TM 11-6130-264-15

TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DS, GS, AND DEPOT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS

DC/DC POWER CONVERSION UNIT MODEL 5020-1005

HEADQUARTERS, DEPARTMENT OF THE ARMY

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HEADQUARTERS
DEPARTMENT OF THE ARMY
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Operator, Organizational, DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tool Lists

DC/DC POWER CONVERSION UNIT MODEL 5020–1005

LIST OF ILLUSTRATIONS

LIST OF TABLES

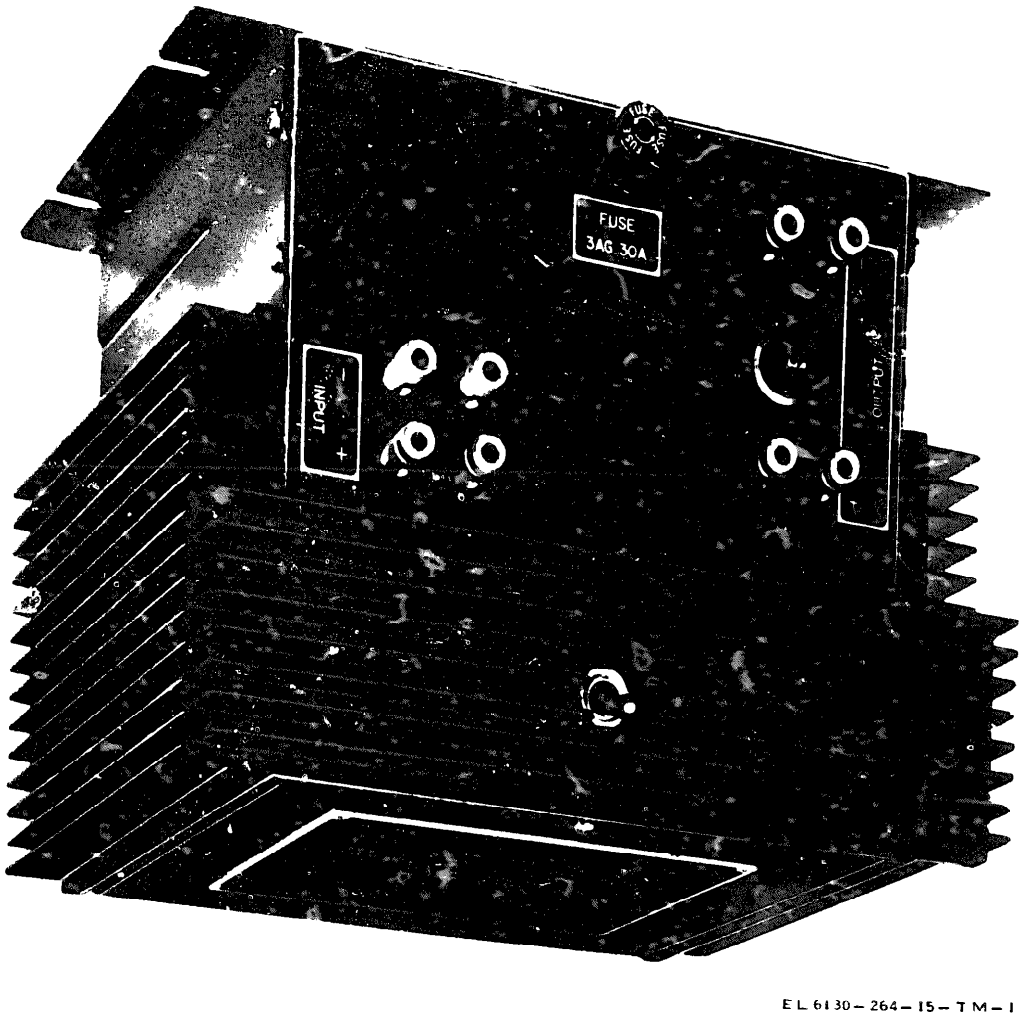


Figure 1-1. Dc/dc power conversion unit model 5020-1005

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a This manual describes DC DC Power Conversion Unit model 5020-1005, referred to as the dc dc converter, and provides instructions for installation, operation, organizational maintenance, and depot maintenance

b. The maintenance allocation chart (MAC) is in appendix B and the repair parts and special tool lists are in appendix C.

c. Appendixes B and C are current as of 21 ***August 1970.***

1-2. Indexes of Publications

a. DA Pam 31-4 Refer to 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. Use*** equipment forms and records in accordance with instructions in TM 33-750.

b Report of Packaging and Handling Deficien- cies Fill out and forward DD Form 6 (Report of Packaging and Handling Deficiencies) as prescribed in AR 700-58 (Army)/NAVSUP PUB 378 (Navy) AFR 71-4 (Air Force)/and MCO P4030 29 (Marine Corps)

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 (Army) NAVSUP PUB 459 (Navy)/AFM 75-34 (Air Force) /and MCO P4610 19 (Marine Corps).

d. Reporting of Equipment Manual Improve- ments. Reporting of errors, omissions, and recommendations for improving this manual by the individual user IS encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commanding General, US Army Electronics Command, ATTN AMSEL-ME-NMP-EM, Fort Monmouth, N.J. 07703

e Administrative Storage For procedures, forms and records, and Inspections required during administrative storage of this equipment, refer to TM 740-90-1

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

The dc dc converter provides a 12-volt direct current (dc) (nominal) power output when fed from a 28-volt dc (nominal) source, to operate a high frequency single-sideband radio set that has been mounted in a military vehicle it is capable of operation under adverse environmental conditions

1-5. Technical Characteristics

Input voltage	22 to 35 volts dc
Output voltage	12 volts dc (nominal)
Load	0–30 amperes continuous operation
Voltage regulation	Less than 1% for line or load variations.
Ripple	Less than 1% rms

Overshoot	Less than 1% of nominal output voltage for any turnon/turnoff condition.
Temperature	-20° to +65° Centigrade.
Case size	9 inches high, 7 inches wide, and 7 inches deep.
Weight	25 pounds.
Protective device	Input fuse, 30 amperes.

1-6. Items Comprising an Operable Equipment

The DC/DC Power Conversion Unit model 6020-1005 is comprised of one component (fig. (1-1).

1-7. Description

The dc/dc converter is inclosed in a steel case which has external anodized aluminum heat sinks on three of its sides (fig. l-l). Input and output terminals with polarities plainly marked are located near two edges of the control panel, Mounting flanges are provided for securing the dc/dc converter to a vehicular mounting surface. The dc/dc converter is a solid-state device, and is shipped with the pluckout items (fuse and dial light) installed.

CHAPTER 2

INSTALLATION AND OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

2-1. Unpacking (fig. 2-1)

a. Cut the tape that seals the top of the shipping carton.

b Remove the Styrofoam filler.

c. Open the moistureproof barrier in the corrugated carton.

d. Remove the technical manual and running spares which are in polyethylene bags.

e. Remove the dc/dc converter from the packing material.

2-2. Checking Unpacked Equipment

f. Inspect the equipment for damage that may have incurred during shipment. If the equipment has been damaged, refer to paragraph 1-3 for applicable forms and records.

b. Check to see that the equipment is complete as listed on the packing slip. Report all discrepancies in accordance with TM 38-750.

c. Check to see whether the equipment has been modified. If the equipment has been modified, the MWO number will appear on the front panel, near the nomenclature plate. Also, check to see whether all MWO's current at the time the equipment is placed in use have been applied.

NOTE

Current MWO's applicable to the equipment are listed in DA Pam 310-7.

d. Check the latest issue of DA Pam 310-4 to see whether the latest editions of all applicable maintenance literature are available,

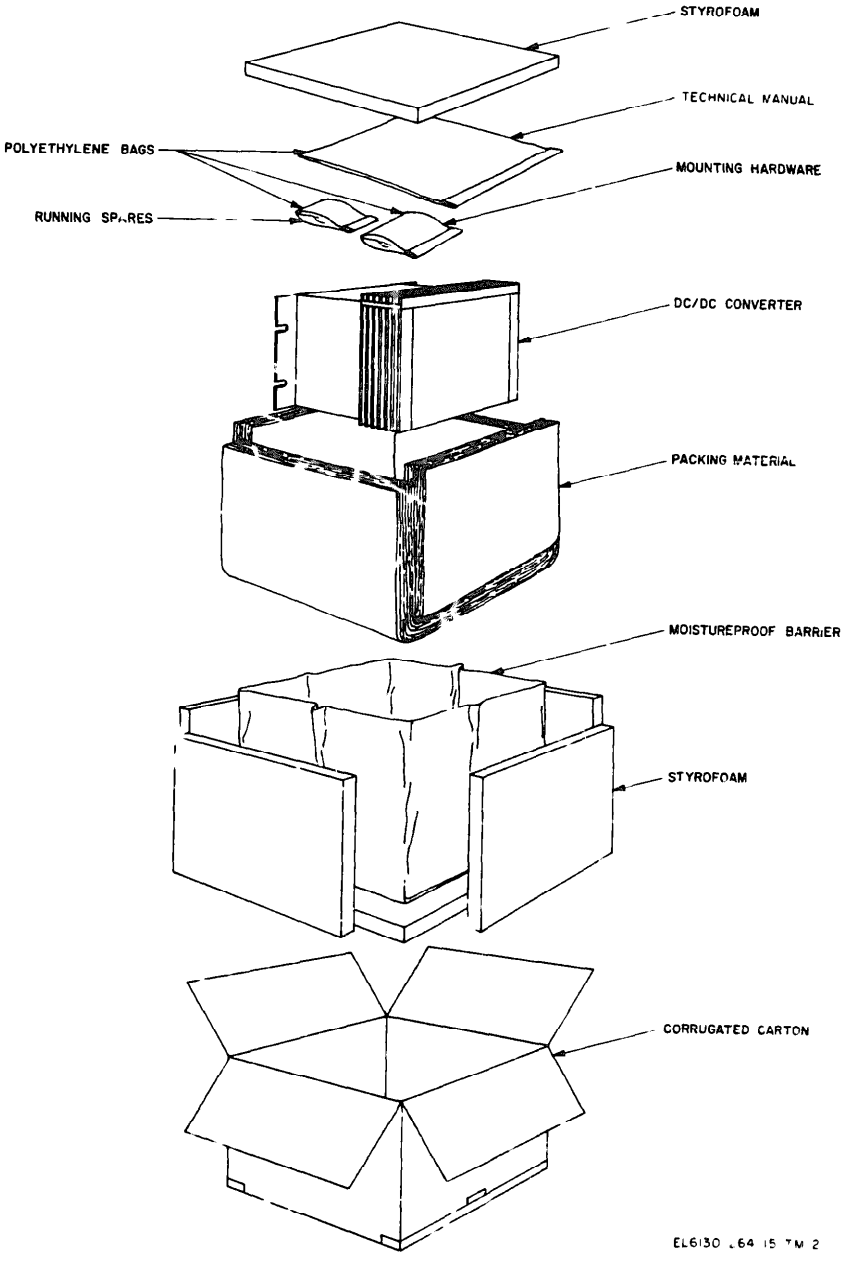


Figure 2-1. Typical packaging.

Section II. INSTALLATION INSTRUCTIONS

2-3. Tools and Test Equipment

The toolkit and test equipment required for installation are listed below.

a. Toolkit, Electronic Equipment TK-101/G.

b. Multimeter AN/URM-105.

2-4. System Layout

System layout is affected by several factors and limitations. The dc dc converter must be mounted as close as possible to the load and source voltage, but where possible, located closer to the load than to the source voltage. Two sets of two number 12 wires in parallel connect the dc/dc converter to the load, and an additional two sets of two number 12 wires in parallel connect the dc/dc converter to the source voltage (fig 2-3). If number 12 wire is used, a maximum distance of 6 feet can be maintamed between the dc/dc converter and the load, or between the dc/dc converter and the source voltage Larger wire must be used for greater distances than 6 feet in order to maintain proper dc/dc converter operating specifications The dc/dc converter terminals must be mounted down for splashproofing

2-5. Installation Location (fig. 2-2)

In selecting a location for the installation of the dc dc converter, the following requirements are applicable A 28-volt dc power source must be accessible for proper operation The dc/dc converter must be mounted on a flat, metal, room temperature surface with the appropriate mounting holes (fig 2-2) for a good metal-to-metal contact This contact is necessary for heat transfer from the case The dc dc converter may be mounted on any position for operation or storage.

2-6. Installation of Dc/Dc Converter

Place the flanged portion of the unit against the metal surface with the terminals of the unit down. Slip each bolt of the hardware kit through the hole in each of four flat washers (fig. 2-2). Push the bolts through each of the four appropriate cutouts in the flange of the dc/dc converter and then through the mounting holes of the metal surface. On the opposite side of the surface, attach one lockwasher and one nut to the bolt. Tighten the nuts down securely, using two 7/16-inch openend wrenches or socket wrenches. There is no wiring to be done on the dc/dc converter except for the connections to the source voltage and to the load (fig. 2-3).

2-7. Source Voltage and Output Voltage Hookup *(fig. 2-3)*

a. To connect the source voltage to the dc/dc converter, run two number 12 wires, in parallel, from the positive terminal of the source voltage to the two INPUT + terminals of the dc/dc converter and tighten the terminal nuts securely by turning them clockwise. Connect two number 12 wires in parallel from the negative terminal of the source voltage to the two dc/dc converter input - terminals, and tighten the terminal nuts securely by turning them clockwise.

b To connect the load to the dc/dc converter, cut two sets of two number 12 wires Connect one set of two number 12 wires to the dc/dc converter + terminals and the other ends to the plus terminal on the load Connect the remaining set of two number 12 wires to the dc/dc converter - terminals and the other ends to the minus terminal on the load. Tighten all dc/dc converter terminal nuts by turning them clockwise

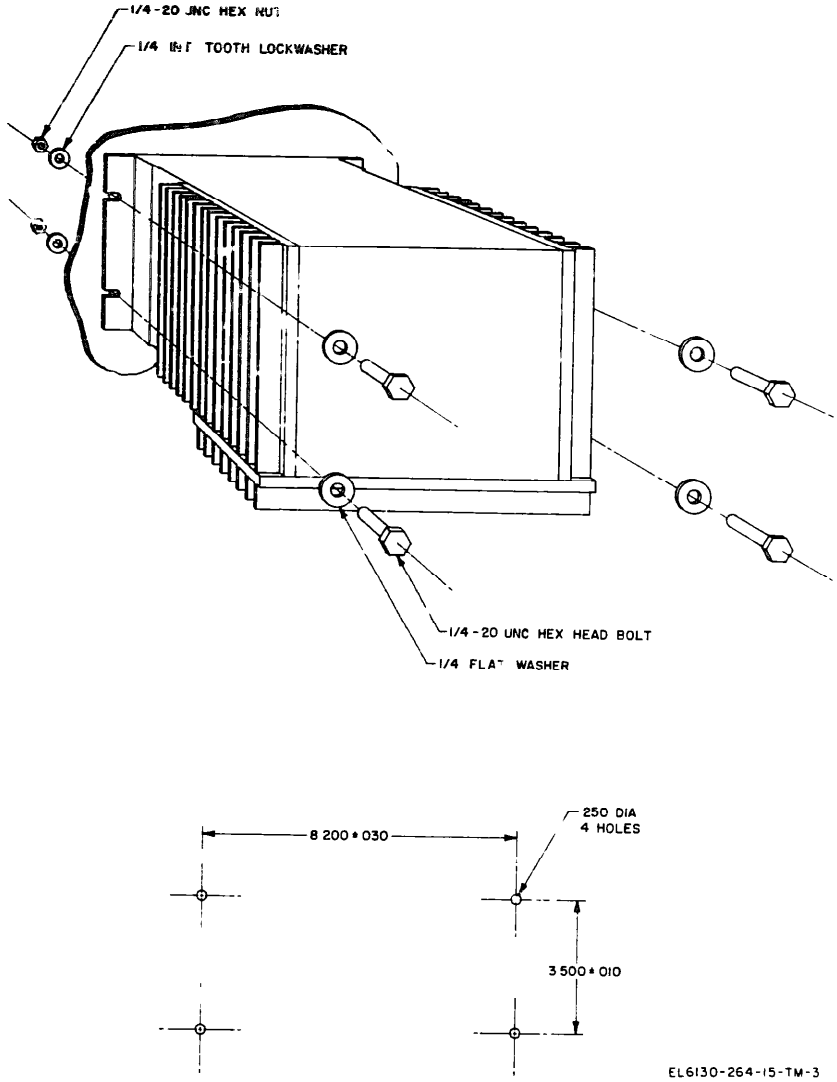


Figure 2-2 Installation and mounting hole diagram

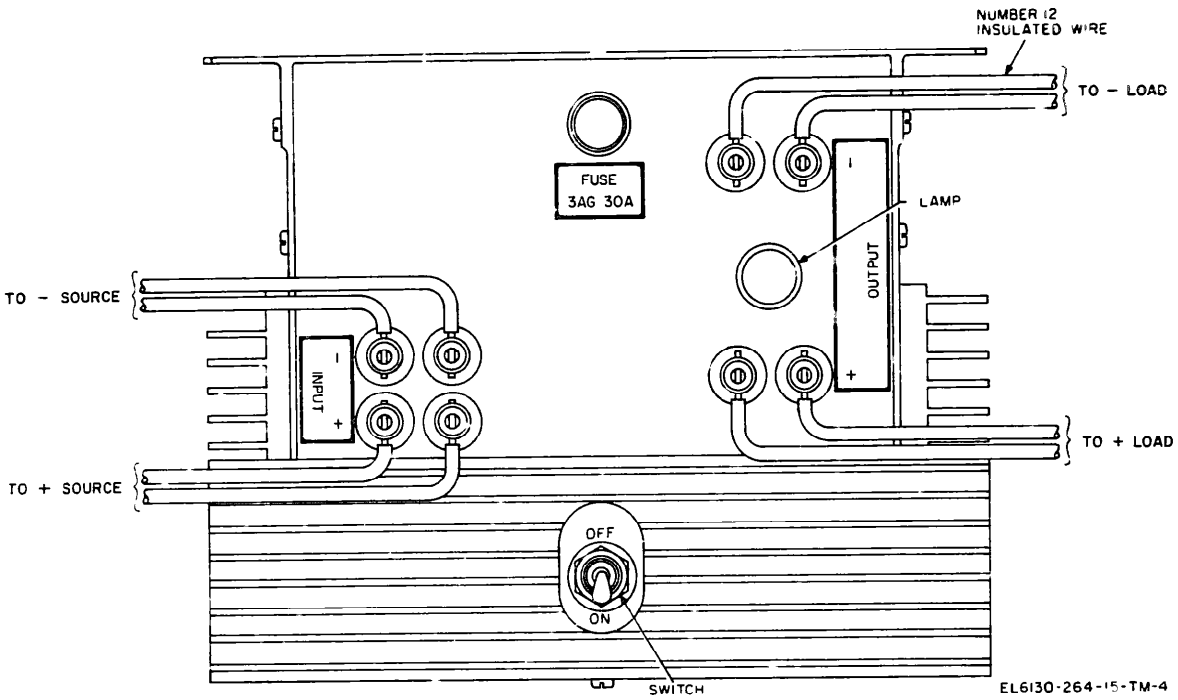


Figure 2-3 Dc/dc converter control location and hookup diagram

Section III. INITIAL CHECKS AND OPERATION

2-8. Initial Checks
(fig 2-3)

Before operating the dc/dc converter, make the following initial checks :

a. Verify that the dc/dc converter is securely fastened to the metal surface (fig. 2-2).

b Check the dc/dc converter for any loose terminal nuts.

c. Verify that the fuse knob is securely turned clockwise into the fuse holder.

d. Set OFF-ON switch to ON and verify that the pilot lamp lights.

e. Check for 28 volts dc at INPUT terminals.

f. Check for 12 volts dc at OUTPUT terminals

g. Set OFF-ON switch to OFF

2-9. Operation

The operator control consists of one OFF-ON switch which is used to turn the dc dc converter input power to ON or OFF. The dc/dc converter is placed in operation by setting the OFF-ON switch to ON and observing that the output indicator lamp is lit

CHAPTER 3

PREVENTIVE MAINTEANCE INSTRUCTIONS

3-1. Scope of Maintenance

The maintenance duties assigned to organizational maintenance personnel of the dc/dc converter are listed below together with a reference to the paragraphs covering the specific maintenance functions.

a. Organizational daily preventive maintenance checks and services (table 3-l).

b. Organizational weekly preventive maintenance checks and services (table 3-2)

c. Organizational monthly preventive maintenance checks and services (table 3-3)

d. Cleaning (para 3-4).

e. Touchup painting (para 3-5).

3-2. Preventive Maintenace

a. Preventive maintenance is the systematic care, servicing, and inspection of the dc/dc converter to prevent the occurrence of trouble, to reduce downtime, and to assure that the dc/dc converter is serviceable.

b. Multimeter AN/URM-105 and Tool Kit Electronic Equipment TK-101/G are authorized for organizational maintenance.

c. The procedures given in tables 3-1, 3-2, and 3-3, and paragraphs 3-4 and 3-5 cover routine systematic **care** and cleaning essential to proper upkeep and operation of the equipment.

d. The preventive maintenance checks and services (tables 3-1, 3-2, and 3-3) outline functions to be performed at specific intervals. These checks and services are to maintain Army electronic equipment in a combat serviceable condition; that is, in good general (physical) condition and in good operating condition To assist operators in maintaining combat serviceability. the tables indicate what to check, how to check, and the normal conditions. Record and report these checks in accordance with the requirements in TM 38-750

3-3. Preventive Maintenance Checks and Services Periods

Preventive maintenance checks and services of the equipment are required dally, weekly, and monthly.

a. Table 3-1 specifies the checks and services that **must be** accomplished daily (or at least once each week if the equipment is maintained in standby condition)

b. Tables 3-2 and 3-63 specify additional checks and services that must be performed weekly and monthly.

Table 3-1. Daily Preventive Maintenance Checks and Services

Sequence No	Item to be inspected	Procedures	References
1	Exterior surfaces	Clean the exterior surfaces, including the cooling fins	Para 3–4
2	Terminal screws	Check the tightness of all terminal screws	None
3	Switch and indicator	While making the operating check (item 5), observe the mechanical action of the OFF–ON switch The action must be smooth and free of external or internal binding, and there must be no excessive looseness	None
4	Operation	Operate the equipment according to chapter 2	None

Table 3-2. Weekly Preventive Maintenance Checks and Services

Sequence No	Item to be inspected	Procedure	References
1	Connecting wires	Check the connecting wires for chaffed, cracked, or frayed insulation	None
2	OFF-ON switch	Set switch to ON and observe that the lamp lights	None
3	Metal surfaces	Inspect exposed metal surfaces for rust and corrosion Touch up paint as required	Para 3-5.

Table 3-3 Monthly Preventive Maintenance Checks and Services

Sequence No	Item to be inspected	Procedure	References
1	Pluckout items	Inspect seating of pluckout items	None
2	Publications	See that all publications are complete, serviceable, and current	DA Pam 310-4
3	Modifications	Check to determine if new applicable MWO's have been published All URGENT MWO's must be applied immediately All NORMAL MWO's must be scheduled	DA Pam 310-7

3-4. Cleaning

Inspect the exterior of the dc/dc converter. The exterior surfaces should be free of dust, grease, and fungus.

a. Remove dust and loose dirt with a clean, soft cloth.

WARNING

The fumes of trichloroethane are toxic. Provide thorough ventilation whenever used. DO NOT use near an open flame Trichloroethane is not flammable, but exposure of the fumes to an open flame converts the fumes to highly toxic, dangerous gases.

b. Remove grease, fungus, and ground-in dirt from the cases: use a cloth dampened (not wet) with trichloroethane.

3-5. Touchup Painting Instructions

Remove rust and corrosion from metal surfaces by lightly sanding them with fine sandpaper. Brush two two coats of paint on the bare metal to protect it from further corrosion Refer to the applicable cleaning and refinishing practices specified in TM 9-213 and TB 746-10.

3-6. Troubleshooting

Organizational troubleshooting is limited to determining whether the fuse or dial lamp is defective. With 28-volt dc power supply on, this is determined by turning the dc/dc converter OFF-ON switch to ON If the dial lamp falls to light, check for a bad fuse or burned-out dial light.

3-7. Repairs

a Replacement of Lamp (fig. 2-3).

(1) Rotate the lamp Jewel counterclockwise and remove it from the lamp assembly.

(2) Remove the defective lamp from the jewel holder.

(3) Replace the defective lamp with a new one of identical rating.

(4) Place the lamp Jewel in the lamp assembly and secure it by turning it clockwise.

b Replacement of Fuse (fig. 2-3).

(1) Press in on the fuse holder cap and rotate it counterclockwise to unlock it.

(2) Pull the fuse holder cap and the fuse out of the fuse holder.

(3) Remove the defective fuse from the fuse holder cap

(4) Replace the defective fuse with a new one of the same rating

(5) Insert, the fuse and fuse holder cap in the fuse holder Push in on the fuse holder cap and rotate it clockwise to lock it.

CHAPTER 4

FUNCTIONING OF EQUIPMENT

4-1. System Block Diagram

a. The overall block diagram for the dc/dc converter (fig. 4-1) illustrates the basic operational block The operation of the unit can be broken down into two general areas the input circuitry and the output circuitry. Al! the ***input*** circuitry can be traced back to the plus 28-volt dc power supply. The ***output*** circuitry operates from the output power of power transformer A3Tl. There is no dc connection between the input and output circuits.

b. The input circuits consist of clock generator Ml, parallel push-pull ransistor switch A2, pulse transformer M1, and power transformer A3Tl. On application of the input power (+28 volts dc) clock generator M1 provides a pulse train with an approximate period of 250 microseconds and a push-pull square wave at a 2-kiloHertz (kHz) rate The square wave signal does not have a 100-percent duty cycle at any time The maximum duty cycle (approximately 85 percent), occurs at the instant the unit is turned on and will vary depending on the input voltage and the load on the unit, The square wave signal supplies drive to transistor switch A2 that alternately switches plus 28 volts dc into power transformer A3Tl. Power transformer A3Tl steps the input voltage down to supply power to the output circuitry The pulse train output from clock generator Ml provides a synchronization pulse for the output circuitry. The pulse train is transmitted to the output circuitry by pulse transformer Ml

c. The ***output circuitry*** consists of two rectifiers (A3CRl and A3CR2), low-pass filter A3Ll and A4C1, voltage regulator VRl, and overshoot detector A4Al circuit. Rectifiers A3CRl and A3CR2 convert the output of power transformer A3Tl to dc voltage, approximately plus 12 volts Low-pass filter A3Ll and A4Cl removes the ripple from the output of rectifiers A3CRl and A3CR2 Voltage regulator VRl circuit compares the 12-volt output voltage to an internal reference voltage and qroduces a train of pulses that are proportional to the difference, i.e , the output voltage, 12 volts dc. of the unit increases, the output frequency of the train of pulses from the voltage regulator increases also.

d. The pulse train from the input circuitry **is** used to synchronize the phase of the voltage regulator. Voltage regulation of the output of the equipment is accomplished by controlling the pulse width of transistor switch A2. ***The*** height of the square wave from the transistor switch is proportional to the input voltage, plus 28 volts dc If the input voltage increases, the height of the square wave must increase also To maintain a constant output voltage, the square wave pulse must decrease in width. This is accomplished by a flip-flop in clock generator Ml. A start pulse, the pulse train, turns on the flip-flop circuit in transistor switch A2. The output pulse from voltage regulator VRl turns the flip-flop off Therefore, an increase in the input voltage increases the output frequency of the pulse train from the voltage regulator VR1 which, in turn, decreases the amount of time the flip-flop circuit in transistor switch A2 IS on This accomplishes voltage regulation from input to output. The load regulation (for an increase or decrease in load) works identically, except that when ***a*** load change occurs, the output voltage is corrected by changing the pulse width from transistor switch A2.

e. Overshoot detector A4Al correction circuit compensates the output voltage under extreme load changes. The output voltage will increase rapidly from the full-load to no-load condition This is due to a large current flowing in an inductor in the filter When the load is removed, an inductive kickback occurs Voltage regulator VRl attempts to correct for this but limits when the pulse width reaches zero At this point, there is no Input power available, and voltage regulator VRl loses control Overshoot detector A4A1 determines when this condition occurs and turns on transistor clamp A4Ql that holds the output voltage at 120 millivolts above nominal. When the energy

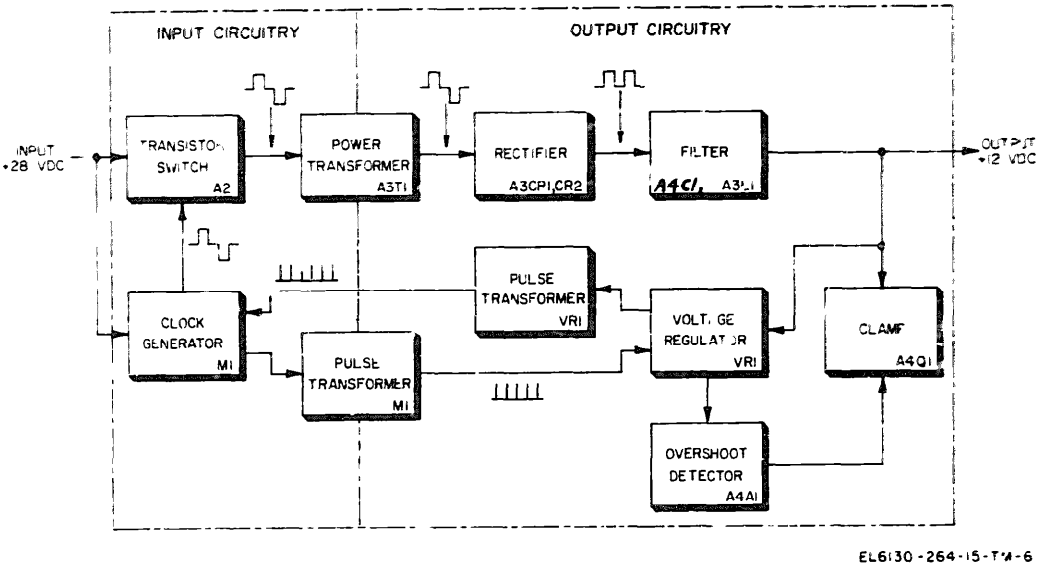


Figure 4-1. Overall block diagram

stored In the inductor has been dissipated by clamp A4A1, voltage regulator VRl returns to normal operation

4-2. Principal Parts of Dc/Dc Converter

The principal parts of the dc/dc converter are listed in the table 4-1

Table 4-1. Principal Parts in Dc Dc Converter

Parts	Callout or symbol
Clock generator	M1
Voltage regulator	VR1
Assemblies (3 each)	A2A2A1
	A2A2A2
	A2A2A3
Transformer and rectifier	A3
Overshoot detector	A4A1
Filter capacitor	A4C1
Overshoot switch (clamp)	A4Q1
Zener diodes (2 each)	A4CP3
	A4CR4
Clock reference zener diode	A4CR5

4-3. Functioning of Dc/Dc Convertor (fig. 7–5)

a. On application of input power, plus 28 volts dc, clock generator Ml produces a pulse Train with an approximate period of 500 microseconds and a push-pull square *wave* at a 1-kHz rate The maximum duty cycle is approximately 85 percent. Supply voltage for clock generator Ml circuit is derived from the Zener regulator composed of A4AlR6, A4A1R7, and A4CR5

b. Square wave clock generator Ml output drives the bases of Q3 and Q4 on three identical assemblies (A2A1, A2A2, and A2A3) Transistors Q3 and Q4 are switched on alternately by a drive signal from clock generator Ml.

c The assembly drives transformer A3Tl push-pull. The two halves of each assembly are identical Consider one-half of assembly A2A1, composed of transistors Q1, Q2. and Q3, and associated resistors, capacitors, and diodes. When A2AlQ3 turns on (A2AlQ4 and second half of transistor switch A2 are off at this time), it charges A2AlCl through resistor A2AlR3. When A241Q3 turns off, A2AlC1 discharges through A2AlCR2 and A2AlR4 The discharge path allows A2AlCl to completely discharge during off-time of A2QlQ3, and to charge and discharge with the same time constant. thus producing a balanced duty cycle and preventing a dc bias buildup at A2A1C1.

d With A2AlQ3 on and A2AlCl charged, a positive voltage appears at the base of A2AlQ2, turning it on Reverse biasing of A2AlQ2 is prevented by A2AlCRl, A2AlQ2 turns A2AlQl on. The collector of A2AlQ2 IS connected to pin 4 of transformer A3Tl through ASAlRl and fur-

nishes base current to A2A1Q1 through this path. Transistor A2A1Q1 is connected to pin 5 of A3T1, and switches pin 5 of A3T1 to ground through current sharing resistor A2A1R1. This allows current to flow through transformer A3T1 from center tap, pin 3, −28 volts dc to approximately ground, pin 5 of A3T1. When A2A1Q3 turns off, this half of transistor switch A2 turns off, raising pin 5 of A3T1 to a high impedance. The two halves of transistor switch A2 switch on alternatively, causing an alternating current to flow at A3T1.

e. Voltage spikes may appear at pins 5 and 1 of A3T1 due to spikes on the 28-volt dc supply or during switch-off transient. Diodes A4CR3 and A4CR4 are 75-volt Zener diodes and clip any spikes exceeding 75 volts. This action prevents the emitter to collector rating of A2A1Q1 or A2A1Q6 from being exceeded.

f. All three assemblies forming transistor switch A2 are identical in operation.

g. Diodes A3CR1 and A3CR2 form a full-wave rectifier at the secondary of A3T1. The resulting rectified voltage is filtered by A3L1 and A4C1, and forms the 12-volt dc output voltage. Resistor A4R1 prevents excessive voltages on the output under no-load conditions.

h. The filtered −12 volts dc is supplied to pin 1 of voltage regulator A4VR1, where it is compared to a zener reference (internal to A4VR1). Reference voltage is adjustable with potentiometer A4A1R2. Pulses from clock generator M1 are brought in to voltage regulator VR1 at pin 6. At turn on of the dc/dc converter (no voltage at +12-volt dc output), a train of pulses with an approximate period of 500 microseconds appears at pin 8 of clock generator M1. When the dc output voltage builds to −12 volts dc, voltage regulator VR1 produces a pulse train, each pulse of which follows a clock generator M1 pulse (pin 8 of VR1). As voltage builds at +12-volt dc output, time delay decreases between input (pin 6 of voltage regulator VR1) and output (pin 8 of VR1). Voltage regulator VR1 output pulses are used to control the duty cycle of the clock driver outputs from clock generator M1. Thus, as voltage at +12-volt dc supply varies due to load changes or input changes, voltage regulator VR1 causes a change in duty cycle of the clock drive to the assemblies to offset the change and regulate the output voltage.

i. In some cases, when output load changes very rapidly, surges from A3L1 may cause output voltage to rise faster than voltage regulator VR1 can respond. When voltage sensed by voltage regulator VR1 pin 1 exceeds the reference voltage by 0.120 volt, a voltage from pin 2 turns on overshoot detector A4A1Q1, which turns on clamp transistor A4Q1, thus preventing any further rise in the output voltage.

CHAPTER 5

DEPOT MAINTENANCE

Section I. INTRODUCTION

5-1. Scope of Maintenance

Depot maintenance covers all maintenance above organizational maintenance This includes troubleshooting, repair, alignment, testing, and overhaul

5-2. Test Equipment, Tools, and Material Required for Depot Maintenance

a The test equipment required for depot maintenance IS listed below.

(1) Multimeter AN PSM-6B (multimeter)

(2) Oscilloscope AN/USM-117 (oscilloscope).

(3) Power supply (Austron model 5020-1041 or equal).

(4) Voltmeter, Electronic AN/USM-98 (voltmeter).

b. The tools required for depot maintenance are listed below.

(1) Toolkit, Electronic Equipment TK-100/G.

(2) Toolkit, Electronic Equipment TK-105, G.

c. The materials required for depot maintenance are listed **below**

(1) Resistor, l-ohm, 200-watt (2 ea).

(2) Resistor, 2-ohm, 200-watt (1 ea).

(3) Switch, 30A spst.

Section II. DEPOT TROUBLESHOOTING

5-3. General

The depot maintenance procedures in this chapter supplement the procedures described in the organizational maintenance chapter. The systematic troubleshooting procedure, which begins with the operation and organizational checks that can be performed at the organizational maintenance category, is carried to, a higher category in this chapter by sectionalization, localization, and isolation techniques.

5-4. Depot Troubleshooting Procedures

a. General. The first step in troubleshooting a defective dc/dc converter is to sectionalize the fault Sectionalization means tracing the fault to a defective assembly responsible for the abnormal condition. Some faults can often be located by sight or smell.

b. Sectionalization The first step is to locate the assembly at fault by the following methods.

(1) *Visual inspection.* The purpose of visual inspection is to locate faults without testing or measuring All visual signs should be observed and an attempt made to sectionalize the fault to a particular assembly.

(2) Functional test. Functional tests frequently indicate the general location of trouble. In many instances, the tests will help in determining the exact nature of the fault

c Localization After the trouble has been sectionalized (b above), refer to paragraph 5-8 for localizing the trouble in the suspected assembly by continuity checking.

5-5. Initial Disassembly

Access to the inside of the dc/dc converter case can be had by following the initial disassembly procedure below :

a. Disconnect all inputs and outputs

b. Remove sealer (8, fig. 7–2) around base of case, and remove five seal screws (6) from the cover.

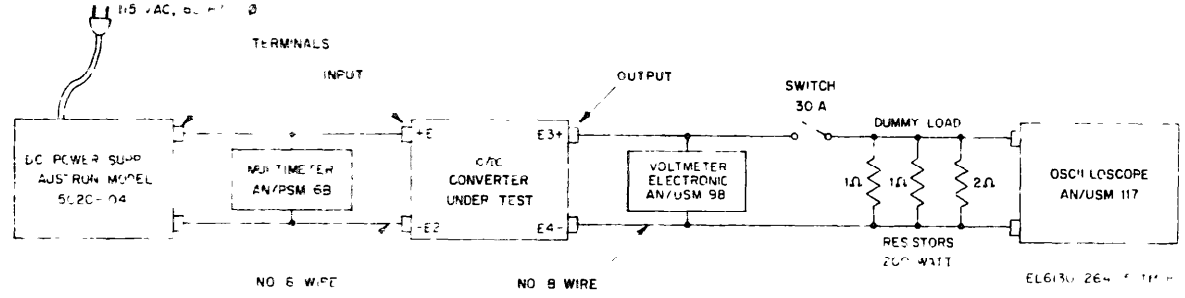


Figure 5-1 Hookup for functional testing

c Pull on either INPUT or OUTPUT terminals to remove the case

d Separate cover from assembly to the extent allowed by internal wiring

e. Remove four panhead screws (7)

f Carefully remove case from dc dc converter The internal assemblies should now be exposed

5-6. Functional Test Setup

To perform the functional tests outlined in tables 5-l through 5-5, connect the dc/dc converter as **shown In figure 5-1**

CAUTION

Be very careful when handling the dc/dc **concerter** on a bench to prevent shorting the input or output terminals on metal objects or surfaces

Table 5-1. Technical Test for Voltage Regulation

Test item	Test condition	Result
1	Multimeter, 50-volt dc range, (power supply 28 volts dc	Output voltage should be 12 volts dc ±1 volt (load switch closed)
2	Adjust power supply to 22.0 volts dc	Record output voltage
3	Adjust power supply to 35.0 volts dc	Output voltage should not change more than 240 millivolts (mv) from that recorded in 2 above

Table 5-2. Functional Test for Load Regulation

Test item	Test condition	Result
1	Multimeter, 50-volt dc range, (load switch closed) power supply 28 volts dc	Record output voltage
2	Load switch, open	Output voltage should not change by more than 120 mv from that recorded in 1 above

Table 5-3. Functional Test for Output Ripple

Test item	Test condition	Result
1	Multimeter, 50-volt dc range (power supply 28.0 volts dc) Dc dc converter ON Load switch Closed Oscilloscope Sweep 10 μsec div Input 1 volt div Trigger Set for stable trigger	Ripple seen on oscilloscope should not exceed 340 mv peak-to-peak

Table 5-4. Functional Test for Output Voltage Overshoot

Test item	Test condition	Result
1	Multimeter, 50-volt dc range, (power supply 28 0 volts dc) Dc, dc converter. ON. Load switch· Closed. Oscilloscope: Sweep. 10 μsec/div. Input. .1 v/div. Stability TRIGGER on negative-going overshoot pulse.	Overshoot on turnoff of dc/dc converter should not exceed 120 mv
2	Same as item 1 except scope— Stability TRIGGER on positive-going overshoot pulse	Overshoot on turnon dc/dc converter should not exceed 120 mv.

5-7. Additional Functional Tests

If additional depot troubleshooting is required to locate the trouble in a defective dc/dc converter, the troubleshooting steps listed in table 5-5 can be used. The test points inclosed in ***triangles*** are used to aid in locating the test point on the schematic diagram (fig. 7-5). Note the corresponding triangles on the schematic diagram. All depot troubleshooting is performed with 28-volt dc input and no load unless indicated otherwise in the procedures.

Table 5-5 Depot Troubleshooting Procedures

NOTE

indicates test points. (See note 2, fig. 7-5).

Item No	Test points	Symptom	Probable trouble	Corrective action
1	1 and E4	0 vdc at output terminals	*a.* Fuse A2F1 blown *b.* Input or output terminals open *c.* Defective power switch A2S1. *d.* Open A3L1 *e.* Shorted A4C1, A4Q1, or a short across A4R1.	*a.* Replace fuse A2F1 (6, fig 7-4). *b.* Check for corrosion or broken wires Clean terminals and replace broken wires *c.* Check for open contacts Replace power switch if contacts are open when switch is at ON (para 5-16) (13 fig. 7-4) *d.* Check A3L1 for open winding between 1 and 4 (3 fig 5-3, para 5-11) *e.* Check output circuit resistance between E3 and E4 (table 5-6 and para 5-12)
2	2 3 and E2.	No waveform	Defective clock drive	Check A4M1 by replacement (para 5-14). Check A4CR5 by replacement (para 5-19) Check resistance of A4A1R7 and A4A1R6 (3, fig 7-3)
3	4 and E4	No waveform	Open A3T1, A3CR1, or A3CR2.	Check A3CR1 and A3CR2 resistance See table 5-6. Check A3T1 for an open circuit. Replace if open (paras 5-20 and 5-10) (12, 13 fig 5-6)
4	1 and E4	High output voltage.	*a.* Adjust A4A1R2 *b.* A4Q1, A4R2 open	*a.* Adjust resistor A4A1R2 (3, fig 5-4). *b.* Check A4Q1 and A4R2 with ohmmeter. Replace if defective (para 5-17).
5	6 and E4	No waveform	Defective A4M1 or A1VR1	Disconnect pin 6, A4VR1 Replace A4VR1 if waveform appears, or replace A4M1 (paras 5-13 and 5-14)
6	5 and E2	No waveform	Defective A4VR1	Replace A4VR1 (para 5-13) (2, fig 7-3).
7	1 and E4	Low output voltage	Defective A4A1R2	Adjust A4A1R2 (3, fig. 5-4).
8	1 and E4	Low output voltage	A3CR1, A3CR2, or A3T1 open.	Check rectifiers and A3T1. If defective, replace (paras 5-19 and 5-20) (2, fig 5-3)
9	7 8 and E2	Improper waveform	Check for defective A4M1 or malfunctioning assemblies A2A1, A2A2, and A2A3.	Disconnect pins 8 and 4 of A4M1, replace A4M1 if waveform is not correct Check assembly if signal is correct (paras 5-14 and 5-15) (3, fig 7-3)
10		Fuse blown, excessive input current.	Shorted wire	Check wiring and input/output terminals for mechanical short.

*Table 5-5. Depot **Troubleshooting** Procedures-Continued*

Item No	Test points	Symptom	Probable trouble	Corrective action
11		Excessive input current, fuse blows	Defective assemblies A2A1, A2A2, A2A3	Use assembly table of resistances, table 5-8 and 11, fig 5-6 and fig 7-5
12	2 3 and E2.	Bad waveform	INPUT and OUTPUT circuits not isolated	Remove connections to A3L1 at test point 4. Repeat items 2, 5, and 9 if waveform does not improve. Repeat items 1, 3, and 6 if it does improve (3, fig 5-3).
13	4 and E4	Bad waveform	Shorted rectifier	Check A3CR1 and A3CR2 Replace if defective (para 5-20) (12 and 15, fig 5-6)
14	2 3 and E2	Bad waveform	Zener open or shorted	Disconnect leads from A4CR3 and A4CR4 and use Table of resistances Table 5-7 and 14, fig 5-6.
15	1 and E4	Poor voltage regulation.	Voltage regulator or output circuit malfunction	Check A4R1, A4Q1, A3CR1, A3CR2, A4CR5, A4R7, A4R6 Repeat items 6, 14, and 2 Vary input voltage between 22 and 35 volts (1, 7, 8, and 9 fig. 5-4) (11, fig. 7-3).
16	1 and E4	Poor regulation	Defective voltage regulator or assembly.	Perform items 1, 5, 6, 13, and 14 at full load. Vary load between no load and full load
17	1 and E4	High ripple	Defective filter capacitor A4C1 or Reactor assy A3L1	Replace A4C1 or A3L1 Use full load (paras 5-11 and 5-12) (3, fig 5-3) (6, fig 7-3)
18	1 and E4	Excessive overshoot	Defective voltage regulator or overshoot circuit.	Check A4Q1, A4A1 (Q1, R4, R5) or replace A4VR1 Vary between full load and no load (para 5-13) (5, 6, and 9, fig. 5-4).

5-8. Depot Troubleshooting by Continuity Checking

This depot continuity troubleshooting procedure is prepared as a means of locating a fault in the dc/dc converter by checking the circuit resistances and comparing the readings obtained with those given in table 5-6. The transistor lead configurations are shown on figure 5-2.

Table 5-6. Resistances of Converter Assembly (Fags 5-3, 5-4, 7-3, and 7-5

From—	To—	Across	Scale	Reading	
				Forward	Reverse
E3	E4		X1	9 75	3 50
4	E3	A3L1	X1	0	0
4	A3T1-6	A3CR1	X1	3 50	9 75
4	A3T1-5	A3CR2	X1	3 50	9 75
4	E4		X1	9 75	3 50
		A4A1R1	X100	255	255
		A4A1R2	X100	350	350
		A4A1R3	X100	315	315
		A4A1R4	X1	2 00	2 00
		A4A1R5	X1	15 00	20 00
		A4A1R6	X10	103	109
		A4A1R7	X10	103	109
A4A1Q1-C	A4A1Q1-E		X10	31 00	48 00
A4A1Q1-B	A4A1Q1-E		X100	265	640
A4Q1-B	E4		X10	30 0	35 0
A4VR1-2	E4		X10 X100	50 0Ω	1 75K
A4VR1-3	E4		X100	300	300
A4VR1-5	E4		X1	0	0
A4VR1-6	E4		X100/X100K	2 4K	Open
A4VR1-7	E4		X100K	Open	Open
A4VR1-8	E4		X100K	Open	Open

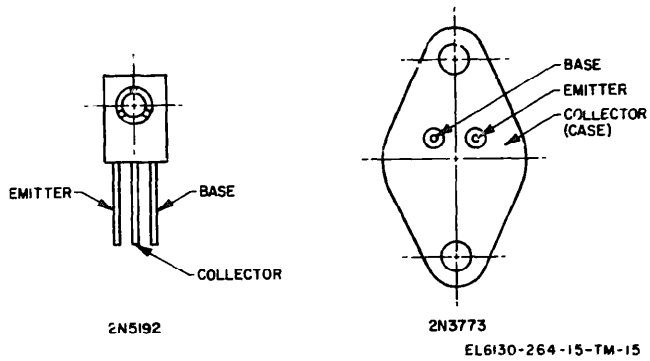


Figure 5-2. Transistor lead configuration.

Table 5-6 ***Resistances*** *of Converter* ***Assembly (Figs*** *5-3, 5-4, 7-3,* ***and*** *7-5)-Continued*

From—	To—	Across	Scale	Reading	
				Forward	Reverse
A4VR1-8	A4VR1-7		X1	1	1
A4M1-1	E2		X100	850Ω	230Ω
A4M1-2	E2		X1	2Ω	2Ω
A4M1-3	E2		X100	1K	160Ω
A4M1-4	E2		X100	325Ω	620Ω
A4M1-5	E2		X1	0	0
A4M1-6	E2		X100K	Open	Open
A4M1-7	E2		X100K	Open	Open
A4M1-8	E2		X10/X100	150Ω	1K
A4M1-7	E4		X100/X100K	1K	Open
		A4CR3	X100	160Ω	900Ω
		A4CR4	X100	160Ω	900Ω
E1	E2		X100	950Ω	160Ω
		A2R1	X1	1	1
		A2R2	X1	1	1
		A2R3	X1	1	1

Table 5-7. Resistances of Transistor Switch A2 (Figs. 5-6 and 7-5)

From—	To—	Across	Scale	Reading	
				Forward	Reverse
		R1	X1	5Ω	5Ω
		R2	X1	4Ω	30Ω
		R3	X10	270Ω	40Ω
		R4	X10	270Ω	50Ω
		R5	X10	270Ω	40Ω
		R6	X10	270Ω	40Ω
		R7	X1	5Ω	5Ω
		R8	X1	4Ω	30Ω
		CR1	X1	5 4Ω	4 8Ω
		CR2	X10	270Ω	40Ω
		CR3	X10	270Ω	40Ω
		CR4	X1	5 4Ω	4 8Ω
		C1	X100	1 1K	1 2K
		C2	X100	1 1K	1 2K
Q1-C	Q1-E		X100	950Ω	150Ω
Q1-B	Q1-E		X10	25Ω	30Ω

Table 5-7 Resistance of Transistor Switch A2 (figs. 5-6 and 7-5)-- Continued

From—	To—	Across	Scale	Reading	
				Forward	Reverse
Q2-C	Q2-E		X10	460Ω	30Ω
Q2-C	Q2-B		X100	2 5K	2.0Ω
Q3-C	Q3-E		X100	1 4K	500Ω
Q3-B	Q3-E		X100	230Ω	360Ω
Q3-C	Q3-B		X100	350Ω	230Ω
Q4-C	Q4-E		X100	1 4K	500Ω
Q4-B	Q4-E		X100	230Ω	360Ω
Q4-C	Q4-B		X100	350Ω	230Ω
Q5-C	Q5-E		X10	460Ω	30Ω
Q5-C	Q5-B		X100	2 5K	270Ω
Q6-C	Q6-E		X100	950Ω	150Ω
Q6-B	Q6-E		X10	25Ω	30Ω

Table 5-8. Resistance of Transistor Switch S2 Assemblies (A2A1, A2A2, and A2A3)

NOTE

Disconnect one end of A2R1, A2R2, A2A3 (the leads to pins 5 and 1 on A3Tl) from the circuit Leave all other **connections** normal (Refer to figs. 5-6 and 7-5)

From—	To—	Across	Scale	Reading	
				Forward	Reverse
		R1	X1	5Ω	5Ω
		R2	X1	30Ω	30Ω
		R3	X1	270Ω	5Ω
		R4	X1	270Ω	35Ω
		R5	X1	270Ω	35Ω
		R6	X1	270Ω	5Ω
		R7	X1	5Ω	5Ω
		R8	X1	30Ω	30Ω
		CR1	X1	5 4Ω	4 8Ω
		CR2	X1	270Ω	5Ω
		CR3	X1	270Ω	5Ω
		CR4	X1	5 4Ω	4 8Ω
		C1	X100	1 1K	1 2K
		C2	X100	1 1K	1 2K
Q1-C	Q1-E		X100	275Ω	Open
Q1-B	Q1-E		X100	200Ω	Open
Q2-C	Q2-E		X100	1K	200Ω
Q2-C	Q2-B		X100	2 5K	260Ω
Q3-C	Q3-E		X100	950Ω	550Ω
Q3-B	Q3-E		X100	230Ω	360Ω
Q3-C	Q3-B		X100	350Ω	230Ω
Q4-C	Q4-E		X100	950Ω	550Ω
Q4-B	Q4-E		X100	230Ω	360Ω
Q4-C	Q4-B		X100	2 5K	260Ω
Q5-C	Q5-E		X100	1K	200
Q6-C	Q6-E		X100	275Ω	Open
Q6-B	Q6-E		X100	200	Open

Section III, PARTS REPLACEMENT

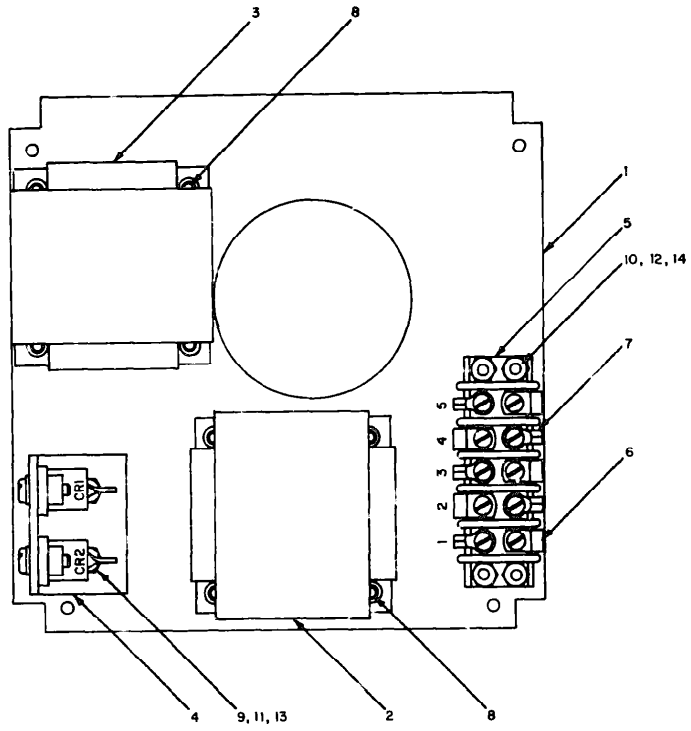
5-9. Depot Parts Replacement

Remove and replace defective parts in accordance with the procedure given in paragraphs 5-10 through 5-21. Observe lead dress, and replace the parts and leads In the original positions to prevent introducing undesirable characteristics.

5-10. Replacement of Transformer A3T1

Remove four panhead screws 8-32 x 1/4 (12, fig. 7-2), and carefully separate top plate assembly (3) from bottom plate assembly (9), to the extent allowed by the internal wiring Locate transformer Tl (2, fig 5-3). Disconnect all trans-

former leads. Tag leads as they are disconnected. Remove four flathead screws 8–32 x 3/8 (8) and carefully remove transformer A3T1. Replace with new transformer assembly, part number 91394. Be careful in feeding wires through grommet (27, fig. 7–3) to prevent nicking varnish insulation. Secure transformer with four flathead screws. Rewire new transformer and remove tags as each wire is connected. Replace top plate with four panhead screws.



1	PLATE, MOUNTING, BOTTOM	8	SCREW, MACHINE, FLAT HD, 8-32 X 3/8
2	TRANSFORMER ASSY, POWER (T1)	9	SCREW, MACHINE, FLAT HD, 8-32 X 1/2
3	REACTOR ASSY (L1)	10	SCREW, MACHINE, FLAT HD, 6-32 X 5/8
4	SEMICONDUCTOR DEVICE ASSY, DIODE	11	WASHER, LOCK, NO 8
5	TERMINAL BOARD (TB1)	12	WASHER, LOCK, NO 6
6	TERMINAL, LUG	13	NUT, PLAIN, HEX, 8-32
7	TERMINAL, LUG	14	NUT, PLAIN, HEX, 6-32

EL6130-264-15-TM-10

Figure 5-3. Bottom plate assembly.

5-11. Replacement of Reactor Assembly A3L1

Remove four panhead screws 8-32 x 1/4 (12, fig. 7-2), and carefully separate top plate assembly (3) from bottom plate assembly (9) to the extent allowed by internal wiring. Locate reactor assembly Ll (3, fig. 5-3). Disconnect all choke leads. Tag leads as they are disconnected. Remove four flathead screws 8-32 x 3/8 (8) and carefully remove reactor assembly. Replace with new reactor assembly A3L1, part number 91395 Be careful in feeding wires through grommet (27, fig. 7-3), to prevent nicking varnish insulation. Secure new reactor assembly A3Ll with four flathead screws. Rewire new reactor assembly A3Ll; remove each tag as each wire is secured. Replace top plate with four panhead screws.

5-12. Replacement of Capacitor A4C1

Locate capacitor A4Cl (6, fig. 7-3). Note red dot identifying positive capacitor terminal. Tag wires to positive terminal. Remove two terminal screws and carefully bend leads to the sides to clear capacitor A4Cl. Loosen (but do not remove) machine screw (14) until capacitor A4Cl slides forward easily. Remove capacitor A4Cl and replace with new capacitor A4C1, part number 91448. Orient red dot near leads tagged for positive terminal Make sure capacitor A4Cl does not extend beyond bottom plate (1, fig. 5-3) and tighten the machine screw. Reinstall tagged leads on positive terminal near red dot, and tighten all screws.

5-13. Replacement of Voltage Regulator VR1

a. Locate voltage regulator VRl (2, fig. 7-3). Make sure wiring IS in accordance with the following color code (table 5-9) :

Table 5-9 Voltage Regulator VR1 Color Code

Pin	Color
1	Violet (red dot)
2	Orange
3	Green
4	NC
5	White (2 leads)
6	Grey
7	Black
8	Yellow

b. Note any differences in color code. Clip off al wires as close to pins on header as possible Remove four hexagonal nuts 6–32 (22, fig 7-3) and washers with $\frac{5}{16}$ hexagonal socket wrench. Remove defective VR1. Replace with new voltage regulator VR1, part number 91267. Use new mounting gasket, part number 90425. Strip each wire 1/4 inch. Rewire voltage regulator VR1.

5-14. Replacement of Clock Generator M1

a. Locate clock generator Ml (3, fig. 7–3). Make sure wiring is in accordance with the following color code (table 5-10) :

Table 5-10 Clock Generator M1 Color Code

Pin	Color
1	Orange (red dot)
2	Yellow
3	Red (2)
4	Grey (1)
5	Black (2)
6	White
7	Grey (2)
8	Green

b. Note any differences in color code. Clip off wires as close to pins as possible. Remove four hexagonal nuts, 6–32 (22, fig. 7–3) and washers with $\frac{5}{16}$ hexagonal socket wrench. Remove defective clock generator M1 and replace with a new clock generator M1, part number 91268. Use new mounting gasket, part number 90425 Strip each wire 1/4 inch. Rewire clock generator M1.

5-15. Replacement of Circuit Card Assembly

Locate assemblies A2A1, A2A2, or A2A3 (11, fig. '7-4). See figures 5-5 and 5-6 to identify the parts and find the parts locations, and figure 7-5 for the circuit wiring. Clip wires as close to the terminals as possible Remove two 6-32 nuts and washers and dismount the defective assembly Coat new power moduel base with silicone grease. Mount the new assembly in the correct position and rewire.

5-16. Replacement of Switch A2Sl.

Locate switch A2Sl (13, fig. 7-4). Unscrew solder lug terminals from switch A2Sl. Gently push wires to one side to clear switch A2Sl. Unscrew nut securing switch A2Sl and remove defective switch. Replace with new switch A2Sl. Replace solder lug terminals.

5-17. Replacement of Circuit Card A4A1

a. Locate circuit card A4Al (4, fig. 7-3). Make

sure wiring is in accordance with tollowing color code (table 5-11). (See figure 5-4 for identification of wire letters.)

Table 5-11. *Circuit Card A4Al Color Code*

Wire letter	*Color*
A	Red
B	Orange
C	Gray
D	Brown
E	Violet
F	Violet
G	Green
H	White
I	White

b. Note any differences in color code Clip off wires as close to circuit card A4A1 as possible. Remove four panhead screws 4–40 x ¾ (17, fig. 7–3), and washers and fiber spacers Retain spacers Remove defective circuit card A4A1. Replace with a new circuit card, part number 91353. Strip all wires ⅛ inch and tin. Solder wires to circuit card A4A1, using color code previously cited. Secure circuit card A4A1 to top plate, using fiber spacers previously removed between circuit card A4A1 and top plate. Secure with four 4–40 x ¾ screws and washers removed previosuly.

5-18. Replacememt of Transistor A4Q1

Locate transistor A4Ql (3, fig. 7-3). No further disassembly of top and bottom plate is necessary to replace Ql. Remove two panhead screws 6-32 x 1/2 (14) securing transistor to plate. Grasp transistor A4Al cap withbase and pull out. Remove the mica washer under transistor A4Al. Inspect the new mica washer supplied with replacement transistor A4Al for presence of cracks or breaks. Coat washer on both sides with a very light coat of silicone grease (FSN 6850-927-9461) Place washer on plate, centering holes over mating chassis holes. Insert *new* transistor A4Al into socket With fingers on transistor A4Al cap, push firmly into socket. Secure with two panhead screws.

5-19. Replacement of Zener Diodes A4CR3, A4CR4, A4CR5

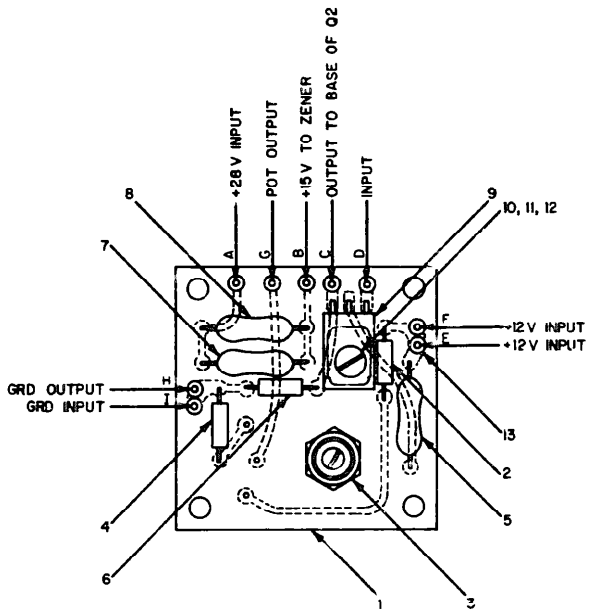
Locate Zener diodes A4CR3, A4CR4, and A4CR5 (11 and 12, fig. 7-3). Replacement procedure for all three diodes is identical. Unsolder connection to diode terminal. Do not unsolder connection to washer under diode. Remove nut securing diode and remove diode and both mica washers. Replace washers with new mica washers supplied with replacement diode. Examine washers for breaks or cracks. Coat washers on both sides with a very light coat of silicone grease (FSN 6850-927-9461). Place mica washers on either side of plate and center on holes. Replace metal washers and nut to secure diode. Resolder wire to diode terminal which was previously removed.

5-20. Replacement of Rectifiers A3CRl and A3CR2

Locate rectifiers A3CR1 and A3CR2 on diode bracket assembly (4, fig. 5–3). Unsolder the wires at diode terminals. Gently push them to one side. Orient the dc/dc converter so that you are facing the four screws securing the rectifiers to the bracket with dc/dc converter lid to your ieft. Remove the two screws on the left. Leave the wire and terminals which have been freed by removal of these screws in place. Remove the two flathead 6–32 x ⅜ screws securing the bracket to the bottom plate. The bracket with rectifiers A3CR1 and A3CR2 still attached with one screw each should now come free. Remove one or both defective rectifiers. Coat the bracket surface and new rectifier undersurfaces with silicone grease. Secure the two new rectifiers to the bracket by the right-hand screws only. Reinstall the bracket by the right-hand screws only. Reinstall the bracket with the two flathead screws. Insert the left-hand screws and re-secure the wire and terminals previously removed. Resolder the two wires to the rectifier terminals.

5-21. Reassembly After Maintenance

When electrical maintenance has been completed, clean the inside case assembly (I, fig. 7-2) and the bottom base plate. Clean the bottom plate. Clean edges of lid assembly and inside case assembly to remove old sealing compound. Coat the flat surface of the bottom plate (which has no components exposed) with silicone grease Set case assembly on work surface with open side up, mounting brackets to rear, heat sinks on either side. Orient dc/dc converter so that heat sinks match. Do not let freshly greased bottom plate surface touch work surface. Bottom plate surface must be kept free of dirt or foreign particles, Lower dc/dc converter into case assembly. Secure with four panhead screws 8-32 x 1/4 (7, fig. 7-2) ; one at each corner of the top plate. Lightly coat

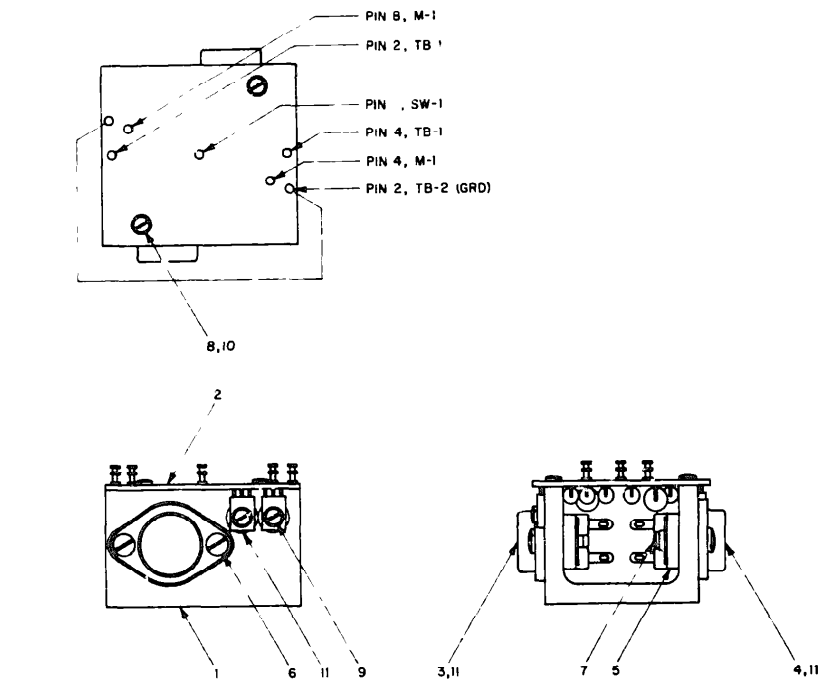


1	PRINTED WIRING BOARD, OVERSHOOT	8	RESISTOR, FIXED, WIREWOUND, 220Ω, 3W, 5% (R7)
2	RESISTOR, FIXED, COMPOSITION, 330Ω, 1/4W, 10% (R1)	9	TRANSISTOR (Q1)
3	RESISTOR, ADJUSTABLE, 500Ω (R2)	10	SCREW, MACHINE, FIL HD, 4-40 X 1/4
4	RESISTOR, FIXED, COMPOSITION 470Ω, 1/4W, 10% (F3)	11	WASHER, LOCK, NO 4
5	RESISTOR XED, WIREWOUN , 2 Ω 3W, 5% (R4)	12	NUT, PLAIN, HEX, 4-40
6	RESISTOR, FIXED, COMPOSITI , Ω, 1/4W, 10% (R5)	13	EYELET, METALLIC
7	RESISTOR, FIXED, WIREWOUND, 22 Ω, 3W, 5% (R6)		

EL6130-264-15-TM 14

Figure 5-4. Circuit card assembly overshoot.

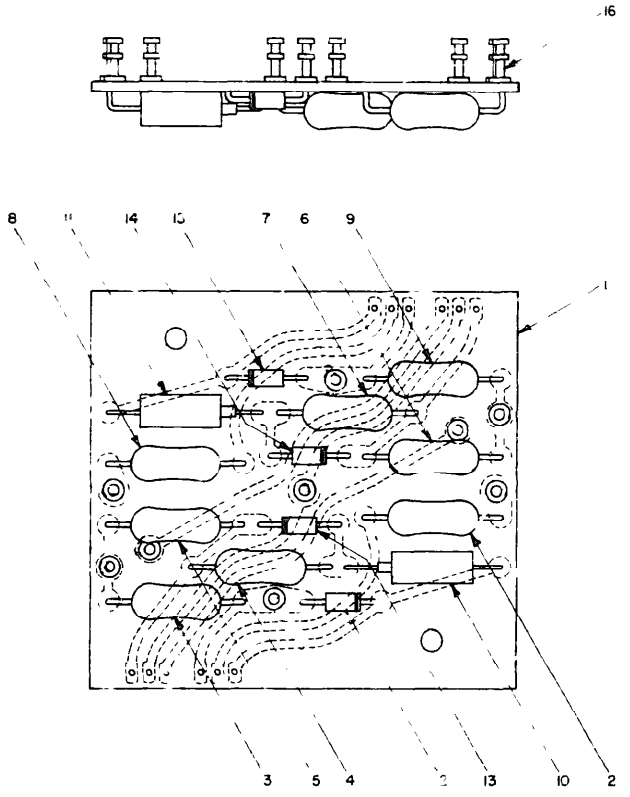
the inside top edge of case assembly and edge of lid assembly with Silastic (FSN 8040–900–2081). Insert lid into case assembly, secure with five seal screws 6–32 x 3/8 (6, fig. 7–2). Wipe away excess sealant. Re-test completely assembled unit (para 5–6).



1 HEAT SINK, ELECTRICAL-ELECTRONIC COMPONENT
2 CIRCUIT CARD ASSY SWITCHING UNIT
3 TRANSISTOR (Q1)
4 TRANSISTOR (Q6)
5 SOCKET, SEMICONDUCTOR DEVICE
6 SCREW, MACHINE, PAN HD, 6-32 X 5/8
7 SCREW, MACHINE, PAN HD, 4-40 X 3 8
8 SCREW, MACHINE, FIL HD, 4-40 X 1/4
9 SCREW, MACHINE, FIL HD, 4-40 X 3/8
10 WASHER, LOCK, NO 4
11 SILICONE COMPOUND

EL6130-264-15-TM-13

Figure 5-5. Switching unit assembly converter



1	PRINTED WIRING CARD, SWITCHING UNIT	9	RESISTOR, FIXED, WIREWOUND, 30 Ω, 3 W, 5 % (R8)
2	RESISTOR, FIXED, WIREWOUND, 5 Ω, 3 W, 5 % (R1)	10	CAPACITOR, FIXED, ELECTROLYTIC, 68 UF, 35V (C1)
3	RESISTOR, FIXED, WIREWOUND, 30 Ω, 3 W, 5 % (R2)	11	CAPACITOR, FIXED, ELECTROLYTIC, 68 UF, 35V (C2)
4	RESISTOR, FIXED, WIREWOUND, 270 Ω, 3 W, 5 % (R3)	12	DIODE (CR1)
5	RESISTOR, FIXED, WIREWOUND, 270 Ω, 3 W, 5 % (R4)	13	DIODE (CR2)
6	RESISTOR, FIXED, WIREWOUND, 270 Ω, 3 W, 5 % (R5)	14	DIODE (CR3)
7	RESISTOR, FIXED, WIREWOUND, 270 Ω, 3 W, 5 % (R6)	15	DIODE (CR4)
8	RESISTOR, FIXED, WIREWOUND, 5 Ω, 3 W, 5 % (R7)	16	TERMINAL, STUD

TL6130-264-15-TM-16

Figure 5-6. Circuit card assembly, switching unit.

CHAPTER 6

DEPOT OVERHAUL STANDARD

6-1. Applicability of Depot Overhaul Standards

The tests outlined in this chapter are designed to measure the performance capability of a repaired equipment Equipment that is returned to stock should meat the standards given in these tests.

6-2. Applicable References

a. Repair Standards. Applicable procedures of the depots performing these tests and the general standards for repaired electronic 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 **Modification** Work Orders. Perform all modification work orders applicable to this equipment before making the tests specified. DA Pam 310-7 lists all available MWO's.

6-3. Test Facilities Required

Thee equipments listed in paragraph 5-2 will be used in determining compliance with the requirements of this specific standard.

6-4. Final Depot Maintenance

After depot maintenance has been completed, the equipment is tested by a depot overhaul standard (DOS). Use the standards given in paragraphs 6-5 through 6-8 to determine that the dc/dc converter is in good operating condition, and can be returned to user or placed in storage for eventual reissue.

6-5. Voltage Regulation Test

a. The test is performed to determine the output voltage regulation over the input voltage operating range

b Connect the equipment as shown in figure 5-l

c Set the AN/PSM-6B for 50-volt dc range.

d Adjust the input voltage to 22 volts dc.

e. Set the AN AN/USM-98 to indicate **12** volts dc

f. Close the switch to the dummy load, and record the output voltage.

g. Adjust the input voltage to 35 volts dc.

h.. Observe and record the output voltage.

i. Output voltage should not change by more than **240** millivolts dc.

6-6. Load Regulation Test

a. This test is to determine the output voltage regulation from no-load to full-load condition.

b. The equipment is connected as shown on figure 5-1.

c. Repeat procedure given in paragraph 6-5c through f. Input voltage of 28 volts dc.

d. Open dummy load switch.

e. The reading on the AN/USM-98 should not change more than 120 millivolts dc.

6-7. Output Ripple Test

a. This test is to determine the output ripple.

b. The equipment is connected as shown on figure 5-1, except that the AN/USM-98 is not required.

c. Adjust the dc input voltage to 28 volts.

d. Set the following oscilloscope controls in positions designated below :

(1) Power switch to ON.
(2) Sweep control at 10 micro sec/div.
(3) X-input control at .lV.

e. Close the switch and check for less than 340 mv peak-to-peak ripple, and less than 1 percent root mean square (rms).

6-8. Output Voltage Overshoot Pest

a. This test IS to determine the maximum output voltage overshoot under turnon and turnoff conditions

b. Connect the equipment as shown in figure 5-1, except that the AN USM-98 is not required.

c. Adjust the dc input voltage to 28 volts.

d. Set dc/dc converter OFF-ON switch to OFF.

e. Set the following oscilloscope controls in the positions designated below:

(1) Power switch at ON for dc power supply.

(2) Sweep control at 10 micro sec/div.

(3) X-input control at .lV.

f. Close switch between dummy load and output (E3).

g. Set Multimeter AN/PSM6B to the 50-volt dc range.

h. Set the OFF--ON switch at ON and then OFF several times while adjusting the oscilloscope pattern for stable triggering on the negative slope of the output waveform. The overshoot should be less than 120 millivolts.

i. Set the OFF-ON switch at OFF and then ON several times while adjusting the oscilloscope pattern for stable triggering on the ***positive slope*** of the output waveform. Overshoot should be less than 120 millivolts.

j. Turn the power off to all equipment.

CHAPTER 7

PACKAGING FOR SHIPMENT OR LIMITED STORAGE AND DEMOLITION TO PREVENT ENEMY USE

Section I. PACKAGING FOR SHIPMENT OR LIMITED STORAGE

7-1. Disassembly of Equipment

Disassembly of the dc/dc converter consists of removing the two sets of parallel wires from between the power source and the INPUT terminals, and the two sets of parallel wires from between the load and the OUTPUT terminals. Detach the dc/dc converter from its mounting surface by removing the four mounting bolts, lo&washers, and nuts (fig. 2-2).

7-2. Repackaging for Shipment or Limited Storage (fig. 2-1)

The exact procedure for repackaging depends on the material available and the conditions under which the equipment IS to be shipped or stored.

a. The running spares are inserted into a moistureproof polyethylene bag with the fuses separating the two lamps. The bag is approximately 4 by 8 Inches The running spares occupy the bottom portion of the bag and the remaining portions of the bag are folded around the contents to form a package of 1/2 by 2 by 4 inches. A strip of masking tape 1/2 by 4 inches is applied to hold the folds together.

b The mounting hardware is inserted into a polyethylene bag 4 by 4 inches. It is sealed shut by running a hot heating iron across the open end of the bag.

c. The technical manual is folded so that it is approximately 81/2 by 4 inches. It is Inserted into a polyethylene bag 10 by 6 inches. Fold the open edges over in the same direction with *a* fold of approximately 1 inch and then staple It shut.

d. Wrap the dc/dc converter in standard packi. g materıal (30 by 30 ın.) and then rewrapped wıth a polyethylene sheet (31 by 31 ın.). Seal the sheet shut by using a heat sealer on any appropriate open edges.

e. Place a piece of styrofoam material (12 by 12 by 1 ınches) on the bottom of a cardboard carton (12¼ by 12¼ by 9¾ ın. (1,440 cu in.)). Place four pieces of styrofoam (11 by 11 by 1 in.) ınsıde the carton fitting flush with the sides and the bottom. The dc/dc converter is then inserted ınto the carton flush with the bottom. The hardware and spare packages are placed on one corner of the unıt and pushed down between the styrofoam side pıeces and the dc/dc converter so that they are flush wıth the top of the dc/dc converter. The flat portıon of the technical manual package ıs placed dırectly on top of the dc/dc converter and the last pıece of styrofoam (12 by 12 by 1 in.) ıs placed on top of the lıterature flush wıth the top edges of the carton. Fold the carton flaps down on the top styrofoam and tape them shut with one pıece of scotch filament tape (5/8 by 16 in.).

Section II. DEMOLITION TO PREVENT ENEMY USE

7-3. Authoritv for Demolition

Demolition of the equipment will be accomplished only upon order of the commander. Use the destruction procedures outlined In paragraph 7-4 to prevent further use of the equipment.

7-4. Methods of Destruction

a. Smash. Smash the equipment.

b. Burn. Burn the technical manuals ***first. Use*** an incendiary grenade placed on top of the unit to destroy it. Gasoline, oil, and other flammables are likely to be ineffective on the converter but may be used to burn spare parts

WARNING

Be extremely careful with explosives or

incendiary devices. Use them only when the need is urgent.

c. Dispose. Bury or scatter destroyed parts or throw them into nearby waterways. This is particularly important if a number of parts have not been completely destroyed.

APPENDIX A

REFERENCES

The following list of references is available to the maintenance personnel of the Dc/Dc Power Conversion Unit model 5020-1005.

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.
SC 5180-91-CL-R07	Tool Kit, Electronic Equipment TK–105/G.
SC 5180-91-CL-R13	Tool Kit, Electronic Equipment TK–101/G.
SM 11-4-5180-S21	Tool Kit, Electronic Equipment TK–100/G.
TB 745-10	Field Instructions for Painting and Preserving Electronics Command Equipment.
TB SIG 355-l	Depot Inspection Standard for Repaired Signal Equipment.
TB SIG 355-2	Depot Inspection Standard for Refinishing Repaired Signal Equipment
TB SIG 355-3	Depot Inspection Standard for Moisture and Fungus Resistant Treatment
TM 9-213	Painting Instructions for Field Use.
TM 11-6625-203-12	Operator and Organizational Maintenance: Multimeter AN/URM–105 Including Multimeter ME–77/U.
TM 11-6625-438-15	Organizational, DS, GS, and Depot Maintenance Manual: Voltmeter, Electronic AN/USM–98.
TM 11-6625-475-10	Operator's Manual: Multimeters AN/PSM–6, AN/PSM–6A, and AN/PSM–6B.
TM 11-6625-640-15	Operator, Organizational, DS, GS, and Depot Maintenance Manual: Oscilloscope AN/USM–117B.
TM 38-750	The Army Maintenance Management System (TAMMS).
TM 740-90-l	Administrative Storage of Equipment.

APPENDIX B

MAINTENANCE ALLOCATION

B-1. General

This appendix provides a summary of the maintenance operations covered in the equipment literature for the DC/DC Power Conversion Unit model 5020-1005. 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.

B-2. Maintenance Functions

Maintenance functions will be limited to and defined as follows.

a. Inspect. To determine serviceability of an item by comparing its physical, mechanical, and electrical characteristics with established standards.

b. ***Test.*** To verify serviceability and to detect incipient electrical or mechanical failure by use of special equipment such as gages, meters, etc. This is accomplished with external test equipment and does not include operation of the equipment and operator type tests using internal meters or indicating devices.

c. Service. To clean, to preserve, to charge, and to add fuel, lubricants, cooling agents, and air. If it is desired that elements, such as painting and lubricating, be defined separately, they may be SO listed.

d. Adjust. To rectify to the extent necessary to bring into proper operating range.

e. ***Align.*** To adjust two or more components or assemblies of an electrical or mechanical system so that their functions are properly synchronized. This does not include setting the frequency control knob of radio receivers or transmitters to the desired frequency.

f. ***Calibrate.*** To determine the corrections to be made in the readings of instruments or test equipment used In precise measurement. Consists of the comparison of two Instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy In the accuracy of the instrument being compared with the certified standard.

g. ***Install*** To set up for use in an operational environment such as an encampment, site, or vehicle.

h. Replace. To replace unserviceable items with serviceable like items.

i. ***Repair.*** To restore an item to serviceable condition through correction of a specific failure or unserviceable condition. This function includes, but is not limited to welding, grinding, riveting, straightening, and replacement of parts other than the trial and error replacement. of running spare type items such as fuses, lamps, or electron tubes.

j Overhaul. Normally, the highest degree of maintenance performed by the Army in order to minimize time work in process is consistent with quality and economy of operation. It consists of that maintenance necessary to restore an item to completely serviceable condition as prescribed by maintenance standards in technical publications for each item of equipment Overhaul normally does not return an item to like new, zero mileage, or zero hour condition.

k. Rebuild. The highest degree of materiel maintenance. It consists of restoring equipment as nearly as possible to new condition in accordance with original manufacturing standards. Rebuild is performed only when required by operational considerations or other paramount factors and then only at the depot maintenance category. Rebuild reduces to zero the hours or miles the equipment, or component thereof, has been in use.

1. ***Symbols.*** The uppercase letter placed in the appropriate column indicates the lowest level at which that particular maintenance function is to be performed.

B-3. **Explanation** of Format

a. Column 1. ***Group Number.*** Not **applicable.**

b. ***Column*** 2, Functional ***Group.*** Column 2 lists the noun names of components, assemblies, subasremblies and modules on which maintenance is authorized.

c. Column 3, Maintenance Functions. **Column 3** lists 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
O	Organizational maintenance
F	Direct support maintenance
H	General suport maintenance
D	Depot maintenance

d. Column 4, Tools and Test Equipment. **Column 4 specifies, by code, those tools and test equipment required to perform the designated function. The numbers appearing in this column** refer to specific tools test test equipment which are **identified in table** I.

e. Column 5, Remarks. Self-explanatory.

B-4. Explanation of Format **of Table I, Tool and Test Equipment Requirements**

The columns in table I 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 maintenance allocation chart. 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 of the specific tool or test equipment.

e. Tool Number. Not used.

GROUP NUMBER	COMPONENT ASSEMBLY NOMENCLATURE	MAINTENANCE FUNCTIONS										TOOLS AND EQUIPMENT	REMARKS
		INSPECT	TEST	SERVICE	ADJUST	ALIGN	CALIBRATE	INSTALL	REPLACE	REPAIR	OVERHAUL	REBUILD	
	DC/DC POWER CONVERSION UNIT MODEL 5020-1005	O D											External only All inspection
			O										2	To fault locate defective converters, fuses, or lamps
			D										5 thru 8	All tests
				O										External only
				D										All servicing
					D									All adjustments
						D								All alignments
										O			1	By replacement of defective fuses, lamps and lens
										D			3,4	All repairs
											D		3,4	All overhaul
												D	3,4	Plus shop support

TABLE I. TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOLS AND EQUIPMENT	MAINTENANCE CATEGORY	NOMENCLATURE	FEDERAL STOCK NUMBER	TOOL NUMBER
		DC/DC POWER CONVERSION UNIT MODEL 5028-105 (continued)		
1	O	TOOL KIT, ELECTRONIC EQUIPMENT TK-100/G	5180-064-5178	
2	O	MULTIMETER AN/URM-105	6625-581-2036	
3	D	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/G	5180-610-8177	
4	D	TOOL KIT, ELECTRONIC EQUIPMENT TK-100/G	5180-605-0079	
5	D	VOLTMETER, ELECTRONIC AN/USM-98( )	6625-753-2115	
6	D	POWER SUPPLY, DC - AUSTRON MODEL 5028-1041 OR EQUIVALENT		
7	D	MULTIMETER AN/USM-68	6628-957-4374	
8	D	OSCILLOSCOPE AN/USM-117	6625-787-0304	

APPENDIX C

ORGANIZATION, DIRECT, AND GENERAL SUPPORT, AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LISTS

Section I. INTRODUCTION

C-1. Scope

This appendix lists repair parts and special tools required for the performance of organizational, direct support, general support, and depot maintenance of the DC/DC Power Conversion Unit model 5020-1005.

C-2. General

This repair parts and special tools list is divided into the following sections :

a. Prescribed Load Allowance (PLA)-Section II. A composite listing of repair parts, special tools, test and support equipment having quantitative allowances for initial stockage at the organizational level.

b. Repair Parts for Organizational Maintenance -Section III. A list of repair parts authorized for the performance of maintenance at the organizational level.

c. Special Tools, Test, and Support Equipment for Organizational Maintenance-Section IV. Not applicable.

d. Repair Parts for Direct Support, General Support, and Depot Maintenance-Section V A list of repair parts authorized for the performance of maintenance at the direct support, general support, and depot level.

c. Special Tools, Test, and Support Equipment for Direct Support, General Support, and Depot Maintenance-Section VI Not applicable.

f. Index-Federal Stock Number Cross-Reference to Figure and Item Number or Reference Designation-Section VII. A list of Federal stock numbers in ascending numerical sequence, followed by a list of reference numbers appearing in ascending alphanumeric sequence, cross-referenced to the figure number and reference designation.

g. Index-Reference Designation Cross-Reference to Page Numbers-Section VIII. A list of reference designations cross-referenced to page numbers.

C-3. Explanation of Columns

The following provides an explanation of columns in the tabular lists:

a. Source, Maintenance, and Recoverability Codes (SMR) .

(1) Source codes indicate the selection status and source for the listed item. Source codes are-

Code	*Explanation*
P	-Repair parts which are stocked in or supplied from the GSA/DSA, or Army supply system and authorized for use at indicated maintenance categories.
P 2	-Repair parts which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.
P 9	-Assigned to items which are NSA design controlled: unique repair parts, special tools, test, measuring and diagnostic equipment, which are stocked and supplied by the Army COMSEC logistic system, and which are not subject to the provisions of AR 380-41.
P10	-- Assigned to items which are NSA design controlled : special tools, test, measuring and diagnostic equipment for COMSEC support, which are accountable under the provisions of AR

Code	Explanation
	380-41, and which are stocked and supplied by the Army COMSEC logstic system.
M	-Repair parts which are not procured or stocked, but are to be manufactured at indicated maintenance levels.
A	-Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.
X	-Parts and assemblies which are not procured or stocked and the mortality of which normally is below that of the applicable end item or component. The failure of such part or assembly should result in retirement of the end item from the supply ***system.***
X1	-Repair parts which are not procured or stocked. The requirement ***for*** such items will be filled by use of the next higher assembly or component.
X2	-Repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain same through cannibalization. Where such repair parts are not obtainable through cannibalization, requirements will be requisitioned, with accompanying justification. through normal supply channels.
G	-Major assemblies that are procured with PEMA funds for initial issue only as exchange assemblies at DSU and GSU level. These assemblies will not be stocked above DS and GS level or returned to depot supply level.

(2) Maintenance codes indicate the lowest category of maintenance authorized to install the listed item. The maintenance level codes are—

Code	Explanation
C	Operator/crew
O	Organizational maintenance
F	Direct support maintenance
H	General suport maintenance
D	Depot maintenance

(3) Recoverability codes indicate whether unserviceable items should be returned for recovery or salvage Items not coded are expendable. Recoverability codes are—

Code	Explanation
R	-Repair parts and assemblies that are economically repairable at DSU and GSU activities and are normally furnished by supply on an exchange basis.
S	-Repair parts and assemblies which are economically repairable at DSU and GSU activities and which normally are furnished by supply on an exchange basis. When items are determined by GSU to be uneconomically repairable, they will be evacuated to a depot for evaluation and analysis before final disposition.
T	-High-dollar value recoverable repair parts which are subject to special handling and are issued oil an exchange basis. Such repair parts normally **are** repaired or overhauled at depot maintenance activities.
U	-Repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, or high-dollar value reusable casings or castings.

b Federal Stock Number. Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. Indicates the Federal item name and any additional description of the item required The index number has been Included as part of the description to aid in the location of "same as" items. A part number or other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parentheses.

d. *Unit of* ***Measure (U/M).*** A two-character alphabetic abbreviation Indicating the amount or quantity of the Item upon which the allowances are based, e.g , ft, ea, pr, etc.

e. Quantity Incorporated in Unit. Indicates the quantity of the item used in the Dc/Dc Power Conversion Unit model 5020–1005 Subsequent appearances of the same item in the same assembly are indicated by the letters "REF."

f. 15-Day Organizational Maintenance Allowances.

(1) The allowance columns are divided into four subcolumns Indicated in each subcolumn opposite the first appearance of each item is the total quantity of items authorized for the number of equipments supported Subsequent appearances

of the same item will have the letters "REF" in the allowance columns. 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 organizational level of maintenance represents one initial prescribed load for a 15-day period for the number of equipments supported. Units and organizations authorized additional prescribed loads will multiply the number of prescribed loads authorized by the quantity of repair parts reflected in the appropriate density column to obtain the total quantity of repair parts authorized.

(3) Organizational units providing maintenance for more than 100 of these equipments shall determine the total quantity of parts required by converting the equipment quantity to, a decimal factor by placing a decimal point before the next to last digit of the number to indicate hundredths, and multiplying the decimal factor by the parts quantity authorized in the 51-100 allowance column ***Example,*** authorized allowance for 51-100 equipments is 12; for 140 equipments multiply 12 by 1.40 or 16.80 rounded off to 17 parts required.

(4) Subsequent changes to allowances will be limited as follows: No change in the range of items is authorized. If additional items are considered necessary, recommendations should be forwarded to Commanding General, U.S. Army Electronics Command, ATTN : AMSEL-ME-NMP-EM, Fort Monmouth, N.J. 07703, for exception or revision to the allowance list. Revisions to the range of items authorized will be made by the USA ECOM National Maintenance Point based upon engineering experience, demand data, or TAERS information.

g. 30-DAY DS/GS Maintenance Allowances.

NOTE

Allowances in GS column are for GS maintenance only.

(1) The allowance columns are divided into three subcolumns. Indicated in each subcolumn, opposite the first appearance of each item, is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have the letters **"REF"** in the applicable allowance columns. **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 DS/GS levels of maintenance will represent initial stockage for a 30-day period for the number of equipments supported.

(3) Determination of the total quantity of parts required for maintenance of more than 100 of these equipments can be accomplished by converting the equipment quantity to a decimal factor by placing a decimal point before the next to last digit of the number to indicate hundredths, and multiplying the decimal factor by the parts quantity authorized in the 51-100 allowance column. ***Example,*** authorized allowance for 51-100 equipments is 40; for 150 equipments multiply 40 by 1 50 or 60 parts required.

h. One-Year Allowances per 100 Equipments/ Contingency Planning Purposes. Indicates opposite the first appearance of each item the total quantity required for distribution and contingency planning purposes. The range of items indicates total quantities of all authorized items required to provide for adequate support of 100 equipments for 1 year.

i. Depot Maintenance Allowance per 100 Equipments. Indicates opposite the first appearance of each item the total quantity authorized for depot maintenance of 100 equipments. Subsequent appearances of the same item will have the letters "REF" in the allowance column. Items authorized for use as required, but not for initial stockage, are identified with an asterisk in the allowance column.

j. Illustrations.

(1) ***Figure number.*** Indicates the figure number in which the item is shown.

(2) Item number or reference designation. Indicates the reference designation used to identify the item in the illustration.

C-4. Special Information

Repair parts mortality is computed from failure rates derived from experience factors with the individual parts in a variety of equipments. Variations in the specific application and periods of use of electronics equipment, the fragility of electronic piece parts, plus intangible material and quality factors intrinsic to the manufacture of electronic parts, do not permit mortality to be based on hours of end item use However, long periods of continuous use under adverse conditions are likely to increase repair parts mortality.

C-5. Location of Repair Parts

a. This appendix contains two cross-reference indexes (secs. VII and VIII) to be **used** to locate a repair part when either the Federal stock number, reference number (manufacturer's part **number),** or reference designation is known. The first *column* in each Index is prepared in numerical and/or alphanumerical sequence in ascending order Where a Federal stock number is not listed. refer to the reference number (manufacturer's pan number) Immediately following the Federal stock number.

b. When the Federal stock number IS known, follow the procedures given in (1) and (2) below.

(1) Refer to the index of Federal stock numbers (sec VII) and locate the Federal stock number. The FSN is cross-referenced to the applicable figure and reference designation.

(2) When the reference designation is determined, refer to the reference designation index (sec. VIII). The reference designations are listed in alphanumerical ascending order and are cross-referenced to the page number on which they appear in the repair parts list (secs. IIII and V). Refer to the page number noted in the index and locate the reference designation in the repair parts list (col. 7b or col. 10b). If the word "REF" appears in the allowance column for the repair part, note the Federal stock number (col. 2) or manufacturer's part number (col. 3). Refer to the FSN index and note the reference designation for that FSN or part number, Refer to the reference designation index and note the page number given for the reference designation. Refer to the page noted in the PSTL (sec. III or V) and locate the reference designation in column 7b or column 10b of the repair parts list.

c. When the reference designation is known, follow the procedures given in ***b(2)*** above.

d. When neither the FSN nor reference designation is known, identify the part in the illustration and follow **directions given in c above or** scrutinize column 3 of the repair parts lists **(secs.** III and V).

C-6. Federal Supply Code for Manufacturers

Code	*Manufacturer*
02735	RCA Corp., Solid State Division
03508	General Electric Co., Semi-Conductor Products Dept.
04713	Motorola Semi-Conductor Products, Inc.
05820	Wakefield Engineering, Inc.
06613	Brown Andrew Company
07707	USM Corp. Fastener Division
12697	Clarostat Mfg. Co., Inc.
24324	Russell Industries, Inc.
24672	Austron, Inc.
37942	Mallory P.R. and Co., Inc.
59730	Thomas and Betts Co. The
61102	Turco Products, Inc., Division of Purex Corp., Ltd.
70318	Allmetal Screw-Products Co., Inc.
71279	Cambridge Thermionic Corp.
71785	Cinch Mfg. Co. and Howard B. Jones Div.
71984	Dow Corning Corp.
72619	Dialight Corp.
72962	Elastic Stop Nut Division of Amerace Esna Corp.
73734	Federal Screw Products, Inc.
75915	Littelfuse, Inc.
80131	Electronics Industries Association
81349	Military Specifications
83330	Smith, Herman H., Inc.
88044	Aeronautical Standards Group, Dept. of Navy and Air Force
91506	Augat, Inc.
91637	Dale Electronics, Inc.
94139	Keystone Electronics Co.
96906	Military Standards
97539	APM & Hexseal Corp.

SECTION II PRESCRIBED LOAD ALLOWANCE

(1) FEDERAL STOCK NUMBER	(2) DESCRIPTION / USABLE ON CODE	(3) 15-DAY ORG. MAINT. ALLOWANCE (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100
5920-232-3700	FUSE, CARTRIDGE 311030 (75915)	2	2	3	6
6240-155-7860	LAMP INCANDESCENT 1488 (03508)			2	2

(1) SMR CD	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / Reference Number & Mfr Code / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO. OR REFERENCE DESIGNATION
		A001 DC DC POWER CONVERSION UNIT MODEL 5020-1005 91342 (34672) (This item is nonexpendable)								
X2-O	5305-687-7541	A002 BOLT MACHINE MS35311-5 (96906)	EA	4						H1
X2-O	5305-687-7541	A003 BOLT MACHINE SAME AS A002	EA	REF						H2
X2-O	5305-687-7541	A004 BOLT MACHINE SAME AS A002	EA	REF						H3
X2-O	5305-687-7541	A005 BOLT MACHINE SAME AS A002	EA	REF						H4
P-O	5920-232-3700	A050 FUSE CARTRIDGE 311030 (75915)	EA	1	2	2	3	6	5-10	A2F1
P O	6240-155-7860	A070 LAMP INCANDESCENT 1488 (03508)	EA	1	•	•	2	2	5-10	A2DS1

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CONTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
		A001 DC/DC POWER CONVERSION UNIT MODEL 5020-1005 91342 (24672) (This item is nonexpendable)													
X2-O	5305-667-7541	A002 BOLT, MACHINE MS35311-5 (96906)		EA	4										H1
X2-O	5305-667-7541	A003 BOLT MACHINE SAME AS A002		EA	REF										H2
X2-O	5305-687-7541	A004 BOLT MACHINE SAME AS A002		EA	REF										H3
X2-O	5305-687-7541	A005 BOLT, MACHINE SAME AS A002		EA	REF										H4
M-D		A006 HOUSING ASSY POWER CONVERTER 91398 (24672)		EA	1										A1
X2-D		A007 ENAMEL X-24087 (06613)		EA	1										A1MP7
M-D		A008 HT SK, ELEC-ELECTRONIC COMPONENT 91774 (24672)		EA	2										A1MP1
M-D		A009 HT SK, ELEC-ELECTRONIC COMPONENT SAME AS A008		EA	REF										A1MP2
M-D		A010 HOLDER, PLATE 91340 (24672)		EA	4										A1MP3
M-D		A011 HOLDER, PLATE SAME AS A010		EA	REF										A1MP4
M-D		A012 HOLDER, PLATE SAME AS A010		EA	REF										A1MP5
M-D		A013 HOLDER, PLATE SAME AS A010		EA	REF										A1MP6
M-D		A014 HOUSING, CONVERTER 91361 (24672)		EA	1										A1A
M-D		A015 BRACKET ANGLE 91355 (24672)		EA	2										A1A1MP1
M-D		A016 BRACKET, ANGLE SAME AS A015		EA	REF										A1A1MP2
M-D		A017 HOUSING MACH, CONVERTER 91371 (24672)		EA											A1A1MP3
X2-D		A018 INSULATING COMPOUND ELECTRICAL DC-153-ETC (05820)		EA	1										A1MP8
X2-D		A019 METAL CONDITIONING COMPOUND W O #1 (61102)		EA	1										A1MP9
X2-D		A020 PRIMER COATING 34151 (06613)		EA	1										A1MP10
X2-D	5320-275-8344	A021 RIVET, BLIND AD45BS (07707)		EA	8										A1H1
X2-D	5320-275-8344	A022 RIVET, BLIND SAME AS A021		EA	REF										A1H2

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER QUIP CNTGNCY	(9) DEPOT MAINT ALW PER 100 YOKE	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNAT ION
X2-D	5320-275-8344	A023 RIVET BLIND SAME AS A021		EA	REF										A1H3
X2-D	5320-275-8344	A024 RIVET BLIND SAME AS A021		EA	REF										A1H4
X2-D	5320-275-8344	A025 RIVET BLIND SAME AS A021		EA	REF										A1H5
X2-D	5320-275-8344	A026 RIVET BLIND SAME AS A021		EA	REF										A1H6
X2-D	5320-275-8344	A027 RIVET BLIND SAME AS A021		EA	REF										A1H7
X2-D	5320-275-8344	A028 RIVET BLIND SAME AS A021		EA	REF										A1H8
X2-D	5320-282-3814	A029 SCREW MACHINE AN505C5-6 (88044)		EA	16										A1H9
X2-D	5320-282-3814	A030 SCREW MACHINE SAME AS A029		EA	REF										A1H10
X2-D	5320-282-3814	A031 SCREW, MACHIN SAME AS A029		EA	REF										A1H11
X2-D	5320-282-3814	A032 SCREW MACHINE SAME AS A029		EA	REF										A1H12
X2-D	5320-282-3814	A033 SCREW, MACHINE SAME AS A029		EA	REF										A1H13
X2-D	5320-282-3814	A034 SCREW MACHINE SAME AS A029		EA	REF										A1H14
X2-D	5320-282-3814	A035 SCREW, MACHINE SAME AS A029		EA	REF										A1H15
X2-D	5320-282-3814	A036 SCREW, MACHINE SAME AS A029		EA	REF										A1H16
X2-D	5320-282-3814	A037 SCREW, MACHINE SAME AS A029		EA	REF										A1H17
X2-D	5320-282-3814	A038 SCREW, MACHINE SAME AS A029		EA	REF										A1H18
X2-D	5320-282-3814	A039 SCREW, MACHINE SAME AS A029		EA	REF										A1H19
X2-D	5320-282-3814	A040 SCREW, MACHINE SAME AS A029		EA	REF										A1H20
X2-D	5320-282-3814	A041 SCREW, MACHINE SAME AS A029		EA	REF										A1H21
X2-D	5320-282-3814	A042 SCREW, MACHINE SAME AS A029		EA	REF										A1H22
X2-D	5320-282-3814	A043 SCREW, MACHINE SAME AS A029		EA	REF										A1H23
X2-D	5320-282-3814	A044 SCREW, MACHINE SAME AS A029		EA	REF										A1H24
X2-D	5320-176-8120	A045 NUT, PLAIN, HEXAGON AN340C-416		EA	4										H5
X2-D	5310-176-8120	A046 NUT PLAIN HEXAGON SAME AS A045		EA	REF										H6
X2-D	5310-176-8120	A047 NUT PLAIN, HEXAGON SAME AS A045		EA	REF										H7

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5 5310-176-8120	A048 NUT PLAIN HEXAGON SAME AS A045		EA	REF										H8
G-D-T		A049 PANEL ASSEMBLY CONVERTER 91389 (24672)		EA	1										A2
P-O	5 5920-232-3700	A050 FUSE, CARTRIDGE 311030 (75915)		EA	1	2	6	12	2	2	3	130	100	5-10	A2F1
X2-D	5 5920-892-9311	A051 FUSEHOLDER HKP (81349)		EA	1										A2XF1
M-D		A052 HT SK, ELEC-ELEC-TRONIC COMPONENT 91377 (24672)		EA	1										A2MP1
X2-D		A053 INSULATING COMPOUND, ELECTRICAL SAME AS A018		EA	1										A2MP2
X2-D		A054 INSULATOR WASHER 33-154 (73734)		EA	16										A2E13
X2-D		A055 INSULATOR, WASHER SAME AS A054		EA	REF										A2E14
X2-D		A056 INSULATOR, WASHER SAME AS A054		EA	REF										A2E15
X2-D		A057 INSULATOR, WASHER SAME AS A054		EA	REF										A2E16
X2-D		A058 INSULATOR, WASHER SAME AS A054		EA	REF										A2E17
X2-D		A059 INSULATOR, WASHER SAME AS A054		EA	REF										A2E18
X2-D		A060 INSULATOR, WASHER SAME AS A054		EA	REF										A2E19
X2-D		A061 INSULATOR, WASHER SAME AS A054		EA	REF										A2E20
X2-D		A062 INSULATOR, WASHER SAME AS A054		EA	REF										A2E21
X2-D		A063 INSULATOR, WASHER SAME AS A054		EA	REF										A2E22
X2-D		A064 INSULATOR, WASHER SAME AS A054		EA	REF										A2E23
X2-D		A065 INSULATOR, WASHER SAME AS A054		EA	REF										A2E24
X2-D		A066 INSULATOR, WASHER SAME AS A054		EA	REF										A2E25
X2-D		A067 INSULATOR, WASHER SAME AS A054		EA	REF										A2E26
X2-D		A068 INSULATOR, WASHER SAME AS A054		EA	REF										A2E27
X2-D		A069 INSULATOR, WASHER SAME AS A054		EA	REF										A2E28
P-O	8240-155-7860	A070 LAMP, INCANDESCENT 1488 (03508)		EA	1	*	2	2	*	2	2	19	10	5-10	A2DS1
X2-D		A071 LAMPHOLDER 95-9110-0931-102 (72619)		EA	1										A2XDS1

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5910-946-1839	A072 LINK TERMINAL CONNECTING 327 (83330)		EA	4										A2E1
X2-D	5940-946-1639	A073 LINK TERMINAL CONNECTING SAME AS A072		EA	REF										A2E2
X2-D	5940-946-1639	A074 LINK TERMINAL CONNECTING SAME AS A072		EA	REF										A2E3
X2-D	5940-946-1639	A075 LINK TERMINAL CONNECTING SAME AS A072		EA	REF										A2E4
X2-D	5310-176-8093	A076 NUT PLAIN HEXAGON AN340C-6 (88044)		EA	14										A2H1
X2-D	5310-176-8093	A077 NUT PLAIN, HEXAGON SAME AS A076		EA	REF										A2H2
X2-D	5310-176-8093	A078 NUT, PLAIN HEXAGON SAME AS A076		EA	REF										A2H3
X2-D	5310-176-8093	A079 NUT PLAIN, HEXAGON SAME AS A076		EA	REF										A2H4
X2-D	5310-176-8093	A080 NUT PLAIN HEXAGON SAME AS A076		EA	REF										A2H5
X2-D	5310-176-8093	A081 NUT, PLAIN HEXAGON SAME AS A076		EA	REF										A2H6
X2-D	5310-176-8093	A082 NUT, PLAIN, HEXAGON SAME AS A076		EA	REF										A2H7
X2-D	5310-176-8093	A083 NUT, PLAIN, HEXAGON SAME AS A076		EA	REF										A2H8
X2-D	5310-176-8093	A084 NUT, PLAIN, HEXAGON SAME AS A076		EA	REF										A2H9
X2-D	5310-176-8093	A085 NUT, PLAIN, HEXAGON SAME AS A076		EA	REF										A2H10
X2-D	5310-176-8093	A086 NUT, PLAIN, HEXAGON SAME AS A076		EA	REF										A2H11
X2-D	5310-176-8093	A087 NUT, PLAIN HEXAGON SAME AS A076		EA	REF										A2H12
X2-D	5310-176-8093	A088 NUT, PLAIN, HEXAGON SAME AS A076		EA	REF										A2H13
X2-D	5310-176-8093	A089 NUT, PLAIN, HEXAGON SAME AS A076		EA	REF										A2H14
X2-D	5310-176-8097	A090 NUT, PLAIN, HEXAGON AN340C-10 (88044)		EA	16										A2H15
X2-D	5310-176-8097	A091 NUT, PLAIN, HEXAGON SAME AS A090		EA	REF										A2H16
X2-D	5310-176-8097	A092 NUT, PLAIN, HEXAGON SAME AS A090		EA	REF										A2H17
X2-D	5310-176-8097	A093 NUT, PLAIN, HEXAGON SAME AS A090		EA	REF										A2H18
X2-D	5310-176-8097	A094 NUT PLAIN, HEXAGON SAME AS A090		EA	REF										A2H19
X2-D	5310-176-8097	A095 NUT, PLAIN, HEXAGON SAME AS A090		EA	REF										A2H20

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE USAE E ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP MTGLY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5310-176-8097	A096 NUT PLAIN HEXAGON SAME AS A090	EA	REF										A2H21
X2-D	5310-176-8097	A097 NUT PLAIN HEXAGON SAME AS A090	EA	REF										A2H22
X2-D	5310-176-8097	A098 NUT, PLAIN, HEXAGON SAME AS A090	EA	REF										A2H23
X2-D	5310-176-8097	A099 NUT PLAIN HEXAGON SAME AS A090	EA	REF										A2H24
X2-D	5310-176-8097	A100 NUT PLAIN HEXAGON SAME AS A090	EA	REF										A2H25
X2-D	5310-176-8097	A101 NUT, PLAIN HEXAGON SAME AS A090	EA	REF										A2H26
X2-D	5310-176-8097	A102 NUT, PLAIN, HEXAGON SAME AS A090	EA	REF										A2H27
X2-D	5310-176-8097	A103 NUT PLAIN, HEXAGON SAME AS A090	EA	REF										A2H28
X2-D	5310-176-8097	A104 NUT PLAIN HEXAGON SAME AS A090	EA	REF										A2H29
X2-D	5310-176-8097	A105 NUT PLAIN HEXAGON SAME AS A090	EA	REF										A2H30
M-D		A106 PANEL CONVERTER 91368 (24672)	EA	1										A2A
X2-D		A107 ENAMEL SAME AS A007	EA	1										A2A4MP2
X2-D		A108 METAL CONDITIONING COMPOUND SAME AS A019	EA	1										A2A4MP3
X2-D	5310-117-8305	A109 NUT PLAIN CLINCH 12LHCFM2-62 (72962)	EA	5										A2A4H1
X2-D	5310-117-8305	A110 NUT, PLAIN CLINCH SAME AS A109	EA	REF										A2A4H2
X2-D	5310-117-8305	A111 NUT, PLAIN, CLINCH SAME AS A109	EA	REF										A2A4H3
X2-D	5310-117-8305	A112 NUT PLAIN, CLINCH SAME AS A109	EA	REF										A2A4H4
X2-D	5310-117-8305	A113 NUT PLAIN CLINCH SAME AS A109	EA	REF										A2A4H5
M-D		A114 PANEL MACHINED CONVERTER 91352 (24672)	EA	1										A2A4MP1
X2-D		A115 PRIMER COATING SAME AS A020	EA	1										A2A4MP
X2-D	5310-282-3570	A116 SCREW, MACHINE AN505C6-8 (88044)	EA	14										A2A4H6
X2-D	5310-282-3570	A117 SCREW, MACHINE SAME AS A116	EA	REF										A2A4H7
X2-D	5310-282-3570	A118 SCREW MACHINE SAME AS A116	EA	REF										A2A4H8
X2-D	5310-282-3570	A119 SCREW MACHINE SAME AS A116	EA	REF										A2A4H9

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR SPARES PER EQUIP CMTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5305-282-3570	A120 SCREW MACHINE SAME AS A116		EA	REF										A2A4H10
X2-D	5305-282-3570	A121 SCREW MACHINE SAME AS A116		EA	REF										A2A4H11
X2-D	5305-282-3570	A122 SCREW MACHINE SAME AS A116		EA	REF										A2A4H12
X2-D	5305-282-3570	A123 SCREW MACHINE SAME AS A116		EA	REF										A2A4H13
X2-D	5305-282-3570	A124 SCREW MACHINE SAME AS A116		EA	REF										A2A4H14
X2-D	5305-282-3570	A125 SCREW MACHINE SAME AS A116		EA	REF										A2A4H15
X2-D	5305-282-3570	A126 SCREW MACHINE SAME AS A116		EA	REF										A2A4H16
X2-D	5305-282-3570	A127 SCREW MACHINE SAME AS A116		EA	REF										A2A4H17
X2-D	5305-282-3570	A128 SCREW MACHINE SAME AS A116		EA	REF										A2A4H18
X2-D	5305-282-3570	A129 SCREW MACHINE SAME AS A116		EA	REF										A2A4H19
X2-D	5940-125-8923	A130 POST BINDING 1775-C	(71279)	LA	8										A2E5
X2-D	5910-125-8923	A131 POST, BINDING SAME AS A130		EA	REF										A2E6
X2-D	5940-125-8923	A132 POST, BINDING SAME AS A130		EA	REF										A2E7
X2-D	5940-125-8923	A133 POST BINDING SAME AS A130		EA	REF										A2E8
X2-D	5940-128-8923	A134 POST, BINDING SAME AS A130		EA	REF										A2E9
X2-D	5940-125-8923	A135 POST BINDING SAME AS A130		EA	REF										A2E10
X2-D	5940-125-8923	A136 POST, BINDING SAME AS A130		EA	REF										A2E11
X2-D	5940-125-8923	A137 POST, BINDING SAME AS A130		EA	REF										A2E12
P-D		A138 RESISTOR, FIXED WIRE WOUND RW68VR05	(91637)	EA	3							18	15	5-10	A2R1
P-D		A139 RESISTOR FIXED, WIRE WOUND SAME AS A138		EA	REF							REF	REF	5-10	A2R2
P-D		A140 RESISTOR FIXED WIRE WOUND SAME AS A138		EA	REF							REF	REF	5-10	A2R3
X2-D	5305-282-4423	A141 SCREW, MACHINE AN500C6-4	(88044)	EA	4										A2H31
X2-D	5305-282-4423	A142 SCREW MACHINE SAME AS A141		EA	REF										A2H32
X2-D	5305-282-4423	A143 SCREW MACHINE SAME AS A141		EA	REF										A2H33

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / REFERENCE NUMBER & MFR. CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5305-262-4423	A144 SCREW MACHINE SAME AS A141	EA	REF										A2H34
X2-D		A145 SILICONE COMPOUND 4 COMPOUND (71984)	EA	1										A2MP3
P-D	5930-655-1514	A146 SWITCH TOGGLE MS35058-22 (96906)	EA	1							8	6	5-10	A2S1
G-D-T	6125-133-9096	A147 HEAT SINK ASSY 91266 (24672)	EA	1									5-5	A2A1
P-D-T		A148 CKT CARD ASSY, SWITCHING UNIT 91320 (24672)	EA	1							59	5	5-6	A2A1A1
P-D	5910-945-9722	A149 CAPACITOR FD.ED ELECTROLYTIC CSR13-F685KM (81349)	EA	2							27	30	5-6	A2A1A1C1
P-D	5910-945-9722	A150 CAPACITOR FIXED, ELECTROLYTIC SAME AS A149	EA	REF							REF	REF	5-6	A2A1A1C2
M-D		A151 PRINTED WIRING CARD, SW UNIT 91150 (24672)	EA	1										A2A1A1MP1
P-D	5905-542-9838	A152 RESISTOR, FIXED WIRE WOUND RW59V5R0 (81349)	EA	2							27	30	5-6	A2A1A1R1
P-D	5905-542-9838	A153 RESISTOR FIXED, WIRE WOUND SAME AS A152	EA	REF							REF	REF	5-6	A2A1A1R7
P-D	5905-834-1601	A154 RESISTOR FIXED, WIRE WOUND RW59V300 (81349)	EA	2							27	30	5-6	A2A1A1R2
P-D	5905-834-1601	A155 RESISTOR FIXED, WIRE WOUND SAME AS A154	EA	REF							REF	REF	5-6	A2A1A1R8
P-D	5905-817-6440	A156 RESISTOR, FIXED WIRE WOUND RW59V271 (81349)	EA	4							53	60	5-6	A2A1A1R3
P-D	5905-817-6440	A157 RESISTOR, FIXED WIRE WOUND SAME AS A156	EA	REF							REF	REF	5-6	A2A1A1R4
P-D	5905-817-6440	A158 RESISTOR, FIXED, WIRE WOUND SAME AS A156	EA	REF							REF	REF	5-6	A2A1A1R5
P-D	5905-817-6440	A159 RESISTOR, FIXED, WIRE WOUND SAME AS A156	EA	REF							REF	REF	5-6	A2A1A1R6
P-D	5961-921-3781	A160 SEMICONDUCTOR DEVICE DIODE 1N4001 (04713)	EA	4							53	60	5-6	A2A1A1CR1
P-D	5961-921-3781	A161 SEMICONDUCTOR DEVICE, DIODE SAME AS A160	EA	REF							REF	REF	5-6	A2A1A1CR2
P-D	5961-921-3781	A162 SEMICONDUCTOR DEVICE, DIODE SAME AS A160	EA	REF							REF	REF	5-6	A2A1A1CR3
P-D	5961-921-3781	A163 SEMICONDUCTOR DEVICE,	EA	REF							REF	REF	5-6	A2A1A1CR4

SMR CODE	DEPOT STOCK NUMBER	DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	UNIT OF MEAS	QTY INC IN UNIT	30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	1 YR ALW PER EQUIP CNTGCY	DEPOT MAINT ALW PER 100 EQUIP	ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D		A164 TERMINAL STUD 1502 3 (94139)		EA	9										A2A1A1E1
X2-D		A165 TERMINAL STUD SAME AS A164		EA	REF										A2A1A1E2
X2-D		A166 TERMINAL STUD SAME AS A164		EA	REF										A2A1A1E3
X2-D		A167 TERMINAL STUD SAME AS A164		EA	REF										A2A1A1E4
X2-D		A163 TERMINAL STUD SAME AS A164		EA	REF										A2A1A1E5
X2-D		A169 TERMINAL STUD SAME AS A164		EA	REF										A2A1A1E6
X2-D		A170 TERMINAL STUD SAME AS A164		EA	REF										A2A1A1E7
X2-D		A171 TERMINAL STUD SAME AS A164		EA	REF										A2A1A1E8
X2-D		A172 TERMINAL STUD SAME AS A164		EA	REF										A2A1A1E9
M-D		A173 HT SK ELEC-ELECTRONIC COMPONENT 91317 (24672)		EA	1										A2A1MP1
X2-D	5305-282-4491	A174 SCREW MACHINE AN500C4-4 (88044)		EA	2										A2A1H1
X2-D	5305-282-4491	A175 SCREW, MACHINE SAME AS A174		EA	REF										A2A1H2
X2-D	5305-282-4489	A176 SCREW MACHINE AN500C4-6 (88044)		EA	2										A2A1H3
X2-D	5305-282-4489	A177 SCREW, MACHINE SAME AS A176		EA	REF										A2A1H4
X2-D	5305-576-7493	A178 SCREW MACHINE MS35233-15 (96906)		EA	4										A2A1H5
X2-D	5305-576-7493	A179 SCREW MACHINE SAME AS A178		EA	REF										A2A1H6
X2-D	5305-576-7493	A180 SCREW MACHINE SAME AS A178		EA	REF										A2A1H7
X2-D	5305-576-7493	A181 SCREW MACHINE SAME AS A178		EA	REF										A2A1H8
X2-D	5305-579-0969	A182 SCREW MACHINE MS35233-31 (96906)		EA	4										A2A1H9
X2-D	5305-579-0969	A183 SCREW MACHINE SAME AS A182		EA	REF										A2A1H10
X2-D	5305-579-0969	A184 SCREW MACHINE SAME AS A182		EA	REF										A2A1H11
X2-D	5305-579-0969	A185 SCREW MACHINE SAME AS A182		EA	REF										A2A1H12
X2-D		A186 SILICONE COMPOUND SAME AS A145		EA	1										A2A1MP2
X2-D	5961-928-6199	A187 SOCKET SEMICONDUCTOR DEVICE: 3080-1G3 (91506)		EA	2										A2A1XQ1

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 5 100	(8) 1 YR ALW PER EQUIP QUAN	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5961-928-6199	A188 SOCKET SEMICONDUCTOR DEVICE SAME AS A187		EA	REF										A2A1XQ6
P-D	5961-911-6711	A189 TRANSISTOR 2N3773 (02735)		EA	2							33	35		A2A1Q1
P-D	5961-911-6711	A190 TRANSISTOR SAME AS A189		EA	REF							REF	REF		A2A1Q6
P-D	5961-127-1585	A191 TRANSISTOR 2N5192 (04713)		EA	4							53	60		A2A1Q2
P-D	5961-127-1585	A192 TRANSISTOR SAME AS A191		EA	REF							REF	REF		A2A1Q3
P-D	5961-127-1585	A193 TRANSISTOR SAME AS A191		EA	REF							REF	REF		A2A1Q4
P-D	5961-127-1585	A194 TRANSISTOR SAME AS A191		EA	REF							REF	REF		A2A1Q5
X2-D	5310-616-3555	A195 WASHER LOCK MS35333-71 (96906)		EA	2										A2A1H13
X2-D	5310-616-3555	A196 WASHER LOCK SAME AS A195		EA	REF										A2A1H14
G-D-T	6125-133-9096	A197 HEAT SINK ASSY SAME AS A147		EA	1									5-5	A2A2
P-D-T		A198 CKT CARD ASSY, SWITCHING UNIT SAME AS A148		EA	1							REF	REF	5-6	A2A2A1
P-D	5910-945-9722	A199 CAPACITOR FIXED, ELECTROLYTIC SAME AS A149		EA	2							REF	REF	5-6	A2A2A1C1
P-D	5910-945-9722	A200 CAPACITOR, FIXED ELECTROLYTIC SAME AS A149		EA	REF							REF	REF	5-6	A2A2A1C2
M-D		A201 PRINTED WIRING CARD, SW UNIT SAME AS A151		EA	1										A2A2A1MP1
P-D	5905-542-9838	A202 RESISTOR FIXED, WIRE WOUND SAME AS A152		EA	2							REF	REF	5-6	A2A2A1R1
P-D	5905-542-9838	A203 RESISTOR, FIXED, WIRE WOUND SAME AS A152		EA	REF							REF	REF	5-6	A2A2A1R7
P-D	5905-834-1601	A204 RESISTOR FIXED, WIRE WOUND SAME AS A154		EA	2							REF	REF	5-6	A2A2A1R2
P-D	5905-834-1601	A205 RESISTOR, FIXED WIRE WOUND SAME AS A154		EA	REF							REF	REF	5-6	A2A2A1R8
P-D	5905-817-6440	A206 RESISTOR, FIXED, WIRE WOUND SAME AS A156		EA	4							REF	REF	5-6	A2A2A1R3
P-D	5905-817-6440	A207 RESISTOR, FIXED, WIRE WOUND SAME AS A156		EA	REF							REF	REF	5-6	A2A2A1R4
P-D	5905-817-6440	A208 RESISTOR FIXED WIRE WOUND SAME AS A156		EA	REF							REF	REF	5-6	A2A2A1R5

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) REFERENCE NUMBER & MFR CODE	(3) DESCRIPTION	(3) USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) 1 YR ALW FOR EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(10) (b) ITEM NO OR REFERENCE DESIGNATION
P-D	5905-817-6440	209	RESISTOR FIXED WIRE WOUND SAME AS A156		EA	REF							REF	REF	5-6	A2A2A1R6
P-D	5961-921-3781	210	SEMICONDUCTOR DEVICE DIODE SAME AS A160		EA	4							REF	REF	5-6	A2A2A1CR1
P-D	5961-921-3781	211	SEMICONDUCTOR DEVICE DIODE SAME AS A160		EA	REF							REF	REF	5-6	A2A2A1CR2
P-D	5961-921-3781	212	SEMICONDUCTOR DEVICE DIODE SAME AS A160		EA	REF							REF	REF	5-6	A2A2A1CR3
P-D	5961-921-3781	213	SEMICONDUCTOR DEVICE DIODE SAME AS A160		EA	REF							REF	REF	5-6	A2A2A1CR4
X2-D		214	TERMINAL STUD SAME AS A164		EA	9										A2A2A1E1
X2-D		215	TERMINAL STUD SAME AS A164		EA	REF										A2A2A1E2
X2-D		216	TERMINAL STUD SAME AS A164		EA	REF										A2A2A1E3
X2-D		217	TERMINAL STUD SAME AS A164		EA	REF										A2A2A1E4
X2-D		218	TERMINAL STUD SAME AS A164		EA	REF										A2A2A1E5
X2-D		219	TERMINAL STUD SAME AS A164		EA	REF										A2A2A1E6
X2-D		220	TERMINAL STUD SAME AS A164		EA	REF										A2A2A1E7
X2-D		221	TERMINAL STUD SAME AS A164		EA	REF										A2A2A1E8
X2-D		222	TERMINAL STUD SAME AS A164		EA	REF										A2A2A1E9
M-D		223	HT SK ELEC-ELECTRONIC COMPONENT SAME AS A173		EA	1										A2A2MP1
X2-D	5305-282-4491	224	SCREW MACHINE SAME AS A174		EA	2										A2A2H1
X2-D	5305-282-4491	225	SCREW MACHINE SAME AS A174		EA	REF										A2A2H2
X2-D	5305-282-4489	226	SCREW MACHINE SAME AS A176		EA	2										A2A2H3
X2-D	5305-282-4489	227	SCREW MACHINE SAME AS A176		EA	REF										A2A2H4
X2-D	5305-576-7493	228	SCREW MACHINE SAME AS A178		EA	4										A2A2H5
X2-D	5305-576-7493	229	SCREW MACHINE SAME AS A178		EA	REF										A2A2H6
X2-D	5305-576-7493	230	SCREW MACHINE SAME AS A178		EA	REF										A2A2H7
X2-D	5305-576-7493	231	SCREW MACHINE SAME AS A178		EA	REF										A2A2H8

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / REFERENCE NUMBER 5 MFR CODE / USABLE ON CODE	(4) UNIT OF MEA	(5) QTY INC IN UNIT	(6) DEPOT MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) DEPOT MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) LVL MAINT MAN PER 100 (MTBF)	(9) DEPOT MAINT MAN PER 100 UNIT	(10) ILLUS REF NO	(10) ITEM NO OR REFERENCE DESIGNATION
X2-D	5305-579-0969	A232 SCREW MACHINE SAME AS A182	EA	4										A2A2H9
X2-D	5305-579-0969	A233 SCREW MACHINE SAME AS A182	EA	REF										A2A2H10
X2-D	5305-579-0969	A234 SCREW MACHINE SAME AS A182	EA	REF										A2A2H11
X2-D	5305-579-0969	A235 SCREW MACHINE SAME AS A182	EA	REF										A2A2H12
X2-D		A236 SILICONE COMPOUND SAME AS A145	EA	1										A2A2MP2
X2-D	5961-928-6199	A237 SOCKET, SEMICONDUCTOR DEVICE SAME AS A187	EA	2										A2A2XQ1
X2-D	5961-928-6199	A238 SOCKET SEMICONDUCTOR DEVICE SAME AS A187	EA	REF										A2A2XQ6
P-D	5961-911-6711	A239 TRANSISTOR SAME AS A189	EA	2							REF	REF	5-5	A2A2Q1
P-D	5961-911-6711	A240 TRANSISTOR SAME AS A189	EA	REF							REF	REF	5-5	A2A2Q6
P-D	5961-127-1585	A241 TRANSISTOR SAME AS A191	EA	4							REF	REF	5-5	A2A2Q2
P-D	5961-127-1585	A242 TRANSISTOR SAME AS A191	EA	REF							REF	REF	5-5	A2A2Q3
P-D	5961-127-1585	A243 TRANSISTOR SAME AS A191	EA	REF							REF	REF	5-5	A2A2Q4
P-D	5961-127-1585	A244 TRANSISTOR SAME AS A191	EA	REF							REF	REF	5-5	A2A2Q5
X2-D	5310-616-3555	A245 WASHER, LOCK SAME AS A195	EA	2										A2A2H13
X2-D	5310-616-3555	A246 WASHER LOCK SAME AS A195	EA	REF										A2A2H14
G-D-T	6125-133-9096	A247 HEAT SINK ASSEMBLY SAME AS A147	EA	1									5	A2A3
P-D-T		A248 CKT CARD ASSY SWITCHING UNIT SAME AS A148	EA	1							REF	REF	5-6	A2A3A1
P-D	5910-945-9722	A249 CAPACITOR FIXED, ELECTROLYTIC SAME AS A149	EA	2							REF	REF	5-6	A2A3A1C1
P-D	5910-945-9722	A250 CAPACITOR, FIXED ELECTROLYTIC SAME AS A149	EA	REF							REF	REF	5-6	A2A3A1C2
M-D		A251 PRINTED WIRING CARD SW UNIT SAME AS A151	EA	1										A2A3A1MP1
P-D	5905-542-9838	A252 RESISTOR FIXED WIRE WOUND SAME AS A152	EA	2							REF	REF	5-6	A2A3A1R1
P-D	5905-542-9838	A253 RESISTOR FIXED, WIRE WOUND SAME AS A152	EA	REF							REF	REF	5-6	A2A3A1R7

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 10-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1 20	(b) 2 50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) D-POT MAINT ALW PER LOC EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
P-D	5905-834-1601	A254 RESISTOR FIXED WIRE WOUND SAME AS A154	EA	2							REF	REF	5-6	A2A3A1R2
P-D	5905-834-1601	A255 RESISTOR FIXED WIRE WOUND SAME AS A154	EA	REF							REF	REF	5-6	A2A3A1R8
P-D	5905-817-6440	A256 RESISTOR, FIXED WIRE WOUND SAME AS A156	EA	4							REF	REF	5-6	A2A3A1R3
P-D	5905-817-6440	A257 RESISTOR FIXED WIPE WOUND SAME AS A156	EA	REF							REF	REF	5-6	A2A3A1R4
P-D	5905-817-6440	A258 RESISTOR FIXED WIRE WOUND SAME AS A156	EA	REF							REF	REF	5-6	A2A3A1R5
P-D	5905-817-6440	A259 RESISTOR FIXED WIRE WOUND SAME AS A156	EA	REF							REF	REF	5-6	A2A3A1R6
P-D	5961-921-3781	A260 SEMICONDUCTOR DEVICE DIODE SAME AS A160	EA	4							REF	REF	5-6	A2A3A1CR1
P-D	5961-921-3781	A261 SEMICONDUCTOR DEVICE, DIODE SAME AS A160	EA	REF							REF	REF	5-6	A2A3A1CR2
P-D	5961-921-3781	A262 SEMICONDUCTOR DEVICE, DIODE SAME AS A160	EA	REF							REF	REF	5-6	A2A3A1CR3
P-D	5961-921-3781	A263 SEMICONDUCTOR DEVICE SAME AS A160	EA	REF							REF	REF	5-6	A2A3A1CR4
X2-D		A264 TERMINAL STUD SAME AS A164	EA	9										A2A3A1E1
X2-D		A265 TERMINAL, STUD SAME AS A164	EA	REF										A2A3A1E2
X2-D		A266 TERMINAL, STUD SAME AS A164	EA	REF										A2A3A1E3
X2-D		A267 TERMINAL, STUD SAME AS A164	EA	REF										A2A3A1E4
X2-D		A268 TERMINAL, STUD SAME AS A164	EA	REF										A2A3A1E5
X2-D		A269 TERMINAL STUD SAME AS A164	EA	REF										A2A3A1E6
X2-D		A270 TERMINAL, STUD SAME AS A164	EA	REF										A2A3A1E7
X2-D		A271 TERMINAL, STUD SAME AS A164	EA	REF										A2A3A1E8
X2-D		A272 TERMINAL, STUD SAME AS A164	EA	REF										A2A3A1E9
M-D		A273 HT SK, ELEC-ELEC-TRONIC COMPONENT SAME AS A173	EA	1										A2A3MP1
X2-D	5305-282-4491	A274 SCREW, MACHINE SAME AS A174	EA	2										A2A3H1
X2-D	5305-282-4491	A275 SCREW MACHINE SAME AS A174	EA	REF										A2A3H2

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY D.S MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY G.S MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALLW PER EQUIP CNTGCY	(9) DEPOT MAINT ALLW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5305-282-4489	A276 SCREW MACHINE SAME AS A176	EA	2										A2A3H3
X2-D	5305-282-4489	A277 SCREW MACHINE SAME AS A176	EA	REF										A2A3H4
X2-D	5305-576-7493	A278 SCREW MACHINE SAME AS A178	EA	4										A2A3H5
X2-D	5305-576-7493	A279 SCREW MACHINE SAME AS A178	EA	REF										A2A3H6
X2-D	5305-576-7493	A280 SCREW MACHINE SAME AS A178	EA	REF										A2A3H7
X2-D	5305-576-7493	A281 SCREW MACHINE SAME AS A178	EA	REF										A2A3H8
X2-D	5305-579-0969	A282 SCREW, MACHINE SAME AS A182	EA	4										A2A3H9
X2-D	5305-579-0969	A283 SCREW MACHINE SAME AS A182	EA	REF										A2A3H10
X2-D	5305-579-0969	A284 SCREW, MACHINE SAME AS A182	EA	REF										A2A3H12
X2-D	5305-579-0969	A285 SCREW MACHINE SAME AS A182	EA	REF										A2A3H11
X2-D		A286 SILICONE COMPOUND SAME AS A145	EA	1										A2A3MP2
X2-D	5961-928-6199	A287 SOCKET SEMICONDUCTOR DEVICE SAME AS A187	EA	2										A2A3XQ1
X2-D	5961-928-6199	A288 SOCKET SEMICONDUCTOR DEVICE SAME AS A187	EA	REF										A2A3XQ6
P-D	5961-911-6711	A289 TRANSISTOR SAME AS A189	EA	2							REF	REF	5-5	A2A3Q1
P-D	5961-911-6711	A290 TRANSISTOR SAME AS A189	EA	REF							REF	REF	5-5	A2A3Q6
P-D	5961-127-1585	A291 TRANSISTOR SAME AS A191	EA	4							REF	REF	5-5	A2A3Q2
P-D	5961-127-1585	A292 TRANSISTOR SAME AS A191	EA	REF							REF	REF	5-5	A2A3Q3
P-D	5961-127-1585	A293 TRANSISTOR SAME AS A191	EA	REF							REF	REF	5-5	A2A3Q4
P-D	5961-127-1585	A294 TRANSISTOR SAME AS A191	EA	REF							REF	REF	5-5	A2A3Q5
X2-D	5310-616-3555	A295 WASHER, LOCK SAME AS A195	EA	2										A2A3H13
X2-D	5310-616-3555	A296 WASHER LOCK SAME AS A195	EA	REF										A2A3H14
X2-D	5940-821-7025	A297 TERMINAL, LUG C10-8 (59730)	EA	6										A2E29
X2-D	5940-821-7025	A298 TERMINAL, LUG SAME AS A297	EA	REF										A2E30
X2-D	5940-821-7025	A299 TERMINAL, LUG SAME AS A297	EA	REF										A2E31

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 20-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 4 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER LOG EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	59	A300 TERMINAL LUG SAME AS A297		EA	REF										A2E32
X2-D	59	5940-821-7025 A301 TERMINAL, LUG SAME AS A297		EA	REF										A2E33
X2-D	59	A302 TERMINAL LUG SAME AS A297		EA	REF										A2E34
X2-D		A303 TERMINAL LUG C10-8A	(59730)	EA	18										A2E35
X2-D		A304 TERMINAL LUG SAME AS A303		EA	REF										A2E36
X2-D		A305 TERMINAL LUG SAME AS A303		EA	REF										A2E37
X2-D		A306 TERMINAL LUG SAME AS A303		EA	REF										A2E38
X2-D		A307 TERMINAL, LUG SAME AS A303		EA	REF										A2E39
X2-D		A308 TERMINAL LUG SAME AS A303		EA	REF										A2E40
X2-D		A309 TERMINAL LUG SAME AS A303		EA	REF										A2E41
X2-D		A310 TERMINAL LUG SAME AS A303		EA	REF										A2E42
X2-D		A311 TERMINAL LUG SAME AS A303		EA	REF										A2E43
X2-D		A312 TERMINAL LUG SAME AS A303		EA	REF										A2E44
X2-D		A313 TERMINAL, LUG SAME AS A303		EA	REF										A2E45
X2-D		A314 TERMINAL, LUG SAME AS A303		EA	REF										A2E46
X2-D		A315 TERMINAL, LUG SAME AS A303		EA	REF										A2E47
X2-D		A316 TERMINAL LUG SAME AS A303		EA	REF										A2E48
X2-D		A317 TERMINAL, LUG SAME AS A303		EA	REF										A2E49
X2-D		A318 TERMINAL, LUG SAME AS A303		EA	REF										A2E50
X2-D		A319 TERMINAL LUG SAME AS A303		EA	REF										A2E51
X2-D		A320 TERMINAL, LUG SAME AS A303		EA	REF										A2E52
X2-D	59	5940-194-2835 A321 TERMINAL BOARD 3-140	(71785)	EA	2										A2TB1
X2-D	59	5940-194-2835 A322 TERMINAL BOARD SAME AS A321		EA	REF										A2TB2
X2-D	59	5310-616-3555 A323 WASHER LOCK SAME AS A195		EA	20										A2H35
X2-D	59	5310-616-3555 A324 WASHER, LOCK SAME AS A195		EA	REF										A2H36

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5310-616-3555	A325 WASHER LOCK SAME AS A195		EA	REF										A2H37
X2-D	5310-616-3555	A326 WASHER LOCK SAME AS A195		EA	REF										A2H38
X2-D	5310-616-3555	A327 WASHER LOCK SAME AS A195		EA	REF										A2H39
X2-D	5310-616-3555	A328 WASHER, LOCK SAME AS A195		EA	REF										A2H40
X2-D	5310-616-3555	A329 WASHER, LOCK SAME AS A195		EA	REF										A2H41
X2-D	5310-616-3555	A330 WASHER, LOCK SAME AS A195		EA	REF										A2H42
X2-D	5310-616-3555	A331 WASHER LOCK SAME AS A195		EA	REF										A2H43
X2-D	5310-616-3555	A332 WASHER, LOCK SAME AS A195		EA	REF										A2H44
X2-D	5310-616-3555	A333 WASHER LOCK SAME AS A195		EA	REF										A2H45
X2-D	5310-616-3555	A334 WASHER LOCK SAME AS A195		EA	REF										A2H46
X2-D	5310-616-3555	A335 WASHER, LOCK SAME AS A195		EA	REF										A2H47
X2-D	5310-616-3555	A336 WASHER, LOCK SAME AS A195		EA	REF										A2H48
X2-D	5310-616-3555	A337 WASHER, LOCK SAME AS A195		EA	REF										A2H49
X2-D	5310-616-3555	A338 WASHER LOCK SAME AS A195		EA	REF										A2H50
X2-D	5310-616-3555	A339 WASHER, LOCK SAME AS A195		EA	REF										A2H51
X2-D	5310-616-3555	A340 WASHER, LOCK SAME AS A195		EA	REF										A2H52
X2-D	5310-616-3555	A341 WASHER, LOCK SAME AS A195		EA	REF										A2H53
X2-D	5310-616-3555	A342 WASHER, LOCK SAME AS A195		EA	REF										A2H54
X2-D	5310-543-5933	A343 WASHER, LOCK MS35333-73	(96906)	EA	32										A2H55
X2-D	5310-543-5933	A344 WASHER, LOCK SAME AS A343		EA	REF										A2H56
X2-D	5310-543-5933	A345 WASHER, LOCK SAME AS A343		EA	REF										A2H57
X2-D	5310-543-5933	A346 WASHER, LOCK SAME AS A343		EA	REF										A2H58
X2-D	5310-543-5933	A347 WASHER, LOCK SAME AS A343		EA	REF										A2H59
X2-D	5310-543-5933	A348 WASHER, LOCK SAME AS A343		EA	REF										A2H60
X2-D	5310-543-5933	A349 WASHER, LOCK SAME AS A343		EA	REF										A2H61

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5310-543-5933	A350 WASHER LOCK SAME AS A343	EA	REF										A2H62
X2-D	5310-543-5933	A351 WASHER LOCK SAME AS A343	EA	REF										A2H63
X2-D	5310-543-5933	A352 WASHER LOCK SAME AS A343	EA	REF										A2H64
X2-D	5310-543-5933	A353 WASHER LOCK SAME AS A343	EA	REF										A2H65
X2-D	5310-543-5933	A354 WASHER, LOCK SAME AS A343	EA	REF										A2H66
X2-D	5310-543-5933	A355 WASHER, LOCK SAME AS A343	EA	REF										A2H67
X2-D	5310-543-5933	A356 WASHER, LOCK SAME AS A343	EA	REF										A2H68
X2-D	5310-543-5933	A357 WASHER, LOCK SAME AS A343	EA	REF										A2H69
X2-D	5310-543-5933	A358 WASHER, LOCK SAME AS A343	EA	REF										A2H70
X2-D	5310-543-5933	A359 WASHER LOCK SAME AS A343	EA	REF										A2H71
X2-D	5310-543-5933	A360 WASHER, LOCK SAME AS A343	EA	REF										A2H72
X2-D	5310-543-5933	A361 WASHER, LOCK SAME AS A343	EA	REF										A2H73
X2-D	5310-543-5933	A362 WASHER, LOCK SAME AS A343	EA	REF										A2H74
X2-D	5310-543-5933	A363 WASHER, LOCK SAME AS A343	EA	REF										A2H75
X2-D	5310-543-5933	A364 WASHER, LOCK SAME AS A343	EA	REF										A2H76
X2-D	5310-543-5933	A365 WASHER, LOCK SAME AS A343	EA	REF										A2H77
X2-D	5310-543-5933	A366 WASHER, LOCK SAME AS A343	EA	REF										A2H78
X2-D	5310-543-5933	A367 WASHER, LOCK SAME AS A343	EA	REF										A2H79
X2-D	5310-543-5933	A368 WASHER, LOCK SAME AS A343	EA	REF										A2H80
X2-D	5310-543-5933	A369 WASHER, LOCK SAME AS A343	EA	REF										A2H81
X2-D	5310-543-5933	A370 WASHER, LOCK SAME AS A343	EA	REF										A2H82
X2-D	5310-543-5933	A371 WASHER, LOCK SAME AS A343	EA	REF										A2H83
X2-D	5310-543-5933	A372 WASHER, LOCK SAME AS A343	EA	REF										A2H84
X2-D	5310-543-5933	A373 WASHER, LOCK SAME AS A343	EA	REF										A2H85
X2-D	5310-543-5933	A374 WASHER, LOCK SAME AS A343	EA	REF										A2H86

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / REFERENCE NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INCL IN UNIT	(6) 30-DAY S MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
M-D		A375 PLATE DESIGNATION 91424-1 (24672)	EA	1										MP1
M-D		A376 PLATE DESIGNATION 91424-2 (24672)	EA	1										MP2
M-D		A377 PLATE DESIGNATION 91424-3 (24672)	EA	1										MP3
M-D		A378 PLATE IDENTIFICATION 91344 (24672)	EA	1										MP4
G-D-T		A379 PLATE ASSEMBLY MOUNTING BOTTOM 91396 (24672)	EA	1										A3
X2-D	5310-176-8093	A380 NUT PLAIN HEXAGON SAME AS A076	EA	4										A3H1
X2-D	5310-176-8093	A381 NUT PLAIN HEXAGON SAME AS A076	EA	REF										A3H2
X2-D	5310-176-8093	A382 NUT PLAIN HEXAGON SAME AS A076	EA	REF										A3H3
X2-D	5310-176-8093	A383 NUT PLAIN HEXAGON SAME AS A076	EA	REF										A3H4
X2-D	5310-271-4645	A384 NUT PLAIN HEXAGON AN340C-8 (80044)	EA	2										A3H5
X2-D	5310-271-4645	A385 NUT PLAIN HEXAGON SAME AS A384	EA	REF										A3H6
M-D		A386 PLATE MOUNTING, BOTTOM 91343 (24672)	EA	1										A3MP1
P-D		A387 REACTOR ASSY 91395 (24672)	EA	1							8	4	5-3	A3L1
X2-D	5305-271-7636	A388 SCREW, MACHINE AN505C6-10 (88044)	EA	4										A3H7
X2-D	5305-271-7636	A389 SCREW MACHINE SAME AS A388	EA	REF										A3H8
X2-D	5305-271-7636	A390 SCREW, MACHINE SAME AS A388	EA	REF										A3H9
X2-D	5305-271-7636	A391 SCREW, MACHINE SAME AS A388	EA	REF										A3H10
X2-D	5305-282-3234	A392 SCREW, MACHINE AN505C8-6 (70318)	EA	8										A3H11
X2-D	5305-282-3234	A393 SCREW, MACHINE SAME AS A392	EA	REF										A3H12
X2-D	5305-282-3234	A394 SCREW MACHINE SAME AS A392	EA	REF										A3H13
X2-D	5305-282-3234	A395 SCREW MACHINE SAME AS A392	EA	REF										A3H14
X2-D	5305-282-3234	A396 SCREW, MACHINE SAME AS A392	EA	REF										A3H15
X2-D	5305-282-3234	A397 SCREW MACHINE SAME AS A392	EA	REF										A3H16
X2-D	5305-282-3234	A398 SCREW, MACHINE SAME AS A392	EA	REF										A3H17

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5305-282-3234	A399 SCREW MACHINE SAME AS A392	EA	REF										A3H18
X2-D	5305-838-9089	A400 SCREW MACHINE AN505C8-8 (70318)	EA	2										A3H19
X2-D	5305-838-9089	A401 SCREW, MACHINE SAME AS A400	EA	REF										A3H20
G-D-T		A402 SEMICOND DEVICE ASSEMBLY DIODE 91386 (24672)	EA	1										A3A1
M-D		A403 BRACKET ANGLE 91341 (24672)	EA	1										A3A1MP1
X2-D		A404 INSULATOR WASHER 105201 (73734)	EA	4										A3A1E4
X2-D		A405 INSULATOR WASHER SAME AS A404	EA	REF										A3A1E5
X2-D		A406 INSULATOR, WASHER SAME AS A404	EA	REF										A3A1E6
X2-D		A407 INSULATOR, WASHER SAME AS A404	EA	REF										A3A1E7
X2-D		A408 INSULATOR SHEET ELECTRICAL 91379 (24672)	EA	1										A3A1E3
X2-D	5310-176-8093	A409 NUT, PLAIN, HEXAGON SAME AS A076	EA	4										A3A1H1
X2-D	5310-176-8093	A410 NUT PLAIN, HEXAGON SAME AS A076	EA	REF										A3A1H2
X2-D	5310-176-8093	A411 NUT, PLAIN HEXAGON SAME AS A076	EA	REF										A3A1H3
X2-D	5310-176-8093	A412 NUT, PLAIN, HEXAGON SAME AS A076	EA	REF										A3A1H4
X2-D	5305-579-0969	A413 SCREW, MACHINE SAME AS A182	EA	4										A3A1H5
X2-D	5305-579-0969	A414 SCREW, MACHINE SAME AS A182	EA	REF										A3A1H6
X2-D	5305-579-0969	A415 SCREW, MACHINE SAME AS A182	EA	REF										A3A1H7
X2-D	5305-579-0969	A416 SCREW, MACHINE SAME AS A182	EA	REF										A3A1H8
P-D	5961-917-3502	A417 SEMICONDUCTOR DEIVCE, DIODE MR-1201FL (04713)	EA	2							13	10	5-3	A3A1CR1
P-D	5961-917-3502	A418 SEMICONDUCTOR DEVICE, DIODE SAME AS A417	EA	REF							REF	REF	5-3	A3A1CR2
X2-D		A419 SILICONE COMPOUND SAME AS A145	EA	1										A3A1MP2
X2-D		A420 TERMINAL LUG SAME AS A303	EA	2										A3A1E1
X2-D		A421 TERMINAL, LUG SAME AS A303	EA	REF										A3A1E2
X2-D	5310-616-3555	A422 WASHER, LOCK SAME AS A195	EA	4										A3A1H9

(1) SMR CODE	(2) STOCK FEDERAL NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	( ) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5310-616-3555	A423 WASHER LOCK SAME AS A195		EA	REF										A3A1H10
X2-D	5310-616-3555	A424 WASHER LOCK SAME AS A195		EA	REF										A3A1H11
X2-D	5310-616-3555	A425 WASHER LOCK SAME AS A195		EA	REF										A3A1H12
X2-D	5940-821-7025	A426 TERMINAL LUG SAME AS A297		EA	5										A3E8
X2-D	5940-821-7025	A427 TERMINAL, LUG SAME AS A297		EA	REF										A3E9
X2-D	5940-821-7025	A428 TERMINAL LUG SAME AS A297		EA	REF										A3E10
X2-D	5940-821-7025	A429 TERMINAL, LUG SAME AS A297		EA	REF										A3E11
X2-D	5940-821-7025	A430 TERMINAL, LUG SAME AS A297		EA	REF										A3E12
X2-D		A431 TERMINAL, LUG SAME AS A303		EA	5										A3E13
X2-D		A432 TERMINAL, LUG SAME AS A303		EA	REF										A3E14
X2-D		A433 TERMINAL LUG SAME AS A303		EA	REF										A3E15
X2-D		A434 TERMINAL, LUG SAME AS A303		EA	REF										A3E16
X2-D		A435 TERMINAL, LUG SAME AS A303		EA	REF										A3E17
X2-D	5940-331-3409	A436 TERMINAL BOARD 5-140	(71785)	EA	1										A3TB1
P-D		A437 XMFR ASSY POWER, ISO & STEP-DOWN 91394	(24672)	EA	1							4	5	5-3	A3T1
X2-D	5310-616-3555	A438 WASHER, LOCK SAME AS A195		EA	4										A3H21
X2-D	5310-616-3555	A439 WASHER, LOCK SAME AS A195		EA	REF										A3H22
X2-D	5310-616-3555	A440 WASHER, LOCK SAME AS A195		EA	REF										A3H23
X2-D	5310-616-3555	A441 WASHER, LOCK SAME AS A195		EA	REF										A3H24
X2-D	5310-543-2739	A442 WASHER, LOCK MS35333-72	(96906)	EA	2										A3H25
X2-D	5310-543-2739	A443 WASHER, LOCK SAME AS A442		EA	REF										A3H26
G-D-T		A444 PLATE ASSEMBLY, MOUNTING, TOP 91397	(24672)	EA	1										A4
P-D		A445 CAPACITOR, FIXED, ELECTROLYTIC CG233U15E1	(37942)	EA	1							8	5	5-9	A4C1
P-D-T		A446 CKT CARD ASSY, OVERSHOOT 91353	(24672)	EA	1							19	15	5-9	A4A1

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X2-D	5325-997-9040	A447 EYELET METALLIC S-6084 (07707)	EA	9										A4A1E1
X2-D	5325-997-0040	A448 EYELET METALLIC SAME AS A447	EA	REF										A4A1E2
X2-D	5325-997-9040	A449 EYELET METALLIC SAME AS A447	EA	REF										A4A1E3
X2-D	5325-997-9040	A450 EYLLET METALLIC SAME AS A447	EA	REF										A4A1E4
X2-D	5325-997-9040	A451 EYELET METALLIC SAME AS A447	EA	REF										A4A1E5
X2-D	5325-997-9040	A452 EYELET METALLIC SAME AS A447	EA	REF										A4A1E6
X2-D	5325-997-9040	A453 EYELET, METALLIC SAME AS A447	EA	REF										A4A1E7
X2-D	5325-997-9040	A454 EYELET, METALLIC SAME AS A447	EA	REF										A4A1E8
X2-D	5325-997-9040	A455 EYELET, METALLIC SAME AS A447	EA	REF										A4A1E9
X2-D	5310-167-1376	A456 NUT PLAIN HEXAGON AN340C-4 (70318)	EA	1										A4A1H3
M-D		A457 PRINTED WIRING BOARD, OVERSHOOT 91338 (24672)	EA	1										A4A1MP1
P-D		A458 RESISTOR, ADJUSTABLE 48M-9-500 (12697)	EA	1							8	5	5-4	A4A1R2
P-D	5905-811-7912	A459 RESISTOR, FIXED, COMPOSITION RC07GF470K (81349)	EA	1							8	5	5-4	A4A1R5
P-D	5905-686-3369	A460 RESISTOR, FIXED, COMPOSITION RC07GF331K (81349)	EA	1							8	5	5-4	A4A1R1
P-D	5905-683-2242	A461 RESISTOR, FIXED, COMPOSITION RC07GF471K (81349)	EA	1							8	5	5-4	A4A1R3
P-D	5905-542-7747	A462 RESISTOR, FIXED, WIRE WOUND RW59V2R0 (81349)	EA	1							8	5	5-4	A4A1R4
P-D	5905-702-4396	A463 RESISTOR, FIXFD, WIRE WOUND RW59V221 (81349)	EA	2							13	10	5-4	A4A1R6
P-D	5905-702-4396	A464 RESISTOR FIXED, WIRE WOUND SAME AS A463	EA	REF							REF	REF	5-4	A4A1R7
X2-D	5305-282-4491	A465 SCREW, MACHINE SAME AS A174	EA	1										A4A1H2
P-D	5961-127-1585	A466 TRANSISTOR SAME AS A191	EA	1							REF	REF	5-5	A4A101
X2-D	5310-550-3715	A467 WASHER, LOCK MS35333-70 (96906)	EA	1										A4A1H3
P-D	6125-133-9097	A468 DRIVER ASSEMBLY 91268 (24672)	EA	1							8	5	5-9	A4M1
P-D		A469 GASKET, MOUNTING, RUBBER 90425 (24672)	EA	2							16	10	5-9	A4MP2

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIG NO	(b) ITEM NO OF REFERENCE DESIGNATION
P-D		A470 GASKET MOUNTING, RUBBER SAME AS A469	EA	REF									5-9	A4MP3
P-D	5325-933-4881	A471 GROMMET PLASTIC 2149 (83330)	EA	1							8	5	5-9	A4E4
P-D		A472 GROMMET, RUBBER GOB-1101-1 (24324)	EA	1							8	5	5-9	A4E5
X2-D	5310-176-8093	A473 NUT, PLAIN, HEXAGON SAME AS A076	EA	12										A4H1
X2-D	5310-176-8093	A474 NUT, PLAIN HEXAGON SAME AS A076	EA	REF										A4H2
X2-D	5310-176-8093	A475 NUT, PLAIN, HEXAGON SAME AS A076	EA	REF										A4H3
X2-D	5310-176-8093	A476 NUT, PLAIN, HEXAGON SAME AS A076	EA	REF										A4H4
X2-D	5310-176-8093	A477 NUT, PLAIN, HEXAGON SAME AS A076	EA	REF										A4H5
X2-D	5310-176-8093	A478 NUT, PLAIN, HEXAGON SAME AS A076	EA	REF										A4H6
X2-D	5310-176-8093	A479 NUT, PLAIN HEXAGON SAME AS A076	EA	REF										A4H7
X2-D	5310-176-8093	A480 NUT PLAIN, HEXAGON SAME AS A076	EA	REF										A4H8
X2-D	5310-176-8093	A481 NUT, PLAIN, HEXAGON SAME AS A076	EA	REF										A4H9
X2-D	5310-176-8093	A482 NUT, PLAIN, HEXAGON SAME AS A076	EA	REF										A4H10
X2-D	5310-176-8093	A483 NUT, PLAIN, HEXAGON SAME AS A076	EA	REF										A4H11
X2-D	5310-176-8093	A484 NUT, PLAIN, HEXAGON SAME AS A076	EA	REF										A4H12
M-D		A485 PLATE, MOUNTING, TOP 91346 (24672)	EA	1										A4MP1
P-D	5905-824-3126	A486 RESISTOR, FIXED, WIRE WOUND RE70G100 (91637)	EA	1							8	5	5-9	A4R1
X2-D	5910-966-2375	A487 RETAINER, CAPACITOR VR-10 (37942)	EA	1										A4MP4
X2-D	5305-282-4491	A488 SCREW, MACHINE SAME AS A174	EA	2										A4H13
X2-D	5305-282-4491	A489 SCREW, MACHINE SAME AS A174	EA	REF										A4H14
X2-D	5305-282-4489	A490 SCREW, MACHINE SAME AS A176	EA	1										A4H15
X2-D	5305-543-2768	A491 SCREW, MACHINE MS35233-19 (96906)	EA	4										A4H16
X2-D	5305-543-2768	A492 SCREW, MACHINE SAME AS A491	EA	REF										A4H17
X2-D	5305-543-2768	A493 SCREW, MACHINE SAME AS A491	EA	REF										A4H18

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5305-543-2768	A494 SCREW, MACHINE SAME AS A491		EA	REF										A4H19
X2-D	5305-543-2772	A495 SCREW, MACHINE MS35233-26	(96906)	EA	3										A4H20
X2-D	5305-543-2772	A496 SCREW, MACHINE SAME AS A495		EA	REF										A4H21
X2-D	5305-543-2772	A497 SCREW, MACHINE SAME AS A495		EA	REF										A4H22
X2-D	5305-558-2865	A498 SCREW, MACHINE MS35233-30	(96906)	EA	3										A4H23
X2-D	5305-558-2865	A499 SCREW, MACHINE SAME AS A498		EA	REF										A4H24
X2-D	5305-558-2805	A500 SCREW, MACHINE SAME AS A498		EA	REF										A4H25
P-D	5961-051-9352	A501 SEMICONDUCTOR DEVICE, DIODE 1N2979B	(80131)	EA	1							8	5	5-9	A4CR5
P-D	5961-829-1567	A502 SEMICONDUCTOR DEVICE, DIODE 1N3002B	(80131)	EA	2							13	10	5-9	A4CR3
P-D	5961-829-1687	A503 SEMICONDUCTOR DEVICE, DIODE SAME AS A502		EA	REF							REF	REF	5-9	A4CR4
X2-D		A504 SILICONE COMPOUND SAME AS A145		EA	1										A4MP5
X2-D	5961-928-6199	A505 SOCKET, SEMICONDUCTOR DEVICE SAME AS A187		EA	1										A4XQ1
X2-D	5340-954-9297	A506 SPACER, SLEEVE 2337	(83330)	EA	4										A4E6
X2-D	5340-954-9297	A507 SPACER, SLEEVE SAME AS A506		EA	REF										A4E7
X2-D	5340-954-9297	A508 SPACER, SLEEVE SAME AS A506		EA	REF										A4E8
X2-D	5340-954-9297	A509 SPACER, SLEEVE SAME AS A506		EA	REF										A4E9
X2-D		A510 TERMINAL LUG SAME AS A303		EA	6										A4E10
X2-D		A511 TERMINAL, LUG SAME AS A303		EA	REF										A4E11
X2-D		A512 TERMINAL, LUG SAME AS A303		EA	REF										A4E12
X2-D		A513 TERMINAL, LUG SAME AS A303		EA	REF										A4E13
X2-D		A514 TERMINAL, LUG SAME AS A303		EA	REF										A4E14
X2-D		A515 TERMINAL, LUG SAME AS A303		EA	REF										A4E15
X2-D		A516 TERMINAL, LUG 1414-10	(83330)	EA	3										A4E1
X2-D		A517 TERMINAL, LUG SAME AS A516		EA	REF										A4E2

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D		A518 TERMINAL, LUG SAME AS A516		EA	REF										A4E3
P-D	5961-911-6711	A519 TRANSISTOR SAME AS A180		EA	1							REF	REF	5-9	A4Q1
P-D	6125-133-9098	A520 VOLTAGE REGULATOR ASSEMBLY 91267	(24672)	EA	1							12	9	5-9	A4VR1
X2-D	5310-722-5993	A521 WASHER, FLAT MS15795-304	(96906)	EA	11										A4H26
X2-D	5310-722-5993	A522 WASHER, FLAT SAME AS A521		EA	REF										A4H27
X2-D	5310-722-5993	A523 WASHER, FLAT SAME AS A521		EA	REF										A4H28
X2-D	5310-722-5993	A524 WASHER, FLAT SAME AS A521		EA	REF										A4H29
X2-D	5310-722-5993	A525 WASHER FLAT SAME AS A521		EA	REF										A4H30
X2-D	5310-722-5993	A526 WASHER, FLAT SAME AS A521		EA	REF										A4H31
X2-D	5310-722-5993	A527 WASHER FLAT SAME AS A521		EA	REF										A4H32
X2-D	5310-722-5993	A528 WASHER, FLAT SAME AS A521		EA	REF										A4H33
X2-D	5310-722-5993	A529 WASHER, FLAT SAME AS A521		EA	REF										A4H34
X2-D	5310-722-5993	A530 WASHER, FLAT SAME AS A521		EA	REF										A4H35
X2-D	5310-722-5993	A531 WASHER, FLAT SAME AS A521		EA	REF										A4H36
X2-D	5310-550-3715	A532 WASHER, LOCK SAME AS A467		EA	6										A4H37
X2-D	5310-550-3715	A533 WASHER, LOCK SAME AS A467		EA	REF										A4H38
X2-D	5310-550-3715	A534 WASHER, LOCK SAME AS A467		EA	REF										A4H39
X2-D	5310-550-3715	A535 WASHER, LOCK SAME AS A467		EA	REF										A4H40
X2-D	5310-550-3715	A536 WASHER, LOCK SAME AS A467		EA	REF										A4H41
X2-D	5310-550-3715	A537 WASHER, LOCK SAME AS A467		EA	REF										A4H42
X2-D	5310-616-3555	A538 WASHER, LOCK SAME AS A196		EA	3										A4H43
X2-D	5310-616-3555	A539 WASHER, LOCK SAME AS A195		EA	REF										A4H44
X2-D	5310-616-3555	A540 WASHER, LOCK SAME AS A195		EA	REF										A4H45
X2-D	5310-011-1041	A541 WASHER, LOCK MS35338-79	(96906)	EA	8										A4H46
X2-D	5310-011-1041	A542 WASHER, LOCK SAME AS A541		EA	REF										A4H47

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CNTGCY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATIONS (a) FIG NO	(b) ITEM NO OR REFERENCE DESIGNATION
X2-D	5310-011-1041	A543 WASHER LOCK SAME AS A541		EA	REF										A4H48
X2-D	5310-011-1041	A544 WASHER LOCK SAME AS A541		EA	REF										A4H49
X2-D	5310-011-1041	A545 WASHER LOCK SAME AS A541		EA	REF										A4H50
X2-D	5310-011-1041	A546 WASHER LOCK SAME AS A541		EA	REF										A4H51
X2-D	5310-011-1041	A547 WASHER LOCK SAME AS A541		EA	REF										A4H52
X2-D	5310-011-1041	A548 WASHER LOCK SAME AS A541		EA	REF										A4H53
X2-D	5305-271-7632	A549 SCREW MACHINE AN505C8-4	(88044)	EA	4										H9
X2-D	5305-271-7632	A550 SCREW MACHINE SAME AS A549		EA	REF										H10
X2-D	5305-271-7632	A551 SCREW MACHINE SAME AS A549		EA	REF										H11
X2-D	5305-271-7632	A552 SCREW MACHINE SAME AS A549		EA	REF										H12
X2 D	5305-[illegible]782	A553 SCREW, MACHINE MS35233-41	(96906)	EA	4										H13
X2-D	5305-[illegible]d2	A554 SCREW MACHINE SAME AS A553		EA	REF										H14
X2-D	5305-543-2782	A555 SCREW MACHINE SAME AS A553		EA	REF										H15
X2 D	5305-543-2782	A556 SCREW MACHINE SAME AS A553		EA	REF										H16
X2-D	5305-543-2785	A557 SCREW MACHINE MS35233-45	(96906)	EA	4										H17
X2-D	5305-543-2785	A558 SCREW, MACHINE SAME AS A557		EA	REF										H18
X2-D	5305-543-2785	A559 SCREW MACHINE SAME AS A557		EA	REF										H19
X2-D	5305-543-2785	A560 SCREW MACHINE SAME AS A557		EA	REF										H20
X2-D	5305-740-8890	A561 SCREW MACHINE S/6-32x3/8	(97539)	EA	5										H21
X2-D	5305-740-8890	A562 SCREW MACHINE SAME AS A561		EA	REF										H22
X2-D	5305-740-8890	A563 SCREW MACHINE SAME AS A561		EA	REF										H23
X2-D	5305-740-8890	A564 SCREW MACHINE SAME AS A561		EA	REF										H24
X2-D	5305-740-8890	A565 SCREW, MACHINE SAME AS A561		EA	REF										H25
X2-D	5040-078-9774	A566 SEALING COMPOUND SILASTIC 732 RTV	(71984)	EA	1										MP9
X2-D		A567 SILICONE COMPOUND SAME AS A145		EA	1										MP10

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE	CSAB IN CODE	(4) UNIT OF MEAS	(5) QTY INCL IN UNIT	(6) 0-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) YR ALW FOR QUAN	(9) DEPOT MAINT ALW FOR 100 QU	(10) ITG NO	(11) ITEM NO OR SYMBOL DESIGNATION
X2-D		A568 SPACER SLEEVE 91354 (24672)		EA	4										MP5
X2-D		A569 SPACER SLEEVE SAME AS A568		EA	REF										MP6
X2-D		A570 SPACER SLEEVE SAME AS A568		EA	REF										MP7
X2-D		A571 SPACER, SLEEVE SAME AS A568		EA	REF										MP8
X2-D	5310-849-7733	A572 WASHER FLAT MS15795-311 (96906)		EA	4										H26
X2-D	5310-849-7733	A573 WASHER FLAT SAME AS A572		EA	REF										H27
X2-D	5310-849-7733	A574 WASHER FLAT SAME AS A572		EA	REF										H28
X2-D	5310-849-7733	A575 WASHER FLAT SAME AS A572		EA	REF										H29
X2-D	5310-543-2740	A576 WASHER LOCK MS35333-74 (96906)		EA	4										H30
X2-D	5310-543-2740	A577 WASHER LOCK SAME AS A576		EA	REF										H31
X2-D	5310-543-2740	A578 WASHER LOCK SAME AS A577		EA	REF										H32
X2-D	5310-543-2740	A579 WASHER LOCK SAME AS A577		EA	REF										H33

TO FIGURE AND ITEM NUMBER OR REFERENCE DESIGNATION

FEDERAL STOCK NUMBER	FIGURE NUMBER	ITEM NUMBER OR REF DESIGNATION
5305-271-7632		H9
5305-271-7632		H10
5305-271-7632		H11
5305-271-7632		H12
5305-271-7636		A3H7
5305-271-7636		A3H8
5305-271-7636		A3H9
5305-271-7636		A3H10
5305-262-3234		A3H11
5305-282-3234		A3H12
5305-282-3234		A3H13
5305-282-3234		A3H14
5305-282-3234		A3H15
5305-282-3234		A3H16
5305-282-3234		A3H17
5305-282-3234		A3H18
5305-282-3570		A2A4H6
5305-282-3570		A2A4H7
5305-282-3570		A2A4H8
5305-282-3570		A2A4H9
5305-232-3570		A2A4H10
5305-282-3570		A2A4H11
5305-282-3570		A2A4H12
5305-282-3570		A2A4H13
5305-282-3570		A2A4H14
5305-282-3570		A2A4H15
5305-282-3570		A2A4H16
5305-282-3573		A2A4H17
5305-282-3570		A2A4H18
5305-282-3570		A2A4H19
5305-282-3814		A1H9
5305-282-3814		A1H10
5305-282-3814		A1H11
5305-282-3814		A1H12
5305-262-3814		A1H13
5305-282-3814		A1H14
5305-282-3814		A1H15
5305-282-3814		A1H16
5305-282-3814		A1H17
5305-282-3814		A1H18
5305-282-3814		A1H19
5305-282-3814		A1H20
5305-282-3814		A1H21
5305-282-3814		A1H22
5305-282-3814		A1H23
5305-282-3814		A1H24
5305-282-4423		A1H31
5305-282-4423		A1H32
5305-282-4423		A2H33
5305-282-4423		A2H34
5305-282-4489		A2A1H3
5305-262-4489		A2A1H4
5305-282-4489		A2A2H3
53035-282-4489		A2A2H4
5305-282-4489		A2A3H3
5305-282-4489		A2A3H4
5305-282-4489		A4H15
5305-282-4491		A2A1H1
5305-282-4491		A2A1H2
5305-282-4491		A2A2H1
5305-282-4491		A2A2H2
5305-282-4491		A2A3H1
5305-282-4491		A2A3H2
5305-282-4491		A4H13
5305-282-4491		A4H14
5305-282-4491		A4A1H2
5305-543-2768		A4H16
5305-543-2768		A4H17
5305-543-2768		A4H18
5305-543-2768		A4H19
5305-543-2772		A4H20
5305-543-2772		A4H21
5305-543-2772		A4H22
5305-543-2782		H13
5305-543-2782		H14
5305-543-2782		H15
5305-543-2782		H16
5305-543-2785		H17
5305-543-2785		H18
5305-543-2785		H19
5305-543-2785		H20
5305-558-2865		A4H23
5305-558-2865		A4H24
5305-558-2865		A4H25
5305-576-7493		A2A1H5
5305-576-7493		A2A1H6
5305-576-7493		A2A1H7
5305-576-7493		A2A1H8
5305-576-7493		A2A2H5
5305-576-7493		A2A2H6
5305-576-7493		A2A2H7
5305-576-7493		A2A2H8
5305-576-7493		A2A3H5
5305-576-7493		A2A3H6
5305-576-7493		A2A3H7
5305-576-7493		A2A3H8
5305-579-0969		A2A1H9
5305-579-0969		A2A1H10
5305-579-0969		A2A1H11
5305-579-0969		A2A1H12
5305-579-0969		A2A2H9
5305-579-0969		A2A2H10
5305-579-0969		A2A2H11
5305-579-0969		A2A2H12
5305-579-0969		A2A3H9
5305-579-0969		A2A3H10
5305-579-0969		A2A3H11
5305-579-0969		A2A3H12
5305-579-0969		A3A1H5
5305-579-0969		A3A1H6
5305-579-0969		A3A1H7
5305-579-0969		A3A1H8
5305-638-9089		A3H19
5305-638-9089		A3H20
5305-687-7541		H1
5305-687-7541		H2
5305-687-7541		H3
5305-687-7541		H4
5305-740-8890		H21
5365-740-8890		H22
5305-740-8890		H23
5305-740-8890		H24

FEDERAL STOCK NUMBER	FIGURE NUMBER	ITEM NUMBER OR REF. DESIGNATION
5305-740-8890		H25
5310-011-1041		A4H46
5310-011-1041		A4H47
5310-011-1041		A4H48
5310-011-1041		A4H49
5310-011-1041		A4H50
5310-011-1041		A4H51
5310-011-1041		A4H52
5310-011-1041		A4H53
5310-117-8305		A2A4H1
5310-117-8305		A2A4H2
5310-117-8305		A2A4H3
5310-117-8305		A2A4H4
5310-117-8305		A2A4H5
5310-167-1376		A4A1H3
5310-176-8093		A2H1
5310-176-8093		A2H2
5310-176-8093		A2H3
5310-176-8093		A2H4
5310-176-8093		A2H5
5310-176-8093		A2H6
5313-176-8093		A2H7
5310-176-8093		A2H8
5310-176-8093		A2H9
5310-176-8093		A2H10
5310-176-8093		A2H11
5310-176-8093		A2H12
5310-176-8093		A2H13
5310-176 -8093		A2H14
5310-176-8093		A3H1
5310-176-8093		A3H2
5310-176-8093		A3H3
5310-176-8093		A3H4
5310-176-8093		A3A1H1
5310-176-8093		A3A1H2
5310-176 -8093		A3A1H3
5310-176-8093		A3A1H4
5310-176-8093		A4H1
5310-176-8093		A4H2
5310-176-8093		A4H3
5310-176-8093		A4H4
5310-176-8093		A4H5
5310-176-8093		A4H6
5310-176-8093		A4H7
5310-176-8093		A4H8
5310-176-8093		A4H9
5310-176-8093		A4H10
5310-176-8093		A4H11
5310-176-8093		A4H12
5310-176-8097		A2H15
5310-176-8097		A2H16
5310-176-8097		A2H17
5310-176-8097		A2H18
5310-176-8097		A2H19
5310-176-8097		A2H20
5310-176-8097		A2H21
5310-176-8097		A2H22
5310-176-8097		A2H23
5310-176-8097		A2H24
5310-176-8097		A2H25
5310-176-8097		A2H26
5310-176-8097		A2H27
5310-176-8097		A2H28
5310-176-8097		A2H29
5310-176-8097		A2H30
5310-176-8120		H5
5310-176-8120		H6
5310-176-8120		H7
5310-176-8120		H8
5310-271-4645		A3H5
5310-271-4645		A3H6
5310-543-2739		A3H25
5310-543-2739		A3H26
5310-543-2740		H30
5310-543-2740		H31
5310-543-2740		H32
5310-543-2740		H33
5310-543-5933		A2H55
5310-543-5933		A3H56
5310-543-5933		A2H57
5310-543-5933		A2H58
5310-543-5933		A2H59
5310-543-5933		A2H60
5310-543-5933		A2H61
5310-543-5933		A2H62
5310-543-5933		A2H63
5310-543-5933		A2H64
5310-543-5933		A2H65
5310-543-5933		A2H66
5310-543-5933		A2H67
5310-543-5933		A2H68
5310-543-5933		A2H69
5310-543-5933		A2H70
5310-543-5933		A2H71
5310-543-5933		A2H72
5310-543-5933		A2H73
5310-543-5933		A2H74
5310-543-5933		A2H75
5310-543-5933		A2H76
5310-543-5933		A2H77
5310-543-5933		A2H78
5310-543-5933		A2H79
5310-543-5933		A2H80
5310-543-5933		A2H81
5310-543-5933		A2H82
5310-543-5933		A2H83
5310-543-5933		A2H84
5310-543-5933		A2H85
5310-543-5933		A2H86
5310-550-3715		A4H37
5310-550-3715		A4H38
5310-550-3715		A4H39
5310-550-3715		A4H40
5310-550-3715		A4H41
5310-550-3715		A4H42
5310-550-3715		A4A1H3
5310-616-3555		A2H35
5310-616-3555		A2H36
5310-616-3555		A2H37
5310-616-3555		A2H38
5310-616-3555		A2H39
5310-616-3555		A2H40
5310-616-3555		A2H41
5310-616-3555		A2H42

FEDERAL STOCK NUMBER	FIGURE NUMBER	ITEM NUMBER OR REF DESIGNATION
5310-616-3555		A2H43
5310-616-3555		A2H44
5310-616-3555		A2H45
5310-616-3555		A2H46
5310-616-3555		A2H47
5310-616-3555		A2H48
5310-616-3555		A2H49
5310-616-3555		A2H50
5310-616-3555		A2H51
5310-616-3555		A2H52
5310-616-3555		A2H53
5310-616-3555		A2H54
5310-616-3555		A2A1H13
5310-616-3555		A2A1H14
5310-616-3555		A2A2H13
5310-616-3555		A2A2H14
5310-616-3555		A2A3H13
5310-616-3555		A2A3H14
5310-616-3555		A3H21
5310-616-3555		A3H22
5310-616-3555		A3H23
5310-616-3555		A3H24
5310-616-3555		A3A1H9
5310-616-3555		A3A1H10
5310-616-3555		A3A1H11
5310-616-3555		A3A1H12
5310-616-3555		A4H43
5310-616-3555		A4H44
5310-616-3555		A4H45
5310-722-5993		A4H26
5310-722-5993		A4H27
5310-722-5993		A4H28
5310-722-5993		A4H29
5310-722-5993		A4H30
5310-722-5993		A4H31
5310-722-5993		A4H32
5310-722-5963		A4H33
5310-722-5993		A4H34
5310-722-5993		A4H35
5310-722-5993		A4H36
5310-849-7733		H26
5310-849-7733		H27
5310-849-7733		H28
5310-849-1733		H29
5320-275-8344		A1H1
5320-275-8344		A1H2
5320-275-8344		A1H3
5320-275-8344		A1H4
5320-275-8344		A1H5
5320-275-8344		A1H6
5320-275-8344		A1H7
5320-275-8344		A1H8
5325-933-4881	5-9	A4E4
5325-997-9040		A4A1E1
5325-997-9040		A4A1E2
5325-997-9040		A4A1E3
5325-997-9040		A4A1E4
5325-997-9040		A4A1E5
5325-997-9040		A4A1E6
5325-997-9040		A4A1E7
5325-997-9040		A4A1E8
5325-997-9040		A4A1E9
5340-954-9297		A4E6
5340-954-9297		A4E7
5340-954-9297		A4E8
5340-954-9297		A4E9
5905-542-7747	5-4	A4A1R4
5905-542-9838	5-6	A2A1A1R1
5905-542-9838	5-6	A2A1A1R7
5905-542-9838	5-6	A2A2A1R1
5905-542-9838	5-6	A2A2A1R7
5905-542-9838	5-6	A2A3A1R1
5905-542-9838	5-6	A2A3A1R7
5905-683-2242	5-4	A4A1R3
5905-686-3369	5-4	A4A1R1
5905-702-4396	5-4	A4A1R6
5905-702-4396	5-4	A4A1R7
5905-811-7912	5-4	A4A1R5
5905-817-6440	5-6	A2A1A1R3
5905-817-6440	5-6	A2A1A1R4
5905-817-6440	5-6	A2A1A1R5
5905-817-6440	5-6	A2A1A1R6
5905-817-6440	5-6	A2A2A1R3
5905-817-6440	5-6	A2A2A1R4
5905-817-6440	5-6	A2A2A1R5
5905-817-6440	5-6	A2A2A1R6
5905-817-6440	5-6	A2A3A1R3
5905-817-6440	5-6	A2A3A1R4
5905-817-6440	5-6	A2A3A1R5
5905-817-6440	5-6	A2A3A1R6
5905-824-3126	5-9	A4R1
5905-834-1601	5-6	A2A1A1R2
5905-834-1601	5-6	A2A1A1R8
5905-834-1601	5-6	A2A2A1R2
5905-834-1601	5-6	A2A2A1R8
5905-834-1601	5-6	A2A3A1R2
5905-834-1601	5-6	A2A3A1R8
5910-945-9722	5-6	A2A1A1C1
5910-945-9722	5-6	A2A1A1C2
5910-945-9722	5-6	A2A2A1C1
5910-945-9722	5-6	A2A2A1C2
5910-945-9722	5-6	A2A3A1C1
5910-945-9722	5-6	A2A3A1C2
5910-966-2375		A4MP4
5920-232-3700	5-10	A2F1
5920-892-9311		A2XF1
5930-655-1514	5-10	A2S1
5940-125-8923		A2E5
5940-125-8923		A2E6
5940-125-8923		A2E7
5940-125-8923		A2E8
5940-125-8923		A2E9
5940-125-8923		A2E10
5940-125-8923		A2E11
5940-125-8923		A2E12
5940-194-2835		A2TH1
5940-194-2835		A2TB2
5940-331-3409		A3TB1
5940-821-7025		A2E29
5940-821-7025		A2E30
5940-821-7025		A2E31
5940-821-7025		A2E32

FEDERAL STOCK NUMBER	FIGURE NUMBER	ITEM NUMBER OR REF DESIGNATION
5940-821-7025		A2E33
5940-821-7025		A2E34
5940-821-7025		A3E8
5940-821-7025		A3E9
5940-821-7025		A3E10
5940-821-7025		A3E11
5940-821-7025		A3E12
5940-946-1639		A2E1
5940-946-1639		A2E2
5940-946-1639		A2E3
5940-946-1639		A2E4
5961-051-9352	5-9	A4CR5
5961-127-1585		A2A1Q2
5961-127-1585		A2A1Q3
5961-127-1585		A2A1Q4
5961-127-1585		A2A1Q5
5961-127-1585	5-5	A2A2Q2
5961-127-1585	5-5	A2A2Q3
5961-127-1585	5-5	A2A2Q4
5961-127-1585	5-5	A2A2Q5
5961-127-1585	5-5	A2A3Q2
5961-127-1585	5-5	A2A3Q3
5961-127-1585	5-5	A2A3Q4
5961-127-1585	5-5	A2A3Q5
5961-127-1585	5-5	A4A1Q1
5961-829-1567	5-9	A4CR3
5961-829-1567	5-9	A4CR4
5961-911-6711		A2A1Q1
5961-911-6711		A2A1Q6
5961-911-6711	5-5	A2A2Q1
5961-911-6711	5-5	A2A2Q6
5961-911-6711	5-5	A2A3Q1
5961-911-6711	5-5	A2A3Q6
5961-911-6711	5-9	A4Q1
5961-917-3502	5-3	A3A1CR1
5961-917-3502	5-3	A3A1CR2
5961-921-3781	5-6	A2A1A1CR1
5961-921-3781	5-6	A2A1A1CR2
5961-921-3781	5-6	A2A1A1CR3
5961-921-3781	5-6	A2A1A1CR4
5961-921-3781	5-6	A2A2A1CR1
5961-921-3781	5-6	A2A2A1CR2
5961-921-3781	5-6	A2A2A1CR3
5961-921-3781	5-6	A2A2A1CR4
5961-921-3781	5-6	A2A3A1CR1
5961-921-3781	5-6	A2A3A1CR2
5961-921-3781	5-6	A2A3A1CR3
5961-921-3781	5-6	A2A3A1CR4
5961-928-6199		A2A1XQ1
5961-928-6199		A2A1XQ6
5961-928-6199		A2A2XQ1
5961-928-6199		A2A2XQ6
5961-928-6199		A2A3XQ1
5961-928-6199		A2A3XQ6
5961-928-6199		A4XQ1
6125-133-9096	5-5	A2A1
6125-133-9096	5-5	A2A2
6125-133-9096	5-5	A2A3
6125-133-9097	5-9	A4M1
6125-133-9098	5-9	A4VR1
6240-155-7860	5-10	A2DS1
8040-078-9774		MP9

FEDERAL STOCK NUMBER	FIGURE NUMBER	ITEM NUMBER OR REF DESIGNATION
Reference No	Mfg Code	Fig No	Ref Desig
CG233U15E1	37942	5-9	A4C1
C10-8A	59730		A2E35
C10-8A	59730		A2E36
C10-8A	59730		A2E37
C10-8A	59730		A2E38
C10-8A	59730		A2E39
C10-8A	59730		A2E40
C10-8A	59730		A2E41
C10-8A	59730		A2E42
C10-8A	59730		A2E43
C10-8A	59730		A2E44
C10-8A	59730		A2E45
C10-8A	59730		A2E46
C10-8A	59730		A2E47
C10-8A	59730		A2E48
C10-8A	59730		A2E49
C10-8A	59730		A2E50
C10-8A	59730		A2E51
C10-8A	59730		A2E52
C10-8A	59730		A2E13
C10-8A	59730		A3E14
C10-8A	59730		A3E15
C10-8A	59730		A3E16
C10-8A	59730		A3E17
C10-8A	59730		A3A1E1
C10-8A	59730		A3A1E2
C10-8A	59730		A4E10
C10-8A	59730		A4E11
C10-8A	59730		A4E12
C10-8A	59730		A4E13
C10-8A	59730		A4E14
C10-8A	59730		A4E15
DC-153-ETC	05820		A1MP8
DC-153-ETC	05820		A2MP2
GOB-1101-1	24324	5-9	A4E5
RW68VR05	91637	5-10	A2R1
RW68VR05	91637	5-10	A2R2
RW68VR05	91637	5-10	A2R3
W O #1	61102		A1MP9
W O #1	61102		A2A4MP3
X-24087	06613		A1MP7
X-24087	06613		A2A4MP2
105201	73734		A3A1E4
105201	73734		A3A1E5
105201	73734		A3A1E6
105201	73734		A3A1E7
1414-10	83330		A4E1
1414-10	83330		A4E2
1414-10	83330		A4E3
1502-3	94139		A2A1A1E1
1502-3	94139		A2A1A1E2
1502-3	94139		A2A1A1E3
1502-3	94139		A2A1A1E4
1502-3	94139		A2A1A1E5
1502-3	94139		A2A1A1E6
1502-3	94139		A2A1A1E7
1502-3	94139		A2A1A1E8
1502-3	94139		A2A1A1E9
1502-3	94139		A2A2A1E1

FEDERAL STOCK NUMBER	FIGURE NUMBER		ITEM NUMBER OR REF DESIGNATION
Reference No	Mfg Code	Fig No	Ref Desig
1502-3	94139		A2A2A1E2
1502-3	94139		A2A2A1E3
1502-3	94139		A2A2A1E4
1502-3	94139		A2A2A1E5
1502-3	94139		A2A2A1E6
1502-3	94139		A2A2A1E7
1502-3	94139		A2A2A1E8
1502-3	94139		A2A2A1E9
1502-3	94139		A2A3A1E1
1502-3	94139		A2A3A1E2
1502-3	94139		A2A3A1E3
1502-3	94139		A2A3A1E4
1502-3	94139		A2A3A1E5
1502-3	94139		A2A3A1E6
1502-3	94139		A2A3A1E7
1502-3	94139		A2A3A1E8
1502-3	94139		A2A3A1E9
33-154	73734		A2E13
33-154	73734		A2E14
33-154	73734		A2E15
33-154	73734		A2E16
33-154	73734		A2E17
33-154	73734		A2E18
33-154	73734		A2E19
33-154	73734		A2E20
33-154	73734		A2E21
33-154	73734		A2E22
33-154	73734		A2E23
33-154	73734		A2E24
33-154	73734		A2E25
33-154	73734		A2E26
33-154	73734		A2E27
33-154	73734		A2E28
34151	06613		A1MP10
34151	06613		A2A4MP4
48M-9-500	12697		A4A1R2
4 COMPOUND	71984		MP10
4 COMPOUND	71984		A2MP3
4 COMPOUND	71984		A2A1MP2
4 COMPOUND	71984		A2A2MP2
4 COMPOUND	71984		A2A3MP2
4 COMPOUND	71984		A3A1MP2
4 COMPOUND	71984		A4MP5
90425	24672	5-9	A4MP2
90425	24672	5-9	A4MP3
91150	24672		A2A1A1MP1
91150	24672		A2A2A1MP1
91150	24672		A2A3A1MP1
91317	24672		A2A1MP1
91317	24672		A2A2MP1
91317	24672		A2A3MP1
91320	24672	5-6	A2A1A1
91320	24672	5-6	A2A2A1
91320	24672	5-6	A2A3A1
91338	24672		A4A1MP1
91340	24672		A1MP3
91340	24672		A1MP4
91340	24672		A1MP5
91340	24672		A1MP6
91341	24672		A3A1MP1
91343	24672		A3MP1
91344	24672		MP4
91346	24672		A4MP1
91352	24672		A2A4MP1
91353	24672		A4A1
91354	24672		MP5
91354	24672		MP6
91354	24672		MP7
91354	24672		MP8
91355	24672		A1A1MP1
91355	24672		A1A1MP2
91361	24672		A1A1
31371	24672		A1A1MP3
91374	24672		A1MP1
91374	24672		A1MP2
91377	24672		A2MP1
91379	24672		A3A1E3
91386	24672		A3A1
91388	24672		A2A4
91389	24672		A2
91394	24672	5-3	A3T1
91395	24672		A3L1
91396	24672		A3
91397	24672		A4
91398	24672		A1
91424-1	24672		MP1
91424-2	24672		MP2
91424-3	24672		MP3
95-9110-0931-102	72619		A2XDS1

CROSS REFERENCE TO PAGE NUMBER

SECTION VII INDEX- REFERENCE DESIGNATION
CROSS REFERENCE TO PAGE NUMBER (CONTINUED)

REFERENCE DESIGNATION	PAGE NUMBER
A2H56	C-20
A21157	C-20
A2H56	C-20
A2H59	C-20
A2H60	C-20
A2H61	C-20
A2H62	C-21
A2H63	C-21
A2H64	C-21
A2H65	C-21
A2H66	C-21
A2H67	C-21
A2H68	C-21
A2H69	C-21
A2H70	C-21
A2H71	C-21
A2H72	C-21
A2H73	C-21
A2R74	C-21
A2H75	C-21
A2H76	C-21
A2R77	C-21
A2H78	C-21
A2H79	C-21
A2H80	C-21
A2H81	C-21
A2H82	C-21
A2H83	C-21
A2H84	C-21
A2H85	C-21
A2H86	C-21
A2MPl	C-8
A2MP2	C-8
A2MP3	C-12
A2Rl	C-11
A2R2	C-11
A3R3	C-11
A2Sl	C-12
A2TB1	C-19
A2TB2	C-19
A2XDSl	C-8
A2XFl	C-8
A2Al	C-12
A2AlHl	C-13
A2A1H2	C-13
A2A1H3	C-13
A2AlH4	C-13
A2AlH5	C-13
A2AlH6	C-13
A2AlH7	C-13
A2AlH8	C-13
A2AlH9	C-13
A2AlH10	C-13
A2AlHll	C-13
A2AlH12	C-13
A2AlH13	C-14
A2AlH14	C-14
A2AlMPl	C-13
A2AlMP2	C-13
A2AlQl	C-14
A2AlQ2	C-14
A2AlQ3	C-14
A2AlQ4	C-14
A2AlQ5	C-14
A2AlQ6	C-14
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A2AlXQ6	C-14
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A2A1A1Cl	C-12
A2AlAlC2	C-12
A2A1A1CRl	C-12
A2A1A1CR2	C-12
A2A1A1CR3	C-12
A2A1A1CR4	C-12
A2A1A1El	C-13
A2A1A1E2	C-13
A2A1A1E3	C-13
A2A1A1E4	C-13
A2A1A1E5	C-13
A2A1A1E6	C-13
A2A1A1E7	C-13
A2A1A1E8	C-13
A2A1A1E9	C-13
A2A1A1MPl	C-12
A2A1A1Rl	C-12
A2A1A1R2	C-12
A2A1A1R3	C-12
A2A1A1R4	C-12
A2A1A1R5	C-12
A2A1A1R6	C-12
A2A1A1R7	C-12
A2A1A1R8	C-12
A2A2	C-14
A2A2Hl	C-15
A2A2H2	C-15
A2A2H3	C-15
A2A2H4	C-15
A2A2H5	C-15
A2A2H6	C-15
A2A2H7	C-15
A2A2H8	C-15
A2A2H9	C-16
A2A2H10	C-16
A2A2HP11	C-16
A2A2H12	C-16
A2A2H13	C-16
A2A2H14	C-16
A2A2MPl	C-15
A2A2MP2	C-16
A2A2Ql	C-16
A2A2Q2	C-16
A2A2Q3	C-16
A2A2Q4	C-16
A2A2Q5	C-16
A2A2Q6	C-16
A2A2XQl	C-16
AlA2XQ6	C-16
A2A2A1	C-14
A2A2A1C1	C-14
A2A2AlC2	C-14
A2A2AlCRl	C-15
A2A2AlCR2	C-15
A2A2AlCR3	C-15
A2A2AlCR4	C-15
A2A2AlEl	C-15
A242AlE2	C-15
A2A2AlE3	C-15
A2A2AlE4	C-15
A2A2AlE5	C-15
A2A2AlE6	C-15
A2A2AlE7	C-15
A2A2AlE8	C-15
A2A2AlE9	C-15
A2A2AlMPl	C-14
A2A3AlRl	C-14
A2A2AlR2	C-14
A2A2AlR3	C-14
A2A2AlR4	C-14
A2A2AlR5	C-14
A2A2AlR6	C-15
A2A2AlR7	C-14
A2A2AlR8	C-14
A2A3	C-16
A2A3H1	C-17
A2A3H2	C-17
A2A3H3	C-18
A2A3H4	C-18
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A2A3H6	C-18
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A2A3H9	C-18
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A2A3H12	C-18
A2A3H13	C-18
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A2A3MP2	C-18
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A2A3AlC2	C-16
A2A3AlCRl	C-17
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A2A3AlE5	C-17
A2A3AlE6	C-17
A2A3AlE7	C-17
A2A3AlE8	C-17
A2A3AlE9	C-17
A2A3AlMPl	C-16
A2A3AlRl	C-16
A2A3AlR2	C-17
A2A3AlR3	C-17
A2A3AlR4	C-17
A2A3AlR5	C-17
A2A3AlR6	C-17
A2A3AlR7	C-16
A2A3AlR8	C-17

CROSS REFERENCE TO PAGE NUMBER (CONTINUED)

INDEX

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Official:
KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

Distribution:
Active Army:
CNGB (1)
Dir of Trans (1)
CofEngrs (1)
TSG (1)
CofSptS (1)
ACSC-E (2)
USAMB (10)
USAARENBD (2)
CONARC (2)
USAMC (2)
USAMICOM (2)
USAECOM (2)
ARADCOM (2)
OS Maj Comd (2)
USACDCEC (10)
USASTRATCOM (10)
USAESC (50)
USATECOM (2)
USASTRATCOM EUR (50)
USAREUR (25)
Armies (1) except
7th USA (25)
SigFLDMS (2)
USASA (2)
USACDCCEA (1)
USACDCCEA
Ft Huachuca (1)
Army Depots (1) except
LBAD (10)
SAAD (15)
TOAD (14)
LEAD (7)
ATAD (10)
Svc Colleges (1)
GENDEP (1)
Sig Sec GEN DEP (6)
Sig Dep (6)
USACRREL (2)
WSMR (2)
Fort Carson (5)
USAERDAA (2)
USAERDAW (2)
USACSA (3)
DCA (2)
Units org under fol TOE:
(2 cys each)
11-158
11-302
11-303
11-367
11-368
11-500(AA-AC)
29-134
29-136

NG: None
USAR None
For explanation of abbreviations used, see AR 310-50.

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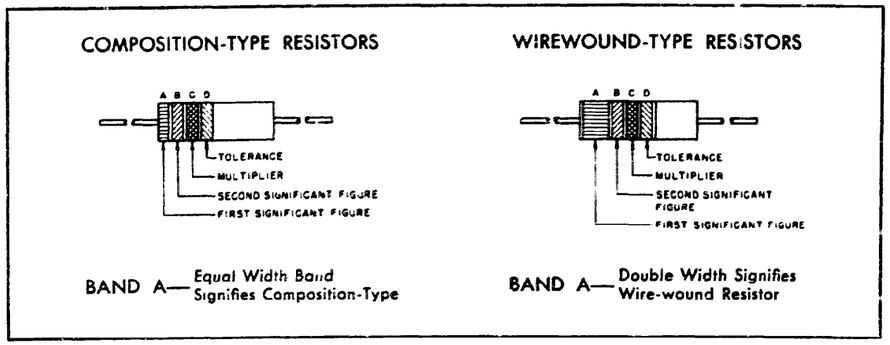
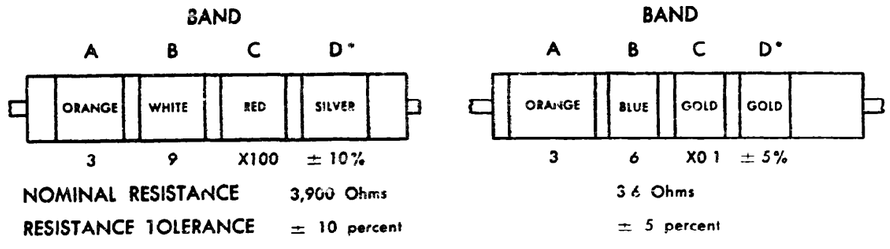


COLOR CODE TABLE

BAND A		BAND B		BAND C		BAND D*	
COLOR	FIRST SIGNIFICANT FIGURE	COLOR	SECOND SIGNIFICANT FIGURE	COLOR	MULTIPLIER	COLOR	RESISTANCE TOLERANCE (PERCENT)
BLACK	0	BLACK	0	BLACK	1		
BROWN	1	BROWN	1	BROWN	10		
RED	2	RED	2	RED	100		
ORANGE	3	ORANGE	3	ORANGE	1,000		
YELLOW	4	YELLOW	4	YELLOW	10,000	SILVER	± 10
GREEN	5	GREEN	5	GREEN	100,000	GOLD	± 5
BLUE	6	BLUE	6	BLUE	1,000,000		
PURPLE (VIOLET)	7	PURPLE (VIOLET)	7				
GRAY	8	GRAY	8	SILVER	0 0.		
WHITE	9	WHITE	9	GOLD	0 1		

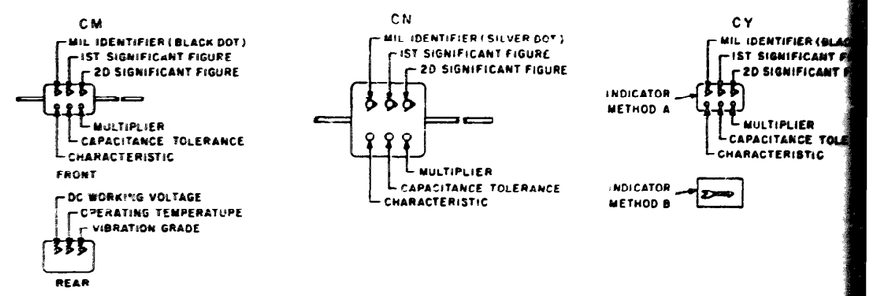
EXAMPLES OF COLOR CODING



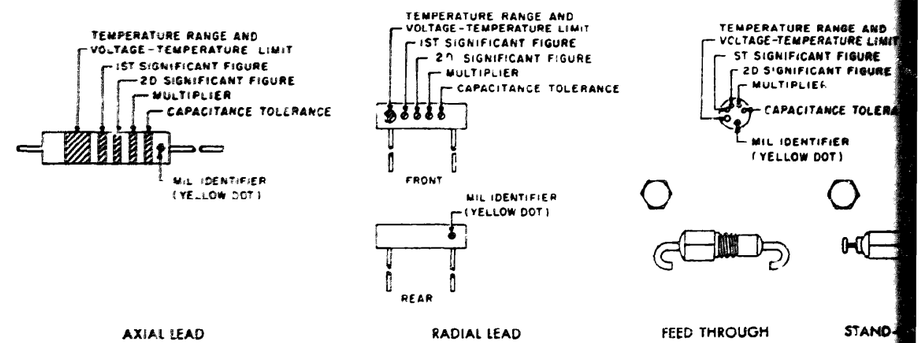
*If Band D is omitted, the resistor tolerance is ±20%, and the resistor is not Mil-Std

A COLOR CODE MARKING FOR MILITARY STANDARD RESISTORS

GROUP I Capacitors, Fixed, Various-Dielectrics, Styles CM, CN, CY, and CB



GROUP II Capacitors, Fixed Ceramic-Dielectric (General Purpose) Style CK



GROUP III Capacitors, Fixed, Ceramic-Dieletric (Temperature Compensating) Style CC

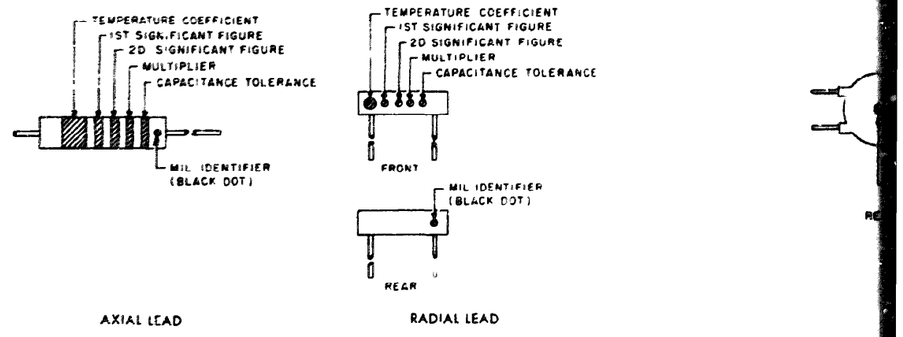
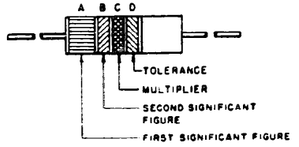


Figure 7-1 *Color code chart for*

WIREWOUND-TYPE RESISTORS



BAND A— Double Width Signifies Wire-wound Resistor

Type

OLOR CODE TABLE

B	BAND C		BAND D*	
ECOND NIFICANT FIGURE	COLOR	MULTIPLIER	COLOR	RESISTANCE TOLERANCE (PERCENT)
0	BLACK	1		
1	BROWN	10		
2	RED	100		
3	ORANGE	1,000		
4	YELLOW	10,000	SILVER	± 10
5	GREEN	100,000	GOLD	± 5
6	BLUE	1 000,000		
7				
8	SILVER	0 01		
9	GOLD	0 1		

LES OF COLOR CODING

BAND

	A	B	C	D*
	ORANGE	BLUE	GOLD	GOLD
	3	6	X0 1	± 5%

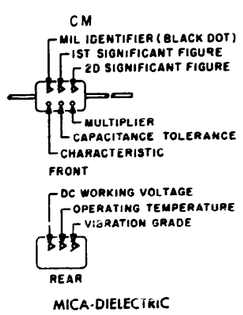
hms 3 6 Ohms

ercent ± 5 percent

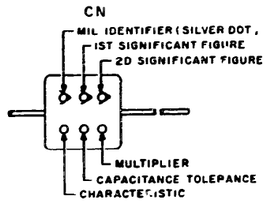
is ± 20%, and the resistor is not Mil-Std

ING FOR MILITARY STANDARD RESISTORS

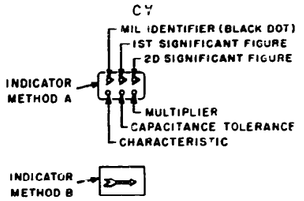
GROUP I Capacitors, Fixed, Various-Dielectrics, Styles CM, CN, CY, and CB



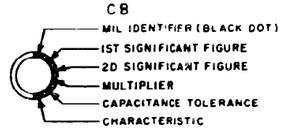
MICA-DIELECTRIC



PAPER-DIELECTRIC

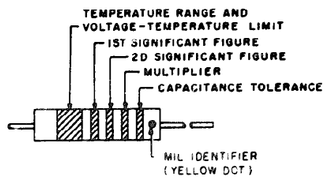


GLASS-DIELECTRIC, GLASS CASE

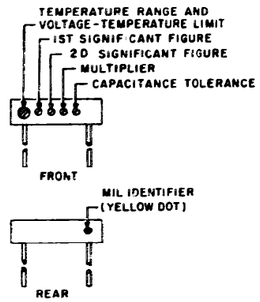


MICA, BUTTON TYPE

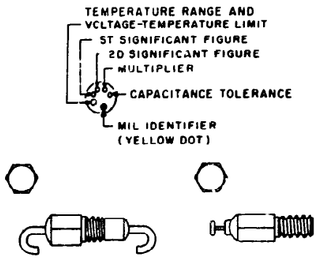
GROUP II Capacitors, Fixed Ceramic-Dielectric (General Purpose) Style CK



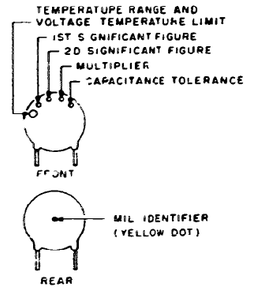
AXIAL LEAD



RADIAL LEAD

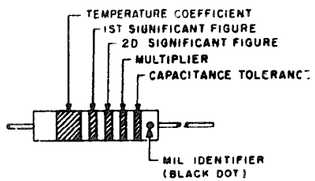


FEED-THROUGH STAND-OFF

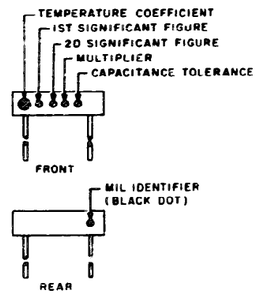


DISK-TYPE

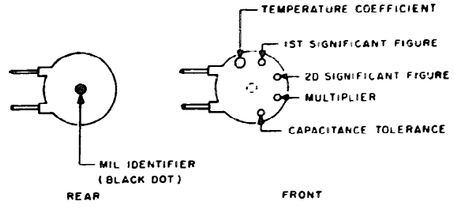
GROUP III Capacitors, Fixed, Ceramic-Dieletric (Temperature Compensating) Style CC



AXIAL LEAD



RADIAL LEAD



DISK-TYPE

TABLE I – For use with Group I, Styles CM, CN, CY and

COLOR	MIL ID	1st SIG FIG	2nd SIG FIG	MULTIPLIER	CAPAC
					CM
BLACK	CM CY CB	0	0	1	
BROWN		1	1	10	
RED		2	2	100	2%
ORANGE		3	3	1 000	
YELLOW		4	4	10 000	
GREEN		5	5		5%
BLUE		6	6		
PURPLE (VIOLET)		7	7		
GREY		8	8		
WHITE		9	9		
GOLD				0 1	
SILVER	CN				10%

TABLE II – For use with Group II, General Purpose, Sty

COLOR	TEMP RANGE AND VOLTAGE – TEMP LIMITS[3]	1st SIG FIG	2nd SIG FIG	MULTIPLIER	CAP TO
BLACK		0	0		
BROWN	AW	1	1	0	
RED	AX	2	2	00	
ORANGE	BX	3	3	1 000	
YELLOW	AY	4	4	10 000	
GREEN	CZ	5	5		
BLUE	BY	6	6		
PURPLE (VIOLET)		7	7		
GREY		8	8		
WHITE		9	9		
GOLD					
SILVER					

1 The multiplier is the number by which the two significant

2 Letters indicate the Characteristics designated in applicab

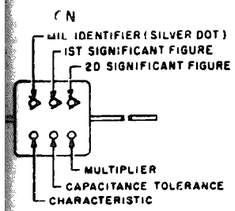
3 Letters indicate the temperature range and voltage tempe

4 Temperature coefficient in parts per million per degree c

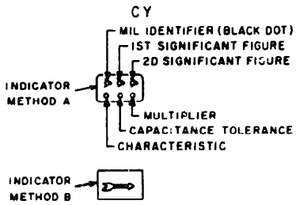
B COLOR CODE MARKING FOR MILITARY STANDARD CAPACITORS

Figure 7-1. Color code chart for MIL-Standard resistors, inductors and Capacitors.

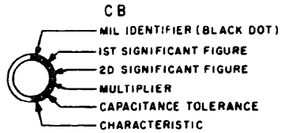
ics, Styles CM, CN, CY, and CB



PAPER-DIELECTRIC

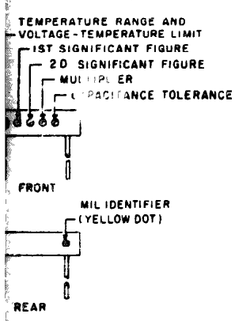


GLASS-DIELECTRIC, GLASS CASE

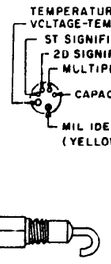


MICA, BUTTON TYPE

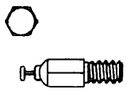
ic (General Purpose) Style CK



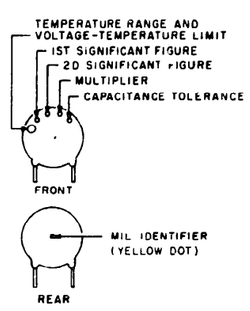
RADIAL LEAD



FEED-THROUGH

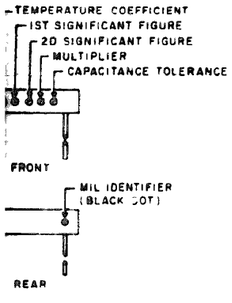


STAND-OFF

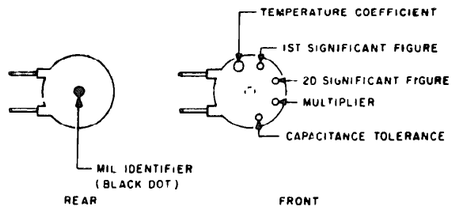


DISK-TYPE

ic (Temperature Compensating) Style CC



RADIAL LEAD



DISK-TYPE

COLOR CODE TABLES

TABLE I – For use with Group I, Styles CM, CN, CY and CB

COLOR	MIL ID	1st SIG FIG	2nd SIG FIG	MULTIPLIER[1]	CAPACITANCE TOLERANCE				CHARACTERISTIC[2]				DC WORKING VOLTAGE	OPERATING TEMP RANGE	VIBRATION GRADE
					CM	CN	CY	CB	CM	CN	CY	CB	CM	CM	CM
BLACK	CM CY CB	0	0	1			± 20%	± 20%		A				−55° to +70°C	10–55 cps
BROWN		1	1	10					B	E		B			
RED		2	2	100	± 2%		± 2%	± 2%	C		C			−55° to +85°C	
ORANGE		3	3	1,000		± 30%			D			D	300		
YELLOW		4	4	10 000					E					−55° to +125°C	10–2,000 cps
GREEN		5	5		± 5%				F				500		
BLUE		6	6											−55° to +150°C	
PURPLE (VIOLET)		7	7												
GREY		8	8												
WHITE		9	9												
GOLD				0 1			± 5%	± 5%							
SILVER	CN				± 10%	± 10%	10%	± 10%							

TABLE II – For use with Group II, General Purpose, Style CK

COLOR	TEMP RANGE AND VOLTAGE – TEMP LIMITS[3]	1st SIG FIG	2nd SIG FIG	MULTIPLIER[1]	CAPACITANCE TOLERANCE	MIL ID
BLACK		0	0	1	± 20%	
BROWN	AW	1	1	10	± 10%	
RED	AX	2	2	100		
ORANGE	BX	3	3	1 000		
YELLOW	AV	4	4	10 000		CK
GREEN	CZ	5	5			
BLUE	BV	6	6			
PURPLE (VIOLET)		7	7			
GREY		8	8			
WHITE		9	9			
GOLD						
SILVER						

TABLE III – For use with Group III, Temperature Compensating, Style CC

COLOR	TEMPERATURE COEFFICIENT[4]	1st SIG FIG	2nd SIG FIG	MULTIPLIER[1]	CAPACITANCE TOLERANCE		MIL ID
					Capacitances over 10uuf	Capacitances 10uuf or less	
BLACK	0	0	0	1		± 2 0uuf	CC
BROWN	−30	1	1	10	± 1%		
RED	80	2	2	100	± 2%	± 0 25uuf	
ORANGE	150	3	3	1 000			
YELLOW	−220	4	4				
GREEN	330	5	5		± 5%	± 0 5uuf	
BLUE	470	6	6				
PURPLE (VIOLET)	750	7	7				
GREY		8	8	0 01			
WHITE		9	9	0 1	± 10%		
GOLD	± 100					± 1 0uuf	
SILVER							

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–91, MIL–C–11272, and MIL–C–10950 respectively

3 Letters indicate the temperature range and voltage temperature limits designated in MIL–C–11015

4 Temperature coefficient in parts per million per degree centigrade

B COLOR CODE MARKING FOR MILITARY STANDARD CAPACITORS

STD-CC

Figure 7-1 Color code chart for MIL-Standard resistors, inductors and capacitors.

1 HOUSING ASSY, POWER CONVERTER (A1)
2 PANEL ASSY, CONVERTER (A2)
3 PLATE ASSY, MOUNTING, TOP (A4)
4 PLATE, IDENTIFICATION
5 PLATE, DESIGNATION
6 SCREW, MACHINE, PAN HD, SELF SEALING, 6-32 X 3/8
7 SCREW, MACHINE, PAN HD, 8-32 X 1/2
8 SEALING COMPOUND, SILASTIC
9 PLATE ASSY, MOUNTING, BOTTOM (A3)
10 SPACER, SLEEVE
11 SCREW, MACHINE FLAT HD, 8-32 X 1/4
12 SCREW, MACHINE, PAN HD, 8-32 X 1/4
13 PLATE, DESIGNATION
14 PLATE, DESIGNATION
15 SILICONE COMPOUND

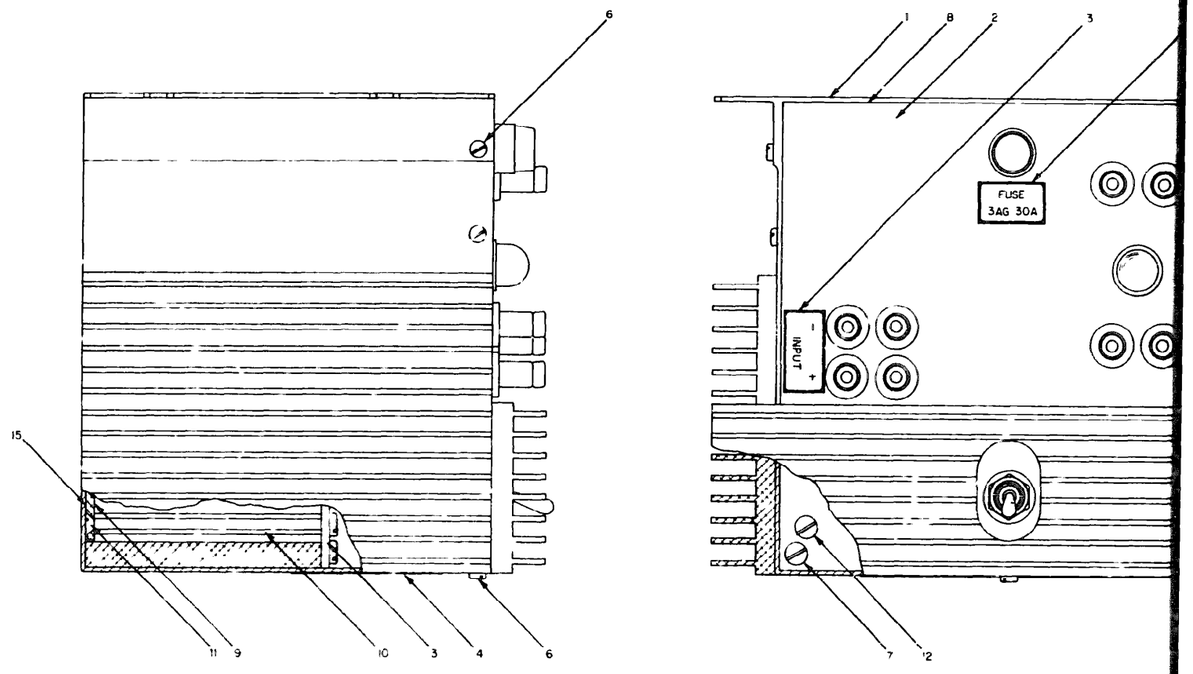


Figure 7-2. Converter assembly, electrical

1 HOUSING ASSY, POWER CONVERTER (A1)
2 PANEL ASSY, CONVERTER (A2)
3 PLATE ASSY, MOUNTING, TOP (A4)
4 PLATE, IDENTIFICATION
5 PLATE, DESIGNATION
6 SCREW, MACHINE, PAN HD, SELF SEALING, 6-32 X 3/8
7 SCREW, MACHINE, PAN HD, 6-32 X 1/2
8 SEALING COMPOUND, SILASTIC
9 PLATE ASSY, MOUNTING, BOTTOM (A3)
10 SPACER, SLEEVE
11 SCREW, MACHINE, FLAT HD, 8-32 X 1/4
12 SCREW, MACHINE, PAN HD, 8-32 X 1/4
13 PLATE, DESIGNATION
14 PLATE, DESIGNATION
15 SILICONE COMPOUND

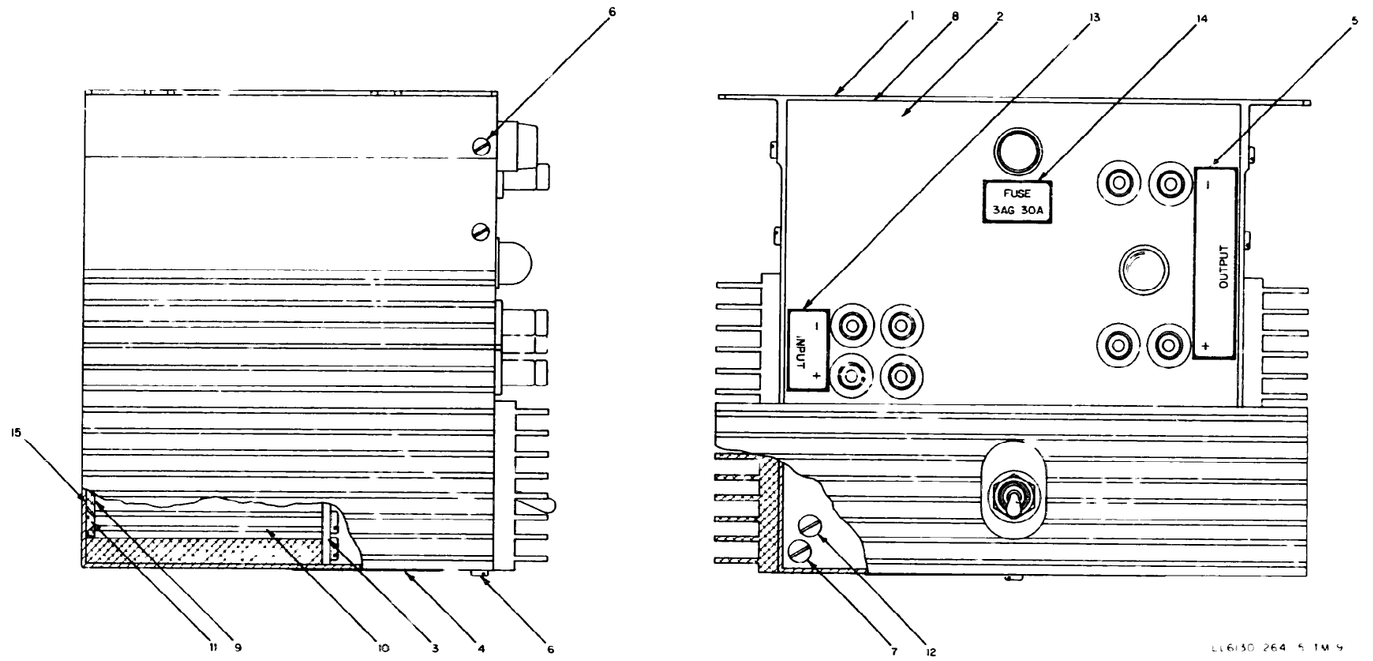


Figure 7-2. Converter assembly, electrical

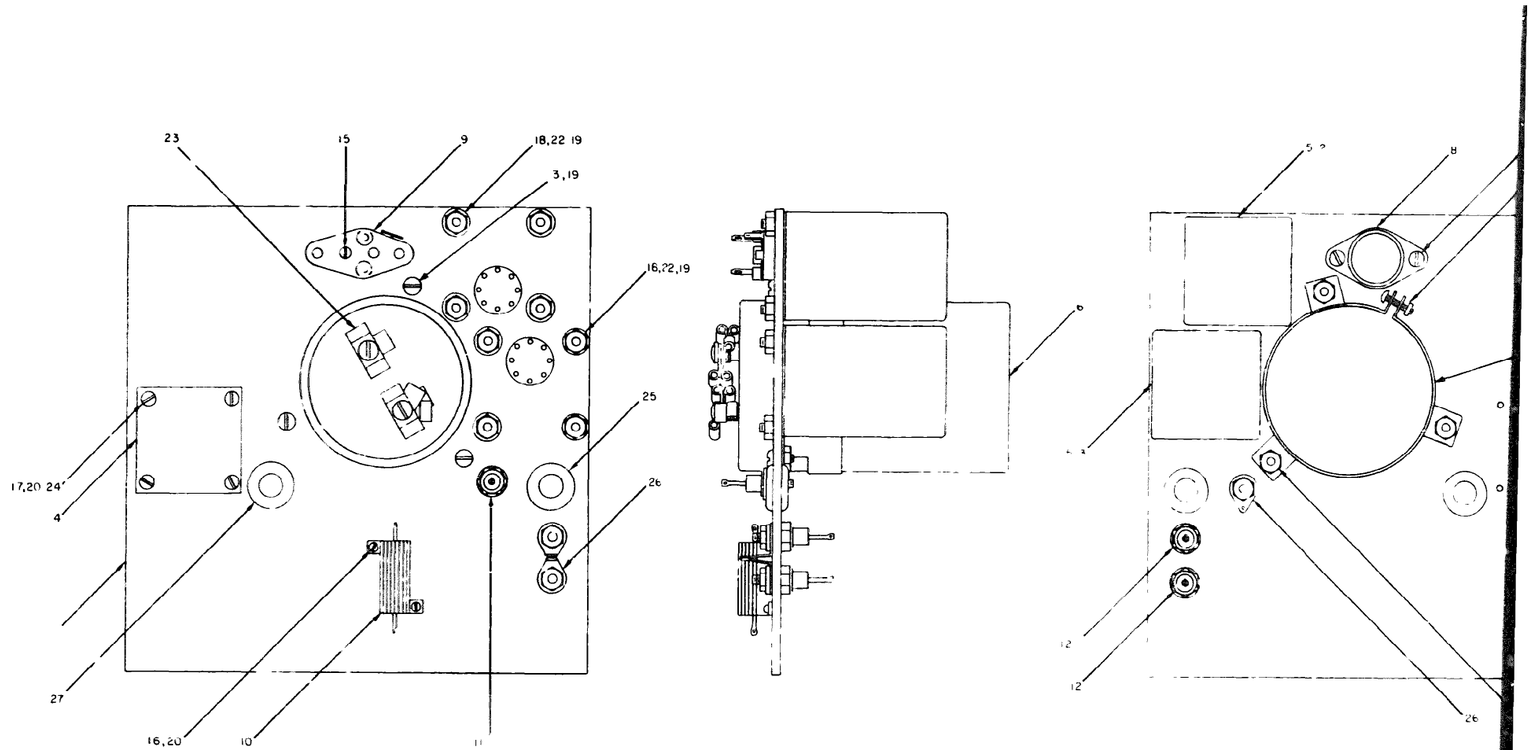
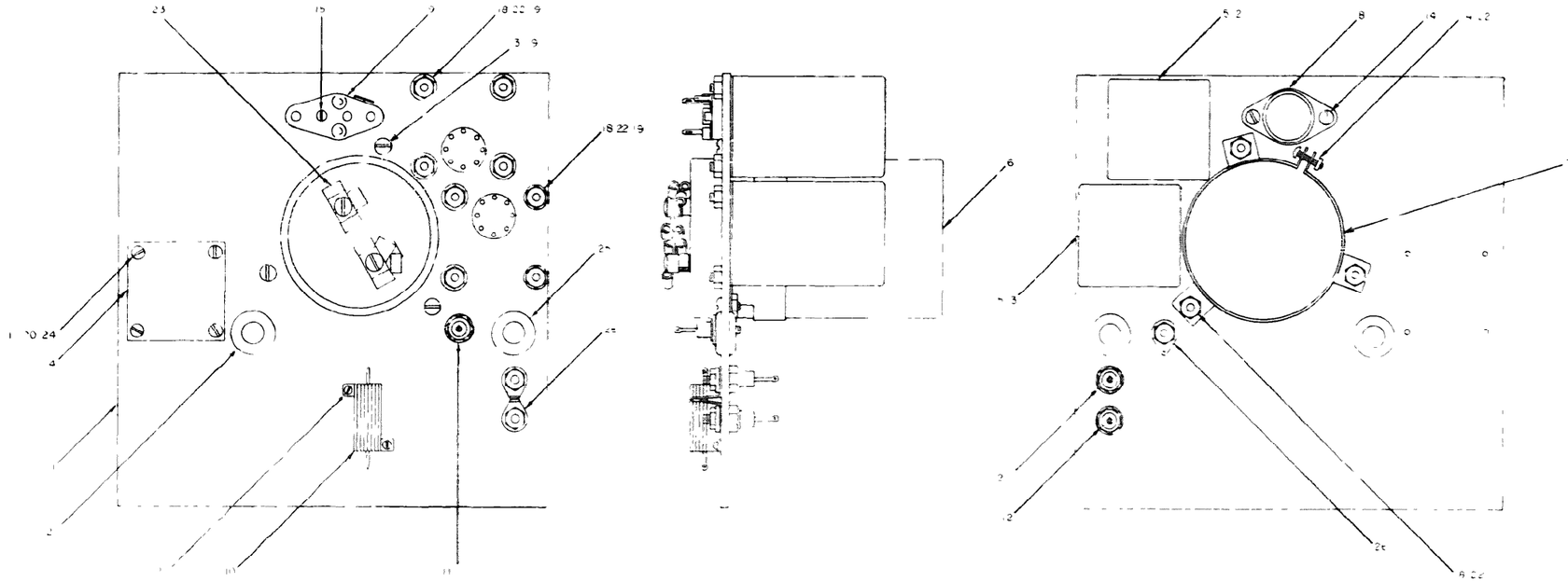


	PLATE MOUNTING		
1	VOLTAGE REGULATOR		
2	CLOCK ASSY		
4	CIRCUIT CARD		
5	BASKET MOUNTING		
6	CAPACITOR		
	RESISTOR		
8	TRANSISTOR		
9	COVER		
10	RESISTOR FIXED WIREWOUND (OPT 25 W 1%)		
11	SEMICONDUCTOR DEVICE DIODE (CR 5)		
12	SEMICONDUCTOR DEVICE DIODE (CR 4)		
13	SCREW MACHINE PAN HD 6-32 X 4		
14	SCREW MACHINE PAN HD 6-32 X 2		
15	SCREW MACHINE FILLISTER HEAD 4-40 X 3/8		
16	SCREW MACHINE FILLISTER HEAD 4-40 X 4		
17	SCREW MACHINE PAN 4-40 X 3/4		
18	WASHER FLAT NO 6		
19	WASHER FLAT NO 8		
20	WASHER LOCK INT TOOTH NO 4		
21	WASHER SPLIT LOCK NO 6		
22	NUT PLAIN HEX 6-32		
23	TERMINAL LUG		
24	SPACER SLEEVE		
25	GROMMET PLASTIC		
26	TERMINAL LUG		
27	GROMMET RUBBER		

Figure 7-3. Plate assembly, top mounting



1 PLATE MOUNTING TOP
2 VOLTAGE REGULATOR ASSY (VR1)
3 CLOCK ASSY (M1)
4 CIRCUIT CARD ASSY OVERSHOOT (A)
5 GASKET MOUNTING RUBBER
6 CAPACITOR (C1)
RETAINER CAPACITOR
8 TRANSISTOR Q1)
9 SOCKET SEMICONDUCTOR DE ICE
10 RESISTOR - WIREWOUND 10 OHM 25 W 10% R1)
11 SEMICONDUCTOR DEVICE DIODE (CR5)
12 SEMICONDUCTOR DEVICE DIODE (CR3 CR4
13 SCREW MACHINE PAN HD 6-32 X 1 4
14 SCREW MACHINE PAN HD 6-32 X 1/2
15 SCREW MACHINE FILLISTER HEAD 4 40 X 3 8
16 SCREW MACHINE FILLISTER HEAD 4 40 X 1/4
17 SCREW MACHINE PAN HEAD 4 40 X 3/4
18 WASHER LOCK INT TOOTH NO 6
19 WASHER FLAT NO 6
20 WASHER LOCK INT TOOTH NO 4
21 WASHER SPLIT LOCK NO 6
22 NUT PLAIN HEX 6-32
23 TERMINAL LUG
24 SPACER SLEEVE
25 GROMMET PLASTIC
26 TERMINAL LUG
27 GROMMET RUBBER

Figure 7-3. Plate assembly, top mounting

1	PANEL, CONVERTER (A4)
2	HT SK, ELECTRICAL ELECTRONIC COMPONENT
3	LAMPHOLDER (XDS1)
4	LAMP, INCANDESCENT (DS1)
5	FUSEHOLDER (XF1)
6	FUSE, CARTRIDGE, 3AG, 30A, 32V (F1)
7	POST, BINDING
8	INSULATOR, WASHER NO 10
9	LINK, TERMINAL CONNECTING
10	NUT, PLAIN, HEXAGON, 10-24
11	ASSEMBLY (A1, A2, A3)
12	NUT, PLAIN, HEXAGON, 6-32
13	SWITCH, TOGGLE (S1)
14	RES, FIXED, WIRE WOUND, 05Ω, 10W, ±3% (R1 R2, R3)
15	TERMINAL BOARD
16	WASHER, LOCK, INT TOOTH NO 6
17	TERMINAL, LUG
18	TERMINAL, LUG
19	WASHER, LOCK, INT TOOTH NO 10
20	SCREW, MACH, FIL H, 6-32 X 1/4

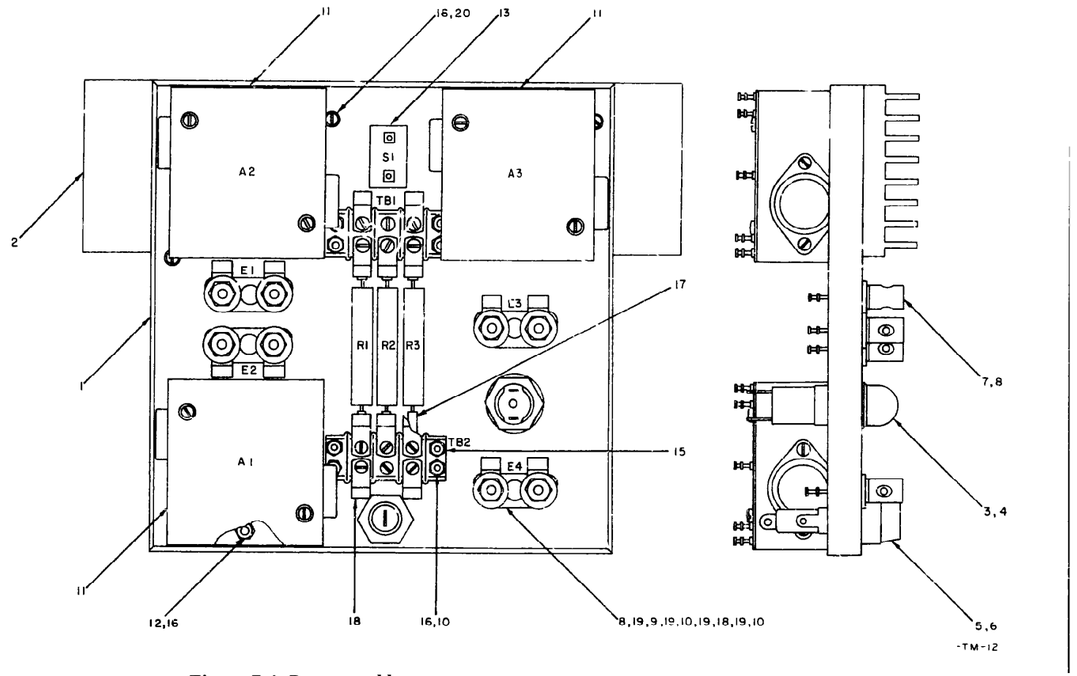


Figure 7-4. Pan assembly, converter

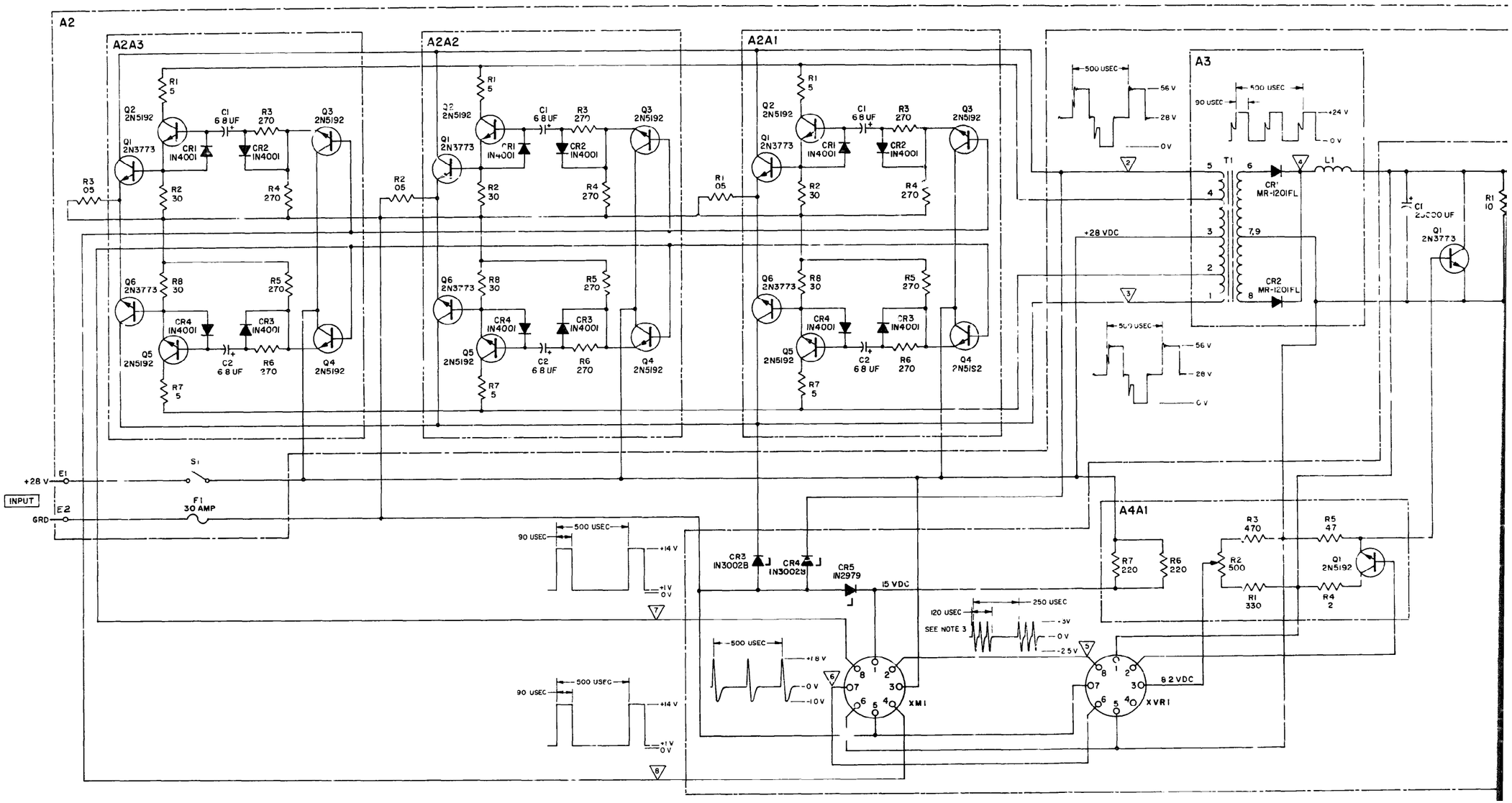
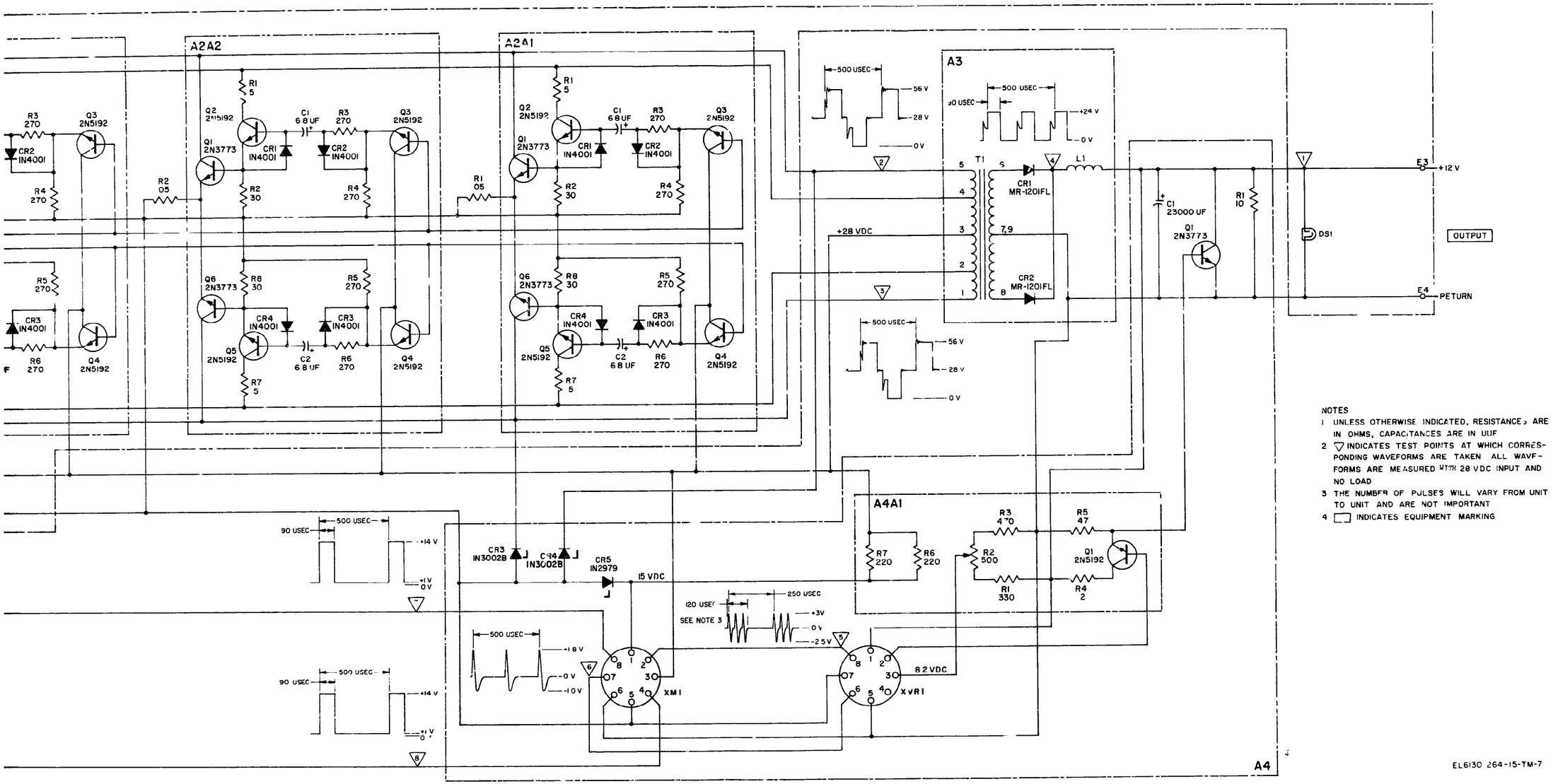


Figure 7-5. Dc/dc converter, schematic diagram



NOTES

1 UNLESS OTHERWISE INDICATED, RESISTANCES ARE IN OHMS, CAPACITANCES ARE IN UUF

2 ▽ INDICATES TEST POINTS AT WHICH CORRESPONDING WAVEFORMS ARE TAKEN ALL WAVEFORMS ARE MEASURED WITH 28 VDC INPUT AND NO LOAD

3 THE NUMBER OF PULSES WILL VARY FROM UNIT TO UNIT AND ARE NOT IMPORTANT

4 ▭ INDICATES EQUIPMENT MARKING

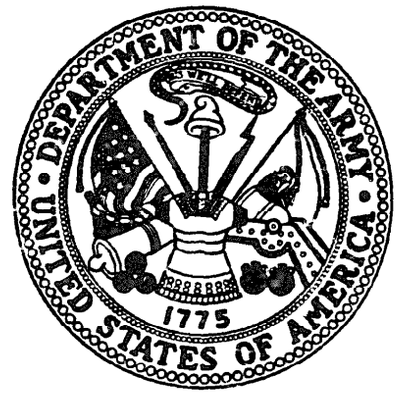
EL6130 264-15-TM-7

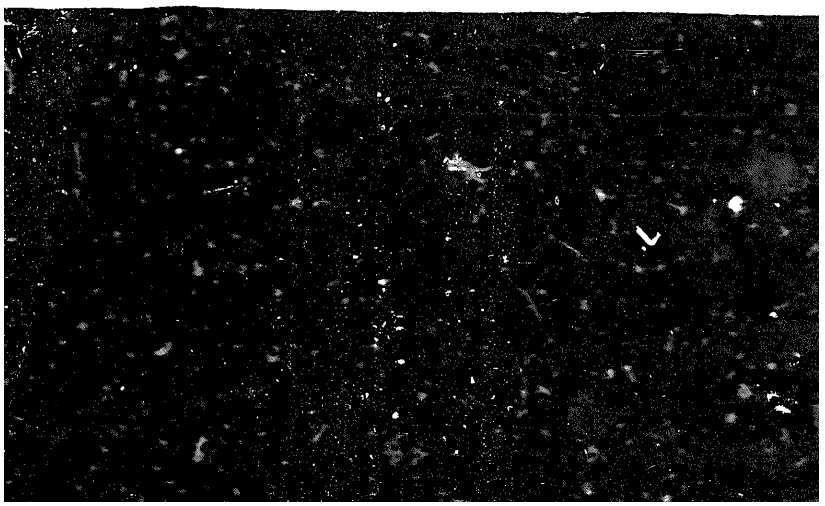
Figure 7-5. Dc/dc converter, schematic diagram.

END

12-08-82

DATE





DEPARTMENT OF THE ARMY

MICROFORM
TEST TARGET