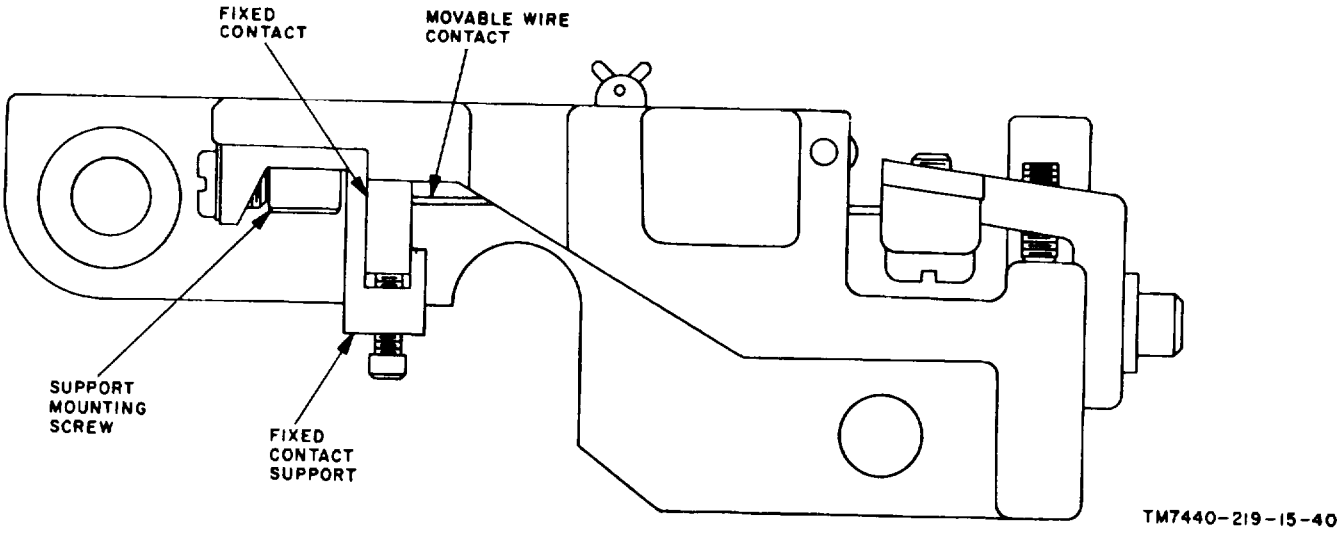


Figure 4-20. Read head fixed contact requirement.

4-50. Starwheel Height Adjustment

(fig. 4-22)

Remove the tape deck assembly as described in paragraph 4-32a and adjust the starwheel height as follows:

a. Requirement. With starwheel height gage 361500 mounted in mounting holes ordinarily used for installation of the tape deck assembly, the starwheels must raise the gage pins to 0.000 to ± 0.002 inch from top of gage.

Note. When using gauge with stepped top surface, measurements must be made from the high surface (left side as viewed in fig. 4-22).

b. Adjustment. Correct starwheel height by loosening the locking screws on the movable contact bracket. Adjust bracket height by varying the setscrews on the top of the bracket. Retighten the locking screws.

Note It may not be possible to adjust the starwheels as low a specified. In this case, adjust the bracket height as low as possible. All pins should be uniform in height to insure proper positioning of the movable contacts.

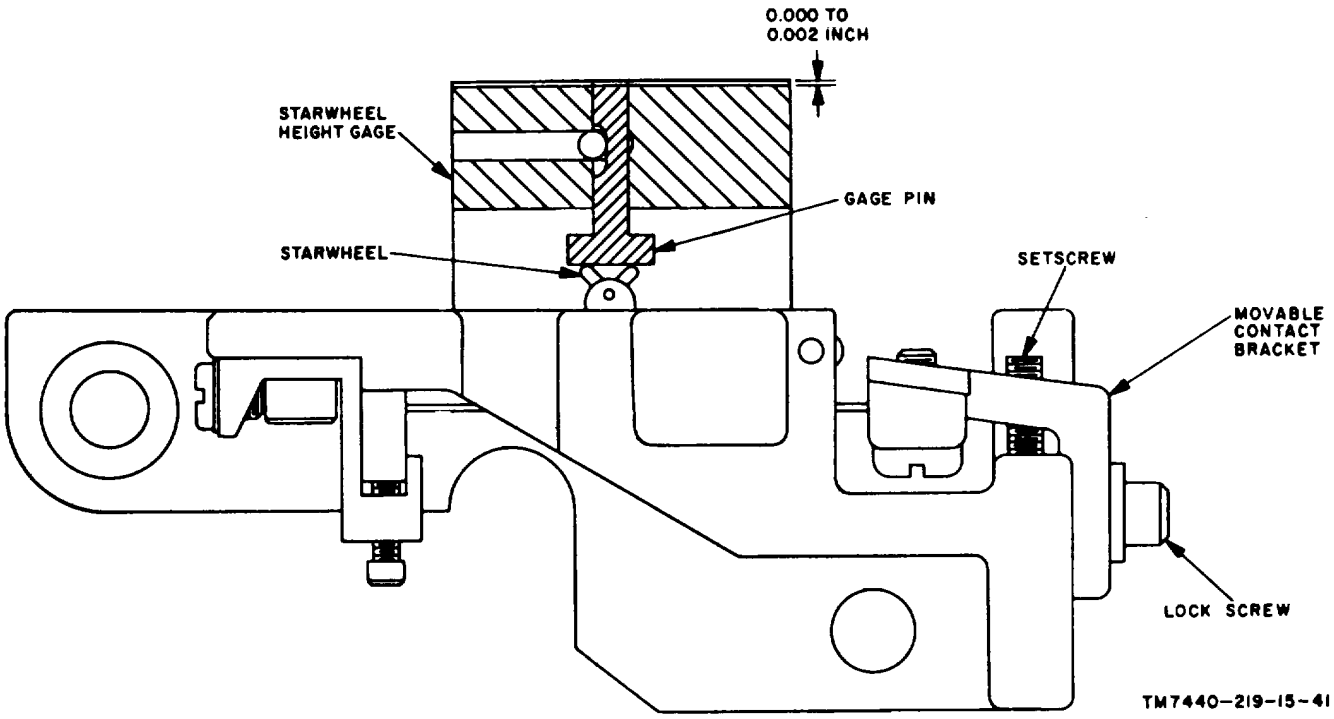


Figure 4-22. Starwheel height requirement.

4-51. Contact Pressure Adjustment

Remove the tape deck assembly as described in paragraph 432, remove the bottom cover, and adjust read head and track assembly as follows:

a. Requirement. The contact pressure required to lower the movable wire contacts, when switch contact is broken, must be at least 6 grams for each contact.

b. Method of Checking. Check each contact pressure with the starwheel in the "hole" position (fig. 3-6).

c. Adjustment. With gram gage 4043403, (3 to 30 grams, FSN 5210-799-2106) and a wire tool, apply a force to the movable wire contact (but not against it) (fig. 4-23). Increase contact pressure by lowering the fixed contact assembly with the height adjustment screw, and raising the movable wire contact with the setscrew.

NOTE

1. Use a paper clip to make a wire tool similar to that shown in fig. 4-23. Form a ¼-inch loop at the upper end of the tool.
2. The point at which contact is broken can be determined easily by observing the deflection on an ohmmeter connected as follows: Remove power from the equipment. On the backplane, connect one ohmmeter lead to XA3, pin A. connect the other lead to pin 1 on TB1 of the read head (A2TB1 or A4ITB1), and observe the switching of movable contact No. 1. Repeat procedure with pins 2 through 8, and movable contacts 2 through 8.

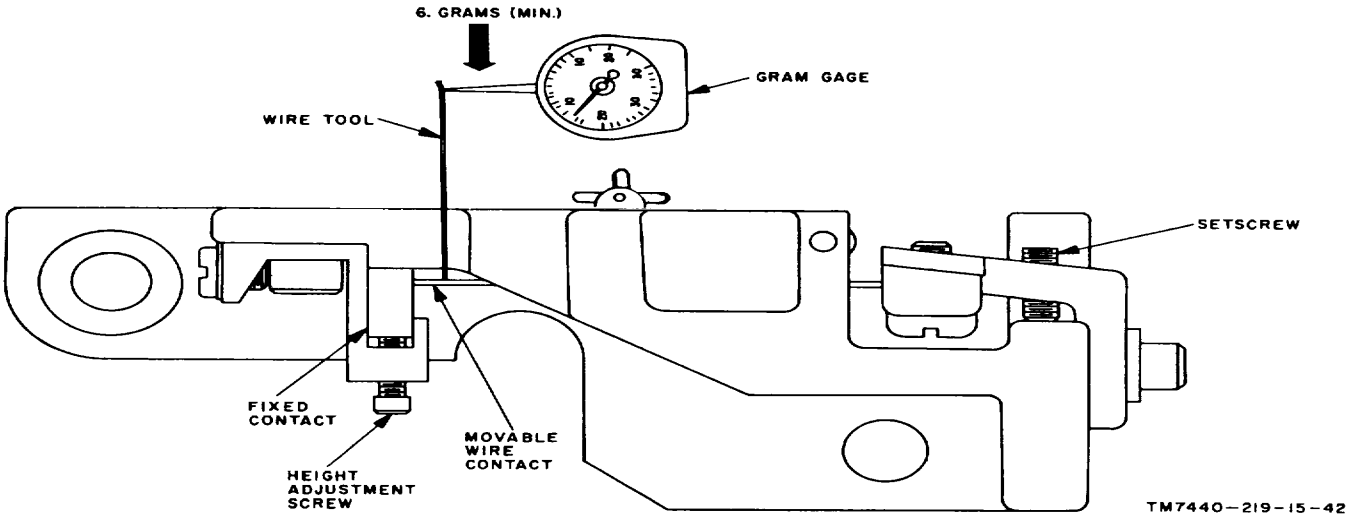


Figure 4-23. Contact pressure requirement.

4-52. Timing Adjustment

Remove the capstan drive guard as described in paragraph 4-38 and adjust the capstan drive mechanism as follows:

a. Requirement. Contact switching must occur within the limits of 2.5 ms (min) and 6.2 ms (max) with respect to the leading edge of the tape drive pulse as shown by figure 4-23.1.

Note. The ideal waveform is a square wave with all transitions occuring approximately 4.3 ms after the leading edge of the tape drive pulse with no extra pulses (indicating contact bounce). Adjustments should be performed to bring the waveform as close to the ideal as possible.

b. Method of Checking. Using a dual-trace preamplifier with oscilloscope, connect the Channel A probe to J4-L of the logic assembly to obtain the tape drive pulse. Run the alternate hole test pattern tape (alternate "U" and "*" characters) through the reader. In sequence, connect the oscilloscope Channel B probe to pins 3, E, H, K, M, P, S and U of A1J3 (fig. 8-1), step the tape and note whether or not the contact switching time of each data pulse meets the requirement (fig. 4-23.1).

Note. The positive and negative going transitions must both be observed and measured, since one of them may be well within tolerance and the other may be out. This may require starting and stopping the tape reader until both transitions have been observed on the oscilloscope.

c. Adjustment. The adjustments described in paragraphs 4-48 through 4-51 should precede this adjustment.

(1) Loosen the clamp screw (fig. 4-25) and turn the adjusting screw counterclockwise to advance the tape, or clockwise to delay the tape. If this adjustment does not provide correct timing, insert a short length of alternate hole pattern tape in the punched tape reader. Remove the roll pin on the differential spider. With the motor running, turn the capstan shaft manually until starwheels sensing no-holes are equally spaced between holes (fig. 4-24). Install the roll pin and readjust as previously specified. Upon completion of adjustment, torque the clamp screw to 17-21 inch-pounds and apply glyptol to the heads of the clamp and adjusting screws.

(2) If the checks in b above show that one or more (but no all) contacts switch outside the allowable region, adjustment of the individual fixed contact(s) is required. While observing the switching time of the contact with the oscilloscope as described in the method of checking above, turn the height adjustment screw (fig. 4-23) to raise or lower the fixed contact until it meets the timing requirement.

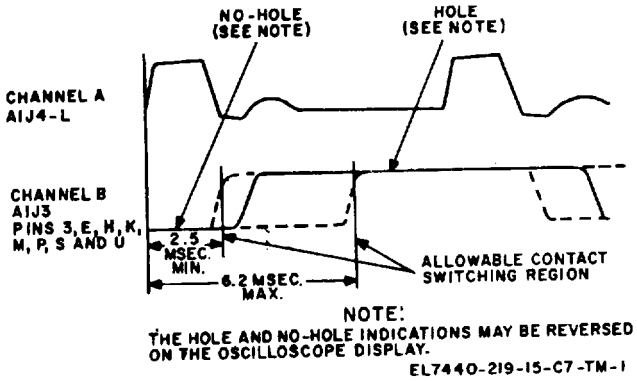


Figure 4-23.1. Contact switching timing.

4-38.8.1 Change 7

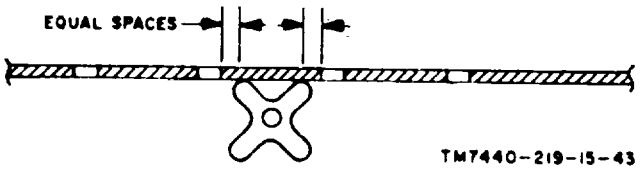


Figure 4-24. Starwheel positioning.

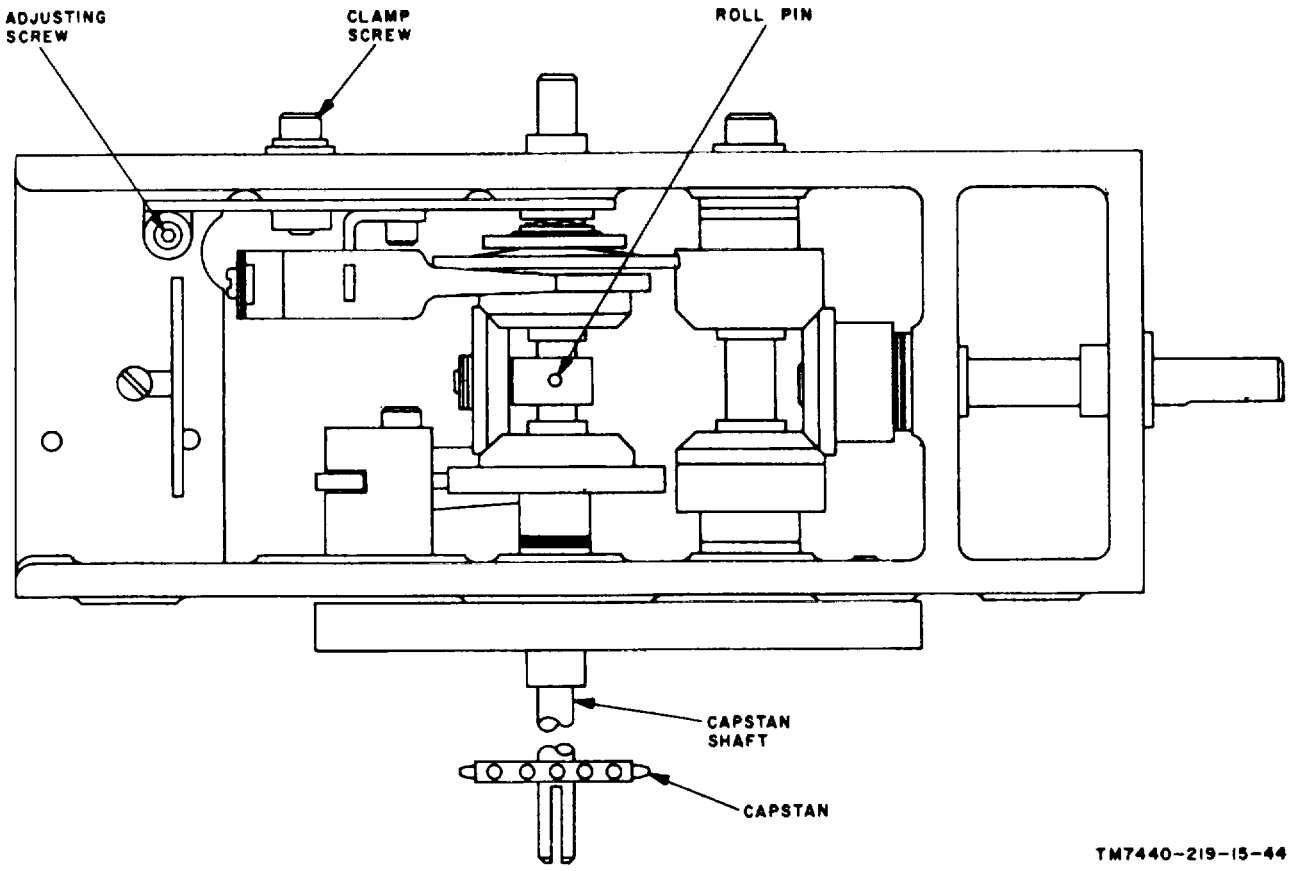


Figure 4-25. Timing requirement.

4-53. Motor Input Shaft Endplay Adjustment (fig. 4-26)

a. Requirement. Motor input shaft endplay must be between 0.005 and 0.015 inch.

NOTE

If requirement is not met, remove and disassemble the capstan drive mechanism assembly as described in paragraphs 4-38 and 4-39, and adjust for motor shaft input endplay. Also, before disassembly, check to insure that other endplay adjustments in paragraphs 4--51 through 4-56 are within tolerances.

b. Adjustment. When reassembling the motor input shaft, gears, bearings, washers, and other components, insert the proper thickness of shims between the shaft and gear assembly and the bushing to provide the required endplay.

4-53.1. Timing Belt Tension Adjustment

a. Requirement. Belt deflection at the midpoint of its span should be 3/16 + 1/16 inch with a force of 150 grams applied.

b. Adjustment. Loosen two screws (72, fig. 4-12), move the motor (75) to obtain proper belt tension, and tighten the screws (72).

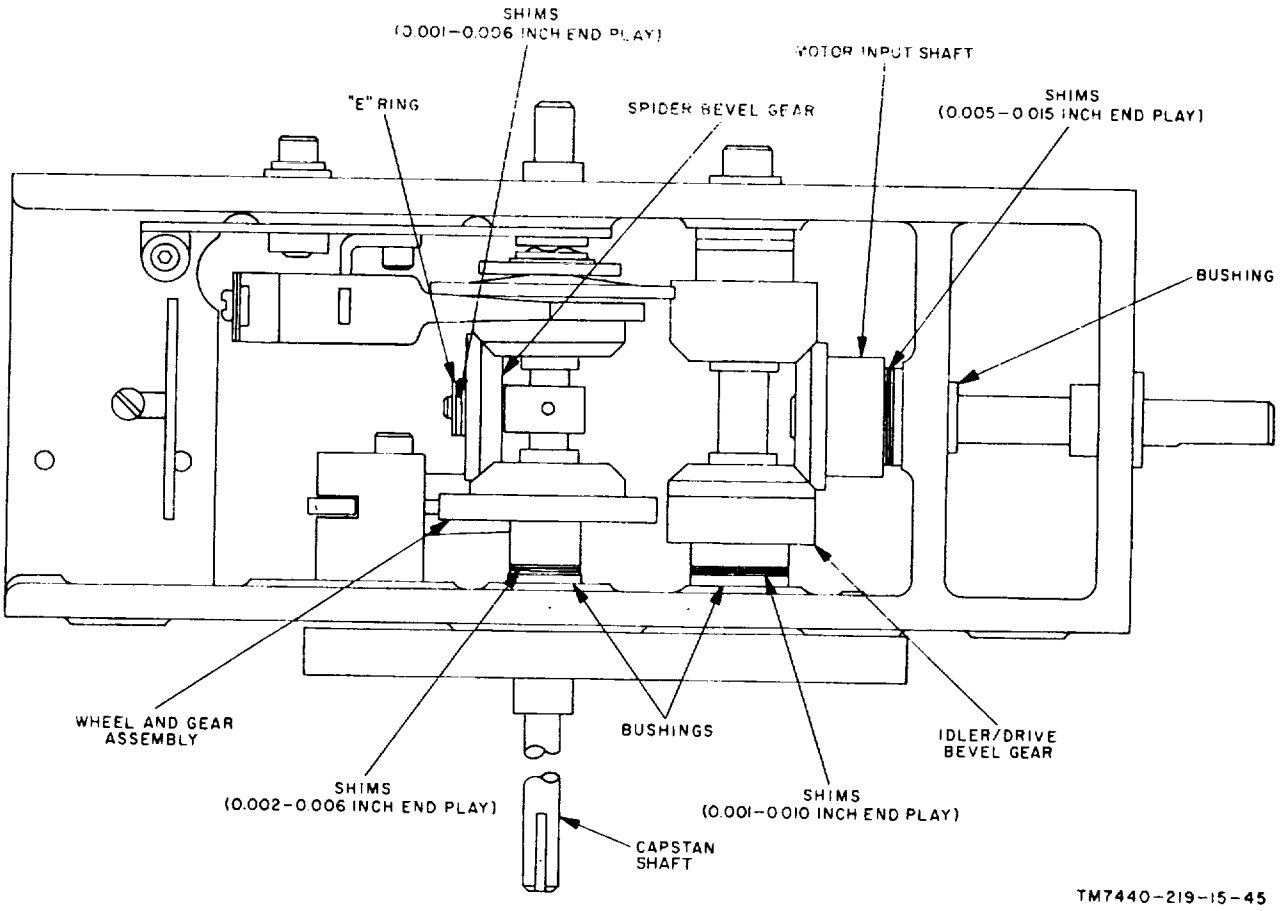


Figure 4-26. Endplay requirements.

4-54. Idler/Drive Bevel Gear Endplay Adjustment (fig. 4-26)

a. Requirement. Idler/drive bevel gear adjustment endplay must be between 0.001 and 0.010 inch.

NOTE

If requirement is not met, remove and disassemble the capstan drive mechanism assembly as described in paragraphs 4-38 and 4-39, and adjust for idler/drive bevel gear endplay. Also, before disassembly, check to ensure that other endplay adjustments in paragraphs 4-53 through 4-56 are within tolerances.

b. Adjustment. When reassembling idler/drive bevel gear, shafts, bearings, washers, and other components, insert the proper thickness of shims between the idler/drive bevel gear and the bushing to provide the required endplay.

4-55. Capstan Shaft Endplay Adjustment (fig. 4-26)

a. Requirement. Capstan shaft endplay must be between 0.002 and 0.006 inch.

NOTE

If requirement is not met, remove and disassemble the capstan drive mechanism assembly as described in paragraphs 4-38 and 4-39, and adjust for capstan shaft endplay. Also, before disassembly, check to insure that other endplay adjustments in paragraphs 4-53 through 4-56 are within tolerances.

b. Adjustment. When reassembling the capstan shaft, gears, bearings, washers, and other components, insert the proper thickness of shims between the wheel and gear assembly and the bushing to provide the required endplay.

4-56. Spider Bevel Gear Endplay Adjustment (fig. 4-26)

a. Requirement. Spider bevel gear endplay must be between 0.001 and 0.006 inch.

NOTE

If requirement is not met, remove and disassemble the capstan drive mechanism assembly as described in paragraphs 4-38 and 4-39, and adjust for spider bevel gear endplay. Also, before disassembly, check to ensure that other endplay adjustments in paragraphs 4-53 through 4-56 are within tolerances.

b. Adjustment. When reassembling the spider bevel gear, shafts, bearings, washers, and other components, insert the proper thickness of shims between the spider bevel gear and the E ring to provide the required endplay.

4-57. Return Spring Force Adjustment

(fig. 4-27)

a. Requirement. Armature return spring tension must be 225 (±+ 50) grams.

b. Method of Checking. Hook gram gage 4043402 at the point indicated in figure 4-27 and lift the armature tip gently to measure spring tension.

NOTE

If requirement is not met, remove the capstan drive mechanism assembly as described in paragraph 4-38 and adjust for requirement in a above.

c. Adjustment. Adjust the setscrew which is attached to the armature return spring to meet the requirement.

4-58. Heel Gap Adjustment

(fig. 4-28)

a. Requirement. The gap between the heel of the armature and the upper edge of the slot in the armature limit must be between 0.016 and 0.018 inch.

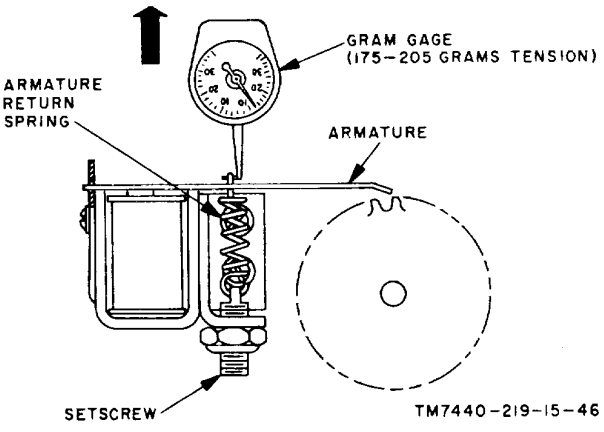


Figure 4-27. Return spring force requirement.

b. Method of Checking. Insert a 0.016-inch feeler gage into the slot of the armature limit as shown in figure 4-28. The gage must slip in easily. Insert a 0.018-inch feeler gage into the slot of the armature limit. This gage must slip in with perceptible drag.

NOTE

If requirement is not met, remove and disassemble the capstan drive mechanism assembly as described in paragraphs 4-38 and 4-39, and adjust for requirement in a above. Also, before disassembly, check to ensure that endplay adjustments in paragraphs 4-53 and 4-56 are within tolerances.

c. Adjustment. Loosen the screw and insert the 0.018-inch feeler gage. Press the armature limit firmly against the gage until the requirement is met, and tighten the screw. Be careful that the coil frame does not pivot on the bracket.

4-59. Tip Clearance Adjustment

(fig. 4-29)

a. Requirement. The clearance between the armature tip and the escapement tooth must be between 0.008 and 0.010 inch.

b. Method of Checking. Insert the 0.018-inch feeler gage into the slot of the armature limit. Turn the clutch so that the flat of an escapement tooth rests under the armature tip. Insert a 0.008-inch feeler gage between the armature tip and the escapement tooth. The gage must slip in easily. Insert a 0.010-inch feeler gage between the armature tip and the escapement tooth. This gage must slip in with perceptible drag.

NOTE

If requirement is not met, remove and disassemble the capstan drive mechanism assembly as described in paragraphs 4-38 and 4-39, and adjust for requirement in a above. Also, before disassembly, check to ensure that endplay adjustments in paragraphs 4-53 through 4-56 are within tolerance.

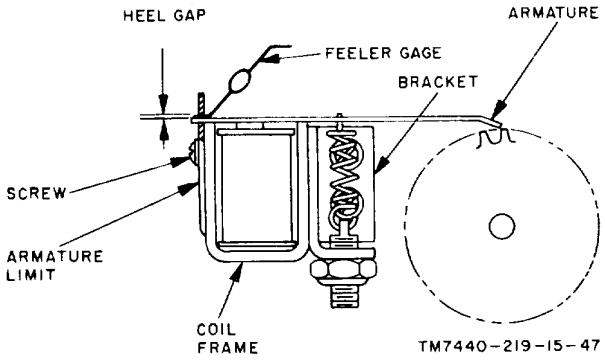


Figure 4-28. Heel gap requirement.

c. Adjustment. Loosen the mounting screws. Place a small screwdriver or awl between the mounting screws and the bracket, and rotate the assembly in the direction necessary to meet the requirement. Retighten the mounting screws. An alternate method of adjustment is to tap the assembly as necessary; at the bottom to reduce clearance, and at the top to increase clearance. Be careful to avoid distorting the coil frame or bracket as shown in figure 3-10.

Engage the end of the gram gage into a sprocket hole in the leading end of the tape. Hold the trailing end of the tape firmly, slowly move the gram gage to the left to pull the leading end of the tape in the direction of normal tape travel, and note the tension required to start the top of the roller support moving to the left.

c. Adjustment. Loosen the setscrew and rotate the spring retainer to preload the spring until the requirement is met (fig. 4-31).

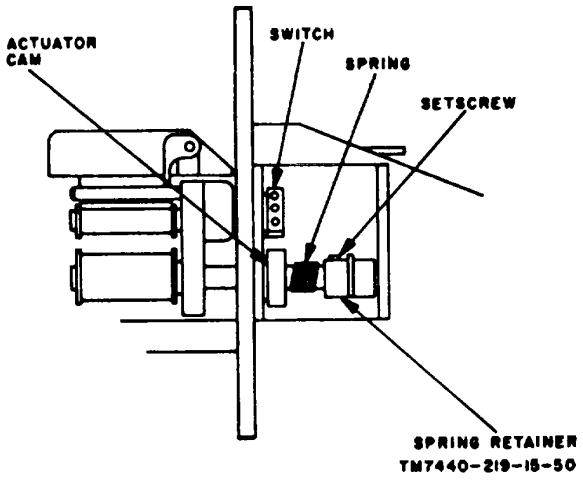


Figure 4-31. Tight tape sensor positioning requirement.

4-62. Roller Support Shaft Endplay Adjustment (fig. 4-32)

a. Requirement. Roller support shaft endplay must be 0.01 to 0.02 inch between the grip ring and the end of the roller assembly.

b. Adjustment. When installing the grip ring on the roller support shaft, provide the required endplay.

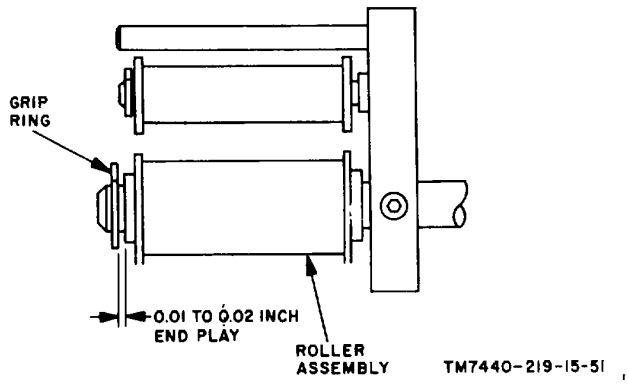


Figure 4-32. Roller support shaft endplay requirement.

4-63. Adjustment of Power Supply Output Voltages

a. Requirement. The adjustment of the power supply output voltages is an electrical adjustment which is made by means of four potentiometers to produce the specified dc output voltages at specific test points within the power supply. These adjustments are made with the power supply connected into the punched tape reader and the power on.

b. Method of Checking. Connect a digital voltmeter to the following test points at the front panel of the power supply. The dc voltages measured should fall within the tolerances specified.

Test point	Voltage tolerance (dc)
+4.75 and COM	+4.75 t0.06
--12V and COM	-12,00 +0.06
+ 12V and COM.....	+12.00 +0.06
--48V and COM	-48.00 +0.24

c. Adjustment. If any of the voltages specified in b above are out of tolerance, the corresponding potentiometer should be adjusted to bring the voltage within tolerance. The potentiometers are listed as follows:

Dc voltage	Potentiometer to be adjusted	Fig. 4-10 item No.
+4.75	R24 on card A1	92
+12	R17 on card A2	93
-12	R32 on card A2	93
-48	R18 on card A3	94

4-64. Adjustment of Power Supply Regulated Supply

a. Requirement. After the power supply output voltage adjustments are performed, the performance of the regulated supply located on card A12 in the power supply should be checked.

CAUTION

When taking voltage measurements on power supply PS1 sequence module A12, use insulated test connectors to avoid possible short circuits between test points and copper runs.

b. Method of Checking. Connect a digital voltmeter between the test points TP11 (+) and TP13 (common) located on card A12 in the power supply (40, fig. 4-10). The test points are clearly labelled on the card. The power supply should be operating in the normal manner in the tape reader, with normal system power turned on. The voltage measured should be + 15.0 $\pm$ 0.1 vdc.

c. Adjustment. If the voltage from test point TP11 to TP13 is not within tolerance, adjust potentiometer R73 on card A12 (40, fig. 4-10).

4-65. Adjustment of Power Supply Over-voltage Limit

a. Requirement. After the +4.75-output voltage has been checked and adjusted (para 4-3), the overvoltage limit circuit for the +4.75-volt output should be checked to make certain that the trip point of 5.5 vdc is not exceeded.

b. Method of Checking.

(1) Disconnect wire connection from PS1TB2, pin 2.

(2) Connect a digital voltmeter to the test point labeled 4.75 (+) on the power supply front panel and the COM test point.

(3) Slowly adjust potentiometer PS1A1R24 to obtain an increase in the +4.75 volt output, while observing the digital voltmeter. Continue to increase the voltage, while observing the voltmeter, until the meter indication suddenly drops to zero volts. The maximum voltmeter indication (which occurs immediately before the voltage drops to zero), is termed the "trip point" and should be 5.40 volts dc (- 0.05).

c. Adjustment.

(1) If the trip point voltage is out of tolerance, adjust potentiometer PS1AIR30. Repeat the check and adjustment until the trip point voltage is within the specified tolerance.

(2) Adjust PS1A1R24 to meet the requirements of paragraph 4-3.

(3) Disconnect the digital voltmeter.

(4) Reconnect the wire connection to PS1TB2, pin 2.

4-66. Oscillator Frequency Adjustment (PC Card A1)

Adjust the oscillator frequency during initial installation of the tape reader and whenever a new PC card Al is installed. Connect a frequency counter (Beckman model 7350A or equal) to pin T of PC card connector XA1; connect the other lead to ground.

With power on, adjust potentiometer R20 (fig. 5-7) to obtain a frequency indication of 9.6 KHZ (± 1 percent).

Note. If a frequency counter is not available, adjust R20 for 104 microseconds using an oscilloscope.

Section VII. DUAL PUNCHED TAPE READER CONVERSION KIT INSTALLATION

4-67. General

a. Scope. This section contains the parts list, step-by-step installation procedures, and checkout procedures required to convert a single punched tape reader into a dual punched tape reader.

b. Power. It is imperative that power to the punched tape reader be turned off and disconnected during installation of this conversion kit. Thus, the tape send channel must be off-line during conversion.

c. Manpower required. To prevent damage to equipment and injury to personnel, two men are required to perform the conversion.

4-68. Tools, Materials, and Test Equipment Required

a. Tools fund test equipment. Refer to appendix C for a list of the tools and test equipment required.

b. Materials. Table 4-1 below lists the parts contained in conversion kit, part number FSN 7440-137-5818 (General Dynamics part number A57615-001).

Table 4-1. Parts List for Dual Punched Tape Reader Conversion Kit

Item No	Qty	Part number	Name
1	1	*A64780-001. Tally Corp. Seattle, Washington, Part No. 347910 composed of Tally Corp. Envelope Part No. 347930 and Tally Corp. 12 Tooth Motor Pulley Part No. 2204433.	Ancillary Item; conversion kit, composed of 12 tooth motor pulley and envelope.
2	24	*A64779-001	Ancillary item; clip tape.
3	1	*A53930-001. Tally Corp., Seattle, Washington, Part No. 305089.	Running spare, timing belt.
4	8	AN960C10L	Washer, flat.
5	8	MS35338-138	Washer, lock.
3	1	*A64757-001	Reader mechanism assembly.
7	10	*SM-B-583244-008	Sealing compound.
8	2	*A61666-001	Cable assembly, special purpose, electrical.
9	1	*A64758-002	Control panel assembly.
10	7	*SM-C-546211-9	Clamp, cable.
11	1	*SM-C-546211-8	Clamp, cable.
12	9	MS5157-46	Screw, machine, pan head.
13	11	MS35338-137	Washer, lock.
14	15	AN960C8L	Washer, flat.
15	12	MS35649-284	Nut, plain, hex.
16	1	*SM-C-546211-12	Clamp, cable.
17	55	MS17821-1-9	Tie wrap.
18	1	*A64752-001	Logic assembly.
19	1	*SM-C-634816	Bar, cable.
20	1	*A64776-001	Relay and filter assembly.
21	2	MS51958-63	Screw, pan head.
22	1	MS51957-30	Screw, machine pan head.
23	3	*SM-C-546211-11	Clamp, cable.
24	1	AN960C6L	Washer, flat.
25	9	MS35338-136	Washer, lock.
26	1	MS35649-264	Nut, plain, hex.
27	8	AN960C6	Washer, flat.
28	8	*SM-B-546131	Locking screw.
29	1	*SM-D-546279	Slide.
30	4	639123-468	Screw, machine.
31	1	*810003-103	Power supply.
32	4	MS35335-59	Washer, lock.
33	1	*SM-C-634831-1	Clamp, cable support.
34	1	*A64775-001	Plate, reference.
35	1	None	Change 3 to Technical Manual Reader, Punched Tape RP-154 (P)/G.
36	2	*555557-022	Strip, fanning.
37	2	*V00078-004	Adapter, Bulkhead.

*General Dynamics Part Number.

4-69. Installation Procedure

a. Preliminary procedure.

(1) Check the conversion kit parts against the parts list (table 4-1) to verify that all of the necessary parts are contained in the kit.

(2) Store ancillary items and running spares (items 1, 2, and 3, table 4-1) with other station ancillary items and running spares.

(3) For safety, turn off the 120 volts ac power to the punched tape reader; then disconnect the input power cable from TB-1 (16, fig. 4-11) of the filter assembly (21, fig. 4-5).

(4) Remove the top rear panel from the punched tape reader enclosure. Reinsert the panel mounting screws (with washers attached) in the panel mounting holes (to prevent loss of mounting hardware).

(5) Remove the tape clip panel (6, fig. 4-11.2) from the reference designation AS area (fig. 1-3). Remove washers from mounting screws and store them with their corresponding parts of the conversion kit (items 4 and 5, table 4-1). Store the hex nuts for later use. The screws will no longer be required.

(6) Remove all tie wraps binding unterminated cables to enclosure structure.

b. Reader mechanism installation.

(1) Remove the outer chassis slides and mounting hardware (part of 9, fig. 4-7) from the reader mechanism (item 6, table 4-1).

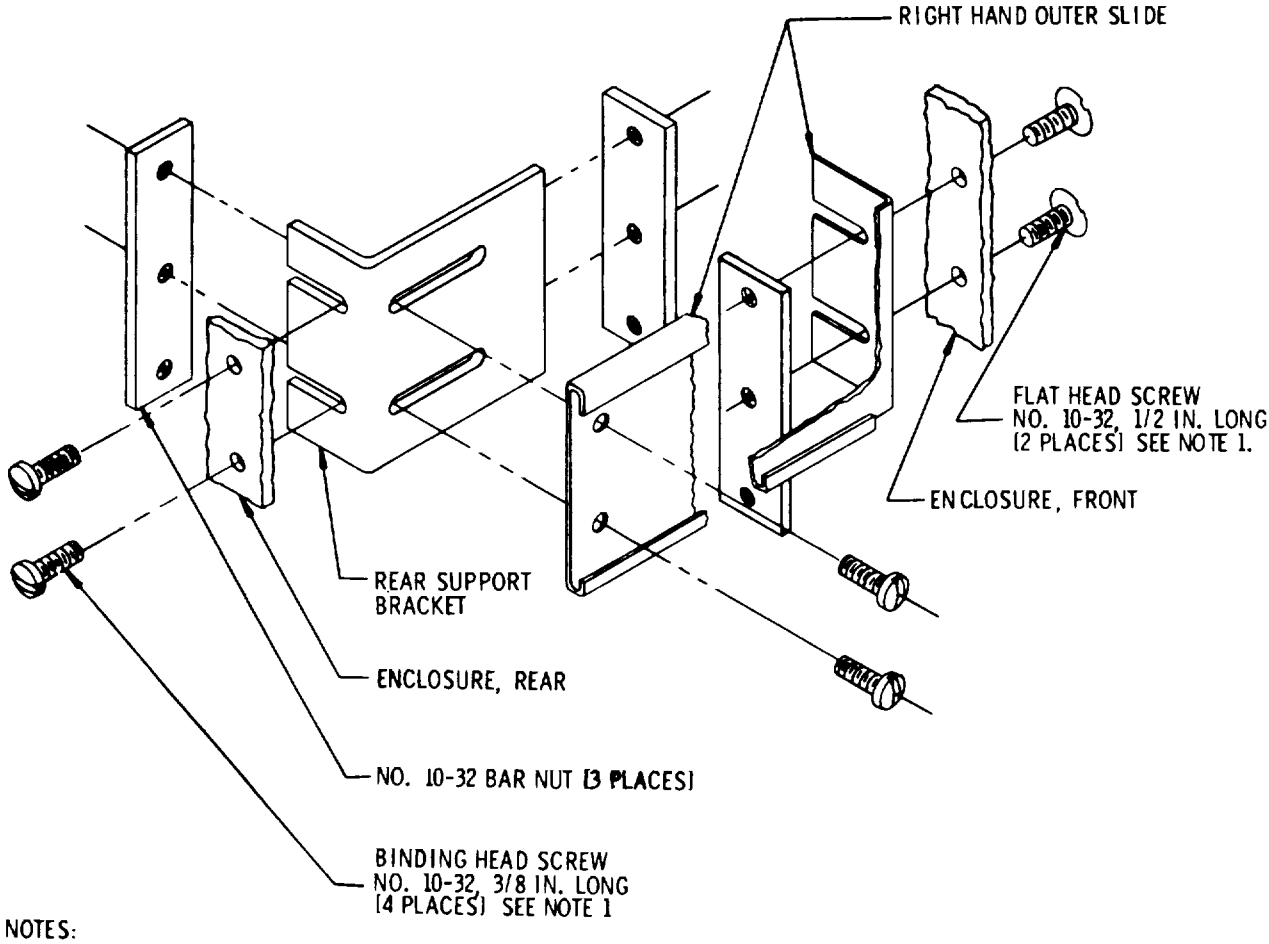


Figure 4-33. Reader mechanism assembly slide installation details, exploded view.

(2) Install the outer slides inside the enclosure as shown in figure 4-33 (holes are provided for mounting slides in reference designation A5 area of enclosure). Do not apply sealing compound to the screw threads at this time because it may be necessary to slightly reposition the slides for proper operation when the reader mechanism is installed.

(3) Install the reader mechanism (para 4-19).

(4) With the reader mechanism installed, reposition the outer slides, if necessary; then apply sealing compound (item 7, table 4-1) to the screw threads before and after final tightening.

c. Interface cable installation.

(1) Install the interface signal cable(s) (item 8, table 4-1) as described in TM 11-7440-239-15, AUTODIN DIGITAL SUBSCRIBER TERMINALS (STATION MANUAL), chapter 2, section IV.

d. Control panel installation.

(1) Remove the blank panel (5, fig. 4-5) from the reference designation A6 area. Store the panel mounting screws and washers for future use in subparagraph h (18).

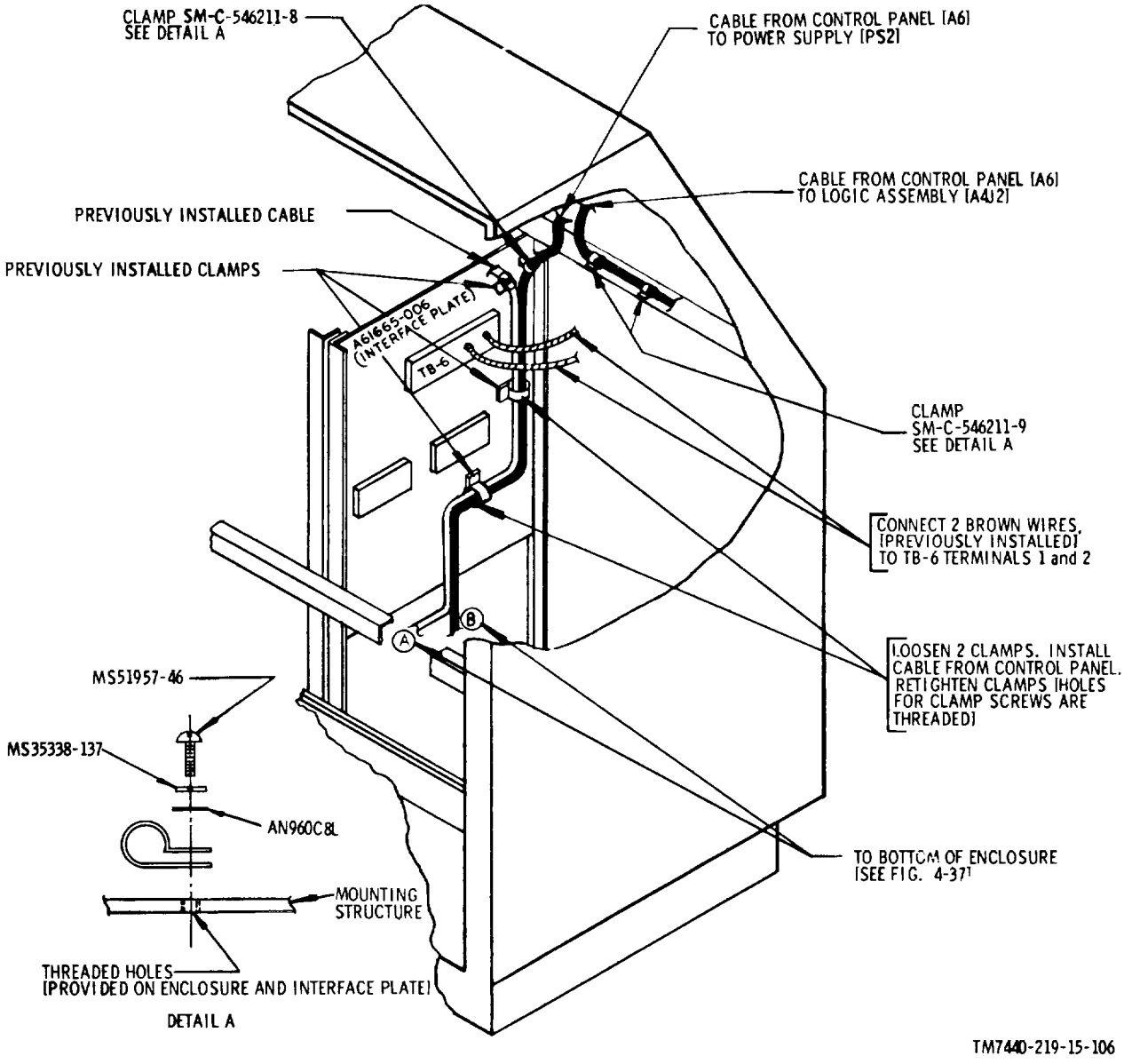


Figure 4-34. Partial routing of cables from control panel.

(2) Position the control panel assembly (fig. 4-6 and item 9 of table 4-1) face down in a servicing position in front of the mounting aperture.

(3) Route and clamp the cables as shown in figure 4-34.

(4) Connect the two brown wires to TB-6 terminals I and 2 as shown in figure 4-34.

(5) Temporarily install the control panel assembly in its mounting aperture without using mounting hardware.

e. Relay and filter assembly installation. Refer to figures 4-35 and 4-37 and install the relay and filter assembly (24.4, fig. 4-5 and item 20, table 4-1) as follows:

(1) Disconnect the punched tape reader number one 11.5 VAC power wiring (twisted black and white wires) from the blower (21, fig. 4-5) terminal block (B1TB1, terminals I and 3). Extend the length of the black and white twisted pair by removing tie wraps for approximately one foot to release the looped portion. After the twisted pair is free, use tie wraps AMS17821-1-9 (item 17, table 4-1) to resecure punched tape reader number one cable. This twisted pair is identified as (D) in figures 4-35 and 4-37.

(2) Connect the black and white wires (D) to relay K1 terminals 1 and 2 as shown in the wiring details in figure 4-35 (detail A).

(3) Locate the six (6) wires broken out of cable (A) that are encased in sleeving (cable (C) in fig. 4-35 and 4-37). The six (6) wires consist of 2 pair of black and white twisted pair and 1 each brown and orange wire. Also locate the shortest set of black and white twisted pair wires and a green wire (cable (F) figures 4-35 and 4-37) from cable (A) and connect one lead (a) of an ohmmeter to the black wire.

Note. Cable (F) wires in figures 4-35 and 4-37 are shown as not being encased in sleeving. However, on some paper tape readers the wires are covered with sleeving. Routing of the wires is the same whether encased in sleeving or not.

(4) Using the other lead (b) of the ohmmeter to verify continuity, locate the other end of the black wire in the six (6) wire cable and connect it to K1-7. Move meter lead (a) to the white wire in that cable. With meter lead (b) locate the white wire in the six (6) wire cable and connect it to K1-8 (fig. 4-35).

(5) Connect the black and white twisted pair and the green wire (F) to the blower (26, fig. 4-5) power terminal block as shown in figure 4-37.

(6) Connect the remaining four wires encased in sleeving. (cable (C()) to relay KI terminals as shown in figure 4-35.

(7) Clamp the cables to the relay bracket as shown in figure 4-35.

(8) Install the assembly in the enclosure as shown in figure 4-3.5. Tapped mounting holes are provided in the enclosure.

f. Filter assembly wiring.

(1) Locate the black and white twisted pair and green wire (three wires) broken off from cable (A) that are encased in sleeving.

(2) Connect this cable ((E), fig. 4-36) and clamp it to the filter assembly as shown in figure 4-36.

g. Routing of cables in bottom of enclosure. Route and clamp the cables as shown in figure 4-37.

h. Logic assembly installation.

(1) Route and clamp the four logic assembly cables to the enclosure structure as shown in figure 4-38. Leave the clamps loose enough to allow the cables to be slid back and forth through them.

(2) Remove the outer chassis slides and mounting hardware (part of 53, fig. 4-8) from the logic assembly (item 18, table 4-1).

(3) Install the outer slides inside the enclosure per figure 4-39 (holes are provided for mounting the slides in reference designation A4 area of the enclosure). Do not apply sealing compound to the screw threads at this time because it may be necessary to reposition the slides slightly for proper operation when the logic assembly is installed.

(4) Depress the slide stop catches (located midway along each of the top and bottom slides) and insert logic assembly A4 into the enclosure.

(5) With the logic assembly installed, reposition the outer slides, if necessary, and tighten screws. Apply sealing compound to the screw threads before and after final tightening.

(6) Pull the logic assembly A4 from the enclosure to its stop position.

(7) Remove printed circuit cards from locations A1 through A3 and A10 through A12 to improve access to the terminal blocks and to the cable clamps (installed in step 1) during final cable adjustments in steps 13 through 16.

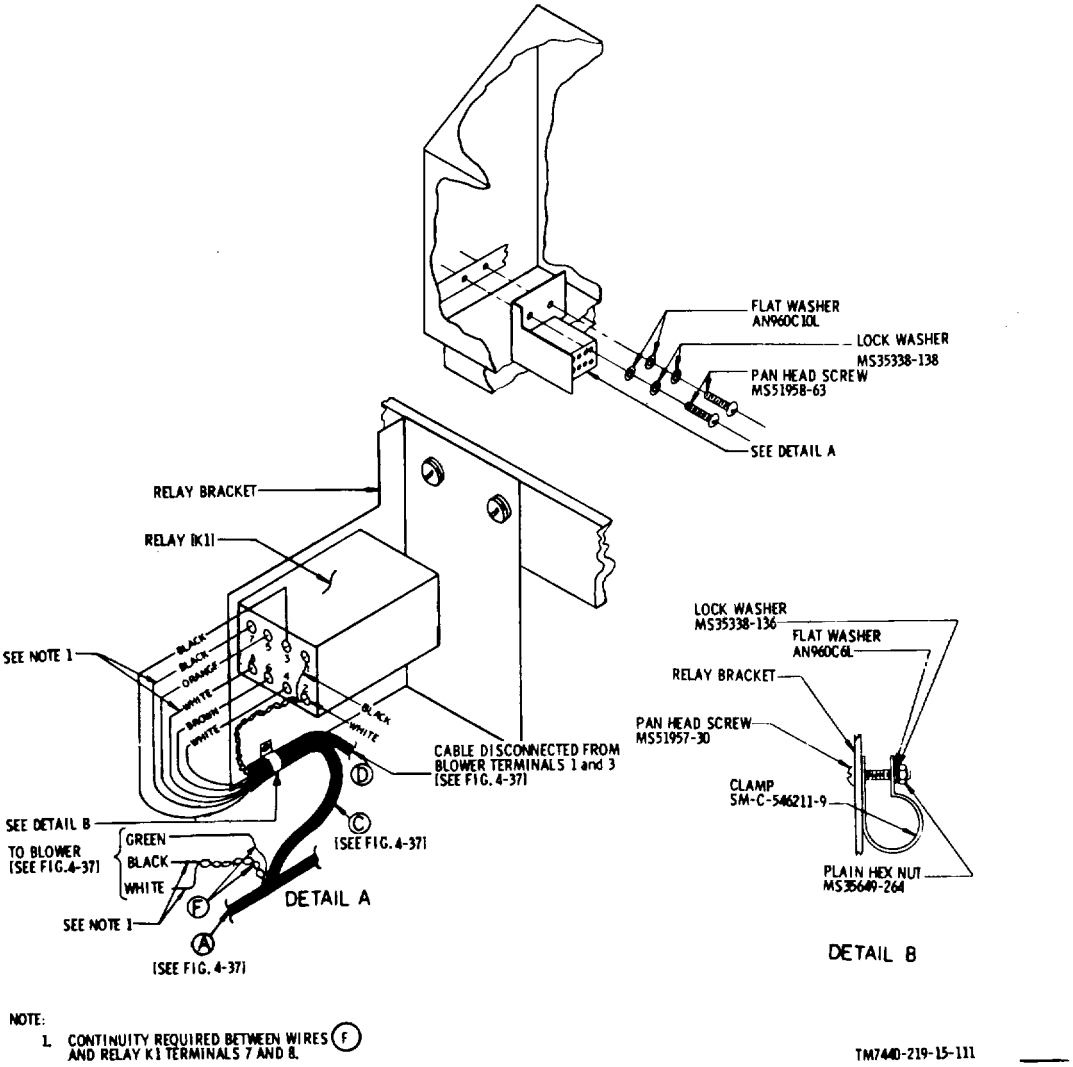


Figure 4-35. Relay assembly (K1) installation, exploded view.

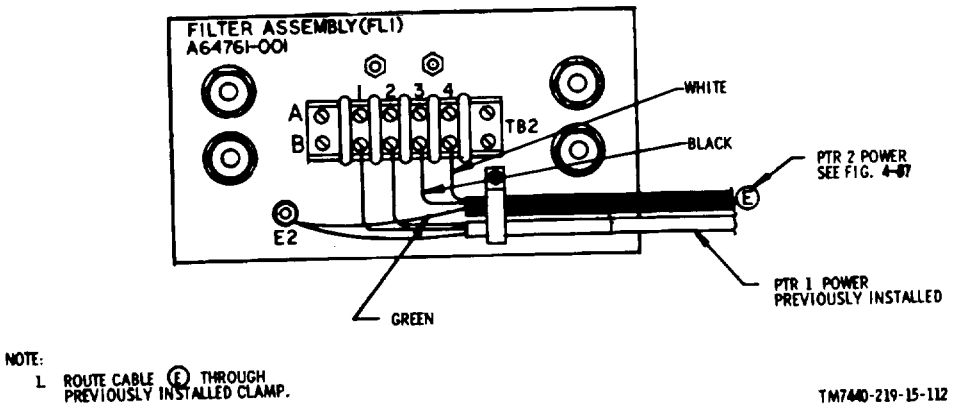


Figure 4-36. Filter assembly (FL1) wiring details and cable routing.

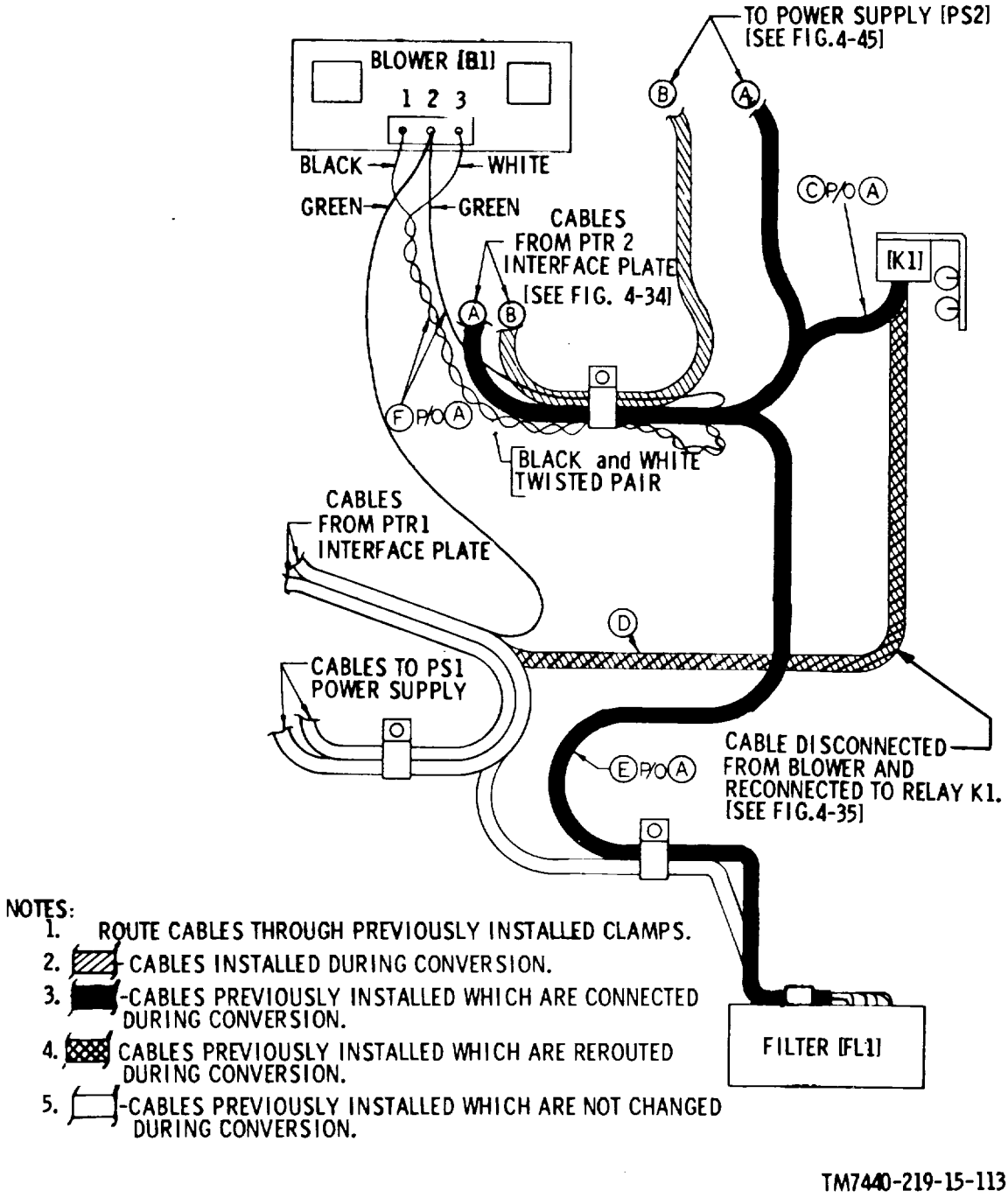


Figure 4-37. Routing of cables in bottom of enclosure and connections to blower.

(8) Connect wires to terminal blocks TB2 and TB3 as shown in figure 4-40.

(9) Connect cables to the logic assembly as shown below. Lock cable connectors in position as shown in detail A of figure 4-40.

Note. Make certain that the cables are not entangled so that they can be routed later as shown in figure 4-41.

(a) P3 (A4J4) to J4

(b) P1 (A4J3) to J3

(c) P2 (A4J2) to J2

(d) P1 (A4J1) to J1

(10) Clamp the cables as shown in figure 4-40.

(11) Being careful not to damage the cables, press the slide stop catches, slide the logic assembly into the enclosure and lock it into position.

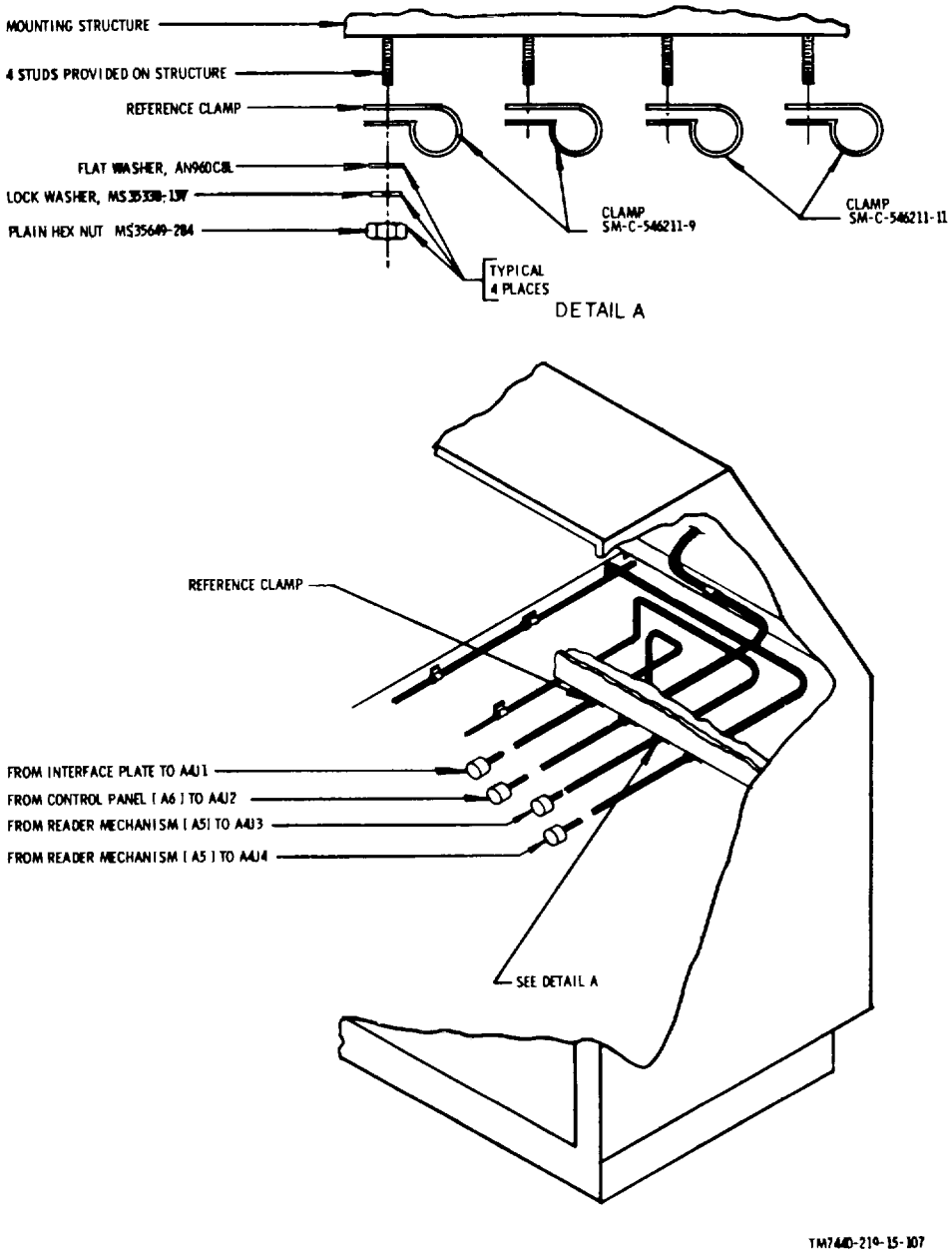


Figure 4-38. Routing and clamping of logic assembly (A4) cables to enclosure.

(12) Route the cables around the rear edge of the logic assembly as shown in figure 4-41 and install the cable bar clamp.

(13) With the logic assembly locked in position, feed the excess cable through the upper cable clamps (installed in step 1) to the front of the enclosure.

(14) Swing the control panel clear and to the right to gain access to the cables with the logic assembly locked in the enclosure.

(15) From the rear of the enclosure, tighten the upper cable clamps then dress and bundle the cables using tie wraps as required. Excess cable must be dressed in behind the control panel in such a manner as to be up and clear of the logic assembly and back and up to clear the front panel switches (see fig. 4-42).

(16) Unlock the logic assembly and slide it in and out several times to insure that the cables are free and that the cables cannot be fouled.

(17) Replace the printed circuit cards (removed in step 7) in locations Al through A3 and A10 through A12. (fig. 4-8).

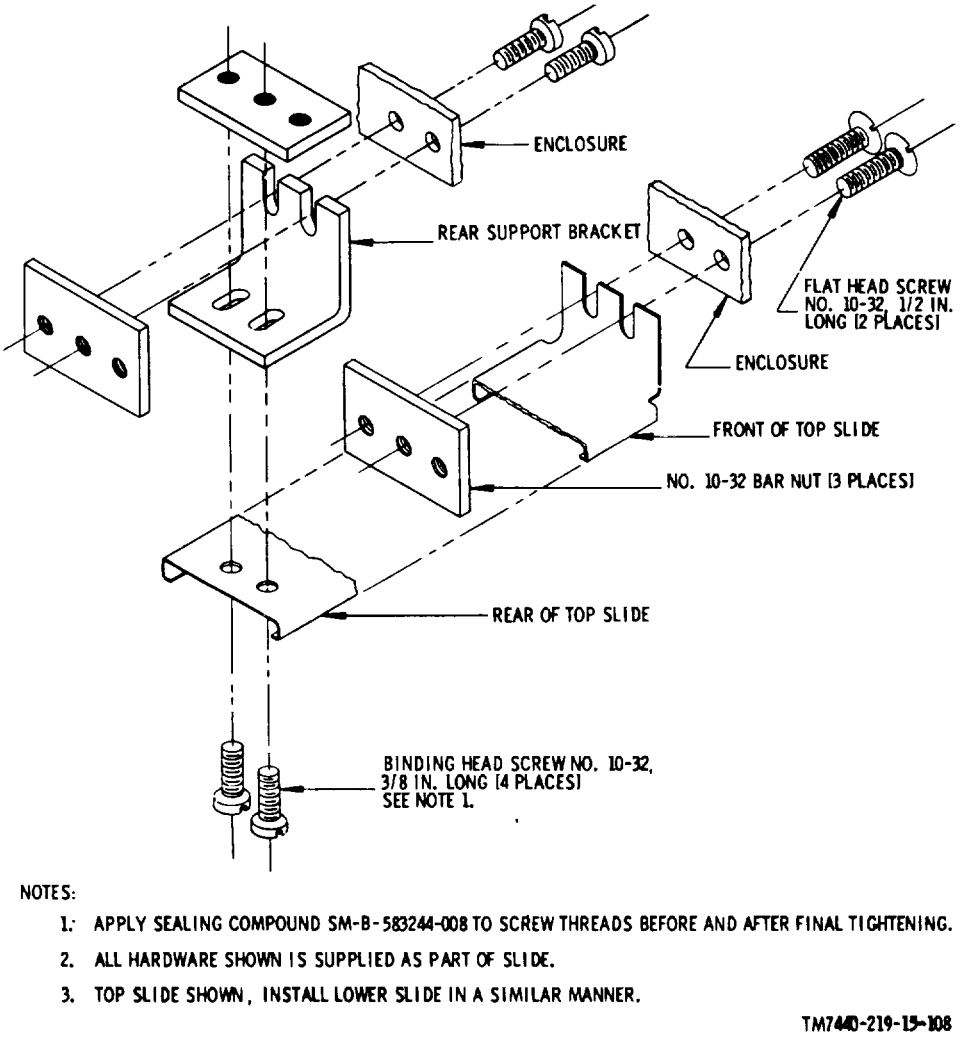


Figure 4-39. Logic assembly slide installation details, exploded view.

(18) Install the control panel using the mounting hardware stored in sub-paragraph d(1).

i. Power supply installation.

(1) Separate the inner parts of each slide from the middle and outer portions (item 29, table 4-1) and mounting hardware and install outer slide in the enclosure per figure 4-43 (mounting holes are provided in reference designation PS2 area of enclosure). Do not apply sealing compound to screw threads at this time.

(2) Mount the inner slides on the power supply (fig. 4-10 and item 31, table 4-1) assembly as shown in figure 4-44.

(3) If removed, reassemble the center slides to the inner slides which are attached to the power supply chassis.

(4) Insert the power supply assembly into the outer slides mounted in the enclosure.

(5) With the power supply in place, reposition the outer slides, if necessary; apply sealing compound on screw threads shown in figure 4-43 before and after final tightening.

(6) Connect cable (B) (fig. 4-37) to power supply PS2 terminal board TBI as indicated in the following table:

Table 4-2. Cable B Connections

Wire color	PS2 termination	Voltage	Destination
Grey	TB1 terminal 9*	15 VAC	A6Z2-G.
Grey	TB1 terminal 10*	15 VAC	A6Z3-G.
Yellow	TB1 terminal 16	+24 VDC	A6Z2-1-N.O.
White-yellow	TB1 terminal 17	+24 VDC switched	A6Z2-1-Com.

*Use ohmmeter to verify continuity between PS2 termination and destination.

(7) Connect cable (A) (fig. 4-37) to power supply PS2 terminal boards TB1 and TB2 as indicated in the following table. Use an ohmmeter to verify continuity between PS2 termination and destination.

Table 4-3. Cable A Connections

Wire color	PS2 termination	Voltage	Destination
Black (jumper)	TB1 terminal 1	120 VAC	PS2 TB1 terminal 4.
Black	TB1 terminal 1	120 VAC	FL1 TB2 terminal 3.
White (jumper)	TB1 terminal 2	120 VAC RTN	PS2 TB1 terminal 3.
White	TB1 terminal 2	120 VAC RTN	FL1 TB2 terminal 4.
White (jumper)	TB1 terminal 3	Wire connected above.	
Black (jumper)	TB1 terminal 4	Wire connected above.	
Black	TB1 terminal 5	120 VAC	A5J2 pin U.
White	TB1 terminal 6	120 VAC RTN	A5J2 pin Y.
Black	TB1 terminal 7	120 VAC	K1 pin 3.
White	TB1 terminal 8	120 VAC	K1 pin 4.
Green	TB1 terminal 15	Hazard grd	FL1 terminal E2.
Green	TB1 terminal 18	Hazard grd	A4 TB2 terminal 7.
Green	TB1 terminal 18	Hazard grd	A5J2 pin e.
Green	TB1 terminal 19	Hazard grd	BITB1 terminal 2.
Brown	TB1 terminal 21	+4.5 VDC RTN	A4TB2, terminal 5.
Red	TB2 terminal 2	+4.75 VDC	A4TB3 terminal 2.
Orange	TB2 terminal 3	+12 VDC	K1 terminal 5.
Orange	TB2 terminal 3	+12 VDC	A4TB2 terminal 1.
Brown	TM2 terminal 4	Com DC RTN	Interface TB6 terminal 2.
Brown	TM2 terminal 4	Com DC RTN	K1 terminal 6.
Blue	TB2 terminal 7	-12 VDC	A4TB2 terminal 2.
Violet	TB2 terminal 8	-48 VDC	A4TB2 terminal 3.
Brown	TB2 terminal 9	-48 VDC RTN	A4TB2 terminal 4.

(8) Clamp the power supply cables to the rear bracket of the power supply as shown in figure 4-45 (mounting holes are provided on the rear bracket).

(9) Use tie wrap MS17821-1-9 (item 17, table 4-1) to bind excess cable as shown in figure 4-45.

j. Validation of cable routing. While observing the cables from the rear of the enclosure, pull out and close reader mechanism A5, logic assembly A4, and power supply PS2 to insure that the cables are not binding. If cables are catching, readjust cable clamps and use tie wraps to eliminate the trouble.

k. Power reconnection. Reconnect the input power cable to filter assembly FL1 TB1 (21, fig. 4-5). Turn on ac power to the punched tape reader.

l. Changing reference designation plate. Remove the single punched tape reader reference designation plate from the inside of the right front enclosure door by pulling it off. Clean adhesive residue from area before replacing it with a dual reader reference designation plate (item 34, table 4-1).

m. Initial turn-on and checkout.

(1) Initial turn-on. Perform turn-on procedures outlined in paragraphs 3-1 and 3-2d, TM11-7440-239-15, AUTODIN Digital Subscriber Terminals (Station Manual).

(2) Self-test checkout procedures. Perform the self-test checkout procedures outlined in subparagraphs 3-3a and 3-3f, TM 11-7440-239-15.

(3) Back-to-back mode tests. Perform the back-to-back mode checkout procedures outlined in paragraph 3-5, TM 11-7440-239-15.

(4) On-line tests. Perform the on-line checkout procedures outlined in paragraph 3-6, TM 11-7440-239-15.

n. Secure enclosure. Replace the rear panel on the enclosure.

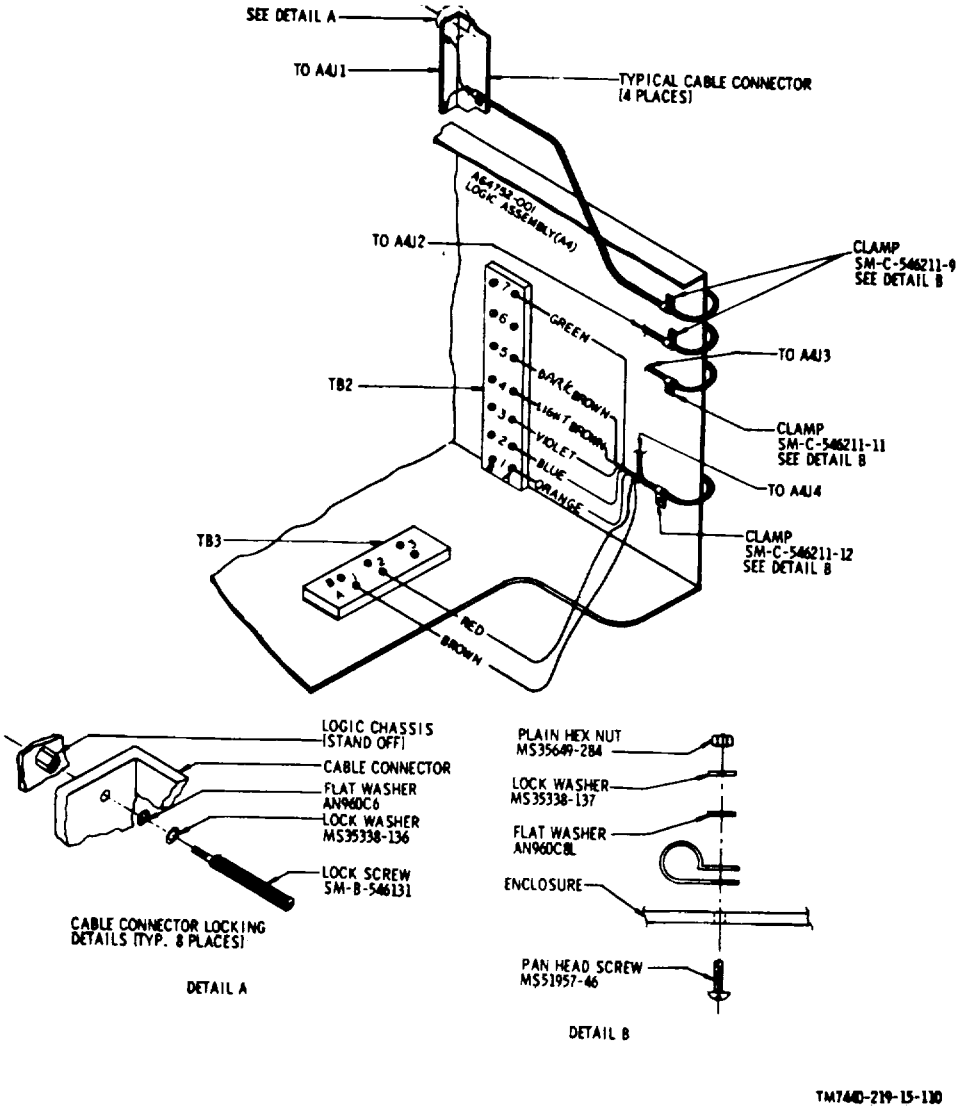


Figure 4-40. Logic assembly (A4) connections and cable clamping.

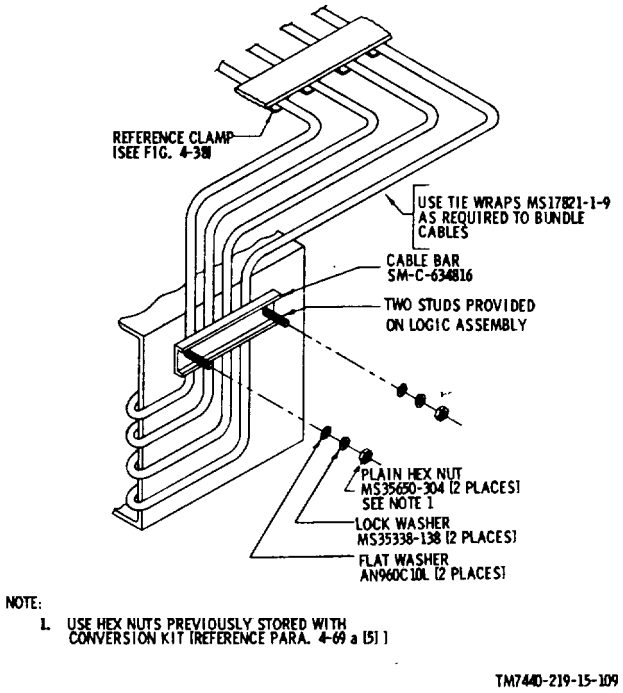


Figure 4-41. Routing and clamping of cables to rear of logic assembly (A4).

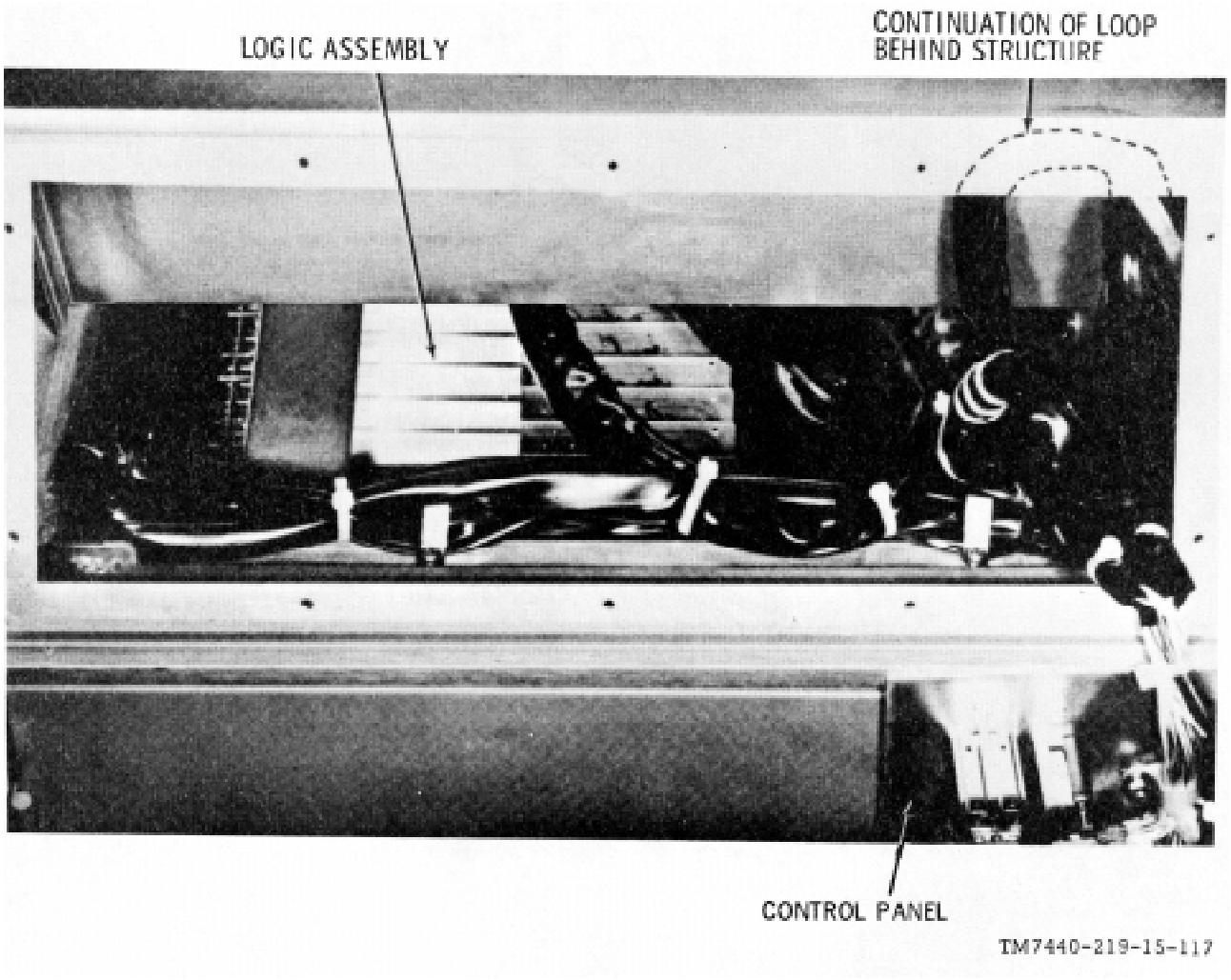
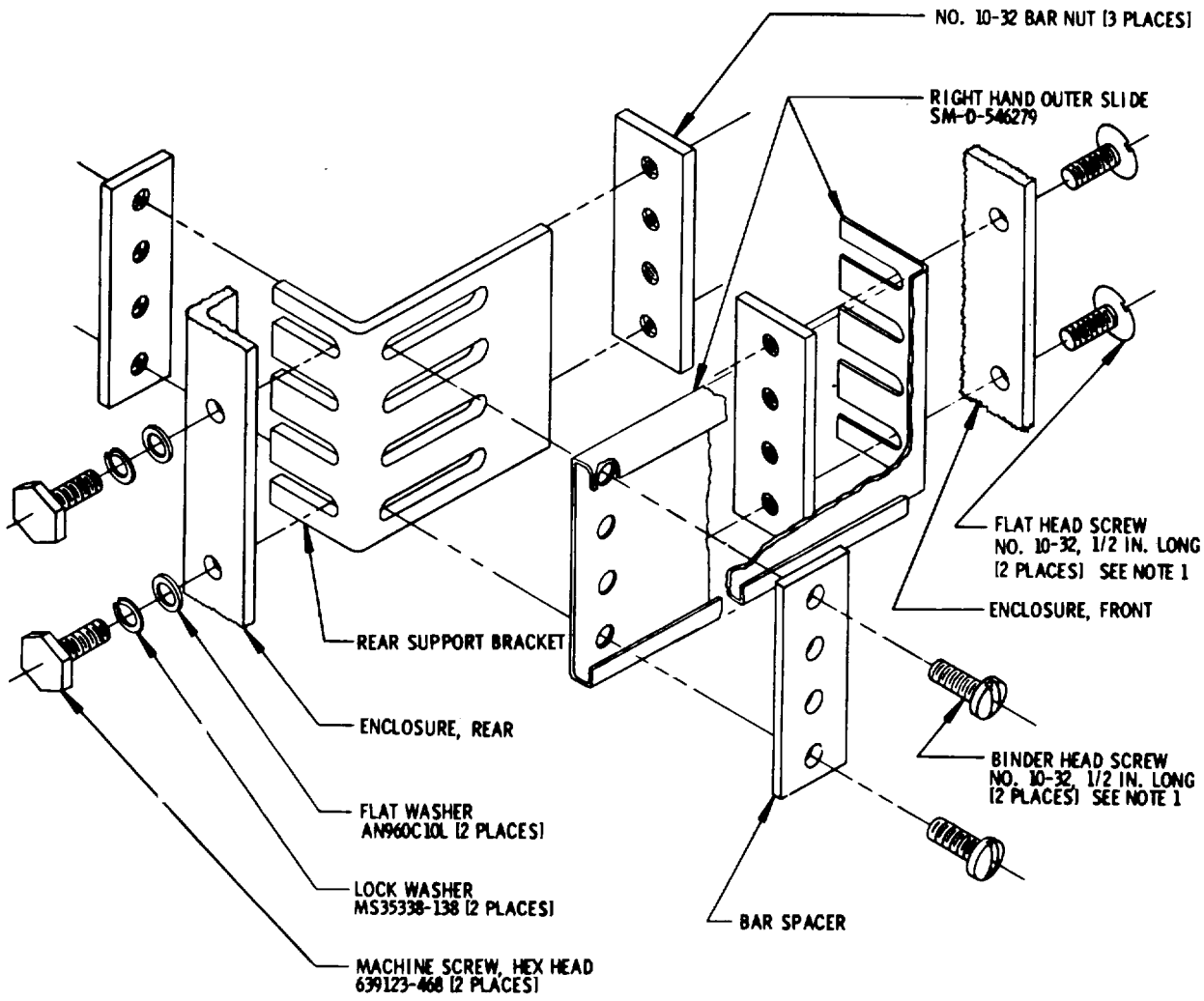


Figure 4-42. Dressing of excess cable behind control panel.

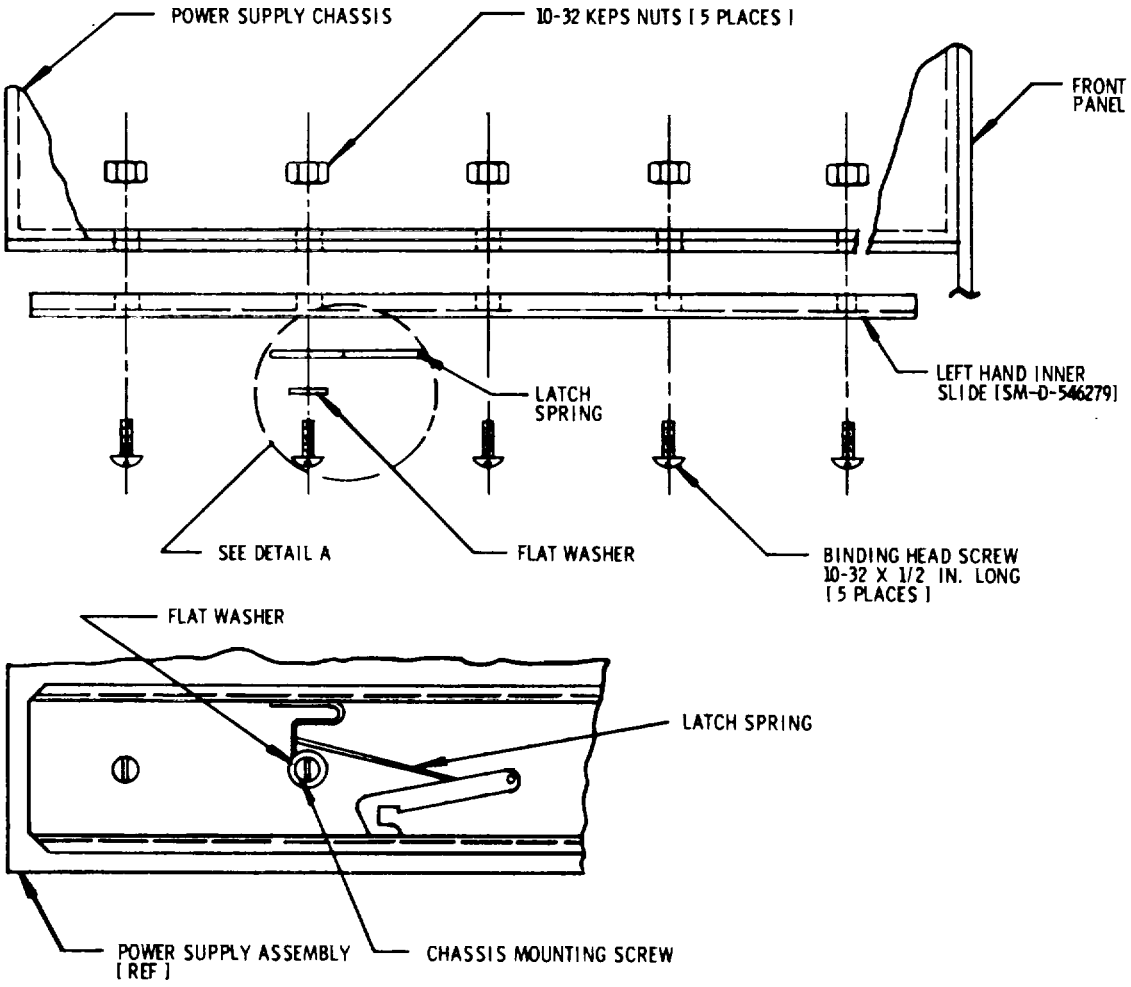


NOTES:

1. APPLY SEALING COMPOUND SM-B-583244-008 TO SCREW THREADS BEFORE AND AFTER FINAL TIGHTENING.
2. USE ITEMS 4, 5, AND 30, TABLE 4-1 TO SECURE SLIDES TO REAR OF ENCLOSURE IN PLACE OF HARDWARE FURNISHED WITH SLIDE. ALL OTHER HARDWARE SHOWN IS FURNISHED AS PART OF SLIDE.
3. RIGHT HAND SLIDE SHOWN. INSTALL LEFT HAND SLIDE IN A SIMILAR MANNER.

TM7440-219-15-118

Figure 4-43. Power supply outer slide installation details, exploded view.



NOTES:

1. LEFT HAND INNER SLIDE SHOWN. MOUNT RIGHT HAND SLIDE IN A SIMILAR MANNER.
2. ON SLIDES USING BUTTON TYPE LATCHES, THE SPRING AND FLAT WASHER ARE NOT USED.
3. MOUNTING HOLES ARE PROVIDED ON THE POWER SUPPLY ASSEMBLY.
4. ALL HARDWARE SHOWN IS FURNISHED AS PART OF SLIDE.

TM7440-219-15-115

Figure 4-44. Mounting of inner slide to power supply (PS2).

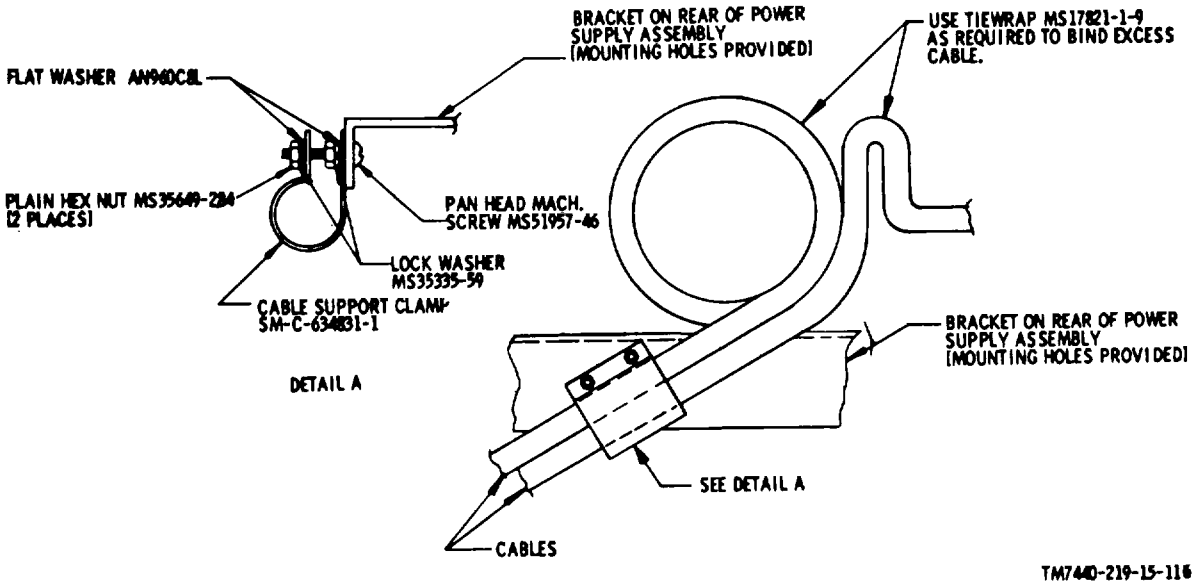


Figure 4-45. Clamping of cables to power supply (PS2).

Section VIII. TRANSMISSION IDENTIFICATION GENERATOR KIT MK-1 583/G INSTALLATION

4-70. General

a. Scope. This section contains the parts list, step-by-step installation procedures and checkout procedures required to install the transmission identification generator (TIG) kit MK-1583/G in the punched tape reader locations A7 and/or A8.

b. Power. For safety, it is imperative that the power to the punched tape reader be turned off during installation of the conversion kit. Thus, the DSTE tape send channel must be off-line during the conversion.

c. Manpower Required. To prevent damage to equipment and injury to personnel, two men will be required to perform the conversion.

4-71. Tools, Materials and Test Equipment Required

a. Tools and Test Equipment. The following recommended tools and test equipment (or equal) are required for installation of the TIG conversion kit:

Item Description	Part number	FSN	Quantity
Toolkit, electronic equipment	TK-105	5186-610-8177	1
Toolkit, general (AUTODIN DST)	----------	----------	1
Drill, electric, portable, 3/8-inch chuck capacity.	----------	----------	1
Drill bit, 3,/32-inch diameter	----------	----------	1
Drill bit, 3./16 inch diameter	----------	----------	1
Drill bit, 1/8-inch diameter	----------	----------	1
Drill bit, 3 '8-inch diameter	----------	----------	1
Knockout driver, hydraulic	Greenlee No. 7646-A--	----------	1
Punch die, 3,/4-inch round	Greenlee ----------	----------	1
Punch die, 1 1/2-inch round	Greenlee ----------	----------	1
Extender, printed circuit board	General Dynamics No. 809002-876.	----------	1
Multimeter AN,/USM-210	Simpson Model 260-5.	6625-149-6301 ----------	1
Voltmeter, Digital (or equivalent with accuracy of + 0 05 volt).	Non-linear Systems Inc Model X-1/5.	6625-168-0669 ----------	1
Oscilloscope AN/USM-309(V)l consists of:	Hewlett-Packard---------	6625-121-63281----------	1
Oscilloscope	Model 140A		
Generator	Model 1421A		
Amplifier	Model H06-1405A		
Test Prods (2 ea)	No. C16-10003B		
Probe tip, coil spring	Textronix No. 206-0061-00	6625-054-02312----------	2
Cart, oscilloscope	Hewlett-Packard1 model 1119B.	----------	1
Cleaner, vacuum, hand type	Ideal Mfg. Co. No. 22-113	7910-250-8039 ----------	1

b. Materials. The following materials are required for installation of the TIG conversion kit:

(1) Solder, lead-tin alloy (60,/40), rosin core, 1/32-inch diameter.

(2) Installation assembly, transmission identification generator kit MK-1583/G, General Dynamics Electro Dynamics Division part No. 00-001498. Table 4-4 lists the parts contained in the installation kit.

Table 4-4. Parts List for Transmission Identification Generator Kit MK-1583/G

Item No.	Qty.	U/M	Part number	Item description
1	1	EA	*00-001509	Special purpose electrical cable assembly (EM signal).
2	1	EA	*00-001497	Special purpose electrical cable assembly (TIG to TIG).
3	1	EA	*00-001501	Electrical equipment chassis assembly (A7 or A8).
4	1	EA	*12-890081	Control logic assembly (PC card A1A2 or A4A2).

Table 4-4. Parts List for Transmission Identification Generator Kit MK-158./G-Continued

Item No.	Qty.	U/M	Part number	Item description
5	80	FT	SMB546288-444	Electrical wire
6	16	EA	MS17821-1-9	Adjustable cable strap
7	1	EA	*540205-109	Nylon cable clamp
8	1	EA	*540205-120	Nylon cable clamp
9	2	EA	SMC546215-2	Polarizing key (connector)
10	1	EA	*04-001348	Extraction hand tool
11	1	EA	SMC546215-1	PC card insulator (XA1A2 or XA4A2).
12	2	EA	MS51957-27	Screw, panhead, No. 6-32, 5/16 in. long.
13	2	EA	MS35338-136	Lockwasher, split, No. 6
14	2	EA	AN960C6L	Washer, flat, No. 6.
15	4	EA	MS51958-63	Screw, panhead, No. 10-32, 1/2 in. long.
16	4	EA	MS35650-304	Nut, hexagon, No. 10-32
17	4	EA	MS35338-138	Lockwasher, split, No. 10
18	8	EA	AN960C10	Washer, flat, No. 10
19	6.28	IN	MS21266-2N	Plastic grommet, edging
20	1	EA	*04-001345-1	Adhesive
21	1	EA	*00-001551	TIG kit repair parts list
22	1	EA	*01-002851	Reference designation plate
23	2	EA	*04-001337	Cable tie mounting device
24	2	EA	MS51959-18	Screw, flathead. No. 4-40, 5/8 in. long
25	2	EA	MS35949-244	Nut, hexagon, No. 4-40
26	2	EA	MS35338-135	Lockwasher, No. 4
27	2	EA	AN960C4L	Washer, flat, No. 4
28	1	EA	*540205-112	Nylon cable clamp
29	1	EA	SM-E-546543	Output deselect (PC card CCU A1A30)

*General Dynamics, Electro Dynamics Division part number.

4-72. Installation Procedure

a. Preliminary Procedure.

(1) Check the conversion kit parts against the parts list (table 4-4) to verify that all of the necessary parts are contained in the kit.

(2) Read the entire installation procedure outlined in paragraphs 4-70 through 4-72 before installing the TIG.

(3) Store TIG kit repair parts list (item 21, table 4-4) with appendix D for use in the logistics support of TIG until such time as these parts have been formally incorporated in the repair part and special tools list.

(4) For safety, disconnect the 120 volts ac power to the punched tape reader.

(5) Remove the top rear panel (72, fig. 4-5) from the punched tape reader. Identify and retain the mounting hardware (69, 70, and 71) for use in replacement of the panel after completion of the conversion.

(6) Determine if the TIG is to be installed in the A7 or in the A8 assembly location on the punched tape reader. If you are installing the TIG in the A7 location (6, fig. 4-47), references made in the following paragraphs will be to punched tape reader number 1 interface plate assembly, logic assembly Al, and power supply PS1. If you are installing the TIG assembly in the A8 location (7, fig. 4-47), then the references in the following paragraphs will be to the punched tape reader number 2 interface plate assembly, logic assembly A4, and power supply PS2.

b. Reference Designation Plate. Take the reference designation plate (item 22, table 4-4) from the kit parts and-

(1) If installing a dual TIG kit in both the A7 and A8 locations, remove the protective covering and press into place above existing reference designation plate on the inside of the right front door as shown by item 1 of figure 4-47.

(2) If installing only one TIG assembly, cut the reference designation plate on the line between A7 and A8 and discard the half that will not be installed. Then, removing the protective covering, press into proper place above the existing reference designation plate on the inside of the right front door as shown by item 1, of figure 4-47.

c. Modification of Logic Assembly A1 (or A4). It is not recommended that the logic assembly be removed from the punched tape reader inclosure to perform the following modifications. It will be necessary, however, to depress the slide stop catches to allow the logic assembly to be withdrawn further from the cabinet to make the wire wrap connections to be added connector J1 and J4 terminals.

Exercise caution that the logic assembly is not pulled so far out of the inclosure that it is no longer supported by the slides.

(1) Tale the PC card insulator (item 11, table 4-4) and identify one end of the insulator contacts as terminal 1. Then install the two insulator polarizing keys (item 9, table 4-4) between pins 3 and 4 and between pins 18 and 19. Use a small amount of adhesive (item 20, table 1-4) to secure the polarizing keys, but insure the adhesive does not flow onto the insulator contact pins.

(2) Install the PC card insulator in the logic assembly A2 location. Insure the insulator contact identified as pin I in (1) above is placed at the top of the logic assembly chassis. Secure the insulator (24, fig. 4-47) using two No. 6 32, 5/16-inch long panhead screws (item 12, table 4-4, two No. 6 lockwashers (item 13), and two No. 6 flat washers (item 14) as shown on figure 4-47 (items 21, 22, and 23).

CAUTION

Extreme care must be taken in performing the backplane wiring modifications in the following steps. Any error in wiring will result in improper operation. In addition, damage to equipment is possible when power is applied. Before removing a wire, first mark both contact pins, then verify continuity with an ohmmeter. In a similar manner, verify continuity between terminals for each added wire. In locating a terminal, *always* double check first to insure the proper connector or jack location has been selected and then double check that the proper pin on that connector or jack has been identified.

(3) Remove the following wires from the logic assembly backplane:

From-	To-
XA05-10	XA15-16
XA05-14	XA14-6
XA05-W	XA06-15
XA05-Y	XA06-W
XA05-Z	XA06-X
XA05-21	XA06-T
XA05-E	XA06-18
XA05-K	XA06-5

From-	To-
XA05-L	XA06-23
XA05-7	XA07-16
XA15-D	XA16-H

(4) Using wire (item 5, table 44), add the following wires to the logic assembly backplane. Route the wires in a square path similar to existing wiring in the backplane. In addition, in the case of the longer wires, route the new wire under existing wiring at approximately 4- to 6-inch intervals to hold the wiring flush against the logic assembly chassis.

From-	To-
J01-A	XA02-13
J04-A	XA02-A
J04-E	XA02-N
J04-J	XA02-18
J04-01	XA02-A
J04-03	XA04-09
J04-06	XA02-B
J04-09	J04-11
J02-14	J04-13
XA01-T	XA02-D
XA02-E	XA05-14
XA02-K	XA04-18
XA02-V	XA06-T
XA02-Z	XA05-E
XA02-02	XA04-B
XA02-05	XA14-06
XA02-16	XA06-W
XA02-20	XA05-W
XA02-23	XA05-Z
XA02-10	XA07-16
J01-B	J04-P
J04-B	XA02-M
J04-F	XA02-R
J04-K	XA02-W
J04-02	XA02-01
J04-04	XA02-14
J04-07	XA02-02
J04-11	J04-15
J04-14	XA01-14
XA01-01	XA02-A
XA02-F	XA15-16
XA02-T	XA06-23
XA02-X	XA05-Y
XA02-AA	XA05-07
XA02-03	XA03-03
XA02-09	KA14-10
XA02-17	KA06-05
XA02-21	XA05-K
XA02-06	XA15-D
XA02-F	XA02-L
J02-14	XA03-01
J04-D	XA02-P
J04-H	XA02-S
J04-03	XA02-01
J04-05	XA02-06
J04-07	J04-08
J04-12	J04-13

From-	To-
XA01-B	XA02-B
XA02-C	XA03-C
XA02-H	XA04-06
XA02-U	XA06-18
XA02-Y	XA05-L
XA02-01	XA03-A
XA02-04	XA04-D
XA02-15	XA06-15
XA02-19	XA06-X
XA02-22	XA05-21
XA02-11	XA02-AA

d. Logic Assembly Wiring Checkout Procedures.

NOTE

Do not install the new PC card A2 into the logic assembly until after the following voltage checks have been completed.

(1) Apply 120 VAC power to the punched tape reader chassis.

(2) Depress the AC POWER switch on the punched tape reader. Observe the AC POWER and the DC POWER indicators light white.

(3) Use a voltmeter and check following approximate voltages to groundpoint XA1-A:

Test point	Voltage
XA2-1	0 volt
XA2-A	0 volt
XA2-2	+4.75 volts
XA2-B	+4.75 volts
XA2-3	- 12 volts
XA2-C	+ 12 volts
J04-1	0 volt
J04-2	0 volt
J04-3	0 volt
J04-9	0 volt
J04-11	0 volt
J04-12	0 volt
J04-13	0 volt
J04-15	0 volt
J04-6	+4.75 volts
J04-7	+4.75 volts
J04-8	+4.75 volts

(4) Use a voltmeter and check the voltage between all terminals on XA2 to groundpoint XA1-A. With the exception of terminals XA2-3 and XA2-C (-12 VDC and + 12 VDC respectively), all of the terminals should read between 0 volt and +4.75 volts.

(5) Using a digital voltmeter, check power supply output voltages as outlined in paragraph 4-63. Adjust power supply output voltages if required.

(6) Depress the AC POWER switch indicator on the punched tape reader. Check to insure the AC POWER and the DC POWER indicators are not illuminated.

(7) Install PC card A2 (item 4, table 4-4) in the logic assembly.

(8) Install a temporary jumper wire between terminals XA2-A and XA2-M. This wire functions to force the TIG control logic PC card A2 into the off-line mode.

(9) Depress the AC POWER switch indicator on the punched tape reader. Observe that the AC POWER, DC POWER, and STOP indicators are illuminated.

(10) Check the punched tape reader for proper operation in local test mode by following procedures outlined in paragraphs 2-2 through 2-8.

(11) Perform back-to-back mode test of the punched tape reader, through the CCU, to the paper tape punch. Verify that the punched tape reader operates in a normal manner without faults and the message punched by the receive device is identical to the transmitted message from the punched tape reader. Procedures outlined in paragraph 3-5, TM 11-7440-239-15, may be used as a guide to operating other terminal equipment.

NOTE

At this point in the installation procedure of the TIG assembly, it is possible to place the punched tape reader back in the on-line mode. Then, complete the installation of the TIG assembly at a later time.

e. Preliminary Procedure for Final Step of Installation.

(1) Remove AC POWER from the punched tape reader unit.

(2) Remove PC cards Al through A5 (items 1, 2, 3 or 3.1, and 4 or 4.1, fig. 4-8 and 26, fig. 4-47) from the logic assembly Al or A4 of the punched tape reader being modified. Identify each card removed to insure proper replacement at a later date.

(3) Remove the temporary jumper wire from terminals XA2-A to XA2-M.

f. Printed Circuit Card A2 Strapping Options.

During initial installation, several solder type hard-wire strapping options must be made on the PC card to be installed in the logic assembly A1A2 or A4A2 location. The message start position strapping board determination if the TI sequence begins with the 1st, 2nd, 3d, or 4th character of the TI format (para 3-84*b*).

The channel designator strapping board generates the three alphabetical characters identifying the terminal that are transmitted as the 5th, 6th, and 7th characters of the TI format. Use wire (item 5, table 4-4) to make the strap on PC card A2. Strip insulation from this wire prior to making connections. These straps are described below.

(1) Determine the message start character position assigned to the terminal.

(2) Refer to figure 4-45.1 and identify the four terminals used for the message start position strapping board.

(3) Solder strapping wires from terminals 2° and 2' to terminals 0 and 1 as follows:

Start position		
First character position	TI format transmitted	Strap connections
1	ZCZC THROUGH NUL	2° TO 0 and 2' TO O
2	CZC THROUGH NUL	2° TO 1 and 2' TO 0
3	ZC TROUGH NUL	2° TO 0 and 2' TO 1
4	C THROUGH NUL	None

(4) Determine the three alphabetical characters that are assigned as channel designation characters to identify the terminal.

(5) Refer to figure 3-3 and determine the ASCII code for columns 1 through 7 to be used on each of the three channel designation characters.

(6) Refer to figure 4-45.1 and locate the 35 terminals used in the channel designator strapping board. The seven terminals 1A through 7A are used as a strap options for the first channel designator character. Terminals B1 through 7B are strap options for the second character and terminals 1C through 7C are used for the third character. Make a solder-type hard-wire strap from these 21 terminals to the nearest terminal 0 or 1 terminal depending upon the ASCII code for each bit of the three characters. Terminal 1A should be connected as indicated in column 1 of chart in figure 3-3 for the character used as the first channel designation character. In a similar manner, make the remaining strap connections by relating the numerical portion of the PC card A2 terminal identification to the column number shown in figure 3-3.

g. Installing TIG Chassis.

(1) Remove the cover (2, fig. 4-48) from the TIG assembly by removing the four flathead screws (1).

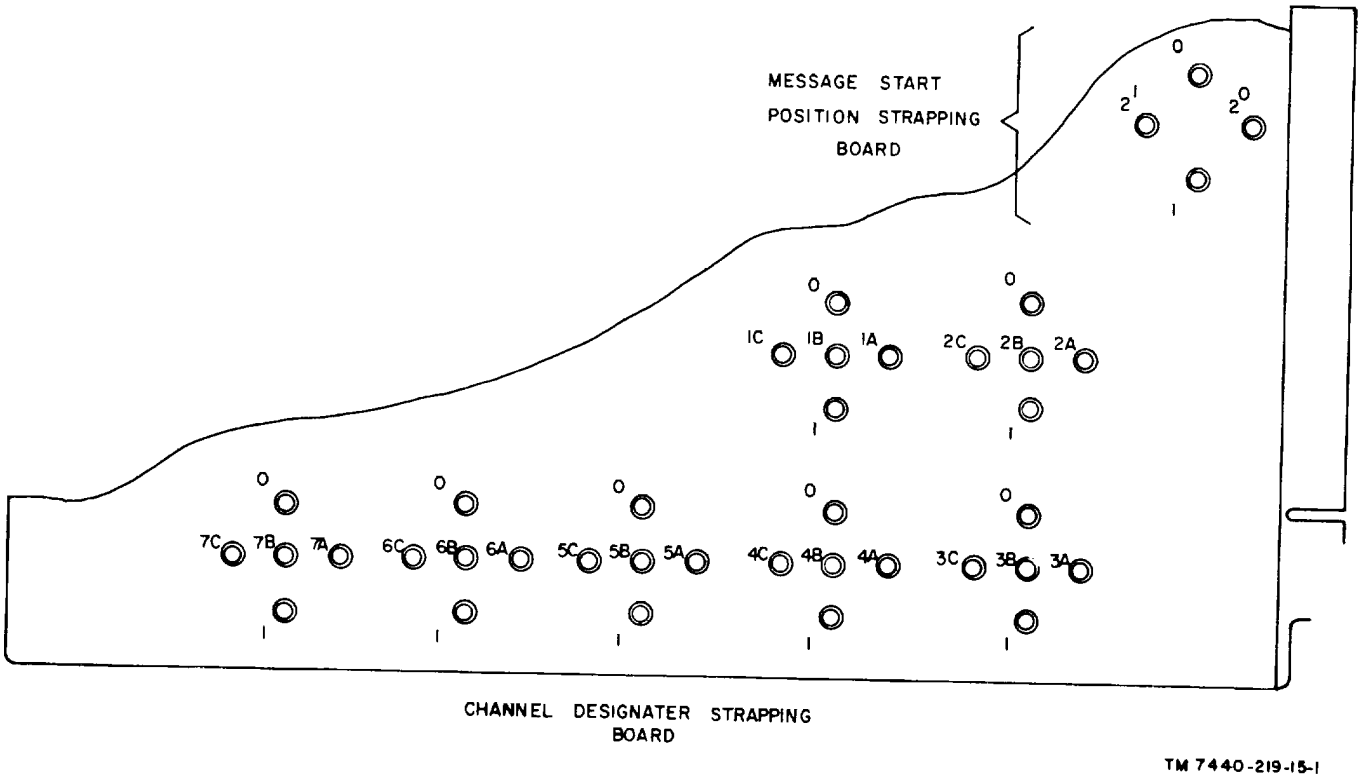


Figure 4-45.1. PC card A2 strapping options.

(2) Place the TIG assembly chassis in the proper position on the top of the punched tape reader inclosure as shown in figure 4-46. Position the TIG chassis flush with the rear of the punched tape reader inclosure, the blue painted portion of the TIG chassis 1/2 inch from the side.

(3) Using a pencil or a scribe, mark the position of all five holes of the TIG chassis on the top of the punched tape reader inclosure.

(4) Remove the TIG chassis and center punch all five holes.

(5) Place protective covering material such as plastic or cloth under the top of the punched tape reader inclosure to prevent metal chips from getting into the punched tape reader mechanism, logic assembly, and power supply.

(6) Drill a 3/32-inch pilot hole in all five holes marked on the punched tape reader inclosure.

(7) Using a 3/16-inch drill bit, enlarge the four mounting holes.

(8) Using a 3/8-inch drill bit, drill the center hole to be used as a guide for the knockout punch.

(9) Insert a 3/4-inch round punch die into the hydraulic knockout driver and punch out a 3/4-inch hole.

(10) Remove the 3/4-inch die and insert a 11/2-inch round die in the hydraulic knockout driver. Use the 3/4-inch hole made in previous step as a pilot and punch out a 11/2-inch hole. Remove any burrs from the hole.

(11) Locate the two vertical angle supports running along either side of the punched tape reader inclosure. Take a cable tie mounting device (item 23, table 4-4) and position the mounting device flush with the top of the angle support as shown by item 17, figure 4-47. Using a pencil or scribe, mark the position of the hole in the center of the mounting device on the angle bracket.

(12) Center punch the hole marked in preceding step and drill a 1/8-inch diameter hole in the angle bracket.

(13) Using one each No. 4-40 flathead screw, No. 4-40 hex nut, No. 4 lockwasher, and No. 4 flat washer (items 24 through 27, table 4-4), remove the protective covering and mount the cable tie mounting device to the punched tape reader inclosure angle bracket. Insure the cable tie mounting device is on the front side of the

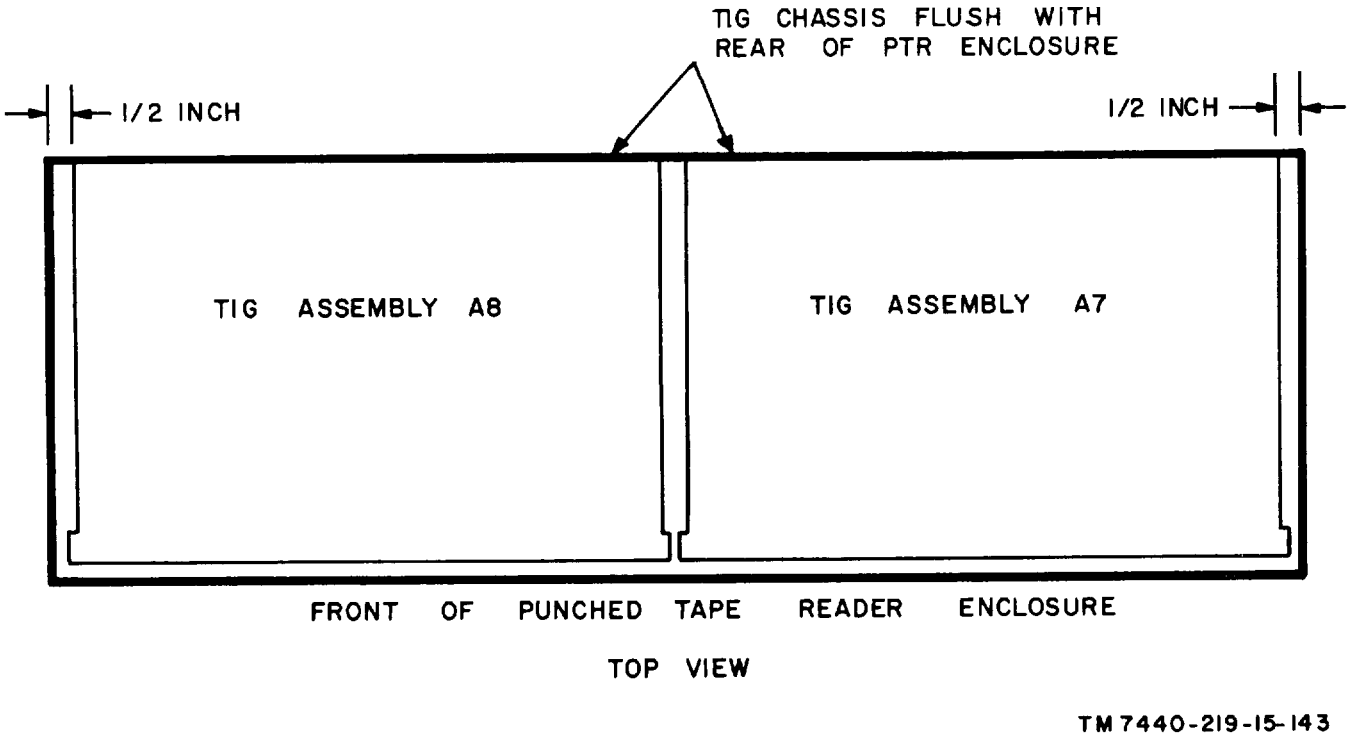


Figure 4-46. TIG chassis position.

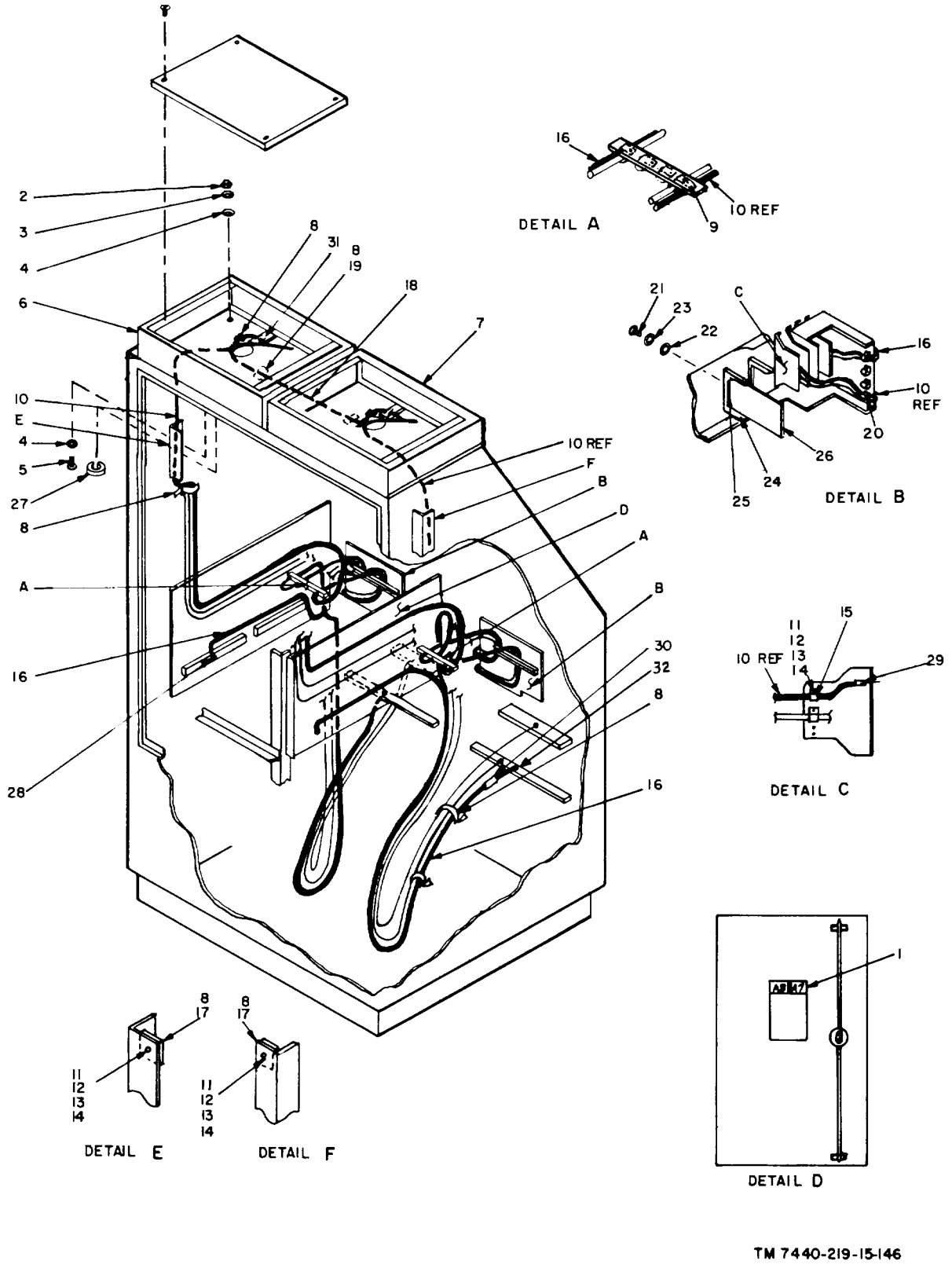


Figure 4-47. Transmission identification generator kit, component location diagram.

1 Reference designation plate
2 Nut, hex, No 10-32
3 Lockwasher. No. 10
4 Washer, flat, No. 10
5 Screw, panhead, No. 10-32, 5/16 in. long
6 TIG assembly A7
7 TIG assembly A8
8 Cable strap
9 Cable clamp
10 TIG cable assembly
11 Nut, hex, No. 4-40
12 Lockwasher, No. 4
13 Washer, flat, No. 4
14 Screw, flathead, No. 4-40, 5/8 in. long
15 Cable clamp
16 EM signal cable assembly
17 Cable tie mounting device
18 TIG to TIG cable assembly
19 Cable tie mounting device
20 Cable clamp
21 Screw panhead, No. 6-32, 5/16 in. long
22 Washer, flat, No. 6
23 Lockwasher, No. 6
24 PC card insulator
25 Polarizing key
26 PC card (A1A2)
27 Grommet
28 Terminal lug
29 Electrical contact pin
30 Identification plate
31 Terminal lug
32 Terminal lug

Figure 4-47-Continued.

angle bracket with the hex nut and washers to the rear of the enclosure.

(14) Take the plastic grommet (item 19, table 4-4) and place it in the 1 1/2-inch hole to verify proper length. If necessary, trim the end of the grommet to insure a snug fit in the hole. Remove the grommet.

(15) Apply adhesive (item 20, table 4-4) to the portion of the grommet that will be in contact with the metal portion of the reader enclosure and then place the grommet into the 1 ½ inch hole in the top of the punched tape reader.

(16) Feed the cable attached to the TIG assembly chassis through the large hole in the top of the enclosure and position the TIG assembly chassis in place. Secure by using the 4 panhead screws, 4 nuts, 4 lockwashers, and 8 washers (items 15 through 18, table 4-4). Position the hardware as shown in figure 4-47 (items 2, 3, 4, and 5).

(17) Remove the bottom cable clamp (124, Detail E, I, or L, fig. 4-5) from the inside rear of the logic assembly chassis. This is the cable clamp that secures the cable routed to TB2, TB3, and J4. Retain the hardware for later replacement.

(18) Disconnect the contact assembly plugged into J4. In the case of the single punched tape reader, this contact assembly is identified as item 40, figure 45, detail E. In the case of dual punched tape reader units, the contact assembly in the logic assembly Al is identified as item 42 in figure 45, detail I and the contact assembly in the logic assembly A4 is identified as 46, in figure 4-5, detail L.

(19) Remove the cable bar clamp (130, fig. 4-5) by removing two nuts (127), two lockwashers (128), and two washers (129) from the rear of the logic assembly being modified. Retain the cable bar clamp and hardware for later replacement.

(20) Route the TIG assembly cable (10, fig. 4-47) in the following manner (fig. 4-47):

(a) From the TIG assembly chassis to the cable tie mounting device (17, fig. 4 47).

(b) Follow the punched tape reader angle bracket down to the top rear of the interface plate and then forward to the top front of the interface plate.

(c) From the above point, the TIG assembly cable should follow the four cables going to logic assembly.

(d) Cable should then be routed so electrical contacts can be inserted into the contact assembly plugged into A1J4 or A4J4. See (18) above for identification of contact assembly.

(21) Insert the electrical contact pins on the end of each wire into the contact assembly identified in (20) above. Press each pin into its appropriate socket until an audible click is heard. The electrical contact removal tool (item 10, table 4-4) is provided in case of error. To remove a contact, insert the removal tool as far as it will go into the contact assembly from the side opposite of the wire. Grasp the wire and pull it out and then remove the removal tool. The following identifies the placement of each wire into the contact assembly:

WIRE COLOR	PS (A1J4 or A4J4) termination
WHITE-RED	15
WHITE-RED-VIOLET	14
GRAY	13
WHITE-ORANGE	12
WHITE-BROWN	11
WHITE-YELLOW-VIOLET	9
WHITE-RED-ORANGE	8
WHITE-ORANGE-YELLOW	7
WHITE-BROWN-ORANGE	6
WHITE-BLACK-GRAY	5
WHITE-BROWN-VIOLET	4
WHITE-ORANGE-GREEN	3
WHITE-BROWN-YELLOW	2
WHITE-RED-GRAY	1
WHITE-GRAY	P
WHITE-BLACK-ORANGE	K
WHITE-BLACK-YELLOW	J
WHITE-BLACK-GREEN	H
WHITE-BLACK-VIOLET	F
WHITE-BLACK-RED	E
WHITE-BLACK-BROWN	D
WHITE-YELLOW-GRAY	B
WHITE-BROWN-RED	A

(22) Open the front panel of the TIG assembly to gain access to TIG assembly switch S1 and PC card Al. Use an ohmmeter and verify accuracy of previous step by measuring continuity between the following points:

Contact assembly P3 (A1J4 or A4J4) terminal	TIG assembly A7 or A8 terminal
1	A1E7
2	A1E8
3	A1E9
4	A1E13
5	ALE14
6	A1E10
7	A1E11
8	S1-3
9	S1-1
13	S1-5
14	A1E15
A	A1E6
B	S1-2
D	A1E19
E	A1E18
F	A1E16
H	A1E17
J	A1E20
P	DS1-C

(23) Secure the TIG assembly cable (10, fig. 4-47) to the contact assembly as shown in detail C of figure 4-47. Use one cable clamp (item 7, table 4-4) and hardware consisting of one each No. 4-40 flathead screw (item 24), No. 4-40 hex nut (item 25), flat washer (item 27), and lockwasher (item 26).

(24) Secure the cables routed to logic assembly TB2, TB3, and J4 with cable clamp (20, fig. 4-47). Use the cable clamp (item 8, table 4-4) and the hardware removed from this location in a previous step.

(25) Complete securing of the TIG assembly cable by proceeding in the following manner:

(a) Refer to detail A of figure 4-47 and remove the hardware holding the end cable clamp. Install cable clamp (item 28, table 4-4) as shown in figure 4-47 (item 9) and replace hardware to secure both cable clamps. Push the logic assembly to its closed position. Replace cable bar (130, fig. 4-5) to hold all cables. Do not tighten hex nuts (127) at this time.

(b) Use cable straps (item 6, table 4-4) and tie the TIG assembly cable to the other cables at two different points between the cable clamp installed in (a) above and the logic assembly.

(c) Using one cable strap (8, fig. 4-47), secure the TIG assembly cable (10) to the cable tie mount (17) previously installed.

(d) Pull the logic assembly to its open position.

(e) Use cable straps to secure the TIG assembly cable to the angle bracket and the reader mechanism cables to the top front of the interface plate assembly. Place the cable straps at 10 to 15-inch intervals.

(f) Use cable straps as required between the cable clamp cluster (detail A, fig. P47) and the top front corner of the interface plate assembly to prevent any cable from interfering with logic assembly slide operation. Excess cable length should be secured at this point.

(26) Disconnect the remaining contact assemblies plugged into the logic assembly being modified.

(27) Take the EM signal cable assembly (item 1, table 4-4) and use an ohmmeter to measure continuity to determine which electrical contact is connected to the longest white wire. Take this wire and insert it into terminal B of the contact assembly to be connected to the A1Jl or A4J1 connector.

(28) Take the second wire in the EM signal cable assembly and insert its contact pin into the insulator for terminal A of the same contact assembly.

(29) Secure the EM signal cable assembly to the contact assembly by removing the cable clamp (58, fig. 4-5) from the contact assembly and then replacing it so that the cable clamp secures both cables.

(30) Replace all four contact assemblies into their proper connector. Also replace PC cards Al through A5.

(31) Secure the EM signal cable assembly to the inside rear of the logic assembly chassis by removing the top cable clamp (121, fig. 45) and then replacing the cable clamp to secure both cables.

(32) Route the EM signal cable (16, fig. 447) in the same path as the other cable connected to the contact assembly A1J1 (or A4J1) to the interface control panel.

(33) Secure the cable by removing the cable clamp (detail A, fig. 4-47) and replacing the cable clamp to hold both cables.

(34) Use cable straps (item 6, table 4-4) and tie the EM signal cable to the adjacent cables

at two different points between the cable clamp installed in (33) above and the logic assembly.

(35) Tighten the hardware (127, 128, and 129, fig. 4-5) holding cable bar clamp (130). Insure all cables to the logic assembly are securely held by the cable bar clamp.

(36) Route the short lead of the EM signal cable to the interface plate assembly and connect the white wire to terminal board TB2 (or TB5), terminal 9. Connect the black wire to terminal board TB2 (or TB5), terminal 10.

(37) Route the long lead of the EM signal cable to the power supply by following the path of the other power cables. Connect the white wire to the power supply (PS1 for the A7 assembly; PS2 for the A8 assembly) terminal board TB1, terminal 9. Connect the black wire to the power supply terminal board TB1, terminal 19.

(38) Complete securing of the EM signal cable by using cable straps (item 6, table 4-4) at 8 to 10-inch intervals to tie the EM signal cable to adjacent cables. Insure excess length of the cable is looped on the floor of the punched tape reader enclosure.

h. Dual TIG Installation Interconnection. In those installations having dual TIG assemblies A7 and A8 both installed, the TIG to TIG interconnecting cable assembly (item 2, table 4-4) may be optional. Install this cable in the following manner:

NOTE

In single TIG installations this cable is not used. Also, in dual TIG installations there will be an excess TIG to TIG cable assembly since the cable is furnished as a part of both TIG modification kits. Discard excess cable(s).

(1) Attach the end of the cable having five terminal lugs to the terminal board TB1 in the TIG assembly A7. Make the connections to terminal board A7TB1 as follows:

Wire	Termination
BLACK	A7TB1-8
RED	A7TB1-7
WHITE	A7TB1-5
BLUE	A7TB1-4
BLACK (SHIELD)	A7TB1-6

(2) Route cable (item 18) as shown on figure 4-47 from the A7 assembly, through the punched tape reader enclosure, to the A8 assembly. Connect the four terminals to A8TB1 as follows:

Wire	Termination
BLACK	A8TB1-5
RED	A8TB11-4
WHITE	A8TR1-8
BLUE	A8TB1-7

(3) Attach two (one supplied as a part of each TIG modification kit) cable tie mounting devices (item 23, table 4-4) to the inside top of the punched tape reader enclosure as shown by item 19 on figure 4-47. These mounting devices should be placed approximately 4 to 5 inches from the holes in the top of the punched tape reader enclosure and positioned so a cable tie can be fed through the mounting device and around the TIG to TIG cable assembly (18, fig. 4-47).

(4) Position the TIG to TIG cable assembly so an equal amount of excess cable is looped in each TIG assembly and then secure the cable by using four cable straps (item 6, table 4-4) tying the cable to the two mounting devices (5, fig. 4-48) inside the TIG chassis and the two mounting devices installed in the preceding step.

i. Replace the TIG cover (2, fig. 4-47) with the four flathead screws (1).

j. Not used.

k. At the common control unit, open the right-hand front door, pull out the logic assembly Al, and remove PC card A30 (26, fig. 4-6, TM 117440-214-15).

l. Take the new CCU PC card A1A30 (item 29, table/part No. SM-E-546543) and insert it into the CCU A1A30 location.

m. Retain the old CCU PC card A1A30 (part No. SM-E-546581) for future replacement into the common control unit should the TIG kit be removed from the punched tape reader or the common control unit returned to the depot.

n. Secure the common control unit, by closing the logic assembly Al and shutting the right-hand front door.

4-73. Initial Turn-On and Checkout

a. Initial Turn-On.

(1) Visually inspect the punched tape reader and the TIG kit to insure there are no loose or shorted wires, tools left in the equipment, or other condition which might cause damage when power is applied.

(2) Restore the 120 VAC power to the punched tape reader cabinet.

(3) Perform initial turn-on procedures outlined in paragraph 3-2d, AUTODIN Digital Subscriber Terminals (Station Manual).

(4) Place the TIG ON-LINE/OFF-LINE switch in the ON-LINE position. Check that the TIG ON indicator lights white. Check that the TIG Channel Sequence Number NEXT NUMBER indicators display 000.

(5) Set the TIG MANUAL UPDATE thumbwheel switches to 111 and then depress the LOAD switch. Check that the TIG Channel Sequence Number NEXT NUMBER indicators display 111.

(6) Using the same procedure as outlined in preceding paragraph, check the loading of 222, 333, 444, 555, 666, 777, 888, 999, and 000.

(7) Place the TIG ON-LINE/OFF-LINE switch in the OFF-LINE position. Check that the TIG ON indicator is not lighted. Check that the TIG channel sequence number NEXT NUMBER indicators display 000 (the last number loaded into the channel sequence circuitry).

b. Checkout Procedure, Reader, Punched Tape RP-154(P)/G. Perform the following checkout procedures on the punched tape reader with the TIG in the off-line mode:

(1) Perform the punched tape reader selftest checkout procedures outlined in paragraphs 3-3a and TM 11-7440-239-15.

(2) Perform the back-to-back mode checkout procedures applicable to punched tape reader operation outlined in paragraph 3-5, TM 117440-239-15.

(3) Perform the on-line checkout procedures applicable to punched tape reader operation outlined in paragraph 3-6, TM 11-7440-239-15.

c. Self-Test Checkout Procedure, Transmission Identification Generator MK-1583/,G (TIG).

(1) Place the TIG ON-LINE/OFF-LINE switch in the ON-LINE position. Check that the TIG ON indicator illuminates.

(2) Perform the punched tape reader selftest checkout procedures outlined in paragraphs 3-3a and 3f, TM 11-7440-239-15. Check that the punched tape reader performs in a normal manner. Check that the TIG NEXT NUMBER indicators do not change the count displayed.

d. Back-to-Back Checkout Procedure, TIG.

(1) Insure the common control unit PC card A1A30 has been replaced with the new PC card (item 29, table 4-4).

(2) Failure to install the new PC card in the CCU A1A30 location will cause the CCU to hang up during back-to-back operation. Theory of operation and schematic diagrams of the CCU PC card A1A30 (part No. SM-E-546543) are provided in TM 11-7440-214-15.

(3) Perform initial turn-on procedures on the CCU as outlined in paragraph 3-2b, TM 11-7440-239-15.

(4) As determined by the particular terminal configuration, perform initial turn-on procedures on the paper tape punch (para 3-2g or 3-2i) that will be used as the output and receive monitor device for the paper tape reader being checked.

(5) The tests below assume that the output and monitor devices are ready for operation at all times. Unless specifically directed otherwise, keep the output devices adequately supplied with blank tape and paper.

(6) Before starting any test, read the entire test to become familiar with the procedure to be followed and the expected results.

(7) Preliminary test setup.

(a) Check that all ASSIGNED indicators on the CCU control panel are not illuminated. If any indicator is on, press the switch once to turn it off.

(b) Load the applicable output and monitor device with blank tape or paper and press the START switch on the devices. The START switches should light green and the NOT ASSIGNED indicators should light amber.

(c) Open the maintenance panel cover on the CCU and place the CCU TEST MODE SELECT switch in the I/O position. Press the MASTER RESET switch.

(d) At the CCU, press the SEND DEVICE ASSIGNED switch for the paper tape reader/TIG to be checked. Also press the appropriate RECEIVE DEVICE and RECEIVE MONITOR ASSIGNED switches. As each switch is pressed, it should light white. In addition, the NOT ASSIGNED indicator on the associated device should go out. The RECEIVE DEVICE and RECEIVE MONITOR READY indicators should light green.

(e) Press the CCU SEND DEVICE CANCEL switch. The switch should light momentarily

tarily, then the RECEIVE DEVICE RM indicator should go out,

(f) Perform the initial turn-on procedures for the punched tape reader/TIG to be checked as outlined in paragraph 3-2d, TM 11-7440-239-15.

(g) Insure the TIG ON-LINE/OFF-LINE SWITCH in the ON-LINE position. Check that the TIG ON indicator *is illuminated white.*

(h) Set the TIG manual update thumb- wheel switches to 099 and then press the TIG LOAD switch. Check that the TIG NEXT NUM- BER indicators display 099.

(i) Prepare a paper tape test message consisting of approximately 100 characters. Use either ASCII or ITA #2 code depending upon normal terminal operation. This message should have a line feed and carriage return after about 100 characters and an end-of-message sequence at the end of the message. Label this "Test tape A." It is recommended that two ends of this test tape be spliced to form a loop.

(j) Prepare a paper tape test message consisting of approximately 50 characters. Use either ASCII or ITA #2 codes depending upon normal terminal operation. Do not use an end- of-message sequence and do not form this test tape into a loop. Label this "Test Tape B."

(k) Insure that the ASCII/ITA #2 switches in both the punched tape reader and in the paper tape punch are set to the proper position for the tape message coding used. Also insure the proper code wheel is installed on the printer interpreter.

(l) Place the punched tape reader in low speed operation by pressing the HIGH SPEED/ LOW SPEED switch until the LOW SPEED indicator is illuminated.

(8) Message transfer test.

(a) Load test tape A into the punched tape reader leaving blank leader space before the first character of the message. Press the punched tape reader START switch and allow one message to be read.

(b) Check that the SEND DEVICE SELECT indicator on the CCU turns white and the punched tape reader START indicator turns white after the tape has advanced to the first character of the message.

(c) Observe that the TIG NEXT NUMBER indicator increments by one to read 100 at the same time that the punched tape reader START indicator illuminates white.

(d) The punched tape reader should then read the entire message and the receive output and monitor devices should start processing the message.

(e) When the last character of the message is read, the punched tape reader START indicator should turn green and the CCU SEND DEVICE SELECT indicator should go out. If using a tape loop for test tape A, manually stop the punched tape reader at this point. If tape is not looped, allow the tape to advance to the end of tape at which time the reader will automatically stop.

(f) Check that the paper tape punch and/ or the page printer copy the message correctly. The message copied by the receive devices should be identical to the message on test tape A except that the transmission identification (TI) sequence should be added to the beginning of the message. The complete TI sequence consists of the sixteen characters identified in paragraph 3-84. However, strapping performed in compliance with paragraph 4-72d may shorten the sequence to 15, 14, or 13 characters. Also note that on the page printer copy, SI, SO, CR, LF, and NUL characters are machine functions and will not be printed.

(g) Check that the TI sequence positions 5, 6, and 7 reflect the proper channel designator for terminal identification.

(h) Check that the TI sequence positions 8, 9, and 10 reflect the proper message sequence number (in this case 099).

(9) Message sequence test.

(a) Load test tape A into the punched tape reader.

(b) Set the TIG manual update thumbwheel switches to 000 and press the TIG LOAD switch. NEXT NUMBER indicators should reflect 000.

(c) Press the punched tape reader START switch and read a minimum of 20 messages. If test tape A is not spliced into a loop, this will require reloading and restarting the tape reader each time an "out of tape" condition occurs.

(d) Check the copy from the output devices to insure that each of the messages is preceded by the TI *sequence.*

(e) Observe that the NEXT NUMBER indicators on the TIG increment by one at the beginning of each message. Count will sequence from 000 to 020.

(f) Check the copy from the output devices to insure the message sequence portion of

the TI increments by one on each message from 000 to 020.

(g) Load each of the following message sequence numbers into the counter and then process two messages. Insure the NEXT NUMBER display and the receive device copy properly reflect the counting of the message sequence counter.

NOTE

Tape reader must be selected to enable loading the message sequence counter.

Load counter to-	Sequence number reflected in next 2 messages
029	029-030
039	039-040
049	049-050
059	059-060
069	069-070
079	079-080
089	089-090
099	099-100
199	199-200
299	299-300
399	399-400
499	499-500
599	599-600
699	699-700
799	799-800
899	899-900
999	999-000

(10) Send alarm/cancel test.

(a) Record the count in the TIG NEXT NUMBER indicators.

(b) Load test tape B in the punched tape reader and start message transmission by pressing the tape reader START switch.

(c) Check that the punched tape reader STOP, TAPE OUT, and CANCEL indicators are illuminated red when the punched tape reader runs out of tape.

(d) Check that the TIG NEXT NUMBER indicator has been incremented by one.

(e) Load test tape A and restart the punched tape reader and allow message to be completely processed. Check the copy from the paper tape punch and/or page printer to insure the retransmitted message begins with the correct TI sequence.

(11) Sequence counter load inhibit test.

(a) Load test tape A and restart the punched tape reader.

(b) Immediately after the punched tape reader starts to process the paper tape message, press the SEND DEVICE EOB STOP switch on the common control unit. When the punched tape reader stops operation, insure the punched tape reader START indicator is still illuminated white.

(c) Observe the count displayed in the TIG NEXT NUMBER indicator display.

(d) Set the TIG manual update thumbwheel switches to 123 and then press the TIG LOAD switch. Insure the TIG NEXT NUMBER display indicators do not change from the count observed in (c) above.

(e) At the common control unit, press the SEND CHANNEL EOB STOP switch and allow the message to be completed.

(12) Pilot header operation test.

(a) Record the count indicated in the TIG NEXT NUMBER display.

(b) Load test tape B into the punched tape reader and press the PILOT HEADER switch. The test should be fed through the punched tape reader.

(c) At the end of the tape, the punched tape reader should stop with the TAPE OUT indicator illuminated. The audible alarm should not sound and the CANCEL indicator should be out. The TIG NEXT NUMBER display should have been incremented by one.

(d) Load test tape A into the punched tape reader and press the START switch. The test tape should be fed through the punched reader. The count indicated in the TIG NEXT NUMBER display should not increment.

(e) Check that the message received at the paper tape punch and/or page printer contains the TI sequence, followed by the test tape B and then by test tape A.

e. Terminal Back-to-back Test (TIG).

(1) Insure the TIG ON-LINE/OFF-LINE switch is in the ON-LINE position.

(2) Perform terminal back-to-back tests using the paper tape channel in accordance with procedures outlined in paragraph 2-5c, TM 117440-239-15.

(3) Check received copy to insure proper TI sequence precedes each message.

f. On-Line Test (TIG).

(1) Insure the TIG ON-LINE/OFF-LINE switch is in the ON-LINE position.

(2) Perform those on-line tests that pertain to paper tape channel devices as outlined in paragraph 3-6, TM 11-7440-239-15.

(3) Check that the TIG NEXT NUMBER indicator increments by one for each message transmitted.

Section IX. DISASSEMBLY AND REASSEMBLY OF TIG ASSEMBLY A7

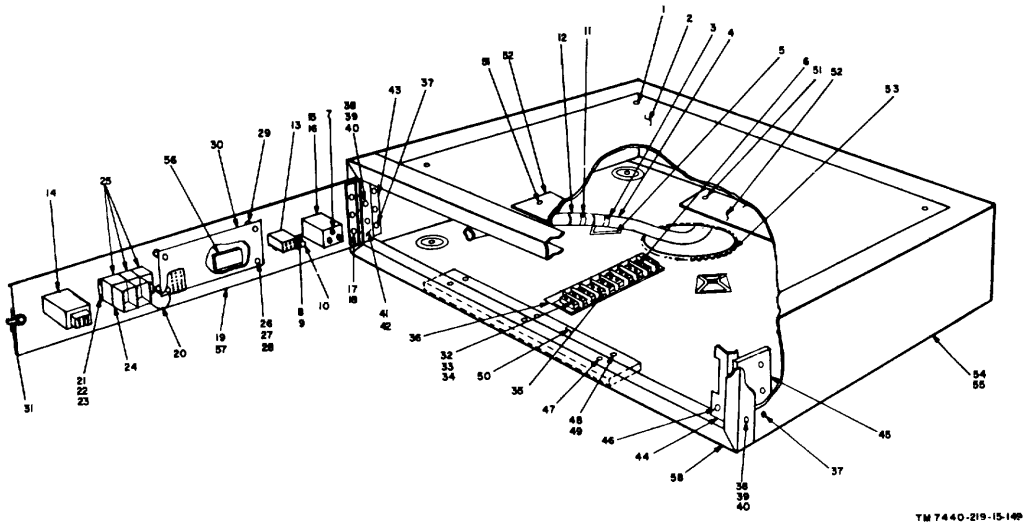
4-74. Disassembly and Reassembly of TIG Chassis

a. Disassembly. Disassemble the TIG chassis 6 or 7, fig. 4 47) in the order of the index lumbers in figure 4-48. Access to component parts of the TIG chassis is gained either by turning knurled latch (31) counterclockwise approximately one turn and then pulling hinged front panel assembly (19) open, or by removing the four screws (1) to remove the access cover plate (2).

CAUTION

To insure latch (31, fig. P48) properly secures front panel assembly (19), always turn knurled knob on latch one to two turns counterclockwise before closing panel assembly. Then, close the panel and secure by turning knurled knob on the latch in a clockwise direction until tight.

b. Reassembly. Reassemble the TIG chassis in the reverse order of a above.



1	Screw, flathead, No. 4-40, % in. long	22	Washer flat, No. 2	40	Screw, flathead, No. 4-40, % in. long
2	Access cover plate	23	Screw, fathead, No. 2-56, 7/16 in. long	41	Hinge
3	Cable strap	24	Switch assembly (S2)	42	Spacer
4	TIG cable assembly	25	Switch module (S2U, S2T, S2H)	43.	Chassis to frame adapter, side
5	Cable tie mounting device	26.	Screw, panhead, No. 4-40, V in. long	44	Strike catch
6	Terminal lug	27	Lockwasher, No. 4	45	Chassis to frame adapter, side
7	Terminal lug	28	Washer, flat, No. 4	46	Rubber grommet
8	Nut, hex., self-locking, No. 4-40	29	Standoff, No. 4-40, ¼ in. Long	47	Screw, flathead, No. 4-40, in. long
9	Washer, flat, No. 4	30	PC card A7A1 (No. 12-890082)	48	Screw, panhead, No. 4-40, V in. long
10	Cable clamp	31	Latch	49	Washer, flat, No. 4
11	Cable strap	32	Nut, hex, self-locking, No. 4-40	50	Chassis to frame adapter, bottom
12	Identification plate	33	Washer, flat, No. 4	51	Drive screw
13	Toggle switch (S1)	34	Screw, panhead, No. 4-40, % in.		
14	Toggle assembly (S3)	52	Identification plate	53	Plastic grommet
15	Light indicator (DS1) long	35	Terminal board (TB1)	54	Chassis assembly
16	Lamp, No. 382	36	Marker strip	55	Chassis
17	Nut, hex, self-locking, No. 4-40	37	Screw, flathead, No. 4-40, ¼in.		
18	Washer, flat, No. 4	56	Light filter lens	57	Blank front panel
19	Front panel assembly long	38	Nut, hex, self-locking, No. 440	58	Front panel mounting frame
20	Flexible cable	39	Washer, flat, No. 4		
21	Nut, hex, self-locking, No. 2-56				

Figure 4-48. Transmission identification generator assembly (AT), component location diagram.

4-75. Removal and Replacement of Integrated Circuit Modules on PC Card A7A1

a. Removal. All integrated circuits modules (Z1 through Z9, fig. 5-25) are removable from plug-in type sockets on the TIG assembly PC card A1 (30, fig. 4-48).

(1) Open the TIG front panel assembly (19, fig P48) to gain access to the PC card mounted on the rear side of the front panel.

(2) Observe the position of the integrated circuit module in its respective socket prior to removal.

(3) Remove the integrated circuit module by prying gently on both ends to pull module straight out of the socket to prevent bending of the module terminal pins.

b. Replacement. To replace a integrated circuit module, reverse the procedure outlined in a above taking care that all terminals are started into the socket before pressing the module into place.

CAUTION

Three of the plug-in sockets (XZ4, XZ5, and XZ6, fig. 5-25) have more terminals than are on the integrated circuit modules which are plugged into these positions. Thus, it is important to insure that terminal 1 of the integrated circuit module is inserted into terminal 1 of the respective socket. Terminal 1 of the socket is identified by a dot on the PC card. Refer to figure 5-1.2 to identify terminal 1 of the integrated circuit modules.

4-76. Removal and Replacement of Indicator Display Modules DS2U, DS2T, and DS2H

a. Removal.

(1) Open the TIG front panel assembly (19, fig. 4-48) to gain access to the PC card mounted on the rear side of the front panel.

(2) Remove the self-locking nut and washer (8 and 9) securing cable clamp (10).

(3) Remove the four screws, washers, and lockwashers (26, 27, and 28) holding the PC card Al (30) to the front panel. Do not unsolder either the flexible cable (20) or the TIG cable assembly (4) from the PC card.

(4) Twist the PC card to gain access to the front side and remove the defective display module (DS2U, DS2T, or DS2H, fig. 5-25) from the socket.

b. Replacement To replace the display module, reverse the procedure outlined in a above. Insure the notch identifying pin 1 of the display module (B, fig. 5-1.2) is on the bottom when the PC card has been properly positioned.

Section X. INSTALLATION OF DRIVE MOTOR ON-OFF SWITCH FOR PUNCHED TAPE READERS EQUIPPED WITH TIG

4-77. General

a. Scope. This section contains the procedure for installing a drive motor on-off switch on punched tape readers equipped with Transmission Identification Generator (TIG) Kit MK-1583/ G. Included are listings of tools and parts required to implement this modification.

b. Purpose. This modification provides a method of turning off the tape reader drive motor to reduce mechanical wear when the tape reader is not in use, without the resetting of the TIG channel number display and channel number generator to 000, as would be the case if the unit were powered down in the normal manner (para 2-7) and then powered up again when needed.

c. Application. This modification applies only to those punched tape readers (RP-154(P)/G) in which the TIG Kit MK-1583/G has been installed.

4-78. Materials and Tools Required

a. Materials Required.

(1) Switch, toggle, SPST (FSN 5930-655-1514).

(2) Wire, stranded, #16 AWG (8 in. lg, black).

(3) Solder, lead-tin alloy (60/40), rosin core.

b. Tools Required.

(1) Electric drill (chuck size to accommodate 15/32 in. bit).

(2) Drill bit, 15/32 inch.

(3) Drill bit, No. 31.

(4) Center punch.

(5) Hammer.

(6) Soldering iron.

4-79. Installation Procedure

a. Preliminary Procedure.

(1) Remove ac input to tape reader by operating circuit breaker on main panel box to OFF.

NOTE

In dual tape readers, determine the location in which the TIG is installed and modify the associated power supply. Power supplies PS1 and PS2 are associated with TIG locations A7 and A8, respectively. If the unit contains a dual TIG, modify both power supplies.

(2) Remove applicable power supply (fig. 13). Refer to paragraph 4-25 for power supply removable procedure.

(3) Remove fuse cover plate (24, fig. 4-10) from power supply.

b. Drilling.

(1) On power supply front panel, locate and mark the centers of the two holes identified as A and B in figure 4-49.

(2) Using a center punch and hammer, center-punch the two marked holes, leaving a good indentation in the panel.

CAUTION

Before drilling, place a block of wood or piece of metal in back of the front panel where the drill bit will come through. This is necessary to prevent damage to wiring or components. Be sure to remove all metal chips and burrs when drilling is completed.

(3) Drill the two holes using a No. 31 bit. (A 1/8 inch bit will suffice if a No. 31 is not available.)

(4) Using the upper hole drilled in (3) above as a pilot, drill a 15/32 inch hole at location A. This will be the mounting hole for the switch. The smaller (lower) hole at B is for the switch lock ring.

c. Switch Installation.

(1) Disconnect yellow and blue wire from back of 120 VAC 10A DRIVE MOT fuseholder XF8 (fig. 4-49). Remove wire from harness to a length that will allow extension of wire to the new switch location. Allow some slack.

(2) Connect the yellow/blue wire disconnected from XF8 to upper terminal (side opposite keyway) of switch to be installed (See para 478a(1).)

NOTE

Switch is equipped with screw-lug terminals, requiring appropriate terminal lugs on the connecting wires. The switch terminals can be converted to solder-lug.

terminals by removal of screws and lockwashers from the terminals.

(3) Connect an 8-inch length of wire (para 4-78a(2)) to lower terminal of toggle switch being installed.

(4) Install switch in hole A (fig. 4-49) with keyway down. Tighten securely, with lock ring tab in hole B.

(5) Solder other end of wire installed in (3) above to fuseholder XF8 terminal from which the yellow/blue wire was disconnected in (1) above.

(6) Identify new switch as DRIVE MOT ON on power supply front panel.

(7) Replace fuse cover plate (24, fig. 4-10) removed in a(3) above.

(8) Replace power supply into unit, replacing harness into clamp on back of power supply. Tighten clamp and replace nylon clamp on harness on bottom of equipment cabinet. Check operation.

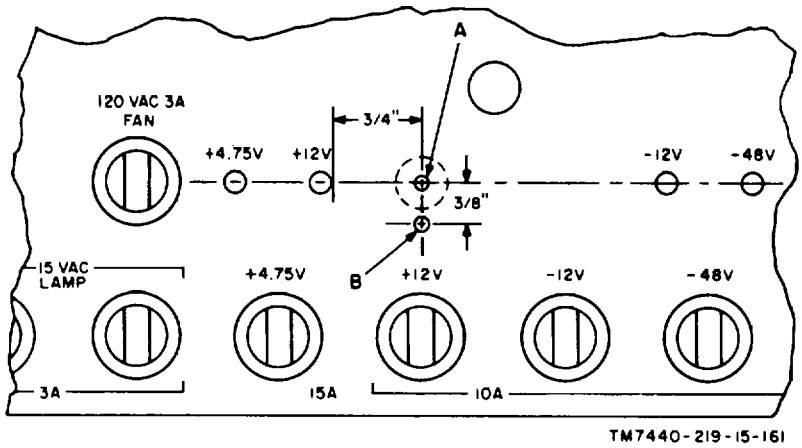


Figure 4-49. Drive motor switch installation, drilling detail.

CHAPTER 5

PRINTED CIRCUIT CARD MAINTENANCE

INSTRUCTIONS

Section I. GENERAL

5-1. Scope of PC Card Maintenance

a. This chapter includes instructions for performing corrective maintenance procedures on PC cards. Isolation of a malfunction in the punched tape reader to a PC card is given in chapter 4. The instructions in chapter 5 are used to isolate the malfunction to a defective part in the PC card and to replace the defective part.

b. PC card maintenance includes:

(1) Testing a suspected PC card.

(2) Troubleshooting using manual techniques.

(3) Replacement of defective parts.

5-2. Tools and Test Equipment Required

The tools and test equipment required for performing PC card maintenance are listed in appendix C.

Section II. TROUBLESHOOTING PRINTED CIRCUIT CARDS

5-3. Testing Procedure

If a PC card is suspected of being defective, install it in a punched tape reader which is known to be otherwise operable. Then operate the punched tape reader with a CCU and a page printer to check if each possible type of character can be read (fig. 3-5). If all characters are correctly read and the controls and indicators on the control panel operate normally, the PC card being checked is considered good. If a malfunction occurs, locate and correct the fault as described in paragraphs 5-4 through 5-10.

5-4. General Troubleshooting Procedure

The first step in servicing a defective PC card is to perform a visual inspection. If this does not help in localizing the fault, signal tracing and signal substitution techniques are required.

5-5. Visual Inspection

Carefully inspect the PC card for evidence of overheating. Check for corrosion, loose connections, or broken components.

5-6. Signal Tracing

a. Place the PC card on an extender board and, with power off, install it in an otherwise operable punched tape reader. Operate the punched tape reader to simulate the condition under which the malfunction was observed, then use standard signal tracing techniques to isolate the defective part. A thorough knowledge of the operation of the punched tape reader circuits as given in chapter 3 is required to effectively use signal tracing techniques. Use the local test mode of the punched tape reader (LOCAL TEST switch-indicator A3Z9) to obtain repeating waveforms as successive characters are read. Use the single feed mode (SINGLE FEED switch-indicator A3Z6) to check one character at a time.

b. The voltages and waveforms at most test points may be observed with the oscilloscope. In general, signals at inputs and outputs of integrated circuit logic element modules switch between 3.3 and 4.5 volts dc (high) and between 0 and 0.6 volt dc (low). The technician should determine whether the voltage at a specific terminal is high

or low at any time by studying the operating conditions at that time. For voltages at inputs and outputs of discrete component logic circuits, refer to paragraph 3-22.

c. For the location of parts on PC cards, refer to figures 5-2 through 5-17. For the location of terminals on integrated circuit logic element modules, see figure 5-1. This figure applies to all types of integrated circuit logic elements.

d. Each lamp driver microcircuit module contains three independent lamp driver circuits. Figure 5-1.1 shows the location and numbering of terminals on the microcircuit module.

e. On those punched tape readers that have been converted by the addition of a transmission identification generator kit MK-1583/G, refer to figures 5-24 and 5-25 for location of parts on PC cards. For location of terminals on integrated circuit logic element modules on these PC cards, see figure 5-1.2.

5-7. Signal Substitution

Do not use signal substitution methods of troubleshooting the logic circuits in logic assembly. A-1. Connecting a ground at any point in the logic circuit to make operation predictable may cause circuit damage. Connecting a high level (+4.5 volts) will not change the effect of a low level (ground) already existing at a point because of circuit operation.

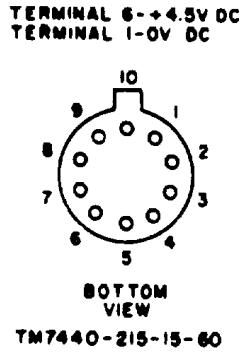


Figure 5-1. Location of terminal on integrated circuit modules.

TERMINAL	FUNCTION	TERMINAL	FUNCTION
1	OUTPUT	6	INPUT 3
2	INPUT 1	7	+12 VOLTS DC
3	OUTPUT 2	8	-2 VOLTS DC
4	INPUT 2	9	LAMP TEST
5	OUTPUT 3	10	GROUND

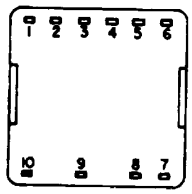


Figure 5-1.1. Location of terminals on microcircuit lamp driver modules

Section III. REPAIR

5-8. General Parts Replacement Techniques

Most of the parts on a PC card can be replaced easily without special procedures. For PC card soldering techniques, refer to TB SIG 222 (Army), TO 00-25-234 (Air Force) or NW 0015PA-1 (Navy) (app. A). When replacing integrated circuit logic elements, it is important to unsolder only one terminal at a time, using a solder syringe to remove the solder before unsoldering the next terminal.

5-9. Parts Location.

The location of all replaceable parts on the PC cards of the punched tape reader is shown in figures 5-2 through 5-14.

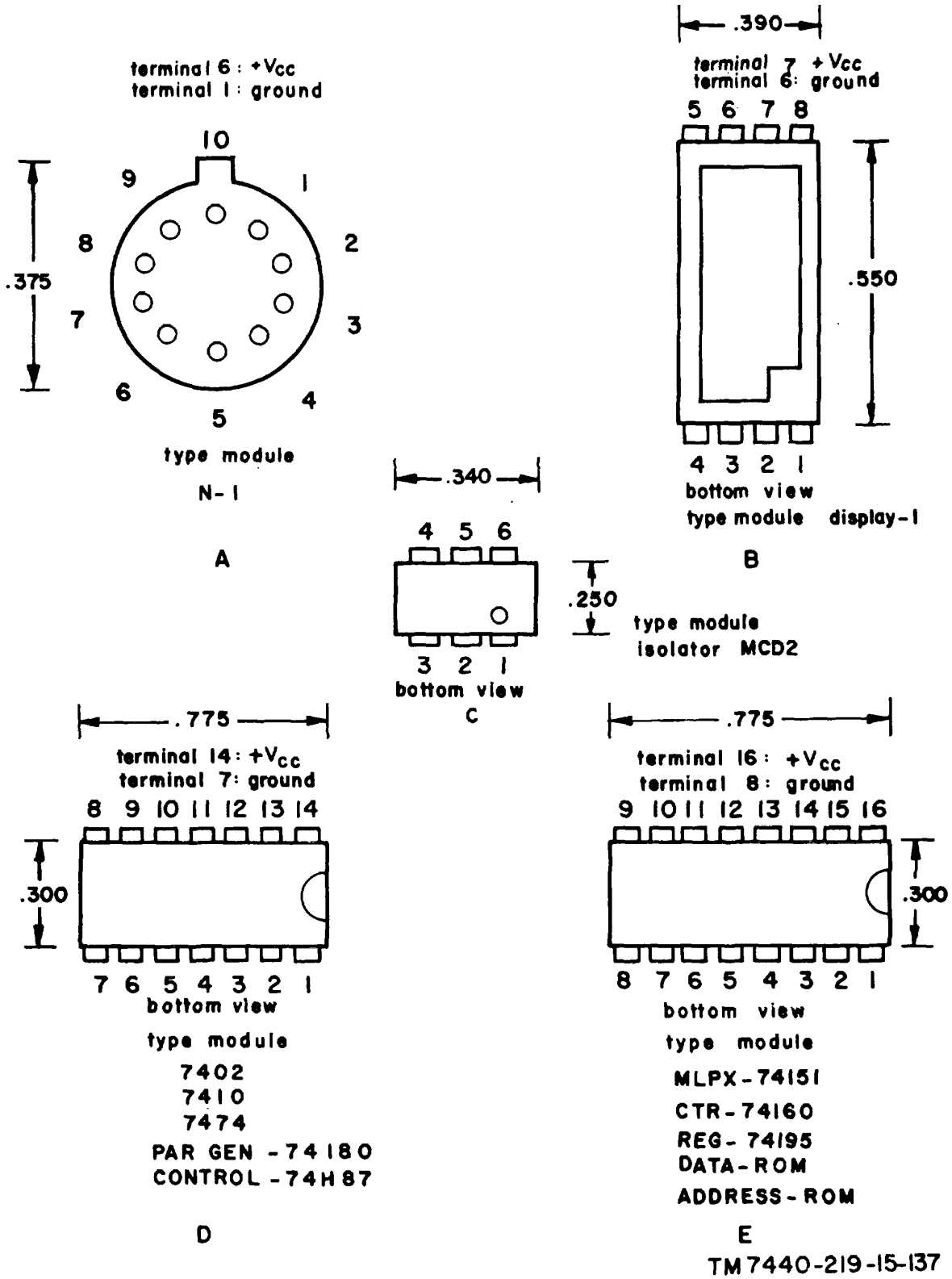


Figure 5-1.2. Location of terminals on TIG integrated circuit modules.

Section IV. PRINTED CIRCUIT CARD TEST DATA CHARTS

5-10. Test Data Charts

a. The test data charts contained in this section may be used when troubleshooting printed circuit cards to determine the type of signal which should be present under certain conditions. This should prove as an aid in localizing a malfunction to a particular circuit on the suspected defective card.

b. For all cards installed in logic assembly Al, ground is available on pin 1 or A of the printed circuit card connector. Pin 2 or B of each PC card connector supplies +4.5 volts to the printed circuit cards. By using a short lead terminated at both ends with alligator clips, these pins can be used as a source of ground (O volt) or active (+4.5 volts) signals for troubleshooting the printed circuit cards.

c. Test data charts are arranged to show the point of test (Test point column) to which the meter, oscilloscope, or other test equipment is connected; the conditions under which the measurement should be made (Test conditions column); and the results which should be obtained if the circuit being tested is good (normal indication column). It should be noted that the Normal indication column gives the expected results for the specified test conditions, and not necessarily the results for normally operating equipment.

d. Unless otherwise specified, all test data in the charts assume the printed circuit board connected to an otherwise operable equipment, with the equipment operating as part of a terminal configuration.

5-11. PC Card A1 (A65209-001) Test Data Chart

Test point	Test condition	Normal indication
XA1–5 or XA1–6	PC card A14 removed from logic assembly A1 (fig. 4–8), power on, and—	
	a. +4.5 volts dc applied to input (XA1–D)	*a.* −48 volts dc
	b. Ground applied to input (XA1–D)	*b.* 0 volt dc
XA1–14	Initial power-on	+4.5 volts dc pulse 330 ms wide with slow decay
XA1–T	Any power-on condition	0 to +4.5 volt pulses at a 9.6 kHz ± 96 Hz rate

5-12. PC Card A3 (SM546659-001) Test Data Chart

(figs. 5-14 and 8-8)

Test point	Test condition	Normal indication
Typical lamp driver output (XA3–U).	PC card A15 removed from logic assembly A1 (fig. 4–8), power on, and—	
	a. LAMP TEST switch A3Z4 pressed	*a.* 0 volt dc
	b. +4.5 volts dc applied to input (XA3–17)	*b.* 0 volt dc
	c. Ground applied to input (XA3–17)	*c.* 15 volts ac

5-13. PC Card A4 (A65215-001) Test Data Chart

(figs. 5-8 and 8-9)

Test point	Test condition	Normal indication
Typical XMTR–1A output (XA4–14).	PC card A16 removed from logic assembly A1 (fig. 4–8), power on, and—	
	a. +4.5 volts dc applied to input (XA4–16)	*a.* 0 volt dc
	b. Ground applied to input (XA4–16)	*b.* Open circuit (+6.2 volts may be reflected from receiver in CCU)
Typical RCVR–1A or RCVR–1B output (XA4–8).	Plug P1 removed from logic assembly A1 (fig. 4–8), power on, and—	
	a. Ground applied to input (XA4–9)	*a.* +4.5 volts dc
	b. Open circuit applied to input (XA4–9)	*b.* 0 volt dc

Test point	Test condition	Normal indication
XMTR–1B output (XA4–21).	PC card A16 removed from logic assembly A1 (fig. 4–8), power on, and—	
	a. Ground applied to both inputs (XA4–22) and (XA4–23).	*a.* Open circuit (+6.2 volts may be reflected from associated received in CCU)
	b. Ground applied to input (XA4–22) and +4.5 volts dc applied to input (XA4–23).	*b.* Open circuit (+6.2 volts may be reflected from associated receiver in CCU)
	c. +4 5 volts dc applied to both inputs (XA4–22) and XA4–23).	*c.* 0 volt dc
RCVR–1C output (XA4–D).	Plug P1 removed from logic assembly A1 (fig. 4–8), power on, and—	
	a. +6.2 volts dc applied to input (XA4–E)	*a.* +4.5 volts dc
	b. −6.2 volts dc applied to input (XA4–E)	*b.* 0 volt dc

5-14. PC Card A5 (A65205-001) Test Data Chart

(figs 5-6 and 8-10)

Test point	Test condition	Normal indication
Typical XMTR–2 output (XA5–U).	PC cards A4 and A6 removed from logic assembly A1 (fig. 4–8). power on, and—	
	a. +4.5 volts dc applied to gate input (XA5–10), then—	*a.* Output enabled
	(1) +4.5 volts dc applied to input (XA5–W)	(1) +6.2 volts dc
	(2) Ground applied to input (XA5–W)	(2) −6 2 volts dc
	b. Ground applied to gate input (XA5–10). then—	*b.* Output inhibited
	(1) +4 5 volts dc applied to input (XA5–W)	(1) −6.2 volts dc
	(2) Ground applied to input (XA5–W)	(2) −6.2 volts dc

5-15. PC Card A6 (A65421-001) Test Data Chart

(figs. 5-9 and 8-11)

Test point	Test condition	Normal indication
	Power on, ASCII mode, with first character of TEST TAPE A–2 (para 5–11) in the read head. SINGLE FEED switch A3Z6 pressed 78 times observing the following test points at indicated number of single feed operations:	
XA6–19	*a.* (Space) steps 3 and 37	*a.* +4 5 volts dc; other steps show 0 volt dc
XA6–V	*b.* (Bell) step 4	*b.* +4.5 volts dc; other steps show 0 volt dc
XA6–12	*c.* (Shift Out) step 5	*c.* +4.5 volts dc; other steps show 0 volt dc
XA6–C	*d.* (Delete) step 6	*d.* +4.5 volts dc; other steps show 0 volt dc
XA6–S	*e.* (Shift In) step 7	*e.* +4.5 volts dc; other steps show 0 volt dc
XA6–13	*f.* (Null) step 8	*f.* +4.5 volts dc; other steps show 0 volt dc
XA6–8	*g.* (Device Control 4) step 9	*g.* +4.5 volts dc; other steps show 0 volt dc
XA6–J	*h.* (End of Medium) step 10	*h.* +4.5 volts dc; other steps show 0 volt dc
XA6–20	*i.* (N) step 24	*i.* +4.5 volts dc; other steps show 0 volt dc
XA6–3	*j.* (@—Commercial At) step 48	*j.* +4.5 volts dc; other steps show 0 volt dc

Test point	Test condition	Normal indication
XA6-U	*k.* (Carriage Return) step 75	*k.* +4.5 volts dc; other steps show 0 volt dc
XA6-11	*l.* (Line Feed) steps 76 and 77	*l.* +4 5 volts dc; other steps show 0 volt dc
XA6-14	*m.* (IDC) steps 3, 4, 5, 6, 7, 8, 37, 75, 76, and 77	*m.* +4.5 volts dc; other steps show 0 volt dc
XA6-F	*n.* (CB) All steps	*n.* 0 volt dc level
XA6-9	*o.* (INC) All steps	*o.* 0 volt dc level

5-16. PC Card A7 (A65425-001 Test Data Chart

(figs. 5-10 and 8-12)

Test point	Test condition	Normal indication
A7-23 -Y -N -P -S -U -R -16	Power on, ASCII mode with test tape A-1 loaded. LOCAL TEST switch A3Z9 pressed. *a.* Character U loaded	*a.* Output pins indicate +4.5, 0, +4.5, 0, +4.5 volts, and 0 volt dc, respectively.
	b. Character * loaded	*b.* Output pins indicate 0, +4.5, 0, 4.5, 0, 4.5, 0, and 4.5 volts dc, respectively.

5-17. PC Card A8 (A53418-001) Test Data Chart

(figs 5-2 and 8-13)

Test point	Test condition	Normal indication
Typical row and COL decode gate Z15B (XA8-8).	Power on, ITA #2 mode with test tape B-1 loaded. LOCAL TEST switch A3Z9 pressed.	Train of +4.5- to 0-volt negative pulses
XA8-M	Power on, ITA #2 mode with test tape B-1 loaded. LOCAL TEST switch A3Z9 pressed.	One 0- to +4.5-volt positive pulse per line
XA8-11	Power on, ITA #2 mode with test tape B-1 loaded. LOCAL TEST switch A3Z9 pressed.	Two 0- to +4.5-volt positive pulses per line
ZA8-16	Power on, ITA #2 mode with test tape B-1 loaded. LOCAL TEST switch A3Z9 pressed.	Two 0- to +4.5-volt positive pulses per line
XA8-S and -U	Power on, ITA #2 mode with test tape B-1 loaded. LOCAL TEST switch A3Z9 pressed.	Complementary 0- and +4 5-volt dc outputs changing several times per line

5-18. PC Cards A9 and A11 (A53725-001) Test Data Chart

(figs. 5-5, 8-4, and 8-16

Test point	Test condition	Normal indication
Typical decode gate Z4B (CHU) (XA9-C).	Power on, ITA #2 mode with test tape B-1 loaded. *a.* MASTER RESET switch A1S1 pressed *b.* LOCAL TEST switch A3Z9 pressed	*a.* 0 volt dc b. One 0- to +4.5-volt positive pulse per line (character 32)

5-19. PC Cards A10 and A12 (A53721-001) Test Data Chart

(figs. 5-4, 8-15, and 8-17)

Test point	Test condition	Normal indication
Typical F line decode gate E-1 (Z11A and	Power on, ITA #2 mode with test tape B-1 loaded. *a.* MASTER RESET switch A1S1 depressed	*a.* 0 volt dc

Test point	Test condition	Normal indication
X11B (XA10-H).	*b.* Depress LOCAL TEST switch A3Z9	*b.* Eight 0- to +4.5-volt dc pulses per line
	c. Further isolation can be provided by removing PC cards A9 and A11 from the logic assembly A1 (fig. 4-8), power on and—	*c.* Observe the following:
	(1) Ground applied to inputs (XA10-F, XA10-E, XA10-L, and XA10-10).	(1) 0 volt dc
	(2) +4.5 volts dc applied to any one input and ground applied to the other inputs (XA10-F, XA10-E, XA10-L, and XA10-10).	(2) +4.5 volts dc

5-20. PC Card A13 (A53434-001) Test Data Chart

(figs. 5-3 and 8-18)

Test point	Test condition	Normal indication
Typical ASCII encode 1 thru 128 outputs (XA13-C).	Power on, ITA #2 mode with test tape B-2 loaded.	
	a. Depress the MASTER RESET switch A1S1	*a.* 0 volt dc
	b. Depress LOCAL TEST switch A3Z9	*b.* Output will alternate between 0 and +4.5 volts dc as each 4th character is read

5-21. PC Card A14 (A65433-001) Test Data Chart

figs 5-12 and 8-12)

Test point	Test condition	Normal indication
Typical binary counter flip-flop outputs (XA14-11).	Power on, ASCII or ITA #2 mode and low-speed operation, single feed or local test will cause the binary counter to cycle one time for each character position on the paper tape.	0- and +4.5-volt dc pulses. (number of pulses generated depends on the binary value of the flip-flops being checked)
XA14-21	Power on, any mode—	
	a. With the reader in high speed operation, depress the SINGLE FEED switch A3Z6.	*a.* 0- to +4.5-volt dc positive pulse 6 66 ms after pressing SINGLE FEED switch
	b. With the reader in low speed operation, depress the SINGLE FEED switch A3Z6.	*b.* 0- to +4.5-volt dc positive pulse 53.4 ms after pressing the SINGLE FEED switch
XA14-C	Power on, any mode and depress the SINGLE FEED switch, A3Z6.	Two 0- to +4.5-volt dc positive pulses 104 μsec wide
XA14-3	Power on, any mode and depress the SINGLE FEED switch A3Z6.	0- to +4.5-volt dc positive pulses, 1872 μsec wide from count 1 to count 18
XA14-4	Power on, any mode and depress the SINGLE FEED switch A3Z6.	Eight 0- to +4.5-volt dc positive pulse 208 μsec wide
XA14-M	Power on, any mode and—	
	a. With the reader in high speed operation depress the SINGLE FEED switch A3Z6.	*a.* 0-volt dc level, however 20 ms noise spikes will appear
	b. With the reader in low speed operation, depress the SINGLE FEED switch A3Z6.	*b.* 0- to +4.5-volt dc level, after 6.6 ms. Signal should remain at +4.5-volt dc level until the end of the counter cycle (53.4 ms)

5-22. PC Card A15 (A65437-001) Test Data Chart

(figs. 5-13 and 8-20)

Test point	Test condition	Normal indication
XA15-21	Power on, not assigned, and depress the MASTER RESET switch A1S1.	+4.5-volts dc while switch is depressed, otherwise 0-volt dc level

Test point	Test condition	Normal indication
XA15-Y	Power on, not assigned, with any test tape loaded with the leader in the read station, and—	
	a. Depress the MASTER RESET switch A1S1	*a.* +4.5-volt dc level
	b. Depress the START switch A3Z7	*b.* +4.5- to 0-volt dc transition when first data character enters read station
XA15-Z	Power on, not assigned and MASTER RESET switch A1S1 depressed.	+4.5-volts dc while switch is depressed, otherwise 0-volt dc level
XA15-V	Power on reset condition with PC cards A6 and A14 removed from the logic assembly A1 (fig. 4-8) and—	
	a. Ground applied to the inputs (XA15-X, XA15-W, and XA15-22).	*a.* +4.5 volts dc
	b. Ground applied to inputs (XA15-2 and XA15-W) and +4.5 volts dc applied to input (XA15-22).	*b.* 0-volt to +4.5-volt dc positive pulse 104 μsec wide
XA15-3	Power on with any test tape loaded and—	
	a. Depress the MASTER RESET switch A1S1	*a.* +4.5 volts dc
	b. Depress LOCAL TEST switch A3Z9 with the reader operating, the TIGHT TAPE switch on the reader mechanism manually activated.	*b.* 0 volt dc
XA15-J	Power on with any test tape loaded and—	
	a. Depress the MASTER RESET switch A1S1	*a.* +4.5 volts dc
	b. Depress the LOCAL TEST switch A3Z9 and a tape motion failure manually develops.	*b.* 0 volt dc

5-23. PC Card A16 (A65429-001) Test Data Chart

(figs. 5-11 and 8-21)

Test point	Test condition	Normal indication
XA16-C	Power on with any test tape loaded and—	
	a. Depress the MASTER RESET switch A1S1	*a.* +4.5 volts dc
	b. Depress START switch A3Z7	*b.* 0 volt dc
XA16-Y	Power on with any test tape loaded and—	
	a. Depress the MASTER RESET switch A1S1	*a.* 0 volt dc
	b. Depress SINGLE FEED switch A3Z6	*b.* 0-volt to +4.5-volt dc positive pulse 3.5 ms wide
XA16-8	Power on with any test tape loaded and—	
	a. Depress the MASTER RESET switch A1S1	*a.* 0 volt dc
	b. Depress START switch A3Z7	*b.* +4.5 volts dc
XA16-9	Power on with any test tape loaded and—	
	a. Depress the MASTER RESET switch A1S1	*a.* +4.5 volts dc
	b. Depress LOCAL TEST switch A3Z9	*b.* 0 volt dc
XA16-15	Power on with any test tape loaded and—	
	a. Depress the MASTER RESET switch A1S1	*a.* 0 volt dc
	b. Depress the PILOT HEADER switch A3Z5	*b.* +4.5 volts dc
XA16-21	Power on, assigned and AUDIBLE RESET switch depressed.	0- to +4.5-volt dc positive pulse at least 500 μsec wide

CAUTION

When taking voltage measurements power supply PS1, sequence module A12 use insulated test connectors to avoid possible short circuits between test points, and copper runs.

5-24. Power Supply (PS1) Test Data Chart

(figs. 4-10, 8-4, and 86)

Test point	Test condition	Normal indication
PS1TP2 to PS1TP1 (common).	Power on	+4.75 volts dc ±1%
PS1TP3 to PS1TP1	Power on	+12.0 volts dc ±1%
PS1TP4 to PS1TP1	Power on	−12.0 volts dc ±1%
PS1TP5 to PS1TP1	Power on	−48.0 volts dc ±1%

Test point	Test condition	Normal indication
PS1A12TP3 to PS1A12TP13.	Power on	−12.0 volts dc ±1%
PS1A12TP4 to PS1A12TP13.	Power on	+12.0 volts dc ±1%
PS1A12TP6 to PS1A12TP13.	Power on	+4.75 volts dc ±1%
PS1A12TP9 to PS1A12TP13.	Power on	−48.0 volts dc ±1%
PS1A12TP11 to PS1A12TP13.	Power on	+15.0 volts dc ±1%

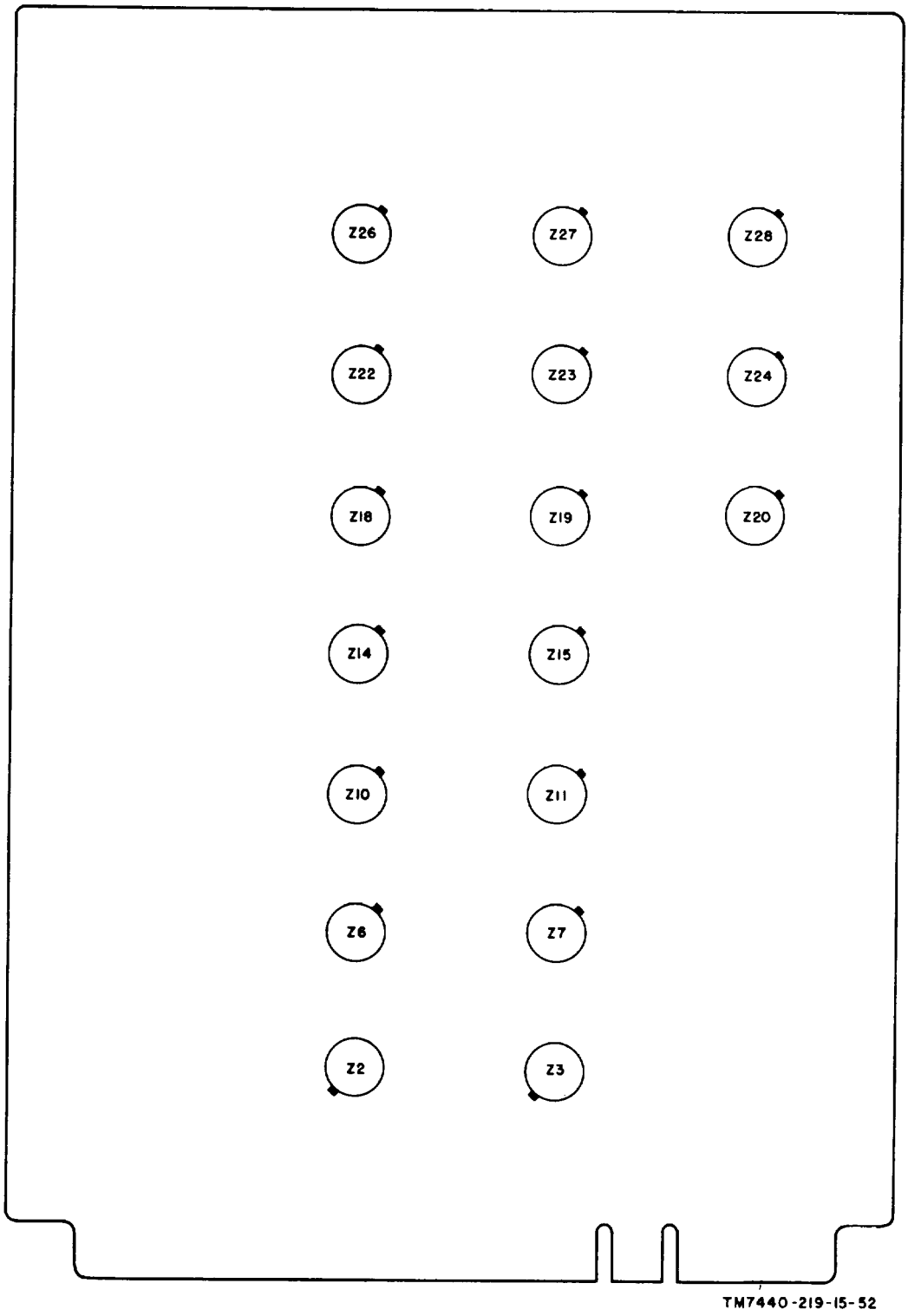


Figure 5-2. PC card No. A53418 (A8), component location diagram

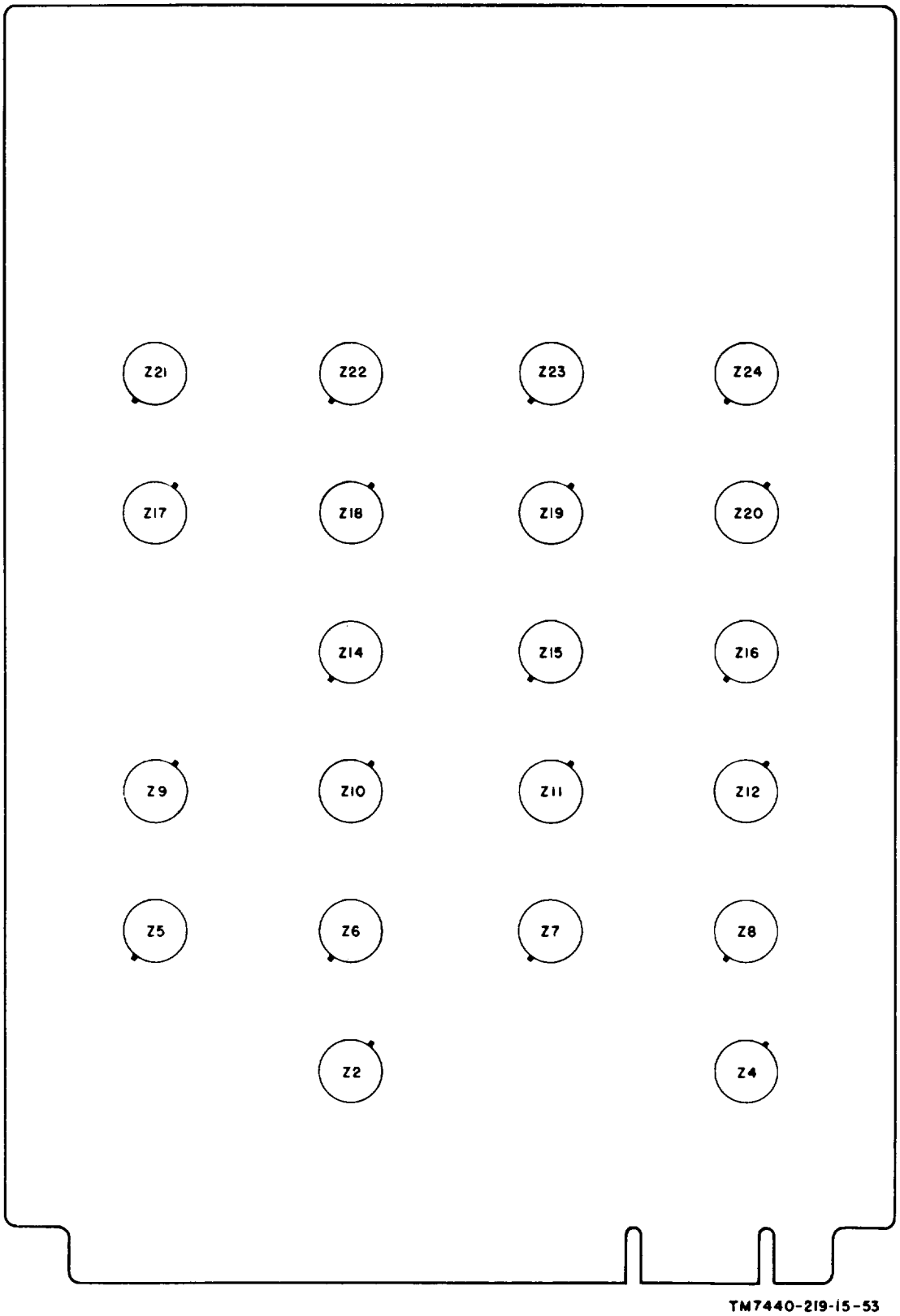


Figure 5-3. PC card No. A53434 (A13), component location diagram.

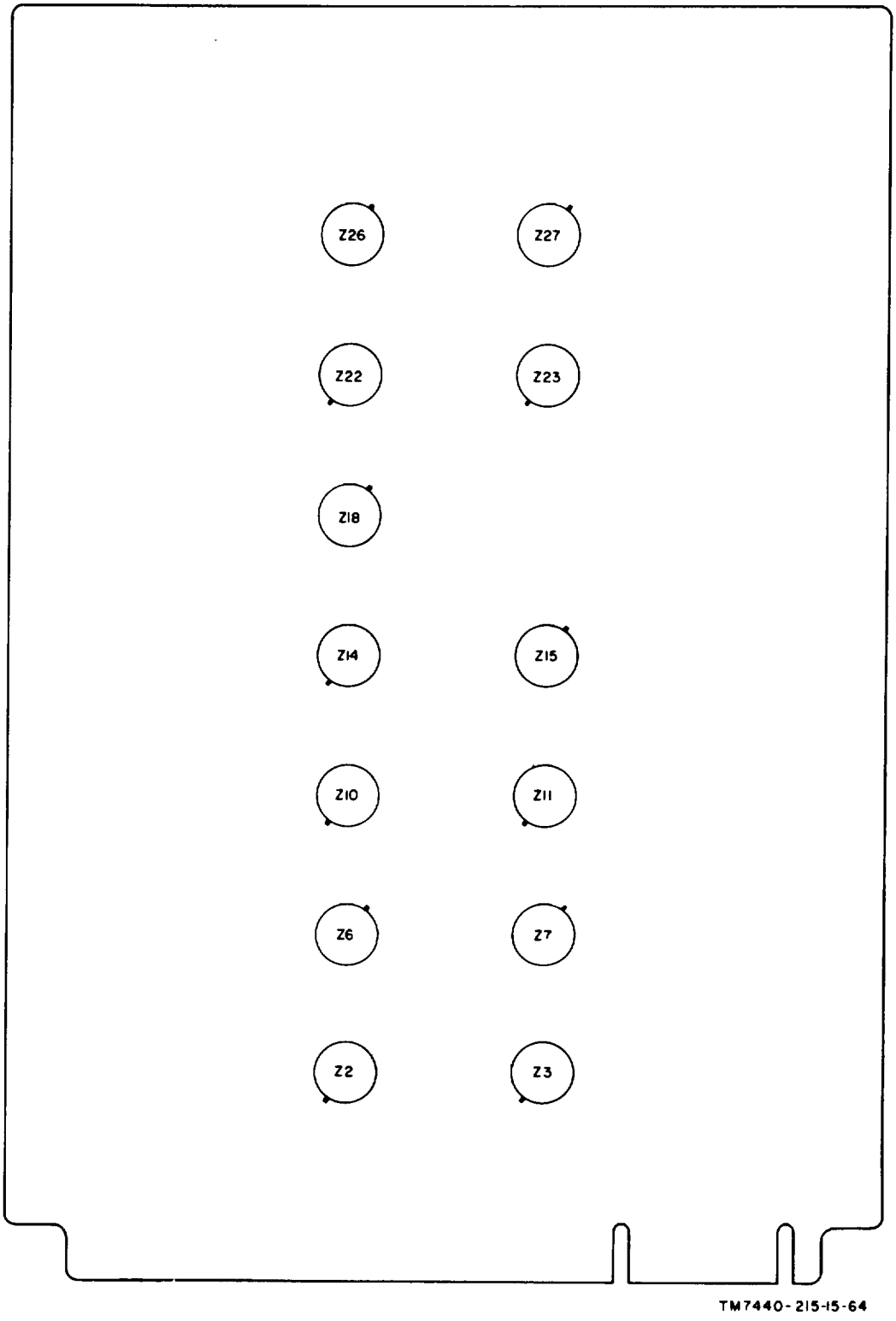


Figure 5-4. PC card No. A63721 (A10, A12), component location diagram.

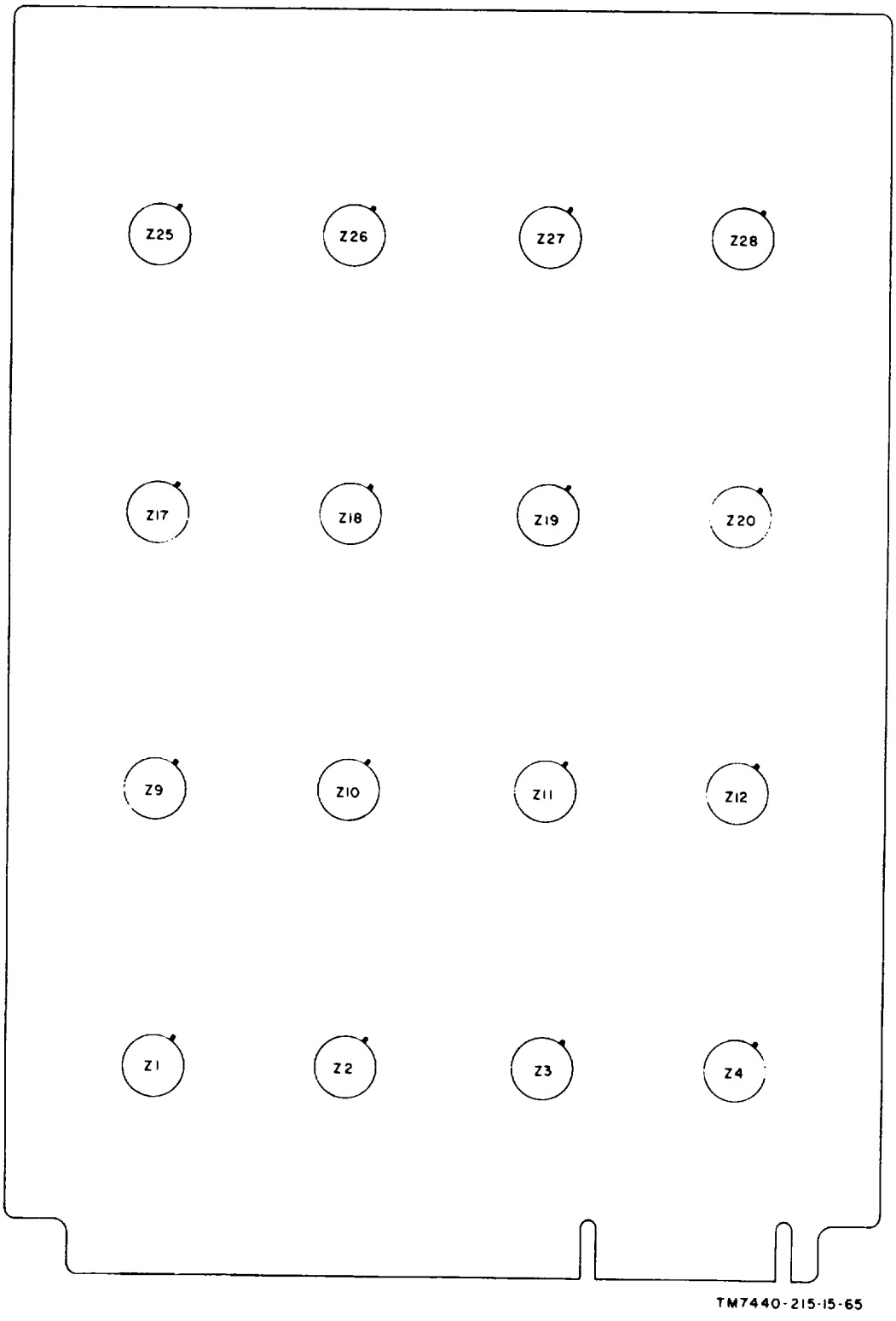


Figure 5-5. PC card No. A53725 (A9, A11), component location diagram

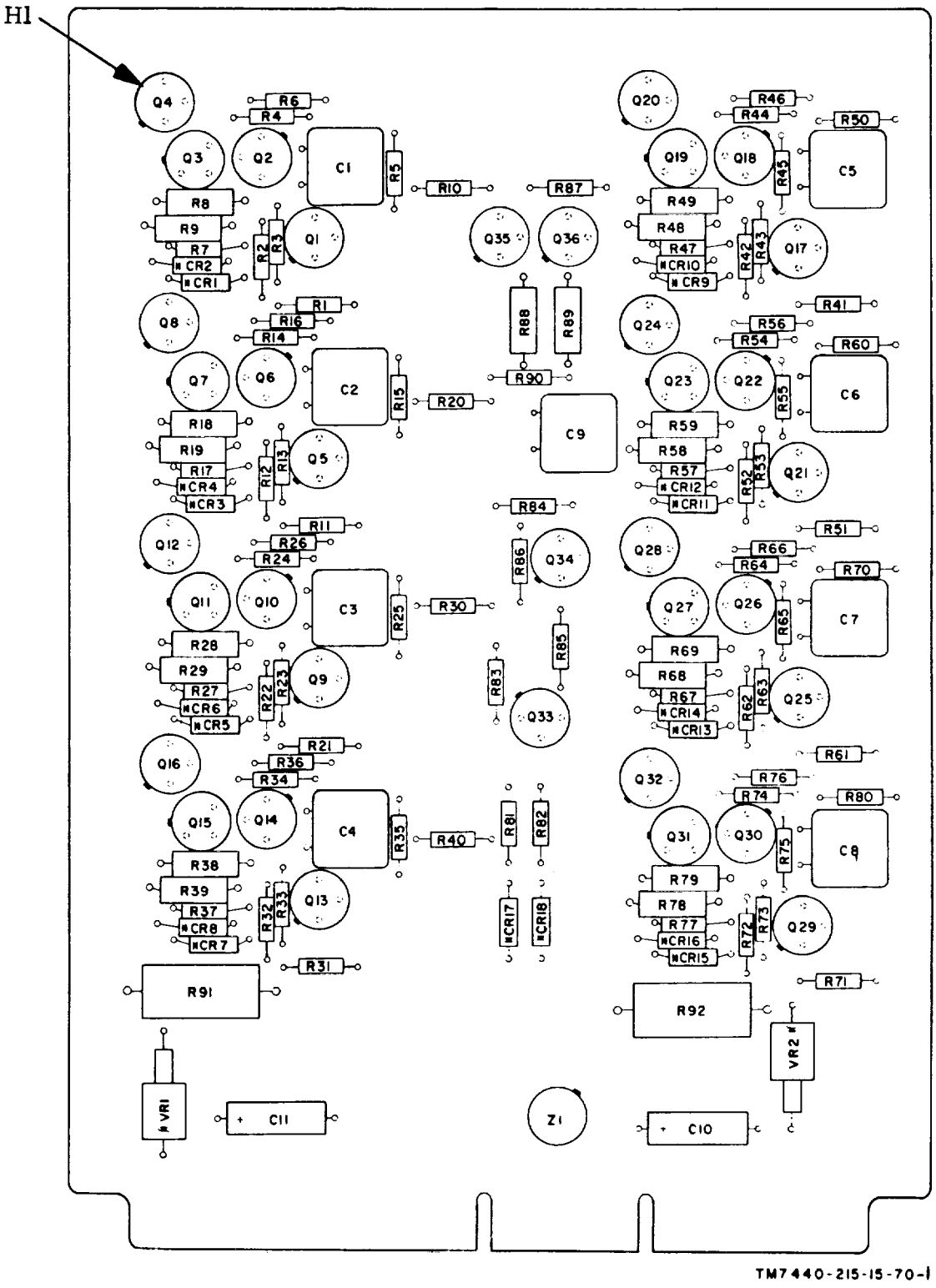


Figure 5-6. PC card no A65205 (A5), component location diagram.

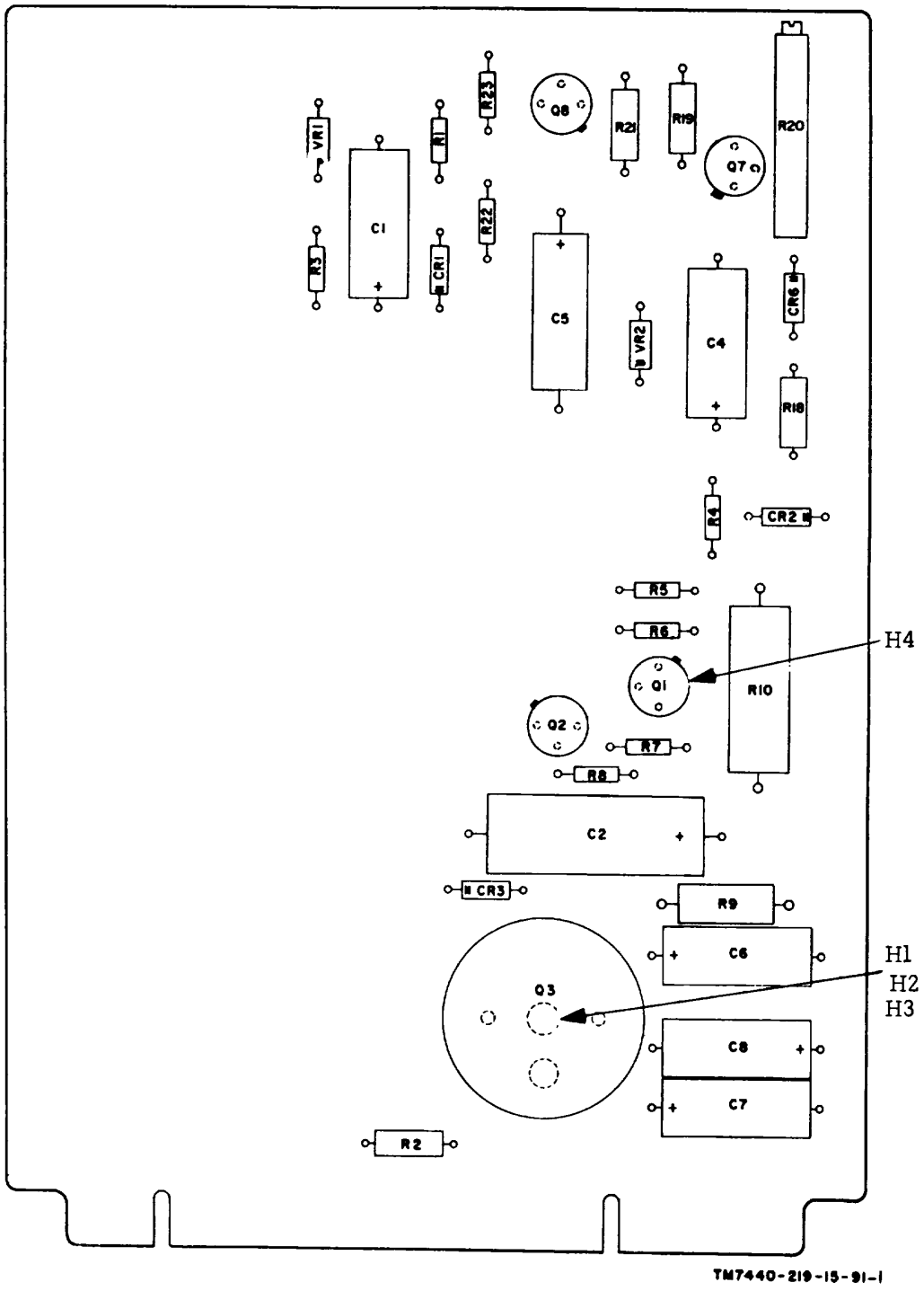


Figure 5-7. PC card No. A65209 (A1), component location diagram.

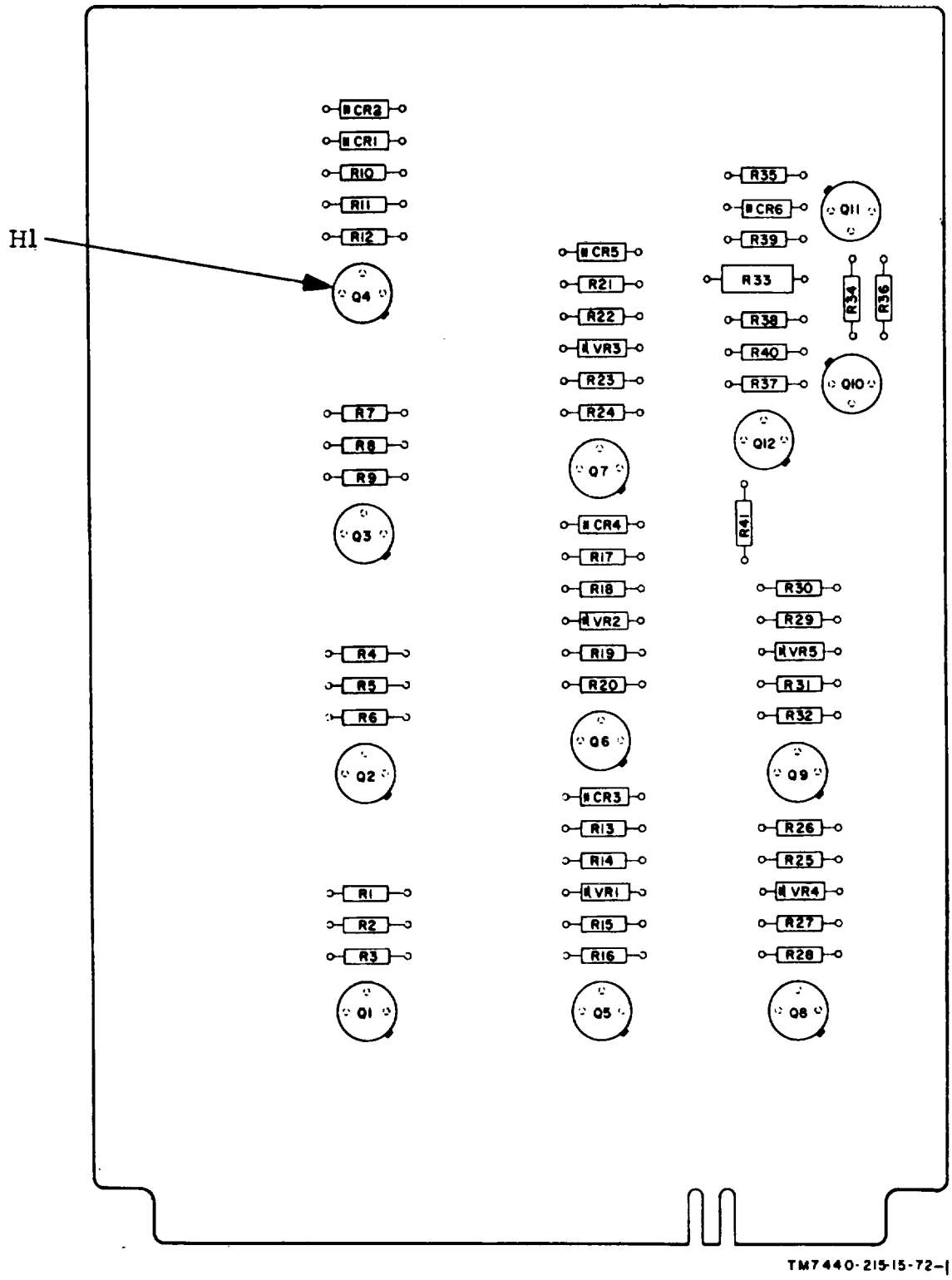


Figure 5-8. PC card No. A65215 (A4),component location diagram.

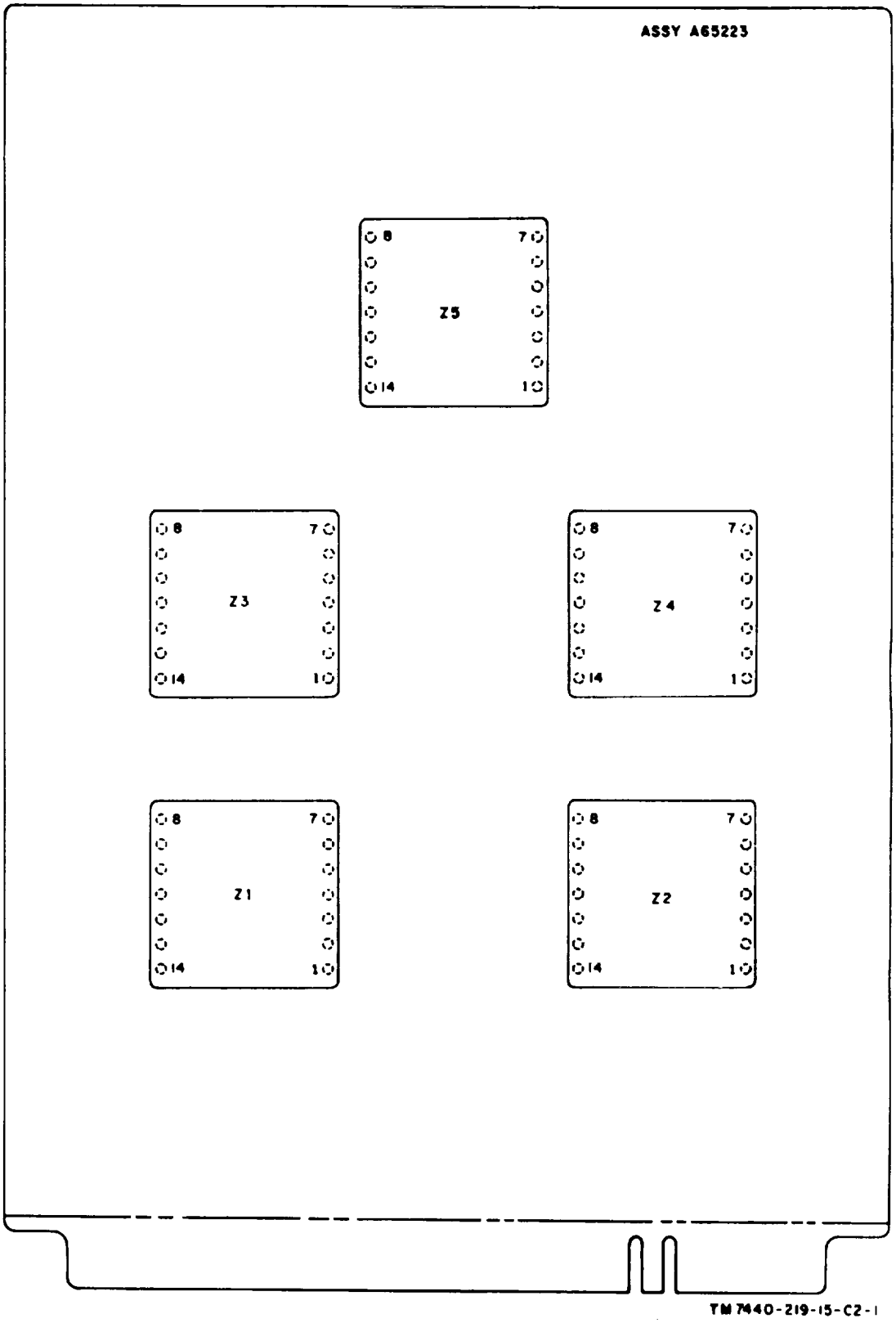


Figure 5-8.1. PC card No. A65223 (A4), component location diagram

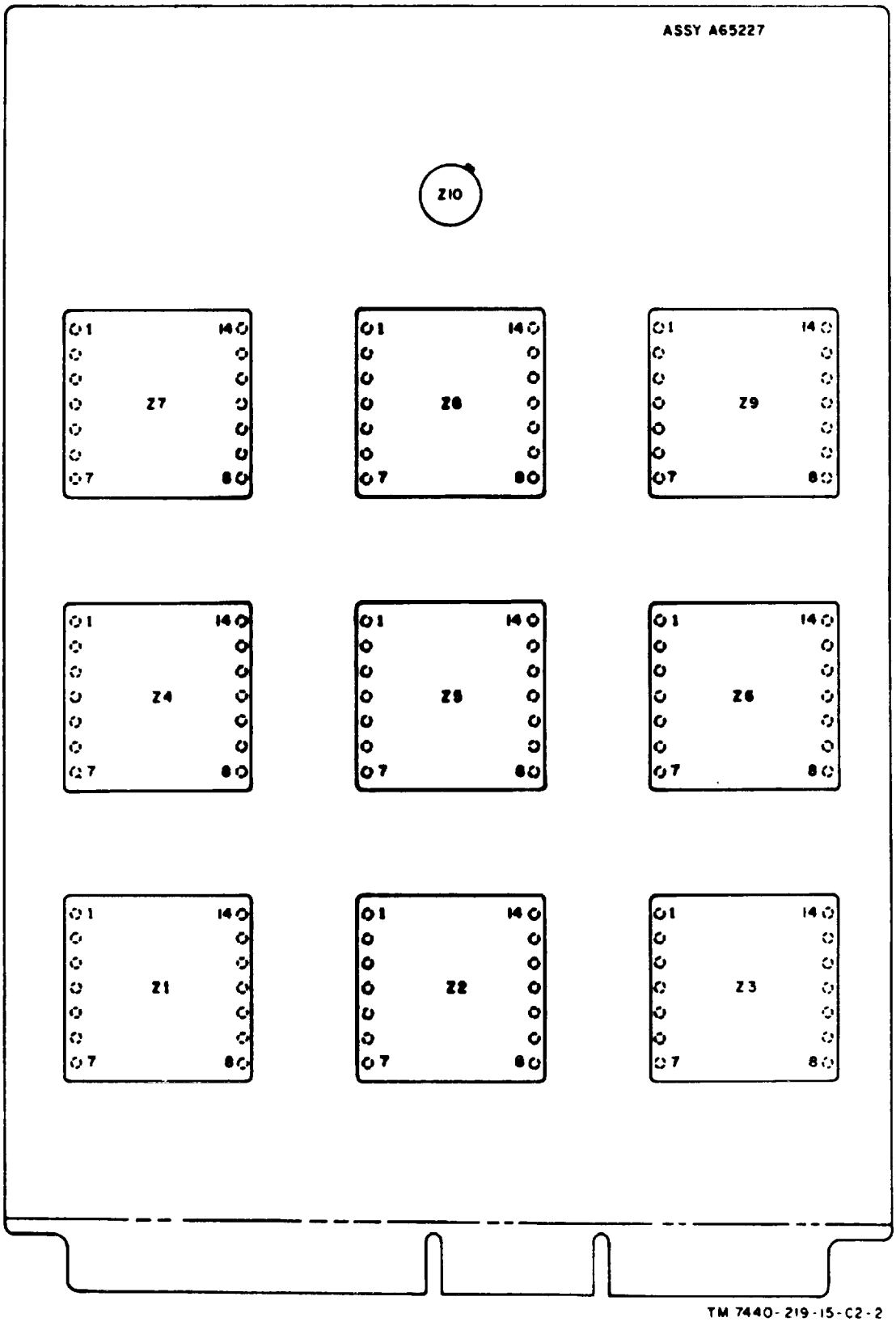


Figure 5-8.2. PC card No. A65227 (A5), component location diagram

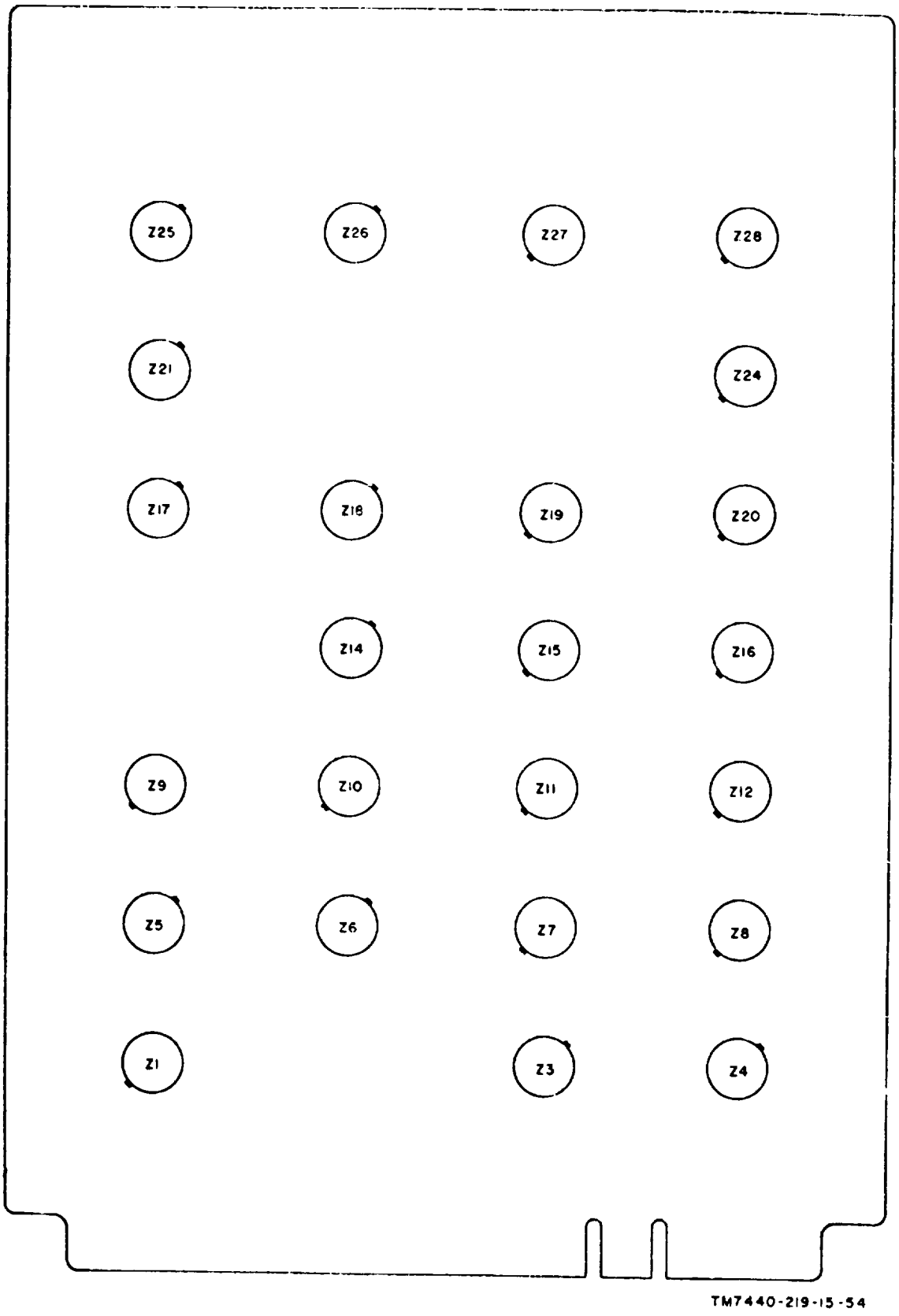


Figure 5-9. PC card No. A65421 (A6), component location diagram.

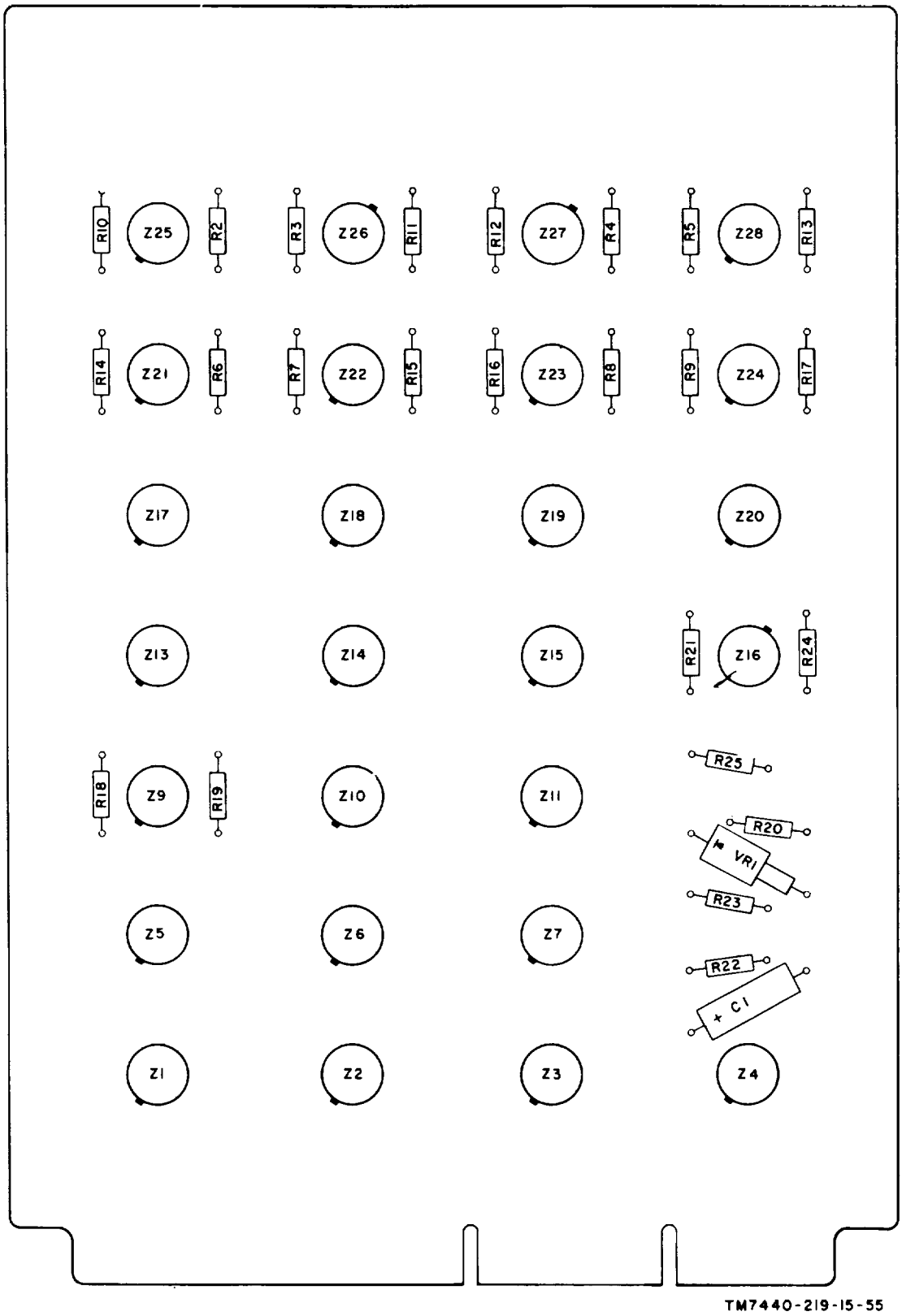


Figure 5-10. PC card No. A65425 (A7), component location diagram.

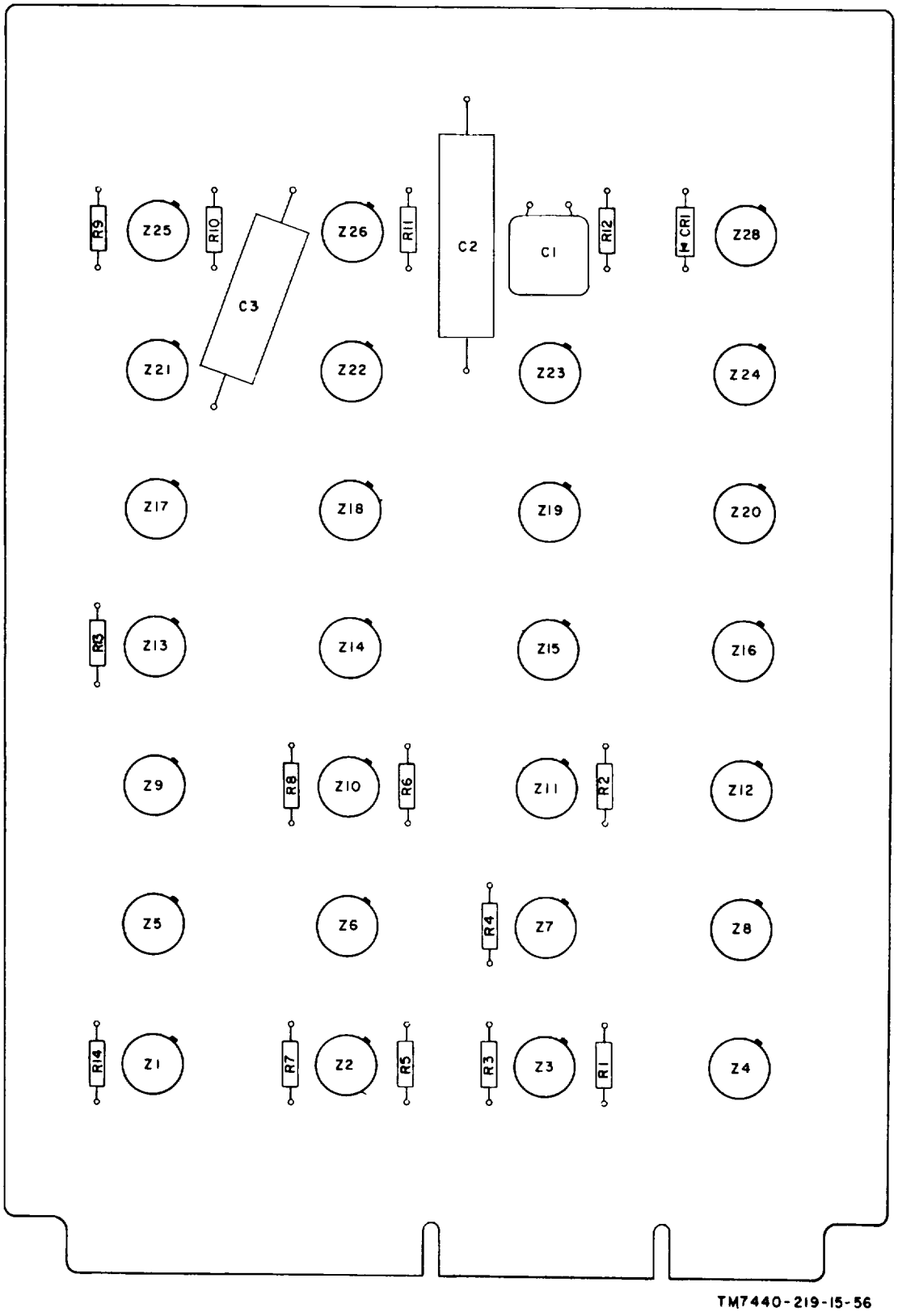


Figure 5-11. PC card No. A65429 (A16), component location diagram.

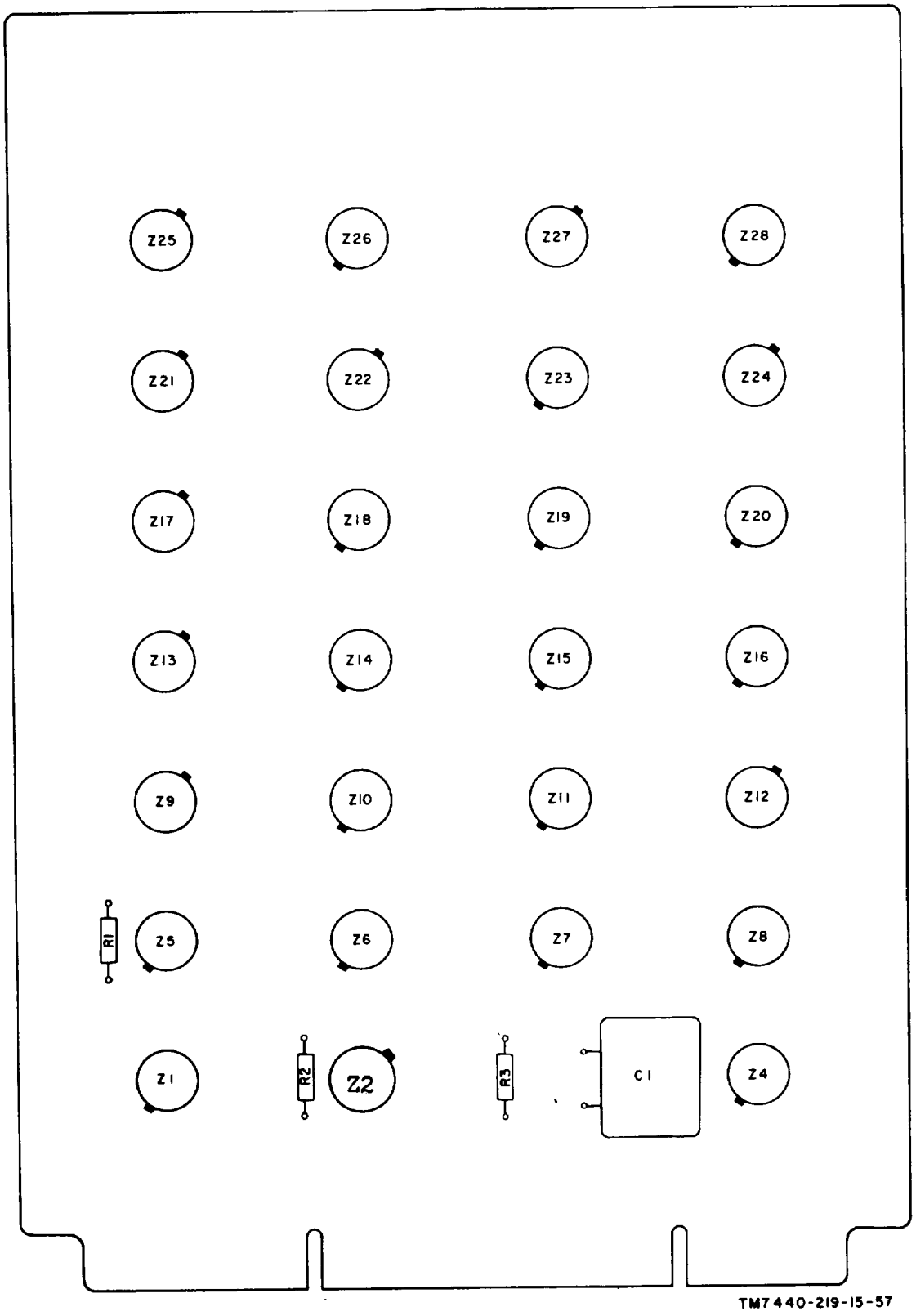


Figure 5-12. PC card No. A65433 (A14), component location diagram.

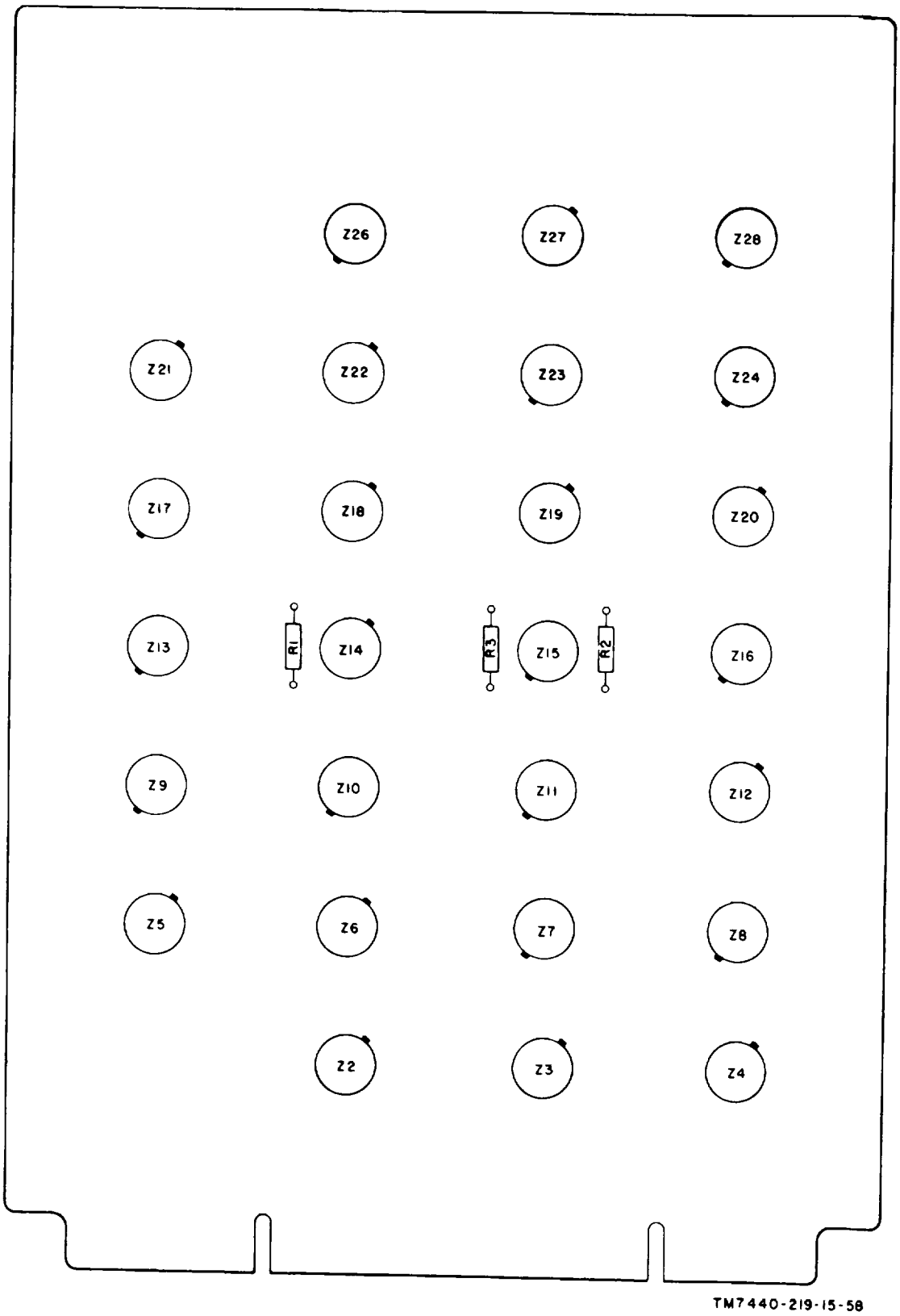


Figure 5-13. PC card No. A65437 (A15), component location diagram.

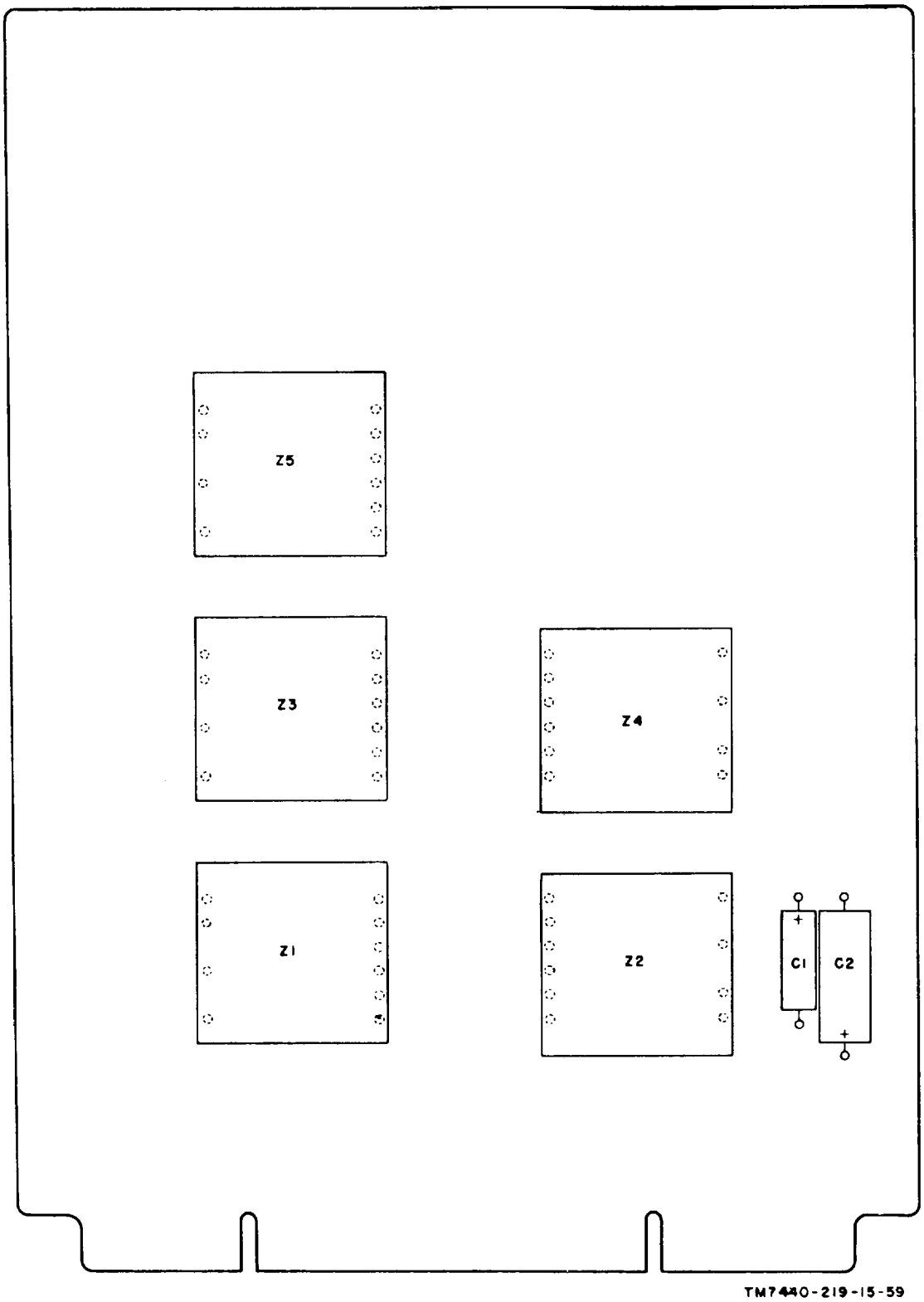


Figure 5-14. PC card No. SM-E-546GG59 (A3), component location. diagram.

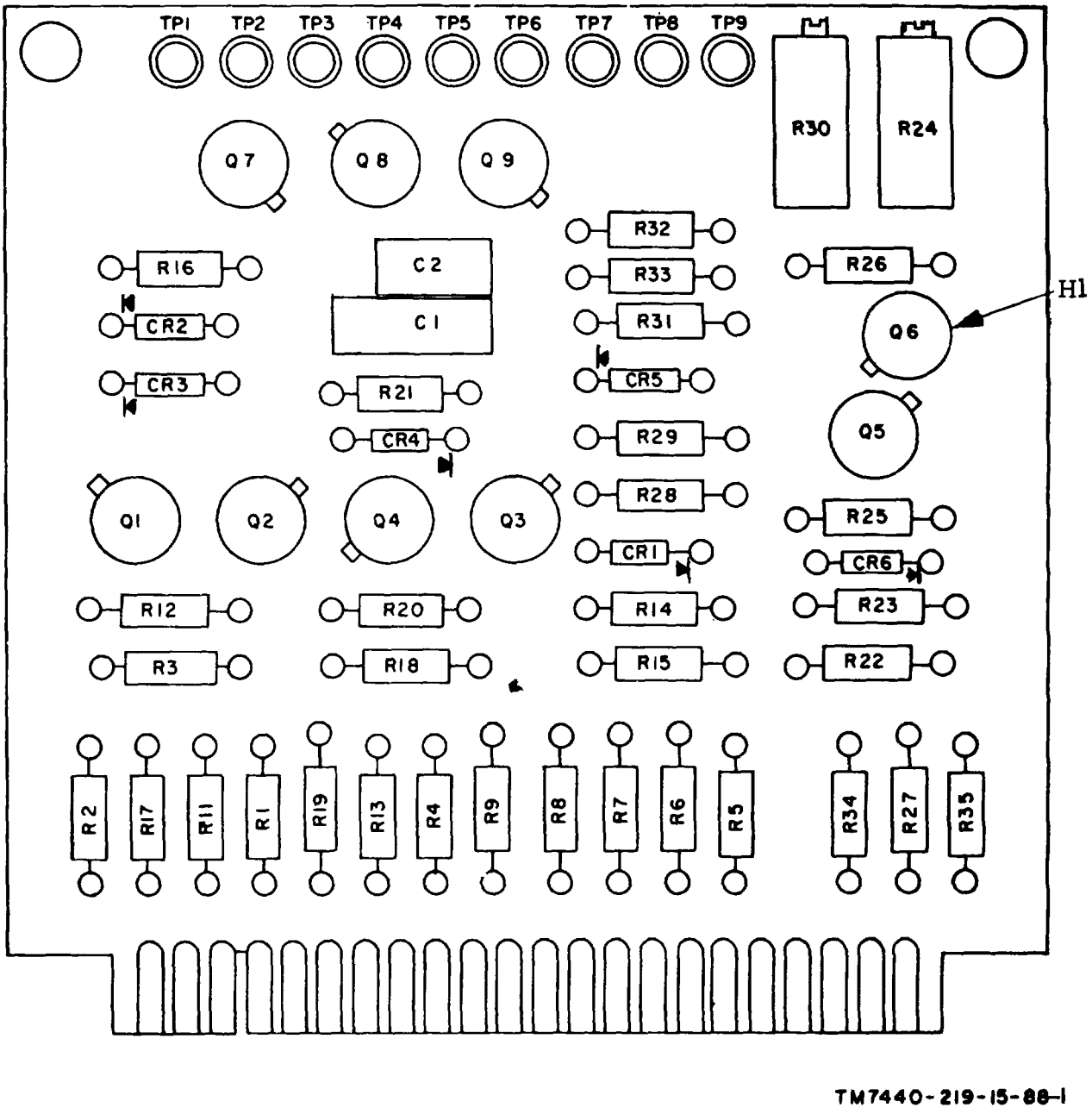


Figure 5-15. Component board assembly (+4.75 VDC) (PSIAI), component location" diagram.

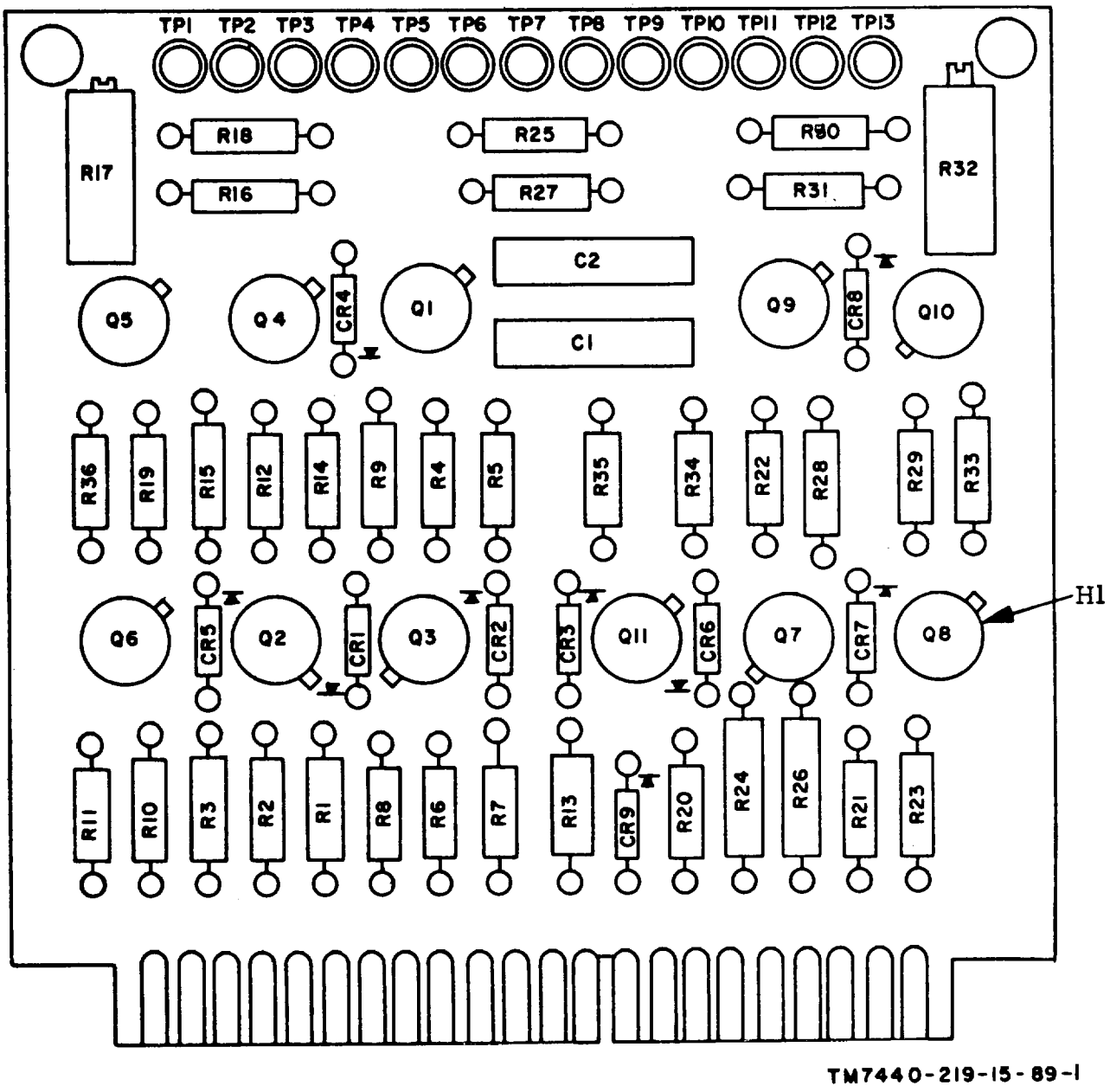


Figure 5-16. Component board assembly (±12 VDC) (PS1A2), component location diagram.

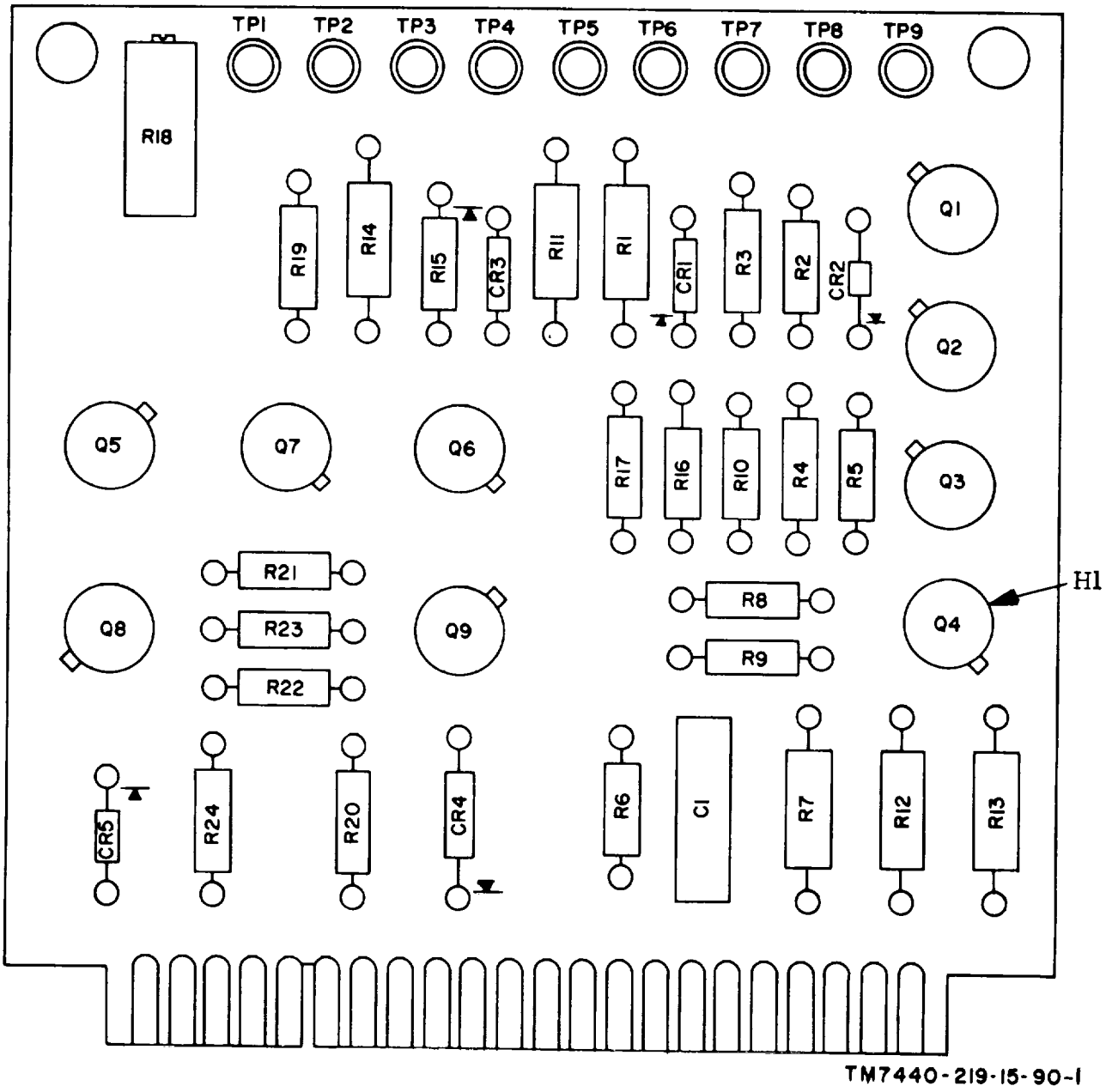


Figure 5-17. Component board assembly (-48 VDC) (PS1A3), component location diagram.

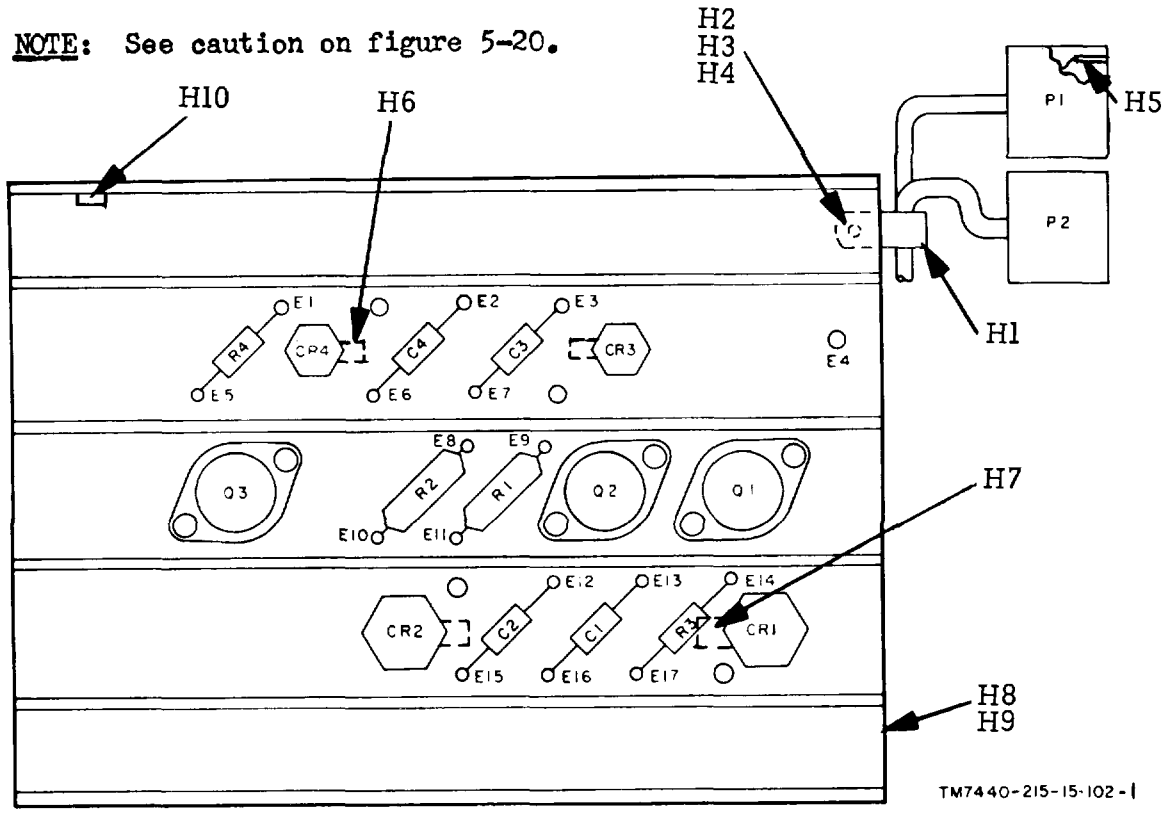


Figure 5-18. Power Supply heat sink assembly A4, component location diagram.

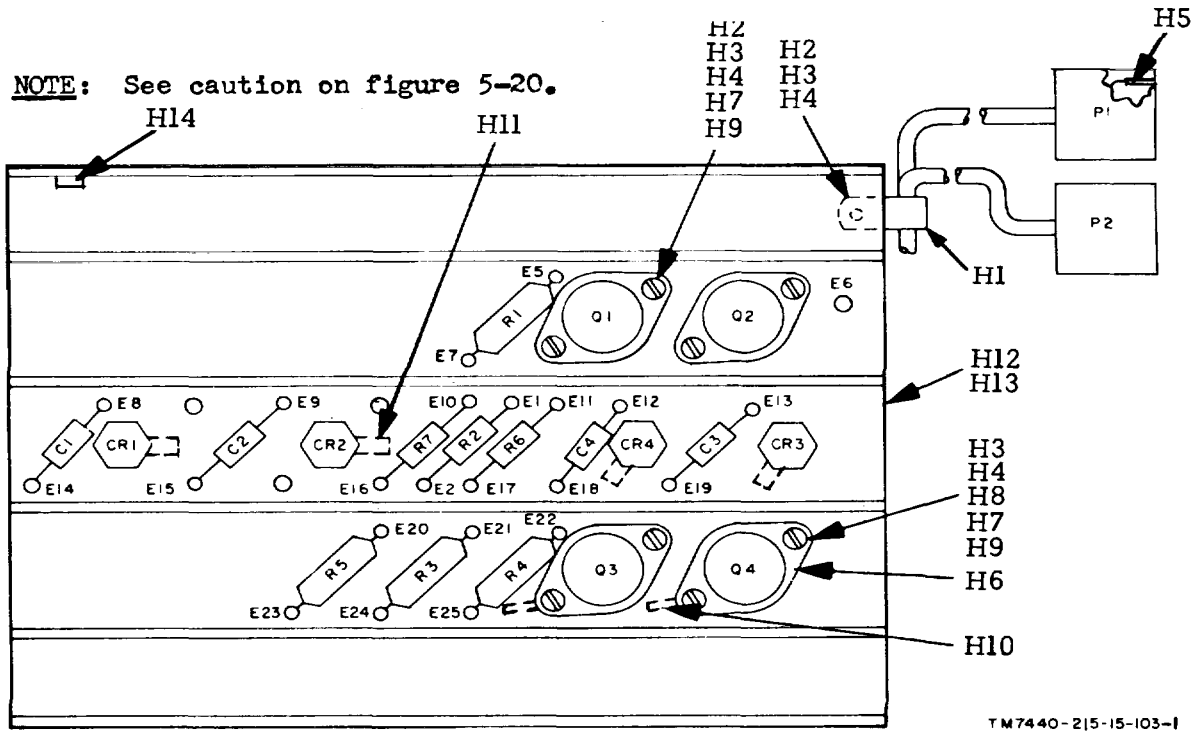


Figure 5-19. Power supply heat sink assembly A5, component location diagram.

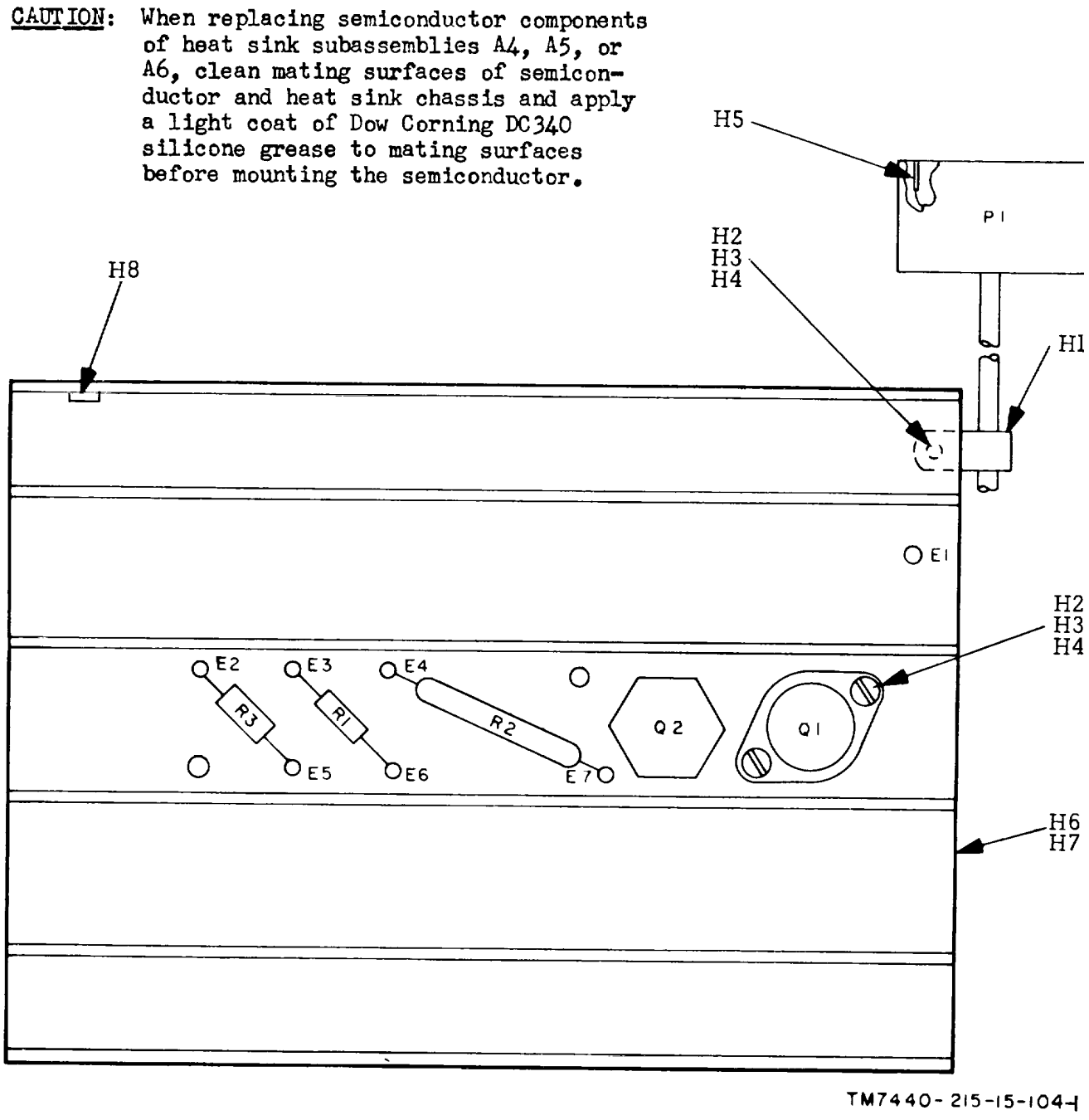
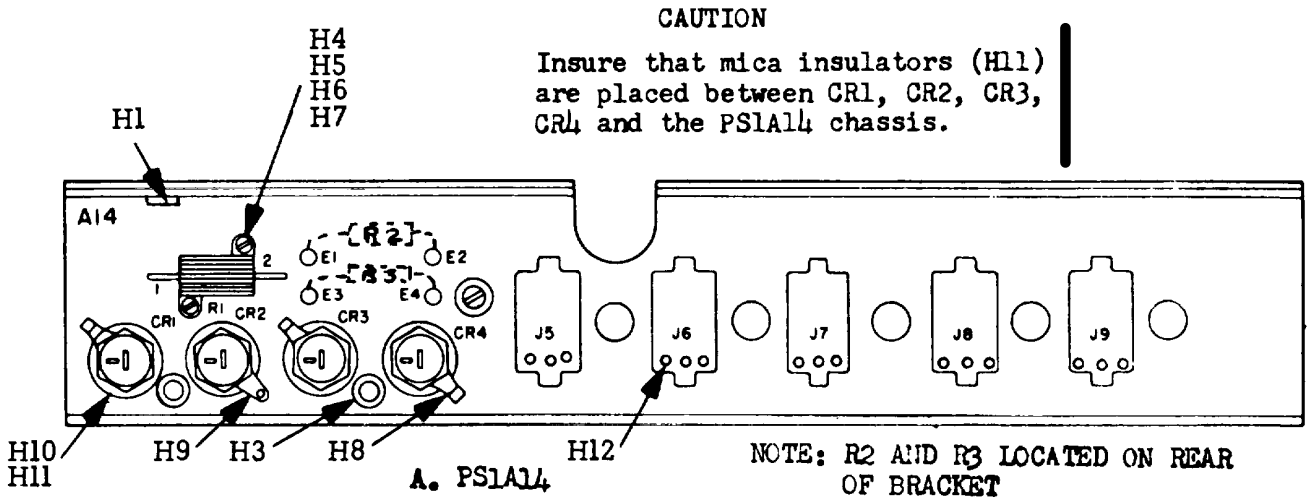
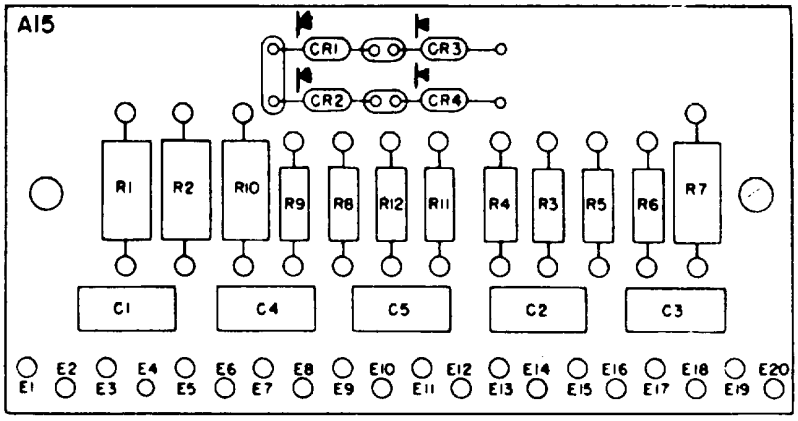


Figure 5-20. Power supply heat sink assembly A6, component location diagram



A. PS1A14



TM7440-215-15-106-

B. PS1A15

Figure 5-21. Power supply connector bracket assembly PSLU/4 and component board assembly PSlA15, component location diagram,

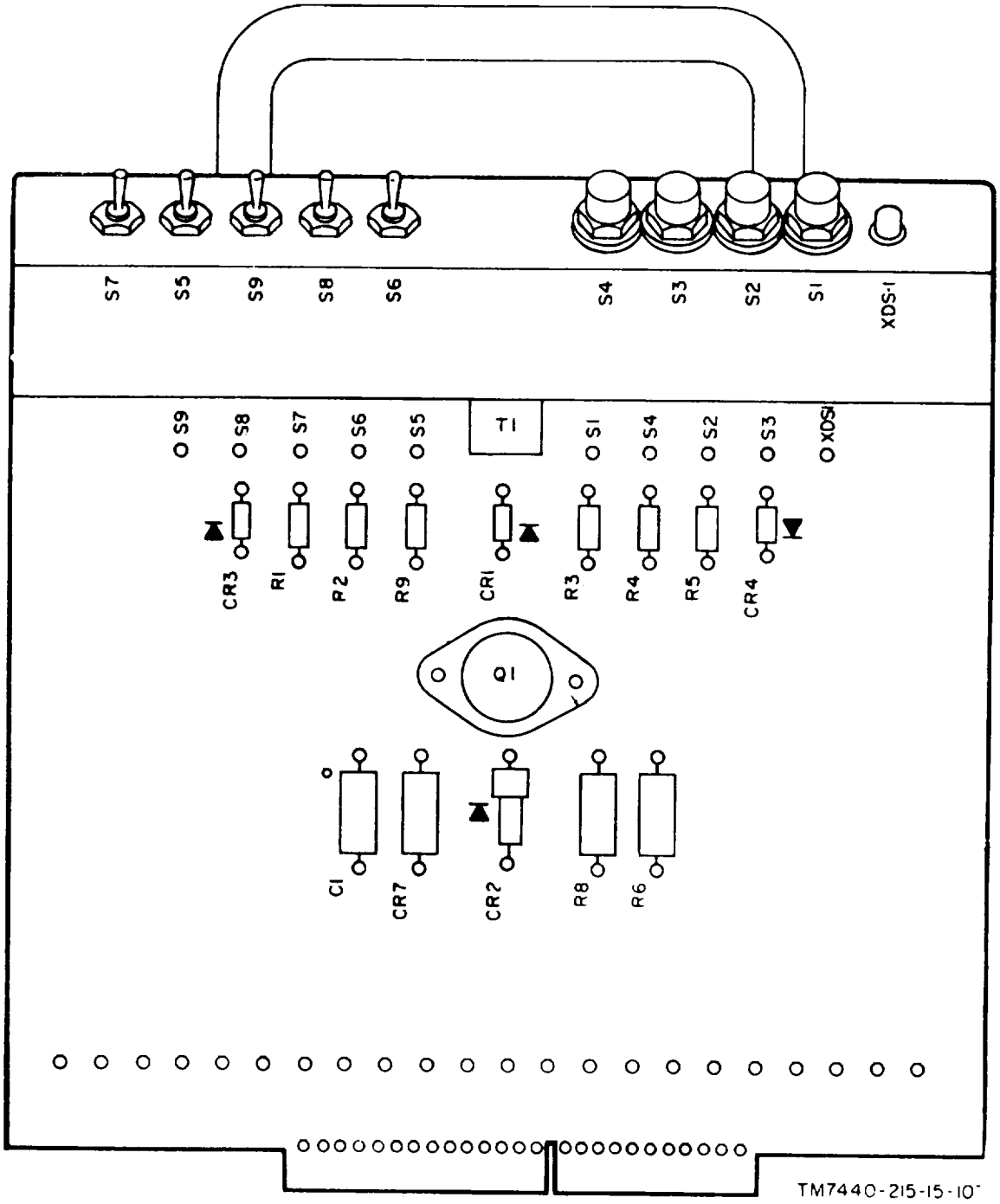


Figure 5-22. Power supply .manual control card.

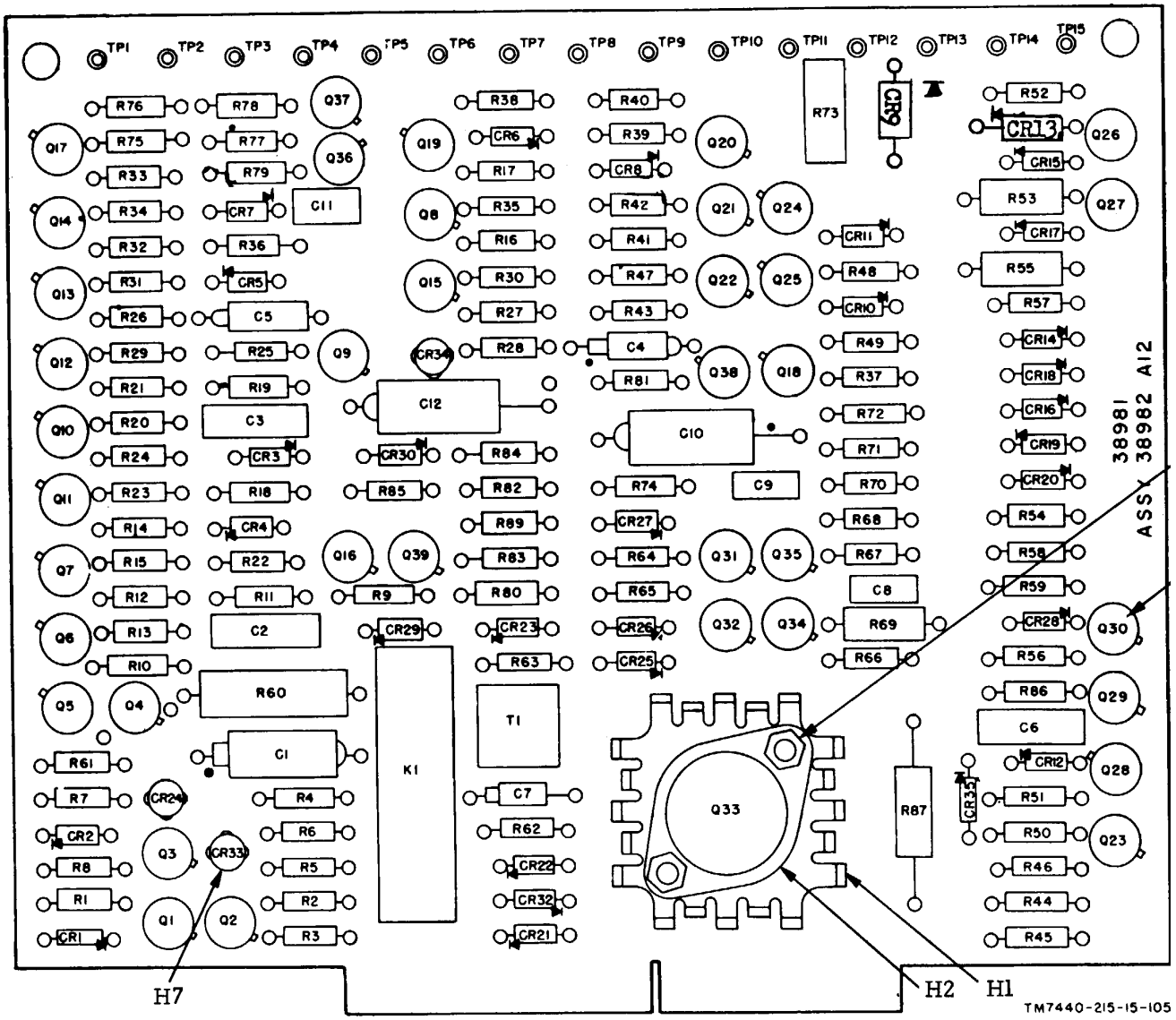


Figure 5-23. Power supply seque7Te module component board assembly PSlA12, component location diagram.

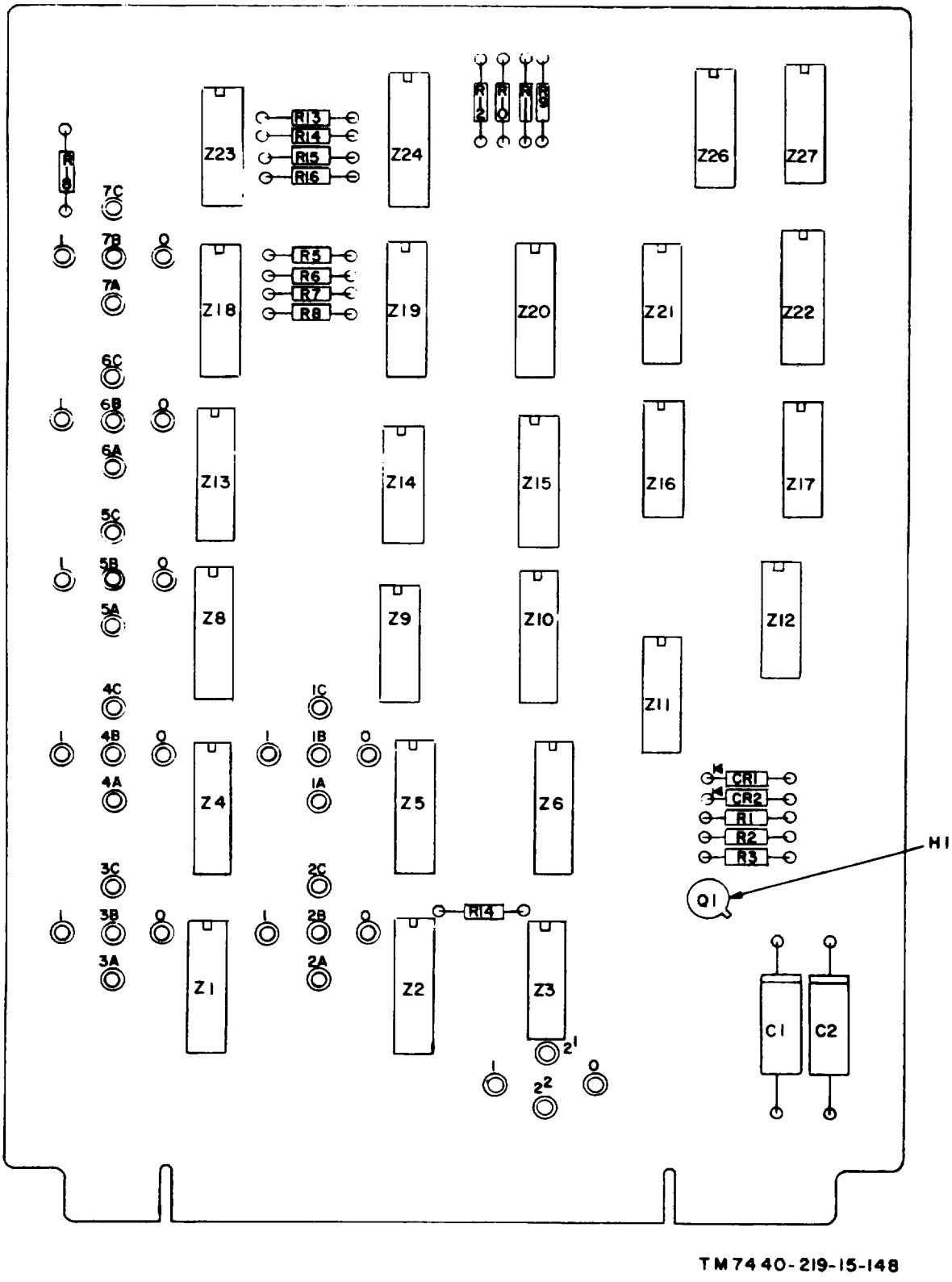


Figure 5-24. TIG PC card No. 12-890081 (A1A2, A4A2), component location diagram,

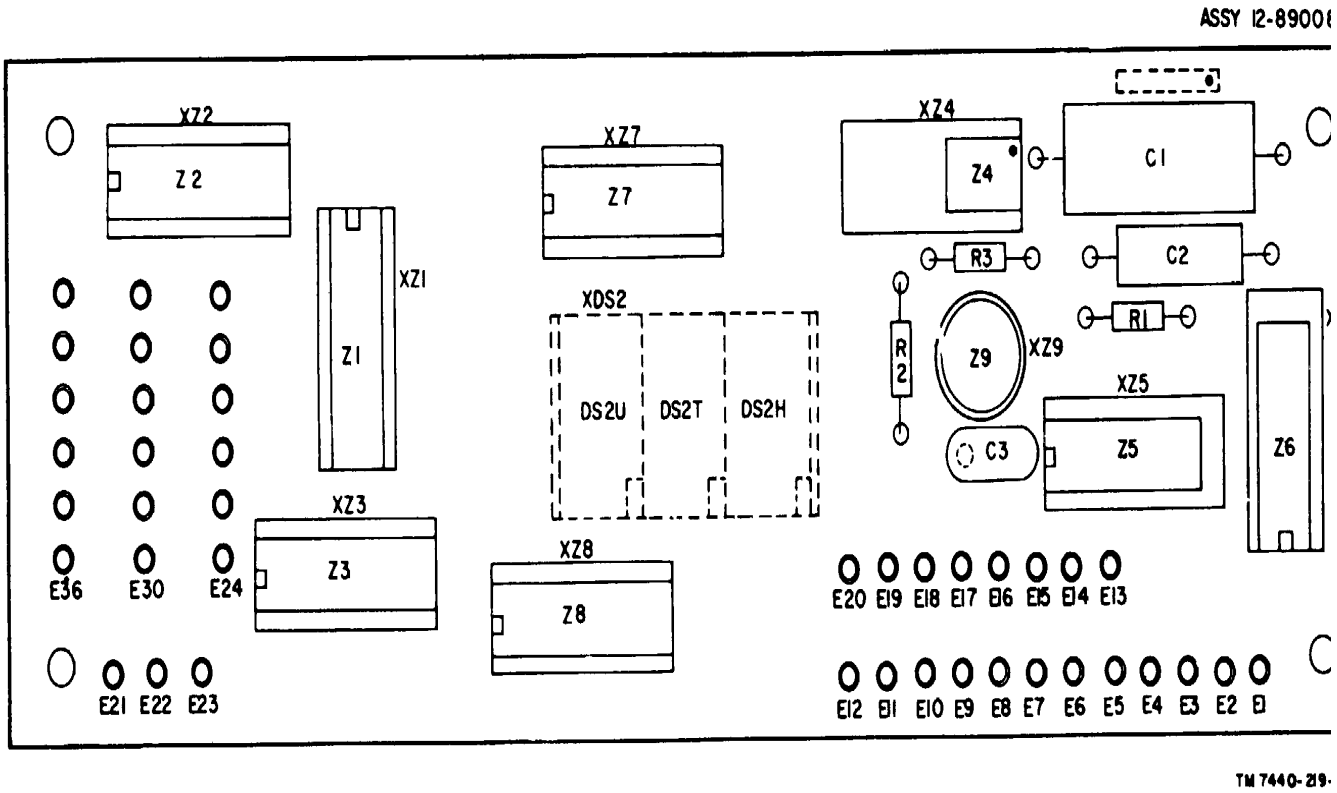


Figure 5-25. TIG assembly PC card No. 12-90O82 (A7A1, A8A1), opponent location diagram.

CHAPTER 6

DEPOT MAINTENANCE

Section I. DEPOT REPAIR

6-1. General

Complete rebuild of the punched tape reader may be accomplished by depot maintenance facilities, when authorized by appropriate authority. Rebuild action includes all repairs, rebuild, and replacement necessary to make this equipment equivalent to new material and suitable for return to the military supply system for reissue to using organizations.

6-2. Depot Repair

Depot repair includes all repair procedures described in chapters 4 and 5, in addition to the part fabrication and refinishing procedures possible with the metalworking and refinishing available at a depot.

Section II. DEPOT OVERHAUL STANDARDS

6-3. Applicability of Depot Overhaul Standards

Reader, Punched Paper Tape RP-154 (P)/G (paper tape reader) must be tested thoroughly after repair to insure that it meets adequate performance requirements for return to stock and reissue. Use the tests described in this section to measure the performance of the repaired device. Equipment that is to be returned to stock should meet all of the performance standards given in this section. Depot overhaul standards also outline procedures for testing punched tape readers that have been modified by the addition of a Transmission Identification Generator Kit MK-1583/G.

6-4. Applicable References

a. Repair Standards. Applicable procedures of the depots performing this test and the general standards for repaired equipment given in TB SIG 355-1, TG SIG 355-2, and TB SIG 355-3 form a part of the requirements for testing this equipment.

b. Technical Publications. The technical pub-
locations applicable to the equipment to be tested
are listed in appendix A.

c. Modification Work Orders. Perform the
work specified by modification work orders per-
taining to this equipment before making the
test specified. DA Pam 310-7 lists all available
MWO's.

65. Test Facilities Required

In addition to the tools and test equipment listed in appendix C, the following special tools and test equipments are required to perform the depot overhaul standards tests.

Item	Description
Frequency Counter (2 required)--	Beckman, Model 7350A, or equivalent accuracy of 1 part in 10' per week.
Paper Tape Reader Test Set----	General Dynamics Electronics Division Model 48-200769 or equivalent.
Timer, 1 minute ----------	Standard, TF-4570.
Regulated Power Amplifier ------	CML Model N500A, or equivalent, with 0.5%c accuracy.
Plug-in Amplifier ----------	AML Model SG13A, or equivalent, with 0.25', accuracy.
Test Cable ----------	Test cable terminated in 48-pin connector on one end and two fanning strips and single No. 8 wire on other end. Cable is labled "Reader".
Test Tape Sample A ----------	ASCII code, 1-inch fully perforated tape, punched with each of the seventy-three allowed combinations and interspersed with "Space" characters to take the place of invalid codes in the ASCII sequence per table 6-1.This pattern will be repeated four times in succession and spliced in a loop.

Item Description

Test Tape Sample B------- ASCII code, 1-inch fully perforated tape punched with all one-hundred and twenty-eight possible combinations per table 6-2.This tape will be unspliced and index marked as shown in figure 6-1.

Test Tape Sample C------ ASCII code, 1-inch fully perforated tape punched with the following sequences.(See fig.6-2.):

a. Fifty Nulls
h. Seven "idle" characters
c. Fifty Nulls
d. One hundred and twenty-eight characters including the seventy-three allowed combinations as described for test tape sample A
e. Fifty N's
f. Fifty Nulls
g. Seven "idle" characters
h. Ten feet of Nulls

The "idle" characters consists of-

1. Null
2. Line Feed
3. Carriage Return
4. Shift-in
5. Shift-out
6. Delete
7. Space

Test Tape Sample D--- One-inch, fully perforated tape, punched with nulls, except for a single character "A" punched approximately midway between the ends of the tape. A printed character "A" appears on the tape between sprocket holes at a distance of four and one-half character spacings ahead of the punched code "A".(See fig.6-2.) This tape is unspliced.

Test Tape Sample E------- 11/16-inch tape, chadless, punched with nulls, except for a single character "A" punched approximately midway between the ends of the tape. A printed character "A" appears on the tape at a distance of six character spacings behind the punched code "A" (fig.6-2).This tape is unspliced.

Test Tape Sample F --------- ITA No 2 code.1-inch fully perforated tape punched to include each of the fifty-eight possible combinations repeated in succession four times in accordance with table 6-3 and spliced in a loop

Test Tape Sample G ------- Fully perforated 11/16-inch tape punched in the same manner as Test Tape F.

Test Tape Sample H ------- Fully perforated 7/'8-inch tape punched in the same manner as Test Tape F.

Test Tape Sample J.--- 1-inch tape punched in the same manner as Test Tape F, except that this tape is not spliced in a loop.

Test Tape Sample K--- 1-inch tape punched in the same manner as Test Tape F except that eight sprocket holes are torn in succession.

Test Tape Sample L.------ 11/16-inch tape, punched in the same manner as Test Tape F except tape will be chadless.

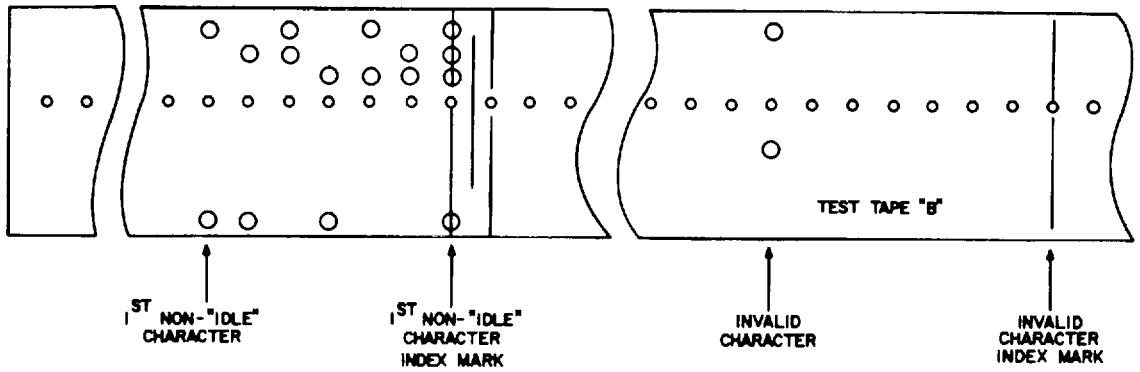
Test Tape Sample M-------- ASCII code.1-inch fully perforated tape punched as indicated in table 6-4.The 100-character pattern is to be repeated twice and the tape spliced into a loop.

Note Test Tape Sample M is required only if a punched tape reader having a Transmission Identification Generator Kit MK-1583/G installed is to be tested.

Test Tape Sample P ------ Fully perforated, 1-inch tape, punched with alternate asterisk and UASCII code characters and spliced to form a loop.

TTG Simulator .---------- General Dynamics, Electro Dynamics Division model No.10-000231, or equivalent.

Note TIC, simulator is required only if a Transmission Identification Generator Kit MK-1.583/G is installed on the punched tape reader to be tested. In addition. the TIC, simulator Is not required if a dual TITG installation is to be tested that has an interconnecting cable installed between the two TIC assemblies.



NOTES:

1. A DOUBLE INDEXING MARK WILL APPEAR TO THE RIGHT OF THE INDEXING EDGE OF THE TAPE READER COVER FOR THE FIRST CHARACTER WHICH IS NOT AN "IDLE" CHARACTER.
2. A SINGLE INDEXING MARK WILL APPEAR TO THE RIGHT OF THE INDEXING EDGE OF THE TAPE READER COVER FOR EACH INVALID CHARACTER READ.

TM 7440-219-15-100

Figure 6-1. Test tape sample B, index markings.

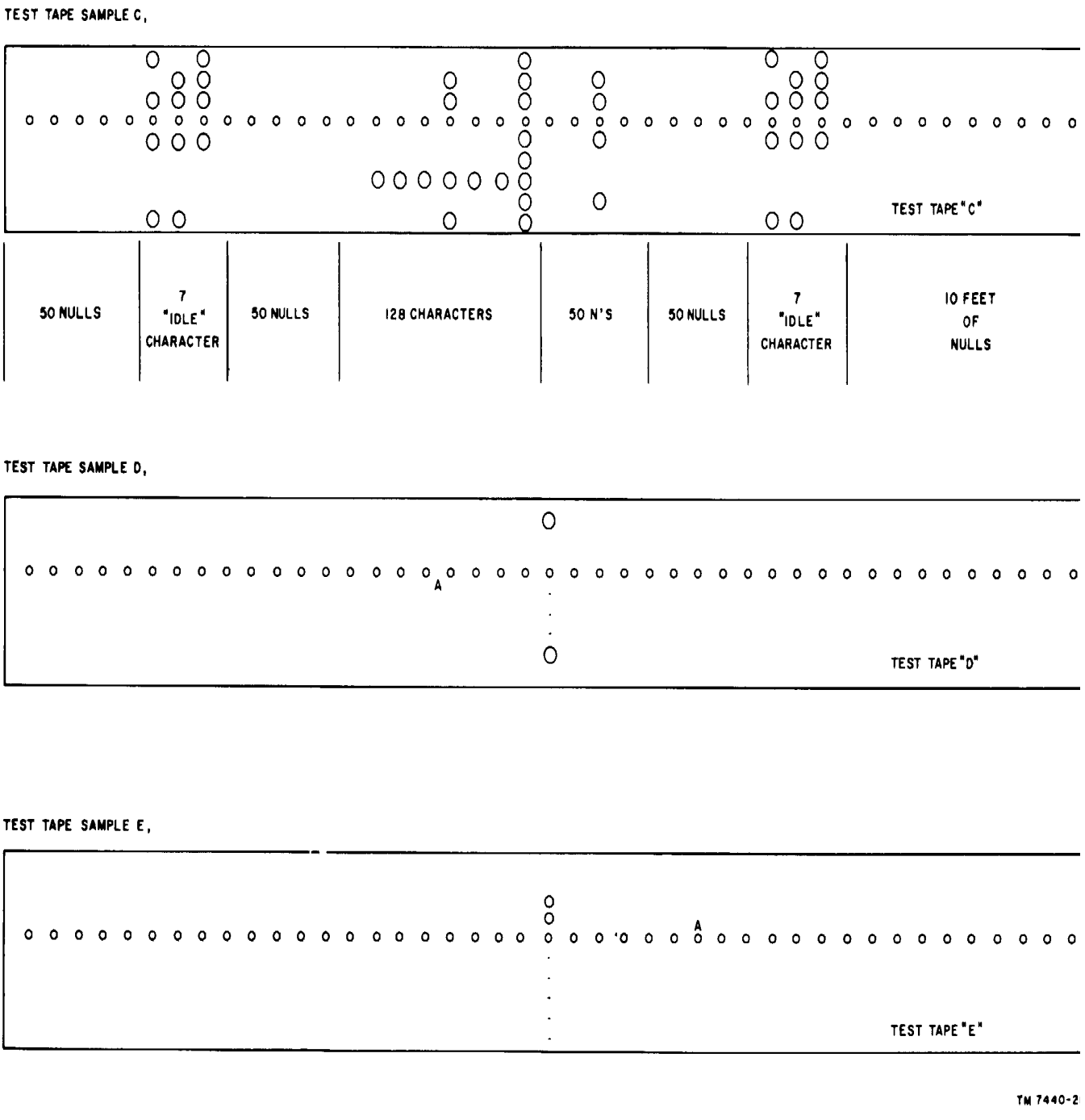


Figure 6-2. Test tape sample C, D, and E.

Table 6-1. ASCII Test Pattern Character Sequence

ASCII								Character
1	2	3	4	5	6	7	8	
0	0	0	0	0	0	0	0	NULL
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
1	1	1	0	0	0	0	1	BEL
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	1	0	1	0	0	0	0	LF
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
1	0	1	1	0	0	0	1	CR
0	1	1	1	0	0	0	1	SO
1	1	1	1	0	0	0	0	SI
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	1	0	1	0	0	0	DC4
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
1	0	0	1	1	0	0	1	EM
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
1	0	0	0	0	1	0	0	!
0	1	0	0	0	1	0	0	"
1	1	0	0	0	1	0	1	#
0	0	1	0	0	1	0	0	$
1	0	1	0	0	1	0	1	%
0	1	1	0	0	1	0	1	&
1	1	1	0	0	1	0	0	'
0	0	0	1	0	1	0	0	(
1	0	0	1	0	1	0	1	)
0	1	0	1	0	1	0	1	*
1	1	0	1	0	1	0	0	+
0	0	1	1	0	1	0	1	,
1	0	1	1	0	1	0	0	-
0	1	1	1	0	1	0	0	.
1	1	1	1	0	1	0	1	/
0	0	0	0	1	1	0	0	ø
1	0	0	0	1	1	0	1	1
0	1	0	0	1	1	0	1	2
1	1	0	0	1	1	0	0	3
0	0	1	0	1	1	0	1	4
1	0	1	0	1	1	0	0	5
0	1	1	0	1	1	0	0	6
1	1	1	0	1	1	0	1	7
0	0	0	1	1	1	0	1	8
1	0	0	1	1	1	0	0	9
0	1	0	1	1	1	0	0	:
1	1	0	1	1	1	0	0	;
0	0	1	1	1	1	0	0	<

ASCII								Character
1	2	3	4	5	6	7	8	
1	0	1	1	1	1	0	1	=
0	1	1	1	1	1	0	1	>
1	1	1	1	1	1	0	0	?
0	0	0	0	0	0	1	1	
1	0	0	0	0	0	1	0	A
0	1	0	0	0	0	1	0	B
1	1	0	0	0	0	1	1	C
0	0	1	0	0	0	1	0	D
1	0	1	0	0	0	1	1	E
0	1	1	0	0	0	1	1	F
1	1	1	0	0	0	1	0	G
0	0	0	1	0	0	1	0	H
1	0	0	1	0	0	1	1	I
0	1	0	1	0	0	1	1	J
1	1	0	1	0	0	1	0	K
0	0	1	1	0	0	1	1	L
1	0	1	1	0	0	1	0	M
0	1	1	1	0	0	1	0	N
1	1	1	1	0	0	1	1	O
0	0	0	0	1	0	1	0	P
1	0	0	0	1	0	1	1	Q
0	1	0	0	1	0	1	1	R
1	1	0	0	1	0	1	0	S
0	0	1	0	1	0	1	1	T
1	0	1	0	1	0	1	0	U
0	1	1	0	1	0	1	0	V
1	1	1	0	1	0	1	1	W
0	0	0	1	1	0	1	1	X
1	0	0	1	1	0	1	0	Y
0	1	0	1	1	0	1	0	Z
1	1	0	1	1	0	1	1	[
0	0	1	1	1	0	1	0	~
0	0	0	0	0	1	0	1	SPACE
0	1	1	1	1	0	1	0	^
0	0	0	0	0	0	1	0	@
1	0	0	0	0	0	1	0	A
0	1	0	0	0	0	1	0	B
1	1	0	0	0	0	1	1	C
0	0	1	0	0	0	1	0	D
1	0	1	0	0	0	1	1	E
0	1	1	0	0	0	1	1	F
1	1	1	0	0	0	1	9	G
0	0	0	1	0	0	1	0	H
1	0	0	1	0	0	1	1	I
0	1	0	1	0	0	1	1	J
1	1	0	1	0	0	1	0	K
0	0	1	1	0	0	1	1	L
1	0	1	1	0	0	1	0	M
0	1	1	1	0	0	1	0	N
1	1	1	1	0	0	1	1	O
0	0	0	0	1	0	1	0	P
1	0	0	0	1	0	1	1	Q
0	1	0	0	1	0	1	1	R
1	1	0	0	1	0	1	0	S
0	0	1	0	1	0	1	1	T
1	0	1	0	1	0	1	0	U
0	1	1	0	1	0	1	0	V
1	1	1	0	1	0	1	1	W
0	0	0	1	1	0	1	1	X
1	0	0	1	1	0	1	0	Y
0	1	0	1	1	0	1	0	Z

Table 6-1. ASCII Test Pattern Character Sequence-Continued

ASCII								
1	2	3	4	5	6	7	8	Character
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE
0	0	0	0	0	1	0	1	SPACE

ASCII								
1	2	3	4	5	6	7	8	Character
0	0	0	0	0	1	0	1	SPACE
1	1	1	1	1	1	1	1	DEL

Table 6-2. ASCII Binary Sequence for Test Tape B

ASCII								
1	2	3	4	5	6	7	8	Character
0	0	0	0	0	0	0	0	NUL
1	0	0	0	0	0	0	1	SOH
0	1	0	0	0	0	0	1	STX
1	1	0	0	0	0	0	0	ETX
0	0	1	0	0	0	0	1	EOT
1	0	1	0	0	0	0	0	ENQ
0	1	1	0	0	0	0	0	ACK
1	1	1	0	0	0	0	1	BEL
0	0	0	1	0	0	0	1	BS
1	0	0	1	0	0	0	0	HT
0	1	0	1	0	0	0	0	LF
1	1	0	1	0	0	0	1	VT
0	0	1	1	0	0	0	0	FF
1	0	1	1	0	0	0	1	CR
0	1	1	1	0	0	0	1	SO
1	1	1	1	0	0	0	0	SI
0	0	0	0	1	0	0	1	DLE
1	0	0	0	1	0	0	0	DC1
0	1	0	0	1	0	0	0	DC2
1	1	0	0	1	0	0	1	DC3
0	0	1	0	1	0	0	0	DC4
1	0	1	0	1	0	0	1	NAK
0	1	1	0	1	0	0	1	SYN
1	1	1	0	1	0	0	0	ETB
0	0	0	1	1	0	0	0	CAN
1	0	0	1	1	0	0	1	EM
0	1	0	1	1	0	0	1	SS
1	1	0	1	1	0	0	0	ESC
0	0	1	1	1	0	0	1	FS
1	0	1	1	1	0	0	0	GS
0	1	1	1	1	0	0	0	RS
1	1	1	1	1	0	0	1	US
0	0	0	0	0	1	0	1	SPACE
1	0	0	0	0	1	0	0	!
0	1	0	0	0	1	0	0	"
1	1	0	0	0	1	0	1	#
0	0	1	0	0	1	0	0	$
1	0	1	0	0	1	0	1	%
0	1	1	0	0	1	0	1	&
1	1	1	0	0	1	0	0	'
0	0	0	1	0	1	0	0	(
1	0	0	1	0	1	0	1	)
0	1	0	1	0	1	0	1	*
1	1	0	1	0	1	0	0	+
0	0	1	1	0	1	0	1	,
1	0	1	1	0	1	0	0	–
0	1	1	1	0	1	0	0	.
1	1	1	1	0	1	0	1	/
0	0	0	0	1	1	0	1	Ø
1	0	0	0	1	1	0	1	1
0	1	0	0	1	1	0	1	2
1	1	0	0	1	1	0	0	3

ASCII								
1	2	3	4	5	6	7	8	Character
0	0	1	0	1	1	0	1	4
1	0	1	0	1	1	0	0	5
0	1	1	0	1	1	0	0	6
1	1	1	0	1	1	0	1	7
0	0	0	1	1	1	0	1	8
1	0	0	1	1	1	0	0	9
0	1	0	1	1	1	0	0	:
1	1	0	1	1	1	0	1	;
0	0	1	1	1	1	0	0	<
1	0	1	1	1	1	0	1	=
0	1	1	1	1	1	0	1	>
1	1	1	1	1	1	0	0	?
0	0	0	0	0	0	1	1	
0	0	0	0	0	0	1	0	A
0	1	0	0	0	0	1	0	B
1	1	0	0	0	0	1	1	C
0	0	1	0	0	0	1	0	D
1	0	1	0	0	0	1	1	E
0	1	1	0	0	0	1	1	F
1	1	1	0	0	0	1	0	G
0	0	0	1	0	0	1	0	H
1	0	0	1	0	0	1	1	I
0	1	0	1	0	0	1	1	J
1	1	0	1	0	0	1	0	K
0	0	1	1	0	0	1	1	L
1	0	1	1	0	0	1	0	M
0	1	1	1	0	0	1	0	N
1	1	1	1	0	0	1	1	O
0	0	0	0	1	0	1	0	P
1	0	0	0	1	0	1	1	Q
0	1	0	0	1	0	1	1	R
1	1	0	0	1	0	1	0	S
0	0	1	0	1	0	1	1	T
1	0	1	0	1	0	1	0	U
0	1	1	0	1	0	1	0	V
1	1	1	0	1	0	1	1	W
0	0	0	1	1	0	1	1	X
1	0	0	1	1	0	1	0	Y
0	1	0	1	1	0	1	0	Z
1	1	0	1	1	0	1	1	[
0	0	1	1	1	0	1	0	~
1	0	1	1	1	0	1	1	]
0	1	1	1	1	0	1	1	^
1	1	1	1	1	0	1	0	_
0	0	0	0	0	1	1	0	@
1	0	0	0	0	1	1	1	a
0	1	0	0	0	1	1	1	b
1	1	0	0	0	1	1	0	c
0	0	1	0	0	1	1	1	d
1	0	1	0	0	1	1	0	e
0	1	1	0	0	1	1	0	f
1	1	1	0	0	1	1	1	g

Table 6-2. ASCII Binary Sequence for Test Tape B-Continued.

ASCII								
1	2	3	4	5	6	7	8	Character
0	0	0	1	0	1	1	1	h
1	0	0	1	0	1	1	0	i
0	1	0	1	0	1	1	0	j
1	1	0	1	0	1	1	1	k
0	0	1	1	0	1	1	0	l
1	0	1	1	0	1	1	1	m
0	1	1	1	0	1	1	1	n
1	1	1	1	0	1	1	0	o
0	0	0	0	1	1	1	1	p
1	0	0	0	1	1	1	0	q
0	1	0	0	1	1	1	0	r
1	1	0	0	1	1	1	1	s

ASCII								
1	2	3	4	5	6	7	8	Character
0	0	1	0	1	1	1	0	t
1	0	1	0	1	1	1	1	u
0	1	1	0	1	1	1	1	v
1	1	1	0	1	1	1	0	w
0	0	0	1	1	1	1	0	x
1	0	0	1	1	1	1	1	y
0	1	0	1	1	1	1	1	z
1	1	0	1	1	1	1	0	Σ
0	0	1	1	1	1	1	1	—
1	0	1	1	1	1	1	0	}
0	1	1	1	1	1	1	0	1
1	1	1	1	1	1	1	1	DEL

Table 63. ITA No. 2 Test Pattern Character Sequence for Test Tapes F Through L

ITA No. 2					Character
1	2	3	4	5	
0	0	0	0	0	BLANK
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
1	1	0	1	1	FIGURES
1	0	1	0	0	BELL
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	1	0	0	0	LINE FEED
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	0	1	0	CARRIAGE RETURN
1	1	0	1	1	FIGURES
1	1	1	1	1	LETTERS
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
1	1	0	1	1	FIGURES
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
1	0	1	1	0	!
1	0	0	0	1	"
0	0	1	0	1	#
1	0	0	1	0	$
0	0	1	0	0	SPACE
0	1	0	1	1	&
1	1	0	1	0	,
1	1	1	1	0	(
0	1	0	0	1	)

ITA No. 2					Character
1	2	3	4	5	
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	1	0	,
1	1	0	0	0	–
0	0	1	1	1	.
1	0	1	1	1	/
0	1	1	0	1	ZERO
1	1	1	0	1	1
1	1	0	0	1	2
1	0	0	0	0	3
0	1	0	1	0	4
0	0	0	0	1	5
1	0	1	0	1	6
1	1	1	0	0	7
0	1	1	0	0	8
0	0	0	1	1	9
0	1	1	1	0	:
0	1	1	1	1	;
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
1	0	0	1	1	?
1	1	1	1	1	LETTERS
1	1	0	0	0	A
1	0	0	1	1	B
0	1	1	1	0	C
1	0	0	1	0	D
1	0	0	0	0	E
1	0	1	1	0	F
0	1	0	1	1	G
0	0	1	0	1	H
0	1	1	0	0	I
1	1	0	1	0	J
1	1	1	1	0	K
0	1	0	0	1	L
0	0	1	1	1	M
0	0	1	1	0	N
0	0	0	1	1	O
0	1	1	0	1	P
1	1	1	0	1	Q
0	1	0	1	0	R
1	0	1	0	0	S

Table 6-3. ITA No. 2 Test Pattern Character Sequence for Test Tapes F Through L--Continued

ITA No. 2					
1	2	3	4	5	Character
0	0	0	0	1	T
1	1	1	0	0	U
0	1	1	1	1	V
1	1	0	0	1	W
1	0	1	1	1	X
1	0	1	0	1	Y
1	0	0	0	1	Z
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
1	1	0	0	0	A
1	0	0	1	1	B
0	1	1	1	0	C
1	0	0	1	0	D
1	0	0	0	0	E
1	0	1	1	0	F
0	1	0	1	1	G
0	0	1	0	1	H
0	1	1	0	0	I

ITA No. 2					
1	2	3	4	5	Character
1	1	0	1	0	J
1	1	1	1	0	K
0	1	0	0	1	L
0	0	1	1	1	M
0	0	1	1	0	N
0	0	0	1	1	O
0	1	1	0	1	P
1	1	1	0	1	Q
0	1	0	1	0	R
1	0	1	0	0	S
0	0	0	0	1	T
1	1	1	0	0	U
0	1	1	1	1	V
1	1	0	0	0	W
1	0	1	1	1	X
1	0	1	0	1	Y
1	0	0	0	1	Z
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE
0	0	1	0	0	SPACE

Table 6-4. Tig Test Tape Sample M

ASCII								
1	2	3	4	5	6	7	8	Character
0	0	1	0	1	0	1	1	T
0	0	0	1	0	0	1	0	H
1	0	0	1	0	0	1	1	I
1	1	0	0	1	0	1	0	S
0	0	0	0	0	1	0	1	SPACE
1	0	0	1	0	0	1	1	I
1	1	0	0	1	0	1	0	S
0	0	0	0	0	1	0	1	SPACE
1	0	0	0	0	0	1	0	A
0	0	0	0	0	1	0	1	SPACE
0	0	1	0	1	0	1	1	T
1	0	1	0	0	0	1	1	E
1	1	0	0	1	0	1	0	S
0	0	1	0	1	0	1	1	T
0	0	0	0	0	1	0	1	SPACE
1	1	1	1	0	0	1	1	O
0	1	1	0	0	0	1	1	F
0	0	0	0	0	1	0	1	SPACE
0	0	1	0	1	0	1	1	T
1	0	0	1	0	0	1	1	I
1	1	1	0	0	0	1	0	G
0	0	0	0	0	1	0	1	SPACE
1	0	0	0	0	0	1	0	A
0	1	0	0	0	0	1	0	B
1	1	0	0	0	0	1	1	C
0	0	1	0	0	0	1	0	D
1	0	1	0	0	0	1	0	E
0	1	1	0	0	0	1	1	F
1	1	1	0	0	0	1	0	G
0	0	0	1	0	0	1	0	H
1	0	0	1	0	0	1	1	I
0	1	0	1	0	0	1	1	J

ASCII								
1	2	3	4	5	6	7	8	Character
1	1	0	1	0	0	1	0	K
0	0	1	1	0	0	1	1	L
1	0	1	1	0	0	1	0	M
0	1	1	1	0	0	1	0	N
1	1	1	1	0	0	1	1	O
0	0	0	0	1	0	1	0	P
1	0	0	0	1	0	1	1	Q
0	1	0	0	1	0	1	1	R
1	1	0	0	1	0	1	0	S
0	0	1	0	1	0	1	1	T
1	0	1	0	1	0	1	0	U
0	1	1	0	1	0	1	0	V
1	1	1	0	1	0	1	1	W
0	0	0	1	1	0	1	1	X
1	0	0	1	1	0	1	0	Y
0	1	0	1	1	0	1	0	Z
0	0	0	0	0	1	0	1	SPACE
1	0	0	0	1	0	1	1	1
0	1	0	0	1	1	0	1	2
1	1	0	0	1	1	0	0	3
0	0	1	0	1	1	0	1	4
1	0	1	0	1	1	0	0	5
0	1	1	0	1	1	0	0	6
1	1	1	0	1	1	0	1	7
0	0	0	1	1	1	0	1	8
1	0	0	1	1	1	0	0	9
0	0	0	0	1	1	0	0	0
0	0	1	1	0	1	0	0	–
0	1	1	1	0	1	0	0	–
0	1	1	1	0	1	0	0	–
0	1	1	1	0	1	0	0	–
0	0	0	0	0	1	0	1	SPACE

Table 6-4. Tig Test Tape Sample M-Continued.

ASCII								
1	2	3	4	5	6	7	8	Character
0	0	0	0	0	1	0	1	SPACE
1	0	1	1	0	0	0	1	CR
1	0	1	1	0	0	0	1	CR
0	1	0	1	0	0	0	0	LF
0	1	0	1	0	0	0	0	LF
0	1	1	1	0	0	1	0	N
0	1	1	1	0	0	1	0	N
0	1	1	1	0	0	1	0	N
0	1	1	1	0	0	1	0	N
1	1	1	1	1	1	1	1	DEL
1	1	1	1	1	1	1	1	DEL
1	1	1	1	1	1	1	1	DEL
1	1	1	1	1	1	1	1	DEL
1	1	1	1	1	1	1	1	DEL
1	1	1	1	1	1	1	1	DEL
1	1	1	1	1	1	1	1	DEL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL

ASCII								
1	2	3	4	5	6	7	8	Character
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL
0	0	0	0	0	0	0	0	NUL

6-6. General Test Conditions and Requirements

Before the tests (para 6-7 through 6-9) are made, the equipment shall meet the mechanical requirements specified in a below. The general test conditions of b below shall be established. Paper tape reader test set must be modified as outlined in c below before testing transmission identification generator.

a. Mechanical Requirements.

(1) The paper tape reader should be assembled for 120 VAC, 60 Hertz operation, and should be adjusted to meet the requirements of paragraphs 4-47 through 4-66.

(2) Reader mechanism should be lubricated per the procedure of paragraph 4-8 before starting the tests of this section.

b. Test Conditions.

(1) Unless otherwise specified, all tests will be performed under the following test conditions:

Temperature ------	Ambient, 150C to 35°C
Altitude - ---------	Normal ground
Humidity --------	Room ambient up to 98%o
Power ------------	120 VAC, 60 Hertz

(2) Connect the paper tape reader to the test equipment as shown in figure 6-3.

(3) When the test procedure requires test tape samples to be loaded into the read head, the following procedure should be followed:

(a) Splice tape loops using a butt splice, and place the splice on the outside of the loop. Place tape loops in the read head with the splice up.

(b) When it is desired to begin reading on a punched character, it is necessary to manually slew the tape to the desired starting character. To do this, the tape is placed in the read head and the cover is closed, the slewing lever is placed in the slewing position, and the tape is manually moved to the desired starting point. The slewing lever is then returned to its original position before starting the reader. This procedure is to be followed when loading the test tapes called for in the test procedure.

(c) ITA test tape samples F, G, H, K, and L are to be marked with and loaded at a START position to insure that the test set search operation locates the proper reference character. The START position is to be marked by a single line drawn across the tape adjacent to the LETTERS character in table 6-3, as shown in figure 6-4. The tape is then to be loaded and positioned in the read head such that the START index line is adjacent to the indexing edge of the tape cover.

c. Paper Tape Reader Test Set Modification. Modification of paper tape reader test set, general dynamics electro dynamic division model 48200769, is required to enable testing of punched tape reader units that have been modified with the addition of one or two Transmission Identification Generator Kits MK-1583/G. Perform the following on the paper tape reader test set to complete this modification:

(1) Add a wire from the test set terminal board TB3-20 (EM signal line) to a spare test

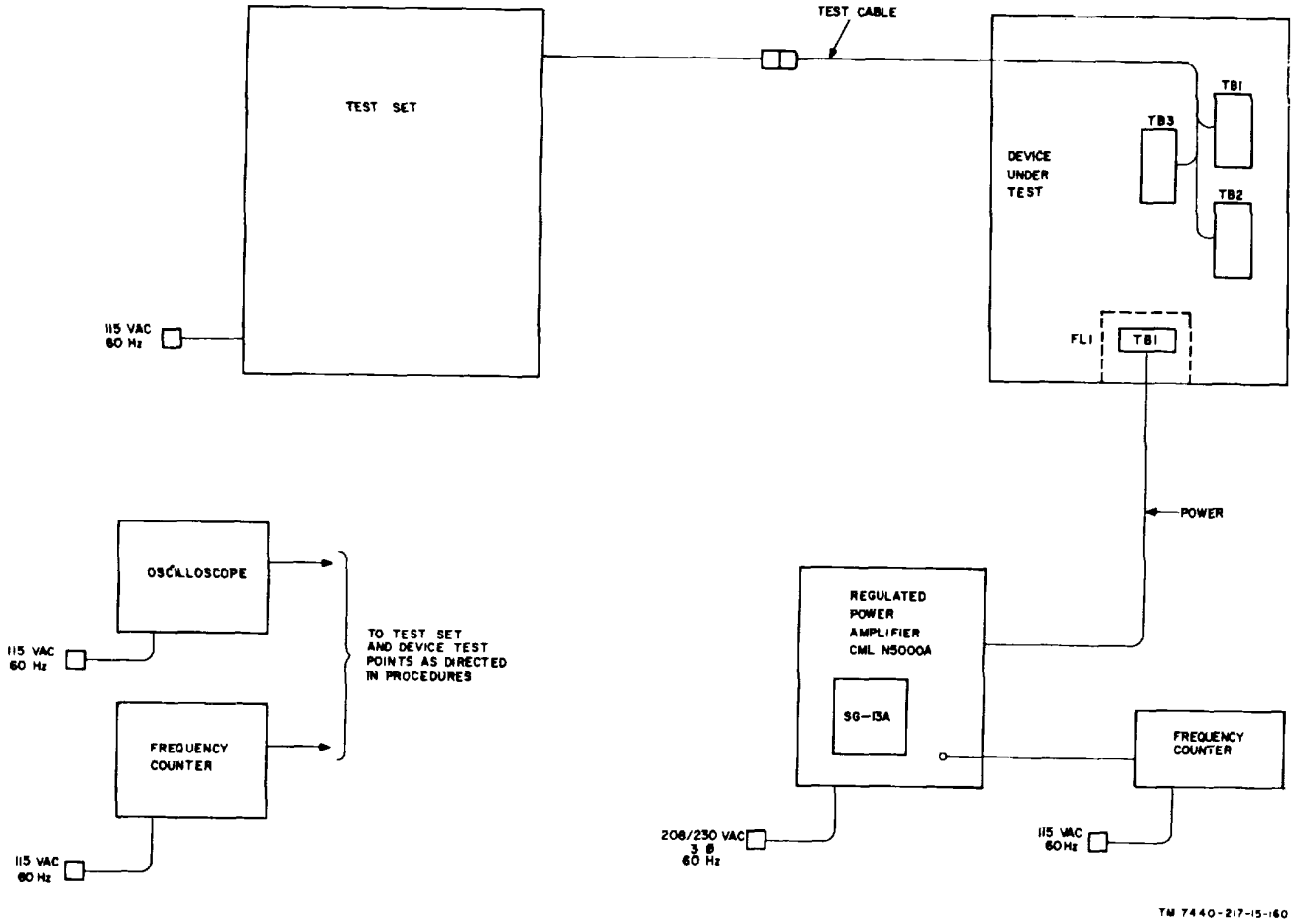


Figure 6-3. Test setup.

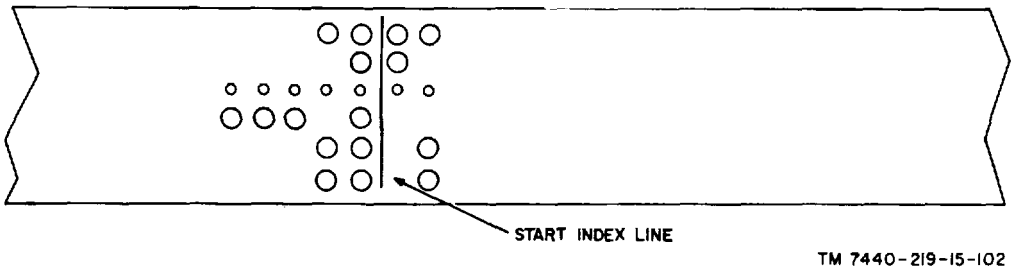


Figure 6-4. Placement of test tape start index line.

point on the test set front panel. Label the test point "EM." It is noted that some of paper tape reader test sets were not manufactured with spare test points. In this case, it will be necessary to first mount a test point similar to the type used for other test points on the test set.

(2) Connect a 1200-ohm resistor (MIL type RC07GF122J) between the EM test point and + 12 VDC.

(3) Connect a 1200-ohm resistor (MIL type TC07GF122J) between the EM test point and ground.

d. Fabrication of TIG Simulator. In lieu of using TIG simulator, general dynamics, electro dynamic division model No. 10-000231, you may fabricate a TIG simulator in accordance with the following (electrical schematic of the circuit is illustrated in fig. 6-5):

(1) Obtain a small chassis and mount a switch (S1) on the chassis. The switch should be a momentary action, single-pole, double-throw switch with all contacts isolated from chassis ground.

(2) Mount a test point (TP1) on the chassis. Recommend a type similar to those used in the paper tape reader test set.

(3) Obtain a Texas instrument type SN7474J integrated circuit module, FSN 5962-4701637 (type SN7474N may be substituted) and make the following connections to switch S1. Insure all terminals of the integrated circuit flipflop are isolated from the chassis.

(a) Connect the common contact of S1 to flip-flop Z1 terminal 7.

(b) Connect the normally-closed contact of switch S1 to flip-flop Z1 terminal 10.

(c) Connect the normally-open contact of switch S1 to flip-flop Z1 terminal 13.

(4) Obtain five wires, AWG No. 20, 3 to 4 feet long, to fabricate an interconnection cable. Label these wires and connect to the TIG simulator as follows:

(a) Wire No. 4-Connect to terminal 14 of the flip-flop Z1.

(b) Wire No. 5--Connect to test point TP1.

(c) Wire No. 6--Connect to switch S1 common terminal.

(d) Wire No. 7-Connect to terminal 14 of the flip-flop Z1.

(e) Wire No. 8-Connect to terminal 9 of the flip-flop Z1.

(5) Lace the wires in the cable and attach five terminal lugs, type MS25036-101 or equivalent, to the end of the cable. The wire numbers labeled in (4) above indicate the terminal numbers of the connections to the TIG terminal board TB1.

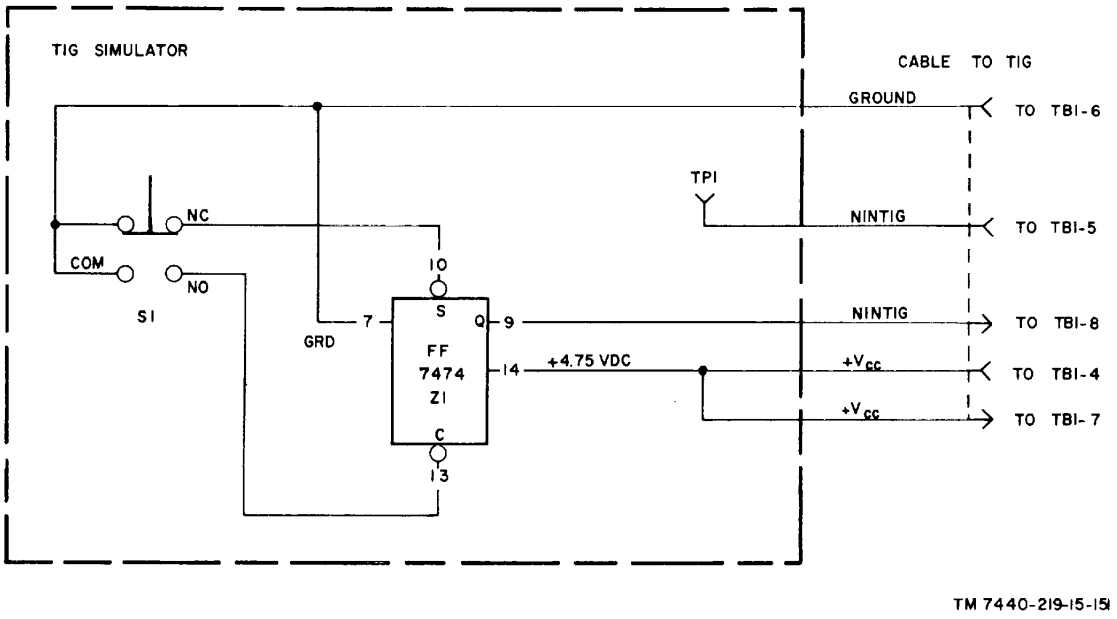


Figure 6-5. TIG simulator, schematic diagram.

6-7. Visual Tests

Disconnect power from the device. Check the general physical condition of the equipment as follows:

a. Exterior and Interior Surfaces. All surface finishes must be free from rust, scratches, or other damage. Surfaces must not be damaged.

b. Cables. The lead connections of all cables must be secure. All cable connectors must be undamaged and cables should not be cracked, frayed, or routed to place strain on the wires.

c. Hardware. All bolts and screws, such as slide mounting screws, panel mounting screws, motor mounting bolts, and mechanism mounting screws must be tight.

d. PC Cards. Check that all printed circuit cards in logic assembly Al are mounted securely in the proper connector (para 1-6).

6-8. Operational Tests-Fixed Voltage and Frequency

a. Preliminary Procedure.

(1) Set the switches and controls on the paper tape reader test set as follows:

115 VAC circuit breaker to OFF
CANCEL to OFF
SELECT to OFF
SPEED (rotary switch) to NORM
COMPARATOR INPUT to DATA IN
EOB 'EOM to OFF
ASSIGN 'NOT ASSIGN to NOT ASSIGN
COMPARATOR to ON
AUTO/MAN to AUTO
SE ,, RCH/TEST to SEARCH
ASCII/ITA 2 to ASCII

(1.1) Connect jumper wires between strapping option standoff terminals on the punched tape reader PC card A2 as indicated in table 65, TI Sequence 1 column.

Table 6-5. Strapping jumpers, PC Card A2

Strapping option	Connect jumper wire from terminal	Connect jumper wire to terminal for—			
		TI Sequence number 1	TI Sequence number 2	TI Sequence number 3	TI Sequence number 4
TI start postion.	2^0	0	1	0	1
	2^1	0	0	1	1
First channel designation character.	1A	1	0	0	0
	2A	0	1	1	1
	3A	0	1	1	1
	4A	0	1	1	1
	5A	0	1	1	1
	6A	0	1	1	1
	7A	1	0	0	0
Second channel designation.	1B	0	1	1	1
	2B	1	0	0	0
	3B	0	1	1	1
	4B	0	1	1	1
	5B	0	1	1	1
	6B	0	1	1	1
	7B	1	0	0	0
Third channel designation character.	1C	1	0	0	0
	2C	1	0	0	0
	3C	0	1	1	1
	4C	0	1	1	1
	5C	0	1	1	1
	6C	0	1	1	1
	7C	1	0	0	0

(2) Position the POWER switch on the variable frequency and voltage source (CML N5000A) to ON and allow a 5-minute warmup.

(3) Position the HIGH VOLTAGE switch on the variable frequency and voltage source to ON.

(4) Adjust the OUTPUT LEVEL control on the variable frequency and voltage source to produce a reading of 120 VAC on the OUTPUT VOLTAGE meter. Adjust the frequency control for 60 CPS.

(5) Position the 115 VAC circuit breaker

switch on the test set to ON and verify that the test set AC on lamp lights.

(6) With current limiting controls set fully clockwise, check that test set dc power supplies are supplying proper voltage output levels-

+4.75 VDC + 0.1 VDC
+12.0 VDC + O.1VDC
- 12.0 VDC + 0.1 VDC

(7) Press the AC POWER switch on the paper tape reader (PTR) and verify that the switches and indicators light as follows:

AC POWER switch ------	White
DC POWER indicator ----	White
STOP switch ----------	Red
NOT ASSIGNED indicator.	Amber
TAPE OUT indicator	Red
HIGH SPEED/LOW SPEED switch.	Illuminated white in either (but not both) the HIGH SPEED or LOW SPEED position.

(8) Verify that the reader mechanism motor is operating.

(9) Verify that the blower in the PTR cabinet is operating.

(9.1) Set the TIG ON-LINE/OFF-LINE switch to OFF-LINE and observe TIG on indicator is not lit.

(10) Press the paper tape reader AC POWER switch and verify the following results:

(a) No PTR switches or indicators are illuminated.

(b) Reader mechanism drive motor is not operating.

(c) Blower in PTR cabinet is not operating.

(11) Remove the two 15 VAC LAMP fuses from the PTR power supply.

(12) Press the AC POWER switch on the PTR and verify the following results:

(a) Paper tape reader DC POWER indicator illuminates, but all other indicators and switches are out.

(b) Reader mechanism drive motor is operating.

(c) Blower in PTR cabinet is operating.

(13) Press the paper tape reader AC POWER switch and replace the 15 VAC LAMP fuses.

(14) Remove the 120 VAC 10 A DRIVE MOT fuse from the PTR power supply.

(15) Press the AC POWER switch on the PTR and verify the following:

(a) AC POWER switch, DC POWER indicator, STOP switch, and either HIGH SPEED or LOW SPEED indicators are lit.

(b) Blower in PTR cabinet is operating.

(*c)* Reader mechanism drive motor is not operating.

(16) Press the AC POWER switch on the PTR and replace the DRIVE MOT fuse.

(17) Remove the 120 VAC 8 A FAN fuse from the PTR power supply.

(18) Press the AC POWER switch and verify the following:

(a) AC POWER switch, DC POWER indicator, STOP switch, and either HIGH SPEED or LOW SPEED indicators are lit.

(b) Reader mechanism drive motor is operating.

(c) Blower in PTR cabinet is not operating.

(19) Press the AC POWER switch on the PTR and replace the FAN fuse.

(20) Remove the 120 VAC PWR SUP INPUT fuse from the PTR power supply.

(21) Press the AC POWER switch on the PTR and verify the following:

(a) No switches or indicators on the PTR are illuminated.

(b) Reader mechanism drive motor is not operating.

(c) Blower in PTR cabinet is not operating.

(22) Replace the PWR SUP INPUT fuse and remove the + 4.75 VDC fuse.

NOTE

Following depression of the AC POWER switch (23) below, the drive mechanism motor may run and the blower may operate, and switches and indicators may light momentarily until the power supply shuts off. The conditions of (23) (a) through (c) below 'should be observed within 7 seconds after the AC POWER switch is operated.

(23) Press the AC POWER switch on the PTR and observe the following:

(a) No switches or indicators on the PTR are illuminated.

(b) Reader mechanism drive motor is not operating.

(c) Blower in PTR cabinet is not operating.

(24) Replace the +4.75 VDC fuse in the power supply.

(25) Remove the +12 VDC, -12 VDC and -48 VDC fuses from the power supply, one at a time, repeating (23) above each time.

(26) With all fuses installed in the power supply, press the AC POWER switch on the PTR. Verify that the AC POWER switch, DC POWER indicator, STOP switch, and either HIGH SPEED or LOW SPEED indicators are lit. Drive mechanism motor should be running and blower in PTR cabinet should be operating.

(27) Set the ASCII/ITA No. 2 switch on the PTR maintenance panel to the ASCII position.

(28) Extend the logic assembly from the PTR cabinet and connect the input of the frequency counter to XA1-T. Adjust the frequency counter to measure a frequency of 9.6 kHz. Frequency should be 9.6 kHz +1 percent. (Refer to adjustment, para P66.)

(29) Remove test leads and return logic assembly to the closed position. Close doors on PTR cabinet.

(30) Adjust the PTR tape guides for 1-inch tape width.

b. Lamp Test. Press the LAMP TEST switch on the control panel of the PTR and verify that the following indicators light:

Switch/Indicator	Color
NOT ASSIGNED	Amber
TIGHT TAPE	Red
TAPE OUT	Red
MOTION FAIL	Red
INVALID CHARACTER	Red
CANCEL	Red
START	White-green
STOP	Red
LOCAL TEST	Amber
SINGLE FEED	White
PILOT HEADER	Amber
HIGH SPEED	White
LOW SPEED	White
AUDIBLE RESET	Not illuminated

NOTE

The AC POWER and DC POWER indicators will remain white during the test. They are not tested by the LAMP TEST pushbutton switch.

c. Not Assigned Operation.

(1) Tape slewing. Place a test sample

(sample D) of punched paper tape in position in the PTR read head (refer to tape loading procedure of para 2-4). Verify that the TAPE OUT indicator on the PTR is out. Release the slewing lever and insure that the tape can be moved in either direction.

(2) Printed character indexing.

(a) Manually slew the tape until the printed character A appears in the indexing window of the PTR tape cover.

(b) Return the slewing lever to the normal position. Check that the tape is locked in place. Open the tape cover and verify that the punched code for the character A appears over the reader star wheels (refer to fig. 3-3 for punched codes).

(c) Replace test sample D with test tape sample E.

(d) Operate the slewing lever and manually slew the tape until the printed character A is positioned next to the indexing edge of the tape cover on the right-hand side of the cover as viewed from the front.

(e) Return the slewing lever to the normal position. Open the tape cover and verify that the punched code for the character A appears over the reader star wheels.

(3) Speed selection.

(a) Press the HIGH SPEED/LOW SPEED switch on the PTR until the HIGH SPEED position lights white. Verify that the upper half of the switch lights white and the lower half (LOW SPEED) is out.

(b) Press the HIGH SPEED/LOW SPEED switch once. The top half (HIGH SPEED) should go out and the lower half should light white.

(4) Single feed.

(a) Replace test tape sample E with test tape sample A.

(b) Press the SINGLE FEED switch several times and verify that the tape advances one character position each time the switch is pressed. Verify that the STOP switch stays lit and the SINGLE FEED switch is not illuminated after each tape advance.

(c) Press the HIGH SPEED,/LOW SPEED switch to light the HIGH SPEED portion.

(5) Local test operation.

(a) Press the LOCAL TEST switch and verify that tape advances continuously through the read head at the high speed rate. Verify that the -LOCAL TEST switch illuminates amber and the STOP switch is extinguished simultaneously

when the LOCAL TEST switch is pressed. Verify all other indicators remain unchanged.

(b) Press the HIGH SPEED/LOW SPEED switch to the LOW SPEED position. Observe that the tape moves through the read head at the low speed rate.

(c) While the tape advances, individually press the START, PILOT HEADER, and SINGLE FEED switches. For each switch actuation, verify that all controls and indicators remain unchanged.

(d) Press the STOP switch and verify that the STOP switch illuminates red. Verify that the LOCAL TEST switch indication is extinguished and that the tape stops moving through the read head.

(6) Not assigned RCS Mode.

(a) Replace test tape sample A with test tape sample C. Position the tape in the read head so that the tape starts at the indicated start position.

(b) Press the PTR START switch and verify the following:

1. START switch illuminates green, and STOP indication extinguishes.

2. PTR steps through the sequence of "idle" characters and stops at the end of the sequence with the START and STOP switch indications unchanged from 1 above.

3. The test set READY lamp is not illuminated while the PTR steps through the tape, and test set READY lamp illuminates green when the PTR stops stepping.

4. Verify that the PTR stopped on the first character which is not an "idle" character by noting that the indexing mark on the tape is at the indexing edge of the tape cover.

(7) Start condition switch interaction.

(a) With the START switch and test set READY lamp illuminated green, press the SINGLE FEED, LOCAL TEST, and PILOT HEADER switches. Verify that this has no effect on the PTR or test set.

(b) Press the PTR STOP switch. Verify that the STOP switch illuminates red, the START switch indication is extinguished, and all other controls and indicators remain the same. Verify that the test set READY indicator is extinguished.

d. Assigned Operation.

(1) Data Line and Strobe Waveforms.

(a) Replace test tape sample C with test tape sample P.

(b) Connect test set DATA LINE TEST POINT 1 to channel A input of oscilloscope. Trigger the oscilloscope internally on the pulse to be observed and adjust the oscilloscope controls to observe a waveform as shown in figure 6-6.

(c) Press the START switch on the PTR. Press the START switch on the test set and observe the pulse displayed on the oscilloscope. Pulse displayed should have the following parameters:

High level ---------- +6.0 +0.1 VDC

Low level ---------- 6.0 ±1.0 VDC

Rise time .---------- 21 to 35 usec

Fall time ---------- 21 to 35 usec

(d) Connect the channel A input of the oscilloscope to the test set DATA LINE TEST POINTS 2 through 7, and the P (parity) test points in numerical sequence. Verify that the pulses displayed meet the parameters listed in *(c)* above.

(e) Connect the channel A input of the oscilloscope to the test set STROBE test point.

Verify that the strobe pulse also meets the parameters listed in *(c)* above.

(f) Connect the channel A input of the oscilloscope to the test set DATA LINE TEST POINT 1, and connect the channel B input of the oscilloscope to the STROBE test point. Set the oscilloscope controls for chopped operation, using the data pulse as an external trigger. Verify that the position of the strobe pulse relative to the data pulse conforms to the limits shown in figure 6-7.

(g) Set the test set SELECT switch to ON.

(h) Connect channel A input of oscilloscope to the SELECT test point. Verify a voltage reading of 0.5 + 0.5 VDC.

(i) Place the test set SELECT switch to the off position. Oscilloscope should indicate 6.0 + 1.0 VDC.

(j) Replace test tape sample P with test tape sample A.

(k) Set the test set SELECT switch to ON.

(1) Press the HIGH SPEED/LOW SPEED switch on the PTR to the HIGH SPEED position.

(m) Connect oscilloscope channel A input to the READY test point on the test set. Oscilloscope should indicate 0.5 + 0.5 VDC.

(n) Press the STOP switch on the paper tape reader. Oscilloscope should indicate 6.0 + 1.0 VDC.

(o) Press the START switch on the PTR. Verify that both the PTR START

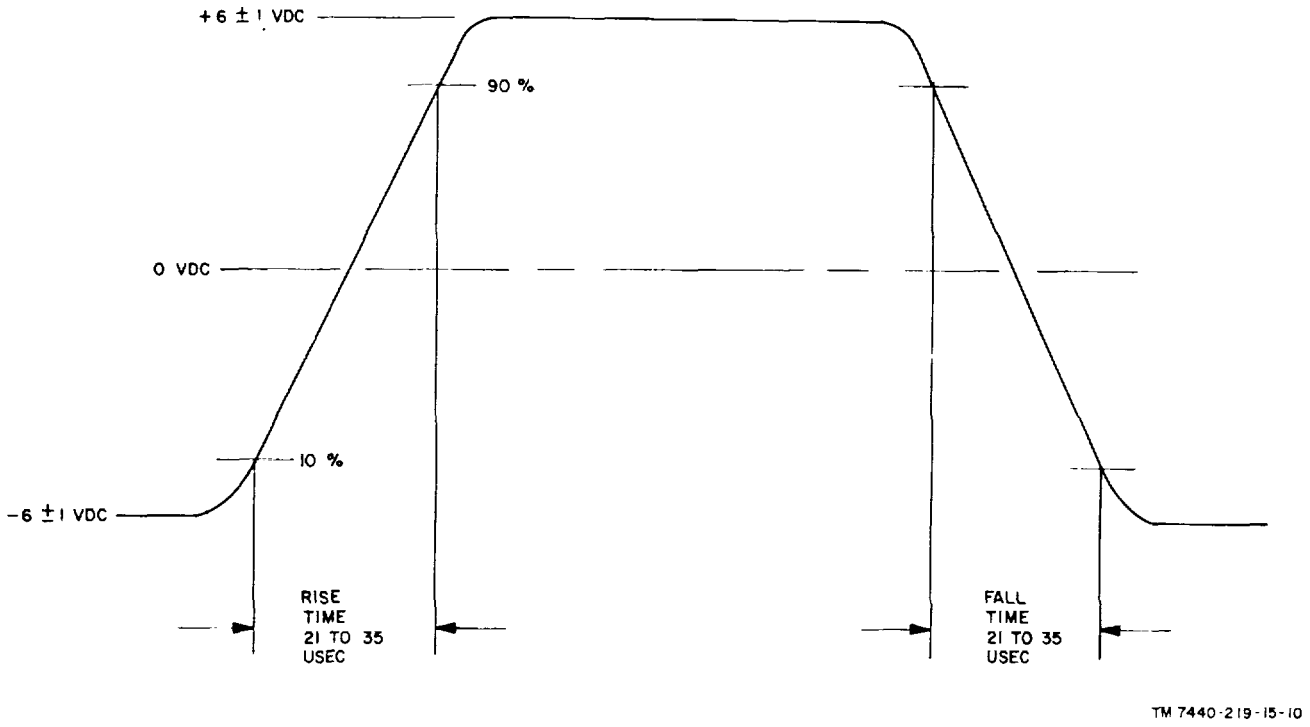


Figure 6-6. Data pulse and data strobe waveform.

switch and the test set READY lamp illuminate green.

(p) Press the START switch on the test set. Verify that the PTR START switch lights white as the tape advances through the read head, and that the tape stops at a predetermined pattern. Verify that when the tape stops moving, the pattern displayed on the test set COMPARATOR INPUTS indicators is as follows:

P	7	6	5	4	3	2	1
ON	OFF	ON	ON	OFF	OFF	OFF	OFF

(*q*) Press the paper tape reader STOP switch.

(*r*) Disconnect the oscilloscope from the STROBE test point and DATA LINE TEST POINTS on the test set. Connect channel A of the oscilloscope to the STEP test point.

(s) Press the START switch on the PTR.

(t) Press the test set START switch.

(u) Verify that the signal levels observed on the oscilloscope are polar, with a nominal +6 VDC high level and a nominal -6 VDC low level.

(*v*) Press the paper tape reader STOP switch and disconnect the oscilloscope.

(2) *Test set search operation.*

NOTE

The purpose of the test set search operation is to establish a reference character for both the test set and the PTR under test. Data comparison is then started from this reference character.

(a) Set the ASSIGN/NOT ASSIGN switch on the test set to ASSIGN.

(*b*) Connect input A of oscilloscope to ASSIGN test point on test set. Position oscilloscope controls to observe a dc level and verify a reading of 0.5 + 0.5 VDC.

(c) Place the test set ASSIGN/NOT AS-

SIGN switch to the NOT ASSIGN position. Os-

cilloscope should indicate a dc level of 6.0 + 1.0

VDC.

(*d*) Return ASSIGN/NOT ASSIGN switch on test set to ASSIGN position. Verify that voltage level returns to level of (b) above, and NOT ASSIGNED indicator on PTR is extinguished.

(3) ASCII data comparison, high speed.

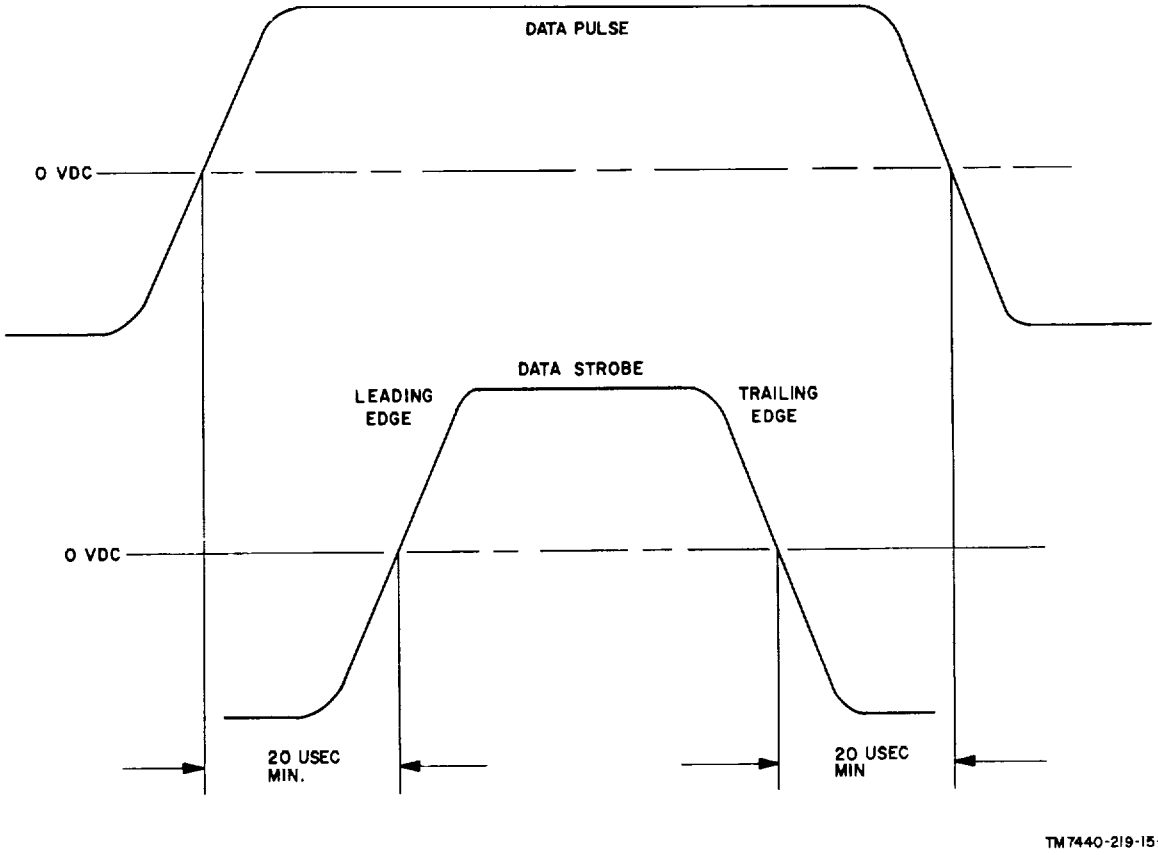


Figure 6-7. Data strobe versus data pulse timing.

(*a*) Set the test set SEARCH/TEST switch to TEST.

(b) Connect the input of the frequency counter to the STROBE test point on the test set. Position controls on frequency counter to measure a pulse rate of approximately 150 PPS.

(c) Press the test set START switch. Verify that the following actions occur:

1. The test set ALM STOP, OP ALM, and ERROR indicators are all extinguished.
2. Tape moves continuously through the PTR read head.
3. The pattern displayed on the test set data lamps changes continuously, indicating transfer of data from the PTR to the test set.

(d) Verify that frequency counter reads a minimum of 150 pulses per second. Remove frequency counter leads from test set.

(e) Allow the tape to run for 3 minutes while the procedure of (f), (g) and (h) below is followed. Verify that no data errors occur during this time. (If a data error does occur, the PTR will stop with the test set ERROR lamp on.)

(f) During the 3-minute run of (e) above, press the LAMP TEST switch on the PTR several times. Verify that the PTR continues to transfer data to the test set without a stop or data error.

(g) During the 3-minute run of (e) above, also press the following switches and verify that pressing the switches has no effect.

SINGLE FEED
LOCAL TEST
PILOT HEADER

(h) During the 3-minute run of (e) above, press the paper tape reader STOP, paper tape reader START, and test set START switches in

sequence. After performing this operation, verify that the PTR continues to run and data comparison still occurs for the remainder of the 3-minute run.

(i) At the conclusion of (h) above, press the PTR STOP switch.

(j) Press the PTR SINGLE FEED switch. Verify that the STOP switch is extinguished and the SINGLE FEED switch illuminates white. Verify that the test set READY lamp is illuminated.

(k) Press the test set START switch and verify the following:

1. The PTR advances the tape one character.
2. The PTR SINGLE FEED switch indication is extinguished and the STOP switch is illuminated.
3. The test set comparator inputs indicators change pattern showing that a new data character was accepted.
4. The test set ERROR lamp is not illuminated.
5. The test set READY lamp is not illuminated.

(l) Repeat (j) and (k) above five times. Verify that data is transferred to the test set without error.

(4) ASCII data comparison, low speed.

(a) Press the PTR HIGH SPEED/LOW SPEED switch to the LOW SPEED position.

(*b*) Connect the input of the frequency counter to the STROBE test point on the test set. Position controls on frequency counter to measure a pulse rate of approximately 20 PPS.

(*c)* Press the test set START switch. Verify that the following actions occur:

1. The test set ALM STOP, OP ALM, and ERROR indicators are all extinguished.
2. Tape moves continuously through the PTR read head.
3. The pattern displayed on the test set data lamps changes continuously, indicating transfer of data from the PTR to the test set.

(*d)* Verify that frequency counter reads a minimum of 20 pulses per second. Remove frequency counter leads from test set.

(*e)* Allow the tape to run for 3 minutes while the procedure of (f), (g) and (h) below is followed. Verify that no data errors occur during this time. (If a data error does occur, the PTR will stop with the test set ERROR lamp on.)

(f) During the 3-minute run of (e) above, press the LAMP TEST switch on the PTR several times. Verify that the PTR continues to transfer data to the test set without a stop or data error.

(g) During the 3-minute run of (e) above, also press the following switches and verify that pressing the switches has no effect:

SINGLE FEED
LOCAL TEST
PILOT HEADER

(h) During the 3-minute run of (e) above, press the paper tape reader STOP, paper tape reader START, and test set START switches in sequence. After performing this operation, verify that the PTR continues to run and data comparison still occurs for the remainder of the 3minute run.

(i) At the conclusion of (h) above, press the PTR STOP switch.

(5) Pilot header.

(a) Replace test tape sample A with test tape sample C. Set the test set COMPARATOR switch to off and press the HIGH SPEED/LOW SPEED switch on the paper tape reader to the HIGH SPEED position.

(b) Press the PILOT HEADER switch on the paper tape reader. Verify that the PILOT HEADER switch illuminates amber. Verify that the tape steps through the "idle" characters and stops at the first character (marked) which is not an "idle" character.

(c) Press the paper tape reader STOP switch. Verify that the STOP switch illuminates and the PILOT HEADER switch remains illuminated.

(d) Press the SINGLE FEED switch on the PTR. Verify that the STOP switch indication is extinguished, the SINGLE FEED switch illuminates white, the test set READY lamp illuminates green, and the PILOT HEADER switch remains illuminated.

(e) Repeat (3) (k) above.

(*f)* Press the PILOT HEADER switch on the PTR. Verify that the STOP switch is extinguished, the test set READY lamp illuminates green, and the PILOT HEADER switch remains illuminated.

(g) Depress the test set START switch. Verify that the tape advances through the read head until the tape-out condition occurs. At this time verify the following:

1. Tape stops in head head.
2. Paper tape reader TAPE OUT indicator illuminates.
3. Paper tape reader STOP switch illuminates.

4. Paper tape reader PILOT HEADER switch remains illuminated.

5. Test set READY lamp is not illuminated.

6. Test set OP ALM and ALM STOP lamps are not illuminated.

(6) Message tape-characters inhibited after EOM.

(*a)* Reload test tape sample C. Verify no change in PTR or test set indications.

(*b*) Place the test set SEARCH/TEST switch to the SEARCH position and the COMPARATOR switch to ON.

(c) Press the paper tape reader START switch. Verify that the PILOT HEADER and TAPE OUT indications on the PTR are extinguished. Verify that the START switch illuminates white and the test set READY lamp illuminates green.

(d) Press the START switch on the test set. Verify that the PTR START switch lights white as the tape advances through the read head, and that the tape stops at a predetermined pattern. Verify that when the tape stops moving, the pattern displayed on the test set COMPARATOR INPUTS indicators is as follows:

P	7	6	5	4	3	2	1
ON	OFF	ON	ON	OFF	OFF	OFF	OFF

(*e)* Place the test set SEARCH/TEST switch to TEST, the EOB/EOM switch to on (EOB,/EOM position), and the test set SPEED rotary switch to H S VAR.

(f) Press the test set START switch and verify the following:

1. The tape runs completely through the read head to the end of the tape.

2. Beginning with the 50 N's, the tape speed increases, as the PTR steps through the "idle" characters following the 128 characters sequence.

3. While stepping through the "idle" characters, the paper tape reader START switch illuminates green and the test set READY lamp is not illuminated.

4. The tape stops at the end of the tape with the paper tape reader STOP switch illuminated red and the TAPE OUT indicator not illuminated.

5. The character displayed on the test set data lamps is the last character in the pattern sequence preceding the 50 N's.

(*g*) Reload test tape sample C.

(*h)* Using the SINGLE FEED switch, step the tape one character at a time through the seven "idle" characters in the leader of the tape. Verify that the pattern displayed on the test set COMPARATOR INPUTS indicator lamps does not change demonstrating that no data is transferred to the test set.

(7) ITA No. 2 Data Comparison--1-inch tape width.

(a) Replace test tape sample C with test tape sample F.

(b) Set the ASCII/ITA No. 2 switch on the PTR maintenance panel to the ITA No. 2 position.

(c) Set the test set controls as follows: ASCII/ITA No. 2 switch to ITA No. 2. SPEED rotary switch to NORM EOB,/EOM switch to OFF

(d) Place the test set SEARCH/,TEST switch to the SEARCH position.

(e) Press the START switch on the PTR. Verify that both the PTR START switch and the test set READY lamp illuminate green.

(f) Press the START switch on the test set. Verify that the PTR START switch lights white as the tape advances through the read head, and that the tape stops at a predetermined pattern. Verify that when the tape stops moving, the pattern displayed on the test set COMPARATOR INPUTS indicators is as follows:

P	7	6	5	4	3	2	1
ON	OFF	ON	ON	OFF	OFF	OFF	OFF

(g) Set the test set SEARCH/TEST switch to TEST.

(h) Press the test set START switch. Verify that the following actions occur:

1. The test set ALM STOP, OP ALM, and ERROR indicators are all extinguished.

2. Tape moves continuously through the PTR read head.

3. The pattern displayed on the test set data lamps changes continuously, indicating transfer of data from the PTR to the test set.

(i) Allow the tape to run for 3 minutes. Verify that no data errors occur during this time.

(j) Press tape reader STOP switch.

(*k*) Remove test tape sample F.

(*8*) ITA No. 2 data comparison--11/ 6-itnch wide tape.

(a) Adjust the tape guides on the PTR for 11/16-inch wide tape.

(b) Load test tape sample G into the paper tape reader.

(c) Repeat (7) (d) through (j) above.

(9) ITA No. 2 data comparison-7/8-inch wide tape.

(a) Replace test tape sample G with test tape sample H.

(*b)* Repeat (7) (d) through (j) above.

(*10*) ITA No. 2 data comparison-chadless tape.

(*a)* Replace test tape sample H with test tape sample L.

(*b)* Press the paper tape reader HIGH SPEED/'LOW SPEED switch to the LOW SPEED position.

(*c)* Repeat (7) (d) through (j) above.

(*11)* EOM.

(a) Replace test tape sample L with test tape sample P.

(*b)* Connect channel A input of oscilloscope to the EOM test point on the test set.

(*c)* Place the test set EOM,'EOB switch on (to the EOM,'EOB position).

(*d*) Position the oscilloscope controls to view a 6-volt pulse; use the pulse being viewed as an external trigger.

(e) Press the START switch on the paper tape reader.

(f) Press the START switch on the test set and verify that the tape advances.

(g) Verify that the pulse at the EOM test point has a high level of 6.0 + 1.0 VDC (starting and finishing level) and a low level of 0.5 + 0.5 VDC during the pulse time.

NOTE

The EOM pulse causes the paper tape reader to stop in a START switch green condition. Repeat (f) above as often as necessary to complete the pulse observation.

(h) Press the STOP switch on the paper tape reader.

(*12) EOB.*

(*a*) Connect channel A input of the oscilloscope to the EOB test point on the test set.

(b) Position the oscilloscope controls to view a 6-volt pulse; use the pulse being viewed as an external trigger.

(c) Press the START switch on the paper tape reader.

(d) Press the START switch on the test set and verify that the tape advances.

(e) Verify that the pulse at the EOB test point has a high level of +6.0 ±1.0 VDC (starting and finishing level), and a low level of 0.5 ± 0.5 VDC during the pulse time.

NOTE

Repeat (d) above as often as necessary to complete the observation required in this step.

(f) Press the STOP switch on the paper tape reader.

(g) Place the EOB/EOM switch on the test set to the OFF position.

e. Alarm Conditions.

(*1)* Tight Tape.

(*a)* Set the PTR tape guides for 1-inch tape width.

(*b)* Replace test tape sample L with test tape sample J.

(c) Press the PTR HIGH SPEED/LOW SPEED switch to the HIGH SPEED position.

(*d)* Set the test set SEARCH/TEST switch to the SEARCH position.

(e) Press the START switch on the PTR. Verify that both the PTR START switch and the test set READY lamp light green.

(f) Press the START switch on the test set. Verify that the PTR START switch lights white as the tape advances through the read head, and that the tape stops at a predetermined pattern. Verify that when the tape stops moving, the pattern displayed on the test set COMPARATOR INPUTS indicators is as follows:

P	7	6	5	4	3	2	1
ON	OFF	ON	ON	OFF	OFF	OFF	OFF

(*g)* Set the test set SEARCH/TEST switch to the TEST position.

(*h)* Connect channel A input of oscilloscope to the OP ALM test point on the test set.

(i) Manually grasp the trailing end of the tape.

(j) Press the test set START switch to start the tape stepping through the read head.

(*k*) Hold the trailing end of the tape from moving and allow the PTR to take up tape until the tight tape sensor actuates.

(l) Upon actuation of the tight tape sensor, verify the following:

1. Tape stops in the read head.

2. PTR TIGHT TAPE indicator illuminates.

3. PTR STOP indicator illuminates.

4. PTR START switch is extinguished.

5. Test set READY and ERROR lamps not illuminated.

6. Test set OP ALM lamp is illuminated.

7. Oscilloscope indicates voltage level of 6.0 + 1.0 VDC.

(*m*) Release the tape so that the tape is no longer tight.

(*n*) Press the PTR START switch. Verify the following:

1. PTR TIGHT TAPE indicator is not illuminated.

2. PTR STOP switch is not illuminated.

3. PTR START switch is illuminated white.

4. Test set READY lamp is illuminated.

5. Test set OP ALM lamp is not illuminated.

6. Oscilloscope indicates 0.5 +0.5 VDC.

(o) Press the test set START switch. Verify that the tape resumes stepping without causing a data error.

(p) Press the PTR STOP switch.

(2) *Tape motion failure*.

(a) Replace test tape sample J with test tape sample K.

(b) Place the test set SEARCH/TEST switch to the SEARCH position.

(c) Repeat (1) (e) and (f) above.

(d) Place test set SEARCH,/'TEST search to TEST position.

(e) Connect channel A input of oscilloscope to ALM STOP test point on test set. Verify oscilloscope indicates 0.5 + 0.5 VDC.

(f) Press the test set START switch to start tape stepping through the read head.

(g) When the PTR tape drive sprocket wheel runs through the torn sprocket holes, verify the following:

1. PTR MOTION FAIL indicator is illuminated.

2. PTR STOP switch is illuminated.

3. PTR START switch is extinguished.

4. Test set ALM STOP lamp is illuminated.

5. Test set READY lamp is not illuminated.

6. The tape stops in the read head with the torn sprocket holes over the sprocket wheel.

7. Oscilloscope indicates 6.0 $\pm$1.0 VAC.

(3) *Reset.*

(a) Press the RESET pushbutton on the PTR maintenance panel. Verify that this has no effect.

(b) Set the test set ASSIGN/NOT ASSIGN switch to the NOT ASSIGN position. Verify that the NOT ASSIGNED indicator on the PTR illuminates.

(c) Press the RESET pushbutton on the PTR maintenance panel. Verify that the PTR MOTION FAIL indicator is extinguished. Verify that the test set ALM STOP indicator is extinguished.

(d) Set the Test ASSIGN/NOT ASSIGN switch to the ASSIGN position. Verify that the PTR NOT ASSIGNED indicator is not illuminated.

(4) *Invalid character.*

(a) Remove test tape sample K from the read head and load the PTR with test tape sample B. Place the test set COMPARATOR switch to off. Set the PTR ASCII/'ITA No. 2 switch (on the PTR maintenance panel) to the ASCII position. Set the test set ASCII,'ITA No. 2 switch to the ASCII position.

(b) Press the PTR START switch.-Verify that the tape steps to the first character which is not an "idle" character and stops. The double line index mark on the tape is at the indexing edge of the PTR tape cover.

(c) Press the test set START button. Verify that the tape advances and stops with the following conditions present:

1. A single index line is at the indexing edge of the PTR tape cover.
2. PTR INVALID CHARACTER indicator is illuminated.
3. PTR STOP switch is illuminated.
4. PTR START switch is not illuminated.
5. Test set ALM STOP lamp is illuminated.
6. Test set READY lamp is not illuminated.

(d) Press the PTR START switch. Verify the following conditions present:

1. PTR INVALID CHARACTER indicator is not illuminated.
2. PTR STOP switch is not illuminated.
3. PTR START switch is illuminated green.
4. Test set ALM STOP lamp is not illuminated.
5. Test set READY lamp is illuminated.

(e) Repeat (c) and (d) above until exactly fifty-five invalid characters have been detected.

(f) Following the fifty-fifth invalid character stop, press the PTR START switch and the test set START button in that order. Verify that the tape advances to TAPE OUT with no further invalid character stops.

5. Tape Out. Following (4) (f) above, verify the following:

(a) PTR TAPE OUT indicator is illuminated.

(b) PTR STOP switch illuminated and START switch is not illuminated.

(c) Test set ALM STOP lamp is illuminated and READY lamp is not illuminated.

(d) Press the PTR START switch. Verify that this has no effect.

(e) Open the PTR tape cover and verify that the end of the tape is three to six character spacings from the reading starwheels.

(f) Remove test tape sample B and load test tape sample A into the PTR. Verify that no change in indication takes place at either the PTR or the test set.

(6) *Cancel.*

(a) Press the PTR START switch. Verify that the PTR START switch illuminates green and that the PTR TAPE OUT and STOP indications are extinguished.

(b) Connect input A of oscilloscope to CANCEL test point on test set. Verify a voltage level of 0.5 +0.5 VDC.

(c) Press the test set START button. Verify that tape advances continuously through the read head.

(d) Place the test set CANCEL switch to the MANUAL position. Verify the following results:

1. The test tape stops running through the read head.

2. The PTR CANCEL indicator and STOP switch are illuminated. The PTR START switch is not illuminated.

3. The test set ALM STOP lamp is illuminated and the READY lamp is not illuminated.

4. Oscilloscope indicates 6.0 +1.0 VDC.

(e) Place the test set CANCEL switch to the OFF position.

(f) Press the START switch on the paper tape reader. Verify the following results:

1. The paper tape reader START switch is illuminated green and the STOP and CANCEL indicators are extinguished.

2. The test set ALM STOP lamp is extinguished and the READY indicator is illuminated.

(g) Press the STOP switch on the PTR.

(7) *Audible reset.*

(a) Connect the channel A input of the oscilloscope to TB2-5 in the paper tape reader to measure the audible reset pulse.

(b) Position the oscilloscope controls to view a 6-volt pulse, and use the pulse being viewed as an external trigger.

(c) Press the AUDIBLE RESET switch on the paper tape reader as many times as needed to obtain an accurate measurement of the audible reset pulse.

(d) Verify that pulse is 5 μsec minimum in duration, with an amplitude of 6.0 ±1.0 VDC at its high level (starting and ending level), and 0.5 +0.5 VDC at its low level during the pulse time.

(e) Disconnect oscilloscope.

6-9. Operational Tests-Variable Voltage and Frequency

a. Preliminary Procedure. Position the switches on the test set as follows:

115 VAC circuit breaker to ON
CANCEL to OFF
SELECT to ON
SPEED rotary switch to NORM
COMPARATOR INPUT switch to DATA IN
EOB,/EOM to OFF
ASSIGN/NOT ASSIGN to ASSIGN
COMPARATOR to OFF
AUTO/MAN to AUTO
SEARCH/TEST to TEST
ASCII/ITA No. 2 to ASCII

b. Operation With Static Variations of Frequencies and Voltages.

(1) Position variable frequency and voltage controls on CML 5000A to the first (132 VAC, 60 CPS) position indicated on the chart below (positions indicated by an "X").

Test voltage (VAC)	Test frequency (CPS) 57	60	63
132----------	--	X	
120----------	X	X	X
96----------	--	x	

(2) Load test tape sample A. (Load with splice up.)

(3) Set the test set COMPARATOR switch to ON.

(4) Set the test set SEARCH/TEST switch to the SEARCH position.

(5) Press the START switch on the PTR. Verify that both the PTR START switch and the test set READY lamp light green.

(6) Press the START switch on the test set. Verify that the PTR START switch lights white as the tape advances through the read head, and that the tape stops at a predetermined pattern. Verify that when the tape stops moving, the pattern displayed on the test set COMPARATOR INPUTS indicators is as follows:

P 7 6 5 4 3 2 1
ON OFF ON ON OFF OFF OFF OFF

(7) Set the test set SEARCH/TEST switch to TEST.

Connect the input of the frequency counter to the STROBE test point on the test set. Position controls on frequency counter to measure a pulse rate of approximately 150 PPS.

(9) Press the test set START switch. Verify that the following actions occur:

(a) The test set ALM STOP, OP ALM, and ERROR indicators are all extinguished.

(b) Tape moves continuously through the PTR read head.

(c) The pattern displayed on the test set data lamps changes continuously, indicating transfer of data from the PTR to the test set. (10) Verify that frequency counter reads 150
+4.5 pps.

(11) Press the STOP switch on the PTR.

(12) Repeat (5) and (8) through (11) above for all remaining settings of frequency and voltage as indicated on an "X" in the chart of (1) above.

(13) Press AC POWER switch on PTR to shut off paper tape reader.

(14) Convert tape reader mechanism from 60 Hertz to 50 Hertz operation by performing the instructions for 50-Hz conversion in TM 11-7440-239-15.

(15) Position variable frequency and voltage controls on the CML 5000A to the first (132 VAC, 50 CPS) position indicated on the chart below (positions indicated by an X).

Test voltage (VAC)	Test frequency (CPS) 47.5	50	52.5
132----------	--	X	
120----------	X	X	X
96----------	--	x	

(16) Press AC POWER switch on PTR.

(17) Repeat (4) through (7) above.

(18) Repeat (5) and (8) through (11) above for each of the voltage and frequency settings indicated by an X in the chart of (15) above.

c. Dynamic Variable Voltage at 50 Hertz (120 VAC).

(1) Adjust the variable frequency and voltage source for 50 Hertz and 120 VAC.

(2) Press the paper tape reader START switch.

(3) Press the test set START switch.

(4) Vary the OUTPUT LEVEL adjust on the CML N5000A from a nominal 120 VAC to a minimum of 96 VAC, then to a maximum of 132 VAC, and then return to 120 VAC. This cycle should be completed in approximately 60 seconds.

(5) Verify the frequency counter reads 150 +4.5 PPS while voltage is varied.

(6) Press the paper tape reader STOP switch at the end of the cycle.

d. Dynamic Variable Frequency at 120 VAC 50 Hertz).

(1) Press the paper tape reader and test set START switches in sequence.

(2) Vary the FREQUENCY CPS adjust on the CML N5000A from a nominal 50 CPS to a minimum 47.5 CPS, then to a maximum 52.5 CPS, and return to 50 CPS. This cycle should be completed in approximately 60 seconds.

(3) Verify that the frequency counter reads 150 ± 4.5 PPS while frequency is varied.

(4) Press the paper tape reader STOP switch at end of the cycle.

(5) Press AC POWER switch on PTR.

(6) Convert tape reader mechanism from 50 Hertz to 60 Hertz operation again. (Reverse procedure given in TM 11-7440-239-15.)

e. Dynamic Variable Frequency at 120 VAC (60 Hertz).

(1) Adjust the variable frequency and voltage source to 60 CPS and 120 VAC.

(2) Press the AC POWER switch on the paper tape reader.

(3) Repeat b(4) through (8) above.

(4) Vary the FREQUENCY CPS adjust on the CML N5000A from a nominal 60 CPS to a minimum of 57 CPS, then to a maximum of 63 CPS, and return to 60 CPS. This cycle should be completed in approximately 60 seconds.

(5) Verify that the frequency counter reads 150 ± 4.5 PPS while frequency is varied.

(6) Press paper tape reader STOP switch at end of cycle.

f. Dynamic Variable Voltage at 60 Hertz.

(1) Adjust the variable frequency and voltage source for 60 CPS and 120 VAC.

(2) Press the PTR and test set START switches in sequence.

(3) Vary the OUTPUT LEVEL adjust on the CML N5000A from a nominal 120 VAC to

a minimum of 96 VAC, then to a maximum of 132 VAC, then return to 120 VAC. This cycle should be completed in approximately 60 seconds.

(4) Verify that the frequency counter reads 150 ±4.5 PPS while voltage is varied.

(5) Press PTR STOP switch at end of cycle.

g. Dynamic Variable Frequency at 120 VAC (60 Hertz) in Low Speed Mode While Reading Chadless Tape.

(1) Remove test tape sample A from the PTR. Position the tape guides for 11/16-inch width tape and load test tape sample L.

(2) Press the paper tape punch HIGH SPEED "LOW SPEED switch to the LOW SPEED position. Set the ASCII/ITA No. 2 switch on the PTR maintenance panel to the ITA No. 2 position. Set the test set ASCII/ITA No. 2 switch to the ITA No. 2 position.

(3) Position the frequency counter controls to read approximately 20 PPS.

(4) Set the OUTPUT LEVEL and FREQUENCY CPS controls on the CML N5000A for 120 VAC and 60 CPS.

(5) Repeat b(4) through (8) above.

(6) Vary the FREQUENCY CPS adjust on the CML N5000A from a nominal 60 CPS to a minimum of 57 CPS and to a maximum of 63 CPS, then return to 60 CPS. This cycle should take approximately 60 seconds.

(7) Verify that frequency counter reads 18.75 ± 0.5 PPS while frequency is varied.

(8) Press the paper tape reader STOP switch at the end of the cycle.

h. Dynamic Variable Voltage at 60 Hertz (120 TVAC) in Low Speed Mode Reading Chadless Tape.

(1) Press the paper tape reader and test set START switches in sequence.

(2) Vary the OUTPUT LEVEL adjust on the CML N5000A from a nominal 120 VAC to a minimum of 96 VAC, then to a maximum of 132 VAC, and return to the 120 VAC. This cycle should take approximately 60 seconds. (3) Verify frequency counter reads 18.75 ± 0.5 PPS while voltage is varied.

(4) Press the paper tape reader STOP switch at end of cycle.

(5) Remove test tape samply L from the paper tape reader.

6-10. Shutdown

a. Press AC POWER switch on paper tape reader.

b. Position 115 VAC circuit breaker on test set to OFF.

c. Position the CML N5000A HIGH VOLTAGE switch to OFF; then place the POWER switch to OFF.

d. Perform the following if you do not have a transmission identification generator to test (para 6-11).

(1) Remove connection between paper tape reader and CML N5000A.

(2) Remove connection between paper tape reader and test set.

6-11. Operational Test-Transmission Identification Generator

a. Initial Setup. This test checks for proper operation of a transmission identification generator kit installed on a punched tape reader. It is necessary that a protested punched tape reader meeting the requirements of paragraphs 6-7 through 6-10 be used.

(1) Initial set up. Connect the paper tape reader and the transmission identification generator to the test equipment as shown in figure 6-8.

(2) Place CML N5000A HIGH VOLTAGE switch to ON; then place the POWER switch to ON.

(3) Press the AC POWER switch on the paper tape reader and verify that the AC PON'ER switch and DC POWER indicator light white.

(4) Set the TIG ON-LINE OFF-LINE switch to the ON-LINE position. Verify that the TIG ON indicator is illuminated white.

(5) Verify that the PTR ASCII/ITA-2 switch on the front of the punched tape reader logic assembly is set to the ASCII position.

(6) Verify/set the controls and switches on the paper tape reader test as follows:

CANCEL to OFF
SELECT to OFF
EOB /EOM to ON
SPEED to NORM
ASSIGNED/NOT ASSIGNED to ASSIGNED
COMPARATOR INPUT to INPUT REG
COMPARATOR to OFF

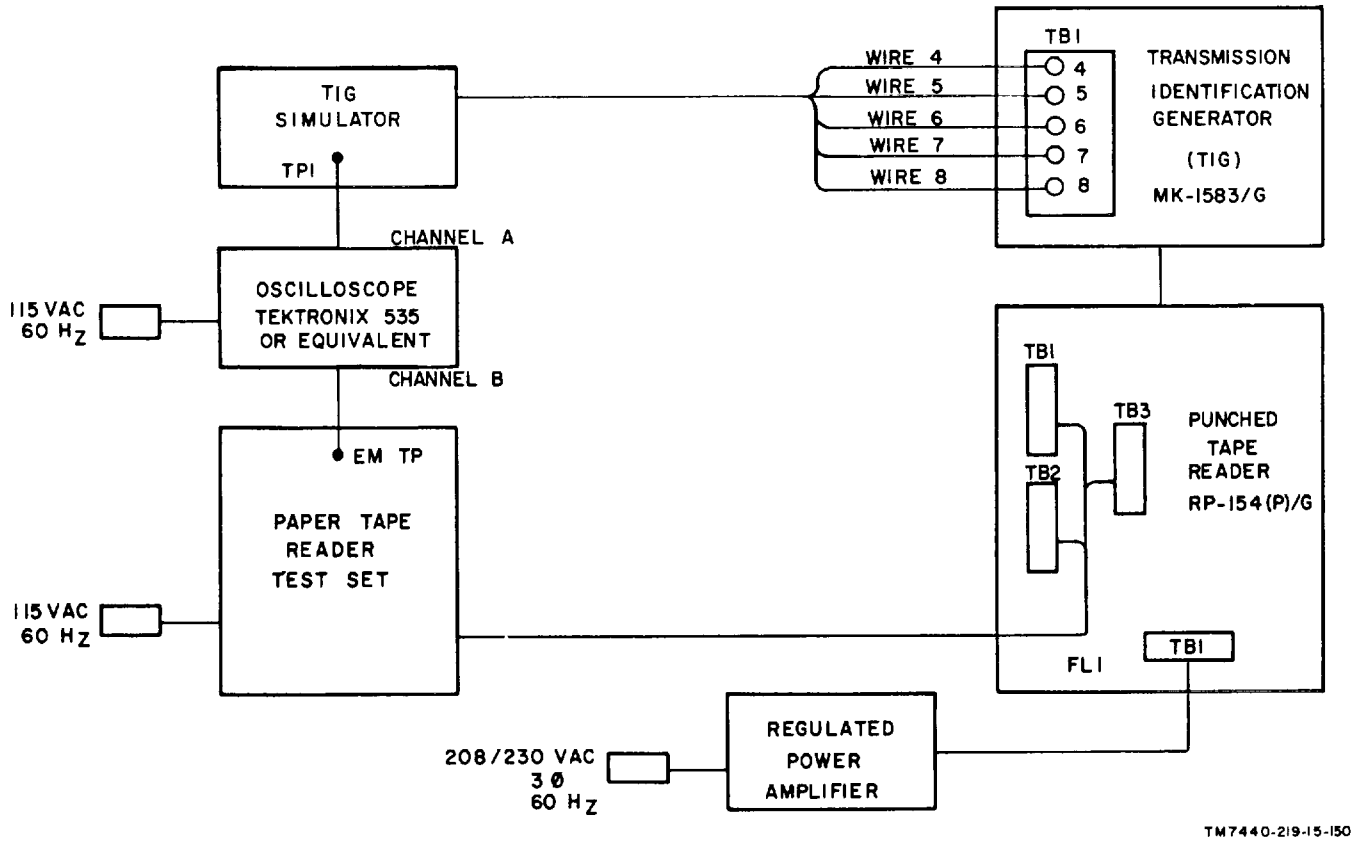


Figure 6-8. Test setup for TIG.

STEP/COUNTER to STEP
AUTO/MAN to MAN
SEARCH/TEST to TEST
ASCII/ITA-2 to ASCII
115 VAC circuit breaker to ON

b. Channel Sequence Number Indicator.

(1) Manually update the channel sequence number for each of the numbers indicated below.

Dial the MANUAL UPDATE thumbwheel switches on the TIG control panel to one of the following numbers and then press the LOAD switch. Observe the proper numbers are shown in the NEXT NUMBER display.

111	444	777	000
222	555	888	
333	666	999	

(2) Load test tape sample M in the punched tape reader.

(3) Press the AC POWER switch on the punched tape reader twice to turn power off and then back on. Verify that the TIG NEXT NUMBER display is automatically reset to 000 when the AC POWER is turned on.

(4) Manually load 999 into the TIG NEST NUMBER display. Use procedure outlined in (1) above.

(5) Set the test set SELECT switch to ON.

(6) Press the punched tape reader START switch and observe that the START switch lights green.

(7) Press the test set START switch and observe the punched tape reader START switch remains green.

(8) Now attempt to manually load 111 into the NEXT NUMBER display (procedure outlined in (1) above). Observe that you cannot update the display.

(9) Set the test set CANCEL switch to MANUAL. Observe the following indications on the punched tape reader control panel:

START switch is not illuminated.
STOP switch lights red.
CANCEL switch lights red.

(10) Set the test set CANCEL switch to OFF.

(11) Press the punched tape reader START switch. Verify the START switch lights green.

(12) Press the test set START switch 16 times. On the TIG control panel, observe the NEXT NUMBER display advances to 000.

c. Transmission Identification (TI) Sequence. This section has four TI sequences with special jumper connections on the selection option board on punched tape reader PC card A2 required before each sequence. These sequences have been such that they verify-

Operation of the TIG with the punched tape reader and the test set:

ASCII code odd parity.

Proper data transfer.

TI format.

Programable ACP-127 start of message.

Programable TI channel designation characters.

Channel sequence number.

EM signal generation.

(1) TI sequence number 1.

(a) Press the punched tape reader AC POWER switch. Verify the AC POWER switch and the DC POWER indicator are not lighted.

(b) Remove PC Card A2 from the punched tape reader logic assembly. Verify that jumper wires are connected on the strapping option terminals as indicated in the TI sequence number column of table 6-5.

(c) Replace PC card A2 in the punched tape reader.

(d) Press the punched tape reader AC POWER switch and observe:

AC POWER switch lights white.

DC POWER indicator lights white.

STOP switch lights red.

(e) Load test tape sample M in the middle of the idle characters.

(*f)* Set the test set SELECT switch to OFF.

(g) Manually load 000 into the TIG NEXT NUMBER display. Use procedure outlined in b(1) above.

(h) Set the test set SELECT switch to N.

(i) Press the punched tape reader START switch. Observe the following:

The START switch lights green.

The test tape in the punched tape reader advances to the first character of the message and then stops.

(j) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 +1 VDC.

Test set COMPARATOR INPUTS lights display 11011010 (character Z).

(k) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set COMPARATOR INPUTS lights display 01000011 (character C).

(l) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures + 6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 11011010 (character Z).

(m) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 01000011 (character C).

(n) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ± 1 VDC.

Test set COMPARATOR INPUTS lights display 11000001 (character A).

(o) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 11000010 (character B).

(p) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 01000011 (character C).

(q) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 00001110 (character SO).

(r) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 10110000 (character 0).

(s) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 10110000 (character 0)

(t) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 10110000 (character 0).

(u) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 10001111 (character SI).

(v) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00001101 (character CR).

(w) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00001101 (character CR).

(x) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 +1 VDC.
Test set EM test point measures +6 +1 VDC.
Test set COMPARATOR INPUTS lights display 10001010 (character LF).

(y) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures a 100 μsec wide negative going pulse.
Test set EM test point measures 0 ±.5 VDC.
Test set COMPARATOR INPUTS lights display 10000000 (character NUL).
TIG NEXT NUMBER display counts to '001'.

(2) *TI sequence number 2*.

(a) Press the punched tape reader AC POWER switch. Verify the AC POWER switch and the DC POWER indicator are not lighted.

(b) Remove PC Card A2 from the punched tape reader logic assembly. Change jumper wires to connect the strapping option terminals as indicated in the TI sequence number 2 column of table 6-5.

(c) Replace PC Card A2 in the punched tape reader.

(d) Press the punched tape reader AC POWER switch and observe-
AC POWER switch lights white.
DC POWER indicator lights white.
STOP switch lights red.

(e) Load test tape sample M in the middle of the idle characters.

(f) Set the test set SELECT switch of OFF.

(g) Manually load 777 into the TIG NUMBER display. Use procedure outlined in b(1) above.

(h) Set the test set SELECT switch to ON.

(i) Press the punched tape reader START switch. Observe the following:
The START switch lights green.
The test tape in the punched tape reader advances to the first character of the message and then stops.

(j) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS display 010-00011 (character C).

(k) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4± 1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 11011010 (character Z).

(l) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 01000011 (character C).

(m) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ++1 VDC.
Test set COMPARATOR INPUTS lights display 00111110 (character >).

(n) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00111101 (character =).

(o) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 10111100 (character <).

(p) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 +1 VDC.
Test set COMPARATOR INPUTS lights display 00001110 (character SO).

(q) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00110111 (character 7).

(r) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00110111 (character 7).

(s) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00110111 (character 7).

(t) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures + 6 ± 1 VDC.
Test set COMPARATOR INPUTS lights display 10001111 (character SI).

(u) Press the test set START switch one time. Observe the following:
TIG simulator test point TPI measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00001101 (character CR).

(v) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00001101 (character CR).

(w) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 100001010 (character LF).

(x) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures a 100-µsec wide negative pulse.
Test set EM test point measures 0 +.5 VDC.
Test set COMPARATOR INPUTS lights display 10000000 (character NUL).
TIG NEXT NUMBER display increments to 778.

(3) TI sequence number 3.

(a) Press the punched tape reader AC POWER switch. Verify the AC POWER switch and the DC POWER indicator are not lighted.

(b) Remove PC Card A2 from the punched tape reader logic assembly. Change jumper wires to connect the strapping option terminals as indicated in the TI sequence number 3 column of table 6-5.

(c) Replace PC card A2 in the punched tape reader.

(d) Press the punched tape reader AC POWER switch and observe:
AC POWER switch lights white.
DC POWER indicator lights white.
STOP switch lights red.

(e) Load test tape sample M in the middle of the idle characters.

(f) Set the test set SELECT switch of OFF.

(g) Manually load 889 into the TIG NEXT NUMBER display. Use procedure outlined in b(1) above.

(h) Set the test set SELECT switch to ON.

(i) Press the punched tape reader START switch. Observe the following:

The START switch lights green.

The test tape in the punched tape reader advances to the first character of the message and then stops.

(j) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 11011010 (character Z).

(k) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 01000011 (character C).

(l) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures + 6±1 VDC.

Test set COMPARATOR INPUTS lights display 00111110 (character >).

(m) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 00111101 (character =).

(n) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 10111100 (character<).

(o) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 00001110 (character SO).

(p) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures + 6±1 VDC.

Test set COMPARATOR INPUTS lights display 00111000 (character 8).

(q) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 00111000 (character 8).

(r) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures + 6 ± 1 VDC.

Test set COMPARATOR INPUTS lights display 10111001 (character 9).

(s) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 10001111 (character SI).

(t) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 00001101 (character CR).

(u) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC. Test set COMPARATOR INPUTS lights display 00001101 (character CR).

(v) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.

Test set EM test point measures +6 ±1 VDC.

Test set COMPARATOR INPUTS lights display 10001010 (character LF).

(w) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures a 100 µsec wide negative pulse.

Test set EM test point measures 0 ±.5 VDC.

Test set COMPARATOR INPUTS lights display 10000000 (character NUL).

TIG NEXT NUMBER display increments to ’890’.

(4) TI sequence number 4.

(a) Press the punched tape reader AC

POWER switch. Verify the AC power switch and the DC POWER indicator are not lighted.

(b) Remove PC Card A2 from the punched tape reader logic assembly. Change jumper wires to connect the strapping option terminals as indicated in the TI sequence number 4 column of table 6-5.

(c) Replace TC Card A2 in the punched tape reader.

(d) Press the punched tape reader AC POWER switch and observe:
AC POWER switch lights white.
DC POWER indicator lights white.
STOP switch lights red.

(e) Load test tape sample M in the middle of the idle characters.

(f) Set the test set SELECT switch to OFF.

(g) Manually load 899 into the TIG NEXT NUMBER display. Use procedure outlined in b(1) above.

(h) Set the test set SELECT switch to ON.

(i) Press the punched tape reader START switch. Observe the following:
The START switch lights green.
The test tape in the punched tape reader advances to the first character of the message and then stops.

(j) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 01000011 (character C).

(k) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00111110 (character>).

(l) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00111101 (character =).

(m) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 10111100 (character <).

(n) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00001110 (character SO).

(o) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00111000 (character 8).

(p) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 10111001 (character 9).

(q) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 10111001 (character 9).

(r) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 10001111 (character SI).

(s) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00001101 (character CR).

(t) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00091101 (character CR).

(u) Press the test set START switch one time. Observe the following:

TIG simulator test point TP1 measures +4 ±1 VDC.
Test set EM test point measures +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 10001010 (character LF).

(v) Press the test set START switch one time. Observe the following:
TIG simulator test point TP1 measures a 100 μsec wide negative pulse.
Test set EM test point measures 0 +±.5 VDC.
Test set COMPARATOR INPUTS lights display 10000000 (character NUL).
TIG NEXT NUMBER display counts to 900.

d. Off-Line Operation of EM Interface Signal.

(1) Set the TIG ON-LINE,/OFF-LINE switch to the OFF-LINE position.

(2) Load test tape sample M in the middle of the idle characters.

(3) Set the test set CANCEL switch to the MANUAL position.

(4) Set the test set CANCEL switch to the OFF position.

(5) Press the punched tape reader START switch. Verify the START switch lights green.

(6) Press the test set START switch one time. Observe the following:
Test set EM test points remains at +6 ± 1 VDC.
Test set COMPARATOR INPUTS lights display 01010100 (character T).

(7) Press the test set START switch one time. Observe the following:
Test set EM test point remains at +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 11001000 (character H).

(8) Press the test set START switch one time. Observe the following:
Test set EM test point remains at +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 01001001 (character I).

(9) Press the test set START switch one time. Observe the following:
Test set EM test point remains at +6 -±1 VDC.
Test set COMPARATOR INPUTS lights display 11010011 (character S).

(10) Press the test set START switch one time. Observe the following:
Test set EM test point remains at +6 ±1 VDC.
Test set COMPARATOR INPUTS lights display 00100000 (character SPACE).

e. Incrementing by Other TIG Press the push-button on the TIG simulator several times. Verify the TIG NEXT NUMBER display is incremented by one each time the simulator pushbutton is pressed and released.

f. Verification of Error Free Operation.

(1) Set the test set AUTO/MAN switch to the AUTO position.

(2) Set the TIG ON-LINE/OFF-LINE switch to the ON-LINE position.

(3) Load test tape sample M in the middle of the idle characters.

(4) Manually load the TIG NEXT NUMBER indicator to 000.

(5) Press the START switch on the paper tape reader. Observe test tape advances to the first valid character on the tape and then stops.

(6) Press the START switch on the test set. Observe that one message is processed by the paper tape reader. Verify that the TIG NEXT NUMBER indicator is incremented by one.

(7) Repeat (6) above nine times (until the TIG NEXT NUMBER indicator displays 010).

(8) Repeat (6) above one time after manually loading each of the following numbers in the TIG NEXT NUMBER indicator.
Verify the TIG NEXT NUMBER indicator is incremented by one each time a message is processed.

019	069	199	699
029	079	299	799
039	089	399	899
049	099	499	999
059		599	

6-12. Shutdown

a. Press the AC POWER switch on the paper tape reader.

b. Position the 115 VAC circuit breaker on test set to OFF.

c. Position the CML N5000A HIGH VOLTAGE switch to OFF; then place the POWER switch to OFF.

d. Disconnect the TIG simulator from TIG assembly.

e. Remove the connection between the paper tape reader and the CML N5000A.

f. Remove the connection between the paper tape reader and the test set

.

CHAPTER 8
ILLUSTRATIONS

8-1

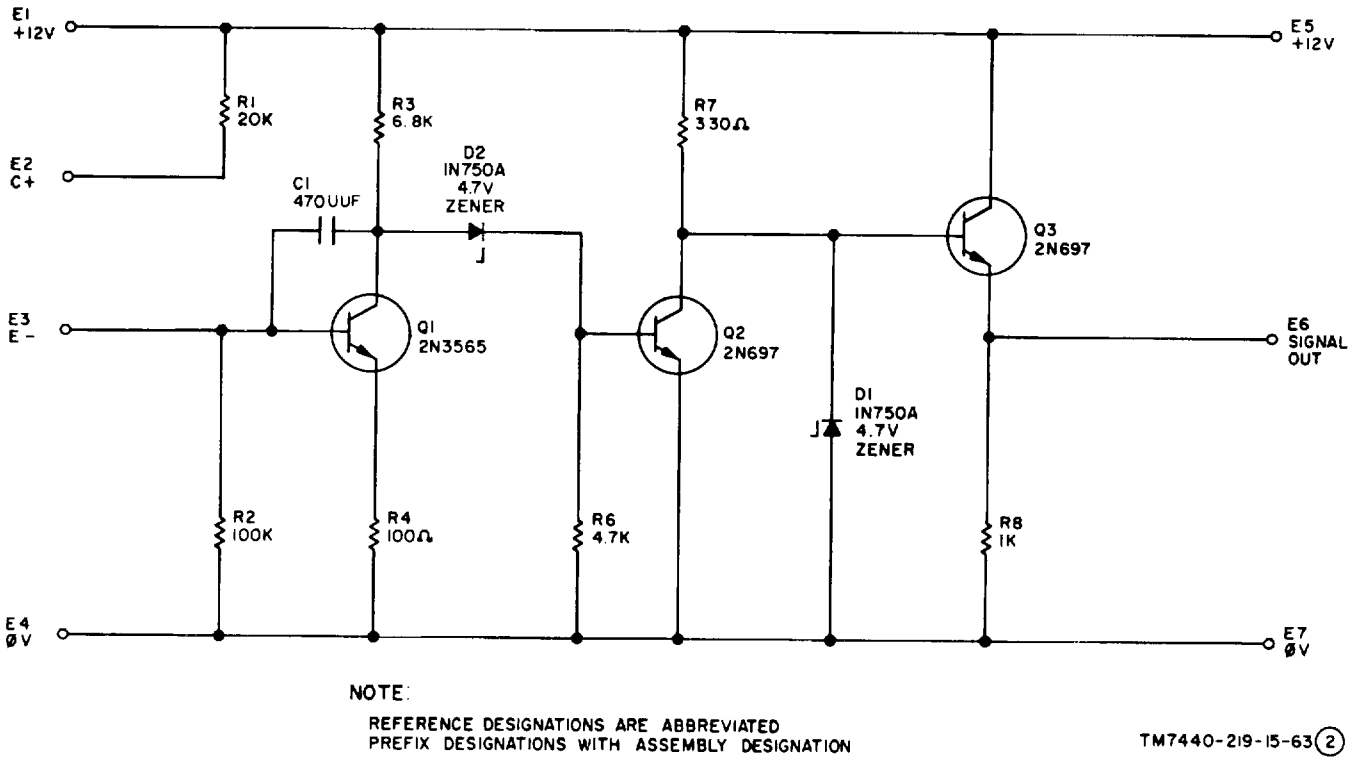


Figure 8-6 (2). Reader mechanism assembly A2, schematic diagram (part 2 of 2).

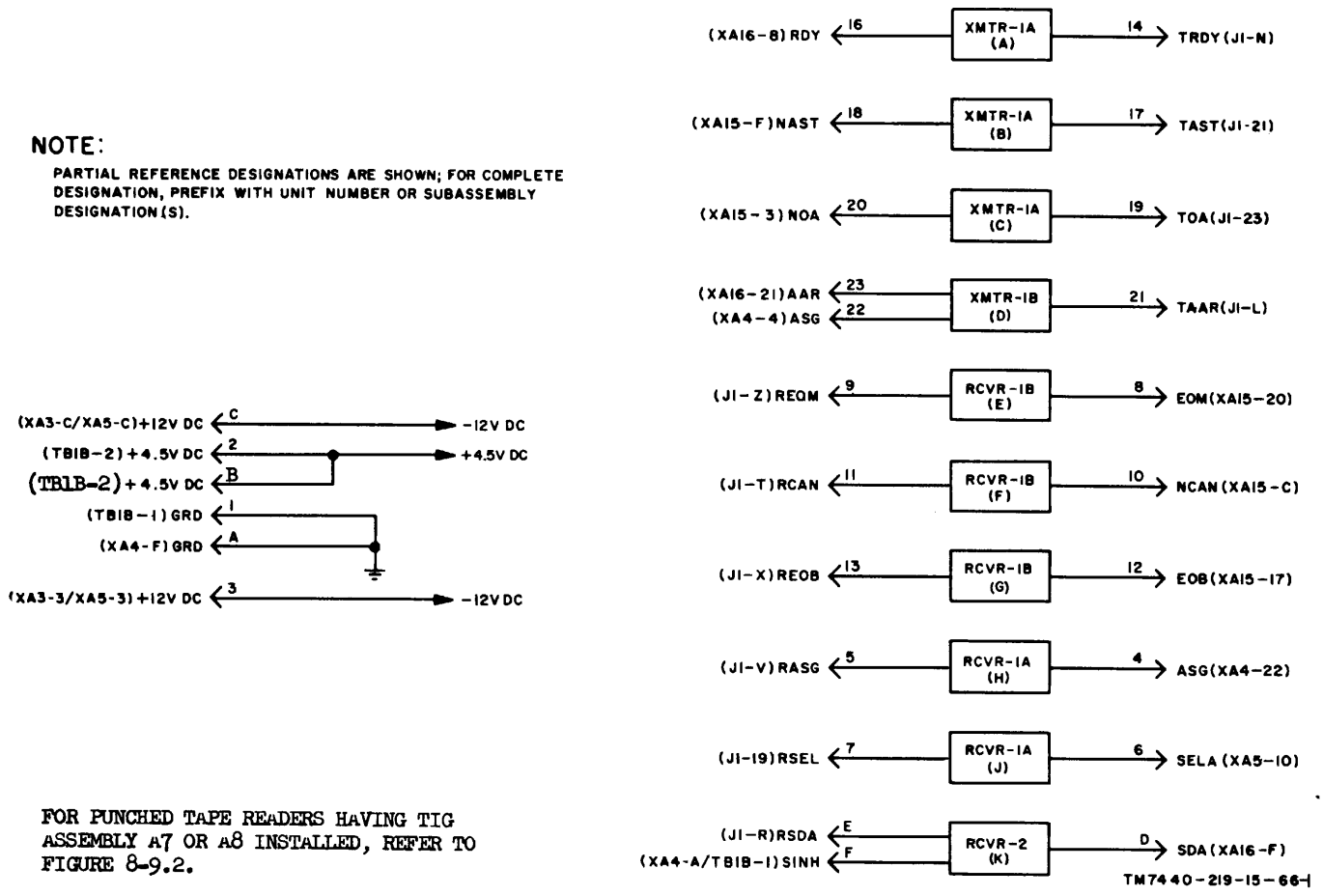
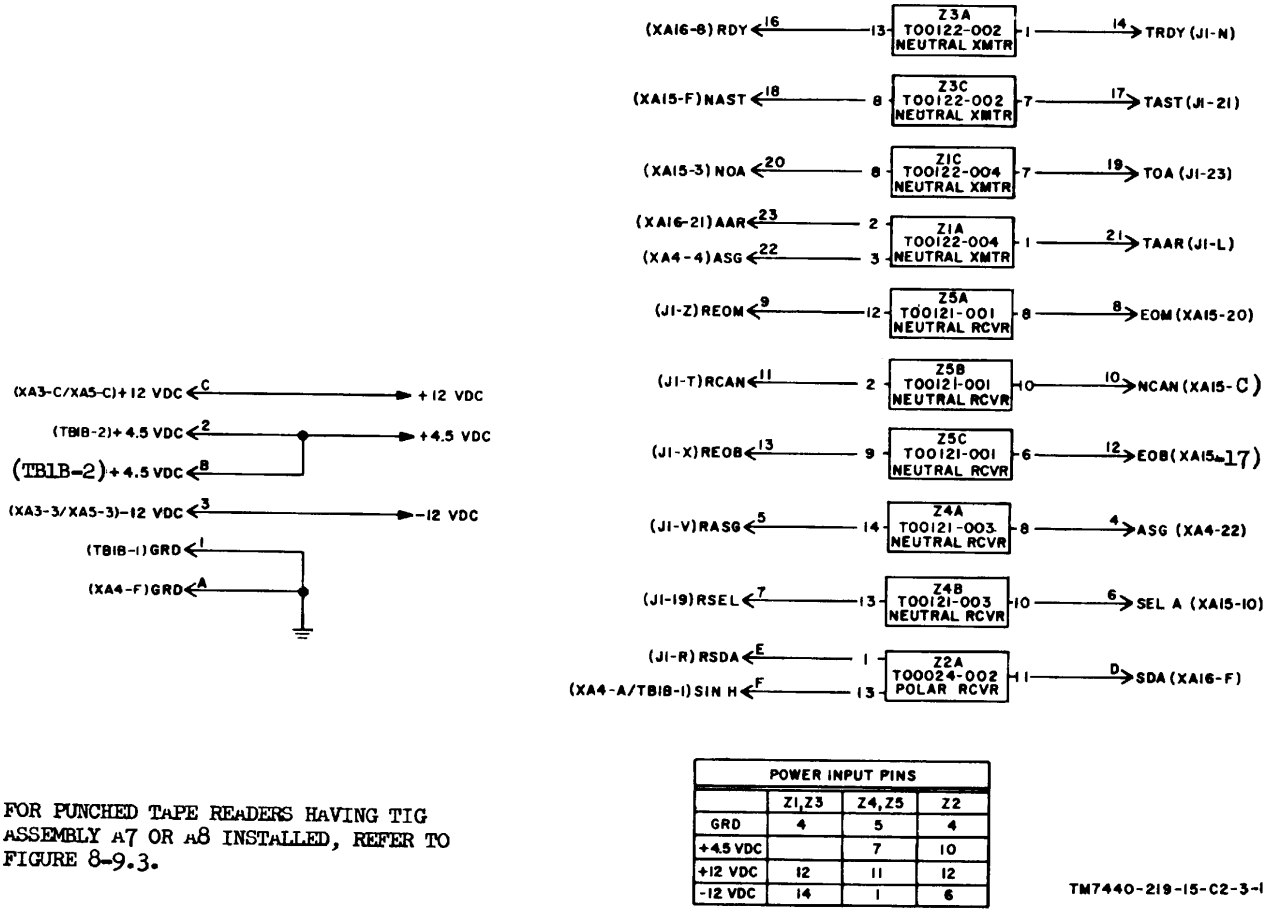


Figure 8-9. PC card A4 (No. A65215-001), schematic diagram.



FOR PUNCHED TAPE READERS HAVING TIG ASSEMBLY A7 OR A8 INSTALLED, REFER TO FIGURE 8-9.3.

POWER INPUT PINS			
	Z1,Z3	Z4,Z5	Z2
GRD	4	5	4
+4.5 VDC		7	10
+12 VDC	12	11	12
-12 VDC	14	1	6

TM7440-219-15-C2-3-1

Figure 8-9.1. PC card A4 (No. A65223-001), schematic diagram.

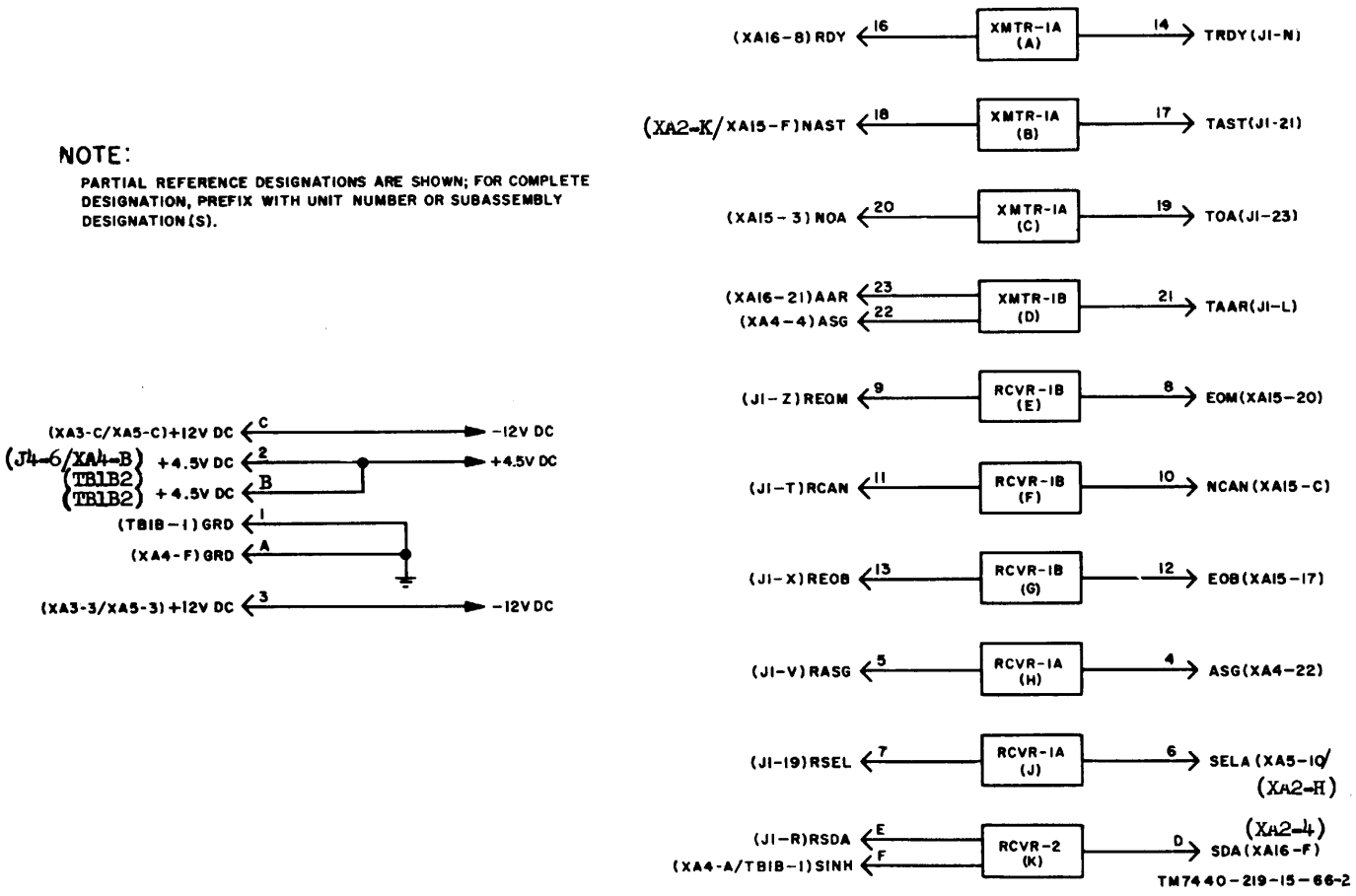
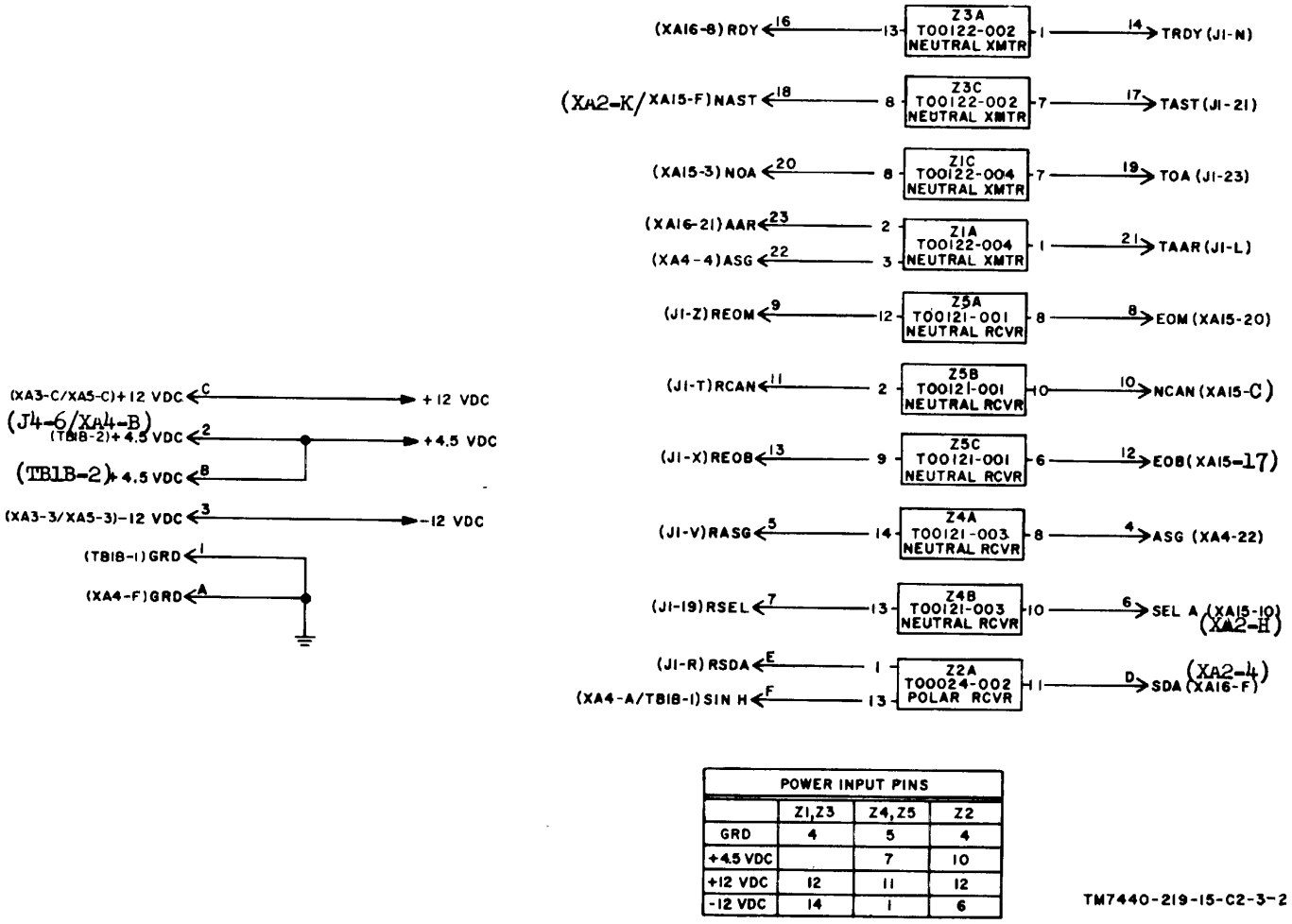
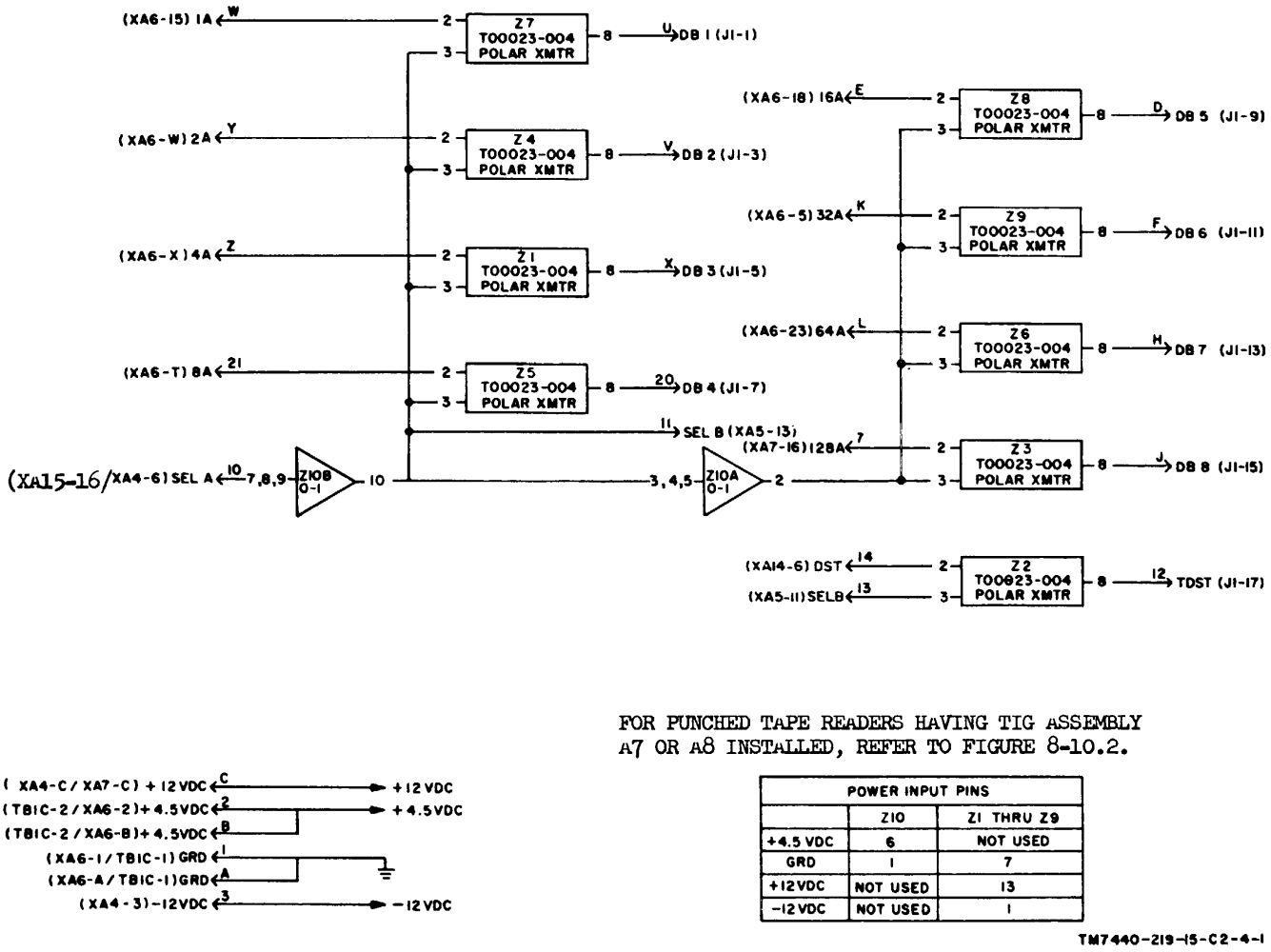


Figure 8-9.2. PC card A4 (No. A65215-001), schematic diagram. (with TIG installed)



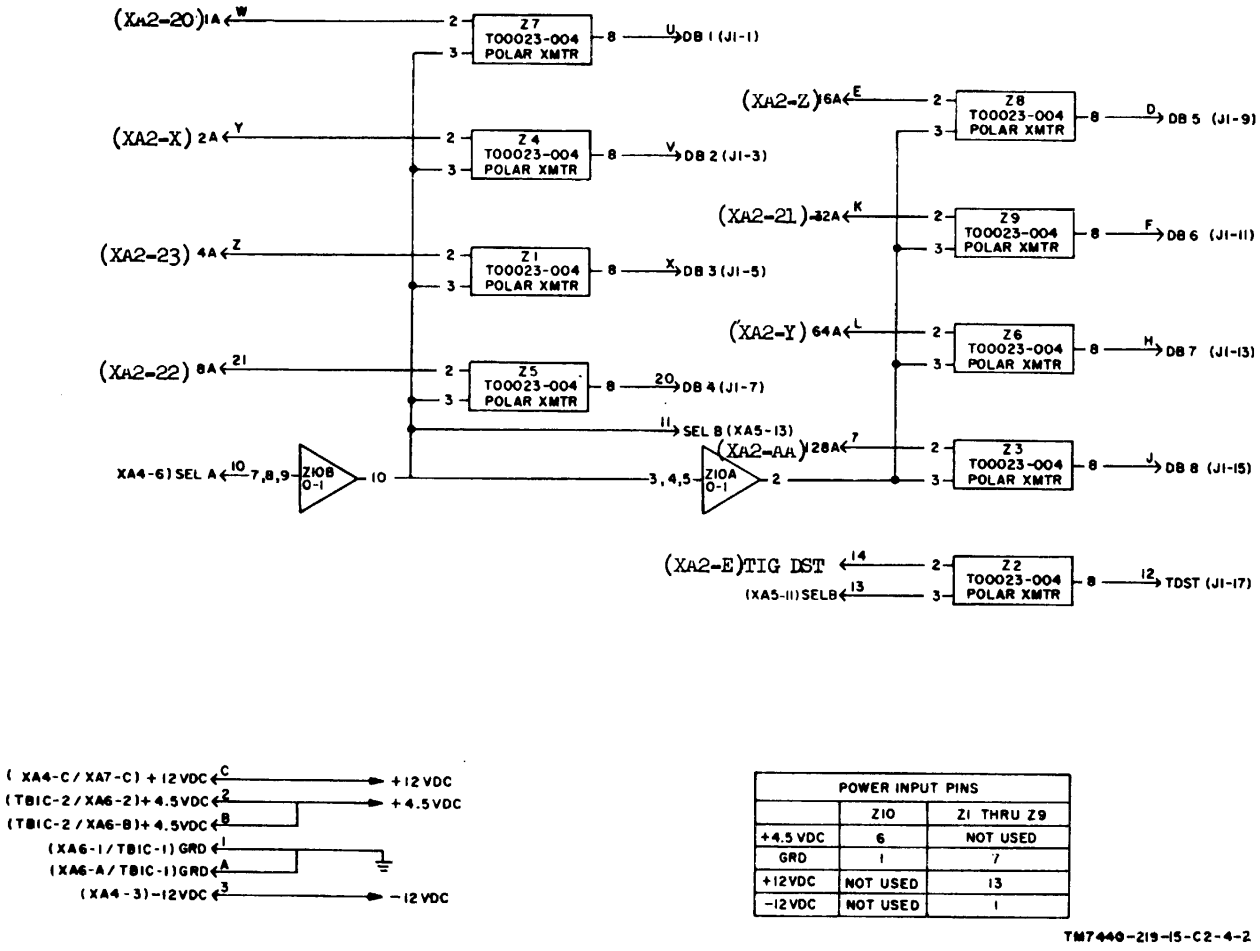
POWER INPUT PINS			
	Z1,Z3	Z4,Z5	Z2
GRD	4	5	4
+4.5 VDC		7	10
+12 VDC	12	11	12
-12 VDC	14	1	6

Figure 8-9.3. PC card A4 (No. A65223-001),schematic diagram. (with TIG installed)



POWER INPUT PINS		
	Z10	Z1 THRU Z9
+4.5 VDC	6	NOT USED
GRD	1	7
+12VDC	NOT USED	13
-12VDC	NOT USED	1

Figure 8-10.1. PC card A5 (No. A65227-001), schematic diagram



POWER INPUT PINS		
	Z10	Z1 THRU Z9
+4.5 VDC	6	NOT USED
GRD	1	7
+12 VDC	NOT USED	13
-12 VDC	NOT USED	1

TM7440-219-15-C2-4-2

Figure 8-10.2. PC card A5 (No. A65227-001), schematic diagram. (with TIG installed)

LOGIC ASSEMBLY A1 (WITHOUT T.I.G.) WIRE LIST

FROM	TO	FROM	TO	FROM	TO	FROM	TO
CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN
E 1	TB 2-7B	J 3-AA	F 3	TB1H-01	XA15-01	XA 4-07	J 1-19
E 1	J 1-AA	J 3-01	J 2-01	TB1H-02	XA15- B	XA 4-08	XA15-20
E 2	J 2-AA	J 3-01	J 3-05	TB1H-02	XA15-02	XA 4-09	J 1- Z
E 3	J 3-AA	J 3-03	XA 7-18	TB1J-01	S 1- C	XA 4-10	XA15- C
E 4	J 4-AA	J 3-05	J 3-01	TB1J-01	S 2-03	XA 4-11	J 1- T
J 1- L	XA 4-21	J 3-05	J 3-07	TB1J-02	S 2-01	XA 4-12	XA15-17
J 1- N	XA 4-14	J 3-07	J 3-05	XA 1- A	TB1A-01	XA 4-13	J 1- X
J 1- P	XA 4- E	J 3-07	J 3-09	XA 1- A	J 2-01	XA 4-14	J 1- 4
J 1- T	XA 4-11	J 3-09	J 3-07	XA 1- B	J 2-02	XA 4-16	XA16-08
J 1- V	XA 4-05	J 3-09	J 3-11	XA 1- B	TB1A-02	XA 4-17	J 1-21
J 1- X	XA 4-13	J 3-11	J 3-09	XA 1- C	TB 2-1B	XA 4-18	XA15- F
J 1- Z	XA 4-09	J 3-11	J 3-13	XA 1- C	J 4- C	XA 4-19	J 1-23
J 1-AA	F 1	J 3-13	J 3-11	XA 1- C	XA 3- C	XA 4-20	XA15-03
J 1-01	XA 5- U	J 3-13	J 3-15	XA 1- D	XA14- D	XA 4-21	J 1- L
J 1-03	XA 5- V	J 3-15	J 3-13	XA 1- T	XA14-19	XA 4-22	XA 4-04
J 1-05	XA 5- X	J 3-15	J 3-17	XA 1-01	J 3-22	XA 4-22	XA15-12
J 1-17	XA 5-20	J 3-17	J 3-15	XA 1-01	J 3- A	XA 4-23	XA16-21
J 1-09	XA 5- D	J 3-17	J 3-19	XA 1-02	TB1A-02	XA 5- A	TB1C-01
J 1-11	XA 5- F	J 3-19	J 3-17	XA 1-03	TB 2-2B	XA 5- A	XA 6- A
J 1-13	XA 5- H	J 3-19	J 3-21	XA 1-03	XA 3-03	XA 5- B	TB1C-02
J 1-15	XA 5- J	J 3-21	J 3-19	XA 1-05	J 4- L	XA 5- B	XA 6- B
J 1-17	XA 5-12	J 3-22	J 2- A	XA 1-06	J 4- L	XA 5- C	XA 4- C
J 1-19	XA 4-07	J 3-22	XA 1-01	XA 1-08	TB 2-4B	XA 5- C	XA 7- C
J 1-21	XA 4-17	J 4- C	TB 2-1B	XA 1-09	TB 2-4B	XA 5- D	J 1-09
J 1-23	XA 4-19	J 4- C	J 2- C	XA 1-10	TB 2-3B	XA 5- E	XA 6-18
J 2- A	J 3-22	J 4- C	XA 1- C	XA 1-10	J 4-10	XA 5- F	J 1-11
J 2- A	J 3- D	J 4- L	XA 1-05	XA 1-14	XA15-09	XA 5- H	J 1-13
J 2- C	J 2-04	J 4- L	XA 1-06	XA 3- A	TB 2-5B	XA 5- J	J 1-15
J 2- C	J 4- C	J 4-AA	E 4	XA 3- C	XA 1- C	XA 5- K	XA 6-05
J 2- F	XA16-13	J 4-10	XA 1-10	XA 3- C	XA 4- C	XA 5- L	XA 6-23
J 2- H	XA16- K	S 1- C	TB1J-01	XA 3- D	XA14-08	XA 5- U	J 1-01
J 2- J	XA16-AA	S 1-NO	XA15-10	XA 3- E	XA16-06	XA 5- V	J 1-03
J 2- K	XA16-12	S 2-01	S 2-06	XA 3- F	J 2- U	XA 5- W	XA 6-15
J 2- L	XA15-11	S 2-01	TB1J-02	XA 3- F	XA14- V	XA 5- X	J 1-05
J 2- M	XA16-18	S 2-02	XA 7-11	XA 3- H	XA15-04	XA 5- Y	XA 6- W
J 2- N	XA16- T	S 2-03	TB1J-01	XA 3- J	XA15- M	XA 5- Z	XA 6- X
J 2- P	XA16-17	S 2-03	S 2-04	XA 3- K	XA16- Y	XA 5-01	TB1C-01
J 2- R	XA16- R	S 2-04	S 2-03	XA 3- R	J 2-11	XA 5-01	XA 6-01
J 2- T	XA 3-19	S 2-05	XA 7-AA	XA 3- S	J 2-06	XA 5-02	TB1C-02
J 2- U	XA 3- F	S 2-06	S 2-01	XA 3- T	J 2-09	XA 5-02	XA 6-02
J 2- V	XA 3-22	TB 1-01	TB 3-1B	XA 3- U	J 2-16	XA 5-03	XA 4-03
J 2- W	XA16- W	TB 1-02	TB 3-2B	XA 3- V	J 2-17	XA 5-07	XA 7-16
J 2- X	XA16-22	TB 2-1B	J 4- C	XA 3- W	J 2-12	XA 5-10	XA 4-06
J 2-AA	F 2	TB 2-1B	XA 1- C	XA 3- X	J 2-20	XA 5-10	XA15-16
J 2-01	J 3-01	TB 2-2B	XA 1-03	XA 3- Y	J 2-15	XA 5-11	XA 5-13
J 2-01	XA 1- A	TB 2-3B	XA 1-10	XA 3-01	TB 2-5B	XA 5-12	J 1-17
J 2-02	XA 1- B	TB 2-4B	XA 1-08	XA 3-01	J 2-14	XA 5-13	XA 5-11
J 2-04	J 2- C	TB 2-4B	XA 1-09	XA 3-03	XA 1-03	XA 5-14	XA14-06
J 2-06	XA 3- S	TB 2-5B	XA 3- A	XA 3-03	XA 4-03	XA 5-20	J 1-07
J 2-07	XA 3-05	TB 2-5B	XA 3-01	XA 3-04	J 2-08	XA 5-21	XA 6- T
J 2-08	XA 3-04	TB 2-7B	E 1	XA 3-05	J 2-07	XA 6- A	XA 5- A
J 2-09	XA 3- T	TB 3-1B	TB 1-01	XA 3-06	J 2-13	XA 6- B	XA 5- B
J 2-10	XA 3-09	TB 3-2B	TB 1-02	XA 3-07	J 2-18	XA 6- T	XA 5-21
J 2-11	XA 3- R	TB1A-01	J 3- A	XA 3-08	J 2-19	XA 6- T	XA 7- P
J 2-12	XA 3- W	TB1A-01	XA 1- A	XA 3-09	J 2-10	XA 6- W	XA 5- Y
J 2-13	XA 3-06	TB1A-02	XA 1- B	XA 3-14	XA15- H	XA 6- W	XA 7- Y
J 2-14	XA 3-01	TB1A-02	XA 1-02	XA 3-15	XA16-14	XA 6- X	XA 5- Z
J 2-15	XA 3- Y	TB1B-01	XA 4- F	XA 3-16	XA16-05	XA 6- X	XA 7- N
J 2-16	XA 3- U	TB1B-01	XA 4-01	XA 3-17	XA15- E	XA 6-01	XA 5-01
J 2-17	XA 3- V	TB1B-02	XA 4- B	XA 3-18	XA15- U	XA 6-02	XA 5-02
J 2-18	XA 3-07	TB1B-02	XA 4-02	XA 3-19	J 2- T	XA 6-05	XA 5- K
J 2-19	XA 3-08	TB1C-01	XA 5- A	XA 3-19	XA14-23	XA 6-05	XA 7- U
J 2-20	XA 3- X	TB1C-01	XA 5-01	XA 3-20	XA15-11	XA 6-09	XA15-19
J 3- A	XA 1-01	TB1C-02	XA 5- B	XA 3-21	XA15- N	XA 6-14	XA15- X
J 3- A	TB1A-01	TB1C-02	XA 5-02	XA 3-22	J 2- V	XA 6-15	XA 5- W
J 3- A	J 3- C	TB1D-01	XA 7- A	XA 4- A	XA 4- F	XA 6-15	XA 7-23
J 3- B	J 3- D	TB1D-01	XA 7-01	XA 4- B	TB1B-02	XA 6-18	XA 5- E
J 3- C	J 3- A	TB1D-02	XA 7- B	XA 4- C	XA 3- C	XA 6-19	XA 7- S
J 3- D	J 2- A	TB1D-02	XA 7-02	XA 4- C	XA 5- C	XA 6-20	XA15-22
J 3- D	J 3- B	TB1E-01	XA 9- A	XA 4- D	XA16- F	XA 6-23	XA 5- L
J 3- E	XA 7-17	TB1E-01	XA10-04	XA 4- E	J 1- R	XA 6-23	XA 7- R
J 3- H	XA 7-09	TB1F-02	XA 9- B	XA 4- F	XA 4- A	XA 7- A	TB1D-01
J 3- K	XA 7-08	TB1F-01	XA11- A	XA 4- F	TB1B-01	XA 7- A	XA 8- A
J 3- M	XA 7-19	TB1F-01	XA12- X	XA 4-01	TB1B-01	XA 7- B	TB1D-02
J 3- P	XA 7- T	TB1F-02	XA11- B	XA 4-02	TB1B-02	XA 7- B	XA 8- B
J 3- S	XA 7-10	TB1G-01	XA13- A	XA 4-03	XA 3-03	XA 7- C	XA 5- C
J 3- U	XA 7-07	TB1G-01	XA13-01	XA 4-03	XA 5-03	XA 7- D	XA 9-07
J 3- W	XA15-13	TB1G-02	XA13- B	XA 4-04	XA 4-22	XA 7- E	XA 8- P
J 3- Y	XA15-08	TB1G-02	XA13-02	XA 4-05	J 1- V	XA 7- F	XA 9- P
J 3- Z	XA15-07	TB1H-01	XA15- A	XA 4-06	XA 5-10	XA 7- H	XA10-07

TM 7440-219-15-WL-1- ①

Figure 8-24. (1). Logic Assembly A1 (without TIG), interconnection chart (part 1 of 3).

LOGIC ASSEMBLY A1 (WITHOUT T.I.G.) WIRE LIST

FROM	TO	FROM	TO	FROM	TO	FROM	TO
CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN
XA 7- J	XA14- H	XA 8-14	XA 8-C4	XA10- P	XA 9- C	XA11-15	XA12-16
XA 7- K	XA 8-23	XA 8-15	XA 7- L	XA10- R	XA 9- S	XA11-16	XA12- Z
XA 7- L	XA 9-15	XA 8-15	XA 8- V	XA10- S	XA 9-05	XA11-17	XA12- E
XA 7- M	XA13-19	XA 9-16	XA10-12	XA10- T	XA12- T	XA11-18	XA12-10
XA 7- N	XA 6- X	XA 8-17	XA 9-13	XA10- U	XA 9- D	XA11-19	XA12-08
XA 7- P	XA 6- T	XA 8-18	XA 8- S	XA10- V	XA 9-03	XA11-20	XA12-05
XA 7- R	XA 6-23	XA 9-19	XA 9-AA	XA10- W	XA13- M	XA11-21	XA12-19
XA 7- S	XA 6-18	XA 8-20	XA11-22	XA10- X	XA 9- V	XA11-22	XA 8-20
XA 7- T	J 3- P	XA 8-21	XA 9-11	XA10- Y	XA 9-08	XA11-23	XA 9-23
XA 7- J	XA 6-05	XA 8-22	XA11- W	XA10- Z	XA 9- N	XA12- A	XA12-07
XA 7- V	XA13-08	XA 8-23	XA 7- K	XA10-AA	XA 9-18	XA12- A	XA12- D
XA 7- X	XA13-10	XA 9- A	TB1E-C1	XA10-01	XA10-04	XA12- B	XA11- B
XA 7- Y	XA 6- W	XA 9- A	XA10- A	XA10-02	XA12-02	XA12- C	XA11- U
XA 7- Z	XA 8-04	XA 9- B	TB1E-C2	XA10-03	XA13-23	XA12- D	XA12- A
XA 7-AA	S 2-05	XA 9- B	XA10- B	XA10-04	XA10-01	XA12- D	XA12- U
XA 7-01	TB1D-01	XA 9- C	XA10- P	XA10-04	TB1E-01	XA12- E	XA11-17
XA 7-01	XA 8-01	XA 9- D	XA10- L	XA10-05	XA 9-19	XA12- F	XA11-08
XA 7-02	TB1D-02	XA 9- E	XA 8- D	XA10-06	XA 9- M	XA12- H	XA10- H
XA 7-02	XA 8-02	XA 9- E	XA11- E	XA10-06	XA13- E	XA12- H	XA13- P
XA 7-03	XA14-05	XA 9- F	XA 8- E	XA10-07	XA 7- H	XA12- J	XA10- J
XA 7-04	XA 8- _	XA 9- F	XA11- F	XA10-07	XA11- P	XA12- J	XA13-16
XA 7-05	XA11-07	XA 9- H	XA10- C	XA10-08	XA 9-07	XA12- K	XA11- S
XA 7-06	XA14- W	XA 9- J	XA10-22	XA10-08	XA13- D	XA12- L	XA11-05
XA 7-07	J 3- U	XA 9- K	XA10-1C	XA10-09	XA 9- M	XA12- M	XA11-04
XA 7-08	J 3- K	XA 9- L	XA10-21	XA10-10	XA 9- K	XA12- N	XA10- N
XA 7-09	J 3- H	XA 9- M	XA10-C9	XA10-11	XA 9-20	XA12- N	XA13-15
XA 7-10	J 3- S	XA 9- N	XA10- Z	XA10-12	XA 9-16	XA12- P	XA11- R
XA 7-11	S 2-02	XA 9- P	XA 7- F	XA10-12	XA13-06	XA12- R	XA11- C
XA 7-12	XA13-13	XA 9- R	XA10-16	XA10-13	XA11-10	XA12- S	XA11- K
XA 7-13	XA13- H	XA 9- S	XA10- R	XA10-14	XA13- N	XA12- T	XA10- T
XA 7-14	XA 8- C	XA 9- T	XA 8-C6	XA10-15	XA13-14	XA12- T	XA13-22
XA 7-14	XA 8-03	XA 9- T	XA11- T	XA10-16	XA 9- R	XA12- J	XA12- D
XA 7-15	XA13-07	XA 9- U	XA 8-C7	XA10-17	XA 9-10	XA12- V	XA11- H
XA 7-16	XA 5-07	XA 9- U	XA11- L	XA10-18	XA 9-17	XA12- W	XA13-20
XA 7-17	J 3- E	XA 9- V	XA10- X	XA10-19	XA 9-21	XA12- X	XA12-13
XA 7-18	J 3-03	XA 9- W	XA 8- N	XA10-20	XA12-20	XA12- K	TB1F-01
XA 7-19	J 3- M	XA 9- X	XA 8-C8	XA10-21	XA 9- L	XA12- Y	XA11- N
XA 7-20	XA 8- J	XA 9- X	XA11- X	XA10-22	XA 9- J	XA12- Z	XA11-16
XA 7-21	XA13- C	XA 9- Y	XA 8-12	XA10-23	XA12-23	XA12-AA	XA11- W
XA 7-22	XA13-17	XA 9- Z	XA13-C4	XA11- A	TB1F-01	XA12-01	XA12-06
XA 7-23	XA 6-15	XA 9-AA	XA 8-19	XA11- A	XA12-07	XA12-02	XA10-02
XA 8- A	XA 7- A	XA 9-01	XA 8-C5	XA11- B	TB1F-02	XA12-02	XA13-AA
XA 8- B	XA 7- B	XA 9-01	XA11-C1	XA11- B	XA12- B	XA12-03	XA13-09
XA 8- C	XA 7-14	XA 9-02	XA10- E	XA11- C	XA12- R	XA12-04	XA 8-11
XA 8- D	XA 9- E	XA 9-03	XA10- W	XA11- D	XA12- C	XA12-05	XA11-20
XA 8- E	XA 9- F	XA 9-04	XA10- M	XA11- E	XA 9- E	XA12-06	XA12-01
XA 8- F	XA 9-12	XA 9-05	XA10- L	XA11- F	XA 9- F	XA12-06	XA12-13
XA 8- H	XA 9-23	XA 9-06	XA10- S	XA11- H	XA12- V	XA12-07	XA11- A
XA 8- J	XA 7-20	XA 9-07	XA 7- U	XA11- J	XA12-18	XA12-07	XA12- A
XA 8- J	XA 8- R	XA 9-07	XA10-C8	XA11- K	XA12- S	XA12-08	XA11-19
XA 8- K	XA 9-13	XA 9-08	XA10- Y	XA11- L	XA12-22	XA12-09	XA11-02
XA 8- K	XA14- S	XA 9-09	XA 8-1C	XA11- M	XA12-AA	XA12-10	XA11-18
XA 8- L	XA 7-04	XA 9-10	XA10-17	XA11- N	XA12- Y	XA12-11	XA11-03
XA 8- M	XA10-06	XA 9-11	XA 8-21	XA11- P	XA10-07	XA12-12	XA11-06
XA 8- N	XA11- Y	XA 9-12	XA 8- F	XA11- P	XA13-03	XA12-13	XA12-06
XA 8- P	XA 7- E	XA 9-12	XA11-12	XA11- R	XA12- P	XA12-13	XA12- K
XA 8- R	XA 8- J	XA 9-13	XA 8-17	XA11- S	XA12- K	XA12-14	XA13- X
XA 8- S	XA 8-18	XA 9-14	XA10- F	XA11- T	XA 9- T	XA12-15	XA13-21
XA 8- T	XA11-13	XA 9-15	XA10- K	XA11- U	XA 9- U	XA12-16	XA11-15
XA 8- U	XA 8- Y	XA 9-16	XA10- D	XA11- V	XA12-17	XA12-17	XA11- V
XA 8- V	XA 8-15	XA 9-17	XA10-18	XA11- W	XA 8-22	XA12-18	XA11- J
XA 8- W	XA 9- W	XA 9-18	XA10-AA	XA11- X	XA 9- X	XA12-19	XA11-21
XA 8- X	XA 9-22	XA 9-19	XA10-C5	XA11- Y	XA 8- N	XA12-20	XA10-20
XA 8- Y	XA 8- U	XA 9-20	XA10-11	XA11- Z	XA13-05	XA12-20	XA13-18
XA 8- Z	XA11-AA	XA 9-21	XA10-19	XA11-AA	XA 8- Z	XA12-21	XA11-14
XA 8-AA	XA11-11	XA 9-22	XA 8- P	XA11-01	XA 9-01	XA12-22	XA11- _
XA 8-01	XA 7-01	XA 9-23	XA 8- H	XA11-02	XA12-09	XA12-23	XA10-23
XA 8-02	XA 7-02	XA 9-23	XA11-23	XA11-03	XA12-11	XA12-23	XA13- T
XA 8-03	XA 7-14	XA10- A	XA 9- A	XA11-04	XA12- M	XA13- A	TB1G-01
XA 8-04	XA 7- Z	XA10- B	XA 9- B	XA11-05	XA12- L	XA13- A	XA14- A
XA 8-04	XA 8-14	XA10- C	XA 9- H	XA11-06	XA12-12	XA13- B	TB1G-02
XA 8-05	XA 9-01	XA10- D	XA 9-16	XA11-07	XA 7-05	XA13- B	XA14- B
XA 8-06	XA 9- T	XA10- E	XA 9-C2	XA11-08	XA12- F	XA13- C	XA 7-21
XA 8-07	XA 9- U	XA10- F	XA 9-14	XA11-09	XA 9-09	XA13- D	XA10-08
XA 8-08	XA 9- X	XA10- H	XA12- H	XA11-10	XA10-13	XA13- E	XA10-06
XA 8-09	XA11-09	XA10- J	XA12- J	XA11-10	XA13- F	XA13- F	XA11-10
XA 8-10	XA 9-09	XA10- K	XA 9-15	XA11-11	XA 9-AA	XA13- H	XA 7-13
XA 8-11	XA12-04	XA10- L	XA 9-C5	XA11-12	XA 9-12	XA13- M	XA10- W
XA 8-12	XA 9- Y	XA10- M	XA 9-C4	XA11-13	XA 8- T	XA13- N	XA10-14
XA 8-13	XA 8- K	XA10- N	XA12- N	XA11-14	XA12-21	XA13- P	XA12- H

TM 7440-219-15-WL-1-②

Figure 8-24 (2). Logic Assembly A1 (without TIG), interconnection chart (part 2 of 3).

LOGIC ASSEMBLY A1 (WITHOUT T.I.G.) WIRE LIST

FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PI
XA13- T	XA12-23	XA15-C3	XA 4-2C				
XA13- K	XA12-14	XA15-03	XA16- P				
XA13-AA	XA12-02	XA15-04	XA 3- H				
XA13-01	TB1G-01	XA15-C5	XA16-16				
XA13-01	XA14-01	XA15-07	J 3- Z				
XA13-02	TB1G-02	XA15-08	J 3- Y				
XA13-02	XA14-02	XA15-09	XA 1-14				
XA13-03	XA11- P	XA15-10	S 1-NO				
XA13-04	XA 9- Z	XA15-11	XA 3-2C				
XA13-05	XA11- Z	XA15-12	XA 4-22				
XA13-06	XA10-12	XA15-12	XA16-23				
XA13-07	XA 7-15	XA15-13	J 3- h				
XA13-08	XA 7- V	XA15-14	XA16- Z				
XA13-09	XA12-03	XA15-15	XA14- X				
XA13-10	XA 7- X	XA15-16	XA 5-1C				
XA13-13	XA 7-12	XA15-16	XA16- E				
XA13-14	XA10-15	XA15-17	XA 4-12				
XA13-15	XA12- N	XA15-18	XA14-C6				
XA13-16	XA12- J	XA15-19	XA 6-C5				
XA13-17	XA 7-22	XA15-20	XA 4-C8				
XA13-18	XA12-20	XA15-21	XA14- h				
XA13-19	XA 7- M	XA15-21	XA16- N				
XA13-20	XA12- W	XA15-22	XA 6-2C				
XA13-21	XA12-15	XA15-23	XA14-15				
XA13-22	XA12- T	XA15-23	XA16-19				
XA13-23	XA10-03	XA16- A	XA15- A				
XA14- A	XA13- A	XA16- B	XA15- B				
XA14- B	XA13- B	XA16- C	XA14-C8				
XA14- D	XA 1- D	XA16- D	XA15- R				
XA14- H	XA 7- J	XA16- E	XA15-16				
XA14- K	XA15- C	XA16- F	XA 4- D				
XA14- S	XA 8- C	XA16- H	XA15- D				
XA14- V	XA 3- F	XA16- K	J 2- H				
XA14- W	XA 7-06	XA16- N	XA15-21				
XA14- W	XA15-21	XA16- P	XA15-C3				
XA14- X	XA15-15	XA16- R	J 2- R				
XA14- Z	XA16-20	XA16- T	J 2- N				
XA14-01	XA13-01	XA16- W	J 2- h				
XA14-02	XA13-02	XA16- X	XA15- L				
XA14-05	XA 7-03	XA16- Y	XA 3- K				
XA14-06	XA 5-14	XA16- Z	XA15-14				
XA14-06	XA15-18	XA16-AA	J 2- J				
XA14-08	XA 3- D	XA16-01	XA15-C1				
XA14-08	XA16- C	XA16-02	XA15-C2				
XA14-09	XA15- Y	XA16-03	XA15- N				
XA14-10	XA15- T	XA16-04	XA15- Y				
XA14-14	XA15- L	XA16-05	XA 3-16				
XA14-15	XA15- W	XA16-06	XA 3- E				
XA14-19	XA 1- T	XA16-07	XA14-2C				
XA14-19	XA15-23	XA16-08	XA 4-16				
XA14-20	XA16-07	XA16-10	XA15- F				
XA14-23	XA 3-19	XA16-11	J 2- L				
XA15- A	TB1H-01	XA16-12	J 2- K				
XA15- A	XA16- A	XA16-13	J 2- F				
XA15- B	TB1H-02	XA16-14	XA 3-15				
XA15- B	XA16- B	XA16-15	XA15- H				
XA15- C	XA 4-10	XA16-16	XA15-C5				
XA15- D	XA16- H	XA16-17	J 2- P				
XA15- E	XA 3-17	XA16-18	J 2- M				
XA15- F	XA 4-18	XA16-19	XA15-23				
XA15- F	XA16-10	XA16-20	XA14- Z				
XA15- H	XA 3-14	XA16-21	XA 4-23				
XA15- H	XA16-15	XA16-22	J 2- X				
XA15- K	XA14- R	XA16-23	XA15-12				
XA15- L	XA14-14						
XA15- L	XA16- X						
XA15- M	XA 3- J						
XA15- N	XA 3-21						
XA15- N	XA16-03						
XA15- R	XA16- D						
XA15- T	XA14-10						
XA15- U	XA 3-18						
XA15- W	XA14-15						
XA15- X	XA 6-14						
XA15- Y	XA14-09						
XA15- Y	XA16-04						
XA15-01	TB1H-01						
XA15-01	XA16-01						
XA15-02	TB1H-02						
XA15-02	XA16-02						

TM 7440-219-15-WL-1-③

Figure 8-24 (3). Logic Assembly A1 (without TIG), interconnection chart (part 3 of 3).

LOGIC ASSEMBLY A1 (WITH T.I.G.) WIRE LIST

FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PIN
E 1	TB 2-7B	J 3- W	XA15-13	TB 2-5B	XA 3-01	XA 2- V	XA 6- T
E 1	J 1-AA	J 3- Y	XA15-08	TB 2-7B	E 1	XA 2- W	J 4- K
E 2	J 2-AA	J 3- Z	XA15-07	TB 3-1B	TB 1-01	XA 2- X	XA 5- Y
E 3	J 3-AA	J 3-AA	E 3	TB 3-2B	TB 1-02	XA 2- Y	XA 5- L
E 4	J 4-AA	J 3-01	J 2-01	TB1A-01	J 3- A	XA 2- Z	XA 5- E
J 1- A	XA 2-13	J 3-01	J 3-05	TB1A-01	XA 1- A	XA 2-AA	XA 5-07
J 1- B	J 4- P	J 3-03	XA 7-1B	TB1A-02	XA 1- B	XA 2-01	J 4-02
J 1- L	XA 4-21	J 3-05	J 3-01	TB1A-02	XA 1-02	XA 2-01	J 4-03
J 1- N	XA 4-14	J 3-05	J 3-07	TB1B-01	XA 4- F	XA 2-01	XA 3- A
J 1- R	XA 4- E	J 3-07	J 3-05	TB1B-01	XA 4-01	XA 2-02	J 4-07
J 1- T	XA 4-11	J 3-07	J 3-09	TB1B-02	XA 4- B	XA 2-02	XA 4- B
J 1- V	XA 4-05	J 3-09	J 3-07	TB1B-02	XA 4-02	XA 2-03	XA 3-03
J 1- X	XA 4-13	J 3-09	J 3-11	TB1C-01	XA 5- A	XA 2-04	XA 4- D
J 1- Z	XA 4-09	J 3-11	J 3-09	TB1C-01	XA 5-01	XA 2-05	XA14-06
J 1-AA	E 1	J 3-11	J 3-13	TB1C-02	XA 5- B	XA 2-06	J 4-05
J 1-01	XA 5- U	J 3-13	J 3-11	TB1C-02	XA 5-02	XA 2-06	XA15- D
J 1-03	XA 5- V	J 3-13	J 3-15	TB1D-01	XA 7- A	XA 2-09	XA14-10
J 1-05	XA 5- X	J 3-15	J 3-13	TB1D-01	XA 7-01	XA 2-13	J 1- A
J 1-07	XA 5-2D	J 3-15	J 3-17	TB1D-02	XA 7- B	XA 2-14	J 4-04
J 1-09	XA 5- D	J 3-17	J 3-15	TB1D-02	XA 7-02	XA 2-15	XA 6-15
J 1-11	XA 5- F	J 3-17	J 3-19	TB1E-01	XA 9- A	XA 2-16	XA 6- W
J 1-13	XA 5- H	J 3-19	J 3-17	TB1E-01	XA10-04	XA 2-17	XA 6-05
J 1-15	XA 5- J	J 3-19	J 3-21	TB1E-02	XA 9- B	XA 2-18	J 4- J
J 1-17	XA 5-12	J 3-21	J 3-19	TB1F-01	XA11- A	XA 2-19	XA 6- X
J 1-19	XA 4-07	J 3-22	J 2- A	TB1F-01	XA12- X	XA 2-20	XA 5- W
J 1-21	XA 4-17	J 3-22	XA 1-01	TB1F-02	XA11- B	XA 2-21	XA 5- K
J 1-23	XA 4-19	J 4- A	XA 2- A	TB1G-01	XA13- A	XA 2-22	XA 5-21
J 2- A	J 3-22	J 4- B	XA 2- M	TB1G-01	XA13-01	XA 2-23	XA 5- Z
J 2- A	J 3- D	J 4- C	J 2- C	TB1G-02	XA13- B	XA 3- A	TB 2-5B
J 2- C	J 4- C	J 4- C	XA 1- C	TB1G-02	XA13-02	XA 3- A	XA 2-01
J 2- C	J 2-04	J 4- C	TB 2-1B	TB1H-01	XA15- A	XA 3- C	XA 1- C
J 2- F	XA16-13	J 4- D	XA 2- P	TB1H-01	XA15-01	XA 3- C	XA 2- C
J 2- H	XA16- K	J 4- E	XA 2- N	TB1H-02	XA15- B	XA 3- C	XA 4- C
J 2- J	XA16-AA	J 4- F	XA 2- R	TB1H-02	XA15-02	XA 3- D	XA14-0B
J 2- K	XA16-12	J 4- H	XA 2- S	TB1J-01	S 1- C	XA 3- E	XA16-06
J 2- L	XA16-11	J 4- J	XA 2-1B	TB1J-01	S 2-03	XA 3- F	J 2- U
J 2- M	XA16-1B	J 4- K	XA 2- W	TB1J-02	S 2-01	XA 3- F	XA14- V
J 2- N	XA16- T	J 4- L	XA 1-06	XA 1- A	TB1A-01	XA 3- H	XA15-04
J 2- P	XA16-17	J 4- L	XA 1-05	XA 1- A	J 2-01	XA 3- J	XA15- M
J 2- R	XA16- R	J 4- P	J 1- B	XA 1- B	J 2-02	XA 3- K	XA16- Y
J 2- T	XA 3-19	J 4-AA	E 4	XA 1- B	TB1A-02	XA 3- R	J 2-11
J 2- U	XA 3- F	J 4-01	XA 2- A	XA 1- B	XA 2- B	XA 3- S	J 2-06
J 2- V	XA 3-22	J 4-02	XA 2-01	XA 1- C	J 4- C	XA 3- T	J 2-09
J 2- W	XA16- W	J 4-03	XA 2-01	XA 1- C	TB 2-1B	XA 3- U	J 2-16
J 2- X	XA16-22	J 4-03	J 4-09	XA 1- C	XA 3- C	XA 3- V	J 2-17
J 2-AA	E 2	J 4-04	XA 2-14	XA 1- D	XA14- D	XA 3- W	J 2-12
J 2-01	J 3-01	J 4-05	XA 2-06	XA 1- T	XA14-19	XA 3- X	J 2-20
J 2-01	XA 1- A	J 4-06	XA 2- B	XA 1- T	XA 2- D	XA 3- Y	J 2-15
J 2-02	XA 1- B	J 4-07	XA 2-02	XA 1-01	J 3-22	XA 3-01	J 2-14
J 2-04	J 2- C	J 4-07	J 4-08	XA 1-01	J 3- A	XA 3-01	TB 2-5B
J 2-06	XA 3- S	J 4-08	J 4-07	XA 1-01	XA 2- A	XA 3-03	XA 1-03
J 2-07	XA 3-05	J 4-09	J 4-03	XA 1-02	TB1A-02	XA 3-03	XA 2-03
J 2-08	XA 3-04	J 4-09	J 4-11	XA 1-03	TB 2-2B	XA 3-03	XA 4-03
J 2-09	XA 3- T	J 4-10	XA 1-10	XA 1-03	XA 3-03	XA 3-04	J 2-08
J 2-10	XA 3-09	J 4-11	J 4-09	XA 1-05	J 4- L	XA 3-05	J 2-07
J 2-11	XA 3- R	J 4-11	J 4-15	XA 1-06	J 4- L	XA 3-06	J 2-13
J 2-12	XA 3- W	J 4-12	J 4-13	XA 1-08	TB 2-4B	XA 3-07	J 2-18
J 2-13	XA 3-06	J 4-13	J 2-14	XA 1-09	TB 2-4B	XA 3-08	J 2-19
J 2-14	XA 3-01	J 4-13	J 4-12	XA 1-10	J 4-10	XA 3-09	J 2-1D
J 2-14	J 4-13	J 4-14	XA 1-14	XA 1-10	TB 2-3B	XA 3-14	XA15- H
J 2-15	XA 3- Y	J 4-15	J 4-11	XA 1-14	J 4-14	XA 3-15	XA16-14
J 2-16	XA 3- U	S 1- C	TB1J-01	XA 1-14	XA15-09	XA 3-16	XA16-05
J 2-17	XA 3- V	S 1-NO	XA15-10	XA 2- A	J 4- A	XA 3-17	XA15- E
J 2-18	XA 3-07	S 2-01	S 2-06	XA 2- A	J 4-01	XA 3-18	XA15- U
J 2-19	XA 3-08	S 2-01	TB1J-02	XA 2- A	XA 1-01	XA 3-19	J 2- T
J 2-20	XA 3- X	S 2-02	XA 7-11	XA 2- B	J 4-06	XA 3-19	XA14-23
J 3- A	J 3- C	S 2-03	TB1J-01	XA 2- B	XA 1- B	XA 3-20	XA15-11
J 3- A	TB1A-01	S 2-03	S 2-04	XA 2- C	XA 3- C	XA 3-21	XA15- N
J 3- A	XA 1-01	S 2-04	S 2-03	XA 2- D	XA 1- T	XA 3-22	J 2- V
J 3- B	J 3- D	S 2-05	XA 7-AA	XA 2- E	XA 5-14	XA 4- A	XA 4- F
J 3- C	J 3- A	S 2-06	S 2-01	XA 2- F	XA15-16	XA 4- B	XA 2-02
J 3- D	J 2- A	TB 1-01	TB 3-1B	XA 2- H	XA 4-06	XA 4- B	TB1B-02
J 3- D	J 3- B	TB 1-02	TB 3-2B	XA 2- K	XA 4-18	XA 4- C	XA 3- C
J 3- E	XA 7-17	TB 2-1B	J 4- C	XA 2- M	J 4- B	XA 4- C	XA 5- C
J 3- H	XA 7-09	TB 2-1B	XA 1- C	XA 2- N	J 4- E	XA 4- D	XA 2-04
J 3- K	XA 7-0B	TB 2-2B	XA 1-03	XA 2- P	J 4- D	XA 4- D	XA16- F
J 3- M	XA 7-19	TB 2-3B	XA 1-10	XA 2- R	J 4- F	XA 4- E	J 1- R
J 3- P	XA 7- T	TB 2-4B	XA 1-0B	XA 2- S	J 4- H	XA 4- F	XA 4- A
J 3- S	XA 7-10	TB 2-4B	XA 1-09	XA 2- T	XA 6-23	XA 4- F	TB1B-01
J 3- U	XA 7-07	TB 2-5B	XA 3- A	XA 2- U	XA 6-1B	XA 4-01	TB1B-01

TM 7440-219-15-WL-2- ①

Figure 8-25. (1). Logic Assembly A1 (with TIG), interconnection chart (part 1 of 3).

LOGIC ASSEMBLY A1 (WITH T.I.G.) WIRE LIST

FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PIN
XA 4-02	TB1B-02	XA 7- B	TB1D-02	XA 8-08	XA 9- X	XA10- H	XA12- H
XA 4-03	XA 3-03	XA 7- R	XA 8- B	XA 8-09	XA11-09	XA10- J	XA12- J
XA 4-03	XA 5-03	XA 7- C	XA 5- C	XA 8-10	XA 9-09	XA10- K	XA 9-15
XA 4-04	XA 4-22	XA 7- D	XA 9-07	XA 8-11	XA12-04	XA10- L	XA 9-05
XA 4-05	J 1- V	XA 7- E	XA 8- P	XA 8-12	XA 9- Y	XA10- M	XA 9-04
XA 4-06	XA 2- H	XA 7- F	XA 9- P	XA 8-13	XA 8- K	XA10- N	XA12- N
XA 4-06	XA 5-10	XA 7- H	XA10-07	XA 8-14	XA 8-04	XA10- P	XA 9- C
XA 4-07	J 1-19	XA 7- J	XA14- H	XA 8-15	XA 7- L	XA10- R	XA 9- S
XA 4-08	XA15-20	XA 7- K	XA 8-23	XA 8-15	XA 8- V	XA10- S	XA 9-06
XA 4-09	J 1- Z	XA 7- L	XA 8-15	XA 8-16	XA10-12	XA10- T	XA12- T
XA 4-10	XA15- C	XA 7- M	XA13-19	XA 8-17	XA 9-13	XA10- U	XA 9- U
XA 4-11	J 1- T	XA 7- N	XA 6- X	XA 8-18	XA 8- S	XA10- V	XA 9-03
XA 4-12	XA15-17	XA 7- P	XA 6- T	XA 8-19	XA 9-AA	XA10- W	XA13- M
XA 4-13	J 1- X	XA 7- R	XA 6-23	XA 8-20	XA11-22	XA10- X	XA 9- V
XA 4-14	J 1- N	XA 7- S	XA 6-18	XA 8-21	XA 9-11	XA10- Y	XA 9-08
XA 4-16	XA16-08	XA 7- T	J 3- P	XA 8-22	XA11- W	XA10- Z	XA 9- N
XA 4-17	J 1-21	XA 7- U	XA 6-05	XA 8-23	XA 7- K	XA13-AA	XA 9-18
XA 4-18	XA 2- K	XA 7- V	XA13-08	XA 9- A	TB1E-01	XA10-01	XA10-04
XA 4-18	XA15- F	XA 7- X	XA13-10	XA 9- A	XA10- A	XA10-02	XA12-02
XA 4-19	J 1-23	XA 7- Y	XA 6- W	XA 9- B	TB1E-02	XA10-03	XA13-23
XA 4-20	XA15-03	XA 7- Z	XA 8-04	XA 9- B	XA10- B	XA10-04	XA10-01
XA 4-21	J 1- L	XA 7-AA	S 2-05	XA 9- C	XA10- P	XA10-04	TB1E-01
XA 4-22	XA 4-04	XA 7-01	TB1D-01	XA 9- D	XA10- U	XA10-05	XA 9-19
XA 4-22	XA15-12	XA 7-01	XA 8-01	XA 9- E	XA 8- D	XA10-06	XA 8- M
XA 4-23	XA16-21	XA 7-02	TB1D-02	XA 9- E	XA11- E	XA10-06	XA13- E
XA 5- A	TB1C-01	XA 7-02	XA 8-02	XA 9- F	XA 8- E	XA10-07	XA 7- H
XA 5- A	XA 6- A	XA 7-03	XA14-05	XA 9- F	XA11- F	XA10-07	XA11- P
XA 5- B	TB1C-02	XA 7-04	XA 8- L	XA 9- H	XA10- C	XA10-08	XA 9-07
XA 5- B	XA 5- B	XA 7-05	XA11-07	XA 9- J	XA10-22	XA10-08	XA13- D
XA 5- C	XA 4- C	XA 7-06	XA14- W	XA 9- K	XA10-10	XA10-09	XA 9- M
XA 5- C	XA 7- C	XA 7-07	J 3- U	XA 9- L	XA10-21	XA10-10	XA 9- K
XA 5- D	J 1-09	XA 7-08	J 3- K	XA 9- M	XA10-09	XA10-11	XA 9-20
XA 5- E	XA 2- Z	XA 7-09	J 3- H	XA 9- N	XA10- Z	XA10-12	XA 8-16
XA 5- F	J 1-11	XA 7-10	J 3- S	XA 9- P	XA 7- F	XA10-12	XA13-06
XA 5- H	J 1-13	XA 7-11	S 2-02	XA 9- R	XA10-16	XA10-13	XA11-10
XA 5- J	J 1-15	XA 7-12	XA13-13	XA 9- S	XA10- R	XA10-14	XA13- N
XA 5- K	XA 2-21	XA 7-13	XA13- H	XA 9- T	XA 8-06	XA10-15	XA13-14
XA 5- L	XA 2- Y	XA 7-14	XA 8- C	XA 9- T	XA11- T	XA10-16	XA 9- R
XA 5- U	J 1-01	XA 7-14	XA 8-03	XA 9- U	XA 8-07	XA10-17	XA 9-10
XA 5- V	J 1-03	XA 7-15	XA13-07	XA 9- U	XA11- U	XA10-18	XA 9-17
XA 5- W	XA 2-20	XA 7-17	J 3- E	XA 9- V	XA10- X	XA10-19	XA 9-21
XA 5- X	J 1-05	XA 7-18	J 3-03	XA 9- W	XA 8- W	XA10-20	XA12-20
XA 5- Y	XA 2- X	XA 7-19	J 3- M	XA 9- X	XA 8-08	XA10-21	XA 9- L
XA 5- Z	XA 2-23	XA 7-20	XA 8- J	XA 9- X	XA11- X	XA10-22	XA 9- J
XA 5-01	TB1C-01	XA 7-21	XA13- C	XA 9- Y	XA 8-12	XA10-23	XA12-23
XA 5-01	XA 6-01	XA 7-22	XA13-17	XA 9- Z	XA13-04	XA11- A	TB1F-01
XA 5-02	TB1C-02	XA 7-23	XA 6-15	XA 9-AA	XA 8-19	XA11- A	XA12-07
XA 5-02	XA 6-02	XA 8- A	XA 7- A	XA 9-01	XA 8-05	XA11- B	TB1F-02
XA 5-03	XA 4-03	XA 8- B	XA 7- B	XA 9-01	XA11-01	XA11- B	XA12- B
XA 5-07	XA 2-AA	XA 8- C	XA 7-14	XA 9-02	XA10- E	XA11- C	XA12- R
XA 5-10	XA 4-06	XA 8- D	XA 9- E	XA 9-03	XA10- V	XA11- D	XA12- C
XA 5-11	XA 5-13	XA 8- E	XA 9- F	XA 9-04	XA10- M	XA11- E	XA 9- E
XA 5-12	J 1-17	XA 8- F	XA 9-12	XA 9-05	XA10- L	XA11- F	XA 9- F
XA 5-13	XA 5-11	XA 8- H	XA 9-23	XA 9-06	XA10- S	XA11- H	XA12- V
XA 5-14	XA 2- E	XA 8- J	XA 7-20	XA 9-07	XA 7- D	XA11- J	XA12-1H
XA 5-20	J 1-07	XA 8- J	XA 8- R	XA 9-07	XA10-08	XA11- K	XA12- S
XA 5-21	XA 2-22	XA 8- K	XA14- S	XA 9-08	XA10- Y	XA11- L	XA12-22
XA 6- A	XA 5- A	XA 8- K	XA 8-13	XA 9-09	XA 8-10	XA11- M	XA12-AA
XA 6- B	XA 5- B	XA 8- L	XA 7-04	XA 9-10	XA10-17	XA11- N	XA12- Y
XA 6- T	XA 2- V	XA 8- M	XA10-06	XA 9-11	XA 8-21	XA11- P	XA10-07
XA 6- T	XA 7- P	XA 8- N	XA11- Y	XA 9-12	XA 8- F	XA11- P	XA13-03
XA 6- W	XA 2-16	XA 8- P	XA 7- E	XA 9-12	XA11-12	XA11- R	XA12- P
XA 6- W	XA 7- Y	XA 8- R	XA 8- J	XA 9-13	XA 8-17	XA11- S	XA12- K
XA 6- X	XA 2-19	XA 8- S	XA 8-18	XA 9-14	XA10- F	XA11- T	XA 9- T
XA 6- X	XA 7- N	XA 8- T	XA11-13	XA 9-15	XA10- K	XA11- U	XA 9- U
XA 6-01	XA 5-01	XA 8- U	XA 8- Y	XA 9-16	XA10- D	XA11- V	XA12-17
XA 6-02	XA 5-02	XA 8- V	XA 8-15	XA 9-17	XA10-18	XA11- W	XA 8-22
XA 6-05	XA 2-17	XA 8- W	XA 9- W	XA 9-18	XA10-AA	XA11- X	XA 9- X
XA 6-05	XA 7- U	XA 8- X	XA 9-22	XA 9-19	XA10-05	XA11- Y	XA 8- N
XA 6-09	XA15-19	XA 8- Y	XA 8- U	XA 9-20	XA10-11	XA11- Z	XA13-05
XA 6-14	XA15- X	XA 8- Z	XA11-AA	XA 9-21	XA10-19	XA11-AA	XA 8- Z
XA 6-15	XA 2-15	XA 8-AA	XA11-11	XA 9-22	XA 8- X	XA11-01	XA 9-01
XA 6-15	XA 7-23	XA 8-01	XA 7-01	XA 9-23	XA 8- H	XA11-02	XA12-09
XA 6-18	XA 2- U	XA 8-02	XA 7-02	XA 9-23	XA11-23	XA11-03	XA12-11
XA 6-18	XA 7- S	XA 8-03	XA 7-14	XA10- A	XA 9- A	XA11-04	XA12- M
XA 6-20	XA15-22	XA 8-04	XA 7- Z	XA10- B	XA 9- B	XA11-05	XA12- L
XA 6-23	XA 2- T	XA 8-04	XA 8-14	XA10- C	XA 9- H	XA11-06	XA12-12
XA 6-23	XA 7- R	XA 8-05	XA 9-01	XA10- D	XA 9-16	XA11-07	XA 7-05
XA 7- A	TB1D-01	XA 8-06	XA 9- T	XA10- E	XA 9-02	XA11-08	XA12- F
XA 7- A	XA 8- A	XA 8-07	XA 9- U	XA10- F	XA 9-14	XA11-09	XA 8-09

TM 7440-219-15-WL-2- (2)

Figure 8-25 (2). Logic Assembly A1 (with TIG), interconnection chart (part21 of 3).

LOGIC ASSEMBLY A1 (WITH T.I.G.) WIRE LIST

FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PIN	FROM CON -PIN	TO CON -PIN
XA11-10	XA10-13	XA13- E	XA10-06	XA15- W	XA14-15
XA11-10	XA13- F	XA13- F	XA11-10	XA15- X	XA 6-14
XA11-11	XA 8-AA	XA13- H	XA 7-13	XA15- Y	XA14-09
XA11-12	XA 9-12	XA13- M	XA10- W	XA15- Y	XA16-04
XA11-13	XA 8- T	XA13- N	XA10-14	XA15-01	TB1H-01
XA11-14	XA12-21	XA13- P	XA12- H	XA15-01	XA16-01
XA11-15	XA12-16	XA13- T	XA12-23	XA15-02	TB1H-02
XA11-16	XA12- Z	XA13- X	XA12-14	XA15-02	XA16-02
XA11-17	XA12- E	XA13-AA	XA12-02	XA15-03	XA 4-20
XA11-18	XA12-10	XA13-01	TB1G-01	XA15-03	XA16- P
XA11-19	XA12-08	XA13-01	XA14-01	XA15-04	XA 3- H
XA11-20	XA12-05	XA13-02	TB1G-02	XA15-05	XA16-16
XA11-21	XA12-19	XA13-02	XA14-02	XA15-07	J 3- Z
XA11-22	XA 8-20	XA13-03	XA11- P	XA15-08	J 3- Y
XA11-23	XA 9-23	XA13-04	XA 9- Z	XA15-09	XA 1-14
XA12- A	XA12- D	XA13-05	XA11- Z	XA15-10	S 1-NO
XA12- A	XA12-07	XA13-06	XA10-12	XA15-11	XA 3-20
XA12- B	XA11- B	XA13-07	XA 7-15	XA15-12	XA 4-22
XA12- C	XA11- D	XA13-08	XA 7- V	XA15-12	XA16-23
XA12- D	XA12- A	XA13-09	XA12-03	XA15-13	J 3- W
XA12- D	XA12- U	XA13-10	XA 7- X	XA15-14	XA16- Z
XA12- E	XA11-17	XA13-13	XA 7-12	XA15-15	XA14- X
XA12- F	XA11-08	XA13-14	XA10-15	XA15-16	XA 2- F
XA12- H	XA10- H	XA13-15	XA12- N	XA15-16	XA16- E
XA12- H	XA13- P	XA13-16	XA12- J	XA15-17	XA 4-12
XA12- J	XA10- J	XA13-17	XA 7-22	XA15-18	XA14-06
XA12- J	XA13-16	XA13-18	XA12-20	XA15-19	XA 6-09
XA12- K	XA11- S	XA13-19	XA 7- M	XA15-20	XA 4-08
XA12- L	XA11-05	XA13-20	XA12- W	XA15-21	XA14- W
XA12- M	XA11-04	XA13-21	XA12-15	XA15-21	XA16- N
XA12- N	XA10- N	XA13-22	XA12- T	XA15-22	XA 6-20
XA12- N	XA13-15	XA13-23	XA10-03	XA15-23	XA14-19
XA12- P	XA11- R	XA14- A	XA13- A	XA15-23	XA16-19
XA12- R	XA11- C	XA14- B	XA13- B	XA16- A	XA15- A
XA12- S	XA11- K	XA14- D	XA 1- D	XA16- B	XA15- B
XA12- T	XA10- T	XA14- H	XA 7- J	XA16- C	XA14-08
XA12- T	XA13-22	XA14- R	XA15- K	XA16- D	XA15- R
XA12- U	XA12- D	XA14- S	XA 8- K	XA16- E	XA15-16
XA12- V	XA11- H	XA14- V	XA 3- F	XA16- F	XA 4- D
XA12- W	XA13-20	XA14- W	XA 7-06	XA16- H	XA15- D
XA12- X	TB1F-01	XA14- W	XA15-21	XA16- K	J 2- H
XA12- X	XA12-13	XA14- X	XA15-15	XA16- N	XA15-21
XA12- Y	XA11- N	XA14- Z	XA16-20	XA16- P	XA15-03
XA12- Z	XA11-16	XA14-01	XA13-01	XA16- R	J 2- R
XA12-AA	XA11- M	XA14-02	XA13-02	XA16- T	J 2- N
XA12-01	XA12-06	XA14-05	XA 7-03	XA16- W	J 2- W
XA12-02	XA10-02	XA14-06	XA 2-05	XA16- X	XA15- L
XA12-02	XA13-AA	XA14-06	XA15-18	XA16- Y	XA 3- K
XA12-03	XA13-09	XA14-08	XA 3- D	XA16- Z	XA15-14
XA12-04	XA 8-11	XA14-08	XA16- C	XA16-AA	J 2- J
XA12-05	XA11-20	XA14-09	XA15- Y	XA16-01	XA15-01
XA12-06	XA12-01	XA14-10	XA 2-09	XA16-02	XA15-02
XA12-06	XA12-13	XA14-10	XA15- T	XA16-03	XA15- N
XA12-07	XA11- A	XA14-14	XA15- L	XA16-04	XA15- Y
XA12-07	XA12- A	XA14-15	XA15- W	XA16-05	XA 3-16
XA12-08	XA11-19	XA14-19	XA 1- T	XA16-06	XA 3- E
XA12-09	XA11-02	XA14-19	XA15-23	XA16-07	XA14-20
XA12-10	XA11-18	XA14-20	XA16-07	XA16-08	XA 4-16
XA12-11	XA11-03	XA14-23	XA 3-19	XA16-10	XA15- F
XA12-12	XA11-06	XA15- A	TB1H-01	XA16-11	J 2- L
XA12-13	XA12-06	XA15- A	XA16- A	XA16-12	J 2- K
XA12-13	XA12- X	XA15- B	TB1H-02	XA16-13	J 2- F
XA12-14	XA13- X	XA15- B	XA16- B	XA16-14	XA 3-15
XA12-15	XA13-21	XA15- C	XA 4-10	XA16-15	XA15- H
XA12-16	XA11-15	XA15- D	XA 2-06	XA16-16	XA15-05
XA12-17	XA11- V	XA15- D	XA16- H	XA16-17	J 2- P
XA12-18	XA11- J	XA15- E	XA 3-17	XA16-18	J 2- M
XA12-19	XA11-21	XA15- F	XA 4-18	XA16-19	XA15-23
XA12-20	XA10-20	XA15- F	XA16-10	XA16-20	XA14- Z
XA12-20	XA13-18	XA15- H	XA 3-14	XA16-21	XA 4-23
XA12-21	XA11-14	XA15- H	XA16-15	XA16-22	J 2- X
XA12-22	XA11- L	XA15- K	XA14- R	XA16-23	XA15-12
XA12-23	XA10-23	XA15- L	XA14-14		
XA12-23	XA13- T	XA15- L	XA16- X		
XA13- A	TB1G-01	XA15- M	XA 3- J		
XA13- A	XA14- A	XA15- N	XA 3-21		
XA13- B	TB1G-02	XA15- N	XA16-03		
XA13- B	XA14- B	XA15- R	XA16- D		
XA13- C	XA 7-21	XA15- T	XA14-10		
XA13- D	XA10-08	XA15- U	XA 3-18		

Added wires

FROM	TO
XA 2-10	XA 7-16
XA 2-11	XA 2-AA
XA 2- F	XA 2- L
XA 2- L	XA 2- F
XA 2-AA	XA 2-11
XA 7-16	XA 2-10

TM 7440-219-15-WL-2- ③

Figure 8-25(3). Logic Assembly A1 (with TIG), interconnection chart (part 3 of 3).

REFERENCES

The following publications apply to operation and maintenance of the equipment covered in this manual:

DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders.
DA Pam 310-7	U.S. Army Equipment Index of Modification Work Orders. Technical
NW 00-15PA-1	Inspection Manual, Soldering for Electric and Electronic Application (Navy)
SB38-100	Preservation, Packaging, Packing and Marking Materials, Supplies, and Equipment Used by the Army.
TB SIG 222	Solder and Soldering
TB 43-0118	Field Instructions for Painting and Preserving Electronics Command Equipment, Including Camouflage Pattern Painting of Electrical Equipment Shelters.
TM 38-750	The Army Maintenance Management System (TAMMS)
TM 11-7440-238-15/ NAVELEX 0967-LP-324-0100/TO 31W4-4-1-101	Operator's Organizational, Direct Support, General Support, and Depot Maintenance Manual, Digital Subscriber Terminals AN/FYA-71(V)1 Through AN/FYA-71(V) 6 and Device Switch Module SA-1616/G
TM 11-7440-239-15/ NAVELEX 0967-LP-324-0110/TO 31W4-4-1-111	Operator's Organizational, Direct Support and Depot Maintenance Manual, Autodin Digital Subscriber Terminals (Station Manual)
T.O. 00-25-234	General Shop Practice Requirements for the Repair, Maintenance, and Test of Electronic Equipment.
TM 750-244-2	Procedures for Destruction of Electronics Material to Prevent Enemy Use (Electronics Command).
TB SIG 355-1	Depot Inspection Standard for Repaired Signal Equipment.
TB SIG 355-2	Depot Inspection Standard for Refinishing Repaired Signal Equipment.
TB SIG 355-3	Depot Inspection Standard for Moisture and Fungus Resistant Treatment.
TM 740-0-1	Administrative Storage of Equipment
TM 750-244-2	Procedure for Destruction of Electronics Materiel to Prevent Enemy Use.

APPENDIX C
MAINTENANCE ALLOCATION

Section I. INTRODUCTION

C-1. General

This appendix provides a summary of the maintenance operations covered in the equipment maintenance manual for Reader, Punched Tape RP-154(P)/'G. It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function.

This appendix may be used as an aid in planning maintenance operations.

C-2. Explanation of Format for Maintenance Allocation Chart

a. Group Number. Group numbers correspond to the reference designation prefix assigned in accordance with ASA Y32.16, *Electrical and Electronics Reference Designations*. They indicate the relation of listed items to the next higher assembly.

b. Component Assembly Nomenclature. This column lists the item names of component units, assemblies, subassemblies, and modules on which maintenance is authorized.

c. Maintenance Function. This column indicates the maintenance category at which performance of the specific maintenance function is authorized. Authorization to perform a function at any category also includes authorization to perform that function at higher categories. The codes used represent the various maintenance categories as follows:

Code	*Maintenance category*
C	Operator/crew
H	General support maintenance
D	Depot maintenance

d. Tools and Equipment. The numbers appearing in this column refer to specific tools and equipment which are identified by these numbers in section III.

e. Remarks. Self-explanatory.

C-3. Explanation of Format for Tool and Test Equipment Requirements

The columns in the tool and test equipment requirements chart are as follows:

a. Tools and Equipment. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool for the maintenance function.

b. Maintenance Category. The codes in this column indicate the maintenance category normally allocated the facility.

c. Nomenclature. This column lists tools, test, and maintenance equipment required to perform the maintenance functions.

d. Federal Stock Number. This column lists the Federal stock number.

e. Tool Number. Not used.

SECTIN II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) FUNCTIONAL GROUP COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTIONS											(4) TOLS AND EQUIPMENT	(5) REMARKS
		INSPECT	TEST	SERVICE	ADJUST	ALIGN	CALIBRATE	INSTALL	REPLACE	REPAIR	OVERHAUL	REBUILD		
1.0	READER, PUNCHED TAPE RP-154(P)/G	C											None	Eternal
		H											9, 10, 11	Internal
													1 thru 5	All on-site tests
			H										7 thru 11	
				H									6, 9, 10, 11	Clean and lubricate lubrication during reassembly
					H								1 thru 5 7 thnu11	Repetition rate circuit card A1; power supply; mechanical adjust-ments in tape reader assembly.
									H				9, 1 0, 11	Replace defective plug-in circuit card assemblies and mechanical sub assemblies.
										H			9, 10, 11	Replace defective piece parts in tape reader assembly and hid wired electrical components.
										D			1 thru 5 7 thru 16	Defective circuit card assemblies and defective components or mechanical sub-assemblies.
											D		1 thru 5 7 thru 16	Restore Reader, Punched Taps RP-154(P)/O to serviceable condition.
	NOTE: OPERLATING ORGANIZATIONS PERFORM ON-SITE EQUIVALENT TO H LEVEL MAINTENANCE.													

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOLS AND TEST EQUIPMENT REQUIREMENTS

TOOLS AND EQUPMENT	MAINTENANCE CATEGORY	NOMENCLATURE	FEDERAL STOCK NUMBER	TOOL NUMBER
		RP-154(P)/G (continued)		
1	H,D	MULTIMETER AN/USM-21O (SIMPSON MODEL 260-5)	6625-149-6301	
2	H,D	OSCILLOSCOPE AN/USM-309(V) (Hewlett-Packard Model 140A with 1421A and Ho6-1405A Plug-Ins)	6625-160-0854	
3	H,D	PROBE, VOLTAGE DIVIDER (HEWLETT-PACKARD MODEL C-16-0003B)-2 ea. REQ'D	6625-802-8028	
4	H,D	Probe, Tip, Coil Spring- 2 ea. Req'd	6625-054-0231	
5	H,D	CART, OSCILLOSCOPE (HEWLETTI-PACKARD MODEL 1119A) with cabinet	6625-463-6038	
6	H	CLEANER, VACUUM, HAND TYPE	7910-205-3400	
7	H,D	ASSEMBLY, MANUAL CONTROL CARD (SARATOGA IND, DIV. ESPEY MFG. & ELECT. CORP. NO. D39245)	6130-115-2631	
8	H,D	ASSEMBLY, CARD EXTENDER (SARATOGA IND., DIV. ESPEY MFG. & ELECT, CORP. NO. D39724)	6130-115-2627	
9	H,D	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/G	5180-610-8177	
10	H,D	TOOL KIT, ELECTRONIC System Maintenance (Misc); PPL-4808	5180-168-9996	
11	H,D	TOOL KIT, Electronic System Maintenance (Paper Tape); PPL-4811	5180-168-9999	
12	D	TEST SET, TRANSISTOR TS1836A/U (SIERA MODEL 219C)	6625-926-6996	
13	D	VOLTMETER, DIGITAL (NON-LINEAR SYSTEMS, INC. MODEL X-1/5)	6625-168-0669	
14	D	RESISTOR, DECADE (GENERAL RADIO CO. MODEL 1434M)	NSN	
15	H, D	EXTENDER, PRINTED CIRCUIT BOARD (GENERAL DYNAMICS/ELECTRONICS N0. A65445-001	7440-134-3729	
16	D	TEST FACILITY, PRINTED CIRCUIT CARD	NSN	
		NOTE: DEPOT MAY SUBSTITUTE EQUIVALENT TEST EQUIPMENT		

APPENDIX D
ON-SITE. AREA RESUPPLY, AND DEPOT REPAIR PARTS

Section I. INTRODUCTION

D-1. Scope

a. The equipment covered in this appendix is categorized as a "FIXED STATION INSTALLATION." Maintenance functions have been authorized to site (ORG thru GSU), *Area Resupply, and depot*.

b. This equipment is used by electronic service organizations organic to the theater headquarters or communications zones to provide theater communications. Those repair parts authorized up to and including general support maintenance are to be stocked by the organization operating this equipment, therefore a separate display of "Organizational" and "Direct Support" maintenance repair parts would be repetitious and are not included in this appendix.

D-2. General

a. The Prescribed Load Allowance (PLA) is not required since this information is adequately defined under "Site Stockage Allowance," Column 7.

b. This list includes all replaceable parts and defines repair parts authorized for maintenance performance at site (ORG and GSU) and depot categories. This list also includes allowances for prepositioned resupply of repair parts based on equipment density per geographical locations.

This resupply requirement is established to sum port each Military Department's concentration of DSTE devices to meet the Defense Communication System operational requirement.

c. The repair parts listing is preceded with a cross-reference index.

D-3. Explanation of Columns

An explanation of the columns is given below:

a. Source, Maintenance, and Recoverability Codes (SMR), Column 1. This column lists the applicable SMR codes for the part as follows:

(1) Source code (A). The source code indicator is the letter appearing on the left in the SMR column. It indicates the source from which the item is obtained in accordance with the following:

NOTE

See para D-3 (4) for cross-reference to Air Force SMR codes.

Code	*Explanation*
P-	Applies to repair parts that are stocked in or supplied from the GSA/DSA, or Army supply system, and authorized for use at indicated maintenance categories
M-	Applies to repair parts that are not procured or stocked but are to be manufactured at indicated maintenance categories.
A-	Applies to assemblies that are not procured or stocked as such but are made up of two or more units, each of which carries an individual stock number and description and is procured and stocked and can be assembled by units at indicated maintenance categories.
X-	Applies to parts and assemblies that are not procured or stocked; the mortality of which normally is below that of the applicable end item; and the failure of which should result in retirement of the end item from the supply system
X1-	Applies to repair parts that are not procured or stocked, the requirement for which will be supplied by the use of next higher assembly or component
X2-	Applies to repair parts that are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization; such repair parts will be requisitioned with supporting Justification through normal supply channels.
C	Applies to repair parts authorized for local procurement If not obtainable from local procurement, such repair parts will be requisitioned through normal supply channels with a supporting statement of nonavailability from local procurement.
G-	Applies to major assemblies that are procured with PEMA funds for initial issue only to be used as exchange assemblies at DSU and GSU category. These assemblies will not be stocked

above DSU and GSU category or returned to depot supply category.

(2) Maintenance code (B). The maintenance code indicator is the letter appearing in the center of the SMR column. It indicates the lowest category of maintenance authorized to install the listed item. The codes are:

Code	*Explanation*
*C	Operator/Crew
*O	Organizational Maintenance
*F	Direst Support Maintenance
H	General Support Maintenance
D	Depot Support Maintenance

NOTE

Codes "C" "0" and "F" have not been utilized in this manual. Site maintenance functions have been designated "H" which includes "C" through "F".

(3) Recoverability code (C). The third, or right hand letter in the SMR column indicates whether the item should be returned for recovery or salvage. Recoverability codes and their explanations are as follows:

NOTE

When no code is indicated in the recoverability column, the part will be considered expendable

Code	*Explanation*
R-	Applies to repair parts and assemblies which are economically repairable at DSU and GSU activities and normally are furnished by supply on an exchange basis.
T-	Applies to high dollar value recoverable repair parts which are subject to special handling and are issued on an exchange basis. Such repair parts normally are repaired or overhauled at depot maintenance activities.
U-	Applies to repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, high dollar value reusable casing or castings.

(4) Cross-reference Army to Air Force SMR code. The following SMR codes represent a cross reference from Army SMR codes displayed in this appendix to appropriate Air Force SMR codes. This coding has been coordinated with OCAMA symbol OCNDTB.

ARMY SMR CODES	AIR FORCE SMR CODE					
	SOURCE CODE (AFLCM 65-5)			EXPENDABLE RECOVERABLE (AFM 67-1, VOL. 1, CH: 9 ATCH. 5)	REPAIR LEVEL CODE (AFLCR 65-5)	
PH	P	1	–	N	S	–
PHR	P	1	–	T	D	–
PHT	P	1	–	T	D	–
PD	P	1	D	N	S	–
PDR	P	1	–	T	D	–
X1H	X	1	–	–	F	–
X1D	X	1	–	–	D	–
X2H	X	2	–	–	F	–
AH	A	–	–	–	F	–
AHR	A	–	–	–	F	–
C	L	–	P	–	–	–
G	G	–	–	–	–	–
MH	M	–	–	–	H	–
MD	M	–	–	–	D	–

b. *Federal Stock Number, Column 2.* The Federal stock number for the item is listed in this column. (see "Note" at end of Appendix D

c. Description, Column 3. This column includes a sequence number, the federal item name, a five-digit Federal supply code for Manufacturer's an indenture code and a part number. The five-digit Federal supply code is followed by the manufacturer's part number. For subsequent appearances of the same item, the manufacturer's code and part number are omitted. The words "same as" followed by the index number assigned to the item when it first appeared in the list will follow the item name, e.g., "RESISTOR, FIXED, COMPOSITION: SAME AS A298." Model column is not used.

d. Unit of Issue, Column 4. The unit used as a basis of issue (e.g., ea, pr, ft, yd, etc.) is indicated in this column.

e. Quantity Incorporated in Unit Pack, Column 5. Not used.

f. Quantity Incorporated in Unit, Column 6. The total quantity of the item used in the equipment is given in this column. Subsequent appearances of the same item in the same any are indicated by the letters "REF".

g. Site Stockage Allowance, Column 7.

(1) The maintenance allowance column are divided into subcolumns. The total quantity of items authorized for the number of equipments supported is indicated in each subcolumn oppo

site the first appearance of each item. Subsequent appearances of the same item will have no entry in the allowance columns but will have a reference in the description column to the first appearance of the item. Items authorized for use as required, but not for initial stockage, are identified with an asterisk (*) in the allowance column.

(2) The quantitative allowances for Site (ORG thru GSU) maintenance represents one initial prescribed load for the number of equipments supported.

(3) Subsequent changes to Site (ORG thru GSU), allowances will be limited as follows: No change in the range of items is authorized. If additional items are considered necessary, recommendation should be forwarded to Commanding General, U. S. Army Electronics Command, ATTN: AMSELME-NMP-CW, Fort Monmouth, N. J. 07703, for exception or revision to the allowance list. Revisions to the range of items authorized will be made by USAECOM National Maintenance Point based upon engineering experience, demand data, or TAERS information.

h. Forty-five Day Area Resupply Allowance Based on Number of DSTE Devices Supported, Column 8.

(1) The allowance column is divided into three subcollumns. The total quantity of items authorized for the number of equipments supported is indicated in each subcolumn opposite the first appearance 6f each item.

(2) The quantitative resupply allowances for the area resupply, represents one initial prescribed load for the number of DSTE equipments to be supported.

(*3*) Subsequent changes to Area Resupply allowances will be limited as follows: No change in the range of items is authorized. If additional items are considered necessary, recommendation should be forwarded to Commanding General, U. S. Army Electronics Command, ATTN: AMSEL-ME-NMP-CW, Fort Monmouth, N. J. 07703, for exception or revision to the allowance list. Revisions to the range of items authorized will be made by USAECOM National Maintenance Point based upon engineering experience, demand data, or TAERS information.

i. One-Year Allow?4ances Per 100 Equipments/ Contingency Planning Purposes, Column 9. Contingency planning requirements must be computed on a per equipment basis for fixed plant equipment, therefore column 9 will not be utilized. Contingency Plan requirements for this equipment will be satisfied by furnishing 1 load of repair parts per quantities displayed under column 7 Site Stockage Allowance.

j. Depot Maintenance Allowance per 100 Equipments, Column 10. This column indicates the total quantity of each item authorized depot maintenance for 100 equipments. Subsequent appearances of the same item will have no entry in this column, but will have a reference in the description column to the first appearance of the item.

k. Illustrations, Column 11.

(1) Figure number, column 11a. The number of the illustration in which the item is shown is indicated in this column.

(2) Item No. or reference designation, column 11b. The callout number or reference designation used to reference the item in the illustration appears in this column.

NOTE:

1. Effective 30 September 1974, all Federal Stock Numbers listed in the following On-Site, Area Resupply, and Depot Parts List were converted to the 13-digit National Stock Number (NSN) System.

2. To obtain the 13-digit NSN by conversion from the 11-digit Federal Stock Number, a National Codification Bureau Code (NCBC) of "00" will be entered following the Federal Stock Classification (FSC) code (first four digits).

3. An example of coding and expansion of the FSN to the NSN is as follows:

a. FSN - 6625-553-0142
b. ,CBC - 00
c. FSC - 6625
d. SEN - 6625-00-553-0142

4. All replacement parts will be ordered under the ISN System.

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
	1	A030
	2	A031AM
	3	A032
	4	A029
	5A	A032A
	5B	B840
	5.1	B836A
	5.2	B837A
	5.3	B839A
	5.4	B838A
	6	B452
	6.1A	B452A
	6.1B	B835A
	7	B799
	8	B800
	9	B801
	10	A829
	11	B914
	12	B798
	13	A138A
	14	A135B
	15	A135C
	16	A135D
	17	A135A
	18	A005
	19	A004
	20	A003
	20.1	A002C
	20.2	A002B
	20.3	A002A
	21	A002
	22	B754
	23	B755M
	24	B756
	24.1	B962
	24.2	B963
	24.3	B964
	24.4	B961
	25	B448
	25.1	B450
	25.2	B451
	25.3	B449
	26	B753
	26.1	B753B
	26.2	B753C
	26.3	B753D
	26.4	B753E
	26.5	B753A
	27	B757
	27.1	B758A
	28	A122
	29	B822
	30	B881H
	31	B863
	32	A134A
	33	B882
	34	B895
	35	B844
	36	A125M
	37	A126M
	38	A127A
	39	A123
	40	B865
	41	B825
	42	B881J
	43	A134B
	44	B883
	45	B896
	46	B846
	47	A124
	48	A129
	49	A130M
	50	A131
	51	A132A
	52	A133M
	53	A133A
	54	A133F
	55	A133C
	56	A133E
	57	A133D
	58	A133B
	59	B759
	60	B760
	61	B761
	62	B762
	63	B763
	64	B764
	65	B765
	66	B766
	67	B767
	68	B772A
	69	B776
	70	B777
	71	B778A
	72	B775
	73	B783
	74	B782A
	75	B781
	76	B779
	77	B780
	78	B792
	79	B791
	80	B793A
	81	B793
	82	B794
	83	B797
	84	B797A
	85	B797B
	86	B797C
	87	B795
	88	B796M
	89	B845

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-5	90	B854
	91	B855
	92	B856M
	93	8857
	94	B858
	95	B859
	96	B862A
	97	B862B
	98	8860
	99	B862D
	100	B879
	101	B893A
	102	B906A
	103	B894B
	104	B938
	105	B941
	106	B958
	107	B957A
	108	B960
	109	B959
	110	8978
	111	B979
	112	B980
	113	B981
	114	B977
	115	B983
	116	8995
	117	B985
	118	B984
	119	B982
	120	B986
	121	B990
	122	C013
	123	C017
	124	C029
	125	C039
	126	C042
	127	C05O
	128	C51
	129	C052
	130	C049
	131	C057
	132	C058
	133	C059
4-6	1	A033
	2	A039
	3	A045
	4	A051
	5	A056
	6	A061
	7	A067
	8	A073
	9	A079
	10	A085B
	11	A090B
	12	A095B
	13	A100B
	14	A105B
	15	A110B
	16	A115B
	17	A120M
	18	A121
	19	A121B
	20	A121C
	21	A121D
	22	A121A
	23	A130A
	24	A130B
	25	A130C
4-7	1	B457A
	2	B459
	3	B458A
	4	B456
	5	B455
	6	B461A
	7	B4GIB
	8	B461C
	9	P453
	10	B454
	11	B461
4-8	1	B102
	2	B397
	3	B142
	3.1	B208A
	4	A938
	4.1	B101A
	5	B209
	6	B235
	7	A830
	8	A902
	9	A872
	10	A849
	11	B334
	12	B366
	13	B287
	14	8406
	15	B446
	15.1	B446A
	16	B443
	17	B444
	18	B445
	19	B409
	20	B410
	21	B411
	22	B408

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-8	23	B447A
	23.1	B442
	24	B430
	25	B431
	26	8432
	27	B431A
	28	B428B
	29	B429
	30	B435
	31	B436
	32	B437
	33	B436A
	34	B433A
	35	B434
	36	B415
	37	B417
	38	B418
	39	B416
	40	B426
	40.1	B414
	40.2	B426C
	40.3	B426B
	40.4	B426D
	40.5	B426E
	40.6	B426F
	40.7	B426G
	40.8	B426H
	40.9	B426I
	41	B420
	42	B421
	43	B419
	43.1	B425A
	44	B423
	45	B425
	46	B424
	47	B422
	48	B426K
	49	B411B
	50	B411C
	51	B411D
	52	B411E
	52.1	B411K
	52.2	B440A
	52.3	B411F
	52.4	B411G
	52.5	B411J
	52.6	B411H
	53	B411A
	54	B441
	55	B427
	56	B407
	57	B412A
	58	B413A
4-9	1	B815
	2	B818
	3	B816
	4	B817M
	5	B820
	6	B814A
	7	B819
	8	B803
	9	B80SA
	10	B804
	11	B807
	12	B813
	13	B802A
	14	B806
	14.1	B821B
	14.2	B821D
	14.3	B821C
	14.4	B821A
	14.5	B823
	14.6	B824
	14.7	B832
	15	B821
4-10	1	A720B
	2	A720D
	3	A720C
	4	A720A
	4.1	A721A
	5	A753
	5.1	A753A
	6	A740
	7	A745
	8	A741
	9	A746A
	10	A749A
	11	A733B
	12	A736B
	13	A727A
	14	A729A
	15	A781
	16	A783
	17	A782
	18	A780
	19	A723A
	20	A722A
	21	A776
	22	A778
	23	A777
	24	A775A
	25	A793A
	26	A792A
	27	A796A
	28	A801

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-10	29	A803
	30	A802
	31	A806A
	32	A8OOA
	33	ABOSM
	34	A772
	35	A774
	36	A773
	37	A771
	38	A770
	39	A769
	40	A489A
	41	A142A
	42	A1I4A
	43	A144
	44	A1I43M
	45	A141A
	45.1	A15SA
	46	A145
	47	A1S1
	48	A140
	49	A139
	s	A163A
	51	A164B
	52	A164C
	53	A162A
	54	A164A
	55	A157M
	56	A158
	57	A160
	58	A161A
	59	A318
	60	A320
	61	A319
	62	A317A
	62.1	A321A
	62.2	A322
	62.3	A324
	62.4	A323
	62.5	A329A
	62.6	A330A
	62.7	A331
	62.8	A333
	62.9	A332
	62.10	A385A
	62.11	A461A
	63	A789
	64	A791
	65	A790
	66	A788
	67	A785
	68	A787
	69	A786
	70	A78A4
	9	AO20M
	72	A821
	73	A823
	74	A822
	75	A820B
	76	A8201
	77	A813
	78	A815E
	78.1	A815C
	78.2	A815B
	78.3	A815A
	78.5	A819A
	79	A815
	80	A814
	81	A812
	82	A816A
	83	A695A
	83.1	A696
	83.2	A698
	83.3	A697
	84	A694A
	84.1	A672B
	85	A673
	86	A67S
	87	A674
	88	A672.A
	89	A756
	90	A7S8
	91	A757
	92	A172B
	93	A210B
	94	A279B
	95	A754
	96	A7SS
	97	A828A
	98	A828C
	99	A828B
	100	A826
	101	A828
	102	A827M
	103	A825A
	104	A166A
	105	A167
	106	A168
	107	A169A
	108	A170
	109	A171
	110	A165B
	111	A172
4-11	1	A026
	2	A027A
	3	A028A
	5	A006
	6	A019
	7	A018
	8	A021

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-11	11	A017
	12	A013
	13	A012
	14	A015
	15	A014B
	16	A010A
	17	A011
	18	A005A
4-11.1	1	B966
	2	B968
	3	B971
	4	B972
	5	B970
	6	B973
	7	B974
	8	B975
	9	B976
	10	B965
4-11.2	1	B839D
	2	B839E
	3	B839F
	4	B839G
	5	B839C
	6	B839B
4-12	1	B740A
	2	B739
	3	B737A
	4	B738
	4.1	B738C
	4.2	B738B
	4.3	B738D
	4.4	B738A
	5	B736
	6	B735
	7	B734
	8	B7338
	8.1	B733D
	9	B733C
	10	B732A
	11	B730A
	12	8731A
	12.1	B731B
	13	B729
	14	B728
	15	B749
	16	B748A
	17	B747
	18	8746
	19	8745A
	20	B745M
	21	B744A
	22	B743
	23	B742
	23.1	B741
	24	B727B
	25	B727
	26	B726
	27	87258
	28	B725
	29	B722B
	30	B721B
	31	B721A
	32	B720
	33	B723D
	34	B723E
	35	B724A
	36	B715E
	37	B715F
	38	B715C
	39	B719
	40	B716
	40.1	B715A
	41	B715
	42	B723
	43	B713A
	43.1	B713B
	44	B714A
	45	B712
	46	B659A
	47	B658
	48	B657
	49	B656A
	50	B656
	51	8655
	52	8619A
	53	B620
	54	B618
	55	B617
	56	B616
	58	B613A
	59	BS549
	60	B483
	61	B482M
	62	B551A
	63	8552
	63.1	B552A
	64	B550
	65	B548A
	66	B547A
	67	B546A
	68	B546
	68.1	B7508
	69	BS535
	70	BS534
	71	B533A

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-12	72	B537A
	73	B5539
	74	B538M
	75	B8536
	76	B531A
	77	B532
	78	B530
	78.1	B532A
	78.2	B532C
	78.3	B532D
	78.4	B532B
	78.5	B532E
	79	B504
	80	B506
	81	B507A
	82	B505A
	83	B479
	84	B481
	86	B480A
	87	B514M
	88	B513M
	89	B515
	90	B508
	91	B511A
	92	B512
	93	B529A
	93.1	B503
	94	B481A
	95	B475A
	96	B477
	98	B474
	99	B473
	100	B472A
	100.1	B472C
	100.2	B472B
	101	B471A
	102	B469A
	103	B470
	104	B468
	105	B467
	106	B502
	107	B466M
	108	B465
	109	B464M
	110	B463
	111	B462
	112	B717A
4-13	1	B698A
	2	B699
	2.1	B699A
	3	B707
	4	B706
	5	B702
	6	8703
	7	B704
	8	B704B
	9	B705
	10	8701
	11	B700
	11.1	B697A
	12	B686A
	13	B687
	13.1	B687A
	13.2	B6878
	13.3	B687C
	13.4	B687D
	14	B690
	15	B688
	16	B695A
	19	B689
	19.1	B685A
	20	B684
	21	B683
	22	B682M
	23	B681
	24	B680
	24.1	B680A
	24.2	B680B
	25	B679
	26	B678
	27	B677
	28	B676A
	29	B675
	30	B672.A
	31	B671
	33	B668
	34	B667
	35	B666
	36	B665M
	37	B664M
	38	B663
	39	B662
	39.1	B661A
	39.2	B662A
	39.3	B662B
	40	B711C
	41	B711B
	43	B709
	44	B710D
	44.1	B710E
	45	B710F
	46	B710A
	47	B660A
	49	B711D
4-14	1	B635A
	1.1	B635B
	1.2	B635C

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-14	2	B654A
	3	B653
	4	B638
	5	B651
	6	B649
	7	B647
	8	B645
	9	B643
	10	B641
	11	B639A
	12	B637A
	13	B636
	13.1	B634
	14	B628A
	14.1	B629B
	15	B629A
	16	8633A
	17	B631
	18	B630
	19	8632
	19.1	8627
	20	B626
	21	B625
	22	B624
	23	B623A
	24	B622
	25	B621
4-15	1	8490A
	1.1	B491M
	2	B488A
	3	8489
	4	8493B
	5	B495
	6	B494
	7	B496
	8	B498M
	9	8499
	10	B500
	11	B486
	12	B487
	12.1	B486A
	13	8485
	14	BSO1M
	15	8484
4-16	1	B612
	2	8611
	3	B609
	4	B610
	5	B608
	6	B606
	7	B607
	7.1	B607A
	8	B605
	9	B603
	10	B604
	11	B601A
	12	B602
	12.1	B602A
	13	B600
	14	8598A
	15	8599
	15.1	B599A
	16	8597
	17	B612A
	18	B580
	18.1	8581
	18.2	8582
	19	8593
	20	B594A
	21	B596A
	21.1	8596B
	21.2	B596C
	22	B595
	23	B596
	23.1	8592
	24	B591
	25	8590
	26	B590
	27	8590
	28	8590
	29	B590
	30	BS90
	31	B589
	32	B588
	33	B586
	34	8587
	35	8579
	36	8578
	37	8583
	37.1	8584
	37.2	B585M
	38	B577
	39	B564M
	41	8572A
	42	8571
	43	B570
	44	8569
	45	8573
	46	8567
	47	8568A
	48	8566
	49	8575
	50	3574
	51	8576
	51.1	8563
	52	B560M

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-16	53	B559M
	54	B561
	55	B562
	56	B558
	57	B557
	58	B556
	59	B555
	60	B554
	61	B553
4-18	1	B525
	2	B519
	3	B521
	4	B522
	5	B524
	6	B523
	7	B520B
	8	B527
	9	B528
	10	B529
	11	B526
	12	B518
	13	B517
4-47 (TIG)	1	A059A
	2	A060A
	3	A061A
	4	A062A
	5	A063A
	6	A005
	7	A005
	8	A043D
	9	A065A
	10	A005E
	11	A066A
	12	A067
	13	A068
	14	A069
	15	A064A
	16	A043
	17	A070
	18	A071
	19	A070
	20	A076
	21	A078
	22	A080
	23	A079
	24	A077
	25	A081
	26	A044
	27	A082
	28	A043A
	29	A00SK
	30	A043C
	31	A073
	32	A043B
	A7	A001
	A8	A001
4-48 (TIG)	1	A005B
	2	A005A
	3	A005M
	4	A005E
	5	A005N
	6	A005F
	7	A00SG
	8	A011D
	9	A011E
	10	A011C
	11	A005J
	12	A005H
	13	A007
	14	A008
	15	A009
	16	A009D
	17	A011F
	18	A011G
	19	A011
	20	A005L
	21	A012B
	22	A012C
	23	A012D
	24	A012
	25	A012A
	26	A013A
	27	A013C
	28	A013B
	29	A013D
	30	A012E
	31	A030C
	32	A032A
	33	A033A
	34	A034A
	35	A031A
	36	A031
	37	A035A
	38	A035B
	39	A035C
	40	A035D
	41	A038
	42	A039
	43	A035
	44	A039F
	45	A039A
	46	A039G
	47	A040B
	48	A040C
	49	A040D

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-48	50	A040A
	51	A005D
	52	A005C
	53	A042A
	54	A042
	55	A042D
	56	A011B
	57	A011A
	58	A041
	E7	A372
5-2	A8	A830
5-3	A13	A849
5-4	A10	A872
	A12	A887
5-5	A9	A902
	A11	A920
5-6	A5	A938
5-7	A1	B102
5-8	A4	B142
5-8.1	A4	B208A
5-8.2	AS	B101A
5-9	A6	B209
5-10	A7	B235
5-11	A16	B287
5-12	A14	B334
5-13	A15	B366
5-14	A3	B397
5-15	PS1A1	A172B
5-16	PS1A2	A210B
5-17	PS1A3	A279B
5-18	PS1A4	A330A
	C1	A338
	C2	A339
	C3	A341
	C4	A340A
	CR1	A349
	CR2	A350
	CR3	A352
	CR4	A351
	E1	A367
	E2	A3G8
	E3	A369
	E4	A383
	E5	A370
	E6	A371
	E8	A373
	E9	A374
	E10	A375
	E11	A376
	E12	A377
	E13	A378
	E14	A379
	E15	A380
	E16	A381
	E17	A382
	H1	A334A
	H2	A335
	H3	A336
	H4	A337
	H5	A344A
	H6	A364A
	H7	A364B
	H8	A365A
	H9	A366A
	H10	A384
	P1	A342
	P2	A343
	Q1	A353
	Q2	A357
	Q3	A361
	R1	A345A
	R2	A346A
	R3	A347
	R4	A348B
5-19	PS1A5	A385A
	C1	A393M
	C2	A394M
	C3	A395M
	C4	A396M
	CR1	A407
	CR2	A408
	CR3	A409
	CR4	A410
	E1	A433
	E2	A434
	E5	A435
	E6	A457
	E7	A436

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
5-19	E8	A437
	E9	A438
	E10	A439
	E11	A440
	E12	A441
	E13	A442
	E14	A443
	E1S	A444
	E16	A445
	E17	A446
	E18	A447
	E19	A448
	E20	A449
	E21	A450
	E22	A451
	E23	A452
	E24	A453A
	E25	A454A
	H1	A389A
	H2	A390
	H3	A391
	H4	A392
	HS	A399A
	H6	A400M
	H7	A415
	H8	A422A
	H9	A430C
	H10	A430D
	H11	A430E
	H12	A431A
	H13	A432A
	H14	A458
	P1	A397
	P2	A398
	Q1	A411
	Q2	A416
	Q3	A421
	Q4	A426
	RI	A401A
	R2	A406M
	R3	A403
	R4	A406B
	RS	A402A
	R6	A406A
	R7	A405M
	C1	A700
5-20	PSIA6	A461A
	E1	A481
	E2	A482
	E3	A483
	E4	A4B4
	E5	A485
	E6	A486
	H1	A465B
	H2	A466
	H3	A467
	H4	A468
	H5	A470A
	H6	A479A
	H7	A480A
	H8	A488
	P1	A469
	Q1	A474
	Q2	A478
	R1	A471
	R2	A472D
	R3	A473M
5-21A	PSlA14	A672A
	CR1	A689
	CR2	A690
	CR3	A691
	CR4	A692
	E1	A677
	E2	A678
	E3	A679
	E4	A680
	H1	A681
	H2	A682B
	H3	A681A
	H4	A684A
	H5	A685
	H6	A686
	H7	A686A
	H8	A693
	H9	A693A
	H10	A693B
	H11	A693C
	H12	A694G
	JS	A694B
	J6	A694C
	J7	A694D
	J8	A694E
	J9	A694F
	R1	A683D
	R2	A687A
	R3	A688A
5-21B	PSIAI5	A695A
	C2	A701
	C3	A702
	C4	A703
	C5	A703A
	CR1	A716
	CR2	A717
	CR3	A718
	CR4	A719

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.	FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
5-21B	R1	A704			
	R2	A705A			
	R3	A706A			
	R4	A707M			
	RS	A714			
	R6	A709M			
	R7	A713A			
	R8	A708AM			
	R9	A710M			
	R10	A711M			
	R11	A715AM			
	R12	A712M			
5-23	PSIA12	A489			
5-25	C1	A018			
	C2	A017			
	C3	A016			
	DS2H	A0O0			
	DS2T	A030A			
	DS2U	A030B			
	E1				
	thru	A024A			
	E20				
	E21				
	thru	A024			
	E41				
	R1	A022			
	R2	A022A			
	R3	A023			
	XDS2	A015			
	XZ1				
	thru	A029			
	XZ8				
	XZ9	A019A			
	Z1	A028			
	Z2	A028A			
	Z3	A028B			
	Z4	A019			
	ZS	A026			
	Z6	A025			
	Z7	A027			
	Z8	A027A			
	Z9	A018A			

Section III. ON SITE, AREA RESUPPLY, AND DEPOT PARTS LIST

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
A	H	R	7409978812	X						A	A001	PUNCHED TAPE READER (SINGLE) : RP-154(P)/G	EA		1									-15 1-1	
A	H	R	7408000706	X						A	A001A	PUNCHED TAPE READER (DUAL) : RP-15(P)/G	EA		1									-15 1-1	
A	H	R		X	X					B	A002	FILTER ASSEMBLY: 58189; A64761-001	EA		1									-15 4-5	21
X2	H			X	X					B	A002A	STANDOOF : 14850; D1-10985B-1												-15 4-5	20.3
X2	H			X	X					B	A002B	SHIELD: 14850: A1-11071F-4	EA		1									-15 4-5	20.2
C	H			X	X					*	A002C	SCREW, MACHINE 14850; A1-11071F-4	EA		6									-15 4-5	20.1
C	H		53101670812	X	X					*	A003	WASHER, FLAT: 88044;AN960C10L	EA		50									-15 4-5	20
C	H		53109338120	X	X					*	A004	WASHER, LOCK: 96906; MS35338-138	EA		58									-15 4-5	19
C	H		53109349765	X	X					*	A005	NUT PLAIN, HEXAGON: 96906; MS35650-304	EA		43									-15 4-5	18
X2	H			X	X					C	A005A	FILTER PLATE 58189; A64770-001	EA		1									-15 4-11	18
P	H			X	X					C	A006	FILTER, RADIO FREQUENCY INTERFERENCE: 56289;10JX63	EA		4	1	2	3	1	2	3		12	-15 4-11	5
			59157126673	X	X					C	A007	FILTER, RADIO FREQUENCY INTERFERENCE: SAME AS A006	EA		REF									-15 4-11	5
			515'7126673	X	X					C	A008	FILTER, RADIO FREQUENCY INTERFERENCE: SAME AS A006	EA		REF									-15 4-11	5
			59157126673	X	C					C	A009	FILTER, RADIO FREQUENCY INTERFERENCE SAME AS A006	EA		REF									-15 4-11	5

Change 6 1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					C	A010	TERMINAL BOARD: 75382; 604--2UH	EA	1										-15 4-11	 16
M	H			X	X					C	A011	STRIP :MARKER 75382; MS604-2XXXPIC	EA	1										-15 4-11	 17

Change 6 2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H		53109349761	X	X					*	A012	NUT, PLAIN, HEXAGON: 96906: MS35649-264	EA		15									-15 4-11	 13
C	H		53050546657	X	X					*	A013	SCREW, MACHINE: 96906: MS51957-33	EA		20									-15 4-11	 12
C	H		53106389857	X	X					*	A014B	WASHER, FLAT: 88044: AN960C6L	EA		39									-15 4-11	 15
C	H		53109296395	X	X					*	A015	WASHER, LOCK: 58189; MS35338-136	EA		139									-15 4-11	 14
X2	H			X	X					*	A016A	TERMINAL BOARD: 75382: 602C-4UH	EA		1									-15 4-11	 10
M	H			X	X					C	A017	STRIP MARKER: 75382; MS602-4XXXP4A	EA		1									-15 4-11	 11
C	H		53109249759	X	X					C	A018	NUT, PLAIN, HEXAGON: 96906; MS35649-284	EA		39									-15 4-11	 7
C	H		53050546673	X	X					*	A019	SCREW, MACHINE: 96906: MS51957-48	EA		4									-15 4-11	 6
C	H		53105586207	X	X					*	A020 M	WASHER, FLAT: 88044; AN960C8L	EA		106									-15 4-11	 9
C	H		53109338119	X	X					*	A021	WASHER, LOCK: 96906; MS35338-137	EA		112									-15 4-11	 8

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
M	H			X	X					C	A026	WIRING HARNESS: 58189; A65476-001	EA		1									-15 4-11	 1
C	H		59402300515	X	X					D	A027A	TERMINAL LUG: 96906; MS25036-54	EA		4									-15 4-11	 2
C	H		59405571627	X	X					D	A028A	TERMINAL LUG: 96906; MS25036-53	EA		58									-15 4-11	 3
A	H	R		X	X					B	A029	CONTROL PANEL ASSEMBLY: 58189; A64758-001	EA		1									-15 4-5	 4
C	H		53050546669	X	X					*	A030	SCREW, MACHINE: 96906; MS51957-44	EA		26									-15 4-5	 1
			53105586207	X	X					*	A031AM	WASHER, FLAT: SAME AS A020 M	EA		REF									-15 4-5	 2
			53109338119	X	X					*	A032	WASHER, LOCK: SAME AS A021	EA		REF									-15 4-5	 3
A	H	R			X					B	A032A	CONTROL PANEL ASSEMBLY: 58189; A64758-002	EA		1									-15 4-5	 5a
			53050546669		X					*	A032B	SCREW, MACHINE: SAME AS A030	EA		REF									-15 4-5	 1
			53105586207		X					*	A032C	WASHER, FLAT: SAME AS A020 M	EA		REF									-15 4-5	 2
			53109338119		X					*	A032D	WASHER, LOCK: SAME AS A021	EA		REF									-15 4-5	 3
A	H	R		X	X					C	A033	SWITCH, PUSH BUTTON: 96182; 1197-30	EA		1									-15 4-6	 1
X2	H		66059410561	X	X					D	A034	SWITCH-LIGHT UNIT: 96182; 10EACI	EA		9									-15 4-6	
P	H		59309593427	X	X					D	A035	SWITCH ASSEMBLY: 96182: 10E	EA		8	1	2	3	1	2	3		16	-15 4-6	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					D	A036	COLORED BULB FILTER: 96182; IOELWGGW	EA		1									-15 4-6	
X2	H		621005s81439	X	X					D	A037AM	DISPLAY SCREEN: 96182; IOEN1	EA		9									-15 4-6	
X2	H			X	X					D	A038A	FRONT LENS: 96182: IOER1TSV12START	EA		1									-15 4-6	
A	H	R		X	X					C	A039	SWITCH, PUSH BUTTON: 96182: 1197-31	EA		1									-13 4-6	2
			59309593427	X	X					D	A040	SWITCH ASSEMBLY: SAME AS A035	EA		REF									-15 4-6	
X2	H			X	X					D	A041	COLORED BULB FILTER: 96182; IOELROOR	EA		1									-15 4-6	
			66059410561	X	X					D	A042	SWITCH-LIGHT UNIT: SAME AS A034	EA		REF									-15 4-6	
			62100581439	X	X					D	A043AM	DISPLAY SCREEN: SAME AS A037AM	EA		REF									-15 4-6	
X2	H			X	X					D	A044A	FRONT LENS: 96182; O1ERLTSV12STOP	EA		1									-15 4-6	
A	H	R		X	X					C	A045	SWITCH, PUSH BUTTON: EA 96182; 1197-32	EA		1									-15 4-6	3
			66059410561	X	X					D	A046	SWITCH-LIGHT UNIT: SAME AS A034	EA		REF									-15 4-6	
			59309593427	X	X					D	A047	SWITCH ASSEMBLY: SAME AS A035	EA		REF									-15 4-6	
X2	H			X	X					D	A048	COLORED BULB FILTER: 96182; 1OELWOOW	EA		2									-15 4-6	
			2100581439	X	X					D	A049AM	DISPLAY SCREEN: SAME AS A037AM	EA		REF									-15 4-6	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					D	A050A	FRONT LENS: 96182; 10ER1T5V13ACPOWER	EA		1									-15 4-6	
A	H	R		X	X					C	A051	SWITCH, PUSH BUTTON: 96182; 1197-33	EA		1									-15 4-6	4
			66059410561	X	X					D	A052	SWITCH-LIGHT UNIT: SAME AS A034	EA		REF									-15 4-6	
			59309593427	X	X					D	A053	SWITCH ASSEMBLY: SAME AS A035	EA		REF									-15 4-6	
			62100581439	X	X					D	A054AM	DISPLAY SCREEN: SAME AS A037AM	EA		REF									-15 4-6	
X2	H			X	X					D	A055A	FRONT LENS: 96182; IOERITSV13LAMPTEST	EA		1									-15 4-6	
A	H	R		X	X					C	A056	SWITCH, PUSH BUTTON: 96182; 1197-34	EA		1									-15 4-6	5
			66059410561	X	X					D	A057	SWITCH-LIGHT UNIT: SAME AS A034	EA		REF									-15 4-6	
			59309593427	X	X					D	A058	SWITCH ASSEMBLY: SAME AS A035	EA		REF									-15 4-6	
			62100581439	X	X					D	A059AM	DISPLAY SCREEN: SAME AS A037AM	EA		REF									-15 4-6	
X2	H			X	X					D	A060B	FRONT LENS: 96182: IOER1TSV13AUD IBLERESET	EA		1									-15 4-6	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
A	H	R		X	X					C	A061	SWITCH, PUSH BUTTON: 96182: 1197-35	EA		1									-15 4-6	6
			66059410561	X	X					D	A062	SWITCH-LIGHT UNIT: SAME AS A034	EA		REF									-15 4-6	
			59309593427	X	X					D	A063	SWITCH ASSEMBLY: SAME AS A035	EA		REF									-15 4-6	
				X	X					D	A064	COLORED BULB FILTER: SAME AS A048	EA		REF									-15 4-6	
			62100581439	X	X					D	A06SAM	DISPLAY SCREEN: SAME AS A037AM	EA		REF									-15 4-6	
X2	H			X	X					D	A066B	FRONT LENS: 96182; 1OER,1TSV13SINGLEFEED	EA		1									-15 4-6	
A	H	R		X	X					C	A067	SWITCH, PUSH BUTTON: 96182; 1197-36	EA		1									-15 4-6	7
			66059410561	X	X					D	A068	SWITCH-LIGHT UNIT: SAME AS A034	EA		REF									-15 4-6	
			59309593427	X	X					D	A069	SWITCH ASSEMBLY: SAME AS A035	EA		REF									-15 4-6	
X2	H			X	X					D	A070	COLORED BULB FILTER: 96182; O1ELAOOA	EA		2									-15 4-6	
			62100581439	X	X					D	A071AM	DISPLAY SCREEN: SAME AS A037AM	EA		REF									-15 4-5	
X2	H			X	X					D	A072B	FRONT LENS: 96182; 10OER1TSV13PILOT HEADER	EA		1									-15 4-6	
A	H	R		X	X					C	A073	SWITCH, PUSH BUTTON: 96182; 1197-37	EA		1									-15 4-6	8
			66059410561	X	X					D	A074	SWITCH-LIGHT UNIT: SAME AS A034	EA		REF									-15 4-6	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59309593427	X	X					D	A075	SWITCH ASSEMBLY: SAME AS A035	EA		REF									-15 4-6	
				X	X					D	A076	COLORED BULB FILTER: SAME AS A070	EA		REF									-15 4-6	
			62100581439	X	X					D	A077AM	DISPLAY SCREEN: SAME AS A037AM	EA		REF									-15 4-6	
X2	H			X	X					D	A078B	FRONT LENS: 96182; lOERITSV13LOCA1 TEST	EA		1									-15 4-6	
A	H	R		X	X					C	A079	SWITCH, PUSH BUTTON: 96182: 1197-38	EA		1									-15 4-6	9
			66059410561	X	X					D	A080	SWITCH-LIGHT UNIT: SAME AS A034	EA		REF									-15 4-6	
P	H		59309205995	X	X					D	05081	SWITCH ASSEMBLY: 96182; O1EF3	EA		1	1	2	3	1	2	3		2	-15 4-6	
X2	H			X	X					D	A082	COLORED BULB FILTER: 96182; 10ELWWWW	EA		1									-15 4-6	
			62100581439	X	X					D	A083AM	DISPLAY SCREEN: SAME AS A037AM	EA		REF									-15 4-6	
X2	H			X	X					D	A084B	FRONT LENS: 96182; 10OERITSV16HIGH SPEE D/LOWSPEED	EA		1									-15 4-6	
A	H	R		X	X					C	A085B	LIGHT INDICATOR: 96182; 80EAIFIWL2N13 DCPOWER	EA		1									-15 4-6	10

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H		62100195599	X	X					D	A086	HOUSING LITE CAPSULE: 96182: 80EAI	EA		7									-15 4-6	
X2	H		62109273688	X	X					D	A087	FILTER COLOR: 96182; 80EFIW	EA		1									-15 4-6	
X2	H			X	X					D	A089	FRONT LENS: 96182: 80EL2N 13DCPOWER	EA		1									-15 4-6	
A	H	R		X	X					C	A090B	LIGHT, INDICATOR: 96182; 80EAIFIRL2N13 INVALIDCHARACTER	EA		1									-15 4-6	11
			62100195599	X	X					D	A091	HOUSING LITE CAPSULE: SAME AS A086	EA		REF									-15 4-6	
X2	H		62100119338	X	X					D	A092	FILTER, COLOR: 96182: 80EFIR	EA		5									-15 4-6	
A	H	R		X	X					C	A095B	LIGHT, INDICATOR: 96182; 80EA1FIRL2N12 CANCEL	EA		1									-15 4-6	12
			62100195599	X	X					D	A096	HOUSING LITE CAPSULE: SAME AS A086	EA		REF									-15 4-6	
			62100119338	X	X					D	A097	FILTER, COLOR: SAME AS A092	EA		REF									-15 4-6	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					D	A099	FRONT LENS: 96182; 80EL2N12CANCEL	EA		1									-15 4-6	
A	H	R		X	X					C	A100B	LIGHT, INDICATOR: 96182: 80EAIFIAL2N13 NOTASSIGN ED	EA		1									-15 4-6	13
			62100195599	X	X					D	A101	HOUSING LITE CAPSULE: SAME AS A086	EA		REF									-15 4-6	
X2	H		62109273519	X	X					D	A102	FILTER, COLOR: 96182; 80EFIA	EA		1									-15 4-6	
X2	H			X	X					D	A104	FRONT LENS: 96182; 80EL2N13NOT ASSIGNED	EA		1									-15 4-6	
A	H	R		X	X					C	A105B	LIGHT, INDICATOR: 96182; 80EAIFIRL2N13 MOTIONFAIL	EA		1									-15 4-6	14
			62100195599	X	X					D	A106	HOUSING LITE CAPSULE: SAME AS A086	EA		REF									-15 4-6	
			62100119338	X	X					D	.A107	FILTER, COLOR: SAME AS A092	EA		REF									-15 4-6	
X2	H			X	X					D	A109A	FRONT LENS: 96182; 80EL2N 13MOTIONFAIL	EA		1									-15 4-6	
A	H	R		X	X					C	A110B	LIGHT, INDICATOR: 96182; 80EAIFIRL2NI3 TIGHTTAPE	EA		1									-15 4-6	15
			62100195599	X	X					D	A112	HOUSING LITE CAPSULE: SAME AS A086	EA		REF									-15 4-6	
			62100119338	X	X					D	A112	FILTER, COLOR: SAME AS A092	EA		REF									-15 4-6	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					D	A114	FRONT LENS: 96182: 80EL2N13TIGHT TAPE	EA		1									-15 4-6	
A	H	R		X	X					C	A115B	LIGHT, INDICATOR: 96182; 80EAI1FRL2N13 TAPEOUT	EA		1									-15 4-6	 16
			62100195599	X	X					D	A116	HOUSING LITE CAPSULE: SAME AS A086	EA		REF									-15 4-6	
			62100119338	X	X					D	A117	FILTER, COLOR: SAME AS A092	EA		REF									-15 4-6	
X2	H			X	X					D	A119	FRONT IENS: 96182; 80EL2N13TAPE OUT	EA		1									-15 4-6	
P	H		62408514352	X	X					C	A120 M	LAMP, INCANDESCENT: 08806: 330	EA		32	5	10	15	5	10	15		1600	-15 4-6	 17
X2	H			X	X					C	A121	CONTROL PANEL: 58189; A64763-001	EA		1									-15 4-6	 18
C	H		53408454884	X	X					C	A121A	CLAMP, LOOP: 71616; CPC1953-7B	EA		1									-15 4-6	 22
			53109349765	X	X					*	A121B	NUT, PLAIN, HEXAGON: SAME AS AOOS	EA		REF									-15 4-6	 19
			53109338120	X	X					*	A121C	WASHER, LOCK: SAME AS A004	EA		REF									-15 4-6	 20
C	H		53100593659	X	X					*	A121D	WASHER, FLAT: 88044; AN960C10	EA		45									-15 4-6	 21
M	H			X	X					C	A122	WIRING HARNESS: 58189; A65473-001	EA		1									-15 4-5	 28
A	H	R	24409335070	X	X					D	A123	CONTACT ASSEMBLY: 58189; A53847-001	EA		10									-15 4-5	 39
X2	H			X	X					E	A124	BRACKET, ANGCLE: 581,9; A53946-001	EA		9									-15 4-5	 47

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H			X	X					*	A125 M	SCREW, EXTERNAL RELIEVED BODY: 80063: SMB546131	EA		18									-15 4-5	 36
			53106389857	X	X					*	A126 M	WASHER, FLAT: SAME AS A014B	EA		REF									-15 4-5	 37
			53109296395	X	X					*	A127A	WASHER, LOCK: SAME AS A015	EA		REF									-15 4-5	 38

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					E	A129	INSULATOR, BUSHING:	EA		405									-15	
												16512; P550009-09												4-5	49
P	H		74400193468	X	X					D	A130 M	CONTACT, ELECTRICAL:	EA		172	30	60	90	30	60	90		114	-15	
												16512; 540362-06												4-5	49
C	H		59405773711	X	X					D	A130A	TERMINAL LUG:	EA		2									-15	
												96906; MS25036-3												4-6	23
C	H		59405039995	X	X					D	A130B	TERMINAL LUG:	EA		129									-15	
												96906; MS25036-1												4-6	24
X2	H			X	X					D	A130C	JUMPER:	EA		14									-15	
												80063; SMB634809												4-6	25
X2	H		53400742072	X	X					D	A131	STRAP, LINE SUPPORT:	EA		69									-15	
												96906: MS17821-1-9												4-5	50
M	H			X	X					D	A132A	NAMEPLATE:	EA		23									-15	
												59730; TC125												4-5	51
C	H		59405571629	X	X					D	A133 M	TERMINAL LUG:	EA		14									-15	
												96906; MS25036-49												4-5	52
X2	H			X	X					D	A133A	PIN, KEYING:	EA		9									-15	
												80063; SMB546216												4-5	53
C	H		53405980496	X	X					D	A133B	CLAMP, LOOP:	EA		4									-15	
												12357; HPBN												4-5	58
C	H		53057637827	X	X					*	A133C	SCREW, MACHINE:	EA		9									-15	
												96906; MS51959-18												4-5	55
C	H		53105956425	X	X					*	A133D	WASHER, FLAT:	EA		33									-15	
												88044; AN960C4L												4-5	57

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		53109338118	X	X					*	A133E	WASHER, LOCK, SPLIT: 96906; MS35338-135	EA		40	*	*	*	*	*	*		78	-15 4-5	 56
C	H		53109349748	X	X					*	A133F	NUT, PLAIN, HEXAGON: 96906; MS35649-244	EA		15									-15 4-5	 54
M	H				X					C	A134A	WIRING HARNESS: 58189; A65184-001	EA		1									-15 4-5	 32
			74409335070		X					D	A134B	CONTACT ASSEMBLY: SAME AS A123	EA		REF									-15 4-5	 43
					X					E	A134C	BRACKET, ANGLE: SAME AS A124	EA		REF									-15 4-5	 47
					X					*	A134D	SCREW, EXTERNAL RELIEVED BODY: SAME AS A125 M	EA		REF									-15 4-5	 36
			53106389857		X						A134E	WASHER, FLAT: SAME AS A014B	EA		REF									-15 4-5	 37
			53109296395		X						A134F	WASHER, LOCK: SAME AS A015	EA		REF									-15 4-5	 38
					X					E	A134G	INSULATOR, BUSHING: SAME AS A129	EA		REF									-15 4-5	 48
			74400193468		X					D	A134H	CONTACT, ELECTRICAL: SAME AS A130 M	EA		REF									-15 4-5	 49
					X					D	A134I	JUMPER: SAME AS A130C	EA		REF									-15 4-6	 25
			59405773711		X					D	A134T	TERMINAL LUG: SAME AS A130A	EA		REF									-15 4-6	 23
			59405039995		X					D	A134K	TERMINAL LUG: SAME AS A130B	EA		REF									-15 4-6	 24
			53400742072		X					D	A134L	STRAP, LINE SUPPORT: SAME AS A131	EA		REF									-15 4-5	 50

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
					X					D	A134N	NAMEPLATE:	EA		REF									-15	
												SAME AS A132A												4-5	51
			59405571629		X					D	A134P	TERMINAL LUG:	EA		REF									-15	
												SAME AS A133 M												4-5	52
					X					D	A134Q	PIN, KEYING:	EA		REF									-15	
												SAME AS A133A												4-5	53
			53405980496		X					D	A134R	CLAMP, LOOP:	EA		REF									-15	
												SAME AS A133B												4-5	58
			53057637827		X					*	A134S	SCREW MACHINE:	EA		REF									-15	
												SAME AS A133C												4-5	55
			53105956425		X					*	A134T	WASHER, FLAT:	EA		REF									-15	
												SAME AS A133D												4-5	57
			53109338118		X					*	A134U	WASHER, LOCK, SPLIT:	EA		REF									-15	
												SAME AS A133E												4-5	56
			53109349748		X					*	A134V	NUT, PLAIN, HEXAGON:	EA		REF									-15	
												SAME AS A133F												4-5	54
X2	H					X				B	A135A	SLIDE:	EA		2									-15	
												01561; C230522												4-5	17
C	H				X					*	A135B	SCREW, MACHINE:	EA		8									-15	
												58189: 639123-468												4-5	14
			53101670812		X					*	A135C	WASHER, FLAT:	EA		REF									-15	
												SAME AS A003												4-5	15
			53109338120		X					*	A135D	WASHER, LOCK:	EA		REF									-15	
												SAME AS A004												4-5	16
				X	X					B	A135E	SLIDE:	EA		REF									-15	
												SAME AS A135A												4-5	17
				X	X					*	A135F	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A135B												4-5	14

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53101670812	X	X					*	A136	WASHER, FLAT: SAME AS A003	EA		REF									-15 4-5	 15
			53109338120	X	X					*	A137	WASHER, LOCK: SAME AS A004	EA		REF									-15 4-5	 16
A	H	R		X	X					B	A138A	POWER SUPPLY: 06809; 40-000092-1	EA		2									-15 4-5	 13
				X	X					B	A138B	POWER SUPPLY: SAME AS A138A	EA		REF									-15 4-5	 13
P	H		59100544243	X	X					C	A139	CAPACITOR, HIGH VOLTAGE: 03508; 86F2004MA	EA		1	1	2	3	1	2	3		5	-15 4-10	 49
P	H		59100544242	X	X					C	A140	CAPACITOR, HIGH VOLTAGE: 03508: 86F1063MA	EA		1	1	2	3	1	2	3		5	-15 4-10	 48
X2	H			X	X					C	A141A	CAPACITOR, RETAINING ASSEMBLY: 06809; 40-000081-1	EA		3									-15 4-10	 45

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H			X	X					*	A142A	SCREW, MACHINE: 88044; AN3C52A	EA		4									-15 4-10	 41
			53100593659	X	X					*	A143 M	WASHER, FLAT: SAME AS A121D	EA		REF									-15 4-10	 44
			5310933d120	X	X					*	A144	WASHER, LOCK: SAME AS A004	EA		REF									-15 4-10	 43
P	H		59100544225	X	X					C	A145	CAPACITOR, HIGH VOLTAGE: 03508; 86F1061MA	EA		2	1	2	3	1	2	3		10	-15 4-10	 46
			59100544225	X	X					C	A146	CAPACITOR, HIGH VOLTAGE: SAME AS'A145	EA		REF									-15 4-10	 46
				X	X					C	A147A	CAPACITOR, RETAINING ASSEMBLY: SAME AS A141A	EA		REF									-15 4-10	 45
C	H			X	X					*	A148A	SCREW, MACHINE: 88044; AN3C66A	EA		2									-15 4-10	 42
			53100593659	X	X					*	A149 M	WASHER, FLAT: SAME AS A121D	EA		REF									-15 4-10	 44
			53109338120	X	X					*	A150	WASHER, LOCK: SAME AS A004	EA		REF									-15 4-10	 43
P	H		59100544241	X	X					C	A151	CAPACITOR, HIGH VOLTAGE: 03508; 86F1062MA	EA		2	1	2	3	1	2	3		10	-15 4-10	 47
			59100544241	X	X					C	A152	CAPACITOR, HIGH VOLTAGE: SAME AS A1	EA		REF									-15 4-10	 47

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					C	A153A	CAPACITOR, RETAINING ASSEMBLY: SAME AS A141A	EA		REF									-15	
				X	X					*	A154 M	SCREW, MACHINE: SAME AS A142A	EA		REF									4-10 -15 4-10	45 41
			53100593659	X	X					*	A155	WASHER, FLAT: SAME AS A121D	EA		REF									-15 4-10	44
			53109338120	X	X					*	A156	WASHER, LOCK: SAME AS A004	EA		REF									-15 4-10	43
X2	H			X	X					C	A156A	INSULATOR: 06809; 40-000124-1	EA		3									-15 4-10	45.1
P	H		59100505330	X	X					C	A157 M	CAPACITOR, H1GH VOLT, AGE: 03508: 86F1064MA	EA		2	1	2	3	1	2	3		10	-15 4-10	55
			59100505330	X	X					C	A157A	CAPACITOR, HIGH VOI.T-AGE: SAME AS A157 M	EA		REF									-15 4-10	55
P	H		59100505331	X	X					C	A158	CAPACITOR, HIGH VOLT-AGE: 03508: 86F106SMA	EA		2	1	2	3	1	2	3		10	-15 4-10	56
			59100505331	X	X					C	A159	CAPACITOR, HIGH VOLT-AGE: SAME AS A158	EA		REF									-15 4-10	56
P	H		59100505332	X	X					C	A160	CAPACITOR, HIGH VOLT-AGE: 03508; 86F1067MA	EA		1	1	2	3	1	2	3		5	-15 4-10	57
X2	H			X	X					C	A161A	BRACKET, CAPACITOR: 94682: 97A	EA		5									-15 4-10	58
C	H		53100134530	X	X					*	A162A	NUT, PLAIN, HEXAGON: 96906: MS35649-62	EA		7									-15 4-10	53

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H		53050546655	X	X					*	A163A	SCREW, MACHINE: 96906; MS51957-31	EA		25									-15 4-10	 50
C	H		53050546652	X	X					*	A164A	SCREW, MACHINE: 96906; MS51957-28	EA		36									-15 4-10	 54
C	H		53100821404	X	X					*	A164B	WASHER, FLAT: 96906; MS27183-6	EA		15									-15 4-10	 51
C	H		53101867454	X	X					*	A164C	WASHER, LOCK: 96906: MS35338-41	EA		15									-15 4-10	 52
X2	H			X	X					C	A165B	CHASSIS, ASSEMBLY: 06809; 40-000062	EA		1									-15 4-10	 110
X2	H			X	X					D	A166A	CHASSIS: 06809; 40-000062-1	EA		1									-15 4-10	 104
X1	H		53105968131	X	X					D	A167	FASTENER, CLINCH: 46384; S632-2	EA		32									-15 4-10	 105
XI	H		53105968129	X	X					D	A168	FASTENER, CLINCH: 46384; S832-2	EA		5									-15 4-10	 106
X1	H			X	X					D	A169A	FASTENER, CLINCH: 46384; SS032-2	EA		16									-15 4-10	 107
X1	H		53102954246	X	X					D	A170	FASTENER CLINCH: 46384; AS632-2	EA		10									-15 4-10	 108
X1	H		53258171158	X	X					D	A171	EYELET, FLANGED: 57771; ASI0	EA		1									-15 4-10	 109
P	H	T	74400189646	X	X					C	A172B	CIRCUIT CARD ASSEMBLY: 06809; 40-000008-1	EA		1	1	2	3	1	2	3		3	-15 4-10	 92

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X1	D			X	X					D	AI73A	PRINTED CIRCUIT BOARD: 06809; 40-000006-1	EA		1									-15 5-15	
P	D		59100613200	X	X					D	A174A	CAPACITOR,FIXED, PAPER: 06001; 75F3RIB104	EA		6								18	-15 5-15	C1
P	D		59101145274	X	X					D	A175A	CAPACITOR, FIXED, ELEC-TRICAL: 06001; 75F1R1B472	EA		1								3	-15 5-15	C2
P	D		59052793512	X	X					D	A178 M	RESISTOR, FIXED, COM-POSITION: 81349; RC20GF431J	EA		2								6	-15 5-15	R1
			59052793512	X	X					D	A178A	RESISTOR FIXED, COM-POSITION: SAME AS A178 M	EA		REF									-15 5-15	R11
P	D		59051956806	X	X					D	A179A	RESISTOR, FIXED, COM-POSITION: 81349; RC20GF102J	EA		9								27	-15 5-15	R2
			59051956806	X	X					D	A180A	RESISTOR, FIXED, COM-POSITION: SAME AS A179A	EA		REF									-15 5-15	R13
P	D		59052793517	X	X					D	A181A	RESISTOR, FIXED, COM-POSITION: 81349: RC20GF510J	EA		2								6	-15 5-15	R14
P	D		59052791757	X	X					D	AZ82A	RESISTOR, FIXED, COM-POSITION: 81349; RC20GF152J	EA		5								15	-15 5-15	R16
P	D		59051956502	X	X					D	A183A	RESISTOR, FIXED, COM-POSITION: 81349: RC20GF332J	EA		12									36 5-15	-15 R17

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59050693914	X	X					D	A184A	RESISTOR, FIXED, FILM: 81349: RN60D1961F	EA		2									6 5-15	-15 R18
P	D		59057636457	X	X					D	A185A	RESISTOR, FIXED, FILM: 81349: RN60D1152F	EA		2									6 5-15	-15 R19
P	D		59052793505	X	X					D	A186A	RESISTOR, FIXED, COMPOSITION: 81349; RC20GF392J	EA		1								3	-15 5-15	 R20
P	D		59050693912	X	X					D	A187	RESISTOR, FIXED, FILM: 81349; RN60D1960F	EA		7								21	-15 5-15	 R9
			59050693912	X	X					D	A188 M	RESISTOR, FIXED, FILM: SAME AS A187	EA		REF									-15 5-15	 R4
			59050693912	X	X					D	A188A	RESISTOR, FIXED, FILM: SAME AS A187	EA		REF									-15 5-15	 R5
			59050693912	X	X					D	A188B	RESISTOR, FIXED, FILM: SAME AS A187	EA		REF									-15 5-15	 R6
			59050693912	X	X					D	A188C	RESISTOR, FIXED, FILM: SAME AS A187	EA		REF									-15 5-15	 R7
			59050693912	X	X					D	A188D	RESISTOR, FIXED, FILM: SAME AS A187	EA		REF									-15 5-15	 R8
			59050693912	X	X					D	A188E	RESISTOR, FIXED, FILM: SAME AS A187	FA		REF									-15 5-15	 R15
P	D		59059854889	X	X					D	A189A	RESISTOR, FIXED, FILM: 81349; RN60D8250F	EA		1								3	-15 5-15	 R22
P	D		59059527042	X	X					D	A190A	RESISTOR, FIXED, FILM: 81349; RN60D2610F	EA		1								3	-15 5-15	 R23

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59059570643	X	X					D	A191 M	RESISTOR, FDIXED, FILM: 81349; RN60D4640F	EA		5								15	-15 5-15	 R27
P	D		59051908887	X	X					D	A192	RESISTOR, FIXED, COM-POSITION: 81349: RC20GF202J	EA		3								9	-15 5-15	 R3
P	D		59051777154	X	X					D	A193AM	RESISTOR, VARIABLE: 91637; 2387-500	EA		6								30	-15 5-15	 R24
			59051777154	X	X					D	A194A	RESISTOR, VARIABLE: SAME AS A193AM	EA		REF									-15 5-15	 R30
P	D		59059882313	X	X					D	A195A	RESISTOR, FIXED, FILM: 81349; RN60D1211F	EA		3								9	-15 5-15	 R25
			59059882313	X	X					D	A196A	RESISTOR, FIXED, FILM: SAME AS A195A	EA		REF									-15 5-15	 R35
P	D		59059882317	X	X					D	A197A	RESISTOR, FIXED, FILM: 81349; RN60DIOO1F	EA		1								3	-15 5-15	 R28
P	D		59059544642	X	X					D	A198A	RESISTOR, FIXED, FILM: 81349; RN60D1621F	EA		3								9	-15 5-15	 R29

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59057611901	X	X					D	A199A	RESISTOR, FIXED, FILM: 81349: RN60D2151F	EA		3								9	-15 5-15	 R31
P	D		59057818015	X	X					D	A199B	RESISTOR, FIXED, FILM: R1349: RN60D3480F	EA		3								9	-15 5-15	 R12
			59057818015	X	X					D	A199C	RESISTOR, FIXED, FILM: SAME AS A199B	EA		REF									-15 5-15	 R32
P	D		59059655554	X	X					D	A199D	RESISTOR, FIXED, FILM: 81349; RN60D6910F	EA		1								3	-15 5-15	 R33
P	D		59051959481	X	X					D	A199E	RESISTOR, FIXED, COM-POSITION: 81349; RC20GF751J	EA		1								3	-15 5-15	 R34
P	D		59350507598	X	X					D	A199F	RZSISTOR, FIXED, FILM: 81349; RNGOD1401F	EA		1								3	-15 5-15	 R26
P	D		59052524018	X						D	A199H	RESISTOR, FIXED, COM-POSITION: 81349; RC20GF470J	EA		2								6	-15 5-15	 R21
P	D		59618921009	X	X					D	A200A	SEMI-CONDUCTOR DE-VICE, DIODE: 81349: IN963B	EA		1								3	-15 5-15	 CR1
P	D		59611070748	X	X					D	A201A	SEMI-CONDUCTOR DE-VICE, DIODE: 03508; A14BX280	EA		8								24	-15 5-15	 CR2
			59611070748	X	X					D	A201B	SEMI-CONDUCTOR DE-VIC.E, DIODE: SAME AS A201A	EA		REF									-15 5-15	 CR3
			59611070748	X	X					D	A201C	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS A201A	EA		REF									-15 5-15	 CR4
P	D		59610816103	X	X					D	A202 M	SEMI-CONDUCTOR DE-VICE, DIODE: 81349: 1N823	EA		4								12	-15 5-15	 CR5

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59610816103	X	X					D	A202A	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS A202 M	EA		REF									-15	
																								5-15	CR6
P	D		59618804779	X	X					D	A203 M	TRANSISTOR: 81349; 2N2905	EA		10								30	-15	
																								5-15	Q3
			59618804779	X	X					D	A204 M	TRANSISTOR: SAME AS A203 M	EA		REF									-15	
																								5-15	Q2
			59618804779	X	X					D	A205 M	TRANSISTOR: SAME AS A203 M	EA		REF									-15	
																								5-15	Q9
P	D		59610540046	X	X					D	A206	TRANSISTOR: 81349: 2N1711	EA		34								102	-15	
																								5-15	Q1
			59610540046	X	X					D	A207	TRANSISTOR: SAME AS A206	EA		REF									-15	
																								5-15	Q4
			59610540046	X	X					D	A208	TRANSISTOR: SAME AS A206	EA		REF									-15	
																								5-15	Q5
			59610540046	X	X					D	A209	TRANSISTOR: SAME AS A206	EA		REF									-15	
																								5-15	Q7

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59610540046	X	X					D	A209A	TRANSISTOR: SAME AS A206	EA		REF									-15 5-15	 06
			59610540046	X	X					D	A209B	TRANSISTOR: SAME AS A206	EA		REF									-15 5-15	 Q8
C	D		59709564972	X	X					D	A209C	INSULATOR, DISK: 07047; 10079	EA		120									-15 5-15	 H1
P	H	T	74400189638	X	X					C	A210B	CIRCUIT CARD ASSEMBLY 06809: 40-000011-1	EA		1	1	2	3	1	2	3		3	-15 4-10	 93
X1	D			X	X					D	A211A	PRINTED CIRCUIT BOARD: 06809; 40-000009-1	EA		1									-15 5-16	
P	D		59101145282	X	X					D	A212A	CAPACITOR, FIXED, ELEC-TRICAL: 03508:; 75F2R1B473	EA		2								6	-15 5-16	
			59100613200	X	X					D	A213A	CAPACITOR, FIXED, PAPER SAME AS A174A	EA		REF									-15 5-16	 C2
P	D		59051712006	X	X					D	A219B	RESISTOR, FIXED, COM-POSITION: 81349; RC20GF271J	EA		7								24	-15 5-16	 R4
P	D		59051908889	X	X					D	A220AM	RESISTOR, FIXED, COM-POSITION: 81349; RC20GF1011	EA		6								18	-15 5-16	 R22
			59051908889	X	X					D	A221 M	RESISTOR, FIXED, COM-POSITION: SAME AS A220AM	EA		REF									-15 5-16	 R35

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		59201999502	X	X					D	A727A	FUSE,CARTRIDGE: 81349: F03A250V15A	EA		2	5	10	15	5	10	15		200	-15 4-10	13

26

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051956806	X	X					D	A230A	RESISTOR, FIXED, COMPOSITION: SAME AS A179A	EA		REF									-15 5-16	 R14
			59051956806	X	X					D	A231A	RESISTOR, FIXED, COMPOSITION: SAME AS A179A	EA		REF									-15 5-16	 R29
			59050693914	X	X					D	A232A	RESISTOR, FIXED, FILM: SAME AS A184A	EA		REF									-15 5-16	 R30
			59051712006	X	X					D	A233	RESISTOR, FIXED, COMPOSITION: SAME AS A219B	EA		REF									-15 5-16	 R19
			59051712006	X	X					D	A234	RESISTOR, FIXED, COMPOSITION: SAME AS A219B	EA		REF									-15 5-16	 R34
P	D		59059841465	X	X					D	A235A	RESISTOR, FIXED, FILM: 81349; RN60D5621F	EA		5								15	-15 5-16	 R9
			59052793517	X	X					D	A236 M	RESISTOR, FIXED, COMPOSITION: SAME AS A181A	EA		REF									-15 5-16	 R20
P	D		59050518003	X	X					D	A237A	RESISTOR, FIXED, FILM: 81349: RN6UDS182F	EA		2								6	-15 5-16	 R25
			59051777154	X	X					D	A238AM	RESISTOR, VARIABLE: SAME AS A193AM	EA		REF									-15 5-16	 R17
			59051777154	X	X					D	A239AM	RESISTOR, VARIABLE: SAME AS Al3JAM	EA		REF									-15 5-16	 R32
P	D		59059855435	X	X					D	A240A	RESISTOR, FIXED, FILM: 81349; RN60D7501F	EA		1								3	-15 5-16	 R10

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59059570643	X	X					D	A241A	RESISTOR, FIXED, FILM: SAME AS A191 M	EA		REF									-15 5-16	 R1
			59059570643	X	X					D	A242A	RESISTOR, FIXED, FILM: SAME AS A191 M	EA		REF									-15 5-16	 R2
			59059570643	X	X					D	A243 M	RESISTOR, FIXED, FILM: SAME AS A191 M	EA		REF									-15 5-16	 R3
			59059570643	X	X					D	A244	RESISTOR, FIXED, FILM: SAME AS A191 M	EA		REF									-15 5-16	 R23
P	D		59050870545	X	X					D	A245A	RESISTOR, FIXED, WIRE-WOUND: 81349; 59V102Z	EA		2								6	-15 5-16	 R24
			59050870545	X	X					D	A246A	RESISTOR, FIXED, WIRE-WOUND:	EA		REF									-15 5-16	 R26
			59059544642	X	X					D	A247M	SAME AS A198A												5-16	R15
			59057818015	X	X					D	A248A	RESISTOR, FIXED, FILM: SAME AS A199B	EA		REF									-15 5-16	 R7

(1) (A) SRCE CD	(1) (B) MNTC DC	(1) (C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59058407609	X	X					D	A250 M RESISTOR, FIXED, FILM: 81349; RN60C1871F	EA		4								12	-15 5-16	R16
			59058407609	X	X					D	A251 RESISTOR, FIXED, FILM: SAME AS A250 M	EA		REF									-15 5-16	R33
			59058407609	X	X					D	A252 RESISTOR, FIXED, FILM: SAME AS A250 M	EA		REF									-15 5-16	R18
			59058407609	X	X					D	A253 RESISTOR, FIXED, FILM: SAME AS A250 M	EA		REF									-15 5-16	R31
P	D		59052793504	X	X					D	A254 RESISTOR, FIXED, COM-POSITION: 81349: RC20GF472J	EA		11								33	-15 5-16	RS
			59052793504	X	X					D	A255A RESISTOR, FIXED, COM-POSITION: SAME AS A254	EA		REF									-15 5-16	R11
P	D		59610888792	X	X					D	A260 SEMI-CONDUCTOR DE-VICE, DIODE: 81349; 1N5059	EA		33								99	-15 5-16	CR7
			59611070748	X	X					D	A261A SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS A201A	EA		REF									-15 5-16	CR1

(1) (A) SRCE CD	(1) (B) MNTC DC	(1) (C) REC CODE	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE (2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59611070748	X	X					D	A261B SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A201A	EA		REF									-15 5-16	CR2
			59611070748	X	X					D	A261C SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A201A	EA		REF									-15 5-16	CR3
			59611070748	X	X					D	A261D SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A201A	EA		REF									-15 5-16	CR6
			59610816103	X	X					D	A262 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A202 M	EA		REF									-15 5-16	CR4
			59610816103	X	X					D	A263 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A202 M	EA		REF									-15 5-16	CR8
P	D		59611070819	X	X					D	A264B SEMI-CONDUCTOR DEVICE, DIODE: 06809: 40-000125-1	EA		2								6	-15 5-16	CR5
				X	X					D	A265B SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A264B	EA		REF									-15 5-16	CR9
			59618804779	X	X					D	A266 M TRANSISTOR: SAME AS A203 M	EA		REF									-15 5-16	Q10

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59618804779	X	X					D	A267 TRANSISTOR: SAME AS A203 M	EA		REF									-15 5-16	Q2
			59618804779	X	X					D	A268 TRANSISTOR: SAME AS A203 M	EA		REF									-15 5-16	Q6
			59618804779	X	X					D	A269 TRANSISTOR: SAME AS A203 M	EA		REF									-15 5-16	Q08
			59618804779	X	X					D	A270 TRANSISTOR: SAME AS A203 M	EA		REF									-15' 5-16	Q9
			59618804779	X	X					D	A271 TRANSISTOR: SAME AS A203 M	EA		REF									-15 5-16	Q11
			59610540046	X	X					D	A272 TRANSISTOR: SAME AS A206	EA		REF									-15 5-16	03
			59610540046	X	X					D	A273 TRANSISTOR: SAME AS A206	EA		REF									-15 5-16	Q4
			59610540046	X	X					D	A274 TRANSISTOR: SAME AS A206	EA		REF									-15 5-16	Q5
			59610540046	X	X					D	A275 TRANSISTOR: SAME AS A206	EA		REF									-15 5-16	Q7
			59610540046	X	X					D	A276 TRANSISTOR: SAME AS A206	EA		REF									-15 5-16	Q1
			59709564972	X	X					D	A276A INSULATOR DISK: SAME AS A209C	EA		REF									-15 5-16	H1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H	T	74400189637	X	X					C	A2798 CIRCUIT CARD ASSEMBLY: 06809; 40-000014-1	EA		1	1	2	3	1	2	3		3	-15 4-10	94
X1	D			X	X					D	A280A PRINTED CIRCUIT BOARD 06809; 40-000012-1	EA		1									-15 5-17	
			59101145282	X	X					D	A281A CAPACITOR, FIXED, ELEC - TRICAL: SAME AS A212A	EA		REF									-15 5-17	C1
P	D		S90S6767410	X	X					D	A284A RESISTOR, FIXED, WIRE-WOUND: 81349; RW59V182	EA		1								3	-15 5-17	RI
			59052791757	X	X					D	A285A RESISTOR, FIXED, COM-POSITION: SAME AS A182A	EA		REF									-15 5-17	R2
P	D		59059522148	X	X					D	A286A RESISTOR, FIXED, FILM: 81349; RN60D3011F	EA		1								3	-15 5-17	R3
P	D		59059695854	X	X					D	A287A RESISTOR, FIXED, FILM: 81349; RN60DS620F	EA		1								3	-15 5-17	R4
P	D		59056895771	X	X					D	A288B RESISTOR, FIXED, WIRE-WOUND: 63743; 3X3000	EA		1								3	-15 5-17	R11
P	D		59051956791	X	X					D	A289 M RESISTOR, FIXED, COM-POSITION: 81349; RC20GF681J	EA		19								57	-15 5-17	R5
			59051956791	X	X					D	A290 M RESISTOR, FIXED, COM-POSITION: SAME AS A289 M	EA		REF									-15 5-17	R21

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59052792616	X	X					D	A291A RESISTOR, FIXED, COMPOSITION: 81349; RC20GF153J	EA		4								12	-15 5-17	R9
			59052792616	X	X					D	A292A RESISTOR, FIXED, COMPOSITION: SAME AS A291A	EA		REF									-15 5-17	R10
P	D		59055780997	X	X					D	A293A RESISTOR, FIXED, WIREWOUND: 81349; RW59V202	EA		4								12	-12 5-17	R7
			59055780997	X	X					D	A294A RESISTOR, FIXED, WIREWOUND: SAME AS A293A	EA		REF									-15 5-17	R12
			59055780997	X	X					D	A295A RESISTOR, FIXED, WIREWOUND: SAME AS A293A	EA		REF									-15 5-17	R13
P	D		59050442228	X	X					D	A2968 RESISTOR, FIXED, WIREWOUND: 81349: RW69V471	EA		1								3	-15 5-17	R14
			59051923373	X	X					D	A297 RESISTOR, FIXED, COMPOSITION: SAME AS A228B	EA		REF									-15 5-17	R6
			59051923373	X	X					D	A298A RESISTOR, FIXED, COMPOSITION: SAME AS A228B	EA		REF									-15 5-17	R8
			59051908887	X	X					D	A299A RESISTOR, FIXED, COMPOSITION: SAME AS A192	EA		REF									-15 5-17	R15

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59050693916	X	X					D	A300A	RESISTOR, FIXED, FILM: 81349; RN60D3831F	EA		1							3	-15 5-17	R16
P	D		59056863380	X	X					D	A301A	RESISTOR, FIXED, FILM: 81349; RN60C2871F	EA		1							3	-15 5-17	R17
			59051777154	X	X					D	A302A M	RESISTOR, VARIABLE: SAME AS A193AM	EA		REF								-15 5-17	R18
P	D		59059572041	X	X					D	A303A	RESISTOR, FIXED, WIRE-WOUND: 81349; RN65C9531F	EA		1							3	-15 5-17	R19
P	D		59059526023	X	X					D	A304A	RESISTOR, FIXED, FILM: 81349: RN60D3162F	EA		1							3	-15 5-17	R20
P	D		59059452664	X	X					D	A305A	RESISTOR, FIXED, COM-POSITION: 81349; RC20GF103J	EA		3							9	-15 5-17	R23
			59052494195	X	X					D	A305B	RESISTOR, FIXED, COM-POSITION: SAME AS A229	EA		REF								-15 5-17	R22
P	D		59059522146	X	X					D	A305C	RESISTOR, FIXED, FILM: 81349; RN60D5111F	EA		1							3	-15 5-17	R24
P	D		59611070820	X	X					D	A3068	SEMI-CONDUCTOR DE-VICE, DIODE: 06809: 40-000126-1	EA		2							6	-15 5-17	CR1
				X	X					D	A307B	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS A306B	EA		REF								-15 5-17	CR5
P	D		59619426756	X	X					D	A308	SEMI-CONDUCTOR DE-VICE, DIODE: 81349: IN942	EA		1							3	-15 5-17	CR3

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE (2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59611070748	X	X					D	A309A SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A201A	EA		REF									-15 5-17	CR2
P	D		59619519652	X	X					D	A309B8 SEMI-CONDUCTOR DEVICE. DIODE: 81349: 1N3022A	EA		1								3	-15 5-17	CR4
			59618804779	X	X					D	A310 TRANSISTOR: SAME AS A203 M	EA		REF									-15 5-17	Q1
			59610540046	X	X					D	A311 TRANSISTOR: SAME AS A206	EA		REF									-15 5-17	Q2
			59610540046	X	X					D	A312 TRANSISTOR: SAME AS A206	EA		REF									-15 5-17	Q3
P	D		59619417847	X	X					D	A313A TRANSISTOR: 81349: 2N2243A	EA		3								3	-15 5-17	Q9
P	D		58619491440	X	X					D	A316 TRANSISTOR: 81349; 2N2905A	EA		20								60	-15 5-17	Q7
			59619491440	X	X					D	A316A TRANSISTOR: SAME AS A316	EA		REF									-15 5-17	Q4
			59619491440	X	X					D	A316B TRANSISTOR: SAME AS A316	EA		REF									-15 5-17	Q5
			59619491440	X	X					D	A316C TRANSISTOR: SAME AS A316	EA		REF									-15 5-17	Q6
			59619491440	X	X					D	A316D TRANSISTOR: SAME AS A316	EA		REF									-15 5-17	Q8
			59709564972	X	X					D	A316E INSULATOR DISK: SAME AS A209C	EA		REF									-15 5-17	H1
A	H	R		X	X					C	A317A HEATSINK ASSEMBLY: 06809: 40-000086-1	EA		1									-15 4-10	62

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53050546652	X	X					*	A318 SCREW, MACHINE: SAME AS A164A	EA		REF									-15 4-10	5.9
C	H		53105319514	X	X					*	A319 WASHER, FLAT: 88044; AN960C6	EA		39									-15 4-10	61
			53109296395	X	X					*	A320 WASHER, LOCK: SAME AS A015	EA		REF									-11 4-10	60
X2	H			X	X					D	A321A END PLATE 06809: 40-000017-1	EA		2									-15 4-10	62.1
C	H		53050546654	X	X					*	A322 SCREW, MACHINE: 96906: M.SS1957-30	EA		13									-15 4-10	62.2
C	H		53101941548	X	X					*	A323 WASHER, FLAT: 96906: MS15795-205	EA		39									-15 4-10	62.4
			53109296395	X	X					*	A324 WASHER, LOCK: SAME AS A015	EA		REF									-15 4-10	62.3
				X	X					D	A325A END PLATE: SAME AS A321A	EA		REF									-15 4-10	62.1
			53050546654	X	X					*	A326 SCREW, MACHINE: SAME AS A322	EA		REF									-15 4-10	62.2
			53101941548	X	X					*	A327 WASHER, FLAT: SAME AS A323	EA		REF									-15 4-10	62.4
			53109296395	X	X					*	A328 -WASHER, LOCK: SAME AS A015	EA		REF									-15 4-10	62.3
X2	H			X	X					D	A329A COVER, SIDE: 06809; 40-000015-1	EA		2									-15 4-10	62.5

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
A	H	R		X	X					D	A330A	HEATSINK SUBASSEMBLY: 06809; 40-000043-1	EA		1									-15 4-10	62.6
			53050546657	X	X					*	A331	SCREW, MACHINE.: SAME AS A013	EA		REF									-15 4-10	62.7
			53101941548	X	X					*	A332	WASHER, FLAT: SAME AS A323	EA		REF									-15 4-10	62.9
			53109296395	X	X					*	A333	WASHER, LOCK: SAME AS A01S	EA		REF									-15 4-10	62.8
C	H		53404207606	X	X					E	A334A	CLAMP, LOOP: 96906: MS25281-4	EA		2									-15 5-18	HI
C	H		53050546653	X	X					*	A335	SCREW, MACHINE: 96906; MS51957-29	EA		17									-15 5-18	H2
			53101941548	X	X					*	A336	WASHER, FLAT: SAME AS A323	EA		REF									-15 5-18	H3
			53109296395	X	X					*	A337	WASHER, LOCK: SAME AS A015	EA		REF									-15 5-18	H4
P	H		59108388395	X	X					E	A338	CAPACITOR,FIXED,PAPER: 06001; 75F1R1B103	EA		14	1	2	3	1	2	3		42	-15 5-18	C1
			59108388395	X	X					E	A339	CAPACITOR,FIXED, PAPER: SAME AS A338	EA		REF									-15 5-18	C2
P	H		59108388395	X	X					E	A340A	CAPACITOR, FIXED,PAPER: 06001: 75FIR2B103	EA		2	1	2	3	1	2	3		6	-15 5-18	C4

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59108388395	X	X					E	A341 CAPACITOR,FIXED, PAPER. SAME AS A340A	EA		REF									-15 5-18	C3
P	H		59350505308	X	X					E	A342 CONNECTOR, PLUG, ELECTRICAL: 00779; 1-480278-4	EA		1	1	1	1	1	1	1		3	-15 5-18	P1
P	H		59350505309	X	X					E	A343 CONNECTOR, PLUG, ELECTRICAL: 00779; 1-480278-7	EA		1	1	1	1	1	1	1		3	-15 5-18	P2
P	H		59351330470	X	X					E	A344A CONTACT, ELECTRICAL: 00779: 61118-1	EA		34	1	2	3	1	2	3		34	-15 5-18	H5
P	H		59050640392	X	X					E	A345A RESISTOR, FIXED, WIRE-WOUND: 81349; RW57GR27	EA		2	1	2	3	1	2	3		6	-15 5-18	R1
			59050640392	X	X					E	A346A RESISTOR, FIXED, WIRE-WOUND: SAME AS A345A	EA		REF	-15								5-18	R2
P	H		59057523659	X	X					E	A347 RESISTOR, FIXED, WIRE-WOUND: 81349: RWS9V1SI	EA		3	1	2	3	1	2	3		9	-15 5-18	R3
P	H		59052267626	X	X					E	A348B RESISTOR, FIXED,WIRE-WOUND: 63743; 3X6000	EA		1	1	2	3	1	2	3		3	-15 5-18	R4
P	H		59617525395	X	X					E	A349 SEMI-CONDUCTOR DE-VICE, DIODE: 81349; IN1184	EA		2	1	2	3	1	2	3		6	-15 5-18	CR1
			59617525395	X	X					E	A350 SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS A349	EA		REF									-15 5-18	CR2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		59619350138	X	X					E	A351 SEMI-CONDUCTOR DEVICE, DIODE: 81349: 1N1Z02	EA		2	1	2	3	1	2	3		6	-15 5-18	CR4
			59619350138	X	X					E	A352 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A351	EA		REF									-15 5-18	CR3
P	H		59611996008	X	X					E	A353 TRANSISTOR: 81349: 2N3055	EA		8	1	2	3	1	2	3		40	-15 5-18	Q1
			53050546653	X	X					*	A354 SCREW, MACHINE: SAME AS A335	EA		REF									-15 5-18	H2
			53101941548	X	X					*	A355 WASHER, FLAT: SAME AS A323	EA		REF									-15 5-18	H3
			53109296395	X	X					*	A356 WASHER, LOCK: SAME AS A015	EA		REF									-15 5-18	H4
			59611996008	X	X					E	A357 TRANSISTOR: SAME AS A353	EA		REF									-15 5-18	Q2
			53050546653	X	X					*	A358 SCREW, MACHINE: SAME AS A335	EA		REF									-15 5-18	H2
			53101941548	X	X					*	A359 WASHER, FLAT: SAME AS A323	EA		REF									-15 5-18	H3
			53109296395	X	X					*	A360 WASHER, LOCK: SAME AS A015	EA		REF									-15 5-18	H4
			59611996008	X	X					E	A361 TRANSISTOR: SAME AS A353	EA		REF									-15 5-18	Q3
			53050546653	X	X					*	A362 SCREW, MACHINE: SAME AS A335	EA		REF									-15 5-18	H2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53101941548	X	X					*	A363 WASHER, FLAT: SAME AS A323	EA		REF									-15 5-18	H3
			53109296395	X	X					*	A364 WASHER, LOCK: SAME AS A015	EA		REF									-15 5-18	H4
C	H		59405015859	X	X					*	A364A TERMINAL, LUG: 00779; 34112	EA		6									-15 5-18	H6
C	H		59409439539	X	X					*	A364B TERMINAL, LUG: 00779; 34113	EA		5									-15 5-18	H7
X2	H			X	X					E	A365A HEATSINK: 06809; 40-000096-1	EA		1									-15 5-18	H8
X1	H			X	X					F	A366A EXTRUSION: 06809; 40-000004-1	EA		3									-15 5-18	H9
C	H			X	X					F	A367 TERMINAL STUD: 98291; FTSM66L4	EA		48									-15 5-18	E1
				X	X					F	A368 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E2
				X	X					F	A369 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E3
				X	X					F	A370 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	ES
				X	X					F	A371 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E6
				X	X					F	A372 TERM!NAL STUD: SAME AS A367	EA		REF									-15 5-18	E7

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					F	A373	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E8
				X	X					F	A374	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E9
				X	X					F	A375	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E10
				X	X					F	A376	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E11
				X	X					F	A377	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E12
				X	X					F	A378	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E13
				X	X					F	A379	TERMINAL STUD: SAME AS A357	EA		REF									-15 5-18	E14
				X	X					F	A380	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E15
				X	X					F	A381	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E16
				X	X					F	A382	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-18	E17
C	H			X	X					F	A383	TERMINAL STUD: 86577: 2D6-29F	EA		3									-15 5-18	E4
C	H		53108034994	X	X					F	A384	NUT, SELFLOCKING: 46384; CLS632-3	EA		12									-15 5-18	H10

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
A	H	R		X	X					D	A385A HEATSINK SUBASSEMBLY: 06809; 40-000044-1	EA		1									-15 4-10	62.10
			53050546657	X	X					*	A386 SCREW, MACHINE: SAME AS A013	EA		REF									-15 4-10	62.7
			53101941548	X	X					*	A387 WASHER, FLAT: SAME AS A323	EA		REF									-15 4-10	62.9
			53109296395	X	X					*	A388 WASHER, LOCK: SAME AS A015	EA		REF									-15 4-10	62.8
			53404207606	X	X					E	A389A CLAMP LOOP: SAME AS A334A	EA		REF									-15 5-19	H1
			53050546653	X	X					*	A390 SCREW, MACHINE: SAME AS A335	EA		REF									-15 5-19	H2
			53101941548	X	X					*	A391 WASHIER, FLAT: SAME AS A323	EA		REF									-15 5-19	H3
			53109296395	X	X					*	A392 WASHER, LOCK: SAME AS A015	EA		REF									-15 5-19	H4
			59108388395	X	X					E	A393 M CAPACITOR,FIXED,PAPER SAME AS A338	EA		REF									-15 5-19	C1
			59108388395	X	X					E	A394 M CAPACITOR,FIXED, PAPER SAME AS A338	EA		REF									-15 5-19	C2
			59108388395	X	X					E	A395 M CAPACITOR,FIXED,PAPER SAME AS A338	EA		REF									-15 5-19	C3

(1) (A) SRCE CD	(1) (B) MNTC DC	(1) (C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59108388395	X	X					E	A396 M CAPACITOR,FIXED,PAPER: SAME AS A338	EA		REF									-15 5-19	C4
P	H		59350505307	X	X					E	A397 CONNECTOR, PLUG, ELECTRICAL: 00779: 1-480278-3	EA		1	1	1	1	1	1	1		3	-15 5-19	P1
P	H		59350505315	X	X					E	A398 CONNECTOR, PLUG, ELECTRICAL: 00779; 1-480278-8	EA		1	1	1	1	1	1	1		3	-15 5-19	P2
			59351330470	X	X					E	A399A CONTACT, ELECTRICAL: SAME AS A344A	EA		REF									-15 5-19	H5
X2	H			X	X					E	A400 M INSULATOR DISK: 08289: DM103SL	EA		5									-15 5-19	H6
P	H		59059027456	X	X					E	A401A RESISTOR, FIXED, WIRE-WOUND: 81349; RW57GR20	EA		2	1	2	3	1	2	3		6	-15 5-19	R1
			59059027456	X	X					E	A40ZA RESISTOR, FIXED, WIRE-WOUND: SAME AS A401A	EA		REF									-15 5-19	R5
P	H		59058890010	X	X					E	A403 RESISTOR, FIXED, WIRE-WOUND: 81349: RW59V100	EA		1	1	2	3	1	2	3		3	-15 5-19	R3
P	H		59050880636	X	X					E	A405 M RESISTOR, FIXED, WIRE-WOUND: 81349: RW59V601	EA		6	1	2	3	1	2	3		18	-15 5-19	R7
			59050880636	X	X					E	A406 M RESISTOR, FIXED, WIRE-WOUND: SAME AS A405 M	EA		REF									-15 5-19	R2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59050880636	X	X					E	A406A RESISTOR, FIXED, WIRE-WOUND: SAME AS A405 M	EA		REF									-15 5-19	R6
			59050880636	X	X					E	A406B RESISTOR, FIXED, WIRE-WOUND: SAME AS A405 M	EA		REF									-15 5-19	R4
P	H		59617526158	X	X					E	A407 SEMI-CONDUCTOR DEVICE, DIODE: 81349: IN1200	EA		4	1	2	3	1	2	3		12	-15 5-19	CR1
			59617S26158	X	X					E	A408 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A407	EA		REF									-15 5-19	CR2
			59617526158	X	X					E	A409 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A407	EA		REF									-15 5-19	CR3
			59617526158	X	X					E	A410 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A407	EA		REF									-15 5-19	CR4
			59611996008	X	X					E	A411 TRANSISTOR: SAME AS A353	EA		REF									-15 5-19	Q1
			53050546653	X	X					*	A412 SCREW, MACHINE: SAME AS A335	EA		REF									-15 5-19	H2
			53101941548	X	X					*	A413 WASHER, FLAT: SAME AS A323	EA		REF									-15 5-19	H3
			53109296395	X	X					*	A414 WASHER, LOCK: SAME AS A015	EA		REF									-15 5-19	H4
C	H			X	X					*	A415 WASHER, NON METAL: 08289; MW375-140	EA		10									-15 5-19	H7

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE (2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59611996008	X	X					E	A416 TRANSISTOR: SAME AS A353	EA		REF									-15 5-19	Q2
			53050546653	X	X					*	A417 SCREW, MACHINE: SAME AS A335	EA		REF									-15 5-19	H2
			53101941548	X	X					*	A418 WASHER, FLAT: SAME AS A323	EA		REF									-15 5-19	H3
			53109296395	X	X					*	A419 WASHER, LOCK: SAME AS A015	EA		REF									-15 5-19	H4
				X	X					*	A420 WASHER, NON METAL: SAME AS A415	EA		REF									-15 5-19	H7
			59611996008	X	X					E	A421 TRANSISTOR: SAME AS A353	EA		REF									-15 5-19	Q3
			53050546653	X	X					*	A422A SCREW, MACHINE: SAME AS A322	EA		REF									-15 5-19	H8
			53101941548	X	X					*	A423 WASHER, FLAT: SAME AS A323	EA		REF									-15 5-19	H3
			53109296395	X	X					*	A424 WASHER, LOCK: SAME AS AO15	EA		REF									-15 5-19	H4
				X	X					*	A425 WASHER, NON METAL: SAME AS A415	EA		REF									-15 5-19	H7
			59611996008	X	X					E	A426 TRANSISTOR: SAME AS A353	EA		REF									-15 5-19	Q4
			53050546653	X	X					*	A427A SCREW, MACHINE: SAME AS A322	EA		REF									-15 5-19	H8

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE (2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53101941548	X	X					*	A428 WASHER, FLAT: SAME AS A323	EA		REF									-15 5-19	H3
			53109296395	X	X					*	A429 WASHER, LOCK SAME AS A15	EA		REF									-15 5-19	H4
				X	X					*	A430 WASHER, NON METAL: SAME AS A415	EA		REF									-15 5-19	H7
X2	H			X	X					E	A430C BUSHING, INSULATOR: 06809; 40-000111-1	EA		8									-15 5-19	H9
C	H			X	X					E	A430D TERMINAL, LUG: 79963; 505-144	EA		2									-15 5-19	H10
			59405015859	X	X					E	A430E TERMINAL, LUG: SAME AS A364A	EA		REF									-15 5-19	H11
X2	H			X	X					E	A431A HEATSINK: 06809; 40-000098-1	EA		1									-15 5-19	H12
				X	X					F	A432A EXTRUSION: SAME AS A366A	EA		REF									-15 5-19	H13
				X	X					F	A433 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E1
				X	X					F	A434 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E2
				X	X					F	A435 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E5
				X	X					F	A436 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E7
				X	X					F	A437 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E8
				X	X					F	A438 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E9

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					F	A439	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E10
				X	X					F	A440	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E11
				X	X					F	A441	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E12
				X	X					F	A442	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E13
				X	X					F	A443	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E14
				X	X					F	A444	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E15
				X	X					F	A445	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E16
				X	X					F	A446	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E17
				X	X					F	A447	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E19
				X	X					F	A448	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E19
				X	X					F	A449	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E20
				X	X					F	A450	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E21

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					F	A451	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E22
				X	X					F	A452	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E23
				X	X					F	A453A	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E24
				X	X					F	A454A	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-19	E25
				X	X					F	A454A7	TERMINAL STUD: SAME AS A383	EA		REF									-15 5-19	E6
			53108034994	X	X					F	A458	NUT, SELFLOCKING: SAME AS A384	EA		REF									-15 5-19	H14
A	H	R		X	X					D	A461A	HEATSINK SUBASSEMBLY: 06809; 40-000045-1	EA		1									-15 4-10	62.11
			53050546657	X	X					*	A462	SCREW, MACHINE: SAME AS A013	EA		REF									-15 4-10	62.7
			53101941548	X	X					*	A463	WASHER, FLAT: SAME AS A323	EA		REF									-15 4-10	62.9

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109296395	X	X					*	A464	WASHER, LOCK.: SAME AS A015	EA		REF									-15 4-10	62.8
C	H		53406190188	X	X					E	A465B	CLAMP, LOOP: 96906; MS25281-2	EA		1									-15 5-20	H1
			53050546653	X	X					*	A466	SCREW, MACHINE: SAME AS A335	EA		REF									-15 5-20	H2
			53101941548	X	X					*	A467	WASHER, FLAT: SAME AS A323	EA		REF									-15 5-20	H3
			53109296395	X	X					*	A468	WASHER, LOCK: SAME AS A015	EA		REF									-15 5-20	H4
P	H		59350544172	X	X					E	A469	CONNECTOR, PLUG, ELECTRICAL: 00779; 1-480278-9	EA		1	1	1	1	1	1	1		3	-15 5-20	P1
			59351330470	X	X					E	A470A	CONTACT, ELECTRICAL: SAME AS A344A	EA		REF									-15 5-20	H5
P	H		59050816137	X	X					E	A471	RESISTOR, FIXED, WIRE-WOUND: 81349; RW59V5R0	EA		1	1	2	3	1	2	3		3	-15 5-20	R1
P	H		59050601233	X	X					E	A472D	RESISTOR, FIXED, WIRE-WOUND: 81349: RW58VR27	EA		1	1	2	3	1	2	3		3	-15 5-20	R2
			59050880636	X	X					E	A473 M	RESISTOR, FIXED, WIRE-WOUND: SAME AS A405 M	EA		REF									-15 5-20	R3
P	H		59617125578	X	X					E	A474	TRANSISTOR: 81349; 2N3442	EA		1	1	2	3	1	2	3		5	-15 5-20	Q1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53050546653	X	X					*	A475 SCREW, MACHINE: SAME AS A335	EA		REF									-15 5-20	H2
			53101941548	X	X					*	A476 WASHER, FLAT: SAME AS A323	EA		REF									-15 5-20	H3
			53109296395	X	X					*	A477 WASHER, LOCK: SAME AS A015	EA		REF									-15 5-20	H4
P	H		59619997351	X	X					E	A478 TRANSISTOR: 05277; 164-10	EA		1	1	2	3	1	2	3		5	-15 5-20	Q2
X2	H			X	X					E	A479A HEATSINK: 06809: 40-000029-1	EA		1									-15 5-20	H6
				X	X					F	A480A EXTRUSION: SAME AS A366A	EA		REF									-15 5-20	H7
				X	X					F	A481 TERMINAL STUD: SAME AS A383	EA		REF									-15 5-20	E1
				X	X					F	A482 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-20	E2
				X	X					F	A483 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-20	E3
				X	X					F	A484 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-20	E4
				X	X					F	A485 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-20	E5
				X	X					F	A486 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-20	E6

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					F	A487 TERMINAL STUD: SAME AS A367	EA		REF									-15 5-20	E7
			53108034994	X	X					F	A488 NUT, SELFLOCKING: SAME AS A384	EA		REF									-15 5-20	H8
P	H	T	74400189706	X	X					C	A489A CIRCUIT CARD ASSEMBLY, 06809; 40-000052-1	EA		1	1	2	3	1	2	3		3	-15 4-10	40
K1	D			X	X					D	A490A PRINTED CIRCUIT BOARD: 06809; 40-000050-1	EA		1									-15 5-23	
P	D		59109361357	X	X					D	A491 CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BE107K	EA		1								5	-15 5-23	C1
			59100613200	X	X					D	A492 CAPACITOR, FIXED,PAPER: SAME AS A174A	EA		REF									-15 5-23	C2
			59100613200	X	X					D	A493 CAPACITOR,FDIED,PAPER: SAME AS A174A	EA		REF									-15 5-23	C3
			59100613200	X	X					D	A494 CAPACITOR,FIXED,PAPER: SAME AS A174A	EA		REF									-15 5-23	C6
			59100613200	X	X					D	A494A CAPACITOR,FIXED,PAPER: SAME AS A174A	EA		REF									-15 5-23	C13
P	D		59107821973	X	X					D	A495 CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BE106K	EA		2								6	-15 5-23	C4

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59107821973	X	X					D	A496	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A495	EA		REF									-15 5-23	C5
P	D		59109361334	X	X					D	A497	CAPACITOR, FIXED, ELECTROLYTIC: 81349: CS138F10SK	EA		1								5	-15 5-23	C7
			59108388395	X	X					D	A498	CAPACITOR,FIXED,PAPER: SAME AS A338	EA		REF									-15 5-23	C8
			59108386395	X	X					D	A499	CAPACITOR,FIXED,PAPER SAME AS A338	EA		REF									-15 5-23	C9
			59108388395	X	X					D	A500	CAPACITOR,FIXED,PAPER SAME AS A338	EA		REF									-15 5-23	C11
P	D		59107338009	X	X					D	A501	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CL65BG181MP3	EA		2								10	-15 5-23	C10
			59107338009	X	X					D	A502	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A501	EA		REF									-15 5-23	C12
			59051956806	X	X					D	A503	RESISTOR, FIXED, COM-POSITION: SAME AS A179A	EA		REF									-15 5-23	R1
			59051956806	X	X					D	A504	RESISTOR, FIXED, COM-POSITION: SAME AS A179A	EA		REF									-15 5-23	R28
			59051956806	X	X					D	A505	RESISTOR, FIXED, COM-POSITION: SAME AS A179A	EA		REF									-15 5-23	R29

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051956806	X	X					D	A506 RESISTOR, FIXED, COMPOSITION: SAME AS A179A	EA		REF									-15 5-23	R34
			59051956806	X	X					D	A507 RESISTOR, FIXED, COMPOSITION: SAME AS A179A	EA		REF									-15 5-23	R66
			59051956791	X	X					D	A508 M RESISTOR, FIXED, COMPOSITION: SAME AS AZ89 M	EA		REF									-15 5-23	R3
			59051956791	X	X					D	A509 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R5
			59051956791	X	X					D	A510 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R12
			59051956791	X	X					D	A511 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R14
			59051956791	X	X					D	A512 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R16
			59051956791	X	X					D	A513 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R21
			59051956791	X	X					D	A514 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R24
			59051956791	X	X					D	A515 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R37

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051956791	X	X					D	A516 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R38
			59051956791	X	X					D	A517 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R40
			59051956791	X	X					D	A518 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R42
			59051956791	X	X					D	A519 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R47
			59051956791	X	X					D	A520 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R49
			59051956791	X	X					D	A521 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R52
			59051956791	X	X					D	A522 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R57
			59051956791	X	X					D	A523 M RESISTOR, FIXED, COMPOSITION: SAME AS A289 M	EA		REF									-15 5-23	R91
P	D		59050793561	X	X					D	A524 RESISTOR, FIXED, FILM: 81349; RN6CD3481F	EA		4								12	-15 5-23	R4
			59050793561	X	X					D	A525 RESISTOR, FIXED, FILM: SAME AS A524	EA		REF									-15 5-23	R19

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59050793561	X	X					D	A526 RESISTOR, FIXED, FILM: SAME AS A524	EA		REF									-15 5-23	R78
			59050793561	X	X					D	A527 RESISTOR, FIXED, FILM: SAME AS A524	EA		REF									-15 5-23	R89
P	D		59052991541	X	X					D	A528 RESISTOR, FIXED, COM-POSITION: 81349: RC20GF1151	EA		1								3	-15 5-23	R6
			59051923373	X	X					D	A529 M RESISTOR. FIXED, COM-POSITION: SAME AS A228B	EA		REF									-15 5-23	R7
			59051923373	X	X					D	A530 M RESISTOR, FIXED, COM-POSITION: SAME AS A228B	EA		REF									-15 5-23	R70
			59052524018	X	X					D	A531 M RESISTOR, FIXED, COM-POSITION: SAME AS A199H	EA		REF									-15 5-23	R8
			59059841465	X	X					D	A532 RESISTOR, FIXED, FILM: SAME AS A235A	EA		REF									-15 5-23	R9
			59059841465	X	X					D	A533 RESISTOR, FIXED, FILM: SAME AS A235A	EA		REF									-15 5-23	R76
			59059841465	X	X					D	A534 RESISTOR, FIXED, FILM: SAME AS A235A	EA		REF									-15 5-23	R79
			59059841465	X	X					D	A535 RESISTOR, FIXED, FILM: SAME AS A235A	EA		REF									-15 5-23	R80
P	D		59058342968	X	X					D	A536 RESISTOR, FIXED, FILM: 81349: RN60C1781F	EA		1								3	-15 5-23	R10

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59052791757	X	X					D	A537 RESISTOR, FIXED, COMPOSITION: SAME AS A182A	EA		REF									-15 5-23	R11
			59052791757	X	X					D	A538 RESISTOR, FIXED, COMPOSITION: SAME AS A1821A	EA		REF									-15 5-23	R13
			59052792616	X	X					D	A539 RESISTOR, RDCED, COMPOSITION: SAME AS A291A	EA		REF									-15 5-23	R15
			59052792616	X	X					D	A540 RESISTOR, FIXED, COMPOSITION: SAME AS A291A	EA		REF									-15 5-23	R36
			59059544642	X	X					D	A541 RESISTOR, FIXED, FILM: SAME AS A198A	EA		REF									-15 5-23	R18
P	D		59050788293	X	X					D	A542A RESISTOR, FIXED, FILM: 81349: RN60D1121F	EA		1								3	-15 5-23	R45
P	D		59052791876	X	X					D	A543 RESISTOR, FIXED, COMPOSITION: 81349; RC20GF222J	EA		2								6	-15 5-23	R26
			59052791876	X	X					D	A544 RESISTOR, FIXED, COMPOSITION: SAME AS A543	EA		REF									-15 5-23	R39
			59052793504	X	X					D	A545 RESISTOR, FIXED, COMPOSITION: SAME AS A254	EA		REF									-15 5-23	R20
			59052793504	X	X					D	A546 RESISTOR, FIXED, COMPQSITION: SAME AS A254	EA		REF									-15 5-23	R27

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59052793504	X	X					D	A547 RESISTOR, FIXED, COMPOSITION: SAME AS A254	EA		REF									-15 5-23	R2
			59052793504	X	X					D	A548 RESISTOR, FIXED, COMPOSITION: SAME AS A254	EA		REF									-15 5-23	R30
			59052793504	X	X					D	A549 RESISTOR, FIXED, COMPOSITION: SAME AS A254	EA		REF									-15 5-23	R41
			59052793504	X	X					D	A550 RESISTOR, FIXED, COMPOSITION: SAME AS A254	EA		REF									-15 5-23	R46
			59052793504	X	X					D	A551 RESISTOR, FIXED, COMPOSITION: SAME AS A254	EA		REF									-15 5-23	R48
			59052793504	X	X					D	A552 RESISTOR, FIXED, COMPOSITION: SAME AS A254	EA		REF									-15 5-23	R68
			59052793504	X	X					D	A553 RESISTOR, FIXED, COMPOSITION: SAME AS A254	EA		REF									-15 5-23	R83
			59051956502	X	X					D	A554 RESISTOR, FDIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R17
			59051956502	X	X					D	A555 RESISTOR, FIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R22
			S9051956502	X	X					D	A556 RESISTOR, FIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R23

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051956502	X	X					D	A557	RESISTOR, FIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R25
			59051956502	X	X					D	A558	RESISTOR, FIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R32
			59051956502	X	X					D	A559	RESISTOR, FIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R33
			59051956502	X	X					D	A560	RESISTOR, FIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R54
			59051956502	X	X					D	A561	RESISTOR, FIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R58
			59051956502	X	X					D	A562	RESISTOR, FIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R71
		1	59051956502	X	X					D	A563	RESISTOR, FIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R82
			59051956502	X	X					D	A564	RESISTOR, FIXED, COMPOSITION: SAME AS A183A	EA		REF									-15 5-23	R85
			59059452664	X	X					D	A565	RESISTOR, FIXED, COMPOSITION: SAME AS A305A	EA		REF									-15 5-23	R43
P	D		59051712004	X	X					D	A566	RESISTOR, FIXED, COMPOSITION: 81349: RC20GF223J	EA		2								6	-15 5-23	R31

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051712004	X	X					D	A567 RESISTOR, FIXED, COMPOSITION: SAME AS A566	EA		REF									-15 5-23	R62
			59059452664	X	X					D	A568 RESISTOR, FIXED, COMPOSITION: SAME AS A305A	EA		REF									-15 5-23	R64
P	D		59052793513	X	X					D	A569 RESISTOR, FIXED, COMPOSITION: 81349; RC20GF221J	EA		4								12	-15 5-23	R35
			59052793513	X	X					D	A570 RESISTOR, FIXED, COMPOSITION: SAME AS A569	EA		REF									-15 5-23	R61
P	D		59052793521	X	X					D	A571 RESISTOR, FIXED, COMPOSITION: 81349: RC20GFS10O	EA		1								3	-15 5-23	R63
P	D		59051923971	X	X					D	A572 RESISTOR, FIXED, COMPOSITION: 81349; RC20GF331J	EA		1								3	-15 5-23	R65
			59051908889	X	X					D	A573 M RESISTOR, FIXED, COMPOSITION: SAME AS A220AM	EA		REF									-15 5-23	R67
P	D		59059526024	X	X					D	A574 RESISTOR, FIXED, FILM: 81349; RN60D3482F	EA		1								3	-15 5-23	R86
P	D		59058926578	X	X					D	A575 RESISTOR, FIXED, FILM: 81349; RN60D1212F	EA		1								3	-15 5-23	R50
			59057611901	X	X					D	A576 RESISTOR, FIXED, FILM: SAME AS A199A	EA		REF									-15 5-23	R72

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59057611901	X	X					D	A577 RESISTOR, FIXED, FILM: SAME AS A199A	EA		REF									-15 5-23	R74
			59057636437	X	X					D	A578 RESISTOR, FIXED, FILM: SAME AS A185A	EA		REF									-15 5-23	R56
P	D		59057318315	X	X					D	A579 RESISTOR, FIXED, FILM: 81349; RN60D1402F	EA		1								3	-15 5-23	R84
P	D		59059836914	X	X					D	A580 RESISTOR, FIXED, FILM: 81349: RN60D1002F	EA		1								3	-15 5-23	R44
			59050518003	X	X					D	A581 RESISTOR, FIXED, FILM: SAME AS A237A	EA		REF									-15 5-23	R75
P	D		59057527228	X	X					D	A582 RESISTOR, FIXED, FILM: 81349; RN60C1782F	EA		1								3	-15 5-23	R59
			59057523659	X	X					D	A583 RESISTOR, FIXED, WIRE-WOUND: SAME AS A347	EA		REF									-15 5-23	R53
			59057523659	X	X					D	A594 RESISTOR, FIXED, WIRE-WOUND: SAME AS A347	EA		REF									-15 5-23	R55
P	D		59058650361	X	X					D	A585A RESISTOR, FIXED, WIRE-WOUND: 81349; RW79U5621F	EA		1								3	-15 5-23	R87
P	D		59055779574	X	X					D	A586 RESISTOR, FIXED, WIRE-WOUND: 81349, RWS9V2R2	EA		1								3	-15 5-23	R69
P	D		59059543308	X	X					D	A587 RESISTOR, FIXED, WIRE-WOUND: 81349: RW57V301	EA		1								3	-IS 5-23	R60

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051777154	X	X					D	A588AM	RESISTOR, VARIABLE: SAME AS A193AM	EA		REF									-15 5-23	R73
			59059882313	X	X					D	A589	RESISTOR, FIXED, FILM: SAME AS A195A	EA		REF									-15 5-23	R77
P	D		59050430381	X	X					D	A590A	RESISTOR, FIXED, FILM: 81349; RN60D2211F	EA		1								3	-15 5-23	RS1
P	D		59451070747	X	X					D	A591	RELAY: 02295; CR120G900A02	EA		1								3	-15 5-23	K1
			59610888792	X	X					D	A592	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR1
			59610888792	X	X					D	A593	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR2
			59610888792	X	X					D	A594	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR3
			59610888792	X	X					D	A595	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR4
			59610888792	X	X					D	A596	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR6
			59610888792	X	X					D	A597	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR7
			59610888792	X	X					D	A598	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR8

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59610888792	X	X					D	A599 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR9
			59610888792	X	X					D	A600 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR10
			59610888792	X	X					D	A601 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR 11
			59610888792	X	X					D	A602 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR12
			59610888792	X	X					D	A603 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR13
			59610888792	X	X					D	A604 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA	REF										-15 5-23	CR14
			59610888792	X	X					D	A605 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA	REF										-15 5-23	CR15
			59610888792	X	X					D	A606 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA	REF										-15 5-23	CR16
			59610888792	X	X					D	A607 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA	REF										-15 5-23	CR17
			59610888792	X	X					D	A608 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA	REF										-15 5-23	CR18

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59610888792	X	X					D	A609	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR19
			59610888792	X	X					D	A610	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR20
			59610888792	X	X					D	A611	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR21
			59610888792	X	X					D	A612	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR22
			59610888792	X	X					D	A613	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR23
			59610888792	X	X					D	A614	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR25
			59610888792	X	X					D	A615	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR26
			59610888792	X	X					D	A616	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR28
			59610888792	X	X					D	A617	SEMI-CONDUCTOR DEVICE, DIODE- SAME AS A260	EA		REF									-15 5-23	CR29
			59610888792	X	X					D	A618	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR35

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59610888792	X	X					D	A619	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-23	CR32
P	D		59619381135	X	X					D	A620A	SEMI-CONDUCTOR DEVICE, DIODE: 81349; 1N4148	EA		1								3	-15 5-23	CR5
P	D		59617256083	X	X					D	A621	SEMI-CONDUCTOR DEVICE, DIODE: 81349: 2N2323	EA		1								5	-15 5-23	CR24
P	D		59612446905	X	X					D	A622	SEMI-CONDUCTOR DEVICE, DIODE: 81349; 2N4986	EA		2								10	-15 5-23	CR33
			59612446905	X	X					D	A623	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A622	EA		REF									-15 5-23	CR34
P	D		59618527549	X	X					D	A624	SEMI-CONDUCTOR DEVICE, DIODE: 81249; 1N754A	EA		2									6 5-23	-15 CR27
			59618527549	X	X					D	A625	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A624	EA		REF									-15 5-23	CR30
P	D		59501028133	X	X					D	A626B	TRANSFORMER: 06809; 40-000133-1	EA		1								2	-15 5-23	T1
			59619417847	X	X					D	A627 M	TRANSISTOR: SAME AS A313A	EA		REF									-15 5-23	Q1
			59619417847	X	X					D	A628	TRANSISTOR: SAME AS A313A	EA		REF									-15 5-23	032

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59610540046	X	X					D	A629 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q2
			59610540046	X	X					D	A630 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	QS
			59610540046	X	X					D	A631 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q6
			59610540046	X	X					D	A632 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q7
			59610540046	X	X					D	A633 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	010
			59610540046	X	X					D	A634 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	011
			59610540046	X	X					D	A635 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q12
			59610540046	X	X					D	A636 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q13
			59610540046	X	X					D	A637 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q14
			59610540046	X	X					D	A638 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q16
			59610540046	X	X					D	A639 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	017
			59610540046	X	X					D	A640 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	018

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59610540046	X	X					D	A641 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q23
			59610540046	X	X					D	A642 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q28
			59610540046	X	X					D	A643 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	029
			59610540046	X	X					D	A644 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q30
			59610540046	X	X					D	A645 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q34
			59610540046	X	X					D	A646 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q35
			59610540046	X	X					D	A647 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q36
			59610540046	X	X					D	A648 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	Q37
			59610540046	X	X					D	A649 TRANSISTOR: SAME AS A206	EA		REF									-15 5-23	-15 Q39
			59619491440	X	X					D	A650 TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q3
			59619491440	X	X					D	A651 TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q4
			59619491440	X	X					D	A652 TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q8

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59619491440	X	X					D	A653	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q19
			59619491440	X	X					D	A654	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q20
			59619491440	X	X					D	A655	TRANSISTOR: SAME AS A316	EA		REF									-15 15-23	Q21
			59619491440	X	X					D	A656	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q22
			59619491440	X	X					D	A65?	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	024
			59619491440	X	X					D	A658	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	025
			59619491440	X	X					D	A659	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q26
			59619491440	X	X					D	A660	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q27
			59619491440	X	X					D	A661	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q31
			59619491440	X	X					D	A662	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q38
			59619491440	X	X					D	A663	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	09
			59619491440	X	X					D	A664A	TRANSISTOR: SAME AS A316	EA		REF									-15 5-23	Q15

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59611996008	X	X					D	A665	TRANSISTOR: SAME AS A353	EA		REF									-15 5-23	Q33
			59709564972	X	X					D	A665A	INSULATOR DISK: SAME AS A209C	EA		REF									-15 5-23	H8
X2	D			X	X					D	A666	HEATSINK: 06809; 40-000167-1	EA		1									-15 5-23	HI
C	D			X	X					D	A666A	INSULATOR DISK: 07047; 10047	EA		3									-15 5-23	H7
				X	X					D	A667	INSULATOR DISK: SAME AS A400 M	EA		REF									-15 5-23	H2
			53050546652	X	X					*	A668	SCREW, MACHINE: SAME AS A164A	EA		REF									-15 5-23	H3
			53109296395	X	X					*	A669	WASHER, LOCK: SAME AS A015	EA		REF									-15 5-23	H4
			53109349761	X	X					*	A670	NUT, PLAIN, HEXAGON: SAME AS A012	EA		REF									-15 5-23	H5
X2	D			X	X					D	A670A	TERMINAL, FEED THRU: 81349; 1S6-17C	EA		15									-15 5-23	H6
A	H	R		X	X					C	A672A	CONNECTOR BRACKET ASSEMBLY: 06809: 40-000110-1	EA		1									-15 4-10	88
			53100134530	X	X					*	A6728	NUT, PLAIN, HEXAGON: SAME AS A162A	EA		REF									-15 4-10	84.1
			53050546652	X	X					*	A673	SCREW, MACHINE: SAME AS A164A	EA		REF									-15 4-10	85
			53105319514	X	X					*	A674	WASHER, FLAT: SAME AS A319	EA		REF									-15 4-10	87
			53109296395	X	X					*	A675	WASHER, LOCK: SAME AS A015	EA		REF									-15 4-10	86

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					D	A676A	BRACKET, CONNECTOR: 06809: 40-000109	EA		1									-15 5-21A	A14
				X	X					E	A677	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-21A	E1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																						
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					E	A678	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-21A	E2
				X	X					E	A679	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-21A	E3
				X	X					E	A680	TERMINAL STUD: SAME AS A367	EA		REF									-15 5-21A	E4
			53105968131	X	X					E	A681	FASTENER, CLINCH: SAME AS A167	EA		REF									-15 5-21A	H1
X2	H			X	X					E	A681A	EYELET FLANGE: 57771; A241	EA		2									-15 5-21	H3
X2	H			X	X					E	A682B	BRACKET CONNECTOR: 06809: 40-000109-1	EA		1									-15 5-21A	H2
P	H		59050444406	X	X					D	A683D	RESISTOR, FIXED, WIRE-WOUND: 81349; RE65GR150	EA		1	1	2	3	1	2	3		3	-15 5-21A	R1
C	H		53050545637	X	X					*	A684A	SCREW, MACHINE: 96906; MS51957-5	EA		4									-15 5-21A	H4
C	H		53102855631	X	X					*	A685	WASHER, FLAT: 88044; AN960C2	EA		6									-15 5-21A	H5
C	H		53109282690	X	X					*	A686	WASHER, LOCK: 96906; MS35338-134	EA		2									-15 5-21A	H6
			53109349748	X	X					*	A686A	NUT, PLAIN, HEXAGON: SAME AS A133F	EA		REF									-15 5-21A	H7
P	H		59057636661	X	X					D	A687A	RESISTOR, FIXED, WIRE-WOUND: 81349; RW57GR10	EA		2	1	2	3	1	2	3		6	-15 5-21A	R2
			59057636661	X	X					D	A688A	RESISTOR, FIXED, WIRE-WOUND: SAME AS A687A	EA		REF									-15 5-21A	P.3

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE											(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION			UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		59610606817	X	X					D	A689	SEMI-CONDUCTOR DEVICE, DIODE: 81349: 2N683		EA		1	1	2	3	1	2	3		5	-15 5-21A	CR1
P	H		59618465808	X	X					D	A690	SEMI-CONDUCTOR DEVICE , DIODE: 81349: 2N682		EA		3	3	6	9	3	6	9		15	-15 5-21A	CR2
			59618465808	X	X					D	A691	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A690		EA		REF									-15 5-21A	CR3
			59618465808	X	X					D	A692	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A690		EA		REF									-15 5-21A	CR4
			59409439539	X	X					D	A693	TERMINAL, LUG: SAME AS A364B		EA		REF									-15 5-21A	H8
C	H		59405523635	X	X					D	A693A	TERMINAL, LUG: 79963: 29A		EA		1									-15 5-21A	H9
X2	H		59709772714	X	X					D	A693B	SPACER: 08289: TW516-25		EA		4									-15 5-21A	H10
C	H			X	X					D	A693C	WASHER, NON METAL: 08289: MW750-255		EA		8									-15 5-21A	H11
X2	H			X	X					D	A694A	POST ELECTRICAL MECHANISM: 06809: 40-000116-1		EA		2									-15 4-10	84
P	H		59351628630	X	X					D	A694B	CONNECTOR, HOUSING: 00779: 1-480275-4		EA		1	*	*	*	*	*	*		2	-15 5-21A	J5
P	H		59351628611	X	X					D	A694C	CONNECTOR, HOUSING: 00779: 1-480275-7		EA		1	*	*	*	*	*	*		2	-15 5-21A	J6
P	H		59351377301	X	X					D	A694D	CONNECTOR, HOUSING: 00779: 1-480275-3		EA		1	*	*	*	*	*	*		2	-15 5-21A	J7
P	H		59354515687	X	X					D	A694E	CONNECTOR, HOUSING: 00779: 1-480275-8		EA		1	*	*	*	*	*	*		2	-15 5-21A	J8

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		59354517385	X	X					D	A694F	CONNECTOR, HOUSING: 00779: 1-480275-9	EA		1	*	*	*	*	*	*		2	-15 5-21A	J9
P	H		59994766327	X	X					D	A694G	CONTACT, ELECTRICAL: 00779: 61117-1	EA		34	5	10	15	5	10	15		17	-15 5-21A	H12
P	H	T	74400189690	X	X					D	A695A	CIRCUIT CARD ASSEMBLY: 06809: 40-000113-1	EA		1	1	2	3	1	2	3		3	-15 4-10	83
C	H		53050546651	X	X					*	A696	SCREW, MACHINE: 96906: MS51957-27	EA		45									-15 4-10	83.1
			53105319514	X	X					*	A697	WASHER, FLAT: SAME AS A319	EA		REF									-15 4-10	83.3

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109296395	X	X					*	A698	WASHER, LOCK: SAME AS A015	EA		REF									-15 4-10	83.2
X1	D			X	X					E	A699A	PRINTED CIRCUIT BOARD: 06809: 40-000114-1	EA		1									-15 5-21B	A15
			59108388395	X	X					E	A700	CAPACITOR, FIXED, PAPER: SAME AS A338	EA	REF										-15 5-21B	C1
			59108388395	X	X					E	A701	CAPACITOR, FIXED, PAPER: SAME AS A338	EA		REF									-15 5-21B	C2
			59108388395	X	X					E	A702	CAPACITOR, FD(ED, PAPER: SAME AS A338	EA		REF									-15 5-218	C3
			59108388395	X	X					E	A703	CAPACITOR, FIXED, PAPER: SAME AS A338	EA		REF									-15 5-218	C4
			59108388395	X	X					E	A703A	CAPACITOR, FIXED, PAPER: SAME AS A338	EA		REF									-15 5-218	C5
			59055780997	X	X					E	A704	RESISTOR, FIXED, WIRE-WOUND: SAME AS A293A	EA		REF									-15 5-219	R1
P	D		59058434711	X	X					E	A705A	RESISTOR, FIXED, WIRE-WOUND: 81349: RW59V1R5	EA		1								3	-15 5-21B	R2
			59051956791	X	X					E	A706A	RESISTOR, FIXED, COM-POSITION: SAME AS A289 M	EA		REF									-15 5-21B	R3

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																				
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051712006	X	X					E	A707 M	RESISTOR, FIXED, COMPOSITION: SAME AS A219B	EA		REF									-15 5-21B	R4
			59051908889	X	X					E	A708A M	RESISTOR, FIXED, COMPOSITION: SAME AS A220AM	EA		REF									-15 5-218	R8
			59051712006	X	X					E	A709 M	RESISTOR, FIXED, COMPOSITION: SAME AS A219B	EA		REF									-15 5-21B	R6
			59051712006	X	X					E	A710 M	RESISTOR, FIXED, COMPOSITION: SAME AS &2198	LEA		REF									-15 5-21B	R9
			59050880636	X	X					E	A711 M	RESISTOR, FIXED, WIREWOUND: SAME AS A405 M	EA		REF									-15 5-21B	R10
			59051712006	X	X					E	A712 M	RESISTOR, FIXED, COMPOSITION: SAME AS A219B	EA		REF									-15 5-21B	R12
P	D		59058552219	X	X					E	A713A	RESISTOR, FIXED, WIREWOUND: 81349: RW59V101	EA		1								3	-15 5-218	R7
P	D		59052793518	X	X					E	A714	RESISTOR, FIXED, COMP- 81349: RC20GF300J	EA		1								3	-15 5-21B	R8
			59051908889	X	X					E	A71SAM	RESISTOR, FIXED, COMPOSITION: SAME AS A220AM	EA		REF									-15 5-21B	R11
			59610888792	X	X					E	A716	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-213	CR1

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE (2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59610888792	X	X					E	A717	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA	REF										-15 5-21B	CR2
			59610888792	X	X					E	A718	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-21B,	CR3
			59610888792	X	X					E	A719	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A260	EA		REF									-15 5-21B	CR4
A	H	R		X	X					C	A720A	FRONT PANEL ASSEMBLY: 06809: 40-000074-1	EA		1									-15 4-10	4
C	H		53050546668	X	X					*	A720B	SCREW, MACHINE: 96906: MS51957-43	EA		9									-15 4-10	1
			53105586207	X	X					*	A720C	WASHER, FLAT: SAME AS A020 M	EA		REF									-15 4-10	3
			53109338119	X	X					*	A720D	WASHER, LOCK: SAME AS A021	EA		REF									-15 4-10	2
A	H	R		X	X					D	A721A	FRONT PANEL: 06809: 40-000058-2	EA		1									-15 4-10	4.1
P	H		59356156736	X	X					E	A722A	JACK TIP: 98291: SKT5BCBLK	EA		1	1	2	3	1	2	3		3	-15 4-10	20
P	H		59356156742	X	X					E	A723A	JACK TIP 98291: SKT5BCGRN	EA		4	1	2	3	1	2	3		12	-15 4-10	19
			59356156742	X	X					E	A724A	JACK TIP: SAME AS A723A	EA		REF									-15 4-10	19
			59356156742	X	X					E	A725A	JACK TIP: SAME AS A723A	EA		REF									-15 4-10	19
			59356156742	X	X					E	A726A	JACK TIP: SAME AS A723A	EA		REF									-15 4-1.0	19

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		59201999502	X	X					D	A727A	FUSE, CARTRIDGE: 81349: F03A250V15A	EA		2	5	10	15	5	10	15		200	-15 4-10	13

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59201999502	X	X					D	A728A	FUSE, CARTRIDGE: SAME AS A727A	EA		REF									-15 4-10	13
P	H		59202805002	X	X					D	A729A	FUSE, CARTRIDGE: 81349: F03A250V10A	EA		4	6	12	18	6	12	18		400	-15 4-10	4
			59202805002	X	X					D	A730A	FUSE, CARTRIDGE: SAME AS A729A	EA		REF									-15 4-10	14
			5920Z805002	X	X					D	A731A	FUSE, CARTRIDGE: SAME AS A729A	EA		REF									-15 4-10	14
			59202805002	X	X					D	A73ZA	FUSE, CARTRIDGE: SAME AS A729A	EA		REF									-15 4-10	14
P	H		59207271452	X	X					D	A7338	FUSE, CARTRIDGE: 81349: F038250V10A	EA		3	5	10	15	5	10	15		300	-15 4-10	11
			59207271452	X	X					D	A7348	FUSE, CARTRIDGE: SAME AS A733B	EA		REF									-15 4-10	11
			59207271452	X	X					D	A7358	FUSE, CARTRIDGE: SAME AS A733B	EA		REF									-15 4-10	11
P	H		59205838486	X	X					D	A7368	FUSE, CARTRIDGE: 81349: F033125V3A	EA		4	6	12	18	6	12	18			400 4-10	-15 12
			59205838486	X	X					D	A737B	FUSE, CARTRIDGE: SAME AS A736B	EA		REF									-15 4-10	12
			59205838486	X	X					D	A738B	FUSE, CARTRIDGE: SAME AS A736B	EA		REF									-15 4-10	12
			59205838486	X	X					D	A7398	FUSE, CARTRIDGE: SAME AS A736B	EA		REF									-15 4-10	12

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		5920043142S	X	X					D	A740	FUSEHOLDER 71400: FHL18G1-9	EA		1	1	1	1	1	1			3	-15 4-10	5
P	H		59209525360	X	X					D	A741	FUSEHOLDER: 71400: FHL18G1-1	EA		4	1	1	1	1	1	1		12	-15 4-10	8
			59209525350	X	X					D	A742	FUSEHOLDER: SAME AS A741	EA		REF									-15 4-10	8
	(																								
			59209525360	X	X					D	A743	FUSEHOLDER: SAME AS A741	EA		REF									-15 4-10	8
			59209525360	X	X					D	A744	FUSEHOLDER: SAME AS A741	EA		REF									-15 4-10	8
P	H		59202693743	X	X					D	A745	FUSEHOLDER: 71400: FHL18GI-5	EA		1	1	1	1	1	1	1		3	-15 4-10	7
P	H		59230894130	X	X					D	A746A	FUSEHOLDER: 71400: HKL-X	EA		3	1	1	1	1	1	1		9	-15 4-10	9
			59200894130	X	X					D	A747A	FUSEHOLDER: SAME AS A746A	EA		REF									-15 4-10	9
			59200894130	X	X					D	A748A	FUSEHOLDER: SAME AS A746A	EA		REF									-15 4-10	9
P	H		59206360970	X	X					D	A749A	FUSEHOLDER: 71400: HKP-A	EA		4	1	1	1	1	I	1		12	-15 4-10	10
			59206360970	X	X					D	A750A	FUSEHOLDER: SAME AS A749A	EA		REF									-15 4-10	10
			59206360970	X	X					D	A751A	FUSEHOLDER: SAME AS A749A	EA		REF									-15 4-10	10

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE												(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59206360970	X	X					D	A752A	FUSEHOLDER: SAME AS A749A	EA		REF									-15 4-10	, 10
X2	H		53406849956	X	X					D	A753	LATCH: 94222: 49-1-1-0	EA		4									-15 4-10	 5
C	H		53105319515	X	X					*	A753A	WASHER, FLAT: 88044: AN960C416	EA		18									-15 4-10	 5.1
P	H		59350505387	X	X					C	A754	CONNECTOR, RECEPTACLE, ELECTRICAL: 91662: 00-6022-022-940-002	EA		3	1	1	1	1	1	1		9	-15 4-10	 095
X2	H			X	X					C	A755	POLARIZATION KEY: 91662: 60-6002-31-24	EA										3	-15 4-10	 96
C	H		53050545648	X	X					*	A756	SCREW, MACHINE: 96906: M51957-14	EA		6									-15 4-10	'3 89
			53105956425	X	X					*	A757	WASHER, FLAT: SAME AS A133D	EA		REF									-15 4-10	 91
			53109338118	X	X					*	A758	WASHER, LOCK, SPLIT: SAME AS A133E	EA		REF									-15 4-10	 90
			59350505387	X	X					C	A759	CONNECTOR, RECEPTACLE ELECTRICAL SAME AS A754	EA		REF									-15 4-10	 95
				X	X					C	A760	POLARIZATION KEY: SAME AS A755	EA		REF									-15 4-10	 96
			53050545648	X	X					X	A761	SCREW, MACHINE SAME AS A756	EA		REF									-15 4-10	 89

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53105956425	X	X					*	A762 WASHER, FLAT: SAME AS A133D	EA		REF									-15 4-10	91

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109338118	X	X					*	A763	WASHER, LOCK, SPLIT: SAME AS A133E	EA		REF									-15 4-10	 90
			59350505387	X	X					C	A764	CONNECTOR, RECEPTACLE ELECTRICAL: SAME AS A754	EA	REF										-15 4-10	 95
				X	X					c	A765	POLARIZATION KEY: SAME AS A755	EA											REF 4-10	-15 96
			53050545648	X	X					*	A766	SCREW, MACHINE: SAME AS A756	EA		REF									-15 4-10	 89
			53105956425	X	X					*	A767	WASHER, FIAT: SAME AS A133D	EA		REF									-15 4-10	 91
			53109296395	X	X					*	A768	WASHER, LOCK: SAME AS A015	EA		REF									-15 4-10	 90
P	H		59350805023	X	X					C	A769	CONNECTOR, RECEPTACLE, ELECTRICAL: 71785: 250-25-36-170	EA		1	1	1	1	1	1	1		3	-15 4-10	 39
X2	H			X	X					C	A770	POLARIZATION KEY: 71785: 456-99-99-193	EA		1									-15 4-10	 38
			53109349748	X	X					*	A771	NUT, PLAIN, HEXAGON: SAME AS A133F	EA		REF									-15 4-10	 37
C	H		53050545652	X	X					*	A772	SCREW, MACHINE: 96906: MS51957-18	EA		2									-15 4-10	 34
			53105956425	X	X					*	A773	WASHER, FIAT: SAME AS AL33D	EA		REF									-15 4-10	 36
			53109338118	X	X					*	A774	WASHER, LOCK, SPLIT: SAME AS A133E	EA		REF									-15 4-10	 35

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																						
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					C	A775A	COVER, FUSE: 06809: 40-000078-1	EA		1									-15 4-10	24
			53050546651	X	X					*	A776	SCREW, MACHINE: SAME AS A696	EA		REF									-15 4-10	21
			53105319514	X	X					*	A777	WASHER, FLAT: SAME AS A319	EA		REF									-15 4-10	23
			53109296395	X	X					*	A778	WASHER, LOCK: SAME AS A015	EA		REF									-15 4-10	22
X2	H			X	X					C	A779	GROMMET, RUBBER: 70485: 1139	EA		1									-15 4-10	71
X2	H			X	X					C	A780	HANDLE, BOW: 96906: MS39078-3	EA		2									-15 4-10	18
C	H		53050593660	X	X					*	A781	SCREW, MACHINE: 96906: MS51958-64	EA		13									-15 4-10	15
C	H			X	X					*	A782	WASHER, FLAT: SAME AS A121D	EA		REF									-15 4-10	17
			53109338120	X	X					*	A783	WASHER, LOCK: SAME AS A004	EA		REF									-15 4-10	16
P	H		59451004743	X	X					c	A784A	RELAY: 12300: PM1SD24VDC	EA		1	1	2	3	1	2	3		3	-15 4-10	70
C	H		53050546670	X	X					*	A785	SCREW, MACHINE: 96906: MS51957-45	EA		11									-15 4-10	67
C	H		53106853744	X		X				*	A786	WASHER, FLAT: 88044: AN960C8	EA		9									-15 4-10	69

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109338119	X	X					*	A787	WASHER, LOCK SAME AS A021	EA		REF									-15 4-10	68
X2	H			X	X					C	A788	BRACKET, ANGLE: 06809: 40-000065-1	EA		1									-15 4-10	66
			53050546668	X	X					*	A789	SCREW, MACHINE SAME AS A720B	EA		REF									-15 4-10	63
			53106853744	X	X					*	A790	WASHER, FLAT: SAME AS A786	EA		REF									-15 4-10	65
			53109338119	X	X					*	A791	WASHER, LOCK: SAME AS A021	EA		REF									-15 4-10	64
X2	H			X	X					C	A792A	PLATE, SIDE: 06809: 40-000066-1	EA		1									-15 4-10	26
C	H			X	X					D	A793A	SCREW, MACHINE: 88044: AN505P6RS	EA		10									-15 4-10	25
			53105968129	X	X					D	A794	FASTENER, CLINCH: SAME AS A168	EA		REF									-15 4-10	106
			53105968131	X	X					D	A795	FASTENER, CINCH: SAME AS A167	EA		REF									-15 4-10	105
X2	H			X	X					C	A796A	SIDE PLATE: 06809: 40-000066-2	EA		1									-15 4-10	27
				X		X				*	A797A	SCREW, MACHINE: SAME AS A793A	EA		REF									-15 4-10	25
			53105968129	X	X					D	A798	FASTENER, CLINCH: SAME AS A168	EA		REF									-15 4-10	106

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53105968131	X	X					D	A799	FASTENER, CLINCH: SAME AS A167	EA		REF									-15 4-10	105
X1	H									C	A800A	BRACKET: 06809: 40-000067-1	EA		1									-15 4-10	32
			53050546668	X	X					*	A801	SCREW, MACHINE: SAME AS A720B	EA		REF									-15 4-10	28
			53106853744	X	X					*	A802	WASHER, FLAT: SAME AS A786	EA		REF									-15 4-10	30
			53109338119	X	X					*	A803	WASHER, LOCK: SAME AS A021	EA		REF									-15 4-10	29
P	H		58219613243	X	X					C	A805 M	CARD GUIDE: 07556; 58-30-40	EA		2	1	1	1	1	1	1		6	-15 4-10	33
X2	H			X	X					C	A806A	BRACKET: 06809: 40-000067-2	EA		1									-15 4-10	31
			53050546668	X	X					*	A807	SCREW, MACHINE SAME AS A720B	EA		REF									-15 4-10	28
			53106853744	X	X					*	A808	WASHER, FLAT: SAME AS A786	EA		REF									-15 4-10	30
			53109338119	X	X					*	A809	WASHER, LOCK: SAME AS A021	EA		REF									-15 4-10	29
X2	H			X	X					C	A812	TERMINAL BOARD: 75382; 602CY21S1	EA		1									-15 4-10	81

(1) (A) SRCE CD	(1) (B) MNTC DC	(1) (C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53050546655	X	X					*	A813	SCREW, MACHINE	EA		REF									-15	
												SAME AS 163A												4-10	77
			53105319514	X	X					*	A814	WASHER, PLAT:	EA		REF									-15	
												SAME AS A319												4-10	80
			5310929639	X	X					C	A815	WASHER, LOCK:	EA		REF									-15	
												SAME AS A015												4-10	79
X2	H			X	X					C	A15A	BRACKET:	EA		2									-15	
												14850; D1-109-C’												4-10	78.3
X2	H			X	X					C	A8158	SHIELD:	EA		1									-15	
												14850; D1-10981C												4-10	78.2
C	H			X	X					*	A815C	NUT, PLAIN, HEXAGON:	EA		4									-15	
												96906; MS35649-262												4-10	78.1
C	H			X	X					*	A815E	SCREW, MACHINE:	EA		8									-15	
												14850; A1-11071F-3												4-10	78
X2	H			X	X					C	A816A	TERMINAL BOARD:	EA		1	-15									
												75382; 603CT1251												4-10	82
			53109296395	X	X					*	A819	WASHER, LOCK:	EA		REF									-15	
												SAME AS A015												4-10	79
X2	H			X	X					C	A819A	SHIELD:	EA		1									-15	
												14850; A1-10980C												4-10	78.5
X2	H			X	X					C	A8198	STANDOFF:	EA		4									-15	
												14850; D1-1098B-1												4-10	78.4
				X	X					*	A819C	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A815E												4-10	78
X2	H			X	X					C	A820A	STIFFENER:	EA		1									-15	
												06809; 40-000120-1												4-10	76
X2	H			X	X					C	A8208	BRACKET, ANGLE:	EA		2									-15	
												06809; 40-000005												4-10	75

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE												(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53050546651	X	X					*	A821	SCREW, MACHINE: SAME AS A696	EA		REF								-15 4-10	72
			53105319514	X	X					*	A822	WASHER, FLAT: SAME AS A319	EA		REF								-15 4-10	74
			53109296395	X	X					*	A823	WASP, LOCK-: SAME AS A015	EA		REF								-15 4-10	73
P	H		59500977508	X	X					C	A825A	TRANSFORMER, POWER 06809; 40-000106-1	EA		1	1	1	2	1	1	2		2	-15 4-10	103
C	H		53109971888	X	X					*	A826	NUT, PLAIN, HEXAGON: 96906; MS35649-2252	EA		4								-15 4-10	100
			53105319515	X	X					*	A827 N	WASHER, FLAT: SAME AS A753A	EA		REF								-15 4-10	102
C	H		53109338121	X	X					*	A828	WASHER, LOCK: 96906; MS35338-139	EA		6								-15 4-10	101
C	H		53108409151	X	X					*	A828A	NUT, PLAIN, HEXAGON 969061 MS20341-100	EA		13								-15 4-10	97
C	H		53102641390	X	X					*	A828B	WASHER, FLAT: 88044; AN961-10	EA		26								-15 4-10	99
C	H			X	X					*	A828C	WASHER, LOCK: 96906; MS35337-100	EA 4-10	98	13								-15	
A	H	R		X	X					B	A829	LOGIC ASSEMBLY: 58189; A64752-001	EA		2								-15 4-5	10
				X						B	A829A	LOGIC ASSEMBLY: SAME AS A829	EA 4-5	RE 10	-15									
P	H	T	744091125101	X	X					C	A830	CIRCUIT CARD ASSEMBLY: 58189; A53418-Q01	EA		1	1	2	3	1	2	3		3	-15 4-.8	7
X1	D			X	X					D	A831	PRINTED CIRCUIT BOARDS 58189; A53419-001	EA		1									-15 5-2	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59627910994	X	X					D	A832	INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7580K	EA		37								111	-15 5-2	Z2
			59627910994	X	X					D	A833	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA		REF									-15 5-2	Z3
			59627910994	X	X					D	A834	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA		REF									-15 5-2	Z14
			55327910994	X	X					D	A835	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA		REF									-15 5-2	Z15
			59627910994	X	X					D	A836	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA		REF									-15 5-2	Z18
			59627910994	X	X					D	A837	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA		REF									-15 5-2	Z19
			59627910994	X	X					D	A838	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA		REF									-15 5-2	Z22
			59627910994	X	X					D	A839	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA		REF									-15 5-2	Z23
			59627910994	X	X					D	A840	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA		REF									-15 5-2	Z26
			59627910994	X	X					D	A841	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA		REF									-15 5-2	Z27

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																						
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D59627911082			X	X					D	A842	INTEGRATED CIRCUIT, LOGIC GATE: 18324: C7090K	EA		107								321	-15 5-2	26
			59627911082	X	X					D	A843	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-2	Z7
			59627911082	X	X					D	A844	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-2	Z10
			59627911082	X	X					D	A845	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-2	Z11
			59627911082	X	X					D	A846	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-2	Z20
			59627911082	X	X					D	A847	INTEGRATED CIRCUIT, LOGIC GATE SAME AS A842	EA		REF									-15 5-2	Z24
			59627911082	X	X					D	A848	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-2	Z28
P	H	T	74409133466	X	X					C	A849	CIRCUIT, CARD ASSEMBLY: 58189: A53434-001	EA		1	1	2	3	1	2	3		3	-15 4-8	10
X1	D			X	X					D	A850	PRINTED CIRCUIT BOARD: 58189: A53435-001	EA		1									-15 5-3	
P	D		59629111001	X	X					D	A851	INTEGRATED CIRCUIT, LOGIC GATE: 18324: C7088K	EA		15								45	-15 5-3	Z2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59627911048	X	X					D	A852	INTEGRATED CIRCUIT, LOGIC GATE: 18324: C7577K	EA		27								81	-15 5-3	24
			59627911048	X	X					D	A853	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-3	Z5
			59627911048	X	X					D	A854	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-3	Z21
			59627911048	X	X					D	A855	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-3	Z22
			59627911048	X	X					D	A856	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-3	Z23
			59627911082	X	X					D	A857	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-3	Z6
			59627911082	X	X					D	A858	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-3	27
			59627911082	X	X					D	A859	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-3	Z11
			59627911082	X	X					D	A860	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-3	Z12
			59627911082	X	X					D	A861	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-3	Z16

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					C	A862	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-3	Z20
			59627911082	X	X					C	A863	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A84 2	EA		REF									-15 5-3	Z24
P	D		59627911120	X	X					D	A864	INTEGRATED CIRCUIT LOGIC GATE: 18324: C7579K	EA		10								30	-15 5-3	Z8
			59627911120	X	X					D	A865	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A864	EA		REF									-15 5-3	Z9
			59627911120	X	X					D	A866	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A864	EA		REF									-15 5-3	Z10
			59627911120	X	X					D	A867	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A864	EA		REF									-15 5-3	2!4
			59627911120	X	X					D	A868	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A864	EA		REF									-15 5-3	Z18
			59627911120	X	X					D	A869	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A8 64	EA		REF									-15 5-3	Z19
P	D		59627911042	X	X					D	A870	INTEGRATED CIRCUIT, LOGIC GATE: 18324: C7578K	EA		2								6	-15 5-3	Z15
			59627911042	X	X					D	A871	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A870	EA		REF									-15 5-3	Z17

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H	T	74409111145	X	X					C	A872	CIRCUIT, CARD ASSEMBLY: 58189: A53721-001	EA		2	1	2	3	1	2	3		3	-15 4-8	9
XL	D			X	X					D	A873	PRINTED CIRCUIT BOARD: 58189: A53722-001	EA		2									-15 5-4	
			59627911120	X	X					D	A874	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A864	EA		REF									-15 5-4	Z2
			59627911120	X	X					D	A875	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A864	EA		REF									-15 5-4	Z18
			59627911048	X	X					D	A876	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z3
			59627911048	X	X					D	A877	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z6
			59627911048	X	X					D	A878	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z7
			59627911048	X	X					D	A879	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z10
			59627911048	X	X					D	A880	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z11
			59627911048	X	X					D	A881	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z14

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911048	X	X					D	A882	INTEGRATED CIRCUIT, LOGIC GATE SAME AS A852	EA		REF									-15 5-4	Z15
			59627911048	X	X					D	A883	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z22
			59627911048	X	X					D	A884	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z23
			59627911048	X	X					D	A885	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z26
			59627911048	X	X					D	A886	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z27
			74409111145	X	X					C	A887	CIRCUIT, CARD ASSEMBLY: SAME AS A872	EA		REF									-15 4-8	9
				X	X					D	A888	PRINTED CIRCUIT BOARD: SAME AS A873	EA		REF									-15 5-4	
			59627911120	X	X					D	A889	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A864	EA		REF									-15 5-4	Z2
			59627911120	X	X					D	A890	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A864	EA		REF									-15 5-4	Z18
			59627911048	X	X					D	A891	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z3

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911048	X	X					D	A892	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z6
			59627911048	X	X					D	A893	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z7
			59627911048	X	X					D	A894	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z10
			59627911048	X	X					D	A895	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z11
			59627911048	X	X					D	A896	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z14
			59627911048	X	X					D	A897	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z15
			59627911048	X	X					D	A898	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z22
			59627911048	X	X					D	A899	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z23
			59627911048	X	X					D	A900	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z26
			59627911048	X	X					D	A901	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A852	EA		REF									-15 5-4	Z27

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H	T	74409111615	X	X					C	A902	CIRCUIT CARD ASSEMBLY: 58189: A53725-001	EA		2	1	2	3	1	2	3		3	-15 4-8	8
X1	D			X	X					D	A903	PRINTED CIRCUIT BOARD: 58189: A53726-001	EA		2									-15 5-5	
			59627911082	X	X					D	A904	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z1
			59627911082	X	X					D	A905	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z2
			59627911082	X	X					D	A906	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z3
			59627911082	X	X					D	A907	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z4
			59627911082	X	X					D	A908	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z9
			59627911082	X	X					D	A909	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z10
			59627911082	X	X					D	A910	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z11
			59627911082	X	X					D	A911	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z12

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					D	A912	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z17
			59627911082	X	X					D	A913	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z18
			59627911082	X	X					D	A914	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z19
			59627911082	X	X					D	A915	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z20
			59627911082	X	X					D	A916	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z25
			59627911082	X	X					D	A917	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z26
			59627911082	X	X					D	A918	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z27
			59627911082	X	X					D	A919	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z28
			74409111615	X	X					C	A920	CIRCUIT, CARD ASSEMBLY: SAME AS A902	EA		REF									-15 4-8	8
				X	X					D	A921	PRINTED CIRCUIT BOARD: SAME AS A903	EA		REF									-15 5-5	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					D	A922	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z1
			59627911082	X	X					D	A923	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z2
			59627911082	X	X					D	A924	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z3
			59627911082	X	X					D	A925	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z4
			59627911082	X	X					D	A926	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z9
			59627911082	X	X					D	A927	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z10
			59627911082	X	X					D	A928	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z11
			59627911082	X	X					D	A929	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z12
			59627911082	X	X					D	A930	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z17
			59627911082	X	X					D	A931	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z18

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					D	A932	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z19
			59627911082	X	X					D	933	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z20
			59627911082	X	X					D	A934	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z25
			59627911082	X	X					D	A935	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z26
			59627911082	X	X					D	A936	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z27
			59627911082	X	X					D	A937	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA		REF									-15 5-5	Z28
P	H	T	74409352376	X	X					C	A938	CIRCUIT, CARD ASSEMBLY: 58189: A65205-001	EA		1	1	2	3	1	2	3		3	-15 4-8	4
X1	D			X	X					D	A939	PRINTED CIRCUIT BOARD: 58189: A65206-001	EA		1									-15 5-6	
P	D		59107028057	X	X					D	A940	CAPACITOR, FIXED, MICA: 81349: CM05F331J03	EA		9								45	-15 5-6	C1
			59107028057	X	X					D	A941	CAPACITOR, FDIXED, MICA: SAME AS A940	EA		REF									-15 5-6	C2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59107028057	X	X					D	A942	CAPACITOR, FIXED, MICA:- SAME AS A940	EA		REF									-15 5-6	C3
			59107028057	X	X					D	A943	CAPACITOR, FIXED, MICA. SAME AS A940	EA		REF									-15 5-6	C4
			59107028057	X	X					D	A944	CAPACITOR, FIXED, MICA: SAME AS A940	EA		REF									-15 5-6	C5
			59107028057	X	X					D	A945	CAPACITOR, FIXED, MICA: SAME AS A940	EA		REF									-15 5-6	C6
			59107028057	X		X				D	A946	CAPACITOR, FIXED, MICA: SAME AS A940	EA		REF									-15 5-6	C7
			59107028057	X	X					D	A947	CAPACITOR, FIXED, MICA: SAME AS A940	EA		REF									-15 5-6	C8
			59107028057	X	X					D	A948	CAPACITOR, FIXED, MICA. SAME AS A940	EA		REF									-15 5-6	C9
P	D		59109485984	X	X					D	A949	CAPACITOR, FIXED, ELECTROLYTIC: 81349: CS13BE106M	EA		3								15	-15 5-6	C10
			59109485984	X	X					D	A950	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A949	EA		REF									-15 5-6	C11
			59627910994	X	X					D	A951	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA		REF									-15 5-6	Z1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59056819969	X	X					D	A952	RESISTOR, FIXED, COM-POSITION: 81349: RC07GF332J	EA		9								27	-15 5-6	R1
			59056819969	X	X					D	A953	RESISTOR, FIXED, COM-POSITION: SAME AS A952	EA		REF									-15 5-6	R11
			59056819969	X	X					D	A954	RESISTOR, FDIXED, COM-POSITION: SAME AS A952	EA		REF									-15 5-6	R21
			59056819969	X	X					D	A955	RESISTOR, FIXED, COM-POSITION: SAME AS A952	EA		REF									-15 5-6	R31
			59056819969	X	X					D	A956	RESISTOR, FIXED, COM-POSITION: SAME AS A952	EA		REF									-15 5-6	R41
			59056819969	X	X					D	A957	RESISTOR, FIXED, COM-POSITION: SAME AS A952	EA		REF									-15 5-6	R51
			59056819969	X	X					D	A958	RESISTOR, FLXED, COM-POSITION: SAME AS A952	EA		REF									-15 5-6	R61
			59056819969	X	X					D	A959	RESISTOR, FIXED, COM-POSITION: SAME AS A952	EA		REF									-15 5-6	R71
			59056819969	.X	X					D	A960	RESISTOR, FIXED, COM-POSITION: SAME AS A952	EA		REF									-15 5-6	R81
P	D		59056869997	X	X					D	A961	RESISTOR, FIXED, COM-POSITION: 81349: RC07GF682J	EA		9								27	-15 5-6	R2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59056869997	X	X					D	A962	RESISTOR, FIXED, COMPOSITION: SAME AS A961	EA		REF									-15 5-6	R12
			59056869997	X	X					D	A963	RESISTOR, FIXED, COMPOSITION: SAME AS A961	EA		REF									-15 5-6	R22
			59056869997	X	X					D	A964	RESISTOR, FIXED, COMPOSITION: SAME AS A961	EA		REF									-15 5-6	R32
			59056869997	X	X					D	A965	RESISTOR, FIXED, COMPOSITION: SAME AS A961	EA		REF									-15 5-6	R42
			59056869997	X	X					D	A966	RESISTOR, FIXED, COMPOSITION: SAME AS A961	EA		REF									-15 5-6	R52
			59056869997	X	X					D	A967	RESISTOR, FIXED, COMPOSITION: SAME AS A961	EA		REF									-15 5-6	R62
			59056869997	X	X					D	A968	RESISTOR, FIXED, COMPOSITION: SAME AS A961	EA		REF									-15 5-6	R72
			59056869997	X	X					D	A969	RESTSTOR, FIXED, COMPOSITION: SAME AS A961	EA		REF									-15 5-6	R82
P	D		59058000179	X	X					D	A970	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF563J	EA		10								30	-15 5-6	R3
			59058000179	X	X					D	A971	RESISTOR, FIXED, COMPOSITION: SAME AS A970	EA		REF									-15 5-6	R13

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59058000179	X	X					D	A972	RESISTOR, FIXED, COMPOSITION: SAME AS A970	EA		REF									-15 5-6	R23
			59058000179	X	X					D	A973	RESISTOR, FIXED, COMPOSITION: SAME AS A970	EA		REF									-15 5-6	R33
			59058000179	X	X					D	A974	RESISTOR, FIXED, COMPOSITION: SAME AS A970	EA		REF									-15 5-6	R43
			59058000179	X	X					D	A975	RESISTOR, FIXED, COMPOSITION: SAME AS P970	EA		REF									-15 5-6	R53
			59058000179	X	X					D	A976	RESISTOR.FIXED, COMPOSITION: SAME AS A970	EA		REF									-15 5-6	R63
			59058000179	X	X					D	A977	RESISTOR, FIXED, COMPOSITION: SAME AS A970	EA		REF									-15 5-6	R73
			59058000179	X	X					D	A978	RESISTOR, FIXED, COMPOSITION: SAME AS A970	EA		REF									-15 5-6	R83
P	D		59051858510	X	X					D	A979	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF103J	EA		22								66	-15 5-6	R4
			59051858510	X	X					D	A980	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R7
			5905185810	X	X					D	A981	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R14

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051858510	X	X					D	A982	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R17
			59051858510	X	X					D	A983	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R24
			59051858510	X	X					D	A984	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R27
			59051858510	X	X					D	A985	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R34
			59051858510	X	X					D	A986	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R37
			59051858510	X	X					D	A987	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R44
			59051858510	X	X					D	A988	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R47
			59051858510	X	X					D	A989	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R54
			59051858510	X	X					D	A990	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R57
			59051858510	X	X					D	A991	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 -6	R64

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051858510	X	X					D	A992	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R67
			59051858510	X	X					D	A993	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R74
			59051858510	X	X					D	A994	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-6	R77
			59051858510	X	X					D	A995	RESISTOR, FIXED, COMPOSITION: SAME AS P.979	EA		REF									-15 5-6	R84
			59051858510	X	X					D	A996	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-G	R87
P	D		59056863903	X	X					D	A997	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF333J	EA		9								27	-15 5-6	R5
			59056863903	X	X					D	A998	RESISTOR, FIXED, COMPOSITION: SAME AS A997	EA		REF									-15 5-6	R15
			59056863903	X	X					D	A999	RESISTOR, FIXED, COMPOSITION: SAME AS A997	EA		REF									-15 5-6	R25
			59056863903	X	X					D	B001	RESISTOR, FIXED, COMPOSITION: SAME AS A997	EA		REF									-15 5-6	R35
			59056863903	X	X					D	B002	RESISTOR, FIXED, COMPOSITION: SAME AS A997	EA		REF									-15 5-6	R45

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59056863903	X	X					D	B003	RESISTOR, FIXED, COMPOSITION: SAME AS A997	EA		REF									-15 5-6	R55
			59056863903	X	X					D	B004	RESISTOR, FIXED, COMPOSITION: SAME AS A997	EA		REF									-15 5-6	R65
			59056863903	X	X					D	B005	RESISTOR, FIXED, COMPOSITION: SAME AS A997	EA		REF									-15 5-6	R75
			59056863903	X	X					D	8006	RESISTOR, FIXED, COMPOSITION: SAME AS A997	EA		REF									-15 5-6	R85
P	D		59058016998	X	X					D	B007	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF621J	EA		9								27	-15 5-6	R6
			59058016998	X	X					D	B008	RESISTOR, FIXED, COMPOSITION: SAME AS B007	EA		REF									-15 5-6	R16
			59058016998	X	X					D	B009	RESISTOR, FIXED, COMPOSITION: SAME AS 8007	EA		REF									-15 5-6	R26
			59058016998	X	X					D	B010	RESISTOR, FIXED, COMPOSITION: SAME AS B007	EA		REF									-15 5-6	R36
			59058016998	X	X					D	B011	RESISTOR, FIXED, COMPOSITION: SAME AS B007	EA		REF									-15 5-6	R46
			59058016998	X	X					D	B012	RESISTOR, FIXED, COMPOSITION: SAME AS B007	EA		REF									-15 5-6	R56

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59058016998	X	X					D	B013	RESISTOR, FIXED, COM-POSITION: SAME AS 8007	EA		REF									-15 5-6	R66
			59058016998	X	X					D	B014	RESISTOR, FIXED, COM.-POSITION: SAME AS B007	EA		REF									-15 5-6	R76
			59058016998	X	X					D	B015	RESISTOR, FIXED, COM-POSITION: SAME AS B007	EA		REF									-15 5-6	R86
P	D		59051955571	X	X					D	B016	RESISTOR, FIXED, COM-POSITION: 81349: RC20GF6801	EA		18								54	-15 5-6	R8
			59051955571	X	X					D	B017	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R9
			59051955571	X	X					D	B018	RESISTOR, FIXED, COM-POSITION: SAME AS 8016	EA		REF									-15 5-6	R18
			59051955571	X	X					D	B019	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R19
			59051955571	X	X					D	B020	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R28
			59051955571	X	X					D	B021	RESISTOR, FIXED, COM-POSITION: SAME AS 8016	EA		REF									-15 5-6	R29
			59051955571	X	X					D	B022	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R38

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051955571	X	X					D	B023	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R39
			59051955571	X	X					D	B024	RESISTOR, FIXED, COMP-POSITION: SAME AS B016	EA		REF									-15 5-6	R48
			59051955571	X	X					D	B025	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R49
			59051955571	X	X					D	B026	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R58
			59051955571	X	X					D	B027	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R59
			59051955571	X	X					D	B028	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R68
			59051955571	X	X					D	B029	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R69
			59051955571	X	X					D	B030	RESISTOR, FXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R78
			59051955571	X	X					D	B031	RESISTOR, FIXED, COM-POSITION: SAME AS B016	EA		REF									-15 5-6	R79
			59051955571	X	X					D	B032	RESISTOR, FIXED, COM-POSITION: SAME AS 8016	EA		REF									-15 5-6	R88

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051955571	X	X					D	B033	RESISTOR, FIXED, COMPOSITION: SAME AS B016	EA		REF									-15 5-6	R89
P	D		59056910195	X	X					D	B034	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF562J	EA		9								27	-15 5-6	R10
			59056910195	X	X					D	B035	RESISTOR, FIXED, COMPOSITION: SAME AS B034	EA		REF									-15 5-6	R20
			59056910195	X	X					D	B036	RESISTOR, FIXED, COMPOSITION: SAME AS B034	EA		REF									-15 5-6	R30
			59056910195	X	X					D	B037	RESISTOR, FIXED, COMPOSITION: SAME AS B034	EA		REF									-15 5-6	R40
			59056910195	X	X					D	B038	RESISTOR, FIXED, COMPOSITION: SAME AS B034	EA		REF									-15 5-6	R50
			59056910195	X	X					D	B039	RESISTOR, FIXED, COMPOSITION: SAME AS B034	EA		REF									-15 5-6	R60
			59056910195	X	X					D	B040	RESISTOR, FIXED, COMPOSITION: SAME AS B034	EA		REF									-15 5-6	R70
			59056910195	X	X					D	B041	RESISTOR, FIXED, COMPOSITION: SAME AS 3034	EA		REF									-15 5-6	R80
			59056910195	X	X					D	B042	RESISTOR, FIXED, COMPOSITION: SAME AS 8034	EA		REF									-15 5-6	R90

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59052792627	X	X					D	B043	RESISTOR, FIXED, COMPOSITION: 81349: RC42GF750J	EA		2								6	-15 5-6	R9
			59052792627	X	X					D	B044	RESISTOR, FIXED, COMPOSITION: SAME AS 8043	EA		REF									-15 5-6	R92
P	D		59618140768	X	X					D	B045	SEMI-CONDUCTOR DEVICE DIODE: 81350: JAN1N3064	EA		28								84	-15 5-6	CR1
			59618140768	X	X					D	B046	SEMI-CONDUCTOR DEVICE DIODE: SAME AS B045	EA		REF									-15 5-6	CR2
			59618140768	X	X					D	B047	SEMI-CONDUCTOR DEVICE DIODE: SAME AS B045	EA		REF									-15 5-6	CR3
			59618140768	X	X					D	B048	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA		REF									-15 5-6	CR4
			59618140768	X	X					D	B049	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA		REF									-15 5-6	CR5
			59618140768	X	X					D	B050	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA		REF									-15 5-6	CR6
			59618140768	X	X					D	B051	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA		REF									-15 5-6	CR7
			59618140768	X	X					D	B052	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA		REF									-15 5-6	CR8

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59618140768	X	X						B053	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS B045	EA		REF									-15 5-6	CR9
			59618140768	X	X					D	B054	SEMI-CONDUCTOR DE-VICE , DIODE: SAME AS B045	EA		REF									-15 5-6	CR10
			59618140768	X	X					D	B055	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS 8045	EA		REF									-15 5-6	CR11
			59618140768	X	X					D	B056	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS 8045	EA		REF									-15 5-6	CR12
			59618140768	X	X					D	B057	SEMI-CONDUCTOR DE-VICE , DIODE: SAME AS B045	EA		REF									-15 5-6	CR13
			59618140768	X	X					D	B058	SEMI-CONDUCTOR DE-VICE , DIODE: SAME AS B045	EA		REF									-15 5-6	CR14
			59618140768	X	X					D	B059	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS B045	EA		REF									-15 5-6	CR15
			59618140768	X	X					D	B060	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS 8045	EA		REF									-15 5-6	CR16
			59618140768	X	X					D	B061	SEMI-CONDUCTOR DE-VICE , DIODE: SAME AS B045	EA		REF									-15 5-6	CR17
			59618140768	X	X					D	B062	SEMI-CONDUCTOR DE-VICE , DIODE: SAME AS B045	EA		REF									-15 5-6	CR18

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59610680687	X	X					D	B063	SEMI-CONDUCTOR DEVICE , DIODE: 81350: JAN1N3828A	EA		3								9	-15 5-6	VR1
			59610680687	X	X					D	B064	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B063	EA		REF									-15 5-6	VR2
P	D		59610507499	X	X					D	B065	TRANSISTOR: 81350: JAN2N2219	EA		32								160	-15 5-6	Q1
			59610507499	X	X					D	B066	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q3
			59610507499	X	X					D	B067	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q5
			59610507499	X	X					D	B068	TRANSISTOR: SAME AS 8065	EA		REF									-15 5-6	Q7
			59610507499	X	X					D	B069	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q9
			59610507499	X	X					D	B070	TRANSISTOR: SAME AS 8065	EA		REF									-15 5-6	Q11
			59610507499	X	X					D	B071	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q13
			59610507499	X	X					D	B072	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q15
			59610507499	X	X					D	B073	TRANSISTOR: SAME AS 8065	EA		REF									-15 5-6	Q17
			59610507499	X	X					D	B074	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q19

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59610507499	X	X					D	B075	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q21
			59610507499	X	X					D	B076	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q23
			59610507499	X	X					D	8077	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q25
			59610507499	X	X					D	B078	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q27
			59610507499	X		X				D	8079	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q29
			59610507499	X	X					D	B080	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q31
			59610507499	X	X					D	B081	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q33
			59610507499	X	X					D	B082	TRANSISTOR: SAME AS B065	EA		REF									-15 5-6	Q35
P	D		59618804779	X	X					D	B083	TRANSISTOR 81350: JAN2N2905	EA		19								95	-15 5-6	Q2
			59618804779	X	X					D	B084	TRANSISTOR: SAME AS B083	EA		REF									-15 5-6	Q4
			59618804779	X	X					D	B085	TRANSISTOR: SAME AS B083	EA		REF									-15 5-6	Q6
			59618804779	X	X					D	B086	TRANSISTOR: SAME AS 0083	EA		REF									-15 5-6	Q8

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59618804779	X	X					D	B087	TRANSISTOR: SAME AS B083	EA		REF									-15 5-6	Q10
			59618804779	X	X					D	B088	TRANSISTOR: SAME AS 8083	EA		REF									-15 5-6	Q12
			59618804779	X	X					D	B089	TRANSISTOR: SAME AS B083	EA		REF									-15 5-6	Q14
			59618804779	X	X					D	B090	TRANSISTOR: SAME AS 8083	EA		REF									-15 5-6	Q16
			59618804779	X	X					D	B091	TRANSISTOR: SAME AS 8083	EA		REF									-15 5-6	Q18
			59618804779	X	X					D	B092	TRANSISTOR: SAME AS 8083	EA		REF									-15 5-6	Q20
			59618804779	X	X					D	B093	TRANSISTOR: SAME AS B083	EA		REF									-15 5-6	Q22
			59618804779	X	X					D	B094	TRANSISTOR: SAME AS B083	EA		REF									-15 5-6	Q24
			59618804779	X	X					D	B095	TRANSISTOR: SAME AS 8083	EA		REF									-15 5-6	Q26
			59618804779	X	X					D	B096	TRANSISTOR: SAME AS 8083	EA		REF									-15 5-6	Q28
			59618804779	X	X					D	B097	TRANSISTOR: SAME AS 8083	EA		REF									-15 5-6	Q30
			59618804779	X	X					D	B098	TRANSISTOR: SAME AS 8083	EA		REF									-15 5-6	Q32

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59618804779	X	X					D	8099	TRANSISTOR; SAME AS B083	EA		REF									-15 5-6	Q34
			59618804779	X	X					D	B100	TRANSISTOR: SAME AS B083	EA		REF									-15 5-6	Q36
			59709564972	X	X					D	B101	INSULATOR, DISK SAME AS A209C	EA		REF									-15 5-6	H1
A	H	T		X	X					C	B101A	CIRCUIT CARD ASSEMBLY: 58189: A65227-001	EA		1									-15 4-8	4.1
X1	D			X	X					D	B101B	PRINTED CIRCUIT BOARD: 58189: A65228-001	EA		1									-15 5-8.2	
P	D		74401343719	X	X					D	B101C	ELECTRONIC COMPONENT ASSEMBLY: 58189: T00023-004	EA		9								27	-15 5-8.2	Z1
			74401343719	X	X					D	B101D	ELECTRONIC COMPONENT ASSEMBLY: SAME AS B101C	EA		REF									-15 5-8.2	Z2
			74401343719	X	X					D	B101E	ELECTRONIC COMPONENT ASSEMBLY: SAME AS B101C	EA		REF									-15 5-8.2	Z3
			74401343719	X	X					D	B101F	ELECTRONIC COMPONENT ASSEMBLY: SAME AS B101C	EA		REF									-15 5-8.2	Z4
			74401343719	X	X					D	B101G	ELECTRONIC COMPONENT ASSEMBLY: SAME AS B101C	EA		REF									-15 5-8.2	Z5
			74401343719	X	X					D	B101H	ELECTRONIC COMPONENT ASSEMBLY: SAME AS B101C	EA		REF									-15 5-8.2	Z6

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			74401343719	X	X					D	B101J	ELECTRONIC COMPONENT ASSEMBLY: SAME AS B101C	EA	REF											-15 5-8.2	Z7
			74401343719	X	X					D	B101K	ELECTRONIC COMPONENT ASSEMBLY: SAME AS B101C	EA		REF										-15 5-8.2	Z8
			74401343719	X	X					D	B101L	ELECTRONIC COMPONENT ASSEMBLY: SAME AS B101C	EA		REF										-15 5-8.2	Z9
			59627910994	X	X					D	B101M	INTEGRATED CIRCUIT LOGIC GATE: SAME AS A832	EA		REF										-15 5-8.2	Z10
P	H	T	74409352375	X	X					C	B102	CIRCUIT CARD ASSEMBLY: 58189: A65209-001	EA		1	1	2	3	1	2	3		3	-15 4-8	1
X1	D			X	X					D	B103	PRINTED CIRCUIT BOARD: 58189: A65Z210-001	EA		1									-15 5-7	
P	D		59106824925	X	X					D	B104	CAPACITOR, FIXED, ELECTROLYTIC: 81349: CS13BF476K	EA		1								5	-15 5-7	C1
P	D		59108994395	X	X					D	B105	CAPACITOR, FIXED, PAPER: 81349: CP09A1KB104K3	EA		1								3	-15 5-7	C2
P	D		59109412356	X	X					D	B106	CAPACITOR, FIXED, ELECTROLYTIC: 81349: CS13BE107M	EA		3								15	-15 5-7	C4
			59109412356	X	X					D	B107	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS 8106	EA		REF									-15 5-7	C7

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59109412356	X	X					D	B108	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS B106	EA		REF									-15 5.7	C8
P	D		59101145286	X	X					D	B109	CAPACITOR, FIXED, PLASTIC 99515: XL5-223A1SC	EA		1								3	-15 5-7	C5

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59109960666	X	X					D	B110	CAPACITOR, FIXED, ELECTROLYTIC: 81349: CS13BC227M	EA		1								5	-15 5-7	C6
P	D		59056863368	X	X					D	B111	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF203J	EA		2								3	-15 5-7	R1
P	D		59052291971	X	X					D	B112	RESISTOR, FIXED, COMPOSITION: 81349: RC20GF822J	EA		1								3	-15 5-7	R2
P	D		59057235251	X	X					D	B113	RESISTOR, FIXED, COMPOSITION: 81349: RC:07GF222J	EA		1								3	-15 5-7	R3
P	D		59056863798	X	X					D	B114	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF272J	EA		5								15	-15 5-7	R4
P	D		59056816462	X	X					D	8115	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF102J	EA		16								48	-15 5-7	R5
			59056816462	X	X					D	8116	RESISTOR, FIXED, COMPOSITION: SAME AS B115	EA		REF									-15 5-7	R22
			59056816462	X	X					D	8117	RESISTOR, FIXED, COMPOSITION: SAME AS B115	EA		REF									-15 5-7	R23
P	D		59056832241	X	X					D	B118	RESISTOR, FIXED. COMPOSITION: 81349: RC07GF512J	EA		1								3	-15 5-7	R6
P	D		59056837723	X	X					D	B119	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF1S2J	EA		1								3	-15 5-7	R7

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051858510	X	X					D	B120	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-7	R8
P	D		59052792642	X	X					D	B121	RESISTOR, FIXED, COMPOSITION: 81349: RC32GF391J	EA		1								3	-15 5-7	R9
P	D		59059751146	X	X					D	B122	RESISTOR, FIXED, WIRE-WOUND: 81349: RW67V680	EA		1								3	-15 5-7	R10
P	D		59052525434	X	X					D	B123	RESISTOR, FIXED, COMPOSITION: 81349: RC20GF121J	EA		1								3	-15 5-7	R18
P	D		59050599103	X	X					D	B124	RESISTOR, FIXED, FILM: 81349: RN60C2741F	EA		1								3	-15 5-7	R19
P	D		59056896799	X	X					D	B125	RESISTOR, VARIABLE: 81349: RT12C2P502	EA		1								5	-15 5-7	R20
P	D		59059695851	X	X					D	B126	RESISTOR, FIXED, FILM: 81349: RN60D1210F	EA		1								3	-15 5-7	R21
			59618140768	X	X					D	B127	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS B045	EA		REF									-15 5-7	CR1
			59618140768	X	X					D	B128	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS B045	EA		REF									-15 5-7	CR2
			59618140768	X	X					D	B129	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS B045	EA		REF									-15 5-7	CR3

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59612265139	X	X					D	B130	SEMI-CONDUCTOR DEVICE, DIODE: 81350: JANIN3666-2	EA		1								3	-15 5-7	CR6
P	D		59618429609	X	X					D	B131	SEMI-CONDUCTOR DEVICE, DIODE: 81350: JANIN966B	EA		1								3	-15 5-7	VR1
P	D		59618456458	X	X					D	B132	SEMI-CONDUCTOR DEVICE, DIODE: 81350: JAN1N756A	EA		1								3	-15 5-7	VR2
			59618804779	X	X					D	B133	TRANSISTOR: SAME AS B083	EA		REF									-15 5-7	Q1
			59610507499	X	X					D	B134	TRANSISTOR: SAME AS B065	EA		REF									-15 5-7	Q2
			59610507499	X	X					D	B135	TRANSISTOR: SAME AS B065	EA		REF									-15 5-7	Q8
P	D		59618920821	X	X					D	B136	TRANSISTOR: 81350: JAN2N1412	EA		1								5	-15 5-7	Q3
P	D		59619262569	X	X					D	B137	TRANSISTOR: 81349: JAN2N491A	EA		1								5	-15 5-7	Q7
			53109349765	X	X					D	B138	NUT, PLAIN, HEXAGON: SAME AS A005	EA		REF									-15 5-7	H1
C	D		58415151918	X	X					D	B139	WASHER, FLAT: 58189: 688000-066	EA		1									-15 5-7	H2
			53109338120	X	X					D	B140	WASHER, LOCK: SAME AS A004	EA		REF									-15 5-7	H3

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59709564972	X	X					D	B141	INSULATOR, DISK: SAME AS A209C	EA		REF									-15 5-7	H4
P	H	T	74409352370	X	X					C	B142	CIRCUIT CARD ASSEMBLY: 58189: A65215-001	EA		1	1	2	3	1	2	3		3	-15 4-8	3
X1	D			X	X					D	B143	PRINTED CIRCUIT BOARD: 58189: A65216-001	EA		1									-15 5-8	
			59056863798	X	X					D	B144	RESISTOR, FIXED, COMPOSITION: SAME AS B114	EA		REF									-15 5-8	R1
			59056863798	X	X					D	B145	RESISTOR, FIXED, COMPOSITION: SAME AS B114	EA		REF									-15 5-8	R4
			59056863798	X	X					D	B146	RESISTOR, FIXED, COMPOSITION: SAME AS B114	EA		REF									-15 5-8	R7
			59056863798	X	X					D	B147	RESISTOR, FIXED, COMPOSITION: SAME AS B114	EA		REF									-15 5-8	R10
			59056816462	X	X					D	B148	RESISTOR, FIXED, COMPOSITION: SAME AS 3115	EA		REF									-15 5-8	R2
			59056816462	X	X					D	B149	RESISTOR, FIXED, COMPOSITION: SAME AS B115	EA		REF									-15 5-8	R5
			59056816462	X	X					D	B150	RESISTOR, FIXED, COMPOSITION: SAME AS B115	EA		REF									-15 5-8	R8

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59056816462	X	X					D	B151	RESISTOR, FIXED, COMPOSITION: SAME AS 8115	EA		REF									-15 5-8	R11
P	D		59056824101	X	X					D	B152	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF752J	EA		4								12	-15 5-8	R3
			59056824101	X	X					D	B153	RESISTOR, FIXED, COMPOSITION: SAME AS B152	EA		REF									-15 5-8	R6
			59056824101	X	X					D	B154	RESISTOR, FIXED, COMPOSITION: SAME AS B152	EA		REF									-15 5-8	R9
			59056824101	X	X					D	B155	RESISTOR, FIXED, COMPOSITION: SAME AS B152	EA		REF									-15 5-8	R12
P	D		59056863369	X	X					D	B156	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF331J	EA		5								15	-15 5-8	R3
			59056863369	X	X					D	B157	RESISTOR, FIXED, COMPOSITION: SAME AS B156	EA		REF									-15 5-8	R17
			59056863369	X	X					D	B158	RESISTOR, FIXED, COMPOSITION: SAME AS B156	EA		REF									-15 5-8	R21
			59056863369	X	X					D	B159	RESISTOR, FIXED, COMPOSITION: SAME AS B156	EA		REF									-15 5-8	R25
			59056863369	X	X					D	B160	RESISTOR, FIXED, COMPOSITION: SAME AS B156	EA		REF									-15 5-8	R29

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59058016444	X	X					D	B161	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF911J	EA		5								15	-15 5-8	R14
			59058016444	X	X					D	B162	RESISTOR, FIXED, COMPOSITION: SAME AS B161	EA		REF									-15 5-8	R18
			59058016444	X	X					D	B163	RESISTOR, FIXED, COMPOSITION: SAME AS B161	EA		REF									-15 5-8	R22
			59058016444	X	X					D	B164	RESISTOR, FIXED, COMPOSITION: SAME AS B161	EA		REF									-15 5-8	R26
			59058016444	X	X					D	B165	RESISTOR, FIXED, COMPOSITION: SAME AS 8161	EA		REF									-15 5-8	R30
P	D		59056870000	X	X					D	B166	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF183J	EA		5								15	-15 5-8	R15
			59056870000	X	X					D	B167	RESISTOR, FIXED, COMPOSITION: SAME AS B166	EA		REF									-15 5-8	R19
			59056870000	X	X					D	B168	RESISTOR, FIXED, COMPOSITION: SAME AS B166	EA		REF									-15 5-8	R23
			59056870000	X	X					D	B169	RESISTOR, FIXED, COMPOSITION: SAME AS B166	EA		REF									-15 5-8	R27
			59056870000	X	X					D	B170	RESISTOR, FIXED, COMPOSITION: SAME AS B166	EA		REF									-15 5-8	R31

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59056832236	X	X					D	B171	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF391J	EA		6								18	-15 5-8	R16
			59056832236	X	X					D	B172	RESISTOR, FIXED, COMPOSITION: SAME AS B171	EA		REF									-15 5-8	R20
			59056832236	X	X					D	B173	RESISTOR, FIXED, COMPOSITION: SAME AS B171	EA		REF									-15 5-8	R24
			59056832236	X	X					D	B174	RESISTOR, FIXED, COMPOSITION: SAME AS B171	EA		REF									-15 5-8	R28
			59056832236	X	X					D	B175	RESISTOR, FIXED, COMPOSITION: SAME AS B171	EA		REF									-15 5-8	R32
			59056832236	X	X					D	B176	RESISTOR, FIXED, COMPOSITION: SAME AS B171	EA		REF									-15 5-8	R41
P	D		59050518012	X	X					D	B177	RESISTOR, FIXED, FILM: 81349: RN60D7321F	EA		1								3	-15 5-8	R33
P	D		59056832246	X	X					D	B178	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF473J	EA		2								6	-15 5-8	R34
			59056832246	X	X					D	B179	RESISTOR, FIXED, COMPOSITION: SAME AS 8178	EA		REF									-15 5-8	R39
P	D		59056824097	X	X					D	B180	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF302J	EA		1								3	-15 5-8	R35

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59051858510	X	X					D	B181	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-8	R36
			59051858510	X	X					D	B182	RESISTOR, FIXED, COMPOSITION: SAME AS A979	EA		REF									-15 5-8	R37
P	D		59056819970	X	X					D	B183	RESISTOR, FIXED, COMPOSITION: 81349: RC07GF822J	EA		1								3	-15 5-8	R38
			59058000179	X	X					D	B184	RESISTOR, FIXED, COMPOSITION: SAME AS A970	EA		REF									-15 5-8	R40
			59618140768	X	X					D	B185	SEMI-CONDUCTOR DEVICE , DIODE: SAME AS B045	EA		REF									-15 5-8	CR1
			59611140768	X	X					D	B186	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA		REF									-15 5-8	CR2
			59618140768	X	X					D	B187	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA		REF									-15 5-8	CR3
			59618140768	X	X					D	B188	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA		REF									-15 5-8	CR4
			59618140768	X	X					D	B189	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA		REF									-15 5-8	CR5
			59618140768	X	X					D	B190	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA		REF									-15 5-8	CR6

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59619952310	X	X					D	B191	SEMI-CONDUCTOR DEVICE DIODE 81349: JAN1N752A	EA		5								15	-15 5-8	VR1
			59619952310	X	X					D	B192	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B191	EA		REF									-15 5-8	VR2
			59619952310	X	X					D	B193	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B191	EA		REF									-15 5-8	VR3
			59619952310	X	X					D	B194	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B191	EA		REF									-15 5-8	VR4
			59619952310	X	X					D	B195	SEMI-CONDUCTOR DEVICE DIODE: SAME AS B191	EA		REF									-15 5-8	VR5
			59610507499	X	X					D	B196	TRANSISTOR: SAME AS B065	EA		REF									-15 5-8	Q1
			59610507499	X	X					D	B197	TRANSISTOR: SAME AS B065	EA		REF									-15 5-8	Q2
			59610507499	X	X					D	B198	TRANSISTOR: SAME AS B055	EA		REF									-15 5-8	Q3
			59610507499	X	X					D	B199	TRANSISTOR: SAME AS B065	EA		REF									-15 5-8	Q4
			59610507499	X	X					D	B200	TRANSISTOR: SAME AS B065	EA		REF									-15 5-8	Q5
			59610507499	X	X					D	B201	TRANSISTOR: SAME AS B065	EA		REF									-15 5-8	Q6

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59610507499	X	X					D	B202	TRANSISTOR: SAME AS B065	EA	REF										-15 5-8	 Q7
			59610507499	X	X					D	B203	TRANSISTOR: SAME AS B065	EA	REF										-15 5-8	 Q8
			59610507499	X	X					D	B204	TRANSISTOR: SAME AS B065	EA	REF										-15 5-8	 Q9
			59610507499	X	X					D	B205	TRANSISTOR: SAME AS 8065	EA	REF										-15 5-8	 Q10
			59610507499	X	X					D	B206	TRANSISTOR: SAME AS B065	EA	REF										-15 5-8	 Q11
			59610507499	X	X					D	B207	TRANSISTOR: SAME AS B065	EA	REF										-15 5-8	 Q12
			59709564972	X	X					D	8208	INSULATOR, DISK: SAME AS A209C	EA	REF										-15 5-8	 H1
A	H	T		X	X					C	B208A	CIRCUIT CARD ASSEMBLY: 58189: A65223-001	EA	1										-15 4-8	 3.1
X1	D			X	X					D	B208B	PRINTED CIRCUIT BOARD: 58189: A65224-001	EA	1										-15	5-8.1
P	D		74401343714	X	X					D	B208C	ELECTRONIC COMPONENT ASSEMBLY: 50189: T00122-004	EA	1									3	-15 5-8.1	 Z1
P	D		74401343717	X	X					D	B208D	ELECTRONIC COMPONENT ASSEMBLY: 58189: T00024-002	EA	1									3	-15 5-8.1	 Z2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		74401343713	X	X					D	B8208E	ELECTRONIC COMPONENT ASSEMBLY: 58189: T00122-002	EA	1									3	-15 5-8.1	Z3
P	D		74401343721	X	X					D	8208F	ELECTRONIC COMPONENT ASSEMBLY: 58189: T00121-003	EA	1									3	-15 5-8.1	Z4
P	D		74401343720	X	X					D	B208G	ELECTRONIC COMPONENT ASSEMBLY: 58189: T00121-001	EA	1									3	-15 5-8.1	Z5
P	H	T	74409352372	X	X					C	B209	CIRCUIT,CARD ASSEMBLY: 58189: A65421-001	EA	1	1	2	3	1	2	3			3	-15 4-8	5
X1	D			X	X					D	B210	PRINTED CLRCUIT BOARD: 58189: A65422-001	EA	1										-15 5-9	
			59627911082	X	X					D	B211	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-9	Z1
			59627911082	X	X					D	B212	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-9	Z4

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					D	B213 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-9	Z5
			59627911082	X	X					D	B214 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-9	Z6
			59627911082	X	X					D	B215 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-9	Z7
			59627911082	X	X					D	B216 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-9	Z9
			59627910994	X	X					D	B217 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-9	Z3
			59627910994	X	X					D	B218 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A832	EA	REF										-15 5-9	28
			59627910994	X	X					D	B219 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-9	Z12
P	D		59627911004	X	X					D	B220 INTEGRATED CIRCUIT, LOGIC GATE: 18324: C7089K	EA	17									51	-15 5-9	Z10
			59627911004	X	X					D	B221 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z11
			59627911004	X	X					D	B222 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z14

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911004	X	X					D	B223 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS 8220	EA	REF										-15 5-9	Z11
			59627911004	X	X					D	B224 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z16
			59627911004	X	X					D	B225 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z17
			59627911004	X	X					D	B226 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z11
			59627911004	X	X					D	B227 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z19
			59627911004	X	X					D	B228 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z20
			59627911004	X	X					D	B229 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z21
			59627911004	X	X					D	B230 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z24
			59627911004	X	X					D	B231 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z25
			59627911004	X	X					D	B232 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS 8220	EA	REF										-15 5-9	Z25

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911004	X	X					D	B233	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z27
			59627911004	X	X					D	B234	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-9	Z28
P	H	T	74409352374	X	X					C	B235	CIRCUIT,CARD ASSEMBLY: 58189: A65425-001	EA	1	1	2	3	1	2	3		3	-15 4-8	6
X	D			X	X					D	B236	PRINTED CIRCUIT BOARD: 58189: A65426-001	EA	1									-15 5-10	
			5910948S984	X	X					D	B237	CAPACITOI',,FDCED, ELECTROLYTIC: SAME AS A949	EA	REF									-15 5-10	C1
			59627910994	X	X					D	8238	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF									-15 5-10	Z1
			59627910994	X	X					D	B239	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF									-15 5-10	Z2
			59627910994	X	X					D	B240	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF									-15 5-10	Z7
			59627910994	X	X					D	B241	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF									-15 5-10	Z10
			59627910994	X	X					D	B242	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF									-15 5-10	Z16

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59629111001	X	X					D	B243 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF										-15 S-10	Z3
			59629111001	X	X					D	B244 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF										-15 5-10	Z5
			59629111001	X	X					D	B245 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF										-15 5-10	Z6
			59629111001	X	X					D	B246 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF										-15 5-10	Z9
			59629111001	X	X					D	B247 INTEGRATEDCIRCUIT, LOGIC GATE: SAME AS A851	EA	REF										-15 5-10	Z11
			59629111001	X	X					D	B248 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF										-15 5-10	Z13
			59629111001	X	X					D	B249 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF										-15 5-10	Z14
			59629111001	X	X					D	B250 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF										-15 5-10	Z15
			59627911082	X	X					D	B251 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	Z4
			59627911082	X	X					D	B252 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	Z17

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					D	B253 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	Z18
			59627911082	X	X					D	B254 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	ZI9
			59627911082	X	X					D	8255 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	220
			59627911082	X	X					D	B256 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	Z21
			59627911082	X	X					D	B257 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	222
			59627911082	X	X					D	B258 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	223
			59627911082	X	X					D	B259 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	224
			59627911082	X	X					D	B260 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	Z25
			59627911082	X	X					D	B261 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	Z26
			59627911082	X	X					D	B262 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-10	Z27

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					D	B263 INTEGRATED CIRCUIT, LOGIC GATE; SAME AS A842	EA	REF										-15 5-10	Z28
			59056816462	X	X					D	B264 RESISTOR, FIXED,COM-POSITION: SAME AS B115	EA	REF										-15 5-10	R2
			59056816462	X	X					D	B265 RESISTOR, FIXED,COM-POSITION: SAME AS B1	EA	REF										-15 5-10 15	R3
			59056816462	X	X					D	B266 RESISTOR, FIXED,COM-POSITION: SAME AS B115	EA	REF										-15 5-10	R4
			59056816462	X	X					D	B267 RESISTOR, FIXED, COM-POSITION: SAME AS B115	EA	REF										-15 5-10	R7
			59056816462	X	X					D	B268 RESISTOR, FIXED,COM-POSITION: SAME AS B115	EA	REF										-15 5-10	R6
			59056816462	X	X					D	B269 RESISTOR, FIXED,COM-POSITION: SAME AS B1	EA	REF										-15 5-10 15	R7
			59056816462	X	X					D	B270 RESISTOR,FIXED,COM-POSITION: SAME AS B115	EA	REF										-15 5-10	R8
			59056816462	X	X					D	B271 RESISTOR, FIXED,COM-POSITION: SAME AS B115	EA	REF										-15 5-10	R9
P	D		59055837724	X	X					D	B272 RESISTOR, FIXED,COM-POSITION: 81349: RC07GF242J	EA	8									24	-15 5-10	R10

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59056837724	X	X					D	B273 RESISTOR, FIXED,COM- POSITION: SAME AS B272	EA	REF										-15 5-10	R11
			59056837724	X	X					D	B274 RESISTOR, FIXED,COM- POSITION: SAME AS B272	FA	REF										-15 5-10	R12
			59056837724	X	X					D	B275 RESISTOR, FIXED, COM- POSITION: SAME AS B272	EA	REF										-15 5-10	R13
			59056837724	X	X					D	B276 RESISTOR, FIXED,COM- POSITION: SAME AS B272	EA	REF										-15 5-10	R14
			59056837724	X	X					D	B277 RESISTOR, FIXED,COM- POSITION: SAME AS B272	EA	REF										-15 5-10	R15
			59056837724	X	X					D	B278 RESISTOR,FIXED,COM- POSITION: SAME AS B272	EA	REF										-15 5-10	R16
			59056837724	X	X					D	B279 RESISTOR,FIXED,COM- POSITION: SAME AS B272	EA	REF										-15 5-10	R17
P	D		59056832242	X	X					D	B280 RESISTOR,FIXED,COM- POSITION: 81349: RC07GF471J	EA	14									42	-15 5-10	R18
			59056832242	X	X					D	B281 RESISTOR,FIXED,COM- POSITION: SAME AS B280	EA	REF										-15 5-10	R19
P	D		59058059713	X	X					D	B282A RESISTOR, FIXED, COM- POSITION: 81349: RC07GF431J	EA	6									18	-15 5-10	R20

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59058059713	X	X					D	B283A	RESISTOR, FIXED,COM-POSITION: SAME AS B282A	EA	REF										-15 5-10	R21
			59058059713	X	X					D	B284A	RESISTOR, FIXED,COM-POSITION: SAME AS B282A	EA	REF										-15 5-10	R22
			59058059713	X	X					D	B284B	RESISTOR, FIXED, COM-POSITION: SAME AS B282A	EA	REF										-15 5-10	R23
			59058059713	X	X					D	8285A	RESISTOR,FIXED,COM-POSITION: SAME AS B828A	EA	REF										-15 5-10	R24
			59058059713	X	X					D	B285B	RESISTOR,FIXED,COM-POSITION: SAME AS B282A	EA	REF										-15 5-10	R25
			59610680687	X	X					D	B286	SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS B063	EA	REF										-15 5-10	VR1
P	H	T	74400190109	X	X					C	B287	CIRCUIT,CARD ASSEMBLY: 58189: A65429-001	EA	1	1	2	3	1	2	3		3	-15 4-8	13
X1	D			X	X					D	B288	PRINTED CIRCUIT BOARD: 58189: AS5430-001	EA	1									-15 5-11	
P	D		59109847588	X	X					D	B289	CAPACITOR,FIXED,MICA: 81349: CM05F101J03	EA	1								3	-15 5-11	C1
P	D		59106550390	X	X					D	8290	CAPACITOR, FIXED,PAPER: 81349: CP09A1KB153K3	EA	1								3	-15 5-11	C2
P	D		59108944546	X	X					D	B291	CAPACITOR, FIXED, PAPER: 81349: CP09A1KC472K3	EA	1								3	-15 5-11	C3

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		59627911393	X	X					D	B292 INTEGRATED CIRCUIT, LOGIC GATE: 18324: C7091K	EA		13								39	-15 5-11	Z1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
	59627911393			X	X					D	B293 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B292	EA	REF										-15 5-11	Z17
	59629111001			X	X					D	B294 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF										-15 5-11	Z2
	59629111001			X	X					D	B295 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A851	EA	REF										-15 5-11	Z3
	59629111001			X	X					D	B296 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A851	EA	REF	-									15 5-11	Z4
	59629111001			X	X					D	B297 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF										-15 5-11	25
	59627911082			X	X					D	B298 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z6
	59627911082			X	X					D	B299 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z7
	59627911082			X	X					D	B300 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z10
	59627911082			X	X					D	B301 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z11
	59627911082			X	X					D	B302 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z12

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					D	B303 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z13
			59627911082	X	X					D	B304 INTEGRATED CIRCURT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z14
			59627911082	X	X					D	B305 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z15
			59627911082	X	X					D	B306 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z16
			59627911082	X	X					D	B307 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z18
			59627911082	X	X					D	B308 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	21
			59627911082	X	X					D	B309 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 -11	Z22
			59627911082	X	X					D	B310 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z23
			59627911082	X	X					D	B311 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z24
			59627911082	X	X					D	B312 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	225

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					D	B313 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-11	Z28
			59627910994	X	X					D	B314 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-11	ZH
			59627910994	X	X					D	B315 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-11	Z9
			59627910994	X	X					D	B316 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-11	Z19
			59627910994	X	X					D	B317 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-11	Z20
			59627910994	X	X					D	B318 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-11	Z26
P	D		59056832239	X	X					D	B319 RESISTOR,FIXED,COM-POSITION: 81349: RC07GF201J	EA 5-11	4 R1										12	-15
			59056832239	X	X					D	B320 RESISTOR,FIXED,COM-POSITION: SAME AS B319	EA	REF										-15 5-11	R3
			59056832239	X	X					D	B321 RESISTOR, FIXED,COM-POSITION: SAME AS 8319	EA	REF										-15 5-11	R5
			59056832239	X	X					D	B322 RESISTOR, FIXED,COM-POSITION: SAME AS 8319	EA	REF										-15 5-11	R7

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59056832242	X	X					D	B323 RESISTOR,FIXED,COM- POSITION: SAME AS B280	EA 5-11	REF R2	-15										
			59056832242	X	X					D	B324 RESISTOR, FIXED,COM- POSITION: SAME AS B280	EA 5-11	REF R4	-15										
			59056832242	X	X					D	B325 RESISTOR,FDCED,COM- POSITION: SAME AS B280	EA 5-11	REF R6	-15										
			59056832242	X	X					D	B8326 RESISTOR, FIXED,COM- POSITION: SAME AS B280	EA 5-11	REF R8	-15										
			59056832242	X	X					D	B327 RESISTOR, FIXED, COM- POSITION: SAME AS B280	EA 5-11	REF R9	-15										
			59056832242	X	X					D	B328 RESISTOR, FIXED,COM- POSITION: SAME AS B280	EA 5-11	REF R10	-15										
			59056832242	X	X					D	B329 RESISTOR,FIXED,COM- POSITION: SAME AS B280	EA 5-11	REF R13	-15										
			59051858510	X	X					D	B330 RESISTOR, FIXED,COM- POSITION: SAME AS A979	EA 5-11	REF R11	-15										
P	D		59057264413	X	X					D	B331 RESISTOR,FIXED,COM- POSITION: 81349: RC07GF1	EA 5-11 23J	1 R12	3	-15									
P	D		59058026730	X	X					D	B332 RESISTOR, FIXED,COM- POSITION: 81349: RC07GF470J	EA 5-11	1 R14	3	-15									

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59618140768	X	X					D	B333 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B045	EA	REF										-15 5-11	CR1
P	H	T	74409352373	X	X					C	B334 CIRCUIT CARD ASSEMBLY: 58189: A65433-001	EA	I	1	2	3	1	2	3			3	-15 4-8	11
X1	D			X	X					D	B335 PRINTED CIRCUIT BOARD: 58189: A65434-001	EA	1										-15 5-12	
P	D		59108063412	X	X					D	B336 CAPACITOR, FIXED, MICA: 81349: CM06F202103	EA	1									3	-15 5-12	C1
			59627910994	X	X					D	B337 INTEGRATED CIRCUIT LOGIC GATE: SAME AS AE32	EA	REF										-15 5-12	Z1
			59627910994	X	X					D	B337A INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-12	Z2
			59627910994	X	X					D	B338 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-12	Z6
			59627910994	X	X					D	B339 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-12	Z11
			59627910994	X	X					D	B340 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-12	Z12
			59627910994	X	X					D	B341 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A832	EA	REF										-15 5-12	Z14

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627910994	X	X					D	B342 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-12	Z19
			59627911082	X	X					D	B343 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-12	Z4
			59627911082	X	X					D	B344 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-12	ZS
			59627911082	X	X					D	B345 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-12	Z7
			59627911082	X	X					D	B346 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-12	Z8
			59627911082	X	X					D	B347 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-12	Z9
			59627911082	X	X					D	B348 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-12	Z10
			59627911082	X	X					D	B349 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-12	Z13
			59627911082	X	X					D	B350 INTEGRATED CIRCUIT LOGIC GATE; SAME AS A842	EA	REF										-15 5-12	Z16
			59627911004	X	X					D	B351 INTEGRATED CIRCUIT LOGIC GATE: SAME AS B220	EA	REF										-15 5-12	Z1S

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911004	X	X					D	B352 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B220	EA	REF										-15 5-12	Z20
			59627911393	X	X					D	B353 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS 8292	EA	REF										-15 5-12	Z17
			59627911393	X	X					D	B354 INTEGRATED CIRCUIT, LOGIC GATE: SAMEAS B292	EA	REF										-15 5-12	Z18
			59627911393	X	X					D	B355 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B292	EA	REF										-15 5-12	Z21
			59627911393	X	X					D	B356 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B292	EA	REF										-15 5-12	Z22
			59627911393	X	X					D	B357 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B292	EA	REF										-15 5-12	Z23
			59627911393	X	X					D	B358 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B292	EA	REF										-15 5-12	Z24
			59627911393	X	X					D	B359 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B292	EA	REF										-15 5-12	Z25
			59627911393	X	X					D	B360 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B292	EA	REF										-15 5-12	Z26
			59627911393	X	X					D	B361 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B292	EA	REF										-15 5-12	Z27

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911393	X	X					D	B362	INTEGRATED CIRCUIT LOGIC GATE: SAME AS B292	EA	REF										-15 5-12	Z28
			59056832242	X	X					D	B363	RESISTOR , FIXED,COM- POSITION: SAME AS B280	EA	REF										-15 5-12	R1
			59056832242	X	X					D	B364	RESISTOR, FIXED,COM- POSITION: SAME AS B280	EA	REF										-15 5-12	R2
			59056816462	X	X					D	8365	RESISTOR, FIXED,COM- POSITION: SAME AS B115	EA	REF										-15 5-12	R3
P	H	T	74409352371	X	X					C	8366	CIRCUIT CARD ASSEMBLY: 58189: A65437-001	EA	1	1	2	3	1	2	3		3	-15 4-8	12
X1	D			X	X					D	B367	PRINTED CIRCUIT BOARD: 58189: A65438-001	EA	1									-15 5-13	
			59629111001	X	X					D	B368	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF									-15 5-13	Z2
			59629111001	X	X					D	B369	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A851	EA	REF									-15 5-13	Z9
			59627911082	X	X					D	B370	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF									-15 5-13	Z3
			59627911082	X	X					D	B371	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF									-15 5-13	Z4

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					D	B372 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	ZS
			59627911082	X	X					D	B373 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z8
			59627911082	X	X					D	B374 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z12
			59627911082	X	X					D	B375 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z13
			59627911082	X	X					D	B376 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z14
			59627911082	X	X					D	B377 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z15
			59627911082	X	X					D	B378 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z16
			59627911082	X	X					D	B379 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z18
			59627911082	X	X					D	B380 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z19
			59627911082	X	X					D	B381 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z20

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911082	X	X					D	B382 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z21
			59627911082	X	X					D	B383 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z22
			59627911082	X	X					D	B384 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z24
			59627911082	X	X					D	B385 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z26
			59627911082	X	X					D	8386 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z27
			59627911082	X	X					D	B387 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A842	EA	REF										-15 5-13	Z28
			59627910994	X	X					D	B388 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-13	Z6
			59627910994	X	X					D	B389 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-13	Z7
			59627910994	X	X					D	B390 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-12	Z11
			59627910994	X	X					D	B391 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-13	Z17

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627910994	X	X					D	B392 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A832	EA	REF										-15 5-13	Z23
			59627911393	X	X					D	B393 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B292	EA	REF										-15 5-13	Z10
			59056832242	X	X					D	B394 RESISTOR,FDCED,COM- POSITION: SAME AS B280	EA	REF										-15 5-13	R1
			59056832242	X	X					D	B395 RESISTOR,FIXED,COM- POSITION: SAME AS B280	EA	REF										-15 5-13	R2
			59056832242	X	X					D	B396 RESISTOR,FIXED,COM- POSITION: SAME AS B280	EA	REF										-15 5-13	R3
P	H	T	74400189634	X	X					C	B397 CIRCUIT CARD ASSEMBLY: 80063: SME546659	EA	1	1	2	3	1	2	3			3	-15 4-8	2
X1	D			X	X					D	B398 PRINTED CIRCUIT BOARD: 80063: SME546657	EA	1										-15 5-14	
P	D		59109494827	X	X					D	B399 CAPACITOR,FIXED, ELECTROLYTIC: 81349: CS13BD226M	EA	1									5	-15 5-14	C
P	D		59108999129	X	X					D	B400 CAPACITOR,FIDED, ELECTROLYTIC: 81349: CS13BD686M	EA	1										5 5-14	-15 C2
P	D		59627911047	X	X					D	B401A INTEGRATED CIRCUIT, LOGIC GATE: 58189: T00009	EA	5									15 5-14	-15 Z1	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59627911047	X	X					D	B402A	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B401A	EA	REF									-15 5-14	Z2
			59627911047	X	X					D	B403A	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B401A	EA	REF									-15 5-14	Z3
			59627911047	X	X					D	B404A	INTEGRATED CIRCUIT LOGIC GATE: SAME AS B401A	EA	REF									-15 5-14	24
			59627911047	X	X					D	B405A	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS B401A	EA	REF									-15 5-14	ZS
M	H			X	X					C	B406	STRIP,DESIGNATION: 58189: A61707-002	EA	1									-15 4-8	14
A	H	R		X	X					C	B407	CHASSIS,LOGIC ASSEMBLY: 58189: A64752-002	EA	1									-15 4-8	56
X2	H		53400605386	X	X					D	B408	HANDLE POW: 96906: MS39087-3	EA	1									-15 4-8	22
C	H		53050593661	X	X					*	B409	SCREW,MACHINE: 96906: MS51958-65	EA	2									-15 4-8	19
			53109338120	X	X					*	B410	WASHER,LOCK: SAME AS A004	EA	REF									-15 4-8	20
			53101670812	X	X					D	B411	WASHER,FLAT: SAME AS A003	EA	REF									-15 4-8	21
X2	H			X	X					D	B411A	SLIDE: 06666: C300S24	EA	1									-15 4-8	53
C	H			X	X					*	B411B	SCREW,MACHINE: 96906: MS51958-63	EA	34									-15 4-8	49
			53109349765	X	X					*	B411C	NUT,PLAIN,HEXAGON: SAME AS A005	EA	REF									-15 4-8	50

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53101670812	X	X					*	B411D	WASHER,FLAT:	EA	REF										-15	
												SAME AS A003												4-8	51
			53109338120	X	X						B411E	WASHER,LOCK:	EA	REF										-15	
												SAME AS A004												4-8	52
C	H			X	X					*	B411F	SCREW,MACHINE:	EA	2										-15	
												96906: MS51958-69												4-8	52.3
			53109349765	X	X					*	B411G	NUT,PLAIN,HEXAGON:	EA	REF										-15	
												SAME AS A00S												4-8	52.4
			53101670812	X	X					*	B411H	WASHER,FLAT:	EA	REF										-15	
												SAME AS A003												4-8	52.6
			53109338120	X	X					*	8411J	WASHER,LOCK:	EA	REF										-15	
												SAME AS A004												4-8	52.5
C	H		53250580493	X	X					D	B411K	GROMMET.RUBBER:	EA	2										-15	
												96906: MS35490-2												4-8	52.1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
M	H			X	X					D	3412A	WIRING HARNESS: 58189: A65471-001	EA	1										-15 4-8	 57
C	H		59402049142	X	X					D	B413A	TERMINAL LUG: 96906: MS25036-12	EA	14										-15 4-8	 58
A	H	R		X	X					D	8414	CONTACT PLATE ASSEMBLY: 58189: A64752-003	EA	1										-15 4-8	 40.1
			53050593660	X	X					*	B415	SCREW,MACHINE: SAME AS A781	EA	REF										-15 4-8	 36
			53101670812	X	X					*	B416	WASHER,FLAT: SAME AS A003	EA	REF										-15 4-8	 39
			53109338120	X	X					*	B417	WASHER,LOCK: SAME AS A004	EA	REF										-15 4-8	 37
			53109349765	X	X					*	B418	NUT,PIAIN,HEXAGON: SAME AS A005	EA	REF										-15 4-8	 38
X2	H			X	X					E	B419	BUSS BAR: 58189: As3855-001	EA	1										-15 4-8	 43
C	H		53505826151	X	X					*	B420	SCREW,MACHINE, NYLON: 96906: MS18212-30	EA	3										-15 4-8	 41

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H			X	X					*	B421	NUT,NYLON,HEXAGON: 80063: SMB546299	EA	3										,-15 4-8	 42
X2	H			X	X					E	B422	SPACER: 80063: SMB546132	EA	8										-15 4-8	 47
			53050546652	X	X					*	B423	SCREW, MACHINE: SAME AS A1 64A	EA	REF										-15 4-8	 44
			53106389857	X	X					*	B424	WASHER,FLAT: SAME AS A0148	EA	REF										-15 4-8	 46
			53109296395	X	X					-	B425	WASHER,LOCK: SAME AS A015	EA	REF										-15 4-8	 45
2	H			X	X					E	B425A	STRIP INSULATION: 80063: SMD634807-2	EA	1										-15 4-8	 43.1
X2	H			X	X					E	B426	CONTACT PLATE: 58189: A64765-001	EA	1										-15 4-8	 40
X2	H			X	X					F	B426B	INSULATOR, PC CARD: 16512; 200150-01	EA	15										-15 4-8	 40.3
			53050546651	X	X					F	B426C	SCREW, MACHINE: SAME AS A696	EA	REF										-15 4-8	 40.2
P	H		59991345933	X	X					F	8426D	PIN,ELECTRICAL CONTACT: 16512: 540111-04	EA	690	10	15	20	10	15	20		69	-15 4-8	 40.4
X2	H			X	X					F	B426E	INSULATOR: 16512: 550056-01	EA	180									-15 4-8	 40.5
P	H		59991392510	X	X					F	B426F	PIN,ELECTRICAL CONTACT: 16512: 540123-03	EA	180	5	10	15	5	10	15			90 4-8	-15 40.6
				X	X					F	B426G	PIN,ELECTRICAL CONTACT: SAME AS B426F	EA	REF									-15 4-8	 40.7

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					F	B426H	PIN,ELECTRICAL	EA	REF										-15	
												CONTACT:												4-9	40.8
												SAME AS B426F													
				X	X					F	B426J	PIN,ELECTRICAL	EA	REF										-15	
												CON TACT:												4-8	40.9
												SAME AS B426F													
C	H		59408272653	X	X					E	B426K	TERMINAL LUG:	EA	4										-15	
												96906: MS77068-2												4-8	48
A	H			X	X					D	B427	CHASSIS ASSEMBLY:	EA	1										-15	
												58189: A64752-004												4-8	55
X2	H			X	X					E	B428B	TERMINAL BOARD:	EA	1										-15	
												75382: 602C-3/4ST-7UH												4-8	28
X2	H			X	X					E	B429	MARKER,STRIP:	EA	1										-15	
												75382: MS602-7XXXP1A												4-8	29

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H		53050546672	X	X					*	B430	SCREW,MACHINE: 96906: MS51957-47	EA	4										-15 4-8	 24
			53109338119	X	X					*	B431	WASHER,LOCK: SAME AS A021	CA	REF										-15 4-8	 25
			53105586207	X	X					*	B431A	WASHER,FLAT: SAME AS A020M	EA	REF										-15 4-8	 27
			53109249759	X	X						B8432	NUT,PLAIN,HEXAGON: SAME AS A018	EA	REF										-15 4-8	 26
X2	H			X	X					E	B433A	TERMINAL BOARD 75382: 603-C-3UH	EA	1										-15 4-8	 34
M	H			X	X					E	B434	STRIP,MARKER: 75382: MSG03-3XXXPIA	EA	1										-15 4-8	 35
			53050546657	X	X					*	B435	SCREW,MACHINE: SAME AS A013	EA	REF										-15 4-8	 30
			53109296395	X	X					*	B436	WASHER,LOCK: SAME AS AO15	EA	REF										-15 4-8	 31
			53106389857	X	X					*	8436A	WASHER,FLAT: SAME AS A014B	EA	REF										-15 4-8	 33
			53109349761	X	X					*	B437	NUT,PLAIN,HEXAGON: SAME AS A012	EA	REF										-15 4-8	 32
X2	H			X	X					E	B440A	TRIM,PLASTIC: 82654: 203413	EA	1										-15 4-8	 52.2
X1	H			X	X					E	B441	CHASSIS ELECTRICAL EQUIPMENT: 58189: A61706-001	EA	1										-15 4-8	 54

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
A	H	R		X	X					D	B442	PANEL ASSEMBLY: 58189; A64752-005	EA	1										-15 4-8	 23.1
P	H		59309310490	X	X					E	B443	SWITCH, PUSH: 96182: 4535-100-28B	EA	1	1	2	3	1	2	3		2	-15 4-8	 16
P	H		59309907568	X	X					E	B444	SWITCH, TOGGLE: 15605: 8869K4	EA	1	1	2	3	1	2	3		2	-15 4-8	 17
X2	H		59306871079	X	X					E	B445	GUARD, SWITCH: 96906: MS24417-1	EA	1									-15 4-8	 18
			53406849956	X	X					E	B446	LATCH: SAME AS A753	EA	REF									-15 4-8	 15
			53105319515	X	X					B	B46A	WASHER, FLAT: SAME AS A753A	EA	REF									-15 4-8	 15.1
X2	H			X	X					E	B447A	PANEL: 58189; A64755-001	EA	1									-15 4-8	 23
X2	H			X	X					B	B448	GRILL ASSEMBLY: 80063; SMD634754	EA	1									-15 4-5	 25
X2	H			X	X					C	B449	GRILL: 80063; SMD546276-1	EA	1									-15 4-5	 25.3
X2	H			X	X					C	B450	STUD: 78553: P116-473-24	EA	2									-15 4-5	 25.1
C	H		53109826813	X	X					*	B451	LOCKNUT: 96906; MS21044C06	EA	2									-15 4-5	 25.2
A	H	R		X	X					B	B452	READER MECHANISM ASSEMBLY: 58189; A64757-001	EA	2									-15 4-5	 6

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
					X					B	B452A	READER MECHANISM ASSEMBLY: SAME AS B452	EA	REF										-15 4-5	6.1a
X2	11			X	X					C	B453	SLIDE: 06666: C300S10	PR	1										-15 4-7	9

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X	H			X	X					C	B454	CHASSIS, READER: 58189: A64764-001	EA	1										-15 4-7	 10
X2	H			X	X					C	B455	LATCH, HANDLE: 24248; 62-99-220-30	EA	2										-15 4-7	 5
X2	H			X	X					C	B456	GUIDE, TAPE: 58189; A64767-001	EA	1										-15 4-7	 4
			53050546652	X	X					*	B457A	SCREW, MACHINE: SAME AS A164A	EA	REF										-15 4-7	 1
			53106389857	X	X					*	B458A	WASHER, FLAT: SAME AS A014B	EA	REF	1									-15 4-7	 3
			53109296395	X	X					*	B459	WASHER, I.OCK: SAME AS A015	EA	REF										-15 4-7	 2
A	H	R		X	X					C	B461	READER, TAPE: 12344; 373660	EA	1										-15 4-7	 11
			53050593660	X	X					*	B461A	SCREW, MACHINE: SAME AS A781	EA	REF										-15 4-7	 6
			53109338120	X	X					*	B461B	WASHER, LOCK: SAME AS A004	EA	REF										-15 4-7	 7
			53101670812	X	X					*	B461C	WASHER, FLAT: SAME AS A003	EA	REF										-15 4-7	 8
X2	H			X	X					D	B462	CHASSIS, BASE: 12344; 330840	EA	1										-15 4-12	 111

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					D	B463	GUSSET, CHASSIS: 12344; 330850	EA	1										-15 4-12	110
C	H			X	X					*	B464	SCREW, SOCKETHEAD CAP: 12344; 4158650	EA	6										-15 4-12	109

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE												(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					D	B465	GUSSET,RIGHT CHASSIS: 12344; 330851	EA		1									-15 4-12	108
				X	X					*	B466 M	SCREW, SOCKETHEAD CAP: SAME AS B464 M	EA		REF									-15 4-12	107
X2	H			X	X					D	B467	BRACKET, ANGLE: 12344; 340100	EA		1									-15 4-12	105
P	H		59459288232	X	X					D	B468	RELAY: 80089; 91252-132	EA		1	1	2	3	1	2			3	3-15 4-12	104
C	H			X	X					*	B469A	SCREW, MACHINE: 96906; MS35223-28	EA		2									-15 4-12	102
C	H		53106163555	X	X					*	B470	WASHER, LOCK: 96906; MS35333-71	EA		15									-15 4-12	103
P	H		59409836044	X	X					D	B471A	STRIP, TERMINAL: 75173; 3-140	EA		1	1	1	1	1	1			1	3-15 4-12	101
C	H			X	X					*	B472A	SCREW, MACHINE: 96906; MS35223-30	EA		4									-15 4-12	100
C	H		53107225998	X	X					*	B4728	WASHER, FLAT: 96906; MS15795-805	EA		15									-15 4-12	100.2
			53109296395	X	X					*	B472C	WASHER, LOCK: SAME AS A015	EA		REF									-15 4-12	100.1
C	H			X	X					D	B473	JUMPER: 12344; 4110600	EA		2									-15 4-12	99
X2	H			X	X					D	B474	BRACKET,MOUNTING, ELECTRICAL CONNEC-TOR: 12344; 373530	EA		1									-15 4-12	98
C	H53057195064			X	X					*	B475A	SCREW, MACHINE: 96906; M551959-30	EA		13									-15 4-12	95

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE												(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109349761	X	X					*	B477	NUT,PLAIN,HEXAGON: SAME AS A012	EA		REF									4-12	-15 96	
C	H		53050546656	X	X					*	B479	SCREW, MACHINE: 9606; HS51957-32	EA		2									4-12	-15 83	
			53105319514	X	X					*	B480A	WASHER, FLAT: SAME AS A319	EA		REF									4-12	-15 86	
			53109349761	X	X					*	B481	NUT,PLAIN,HEXAGON: SAME AS A012	EA		REF									4-12	-15 84	
X2	H			X	X					D	B481A	ROD, PUSH: 12344; 373320	EA		1									4-12	-15 94	
P	H	R	74408987036	X	X					D	B482 M	CIRCUIT CARD ASSEMBLY 12344; 890050	EA		1	1	2	3	1	2	3		3 4-12	-15 61	
			53057195064	X	X					*	B483	SCREW, MACHINE: SAME AS B475A	EA		REF									-15 4-12	60	
X1	H			X	X					E	B484	PRINTED CIRCUIT BOARD: 12344; 903450	EA		1									-15 4-15	15	
C	H			X	X					*	B485	STANDOFF: 12344; 321011	EA		4									-15 4-15	13	
C	H		53050546650	X	X					*	B486	SCREW, MACHINE: 96906; MS51957-26	EA		10									-15 4-15	11	
			53106163555	X	X					*	B486A	WASHER, LOCK: SAME AS 8470	EA		REF									-15 4-15	12.1	
			53107225998	X	X					*	B487	WASHER, FLAT: SAME AS B4728	EA		REF									-15 4-15	12	
P	H		59108215215	X	X					E	B488A	CAPACITOR: 71590; 2DD460L471K	EA		1	1	2	3	1	2		3	3-15 4-15	2	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		59618923361	X	X					E	B489	SEMI-CONDUCTOR DEVICE, DIODE: 81349; 1N750A	EA		2	1	2	3	1	2	3		6	-15 4-15	3
			59618923361	X	X					E	B489A	SEMI-CONDUCTOR DEVICE, DIODE: SAME AS 8489	EA		REF									-15 4-15	3
P	H		59619305325	X	X					E	B490A	TRANSISTOR: 80131; 2N3565	EA		1	1	2	3	1	2	3		5	-15 4-15	1
P	H		59618377262	X	X					E	B491 M	TRANSISTOR: 81349; 2N697	EA		2	1	2	3	1	2	3		10	-15 4-15	1.1
			59618377262	X	X					E	B492 M	TRANSISTOR: SAME AS 8491 M	EA		REF									-15 4-15	1.1
			59056863368	X	X					E	B493B	RESISTOR,FIXED, COMPOSITION: SAME AS 8111	EA		REF									-15 4-15	4
P	H		58056863129	X	X					E	B494	RESISTOR, FLYED, COMPOSITION: 81349; RC07GF104K	EA		1	1	2	3	1	2	3		3	-15 4-15	6
P	H		59056869997	X	X					E	B495	RESISTOR, FIXED, COMPFOSITION: 81349; RC07GF682K	EA		1	1	2	3	1	2	3		3	-15 4-15	5
P	H		59056837721	X	X					E	B496	RESISTOR, FIXED, COMPOSITION: 81349; RC07GF101K	EA		1	1	2	3	1	2	3		3	-15 4-15	7
P	H		59057523340	X	X					E	B498 M	RESISTOR, FIXED, COMPOSITION: 81349; RC07GF472K	EA		1	1	2	3	1	2	3		3	-15 4-15	8

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		59051711997	X	X					E	B499	RESISTOR, FIXED, COMPOSITION: 81349; RC20GF331K	EA		1	1	2	3	1	2	3		3	-15 4-15	9
P	H		59051956806	X	X					E	B500	RESISTOR, FIXED, COMPOSITION: 81349; RC20GF102K	EA		1	1	2	3	1	2	3		3	-15 4-15	10
C	H			X	X					E	B501 M	TERMINAL PIN: 71279; 2186-2	EA		7									-15 4-15	14
X2	H			X	X					D	B502	BUSHING: 12344; 4083300	EA		1									-15 4-12	106
A	H	R		X	X					D	B503	HARNESS ASSEMBLY: 12344; 373760	EA		1									-15 4-12	93.1
			53050546651	X	X					*	B504	SCREW, MACHINE: SAME AS A696	EA		REF									-15 4-12	79
			53057195064	X	X					*	B505A	SCREW, MACHINE: SAME AS B475A	EA		REF									-15 4-12	82
			53106163555	X	X					*	B506	WASHER, LOCK: SAME AS 8470	EA		REF									-15 4-12	80
C	H			X	X					*	B507A	WASHER, LOCK: 96906; MS35335-58	EA		1									-15 4-12	81
P	H		59359293118	X	X					E	B508	CONNECTOR,RECEPTA-CLE, ELECTRICAL: 10400; EP34PJ	EA		1	1	1	1	1	1	1		3	-15 4-12	90

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		59350505346	X	X					E	B511A	CONNECTOR, RECEPT-ACLE, ELECTRICAL: 10040; 25026-16PGDSP	EA		1	1	1	1	1	1	1		3	-15 4-12	91
X2	H			X	X					E	B512	BRACKET CONNECTOR: 12344; 331670	EA		1									-15 4-12	92
C	H		59409282030	X	X					E	B513 M	TERMINAL LUG: 02660; AMP31881AA520-06	EA		3									-15 4-12	88
C	H		74400193444	X	X					E	B514 M	CONTACT ELECTRICAL: 00779; 41646-3	EA		54									-15 4-12	87
A	H	R		X	X					E	B515	NETWORK ASSEMBLY: 12344; 331690	EA		1									-15 4-12	89
X2	H			X	X					F	B517	BOARD COMPONENT MOUNTING: 12344; 331700	EA		1									-15 4-18	13
X2	H		59405492738	X	X					F	B518	TERMINAL STUD: 88245; 12008	EA		4									-15 4-18	12
P	H		59619310355	X	X					F	B519	SEMI-CONDUCTOR DEVICE, DIODE: 14099; SS875	EA		1	1	2	3	1	2	3		3	-15 4-18	2
P	H		59109542218	X	X					F	B520B	CAPACITOR, FIXED: 00656; AFH2-06-20	EA		1	1	2	3	1	2	3		3	-15 4-18	7
C	H		53050545649	X	X					*	B521	SCREW, MACHINE: 96906; MS51957-15	EA		2									-15 4-18	3

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109349748	X	X					*	B522	NUT,PLAIN,HEXAGON: SAME AS A133F	EA		REF									-15 4-18	4
C	H		53107821349	X	X					*	B523	WASHER, FLAT: 96906; MS15795-804	EA		4									-15 4-18	6
C	H		53105503715	X	X					*	B524	WASHER, LOCK: 96906; MS35333-70	EA		11									-15 4-18	5
P	H		59059718509	X	X					F	B525	RESISTOR: 44655; 1719	EA		1	1	2	3	1	2	3		3	-15 4-18	1
X2	H			X	X					F	B526	SPACER, SLEEVE: 12344; 321012	EA		2									-15 4-18	11
			53050546652	X	X					*	B527	SCREW, MACHINE: SAME AS A164A	EA		REF									-15 4-18	8
			53106163555	X	X					*	B528	WASHER, LOCK: SAME AS 8470	EA		REF									-15 4-18	9
			53106389857	X	X					*	B529	WASHER, FLAT: SAME AS A014B	EA		REF									-15 4-18	10
X2	H		59408397979	X	X					E	B529A	BLOCK, CONNECTOR: 00779; 480064-3	EA		2									-15 4-12	93
C	H			X	X					D	B530	CLAMP, CABLE: 05593; CLE1-4	EA		1									-15 4-12	78
			53050546653	X	X					*	B531A	SCREW, MACHINE: SAME AS A335	EA		REF									-15 4-12	76
			53107225998	X	X					*	B532	WASHER, FLAT: SAME AS B472B	EA		REF									-15 4-12	77
			53106163555	X	X					*	B532A	WASHER, LOCK: SAME AS B470	EA		REF									-15 4-12	78.1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H			X	X					D	B532B	CLAMP, CABLE: 05593; CLES-16	EA		1									-15 4-12	78.4
			53050546653	X	X					*	B532C	SCREW, MACHINE: SAME AS A335	EA		REF									-15 4-12	78.2
			53107225998	X	X					*	B532D	WASHER, FLAT: SAME AS B472B	EA		REF									-15 4-12	78.3
			53106163555	X	X					*	B532E	WASHER, LOCK: SAME AS B470	EA		REF									-15 4-12	78.5

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H			X	X					D	B533A	TERMINAL LUG: 12344; 4110300	EA		4									-15 4-12	71
X2	H			X	X					D	B534	FAN VANE AXIAL: 12344; 349380	EA		1									-15 4-12	70
C	H		53057534451	X	X					*	B535	SETSCREW: 96906; MS51021-42	EA		1									-15 4-12	69
A	H	R		X	X					D	B536	MOTOR ASSEMBLY, ALTERNATING: 03511; SKH17MG191118906	EA		1									-15 4-12	75
C	H			X	X					*	B537A	SCREW, MACHINE: 96906; MS35223-80	EA		2									-15 4-12	72
			53105319515	X	X					*	B538 M	WASHER, FLAT: SAME AS A753A	EA		REF									-15 4-12	74
			53109338121	X	X					*	B539	WASHER, LOCK: SAME AS A828	EA		REF									-15 4-12	73
X2	H			X	X					E	B540	BASE MOTOR: 88422; 111B906AA006	EA		1									-15 4-17	6
P	H	T	61051258141	X	X					E	B541	MOTOR ALTERNATING: 88422; 5KH17MG19	EA		1	*	*	*	1	2	3		3	-15 4-17	1,2,3,4,5

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		74408954054	X	X					D	B546	PULLEY, INTEGRATED, TOOTH, 60 Hz: 12344; 2204432	EA		1	1	1	2	1	1	2		1	-15 4-12	68
C	H			X	X					*	B546A	SETSCREW: 96906; MS51963-11	EA		3									-15 4-12	67
X2	H			X	X					D	B547A	PANEL, BLANK: 12344; 378610	EA		1									-15 4-12	66
			53057195064	X	X					*	B548	SCREW, MACHINE: SAME AS B475A	EA		REF									-15 4-12	65
X2	H			X	X					D	B549	BUSHING,PANEL: 12344; 330310	EA		1									-15 4-12	59
P	H	R	74401048912	X	X					D	B550	CAPSTAN DRIVE ASSEMBLY: 12344; 330410	EA		1	1	1	1	1	1	1		3	-15 4-12	64
C	H			X	X					*	B551A	SCREW, MACHINE: 96906; MS16995-26	EA		6									-15 4-12	62
C	H		53105432739	X	X					*	B552	WASHER, LOCK: 96906; MS35333-72	EA		8									-15 4-12	63
			53107225998	X	X					*	B552A	WASHER, FLAT: SAME AS B472B	EA		REF									-15 4-12	63.1
X2	H			X	X					E	B553	FRAME: 12344; 335610	EA		1									-15 4-16	61
P	H		31200016061	X	X					E	B554	BUSHING, SLEEVE: 12344; 350200	EA		1	*	*	*	*	*	*		5	-15 4-16	60
P	H		74401686908	X	X					E	B555	BUSHING, FLANGE: 12344; 349840	EA		1	*	*	*	*	*	*		5	-15 4-16	59
P	H31201828219			X	X					E	B556	BUSHING, SLEEVE: 12344: 349841	EA		3	*	*	*	*	*	*		5	-15 4-16	58

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		31201828640	X	X					E	B557	BUSHING, SLEEVE: 12344; 349843	EA		1	1	2	3	1	2	3		5	-15 4-16	57
P	H		66059080986	X	X					E	B558	PLATE CAPSTAN ADJUSTING: 12344; 145780	EA		1	*	*	*	*	*	*		3	-15 4-16	56
P	H		53056865973	X	X					*	B559 M	SCREW,SOCKET HEAD: 12344; 304182	EA		1	*	*	*	*	*	*		10	-15 4-16	53
P	H		5305701778	X	X					*	B560 M	SET SCREW, SOCKET HEAD: 123UI 4160600	EA		1	*	*	*	*	*	*		10	-15 4-16	52
			53106163555	X	X					*	B561	WASHER, LOCK: SAME AS B470	EA		REF									-15 4-16	54
			53107225998	X	X					*	B562	WASHER, FLAT: SAME AS B472B	EA		REF									-15 4-16	55
A	H	R		X	X					E	B563	ACTUATOR ASSEMBLY: 12344; 328650	EA		1									-15 4-16	51.1
P	H		53051880219	X	X					*	B564 M	SCREW, SOCKET HEAD: 12344; 4153750	EA		2	*	*	*	*	*	*		20	-15 4-16	39
P	H		74400878455	X	X					F	B565	LIMIT, ESCAPEMENT: 12344; 223770	EA		1	*	*	*	*	*	*		3	-15 4-16	48
P	H		53050570508	X	X					*	B567	SCREW, MACHINE: 96906; A51958-11	EA		3	*	*	*	*	*	*		15	-15 4-16	46
			53109338118	X	X					*	B568A	WASHER, LOCK: SAME AS A133E	EA		REF									-15 4-16	47

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE											(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION			UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		74400878439	X	X					F	B569	ARMATURE ASSEMBLY: 12344: 318460		EA		1	1	2	3	1	2	3		1	-15 4-16	44
P	H		74409265421	X	X					F	B570	SPRING, ACTUATOR: 12344; 300371		EA		1	*	*	*	*	*	*		5	-15 4-16	43
P	H		53056019080	X	X					F	B571	SCREW, TENSION ADJUSTING: 12344; 304370		EA		1	*	*	*	*	*	*		10	-15 4-16	42
P	H		53104043785	X	X					*	B572A	NUT,SELF-LOCKING: 12344; 4172400		EA		1	*	*	*	*	*	*		10	-15 4-16	41
P	H		74409716201	X	X					F	B573	SHIM, ANTI-RESIDUAL: 12344; 226374		EA		1	*	*	*	*	*	*		10	-15 4-16	45
P	H		74400878465	X	X					F	B574	BRACKET, ACTUATOR: 12344:313740		EA		1	*	*	*	*	*	*		4	-15 4-16	50
			53050570508	X	X					*	B575	SCREW, MACHINE: SAME AS 8567		EA		REF									-15 4-16	49
P	H		74400192215	X	X					F	B576	COIL FRAME ASSEMBLY: 12344; 332210		EA		1	1	2	3	1	2	3		3	-15 4-16	51
P	H		66059877679	X	X					E	B577	SHAFT-GEAR ASSEMBLY: 12344; 135511		EA		1	1	2	3	1	2	3		1	-15 4-16	38
P	H		74401656670	X	X					E	3578	SHAFT IDLER: 12344; 330890		EA		1	*	*	*	*	*	*		4	-15 4-16	36
P	H		53400577774	X	X					E	B579	WASHER, THRUST: 12344; 320221		EA		1	1	2	3	1	2	3		3	-15 4-16	35
P	H		53407750455	X	X					E	B580	SHIM,0.003"THICK, .375" O. D., .190"I. D. 01351; SSS21		EA		2	*	*	*	*	*	*		10	-15 4-16	18

Q36

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		53407750458	X	X					E	B581 SHIM, .005" THICK, .375"O.D., .190"I.D. 01351: 5SS22	EA		2	*	*	*	*	*	*		10	-15 4-16	18.1
P	H		53402261840	X	X					E	B582 SHIM, .010" THICK, .375" 0.D., 190"I.D. 01351; SSS23	EA		2	*	*	*	*	*	*		10	-15 4-16	18.2
P	H		53654095472	X	X					C	B583 SHIM, .003" THICK, .375"0O.D., .253"I.D. 01351; SSS24	EA		4	*	*	*	*	*	*		20	-15 4-16	37
X2	H			X	X					E	B584 SHIM, .005 THICK, .375"O.D., .253"I.D. 01351; SSS25	EA		4									-15 4-16	37.1
X2	H			X	X					E	B585 M SHIM, .010" THICK, .375"0.D., .253"I.D. 01351; SSS26	EA		4									-15 4-16	37.2
P	H		66059877682	X	X					E	B586 GEAR CLUSTER: 66059; 877682	EA		1	1	2	3	1	2	3		1	-15 4-16	33
P	H		66059877683	X	X					E	B587 GEAR CLUSTER: 66059; 877683	EA		1	1	2	3	1	2	3		1	-15 4-16	34
C	H		53056559246	X	X					*	B588 SETSCREW: 96906; MS51021-10	EA		2									-15 4-16	32
P	H		74401656671	X	X					E	B589 SHAFT, CAPSTAN: 12344; 350260	EA		1	*	*	*	*	*	*		5	-15 4-16	31
P	H		74400878469	X	X					E	B590 CLUTCH ASSEMBLY DRIVE: 12344:325410	EA		1	1	2	3	1	2	3		1	-15 4-16	25,26,27, 28,29,30
C	H		53107019130	X	X					E	B591 WASHER: 12344; 304282	EA		1									-15 4-16	24
A	H	R	30200531455	X	X					E	B592 GEAR ASSEMBLY,SPIDER; 12344; 342660	EA		1									-15 4-16	23.1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		59408253696	X	X					*	B593	PIN, SPRING: 96906: MS17143-4	EA		1	*	*	*	*	*	*		5	-15 4-16	19
P	H		53402825322	X	X					F	B594A	RING, RETAINING: 79136; 5133-12	EA		1	*	*	*	*	*	*		10	-15 4-16	20
P	H		74400878471	X	X					F	B595	GEAR,DRIVE,MOLDED: 12344; 325430	EA		1	1	2	3	1	2	3		1	-15 4-16	22
P	H		74400878470	X	X					F	B596	SPIDER, CAPSTAN: 12344; 325440	EA		1	*	*	*	*	*	*		3	-15 4-16	23
P	H		53652351003	X	X					F	B596A	SHIM, .003' THICK, .373"O.D. 12344; 305651	EA		6	*	*	9	9	9	9		18	-15 4-16	21
X2	H			X	X					F	B596B	SHIM, .OOS THICK, .373"O.D. 12344; 305652	EA		6									-15 4-16	21.1
X2	H			X	X					F	B596C	SHIM, .010"'THICK, .373"O.D. 12344; 305653	EA		6									-15 4-16	21.2
X2	H			X	X					E	B597	BLOCK,ROD MOUNTING: 12344; 330330	EA		1									-15 4-16	16
				X	X					*	B598A	SCREW, MACHINE: SAME AS BS51A	EA		REF									-15 4-16	14
			53105432739	X	X					*	B599	WASHER, LOCK: SAME AS B552	EA		REF									-15 4-16	15
C	H			X	X					*	B599A	WASHER, FLAT: 96906; MS15795-807	EA		2									-15 4-16	15.1
X2	H			X	X					E	B600	BLOCK, LATCH PIVOT: 12344; 330350	EA		1									-15 4-16	13
C	H			X	X					*	B601A	SCREW, MACHINE: 12344; 4157452	EA		2									-15 4-16	11

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53105503715	X	X					*	B602	WASHER, LOCK: SAME AS B524	EA		REF									-15 4-16	12
C	H		53105956211	X	X					*	B602A	WASHER, FLAT: 96906; MS15795-803	EA		14									-15 4-16	12.1
X2	H			X	X					E	B603	PIN, PIVOT: 12344; 330740	EA		1									-15 4-16	9
X2	H			X	X					E	B604	LATCH ASSEMBLY: 12344; 330380	EA		1									-15 4-16	10
X2	H			X	X					E	B605	SPRING,TAPE SLEWING: 12344; 330320	EA		1									-15 4-16	8
C	H		53050545647	X	X					*	B606	SCREW, MACHINE: 96906: MS51957-13	EA		5									-15 4-16	6
			53105503715	X	X					*	B607	WASHER, LOCK: SAME AS B524	EA		REF									-15 4-16	7
			53105956211	X	X					*	B607A	WASHER, FLAT: SAME AS B602A	EA		REF									-15 4-16	7.1
X2	H		66059081001	X	X					E	B608	STRIP, TERMINAL: 12344; 144560	EA		1									-15 4-16	5
			53050545647	X	X					*	B609	SCREW, MACHINE: SAME AS B606	EA		REF									-15 4-16	3
			53105503715	X	X					*	B610	WASHER, LOCK: SAME AS B524	EA		REF									-15 4-16	4
X2	H			X	X					E	B611	PLATE, ADAPTER: 12344; 349450	EA		1									-15 4-16	2
C	H		53057640068	X	X					*	B612	SCREW, MACHINE: 96906; MS51959-45	EA		4									-15 4-16	1
P	H		14409365432	X	X					E	B612A	GEAR WHEEL ASSEMBLY: 12344; 330400	EA		1	1	2	3	1	2	3		1	-15 4-16	17

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE												(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		74408000891	X	X					D	B613A	LEVER ASSEMBLY: 12344; 347880	EA		1	1	2	3	1	2	3		2	-15 4-12	58
C	H		53055767266	X	X					*	B616	SETSCREW: 96906: MS51021-22	EA		1									-15 4-12	S6
P	H		74408954002	X	X					D	B617	CAM,TAPE MECHANISM: 12344; 330370	EA		1	1	2	3	1	2	3		1	-15 4-12	55
P	H	T	74400193016	X	X					D	B618	READ HEAD ASSEMBLY: 12344;: 349871	EA		1	*	*	*	1	2	3		3	-15 4-12	54
C	H			X	X					*	B619A	SCREW, MACHINE: 96906; MS16995-25	EA		2									-15 4-12	52
			53105432739	X	X					*	B620	WASHER, LOCK: SAME AS 8552	EA		REF									-15 4-12	53
X2	D			X	X					E	B621	SUPPORT,READ HEAD: 12344:; 349480	EA		1									-15 4-14	25
P	D		74409954068	X	X					E	B622	LEVER ASSEMBLY, STAR-WHEEL: 12344: 349820	EA		8								24	-15 4-14	24
X1	D			X	X					F	B623A	LEVER, STAR WHEEL: 12344; 349440	EA		8									-15 4-14	23
X1	D			X	X					F	B624	STARWHEEL 12344:601545-1	EA		8									-15 4-14	22
X2	D		74400878612	X	X					E	B625	BUSHING, SLEEVE: 12344; 137350	EA		1									-15 4-14	21

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	D			X	X					E	B626	PIN: 12344; 318693	EA		1									-15 4-14	20
A	D	R		X	X					E	B627	CONTACT ASSEMBLY, MOVABLE: 12344; 349501	EA		1									-15 4-14	19.1
C	D			X	X					*	B628A	SCREW, MACHINE: 12344; 4156400	EA		8									-15 4-14	14
			53107821349	X	X					*	B629A	WASHER, FLAT: SAME AS B523	EA		REF									-15 4-14	15
			53109338118	X	X					*	B6298	WASHER, LOCK: SAME AS A133E	EA		REF									-15 4-14	14.1
X2	D			X	X					F	B630	BASE ASSEMBLY,CON-TACT: 12344; 361281	EA		1									-15 4-14	18
			53050545647	X	X					*	B631	SCREW, MACHINE: SAME AS 8606	EA		REF									-15 4-14	17
X2	D			X	X					F	B632	BRACKET,CONTACT: 12344:; 353960	EA		1									-15 4-14	19
C	D			X	X					*	B633A	SETSCREW: 96906; MS51029-11	EA		2									-15 4-14	16
A	D	R		X	X					E	B634	CONTACT ASSEMBLY, FIXED: 12344; 349801	EA		1									-15 4-14	13.1
C	D			X	X					*	B635A	SCREW, MACHINE: 12344:; 4154500	EA		2									-15 4-14	1
			53105956211	X	X					*	B635B	WASHER, FLAT: SAME AS B602A	EA		REF									-15 4-14	1.1
			53109338118	X	X					*	B635C	WASHER, LOCK: SAME AS A133E	EA		REF									-15 4-14	1.2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	D			X	X					F	B636	SUPPORT FIXED CONTACT: 12344; 347861	EA		1									-15 4-14	13
P	D		74400190012	X	X					F	B637A	CONTACT ASSEMBLY: 12344; 347801	EA		1								3	-15 4-14	12

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		53054947605	X	X					*	B638	SCREW,SOCKET HEAD: 12344: 4150850	EA		9							18	-15 4-14	4
P	D		74400190017	X	X					F	B639A	CONTACT ASSEMBLY: 12344; 347802	EA		1							3	-15 4-14	11
				X	X					*	B640	SCREW,SOCKET HEAD: SAME AS B638	EA		REF								-15 4-14	4
P	D		74400190826	X	X					F	B641	CONTACT ASSEMBLY: 12344; 347803	EA		1							3	-15 4-14	10
				X	X					*	B642	SCREW, SOCKET HEAD: SAME AS B638	EA		REF								-15 4-14	4
P	D		74400190031	X	X					F	B643	CONTACT ASSEMBLY: 12344; 347804	EA		1							3	-15 4-14	9
				X	X					*	B644	SCREW, SOCKET HEAD: SAME AS B638	EA		REF								-15 4-14	4
P	D		74400190107	X	X					F	B645	CONTACT ASSEMBLY: 12344; 347805	EA		1							3	-15 4-14	8
				X	X					*	B646	SCREW, SOCKET HEAD: SAME AS 8638	EA		REF								-15 4-14	4
P	D		74400189910	X	X					F	B647	CONTACT ASSEMBLY: 12344; 347806	EA		1							3	-15 4-14	7
				X	X					*	B648	SCREW, SOCKET HEAD: SAME AS B638	EA		REF								-15 4-14	4

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																							
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION			(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	D		74400190049	X	X					F	B649	CONTACT ASSEMBLY: 12344; 347807		EA		1								3	-15 4-14	6
				X	X					*	B650	SCREW, SOCKET HEAD: SAME AS 8638		EA		REF									-15 4-14	4
P	D		74400192186	X	X					F	B651	CONTACT ASSEMBLY: 12344; 347808		EA		1								3	-15 4-14	5
				X	X					*	B652	SCREW, SOCKET HEAD: SAME AS B638		EA		REF									-15 4-14	4
X2	D			X	X					F	B653	RETAINER, CONTACT: 12344: 347831		EA		1									-15 4-14	3
C	D			X	X					*	B654A	SCREW, MACHINE: .96906; MS35223-1		EA		2								1	-15 4-14	2
P	H		74400878404	X	X					D	B655	CAPSTAN: 12344; 308270		EA		1	1	2	3	1	2	3		1	-15 4-12	51
P	H		74408954073	X	X					D	B656	PULLEY INTEGRATED TOOTH: 12344; 220442		EA		1	1	1	2	1	1	2		1	-15 4-12	50
				X	X					*	B656A	SETSCREW: SAME AS B546A		EA		REF									-15 4-12	19
P	H		30308076391	X	X					D	B657	BELT, LUG: 12344: 305089		EA		1	1	2	3	1	2	3		4	-15 4-12	48
A	H	R		X	X					D	B658	DECK TAPE ASSEMBLY: 12344; 373920		EA		1									-15 4-12	47
C	H			X	X					*	B659A	SCREW, MACHINE: 96906; MS51959-14		EA		2									-15 4-12	46

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					E	B660A	DECK, TAPE: 12344 356113	EA		1									-15 4-13	47
P	H	R	74401686909	X	X					E	B661A	TAPE HOLDDOWN ASSEMBLY 12344; 349602	EA		1	*	*	*	*	*	*		3	-15 4-13	39.1
P	H		74401686907	X	X					F	B662	CARRIER : 12344; 3496403	EA		1	*	*	*	*	*	*		5	-15 4-13	39
P	H			X	X					G	B662A	INSERT, LATCH 12344 600681-1	EA		1	*	*	*	*	*	*		5	-15 4-13	39.2
P	H			X	X					*	B6625	SCREW MACHINE: 12344 4151100	EA		2	*	*	*	*	*	*		5	-15 4-13	39.3
P	H		74400192217	X	X					F	B663	COMB 12344 374810	EA		1	1	2	3	1	2	3		1	-15 4-13	38
P	H		53600097749	X	X					F	B664 M	SPRING COMB 12344; 359200	EA		4,4	*	*	*	*	*	*		8	-15 4-13	37
P	H		53051880289	X	X					F	B665 M	SCREW, SHOULDERED: 12344 349550	EA		4	*	*	*	*	*	*		20	-15 4-13	36
P	H		74401723633	X	X					F	B666	BLOCK, ADJUSTING 12344: 349580	EA		1	*	*	*	*	*	*		5	-15 4-13	35
				X	X					*	B667	SCREW, SOCKET HEAD SAME AS B638	EA		REF									-15 4-13	34
P	H		74400192185	X	X					F	B668	ROLLER ASSEMBLY 12344: 349610	EA		1	1	2	3	1	2	3		1	-15 4-13	33
P	H		7440126512	X	X					F	B671	SHAFT, ROLLER: 12344 349560	EA		1	*	*	*	*	*	*		3	-15 4-13	31
P	H		74401826512	X	X					F	B672	COVER , CARRIER: 12344 74790	EA		1	*	*	*	*	*	*		3	-15 4-13	30
X-2	H			X	X					E	B675	SHAFT, CARRIER 12344 349530	EA			1								-15 4-13	2

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H			X	X					*	B676A SETSCREW: 96906; MS51973-9	EA		2									-15 4-13	28
P	H		53604029176	X	X					E	B677 SPRING,HOLDDOWN: 12344; 361330	EA		1	*	*	*	*	*	*		5	-15 4-13	27
P	H		53151724189	X	X					E	B678 PIN, DOWEL: 12344; 4106401	EA		1	*	*	*	*	*	*		10	-15 4-13	26
P	H		74404118649	X	X					E	B679 HOLDDOWN, TAPE MOTION SENSOR: 12344; 359640	EA		1	*	*	*	*	*	*		5	-15 4-13	25
			53050545637	X	X					*	B680 SCREW, MACHINE: SAME AS A684A	EA		REF									-15 4-13	24
C	H			X	X					*	B680A WASHER, FLAT: 96906; MS15795-801	EA		8									-15 4-13	24.1
C	H		53105434652	X	X					*	B680B WASHER, LOCK: 96906; MS35333-69	EA		10									-15 4-13	24.2
P	H		74401578624	X	X					E	B681 CATCH: 12344; 349570	EA		1	*	*	*	*	*	*		5	-15 4-13	23
P	H		53051373446	X	X					*	B682 M SCREW, MACHINE: 12344; 4150800	EA		1	*	*	*	*	*	*		5	-15 4-13	22
X2	H		53409379716	X	X					E	B683 SPRING, HELICAL: 12344; 323330	EA		1									-15 4-13	21
P	H		74401896296	X	X					E	B684 BUTTON ASSEMBLY: 12344; 352210	EA		1	*	*	*	*	*	*		2	-15 4-13	20
P	H	R	74402296571	X	X					E	B685A TAPE MOTION ASSEMBLY: 12344; 349940	EA		1	1	2	3	1	2	3		3	-15 4-13	19.1
				X	X					*	B688A SCREW, MACHINE: SAME AS B628A	EA		REF									-15 4-13	12

Q36

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53105956425	X	X					*	B687	WASHER, FLAT: SAME AS A133D	EA		REF									-15 4-13	13
			53105503715	X	X					*	B687A	WASHER, LOCK: SAME AS B524	EA		REF									-15 4-13	13.1
				X	X					*	B6878	SHIM, .003" THICK, .373"O.D. SAME AS B596A	EA		REF									-15 4-13	13.2
				X	X					*	B687C	SHIM, .005" THICK, .373"O.D. SAME AS 8596B	EA		REF									-15 4-13	13.3
				X	X					*	B687D	SHIM, .010" THICK, .373"0.D. SAME AS B596C	EA		REF									-15 4-13	13.4
P	H		74408953973	X	X					F	B688	CAPSTAN, SENSING UNIT: 12344; 325110	EA		1	1	2	3	1	2	3		1	-15 4-13	15

Q36

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		74404118642	X	X					F	B689	HOUSING, SENSOR: 12344; 330021	EA		1	*	*	*	*	*	*		5	-15 4-13	 19
X2	H		30409379963	X	X					F	B690	SHAFT, CAPSTAN: 12344; 330270	EA		1								1	-15 4-13	 14
			74400193444	X	X					F	B695A	CONTACT ELECTRICAL: SAME AS B514 M	EA		REF									-15 4-13	 16
A	H	R		X	X					E	B697A	END OF TAPE ASSEMBLY: 12344; 349974	EA		1									-15 4-13	 11.1
C	H		53050685276	X	X					*	B698A	SCREW: 96906: MS16995-9	EA		2									-15 4-13	 1
			53105956425	X	X					*	B699	WASHER, FLAT: SAME AS A133D	EA		REF									-15 4-13	 2
			53105503715	X	X					*	B699A	WASHER, LOCK: SAME AS B5524	EA		REF									-15 4-13	 2.1
X2	11		53406865739	X	X					F	B700	BRACKET MOUNTING: 12344; 335220	EA		1									-15 4-13	 11
P	H		59309516451	X	X					F	B701	SWITCH, SENSITIVE: 91929; 3SX1T	EA		1	1	2	3	1	2	3		3	-15 4-13	 10
C	H		53050545641	X	X					*	B702	SCREW, MACHINE: 96906; MS51957-7	EA		2									-15 4-13	 5

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53105434652	X	X					*	B703	WASHER, LOCK: SAME AS 8680B	EA		REF									-15 4-13	6
C	H		53109382013	X	X					*	B704	NUT,PLAIN,HEXAGON: 96906; M535649-224	EA		2									-15 4-13	7
				X	X					*	B704B	WASHER, FLAT: SAME AS 8680A	EA		REF									-15 4-13	8
			74400193444	X	X					F	B705	CONTACT,ELECTRICAL: SAME AS B514 M	EA		REF									-15 4-13	9
P	H		74400192575	X	X					F	B706	ACTUATOR: 12344; 374750	EA		1	1	2	3	1	2	3		1	-15 4-13	4
X2	H		53150899718	X	X					F	B707	PIN, PIVOT: 12344; 318692	EA		1								2	-15 4-13	3
P	H		74401520055	X	X					E	B709	GUIDE, TAPE: 12344; 377000	EA		2	1	2	3	1	2	3		4	-15 4-13	43
X2	H		74409976221	X	X					E	B710A	BRACKET: 12344; 329990	EA		2									-15 4-13	46
C	H			X	X					*	B710D	SCREW, MACHINE: 96906; MS35223-4	EA		4									-15 4-13	44
			53105434652	X	X					*	B710E	WASHER, LOCK: SAME AS 86808	EA		REF									-15 4-13	44.1
			53102855631	X	X					*	B710F	WASHER, FLAT: SAME AS A685	EA		REF									-15 4-13	45
C	H			X	X					E	B711B	WASHER, WAVE: 12344 4 17921	EA		2									-15 4-13	41
C	H			X	X					E	B711C	RING, RETAINING: 79136; 5555G-9MD	EA		2									-15 4-13	40

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD		(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H			X	X					E	B711D	SHIM, BRACKET, .010' THICK: 12344; 379930	EA		4									-15 4-13	49
X2	H		7400878402	X	X					D	B712	BRACKET: 12344; 322360	EA		1									-15 4-12	45
C	H			X	X					*	B713A	SCREW, MACHINE: 96906; MS35223-15	EA		4									-15 4-12	43
			53109338118	X	X					*	B713B	WASHER, LOCK: SAME AS A133E	EA		REF									-15 4-12	43.1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53105956211	X	X					*	B714A	WASHER, FLAT: SAME AS B602A	EA		REF									-15 4-12	44
X2	H		66058355130	X	X					D	B715	BUSHING: 12344; 304212	EA		2									-15 4-12	41
A	H	R		X	X					D	B715A	CABLE ASSEMBLY: 12344; 381350	EA		1									-15 4-12	40.1
			53105434652	X	X					*	B715C	WASHER, LOCK: SAME AS B680B	EA		REF									-15 4-12	38
C	H			X	X					*	B715E	SCREW, MACHINE: 96906; MS35223-5	EA		2									-15 4-12	36
				X	X					*	B715F	WASHER, FLAT: SAME AS B680A	EA		REF									-15 4-12	37
P	H		59308187799	X	X					E	B716	SWITCH, SENSITIVE: 91929; 11SM23T	EA		1	1	2	3	1	2	3		3	-15 4-12	40
			74400193444	X	X					E	B717A	CONTACT,ELECTRICAL: SAME AS B514 M	EA		REF									-15 4-12	112
P	H		59309297869	X	X					D	B719	ACTUATOR, SWITCH: 91929; JS261	EA		1	1	2	3	1	2	3		3	-15 4-12	39
X2	H			X	X					D	B720	STOP: 12344; 375600	EA		1									-15 4-12	32
C	H			X	X					*	B721A	SCREW, MACHINE: 12344; 4158520	EA		1									-15 4-12	31
			53109296395	X	X					*	B7218	WASHER, LOCK: SAME AS AO15	EA		REF									-15 4-12	30

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H		53057195330	X	X					*	B722b	SETSCREW: 96906; MS51963-21	EA		2									-15 4-12	29
X2	H			X	X					D	B723	FRAME: 12344; 374770	EA		1									-15 4-12	42
C	H		53057654352	X	X					*	B723D	SCREW, MACHINE: 96906; M51959-31	EA		2									-15 4-12	33
C	H			X	X					*	B723E	NUT, PLAIN,HEXAGON: 12344: 4172900	EA		2									-15 4-12	34
			53105319514	X	X					*	B724A	WASHER, FLAT: SAME AS A319	EA		REF									-15 4-12	35
X2	H			X	X					D	B725	CAM: 12344; 374100	EA		1									-15 4-12	28
C	H		53057176955	X	X					*	B725B	SETSCREW: 96906;: MS51963-1	EA		1									-15 4-12	27
P	H		53601726466	X	X					D	B726	SPRING: 12344; 374760	EA		1	*	*	*	*	*	*		10	-15 4-12	26
P	H		74401771557	X	X					D	B727	RETAINER, SPRING: 12344; 374730	EA		1	*	*	*	*	*	*		5	-15 4-12	25
			53057195330	X	X					*	B727B	SETSCREW: SAME AS B722B	EA		REF									-15 4-12	24
X2	H			X	X					D	B728	COVER, TERMINAL: 12344; 331510	EA		1									-15 4-12	14

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					D	B729	PLATE BEARING: 12344; 347890	EA		2									-15 4-12	 13
				X	X					*	B730A	SCREW, MACHINE: SAME AS B628A	EA		REF									-15 4-12	 11
			53109338118	X	X					*	B731A	WASHER, LOCK. SPLIT: SAME AS A133E	EA		REF									-15 4-12	 12
			53105956211	X	X					*	B731B	WASHER, FLAT: SAME AS B602A	EA		REF									-15 4-12	 12.1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
		X2	H			X	X			D	B732A	COVER, BOTTOM: 12344; 317881	EA		1									-15 4-12	10
						X	X			*	B733B	SCREW, MACHINE: SAME AS B713A	EA		REF									-15 4-12	8
			53105956211	X	X					*	B733C	WASHER, FLAT: SAME AS B602A	EA		REF									-15 4-12	9
			53109338118	X	X					*	B733D	WASHER, LOCK, SPLIT: SAME AS A133E	EA		REF									-15 4-12	8.1
X2	H			X	X					D	B734	GUARD,FAN BELT: 12344; 336880	EA		1									-15 4-12	7
			53057195064	X	X					*	B735	SCREW, MACHINE: SAME AS B475A	EA		REF									-15 4-12	6
X2	H			X	X					D	B736	GUARD, CAPSTAN DRIVE: 12344; 337150	EA		1									-15 4-12	5
C	H			X	X					*	B737A	SCREW, MACHINE: 96906; MS35223-27	EA		1									-15 4-12	3
			53106163555	X	X					*	B738	WASHER, LOCK: SAME AS B470	EA		REF									-15 4-12	4
X2	H			X	X					D	B738A	CLAMP, BAR: 12344; 382270	EA		1									-15 4-12	4.4
C	H			X	X					*	B738B	SCREW, MACHINE: 96906; MS35223-32	EA		1									-15 4-12	4.2
				X	X					*	B738C	NUT,PLAIN, HEXAGON: SAME AS 8723E	EA		REF									-15 4-12	4.1
			53105319514	X	X					*	B738D	WASHER, FLAT SAME AS A319	EA		REF									-15 4-12	4.3
M	H			X	X					D	B739	LABEL INSTRUCTION: 12344; 331520	EA		1									-15 4-12	2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
M	H			X	X					D	B740A	PLATE,IDENTIFICATION: 12344; 381520	EA		1									-15 4-12	1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
A	H	R		X	X					D	B741	ROLLER SUPPORT ASSEMBLY: 12344; 373950	EA		1									-15 4-12	23.1
X2	H			X	X					E	8742	SUPPORT, ROLLER: 12344: 375590	EA		1									-15 4-12	23
X2	H			X	X					E	B743	SHAFT, ROLLER: 12344; 374110	EA		1									-15 4-12	22
C	H		53057195339	X	X					*	B744A	SETSCREW: 96906; MS51963-22	EA		1									-15 4-12	21
X2	H			X	X					E	B745 M	PIN, SUPPORT: 12344; 377020	EA		2									-15 4-12	20
X2	H			X	X					E	B745A	PIN, ROLLER: 12344; 356551	EA		1									-15 4-12	19
X2	H			X	X					E	B746	ROLLER ASSEMBLY: 12344; 374740	EA		1									-15 4-12	18
C	H		53408045043	X	X					*	B747	RING, RETAINING: 79136; 5555-2SMD	EA		1									-15 5-12	17
X2	H			X	X					E	B748A	ROLLER ASSEMBLY: 12344:; 356561	EA		1									-15 4-12	16
C	H		53402826297	X	X					*	B749	RING, RETAINING: 79136; 5555-12MD	EA		1									-15 4-12	15
P	H		71400431205	X	X					D	B750A	KIT, 50 CYCLE CONVERSION: 12344:; 347910	EA		1	*	*	*	*	*	*		2	-15 4-12	
X1	H			X	X					E	B7508	PULLEY, INTEGRATED TOOTH, 50 Hz: 12344; 2204433	EA		1									-15 4-12	68.1
				X	X					*	B750C	SETSCREW: SAME AS B546A	EA		REF									-15 4-12	67

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
A	H	R	74401656535	X	X					B	B753	BLOWER: 03522; RC2E8412A31	EA		1									-15 4-5	 26
P	H		41308640650	X	X					C	B753A	FILTER, WASHABLE: 03522; S-1006-5	EA		1	1	1	2	1	1	2		1	-15 4-5	 26.5
P	H		59109729420	X	X					C	B7538	CAPACITOR: 03522; S-1309	EA		1	1	2	3	1	2	3		3	-15 4-5	 26.1
X2	H		41409883694	X	X					C	B753C	BLOWER WHEEL, CW: 03522; S-1364	EA		1									-15 4-5	 26.2
X2	H		41409883695	X	X					C	B753D	BLOWER WHEEL,CCW: 03522; S-1365	EA		1									-15 4-5	 26.3
P	H		61051345596	X	X					C	B753E	MOTOR: 03522; S-1783	EA		1	*	*	*	1	1	2		1	-15 4-5	 26.4
			53050546669	X	X					*	B754	SCREW, MACHINE: SAME AS A030	EA		REF									-15 4-5	 22
			53105586207	X	X					*	B755 M	WASHER, FLAT: SAME AS A020 M	EA		REF									-15 4-5	 23
			53109338119	X	X					*	B756	WASHER, LOCK: SAME AS A021	EA		REF									-15 4-5	 24
A	H	R		X	X					B	B757	ENCLOSURE: 05439; 600751-1	EA		1									-15 4-5	 27

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X	H			X	X					C	B758	CHASSIS EI.ECTRICAL EQUIPMENT: 05439; 600752	EA		1									-15 4-5	
X2	H			X	X					D	B758A	BUMPER, RUBBER: 70485; 1178-2	EA		2									-15 4-5	 27.1
A	H	R		X	X					C	B759	DOOR ASSEMBLY, RIGHT HAND: 05439: 600002-2	EA		1									-15 4-5	 59
C	H			X	X					*	B760	PIN, STRAIGHT, HEAD-LESS: 05439; 600105-4	EA		4									-15 4-5	 60
X2	H			X	X					D	B761	SHELL, DOOR: 05439; 600002-3	EA		2									-15 4-5	 61
X2	H			X	X					D	B762	HANDLE: 05439; 600111-1	EA		2									-15 4-5	 62

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					D	B763	CAM:	EA		2								-	15	
												05439; 600111-2												4-5	63
X2	H			X	X					D	B764	ROD:	EA		3									-15	
												05439: 600111-3												4-5	64
X2	H			X	X					D	B765	GROMMET, NYLON:	EA		4									-15	
												05439; 600112-1												4-5	65
X2	H			X	X					D	B766	LINER, MYLAR:	EA		2									-15	
												05439; 600002-5												4-5	66
A	H	R		X	X					C	B767	DOOR, FRONT, LEFT HAND:	EA		1									-15	
												05439; 600002-1												4-5	67
				X	X					*	B768	PIN, STRAIGHT, HEAD-LESS:	EA		REF									-15	
												SAME AS 8760												4-5	60
				X	X					D	B769	SHELL DOOR:	EA		REF									-15	
												SAME AS 8761												4-5	61
				X	X					D	B770	HANDLE:	EA		REF									-15	
												SAME AS B762												4-5	62
				X	X					D	B771	CAM:	EA		REF									-15	
												SAME AS 8763												4-5	63
				X	X					D	B772	ROD:	EA		REF									-15	
												SAME AS 8764												4-5	64
X2	H			X	X					D	B772A	ROD:	EA		1									-15	
												05439; 600111-7												4-5	68
				X	X					D	B773	GROMMET, NYLON:	EA		REF									-15	
												SAME AS B765												4-5	65
				X	X					D	B774	LINER, MYLAR:	EA		REF									-15	
												SAME AS B766												4-5	66

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					C	B775	PANEL, REAR:	EA		1								-	15	
												05439; 600108-1												4-5	72
			53050593659	X	X					*	B776	SCREW, MACHINE:	EA		REF									-15	
												SAME AS B411B												4-5	69
			53100593659	X	X					*	B777	WASHER, FLAT:	EA		REF									-15	
												SAME AS A121D												4-5	70
C	H		531Q0453296	X	X					*	B778A	WASHER, LOCK:	EA		33									-15	
												96906; MS35338-43												4-5	71
X2	H			X	X					C	B779	MOUNTING PLATE:	EA		1									-15	
												05439; 600754-1												4-5	76
X2	H			X	X					C	B780	SUPPORT PLATE:	EA		1									-15	
												05439; 600755-1												4-5	77
			53100593659	X	X					*	B781	WASHER, FLAT:	EA		REF									-15	
												SAME AS A121D												4-5	75
			53100453296	X	X					*	B782A	WASHER, LOCK:	EA		REF									-15	
												SAME AS B778A												4-5	74
			53109349765	X	X					*	B783	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS AOOS												4-5	73

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					C	B791	BASE: 05439; 600100-1	EA		1									-15 4-5	 79
C	H		5305721474	X	X					*	B792	SCREW, MACHINE: 96906; 600109-1	EA		4									-15	
X2	H			X	X					C	B793	TRIM, METAL,VERTICAL: 05439; 600100-1	EA		2									-15 4-5	 78
P	H		53404519149	X	X					*	B793A	CLIP, RETAINING: 78553;C29943-014-1	EA		28	5	10	15	5	10	15		14	-15 4-5	 80
X2	H			X	X					C	B794	TRIM, METAL, HORIZONTAL: 05439; 600109-2	EA		2									-15 4-5	 82
			53404519149	X	X					*	B794A	CLIP, RETAINING: SAME AS B793A	EA		REF									-15 4-5	 80
X2	H			X	X					C	B795	TRIM METAL, LOGO: 05439; 600110-1	EA		1									-15 4-5	 87
X2	H			X	X					C	B796 M	STRIP, LOGO: 05439; 600756-1	EA		1									-15 4-5	 88
C	H		53057015071	X	X					*	B797	SCREW, MACHINE: 96906; MS51959-61	EA		3									-15 4-5	 83
			53109349765	X	X					*	B797A	NUT, PLAIN, HEXAGON: SAME AS A005	EA		REF									-15 4-5	 84
			53100453296	X	X					*	B797B	WASHER, LOCK: SAME AS B778A	EA		REF									-15 4-5	 85
			53100593659	X	X					*	B797C	WASHER, FLAT: SAME AS A121D	EA		REF									-15 4-5	 86
A	H	R		X	X					B	B798	INTERFACE PLATE ASSEMBLY: 58189; A61665-004	EA		1									-15 4-5	 12

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53050546670	X	X					*	B799	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A785													4-5	7
			53105586207	X	X					*	B800	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M													4-5	8
			53109338119	X	X					*	B801	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021													4-5	9
X2	H			X	X					C	B802A	TERMINAL BOARD:	EA		4									-15	
												75382; 600-C-22UH													4-9	13
			53050546655	X	X					*	B803	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A163A													4-9	8
			53109296395	X	X					*	B804	WASHER, LOCK:	EA		REF									-15	
												SAME AS A01S													4-9	10
C	H			x	x					*	B805A	NUT,PLAIN,HEXAGON:	EA		16									-15	
												80063; SMB583230-1													4-9	9
X2	H			X	X					C	B806	MARKER, STRIP:	EA		4									-15	
												75382; MS600-22XXXP4D													4-9	14
X2	H			X	X					C	B807	JUMPER, ALTERNATE:	EA		4									-15	
												80063; SMB634799-1													4-9	11
				X	X					C	B808A	TERMINAL BOARD:	EA		REF									-15	
												SAME AS B802A													4-9	13
			53050546655	X	X					*	B809	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A163A													4-9	8
			53109296395	X	X					*	B810	WASHER, LOCK:	EA		REF									-15	
												SAME AS A01S													4-9	10

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																					
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					*	B811A	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS B805A													4-9	9
				X	X					C	B812	MARKER STRIP:	EA		REF									-15	
												SAME AS B806													4-9	14
X2	H			X	X					C	B813	JUMPER, ALTERNATE:	EA		4									-15	
												80063; SMB634799-2													4-9	12
X2	H			X	X					C	B814A	TERMINAL BOARD:	EA		2									-15	
												75382; 604-C-8UH													4-9	6
C	H		53050546674		X					*	B815	SCREW, MACHINE:	EA		8									-15	
												96906; MS51957-49													4-9	1
			53109338119	X	X					*	B816	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021													4-9	3
			53105586207	X	X					*	B817 M	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M													4-9	4
			53109249759	X	X					*	B818	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A018													4-9	2
X2	H			X	X					C	B819	MARKER, STRIP:	EA		2									-15	
												75382; MS604-8XXXP1C													4-9	7
X2	H			X	X					C	B820	JUMPER, SERIES:	EA		2									-15	
												75382: 640RJ8													4-9	5
X2	H			X	X					C	B821	PLATE, INTERFACE:	EA		1									-15	
												58189: A61665-002													4-9	15
C	H			X	X					C	B821A	CLAMP, LOOP:	EA		16									-15	
												09922; HP-1ON													4-9	14.4
C	H			X	X					*	B8218	SCREW, MACHINE:	EA		43									-15	
												96906; MS51957-46													4-9	14.1
			53105586207	X	X					*	B821C	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M													4-9	14.3

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109338119	X	X					*	B821D	WASHER, LOCK: SAME AS A021	EA		REF									-15 4-9	 14.2
M	H			X	X					C	B822	WIRING HARNESS: 58189; A65193-00]	EA		1									-15 4-5	 29

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H			X	X					D	B823	FERRULE:	EA		38									-15	
												00779;: 2-322930-2												4-9	14.5
			59405039995	X	X					D	B824	TERMINAL LUG:	EA		REF									-15	
												SAME AS A130B												4-9	14.6
			74409335070	X	X					D	B825	CONTACT ASSEMBLY:	EA		REF									-15	
												SAME AS A123												4-5	41
				X	X					E	B826	BRACKET, ANGLE:	EA		REF									-15	
												SAME AS A124												4-5	47
				X	X					*	B827	SCREW,EXTERNAL	EA		REF									-15	
												RELIEVED BODY:												4-5	36
												SAME AS A125 M													
			53106389857	X	X					*	B828	WASHIER, FLAT:	EA		REF									-15	
												SAME AS A014B												4-5	37
			53109296395	X	X					*	B29A	WASHER, LOCK:	EA		REF									-15	
												SAME AS A015												4-5	38
				X	X					E	B830	INSULATOR,BUSHING:	EA		REF									-15	
												SAME AS A129												4-5	48
			74400193468	X	X					D	B831	CONTACT, ELECTRICAL:	EA		REF									-15	
												SAME AS A130 M												4-5	49
C	H		59406603631	X	X					D	B832	TERMINAL LUG:	EA		8									-15	
												96906; MS25036-50												4-9	14.7
			53400742072	X	X					D	B833	STRAP,LINE SUPPORT:	EA		REF									-15	
												SAME AS A131												4-5	50
				X	X					D	B834	NAMEPLATE:	EA		REF									-15	
												SAME AS A132A												4-5	51

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					D	B834A	PIN, KEYING:	EA		REF									-15	
												SAME AS A133A												4-5	53
			53405980496	X	X					D	B834B	CLAMP, LOOP:	EA		REF									-15	
												SAME AS A133B												4-5	58
			53057637827	X	X					*	B834C	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A133C												4-5	55
			53105956425	X	X					*	B834D	WASHER, FIAT:	EA		REF									-15	
												SAME AS A133D												4-5	57
			53109338118	X	X					*	B834E	WASHER, LOCK,SPLIT:	EA		REF									-15	
												SAME AS A133E												4-5	56
			53109349748	X	X					*	B834F	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A133F												4-5	54
X2	H				X					B	B835A	PANEL,TAPE CLIP:	EA		1									-15	
												58189; A64772-003												4-5	6.1b
			53109349765		X					*	B836A	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS AOOS												4-5	5.1
C	H				X					*	B837A	SCREW, MACHINE:	EA		2									-15	
												96906; MSS 1957-65												4-5	5.2
			53101670812		X					*	B838A	WASHER, FLAT:	EA		REF									-15	
												SAME AS A003												4-5	5.4
			53109338120		X					*	B839A	WASHER, LOCK:	EA		REF									-15	
												SAME AS A004												4-5	5.3
X2	H				X					C	B839B	PANEL, BLANK READER:	EA		1									-15	
												58189; A64772-001												4-11.2	6
X2	H				X					C	B839C	CLIP, TAPE:	EA		12									-15	
												58189: A64779-001												4-11.2	5
C	H				X					*	B839D	NUT,PLAIN,HEXAGON:	EA		12									-15	
												96906: MS35649-44												4-11.2	1

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109338118		X					*	B839E	WASHER, LOCK: SAME AS A133E	EA		REF									-15 4-11.2	 2
			53105956425		X					*	B839F	WASHER, FIAT: SAME AS A133D	EA		REF									-15 4-11.2	 3
C	H		53050545651		X					*	B839G	SCREW, MACHINE: 96906: MS51957-17	EA		12									-15 4-11.2	 4
X2	H				X					B	B840	PANEL, BLANK: 58189; A64771-001	EA		1									-15 4-5	 5b

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53050546669		X					*	B841	SCREW, MAC HINE:	EA		REF									-15	
												SAME AS A030													4-5	1
			53105586207		X					*	B842 M	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M													4-5	2
			53109338119		X					*	B843	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021													4-5	3
M	H			X	X					B	B844	WIRING HARNESS:	EA		1									-15	
												58189: A65189-001													4-5	35
X2	H		59409479947	X	X					C	B845	FERRULE:	EA		28									-15	
												00779: 2-323934-2													4-5	89
			74409335070	X	X					C	B846	CONTACT ASSEMBLY:	EA		REF									-15	
												SAME AS A123													4-5	46
				X	X					D	B847	BRACKET, ANGLE:	EA		REF									-15	
												SAME AS A124													4-5	47
					X					*	B848	SCREW, EXTERNAL	EA		REF									-15	
												RELIEVED BODY:													4-5	36
												SAME AS A125 M														
			53106389857		X					*	B849	WASHER, FLAT:	EA		REF									-15	
												SAME AS A0148													4-5	37
			53109296395		X					*	B850A	WASHER, LOCK:	EA		REF									-15	
												SAME AS A015													4-5	38
				X	X					D	B851	INSULATOR, BUSHING:	EA		REF									--15	
												SAME AS A129													4-5	48

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			74400193468	X	X					C	B853	CONTACT,ELECTRICAL:	EA		REF									-15	
												SAME AS A130 M												4-5	49
C	H		59405571628	X	X					C	B854	TERMINAL LUG:	EA		18									-15	
												96906; MS25036-56												4-5	90
			59405571627	X	X					C	B855	TERMINAL LUG:	EA		REF									-15	
												SAME AS A028A												4-5	91
			59405571629	X	X					C	B856 M	TERMINAL LUG:	EA		REF									-15	
												SAME AS A133 M												4-5	92
			59402049142	X	X					C	B857	TERMINAL LUG:	EA		REF									-15	
												SAME AS B413A												4-5	93
C	H		59405571631	X	X					C	B858	TERMINAL LUG:	EA		6									-15	
												96906; MS25036-15												4-5	94
C	H		59405574346	X	X					C	B859	TERMINAL LUG:	EA		12									-15	
												96906; MS25036-16												4-5	95
P	H		59359316165	X	X					C	B860	CONNECTOR,RECEPT-	EA		3	1	1	1	1	1	1		6	-15	
												ACLE, ELECTRICAL:												4-5	98
												95238;25026-16SGDSK'MF													
				X	X					C	B861A	NAMEPLATE-	EA		REF									-15	
												SAME AS A132A												4-5	51
			53400742072	X	X					C	B862	STRAP,LINE SUPPORT:	EA		REF									-15	
												SAME AS A131												4-5	50
C	H		59405340970	X	X					C	B862A	TERMINAL LUG:	EA		13									-15	
												96906; MS25036-7												4-5	96
			59405039995	X	X					C	B8628	TERMINAL LUG:	EA		REF									-15	
												SAME AS A130B												4-5	97

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					C	B862C	PIN, KEYING:	EA		REF									-15	
												SAME AS A133A												4-5	53
C	H		53402002691	X	X					C	B862D	CLAMP, LOOP:	EA		3									-15	
												09922; HPSN												4-5	99
			53057637827	X	X					*	B862E	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A133C												4-5	55
			53105956425	X	X					*	B862F	WASHER, FLAT:	EA		REF									-15	
												SAME AS A133D												4-5	57
			53109338118	X	X					*	B862G	WASHER, LOCK,SPLIT:	EA		REF									-15	
												SAME AS A133E												4-5	56
			53109349748	X	X					*	B862H	NUT,PIAIN,HEXAGON:	EA		REF									-15	
												SAME AS A133F												4-5	54
M	H			X							BB863	WIRING HARNESS:	EA		1									-15	
												58189; A65475-001												4-5	31
			59409479947	X						C	B864A	FERRULE:	EA		REF									-15	
												SAME AS B845												4-5	89
			74409335070	X						C	B865	CONTACT ASSEMBLY:	EA		REF									-15	
												SAME AS A123												4-5	40
				X						D	B866	BRACKET, ANGLE:	EA		REF									-15	
												SAME AS A124												4-5	47
				X						*	B867	SCREW, EXTERNAL	EA		REF									-15	
												RELIEVED BODY:												4-5	36
												SAME AS A125 M													
			53106389857	X						*	B868	WASHER, FLAT:	EA		REF									-15	
												SAME AS A014B												4-5	37

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109296395	X						*	B869A	WASHER, LOCK:	EA		REF									-15	
												SAME AS A0115													4-5	38
				X						D	B870	INSULATOR, BUSHING:	EA		REF									-15	
												SAME AS A129													4-5	48
			74400193468	X						C	B872	COUNTACT, ELECTRICAL:	EA		REF									-15	
												SAME AS A130 M													4-5	49
			59405571628	X						C	B873	TERMINAL LUG:	EA		REF									-15	
												SAME AS B854													4-5	90
			59405571627	X						C	B874	TERMINAL LUG:	EA		REF									-15	
												SAME AS A028A													4-5	91
			594055761629	X						C	B875 M	TERMINAL LUG:	EA		REF									-15	
												SAME AS A133 M													4-5	92
			59402049]42	X						C	B876	TERMINAL LUG:TE	EA		REF									-15	
												SAME AS B413A													4-5	93
			59405571631	X						C	B877	TERMINAL LUG:	EA		REF									-15	
												SAME AS B858													4-5	94
			59405574346	X						C	B878	TERMINAL LUG:	EA		REF									-15	
												SAME AS B859													4-5	95
			59359316165	X						C	B879	CONNECTOR, RECEPT-	EA		REF									-15	
												ACLE, ELECTRICAL:													4-5	100
												SAME AS B860														
				X						C	B880	NAMEPLATE:	EA		REF									-15	
												SAME AS AI32A													4-5	51
			53400742072	X						C	B881	STRAP, LINE SUPPORT:	EA		REF									-15	
												SAME AS A131													4-5	50

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59405340970	X						C	B881A	TERMINAL LUG:	EA		REF									-15	
												SAME AS B862A													4-5	97
				X						C	B881B	PIN, KEYING:	EA		REF									-15	
												SAME AS A133A													4-5	53
			53402002691	X						C	B881C	CILAMP, LOOP:	EA		REF									-15	
												SAME AS B862D													4-5	99
			53057637827	X						*	B881D	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A133C													4-5	55
			53105956425	X						*	B881E	WASHER, FLAT:	EA		REF									-15	
												SAME AS A133D													4-5	57
			53109338118	X						*	B881F	WASHER, LOCK, SPLIT:	EA		REF									-15	
												SAME AS A133E													4-5	56
			53109349748	X						*	B881G	NUT, PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A133F													4-5	54
M	H				X					B	B881H	WIRING HARNESS:	EA		1									-15	
												58189; A65481-001													4-5	30
			59409479947		X					C	B8811	FERRULE:	EA		REF									-15	
												SAME AS B845													4-5	89
			74409335070		X					C	B881J	CONTACT ASSEMBLY:	EA		REF									-15	
												SAME AS A123													4-5	42
					X					D	B881K	BRACKET, ANGLE:	EA		REF									-15	
												SAME AS A124													4-5	47
					X					*	B881L	SCREW, EXTERNAL	EA		REF									-15	
												RELIEVED BODY:													4-5	36
												SAME AS A125 M														
			53106389857		X					*	B881N	WASHER, FIAT:	EA		REF									-15	
												SAME AS A014B													4-5	37

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109296395		X					*	B881P	WASIIER, LOCK:	EA		REF									-15	
												SAME AS A015												4-5	38
					X					D	B881Q	INSULATOR,BUSHING:	EA		REF									-15	
												SAME AS A129												4-5	48
			74400193468		X					C	B881R	CONTACT,ELECTRICAL:	EA		REF									-15	
												SAME AS A130 M												4-5	49
			59405571628		X					C	B881S	TERMINAL LUG:	EA		REF									-15	
												SAME AS 3854												4-5	90
			59405571627		X					C	B881T	TERMINAL LUG:	EA		REF									-15	
												SAME AS A028A												4-5	91
			59405571629		X					C	B881U	TERMINAL LUG:	EA		REF									-15	
												SAME AS A133 M												4-5	92
			59402049142		X					C	B881V	TERMINAL LUG:	EA		REF									-15	
												SAME AS B413A												4-5	93
			59405571631		X					C	B881W	TERMINAL LUG:	EA		REF									-15	
												SAME AS 8858												4-5	94
			59405574346		X					C	B881X	TERMINAL LUG:	EA		REF									-15	
												SAME AS B859												4-5	95
			59359316165		X					C	B881Y	CONNECTOR, RECEPT-	EA		REF									-15	
												ACLE, ELECTRICAL:												4-5	100
												SAME AS 8860													
					X					C	B881Z	NAMEPLATE:	EA		REF									-15	
												SAME AS A132A												4-5	51
M	H			X	X					C	B882	CABLE ASSEMBLY:	EA		1									-15	
												58189; A65480-001												4-5	33
			53400742072		X					C	B882A	STRAP,LINE SUPPORT:	EA		REF									-15	
												SAME AS A131												4-5	50
			59405340970		X					C	B882B	TERMINAL LUG:	EA		REF	-15									
												SAME AS B862A												4-5	97

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
					X					C	B882C	PIN, KEYING:	EA		REF									-15	
												SAME AS A133A												4-5	53
			53402002691		X					C	B882D	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B862D												4-5	99
			53057637827		X					*	B882E	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A133C												4-5	55
			53105956425		X					*	B882F	WASHER, FIAT:	EA		REF									-15	
												SAME AS A133D												4-5	57
			53109338118		X					*	B882G	WASHER, LOCK, SPLIT:	EA		REF									-15	
												SAME AS A133E												4-5	56
			53109349748		X					*	B882H	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A133F												4-5	54
			74409335070	X	X					C	B883	CONTACT ASSEMBLY:	EA		REF									-15	
												SAME AS A123												4-5	44
				X	X					D	B884	BRACKET, ANGLE:	EA		REF									-15	
												SAME AS A124												4-5	47
				X	X					*	B885	SCREW, EXTERNAL	EA		REF									-15	
												RELIEVED BODY:												4-5	36
												SAME AS A125M													
			53106389857	X	X					*	B886	WASHER, FLAT:	EA		REF									-15	
												SAME AS A014B												4-5	37

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109296395	X	X					*	B887A	WASHER, LOCK:	EA		REF									-15	
												SAME AS A015													4-5	38
				X	X					D	B888	INSULATOR,BUSHING:	EA		REF									-15	
												SAME AS A129													4-5	48
			74400193468	X	X					C	B890	CONTACT,ELECTRICAL:	EA		REF									-15	
												SAME AS A130 M													4-5	49
			59409479947	X	X					C	B891	FERRULE:	EA		REF									-15	
												SAME AS B845													4-5	89
				X	X					C	B892	NAMEPLATE:	EA		REF									-15	
												SAME AS A132A													4-5	51
P	H		59358500813	X	X					C	B893A	CONNECTOR, RECEPT-	EA		2	1	1	1	1	1	1		6	-15	
												ACLE, ELECTRICAL:													4-5	101
												10400:P34S23JTLHFL														
			53400742072	X	X					C	B894	STRAP, LINE SUPPORT:	EA		REF									-15	
												SAME AS A131													4-5	50
				X	X					C	B894A	PIN, KEYING:	EA		REF									-15	
												SAME AS A133A													4-5	53
C	H			X	X					C	B894B	CLAMP, LOOP:	EA		12									-15	
												09922; HP13N													4-5	103
			53057637827	X	X					*	B894C	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A133C													4-5	55
			53105956425	X	X					*	B894D	WASHER, FLAT:	EA		REF									-15	
												SAME AS A133D													4-5	57

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109338118	X	X					*	B894E	WASHER,LOCK,SPLIT:	EA		REF									-15	
												SAME AS A133E													4-5	56
			53109349748	X	X					*	B894F	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A133F													4-5	54
M	H			X	X					B	B895	CABLE ASSEMBLY:	EA		1									-15	
												58189; A65188-001													4-5	34
			74409335070	X	X					C	B896	CONTACT ASSEMBLY:	EA		REF									-15	
												SAME AS A123													4-5	45
				X	X					D	B897	BRACKET, ANGLE:	EA		REF									-15	
												SAME AS A124													4-5	47
				X	X					*	B898	SCREW, EXTERNAL	EA		REF									-15	
												RELIEVED BODY:													4-5	36
												SAME AS A125 M														
			53106389857	X	X					*	B899	WASHER, FLAT:	EA		REF									-15	
												SAME AS A014B													4-5	37
			53109296395	X	X					*	B9OOA	WASHER, LOCK:	EA		REF									-15	
												SAME AS A015													4-5	38
				X	X					D	B901	INSULATOR, BUSHING:	EA		REF									-15	
												SAME AS A12q													4-5	48
			74400193468	X	X					C	B903	CONTACT, ELECTRICAL:	EA		REF									-15	
												SAME AS A130 M													4-5	49
			59409479947	X	X					C	B904	FERRULE:	EA		REF									-15	
												SAME AS 8845													4-5	89

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					C	B905 M	NAMEPLATE:	EA		REF									-15	
												SAME AS A132A												4-5	51
			59358500813	X	X					C	B906A	CONNECTOR, RECEPT-	EA		REF									-15	
												ACLE, ELECTRICAL:												4-5	102
												SAME AS B893A													
			53400742072	X	X					C	B907	STRAP, LINE SUPPORT:	EA		REF									-15	
												SAME AS A131												4-5	50
				X	X					C	B908	PIN, KEYING:	EA		REF									-15	
												SAME AS A133A												4-5	53
				X	X					C	B909	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B894B												4-5	103
			53057637827	X	X					*	B910A	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A133C												4-5	55
			53105956425	X	X					C	B911	WASHER, FLAT:	EA		REF									-15	
												SAME AS A133D												4-5	57
			53109338118	X	X					C	B912	WASHER, LOCK, SPLIT:	EA		REF									-15	
												SAME AS A133E												4-5	56
			53109349748	X	X					C	B913	NUT, PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A133F												4-5	54
A	H	R		X	X					B	B914	INTERFACE PLATE	EA		1									-15	
												ASSEMBLY:												4-5	11
												58189; A61665-006													
			53050546670	X	X					*	B915	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A785												4-5	7

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53105586207	X	X					*	B916	WASHER,FLAT:	EA		REF									-15	
												SAME AS A020M												4-5	8
			53109338119	X	X					*	B917	WASHER,FLAT:	EA		REF									-15	
												SAME AS A021												4-5	9
				X	X					C	B918A	TERMINAL BOARD:	EA		REF									-15	
												SAME AS B802A												4-9	13
			53050546655	X	X					*	B919	SCREW,MACHINE:	EA		REF									-15	
												SAME AS A163A												4-9	8
			53109296395	X	X					*	B920	WASHER,LOCK:	EA		REF									-15	
												SAME AS A015												4-9	10
				X	X					*	B921	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS B805A												4-9	9
				X	X					C	B922	MARKER,STRIP:	EA		REF									-15	
												SAME AS 8S06												4-9	14
				X	X					C	B923	JUMPER,ALTERNATE:	EA		REF									-15	
												SAME AS B807												4-9	11
				X	X					C	B924A	TERMINAL BOKRD:	EA		REF									-15	
												SAME AS B802A												4-9	13
			53050546655	X	X					*	B925	SCREW, MACHINE:	EA		REF									-15	
												SAME AS A163A												4-9	8
			53109296395	X	X					*	B926	WASHER,LOCK:	EA		REF									-15	
												SAME AS AO15												4-9	10
				X	X					*	B927	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS B805A												4-9	9

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					C	B928	MARKER,STRIP:	EA		REF									-15	
												SAME AS 8806												4-9	14
				X	X					C	B929	JUMPER ALTERNATE:	EA		REF									-15	
												SAME AS B813												4-9	12
				X	X					C	B930A	TERMINAL BOARD:	EA		REF									-15	
												SAME AS B814A												4-9	6
			53050546674	X	X					*	B931	SCREW,MACHINE:	EA		REF									-15	
												SAME AS B815												4-9	1
			53109338119	X	X					*	B932	WASHER,LOCK:	EA		REF									-15	
												SAME AS A021												4-9	3
			53105586207	X	X					*	B933	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020M												4-9	4
			53109249759	X	X					*	B934	NUT, PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A018												4-9	2
				X	X					C	B935	MARKER,STRIP:	EA		REF									-15	
												SAME AS B819												4-9	7
				X	X					C	B936	JUMPER,SERIES:	EA		REF									-15	
												SAME AS B820												4-9	5
X2	H			X	X					C	B937	PLATE, interface:	EA		1									-15	
												58189: A61665-003												4-9	15
				X	X					C	B937A	CIAMP,LOOP:	EA		REF									-15	
												SAME AS B821A												4-9	14.4
				X	X					*	B937B	SCREW,MACHINE:	EA		REF									-15	
												SAME AS B821B												4-9	14.1
			53105586207	X	X					*	B937C	WASHER,FLAT:	EA		REF									-15	
												SAME AS A020M												4-9	14.3
			53109338119	X	X					*	B937D	WASHER,LOCK:	EA		REF									-15	
												SAME AS A021												4-9	14.2

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
M	H			X	X					C	B938	WIRING HARNESS: 58189: A65186-001	EA		1									-15 4-5	104
			59405039995	X	X					D	B939	TERMINAL,LUG: SAME AS A130B	EA		REF									-15 4-9	14.6

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					D	B940 M	FERRULE:	EA		REF									-15	
												SAME AS B823												4-9	14.5
			74409335070	X	X					D	B941	CONTACT ASSEMBLY:	EA		REF									-15	
												SAME AS A123												4-5	105
				X	X					E	B942	BRACKET,ANGLE:	EA		REF									-15	
												SAME AS A124												4-5	41
				X	X					*	B944	SCREW,EXTERNAL	EA		REF									-15	
												RELIEVED BODY:												4-5	36
												SAME AS A125 M													
			53106389857	X	X					*	B945	WASHER,FLAT:	EA		REF									-15	
												SAME AS A014B												4-5	37
			53109296395	X	X					*	B946A	WASHER,LOCK:	EA		REF									-15	
												SAME AS A015												4-5	38
				X	X					E	B947	INSULATOR,BUSHING:	EA		REF									-15	
												SAME AS A129												4-5	48
			74400193468	X	X					D	B948	CONTACT,ELECTRICAL:	EA		REF									-15	
												SAME AS A130 M												4-5	49
				X	X					D	B949	NAMEPLATE:	EA		REF									-15	
												SAME AS A132A												4-5	51
			59406603631	X	X					D	B950	TERMINAL,LUG:	EA		REF									-15	
												SAME AS B832												4-9	14.7
			53400742072	X	X					D	B951	STRAP,LINE SUPPORT:	EA		REF									-15	
												SAME AS A131												4-5	50

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X	X					D	B952	PIN,KEYING:	EA		REF								-15		
												SAME AS A133A											4-5	53	
			5340'980496	X	X					D	B953	CLAMP,LOOP:	EA		REF								-15		
												SAME AS A133B											4-5	58	
			53057637827	X	X					*	B954	SCREW,MACHINE:	EA		REF								-15		
												SAME AS A133C											4-5	55	
			53105956425	X	X					*	B955	WASHER,FLAT:	EA		REF								-15		
												SAME AS A133D											4-5	57	
			53109338118	X	X					*	B956	WASHER,LOCK,SPLIT:	EA		REF								-15		
												SAME AS A133E											4-5	56	
			53109349748	X	X					*	B957	NUT,PLAIN,HEXAGON:	EA		REF								-15		
												SAME AS A133F											4-5	54	
M	H			X						B	B957A	PLATE, IDENTIFICATION:	EA		1								-15		
												58189: A64774-001											4-5	107	
M	H				X					B	B958	PLATE,IDENTIFICATION:	EA		1								-15		
												58189: A64775-001											4-5	106	
M	H			X	X					B	B959	PLATE,IDENTIFICATION:	EA		1								-15		
												58189: A52996-001											4-5	109	
C	H		53052535603	X	X					B	B960	SCREW,MACHINE:	EA		2								-15		
												96906: MS21318-1											4-5	108	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
A	H	R			X					B	B961	REIAY AND FILTER ASSEMBLY: 58189; A64776-001	EA		1									-15 4-5	 24.4
			53050593659		X					*	B962	SCREW, MACHINE: SAME AS B411B	EA		REF									-15 4-5	 24.1
			53101670812		X					*	B963	WASHER, FIAT: SAME AS A003	EA		REF									-15 4-5	 24.2
			53109338120		X					*	B964	WASHER, LOCK: SAME AS A004	EA		REF									-15 4-5	 24.3
X1	H				X					C	B965	CHASSIS, REIAY AND FILTER: 58189; A64776-002	EA		1									-15 4-11.1	 10
P	H		59108818268		X					C	B966	CAPACITOR, FIXED, PAPER: 81349; CP09AlKF474K3	EA		2	*	*	*	*	*	*		6	-15 4-11.1	 1
					X					C	B967	CAPACITOR, FIXED, PAPER: SAME AS B966	EA		REF									-15 4-11.1	 1
			59052793513		X					C	B968	RESISTOR, FIXED, COMPOSITION:, SAME AS ASb59	EA		REF									-15 4-11.1	 2
			59052793513		X					C	B969	RESISTOR, FIXED, COMPOSITION: SAME AS A569	EA		REF									-15 4-11.1	 2
P	H		59450544379		X					C	B970	REIAY, ARMATURE: 77342; AK-4018-1	EA		1	*	*	*	*	*	*		3	-15 4-11.1	 5
			53109249759		X					*	B971	NUT,PLAIN,HEXAGON: SAME AS A018	EA		REF									-15 4-11.1	 3
			53109338119		X					*	B972	WASHER, LOCK: SAME AS A021	EA		REF									-15 4-11.1	 4

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE												(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H				X					C	B973	TERMINAL,STANDOFF:	EA		6								-15	
												58189; 540027-006											4-11.1	6
			53050546650		X					*	B974	SCREW, MACHINE:	EA		REF								-15	
												SAME AS 0486											4-11.1	7
			53109296395		X					*	B975	WASHER, LOCK:	EA		REF								-15	
												SAME AS A015S											4-11.1	8
			59405039995		X					C	B976	TERMINAL LUG:	EA		REF								-15	
												SAME AS A130B											4-11.1	9
					X					B	B977	CLAMP, LOOP:	EA		REF								-15	
												SAME AS 8821A											4-5	114
			53109349761		X					*	B978	NUT,PLAIN,HEXAGON:	EA		REF								-15	
												SAME AS A012											4-5	110
			53050546654		X					*	B979	SCREW, MACHINE:	EA		REF								-15	
												SAME AS A322											4-5	111
			53109296395		X					*	B980	WASHER, LOCK:	EA		REF								-15	
												SAME AS A015											4-5	112
			53106389857		X					*	B981	WASIIER, FLAT:	EA		REF								-15	
												SAME AS A014B											4-5	113
C	H			X	X					B	B982	CLAMP, LOOP:	EA		11								-15	
												09922, HP-12N											4-5	119
				X	X					*	B983	SCREW, MACHINE:	EA		REF								-15	
												SAME AS B821B											4-5	115
			53105586207	X	X					*	B984	WASHER, FLAT:	EA		REF								-15	
												SAME AS A020 M											4-5	118
			53109338119	X	X					*	B985	WASHER, LOCK:	EA		REF								-15	
												SAME AS A021											4-5	117

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X						B	B986	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B982												4-5	120
				X						*	B987	SCREW, MACHINE:	EA		REF									-15	
												SAME AS B821B												4-5	115
			53105586207	X						*	B8988	WASHER, FIAT:	EA		REF									-15	
												SAME AS A020 M												4-5	118
			53109338119	X						*	B989	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021												4-5	117
				X	X					B	B990	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B821A												4-5	121
				X	X					*	B990A	SCREW, MACHINE:	EA		REF									-15	
												SAME AS B821B												4-5	115
			53105586207	X	X					*	B9908	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M												4-6	118
			53109338119	X	X					*	B990C	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021												4-5	117
					X					B	B990D	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B821A												4-5	121
					X					*	B991	SCREW, MACHINE:	EA		REF									-15	
												SAME AS B821B												4-5	115
			53105586207		X					*	B992	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M												4-5	118
			53109338119		X					*	B993	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021												4-5	117
				X	X					B	B994	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B821A												4-5	121
			53109249759	X	X					*	B995	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A01B												4-5	116

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109338119	X	X					*	B996	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021												4-5	117
			53105586207	X	X					*	B997	WASHER, FIAT:	EA		REF									-15	
												SAME AS A020 M												4-5	118
					X					B	B998	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B821A												4-5	121
			53109249759		X					*	B999	NUT, PLAIN, HEAGON:	EA		REF									-15	
												SAME AS A018												4-5	116
			53109338119		X					*	C001	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021												4-5	117
			53105586207		X					*	C002	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M												4-5	118
				X	X					B	C003	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B82 A												4-5	121
			53109249759	X	X					*	C004	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A018												4-5	116
				X	X					*	C005	SCREW, MACHINE:	EA		REF									-15	
												SAME AS B821B												4-5	115
			53109338119	X	X					*	C006	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021												4-5	117
			53105586207	X	X					*	C007	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M												4-5	118
					X					B	C008	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B821A												4-5	121
			53109249759		X					*	C009	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A018												4-5	116
					X					*	C010	SCREW, MACHINE:	EA		REF									-15	
												SAME AS B821B												4-5	115

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109338119		X					*	C011	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021													4-5	117
			53105586207		X					*	C012	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M													4-5	118
C	H			X	X					B	C013	CLAMP, LOOP	EA		4									-15	
												09922; HP-9N													4-5	122
				X	X					*	C014	SCREW, MACHINE:	EA		REF									-15	
												SAME AS B8218													4-5	115
			53105586207	X	X					*	C015	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M													4-5	118
			53109338119	X	X					*	C016	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021													4-5	117
				X	X					B	C017	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B894B													4-5	123
				X	X					*	C018	SCREW, MACHINE:	EA		REF									-15	
												SAME AS 88218													4-5	115
			53105586207	X	X					*	C019	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M													4-5	118
			53109338119	X	X					*	C020	WASIHER, LOCK:	EA		REF									-15	
												SAME AS A021													4-5	117
				X	X					B	C021	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B8948													4-5	123
			53109249759	X	X					*	C022	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A018													4-5	116
			53109338119	X	X					*	C023	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021													4-5	117
			53105586207	X	X					*	C024	WASHER, LOCK:	EA		REF									-15	
												SAME AS A020 M													4-5	118

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
					X					B	C025	CLAMP, LOOP:	EA		REF									-15	
												SAME AS B894B												4-5	123
			53109249759		X					*	C026	NUT,PIAIN,HEXAGON:	EA		REF									-15	
												SAME AS A018												4-5	116
			53109338119		X					*	C027	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021												4-5	117
			53105586207		X					*	C028	WASHER, FIAT:	EA		REF									-15	
												SAME AS A020 M												4-5	118
C	H			X	X					B	C029	CLAMP, LOOP:	EA		8									-15	
												09922; HP-16N												4-5	124
			53109249759	X	X					*	C030	NUT,RPLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A018												4-5	116
				X	X					*	C031	SCREW, MACHINE:	EA		REF									-15	
												SAME AS B821B												4-5	115
			53109338119	X	X					*	C032	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021												4-5	117
			53105586207	X	X					*	C033	WASIIER, FLAT:	EA		REF									-15	
												SAME AS A020 M												4-5	118
					X					B	C034	CLAMP, LOOP:	EA		REF									-15	
												SAME AS C029												4-5	124
			53109249759		X					*	C035	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A018												4-5	116
					X					*	C036	SCREW, MACHINE:	EA		REF									-15	
												SAME AS B821B												4-5	115
			53109338119		X					*	C037	WASHER, LOCK:	EA		REF									-15	
												SAME AS A021												4-5	117
			53105586207		X					*	C038	WASHER, I'LAT:	EA		REF									-15	
												SAME AS A020 M												4-5	118

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
C	H			X	X					B	C039	CLAMP,CABLE SUPPORT:	EA		2									-15	
												80063: SMC634831-1												4-5	125
			53109249759	X	X					*	C040	NUT,PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS A018												4-5	116
				X	X					*	C041	SCREW,MACHINE:	EA		REF									-15	
												SAME AS B8218												4-5	115
C	H			X	X					*	C042	WASHER, LOCK:	EA		4									-15	
												96906: MS35335-59												4-5	126
			53105586207	X	X					*	C043	WASHER, FLAT:	EA		REF									-15	
												SAME AS A020 M												4-5	118
					X					B	C044	CLAMP,CABLE SUPPORT:	EA		REF									-15	
												SAME AS C039												4-5	125
			53109249759		X					*	C045	NUT,PIAIN,HEXAGON:	EA		REF									-15	
												SAME AS A018												4-5	116
					X					*	C046	SCREW, MACHINE:	EA		REF									-15	
												SAME AS B821B												4-5	115
					X					*	C047	WASHER, LOCK:	EA		REF									-15	
												SAME AS C042												4-5	126
			53105586207		X					*	C048	WASFIER, FLAT:	EA		REF									-15	
												SAME M A020 M												4-5	118
C	H				X					B	C049	CLAMP, BAR:	EA		2									-15	
												80063: SMC634816												4-5	130
			53109349765	X	X					*	C050	NUT, PLAIN,HEXAGON:	EA		REF									-15	
												SAME AS AOOS												4-5	127
			53109338120	X	X					*	C051	WASHER, LOCK:	EA		REF									-15	
												SAME AS A004												4-5	128
			53101670812	X	X					*	C052	WASHER, FLAT:	EA		REF									-15	
												SAME AS A003												4-5	129

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE											(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION			UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
				X						B	C053	CLAMP, BAR: SAME AS C049		EA		REF									-15 4-5	 130
			53109349765	X						*	C054	NUT, PLAIN, HEXAGON: SAME AS A005		EA		REF									-15 4-5	 127
			53109338120	X						*	C055	WASHER, LOCK: SAME AS A004		EA		REF									-15 4-5	 128
			53101670812	X						*	C056	WASHER, FLAT: SAME AS A003		EA		REF									-15 4-5	 129
			53109249759	X	X					B	C057	NUT, PLAIN, HEXAGON: SAME AS A018		EA		REF									-15 4-5	 131
			53109338119	X	X					B	C058	WASHER, LOCK: SAME AS A021		EA		REF									-15 4-5	 132
			53105586207	X	X					B	C059	WASHER, FLAT: SAME AS A020 M		EA		REF									-15 4-5	 133
				X	X					B	C060	CLAMP, LOOP: SAME AS C029		EA		REF									-15 4-5	 124
				X	X					*	C061	SCREW, MACHINE: SAME AS B821B		EA		REF									-15 4-5	 115
			53105586207	X	X					*	C062	WASHER, FLAT: SAME AS A020 M		EA		REF									-15 4-5	 118
			53109338119	X	X					*	C063	WASHER, LOCK: SAME AS A021		EA		REF									-15 4-5	 117

221

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE												(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION			(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
A	H	R	58953505348							A	A001	TRANSMISSION IDENTI-FICATION GENERATOR KIT: MK-1583/G		EA		1									-15 4-47	A7or A8
X1	H									B	A005	CHASSIS ELECTRICAL ASSEMBLY: 06809; 00-001501		EA		1									-15 4-47	6, 7
X2	H									C	A005A	COVER, PLATE, ACCESS: 06809; 01-002792-1		EA		1									-15 4-48	2
P	H		53057637827							*	A005B	SCREW, MACHINE: 96906; MS51959-18		EA		6	*	*	*	*	*	*	*	18	-15 4-48	51
M	H									D	A005C	PLATE IDENTIFICATION: 06809; 01-002845		EA		2									-15 4-48	52
P	H		53052535603							*	A005D	SCREW, DRIVE: 96906; MS21318-1		EA		4	*	*	*	*	*	*		12 4-48	-15 51	
X2	H									C	A005E	CABLE ASSEMBLY: 06809; 00-001496-1		EA		1								4-47 4-48	-15 10 4	
P	H		59408130698							D	A005F	TERMINAL LUG: 96906; MS25036-101		EA		18	*	*	*	*	*		36	-15 4-48	6	
P	H		59402048966							D	A005G	TERMINAL LUG: 96906; MS25036-102		EA		2	*	*	*	*	*		4	-15 4-48	7	
X2	H									D	A005H	PLATE, IDENTIFICATION: 59730; TC-125		EA									4	-15 4-48	12	
P	H		59754972158							D	A005J	STRAP, CABLE: 96906: MS17821-1-9		EA		38	*	*	*	*	*		38	15 4-48	11	
P	H		59351025806							D	A005K	CONTACT, ELECTRICAL: 16512; 540362-06		EA		25	*	*	*	*	*		46 4-47	-15 29		
X2	H									D	A005L	CABLE, FLEXIBLE: 06809: 12-890089		EA		1							-15 4-48	20		

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59754972158							C	A005M	STRAP, CABLE: SAME AS A005J	EA		REF									-15 4-48	3
P	H									C	A005N	MOUNTING DEVICE, CABLE TIE: 06383; ABMS-A-C	EA		4	*	*	*	*	*	*		4	-15 4-48	5
P	H									C	A007	SWITCH, TOGGLE, SUB-MINIATURE: 96906; MS90311-231	EA		1	*	*	*	*	*	*		5	-15 4-48	13
P	H									C	A008	SWITCH, PUSH BUTTON: 96182; 1197-46	EA		1	*	*	*	*	*	*		5	-15 4-48	14
X2	H		66059410561							D	A008A	SWITCH-LIGHT UNIT: 96182; 10EA1C1	EA		1									-15 4-48	
X2	H		59309593427							D	A008B	SWITCH ASSEMBLY: 96182: 01EF1	EA		1									-15 4-48	
X2	H		62100581439							D	A008C	DISPLAY SCREEN: 96182; 10EN1	EA		1									-15 4-48	
X2	H									D	A008D	FRONT LENS: 96182; 10ER1T5V12-LOAD	EA		1									-15 4-48	
P	H									C	A009	LIGHT INDICATOR: 96182; 80EA1F1WL2N12 TIG ON	EA	1	*	*	*	*	*	*	*	*		-15 4-48	15
X2	H		62100195599							D	A009A	HOUSING LIGHT CAP-SULE: 96182; 80EA1	EA	1										-15 4-48	
X2	H		62109273688							D	A009B	FILTER COLOR: 96182; 80EF1W	EA	1										-15 4-48	
X2	H									D	A009C	FRONT LENS: 96182; 80EL2N12-TIG ON	EA	1										-15 4-48	

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		62409651381							C	A009D	LAMP, INCANDESCENT: 08806; 382	EA		2	*	*	*	*	*	*		100	-15 4-48	16
X2	H									C	A011	PANEL, FRONT: 06809; 01-002794-1	EA		1									-15 4-48	19
X2	H									D	A011A	PANEL, BLANK, FRONT: 06809; 01-002794-2	EA		1									-15 4-48	57
X2	H									D	A011B	FILTER LENS: 06809; 01-002869	EA		1									-15 4-48	56
P	H		53403368164							C	A011C	CLAMP, CABLE, NYLON: 09922; HP10N	EA		1	*	*	*	*	*	*		3	-15 4-48	10
P	H		53109390849							*	A011D	NUT, HEX, SELF-LOCK-ING: 96906; MS21083-C04	EA		12								24	-15 4-48	8
P	H		53105956211							*	A011E	WASHER, FLAT: 96906; MS15795-803	EA		19	*	*	*	*	*	*		38	-15 4-48	9
			53109390849							*	A011F	NUT, HEX, SELF-LOCK-ING: SAME AS A011D	EA		REF									-15 4-48	17

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE												(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD		(3) DESCRIPTION			UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53105956211							*	A01G	WASHER, FLAT: SAME AS A011E			EA		REF									-15 4-48	18
A	H	R								C	A012	SWITCH ASSEMBLY, 711 SERIES THUMBWHEEL: 07126: 7-D-58			EA		1									-15 4-48	24
P	H		59308329647							D	A012A	SWITCH, MODULE: 07126; 711/107/545			EA		3	*	*	*	*	*	*		5	-15 4-48	25
P	H		53100581823							*	A012B	NUT, HEX, SELF-LOCKING: 96906; MS21042-02			EA		4	*	*	*	*	*	*		9	-15 4-48	21
P	H		53108040141							*	A012C	WASHER, FIAT: 96906; MS15795-801			EA		4	*	-*	*	*	*	*		8	-15 4-48	22
P	H		53057633357							*	A012D	SCREW; MACHINE: 96906; MS51959-6			EA		4	*	*	*	*	*	*		8	-15 4-48	23
P	H	R	74404514957							C	A012E	CIRCUIT CARD ASSEMBLY 06809; 12-890082			EA		1	*	*	*	*	*	*		1	-15 4-48	30
X1	H									D	A012F	PRINTED CIRCUIT BOARD: 06809; 12-870082			EA		1									-15 5-25	XDS2
P	H		53050545647							*	A013A	SCREW, MACHINE: 96906; MS51957-13			EA		7	1	4	· I	14	-15				4-48	26
			53105956211							*	A013B	WASHER, FIAT: SAME AS A011E			EA		REF									-15 4-48	28
P	H		53109338118							*	A013C	WASHER, LOCK: 96906; MS35338-135			EA		6								12	-15 4-48	27
C	H									*	A013D	STANDOFF, ROUND, THREADED: 00141: EG-3			EA		4									-15 4-48	29
P	H		59351721115							D	A015	CONNECTOR, 24 PIN: 82110; A23-2023Z			EA		1	*	*	*	*	*	*	*		-15 5-25	XDS2
P	H		59104878424							D	A016	CAPACITOR, 390 PICA-FARAD: 81349; CM05FD391103			EA		1	*	*	*	*	*	*		5	-15 5-25	C3

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		59104335446							D	A017	CAPACITOR, 10 MICRO-FARAD: 81349; CS13BE106M	EA		1	*	*	*	*	*	*		5	-15 5-25	C2
P	H		59109412356							D	A018	CAPACITOR, 100 MICRO-FARAD: 81349; CS138E107M	EA		3	*	*	*	*	*	*		5	-15 5-25	C1
P	H		59627911082							D	A018A	INTEGRATED CIRCUIT: 18324; C7090K	EA		1	*	*	*	*	*	*	*		5 5-25	-15 Z9
P	H		59619314239							D	A019	INTEGRATED CIRCUIT: 29083; MCD2	EA		1	*	*	*	*	*	*		5	-15 5-25	Z4
P	H		59351904519							D	A019A	CONNECTOR, 10 PIN: 99779; MGR-102	EA		1	*	*	*	*	*	*	*		3 -15 5-25	XZ9
P	H									D	A022	RESISTOR, 1000 OHMS 59056816462 1/4 W ± 5%: 81349; RC07GF102J	EA		6	*	*	*	*	*	*		18	-15 5-25	R1
			59056816462							D	A022A	RESISTOR, 1000 OHMS 1/4 W ± 5%: SAME AS A022	EA		REF									-15 5-25	R2
P	H		59051061249							D	A023	RESISTOR, 51 OHMS 1/4 W ± 5% 81349; RC07GF510J	EA		1	*	*	*	*	*	*		3	-15 5-25	R3
X2	H									D	A024	TERMINAL, TURRENT TYPE: 80063; SM-8-546534	EA		60									-15 5-25	E21 thru E41
X2	H									D	A024A	EYELET, FLAT FLANGE: 70528; 384	EA		20									-15 5-25	E1 thru E20
P	H		59624709522							D	A025	INTEGRATED CIRCUIT: 01295; SN7402J	EA		4	*	*	*	*	^	*		16	-15 5-25	Z6
P	H		59624779456							D	A026	INTEGRATED CIRCUIT: 01295; SN7410J	EA		6	*	*	*	*	*	*		24	-15 5-25	25
P	H		59621477938							D	A027	INTEGRATED CIRCUIT: 01295; SN74153J	EA		3	*	*	*	*	*	*		12	-15 5-25	Z7

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE (2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
										D	A027A	INTEGRATED CIRCUIT: SAME AS A027	EA		REF									-15 5-25	Z8
P	H		59621750318							D	A028	INTEGRATED CIRCUIT: 01295; SN741601	EA		3	*	*	*	*	*	*		12	-15 5-25	Z1
										D	A028A	INTEGRATED CIRCUIT: SAME AS A028	EA		REF									-15 5-25	Z2
										D	A028B	INTEGRATED CIRCUIT; SAME AS A028	EA		REF									-15 5-25	Z3
P	H		59352522							D	A029	CONNECTOR, 16 PIN PRINTED CIRCUIT: 99779; 121-20-012-164	EA		8	*	*	*	*	*	*		24	-15 5-25	XZ1 thru XZ8
P	H		6625211050							D	A030	INDICATOR, SOLID STATE NUMERICAL: 28480: 5082-7300	EA		3	*	*	*	*	*	*		15	-15 5-25	DS2H
										D	A030A	INDICATOR, SOLID STATE NUMERICAL: SAME AS A030	EA		REF									-15 5-25	DS2T
										D	A030B	INDICATOR, SOLID STATE NUMERICAL: SAME AS A030	EA		REF									-15 5-25	DS2U
X2	H									C	A030C	LATCH SET: 94222; 27-99-123-10	EA		1									-15 4-48	31
M	H									C	A031	MARKER STRIP: 06809; 555218-108	EA											-15 4-48	36
P	H		59409836049							C	A031A	TERMINAL BOARD: 81349; 37TB-P	EA		1	*.	.	*	*	*	*		3	-15 4-48	35
			53109390849							*	A032A	NUT, HEX, SELF-LOCKING SAME AS A011D	EA	REF										-15 4-48	32
			53105956211							*	A033A	WASHER, FLAT: SAME AS A011E	EA		REF									-15 4-48	33

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H		53050545652							*	A034A	SCREW, MACHINE: 96906: MS51957-18	EA		4								8	-15 4-48	 34
X2	H									C	A035	ADAPTER, CHASSIS TO FRAME, SIDE: 06809; 01-002787-1	EA		1									-15 4-48	 43
P	H		53057015068							*	A035A	SCREW, MACHINE: 96906; MS51959-13	EA		9	*	*	*	*	*	*		18	-15 4-48	 37
			53109390849							*	A035B	NUT, HEX, SELF-LOCKING: SAME AS A011D	EA		REF									 4-48	-15 38
			53105956211							*	A035C	WASHER, FLAT: SAME AS A011E	EA		REF									-15 4-48	 39
P	H		53057278831							*	A035D	SCREW, MACHINE: 96906;: MS51959-19	EA		4	*	*	*	*	*	*		8	-15 4-48	 40
X2	H									C	A038	HINGE, CONTINUOUS: 06809; 01-002790	EA		1									-15 4-48	 41
X2	H									C	A039	SPACER, HINGE: 06809; 01-002791	EA		1									-15 4-48	 42
X2	H									C	A039A	ADAPTER, CHASSIS TO FRAME, SIDE: 06809; 01-002787-2	EA		1									-15 4-48	 45
										*	A039B	SCREW, MACHINE: SAME AS A035A	EA		REF									-15 4-48	 37
			53109390849							*	A039C	NUT, HEX, SELF-LOCKING SAME AS A011D	EA		REF									-15 4-48	 38
			53105956211							*	A039D	WASHER, FLAT: SAME AS A011E	EA		REF									-15 4-48	 39

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE (2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
										*	A039E	SCREW, MACHINE: SAME AS A035D	EA		REF									-15 4-48	40
X2	H									C	A039F	CATCH, STRIKE: 06809; 01-002789	EA		1									-15 4-48	44
P	H		53406646881							C	A039G	GROMMET, RUBBER: 70485; 711	EA		2	*	*	*	*	*	*		10	-15 4-48	46
X2	H									C	A040A	ADAPTER, CHASSIS TO FRAME, BOTTOM: 06809; 01-002788	EA		1									-15 4-48	50
										*	A040B	SCREW, MACHINE: SAME AS A035A	EA		REF									-15 4-48	47
										*	A040C	SCREW, MACHINE: SAME AS A013A	EA		REF									-15 4-48	48
			53105956211							*	A040D	WASHER, FIAT: SAME AS A011E	EA		REF									-15 4-48	49
X2	H									C	A041	FRAME, MOUNTING, FRONT PANEL: 06809; 01-002793	EA		1									-15 4-48	58
X2	H									C	A042	CHASSIS, ELECTRICAL EQUIPMENT ASSEMBLY: 06809; 01-002795-1	EA		1									-15 4-48	54
P	H		53250743301							D	A042A	GROMMET, PLASTIC, 6.28 IN LG.: 96906; MS21266-2N	EA		2	*	*	*	*	*	*		5 4-48	-15 53	
										D	A042B	PLATE, IDENTIFICATION: SAME AS A005C	EA		REF								-15 4-48	52	
										*	A042C	SCREW, DRIVE: SAME AS A005D	EA		REF								-15 4-48	51	
X2	H									D	A042D	CHASSIS, ELECTRICAL EQUIPMENT: 06809; 01-002795-2	EA		1								-15 4-48	55	

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
X2	H									B	A043 CABLE, ELECTRICAL ASSEMBLY: 06809; 00-001509	EA		1									-15 4-47	16
										C	A043A TERMINAL LUG: SAME AS A005F	EA		REF	-								-15 4-47	28
P	H		59405571629							C	A043B TERMINAL LUG: 96906; MS25036-149	EA		2	*	*	*	*	*			10	-15 4-47	32
										C	A043C PLATE, IDENTIFICATION: SAME AS A005H	EA		REF									-15 4-47	30
			59754972158							C	A043D STRAP, CABLE: SAME AS A005J	EA		REF									-15 4-47	8
			59351025806							C	A043E CONTACT, ELECTRICAL: SAME AS A005K	EA		REF									-15 4-47	29
P	H	T	74404037435							B	A044 CIRCUIT CARD ASSEMBLY: 06809; 12-890081	EA		1	*	*	*	*	*	*		15	-15 4-47	26
X1	D									C	A044A PRINTED CIRCUIT BOARD: 06809; 12-870081	EA		1									-15 5-24	
			59109412356							C	A045 CAPACITOR, 100 MICRO-FARAD: SAME AS A018	EA		REF									-15 5-24	C1
			59109412356							C	A045A CAPACITOR, 100 MICRO-FARAD: SAME AS A018	EA		REF									-15 5-24	C2
P	D		59618140768							C	A046 DIODE: 81349; JAN1N3064	EA		2								10	-15 5-24	CR1
			59618140768							C	A046A DIODE: SAME AS A046	EA		REF									-15 5-24	CR2
P	D		59619491432							C	A046B TRANSISTOR: 81349; JAN2N2219A	EA		1								5	-15 5-24	01

230

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE (2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59056816462							C	A048 RESISTOR, 1000 OHMS 1/4 W ± 5%: SAME AS A022	EA 5-24	REF R2	-15										
			59056816462							C	A048A RESISTOR, 1000 OHMS 1/4 W ± 5%: SAME AS A022	EA 5-24	REF R4	-15										

231

231

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59056816462							C	A048B	RESISTOR, 1000 OHMS 1/4 W ± S%: SAME AS A022	EA		REF									-15 5-24	R18
			59056816462							C	A048C	RESISTOR, 1000 OHMS 1/4 W ± 5%: SAME AS A022	EA		REF									-15 5-24	R17
P	D		59056863798							C	A049	RESISTOR, 2700 OHMS 1/4 W ± 5%: 81349; RC07GF2721	EA		13								39	-15 5-24	R1
P	D		59051411132							C	A049A	RESISTOR, 7500 OHMS 1/4 W ± 5%: 81349: RC07GF752I	EA		1								3	-15 5-24	R3
			59056863798							C	A049B	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R5
			59056863798							C	A049C	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R6
			59056863798							C	A049D	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R7
			59056863798							C	A049E	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R8
			59056863798							C	A049F	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R9
			59056863798							C	A049G	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R10
			59056863798							C	A049H	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R11

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59056863798							C-	A049Y	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R12
			59058863798							C	A049K	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R13
			59056863798							C	A049L	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R14
			59056863798							C	A049M	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R15
			59056863798							C	A049N	RESISTOR, 2700 OHMS 1/4 W ± 5%: SAME AS A049	EA		REF									-15 5-24	R16
										C	A050	TERMINAL, TURRENT TYPE: SAME AS A024	EA		REF									-15 5-24	1, 0, 2[1] 2[2], 1A thru 7C
P	D		59621455681							C	A051	INTEGRATED CIRCUIT: 01295; SN74H87J	EA		1									5 5-24	-15 Z9
			59624709522							C	A052	INTEGRATED CIRCUIT: SAME AS A025	EA		REF									-15 5-24	Z11
			59624709522							C	A052A	IN RATED CIRCUIT: SAME AS A02S	EA		REF									-15 5-24	Z16
			59624709522							C	A0528	INTEGRATED CIRCUIT: SAME AS A025	EA		REF									-15 5-24	Z26
			59624779456							C	A053	INTEGRATED CIRCUIT: SAME AS A026	EA		REF									-15 5-24	Z3
			59624779456							C	A053A	INTEGRATED CIRCUIT: SAME AS A026	EA		REF									-15 5-24	Z14

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			59624779456							C	A053B	INTEGRATED CIRCUIT: SAME AS A026	EA		REF									-15 5-24	Z17
			5962477945£							C	A053C	INTEGRATED CIRCUIT: SAME AS A026	EA		REF									-15 5-24	Z21
			59624779456							C	A053D	INTEGRATED CIRCUIT: SAME AS A026	EA		REF									-15 5-24	Z27
P	D									C	A054	INTEGRATED CIRCUIT: 01295: SN74151J	EA		7								35	-15 5-24	Z1
										C	A054A	INTEGRATED CIRCUIT: SAME AS A054	EA		REF									-15 5-24	Z2
										C	A054B	INTEGRATED CIRCUIT: SAME AS A054	EA		REF									-15 5-24	Z4
										C	A054C	INTEGRATED CIRCUIT: SAME AS A054	EA		REF									-15 5-24	Z5
										C	A054D	INTEGRATED CIRCUIT: SAME AS A054	EA		REF									-15 5-24	Z8
										C	A054E	INTEGRATED CIRCUIT: SAME AS A054	EA		REF									-15 5-24	Z13
										C	A054F	INTEGRATED CIRCUIT: SAME AS A054	EA		REF									-15 5-24	Z18
										C	A055	INTEGRATED CIRCUIT: SAME AS A027	EA		REF									-15 5-24	Z6
P	D		59621468593							C	A056	INTEGRATED CIRCUIT: 01295; SN74180J	EA		1								5	-15 5-24	Z23
P	D		59629851091							C	A057	INTEGRATED CIRCUIT: 01295; SN74195J	EA		4							20	-15 5-24	Z19	
										C	A057A	INTEGRATED CIRCUIT: SAME AS A057	EA		REF								-15 5-24	Z20	

(1) (A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	(4) UNIT OF ISSUE	(5) QTY INC IN UN PK	(6) QTY INC IN UNIT	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	(9) 1 YR. ALW. PER 100 EQUIP CNTG CY PL.	(10) DEPOT MAINT ALW. PER 100 EQUIP.	(11) ILLUSTRATIONS (A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
										C	A057B INTEGRATED CIRCUIT: SAME AS A057	EA		REF										-15 5-24	Z22
										C	A057C INTEGRATED CIRCUIT SAME AS A057	EA		REF										-15 5-24	Z24
P	D		59624701637							C	A058 INTEGRATED CIRCUIT! 01295; SN7474J	EA		1								5	-15 5-24	Z12
P	D		59621805793							C	A05BA8 INTEGRATED CIRCUIT: 06809; 04-001313	EA		1									5 5-24	-15 Z10
P	D		59621805794							C	A058B INTEGRATED CIRCUIT: 06809; 04-001314	EA		1									5 5-24	-15 Z15
P	D		59709564972							C	A058C INSULATOR DISK: 07047; 10079	EA		1								5	-15 5-24	H1
M	H									B	A059A PLATE, REFERENCE, DESIGNATION: 06808; 01-002851	EA		1									-15 4-47	1
P	H		53109349765							B	A060A NUT, PLAIN, HEXAGON: 96906; MS35650-304	EA		4	*	*	*	*	*	*		8	-15 4-47	2
P	H		53109330120							B	A061A WASHER, LOCK: 96906; MS35338-138	EA		4	*	*	*	*	*	*		8	-15 4-47	3
P	H		53101670801							B	A062A WASHER, FLAT: 88044; AN960C10	EA		8	*	*	*	*	*				16 4-47	-15 4
P	H		53050593659							B	A063A SCREW, MACHINE: 96906; MS51958-63	EA		4	*	*	*	*	*			8	-15 4-47	5
P	H		53408051045							B	A064A CLAMP, CABLE: 71616; CPC1953-9B	EA		1	*	*	*	*	*	*		10	-15 4-47	15
P	H		53404395246							B	A065A CLAMP, CABLE: 71616; CPC1953-12B	EA		1	*	*	*	*	*		*	5	-15 4-47	9
P	H		53109349748							*	A066A NUT, PLAIN, HEXAGON: 96906; MS35649-244	EA		2	*	*	*	*	*	*		8	-15 4-47	11

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION		UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
			53109338118							*	A067	WASHER, LOCK: SAME AS A013C	EA 4-47	REF 12	-15										
P	H		53105956425							*	A068	WASHER, FLAT; 88044; AN960C4L	LEA 4-47	2 13	*	*	*	' "	+	4	-15				
										*	A069	SCREW, MACHINE: SAME AS A005B	EA 4-47	REF 14	-15										
										B	A070	MOUNTING DEVICE, CABLE TIE: SAME AS A005N	EA 4-47	REF 17, 19	-15										
										*	A070A	NUT, PLAIN, HEXAGON: SAME AS A066A	EA 4-47	REF 11	-15										
			53109338118							*	A0708	WASHER, LOCK: SAME AS A013C	EA 4-47	REF 12	-15										
			53106389857							*	A070C	WASHER, FLAT: SAME AS, A068	EA 4-47	REF 13	-15										
										*	A070D	SCREW, MACHINE: SAME AS A005B	EA 4-47	REF 14	-15										
X2	H									B	A071	CABLE ELECTRICAL ASSEMBLY, SPECIAL PURPOSE: 06809; 00-001497	EA 4-47	1 18	-15										
			59754972158							*	A072	STRAP, CABLE: SAME AS AS005J	EA 4-47	REF 8	-15										
										C	A073	TERMINAL LUG: SAME AS A005F	EA 4-47	REF 31	-15										
										C	A074	PLATE, IDENTIFICATION: SAME AS A005H	EA REF 4-47	-15 30											
			59754972158							C	A075	STRAP, CABLE: SAME AS A005J	EA 4-47	REF 8	-15										

(1)			REPAIR PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7) (30 DAYS) SITE STOCKAGE ALLOWANCE			(8) 45 DAY AREA RESUPPLY ALLOW. BASED ON NO. EQUIP. SUPPORTED			(9)	(10)	(11) ILLUSTRATIONS	
(A) SRCE CD	(B) MNTC DC	(C) REC CODE	(2) FEDERAL STOCK NUMBER	MODEL 1	2	3	4	5	6	IND CD	(3) DESCRIPTION	UNIT OF ISSUE	QTY INC IN UN PK	QTY INC IN UNIT	(A) 1-5	(B) 6-10	(C) 11-20	(A) 1-5	(B) 6-10	(C) 11-20	1 YR. ALW. PER 100 EQUIP CNTG CY PL.	DEPOT MAINT ALW. PER 100 EQUIP.	(A) FIGURE NUMBER	(B) ITEM NO. OR REF DESIGN
P	H									B	A076 CLAMP, CABLE: 71616; CPC1953-20B	EA		1	*	*	*	*	*	*		5 4-47	-15 20	
P	H		59351025690							B	A077 P.C. CARD INSULATOR: 16512; 200150-02	EA		1	*	*	*	*	*	*		3	-15 4-47	24
P	H		5305d546651							*	A078 SCREW, MACHINE: 96906; MS51957-27	EA		2	*	*	*	*	*	*		4	-15 4-47	21
P	H									*	A079 WASHER, LOCK: 96906; MS35338-136	EA		2	*	*	*	*	*	*		4	-15 4-47	23
P	H		53106389857							*	A080 WASHER, FLAT: 88044; AN960C6L	EA		2	*	*	*	*	*	*		4	-15 4-47	22
P	H									B	A081 KEY, POLARIZING: 16512; 290050-1	EA		2	*	*	*	*	*	*		8	-15 4-47	25
										B	A082 GROMMET, PLASTIC, 6.28 IN LG.: SAME AS A042A	EA		REF									-15 4-47	27
											Breakdown of the following Cir- cult Card Assembly is located In the Common Control RPSTL and TM 11-7440-214-15:													
										B	A083 CIRCUIT CARD ASSEM- BLY: 80063; SM-E-546543	EA		1									-15 4-6	26

(238 blank)

INDEX

By Order of the Secretaries of the Army and the Navy:

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

JOSEPH E. RICE,
Rear Admiral, U. S. Navy,
Commander, Naval Electronics
Systems Command.

Published Under Authority of the Secretary of the Air Force

*U. S. GOVERNMENT PRINTING OFFICE: 1984 O- 421-647 (3361)

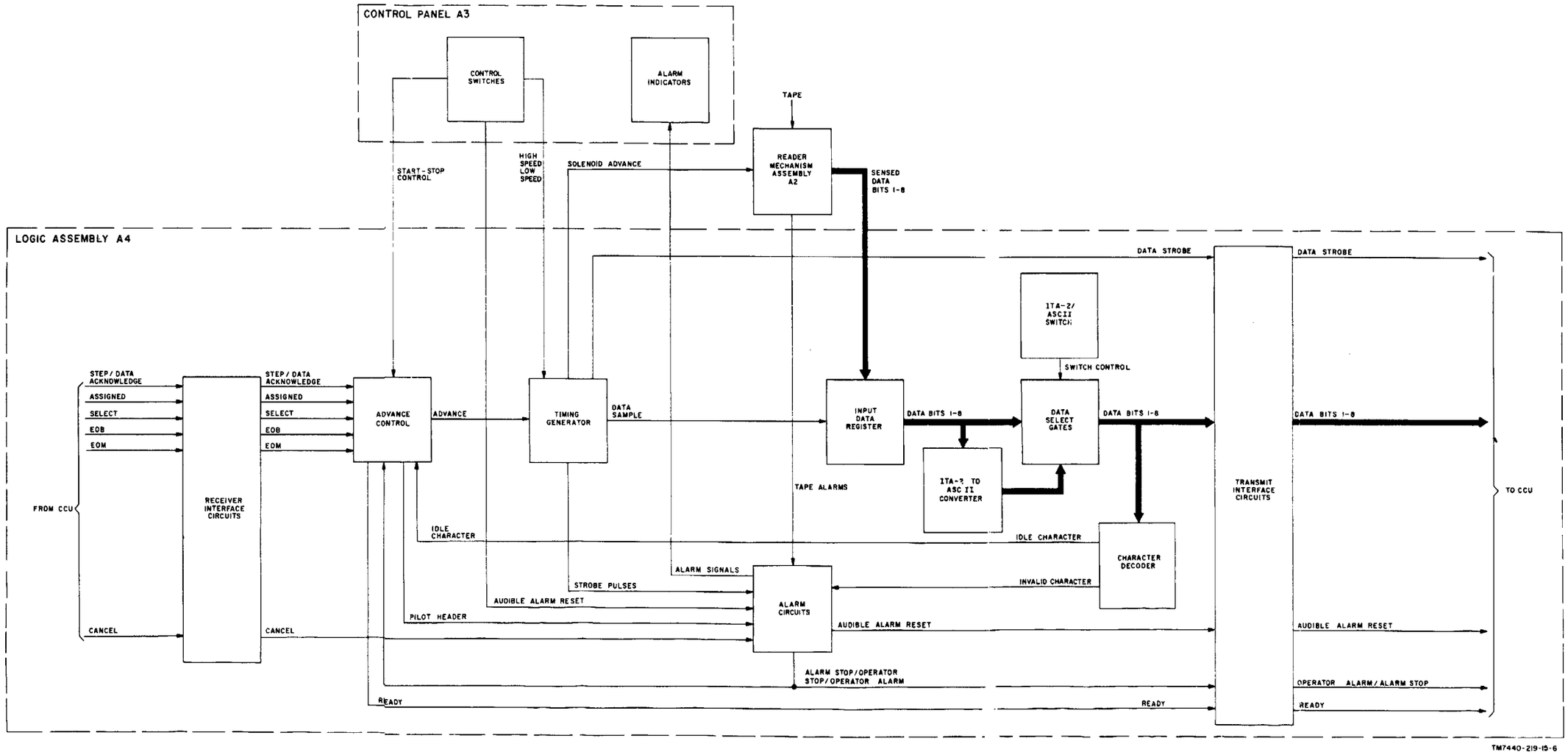


Figure 3-1. Punched tape reader, block diagram.

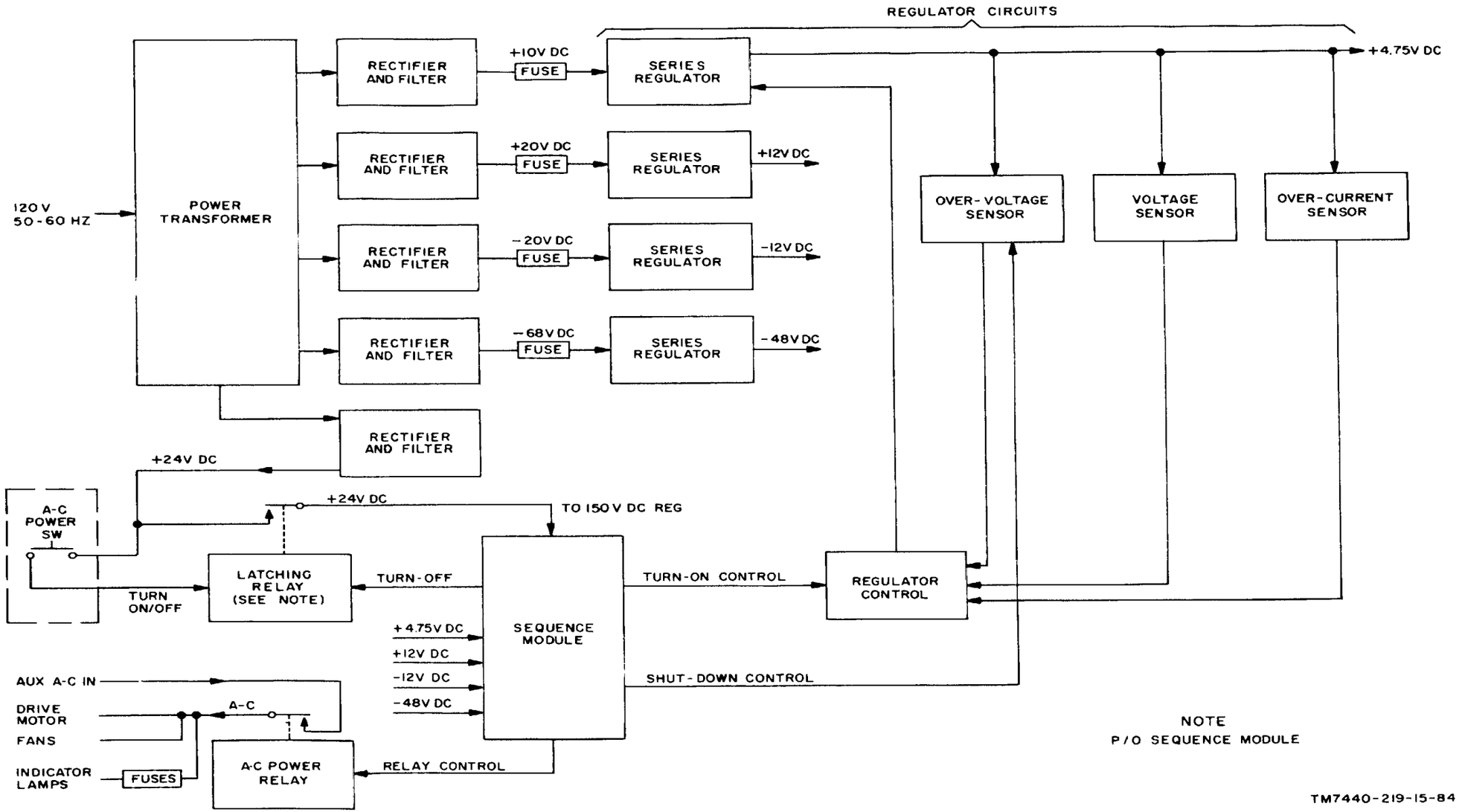


Figure 3-19. Rectifier and regulator circuits, block diagram.

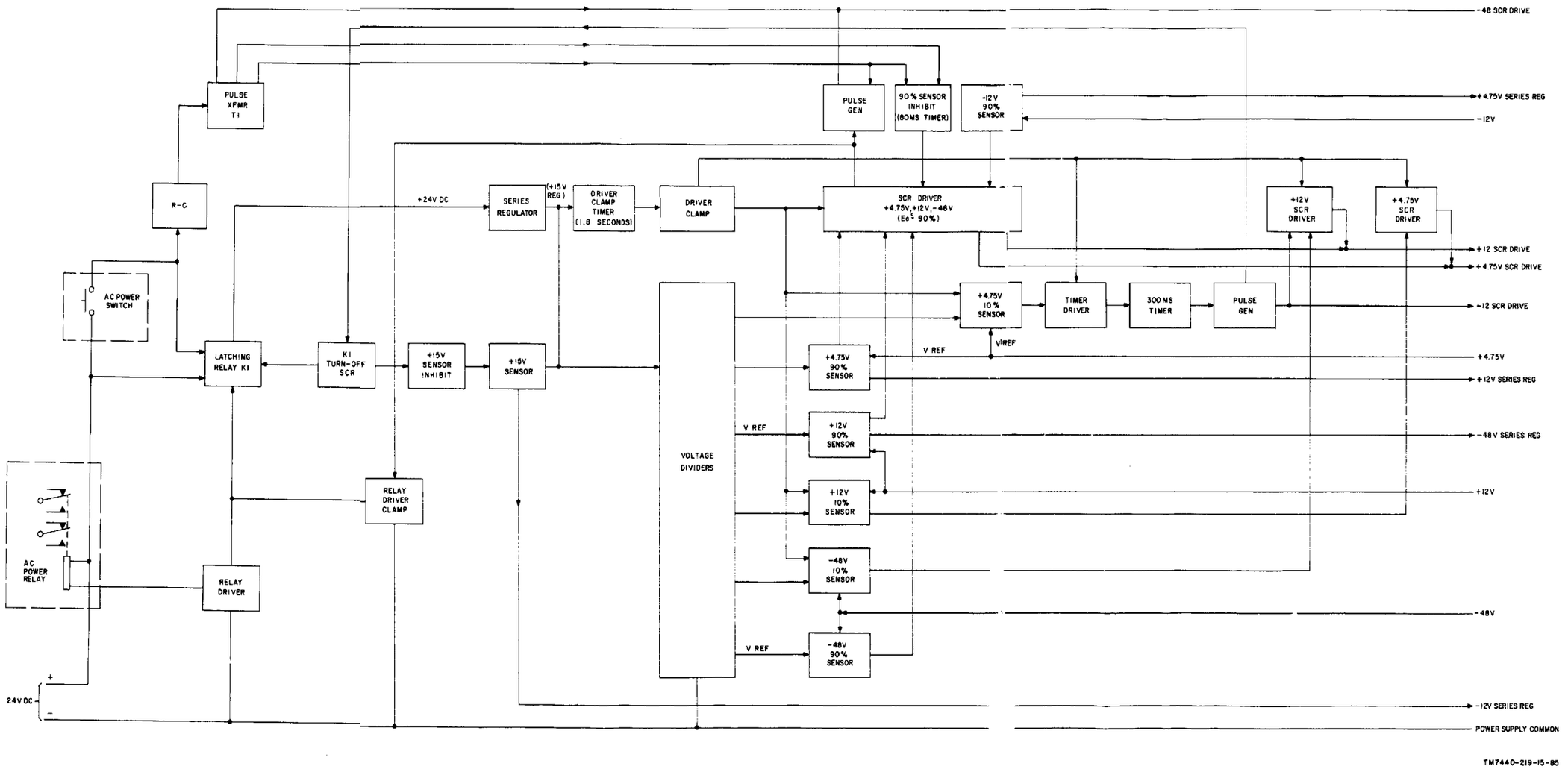
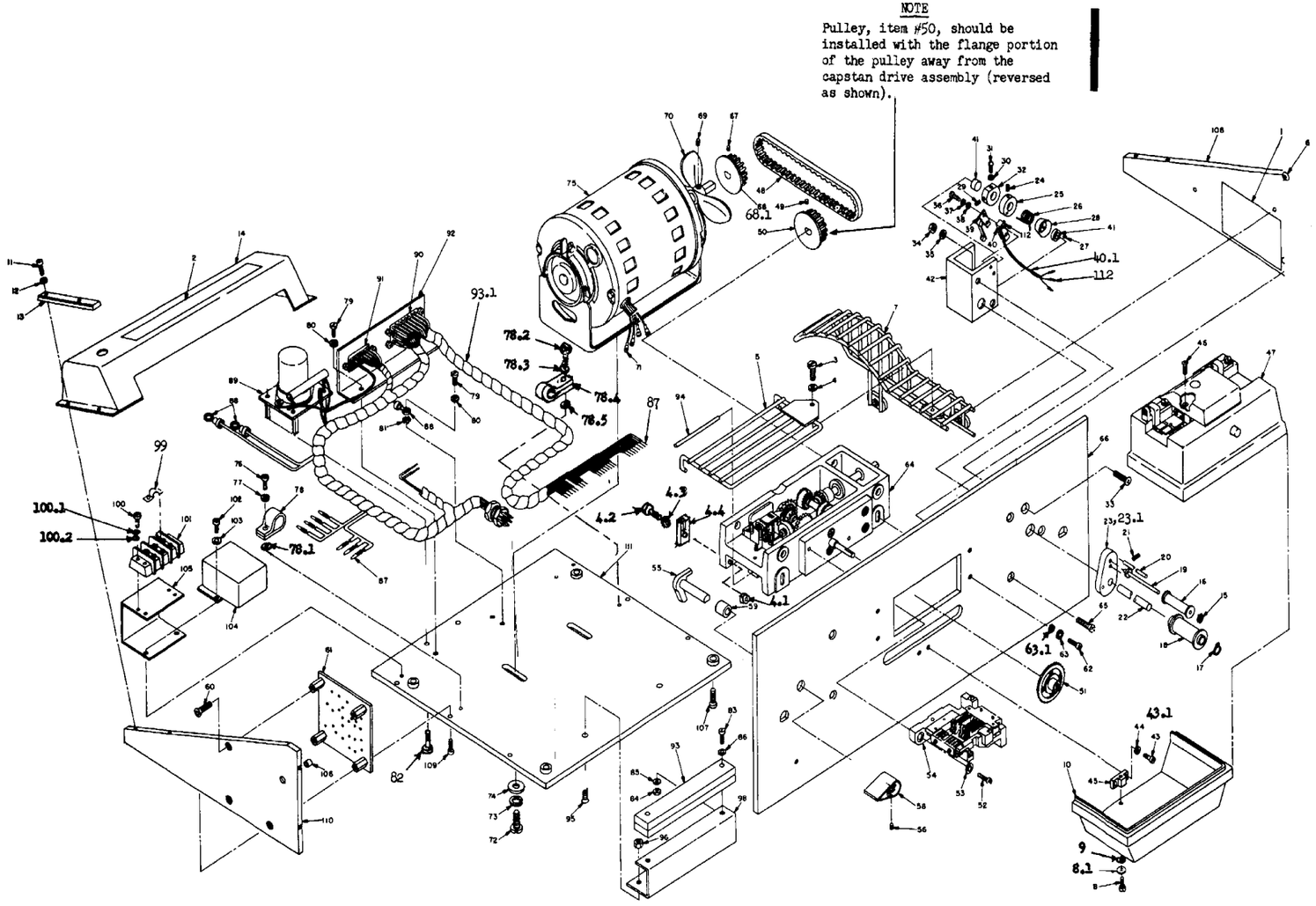


Figure 3-20. Power sequencing circuits, block diagram.



TM 11-7440-219-15/NAVSHIPS 0967-324-0054/TO 31W4-2G-61

1. Identification label
2. High woltage warning label
3. Screw, panhead, 6-32, 5/16 in.long
4. Lockwasher, internal tooth, No. 6
4.1 Hex nut, Keps, 6-32
4.2 Screw, panhead, 6-32, 3/4 in. long
4.3 Washer, plain, No. 6
4.4 Clamp bar
5. Capstan drive guard
6. Screw, flathead, 6-32, 1/2 in. long, Nyloc
7. Fan guard
8. Screw, panhead, 4-40, 3/8 in. long
8.1 Washer, split-ring, No. 4
9. Washer, plain, No. 4
10. Bottom cover
11. Screw, sockethead, 4-40, 5/16 in. long
12. Lockwasher, split-ring, No. 4
12.1 Washer, plain, No. 4
13. Bearing plate
14. Terminal cover
15. Grip ring
16. Roller assembly
17. Grip ring
18. Roller assembly
19. Roller pin
20. Support pin
21. Setscrew, socket, 6-32, 1/4 in. long
22. Roller support shaft
23. Roller support 23.1 Roller support assy
24. Setscrew, socket, 6-32, 3/16 in. long
25. Spring retainer
26. Tight tape spring
27. Setscrew, socket, 2-56, 1/8 in. long
28. Cam
29. Setscrew, socket, 6-32, 3/16 in. long
30. Lockwasher, split, No. 6
31. Screw, roundhead, 6-32, 3/16 in. long
32. Stop
33. Screw, flathead, 6-32, 5/8 in. long
34. Hex nut, Keps, 6-32
35. Washer, plain, No. 6
36. Screw, panhead, 2-56, 3/8 in. long
37. Washer, plain. No. 2
38. Lockwasher, internal tooth, No. 2
39. Actuator
40. Switch 40.1 Tight tape cable assembly
41. Bushing
42. Frame
43. Screw, panhead, 4-40, 3/8 in. long
43.1 Washer, split-ring, No. 4
44. Washer, plain, No. 4
45. Lower cover bracket
46. Screw, flathead, 4-40, 5/16 in. long
47. Tape deck assembly
48. Drive belt
49. Screw, cup pt., 4-40 1/4 in. long
50. 14-tooth pulley
51. Capstan
52. Screw, sockethead, 8-32, 3/8 in. long
53. Lockwasher, internal tooth, No. 8
54. Read head and track assembly
55. Cam
56. Setscrew, socket, 6-32, 3/16 in. long
57. Not used
58. Slew lever
59. Panel bushing
60. Screw, flathead, 6-32, 1/2 in. long, Nyloc
61. Amplifier assembly A2 (fig. 4-15)
62. Screw, sockethead, 8-32, 1/2 in. long
63. Lockwasher, internal tooth, No. 8
63.1 Washer, plain, No. 8
64. Capstan drive mechanism assembly
65. Screw, flathead, 6-32, 1/2 in. long
66. Panel
67. Setscrew, socket, 4-40 1/4 in. long
68. 10-tooth pulley, 60 Hz
69. Setscrew, socket, 10-32, 3/16 in. long
70. Fan 68.1 12 tooth pulley, 50 Hz
71. Terminal
72. Screw, panhead, 1/4-20, 5/8 in long
73. Lockwasher, split-ring, 1/4
74. Washer, flat, 1/4
75. Motor
76. Screw, panhead, 6-32, 7/16 in. long
77. Washer, plain, No. 6
78. Plastic clamp, 1/4 in.
78.1 Lockwasher, internal tooth, No. 6
78.2 Screw, panhead, 6-32, 7/16 in. long
78.3 Washer, plain, No. 6
78.4 Plastic clamp, 5/16 in.
78.5 Lockwasher, internal tooth, No. 6
79. Screw, panhead, 6-32, 5/16 in. long
80. Lockwasher, internal tooth, No. 6
81. Lockwasher, external tooth, No. 6
82. Screw, flathead, 6-32, 1/2 in. long
83. Screw, panhead, 6-32, 3/4 in. long
84. Hex nut, Keps, 6-32
85. Not used
86. Washer, plain, No. 6
87. Taper pin
88. Terminal lug
89. Network assembly A1
89.1 Not used
89.2 Not used
90. 34-pin connector (J1)
91. 26-pin connector (J2)
92. Bracket
93. Taper pin block
94. Push rod 93.1 Harness assembly
95. Screw, flathead, 6-32, 1/2 in. long
96. Hex nut, Keps, 6-32
97. Not used
98. Connector block bracket
99. Jumper
100. Screw, panhead, 6-32, 1/2 in. long
100.1 Lockwasher, split-ring, No. 6
100.2 Washer, plain, No. 6
101. Terminal strip
102. Screw, panhead, 6-32, 3/8 in. long
103. Lockwasher, internal tooth, No. 6
104. Relay K1
105. Bracket
106. Bushing
107. Screw, sockethead, 6-32, 5/16 in. long
108. Chassis gusset
109. Screw, sockethead, 6-32, 5/16 in. long
110. Chassis gusset
111. Base chassis assembly
112. Taper pin

Figure 4-12. Reader mechanism A2, exploded view.

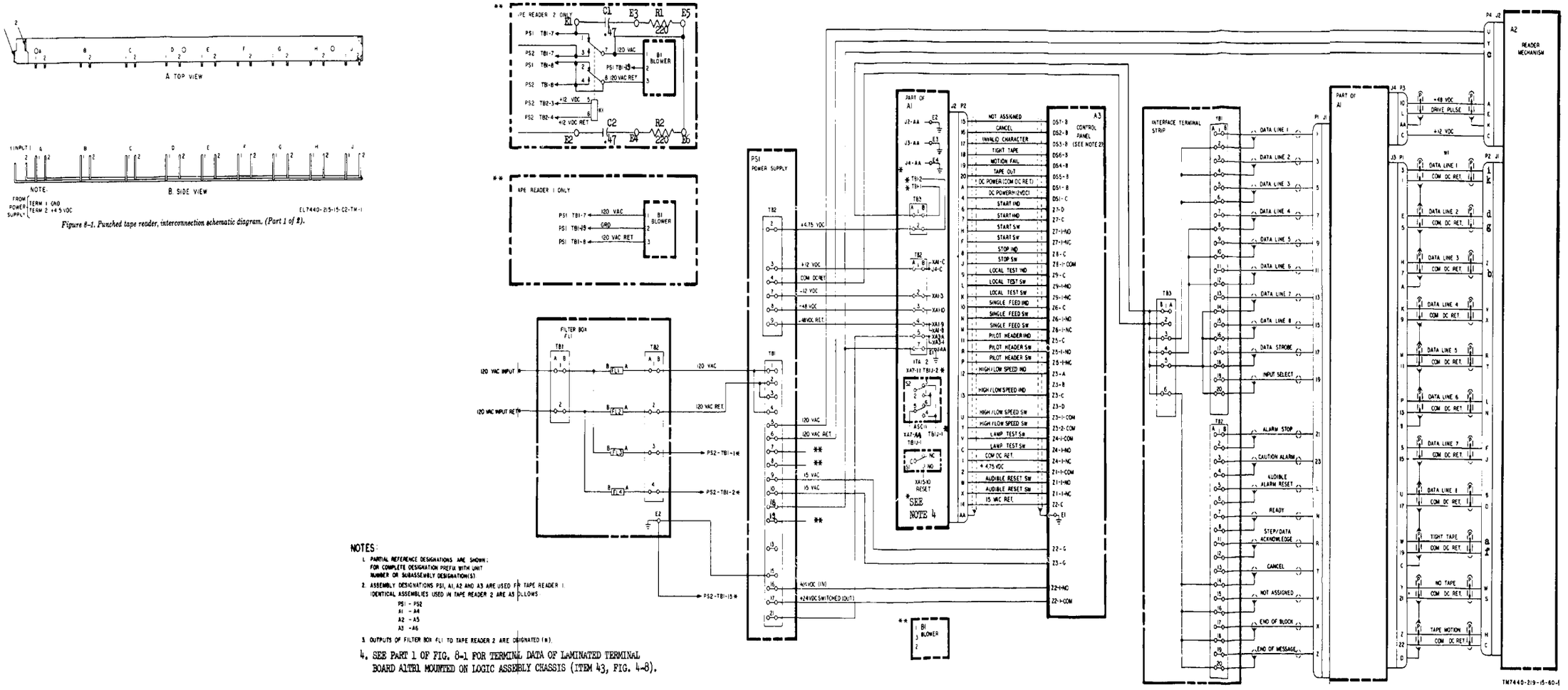


Figure 8-1. Punched tape reader, interconnection schematic diagram. (Part 1 of 2).

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
2. ASSEMBLY DESIGNATIONS PS1, A1, A2 AND A3 ARE USED FOR TAPE READER 1. IDENTICAL ASSEMBLIES USED IN TAPE READER 2 ARE AS FOLLOWS:
   PS1 - PS2
   A1 - A4
   A2 - A5
   A3 - A6
3. OUTPUTS OF FILTER BOX FL1 TO TAPE READER 2 ARE DESIGNATED (R).
4. SEE PART 1 OF FIG. 8-1 FOR TERMINAL DATA OF LAMINATED TERMINAL BOARD A1TB1 MOUNTED ON LOGIC ASSEMBLY CHASSIS (ITEM 43, FIG. 4-8).

Figure 8-1. Punched tape reader, interconnection schematic diagram. (Part 2 of 2)

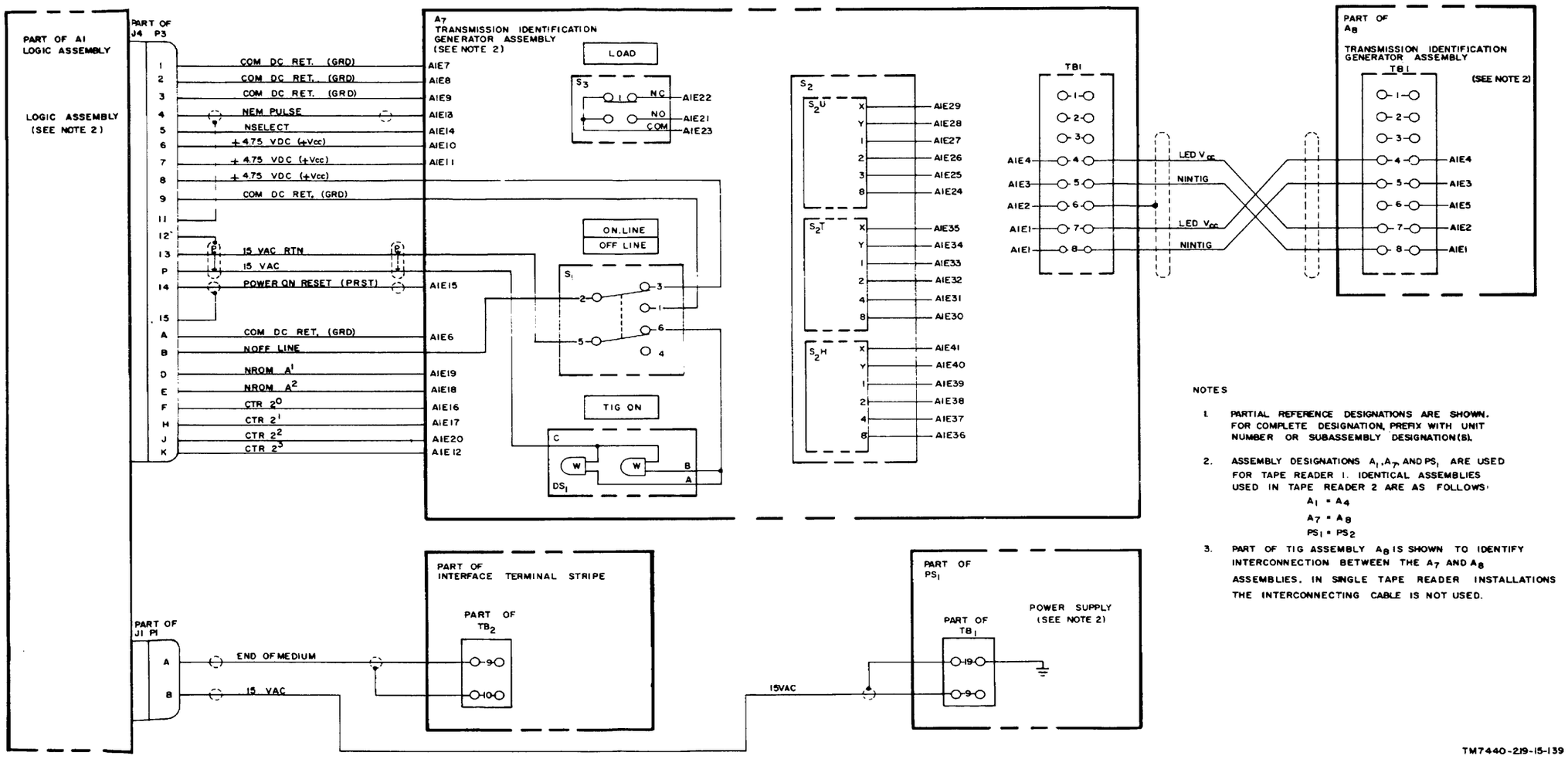
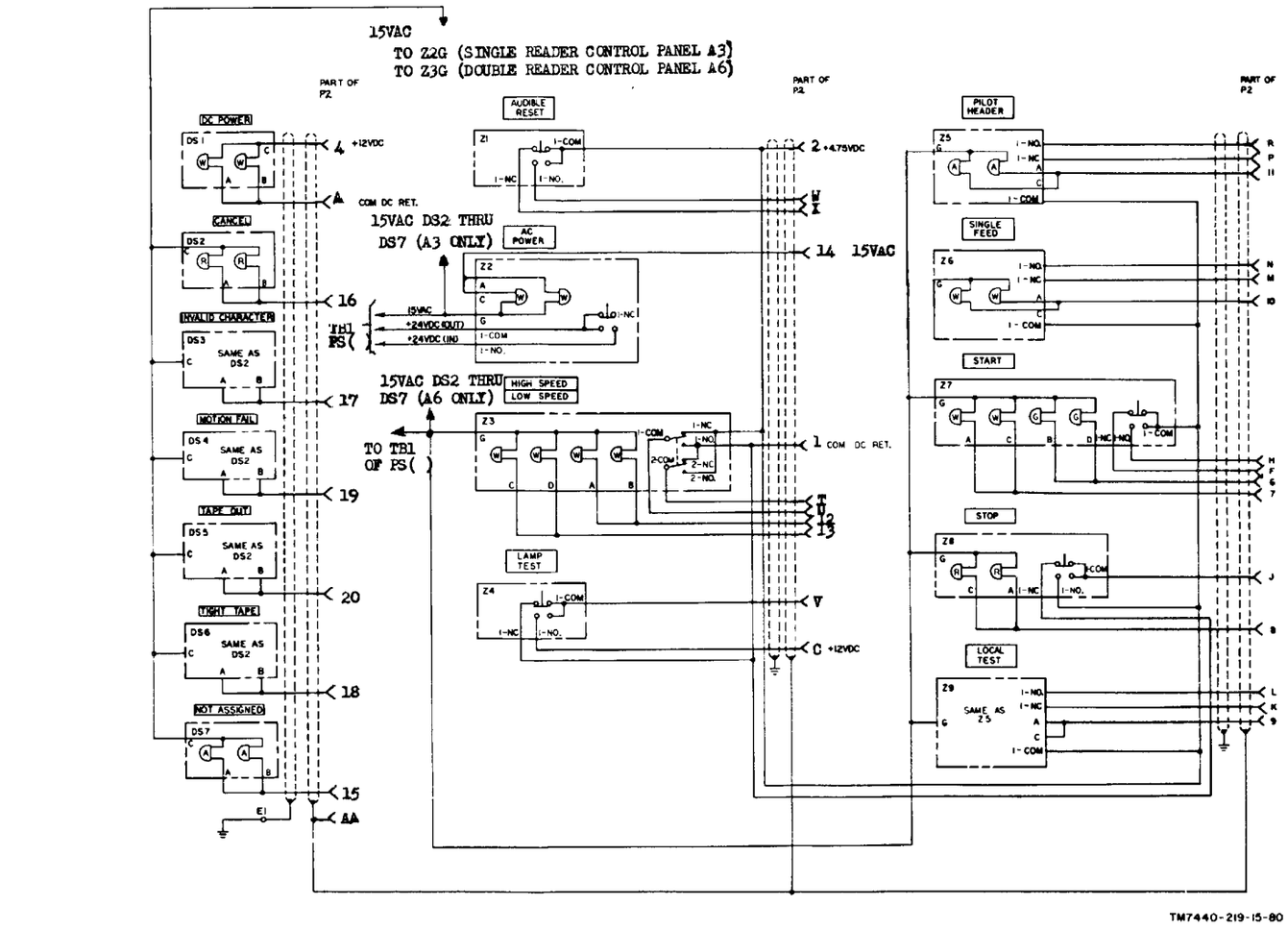


Figure 8-1.1. Transmission identification generator, interconnection schematic diagram.



NOTE:
PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).

Figure 8-2. Punched tape reader control panel, schematic diagram.

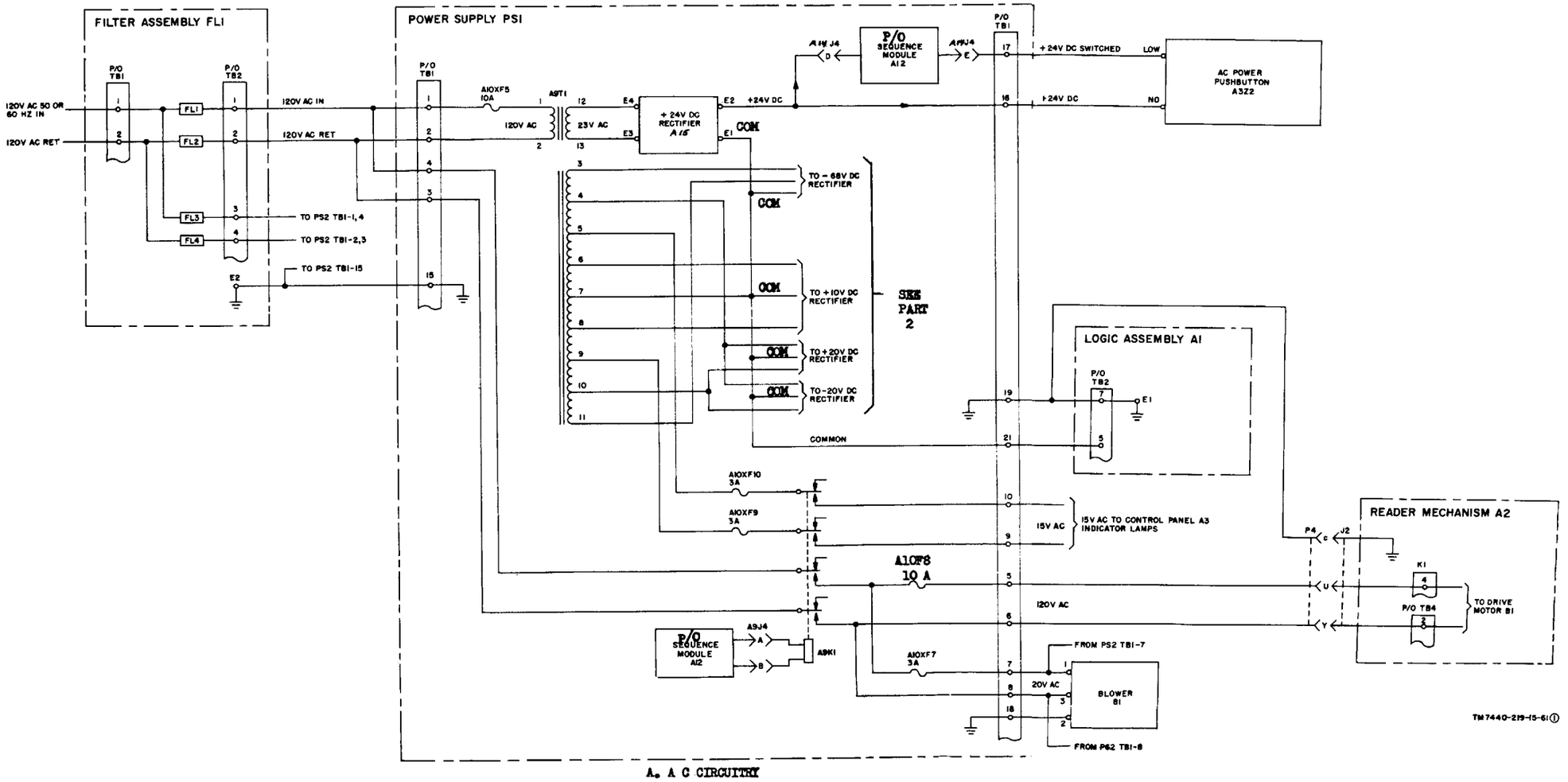


Figure 8-3. Ac and dc circuits, schematic diagrams (part 1 of 2).

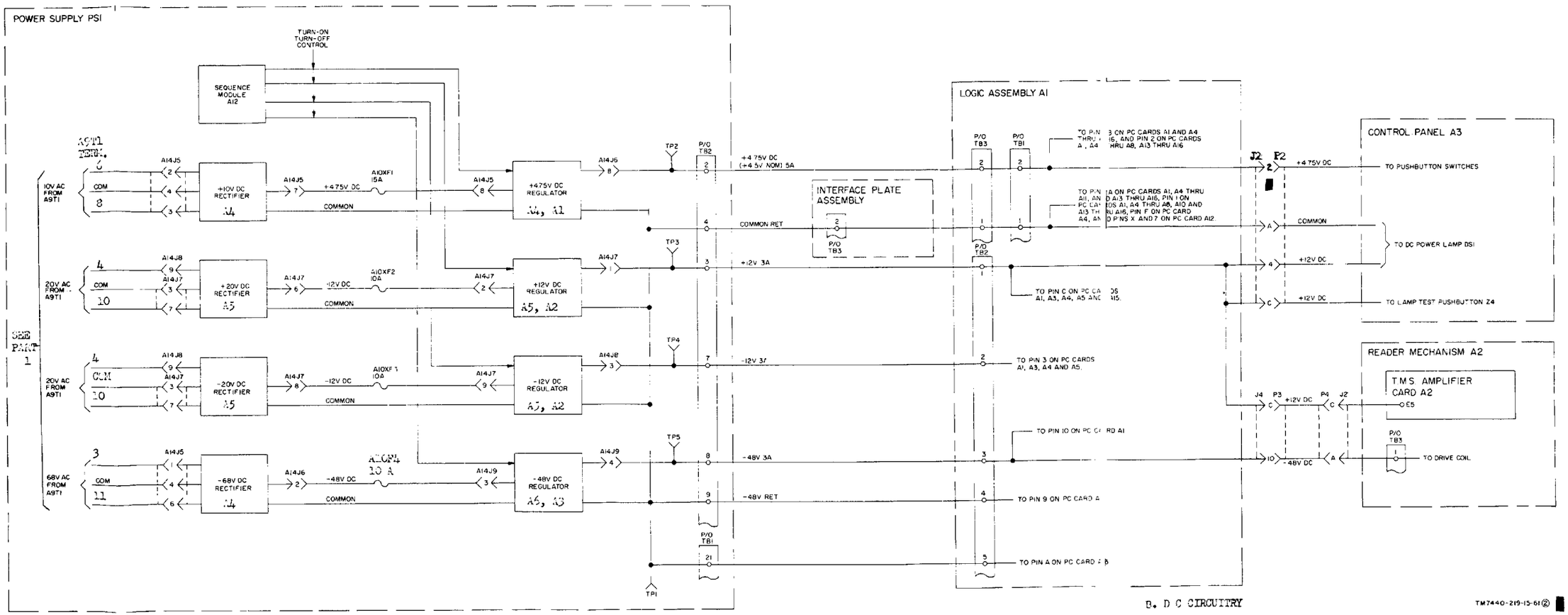


Figure 8-3. Ac and dc circuits, schematic diagrams (part 2 of 2).

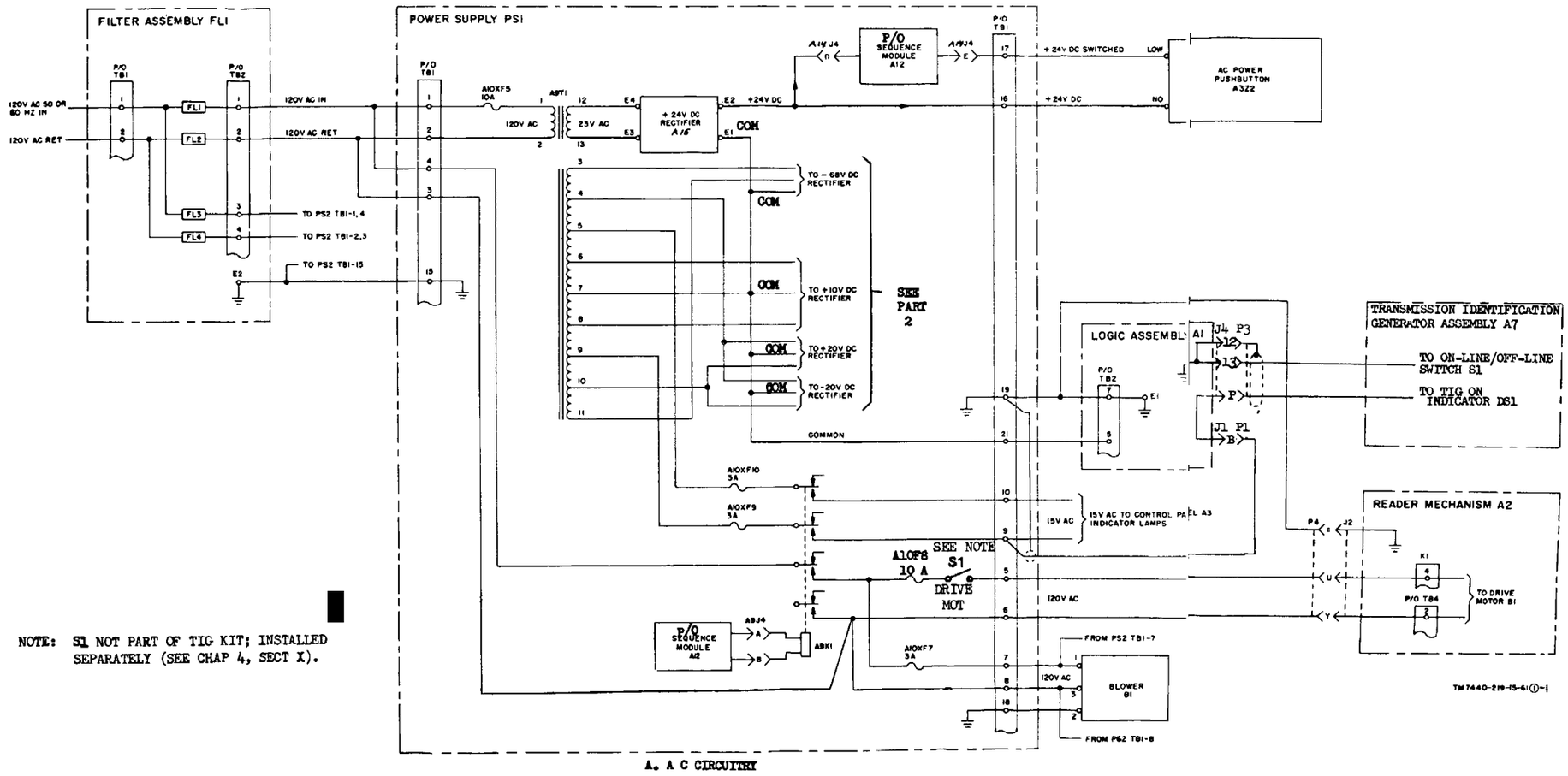


Figure 8-3.1 Ac and dc circuits, schematic diagrams (part 1 of 2). (with TIG installed)

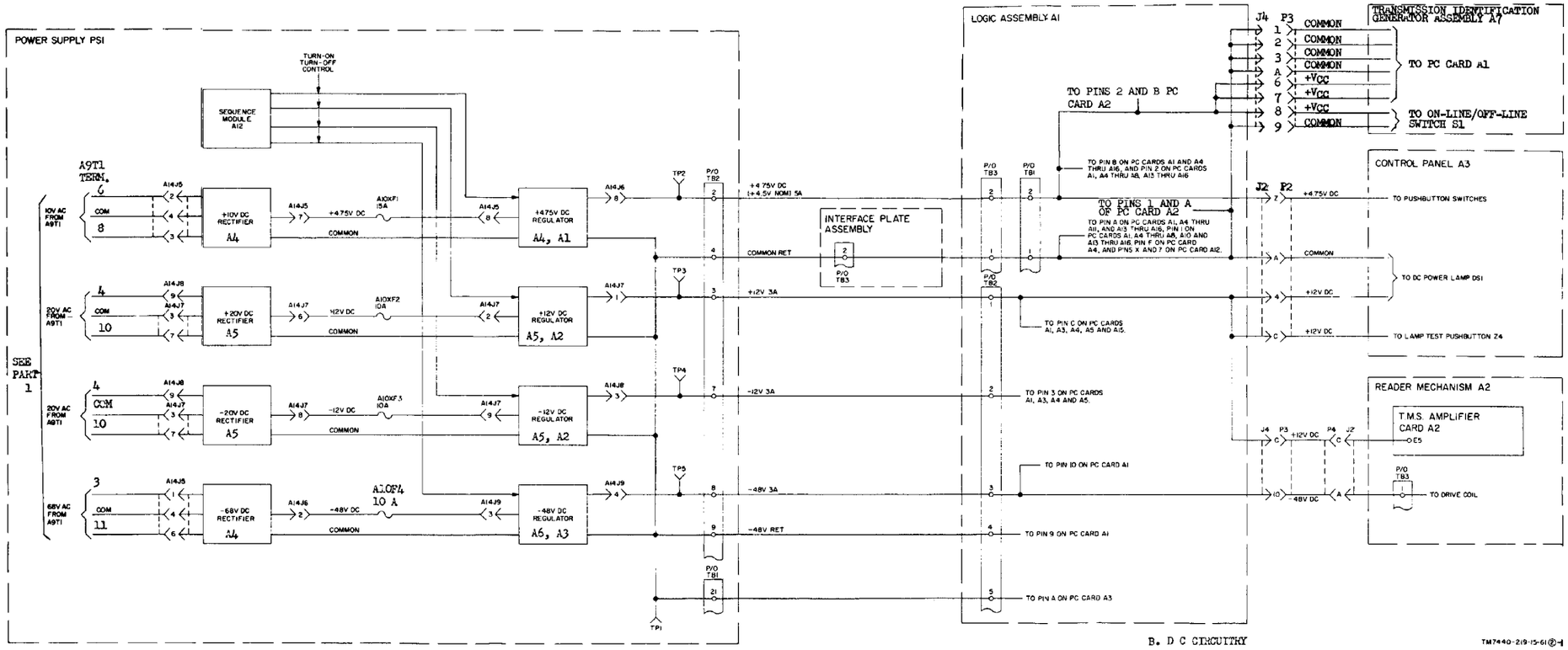


Figure 8-3.1 Ac and dc circuits, schematic diagrams (part 2 of 2).
(with TIG installed)

Change 4 8-10.3/(8-10.4 blank)

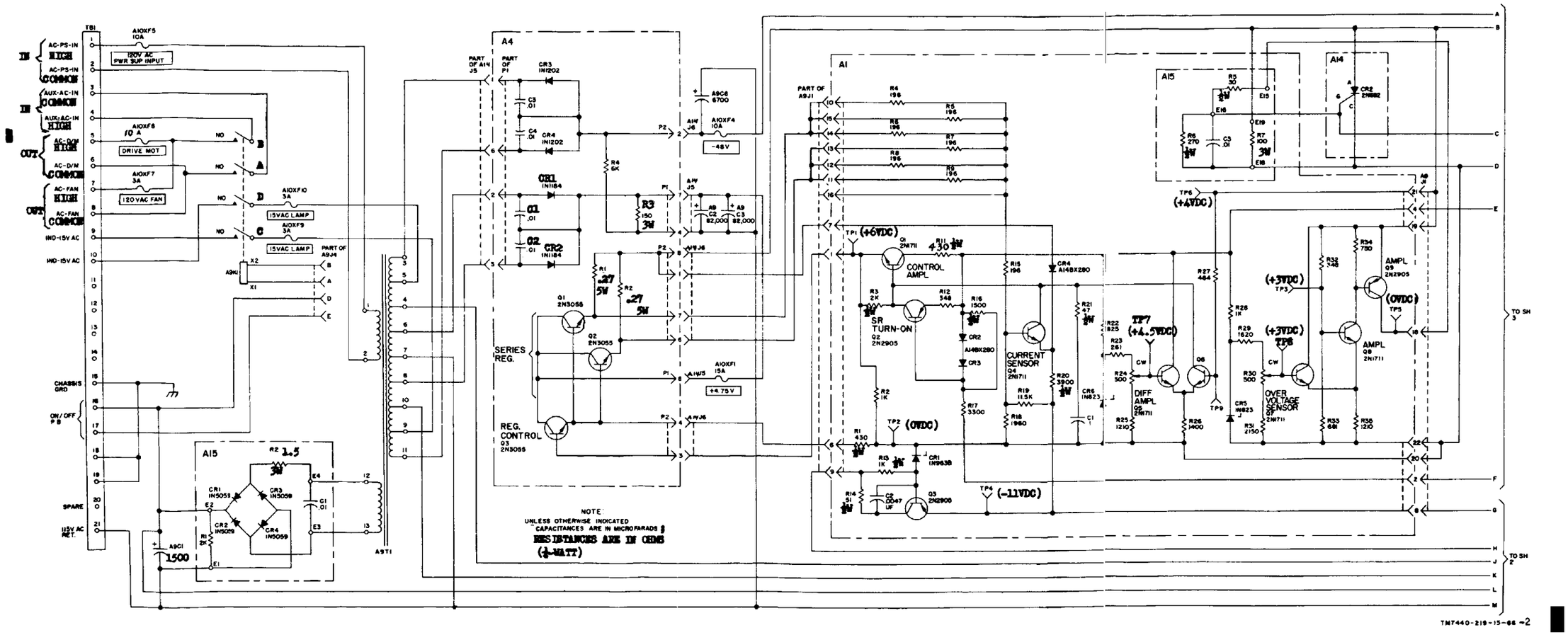


Figure 8-4. (1). Rectifier and regulator circuits, schematic diagram (part 1 of 3).

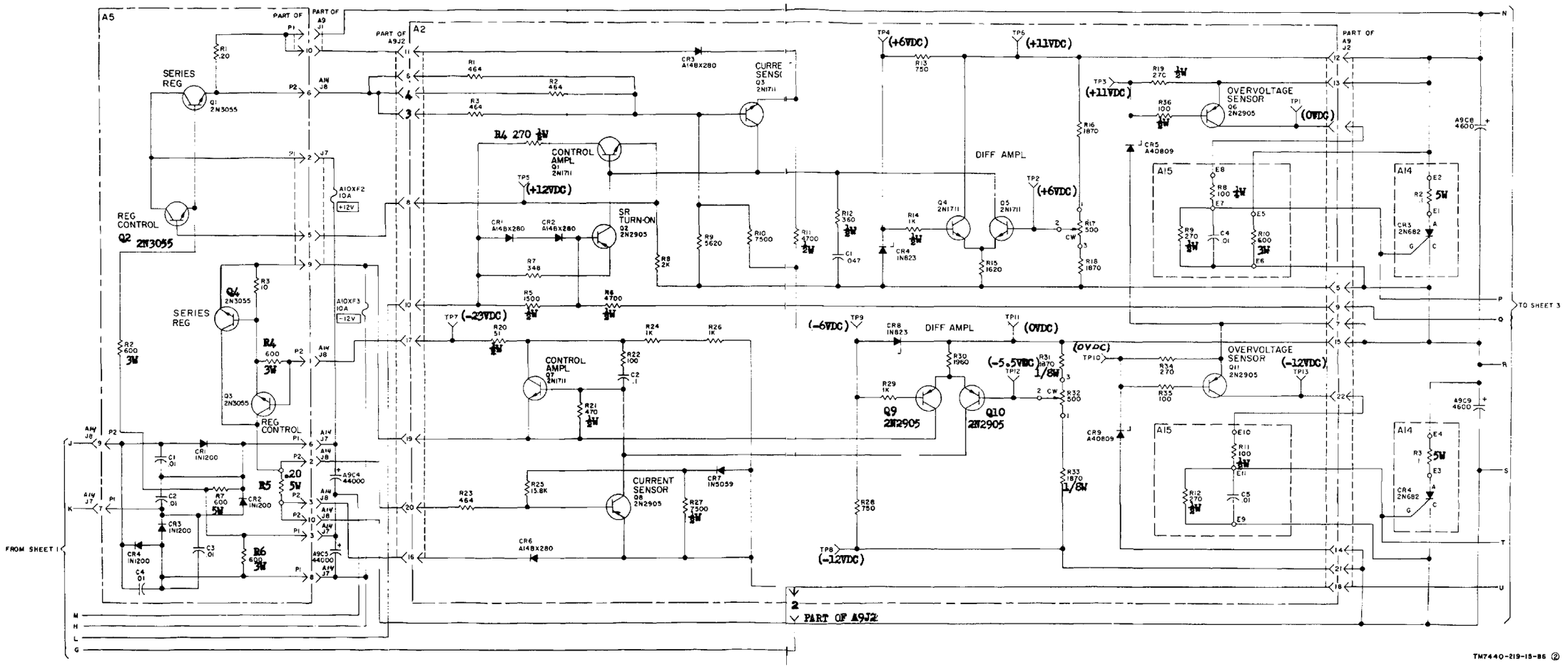


Figure 8-4 (2). Rectifier and regulator circuits, schematic diagram (part 2 of 3).

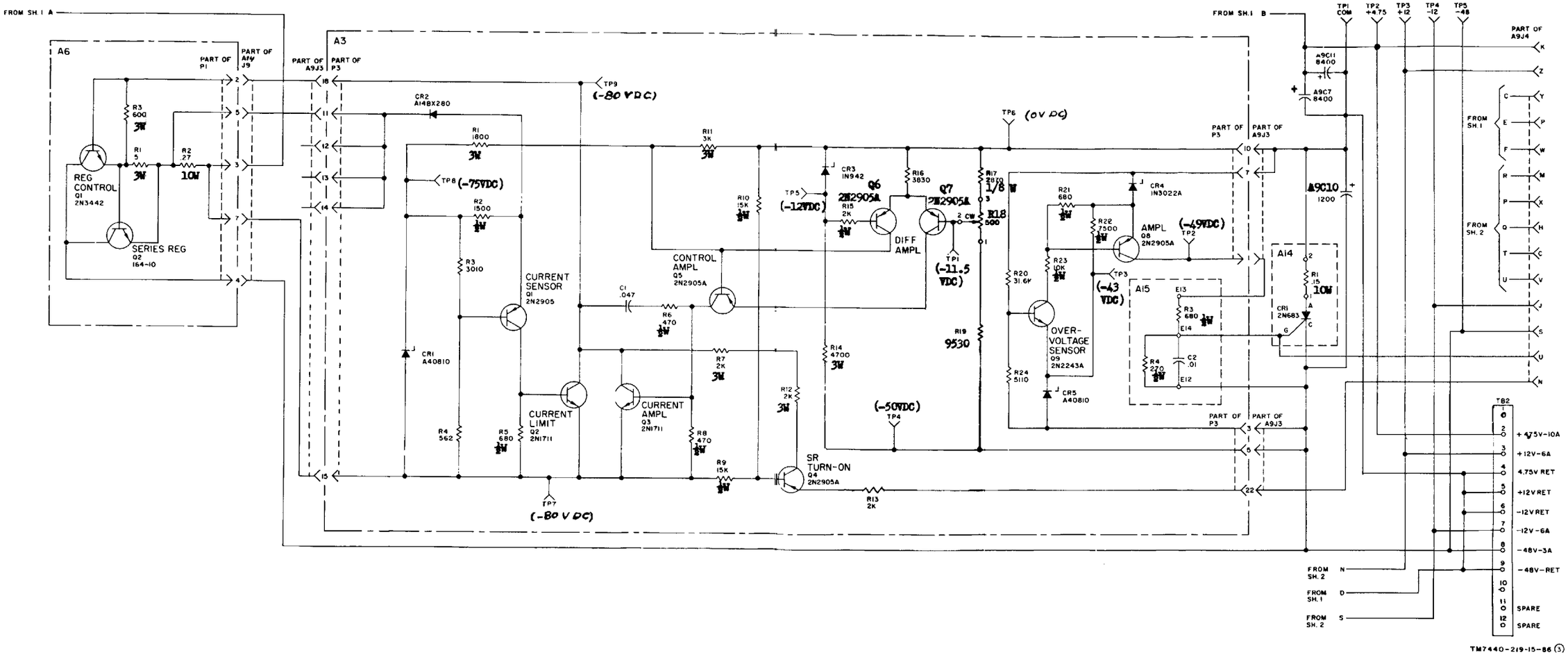
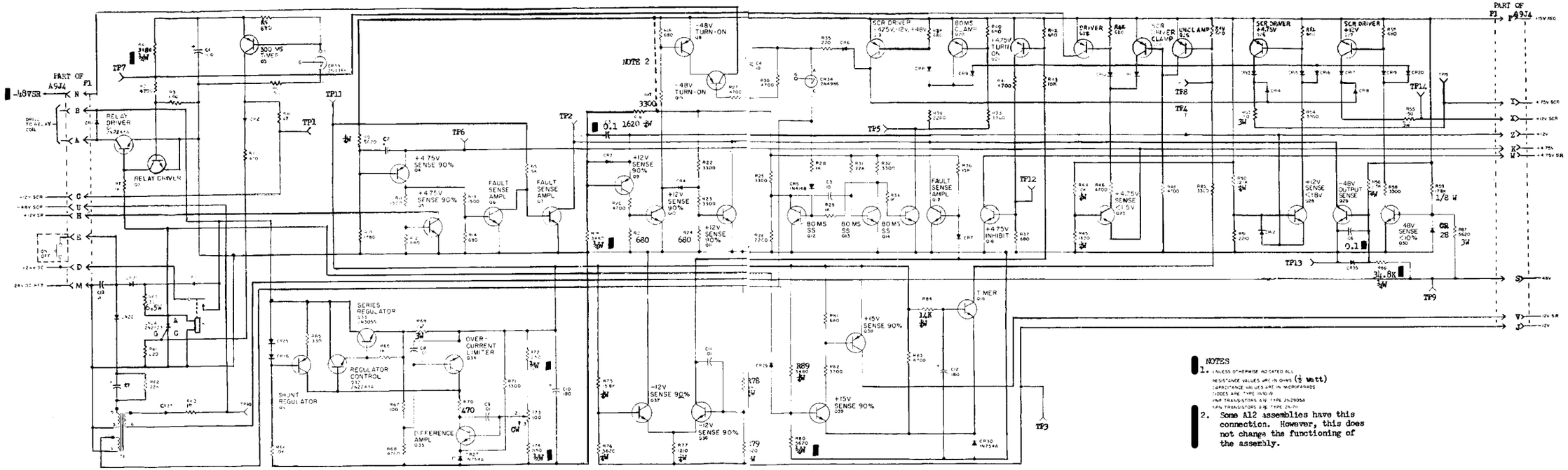


Figure 8-4 (3). Rectifier and regulator circuits, schematic diagram (part 3 of 3).



TM 7440-219-15-87-2

Figure 8-5. Power sequencing circuits, (PS1A12), schematic diagram.

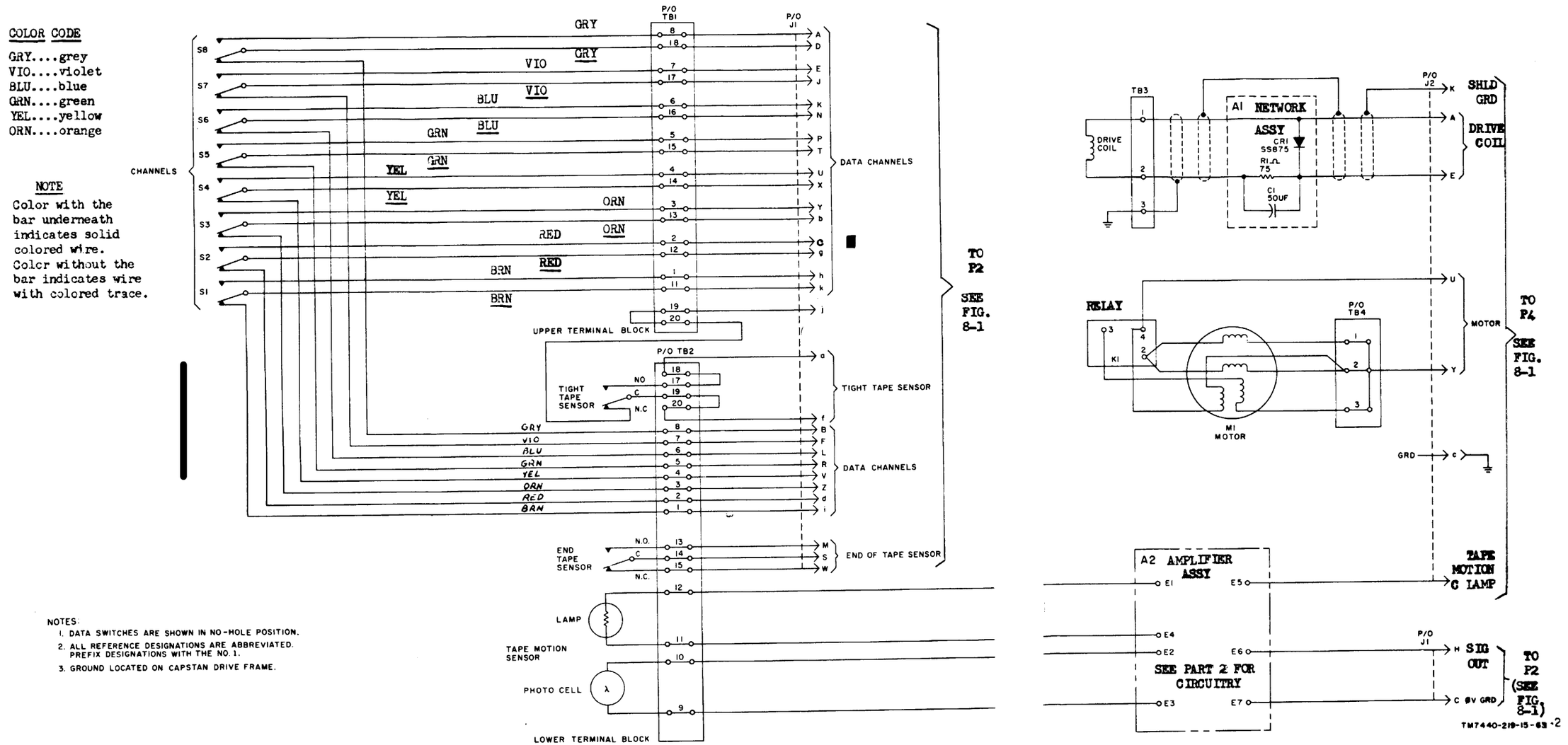
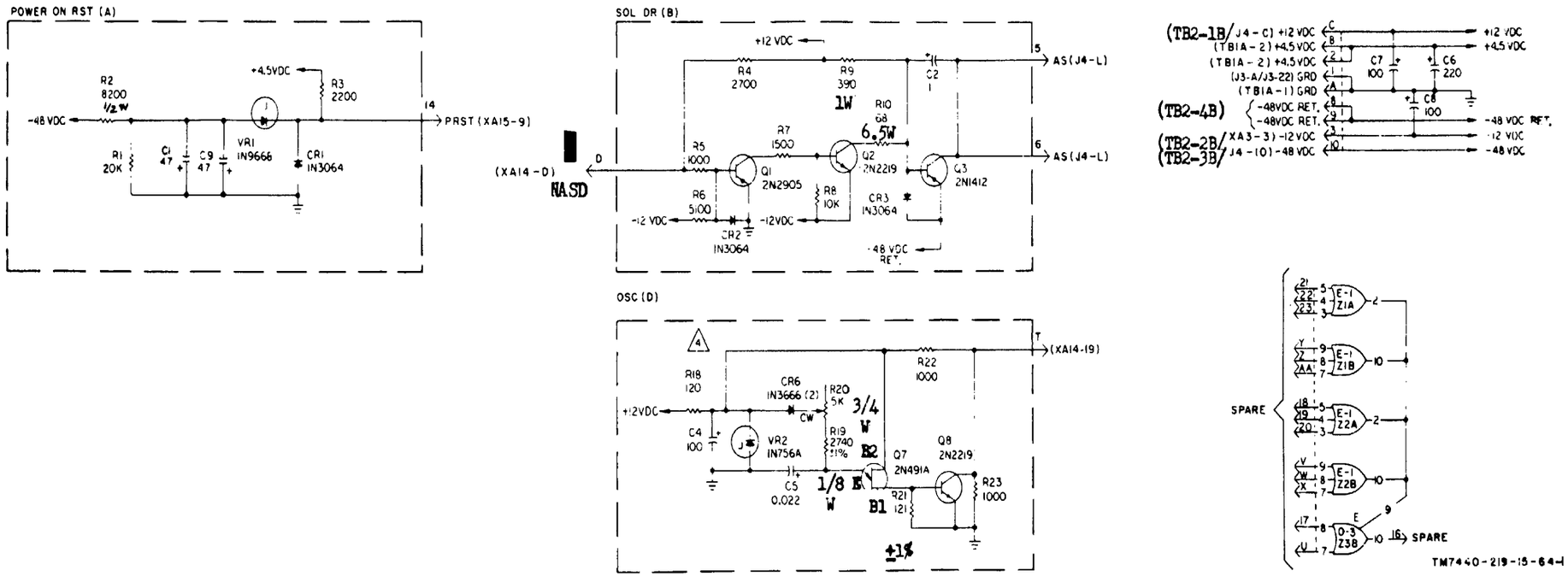


Figure 8-6 (1). Reader mechanism assembly A2, schematic diagram (part 1 of 2).

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
2. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTANCE VALUES ARE IN OHMS.
   ALL CAPACITANCE VALUES ARE IN MICROFARADS.

POWER INPUT PINS	
	Z1,Z2,Z3
+4.5VDC	6
GRD	1



FOR PUNCHED TAPE UNITS HAVING TIG ASSEMBLY A7 OR A8 INSTALLED, REFER TO FIGURE 8-23.1.

Figure 8-7. PC card A1 (No. A65209-001), schematic diagram.

NOTES:
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
2. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTANCE VALUES ARE IN OHMS.
   ALL CAPACITANCE VALUES ARE IN MICROFARADS.

POWER INPUT PINS	
	Z1,Z2,Z3
+4.5VDC	6
GRD	1

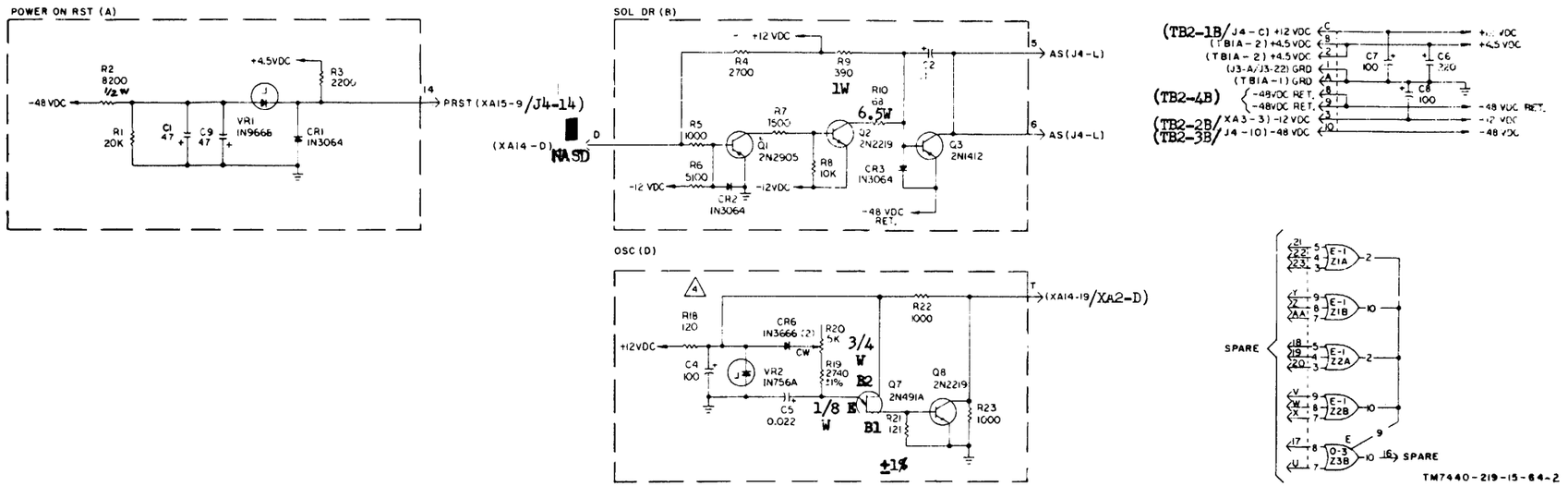
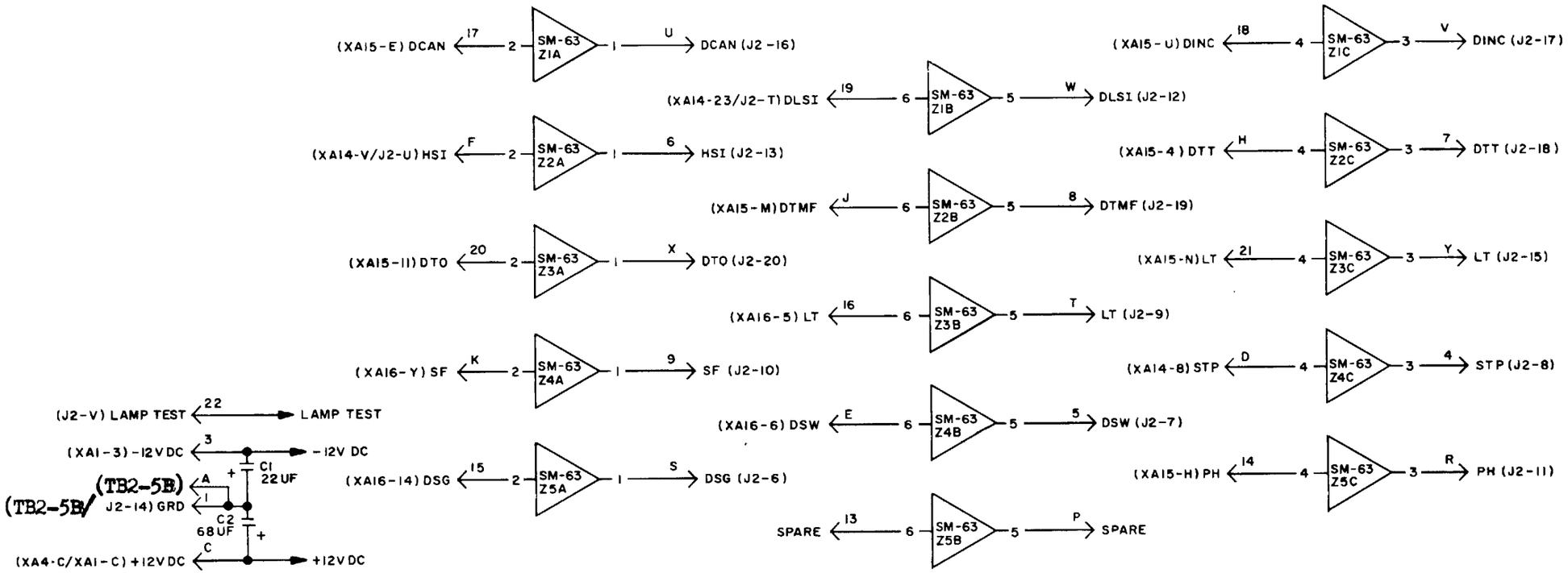


Figure 8-7.1. PC card A1 (No. A65209-001),schematic diagram. (with TIG installed)

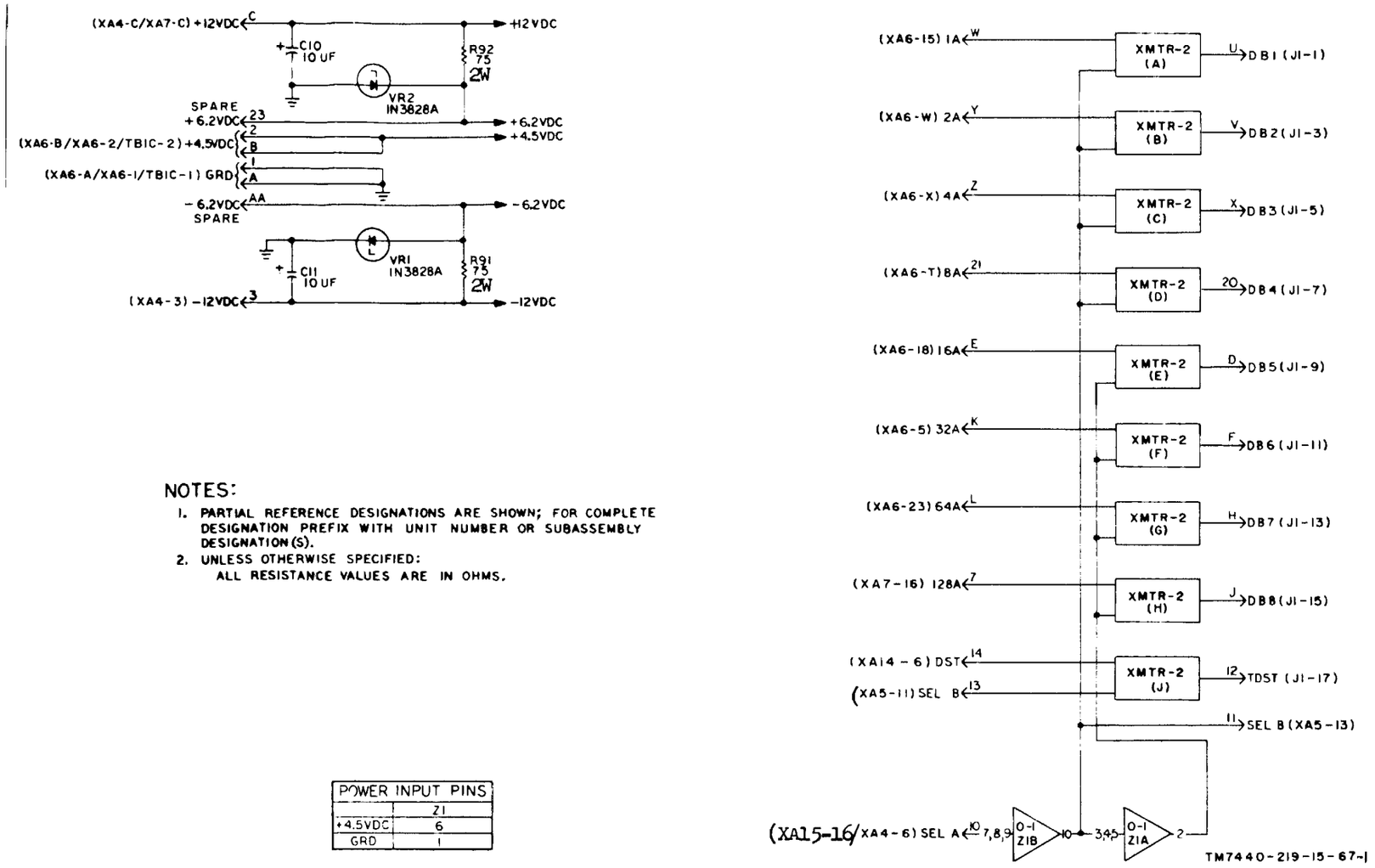


NOTE:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION (S)

POWER INPUT PINS	
	Z1 THRU Z5
+12V DC	7
-12V DC	8
GRD	10
LAMP TEST	9

Figure 8-8. PC card A3 (No. SM-E-546659-001, schematic diagram.



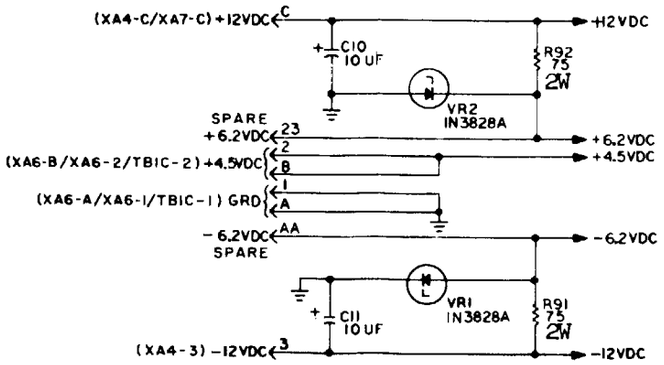
NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
2. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTANCE VALUES ARE IN OHMS.

POWER INPUT PINS	
	Z1
+4.5VDC	6
GRD	1

FOR PUNCHED TAPE READERS HAVING TIG ASSEMBLY A7 or A8 INSTALLED, REFER TO FIGURE 8-10.3.

Figure 8-10. PC card A5 (No. A65205-001), schematic diagram.



NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION (S).
2. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTANCE VALUES ARE IN OHMS.

POWER INPUT PINS	
	Z1
+4.5VDC	6
GRD	1

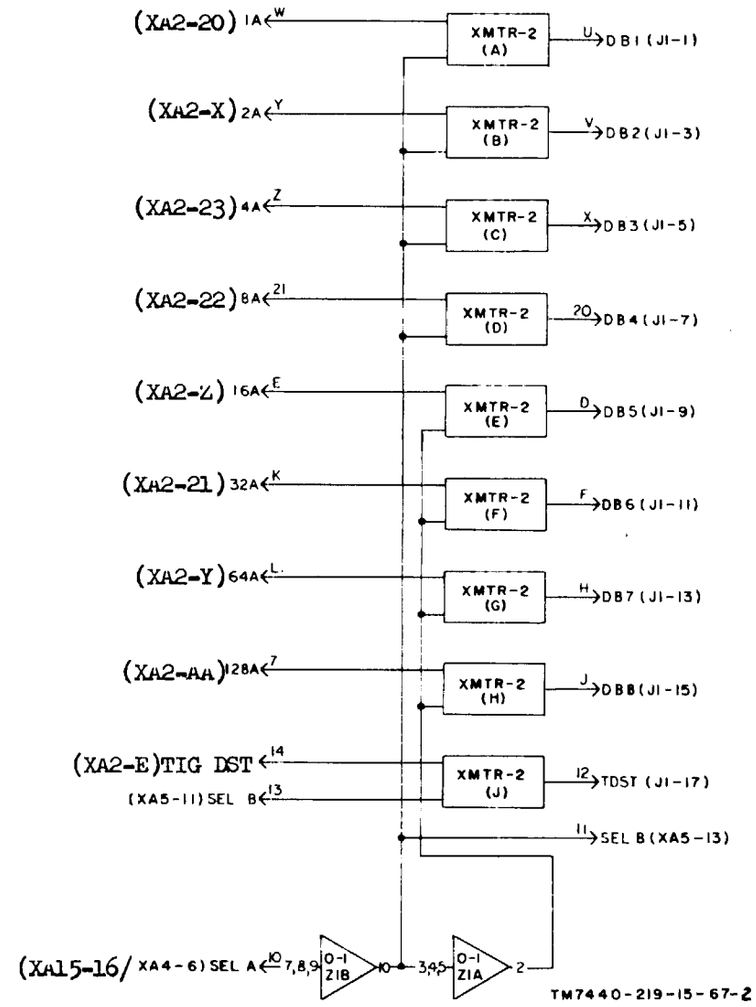
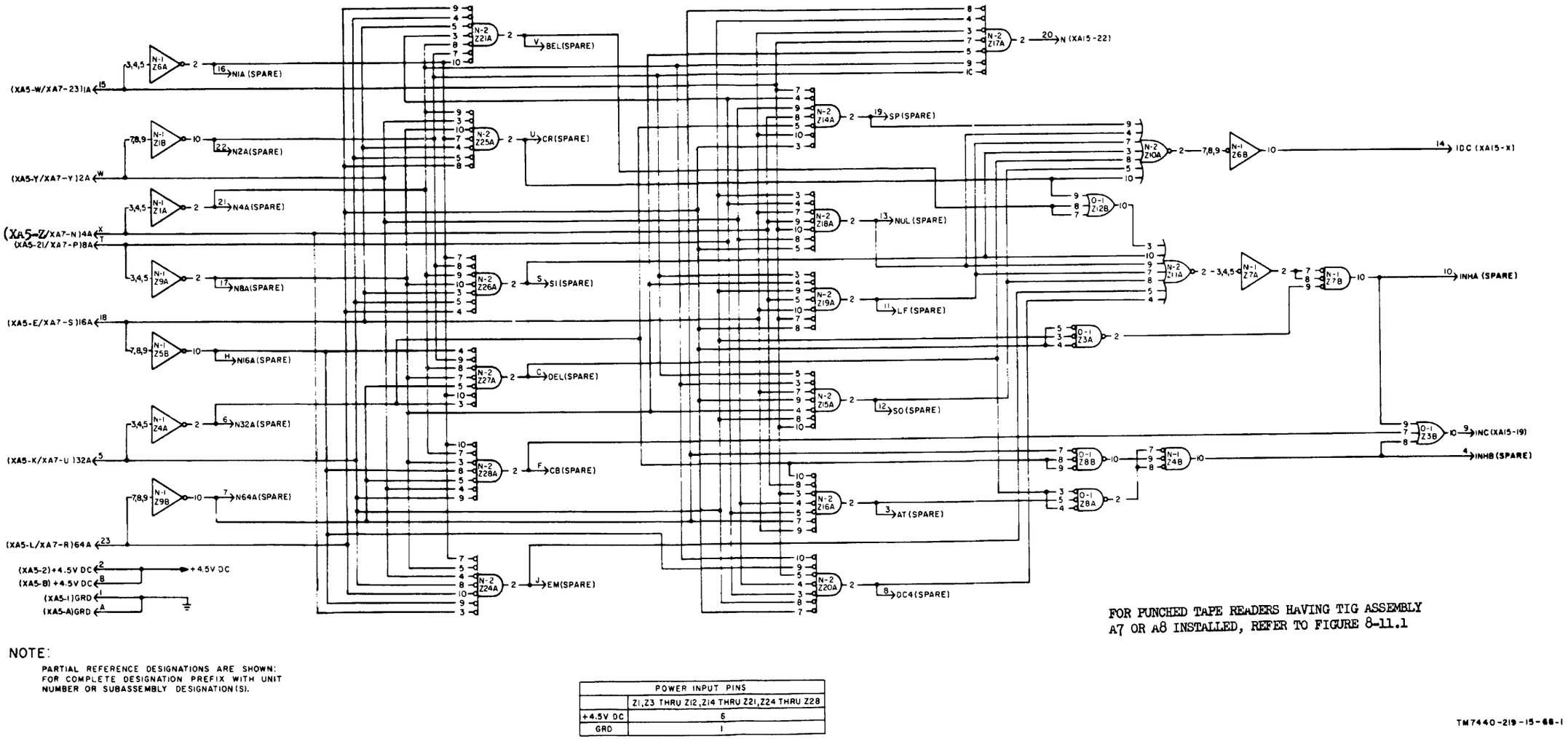


Figure 8-10.3. PC card A5 (No. A65205-001), schematic diagram. (with TIG installed)

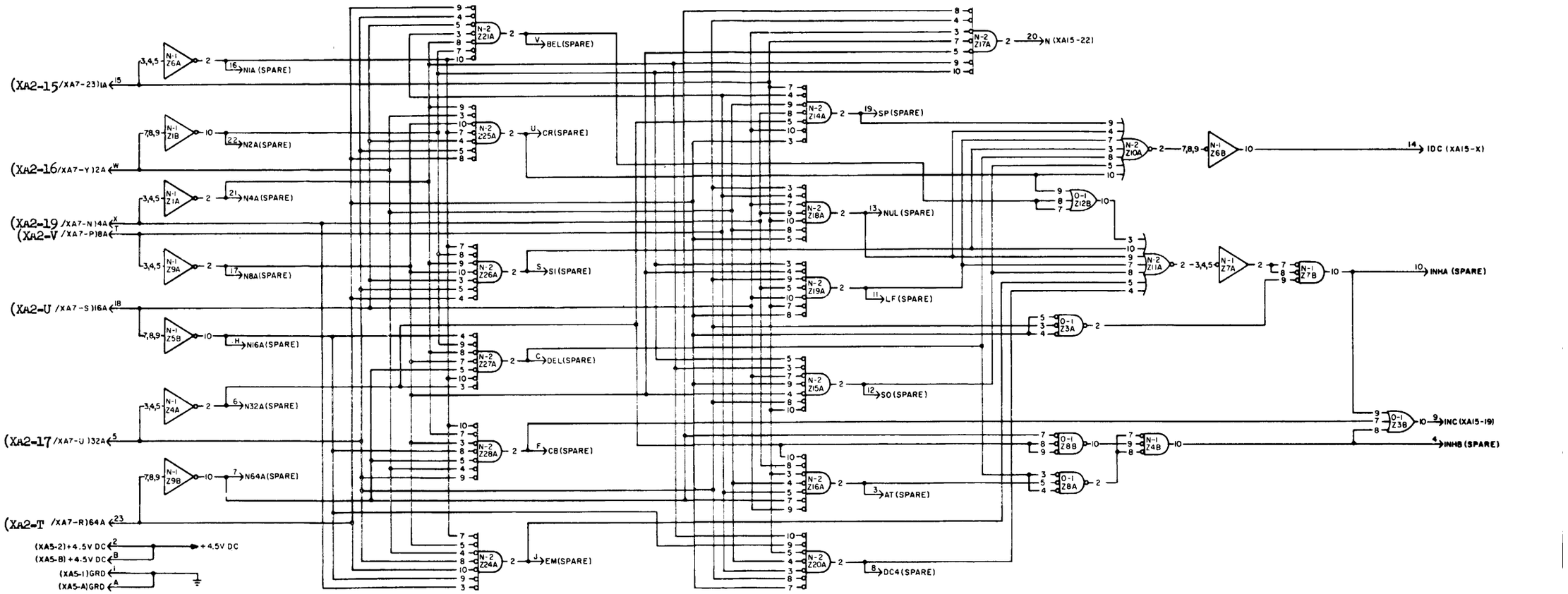


NOTE:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN: FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).

POWER INPUT PINS	
	Z1, Z3 THRU Z12, Z14 THRU Z21, Z24 THRU Z28
+4.5V DC	6
GRD	1

Figure 8-11. PC card A6 (No. A65421-001), schematic diagram



NOTE:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN: FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).

POWER INPUT PINS	
	Z1, Z3 THRU Z12, Z14 THRU Z21, Z24 THRU Z28
+4.5V DC	6
GRD	1

TM7440-219-15-68-2

Figure 8-11.1. PC card A6 (No. A665421-001), schematic diagram. (with TIG installed)

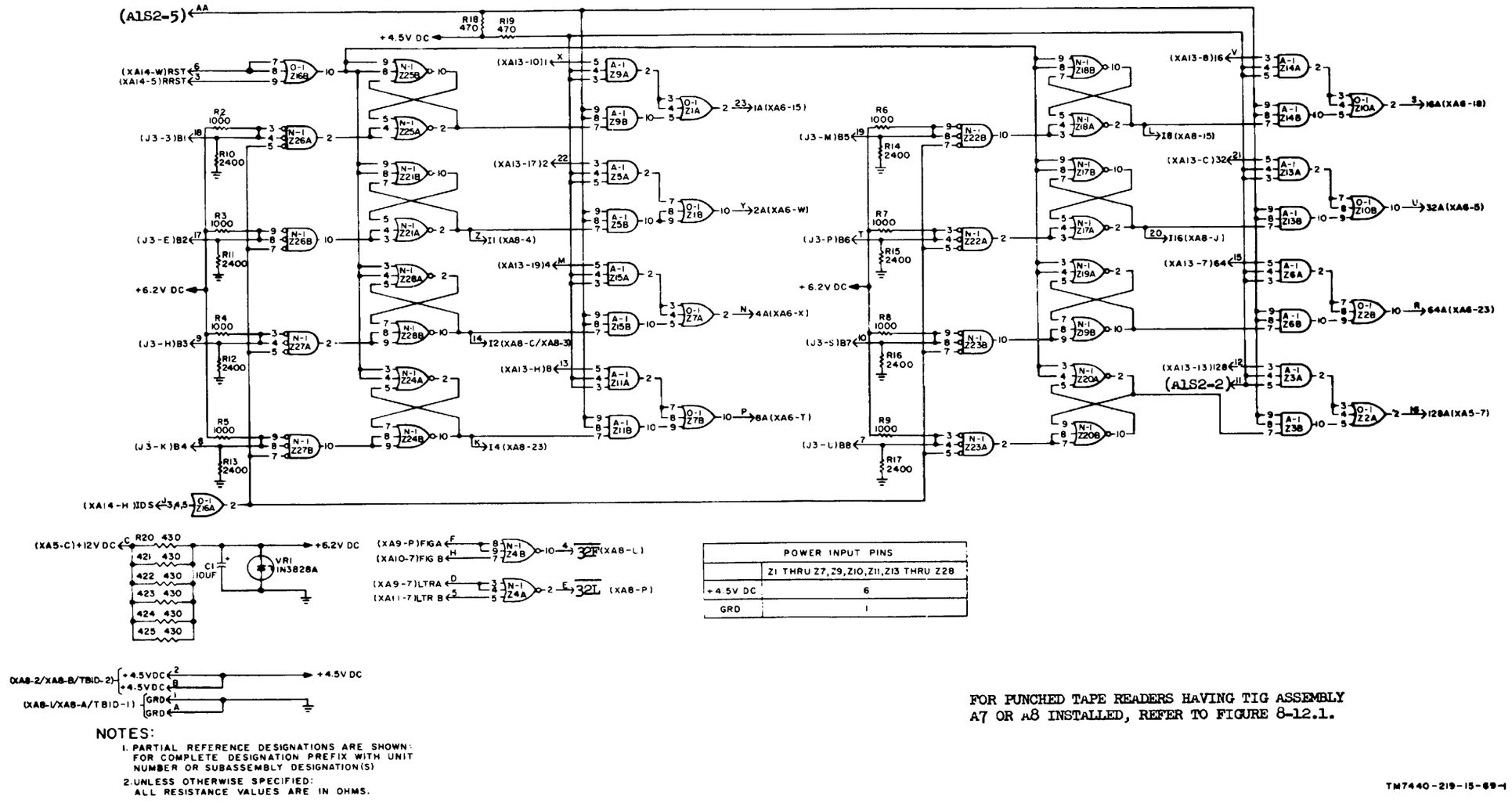


Figure 8-12. PC card A7 (No. A65426-001), schematic diagram.

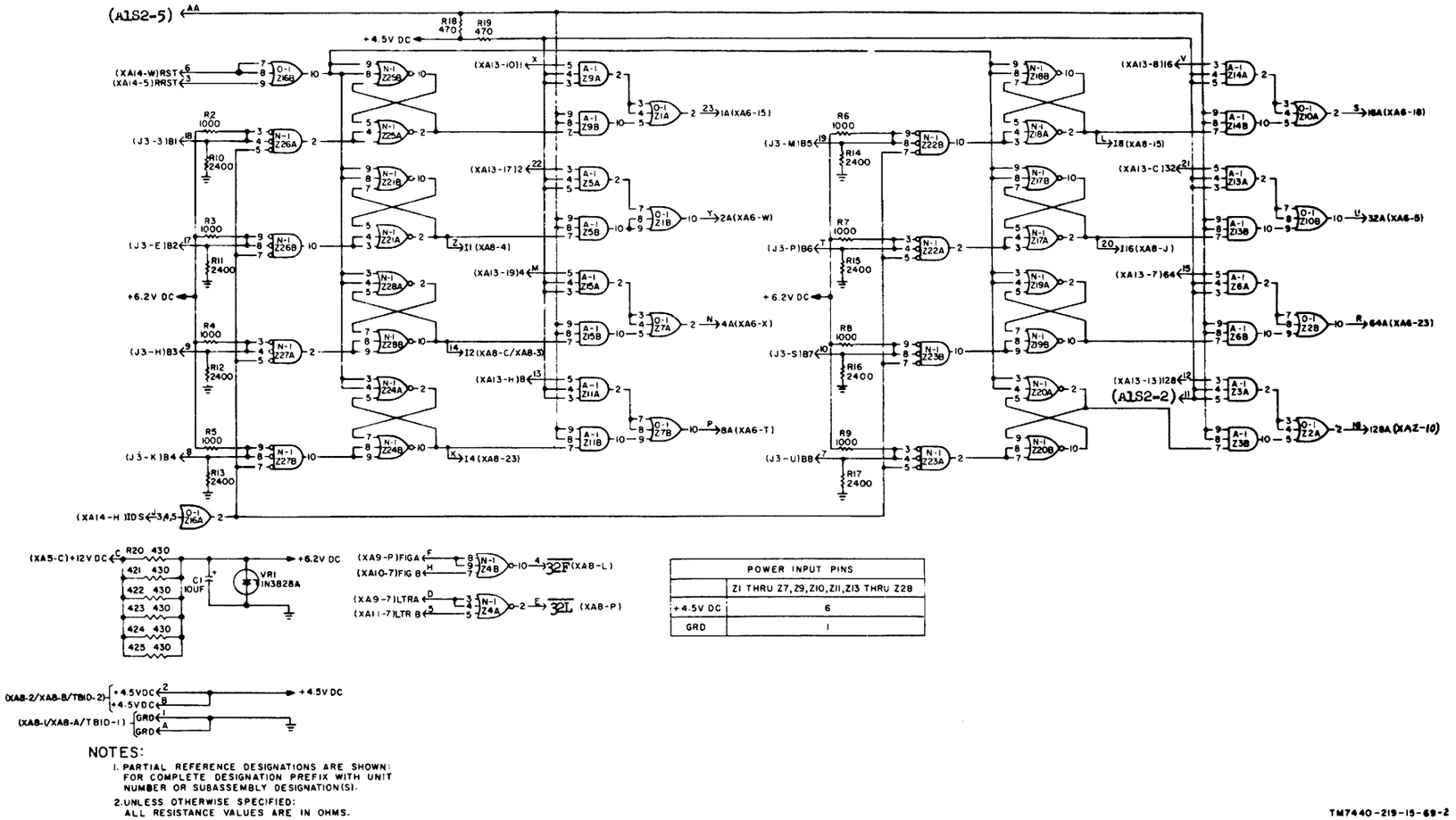
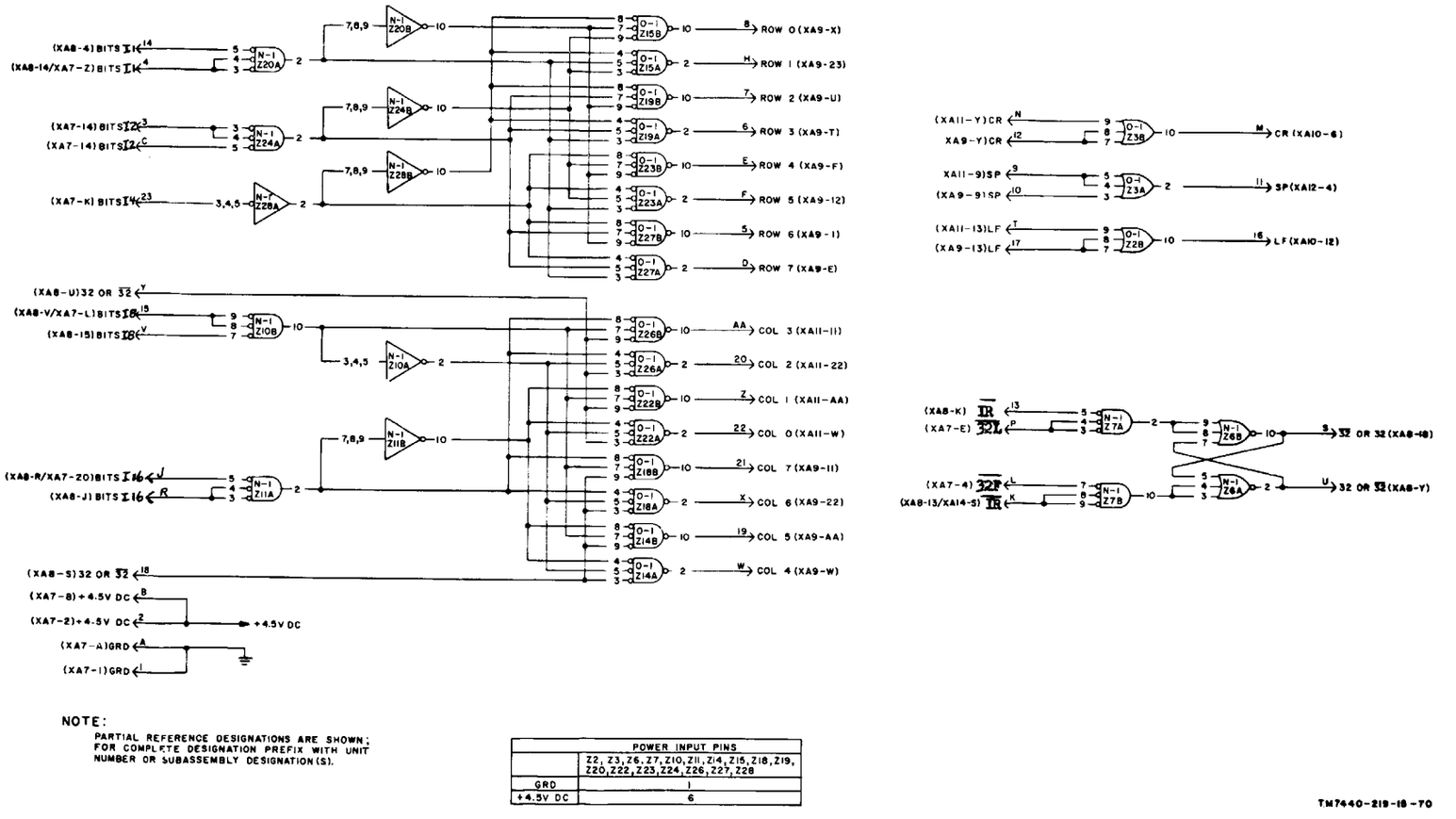


Figure 8-12.1. PC card A7 (No. A65426-001), schematic diagram.
(with TIG installed)



NOTE:
PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION (S).

	POWER INPUT PINS
	Z2, Z3, Z6, Z7, Z10, Z11, Z14, Z15, Z18, Z19, Z20, Z22, Z23, Z24, Z26, Z27, Z28
GRD	1
+4.5V DC	6

Figure 8-13. PC and A8 (No. A63418-001), schematic diagram.

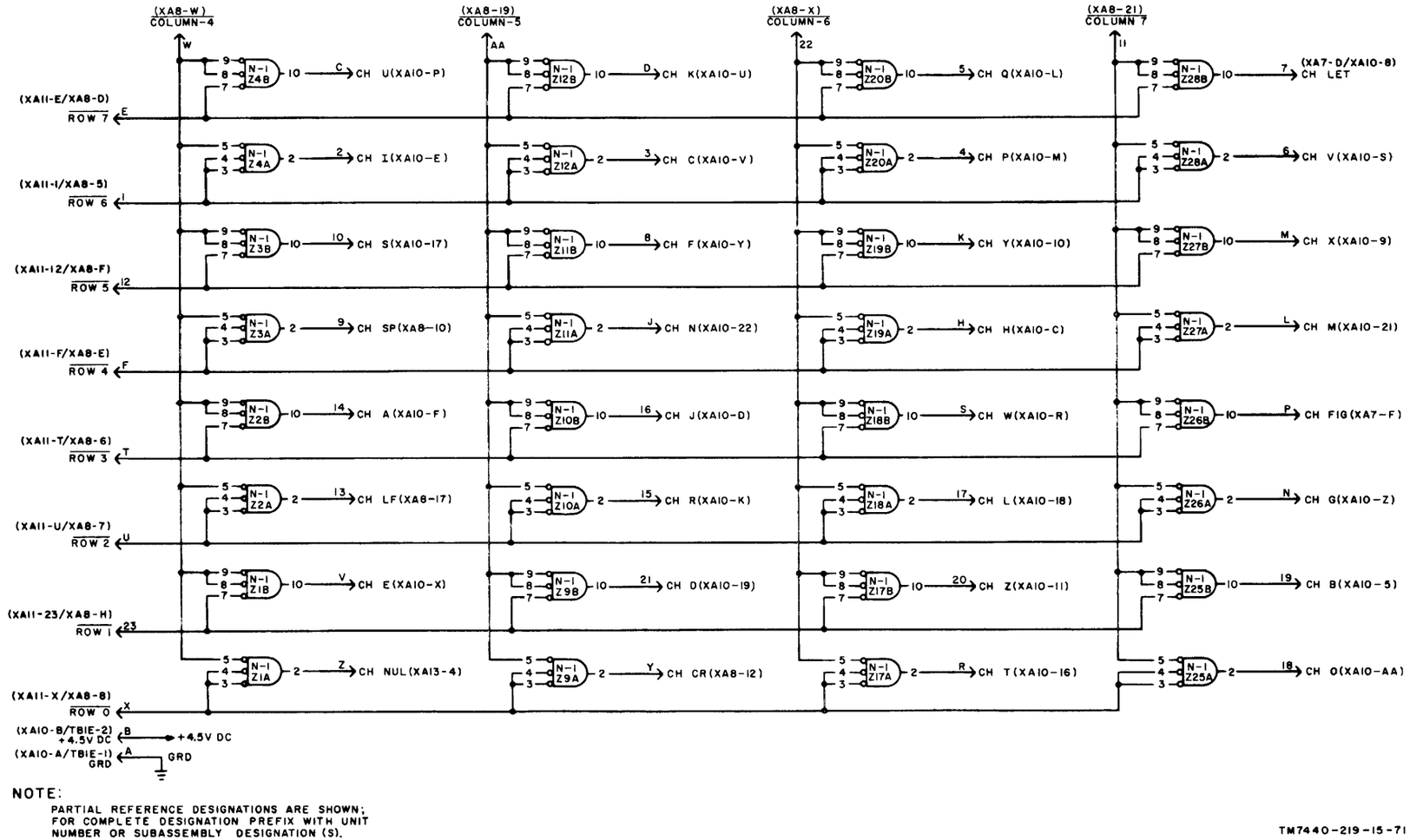


Figure 8-14. PC card A9 (No. A53725-001), schematic diagram.

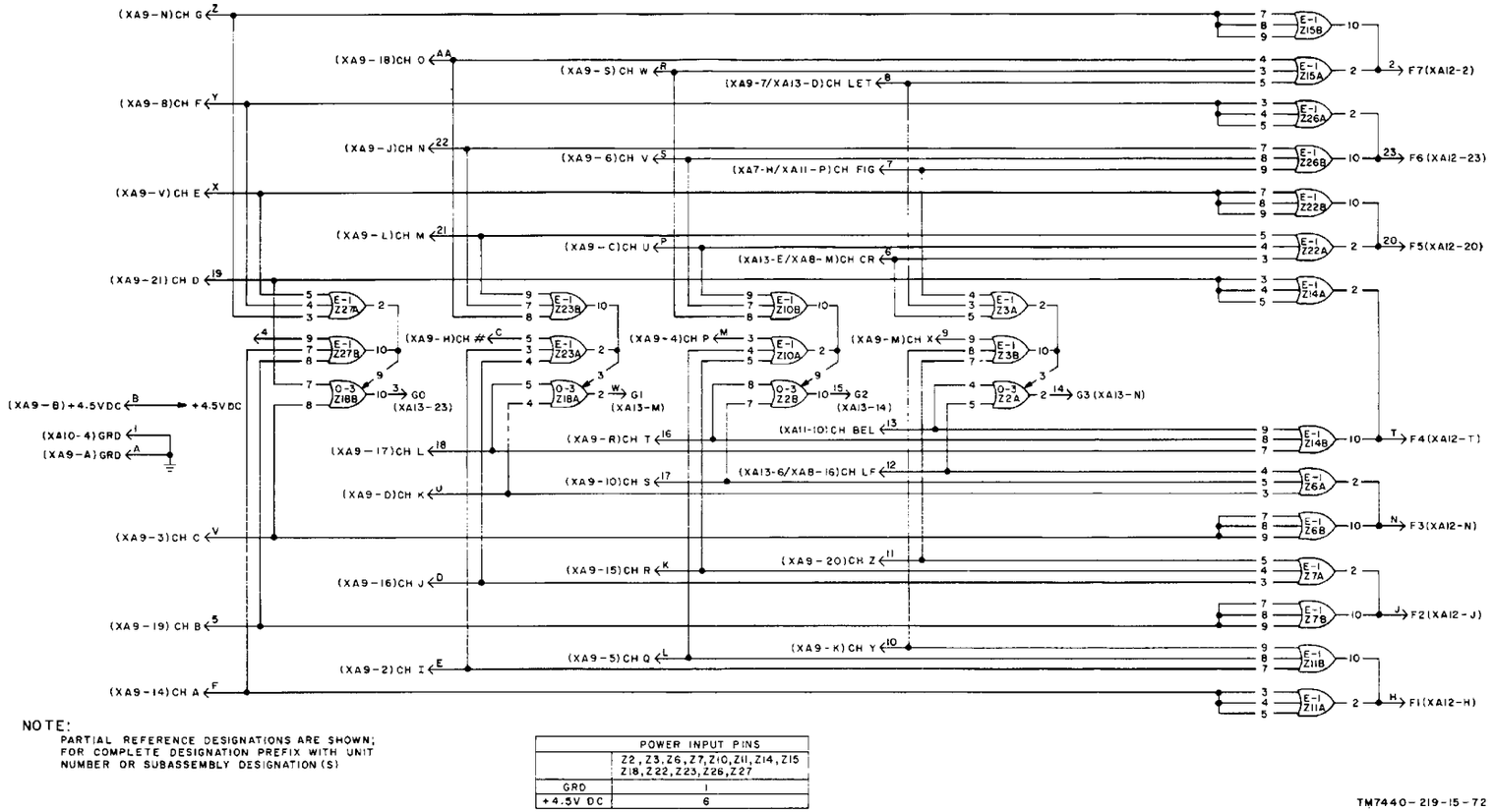
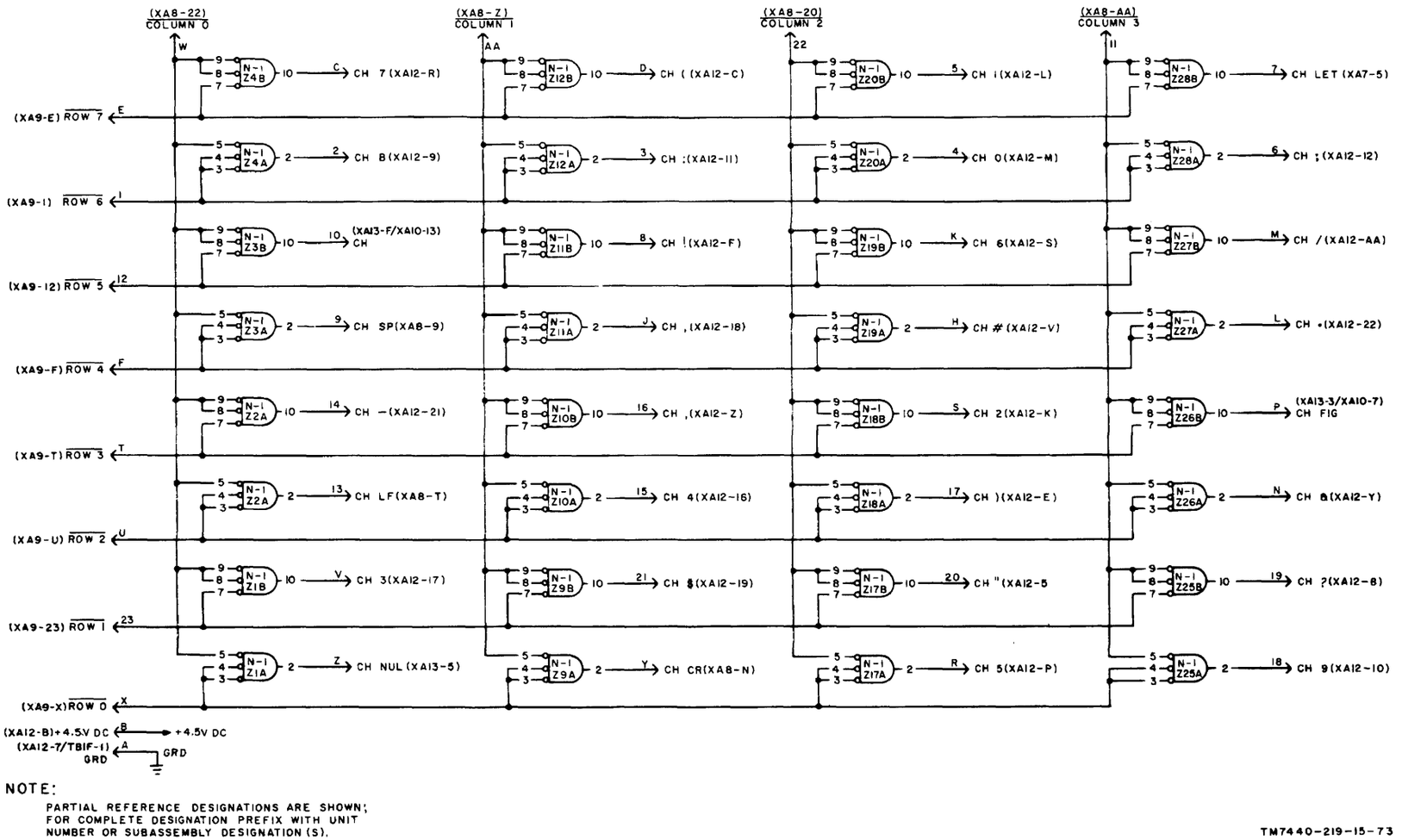


Figure 8-15. PC card A10 (No. A53721-001), schematic diagram.



NOTE:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION (S).

Figure 8-16. PC card A11 (No. A53725-001), schematic diagram.

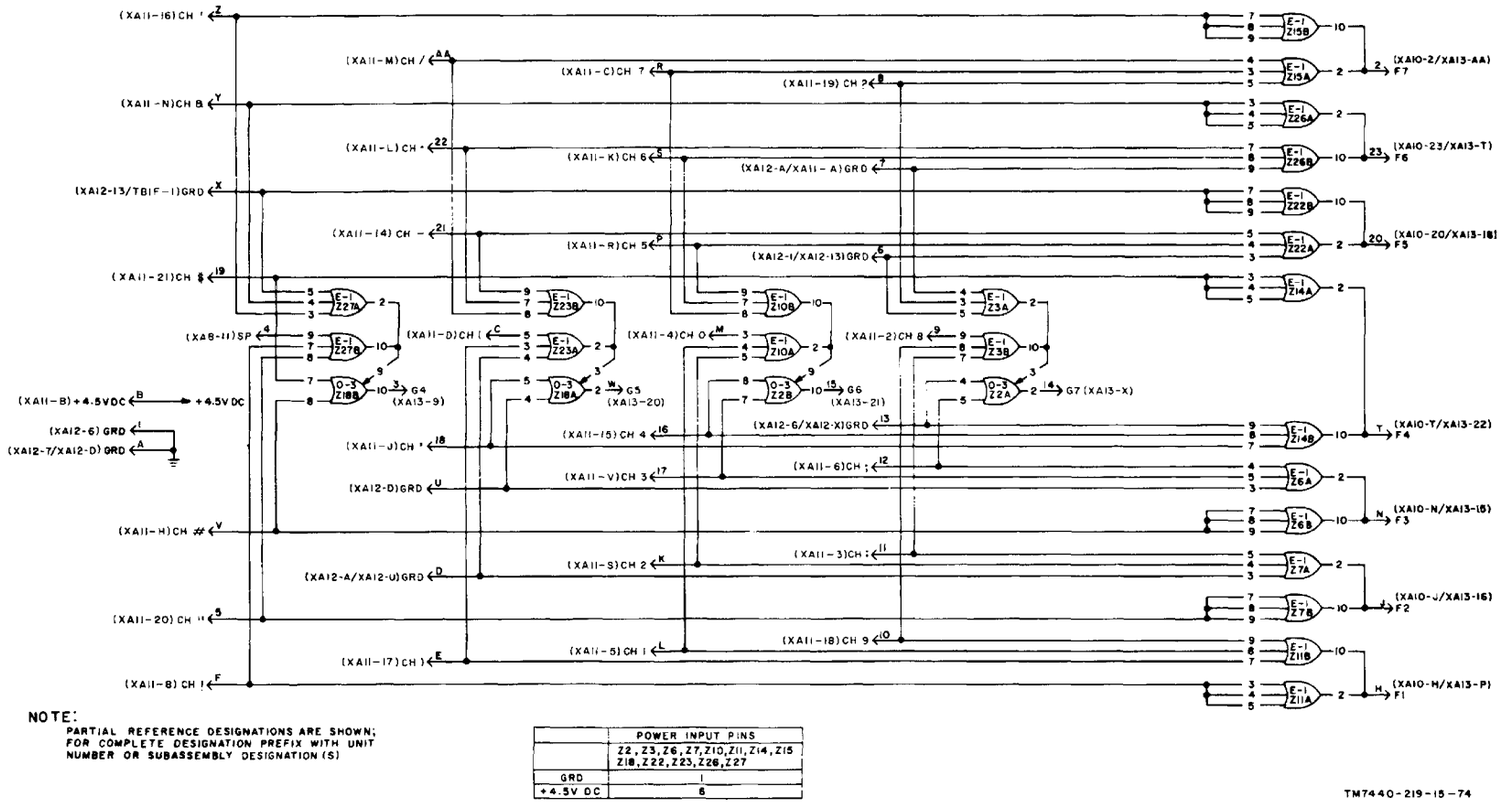


Figure 8-17. PC card A12 (No. A53721-001), schematic diagram.

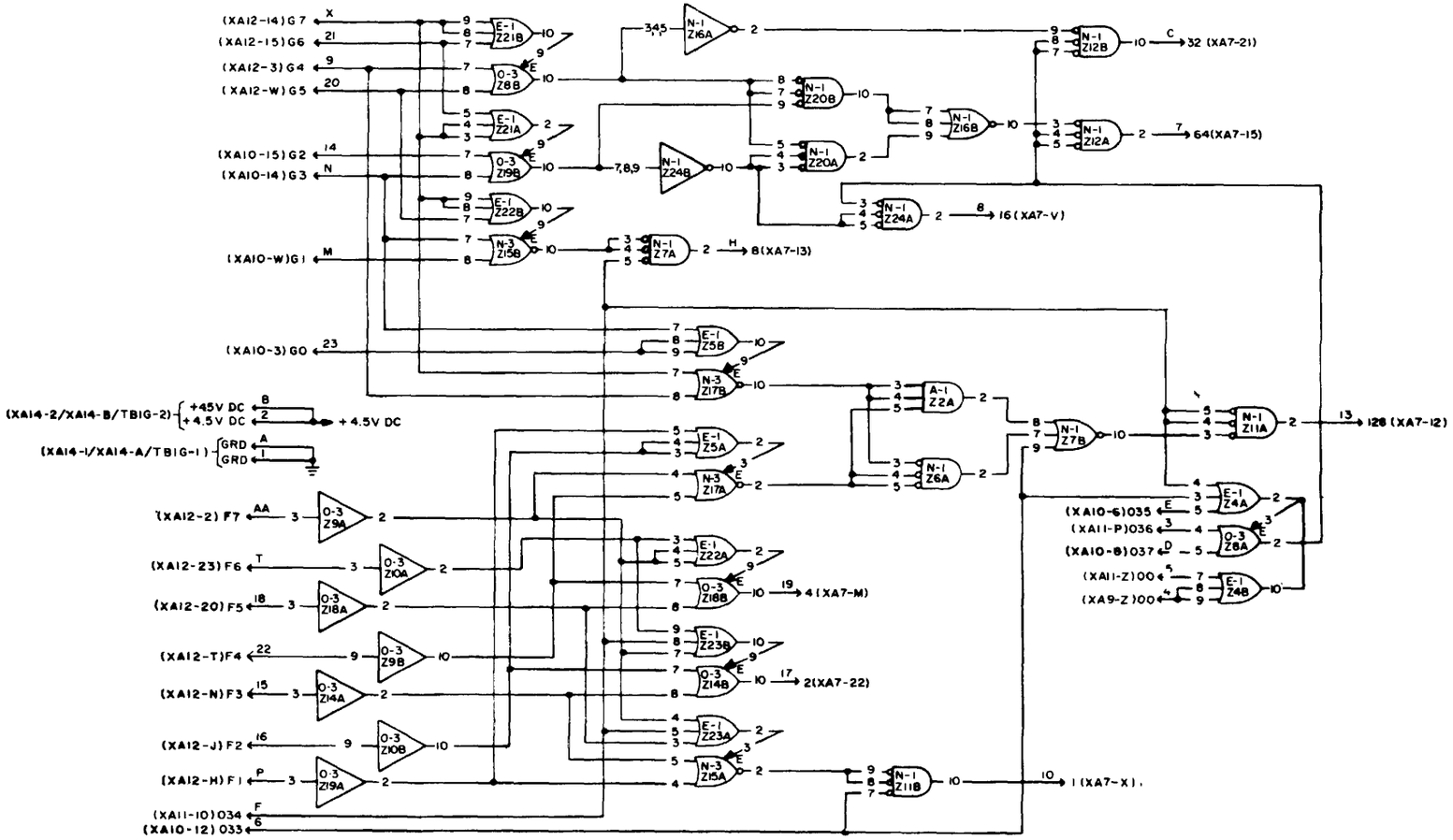
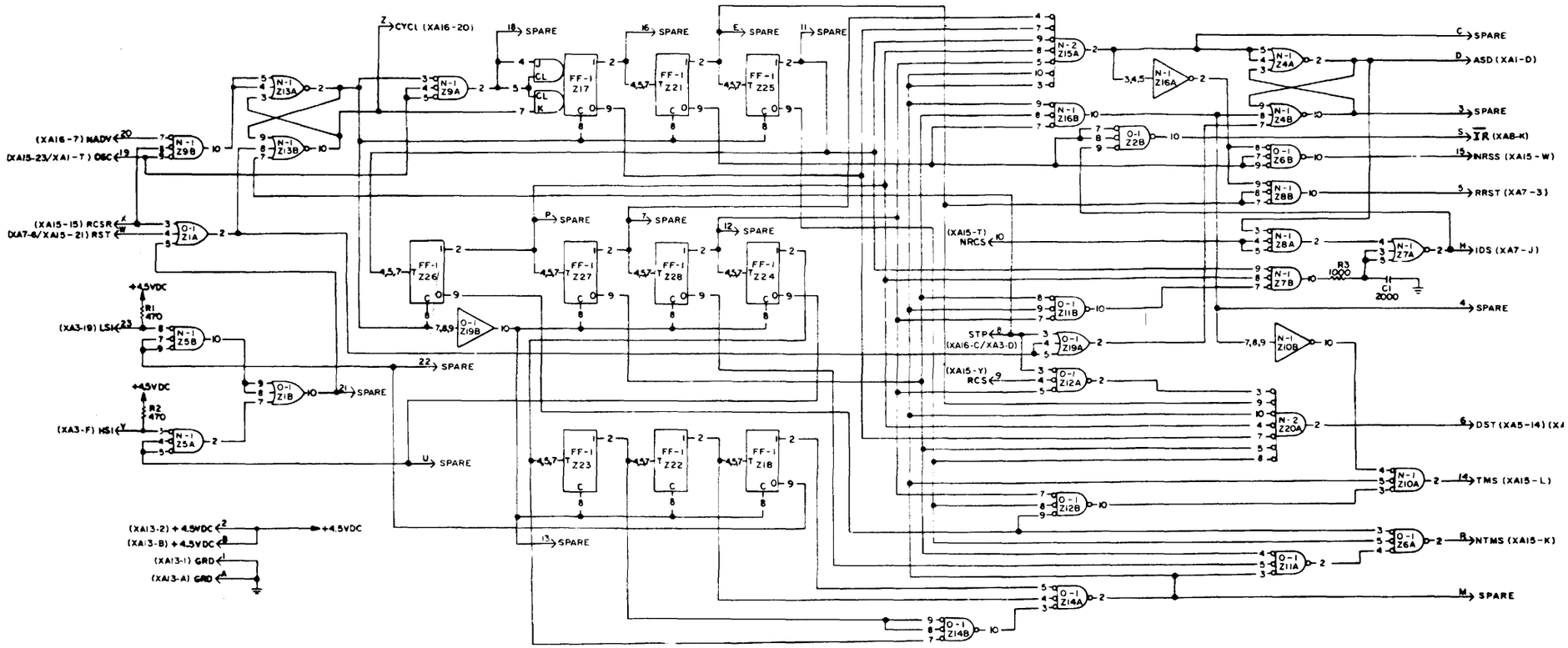


Figure 8-18. PC card A13 (No. A53434-001), schematic diagram.



POWER INPUT PINS		
	Z17,Z18,Z21 THRU Z28	Z1,Z2,Z4 THRU Z16,Z19,Z20
+4.5VDC	6	6
GRD	1,3	1

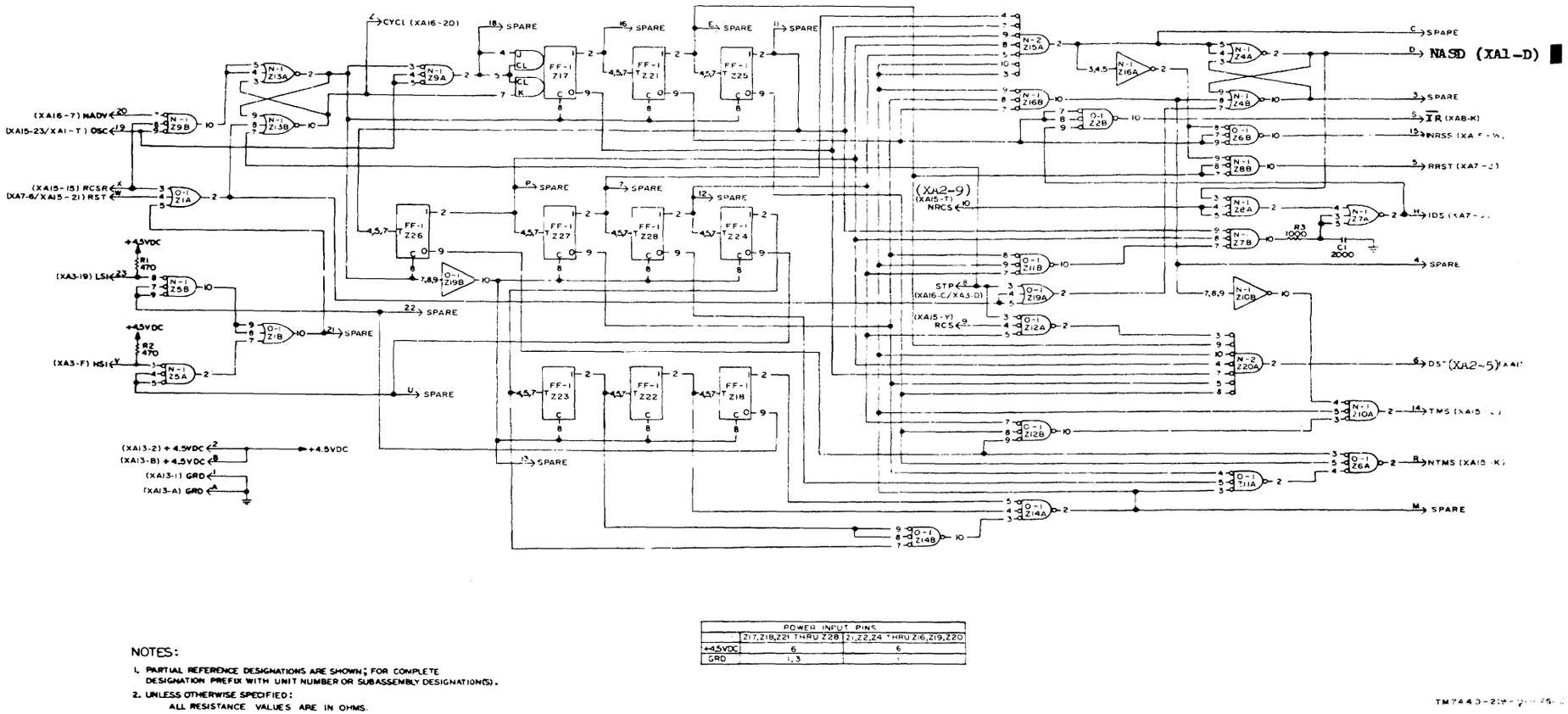
NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
2. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTANCE VALUES ARE IN OHMS.

FOR PUNCHED TAPE READERS HAVING TIG ASSEMBLY A7 OR A8 INSTALLED, REFER TO FIGURE 8-19.1

TM7440-219-15-76-1

Figure 8-19. PC card A14 (No. A65433-001), schematic diagram.

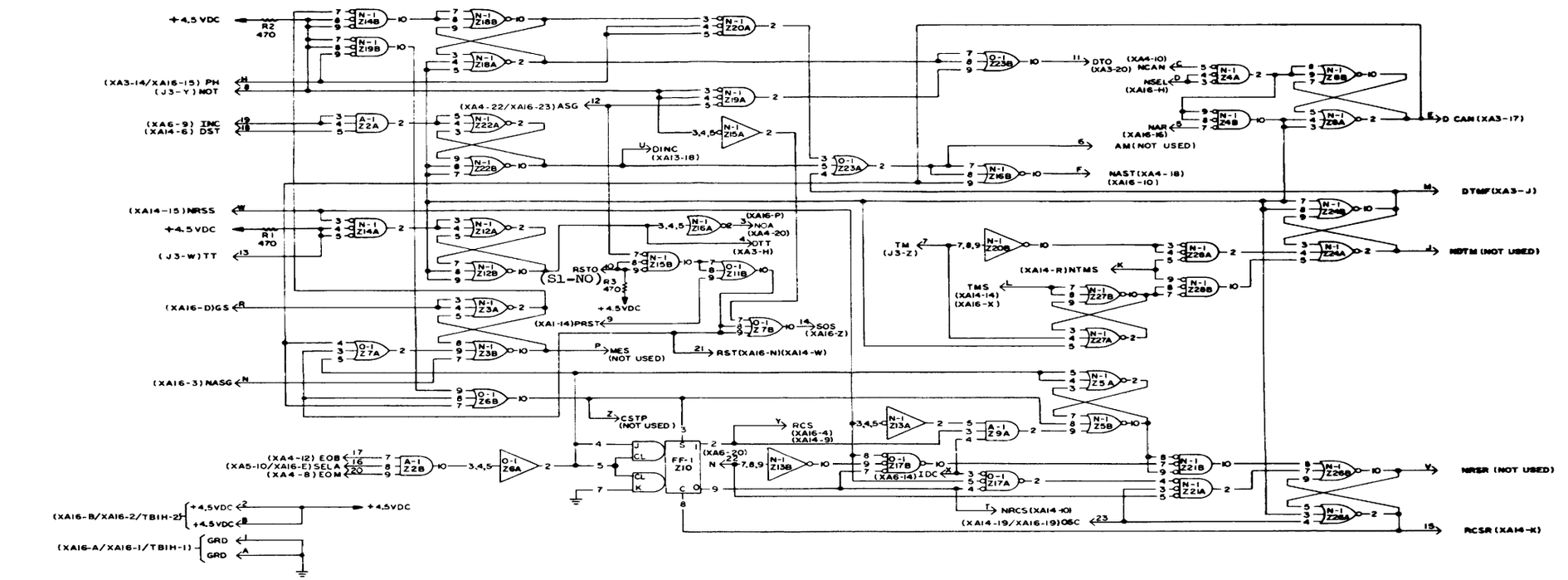


POWER INPUT PINS		
	Z17,Z18,Z21 THRU Z28	Z1,Z2,Z4 THRU Z16,Z19,Z20
+4.5VDC	6	6
GRD	1, 3	

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
2. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTANCE VALUES ARE IN OHMS.

Figure 8-19.1. PC card A14 (No. A65433.001). schematic diagram . (with TIG installed)



POWER INPUT PINS	
	Z2 THRU Z24, Z26, Z27, Z28
+4.5VDC	6
GRD	1

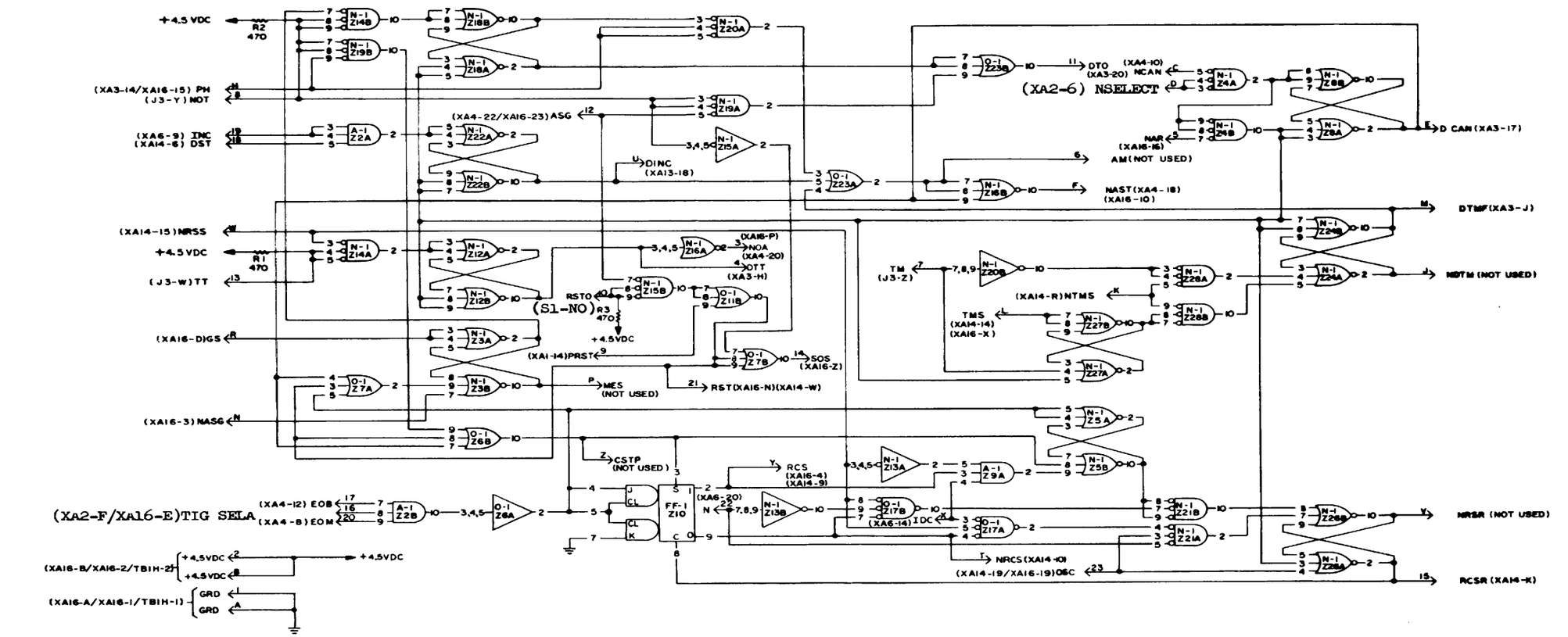
FOR PUNCHED TAPE READERS HAVING TIG ASSEMBLY A7 OR A8 INSTALLED, REFER TO FIGURE 8-20.1.

TM7440-219-15-77-1

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION (S).
2. UNLESS OTHERWISE SPECIFIED: ALL RESISTANCE VALUES ARE IN OHMS.

Figure 8-20. PC card A16 (No. A65437-001), schematic diagram.



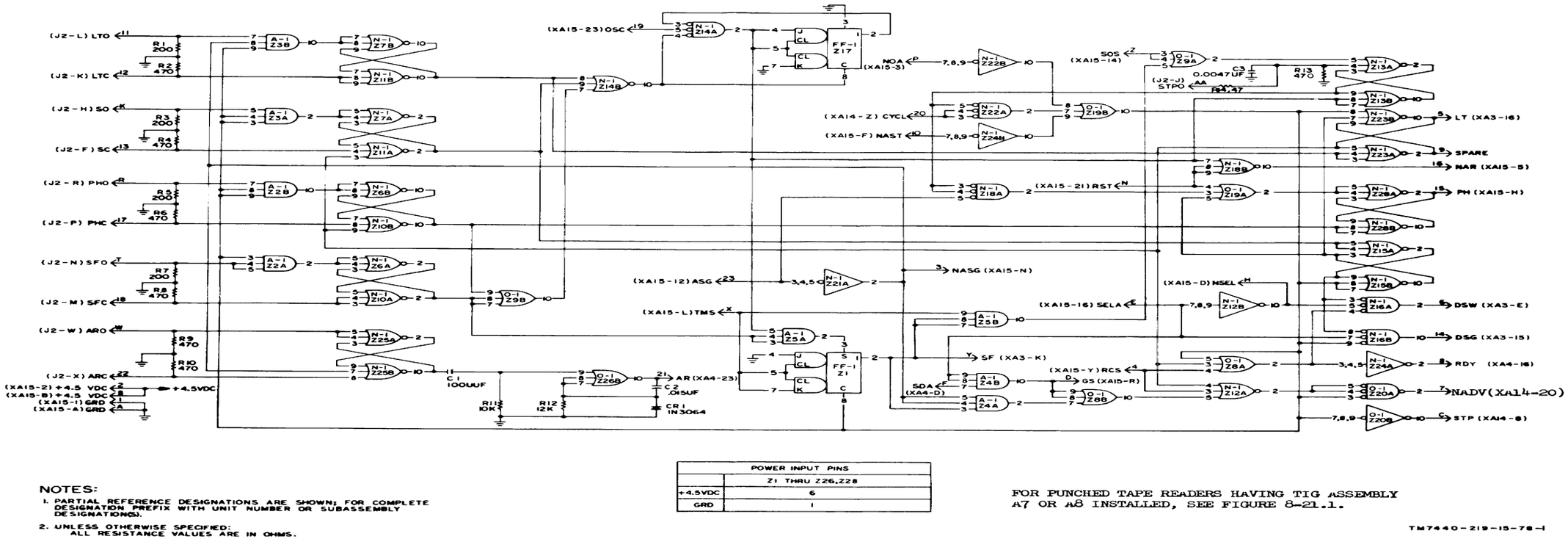
POWER INPUT PINS	
	Z2 THRU Z24, Z26, Z27, Z28
+4.5VDC	6
GRD	1

TM7440-219-15-77-2

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION (S).
2. UNLESS OTHERWISE SPECIFIED: ALL RESISTANCE VALUES ARE IN OHMS.

Figure 8-20.1. PC card A16 (No. A66437-001), schematic diagram. (with TIG installed)

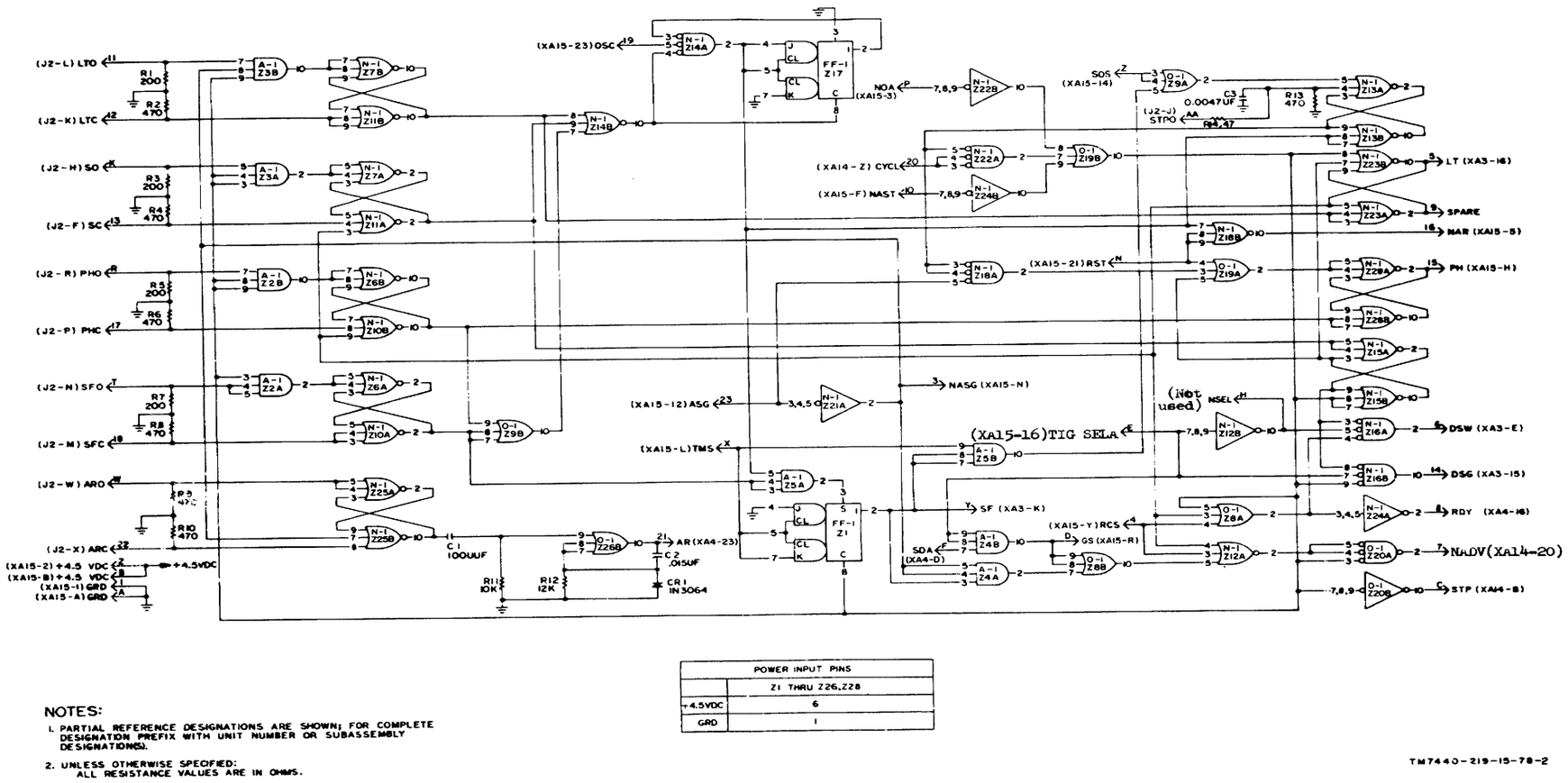


POWER INPUT PINS	
	Z1 THRU Z26,Z28
+4.5VDC	6
GRD	1

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
2. UNLESS OTHERWISE SPECIFIED: ALL RESISTANCE VALUES ARE IN OHMS.

Figure 8-21. PC card A16 (No. A65429-001), schematic diagram.

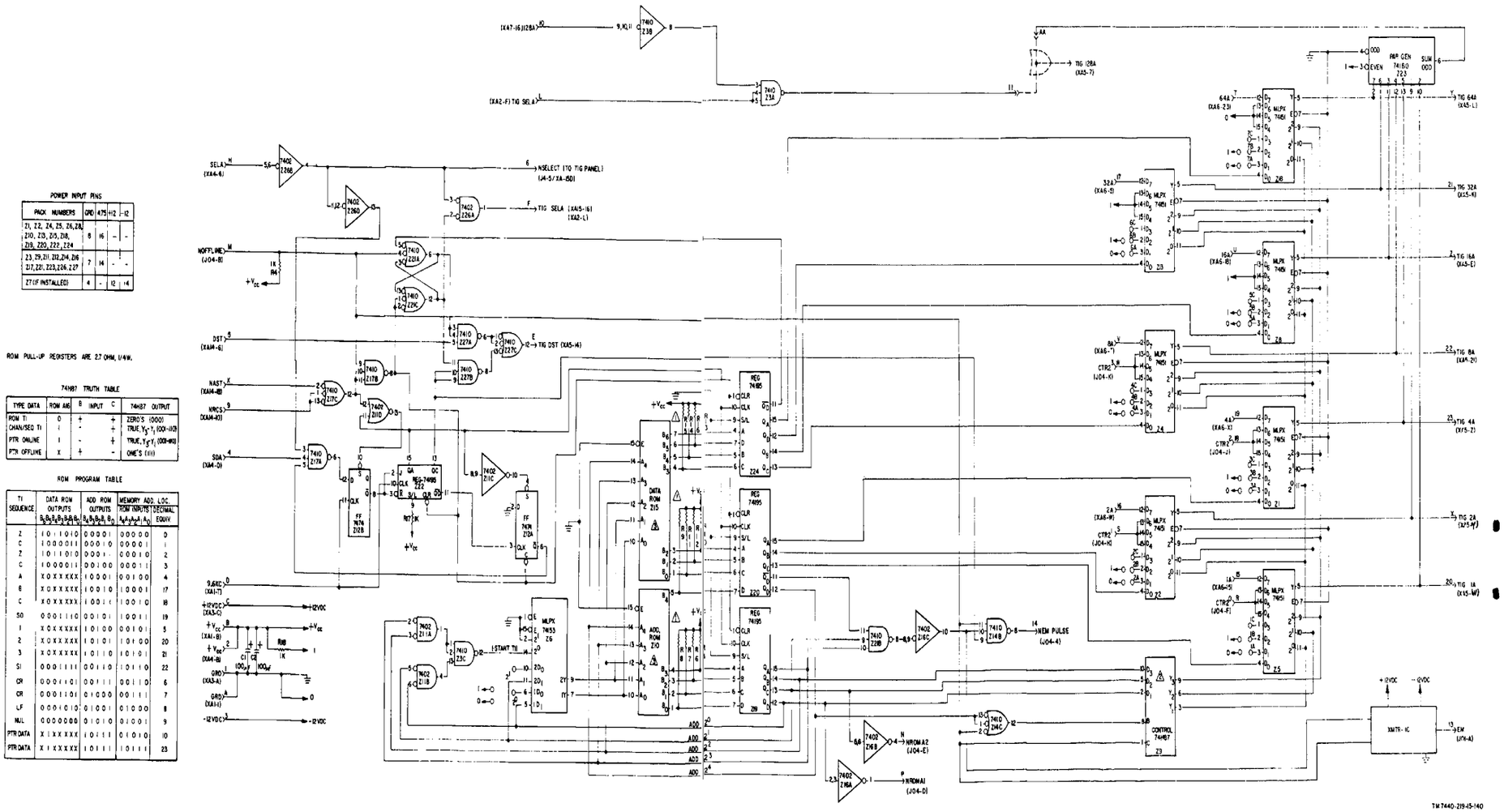


POWER INPUT PINS	
	Z1 THRU Z26, Z28
+4.5VDC	6
GRD	1

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).
2. UNLESS OTHERWISE SPECIFIED: ALL RESISTANCE VALUES ARE IN OHMS.

Figure 8-21.1. PC card A16 (No. A65429-001), schematic diagram. (with TIG installed)



POWER INPUT PINS

PACK NUMBERS	GRD	+5	+12	-12
Z1, Z2, Z4, Z5, Z6, Z8, Z10, Z13, Z15, Z18, Z19, Z20, Z22, Z24	8	16	–	–
Z3, Z9, Z11, Z12, Z14, Z16 Z17, Z21, Z23, Z26, Z27	7	14	–	–
Z7 (IF INSTALLED)	4	–	12	14

ROM PULL-UP RESISTORS ARE 2.7 OHM, 1/4W.

74H87 TRUTH TABLE

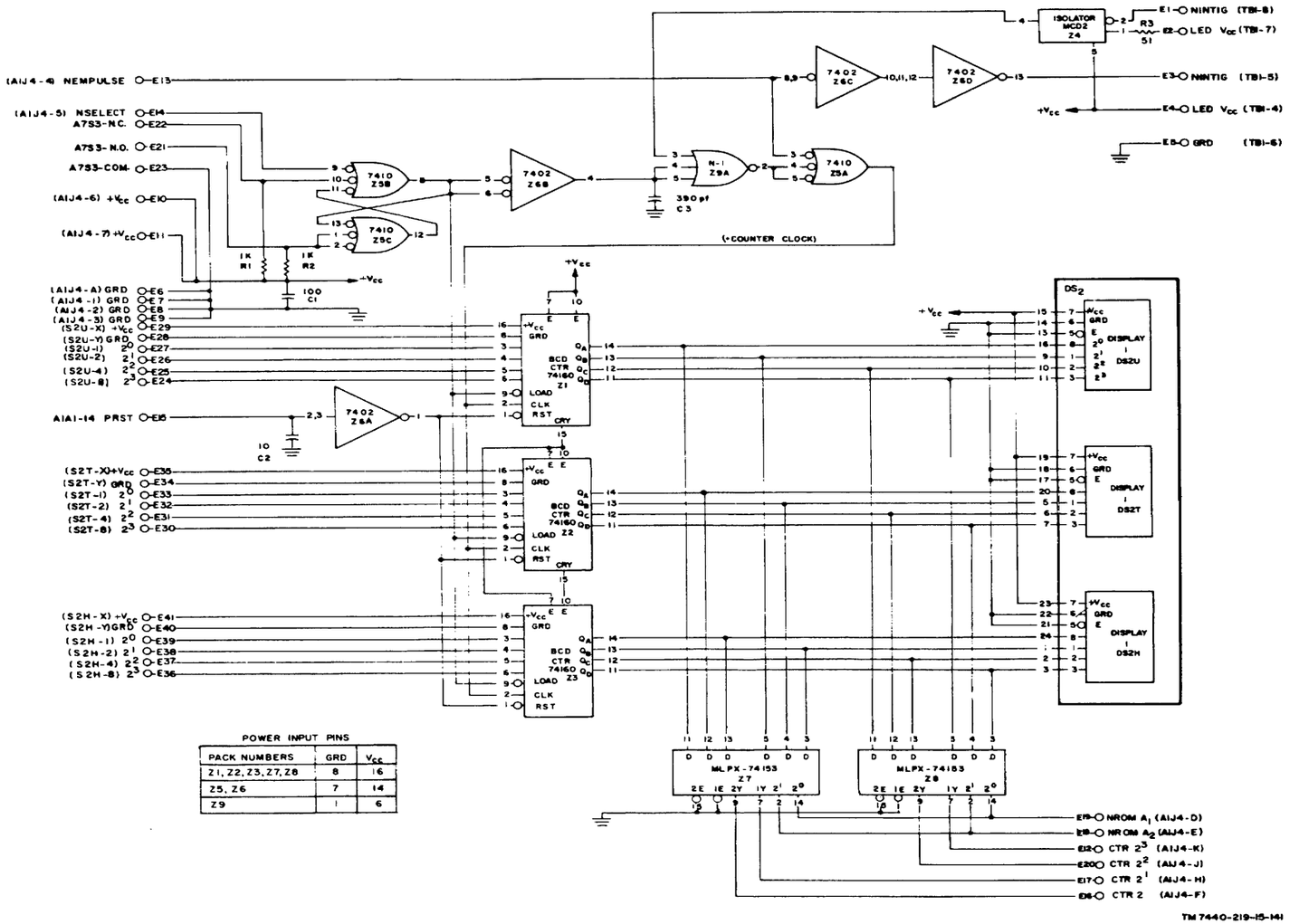
TYPE DATA	ROM A#5	B INPUT	C	74H87 OUTPUT
ROM TI	0	+	+	ZERO'S (000)
CHAN/SEQ TI	i	-	+	TRUE, Y_2-Y_0 (001-111)
PTR ONLINE	1	-	‡	TRUE, Y_2-Y_0 (000-110)
PTR OFFLINE	X	+	-	ONE'S (111)

ROM PROGRAM TABLE

TI SEQUENCE	DATA ROM OUTPUTS B_7 B_6 B_5 B_4 B_3 B_2 B_1 B_0	ADD ROM OUTPUTS B_7 B_6 B_5 B_4 B_3 B_2 B_1 B_0	MEMORY ADD. ROM INPUTS A_4 A_3 A_2 A_1 A_0	LOC. DECIMAL EQUIV
Z	1 0 1 1 0 1 0	0 0 0 0 1	0 0 0 0 0	0
C	1 0 0 0 0 1 1	0 0 0 1 0	0 0 0 0 1	1
Z	1 0 1 1 0 1 0	0 0 0 1 -	0 0 0 1 0	2
C	1 0 0 0 0 1 1	0 0 1 0 0	0 0 0 1 1	3
A	X 0 X X X X X	1 0 0 0 1	0 0 1 0 0	4
B	X 0 X X X X X	1 0 0 1 0	1 0 0 0 1	17
C	X 0 X X X X X	1 0 0 1 1	1 0 0 1 0	18
SO	0 0 0 1 1 1 0	0 0 1 0 1	1 0 0 1 1	19
1	X 0 X X X X X	1 0 1 0 0	0 0 1 0 1	5
2	X 0 X X X X X	1 0 1 0 1	1 0 1 0 0	20
3	X 0 X X X X X	1 0 1 1 0	1 0 1 0 1	21
SI	0 0 0 1 1 1 1	0 0 1 1 0	1 0 1 1 0	22
CR	0 0 0 1 1 0 1	0 0 1 1 1	0 0 1 1 0	6
CR	0 0 0 1 1 0 1	0 1 0 0 0	0 0 1 1 1	7
LF	0 0 0 1 0 1 0	0 1 0 0 1	0 1 0 0 0	8
NUL	0 0 0 0 0 0 0	0 1 0 1 0	0 1 0 0 1	9
PTR DATA	X 1 X X X X X	1 0 1 1 1	0 1 0 1 0	10
PTR DATA	X 1 X X X X X	1 0 1 1 1	1 0 1 1 1	23

Figure 8-21.2. PC card A2 (NO.12 -890081), schematic diagram.

Change 6 8-52.3/ (8-52.4 blank)



POWER INPUT PINS

PACK NUMBERS	GRD	V_{cc}
Z1, Z2, Z3, Z7, Z8	8	16
Z5, Z6	7	14
Z9	1	6

Figure 8-21.3. PC card A7A1 (NO.12 -890082), schematic diagram.

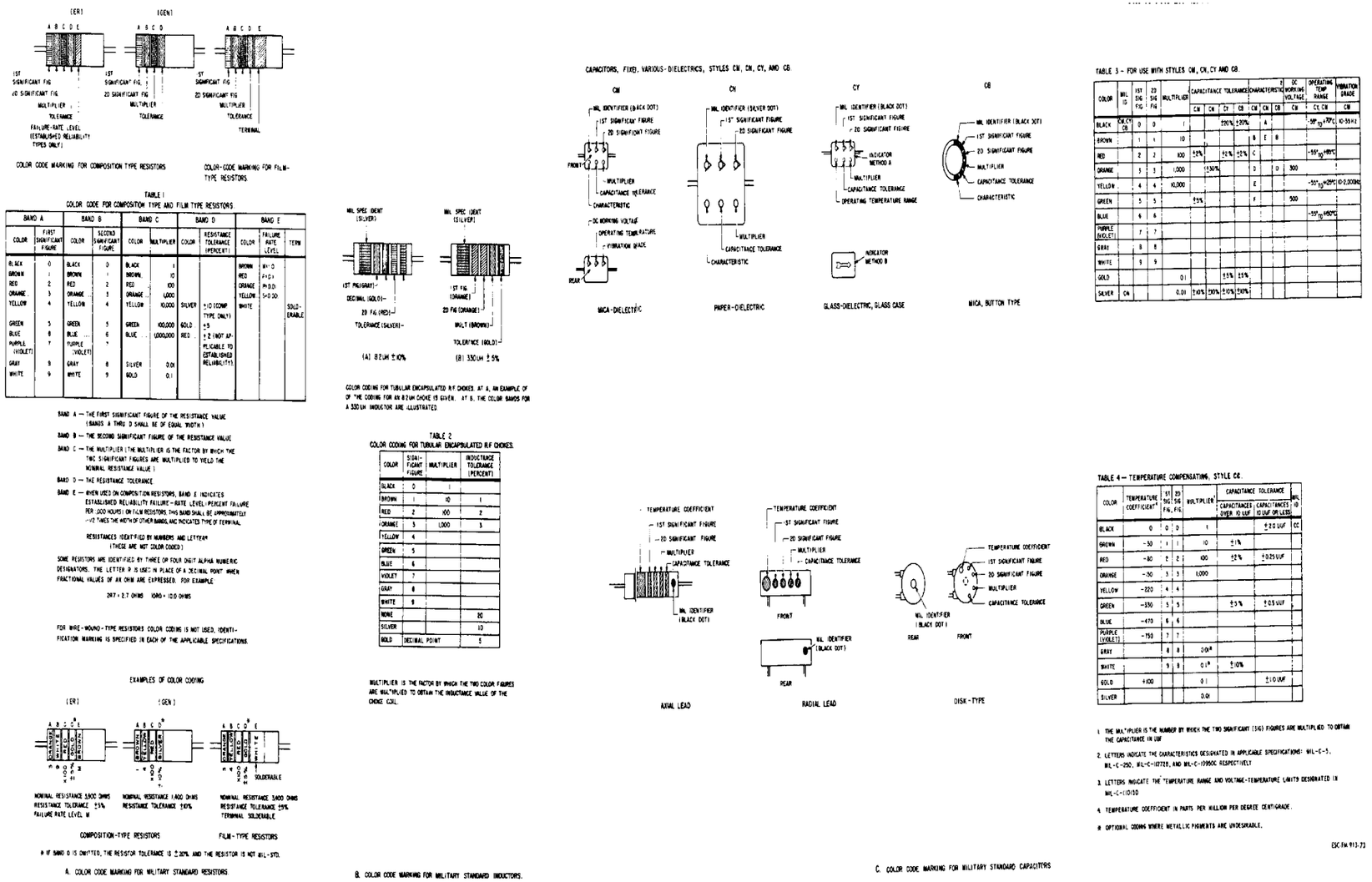


Figure 8-22. Military standard for color code marking.

Change 7 8-53/(8-54 blank)
All data on pages 8-55 and 8-56, including figure 8-23 deleted.

TEAR ALONG PERFORATED LINE

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT. . .PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE:

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ▸ ARE OBSOLETE.

P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.