DEPARTMENT OF THE ARMY TECHNICAL MANUAL
DEPARTMENT OF THE NAVY TECHNICAL MANUAL
DEPARTMENT OF THE AIR FORCE TECHNICAL ORDER

TM 11-7440-215-15
NAVSHIPS 0967-324-0020
TO 31W4-2G-31

OPERATOR'S,ORGANIZATIONAL, DIRECT SUPPORT,

GENERAL SUPPORT, AND DEPOT MAINTENANCE MANUAL

INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS

READER, PUNCHED CARD

RP-152/G

This copy is a reprint which includes current pages from Changes 1 through 8.

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!

TECHNICAL MANUAL
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DEPARTMENTS OF THE ARMY,

THE NAVY AND THE AIR FORCE

WASHINGTON, DC, *16 December 1968*

Operator's, Organizational, Direct Support, General Support, and Depot Maintenance Manual Including Repair Parts and Special Tools Lists READER, PUNCHED CARD RP-152/G (NSN 7040-00-998-0046)

LIST OF ILLUSTRATIONS

RECORD OF CHANGES

CHANGE NO.	DATE	TITLE OR BRIEF DESCRIPTION	ENTERED BY

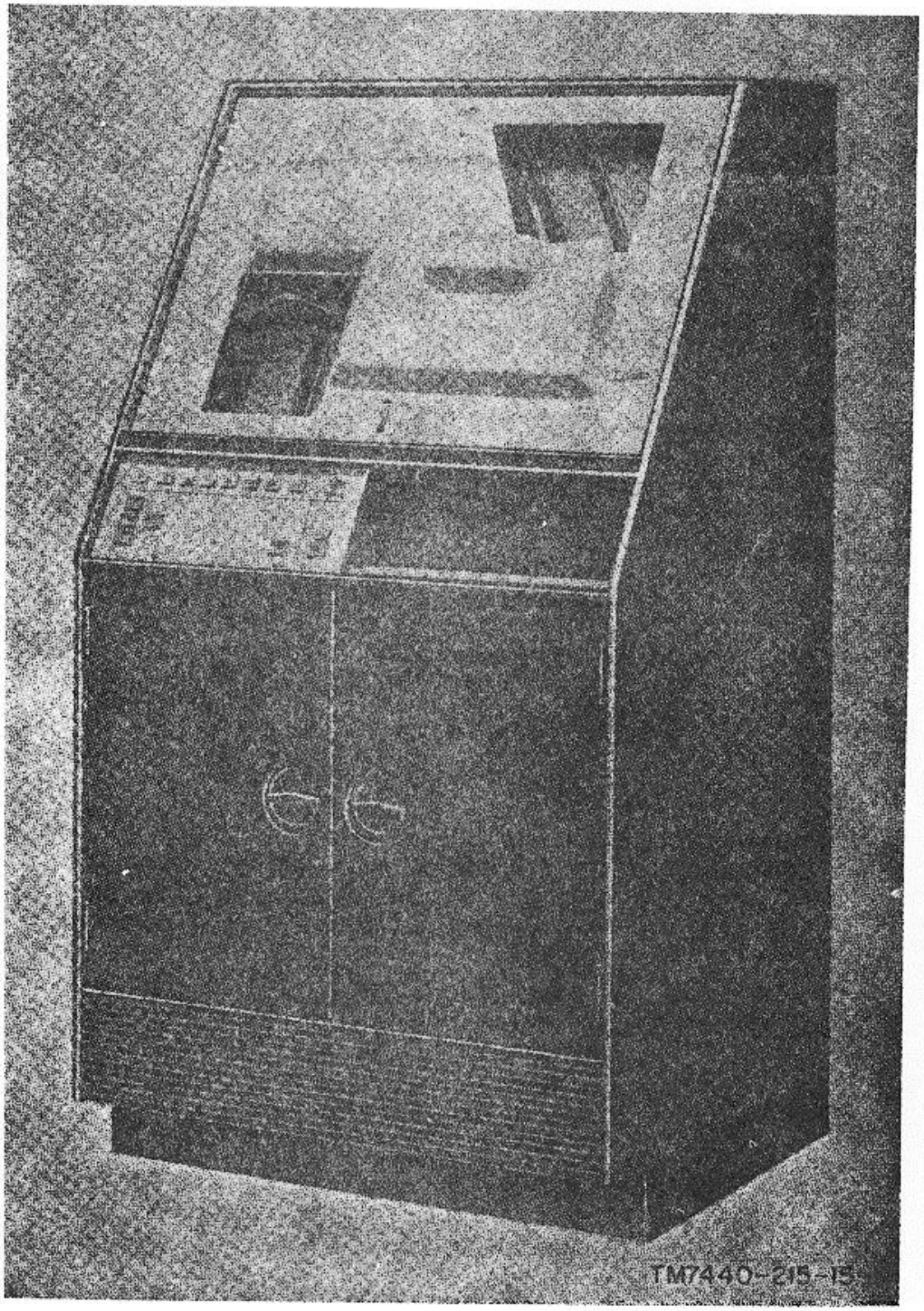


Figure 1-1. Reader, Punched Card RP-152/G, less running spares.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual describes Reader, Punched Card RP-152/G (card reader) (fig. 1-1) and contains operation and maintenance information. It also covers detailed functioning of the card 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 (Army). Air Force personnel will use AFM 66-1 for maintenance reporting and TO-00-35D54 for unsatisfactory equipment reporting. Navy personnel will report maintenance performed utilizing the Maintenance Data Collection Subsystem (MDCS) IAW OPNAVINST 4790.2, Vol 3 and unsatisfactory material/conditions (UR submissions) IAW OPNAVINST 4790.2, Vol 2, chapter 17.

b. Report of Packaging and Handing Deficiencies. Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR 700-58/ 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 4610.33A/ AFR 75-18/MCO P4610.19B 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. Administrative Storage

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

1-3.3. 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 card reader is used as an input device component of Digital Subscriber Terminal Equipment (DSTE) sets in the Automatic Digital Network (AUTODIN) military communications system. It reads perforations in punched cards to establish the information in electrical form and transmits the data to the common control unit (CCU) component of the DSTE set (fig. 1-2).

b. The cards used are Electronic Industries Association (EIA) standard 80-column cards punched with rectangular holes. The punched data is in the 12-bit FIPS-14 code arranged in 80 columns with each column representing a character. The card reader checks that the punched data represents valid characters, then converts the data to the eight-bit American Standard Code for Information Interchange (ASCII). The eight-bit ASCH data (seven data bits and a parity bit) is transferred to the CCU on eight parallel lines at a minimum rate of 150 characters per second.

c. Cards are picked and read by the card reader in response to control signals from the CCU. Protective circuits in the card reader stop the reading in case of any one of eight alarm conditions. For testing and maintenance, the card reader can be operated off-line, independent of the CCU.

1-5. Technical Characteristics of Card Reader

Type of card	EIA standard 80-column cards punched with rectangular holes.
Input data	Card perforations in 12-bit FIPS 14 code.
Hopper capacity	1,000 cards.
Stacker capacity	1,000 cards.
Output data	ASCII information transferred on a bit-parallel character-serial basis with eighth bit of each character maintaining odd parity.
Card rate	108 cards per minute, minimum.
Data transfer rate	Sufficient to maintain any line modulation rate up to and including 1200 baud.
Power requirements	120-volts (+12, -24), 50 hz (± 2.5) or 60 hz (±3), single phase, 7.0 amperes maximum running current; 30.0 amperes starting current.

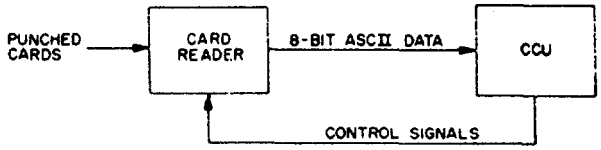


Figure 1-2. Typical system application, block diagram.

1-6. Items Comprising an Operable Equipment

NSN	Qty	Nomenclature, part No., and mfr code	Weight (lb)	Dimensions (in.) Depth	Width	Height	Fig. No.
		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.**					
7440-00-998-0046	1	Reader, Punched Card RP-152/G; 58189. A64400-002	290	30	35	64	1-1

1-7. Common Names

The following list provides the reference designation, official name, common name, and part number of items frequently mentioned in this manual. Although the full reference designations are shown below, abbreviated reference designations are frequently used in this manual. Prefix the abbreviated reference designation with the applicable assembly or subassembly identification.

Reference designation	*Item name*	*Common name*	*Manufacturers part No.*
	Reader, Punched Card RP-152/G	Card reader	A64400-002
A1	Logic assembly	Logic assembly	A64434-001
A2	Mechanism assembly	Card reader mechanism	A64421-001
A3	Control panel	Control panel	A64403-001
PS	Power supply	Power supply	810003-103
FL1	Filter assembly	Filter	A64008-001
B1	Blower	Blower	SM-6-546250
A1A1	PC card	Solenoid driver	A65209-002
A1A3	PC card	Lamp driver	SM546659-001

Reference designation	*Item name*	*Common name*	*Manufacturers part No.*
A1A4	PC card	Interface control	A65215-001 or A65223-001
A1A5	PC card	Polar interface	A65205-001 or A65227-001
A1A6	PC card	Photocell amplifier	A52630-001
A1A7	PC card	Data register	A65145-001
A1A8	PC card	Invalid character detector	A52634-001
A1A9	PC card	Decode matrix	A53725-001
A1A10	PC card	Encode matrix	A53721-001
A1A11	PC card	Decode matrix	A53725-001
A1A12	PC card	Encode matrix	A53721-001
A1A13	PC card	ASCII encoder	A52622-001
A1A14	PC card	Timing generator	A65173-001
A1A15	PC card	Timer	A65153-001
A1A16	PC card	Control	A65141-001
PS1A1	Circuit card assembly	+4.75-volt regulator	38864
PS1A2	Circuit card assembly	+12 volt and -12 volt regulators	38869
PS1A3	Circuit card assembly	-48 volt regulator	38874
PS1A12	Sequence module assembly	Sequence module	38982

CHAPTER 2

OPERATING INSTRUCTIONS

2-1. Operator's Controls and Indicators

(fig. 2-1)

Control or indicator	Function
AC POWER switch indicator (Z2).	Controls and indicates (white) when ac power is applied.
DC POWER indicator (DS1).	Lights (white) when all dc voltages are present in card reader.
OUT OF SYN indicator (DS6).	Lights (red) when card reader is out of sync with CCU.
PHOTOCELL CHECK indicator (DS4).	Lights (red) when either a card is improperly positioned or a photocell lamp is either dirty or defective.
INVALID CHARACTER indicator (DS3).	Lights (red) when a character is either invalid or is not contained in list of permissible characters.
CARD ALARM indicator (DS7).	In local test mode, lights (red) when either a hopper empty or stacker full condition is detected. In on-line operation lights when a stacker full condition is detected before end of message has been acknowledged by CCU.
CARD JAM indicator (DS5).	Lights (red) when card does not pass through read station within allowable time.
PICK FAIL indicator (DS8).	Lights (red) when card is not picked from hopper within allowable time.
CANCEL indicator (DS2).	Lights (red) when cancel signal Is received from CCU.
NOT ASSIGNED indicator (DS9).	Lights (amber) when card Reader is not assigned at CCU.
LAMP TEST switch (Z3).	Lights all indicators, except AC POWER and DC POWER indicators.
SINGLE FEED switch-indicator (Z4).	When momentarily pressed, indicates (white) momentarily and initiates reading of one card
AUDIBLE RESET switch (Z1).	After card reader malfunction, press AUDIBLE RESET switch to remove audible alarm at the CCU.
START switch-indicator (Z7).	When momentarily depressed, allows cards to be picked for reading in assigned mode under control of CCU. *Green* light indicates card reader is available for selection at CCU. *White* light indicates card reader is selected at CCU. Neither indicator lights if fault condition is present, if card reader is stopped, or if card reader is in local test operation (initiated by LOCAL TEST switch-indicator).
START switch-indicator (Z7)-Con.	
STOP switch-indicator (Z6).	When momentarily depressed, Stops card feed operations initiated by START switch-indicator or LOCAL TEST switch-indicator. Lights (red) when card reader is stopped by STOP switch- indicator, CANCEL signal, detection of a fault condition, an out-of-cards condition occurring after end of message is acknowledged by CCU, or power-on reset.
LOCAL TEST switch-indicator (Z5).	When card reader is not assigned and is in the stop mode depression of LOCAL TEST switch-indicator initiates picking and reading of cards in local test operation and lights (amber) in this condition.

2-2. Types of Operation

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

b. Perform the following sequence of procedures when operating the card 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

Press the AC POWER switch-indicator on the control panel. Check to see that the AC POWER and DC POWER indicators are lighted.

2-4. Loading Procedure

a. Press the STOP switch-indicator, fan the stack of cards to be read, and square the stack on the card squaring shelf at the right of the control panel.

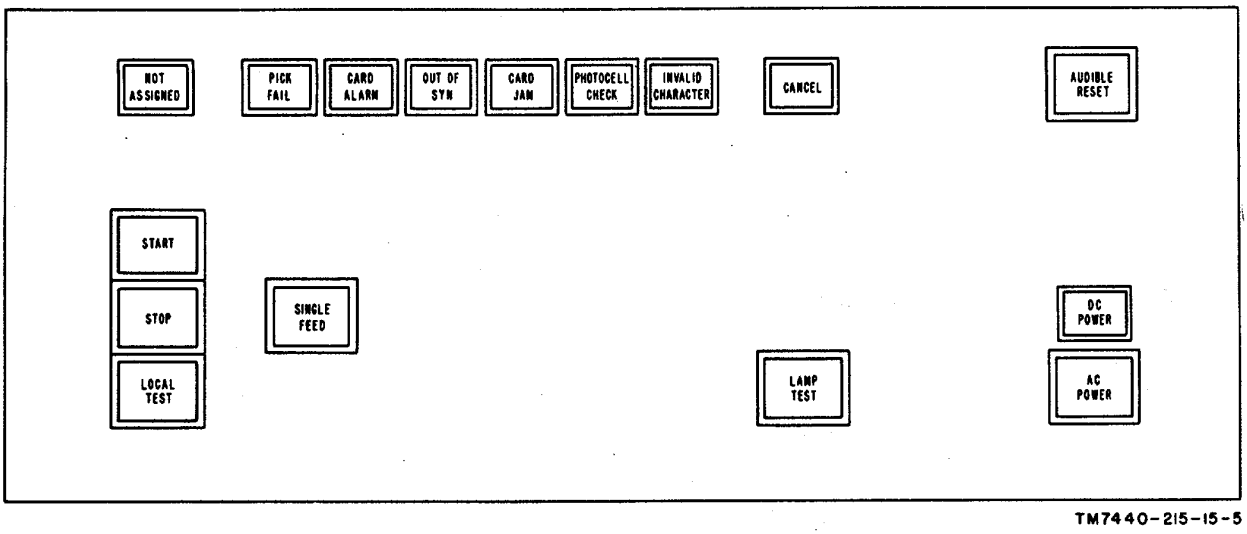


Figure 2-1. Control panel controls and indicators.

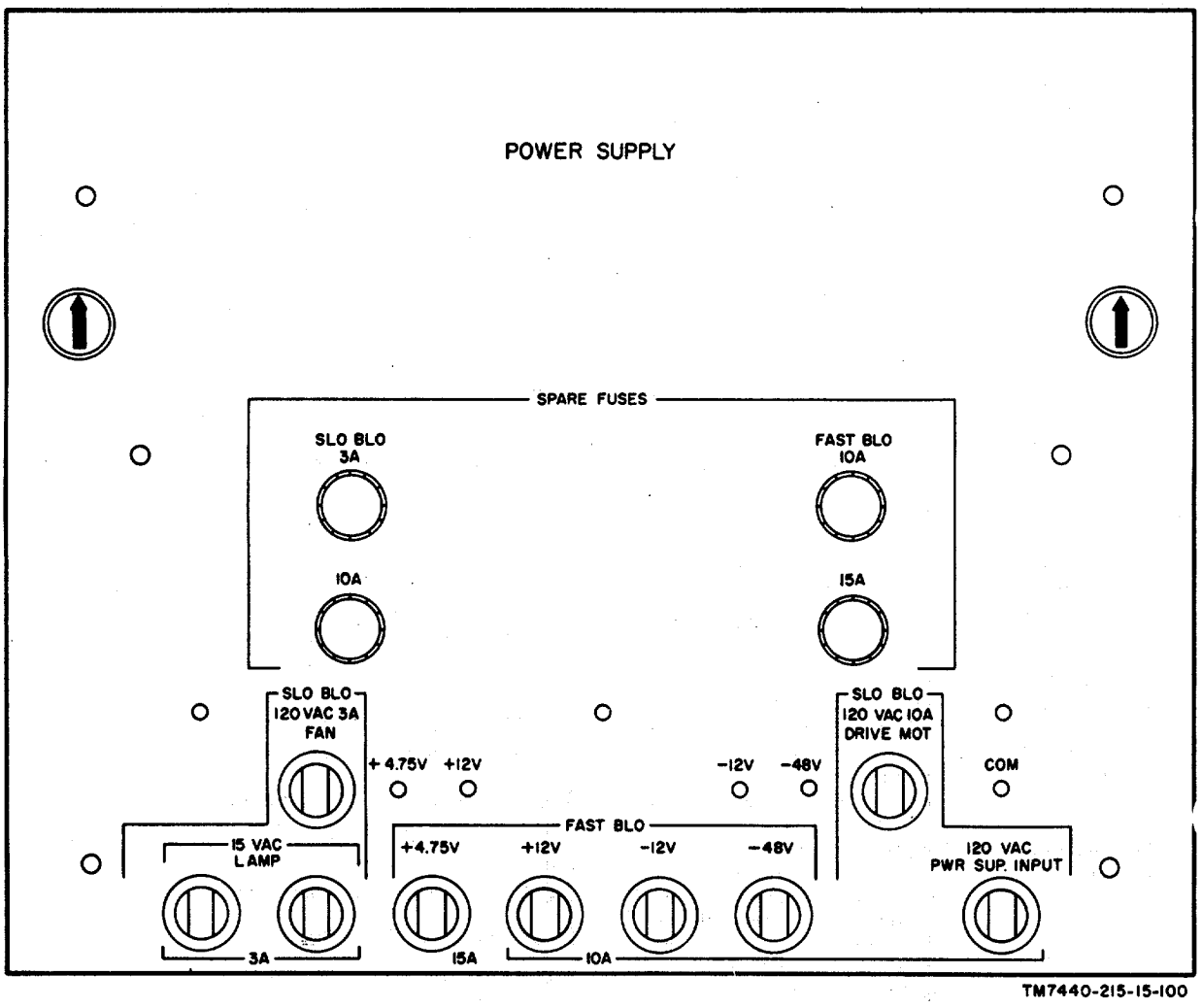


Figure 2-2. Power supply, front panel.

b. Take about a 1/2-inch thick stack of cards from the top of the deck of cards to be read.

c. Turn the stack face down with row 12 nearest the operator and column 1 to the left.

d. While holding the cards as indicated in step c above, slide the bottom card about 1/4 inch more to tile left; then place the stack into the hopper, sliding the left edge of the bottom card about 1/8 inch into the pneumatic throat. The vacuum at the entrance of the pneumatic throat should pull the bottom card down so that it enters the throat easily.

e. Load the rest of the deck of cards to be read face down on top of the loaded cards.

f. If the card reader is assigned, press the SINGLE FEED switch-indicator and check to see that the card is fed, read, and stacked properly.

2-5. Starting Procedures

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

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

(1) STOP switch-indicator.

(2) All fault alarm indicators.

2-6. Operating Procedures

a. On-Line Operation. To select on-line operation, press the START switch-indicator and check that the switch-indicator is lighted green. The cards can then be picked and read in response to step commands from the CCU (switch-indicator lighted (white) during card reading).

b. Local Test Operation. To initiate local test operation, press the STOP switch-indicator, then press the LOCAL TEST switch-indicator and check to be sure the STOP switch-indicator is extinguished.

2-7. Stopping Procedure

a. Stop Condition. When in the on-line or local test condition, stop the card reader by pressing the STOP switch-indicator.

b. Power-Down Condition. Press the STOP switch-indicator, then the AC POWER switch-indicator.

2-8. Correcting Fault Conditions

When a fault condition occurs, correct it as follows:

a. Check the control panel fault indicators to determine the fault. Note that the fault places the card reader in the STOP condition.

b. Take appropriate action to correct the fault.

c. After the fault is corrected, place the card reader in the on-line condition by pressing the START switch-indicator (or in the local test condition by pressing the LOCAL TEST switch-indicator).

CHAPTER 3

FUNCTIONING OF CARD READER

Section I. GENERAL FUNCTIONING OF CARD READER

3-1. Card Reader, Block Diagram

(fig. 3-1)

All of the card handling and reading functions of the card reader are performed by the card reader mechanism. Within this mechanism, cards are automatically transported by card feed mechanisms from the hopper to the read station, where the punched holes are read, and then to the stacker for storage. Processing of the data read from the cards and control of the card handling operations 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. Card Feed

Before operating the card reader, standard punched cards (EIA-RS-292) are manually loaded into the hopper which has a 1,000-card capacity. Picking cards from the hopper may be controlled automatically or manually.

a. Remote Operation. Automatic card feed under control of the common control unit (CCU) is accomplished by operation of the START switch-indicator on the control panel. This enables card feed control circuits in the logic assembly to operate under CCU control.

(1) The CCU operator must assign the card reader to operate with the CCU by pressing a front panel switch on the CCU. This results in an assigned signal which is routed from the CCU through receive interface circuits to card feed control circuits in the logic assembly of the card reader.

(2) If the card reader is in condition to accept instructions from the CCU, the card feed control circuits generate a ready signal which is routed through transmit interface circuits to the CCU (fig. 3-2). This permits the CCU to select the card reader for a message by sending a select signal and a step/data acknowledge pulse. These signals enable the card feed control circuits to begin card feeding operations.

Note. All signals shown in figure 3-2 are high when active. This format is used in the card reader at the output of the receive interface circuits and at the input of the transmit interface circuits. Conversion by the receive and transmit interface circuits causes most of the actual received and transmitted signals to be inverse (low when active).

(3) The leading edge of the first step/data acknowledge pulse causes the card feed control circuit in the logic assembly to supply a pick command to actuate a pick solenoid in the card feed mechanisms so that a single card is picked from the bottom of the hopper and transported through the read station.

(4) Once a card has been picked, no further control, except offsetting (para 3-6), can be applied to the card until it reaches the stacker. Transport from the hopper through the read station to the stacker is under control of a continuously running 1,725-rpm, 1/3-hp induction motor in the card feed mechanisms.

(5) As the first card passes through the read station, the 80 columns of data are read and transmitted to the CCU. As each column of data is read, the step/' data acknowledge signal from the CCU drops for an interval of 10 to 100 microseconds (μsec). This drop has no effect on the card reader; however, when the step/data acknowledge signal goes back up after the 80th column is read, another card is picked. This process continues until the last card of a message, when the step command does not go back up again after the 80th column is read.

b. Local Operation. When the card reader is not assigned to the CCU, the operator can initiate card feed locally by operation of appropriate card feed switches on the control panel. Continuous card feed (local test operation) can be selected in which a new card is automatically picked as the previous card leaves the read station. Alternately, single-card feed can be selected in which a single card is picked and read each time the single-feed switch-indicator is pressed.

3-3. Card Reading

As cards pass through the read station, they are automatically read by a bank of photocells in the read station. There are 12 read photocells positioned to monitor the 12 rows of data on the punched card. When the leading edge of the card passes over the read photocells, all 12 photocells are darkened. Then, as the 80 columns of punched holes pass over the read photocells, an electrical pulse is generated by each photocell as it is uncovered by a punched hole. The speed of motion of the cards past the read photocells is 2.5 milliseconds (ms) per column.

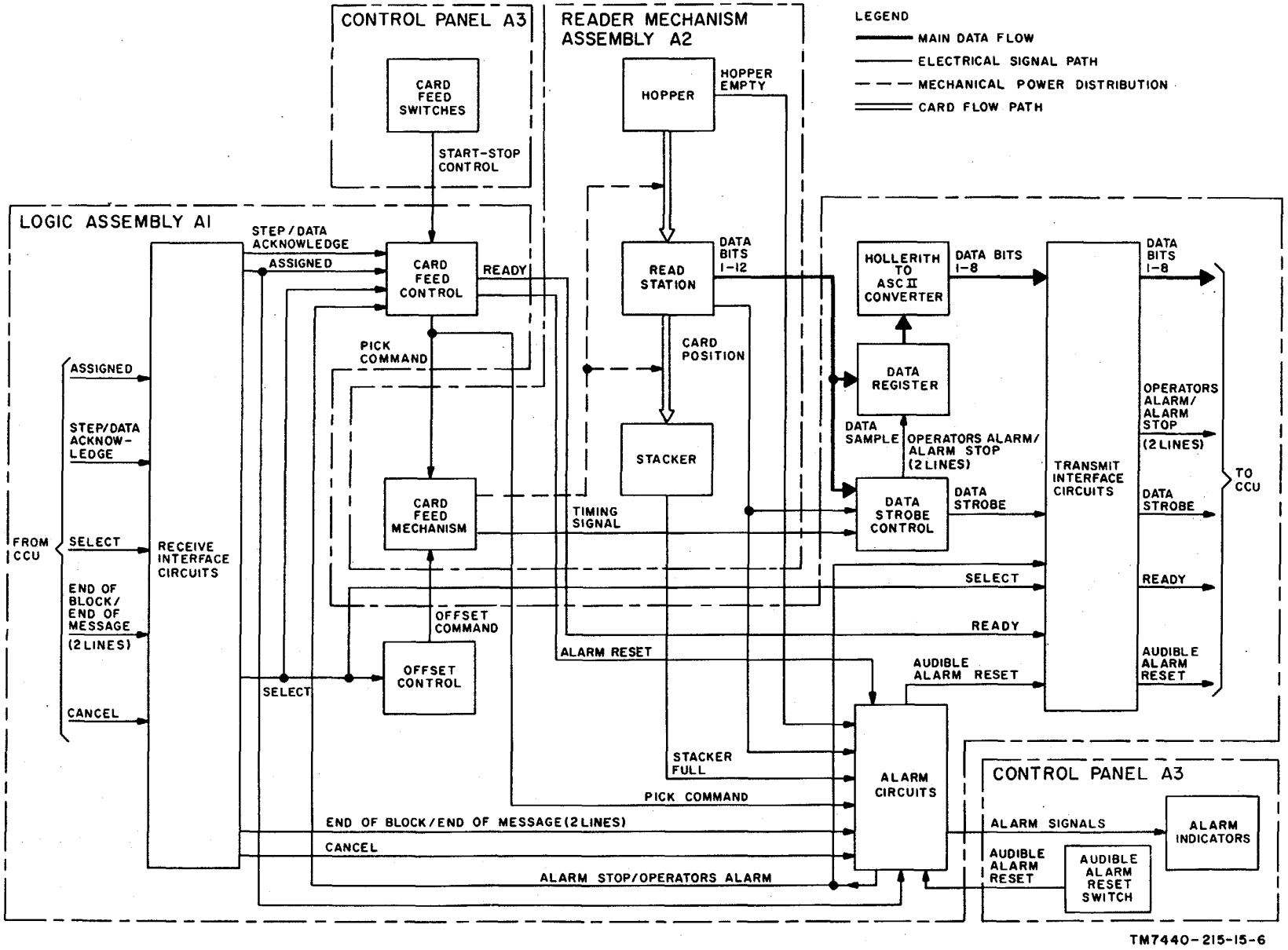


Figure 3-1. Card reader, block diagram.

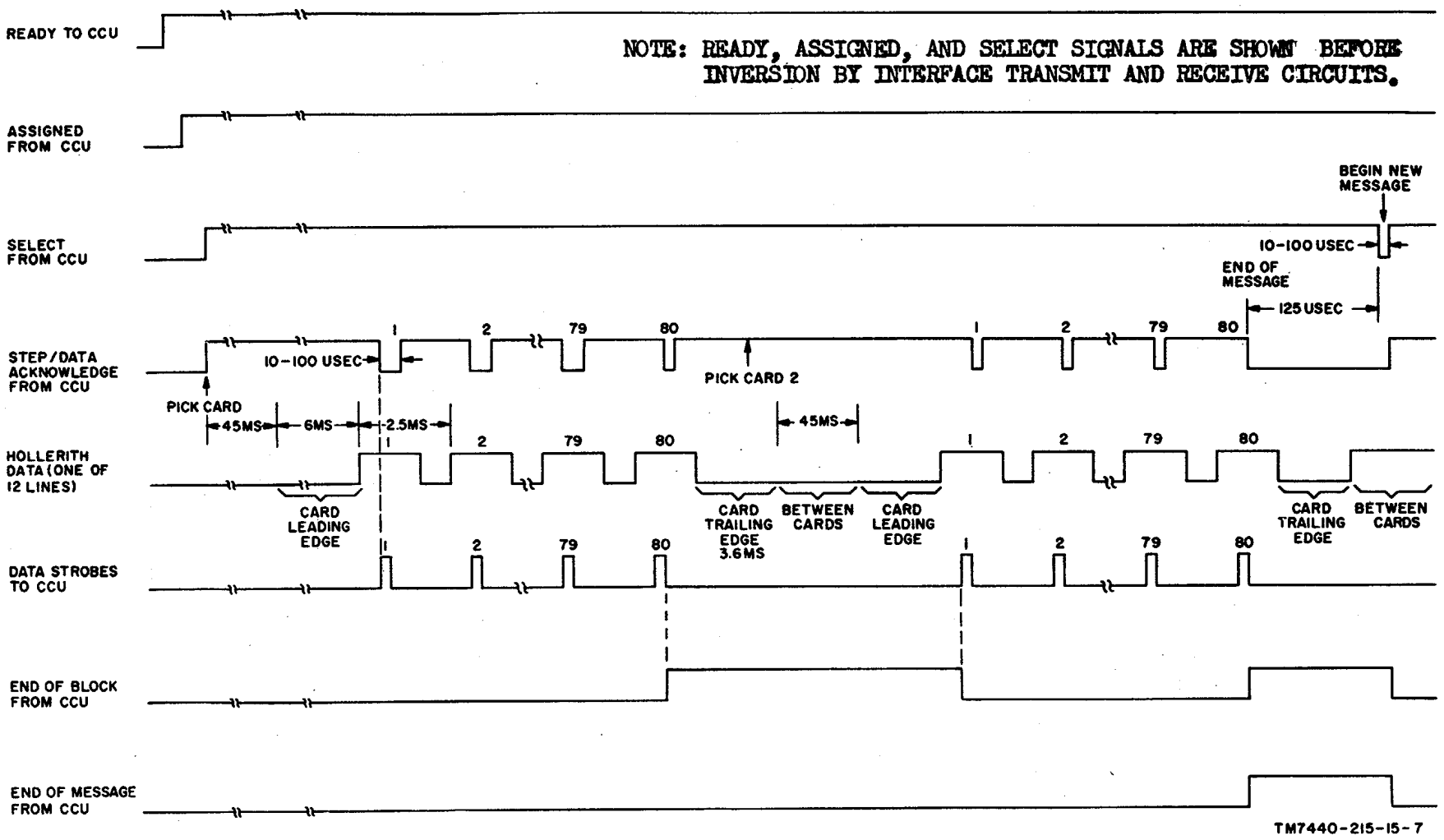


Figure 3-2. Card reader - CCU interface, timing diagram.

3-4. Data Conversion

a. The 12 data lines from the 12 read photocells in the read station represent the information punched in the card column being read. This information is any of 50 characters which can be encoded on the 12 data bits in a column. The 12-bit data format is in the Hollerith code (para 3-8). After storing the 12 data bits in a data register, the bits are converted to an eight-bit ASCII coding format for transmission to the CCU. After conversion in the Hollerith-to-ASCII converter, the data is gated through the transmit interface circuits to the CCU on eight lines if the select signal from the CCU is present. Since this can occur only in CCU operation, no data is transmitted in local test operation (para 3-2).

b. The effect of data conversion is illustrated in figure 3-3 for the characters A through E punched in columns 1 through 5. Note that the character A is represented in the Hollerith code by a hole punched in rows 1 and 12 of the card. This results in pulses from the corresponding read photocells but no pulses from the other photocells. After conversion to ASCII code, pulses of the same pulse width are sent to the CCU on ASCII lines 1, 7, and 8 because that is the ASCII coding for the character A. Similarly, the character B is converted from a Hollerith coding of bits 2 and 12 to ASCII coding of bits 2, 7, and 8.

c. The waveform of a sample Hollerith data output line is shown in figure 3-2. In the sample, it is assumed that pulses are generated for all columns. Since the data signal is derived from the read photocells, it is high when no card is present in the read station as all photocells are lighted at that time. When the leading or trailing edge of the card passes over the read photocells,, the photocells all become darkened, and all data lines go low. This takes approximately 6 ms. As each column of punched holes passes the read photocells, the data lines to be activated go high for a time corresponding to the width of the hole which is approximately 1.5 ms.

3-5. Data Strobes

a. To insure that the CCU evaluates the data only in the middle of each data pulse when it is most reliable, the card reader sends a 150-μsec data strobe pulse to the CCU near the middle of each data pulse. This function is performed by the data strobe generator which generates 80 data strobes for each punched card synchronized with the 80 columns on the card. The data strobe generator supplies a sample pulse to the data register for each character. The sample pulse enters the 12 data bits of the character in the data register. The data strobe for each character is not generated until after the data is stored, thereby insuring that all data is simultaneously available for transmission to the CCU. There is no delay in the Hollerith-to-ASCII conversion

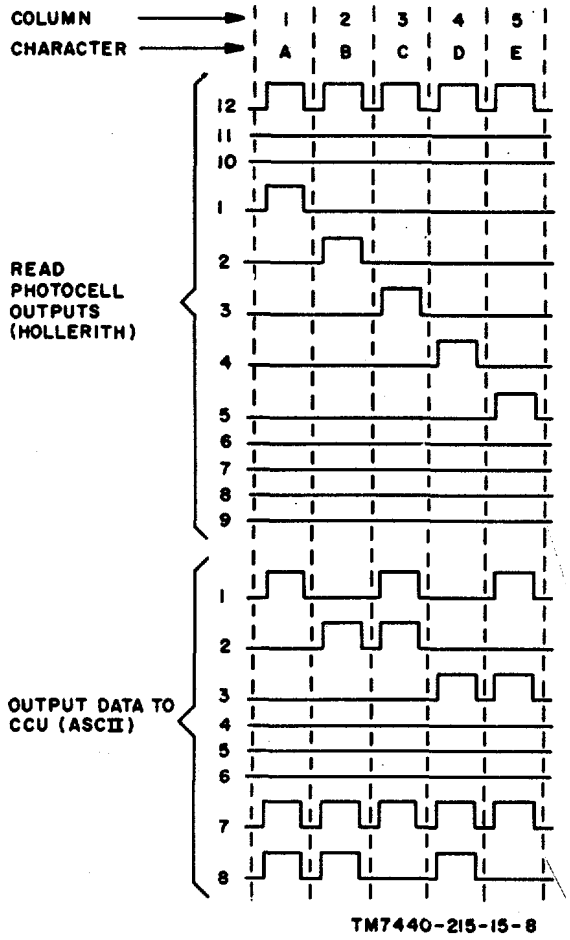


Figure 3-3. Data conversion, timing diagram.

process so that the data is available for transmission as soon as it is stored in the data register.

b. To aid in synchronizing the generation of data strobes with the holes on the card, the data strobe generator monitors the outputs of the read station photocells, card position signals from other photocells in the read station which monitor the beginning of the card and the end of the card, and timing pulses derived from a timing wheel in the card reader mechanism. The timing pulses enable synchronizing data strobe generation to the motion of the card. Data strobe pulses are gated out to the CCU through the transmit interface circuits only when the select signal is present.

3-6. Header Card Offset

A series of cards read in sequence is considered a message. After the last card in a message is read, the CCU drops the select signal for 10 to 100 μsec. This indicates the next card is the first card of a new message (header card). When this happens, the offset control circuit in the logic assembly actuates an offset solenoid in the card feed mechanisms to offset the

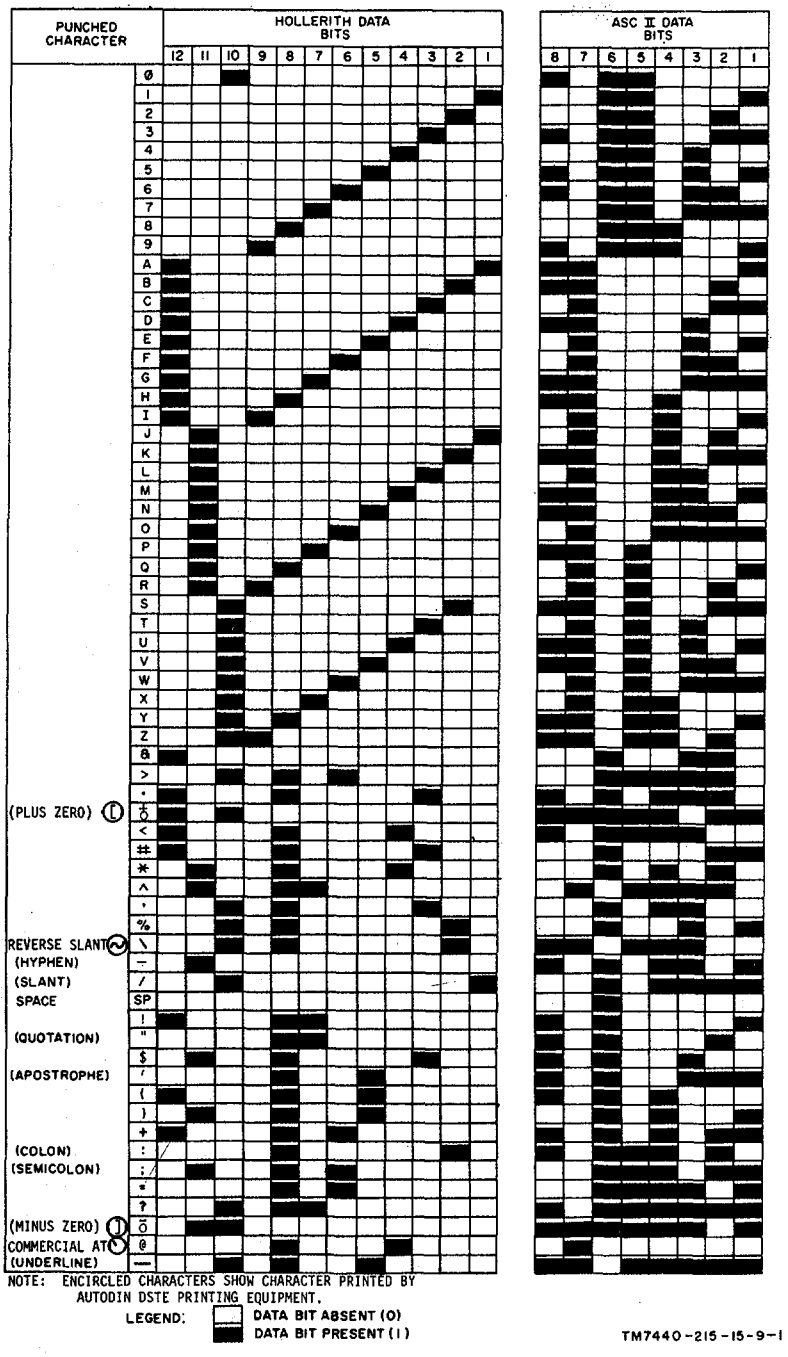


Figure 3-4. Signaling code chart.

header card from the nearest nonoffset cards by at least 1/4 inch.

3-7. Alarm Functions

a. Various operations of the card reader are continuously checked by a group of alarm circuits in logic assembly A1. When an alarm condition occurs, the ready signal to the CCU is interrupted, and an alarm stop or operator's .alarm signal is generated to disable the card feed and is transmitted to the CCU. Corresponding alarm signals are also fed to indicators on control panel A3 to provide a visual indication of the alarm condition.

b. The following fault conditions call cause all alarm stop:

(1) An invalid character is determined by monitoring the 12 data bit lines from tile read photocells for an invalid combination.

(2) A CCU synchronization (sync) failure is determined by monitoring the end-of-block signal from

the CCU. The end-of-block signal is generated by the CCU immediately following the 80th data strobe of each card (block) and remains active until the first data strobe of the next block. If the end of block signal is not received at the proper time, the CCU is out of sync with the card reader. .Also, at the end of a message, an 81st data strobe must be generated. If not, a CCU sync failure exists.

(3) A light check failure is determined by monitoring the outputs of the 12 read photocells to see if all 12 photocells are lighted when no card is present in the read station.

(4) A dark check failure is determined by monitoring data bits 1 through 8 at the output of the Hollerith-to-AS.CII converter during the time when the leading edge of the card (prior to column 1) is covering the read photocells. The Hollerith character for no holes punched is the space character; therefore, the code contained in ASCII data bits 1 through 8 should be that for a space character. If incorrect, a dark check failure exists.

(5) A card jam condition is determined by monitoring the card position signals from the read station to see if a card remains in the read station longer than 400 ms.

c. The following fault conditions can cause an operator's alarm:

(1) A pick failure is determined by monitoring the card pick command and the card position signals from the read station to see if a card fails to reach the read station within 115 ms of a pick command.

(2) A hopper empty condition is determined by monitoring the output of a photocell located at the hopper. This photocell is lighted when no cards are in the hopper.

(3) A stacker full condition is determined by the output of a sensing switch at the stacker.

d. In case of an alarm stop or operator's alarm, an audible alarm is sounded in the CCU. The audible alarm for an operator's alarm can be reset by operating a switch on the card reader control panel. Operation of this switch results in transmission of an audible alarm reset signal through the transmit interface circuits to the CCU. In case of an alarm stop, the audible alarm is not reset until the CCU operator operates a cancel switch on the CCU front panel.

3-8. Signaling Code

a. The signaling code used by the card reader to transmit data to the CCU is the eight-bit ASCII code shown in figure 3-4. 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. Figure 3-4 lists the 64 ASCII characters which may be transmitted by the card reader.

b. The data which is punched on the cards being read is in the 12-bit FIPS-14 code. This code is shown in figure 3-4 for the 64 characters.

Section II. MECHANICAL FUNCTIONING OF CARD READER

3-9. Reader Mechanism, Block Diagram Card (fig. 3-5)

The card reader mechanism consists of several subassemblies which together perform the card handling functions of the card reader.

a. The cards to be read are placed in the hopper face down. When the picker solenoid is energized by a pick command from the logic assembly, the bottom card is picked lengthwise from the hopper by a vacuum from picker belts, which are pressed against the card by the solenoid. Drive for the picker belts, and for all other rotating mechanisms, is provided by a constantly running motor. The card being picked is held against the picker belts by the suction from a vacuum pump which is driven by the same motor.

b. Reader drive capstans move the card from the picker belts through the read station where 12 read photocells detect the holes punched on the card and generate data signals. The position of the card in the read station is detected by an end of card photocell (placed before the read photocells) and a beginning of card photocell (placed after the read photocells). All photocells receive light from corresponding illuminating lamps when no card is in the read station. As the card passes through the read station it breaks the lightpath, resulting in a pattern of photocell signals corresponding to the card position and the holes punched on the card. All photocell signals are sent to the logic assembly.

c. When the card leaves the read station it is picked up by the stacker capstan which is driven against the offset idler to send the card into the stacker. If the card is a header card, an offset command energizes the offset solenoid. This adjusts the offset idler to shift the card sideways slightly as it is fed lengthwise into the stacker.

d. To synchronize generation of data strobes (by the logic assembly) with the movement of the cards, a timing gear is mounted on the stacker capstan drive shaft. The evenly spaced teeth on this gear are sensed by a reluctance pickup to generate a sine wave timing signal of eight cycles per column of card travel whose frequency varies with the speed of the mechanism.

e. An indication that the hopper is empty is provided by a photocell located at the hopper. An indication that the stacker is full is provided by a stacker full sensing switch.

f. Physically, the picker belts are part of a picker frame assembly, which also includes the hopper empty photocell and the read station photocells. The read station lamps are part of a light aid idler assembly which also contains the idlers for the reader drive capstans. The card stacking and offsetting functions are performed by the stacker capstan assembly and the offset idler assembly, respectively.

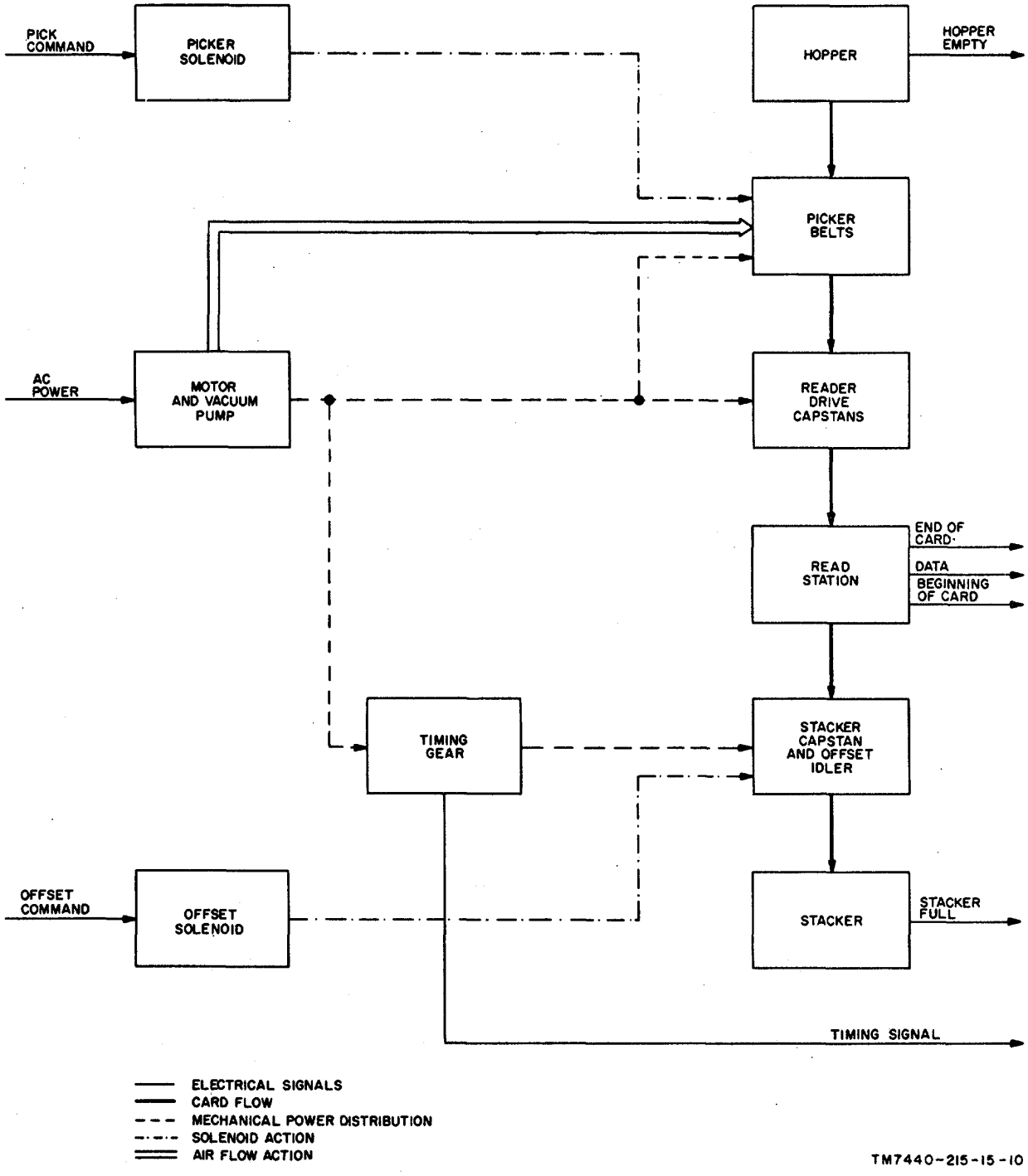


Figure 3-5. Card reader mechanism, block diagram.

3-10. Functioning of Picker Frame Assembly
(fig. 3-6)

a. The picker frame assembly consists of four capstan-driven perforated belts, a belt pulley idler, a belt pusher, two reader drive capstans, two vacuum manifolds, and the read photocell support, all of which are mounted on the picker and read head frame. The timing belt, from the stacker capstan shaft turns the input gear on the picker drive shaft which transfers the motion directly to the picker belts and also through timing belts to the reader drive capstans. The four picket belts are turned around the belt pulley idler by a pulley mounted on the picker drive shaft. The pulley idler is adjustable for varying the belt tension. Two other pulleys, one on each end of the picket. drive shaft, drive timing belts .which transfer motion to the two reader drive capstan pulleys. The two capstans mate with idler rollers which are part of the light station and idler assembly. Depending on the operating speed of the drive motor, the reader drive capstans move a card bat 23.2 to 27.6 inches per second. One complete revolution of the reader drive capstan advances a card exactly 45 columns.

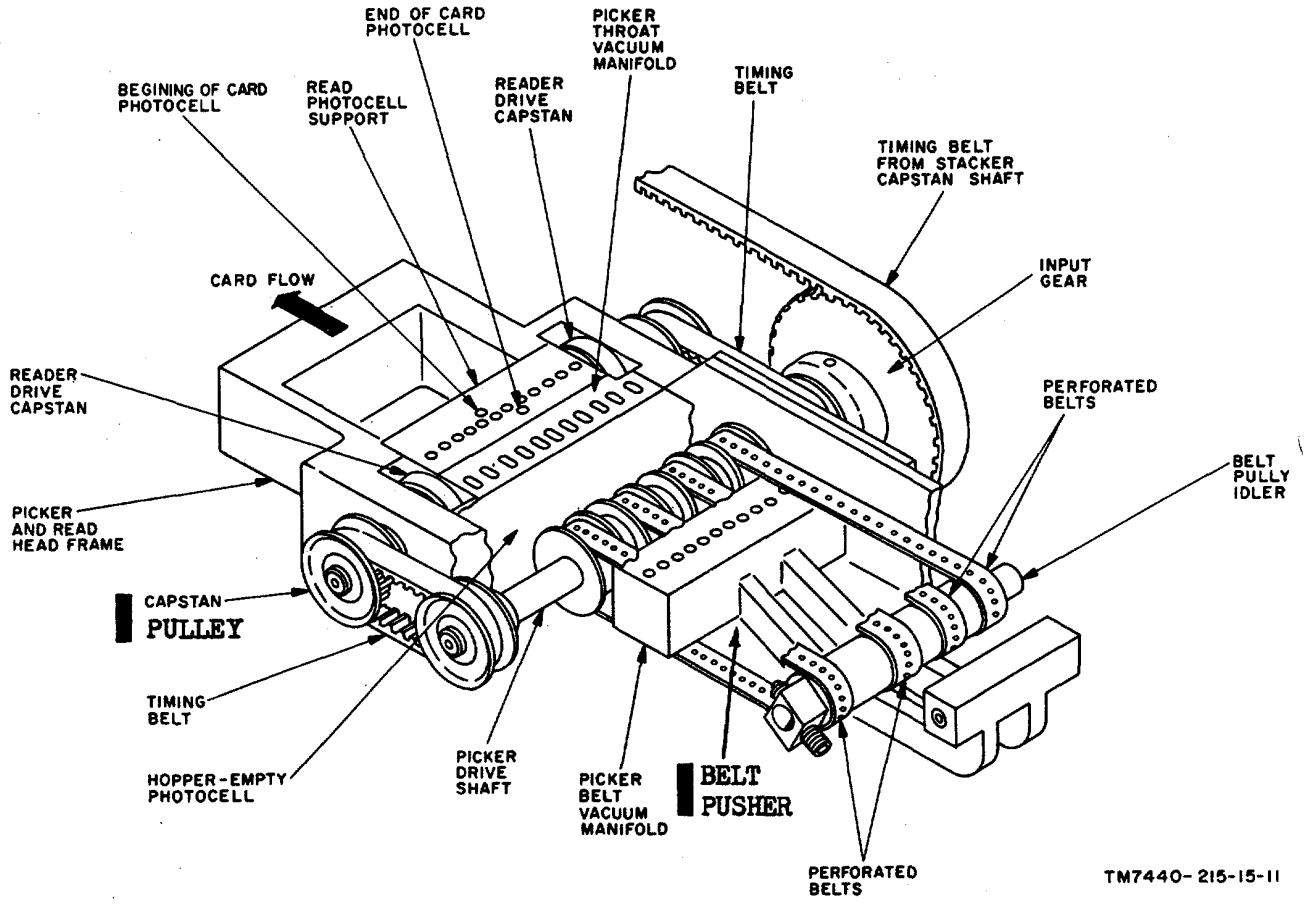


Figure 3-6. Picker frame assembly functional diagram.

b. One end of the belt pusher is attached to the picker and read head frame on a pivot. The free end of the belt pusher includes a vacuum manifold which is pushed up against the perforated belts by the picker solenoid assembly to pick a card from the hopper. The vacuum is applied from the vacuum pump intake through the belt perforations so that the card is gripped and carried by the moving belts. Another vacuum manifold pulls the leading edge of the card flat as it leaves the belts. This is the part of the picker frame assembly which, together with the light station and idler assembly, forms the pneumatic throat. The pneumatic throat manifold vacuum is formed by air in the vacuum pump exhaust line flowing through a venturi manifold whose throat is connected to the hole in the manifold.

c. The read photocell support includes 14 photocells, 12 of which are positioned to read the 12 rows of

the punched cards. The other two photocells are the end-of-card and the beginning-of-card sensors. The light source for all 14 photocells is supplied by lamps in the light station and idler assembly when the card reader is assembled. The electrical outputs from the phototransistors are brought out to a taper pin block for external connections. One other photocell, located near the downstream end of the picker belt pulley, is used to sense the hopper empty condition. This photocell receives a light source from a lamp on the input card guide and lamp assembly.

3-11. Functioning of Light Station and Idler Assembly

(fig. 3-7)

The light station and idler assembly contains two idler rollers which operate with the reader drive capstan rollers in the picker frame assembly when the card reader is assembled. The light station contains a lamp assembly with 14 lamp filaments that provide light for the 12 read photocells and the end-of-card and beginning-of-card photocells in the picker frame assembly. The throat block is the upper limit of the pneumatic throat when the light station and idler assembly is assembled over the picker frame assembly in the card reader. This pneumatic throat permits only one card at a time to enter the read station.

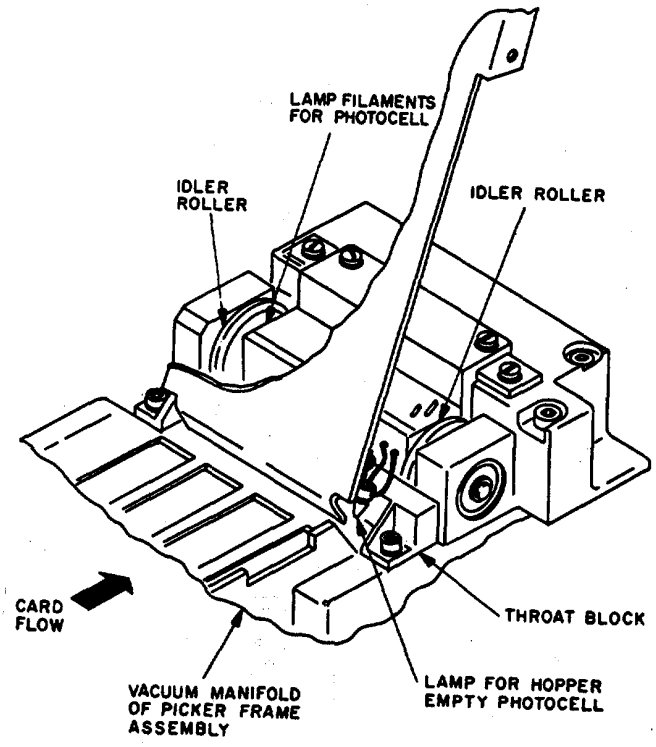


Figure 3-7. Light station and idler assembly, functional diagram.

3-12. Functioning of Stacker Capstan Assembly

(fig. 3-8)

The stacker capstan assembly receives drive power from a timing belt which is turned by the drive motor. The assembly consists of two pulleys, a 120-tooth gear, and a capstan roller, all mounted on the same shaft. The 120-tooth gear is part of the timing generator; the capstan roller is used to drive cards into the stacker. When the card reader is assembled, the capstan roller mates with the idler roller of the offset idler roller assembly. The capstan roller delivers cards to the stacker at approximately 69.6 or 82.8 inches per second, depending on the operating speed of the drive motor (50 or 60 cps).

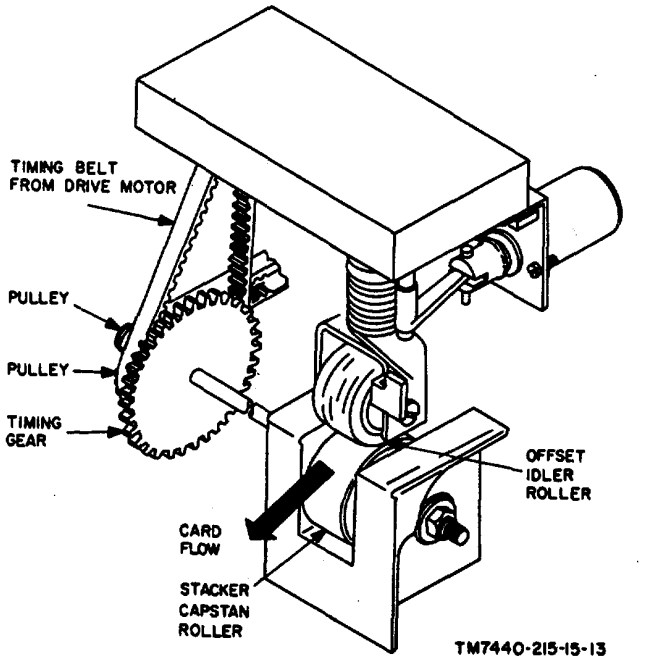


Figure 3-8. Stacker capstan assembly, functional diagram.

3-13. Functioning of Offset Idler Roller Assembly

(fig. 3-9)

In addition to providing an idler roller for the stacker capstan assembly the offset idler roller assembly performs a card-offsetting function. This is used for the header card of a message on command from the logic assembly. The offsetting action is initiated by the offset solenoid which is linked to the bracket supporting the idler roller. When the solenoid energizes, it moves the bracket so that the idler roller is turned slightly off center with respect to the stacker capstan; therefore, as the card is driven lengthwise into the stacker, it is also moved sideways a minimum of 1/4 inch.

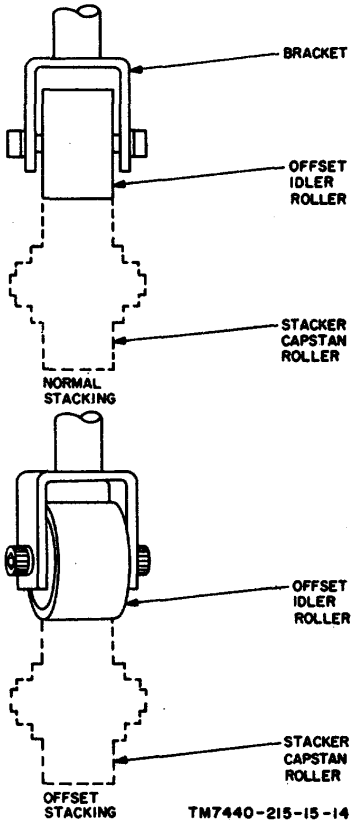


Figure 3-9. Offset idler roller assembly, functional diagram.

3-14. Functioning of Stacker Assembly

(fig. 3-10)

The stacker is basically a flat spring-loaded platform which moves down under the weight of stacked cards. When the number of cards in the stacker reaches capacity, the platform lowers against the load applied by the elevator spring to the preset downward travel limit. Any additional cards loaded into the stacker raise the card deflection plate which then activates the stacker full switch. This produces a signal for the logic assembly which then causes an operator's alarm condition in the card reader.

3-15. Timing Generator

(fig. 3-11)

The timing generator performs as a column clock by generating electrical pulses that are mechanically initiated. It consists of a 120-tooth, 24-pitch gear and a magnetic pickup assembly. The gear, mounted on the stacker offset capstan shaft, turns at 1,280 rpm or 1,065 rpm, depending on the operating speed of the drive motor. The magnetic pickup is mounted in a fixed position so that the periphery of the timing gear passes the iron core of the pickup.

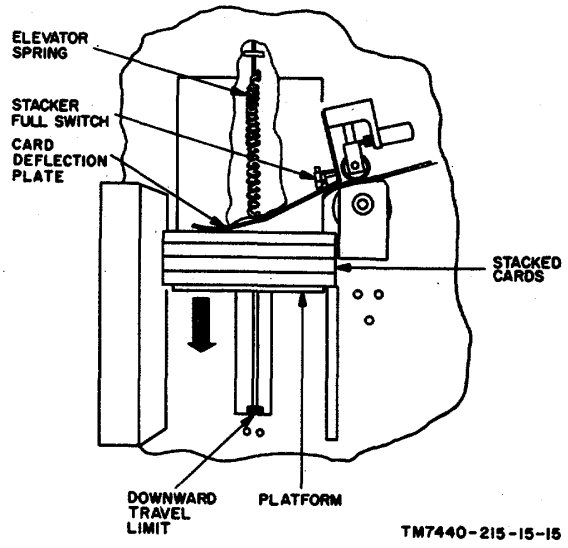


Figure 3-10. Stacker assembly, functional diagram.

The pickup is adjusted for an airgap of 0.003 inch (nominal) between the core of the pickup and the teeth of the gear.

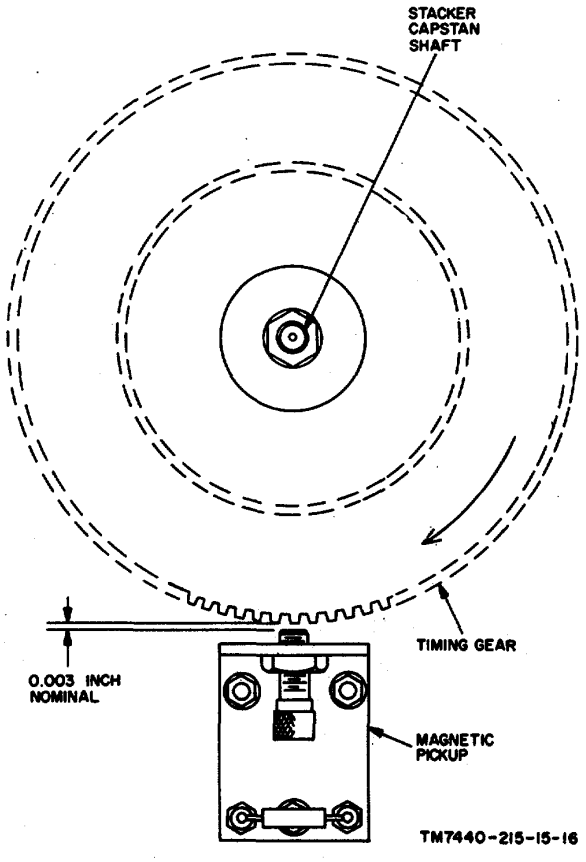


Figure 3-11. Timing generator, functional diagram.

As a tooth enters the iron core, a pulse is generated first in one direction as the tooth approaches, then in the opposite direction as the tooth leaves the airgap; therefore, the pickup generates a sine wave 120 times for each revolution of the gear. Since the gear makes 3 revolutions for each revolution of the reader drive capstan, 120 times 3, or 360 sine waves are generated for 45 columns of a card. The result is 8 sine waves per column.

3-16. Mechanical Power Distribution System

(fig. 3-12)

The mechanical power distribution system supplies the drive for the picker belts, reader drive capstans, stacker capstan, and a vacuum pump. It consists of a drive motor, gears, and timing belts.

a. Drive Motor. The drive motor requires 96- to 132-volt, 50- to 60-cps, single-phase ac power and is rated at 1/3 horsepower. When 60-cps power is supplied, the drive motor speed is 1,725 rpm; for 50-cps power, the speed is 1,425 rpm. A pulley mounted on one end of the motor armature shaft transfers the driving force to the rest of the system.

b. Power Distribution. The stacker capstan shaft, picker belts capstan, and reader drive capstan shafts rotate continuously when the drive motor is operating. A timing belt transfers power from the motor shaft pulley to the stacker capstan shaft which, in turn, drives the picker drive shaft by a second timing belt. Two other timing belts on the picker drive shaft drive the two transport reader capstan shafts. The vacuum pump is mounted on the rear of the drive motor and is driven directly by the drive motor shaft. The operating speed of each shaft in the system, as well as card travel speeds, is as follows:

	Operating speeds					
Input power frequency	Motor	Stacker offset capstan	Picker drive	Transport reader capstans	Reader card travel	Stacker offset capstan travel
50 cps	1425 rpm	1065 rpm	355 rpm	355 rpm	23.2 in./sec	69.6 in./sec.
60 cps	1725 rpm	1280 rpm	427 rpm	427 rpm	27.6 in./sec	82.8 in./sec.

3-17. Deleted

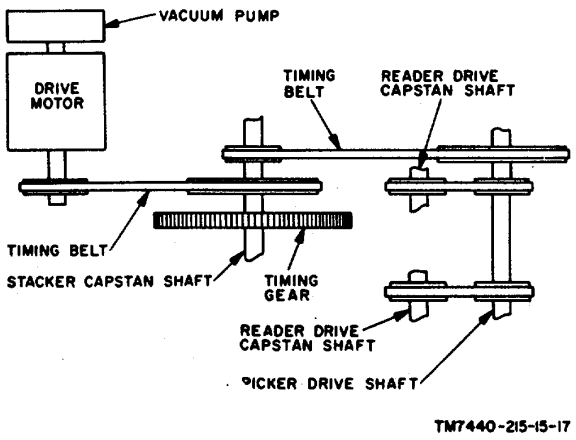


Figure 3-12. Mechanical power distribution system.

Section III. ELECTRICAL FUNCTIONING OF CARD READER

3-18. Logic Diagrams

a. Most of the data processing and control functions of the card reader are performed by logic circuits on the printed circuit (PC) cards in the logic assembly. The electrical operation of the PC cards are represented in chapter 8 by logic diagrams instead of conventional schematic diagrams. Each logic diagram shows all input and output connections of the 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 card reader are mounted in integrated circuit modules, and detailed circuit components are nor applicable. Each integrated circuit logic element is considered to be a single electrical component. For those logic elements

Figure 3-13. Deleted

that are made up of discrete circuit components, the schematic representation and a description of the circuit operation for each type of logic element is given ill paragraphs 3-81 through 3-86.

Note. For convenience, all cards in the logic assembly are identified only by their distinguishing reference designations (A1, A2, A3, etc.). It should be understood that these designations are prefixed by A1 (para 1-7).

3-19. Logic Signal Notation

a. In general, logic signals in the card reader switch between a. high level of nominally +4.5 volts and a low level of nominally 0 volt. Some signal lines are considered activated when the level is high, and 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 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 logic 1 for signal naming purposes, and the low level is arbitrarily designated false or logic 0. Therefore, 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. See following mneumonic chart.

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.

3-20. Logic Diagram Symbol Notation

a. Typical integrated circuit and discrete circuit logic elements are shown in figure 8-10. 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. Two tagging lines are used within each logic symbol for identification purposes.

(1) The first tagging line in each logic symbol identifies the logic element type. The various types of integrated circuit and discrete circuit logic elements are described in paragraphs 3-21 through 3-25.

(2) The second tagging line in each logic symbol identifies the electrical reference designation of the logic element (para 3-21*b* and 3-24*b*). This reference designation is prefixed by the reference designation of the printed circuit card on which it is located.

3-21. Integrated Circuit Modules

a. The integrated circuit modules used in the card reader are of several types as described in b through e below; however, they are all 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.

ABBREVIATIONS AND LOGIC SIGNAL MNEUMONICS AND FUNCTIONAL NAMES

AAR	- AUDIBLE ALARM RESET
AR	- CHANGE TO NAR
ARC	- AUD RESET SWITCH CLOSED
ARST	- ALARM RESET LOGIC
ARO	- AUD RESET SWITCH OPEN
AS	- ADVANCE SOLENOID
ASC	- ASCII
ASD'	- ADVANCE SOLENOID DRIVER
AST	- ALARM STOP
BC	- BEGINNING OF CARD
BCN	- BEGINNING OF CARD - NOT
BCP	- BEGINNING OF CARD PHOTOCELL
BLKF	- BLOCK FAILURE
C5	- COUNT 5
CA	- CARD ALARM
CC	- CYCLE COMPLETE
C1A9	- COUNTS 1 OR 9
CJTP	- CARD JAM TEST POINT
CLK	- CLOCK
CLTP	- CLOCK TEST POINT
CYCL	- CYCLE
DB1	- DATA BIT 1 (ETC)
DC	- DARK CHECK
DCA	- DISPLAY CARD ALAIRM
DCAN	- DISPLAY CANCEL
DCE	- DARK CHECK ENABLE
DCF	- DARK CHECK FAILURE A13-10
DCJ	- DISPLAY CARD JAM
DPKF	- DISPLAY PICK FAIL A15-18
DS	- DATA SAMPLE
DSG	- DISPLAY START-RE
DST	- DATA STPOBE
DSW	- DISPLAY START-WHITE
DSYN	- DISPLAY OUT SYN
EC	- END OF CARD-FROM PHOTOCELL
ECP	- END OF CARD PHOTOCELL
EOB	- END OF BLOCK
EOC	- END OF CARD-FROM LOGIC
EOM	- END OF MESSAGE
GS	- GATED STEP
HL	- HOLLERITH
HOL	- HOLLERITH
HOP	- HOPPER PHOTOCELL
HPE	- HOPPER EMPTY
HPN	- HOPPER PHOTOCELL - NOT
INV	- INVALID - CODE
INC	- INVALID CHARACTER
LIT	- LIGHT (ALL 12 PHOTOCELLS LIT)
LT	- LOCAL TEST
LTC	- LOCAL TEST SWITCH CLOSED
LTO	- LOCAL TEST SWITCH OPEN
NAR	- NOT ALARM RESET
NASG	- NOT ASSIGNED
NAST	- NOT ALARM STOP
NCAN	- NOT CANCEL
NEC	- NOT END OF CARD (FROM PHOTOCELL)
NOA	- NOT OPERATOR ALARM
NRT	- NOT READ TIME
NSEL	- NOT SELECT
OS	- OFFSET
OSC	- OFFSET CONTROL
OSD	- OFFSET DRIVER
OST	- OFFSET TIMER
PHCK	- PHOTOCELL CHECK
PKF	- PICK FAILURE
PRST	- POWER ON RESET
PS	- PICKER SOLENOID
PRTY	- PARITY
RASG	- RECEIVE ASSIGNED
RCAN	- RECEIVE CANCEL
RDY	- READY
RPA	- RELUCTANCE PICKUP A
RPB	- RELUCTANCE PICKUP B
RRST	- REGISTER RESET
RSB	- RESET BUTTON
RST	- RESET
RSTO	- RESET SWITCH OPEN
SC	- START SWTCH CLOSED

ABBREVIATIONS AND LOGIC SIGNAL MNEUMONICS AND FUNCTIONAL NAMES (cont)

SDA	- STEP DATA ACK
SEL	- SE ECT
SEL A	- SELECT A
SEL B	- SELECT B
SF	- SINGLE FEED
SFC	- SINGLE FEED SWITCH CLOSED
SFO	- SINGLE FEED SWITCH OPEN
STF	- STACKER FULL
STFO	- STACKER FULL SWITCH OPEN
STP	- STOP
STPO	- STOP SWITCH OPEN
STR	- STROBE
XINH	- INHIBIT
XAM	- AMPERSAND
XAP	- APOSTROPHE
XAS	- ASTERISK
XCA	- COMMA
XCB	- CLOSING BRACKET
XCF	- CIRCUMFLEX
XCN	- COLON
XCP	- CLOSING PARENTHESIS
XDR	- DOLLAR SIGN
XEQ	- EQUAL SIGN
XEX	- EXCLAMATION POINT
XGR	- GRAVE ACCENT
XGT	- GREATER THAN
XHY	- HYPHEN
XLT	- LESS THAN
XNO	- NUMBER SIGN
XDB	- OPEN BRACKET
XDP	- OPEN PARENTHESIS
XPC	- PERCENT
XPD	- PERIOD
XPL	- PLUS SIGN
XQT	- QUOTATION MARKS
XSC	- SEMICOLON
XSL	- SLANT
XSP	- SPACE
XTL	- TILDE
XUL	- UNDERLINE
XVL	- VERTICAL LINE

b. Some of the integrated circuit modules contain only one logic element while others contain two. In those cases 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 since there is no provision for them in logic symbology; however, all integrated circuit modules receive power supply inputs of +4.5 volts at terminal 6, and 0 volt 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; therefore, more than one terminal may be listed at an input on the logic diagram symbol.

e. Most integrated circuit logic elements can function in more than one way. 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. The logic operation of each integrated circuit module type is described in paragraph 3-22.

3-22. Operation of Individual Integrated Circuit Modules

The operation of the individual integrated circuit modules used in the card reader is described in *a* through *h* 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. 3-14). These 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.

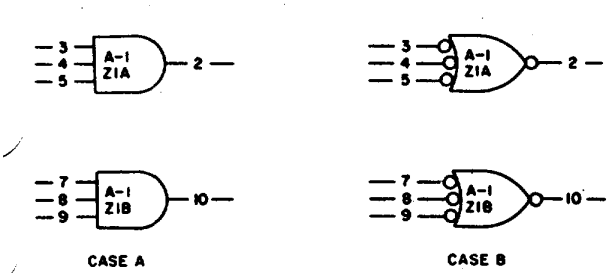


Figure 3-14. Type A-1 module, logic symbol.

b. Type E-1 Module. Two type E-1 gates are located on each type E-1 module (fig. 3-15). These 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 or O-3 modules (*e* and *g* below). Open circuit inputs to type E-1 gates are equivalent to low levels.

c. Type N-1 Module. Two type N-1 gates are located on each type N-1 module (fig. 3-16). These 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.

d. Type N-2 Module. A single type N-2 module (fig. 3-17) is used in the card reader on PC card A13. This module contains a single inverting AND gate for low inputs.

e. Type N-3 Module. Two type N-3 gates are located on each type N-3 module (fig. 3-18). These 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.

f. Type O-1 Module. Two type O-1 gates are located on each type O-1 module (fig. 3-19). These may be noninverting OR gates for high inputs (case A) or noninverting AND gates for low inputs (case B). The type O-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.

g. Type O-3 Module. Two type O-3 gates are located on each type O-3 module (fig. 3-20). These may be noninverting OR gates for high inputs (case A) or noninverting AND gates for low inputs (case B). The type O-3 gates are used with an expander input supplied by type E-1 OR gates for case A

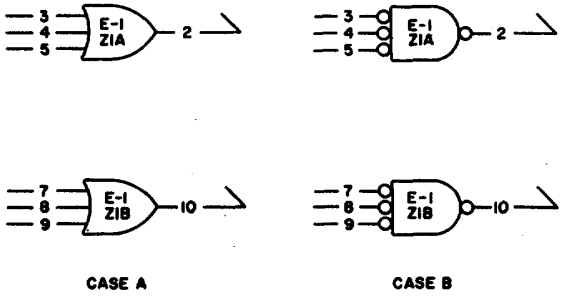


Figure 3-15. Type E-1 module, logic symbols.

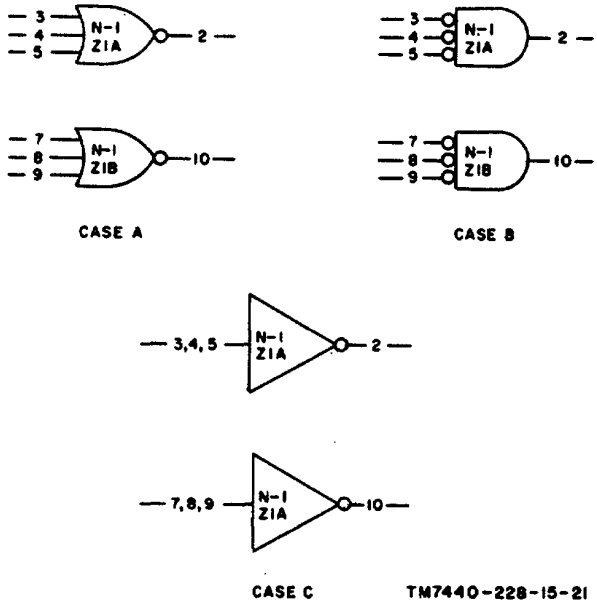


Figure 3-16. Type N-1 module, logic symbols.

and by type E-1 AND gates for case B. Open circuit inputs are equivalent to low levels.

h. Type FF-1 Module. One type FF-1 flip-flop is located on each type FF-1 module (fig. 3-21).

(1) In the case A configuration, the flip-flop can be set 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.

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

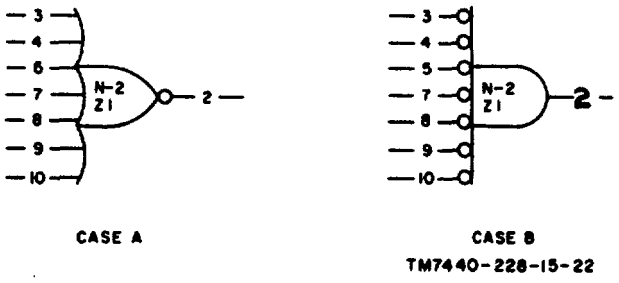


Figure 3-17. Type N-2 module, logic symbol.

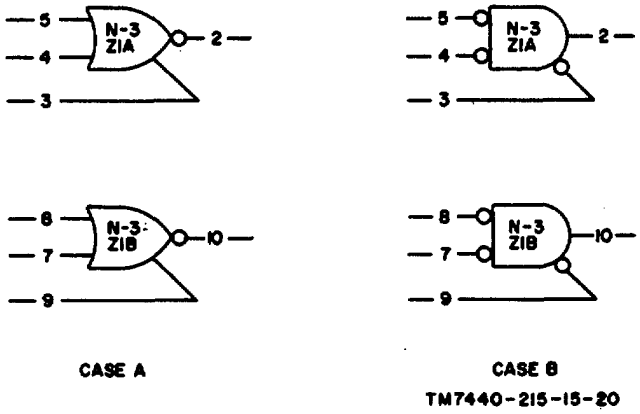


Figure 3-18. Type N-3 module, logic symbols.

(4) Unused J- and K-inputs are wired to terminal 1 (0 volt). To permanently enable J-, K-, or CL-inputs, these inputs are wired to terminal 6 (+4.5 volts).

3-23. Integrated Circuit Latch

a. A special combination of N-1 OR gates called a latch (fig. 3-22) is used extensively in the card 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 goes high when the latch is set, and the 0 output goes high when the latch is cleared.

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 maintains an 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 to either clear side inputs. This causes the 1 output to go low and the 0 output to go high; therefore, the clear condition is reinforced and remains, even after the high level to the clear side goes low again.

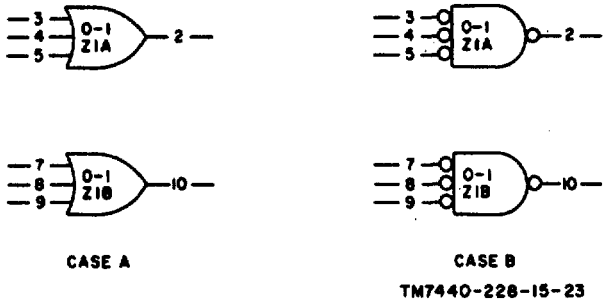


Figure 3-19. Type O-1 module, logic symbols.

3-23.1 Microcircuit Logic Elements

a. Lamp driver circuits used in the card reader consists 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 microcircuit module contains three separate circuits. These circuits are shown separately on the logic diagrams and are designated as A, B and C. (For example: Z1A, Z1B and Z1C.) The output terminals from the A circuit is always terminal 1; for the B circuit terminal 3; and for the C circuit, terminal 5 (see fig. 3-22.1).

b. Power supply inputs to the individual microcircuit modules is not shown on the logic diagrams since there is no provision for them in logic symbology. However, all lamp driver SM3-63 microcircuit modules receive power supply inputs so +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 lamp driver. With no input (0 level) 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 lighted. 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 are wired to LAMP TEST switch A3Z3 which applies +12 volts dc to the lamp driver when actuated. This voltage switches he lamp driver on to light the lamp.

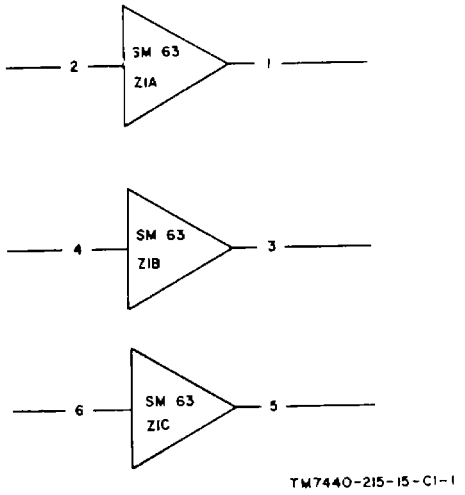


Figure 3-22.1. Microcircuit lamp driver logic symbol.

3-23.2 Transmitter and Receiver Microcircuit Logic Elements

Some models of the Card Readers use thick film microcircuits as interface transmitters and receivers on PC cards A4 and A5. The microcircuits are constructed similar to the microcircuit lamp drivers (para 3-23.1) 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 in the following paragraphs.

a. Type T00023 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 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 output 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	--	3	--
Diode input 3	12	--	--	--	--
Output	8	8	8	8	8
+12 volt dc supply	13	13	13	13	13
--12 volt dc 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 output. Two variations of polar receiver microcircuit module are supplied. One (T00024001) 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	13
Input No. 2	7	--
Output No. 2	9	--
Inhibit No. 2	2	--
+12 volt dc supply	12	12
-12 volt dc supply	6	6
+4.5 volt de supply	10	10
Ground	4	4

c. Type T00121 Neutral Receiver. Neutral Receivers convert a 0 volt input from the CCU to +4.5 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 of separate circuits contained in each module and inhibit levels used. Microcircuits T00121-001 and -002 contain three similar, but separate, receiver circuits, while T00121003 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 (0 volt) signal to maintain the 0 volt output. The chart below shows 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 T00121			
Function	-001	-002	-003	-004
Circuit 1:				
Direct input-	14	14	14	14
Diode input	12	--	--	--
Inhibit A[a]	--	--	--	3
Inhibit B[b]	--	3	--	--
Output	8	8	8	8
Circuit 2:				
Direct input	13	13	13	13
Diode input	2	--	--	--
Inhibit B[b]	--	4	--	--
Output	10	10	10	10

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

Function	Terminal Number T00121 -001	-002	-003	-004
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

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.

Function	Terminal Number T00122 -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. Transmitter and receiver microcircuit modules are connected through 14 terminals. Figure 5-1.1 shows the location of these terminals.

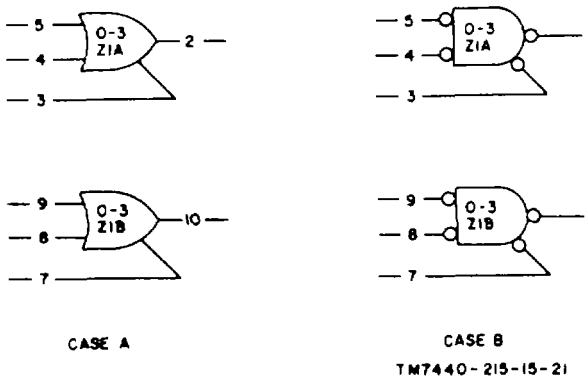


Figure 3-20. Type 0-3 module, logic symbols.

3-24. Discrete Circuit Logic Elements

a. There are several types of discrete circuit logic elements as described in paragraph 3-25. Each discrete circuit logic element consists of a combination of standard circuit components such as resistors, diodes, etc.; therefore, wire terminal numbers for inputs and outputs are not assigned as they are 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.

3-25. 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 card on which they are located. Schematic diagrams and detailed circuit operation of each type of discrete circuit logic element are given in paragraphs 3-81 through 3-86.

a. PC Card A4. The following discrete circuit logic elements are located on PC card A4 (fig. 3-23).

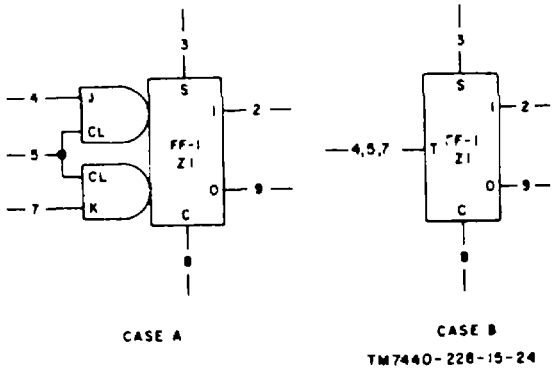


Figure 3-21. Type FF-1 module, logic symbol.

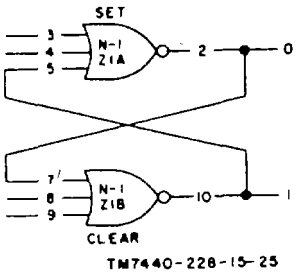


Figure 3-22. Latch logic symbol.

(1) *Type XMTR-1A.* The type XMTR-1A interface transmitter converts a low level input from the card reader to **an open circuit for the CCU and a high level input to O v 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 circuit** is transmitted to the C,U.

(3) **Type RCVR-1A and RCVR-1B 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) **The Type RCVR-1C interface** receiver converts a + 6.2 volt input from the CCU to + 4.5 volts and an open circuit 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. 3-24) 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.

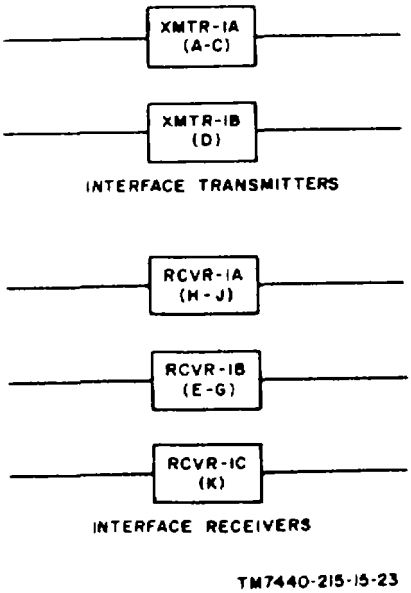
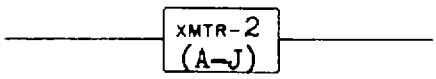


Figure 3-23. PC card A4 discrete circuit logic element symbols.



INTERFACE TRANSMITTERS

TM7440-215-15-24

Figure 3-24. PC card A5 discrete circuit logic element symbols.

c. PC Card A16. PC, card A6 contains a single type of discrete circuit logic element. This is the type PHOTO AMPL photocell amplifier (fig. 3-25) which converts a dark photocell output (low current) to a high level and a light photocell output (high current) to a low level.

3-26. Ac Circuits

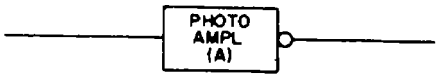
(fig. 8-5)

The ac input circuit receives the external ac power and distributes the power to the various circuits of the card reader. The 120-volt, single-phase input power is routed through power filters FL1 through FL4 of filter assembly FL1 to power supply terminal board TB1. The filters eliminate high frequency noise from the ac input. The ac power is switched through power supply PS1 to cabinet blower B1 and to the card reader mechanism. Switching control to PS1 is provided by AC POWER switch indicator Z2 on the control panel. Power supply PS1 produces a 24-volt dc output which, when returned through the closed contacts of AC POWER switch indicator Z2 and sequence module A12 in the power supply PS1, turns on ac power to the card reader mechanism drive motor and cabinet blowers. When power is turned on, the 24-volt dc output turns on the indicator in AC POWER switch-indicator Z2. The power supply also provides 15-volt ac power for illuminating the various indicator lamps on the control panel of the card reader.

3-27. Dc Circuits

(fig. 8-6)

Tile dc voltages required by the card reader are generated in power supply PS1. The following regulated voltages are supplied: +12 volts de, -12 volts de, +4.75 volts de, and -48 volts de. These voltages are automatically turned on in a specific sequence, as



PHOTOCELL AMPLIFIER

TM7440-215-15-25

Figure 3-25. PC card A6 discrete circuit logic element symbol.

controlled by a sequence module in the power supply, to supply bias voltages to circuit elements in such as manner 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 controlled by the AC PONWER pushbutton 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 that 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.

3-28. Power Supply PS1, 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 vdc regulated power for the card 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 card reader is started or stopped. The sequencing circuit also turns off the regulators and the drive motor and fans is there is a failure in any portion of the power supplies. Fuses mounted on the front panel of the power supplies, protect each regulator assembly, the ac power lines 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 card reader is used to turn the power supply on and off. The sequencing circuit lights the lamps in the switch-indicator when the power supply is on.

3-29. Rectifiers and Voltage Regulators

(fig. 3-26)

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 secondary windings are applied to five full-wave rectifier and filter networks, four of which supply input dc voltages to the four regulator circuits; and the fifth rectifier supplies the unregulated 24-volt do power required by the sequence module.

b. The four regulating circuits operate in a similar manner; therefore, only the +4.75 vdc regulate is illustrated in figure 3-26 and is described.

(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 manner 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 should momentarily rise above 115 percent of the rated output, this is sensed by the 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 caused by a failure in the regulator circuit, instead of 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 over current 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.

3-30. Power Turn-On, and Turn-Off Sequencing Control

(fig. 3-27)

a. To minimize the initial power drain at turn-on of the card reader by AC POWER switch-indicator, and to protect the electronic circuits in the card reader from damage cause by 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, whenever the card reader is turned off by the AC POWER switch-indicator, the power supplies are automatically shut down the opposite sequence to turn-on, with certain specific delays between individual power turn-offs 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 card 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 dc voltages are supplied and turning off this power when the card 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 card reader control panel are also controlled by the sequencing circuits. When power is turned off, all lamps will be dark.

b. The automatic power sequencing circuits are all contained on sequence 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 and 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 de, 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 in the following manger.

(1) When the AC POWER switch-indicator is depressed to start operation of the card reader, it momentarily applies the 24 volts de from the 24-volt dc rectifier-filter network to a self-latching relay in the sequence module. This 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 applies the auxiliary ac power to the drive motor, the fans, and to all control panel indicator lamps. The AC

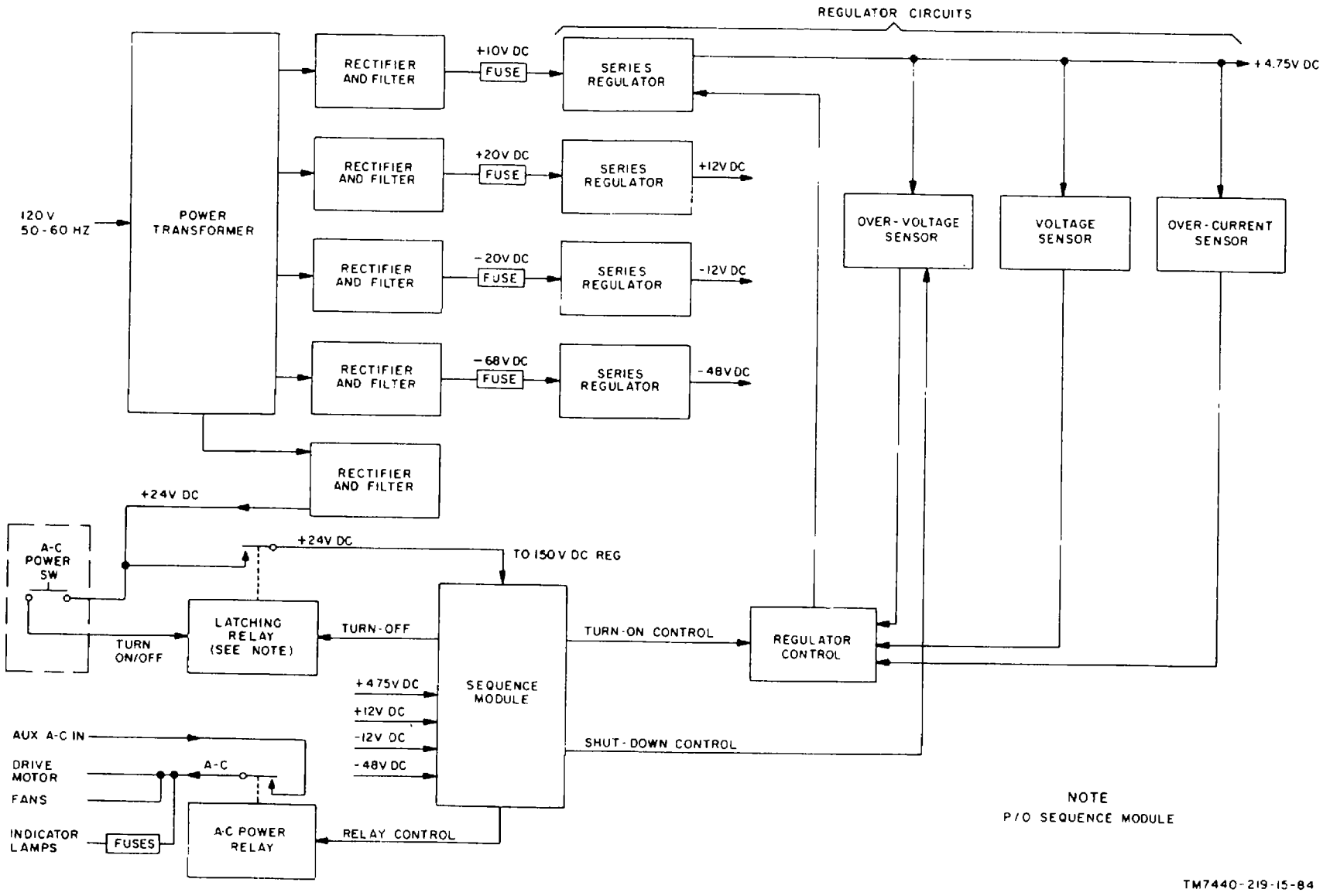


Figure 3-26. Rectifiers and voltage regulators, block diagram.

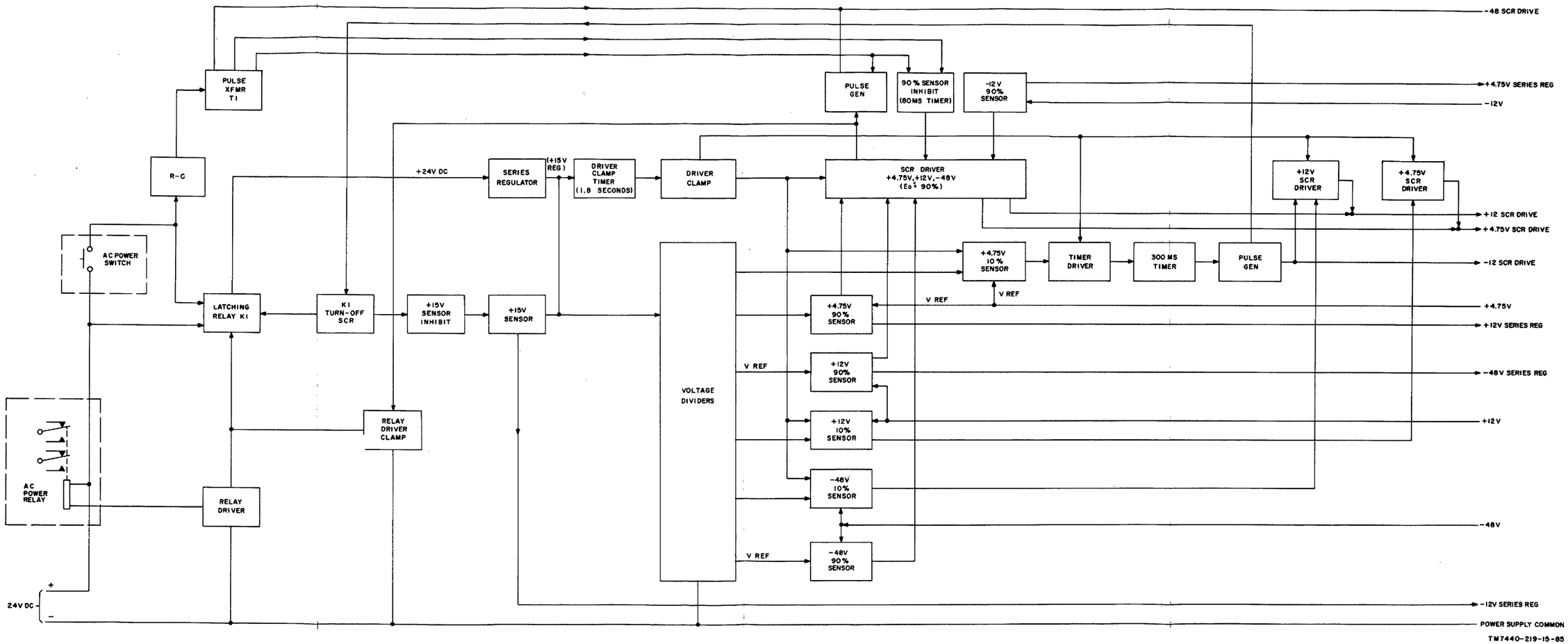


Figure 3-27. Power sequencing circuit, block diagram.

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-volt de 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 dc, +4.75 volt dc, +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 de), 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-ms 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 dc power applied to the +15.0-volt do 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 shutdown 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 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 turn off the -48-volt, +4.75-volt, and +12-volt regulators simultaneously. The 12-volt regulator is then turned off in the normal manner.

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.

3-31. Detailed Circuit Description of Rectifiers and Voltage Regulators

(fig. 8-7)

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 A10XF5 is included in the line from the terminal

board to the primary of transformer A9T1. 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 de input to the -48-volt dc regulator circuit; diodes A5CR3 and A5CR4 with filter capacitor A9C5 provide a nominal -20-volt dc input to the -12-volt dc regulator circuit; diodes A5CR1 and A5CR2 and filter capacitor A9C4 provide a nominal +20-volt de input to the +12-volt do regulator circuit. Diodes A4CR1 and A4CR2 with filter capacitors A9C2 and A9C3 provide a nominal + 10 volts dc for the + 4.75volt dc regulator.

(1) A pair of ac outputs are picked off taps 9 and 7 and 5 and 7 of the secondary of transformer A9T1 to provide 15-0-15-volt ac power for the indicator lamps of the card reader. Fuses A10XF9 and A10X10 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 transformer A9T1, provides a nominal 23-volt ac input to full-wave bridge rectifier A15CR1, A15CR2, A15CR3, A15CR4, and filter capacitor A9C1 provides a nominal 24-volt do input to the sequence module (para 3-32).

b. *+4.5-Volt Dc Regulator Circuit.*

(1) *Voltage regulation.* The unregulated 10-volt dc output of rectifier A4CR1 and A4CR2 is applied through fuse A10FX1 to the series regulator consisting of transistors A4Q1 and A4Q2 connected in parallel. The transistors act as a variable resistance in series with the 10 volts dc to drop this voltage to +4.75 volts at the output of the regulator (junction of A4R1 and A4R2). 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 dc is applied to the collectors of transistors A4Q1 and A4Q2 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 A4R2, 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 AlCR6 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 A1Q6. A sample of the output voltage of the regulator is applied to the base of A1Q6. 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 A1Q6 increases or decreases proportionately, producing a corresponding variation in the output voltage of A1Q6. Since the base of A1Q5 is held at a constant voltage by Zener regulator diode A1CR6, the common emitter of A1Q5 and A1Q6 is held at a voltage which only varies with variations in transistor characteristics or variations in bias. However, since transistors AiQ6 and A1Q5 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 A1Q6. Only a change in the base voltage at A1Q6 produces a net change in the collector voltage at A1Q6. The voltage at the collector of A1Q6 is applied to the base of A1Q1. If there has been an increase in the regulator output voltage above +4.75 volts, the voltage applied to A1Q1 decreases, decreasing the voltage at the base of emitter follower A4Q3, which reduces the voltage at the parallel bases of series regulators A4Q1 and A1Q2. 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.*

(a) The sum of the currents at the emitters of series regulators A4Q1 and A1Q2 is the output current of the voltage regulator. Parallel-connected resistors A1R4 through AIR9 comprise a summing network which samples this current and provides a proportional voltage at the base of A1Q4. By biasing diode AlCR4 in a forward direction, the net basemitter threshold voltage for A1Q4 is set to cut off A1Q4 during normal operation. The use of diode A1CR4 to establish base bias provides temperature stabilization and permits operation at low signal levels.

(b) If the load current on the series regulator increases to 120 percent of rated value, the voltage drop across current-sensing resistors A1R4 through

A1R9 increases sufficiently to turn on A1Q4. This causes a sharp voltage drop at the collector of A1Q4, which is connected to the base of A1Q1, producing a corresponding -voltage drop at the base of A1Q1 which-severely reduces the conduction of series regulators A4Q2 and A4Q1. This action causes a sharp decrease in output voltage, further forward-biasing A1Q4, 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 stare during load faults.

(3) Overvoltage protection. Zener reference diode A1CR5 provides a constant voltage to voltage divider A1R9, A1R30, and A1R31, which provides a fixed bias to the base of A1Q7. Transistor A1Q7 is a p part of differential amplifier A1Q7-A1Q8. A sample of the output voltage is applied to the base of A1Q8. The wiper arm of potentiometer A1R30 is adjusted so that with normal output voltage, AlQ8 is cut off due to the emitter bias across common emitter resistor A1R35. When AlQ8 is it off, the base of AlQ9 is at supply ¾potential and AlQ9 is also cut off. 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 ALQ8 causes the transistor to conduct. Voltage drop across collector load resistor A134 lowers the bias on A1Q9, causing A19 to conduct also. When A1Q9 conducts, it applies a positive level to voltage divided A15R5 and A15R6 which fires silicon control rectifier A1CR2. Silicon control rectifier A14CR2 then conducts heavily and drops the rectifier output voltage to a low level.

(4) *Overcurrent protection*. 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 A1Q3, which is connected to regulator Zener diode AlCR1. 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 or turned off by 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 A1CR3 and transistor A1Q2 is now driven to the conduction state. This produces a base bias for A1Q1 and collector bias for A1Q6. 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 A4Q2. Turn off is accomplished by firing over-voltage protection SCR A14CR2, thereby dropping the output voltage to near zero. Refer to paragraph 3-32 for a description of the operation of the sequence module. Diodes A1CR2 and A1CR3 provide protection for transistor A1Q2 against excessive back bias.

d. Other Regulator Circuits. The -48-vdc regulator, +12-vdc regulator, and -12-vdc regulator all operate in a manner similar to the +4.75-volt regulator. The differences are described 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 A3Q4. 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 A3Q1, turning on A3Q2. 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, A3Q7 which controls regulator control transistor A3Q3, through voltage splitter A3Q5. Transistor A3Q5 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, turn-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 -12-volt series regulator. Other circuit operations are the same as for the +4.75-volt supply previously described (b and c above).

3-32. Sequence Module A12, Detailed Circuit Description

(fig. 8-8)

The sequence module turns the complete power supply on and/or off in a predetermined manner when the AC POWER switch-indicator on the control panel is operated. Also, the failure of any one regulated do 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 A15 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 card 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-indicator 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 auxiliary ac power relay, A9K1 (shown on the. regulator circuit), applying the auxiliary 115 vac power to the fans, the drive motor, the AC POWER switch-indicator 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 15-volt 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 Q39, 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 and the voltage regulator then provides the regulated + 15.0-vdc output, the regulators are turned on automatically in the following sequence: -12 vdc, +4.75 vdc, +12 vdc, and -48 vdc. The sequence module performs this turn-on action in the following manner:

(1) *-12-volt turn-on.* The +15.0-vdc output of the +15-vdc regulator in the sequence module is applied to voltage divider R89 and RF0 The voltage_ at the junction of R89 and RW0 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 80 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; turning on this regulator. The collector of Q39is at approximately 24 volts dc before it is turned on and at approximately + 15 volts de 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 15.0-volt dc regulator provide 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 de; 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. This produces turn-on of the +12vdc supply.

(5) *+12-volt turn-on.* The conduction of Q4 causes Q5 to turn on, which provides a turn-on 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) *+1B-volt output sense (90 percent).* A sample of the output voltage from the +12 volt 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. This produces turn-on of 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 conduction 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 used only in the turn-off sequence when a fault occurs.

d. Turn-Of Sequence. When the AC POWER switch-indicator on the unit is pressed to turn off power, the sequence module turns off the regulators in a sequence opposite to the turn-on sequence. The turn-off sequence is described in (1) through (10) below.

(1) *-48-volt regulator power reduction*. When the AC POWER switch-indicator is depressed, the 24 volts dc from the 24-volt de rectifier is applied through the momentarily closed contacts of the switch to the rc pulse-forming network of C7 and R62 and pulse transformer T1. The primary of 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-indicator and when the switch-indicator 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 48-volt supply is accomplished.

(2) *-48-volt, +1B-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 and 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 turnoff sequence. This inhibits the operation of Q19 during the sequenced shutdown accomplished by operating the AC POWER switch-indicator. Transistor Q.19 is only used to turn off the -48-volt, +4.75vclt 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-indicator fires the overvoltage SCR in the -48-volt regulator, reducing the output voltage from this supply. A sample of the -48-volt out put voltage is applied to the base of Q30. 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 turnoff, the base bias will become sufficiently less negative to cause Q30 to conduct, initiating 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 applies a pulse through diode CR17 of OR gate CR17, CR18 to the SCR in the overvoltage protection circuit of the + 12volt regulator. This initiates turn-off 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 +12-volt 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 off this regulator.

(5) *+12-volt output 10 percent sensor*. A sample of the output of the +12-volt regulator is applied to the emitter of Q28, whereas 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, which initiates reduction of the output voltage of the +4.75-volt supply.

(6) *+4.75-volt 7egulator 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 Q26, causing it to conduct and apply a positive voltage through diode CR13 of OR gate CR13, CR14 to the SCR overvoltage turnoff diode in the 4.75-volt regulator. This action reduces the output of the 4.75-volt regulator to less than 1.8 volt, 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, turning 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 and R45 connected across the 15.0-volt regulator. The emitter bias keeps Q23 normally cut off. When the emitter voltage drops to 1.8 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 base-emitter voltage divider R2 and R3 relay control amplifier Q2. Amplifier Q2 now conducts heavily, reducing the base voltage on relay driver Q1 sufficiently to turn off Q1. This removes excitation from the coil of ac power relay A9K1, turning off ac power for the drive motor, the fans, and also the AC POWER switch-indicator lamp and the other indicator lamps. The now unlighted AC POWER switch-indicator lamp indicates that the ac drive motor 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 interval 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 the 90 percent level sensor (Q36 and Q37) connected across the output of the -12-volt 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 ((8) above) also 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 back-biases Q39, turning it off, which in turn, cuts off Q38. This removes the bias voltage from the series regulator in the -12-volt regulator, completely turning off this power supply. The pulse applied to SCR CR24 fires this SCR, shorting out the coil of relay K1, deenergizing this relay. This removes the 24-volt dc power from the 15.0-volt, regulator, removing all power from the circuits of the sequence module. This completes 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 12volt 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 +4.75-volt 90 percent sensor (Q4) which turns off, and turns off Q6, which in turn turns on Q7. The collector Q7 is reduced to near ground level, applying a negative voltage through diode CR8 to the base of Q19. This turns on Q19, providing a position

voltage through diodes CR6, CR14, mid CR18 to the -48-volt SCR, the +4.75-volt SCR, and the + 12-volt SCR, turning off these supplies simultaneously. Transistor Q19 is also operated by the -48volt 90 percent sensor (Q29), the +12-volt 90 percent sensor (Q9, Q10, and 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 +12volt supplies are simultaneously turned off, the -12volt supply is turned off as described in e above. 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 turns off this regulator, initiating the shutdown procedure.

f. Override Timer Circuit for turn-On Circuit. As described in d above, 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, as described in e above. Both of these sensors must be inhibited during the power turn-on 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 15.0volt regulator to produce the regulated 15-volt output, the +15-volt 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 -48-volt, 10 percent sensor Q30; +12-volt 10 percent sensor Q28; + 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 CR19, 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.

3-33. Voltage Regulation for +6.2-Volt and -6.2-Volt Dc Power

Voltage regulator circuits are located on PC card A5 (fig. 8-13) to 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 +6.2-volt power is derived from the +12-volt source by Zener diode VR2 in conjunction with resistor R92. Capacitor C10 minimizes the effect of switching transients on the +12-volt power.

3-34. Power-On Reset Control Circuits

When power to the card reader is turned on, a reset signal is generated to clear various latches in logic assembly Al in preparation for a new card feed and read cycle. The power on reset (PRST) signal is initiated by operation of the AC POWER switch indicator on the control panel (para 3-28). When this switch-indicator is pressed, -48 volts dc is applied to the power-on reset circuit on PC card A1 (fig. 8-10 and para 3-81a). The resulting PRST signal is routed to the card feed control circuits on PC card A15.

3-35. Receive Interface Circuits

a. All control signals between the CCI and card reader switch between levels of 0 volt and pen ckt or -6.2 volts and + 6.2 volts. These signals are generated by transmitter circuits in the CCU with high frequency components (sharp turn-on, turn-off) removed to minimize rfi problems in the cables. The receive interface circuits provide an impedance match for the CCU signals, convert them to the card 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 card reader.

b. The receive interface circuits consist of interface receivers (E) through (K) on PC card A4 (fig. 8-12). Interface receivers (E) through (J) provide level shifting and inversion, converting inputs of 0 Volt to outputs of +4.5 volts and open circuit mt8 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 ill that, although there is level shifting, there is no inversion. Thus, a positive received step/data acknowledge pulse input (RSDA) results in a correspond positive output pulse (SDA). An inhibit input (SINH) to this receiver is not used and wired to ground.

3-36. Read Station and Hopper Empty Photocell Circuits

(fig. 3-28)

a. Hopper Empty Function. The light station in the card reader mechanism contains a lamp assembly with 14 lamp filaments. An additional lamp is directed through the hopper to the hopper empty photocell. When no card is present in the hopper, the hopper empty photocell is illuminated. This produces a hopper empty signal which is converted to card reader logic levels by one of the photocell amplifiers on PC card A6 in the logic assembly. The hopper empty signal is then sent to the alarm circuits to initiate an operator's alarm.

b. Read Station Function. Of the remaining 14 lamp filaments in the light station, two are directed at the end of card and beginning of card photocells which monitor the position of the card through the read station, and the other 12 are directed at the 12 read photocells which monitor the data content in the 12 rows on the card.

(1) *Read photocells.* The read photocells are arranged in a line so that all 12 bits in a column are simultaneously read. The operation of a typical read photocell is illustrated in figure 3-29 for a row of holes punched in every column.

(a) The photocell, signal after conversion by one of the photocell amplifiers on PC card A6, is low when the photocell is lighted. This signal goes high when the leading edge of the card passes under the read photocells and remains high until the first column. If a hole is punched in this column in the row for that photocell, a positive pulse is produced. Similar pulses are produced for succeeding columns. After the last column, the signal remains high while the trailing margin of the card is passing under the read photocells and then goes low again after the card has passed.

(b) An indication of the presence of a card in the read station is obtained by monitoring the out puts of the 12 read photocells for a simultaneous light condition on all 12 photocells. Since there is no valid Hollerith character requiring all 12 rows in a column to be punched, the only time when all 12 photocells can be lighted is before the leading edge of the card reaches the line of read photocells and after the trailing edge of the card leaves the line of read photocells. This condition is detected by feeding all 12 data bit lines from the photocell amplifiers on card A6 to the all-lighted detector which produces an all-lighted (LIT) signal that goes high only when all 12 read photocells are lighted at the same time (fig. 3-29). This signal is used in the data strobe control and alarm circuits as an indication of the position of a card in the read station.

(2) *Beginning- and end-of-card photocells.* Additional information concerning the position of the card in the read station is provided by the beginning-of-card photocell located downstream, after the read photocells and the end-of-card photocell located upstream, before the read photocells. The position of the beginning-and end-of-card photocells is such that they are darkened when a card is in the read station and are not affected by light passing through the punched data holes.

(a) Note that six key positions of the card in its passage through the read station are shown in figure 3-30 and are designated by the letters A through F. The time at which the card is in each of these positions is also identified in figure 3-29.

(b) As a new card enters the read station, moving from right to left, the first photocell to be darkened is the end-of-card photocell. When this occurs (at time A), the end-of-card signal goes low. The end-of-card photocell remains dark as the card passes through the read station until time D when the last column has just passed under the read photocells because the spacing between the read photocells and the end-of-card photocell is equal to the distance between the end of column 80 and the edge of the card.

(c) The beginning-of-card photocell goes dark just before column 1 passes under the read photocells (at time C) and remains dark until time F when the card leaves the read station. The spacing between the beginning-of-card photocell and the read photocell is equal to the distance between the leading edge of the card and column 1.

(d) The portion of the card between the beginning of column 1 and the end of column 80 is called the data field. The time when the card is in this position is monitored by a data field detector on PC card A14. The data field signal produced by the data field detector is low only when both the beginning-and end-of-card signals are low simultaneously (fig. 3-29).

(e) An additional indication of the card position is provided by the card end detector on PC card A14. When LIT signal is low but the end-of-card signal is high, the card end signal produced by the card end detector goes high. This signal marks the time from D to E when the trailing edge of the card is passing over the read photocells.

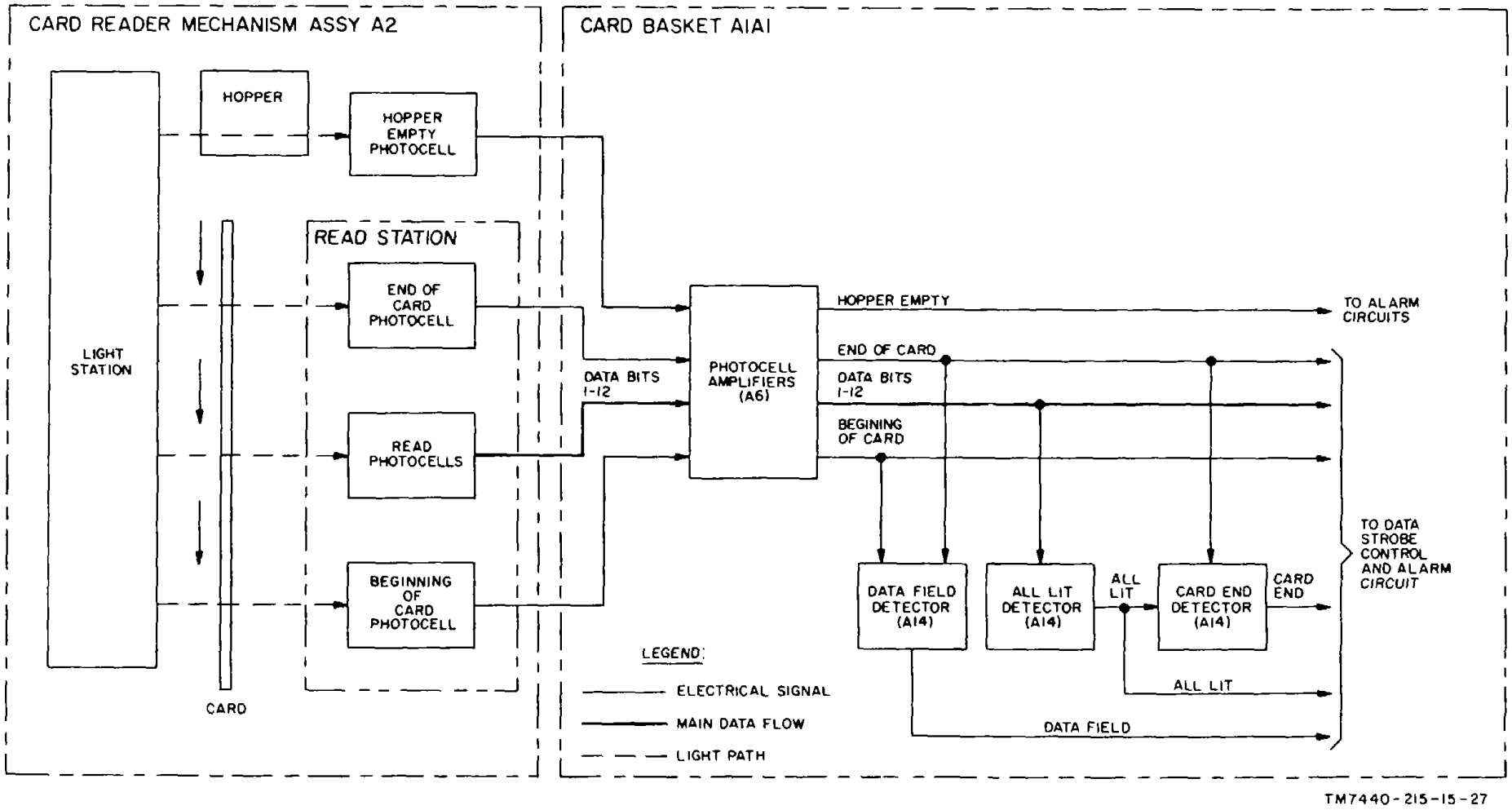


Figure 3-28. Read station and hopper empty photocell circuits, block diagram.

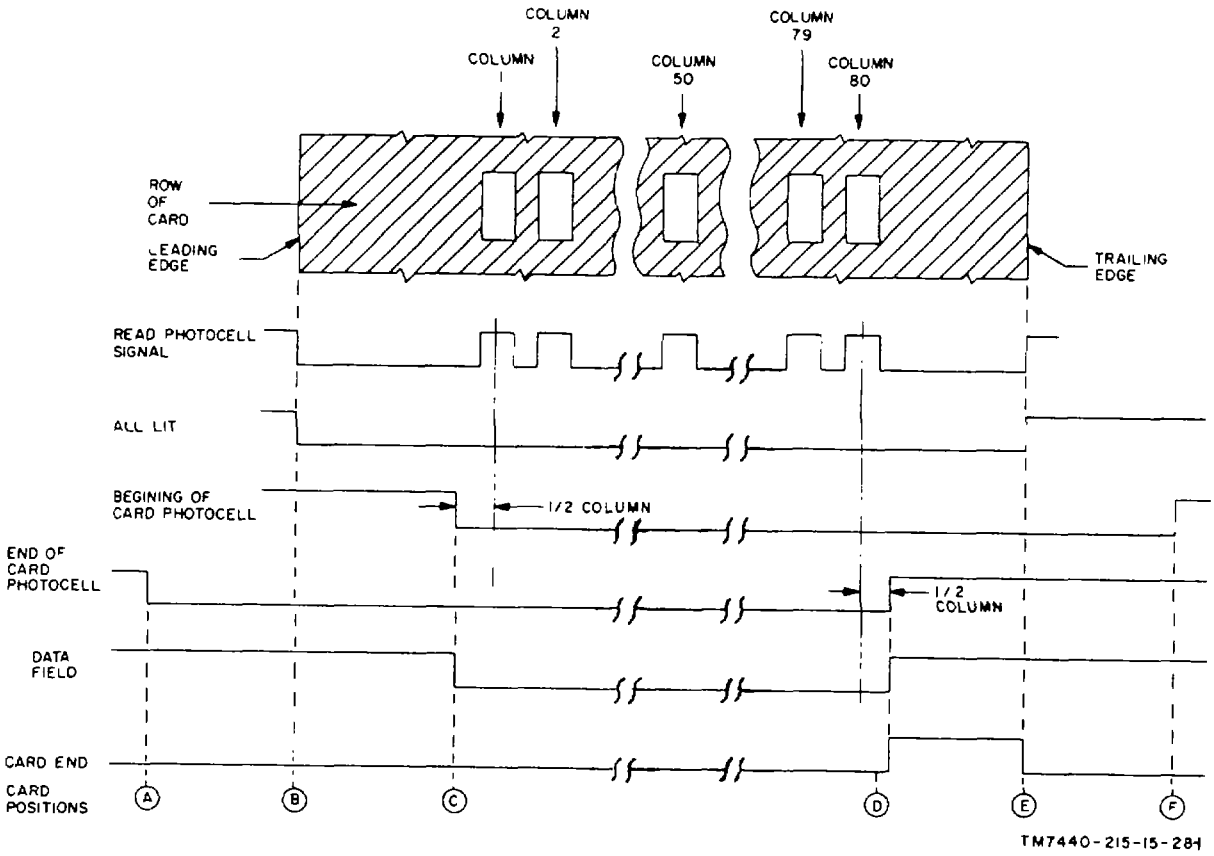


Figure 3-29. Read station timing diagram.

3-37. Read Station and Hopper Empty Photocells

The read station photocells detect the presence or absence of punched holes ill each column of the card and monitor the position of the card relative to the station. The hopper empty photocell provides an alarm indication when the last card is picked from the hopper.

a. Read Photocell. The 12 Hollerith data bits are, detected by read photocells Q1 through Q12 on subassembly A1A1 (fig. 8-9). The 12 photocells are positioned in line at the correct spacing for rows 12, 11, 10, and 1 through 9), respectively, on the punched card. Light for the operation of these photocells is provided by the filaments in assembly lamp DS1 on subassembly A1DS1. When the light from these continuously lighted lamps is not blocked by the card, the individual photocells are driven into the conducting state and current that is received at the collectors from the +4.5-volt supply is passed through the emitters to the photocell amplifiers on PC card A6.

b. Beginning-and End-of-Card Photocells. The position of the card in the read station is monitored by beginning of card photocell Q13 and end-of-card photocell Q14. These photocells operate from light supplied by corresponding filaments on lamp assembly A1DS1. Both photocells are darkened (nonconducting) when the card is in the read station. The specific time when these photocells stop conducting as the card enters the read station and start conducting after it leaves the read station is used in data evaluation.

c. Hopper Empty Photocell. The cards in the hopper are monitored by hopper empty photocell A1Q1. When the hopper is empty, light from: lamp A1DS2 causes A1Q1 to conduct, producing a high level on the hopper empty line.

d. Lamps. All 14 read station lamps are connected in series with hopper empty lamp A1DS2 and voltage dropping resistor R1 across the -48-Evolt supply, and the lamps go on when power to the card reader is switched on.

3-38. Photocell Amplifiers

a. The photocell amplifiers convert signals from the read station and hopper empty photocells into logic signals required to operate the integrated circuits of tie card reader. There are 15 separate amplifiers (A

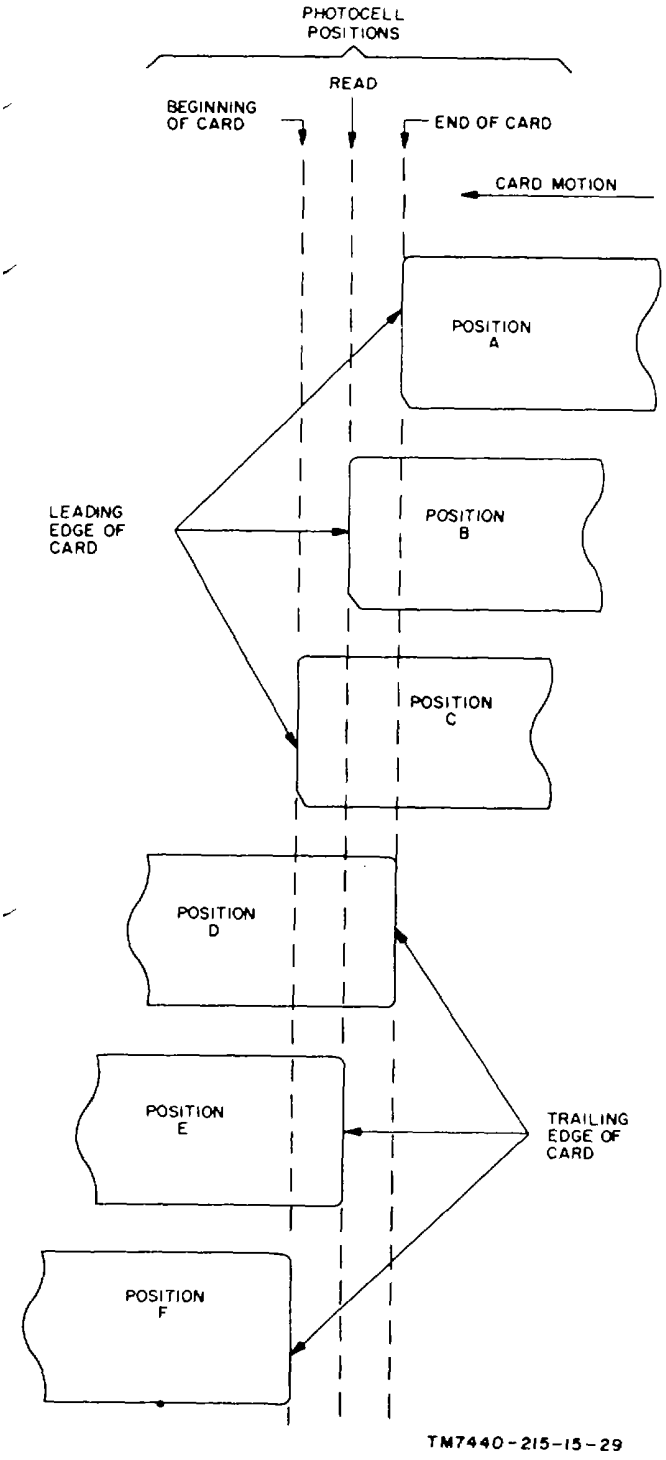


Figure 3-30. Card positions in read station.

through Q) on PC card A6 for the 15 photocell outputs (fig. 8-14). These outputs are the 12 Hollerith data bit signals, the beginning-of-card signal (BCP), end-of-card signal (ECP), and the hopper empty (HOP) signal.

b. When light strikes any one of the 15 photocells, the photocell, acting as a switch, permits current to flow from the +4.5-volt supply to the photocell amplifiers. Each photocell amplifier converts the presence of current into a low output logic level ((0 volt) and the absence of current into a high output logic level (+4.0 volts).

c. The read photocell amplifier outputs are not functions since they are low when holes are detected by the corresponding read station photocells, and are identified as RA 01 through RA12. To obtain true functions, these signals are inverted to produce outputs on data bit lines HOL 1 through HOL12

d. Similarly, the beginning-of-card (BCN) and end-of-card (ECN) signals produced by photocell amplifiers N and P are high when the photocell is blocked by the presence of the card in the read station. The true-function BC and EC signals are produced by inverters Z2B and Z2a, respectively. The hopper empty (HPN) signal produced by photocell amplifier Q is also a not-function (low when the hopper is empty). This signal is not used in its true-function form.

3-39. All-Lighted Detector.

The all lighted detector checks for the absence of a card at the read station by monitoring for the simultaneous detection of light at each of the 12 data bit photocells. When no card is present, low outputs are simultaneously produced by the 12 respective photocell amplifiers on PC card A6 (fig. 8-14). These low outputs enable the combination of ABD gate Z5B and expander AND gates Z6A, Z6B, Z7A, and Z7B. The resulting high outputs on the LIT line indicates that all read station photocells detect a lighted condition.

3-40. Data Field Detector

The data field detector produces an indication to determine exactly when the portion of the card containing the 80 data columns is passing under the read photocells. To accomplish this function, the end of card (EC) and beginning of card (BC) signals from the photocell amplifiers of PC card A6 are applied to AND gate Z20A on card A14 which produces a low output only when both inputs are low (fig. 8-22). Since the Z20A output is low only when both inputs are low, the data field signal produced by Z20A goes low just before column 1 and remains low until; after the end of column 80 (fig. 3-30).

3-41. Card End Detector

The card end detector is used to detect the time that the portion of the card between column 80 and trailing edge is passing under the read photocells. This function is performed by AND gate Z14B on PC card A14 (fig. 8-22). The AND gate monitors the all-lighted (LIT) signal from the all-lighted detector

on PC card A6 and not-function end of card signal (NEC) which is derived by inverting end of card signal (EC) from the photocell amplifiers on PC card A6. Figure 3-29 illustrates that these signals are both low during the required time since NEC signal goes low after column 80 and the LIT signal is low up to the trailing edge of the card. The high end of card output (EOC) of AND gate Z14B is also applied to AND gate Z12A where it enables a C5 (count of 5) pulse from the timing counter is the data strobe control circuits to pass through to the cycle complete (CC) line. This pulse indicates that the card has been completely read and that the next card may be picked from the hopper.

3-42. Card Feed Control Circuits

(fig. 3-.31)

The card feed control circuits contain a card feed start control circuit which controls the generation of the pick command for the card feed solenoid and a card feed stop control circuit disables card feed operation by the card feed start control circuit when required. In addition, a ready control circuit generates a ready signal for transmission to the CCU unless the card feed start control circuits are being operated in a local mode which would exclude CCU control of the card feed.

3-43. Card Feed Start Control Circuit

The card feed start control circuit controls the operation of the pick solenoid in the card reader mechanism. The solenoid is allowed to pick a single card when the SINGLE FEED switch-indicator on the control panel is pressed. When the LOCAL TEST switch-indicator is pressed, the solenoid is repeatedly activated as each card is read. When the START switch-indicator is pressed, the solenoid is activated only upon a step or command from the CCU for a new data block. Each of the three switch-indictors performs its function only if the card reader is in a stop condition at the time the switch-indicator is pressed. Normally, a stop condition is achieved by pressing the STOP switch-indicator, otherwise a stop condition is initiated automatically by any one of a number of alarm conditions detected by the various alarm circuits.

3-44. Single Feed Operation

a. When SINGLE FEED switch-indicator Z4 is pressed, a high level (4.5 volts de) is applied to the single feed open (SFO) line, conditioning AND gate Z21A on PC card A16 (fig. 8-24). Since this AND gate monitors the stop signal (STP), it is inhibited if the card reader is not in a stop condition. When Z21A is enabled, the high output sets debounce latch Z18, which removes the effects of switch bounce from the signal. The resulting high level output conditions AND gate Z21B and also activates OR gate Z26B. Prior to activation of Z26B, the high level at the Z26B output clears flip-flop) Z25.

b. The action described in a above, results in a single start pulse from AND gate Z26A to latch Z16 to remove the stop condition in the stop control circuit. The start pulse also sets flip-flop Z13 through AND gate Z21B.

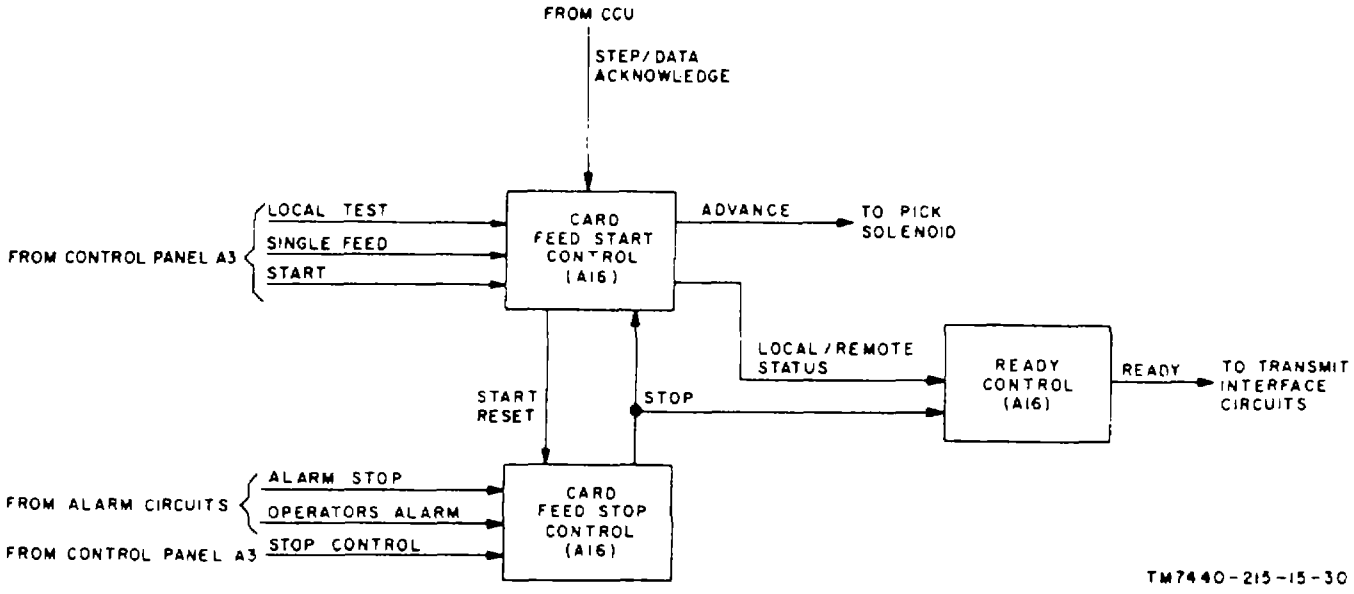


Figure 3-31. Card feed control circuits, block diagram.

c. The resulting high output of Z13 on single feed line SF, lights SINGLE FEED switch-indicator Z4 by activating a lamp driver on PC card A3.

d. Single feed signal SF also enables AND gate Z9B unless the card reader has been assigned by the CCU. In this case, the assigned line ASG is inverted to a low level by inverter Z1OA to disable AND gate Z9B. This prevents automatic card advance under control of the SINGLE FEED switch-indicator; however, card advance can still occur under control of the step data acknowledge interface line SDA from the CCU, gated through AND gate Z4A.

e. Assuming that the card reader is not assigned to the CCU, ANT) gate Z9B produces a high level when SINGLE FEED switch-indicator Z4 is pressed. This signal activates OR gate ZSA which feeds a low level to AND gate Z6A. If the other two conditioning inputs to ZGA are low, a low level is produced on advance solenoid driver line ASD. The ASD signal activates solenoid driver Q1, Q2, Q3 on card A1 (para 3-81). This solenoid driver then supplies a ground level to energize the pick solenoid in the card reader mechanism.

f. One of the other two conditions for enabling AND gate Z6A to produce the ASD output is a low level on the stop line from the stop control circuit. This insures that a new pick command is not generated if the card reader is still in the stop state. The second condition is a low level on not end of card line NEC. This insures that a new pick command is not, generated if the previous card is still in the read station, blocking the end of card photocell. Also, this removes the ASD signal from the solenoid driver once the new card has reached the read station.

g. As soon as the card has passed through the read station, a cycle complete (CC) pulse is generated. This clears flip-flop Z13, terminating the SF signal. Thus, SINGLE FEED switch-indicator Z4 is extinguished; AND gate Z9B1becomes disabled; and a new pick command cannot be generated until the next, time SINGLE FEED switch-indicator Z4 is pressed. Even if Z4 is held ill the depressed position (so that latch Z18 remains set.) AND gate Z21B does not set flip-flop Z13 again because flip-flop Z25 must be cleared before a new enabling pulse is supplied to Z2i.13. Flip-flop Z25 is not cleared until SINGLE FEE,) switch-indicator 74 is released. At that time, the +4.5-volt level is switched back to the SFC line, clearing latch Z18 and, in turn, deactivating OR gate Z26B. The high output of Z26B can then clear flip-flop Z25.

3-45. Local Test Operation

a. When LOCAL TEST switch-indicator Z5 is pressed, a high level is switched to the local test open (LTO) line conditioning AND gate Z24A on PC card A16 (fig. 8-241). This gate also monitors the stop and not assigned (NASG) signals. Both of these signals are high if the card reader is in a stop condition and has not been assigned by the CCU. The resulting high output of Z24A sets debounce latch Z27.

b. The high output of Z27 activates OR gate Z2613, resulting in a pulse from ANI) gate Z26A in the same way as for single-feed operation. This pulse is fed to the stop control circuit to remove the stop condition.

c. In addition, the high output of Z27, in turn, sets latch Z23 to produce a high level on logic test line LT. This signal activates OR gate ZSA to cause the generation of a pick command in the same way as in single-feed operation. The solenoid advance signal (ASD) remains high until the new card has entered the read station. At that time, not end of card signal NEC goes high, disabling ANI) gate Z613 and terminating the ASD signal.

d. Since the LT line remains high, a new pick command is generated as soon as the card has left the read station. At that time, the NEC signal goes low again, enabling AND gate Z6A to place a high level on line ASI). As long as the LT line is high, this line activates a lamp driver on PC card A3 to energize LOCAL TEST switch-,indicator Z5 on the control panel.

e. Whenever the stop control circuit. produces a stop signal at the output of OIR gate Z7A, this signal is fed back to clear latch Z22, switching off the local test, mode. When remote operation is initiated by operation of START switch-indicator Z7, a high level is fed from the Z22A output of latch Z22 to clear latch Z23, thereby preventing local test operation from being selected.

3-46. Remote Operation

a. To allow the card feed function to be remotely controlled, the operator presses START switch-indicator Z7 on the control panel. This transfers a high level from line SC to line SO. The SO signal enables AND gate Z24B if the card reader is in a stop condition (stop signal from OR gate Z7A is high). The resulting high output of AND gate Z2413 sets latch Z28. The high output of Z28 activates OR gate Z2613. This results in the removal of the stop condition by the stop control circuit in the same way as for single feed and local test. operation.

b. The high output of latch Z28 also sets latch Z22 which, in turn, supplies a high level from the Z22A

output to hold local test latch Z23 cleared. In addition, the low level at the Z22B output conditions AND gates Z11A and Z11B. As long as the card reader has not yet been selected by the CCU, the SET, A line from tile receive interface circuits is low. This conditions AND gate Z11A.

c. Finally, if the card reader is in the ready state, the not ready signal from OR gate Z713 in the ready control circuit is low. This enables AND gate Z11A to produce a high level on line DSG. The DSG line activates a lamp driver on PC card A3 to energize the green indicator portion of START switch-indicator Z7. The white portion is not energized until the SEL A goes high. This disables AND gate Z11A and is inverted to a low level by inverter Z8B to condition AND gate Z11B. If the card reader is still in a ready state (Z7B output low), AND gate Z11B is disabled. This results in a high level on the DSW line which activates another lamp driver on PC card A3 to energize the white indicator portion of START switch-indicator Z7.

d. The actual solenoid drive impulse for the pick solenoid is not generated until a step/data acknowledge (SDA) signal is received from the CCU. This results in a high level on the SDA line from the receive interface circuits which conditions AND gate Z4A. If the select signal from the CCU is also active, the high level on the SEL A line conditions AND gate Z4A which is enabled to produce a high output on gated step line GS. This signal activates OR gate Z8, producing a low level which goes to AND gate Z6A to generate the ASD solenoid drive signal. As for single-feed and local test. operation, the ASD signal remains high until the picked card enters the read station.

3-47. Card Feed Stop Control Circuit

The card feed stop control circuit generates the stop command for the card feed control circuit. Normally, the stop command is removed by a start pulse from the card feed control circuit when one of three card feed switch-indicators is operated (SINGLE FEED Z4, LOCAL TEST Z5, and START Z7). In the case of SINGLE, FEED switch-indicator Z4, the stop command is renewed as soon as the picked card passes through the read station. In the case of switch indicators Z5 and Z7, the stop command is normally not renewed until STOP switch-indicator Z6 is pressed.

a. The stop command signal is controlled by OR gate Z7A on PC card A16 (fig. 8-24). Whenever the output of Z7A goes high, AND gate Z6A in the card feed control circuit is disabled, thereby preventing a new card from being -picked. The Z7A output is also passed through buffer Z6B to the STP line. This activates a lamp driver on PC card A3 which energizes STOP switch-indicator Z6 on the control panel.

b. If the alarm stop circuits on PC card A15 detect an alarm stop or operator alarm condition, a stop command is produced. Therefore, a low level on not alarm stop line NAST or not operator alarm line NOA is inverted by inverter Z3A or Z3B, respectively, to activate OR gate Z7A.

c. The third input to OR gate Z7A is controlled by AND gate Z15A which is enabled only if both latches Z14 and Z16 provide low inputs. Normally, when power is first turned on to the card reader, power on reset line PRST goes high. This activates OR gate Z20B to provide a high output which is passed through OR gates Z17B and Z20A to clear latches Z14 and Z16. Thus, the latches provide low levels to AND gate Z15A, causing a stop condition. The same effect is obtained if RESET switch S1 on the front panel of the logic assembly is pressed when the card reader is not assigned to the CCU. At that time, AND gate ZL9A is conditioned by a low level on assigned line ASG and receives a low level at its second input on reset line RSTO from the RESET switch. The resulting high output of AND gate Z19A activates OR gate Z201B, causing both latches to be cleared.

d. To remove the stop command, one of the three card feed switch-indicators be operated (SINGLE FEED Z4, LOCAL TEST Z5, and START Z7). In either case, a single positive start pulse is produced at the output of AND gate Z26A. This is fed directly to the set side of latch Z16 and through OR gate Z17B to the clear side of latch Z14. The resulting high output from Z16 disables AND gate Z15A, removing the stop condition even though a low level is still being received from latch Z14.

e. Latch Z14 does not become set until the first advance solenoid drive pulse (ASD) is produced by the card feed control circuit to pick the first card. This negative pulse enables AND gate 72A if the hopper is not empty (hopper empty line HPFE from the hopper empty photocell amplifier is low) and if the stacker is not full (stacker full line STFO from the stacker full sensing switch on the card reader mechanism is high). The high level on the STFO line is provided by resistor R1 on PC card A15, since the sensing switch is open when the stacker is not full. This high level is inverted by inverter Z2B on PC card A16 to enable AND gate Z2A. The resulting high level sets latch Z14.

f. After the card that is picked completes its passage through the read station, a positive cycle complete pulse (CC) is received from the card end detector on card A14. This signal clears latch Z14 again. However, the stop condition does not return unless latch Z16 is also cleared. Normally (unless STOP switch-indicator Z2 is pressed) this occurs

only if the SINGLE FEED switch- indicator Z4 is pressed. In that case, the CC pulse enables AND gate Z9A which is conditioned by the high level on single-feed line SF. The resulting high output of Z9A is passed through OR gate Z20A to clear latch Z14. This restores the stop condition, thereby preventing more than one card from being fed as a result of a signal switch-indicator operation.

g. However, in case of card feed initiated by LOCAL TEST switch-indicator Z5 or START switch-indicator Z7, card feed normally continues automatically (with the limitation of CCU control) in case of START Z7. Card feed call be stopped at any time by pressing STOP switch indicator Z6. This connects a high level to stop line STOP which clears latch Z1G; however, the stop command is delayed until the card being read, if any, has passed through the read station. At that, time, cycle complete signal CC clears latch Z14 and low levels are again available at both inputs to AND gate Z15A.

h. A stop command is automatically generated if the hopper becomes empty. At that time, hopper empty signal HPE, goes high,, activating OR gate Z20A which clears latch Z16. Then, when the card being read passes the read station, the CC pulse clears latch Z14 and the stop command is given.

i. The signal at the output of latch Z14 normally goes high when a pick command is given (line ASD goes low) and returns to a low level as the cared that has been picked leaves the read station. Thus, tile Z14 output indicates a complete card pick-read cycle and is designated CYCL.

3-48. Ready Control Circuit

a. The ready signal is controlled by OR gate Z7B on PC card A16 (fig. 8-24). This OR gate becomes activated if any of the following three conditions exist:

(1) A card feed stop condition as indicated by a high level from the card feed control circuit.

(2) A local test card feed condition as indicated by local test signal LT from the card feed control circuit.

(3) A signal feed condition (card being read because of operation of SIGNAL FEED switch-indicator Z4 when in not assigned mode) as indicated by a high level from AND gate Z9B in the card feed control circuit.

b. When none of the inputs to OR gate Z7B is high, a low output is produced. This is inverted to a high level on RDY line by inverted Z10B. The RDY output is fed to the transmit interface circuits for transmission to the CCU.

3-49. Hollerith-to-ASCII Converter, Block Diagram (fig. 3-32)

a. Hollerith Decoding. To convert the 64 characters encoded in 12 Hollerith data bits into the equivalent characters encoded in 8 ASCII data bits, it is first necessary to decode each of the 64 Hollerith characters codes. This is accomplished in two stages as described in (1) through (4).

(1) The characters represented by the 12 Hollerith bits are converted to a two-bit octal code, in which each octal digit is represented by the 8x8 matrix shown in table 3-1. In this matrix, one octal digit specifies a column and the second octal digit specifies a row.

NOTE

The card reader has been modified to use the Federal standard FIPS-14 card code. Text reference to Hollerith are applicable to the FIPS-14 code.

Table 3-1. Octal Decode Matrix

Row	Column							
	0	1	2	3	4	5	6	7
0	Space	1	2	3	4	5	6	7
1	8	9	:	#	#	'	=	"
2	0	/	S	T	U	V	W	X
3	Y	Z	\	,	%	__	>	?
4	-	J	K	L	M	N	O	P
5	Q	R	O	$	*	)	;	^
6	&	A	B	C	D	E	F	G
7	H	I	O	.	<	(	+	!

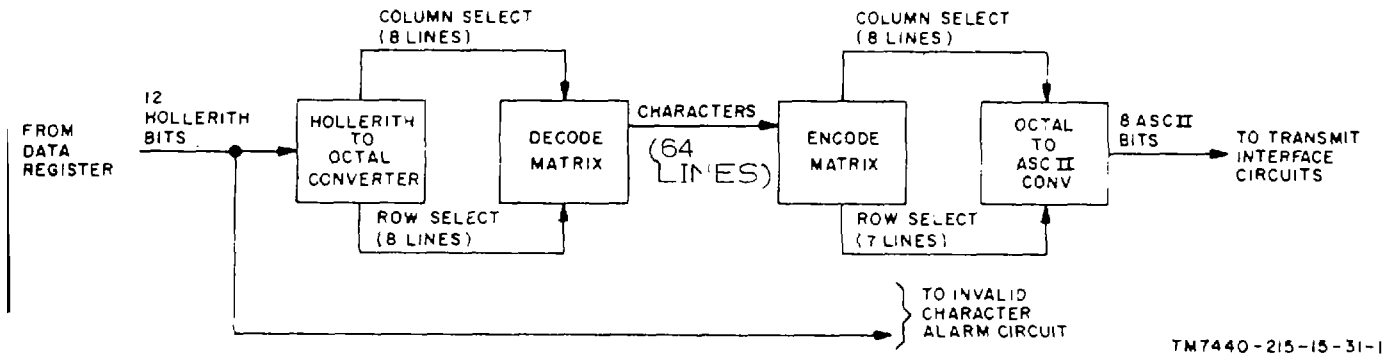


Figure 3-32. Hollerith to ASCII converter, block diagram.

(2) Each of the 64 positions on the matrix is specified by a different combination of the two octal digits, therefore, the 8x8 matrix specifies the octal coding for the 64 Hollerith characters. Once the Hollerith code is converted to two octal digits, each of the 64 characters can be decoded by monitoring its specific column-row combination.

(3) when the Hollerith code for a specific character is read from the punched card, the Hollerith code is converted to the corresponding octal code specified in table 3-1 by a Hollerith to octal converter. The octal us then decoded by a decoder matrix and one of 64 lines representing the punched character is activated.

(4) Theoretically, the 12-bit Hollerith code could be converted into any arbitrary octal code other than the one in table 3-1; however, this one is used because it permits relatively easy conversion as described ill paragraph : 3-50.

b. *ASCII Encoding.* Once the 64 Hollerith characters are decoded onto 64 separate lines, the conversion to air eight-bit ASCII code can be performed. This is done in two stages ((1) through (4) below) which are the reverse of the decoding process.

(1) First, the 64 characters are encoded as two octal digits represented by eight lines each. Actually. there are 1 5 physical lines; the eighth row condition is the absence of the other seven. The octal digits (designated F and G) for each character can be represented by the ASCII matrix in table 3-2. The columns in this matrix are arbitrarily designated 4 through 11.

(2) The 8 x 8 ASCII matrix in table 3-2 is obtained by using the binary of the first three bits in the ASCII code to specify one of eight rows (0 through 7) and tire binary value of the next four digits to specify one of eight columns (4 through 11). (The eighth ASCII bit is a parity bit and has no effect on the character selected.) Therefore, the ASCII character L is coded as 11001100 in bits 8 through 1, respectively. Bits 7 through 4 (1001) spec if column G9 find hits 3 through 1 (100) specify row F4.

(3) The circuit which converts the 64 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 64 characters.

(4) 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 its binary equivalent as specified in figure 3-4. The parity bit is made active or inactive as necessary to make the total sum odd.

3-50. Hollerith-to-Octal Converter

The 12 Hollerith bits read from the card are converted to a two-digit octal code by the Hollerith-to-Octal converter. One octal digit determines the row in the Hollerith matrix and the second octal digit determines the column.

a. To demonstrate how the Hollerith 12-bit code is broken down for presentation in a two-digit octal code, the 8 x 8 matrix shown in table 3-1 is represented by its Hollerith equivalent in table 3-3. Table 3-3 lists the Hollerith bits punched for each character in the matrix. *For example*, the character S in row 2, column 2 is coded by Hollerith bits 2 and 10 (fig. 3-4).

b. Note that table 3-3 shows that, in general, the column select octal digit has the same value as the digit punched in Hollerith bits 1 through 7. The only exceptions are that in rows 1, 3, 5, and 7, Hollerith bit 9 is used in place of bit 1 and in rows 5 and 7, Hollerith bit 10 is used in place of bit 2.

c. Similarly, each of the eight rows is generally characterized by a specific code combination in Hollerith bits 8 through 12; therefore, row 0 contain no punches in. any of these bits, row 1 contains a punch in bit 8, row 2 contains a punch in bit 10, row 3 contains a punch in bits 8 and 10, row 4 contains

Table 3-2. ASCII Matrix Chart

ROWS (F)				ASCII Data bits →	Columns (G) 4	5	6	7	8	9	10	11
				7	0	0	0	0	1	1	1	1
				6	1	1	1	1	0	0	0	0
				5	0	0	1	1	0	0	1	1
				4	0	1	0	1	0	1	0	1
0	0	0	0		SP	(	0	8	@	H	P	X
1	0	0	1		!	)	1	9	A	I	Q	Y
2	0	1	0		"	*	2	:	B	J	R	Z
3	0	1	1		#	+	3	;	C	K	S	(0)
4	1	0	0		$	,	4	<	D	L	T	/
5	1	0	1		%	-	5	=	E	M	U	(0)
6	1	1	0		&	.	6	>	F	N	V	^
7	1	1	1		'	/	7	?	G	O	W	←

Note: Encircled characters will cause ASCII data bit 6 to also be transmitted as a "1".

Table 3-3. Hollerith-to-Octal Matrix, Hollerith Coding

Row	Column 0	1	2	3	4	5	6	67
0	0	1	(2)	3	4	(5)	(6)	(7)
1	8	9	(8-2)	8-3	8-4	(8-5)	(8-6)	(8-7)
2	10	10-1	10-2	10-3	10-4	10-5	10-6	10-7
3	10-8	10-9	(10-8 2)	10-8 3	10-8 4	(10-8 5)	(10-8 6)	(10-8 7)
4	11	11-1	11-2	11-3	11-4	11-5	11-6	11-7
5	11-8	11-9	11-10	11-8 3	11-8 4	(11-8 5)	(11-8 6)	(11-8 7)
6	12	12-1	12-2	12-3	12-4	12-5	12-6	12-7
7	12-8	12-9	12-10	12-8 3	12-8 4	(12-8 5)	(12-8 6)	(12-8 7)

a punch in bit 11, row 5 contains a punch in bits 8 and 11, row 6 contains a punch in bit 12, and row 7 contains a punch in bits 8 and 12. The only exceptions to these rules are in column 1 where the punch in bit 8 is replaced by a punch in bit 9 for rows 1, 3, 5, and 7.

d. The characteristics of the Hollerith-to-Octal matrix described in b and c above are used as the basis

for developing the column and row selection digits (paras 3-51 and 3-52).

3-51. Hollerith-to-Octal Column Selection

a. As described in paragraph 3-50c, the column select. octal digit]has the same value as the digit punched in Hollerith bits 1 through 7. In addition, the column select octal digit assumes a value of 1 whenever Hollerith bit 9 is punched. Also, the column select octal digit assumes a value of 2 when either Hollerith bits 10 and 11 or 10 and 12 are punched (rows 5 and 7), even though the Hollerith bit 2 is not punched.

b. The octal digits are developed in not-function form on PC card A8 (fig. 8-16) by routing Hollerith bits 3 through 7 to corresponding inverters (Z6B, Z6A, Z9A, Z913, and Z24A) for octal bits 3 through 7. Octal bit 1 (COLUMN 1) is produced as a low level signal by OR gate Z22B when either Hollerith bit 1 or bit 9 is high. Octal bit 2 (COLUMN 2) is produced as a low level signal by OR, gate Z3A either when Hollerith bit 2 is high or when the 10 (11 + 12) signal produced by AND gate Z13B is high.

c. The 10 (1 + 12) combination is used only for the Ō character (10 and 11) and the ♁ character (10 and 12). This combination is obtained by feeding Hollerith bits 11 and 12 to OR gate Z17B and then feeding the Z17B output to AND gate Z13B together with Hollerith bit 10; therefore, if Hollerith bit 10 is high at the same time as either bit 11 or 12, Z13B is enabled and OR gate Z3A produces a low output.

d. Octal bit 0 (COLUMN 0) is activated when no hole is punched in Hollerith bits 1 through 7. This is detected by AND gate Z10B which monitors the outputs of OR gates Z7B, Z11A, and Z15A in the invalid character detector (para 3-66). These outputs are all low when Hollerith bits 1 through 7 are all low. When this happens, Z10B is enabled to produce a low output on the octal 6 (COLUMN 0) line.

3-52. Hollerith-to-Octal Row Selection

a. The row select octal digit is considered to be the more significant digit of the two-digit octal number which specifies each character. This digit is developed in two stages. First, the row selection is encoded in three binary bits, and then the binary value is converted to its octal equivalent.

b. Row select binary bit 1 is true for rows 1, 3, 5, and 7 since the corresponding octal digits (1, 3, 5, 7) are coded in binary as 001, 011, 101, and 111. The characters in these four columns of the matrix are identified by a punched hole in either bits 8, 9, 10, and 11, or 10 and 12. The 10 and 11, and 10 and 12 combinations are used only for the Ō and ♁ characters and are developed by AND gate Z13B as described in paragraph 3-51c. Therefore, the Z13B output (10 (11+12)) is applied to OR gate Z22A together with Hollerith bits 8 and 9. If any of the inputs to Z22A goes high, Z22A produces a low 8 output. This is inverted to true-function form by inverter Z24B.

c. Row select binary bit 2 is true for columns 2, 3, 6, and 7 since the corresponding octal digits (2, 3, 6, 7) are coded in binary as 010, 011, 110, and 111. The' characters in these four columns of the matrix are characterized by a punch in bit 10 if neither bit 11 nor 12 is punched or by a punch in bit 12.

(1) Hollerith bit line 12 is routed directly to OR gate Z17A to produce a high output on octal row 2 whenever bit 12 is punched. This is inverted to not function form by inverter Z21.

(2) The other input to Z17A is controlled by AND gate Z13A which monitors bit 10 and the output of inverter Z21B. The Z21B signal is low when either bit 11 or 12 is punched since these bits are fed to OR gate Z17B which controls the input to Z21B. AND gate Z13A activates row 2 only when bit 10 is punched without bit 11 or 12.

d. Row select binary 4 is true for columns 4, 5, 6, and 7 since the corresponding octal digits (4, 5, 6, 7) are coded in binary as 100, 101, 110, and 111. The characters in these four columns of the matrix are characterized by a punch in Hollerith bit 11 or 12. Binary bit 4 is controlled by OR gate Z17B which pro duces a high output on octal row 3 when either bit 11 J or 12 is punched. This is inverted to not-function form by inverter Z21B.

e. The three row select binary bits are converted to octal form by eight decoder AND gates Z25 through Z28. Each AND gate monitors a different combination of the three binary bits. Each possible combination is monitored by a separate AND gate so that only one AND gate is enabled at any one time. The enabled AND gate produces a low output representing the selected row number while the other AND gates produce a high output. The value of the row is equal to the sum of the not-function input binary digits. AND gate Z27B, which receives 1, 2, and 4, produces a low output for row 3 (1+2=3) when all three inputs are low.

3-53. Decode Matrix

a. The decode matrix decodes the two octal digits from the Hollerith-to-octal converter on 64 output lines representing the 64 characters specified by the 64 possible combinations of the two octal digits (table 3-1). The matrix consists of 64 decoder AND gates each of which monitors a different combination of the two octal digits. The 64 decoder AND gates are located on identical PC cards A9 and A11 (figs. 8-17 and 8-19).

b. PC card A9 contains 32 AND gates which decode the characters in the first four rows of the matrix, and PC card A11 contains 32 AND gates which decode the characters in the last four rows of the matrix.

c. The And gate which receives a low level at both its row select and column select inputs is enabled to produce a high level output representing the selected character. All other AND gates specifying the other 64 characters are inhibited since any row-column combination can satisfy only one AND gate.

d. For example, if the character T is punched on the card, the Hollerith-to-octal converter activates column 3 and row 2 of the matrix as shown in table 3-1, and the COLUMN 3 and ROW 2 input lines to PC card A9 are both low. The only AND gate which monitors both these lines is AND gate Z18B on PC card A9; therefore, only Z18B is enabled to produced a high output.

3-54. Encode Matrix

a. The encode matrix encodes the 64 characters form the decode matrix into two octal digits representing the row and column of the 8 x 8 portion of the ASCII matrix (table 3-2). The encode matrix consists of a set of a OR gates located on identical PC cards A10 and A12 (figs. 8-18 and 8-20).

b. Each of the 64 characters (except those in row 0 and column 0) is routed to two OR gates, one of which defines the column digit if the output octal code and the other of which defines the row digit. The OR gates controlling columns G4, G5, G6, and G7 are located on PC card A10, and the OR gates controlling columns G8, G9, G10, and G11 are located on PC card A12.

c. In addition, OR gates are provided for each of rows F1 through F7 on both PC cards A10 and A12. The respective row outputs are wired together externally to the two card. For example, the output of row 1 OR gate Z11 on PC card A10; therefore, if either A10Z11 or A12Z11 is activated, a high output is produced on the common row F1 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 characters T is punched on the card. As indicated in table 3-2 this character is defined by the intersection of row F4 and column G10 in the ASCII matrix. Therefore, the line representing this character is routed to OR gate Z2B on PC card A12 which controls the line representing column G10 and to OR gate Z14 which controls the line representing row F4. The high level on the character T line causes both Z2B and Z14 to produce high outputs.

3-55. 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.

3-56. Generation of ASCII Bits 1 Through 7

a. ASCII data bits 1, 2, and 3 are defined by rows 0 through 7 of the matrix. The octal row selection digit from the encode matrix is converted into the equivalent three-bit binary code on ASCII data bit lines 1, 2, and 3 by three expanded OR gates on PC card A13 (Z25A, Z27A; Z25B, Z27B; Z22A, Z23A) as shown in figure 8-21. The data bits 1, 2, and 3 have the binary value of 1, 2, and 4, respectively. Each row selection digit are is encoded by feeding it to the OR gates which control the binary equivalent lines, For example, F6 converts to 110 (binary 6) on lines 3, 2, and 1 of the ASCII output. When none of the seven row select digits are activated, a row F0 selection is indicated. In this case, all the three binary output lines remain low (000).

b. ASCII data bits 4, 5, 6, and 7 are defined by columns G4 through G11 of the matrix and the column selection from the encoded matrix is converted into the equivalent four-bit binary code as specified by table 3-2. This is accomplished by feeding the column G4 through G11 lines to four sets of expanded OR gates on PC card A13 which control data bits 4, 5, 6, and 7. To allow an arithmetical conversion, the binary value of these four data bits is designated 1, 2, 4, and 8, respectively. Each column selection is encoded by feeding it to the OR gates which control the binary equivalent lines. For example, the column G10 signal is fed to the OR gates which control data bits 5 (binary 2) and 7 (binary8), and the G10 signal is converted to binary bits 2 and 8 (2+8=10); therefore, whenever the punched characters is in column G10, a high output is produced in the data bit 5 and 7 lines (ASC5 and ASC7). Table 3-3.1 shows the ASCII data bits generated by an input on each row and column of the encode matrix. Inputs on both a row and a column will produce the proper ASC11 data bits for the character. For example; inputs on both row F3 and column G8 produces ASCII data bits 1, 2, and 7 (1000 011) which is the ASCII code for the character C.

c. The O and O characters are unique in that these are the only characters that develop both ASCII data

Table 3-3.1 ASCII Encode Matrix

Input on Rows	Generates ASCII Bits	Input on Column[a]	Generates ASCII Bits
F0	(none)	G4	6
F1	1	G5	4,6
F2	2	G6	5,6
F3	1,2	G7	4,5,6
F4	3	G8	7
F5	1,3	G9	4,7
F6	2,3	G10	5,7
F7	1,2,3	G11	4,5,7

[a]Inputs to columns G1, G2, C3, G12, G13, G14 and G16 wired to ground.

bits 6 and 7 as a "1". As described in paragraph 3-51c when the 10 and 11 or 10 and 12 combinations are punched in the card AND gate Z13B on PC card A8 (fig. 8-16) is high. This high is applied to terminal 6 on PC card A8 and connected to OR gate Z11B on PC card A13 (fig. 8-21) through terminal J on PC card A13. The high output of OR gate Z11B thus develops a high output on ASCII Bit 6. The remaining ASCII bits for these two characters are developed in a normal manner as described in b above.

3-57. 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 3 is odd or even and as to whether the sum of data bits 4, 5, 6, and 7 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 3 involving an odd sum (001, 010, 100, and 111). These combinations are represented by the octal row select digits F1, F2, F4, and F7, therefore, if the character punched on the card is in rows F1,

F2, F4, and F7 of the ASCII matrix, the sum of data bits F1, F2, and F3 is odd. This condition is detected by routing the row F1, F2, F4, and F7 lines to expanded OR gate Z18A-Z19A on PC card A13 (fig 8-21). If any of the lines are high, the OR output is law, indicating an odd sum.

c. The parity detection for data bits 4, 5, 6, and 7 is performed in a similar manner and the combinations of these bits involving an even sum are represented by column select digits G5, G6, G9, and G10. If the character punched on the card involves an even sum of data bits 4, 5, 6, and 7, a high level is applied to the OR gates Z%6B, Z1813, and Z19i, and a low level output is produced at the output of Z18B.

d. The odd and even sum outputs for the two sets of data bits are fed to the comparator circuit formed by ANI gates Z9A and Z13A, and OR gate Z13n for final parity evaluation. AND gate Z9A receives both high inputs only if the bit 1, 2, 3 sum is odd and the bit 4, 5, 6, 7 sum is odd and AND gate Z13A receives both low inputs only if the bit 1, 2, 3 sun is odd and the bit 4, 5, 6, 7 sum is odd. In either case, a high output is routed into OR gate Z131B on the parity bit line, indicating that the sum is odd. If the input sums are both even, or both odd Z9A and Z1 3A are both disabled, and Z13Bi produces a high output on the parity bit line to keep the total bit sum odd.

3-58. Data Strobe Control Circuits

(fig. 3-33)

A data strobe pulse is generated each time a card column of data is available in the data register.

a. To insure that data strobe pulses are generated at the proper time, the date strobe control circuits are synchronized to the movement of the card through the read station. This is accomplished by using the timing signal from the timing gear in the card reader mechanism. The timing signal is a sine wave at eight cycles per column of the card (approximately a 300= sec period). The timing signal is fed to a clock pulse generator on PC card A15 nowhere it is converted to clock pulses at 16 pulses per column of the card. If variations in operation of the motor in the card reader mechanism cause the card to slow down or speed up slightly, the timing gear speed follows proportionately because it is also driven by the motor; therefore, the clock pulses are always generated at 16 pulses per column.

b. The width of the holes punched ill each column of the card corresponds to approximately 10 clock pulses, and the space between holes corresponds to approximately 6 clock pulses. The data is gated into the data register at the fifth clock pulse after the start .of the hole by a sample pulse and is strobed by the data strobe at the eighth clock pulse (fig. 3-34). To control data sample and data strobe generation at the proper time, the clock pulses are counted by a 16-count timing counter on PC card A14. This counter is cleared to a count of 0 at the beginning of each column and reaches a count of 15 (binary 1 1 1 1) prior to the zero count.

c. The time that passes between the appearance of the card leading edge at the read photocells and the leading edge of the first column is measured by 42 clock pulses, which comprise two complete 16 count cycles of the timing counter plus 10 counts. To insure that the timing counter begins the first column on the count of 0, it is preset to the count of 6 at the leading edge of the card (fig. 3-35), therefore, the timing counter recycles after the first 10 counts and recycles twice again before the leading edge of the first column is reached.

d. The timing counter is held preset to 6 by a LIT signal from the all-lighted detector when no card is present over the read photocells. As soon as the leading edge of a card reaches the 12 read photocells, the preset condition is removed from the counter and the counter is allowed to advance.

e. To insure that the timing counter is cleared to 0 at the start of each hole if the card slips slightly and the timing is thrown off, the 12 data bits from the photocell amplifiers are fed to a sync generator on PC card A14. This circuit produces a sync pulse which goes high as soon as any one of the 12 data bit photocells is lighted. All columns of valid information, except the space character, on the card have at least one hole punched. The sync pulse goes high at the beginning of these columns and can, therefore, be used to clear the timing counter.

3-59. Clock Pulse Generator

a. The clock pulse generator produces clock pulses at the rate of 16 clock pulses per column for the data strobe generator. The clock pulses are derived from the timing gear in the card reader mechanism since the rate of rotation of the timing gear is directly proportional to that of the card drive capstans. Reluctance pickup coil A2A4PU1 in the card reader mechanism (fig. 8-9) senses the flux generated by the evenly spaced notches on the timing gear, and generates a sine wave which is filtered by capacitor A2A4C2. The sine wave period is approximately 300 μsec. Eight cycles of this sine wave are generated during the time that each column of the card passes under the read photocells.

b. The reluctance pickup coil is connected across full-wave rectifier CR1 through CR4 on card A15 (fig. 8-23) which doubles the frequency. The resulting 6.6-kc signal (150-μsec period) is applied to shaper Q3, where it is amplified and converted to a pulse output with short risetimes and falltimes.

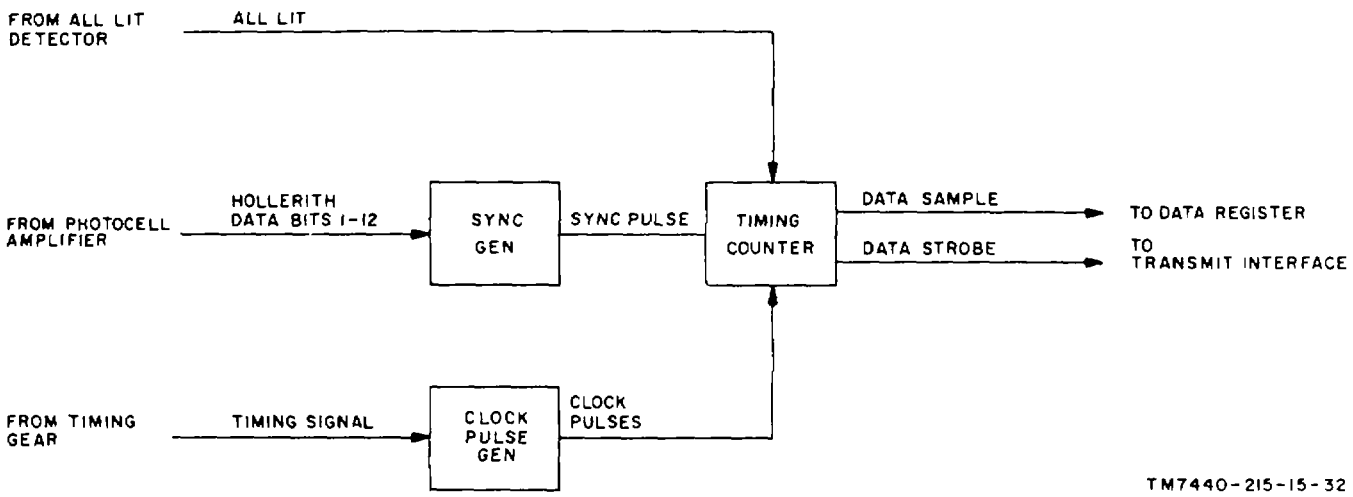


Figure 3-33. Data strobe control circuits, block diagram.

Finally, the shaped signal is amplified by inverter amplifier Z7A to produce CLK clock pulses. Since the input sine wave occurs at a rate of eight cycles per column, the output CLK clock pulses occur at 16 pulses per column.

3-60. Timing Counter

The timing counter is a binary counter that receives CLK clock pulses from the clock generator at the rate of 16 pulses per column and, once each column on the count of 5, produces an output pulse near the time at which the center of the card hole is passing under the read photocells.

a. Basic Counter Operation. The binary counter consists of flip-flops Z28, Z27, Z26, and Z25 on card A14 (fig. 8-22).

(1) The basic timing input to the counter is provided by CLK clock pulses from the clock generator on PC card A15. These pulses are applied to the CL and J-inputs of flip-flop Z28. The K-input is normally at a high level supplied by AND gate Z24B.

(2) The clock input, at 16 clock pulses per column, causes Z28 to change states at this rate, resulting in a square wave of eight pulses per column at the 1 output (fig. 3-36). This output is connected directly to the clock input of flip-flop Z27. On every negative-going transition of the square wave, Z27 changes states, resulting in a square wave output of four pulses per column. This process is repeated for flip-flops Z26, Z25, and Z21. The J-input of Z26 and the K-input of Z25 are controlled by the inverted LIT signal which is high only when a card is in the read station.

(3) The four flip-flops function as a conventional binary counter as indicated in figure 3-36 by the combination of states for the counts of 0 (0000) through 15 (1111). Since the speed at which the card passes under the card read head is approximately one column ever 16 counts, the counter recycles once for each column.

b. Counter Synchronization. The counter is synchronized to t he count of 0000 at the beginning of each column by the sync pulse from the sync generator.

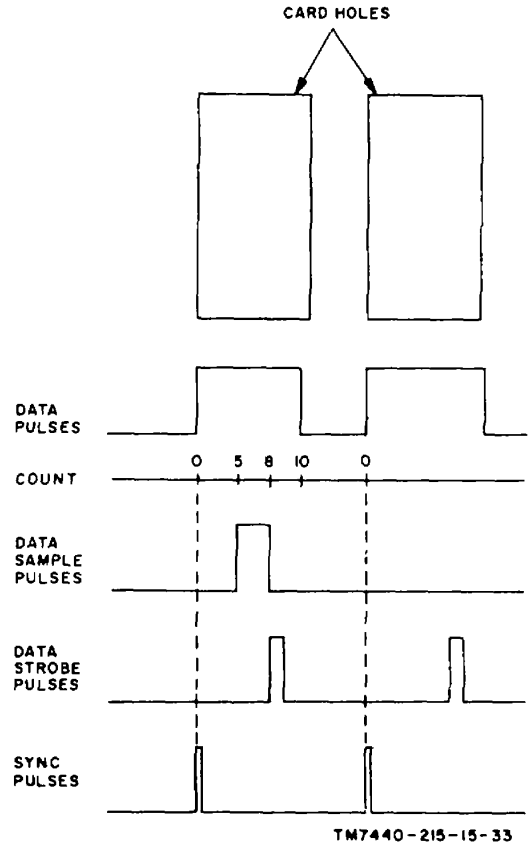


Figure 3-34. Individual data strobe generation, timing diagram.

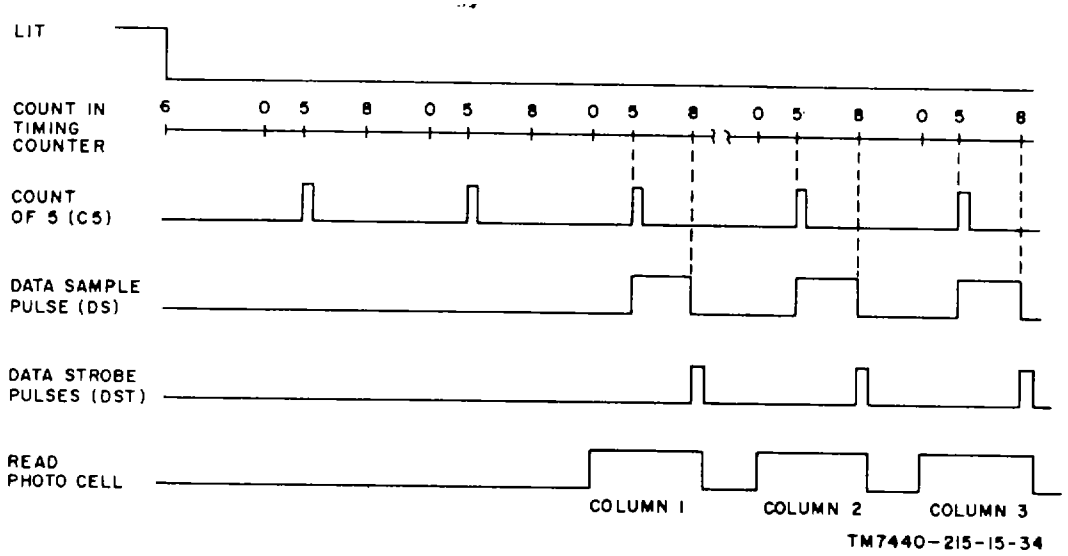


Figure 3-35. Timing counter operation.

This positive pulse, which appears at the beginning of each column oil line SNC, is pasted through OR gate Z2013 to clear flip-flops Z28, Z25, and Z21 and directly to clear flip-flops Z27 and Z26. During the time that the sync pulse appears, clocking of the first stage of the counter is disabled by AND gate Z24B, which produces a low output during the time the at the positive SNC pulse is present.

c. Card Leading Edge Control. The timing counter is preset to the count of 6 at the leading edge of the card.

(1) When no card is present at the read station, all 15 read)photocells are lighted, producing a high output signal from the all-lighted detector. This high signal disables AND gate Z2413, the low output of which prevents clock pulses front being gated into the first stage of the counter, flip-flop Z28. Simultaneously, the LIT signal is routed through OR gate Z20B to the C-inputs of flip-flop)s Z28, Z25, and Z21, and is applied directly to the S-inputs of flip-flops Z27 and Z26. The binary count is thereby preset to 0110 (6).

(2) When the leading edge of tile card reaches the read photocells, the LIT signal becomes low; enabling AND gate Z24B (since the SNC line is normally low), and counter operation is turned on. Tile time that passes between the appearance of the card leading edge at the read photocells and the appearance of tile leading edge of the first column is measured by 42 clock pulses. This is two complete 16-count cycles of the counter plus 10 counts. Since the counter is preset to 6, it recycles after the first 10 counts and then recycles twice again before the leading edge of the first column is reached (fig. 3-36). At that time, the count should be zero. To insure that the count is zero in case the card slipped slightly, the sync signal clears the counter to zero on the leading edge of the column as described in b above.

d. Count of 5. The count of 5 (0101) is monitored by AND gates Z23A and Z%23B which receive the 0 output of flip-flop Z28 and the 1 outputs of the remaining flip-flops. During the time that count of 5 is present in the counter, all inputs to the AND gates are low so that both AND gate acre enabled. The negative count-of-5 pulse at tile Z23A output is used to control the timing of the data sample ,and data < strobe pulses.

e. Data Sample Control. A data sample signal is generated from counts 5 to 8 of the timing counter to allow data to be entered into the data register at this time in each column. The data sample signal is initiated by the negative count-of-5 pulse from AND gate Z23A. This pulse is inverted by inverter Z15A to produce a positive C5 pulse which sets latch Z18. The latch remains set, until the count of 8 at. \which time counter flip-flop Z25 is set. The high C8 signal produced by Z25 at this time clears latch Z18. Thus, a high data sample (DS) signal appears at the Z18 out-put from counts 5 to 8.

f. Data Strobe Control. The data strobe lasting from count 8 to count 9 of the timing counter for each column is generated by flip-flop Z19. This flip-flop is set at count 8 by the negative transition of the DS data sample pulse and is cleared one count later by a C1A9 signal from AND gate Z22B. The C1A9 signal is high for counts 1 and 9 of the timing counter because AND gate Z22B monitors only the states of the first three flip-flops with the help of AND gate Z23B. When these flip-flops are ill the 001 state, Z22B is enabled. This occurs for both the counts of 1 (001) and 9 (1001).

g. Data Register Reset Control. The data register is reset at count 1 of tile timing counter for each column.

This is controlled by AND gate Z22A which, with the help of AND gate Z23B, monitors the state of the first four flip-flops. When the count is 1 (0001), AND gate Z22A is enabled to produce a high level on the register reset line (RRST). This 1-count pulse resets the data register.

3-61. Sync Generator

The sync generator produces a sync pulse at the start of each column. The sync pulse is obtained by monitoring the status of all 12 Hollerith data bits that are being read by the photocells. This is accomplished by two sets of OR gates that divide the 12 data bit lines into two separate monitoring circuits, each monitoring 6 data bit lines.

a. The occurrence of a hole punched in the upper six lines (Hollerith data bits 10, 11, 12, 1, 2, or 3) is monitored by OR gates Z4A and Z4B. Similarly, on PC card A14 (fig. 8-22), Hollerith data bits 4, 5, 6, 7, 8, and 9 are monitored by OR gates Z8A and ZS8B. The appearance of a hole at any one of the 12 data bits results in a high level at the output, of one of the four OR gates. This, in turn, results in a high level at the output of OR gate Z7A or Z7B. The Z7A and Z7TB outputs are integrated by capacitors C1 and C2 to filter out transients and is then inverted to low levels by inverters Z3A and Z6B.

b. If a hole is sensed in t he upper six lines of the card, the low level at the Z3A output passes through AND gate Z2B, which is enabled by the normally low level from Z3B. The low level at Z3A is also inverted by Z3B and, after integration by R3 and C3, disables AND gate Z2B after a short delay to result in a single SNCA pulse at the output of Z2B.

c. Similarly, if a hole is sensed in the lower six lines of the card, a single positive SNCB pulse is produced by AND gate Z2A.

d. The occurrence of an SNCA or SNCB pulse is monitored by OR gate Z10A which passes the pulse to flip-flop Z16G and and gate Z12B Flip-flop Z16 is initially cleared and provides a high conditioning level to AND gate Z12B. The third input to the AND gate is the NEC signal 'which is high only if the end of card photocell is covered. This must be the case if the data portion of the card is in the read station. Thus, AND gate Z12B is enabled to pass the sync pulse from OR gate Z10A to the SNC line. The negative transition at the trailing edge of the pulse immediately sets flip-flop Z16, disabling Z12B. Therefore, even if holes are sensed in both the upper and lower six lines of the card, only the first sync pulse (SNCA or SNCB) is allowed to pass through to the SNCB output line.

3-62. Data Register

The data register stores the 12 Hollerith bits from the photocell amplifier to insure that all data bits are available to the CCU when the data strobe is transmitted.

a. Simultaneous storage for the 12 data bits is provided by 12 latches on PC card A7 (fig. 8-15). The 12 Hollerith data bits are gated to the set inputs of the 12 latches by corresponding AND gates. For each card column, the input AND gates are conditioned at the count of 5 of the timing counter. This is controlled by the data sample signal (DS) from the timing counter. The DS signal, which is high from the count of 5 to the count of 8, is passed through OR gates

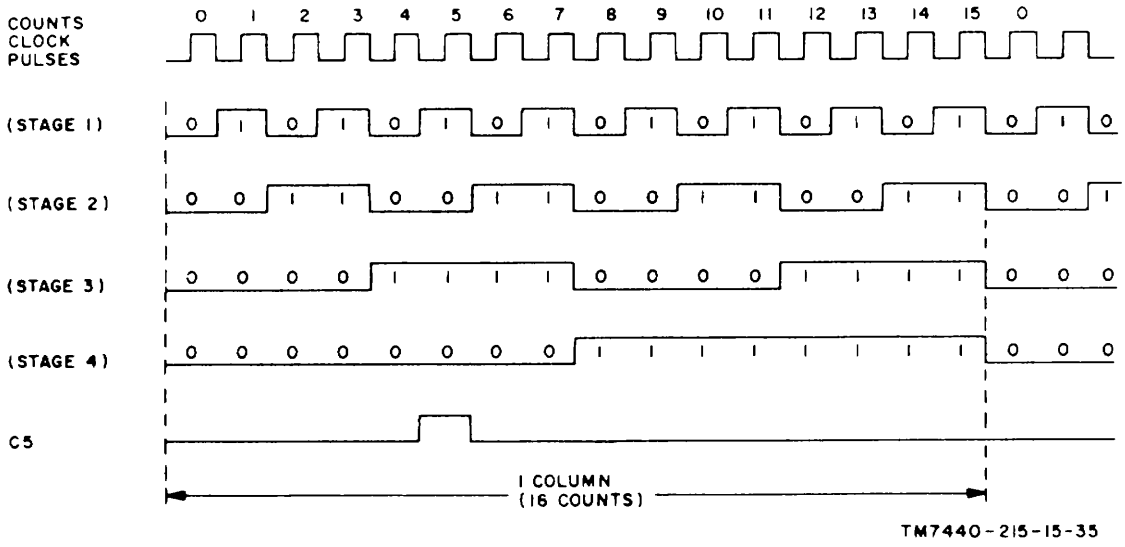


Figure 3-36. Timing counter count sequence, timing diagram.

Z1B, Z1A, and Z2B to condition the 12 input AND gates. Therefore, at the count of 5, the data is passed through the input AND gates, setting those latches for which a 1 data bit is received and leaving the others cleared.

b. The data remains in the register until count 1 of the timing counter at the beginning of the next column. At that time, a high level is received on register reset line RRST. This is gated through OR gate Z2A to the clear inputs of all 12 latches. A second clear input to OR gate Z2A is master reset signal RST. This insures that all latches are cleared when power is first turned on.

c. To permit a dark check of the read photocells when they are covered by the leading edge of the card, the outputs of the photocell amplifiers (which should be all low) must be gated into the data register at this time. The dark check time is defined by signal DC from the dark check portion of the alarm circuits. This signal is applied to OR gate Z1B to serve as a conditioning input for the input AND gates.

3-63. Offset Control

The offset control circuit drives the offset solenoid to offset header cards in the stacker. This function is controlled by the select signal from the CCU.

a. The CCU initiates offset before a header card by switching off the select (SEL) signal. The resulting negative step on select line SELA from the interface circuits on PC card A4 is inverted by inverter Z8B oil PC card A16 to set latch Z12 (fig. 8-24).

b. The Z12 latch is cleared after column 80 of the header card has passed the read photocells. This is controlled by AND gate Z4A which monitors the card and pulse (EOC) from the card and detector. At the end of column 80, the EOC signal goes high and remains high until the trailing edge of the card passes the read photocells (fig. 3-29).

c. Another condition for AND gate Z4B is that the select, (SELA) signal must be high. This prevents latch Z12 from being cleared until the SELA signal is switched on again by the CCU. Since the offset function is actuated by the step resulting from latch Z12 going from the set state to the cleared state, a second offset command to the offset solenoid cannot be generated unless the CCU switches the select signal off again to set the latch and then switches it on to allow the EOC pulse to clear the latch once more.

d. The positive OSC pulse is fed to one-shot multivibrator Q6, Q7 on PC card A15 (fig. 8-23). This results in a 140-ms positive pulse output from the one-shot circuit which is initiated by the leading edge of the negative OSC pulse. The 140-ms pulse is inverted by inverter Z3B to activate offset solenoid driver Q4, Q5, Q6 on PC card A1 (fig. 8-10).

c. When activated, the solenoid driver provides a ground return for -48-volt stacker offset solenoid A3K1 (fig. 8-9). Resistor A3R1 limits the current to the solenoid. Diode A3CR1 prevents reverse overshoot when the solenoid is deenergized.

3-64. Alarm Circuits

(fig. 3-37)

The alarm circuits include a series of alarm condition monitoring circuits which detect various types of alarm conditions in the card reader. Some of these alarm conditions result in an alarm stop signal sent to the CCU. Other alarm conditions result in and operator's alarm signal to the CCU. Either type of output alarm signal also causes the card feed control circuits to stop card feed. In addition, most of the separate alarm conditions result in visual indications on control panel A3. The alarm circuits also include the capability of generating an audible alarm reset signal which is sent to the CCU to reset the audible alarm.

a. Alarm Stop. An alarm stop circuit monitors the outputs of various alarm circuits for an alarm indication. When an alarm condition signal is received, the alarm stop circuit on PC card A16 (NAST) sends an alarm stop signal to the transmit interface circuits for transmission to the CCU and to the card feed control circuits on PC card A16 to stop card feed. These alarm conditions and their method of detection are described as follows:

(1) *Invalid character*. An invalid character ill the data bits read from the card is detected by the invalid character detector on PC card A8. The invalid detector output indication is used by the invalid character alarm circuit on PC card A14 to generate an alarm indication. This may also be generated if all read photocells are lighted at any time during the data field, as indicated by the coincidence of the LIT and data field signals.

(2) *CCU sync failure*. A failure of synchronism between the end of block and end of message signals received from the CCU with the data strobe pulses generated by the card reader are detected by the CCU sync check circuit on PC card A15. The CCU sync failure signal causes the alarm stop circuits to activate an out-of-sync visual indication on control panel A3. To prevent a sync check failure signal unless the card reader is operating with the CCU, a gated select signal from the card feed control disables the CCU sync check failure indication unless a select signal is being received front the CCU.

(3) *Light check failure*. A failure of all read photocells that should be lighted when no card is present in the read station is detected by their light check circuit on PC card A14 which monitors the beginning-of-card and end-of-card photocell signals

to determine card position and also monitors the LIT signal to determine when the read photocells are lighted. A light check failure results in a photocell check failure signal, which activates a visual indicator on control panel A3 besides activating the alarm stop signal.

(4) *Dark check failure*. A failure of all read photocells that should be darkened when the leading edge of the card is passing over the read photocells, is detected by the dark check circuit on PC card A14. To insure that this check in made at the proper time, the dark check circuit monitors the beginning-of-card photocell signal and a count output of the timing counter in the data strobe control circuit. Either a light check or dark check failure is indicated by a photocell failure signal, which activates a visual indicator on control panel A3 besides activating the alarm stop signal.

(5) *Pick failure*. A failure of a card to reach the read station within approximately 115 ms of a pick command is detected by the pick failure alarm circuit on PC card A15. This circuit operates by monitoring the duration of the advance solenoid signal from the card feed control circuits, since this signal lasts until a card reaches the read station. A pick failure activates an operator's alarm. A sync failure is generated if a card passes through the read station after a pick failure is declared.

(6) *Card jam*. A card jammed in the read station is detected by the card jam circuit on PC card A15. The presence of a card in the read station is detected by a read time circuit on PC card A14. This circuit produces a read time signal when the all-lighted detector indicates that one or more or the read photocells is covered. The card jam circuit performs its function by checking that the read time signal does not last more than approximately 400 ms.

(7) *Cancel*. When the CCU indicates that a data block is to be canceled by sending a cancel signal to the card reader, the cancel signal is monitored by a cancel control circuit in PC card A15. If the card reader is also receiving a select signal from the CCU, the correct control circuit produces a cancel control signal which activates the alarm stop circuits and a visual indicator on the control panel.

b. Operator's Alarm. An operator's alarm signal is generated by the operator's alarm circuit when any one of three alarm conditions occurs. The operator's alarm signal is sent through the transmit interface circuit to the CCU and is also sent to the card feed control circuits to stop card feed. The alarm conditions are detected as follows:

(1) *Hopper empty*. A hopper empty condition is detected by a card alarm circuit on PC card A15. This circuit produces a card alarm signal if the hopper empty photocell is illuminated after the last card has left the read station and EDM has not been received from the CCU. The absence of a card in the read station is indicated by the inactive state of the cycle signal from the card feed control circuits. The card alarm signal activates a visual indicator on control panel besides activating the operator's alarm circuit.

(2) *Stacker full*. A stacker full condition is detected by a sensing switch at the stacker. This switch is monitored by the card alarm circuit and causes generation of a card alarm signal.

(3) *Pick failure*. A pick failure condition detected by the pick failure alarm circuits results in a pick failure signal which activates the operator's alarm circuit.

c. Audible Reset. When the AUDIBLE RESET alarm pushbutton on the control panel is pressed, a corresponding control circuit on PC card A16 activates an audible alarm reset signal which is routed through transmit interface circuits to reset the audible alarm in the CCU; however, this signal is disabled unless the CCU operator has assigned the card reader to the CCU by pressing a pushbutton on the CCU. If not, the absence of an assigned signal from the receiver interface circuits inhibits the audible alarm reset control.

3-65. Invalid Character Detector, Principles

a. The invalid character detector monitors the 12 Hollerith data bits read from the card and checks them for invalid combinations. An analysis of the Hollerith characters listed in table 3-3 shows that there are five groups of invalid combinations-

(1) Two or more punches in bits 1 through 7, 9.

(2) Punches in bits 10 and 11 plus one or more punches in bits 1 through 7, 9.

(3) Punches in bits 10 and 12 plus one or more punches in bits 1 through 7, 9.

(4) Punches in any of the following bit combinations:

(a) 11 and 12.
(b) 8 and 1.
(c) 8 and 9.
(d) 8 and 2 and 11.
(e) 8 and 2 and 12.
(f) 8 and 10 and 11.
(g) 8 and 10 and 12.

(5) Punches for the 14 characters encircled in table 3-3 that were made invalid by backplane wiring.

b. The invalid character detection requirements for the first three groups of invalid combinations (*a*(1), (2), and (3), above) can be represented by the array shown in table 3-4. This array shows the intersection of three rows and three columns of numbers

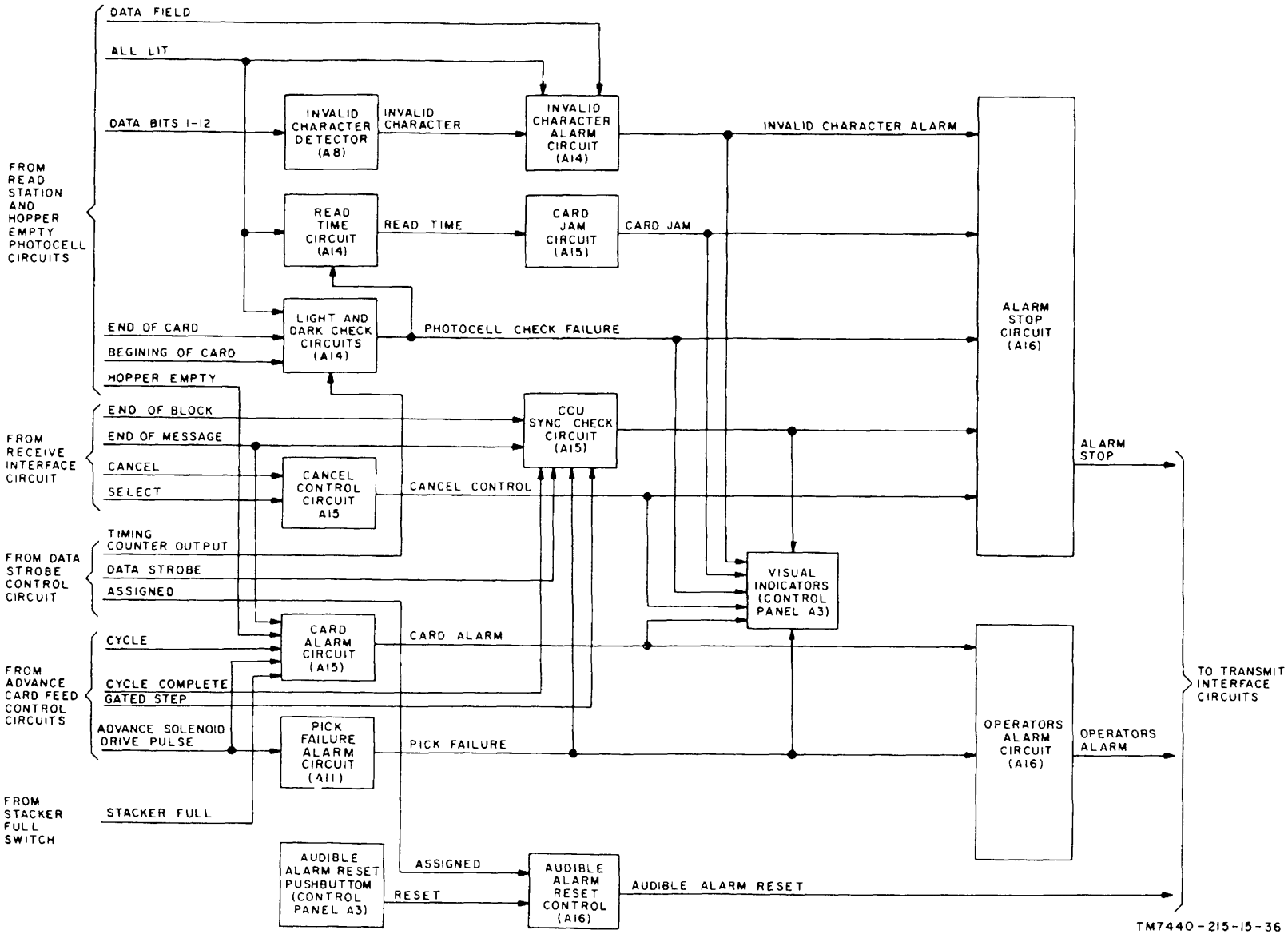


Figure 3-37. Alarm circuits, block diagram.

representing Hollerith bits. The first column represents Hollerith bits 1, 4, and 7. The third position in the third column represents a special combination of bits: 10 and either 11 or 12, that is, 10 (11+12).

c. The array of table 3-4 demonstrates the first three groups of invalid combinations if the statement is made that a combination of card bits represented by any two positions in the array are invalid. The first invalid combination group (a(1) above) involves bits 1 through 7 and bit, 9, all of which occupy separate positions in the array. If any two of these bits are punched, an invalid combination exists. The second and third invalid combination groups (a(2) and (3), above) involve the 10 (11+12) combination since neither of the two possibilities in this combination (10 and 11 or 10 and 12) is permitted to coexist with the bits in the other eight positions (1 through 7, 9) according to the rules of the second and third groups.

Table 3-4. Invalid Character Detection Array

	Columns		
	1	2	3
Rows	4	5	6
	7	9	10 (11+12)

d. The requirement that no two positions in the array of table 3-4 are permitted to coexist can be implemented by determining which column and which row of the array contain a punched bit. If bit 6 is punched, the second row and the third column are activated. Similarly, if any of the nine array positions are punched, only one column and one row are activated; this is a permissible combination. However, if any two positions in the array are punched, two columns or two rows are activated. For example, if bits 3 and 6 are punched simultaneously, rows 1 and 2 as well as column 3 are activated; this is an invalid combination.

3-66. Invalid Character Detector Operation

a. The signals representing the nine positions of the array of table 3-4 are Hollerith data bits 1 through 7 and 9, and Hollerith combination 10 (11+12). The Hollerith data bits are supplied from the register on PC card A7. The 10 (11+12) combination is developed in the Hollerith-to-octal converter on PC card A8 para 3-51).

b. To determine which rows and columns of the array are activated at any time, the signals representing the nine positions of the array are fed to six OR gates on PC card A8 (Z7A, Z11B, Z15B, Z7B, Z11A, and Z15A) representing the three rows and three columns (fig. 8-16). The equations for the six OR gate outputs are as follows:

(1) Column (Z7A)=1+4+7.
(2) Column 2 (Z11B) =2 + 5 + 9.
(3) Column 3 (Z15B)=3+6+10 (11+12).
(4) Row 1 (Z7B)=1+2+3.
(5) Row 2 (Z11A)=4+5+6.
(6) Row 3 (Z15A)=7+9+10 (11+12).

c. To implement the rule that no two rows or two columns can be activated simultaneously the three column signals are fed to AND gates Z8A, Z8B, and Z12A in three possible combinations of two simultaneous columns. If any one of these three AND gates is enabled, an invalid condition is indicated. This is monitored by OR gate Z20A which produces a high output if any one of the three AND gates is enabled. Similarly, the three row signals are fed to AND gates Z12B, Z16A, and Z16B in the three possible combinations of two simultaneous rows. The three AND gate outputs are monitored by OR gate Z20B which produces a high output if any one of the three AND gates is enabled.

d. The outputs of OR gates Z20A and Z20B are fed to expander inputs to OR gate Z3B so that either a double row or double column combination results in a low invalid output from Z3B. This is sent to the invalid character alarm circuit on PC card A14 for timing control.

e. The special invalid character combinations listed in paragraph 3-65a(4) are monitored by OR gate Z23A. When any one of these combinations exists, Z23A produces a high output which causes Z31B to produce a low invalid output.

f. The invalid condition of punches in both bits 11 and 12 is monitored by AND gate Z18A which controls one of the inputs to OR gate Z23A. The other two inputs to Z23A are controlled by AND gates Z19A and Z19B. A common input to both AND gates is Hollerith bit 8 since all of the remaining special invalid combinations in paragraph 3-65a(4) ,are marked by the presence of this bit. OR gate Z23B, which controls the other input to Z19B, monitors Hollerith bits 1 and 9. If either of these bits is punched, Z23B produces a high output which enables Z19B if bit 8 is punched.

g. The other two inputs to AND gate Z19A are controlled by OR gate Z14B which monitors bits 2 and 10, and OR gate Z17B which monitors bits 11 and 12. If bit 8 is punched at the same time as either bit 12 or 10 and either bit 11 or 12, an invalid combination

is indicated. Thus, AND gate Z19A is then enabled and a high output is routed through OR gate Z23A to OR Z3B to cause a low output on the INVALID line.

h. The 14 circled characters in table 3-1 are detected by routing the corresponding decode matrix output lines to OR gates Z1A, Z1B, Z2A, Z2B, and Z3B on PC card A1 (fig. 8-10). When any one of these 14 characters is decoded, a high level is produced on inhibit line XINH. If the character is wired for inhibit this high level is routed directly to OR gate Z3B an PC card A8 to cause a low level on the INVALID line.

3-67. Invalid Character Alarm Circuit

The invalid character alarm circuit produces an invalid character alarm signal when an invalid character is detected by the invalid character detector or if all photocells are lighted at any time during the data field (columns 1 through 80).

a. If the invalid character detector senses an invalid character, a low level invalid signal (INV) is applied to AND gate Z17B on PC card A14 (fig. 8-22). This AND gate is also controlled by the data field signal from OR gate Z20A in the data field detector since an invalid character is an alarm condition only if it occurs during the data field when the data field line is low. If both the INVALID and data field lines are low, the not function of the data strobe is gated through Z17B to set latch Z1. The resultant high invalid character alarm signal (INC) appears at the 1 output of the latch.

b. Latch Z1 can also be set under control of AND gate Z17A when the read photocells are all lighted during the data field. This condition is identified by low signals on the inverted LIT line from the all lighted detector and on the not data field line from the data field detector.

3-68. CCU Sync Check Circuit

The CCU sync check circuit generates a sync failure signal unless an end of block signal is received from the CCU in the time period between the trailing edge of the 80th data strobe and the leading edge of the end-of-card signal.

a. The end of block (EOB) signal from the receive interface circuits on PC card A4 is routed to AND gate Z1B on PC card A15. The AND gate is conditioned by a high select A (SELA) signal when the card reader is selected by the CCU. The gated EOB signal clears latch Z15. The set side of this latch is controlled by the data strobe (DST) signal from the data strobe control circuits on PC card A14. As the card passes through the read station, the data strobe pulses keep latch Z15 in a set state. If an FOB pulse occurs following the 80th data strobe, the latch remains in the clear state until the first data strobe of the next card. However, if the EOB pulse does not occur or occurs before the 80th data strobe, flip-flop Z15 is not cleared and remains in the set state. ' This indicates a CCU sync check failure.

b. To keep latch Z15 cleared between messages, the in message/out of message state of the card reader is monitored by latch Z5. This latch is set to the in message state by the first gated step (GS) signal> from PC card A16. The in message state lasts until one of four out of message conditions occurs. One of these is a cancel condition detected by AND gate Z2A in the cancel control circuit (para 3-69). Another is deassignment by the CCU operator, which is indicated by a high level on not assigned line NASG from the receive interface circuits. The NASG signal is routed through OR gate Z9A to latch Z5. The detection of a normal end of message by the CCU results in a high level on end of message line EOM. If the card reader is selected, the high level on select line SELA is combined with the high level on line EOM to enable AND gate Z1A. The resulting high output is routed through OR gate Z9A to latch Z5. The final condition clearing latch Z5 is a high level on master reset line RST.

c. When latch Z5 is set in the out of message state, the Z5A output is a high level which keeps latch Z15 cleared, preventing a CCU sync failure indication. Alternately when the latch is cleared, a high level at the Z5B output enables detection of a hopper empty condition by the card alarm circuit.

3-69. Cancel Control Circuit

a. When a cancel signal is received from the CCU during a data block, the cancel control circuit initiates an alarm stop and causes CANCEL indicator DS2 on the control panel to be lighted.

b. The cancel signal is detected by AND gate Z2A on PC card A15 (fig. 8-23). 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 line NCAN and NSEL. These low levels enable AND gate Z2A which sets latch Z6. 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 the control panel. The DCAN signal is also fed to the alarm stop circuit to cause an alarm stop signal.

3-70. Light Check Circuit

a. The light check circuit performs a light check before the time when the leading edge of the card reaches the end of card photocell position A, figure 3-30, and after the time when the trailing edge o! the card leaves the beginning of card photocell (position F). The light check is a check that all of the 12 reading photocells are illuminated at this time.

b. The light check is performed by AND gate Z14A on card A14 (fig. 8-22). The timing of tile light check is controlled by the not beginning of card (BCN) and not-end-of card (NEC) signal inputs to AND gate Z14A. Both signals are derived from the photocell amplifier circuit. on PC card A6 with the BCN signal received directly and the ECN signal developed by inverter Z15 from end-of-card input EC. Since BCN and NEC signals are complements of those shown in figure 3-30, they are both flow only when both the beginning and end-of-card photocells are illuminated. If any of the reading photocells are not illuminated at any time before position A and after position F, the LIT signal, monitored by AND gate Z14A from the all-lighted detector on PC card A6, is also low. The resulting high output of Z14A sets latch Z9 to indicate the light check failure condition. Latch Z9 may also be set as a result of a dark check failure.

3-71. Dark Check Circuit

The dark check circuit performs a dark check during the time when the leading edge of the card passes over the read photocells. The dark check consists of determining that none of the read photocells are activated at this time. Since the top corner of the leading edge is crosscut, it is necessary to insure that, the dark check is not performed until the crosscut portion is passed; otherwise, light getting through the crosscut region might actuate one of the photocells, thereby giving a false error indication.

a. To insure that the dark check does not take place until after the crosscut region, the dark check is performed 31 counts of the data strobe generator after the leading edge of the card has passed. Thus, referring to figure 3-35, the dark check is performed on the second count of 5 after the leading edge.

b. The timing of the dark check is controlled by AND gate Z13B on PC card A14 (fig. 8-22). When enabled, this gate passes a negative count-of-5 pulse from AND gate Z23A in the data strobe timing counter. One gating condition for this AND gate is a low level on the not beginning-of-card (BCN) photocell amplifier line. As indicated in figure 3-35, this occurs up to the time when the first column appears under the read photocells. Thus, the dark check can only occur during the time when the leading edge of the ,card is under the read photocells.

c. The other gating condition for AND gate Z13B is the 1 output of flip-flop Z21. This flip-flop functions as a fifth stage of the data strobe timing counter, being initially cleared at. the start of operation, and then being set for the first time on the count of 16 when the fourth flip-flop stage Z25 is cleared. This is controlled by the negative-going 1 output of Z25 connected to the toggle input to Z21. The flip-flop remains set until 16 counts later, when Z25 is again cleared.

d. As shown in figure 3-38, count operation of the data strobe timing counter begins on the count of 6 at the leading edge of the card. Thus, the first count of 5 does not occur until after Z21 is set on the count of 16. At that time, the high level at the 1 output of the flip-flop disables AND gate Z13B. Alien the next count of 5 occurs 16 counts later, Z21 is in the cleared state and a low level is provided for Z13B. AND gate Z13B is enabled by the count of 5 pulse to produce a positive dark check (DC) pulse. This is inverted by inverter Z13A to produce a negative dark check enable (DCE) pulse.

e. The positive DC pulse is routed to the data register to permit storage of the information sensed by the read photocells at this time.

f. The negative DCE pulse is sent to AND gate Z8B on PC card A13 (fig. 8-21) to allow this gate to sample the state of AND gate Z12A. The purpose of AND gate Z12A is to check for the presence of a decoded space character 00100000 (least, significant bits on right) at, the ASCII output. This character is produced whenever all 12 read photocells are covered. To check for this character, the true-functions of all eight, ASCII bits except bit 6 (ASCII BIT 32) are monitored by AND gate Z12A. The not-function of bit 6 is supplied by OR gate Z8A which functions as an inverter. Thus, whenever a space character is present, at the ASCII output,, Z12A is enabled and supplies a high level to disable AND gate Z8B.

g. If a space character is not, detected at, the time of the dark check, the output of Z12A is low and the negative DCE pulse momentary enables AND gate Z8B to result in a positive pulse on the dark check fail line (DCF). This is returned to PC card A14 to set latch Z9. Since Z9 is set by either a light, check or dark check failure, its resulting high output is identified as a photocell check failure (PHCK).

3-72. Pick Failure Alarm Circuit

a. The pick failure alarm circuit, monitors the pick command to the picker solenoid driver and generates an alarm indication if the picked card fails to reach the end-of-card photocell at the beginning of the read station will approximately 115 ms of the step command which initiated the pick command. This function is performed by monitoring the width of the pick solenoid drive pulse since this pulse is terminated by the darkening of the end-of-card photocell. If the pulse width is longer than 115 ms, a failure is indicated.

b. The advance solenoid drive pulse (ASD) from the card feed control circuit on PC card A16 is fed to time delay circuit, Q1, Q2 on PC card A15 (fig. 8-23). If the AI)V pulse lasts longer than 115 ms, the

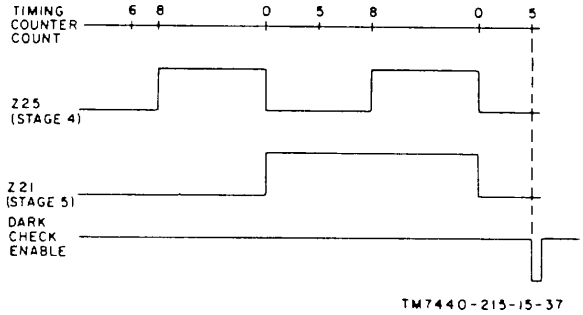


Figure 3-38. Dark check circuit, timing diagram.

time delay produces an output pulse at the end of the 115-ms interval which sets latch Z14. This results in a high DPKF pick failure signal at the 1 output of the latch. If the ADV pulse lasts less than 115 ms, no output pulse is produced by the time delay circuit and the DPKF line remains low. \\'hen activated, the DPKF line energizes a lamp driver on PC card A3 to light PICK FAIL indicator DS8 on the control panel. By causing an operator alarm, the DPKF line also causes the picker solenoid to be deenergized.

3-73. Card Alarm Circuit

The card alarm circuit produces an alarm indication on either a hopper empty or stacker full condition.

a. When the card render is assigned to the CCU, the hopper empty condition is considered an alarm condition only after the CCU sends a step/data acknowledge signal requesting a new card to be picked. This results in an in-message signal to AND gate Z11A on PC card A15 (fig. 8-23. The other input to Z11A is controlled by AND gate Z7B which produces a high output if the hopper empty photocell is illuminated following completion of a card cycle. Thus, AND gate 27B is enabled by a low level on the HPN line from the photocell amplifiers and a low level on the CYCL line from the card feed stop control circuits.

b. The high output of AND gate Z11A sets latch Z13, resulting in a high level on card alarm line CA. This signal is gated through OR gate Z4A to the DCA line which activates a lamp driver on PC card A3, energizing CARD ALARM indicator DS7 on the control panel. The CA signal is also gated through OR gate Z16B to result in an operator's alarm signal to the CCU.

c. If the card render is not assigned to the CCU. the hopper empty card is not condition is not dependent. on the receipt of a step/data acknowledge signal from the CCU. In this case, the high level on the HPE output of AND gate Z7B enables AND gate Z11B which is conditioned by a high level on not assigned line NASG. The resulting high output of Z11B is fed directly to OR gate Z4A to activate the DCA line.

d. The stacker full condition is detected by AND gate Z10B which is enabled by a low level on line STFO from the stacker full sensing switch on the card reader mechanism. The conditions for a stacker full card alarm indication are that the last card cycle be complete (CYCL line low) and that the card render is beginning to pick a new card (ASD low). When these conditions exist., the high output of Z3A sets latch Z13 to result in a high level on the CA line and, in turn, on the DCA line.

e. Latch Z13 is cleared, removing the card alarm indication, when the alarm reset circuit activates alarm reset line ARST. The high level on the ARST line enables AND gate Z10B to clear Z13 only if the stacker is not full (line STFO is high) .

3-74. Read Time Circuit

The rend time circuit consists of AND gate Z11A on PC card A14 (fig. 8-22 which produces a low lover on not-function read line NRT during the time when the card is under the read photocells. During this time, one or all of the photocells are darkened and the LIT line from the all-lighted detector is low. This provides one. conditioning input to AND gate Z11A The. other input is photocell check line PHCK which is low as long as P. light or dark check failure has not. occurred.

3-75. Card Jam Alarm Circuit

a. The card jam alarm circuit. generates a card jam indication if a card remains in the read station for more than approximately 400 ms. The presence of a. card in the read station is indicated by the not read time (NRT) signal from AND gate Z11A on PC card A14. This signal remains low only during: the time w hen the card is covering one or more of the 12 card row of photocells; therefore, the card jam check function is performed by checking that the NRT signal comes up before 400 ms.

b. The negative NRT pulse is fed to time delay circuit Q4, Q5 on PC Card A15 (fig. 8-23 If the pulse lasts for more than 400 ms, the time delay circuit produces a positive pulse (CJTP) after the 400-ms delay which represents a card jam condition. If the NRT pulse lasts less than 400 ms. no CJTP pulse is produced. In case of a card jam condition, the CJTP pulse sets latch Z8 to provide a display card jam indication (DCJ).

3-76. Alarm Stop Circuit

The alarm stop circuit controls the Horn stop signal on line NAST which is routed through the transmit interface circuits to the CCU and is also fed to the card feed atop control circuit to atop automatic card

feed. The alarm stop signal is generated as a low level on line NAST when any one of a number of alarm stop conditions occurs.

a. The NAST signal is produced by OR gate Z16A on PC card A15 (fig. 8-23). This OR gate is activated by a high level on the DCAN line from latch Z6 whenever a data block is canceled by the CCU. Three other alarm stop conditions are monitored by OR gate Z4B which supplies a second input to OR gate Z16A. Thus, when an invalid character (INC), photocell check failure (PHCK), or card jam (DCJ) occurs, the corresponding line goes high, activating OR gate Z4B and, in turn, Z16A.

b. The third input to OR gate Z16A is controlled by latch Z12 which is set whenever the card reader is assigned to the CCU but is out of sync. Thus, OR gate Z9B is activated by latch Z15 in case of a CCU sync check failure and is activated by pick failure line DPKF in case of a card pick failure. In either case, the high output of Z9B enables AND gate Z10A after the card being processed has left the read station (cycle complete line CC is high) as long as an alarm stop has not yet been generated (line NAST is high). The high output, of Z10A sets latch Z12 to activate OR gate Z16A and places a low level on line NAST.

c. The high output of latch Z12 is also routed on line DSYN to a lamp driver PC card A3 which energizes OUT of SYN indicator DS6 on the control panel. The indicator remains lit until latch Z12 is cleared. This occurs either on an alarm reset condition (alarm reset, line ARST goes high) or when the card reader is deassigned from the CCU (not assigned line NASG goes low).

3-77. Operator's Alarm Circuit

The operator's alarm circuit consists of OR gate Z16B on PC card A15 (fig. 8-23). This gate, produces a low level operator's alarm signal on line NOA for transmission; to the CCU by the transmit interface circuits if either a card alarm or pick failure occurs. Thus, if either card alarm signal CA or pick failure signal DPKF goes high, the OR gate is activated and places low level on the NOA line. The NOA signal is also routed to the card feed stop control circuit to stop automatic card feed.

3-78. Audible Alarm Reset Control Circuit

If the card 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 Z5 on PC card A16 (fig. 8-24). The resulting positive step at the Z5B output of the latch is converted into a sharp positive pulse by differentiator C1, R9. The pulse is then coupled through OR gate Z17A 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 C1 through resistor R10 to a potential at which the feedback voltage is insufficient to keep Z17A activated. At that time, the Z17A output returns to a low level and C2 quickly discharges through diode CR1.

b. To prevent generation of the AAR pulse when the card 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 Z10A. This prevents Z5 from initiating a step when the switch Z1 is pressed.

3-79. Alarm Reset Control Circuit

An alarm reset signal is generated for the a] arm stop circuits when any of the three card feed switch indicators on the control panel (SINGLE FEED Z4, LOCAL TEST Z5, and START Z7) is pressed, or when RESET switch S1 (on logic assembly front panel) is pressed, and when power is turned on to the card reader. However, the alarm reset signal is disabled during a block in which a cancel signal is being received from the CCU.

a. A power-on reset or a pushbutton reset activates OR gates Z20B in the card feed stop control circuit (para 3-47). The resulting high level activates OR gate Z15B which places a low level on not alarm reset line NAR. The NAR line is also activated when any one of the three card feed switch-indicators is pressed. In that case, OR gate Z15B receives a positive start pulse from AND gate Z26A in the card feed control circuit.

b. The NAR line is fed to AND gate Z2B on PC card A15 (fig. 8-23) which becomes enabled if AND gate Z2A supplies a conditioning low level. The resulting high level on alarm reset line ARST clears the various alarm stop flip-flops.

c. The alarm reset function is disabled by AND gate Z2A if the CCU supplies a cancel signal while the card reader is selected. The resulting low levels on the NCAN and NSEL lines from the receive interface circuits enable AND gate Z2A, disabling AND gate Z2B, and preventing the ARST signal from going high.

3-80. Transmit Interface Circuits

The ready signal from the ready control circuit is shifted from card reader switching levels (0 volt and + 4.5 volts) to CCU interface switching levels (open circuit and 0 volt) by the transmit interface circuits. (open circuit and 0 volt) by the transmit interface circuits. This permits the CCU to send the select signal through the receive 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 ASCH 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 (open circuit by transmitter (A) on PC card A4 (fig. 8-12). 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 card A14 is gated into transmitter (J) on PC card A5 by the SEL B select line from the receive interface circuits (fig. 8-13). When the select input from the CCU is active, the SEL B line is high and the positive DST strobe pulses are accepted and inverted to produce negative 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 Hollerith to ASCII encoder 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 card 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 control circuits on card A15 are inverted to an active level (open ckt) and an inactive level of 0 volt by transmitters (B) and (C), respectively, on PC card A4 (fig. 8-12). The resulting transmit TAST and TOA outputs are open ckt 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 card reader is assigned to the CCU, the ASGD line from the receive interface circuits goes high. This conditions transmitter (D) to produce 0 volt on line TAAR to the CCU, resetting the audible alarm in the CCU. If either input goes low, the TAAR output is an open circuit.

3-81. Detailed Operation of Discrete Circuits on PC Card A1

(fig. 8-10)

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, the -48-volt supply current gradually charges up capacitors C1 and C9 through resistor R2. The voltage at the junction of C1, C9, and R2 is applied to 16-volt Zener diode VR1 to the output. When sufficient charge is built up in C1 and C9 to drive VR1 into conduction, the output begins dropping from the + 4.5-volt level established through resistor R3. Thus, at the moment when conduction begins, the voltage at the junction of C1, C9, and R2 is approximately -11.5 volts. As 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 current to the base of Q2. This allows transistor Q2 to go into conduction so 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 de-energized. 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.

3-82. Detailed Operation of Discrete Circuit Logic Elements

The detailed circuit operation of discrete circuit logic elements is described in paragraphs 3-83 through 3-86. The component makeup of each type of logic element is shown in figures 3-39 through 3-45. However, since one example of each type is shown in these figures, refer to table 3-5 for a detailed listing of the corresponding components in the logic element of each type.

3-83. Detailed Operation of Discrete Circuit Logic Elements on PC Card A4

a. Type RCVR-1A Interface Receiver (fig. 3-39). The type RCVR-1A receiver converts a 0-volt input from the CCU to + 4.5 volts and an open circuit input from the CCU to 0 volt. When the transmitting source comes an open circuit, the input signal becomes +6.2 volts due to the reference voltage established by Zener diode VR4. This voltage is coupled to the base of transistor Q8 driving Q8 into conduction. This result in a 0-volt output at the Q8 collector. When the input signal goes to

PC card	Logic element type designation	Logic element reference	Component reference designation																
A4	XMTR-1A	(A)	R1	R2	R3														
Q1		(B)	R4	R5	R6	Q2													
		(C)	R7	R8	R9	Q3													
	XM-TR-1B	(D)	R10	R11	R12	CR	CR2	Q4											
	RCVR-1B	(E)	R13	R14	R15	R16	CR3	Q5	VR1										
		(F)	R17	R18	R19	R20	CR4	Q6	VR1										
		(F)	R17	R18	R19	R20	CR4	Q6	VR1										
		(G)	R21	R22	R23	R24	CR5	Q7	VR3										
	RCNVR-1A	(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				
A5	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	Q17	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
	XMITR-2	(H)	R71	R72	R73	R74	R75	R76	R77	R78	R79	R80	C8	C29	C30	Q31	Q32	CR15	CR16
		(J)	R81	R82	R83	R84	R85	R86	R87	R88	R89	R90	C9	Q32	Q33	Q34	Q35	CR17	CR17
A6	PHOTO	(A)	R1	R2	CR1	Q1													
	AMPL	(B)	R3	R4	CR2	Q2													
		(C)	R5	R6	CR3	Q3													
		(D)	R7	R8	CR4	Q4													
		(E)	R9	R10	CR5	Q5													
		(F)	R11	R12	CR6	Q6													
		(G)	R13	R14	CR7	Q7													
		(H)	R15	R16	CR8	Q8													
		(J)	R17	R18	CR9	Q9													
		(K)	R19	R20	CR10	Q10													
		(L)	R21	R22	CR11	Q11													
		(M)	R23	R24	CR12	Q12													
		(N)	R25	R26	CR13	Q13													
		(P)	R27	R28	CR14	Q14													
		(Q)	R29	R30	CR15	Q15													

0 volt, transistor Q8, is cut off and a +4.5-volt output is coupled through resistor R28 to the load.

b. Type RCVR-1B Interface Receiver (fig. 3-40). The type RCVR-1B receiver operates in tile same way as the RCVR-1A receiver described in a above, except coupling is accomplished by constant voltage drop diode CR3 and resistor R13.

c. Type RCVR-1C Interface Receiver (fig. 3-41). The type RCVR-1C 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-input causes transistor Q10 of difference amplifier Q10, Q11 to go into conduction and causes transistor Q11 to go into cutoff. The negative voltage at tile 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, and 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. 3-42). Inputs from the card reader logic circuits switching between 0 volt and +4.5 volts are coupled through biasing network R1, R2, and 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. 3-43). The type XMTR-1B transmitter operates in the sample way as the XMTR-1A transmitter described in *d* above, except diodes CR1 and CR2 are added to provide and function for two input signals, both of which must be

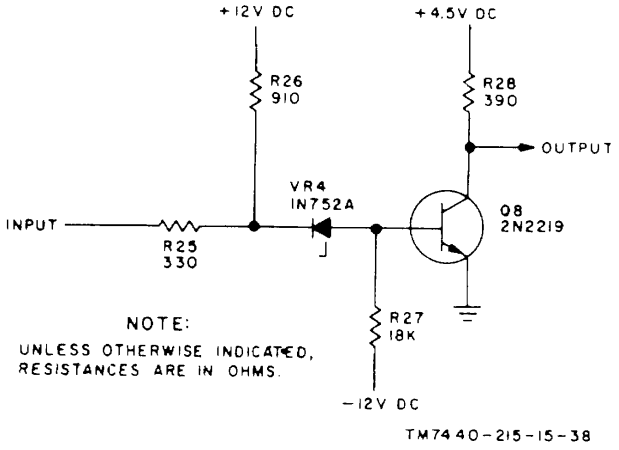


Figure 3-39. Type RCVR-1A interface receiver, schematic diagram.

+ 4.5 volts to produce the 0-volt output.

3-84. Detailed Operation of Discrete Circuit Logic Elements on PC Card A5

a. The type XMTR-2 interface transmitter on PC card A5 (fig. 3-44) receives card reader inputs switching between 0 volt and +4.5 volts dc 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 drop in voltage at the junction of R4 and R5 turns on transistor Q2 to result in a + 12-volt level at the Q2 collector. This drives transistor Q3 into conduction and transistor Q4 into cutoff. Thus, the -6.2volt supply voltage is drawn through Q3 and 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, and R3 allows Q1 to go into cutoff. The resulting positive + 12 volt-output of Q1 cuts off Q2 so that a negative voltage appears at the Q2 collector. This voltage drives Q4 into conduction and Q3 into cutoff. Thus, the -6.2-ivolt supply is drawn through Q4 and resistor R9 to the circuit output.

3-85. Detailed Operation of Discrete Circuit Logic Elements on PC Card A6

The type PHOTO AMPL photocell amplifier on PC card A6 (fig. 3-45) is controlled by the output of a photocell connected to a + 4.5-supplly. When the photocell is dark, it acts as an open circuit. Thus, transistor Q1 is biased on by -12 volts through resistor R1. Diode CR1 in the emitter circuit of Q1 provides a constant voltage drop, and the output voltage across load resistor R2 is approximately 4.0 volts. When the photocell is lighted, the current flowing through the photocell builds up a 16-volt drop

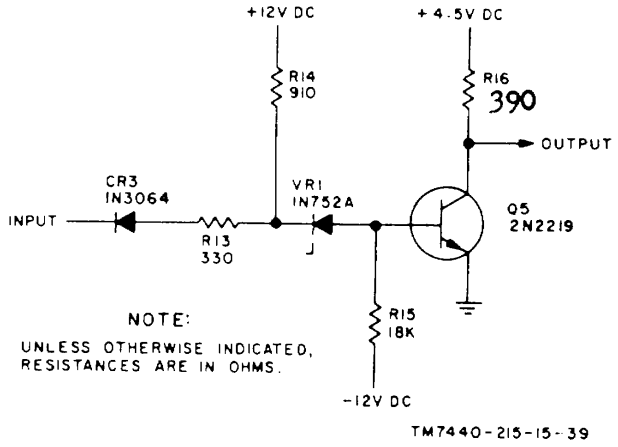


Figure 3-40. Type RCVR-1B interface receiver, schematic diagram.

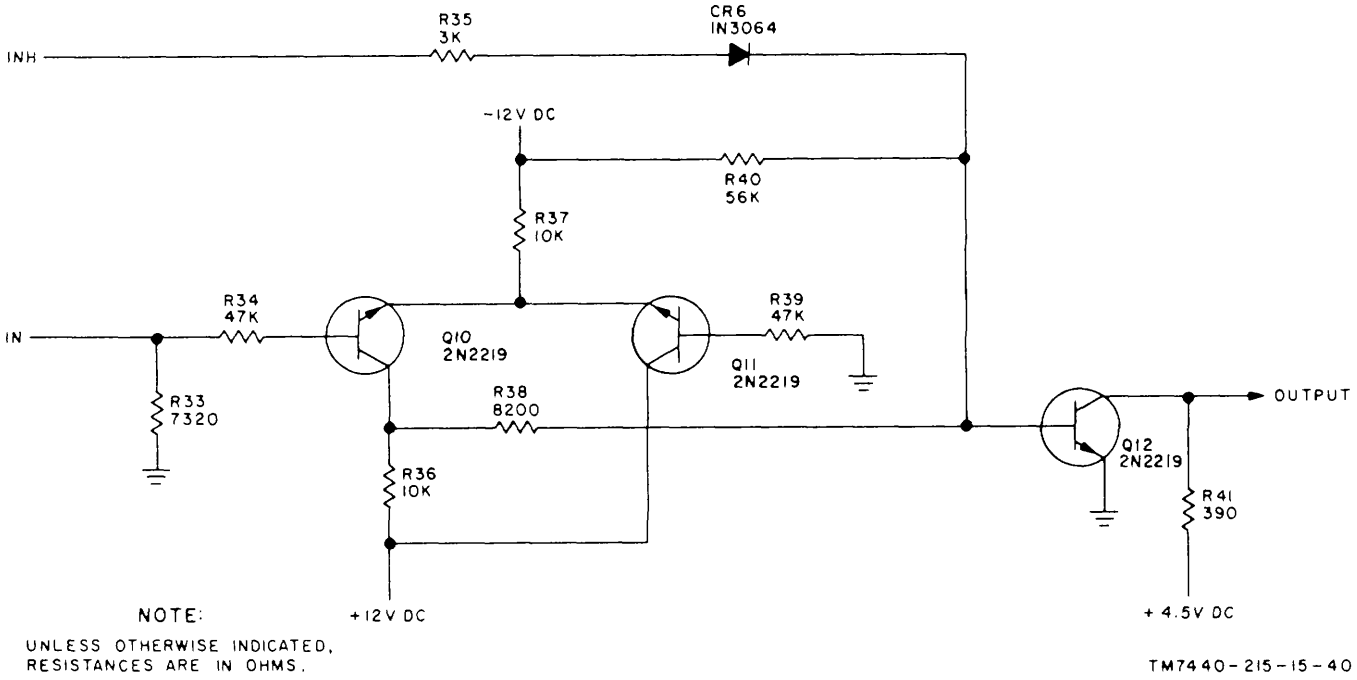


Figure 3-41. Type RCVR-1C interface receiver, schematic diagram.

across resistor R1 so that a +4.0 - volt level at the base of Q1 drives into cutoff. This results in a 0-volt output at the Q2 collector.

3-86. Detailed Operation of Discrete Circuits on PC Card A15

(fig. 8-23)

a. Time Delay Q1, Q2, Initially, with a +4.5-volt input applied across bias resistors R2 and R3, transistor Q1 is conducting and timing capacitor C1 is-discharged. Unijunction transistor Q2 is not conducting. The time delay is triggered by a negative input pulse switching from +4.5 volts to 0 volt, which is applied across R2 and R.3 to cutoff transistor Q1. This allows C1 to charge through charging resistor R4. If the input pulse is still low after 115 ms, the voltage across C1 becomes sufficiently high to fire Q2. This results in a +4.5-volt output established by resistors R5 and R6. Once Q2 is fired, the current drawn from capacitor C1 to the Q2 emitter discharges C1 quickly until not enough current is as available to maintain conduction through Q2. Thus, Q2 is cutoff and the output pulse is terminated.

b. Time. Delay Q4, Q5. Time delay Q4, Q5 operates in the same way as time delay Q1, Q2 described in a above, except for a change in the value of charging resistor R9 to achieve a 400-ms time delay before unijunction transistor Q5 is fired.

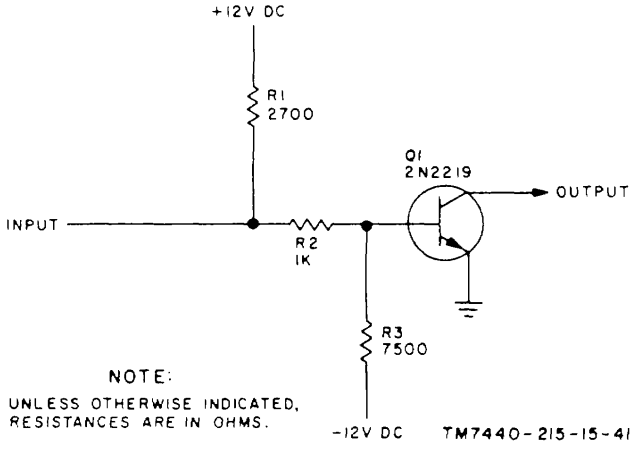


Figure 3-42. Type XMTR-1A interface transmitter schematic diagram.

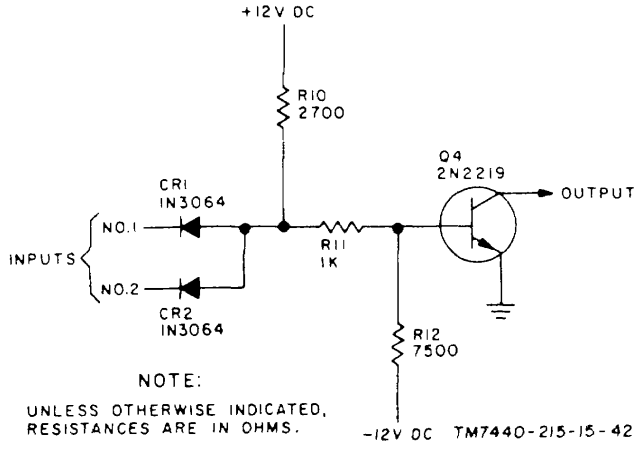


Figure 3-43. Type XMTR-1B interface transmitter. schematic diagram.

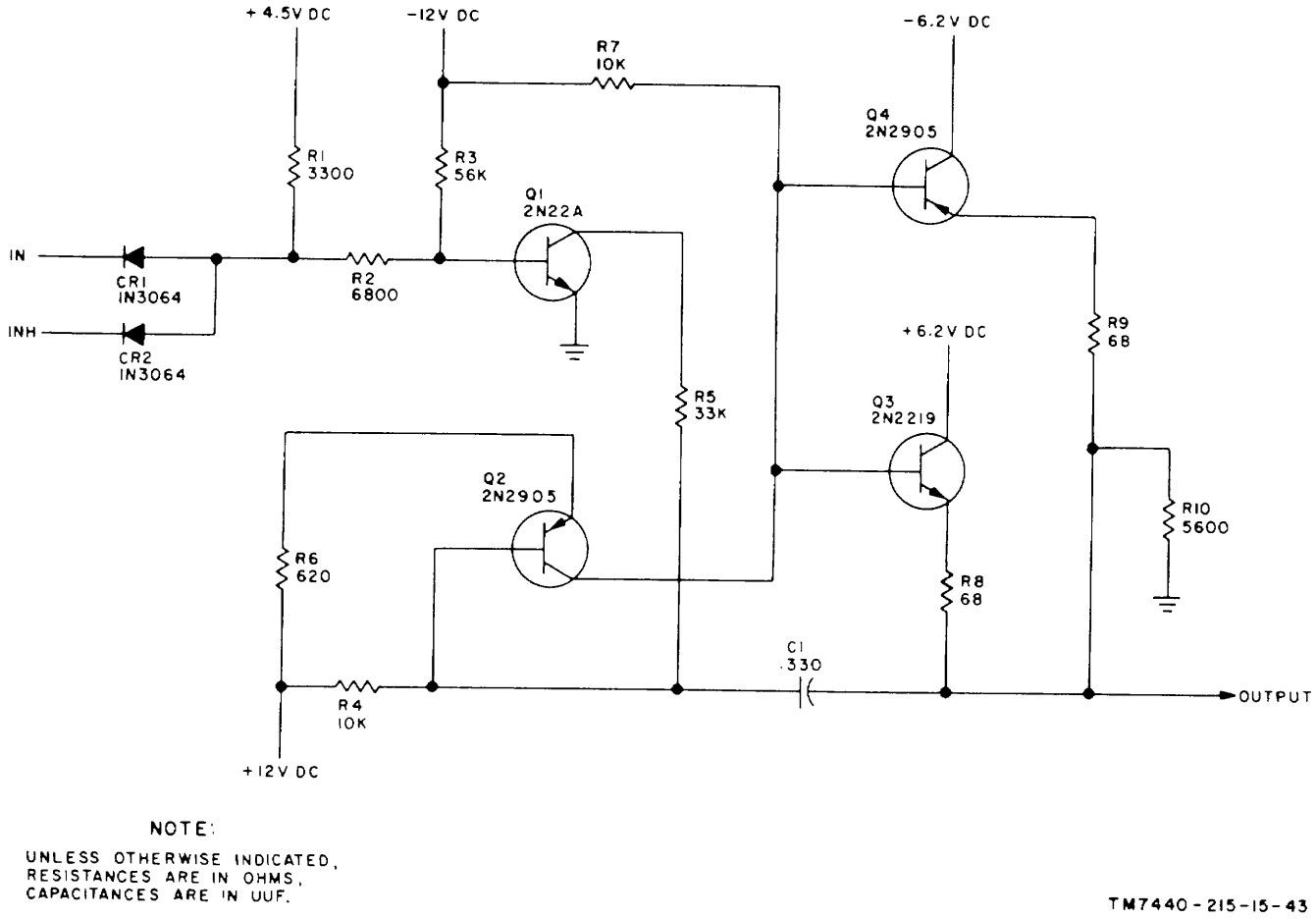


Figure 3-44. Type XMTR-2 interface transmitter, schematic diagram.

c. Rectifier CR1 Through CR4. An input sine wave signal of approximately 3.3 kc is full-wave rectified by diodes CR1 through CR4. The rectified output is filtered by capacitor C3 to remove high frequency noise.

d. Shaper Q3. A filtered full-wave rectified signal is applied to transistor Q5 which operates as an over

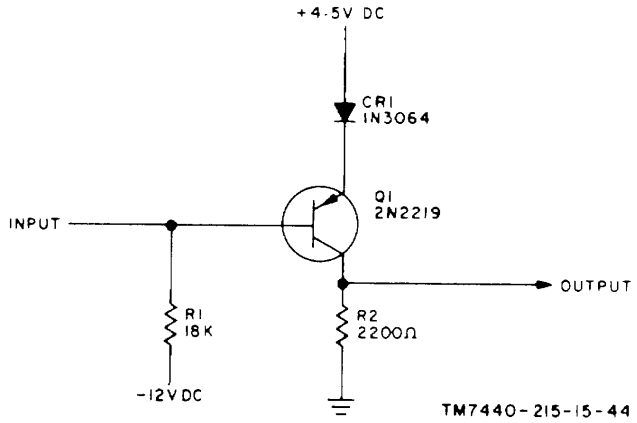


Figure 3-45. Type PHOTO AMPL photocell amplifier, schematic diagram.

driven amplifier to produce output pulses across load resistor R15 at the same frequency as the full-wave rectified input. The signal is then filtered by capacitor C4 to minimize the high frequency noise.

e. Single Shot Q6, Q7. A positive step input signal switching from 0 volt to +4.5 volts is applied across loading resistor R18 and converted to a sharp positive pulse by differentiator C6 and R19. The positive differentiated pulse is passed by diode CR6 and is applied across loading resistor R22 to drive transistor Q6 into conduction. Transistors Q6 and Q7 form a single-shot multivibrator which produces a positive 140-ms output pulse from the collector of Q7.

(1) Initially, Q6 is cut off and Q7 is conducting. The base of Q6 is held slightly below 0 volt by diodes CR5 and CR6 with the aid of current flowing through resistor R22. Base current for Q7 is supplied through resistor R20 and diode CR7. The low level at the collector of Q7 is fed back through resistor R21 to keep Q6 cut off. Initially, capacitor C5 has a a charge of 12 volts since Q6 is cut off.

(2) When the single shot is triggered, Q6 is driven into conduction and supplies a low voltage

through C5 to cut off diode CR7 and transistor Q7. The high output at the collector of Q7 is fed back regeneratively to the base of Q6 through resistor R21 and is applied to the circuit, output across voltage R25, R26. Capacitor C5 charges up through resistor R20 and transistor R20. After 140 ms, the voltage at the junction of C5 and R20 is sufficiently high to drive CR7 and Q7 into condition, there by terminating the output pulse and driving Q6 into cutoff.

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 printed circuit cards) of the card reader. Refer to chapter 5 for information on troubleshooting and repair of the printed circuit cards.

b. Maintenance of the card reader includes the following:

(1) Preventive maintenance (para 4-3 through 4-11).

(2) Troubleshooting (para 4-12 through 4-14).

(3) Removal and replacement (para 4-15 through 4-49).

(4) Repairs and adjustments (para 4-50 through 4-69).

4-2. Tools, Materials, and 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 card reader.

b. Materials. The following maintenance materials 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 8305-00267-3015.

(2) Pressure-sensitive tape.

(3) Fine sandpaper (0000), NSN 5350-00-235-0124.

(4) Lacquer, semigloss, blue (No. 25184, per FED STD 595), NSN 8010-00-721-9753 (1 pt press can).

(5) Enamel, semigloss, gray (No. 26492, per FED STD 595), NSN 8010-00-087-0109 (1 qt can).

(6) Enamel, semigloss, black (No. 27038, per FED STD 595), NSN 8010-00-844-4792 (1 qt can).

(7) Primer, zinc chromate, FED SPEC TT-P664, NSN 8010-00-936-3372 (1 pt press can).

(8) Detergent, liquid, NSN 7930-00-926-5280 (pt).

(9) Coater, filter, NSN 4130-00-860-0042 (pt).

(10) Trichloroethane, FED SPEC O-T-620, Type 1, NSN 6810-00-292-9625 (qt), or NSN 6810-00.-664-0387 (gal).

(11) Adhesive (RTV-108), NSN 8040-00-9147013 (2 oz tb).

(12) Silicone compound (DC-340 heat-sink compound), NSN 6850-00-171-6995 (2 oz tb).

(13) Sealing compound, retaining (LOCTITE, Grade E), NSN 8030-00-081-2328 (50 cc pl btl).

(14) Resistor, fixed, 1,000 ohms, 1/4-watt RC07GF102J), (1 ea).

(15) Resistor, fixed, 1,000 ohms, ½-watt (RC20GF102J), (1 ea).

Section II. PREVENTIVE MAINTENANCE

4-3. Scope of Preventive Maintenance

a. Preventive maintenance is the systematic care, inspection, and servicing of the card reader to maintain it in serviceable condition, prevent breakdowns, and assure maximum operational capability. Preventive maintenance includes the 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 charts outline functions necessary to maintain the card reader in good operating condition. The charts indicate what to check, how to check, and what the normal conditions are; the *References* column lists the illustrations, paragraphs, or manuals that contain detailed maintenance procedures.

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 8-hour-a-day operation, respectively. If the card reader is operated 16 hours a day, the weekly and monthly preventive maintenance checks and services should be performed at 4-day and 15-day intervals, respectively. Adjustment of the preventive maintenance interval should be made to compensate for any unusual operating conditions.

4-4. Daily Preventive Maintenance Checks and Services Chart

Sequence No.	Item to be inspected	Procedure	References
1	Exterior surfaces	Clean the overall cabinet and covers. When cleaning, check for broken, missing, or loose covers, hinges, or hardware.	Para. 4-7 Para 4-7
2	External cables and connectors.	Inspect external cables and connectors for evidence of deterioration, kinks, and insecure connections.	

4-5. Weekly Preventive Maintenance Checks and Services Chart

Sequence No.	Item to be inspected	Procedure	References
1	Drive belts	Check for wear and proper adjustment	Para 4-32b
2	Picker belts	Check for wear and height adjustment	Para 4-54
3	Stacker spring	Check for proper tension	Para 4-5
4	Card reader mechanism	Clean	Para 4-7
5	Blower air filter	Replace	None
6	Muffler	Empty and clean jar. Clean element	Para 4-9

4-6. Monthly Preventive Maintenance Checks and Services

Sequence No.	Item to be inspected	Procedure	References
1	Cabinet	Clean	Para 4-7
2	Internal logic area	Clean	Para 4-7
3	Picker vacuum relief valve	Check for proper vacuum; adjust if required	Para 4-70
4	Picker belts	Check for wear or deterioration and for proper tension	Para 4-54
5	Picker solenoid	Check for proper adjustment	Para 4-56
6	Blower assembly (B1)	Inspect blades for dirt buildup	Clean if dirty

4-7. Cleaning and Touchup Painting

a. External Cleaning. Use a vacuum cleaner and a lint free cloth to clean all external areas.

NOTE

A spare blower air filter is required to permit cleaning while the card reader is in use.

b. Card Reader Mechanism. Use a soft brush or low-pressure air to clean dirt, lint, and card dust from the card reader mechanism.

c. Internal Cleaning. Use a vacuum cleaner and a lint free cloth to clean the cabinet and logic section internally.

d. Ball Bearings. All ball bearings used in the card reader are sealed and cannot be cleaned or relubricated. Wipe the exterior of ball bearings with a lint free cloth.

e. Touchup Painting Instructions. Remove rust and corrosion from metal surfaces by lightly sanding them with sandpaper. Brush two coats of paint on bare metal to protect it from further corrosion.

4-8. Cleaning Cabinet Air Filter

Remove loose dust and dirt from the cabinet air filter weekly or after each 50 hours of operation, whichever occurs first (and b below). Wash the filter monthly or after each 250 hours of operation, whichever occurs first (c below).

a. Pry the upper corners of the grill assembly forward slightly and lift the grill 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 the filter as follows:

(1) Immerse air filter in a solution of warm water and detergent and move it about to free the dirt. When clean, hang it up to dry.

(2) Hold a spray can of RF Super Filter Coat (Research Products Corp.) 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).

4-9. Cleaning of Muffler and Jar Element

a. Unscrew the jar (1, fig. 4-8) from the muffler.

b. Unscrew the element (2) from the muffler.

WARNING

The fumes of trichloroethane are toxic. Provide though ventilation whenever used. DO NOT USE NEAR AN OPEN FLAME. Trichloroethane is not flammable, but exposure of the fumes to an open flame or hot metal surfaces forms highly toxic phosgene gases.

c. Clean the element by washing it trichloroethane.

d. Air dry the element with air from a low pressure air source.

e. Replace the element and jar.

4-10. (Deleted)

4-11. Lubrication

Lubrication of the card reader is not required.

Section III. TROUBLESHOOTING

4-12. Use of Troubleshooting Data

NOTE

To test the Reader, Punched Card RP152/G, when it is used with the 490-L Overseas AUTOVON, strap terminals 7 and 13 of TB-2.

Troubleshooting information for the card reader is given in the card reader troubleshooting chart (para 4-13). When a particular trouble symptom is observed, the particular trouble or troubles can be corrected by 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. Resistance data on transformers, relays, and nonstandard items is given in paragraph 4-14. When a PC card trouble is suspected, check the PC card by substituting al new card. Always recheck the card reader operation after repairs or replacements are performed.

4-13. Card Reader Troubleshooting Charts

Locate troubles in the card reader as described in a below. If it is suspected that the trouble is in power supply PS1, refer to b and c below for power supply troubleshooting information.

a. Card Reader Troubleshooting Chart.

Note

When troubleshooting, be alert for loose or damaged connections, short circuits caused by foreign materials, and PC cards that are not securely seated in their connectors.

Item No.	Trouble symptom	Probable trouble	Checks and corrective measures
1	Card reader alarm indications:		
	a. PICK FAIL indicator lights.	a. One or more of following:	a. Proceed as follows:
		(1) Failure to load cards properly	(1) Remove cards from hopper, and fan and joggle card deck before reloading in hopper.
		(2) Damaged card	(2) Remove cards from hopper and check column 1 edge of bottom card for damage.
		(3) Obstruction in picker throat	(3) Check throat for obstructions.
		(4) Hopper card support out of adjustment.	(4) Adjust the hopper card support.
		(5) Picker belt height in need of adjustment.	(5) Adjust height of picker belts.
		(6) Picker belts worn smooth	(6) Replace picker belts.
		(7) Metering capstan pressure insufficient.	(7) Adjust capstan pressure.
		(8) Insufficient vacuum	(8) Check for kinks in vacuum line. Clean vacuum line air filter. Adjust vacuum relief valve.
		(9) Pick timer circuit	(9) Replace PC card A15.
		(10) Control logic	(10) Replace PC card A16.
		(11) End of card photocell shorted	(11) Replace photocell.
		(12) Solenoid drivers	(12) Replace PC card A1.
		(13) Photocell amplifiers	(13) Replace PC card A6.
		(14) Broken metering capstan belt, front or rear.	(14) Replace defective belt.
		(15) Broken picker belt set (4 belts)	(15) Replace belt set.
		(16) Broken main drive belt	(16) Replace belt.
		(17) Broken picker drive belt	(17) Replace belt.
		(18) Resistor A2A2R1	(18) Replace resistor.
	.	(19) Picker solenoid A2A2K1	(19) Replace picker solenoid.
		(20) Vacuum pump	(20) If vacuum relief valve adjustment does not provide sufficient vacuum, refer to para. 4-36.1 for repair of vacuum pump. Replace vacuum pump.
		(21) Vacuum hose	(21) Replace hose length.
	b. CARD ALARM indicator lights.	b. One or more of following:	b. Proceed as follows:
		(1) Hopper empty or stacker full .	(1) Take appropriate action.
		(2) Hopper photocell defective or shorted	(2) Replace photocell.
		(3) Stacker elevator not descending properly.	(3) Check for binding. Adjust stacker spring tension.
		(4) Stacker full switch defective .	(4) Replace switch.
		(5) Photocell amplifiers	(5) Replace PC card A6.

Note. If an alarm is indicated continuously, even when the reader is in a start condition, check lamp driver PC card A3.

	c. OUT OF SYNC indicator lights.	c. One or more of following:	c. Proceed as follows:
		(1) Failure to receive end of block signal from CCU.	(1) Reread card message.
		(2) Interface control card.	(2) Replace PC card A4.
		(3) Timers and alarm logic card.	(3) Replace PC card A15.
		(4) Timing generator card.	(4) Replace PC card A14.
		(5) Photocell amplifier card.	(5) Replace PC card A6.
		(6) End of card photocell or beginning of card photocell defective.	(6) Replace defective photocell.
		(7) Faulty card motion	(7) Check metering capstan pressure.

Item No.	Trouble symptom	Probable trouble	Checks and corrective measures
1	Card reader alarm indications-Con.		
		(8) Polar interface card	(8) Replace PC card A5.
		(9) Reluctance pickup A2A4PU 1	(9) Replace pickup.
		(10) Capacitor A2A4C1	(10) Replace capacitor.
	d. CARD JAM indicator lights	d. One or more of following:	d. Proceed as follows:
		(1) Card jammed in read station	(1) Remove jammed card.
		(2) Photocell amplifier card	(2) Replace PC card A6.
		(3) Timing generator card	(3) Replace PC card A14.
		(4) Timers and alarm logic card	(4) Replace PC card A15.
		(5) Read station lamps not illuminated.	(5) Replace lamp assembly A2A1DS1. Replace lamp A2A1DS2. Replace resistor A2R1.
	e. PHOTOCELL CHECK	e. One or more of following:	e. Proceed as follows:
		(1) Photocell amplifier card	(1) Replace PC card A6.
		(2) Dirt or card piece covering one or more of read station photocell transistors Q1 through Q12.	(2) Clean out read station.
		(3) Timing generator card	(3) Replace PC card A14.
		(4) Data register card	(4) Replace PC card A7.
		(5) Code converter	(5) Check PC cards A8, through All, and A13. Replace defective card.
		(6) Punch, notch, or other aperature in leading edge of card being read	(6) Make new card.
		(7) Photocell transistors Q1 through Q12.	(7) Check and replace defective photocell transistor.
		(8) Resistor A2R1	(8) Replace resistor.
	f. INVALID CHARACTER indicator lights.	f. One or more of following:	f. Proceed as follows:
		(1) Damaged data processing card or improper punch code.	(1) Replace with correct card.
		(2) Photocell amplifier card.	(2) Replace PC card A6.
		(3) Read station photocell defective	(3) Replace defective photocell.
		(4) Timing generator card	(4) Replace PC card A14.
		(5) Invalid character detector card	(5) Replace PC card A8.
		(6) Data register	(6) Replace PC card A7.
	g. Inability to get out of stop condition	g. One or more of following:	g. Proceed as follows:
		(1) Uncorrected alarm condition	(1) Take appropriate action.
		(2) No cards loaded	(2) Place cards in hopper.
		(3) Control logic card	(3) Replace PC card A16.
		(4) Timers and alarm logic card-	(4) Replace PC card A15.
2	Incorrect or no alarm or lamp indications:		
	a. Improper indicator lamp display.	a. Defective lamp (s)	a. Replace defective lamp (s).
	b. Improper panel indicator lamp display.	b. Lamp drivers	b. Replace PC card A3.
	c. Panel indicator lamps inoperative.	c. Fuses A10F9 or A10F10	c. Replace defective fuse.
	d. All read station lamps and HOPPER EMPTY lamp unlighted.	d. Defective lamp A2A1DS2, resistor A2R1, or lamp A2A1DS1.	d. Replace lamp or resistor.
	e. Indicator lights at half brilliance.	e. Lamps A3 DS1 through A3DS9, A3Z2, A3Z6, or A3Z7.	e. Replace defective lamps.
	f. One of two indicators light at half brilliance.	f. Lamp A3Z5	f. Replace lamp.
	g. AC POWER and-DC POWER indicators not lighted.	g. One or more of following:	g. Proceed as follows:
		(1) Power supply (PS1) AC or DC fuses.	(1) Replace defective fuses.
		(2) 15-vac fuses	(2) Replace defective fuses.
		(3) Lamps defective	(3) Replace defective lamps.

Item No.	Trouble symptom	Probable trouble	Checks and corrective measures
3	Data or transmission troubles:		
	a. One or more field-data invalid characters un-recognized.	a. Solenoid drivers	a. Replace PC card A1.
		b. Polar interface card or ASC11 encorder.	b. Replace PC cord A5 or A13
	b. Transmission error (data) CCU parity error alarm.		
	c. Transmission errors without alarm.	c. One or more of following:	c. Proceed as follows:
		(1) Photocell amplifiers	(1) Replace PC card A6.
		(2) Data register	(2) Replace PC card A7.
		(3) Invalid character detector	(3) Replace PC card A8.
		(4) ASCII encoder	(4) Replace PC card A13.
		(5) Timing generator	(5) Replace PC card A14.
		(6) Encode matrix	(6) Replace both PC cards A10 and A12.
		(7) Decode matrix	(7) Replace both PC cards A9 and A11.
	d. Failure to detect invalid characters.	d. Invalid character detector or timing generator.	d. Replace PC card A8 or A14.
4	Card functions and motion trouble:		
	a. Picker solenoid inoperative	a. One or more of following:	a. Proceed as follows:
		(1) Control logic	(1) Replace PC card A16.
		(2) Picker solenoid A2A2K1 defective.	(2) Replace solenoid.
		(3) Photocell amplifier defective -	(3) Replace PC card A6.
		(4) End-of-card photocell defective-	(4) Replace photocell.
		(5) Solenoid drivers	(5) Replace PC card A1.
		(6) Resistor A2A2R1	(6) Replace resistor.
		(7) Resistor A2A2R2	(7) Replace resistor.
		(8) Diode A2A2CR1	(8) Replace diode.
		(9) Capacitor A2A2C2	(9) Replace capacitor.
	b. Card offset failure	b. One or more of the following:	b. Proceed as follows:
		(1) Timing generator and alarm logic	(1) Replace PC card A14.
		(2) Timers	(2) Replace PC card A15.
		(3) Resistor A2A3R1	(3) Replace resistor.
		(4) Diode A2A3CR1	(4) Replace diode.
		(5) Relay A2A3K1	(5) Replace relay.
		(6) Control logic	(6) Replace PC card A16.
		(7) Solenoid drivers	(7) Replace PC card A1.
	c. Uncertain or no card motion into stacker.	c. Offsetting capstan idler or insufficient pressure	c. Replace defective part or adjust idler. between offset idler and capstan.
	d. Improper offsetting or stacking.	d. Offsetting capstan idler or stacker elevator.	d. Adjust offsetting angle of idler or adjust spring tension on elevator.
	e. Uncertain or no card motion through read station.	e. One or more of following:	e. Proceed as follows:
		(1) Insufficient capstan pull	(1) Increase pressure of idler on drive capstan.
		(2) Broken capstan drive belt, front or rear.	(2) Replace capstan drive belt.
		(3) Faulty idler capstan	(3) Replace idler capstan.
		(4) Faulty drive capstan	(4) Replace drive capstan.
	f. Drive motor inoperative	f. One or more of following:	f. Proceed as follows:
		(1) Drive motor fuse in power supply.	(1) Replace fuse.
		(2) Relay in power supply	(2) Replace relay or drive circuit.
		(3) Drive motor	(3) Replace drive motor.
	g. Picker belts stationary	g. Broken picker drive belt, or main drive belt.	g. Replace belt.
	h. All mechanisms inoperative	h. Faulty drive motor	h. Replace drive motor.

Item No.	Trouble symptom	Probable trouble	Checks and corrective measures
5	Miscellaneous troubles:		
	a. Power-on reset malfunction	a. Solenoid drivers	a. Replace PC card A1.
	b. Absence of control signal to or from CCU.	b. Control interface	b. Replace PC card A4.
	c. Card reader will not turn on	c. One or more of following:	c. Proceed as follows:
		(1) Loss of primary power	(1) Check power source.
		(2) AC or DC fuse blown in power supply.	(2) Replace blown fuse.
		(3) Loss of power connection in unit	(3) Check for secure connections.
		(4) AC POWER switch defective	(4) Replace switch.
		(5) Polar interface	(5) Replace PC card A5.
		(6) Timing generator and alarm logic	(6) Replace PC card A14.
		(7) Power supply malfunction	(7) Replace power supply.
		(8) Filter FL1, FL2, FL3, or FL4	(8) Replace defective filter.
	d. Alarm condition undetected	d. One or more of following:	d. Proceed as follows:
		(1) Lamp drivers	(1) Replace PC card A3.
		(2) Timing generator	(2) Replace PC card A14.
		(3) Control panel lamps	(3) Press LAMP TEST switch to check lamps. Replace defective lamps.
		(4) Timers	(4) Replace PC card A15.
		(5) Photocell amplifiers	(5) Replace PC card A6.
	e. Improper response to front panel controls.	e. Control logic	e. Replace PC card A16.
	f. Erratic operation -.	f. One or more of following:	f. Proceed as follows:
		(1) Loose connection in ac power circuit.	(1) Check ac power circuit connections.
		(2) Power supply malfunction	(2) Check power supply.
		(3) Lamp	(3) Replace lamp.
	g. Ventilating fan inoperative	g. One or more of following:	g. Proceed as follows:
		(1) Fuse A10F7	(1) Replace fuse.
		(2) Faulty blower motor	(2) Replace blower motor.
	h. Damage to cards being read.	h. One or-more of following:	h. Proceed as follows:
		(1)Stacker elevator too low	(1) Adjust stacker spring tension.
		(2) Deflector plate in sticker not lying flat on cards.	(2) Adjust deflector plate.
		(3) One picker belt raised above others.	(3) Adjust picker belt tension.
	i. Damage to cards being read.	i. Offset idler	i. Adjust angle of offset idler.

b. Power Supply PSI, Troubleshooting Procedure.

If there is any malfunction in any of the regulated supplies in power supply PS1, the sequencing module, A12, in the power supply automatically shuts down the entire supply. In order to troubleshoot the power supply, the sequencing module must be removed and in its place a manual control card (Saratoga Industries part No. D39245) must be installed. This control card contains manually operated switches which permit the regulated supplies to be turned on one at a time.

(1) In order to use the manual control card to troubleshoot power supply PS1, first operate all SR of the manual control card. This should turn on all the regulated supplies, which can be monitored at the test jacks on the front of the power supply, as described in paragraph 4-67 (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 sequencing 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 (c below). If all regulated supplies are not operating, the ac power transformer (A9T1) is defective or a front panel ac fuse is blown.

(2) 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 on the front of the power supply normally monitored by a digital voltmeter (para 4-67). The ac ripple should not exceed the following peak-to-peak values:

Test point monitored	Maximum ripple (volts, peak to peak)
+ 4.75 and COM	0.01.2
+ 12 and COM	0.02
- 12 and COM	0.02
- 48 and COM	0.02

(3) If one of the regulated supplies is completely off, check the front panel fuse associated with this supply. If the fuse is not defective, the cause of trouble is in the corresponding voltage regulator card specified in the troubleshooting chart in c below.

c. Power Supply PSI Troubleshooting Chart.

Item No.	Trouble symptom	Probable trouble	Checks and corrective measures
	WARNING **Before removing or installing PC cards or heat sink subassemblies, ensure that input power is removed by opening the main ac input circuit breaker.**		
1	Power supply shuts off but can be made to operate when manual control card is installed.	Sequencing module PS1A12 defective.	Replace module PSIA12.
2	+4.75-volt output out of tolerance	a. Incorrectly adjusted +4.75-volt regulator. b. Defective +4.75volt regulator c. Defective rectifier-filter network	a. Adjust +4.7-volt regulator as dc-scribed in paragraph 4-67. b. Replace module PS1A1. c. Replace heatsink component assembly PS1A4
3	+12volt output out of tolerance	a. Incorrectly adjusted +12-volt regulator b. Defective +12-volt regulator c. Defective rectifier-filter network	a. Adjust +12-volt regulator as described in paragraph 4-67. b. Replace module PS1A2. c. Replace heatsink component assembly PS1A5.
4	-12-volt output out of tolerance	a. Incorrectly adjusted -12volt regulator. b. Defective -12-volt regulator c. Defective rectifier-filter network	a. Adjust -12-volt regulator as described in paragraph 4-67. b. Replace module PS1A2. c. Replace heatsink component assembly PS1A5.
5	-48-volt output out of tolerance	a. Incorrectly adjusted -48 volt-regulator. b. Defective 48-volt regulator c. Defective rectifier-filter network	a. Adjust -48-volt-regulator as described in paragraph 4-67. b. Replace module PS1A3 or PS1A6. 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.

4-14. Troubleshooting Reference Data

a. General. When using the dc resistance data listed below, do not use the resistance measurement as the sole basis for determining that the component is defective. Because of broad winding tolerances during manufacture, resistances of operable components may vary considerably.

b. Transformer Windings. The dc resistances of the windings of transformers PS1A9T1 and PS1A12T1 are listed below. The resistances are measured

with all connections removed from the transformer terminals.

Transformer	Winding terminals	Resistance (ohms)
PS1A9T1	1-2	0.270 (Max.).
	3-7	0.270 (Max.).
	4-7	0.021 (Max.).
	5-7	0.048 (Max.).
	6-7	0.011 (Max.).
	7-8	0.011 (Max.).
	7-9	0.048 (Max,).
	7-10	0.021 (Max.).
	7-11	0.270 (Max.).
	12-13	0.510 (Max.).
PS1A12T1	1-6	1.250 (+15%).
	2-4	0.290 (+15%).
	3-5	0.370 (+15%).

c. Solenoid Windings. The dc resistance of the winding of the offset idler solenoid should be approximately 28 ohms. The dc resistance of the picker solenoid winding should be approximately 35 ohms.

d. Additional Reference Data. Illustrations that will help in troubleshooting the card reader are listed below.

Fig. No.	Description
8-1	Color code for marking MIL-STD resistors.
8-2	Color code for marking MIL-STD capacitors.
8-3	Card reader, interconnection, schematic
8-4	diagram.
8-5	Card reader, control panel, schematic diagram.
8-6	Ac circuits, schematic diagram.
8-9	Dc circuits, schematic diagram.
	Card reader mechanism assembly A2, schematic diagram.

Section IV. REMOVAL AND REPLACEMENT

4-15. General

The following paragraphs describe the removal and replacement of major assemblies, subassemblies, and components of the card 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, repair, and adjustment procedures described in paragraphs 4-12, 4-51, and 4-53, respectively.

a. Removal and Disassembly. Disassemble the card 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. Open the front or rear door of the card reader inclosure (39, fig. 4-1) as necessary to gain access to assemblies to be removed.

b. Reassembly and Replacement.

(1) Inspect all removed parts for evidence of excessive wear or damage. Install only parts that are unquestionably serviceable.

(2) Check to be sure that mating gears and mechanical linkages are engaged properly before tightening the mounting screws or nuts.

CAUTION

When securing parts in place, be careful not to tighten the mounting screws or nuts excessively.

(3) Apply sealing compound (SM-B583244-008) to the areas indicated by the note on figure 4-1.

4-16. Removal and Replacement of Card Reader Mechanism

a. Removal. Remove the card reader mechanism (12, fig. 4-1) in order of index numbers 1 through 11. Remove cables J1 & J2 from the back of the card reader mechanism.

Mechanism cannot be removed without removing cables.

b. Replacement. Replace the card reader mechanism in the reverse order of removal in a above.

4-17. Disassembly and Reassembly of Card Reader Mechanism

The disassembly and reassembly of the card reader mechanism is described in paragraphs 4-28 through 4-49.

4-18. Removal and Replacement of Logic Assembly

a. Removal. Remove the logic assembly A1 (15, fig. 4-1) from the card reader as follows:

(1) Pull the logic assembly (15) forward until the latches on the slides lock in the open position.

(2) Remove the four connectors (44, 45, 46, and 47) from A1J1 through A1J4. Disconnect the wiring from terminal blocks A1TB2 and TB3 (26 and 32, fig. 4-2).

(3) Remove the strain relief bar (113, fig. 4-1) and cable clamps (119, 121, and 122) securing the cables to the logic assembly (15).

(4) Depress the latches on the slides (51, fig. 4-2) and pull the logic assembly from the card reader.

(5) Remove the screws (13 and 14.1) and bar nuts (14) to free the remaining half of slide (51, fig. 4-2) from the card reader inclosure (39, fig. 45-1).

b. Replacement. Replace the logic assembly in the reverse order of removal in a above.

4-19. Disassembly and Reassembly of Logic Assembly A1
(fig. 4-2)

a. Disassembly. Disassemble logic assembly A1 (15, fig. 4-1) in the order of the index numbers in figure 4-2.

b. Reassembly. Reassemble the logic assembly in the reverse order of index numbers in figure 4-2.

4-20. Removal and Replacement of Control Panel A3

a. Removal. Remove the control panel (19, fig. 4-1) in the order of index numbers 16, 17, and 18.

b. Replacement. Replace the control panel in the reverse order of removal in a above.

1 Cover assembly
2 Hex nut, 3/8 inch
3 Lockwasher, 3/8 inch
4 Screw, panhead, 3/8 dia., 7/8 in. long
5 Washer, 3/8 inch
6 Mechanism frame
7 Hex nut, No. 10-32
8 Washer, flat, No. 10
9 Screw, panhead, No. 10-32, 3/4 in. long
10 Lockwasher, No. 10
11 Safety bracket
11.1 Card reader
12 Mechanism assembly A2
13 Screw, binding head, No. 10-32, 1/2 in. long
14 Bar nut, 1/8 inch thick
14.1 Screw, flat head, No 10-32, 1/2 in. long
15 Logic assembly A1
16 Screw, panhead, No. 8-32, 7/16 in. long
17 Washer, flat, No. 8
18 Lockwasher, No. 8
19 Control panel A3
20 Power supply PS1
21 Screw, hex head, No. 10-32, 9/16 in. long
22 Lockwasher, No. 10
23 Washer, flat, No. 10
24 Bar nut, 1/8 inch thick
24.1 Screw, flat head, No. 10-32, 1/2 in. long
24.2 Bar spacer
24.3 Screw, panhead, No. 10-32, 1/2 in. long
24.4 Angle bracket
24.5 Hex nut, No. 10-32
25 Slide
26 Screw, panhead, No. 8-32, 1/2 in. long
27 Washer, flat, No. 8
28 Lockwasher, No. 8
29 Interface plate assembly
30 Screw, panhead, No. 10-32
31 Shield assembly
31.1 Standoff
32 Lockwasher, No. 10
33 Filter assembly FL1
34 Grill assembly
34.1 Stud
34.2 Locknut, No. 6-32
34.3 Grill
35 Screw, panhead, No. 8-32, 7/16 in. long
36 Washer, flat, No. 8
37 Lockwasher, No. 8
38 Blower B1
38.1 Washable filter
38.2 Capacitor B1C1
38.3 Clockwise blower wheel
38.4 Counterclockwise blower wheel
38.5 Blower motor
39 Card reader enclosure
40 Control panel wiring harness
41 Interface plate wiring harness
42 Cable assembly (W1)
43 Power distribution cable assy.
44 Contact assembly P1 (A1J1)
45 Contact assembly P2 (A1J2)
46 Contact assembly W1P1 (A1J3)
47 Contact assembly P3 (A1J4)
48 Locking screw
49 Lockwasher, No. 6
50 Washer; flat, No. 6
51 Insulator
52 Angle bracket
53 Keying pin
54 Screw, flat head, No. 4-40, 5/8 in. long
55 Hex nut, No. 4-40
56 Lockwasher, No. 4
57 Washer, flat, No. 4
58 Cable clamp
59 Male electrical contact
60 Terminal lug
61 Nameplate
62 Cable strap
63 Cable clamp
64 Chassis
64.1 Rubber bumper
65 Straight pin
66 Door
67 Handle
68 Cam
69 Rod
70 Nylon grommet
71 Mylar liner
72 Right hand door assembly
73 Left hand door assembly
73.1 Rear door
73.2 Cam
74 Rod
75 Mylar liner
76 Rear door assembly
77 Hex nut, No. 10-32
78 Lockwasher, No. 10
79 Washer, flat, No. 10
80 Mounting plate
81 Support plate
82 Screw, panhead, No. 10-32, 1/2 in. long
83 Washer, flat, No. 10
84 Lockwasher, No. 10
85 Shelf
86 Screw, sheetmetal, No. 10
87 Base
88 Mounting clip
89 Horizontal trim
90 Vertical trim
91 Screw, flathead, No. 10-32, 3/8 in. long
92 Hex nut, No. 10-32
93 Lockwasher, No. 10
94 Washer, flat, No. 10
95 Metal logo trim
96 Logo strip
97 Reference plate
98 Drive screw
99 Identification plate
100 Connector (W1P2)
101 Cable clamp
102 Solder ferrule
103 Connector P4
104 Cable clamp
105 Terminal lug
106 Terminal lug
107 Terminal lug
108 Terminal lug
109 Terminal lug
110 Hex nut, No. 10-32
111 Lockwasher, No. 10
112 Washer, flat, No. 10
113 Strain relief bar
114 Screw, panhead, No. 8-32, 5/8 in. long
115 Hex nut, No. 8-32
116 Washer, flat, No. 8
117 Lockwasher, No. 8
118 Lockwasher, external tooth, No. 8
119 Cable clamp
120 Cable clamp
121 Cable clamp
122 Cable clamp
123 Cable clamp
124 Cable clamp
125 Cable clamp
126 Cable support clamp

Figure 4-1 (1). Card reader, component location diagram (part 1 of 3).

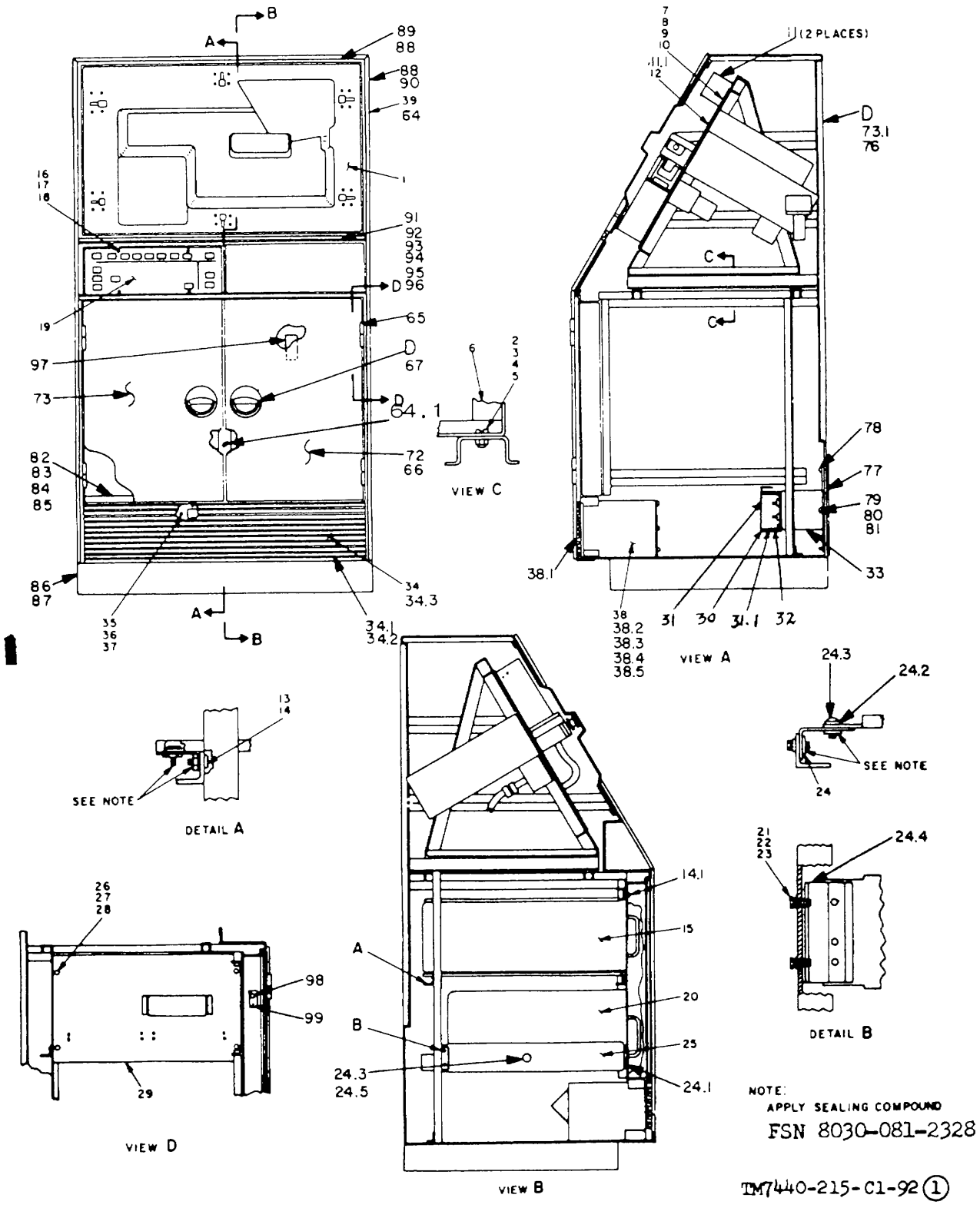


Figure 4-1(2) . Card reader, component location diagram (part 2 of 3).

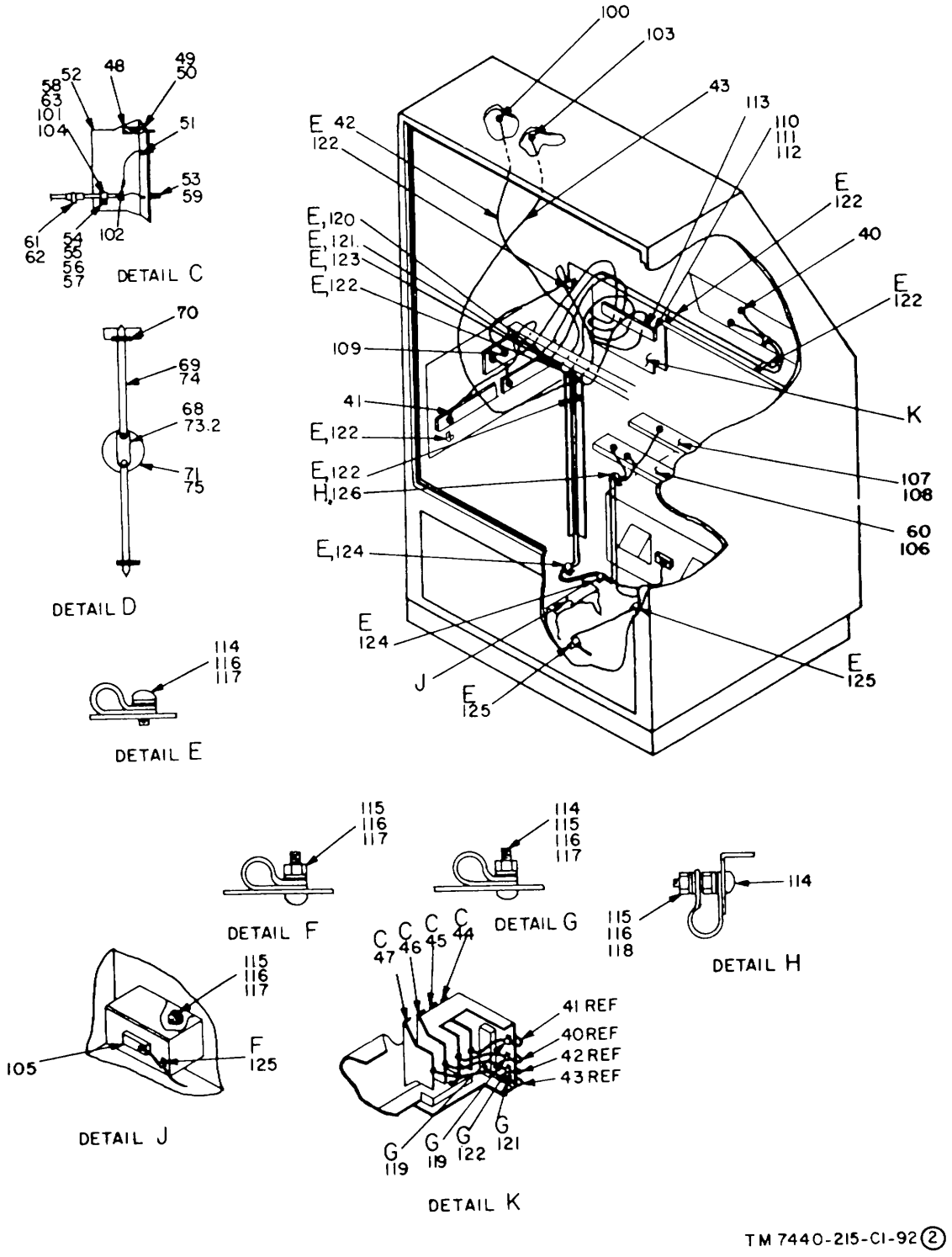
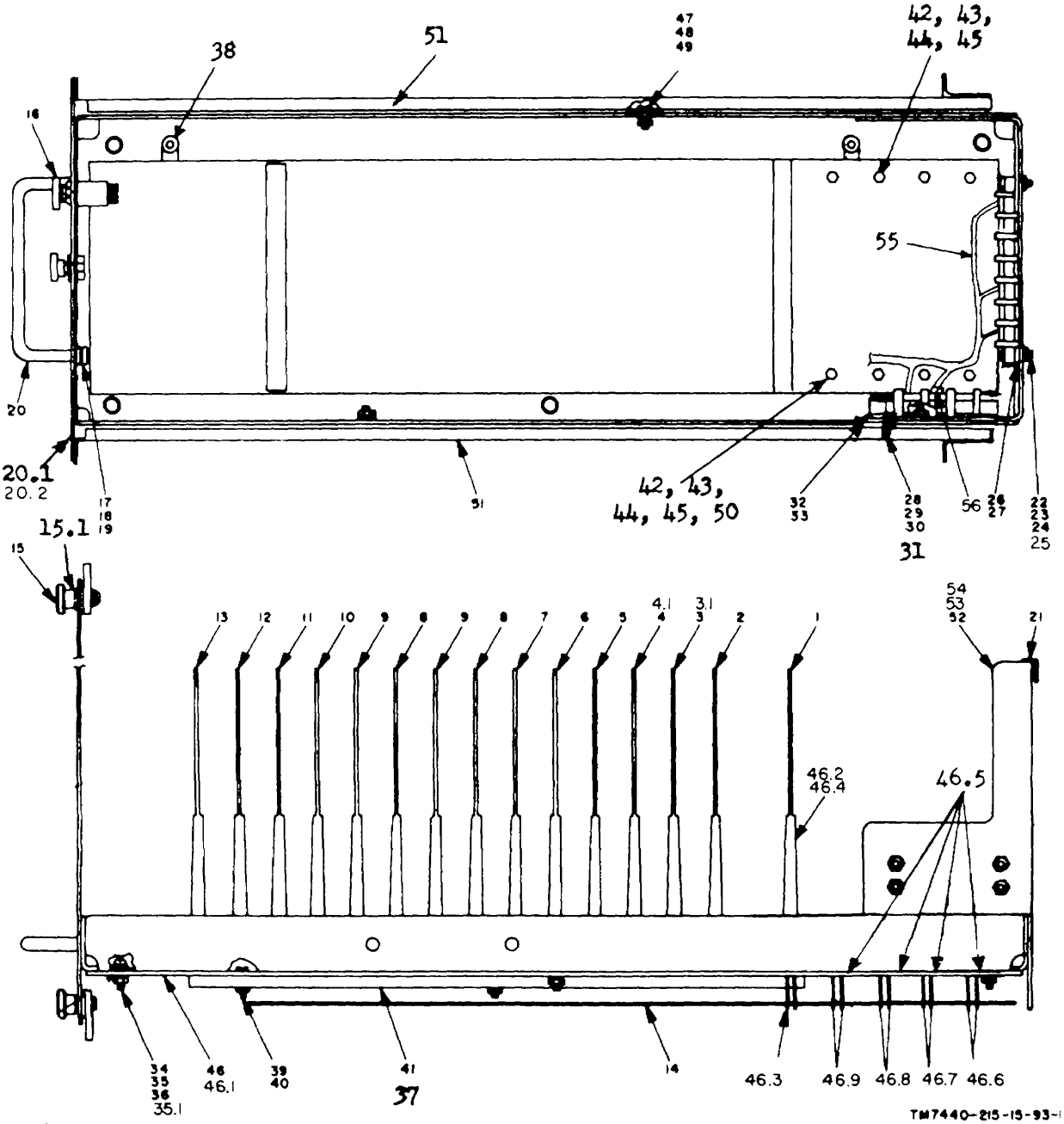


Figure 4-1 (3) . Card reader, component location diagram (part 3 of 3).



NOTES:
1. PC cards A65205 and A65227 are interchangeable.
2. PC cards A65215 and A65223 are interchangeable.

Figure 4-2. Logic assembly A1, component location diagram.

Legend for figure 4-2

1 PC card A1 (No. A65209-002)
2 PC card A3 (No. SME 546659)
3 PC card A4 (No. A65215) Note 2
3.1 PC card A4 (No. A65223) Note 2
4 PC card A5 (No. A65205) Note 1
4.1 PC card A5 (No. A65227) Note 2
5 PC card A6 (No. A52630)
6 PC card A7 (No. A65145)
7 PC card A8 (No. A52634)
8 PC cards A9, A11 (No. A53725)
9 PC cards A10, A12 (No. A53721)
10 PC card A13 (No. A52622)
11 PC card A14 (No. A65149)
12 PC card A15 (No. A65153)
13 PC card A16 (No. A65141)
14 Pin identification overlay
15 Door latch
15.1 Washer, No. 12
16 Push switch (S1)
17 Screw panhead, 10-32, 3/4 in. long
18 Lockwasher, No. 10
19 Washer, flat, No. 10
20 Bow handle
20.1 Front panel
20.2 Panel assembly
21 Plastic trim
22 Screw, panhead, 8-32, 3/4 in. long
23 Lockwasher, No. 8
24 Nut, hex, No. 8-32
25 Washer, flat, No. 8
26 Terminal board (TB2)
27 Marker strip
28 Screw, panhead, 6-32, 7/8 in. long
29 Lockwasher, No 6
30 Nut, hex, No. 6-32
31 Washer, flat, No. 6
32 Terminal board (TB3)
33 Marker strip
34 Screw, panhead, 10-32, 5/8 in. long
35 Lockwasher, No. 10
35.1 Washer, flat, No. 10
36 Hex nut, No. 10-32
37 Washer, flat, No. 10
38 Main panel assembly
39 Screw, nylon, 6-32, 1/2 in. long
40 Nut, hex, nylon, No. 6-32
41 Laminated bus (TB1)
42 Screw, panhead, 6-32, 3/8 in. long
43 Lockwasher, No. 6
44 Washer, flat, No. 6
45 Spacer
46 Contact plate
46.1 Contact plate assembly
46.2 PC card insulator
46.3 Contact pin
46.4 Screw, panhead No. 6-32 5/16 in. long
46.5 Connector, insulator
46.6 Contact pin (A1J1)
46.7 Contact pin (A1J2)
46.8 Contact pin (A1J3)
46.9 Contact pin (A1J4)
47 Screw, panhead, 10-32, 1/2 in. long
48 Nut, hex, No. 10-32
49 Lockwasher, No. 10
50 Washer, flat, No. 10
51 Slide
52 Chassis
53 Logic chassis (w/o PC cards)
54 Chassis assembly
55 Wiring harness
56 Terminal lug

4-21. Disassembly and Reassembly of Control Panel

(fig. 4-3)

a. Disassembly. Disassemble the control panel (19, fig. 4-1) in the order of index numbers in figure 4-3.

b. Reassembly. Reassemble the control panel in the reverse order of index numbers in figure 43.

4-22. Removal and Replacement of Power Supply PS1

WARNING

Use two men to remove the power supply (20, fig. 4-1) from the reader inclosure. Use extreme care in handling the power supply (20), to avoid injury to personnel or damage to equipment, since there are no good grasping areas in the rear of these units.

a. Removal. Remove the power supply (20) by sliding out of the reader inclosure on the slides (25) and carefully lifting the power supplies off the slides.

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 180^{o} in a counterclockwise 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.

b. Replacement. Replace the power supply in the reverse order of removal in *a* 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.

4-23. Disassembly and Reassembly of Power Supply

(fig. 4-4)

a. Disassembly. Disassemble the power supply (20, fig. 4-1) in the order of the index numbers in figure 4-4.

b. Reassembly. Reassemble the power supply in the reverse order of the index numbers in figure 4-4.

4-24. Removal and Replacement of Interface Plate Assembly

a. Removal. Remove the interface plate assembly (29, fig. 4-1) in the order of index numbers 26, 27, and 28.

b. Replacement. Replace the interface plate assembly in the reverse order of removal in a above.

4-25. Disassembly and Reassembly of Interface Plate Assembly
(fig 4-5)

a. Disassembly. Disassemble the interface plate assembly (29, Fig 4-1) in the order of the index numbers in figure 4-5.

b. Reassembly. Reassemble the interface plate assembly in the reverse order of the index numbers in figure 4-5.

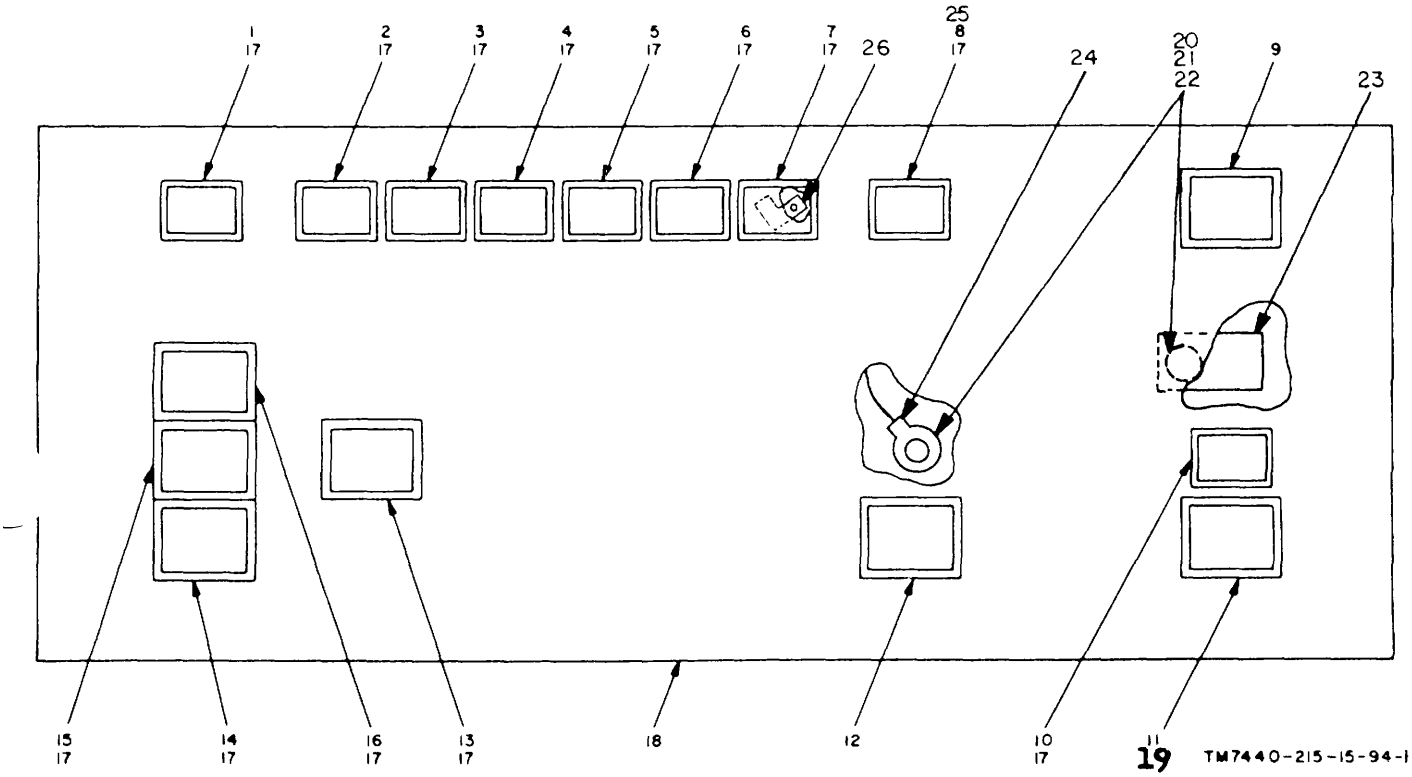


Figure 4-3. Control panel A3, component location diagram.

1	Indicator light (DS9)	17	Lamp (No. 330)
2	Indicator light (DS8)	18	Panel
3	Indicator light (DS7)	19	Lamp (No. 382)
4	Indicator light (DS6)	20	Hex nut, No. 10-32
5	Indicator light (DS5)	21	Lockwasher, No. 10
6	Indicator light (DS4)	22	Washer, flat, No. 10
7	Indicator light (DS3)	23	Cable clamp
8	Indicator light (DS2)	24	Terminal lug
9	Push switch (Z1)	25	Terminal lug
10	Indicator light (DS1)	26	Jumper
11	Push switch (Z2)		
12	Push switch (Z3)		
13	Push switch (Z4)		
14	Push switch (Z5)		
15	Push switch (Z6)		
16	Push switch (Z7)		

Legend for figure 4-4

1 Screw, hex, head, No. 8-32, 3/8 in long
2 Lockwasher, No. 8
3 Washer, No. 8
4 Front Panel Assembly (A10)
4.1 Front Panel
5 Latch
5.1 Washer, No. 12
6 Fuse Holder (XF1)
7 Fuse Holder (XF4)
8 Fuse Holder (XF2, XF3, XF9, XF10)
9 Fuse Holder (XF5, XF7, XF8)
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, hex head, No. 10-32, 5/8 in. long
16 Lockwasher, No. 10
17 Washer, No. 10
18 Handle
19 Test point jack (TP2 throughTP5)
20 Test point jack (TP1)
21 Screw, hex head, No. 6-32, 3/8 in. long
22 Lockwasher, No. 6
23 Washer, 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, hex head, No. 8-32, 3/8 in. long
29 Lockwasher, No. 8
30 Washer, No. 8
31 Sequence module bracket, left hand
32 Sequence module bracket, right hand
33 Card guide
34 Screw, hex head, No. 4-40, 1/2 in. long
35 Lockwasher, No. 4
36 Washer, No. 4
37 Hex nut, No. 4-40
38 Polarization key
39 Electrical receptacle connector (A9J4)
40 Sequence module component board assembly (A12)
41 Screw, hex head, No. 10-32, 4-7/8 in. long
42 Screw, hex head, No. 10-32, 6 3/8 in. long
43 Lockwasher, No. 10
44 Washer, No. 10
45 Capacitor nest
45.1 Insulator
46 Capacitor, 82,000 µf, 15 vdc (A9C2, A9C3)
47 Capacitor, 44,000 µf, 25 vdc (A9C4, A9C5)
48 Capacitor, 6,700 µf, 100 vdc (A9C5)
49 Capacitor, 1,500 µf, 75 vdc (A9C1)
50 Screw, hex head, No. 6-32, 5/8 in. long
51 Washer, No. 6
52 Lockwasher, No. 6
53 Hex nut, No. 6-32
54 Screw, pan head, No. 6-32, 3/8 in. long
55 Capacitor, 9,200 µf, 10 vdcw (A9C7, A9C11)
56 Capacitor, 4,600 µf, 20 vdcw (A9C8, A9C9)
57 Capacitor, 1,200 µf, 75 vdcw (A9C10)
58 Capacitor bracket
59 Screw, hex head, No. 6-32, 3/8 in. long
60 Lockwasher, No. 6
61 Washer, No. 6
62 Heatsink assembly (A11)
62.1 End plate
62.2 Screw, panhead, No. 6-32, 1/2 in. long
62.3 Lockwasher, No. 6
62.4 Washer, flat, No. 6
62.5 Side cover
62.6 Heat sink 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 Heat sink assembly (A5)
62.11 Heat sink assembly (A6)
63 Screw, hex head, No. 8-32, 3/8 in. long
64 Lockwasher, No. 8
65 Washer, No. 8
66 Relay bracket
67 Screw, hex head, No. 8-32, 1/2 in. long
68 Lockwasher, No. 8
69 Washer, flat, No. 8
70 Relay, 24 vdc (A9K1)
71 Grommet
72 Screw, hex head, No. 6-32, 3/8 in. long
73 Lockwasher, No. 6
74 Washer, flat, No. 6
75 Terminal board bracket
76 Stiffener
77 Screw, hex head, No. 6-32, 5/8 in. long
78 Screw, hex head, No. 6-32, 3/8 in. long
78.1 Hex nut, No. 6-23
78.2 Shield
78.3 Bracket
78.4 Shield assembly
78.5 Standoff
79 Lockwasher, No. 6
80 Washer, flat, No. 6
81 Terminal board (TB1)
82 Terminal board (TB2)
83 Component board assembly (A15)
83.1 Screw, hex head, No. 6-32, 5/16 in. long
83.2 Lockwasher, No. 6
83.3 Washer, flat, No. 6
84 Spacer
84.1 Hex nut, No. 6-32
85 Screw, hex head, No. 6-32, 3/8 in. long
86 Lockwasher, No. 6
87 Washer, flat, No. 6
88 Connector bracket assembly
89 Screw, hex head, No. 4-40, 5/16 in. long
90 Lockwasher, No. 4
91 Washer, flat, No. 4
92 Component board assembly (A1)
93 Component board assembly (A2)
94 Component board assembly (A3)
95 Electrical receptacle connector (A9J1, A9J2, A9J3)
96 Polarization key
97 Hex nut, No. 10-32
98 Lockwasher, No. 10
99 Washer, flat, No. 10
100 Hex nut, 1/4- 20
101 Lockwasher, No. 1/4 in.
102 Washer, flat, No. 1/4 in.
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

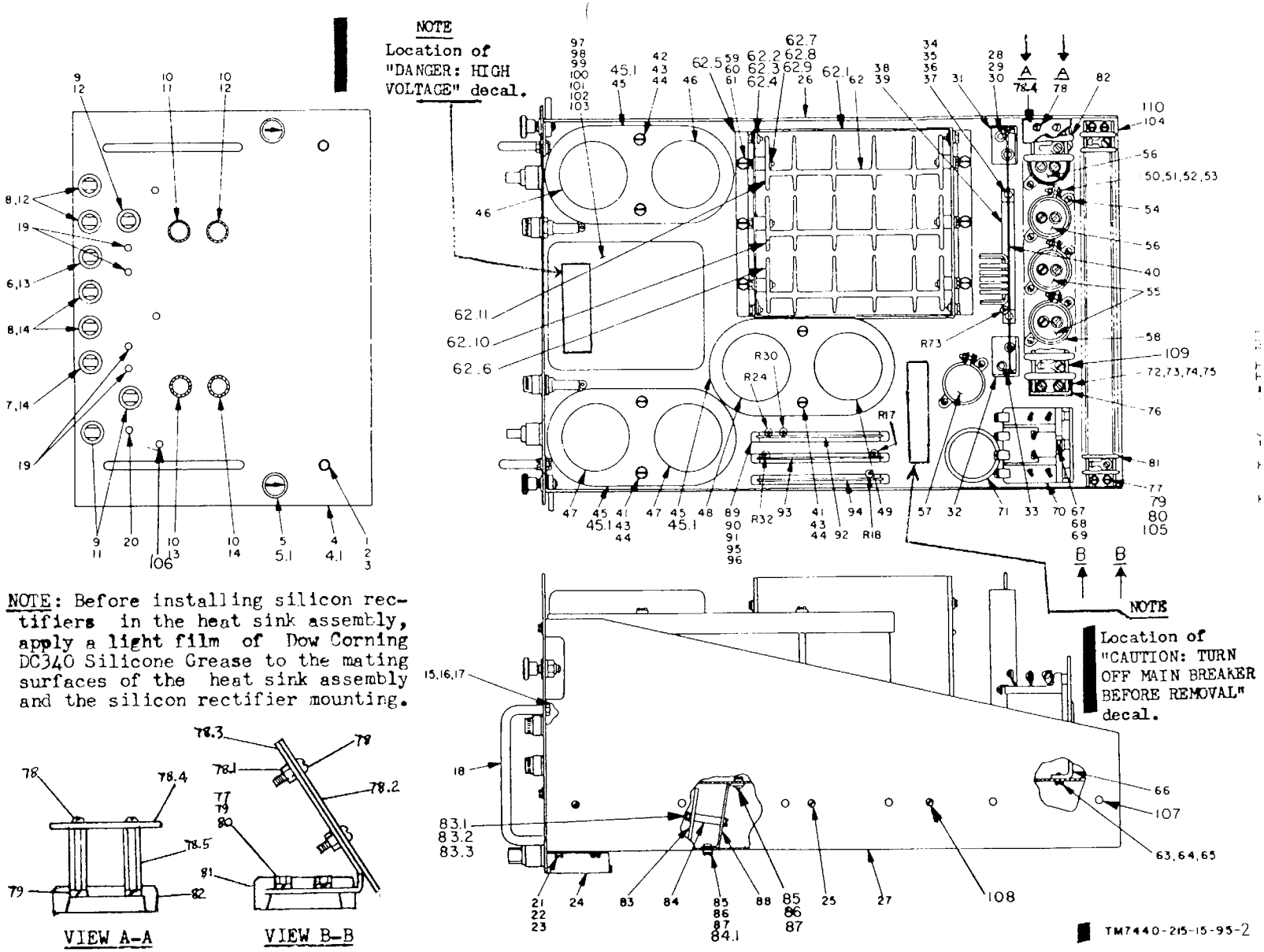


Figure 4-4. Power supply PS1, component location diagram

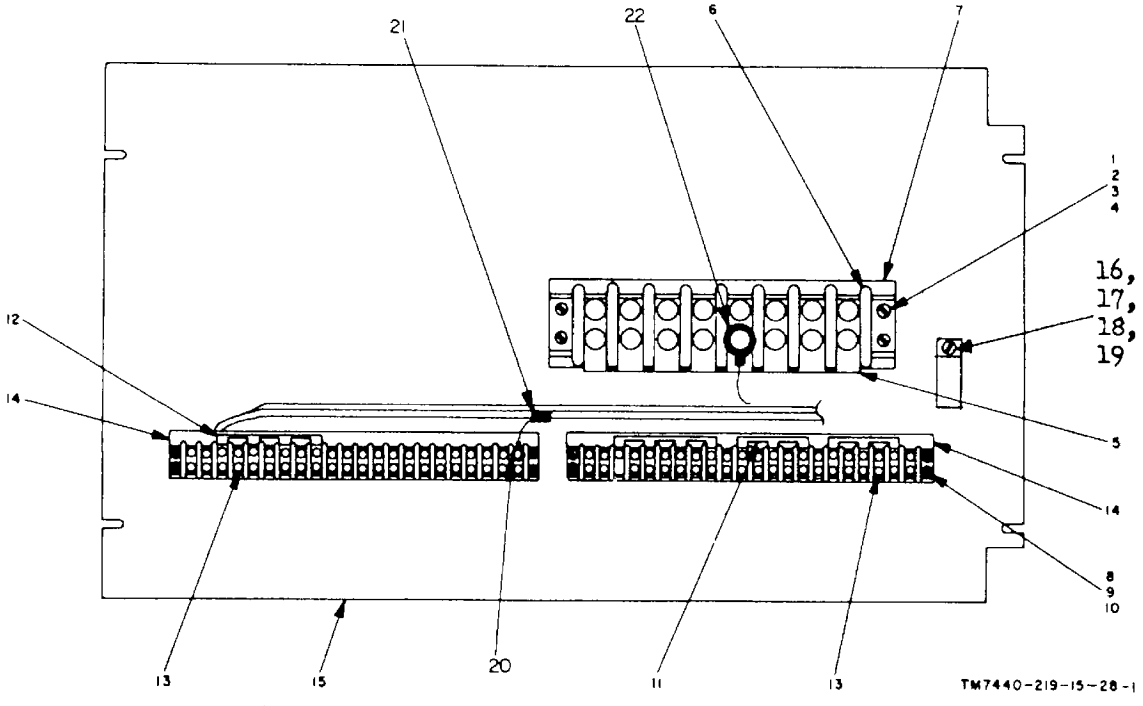


Figure 4-5. Interface plate assembly, component location diagram

1. Screw, panhead, 8-32, 1 in. long
2. Nut, hex, No.8
3. Lockwasher, flat, No. 8
4. Washer, flat, No. 8
5. Jumper plate
6. Terminal board (TB3)
7. Marker strip
8. Screw, panhead, 6-32, 5/8 in. long
9. Hex nut. No. 6
10. Lockwasher, No. 6
11. Alternate jumper
12. Alternate Jumper
13. Terminal board (TB1, TB2)
14. Marker strip
15. Interface plate
16. Screw, panhead, No. 8-32, 5/8 in. long
17. Lockwasher, No. 8
18. Washer, flat, No. 8
19. Cable clamp
20. Terminal lug
21. Ferrule
22. Terminal lug

4-26. Removal and Replacement of Filter Assembly

a. Removal. Remove the filter assembly (33, fig. 4-1) in the order of index numbers 30, 31, and 32.

b. Replacement. Replace the filter assembly in the reverse order of removal in a above.

4-27. Disassembly and Reassembly of Filter Assembly

(fig. 4-6)

a. Disassembly. Disassemble the filter assembly (33, fig. 4-1) in the order of the index numbers in figure 4-6;

b. Reassembly. Reassemble the filter assembly in the reverse order of the index numbers in figure 4-6.

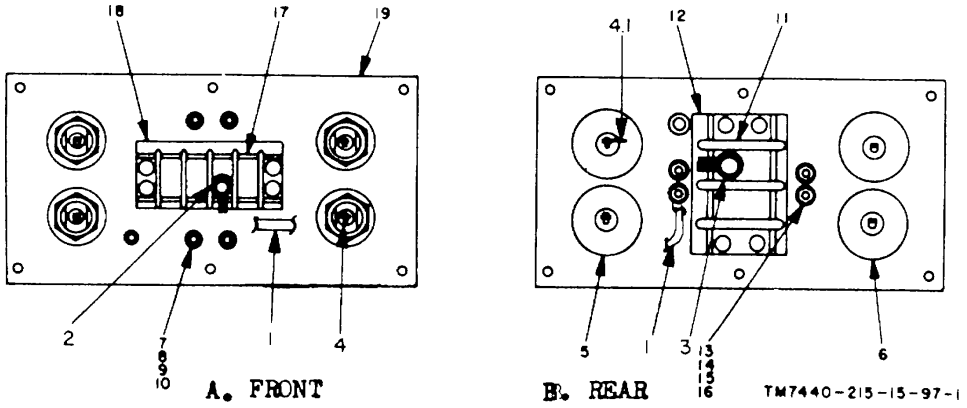


Figure 4-6. Filter assembly, component location diagram.

Legend for figure 4-6

1	Wiring Harness	10	Washer, flat, No. 6
2	Terminal lug	11	Terminal board (FL1TB1)
3	Terminal lug	12	Markers strip
4	Terminal lug	13	Screw, panhead, No. 8-32, 7/8 in. long
4.1	Terminal lug	14	Hex nut, No. 8-32
5	Filter (FL3, FL4)	15	Lockwasher, No. 8
6	Filter (FL1, FL2)	16	Washer, flat, No. 8
7	Screw, panhead, No. 6-32, 7/8 in. long	17	Terminal board (FL1TB1)
8	Hex nut, No 6-32	18	Marker strip
9	Lockwasher, No. 6	19	Filter plate

Section V. DISASSEMBLY AND REASSEMBLY OF CARD READER MECHANISM

4-28. General

The disassembly and reassembly of the card reader mechanism is effected by removal and replacement of major assemblies, subassemblies, and components as described in the following paragraphs. 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, repair, and adjustment procedures described in paragraphs 4-12, 4-51, and 4-53, respectively.

4-29. Removal and Replacement of Muffler

a. Removal. Remove the muffler (41, ig. 4-7) in the order of index numbers 38, 40, 42, and 41.

b. Replacement. Replace the muffler in the reverse order of removal in a above.

LEGEND FOR FIGURE 4-7

1	Hose clamp	29	Magnetic pickup (PU1)
2	Hose clamp	30	Socket
3	Screw, panhead, No. 8-32, 1.2 in. long	31	Capacitor, 0.033uf, 100 vdcw
4	Lockwasher, No. 8	32	Terminal
5	Washer, flat, No. 8	33	Bracket
6	Tie strap	33.1	Magnetic pickup assembly
7	Filter hose subassembly	34	Screw, cap, socket head, 1/4-20, 3/4 in. long
8	Hose fitting	35	Lockwasher, 1/4 in.
9	Nut, locking, relief valve	36	Washer, 1/4 in.
10	Nut, adjustment, relief valve	37	Retainer plate
11	Spring, relief valve	38	Hose clamp
12	Body, relief valve	39	Hose clamp
12.1	Valve	39.1	Stay strap
12.2	Vacuum relief valve	40	Tygon tubing
13	Vacuum gauge, 0-30 inches Hg.	41	Muffler
13.1	Hose clamp	42	Elbow, 90 degree
14	Vacuum manifold	43	Pipe plug
14.1	Hose clamp	44	Bolt, hex head, 1/4-20, 5/8 in. long
15	Tygon tubing	45	Lockwasher, 1/4
15.1	Nipple, 1/4 NPT, 1-1/2 in. long	46	Washer, 1/4
16	Hex nut, No. 6-32	47	Motor assembly, modified
17	Lockwasher, No. 6	48	Screw, panhead, No. 10-32, 1 -1/2 in. long
18	Washer, flat, No. 6	49	Lockwasher, No. 10
19	Screw, binding head, No. 6-32, 1/2 in. long	50	Washer, No. 10
20	D washer	51	Standoff
21	Hose clamp	52	Hex, nut, No. 8-32
21.1	Screw, binding head, No. 6-32, 5/16 in. long	53	Lockwasher, No. 8
21.2	Lockwasher, No. 6	54	Washer, No. 8
22	Connector bracket	55	Screw, panhead, No. 8-32, 3/4 in. long
23	Electrical receptacle connector (J3, J4, J5)	56	Washer, No. 8
23.1	Contact pin	57	Inlet plate
24	Screw, binding head, No. 8-32, 1/2 in. long	58	Gasket
25	Lockwasher, No. 8	59	Mixer nozzle
26	Washer, No. 8	59.1	Exhauster assembly
27	Electrical receptacle connector	60	Screw, panhead, No. 6-32 5/8 in. long
28	Hex nut, 3/8-24	61	Lockwasher, No. 6

61.1 Straddle plate
62 Protector cover
63 Terminal board
63.1 Insulator strip
63.2 Terminal lug
64 Motor support
64.1 Motor support assembly
64.2 Support assembly
65 Belt
66 Belt
67 Screw, cap, socket head, No. 10-32, 1/2 in. long
68 Lockwasher, No. 10
69 Washer, No. 10
70 Hex. nut, 5/16-24
71 Hex. nut, 5/16-24
72 Pulley
73 Washer, 3/8 in.
75 Pulley
75 Spur gear
76 Spacer
77 Shaft, stacker capstan
78 Roller
79 Ball bearing
80 Sleeve
81 Ball bearing
82 Offset driver support
82.1 Offset drive assembly
83 Screw, binding head, No. 8-32, 3/4 in. long
84 Lockwasher, No. 8
85 Washer, No. 8
86 Spacer
87 Spacer
88 Electrical plug connector (A2P1)
89 Return spring
90 Hex. nut, No. 6-32
91 Lockwasher, No. 6
92 Washer, No. 6
93 Guard cover
94 Standoff
95 Bumper
96 Solenoid plunger
97 Hex. nut, No. 5-40
98 Screw, binding head, No. 6-32, 3/8 in. long
99 Lockwasher, No. 6
100 Washer, No. 6
101 Screw, binding head, No. 8-32, 1/2 in. long
102 Lockwasher, No. 8
103 Washer, No. 8
104 Solenoid stop
105 Solenoid
106 Screw, binding head, No. 4-40, 1/4 in. long
107 Lockwasher, No. 4
108 Resistor (A1R2)
109 Hex. nut. No. 6-32
110 Washer, No. 6
111 Continuous thread stud
112 Diode (CR)
113 Resistor, 2700 ohms, I watt
114 Capacitor (A1C1)
114.1 Mounting clip
115 Stud terminal
116 Electrical contact
117 Component board
118 Electrical shield plate
119 Picker solenoid bracket
119.1 Solenoid assembly
120 Screw, binding head, No. 8-32, 1/2 in. long
121 Lockwasher, No. 8
122 Washer, No. 8
123 Lamp (DS1)
124 Screw, binding head, No. 4-40, 3/16 in. long
125 Lockwasher, No. 4
126 Washer, No. 4
127 Lamp socket
128 Input guide
128.1 Guide-lamp assembly
129 Screw, cap, socket head, 1/4-20, 5/8 in. long
130 Lockwasher, No. 4
131 Washer, No. 4
132 Picker and reader assembly (fig. 4-11)
133 Screw, cap, socket head, No. 10-32, 1/2 in. long
134 Lockwasher, No. 10
135 Washer, No. 10
136 Hex, nut, No. 6-32
137 Lockwasher. No. 6
138 Washer, No. 6
139 Lockwasher, external tooth, No. 6
140 Screw, binding head, No. 6-32, 5/16 in. long
141 Hex. nut, No. 6-32
142 Lockwasher, No. 6
143 Screw, binding head, No. 6-32, 3/8 in. long
144 Washer, No. 6
145 Lockwasher, external tooth, No. 6
146 Bonding strap
147 Retaining ring
148 Pivot pin
149 Card deflector
150 Screw, binding head, No. 8-32, 3/8 in. long
151 Washer, No. 8
152 Roller shaft
153 Ball bearing
154 Ball bearing
155 Roller
156 Retaining ring
157 Offset idler spring
158 Washer
159 Pivot frame assembly
160 Screw, binding head, No. 10-32, 1 1/8 in. long
161 Lockwasher, No. 10
162 Washer, No. 10
163 Nut strip
164 Pivot arm pin
165 Pivot arm
166 Screw, binding head, No. 4-10, 5/16 in. long
167 Lockwasher, No. 4
168 Solenoid
169 Solenoid bracket
170 Screw, binding head, No. 4-40, 1 in. long
171 Lockwasher, No. 4
172 Washer, No. 4
173 Component cover
174 Standoff
175 Screw, binding head, No. 4-40, 3/8 in. long
176 Lockwasher, No. 4
177 Resistor (A1R1)
178 Diode (A1CR1)
179 Electrical contact
180 Electrical plug connector (A3P1)
181 Stud terminal
182 Screw, binding head, No. 10-32, 5/8 in. long
183 Lockwasher, No. 10
184 Washer, No. 10
185 Support
186 Screw, binding head, No. 2-56, 1/2 in. long
187 Lockwasher, No. 2
188 Washer, No. 2
189 Nut strip
190 Push switch (S1)
191 Screw, binding head, No. 10-32, 7/8 in. long
191.1 Locknut, No. 10-32

192 Retaining ring
193 Roller
194 Screw, binding head, No. 6-32, 1/4 in. long
195 Lockwasher, No. 6
196 Deleted
197 Roller pin
198 Deflector bracket
198.1 Offset assembly
199 Screw, cap, socket head, No. 10-32, 3/8 in. long
200 Lockwasher, No. 10
201 Deleted
202 Setscrew
203 Shaft collar
204 Spring hanger
205 Stacker spring
206 Screw, binding head, No. 6-32, 1/4 in. long
207 Retainer clip
208 Setscrew
209 Shaft collar
210 Rubber bumper
211 Preformed packing
212 Elevator slider shaft
213 Screw, flathead, No. 6-32, 3/8 in. long
214 Elevator
215 Ball bearing
216 Teflon tape, 1 in. wide, 10 in. long
217 Backer plate
217.1 Elevator assembly
218 Screw, binding head, No. 8-32, 1/2 in. long
219 Lockwasher, No. 10
220 Washer, No. 10
221 Top card guide
222 Bottom card guide
223 Screw, binding head, No. 6-32, 1/2 in. long
224 Lockwasher, No. 6
225 Washer, No. 6
226 Card input support
227 Hex nut, No. 8-32
228 Lockwasher, No. 8
228.1 Washer, No. 8
229 Screw, binding head, No. 8-32, 1/2 in. long
230 Electrical receptacle connector (J1)
231 Hex nut, No. 4-40
232 Lockwasher, No. 4
232.1 Washer, No. 4
233 Screw, binding head, No. 4-40, 1/2 in. long
234 Electrical receptacle connector (J2)
235 Screw, binding head, No. 8-32, 1/2 in. long
236 Lockwasher, No. 8
237 Connector bracket
238 Terminal cover
239 Screw, binding head
240 Lockwasher, No. 6
241 Straddle plate
242 Terminal strip
243 Insulator strip
244 Screw, Binding head, No. 2-56, 1/2 in. long
245 Lockwasher, No. 2
246 Nut strap
246.1 Resistor
246.2 Terminal lug
247 Resistor assembly (R1)
248 Screw, binding head, No. 6-32, 1 in. long
249 Lockwasher, No. 6
250 Washer, No. 6
251 Taper pin block
251.1 Contact pin
252 Wiring harness
253 Deleted
254 Deleted
255 Screw, binding head, No. 6-32, 5/16 in. long
256 Lockwasher, No. 6
257 Washer, No. 6
258 Wiring race
259 Screw, binding head, No. 8-32, 1/2 in. long
260 Lockwasher, No. 8
261 Washer, No. 8
262 Card bumper
263 Screw, binding head, No. 6-32, 3/8 in. long
264 Lockwasher, No. 6
265 Washer, No. 6
266 Edge guide
267 Edge guide
268 Hex nut, No. 8-32
269 Lockwasher, No. 8
270 Washer, No. 8
270.1 Glide
270.2 Stud, No. 8-32
271 Input glide assembly
271.1 Glide
272 Input glide assembly
273 Screw, cap, socket head, No. 6-32, 1/4 in. long
274 Lockwasher, No. 6
275 Washer, No. 6
276 Stay strap
277 Screw, binding head, No. 6-32, 5/16 in. long
278 Lockwasher, No. 6
279 Connector clip
280 Grommet
281 Grommet
282 Reader panel

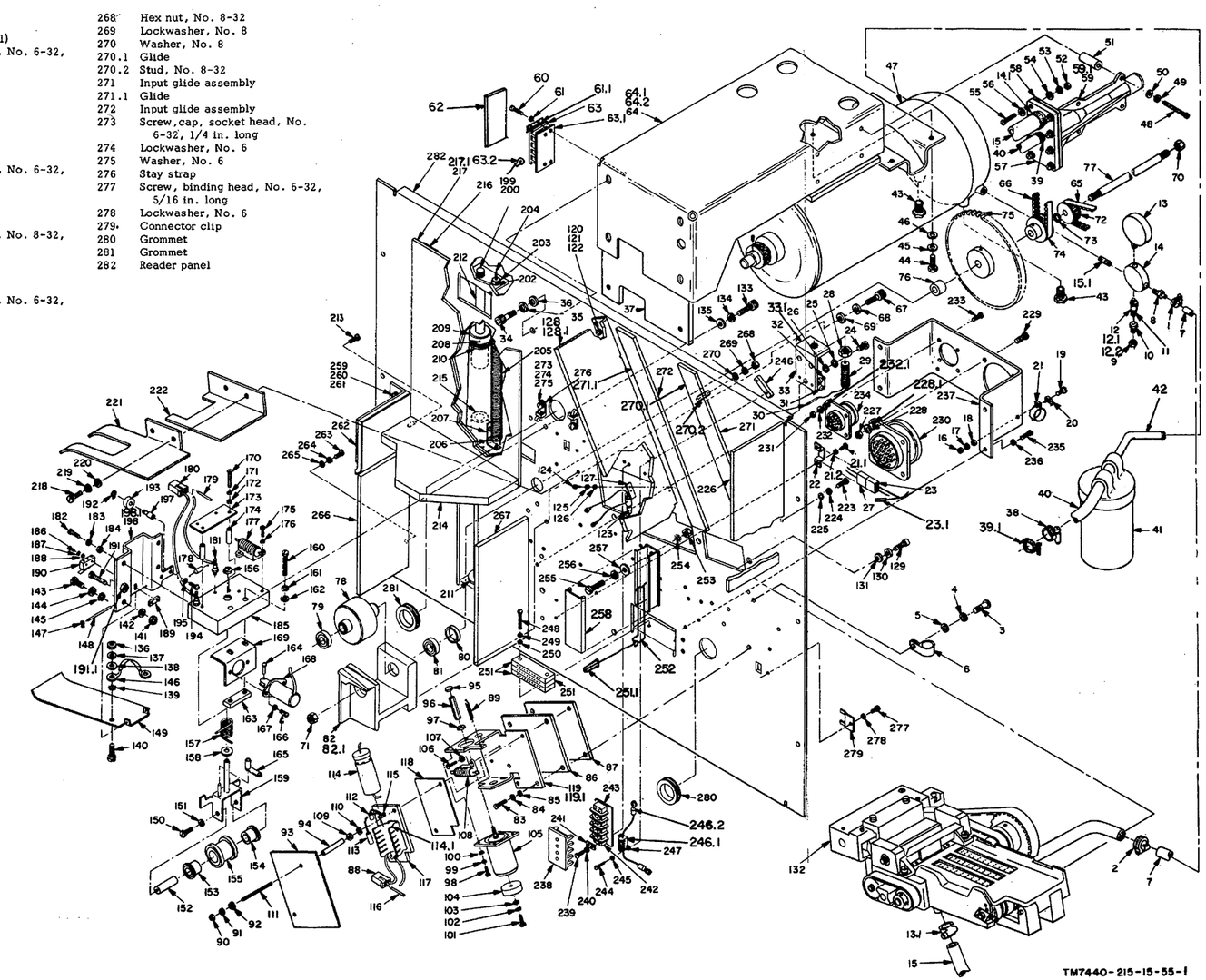


Figure 4-7. Card reader mechanism, exploded view.

4-30. Removal and Replacement of Magnetic Pickup Assembly

a. Removal. Remove the magnetic pickup assembly (33.1, figure 4-7) in the order of index numbers 24, 25, and 26. Remove plug A2P1.

b. Replacement. Replace the magnetic pickup assembly in the reverse order of removal in a above. After replacement, perform the ad[justment procedure described in paragraph 4-59.

4-31. Disassembly and Reassembly of Magnetic Pickup Assembly

a. Disassembly. Disassemble the magnetic pickup assembly in the order of index numbers 27 through 33 in figure 4-7.

b. Reassembly. Reassemble the magnetic pickup assembly in the reverse order of disassembly in a above.

4-32. Removal and Replacement of Motor and Support Assembly

a. Removal. Removal of the motor and support assembly (38 through 64, fig. 4-7) requires two men due to the weight of the assembly.

(1) Disconnect and tag the motor leads at the terminal board (63, fig. 4-7).

(1.1) Remove hose clamp (14.1) and tygon tubing (15).

(1.2) Remove hose clamp (1) and filter hose subassembly (7).

(2) Hold assembly in place and remove mounting screws (34), lockwasher (35), flat washer (36), and retainer plate (37).

(3) Lower assembly and unhook drive belt (66) from pulley (15, fig. 4-10).

b. Replacement. Replace the motor and support assembly in the reverse order of removal in a above except as follows: Before fully tightening the mounting screws (34, fig. 4-7), raise the assembly so that the drive belt (66) is not slack, then tighten the mounting screws. Although the drive belt tension is not critical, the drive belt should not be so loose that there is play, or so tight that the pulley bearings bind.

4-33. Disassembly and Reassembly of Motor and Support Assembly

a. Disassembly. Disassemble the motor and support assembly in the order of index numbers 18 through 64 in figure 4-7.

b. Reassembly. Reassemble the motor and support assembly in the reverse order of disassembly in a above.

4-34. Disassembly and Reassembly of Muffler

a. Disassembly. Disassemble the muffler (41, fig. 4-7) in the order of the index numbers in figure 4-8.

b. Reassembly. Reassemble the muffler in the reverse order of disassembly in a above.

4-35. Deleted

4-36. Disassembly and Reassembly of Motor and Pump

a. Disassembly. Disassemble the motor and pump (47, fig. 4-7) in the order of the index numbers in figure 4-10.

b. Reassembly. Reassemble the motor and pump in the reverse order of disassemble in a above.

4-36.1. Vacuum Pump Vane Replacement

NOTE

If a minimum of 5 inches Hg cannot be obtained after cleaning muffler, checking vacuum lines, and adjustment of vacuum relief valve (para 4-70), the vanes in the vacuum pump may require replacement.

Replace vanes in the vacuum pump as follows:

a. Remove screws (1, fig. 4-10) and washers (1.1) while supporting end plate (2). Remove end plate (2).

b. Remove worn carbon vanes (5) and clean carbon particles from the pump.

c. Insert new carbon vanes (5) with raised edge facing toward the outside and toward the direction of rotor rotation.

d. Replace end plate (2) and secure with screws (1) and washers (1.1).

e. Allow drive motor to operate for approximately 30 minutes, then readjust vacuum relief valve as outlined in paragraph 4-70.

4-37.Removal and Replacement of Offset Drive Assembly

a. Removal. Removal of the offset drive assembly (70 through 82, fig. 4-7) results in the disassemble of the assembly.

(1) Remove belt (65, fig. 4-7), by sliding off flangeless pulley (55, fig. 4-11).

(2) Remove motor and vacuum pump (para 432 to gain access to drive assembly pulleys.

(3) Remove the two nuts (70 and 71, fig. 4-7) from the shaft (77). Since there is no convenient place for holding the shaft, only one of the nuts (70 or 71) may come off.

(4) All components on the shaft are held in place by compression of the two nuts. If the rear nut (70) has been removed in step (3), slide pulley (72), washer (73), pulley (74), spur gear (75), and spacer (76) off the shaft from the rear of the panel.

NOTE

On some units, pulleys (72 and 74) and spur gear (75) may have setscrews which must be loosened.

(5) Remove shaft (77) from the front, grasping roller (78), and sleeve (80) as they come free.

(6) If the front nut (71) was removed in step (3), remove shaft (77 complete with pulleys and washers from the rear of the panel grasping roller (78) and sleeve (80) as they come free. Then remove the remaining parts identified in step (4) from the shaft (77).

(7) Remove screws (67), lockwashers (68), and flatwasher (69) to release offset driver support (82).

(8) Remove bearings (79 and 81) from the offset driver support (82).

b. Replacement.

(1) Set bearings (79 and 81) into the support (82).

(2) Hold roller (78) in support (82) and insert shaft (77).

(3) Place nut (71) on shaft (77) and tighten.

(4) Slip spacer (80) onto other end of shaft (77).

(5) Attach support (82) to panel with screws (67), lockwashers (68), and flat washers (69), but do not tighten.

(6) Slide spacer (76) onto shaft from rear, then assemble spur gear (75), pulley (74-larger than pulley 72), washer (73), and pulley (72) onto shaft (77).

(7) Replace nut (70) and tighten to 10 foot-pounds torque while holding nut (71).

(8) Hook belt (66) over pulley (74) and let hang loose.

(9) Hook belt (65) over pulley (72) and slide over flangeless pulley (55, fig. 4-11).

NOTE

On units having setscrews in pulleys (72 and 74) and spur gear (75), tighten setscrews.

(10) Position support (82) so that belt (65) will deflect 1/4 inch when 1 pound of force is applied at the center of its span, then tighten screws (67).

(11) Replace motor and vacuum pump and hook belt (66) over motor drive pulley as described in paragraph 4-32.

NOTE

Element, muffler assembly, NSN 4310-00-957-1967 is composed of items s 2, 3, 4, 7, and 8.

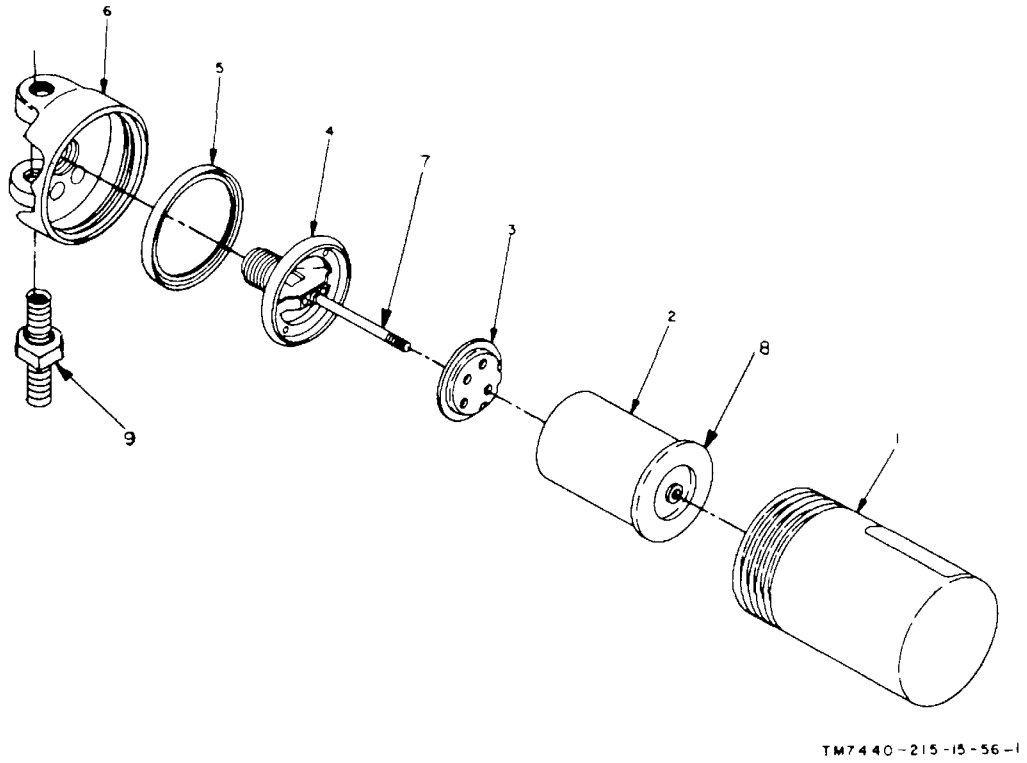


Figure 4-8. Muffler, exploded view.

1 Jar	4 Body	7 Stud
2 Muffler element	5 Gasket	8 End cap
3 Muffler plate	6 Cover	9 Coupling

4-38. Removal and Replacement of Picker Solenoid Assembly

a. Removal.

(1) Before removing mounting hardware, remove parts bearing index numbers 88 through 93 in figure 4-7.

(2) Remove picker solenoid assembly (88 through 119, fig. 4-7) in the order of index numbers 83 through 87.

b. Replacement. Replace the picker solenoid assembly in the reverse order of removal in a above. After replacement, perform the adjustment procedure described in paragraph 4-56.

4-39. Disassembly and Reassembly of Picker Solenoid Assembly

a. Disassembly. Disassemble the picker solenoid assembly in the order of index numbers 94 through 119 in figure 4-7.

b. Reassembly. Reassemble the picker solenoid assembly in the reverse order of disassembly in a above.

4-40. Removal and Replacement of Input Card Guide and Lamp Assembly

a. Removal.

(1) Remove terminal cover (238, fig. 4-7) and disconnect and tag wires from terminal board TB2 (243).

(2) Remove the input card guide and lamp assembly (123 through 128, fig. 4-7) in the order of index numbers 120, 121, and 122 in figure 4-7.

b. Replacement. Replace the input card guide and lamp assembly in the reverse order of removal in a above. After replacement, perform the adjustment procedure described in paragraph 4-58.

4-41. Disassembly and Reassembly of Input Card Guide and Lamp Assembly

a. Disassembly. Disassemble the input card guide and lamp assembly in the order of index numbers 123 through 128 in figure 4-7.

b. Reassembly. Reassemble the input card guide and lamp assembly in the reverse order of disassembly in a above.

4-42. Removal and Replacement of Picker and Read Assembly

a. Removal.

(1) Remove wiring race (258, fig. 4-7).

(2) Remove photocell assembly (44.1, fig. 4-11) and let it rest on the safety bracket so that no undue stress is placed on the wires.

(3) Disconnect and tag leads of the light station assembly (9, fig. 4-11), and hopper empty lamp (127, fig. 4-7), from TB2.

(4) Remove input guide (128, fig. 4-7).

(5) Disconnect and tag leads No. 9 and 10 of terminal board TB1 for hopper empty photocell (47, fig. 4-11).

(6) Loosen hose clamp (13.1, fig. 4-7) and remove tygon tubing (15, fig. 4-7) from the air transmitter throat (33, fig. 4-11) of the picker assembly.

(7) Remove spring (89, fig. 4-7) from the picker assembly.

(8) Loosen hose clamp (2, fig. 4-7) and remove hose from the vacuum tube. Picker assembly will lift out with the vacuum tube in its present position.

(9) Slide belt (65, fig. 4-7) from the pulley (55, fig. 4-11).

(10) Loosen setscrews (54, fig. 4-11) and remove pulley.

(11) Remove picker and read assembly (132, fig. 4-7) by removing three screws (129), three lockwashers (130), and three flat washers (131).

b. Replacement. Replace the picker and read assembly in the reverse order of removal in a above. After replacement, perform the adjustment procedures described in paragraphs 4-32 b, 4-56, 4-57, 4-58, 4-59, and 4-70.

4-43. Disassembly and Reassembly of Picker and Read Assembly

a. Disassembly. Disassemble the picker and read assembly in the order of the index numbers in figure 4-11, noting the following:

WARNING

Use care when removing glass cover so as not to cut the hands.

(1) Remove glass cover (7, 43, and 45), only if the glass is broken, cracked, or scratched, by separating the glass from the surface to which it is glued. Remnants of glass which stick may be removed with a single-edge razor blade. Remnants of adhesive which stick may be removed by rubbing with a pencil eraser.

(2) Do not lose or interchange shims (16, 22) between the idler arms (19, 25) and the light station platform (26); or the shims (13) between the two idler arms (19, 25).

(3) Bearings (18 and 24) must be pressed out of idler arms (19 and 25).

(4) Remove pulleys (49 and 58) simultaneously, with belts (53 and 56) still in place, then remove belts from pulleys.

NOTE

On later assemblies, only one setscrew (48) is used.

(5) Bearings (50) must be pressed out of picker frame (80).

b. Reassembly. Reassemble the picker and read assembly in the reverse order of the index numbers in figure 4-11, noting the following:

(1) To replace glass covers (7, 43, and 45), apply a thin even layer of adhesive, General Electric part No. RTV-108, or equivalent, on each side of the apertures and set the glass in place. Press the glass onto the adhesive, using a piece of cloth or cotton and firm finger pressure. Make sure glass does not protrude above adjacent surfaces and allow adhesive to dry for 15 minutes before replacing part to which glass cover is attached.

(2) Shims (16, 22, 13) must be reinstalled in the same location they occupied before disassembly. THEY MUST NOT BE INTERCHANGED. The shims control the position of the idler roller with respect to the drive rollers. The idler rollers must be within flush to 0.010 inch under flush with respect to the inboard edge of the drive rollers.

(3) The four picket belts (66) must be replaced as a matched set.

(4) Hook belts (53 and 56) over pulleys (49 and 58) and slide pulleys onto shafts (51.1 and 62) simultaneously. Mount self-locking nuts (47.1) on the roller assemblies (52) and use a torque wrench to tighten the nuts to a torque of 6 foot pounds.

(5) Press bearings (50) into picker frame (80).

(5.1) When replacing light station assembly (9) and photocell assembly (44.1), press each bracket against its respective mounting surface while tightening screws.

(6) When replacing photocell semiconductor devices (37), make sure they are fully seated in their slots. After all photocells are in place, tighten screws (34) until they hit their stops.

(7) Perform the picker belt adjustment (para 4-54) after completing reassembly.

(8) Perform metering capstan pressure adjustment (para 4-55).

(8.1) Check the positioning of throat block (29, fig. 4-11) by placing a card in the picker assembly. Push card flush with rear of picker bed and slide it up to the throat block. The leading edge of the card should contact the throat block squarely. If not, loosen screws (27) and reposition throat block (29).

(9) Deleted.

(10) Deleted.

Figure 4-9. Deleted.

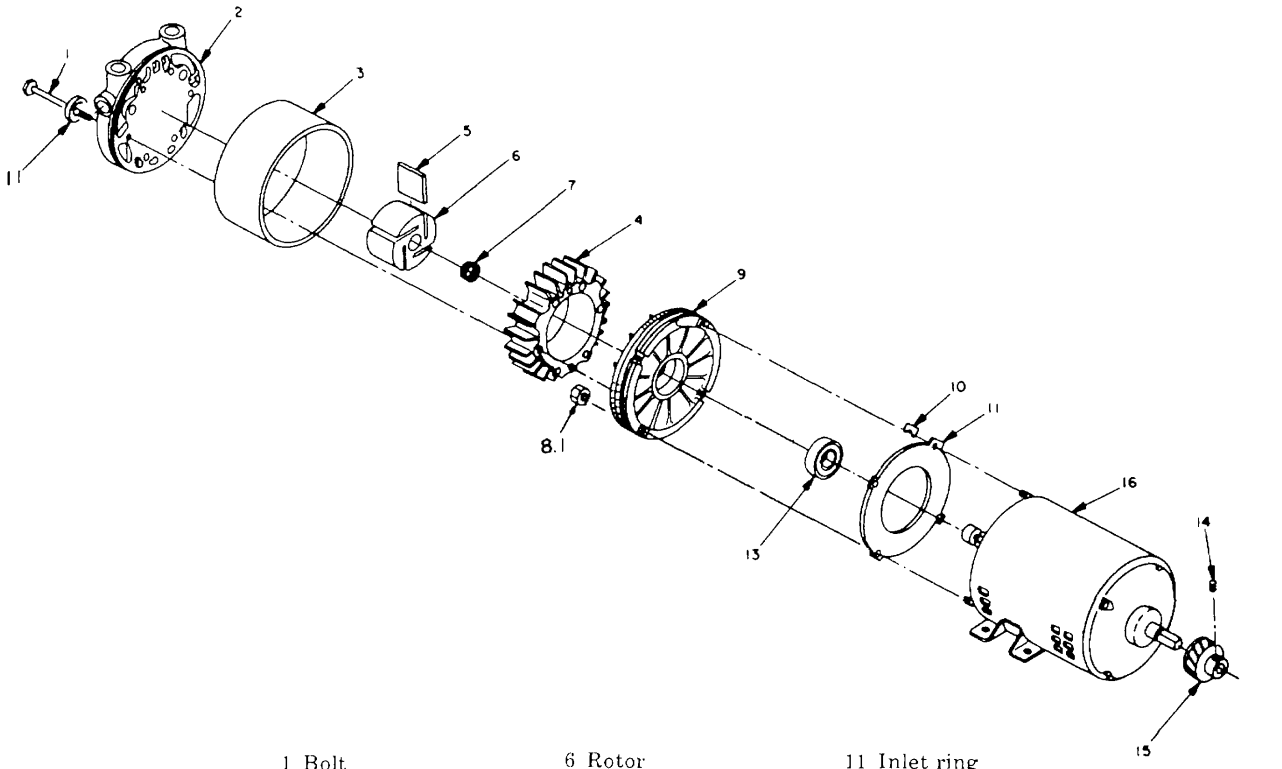


Figure 4-10 (1). Motor and pump, exploded view (part 1 of 2)

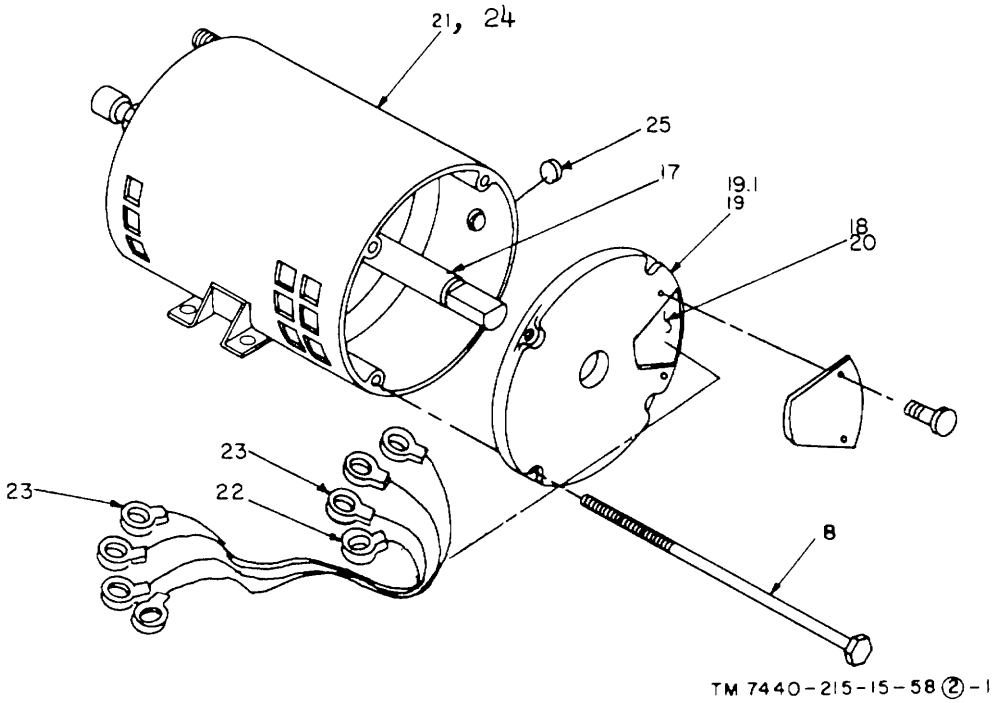


Figure 4-10 (2). Motor and pump, exploded view (part 2 of 2).

17	Rotor	21	Stator
18	Mechanism	22	Terminal lug
19	Front end housing	23	Terminal lug
19.1	Bearing	24	Motor-pump assembly
20	Switch	25	Filler plug

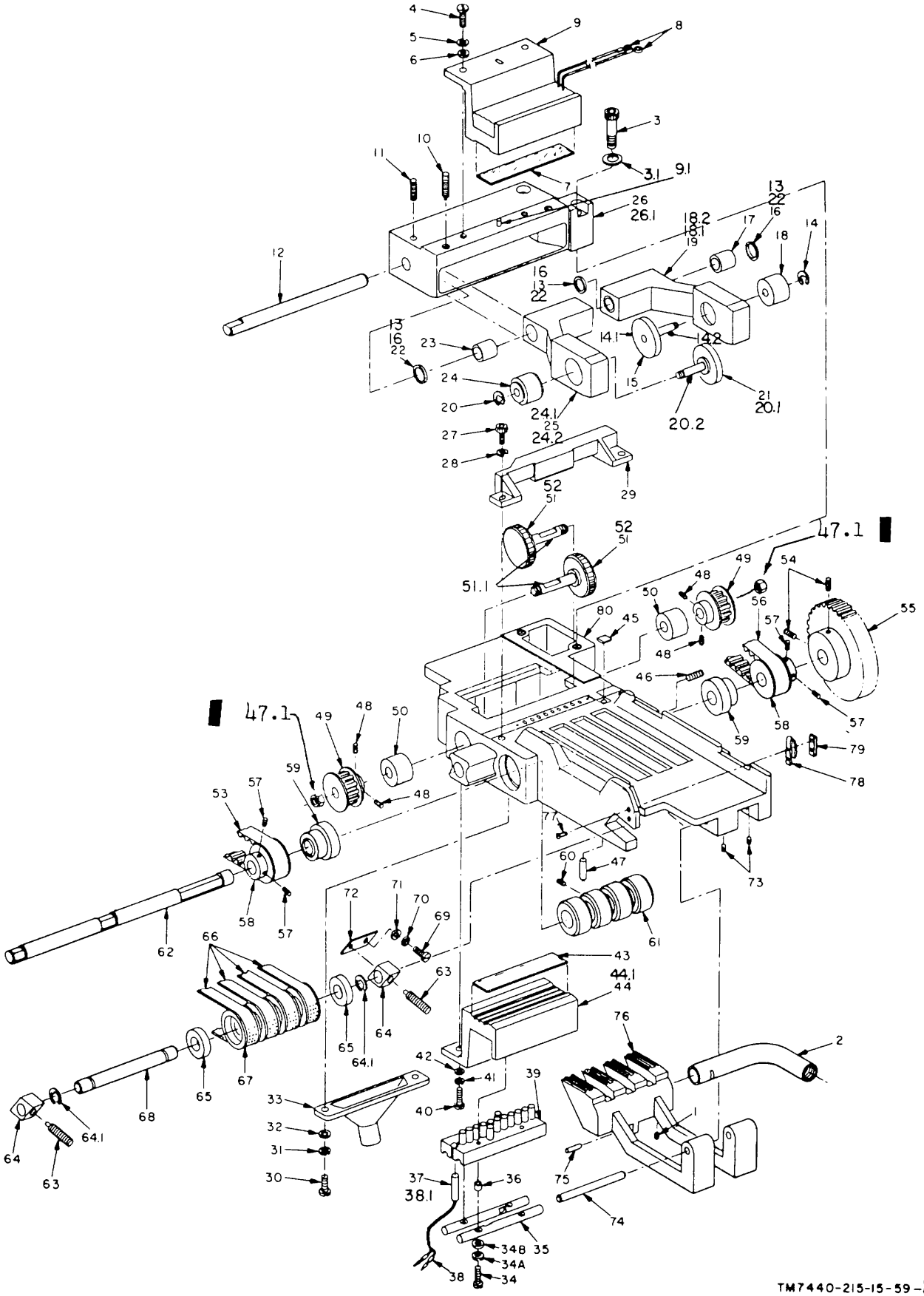


Figure 4-11. Picker and read assembly, exploded view.

Legend for figure 4-11

1 Setscrew, cup point, No. 6-32, 3/16 in. long
2 Vacuum tube
3 Shoulder screw, 5/16 OD, 1 1/4 in. long
4 Screw, binding head, No. 10-32, ½ in. long
5 Lockwasher, No. 10
6 Washer, No. 10
7 Glass cover
8 Lug terminal
9 Light station assembly
9.1 Spring pin
10 Spring plunger
11 Setscrew, flat point, No. 8-32, 3/16 in. long
12 Pivot shaft
13 Shim, 0.003 in. thick
14 Retaining ring
14.1 Card roller
14.2 Roller shaft
15 Card roller assembly
16 Shim, 0.005 in. thick
17 Bushing bearing
18 Ball bearing
18.1 Arm subassembly
18.2 Idler arm assembly
19 Idler arm
20 Retaining ring
20.1 Card roller
20.2 Roller shaft
21 Card roller assembly
22 Shim. 0.010 in. thick
23 Bushing bearing
24 Ball bearing
24.1 Arm subassembly
24.2 Idler arm assembly
25 Idler arm
26 Light station platform
26.1 Light station and roller assembly
27 Screw, cap, socket head, No. 10-32, 3/8 in. long
28 Lockwasher
29 Throat block
30 Screw, binding head, No. 8-32, 1/2 in. long
31 Lockwasher, No. 6
32 Washer, No. 6
33 Air transmitter throat
34 Screw, binder head, No. 4-40, 3/4 in. long
34A Lockwasher, No. 4
34B Washer, No. 4
35 Mounting clamp
36 Spacer
37 Photocell semiconductor device (1Q1 through 1Q14)
38 Electrical contact
38.1 Photocell assembly
39 Insert
40 Screw, binding head, No. 10-32, 7/8 in. long
41 Lockwasher, No. 10
42 Washer, No. 10
43 Glass cover
44 Angle bracket
44.1 Photocell assembly
45 Glass cover
46 Setscrew, flat point, No. 6-32, 3/16 in. long
47 Photocell assembly
47.1 Nut, self-locking
48 Setscrew, flat point, No. 8-32, 3/16 in. long
49 Pulley
50 Ball bearing
51 Roller
51.1 Roller shaft
52 Roller assembly
53 Positive drive belt
54 Setscrew, flat point, No. 10-32, 3/8 in. long
55 Pulley
56 Positive drive belt
57 Setscrew, flat point, No. 8-32, 3/16 in. long
58 Pulley
59 Ball bearing
60 Setscrew, flat point, No. 8-32, 3/16 in. long
61 Drive pulley
62 Picker drive shaft
63 Spring plunger
64 Slider
64.1 Retaining ring
65 Bearing
66 Belt set, picker
67 Idler pulley
68 Idler shaft
69 Screw, binding head, No. 4-40, 3/8 in. long
70 Lockwasher, No. 4
71 Washer, No. 4
72 Positioning plate
73 Setscrew, cup point, No. 8-32, 3/16 in. point
74 Pivot shaft
75 Drive pin, 3/32 dia, 1/2 in. lg.
76 Belt pusher
77 Screw, flathead, No. 4-40, 5/16 in. long
78 Guide spring
79 Nut plate
80 Picker frame

4-44. Removal and Replacement of Offset Idler Roller Assembly

a. Removal.

(1) Disconnect connector (180, fig. 4-7).

(2) Disconnect and tag leads at switch S1 (190).

(3) Remove two screws (133, lockwashers (134), and washers (135) which secure the offset idler roller assembly (136 through 198) to the panel and remove the offset idler roller assembly.

b. Replacement. Replace the offset idler roller assembly in the reverse order of removal in a above observing the following special procedures:

(1) When replacing deflector bracket (198, fig. 4-7) position the bracket to allow approximately 1/16 inch clearance between the elevator assembly backer plate (217) and the reader panel (282).

(2) After replacement, perform the adjustment procedures described in paragraphs 4-60, 4-61, 4-62, and 4-65.

4-45. Disassembly and Reassembly of Offset Idler Roller Assembly

a. Disassembly.

(1) Unsolder and tag solenoid leads at terminal posts (181, fig. 4-7).

(2) Partially disassemble the assembly in the order of index numbers 136 through 155 in figure 4-7.

(3) Remove retaining ring (156).

(4) Spring (157) is in torsion. Grasp the ends of the spring with the fingers to hold it in torsion and slide out pivot frame assembly (159).

(5) Slowly release torsion on spring (157) and remove the spring and spacer (158).

(6) Remove remaining parts in the order of index numbers 160 through 198 in figure 4-7.

b. Reassembly.

(1) Reassemble part of the assembly in the reverse order of index numbers 160 through 198 in figure 4-7.

(2) Place washer (158) in position on pivot frame assembly (159).

(3) Grasp the ends of spring (157) and squeeze it to put it in torsion.

(4) Place the spring in position and slide the long part on pivot frame (159) up through the center of the spring and through the hole in support (185). Make sure that the small post on pivot frame (159) engages the pivot arm (165).

(5) Hook one end of spring (157) over the edge of solenoid bracket (169) and allow the other end of the spring to rest against the face of the arm on pivot frame (159).

(6) Install retaining ring (156) onto the long shaft of the pivot frame as close to the top as possible.

(7) Reassemble the remaining parts of the assembly in the reverse order of index numbers 136 through 155 in figure 4-7.

4-46. Removal and Replacement of Elevator Assembly

a. Removal.

(1) Loosen setscrew (202, fig. 4-7), remove collar (203), and remove hangar (204) and spring (205).

(2) Remove two screws (206) securing retainer clip (207) and remove the retainer clip.

(3) Remove two screws (199), lockwashers (200), and washer (201) at each end of shaft (212).

(4) Loosen setscrew (208) and slide shaft (212) out of assembly from rear of panel.

(5) Remove the elevator assembly (202 through 217) from the front of the panel by lowering the elevator to the bottom of its travel and moving it to the left.

b. Replacement. Replace the elevator assembly in the reverse order of removal in a above observing the following special procedures.

(1) When replacing the screws (199) securing shaft (212), position the shaft (212) to allow approximately 1/16 inch clearance between the backer plate (217) and the reader panel (282). It may be necessary to loosen screws (182) so the deflector bracket (198) may be repositioned to prevent roller (193) from interfering with this requirement.

(2) After replacement, perform the adjustment procedures described in paragraphs 4-63, 4-64, and 4-65.

4-47. Disassembly and Reassembly of Elevator Assembly

a. Disassembly. Disassemble the elevator assembly in the, order of index numbers 202 through 217 in figure 4-7.

b. Reassembly. Reassemble the elevator assembly in the reverse order of disassembly in a above.

4-48. Removal and Replacement of Top and Bottom Card Guides

a. Removal. Remove the top and bottom card guides (221 and 222, fig. 4-7) in the order of the index numbers 218, 219, and 220.

b. Replacement. Replace the top and bottom card guides in the reverse order of removal in a above. After replacement, perform the adjustment procedure described in paragraph 4-62.

4-49. Removal and Replacement of Card Input Support

a. Removal. Remove the card input support (226, fig. 4-7) in the order of index numbers 223, 224, and 225.

b. Replacement. Replace the card input support in the reverse order of removal in a above. After replacement, perform the adjustment procedure described in paragraph 4-66.

Section VI. REPAIR AND ADJUSTMENTS

4-50. General

This section contains repair instructions, adjustment procedures, and tolerance requirements for the card reader.

4-51. 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.

4-52. Spring Data

Use the following data to determine whether a spring meets the tension or compression requirement and also as a means of identifying springs. Replace all springs which do not meet the

tension, compression, or torsion tensions requirements.

a. Picker Solenoid Spring. The picker solenoid spring (89, fig. 4-7) is shown in part A of figure 4-12. The force required to stretch the spring to its extended length is 2 (±.2) pounds.

b. Stacker Elevator Spring. The stacker elevator spring (205, fig. 4-7) is shown in part B of figure 4-12. The force required to stretch the spring to its extended length is 5.5 (±.4) pounds.

c. Offset Idler Spring. The offset idler spring (157, fig. 4-7) is shown in part C of figure 4-12. Replace the spring when it is too weak to restore the offset idler roller assembly to the non-offset position (fig. 3-8).

4-53. Adjustments

The adjustment procedures described in the following paragraphs are arranged in the proper sequence for a complete readjustment of the card reader. When making individual adjustments, check all related adjustments. When removal of parts or subassemblies is necessary to make an adjustment, reference is made to specific paragraphs for removal and replacement.

4-54. Adjustment of Picker and Stacker Capstan Shaft Belt Tension

(fig. 4-7, and 4-13)

Note.

See para 4-32b for tension requirements of the stacker capstan belt (item 66).

a. Requirement. The picker belt idler pulley must rotate freely and without binding. The two belt tension springs must be set at 5 ±1 pounds and be within 1/4 pound of each other.

b. Method of Checking. Place the probe of a push-type spring scale against each spring-loaded plunger, and press until a small movement of the slider block is noted, so as to relieve some belt tension. Read the spring scale at this point. Repeat for each plunger.

c. Adjustment. Use an Allen wrench to rotate the spring-loaded plunger in the slider blocks. Clockwise rotation increases tension and counterclockwise rotation decreases tension. (Ref. para 4-42 for removal and replacement of picker & read assembly. This assembly must be removed to perform the adjustment.)

4-55. Adjustment of Metering Capstan Pressure (fig. 4-14)

a. Requirement. The metering capstan pressure must be such that a 2 1/2-pound pull is applied to a card at the inboard capstan and idler (adjacent to panel) and a 3-pound pull is applied to a card at the outboard capstan and idler.

b. Method of Checking.

(1) Cut a standard punched card lengthwise between card rows 3 and 4. Reinforce one end of one-half of the card with pressure-sensitive tape on both sides, and punch a hole through which the spring scale can be hooked.

(2) Remove the card input support (para 4-49).

(3) Insert the untaped end of the card between the inboard capstan and idler.

(4) Hold the inboard capstan pulley with one hand and pull the free end of the card with the spring scale to measure the force required to pull the card out. The required force should be 2 1/4 ± 1/4 pounds.

(5) Repeat steps (3) and (4) above for the outboard capstan and idler. The required force should be 2 3/4 ±1/4 pounds.

(6) Replace the card input support (para 4-49).

c. Adjustment. Rotate the inboard capstan adjusting screw to adjust the inboard capstan pressure and rotate the outboard capstan adjusting screw to adjust the outboard capstan pressure. Clockwise rotation of the screws increases pressure and counterclockwise rotation decreases pressure.

4-56. Adjustment of Picker Solenoid (fig. 4-15)

a. Requirement. When the picker solenoid is energized, the picker belts should protrude through the slots in the picker plate a maximum of one belt thickness and a minimum of 1/2 belt thickness. When the picker solenoid is deenergized, the belts should fall below the picker plate 0.015 to 0.030 inch.

b. Method of Checking. With the hopper

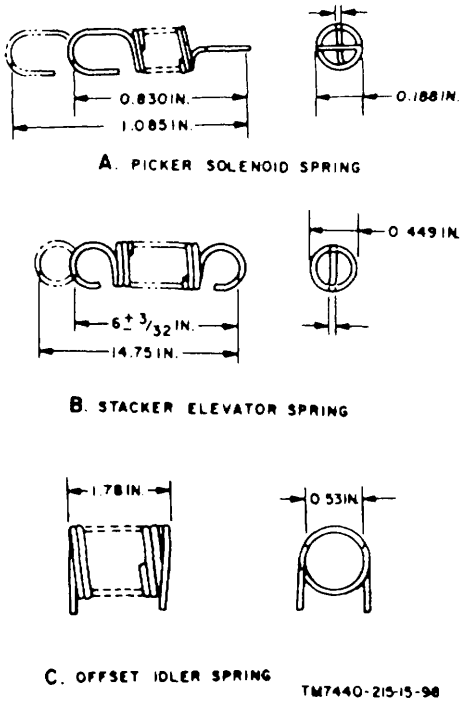


Figure 4-12. Spring dimensions.

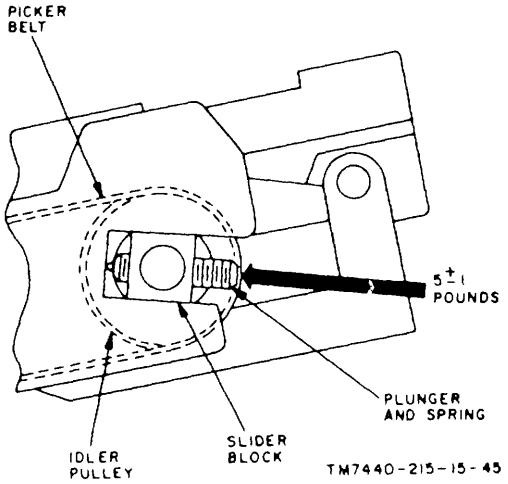


Figure 4-13. Picker belt tension requirement.

empty, use a feeler gauge to check the distance between the top of the belts and the picker plate; then manually actuate the picker solenoid, and observe the movement of the four belts through the slots in the picker plate.

c. Adjustment. Manually actuate the picker solenoid while the belts are not running. Loosen the jam nut, and rotate the long nut to extend or shorten the plunger. If the requirement cannot be obtained in this manner, the entire solenoid assembly can be repositioned slightly by loosening the two solenoid bracket attaching screws. Panel holes for these screws are slightly oversized to permit adjustment.

4-56.1. Adjustment of Picker Throat Clearance

a. Requirement. A .010 inch thick oil feeler gauge should slide under the plate on the throat mounting blocks with some slight resistance. This clearance should be present on both sides of the plate.

b. Method of Checking. With the .010 inch oil feeler gauge, check picker throat clearance by placing the gauge under the plate on the throat mounting blocks. Check clearance on both sides of the plate. Clearance should be such that the feeler gauge slides under the plate with some slight resistance.

c. Adjustment.

(1) Adjustment procedure for pickers with adjustment screws:

(a) If clearance is improper, adjust clearance by first loosening the Allen screws which hold the throat mounting block secure.

(b) Adjust the clearance by turning the remaining four 1/16 inch Allen screw on the throat mounting block.

(c) After adjusting, secure the throat mounting block.

(2) Adjustment ,procedure for picker throat clearance on pickers without Allen adjustment screws:

(a) Loosen the two Allen screws on the picker throat mounting block.

(b) Vary the throat clearance by placing shims under the throat mounting block. To increase clearance, place shim stock (1/2 inch square) behind each of the mounting screws in the block (area closest to picker belts). If clearance is to be decreased, the shim stock must be placed in front of the mounting screws (area closest to the mouth of the head).

(3) Check throat clearance; ensure that the clearance is even throughout.

(4) Tighten the throat mounting Allen screws.

4-57. Adjustment of Read Station Phototransistor (fig 4-16)

a. Requirement. The 14 read station phototransistors must be correctly positioned in their mounting block for maximum response.

b. Method of Checking.

(1) Set the oscilloscope input voltage selector to the 1-volt position and connect the oscilloscope probe to the 14 inverter outputs HOL1 through HOL12, BC, and EC (fig. 8-14).

(2) Check to assure there are no cards in the hopper, turn on the reader and verify all lamps on the light station are lighted.

(3) Using a card to block the lamps, check the voltage output of each of the 14 inverters for the covered and uncovered condition. The dc voltage level should be between + 4.0 volts (uncovered) and 0 volts (covered).

c. Adjustment.

(1) Loosen the four pressure screws (fig. 4-16) on the read station mounting block.

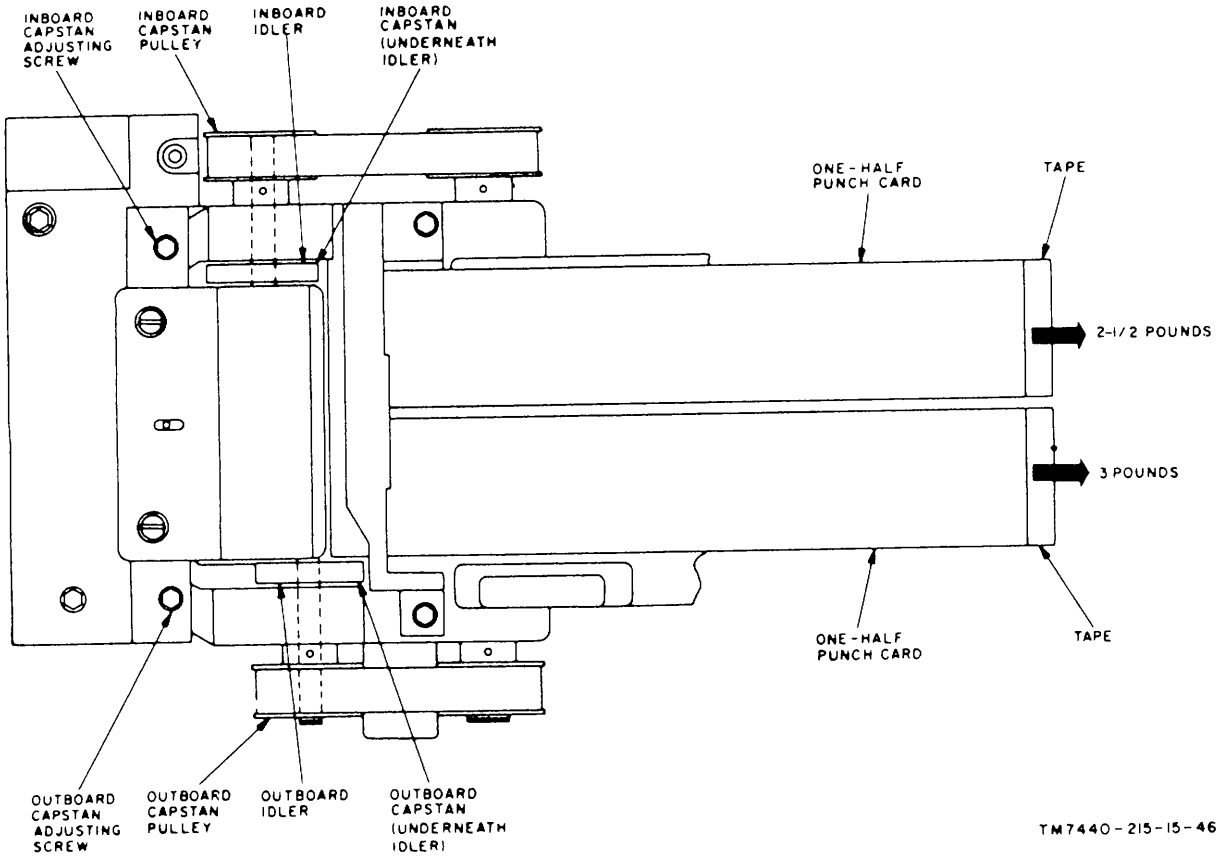


Figure 4-14. Metering capstan pressure requirement.

4-26.1 **Change**

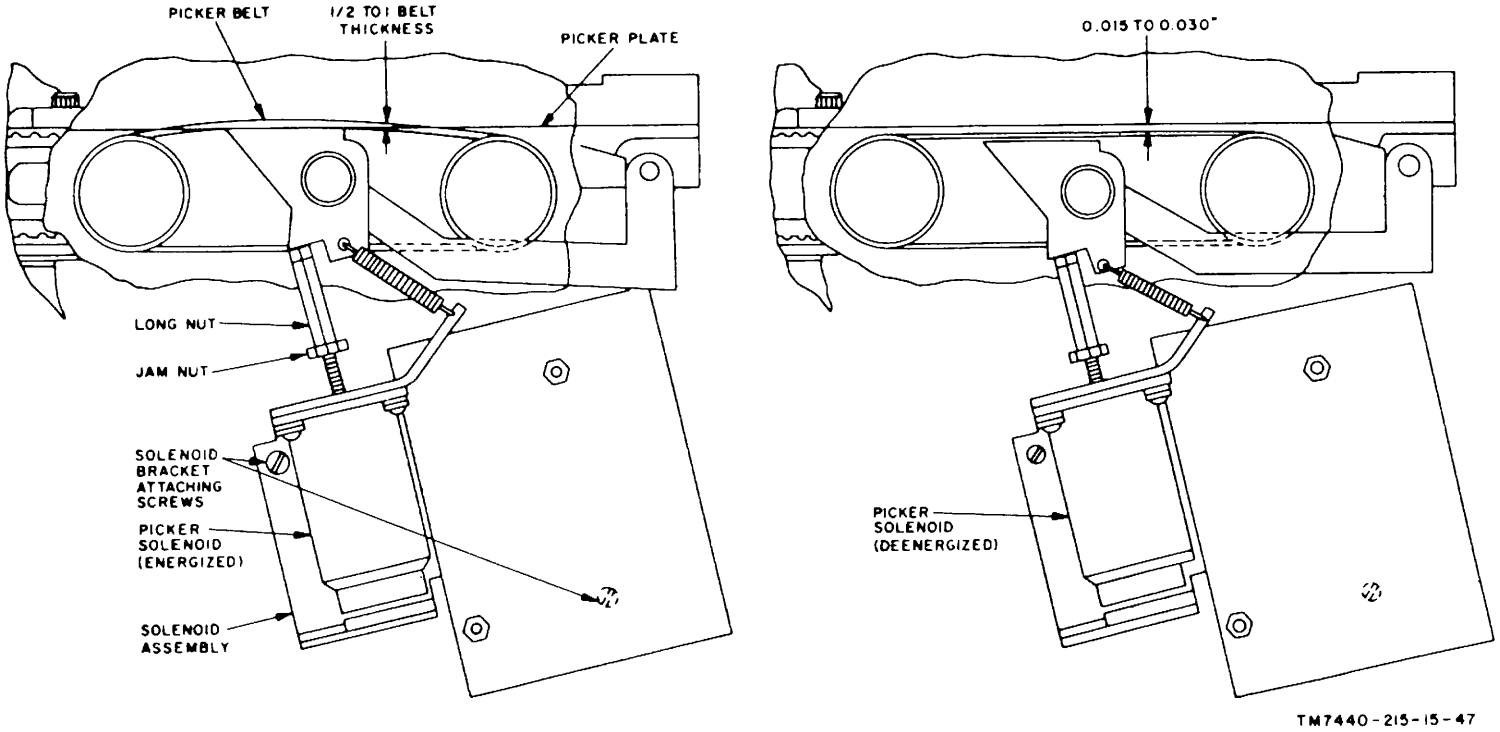


Figure 4-15. Picker solenoid requirement.

(2) While monitoring the photoamplifier inputs (ROWI through ROW12, BCP, and ECP-fig. 8-14), carefully rotate the phototransistor as follows. Insert a piece of plastic or plastic tipped screwdriver (fig. 4-16) between the pins on the phototransistor and carefully turn the phototransistor until the photocell output indicated on the oscilloscope is at least +4.3 volts dc (uncovered) and at least +3.3 volts (covered). Assure the phototransistors are bottomed in the sockets and take care not to break the pins on the phototransistors. If the phototransistors do not switch voltages between the covered and uncovered conditions, go to step (4) below.

(3) Tighten the pressure screws (fig. 4-16) on the read station mounting block to secure the phototransistors.

(4) If the monitored voltage is approximately 3.3 vdc and does not change when the phototransistors are adjusted, check the position of the read station mounting block. While monitoring the photoamplifier inputs (fig. 8-14), adjust the position of the read station mounting block until the voltage changes from +3.3 vdc to +4.3 vdc. Secure the read station mounting block and repeat the check of all 14 inverter outputs noted in b(3) above.

d. Bench Adjustment Procedure. The procedure outlined in b and c above is preferred for checking read station phototransistor operation since it also checks printed circuit card A1A6 circuitry. Figure 4-16, however, outlines test equipment connections for bench operation and adjustment. With the test equipment connections as illustrated in figure 4-16, a 1-volt indication on the VTM is equivalent to 1 ma of current from the phototransistors. With the reader lamps illuminated and no card in the reader head, the VTVM should indicate an optimum value of 6 volts (6 ma). Any value between 2 volts (2 ma.) and 10 volts (10 ma.) should normally provide satisfactory operation.

4-58. Adjustment of Hopper Empty Lamp
(fig. 4-17)

a. Requirement. The hopper empty lamp must be positioned so that proper response is obtained from the hopper empty phototransistor.

b. Method Checking.

(1) Set the oscilloscope input voltage selector to the 1-volt position and connect the input probe to pin D of PC card A1A6 in the logic assembly.

(2) Turn on the card reader. Insure that no cards are in the hopper and all lamps of the light station are lighted.

(3) Check indication. Voltage level should be between 4.3 and 4.4 volts dc.

c. Adjustment.

(1) Loosen mounting screws securing the hopper-empty lampholder (fig. 4-17).

(2) While monitoring voltage on pin D of A1A6, adjust position of the lampholder for a 4.3 to 4.4-volt dc indication. Note that monitored voltage will be approximately 3.3 volts, until lampholder is correctly positioned.

NOTE

Correct voltage must be obtained without moving lampholder past the input card guide into the card path.

(3) Secure the mounting screws and recheck for 4.3 to 4.4 volts dc.

d. Bench Adjustment Procedure. Figure 4-17 outlines test equipment connections to enable check to be performed on the bench. With test equipment connections as illustrated in figure 4-17, a 1-volt indication on the VTVM is equivalent to 1 ma. of current from the phototransistor. Adjust the position of the light station assembly for a nominal indication of 6 volts (6 ma.). Any value between 2 volts (2 ma.) and 10 volts (10 ma.) should normally provide satisfactory operation.

4-59. Adjustment of Reluctance Pickup-Timing Gear Gap
(fig. 4-18)

a. Requirement. The gap between the polepiece of reluctance pickup PU1 and the timing gear teeth must be such that the pickup provides 5.8 volts peak-to-peak nominal (5.5 to 6.5 volts) with a load impedance of 1,000-ohm operating at 120 volts 60 Hz, and 4.8 volts peak-to-peak nominal (4.5 to 5.5 volts) operating at 50 Hz.

b. Method of Checking. Connect a 1,000-ohm 1/4-watt loading resistor and an oscilloscope across the terminals of the reluctance pickup. Disconnect connector plug P1 from jack J3 to remove the reluctance pickup output from remaining circuitry. The waveform on the oscilloscope should be a 2.5-kilohertz sine wave with amplitudes as in a above. The amplitude varies as the gap between the reluctance pickup and the timing gear changes due to gear rotation.

c. Adjustment.

CAUTION

Remove all power from the card reader before adjusting the reluctance pickup. Do not apply power until the jam nut has been tightened.

(1) Loosen the three mounting screws so that the reluctance pickup bracket can be moved.

(2) Position the bracket so that the reluctance pickup is visually alined radially with the timing gear and tighten the three mounting screws.

(3) Place a 0.003-inch feeler gage between the reluctance pickup polepiece and the timing gear teeth. Rotate the timing gear to the point where the clearance between the polepiece and the timing gear teeth is least.

CAUTION

Rotate the timing gear manually at least one full turn to insure the pole piece does not scrape the gear teeth at any point on the gear.

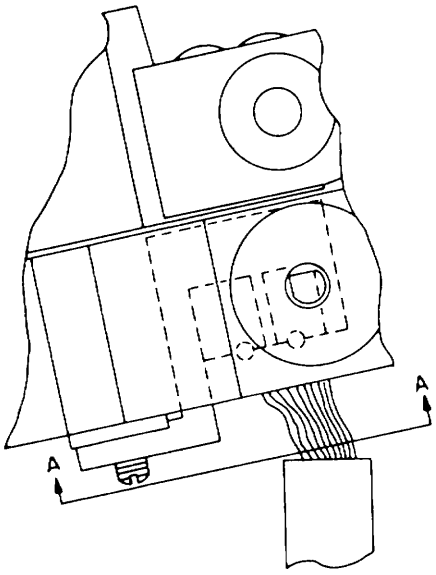
(4) Loosen the jamnut and rotate the entire reluctance pickup in the threaded mounting hole until the gap between the polepiece and the timing gear teeth is 0.003 inch (the 0.003-inch feeler gage can just be withdrawn.

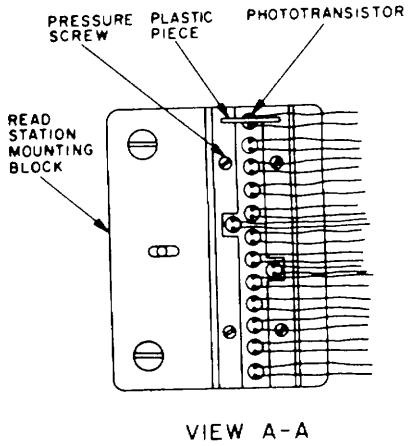
CAUTION

Do not tighten the jamnut to more than 16 inch-pounds.

(5) Tighten the jamnut to 16 inch-pounds of torque and recheck the gap with the 0.003-inch feeler gage.

(6) Recheck the reluctance pickup output as in b above. If the voltage is below that required in a above, remove all power from the card reader and decrease the gap between the polepiece and the timing gear teeth, in 0.0005inch increments, until the correct voltage is obtained. If the voltage is above 6.5 volts peak-to-peak, remove power from the card reader and increase the gap between the polepiece and the timing gear teeth, in 0.0005-inch increments, until the correct voltage is obtained.





Card Row	PC Card A1A6 Pins		
	Photo Amplifier		Inverter
	In	Out	Out
12	L	K	M
11	5	C	E
0	4	H	F
1	AA	Z	X
2	21	Y	W
3	19	-	20
4	18	J	22
5	17	-	16
6	14	6	V
7	13	-	11
8	12	7	N
9	10	9	8
Hop Emp	D	2	-
BOC	S	T	U
EOC	15	R	P

TM7440-215-15-48-C4

Figure 4-16. Read station, phototransistor requirement.

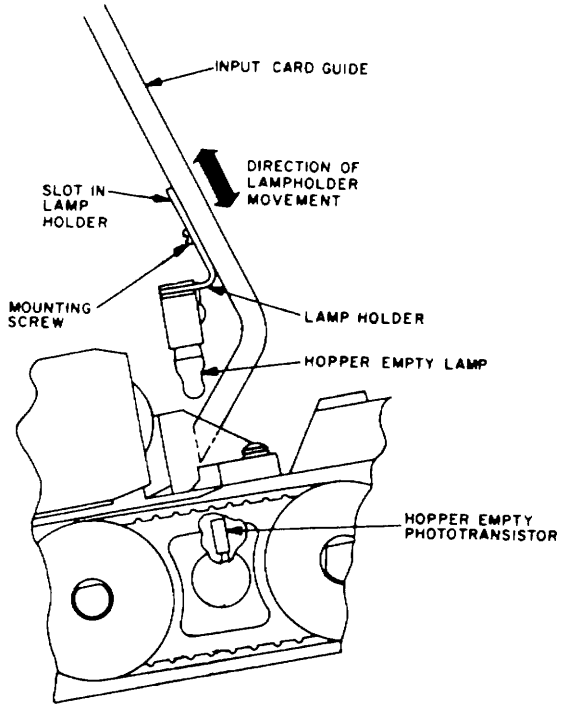


Figure 4-17. Hopper empty lamp requirement.

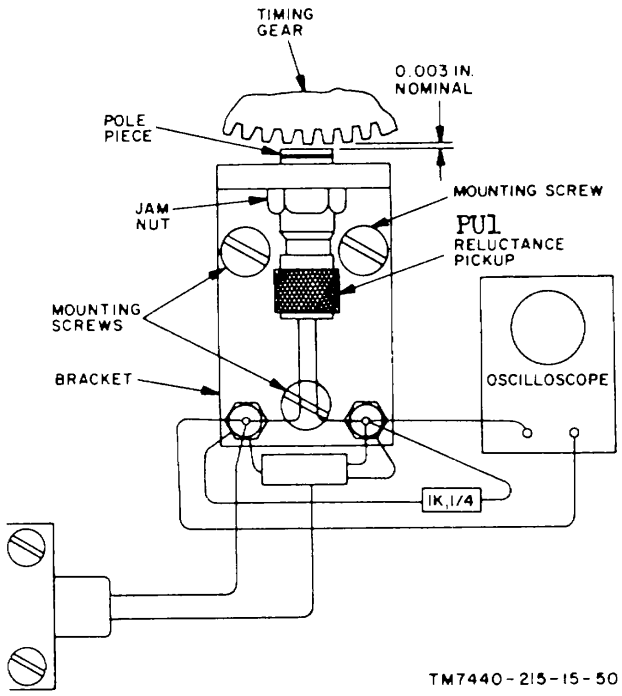


Figure 4-18. Reluctance pickup requirement.

4-60. Adjustment of Offset Idler
(fig. 4-19)

a. Requirement. When the offset solenoid is not energized, the offset idler must be parallel to the offset capstan, thus transporting the processed cards to the stacker elevator in a straight line. When the solenoid is energized, the card must be offset 1/4 to 3/4 inch in the stacker elevator so that the card can be readily identified visually.

b. Method of Checking. If power is applied to the card reader, the adjustment is checked by observing whether cards form a straight stack in the elevator, with the deck stacked against the rear surface of the elevator. Offset cards should project approximately 1/4 to 3/4 inch from the stacker. With no power applied. to the reader, the adjustment can be checked by turning the drive shaft manually to transport a card into the stacker. The card should leave the offset capstan in a straight line perpendicular to the roller shafts when the solenoid is not actuated. When the solenoid is actuated, the card should be offset.

c. Adjustment.

(1) Adjust the idler stop screw so that the cards are transported to the stacker elevator in a straight line when the offset solenoid is not energized. Turn the screw counterclockwise to move cards toward the panel, or clockwise to move cards away from the panel.

(2) Manually actuate the solenoid and adjust the offset stop screw to obtain proper offsetting. Turn the screw counterclockwise to increase the projection of offset cards, and turn it clockwise to decrease the projection.

4-61. Adjustment of Offset Solenoid
(fig. 4-19)

a. Requirement. The offset solenoid plunger must have sufficient travel to allow full motion of the idler yoke and still operate consistently with the available voltage. The offset solenoid plunger must not reach bottom when fully actuated.

b. Method of Checking.

(1) With power to the card reader off, disconnect the plug at connector J2.

(2) Connect a variable dc power supply to pins E (negative) and F (positive) of connector J2.

(3) Increase the voltage of the dc power supply until the solenoid pulls in. Nominal pull-in voltage is 37 volts (35 to 40 volts).

(4) Alternate method of checking can be accomplished by removing front cover from the card reader, and with power off, disconnect plug P1 located on the front panel next to offset assembly A3. Connect a variable dc power supply to P1 as follows: negative to lower pin 1, and positive to upper pin 2. Perform (3) above.

c. Adjustment. Loosen the solenoid bracket mounting screws, and move the solenoid toward the offset idler if more than 37 volts is required to actuate the solenoid, or move the solenoid away from the offset idler if less than 37 volts is required to actuate the solenoid.

4-62. Adjustment of Card Guides
(fig. 4-20)

a. Requirement. The card guides must be positioned so that the cards move without jamming up or becoming damaged.

b. Method of Checking. Visually check that the lower card guide is either flush or not more than 0.005 inch below the lower surface of the gap where the cards come out of the picker and read assembly and that the upper card guide is above the upper surface of the gap.

c. Adjustment. Loosen the two mounting screws and position the lower card guide so that it is either flush or not more than 0.005 inch below the lower surface of the gap where the cards come out of the picker and read assembly. Hold the lower card guide in this position and move the upper card guide as high as possible. Tighten the two mounting screws.

4-63. Adjustment of Stacker Spring Tension
(fig. 4-21)

a. Requirement. The stacker elevator must rest at the upper limit under a pressure of 5 ounces nominal (4 to 10 ounces or, 113 to 283 grams) when the stacker elevator is empty and must be depressed proportionately as cards enter the stacker.

b. Method Checking.

(1) Press down on the stacker elevator platform using a push-type spring scale, then slowly release the pressure. The stacker elevator should rise to the upper limit under a pressure of 5 ounces nominal (4 to 10 ounces) (113 to 283 grams).

(2) During the normal card processing operation of the card reader, observe that the stacker elevator is depressed proportionately as cards enter the stacker.

c. Adjustment. Loosen the spring hanger setscrew and move the spring hanger up or down to obtain the requirement in *a* above.

4-64. Adjustment of Elevator Stop
(fig. 4-21)

a. Requirement. The top limit of stacker elevator travel should be at a point where the top of the stacker elevator is 1/4 inch below the slot in the panel.

b. Method of Checking. With the stacker elevator empty, measure the distance between the top of the stacker elevator and the top of the panel slot.

c. Adjustment. Loosen the setscrew on the

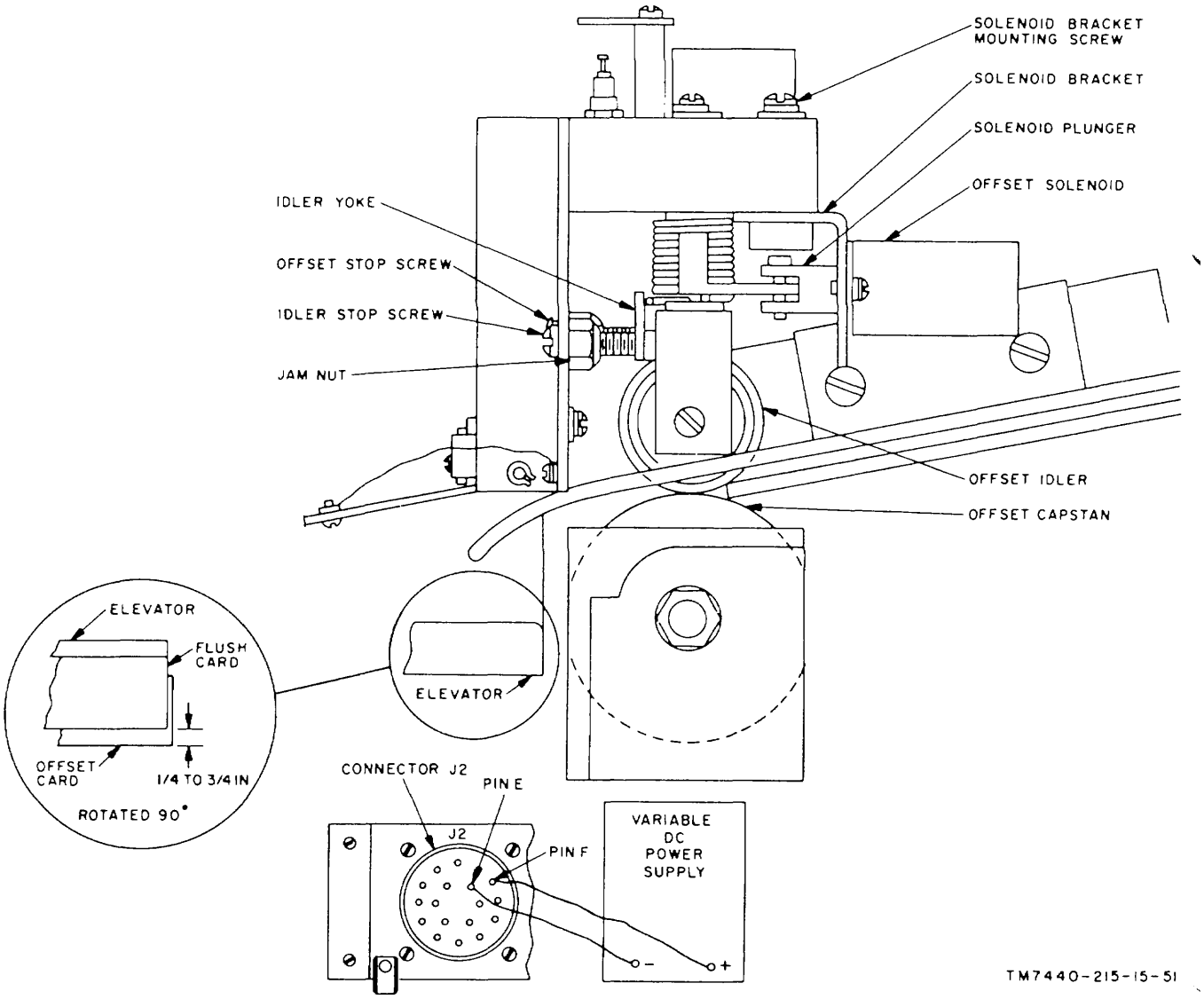


Figure 4-19. Offset idler requirement.

elevator stop and move the stop up or down on the elevator shaft.

4-65. Adjustment of Stacker Full Sensor (fig. 4-21)

a. Requirement. When the stacker elevator contains 1,000 or more cards, switch S1 must be actuated to provide a contact closure across pins f and g of connector J1. Contacts must be open when there are less than 1,000 cards in the stacker elevator.

b. Method of Checking. Use an ohmmeter to check for an open circuit across pins f and g of connector J1 with no cards in the stacker elevator. Place 1,000 cards in the stacker elevator and check to see that the open circuit still exists. As 50 additional cards are placed in the stacker elevator, the ohmmeter should indicate continuity.

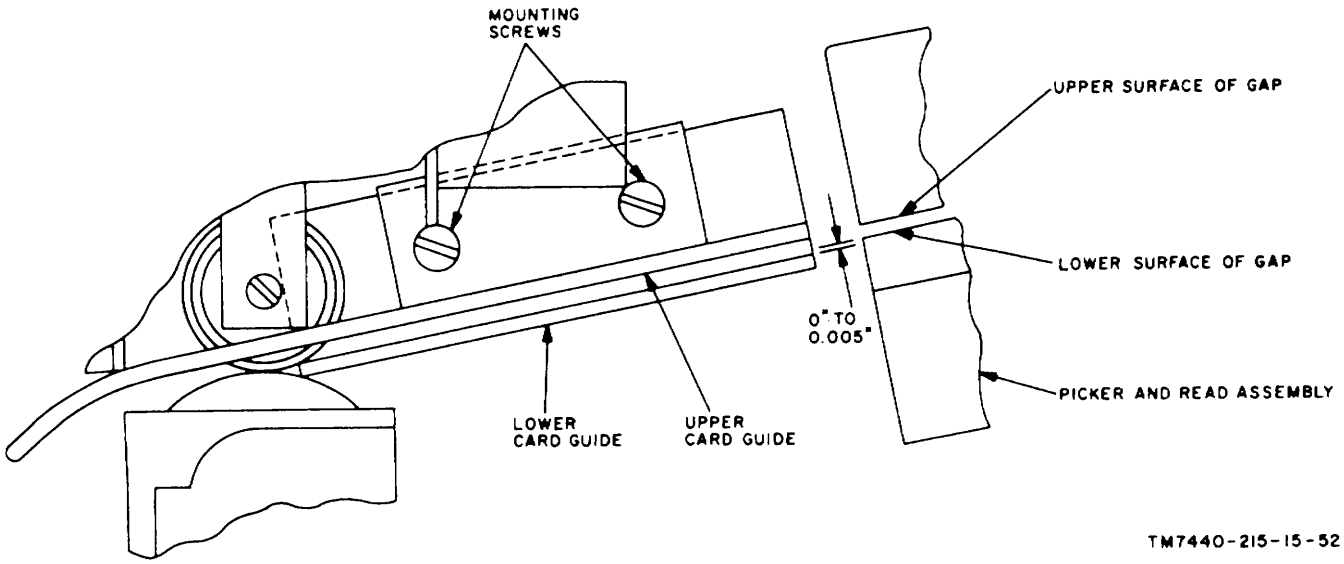


Figure 4-20. Card guide requirement.

c. Adjustment. Loosen the two attaching screws on the switch and position the switch to obtain the required response.

4-66. Adjustment of Card Input Support (fig. 4-22)

a. Requirement. The card input support must be positioned so that the lower end, adjacent to the picker frame, is one card length (7 3/8 inches) plus 0.02 -0.01 inch from the face of the picker throat block.

b. Method of Checking.

(1) Place a standard punched card in position on the picker frame and push it snugly against the picker throat block.

(2) Use a feeler gage to measure the distance between the end of the punched card and the card input support.

c. Adjustment. Loosen the mounting screws on the rear of the panel, and move the support until the proper distance is obtained.

4-67. 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 card reader and 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 points	Voltages (dc)
+4.75 and COM	4.75 ± 0.05
- 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 into tolerance. The potentiometers are listed as follows:

DC voltage	Potentiometer to be adjusted		Fig. 4-4 item number
+4 75	R24	(on assy PS1A1)	92
+12	R17	(on assy PS1A2)	93
-12	R32	(on assy PS1A2)	93
- 48	R18	(on assy PS1A3)	94

4-68. 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 sequence module PS1A12 in the power supply should be checked.

b. Method of Checking. Connect a digital voltmeter between the test points TP11 (+) and TP13 (common) located on sequence module PS1A12 in the power supply (40, fig. 4-4). The power supply should be operating in the normal manner in the card reader, with normal system power turned on. The voltage measured should be + 15.0 ± 0.1 volt dc.

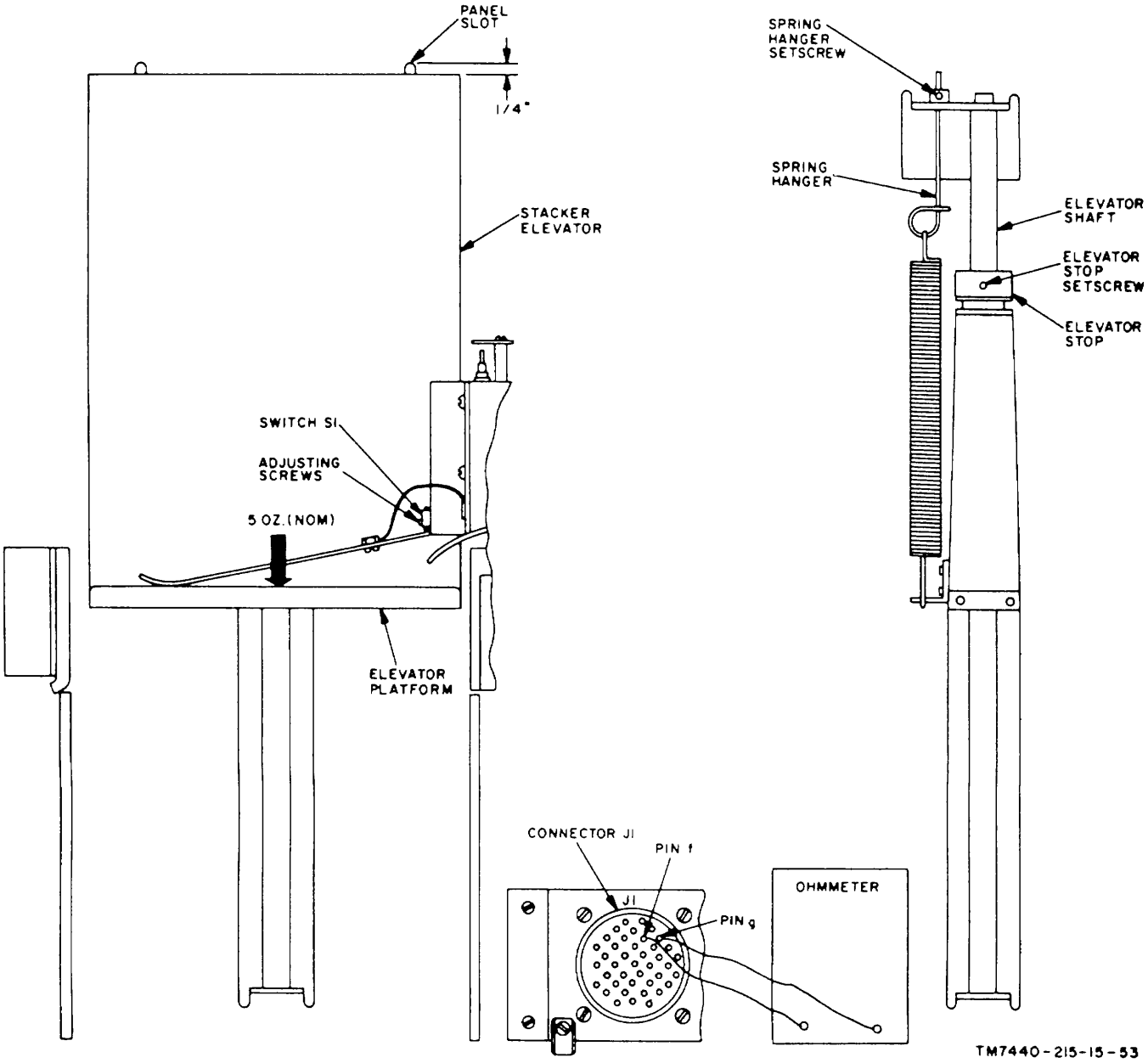


Figure 4-21. Stacker spring, elevator stop, and stacker full sensor requirements.

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.

c. Adjustment. If the voltage from test point TP11 to TP13 is not within tolerance, adjust potentiometer R73 on sequence module A12 (40, fig. 4-4).

4-69. Adjustment of Power Supply Overvoltage Limit

a. Requirement. After the +4.75 output voltage has been checked and adjusted (para 4-67), the overvoltage limit circuit for the +4.75-volt output should be checked to make certain that the trip point of 5.5 volts dc is not exceeded.

b. Method of Checking.

(1) Disconnect the wire connection from PS1TB2, pin 2.

(2) Connect a digital voltmeter, Digitec 251-1, or equivalent, to the test point labeled +4.75 (+) on the power supply front panel and the COM test point.

(3) Slowly adjust potentiometer PSA1R24 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 (occurs immediately before voltage drops to zero) is termed the trip point and should be 5.40 volts dc ± 0.05. If the trip point voltage is out of tolerance, adjust potentiometer PS1A1R30 (92, fig. 4-4). Repeat the check and adjustment until the trip point voltage is within the specified tolerances.

(4) Adjust PS1A1R24 to meet the requirements of paragraph 4-67.

(5) Disconnect the digital voltmeter.

(6) Reconnect the wire connection to PS1 TB2, pin 2.

4-70. Adjustment of Vacuum Relief Valve

NOTE
The following adjustment requires two people.

a. Requirement. The picker requires a vacuum of 5 to 7 inches Hg. while picking a card. This value is obtained when the relief valve (fig. 4-23) is properly adjusted.

b) Method of Checking. With the card reader motor operating, place a card in the hopper and hold the card against the picker belts to close the perforations in the belts. Manually actuate the picker solenoid and check the vacuum indicated by the gauge (fig. 4-23) on the pump assembly.

c. Method of Adjustment. Loosen locknut on relief valve assembly. With motor operating, hold a card in the hopper against the picker belts and actuate the picker solenoid as in b above. Turn adjustment nut until the gauge indicates a minimum value of 5 inches Hg. Clockwise rotation of the adjustment nut increases the vacuum and counter,-clockwise rotation decreases the

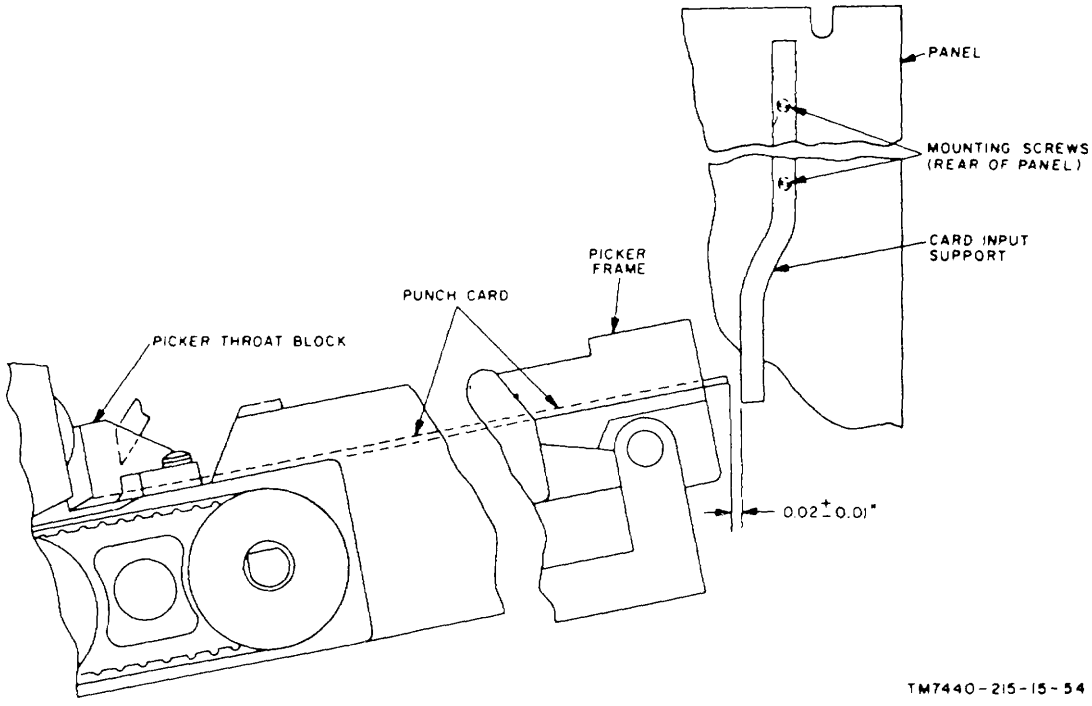


Figure 4-22. Card input support requirement.

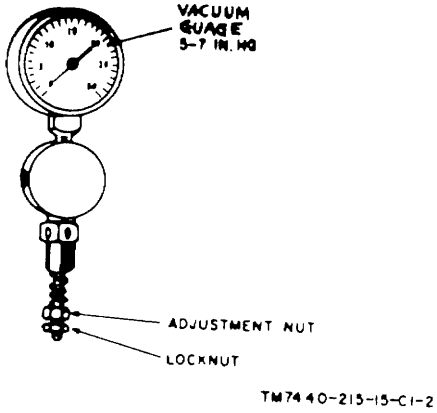


Figure 4-23. Vacuum relief valve requirements.

vacuum. Tighten locknut to maintain valve adjustment.

Caution:

While performing this adjustment, it is necessary to keep the card from moving when placed against the picker belt to close the perforations. Vacuum adjustments in excess of 7 inches of Hg will shorten the life of the vacuum pump. If required vacuum cannot be obtained, refer to para 4-36.1.

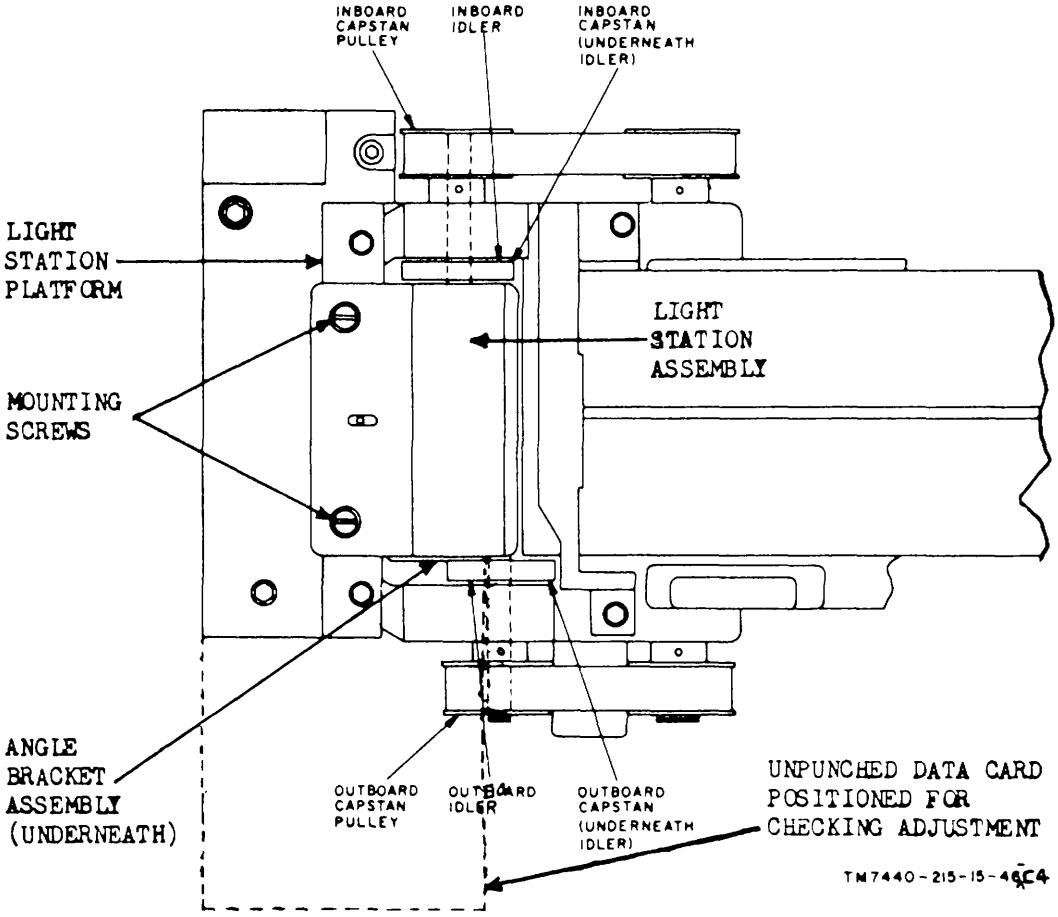


Figure 4-24. Card path clearance adjustment.

4-71. Adjustment of Card Path Clearance (fig. 4-24)

a. Requirement. There should be sufficient clearance between the light station assembly and the angle bracket assembly (phototransistor mounting bracket) to allow free card movement through the read station.

b. Method of Checking. Insert a standard unpunched data card between light station assembly and angle bracket assembly from the front of the machine, immediately to the left of the outboard capstan and outboard idler. Withdraw it moderately fast. There should be no significant drag on the card, indicating that there is sufficient clearance for free card movement.

c. Method of Adjustment. Add a minimum thickness of shims between light station assembly and light station platform, to eliminate any significant drag on a card as in b, above. An equal thickness of shims should be installed around each of the two light station assembly mounting screws. To insure proper alignment with phototransistors, the light station assembly should be held to the left while tightening the mounting screws.

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 card reader to a PC card is given in chapter 4. The instructions in this chapter 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 PC card suspected to be defective.

(2) Troubleshooting using manual techniques.

(3) Replacement of defective parts.

5-2. Tools and Test Equipment Required

Refer to the maintenance allocation chart (appx C) for a list of the tools and test equipment required for maintenance of the printed circuit cards of the card reader.

Section II. TROUBLESHOOTING PRINTED CIRCUIT CARDS

5-3. Testing Procedure

If a PC card is suspected to be defective, install it in a card reader which is known to be operable. Then operate the card reader with an associated CCU and output device to read out the information content on punched cards containing all possible characters (fig. 3-4). If cards are picked and fed, and all characters are properly read out, the PC card being checked is considered good. If a malfunction occurs, locate and correct the fault as described in paragraphs 5-4 through 5-25.

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, or loose connections.

5-6. Signal Tracing

a. Place the PC card on an extender board and, with power off, install it in an otherwise operable card reader. Operate the card reader to simulate the condition under which tile malfunction was observed. Then use standard signal tracing techniques to isolate the defective part. A thorough knowledge of the operation of the card reader circuits as given in chapter 3 is required to effectively use signal tracing techniques.

b. The voltages and waveforms at most test points may be observed with the oscilloscope. In general, signals at input and outputs of integrated circuit logic element modules switch between +4.5 volts dc (high) and 0 volt dc (low). 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 circuit logic elements, refer to paragraph 3-25.

c. Refer to paragraph 5-9 for the location of parts on PC cards. Refer to figure 5-1 for the location of terminals on integrated circuit logic element modules. Figure 5-1 applies to all types of integrated circuit logic elements.

d. The card reader can be operated to read only one card at a time using the SINGLE FEED switch on the control panel. Each time this switch is pressed, a single card is picked and read; however, the card reader cannot normally be made to read one character at a time. If the PC card being checked contains

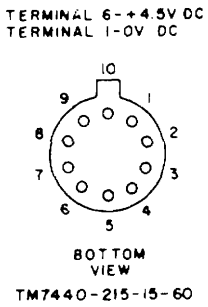


Figure 5-1. Location of terminal. on integrated circuit modules.

circuits which process the character data bits, repetitive -waveforms for signal tracing can be obtained by using a punched card with the identical character punched in each of the 80 columns.

e. 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.

5-7. Signal Substitution

In some cases, the effort of isolating a malfunction within a complex logic circuit can be simplified by using signal substitution techniques. Specifically, any point or points at, the input to ,a logic element may be grounded, thereby making the operation of the logic element easily predictable. This method cannot normally be used to insert a high level (+4.5 volts) without physically disconnecting the signal input from the logic element; therefore, it is not recommended to use signal substitution for high level inputs.

Section III. REPAIR OF PRINTED CIRCUIT CARDS

5-8. General Parts Replacement Techniques

Most of the parts on at PC card can be replaced easily without special procedure. For PC card soldering techniques, refer to TB SIG 222 (Army), TO 0025-234 (Air Force), or NW 00-15PA-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

Tile locations of all replaceable parts on the PC cards of the card reader are shown in figures 5-2 through 5-23.

TERMINAL	FUNCTION	TERMINAL	FUNCTION
1	OUTPUT 1	6	INPUT 3
2	INPUT 1	7	+12 VOLTS DC
3	OUTPUT 2	8	−12 VOLTS DC
4	INPUT 2	9	LAMP TEST
5	OUTPUT 3	10	GROUND

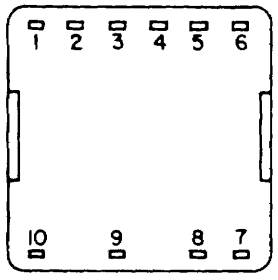


Figure 5-1.1. Location of terminals of microcircuit lamp driver modules.

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 A1, ground is available on pin 1 or A of the printed circuit card connector. Pin 2 of B of each PC card connector supplied +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 (0 volts) 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 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. Test Card Deck

a. Prepare a deck of test cards (at least 100) punched with 16 asterisks followed by the 64.

ASCII characters listed in figure 3-4. The sequence of characters on the card should be shown in Table 5-1. These test cards will be used to provide appropriate input signals to the card reader during certain test conditions specified in the test data charts (para 5-12 through 5-26).

Table 5-1. Test Pattern Character Sequence

Card column	Character	Punched code
1	* Asterisk	11,8,4
2	"	"
3	"	"
4	"	"
5	"	"
6	"	"
7	"	"
8	"	"
9	"	"
10	"	"
11	"	"
12	"	"
13	"	"
14	"	"
15	"	"
16	* Asterisk	11, 8, 4
17	Space	No Punches
18	! Exclamation Point	12,8,7
19	" Quotation Mark	7,8
20	# Number sign	8,3
21	$ Dollar Sign	11,8,3
22	% Percent	10,4,8
23	& Ampersand	12
24	' Apostrophe	8,5
25	(Opening Parenthesis	12,8,5
26	) Closing Parenthesis	11,8,5
27	* Asterisk	11,4,8
28	+ Plus	12,8,6
29	, Comma	10,3,8
30	- Hyphen	11
31	. Period	12,3,8
32	/ Slant	10,1
33	0 Zero	10
34	1	1
35	2	2
36	3	3
37	4	4
38	5	5
39	6	6
40	7	7
41	8	8
42	9	9
43	: Colon	8,2
44	; Semicolon	11,6,8
45	< Less Than	12,4,8
46	= Equals	8,6
47	> Greater Than	10,8,6
48	? Question Mark	10,8,7
49	@ Commercial at	8,4
50	A	12,1
51	B	12,2
52	C	12,3
53	D	12,4
54	E	12,5
55D	F	12,6
56	G	12,7
57	H	12,8
58	I	12,9
59	J	11,1
60	K	11,2
61	L	11,3
62	M	11,4
63	N	11,5
64	0	11,6
65	P	11,7
66	Q	11,8
67	R	11,9
68	S	10,2
69	T	10,3
70	U	10,4
71	V	10, 5
72	W	10, 6

Table 5-1-Continued

Table 5-1-Continued

Card column	Character	Punched code
73	X	10,7
74	Y	10, 8
75	Z	10, 9
76	Ø- Plus zero	12, 10

Table 5-1-Continued

Cad column	Character	Punched code
77	_ Reverse slant	10, 8,2
78	Ø Minus zero	11,10
79	^ Circumflex	11 ,8,7
80	_ Underline	10,8,5

5-12. PC Card A1A1 (A65209-002) Test Data Chart

(Fig. 5-12 and 8-10)

Test points	Test conditions	Normal indications
Typical SOL DR (B) or SOL DR (C) output (XA1-5 or XA1-6).	PC card A15 removed from logic assembly A1 (fig. 4-2), power on, and: *a*. +4.5 volts dc applied to input (XA1-D) - *b*. ground applied to input (XA1-D)	 *a*. -48 volts dc. *b*. 0 volts dc.
XA1-14	Initial power turn-on.	+4.5 volts dc pulse, 330 msec wide, with slow decay.

5-13. PC Card A1A3 (SM546659-001) Test Data Chart

(Fig. 5-14 and 8-11)

Test points	Test conditions	Normal indications
Typical lamp driver output (XA3-U).	PC card A15 removed from logic assembly A1 (fig. 4-2), power on, and: *a*. LAMP TEST switch A3Z3 pressed . *b*. +4.5 volts dc applied to input (XA3-17). *c*. ground applied to input (XA3-17)	 *a*. 0 volts dc. *b*. 0 volts dc. *c*. 15 volts ac.

5-14. PC Card A1A4 (A65215-001) Test Data Chart

(Fig. 5-13 and 8-12)

Test points	Test conditions	Normal indications
RCVR-1C output (XA4-D)	Jack J1 removed from logic assembly A1 (fig. 4-2), power on, and: *a*. +6.2 volts dc applied to input (XA4-E) *b*. -6.2 volts dc applied to input (XA4-E)	 *a*. +4.5 volts dc. *b*. 0 volts de.
Typical RCVR-1A or RCVR-1B output (XA4-8).	Jack J1 removed from logic assembly Al (fig. 4-2), power on, and: *a*. ground applied to input (XA4-9) *b*. open applied to input (XA4-9)	 *a*. +4.5 volts dc. *b*. 0 volts dc.
XMTR-1B output (XA4-21)	PC card A16 removed from logic assembly A1 (fig. 4-2), power on, and: *a*. ground applied to both inputs (XA4-22 and XA4-23). *b*. ground applied to input (XA4-22) and +4.5 volts dc applied to input (XA4-23). *c*. +4.5 volts dc applied to both inputs (XA4-22 and XA4-23).	 *a*. Open circuit (+6.2 volts dc may be reflected from associated receiver circuit in the CCU). *b*. Open circuit (+6.2 volts may be reflected from associated receiver circuit in the CCU). *c*. 0 volts dc.
Typical XMTR-1A output (XA4-14).	PC card A16 removed from logic assembly Al (fig. 4-2), power on, and: *a*. +4.5 volts dc applied to input (XA4-16) *b*. ground applied to input (XA4-16)	 *a*. 0 volts dc. *b*. Open circuit (6.2 volts dc may be reflected from associated receiver circuit in the CCU).

5-15. PC Card A1A5 (A65205-001) Test Data Chart

(Fig. 5-11 and 8-13)

Test points	Test conditions	Normal indications
Typical XMTR-2 output (XA5-U).	PC cards A4 and A13 removed from logic assembly A1 (fig. 4-2), power on, and:	
	a. ground applied to input (XA5-10)	a. -6.2 volts dc.
	b. +4.5 volts dc applied to gate input (XA5-10) and:	b. (Output enabled).
	(1) +4.5 volts dc applied to input (XA5-W)	(1) +6.2 volts dc.
	(2) ground applied to input (XA5-WV)	(2) -6.2 volts dc.

5-16. PC Card A1A6 (A52630-001) Test Data Chart

(Fig. 5-3 and 8-14)

Test points	Test conditions	Normal indications
Typical PHOTO AMPL-1 output (XA6-X).	Power on, hopper loaded with blank (unpunched cards), and SINGLE FEED switch A3Z4 pressed.	
	a. Photocells not covered by card	*a*. +4.5 volts dc.
	b. Photocells covered by card	*b*. 0 volts dc.
XA6-23	Power on, hopper loaded with blank (unpunched cards), and SINGLE FEED switch A3Z4 pressed.	
	a. Photocells not covered by card	*a*. +4.5 volts dc.
	b. Photocells covered by card	*b*. 0 volts dc.

5-17. PC Card A1A7 (A65145-001) Test Data Chart

(Fig. 5-8 and 8-15)

Test points	Test conditions	Normal indications
Typical Data Register latch output (XA7-16).	PC cards A14 and A16 removed from logic assembly A1 (fig. 4-2), power on, and:	
	a. ground applied to inputs (XA7-X, XA7-Y, and XA7-U) and +4.5 volts de applied to input (XA7-T).	a. 0 volts dc.
	b. ground applied to inputs (XA7-X, XA7-U, and XA7-T) and +4.5 volts dc applied to inputs (XA7-Y and XA7-N).	b. +4.5 volts dc.

5-18. PC Card A1A8 (A52634-001) Test Data Chart

(Fig. 5-4 and 8-16)

Test points	Test conditions	Normal indications
XA8-C	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	*a*. 0 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	*b*. 0 volts dc.
XA8-D	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	*a*. 0 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	*b*. 0 volts dc.
XA8-U	Power on with test desk (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	*a*. 0 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	*b*. Train of 0 to +4.5 volt dc pulses.
XA8-4	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	*a*. 0 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	*b*. 0 volts dc.

5-18. PC Card A1A8 (A52634-001) Test Data Chart (cont.)

Test points	Test conditions	Normal indications
XA8-6	Power on with test deck (para 5-11) loaded in hopper and: a. MASTER RESET switch A1S1 pressed b. LOCAL TEST switch A3Z5 pressed	 a. 0 volts dc. b. Two 0 to +4.5 volt dc pulses per card (columns 76 and 78).
XA8-15	Power on with test deck (para 5-11) loaded in hopper and: a. MASTER RESET switch A1S1 pressed b. LOCAL TEST switch A3Z5 pressed	 a. 0 volts dc. b. Train of 0 to +4.fvoltdcpulses.

5-19. PC Card A1A9 (A53725-001) Test Data Chart
(Fig. 5-6 and 8-17)

Test points	Test conditions	Normal indications
Typical decode gate (Z4B) output (XA9-C)	Power on with test deck (para 5-11) loaded in hopper and: *a*. MASTER RESET switch A1S1 pressed *b*. LOCAL TEST switch A3Z5 pressed	 *a*. 0 volts dc. *b*. One 0 to +4.5 volt dc pulse per card (column 40).

5-20. PC Cards A1A10, A1A11, and A1A12

Test points	Test conditions	Normal indications
A1A10 (A53721-001) Typical "F line" encode gate (Z15A and Z15B) output (XA10-2).	(Fig. 5-5 and 8-18): Power on with test deck (para. 5-11) loaded in hopper and: a. MASTER RESET switch AIS1 pressed b. LOCAL TEST switch A3Z5 pressed c. Further isolation can be provided with PC Cards A9 and A12 removed from logic assembly A1 (fig. 4-2), power on, and: (1) ground applied to inputs (XA10-Z, XA10-AA, XA10-R, AND XA10-8). (2) +4.5 volts dc applied to any one input and ground applied to the other inputs (XA10-Z, XA10-AA, XA10-R, and XA10-8).	 a. 0 volts dc. b. Eight O to +4.5 volt dc pulses per card (columns 24, 32, 40, 48, 56,64, 72, and 80). c. Observe following: (1) 0 volts dc. (2) +4.5 volts dc.
A1A11 (A53725-001)	(Fig. 5-6 and 8-19): Install in PC Card A9 location and use test data given above.	
A1A12 (A53721-001)	(Fig. 5-5 and 8-20): Install in PC Card A10 location and use test data given above.	

WARNING

Do not remove PC Card AIA12 prior to removing AC voltage to Punched Card Card Reader from the AC power sources.

5-21. PC Card A1A13 (A52622-001) Test Data Chart
(Fig. 5-2 and 8-21)

Test points	Test conditions	Normal indications
XA13-Z	Power on with test deck (para. 5-11) loaded in hopper and: a. MASTER RESET switch A1S1 pressed b. LOCAL TEST switch A3Z5 pressed	 a. + 4.5 volts dc. b. Train of +4.5 to volt dc pulses.

5-21. PC Card A1A13 (A526622-001) Test Data Chart (cont.)

Test points	Test conditions	Normal indications
XA13-4	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	a. +4.5 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	b. Train of +4.5 to 0 volt dc pulses.
XA13-20	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	a. +4.5 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	b. Train of +4.5 to 0 volt dc pulses.
XA13-22	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	a. +4.5 volts dc.
	b. LOCAL TEST switch A2Z5 pressed	b. Train of +4.5 to 0 volt dc pulses.
XA13-23	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	a. 0 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	b. Train of 0 to +4.5 volt dc pulses.

5-22. PC Card A1A14 (A65175-001) Test Data Chart
(Fig. 5-9 and 8-22)

Test points	Test conditions	Normal indications
XA14-6	Power on and:	
	a. MASTER RESET switch A1S1 pressed	a. +4.5 volts dc.
	b. LOCAL TEST switch A3Z5 pressed with hopper loaded with test deck (para 5-11).	b. Train of +4.5 to 0 volt dc pulses.
	c. LOCAL TEST switch A3Z5 pressed with hopper loaded with blank (unpunched) cards.	c. +4.5 volts dc.
XA14-7	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	a. 0 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	b. Train of 0 to +4.5 volt dc pulses.
XA14-9	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	a. 0 volts dc.
	b. LOCAL TEST switch A3Z5 pressed (column 17).	b. One 0 to +4.5 volt dc pulse per card
XA14-14	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	a. 0 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	b. Train of 0 to +4.5 volt dc pulses.
XA14-18	Power on with test deck (para 5-11) loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	a. 0 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	b. Train of 0 to +4.5 volt dc pulses.

5-23. PC Card A1A15 (A65153-001) Test Data Chart
(Fig. 5-10 and 8-23)

Test points	Test conditions	Normal indications
XA15-J and XA15-V	Power on with hopper loaded with a deck of cards that includes one card creased so that it will cause a pick fail, and LOCAL TEST switch A3Z5 pressed.	
	a. Observe XA15-V on good cards	a. 0 volts dc.
	b. Observe XA15-V on pick fail	b. 0 to +4.5 volt dc pulse after a delay.
	c. Observe XA15-J on pick fail	c. -4.5-volt dc level after a delay.

5-23. PC Card A1A15 (A65153-001) Test Data Card (cont.)

Test points	Test conditions	Normal indications
XA15-K	Power on	+4.5 volt dc pulses.
XA15-L	Power on and:	
	a. MASTER RESET switch A1S1 pressed	+4.5 volts dc.
	b. PC card A16 removed from logic assembly A1 (fig. 4-2) and -+4.5 volts dc applied to input (XA15-U).	b. One +4.5 to 0 volt dc pulse when +4.5 volts dc was applied to input (XA15-U).
XA15-6	Power on and:	
	a. MASTER RESET switch A1S1 pressed	a. 0 volts dc.
	b. PC card A14 removed from logic assembly A1 (fig. 4-2) and then:	b. Observe following:
	(1) +4.5 volts dc applied to input (XA15-7)	(1) 0 volts dc.
	(2) open applied to input (XA15-7)	(2) 0 to +4.5 volt dc pulse after a delay.

5-24. PC Card A1A16 (A65141-001) Test Data Chart

(Fig. 5-7 and 8-24)

Test points	Test conditions	Normal indications
XA16-P	Power on with a deck of cards loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	a. 0 volts dc.
	b. START switch A3Z7 pressed	b. +4.5 volts dc.
XA16-6	Power on and:	
	a. MASTER RESET switch A1S1 pressed and held	a. +4.5 volts dc.
	b. MASTER RESET switch A1S1 released	b. 0 volts dc.
XA16-13	Power on with cards loaded in hopper and:	
	a. MASTER RESET switch A1S1 pressed	a. 0 volts dc.
	b. SINGLE FEED switch A3Z4 pressed	b. One 0 to +4.5 volt dc pulse.
XA16-14	Power on with cards loaded in hopper and:	
	a. STOP switch A3Z6 pressed	a. 14.5 volts dc.
	b. LOCAL TEST switch A3Z5 pressed	b. 0 volts dc until hopper is empty.
XA16-18	Power on, assigned, and AUDIBLE RESET switch A3Z1 pressed.	0 to +4.5 volt de pulse when switch is first pressed.
XA16-21	Power on with cards loaded in hopper and SINGLE FEED switch A3Z4 pressed.	0 to +4.5 volt de pulse while card is being processed.

5-25. Power Supply PS1 Test Data Chart

(Fig. 4-4 and 8-7).

CAUTION

When taking voltage measure on power supply PS1 sequence module A12, use insulated test connectors to avoid possible short circuits between test points and copper runs.

Test points	Test conditions	Normal indications
PS1TP2 to PS1TP1 (Common)	Power on	+4.75 vdc ±1%
PS1TP3 to PSTP1	Power on	+12.0 vdc ±1%
PS1TP4 to PS1TP1	Power on	+12.0 vdc ±1%
PS1TP5 to PS1TP1	Power on	-48.0 vdc ±1%
PS1A12TP3 to TP13	Power on	-12.0 vdc ±1%
PS1A12TP4 to TP13	Power on	+12.0 vdc ±1%
PS1A12TP6 to TP13	Power on	+4.75 vdc ±1%
PS1A12TP9 to TP13	Power on	+48.0 vdc ±1%
PS1A12TP1 to TP13	Power on	-15.0 vdc ±1%

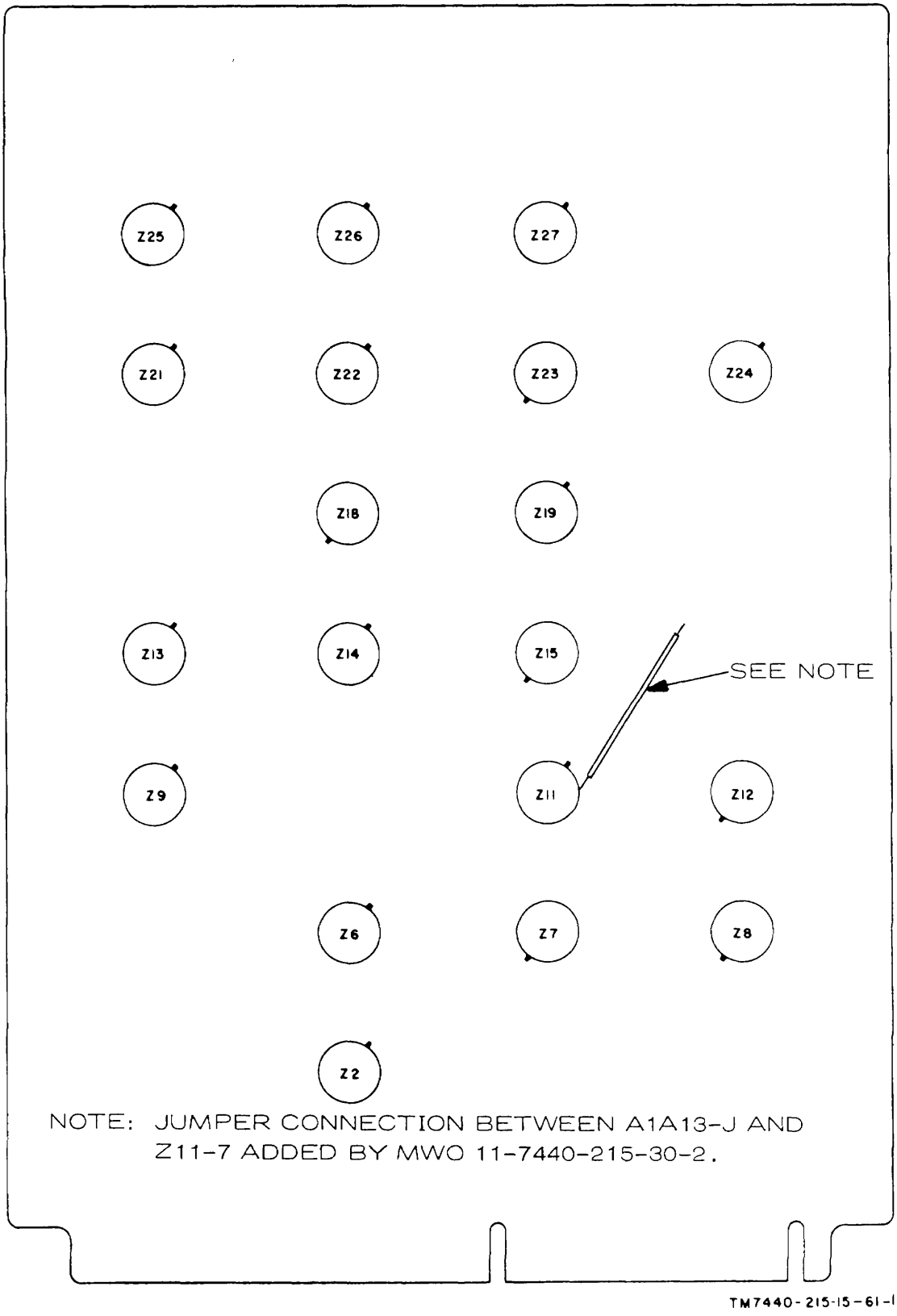


Figure 5-2. PC card A13 (No. A52622-001). component location diagram.

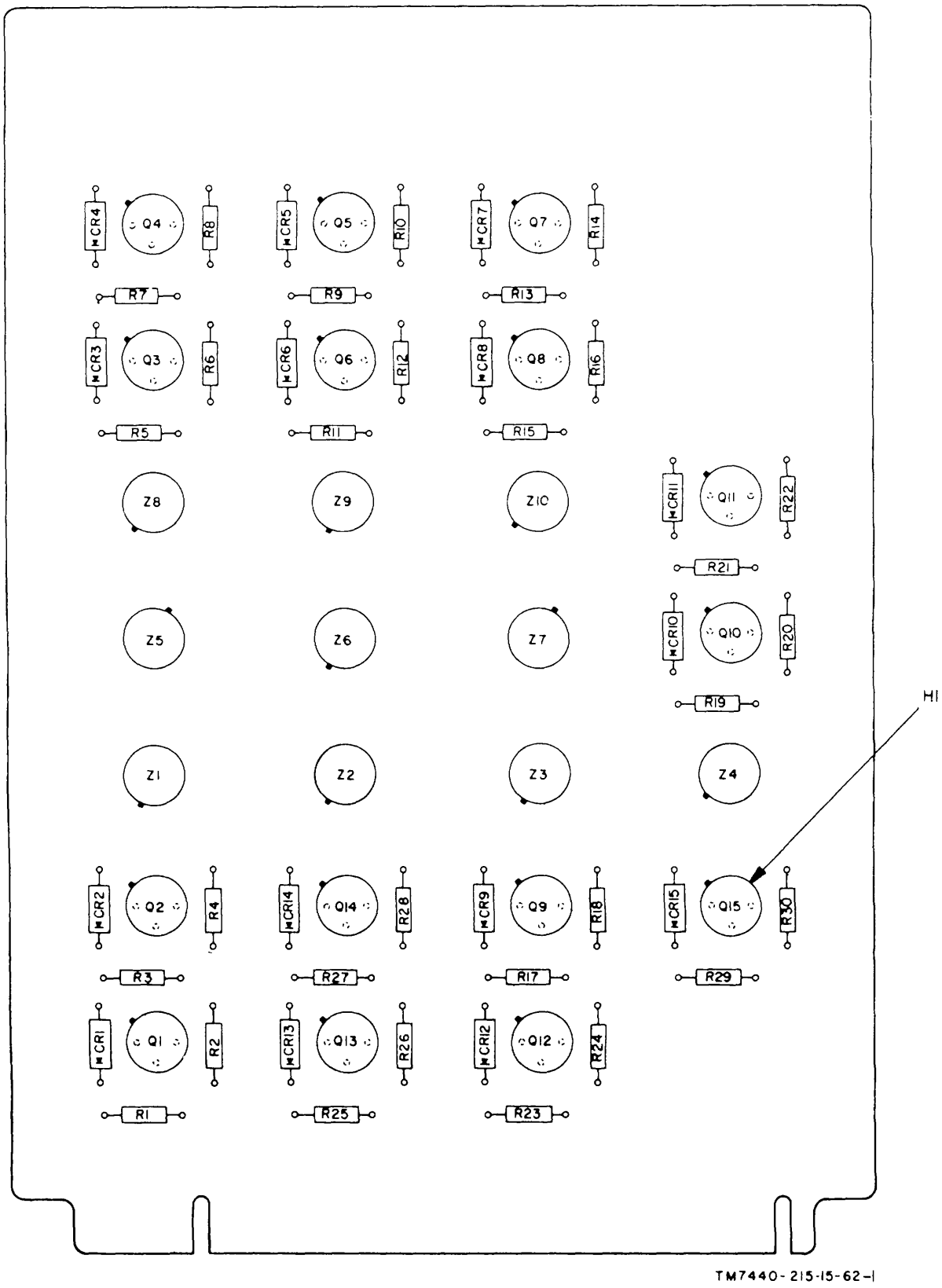


Figure 5-3. PC card A6 (No. A52630-001), component location diagram.

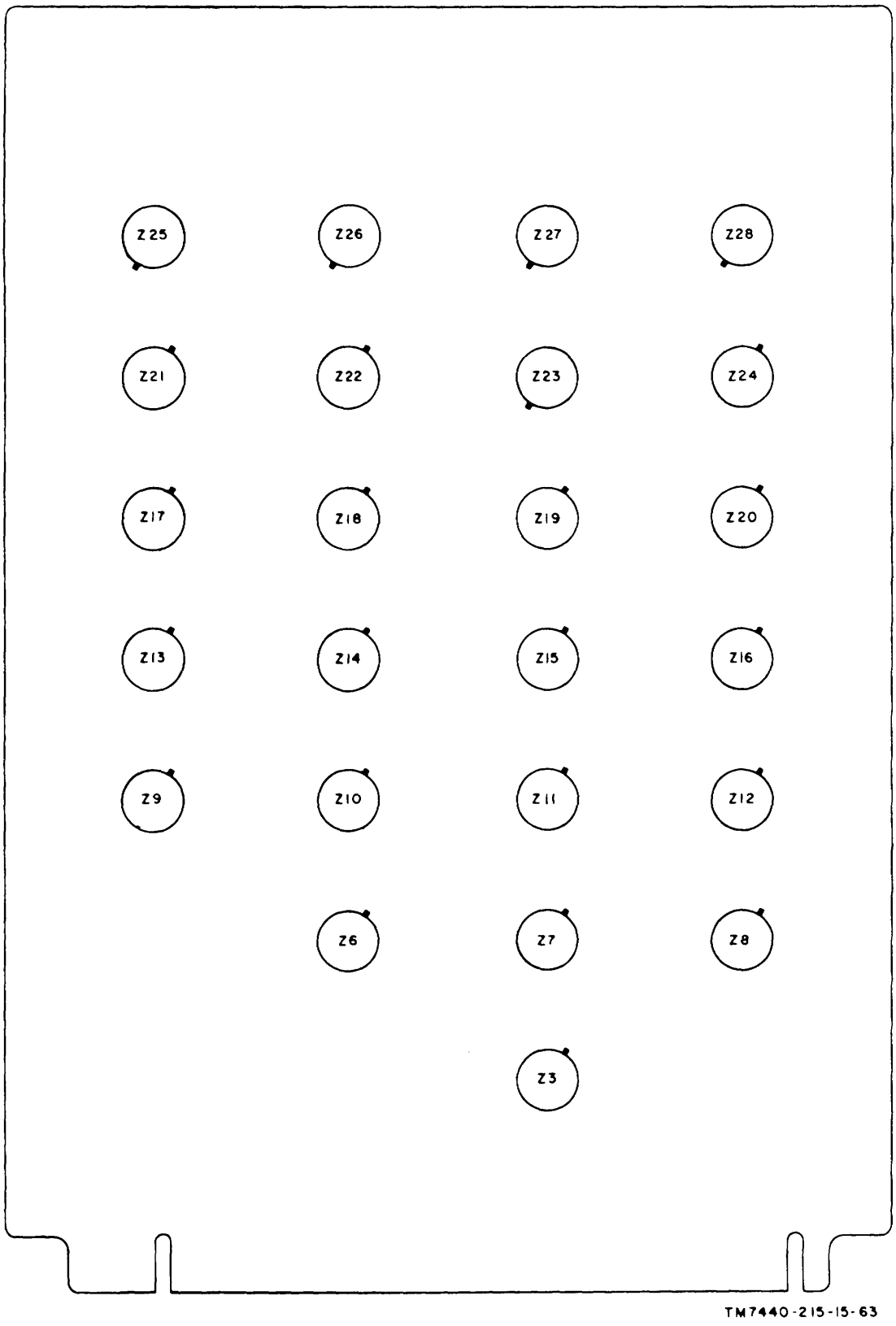


Figure 5-4. PC card A8 (No. A52634-001), component location diagram.

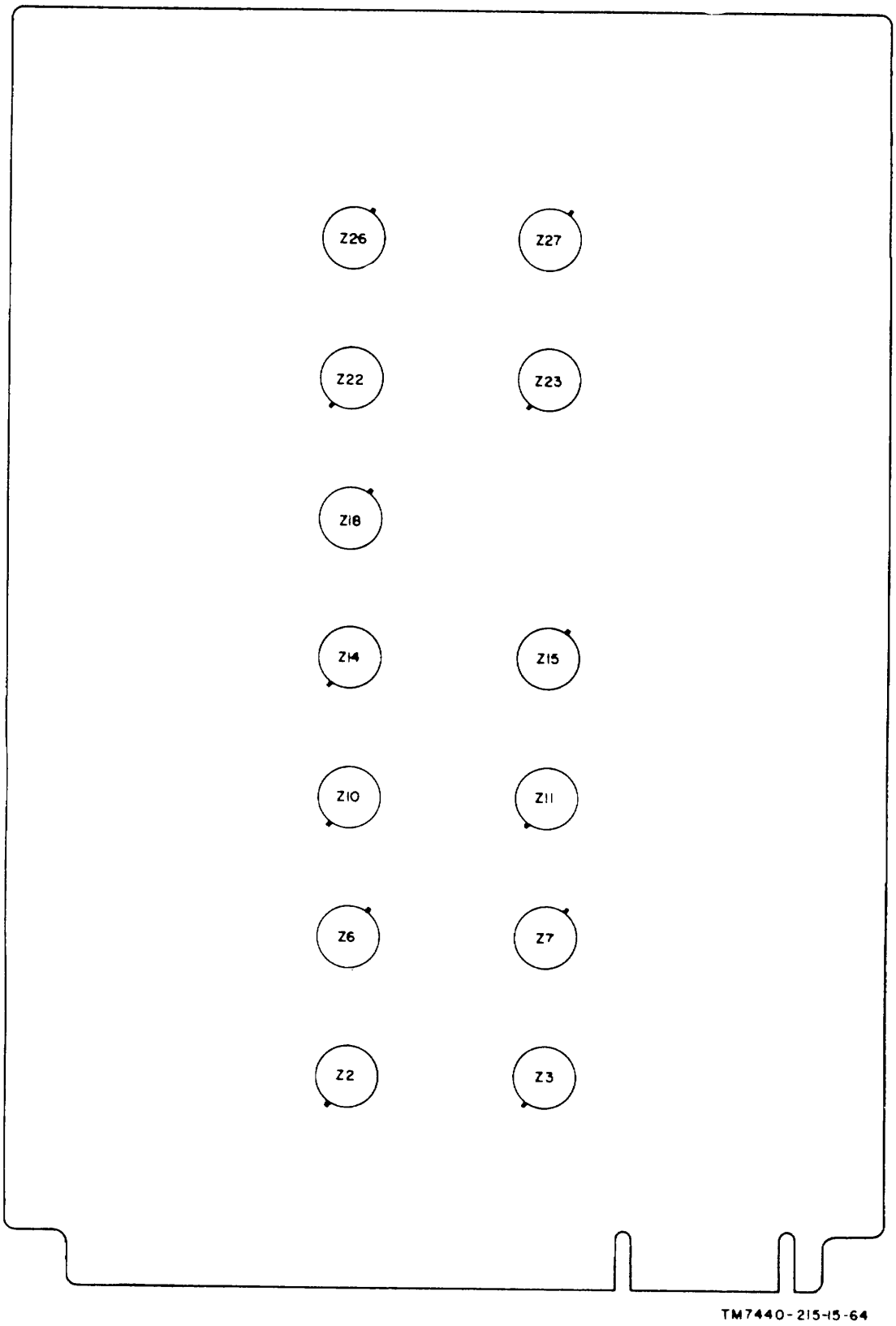


Figure 5-5. PC cards ,A10 and A12 (No. 53721-001), component location diagram.

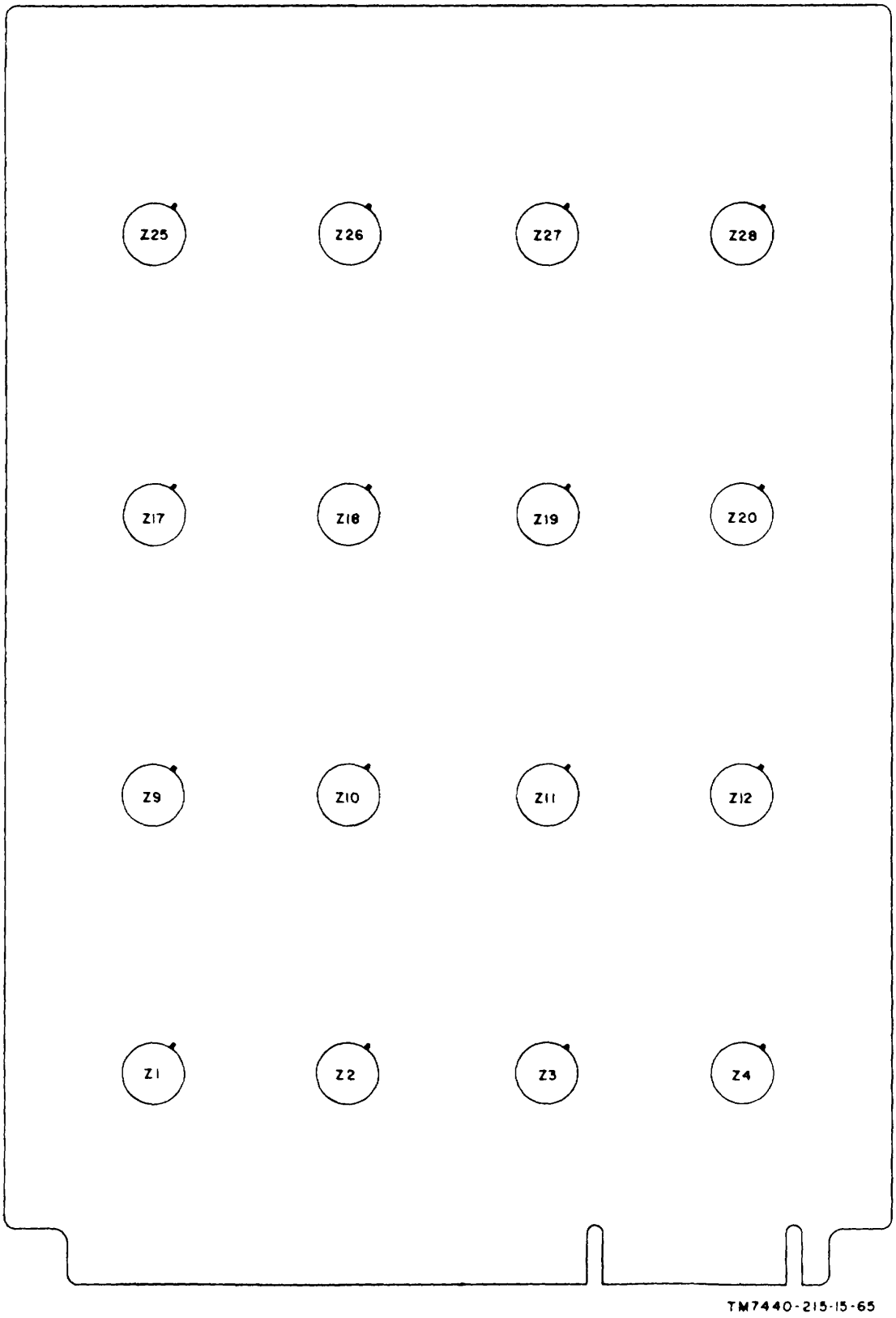


Figure 5-6. PC cards A9 and A11 (No. A53725-001), component location diagram.

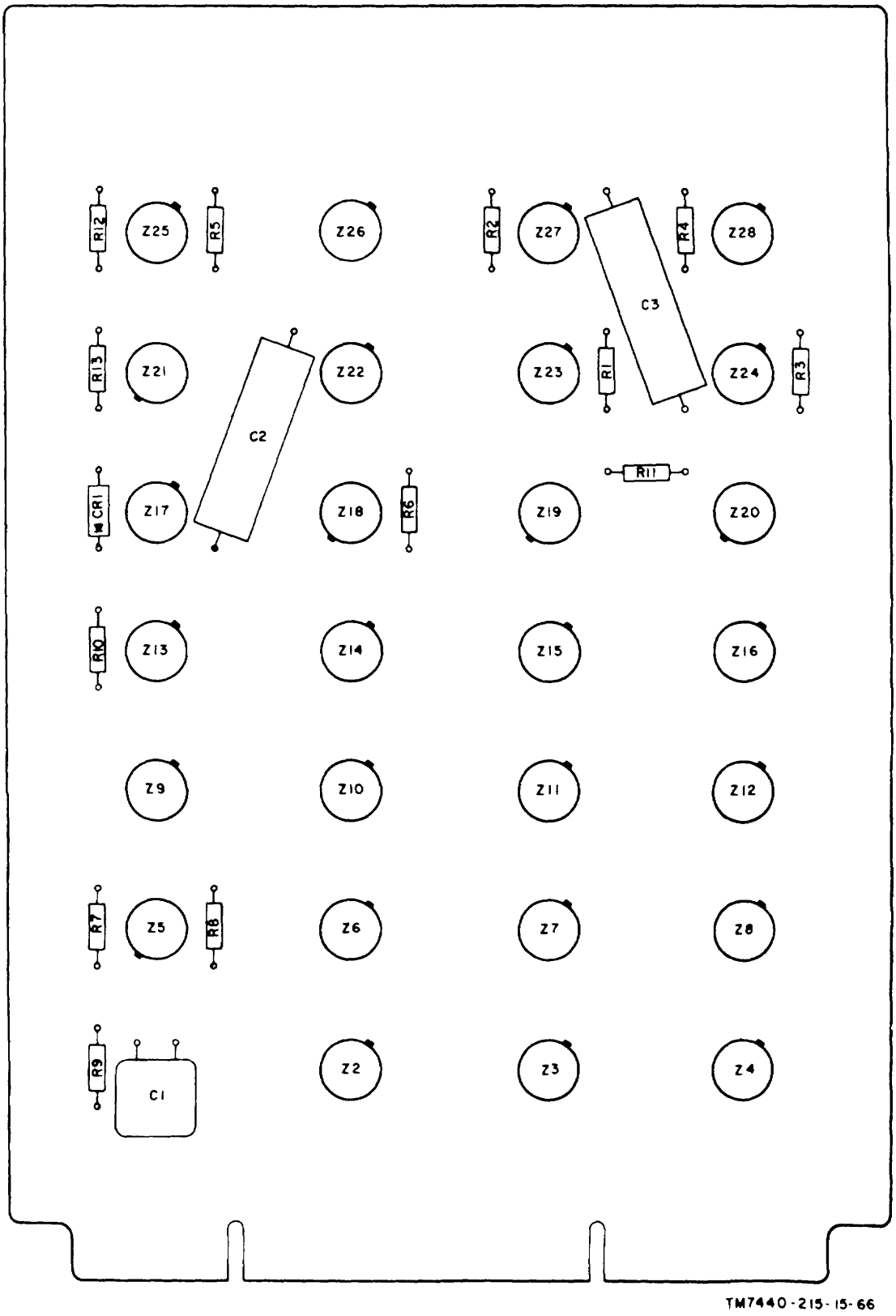


Figure 5-7. PC card A16 (No. A65141-001), component location diagram.

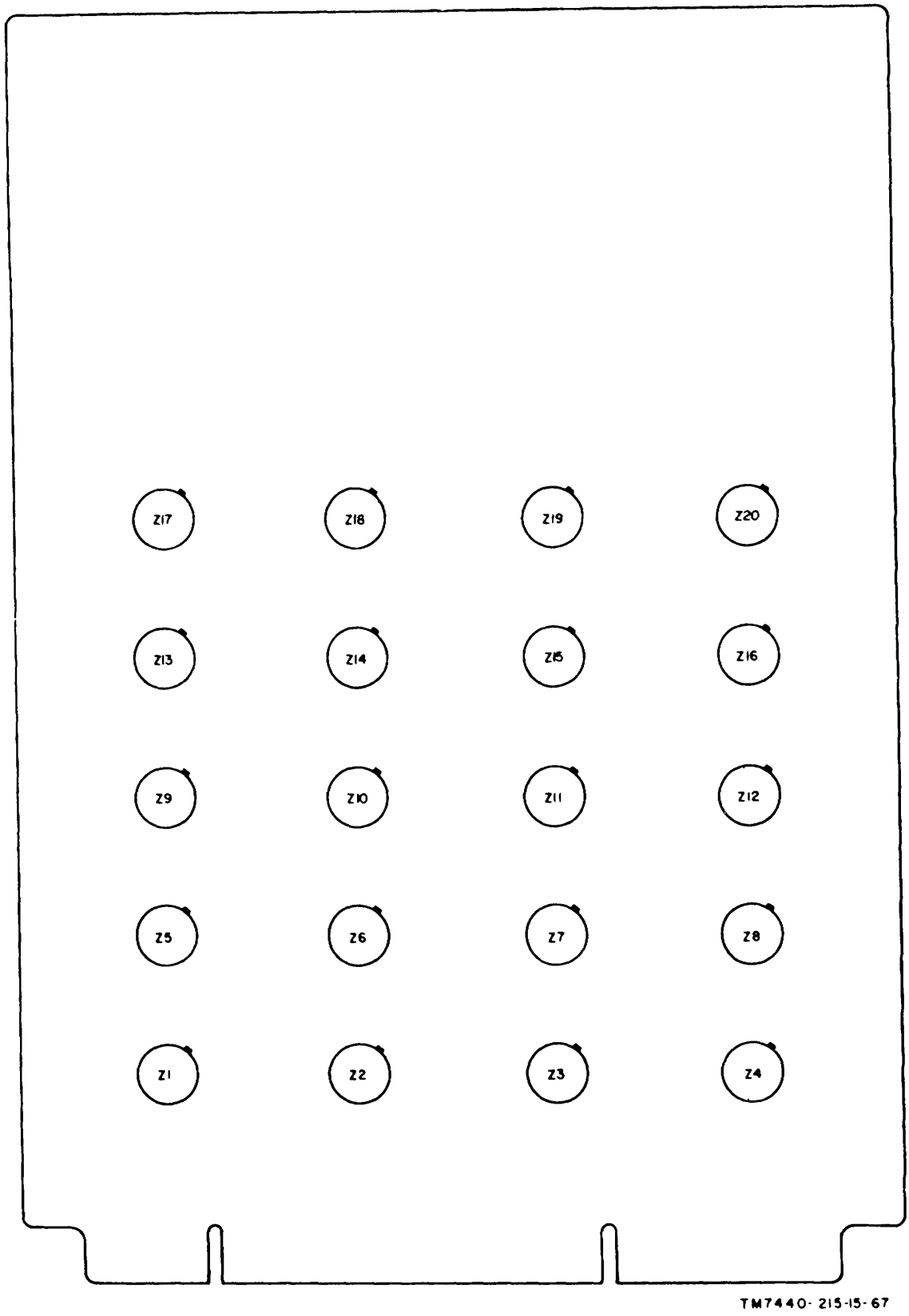


Figure 5-8. PC card A7 (No. A65145-001), component location diagram.

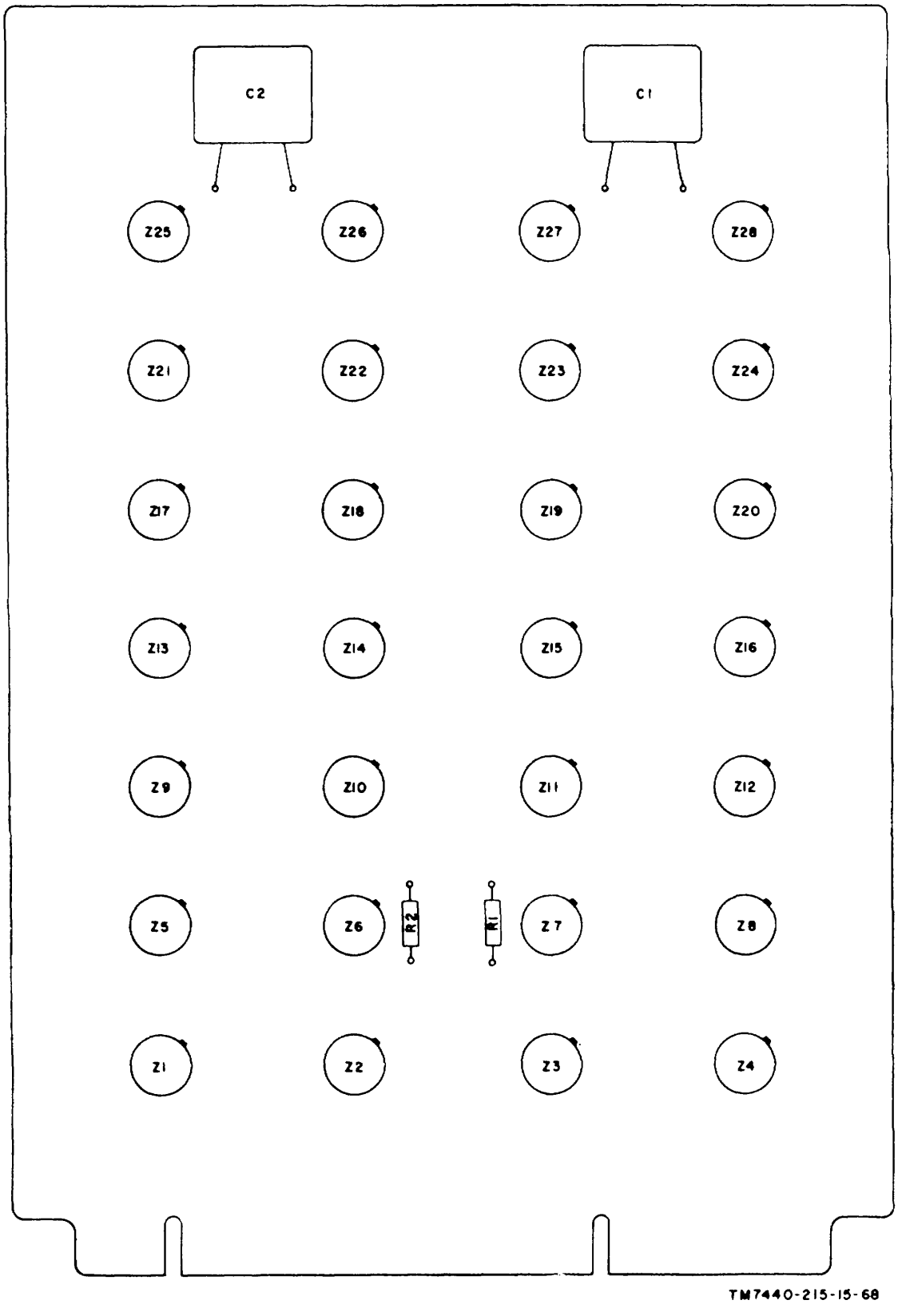


Figure 5-9. PC card A14 (No. A65173-001), component location diagram.

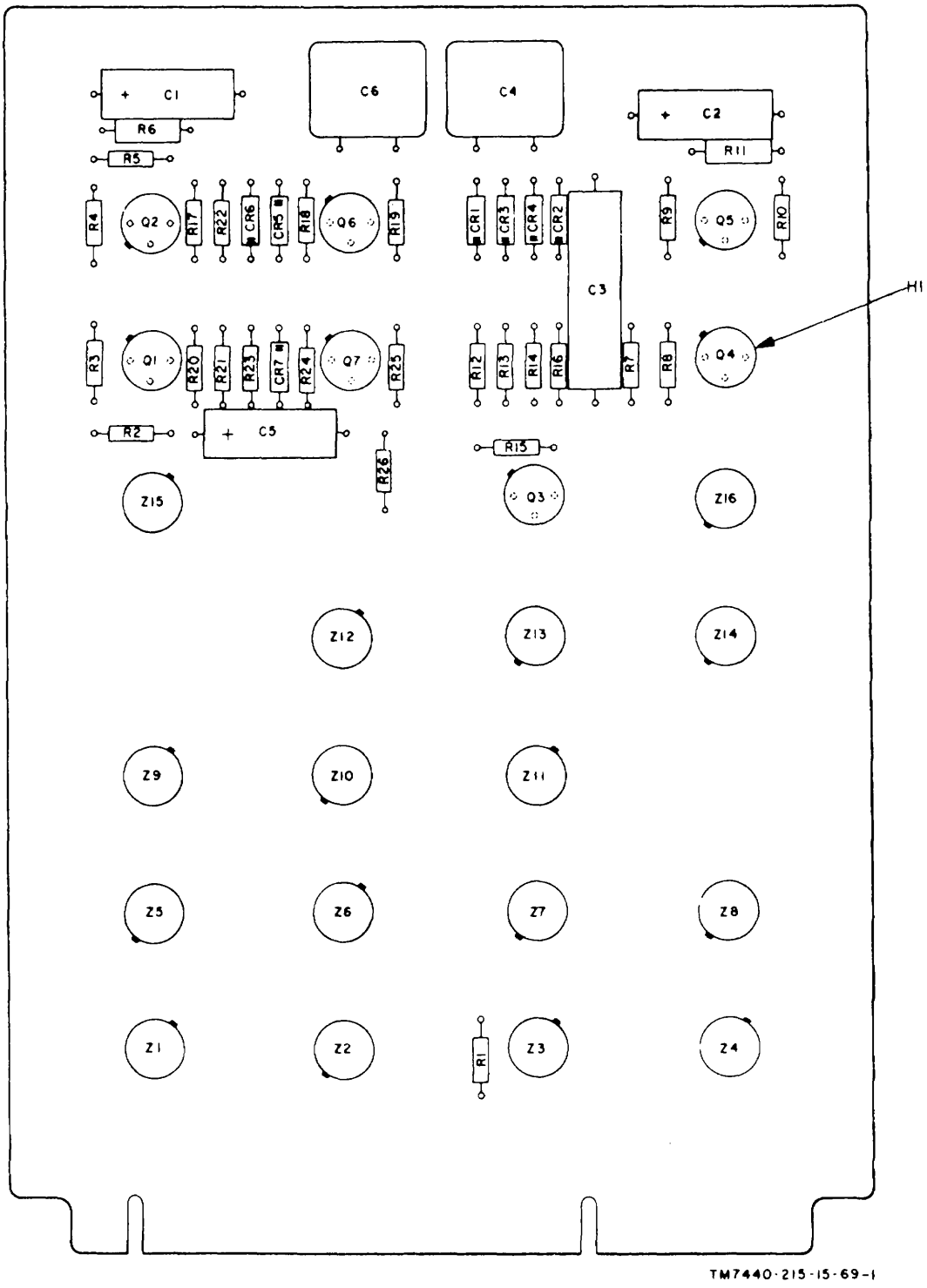


Figure 5-10. PC card A15 (No. A65153-001), component location diagram.

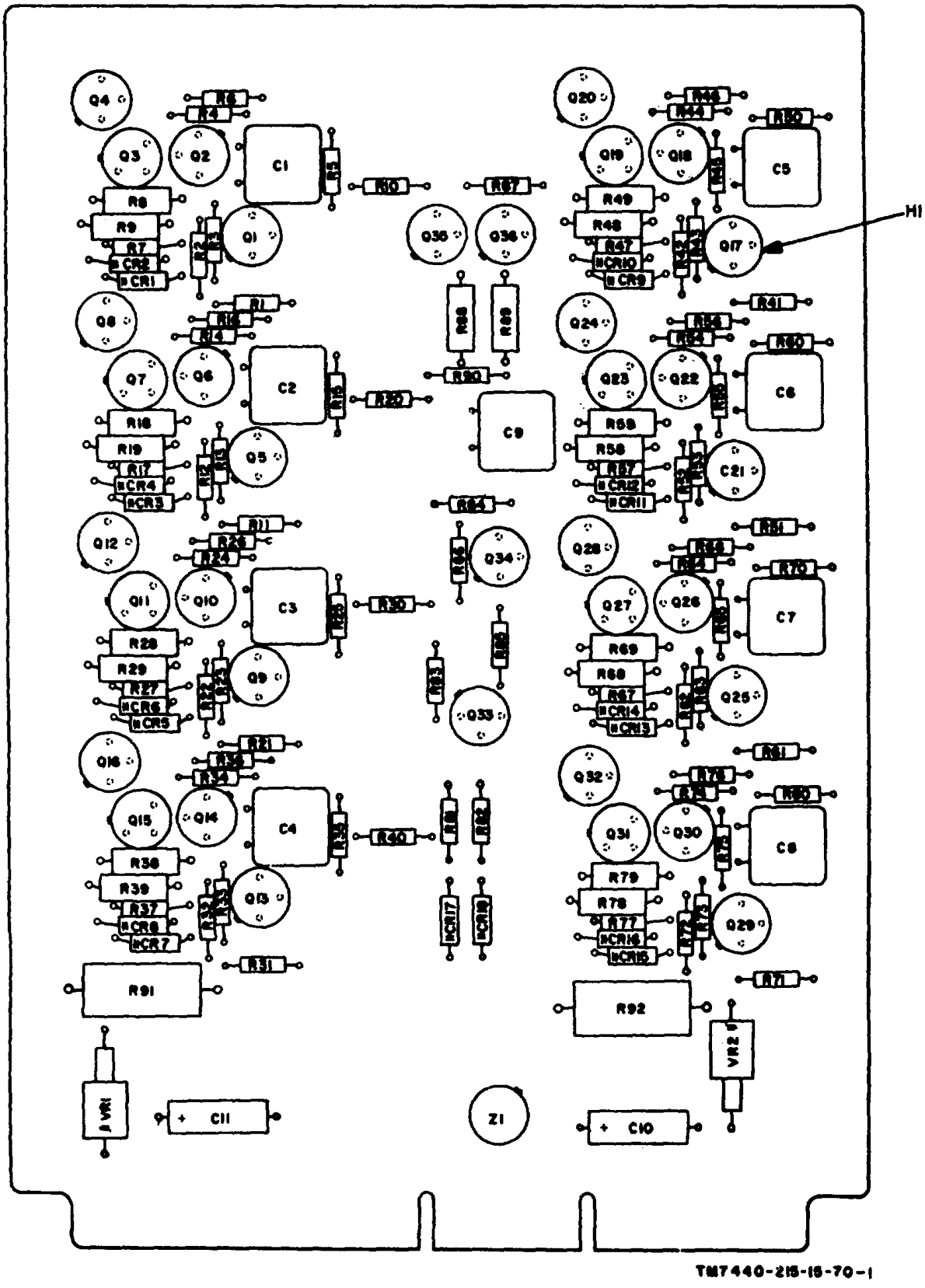


Figure 5-11. PC card A5 (No. A65205-001), component location diagram.

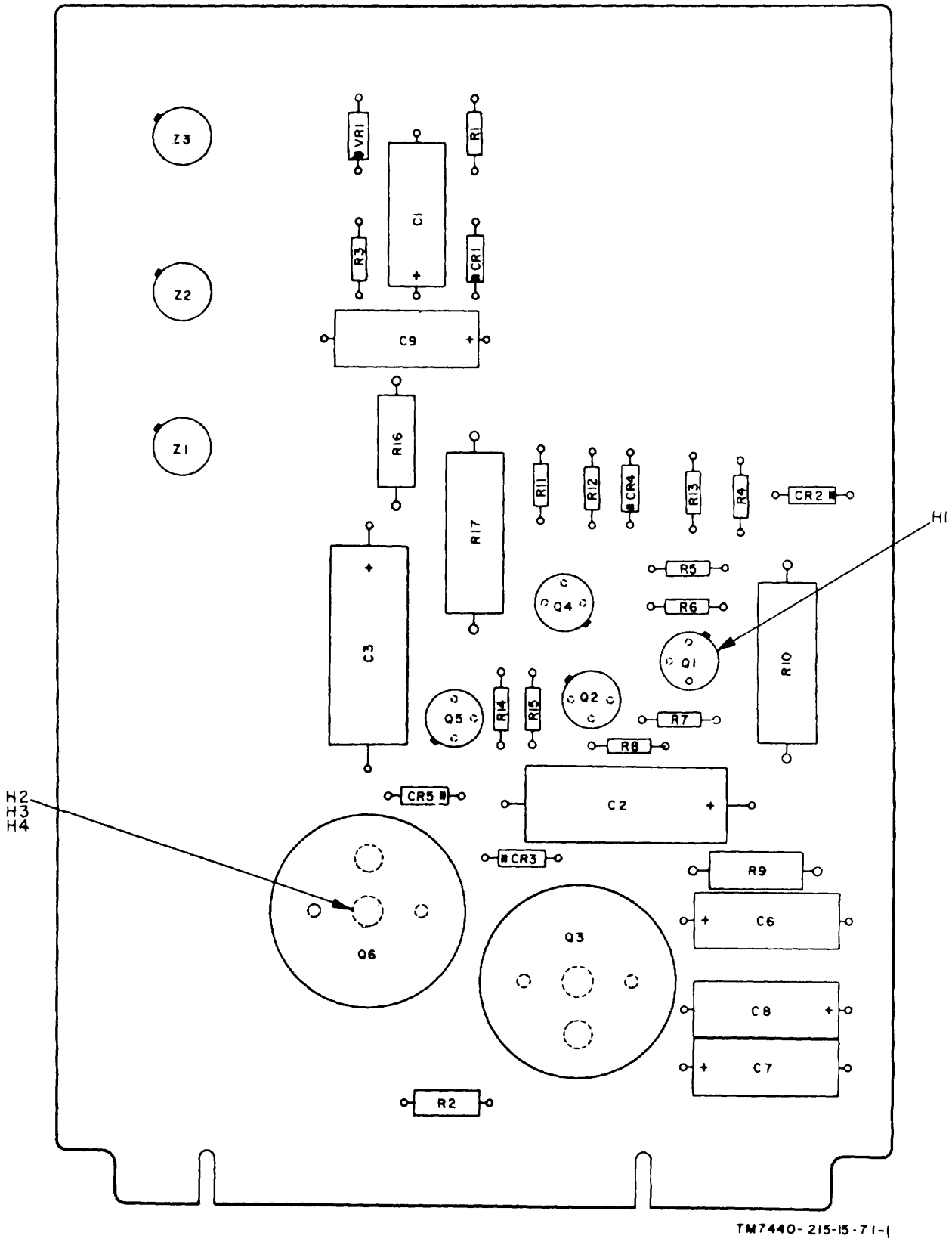


Figure 5-12. PC card A1 (No. A65209-002), component location diagram.

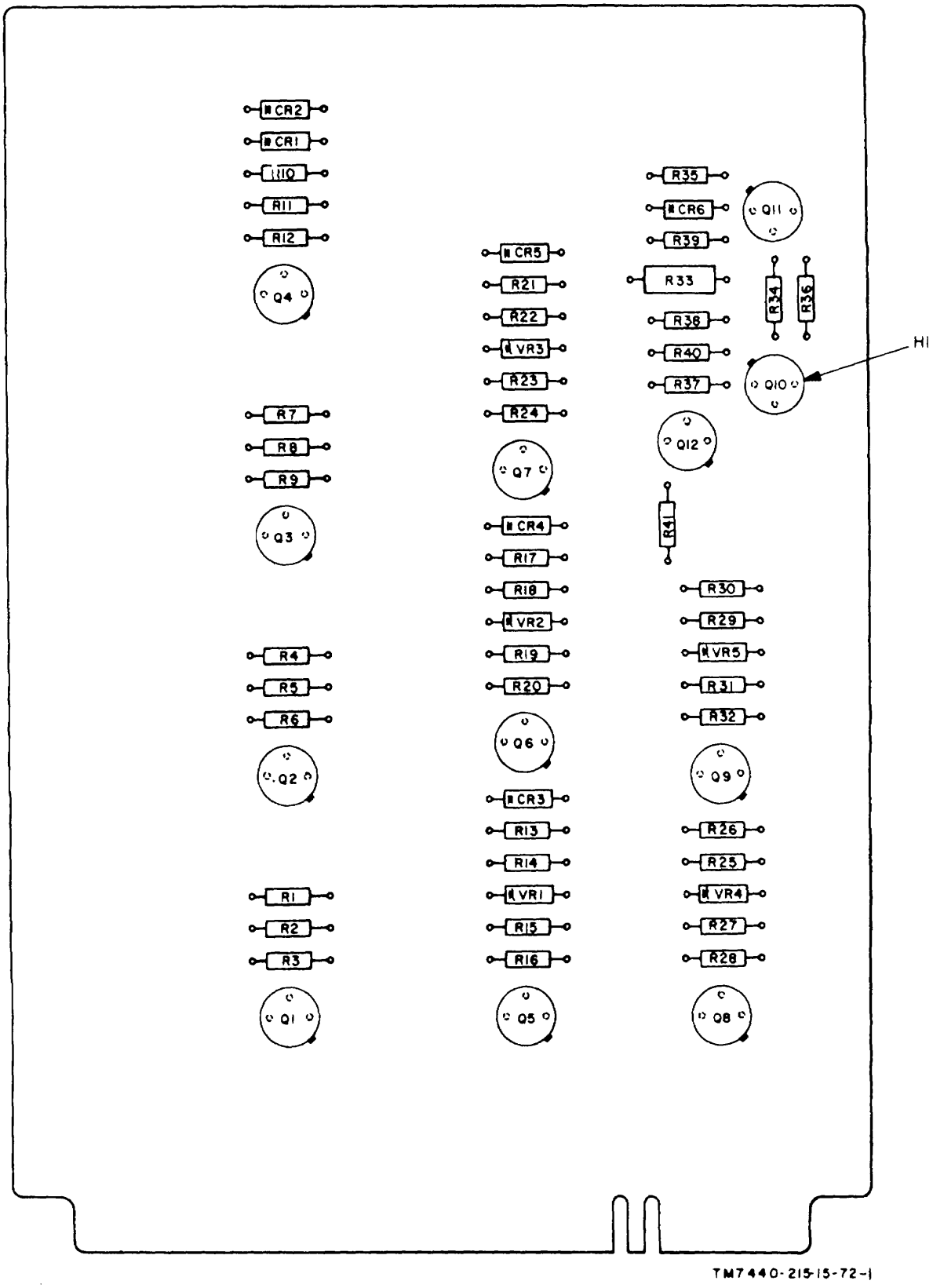


Figure 5-13. PC card A4 (No. A65215-001), component location diagram.

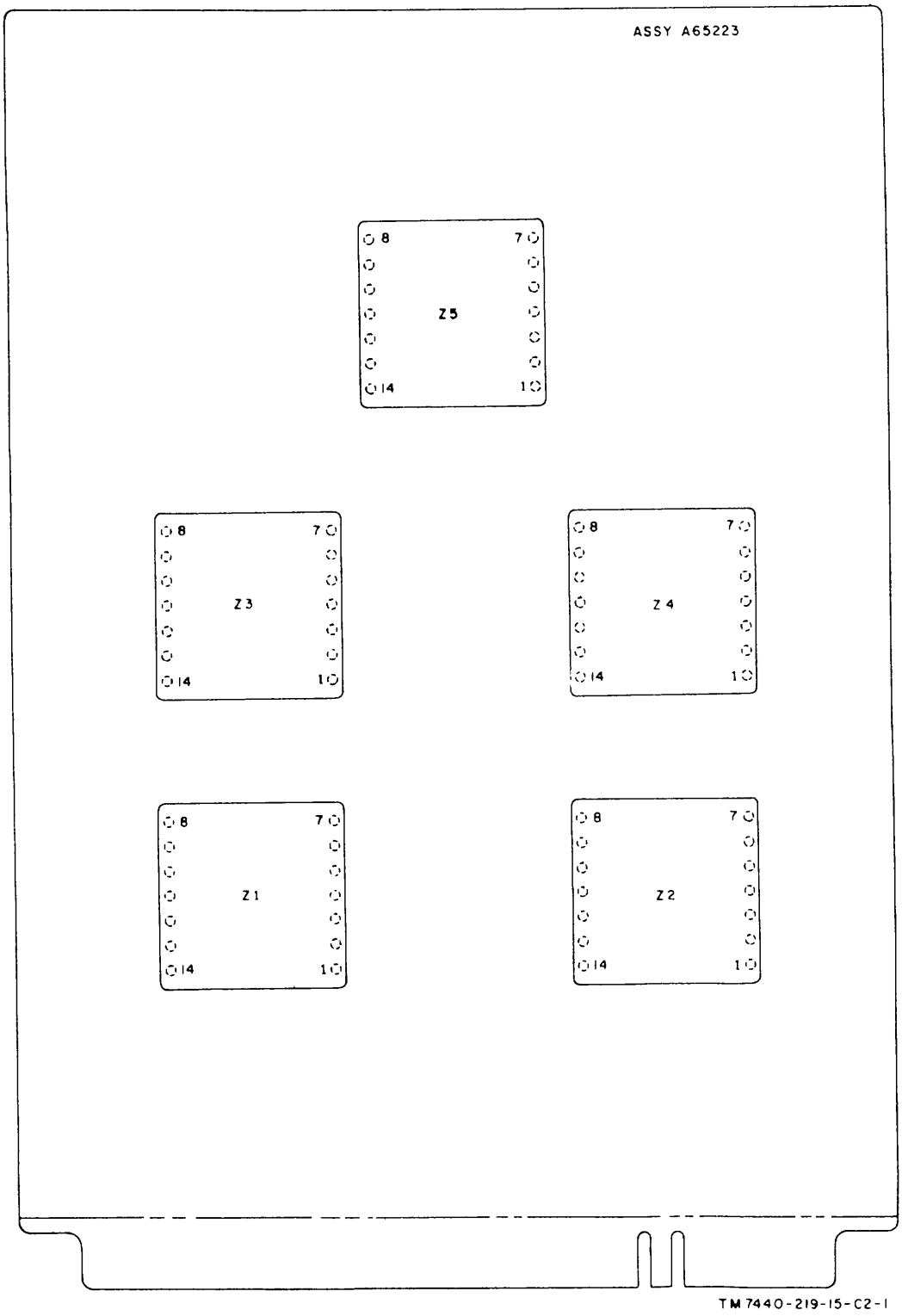


Figure 5-13.1. PC card A4 (A65223-001), component location diagram.

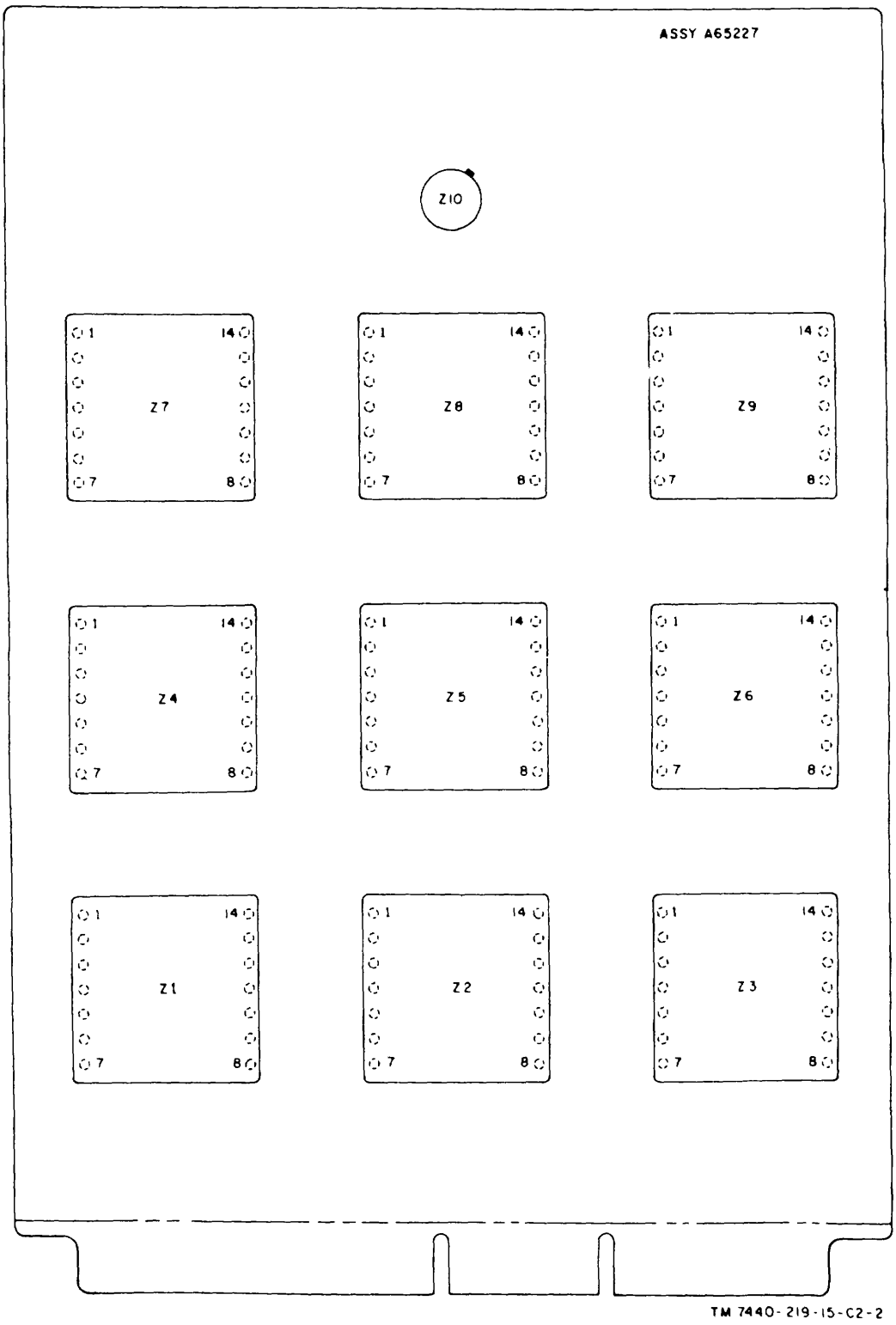


Figure 5-13.2. PC card A5 (A 65227-001), component location diagram.

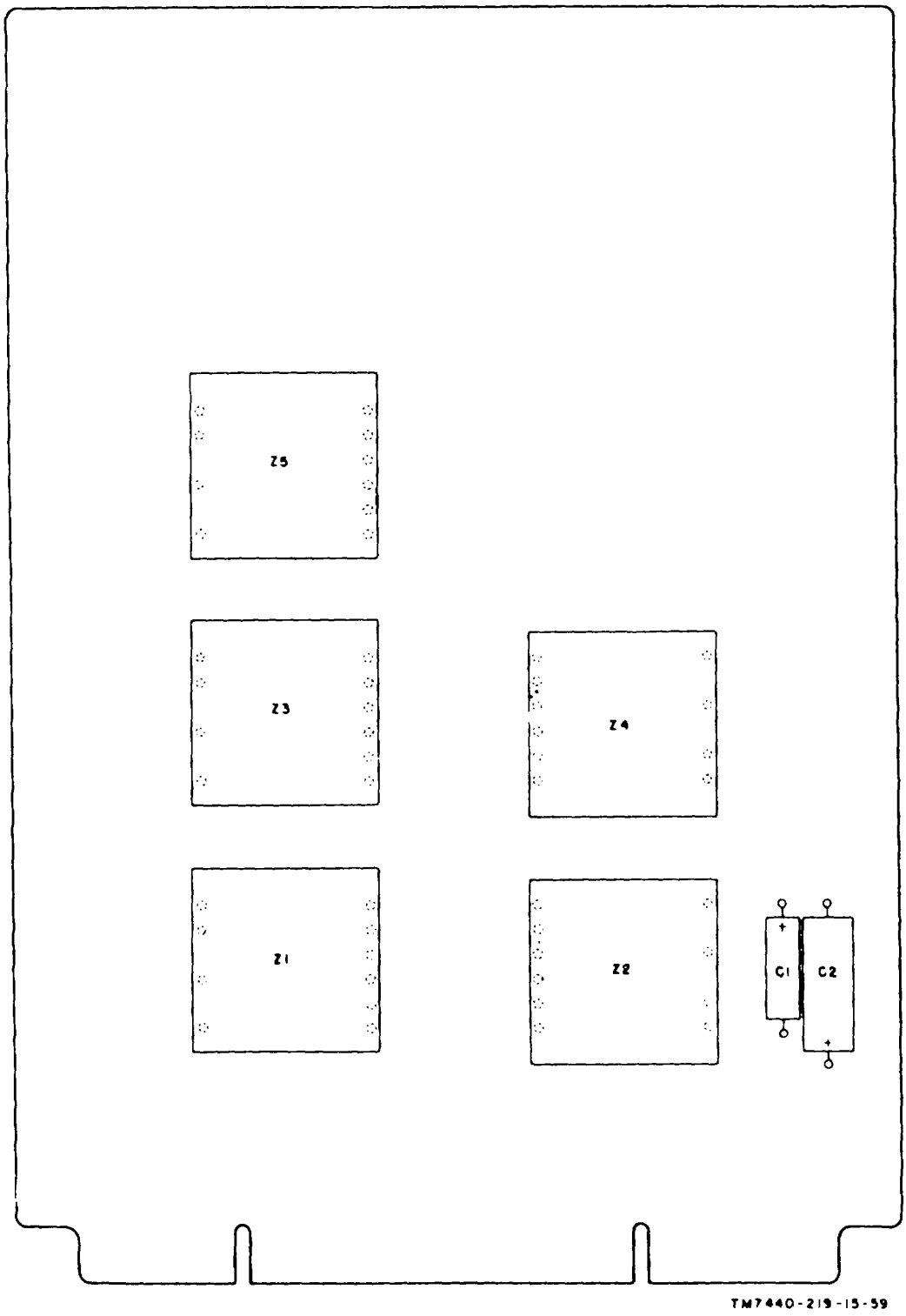


Figure 5-14. PC card As (No. SME546659-001), component locution diagram.

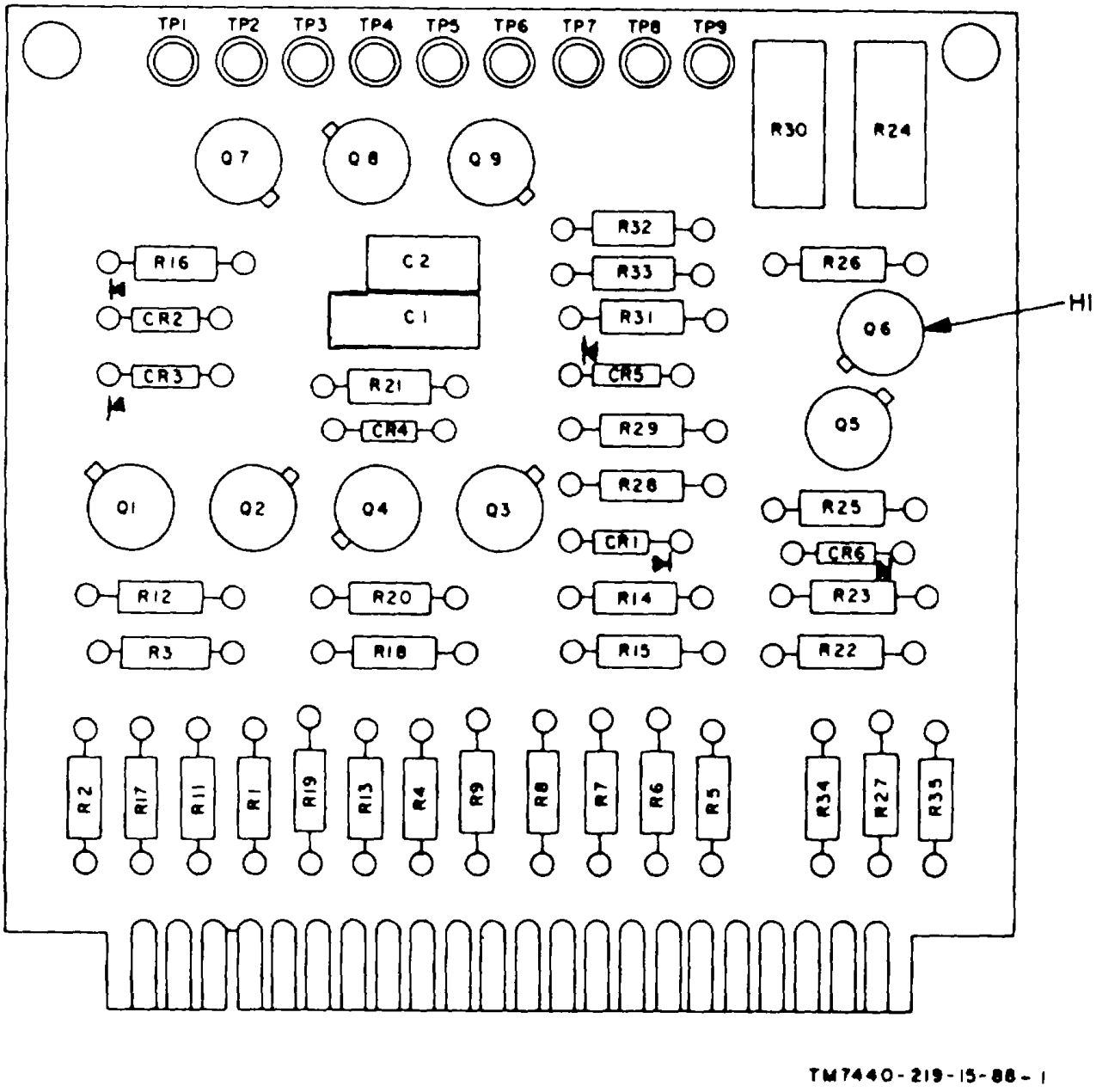


Figure 5-15. Power Supply PS1 component board assembly Al (+4.75 volt dc), component location diagram.

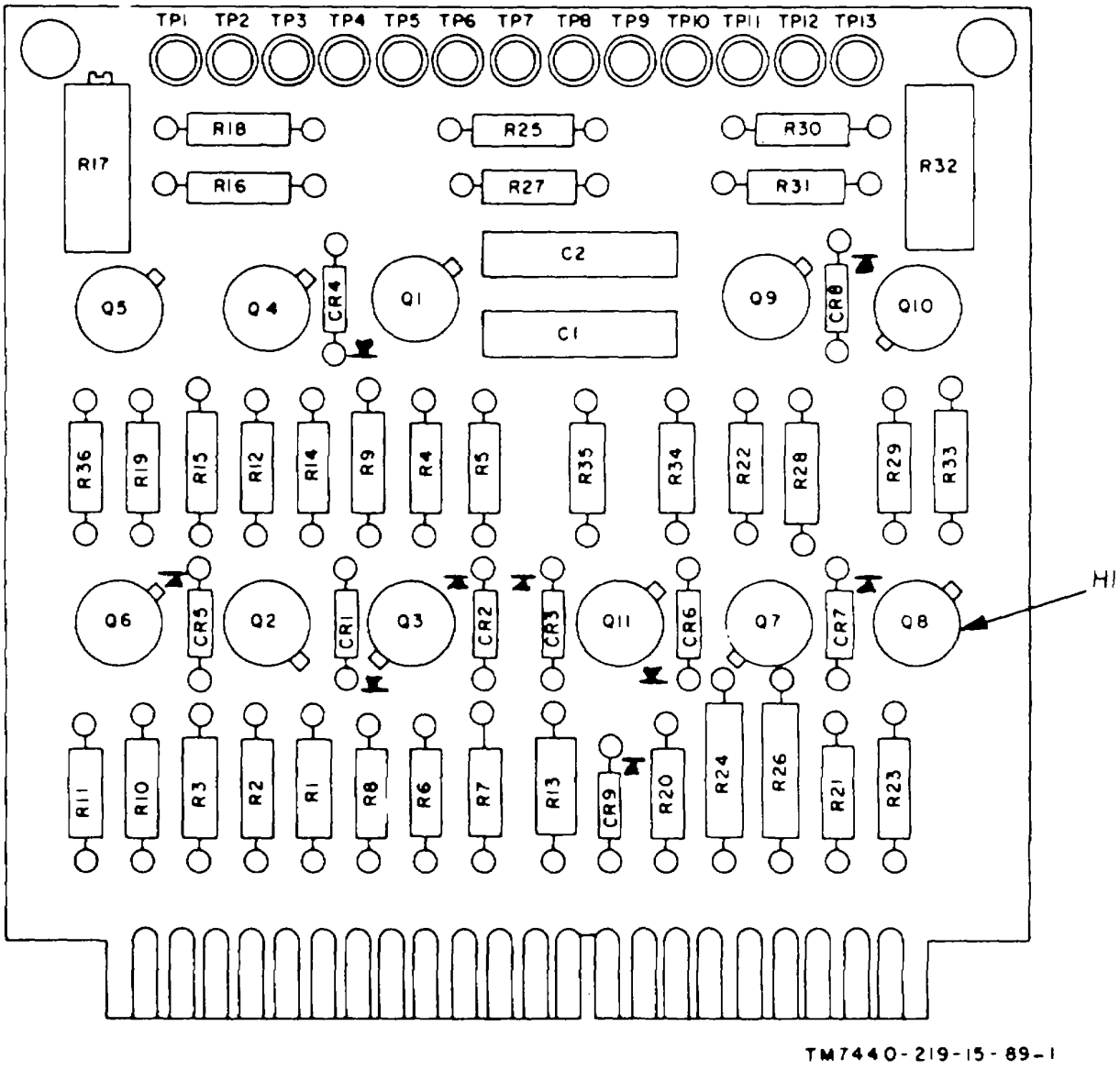


Figure 5-16. Power supply PS1 component board assembly A2 (±12 volt dc), component location diagram.

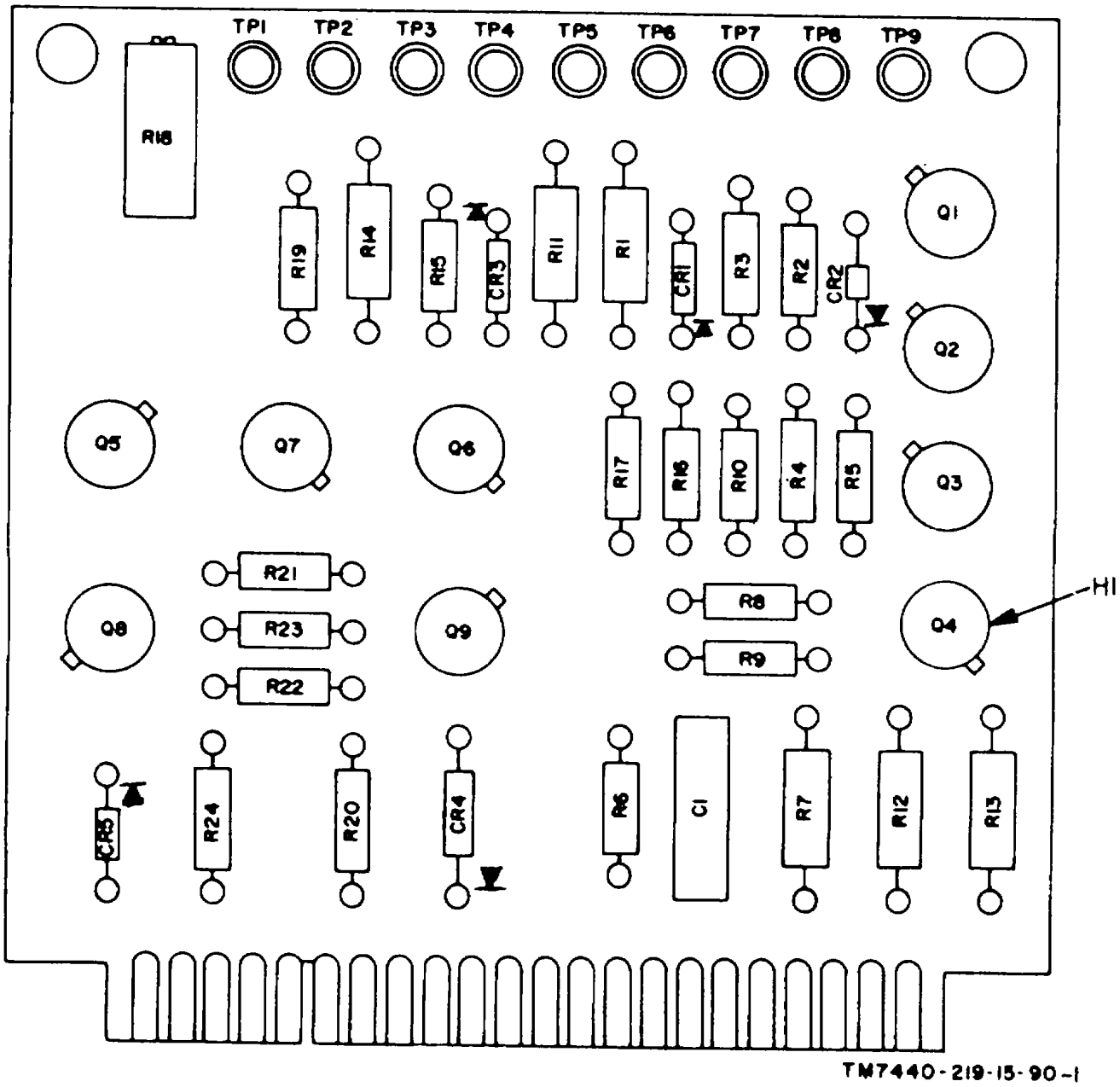


Figure 5-17. Power supply PS1 component board assembly AS (- 48 volt dc), component location diagram.

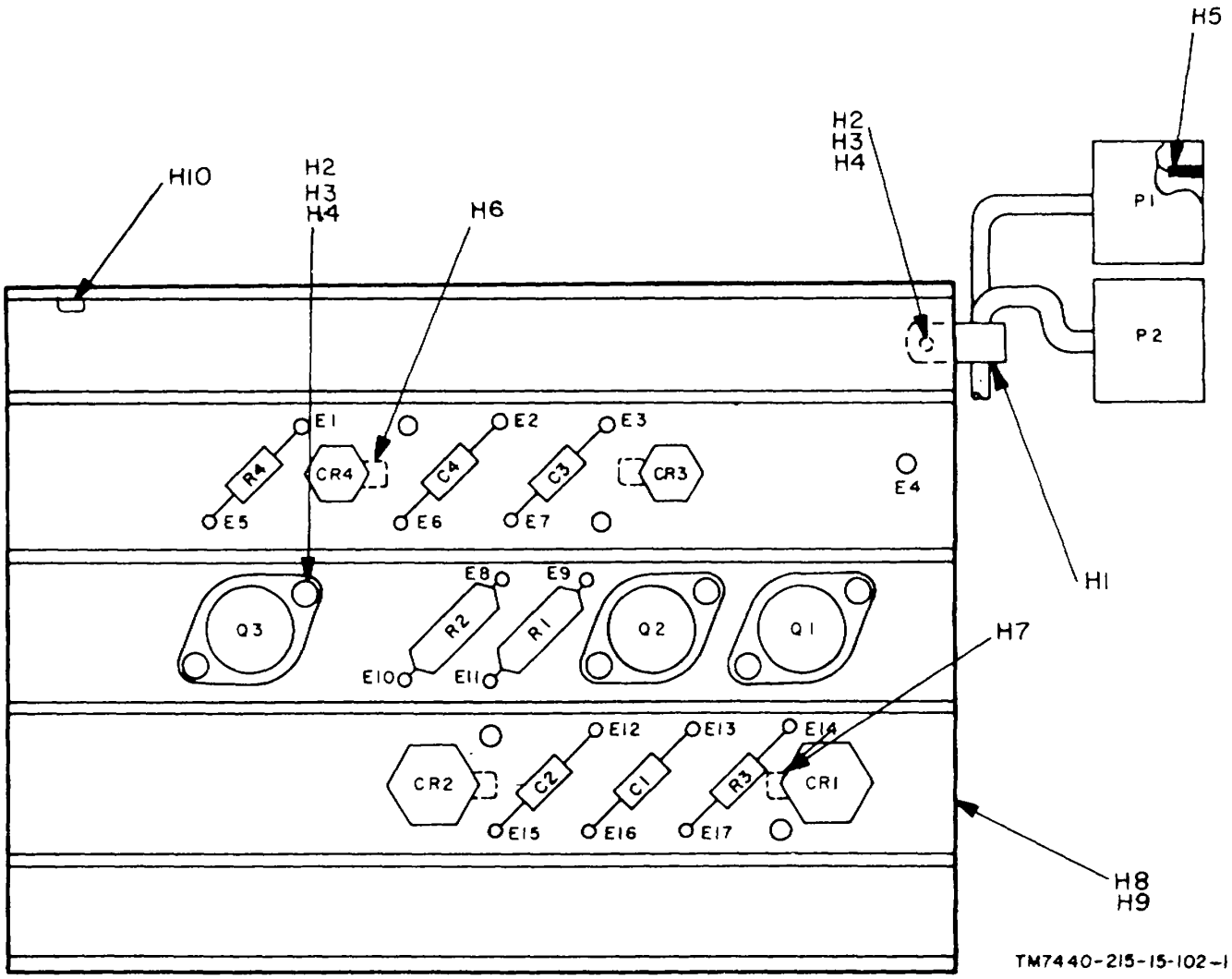


Figure 5-18. Power supply PS1 heat sink components assembly A4, component locations diagram.

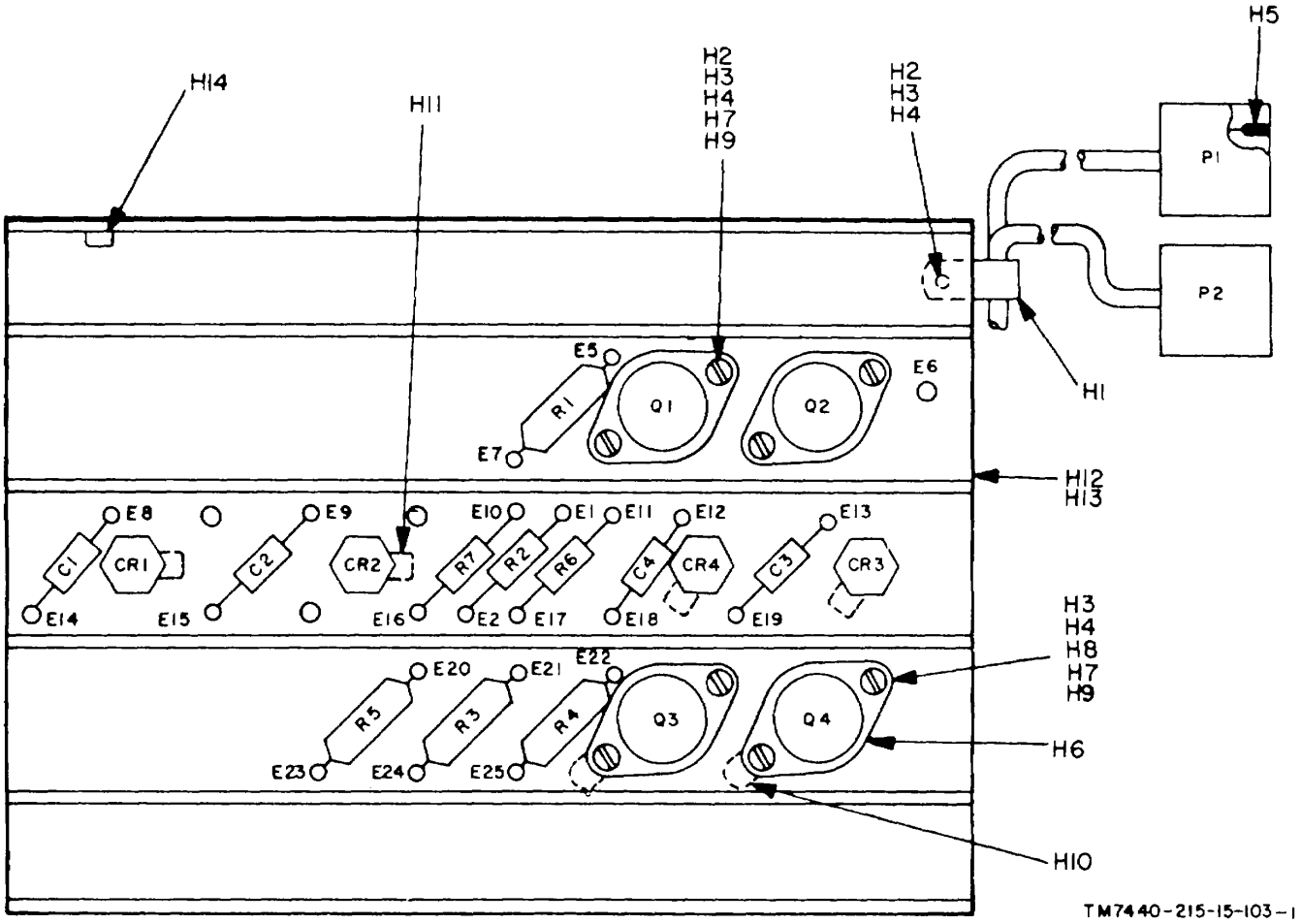


Figure 5-19. Power supply PS1 heat sink components assembly A5.

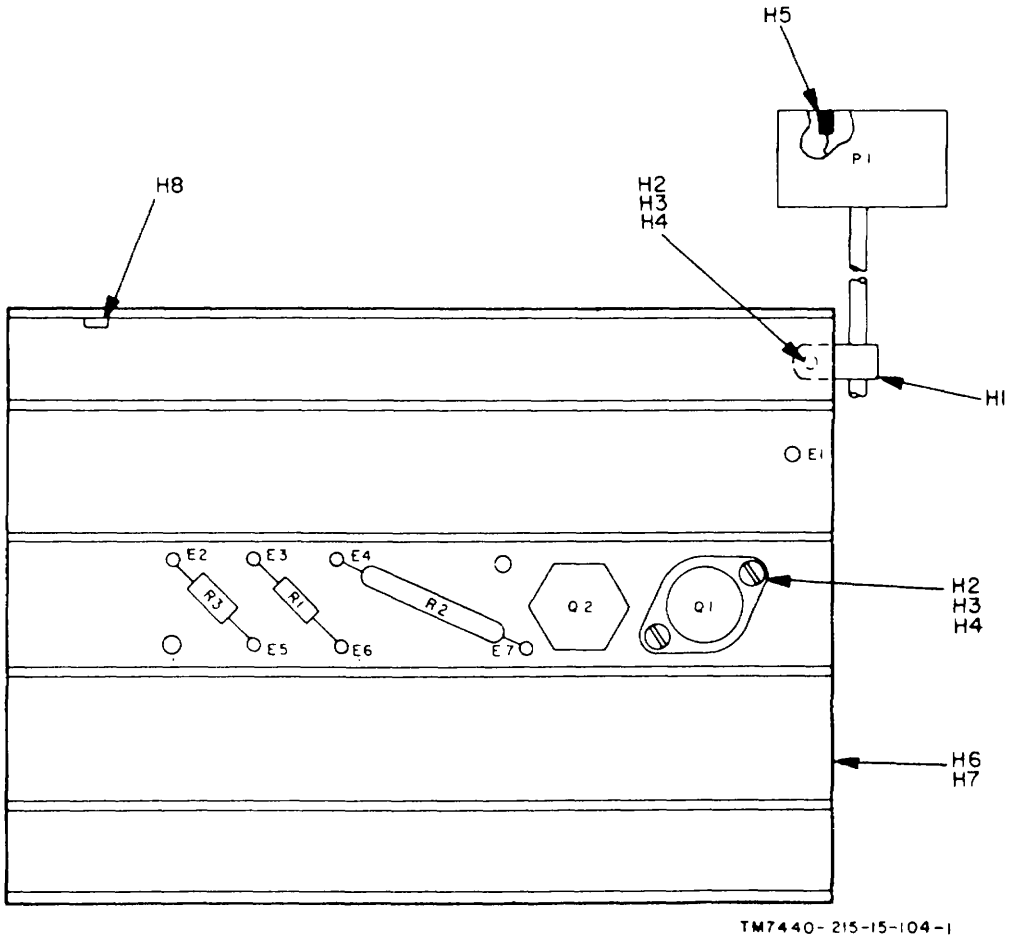


Figure 5-20. Power supply PS1 heat sink components assembly A6.

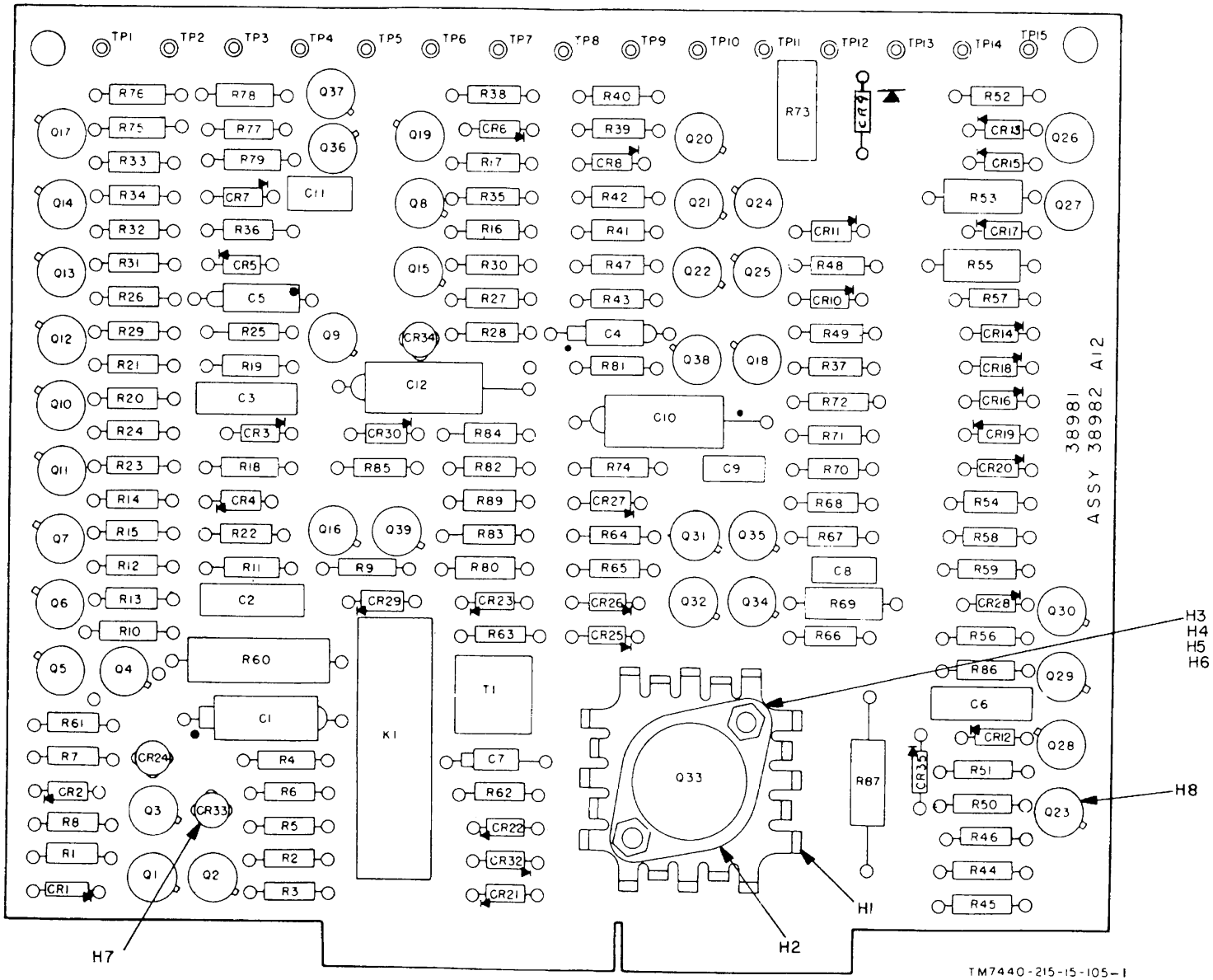


Figure 5-21. Power supply PS1 sequence module component board assembly A12.

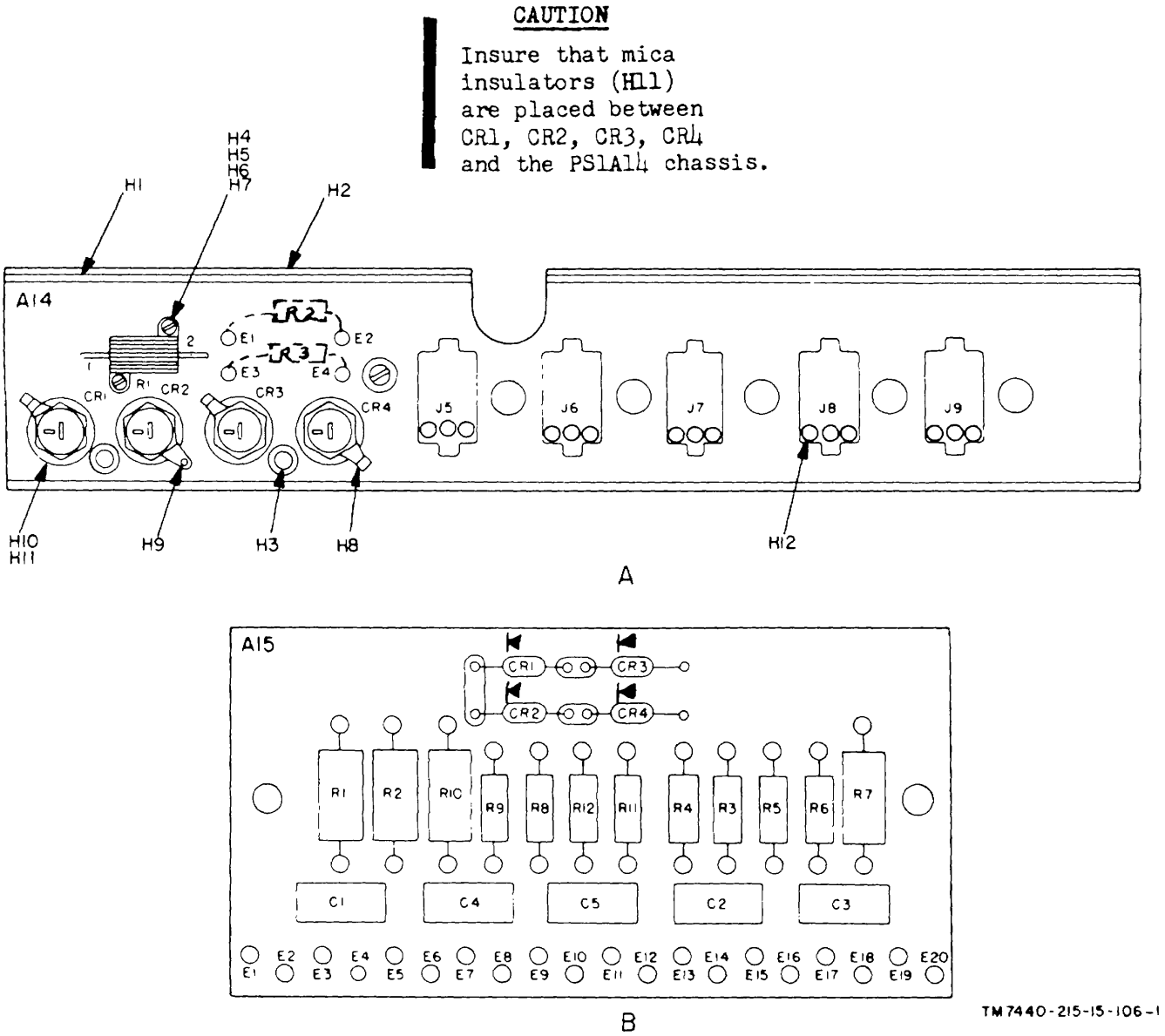


Figure 5-22. Power Supply PS1 connector bracket assembly A14 and component board assembly A15.

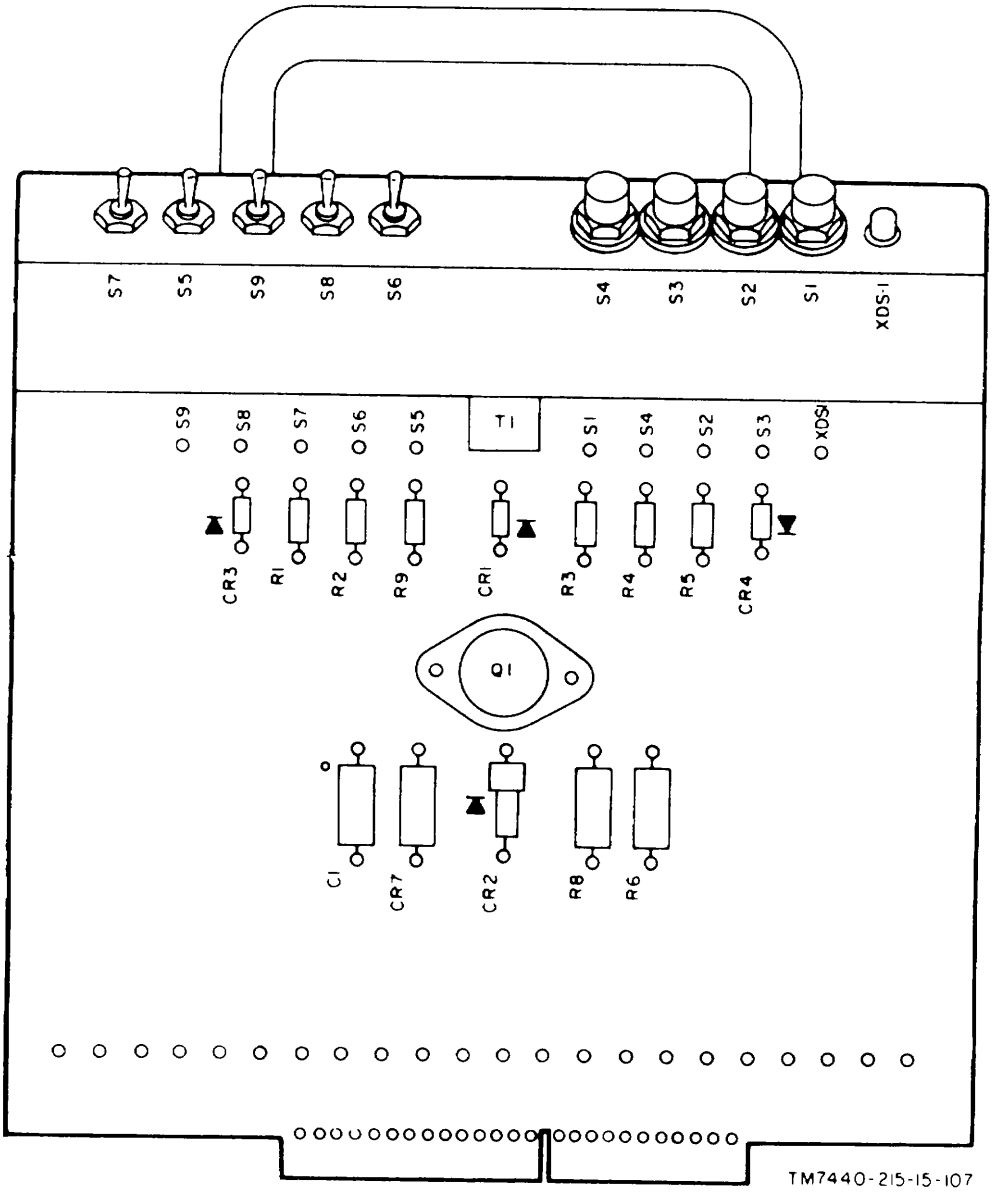


Figure 5-23. Power Supply PS1 manual control card.

CHAPTER 6

DEPOT MAINTENANCE

Section I. DEPOT REPAIR

6-1. General

Complete rebuild of the card 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 equipment available at a depot.

Section II. DEPOT OVERHAUL STANDARDS

6-3. Applicability of Depot Overhaul Standards

Reader, Punched Card RP-152/G (card 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.

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, TB SIG 355-2, and TB SIG 355-3 form a part of the requirements for testing this equipment.

b. Technical Publications. The technical publications applicable to the equipment to be tested are listed in appendix A.

c. Modification Work Orders. Perform the work specified by modification work orders pertaining to this equipment before making the tests specified. DA Pam 310-7 lists all available MWO's.

6-5. Test Facilities Required

In addition to the tools and test equipment listed in appendix C, the following special tools and test equipment 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 10^8 per week.
Card Reader Test Set.	General Dynamics Electronics Division Model 48-200711.
Timer, one minute.	Standard, TF-4570.
Regulated Power Amplifier.	CML Model N5000A, or equivalent, with 0.5% accuracy.
Plug-in Oscillator.	CML 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 a single No. 8 wire on other end. Cable is labeled "Reader"
Card Stack "A"	Consists of one hundred and eight (108) standard punch cards, white in color, punched in such a manner as to conform with the sequence of characters generated by the Card Reader Test Set. This sequence will be sixteen (16) asterisks followed by sixty-four (64) printable ASCII characters. See figure 6-1 and table 6-1.
Card Stack "B"	Consists of eleven hundred (1100) cards, one thousand (1000) white

Item	Description
	cards and one hundred (100) blue cards. The cards will be punched in the same manner as card stack "E" and shall have the one thousand (1000) white cards stacked together followed by the one hundred (100) blue cards.
Card Stack “C”	(consists of one hundred and thirteen (113) cards, one hundred and six (106) cards, white in color and seven (7) cards blue in color. The cards in Card Stack "C" will be arranged and punched in the following order: **NOTE** **In describing the color of the punched cards, the color noted will be the color of the stripe on the top edge of the card.** *Card Nos. 1 through 50*: White in color, punched in the same manner as cards described in Stack "A". See figure 6-1. *Card No. 51*: Blue in color, punched in the same. manner as cards in Stack "A", with the exception of Column 46. In this column Rows two (2) and seven (7) will be punched. This card will be marked "Invalid Character". *Card No. 52*. White in color, punched in the same manner as cards described in Stack "A". *Card No. 53*.: Blue in color, punched in the same manner as cards in Stack "A" with the exception of Column 47. In this column Rows five (5) and nine (9) will be punched. This card will be marked "Invalid Character". *Card No. 54*: Same as Card No. 52. *Card No. 55*: Blue in color, punched in the same manner as cards in Stack "A" with the exception of Column 48. In this column Rows ten (10), eleven (11), and nine (9) will be punched. This card will be marked "Invalid Character". *Card No. 56*: Same as Card No. 52. *Card No. 57.* Blue in color, punched in the same manner as cards in Stack "A" with the exception of Column 49. In this column Rows two (2), eight (8), and eleven (11) will be punched. This card will be marked "Invalid Character". *Card No. 58*. Same as Card No. 52. *Card No. 59*: Blue in color, punched in the same manner as cards in Stack "A" with the exception of Column 50. In this column Rows eleven (11) and twelve (12) will be punched. This card will be marked "Invalid Character". *Card No. 60*. Same as Card No. 52. *Card No. 61*: Blue in color, punched in the same manner as cards in Stack "A" with the exception of Column 51. In this column Rows one (1) and eight (8) will be punched. This card will be marked "Invalid Character". *Card No. 62*. Same as Card No. 52. *Card No. 63.* Blue in color, punched in the same manner as cards in Stack "A" with a notch in the space preceding Column one (1), Row four (4). This notch will simulate a dark check failure. This card will be marked "Dark Check". See figure 6-2. *Card Nos. 64 through 113*: Same as Card No. 52.
Card Stack "D"	Consists of 1000 white cards, punched in the following manner: one punch in Row 10 of Column 1, followed by punches in Rows 6 and 11 in Column 2. This sequence is repeated for the 80 columns.
Card Stack "E"	Consists of 200 cards, 108 white cards followed by 92 colored cards. The cards will be punched in such a manner as to conform with the sequence of characters generated by the Card Reader Test Set. This sequence will be 16 asterisk characters followed by 64 printable ASCII Code characters including each of the 62 punched card code assignments as shown in figure 6-3 and table 6-2.
Card Stack "F"	Consists of 118 cards, 108 white cards followed by 10 colored cards. The cards will be punched in such a manner as to conform with the sequence of characters generated by the Card Reader Test Set. This sequence will be 16 asterisk characters followed by 64 printable ASCII Code characters including each of the 62 punched card code assignments shown in figure 6-3 and table 6-2.
Card Stack "G"	Consists of two cards punched in the following manner: punches in Row 12 and Row 10 of each column as shown in figure 6-3.1.
Card Stack "H"	Consists of two cards punched in the following manner: punches in Row 11 and Row 10 of each column as shown in figure 6-3.2.

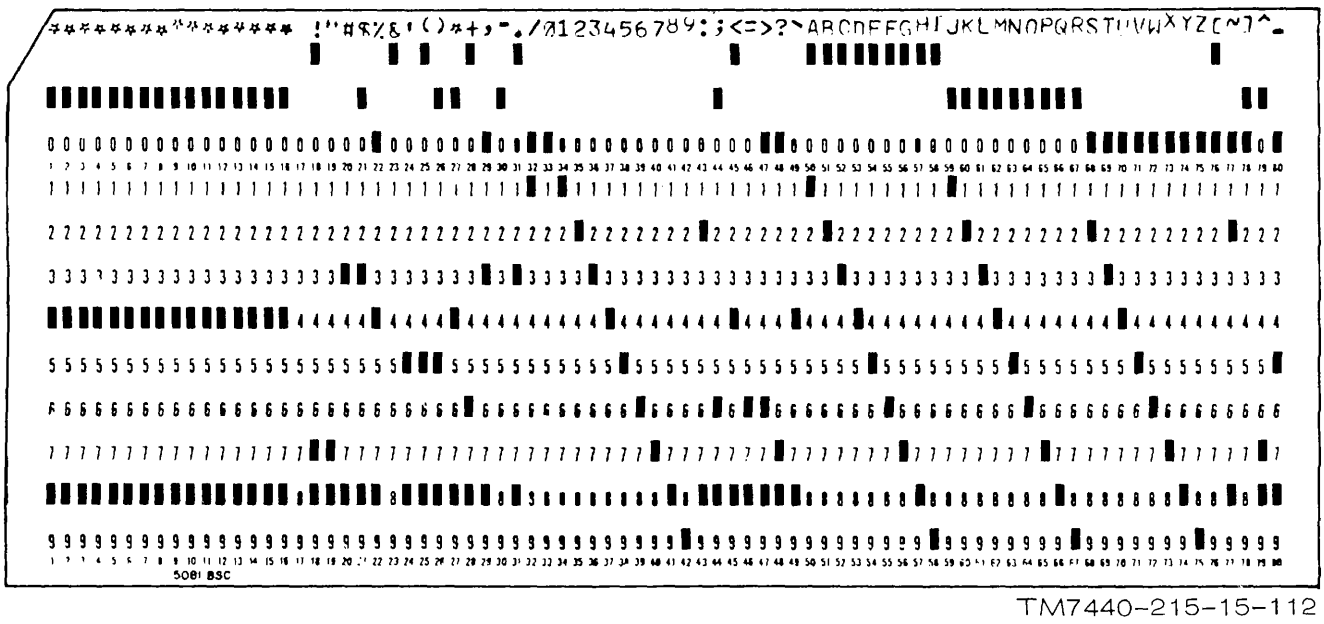


Figure 6-1. Test card, stack 'A'.

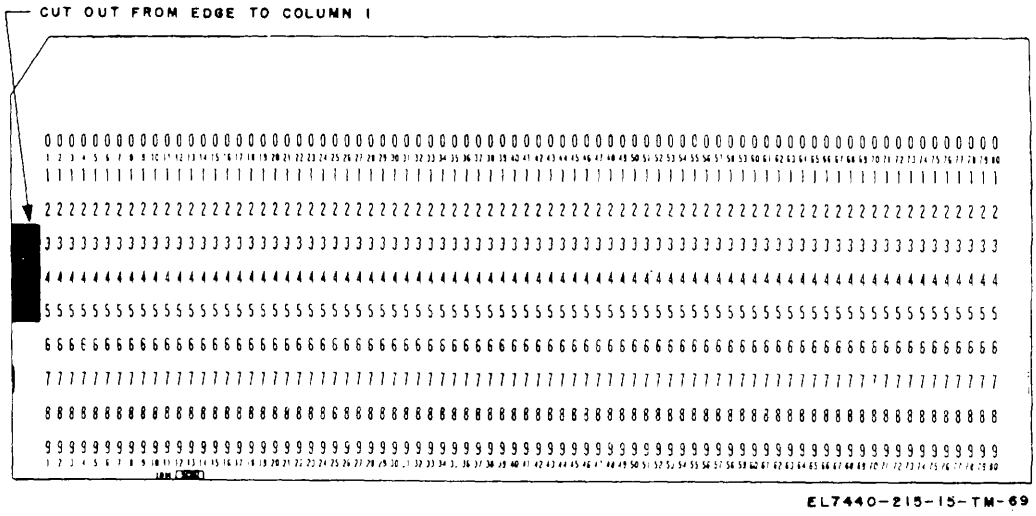


Figure 6-2. Dark check test card.

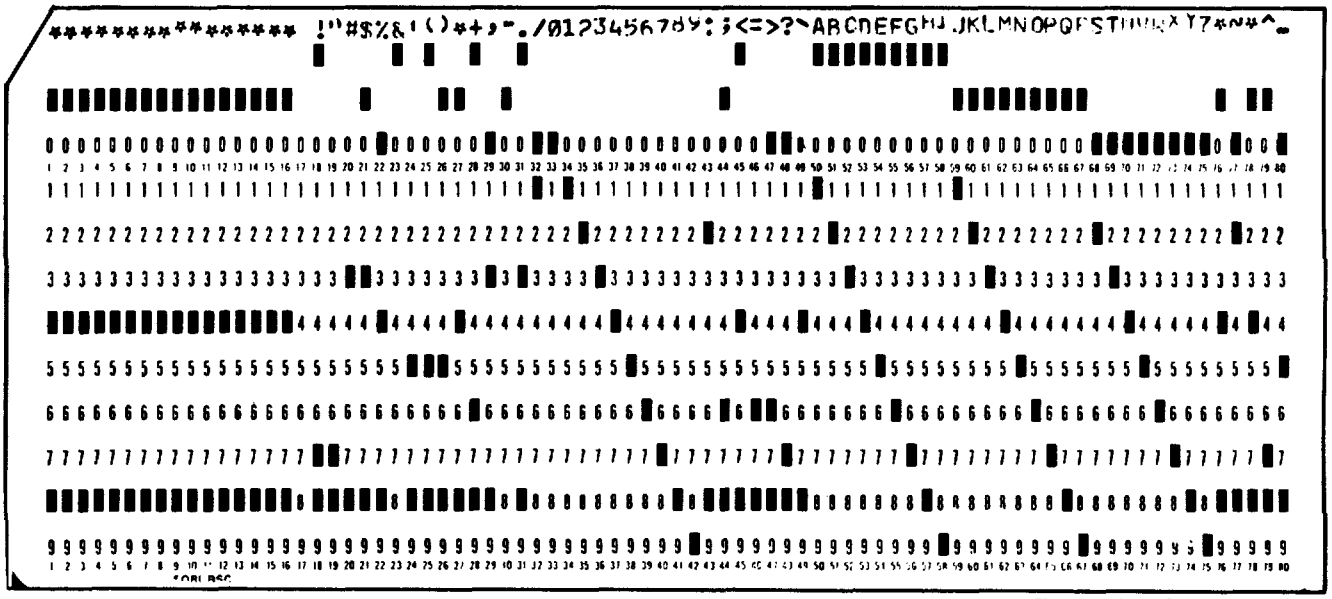


Figure 6-3. Test card, stack 'E'.

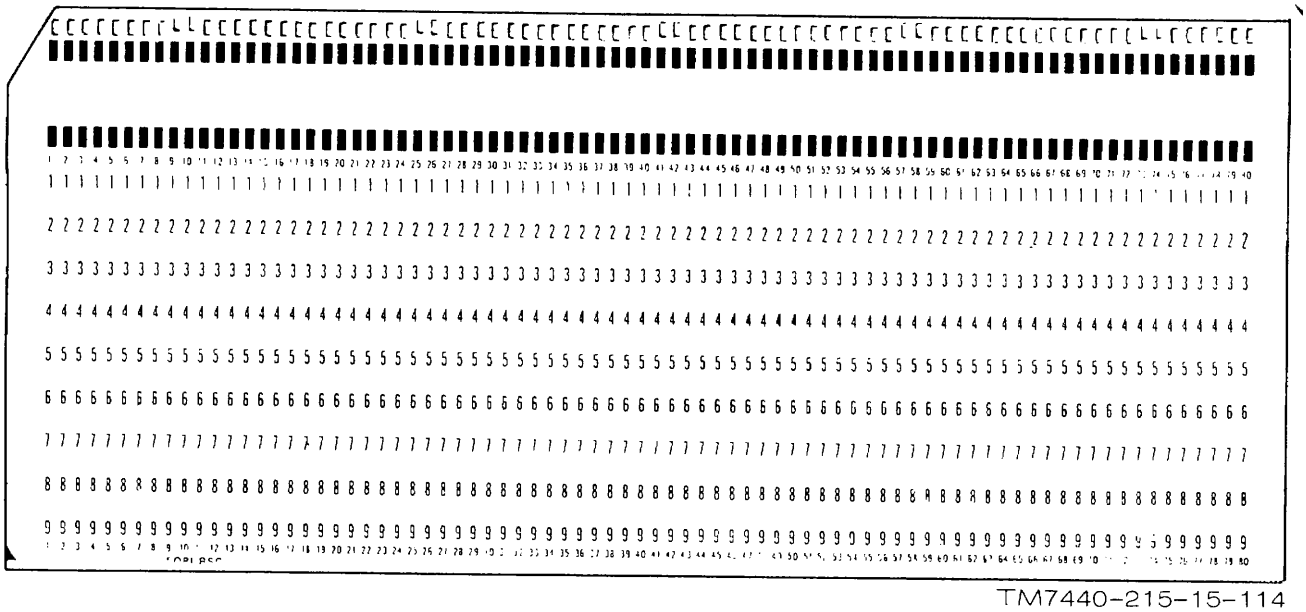
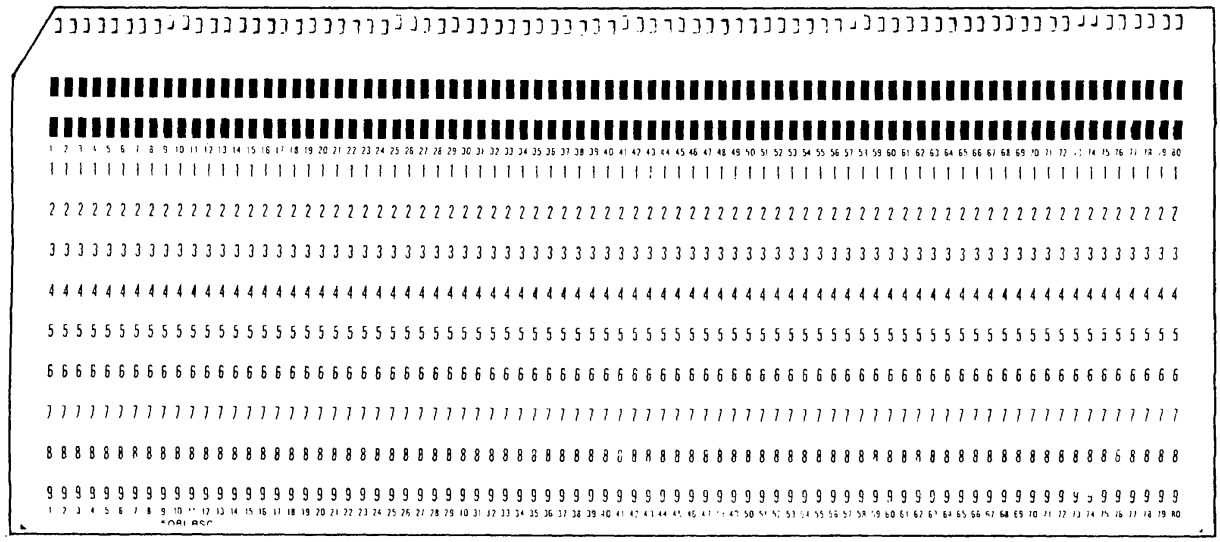


Figure 6-3.1. Test card, stack 'G'.



TM7440-215-15-115

Figure 6-3.2. Test card, stack 'H'

Table 6-1. Test Pattern Character Sequence

Card column	*Character*	*Punch code*
1	*Asterisk	11, 8, 4
2	*Asterisk	11, 8, 4
3	*Asterisk	11, 8, 4
4	*Asterisk	11, 8, 4
5	*Asterisk	11, 8, 4
6	*Asterisk	11, 8, 4
7	*Asterisk	11, 8, 4
8	*Asterisk	11, 8, 4
9	*Asterisk	11, 8, 4
10	*Asterisk	11, 8, 4
11	*Asterisk	11, 8, 4
12	*Asterisk	11, 8, 4
13	*Asterisk	11, 8, 4
14	*Asterisk	11, 8, 4
15	*Asterisk	11, 8, 4
16	*Asterisk	11, 8, 4
17	Space	No punches
18	! exclamation point	12, 8, 7
19	“Quotation mark	8, 7
20	# Number sign	8, 3
21	$ Dollar sign	11, 8, 3
22	%. Percent	10, 8, 4
23	& Ampersand	12
24	‘ Apostrophe	8, 5
25	(Opening parenthesis	12, 8, 5
26	) Closing parenthesis	11, 8, 5
27	*Asterisk	11, 8, 4
28	+ Plus	12, 8, 6
29	, Comma	10, 8, 3
30	- Hyphen	11
31	. Period	12, 8, 3
32	/ Slant	10, 1
33	Ø Zero	10
34	1	1
35	2	2
36	3	3
37	4	4

Table 6-1. Test Pattern Character Sequence - Continued

Card column	*Character*	*Punch code*
38	5	5
39	6	6
40	7	7
41	8	8
42	9	9
43	: Colon	8, 2
44	; Semicolon	11, 8, 6
45	< Less than	12, 8, 4
46	= Equal	8, 6
47	> Greater than	10, 8,6
48	? Question mark	10,8,7
49	@ Commercial at (`) Note 1	8, 4
50	A	12, 1
51	B	12, 2
52	C	12, 3
53	D	12, 4
54	E	- 12. 5
55	F	12, 6
56	G	12, 7
57	H	12. 8
58	I	12, 9
59	J	11, 1
60	K	11, 2
61	L.	11, 3
62	M	11, 4
63	N	11, 5
64	O	11, 6
65	P	11, 7
66	Q	11, 8
67	R	11, 9
68	S	10.'2
69	T	10, 3
70	U	10, 4
71	V	10, 5
72	W	10, 6
73	X	10, 7
74	Y	10, 8
75	Z	10, 9
76	ŧ Plus Zero ([) Note 1	11, 8, 4
77	\ Reverse Slant (~) Note 1	10, 8, 2
78	Ō Minus Zero (]) Note 1	11, 8, 4
79	^ Circumflex	11, 8, 7
80	_ Underline	10, 8, 5

Note 1: ( ) indicates AUTODIN printed character.

Table 6-2. Test Pattern Character Sequence

Card column	*Character*	*Punch code*
1	*Asterisk	11, 8, 4
2	*Asterisk	11, 8, 4
3	*Asterisk	11, 8, 4
4	*Asterisk	11, 8, 4
5	*Asterisk	11, 8, 4
6	*Asterisk	11, 8, 4
7	*Asterisk	11, 8, 4
8	*Asterisk	11, 8, 4
9	*Asterisk	11, 8, 4
10	*Asterisk	11, 8, 4
11	*Asterisk	11, 8, 4
12	*Asterisk	11, 8, 4
13	*Asterisk	11, 8, 4
14	*Asterisk	11, 8, 4
15	*Asterisk	11, 8, 4
16	*Asterisk	11, 8, 4

Table 6-2. Test Pattern Character Sequence - Continued

Card column	*Character*	*Punch code*
17	Space	No punches
18	! exclamation point	12, 8, 7
19	“Quotation mark	8, 7
20	# Number sign	8, 3
21	$ Dollar sign	11, 8, 3
22	% Percent	10, 8, 4
23	& Ampersand	12
24	‘ Apostrophe	8, 5
25	(Opening parenthesis	12, 8, 5
26	) Closing parenthesis	11, 8, 5
27	*Asterisk	11, 8, 4
28	+ Plus	12, 8, 6
29	, Comma	10, 8, 3
30	- Hyphen	11
31	. Period	12, 8, 3
32	/ Slant	10, 1
33	Ø Zero	10
34	1	1
35	2	2
36	3	3
37	4	4
38	5	5
39	6	6
40	7	7
41	8	8
42	9	9
43	: Colon	8, 2
44	; Semicolon	11, 8, 6
45	< Less than	12, 8, 4
46	= Equal	8, 6
47	> Greater than	10, 8,6
48	? Question mark	10, 8,7
49	@ Commercial at (`) Note 1	8, 4
50	A	12, 1
51	B	12, 2
52	C	12, 3
53	D	12, 4
54	E	- 12. 5
55	F	12, 6
56	G	12, 7
57	H	12. 8
58	I	12, 9
59	J	11, 1
60	K	11, 2
61	L.	11, 3
62	M	11, 4
63	N	11, 5
64	O	11, 6
65	P	11, 7
66	Q	11, 8
67	R	11, 9
68	S	10, 2
69	T	10, 3
70	U	10, 4
71	V	10, 5
72	W	10, 6
73	X	10, 7
74	Y	10, 8
75	Z	10, 9
76	*Asterisk	11, 8, 4
77	\ Reverse Slant (~) Note 1	10, 8, 2
78	*	11, 8, 4
79	^ Circumflex	11, 8, 7
80	_ Underline	10, 8, 5

Note 1: ( ) indicates AUTODIN printed character.

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 below shall be established.

a. Mechanical Requirements.

(1) The card reader should be assembled for 120 VAC, 60 Hertz operation, and should be adjusted to meet the requirements of paragraphs 4-50 through 4-70.

(2) Muffler and jar element should be cleaned per the procedures of paragraph 4-9 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 15° C. To 35° C
Altitude	Normal ground
Humidity	Room ambient up to 98%
Power	120 VAC. 60 hertz

(2) Connect the card reader to the test equipment as shown in figure 6-4.

c. Test Set Modification. To permit use of the Test Set, General Dynamics Model 48-200711 to check the card reader after incorporation of Federal Standard FIPS-14 Card Code, MWO 11-7440-215-30-2, modification to the test set is required. Modified card readers generate ASCII codes of 11111011 and 11111101 for the opening bracket ([) and closing bracket (]) characters to represent the plus-zero (ȸ) and minus-zero (ȹ) characters respectively. These ASCII codes are out of the binary sequence of the internal counter in the test set and action must be taken to mask these characters or a comparison error will result. Proceed as follows to modify the test set:

(1) Refer to figure 6-3.3 and make the following wiring changes on test set printed circuit card A11:

(a) At Z7D remove the connections to Z7D-3 and Z7D-4 from Z5A-2.

(b) At Z7D make connections from Z7D-3 and Z7D-4 to Z7D-5.

(c) At Z5A remove the connections to Z5A-7 from Z4D-10 and to Z5A-9 from Z4B-2.

(d) Check, and if necessary, make a connection from Z4B-2 to A11-pin AA as shown on figure 6-3.3.

(e) At Z5A make connections from Z5A-7 to Z3C-2 and from Z5A-8 to Z5A-9.

(f) At Z3C remove the connections from Z3C-5 to A11-pin 12, from Z3C-9 to A11-pin 8, and from Z3C-10 to A11-pin 9. If any of the above terminals on Z3C have more than one wire connected to the terminal, reconnect the wires after removal from Z3C to assure continuity of the signal. Use spare pads on the PC card provided for this purpose.

(g) At Z3C make connections from Z3C-5 to A11-pin 5, from Z3C-9 to A11-pin 15, and from Z3C-10 to A11-pin 16.

(2) Use an ohmmeter or continuity tester and verify the connections to Z3C, Z4A, Z4B, Z5A, and Z7D as shown. Other decode circuitry originally inputting signals to Z7D are now disabled. This circuitry was originally used to decode for 14 different characters which were invalid in early AUTODIN equipment which conflicted with the FIELD DATA code used in the AUTODIN switches. (3) On the test set logic assembly, disable the CR TEST CARDS/HSCP CARDS switch as follows (fig. 6-3.3):

(a) Remove the connection from XA11-F to the switch.

(b) Remove the connection from XA17-7 to the switch.

(c) Make a connection between XA11-F to XA17-7.

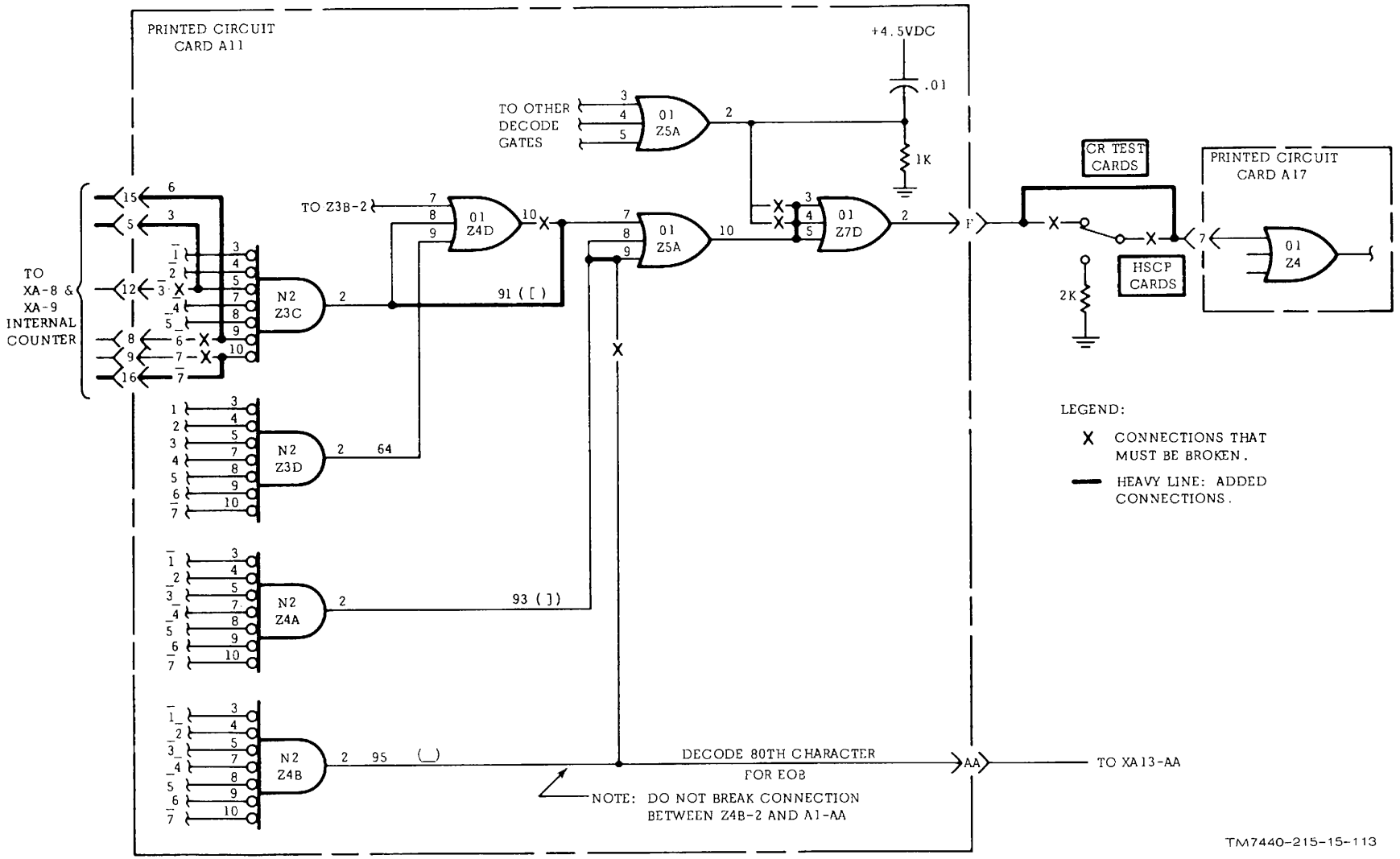


Figure 6-3.3. Test Set Model 48-200711 modification.

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.

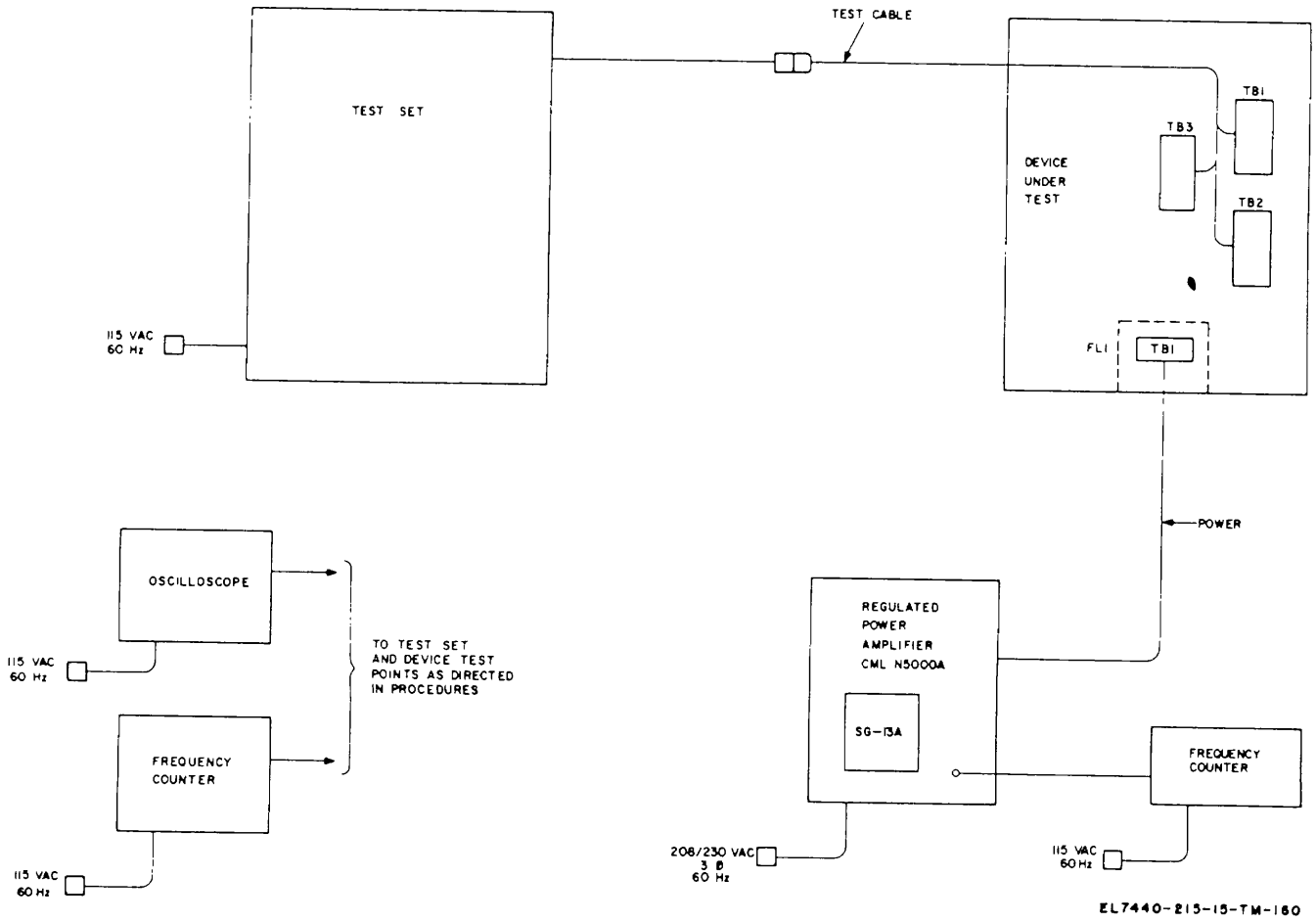


Figure 6-4. Test setup.

d. PC Cards. Check that all printed circuit cards in logic assembly A1 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 Card Reader Test Set (test set) as follows:

115 VAC circuit breaker to OFF
CANCEL to OFF
SYNC FAIL to OFF
EOM to OFF
SELECT to off
SINGLE CARD/REPEAT to REPEAT
COMPARATOR INPUT rotary switch to DATA I
AUTO/MAN to AUTO
COMPARATOR IN/OUT to OUT
ASSIGNED/NOT ASSIGNED to NOT ASSIGNED

(2) Position the POWER switch on the variable frequency and voltage source (CML N5000A) to ON and allow a five-minute warm-up.

(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 ± 0.1 VDC
- 12.0 VDC ± 0.1 VDC

(7) Press the AC POWER switch on the card reader (CR) 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
CARD ALARM indicator..... red

(8) Verify that the reader mechanism motor is operating.

(9) Verify that the blower in the CR cabinet is operating.

(10) Press the card reader AC POWER switch and verify the following results:

(*a*) No CR switches or indicators are illuminated.

(*b*) Reader mechanism drive motor is not operating.

(*c*) Blower in CR cabinet is not operating.

(11) Remove the two 15 VAC LAMP fuses from the CR power supply.

(12) Press the AC POWER switch on the CR and verify the following results:

(*a*) Card reader DC POWER indicator illuminates, but all other indicators and switches are out.

(*b*) Reader mechanism drive motor is operating.

(*c*) Blower in CR cabinet is operating.

(13) Press the card reader AC POWER switch and replace the 15 VAC LAMP fuses.

(14) Remove the 120 VAC 10 A DRIVE MOT fuse from the CR power supply.

(15) Press the AC POWER switch on the CR and verify the following:

(*a*) AC POWER switch, DC POWER indicator and STOP switch, indicators are lit.

(*b*) Blower in CR cabinet is operating.

(*c*) Reader mechanism drive motor is not operating.

(16) Press the AC POWER switch on the CR and replace the DRIVE MOT fuse.

(17) Remove the 120 VAC 3 A FAN fuse from the CR power supply.

(18) Press the AC POWER switch and verify the following:

(*a*) AC POWER switch, DC POWER indicator and STOP switch, indicators are lit.

(*b*) Reader mechanism drive motor is operating.

(*c*) Blower in CR cabinet is not operating.

(19) Press the AC POWER switch on the CR and replace the FAN fuse.

(20) Remove the 120 VAC PWR SUP INPUT fuse from the CR power supply.

(21) Press the AC POWER switch on the CR and verify the following:

(*a*) No switches or indicators on the CR are illuminated.

(*b*) Reader mechanism drive motor is not operating.

(*c*) Blower in CR 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 (step 23), 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 step (23) (*a*) through (*c*) should be observed within seven seconds after the AC POWER switch is operated.

(23) Press the AC POWER switch on the CR and observe the following:

(*a*) No switches or indicators on the CR are illuminated.

(*b*) Reader mechanism drive motor is not operating.

(*c*) Blower in CR 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 step 23 each time.

(26) With all fuses installed in the power supply, press the AC POWER switch on the CR. Verify that the AC POWER switch, DC POWER indicator, and STOP switch, indicators are lit. Drive mechanism motor should be running and blower in CR cabinet should be operating.

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
PICK FAIL	red
CARD ALARM	red
OUT SYN	red
CARD JAM	red
PHOTOCELL CHECK	red
INVALID CHARACTER	red
CANCEL	red
START	white-green
STOP	red
LOCAL TEST	amber
SINGLE FEED	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) *Single feed.*

(*a*) Load card stack 'A' in the card reader. Verify that CARD ALARM indicator is extinguished, and all other indicators do not change condition.

(*b*) Press SINGLE FEED switch on the card reader. Verify that STOP switch is extinguished and SINGLE FEED switch lights momentarily as one card feeds from hopper to stacker.

(*c*) Verify that SINGLE FEED switch is extinguished and STOP switch illuminates after the card cycle is completed.

(*d*) Repeat this cycle (steps (*b*) and (*c*)) for ten cycles, and verify that the mechanical components involved in card feeding operate smoothly without any binding or jamming. Also verify that the test set COMPARATOR INPUTS lamps do not change state during the single feed cycle.

(2) *Card reader speed*.

(*a*) Remove all cards from the card reader stacker and load in the hopper. Verify that all indications remain the same.

NOTE

Before performing step 6-8*c*(2) (*b*), read steps 6-8*c*(2) (*c*) and (*d*).

(*b*) Press the card reader LOCAL TEST switch and start the one-minute timer. Verify that STOP switch is extinguished, LOCAL TEST switch lights, other switches and indicators do not change condition, and cards are fed automatically and continuously from hopper to stacker.

(*c*) While cards are being read (step 6-8*c*(2)(*b*)), press each of the following switches: START, SINGLE FEED, LAMP TEST. Verify that pressing these switches has no effect on the processing of cards, and other switches or indicators light only when the LAMP TEST switch is pressed. Also verify that the test set COMPARATOR INPUTS lamps do not change state.

(*d*) After the last card has been read, verify that the LOCAL TEST switch extinguishes, the STOP switch lights, and the CARD ALARM indicator lights. Stop the one-minute timer and verify that the card stack was read in one minute maximum.

(*e*) Remove card stack 'A' from the stacker. Examine the edges of the cards in the stack for damage which would prevent rereading the cards. Examine at least five cards at random for torn webbing

between punched holes. There should be no damage or torn webbing on the cards.

(3) *START switch interaction.*

(*a*) Remove card stack 'A' from the stacker. Load hopper with the 1000 white cards of stack 'D'. Verify that CARD ALARM indicator on card reader is extinguished and other indicators and switches do not change condition.

(*b*) Press START switch on card reader. Verify that STOP switch is extinguished, START switch lights green, and test set RDY lamp lights green. Verify that no cards are read.

(*c*) With card reader in 'START green' condition, press each of the following switches: LOCAL TEST, SINGLE FEED, and LAMP TEST. Verify that operation of these switches has no effect on the card reader, and other indicators and switches are illuminated or extinguished only when the LAMP TEST switch is pressed.

(*d*) Press STOP switch on the card reader. Verify that the START switch is extinguished, the STOP switch lights, and other switches and indicators do not change condition. Verify that the test set RDY lamp goes out.

d. Assigned Operation.

(1) *Data line and strobe waveforms*.

(*a*) 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 6-5.

(*b*) Press the START switch on the CR. 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 ±1.0 VDC
Low level:	-6.0 ±1.0 VDC
Rise time:	21 to 35 μsec
Fall time:	21 to 35 μsec

(*c*) 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 step d (1) (b) above.

(*d*) 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 step *d*(1) (*b*) above.

(*e*) Press the CR STOP switch. Remove all cards from stacker and reload in hopper.

(*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

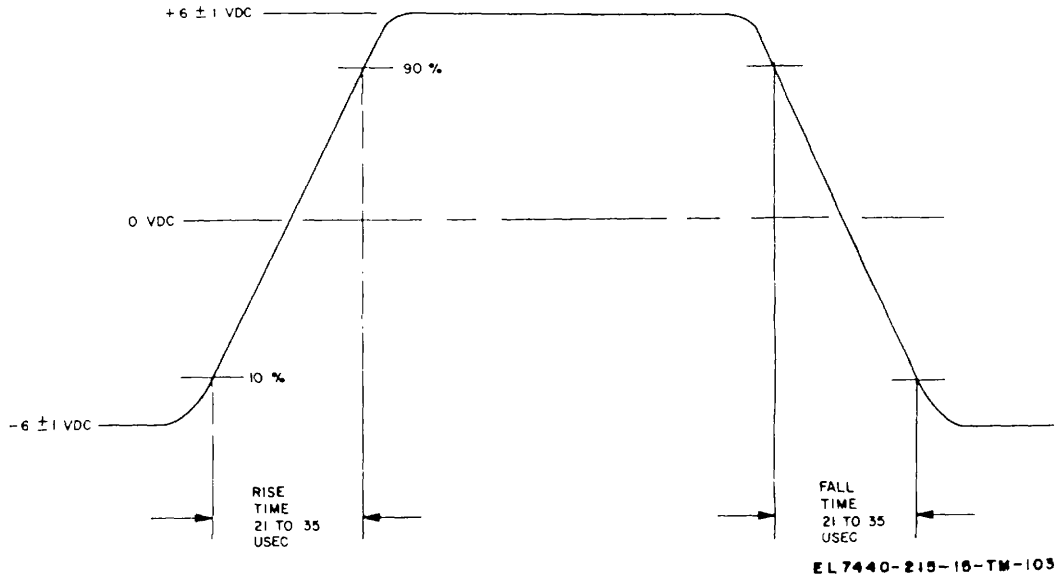


Figure 6-5. Data pulse and data strobe waveform.

the STROBE test point. Set the oscilloscope to the STROBE test point. Set the oscilloscope controls for chopped operation, using the data pulse as an external trigger. Press the CR START switch and the test set START switch. Verify that the position of the strobe pulse relative to the data pulse conforms to the limits shown in figure 6-6.

(*g*) Press the card reader STOP switch.

(*h*) 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.

(*i*) Press the START switch on the CR.

(*j*) Press the test set START switch.

(*k*) Verify that the signal levels observed on the oscilloscope are polar, with a nominal +6 VDC high level and a nominal -6 VDC high level.

(*l*) Press the card reader STOP switch and disconnect the oscilloscope. Remove all cards from the hopper and stacker.

(2) *Data verification*.

(*a*) Remove card stack 'D' from stacker and hopper and load card stack 'B'.

(*b*) Place ASSIGNED/NOT ASSIGNED switch on the test set to the ASSIGNED position. Verify that NOT ASSIGNED indicator on the card reader is extinguished and other indicators and switches on the card readers do not change position.

(*c*) Connect oscilloscope channel A input to test set ASSIGN test point. Position oscilloscope controls to observe a dc level and verify a reading of 0.5 ±0.5 VDC with the ASSIGNED/NOT ASSIGNED switch in the ASSIGNED position.

(*d*) Place the test set ASSIGNED/NOT ASSIGNED switch to the NOT ASSIGNED position. Verify a voltage level of 6.0 VDC ±1.0 VDC.

(*e*) Place ASSIGNED/NOT ASSIGNED switch to the ASSIGNED position. Verify that voltage level returns to the level of step (*c*) above.

NOTE

The following steps verify accurate data transfer between the card reader and test set. This is done automatically in the test set when the COMPARATOR IN/OUT switch is in the IN position. Comparison is made of the information generated in the test set with information coming from the punched cards being read by the card reader. This comparison is indicated by the changing status of the eight COMPARATOR INPUTS lamps when the COMPARATOR INPUTS switch is placed in the DATA- IN position. These lamps are designated 1 through 7, with the

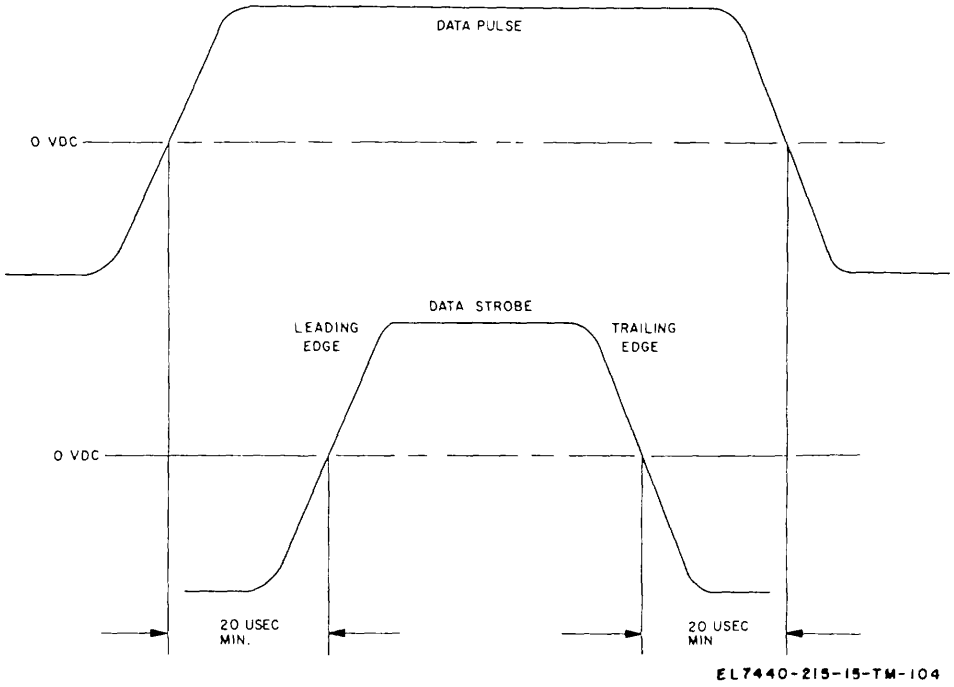


Figure 6-6. Data strobe versus data pulse timing.

eighth lamp designated 'P' (parity). If incorrect data is received from the card reader, the ERR (error) lamp on the test set will light red and the card reader will go to a stop condition.

(*f*) Press the START switch on the card reader. Verify that the STOP switch on CR is extinguished, START switch lights green, test set RDY lamp lights green, and all other switches and indicators do not change condition.

(*g*) Place SELECT switch on test set to ON.

(h) Connect oscilloscope channel A input to SELECT test point on the test set. Verify a voltage level of +0.5 ± 0.5 VDC.

(*i*) Place the SELECT switch to the off position. Verify a voltage level of +6.0 ± 1.0 VDC at the SELECT test point.

(*j*) Return the test set SELECT switch to the ON position.

(*k*) Connect oscilloscope channel A input to test set RDY test point. Verify a voltage level of 0.5 ± 0.5 VDC.

(*l*) Press the card reader STOP switch and verify a voltage level of 6.0 ± 1.0 VDC at the RDY test point.

(*m*) Press the card reader START switch and place the COMPARATOR IN/OUT switch on the test set to IN.

NOTE

When the COMPARATOR IN/OUT switch is set to IN, the ERR lamp on the test set will light, because synchronization between the generated test pattern and the input data is not established until step (*n*) below.

(*n*) Press START switch on test set. Verify that START switch on card reader changes from green to white and that cards feed automatically and continuously from hopper to stacker. Verify that the ERR lamp on the test set is extinguished and that all COMPARATOR INPUTS lamps are changing state with COMPARATOR INPUTS switch in the DATA IN position.

(*o*) While cards are being read, press the following switches: LOCAL TEST, SINGLE FEED, and LAMP TEST. Verify that the use of these switches does not affect operation on the card reader, and that additional switches and indicators are illuminated or extinguished only when the LAMP TEST switch is pressed.

(*p*) Press STOP switch on card reader. Verify that the card reader stops and that START switch indicator is extinguished, STOP switch lights, and other switches and indicators on card reader do not change condition. Verify that RDY lamp on test set is out.

(*q*) Verify that bottom card (and only bottom card) in the CR stacker is offset one quarter inch minimum from the card above it.

(*r*) Remove card stack "B" from the stacker and the hopper and load card stack "G" in the hopper.

(*s*) On the test set burn the COMPARATOR INPUT rotary switch to DATA COMP. On the card reader press the START switch and the ALARM RESET switch.

(*t*) Press the START switch on the test set. Verify the card reader reads one card and the STOP switch lights red. On the test set verify the ALM and ERR lamps are lit and the COMPARATOR INPUTS lamp indicate 11111011.

(*u*) Remove card stack "G" from the stacker and the hopper and load card stack "H" in the hopper.

(*v*) On the card reader press the START switch and the ALARM RESET switch.

(*w*) Press the START switch on the test set. Verify the card reader reads one card and the STOP switch lights red. On the test set verify the ALM and ERR lamps are lit and the COMPARATOR INPUTS lamps indicate 11111101.

(*x*) On the test set place the COMPARATOR INPUT rotary switch to DATA IN and set the COMPARATOR IN/OUT switch to OUT.

(*y*) Remove card stack "H" from the stacker and the hopper and load card stack "B" in the hopper.

(3) *Single feed*.

(*a*) Press the card reader SINGLE FEED switch. Verify that the CR STOP switch is extinguished, SINGLE FEED switch lights, and all other switches and indicators do not change condition. Also verify that RDY and ERR lamps on test set light.

NOTE

The ERR lamp on the test set lights because synchronization between the test set and CR is lost. Synchronization is reestablished at step (*c*) below.

(*b*) With the card reader in single feed condition, press the following switches: START, LOCAL TEST, LAMP TEST. Verify that the operation of these switches has no effect on the card reader, and that additional switches and indicators are illuminated or extinguished only when the LAMP TEST switch is pressed.

(*c*) With the card reader still in the

single feed condition press the START switch on the test set. Verify that only one card is fed from hopper to stacker, SINGLE FEED switch is extinguished, STOP switch lights, and other switches and indicators on CR do not change condition. Also verify that RDY lamp on test set is extinguished. During the single feed cycle, verify that the test set COMPARATOR INPUTS lamps change state.

(4) *EOM and EOB.*

(a) Connect oscilloscope channel A input to the EOM test point on the test set.

(b) Place the EOM switch on the test set to ON.

(c) Position the oscilloscope controls to view a 60 millisecond pulse with a negatively sloped leading edge. Trigger the oscilloscope internally on the signal being viewed.

(d) Press the START switch on the card reader. Verify that STOP switch is extinguished, START switch lights white, and all other switches and indicators on CR do not change condition. Also verify that RDY lamp on test set lights.

(*e*) Press the START switch on the test set and verify that cards feed from hopper to stacker on card reader.

(*f*) 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.

(*g*) Connect oscilloscope channel A input to the EOB test point on the test set.

(*h*) 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.

(*i*) Allow cards to run until hopper is empty. Verify that all cards are read without producing an error indication on the test set.

(*j*) Verify that the START switch and CARD ALARM indicators are not illuminated, and the STOP switch it illuminated on the card reader. Verify that all other switches and indicators on the CR do not change condition.

(*k*) On the test set, verify that the OP ALM, ALM STOP and RDY lamps are extinguished.

e. Alarm Conditions.

(1) *Stacker full.*

(*a*) Place the remaining 100 blue cards from card stack 'B' into the hopper. Verify that no switches or indicators on the card reader or test set change condition.

(*b*) Connect oscilloscope channel A input to the OP ALM test point on the test set. Verify a voltage level of 0.5 ± 0.5 VDC.

(*c*) Press START switch on CR. Verify that STOP switch extinguishes, START switch lights white, and all other switches and indicators do not change condition. Also verify that test set RDY lamp lights green.

(*d*) Press START switch on test set. Allow cards to process to a stacker full condition. Verify that the stacker full condition causes the card reader to stop processing cards and causes the CARD ALARM indicator to light, the START switch to go out, and the STOP switch to light. Other switches and indicators on the CR should remain unchanged. Also verify that the RDY and ERR lamps on the test set are not lit, but the OP ALM is illuminated.

(*e*) Verify that the oscilloscope indicates a voltage level of +6.0 ±1.0 VDC at the OP ALM test point.

(*f*) Press the START switch on the CR. Verify that no change in CR switches or indicators occurs, and no cards are read.

(*g*) Remove all cards from the stacker. Verify that no change in card reader switches or indicators occurs.

(*h*) Press START switch on card reader. Verify that the CARD ALARM indicator extinguishes, the START switch lights white, and the test set RDY lamp lights.

(*i*) Connect oscilloscope channel A input to the ALM RST test point on the test set. Adjust oscilloscope controls to view a 5 μsec wide negative going pulse. Use the pulse being viewed as an external trigger.

(*j*) Press the AUDIBLE RESET switch on the card reader. Verify that the OP ALM lamp on the test set goes out. Press the AUDIBLE RESET switch as necessary to verify that the audible reset 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.

(*k*) Remove the remaining cards from the card reader hopper. Verify that the START switch and the test set RDY lamp extinguish, and the card reader STOP switch lights.

(2) *Pick fail.*

(*a*) Place the special pick-fail card (fig. 6-7) in the card reader hopper, with several cards placed on top of it.

(*b*) Press START switch on card reader. Verify that STOP switch is extinguished and START switch lights white. Also verify that RDY lamp lights and alarm lamps on test set are out.

(*c*) Press START switch on the test set. Verify that START switch is extinguished and STOP switch and PICK FAIL indicator are illuminated on the card reader. Verify that RDY lamp is extinguished and OP ALM lamp is illuminated on the test set. Verify that no cards are picked.

(*d*) Press the card reader START switch. Verify that the PICK FAIL indicator is extinguished, the START switch is illuminated white, and the test set RDY lamp is illuminated.

(*e*) Press the AUDIBLE RESET switch on the card reader. Verify that the OP ALM lamp is extinguished on the test set.

(*f*) Remove all cards from the hopper.

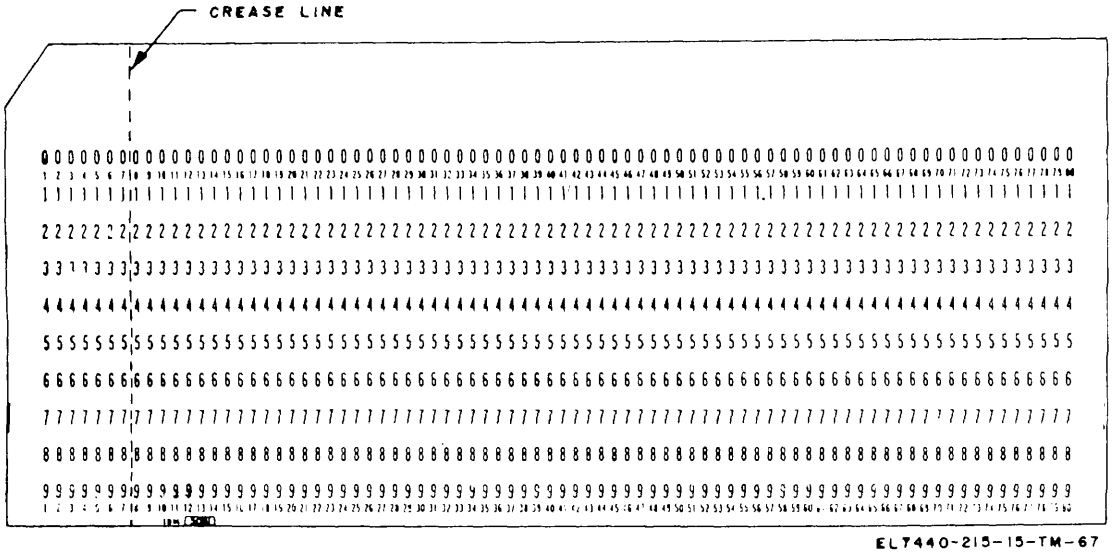


Figure 6-7. Pick-fail card.

Verify that the CARD ALARM indicator is illuminated, the STOP switch is illuminated, and the START switch is extinguished on the card reader. Verify that the lamp is extinguished and the OP ALM lamp is illuminated on the test set.

(3) *Cancel.*

(*a*) Load card stack 'C' in the hopper. Verify that no change occurs in test set or card reader indications.

(*b*) Connect oscilloscope channel A input to the CNCL test point on the test set. Verify a voltage reading of 0.5 ±0.5 VDC.

(*c*) Press START switch on card reader. Verify that STOP switch and CARD ALARM indicators on CR go out and START switch lights white. Verify that RDY lamp on test set lights.

(*d*) Press the AUDIBLE RESET switch on the card reader. Verify that OP ALM lamp on test set extinguishes.

NOTE

The CANCEL switch must be actuated (step (*f*)) within 15 seconds after the test set start switch is pressed (step (*e*)).

(*e*) Press START switch on test set and verify that cards feed from hopper to stacker.

(*f*) While cards are being read, place CANCEL switch on test set to MAN. Verify that cards stop feeding, the START switch on the CR goes out and the STOP switch and CANCEL indicators light. On the test set verify that the RDY lamp goes out and the ALM STOP lamp lights.

(*g*) Verify that oscilloscope indicates a voltage level of 6.0 ±1.0 VDC at CNCL test point.

(*h*) Press START switch on card reader. Verify that this switch has no effect with cancel applied.

(*i*) Place the test set CANCEL switch to the AUTO position.

(*j*) Press the card reader START switch. Verify that the STOP switch and CANCEL indicator are extinguished and the START switch is illuminated white. Verify that the RDY lamp is illuminated on the test set.

(*k*) Depress the AUDIBLE RESET switch on the card reader. Verify that the ALM STOP lamp is extinguished on the test set.

NOTE

The following steps demonstrate the use of the maintenance RESET switch.

(*l*) Place the CANCEL switch on the test set to the MAN position. Verify that START switch is extinguished and the STOP switch and CANCEL indicator are illuminated on the card reader. Verify that the ALM STOP lamp is illuminated and the RDY lamp is extinguished on the test set.

(*m*) Open the card reader front door to

gain access to the maintenance panel. Press the RESET switch on the maintenance panel. Verify that this action has no effect.

(*n*) Place the ASSIGNED/NOT ASSIGNED switch on the test set to the NOT ASSIGNED position. Verify that the NOT ASSIGNED indicator on the card reader is illuminated.

(*o*) Press the RESET switch on the maintenance panel of the card reader. Verify that the CANCEL indicator is extinguished.

(*p*) Place the test set CANCEL switch to the AUTO position.

(*q*) Place the ASSIGNED/NOT ASSIGNED switch on the test set to the ASSIGNED position. Verify that the NOT ASSIGNED indicator on the card reader is extinguished.

(*r*) Depress the START switch on the card reader. Verify that the STOP switch is extinguished and the START switch is illuminated green on the card reader. Verify that the RDY lamp is illuminated on the test set.

(*s*) Depress the AUDIBLE RESET switch on the card reader. Verify that the ALM STOP lamp is extinguished on the test set.

(*t*) Close the door to the maintenance panel on the card reader.

(4) *Invalid character.*

(*a*) Connect oscilloscope channel A input to ALM STOP test point on test set. Verify that voltage level is 0.5 ± 0.5 VDC.

(*b*) Press START switch on test set and verify the following:

1. Card reader START switch changes from green to white and cards process from hopper to stacker.

2. First card read is offset minimum of one-quarter inch from cards above it in stacker.

3. Cards are processed until card no. 51, containing an invalid character is read.

4. When the invalid character card is read, the CR stops processing cards with the START switch extinguished and the STOP and INVALID CHARACTER indicators illuminated.

5. When card reader stops, RDY and ALM STOP lamps on test set light.

6. When card reader stops, oscilloscope indicates voltage level of 6.0 ± 1.0 VDC.

(*c*) Press card reader START switch. Verify that STOP switch and INVALID CHARACTER indicators go out, and START switch lights white. Verify that RDY lamp on test set lights.

(*d*) Press AUDIBLE RESET switch on card reader and verify that all alarm lamps on test set go out.

(*e*) Repeat the above steps until all six invalid character cards in card stack 'C' have been read and detected.

(5) *Photocell check.*

(*a*) Following step 6-8*e*(4)(*e*) performed for the sixth invalid character card (No. 61), depress START switch on the test set. Verify that cards feed until the card reader PHOTOCELL CHECK indicator is illuminated and the card reader goes to a stop condition. Verify that the "Dark Check" card is the top card in stacker, and thus, the last card to be read. Verify that START switch is extinguished and STOP switch and PHOTOCELL CHECK indicator are illuminated on the card reader. Also verify ALM STOP lamp is illuminated and RDY lamp is extinguished on the test set.

(*b*) Remove the mechanism cover from the card reader.

(*c*) Depress START switch and AUDIBLE RESET switch on the card reader. Verify that STOP switch and PHOTOCELL CHECK indicator are extinguished, and START switch is illuminated white. Verify all alarm lamps extinguished and RDY lamp illuminated on the test set.

(*d*) Insert a strip of opaque paper between the lamp block and photocells in the read head. Cover any number of the twelve (12) read cells. Do not cover the BOC or EOC photocells. Verify that START switch is extinguished, STOP switch and PHOTOCELL CHECK indicator are illuminated on the card reader. Verify that RDY lamp is extinguished and ALM STOP lamp illuminated on the test set.

(*e*) Remove opaque paper. Verify no change in card reader or test set conditions from step 6-8*e*(5) (*d*) above.

(6) *Card jam.*

(*a*) Depress START switch and AUDIBLE RESET switch on the card reader. Verify that STOP switch and PHOTOCELL CHECK indicator are extinguished and START switch is illuminated white. Verify all alarm lamps are extinguished and RDY lamp is illuminated on the test set.

(*b*) Hold the eraser end of a lead pencil two inches (2") upstream from the card reader offset capstan in a position to stop a card. While holding the pencil in this position, depress the START switch on

the test set. Verify that one card is picked and stops at the pencil, START switch is extinguished, and STOP switch and CARD JAM indicator are illuminated on the card reader. Verify that RDY lamp is extinguished and ALM STOP lamp is illuminated on the test set.

NOTE

Card reader INVALID CHARACTER indicator may also illuminate as a result of the card jam.

(*c*) Allow the card that was jammed to pass into the stacker. Remove if from the stacker and discard.

(*d*) Depress the START switch on the card reader. Verify that the STOP switch and CARD JAM indicator are extinguished and the START switch is illuminated white on the card reader. Verify that the RDY lamp is illuminated on the test set.

(*e*) Depress the AUDIBLE RESET switch on the card reader. Verify that the ALM STOP lamp on the test set is extinguished.

(7) *Out of sync.*

NOTE

The SYNC FAIL switch must be activated within 15 seconds after the test set START switch is depressed.

(*a*) Depress the START switch on the test set. Verify that cards are picked and fed automatically and continuously from hopper to stacker.

(*b*) While cards are being read, place SYNC FAIL switch on test set to the on position. Verify that cards stop feeding and that START switch is extinguished, and STOP switch and OUT OF SYN indicator are illuminated on the card reader. Also verify that RDY lamp is extinguished and ALM STOP lamp is illuminated on the test set.

(*c*) Depress START switch on the card reader. Verify that STOP switch and OUT OF SYN indicator are extinguished, START switch is illuminated white and all other indicators and switches do not change condition. Verify that RDY lamp is illuminated on test set and that no cards are processed.

(*d*) Depress AUDIBLE RESET switch on the card reader. Verify that all alarm lamps are extinguished on the test set.

(*e*) Place SYNC FAIL switch on test set to the OFF position.

(*f*) Hold remaining cards in hopper so that a card cannot be picked, but do not remove cards from hopper. Depress START switch on the test set. Verify that no card is picked, STOP switch and PICK FAIL indicator are illuminated and START switch is extinguished on the card reader. Verify that test set RDY lamp is extinguished and OP ALM lamp is illuminated.

(*g*) Using the hand, tap bottom of picker solenoid in order to manually pick one card. Verify that OUT OF SYN indicator illuminates and all other indicators and switches on card reader do not change condition. Also verify that ALM STOP lamp illuminates on the test set.

(8) *Card alarm - hopper empty without EOM.*

(*a*) Place EOM switch on the test set to the OFF position.

(*b*) Depress the START switch and AUDIBLE RESET switch on the card reader. Verify that STOP switch, OUT OF SYNC indicator and PICK FAIL indicator are extinguished. Verify that START switch is illuminated white. Verify that RDY lamp is illuminated and all alarm lamps are extinguished on the test set.

(*c*) Depress START switch on the test set and allow cards to feed until hopper is empty. Verify that the STOP switch and CARD ALARM indicator are illuminated and the START switch is extinguished on the card reader. Also verify that the test set RDY lamp is extinguished and OP ALM lamp is illuminated.

(*d*) Remove cards from stacker and reload in hopper. Verify no change in condition of card reader indications.

(*e*) Depress SINGLE FEED switch on the card reader. Verify that STOP switch and CARD ALARM indicator are extinguished and SINGLE FEED switch is illuminated white. Verify that the test set RDY lamp is illuminated.

(*f*) Depress the AUDIBLE RESET switch on the card reader. Verify that the OP ALM lamp is extinguished on the test set.

(*g*) Remove cards from the hopper.

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
SYNC FAIL to OFF
EOM to OFF
SELECT to ON
SINGLE CARD/REPEAT to REPEAT
COMPARATOR INPUT rotary switch to DATA IN
ASSIGNED/NOT ASSIGNED to ASSIGNED
COMPARATOR IN/OUT to OUT
AUTO/MAN to AUTO

b. Operation With Static Variations of Frequencies and Voltages.

(1) Position variable frequency and voltage controls on 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	52.6	67	60	63
132		X			X	
120	X	X	X	X	X	X
96		X			X	

(2) Load card stack 'F' in hopper.

(3) Set the test set COMPARATOR switch to IN.

(4) Press START switch on card reader.

(5) Press START switch on test set and start one-minute timer.

(6) Verify that the 108 white cards are read in one-minute maximum.

(7) Repeat steps (2) and (4) through (6) for all remaining settings of frequency and voltage as indicated by an 'X' in the chart of step (1).

c. Dynamic Variable Voltage at 50 Hertz (120 VAC).

(1) Adjust the variable frequency And voltage source for 50 hertz and 120 VAC.

(2) Remove card stack 'F' and load stack 'E' in the hopper.

(3) Press the card reader START switch.

(4) Press the test set START switch and start the one-minute timer.

(5) Vary the OUPTPUT 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.

(6) Verify that cards continue to feed while voltage is varied, and that all 108 white cards are read in one minute maximum.

(7) Press the card reader STOP switch at the end of the cycle.

d. Dynamic Variable Frequency at 120 VAC (50 Hertz).

(1) Reload card stack 'E' in hopper.

(2) Press the card reader and test set START switches in sequence, and start the one- minute timer.

(3) 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.

(4) Verify that cards continue to feed while frequency is varied, and all 108 white cards are read within one minute.

(5) Press the card reader STOP switch at end of the cycle.

e. Dynamic Variable Frequency at 120 VAC (60 Hertz).

(1) Adjust the variable frequency and voltage source to 60 CPS and 120 VAC.

(2) Reload card stack 'E' in hopper.

(3) Press CR and test set START switches in sequence, and start one-minute timer.

(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 cards continue to feed while frequency is varied, and all 108 white cards are read within one minute.

(6) Press card reader STOP switch at end of cycle.

f. Dynamic Variable Voltage at 60 Hertz.

(1) Reload card stack 'E' in hopper.

(2) Adjust the variable frequency and voltage source for 60 CPS and 120 VAC.

(3) Press the CR and test set START switches in sequence, and start one-minute timer.

(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, the return to 120 VAC. This cycle should be completed in approximately 60 seconds.

(5) Verify that cards continue to feed while voltage is varied, and all 108 white cards are read within one minute.

(6) Press CR STOP switch at end of cycle.

6-10. Shutdown

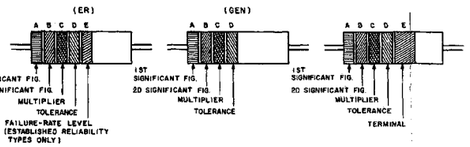
a. Press AC POWER switch on card reader.

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. Remove connection between card reader and CML N5000A.

e. Remove connection between card reader and test set.



COLOR CODE MARKING FOR COMPOSITION TYPE RESISTORS.

COLOR-CODE MARKING FOR FILM-TYPE RESISTORS.

TABLE I
COLOR CODE FOR COMPOSITION TYPE AND FILM TYPE RESISTORS.

BAND A		BAND B		BAND C		BAND D		BAND E	
COLOR	FIRST SIGNIFICANT FIGURE	COLOR	SECOND SIGNIFICANT FIGURE	COLOR	MULTIPLIER	COLOR	RESISTANCE TOLERANCE (PERCENT)	COLOR	FAILURE RATE LEVEL
BLACK	0	BLACK	0	BLACK	1			BROWN	M=1.0
BROWN	1	BROWN	1	BROWN	10			RED	P=0.1
RED	2	RED	2	RED	100			ORANGE	R=0.01
ORANGE	3	ORANGE	3	ORANGE	1,000			YELLOW	S=0.001
YELLOW	4	YELLOW	4	YELLOW	10,000	SILVER	±10 (COMP TYPE ONLY)	WHITE	SOLDERABLE
GREEN	5	GREEN	5	GREEN	100,000	GOLD	±5		
BLUE	6	BLUE	6	BLUE	1,000,000	RED	±2 (NOT APPLICABLE TO ESTABLISHED RELIABILITY)		
PURPLE (VIOLET)	7	PURPLE (VIOLET)	7						
GRAY	8	GRAY	8	SILVER	0.01				
WHITE	9	WHITE	9	GOLD	0.1				

BAND A — THE FIRST SIGNIFICANT FIGURE OF THE RESISTANCE VALUE. (BANDS A THRU D SHALL BE OF EQUAL WIDTH.)

BAND B — THE SECOND SIGNIFICANT FIGURE OF THE RESISTANCE VALUE.

BAND C — THE MULTIPLIER (THE MULTIPLIER IS THE FACTOR BY WHICH THE TWO SIGNIFICANT FIGURES ARE MULTIPLIED TO YIELD THE NOMINAL RESISTANCE VALUE.)

BAND D — THE RESISTANCE TOLERANCE.

BAND E — WHEN USED ON COMPOSITION RESISTORS, BAND E INDICATES ESTABLISHED RELIABILITY FAILURE-RATE LEVEL (PERCENT FAILURE PER 1,000 HOURS). ON FILM RESISTORS, THIS BAND SHALL BE APPROXIMATELY 1-1/2 TIMES THE WIDTH OF OTHER BANDS, AND INDICATES TYPE OF TERMINAL.

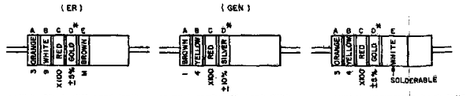
RESISTANCES IDENTIFIED BY NUMBERS AND LETTERS (THESE ARE NOT COLOR CODED.)

SOME RESISTORS ARE IDENTIFIED BY THREE OR FOUR DIGIT ALPHA NUMERIC DESIGNATORS. THE LETTER R IS USED IN PLACE OF A DECIMAL POINT WHEN FRACTIONAL VALUES OF AN OHM ARE EXPRESSED. FOR EXAMPLE:

2R7 = 2.7 OHMS 10R0 = 10.0 OHMS

FOR WIRE-WOUND-TYPE RESISTORS COLOR CODING IS NOT USED. IDENTIFICATION MARKING IS SPECIFIED IN EACH OF THE APPLICABLE SPECIFICATIONS.

EXAMPLES OF COLOR CODING



NOMINAL RESISTANCE 3,900 OHMS
RESISTANCE TOLERANCE ±5%
FAILURE RATE LEVEL M

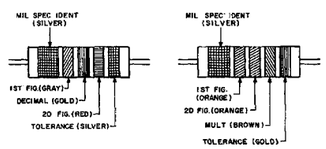
NOMINAL RESISTANCE 1,400 OHMS
RESISTANCE TOLERANCE ±10%

NOMINAL RESISTANCE 2,400 OHMS
RESISTANCE TOLERANCE ±5%
TERMINAL SOLDERABLE

COMPOSITION-TYPE RESISTORS FILM-TYPE RESISTORS

* IF BAND D IS OMITTED, THE RESISTOR TOLERANCE IS ±20% AND THE RESISTOR IS NOT MIL-STD.

A. COLOR CODE MARKING FOR MILITARY STANDARD RESISTORS.



(A) 8.2UH ±10% (B) 330UH ±5%

COLOR CODING FOR TUBULAR ENCAPSULATED R.F. CHOKES. AT A, AN EXAMPLE OF THE CODING FOR AN 8.2UH CHOKE IS GIVEN. AT B, THE COLOR BANDS FOR A 330 UH INDUCTOR ARE ILLUSTRATED.

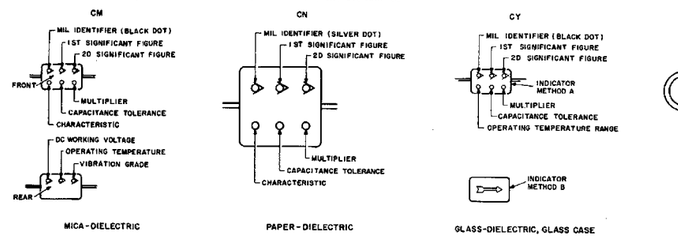
TABLE 2
COLOR CODING FOR TUBULAR ENCAPSULATED R.F. CHOKES.

COLOR	SIGNIFICANT FIGURE	MULTIPLIER	INDUCTANCE TOLERANCE (PERCENT)
BLACK	0	1	
BROWN	1	10	1
RED	2	100	2
ORANGE	3	1,000	3
YELLOW	4		
GREEN	5		
BLUE	6		
VIOLET	7		
GRAY	8		
WHITE	9		
NONE			20
SILVER			10
GOLD	DECIMAL POINT		5

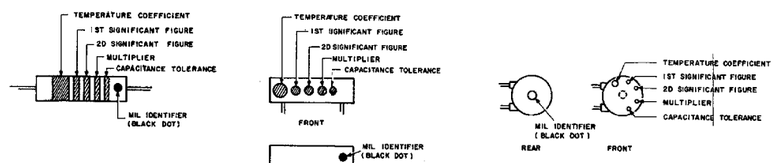
MULTIPLIER IS THE FACTOR BY WHICH THE TWO COLOR FIGURES ARE MULTIPLIED TO OBTAIN THE INDUCTANCE VALUE OF THE CHOKE COIL.

B. COLOR CODE MARKING FOR MILITARY STANDARD INDUCTORS.

CAPACITORS, FIXED, VARIOUS-DIELECTRICS, STYLES CM, CN, CY, AND CB.



MICA-DIELECTRIC PAPER-DIELECTRIC GLASS-DIELECTRIC, GLASS CASE MICA, BUTTON TYPE



C. COLOR CODE MARKING FOR MILITARY STANDARD CAPACITORS.

CHAPTER 8

ADDITIONAL ILLUSTRATIONS AND WIRE LIST

TABLE 3 — FOR USE WITH STYLES CM, CN, CY AND CB.

COLOR	MIL ID	1ST SIG FIG.	2D SIG FIG.	MULTIPLIER	CAPACITANCE TOLERANCE			CHARACTERISTIC[2]			DC WORKING VOLTAGE	OPERATING TEMP. RANGE	VIBRATION GRADE
					CM	CN	CY	CB	CM	CN	CB	CM	CY, CM	CM
BLACK	CM, CY, CB	0	0	1			±20%	±20%		A			-55° TO +70°C	10-55 Hz
BROWN		1	1	10					B	E	B			
RED		2	2	100	±2%		±2%	±2%	C				-55° TO +80°C	
ORANGE		3	3	1,000		±30%			D		D	300		
YELLOW		4	4	10,000					E				-55° TO +125°C	10-2,000Hz
GREEN		5	5		±5%				F			500		
BLUE		6	6										-55° TO +150°C	
PURPLE (VIOLET)		7	7											
GRAY		8	8											
WHITE		9	9											
GOLD				0.1			±5%	±5%						
SILVER	CN			0.01	±10%	±10%	±10%	±10%						

TABLE 4 — TEMPERATURE COMPENSATING, STYLE CC.

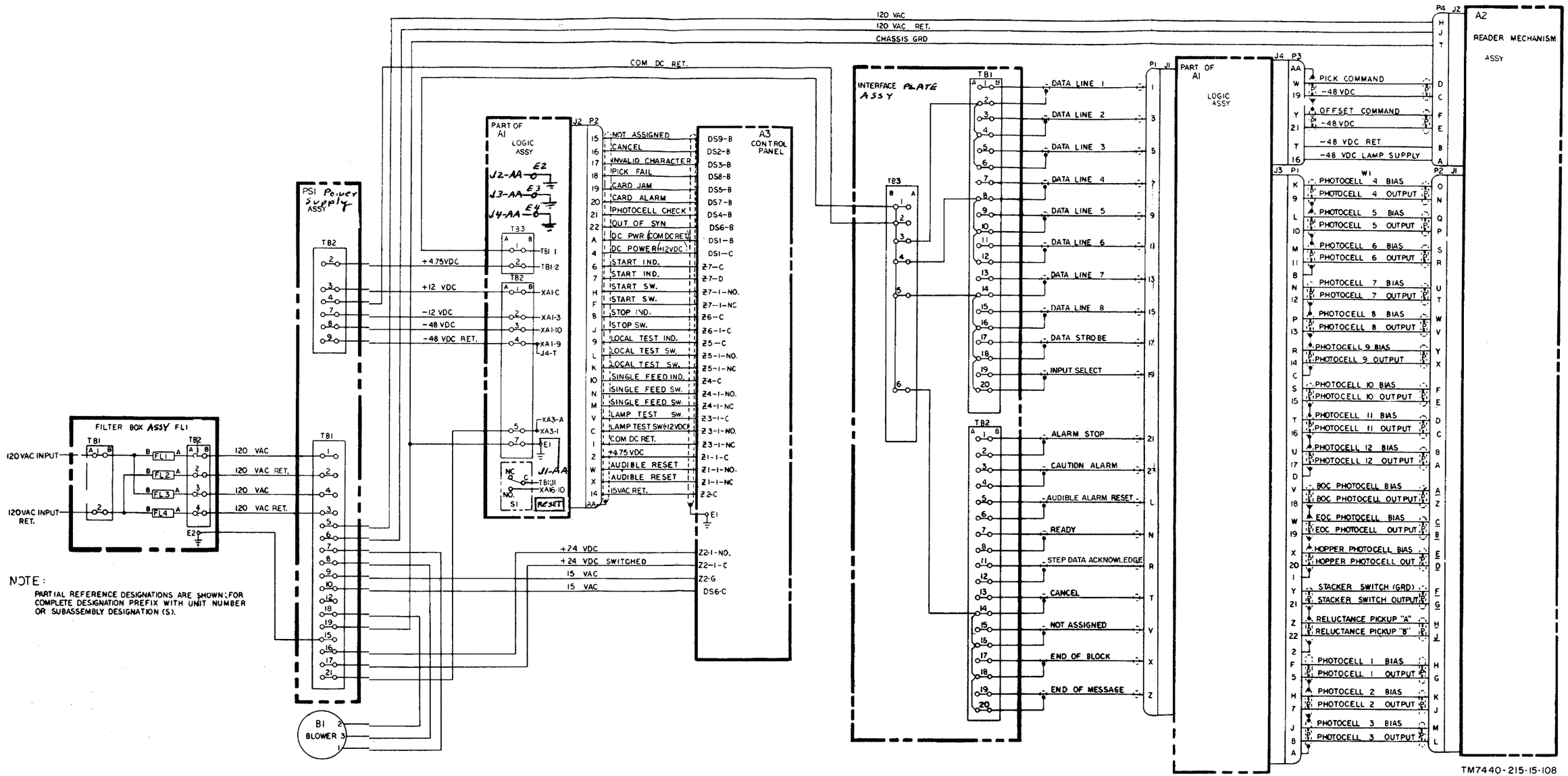
COLOR	TEMPERATURE COEFFICIENT[4]	1ST SIG FIG.	2D SIG FIG.	MULTIPLIER[1]	CAPACITANCE TOLERANCE		MIL ID
					CAPACITANCES OVER 10 UUF	CAPACITANCES 10 UUF OR LESS	
BLACK	0	0	0	1		±2.0 UUF	CC
BROWN	-30	1	1	10	±1%		
RED	-80	2	2	100	±2%	±0.25 UUF	
ORANGE	-150	3	3	1,000			
YELLOW	-220	4	4				
GREEN	-330	5	5		±5%	±0.5 UUF	
BLUE	-470	6	6				
PURPLE (VIOLET)	-750	7	7				
GRAY		8	8	0.01*			
WHITE		9	9	0.1*	±10%		
GOLD	+100			0.1		±1.0 UUF	
SILVER				0.01			

1. THE MULTIPLIER IS THE NUMBER BY WHICH THE TWO SIGNIFICANT (SIG) FIGURES ARE MULTIPLIED TO OBTAIN THE CAPACITANCE IN UUF.
2. LETTERS INDICATE THE CHARACTERISTICS DESIGNATED IN APPLICABLE SPECIFICATIONS: MIL-C-5, MIL-C-25D, MIL-C-11272B, AND MIL-C-10950C RESPECTIVELY.
3. LETTERS INDICATE THE TEMPERATURE RANGE AND VOLTAGE-TEMPERATURE LIMITS DESIGNATED IN MIL-C-11015D.
4. TEMPERATURE COEFFICIENT IN PARTS PER MILLION PER DEGREE CENTIGRADE.

* OPTIONAL CODING WHERE METALLIC PIGMENTS ARE UNDESIRABLE.

Figure 8-1. Military standard for color code marking. ESC-FM 913-73

Figure 8-1. Military standard for color marking.

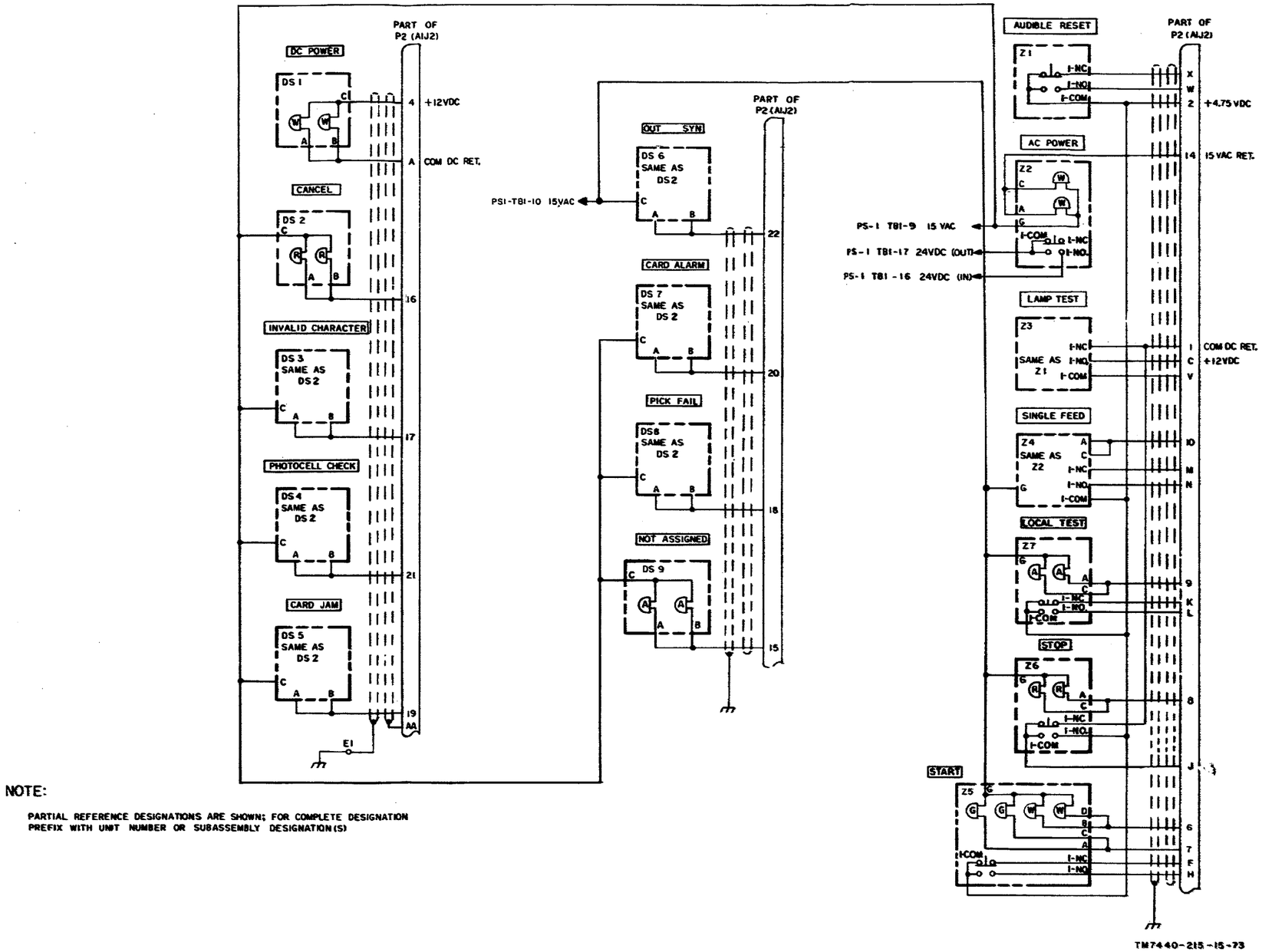


NOTE:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION (S).

Figure 8-3. Card reader, interconnection schematic diagram.

8-2.3 Change 1



NOTE:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S)

Figure 8-4. Card reader, control panel schematic diagram..

TM 11-7440-215-15/NAVSHIPS 0967-324-0021/TO 31W4-2G-31

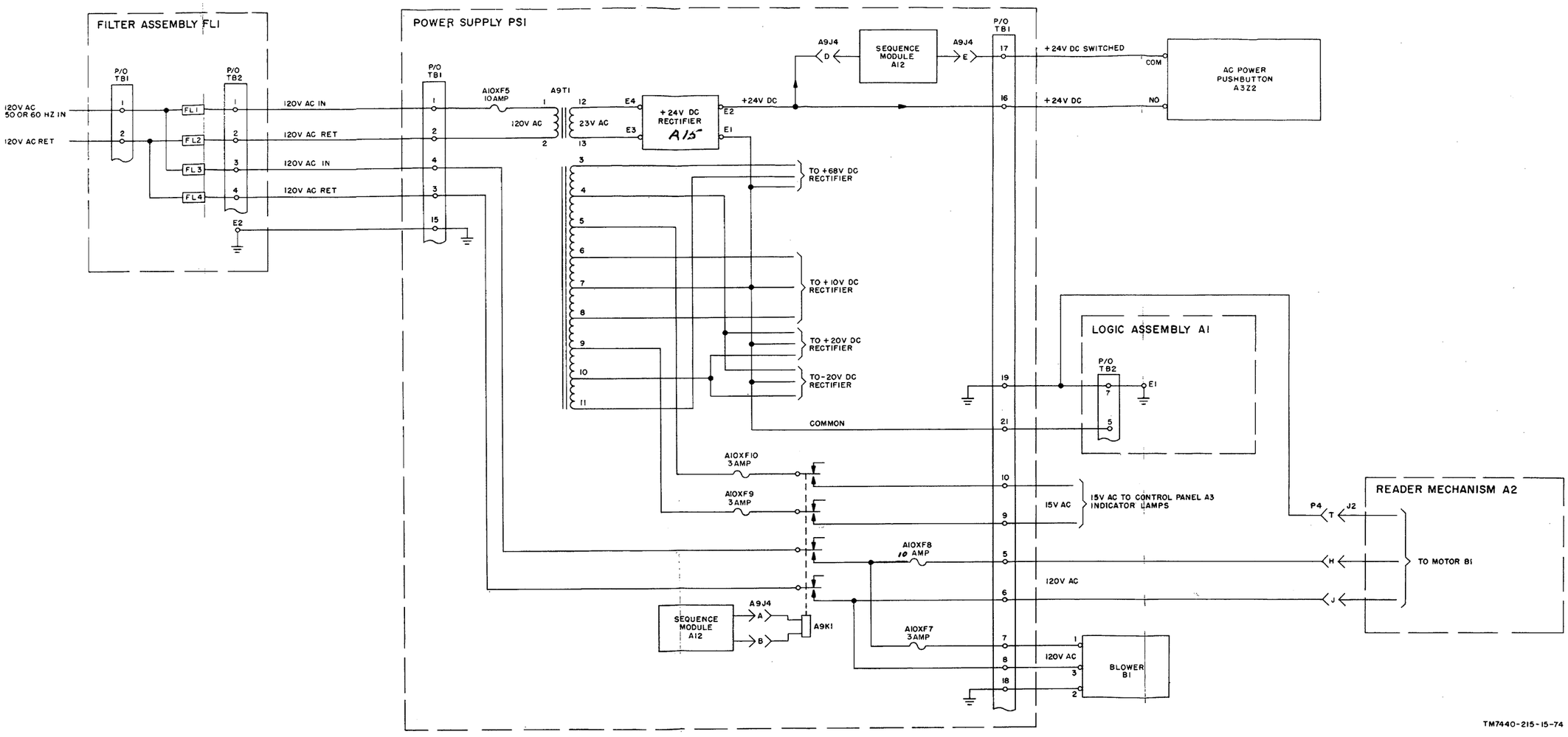


Figure 8-5. Ac circuits, schematic diagram.

TM 11-7440-215-15/NAVSHIPS 0967-324-0025/TO 31W4-2G-31

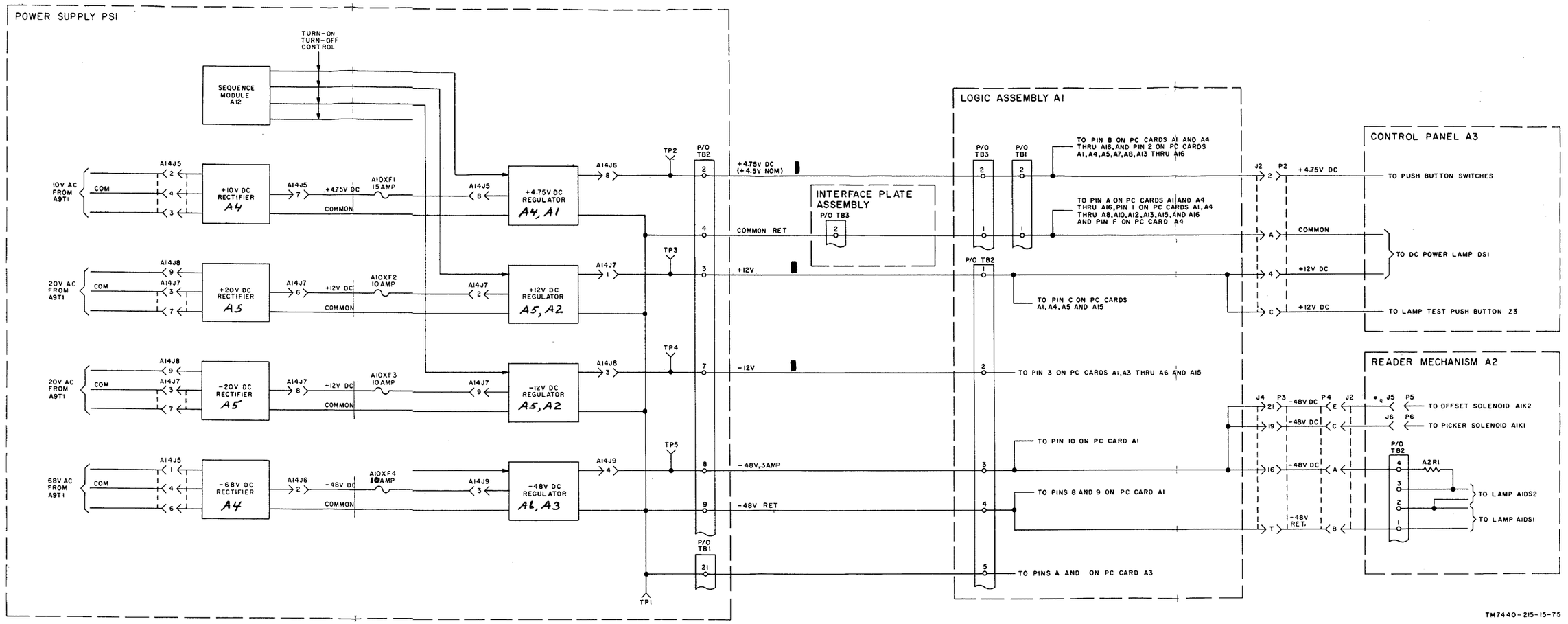
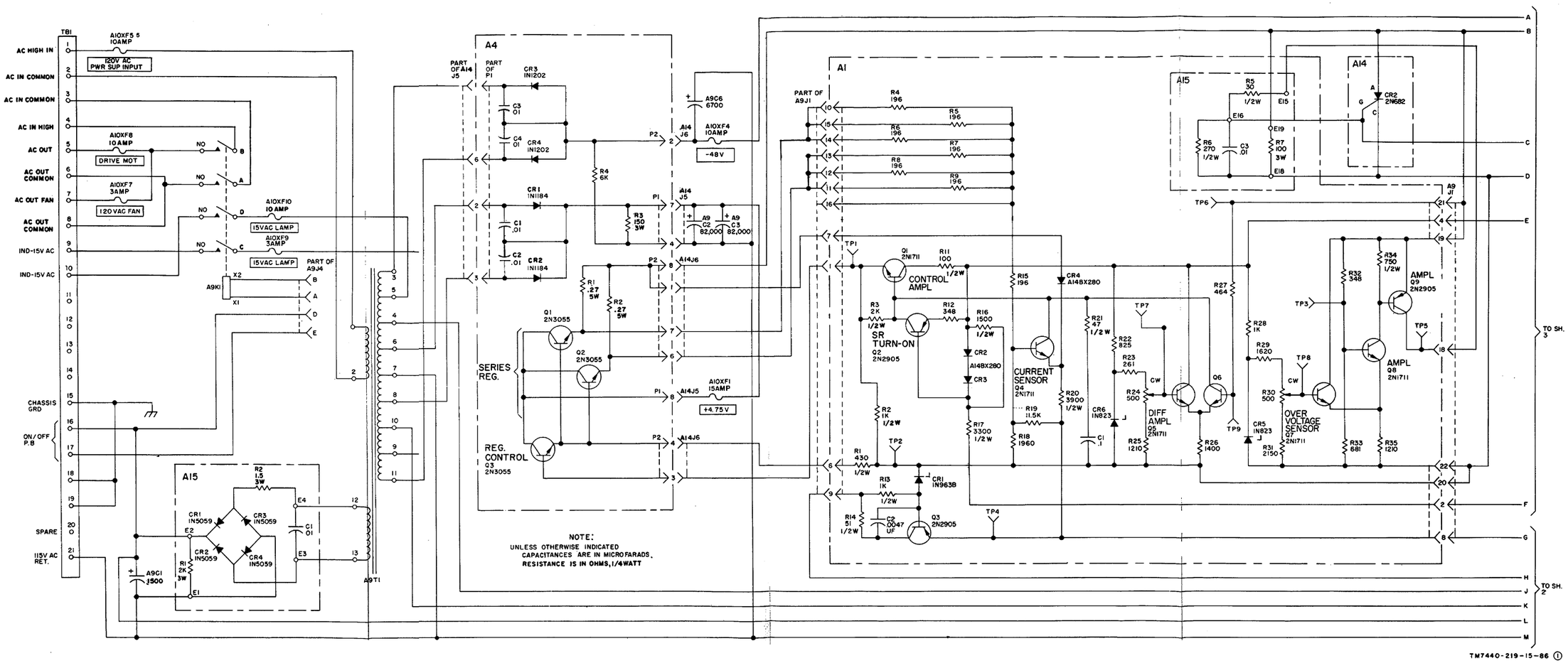


Figure 8-6. Dc circuits, schematic diagram.

TM 11-7440-215-15/NAVSHIPS 0967-324-0021/TO 31W4-2G-31



TM7440-219-15-86 ①

Change 1

Figure 8-7 (1). Rectifier and voltage regulators, schematic diagram (part 1 of 3 parts.)

TM 11-7440-215-15/NAVSHIPS 0967-324-0021/TO 31W4-2G-31

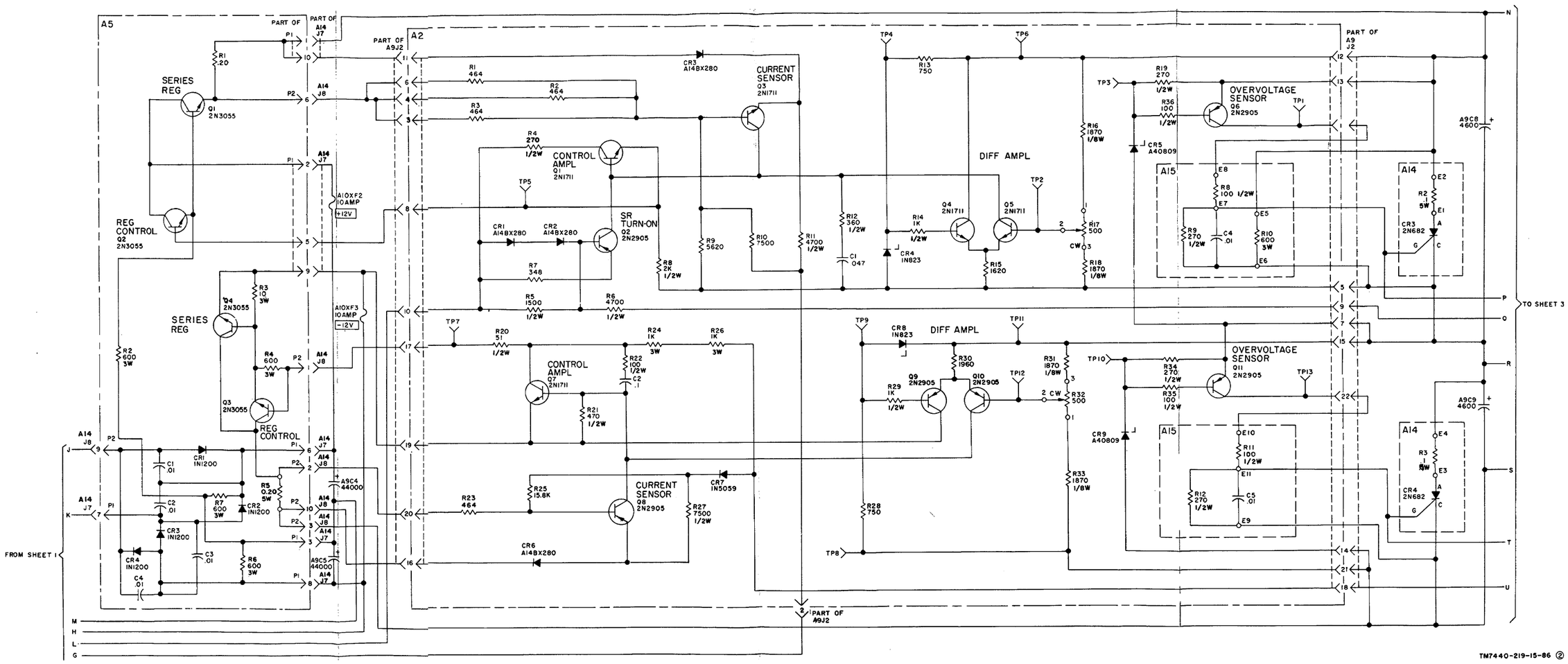


Figure 8-7 (2). Rectifier and voltage regulators, schematic diagram (part 2 of 3 parts.)

TM 11-7440-215-15/NAVSHIPS 0967-324-0025/TO 31W4-2G-31

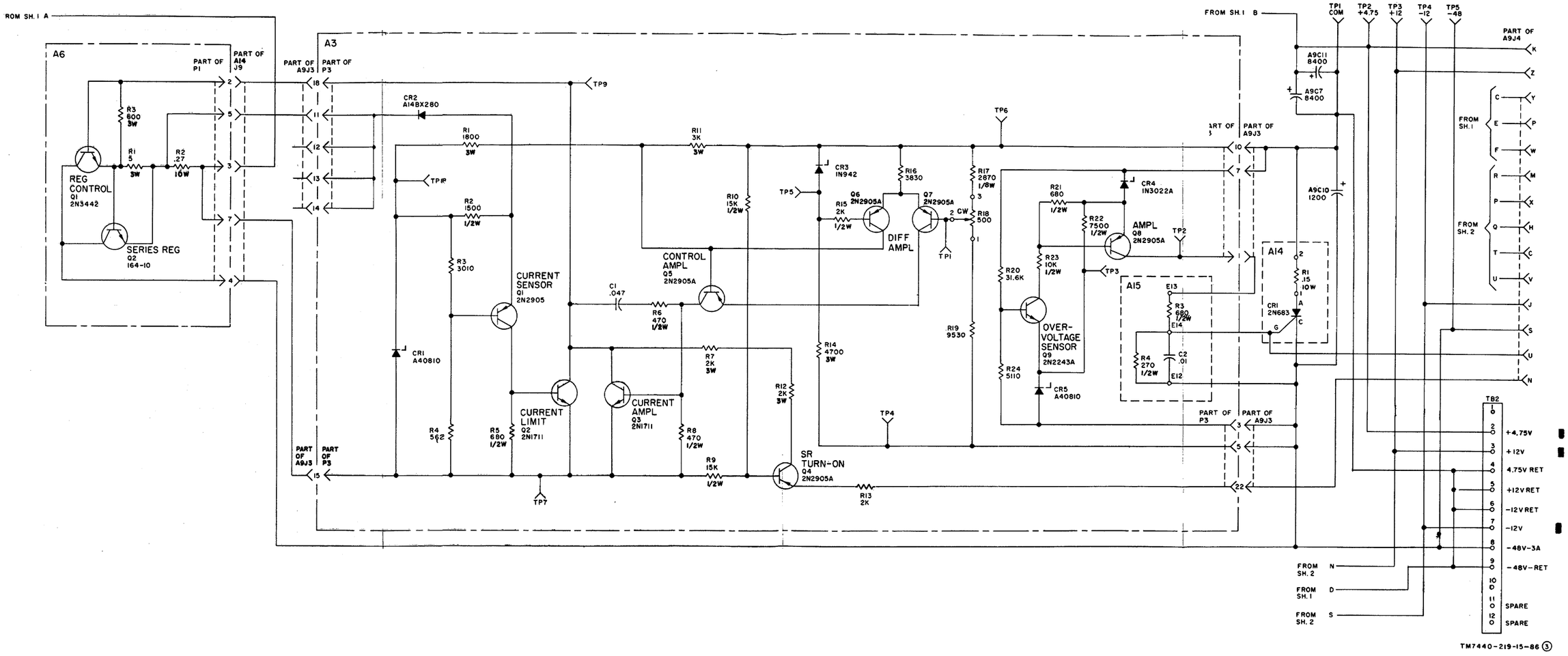


Figure 8-7 (3). Rectifier and voltage regulators, schematic diagram (part 3 of 3 parts.)

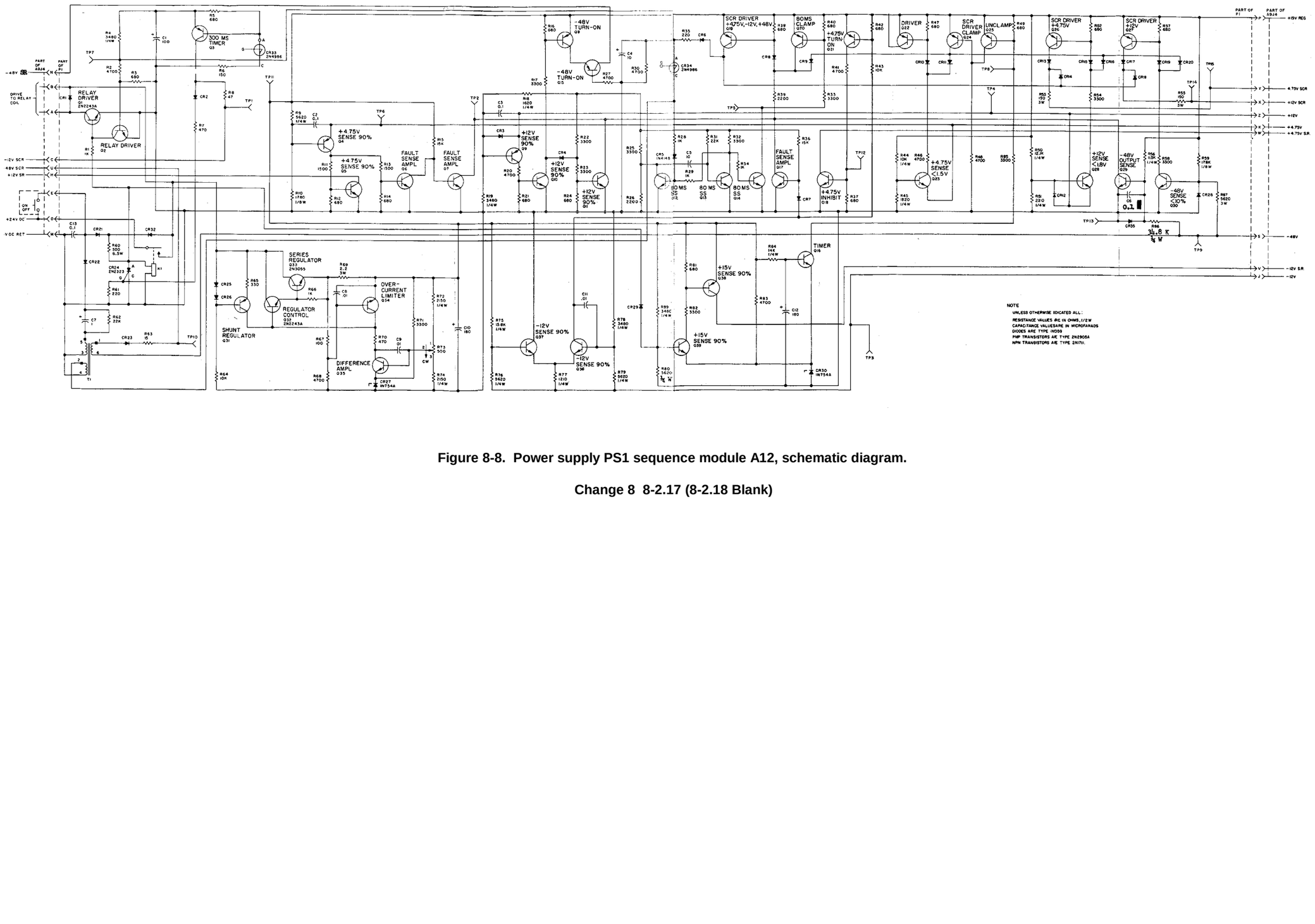


Figure 8-8. Power supply PS1 sequence module A12, schematic diagram.

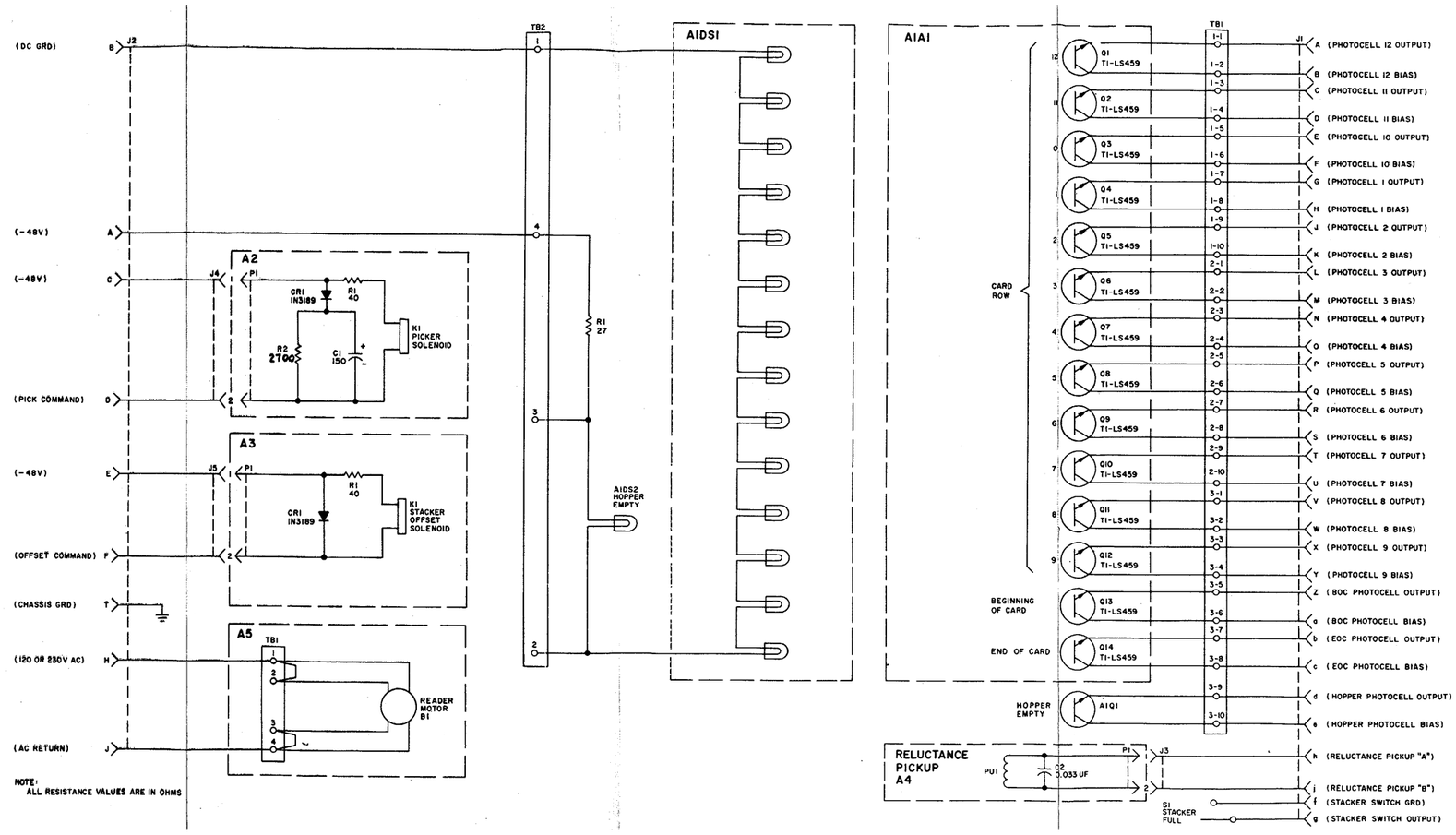


Figure 8-9. Card reader mechanism circuitry, schematic diagram.

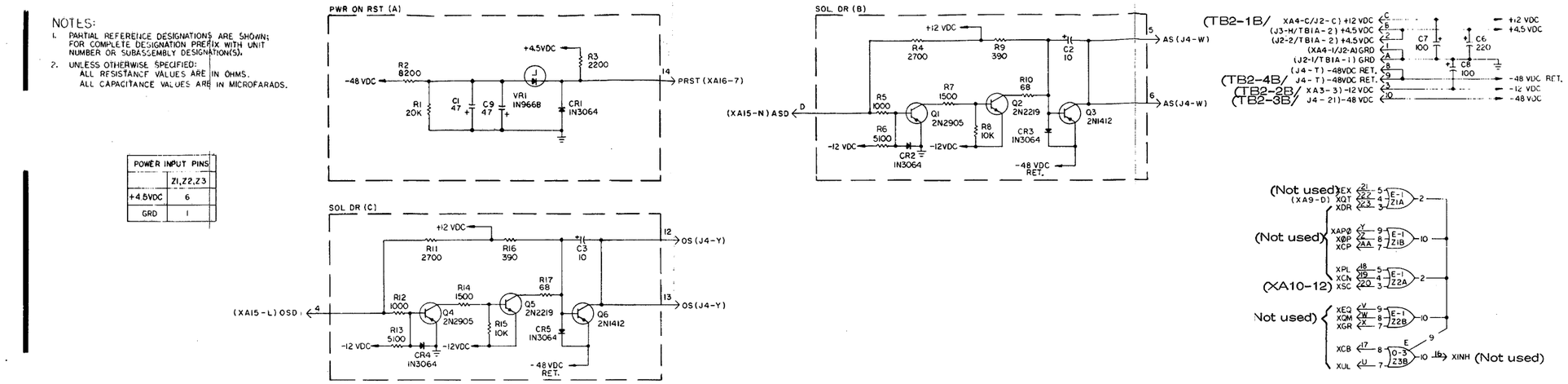
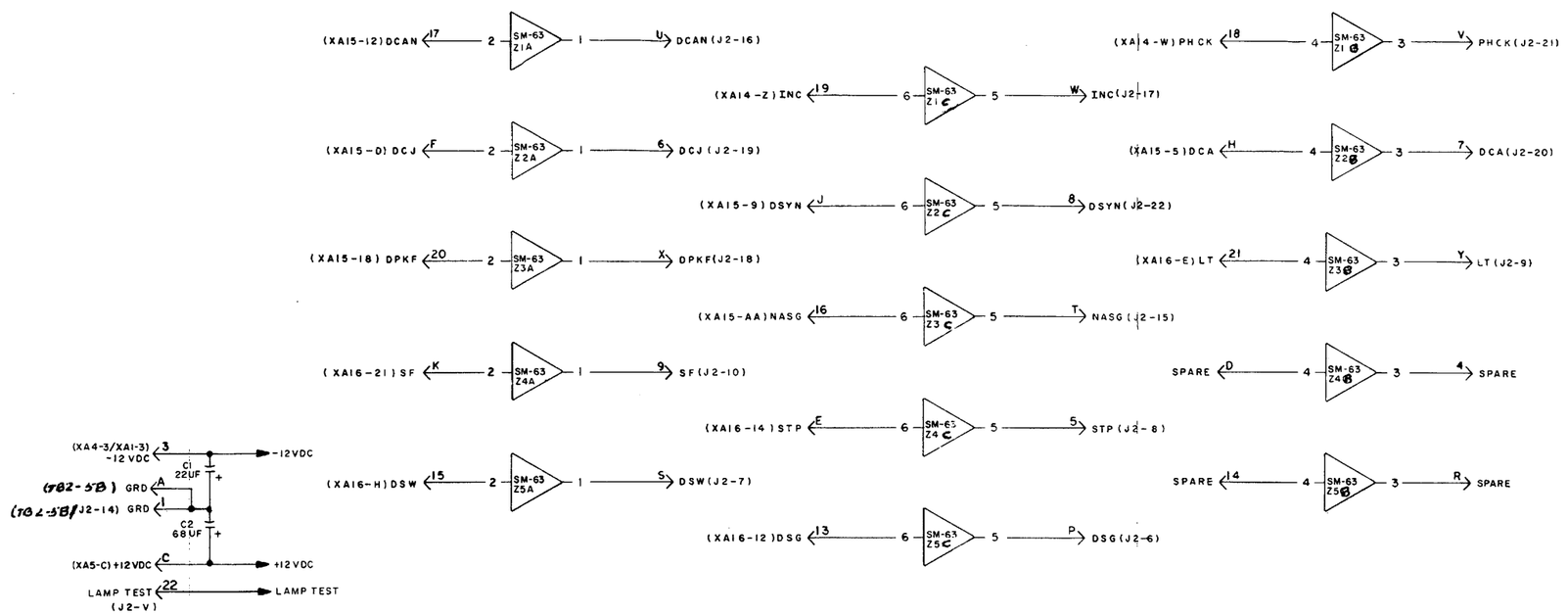


Figure 8-10. PC card A1 (No. A65209-002), schematic diagram.

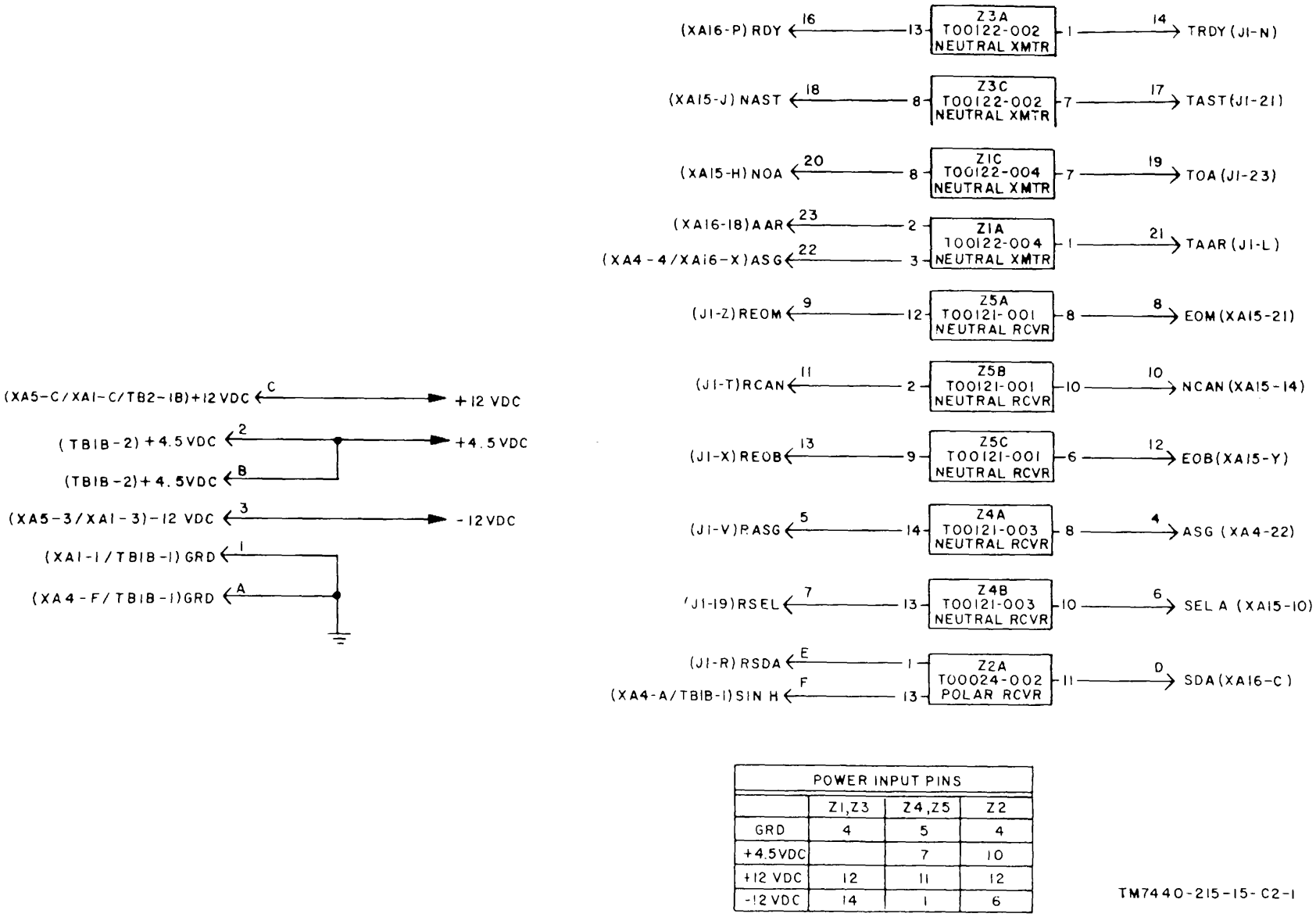


NOTE

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION (S).

POWER INPUT PINS	
	Z1 THRU Z6
+12VDC	7
-12 VDC	8
GRD	10
LAMP TEST	9

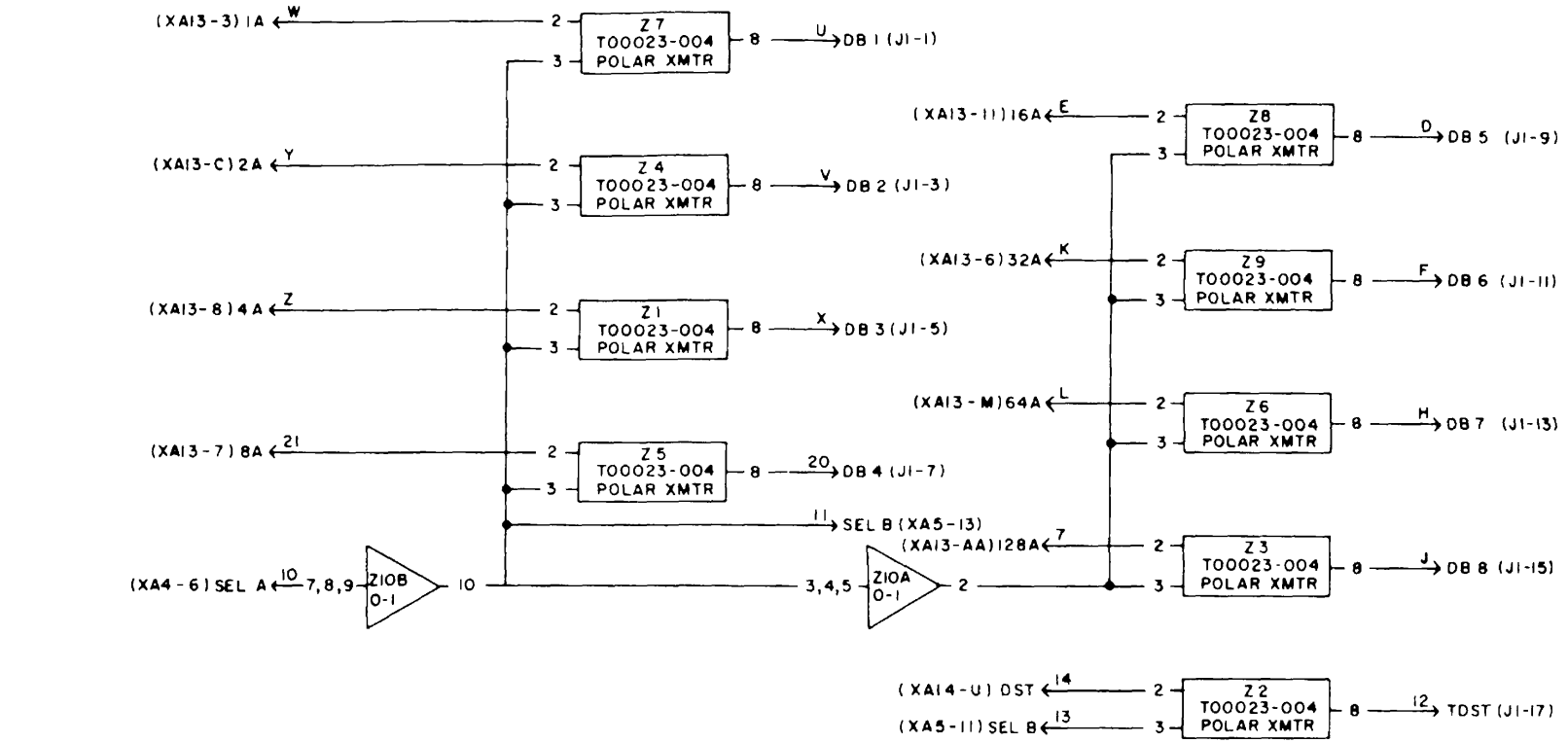
Figure 8-11. PC card A3 (No. SM546659-001), schematic diagram.

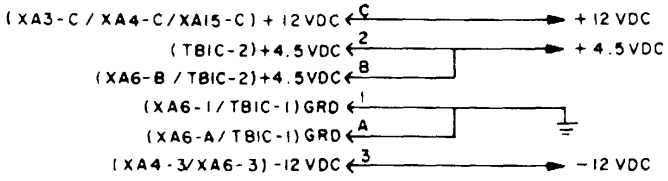


POWER INPUT PINS			
	Z1,Z3	Z4,Z5	Z2
GRD	4	5	4
+4.5VDC		7	10
+12 VDC	12	11	12
-12 VDC	14	1	6

TM7440-215-15-C2-1

Figure 8-12.1. PC card A4 (A65223-001), schematic diagram.





POWER INPUT PINS		
	Z10	Z1 THRU Z9
+4.5 VDC	6	NOT USED
GRD	1	7
+12VDC	NOT USED	13
-12 VDC	NOT USED	1

TM 7440-215-15-C2-2

Figure 8-12.2. PC card A5 (A65227-001), schematic diagram.

NOTE:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION, PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).

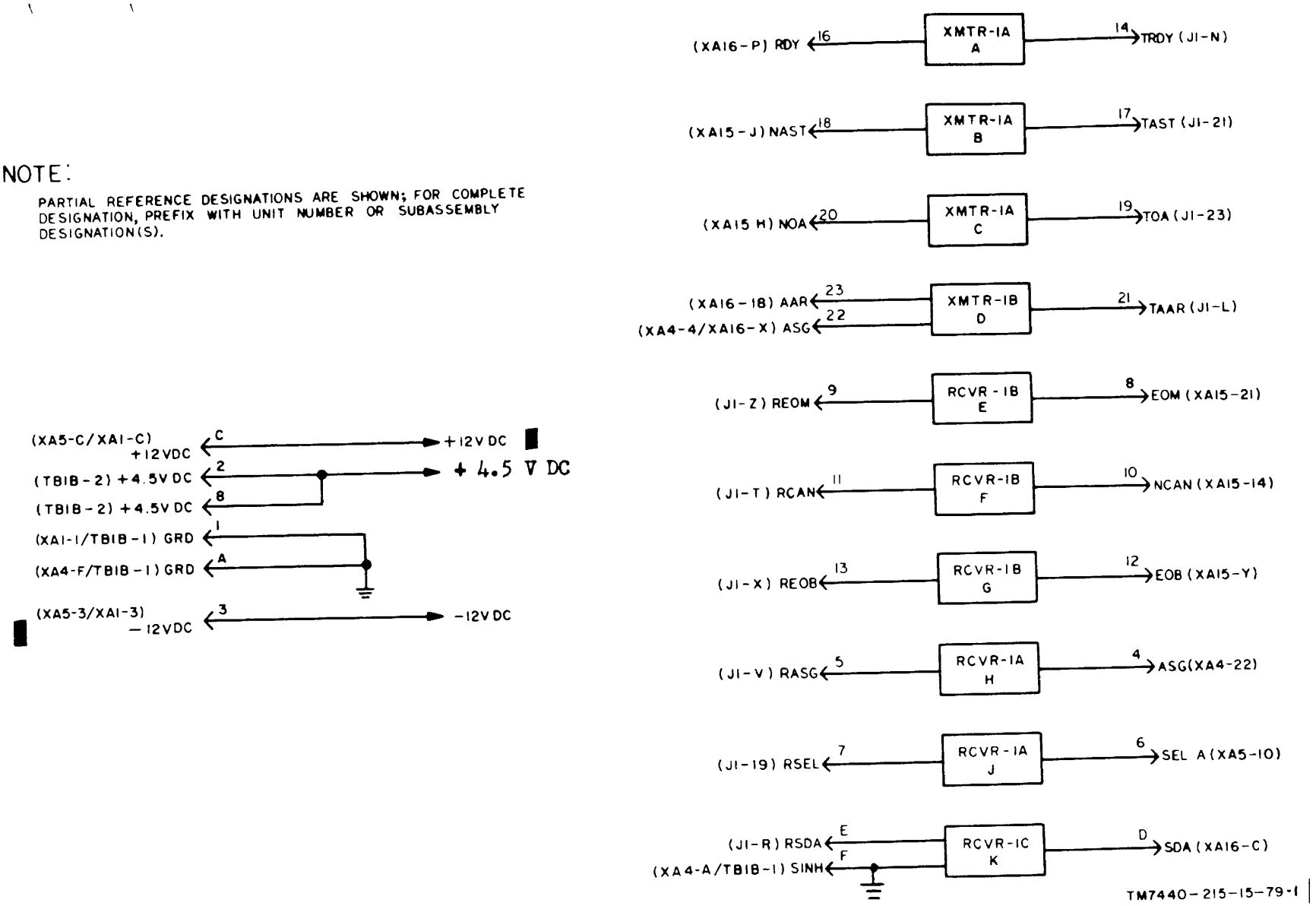
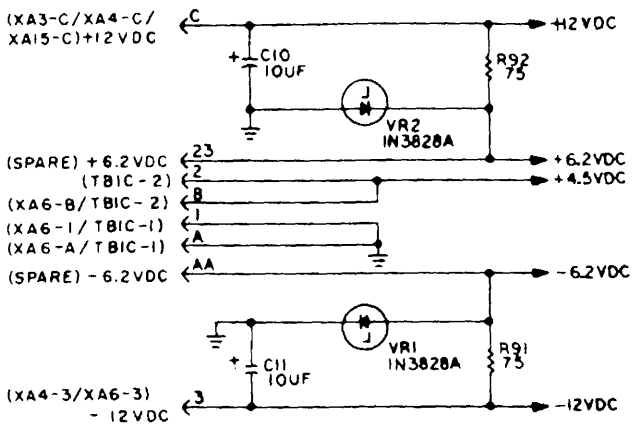


Figure 8-12. PC card A4 (No. A65215-001), schematic diagram.



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

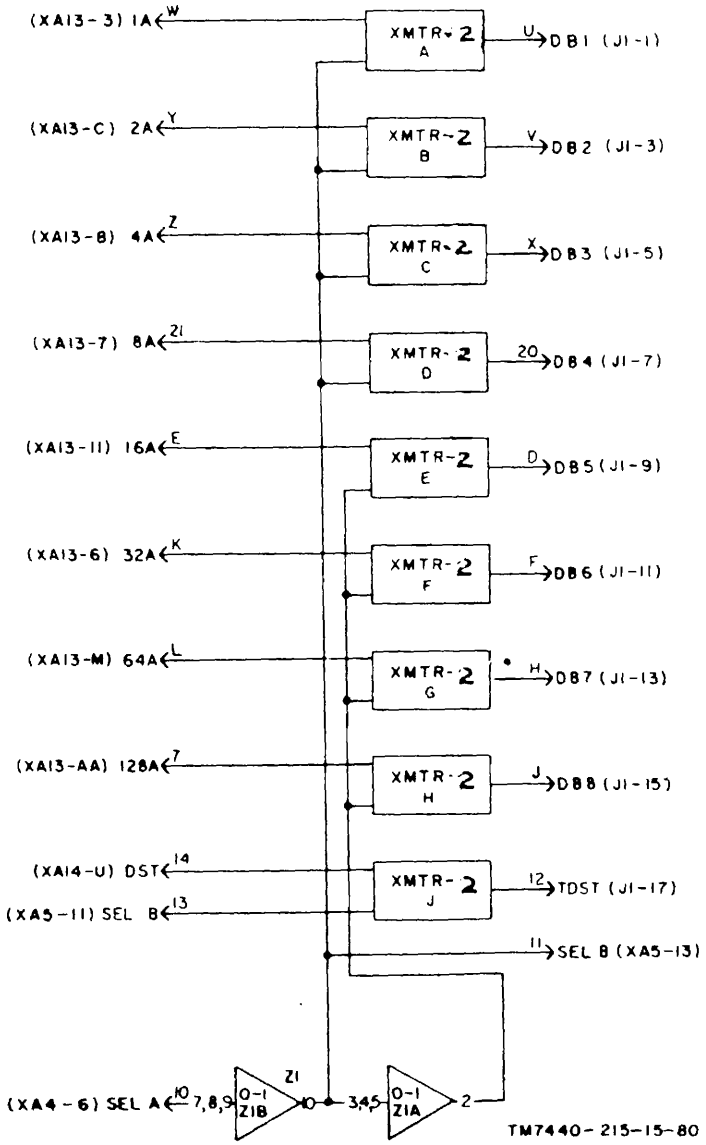
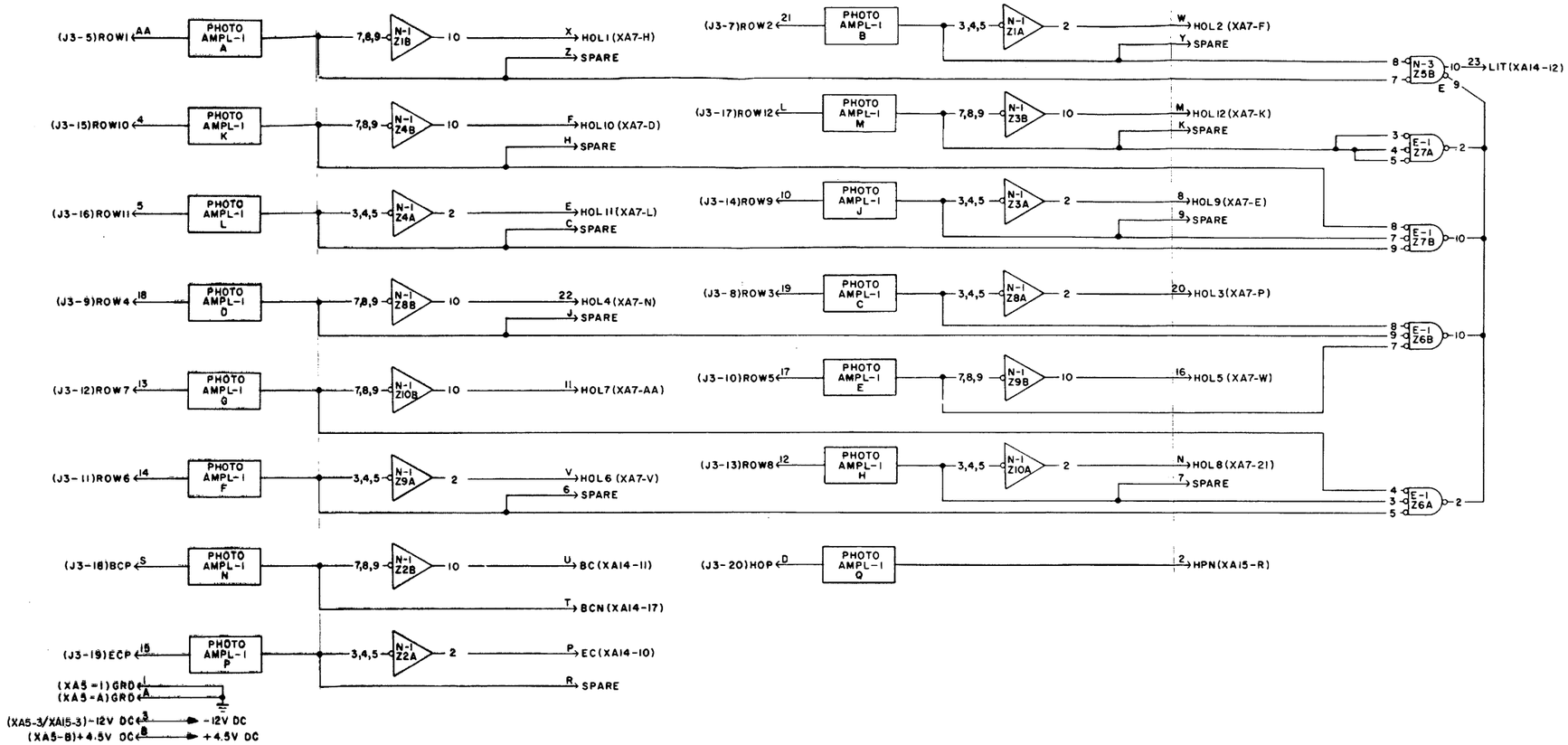


Figure 8-13. PC card A5 (No. A65205-001), schematic diagram.



NOTE:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION (S).

POWER INPUT PINS	
	Z1 THRU Z20
GRD	1
+4.5V DC	6

TM7440-215-15-8

Figure 8-14. PC card A6 (No. A52630-001), schematic diagram.

NOTE:
PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION(S).

POWER INPUT PINS	
	Z1 THRU Z20
+4.5VDC	6
GRD	1

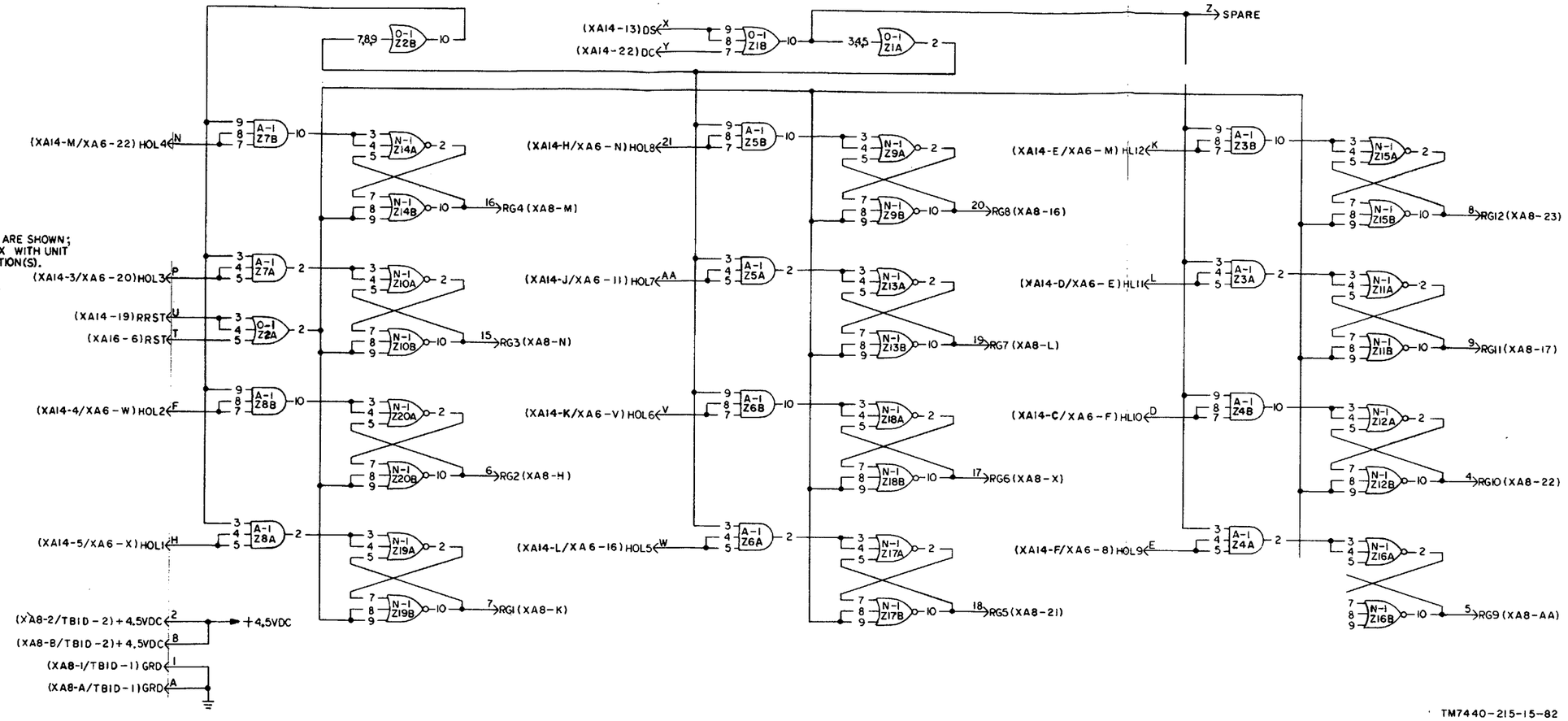


Figure 8-15. PC card A7 (No. A65145-001) schematic diagram

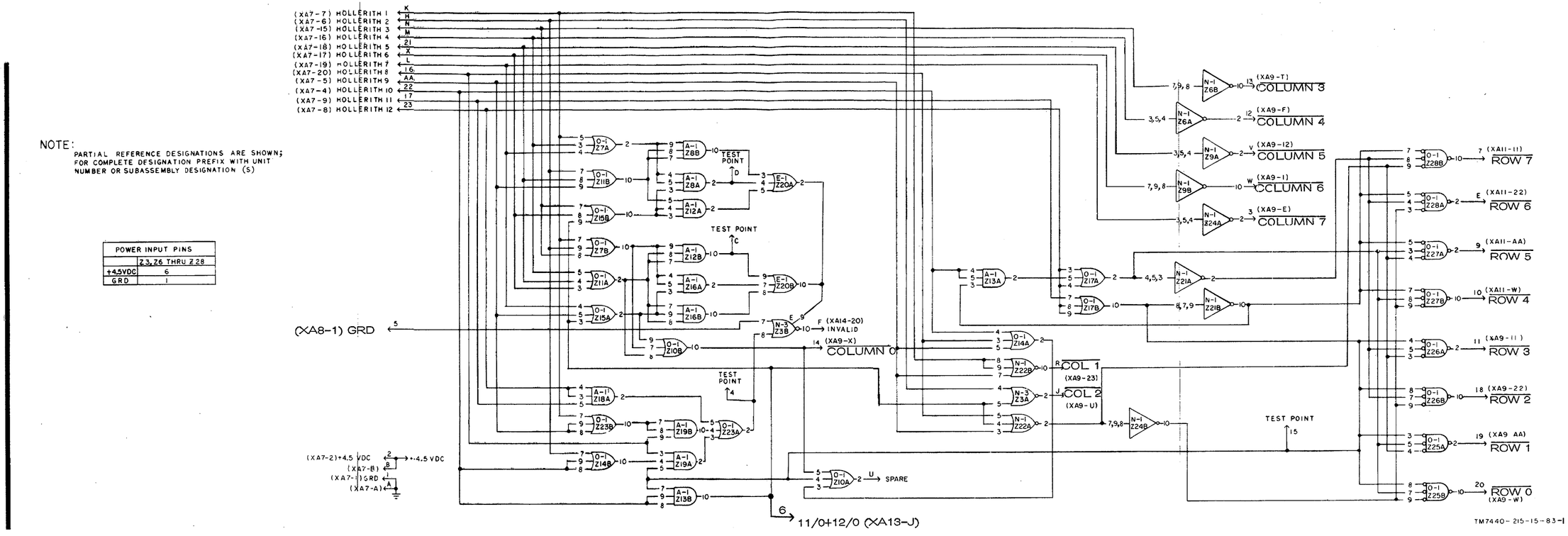
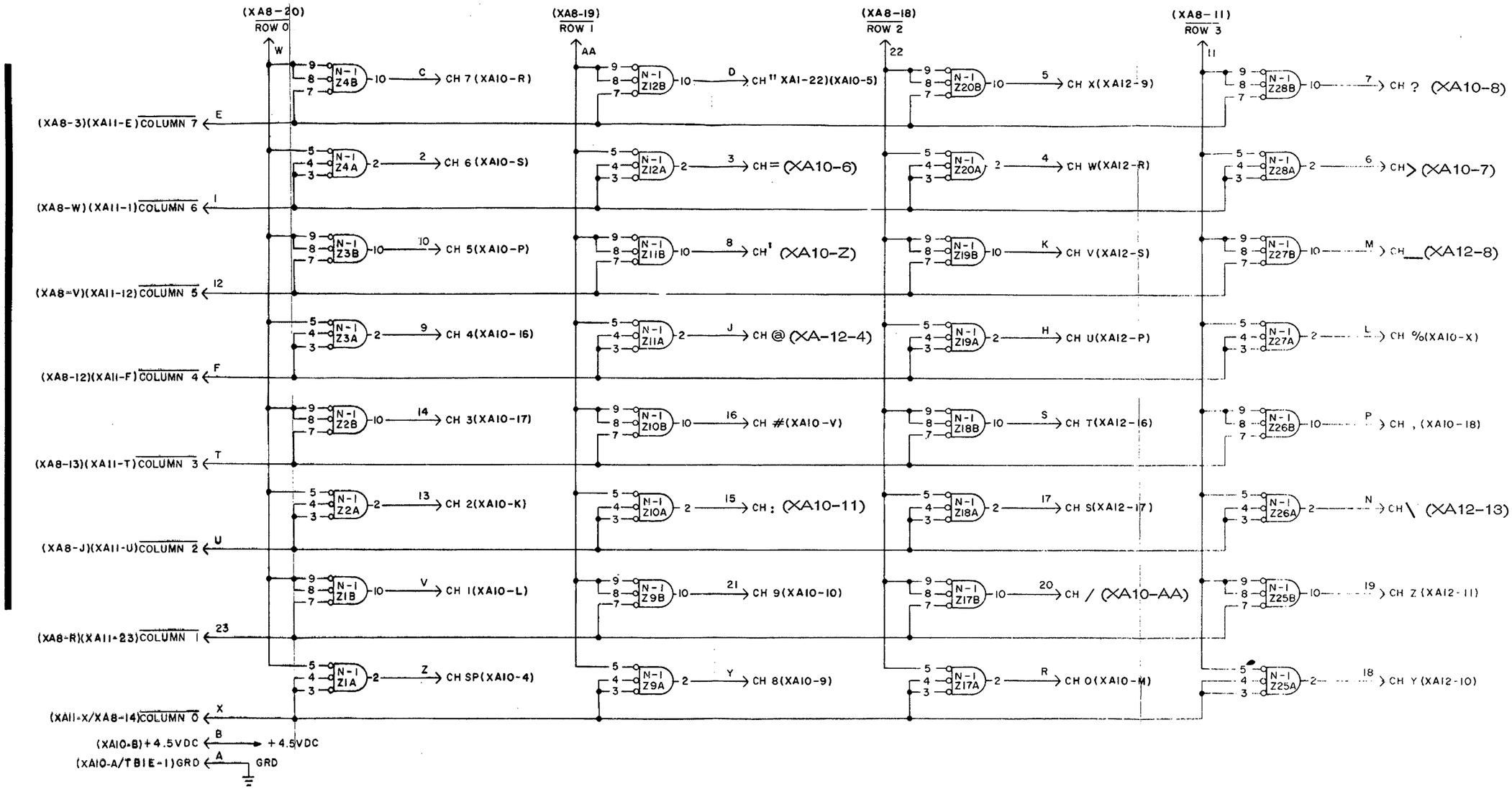


Figure 8-16. PC card A8 (No. A52634-001), schematic diagram.

Change 6 8-4.5/(8-4.6 Blank)

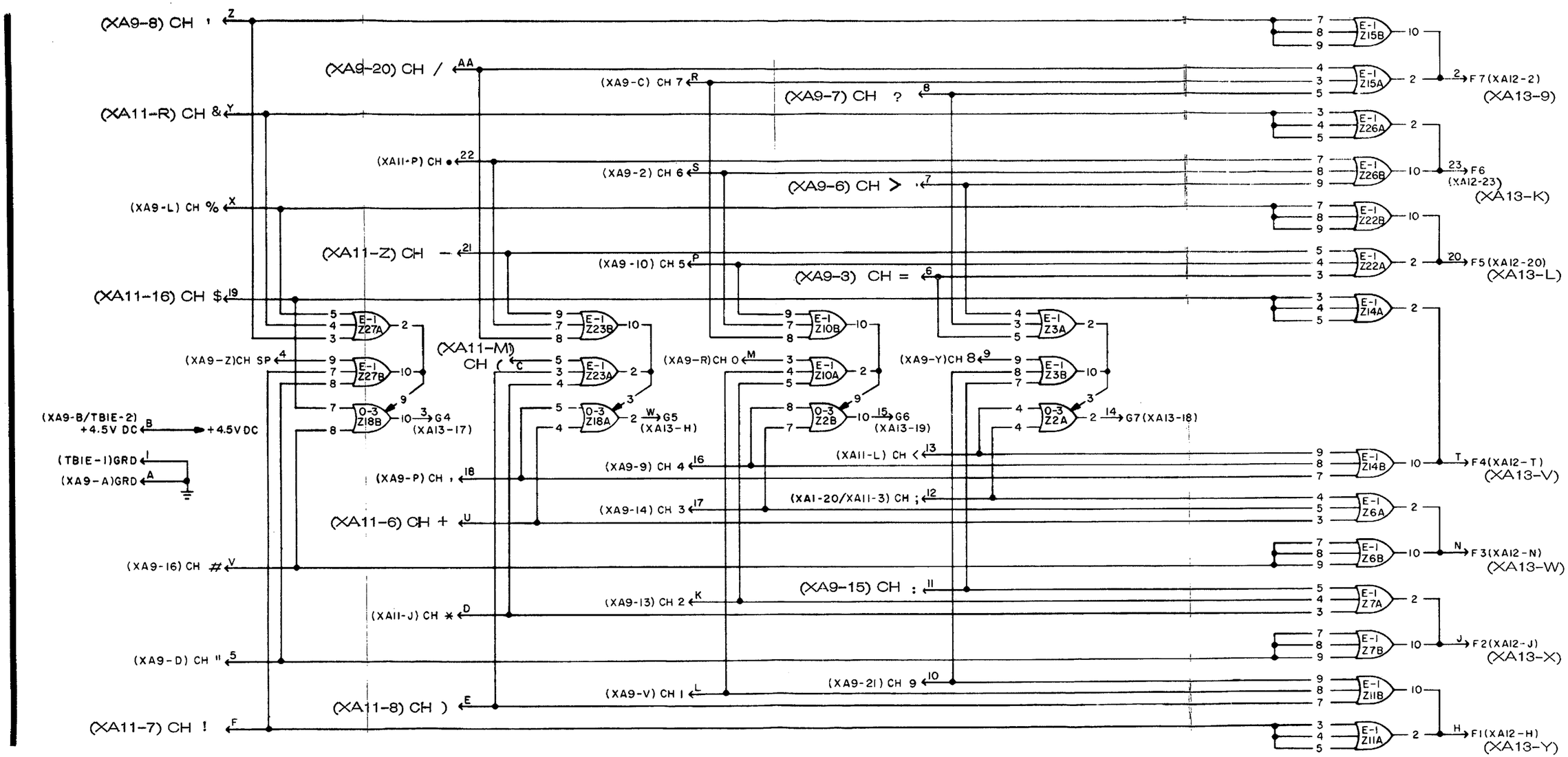


NOTE:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN;
FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER
OR SUBASSEMBLY DESIGNATION (S)

TM 7440-215-15-84-1

Figure 8-17. PC card A9 (No. A53725-001), schematic diagram.



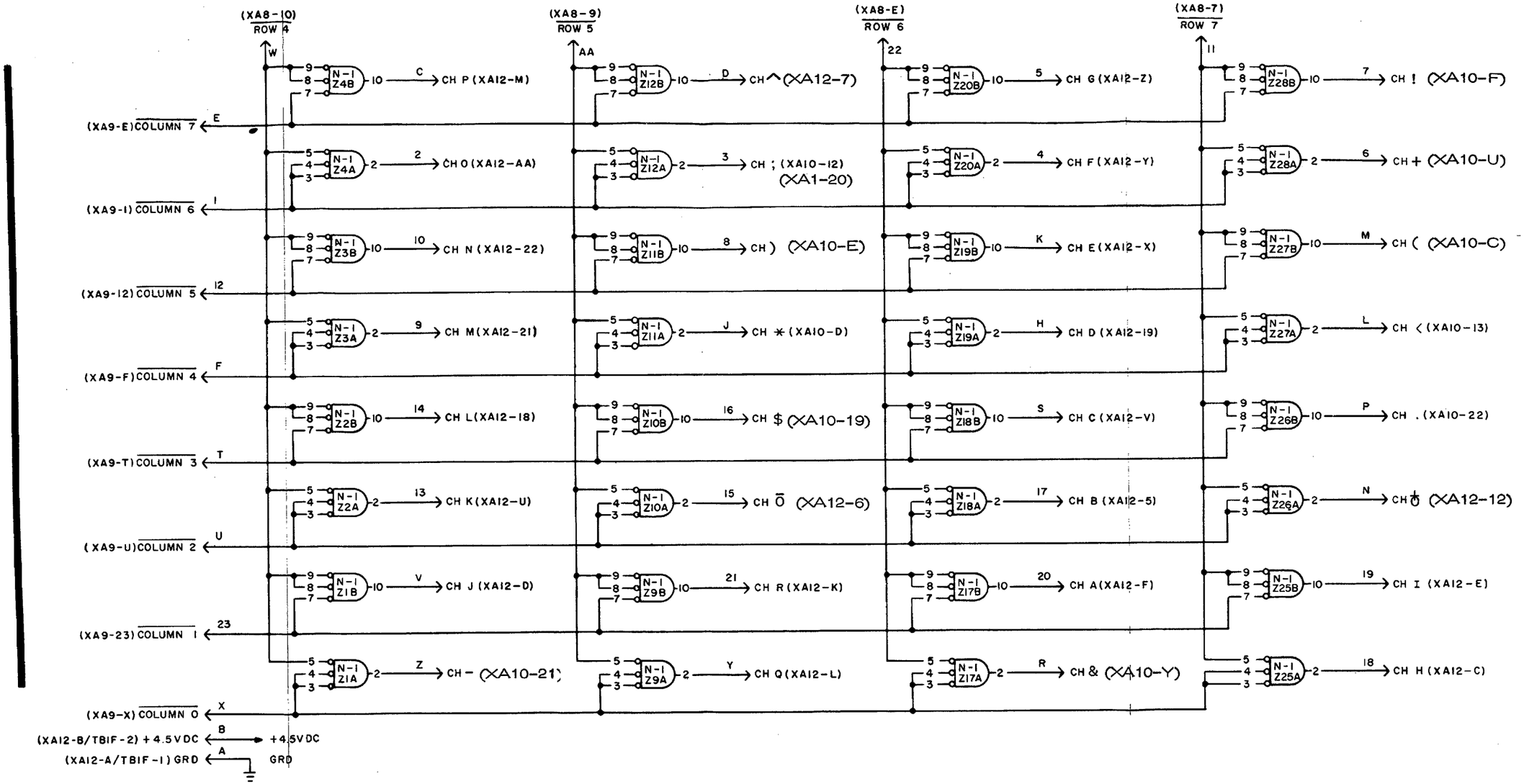
NOTE:

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, Z22, Z23, Z26, Z27
GRD	1
+4.5V DC	6

TM7440-215-15-85-1

Figure 8-18. PC card A10 (No. A53721-001), schematic diagram.

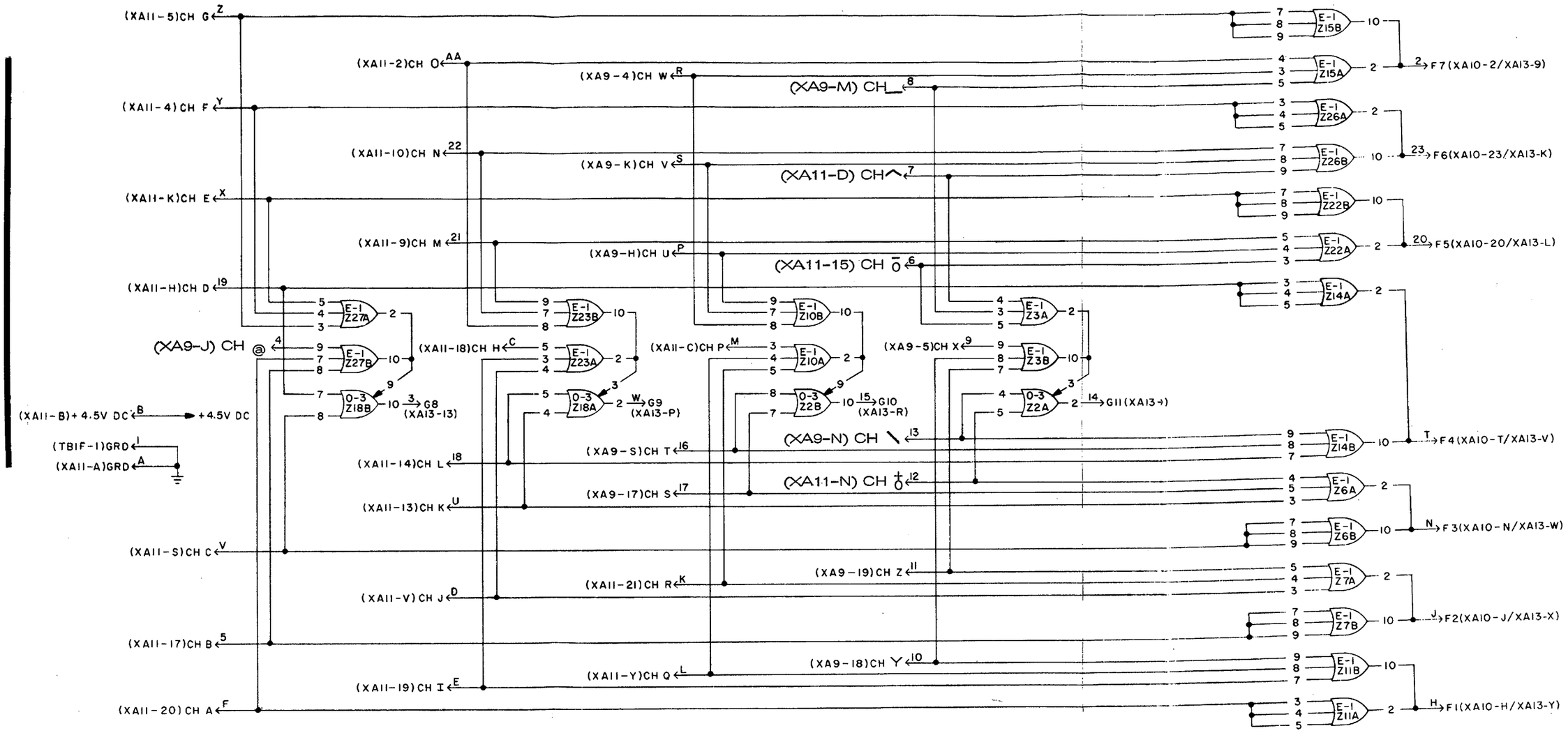


NOTE:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN;
FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER
OR SUBASSEMBLY DESIGNATION (S)

TM 7440-215-15-90-1

Figure 8-19. PC card A11 (No. A53725-001), schematic diagram.



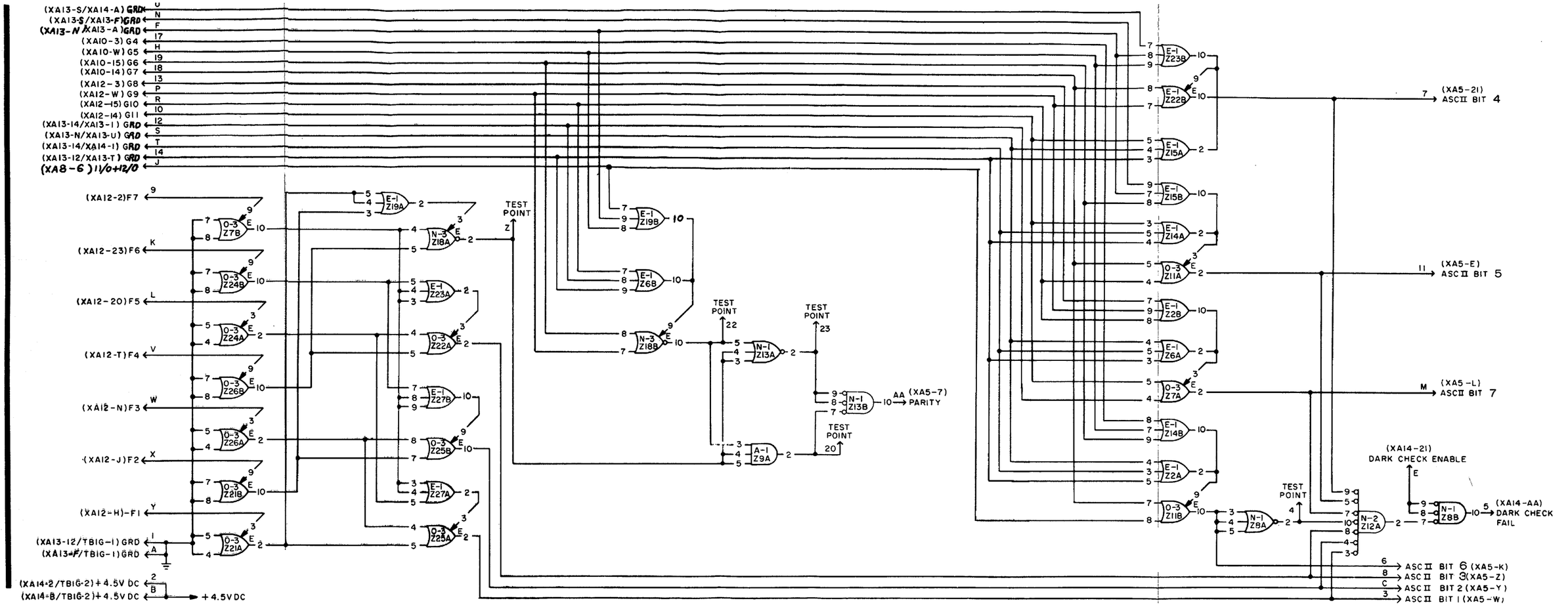
NOTE:

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, Z22, Z23, Z26, Z27
GRD	1
+4.5V DC	6

TM7440-215-15-91-1

Figure 8-20. PC card A12 (No. A53721-001), schematic diagram.



NOTE:
PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATIONS(S).

POWER INPUT PINS	
	Z2, Z6-Z9, Z11-Z15, Z18, Z19, Z21-27
+4.5V DC	6
GRD	1

Figure 8-21. PC card A13 (No. A52662-001), 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 2200 OHMS.
   ALL CAPACITANCE VALUES ARE IN MICROMICROFARADS.

POWER INPUT PINS	
	Z1 THRU Z28
+4.5VDC	6
GRD	1

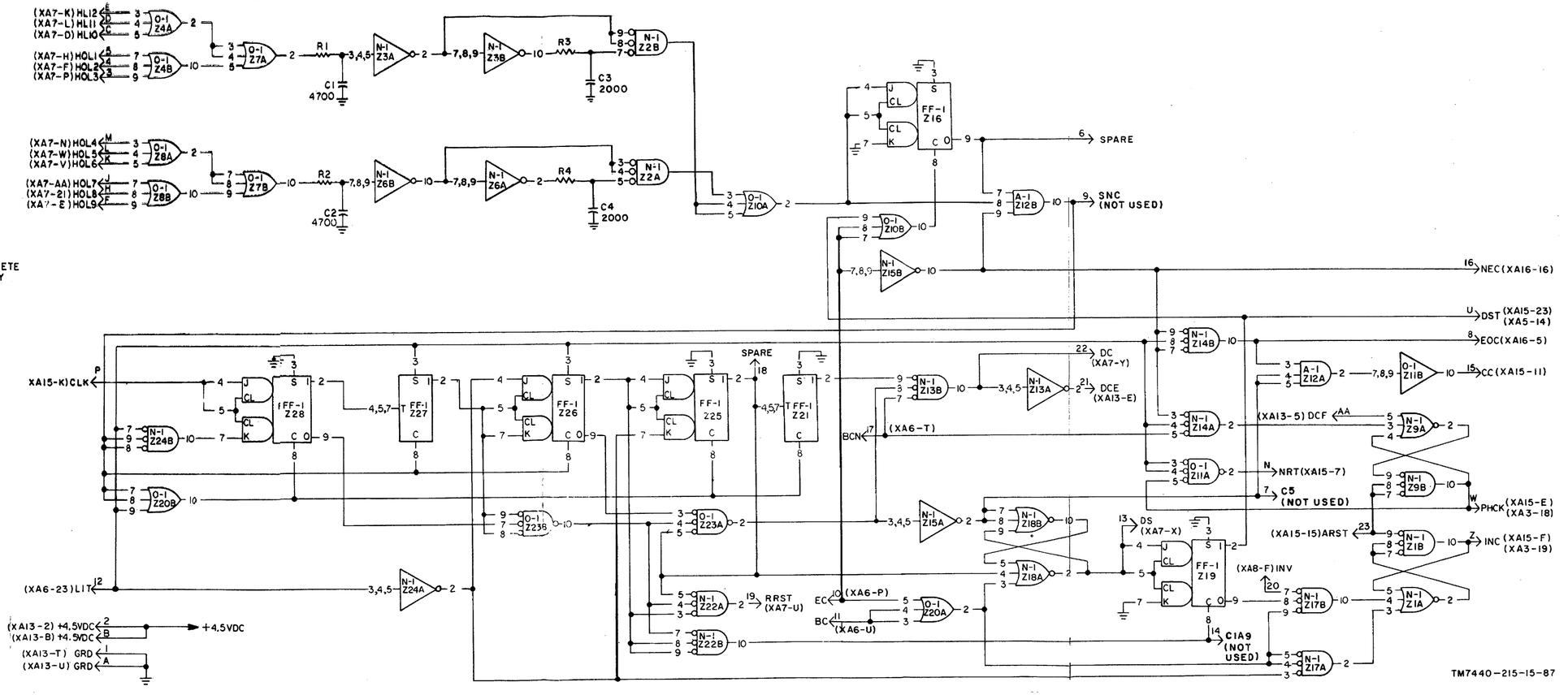


Figure 8-22. PC card A14 (No. A65175-001), schematic diagram.

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.
   ALL DIODES ARE IN3666(2).
   ALL TRANSISTORS ARE 2N2219.

POWER INPUT PINS	
	Z1 THPU Z16
+4.5VDC	6
GRD	1

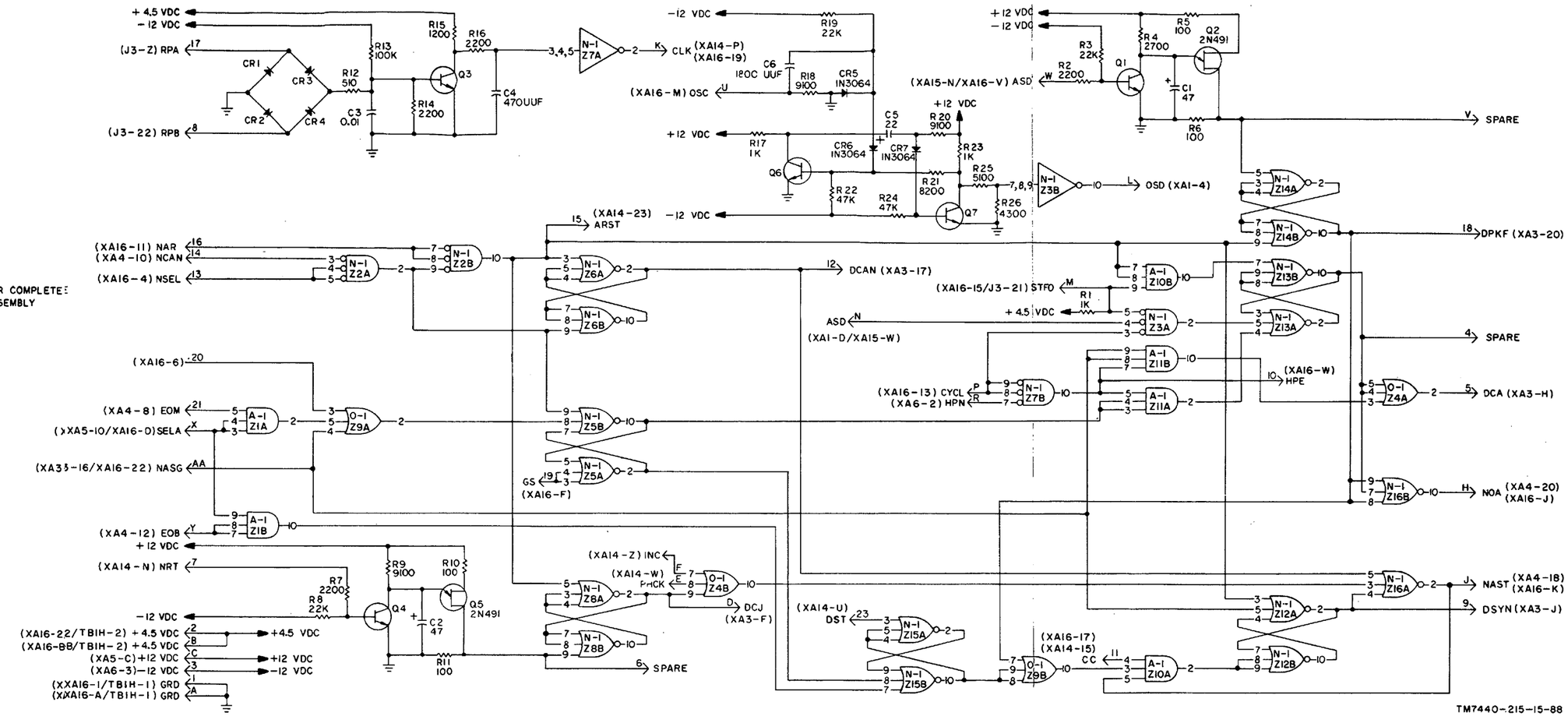
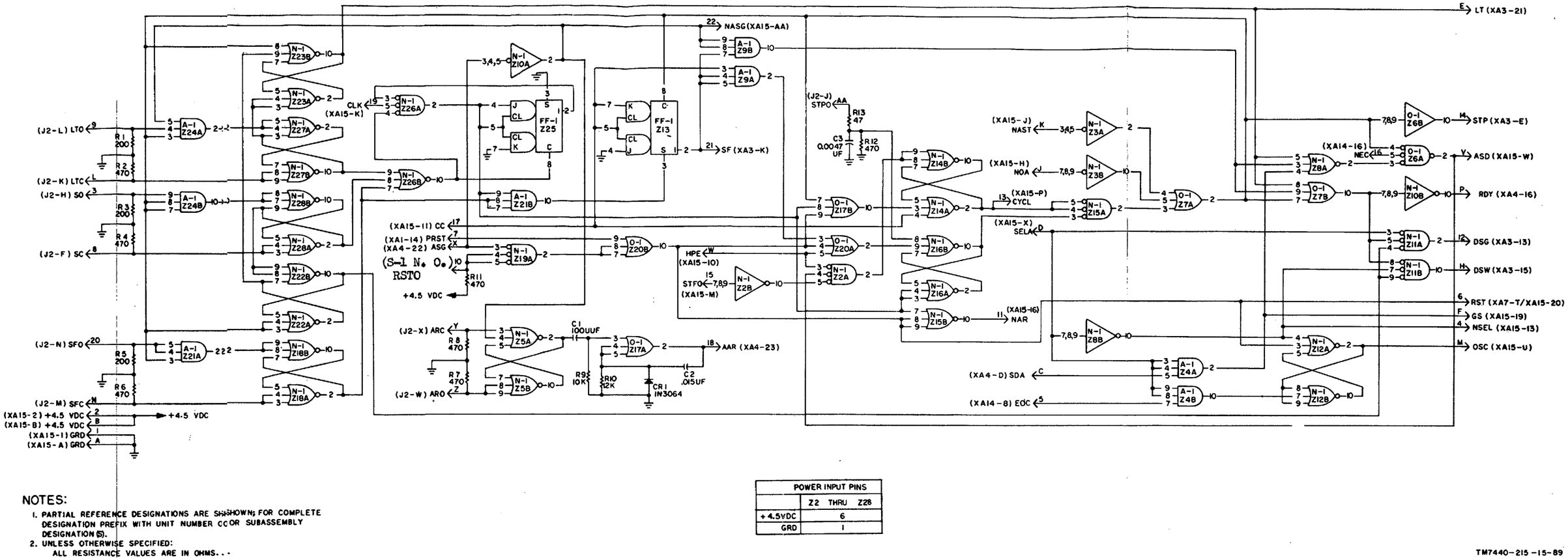


Figure 8-23. PC card A15 (No. A65153-001), schematic diagram.



NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER CC OR SUBASSEMBLY DESIGNATION (S).
2. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTANCE VALUES ARE IN OHMS...

POWER INPUT PINS	
	Z2 THRU Z28
+4.5VDC	6
GRD	1

TM7440-215-15-89

Figure 8-24. PC card A16 (No. A65141-001), schematic diagram.

TABLE 8-1 LOGIC ASSEMBLY A1 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
-	-	J03 - T	J03 - V			XA04-12	XA15- Y
> -	-	J03 - T	J03 - R			XA04-13	J01 - X
> J01 - L	XA04-21	J03 - U	J03 - W			XA04-14	J01 - N
J01 - N	XA04-14	J03 - U	J03 - S			XA04-16	XA16- P
J01 - R	XA04- E	J03 - V	J03 - T			XA04-17	J01 -21
J01 - T	XA04-11	J03 - V	J03 - X			XA04-18	XA15- J
J01 - V	XA04-05	J03 - W	J03 - U	XA01-01	J02 - A	XA04-19	J01 -23
J01 - X	XA04-13	J03 - X	J03 - V	XA01-01	XA04-01	XA04-20	XA15- H
> J01 - Z	XA04-09	J03 - Y	J03 -01	XA01-02	TB1A-02	XA04-21	J01 - L
> J01 -01	XA05- U	> J03 - Z	XA15-17	XA01-02	J02 -02	XA04-22	XA04-04
J01 -03	XA05- V	> J03 -01	J03 - Y	> XA01-03	XA03-03	XA04-22	XA16- X
J01 -05	XA05- X	J03 -01	J03 - C	> XA01-04	XA15- L	XA04-23	XA16-18
J01 -07	XA05-20	J03 -01	TB1A-01	XA01-05	J04 - W	XA05- A	XA06- A
J01 -09	XA05- D	J03 -02	J03 - A	XA01-06	J04 - W	XA05- A	TB1C-01
J01 -11	XA05- F	J03 -05	XA06-AA	XA01-06	J04 - T	XA05- B	XA06- B
J01 -13	XA05- H	J03 -07	XA06-21	> XA01-09	J04 - T	XA05- B	TB1C-02
J01 -15	XA05- J	J03 -08	XA06-19	> XA01-10	J04 -21	XA05- C	XA15- C
J01 -17	XA05-12	J03 -09	XA06-18	> XA01-12	J04 - Y	XA05- C	XA04- C
J01 -19	XA04-07	J03 -10	XA06-17	XA01-13	J04 - Y	XA05- C	XA03- C
J01 -21	XA04-17	J03 -11	XA06-14	XA01-14	XA16-07	XA05- D	J01 -09
J01 -23	XA04-19	J03 -12	XA06-13			XA05- E	XA13-11
J02 - A	XA01-01	J03 -13	XA06-12			XA05- F	J01 -11
J02 - C	XA01- C	J03 -14	XA06-10			XA05- H	J01 -13
J02 - C	J02 -04	J03 -15	XA06-04			XA05- J	J01 -15
J02 - F	XA16-08	J03 -16	XA06-05	XA01-20	XA10-12	XA05- K	XA13-06
J02 - H	XA16-03	J03 -17	XA06- L			XA05- L	XA13- M
J02 - J	XA16-AA	J03 -18	XA06- S	XA01-22	XA09- D	XA05- U	J01 -01
J02 - K	XA16- L	J03 -19	XA06-15			XA05- V	J01 -03
J02 - L	XA16-09	J03 -20	XA06- D	> XA03- C	XA05- C	XA05- W	XA13-03
J02 - M	XA16- N	J03 -21	XA15- M	XA03- E	XA16-14	XA05- X	J01 -05
J02 - N	XA16-20	J03 -22	XA15-08	XA03- F	XA15- D	XA05- Y	XA13- C
J02 - V	XA03-22	J04 - T	XA01-09	XA03- H	XA15-05	XA05- Z	XA13-08
J02 - W	XA16- Z	J04 - T	XA01-08	XA03- J	XA15-09	XA05-01	XA06-01
> J02 - X	XA16- Y	J04 - W	XA01-06	XA03- K	XA16-21	XA05-01	TB1C-01
> J02 -01	XA01- A	J04 - W	XA01-05	XA03- P	J02 -06	XA05-02	TB1C-02
J02 -02	XA01-02	J04 - Y	XA01-13	XA03- S	J02 -07	XA05-03	XA06-03
J02 -04	J02 - C	> J04 - Y	XA01-12	XA03- T	J02 -15	XA05-03	XA04-03
J02 -06	XA03- P	> J04 -16	J04 -19	XA03- U	J02 -16	XA05-07	XA13-AA
J02 -07	XA03- S	J04 -19	J04 -16	XA03- V	J02 -21	XA05-10	XA04-06
J02 -08	XA03-05	J04 -19	J04 -21	XA03- W	J02 -17	XA05-10	XA15- X
J02 -09	XA03- Y	J04 -21	XA01-10	XA03- X	J02 -18	XA05-11	XA05-13
J02 -10	XA03-09	> J04 -21	J04 -19	XA03- Y	J02 -09	XA05-12	J01 -17
J02 -14	XA03-01	> TB1A-01	J03 -01	> XA03-01	J02 -14	XA05-13	XA05-11
J02 -15	XA03- T	TB1A-01	XA01- A	> XA03-03	XA04-03	XA05-14	XA14- U
J02 -16	XA03- U	TB1A-02	XA01-02	XA03-03	XA01-03	XA05-20	J01 -07
J02 -17	XA03- W	TB1A-02	XA01- B	XA03-05	J02 -08	XA05-21	XA13-07
J02 -18	XA03- X	TB1E-01	XA04-01	XA03-06	J02 -19	XA06- A	XA05- A
J02 -19	XA03-06	TB1E-01	XA04- F	XA03-07	J02 -20	XA06- B	XA05- B
J02 -20	XA03-07	TB1E-02	XA04-02	XA03-08	J02 -22	XA06- D	J03 -20
J02 -21	XA03- V	TB1E-02	XA04- B	XA03-09	J02 -10	XA06- E	XA07- L
J02 -22	XA03-08	TB1C-01	XA05-01	XA03-13	XA16-12	XA06- F	XA07- D
J03 - A	J03 - C	TB1C-01	XA05- A	XA03-15	XA16- H	XA06- L	J03 -17
J03 - A	J03 -02	TB1C-02	XA05-02	XA03-16	XA15-AA	XA06- M	XA07- K
J03 - A	J03 - D	TB1C-02	XA05- B	XA03-17	XA15-12	XA06- N	XA07-21
J03 - B	J03 - D	TB1D-01	XA07-01	XA03-18	XA14- W	XA06- P	XA14-10
J03 - C	J03 - A	TB1D-01	XA07- A	XA03-19	XA14- Z	XA06- S	J03 -18
J03 - C	J03 -01	TB1D-02	XA07-02	XA03-20	XA15-18	XA06- T	XA14-17
J03 - D	J03 - B	TB1D-02	XA07- B	XA03-21	XA16- E	XA06- U	XA14-11
J03 - D	J03 - A	TB1E-01	XA10-01	XA03-22	J02 - V	XA06- V	XA07- V
J03 - F	J03 - K	TB1E-01	XA09- A	XA04- A	XA04- F	XA06- W	XA07- F
J03 - F	J03 - J	TB1E-02	XA10- B	XA04- B	TB1B-02	XA06- X	XA07- H
J03 - H	J03 - K	TB1F-01	XA12-01	> XA04- C	XA01- C	XA06-AA	J03 -05
J03 - H	XA01- B	TB1F-01	XA11- A	> XA04- C	XA05- C	XA06-01	XA05-01
J03 - J	J03 - L	TB1F-02	XA11- B	XA04- D	XA16- C	XA06-02	XA15- R
J03 - J	J03 - F	TB1G-01	XA13-01	XA04- E	J01 - R	XA06-03	XA05-03
J03 - K	J03 - M	TB1G-01	XA13- A	XA04- F	TB1B-01	XA06-03	XA15-03
J03 - K	J03 - H	TB1G-02	XA13-02	XA04- F	XA04- A	XA06-04	J03 -15
J03 - K	J03 - F	TB1G-02	XA13- B	XA04-01	TB1B-01	XA06-05	J03 -16
J03 - L	J03 - J	TB1H-01	XA15-01	XA04-01	XA01-01	XA06-08	XA07- E
J03 - L	J03 - N	TB1H-01	XA15- A	XA04-02	TB1B-02	XA06-10	J03 -14
J03 - M	J03 - K	TB1H-02	XA15-02	XA04-03	XA03-03	XA06-11	XA07-AA
J03 - M	J03 - P	> TB1H-02	XA15- B	XA04-03	XA05-03	XA06-12	J03 -13
J03 - N	J03 - R	> XA01- A	TB1A-01	XA04-04	XA04-22	XA06-13	J03 -12
J03 - N	J03 - L	XA01- A	J02 -01	XA04-05	J01 - V	XA06-14	J03 -11
J03 - P	J03 - S	XA01- B	J03 - H	XA04-06	XA05-10	XA06-15	J03 -19
J03 - P	J03 - M	XA01- B	TB1A-02	XA04-07	J01 -19	XA06-16	XA07- W
J03 - R	J03 - N	> XA01- C	XA04- C	XA04-08	XA15-21	XA06-17	J03 -10
J03 - R	J03 - T	> XA01- C	J02 - C	XA04-09	J01 - Z	XA06-18	J03 -09
J03 - S	J03 - P	XA01- D	XA15- N	XA04-10	XA15-14	XA06-19	J03 -08
J03 - S	J03 - U			XA04-11	J01 - T	XA06-20	XA07- P

NOTE: SYMBOL (>) INDICATES ADDED CONNECTIONS; SEE END OF CHART.

TABLE 8-1 LOGIC ASSEMBLY A1 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
XA06-21	J03 -07	XA08-19	XA09-AA	XA1C- L	XA09- V	XA11-15	XA12-06
XA06-22	XA07- N	XA08-20	XA05- W	XA1C- M	XA09- R	XA11-16	XA10-19
XA06-23	XA14-12	XA08-21	XA07-16	XA1C- N	XA12- N	XA11-17	XA12-05
XA07- A	XA08- A	XA16-22	XA07-04	XA1C- P	XA09-10	XA11-18	XA12- C
XA07- A	TE1C-01	XA06-23	XA07-08	XA1C- R	XA09- C	XA11-19	XA12- E
XA07- B	XA08- B	XA05- A	XA10- A	XA1C- S	XA09-02	XA11-20	XA12- F
XA07- B	TE1D-02	XA05- A	TE1E-01	XA1C- T	XA12- T	XA11-21	XA12- K
XA07- D	XA14- C	XA05- B	XA10- B	XA1C- U	XA11-06	XA11-22	XA06- E
XA07- D	XA06- F	XA05- C	XA10- R			XA11-23	XA09-23
XA07- E	XA14- F	XA05- D	XA10-05	XA10- V	XA09-16	XA12- A	XA11- A
XA07- E	XA06-08	XA05- D	XA01-22	XA1C- W	XA13- H	XA12- E	XA11- B
XA07- F	XA14-04	XA05- E	XA11- E	XA1C- X	XA09- L	XA12- C	XA11-18
XA07- F	XA06- W	XA05- E	XA06-03	XA1C- Y	XA11- R	XA12- D	XA11- V
XA07- H	XA06- X	XA05- F	XA11- F	XA1C- Z	XA09-08	XA12- E	XA11-19
XA07- H	XA14-05	XA05- F	XA08-12	XA1C-AA	XA09-20	XA12- F	XA11-20
XA07- K	XA14- E	XA05- H	XA12- P	XA1C-01	TE1E-01	XA12- H	XA10- H
XA07- K	XA06- M	XA05- J	XA12-04	XA1C-02	XA12-02	XA12- H	XA13- Y
XA07- L	XA14- D	XA09- K	XA12- S	XA1C-03	XA13-17	XA12- J	XA10- J
XA07- L	XA06- E	XA09- L	XA10- X	XA1C-04	XA09- Z	XA12- J	XA13- X
XA07- N	XA14- M	XA09- M	XA12-08	XA1C-05	XA09- D	XA12- K	XA11-21
XA07- N	XA06-22			XA1C-06	XA09-03	XA12- L	XA11- Y
XA07- P	XA14-03	XA09- N	XA12-13			XA12- M	XA11- C
XA07- P	XA06-20			XA1C-07	XA09-06	XA12- N	XA13- W
XA07- T	XA16-06	XA09- P	XA10-18	XA1C-08	XA09-07	XA12- N	XA10- N
XA07- U	XA14-19	XA09- R	XA10- M	XA1C-09	XA09- Y	XA12- P	XA09- H
XA07- V	XA14- K	XA09- S	XA12-16	XA10-10	XA09-21	XA12- R	XA05-04
XA07- V	XA06- V	XA09- T	XA08-13	XA10-11	XA09-15	XA12- S	XA09- K
XA07- W	XA14- L	XA09- T	XA11- T	XA10-12	XA11-03	XA12- T	XA13- V
XA07- W	XA06-16	XA09- U	XA11- U	XA10-12	XA01-20	XA12- T	XA10- T
XA07- X	XA14-13	XA09- U	XA08- J	XA10-13	XA11- L	XA12- U	XA11-13
XA07- Y	XA14-22	XA09- V	XA10- L	XA10-14	XA13-18	XA12- V	XA11- S
XA07-AA	XA14- J	XA09- W	XA08-20	XA1C-15	XA13-19	XA12- W	XA13- P
XA07-AA	XA06-11	XA09- X	XA11- X	XA1C-16	XA05-09	XA12- X	XA11- K
XA07-01	XA08-01	XA09- X	XA08-14	XA1C-17	XA05-14	XA12- Y	XA11-04
XA07-01	TB1D-01	XA09- Y	XA10-09	XA1C-18	XA05- P	XA12- Z	XA11-05
XA07-02	TB1D-02	XA09- Z	XA10-04	XA1C-19	XA11-16	XA12-AA	XA11-02
XA07-02	XA08-02	XA09-AA	XA06-19	XA1C-20	XA12-20	XA12-01	TE1F-01
XA07-04	XA08-22	XA09-01	XA11-01	XA1C-21	XA11- Z	XA12-02	XA13-09
XA07-05	XA06-AA	XA09-01	XA03- W	XA10-22	XA11- P	XA12-02	XA10-02
XA07-06	XA06- H	XA09-02	XA10- S	XA1C-23	XA12-23	XA12-03	XA13-13
XA07-07	XA06- K			XA11- A	XA12- A	XA12-04	XA09- J
XA07-08	XA08-23	XA09-03	XA10-6	XA11- A	TE1F-01	XA12-05	XA11-17
XA07-09	XA06-17	XA09-04	XA12- R	XA11- B	XA12- B	XA12-06	XA11-15
XA07-15	XA08- N	XA09-05	XA12-09	XA11- B	TE1F-02	XA12-07	XA11- D
XA07-16	XA06- M			XA11- C	XA12- M	XA12-08	XA09- M
XA07-17	XA06- X	XA09-06	XA10-07	XA11- D	XA12-07	XA12-09	XA09-05
XA07-18	XA06-21			XA11- E	XA05- E	XA12-10	XA09-18
XA07-19	XA06- L	XA09-07	XA10-08	XA11- F	XA05- F	XA12-11	XA09-19
XA07-20	XA08-16			XA11- H	XA12-19	XA12-12	XA11- N
XA07-21	XA14- H	XA09-08	XA10- Z	XA11- J	XA10- D	XA12-13	XA09- N
XA07-21	XA06- N	XA09-09	XA10-16	XA11- K	XA12- X	XA12-14	XA13-10
XA0E- A	XA07- A	XA09-10	XA10- P	XA11- L	XA10-13	XA12-15	XA13- R
XA0E- B	XA07- B	XA09-11	XA08-11	XA11- M	XA10- C	XA12-16	XA09- S
XA0E- E	XA11-22	XA09-12	XA11-12	XA11- N	XA12-12	XA12-17	XA09-17
XA0E- F	XA14-20	XA09-12	XA06- V	XA11- P	XA10-22	XA12-18	XA11-14
XA0E- H	XA07-06	XA09-13	XA10- K	XA11- R	XA10- Y	XA12-19	XA11- H
XA0E- J	XA09- U	XA09-14	XA10-17	XA11- S	XA12- V	XA12-20	XA13- L
XA0E- K	XA07-07			XA11- T	XA09- T	XA12-20	XA10-20
XA0E- L	XA07-19	XA09-15	XA10-11	XA11- U	XA09- U	XA12-21	XA11-09
XA0E- M	XA07-16	XA09-16	XA10- V	XA11- V	XA12- D	XA12-22	XA11-10
XA0E- N	XA07-15	XA09-17	XA12-17	XA11- W	XA06-10	XA12-23	XA13- K
XA0E- R	XA09-23	XA09-18	XA12-10	XA11- X	XA09- X	XA12-23	XA10-23
XA0E- V	XA09-12	XA09-19	XA12-11	XA11- Y	XA12- L	XA13- A	XA13- F
XA0E- W	XA09-01	XA09-20	XA10-AA	XA11- Z	XA10-21	XA13- A	TE1G-01
XA0E- X	XA07-17	XA09-21	XA10-10	XA11-AA	XA06-09	XA13- B	XA14- B
XA0E-AA	XA07-05	XA09-22	XA06-18	XA11-01	XA09-01	XA13- B	TE1G-02
XA0E-01	XA07-01	XA09-23	XA11-23	XA11-02	XA12-AA	XA13- C	XA05- Y
XA0E-02	XA07-02	XA09-23	XA06- R	XA11-03	XA10-12	XA13- E	XA14-21
XA0E-03	XA09- E	XA1C- A	XA05- A	XA11-04	XA12- Y	XA13- F	XA13- A
XA0E-05	XA08-01	XA1C- B	XA09- B	XA11-05	XA12- Z	XA13- F	XA13- N
XA0E-07	XA11-11	XA1C- B	TE1E-02	XA11-06	XA10- U	XA13- H	XA10- W
XA0E-09	XA11-AA	XA1C- C	XA11-M	XA11-07	XA10- F	XA13- J	XA08-06
XA0E-10	XA11- W			XA11-08	XA10- E		
XA0E-11	XA05-11	XA1C- D	XA11- J			XA13- K	XA12-23
XA0E-12	XA09- F	XA1C- E	XA11-08	XA11-09	XA12-21	XA13- L	XA12-20
XA0E-13	XA05- T	XA1C- F	XA11-07	XA11-10	XA12-22	XA13- M	XA05- L
XA0E-14	XA09- X			XA11-11	XA0E-07	XA13- N	XA13- S
XA0E-16	XA07-20	XA1C- H	XA12- H	XA11-12	XA05-12	XA13- N	XA13- F
XA0E-17	XA07-09	XA1C- J	XA12- J	XA11-13	XA12- U	XA13- P	XA12- W
XA0E-18	XA05-22	XA1C- K	XA05-13	XA11-14	XA12-18	XA13- R	XA12-15
XA08-01	XA08-05						

TABLE 8-1 LOGIC ASSEMBLY A1 WIRE LIST

FROM	TO	FROM	TO	FROM	TO
CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN	CON -PIN
XA13- S	XA13- U	XA15- J	XA04-18	XA16-21	XA03- K
XA13- S	XA15- N	XA15- K	XA14- P	XA16-22	XA15-AA
XA13- T	XA13-14	XA15- K	XA16-19	E1	J01-AA
XA13- T	XA14-01	XA15- L	XA01-04	E1	TB2-7B
XA13- U	XA14- A	XA15- M	XA16-15	E2	J02-AA
XA13- U	XA13- S	XA15- M	J03 -21	E3	J03-AA
XA13- V	XA12- T	XA15- N	XA01- D	E4	J04-AA
XA13- W	XA12- N	XA15- N	XA15- W	J01-AA	E1
XA13- X	XA12- J	XA15- P	XA16-13	J02-AA	E2
XA13- Y	XA12- H	XA15- R	XA06-02	J03-AA	E3
XA13-AA	XA05-07	XA15- U	XA16- M	J04-AA	E4
XA13-01	XA13-12	XA15- W	XA16- V	S1-C	TB1-J1
XA13-01	TB1G-01	XA15- W	XA15- N	S1-N.O.	XA16-10
XA13-02	XA14-02	XA15- X	XA16- D	TB1-J1	S1-C
XA13-02	TB1G-02	XA15- X	XA05-10	TB1-01	TB3-1B
XA13-03	XA05- W	XA15- Y	XA04-12	TB1-02	TB3-2B
XA13-05	XA14-AA	XA15-AA	XA03-16	TB2-1B	XA01- C
XA13-06	XA05- K	XA15-AA	XA16-22	TB2-1B	XA04- C
XA13-07	XA05-21	XA15-01	XA16-01	TB2-2B	XA01-03
XA13-08	XA05- Z	XA15-01	TB1H-01	TB2-3B	XA01-10
XA13-09	XA12-02	XA15-02	TB1H-02	TB2-4B	XA01-09
XA13-10	XA12-14	XA15-02	XA16-02	TB2-5B	XA03- A
XA13-11	XA05- E	XA15-03	XA06-03	TB2-7B	E1
XA13-12	XA13-01	XA15-05	XA03- H	TB3-1B	TB1-01
XA13-12	XA13-14	XA15-07	XA14- N	TB3-2B	TB1-02
XA13-13	XA12-03	XA15-08	J03 -22	XA01- C	TB2-1B
XA13-14	XA13- T	XA15-09	XA03- J	XA01-03	TB2-2B
XA13-14	XA13-12	XA15-10	XA16- W	XA01-09	TB2-4B
XA13-17	XA10-03	XA15-11	XA16-17	XA01-10	TB2-3B
XA13-18	XA10-14	XA15-11	XA14-15	XA03- A	TB2-5B
XA13-19	XA10-16	XA15-12	XA03-17	XA03-01	TB2-5B
XA14- A	XA13- U	XA15-13	XA16-04	XA04-C	TB2-1B
XA14- B	XA13- B	XA15-14	XA04-10	XA08-06	XA13- J
XA14- C	XA07- D	XA15-15	XA14-23	XA16-10	S1-N.O.
XA14- D	XA07- L	XA15-16	XA16-11		
XA14- E	XA07- K	XA15-17	J03 - Z		
XA14- F	XA07- E	XA15-18	XA03-20		
XA14- H	XA07-21	XA15-19	XA16- F		
XA14- J	XA07-AA	XA15-20	XA16-06		
XA14- K	XA07- V	XA15-21	XA04-08		
XA14- L	XA07- W	XA15-23	XA14- U		
XA14- M	XA07- N	XA16- A	XA15- A		
XA14- N	XA15-07	XA16- B	XA15- B		
XA14- P	XA15- K	XA16- C	XA04- D		
XA14- U	XA05-14	XA16- D	XA15- X		
XA14- U	XA15-23	XA16- E	XA03-21		
XA14- W	XA03-18	XA16- F	XA15-19		
XA14- W	XA16- E	XA16- H	XA03-15		
XA14- Z	XA15- F	XA16- J	XA15- H		
XA14- Z	XA03-19	XA16- K	XA15- J		
XA14-AA	XA13-05	XA16- L	J02 - K		
XA14-01	XA13- T	XA16- M	XA15- U		
XA14-02	XA13-02	XA16- N	J02 - M		
XA14-03	XA07- P	XA16- P	XA04-16		
XA14-04	XA07- F	XA16- V	XA15- W		
XA14-05	XA07- H	XA16- W	XA15-10		
XA14-08	XA16-05	XA16- X	XA04-22		
XA14-10	XA06- P	XA16- Y	J02 - X		
XA14-11	XA06- U	XA16- Z	J02 - W		
XA14-12	XA06-23	XA16-AA	J02 - J		
XA14-13	XA07- X	XA16-01	XA15-01		
XA14-15	XA15-11	XA16-02	XA15-02		
XA14-16	XA16-16	XA16-03	J02 - H		
XA14-17	XA06- T	XA16-04	XA15-13		
XA14-19	XA07- U	XA16-05	XA14-08		
XA14-20	XA08- F	XA16-06	XA15-20		
XA14-21	XA13- E	XA16-06	XA07- T		
XA14-22	XA07- Y	XA16-07	XA01-14		
A14-23	XA15-15	XA16-08	J02 - F		
A15- A	XA16- A	XA16-09	J02 - L		
A15- A	TB1H-01	XA16-11	XA15-16		
XA15- B	XA16- B	XA16-12	XA03-13		
XA15- B	TB1H-02	XA16-13	XA15- P		
XA15- C	XA05- C	XA16-14	XA03- E		
XA15- D	XA03- F	XA16-15	XA15- M		
XA15- E	XA14- W	XA16-16	XA14-16		
A15- F	XA14- Z	XA16-17	XA15-11		
XA15- H	XA16- J	XA16-18	XA04-23		
XA15- H	XA04-20	XA16-19	XA15- K		
XA15- J	XA16- K	XA16-20	J02 - N		

APPENDIX A

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
NW 00-15PA-1	Technical Inspection Manual, Soldering for Electric and Electronic Application (Navy)
SB 38-100	Preservation, Packaging and Packing 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
TM 38-750	The Army Maintenance Management System (TAX)
TM 11-7440-238-15, TO 31W4-4-1, NAVSHIPS 0967-324-0100.	Operator, Organizational, Direct Support, General Support, and Depot Maintenance Manual, Digital Subscriber Terminal Sets AN/FYA-71(V) 1 through AN/FYA-7 1(V)6
TM 11-7440-239-15, TO 31W4-4-11, NAVSHIPS 0967-324-0110.	Operator, Organizational, DS, GS, and Depot Maintenance Manual, AUTODIN Digital Subscriber Terminals
TO 00-25-234	General Shop Practice Requirements for the Repair, Maintenance, and Test of Electronic Equipment
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 3553	Depot Inspection Standard for Moisture and Fungus Resistant Treatment
TM 740-90-1	Administrative Storage of Equipment
TM 750-244-2	Procedure for Destruction of Electronic Materiel to Prevent Enemy Use (Electronics Command)

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 Card RP-152/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.

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) Functional group	(3) Maintenance functions											(4)	(5) Remarks
		A INSPECT	B TEST	C SERVICE	D ADJUST	E ALIGN	F CALIBRATE	G INSTALL	H REPLACE	I REPAIR	J OVERHAUL	K REBUILD	TOOLS AND EQUIPMENT	REMARKS
1.0	READER, PUNCHED CARD RP-152/G	C											None	External
		H											13,14,15	Internal
			H										1 thru 9, 11 thru 15	All on-site tests
				H									9,13,14,15	Clean and lubricate Lubrication during reassembly
					H								1 thru 7, 13,14,15	Mechanical adjustments in card reader assembly
									H				13,14,15	Replace defective plug-in circuit card assemblies and mechanical sub-assemblies
										H			13,14,15	Replace defective piece parts in card reader assembly and hard wired electrical components
										D			1 thru 7, 11 thru 19 21,22,23	Defective circuit card assemblies and defective components or mechanical subassemblies.
											D		1 thru 9, 11 thru 23	Restore Reader, Punched Card RP-152/G to serviceable condition
	NOTE: OPERATING ORGANIZATIONS PERFORM ON-SITE EQUIVALENT TO H LEVEL MAINTENANCE.													

SECTION III. TOOL .ND TEST EQUIPMENT REQUIREMENTS

TOOL AND TEST EQUIPMENT REQUIREMENTS				
TOOLS AND EQUIPMENT	MAINTENANCE CATEGORY	NOMENCLATURE	FEDERAL STOCK NUMBER	TOOL NUMBER
		RP-152/G (continued)		
1	H,D	MULTIMETER AN/USM-210 (SIMPSON MODEL 260)	6625-019-0815	
2	H,D	OSCILLOSCOPE (HEWLETT-PACKARD MODEL 140A)	6625-957-0509	
3	H,D	DUAL TRACE AMPLIFIER (HEWLETT-PACKARD MODEL H06-1405A)	6625-937-3610	
4	H,D	TIME BASE AND DELAY GENERATOR (HEWLETT-PACKARD MODEL 1421A)	6625-930-8119	
5	H,D	PROBE, VOLTAGE DIVIDER WITH TIP KIT (HEWLETT-PACKARD MODEL CO-7-10003B) - 2 ea. REQ'D		
6	H,D	HOOD, OSCILLOSCOPE (HEWLETT-PACKARD MODEL 10175A)		
7	H,D	CART, OSCILLOSCOPE (HEWLETT-PACKARD MODEL 1119B)		
8	H,D	STROBOSCOPE, TACHOMETER (ELECTRONIC BRAZING CO. MODEL 510AL)	6625-223-5150	
9	H,D	GAGE, VACUUM (CAST MFG. CO. MODEL AF205	6685-832-8766	
10	H	CLEANER, VACUUM, AND TYPE (IDEAL MFG. CO. NO. 22-113)	7910-250-8039	
11	H,D	ASSEMBLY, MANUAL CONTROL CARD (SARATOGA IND.,DIV. ESPEY MFG. & ELECT. CORP. NO. D39245)	6130-115-2631	
12	H,D	ASSEMBLY, CARD EXTENDER (SARATOGA IND., DIV. ESPEY MFG. & ELECT. CORP. NO. D39724)		
13	H,D	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/G	5180-610-8177	
14	H,D	TOOL KIT, ELECTRONIC EQUIPMENT (AUTODIN)		
15	H,D	TOOL KIT, PUNCHED CARD EQUIPMENT (AUTODIN)		
16	D	ANALYZER ZM-3()/U (CAPACITOR TEST SET)	6625-229-1060	
17	D	TEST SET, TRANSISTOR TS-1836A/U (SIERRA MODEL 219C)	6625-926-6996	
18	D	MULTIMETER MF-26A/U (HEWLETT-PACKARD MODEL 410B)	6625-360-6407	
19	D	VOLTMETER, DIGITAL (NON-LINEAR SYSTEMS, INC. MODEL X-1/5)	6625-168-0669	
20	D	POWER SUPPLY, VARIABLE, D.C. (TRYGON ELECTRONICS, INC. MODEL T50-2)		

SECTION III. TOOL END TEST EQUIPMENT REQUIREMENTS

TOOL AND TEST EQUIPMENT REQUIREMENTS				
TOOLS AND EQUIPMENT	MAINTENANCE CATEGORY	NOMENCLATURE	FEDERAL STOCK NUMBER	TOOL NUMBER
		RP-152/0 (continued)		
21	D	RESISTOR, DECADE (GENERAL RADIO CO. MODEL 1434M)		
22	D	EXTENDER, PRINTED CIRCUIT BOARD(GENERAL DYNAMICS/ELECTRONICS N0. 809002-876)		
23	D	TEST FACILITY, PRINTED CIRCUIT BOARD		
		NOTES: DEPOT MAY SUBSTITUTE EQUIVALENT TEST EQUIPMENT.		

AMSEL-MR Form 1 Jan 66 6013 (Supersedes edition of 1 Jan 65 which is obsolete) ESC-FM 95-66

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 propositioned resupply of repair parts based on equipment density per geographical locations. This resupply requirement is established to support 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.

Code	*Explanation*
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
*0	Organizational Maintenance
*F	Direct 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 casings 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.

AIR FORCE SMR CODE

ARMY SMR CODES	SOURCE CODE (AFLCM 65-3)			EXPENDABLE RECOVERABLE (AFM 67-1, VOL. 1, CH: 9 ATCH. 5)	REPAIR LEVEL CODE (AFLCR 65-2)	
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.

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 assembly are indicated by the letters 'REF".

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 "GO" 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 ,NO is as follows;

- **a. FSN - 6625-553-0142**
- **b. NCBC - 00**
- **c. FSC - 6625**
- **d. NSN - 6625-00-553-0142**

4. All replacement parts will be ordered under the NSN System.

g. Site Stockage Allowance, Column 7.

(1) The maintenance allowance columns are divided into subcolumns. The total quantity of items authorized for the number of equipments supported is indicated in each subcolumn opposite 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: 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.

h. Forty-five Day Area Resupply Allowance Based on Number of DSTE Devices Supported, Column 8.

(1) The allowance column is divided into three subcolumns. The total quantity of items authorized for the number of equipments supported is indicated in each subcolumn opposite the first appearance of 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 Commander, US Army Electronics Command, ATTN: AMEL-MA-CW, Fort Monmouth, New Jersey 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 Allowances 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 be utilized. Contingency Plan requirements for this equipment will be satisfied by furnishing one 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.

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-1	1	A757
	2	A829
	3	A828
	4	A827
	5	A830
	6	B260A
	7	A832
	8	A835
	9	A833
	10	A834M
	11	B256
	11.1	A831A
	12	A826
	13	A002C
	14	A002D
	14.1	A002B
	15	A002A
	16	A686
	17	A687
	18	A688
	19	A685
	20	B261A
	21	B966
	22	B968M
	23	B967
	24	B965D
	24.1	B965F
	24.2	B965C
	24.3	B965E
	24.4	B965B
	24.5	B965G
	28	A792
	29	A789M
	30	A764C
	31	A764B
	31.1	A764A
	32	A764M
	33	A762
	34	A758A
	34.1	A759
	34.2	A760
	34.3	A761A
	35	B962
	36	B963
	37	B964
	38	B961
	38.1	B961A
	38.2	B961B
	38.3	B961C
	38.4	B961D
	38.5	B961E
	39	B969
	40	A747A
	41	A812A
	42	C021
	43	C039
	44	A815M
	45	A748
	46	C023
	47	C041
	48	A749
	49	A751A
	50	A750
	51	A752
	52	A753
	53	A753B
	54	A753D
	55	A753E
	56	A753F
	57	A753G
	58	A753C
	59	A754
	60	A755
	61	A755D
	62	A756
	63	A821B
	64	B970
	64.1	B970A
	65	B972
	66	B973
	67	B974
	68	B975
	69	B976
	70	B977
	71	B978
	72	B971
	73	B979
	73.1	B989
	73.2	B991
	74	B992
	75	B994
	76	B987
	77	B997
	78	B999A
	79	B998
	80	B995
	81	B996
	82	C003
	83	C004A
	84	C005A
	85	C001A
	86	C009
	87	C008
	88	C010A
	89	C011
	90	C010
	91	C014
	92	C015
	93	C016
	94	C017
	95	C012
	96	C013M

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER (CONTINUED)

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-1	97	C018
	98	C020
	99	C019
	100	C022
	101	C030
	102	C036
	103	C040
	104	C048
	105	C054
	106	C055
	107	C056
	108	C057
	109	C058
	110	C062
	111	C063
	112	C064
	113	C061
	114	C066
	115	C067
	116	C068
	117	C069
	118	C112
	119	C065
	120	C070
	121	C074
	122	C083
	123	C092
	124	C096
	125	C100
	126	C108
4-2	1	A520
	2	A632
	3	A565
	3.1	A631A
	4	A357
	4.1	A519A
	5	A024
	6	A235
	7	A163
	8	A127
	9	A097
	10	A003
	11	A257A
	12	A291
	13	A189
	14	A651
	15	A682
	15.1	A682A
	16	A683A
	17	A648
	18	A649M
	19	A650
	20	A647
	20.1	A681
	20.2	A680A
4-2	21	A667A
	22	A678
	23	A677
	24	A679
	25	A679A
	26	A676B
	27	A675
	28	A669
	29	A670
	30	A671
	31	A672B
	32	A668B
	33	A674
	34	A653A
	35	A653DM
	35.1	A653B
	36	A653C
	37	A653E
	38	A653F
	39	A656A
	40	A656B
	41	A656
	42	A659
	43	A660
	44	A661
	45	A658
	46	A657
	46.1	A652A
	46.2	A657A
	46.3	A657B
	46.4	A657C
	46.5	A657D
	46.6	A657E
	46.7	A657F
	46.8	A657G
	46.9	A657H
	47	A646A
	48	A646B
	49	A646C
	50	A653G
	51	A646
	52	A666
	53	A642A
	54	A662A
	55	A651A
	56	A652
4-3	1	A744M
	2	A736M
	3	A728M
	4	A716M
	5	A732M
	6	A720M
	7	A724M
	8	A740M
	9	A703M

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER (CONTINUED)

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-3	10	A712 2
	11	A698M
	12	A702 M
	13	A704M
	14	A690M
	15	A694M
	16	A708M
	17	A745M
	18	A689
	19	A745A
	20	A756B
	21	A756C
	22	A756D
	23	A756A
	24	A755A
	25	A755B
	26	A755C
4-4	1	B841E
	2	B841G
	3	B841F
	4	B841D
	4.1	B842A
	5	B875
	5.1	B875A
	6	B861
	7	B867
	8	G862
	9	B868A
	10	B871A
	11	B854B
	12	B857B
	13	B848A
	14	B850A
	15	B903
	16	B905M
	17	B904
	18	B902
	19	B844A
	20	B843A
	21	B898M
	22	B900
	23	B899
	24	B897A
	25	B915C
	26	B914A
	27	B918A
	28	B923A
	29	B925
	30	B924
	31	B928B
	32	B9228
	33	B927M
	34	B894
	35	B896
	36	B895
	37	B893
	38	B892
	39	B891
4-4	40	B611A
	41	B265A
	42	B271A
	43	B267M
	44	B266
	45	B264A
	45.1	B279A
	46	B268
	47	B274
	48	B263
	49	B262
	SO	B286A
	51	B287B
	52	B287C
	53	B285A
	54	B287A
	55	B280
	56	B281
	57	B283
	58	B284A
	59	B445
	60	B447
	61	B446
	62	B444A
	62.1	B448A
	62.2	B449
	62.3	B451
	62.4	B450
	62.5	B456A
	62.6	B457A
	62.7	B458
	62.8	B460
	62.9	B459
	62.10	B8511
	62.11	B584A
	63	B911A
	64	B913
	65	B912
	66	B910A
	67	B907
	68	B909
	69	B908
	70	B906A
	71	B901
	72	B943M
	73	B945
	74	B944
	75	B942A
	76	B946B
	77	B935
	78	B937E
	78.1	B937C
	78.2	B937B
	78.3	B937A
	78.4	B941B
	78.5	B941A
	79	B937
	80	B936

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER (CONTINUED)

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-4	81	B934
	82	B938A
	83	B816
	83.1	B817M
	83.2	B819
	83.3	B818
	84	B815
	84.1	B793A
	85	B794
	86	B796
	87	B795
	88	B7938
	89	B878
	90	B880
	91	B879
	92	B295B
	93	B333B
	94	B402B
	95	B876
	96	B877
	97	B955A
	98	B955C
	99	B9558
	100	B953
	101	B955
	102	B954A
	103	B952A
	104	B289B
	105	B290
	106	B291
	107	B292
	108	B293
	109	B294
	110	B288B
	1	A806
	2	A809
	3	A807
	4	A808
	5	A811A
	6	A805B
	7	A810A
	8	A794
	9	A796
	10	A795
	11	A798
	12	A803
	13	A793B
	14	A797A
	15	A812
	16	A811C
	17	A811E
	18	A811D
	19	A811B
	20	A813M
	21	A814M
4-5	22	A823M
4-6	1	A786A
	2	A786B
	3	A786C
	4	A787M
	4.1	A788M
	5	A769
	6	A767
	7	A772
	8	A775
	9	A774
	10	A773
	11	A771B
	12	A776
	13	A778
	14	A781
	15	A780
	16	A779
	17	A777B
	18	A782
	19	A766
4-7	1	B236
	2	B236
	3	B235B
	4	B235D
	5	B235C
	6	B235A
	7	B226A
	8	B214
	9	B149W5
	10	B149W4
	11	B149W3
	12	B149W1
	12.1	B149W2
	12.2	B149W
	13	B149V
	13.1	B236
	14	B149V
	14.1	B236
	15	B228A
	15.1	B149W6
	16	B231
	17	B235
	18	B234
	19	B232
	20	B233
	21	B230A
	21.1	B182
	21.2	B183
	22	B181
	23	B180A
	23.1	B198A
	24	B153
	25	B155

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER (CONTINUED)

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-7	26	B154
	27	B157
	28	B160
	29	B159
	30	B158A
	31	B156
	32	B161
	33	B163
	33.1	B152
	34	B124
	35	B126
	36	B125
	37	B122A
	38	B236
	39	B236
	39.1	B163A
	40	B225A
	41	B148V
	42	B148T
	43	B148FM
	44	B146
	45	B148
	46	B147
	47	B145B
	48	B129A
	49	B132A
	50	B131A
	51	B130
	52	B135A
	53	B138A
	54	B137A
	55	B136A
	56	B137A
	57	B8134
	58	B133A
	59	B133
	59.1	B128
	60	B141
	61	B143
	61.1	B142
	62	B139
	63	B140
	63.1	B141A
	63.2	B200
	64	B144
	64.1	B123B
	64.2	B127
	65	B206AM
	66	B205AM
	67	B108
	68	B110
	69	B109
	70	B117
	71	B117
	72	B114
	73	B118
4-7	74	B113
	75	B112
	76	B120
	77	B116
	78	B115
	79	B111
	80	B119
	81	B111
	82	B121
	82.1	B107
	83	B074
	84	B076
	85	B075
	86	B250A
	87	B250A
	88	B082
	89	B092
	90	B085
	91	B089
	92	B088
	93	B084
	94	B086
	95	B091A
	96	B090A
	97	B091
	98	B099
	99	B101
	100	B100
	101	B103
	102	B105
	103	B104
	104	B102
	105	B098
	106	B095
	107	B096
	108	B094A
	109	B085
	110	B088
	111	B087
	112	B097
	113	B093
	114	B080
	114.1	B081
	115	B106
	116	B083A
	117	B077A
	118	B078
	119	B079
	119.1	B073A
	120	A914
	121	A916
	122	A915
	123	A918A
	124	A920
	125	A922
	126	A921

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER (CONTINUED)

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-7	127	A919
	128	A917
	128.1	A913
	129	A936
	130	A938
	131	A937
	132	A935A
	133	A853
	134	A855
	135	A854
	136	A906H
	137	A906E
	138	A906D
	139	A906G
	140	A906F
	141	A858E
	142	A858D
	143	A858F
	144	A858B
	145	A858G
	146	A906A
	147	A877
	148	A876
	149	A875A
	150	A893
	151	A894
	152	A892
	153	A859
	154	A859
	155	A886
	156	A857
	157	A898A
	158	A858
	159	A856
	160	A865
	161	A867
	162	A866
	163	A868
	164	A882
	165	A881
	166	A896
	167	A897
	168	A895
	169	A864
	170	A872
	171	A874
	172	A873
	173	A871
	174	A899
	175	A884
	176	A885
	177	A883A
	178	A891
	179	A870A
	180	A869A
	181	A906
	182	A861A
4-7	183	A862
	184	A863
	185	A900
	186	A903
	187	A905
	188	A904
	189	A902
	190	A901
	191	A889
	191.1	A890
	192	A888
	193	A887
	194	A879
	195	A830
	197	A878A
	198	A860A
	198.1	A852A
	199	A837
	200	A838
	202	A841A
	203	A841
	204	A845
	205	A851A
	206	A849
	207	A848
	208	A842A
	209	A842
	210	A840
	211	A844
	212	A850
	213	A846A
	214	A843
	215	A839
	216	A847B
	217	A846
	217.1	A836A
	218	B221
	219	B223
	220	B222
	221	B219
	222	B220
	223	B248
	224	B249A
	225	B249
	226	B247
	227	B171
	228	B174
	228,1	B173
	229	B172
	230	B170
	231	B176
	232	B179
	232.1	B178
	233	B177
	234	B175

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER (CONTINUED)

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-7	235	B208
	236	B209
	237	B207
	238	B242
	239	B239
	240	B241
	241	B240
	242	B238
	243	B237
	244	A909
	245	A910
	246	A908
	246.1	A911B
	246.2	A912
	247	A907
	248	B195
	249	B197
	250	B196
	251	B192
	251 .	B199A
	252	B1164
	255	B244
	256	B246
	257	B245
	258	B243
	259	B211
	260	B213
	261	B212
	262	B210
	263	B216
	264	B218
	265	B217
	2G6	B215
	267	B21]
	268	A924
	269	A926
	270	A925
	270.1	A933
	270.2	A928
	271	A929
	271. 1	A927
	272	A923
	273	B163C
	274	B163E
	275	B163D
	276	B163B
	277	B186
	278	B187
	279	B185A
	280	B224
	281	B224
	282	B251
4-8	1	B148X
	2	B1481
	3	B1484
	4	B184
	5	B148W
	6	B148V
	7	B1485
	8	B1486
	9	B148Y
4-10	1	B149T
	1.1	B149S
	2	B149RM
	3	B149QM
	4	B149M
	5	B149PM
	6	B149L
	7	B149KM
	8	B149N
	8.1	B149H
	9	B149GM
	10	B149JM
	11	B149FM
	13	B149DM
	14	B151
	1 5	B150
	16	B148EA
	17	B148EB
	18	B14BEF
	19	B14BED
	19.1	B148EG
	20	B148EE
	21	B148EC
	22	B148BM
	23	B148A
	24	B148DM
	25	B149B
4-11	1	B072
	2	B071
	3	A940
	3.1	B072B
	4	A960
	5	A962
	G	A961
	7	A963
	8	A964
	9	A959
	9.1	A965
	10	A968
	11	A968
	12	A967
	13	P969
	14	A956

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER (CONTINUED)

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
4-11	14.1	A957
	14.2	A958
	15	A955
	16	A970
	17	A954A
	18	A953
	18.1	A951
	18.2	A950
	19	A952
	20	A947
	20.1	A948
	20.2	A949A
	21	A946
	22	A971
	23	A945A
	24	A944
	24.1	A942
	24.2	A941
	25	A943A
	26	A972A
	26.1	A939
	27	B042
	28	B043
	29	B049
	30	B068
	31	B070
	32	B069
	33	B067
	34	B021
	34A	B024
	34B	B023
	35	B020
	36	B022
	37	A979
	38	A978
	38.1	A977M
	39	B026
	40	A974
	41	A976
	42	A975
	43	B025
	44	B027
	44.1	A973M
	45	B044
	46	B029
	47	B028M
	47.1	B028N
	48	B055
	49	B054
	50	B037
	51	B033
	51.1	B034
	52	B032A
	53	B039AM
	54	B057A
	55	B056
	56	B038AM
4-11	57	B053
	58	B052
	59	B036A
	60	B059
	61	B058
	62	B062A
	63	B051A
	64	B066
	64.1	B072A
	65	B035
	66	B040
	67	B060A
	68	B063
	69	B048
	70	B050
	71	B049
	72	B047
	73	B065
	74	B064
	75	B046
	76	B061
	77	B072F
	78	B072C
	79	B072D
	80	B045A
5-2	A13	A003
5-3	A6	A024
5-4	A8	A163
5-5	A10	A097
	A12	A112
5-6	A9	A127
	A11	A145
5-7	A16	A189
5-8	A7	A235
5-9	A14	A257A
5-10	A15	A291
5-11	A5	A357
5-12	A1	A520
5-13	A4	A565
5-13.1	A4	A631A
5-13.2	A5	A519A

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER (CONTINUED)

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
5-14	A3	A632
5-15	PS1A1	B295B
5-16	PS1A2	B333B
5-17	PS1A3	B402B
	PS1A4	B457A
5-18	C1	B465M
	C2	B466M
	C3	B468M
	C4	B467A
	CR1	B476
	CR2	B477
	CR3	B479M
	CR4	B478
	E1	B494
	E2	B495
	E3	B496
	E4	B510
	E5	B497
	E6	B498
	E7	B499
	E8	B500
	E9	B501
	E10	B502
	E11	B503
	E12	B504
	E13	B505
	E14	B506
	E15	B507
	E16	B508
	E17	B509
	H1	B461A
	H2	B462
	H3	B463
	H4	B464
	H5	B471A
	H6	B491A
	H7	B491B
	H8	B492
	H9	B493A
	H10	B510A
	P1	B469
	P2	B470
	Q1	B480
	Q2	B484
	Q3	B488
	R1	B472B
	R2	B473B
	R3	B474M
	R4	B475C
	PS1A5	B511
5-19	C1	B519M
5-19	C2	B520M
	C3	B521M
	C4	B522M
	CR1	B533
	CR2	B534
	CR3	B535
	CR4	B536
	E1	B559
	E2	B560
	ES	B563
	E6	B583
	E7	B564
	E8	B565
	E9	B566
	E10	B567
	E11	B568
	E12	B569
	E13	B570
	E14	B571
	E15	B572
	E16	B573
	E17	B574
	E18	B575
	E19	B576
	E20	B577
	E21	B578
	E22	B579
	E23	B580
	E24	B581
	E25	B582
	H1	B515A
	H2	B516
	H3	B517
	H4	B518
	H5	B525A
	H6	B526
	H7	B541
	H8	B548A
	H9	B556D
	H10	B556E
	H11	B556F
	H12	B557A
	H13	B558A
	H14	B583A
	P1	B523
	P2	B524
	Q1	B537
	Q2	B542
	Q3	B547
	Q4	B552
	R1	B527A
	R2	B532A
	R3	B529
	R4	B532B

SECTION II INDEX-FIGURE AND ITEM NUMBER CROSS REFERENCE TO INDEX NUMBER (CONTINUED)

FIG. NO.	ITEM NO. OR REFERENCE DESIGNATION	INDEX NO.
5-19	R5	B528A
	R6	B532M
	R7	B531M
5-20	PS1A6	B584A
	E1	B604
	E2	B605
	E3	B606
	E4	B607
	E5	B608
	E6	B609
	E7	B610
	E8	B610A
	H1	B588A
	H2	B589
	H3	B590
	H4	B591
	H5	B593A
	H6	B602
	H7	B603
	P1	B592
	Q1	B597
	Q2	B601
	R1	B594
	R2	B595B
	R3	B596A
5-21	PS1A12	B611A
5-22A	A14	B797A
	CR1	B810M
	CR2	B811M
	CR3	B812M
	CR4	B813M
	E1	B798
	E2	B799
	E3	B800
	E4	B801
	H1	B802
	H2	B803C
	H3	B803D
	H4	B805A
	H5	B806
	H6	B807
	H7	B807A
	H8	B814M
	H9	B814A
	H10	B814B
	H11	B814C
	H12	B815F
	J5	B815A
	J6	B815B
	J7	B815C
	J8	B815D
	J9	B815E
5-22A	R1	B804D
	R2	B808A
	R3	B809A
5-22B	A15	B820A
	C1	B821
	C2	B822
	C3	B823
	C4	B824
	C5	B825
	CR1	B837
	CR2	B838
	CR3	B839
	CR4	B840
	R1	B826
	R2	B827A
	R3	B828A
	R4	B829A
	R5	B835M
	R6	B831A
	R7	B834A
	R8	B830B
	R9	B832M
	R10	B832A
	R11	B836A
	R12	B833A

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
A	H	R	74409980046							A	A001B	CARD READER: RP-152/G	EA		1									-15 1-1	
A	H	R								B	A002A	LOGIC ASSEMBLY: 58189; A64434-001	EA		1									-15 4-1	15
C	H									*	A002B	SCREW, MACHINE: 96906; MS51960-63	EA		4									-15 4-1	14.1
C	H		53055434357							*	A002C	SCREW, MACHINE: 96906; MS35234-63	EA		10									-15 4-1	13
X2	H									*	A002D	NUT, BAR: 83508; A300005	EA		12									-15 4-1	14
P	H	T	74409168295							C	A003	CIRCUIT, CARD ASSEMBLY: 58189; A52622-001	EA		1	1	2	3	1	2	3		3	-15 4-2	10
X1	D	D									A004	PRINTED CIRCUIT BOARD: 58189; A52623-001	EA		1									-15 5-2	
P	D		59627911120							D	A005	INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7579K	EA		12								36	-15 5-2	Z7
			59627911120							D	A006	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF									-15 5-2	Z11
			59627911120							D	A007	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF									-15 5-2	Z21
			59627911120							D	A008	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF									-15 5-2	Z22
			59627911120							D	A009	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF									-15 5-2	Z24

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911120							D	A010 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF-									-15 5-2	Z25

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911120							D	A011 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF									-15 5-2	Z26
P	D		59627911042							D	A012 INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7578K	EA		3								9	-15 5-2	Z18
P	D		59627911048							D	A013 INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7577K	EA		34								102	-15 5-2	Z2
			59627911048							D	A014 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-2	Z-6
			59627911048							D	A015 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-2	Z14
			59627911048							D	A016 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-2	Z15
			59627911048							D	A017 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-2	Z19
			59627911048							D	A018 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 -2	Z23
			59627911048							D	A019 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-2	Z27
P	D		59627911082							D	A020 INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7090K	EA		98								291	-15 5-2	Z8

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A021		INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-2	Z13
P	D		59627911001							D	A022		INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7088K	EA		21								63	-15 5-2	Z9
P	D		59627911004							D	A023		INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7089K	EA		1								3	-15 5-2	Z12
P	H	T	74409594501							C	A024		CIRCUIT, CARD ASSEMBLY: 58189; A52630-001	EA		1	1	2	3	1	2	3		3	-15 4-2	5
X1	D									D	A025		PRINTED CIRCUIT BOARD: 58189; A52631-001	EA		1									-15 5-3	
			59627911082							D	A026		INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-3	Z1
			59627911082							D	A027		INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-3	Z2
			59627911082							D	A028		INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-3	Z3
			59627911082							D	A029		INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-3	Z4
			59627911082							D	A030		INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-3	Z8

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A031 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-3	Z9
			59627911082							D	A032 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-3	Z10
			59627911042							D	A033 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A012	EA		REF									-15 5-3	Z5
			59627911048							D	A034 INTEGRATED CIRCUIT, LOGIC, GATE: SAME AS A013	EA		REF									-15 5-3	Z6
			59627911048							D	A035 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-3	Z7
P	D		59056870000							D	A036 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF183J	EA		20								60	-15 5-3	R1
			59056870000							D	A037 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R3
			59056870000							D	A038 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R5
			59056870000							D	A039 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R7
			59056870000							D	A040 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R9

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59056870000							D	A041 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R11
			59056870000							D	A042 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R13
			59056870000							D	A043 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R15
			59056870000							D	A044 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R17
			59056870000							D	A045 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R19
			59056870000							D	A046 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R21
			59056870000							D	A047 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R23
			59056870000							D	A048 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R25
			59056870000							D	A049 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R27
			59056870000							D	A050 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-3	R29

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59057235251							D	A051 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF222J	EA		24								66	-15 5-3	R2
			59057235251							D	A052 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF						-			15 5-3	R4
			59057235251							D	A053 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R6
			59057235251							D	A054 RESISTOR, FIXED, COMPPSITION: SAME AS A051	EA		REF									-15 5-3	R8
			59057235251							D	A055 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R10
			59057235251							D	A056 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R12
			59057235251							D	A057 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R14
			59057235251							D	A058 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R16
			59057235251							D	A059 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R18
			59057235251							D	A060 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R20

(1) (A) SOURCE CD	(1) (B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59057235251							D	A061 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R22
			59057235251							D	A062 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R24
			59057235251							D	A063 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R26
			59057235251							D	A064 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R28
			59057235251							D	A065 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-3	R30
P	D		59618140768							D	A066 SEMI-CONDUCTOR DEVICE, DIODE: 81350; JANIN3064	EA		48								144	-15 5-3	CR1
			59618140768							D	A067 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR2
			59618140768							D	A068 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR3
			59618140768							D	A069 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR4
			59618140768							D	A070 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR5

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59618140768							D	A071 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR6
			59618140768							D	A072 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR7
			59618140768							D	A073 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR8
			59618140768							D	A074 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR9
			59618140768							D	A075 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR10
			59618140768							D	A076 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR11
			59618140768							D	A077 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR12
			59618140768							D	A078 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR13
			59618140768							D	A079 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR14
			59618140768							D	A080 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-3	CR15

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59618804779							D	A081 TRANSISTOR: 81350; JAN2N2905	EA		35								175	-15 5-3	Q1
			59618804779							D	A082 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q2
			59618804779							D	A083 TRANSISTOR: SAME AS A081	EA		REF									-15 5- 3	Q3
			59618804779							D	A084 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q4
			59618804779							D	A085 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q5
			59618804779							D	A086 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q6
			59618804779							D	A087 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q7
			59618804779							D	A088 TRANSISTOR: SAME AS A081	EA		REF									- 15 5-3	Q8
			59618804779							D	A089 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q9
			59618804779							D	A090 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q10
			59618804779							D	A091 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q11
			59618804779							D	A092 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q12

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59618804779							D	A093 TRANSISTOR: SAME AS.A081	EA		REF									-15 5-3	Q13
			59618804779							D	A094 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q14
			59618804779							D	A095 TRANSISTOR: SAME AS A081	EA		REF									-15 5-3	Q15
P	D		59709564972							D	A096 INSULATOR, DISK: 07047; 10079	EA		142								142	-15 5-3	H1
P	H	T	74409111145							C	A097 CIRCUIT, CARD ASSEMBLY: 58189; A53721-001	EA		2	1	2	3	1	2	3		3	-15 4-2	9
X1	D									D	A098 PRINTED CIRCUIT BOARD: 58189; A53722-001	EA		2									-15 5-5	
			59627911048							D	A099 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z3
			59627911048							D	A100 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z6
			59627911048							D	A101 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z7
			59627911048							D	A102 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z10
			59627911048							D	A103 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z11

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911048							D	A104 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z14
			59627911048							D	A1-05 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z15
			59627911048							D	A106 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z22
			59627911048							D	A107 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z23
			59627911048							D	A108 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z26
			59627911048							D	A109 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z27
			59627911120							D	A110 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF									-15 5-5	Z2
			59627911120							D	A111 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF									-15 5-5	Z18
			74409111145							C	A112 CIRCUIT, CARD ASSEM BLY: SAME AS A097	EA		REF									-15 4-2	9
										D	A113 PRINTED CIRCUIT BOARD: SAME AS A098	EA		REF									-15 5-5	

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911048							D	A114 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z3
			59627911048							D	A115 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z6
			59627911048							D	A116 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z7
			59627911048							D	A117 INTEGRATED CIRCUIT, LOGIC GATE: SAME AIS A013	EA		REF									-15 5-5	Z10
			59627911048							D	A118 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z11
			59627911048							D	A119 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z14
			59627911048							D	A120 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z15
			59627911048							D	A121 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z22
			59627911048							D	A122 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z23
			59627911048							D	A123 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z26

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911048							D	A124 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-5	Z27
			59627911120							D	A125 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF									-15 5-5	Z2
			59627911120							D	A126 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF									-15 5-5	Z18
P	H	T	74409111615							C	A127 CIRCUIT,- CARD ASSEM-BLY: 58189; A53725-001	EA		2	1	2	3	1	2	3		6	-15 4-2	8
X1	D									D	A128 PRINTED CIRCUIT BOARD: 58189; A53726-001	EA		2									-15 5-6	
			59627911082							D	A129 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z1
			59627911082							D	A130 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z2
			59627911082							D	A131 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z3
			59627911082							D	A132 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z4
			59627911082							D	A133 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z9

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A134 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z10
			59627911082							D	A135 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z11
			59627911082							D	A136 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z12
			59627911082							D	A137 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z17
			59627911082							D	A138 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z18
			59627911082							D	A139 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z19
			59627911082							D	A140 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z20
			59627911082							D	A141 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z25
			59627911082							D	A142 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z26
			59627911082							D	A143 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z27

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A144 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z28
			74409111615							C	A145 CIRCUIT, CARD ASSEMBLY: SAME AS A127	EA		REF									-15 4-2	8
										D	A146 PRINTED CIRCUIT BOARD: SAME AS A128	EA		REF									-15 5-6	
			59627911082							D	A147 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z1
			59627911082							D	A148 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z2
			59627911082							D	A149 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z3
			59627911082							D	A150 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z4
			59627911082							D	A151 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z9
			59627911082							D	A152 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z10
			59627911082							D	A153 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z11

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A154 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z12
			59627911082							D	A155 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z17
			59627911082							D	A156 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z18
			59627911082							D	A157 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z19
			59627911082							D	A158 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z20
			59627911082							D	A159 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z25
			59627911082							D	A160 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z26
			59627911082							D	A161 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z27
			59627911082							D	A162 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-6	Z28
P	H	T	74409594502							C	A163 CIRCUIT, CARD ASSEMBLY: 58189; A52634-001	EA		1	1	2	3	1	2	3		3	-15 4-2	7

(1)			REPAIRS PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7)			(8)			(9)	(10)	(11)	
(A) SOURCE CD	(B) MAINT 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 UNIT PK	QTY INC IN UNIT	(30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	45 DAY AREA RESUPPLY ALLOW BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	1 YEAR ALW PER 100 EQUIP CNTGCY PLAN	DEPOT MAINT ALW PER 100 EQUIP	ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X1	D									D	A164 M PRINTED CIRCUIT BOARD: 58189; A52635-001		EA		1									-15 5-4	
			59627911048							D	A165 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013		EA		REF									-15 5-4	Z20
			59627911042							D	A166 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A012		EA		REF									-15 5-4	Z3
P	D		59627910994							D	A167 INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7580K		EA		28								81	-15 5-4	Z7
			59627910994							D	A168 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167		EA		REF									-15 5-4	Z10
			59627910994							D	A169 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167		EA		REF									-15 5-4	Z11
			59627910994							D	A170 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167		EA		REF									-15 5-4	Z14
			59627910994							D	A171 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167		EA		REF									-15 5-4	Z15
			59627910994							D	A172 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167		EA		REF									-15 5-4	Z17
			59627910994							D	A173 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167		EA		REF									-15 5-4	Z23

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627910994							D	A174 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-4	Z25
			59627910994							D	A175 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-4	Z26
			59627910994							D	A176 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-4	Z27
			59627910994							D	A177 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-4	Z28
			59627911082							D	A178 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-4	Z6
			59627911082							D	A179 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-4	Z9
			59627911082							D	A180 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-4	Z21
			59627911082							D	A181 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-4	Z22
			59627911082							D	A182 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-4	Z24
			59627911001							D	A183 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-4	Z8

(1) (A) SOURCE CD	(1) (B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911001							D	A184 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-4	Z12
			59627911001							D	A185 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-4	Z13
			59627911001							D	A186 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-4	Z16
			59627911001							D	A187 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-4	Z18
			59627911001							D	A188 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-4	Z19
P	H	T	74409352412							C	A189 CIRCUIT CARD ASSEMBLY: 58189; A65141-001	EA		1	1	2	3	1	2	3		3	-15 4-2	13
X1	D									D	A190 PRINTED CIRCUIT BOARD: 58189; A65142-001	EA		1									-15 5-7	
P	D		59100873468							D	A191 CAPACITOR, FIXED, MICA: 81349; CM05F101J03	EA		1								3	-15 5-7	C 1
P	D		59106550390							D	A192 CAPACITOR, FIXED, PAPER: 81349; CP09A1KB153K3	EA		1	3								-15 5-7	C2
P	D		59108944546							D	A193 CAPACITOR, FIXED, PAPER: 81349; CP09A1KC472K3	EA		1	3								-15 5-7	C3

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59627911393							D	A194 INTEGRATED CIRCUIT, LOGIC GATE: 18324; C7091K	EA		9								27	-15 5-7	Z13
			59627911393							D	A195 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A194	EA		REF									-15 5-7	Z25
			59627911001							D	A196 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-7	Z4
			59627911001							D	A197 INTEGRATED CIRCUIT LOGIC GATE: SAME AS A022	EA		REF									-15 5-7	Z9
			59627911001							D	A198 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-7	Z21
			59627911001							D	A199 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-7	Z24
			59627910994							D	A200 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-7	Z6
			59627910994							D	A201 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-7	Z7
			59627910994							D	A202 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-7	Z17
			59627910994							D	A203 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-7	Z20

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A204 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z2
			59627911082							D	A205 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z3
			59627911082							D	A206 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z5
			59627911082							D	A207 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z8
			59627911082							D	A208 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z10
			59627911082							D	A209 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z11
			59627911082							D	A210 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z12
			59627911082							D	A211 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z14
			59627911082							D	A212 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z15
			59627911082							D	A213 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z16

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A214 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z18
			59627911082							D	A215 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z19
			59627911082							D	A216 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z22
			59627911082							D	A217 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z23
			59627911082							D	A218 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z26
			59627911082							D	A219 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z27
			59627911082							D	A220 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-7	Z28
P	D		59056832239							D	A221 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF201J	EA		3								9	-15 5-7	R1
			59056832239							D	A222 RESISTOR, FIXED, COMPOSITION: SAME AS A221	EA		REF									-15 5-7	R3
			59056832239							D	A223 RESISTOR, FIXED, COMPOSITION: SAME AS A221	EA		REF									-15 5-7	R5

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59056832238							D	A224 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF103J	EA		23								69	-15 5-7	R9
P	D		59057264413							D	A225 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF123J	EA		1								3	-15 5-7	R10
P	D		59056832242							D	A226 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF471J	EA		7								21	-15 5-7	R2
			59056832242							D	A227 RESISTOR, FIXED, COMPOSITION: SAME AS A226	EA		REF									-15 5-7	R4
			59056832242							D	A228 RESISTOR, FIXED, COMPOSITION: SAME AS A226	EA		REF									-15 5-7	R6
			59056832242							D	A229 RESISTOR, FIXED, COMPOSITION: SAME AS A226	EA		REF									-15 5-7	R7
			59056832242							D	A230 RESISTOR, FIXED, COMPOSITION: SAME AS A226	EA		REF									-15 5 -7	R8
			59056832242							D	A231 RESISTOR, FIXED, COMPOSITION: SAME AS A226	EA		REF									-15 5-7	R11
			59056832242							D	A232 RESISTOR, FIXED, COMPOSITION: SAME AS A226	EA		REF									-15 5-7	R12
P	D		59058026730							D	A233 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF470J	EA		1								3	-15 5-7	R13

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59618140768							D	A234 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-7	CR1
P	H	T	74409352411							C	A235 CIRCUIT, CARD ASSEMBLY: 58189; A65145-001	EA		1	1	2	3	1	2	3		3	-15 4-2	6
X1	D		D							A	236 PRINTED CIRCUIT BOARD: 58189; A65146-001	EA		1									-15 5-8	
			59627911082							D	A237 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-8	Z9
			59627911082							D	A238 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-8	Z10
			59627911082							D	A239 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-8	Z11
			59627911082							D	A240 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-8	Z12
			59627911082							D	A241 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-8	Z13
			59627911082							D	A242 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-8	Z14
			59627911082							D	A243 INTEGRATED CIRCUIT, LOGIC GATE: SAM E AS A020	EA		REF									-15 5-8	Z15

(1) REPAIRS PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																							
(A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A244	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020		EA		REF									-15 5-8	Z16
			59627911082							D	A245	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020		EA		REF									-15 5-8	Z17
			59627911082							D	A246	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020		EA		REF									-15 5-8	Z18
			59627911082							D	A247	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020		EA		REF									-15 5-8	Z19
			59627911082							D	A248	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020		EA		REF									-15 5-8	Z20
			59627910994							D	A249	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167		EA		REF									-15 5-8	Z1
			59627910994							D	A250	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167		EA		REF									-15 5-8	Z2
			59627911001							D	A251	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022		EA		REF									-15 5-8	Z3
			59627911001							D	A252	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022		EA		REF									-15 5-8	Z4
			59627911001							D	A253	INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022		EA		REF									-15 5-8	Z5

(1) REPAIRS PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE																							
(A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911001							D	A254 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-8	Z6
			59627911001							D	A255 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-8	Z7
			59627911001							D	A256 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-8	Z8
P	H	T	74402296564							C	A257A CIRCUIT CARD ASSEMBLY: 581891 A65173-001	EA		1	1	2	3	1	2	3		3	-15 4-2	11
X1	D									D	A258A PRINTED CIRCUIT BOARD: 58189; A65174-001	EA		1									-15 5-9	
P	D		59100514641							D	A259A CAPACITOR, FIXED, MICA: 81349; CM06F472J03	EA		2								6	-15 5-9	C1
			59100514641							D	A260A CAPACITOR, FIXED, MICA: SAME AS A259A	EA		REF									-15 5-9	C2
P	D		59108063412							D	A260B CAPACITOR, FIXED, MICA: 81349; CM06F202J03	EA		2	10								-15 5-9	C3
			59108063412							D	A260CM CAPACITOR, FIXDED, MICA: SAME AS A260B	EA		REF									-15 5-9	C4
			59627911001							D	A261 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-9	Z12
			59627910994							D	A262 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-9	Z4

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627910994							D	A263 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-9	Z7

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627910994							D	A264 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-9	Z8
			59627910994							D	A265 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-9	Z10
			59627910994							D	A266 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-9	Z11
			59627910994							D	A267 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-9	Z20
			59627910994							D	A268 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-9	Z23
			59627911082							D	A269 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z1
			59627911082							D	A269A INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z2
			59627911082							D	A270 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z3
			59627911082							D	A271 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z6
			59627911082							D	A272 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z9
			59627911082							D	A273 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z13

(1) (A) SOURCE CD	(1) (B) MAINT DC	(1) (C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A274 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z14
			59627911082							D	A275 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z15
			59627911082							D	A276 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z17
			59627911082							D	A277 INTEGRATED CIRCUIT, LOGIC GATE: SAME -S A020	EA		REF									-15 5-9	Z18
			59627911082							D	A278 INTEGRATED CIRCUT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z22
			59627911082							D	A279 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-9	Z24
			59627911393							D	A282 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A194	EA		REF									-15 5-9	Z16
			59627911393							D	A283 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A194	EA		REF									-15 5-9	Z19

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911393							D	A284 INTEGRATED CURCUIT, LOGIC GATE: SAME AS A194	EA		REF									-15 5-9	Z21
			59627911393							D	A285 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A194	EA		REF									-15 5-9	Z25
			59627911393							D	A286 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A194	EA		REF									-15 5-9	Z26
			59627911393							D	A287 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A194	EA		REF									-15 5-9	Z27
			59627911393							D	A288 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A194	EA		REF									-15 5-9	Z28
			59057235251							D	A289 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-9	R1
			59057235251							D	A290 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-9	R2
			59057235251							D	A290A RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-9	R3
			59057235251							D	A290B RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-9	R4
P	H	T	74409352409							C	A291 CIRCUIT CARD ASSEMBLY: 58189; A65153-001	EA		1	1	2	3	1	2	3		3	-15 4-2	12
X1	D									D	A292 PRINTED CIRCUIT BOARD: 58189; A65154-001	EA		1									-15 5-10	

(1)			REPAIRS PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7)			(8)			(9)	(10)	(11)	
(A) SOURCE CD	(B) MAINT 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 UNIT PK	QTY INC IN UNIT	(30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	45 DAY AREA RESUPPLY ALLOW BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	1 YEAR ALW PER 100 EQUIP CNTGCY PLAN	DEPOT MAINT ALW PER 100 EQUIP	ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59109252412							D	A293	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BE476M	EA		2								6	-15 5-10	C1

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59109252412							D	A294 CAPACITOR, FDCIXED, ELECTROLYTIC: SAME AS A293	EA		REF									-15 5-10	C2
P	D		59109043983							D	A295 CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BF226M	EA		1								3	-15 5-10	C5
P	D		59108352175							D	A296 CAPACITOR, FIXED, PAPER: 81349; CP09A1KB103K3	EA		1								3	-15 5-10	C3
P	D		59100431994							D	A297 CAPACITOR, FIXED, MICA: 81349; CM06F471J03	EA		1								3	-15 5-10	C4
P	D		59107175853							D	A298 CAPACITOR, FIXED, MICA: 81349; CM06F182J03	EA		1								3	-15 5-10	C6
			59627910994							D	A299 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-10	Z4
			59627910994							D	A300 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-10	Z9
			59627911001							D	A301 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-10	Z1
			59627911001							D	A302 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-10	Z10
			59627911001							D	A303 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A022	EA		REF									-15 5-10	Z11

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A304 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-10	Z2
			59627911082							D	A305 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-10	Z3
			59627911082							D	A306 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-10	Z5
			59627911082							D	A307 INTEGRATED CIRCUIT, LOGIC GATE: SAME 4S A020	EA		REF									-15 5-10	Z6
			59627911082							D	A308 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-10	Z7
			59627911082							D	A309 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-10	Z8
			59627911082							D	A310 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-]5 5-10	Z12
			59627911082							D	A311 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-10	Z13
			59627911082							D	A312 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-10	Z14
			59627911082							D	A313 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-10	Z15

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59627911082							D	A314 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A020	EA		REF									-15 5-10	Z16
P	D		59056816462							D	A316 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF102J	EA		9								27	-15 5-10	R1
			59056816462							D	A317 RESISTOR, FIXED, COMPOSITION: SAME AS A316	EA		REF									-15 5-10	R17
			59056816462							D	A318 RESISTOR, FIXED, COMPOSITION: SAME AS A316	EA		REF									-15 5-10	R23
			59057235251							D	A319 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-10	R2
			59057235251							D	A320 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-10	R7
			59057235251							D	A321 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-10	R14
			59057235251							D	A322 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-10	R16
P	D		59056870002							D	A323 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF223J	EA		3								9	-15 5-10	R3
			59056870002							D	A324 RESISTOR, FIXED, COMPOSITION: SAME AS A323	EA		REF									-15 5-10	R8

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59056870002							D	A325 RESISTOR, FIXED, COMPOSITION: SAME AS A323	EA		REF									-15 5-10	R19
P	D		59056863798							D	A326 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF272J	EA		7								21	-15 5-10	R4
P	D		59056837721							D	A327 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF1011J	EA		2								6	-15 5-10	R5
			59056837721							D	A328 RESISTOR, FIXED, COMPOSITION: SAME AS A327	EA		REF									-15 5-10	R10
P	D		59056824099							D	A329 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF432J	EA		1	3								-15 5-10	R26
P	D		59058018272							D	A330 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF511J	EA		1								3	-15 5-10	R12
P	D		59056832241							D	A331 RESISTOR, FIXED, COMPOSITION: 81349: RC07GF512J	EA		3								9	-15 5-10	R25
P	D		59056863129							D	A332 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF104J	EA		1								3	-15 5-10	R13
P	D		59056869994							D	A333 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF122J	EA		1								3	-15 5-10	R15
P	D		59057263807							D	A334 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF912J	EA		3								9	-15 5-10	R9

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59057263807							D	A335 RESISTOR, FIXED, COMPOSITION: SAME AS A334	EA		REF									-15 5-10	R18
			59057263807							D	A336 RESISTOR, FIXED, COMPOSITION: SAME AS A334	EA		REF									-15 5-10	R20
P	D		59056819970							D	A337 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF822J	EA		2								6	-15 5-10	R21
P	D		59056832246							D	A338 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF473J	EA		4								12	-15 5-10	R22
			59056832246							D	A339 RESISTOR, FIXED, COMPOSITION: SAME AS A338	EA		REF									-15 5-10	R24
P	D		59051908889							D	A340 RESISTOR, FIXED, COMPOSITION: 81349; RC20GF101J	EA		8								24	-15 5-10	R6
			59051908889							D	A341 RESISTOR, FIXED, COMPOSITION: SAME AS A340	EA		REF									-15 5-10	R11
P	D		59612265139							D	A342 SEMI-CONDUCTOR DEVICE, DIODE: 81350; JAN1N3666-2	EA		4								12	-15 5-10	CR1
			59612265139							D	A343 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A342	EA		REF									-15 5-10	CR2
			59612265139							D	A344 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A342	EA		REF									-15 5-10	CR3

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59612265139							D	A345 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A342	EA		REF									-15 5-10	CR4
			59618140768							D	A346 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-10	CR 5
			59618140768							D	A347 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-10	CR6
			59618140768							D	A348 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-10	CR7
P	D		59610507499							D	A349 TRANSISTOR: 81350; JAN2N2219	EA		37								185	-15 5-10	Q1
			59610507499							D	A350 TRANSISTOR: SAME AS A349	EA		REF									-15 5-10	Q3
			59610507499							D	A351 TRANSISTOR: SAME AS A349	EA		REF									-15 5-10	Q4
			59610507499							D	A352 TRANSISTOR: SAME AS A349	EA		REF									-15 5-10	Q6
			59610507499							D	A353 TRANSISTOR: SAME AS A349	EA		REF									-15 5-10	Q7
P	D		59618088393							D	A354 TRANSISTOR: 81350; JAN2N491	EA		2								10	-15 5-10	Q2
			59618088393							D	A355 TRANSISTOR: SAME AS A354	EA		REF									-15 5-10	Q5

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59709564972							D	A356 INSULATOR, DISK: SAME AS A096	EA		REF									-15 5-10	H1
P	H	T	74409352376							C	A357 CIRCUIT CARD ASSEMBLY: 58189; A65205-001	EA		1	1	2	3	1	2	3		3	-15 4-2 4	
X1	D									D	A358 PRINTED CIRCUIT BOARD: 58189; A65206-001	EA		1									-15 5-11	
P	D		59109579909							D	A359A CAPACITOR, FIXED, MICA: 81349; CM05F391J03	EA		9								27	-15 5-11	C1
			59109579909							D	A360A CAPACITOR, FIXED, MICA: SAME AS A359A	EA		REF									-15 5-11	C2
			59109579909							D	A361A CAPACITOR, FIXED, MICA: SAME AS A359A	EA		REF									-15 5-11	C3
			59109579909							D	A362A CAPACITOR, FIXED, MICA: SAME AS A359A	EA		REF									-15 5-11	C4
			59109579909							D	A363A CAPACITOR, FIXED, MICA: SAME AS A359A	EA		REF									-15 5-11	C5
			59109579909							D	A364A CAPACITOR, FIXED, MICA: SAME AS A359A	EA		REF									-15 5-11	C6
			59109579909							D	A365A CAPACITOR, FIXED, MICA: SAME AS A359A	EA		REF									-15 5-11	C7

(1) (A) SOURCE CD	(1) (B) MAINT DC	(1) (C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59109579909							D	A366A CAPACITOR, FIXED, MICA: SAME AS A359A	EA		REF										-15 5-11	C8
			59109579909							D	A367A CAPACITOR, FIXED, MICA: SAME AS A359A	EA		REF										-15 5-11	C9
P	D		59109485984							D	A368 CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BE106M	EA		2								6	-15 5-11	C10
			59109485984							D	A369 CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A368	EA		REF									-15 5-11	C11
			59627910994							D	A370 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-11	Z1
P	D		59052792627							D	A371 RESISTOR, FIXED, COMPOSITION: 81349; RC42GF750J	EA		2								6	-15 5-11	R91
			59052792627							D	A372 RESISTOR, FIXED, COMPOSITION: SAME AS A371	EA		REF									-15 5-11	R92
P	D		59056819969							D	A373 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF332J	EA		9								27	-15 5-11	R1
			59056819969							D	A374 RESISTOR, FIXED, COMPOSITION: SAME AS A373	EA		REF									-15 5-11	R11
			59056819969							D	A375 RESISTOR, FIXED, COMPOSITION: SAME AS A373	EA		REF									-15 5-11	R21

(1) (A) SOURCE CD	(1) (B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59056819969							D	A376 RESISTOR, FIXED, COMPOSITION: SAME AS A373	EA		REF									-15 5-11	R31
			59056819969							D	A377 RESISTOR, FIXED, COMPOSITION: SAME AS A373	EA		REF									-15 5-11	R41
			59056819969							D	A378 RESISTOR, FIXED, COMPOSITION: SAME AS A373	EA		REF									-15 5-11	R51
			59056819969							D	A379 RESISTOR, FIXED, COMPOSITION: SAME AS A373	EA		REF									-15 5-11	R61
			59056819969							D	A380 RESISTOR, FIXED, COMPOSITION: SAME AS A373	EA		REF									-15 5-11	R71
			59056819969							D	A381 RESISTOR, FDCIXED, COMPOSITION: SAME AS A373	EA		REF									-15 5-11	R81
P	D		59056869997							D	A382 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF682J	EA		9									27 5-11	-15 R2
			59056869997							D	A383 RESISTOR, FIXED, COMPOSITION: SAME AS A382	EA		REF									-15 5-11	R12
			59056869997							D	A384 RESISTOR, FIXED, COMPOSITION: SAME AS A382	EA		REF									-15 5-11	R22
			59056869997							D	A385 RESISTOR, FIXED, COMPOSITION: SAME AS A382	EA		REF									-15 5-11	R32

(1) (A) SOURCE CD	(1) (B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59056869997							D	A386 RESISTOR, FIXED, COMPOSITION: SAME AS A382	EA		REF									-15 5-11	R42
			59056869997							D	A387 RESISTOR, FIXED, COMPOSITION: SAME AS A382	EA		REF									-15 5-11	R52
			59056869997							D	A388 RESISTOR, FIXED, COMPOSITION: SAME AS A382	EA		REF									-15 5-11	R62
			59056869997							D	A389 RESISTOR, FIXED, COMPOSITION: SAME AS A382	EA		REF									-15 5-11	R72
			59056869997							D	A390 RESISTOR, FD(ED, COMPOSITION: SAME AS A382	EA		REF									-15 5-11	R82
P	D		59058000179							D	A391 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF563J	EA		10								30	-15 5-11	R3
			59058000179							D	A392 RESISTOR, FIXED, COMPOSITION: SAME AS A391	EA		REF									-15 5-11	R13
			59058000179							D	A393 RESISTOR, FIXED, COMPOSITION: SAME AS A391	EA		REF									-15 5-11	R23
			59058000179							D	A394 RESISTOR, FIXED, COMPOSITION: SAME AS A391	EA		REF									-15 5-11	R33
			59058000179							D	A395 RESISTOR, FIXED, COMPOSITION: SAME AS A391	EA		REF									-15 5-11	R43

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59058000179							D	A396 RESISTOR, FIXED, COMPOSITION: SAME AS A391	EA		REF									-15 5-11	R53
			59058000179							D	A397 RESISTOR, FIXED, COMPOSITION: SAME AS A391	EA		REF									-15 5-11	R63
			59058000179							D	A398 RESISTOR, FIXED, COMPOSITION: SAME AS A391	EA		REF									-15 5-11	R73
			59058000179							D	A399 RESISTOR, FIXED, COMPOSITION: SAME AS A391	EA		REF									-15 5-11	R83
			59056832238							D	A400 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R4
			59056832238							D	A401 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R7
			59056832238							D	A402 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R14
			59056832238							D	A403 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R17
			59056832238							D	A404 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R24
			59056832238							D	A405 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R27

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59056832238							D	A406 RESISTOR, FDIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R34
			59056832238							D	A407 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R37
			59056832238							D	A408 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R44
			59056832238							D	A409 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R47
			59056832238							D	A410 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R54
			590568322381							D	A411 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R57
			59056832238							D	A412 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R64
			59056832238							D	A413 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R67
			59056832238							D	A414 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R74
			59056832238							D	A415 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R77

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			69056832238							D	A416 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R84
			59056832238							D	A417 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-11	R87
P	D		59056863903							D	A418 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF333J	EA		9								27	-15 5-11	R5
			59056863903							D	A419 RESISTOR, FIXED, COMPOSITION: SAME AS A418	EA		REF									-15 5-11	R15
			59056863903							D	A420 RESISTOR, FIXED, COMPOSITION: SAME AS A418	EA		REF									-15 5-11	R25
			59056863903							D	A421 RESISTOR, FIXED, COMPOSITION: SAME AS A418	EA		REF									-15 5-11	R35
			59056863903							D	A422 RESISTOR, FIXED, COMPOSITION: SAME AS A418	EA		REF									-15 5-11	R45
			59056863903							D	A423 RESISTOR, FIXED, COMPOSITION: SAME AS A418	EA		REF									-15 5-11	R55
			59056863903							D	A424 RESISTOR, FIXED, COMPOSITION: SAME AS A418	EA		REF									-15 5-11	R65
			59056863903							D	A425 RESISTOR, FIXED, COMPOSITION: SAME AS A418	EA		REF									-15 5-11	R75

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59056863903							D	A426 RESISTOR, FIXED, COMPOSITION: SAME AS A418	EA		REF									-15 5-11	R85
P	D		59058016998							D	A427 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF621J	EA		9								27	-15 5-11	R6
			59058016998							D	A428 RESISTOR, FIXED, COMPOSITION: SAME AS A427	EA		REF									-15 5-11	R16
			59058016998							D	A429 RESISTOR, FIXED, COMPOSITION: SAME AS A427	EA		REF									-15 5-11	R26
			59058016998							D	A430 RESISTOR, FIXED, COMPOSITION: SAME AS A427	EA		REF									-15 5-11	R36
			59058016998							D	A431 RESISTOR, FIXED, COMPOSITION: SAME AS A427	EA		REF									-15 5-11	R46
			59058016998							D	A432 RESISTOR, FIXED, COMPOSITION: SAME AS A427	EA		REF									-15 5-11	R56
			59058016998							D	A433 RESISTOR, FIXED, COMPOSITION: SAME AS A427	EA		REF									-15 5-11	R66
			59058016998							D	A434 RESISTOR, FIXED, COMPOSITION: SAME AS A427	EA		REF									-15 5-11	R76
			59058016998							D	A435 RESISTOR, FIXED, COMPOSITION: SAME AS A427	EA		REF									-15 5-11	R86

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59051955571							D	A436 RESISTOR, FIXED, COMPOSITION: 81349; RC20GF680J	EA		18								54	-15 5-11	R8
			59051955571							D	A437 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF									-15 5-11	R9
			59051955571							D	A438 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF									-15 5-11	R18
			59051955571							D	A439 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF									-15 5-11	R19
			59051955571							D	A440 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF									-15 5-11	R28
			59051955571							D	A441 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF									-15 5-11	R29
			59051955571							D	A442 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF									-15 5-11	R38
			59051955571							D	A443 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF									-15 5-11	R39
			59051955571							D	A444 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF									-15 5-11	R48
			59051955571							D	A445 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF									-15 5-11	R49

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59051955571							D	A446 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF										-15 5-11	R58
			59051955571							D	A447 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF										-15 5-11	R59
			59051955571							D	A448 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF										-15 5-11	R68
			59051955571							D	A449 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF										-15 5-11	R69
			59051955571							D	A450 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF										-15 5-11	R78
			59051955571							D	A451 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF										-15 5-11	R79
			59051955571							D	A452 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF										-15 5-11	R88
			59051955571							D	A453 RESISTOR, FIXED, COMPOSITION: SAME AS A436	EA		REF										-15 5-11	R89
P	D		59056910195							D	A454 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF562J	EA		9									27	-15 5-11	R10
			59056910195							D	A455 RESISTOR, FIXED, COMPOSITION: SAME AS A454	EA		REF										-15 5-11	R20

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59056910195							D	A456 RESISTOR, FIXED, COMPOSITION: SAME AS A454	EA		REF									-15 5-11	R30
			59056910195							D	A457 RESISTOR, FIXED, COMPOSITION: SAME AS A454	EA		REF									-15 5-11	R40
			59056910195							D	A458 RESISTOR, FIXED, COMPOSITION: SAME AS A454	EA		REF									-15 5-11	R50
			59056910195							D	A459 RESISTOR, FIXED, COMPOSITION: SAME AS A454	EA		REF									-15 5-11	R60
			59056910195							D	A460 RESISTOR, FIXED, COMPOSITION: SAME AS A454	EA		REF									-15 5-11	R70
			59056910195							D	A461 RESISTOR, FIXED, COMPOSITION: SAME AS A454	EA		REF									-15 5-11	R80
			59056910195							D	A462 RESISTOR, FIXED, COMPOSITION: SAME AS A454	EA		REF									-15 5-11	R90
			59618140768							D	A463 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR1
			59618140768							D	A464 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR2
			59618140768							D	A465 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR3

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59618140768							D	A466 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR4
			59618140768							D	A467 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR5
			59618140768							D	A468 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR6
			59618140768							D	A469 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR7
			59618140768							D	A470 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR8
			59618140768							D	A471 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR9
			59618140768							D	A472 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR10
			59618140768							D	A473 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR11
			59618140768							D	A474 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR12
			59618140768							D	A475 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	CR13

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59618140768							D	A476 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	 CR14
			59618140768							D	A477 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	 CR15
			59618140768							D	A478 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	 CR16
			59618140768							D	A479 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	 CR17
			59618140768							D	A480 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-11	 CR18
P	D		59610680687							D	A481 SEMI-CONDUCTOR DEVICE, DIODE: 81350; JAN1N3828A	EA		2								6	-15 5-11	 VR1
			59610680687							D	A482 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A481	EA		REF									-15 5-11	 VR2
			59610507499							D	A483 TRANSISTOR: SAME AS A349	EA		REF									-15 5-11	 Q1
			59610507499							D	A484 TRANSISTOR: SAME AS A349	EA		REF									-15 5-11	 Q3
			59610507499							D	A485 TRANSISTOR: SAME AS A349	EA		REF									-15 5-11	 Q5

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59610507499							D	A486 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q7
			59610507499							D	A487 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q9
			59610507499							D	A488 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q11
			59610507499							D	A489 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q13
			59610507499							D	A490 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q15
			59610507499							D	A491 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q17
			59610507499							D	A492 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q19
			59610507499							D	A493 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q21
			59610507499							D	A494 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q23
			59610507499							D	A495 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q25
			59610507499							D	A496 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q27
			59610507499							D	A497 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q29

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59610507499							D	A498 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q31
			59610507499							D	A499 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q33
			59610507499							D	A500 TRANSISTOR:	EA		REF									-15	
											SAME AS A349												5-11	Q35
			59618804779							D	A501 TRANSISTOR:	EA		REF									-15	
											SAME AS A081												5-11	Q2
			59618804779							D	A502 TRANSISTOR:	EA		REF									-15	
											SAME AS A081												5-11	Q4
			59618804779							D	A503 TRANSISTOR:	EA		REF									-15	
											SAME AS A081												5-11	Q6
			59618804779							D	A504 TRANSISTOR:	EA		REF									-15	
											SAME AS A081												5-11	Q8
			59618804779							D	A505 TRANSISTOR:	EA		REF									-15	
											SAME AS A081												5-11	Q10
			59618804779							D	A506 TRANSISTOR:	EA		REF									-15	
											SAME AS A081												5-11	Q12
			59618804779							D	A507 TRANSISTOR:	EA		REF									-15	
											SAME AS A081												5-11	Q14
			59618804779							D	A508 TRANSISTOR:	EA		REF									-15	
											SAME AS A081												5-11	Q16
			59618804779							D	A509 TRANSISTOR:	EA		REF									-15	
											SAME AS A081												5-11	Q18

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59618804779							D	A510 TRANSISTOR: SAME AS A081	EA		REF									-15 5-11	Q20
			59618804779							D	A511 TRANSISTOR: SAME AS A081	EA		REF									-15 5-11	022
			59618804779							D	A512 TRANSISTOR- SAME AS A081	EA		REF									-15 5-11	Q24
			59618804779							D	A513 TRANSISTOR: SAME AS A081	EA		REF									-15 5-11	Q26
			59618804779							D	A514 TRANSISTOR: SAME AS A081	EA		REF									-15 5-11	Q28
			59618804779							D	A515 TRANSISTOR: SAME AS A081	EA		REF									-15 5-11	Q30
			59618804779							D	A516 TRANSISTOR: SAME AS A081	EA		REF									-15 5-11	Q32
			59618804779							D	A517 TRANSISTOR: SAME AS A081	EA		REF									-15 5-11	Q34
			59618804779							D	A518 TRANSISTOR: SAME AS A081	EA		REF									-15 5-11	Q36
			59709564972							D	A519 INSULATOR, DISK SAME AS A096	EA		REF									-15 5-11	H1
A	H	T								C	A519A CIRCUIT CARD ASSEMBLY: 58189; A65227-001	EA		1									-15 4-2	4.1
X1	D									D	A519B PRINTED CIRCUIT BOARD: 58189; A65228-001	EA		1									-15 5-13.2	
P	D		'74401343719							D	AS19C ELECTRONIC COMPONENT ASSEMBLY: 58189; T00023-004	EA		9								27	-15 5-13.2	Z1

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			74401343719							D	A519D ELECTRONIC COMPONENT ASSEMBLY: SAME AS A519C	EA		REF									-15 5-13.2	Z2
			74401343719							D	A519E ELECTRONIC COMPONENT ASSEMBLY: SAME AS A519C	EA		REF									-15 5-13.2	Z3
			74401343719							D	A519F ELECTRONIC COMPONENT ASSEMBLY: SAME AS A519C	EA		REF									-15 5-13.2	Z4
			74401343719							D	A519G ELECTRONIC COMPONENT ASSEMBLY: SAME AS A519C	EA		REF									-15 5-13.2	Z5
			74401343719							D	A519H ELECTRONIC COMPONENT ASSEMBLY: SAME AS A519C	EA		REF									-15 5-13.2	Z6
			74401343719							D	A519J ELECTRONIC COMPONENT ASSEMBLY: SAME AS A519C	EA		REF									-15 5-13.2	Z7
			74401343719							D	A519K ELECTRONIC COMPONENT ASSEMBLY: SAME AS A519C	EA		REF									-15 5-13.2	Z8
			74401343719							D	A519L ELECTRONIC COMPONENT ASSEMBLY: SAME AS A519C	EA		REF									-15 5-13.2	Z9
			59627910994							D	A519M INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A167	EA		REF									-15 5-13.2	Z10
P	H	T	74409352398							C	A520 CIRCUIT CARD ASSEMBLY: 58189; A65209-002	EA		1	1	2	3	1	2	3		3	-15 4-2	1
X1	D									D	A521 PRINTED CIRCUIT BOARD: 58189; A65210-001	EA		1									-15 5-12	

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59106824925							D	A522 CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BF476K	EA		2								6	-15 5-12	C1
			59106824925							D	A523 CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A522	EA		REF									-15 5-12	C9
P	D		59109960666							D	A524 CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BC227M	EA		1								3	-15 5-12	C6
P	D		59109412356							D	A525 CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BE107M	EA		2								6	-15 5-12	C7
			59109412356							D	A526 CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A525	EA		REF									-15 5-12	C8
P	D		59109260111							D	A527 CAPACITOR, FIXED, ELECTROLYTIC: 81349; CE11C100H	EA		2								6	-15 5-12	C2
			59109260111							D	A528 CAPACITOR, FIXED, ELECTROLYTIC: SAME AS A527	EA		REF									-15 5-12	C3
			59627911048							D	A529 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-12	Z1
			59627911048							D	A530 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A013	EA		REF									-15 5-12	Z2
			59627911120							D	A531 INTEGRATED CIRCUIT, LOGIC GATE: SAME AS A005	EA		REF									-15 5-12	Z3

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59056863368							D	A532 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF203J	EA		1								3	-15 5-12	R1
			59057235251							D	A533 RESISTOR, FIXED, COMPOSITION: SAME AS A051	EA		REF									-15 5-12	R3
			59056832238							D	A534 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-12	R8
			59056832238							D	A535 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-12	R15
P	D		59052991971							D	A536 RESISTOR, FIXED, COMPOSITION: 81349; RC20GF822J	EA		1								3	-15 5-12	R2
			59056816462							D	A537 RESISTOR, FIXED, COMPOSITION: SAME AS A316	EA		REF									-15 5-12	R5
			59056816462							D	A538 RESISTOR, FIXED, COMPOSITION: SAME AS A316	EA		REF									-15 5-12	R12
			59056863798							D	A539 RESISTOR, FIXED, COMPOSITION: SAME AS A326	EA		REF									-15 5-12	R4
			59056863798							D	A540 RESISTOR, FIXED, COMPOSITION: SAME AS A326	EA		REF									-15 5-12	R11
			59056832241							D	A541 RESISTOR, FIXED, COMPOSITION: SAME AS A331	EA		REF									-15 5-12	R6

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59056832241							D	A542 RESISTOR, FIXED, COMPOSITION: SAME AS A331	EA		REF									-15 5-12	R13
P	D		59056837723							D	A543 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF152J	EA		2								6	-15 5-12	R7
			59056837723							D	A544 RESISTOR, FIXED, COMPOSITION: SAME AS A543	EA		REF									-15 5-12	R14
P	D		59059751146							D	A545 RESISTOR, FIXED, WIRE WOUND: 81349: RW67V680	EA		2								6	-15 5-12	R10
			59059751146							D	A546 RESISTOR, FIXED, WIREWOUND: SAME AS A545	EA		REF									-15 5-12	R17
P	D		59052792642							D	A547 RESISTOR, FIXED, COMPOSITION: 81349; RC32GF391J	EA		2								6	-15 5-12	R9
			59052792642							D	A548 RESISTOR, FIXED, COMPOSITION: SAME AS A547	EA		REF									-15 5-12	R16
			59618140768							D	A549 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-12	CR1
			59618140768							D	A550 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-12	CR2
			59618140768							D	A551 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-12	CR3

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59618140768							D	A552 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-12	 CR4
			59618140768							D	A553 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-12	 CR5
P	D		59618429609							D	A554 SEMI-CONDUCTOR DEVICE, DIODE: 81350; JAN1N966B	EA		1								5	-15 5-12	 VR1
			59618804779							D	A555 TRANSISTOR: SAME AS A081	EA		REF									-15 5-12	 Q1
			59618804779							D	A556 TRANSISTOR: SAME AS A081	EA		REF									-15 5-12	 Q4
			59610507499							D	A557 TRANSISTOR: SAME AS A349	EA		REF									-15 5-12	 Q2
			59610507499							D	A558 TRANSISTOR: SAME AS A349	EA		REF									-15 5-12	 Q5
P	D		59618920821							D	A559 TRANSISTOR: 81350; JAN2N1412	EA		2								10	-15 5-12	 Q3
			59618920821							D	A560 TRANSISTOR: SAME AS A559	EA		REF									-15 5-12	 Q6
			59709564972							D	A561 INSULATOR, DISK: SAME AS A096-	EA		REF									-15 5-12	 H1
C	D		53109349765							D	A562 NUT, PLAIN, HEXAGON: 96906; MS35650-304	EA		44									-15 5-12	 H2

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	D		58415151918							D	A563 WASHER, FLAT: 58189; 688000-066	EA		2									-15 5-12	 H3
C	D		53109338120							D	A564M WASHER, LOCK: 96906; MS35338-138	EA		66									-15 5-12	 H4
P	H	T	74409352370							C	A565 CIRCUIT CARD ASSEMBLY: 58189; A65215-001	EA		1	1	2	3	2	3	3			-15 4-2	 3
X1	D									D	A566 PRINTED CIRCUIT BOARD: 58189; A65216-001	EA		1									-15 5-13	
			59056863798							D	A567 RESIST'OR, FIXED, COMPOSITION: SAME AS A326	EA		REF									-15 5-13	 R1
			59056863798							D	A568 RESISTOR, FIXED, COMPOSITION: SAME AS A326	EA		REF									-15 5-13	 R4
			59056863798							D	A569 RESISTOR, FIXED, COMPOSITION: SAME AS A326	EA		REF									-15 5-13	 R7
			59056863798							D	A570 RESISTOR, FIXED, COMPOSITION: SAME AS A326	EA		REF									-15 5-13	 R10
			59056816462							D	A571 RESISTOR, FIXED, COMPOSITION: SAME AS A316	EA		REF									-15 5-13	 R2
			59, 056816462							D	A572 RESISTOR, FIXED, COMPOSITION: SAME AS A316	EA		REF									-15 5-13	 R5

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			'59056816462							D	A573 RESISTOR, FIXED, COMPOSITION: SAME AS A316	EA		REF										-15 5-13	R8
			59056816462							D	A574 RESISTOR, FIXED, COMPOSITION: SAME AS A316	EA		REF										-15 5-13	R11
P	D		59056824101							D	A575 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF752J	EA		4								12	-15 5-13	R3
			59056824101							D	A576 RESISTOR, FIXED, COMPOSITION: SAME AS A575	EA		REF									-15 5-13	R6
			59056824101							D	A577 RESISTOR, FIXED, COMPOSITION: SAME AS A575	EA		REF									-15 5-13	R9
			59056824101							D	A578 RESISTOR, FIXED, COMPOSITION: SAME AS A575	EA		REF									-15 5-13	R12
P	D		59056863369							D	A579 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF331J	EA		5								15	-15 5-13	R13
			59056863369							D	A580 RESISTOR, FIXED, COMPOSITION: SAME AS A579	EA		REF									-15 5-13	R17
			59056863369							D	A581 RESISTOR, FIXED, COMPOSITION: SAME AS A579	EA		REF									-15 5-13	R21
			59056863369							D	A582 RESISTOR, FIXED, COMPOSITION: SAME AS A579	EA		REF									-15 5-13	R25

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59056863369							D	A583 RESISTOR, FIXED, COMPOSITION: SAME AS A579	EA		REF									-15 5-13	R29
P	D		59058016444							D	A584 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF911J	EA		5								15	-15 5-13	R14
			59058016444							D	A585 RESISTOR, FIXED, COMPOSITION: SAME AS A584	EA		REF									-15 5-13	R18
			59058016444							D	A586 RESISTOR, FIXED, COMPOSITION: SAME AS A584	EA		REF									-15 5-13	R22
			59058016444							D	A587 RESISTOR, FIXED, COMPOSITION: SAME AS A584	EA		REF									-15 5-13	R26
			59058016444							D	A588 RESISTOR, FIXED, COMPOSITION: SAME AS A584	EA		REF									-15 5-13	R30
			59056870000							D	A589 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-13	R15
			59056870000							D	A590 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-13	R19
			59056870000							D	A591 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-13	R23
			59056870000							D	A592 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-13	R27

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59056870000							D	A593 RESISTOR, FIXED, COMPOSITION: SAME AS A036	EA		REF									-15 5-13	 R31
P	D		59056832236							D	A594 RESISTOR, FIXED, COMPOSITION: 81349: RC07GF391J	EA		6								18	-15 5-13	 R16
			59056832236							D	A595 RESISTOR, FIXED, COMPOSITION: SAME AS A594	EA		REF									-15 5-13	 R20
			59056832236							D	A596 RESISTOR, FIXED, COMPOSITION: SAME -S A594	EA		REF									-15 5-13	 R24
			59056832236							D	A597 RESISTOR, FIXED, COMPOSITION: SAME AS A594	EA		REF									-15 5-13	 R28
			59056832236							D	A598 RESISTOR, FIXED, COMPOSITION: SAME AS A594	EA		REF									-15 5-13	 R32
			59056832236							D	A599 RESISTOR, FIXED, COMPOSITION: SAME AS A594	EA		REF									-15 5-13	 R41
P	D		59050518012							D	A600 RESISTOR, FIXED, FILM: 81349; RN60D7321F	EA		1								3	-15 5-13	 R33
			59056832246							D	A601 RESISTOR, FIXED, COMPOSITION: SAME AS A338	EA		REF									-15 5-13	 R34
			59056832246							D	A602 RESISTOR, FIXED, COMPOSITION: SAME AS A338	EA		REF									-15 5-13	 R39

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59056824097							D	A603 RESISTOR, FIXED, COMPOSITION: 81349; RC07GF302J	EA		1								3	-15 5-13	R35
			59056832238							D	A604 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-13	R36
			59056832238							D	A605 RESISTOR, FIXED, COMPOSITION: SAME AS A224	EA		REF									-15 5-13	R37
			59056819970							D	A606 RESISTOR, FIXED, COMPOSITION: SAME AS A337	EA		REF									-15 5-13	R38
			59058000179							D	A607 RESISTOR, FIXED, COMPOSITION: SAME AS A391	EA		REF									-15 5-13	R40
			59618140768							D	A608 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-13	CR1
			59618140768							D	A609 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-13	CR2
			59618140768							D	A610 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-13	CR3
			59618140768							D	A611 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-13	CR4
			59618140768							D	A612 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-13	CR5

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59618140768							D	A613 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A066	EA		REF									-15 5-13	CR6
P	D		59619952310							D	A614 SEMI-CONDUCTOR DEVICE, DIODE: 81349; JAN1N752A	EA		5								25	-15 5-13	VR1
			59619952310							D	A615 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A614	EA		REF									-15 5-13	VR2
			59619952310							D	A616 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A614	EA		REF									-15 5-13	VR3
			59619952310							D	A617 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A614	EA		REF									-15 5-13	VR4
			59619952310							D	A618 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A614	EA		REF									-15 5-13	VR5
			59610507499							D	A619 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	Q1
			59610507499							D	A620 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	Q2
			59610507499							D	A621 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	Q3
			59610507499							D	A622 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	Q4
			59610507499							D	A623 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	Q5

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59610507499							D	A624 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	 Q6
			59610507499							D	A625 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	 Q7
			59610507499							D	A626 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	 Q8
			59610507499							D	A627 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	 Q9
			59610507499							D	A628 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	 Q10
			59610507499							D	A629 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	 Q11
			59610507499							D	A630 TRANSISTOR: SAME AS A349	EA		REF									-15 5-13	 Q12
			59709564972							D	A631 INSULATOR, DISK: SAME AS A096	EA		REF									-15 5-13	 H1
A	H	T								C	A631A CIRCUIT CARD ASSEMBLY: 58189; A65223-001	EA		1									-15 4-2	 3.1
X1	D									D	A631B PRINTED CIRCUIT BOARD: 58189; A65224-001	EA		1									-15 5-13.1	
P	D		74401343714							D	A631CM ELECTRONIC COMPONENT ASSEMBLY: 58189; T00122-004	EA		1								3	-15 5-13.1	 Z1
P	D		74401343717							D	A631DM ELECTRONIC COMPONENT ASSEMBLY: 58189; T00024-002	EA		1								3	-15 5-13.1	 Z2
P	D		74401343713							D	A631EM ELECTRONIC COMPONENT ASSEMBLY: 58189; T00122-002	EA		1								3	-15 5-13.1	 Z3

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		74401343721							D	A631FM ELECTRONIC COMPONENT ASSEMBLY: 58189: T00121-003	EA		1								3	-15 5-13.1	Z4
P	D		74401343720							D	A631GM ELECTRONIC COMPONENT ASSEMBLY: 58189; T00121-001	EA		1								3	-15 5-13.1	Z5
P	H	T	74400189634							C	A632 CIRCUIT CARD ASSEMBLY: 80063; SME546659	EA		1	1	2	3	1	2	3		3	-15 4-2	2
X1	D									D	A633 PRINTED CIRCUIT BOARD: 80063; SME546657	EA		1									-15 5-14	
P	D		59109494827							D	A634 CAPACITOR, FIXED, ELECTROLYTIC: 81349: CS13BD226M	EA		1								3	-15 5-14	C1

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59108999129							D	A635 CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BD686M	EA		1								3	-15 5-14	C2
P	D		59627911047							D	A636A INTEGRATED CIRCUIT LOGIC GATE: 58189; T00009	EA		5								15	-15 5-14	Z1
			59627911047							D	A637A INTEGRATED CIRCUIT LOGIC GATE: SAME AS A636A	EA		REF									-15 5-14	Z2
			59627911047							D	A638A INTEGRATED CIRCUIT LOGIC GATE: SAME AS A636A	EA		REF									-15 5-14	Z3
			59627911047							D	A639A INTEGRATED CIRCUIT LOGIC GATE: SAME AS A636A	EA		REF									-15 5-14	Z4
			59627911047							D	A640A INTEGRATED CIRCUIT LOGIC GATE: SAME AS A636A	EA		REF									-15 5-14	Z5
A	H	R								C	A642A CHASSIS LOGIC: 58189; A64434-002	EA		1									-15 4-2	53
X2	H									D	A646 SLIDE: 06666; C300S24	EA		1									-15 4-2	51
C	H									*	A646A SCREW, MACHINE: 96906; MS35224-63	EA		10									-15 4-2	47
			53109349765							*	A646B NUT, PLAIN, HEXAGON: SAME AS A562	EA		REF									-15 4-2	48
			53109338120							*	A646C WASHER, LOCK: SAME AS A564 M	EA		REF									-15 4-2	49

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H		53400605386							D	A647 HANDLE BOW: 96906; MS39087-3	EA		1									-15 4-2	 20
C	H		53050593661							*	A648 SCREW, MACHINE: 96906; MS51958-65	EA		8									-15 4-2	 17
			53109338120							*	A649M WASHER, LOCK: SAME AS A564 M	EA		REF									-15 4-2	 18
C	H		53101670812							*	A650 WASHER, FLAT: 88044; AN960C10L	EA		39									-15 4-2	 19
M	H									D	A651 STRIP, DESIGNATION: 58189: A61707-002	EA		1									-15 4-2	 14
A	H									D	A651A WIRING HARNESS: 58189; A65194-001	EA		1									-15 4-2	 55
C	H		59402049142							E	A652 TERMINAL, LUG: 96906; TvS25036-12	EA		6									-15 4-2	 56
A	H	R								D	A652A CONTACT PLATE ASSEMBLY: 58189; A64434-003	EA		1									-15 4-2	 46.1
C	H		53050593660							*	A653A SCREW, MACHINE: 96906; MS51958-64	EA		9									-15 4-2	 34
			53101670812							*	A653B WASHER, FLAT: SAME AS A650	EA		REF									-15 4-2	 35.1
			53109349765							*	A653C NUT, HEXAGON: SAME AS A562	EA		REF									-15 4-2	 36
			53109338120							*	A653DM WASHER, LOCK: SAME AS A564 M	EA		REF									-15 4-2	 35
X2	H									E	A653E STRIP, INSULATING: 80063; SMD634807-2	EA		1									-15 4-2	 37

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53258132050							E	A653F GROMMET, RUBBER: 96906; MS35490-32	EA		2									-15 4-2	 38
C	H		59408272653							E	A653G TERMINAL LUG: 96906; MS77068-2	EA		4									-15 4-2	 50

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									E	A656 BUSS BAR: 58189; AS3855-001	EA		1									-15 4-2	 41
C	H		53055826151							*	A656A SCREW, MACHINE, NYLON: 96906; MS18212-30	EA		3									-15 4-2	 39
C	H									*	A656B NUT, NYLON, HEXAGON: 80063; SMB546299	EA		3									-15 4-2	 40
A	H									E	A657 CONTACT PLATE: 58189; A64765-001	EA		1									-15 4-2	 46
X2	H									F	A657A INSULATOR, PC CARD: 16512; 200150-01	EA		15									-15 4-2	 46.2
P	H		59991345993							F	A657B PIN, ELECTRICAL CONTACT: 16512; 540111-04	EA		870	100	200	300	100	200	300		100	-15 4-2	 46.3
C	H		53050546651							*	A657C SCREW, MACHINE: 96906: MS51957-27	EA		40									-15 4-2	 45.4
X2	H									F	A657D INSULATOR, CONNECTOR: 16512; 550056-01	EA		100									-15 4-2	 46.5
P	H		59991392510							F	A657E PIN, ELECTRICAL CONTACT: 16512; 540123-03	EA		180	5	10	15	5	10	15		45	-15 4-2	 46.6
										F	A657F PIN, ELECTRICAL CONTACT: SAME AS A657E	EA		REF									-15 4-2	 46.7
										F	A657G PIN, ELECTRICAL CONTACT: SAME AS A657E	EA		REF									-15 4-2	 46.8
										F	A657H PIN, ELECTRICAL CONTACT: SAME AS A657E	EA		REF									-15 4-2	 46.9

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H									E	A658 SPACER:	EA		8										-15	
											80063: SMB546132													4-2	45
C	H		53050546652							*	A659 SCREW, MACHINE:	EA		32										-15	
											96906; MS51957-28													4-2	42
C	H		53109296395							*	A660 WASHER, LOCK:	EA		107										-15	
											58189; MS35338-136													4-2	43
C	H		53106389857							*	A661 WASHER, FLAT:	EA		26										-15	
											88044: AN960C6L													4-2	44
A	H	R								D	A662A CHASSIS ASSEMBLY:	EA		1										-15	
											58189; A64434-004													4-2	54
X1	H									E	A666 CHASSIS ELECTRICAL EQUIPMENT:	EA		1										-15	
											58189; A61706-003													4-2	52
M	H		59407735147							E	A667A TRIM, PLASTIC:	EA		1										-15	
											82654: 203413													4-2	21
P	H		59409495536							E	A668B TERMINAL, BOARD:	EA		1	1	2	3	1	2	3		1		-15	
											75382; 603C3UH													4-2	32

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53050546672							*	A669 SCREW, MACHINE: 96906; MS51957-47	EA		4									-15 4-2	 28
C	H		53109338119							*	A670 WASHER, LOCK: 96906; MS35338-137	EA		65									-15 4-2	 29
C	H		53109349759							*	A671 NUT, PLAIN, HEXAGON: 96906; MS35649-284	EA		21									-15 4-2	 30
			53106389857							*	A672B WASHER, FLAT: SAME AS A661	EA		REF									-15 4-2	 31
M	H									E	A674 STRIP, MARKER: 75382:MS603-3XXXP1A	EA		1									-15 4-2	 33
M	H									E	A675 MARKER STRIP: 75382;MS602-7XXXP1A	EA		1									-15 4-2	 27
P	H		59409836102							E	A676B TERMINAL BOARD: 75382; 602C34ST7UH	EA		1	1	2	3	1	2	3		1	-15 4-2	 26
			53109296395							*	A677 WASHER, LOCK: SAME AS A660	EA		REF									-15 4-2	 23
C	H		53050546657							*	A678 SCREW, MACHINE: 96906; MS51957-33	EA		20									-15 4-2	 22
C	H		53109349761							*	A679 NUT, PLAIN, HEXAGON: 96906; MS35649-264	EA		20									-15 4-2	 24
C	H		53105586207							*	A679A WASHER, FLAT: 88044; AN960C8L	EA		60									-15 4-2	 25
A	H	R								D	A680A PANEL ASSEMBLY: 58189; A64434-005	EA		1									-15 4-2	 20.2

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									E	A681 PANEL, BLANK: 58189; A64406-001	EA		1									-15 4-2	20.1
X2	H		53406563871							E	A682 LATCH: 94222; 49-1-1-0	EA		4									-15 4-2	15
C	H		53105319515							*	A682A WASHER, FLAT: 88044; AN960C416	EA		16									-15 4-2	15.1
P	H		59309310514							E	A683A SWITCH, PUSH: 96182; 4535-100-1B	EA		1	1	2	3	1	2	3		3	-15 4-2	16
A	H	R								B	A685 CONTROL, PANEL: 58189; A64403-001	EA		1									-15 4-1	19
C	H		53050546669							*	A686 SCREW, MACHINE: 96906; MS51957-44	EA		18									-15 4-1	16
			53105586207							*	A687 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	17
			53109338119							*	A688 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	18
X2	H									C	A689 CONTROL, PANEL: 58189; A64408-001	EA		1									-15 4-3	18
A	H									C	A690M SWITCH, PUSH BUTTON: 96182; 1197-30	EA		1									-15 4-3	14
X2	H		66059410561							D	A690A SWITCH-LIGHT UNIT: 96182; 10EA1C1	EA		7									-15 4-3	
P	H		59309593427							D	A690B SWITCH ASSEMBLY: 96182; 10EF1	EA		7	1	2	3	1	2	3		21	-15 4-3	

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									D	A690C COLORED BULB FILTER: 96182; 10ELWGGW	EA		1									-15 4-3	
X2	H									D	A690E DISPLAY SCREEN: 96182; 10EN1	EA		6									-15 4-3	
X2	H									D	A690G FRONT LENS: 96182; 10ER1T5V12START	EA		1									-15 4-3	
A	H									C	A694M SWITCH, PUSH BUTTON: 96182; 1197-31	EA		1									-15 4-3	15
			66059410561							D	A694A SWITCH-LIGHT UNIT: SAME AS A690A	EA		REF									-15 4-3	
			59309593427							D	A694B SWITCH ASSEMBLY: SAME AS A690B	EA		REF									-15 4-3	
X2	H									D	A694E COLORED BULB FILTER: 96182; 10ELR00R	EA		1									-15 4-3	
										D	A694G DISPLAY SCREEN: SAME AS A690E	EA		REF									-15 4-3	
X2	H									D	A694H FRONT LENS: 96182;10ER1TSV12STOP	EA		1									-15 4-3	
A	H									C	A698M SWITCH, PUSH BUTTON: 96182; 1197-32	EA		1									-15 4-3	11
			66059410561							D	A698A SWITCH-LIGHT UNIT: SAME AS A690A	EA		REF									-15 4-3	
			59309593427							D	A698B SWITCH ASSEMBLY: SAME AS A690B	EA		REF									-15 4-3	
X2	H									D	A698F COLORED BULB FILTER: 96182; 10ELW00W	EA		2									-15 4-3	

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
										D	A698G DISPLAY SCREEN: SAME AS A690E	EA		REF									-15 4-3	
X2	H									D	A698H FRONT LENS: 96182; 10ER1TSV13AC POWER	EA		1									-15 4-3	
A	H									C	A702M SWITCH, PUSH BUTTON: 96182; 1197-33	EA		1									-15 4-3	12
			66059410561							D	A702A SWITCH-LIGHT UNIT: SAME AS A690A	EA		REF									-15 4-3	
			59309593427							D	A702B SWITCH ASSEMBLY: SAME AS A690B	EA		REF									-15 4-3	
										D	A702E DISPLAY SCREEN: SAME AS A690E	EA		REF									-15 4-3	
X2	H									D	A702F FRONT LENS: 96182; 10ER1T5V13LAMPTEST	EA		1									-15 4-3	
A	H									C	A703M SWITCH, PUSH BUTTON: 96182; 1197-34	EA		1									-15 4-3	9
			66059410561							D	A703A SWITCH-LIGHT UNIT: SAME AS A690A	EA		REF									-15 4-3	
			59309593427							D	A703B SWITCH ASSEMBLY: SAME AS A690B	EA		REF									-15 4-3	
										D	A703D DISPLAY SCREEN: SAME AS A690E	EA		REF									-15 4-3	
X2	H									D	A703E FRONT LENS: 98182; 10ERITSV13 AUDIBLERESET	EA		1									-15 4-3	
A	H									C	A704M SWITCH, PUSH BUTTON: 96182; 1197-35	EA		1									-15 4-3	13

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(1)			REPAIRS PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7)			(8)			(9)	(10)	(11)	
(A) SOURCE CD	(B) MAINT 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 UNIT PK	QTY INC IN UNIT	(30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	45 DAY AREA RESUPPLY ALLOW BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	1 YEAR ALW PER 100 EQUIP CNTGCY PLAN	DEPOT MAINT ALW PER 100 EQUIP	ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			66059410561							D	A704A SWITCH-LIGHT UNIT: SAME AS A690A	EA		REF									-15 4-3	

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59309593427							D	A704B SWITCH ASSEMBLY:	EA		REF									-15	
											SAME AS A690B												4-3	
										D	A704C COLORED BULB FILTER:	EA		REF									-15	
											SAME AS A698F												4-3	
										D	A704E DISPLAY SCREEN:	EA		REF									-15	
											SAME AS A690E												4-3	
X2	H									D	A704F FRONT LENS:	EA		1									-15	
											96182;10ER1T5V13												4-3	
											SINGLEFEED													
A	H									C	A708M SWITCH, PUSH BUTTON:	EA		1									-15	
											96182; 1197-37												4-3	16
			66059410561							D	A708A SWITCH-LIGHT UNIT:	EA		REF									-15	
											SAME AS A690A												4-3	
			59309593427							D	A708B SWITCH ASSEMBLY:	EA		REF									-15	
											SAME AS A690B												4-3	
X2	H									D	A708C COLORED BULB FILTER:	EA		1									-15	
											96182; 10ELA00A												4-3	
										D	A708E DISPLAY SCREEN:	EA		REF									-15	
											SAME AS A690E												4-3	
X2	H									D	A708F FRONT LENS:	EA		1									-15	
											96182; 10ER1TSV13												4-3	
											LOCALTEST													
A	H									C	A712M LIGHT, INDICATOR:	EA		1									-15	
											96182; 80EA1F1WL2N13												4-3	10
											DCPOWER													
X2	H		62100195599							D	A712A HOUSING, LIGHT CAP-	EA		9									-15	
											SULE:												4-3	
											96182; 80EA1													
X2	H		62109273688							D	A712B FILTER COLOR:	EA		1									-15	
											96182; 80EF1W												4-3	

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(1)			REPAIRS PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7)			(8)			(9)	(10)	(11)	
(A) SOURCE CD	(B) MAINT 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 UNIT PK	QTY INC IN UNIT	(30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	45 DAY AREA RESUPPLY ALLOW BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	1 YEAR ALW PER 100 EQUIP CNTGCY PLAN	DEPOT MAINT ALW PER 100 EQUIP	ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									D	A712D FRONT LENS: 96182; 80EL2N13DC POWER	EA		1									-15 4-3	

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
A	H									C	A716M LIGHT, INDICATOR: 96182; 80EA1F1RL2N13 OUTSYN	EA		1									-15 4-3	4
			62100195599							D	A716A HOUSING LIGHT CAP-SULE: SAME AS A712A	EA		REF									-15 4-3	
X2	H		62100119338							D	A716B FILTER, COLOR: 96182; 80EF1R	EA		7									-15 4-3	
X2	H									D	A716D FRONT LENS: 96182; 80EL2N130UT SYN	EA		1									-15 4-3	
A	H									C	A720 M LIGHT, INDICATOR: 96182; 80EA1F1RL2N13 PHOTOCELLCHECK	EA		1									-15 4-3	6
			62100195599							D	A720A HOUSING LIGHT CAP-SULE: SAME AS A712A	EA		REF									-15 4-3	
			62100119338							D	A720B FILTER, COLOR: SAME AS A716B	EA		REF									-15 4-3	
X2	H									D	A720D FRONT LENS: 96182; 80EL2N13PHOTO CELLCHECK	EA		1									-15 4-3	
A	H									C	A724M LIGHT, INDICATOR: 96182; 80EAIF1RL2N13 INVALIDCHARACTER	EA		1									-15 4-3	7
			6210019S599							D	A724A HOUSING LIGHT CAP-SULE: SAME AS A712A	EA		REF									-15 4-3	
			62100119338							D	A724B FILTER, COLOR: SAME AS A716B	EA		REF									-15 4-3	

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(1)			REPAIRS PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE										(4)	(5)	(6)	(7)			(8)			(9)	(10)	(11)	
(A) SOURCE CD	(B) MAINT 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 UNIT PK	QTY INC IN UNIT	(30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	45 DAY AREA RESUPPLY ALLOW BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	1 YEAR ALW PER 100 EQUIP CNTGCY PLAN	DEPOT MAINT ALW PER 100 EQUIP	ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									D	A724D FRONT LENS: 96182; 80EL2N13INVAL IDCHARACTER	EA		1									-15 4-3	

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
A	H									C	A728M LIGHT, INDICATOR: 96182; 80EA1F1RL2N13 CARDALARM	EA		1									-15 4-3	3
			63100195599							D	A728A HOUSING LIGHT CAP-SULE: SAME AS A712A	EA		REF									-15 4-3	
			62100119338							D	A728B FILTER, COLOR: SAME AS A716B	EA		REF									-15 4-3	
X2	H									D	A728D FRONT LENS: 96182; 80EL2N13CARDALARM	EA		1									-15 4-3	
A	H									C	A732M LIGHT, INDICATOR: 96182; 80EA1FIRL2N13 CARDJAM	EA		1									-15 4-3	5
			62100195599							D	A732A HOUSING LIGHT CAP-SULE: SAME AS A712A	EA		REF									-15 4-3	
			62100119338							D	A732B FILTER, COLOR: SAME AS A716B	EA		REF									-15 4-3	
X2	H									D	A732D FRONT LENS: 96182; 80EL2N13CARDJAM	EA		1									-15 4-3	
A	H									C	A736M LIGHT, INDICATOR: 96182; 80EA1FIRL2N13 PICKFAIL	EA		1									-15 4-3	2
			62100195599							D	A736A HOUSING LIGHT CAP-SULE: SAME AS A712A	EA		REF									-15 4-3	

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			62100119338							D	A736B FILTER, COLOR: SAME AS A716B	EA		REF									-15 4-3	
X2	H									D	A736D FRONT LENS: 96182; 80EL2N13PICKFAIL	EA		1									-15 4-3	
A	H									C	A740 M LIGHT, INDICATOR: 96182; 80EA1FIRL2N12 CANCEL	EA		1									-15 4-3	8
			62100195599							D	A740A HOUSING LIGHT CAP-SULE: SAME AS A712A	EA		REF									-15 4-3	
			62100119338							D	A740B FILTER, COLOR: SAME AS A716B	EA		REF									-15 4-3	
X2	H									D	A740D FRONT LENS: 96182; 80EL2N13CANCEL	EA		1									-15 4-3	
A	H									C	A744M LIGHT, INDICATOR: 96182; 80EA1F1AL2N13 NOTASSIGNED	EA		1									-15 4-3	1
			62100195599							D	A744A HOUSING LIGHT CAP-SULE: SAME AS A712A	EA		REF									-15 4-3	
X2	H		62109273519							D	A744B FILTER, COLOR: 96182; 80EF1A	EA		1									-15 4-3	

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									D	A744D FRONT LENS: 96182; 80EL2N12NOT ASSIGNED	EA		1									-15 4-3	
P	H		62408514352							C	A745M LAMP, INCANDESCENT: 08806; 330	EA		28	10	20	30	10	20	30		1300	-15 4-3	17
P	H		62409651381							C	A745A LAMP, INCANDESCENT: 08806; 382	EA		2	2	4	6	2	4	6		100	-15 4-3	19
M	H									C	A747A WIRING HARNESS: 58189; A65197-001	EA		1									-15 4-1	40
A	H		74409335070							C	A748 CONTACT ASSEMBLY: 58189w A53487-001	EA		4									-15 4-1	45

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H									*	A749 SCREW, EXTERNAL RELIEVED BODY: 80063; SMB546131	EA		8									-15 4-1	 48
			53106389857							*	A750 WASHER, FLAT: SAME AS A661	EA		REF									-15 4-1	 50
			53109296395							*	A751A WASHER, LOCK: SAME ASA660	EA		REF									-15 4-1	 49
C	H									E	A752 INSULATOR, BUSHING: 16512; P550009-09	EA		184									-15 4-1	 51
X2	H									E	A753 BRACKET, ANGLE: 58189; A53846-001	EA		4									-15 4-1	 52
X2	H									D	A753B PIN, KEYING: 80063; SMB546216	EA		4									-15 4-1	 53
C	H									D	A753C CLAMP, LOOP: 09922; HP-8N	EA		3									-15 4-1	 58
C	H		53057637827							*	A753D SCREW, MACHINE: 96906; MS51959-18	EA		4									-15 4-1	 54
C	H		53109349748							*	A753E NUT, PLAIN, HEXAGON: 96906; MS35649-244	EA		8									-15 4-1	 55
C	H		53109338118							*	A753F WASHER, LOCK: 96906; MS35338-135	EA		12									-15 4-1	 56
C	H		53106326721							*	A753G WASHER, FLAT: 88044; AN960C4	EA		12									-15 4-1	 57
X2	H		74400193468							D	A754 CONTACT, ELECTRICAL: 16512; 540362-06	EA		90									-15 4-1	 59
X2	H		59405571629							D	A755 TERMINAL LUG: 96906; MS25036-49	EA		4									-15 4-1	 60
C	H		59405773711							D	A755A TERMINAL LUG: 96906; MS25036-3	EA		1									-15 4-3	 24

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		59405039995							D	A755B TERMINAL LUG: 96906; MS25036-1	EA		67									-15 4-3	 25
X2	H									D	A755C JUMPER: 80063; SMB634809	EA		9									-15 4-3	 26
M	H									D	A755D PLATE, IDENTIFICATION 59730; TC-125	EA		9									-15 4-1	 61
X2	H		53400742072							D	A756 STRAP, LINE SUPPORT: 96906; MS17821-1-9	EA		27									-15 4-1	 62
C	H		53408454884							C	A756A CLAMP, LOOP: 71616; CPC1953-7B	EA		1									-15 4-3	 23
			53109349765							*	A756B NUT, PLAIN, HEXAGON: SAME AS A562	EA		REF									-15 4-3	 20
			53109338120							*	A756C WASHER, LOCK: SAME AS A564 M	EA		REF									-15 4-3	 21
C	H		53100593659							*	A756D WASHER, FLAT: 88044; AN960C10	EA		16									-15 4-3	 22
X2	H									B	A757 COVER ASSEMBLY: 58189; A64404-001	EA		1									-15 4-1	 1
X2	H									B	A758A GRILL ASSEMBLY: 58189; A64042-002	EA		1									-15 4-1	 34
C	H		53077103787							C	A759 STUD: 78553; P116-473-24	EA		2									-15 4-1	 34.1

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53109826813							*	A760 LOCKNUT: 96906; MS21044C06	EA		2									-15 4-1	 34.2
X1	H									C	A761A GRILL: 80063; SMD546276-2	EA		1									-15 4-1	 34.3
A	H	R								B	A762 FILTER ASSEMBLY: 58189; A64008-001	EA		1									-15 4-1	 33
			53109338120							*	A764M WASHER, LOCK: SAME AS A564M	EA		REF									-15 4-1	 32
X2	H									B	A764A STANDOFF: 14850; D1-10985B-1	EA		6									-15 4-1	 31.1
X2	H									B	A764B SHIELD ASSEMBLY: 14850; A1-10979C	EA		1									-15 4-1	 31
C	H									*	A764C SCREW, MACHINE 14850; A1-11069F-4	EA		6									-15 4-1	 30
X2	H									B	A766 PLATE ASSEMBLY: 58189; A64041-001	EA		1									-15 4-6	 19
P	H		59157126673							C	A767 FILTER, RADIO FREQUENCY INTERFERENCE: 56289; 10JX63	EA		2	1	2	3	1	2	3		6	-15 4-6	 6
			59157126673							C	A768 FILTER, RADIO FREQUENCY INTERFERENCE SAME AS A767	EA		REF									-15 4-6	 6
P	H		59150611346							C	A769 FILTER, RADIO FREQUENCY 56289; 20JX35	EA		2	1	2	3	1	2	3		6	-15 4-6	 5
			59150611346							C	A770 FILTER, RADIO FREQUENCY SAME AS A769	EA		REF									-15 4-6	 5
P	H		59409262459							C	A7718 TERMINAL BOARD: 75382; 604C20H	EA		1	1	2	3	1	2	3		1	-15 4-6	 11

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53050546657							*	A772 SCREW, MACHINE:	EA		REF									-15	
											SAME AS A678												4-6	7
			53106389857							*	A773 WASHER, FLAT:	EA		REF									-15	
											SAME AS A661												4-6	10
			53109296395							*	A774 WASHER, LOCK:	EA		REF									-15	
											SAME AS A660												4-6	9
			53109349761							*	A775 NUT, PLAIN, HEXAGON:	EA		REF									-15	
											SAME AS A679												4-6	8
M	H	C									A776 STRIP, MARKER;	EA		1									-15	
											75382- MS604-2XXXPIC												4-6	12
P	H		59409836099							C	A777B TERMINAL BOARD:	EA		1	1	2	3	1	2	3		1	-15	
											75382; 602C4UH												4-6	17
C	H		53050546673							*	A778 SCREW, MACHINE:	EA		4									-15	
											96906: MS51957-48												4-6	13
			53105586207							*	A779 WASHER, FLAT:	EA		REF									-15	
											SAME AS A679A												4-6	16
			53109338119							*	A780 WASHER, LOCK:	EA		REF									-15	
											SAME AS A670												4-6	15
			53109249759							*	A781 NUT, PLAIN,HEXAGON:	EA		REF									-15	
											SAME AS A671												4-6	14
M	H	C									A782 STRIP, MARKER:	EA		1									-15	
											75382; MS602-4XXXP4A												4-6	18

(1)			REPAIRS PARTS FOR ON-SITE, AREA RESUPPLY, AND DEPOT MAINTENANCE									(4)	(5)	(6)	(7)			(8)			(9)	(10)	(11)	
(A) SOURCE CD	(B) MAINT 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 UNIT PK	QTY INC IN UNIT	(30 DAYS) SITE STOCKAGE ALLOWANCE (A) 1-5	(B) 6-10	(C) 11-20	45 DAY AREA RESUPPLY ALLOW BASED ON NO. EQUIP. SUPPORTED (A) 1-5	(B) 6-10	(C) 11-20	1 YEAR ALW PER 100 EQUIP CNTGCY PLAN	DEPOT MAINT ALW PER 100 EQUIP	ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
A	H	R								C	A786A WIRING HARNESS: 58189; A65132-001	EA		1									-15 4-6	1
C	H		59405571627							D	A786B TERMINAL LUG: 96906; MS25036-53	EA		15									-15 4-6	2
C	H									D	A786C TERMINAL LUG: 96906; MS25036-54	EA		2									-15 4-6	3
C	H		59405571628							D	A787M TERMINAL LUG: 96906: MS25036-56	EA		20									-15 4-6	4
C	H		59406603634							D	A788 M TERMINAL LUG: 96906; MS25036-57	EA		2									-15 4-6	4.1
A	H	R								B	A789 M INTERFACE PLATE ASSEMBLY: 58189: A61665-004	EA		1									-15 4-1	29
C	H		53050546670							*	A790 SCREW, MACHINE: 96906; MS51957-45	EA		7									-15 4-1	26
			53105586207							*	A791 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	27
			53109338119							*	A792 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	28
P	H		59409902810							C	A793B TERMINAL BOARD: 75382; 600C22UH	EA		2	1	2	3	1	2	3		2	-15 4-5	13
C	H		53050546655							*	A794 SCREW, MACHINE: 96906: MS51957-31	EA		17									-15 4-5	8

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53109296395							*	A795 WASHER, LOCK:	EA		REF									-15	
											SAME AS A660												4-5	10
			53109349761							*	A796 NUT,PLAIN,HEXAGON:	EA		REF									-15	
											SAME AS A679												4-5	9
M	H									C	A797A STRIP, MARKER:	EA		2									-15	
											75382: MS600-2XXX0P4D												4-5	14
X2	H									C	A798 JUMPER,ALTERNATE:	EA		2									-15	
											80063; SMB634799-1												4-5	11
			59409902810							C	A799B TERMINAL BOARD:	EA		REF									-15	
											SAME AS A793B												4-5	13
			53050546655							*	A800 SCREW, MACHINE:	EA		REF									-15	
											SAME AS A794												4-5	8
			53109296395							*	A801 WASHER, LOCK:	EA		REF									-15	
											SAME AS A660												4-5	10
			53109349761							*	A802 NUT,PLAIN,HEXAGON:	EA		REF									-15	
											SAME AS A679												4-5	9
X2	H									C	A803 JUMPER ALTERNATE:	EA		2									-15	
											80063: SMB634799-2												4-5	12
										C	A804A MARKER, STRIP:	EA		REF									-15	
											SAME AS A797A												4-5	14
P	H		59409495533							C	A805B TERMINAL BLOCK:	EA		1	1	2	3	1	2	3		1	-15	
											75382; 604C8UH												4-5	6
C	H		53050546674							*	A806 SCREW, MACHINE:	EA		4									-15	
											96906: MS51957-49												4-5	1
			53109338119							*	A807 WASHER, LOCK:	EA		REF									-15	
											SAME AS A670												4-5	3

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53105586207							*	A808 WASHER, FLAT: SAME AS A679A	EA		REF									-15	
																							4-5	4
			53109249759							*	A809 NUT,PLAIN,HEXAGON: SAME AS A671	EA		REF									-15	
																							4-5	2
M	H									C	A810A MARKER, STRIP: 75382;MS604-8XX)XPC	EA		1									-15	
																							4-5	7
X2	H	C									A811A JUMPER SERIES: 75382; 640RJ8	EA		1									-15	
																							4-5	5
C	H									C	A811B CLAMP, LOOP: 09922: HP-10N	EA		4									-15	
																							4-5	19
C	H	*									A811C SCREW, MACHINE: 96906; MS51957-46	EA		20									-15	
																							4-5	16
			53105586207							*	A811D WASHER, FLAT: SAME AS A679A	EA		REF									-15	
																							4-5	18
			53109338119							*	A811E WASHER, LOCK: SAME AS A670	EA		REF									-15	
																							4-5	17
X2	H									C	A812 PLATE, INTERFACE: 58189; A61665-002	EA		1									-15	
																							4-5	15
A	H	R								C	A812A WIRING HARNESS: 58189; A65193-001	EA		1									-15	
																							4-1	41
			59405039995							D	A813M TERMINAL LUG: SAME AS A755B	EA		REF									-15	
																							4-5	20
X2	H		59409935216							D	A814M FERRULE: 00779; 2-323930-2	EA		36									-15	
																							4-5	21
			74409335070							D	A815M CONTACT ASSEMBLY: SAME AS A748	EA		REF									-15	
																							4-1	44
										*	A816M SCREW, EXTERNAL RELIEVED BODY: SAME AS A749	EA		REF									-15	
																							4-1	48

(1) (A) SOURCE CD	(1) (B) MAINT DC	(1) (C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53106389857							*	A817M WASHER, FLAT: SAME AS A661	EA		REF										-15 4-1	 50
			53109296395							*	A818A WASHER, LOCK: SAME AS A660	EA		REF										-15 4-1	 49

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
										E	A819M INSULATOR,BUSHING:	EA		REF									-15	
											SAME AS A752												4-1	51
										E	A821M BRACKET, ANGLE:	EA		REF									-15	
											SAME AS A753												4-1	52
										D	A821A PIN, KEYING:	EA		REF									-15	
											SAME AS A753B												4-1	53
										D	A821B CLAMP, LOOP:	EA		REF									-15	
											SAME AS A811B												4-1	63
			53057637827							*	A821C SCREW, MACHINE:	EA		REF									-15	
											SAME AS A753D												4-1	54
			53109349748							*	A821D NUT,PLAIN,HEXAGON:	EA		REF									-15	
											SAME AS A753E												4-1	55
			53109338118							*	A821E WASHER, LOCK:	EA		REF									-15	
											SAME AS A753F												4-1	56
			53106326721							*	A821F WASHER, FLAT:	REF		4									-15	
											SAME AS A753G												4-1	57
			74400193468							D	A822 M CONTACT,ELECTRICAL.	EA		REF									-15	
											SAME AS A754												4-1	59
C	H		59406603631							D	A823M TERMINAL LUG:	EA		4									-15	
											96906; MS25036-50												4-5	22
			53400742072							D	A824M STRAP,LINE SUPPORT:	EA		REF									-15	
											SAME AS A756												4-1	62
										D	A825M NAMEPLATE:	EA		REF									-15	
											SAME AS A755D												4-1	61
A	H	R								B	A826 MECHANISM ASSEMBLY:	EA		1									-15	
											58189; A64421-001												4-1	12
C	H		53050510851							*	A827 SCREW, MACHINE:	EA		6									-15	
											96906; MS51957-110												4-1	4

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53109847042							*	A828 WASHER, LOCK: 96906; MS35338-141	EA		6										-15 4-1	3
C	H		53109895956							*	A829 NUT,PLAIN,HEXAGON: 96906; MS35691-19	EA		6										-15 4-1	2
C	H		53101834355							*	A830 WASHER, FLAT: 88044; AN960C616L	EA		6										-15 4-1	5

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
A	H	R								C	A831A CARD READER: 07264; X14550B	EA		1									-15 4-1	11.1
			53109349765							*	A832 NUT,PLAIN,HEXAGON: SAME AS A562	EA		REF									-15 4-1	7
			53050593661							*	A833 SCREW, MACHINE: SAME AS A648	EA		REF									-15 4-1	9
			53109338120							*	A834M WASHER, LOCK: SAME AS A564 M	EA		REF									-15 4-1	10
			53101670812							*	A835 WASHER, FLAT: SAME AS A650	EA		REF									-15 4-1	8
A	H	R								D	A836A ELEVATOR ASSEMBLY: 07264; D14769P1	EA		1									-15 4-7	217.1
C	H		53050574593							*	A837 SCREW, MACHINE: 96906; MS16996-9	EA		4									-15 4-7	199
C	H		53100541831							*	A838 WASHER, LOCK: 96906; MS35338-81	EA		21									-15 4-7	200
P	H		31109839655							E	A839 BEARING, BALL: 96881; A81420NBP	EA		2	*	*	*	*	*	*	*	4	-15 4-7	215
X2	H									E	A840 BUMPER, RUBBER: 07264; A14877	EA		1									-15 4-7	210
X2	H									E	A841 COLLAR: 93990; C12S	EA		1									-15 4-7	203

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53056559246							*	A841A SETSCREW: 96906; MS51021-10	EA		1									-15 4-7	 202
X2	H									E	A842 COLLAR, SHAFT: 93993; C50S	EA		1									-15 4-7	 209
C	H		53052724128							*	A842A SETSCREWS: 96906; MS51021-23	EA		1									-15 4-7	 208
X2	H									E	A843 ELEVATOR: 07254; D14664T1;	EA		1									-15 4-7	 214
X1	H									E	A843 PACKING, PERFORMED: 75543; 934	EA		1									-15 4-7	 211
X2	H		74409179821							E	A845 HANGER, SPRING: 07264; A32441	EA		1									-15 4-7	 204
X2	H									E	A846 PLATE, BACKER: 07264; C14534B	EA		1									-15 4-7	 217
C	H									*	A846A SCREW, MACHINE: 96906; MS51959-28	EA		4									-15 4-7	 213
C	H									E	A847B TAPE, TEFLON,1" W, 10" LG: 71643; TH-1 IN.	EA		2									-15 4-7	 216
X2	H									E	A848 RETAINER, SPRING: 07264; A14655	EA		1									-15 4-7	 207
C	H		53050546650							*	A849 SCREW, MACHINE: 96906; MS35233-26	EA		8									-15 4-7	 206
X2	H									E	A850 SHAFT, SLIDER: 07264; B144758	EA		1									-15	
P	H		63409992928							E	A851A SPRING, HELICAL, COMPRESSION: 07264; B14398A	EA		1	1	2	3	1	2	3		1	-15 4-7	 205

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
A	H	R								D	A852A OFFSET ASSEMBLY: 07264; C14573P1A	EA		1									-15 4-7	198.1

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53050526456							*	A853 SCREW, MACHINE: 96906; MS16996-10	EA		5									-15 4-7	 133
C	H		53106191148							*	A854 WASHER, FLAT: 96906; MS15795-808	EA		17									-15 4-7	 135
			53100541831							*	A855 WASHER, LOCK: SAME AS A838	EA		REF									-15 4-7	 134
X2	H		74400543362							E	A856 PIVOT ASSEMBLY: 07264; A14539A	EA		1									-15 4-7	 159
C	H		53408045043							*	A857 RING RETAINING: 79136; 5555-25MD	EA		1									-15 4-7	 156
C	H	F									A858 WASHER, FLAT: 07264; B0039T30	EA		1									-15 4-7	 158
			53106389857							*	A858B WASHER, FLAT: SAME AS A661	EA		REF									-15 4-7	 144
			53109296395							*	A858D WASHER, LOCK: SAME AS A660	EA		REF									-15 4-7	 142
			53109349761							*	A858E NUT,PLAIN,HEXAGON: SAME AS A679	EA		REF									-15 4-7	 141
C	H									*	A858F SCREW, MACHINE: 96906; MS35223-28	EA		1									-15 4-7	 143
C	H		53102091366							*	A858G WASHER, LOCK: 96906; MS35335-58	EA		2									-15 4-7	 145
P	H		31109788027							E	A859 BEARING, BALL: 43334; SSZ99NR6XR1C	EA		2	2	4	6	2	4	6		6	-15 4-7	 153,154
X2	H									E	A860A BRACKET, DOUBLE ANGLE: 07264;B14595AP1A	EA		1									-15 4-7	 198

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H									*	A861A SCREW, MACHINE: 96906: MS35234-64	EA		2										-15 4-7	 182
			53100541831							*	A862 WASHER, LOCK: SAME AS A838	EA		REF										-15 4-7	 183
			53106191148							*	A863 WASHER, FLAT: SAME AS A854	EA		REF										-15 4-7	 184
X2	H									E	A864 BRACKET, ANGLE: 07264; B14645	EA		1										-15 4-7	 169
C	H		53055434361							*	A865 SCREW, MACHINE: 96906; MS35234-67	EA		2										-15 4-7	 160
			53106191148							*	A866 WASHER, FLAT: SAME AS A854	EA		REF										-15 4-7	 162
			53100541831							*	A867 WASHER, LOCK: SAME AS A838	EA		REF										-15 4-7	 161
C	H									*	A868 NUT, STRIP: 07264; A14700	EA		1										-15 4-7	 163
P	H		59351087261							E	A869A CONNECTOR, PLUG, ELECTRICAL: 00779; 1-480318-0	EA		3	1	2	3	1	2	3		9	-15 4-7	 180
P	H		59357386490							E	A870A CONTACT, ELECTRICAL 00779; 60510-1	EA		6	2	4	6	2	4	6		12	-15 4-7	 179
X2	H									E	A871 COVER, COMPONENT: 07264; B14728	EA		1									-15 4-7	 173
C	H		53055432770							*	A872 SCREW, MACHINE: 96906; MS35233-21	EA		2									-15 4-7	 170

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53107821349							*	A873 WASHER, FLAT: 96906; MS15795-804	EA		12									-15 4-7	 172
C	H		53100429609							*	A874 WASHER, LOCK: 96906; MS35338-78	EA		18									-15 4-7	 171
X2	H									E	A875A DEFLECTOR, CARD: 07264; B14633P2A	EA		1									-15 4-7	 149
C	H									E	A876 PIN, PIVOT: 07264; A14593	EA		1									-15 4-7	 148
C	H		53407718341							*	A877 RING, RETAINING: 79136; 5555G9	EA		2									-15 4-7	 147
X2	H									E	A878A PIN, ROLLER: 07264; A14665	EA		1									-15 4-7	 197
			53050546650							*	A879 SCREW, MACHINE: SAME AS A849	EA		REF									-15 4-7	 94
C	H		53100111041							*	A880 WASHER, LOCK: 96906; MS35338-79	EA		36									-15 4-7	 195
P	H		7A400505993							E	A881 ARM, PIVOT: 07264; A14647	EA		1	1	2	3	1	2	3		2	-15 4-7	 165
P	H		53150878779							*	A882 PIN, PIVOT ARM: 07264; A14648	EA		1	1	2	3	1	2	3		2	-15 4-7	 164
P	H		59057550447							E	A883A RESISTOR, FIXED, WIREWOUND: 02985; TM25W400J	EA		2	1	2	3	1	2	3		6	-15 4-7	 177
C	H		53055767493							*	A884 SCREW, MACHINE: 96906, MS35233-15	EA		3									-15 4-7	 175

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53100429609							*	A885 WASHER, LOCK: SAME AS A874	EA		REF									-15 4-7	 176
P	H		74400193129							E	A886 ROLLER: 07264: A140J7P4	EA		1	1	2	3	1	2	3		1	-15 4-7	 155
X2	H		74400506073							E	A887 ROLLER: 07264; A14670	EA		2									-15 4-7	 193
C	H		53405988635							*	A888 RING, RETAINING: 79136; 5555-12	EA		2									-15 4-7	 192
C	H		53055434360							E	A889 SCREW, MACHINE: 96906; MS35234-66	EA		4									-15 4-7	 191
C	H		53105966479							*	4890 NUT, LOCK: 13257; 22NC4-02	EA		2									-15 4-7	 191.1
P	H		59618118372							E	A891 SEMI-CONDUCTOR DEVICE, DIODE: 81349; 1N3189	EA		2	1	2	3	1	2	3		6	-15 4-7	 178
X2	H									E	A892 SHAFT, ROLLER: 07264; A14536	EA		1									-15 4-7	 152
C	H		53050546668							*	A893 SCREW, MACHINE: 95906; MS35233-43	EA		2									-15 4-7	 150
C	H		53100541820							*	A894 WASHER, LOCK: 96906; MS35338-80	EA		37									-15 4-7	 151
P	H		59451345577							E	A895 SOLENOID: 28478; MX12-220	EA		1	1	2	3	1	2	3		2	-15 4-7	 168
C	H		53055793027							*	A896 SCREW, MACHINE: 96906; MS35233-14	EA		2									-15 4-7	 166

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53100429609							*	A897 WASHER, LOCK: SAME AS A874	EA		REF									-15 4-7	 167
P	H		53400878784							E	A898A SPRING, OFFSET: 07264; B14674P2A	EA		1	1	2	3	1	2	3		2	-15 4-7	 157
X2	H									E	A899 STANDOFF: 07264; A14872AT2	EA		2									-15 4-7	 174
X2	H									E	A900 SUPPORT: 07264; A14731	EA		1									-15 4-7	 185
P	H		59309033424							E	A901 SWITCH,PUSH BUTTON 80207; SSL	EA		1	1	2	3	1	2	3		3	-15 4-7	 190
C	H		53100156307							*	A902 NUT, STRIP: 07264; A11311	EA		1									-15 4-7	 189
C	H									*	A903 SCREW, MACHINE: 96906; MS35233-7	EA		4									-15 4-7	 186
C	H		53105956761							*	A904 WASHER, FLAT: 96906; MS15795-802	EA		2									-15 4-7	 188
C	H		53100583829							*	A905 WASHER, LOCK: 96906; MS35338-77	EA		4									-15 4-7	 187
X2	H		59400899411							E	A906 TERMINAL, STUD: 71279; 1581-5	EA		4									-15 4-7	 181
X2	H									E	A906A STRAP, BONDING: 07264; A35292	EA		1									-15 4-7	 146

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53106389857							*	A906D WASHER, FLAT: SAME AS A661	EA		REF									-15	
																							4-7	138
			53109296395							*	A906E WASHER, LOCK: SAME AS A660	EA		REF									-15	
																							4-7	137
C	H		53056394777							*	A906F SCREW, MACHINE: 96906; MS35233-27	EA		7									-15	
																							4-7	140
			53102091366							*	A906G WASHER, LOCK: SAME AS A858G	EA		REF									-15	
																							4-7	139
			53109349761							*	A906H NUT,PLAIN,HEXAGON: SAME AS A679	EA		REF									-15	
																							4-7	136
A	H	R								D	A907 RESISTOR ASSEMBLY: 07264; A14753	EA		1									-15	
																							4-7	247
C	H									*	A908 NUT, STRIP: 07264; A14881	EA		1									-15	
																							4-7	246
										*	A909 SCREW, MACHINE: SAME AS A903	EA		REF									-15	
																							4-7	244
			53100583829							*	A910 WASHER, LOCK: SAME AS A905	EA		REF									-15	
																							4-7	245
P	H		59058912392							E	A911B RESISTOR, FIXED, WIREWOUND: 02985; TM5W270H	EA		1	1	2	3	1	2	3		3	-15	
																							4-7	246.1
C	H									E	A912 TERMINAL LUG: 00779; 31885	EA		20									-15	
																							4-7	246.2
A	H	R								D	A913 GUIDE LAMP ASSEMBLY 07264; 814768	EA		1									-15	
																							4-7	128.1

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53050546670							*	A914 SCREW, MACHINE: 96906; MS35233-45	EA		20									-15	
																							4-7	120
C	H		53108805978							*	A915 WASHER, FLAT: 96906; MS15795-807	EA		39									-15	
																							4-7	122
			53100541830							*	A916 WASHER, LOCK: SAME AS A894	EA		REF									-15	
																							4-7	121
X2	H									E	A917 GUIDE, INPUT: 07264; B14531A	EA		1									-15	
																							4-7	128
P	H		62408612284							E	A918A LAMP: 95154; TS4	EA		1	4	6	8	4	6	8		50	-15	
																							4-7	123
P	H		62501696486							E	A919 SOCKET, LAMP: 07264; A14765	EA		1	1	1	2	1	1	2		3	-15	
																							4-7	127
C	H		53055505001							*	A920 SCREW, MACHINE: 96906; MS35233-12	EA		1									-15	
																							4-7	124
			53107821349							*	A921 WASHER, FLAT: SAME AS A873	EA		REF									-15	
																							4-7	126
			53100429609							*	A922 WASHER, LOCK: SAME AS A874	EA		REF									-15	
																							4-7	125
X2	H									D	A923 CARD GLIDE ASSEMBLY: 07264, B14576G1	EA		1									-15	
																							4-7	272
C	H		53102714645							*	A924 NUT,PLAIN,HEXAGON: 96906; MS35649-84	EA		16									-15	
																							4-7	268
			53108805978							*	A925 WASHER, FLAT: SAME AS A915	EA		REF									-15	
																							4-7	270

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53100541830							*	A926 WASHER, LOCK: SAME AS A894	EA		REF									-15 4-7	 269
X2	H									E	A927 GUIDE, CARD: 07264; B14562P2AT1	EA		1									-15 4-7	 271.1
X2	H		53079853802							E	A928 STUD, CAPTIVE: 46384; CFHS832-8	EA		4									-15 4-7	 270.2
X2	H									D	A929 CARD GLIDE ASSEMBLY; 07264; B14576G2	EA		1									-15 4-7	 271
			53102714645							*	A930 NUT,PLAIN,HEXAGON: SAME AS A924	EA		REF									-15 4-7	 268
			53108805978							*	A931 WASHER, FLAT: SAME AS A915	EA		REF									-15 4-7	 270
			53100541830							*	A932 WASHER, LOCK: SAME AS A894	EA		REF									-15 4-7	 269
X2	H									E	A933 GLIDE, CARD: 07264; B14562P2AT2	EA		1									-15 4-7	 270.1
			53079853802							E	A934 STUD, CAPTIVE: SAME AS A928	EA		REF									-15 4-7	 270.2
P	H	R	74401656673							D	A935A PICKER READER ASSEMBLY: 07264; D145808P1	EA		1	*	*	*	*	*	*		3	-15 4-7	 132
C	H		53059887613							*	A936 SCREW, MACHINE: 96906; MS16995-49	EA		3									-15 4-7	 129
C	H		53105825677							*	A937 WASHER, FLAT: 96906; MS15795-810	EA		11									-15 4-7	 131

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53100426758							*	A938 WASHER, LOCK: 96906; MS35338-82	EA		11									-15 4-7	130
A	H	R								E	A939 LIGHT-ROLLER ASSEMBLY: 07264; C14581A	EA		1									-15 4-11	26.1
C	H		53050600402							*	A940 SCREW, MACHINE: 96906; MS16638-12	EA		2									-15 4-11	3
A	H	R								F	A941 IDLER ARM ASSEMBLY: 07264; B14755P1	EA		1									-15 4-11	24.2
A	H	R								G	A942 ARM SUB ASSEMBLY: 07264; 814786P1	EA		1									-15 4-11	24.1
X2	H									H	A943A ARM IDLER: 07264; B14652P1B	EA		1									-15 4-11	25
P	H		31101981156							H	A944 BEARING, BALL: 21335; PDSK	EA		4	1	2	3	1	2	3		1	-15 4-11	24
P	H		31201336458							H	A945A BEARING, BUSHING: 21335; BJC12TF18-8	EA	4	2	4	6	2	4	6	12			-15 4-11	23
P	H		58957747271							G	A946 ROLLER ASSEMBLY: 07264; A14756	EA		2	1	2	3	1	2	3		6	-15 4-11	21
C	H									*	A947 RING, RETAINING: 79136; X5131-31MD	EA		2									-15 4-11	20
X1	H		74409169375							H	A948 ROLLER, CARD: 07264; A14556A	EA		2									-15 4-11	20.1
P	H		30409334470							H	A949A SHAFT, ROLLER: 07264; A14557T2	EA		2	*	*	*	*	*	*		6	-15 4-11	20.2

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
A	H	R								F	A950 IDLER ARM ASSEMBLY: 07264; B14755P2	EA		1										-15 4-11	18.2
A	H	R								G	A951 ARM SUB ASSEMBLY: 07264; B14786P2	EA		1										-15 4-11	18,1
X2	H									H	A952 ARM, IDLER: 07264; B14652P2A	EA		1										-15 4-11	19
			31101981156							H	A953 BEARING, BALL: SAME AS A944	EA		REF										-15 4-11	18
			31201336458							H	A954A BEARING, BUSHING: SAME AS A945A	EA		REF										-15 4-11	17
			58957747271							G	A955 ROLLER ASSEMBLY: SAME AS A946	EA		REF										-15 4-11	15
										*	A956 RING, RETAINING: SAME AS A947	EA		REF										-15 4-11	14
			74409169375							H	A957 ROLLER, CARD: SAME AS A948	EA		REF										-15 4-11	14.1
			30409334470							H	A958 SHAFT, ROLLER: SAME AS A949A	EA		REF										-15 4-11	14.2
P	H	R	74409169333							F	A959 LIGHT STATION ASSEMBLY: 07264; C14559A	EA		1	1	2	3	1	2	3		2	-15 4-11	9
			53055434357							*	A960 SCREW, MACHINE: SAME AS A002C	EA		REF									-15 4-11	4
			53106191148							*	A961 WASHER, FLAT: SAME AS A854	EA		REF									-15 4-11	6

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53100541831							*	A962	WASHER, LOCK: SAME AS A838	EA		REF									-15 4-11	 5
P	H		59619310349							G	A963	COVER, GLASS: 07264; A14565	EA		2	1	2	3	1	2	3		10	-15 4-11	 7
										G	A964	TERMINAL LUG: SAME AS A912	EA		REF									-15 4-11	 8
C	H									F	A965	PIN, SPRING: 00287; N94-0500NDP	EA		1									-15 4-11	 9.1
P	H		16808954079							F	A966B	PLUNGER, SPRING: 01226; BH58N	EA		2	1	2	3	1	2	3		4	-15 4-11	 10
X2	H									F	A967	SHAFT, PIVOT: 07264; A14734	EA		1									-15 4-11	 12
C	H		53050512480							*	A968	SETSCREW: 96906; MSS1029-26	EA		1									-15 4-11	 11
P	H		53409971718							F	A969	SHIM, .003 IN. THICK: 07264; C3817CT50	EA		3	*	*	*	*	*	*		12	-15 4-11	 13
P	H		53409971719							F	A970	SHIM, .005 IN.THICK: 07264; C3817CT51	EA		3	*	*	*	*	*	*		12	-15 4-11	 16
P	H		53409971720							F	A971	SHIM, .010 IN.THICK: 07264; C3817CT52	EA		3	*	*	*	*	*	*		12	-15 4-11	 22
X2	H									F	972A	PLATFORM, LIGHT STATION: 07264; C14650C	EA		1									-15 4-11	 26
A	H	R	59615320887							E	A973M	PHOTO CELL ASSEMBLY: 07264; C14566A	EA		1									-15 4-11	 44.1
			53055434360							*	A974	SCREW, MACHINE: SAME AS A889	EA		REF									-15 4-11	 40

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53106191148							*	A975 WASHER, FLAT: SAME AS A854	EA		REF									-15	
																							4-11	42
			53100541831							*	A976 WASHER, LOCK: SAME AS A838	EA		REF									-15	
																							4-11	41
A	H	R	74409169212							F	A977M PHOTO CELL ASSEMBLY 07264; A14724	EA		15									-15	
																							4-11	38.1
P	H		59409772717							G	A978 CONTACT,ELECTRICAL: 00779; 42927-1	EA		30	1	2	3	1	2	3		60	-15	
																							4-11	38
P	H		74409954627							G	A979 SEMI-CONDUCTOR, PHOTO: 07264; A32523T1	EA		15	3	5	10	3	5	10		75	-15	
																							4-11	37
			74409169212							F	A980M PHOTO CELL ASSEMBLY: SAME AS A977 M	EA		REF									-15	
																							4-11	38.1
			59409772717							G	A981 CONTACT, ELECTRICAL; SAME AS A978	EA		REF									-15	
																							4-11	38
			74409954627							G	A982 PHOTO CELL ASSEMBLY: SAME AS A979	EA		REF									-15	
																							4-11	37
			74409169212							F	A983M PHOTO CELL ASSEMBLY: SAME AS A977 M	EA		REF									-15	
																							4-11	38.1
			59409772717							G	A984 CONTACT,ELECTRICAL: SAME AS A978	EA		REF									-15	
																							4-11	38
			74409954627							G	A985 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15	
																							4-11	37

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			74409169212							F	A986M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A977 M	EA		REF									-15 4-11	 38.1
			59409772717							G	A987 CONTACT,ELECTRICAL: SAME AS A978	EA		REF									-15 4-11	 38
			74409954627							G	A988 PHOTO CELL ASSEMBLY: SAME AS A979	EA		REF									-15 4-11	 37
			74409169212							F	A989M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A977 M	EA		REF									-15 4-11	 38.1
			59409772717							G	A990 CONTACT ELECTRICAL: SAME AS A978	EA		REF									-15 4-11	 38
			74409954627							G	A991 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15 4-11	 37
			74409169212							F	A992M PHOTO CELL ASSEMBLY: SAME AS A977 M	EA		REF									-15 4-11	 38.1
			59409772717							G	A993 CONTACTELECTRICAL: SAME AS A978	EA		REF									-15 4-11	 38
			74409954627							G	A994 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15 4-11	 37
			74409169212							F	A995M PHOTO CEL LASSEMBLY: SAME AS A977 M	EA		REF									-15 4-11	 38.1
			59409772717							G	A996 CONTACT,ELECTRICAL: SAME AS A978	EA		REF									-15 4-11	 38

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			74409954627							G	A997 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15 4-11	 37
			74409169212							F	A998M PHOTO CELL ASSEMBLY: SAME AS A977 M	EA		REF									-15 4-11	 38.1
			59409772717							G	A999 CONTACT,ELECTRICAL: SAME AS A978	EA		REF									-15 4-11	 38
			74409954627							G	B001 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15 4-11	 37
			74409169212							F	B002M PHOTOCELLASSEMBLY: SAME AS A977 M	EA		REF									-15 4-11	 38.1
			59409772717							G	B003 CONTACT, ELECTRICAL: SAME AS A978	EA		REF									-15 4-11	 38
			74409954627							G	B004 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15 4-11	 37
			74409169212							F	B005M PHOTOCELLASSEMBLY: SAME AS A977 M	EA		REF									-15 4-11	 38.1
			59409772717							G	B006 CONTACT,ELECTRICAL: SAME AS A978	EA		REF									-15 4-11	 38
			74409954627							G	B007 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15 4-11	 37
			74409169212							F	B008M PHOTOCELLASSEMBLY: SAME AS A977 M	EA		REF									-15 4-11	 38.1

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59409772717							G	B009 CONTACT, ELECTRICAL: SAME AS A978	EA		REF	-15								4-11	38
			74409954627							G	B010 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15 4-11	 37
			74409169212							F	B011M PHOTO CELL ASSEMBLY: SAME AS A977 M	EA		REF									-15 4-11	 38.1
			59409772717							G	B012 CONTACT,ELECTRICAL: SAME AS A978	EA		REF									-15 4-11	 38
			74409954627							G	B013 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15 4-11	 37
			74409169212							F	B014 M PHOTO CELL ASSEMBLY: SAME AS A977 M	EA		REF									-15 4-11	 38.1
			59409772717							G	B015 CONTACT,ELECTRICAL: SAME AS A978	EA											REF 4-11	-15 38
			74409954627							G	B016 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15 4-11	 37
			74409169212							F	B017M PHOTOCELLASSEMBLY: SAME AS A977 M	EA		REF									-15 4-11	 38.1
			59409772717							G	B018 CONTACT,ELECTRICAL: SAME AS A978	EA		REF									-15 4-11	 38
			74409954627							G	B019 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15 4-11	 37
X2	H									F	B020 CLAMP,MOUNTING: 07264: A14744A	EA		2									-15 4-11	 35

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53055432768							*	B021 SCREW, MACHINE: 96906; MS35233-19	EA		4									-15	
																							4-11	34
C	H									*	B022 STANDOFF: 07264; A14745	EA		4									-15	
																							4-11	36
			53107821349							*	B023 WASHER, FLAT: SAME AS A873	EA		REF									-15	
																							4-11	34B
			53100429609							*	B024 WASHER, LOCK: SAME AS A874	EA		REF									-15	
																							4-11	34A
			59619310349							F	B025 COVER, GLASS: SAME AS A963	EA		REF									-15	
																							4-11	43
X2	H									F	B026 INSERT: 07264; A14743	EA		2									-15	
																							4-11	39
X2	H									F	B027 BRACKET, ANGLE: 07264; C14721A	EA		1									-15	
																							4-11	44
			74409169212							E	B028M PHOTO CELL ASSEMBLY: SAME AS A977 M	EA		REF									-15	
																							4-11	47
C	H		5310-00-208-9285							*	B028N NUT, SELF-LOCKING: 96906; 42NE054	EA		2									4-11	47.1
C	H		53050603849							*	B029 SETSCREW: 96906; MS51029-17	EA		1									-15	
																							4-11	46
			59409772717							F	B030 CONTACT,ELECTRICAL: SAME AS A978	EA		REF									-15	
																							4-11	38
			74409954627							F	B031 SEMI-CONDUCTOR, PHOTO: SAME AS A979	EA		REF									-15	
																							4-11	37
P	H		58957747265							E	B032A ROLLER ASSEMBLY: 07264; A14716P1	EA		2	*	*	*	*	*	*		8	-15	
																							4-11	52
X2	H									F	B033 ROLLER: 07264; A14714	EA		1									-15	
																							4-11	51

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									F	B034 SHAFT, ROLLER: 07264; A14715	EA		1									-15	
																							4-11	51.1
P	H		31109318644							E	B035 BEARING: 3334: SSZ99R6XR1C	EA		4	2	4	6	2	4	6		12	-15	
																							4-11	65
P	H		31108074221							E	B036A BEARING, BALL: 21335; S5PP2	EA		2	2	4	6	2	4	6		6	-15	
																							4-11	59
			31101981156							E	B037 BEARING, BALL: SAME AS A944	EA		REF									-15	
																							4-11	50
P	H		30-00-982-8174							E	B038A BELT, TIMING 21678; 80XL037	EA		I	2	3	4	2	3	4		4	-15	
																							4-11	56
P	H		3030-0 9828175							E	B039A BELT POSITIVE DRIVE: 21678; 70XL037	EA		1	2	3	4	2	3	4		4	-15	
																							4-11	53
P	H		74400543361							E	B040 BELT SET-, PICKER: 07264; B14653	EA		1	2	3	4	2	3	4		4	-15	
																							4-11	66
X2	H									E	B041 BLOCK, THROAT: 07264; C14691P1	EA		1									-15	
																							4-11	29
			53050574593							*	B042 SCREW, MACHINE: SAME AS A837	EA		REF									-15	
																							4-11	27
			53100541831							*	B043 WASHER, LOCK: SAME AS A838	EA		REF									-15	
																							4-11	28
P	H		74400506027							E	B044 COVER, GLASS: 07264; A14589	EA		1	1	2	3	1	2	3		2	-15	
																							4-11	45
X2	H									E	B045A FRAME, PICKER: 07264: X14554E	EA		1									-15	
																							4-11	80
P	H		5315482S 9							E	B046 PIN, GROOVED: 73957; GP67-093-0500-12	EA		*	*	*	*	*	*			5	-15	
																							4-11	75

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									E	B047 PLATE, POSITIONING: 07264; A14880	EA		1										-15	
																								4-11	72
			53055767493							*	B048 SCREW, MACHINE: SAME AS A884	EA		REF										-15	
																								4-11	69
			53107821349							*	B049 WASHER, FLAT: SAME AS A873	EA		REF										-15	
																								4-11	71
			53100429609							*	B050 WASHER, LOCK: SAME AS A874	EA		REF										-15	
																								4-11	70
P	H		53409335752							E	B051A PLUNGER, SPRING: 01226; NS54N-011-03	EA		2	2	3	4	2	3	4		4	-15	
																								4-11	63
P	H		58957710047							E	B052 PULLEY: 07264; A14884	EA		2	1	1	2	1	1	2		2	-15	
																								4-11	58
P	H		53055510156							*	B053 SETSCREW: 88044; AN565AC832H3	EA		10	*	*	*	*	*	*		20	-15	
																								4-11	57
P	H		74409263741							E	B054 PULLEY: 07264; A14571AT1	EA		2	1	1	2	1	1	2		2	-15	
																								4-11	49
										*	B055 SETSCREW: SAME AS B053	EA		REF									-15	
																								4-11	48
P	H		58957710068							E	B056 PULLEY: 07264; A14569A	EA		1	1	1	2	1	1	2		1	-15	
																								4-11	55
C	H		53058176139							*	B057A SETSCREW: 96906; MS51021-56	EA		2									-15	
																								4-11	54
P	H		74409176976							E	B058 PULLEY, DRIVE: 07264; C14002P2A	EA		1	1	1	2	1	1	2		1	-15	
																								4-11	61

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
										*	B059 SETSCREW: SAME AS B053	EA		REF										-15 4-11	60
P	H		74401656674							E	B060A PULLEY, IDLER: 07264; C145468	EA		1	1	1	2	1	1	2		1	-15 4-11	67
X2	H									E	B061 PUSHER, BELT: 07264; C14553B	EA		1									-15 4-11	76
P	H		74407747287							E	B062A SHAFT, DRIVE: 07264: 814547E	EA		1	*	*	*	*	*	*		2	-15 4-11	62
P	H		58957710081							E	B063 SHAFT, IDLER: 07264; A14037P2B	EA		1	*	*	*	*	*	*		3	-15 4-11	68
X2	H									E	B064 SHAFT, PIVOT: 07264; A14587T2	EA		1									-15 4-11	74
P	H		53055510156							*	B065 SETSCREW: 88044; AN565DC832L3	EA		2	*	*	*	*	*	*		10	-15 4-11	73
P	H		74409936484							E	B066 SLIDER: 07264; A14033	EA		2	1	2	3	1	2	3		4	-15 4-11	64
X2	H									E	B067 THROAT, AIR TRANSFER: 07264; B14663A	EA		1									-15 4-11	33
			53050546670							*	B068 SCREW, MACHINE: SAME AS A914	EA		REF									-15 4-11	30
			53108805978							*	B069 WASHER, FLAT: SAME AS A915	EA		REF									-15 4-11	32
			53100541830							*	B070 WASHER, LOCK: SAME AS A894	EA		REF									-15 4-11	31
X2	H		74409169380							E	B071 TUBE, LINE VACUUM: 07264; A14585	EA		1									-15 4-11	2

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		53052825805							*	B072 SETSCREW: 88044; AN565DC632H3	EA		1	*	*	*	*	*	*		10	-15 4-11	1
C	H		53402562465							E	B072A RING, RETAINING: 79136; 5133-37MD	EA		2									-15 4-11	64.1
P	H		74401656675							E	B0728 INSERT: 07264; A14826	EA		2	*	*	*	*	*	*		6	-15 4-11	3.1
P	H		74409936482							E	B072C SPRING, GLIDE: 07264; B13422T1	EA		1	1	2	3	1	2			2	-15 4-11	78
P	H		74401656676							*	B072D PLATE, NUT: 07264; A34101	EA		1		*	*	*	*	*		5	-15 4-11	79
C	H									*	B072F SCREW, MACHINE: 96906; MS51959-12	EA		2									-15 4-11	77
A	H	R								D	B073A SOLENOID ASSEMBLY: 07264; B814586B	EA		1									-15 4-7	119.1
C	H		53055432787							*	,B074 SCREW, MACHINE: 96906; MS35233-47	EA		10									-15 4-7	83
			53108805978							*	B075 WASHER, FLAT: SAME AS A915	EA		REF									-15 4-7	85
			53100541830							*	B076 WASHER, LOCK: SAME AS A894	EA		REF									-15 4-7	84
X2	H									E	B077A COMPONENT BOARD: 07264; A14607AT1	EA		1									-15 4-7	117
X2	H									E	B078 PLATE, ELECTRICAL SHIELD: 07264; A14608A	EA		1									-15 4-7	118

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									E	B079	BRACKET, DOUBLE ANGLE: 07264: C14618A	EA		1									-15 4-7	 119
P	H		59101028035							E	B080	CAPACITOR,FIXED,ELEC-TROLYTIC: 56289; 45D10133HL	EA		1	1	2	3	1	2	3		3	-15 4-7	 114
X2	H		54300526287							E	B081	CLIP, MOUNTING: 99378; 100-200-12A6	EA		1									-15 4-7	 114.1
			59351087261							E	B082	CONNECTOR,PLUG, ELEC-TRICAL: SAME AS A869A	EA		REF									-15 4-7	 88
			59357386490							E	B083A	CONTACT, ELECTRICAL: SAME AS A870A	EA		REF									-15 4-7	 116
X2	H									E	B084	COVER, GUARD: 07264; A14725W1	EA		1									-15 4-7	 93
C	H		53102714644							*	B085	NUT, PLAIN, HEXAGON: 96906; MS35649-64	EA		6									-15 4-7	 90,109
C	H									*	B086	STANDOFF: 07264; A14872AT1	EA		2									-15 4-7	 94
C	H									*	B087	STUD, THREADED: 07264; A14883	EA		2									-15 4-7	 111
C	H		53108805976							*	B088	WASHER, FLAT: 96906; MS15795-806	EA		24									-15 4-7	 92,110
			53100111041							*	B089	WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	 91

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		59451653878							E	B090A PLUNGER,SOLENOID: 07264; A14578A	EA		1	*	*	*	*	*	*		5	-15	
																							4-7	96
C	H		53105957652							*	B091 NUT,PLAIN,HEXAGON: 88044; AN320C5	EA	1										-15	
																							4-7	97
P	H		53401781342							E	B091A BUMPER: 07264; A34115	EA		1	1	2	3	1	2	3		2	-15	
																							4-7	95
P	H		74409265412							E	B092 SPRING, RETURN: 07264; A14583	EA		1	1	2	3	1	2	3		2	-15	
																							4-7	89
P	H		59052793837							E	B093 RESISTOR, FIXED, COMPOSITION: 81349; RC32GF272J	EA		1	1	2	3	1	2	3		3	-15	
																							4-7	113
			59057550447							E	B094A RESISTOR, FIXED, WIREWOUND: SAME AS A883A	EA		REF									-15	
																							4-7	108
C	H		53055505002							*	B095 SCREW, MACHINE: 96906; MS35233-13	EA		2									-15	
																							4-7	106
			53100429609							*	B096 WASHER, LOCK: SAME AS A874	EA		REF									-15	
																							4-7	107
			59618118372							E	B097 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS A891	EA		REF									-15	
																							4-7	112
P	H		59459297847							E	B098 SOLENOID: 18482, TM1365	EA		1	1	2	3	1	2	3		3	-15	
																							4-7	105
C	H		53050451628							*	B099 SCREW, MACHINE: 96906; MS35233-28	EA		8									-15	
																							4-7	98

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53108805976							*	B100 WASHER, FLAT: SAME AS B088	EA		REF									-15 4-7	 190
			53100111041							*	B101 WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	 93
P	H		59451028020							E	B102 STOP, SOLENOID: 07264; A14591	EA		1	1	2	3	1	2	3		2	-15 4-7	 104
			53050546670							*	B103 SCREW, MACHINE: SAME AS A914	EA		REF									-15 4-7	 101
			53108805978							*	B104 WASHER, FLAT: SAME AS A915	EA		REF									-15 4-7	 103
			53100541830							*	B105 WASHER, LOCK: SAME AS A894	EA		REF									-15 4-7	 102
C	H									E	B106 TERMINAL, STUD: 71279; 1724-3	EA		3									-15 4-7	 115
A	H	R								D	B107 OFFSET DRIVEASSEMBLY: 07264; B14567A	EA		1									-15 4-7	 82.1
			53050526456							*	B108 SCREW, MACHINE: SAME AS A853	EA		REF									-15 4-7	 67
			53106191148							*	B109 WASHER, FLAT: SAME AS A854	EA		REF									-15 4-7	 69
			53100541831							*	B110 WASHER, LOCK: SAME AS A838	EA		REF									-15 4-7	 68
			31109318644							E	B111 BEARING: SAME AS B035	EA		REF									-15 4-7	 79,81

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		30209335689							E	B112 GEAR, SPUR: 07264: B14252	EA		1	*	*	*	*	*	*		2	-15 4-7	 75
P	H		0209334929							E	B113 PULLEY: 07264; A14570A	EA		1	1	2	3	1	2	3		2	-15 4-7	 74
P	H		30209370322							E	B114 PULLEY: 07264; A1571AT3	EA		1	1	2	3	1	2	3		2	-15 4-7	 72
X2	H		71409333655							E	B115 ROLLER: 07264; B14543T1	EA		1									-15 4-7	 78
P	H		30409334471							E	B116 SHAFT: 07264; B14542	EA		1	*	*	*	*	*	*		2	-15 4-7	 77
C	H		53102089285							*	B117 NUT,SELF LOCKING: 72962; 42NE054	EA		2									-15 4-7	 70,71
C	H		53108024701							*	B118 WASHER, FLAT: 96906; MS15795-813	EA		1									-15 4-7	 73
P	H		74401656677							E	B119 SLEEVE: 07264; A14640	EA		1	*	*	*	*	*	*		5	-15 4-7	 80
X2	H		53409895422							E	B120 SPACER: 07264; A14544	EA		1									-15 4-7	 76
X2	H									E	B121 BRACKET, ANGLE: 07264; C14545AP1	EA		1									-15 4-7	 82
X2	H									D	B122A PLATE, RETAINER: 07264; B14689	EA		1									-15 4-7	 37
A	H	R								D	B123B MOTOR-SUPPORT ASSEMBLY: 07264; 111075200	EA		1									-15 4-7	 64.1

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53059887614							*	B124 SCREW, MACHINE: 96906; MS16995-50	EA		4	-15									4-7	34
			53105825677							*	B125 WASHER, FLAT: SAME AS A937	EA		REF									-15 4-7	 36
			53100426758							*	B126 WASHER, LOCK: SAME AS A938	EA		REF									-15 4-7	 35
A	H	R								E	B127 SUPPORT ASSEMBLY: 07264; D14767	EA		1									-15 4-7	 64.2
A	H	R								F	B128 EXHAUSTER ASSEMBLY: 07264; C14770G2	EA		1									-15 4-7	 59.1
C	H									*	B129A SCREW, MACHINE: 96906; MS35233-69	EA		4									-15 4-7	 48
C	H									*	B130 STANDOFF: 07264; A14886	EA		4									-15 4-7	 51
			53106191148							*	B131A WASHER, FLAT: SAME AS A854	EA		REF									-15 4-7	 50
			53100541831							*	B132A WASHER, LOCK: SAME AS A838	EA		REF									-15 4-7	 49
P	H		74400192249							G	B133 NOZZLE, MIXER: 07264; D14771T2	EA		1	1	2	3	1	2	3		2	-15 4-7	 59
M	H									G	B133A GASKET: 07264; A14788	EA		1									-15 4-7	 58
X2	H									G	B134 PLATE, INLET: 07264; C14772T3	EA		1									-15 4-7	 57

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53102714645							*	B135A NUT, HEXAGON: SAME AS A924	EA		REF									-15 4-7	 52
			53055432787							*	B136A SCREW, MACHINE: SAME AS B074	EA		REF									-15 4-7	 55
			53108805978							*	B137A WASHER, FLAT: SAME AS A915	EA		REF									-15 4-7	 54,56
			53100541830							*	B138A WASHER, LOCK: SAME AS A894	EA		REF									-15 4-7	 53
X2	H									F	B139 COVER, PROTECTOR: 84971: 15M02-04	EA		1									-15 4-7	 62
P	H		59409836045							F	B140 TERMINAL BLOCK: 75382: GMF600-4	EA		2	1	1	1	1	1	1		6	-15 4-7	 63
C	H		53056208158							*	B141 SCREW, MACHINE: 96906; MS35233-31	EA		8									-15 4-7	 60
X2	H	F									B141A INSULATOR, STRIP: 75382: MS600-4	EA		2									-15 4-7	 63.1
X2	H		59405028294							*	B142 STRADDLE PLATE: 75382: 600SP	EA		4									-15 4-7	 61.1
			53100111041							*	B143 WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	 61
X2	H									F	B144 SUPPORT, MOTOR: 07264; C14628P3	EA		1									-15 4-7	 64
A	H	R								E	B145B MOTOR MODIFICATION ASSEMBLY: 07264: 111075100	EA		1									-15 4-7	 47

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53056877541							*	B146 BOLT, MACHINE: 96906; MS35311-5	EA		4									-15 4-7	 44
			53105825677							*	B147 WASHER, FLAT: SAME AS A937	EA		REF									-15 4-7	 46
			53100426758							*	B148 WASHER, LCCK: SAME AS A938	EA		REF									-15 4-7	 45
										F	B148A TERMINAL LUG: SAME AS A912	EA		REF									-15 4-10	 23
C	H		59402748298							F	B148B MLUG, CRIMP: 007793 31302	EA		2									-15 4-10	 22
P	H	T	43101727.754							F	B148D MMOTOR PUMP ASSEMBLY: 4-10 24 24123;0522V123G329D	EA		1	1	1	2	1	1	2		2	-15	
P	D		61054969863							G	B148EA MOTOR: 24123; G329D-1	EA		1		2							-15 4-10	 16
P	D		61051563865							H	B148EB ROTOR: 88422; 113B1900AAG1	EA		11									-15 4-10	 17
P	D		61051563866							H	B148EC STATOR: 88422; 113B1651ABG1	EA		11									-15 4-10	 21
X2	D									H	B148ED END SHIELD: 88422; 113D811ADP1	EA		1									-15 4-10	 19
P	D		59301773203							H	B148EE SWITCH: 88422; 113A834CAG1	EA		13									-15 4-10	 20
X2	D									H	B148EF MECHANISM: 88422; 115A820BAG10	EA		1									-15 4-10	 18
P	D		31101448906							H	B148EG BALL BEARING: 68422; 113AG1SAAP1	EA		12									-15 4-10	 19.1
X2	H									G	B148FM PLUG, PIPE: 79470; BA503	EA		1									-15 4-7	 43

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									G	6148T ELBOW, 90 DEG: 24123; AD997	EA		1	-15									4-7	42
A	H	R								G	B148U MUFFLER ASSEMBLY: 24123: AB609B	EA		1										-15 4-7	 41
X2	H									H	B148V COVER: 24123; AV810A	EA		1										-15 4-8	 6
M	H									H	B148W GASKET: 24123; AA404	EA		1										-15 4-8	 5
X2	H									H	B148X JAR, ALUMINUM: 24123; AA132	EA		1										-15 4-8	 1
P	H		43109571967							H	B148Y ELEMENT, MUFFLER ASSEMBLY: 24123; AC434	EA		1	1	2	3	1	2	3		3		-15 4-8	 9
X2	H									I	B148Z MUFFLER PLATE: 24123; AC395	EA		1										-15 4-8	 3
P	H		53309973024							I	B1481 FILTER, CATRIDGE: 24123; AC393	EA		1	*	*	*	*	+	5		-15		4-8	2

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	D									I	B1484 COUPLING:	EA		1									-15	
											24123; AC391												4-8	4
X2	D									I	B1485 STUD:	EA		1									-15	
2											4123; AC396												4-8	7
X2	D									I	B1486 END CAP:	EA		1									-15	
											24123; AC394												4-8	8
X2	H									G	B149B PLUG, FILLER:	EA		1									-15	
											24123; B378												4-10	25
P	H		31102787323							G	B149D MBEARING, BALL:	EA		1	1	2	3	1	2	3		3	-15	
											43334; Z99503XR1S												4-10	13
P	D		53654081694							G	B149F M RING, INLET:	EA		1									2	-15
											24123; AF103												4-10	11
X2	D									G	B149G MBRACKET:	EA		1									-15	
											24123; AF104												4-10	9
C	D									*	B149H NUT, LOCK:	EA		4									-15	
											24123; AE622												4-10	8.1
P	D		53654081710							G	B149J M SHIM:	EA		A/R									2	-15
											24123; AC417												4-10	10
P	D		53654106759							G	8149K M RING, TOLERANCE:	EA		1									2	-15
											24123; AF105												4-10	7
P	D		61052526192							G	B149L ROTOR:	EA		1									2	-15
											24123; AF106												4-10	6
X	D									G	B149M BODY:	EA		1									-15	
											24123; AF108												4-10	4

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H									*	B149N SCREW, MACHINE 96906; MS16995-S4	EA		2									-15 4-10	 8
P	H		74401343164							G	B149PM VANE: 24123; AF109B	EA		4	4	8	12	4	8	12		4	-15 4-10	 5
X2	D									G	B149QM SHROUD: 24123; AF111	EA		1									-15 4-10	 3
X2	D									G	B149RM PLATE, END: 24123; AF112	EA		1									-15 4-10	 2
C	D									*	B149S WASHER, LOCK: 78189; 1214	EA		6									-15 4-10	 1.1
C	D									*	B149T BOLT, MACHINE: 96906; MS35307-14	EA		6									-15 4-10	 1
P	H		66852267824							G	B149U GAUGE, VACUUM: 24123; AA640	EA		1	*	*	*	1	1	2		1	-15 4-7	 13
X2	H									G	8149V MANIFOLD, VACUUM: 24123; AE232	EA		1									-15 4-7	 14
P	H		48209529376							G	8149W VACUUM RELIEF VALVE: 24123; AA840A	EA		1	*	*	*	1	1	2		1	-15 4-7	 12.2
X1	H									H	8149W1 BODY, VALVE: 24123; AA841	EA		1									-15 4-7	 12
X1	H									H	B149W2 VALVE: 24123; AA842	EA		1									-15 4-7	 12.1
X1	H									H	B149W3 SPRING,COMPRESSION: 24123; AA844	EA		1									-15 4-7	 11
C	H									*	B149W4 NUT, HEXAGON, ADJUSTING: 24123; AA843	EA		1									-15 4-7	 10
C	H									*	B149W5 NUT, PLAIN, HEXAGON: 96906; MS35649-204	EA		1									-15 4-7	 9

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									G	B149W6 NIPPLE, 1/4 IN. I.D. X 1 1/2 IN. LONG: 24123; BA708	EA		1										-15 4-7	15.1
P	H		58957710069							E	B150 PULLEY: 07264; A14686	EA		1	1	1	1	1	1	1		2	-15 4-10	15
C	H									*	B151 SETSCREW: 88044; ANS65AC8 -3	EA		2									-15 4-10	14
A	H	R								D	B152 MAGNETIC PICK UP ASSEMBLY: 07264; 832598P2	EA		1									-15 4-7	33.1
			53050546670							*	B153 SCREW, MACHINE: SAME AS A914	EA		REF									-15 4-7	24
			53108805978							*	B154 WASHER, FLAT: SAME AS A915	EA		REF									-15 4-7	26
			53100541830							*	B155 WASHER, LOCK SAME AS A894	EA		REF									-15 4-7	25

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		59108820092							E	B156 CAPACITOR, FIXED, PLASTIC: 14655; WMF1S33	EA		1	1	2	3	1	2	3		3	-15 4-7	 31
			59351087261							E	B157 CONNECTOR, PLUG, ELECTRICAL: SAME AS A869A	EA		REF									-15 4-7	 27
			59357386490							E	B158A CONTACT, ELECTRICAL: SAME AS A570A	EA		REF									-15 4-7	 30
P	H		58205091073							E	B159 PICK UP, MAGNETIC: 81692; 3015A	EA		1	1	1	2	1	1	2		3	-15 4-7	 29
C	H		53106806850							*	B160 NUT, PLAIN, HEXAGON: 96906: MS35691-630	EA		1									-15 4-7	 28
			59400899411							E	B161 TERMINAL, STUD: SAME AS A906	EA		REF									-15 4-7	 32
X2	H									E	B163 BRACKET, ANGLE: 07264; A32253	EA		1									-15 4-7	 33
X2	H		53400742072							D	B163A STAY STRAP: 06383; SST23	EA		2									-15 4-7	 39.1
X2	H									D	B163B STAY STRAP: 06383; SSC2B	EA		4									-15 4-7	 276
			53050546650							*	B163C SCREW, MACHINE: SAME AS A849	EA		REF									-15 4-7	 273
			53108805976							*	B163D WASHER, FLAT: SAME AS B088	EA		REF									-15 4-7	 275
			53100111041							*	B163E WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	 274
A	H	R								D	B164 HARNESS ASSEMBLY: 07264; D14760	EA		1									-15 4-7	 252

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		59357252550							E	B170 CONNECTOR, RECEPTACLE, ELECTRICAL: 96906; MS3102R36-10P	EA		1	1	1	1	1	1	1		3	-15 4-7	230
			53102714645							*	B171 NUT, PLAIN, HEXAGON: SAME AS A924	EA		REF									-15 4-7	227
			53050546670							*	B172 SCREW, MACHINE: SAME AS A914	EA		REF									-15 4-7	229
			53108805978							*	B173 WASHER, FLAT: SAME AS A915	EA		REF									-15 4-7	228.1
			53100541830							*	B174 WASHER, LOCK: SAME AS A894	EA		REF									-15 4-7	228
P	H		59357552787							E	B175 CONNECTOR, RECEPTACLE, ELECTRICAL: 96906; MS3102R20-29P	EA		1	1	1	1	1	1	1		3	-15 4-7	234
C	H		53102714642							*	B176 NUT, PLAIN, HEXAGON: 96906; MS35649-44	EA		4									-15 4-7	231
C	H		53055157219							*	B177 SCREW, MACHINE: 96906; MS35233-17	EA		4									-15 4-7	233
			53107821349							*	B178 WASHER, FLAT: SAME AS A873	EA		REF									-15 4-7	232.1
			53100429609							*	B179 WASHER, LOCK: SAME AS A874	EA		REF									-15 4-7	232

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		59351067083							E	B180A CONNECTOR, RECEPTACLE, ELECTRICAL: 02798; 1-480319-0	EA		3	1	1	1	1	1	1		9	-15 4-7	 23
X2	H									*	B181 CLIP, CONNECTOR MOUNTING: 07264; B14741	EA		1									-15 4-7	 22
			53056394777							*	B182 SCREW, MACHINE: SAME AS A906F	EA		REF									-15 4-7	 21.1
			53100111041							*	B183 WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	 21.2
			59351067083							E	B184A CONNECTOR, RECEPTACLE, ELECTRICAL: SAME AS B180	EA		REF									-15 4-7	 23
X2	H									*	B185A CLIP, CONNECTOR MOUNTING: 07264; A14878	EA		2									-15 4-7	 279
			53056394777							*	B186 SCREW, MACHINE: SAME AS A906F	EA		REF									-15 4-7	 277
			53100111041							*	B187 WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	 278
			59351067083							E	B188A CONNECTOR, RECEPTACLE, ELECTRICAL: SAME AS B180A	EA		REF									-15 4-7	 23
										*	B189A CLIP, CONNECTOR MOUNTING: SAME AS B185A	EA		REF									-15 4-7	 279
			53056394777							*	B190 SCREW, MACHINE: SAME AS A906F	EA		REF									-15 4-7	 277

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53100111041							*	B191 WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	278
P	H		59357320221							E	B192 TAPER PIN BLOCK: 00779; 480064-1	EA		3	1	2	3	1	2	3		9	-15 4-7	251
			59357320221							E	B193 TAPER PIN BLOCK: SAME AS B192	EA		REF									-15 4-7	251
			59357320221							E	B194 TAPER PIN BLOCK: SAME AS B192	EA		REF									-15 4-7	251
C	H		53055432776							*	B195 SCREW, MACHINE: 96906; MS35233-34	EA		2									-15 4-7	248
			53108805976							*	B196 WASHER, FLAT: SAME AS B088	EA		REF									-15 4-7	250
			53100111041							*	B197 WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	249
P	H		59991338954							E	B198A CONTACT, ELECTRICAL: 00779; 60611-1	EA		6	1	2	3	1	2	3		18	-15 4-7	23.1
P	H		59351029270							E	B199A CONTACT, ELECTRICAL: 00779; 66091-2	EA		30	1	2	3	1	2	3		90	-15 4-7	251.1
										E	B200 TERMINAL, LUG: SAME AS A912	EA		REF									-15 4-7	63.2

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		30309335356							D	B205AM BELT, POSITIVE DRIVE: 21678; 110XL037	EA		1	2	3	4	2	3	4		2	-15 4-7	 66
P	H		30309428532							D	B206AM BELT, POSITIVE DRIVE: 21678; 260XL037	EA		1	2	3	4	2	3	4		2	-15 4-7	 65
X2	H									D	B207 BRACKET, CONNECTOR: 07264; C14563	EA		1									-15 4-7	 237
			53050546670							*	B208 SCREW, MACHINE: SAME AS A914	EA		REF									-15 4-7	 235
			53100541830							*	B209 WASHER, LOCK: SAME AS A894	EA		REF									-15 4-7	 236
X2	H		74409333660							D	B210 BUMPER, CARD: 34631; 110653901	EA		1									-15 4-7	 262
			53050546670							*	B211 SCREW, MACHINE: SAME AS A914	EA		REF									-15 4-7	 259
			53108805978							*	B212 WASHER, FLAT: SAME AS A915	EA		REF									-15 4-7	 261
			53100541830							*	B213 WASHER, LOCK: SAME AS A894	EA		REF									-15 4-7	 260
C	H		47309158176							D	B214 FITTING, HOSE: 30327; KA06-04MB	EA		2									-15 4-7	 8

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									D	B215 GUIDE, CARD, EDGE: 07264; B14484T1	EA		2									-15 4-7	266, 267
			53050451628							*	B216 SCREW, MACHINE: SAME AS B099	EA		REF									-15 4-7	263
			53108805976							*	B217 WASHER, FLAT: SAME AS B088	EA		REF									-15 4-7	265
			53100111041							*	B218 WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	264
X2	H									D	B219 GUIDE, CARD, TOP: 07264; B14680A	EA		1									-15 4-7	221
X2	H									D	B220 GUIDE, CARD, BOTTOM: 07264; B14679A	EA		1									-15 4-7	222
			53050546670							*	B221 SCREW, MACHINE: SAME AS A914	EA		REF									-15 4-7	218
			53108805978							*	B222 WASHER, FLAT: SAME AS A915	EA		REF									-15 4-7	220
			53100541830							*	B223 WASHER, LOCK: SAME AS A894	EA		REF									-15 4-7	219
X2	H									D	B224 GROMMET RUBBER: 75543; 936	EA		2									-15 4-7	280 281
P	H		47202719842							D	B225A HOSE: 07264; 111065600	FT		3	3	6	9	3	6	9		6	-15 4-7	40
P	H		47201769979							D	B226A HOSE SUB-ASSEMBLY, PLASTIC: 07264; 111065400	EA		1	1	2	3	1	2	3		2	-15 4-7	7

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		47208417860							D	B228A HOSE, PLASTIC: 07264; 111065500	FT		3	3	6	9	3	6	9		6	-15 4-7	 15
X2	H									D	B230A CLAMP, PLASTIC: 95987; 1-6B	EA		3									-15 4-7	 21
			53102714644							*	B231 NUT, PLAIN, HEXAGON: SAME AS B085	EA		REF									-15 4-7	 16
C	H		53055582865							*	B232 SCREW, MACHINE: 96906; MS35233-30	EA		4									-15 4-7	 19
C	H									*	B233 WASHER, D: 95987; D140D	EA		2									-15 4-7	 20
			53108805976							*	B234 WASHER, FLAT: SAME AS B088	EA		REF									-15 4-7	 18
			53100111041							*	8235 WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	 17
										D	B235A CLAMP, PLASTIC: SAME AS B230A	EA		REF									-15 4-7	 6
C	H									*	B235B SCREW, MACHINE: 96906; MS35233-41	EA		1									-15 4-7	 3
			53108805978							*	B235C WASHER, FLAT: SAME AS A915	EA		REF									-15 4-7	 5
			53100541830							*	B235D WASHER, LOCK: SAME AS A894	EA		REF									-15 4-7	 4
X2	H									D	B236 CLAMP, HOSE: 81646; 5206	EA		6									-15 4-7	 1,2, 13.1, 14.1, 38,39
										D	B237 INSULATOR, STRIP: SAME AS B141A	EA		REF									-15 4-7	 243
			59409836045							D	B238 TERMINAL BLOCK: SAME AS B140	EA		REF									-15 4-7	 242

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53056208158							*	B239 SCREW, MACHINE: SAME AS B141	EA		REF									-15 4-7	 239
			59405028294							*	B240 STRADDLE PLATE: SAME AS B142	EA		REF									-15 4-7	 241
			53100111041							*	B241 WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	 240
X2	H									D	B242 COVER, TERMINAL: 07264; A14861	EA		1									-15 4-7	 238
X2	H									D	B243 RACE, WIRING: 07264; B14754	EA		1									-15 4-7	 258
			53056394777							*	B244 SCREW, MACHINE: SAME AS A906F	EA		REF									-15 4-7	 255
			53108805976							*	B245 WASHER, FLAT: SAME AS B088	EA		REF									-15 4-7	 257
			53100111041							*	B246 WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	 256
X2	H									D	B247 SUPPORT, CARD: 07264; B14732	EA		1									-15 4-7	 226
			53055582865							*	B248 SCREW, MACHINE: SAME AS B232	EA		REF									-15 4-7	 223
			53108805976							*	B249 WASHER, FLAT: SAME AS B088	EA		REF									-15 4-7	 225
			53100111041							*	B249A WASHER, LOCK: SAME AS A880	EA		REF									-15 4-7	 224
X2	H									D	B250A SPACER: 07264; B14992	EA		2									-15 4-7	 86,87

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									D	B251 PANEL, READER: 07264; X14561ET2	EA		1									-15 4-7	282
X2	H									C	B256 BRACKET, SAFETY: 58189; A64409-001	EA		2									-15 4-1	11
			53109349765							*	B257 NUT, PLAIN, HEXAGON: SAME AS A562	EA		REF									-15 4-1	7
			53050593661							*	B258 SCREW, ,MACHINE: SAME AS A648	EA		REF									-15 4-1	9
			53101670812							*	B259 WASHER, FLAT: SAME AS A650	EA		REF									-15 4-1	8
			53109338120							*	B260 M WASHER, LOCK: SAME AS A564 M	EA		REF									-15 4-1	10
X2	H									C	B260A FRAME, ASSEMBLY: 58189; A61667-001	EA		1									-15 4-1	6
A	H	R								B	B261A POWER SUPPLY: 06809; 40-000092-1	EA		1									-15 4-1	20

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		59100544243							C	B262 CAPACITOR, HIGH VOLTAGE: 03508; 86F2004MA	EA		1	1	2	3	1	2	3		3	-15 4-4	 49
P	H		59100544242							C	B263 CAPACITOR, HIGH VOLTAGE: 03508; 86F1063MA	EA		1	1	2	3	1	2	3		3	-15 4-4	 48
X2	H									C	B264A CAPACITOR, RETAINING ASSEMBLY: 06809; 40-000081-1	EA		3									-15 4-4	 45
C	H									*	B265A SCREW, MACHINE: 88044; AN3C52A	EA		4									-15 4-4	 41
			53100593659							*	B266 WASHER, FLAT: SAME AS A756D	EA		REF									-15 4-4	 44
			53109338120							*	B267 M WASHER, LOCK: SAME AS A564 M	EA		REF									-15 4-4	 43
P	H		59100544225							C	B268 CAPACITOR, HIGH VOLTAGE: 03508; 86F1061MA	EA		2	1	2	3	1	2	3		6	-15 4-4	 46
			59100544225							C	B269 CAPACITOR, HIGH VOLTAGE: SAME AS B268	EA		REF									-15 4-4	 46
										C	B270 CAPACITOR, RETAINING ASSEMBLY: SAME AS B264A	EA		REF									-15 4-4	 45
C	H									*	B271A SCREW, MACHINE: 88044; AN3C66A	EA		2									-15 4-4	 42
			53100593659							*	B272 WASHER, FLAT: SAME AS A756D	EA		REF									-15 4-4	 44

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53109338120							*	B273 M WASHER, LOCK: SAME AS A564 M	EA		REF										-15 4-4	43
P	H		59100544241							C	B274 CAPACITOR, HIGH VOLTAGE: 03508; 86F1062MA	EA		2	1	2	3	1	2	3		6	-15 4-4	47
			59100544241							C	B275 CAPACITOR, HIGH VOLTAGE: SAME AS B274	EA		REF									-15 4-4	47
										C	B276 CAPACITOR, RETAINING ASSEMBLY: SAME AS B264A	EA		REF									-15 4-4	45
										*	B277A SCREW, MACHINE: SAME AS B265A	EA		REF									-15 4-4	41
			53100593659							*	B278 WASHER, FLAT: SAME AS A756D	EA		REF									-15 4-4	44
			53109338120							*	B279 M WASHER, LOCK: SAME AS A564 M	EA		REF									-15 4-4	43
X2	H									C	B279A INSULATOR: 06809; 40-000124-1	EA		3									-15 4-4	45.1
P	H		59100505330							C	B280 CAPACITOR, HIGH VOLTAGE: 03508; 86F1064MA	EA		2	1	2	3	1	2	3		6	-15 4-4	55
			59100505330							C	B280A CAPACITOR, HIGH VOLTAGE: SAME AS B280	EA		REF									-15 4-4	55
P	H		59100505331							C	B281 CAPACITOR, HIGH VOLTAGE: 03508; 86F1065MA	EA		2	1	2	3	1	2	3		6	-15 4-4	56

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59100505331							C	B282 CAPACITOR, HIGH VOLTAGE: SAME AS B281	EA		REF									-15 4-4	 56
P	H		59100505332							C	B283 CAPACITOR, HIGH VOLTAGE: 03508; 86F1067MA	EA		1	1	2	3	1	2	3		3	-15 4-4	 57
X2	H									C	B284A BRACKET, CAPACITOR: 94682; 97A	EA		5									-15 4-4	 58
C	H		53100134530							*	B285A NUT, PLAIN, HEXAGON: 96906; MS35649-62	EA		7									-15 4-4	 53
			53050546655							*	B286A SCREW MACHINE: SAME AS A794	EA		REF									-15 4-4	 50
			53050546652							*	B287A SCREW, MACHINE: SAME AS A659	EA		REF									-15 4-4	 54
C	H		53100821404							*	B287B WASHER, FLAT: 96906; MS27183-6	EA		15									-15 4-4	 51
C	H		53100454007							*	B287C WASHER, LOCK: 96906; MS35338-41	EA		15									-15 4-4	 5
A	H	R								C	B288B CHASSIS ASSEMBLY: 06809; 40-000062	EA		1									-15 4-4	 110
X2	H									D	B289B CHASSIS: 06809; 40-000062-1	EA		1									-15 4-4	 104
X2	H		53408399050							D	B290 FASTENER, CLINCH: 46384; S632-2	EA		31									-15 4-4	 105
X2	H		53105968129							D	B291 FASTENER, CLINCH: 46384; S832-2	EA		5									-15 4-4	 106

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									D	B292 FASTENER, CLINCH: 46384; SS032-2	EA		16									-15 4-4	107
X2	H		53105968129							D	B293 FASTENER, CLINCH: 46384; AS632-2	EA		10									-15 4-4	108
X2	H		53258171158							D	B294 EYELET, FLANGED: 57771; A510	EA		1									-15 4-4	109
P	H	T	74400189646							C	B295B CIRCUIT CARD ASSEMBLY 06809; 40-000008-1	EA		1	1	2	3	1	2	3		3	-15 4-4	92
X1	D									D	B296 PRINTED CIRCUIT BOARD: 06809; 40-000006-1	EA		1									-15 5-15	
P	D		59100613200							D	B297A CAPACITOR, FIXED, PAPER: 06001; 75F3R1B104	EA		6								18	-15 5-15	C1
P	D		59101145274							D	B298B CAPACITOR, FIXED, PAPER: 06001; 75F1R1B472	EA		1								3	-15 5-15	C2
P	D		59052793512							D	B301 M RESISTOR, FIXED, COMPOSITION: 81349; RC20GF431J	EA		2								6	-15 5-15	R1
			59052793512							D	B301AM RESISTOR, FIXED, COMPOSITION: SAME AS B301 M	EA		REF									-15 5-15	R11
P	D		59051956806							D	B30ZA RESISTOR, FIXED, COMPOSITION: 81349; RC20GF102J	EA		9								27	-15 5-15	R2
			59051956806							D	B303A RESISTOR, FIXED, COMPOSITION: SAME AS B302A	EA		REF									-15 5-15	R13

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59052793517							D	B304A RESISTOR, FIXED, COMPOSITION: 81349; RC20GF510J	EA		2								6	-15 5-15	 R14
P	D		59052791757							D	B305A RESISTOR, FIXED, COMPOSITION: 81349; RC20GF152J	EA		5								15	-15 5-15	 R16
P	D		59052793506							D	B306A RESISTOR, FIXED, COMPOSITION: 81349; RC20GF332J	EA		12								36	-15 5-15	 R17
P	D		59050693914							D	B307A RESISTOR, FIXED, FILM: 81349; RN60D1961F	EA		2								6	-15 5-15	 R18
P	D		59057636457							D	B308A RESISTOR, FIXED, FILM: 81349; RN60D1152F	EA		2								6	-15 5-15	 R19
P	D		59052793505							D	B309A RESISTOR, FIXED, COMPOSITION: 81349; RC20GF392J	EA		1								3	-15 5-15	 R20
P	D		59050693912							D	B310 RESISTOR, FIXED, FILM: 81349; RN60D196OF	EA		7								21	-15 5-15	 R9
			59050693912							D	B311 M RESISTOR, FIXED, FILM: SAME AS B310	EA		REF									-15 5-15	 R4
			59050693912							D	B311A RESISTOR, FIXED, FILM: SAME AS B310	EA		REF									-15 5-15	 R5
			59050693912							D	B311B RESISTOR, FIXED, FILM: SAME AS B310	EA		REF									-15 5-15	 R6
			59050693912							D	B311C RESISTOR, FIXED, FILM: SAME AS B310	EA		REF									-15 5-15	 R7

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59050693912							D	B311D RESISTOR, FIXED, FILM: SAME AS B310	EA		REF									-15 5-15	R8
			59050693912							D	B311E RESISTOR, FIXED, FILM: SAME AS B310	EA		REF									-15 5-15	R15
P	D		59059854889							D	B312A RESISTOR, FIXED, FILM: 81349; RN60D8250F	EA		1								3	-15 5-15	R22
P	D		59059527042							D	B313A RESISTOR, FIXED, FILM: 81349; RN60D2610F	EA		1								3	-15 5-15	R23
P	D		59059570643							D	B314M RESISTOR, FIXED, FILM: 81349; RN60D4640F	EA		5								15	-15 5-15	R27
P	D		59051908887							D	B315M RESISTOR, FIXED, COMPOSITION: 81349; RC20GF202J	EA		3								9	-15 5-15	R3
P	D		5905-00-107-0818							D	B316AM RESISTOR, VARIABLE: 73138;77PR500	EA		6								18	-15 5-15	R24
			5905-00-107-0818							D	B317A RESISTOR, VARIABLE: SAME AS B316AM	EA		REF									-15 5-15	R30
P	D		59059882313							D	B318A RESISTOR, FIXED, FILM: 81349: RN60D1211F	EA		3								9	-15 5-15	R25
			59059882313							D	B319A RESISTOR, FIXED, FILM: SAME AS B318A	EA		REF									-15 5-15	R35
P	D		59059882317							D	B320A RESISTOR, FIXED, FILM: 81349; RN60D1001F	EA		1								3	-15 5-15	R28
P	D		59059544642							D	B321A RESISTOR, FIXED, FILM: 81349; RN60D1621F	EA		3								9	-15 5-15	R29

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59057611901							D	B322B RESISTOR, FIXED, FILM: 81349; RN60D2151F	EA		3								9	-15 5-15	R31
P	D		59057818015							D	B322C RESISTOR, FIXED, FILM: 81349; RN60D3480F	EA		3								9	-15 5-15	R12
			59057818015							D	B322D RESISTOR, FIXED, FILM: SAME AS B322C	EA		REF									-15 5-15	R32
P	D		59059655554							D	B322E RESISTOR, FIXED, FILM: 81349; RN60D6810F	EA		1								3	-15 5-15	R33
P	D		59051959481							D	B322F RESISTOR, FIXED, COMPOSITION: 81349; RC20GF751J	EA		1								3	-15 5-15	R34
P	D		59050507598							D	B322G RESISTOR, FIXED, FILM: 81349; RN60D1401F	EA		1								3	-15 5-15	R26
P	D		59052524018							D	B322J RESISTOR, FIXED, COMPOSITION: 81349; RC20GF470J	EA		2								15	-15 5-15	R21
P	D		59618921009							D	B323A SEMI-CONDUCTOR DEVICE, DIODE: 81349; 1N963B	EA		1								3	-15 5-15	CR1
P	D		59611070748							D	B324A SEMI-CONDUCTOR DEVICE, DIODE: 03508; A14BX280	EA		8								24	-15 5-15	CR2
			59611070748							D	B324B SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B324A	EA		REF									-15 5-15	CR3
			59611070748							D	B324C SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B324A	EA		REF									-15 5-15	CR4

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59610816103							D	B325 M SEMI-CONDUCTOR DEVICE, DIODE: 81349; 1N823	EA		4								12	-15 5-15	 CR5
			59610816103							D	B325A SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B325 M	EA		REF									-15 5-15	 CR6
P	D		59618804779							D	B326 M TRANSISTOR: 81349; 2N2905	EA		10								50	-15 5-15	 Q3
			59618804779							D	B327 TRANSISTOR: SAME AS B326 M	EA		REF									-15 5-15	 Q2
			59618804779							D	B328 M TRANSISTOR: SAME AS B326 M	EA		REF									-15 5-15	 Q9
P	D		59610540046							D	B329 M TRANSISTOR: 81349; 2N1711	EA		34								170	-15 5-15	 Q1
			59610540046							D	B330 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-15	 Q4
			59610540046							D	B331 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-15	 Q5
			59610540046							D	B332 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-15	 Q7
			59610540046							D	B332A TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-15	 Q6
			59610540046							D	B332B TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-15	 Q8
			59709564972							D	B332C INSULATOR, DISK: SAME AS A096	EA		REF									-15 5-15	 H1
P	H	T	74400189638							C	B333B CIRCUIT CARD ASSEMBLY 06809; 40-000011-1	EA		1	1	2	3	1	2	3		3	-15 4-4	 93

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X1	D									D	B334 A PRINTED CIRCUIT BOARD: 06809, 40-000009-1	EA		1									-15 5-16	
P	D		59101145282							D	B335 A CAPACITOR, FIXED, ELECTRICAL: 03508; 75F2R1B473	EA		2								6	-15 5-16	C1
			59100613200							D	B336 A CAPACITOR, FIXED, PAPER SAME AS B297A	EA		REF									-15 5-16	C2
P	D		59051712006							D	B342 B RESISTOR, FIXED, COMPOSITION: 81349; RC20GF271J	EA		7								21	-15 5-16	R4
			59051908889							D	B343 A RESISTOR, FIXED, COMPOSITION: SAME AS A340	EA		REF									-15 5-16	R22
			59051908889							D	B344 M RESISTOR, FIXED, COMPOSITION: SAME AS A340	EA		REF									-15 5-16	R35
			59051908889							D	B345 M RESISTOR, FIXED, COMPOSITION: SAME AS A340	EA		REF									-15 5-16	R36
			59051908887							D	B346 M RESISTOR, FIXED, COMPOSITION: SAME AS B315 M	EA		REF									-15 5-16	R8
			59052791757							D	B347 A RESISTOR, FIXED, COMPOSITION: SAME AS B305A	EA		REF									-15 5-16	R5
P	D		59052791889							D	B348 A RESISTOR, FIXED, COMPOSITION: 81349; RC20GF361J	EA		1								3	-15 5-16	R12

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59059529230							D	B349A RESISTOR, FIXED, FILM: 81349; RN60D7500F	EA		2								6	-15 5-16	R13
			59059529230							D	B350A RESISTOR, FIXED, FILM: SAME AS B349A	EA		REF									-15 5-16	R28
P	D		59051923973							D	B351AM RESISTOR, FIXED, COMPOSITION: 81349; RC20GF471J	EA		5								15	-15 5-16	R21
P	D		59052494195							D	B352 M RESISTOR, FIXED, COMPOSITION: 81349; RC20GF752J	EA		2								6	-15 5-16	R27
			59051956806							D	B353A RESISTOR, FIXED, COMPOSITION: SAME AS B302A	EA		REF									-15 5-16	R14
			59051956806							D	B354A RESISTOR, FIXED, COMPOSITION: SAME AS B302A	EA		REF									-15 5-16	R29
			59050693914							D	B355A RESISTOR, FIXED, FILM: SAME AS B307A	EA		REF									-15 5-16	R30
			59051712006							D	B356 M RESISTOR, FIXED, COMPOSITION: SAME AS B342B	EA		REF									-15 5-16	R19
			59051712006							D	B357 M RESISTOR, FIXED, COMPOSITION: SAME AS B342B	EA		REF									-15 5-16	R34
P	D		59059841465							D	B358A RESISTOR, FIXED, FILM: 81349; RN60D 5621F	EA		5								15	-15 5-16	R9

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59052793517							D	B359A RESISTOR, FIXED, COMPOSITION: SAME AS B304A	EA		REF									-15 5-16	R20
P	D		59050518003							D	B360A RESISTOR, FIXED, FILM: 81349; RN60D1582F	EA		2								6	-15 5-16	R25
			5905-00-107-0818							D	B361A RESISTOR, VARIABLE: SAME AS B316AM	EA		REF									-15 5-16	R17
			5905-00-107-0818							D	B362A RESISTOR, VARIABLE: SAME AS B316AM	EA		REF									-15 5-16	R32
P	D		59059855435							D	B363A RESISTOR, FIXED, FILM: 81349; RN60D7501F	EA		1								3	-15 5-16	R10
			59059570643							D	B364A RESISTOR, FIXED, FILM: SAME AS B314 M	EA		REF									-15 5-16	R1
			59059570643							D	B365A RESISTOR, FIXED, FILM: SAME AS B314 M	EA		REF									-15 5-16	R2
			59059570643							D	B366 M RESISTOR, FIXED, FILM: SAME AS B314 M	EA		REF									-15 5-16	R3
			59059570643							D	B367 M RESISTOR, FIXED, FILM: SAME AS B314 M	EA		REF									-15 5-16	R23
P	D		59055429387							D	B368A RESISTOR, FIXED, WIREWOUND: 81349; RW59V102	EA		1								6	-15 5-16	R24
			59055429387							D	B369A RESISTOR, FIXED, WIREWOUND: SAME AS B368A	EA		REF									-15 5-16	R26

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59059544642							D	B370 M RESISTOR, FIXED, FILM: SAME AS B321A	EA		REF									-15 5-16	 R15
			59057818015							D	B371A RESISTOR, FIXED, FILM: SAME AS B322C	EA		REF									-15 5-16	 R7
P	D		59058407609							D	B373 M RESISTOR, FIXED, FILM: 81349; RN60C1871F	EA		4								12	-15 5-16	 R16
			59058407609							D	B374 RESISTOR, FIXED, FILM: SAME AS B373 M	EA		REF									-15 5-16	 R33
			59058407609							D	B375 M RESISTOR, FIXED, FILM: SAME AS B373 M	EA		REF									-15 5-16	 R18
			59058407609							D	B376 RESISTOR, FIXED, FILM: SAME AS B373 M	EA		REF									-15 5-16	 R31
P	D		59052793504							D	B377 M RESISTOR, FIXED, COMPOSITION: 81349; RC20GF472J	EA		11								33	-15 5-16	 R6
			59052793504							D	B378A RESISTOR, FIXED, COMPOSITION: SAME AS B377 M	EA		REF									-15 5-16	 R11
P	D		59610888792							D	B383 M SEMI-CONDUCTOR DEVICE, DIODE: 81349; 1N5059	EA		33								99	-15 5-16	 CR7
			59611070748							D	B384A SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B324A	EA		REF									-15 5-16	 CR1
			59611070748							D	B384B SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B324A	EA		REF									-15 5-16	 CR2

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59611070748							D	B384C SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B324A	EA		REF									-15 5-16	 CR3
			59611070748							D	B384D SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B324A	EA		REF									-15 5-16	 CR6
			59610816103							D	B385 M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B325 M	EA		REF									-15 5-16	 CR4
			59610816103							D	B386 M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B325 M	EA		REF									-15 5-16	 CR8
P	D		59611070819							D	B387B SEMI-CONDUCTOR DEVICE, DIODE: 06809; 40-000125-1	EA		2								6	-15 5-16	 CR5
			59611070819							D	B388A SEMI-CONDUCTOR DEVICE, DIODE SAME AS B387B	EA		REF									-15 5-16	 CR9
			59618804779							D	B389 M TRANSISTOR: SAME AS B326 M	EA		REF									-15 5-16	 Q10
			59618804779							D	B390 M TRANSISTOR: SAME AS B326 M	EA		REF									-15 5-16	 Q2
			59618804779							D	B391 M TRANSISTOR: SAME AS B326 M	EA		REF									-15 5-16	 Q6
			59618804779							D	B392 M TRANSISTOR: SAME AS B326 M	EA		REF									-15 5-16	 Q8
			59618804779							D	B393 M TRANSISTOR: SAME AS B326 M	EA		REF									-15 5-16	 Q9

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59618804779							D	B394M TRANSISTOR: SAME AS B326 M	EA		REF									-15 5-16	 Q11
			59610540046							D	8395 M TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-16	 Q3
			59610540046							D	B396 M TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-16	 Q4
			59610540046							D	B397 M TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-16	 Q5
			59610540046							D	B398 M TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-16	 Q7
			59610540046							D	B399 M TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-16	 Q1
			59709564972							D	B400A INSULATOR, DISK: SAME AS A096	EA		REF									-15 5-16	 H1
P	H	T	74400189637							C	B402B CIRCUIT CARD ASSEMBLY: 06809; 40-000014-1	EA		1	1	2	3	1	2	3		3	-15 4-4	 94
X1	D									D	B403 PRINTED CIRCUIT BOARD 06809; 40-000012-1	EA		1									-15 5-17	
			59101145282							D	B404A CAPACITOR, FIXED, ELECTRICAL: SAME AS B335A	EA		REF									-15 5-17	 C1
P	D		59056767410							D	B408A RESISTOR, FIXED, WIREWOUND: 81349; RW59V182	EA		1								3	-15 5-17	 R1
			59052791757							D	B409A RESISTOR, FIXED, COMPOSITION: SAME AS B305A	EA		REF									-15 5-17	 R2

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59059522148							D	B410A RESISTOR, FIXED, FILM: 81349; RN60D3011F	EA		1								3	-15 5-17	R3
P	D		59059695854							D	B411A RESISTOR, FIXED, FILM: 81349; RN60D 5620F	EA		1								3	-15 5-17	R4
P	D		59056895771							D	B412B RESISTOR, FIXED, WIRE-WOUND: 63743; 3X3000	EA		1								3	-15 5-17	R11
P	D		59051956791							D	B413 M RESISTOR, FIXED, COMPOSITION: 81349; RC20GF681J	EA		19								57	-15 5-17	R5
			59051956791							D	B414M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-17	R21
P	D		59052792616							D	B415A RESISTOR, FIXED, COMPOSITION: 81349; RC20GF153J	EA		4								12	-15 5-17	R9
			59052792616							D	B416A RESISTOR, FIXED, COMPOSITION: SAME AS B415A	EA		REF									-15 5-17	R10
P	D		59055780997							D	B417A RESISTOR, FIXED, WIRE-WOUND: 81349; RW59V202	EA		4								12	-15 5-17	R7
			59055780997							D	B418A RESISTOR, FIXED, WIRE-WOUND: SAME AS B417A	EA		REF									-15 5-17	R12
			59055780997							D	B419A RESISTOR, FIXED, WIRE-WOUND: SAME AS B417A	EA		REF									-15 5-17	R13

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(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59050442228							D	B420A RESISTOR, FIXED, WIRE-WOUND: 81349; RW69V471	EA		1								3	-15 5-17	R14
			59051923973							D	B421AM RESISTOR, FIXED, COM-POSITION: SAME AS B351AM	EA		REF									-15 5-17	R6
			59051923973							D	B422AM RESISTOR, FIXED, COM-POSITION: SAME AS B351AM	EA		REF									-15 5-17	R8
			59051908887							D	B423A RESISTOR, FIXED, COM-POSITION: SAME AS B315 M	EA		REF									-15 5-17	R15
P	D		59050693916							D	B424A RESISTOR, FIXED, FILM: 81349; RN60D3831F	EA		1								3	-15 5-17	R16
P	D		59056863380							D	B425A RESISTOR, FIXED, FILM: 81349; RN60C2871F	EA		1								3	-15 5-17	R17
			590-008 107-0818							D	B426AM RESISTOR, VARIABLE: SAME AS B316AM	EA		REF									-15 5-17	R18
P	D		590595720'41							D	B427A RESISTOR, FIXED, WIRE-WOUND: 81349; RN65C9531F	EA		1								3	-15 5-17	R19
P	D		59059526023							D	B428A RESISTOR, FIXED, FILM: 81349; RN60D3162F	EA		1								3	-15 5-17	R20
P	D		59051858510							D	B429A RESISTOR, FIXED, COM-POSITION: 81349; RC20GF103J	EA		3								9	-15 5-17	R23

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59052494195							D	B430A RESISTOR, FIXED, COMPOSITION: SAME AS B352 M	EA		REF									-15 5-17	R22
P	D		59059522146							D	B431B RESISTOR, FIXED, COMPOSITION: 81349; RN60D 5111J	EA		1								3	-15 5-17	R24
P	D		59611070820							D	B432B SEMI-CONDUCTOR DEVICE, DIODE: 06809: 40-000126-1	EA		2								6	-15 5-17	CR1
			59611070820							D	B433A SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B432B	EA		REF									-15 5-17	CR5
P	D		59619426756							D	B434 SEMI-CONDUCTOR DEVICE, DIODE: 81349; 1N942	EA		1								3	-15 5-17	CR3
			59611070748							D	B435A SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B324A	EA		REF									-15 5-17	CR2
P	D		59618360382							D	B435B SEMI-CONDUCTOR DEVICE, DIODE: 81349; IN3022A	EA		1								3	-15 5-17	CR4
			59618804779							D	B436 M TRANSISTOR: SAME AS B326 M	EA		REF									-15 5-17	Q1
			59610540046							D	B437 M TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-17	Q2
			59610540046							D	B438 M TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-17	Q3

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59619417847							D	B439A TRANSISTOR: 81349; 2N2243A	EA		3								15	-15	
																							5-17	Q9
P	D		59619491440							D	B442 M TRANSISTOR: 81349; 2N2905A	EA		20								100	-15	
																							5-17	Q6
			59619491440							D	B442A TRANSISTOR: SAME AS B442 M	EA		REF									-15	
																							5-17	Q4
			59619491440							D	B442B TRANSISTOR: SAME AS B442 M	EA		REF									-15	
																							5-17	Q5
			59619491440							D	B442C TRANSISTOR: SAME AS B442 M	EA		REF									-15	
																							5-17	Q6
			59619491440							D	B442D TRANSISTOR: SAME AS B442 M	EA		REF									-15	
																							5-17	Q8
			59709564972							D	B443A INSULATOR, DISK: SAME AS A096	EA		REF									-15	
																							5-17	H1
A	H	R								C	B444A HEATSINK ASSEMBLY: 06809; 40-000086-1	EA		1									-15	
																							4-4	62
			53050546652							*	B445 SCREW, MACHINE: SAME AS A659	EA		REF									-15	
																							4-4	59
C	H		53105319514							*	B446 WASHER, FLAT: 88044; AN960C6	EA		34									-15	
																							4-4	61
			53109296395							*	B447 WASHER, LOCK: SAME AS A660	EA		REF									-15	
																							4-4	60
X2	H									D	B448A END PLATE: 06809; 40-000017-1	EA		2									-15	
																							4-4	62.1
C	H		53050546654							*	B449 SCREW, MACHINE: 96906; MS51957-30	EA		12									-15	
																							4-4	62.2

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53101937610							*	B450 WASHER, FLAT: 96906; MS15795-205	EA		39									-15 4-4	62.4
			53109296395							*	B451 WASHER, LOCK: SAME AS A660	EA		REF									-15 4-4	62.3
										D	B452A END PLATE: SAME AS B448A	EA		REF									-15 4-4	62.1
			53050546654							*	B453 SCREW, MACHINE: SAME AS B449	EA		REF									-15 4-4	62.2
			53101941548							*	8454 WASHER, FLAT: SAME AS B450	EA		REF									-15 4-4	62.4
			53109296395							*	8455 WASHER, LOCK: SAME AS A660	EA		REF									-15 4-4	62.3
X2	H									D	B456A COVER, SIDE: 06809: 40-000015-1	EA		2									-15 4-4	62.5
A	H	R								D	B457A HEATSINK SUBASSEMBLY: 06809; 40-000043-1	EA		1									-15 4-4	62.6
			53050546657							*	B458 SCREW, MACHINE: SAME AS A678	EA		REF									-15 4-4	62.7
			53101941548							*	B459 WASHER, FLAT: SAME AS B450	EA		REF									-15 4-4	62.9
			53109296395							*	B460 WASHER, LOCK: SAME AS A660	EA		REF									-15 4-4	62.8
X2	H		53404207606							E	B461A CLAMP, LOOP: 96906; MS25281-4	EA		2									-15 5-18	H1

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53050546653							*	B462 SCREW, MACHINE: 96906; MS51957-29	EA		15									-15 5-18	H2
			53101941548							*	B463 WASHER, FLAT: SAME AS B450	EA		REF									-15 5-18	H3
			53109296395							*	B464 WASHER, LOCK: SAME AS A660	EA		REF									-15 5-18	H4
P	H		59108388395							E	B465 M CAPACITOR, FIXED, PAPER: 03508; 75F1R1B103	EA		14	1	2	3	1	2	3		42	-15 5-18	C1
			59108388395							E	B466 M CAPACITOR, FIXED, PAPER: SAME AS B465 M	EA		REF									-15 5-18	C2
P	H		59108388395							E	B467A CAPACITOR, FIXED, PAPER: 03508; 75F1R2B103	EA		2	1	2	3	1	2	3		6	-15 5-18	C4
			59108388395							E	B468 M CAPACITOR, FIXED, PAPER: SAME AS B467A	EA		REF									-15 5-18	C3
P	H		59350505308							E	B469 CONNECTOR, PLUG, ELECTRICAL: 00779; 1-480278-4	EA		1	1	2	3	1	2	3		3	-15 5-18	P1
P	H		59350505309							E	B470 CONNECTOR, PLUG, ELECTRICAL: 00779; 1-480278-7	EA		1	1	2	3	1	2	3		3	-15 5-18	P2
P	H		59351330470							E	B471A CONTACT, ELECTRICAL: 00779; 61118-1	EA		34	1	2	3	1	2	3		102	-15 5-18	H5

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	H		59059844868							E	B472B RESISTOR, FIXED, WIRE-WOUND: 81349; RW57VR27	EA		2	1	2	3	1	2	3		6	-15 5-18	R1
			59059844868							E	B473B RESISTOR, FIXED, WIRE-WOUND: SAME AS B472B	EA		REF									-15 5-18	R2
P	H		59057523659							E	B474 M RESISTOR, FIXED, WIRE-WOUND: 81349; RW59V151	EA		3	1	2	3	1	2	3		9	-15 5-18	R3
P	H		59052267626							E	B475C RESISTOR, FIXED, WIRE-WOUND: 63743: 3X6000	EA		1	1	2	3	1	2	3		3	-15 5-18	R4
P	H		59617525395							E	B476 SEMI-CONDUCTOR DE-VICE, DIODE: 81349; 1N1184	EA		2	1	2	3	1	2	3		6	-15 5-18	CR1
			59617525395							E	B477 SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS B476	EA		REF									-15 5-18	CR2
P	H		59619350138							E	B478 SEMI-CONDUCTOR DE-VICE, DIODE: 81349; IN1202	EA		2	1	2	3	1	2	3		6	-15 5-18	CR4
			59619350138							E	B479 M SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS B478	EA		REF									-15 5-18	CR3
P	H		59611996008							E	B480 TRANSISTOR: 81349; 2N3055	EA		8	1	2	3	1	2	3		40	-15 5-18	Q1
			53050546653							*	B481 SCREW, MACHINE: SAME AS B462	EA		REF									-15 5-18	H2

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53101941548							*	B482 WASHER, FLAT: SAME AS B450	EA		REF									-15 5-18	 H3
			53109296395							*	B483 WASHER, LOCK: SAME AS A660	EA		REF									-15 5-18	 H4
			59611996008							E	B484 TRANSISTOR: SAME AS B480	EA		REF									-15 5-18	 Q2
			53050546653							*	B485 SCREW, MACHINE: SAME AS B462	EA		REF									-15 5-18	 H2
			53101941548							*	B486 WASHER, FLAT: SAME AS B450	EA		REF									-15 5-18	 H3
			53109296395							*	B487 WASHER, LOCK: SAME AS A660	EA		REF									-15 5-18	 H4
			59611996008							E	B488 TRANSISTOR: SAME AS B480	EA		REF									-15 5-18	 Q3
			53050546653							*	B489 SCREW, MACHINE: SAME AS B462	EA		REF									-15 5-18	 H2
			53101941548							*	B490 WASHER, FLAT: SAME AS B450	EA		REF									-15 5-18	 H3
			53109296395							*	B491 WASHER, LOCK: SAME AS A660	EA		REF									-15 5-18	 H4
C	H		59405015859							E	B491A TERMINAL, LUG: 00779; 34112	EA		6									-15 5-18	 H6
C	H		59409439539							E	B491B TERMINAL, LUG: 00779; 34113	EA		5									-15 5-18	 H7
A	H	R								E	B492 HEATSINK: 06809; 40-000096-1	EA		1									-15 5-18	 H8

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									F	493A EXTRUSION: 06809; 40-000004-1	EA		3									-15 5-18	 H9
P	H		59409358248							F	B494 TERMINAL STUD: 98291; FTSM66L4	EA		48	1	2	3	1	2	3		100	-15 5-18	 E1
			59409358248							F	B495 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	 E2
			59409358248							F	B496 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	 E3
			59409358248							F	B497 TERMINAL STUD: SAME AS B494:	EA		REF									-15 5-18	 E5
			59409358248							F	B498 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	 E6
			59409358248							F	B499 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	 E7
			59409358248							F	B500 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	 E8
			59409358248							F	B501 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	 E9
			59409358248							F	B502 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	 E10
			59409358248							F	B503 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	 E11

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59409358248							F	B504 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	E12
			59409358248							F	B505 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	E13
			59409358248							F	B506 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	E14
			59409358248							F	B507 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	E15
			59409358248							F	B508 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-18	E17
P	H		59409358246							F	B510 TERMINAL STUD: 86577; 2D6-29F	EA		3	1	2	3	1	2	3		6	-15 5-18	E4
C	H		53108034994							F	B510A NUT, SELF-LOCKING: 46384; CLS632-3	EA		12									-15 5-18	H10
A	H	R								D	B511 HEATSINK SUBASSEMBLY: 06809; 40-000044-1	EA		1									-15 4-4	62.10
			53050546657							*	B512 SCREW, MACHINE: SAME AS A678	EA		REF									-15 4-4	62.7
			53101941548							*	B513 WASHER, FLAT: SAME AS B450	EA		REF									-15 4-4	62.9
			53109296395							*	B514 WASHER, LOCK: SAME AS A660	EA		REF									-15 4-4	62.8

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53404207606							E	B515A CLAMP, LOOP: SAME AS B461A .	EA		REF									-15	
																							5-19	H1
			53050546653							*	B516 SCREW, MACHINE: SAME AS B462	EA		REF									-15	
																							5-19	H2
			53101941548							*	B517 WASHER, FLAT: SAME AS B450	EA		REF									-15	
																							5-19	H3
			53109296395							*	B518 WASHER, LOCK: SAME AS A660	EA		REF									-15	
																							5-19	H4
			59108388395							E	B519 M CAPACITOR, FIXED, PAPER: SAME AS B465 M	EA		REF									-15	
																							5-19	C1
			59108388395							E	B520 M CAPACITOR, FIXED, PAPER: SAME AS B465 M	EA		REF									-15	
																							5-19	C2
			59108388395							E	B521 M CAPACITOR, FIXED, PAPER: SAME AS B465 M	EA		REF									-15	
																							5-19	C3
			59108388395							E	B522 M CAPACITOR, FIXED, PAPER: SAME AS B465 M	EA		REF									-15	
																							5-19	C4
P	H		59350505307							E	B523 CONNECTOR, PLUG, ELECTRICAL: 0779; 1-480278-3	EA		1	1	1	2	1	1	2		3	-15	
																							5-19	P1
P	H		59350505315							E	B524 CONNECTOR, PLUG, ELECTRICAL: 00779; 1-480278-8	EA		1	1	1	2	1	1	2		3	-15	
																							5-19	P2
			59351330470							E	B525A CONTACT, ELECTRICAL: SAME AS B471A	EA		REF									-15	
																							5-19	H5

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									E	B526 INSULATOR DISK: 08289; DM103SL	EA										5	-15 5-19	 H6
P	H		59059027456							E	B527A RESISTOR, FIXED, WIRE-WOUND: 81349: RWS7GR20	EA		2	1	2	3	1	2	3		6	-15 5-19	 R1
			59059027456							E	B528A RESISTOR, FIXED, WIRE-WOUND: SAME AS B527A	EA		REF									-15 5-19	 R5
P	H		59055777427							E	B529 RESISTOR, FIXED, WIRE-WOUND: 81349; RW59V100	EA		1	1	2	3	1	2	3		3	-15 5-19	 R3
P	H		59056818970							E	B531M RESISTOR, FIXED, WIRE-WOUND: 81349; RW59V601	EA		6	1	2	3	1	2	3		18	-15 5-19	 R7
			59056818970							E	B532M RESISTOR, FIXED, WIRE-WOUND: SAME AS B531 M	EA		REF									-15 5-19	 R6
			59056818970							E	B532A RESISTOR, FIXED, WIRE-WOUND: SAME AS B531 M	EA		REF									-15 5-19	 R2
			59056818970							E	B532B RESISTOR, FIXED, WIRE-WOUND: SAME AS B531 M	EA		REF									-15 5-19	 R4
P	H		59617526158							E	B533 SEMI-CONDUCTOR DEVICE, DIODE: 81349; 1N1200	EA		4	1	2	3	1	2	3		12	-15 5-19	 CR1
			59617526158							E	B534 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B533	EA		REF									-15 5-19	 CR2

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(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59617526158							E	B535 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B533	EA		REF									-15 5-19	 CF
			59617526158							E	B536 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B533	EA		REF									-15 5-19	 CF
			59611996008							E	B537 TRANSISTOR: SAME AS B480	EA		REF									-15 5-19	 Q1
			53050546653							*	B538 SCREW, MACHINE: SAME AS B462	EA		REF									-15 5-19	 H2
			53101941548							*	B539 WASHER, FLAT: SAME AS B450	EA		REF									-15 5-19	 H3
			53109296395							*	B540 WASHER, LOCK: SAME AS A660	EA		REF									-15 5-19	 H4
C	H		59709103528							*	B541 WASHER, NON METAL: 08289; MW375-140	EA		10									-15 5-19	 H7
			59611996008							E	B542 TRANSISTOR: SAME AS B480	EA		REF									-15 5-19	 Q2
			53050546653							*	B543 SCREW, MACHINE: SAME AS B462	EA		REF									-15 5-19	 H2
			53101941548							*	B544 WASHER, FLAT: SAME AS B450	EA		REF									-15 5-19	 H3
			53109296395							*	B545 WASHER, LOCK: SAME AS A660	EA		REF									-15 5-19	 H4
			59709103528							*	B546 WASHER, NON METAL: SAME AS B541	EA		REF									-15 5-19	 H7

Q35

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59611996008							E	B547 TRANSISTOR:	EA		REF									-15	
											SAME AS B480												5-19	Q3
			53050546654							*	B548A SCREW, MACHINE:	EA		REF									-15	
											SAME AS B449												5-19	H8
			53101941548							*	B549 WASHER, FLAT:	EA		REF									-15	
											SAME AS B450												5-19	H3
			53109296395							*	B550 WASHER, LOCK:	EA		REF									-15	
											SAME AS A660												5-19	H4
			59709103528							*	B551 WASHER, NON METAL:	EA		REF									-15	
											SAME AS B541												5-19	H17
			59611996008							E	B552 TRANSISTOR:	EA		REF									-15	
											SAME AS B480												5-19	Q4
			53050546654							*	B553A SCREW, MACHINE:	EA		REF									-15	
											SAME AS B449												5-19	H8
			53101941548							*	B554 WASHER, FLAT:	EA		REF									-15	
											SAME AS B450												5-19	H3
			53109296395							*	B555 WASHER, LOCK:	EA		REF									-15	
											SAME AS A660												5-19	H4
			59709103528							*	B556 WASHER, NON METAL:	EA		REF									-15	
											SAME AS B541												5-19	H7
X2	H									E	B556D BUSHING, INSULATOR:	EA		8									-15	
											06809; 40-000111-1												5-19	H9
C	H		59400584543							E	B556E TERMINAL LUG:	EA		2									-15	
											79963; 505-144												5-19	H10

Q35

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59405015859							E	B556F TERMINAL, LUG: SAME AS B491A	EA		REF									-15 5-19	H11
X1	H									E	B557A HEATSINK: 06809; 40-000098-1	EA		1									-15 5-19	H12
										D	B558A EXTRUSION: SAME AS B493A	EA		REF									-15 5-19	H13
			59409358248							F	B559 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E1
			59409358248							F	B560 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E2
			59409358248							F	B563 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E5
			59409358248							F	B564 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E7
			59409358248							F	B565 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E8
			59409358248							F	B566 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E9
			59409358248							F	B567 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E10

Q35

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59409358248							F	B568 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E11
			59409358248							F	B569 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E12
			59409358248							F	B570 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E13
			59409358248							F	B571 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E14
			59409358248							F	B572 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E15
			59409358248							F	B573 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E16
			59409358248							F	B574 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E17
			59409358248							F	B575 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E18
			59409358248							F	B576 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E19
			59409358248							F	B577 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E20
			59409358248							F	B578 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E21
			59409358248							F	B579 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E22

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59409358248							F	B580 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E23
			59409358248							F	B581 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E24
			53409358248							F	B582 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-19	E25
			59409358246							F	B583 TERMINAL STUD: SAME AS B510	EA		REF									-15 5-19	E6
			53108034994							F	B583A NUT, SELFLOCKING: SAME AS B510A	EA		REF									-15 5-19	H14
A	H	R								D	B584A HEATSINK SUBASSEMBLY: 06809; 40-000045-1	EA		1									-15 4-4	62.11
			53050546657							*	B585 SCREW, MACHINE: SAME AS A678	EA		REF									-15 4-4	62.7
			53101941548							*	B586 WASHER, FLAT: SAME AS B450	EA		REF									-15 4-4	62.9
			53109296395							*	B587 WASHER, LOCK SAME AS A660	EA		REF									-15 4-4	62.8
X2	H									E	B588A CLAMP, LOOP: 96906; MS25281-2	EA		1									-15 5-20	H1
			53050546653							*	B589 SCREW, MACHINE: SAME AS B462	EA		REF									-15 5-20	H2
			53101941548							*	B590 WASHER, FLAT: SAME AS B450	EA		REF									-15 5-20	H3

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53109296395							*	B591 WASHER, LOCK: SAME AS A660	EA		REF									-15 5-20	H4
P	H		59350544172							E	B592 CONNECTOR, PLUG ELECTRICAL: 00779; 1-480278-9	EA		1	1	2	3	1	2	3		3	-15 5-20	P1
			59351330470							E	B593A CONTACT, ELECTRICAL: SAME AS B471A	EA		REF									-15 5-20	H5
P	H		59055429838							E	B594 RESISTOR, FIXED, WIRE WOUND: 81349; RW59V5R0	EA		1	1	2	3	1	2	3		3	-15 5-20	RI
P	H		59050601233							E	B595B RESISTOR, FIXED, FILM: 81349; RW58VR27	EA		1	1	2	3	1	2	3		3	-15 5-20	R2
			59056818970							E	B596A RESISTOR, FIXED, WIRE-WOUND: SAME AS 8531 M	EA		REF									-15 5-20	R3
P	H		59617125578							E	B8597 TRANSISTOR: 81349; 2N3442	EA		1	1	2	3	1	2	3		5	-15 5-20	Q1
			53050546653							*	B598 SCREW, MACHINE: SAME AS B462	EA		REF									-15 5-20	H2
			53101941548							*	B599 WASHER, FLAT: SAME AS B450	EA		REF									-15 5-20	H3
			53109296395							*	B600 WASHER, LOCK: SAME AS A660	EA		REF									-15 5-20	H4
	P	H	59619997351							E	B601 TRANSISTOR: 05277; 164-10	EA		1	1	2	3	1	2	3		5	-15 5-20	Q2

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
A	H	R								E	B602 HEATSINK: 06809; 40-000029-1	EA		1										-15 5-20	H6
										E	B603A EXTRUSION: SAME AS B493A	EA		REF										-15 5-20	H7
			59409358246							F	B604 TERMINAL STUD: SAME AS BS10	EA		REF										-15 5-20	E1
			59409358248							F	B605 TERMINAL STUD: SAME AS 8494	EA		REF										-15 5-20	E2
			59409358248							F	B606 TERMINAL STUD: SAME AS 8494	EA		REF										-15 5-20	E3
			59409358248							F	B607 TERMINAL STUD: SAME AS 8494	EA		REF										-15 5-20	E4
			59409358248							F	B608 TERMINAL STUD: SAME AS 8494	EA		REF										-15 5-20	E5
			59409358248							F	B609 TERMINAL STUD: SAME AS 8494	EA		REF										-15 5-20	E6
			59409358248							F	B610 TERMINAL STUD: SAME AS 8494	EA		REF										-15 5-20	E7
			53108034994							F	B610A NUT, SELFLOCKING: SAME AS B510A	EA		REF										-15 5-20	H8
P	H	T	74400189706							C	B611A CIRCUIT CARD ASSEMBLY: 06809: 40-000052-1	EA		1	1	2	3	1	2	3		3	-15 4-4	40
X1	D									D	B612A PRINTED CIRCUITBOARD: 06809: 40-000050-1	EA		1									-15 5-21	

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59107798404							D	B613	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BE107K	EA		1								5	-15 5-21	 C1
			59100613200							D	B614M	CAPACITOR, FIXED, PAPER: SAME AS B297A	EA		REF									-15 5-21	 C2
			59100613200							D	B615M	CAPACITOR, FIXED, PAPER: SAME AS B297A	EA		REF									-15 5-21	 C3
			59100613200							D	B616M	CAPACITOR, FIXED, PAPER: SAME AS B297A	EA		REF									-15 5-21	 C6
			59100613200							D	B616A	CAPACITOR, FIXED, PAPER: SAME AS B297A	EA		REF									-15 5-21	 C13
P	D		59107821973							D	B617	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BE106K	EA		2									10 5-21	-15 C4
			59107821973							D	B618	CAPACITOR, FIXED, ELECTROLYTIC: SAME AS B617	EA		REF									-15 5-21	 C5
P	H		59107872109							D	B619	CAPACITOR, FIXED, ELECTROLYTIC: 81349; CS13BF105K	EA		1									5 5-21	-15 C7
			59108388395							D	B620M	CAPACITOR,FIXED,PAPER: SAME AS B465 M	EA		REF									-15 5-21	 C8
			59108388395							D	B621M	CAPACITOR,FIXED,PAPER: SAME AS B465 M	EA		REF									-15 5-21	 C9

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59108388395							D	B622M CAPACITOR, FIXED, PAPER: SAME AS B465 M	EA		REF									-15 5-21	C11
P	D		59100879000							D	B623 CAPACITOR, FIXED, ELECTROLYTIC: 81349: CL65BG181MP3	EA		2								10	-15 5-21	C10
			59100879000							D	B624 CAPACITOR, FIXED, ELECTROLYTIC: SAME AS B623	EA		REF									-15 5-21	C12
			59051956806							D	B625M RESISTOR, FIXED, COMPOSITION: SAME AS B302A	EA		REF									-15 5-21	R1
			59051956806							D	B626M RESISTOR, FIXED, COMPOSITION: SAME AS B302A	EA		REF									-15 5-21	R28
			59051956806							D	B627M RESISTOR, FIXED, COMPOSITION: SAME AS B302A	EA		REF									-15 5-21	R29
			59051956806							D	B628M RESISTOR, FIXED, COMPOSITION: SAME AS B302A	EA		REF									-15 5-21	R34
			59051956806							D	B629M RESISTOR, FIXED, COMPOSITION: SAME AS B302A	EA		REF									-15 5-21	R66
			59051956791							D	B630M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R3
			59051956791							D	B631M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R5

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59051956791							D	B632M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R12
			59051956791							D	B633M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R14
			59051956791							D	B634M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R16
			59051956791							D	B635M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R21
			59051956791							D	B636M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R24
			59051956791							D	B637M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R37
			59051956791							D	B638M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R38
			59051956791							D	B639M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R40
			59051956791							D	B640M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R42
			59051956791							D	B641M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R47

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59051956791							D	B642M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R49
			59051956791							D	B643M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R52
			59051956791							D	B644M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R57
			59051956791							D	B645M RESISTOR, FIXED, COMPOSITION: SAME AS B413 M	EA		REF									-15 5-21	R81
P	D		59050793561							D	B646 RESISTOR, FIXED, FILM: 81349; RN60D3481F	EA		4									12 5-21	-15 R4
			59050793561							D	B647 RESISTOR, FIXED, FILM: SAME AS B646	EA		REF								-15	5-21	R19
			59050F93561							D	B648 RESISTOR, FIXED, FILM: SAME AS B646	EA		REF									-15 5-21	R78
			59050793561							D	B649 RESISTOR, FIXED, FILM: SAME AS B646	EA		REF									-15 5-21	R89
P	D		59052991541							D	B650 RESISTOR, FIXED, COMPOSITION: 81349; RC20GF151	EA		1									3 5-21	-15 R6
			59051923973							D	B651M RESISTOR, FIXED, COMPOSITION: SAME AS B351AM	EA		REF									-15 5-27	R7

(1) (A) SOURCE CD	(1) (B) MAINT DC	(1) (C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59051923973							D	B652M RESISTOR, FIXED, COMPOSITION: SAME AS B351AM	EA		REF										15 5-21	R70
			59052524018							D	B653AM RESISTOR, FIXED, COMPOSITION: SAME AS B322J	EA		REF										-15 5-21	R8
			59059841465							D	B654M RESISTOR, FIXED, FILM: SAME AS B358A	EA		REF										-15 5-21	R9
			59059841465							D	B655M RESISTOR, FIXED, FILM: SAME AS B358A	EA		REF										-15 5-21	R76
			59059841465							D	B656M RESISTOR, FIXED, FILM: SAME AS B358A	EA		REF										-15 5-21	R79
			59059841465							D	B657M RESISTOR, FIXED, FILM: SAME AS B358A	EA		REF										-15 5-21	R80
P	D		59058342968							D	B658 RESISTOR, FIXED, FILM: 81349; RN60C1781F	EA		1									3	-15 5-21	R10
			59052791757							D	B659M RESISTOR, FIXED, COMPOSITION: SAME AS B305A	EA		REF										-15 5-21	R11
			59052791757							D	B660M RESISTOR, FIXED, COMPOSITION: SAME AS B305A	EA		REF										-15 5-21	R13
			59052792616							D	B661M RESISTOR, FIXED, COMPOSITION: SAME AS B415A	EA		REF										-15 5-21	R15
			59052792616							D	B662M RESISTOR, FIXED, COMPOSITION: SAME AS B415A	EA		REF										-15 5-21	R36

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59059544642							D	B663M RESISTOR, FIXED, FILM: SAME AS B321A	EA		REF									-15 5-21	R18
P	H		59050788293							D	B664A RESISTOR, FIXED, FILM: 81349; RN60D1821F	EA		1									3 5-21	-15 R45
P	H		59052791876							D	B665 RESISTOR, FIXED, COM-POSITION: 81349; RC20GF222J	EA		2									6 5-21	-15 R26
			59052791876							D	B666 RESISTOR, FIXED, COM-POSITION: SAME AS B665	EA		REF									-15 5-21	R39
			59052793504							D	B667 RESISTOR, FIXED, COM-POSITION: SAME AS 8377 M	EA		REF									-15 5-21	R20
			59052793504							D	B668 RESISTOR, FIXED, COM-POSITION: SAME AS B377 M	EA		REF									-15 5-21	R27
			59052793504							D	B669 RESISTOR, FIXED, COM-POSITION: SAME AS B377 M	EA		REF									-15 5-21	R2
			59052793504							D	B670 RESISTOR, FIXED, COM-POSITION: SAME AS B377 M	EA		REF									-15 5-21	R30
			59052793504							D	B671 RESISTOR, FIXED, COM-POSITION: SAME AS B377 M	EA		REF									-15 5-21	R41
			59052793504							D	B672 RESISTOR, FIXED, COM-POSITION: SAME AS B377 M	EA		REF									-15 5-21	R46

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59052793504							D	B673 RESISTOR, FIXED, COMPOSITION: SAME AS B377 M	EA		REF									-15 5-21	R48
			59052793504							D	B674 RESISTOR, FIXED, COMPOSITION: SAME AS B377 M	EA		REF									-15 5-21	R68
			59052793504							D	B675 RESISTOR, FIXED, COMPOSITION:. SAME AS B377 M	EA		REF									-15 5-21	R83
			59052793506							D	B676A RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R17
			59052793506							D	B677M RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R22
			59052793506							D	B678M RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R23
			59052793506							D	B679M RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R25
			59052793506							D	B680M RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R32
			59052793506							D	B681M RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R33
			59052793506							D	B682M RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R54

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59052793506							D	B683M RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R58
			59052793506							D	B684M RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R71
			59052793506							D	B685M RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R82
			59052793506							D	B686M RESISTOR, FIXED, COMPOSITION: SAME AS B306A	EA		REF									-15 5-21	R85
			59051858510							D	B687M RESISTOR, FIXED, COMPOSITION: SAME AS B429A	EA		REF									-15 5-21	R43
P	D		59051712004							D	B688 RESISTOR, FIXED, COMPOSITION: 81349; RC20GF223J	EA		2								6	-15 5-21	R31
			59051712004							D	B689 RESISTOR, FIXED, COMPOSITION: SAME AS B688	EA		REF									-15 5-21	R62
			59051858510							D	B690M RESISTOR, FIXED, COMPOSITION: SAME AS B429A	EA		REF									-15 5-21	R64
P	D		59052793513							D	B691 RESISTOR, FIXED, COMPOSITION: 81349; RC20GF221J	EA		2								6	-15 5-21	R35
			59052793513							D	B692 RESISTOR, FIXED, COMPOSITION: SAME AS B691	EA		REF									-15 5-21	R61

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59052793521							D	B693M RESISTOR, FIXED, COMPOSITION: 81349; RC20GF150J	EA		1								3	-15 5-21	R63
P	D		59351923971							D	B694 RESISTOR, FIXED, COMPOSITION: 81349; RC20GF331T	EA		1								3	-15 5-21	R65
			59051908889							D	B695 RESISTOR, FIXED, COMPOSITION: SAME AS A340	EA		REF									-15 5-21	R67
P	D		59059526024							D	8696 RESISTOR, FIXED, FILM: 81349; RN60D3482F	EA		1								3	-15 5-21	R86
P	D		59058926578							D	B697 RESISTOR, FIXED, FILM: 81349; RN60DI212F	EA		1								3	-15 5-21	R50
			59057611901							D	8698M RESISTOR, FIXED, FILM: SAME AS 83228	EA		REF									-15 5-21	R72
			59057611901							D	B699M RESISTOR, FIXED, FILM: SAME AS B322B	EA		REF									-15 5-21	R74
			59057636457							D	B700M RESISTOR, FIXED, FILM: SAME AS B308A	EA		REF									-15 5-21	R56
P	D		59057318315							D	B701 RESISTOR, FIXED, FILM: 81349; RN60D1402F	EA		1								3	-15 5-21	R84
P	H		59059836914							D	B702 RESISTOR, FIXED, FILM: 81349; RN60D1002F	EA		3									-15 5-21	R44
			59050518003							D	B703M RESISTOR, FIXED, FILM: SAME AS B360A	EA		REF									-15 5-21	R75

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
P	D		59057527228							D	B704 RESISTOR, FIXED, FILM: 81349; RN60C1782F	EA		1								3	-15 5-21	R59
			59057523659							D	B705M RESISTOR, FIXED, WIRE-WOUND: SAME AS B474 M	EA		REF									-15 5-21	R53
			59057523659							D	8706M RESISTOR, FIXED, WIRE-WOUND: SAME AS B474 M	EA		REF									-15 5-21	R55
P	D		59058650361							D	B707C RESISTOR, FIXED, WIRE-WOUND: 81349; RW79U5621F	EA		1								3	-15 5-21	R87
P	D		59055779574							D	B708 RESISTOR, FIXED, WIRE-WOUND: 81349; RW59V2R2	EA		1								3	-15 5-21	R69
P	D		59055044640							D	B709 RESISTOR, FIXED, WIRE-WOUND: 81349; RW57V301	EA		1								3	-15 5-21	R60
			5905-00-107-0818							D	B710AM RESISTOR, VARIABLE: SAME AS B316AM	EA		REF									-15 5-21	R73
			59059882313							D	B711M RESISTOR, FIXED, FILM: SAME AS B318A	EA		REF									-15 5-21	R77
P	D		59050430381							D	B712A RFSISTOR, FIXED, FILM: 81349; RN60D2211F	EA		1								3	-15 5-21	R51
P	D		59451070747							D	B713 REL.AY: 02295; CR120C900A02	EA		1								3	-15 5-21	K1
			59610888792							D	B714M SEMI-CONDUCTOR DE-VICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR1

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59610888792							D	B715M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR2
			59610888792							D	B716M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR3
			59610888792							D	B717M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR4
			59610888792							D	B718M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS 8383 M	EA		REF									-15 5-21	CR6
			59610888792							D	B719M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR7
			59610888792							D	B720M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR8
			59610888792							D	B721M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR9
			59610888792							D	B722M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR10
			596i0888792							D	B723M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR11
			59610888792							D	B724M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR12

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59610888792							D	B725M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR13
			59610888792							D	B726M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR14
			59610888792							D	B727M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS 8383 M	EA		REF									-15 5-21	CR15
			59610888792							D	B728M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR16
			59610888792							D	B729M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR17
			59610888792							D	B730M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR18
			59610888792							D	B731M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR19
			59610888792							D	B732M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR20
			59610888792							D	B733M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR21
			59610888792							D	B734M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR22

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59610888792							D	B735M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR23
			59610888792							D	B736M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR25
			59610888792							D	8737M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR26
			59610888792							D	8738M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR28
			59610888792							D	B739M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR29
			59610888792							D	B740M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR35
			59610888792							D	B741M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-21	CR32
P	D		59619381135							D	B742A SEMI-CONDUCTOR DEVICE, DIODE: 81349; 1N4148	EA		1									3 5-21	-15 CRS
P	D		59619047586							D	B743 SEMI-CONDUCTOR DEVICE, DIODE: 81349; 2N2323	EA		1									5 5-21	-15 CR24
P	D		59612446905							D	8744 SEMI-CONDUCTOR DEVICE, DIODE: 81349; 2N4986	EA		2									10 5-21	-15 CR33

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59612446905							D	B745 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B744	EA		REF									-15 5-21	CR34
P	H		59618527549							D	B746M SEMI-CONDUCTOR DEVICE, DIODE: 81349; IN754A	EA		2								6	-15 5-21	CR27
			59618527549							D	B747M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B746 M	EA		REF									-15 5-21	CR30
P	H		59501028133							D	B748C TRANSFORMER: 06809; 40-000133-1	EA		1								2	-15 5-21	T1
			59619417847							D	B749M TRANSISTOR: SAME AS B439A	EA		REF									-15 5-21	Q1
			59619417847							D	B750M TRANSISTOR: SAME AS B439A	EA		REF									-15 5-21	Q32
			59610540046							D	B751 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q2
			59610540046							D	B752 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q5
			59610540046							D	B753 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q6
			59610540046							D	8754 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q7
			59610540046							D	B755 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q10

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59610540046							D	B756 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q1
			59610540046							D	B757 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q12
			59610540046							D	B758 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q13
			59610540046							D	B759 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q14
			59610540046							D	B760 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q16
			59610540046							D	B761 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q17
			59610540046							D	B762 TRANSISTOR: SAME AS 8329 M	EA		REF									-15 5-21	Q18
			59610540046							D	B763 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q23
			59610540046							D	8764 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q28
			59610540046							D	B765 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q29
			59610540046							D	B766 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q30
			59610540046							D	B767 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q34

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59610540046							D	B768 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q35
			59610540046							D	B769 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q36
			59610540046							D	B770 TRANSISTOR: SAME AS 8329 M	EA		REF									-15 5-21	Q37
			59610540046							D	B771 TRANSISTOR: SAME AS B329 M	EA		REF									-15 5-21	Q39
			59619491440							D	B772 TRANSISTOR: SAME AS 8442 M	EA		REF									-15 5-21	Q3
			59619491440							D	B773 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	Q4
			59619491440							D	B774 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	Q8
			59619491440							D	B775 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	Q19
			59619491440							D	B776 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	Q20
			59619491440							D	B777 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	Q21
			59619491440							D	B778 TRANSISTOR: SAME AS 8442 M	EA		REF									-15 5-21	Q22
			59619491440							D	B779 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	Q24

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59619494440							D	B780 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	 Q25
			59619494440							D	B781 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	 Q26
			59619494440							D	B782 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	 Q27
			59619494440							D	B783 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	 Q31
			59619494440							D	B784 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	 Q38
			59619494440							D	B785 TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	 Q9
			59619494440							D	B786A TRANSISTOR: SAME AS B442 M	EA		REF									-15 5-21	 Q15
			59611996008							D	B787 TRANSISTOR: SAME AS B480	EA		REF									-15 5-21	 Q33
			59709564972							D	B787A INSULATOR, DISK: SAME AS A096	EA		REF									-15 5-21	 H8
X2	D									D	B788 HEATSINK: 06809; 40-000167-1	EA		1									-15 5-21	 H1
C	D									D	B788A INSULATOR, DISK: 07047; 10047	EA		3									-15 5-21	 H7
										D	B789 INSULATOR, DISK: SAME AS B526	EA		REF									-15 5-21	 H2
			53050546652							*	B790 SCREW, MACHINE: SAME AS A659	EA		REF									-15 5-21	 H3
			53109296395							*	B791 WASHER, LOCK: SAME AS A660	EA		REF									-15 5-21	 H4

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53109349761							*	8792 NUT, PLAIN, HEXAGON: SAME AS A679	EA		REF									-15 5-21	 H5
C	D									D	B792A TERMINAL, FEED, THRU: 86577; 2S4-398	EA		15									-15 5-21	 H6
A	H	R								C	B793B CONNECTOR BRACKET ASSEMBLY: 06809: 40-000110-1	EA		1									-15 4-4	 88
			53100134530							*	B793C NUT, PLAIN, HEXAGON: SAME AS B285A	EA		REF									-15 4-4	 84.1
			53050546652							*	B794 SCREW, MACHINE: SAME AS A659	EA		REF									-15 4-4	 85
			53105319514							*	B795 WASHER, FLAT: SAME AS B446	EA		REF									-15 4-4	 87
			53109296395							*	B796 WASHER, LOCK: SAME AS A660	EA		REF									-15 4-4	 86
A	H	R								D	B797A BRACKET, CONNECTOR: 06809; 40-000109	EA		1									-15 5-22A	 A14
			59409358248							E	B798 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-22A	 E1
			59409358248							E	B799 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-22A	 E2
			59409358248							E	B800 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-22A	 E3
			59409358248							E	B801 TERMINAL STUD: SAME AS B494	EA		REF									-15 5-22A	 E4
			53408399050							E	B802 FASTENER, CLINCH: SAME AS B290	EA		REF									-15 5-22A	 H1

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									E	B803C BRACKET CONNECTOR: 06809; 40-000109-1	EA		1									-15 5-22A	H2
X2	H									E	B803D EYELET, FLANGE: 57771; A241	EA		2									-15 5-22A	H3
P	H		59050444406							D	B804D RESISTOR, FIXDED, WIRE-WOUND: 81349; RE65GR150	EA		1	1	2	3	1	2	3		3	-15 5-22A	R1
C	H		53050545639							*	B805A SCREW, MACHINE: 96906; MS51957-5	EA		2									-15 5-22A	H4'
C	H		53102855631							*	B806 WASHER, FLAT: 88044; AN960C2	EA		2									-15 5-22A	H5
C	H		53109282690							*	B807 WASHER, LOCK: 96906; MS35338-134	EA		2									-15 5-22A	H6
			53109349748							*	B807A NUT, PLAIN, HEXAGON: SAME AS A753E	EA		REF									-15 5-22A	H7
P	H		59057636661							D	B808A RESISTOR, FIXED, WOUND: 81349; RW57GR10	EA		2	1	2	3	1	2	3		6	-15 5-22A	R2
			59057636661							D	B809A RESISTOR, FIXED, WIRE-WOUND: SAME AS B808A	EA		REF									-15 5-22A	R3
P	H		59610606817							D	B810M SEMI-CONDUCTOR DEVICE, DIODE: 81349; 2N683	EA		1	1	2	3	1	2	3		5	-15 5-22A	CR1
P	H		59618465808							D	B811M SEMI-CONDUCTOR DEVICE, DIODE: 81349: 2N682	EA		3	1	2	3	1	2	3		15	-15 5-22A	CR2
			59618465808							D	B812M SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B811 M	EA		REF									-15 5-22A	CR3

(1) (A) SOURCE CD	(1) (B) MAINT DC	(1) (C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59618465808							D	B813MSEMI-CONDUCTOR DEVICE, DIODE: SAME AS B811 M	EA		REF									-15 5-22A	CR4

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59409439539							D	B814M TERMINAL LUG: SAME AS B491B	EA		REF									-15	
																							5-22A	H8
C	H		59405523635							D	B814A TERMINAL LUG: 79963: 29A	EA		1									-15	
																							5-22A	H9
X2	H		59709772714							D	B814B SPACER: 08289; TW516-25	EA		4									-15	
																							5-22A	H10
C	H									D	B814C WASHER, NON METAL 08289; MW-750-255	EA		8									-15	
																							5-22A	H11
X2	H									D	B815 POST ELECTRICAL MECH-ANISM: 06809; 40-000116-1	EA		2									-15	
																							4-4	84
P	H		59351628630							D	B815A CONNECTOR, HOUSING: 00779: 1-480275-4	EA		1	*	*	*	*	*	*		2	-15	
																							5-22A	JS
P	H		59351628631							D	B815B CONNECTOR, HOUSING: 00779: 1-480275-7	EA		1	*	*	*	*	*	*		2	-15	
																							5-22A	J6
P	H		59351377301							D	B815C CONNECTOR, HOUSING: 00779: 1-480275-3	EA		1	*	*	*	*	*	*		2	-15	
																							5-22A	J7
P	H		59354515687							D	B815D CONNECTOR, HOUSING: 00779: 1-480275-8	EA		1	*	*	*	*	*	*		2	-15	
																							5-22A	J8
P	H		59354517385							D	B81SE CONNECTOR, HOUSING: 00779; 1-480275-9	EA		1	*	*	*	*	*	*		2	-15	
																							5-22A	J9
P	H		59994766327							D	B815F CONTACT, ELECTRICAL 00779; 61117-1	EA		34	5	10	15	5	10	15		17	-15	
																							5-22A	H12
P	H	T	74400189690							D	B816 CIRCUIT CARD ASSEM-BLY: 06809; 40-000113-1	EA		1	1	2	3	1	2	3		3	-15	
																							4-4	83
			53050546651							*	B817M SCREW, MACHINE: SAME AS A657C	EA		REF									-15	
																							4-4	83.1
			53105319514							*	B818 WASHER, FLAT: SAME AS B446	EA		REF									-15	
																							4-4	83.3

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53109296395							*	B819 WASHER, LOCK: SAME AS A660	EA		REF									-15 4-4	83.2
X1	D									E	B820A PRINTED CIRCUIT BOARD: 06809; 40-000114-1	EA		1									-15 5-22B	A15
			59108388395							E	B821 CAPACITOR, FIXED, PAPER: SAME AS B465 M	EA		REF									-15 5-22B	C1

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59108388395							E	B822 CAPACITOR, FIXED, PAPER: SAME AS B465 M	EA		REF									-15 5-22B	C2
			59108388395							E	B823 CAPACITOR, FIXED, PAPER: SAME AS B465 M	EA		REF									-15 5-228	C3
			59108388395							E	B824 CAPACITOR, FIXED, PAPER: SAME AS B465 M	EA		REF									-15 5-22B	C4
			59108388395							E	B825 CAPACITOR, FIXED, PAPER: SAME AS 8465 M	EA		REF									-15 5-22B	C5
			59055780997							E	B826 RESISTOR, FIXED, WIRE-WOUND: SAME AS B417A	EA		REF									-15 5-22B	R1
P	D		59058434711							E	B827A RESISTOR, FIXED, WIRE-WOUND: 81349; RW59V1RS	EA		1								3	-15 5-22B	R2
			59051956791							E	B828A RESISTOR, FIXED, COM-POSITION: SAME AS B413 M	EA		REF									-15 5-22B	R3
			59051712006							E	B829A RESISTOR, FIXED, COM-POSITION: SAME AS B342B	EA		REF									-15 5-22B	R4
			59051908889							E	B830B RESISTOR, FIXED, COM-POSITION: SAME AS A340	EA		REF									-15 5-22B	R8
			59051712006							E	B831A RESISTOR, FIXED, COM-POSITION: SAME AS 8342B	EA		REF									-15 5-22B	R6

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59051712006							E	B832M RESISTOR, FIXED, COMPOSITION: SAME AS B342B	EA		REF									-15 5-22B	R9
			59056818970							E	B832A RESISTOR, FIXED. WIREWOUND: SAME AS B531M	EA		REF									-15 5-22B	R10
			59051712006							E	B833A RESISTOR, FIXED, COMPOSITION: SAME AS B342B	EA		REF									-15 5-22B	R12
P	D		59058552219							E	B834A RESISTOR, FIXED, WIREWOUND: 81349: RW59V101	EA		1								3	-15 5-22B	R7
P	D		59052793518							E	B835M RESISTOR, FIXED, COMPOSITION: 81349; RC20GF300J	EA		1								3	-15 5-22B	R5
			59051908889							E	B836A RESISTOR, FIXED, COMPOSITION: SAME AS A340	EA		REF									-15 5-22B	R11
			59610888792							E	B837 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-22B	CR1
			59610888792							E	B838 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-22B	CR2
			59610888792							E	B839 SEMI-CONDUCTOR DEVICE, DIODE: SAPME AS 8383 M	EA		REF									-15 5-22B	CR3
			59610888792							E	B840 SEMI-CONDUCTOR DEVICE, DIODE: SAME AS B383 M	EA		REF									-15 5-22B	CR4

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
A	H	R								C	B841D FRONT PANEL ASSEMBLY: 06809; 40-000074-1	EA		1									-15 4-4	 4
C	H		53050546668							*	B841E SCREW, MACHINE: 95906: MS51957-43	EA		9									-15 4-4	 1
			53105586207							*	B841F WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-4	 3
			531093381198							*	841G WASHER, LOCK: SAME AS A670	EA		REF									-15 4-4	 2
A	H	R								D	B842A FRONT PANEL: 06809; 40-000058-1	EA		1									-15 4-4	 4.1
C	H		59356156736							E	B843A JACK TIP: 98291; SKTSBCBLK	EA		1									-15 4-4	 20
C	H		59356156742							E	B844A JACK TIP: 98291: SKT5BCGRN	EA		4									-is 4-4	 19
			59356156742							E	8845A JACK TIP: SAME AS B844A	EA		REF									-15 4-4	 19
			59356156742							E	B846A JACK TIP: SAME AS B844A	EA		REF									-15 4-4	 19
			59356156742							E	B847A JACK TIP: SAME AS 8844A	EA		REF									-15 4-4	 19
P	H		59201999502							D	B848A FUSE, CARTRIDGE: 81349; F03A250V15A	EA		2	5	10	15	5	10	15		200	-15 4-4	 13
			59201999502							D	B849A FUSE, CARTRIDGE: SAME AS B848A	EA		REF									-15 4-4	 13
P	H		59202805002							D	B850A FUSE, CARTRIDGE: 81349; F03A250A	EA		4	6	12	18	6	12	18		400	-15 4-4	 14
			59202805002							D	8851A FUSE, CARTRIDGE: SAME AS B850A	EA		REF									-15 4-4	 14

(1) (A) SOURCE CD	(B) MAINT DC	(C) REC CODE	REPAIRS 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59202805002							D	B852 FUSE, CARTRIDGE: SAME AS B850A	EA		REF										-15 4-4	14

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59202805002							D	B853 FUSE CARTRIDGE: SAME AS B850A	EA		REF									-15 4-4	14
P	H		5920-00-342-5828							D	B854B FUSE, CARTRIDGE: 71400; MDAIOA250V	EA		3	6	12	18	6	12	18		300	-15 4-4	11
			59207271452							D	B855B FUSE, CARTRIDGE: SAME AS B854B	EA		REF									-15 4-4	11
			59207271452							D	B856B FUSE, CARTRIDGE: SAME AS B854B	EA		REF									-15 4-4	11
P	H		59205838486							D	B857B FUSE, CARTRIDGE: 81349; F03B125V3A	EA		4	6	12	18	5	12	18		400	-15 4-4	12
			59205838486							D	B858B FUSE, CARTRIDGE: SAMIE AS B857B	EA		REF									-15 4-4	12
			59205838486							D	B859B FUSE, CARTRIDGE: SAME AS B857B	EA		REF									-15 4-4	12
			59205838486							D	B860B FUSE, CARTRIDGE: SAME AS B857B	EA		REF									-15 4-4	12
P	H		59200431425							D	B861 FUSEHIOLDER: 71400; FHL18G1-9	EA		1	1	1	1	1	1	1		3	-15 4-4	6
P	H		59209525360							D	B862 FUSEIIOLDER: 71400; FHL18G1-1	EA		4	1	1	1	1	1	1		12	-15 4-4	8
			59209525360							D	B864 FUSEHOLDER: SAME AS 8862	EA		REF									-15 4-4	8

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			59209525360							D	B865 FUSEHOLDER: SAME AS B862	EA		REF									-15 4-4	8
			59209525360							D	B866 FUSEHOLDER: SAME AS B862	EA		REF									-15 4-4	8
P	H		53202693743							D	B867 FUSEHOLDER: 71400; FHL18GI-5	EA		1	1	1	1	1	1	1		3	-15 4-4	7
P	H		59200894130							D	B868A FUSEHOLDER: 71400; HKL-X	EA		3	1	1	1	1	1	1		9	-15 4-4	9
			59200894130							D	B869A FUSEHOLDER: SAME AS B868A	EA		REF									-15 4-4	9
			59200894130							D	B870A FUSEHOLDER: SAME AS B868A	EA		REF									-15 4-4	9
P	H		59206360970							D	B871A FUSEHOLDER: 71400; HKP-A	EA		4	1	2	3	1	2	3		12	-15 4-4	10
			59206360970							D	B872A FUSEHOLDER: SAME AS B871A	EA		REF									-15 4-4	10
			59206360970							D	B873A FUSEHOLDER: SAME AS B871A	EA		REF									-15 4-4	10
			59206360970							D	B874A FUSEHOLDER: SAME AS B871A	EA		REF									-15 4-4	10
			53406849956							D	B875 LATCH: SAME AS A682	EA		REF									-15 4-4	5
			53105319515							*	B875A WASHER, FLAT: SAME AS A682A	EA		REF									-15 4-4	5.1
P	H		59350505387							C	B876 CONNECTOR, RECEPTACLE, ELECTRICAL: 91662; 00-6022-022-940-002	EA		3	1	1	2	1	1	2		9	-15 4-4	95

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H									C	B877 POLARIZATION KEY: SAME AS B877	EA		REF									-15 4-4	 96
C	H		53050545648							*	B878 SCREW, MACHINE: SAME AS B878	EA		REF									-15 4-4	 89
			53106326721							*	B879 WASHER, FLAT: SAME AS A753G	EA		REF									-15 4-4	 91
			53109338118							*	B880 WASHER, LOCK,SPLIT: SAME AS A753F	EA		REF									-15 4-4	 90
			59350505387							C	B881 CONNECTOR, RECEPT-ACLE, ELECTRICAL: SAME AS B876	EA		REF									-15 4-4	 95
										C	B882 POLARIZATION KEY: SAME AS B877	EA		REF									-15 4-4	 96
			53050545648							*	B883 SCREW, MACHINE: SAME AS B878	EA		REF									-15 4-4	 89
			53106326721							*	B884 WASHER, FLAT: SAME AS A753G	EA		REF									-15 4-4	 91
			53109338118							*	B885 WASHER, LOCK, SPLIT: SAME AS A753F	EA		REF									-15 4-4	 90
			59350505387							C	B886 CONNECTOR, RECEPT-ACLE, ELECTRICAL: SAME AS B876	EA		REF									-15 4-4	 95
										C	B887 POLARIZATION KEY: SAME AS B877	EA		REF									-15 4-4	 96
			53050545648							*	B888 SCREW, MACHINE: SAME AS B878	EA		REF									-15 4-4	 89

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53106326721							*	B889 WASHER, FLAT: SAME AS A753G	EA		REF	-15									4-4	91
			53106338118							*	B890A WASHER, LOCK, SPLIT: SAME AS A753F	EA		REF										-15 4-4	90
P	H		59350805023							C	B891 CONNECTOR, RECEPTACLE, ELECTRICAL: 71785; 250-25-36-170	EA		1	1	1	2	1	1	2		3	-15 4-4	39
C	H									C	B892 POLARIZATION KEY: 71785; 456-99-99-193	EA		1									-15 4-4	38
			53109349748							*	B893 NUT,PLAIN,HEXAGON: SAME AS A753E	EA		REF									-15 4-4	37
C	H		53050545652							*	B894 SCREW, MACHINE: 96906; MS51957-18	EA		2									-15 4-4	34
			53106326721							*	B895 WASHER, FLAT: SAME AS A753G	EA		REF									-15 4-4	36
			53109338118							*	B896 WASHER,LOCK, SPLIT: SAME AS A753F	EA		REF									-15 4-4	35
X2	H									C	B897A COVER, FUSE: 06809; 40-000078-1	EA		1									-15 4-4	24
			53050546651							*	B898M SCREW, MACHINE: SAME AS A657C	EA		REF									-15 4-4	21
			53105319514							*	B899 WASHER, FLAT: SAME AS B446	EA		REF									-15 4-4	23
			53109296395							*	B900 WASHER, LOCK: SAME AS A660	EA		REF									-15 4-4	22

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H									C	B901 GROMMET, RUBBER: 70485; 1139	EA		1										-15 4-4	 71
X2	H									C	B902 HANDLE, BOW: 96906: MS39078-3	EA		2										-15 4-4	 18
			53050593660							*	B903 SCREW, MACHINE: SAME AS A653A	EA		REF										-15 4-4	 15
C	H		53101670801							*	B904 WASHER, FLAT: 88044; AN96C100	EA		4										-15 4-4	 17
			53109338120							*	B905M WASHER, LOCK: SAME AS A564 M	EA		REF										-15 4-4	 16
P	H		59451004743							C	B906A RELAY: 12300; PM15D24VDC	EA		1	1	2	3	1	2	3		3		-15 4-4	 70
			53050546670							*	B907 SCREW, MACHINE: SAME AS A790	EA		REF										-15 4-4	 67
C	H		53106853744							*	B908 WASHER, FLAT: 88044; AN960C8	EA		9										-15 4-4	 69
			53109338119							*	B909 WASHER, LOCK: SAME AS A670	EA		REF										-15 4-4	 68
X2	H									C	B910A BRACKET, ANGLE: 06809; 40-000065-1	EA		1										-15 4-4	 66
			53050546668							*	B911A SCREW, MACHINE: SAME AS B841E	EA		REF										-15 4-4	 63
			53106853744							*	B912 WASHER, FLAT: SAME AS B908	EA		REF										-15 4-4	 65

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53109338119							*	B913 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-4	 64
X2	H									C	B914A PLATE, SIDE: 06809; 40-000066-1	EA		1									-15 4-4	 26
C	H		53057636962							*	B915C SCREW, MACHINE: 96906; MS51959-27	EA		10									-15 4-4	 25
			53105968129							D	B916 FASTENER, CLINCH: SAME AS B291	EA		REF									-15 4-4	 106
			53408399050							D	B917 FASTENER, CLINCH: SAME AS B290	EA		REF									-15 4-4	 105
X2	H									C	B918A SIDE PLATE: 06809; 40-000066-2	EA		1									-15 4-4	 27
			53057636962							*	B919A SCREW, MACHINE: SAME AS B915C	EA		REF									-15 4-4	 25
			53105968129							D	B920 FASTENER, CLINCH: SAME AS B291	EA		REF									-15 4-4	 106
			53408399050							D	B921 FASTENER, CLINCH: SAME AS B290	EA		REF									-15 4-4	 105
X2	H									C	B922B BRACKET: 06809; 40-000067-1	EA		1									-15 4-4	 32
			53050546668							*	B923A SCREW, MACHINE: SAME AS B841E	EA		REF									-15 4-4	 28
			53106853744							*	B924 WASHER, FLAT: SAME AS B908	EA		REF									-15 4-4	 30

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53109338119							*	B925 WASHER, LOCK: SME AS A670	EA		REF									-15 4-4	 29
P	H		58219613243							C	B927 M CARD GUIDE: 07556; 58-30-40	EA		2	1	1	2	1	1	2		2	-15 4-4	 33
X2	H									C	B928 B BRACKET: 00609; 40-000067-2	EA		1									-15 4-4	 31
			53050546668							*	B929 A SCREW, MACHINE SAME AS B841E	EA		REF									-15 4-4	 28
			53106853744							*	B930 WASHER FLAT SAME AS B908	EA		REF									-15 4-4	 30
			53109338119							*	B931 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-4	 29
P	H		59409358251							C	B934 TERMINAL BOARD: 75382; 602CY21S1	EA		1	1	1	1	1	1	1		3	-15 4-4	 81
			53050546655							*	B935 SCREW, MACHINE SAME AS A794	EA		REF									-15 4-4	 77
			53105319514							*	B936 WASHER, FLAT: SAME AS B446	EA		REF									-3.5 4-4	 80
			53109296395							*	B937 WASHER, LOCK: SAME AS A660	EA		REF									-15 4-4	 79
X2	H									C	B937A BRACKET. 14850; D1-10987C	EA		2									-15 4-4	 78.3
X2	H									C	B937B SHIELD: 14850; D1-10981C	EA		1									-15 4-4	 78.2
C	H									*	B937C NUT, PLAIN, HEXAGON: 96906; M535649-262	EA		4									-15 4-4	 78.1
C	H									*	B937E SCREW MACHINE:: 11850; A1-11069F-3	EA		8									-15 4-4	 78
P	H		59409358256							C	B938A TERMINAL BOARD 75382; 603CY12S1	EA		1	1	1	1	1	1	1		3	-15 4-4	 82

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			5310926395							*	B941 WASHER, LOCK: SAME AS A660	EA		REF									-15	
																							4-4	80
X2	H									C	B941A STANDOFF: 14850; D1-10984B-1	EA		4									-15	
																							4-4	78.5
X2	H									C	B941B SHIELD ASSEMBLY: 14850; A1-10980C	EA		1									-15	
																							4-4	78.4
C	H									*	B941C SCREW MACHINE SAME AS B937E	EA											-15	
																							4-4	78
X2	H									C	B942A BRACKET, ANGLE: 98675; 39118	EA		2									-15	
																							4-4	75
			53050546651							*	B943 M SCREW, MACHINE: SAME AS A657C	EA		REF									-15	
																							4-4	72
			53105319514							C	B94 WASHER, FLAT: SAME: AS 0446	EA		REF									-15	
																							4-4	74
			53109296395							*	B945 WASHER, LOCK: SAME AS A660	EA		REF									-15	
																							4-4	73
X2	H									C	B946B STIFFENER: 06809; 40-000120-1	EA		1									-15	
																							4-4	76
X2	H		59500977508							C	B952A TRANSFORMER 06809; 40-000106-1	EA		1	1	1	2	1	1	2		2	-15	
																							4-4	103
C	H		53109971888							*	B953 NUT, PLAIN, HEXAGON: 96906; MS3 5649-2252	EA		4									-15	
																							4-4	100
			53105319515							*	B945A WASHER, FLAT: SAME AS A682A	EA		REF									-15	
																							4-4	102
C	H		53109338121							*	B955 WASHER, LOCK: 96906; MS35338-139	EA		4									-15	
																							4-4	101
C	H		53108409151							*	B955A NUT, PLAIN, HEXAGON 96906; MS20341-103	EA		13									-15	
																							4-4	97
C	H		53102641390							*	B955B WASHE:R, FLAT: 88044; AN961-10	EA		26									-15	
																							4-4	99

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53101848968							*	B955C WASHER, LOCK: 96906; MS35337-100	EA		13									-15 4-4	98
A	H	R	74401656535							B	B961 BLOWER: 03522; RC2EB412A31	EA		1									-15 4-1	38
P	H		41308640650							C	B961A FILTER,WASHABLE: 03522: S-1006-5	EA		1	1	1	2	1	1	2		1	-15 4-1	38.1
P	H		59109729420							C	B961B CAPACITOR: 03522: S-1309	EA		1	1	2	3	1	2	3		3	-15 4-1	38.2
X2	H		41409883694							C	B961C BLOWER WHEEL, CLOCKWISE: 03522: S-1364	EA		1									-15 4-1	38.3
X2	H		41409883695							C	B961D BLOWER WHEEL, COUNTERCLOCKWISE: 03522; S-1365	EA		1									-15 4-1	38.4
P	H		61051345596							C	B961E MOTOR: 03522: S-1783	EA		1	*	*	*	1	1	2		1	-15 4-1	38.5
			53050546669							*	B962 SCREW MACHINE: SAME AS A686	EA		REF									-15 4-1	35
			53105586207							*	B963 .WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	36
			53109338119							*	B964 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	37
X2	H									B	B965A SLIDE: 83508; C301289	EA		1									-15 4-1	25
X2	H									C	B965B BRACKET, MOUNTING: 83508: A301296	EA		2									-15 4-1	24.4
X2	H									C	B965C SPACER, BAR: 83508; A300302	EA		2									-15 4-1	24.2

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
										*	B965D NUT, BAR:	EA		REF	-15									
											SAME AS A002D												4-1	24
X2	H									*	B965E SCREW, MACHINE:	EA		1									-15	
											83508;												4-1	24 .3
											A050142-10-32-8													
X2	H									*	B965F SCREW, MACHINE:	EA		4									-15	
											83508;												4-1	24.1
											A050102-103208													
X2	H									*	B965G NUT:	EA		10									-15	
											83508; A301398												4-1	24.5
C	H									*	B966 SCREW, MACHINE:	EA		4									-15	
											58189; 639123-468												4-1	21
			53101670812							*	B967 WASHER, FLAT:	EA		REF									-!5	
											SAME AS A650												4-1	23
			53109338120							*	8968 M WASHER, LOCK:	EA		REF									-15	
											SAME AS A564 M												4-1	22
A	H	R								B	B969 ENCLOSURE:	EA		1									-15	
											05439; 600402-1												4-1	39
X2	H									C	B970 CHASSIS, ELECTRICAL:	EA		1									-15	
											05439; 600403-1												4-1	64
X2	H									D	B970A BUMPER, RUBBER:	EA		4									-15	
											70485; 1178-2												4-1	64.1
A	H	R								C	B971 DOOR ASSEMBLY,	EA		1									-15	
											RIGHT HAND:												4-1	72
											05439; 600002-2													
C	H									*	B972 PIN:	EA		7									-15	
											05439; 600105-4												4-1	65
X2	H									D	B973 DOOR:	EA		2									-15	
											05439; 600002-3												4-1	66
X2	H									D	B974 HANDLE:	EA		4									-15	
											05439; 600111-1												4-1	67

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
X2	H									D	B975 CAM: 05439; 600111-2	EA		2									-15 4-1	68
X2	H									D	B976 ROD: 05439; 600111-3	EA		4									-15 4-1	69
X2	H									D	B977 GROMMET, NYLON: 05439; 600112-1	EA		6									-15 4-1	70
X2	H									D	B978 LINER, MYLAR: 05439; 600002-5	EA		2									-15 4-1	71
A	H	R								C	B979 DOOR FRONT, LEFT HAND: 05439: 600002-1	EA		1									-15 4-1	73
										*	B980 PIN: SAME AS B972	EA		REF									-15 4-1	65
										D	B981 DOOR: SAME AS B973	EA		REF									-15 4-1	66
										D	B982 HANDLE: SAME AS B974	EA		REF									-15 4-1	67
										D	B983 CAM: SAME AS B975	EA		REF									-15 4-1	68
										D	B984 ROD: SAME AS B976	EA		REF									-15 4-1	69
										D	B985 GROMMET, NYLON: SAME AS B977	EA		REF									-15 4-1	70
										D	B986 LINER, MYLAR: SAME AS B978	EA		REF									-15 4-1	71
A	H	R								C	B987 DOOR, REAR: 05439; 600106-1	EA		1									-15 4-1	76

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
										*	B988 PIN: SAME AS 8972	EA		REF										-15 4-1	65
X2	H									D	B989 DOOR: 05439; 600106-2	EA		1										-15 4-1	73.1
										D	B990 HANDLE: SAME AS B974	EA		REF										-15 4-1	67
X2	H									D	B991 CAM: 05439; 600111-5	EA		2										-15 4-1	73.2
X2	H									D	B992 ROD: 05439; 600111-6	EA		2										-15 4-1	74
										D	B993 GROMMET, NYLON: SAME AS B977	EA		REF										-15 4-1	70
X2	H									D	B994 LINER, MYLAR: 05439; 600106-4	EA		2										-15 4-1	75
X2	H									C	B995 PLATE: 05439; 600102-1	EA		1										-15 4-1	80
X2	H									C	B996 SUPPORT PLATE: 05439; 600103-1	EA		1										-15 4-1	81
			53109349765							*	B997 NUT, PLAIN, HEXAGON: SAME AS A562	EA		REF										-15 4-1	77
			53100593659							*	B998 WASHER, FLAT: SAME AS A756D	EA		REF										-15 4-1	79
			53109338120							*	B999A WASHER, LOCK: SAME AS A564 M	EA		REF										-15 4-1	78
X2	H									C	C001A SHELF: 05439; 600404	EA		1										-15 4-1	85

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
C	H		53050593659							*	C003 SCREW, MACHINE: 96906; MS51958-63	EA		6									-15 4-1	82
			53101670812							*	C004A WASHER, FLAT: SAME AS A650	EA		REF									-15 4-1	83
			53109338120							*	C005A WASHER, LOCK: SAME AS A564 M	EA		REF									-15 4-1	84
X2	H									C	C008 BASE: 05439; 600100-1	EA		1									-15 4-1	87
C	H		53057214747							*	C009 SCREW, MACHINE: 96906; MS24618-40	EA		4									-15 4-1	86
X2	H									C	C010 TRIM, METAL: 05439; 600109-1	EA		2									-15 4-1	90
P	H		53404519149							*	C010A CLIP, MOUNTING: 78553; C29943-014-1	EA		25	5	10	15	5	10	15		15	-15 4-1	88
X2	H									C	C011 TRIM, METAL: 05439; 600109-2	EA		2									-15 4-1	89
			53404519149							*	C011A CLIP, MOUNTING: SAME AS C010A	EA		REF									-15 4-1	88
X2	H									C	C012 TRIM, METAL: 05439; 600110-1	EA		1									-15 4-1	95
X2	H									C	C013M STRIP, LOGO: 05439; 600406	EA		1									-15 4-1	96
C	H		53057015071							*	C014 SCREW, MACHINE: 96906; MS51959-61	EA		3									-15 4-1	91
			53109349765							*	C015 NUT, PLAIN, HEXAGON: SAME AS A562	EA		REF									-15 4-1	92
			53101670812							*	C016 WASHER, LOCK: SAME AS A650	EA		REF									-15 4-1	93
			53109338120							*	C017 WASHER, FLAT: SAME AS A564 M	EA		REF									-15 4-1	94

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
M	H									B	C018	PLATE, REFERENCE: 58189; A64435-001	EA		1									-15 4-1	97
M	H									B	C019	PLATE, IDENTIFICATION: 58189; A52238-001	EA		1									-15 4-1	99
C	H									*	C020	SCREW, MACHINE: 96906; MS21318-1	EA		2									-15 4-1	98
A	H									B	C021	CABLE ASSEMBLY: 58189: A65195-001	EA		1									-15 4-1	42
P	H		593551F9479							C	C022	CONNECTOR, SOCKET: 96906; MS3106A36-10S	EA		1	*	*	*	*	*	*		3	-15 4-1	100
			74409335070							C	C023	CONTACT ASSEMBLY: SAME AS A748	EA		REF									-15 4-1	46
										*	C024	SCREW, EXTERNAL RELIEVED BODY: SAME AS A749	EA		REF									-15 4-1	48
			53106389857							*	C025	WASHER, FLAT: SAME AS A661	EA		REF									-15 4-1	50
			53109296395							*	C026	WASHER, LOCK: SAME AS A660	EA		REF									-15 4-1	49
										D	C027	INSULATOR, BUSHING: SAME AS A752	EA		REF									-15 4-1	51
										D	C028	BRACKET, ANGLE: SAME AS A753	EA		REF									-15 4-1	52
										C	C029	PIN, KEYING: SAME AS A753B	EA		REF									-15 4-1	53
C	H									C	C030	CLAMP, LOOP: 09922; HP-12N	EA		8									-15 4-1	101
			53057637827							*	C031	SCREW, MACHINE: SAME AS A753D	EA		REF									-15 4-1	54

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53109349748							*	C032 NUT, PLAIN, HEXAGON: SAME AS A753E	EA		REF									-15 4-1	55
			53109338118							*	C033 WASHER, LOCK: SAME AS A753F	EA		REF									-15 4-1	56
			53106326721							*	C034 WASHER, FLAT: SAME AS A753G	EA		REF									-15 4-1	57
			74400193468							C	C035 CONTACT, ELECTRICAL: SAME AS A754	EA		REF									-15 4-1	59
			59409935216							C	C036 FERRULE: SAME AS A814 M	EA		REF									-15 4-1	102
										C	C037 PLATE, !DENTIFICATION: SAME AS A75SD	EA		REF									-15 4-1	61
			53400742072							C	C038 STRAP, LINE SUPPORT: SAME AS A756	EA		REF									-15 4-1	62
A	H									B	C039 CABLE ASSEMBLY: 89; A65192-001	EA		1									-15 4-1	43
P	H		59355524711							C	C040 CONNECTOR, SOCKET: 96906; MS3106A20-29S	EA		1	*	*	*	*	*	*		3	-15 4-1	103
			74409335070							C	C041 CONTACT ASSEMBLY: SAME AS A748	EA		REF									-15 4-1	47
										*	C042 SCREW, EXTERNAL RELIEVED BODY: SAME AS A749	EA		REF									-15 4-1	48
			53106389857							*	C043 WASHIER, FLAT: SAME AS A661	EA		REF									-15 4-1	50
			53109296395							*	C044 WASHIER, LOCK: SAME AS A660	EA		REF									-15 4-1	49
										D	C045 INSULATOR, BUSHING: SAME AS A752	EA		REF									-15 4-1	51

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
										D	C046 BRACKET, ANGLE: SAME AS A753	EA		REF										-15 4-1	52
										C	C047 PIN, KEYING: SAME AS A753B	EA		REF										-15 4-1	53
C	H									C	C048 CLAMP, LOOP: 09922; HP-7N	EA		4										-15 4-1	104
			53057637827							*	C049 SCREW, MACHINE: SAME AS A753D	EA		REF										-15 4-1	54
			53109349748							*	C050 NUT, PLAIN, HEXAGON: SAME AS A753E	EA		REF										-15 4-1	55
			53109338118							*	C051 WASHER, LOCK: SAME AS A753F	EA		REF										-15 4-1	56
			53106326721							*	C052 WASHER, FLAT: SAME AS A753G	EA		REF										-15 4-1	57
			74400193468							C	C053 CONTACT, ELECTRICAL: SAME AS A754	EA		REF										-15 4-1	59
			59405571628							C	C054 TERMINAL LUG: SAME AS A787 M	EA		REF										-15 4-1	105
			59405571627							C	C055 TERMINAL LUG: SAME AS A786B	EA		REF										-15 4-1	106
			59402049142							C	C056 TERMINAL LUG: SAME AS A652	EA		REF										-15 4-1	107
C	H		59405571631							C	C057 TERMINAL LUG: 96906; MS25036-15	EA		2										-15 4-1	108
C	H		59405574346							C	C058 TERMINAL LUG: 96906; MS25036-16	EA		4										-15 4-1	109
										C	C059 PLATE, IDENTIFICATION: SAME AS A755D	EA		REF										-15 4-1	61

(1) (A) SOURCE CD	(1) (B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53400742072							C	C060 STRAP, LINE SUPPORT: SAME AS A756	EA		REF									-15 4-1	62
X2	H									B	C061 BAR, STRAIN RELIEF: 80063; SMB634816	EA		1									-15 4-1	113
			53109349765							*	C062 NUT, PLAIN, HEXAGON: SAME AS A562	EA		REF									-15 4-1	110
			53109338120							*	C063 WASHER, LOCK: SAME AS A564 M	EA		REF									-15 4-1	111
			53101670812							*	C064 WASHER, FLAT: SAME AS A650	EA		REF									-15 4-1	112
										B	C065 CLAMP, LOOP: SAME AS A753C	EA		REF									-15 4-1	119
										*	C066 SCREW, MACHINE: SAME AS A811C	EA		REF									-15 4-1	114
			53109349759							*	C067 NUT, PLAIN, HEXAGON: SAME AS A671	EA		REF									-15 4-1	115
			53106389857							*	C068 WASHER, FLAT: SAME AS A579A	EA		REF									-15 4-1	116
			53109338119							*	C069 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	117
C	H									B	C070 CLAMP, LOOP: 09922; HP-9N	EA		1									-15 4-1	120
										*	C071 SCREW, MACHINE: SAME AS A811C	EA		REF									-15 4-1	114
			53106389857							*	C072 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	116
			53109338119							*	C073 WASHER, LOCK: SAME AS A570	EA		REF									-15 4-1	117

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
										B	C074 CLAMP, LOOP: SAME AS A811B	EA		REF									-15 4-1	121
										*	C075 SCREW, MACHINE: SAME AS A811C	EA		REF									-15 4-1	114
			53106389857							*	C076 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	116
			53109338119							*	C077 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	117
										B	C078 CLAMP, LOOP: SAME AS A811B	EA		REF									-15 4-1	121
										*	C079 SCREW, MACHINE: SAME AS A811C	EA		REF									-15 4-1	114
			53109349759							*	C080 NUT, PLAIN, HEXAGON: SAME AS A671	EA		REF									-15 4-1	115
			53106389857							*	C081 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	116
			53109338119							*	C082 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	117
										B	C083 CLAMP, LOOP: SAME AS C030	EA		REF									-15 4-1	122
										*	C084 SCREW, MACHINE: SAME AS A811C	EA		REF									-15 4-1	114
			53106389857							*	C085 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	116
			53109338119							*	C086 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	117
										B	C087 CLAMP, LOOP: SAME AS C030	EA		REF									-15 4-1	122

(1) (A) SOURCE CD	(B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
										*	C088 SCREW, MACHINE: SAME AS A811C	EA		REF									-15 4-1	114
			53109349759							*	C089 NUT, PLAIN, HEXAGON: SAME AS A671	EA		REF									-15 4-1	115
			53106389857							*	C090 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	116
			53109338119							*	C091 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	117
C	H									B	C092 CLAMP, LOOP: 09922; HP-13N	EA		1									-15 4-1	122
										*	C093 SCREW, MACHINE: SAME AS A811C	EA		REF									-15 4-1	114
			53106389857							*	C094 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	116
			53109338119							*	C095 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	117
C	H									B	C096 CLAMP, LOOP: 09922; HP-16N	EA		2									-15 4-1	124
										*	C097 SCREW, MACHINE: SAME AS A811C	EA		REF									-15 4-1	114
			53106389857							*	C098 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	116
			53109338119							*	C099 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	117
										B	C100 CLAMP, LOOP: SAME AS C048	EA		REF									-15 4-1	125
										*	C101 SCREW, MACHINE: SAME AS A811C	EA		REF									-15 4-1	114

(1) (A) SOURCE CD	(1) (B) MAINT 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 UNIT 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 YEAR ALW PER 100 EQUIP CNTGCY PLAN	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (A) FIG. NO.	(B) ITEM NO. OR REF DESIGN
			53106389857							*	C102 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	 116
			53109338119							*	C103 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	 117
										B	C104 CLAMP, LOOP: SAME AS C048	EA		REF									-15 4-1	 125
			53109349759							*	C105 NUT, PLAIN, HEXAGON: SAME AS A671	EA		REF									-15 4-1	 115
			53106389857							*	C106 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	 116
			53109338119							*	C107 WASHER, LOCK: SAME AS A670	EA		REF									-15 4-1	 117
C	H									B	C108 CLAMP, LOOP: 80063; SMC634831-2	EA		1									-15 4-1	 126
			53109349759							*	C109 NUT, PLAIN, HEXAGON: SAME AS A671	EA		REF									-15 4-1	 115
										*	C110 SCREW, MACHINE: SAME AS A811C	EA		REF									-15 4-1	 114
			53106389857							*	C111 WASHER, FLAT: SAME AS A679A	EA		REF									-15 4-1	 116
C	H		53106143552							*	C112 WASHER, LOCK: 96906; MS35335-59	EA		4									-15 4-1	 118

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

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General, United States Army,
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NG: None
USAR: None
For explanation of abbreviations used, see AR 810-50.

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The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

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