

TM

9-4931-381-14&P-2

TECHNICAL MANUAL

**OPERATOR'S ORGANIZATIONAL, DIRECT SUPPORT,
AND GENERAL SUPPORT MAINTENANCE MANUAL
INCLUDING REPAIR PARTS AND SPECIAL TOOLS
LIST (INCLUDING DEPOT MAINTENANCE REPAIR
PARTS AND SPECIAL TOOLS)**

**VOLUME IV
MAINTENANCE**

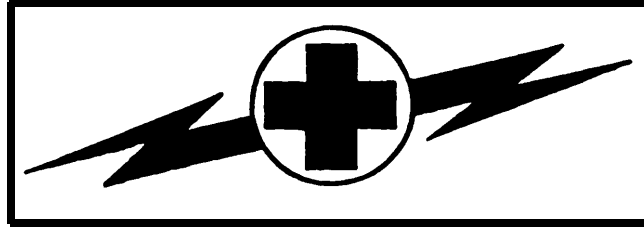
THERMAL SYSTEM TEST SET

(4931-01-119-7092)

DISTRIBUTION STATEMENT: Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

DECEMBER 1986



WARNING

HIGH VOLTAGE

is used in the operation of this equipment.

DEATH ON CONTACT

may result if personnel fail to observe safety precautions.

Never work on electronic equipment unless there is another person nearby. He should be familiar with the operation and hazards of the equipment. He should also be competent in giving first aid. When the technician is helped by operators, he must warn them about dangerous areas.

Whenever possible, the power supply to the equipment must be shut off before beginning work on the equipment. Take special care to ground every capacitor likely to hold a dangerous potential. When working inside the equipment after the power has been turned off, always ground every part before touching it.

Be careful not to contact high-voltage connections when installing or operating this equipment.

Whenever possible, keep one hand away from the equipment to reduce the hazard of current flowing through vital organs of the body.

WARNING

Do not be misled by the term; "low voltage." Potentials as low as 50 volts may cause death.

For artificial respiration, refer to FM 21-11.



WARNING

RADIATION HAZARD

The antireflective coating on all infrared optics contains thoriurn fluoride which is slightly radioactive. The only potential hazard involves ingestion (swallowing or inhaling) of this coating material. Dispose of broken lens, etc., in accordance with AR 385-11.

DON'T TAKE CHANCES!

Change

No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 2 July 1987

DIRECT SUPPORT AND GENERAL SUPPORT
MAINTENANCE MANUAL

TROUBLESHOOTING, THERMAL IMAGING SYSTEM

TANK, COMBAT, FULL-TRACKED:

105-MM GUN MI

(2350-01-061-2445)

AND

TANK, COMBAT, FULL-TRACKED:

105-MM GUN IPMI

(2350-01-136-8738)

AND

TANK, COMBAT, FULL-TRACKED:

120-MM GUN, MIAI

(2350-01-087-1095)

GENERAL ABRAMS

SIGHTING AND FIRE CONTROL

TM 9-4931-381-14&P-2, 31 December 1986, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. New or changed information is indicated by a vertical bar in the margin of the page.

Remove Pages

Insert Pages

Volume IV

2-5 through 2-10

2-27 through 2-32

None

None

2-161 and 2-162

3-9 through 3-16/(3-17 blank)

Index-25 and Index-26

2-5 through 2-8

2-27 through 2-32

2-96.1 through 2-96.3/(2-96.4 blank)

2-116.1 and 2-116.2

2-161 and 2-162

3-9 through 3-18

Index-25 and Index-26

File this change sheet in back of the publication for reference purposes.

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-41, Direct and General Support Maintenance requirements for Sighting Components, Fire Control for M1 Tank.

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 31 December 1986

TECHNICAL MANUAL
OPERATOR'S, ORGANIZATIONAL,
DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST
INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS
THERMAL SYSTEM TEST SET
(4931-01-119-7092)

RPSTL current as of technical manual date

Software PN 12303273 Revision D, current as of technical manual date.

Reporting Errors and Recommending Improvements

You can help improve this manual. If you find any mistakes or if you know a way to improve the procedures, please let us know. Mail your letter DA Form 2028 (Recommended Changes to Publication and Blank Forms), or DA Form 2028-2 located in back of this manual direct to: Commander, U.S. Army Armament, Munitions and Chemical Command, Attn: AMSMC-MAS, Rock island, Illinois 61299-6000. A reply will be furnished to you.

DISTRIBUTION STATEMENT : Approved for public release; distribution is unlimited.

NOTE

This manual is divided into three bindings. The first binding consists of volumes I, II, and III and front matter for all three bindings. The second binding consists of volume IV and an index for volumes I through IV. Test set schematic and functional diagrams are contained in the third binding.

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TM 9-4931-381-14&P-2

TECHNICAL MANUAL

**VOLUME IV
MAINTENANCE**

THERMAL SYSTEM TEST SET

CHAPTER I GENERAL MAINTENANCE INFORMATION

1-1. Scope

This volume contains maintenance tasks for the thermal system test set. The maintenance procedures and information presented in this volume are intended for repair of the Thermal System Test Set.

1-2. Equipment Group Breakdown. The chapters in this volume are broken down by maintenance groups as follows:

- a. Thermal System Test Controller (chapter 2)
- b. Accessory Storage Assembly (chapter 3)
- c. Holding Fixtures (chapter 4)

1-3. Cleaning.

WARNING

Many solvents burn easily. Do not use solvents near open fire. Solvents may give off harmful vapor. Use in well ventilated area.

a. Mechanical Parts. Use one of the following methods to remove dirt, grease, oil, etc. from all metal surfaces:

- o Dip tank: stir or shake fast for 1 minute in each tank.
- o Vapor degreaser: soak for about 2 to 3 minutes.
- o Wipe with rags: dip rags in dry cleaning solvent.
- o Stiff brush or scraper: clean hard-to-get at areas with stiff-bristle brush or scraper.

b. Electrical Parts. Clean dirt, grease, oil, etc. from metal surfaces, connectors, and parts by dipping into container of freon (Item 13, appendix C) and acid swabbing brush (Item 8, appendix C). Dip stiff brush into freon and brush off parts you cannot dip. Dry with compressed, oil-free air or wipe dry with clean rag (Item 24, appendix C).

1-4. Painting. Look in TM 9-208-1 for ways to clean and mix material for pointing. Look in TM 9-213 for ways to paint and supplies to use.

1-5. Disposition of Parts. During maintenance tasks you will be told to "get rid of" and "turn in" bad and replaced parts. These terms are defined as follows:

- **Get rid of** - Dispose of metal parts or parts containing metal (lockwashers, cotter pins, gaskets, etc.) in accordance with local policy and standing operating procedures. Dispose of parts that are not made of metal (gaskets, seals, packings, etc.) in a refuse container.

- **Turn in** Turn over components and/or parts to your immediate supervisor (motor sergeant, motor officer, section chief, etc.) who will in turn dispose of in accordance with local policy and standing operating procedures.

**CHAPTER 2
THERMAL SYSTEM TEST CONTROLLER**

2-1. General. This chapter contains job tasks that tell you how to repair the thermal system test controller. The job tasks tell you how to remove and install components and assemblies of the chassis assembly and case assembly. Defective components and assemblies removed from the test controller are not covered in this manual for repair at this maintenance level. These defective items are turned in for repair. Repair of the test controller at this maintenance level is done by replacing any bad components or assemblies that are found by good components or assemblies.

2-2. Equipment Items Covered. Table 2-1 lists the equipment items covered in this chapter. The assemblies making up the thermal system test controller are listed along with the section and page number where they are found in this chapter.

Table 2-1. Equipment Items Covered

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2-3. Equipment Items Not Covered. None

2-4. General Maintenance Instructions. The following maintenance practices must be followed any time you are working on the test set.

NOTE

Electrical connector repair kit 12285360 contains instructions and tools needed for repair and replacement of connectors, receptacles, contacts, and wires.

a. Soldering Techniques. Solder connections must be bright clean before soldering. Remove dirt and grease from connections with freon (Item 13, appendix C) Type II and acid swabbing brush (Item 8, appendix C). Solder (Item 29, appendix C) must be non acid type. Rosin flux (Item 25, appendix C) should be used. All wires, parts, and solder iron must be pre-tinned for good connection and maximum transfer of heat. Clean all solder joints with acid swabbing brush (Item 8, appendix C) and isoproyl alcohol (Item 17, appendix C) after soldering to obtain a clean, bright surface.

b. Crimping Wires. Cutoff and get rid of broken, bent, or discolored contacts with pliers. Strip insulation from wires with a thermal wire stripper.

NOTE

Color bands on contacts indicate size of wire; for example, contacts with green color bands are for 22-26 gauge wire. Contacts with red color bands are for 20-24 gauge wire.

Put contact into crimping tool with color band toward rear. Put bare wire into contact and squeeze crimping tool. Take out crimped contact from tool and check crimp by looking through inspection hole. You must be able to see end of bare wire.

c. Tagging Electrical Wires. Look at component or part to see if wiring or component has numbers or letters. Write numbers or letters on tag (Item 34, appendix C) with pencil (Item 19, appendix C). Fasten tag on wire. Remove tags after parts or wires are installed. If you cannot tag a wire or component for some reason, write down the wire location and terminating point. After connecting wires without tags, check continuity of wire to make sure it is connected to the correct point.

d. Replacing Wires.

WARNING

Use solvent in a well-ventilated area away from open flame. Solvent can burn easily and may give off harmful vapors.

Cut shrinkable sleeving from terminals of wire to be replaced. Unsolder wire or cut if crimped. When soldering or unsoldering wires, hold the bare wire near the soldering point with long round nose pliers. Pliers act as a heat sink preventing heat damage to electrical and electronic components. Cut new wire to desired length and slide new heat-shrinkable tubing over ends of wire. Push sleeving back and strip insulation off wire with thermal wire stripper. Solder or crimp wire to end terminal. Clean soldered joint with acid swabbing brush (Item 8, appendix C) and solvent cleaning compound (Item 30, appendix C). Slide sleeving over connection. Using thermal gun, shrink sleeving.

e. Installing Heat-Shrinkable Tubing. Heat-shrinkable sleeving should be twice the diameter of the part it will be shrunk over. Slide sleeving over wire and terminal. Hold thermal gun 4 to 5 inches away from sleeving and apply heat for 30 seconds. Take thermal gun away as soon as sleeving forms to shape of wire and terminal. Let sleeving cool 30 seconds before handling.

f. Replacing Diodes (semiconductors), Relays, Potentiometers, Switches, Circuit Breakers, Wires, and Capacitors:

WARNING

Capacitors may hold high voltage that can cause injury. Before removing capacitors, short them to ground.

CAUTION

Use low-wattage soldering iron when replacing components or parts on printed circuit boards, cards or connectors. Printed circuits or connectors can be damaged if high-wattage soldering iron is used.

When replacing diodes, coat mica washers and mount with silicone compound (Item 27, appendix C). Put one washer on threaded end of diode before inserting diode in mounting hole. When replacing potentiometers, switches, and circuit breakers, be sure keyways, washers, and tabs are lined up in mounting holes before tightening hardware. When soldering capacitors, relays, circuit breakers, wires, and diodes, hold terminal lugs and leads with long round nose pliers to keep parts from overheating.

g. Removing and Installing Connectors. If connectors cannot be removed by hand, use slip joint conduit style pliers with plastic jaw inserts to loosen them. Finish removal by hand. Straighten any bent pins with long round nose pliers. When installing connectors on larger harnesses, another soldier maybe needed to help aline the mating ends of the cable. Make sure that pins and keyways line up. Tighten twist-snap-type connectors until a click is heard and tighten screw-on-type until the ratchet noise is no longer heard to indicate that connectors are tight.

h. Replacing Connectors. Cut boot from adapter with knife. If shielding is installed, remove shielding. Unscrew adapter and slide back over cable. Unsolder wires from connector contacts. If wires are crimp type, remove contacts and wires from connector with insert-extract tool. Slide new boot and adapter over cable. Solder wires to connector. If wires are crimp type, crimp wires to contacts and insert them in connector using insert-extract tool. Screw on adapter. Lace shielding to cable in three places if required. Slip boot over adapter and shrink with thermal gun.

i. Repairing Connectors and Modules. Hold connector with back end toward you. Slide extract end of insert-extract tool over wire of contact to be taken out. Slide tool along wire and into hold until it engages contact, and a slight pressure is felt; the contact is now unlocked. Pull contact and wire out of connector. Cut off bad contacts. Strip insulation from wire with thermal stripper and place new contact in crimping tool. Put bare wire in contact and crimp it. Look through wire in contact. If you do not see bare wire, remove wire and crimp it again. Hold colored end of insertion tool toward connector. Lay wire along slot in tool. Leave at least 1/2-inch of wire sticking out of end of tool. Pull wire back through tool until crimped shoulder seats against tips of tool. Push contact into connector until it stops. Contact is now locked in connector. Put sealing plugs in all empty contact holes in connector. Tighten retaining nut with slip joint conduit style pliers with plastic inserts. To remove modules, slide points of extract tool into indents of module and push tool until clips unlock. Hold extract tool tight and pull module out. To install new module, push module into rail assembly until a firm snap is felt and a click is heard. Look into inspection hole to be sure clip is in place.

j. Cleaning Electrical Components.

WARNING

Use solvent in a well-ventilated area away from open flame.
Solvent can burn easily and may give off harmful vapors.

Clean dirt, grease, dust, and old compounds off cable harnesses, parts, connectors, and receptacles by dipping them into a container filled with solvent cleaning compound (item 30, appendix C). Shake parts in solvent or wipe them clean with a lint-free cloth (Item 9, appendix C). Clean dirt, grease, and dust off recessed areas with acid swabbing brush (Item 8, appendix C) or lint-free cloth. Dry components/parts, connectors, and receptacles completely with low-pressure, dry compressed air, or with a clean, lint-free cloth.

k. Cleaning Threaded Holes.

WARNING

Use solvent in a well-ventilated area away from open flame.
Solvent can burn easily and may give off harmful vapors.

Threaded holes in metal must be thoroughly clean when sealing compounds are used to lock screws in place. Take off old sealing compound from threads with tap and tap wrench. Blow loose particles out of holes with compressed air, then clean threads with solvent cleaning compound (Item 30, appendix C) and acid swabbing brush (Item 8, appendix C). Let holes dry before putting in screws.

l. Replacing Nutplates (plain self-locking nuts).

WARNING

Primers can burn easily and can give off harmful vapors. To avoid injury, keep away from open flame and use in a well-ventilated area.

NOTE

Two soldiers are required to replace nutplates.

Using drill and 1/16-inch bit, drill out old rivets. Clean area thoroughly and blow loose particles out of holes with compressed air. After cleaning, all parts should be completely dry and free of corrosion products, scale, paint, grease, oil, flux, and other foreign materials. Coat back of nutplate and rivets with unthinned primer (Item 23, appendix C). While primer is wet, line up new nutplate with holes in bracket and insert rivets. Soldier B hold drift pin against rivet on back of nutplate, Soldier A make fast nutplate by hammering top of rivet with ball peen hammer. After nutplate has been made fast, repair any damaged areas of the protective finish with primer. When primer has dried thoroughly, coat any exposed surfaces with chemical film (Item 12, appendix C).

m. Replacing Inserts.

WARNING

Primers can burn easily and give off harmful vapors. To avoid injury, keep away from open flame and use in a well-ventilated area.

Take out insert with insert extractor and get rid of insert. Clean area thoroughly and blow loose particles out of holes with compressed air. After cleaning, all parts should be completely dry and free of corrosion products, scale, paint, grease, oil, flux, and other foreign materials. Coat outside of new insert with unthinned primer (Item 23, appendix C). While primer is wet, screw insert in housing with inserter. Unscrew and take out inserter. If insert is in a blind hole, break off tang from insert with tang break-off tool and get rid of tang. When primer has dried thoroughly, coat any exposed surfaces with chemical film (Item 12, appendix C).

n. Replacing Rivets MS16535-2,-3,-4.

NOTE

Two soldiers are required to replace rivets.

Take out rivet using drive pin punch and hammer. Clean area thoroughly and blow loose particles out of holes with compressed air. After cleaning, all parts should be completely dry and free of corrosion products, scale, paint, grease, oil, flux, and other foreign materials. Soldier B align and insert rivet and hold drift pin against back of rivet. Soldier A make fast rivet with center punch and hammer.

2-5. Thermal System Test Controller Case.

Task	Title	Frames
1	Remove Thermal System Test Controller for Access Only -- Task 2 deleted --	1 - 3
3	Remove Cooling Interconnect Fan Assembly W18	5 - 6
4	Repair Cooling Interconnect Fan Assembly W18	7 - 9
5	Replace Cooling Fan	10-13
6	Replace Identification Plate	14
7	Install Cooling Interconnect Fan Assembly W18	15-16
8	Install Thermal System Test Controller	17-18

TASK 1. Remove Thermal System Test Controller for Access Only.

Applicability: All Models

Common Tools:

- Screwdriver, cross tip, No. 2
- Screwdriver, flat tip

Special Tools: None

Supplies: None

Personnel: Three

- Soldier A: Removes thermal system test controller chassis assembly.
- Soldier B: Lifts thermal system test controller chassis assembly and helps Soldier A.
- Soldier C: Lifts thermal system test controller chassis assembly and helps Soldier A.

NOTE

Soldiers B and C not needed until frame 2.

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove thermal system test controller case cover; refer to volume I, para. 4-17.

FRAME 1

Remove Chassis Assembly:

WARNING

High voltage is used in the operation of this equipment. Death on contact may result if personnel fail to follow procedures listed.

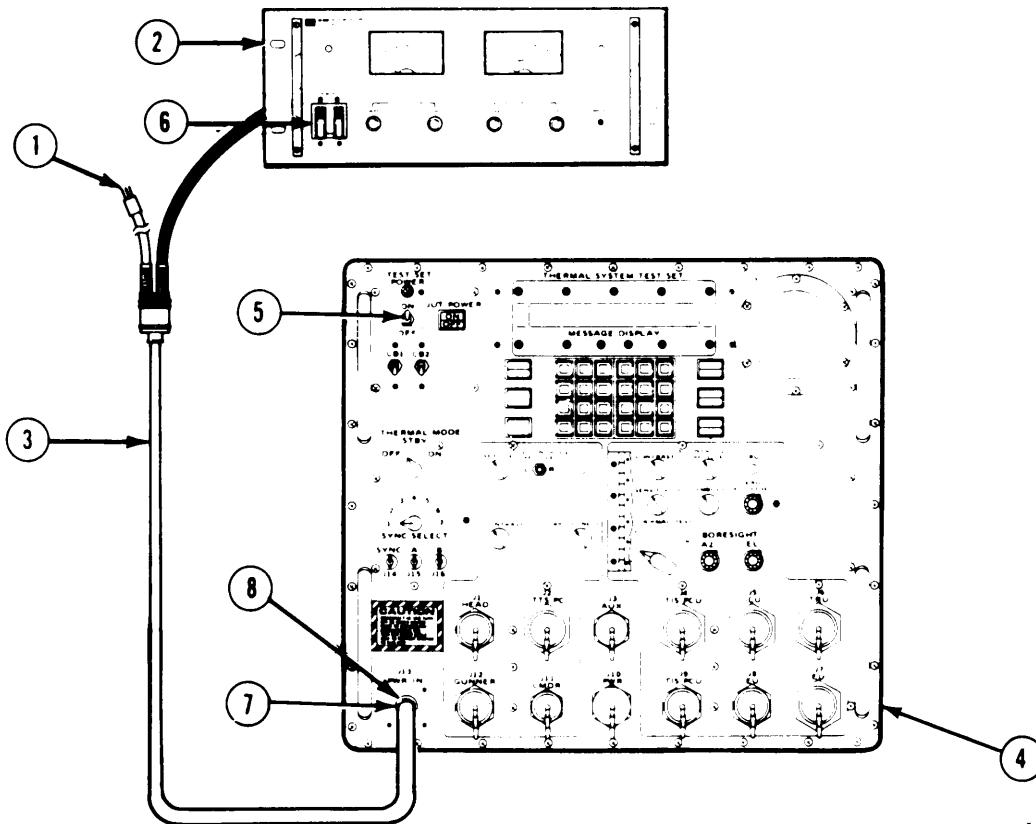
CAUTION

Make sure connector (1) is unplugged from 115 V ac source and power supply (2) is set to OFF before disconnecting W10 cable (3) from TSTS (4) to prevent damage to the TSTS (4).

NOTE

Read paragraph 2-4 on removing electrical components before doing any work.

1. Make sure TEST SET POWER switch (5) is set to OFF.
 2. Set power supply ON/OFF switch (6) to OFF.
 3. Unplug connector (1) from 115 V ac source.
 4. Disconnect W10 cable connector P1 (7) from test set connector J13 PWR IN (8).
- GO TO FRAME 2



ARR82-24272

FRAME 2

Remove Chassis Assembly (Continued):

Soldier A: 1. Unscrew and take out 32 machine screws (1), lockwashers (2), and flat washers (3) from panel (4) with cross tip screwdriver. Get rid of lockwashers (2).

WARNING

Test controller chassis assembly (5) weighs about 136 pounds (62 kilograms). To avoid injury, two soldiers are needed to lift or move chassis assembly (5).

CAUTION

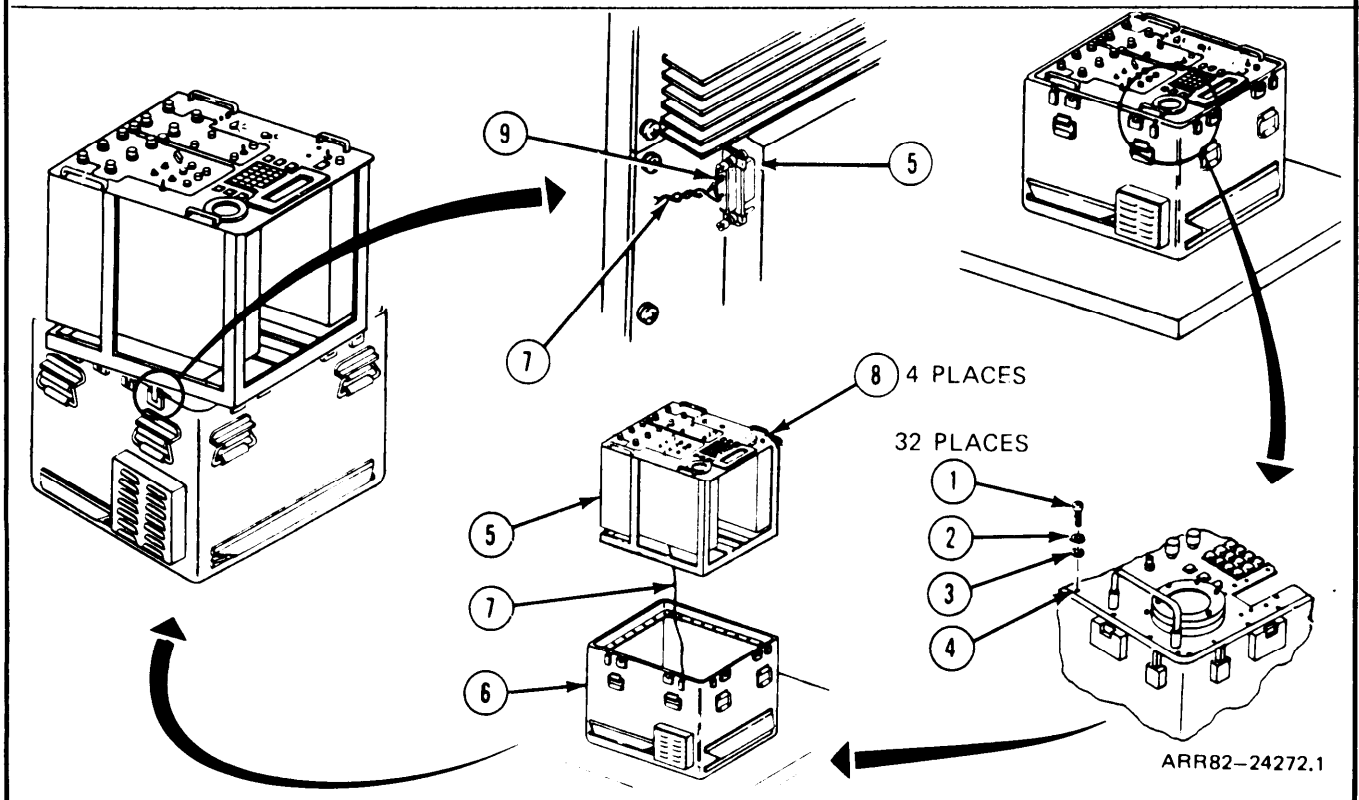
- Do not lift test controller chassis assembly (5) too far out of controller case assembly (6) or electrical wire (7) may be damaged.
- Always turn chassis assembly (5) and case (6) together or electrical wire (7) may be damaged.

Soldier B,

Soldier C: 2. Lift chassis assembly (5) out of case (6) by bow handles (8). Turn chassis assembly (5) 45 degrees and set chassis assembly (5) on case (6).

Soldier A: 3. Disconnect receptacle connector P1 (9) from chassis assembly (5) with flat tip screwdriver.

GO TO FRAME 3



FRAME 3

Remove Chassis Assembly (Continued):

- Soldier B,
Soldier C: 1. Lift chassis assembly (1) off case (2). Carefully set chassis assembly (1) on clean work surface.
- Soldier A: 2. Lift case (2) and place on clean work surface in line with chassis assembly (1).
- Soldier A: 3. Look at case (2) for dents, cracks, or broken latches (3). If bad, replace case (2). Look at grill (4) for dents, cracks, or breaks. If bad, refer to task 3. If OK, go to step 4.
- Soldier A: 4. Look at connector P1 (5) for corroded contacts. If bad, replace connector P1 (5); refer to task 4.
- Soldier A: 5. Connect connector P1 (5) to chassis assembly (1) with flat tip screwdriver.

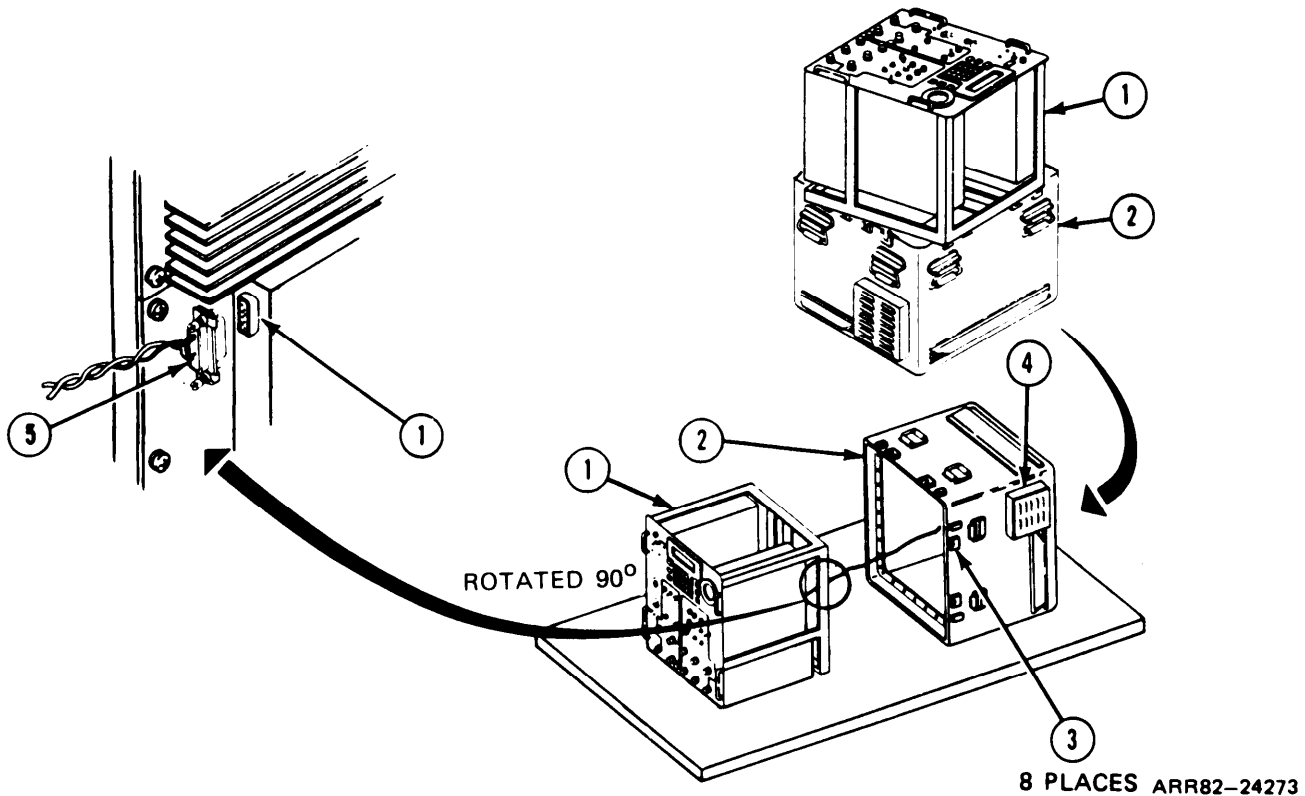
NOTE

Frame 4 deleted.

Follow-on Maintenance:

NOTE: To install thermal system test controller, refer to task 8.

TASK 1 ENDS HERE



Task 3. Remove Cooling Interconnect Fan Assembly W18.

Applicability: All Models

Common Tools:

- Knife, pocket
- Screwdriver, cross tip, No. 2
- Screwdriver, cross tip, offset, No. 2
- Wrench, combination, 7/32-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to task 2.

FRAME 5

Remove Fan:

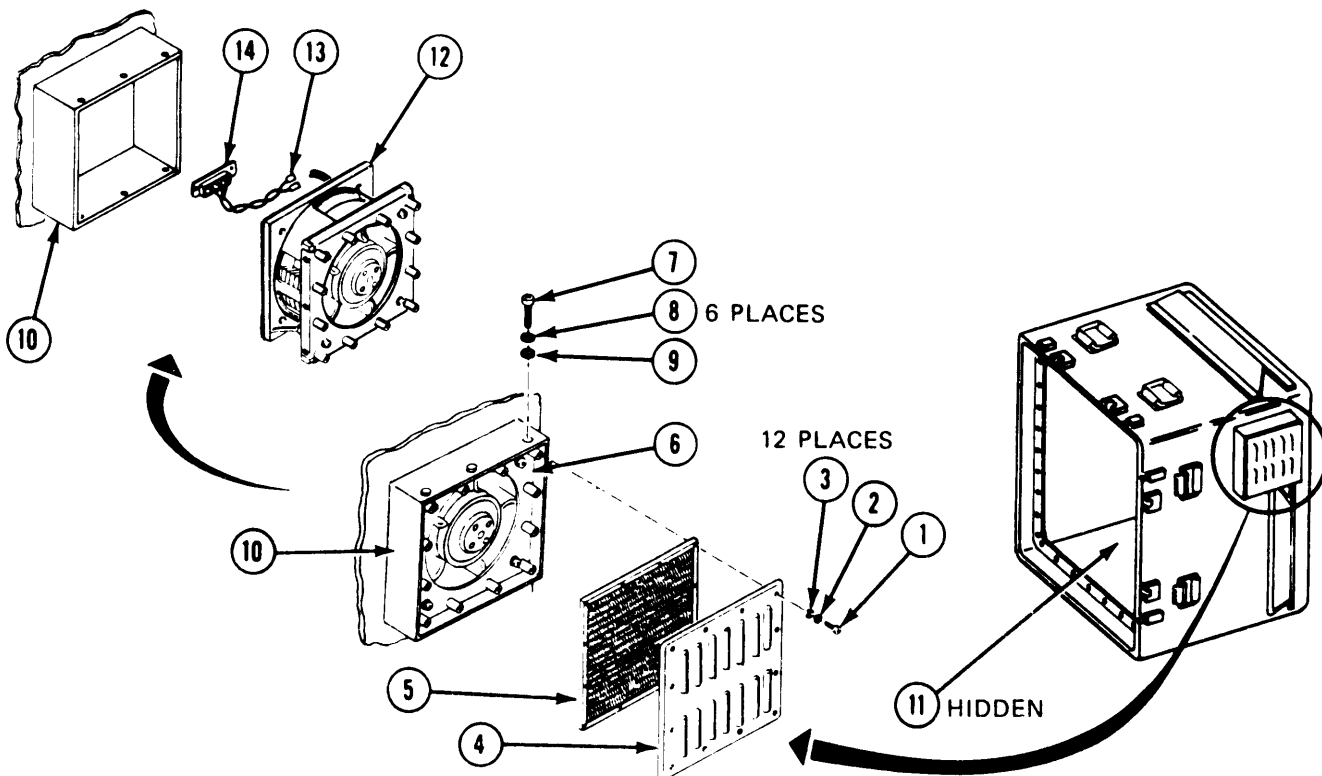
1. Unscrew and take out 12 machine screws (1), lockwashers (2), and flat washers (3) with screwdriver. Get rid of lockwashers (2). Take off cover (4) and filter (5) from blower mount (6).
2. Unscrew and take out six screws (7), lockwashers (8), and washers (9) from fan housing (10) with screwdriver. Get rid of lockwashers (8).
3. Cut two tiedown straps on inside of case (11) with knife.

CAUTION

Fan (12) has electrical wire (13) and receptacle connector P1 (14) attached. Be careful not to damage wire (13) and connector (14) when pulling through fan housing (10).

3. Pull out fan (12), wire (13), and receptacle connector P1 (14) from fan housing (10).

GO TO FRAME 6



ARR82-24276

FRAME 6

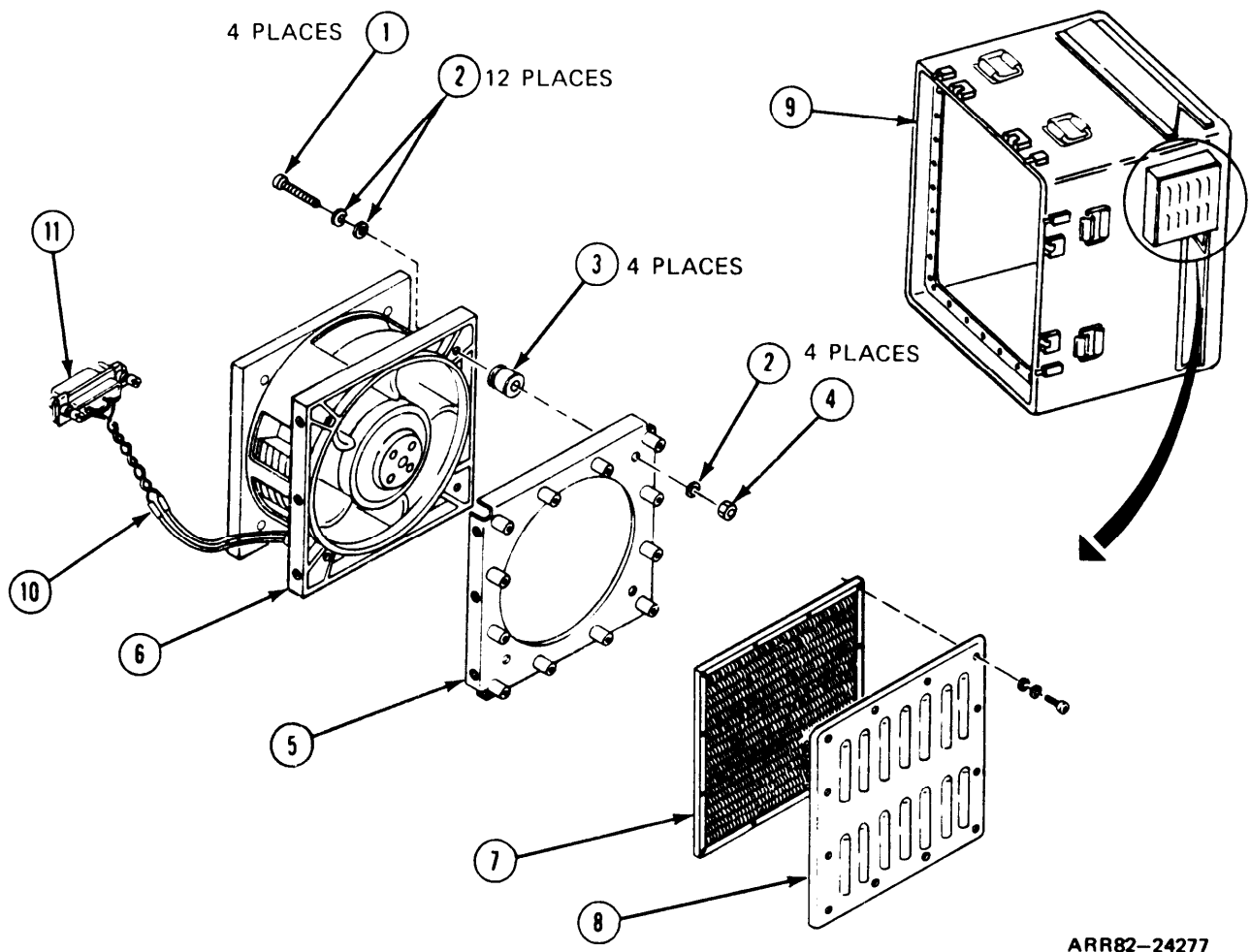
Remove Fan (Continued):

1. Unscrew and take out four machine screws (1), 12 flat washers (2), four nonmetallic grommets (3), and four self-locking nuts (4) with offset screwdriver and wrench. Remove blower mount (5) from cooling fan assembly (6).
2. Look at blower mount (5), filter (7), and cover (8) for cracks or dents. If bad, replace case assembly (9). If OK, set aside for later use.
3. Look at electrical wire (10) and receptacle connector P1 (11) for damage. If bad, repair cooling interconnect fan assembly W18 (9); refer to task 4. If OK, set aside for later use.
4. Look at fan (6) for damage. If bad, replace fan (6); refer to task 5. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install cooling interconnect fan assembly W18, refer to task 7.

TASK 3 ENDS HERE



ARR82-24277

Task 4. Repair Cooling Interconnect Fan Assembly W18.

Applicability: All Models

Common Tools:

- Gun, thermal
- Knife, pocket
- Pliers, diagonal cutting
- Rule, machinist's, 6-inch
- Set, soldering and resoldering
- Tool, insert/extract (M24308/18-2)

Special Tools:

- Maintenance Kit, electrical connector repair, 12285360

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

- Pencil, writing (Item 19)
- Sleeving, insulation (Bulk)
- Solder (Item 29)
- Splice (80205) NAS1744-2 (2 required)
- Tag, marker (as required) (Item 34)
- Wire (Bulk) (72 inches required)

Personnel: One

Equipment Condition:

- Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to task 2.
3. Remove cooling interconnect fan assembly W18; refer to task 3.

FRAME 7

Repair Electrical Connector P1:

NOTE

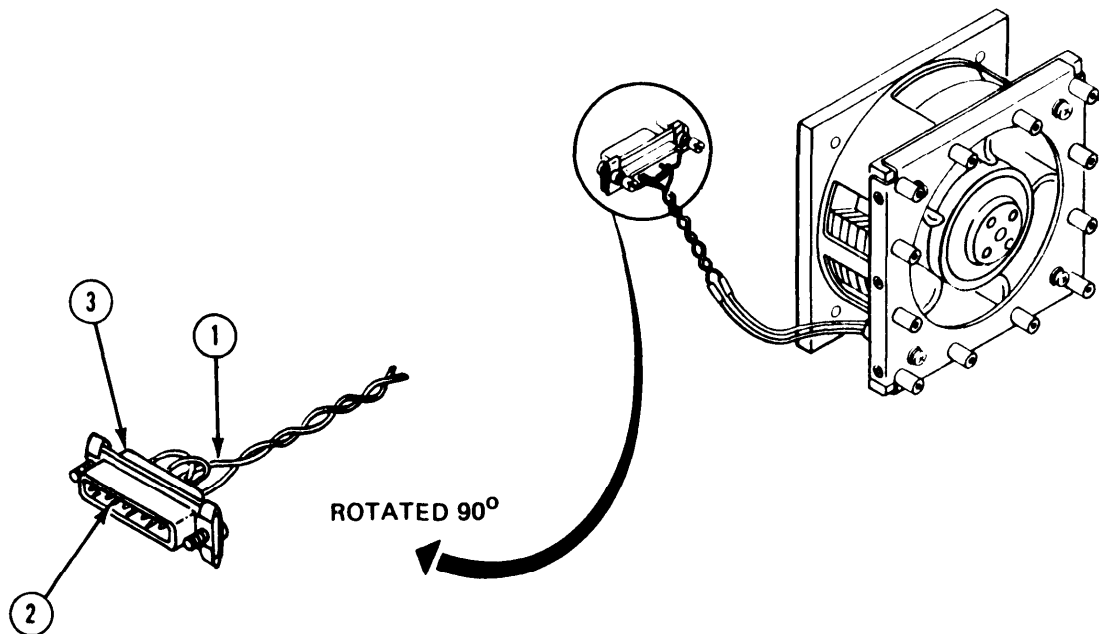
- Read paragraph 2-4 on tagging and crimping wires before doing any work.
- If replacing electrical wire GO TO FRAME 8.

1. Tag wires (1) going to any bad contacts (2) on connector P1 (3).
2. Remove bad contacts (2) with extraction tool.
3. Cut wires (1) going to bad contacts (2) with pliers. Get rid of bad contacts (2).
4. Strip wires (1) with pliers. Crimp wires (1) to new contacts (2) with crimp tool.
5. Put new contacts (2) in connector P1 (3) with insertion tool.

NOTE

If replacing connector P1 only, go to follow-on maintenance and TASK 4 ENDS HERE.

GO TO FRAME 8



ARR82-24278

FRAME 8

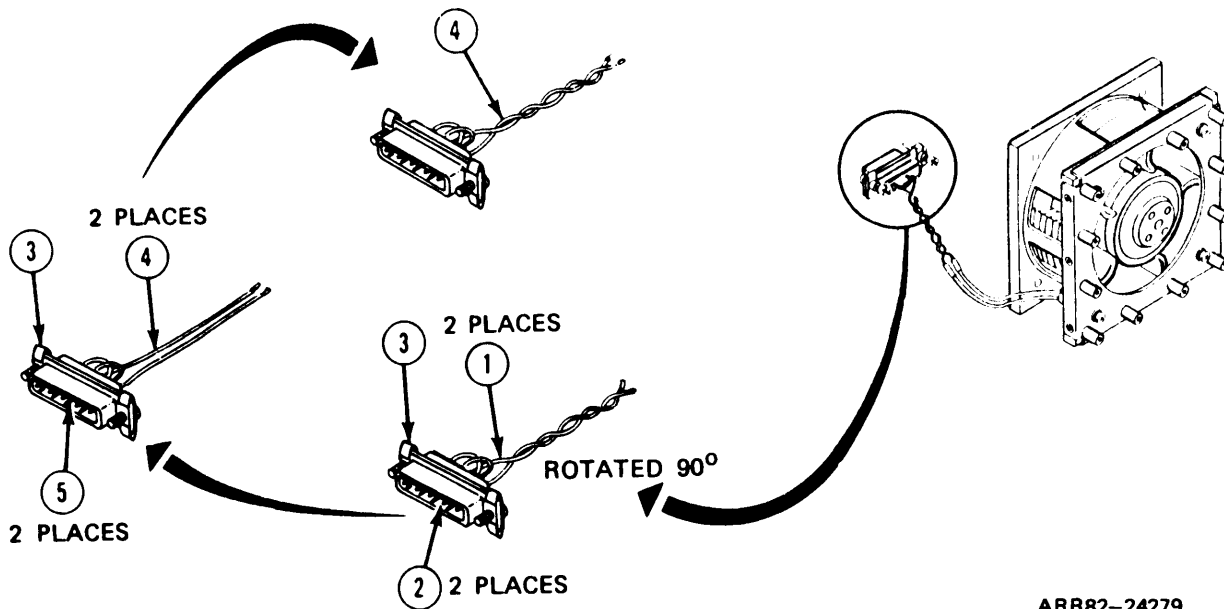
Replace Wire:

NOTE

Read paragraph 2-4 on tagging and crimping wires before doing any work.

1. Remove two wires (1) and contacts (2) from connector P1 (3) with extraction tool.
2. Measure and cut two pieces of new wire (4) 36 inches (0.9 meter) long with rule and pliers.
3. Strip wires (4) with pliers. Crimp wires (4) to new contacts (5) with crimp tool.
4. Put new contacts (5) in connector P1 (3) with insertion tool. Tag loose ends of wires (4).
5. Twist wires (4) two twists to the inch (four twists to every five centimeters).

GO TO FRAME 9



FRAME 9

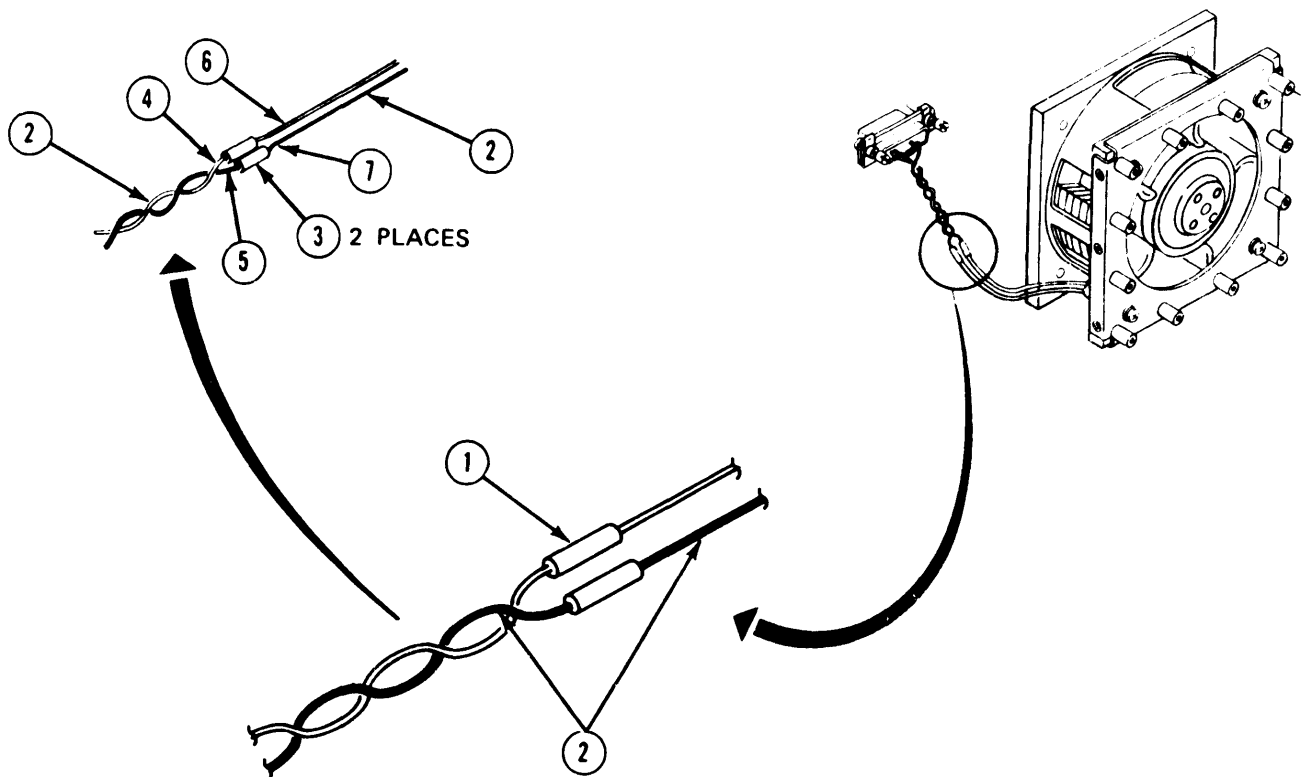
Replace Wire (Continued):

1. Cut and take off insulation sleeving (1) from wire (2) with knife. Get rid of sleeving (1).
2. Look for two hard splices (3) in wire (2). Tag wires at splices (3). Cut wire (2) at splices (3). Get rid of wire (2) and splices (3).
3. Strip four wires (4, 5, 6, 7) with pliers.
4. Measure 1 1/2-inch (3.8 centimeters) and cut new sleeving (1) with rule and knife and slide new insulation sleeving (1) over new wiring harness (2).
5. Connect wire (4) (white) (from W18P1-6) to wire (6) with new splice (3). Connect wire (5) (black) (from W18P1-5) to wire (7) with new splice (3). Crimp two splices (3) with crimp tool.
6. Slide sleeving (1) over two splices (3) and using thermal gun, shrink sleeving (1).

Follow-on Maintenance:

NOTE: To install cooling interconnect fan assembly W18, refer to task 6.

TASK 4 ENDS HERE



ARR82-24280

TASKS. Replace Cooling Fan.

Applicability: All Models

Common Tools:

Gun, thermal
Knife, pocket
Pliers, diagonal cutting
Rule, machinist's, 6-inch
Screwdriver, cross tip, No. 2
Tool, crimp
Wrench, combination, 7/32-inch

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-136 (12 required)
Lockwasher (96906) MS35338-137 (6 required)
Pencil, writing (Item 19)
Sleeving, insulation (Bulk)
Splice (80205) NAS1744-2 (2 required)
Strap, tiedown (96906) MS3367-1-9 (2 required)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to task 2.

FRAME 10

Remove Fan:

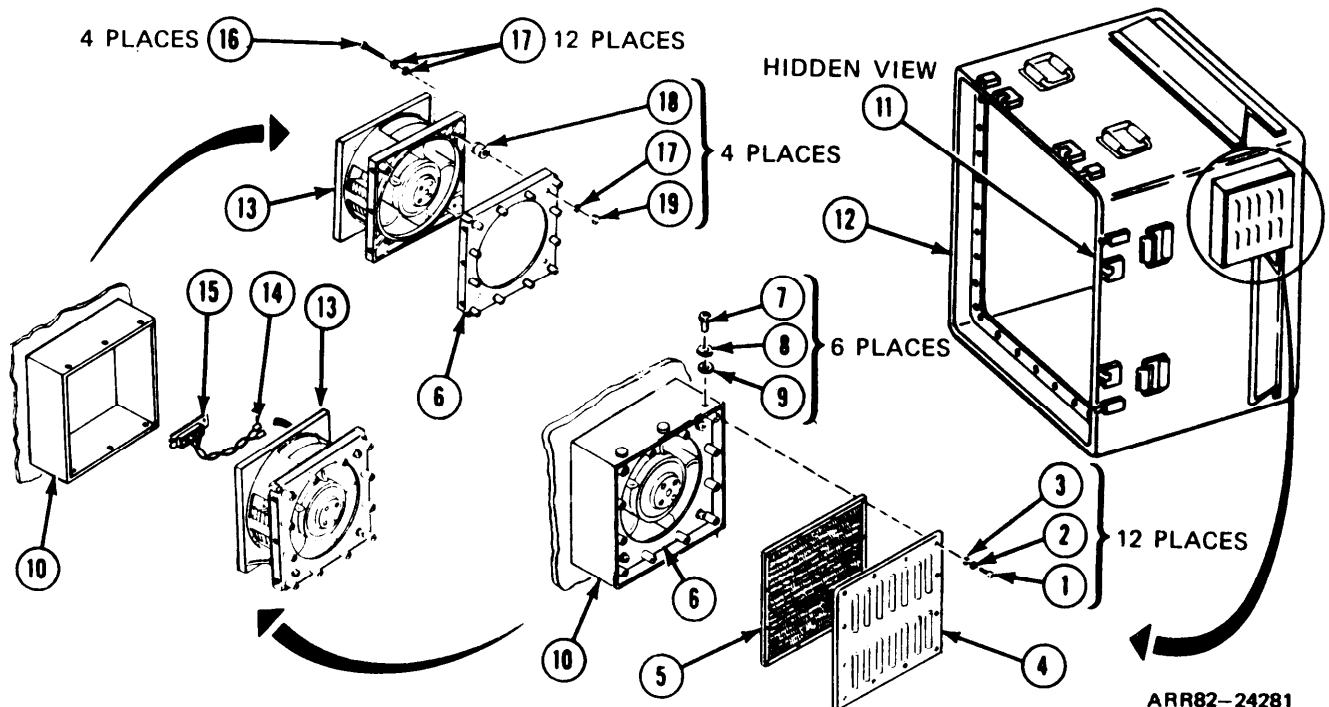
1. Unscrew and take out 12 machine screws (1), lockwashers (2), and flat washers (3) with screwdriver. Get rid of lockwashers (2). Takeoff cover (4), and filter (5) from blower mount (6).
2. Unscrew and take out six machine screws (7), lockwashers (8), and flat washers (9) from fan housing (10) with screwdriver. Get rid of lockwashers (8).
3. Cut two electrical tiedown straps (11) on inside of case assembly (12).

CAUTION

Fan (13) has electrical wire (14) and receptacle connector P1 (15) attached. Be careful not to damage wire (14) and connector P1 (15) when pulling through fan housing.

4. Pull out fan (13), wire (14), and connector P1 (15) from fan housing (10).
5. Unscrew and takeout four machine screws (16), 12 flat washers (17), four nonmetallic grommets (18), and four self-locking nuts (19) with screwdriver and wrench. Remove blower mount (6) from fan (13).
6. Look at blower mount (6), filter (5), and cover (4) for cracks or dents. If bad, replace case assembly (12). If OK, set aside for later use.

GO TO FRAME 11



FRAME 11

Remove Fan (Continued):

NOTE

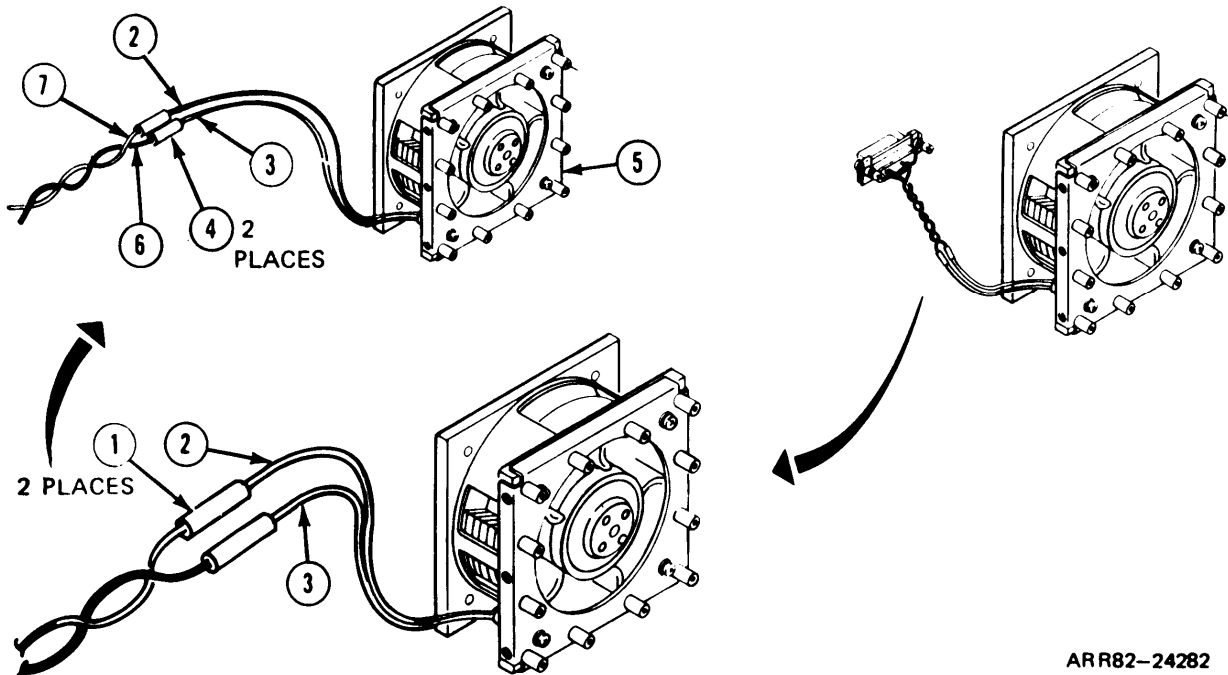
Read paragraph 2-4 on tagging and crimping wires before doing any work.

1. Cut and take off insulation sleeving (1) from wires (2,3) with pocket knife. Get rid of sleeving (1).
2. Look at two hard splices (4) in wires (2,3). Tag wires (2,3) at splices (4).
3. Cut wires (2,3) at splices (4). Get rid of splices (4). Turn in fan (5).

Install Fan:

4. Strip four wires (2, 3, 6, 7) with pliers. Measure 1 1/2-inch (3.8 centimeters) and cut new sleeving (1) with rule and knife and slide new sleeving (1) over wires (2, 3).
5. Connect wire (7) (white) (from W18P1-6) to wire (2) with new splice (4). Connect wire (6) (black) (from W1P1-5) to wire (3) with new splice (4). Crimp two splices (4) with crimp tool.
6. Slide sleeving (1) over two splices (4) and using thermal gun, shrink sleeving (1).

GO TO FRAME 12



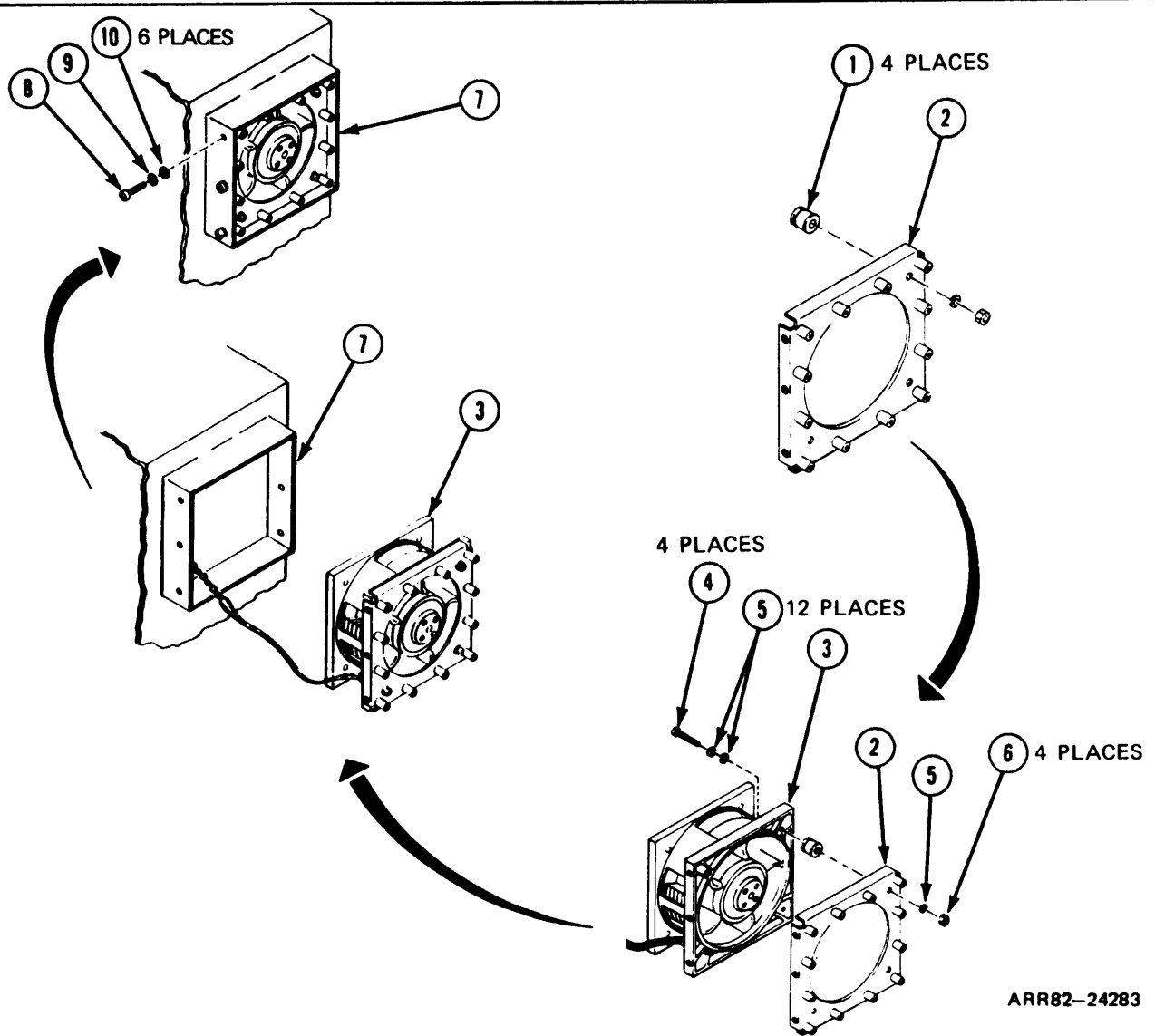
ARR82-24282

FRAME 12

Install Fan (Continued):

1. Install four grommets (1) on blower mount (2).
2. Position blower mount (2) on fan (3).
3. Screw in and tighten four screws (4), 12 washers (5), and four nuts (6) with screwdriver and wrench.
4. Position fan (3) on fan housing (7).
5. Screw in and tighten six screws (8), new lockwashers (9), and washers (10) with screwdriver.

GO TO FRAME 13



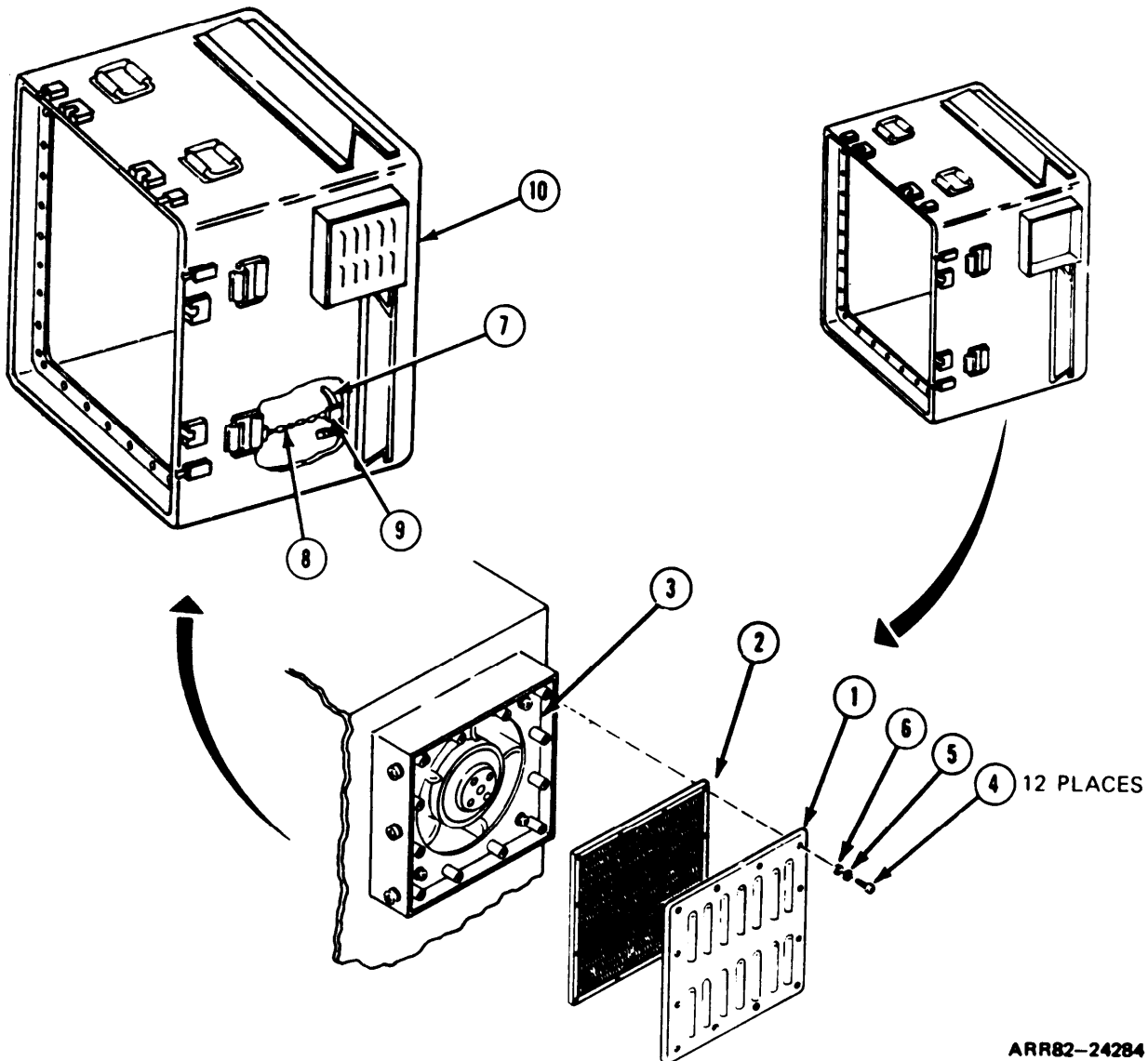
FRAME 13**Install Fan (Continued):**

1. Position cover (1) and filter (2) on blower mount (3).
2. Screw in and tighten 12 screws (4), new lockwasher (5), and washers (6) with screwdriver.
3. Install two new tiedown straps (7) on wire (8) and support (9) inside case (10).

Follow-on Maintenance:

1. Install thermal system test controller; refer to task 8.
2. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 5 ENDS HERE



TASK 6. Replace Identification Plate.

Applicability: All Models

Common Tools:

Knife, pocket
Hammer, ball peen
Metal Stamp, numbers and letters, 1/8-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume I, appendix C.
Isopropyl Alcohol (Item 17)
Methyl-Ethyl-Keytone (Item 18)
Plate, TSTC, identification, (19200) 12303106
Plate, TSTS, identification, (19200) 12303550
Rag, wiping (Item 24)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures: None

FRAME 14

Remove Identification Plate:

NOTE

Use this task to replace TSTS plate (1) or TSTC plate (2).

1. Peel away plate (2) with knife. Get rid of plate (2).

WARNING

Isopropyl alcohol is toxic and extremely flammable. Use only in well ventilated areas. Avoid prolonged or repeated breathing of the vapors. Avoid prolonged contact with skin. Keep the area free of sparks and open flames.

2. Clean surface (3) with knife blade, alcohol, and rag.

Install Identification Plate:

3. Stamp serial number on new identification plate with stamp set and hammer.

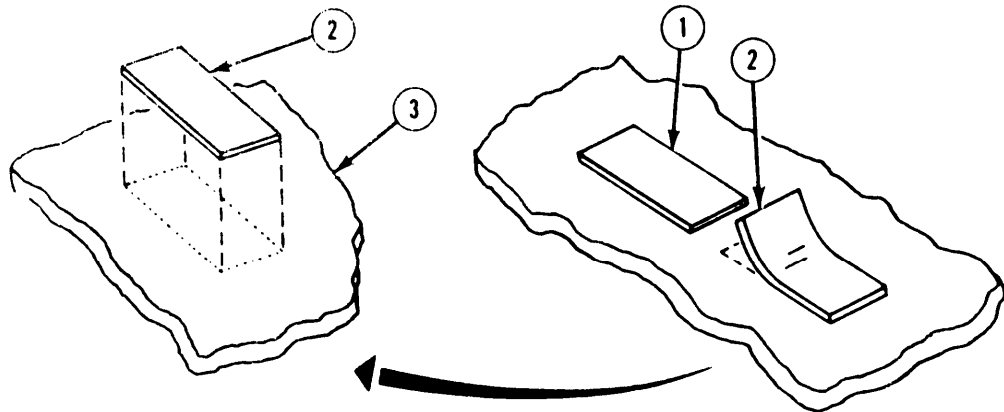
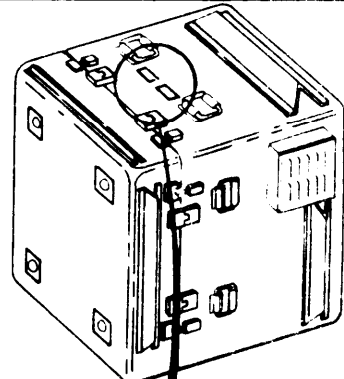
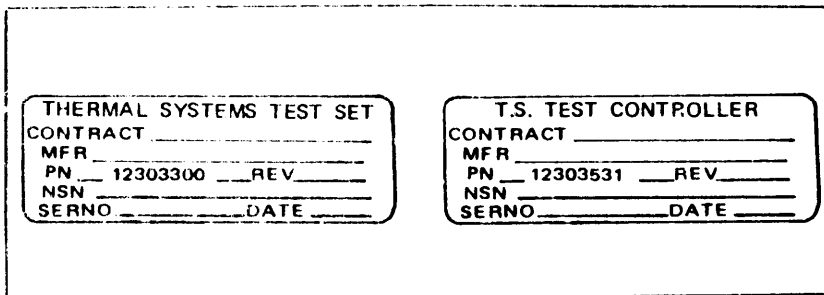
WARNING

Many solvents burn easily. Do not use solvents near open fire. Solvents may give off harmful vapor. Use in well-ventilated area.

4. Wipe back side of new plate (2) with methyl-ethyl-keytone and rag.
5. Put new plate (2) on prepared surface (3).

Follow-on Maintenance: None

TASK 6 ENDS HERE



ARR82-24285

TASK 7. Install Cooling Interconnect Fan Assembly W18.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Wrench, combination, 7/32-inch

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-136 (12 required)
Lockwasher (96906) MS35338-137 (6 required)
Strap, tiedown (96906) MS3367-1-9 (2 required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

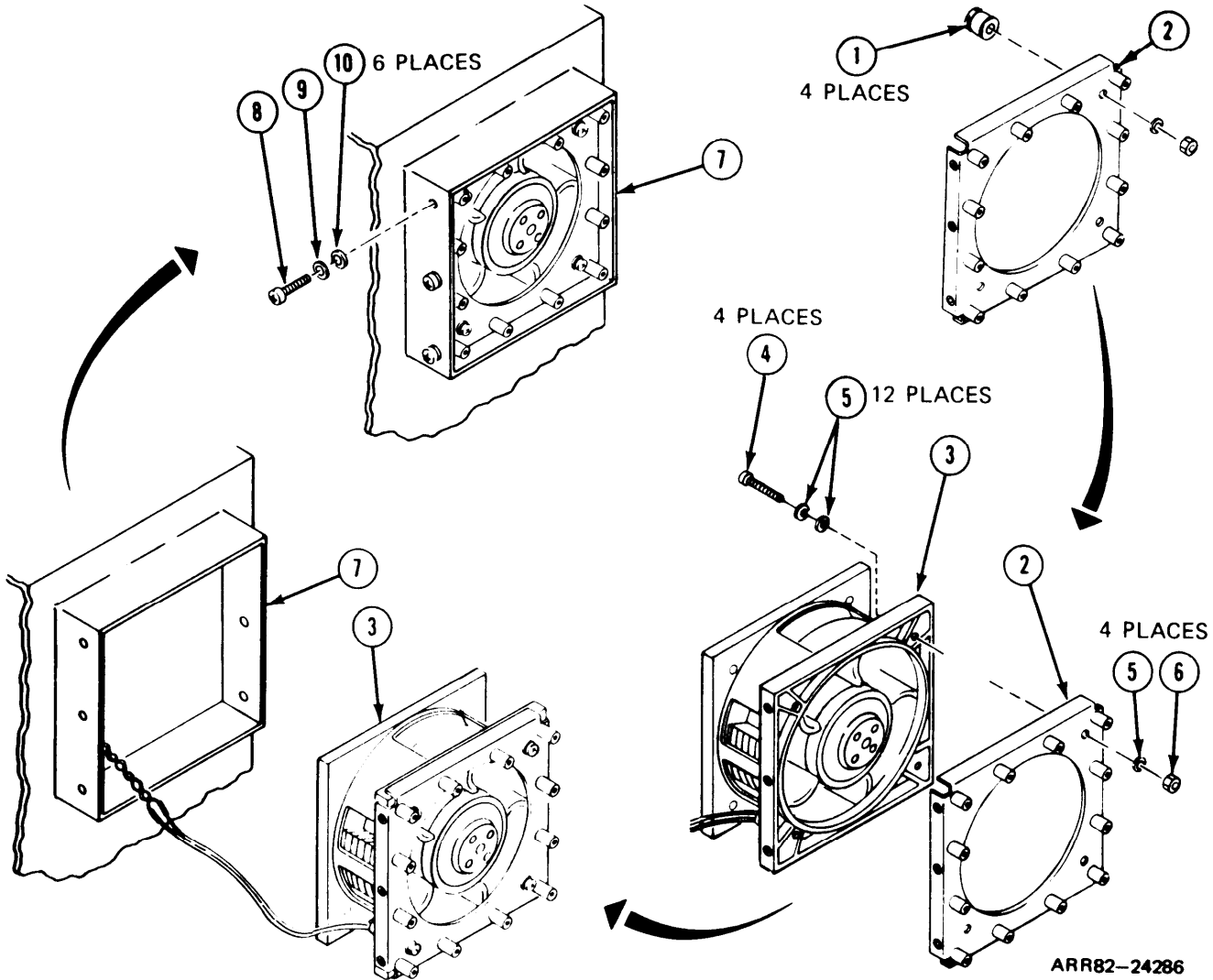
Remove cooling interconnect fan assembly W18; refer to task 3.

FRAME 15

Install Fan:

1. Install four nonmetallic grommets (1) on blower mount (2).
2. Position blower mount (2) on fan (3).
3. Screw in and tighten four machine screws (4), 12 flat washers (5), and four self-locking nuts (6) with screwdriver and wrench.
4. Position fan (3) on fan housing (7).
5. Screw in and tighten six machine screws (8), new lockwashers (9), and flat washers (10) with screwdriver.

GO TO FRAME 16



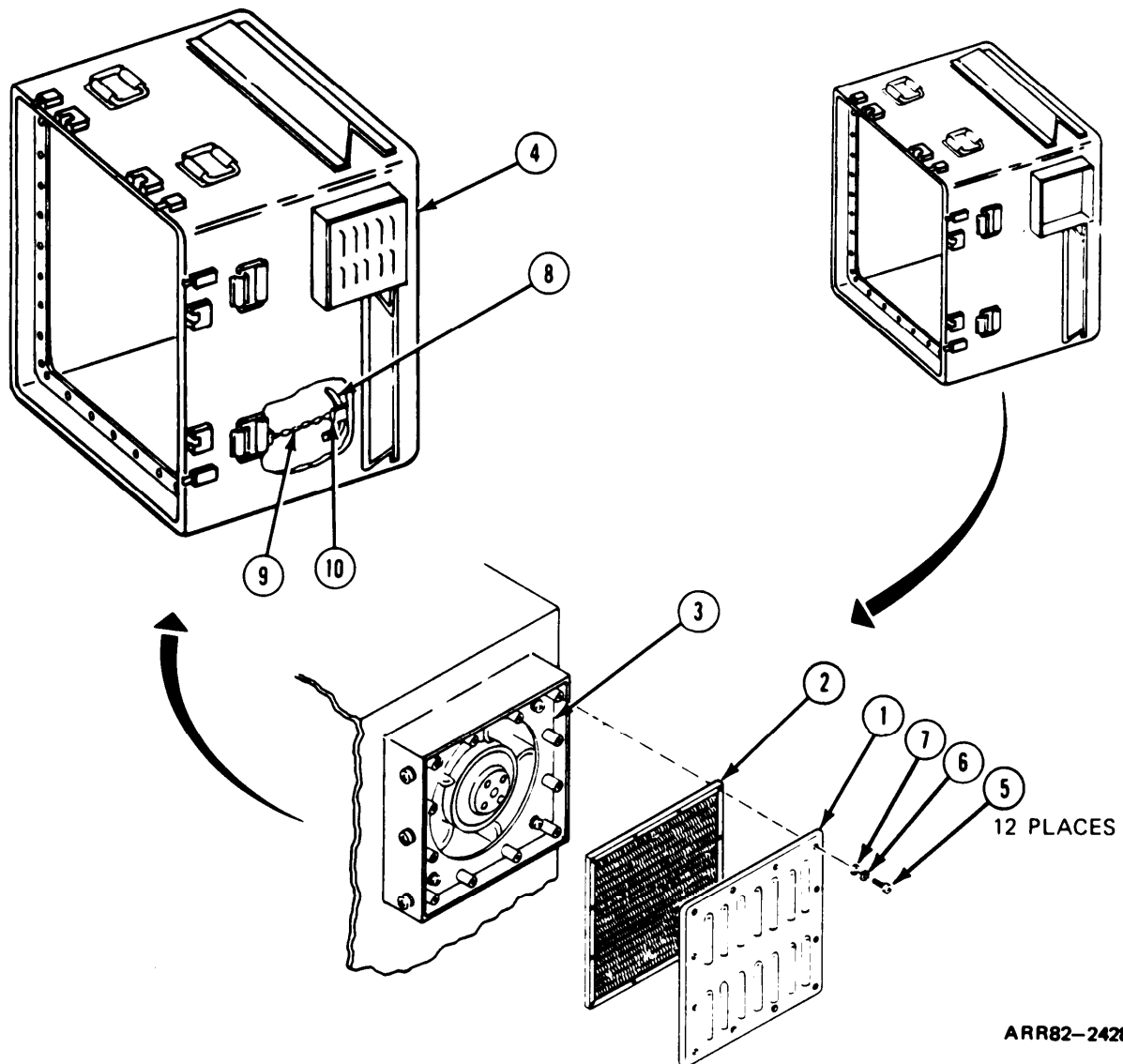
FRAME 16**Install Fan (Continued):**

1. Position cover (1) and filter (2) on blower mount (3) so that cover vents point at bottom of case assembly (4).
2. Screw in and tighten 12 screws (5), new lockwashers (6), and washers (7) with screwdriver.
3. Install two new electrical tiedown straps (8) on wire (9) on support (10) inside case (4).

Follow-on Maintenance:

1. Install thermal system test controller; refer to task 8.
2. Install thermal system test controller case cover; refer to volume I, para. 4-18.

TASK 7 ENDS HERE



TASK 8. Install Thermal System Test Controller.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Screwdriver, flat tip

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-135 (32 required)

Personnel: Three

Soldier A: Installs thermal system test controller chassis assembly and connects connector.
Soldier B: Lifts thermal system test controller chassis assembly and helps Soldier A.
Soldier C: Lifts thermal system test controller chassis assembly and helps Soldier A.

NOTE

Soldiers B and C not needed until frame 18.

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

Remove thermal system test controller case; refer to task 1.

FRAME 17

Disconnect Cooling Interconnect Fan Assembly W18:

CAUTION

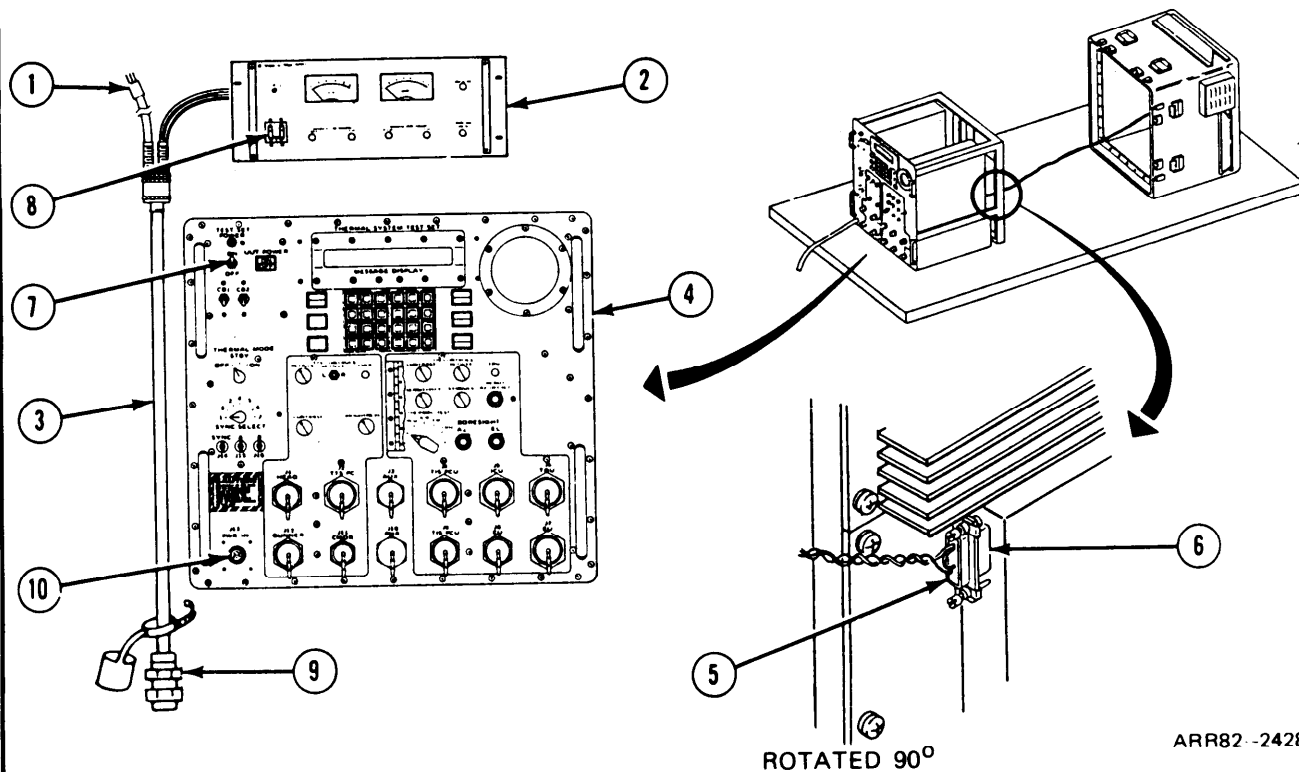
Make sure connector (1) is unplugged from 115 V ac source and power supply (2) is set to OFF before disconnecting W10 cable (3) from TSTS (4) to prevent damage to the TSTS (4).

NOTE

If receptacle connector P1 (5) and cable assembly W10 (3) are connected to chassis assembly (6), go to step 1; if not go to step 4.

1. Make sure TEST SET POWER switch (7) is set to OFF.
2. Set power supply ON/OFF switch (8) to OFF.
3. Unplug connector (1) from 115 V ac source.
4. Disconnect W10 cable connector P1 (9) from test set connector J13 PWR IN (10).
5. Disconnect connector P1 (5) from chassis assembly (6) with flat tip screwdriver.

GO TO FRAME 18



FRAME 18

Install Chassis Assembly:

Soldier A: 1. Lay controller case assembly (1) on back.

WARNING

Chassis assembly (2) weighs approximately 136 pounds (62 kilograms). To avoid injury, two soldiers are needed to lift or move chassis assembly (2).

Soldier B: 2. Carefully lift and turn chassis assembly (2) by bow handles (3). Set
Soldier C: chassis assembly (2) on case (1) at 45 degree angle.

Soldier A: 2. Connect receptacle connector P1 (4) to chassis assembly (2) with flat tip screwdriver.

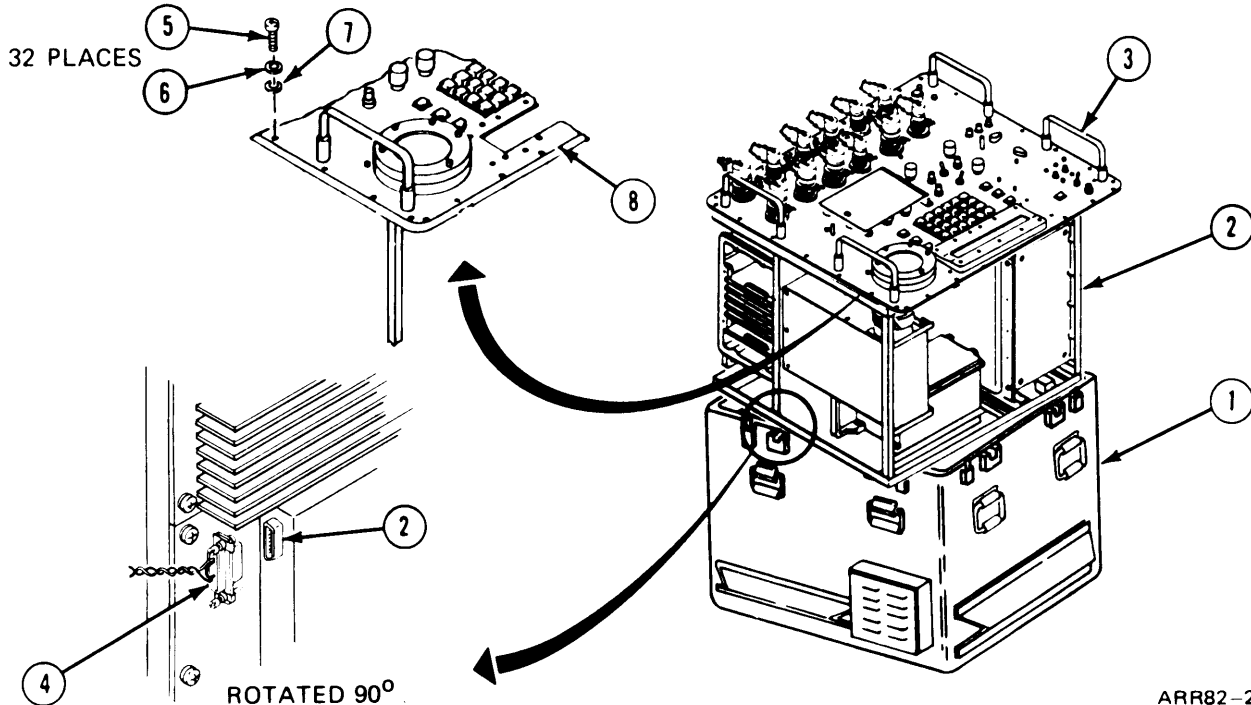
Soldier B:
Soldier C: 3. Carefully lift chassis assembly (2) by handles (3) and lower into case (1).

Soldier A: 4. Screw in and tighten 32 machine screws (5), new lockwashers (6), and flat washers (7) in panel (8) with cross tip screwdriver.

Follow-on Maintenance:

NOTE: To install thermal system test controller case cover: refer to volume I, para. 4-18.

FND OF THERMAL SYSTEM TEST CONTROLLER CASE MAINTENANCE



2-6. Panel Assembly A1.

Task	Title	Frames
1	Remove Panel Assembly A1	1 - 4
2	Remove Digital Indicator	5 - 7
3	Remove Keyboard Assembly	8
4	Repair keyboard Assembly	9 - 10
5	Remove Board Assembly A1TB1	11
6	Repair Board Assembly A1TB1	12
7	Replace Panel Structure	13-14
8	Remove Variable Resistor or Switch Knob or Control Dial	15-17
9	Replace Variable Resistor R1, R2, R3, R4, R5, R6, R7, R8, R10, or R13	18-19
10	Replace Rotary Switch S9, S10, or S11	20-21
11	Replace Toggle Switch S1 or S8	22-24
12	Replace Light-Switch DS2, S2, S3, S4, S5, S6, or S7	25-27
13	Replace Lens, Lamp, or Housing	28
14	Replace RFI Filter Assembly	29-31
15	Replace Plug Connector J14, J15, or J16	32
16	Replace Circuit Breaker CB1 or CB2	33-36
17	Replace IDU EMI Round Window or Bezel Spacers	37-38
18	Replace Access Door, Electrical-Mechanical Post, or Terminal Lug	39-40
19	Replace Bow Handle or Extension Handle	41
20	Replace Semiconductor Device or Terminal Lug E1	42-44
20.1	Replace Tranzorb	44.1-44.2
21	Replace Totalizing Time Meter M1	45
22	Install Variable Resistor or Switch Knob or Control Dial	46-48
23	Install Board Assembly A1TB1	49-50
24	Install Keyboard Assembly	51-52
25	Install Digital Indicator	53-54
26	Install Panel Assembly A1	55-58
27	Replace Front Panel Decal	59

TASK 1. Remove Panel Assembly A1.

Applicability: All Models

Common Tools:

- Pliers, diagonal cutting
- Screwdriver, cross tip, No. 1
- Screwdriver, cross tip, No. 2
- Screwdriver, flat tip

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies: None

Personnel: Two

- Soldier A: Removes panel assembly A1.
- Soldier B: Helps Soldier A.

NOTE

Soldier B is not needed until frame 4.

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller for access only; refer to para. 2-5, task 1.

FRAME 1

Remove Panel Assembly:

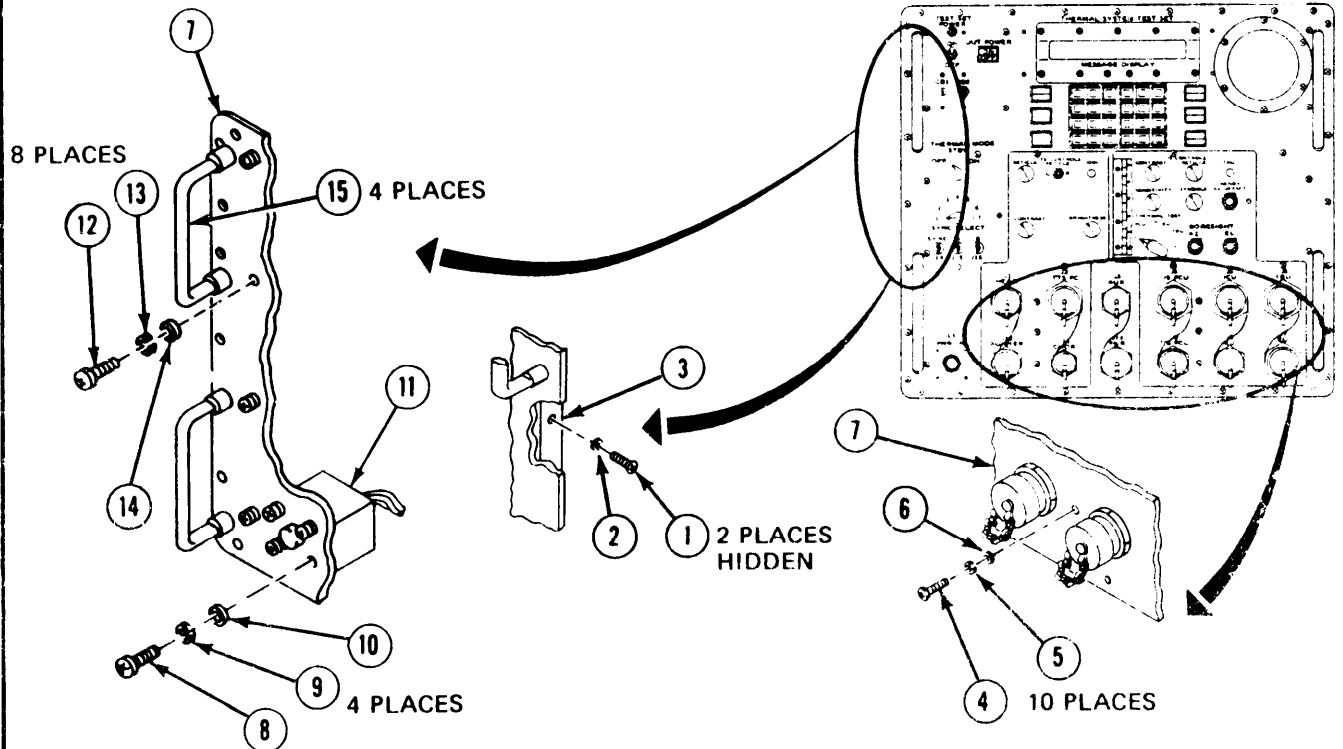
1. Unscrew and take out two machine screws (1) and flat washers (2) from each side of chassis angles (3) with cross tip screwdriver.
2. Unscrew and take out ten screws (4), lockwashers (5), and washers (6) from bottom of panel (7) with cross tip screwdriver.
3. Unscrew and take out four machine screws (8), lockwashers (9), and flat washers (10) from RFI filter assembly (11) with cross tip screwdriver. Get rid of lockwashers (9).

NOTE

There are eight machine screws (12), lockwashers (13), and flat washers (14) on each side of panel (7) near handles (15). Leave in the top screw (12), lockwasher (13), and washer (14) on each side until frame 4.

4. Unscrew and take out eight screws (12), lockwashers (13), and washers (14) with cross tip screwdriver.

GO TO FRAME 2



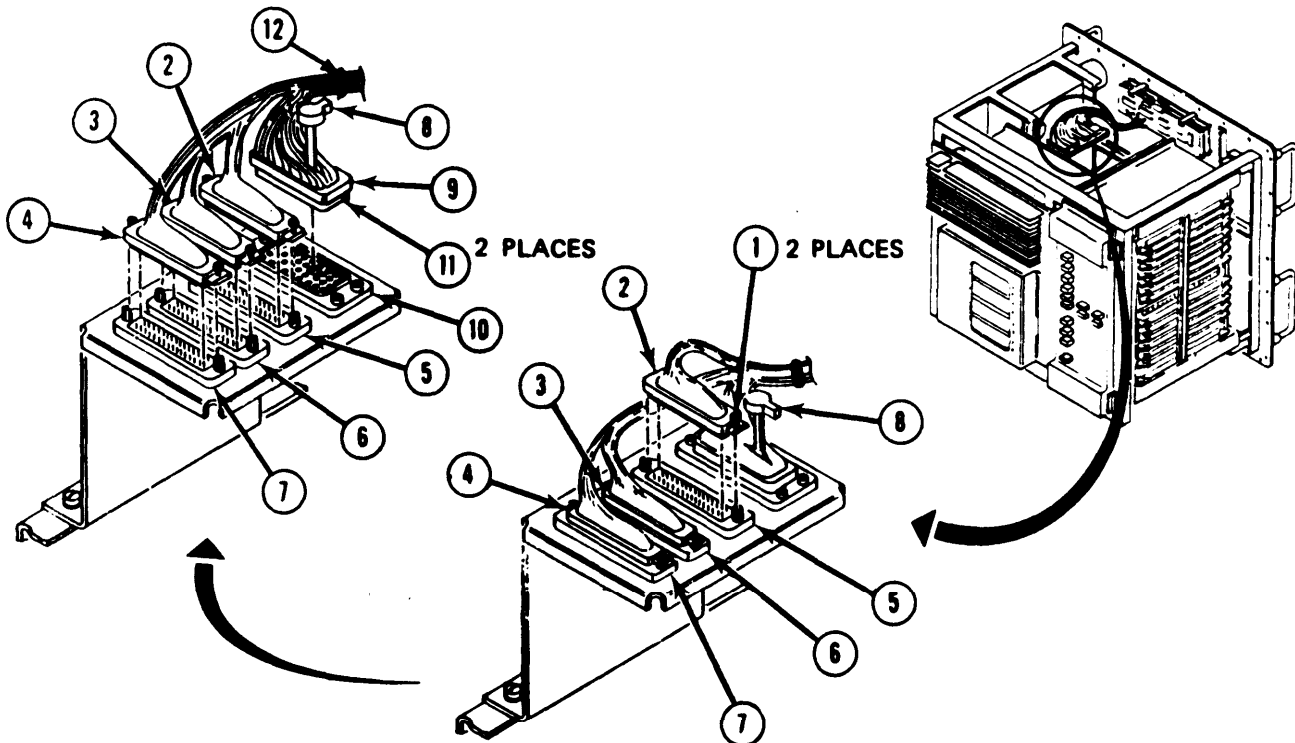
ARR82-24290

FRAME 2

Remove Panel Assembly (Continued):

1. Unscrew but do not take out two electrical polarizing keys (1) from each of three receptacle connectors A1P3 (2), A1P1 (3), and A1P4 (4) with flat tip screwdriver.
2. Take off connector A1P3 (2) from receptacle connector W14J1 (5). Take off connector A1P1 (3) from receptacle connector W17J1 (6). Take off connector A1P4 (4) from receptacle connector W13J2 (7).
3. Turn handle (8) one-quarter turn counterclockwise. Take off receptacle connector A1P2 (9) from receptacle connector W16J1 (10) by pulling up on handle (8).
4. Look at connectors A1P1 (3), A1P2 (9), A1P3 (2), and A1P4 (4) and connectors W16J1 (10), W14J1 (5), W17J1 (6), and W13J2 (7) for cracks and bent or loose contacts. If bad, refer to paragraph 2-4 on repairing connectors (if working on plug A1P2 (9), polarizing keys (11) and handle (8) maybe removed if necessary).
5. Cut electrical tiedown strap (12) from harness.

GO TO FRAME 3



ARR82-24291

FRAME 4

Remove Panel Assembly (Continued):

CAUTION

Panel (1) is now held in place by only two screws (2). After screws (2) are removed, panel (1) can be lowered down to rest on handles (3).

Soldier A,

Soldier B: 1. While holding panel (1) by handles (3), unscrew and take out two screws (2) and washers (4) with screwdriver.

Soldier A,

Soldier B: 2. Carefully lower panel (1) down to rest on handles (3) while guiding wiring (5) around chassis structure (6).

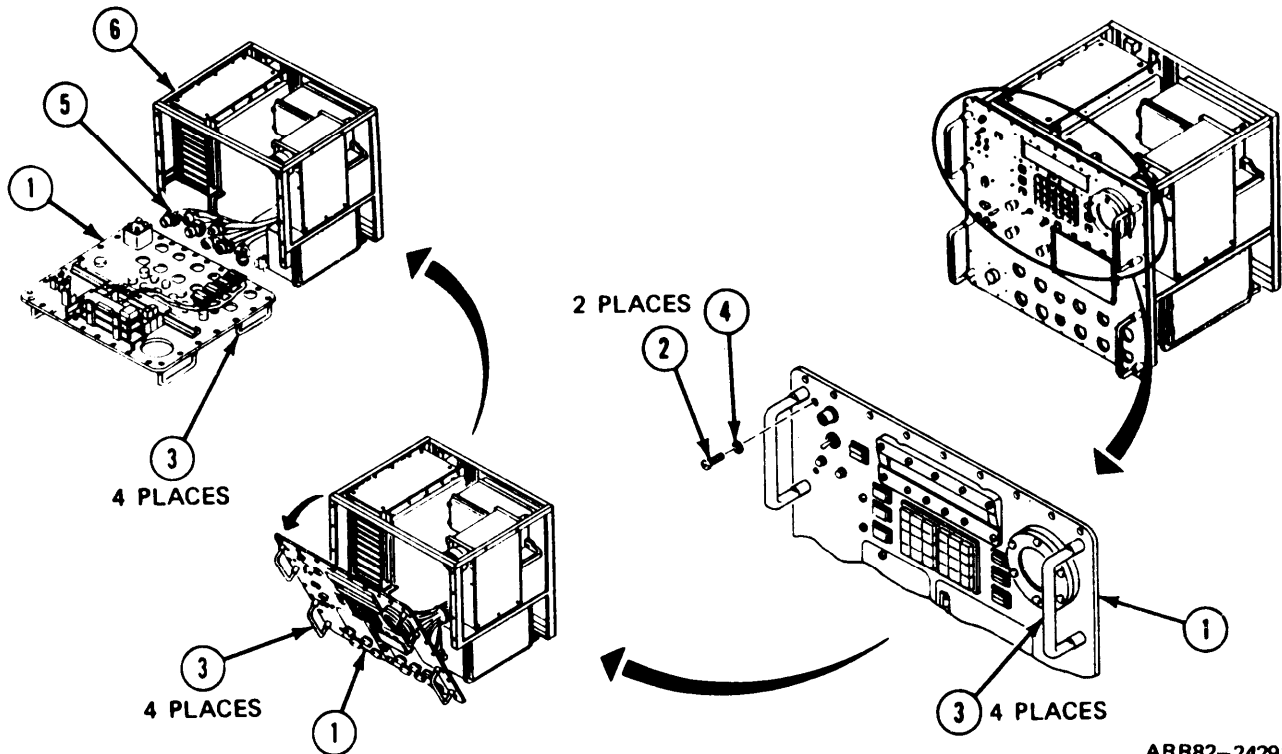
NOTE

If preformed packing comes off connectors when removing panel, reinstall preformed packing on connectors.

Follow-on Maintenance:

NOTE: To install panel assembly A1, refer to task 26.

TASK 1 ENDS HERE



TASK 2. Remove Digital Indicator.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Screwdriver, flat tip

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

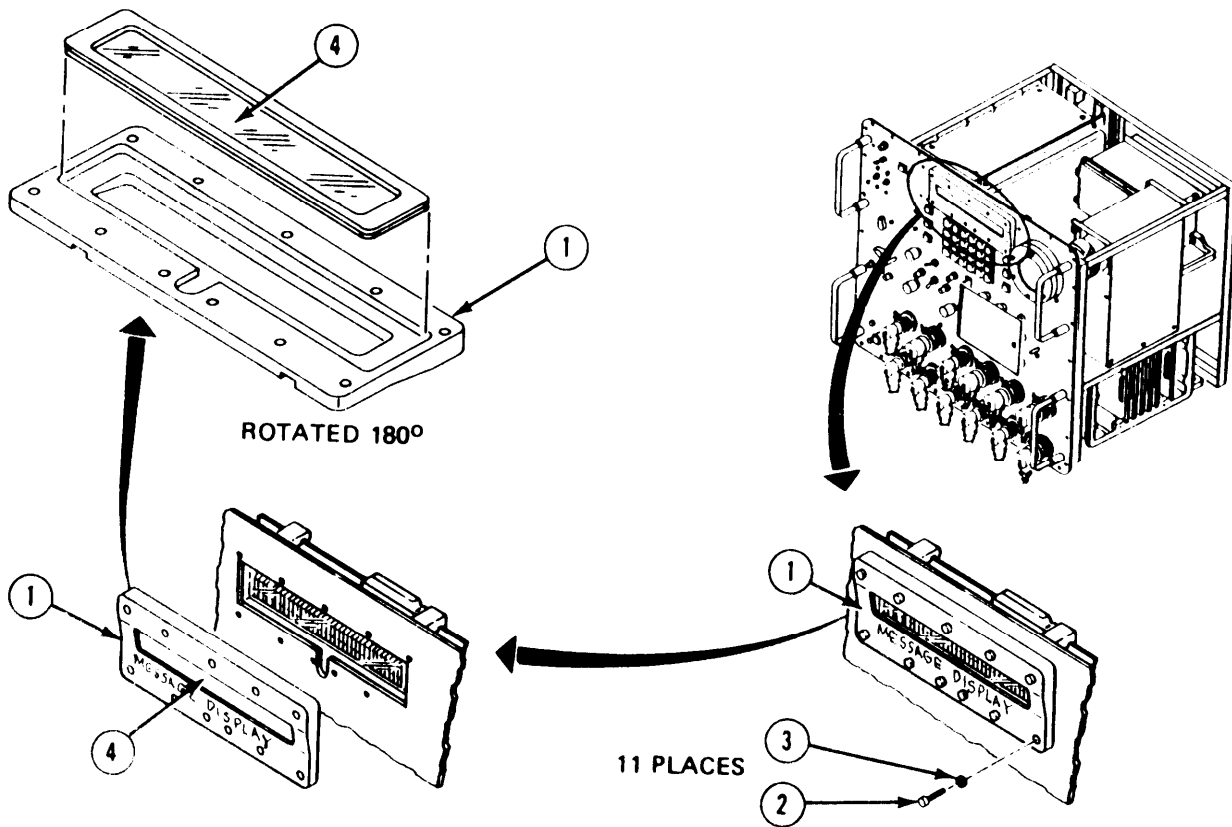
1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.

FRAMES 5

Remove Alpha Display Bezel and Rectangular EMI Window:

1. At bezel (1) unscrew and take out 11 machine screws (2) and flat washers (3) with cross tip screwdriver.
2. Take out and take apart bezel (1) and rectangular EMI window (4).
3. Look at bezel (1) for cracks, breaks, or chipping. If bad, turn in bezel (1). If OK, set aside until step 5.
4. Look at window (4) for cracks, scratches, or broken edges. If bad, turn in window (4). If OK, do step 5.
5. Put window (4) back in bezel (1) and set aside for later use.

GO TO FRAME 6



ARR82-24294

FRAME 6

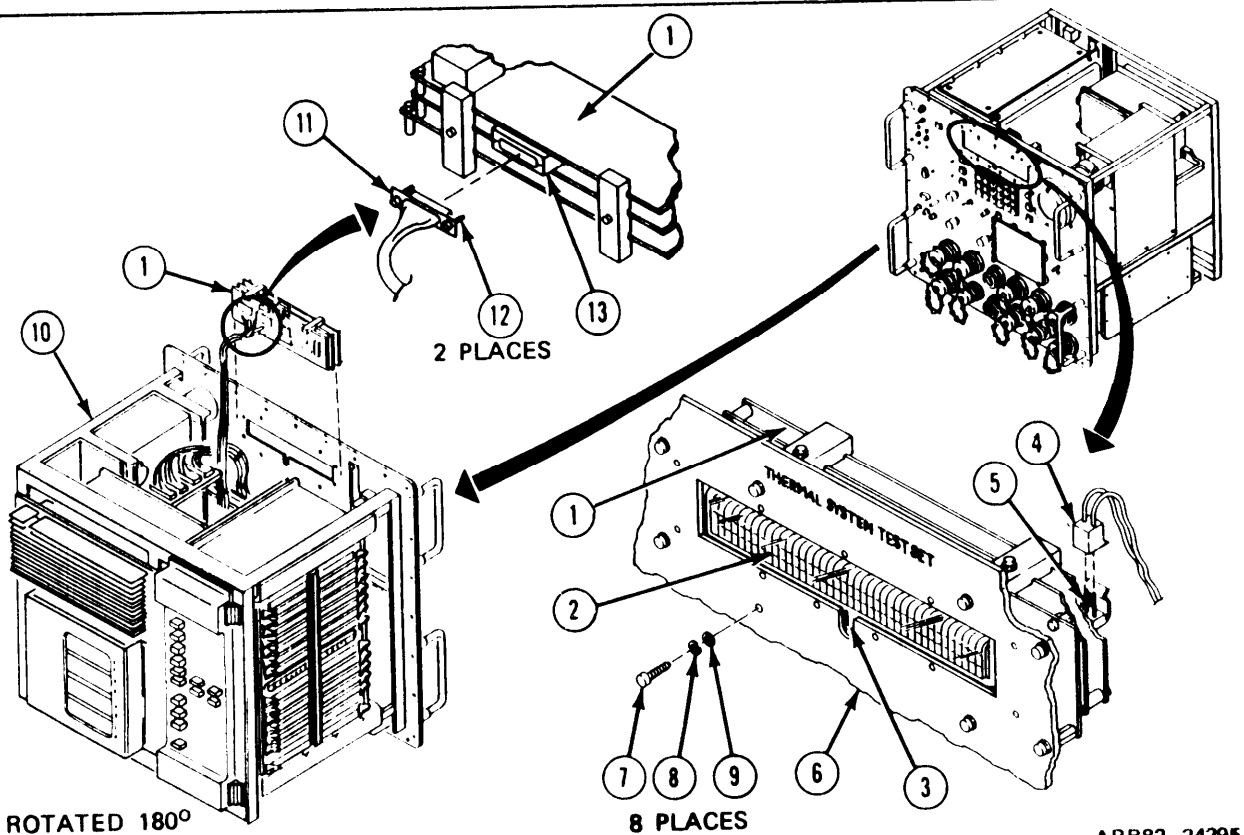
Remove Digital Indicator:

CAUTION

Digital indicator (1) has a glass covered, vacuum sealed message display (2). Avoid breaking vacuum nipple (3) or puncturing glass cover of message display (2). Avoid damage to circuits by not allowing digital indicator (1) to hit against hard surfaces.

1. At back of digital indicator (1), take off electrical plug connector A1P6 (4) from jack (5).
2. At message display (2) on panel (6), unscrew and take out eight machine screws (7), lockwashers (8), and flat washers (9) with cross tip screwdriver. Get rid of lockwashers (8).
3. Take digital indicator (1) out of test controller chassis assembly (10). Turnover digital indicator (1) and find receptacle connector A1P5 (11).
4. On connector A1P5 (11), unscrew but do not takeout two electrical polarizing keys (12) with flat tip screwdriver. Take connector A1P5 (11) offjack (13).

GO TO FRAME 7



FRAME 7

Inspect Digital Indicator:

CAUTION

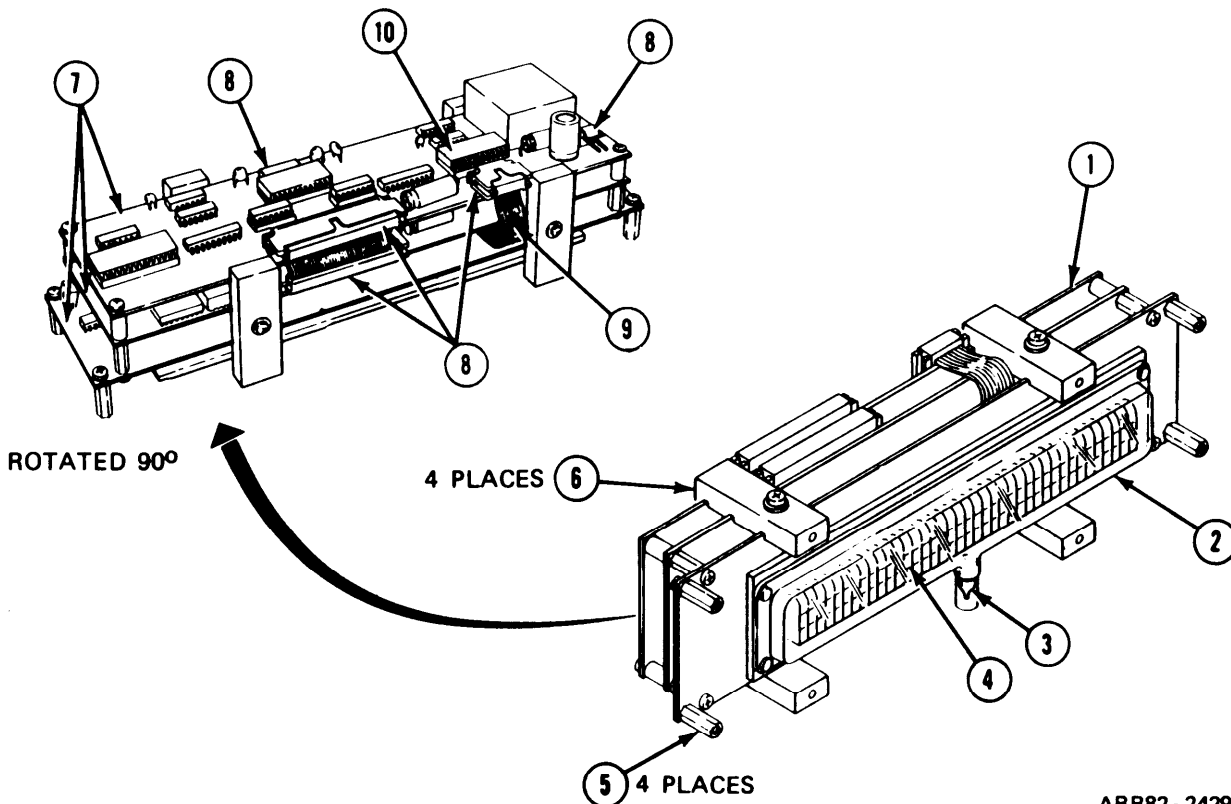
Digital indicator (1) has a glass covered, vacuum sealed message display (2). Avoid breaking vacuum nipple (3) or puncturing glass cover (4) of message digital indicator (2). Avoid damage to circuits by not allowing digital indicator (1) to hit against hard surfaces.

1. Look at message display (2) for cracked or broken window (4) or vacuum nipple (3). If bad, turn in digital indicator (1). If OK, do step 2.
2. Look at digital indicator (1) for loose, damaged, or missing electrical-mechanical posts (5) or spacer blocks (6). If bad, turn in. If OK, go to step 3.
3. Look at digital indicator (1) for loose or damaged printed wiring boards (7), connectors (8), wiring (9), or microcircuits (10). If bad, turn in. If OK, carefully set aside for later use.

Follow-on Maintenance:

NOTE: To install digital indicator, refer to task 25.

TASK 2 ENDS HERE



ARR82-24296

TASK 3. Remove Keyboard Assembly.

Applicability: All Models

Common Tools:

Set, soldering and resoldering
Wrench, open end, 1/4-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Pencil, writing (Item 19)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.

FRAME 8

Remove Keyboard:

NOTE

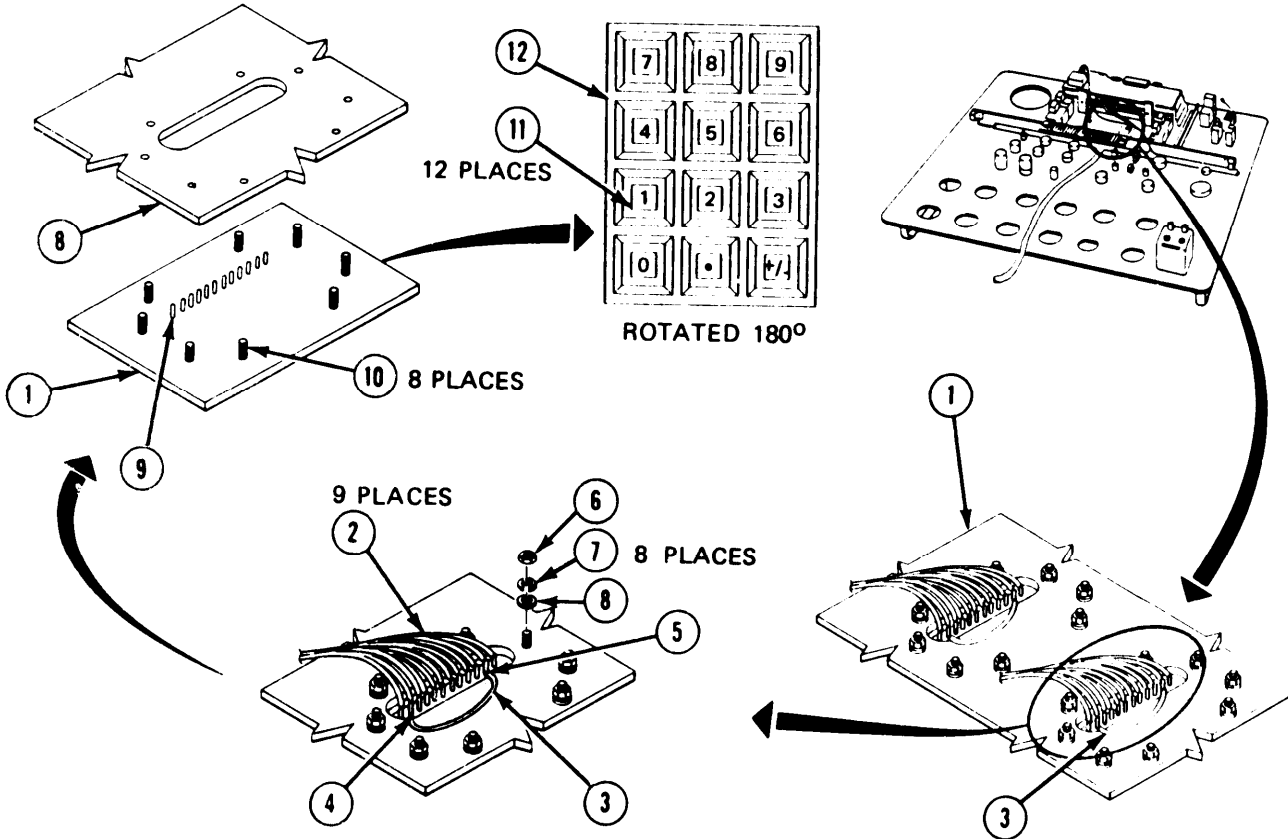
- Use this task to remove either function or numeric keyboard assembly, numeric keyboard assembly (1) is shown.
- Read paragraph 2-4 on tagging and unsoldering wires before doing any work.

1. Unsolder nine wires (2) and jumper wire (3) between H(4) and B(5) terminals.
2. Unscrew and take out eight hexagon plain nuts (6), lockwashers (7), and flat washers (8) with wrench. Get rid of lockwashers (7).
3. Take keyboard (1) out of panel assembly (8).
4. Look at keyboard (1) for broken, bent, or missing terminals (9) and screw posts (10). Look at keyboard (1) for cracked, unreadable, or missing inserts (11) or torn or worn out rubber cover (12). If bad, turn in keyboard (1). If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install keyboard assembly, refer to task 24.

TASK 3 ENDS HERE



ARR82-24297

TASK 4. Repair Keyboard Assembly.

Applicability: All Models

Common Tools:

Screwdriver, flat tip

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

Adhesive (Item 2)

Insert, keyboard (19200) 12303229-13 through -20 (as required)

Insert, keyboard (19200) 12303480-2 (as required)

Isopropyl alcohol (Item 17)

Primer (Item 22)

Swab, cotton (Item 33)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

Remove thermal system test controller case cover; refer to volume 1, para. 4-17.

FRAME 9

Remove Insert:

WARNING

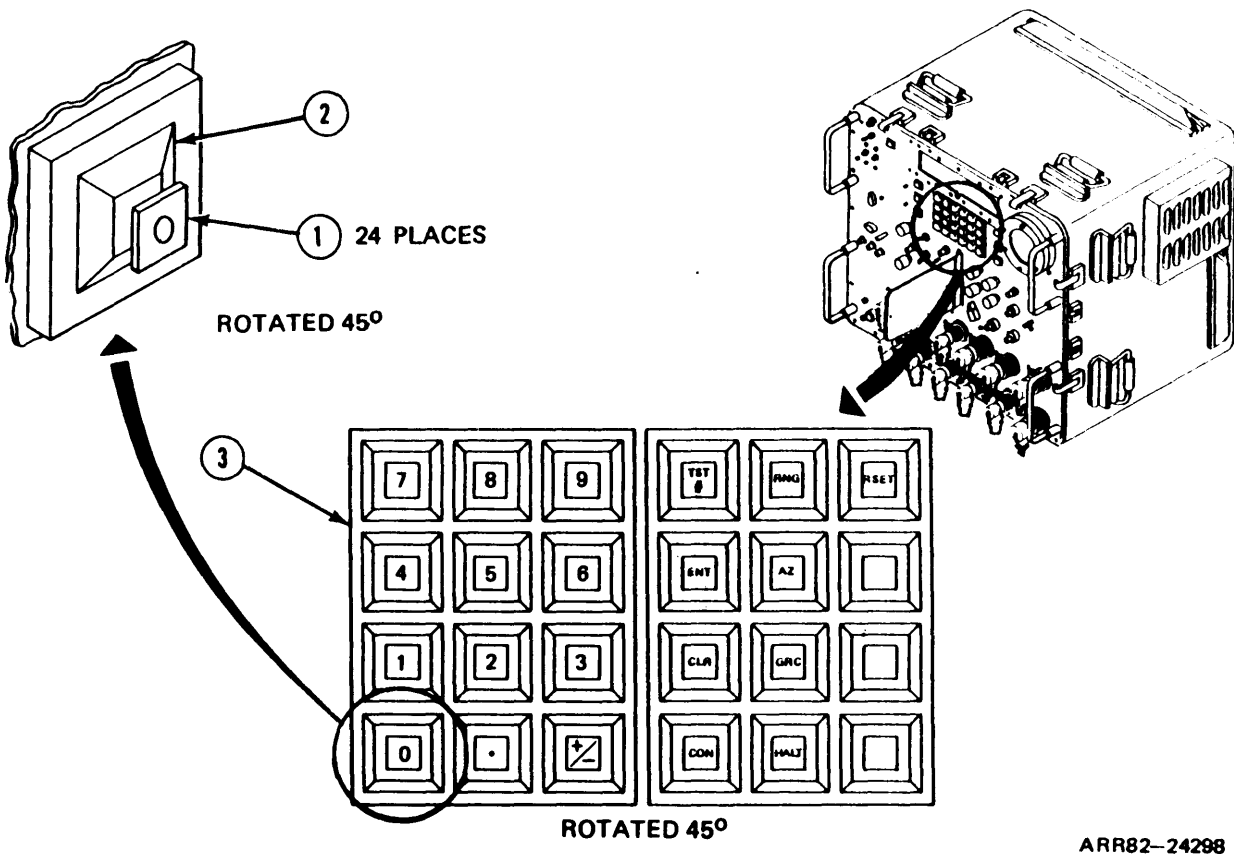
Isopropyl alcohol is toxic and extremely flammable. Use only in well ventilated areas. Avoid prolonged or repeated breathing of the vapors. Avoid prolonged contact with skin. Keep the area free of sparks and open flames.

NOTE

Use this task to replace insert (1) on any of 24 keys (2). "0" insert on numeric keyboard (3) is shown.

1. Pry off insert (1) from keyboard (3) with screwdriver. Get rid of insert (1).
2. Clean area of key (2) with alcohol and swab.

GO TO FRAME 10



FRAME 10

Install Insert:

WARNING

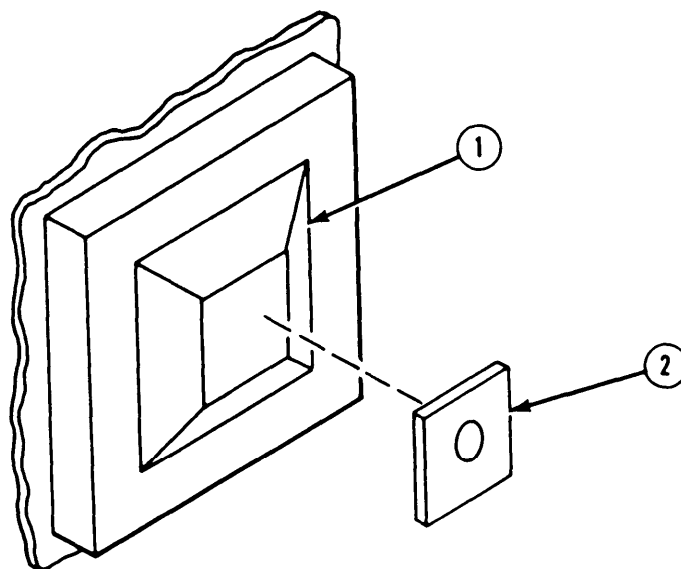
Primers and adhesives can burn easily and give off harmful vapors. To avoid injury, keep away from open fire and use in a well-ventilated area.

1. Apply primer to key (1).
2. Apply adhesive to back side of new insert (2) and put new insert (2) into key (1).
3. Press insert (2) firmly and let dry.

Follow-on Maintenance:

Install thermal system test controller case cover; refer to volume 1, para.4-18.

TASK 4 ENDS HERE



ARR82-24299

TASK 5. Remove Board Assembly A1TB1.

Applicability: All Models

Common Tools:

Set, soldering and resoldering
Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Pencil, writing (Item 19)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.

FRAME 11

Remove Board A1TB1:

CAUTION

Several wires (1) on board A1TB1 (2) may be covering access to screws (3). Use care when removing machine screws (3) to avoid disconnecting wires (1) or tearing insulation on wires(1).

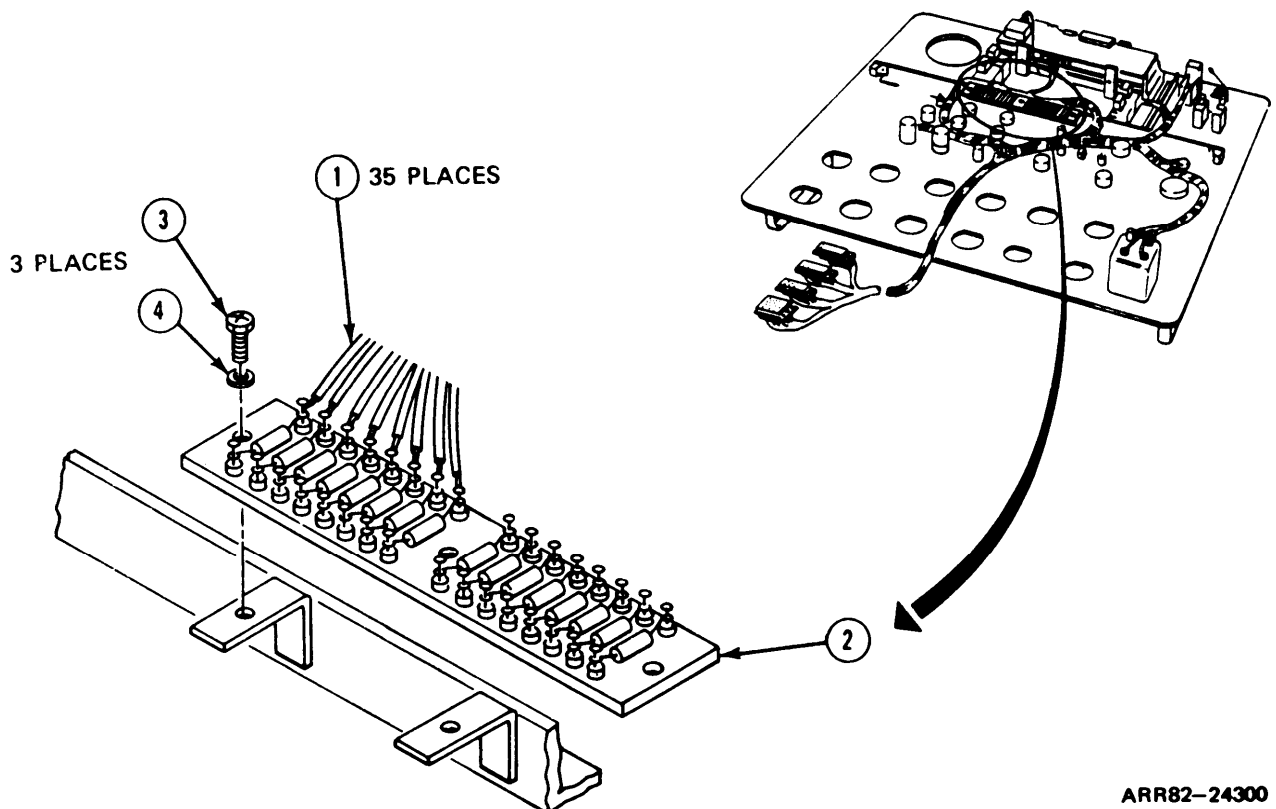
NOTE

- Read paragraph 2-4 on tagging and soldering wires before doing any work.
 - To remove board (2) for access only; do step 2.
1. Unsolder and take off 35 wires (1) from board (2).
 2. Unscrew and takeout three screws (3) and flat washers (4) with screwdriver.

Follow-on Maintenance:

NOTE: To install board assembly A1TB1, refer to task 23.

TASK 5 ENDS HERE



TASK 6. Repair Board Assembly A1TB1.

Applicability: All Models

Common Tools:

Set, soldering and resoldering

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

Pencil, writing (Item 19)

Resistor, fixed, film (81349) RNC60H1001FR (R14, R20) (as required)

Resistor, fixed, film (81349) RNC60H3011FR (R15, R16) (as required)

Resistor, fixed, film (81349) RNC60H2051FR (R17, R18) (as required)

Resistor, fixed, film (81349) RNC60H1002FR (R9, R19) (as required)

Resistor, fixed, film (81349) RNC60H5111FR (R11, R12) (as required)

Semiconductor Device (81349) JAN1N3600 (CR1-CR16) (as required)

Solder (Item 29)

Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.
4. Remove board assembly A1TB1; refer to task 5.

FRAME 12

Remove Semiconductor Device or Fixed Film Resistor:

NOTE

- Read Paragraph 2-4 on tagging and crimping wires before doing any work.
- Use this task to replace any of 16 semiconductors or 10 resistors. Semiconductor CHR13 (1) is shown.
- Take off jumper wires as required.

1. Unsolder and take off semiconductor (1) and jumper wire (2), if any. Get rid of semiconductor (1).

Install Semiconductor or Fixed Film Resistor:

CAUTION

Installing semiconductor (1) backwards can cause damage to panel lamps. Make sure the band (3) on the semiconductor (1) is facing the correct terminal (4) as shown below.

NOTE

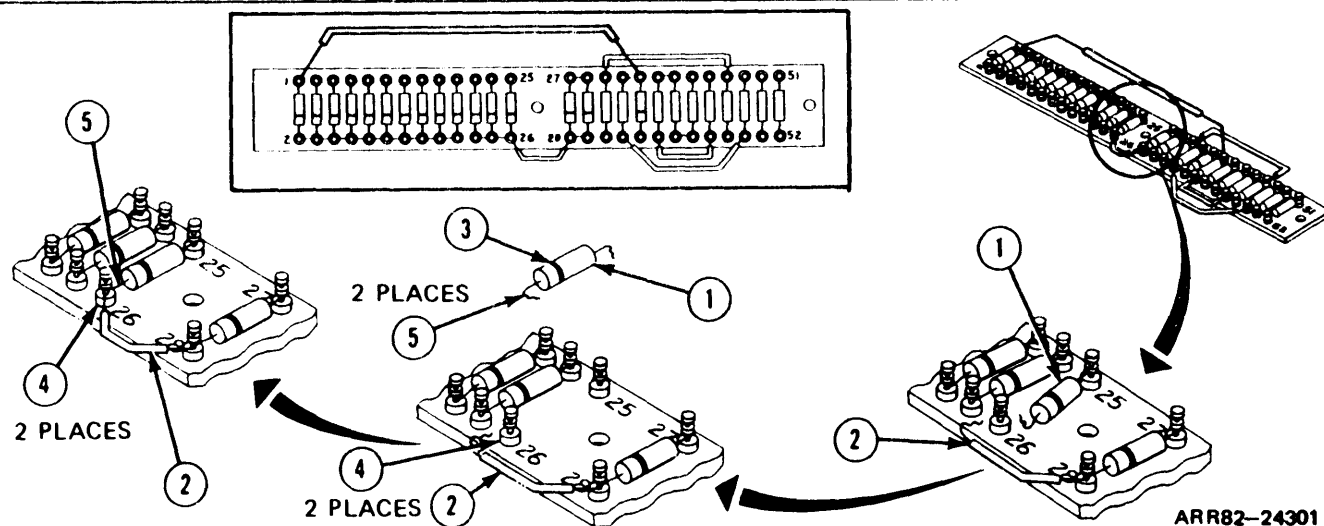
Put on jumper wires as required.

2. Wrap leads (5) of new semiconductor (1) and jumper wire (2), if any, around two terminals (4).
3. Solder leads (5) and jumper wire (2), if any, to terminals (4).

Follow-on Maintenance:

NOTE: To install board assembly A1TB1, refer to task 23.

TASK 6 ENDS HERE



TASK 7. Replace Panel Structure.

Applicability: All Models

Common Tools:

- Screwdriver, cross tip, No. 1
- Screwdriver, cross tip, No. 2
- Wrench, combination, 3/16-inch

Special Tools: None

Supplies:

- Lockwasher (96906) MS35338-135 (1 required)
- Strap, tiedown, electrical (96906) MS3367-4-9 (as required)
- Structure, panel, (19200) 12303539

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.
4. Remove totalizing time meter M1; refer to task 21.

FRAME 13

Remove Structure:

1. Take off bard assembly A1TB1 (1) for access only; refer to task 5.
2. Unscrew and take out machine screw (2), 2 flat washers (3), lockwashers (4), and hexagon plain nut (5) from semiconductor device (6) with screwdriver and wrench.
3. Unscrew and take out six machine screws (7) and flat washers (8) from front of panel assembly (9) with screwdriver and wrench.
4. Genly pull and rock top part of light-switch S2 (10) to separate.

CAUTION

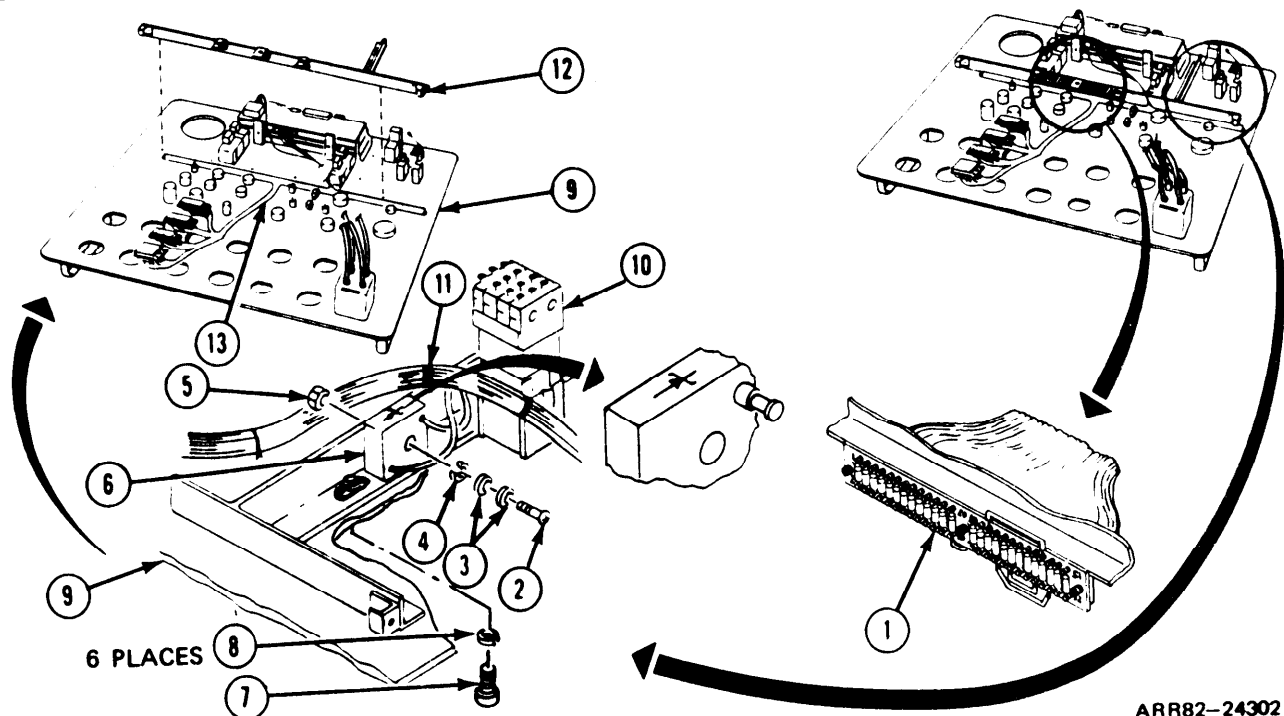
Use caution when removing structure. Do not damage wires

NOTE

Take off electrical tiedown strap (11) as needed to take structure (12) off of panel (9).

5. Lift wiring harness (13) to take off structure (12).
6. Take structure (12) off rear of panel (9) and turn in structure (12).

GO TO FRAME 14



FRAME 14

Install Structure:

1. Lift wiring harness (1) to put on structure (2).
2. Put new structure (2) on rear of panel (3).

NOTE

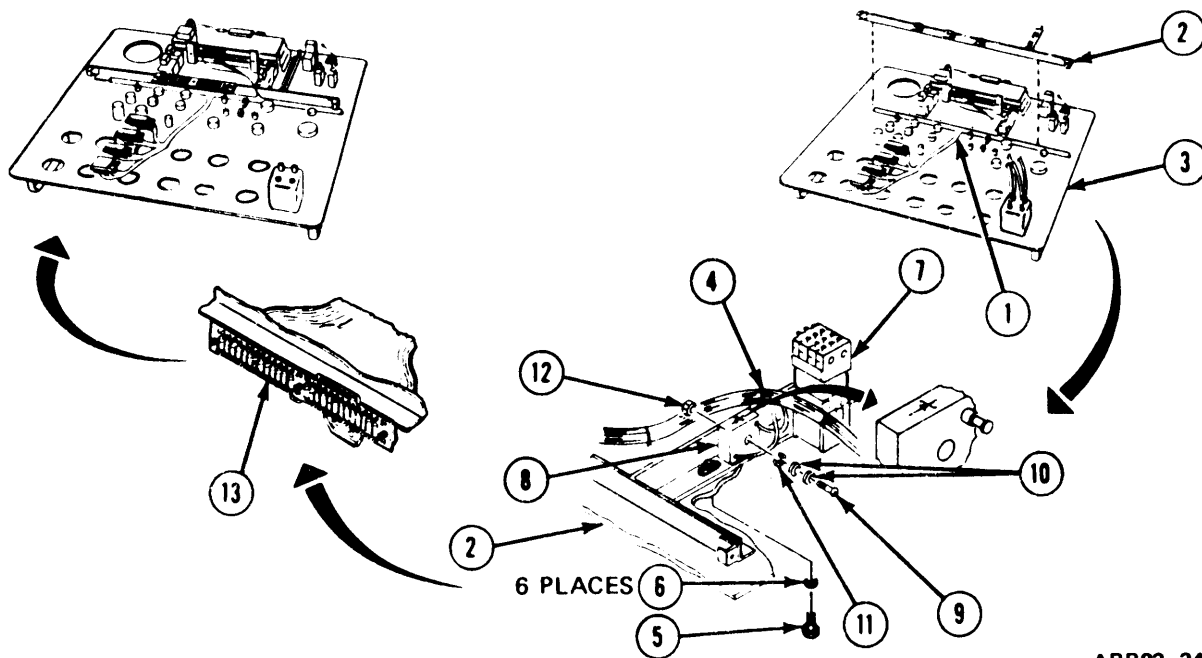
Put on new electrical tiedown strap (4) if removed from wiring harness (1).

3. Screw in and tighten six screws (5) and washers (6) with screwdriver and wrench.
4. Put top part of light-switch S2 (7) onto bottom part. Push gently until it clicks into place.
5. Align semiconductor (8) on structure (2). Screw in and tighten screw (9), 2 washers (10), lockwasher (11), and nut (12) with screwdriver and wrench.
6. Put board A1TB1 (13) on; refer to task 23.

Follow-on Maintenance:

1. Install totalizing time meter M1; refer to task 21.
2. Install panel assembly A1; refer to task 26.
3. Install thermal system test controller; refer to para. 2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 7 ENDS HERE



ARR82-24303

TASK 8. Remove Variable Resistor or Switch Knob or Control Dial.

Applicability: All Models

Common Tools:

Key, hex, .050-inch

Key, hex, 5/64-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove thermal system test controller case cover; refer to volume 1, para. 4-17.

FRAME 15

Remove Variable Resistor Knob:

NOTE

- To remove a variable resistor knob, do frame 15; to remove a switch knobs do frame 16; to remove a control dial, do frame 17.
- Use this frame to remove any of seven potentiometer knobs:

BRIGHTNESS R1	SYMBOLS	R5
CONTRAST R2	RETICLE	R6
SENSITIVITY R3	RETICLE BRIGHTNESS	R10
CONTRAST R5		

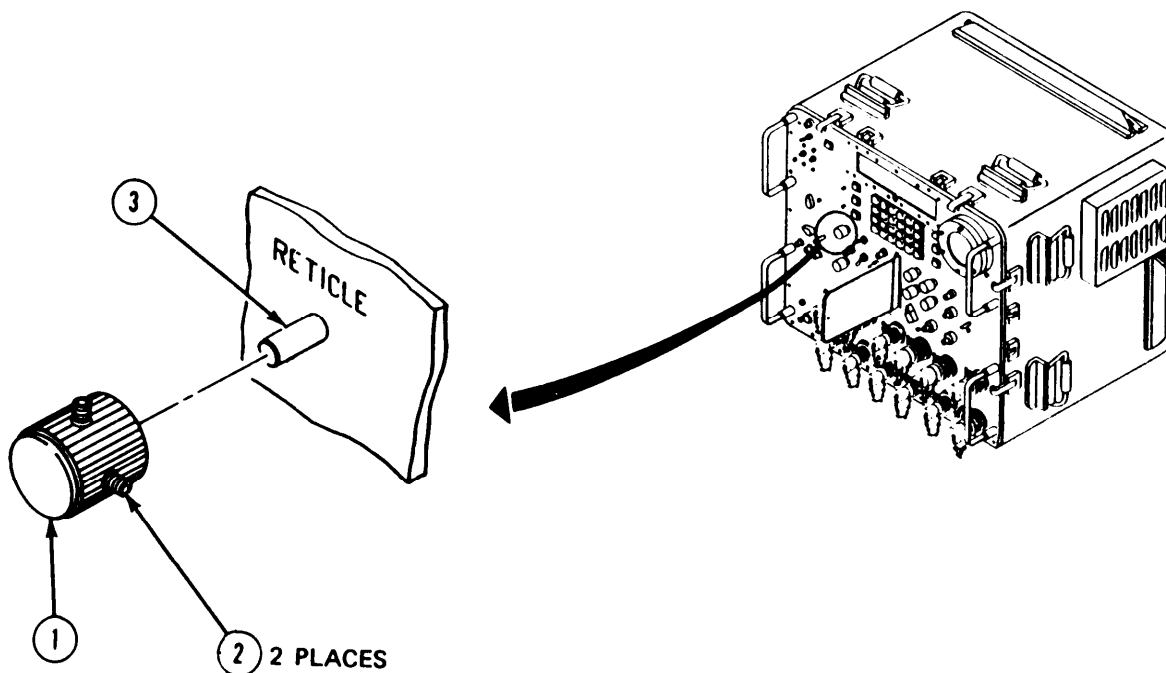
RETICLE BRIGHTNESS variable resistor R10 knob (1) is shown.

1. Turn knob (1) fully counterclockwise.
2. Unscrew but do not take out two set screws (2) with 5/64-inch key. Take knob (1) off post (3).
3. Look at knob (1) for cracks, chips, or missing set screws (2). If bad, turn in knob (1), If OK, set aside for later use, do follow-on maintenance, and TASK 8 ENDS HERE.

Follow-on Maintenance:

NOTE: To install variable resistor knob, refer to task 22.

GO TO FRAME 16



ARR82-24304

FRAME 16

Remove Switch Knob:

NOTE

Use this frame to remove any of three switch knobs:

THERMAL MODE	S9
THERMAL TEST	S10
SYNC SELECT	S11

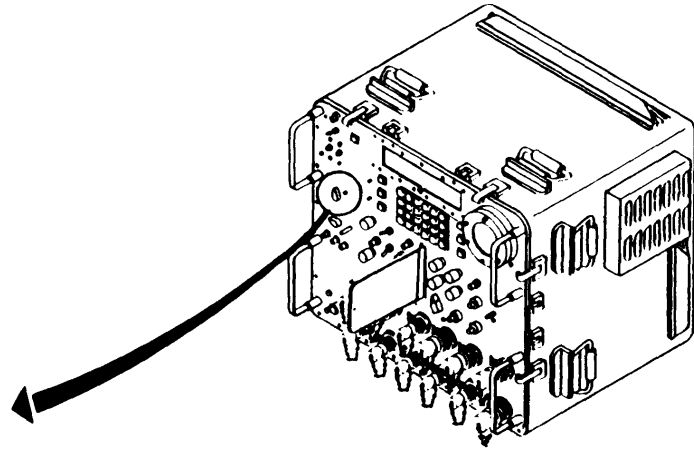
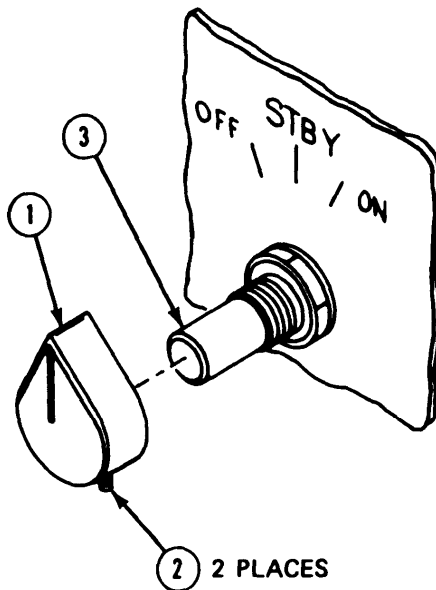
THERMAL MODE rotary switch S9 knob (1) is shown.

1. Turn knob (1) counterclockwise to farthest left position.
2. Unscrew but do not take out two set screws (2) with .050-inch key. Take knob (1) off post (3).
3. Look at knob (1) for cracks, chips, or missing set screws (2). If bad, turn in knob (1). If OK, set aside for later use, do follow-on maintenance, and TASK 8 ENDS HERE.

Follow-on Maintenance:

NOTE: To install switch knob, refer to task 22.

GO TO FRAME 17



ARR82-24305

FRAME 17

Remove Control Dial:

NOTE

Use this frame to remove any of three control dials:

BORESIGHT AZ R7
 BORESIGHT EL R8
 AZ OFFSET R13

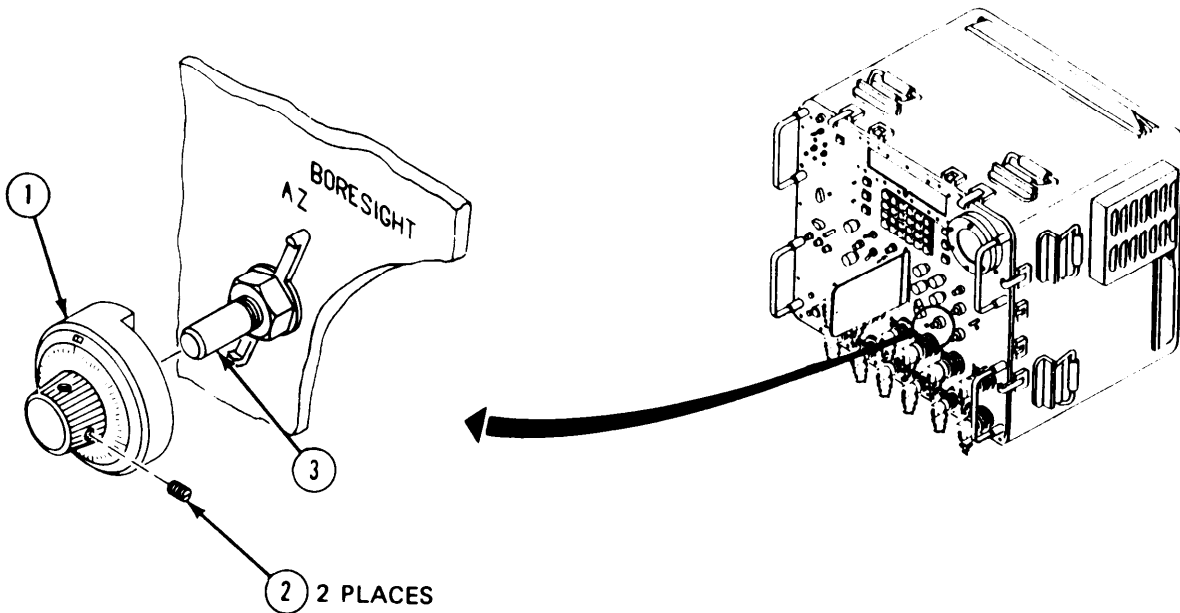
BORESIGHT AZ R7 dial (1) is shown.

1. Turn dial (1) fully counterclockwise so dial is set at 0.0.
2. Unscrew but do not take out two set screws (2) with 0.050-inch key. Take dial (1) off post (3).
3. Look at dial (1) for cracks, chips, or missing set screws (2). If bad, turn in dial (1). If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install control dial, refer to task 22.

TASK 8 ENDS HERE



ARR82-24306

TASK 9. Replace Variable Resistor R1, R2, R3, R4, R5, R6, R7, R8, R10, R13.

Applicability: All Models

Common Tools:

Set, soldering and resoldering
Wrench, combination 1/2-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Pencil, writing (Item 19)
Solder (Item 29)
Tag, marker (as required) (Item 34)
Variable Resistor (81349) RV2SAYSD103A (R3, R4, R6) (as required)
Variable Resistor (81349) RV2SAYSD253A (R5) (as required)
Variable Resistor (81349) RV4NAYSD103A (R10) (as required)
Variable Resistor (81349) RV4NAYSD253A (R1, R2) (as required)
Variable Resistor (19200) 12303311 (R7, R8) (as required)
Variable Resistor (19200) 12303312 (R13) (as required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.
4. Remove variable resistor or switch knob or control dial; refer to task 8.

FRAME 18

Remove Variable Resistor:

NOTE

- To replace any of variable resistors R1 through R6 or R10, do frame 18. To replace variable resistors R7, R8, or R13, do frame 19.

- Use this frame to replace any of seven variable resistors:

BRIGHTNESS R1	SYMBOLS	R5
CONTRAST R2	RETICLE	R6
SENSITIVITY R3	RETICLE BRIGHTNESS	R10
CONTRAST R4		

RETICLE BRIGHTNESS variable resistor R10 (1) is shown.

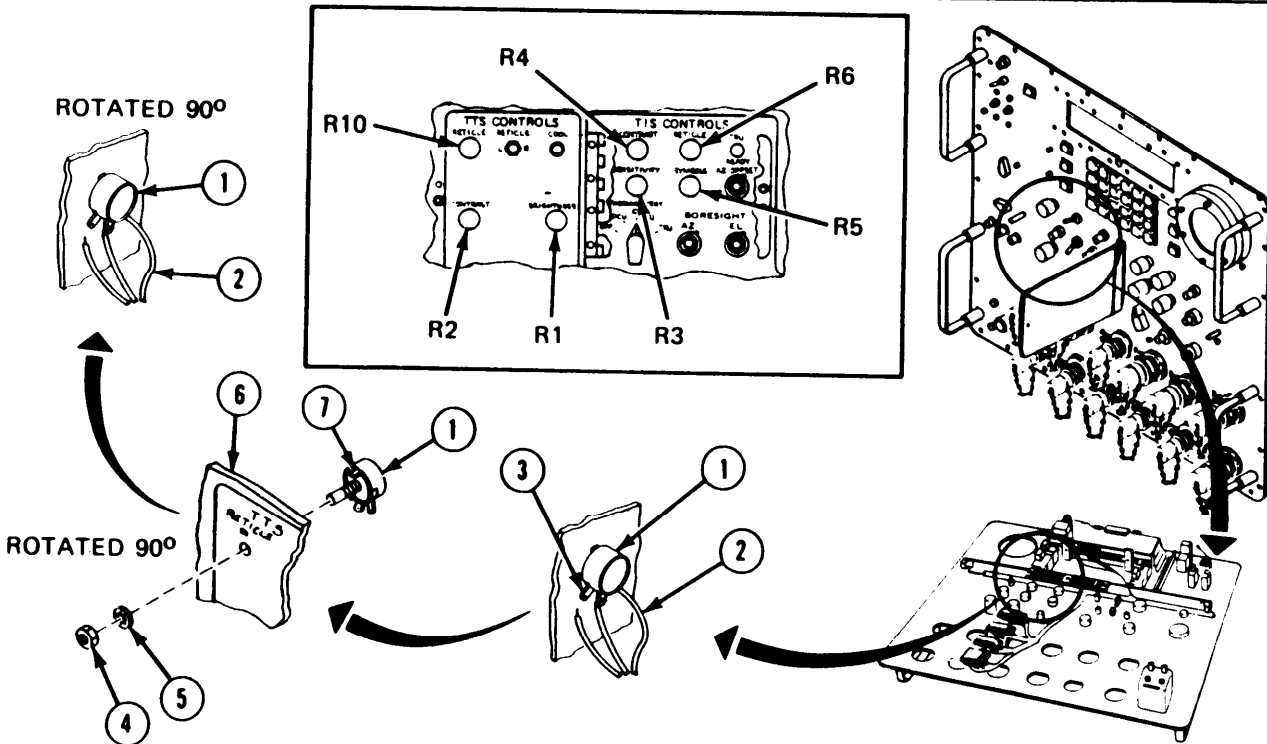
- Read paragraph 2-4 on tagging and soldering wires and switches before doing any work.

1. Tag and unsolder two wires and jumper wires (2) from terminals (3) of variable resistor (1).
2. Unscrew and take off nut (4) and lockwasher (5) with wrench. Get rid of variable resistor (1), nut (4), and lockwasher (5).

Install Variable Resistor:

3. Put new variable resistor (1) through hole in panel assembly (6) so tang (7) sits in hole.
4. Screw on and tighten new nut (4) and new lockwasher (5) with wrench.
5. Solder wires (2) to variable resistor (1).

GO TO FRAME 19



ARR82-24307

FRAME 19

Remove Variable Resistor (Continued):

NOTE

- Use this frame to remove any of three variable resistors:
 - BORESIGHT AZ R7
 - BORESIGHT EL R8
 - AZ OFFSET R13
- BORESIGHT EL variable resistor R8 (1) is shown.
- Read paragraph 2-4 on tagging and soldering wires and switches before doing any work.

1. Tag and unsolder wires (2) from variable resistor (1).
2. Unscrew and take off nut (3), anti-rotation washer (4), and lockwasher (5) with wrench. Get rid of nut (3), washer (4), lockwasher (5), and variable resistor (1).

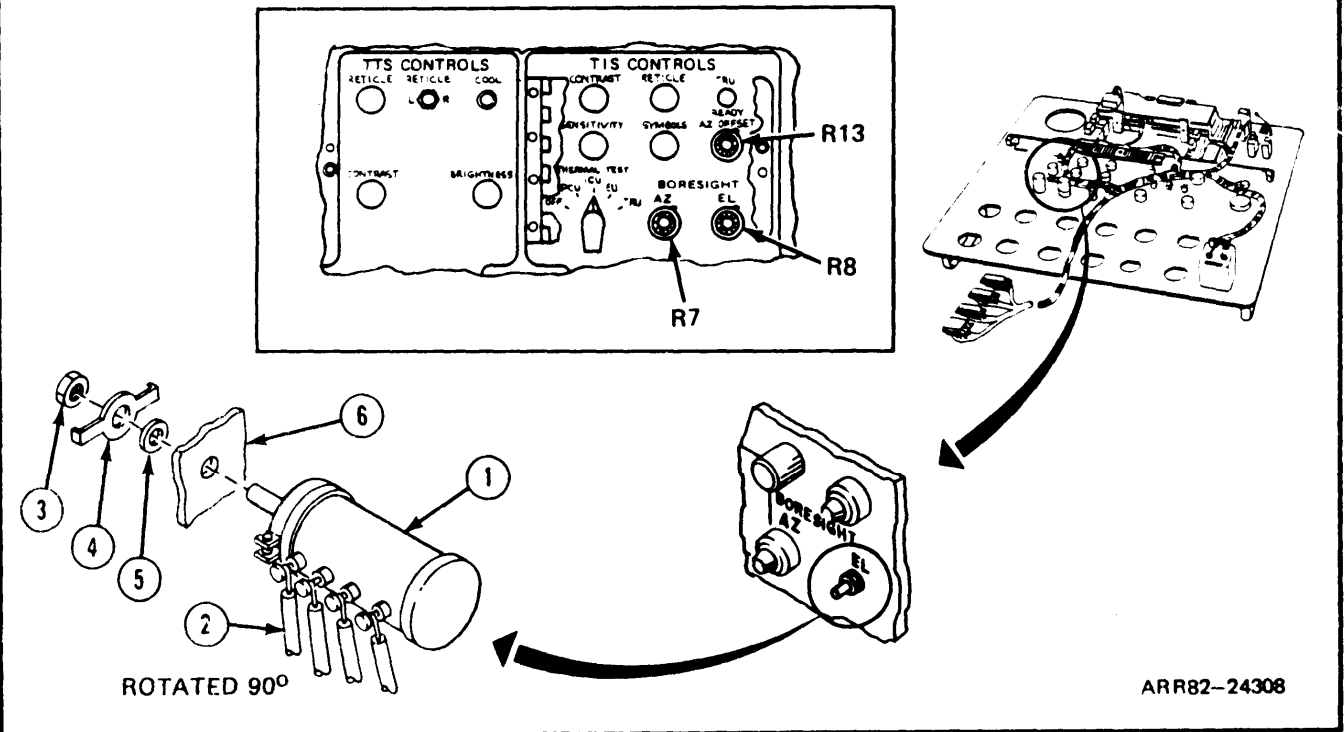
Install Variable Resistor:

3. Put new variable resistor (1) through hole in panel (6).
4. Screw on and tighten new nut (3), new lockwasher (S), and new washer (4) with wrench.
5. Solder wires (2) to variable resistor (1).

Follow-on Maintenance:

1. Install variable resistor or switch knob or control dial; refer to task 22.
2. Install panel assembly A1; refer to task 26.
3. Install thermal system test controller; refer to para. 2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 9 ENDS HERE



TASK 10. Replace Rotary Switch S9, S10, or S11.

Applicability: All Models

Common Tools:

Pliers, long round nose
Set, soldering and resoldering
Wrench, combination, 1/2-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

Grease, Apiezon H (Item 15)
Pencil, writing (Item 19)
Solder (Item 29)
Switch, rotary, (19200) 12303298 (S9, S10) (as required)
Switch, rotary, (19200) 12303296 (S11) (as required)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.
4. Remove switch knob; refer to task 8.

FRAME 20

Remove Switch:

NOTE

- Use this task to replace any of three rotary switches:

THERMAL MODE S9
 THERMAL TEST S10
 SYNC SELECT S11

SYNC SELECT switch S11 (1) is shown.

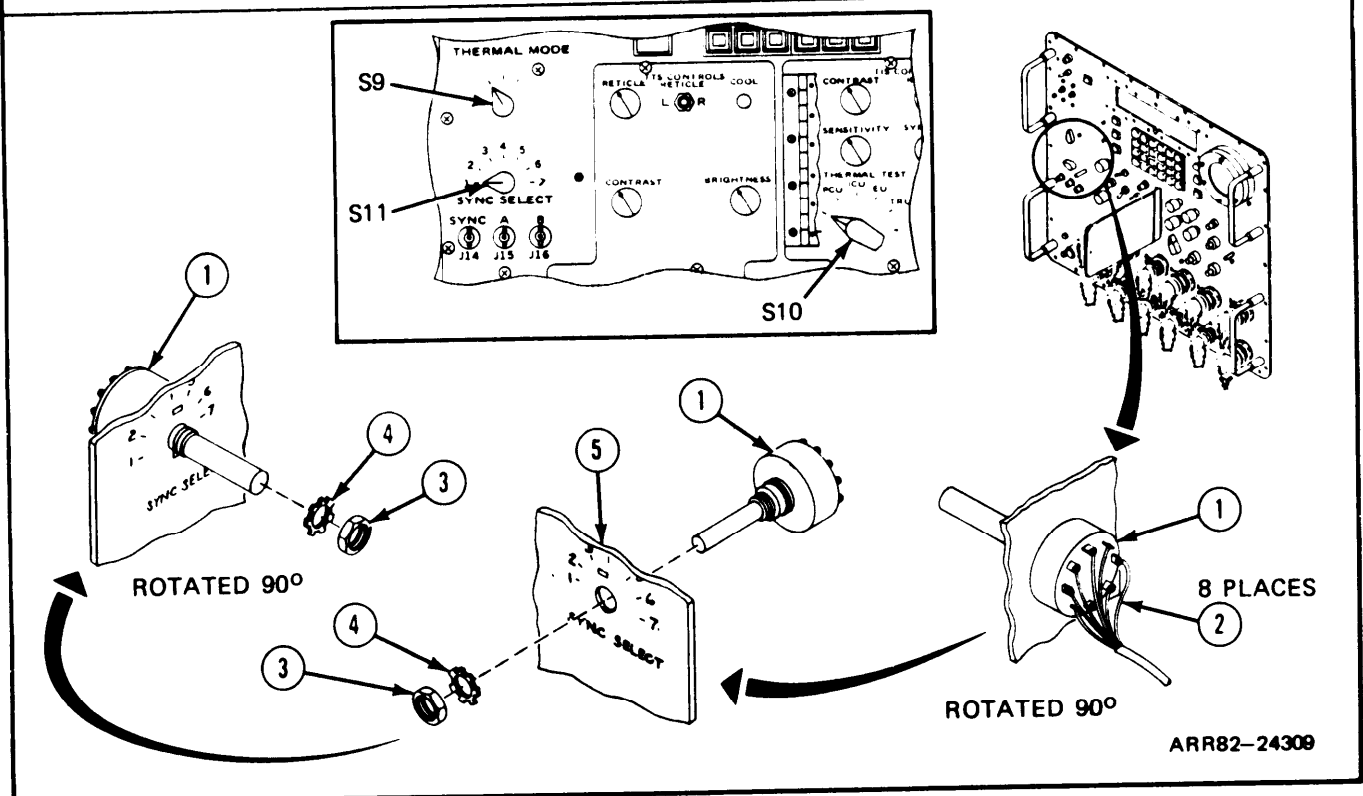
- Read paragraph 2-4 on tagging and soldering wires and switches before doing any work.

1. Tag and unsolder eight wires (2) from switch (1).
2. Unscrew and takeoff nut (3) and lockwasher (4) with wrench. Get rid of switch (1), nut (3), and lockwasher (4).

Install Switch:

3. Put new switch (1) through hole in panel (5).
4. Screw in and tighten new nut (3) and new lockwasher (4) with

GO TO FRAME 21



FRAME 21

Install Switch (Continued):

NOTE

- Read paragraph 2-40 on toggling and soldering wires and switches before doing any work.
- Use this wiring chart for reference only.

1. Solder eight wires (1) to switch (2).

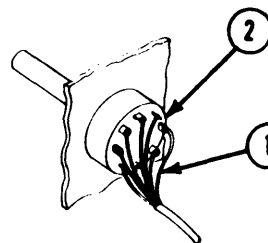
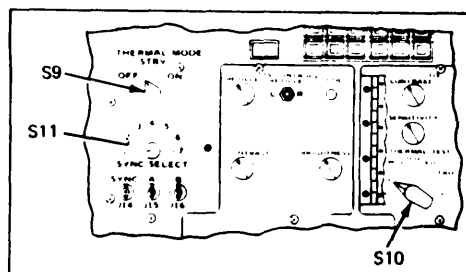
Wiring Chart for Switch S9, S10, S11

From	To	From	To	From	To
S9A-2	A1P3-22	S9C-9	A1P4-22	S10B-5	A1P3-29
S9A-C1	S10A-C1	S9C-C2	A1P4-18	S10B-7	R5-W
S9A-3	A1P3-21	S10A-C1	S9A-C1	S10B-7	S10B-8
S9A-C2	S10B-C1	S10A-C1	A1P3-38	S10B-8	S10B-9
S9A-2	A1P3-22	S10A-1	A1P3-23	S10B-9	S10B-11
S9A-9	S2-1C	S10A-2	A1P3-24	S10B-10	R5-CW
S9B-C1	S9B-C2	S10A-3	A1P3-25	S10B-C2	A1P3-10
S9B-3	A1P3-43	S10A-4	A1P3-26	S11-1	A1P2-L1
S9B-8	S9B-9	S10A-5	A1P3-27	S11-2	A1P2-L2
S9B-9	A1P3-42	S10A-9	A1P3-28	S11-3	A1P2-L3
S9B-C2	A1P1-25	S10A-C2	S9A-9	S11-4	A1P2-L4
S9B-C1	S9C-C2	S10A-C2	TB1-37	S11-5	A1P2-L5
S9C-2	S9C-3	S10B-1	S10B-3	S11-6	A1P2-L6
S9C-3	A1P4-21	S10B-3	S10B-5	S11-7	A1P2-L7

Follow-on Maintenance:

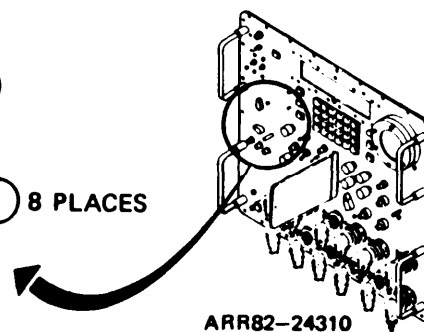
1. Install switch knob; refer to task 22.
2. Install panel assembly A1; refer to task 26.
3. Install thermal test controller; refer to para. 2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK TO END THERE



ROTATED 90°

1 8 PLACES



ARR82-24310

TASK 11. Replace Toggle Switch S1 or S8.

Applicability: All Models

Common Tools:

Knife, pocket
Screwdriver, flat tip
Set, soldering and desoldering
Wrench, combination, 9/16-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Pencil, writing (Item 19)
Potting Compound (Item 20)
Solder (Item 29)
Switch (96906) MS24524-23 (S1)
Switch (96906) MS90311-271 (S8)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller: refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.

FRAME 24

Remove Switch:

NOTE

Use this task to replace RETICLE switch S8 (1).

Read paragraph 2-4 on tagging and soldering wires before doing any work.

1. Tag and unsolder all wires (2) from switch (1).
2. Unscrew and takeoff nut (3), lockwasher (4), and lockring (5) with handle and socket. Turn in switch (1), nut (3), lockwasher (4), and lockring (5).

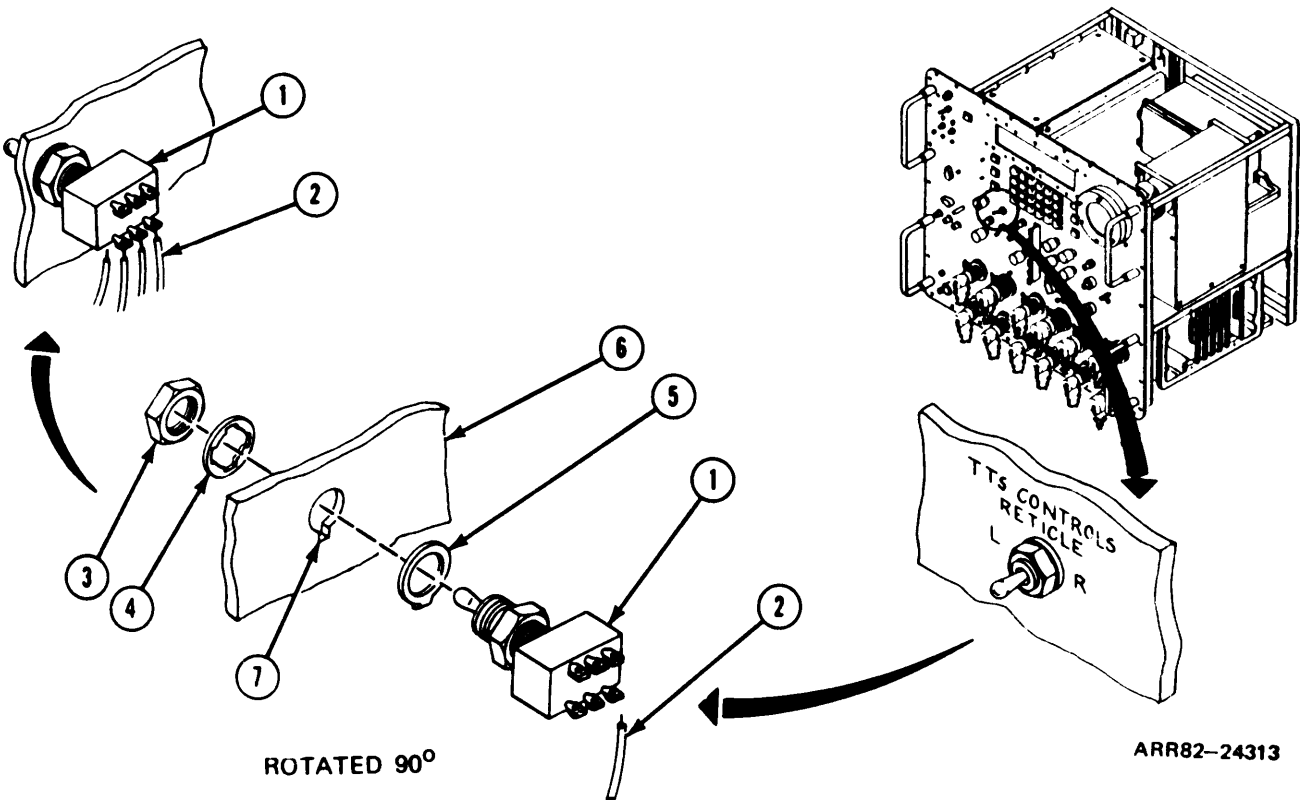
Install Switch:

3. Put new switch (1) through hole in panel (6) so lockring (5) fits in slot (7).
4. Screw on and tighten nut (3), new lockwasher (4), and lockring (5) with handle and socket.
5. Solder wires (2) to switch (1).

Follow-on Maintenance:

1. Install panel assembly A1; refer to task 26.
2. install thermal system test controller; refer to para. 2-5, task 8.
3. install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 11 ENDS HERE



TASK 12. Replace Light-Switch DS2, S2, S3, S4, S5, S6, or S7.**Applicability:** All Models**Common Tools:**

Knife, pocket
Screwdriver, flat tip
Set, soldering and resoldering

Special Tools: None**Supplies:****NOTE:** Expendable supplies are defined in volume 1, appendix C.

Light-Switch (19200) 12303306 (DS2)
Light-Switch (19200) 12303301 (S2)
Light-Switch (19200) 12303302 (S3)
Light-Switch (19200) 12303303 (S4)
Light-Switch (19200) 12303304 (S5)
Light-Switch (19200) 12303305 (S6)
Light-Switch (19200) 12303295 (S7)
Pencil, writing (Item 19)
Solder (item 29)
Tag, marker (as required) (Item 34)
Tape, lacing (as required) (Item 35)

Personnel: One**Equipment Condition:**

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.

FRAME 25

Remove Light-Switch:

NOTE

- Use this task to replace any of seven light-switches:

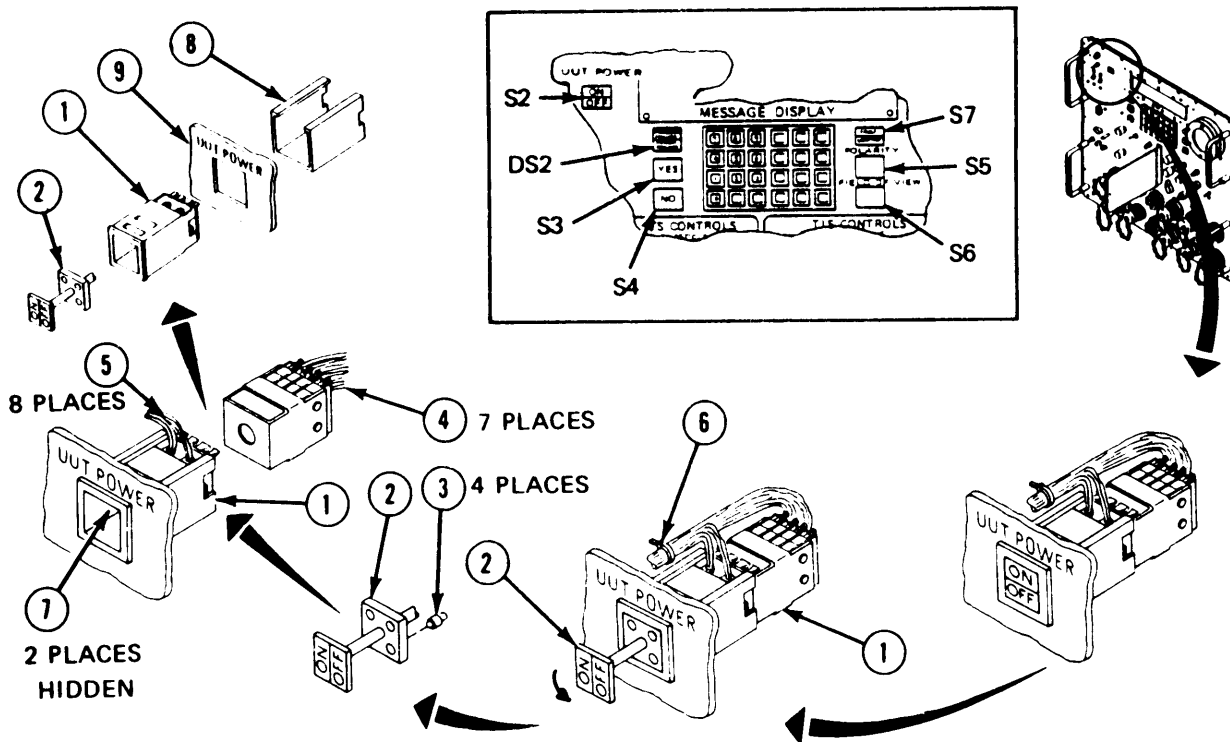
PROCESSOR FAILURE/ DS2 NO		S4
POWER FAILURE	POLARITY	S5
UUT POWER	S2	FIELD OF VIEW
YES	S3	FAULT/LAMP TEST
		S7

UUT POWER switch S2 (1) is shown.

- Read paragraph 2-4 on tagging and soldering wires before doing any work.

- Pull lampholder (2) of light-switch (1) out until it stops.
- Turn lampholder (2) counterclockwise 1/4 turn. Push lampholder (2) in and pull out of light-switch (1). Look at four lamps (3) for cracks or burns. If bad, replace light-switch (1). If OK, set lampholder (2) aside for later use.
- Unsolder seven wires (4) from light-switch (1). Pull back half of light-switch (1) off and set aside for later use.
- Unsolder eight wires (5) from light-switch (1). Cut lacing tape (6) holding wire to light-switch (1) with knife.
- Turn two screws (7) counterclockwise with screwdriver to unlock light-switch (1)
- Take bracket (8) off light-switch (1) and pull light-switch (1) through panel (9). Turn in light-switch (1), lampholder (2), and bracket (8).

GO TO FRAME 26



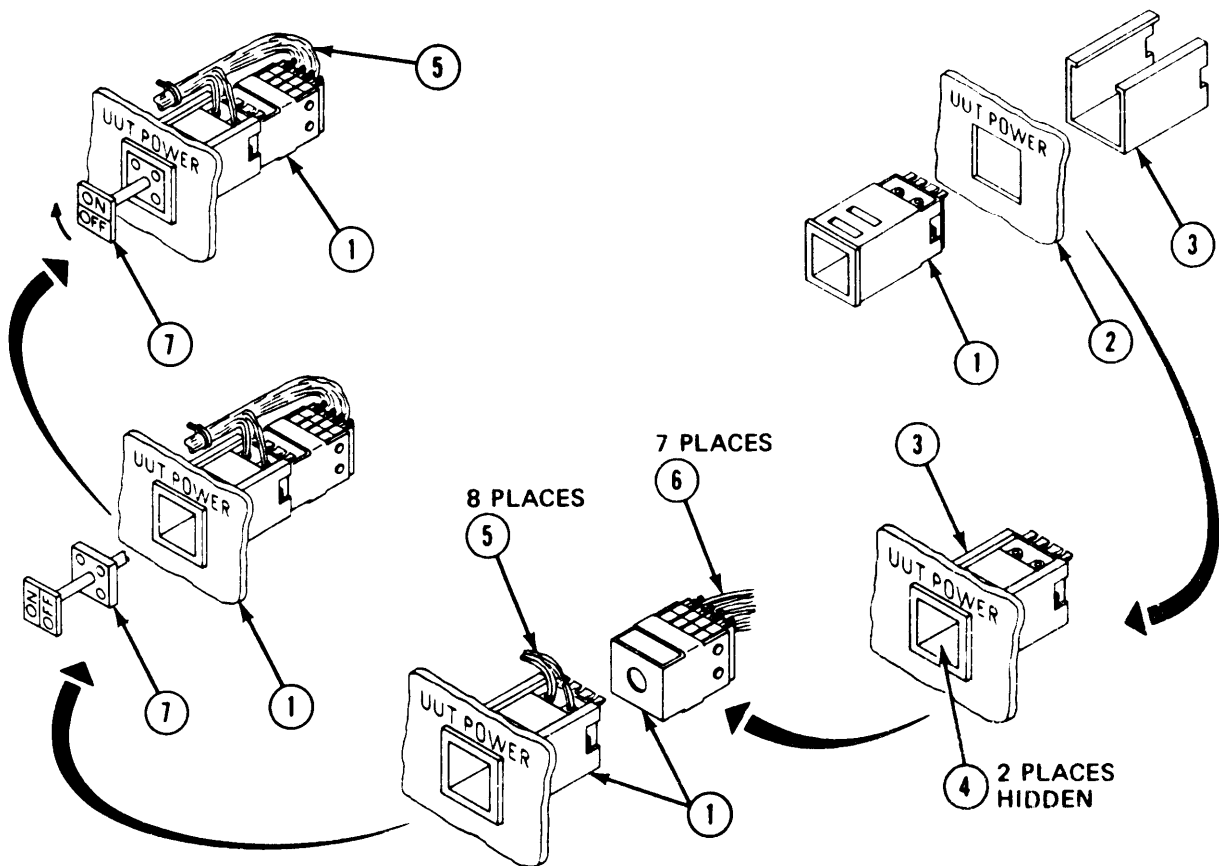
ARR82-24314

FRAME 26

Install Light-Switch:

1. Put light-switch (1) through panel assembly (2) so top is up and slide bracket (3) over light-switch (1).
2. Turn two screws (4) clockwise with screwdriver so bracket (3) is locked onto light-switch (1).
3. Solder eight wires (5) to light-switch (1). Put back half of light-switch (1) in place on light-switch (1).
4. Solder seven wires (6) to light-switch (1). Refer to frame 27 for wiring chart.
5. Put new lacing tape around wires (5) and light-switch (1).
6. Put lampholder (7) into light-switch (1) and turn one-quarter turn clockwise. Push in until lampholder (7) seated in light-switch (1).

GO TO FRAME 27



ARR82-24315

FRAME 27

Install Light-Switch:

NOTE

Use this chart for reference only.

Wiring Chart for Light-Switch DS2, S2, S3, S4, S5, S6, S7

From	To	From	To	From	To
DS2-A	TB1-9	S3-3NO	S3-A	S5-3C	A1P4-26
DS2-B	A1P2-D1	S3-1C	S4-1C	S5-4NO	A1P3-32
DS2-B	DS2-A	S3-1NO	KBD1-A	S5-4C	A1P3-34
DS2-C	TB1-11	S3-A	W-B	S5-1C	S7-1C
DS2-C	DS2-D	S3-B	S3-C	S5-1C	S6-4C
DS2-D	A1P2-D2	S3-C	S3 D	S5-1NC	S5-A
DS2-G	A1P1-23	S3-D	TB1-5	S5-1NO	S5-C
S2-2C	A1P6-2	S3-G	S2-G	S5-G	P1-5
S2-1C	S9A-9	S4-3C	S3-3C	S5-G	S5-H
S2-2NO	A1P2-A4	S4-3C	S6-4C	S5-H	S6-G
S2-1NC	A1P2-A1	S4-1C	S3-1C	S5-A	S5-B
S2-1NO	A1P2-A2	S4-1C	A1P2-J1	S5-B	TB1-13
S2-2C	S2-1C	S4-3NO	S4-A	S5-C	S5-D
S2-A	TB1-1	S4-1NO	KBD1-J	S5-D	TB1-15
S2-A	S2-B	S4-A	S4-B	S6-4C	S5-1C
S2-C	S2-D	S4-13	S4-C	S6-4C	S4-3C
S2-C	TB1-3	S4-C	S4-D	S6-4NC	S6-C
S2-G	S2-H	S4-D	TB1-7	S6-4NO	S6-A
S2-G	S3 G	S4-G	S3-G	S6-3NC	A1P4-28
S2-H	M1-(+)	S4-G	S6-H	S6-3NO	A1P4-29
S7-4C	P1-12	S7-1C	S5-1C	S6-3C	A1P4-30
S7-4C	TB1-39	S7-A	S7-B	S6-2NO	A1P3-36
S7-4NC	A1P2-D5	S7-A	TB1-21	S6-2C	A1P3-37
S7-4NO	A1P2-D4	S7-B	A1P3-41	S6-A	S6-B
S7-2C	A1P1-8	S7-C	S7-D	S6-B	TB1-17
S7-2NO	TB1-22	S7-D	TB1-23	S6-C	S6-D
S7-1NC	TB1-18	S7-G	A1P1-7	S6-D	TB1-19
S7-1C	P1-6	S7-H	DS3- 1	S6-G	S5-H
S3-3C	M1-(-)	S5-3NC	A1P4-24	S6-H	S4-G
S3-3C	S4-3C	S5-3NO	A1P4-25		

Follow-on Maintenance:

1. Install panel assembly A1; refer to task 26.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 12 ENDS HERE

TASK 13. Replace Lens, Lamp, Housing.

Applicability: All Models

Common Tools:

Set, soldering and resoldering
Wrench, combination, 9/16-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

Incandescent Lamp (81348) MS 18209-387

Indicator Light (81349) LH73/2

Light Lens (81349) LC25GN2

Pencil, writing (Item 19)

Solder (Item 29)

Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller (only when replacing indicator light); refer to para. 2-5, task 2.
3. Remove panel assembly A1(only when replacing indicator light); refer to task 1.

FRAME 28

Remove Lens, Lamp, or Housing:

NOTE

- Use this task to replace any of three lenses (1), lamps (2), or indicator lights (3) DS1, DS3, or DS4. TRU READY 0S3 is shown. If only changing lens (1) or lamp (2) do steps 1 and 6.
- Read paragraph 2-4 on tagging and soldering wires before doing any work.

1. Unscrew and take out lens (1). Pull lamp (2) from lens (1). Look at lens (1) and lamp (2) for cracks. If bad, turn in lens (1) or lamp (2). If OK, set aside for later use.
2. Tag and unsolder wires (4) from indicator light (3).
3. Unscrew and take off nut (5) and lockwasher (6) with wrench. Get rid of indicator light (3), nut (5), and lockwasher (6).

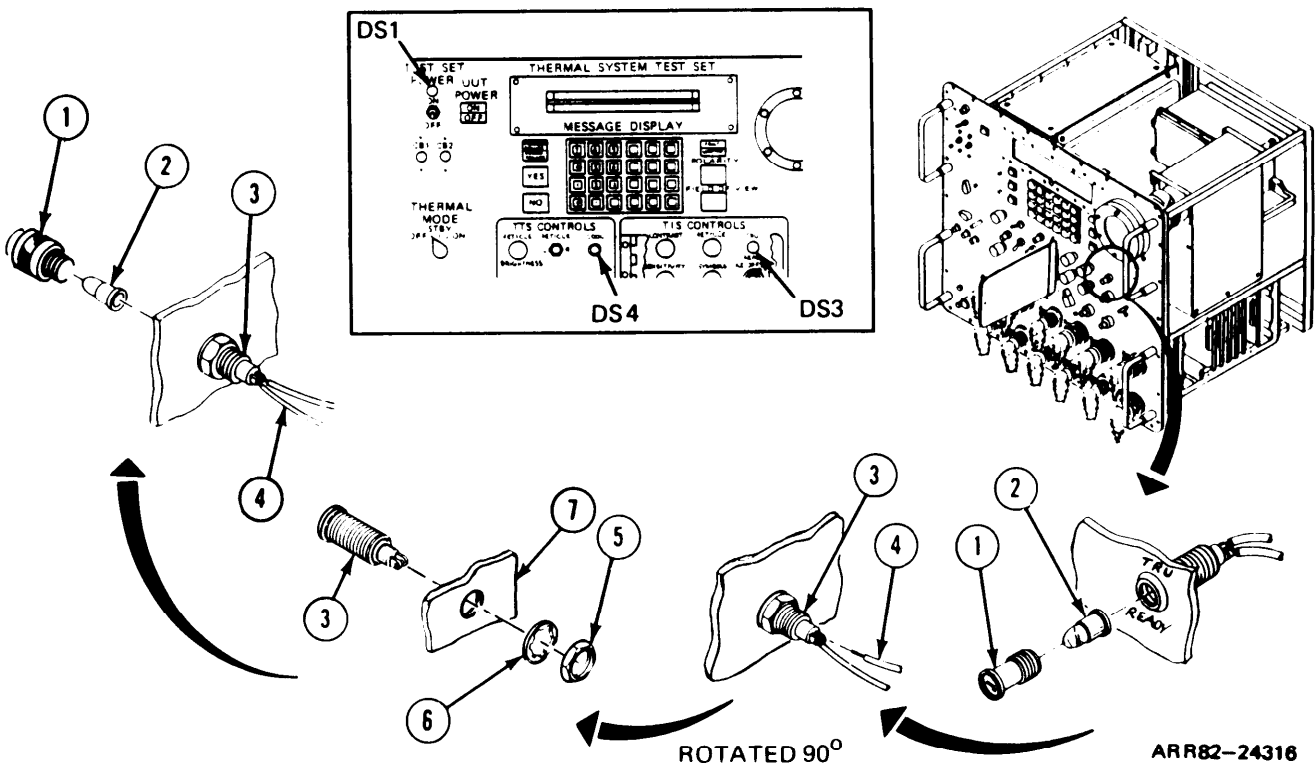
Install Lens, Lamp, or Housing:

4. Put new indicator light (3) through hole in panel (7) and screw on and tighten nut (5) and lockwasher (6) with wrench.
5. Solder wires (4) to indicator light (3).
6. Put new lamp (2) in new lens (1) and screw lens (1) into indicator light (3).

Follow-on Maintenance:

1. Install panel assembly A1 (if removed); refer to task 26.
2. Install thermal system test controller (if removed); refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 13 ENDS HERE



TASK 14. Replace RFI Filter Assembly.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 1
Set, soldering and resoldering

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-135 (eight required)
Pencil, writing (Item 19)
RFI filter assembly (19200) 12303329
Solder (Item 29)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.

FRAME 29

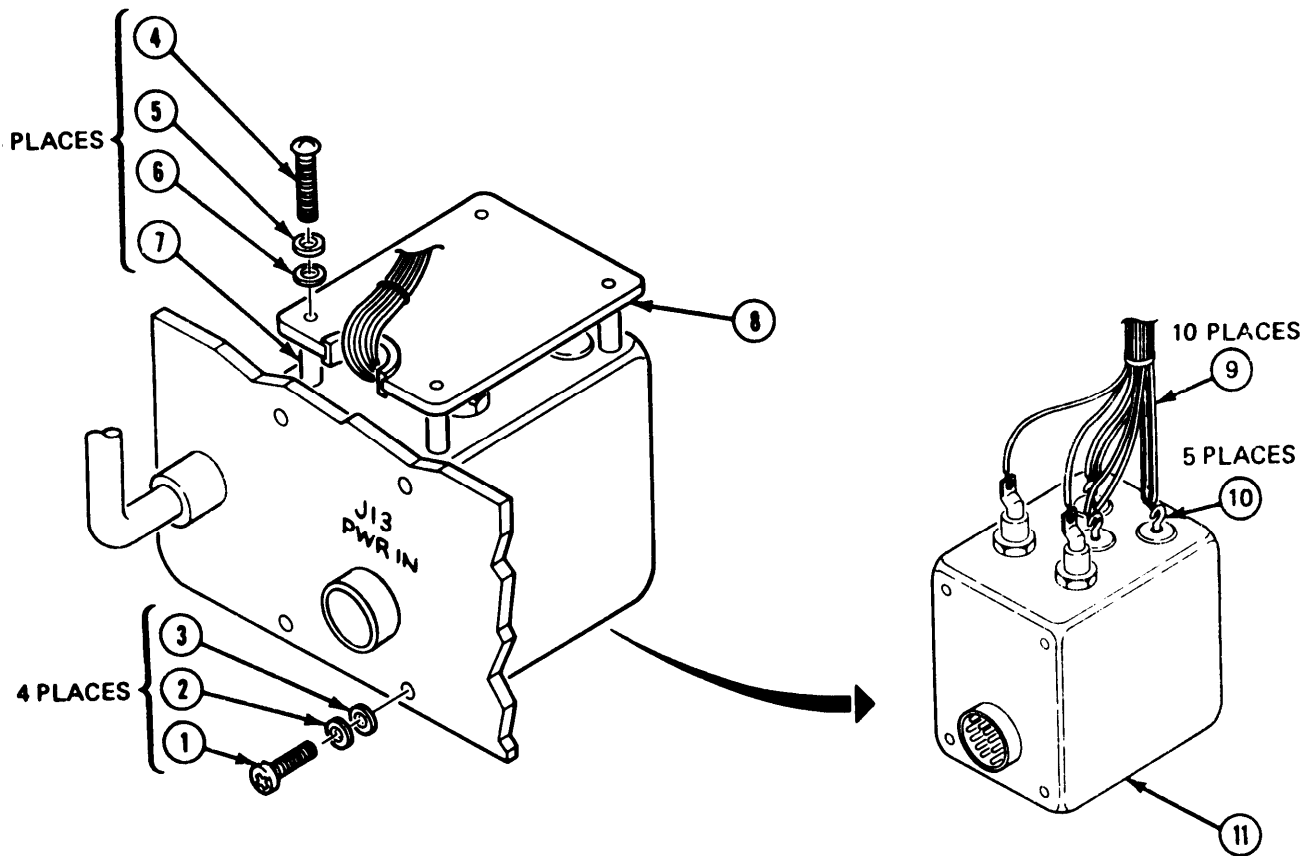
Remove Filter Assembly:

NOTE

Read paragraph 2-4 on tagging and soldering wires before doing any work.

1. Unscrew and take out four machine screws (1), lockwashers (2), and flat washers (3) with cross tip screwdriver. Get rid of lockwashers (2).
2. Unscrew and take out four machine screws (4), lockwashers (5), flat washers (6), and sleeve spacers (7) with cross tip screwdriver. Remove, but do not turn in RFI cover (8) and get rid of lockwashers (5).
3. Tag and unsolder ten wires (9) from terminals (10). Turn in RFI filter (11).

GO TO FRAME 30



FRAME 30

Install Filter Assembly:

1. Solder ten wires (1) to terminals (2). Refer to wiring chart.

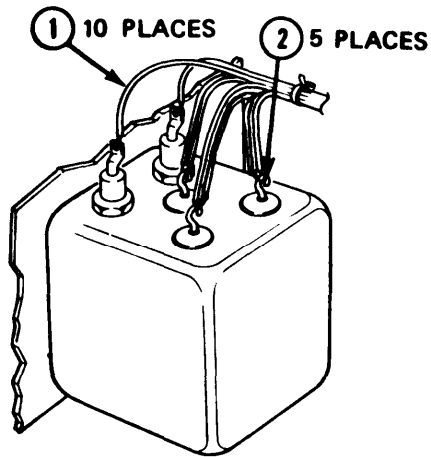
NOTE

Use this wiring chart for reference only.

Wiring Chart for RFI Filter Assembly

From	To
FL1	CB2-LINE (3 wires)
FL2	E1 (3 wires)
FL3	CB1
FL4	S1-6
A1E2	Shield of AC input to FL3/FL4
A1E2	A1P1-21

GO TO FRAME 31



ARR82-24318

FRAME 31

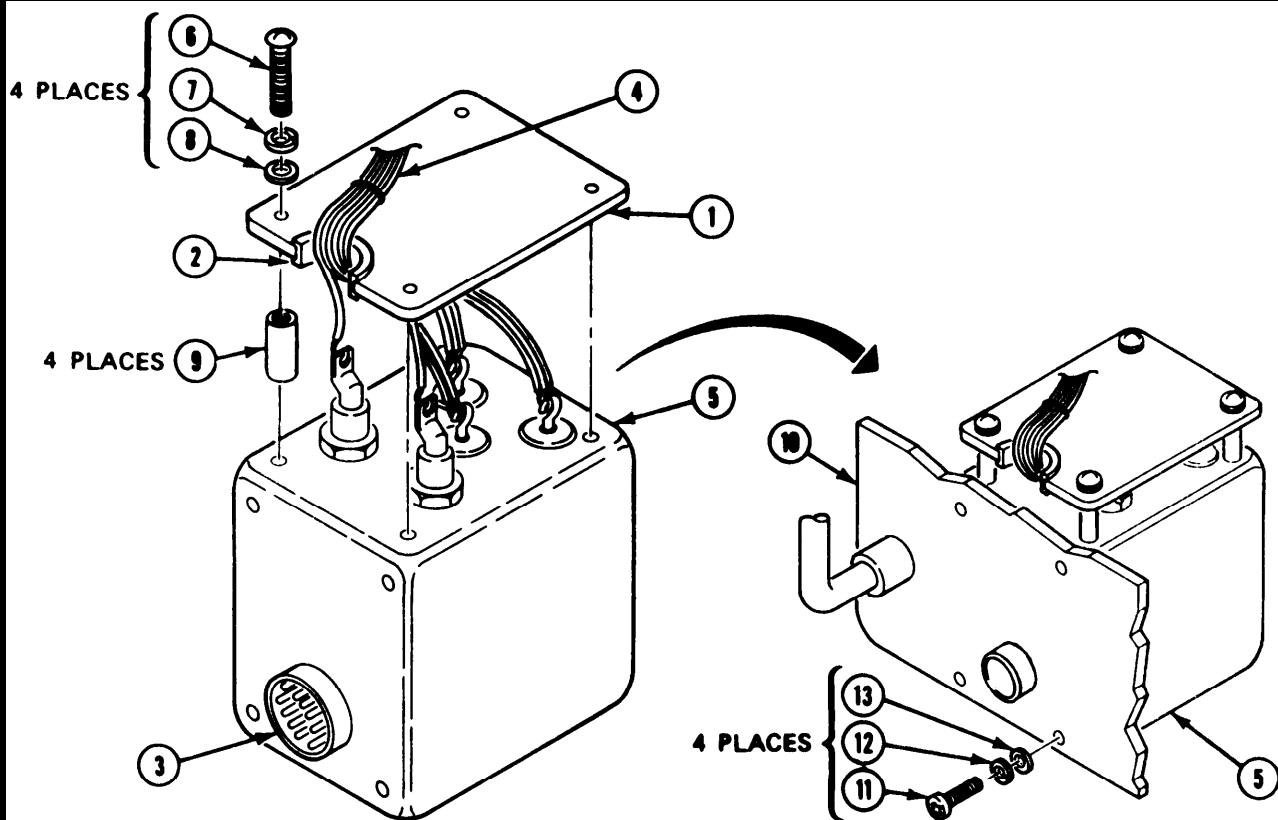
Install Filter Assembly (Continued):

1. Align RFI cover (1) so that grommet opening (2) is on same side as connector (3) with wires (4) extending through grommet opening (2).
2. Line up holes in RFI cover (1) with holes in RFI filter assembly (5).
3. Screw in and tighten four machine screws (6), new lockwashers (7), flat washers (8), and sleeve spacers (9) with cross tip screwdriver.
4. Line up holes in RFI filter assembly (5) with holes in front panel (10).
5. Screw in and tighten four machine screws (11), new lockwashers (12), and flat washers (13) with cross tip screwdriver.

Follow-on Maintenance:

1. Install thermal system test controller; refer to para. 2-5, task 8.
2. install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 14 ENDS HERE



ARR82-24318.1

TASK 15. Replace Plug Connector J14, J15, or J16.

Applicability: All Models

Common Tools:

Set, soldering and resoldering
Wrench, combination, 5/8-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Pencil, writing (Item 19)
Plug connector (19200) 12303258 (as required)
Solder (Item 29)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.

FRAME 32

Remove Connector:

NOTE

- Use this task to replace any of three plug connectors J14, J15, or J16. J16 (1) is shown.
- Read paragraph 2-4 on tagging and soldering wires before doing any work.

1. Tag and unsolder wires (2) from connector (1).
2. Unscrew and takeoff nut (3) and lockwasher (4) with wrench. Turn in connector (1), nut (3), and lockwasher (4).

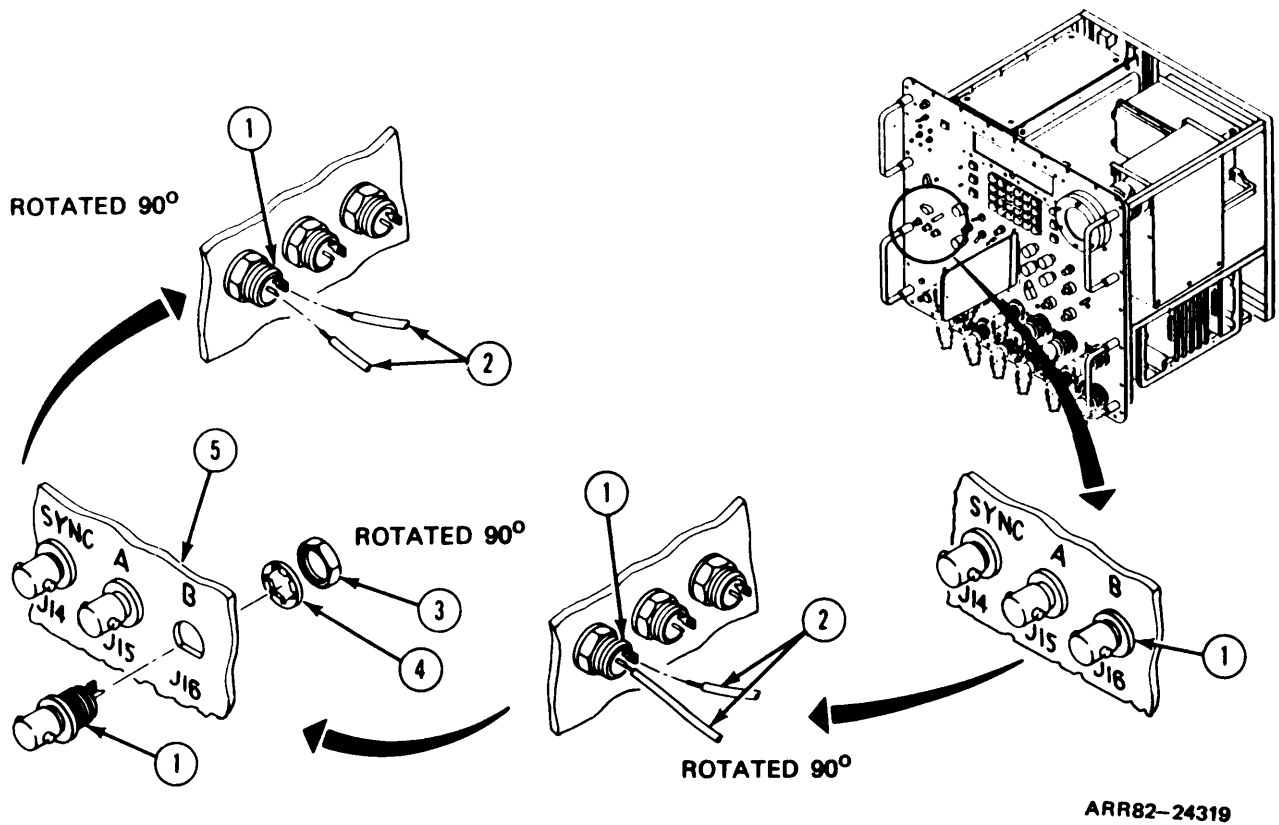
Install Connector:

3. Put new connector (1) in hole in panel assembly (5).
4. Screw on and tighten new nut (3) and new lockwasher (4) with wrench.
5. Solder wires (2) to connector (1).

Follow-on Maintenance:

1. Install thermal system test controller; refer to para. 2-5, task 8.
2. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 15 ENDS HERE



TASK 16. Replace Circuit Breaker CB1 or CB2.

Applicability: All Models

Common Tools:

Knife, pocket
Screwdriver, flat tip
Set, soldering and resoldering

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Circuit breaker (19200) 12303350 (CB1)
Circuit breaker (19200) 12303121 (CB2)
Pencil, writing (Item 19)
Potting, compound (Item 20)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.

FRAME 33

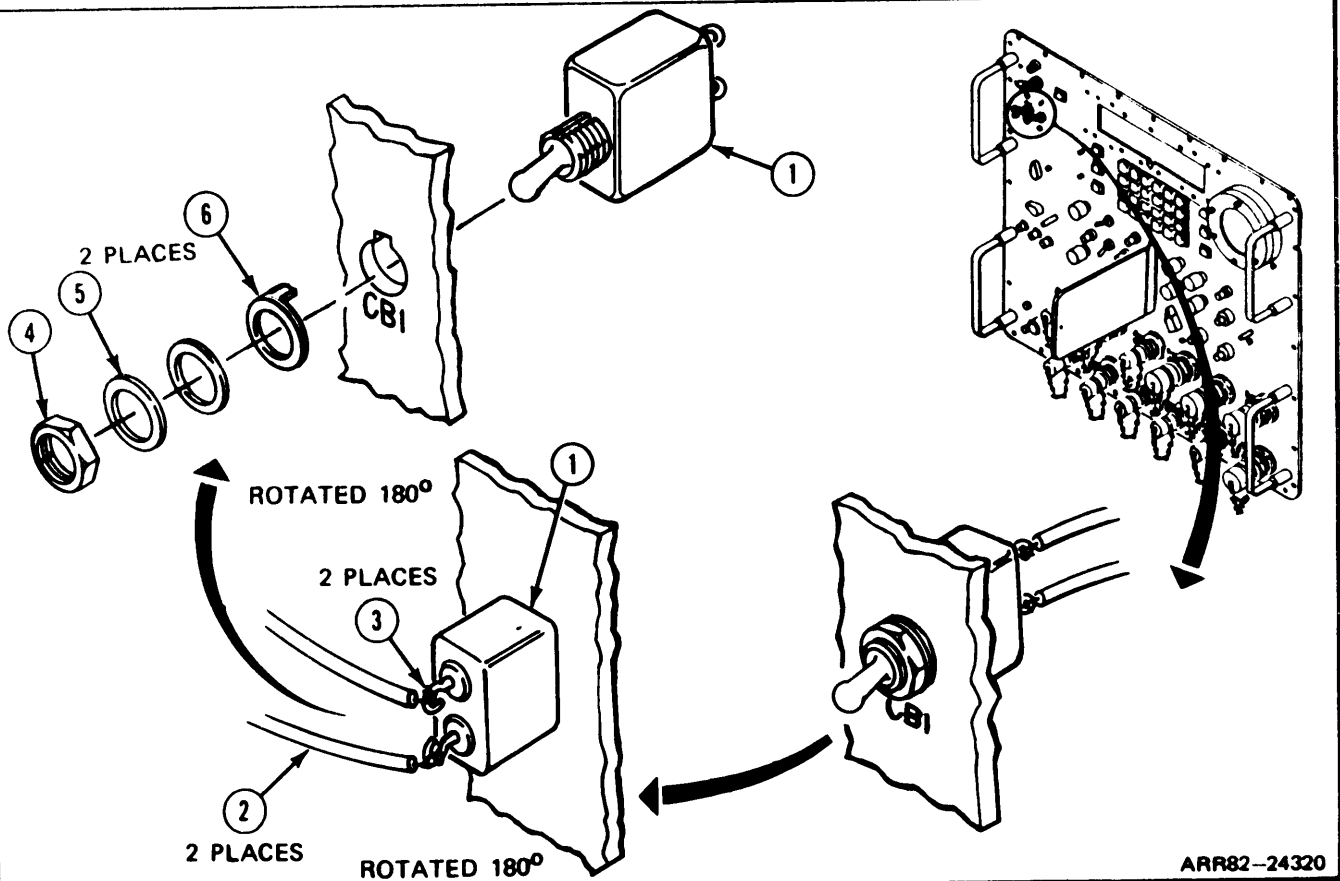
Remove Circuit Breaker:

NOTE

- Further access to panel can reobtained by removing panel assembly A1; refer to task 1 as required.
- To replace circuit breaker CB1, do frames 33 and 34. To replace circuit breaker CB2, do frames 35 and 36.
- Refer to paragraph 2-4 on tagging and soldering wires before doing any work.

1. Remove potting compound from circuit breaker (1) with knife.
2. Tag and unsolder wires (2) from terminals (3).
3. Unscrew and take off nut (4), two flat washers (5), and locating flange (6) with handle and socket. Turn in circuit breaker (1), nut (4), two flat washers (5), and locating flange (6).

GO TO FRAME 34



ARR82-24320

FRAME 34

Install Circuit Breaker:

1. Put new circuit breaker (1) through hole in panel assembly (2) so new locating flange (3) fits into slot (4).
2. Screw on and tighten new nut (5), two new flat washers (6), and new locating flange (3) with handle and socket.
3. Solder wires (7) to terminals (8).

WARNING

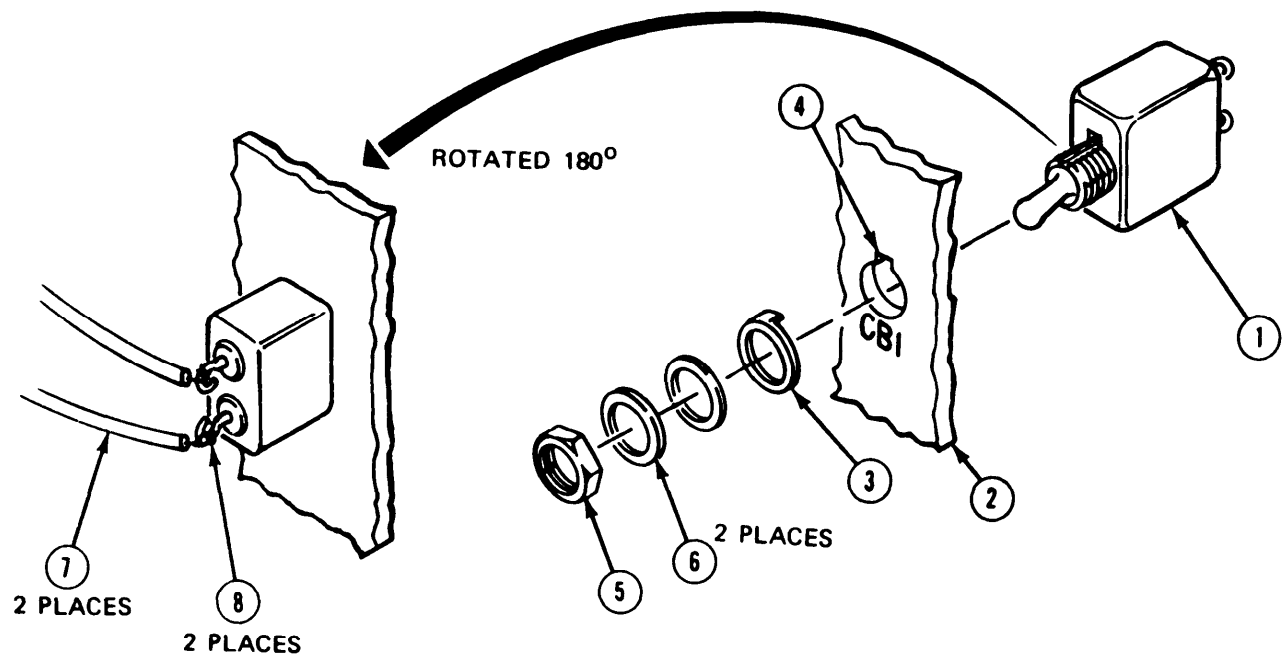
Potting compound is toxic and extremely flammable. Use only in well ventilated areas. Avoid prolonged or repeated breathing of vapors. Avoid prolonged contact with skin. Keep the area free of sparks and open flames.

4. Put potting compound on circuit breaker (1).

Follow-on Maintenance:

1. Install thermal system test controller; refer to para. 2-5, task 8.
2. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

GO TO FRAME 35



ARR82-24321

FRAME 35

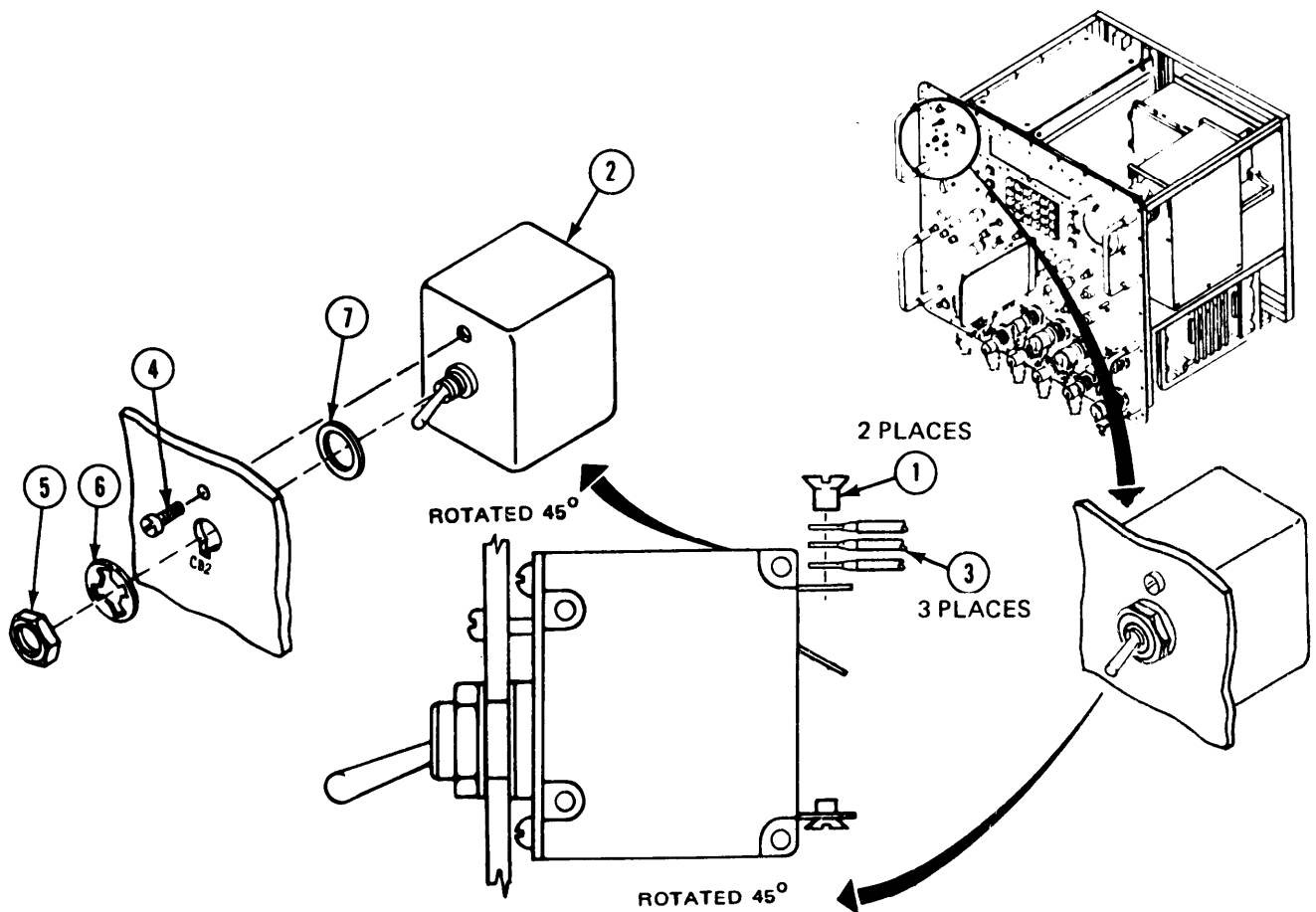
Remove Circuit Breaker:

NOTE

- Use this task to replace circuit breaker CB2.
- Refer to paragraph 2-4 on tagging wires before doing any work.

1. Unscrew and take out two screws (1) from circuit breaker (2) with screwdriver and remove wires (3).
2. Using screwdriver, unscrew and take out mounting screw (4).
3. Unscrew and take off nut (5), lockwasher (6), and rubber ring (7) with handle and socket. Turn in circuit breaker (2), nut (5), lockwasher (6), and rubber ring (7).

GO TO FRAME 36



APR82--24321.1

FRAME 36

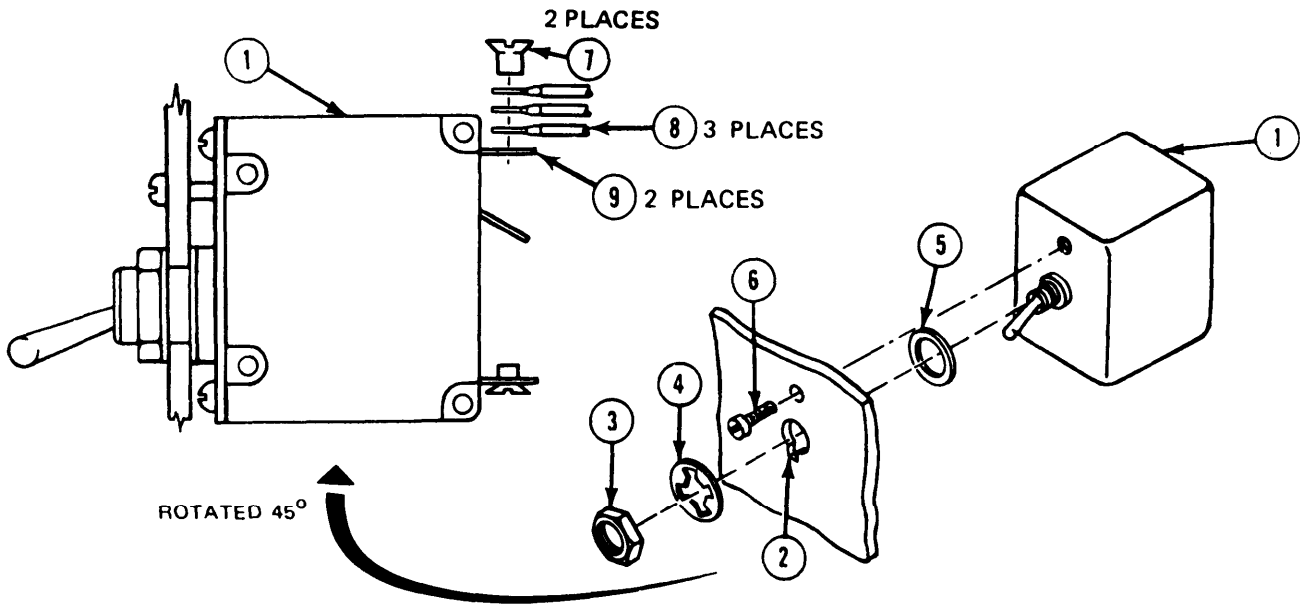
Install Circuit Breaker:

1. Put new circuit breaker (1) through hole in pad assembly (2).
2. Screw on and tighten nut (3), lockwasher (4), and rubber ring (5) with handle and socket.
3. Screw in and tighten mounting screw (6) with screwdriver.
4. Put screw (7) through loops in wires (8) and screw into circuit breaker terminal (9) with screwdriver.

Follow-on Maintenance:

1. install panel assembly A1; refer to task 26.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 16 ENDS HERE



ARR82-24321.2

TASK 17. Replace IDU EMI Round Window or Bezel Spacers.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-138 (12 required)

Spacer, bezel (19200) 12303400

Spacer, bezel (19200) 12303413

Window, EMI, round (19200) 12303325

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

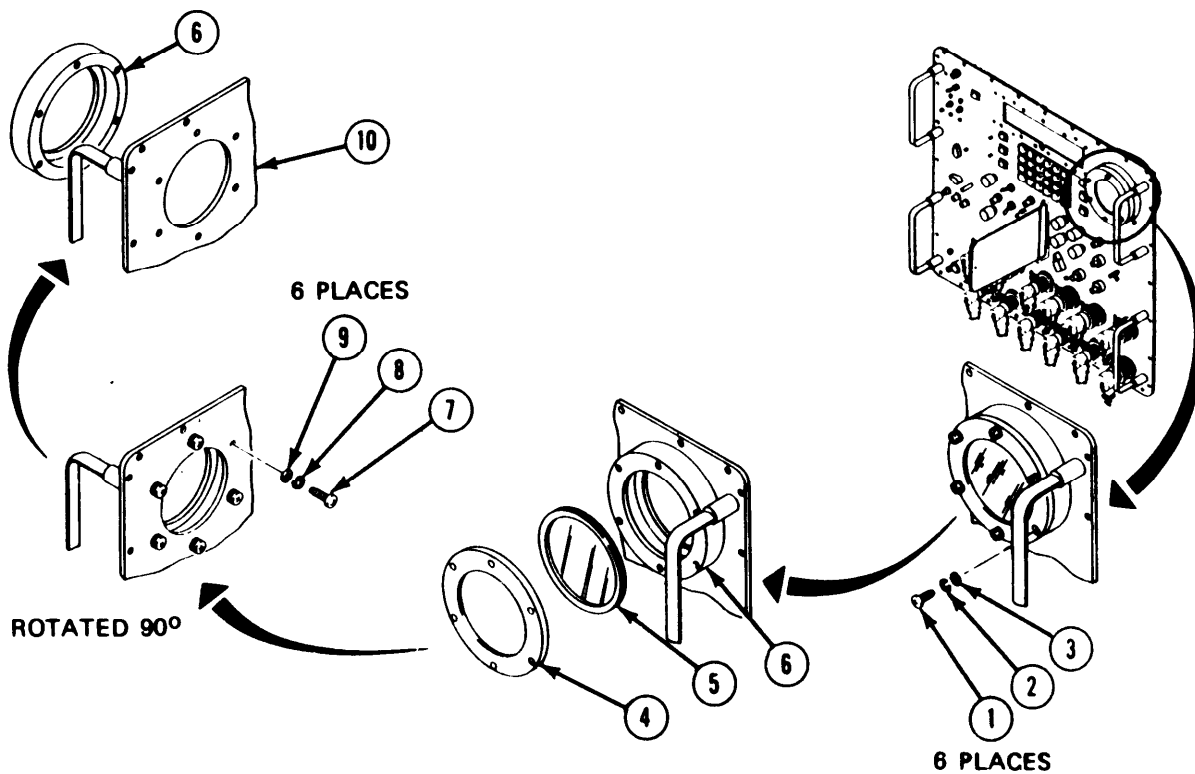
1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.

FRAME 37

Remove IDU Window and Spacers:

1. Unscrew and take out six machine screws (1) lockwashers (2), and flat washers (3) with screwdriver. Get rid of lockwashers (2).
2. Take spacer (4) and window (5) off of spacer (6). Look at spacer (4) and window (5) for scratches and cracks. If bad, turn in spacer (4) or window (5). If OK, set aside for later use.
3. Unscrew and take out six machine screws (7), lockwashers (8), and flat washers (9) with screwdriver. Get rid of lockwashers (8).
4. Take spacer (6) off panel assembly (10). Look at spacer (6) for cracks. If bad, turn in spacer (6). If OK, set aside for later use.

GO TO FRAME 38



FRAME 38

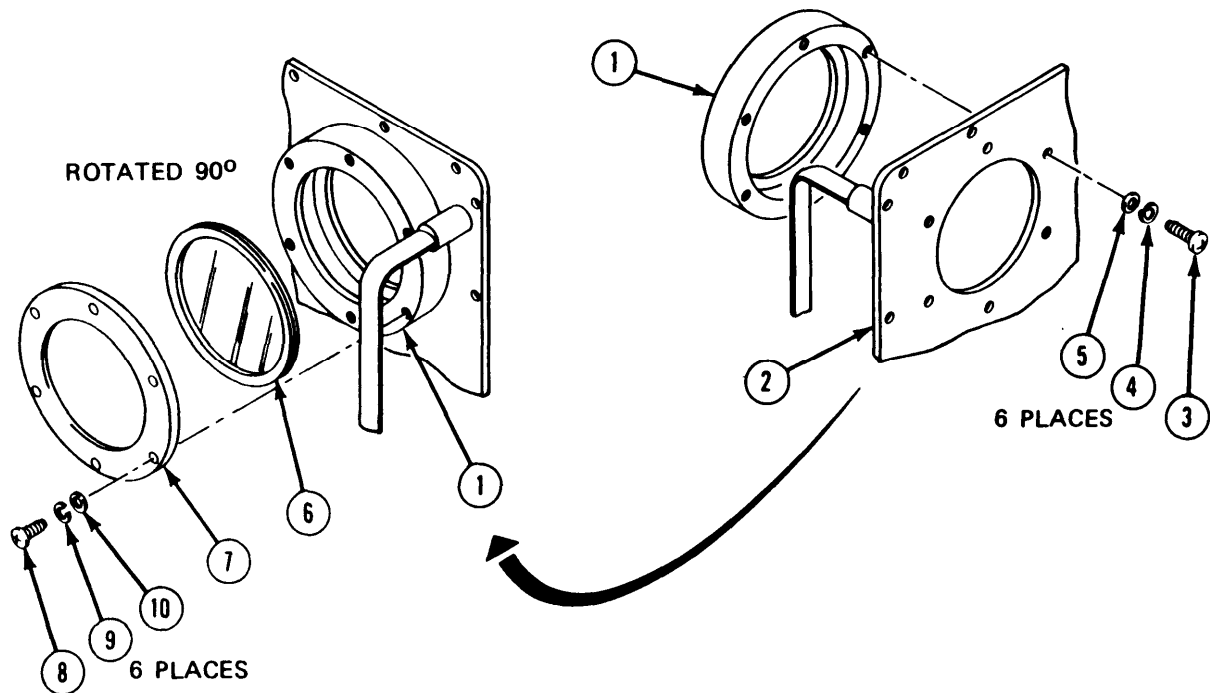
Install IDU Window and Spacers:

1. Line up holes in spacer (1) with holes in panel (2).
2. Screw in and tighten six screws (3), new lockwashers (4), and washers (5) with screwdriver.
3. Put window (6) on spacer (1) and line up holes in spacer (7) with holes in spacer (1).
4. Screw in and tighten six screws (8), new lockwashers (9), and washers (10) with screwdriver.

Follow-on Maintenance:

1. Install panel assembly A1; refer to task 26.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 17 ENDS HERE



ARR82-24323

TASK 18. Replace Access Door, Electrical-Mechanical Post, or Terminal Lug.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Wrench, combination, 1/4-inch

Special Tools: None

Supplies:

Access Door (19200) 12303370
Electrical-Mechanical Post (80205) NAS1786-06-18
Lockwasher (96906) MS35338-136 (4 required)
Lockwasher (96906) MS35338-138 (2 required)
Terminal Lug (96906) MS77068

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.

FRAME 39

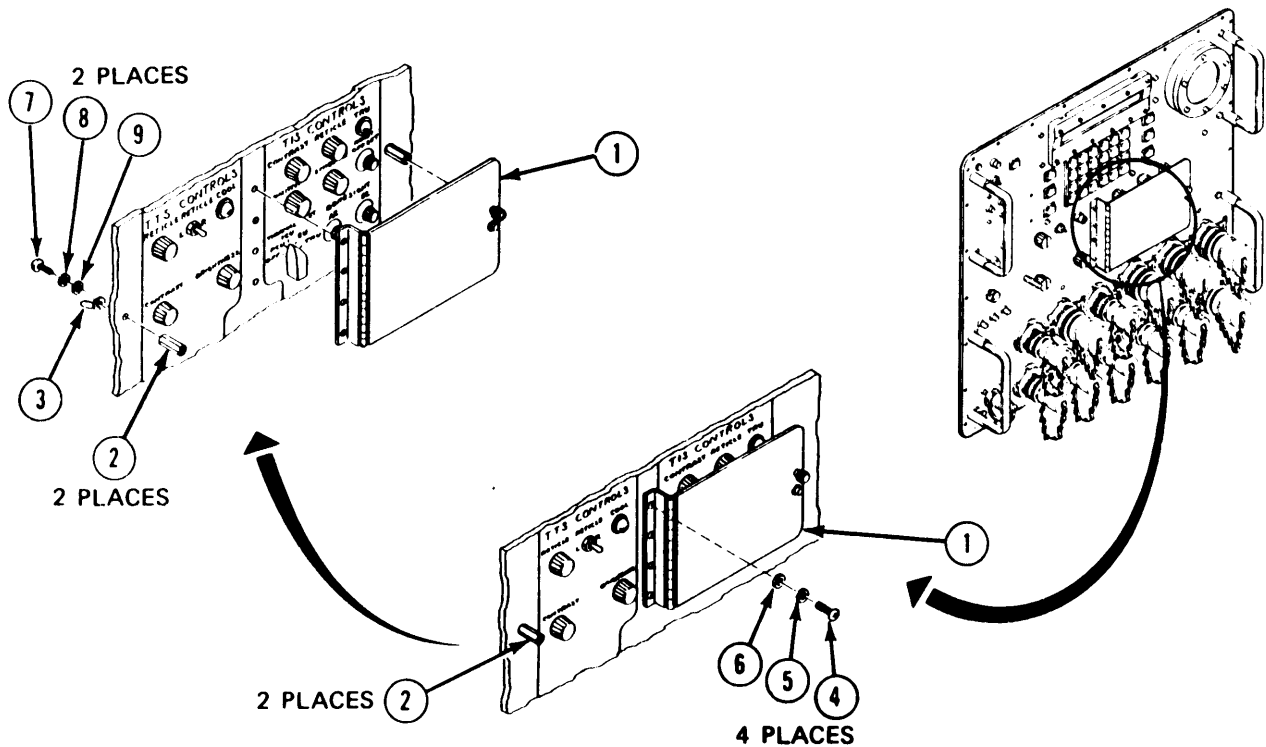
Remove Access Door, Post, and Lug:

NOTE

- Further access to panel can be obtained by removing panel assembly A1; refer to task 1 as required.
- Use this task to replace access door (1), either of two posts (2), or terminal lugs (3).

1. Unscrew and take out four machine screws (4), lockwashers (5), and with screwdriver. Get rid of lockwashers (5).
2. Look at access door (1) for cracks or dents. If bad, turn in. If OK, later use.
3. Unscrew and take out machine screw (7), lockwasher (8), washer (9), and lug (3) with screwdriver and wrench. Get rid of lockwasher (8).
4. Take off post (2) with wrench and turn in post (2).

GO TO FRAME 40



ARR82-24324

FRAME 40

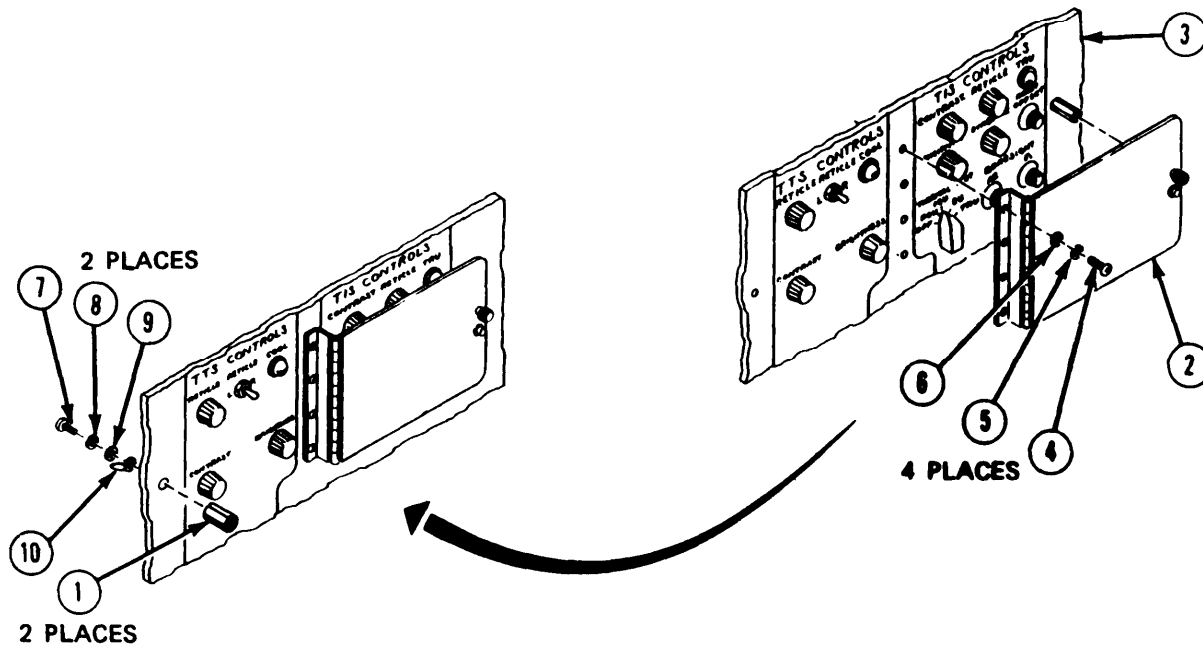
Install Access Door, Post, and Lug:

1. Put new post (1) on with wrench.
2. Line up holes in new access door (2) with holes in panel assembly (3).
3. Screw in and tighten four screws (4), new lockwashers (5), and washers (6) with screwdriver.
4. Screw in and tighten screw (7), new lockwasher (8), washer (9), and lug (10) with screwdriver.

Follow-on Maintenance:

1. Install panel assembly A1; refer to task 26.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 18 ENDS HERE



ARR82-24325

TASK 19. Replace Handle or Extension Handle.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Bow Handle (19200) 12303357 (as required)

Extension Handle (19200) 12303436 (as required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.

FRAME 41

Remove Bow Handle and Extension Handle:

NOTE

Use this task to replace any of four bow handles (1) and extension handles (2).

1. Unscrew and take out two machine screws (3) with screwdriver.
2. Unscrew and takeoff two extension handles (2) from bow handle (1).

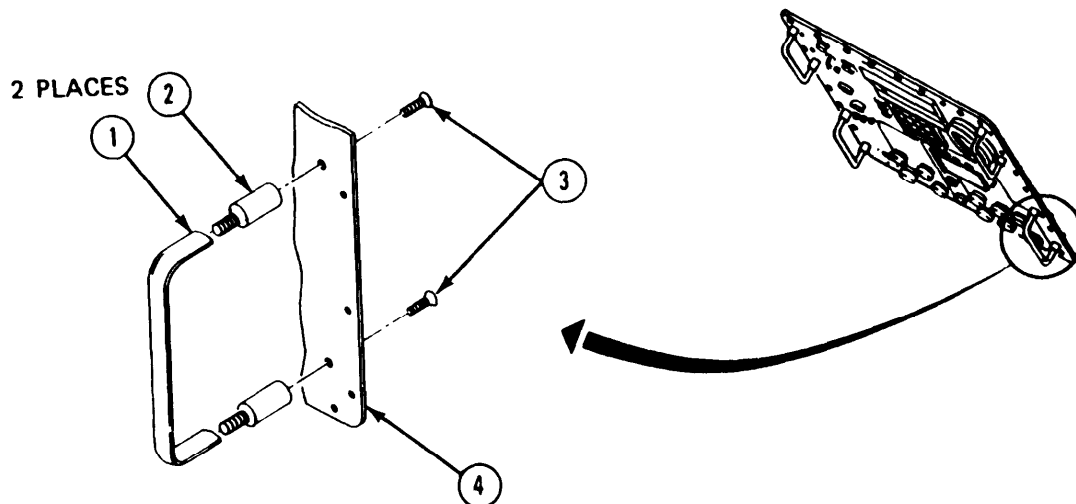
Install Bow Handle and Extension Handle:

3. Screw on and tighten two new extension handles (2) to bow handle (1).
4. Line up holes in new bow handle (1) and new extension handles (2) with holes in panel (4).
5. Screw in and tighten two screws (3) with screwdriver.

Follow-on Maintenance:

1. Install panel assembly A1; refer to task 26.
2. install thermal system test controller; refer to para. 2-5, task 8.
3. install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 19 ENDS HERE



ARR82-24326

TASK 20. Replace Semiconductor Device or Terminal Lug E1.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 1
Set, soldering and resoldering
Wrench, combination, 3/16-inch
Wrench, combination, 1/4-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-135 (one required)
Lockwasher (96906) MS35338-136 (one required)
Pencil, writing (Item 19)
Post, electrical-mechanical (19200) 12303288
Semiconductor device (19200) 12272103
Solder (Item 29)
Tag, marker (as required) (Item 34)
Terminal Lug E1 (19200) 12303323

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.

FRAME 42

Remove Semiconductor Device:

NOTE

Refer to paragraph 2-4 on tagging and soldering wires before doing any work.

1. Tag and unsolder two wires (1) from semiconductor device terminals (2).
2. Unscrew and take out machine screw (3), lockwasher (4), flat washers (5), and hexagon plain nut (6) with screwdriver and 3/16-inch wrench. Get rid of lockwasher (4).
3. Remove semiconductor device (7). Get rid of semiconductor device (7).

Install Semiconductor Device:

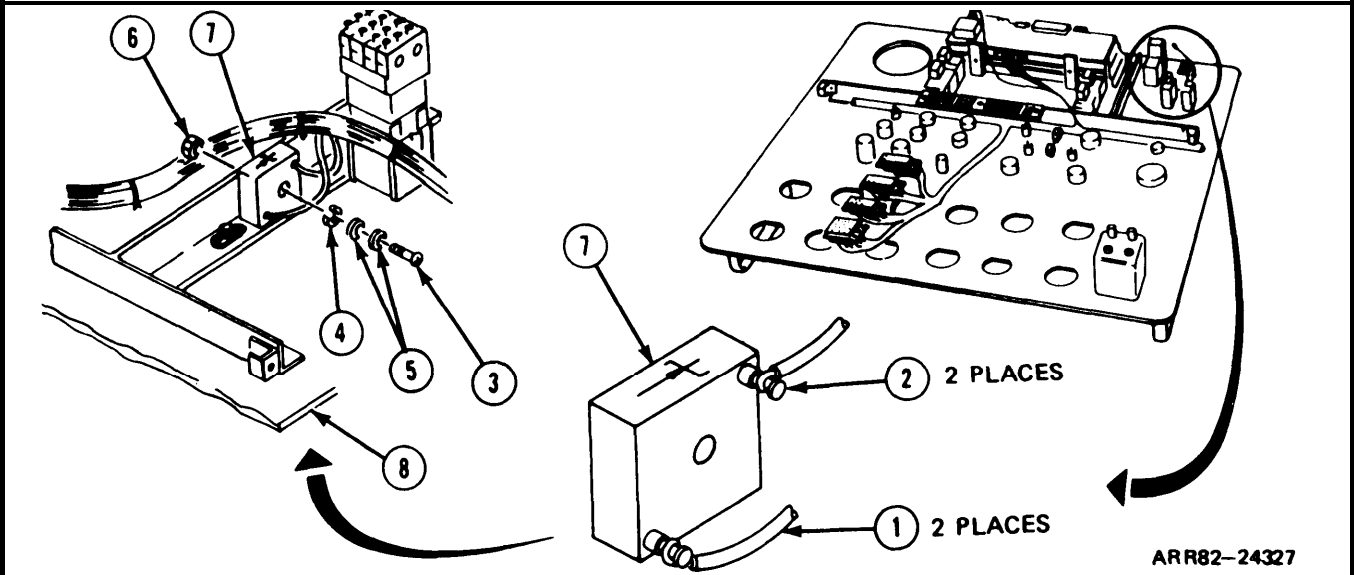
4. Position new semiconductor device (7) on panel assembly (8) with cathode terminal up.
5. Screw in and tighten screw (3), new lockwasher (4), and washers (5) with screwdriver.

CAUTION

Installing semiconductor device (7) backwards can damage semiconductor device (7). Be sure to connect it as stated in step 6.

6. Solder wire (1) from CB2 to cathode terminal of semiconductor device (7) and wire (1) from E1 to anode terminal of semiconductor device (7).

GO TO FRAME 43



FRAME 43

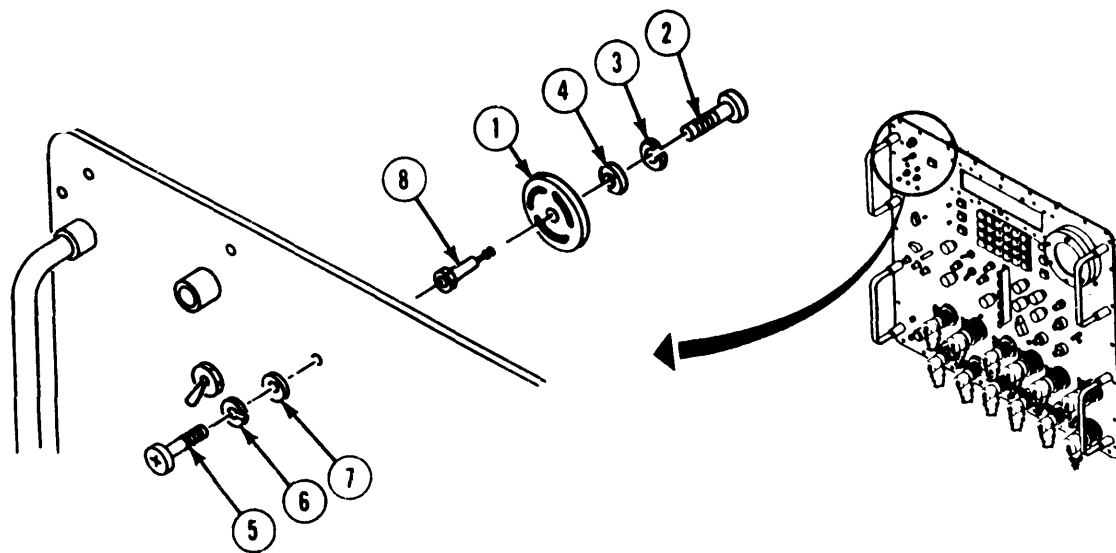
Remove Terminal Lug:

NOTE

Refer to paragraph 2-4 on tagging and soldering wires before doing any work.

1. Tag and unsolder wires from terminal lug (1).
2. Unscrew and take out machine screw (2), lockwasher (3), and flat washer (4) with screwdriver.
3. Turn in terminal lug (1) and lockwasher (3).
4. Unscrew and take out machine screw (5), lockwasher (6), and flat washer (7) with screwdriver and 1/4-inch wrench. Get rid of lockwasher (6) and turn in electrical-mechanical post (8).

GO TO FRAME 44



ARR82-24328

FRAME 44

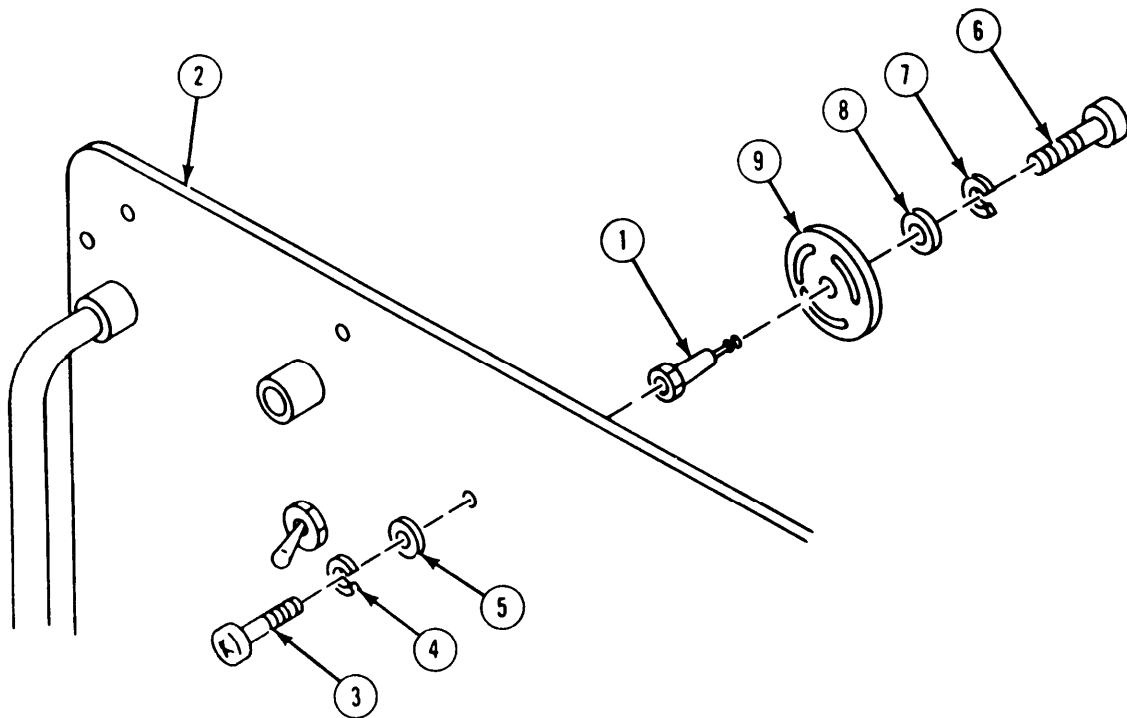
Install Terminal Lug:

1. Position new electrical-mechanical post (1) on back of panel assembly (2).
2. Screw in and tighten screw (3), new lockwasher (4), and washer (5) with screwdriver and 1/4-inch wrench.
3. Screw in and tighten screw (6), new lockwasher (7), washer (8), and terminal lug (9) with screwdriver.
4. Solder wires back to new terminal lug (9).

Follow-on Maintenance:

1. Install panel assembly A1; refer to task 26.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-8

TASK 20 ENDS HERE



ARR82-24329

TASK 20.1. Replace Tranzorb.

Applicability: All Models

Common Tools:

Knife, craftsman's
Screwdriver, cross tip, No. 1
Set, soldering and resoldering
Wrench, combination, 3/16-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-135 (two required)
Pencil, writing (Item 19)
Potting Compound (Item 20)
Solder (Item 29)
Tag, marker (as required) (Item 34)
Tranzorb (19200) 12303137

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller for access only; refer to para. 2-5, task 1.
3. Remove panel assembly A1; refer to task 1.

FRAME 44.1

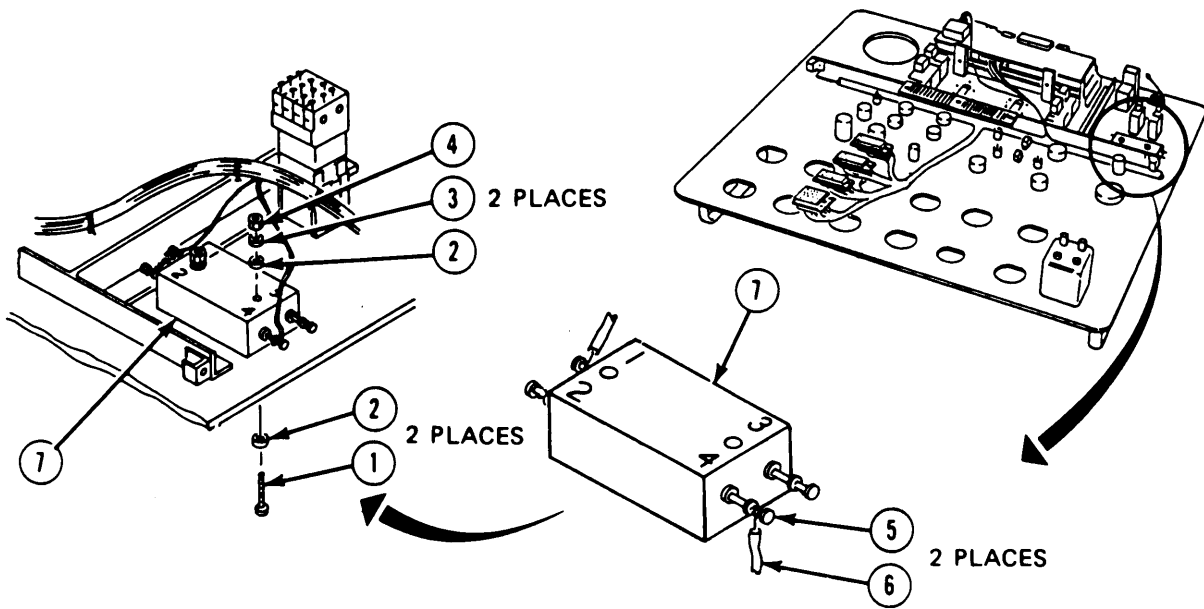
Remove Tranzorb:

NOTE

Refer to paragraph 2-4 on tagging and soldering wires before doing any work.

1. Unscrew and take out two machine screws (1), four flat washers (2), two lockwashers (3), and hexagon plain nuts (4) with screwdriver and wrench. Get rid of lockwashers (3).
2. Remove potting compound from tranzorb terminals (5) with knife.
3. Tag and unsolder two wires (6) from tranzorb terminals (5).
4. Remove and turn in tranzorb (7).

GO TO FRAME 41.2



ARR82-24326.2

FRAME 44.2

Install Tranzorb:

1. Position new tranzorb (1) on panel assembly (2).

WARNING

Potting compound is toxic and extremely flammable. Use only in well ventilated areas. Avoid prolonged or repeated breathing of vapors. Avoid prolonged contact with skin. Keep the area free of sparks and open flames.

2. Put potting compound on tranzorb terminals (3).

CAUTION

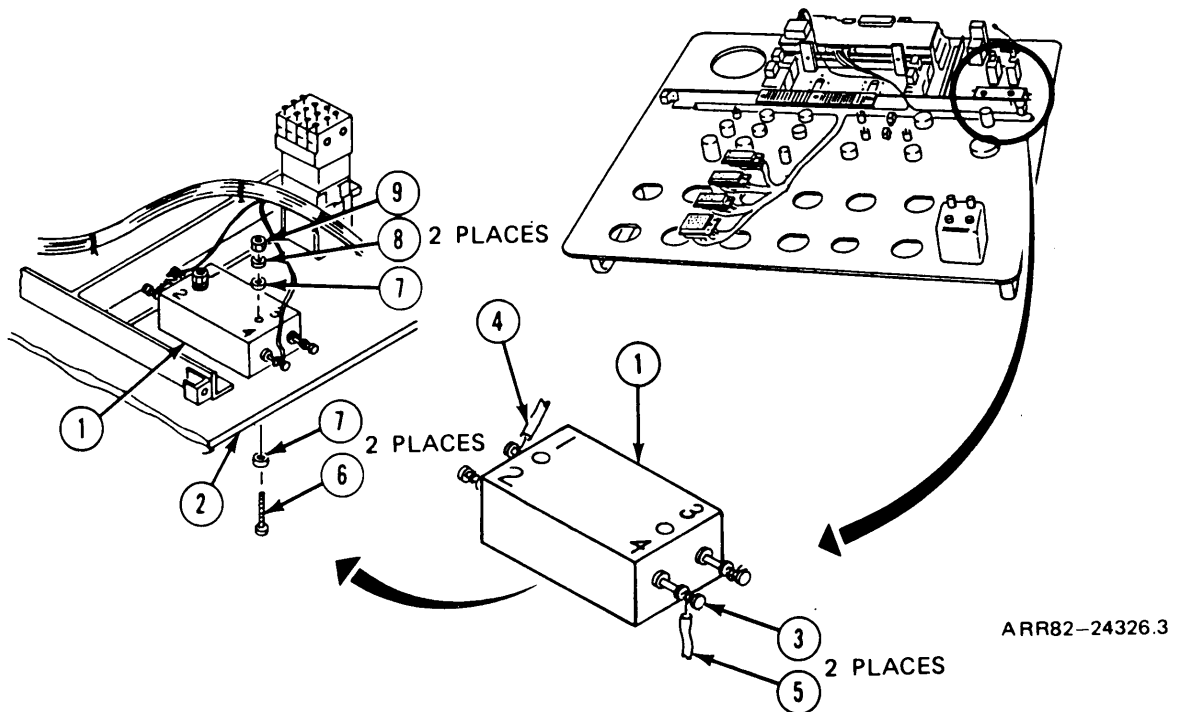
Installing tranzorb (1) backwards can damage tranzorb (1). Be sure to connect it as stated in step 3.

3. Solder wire (4) from pin 3 of S1 to pin 1 of tranzorb (1) and wire (5) from pin 6 of S1 to pin 4 of tranzorb (1).
4. Screw in and tighten two screws (6), four washers (7), two new lockwashers (8), and nuts (9) with screwdriver and wrench.

Follow-on Maintenance:

1. Install panel assembly A1; refer to task 26.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 20.1 ENDS HERE



TASK 21. Replace Totalizing Time Meter M1.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 1
Set, soldering and resoldering
Wrench, combination, 3/16-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-135 (two required)
Pencil, writing (Item 19)
Solder (Item 29)
Tag, marker (as required) (Item 34)
Totalizing Time Meter M1 (96906) MS17321-9

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to task 1.

FRAME 45

Remove Meter:

NOTE

Refer to paragraph 2-4 on tagging and soldering wires before doing any work.

1. Unsolder two wires (1) from terminals (2).
2. Unscrew and take off two screws (3), four washers (4), two lockwashers (5), and nuts (6) with screwdriver and wrench. Get rid of lockwashers (5) and turn in meter (7).

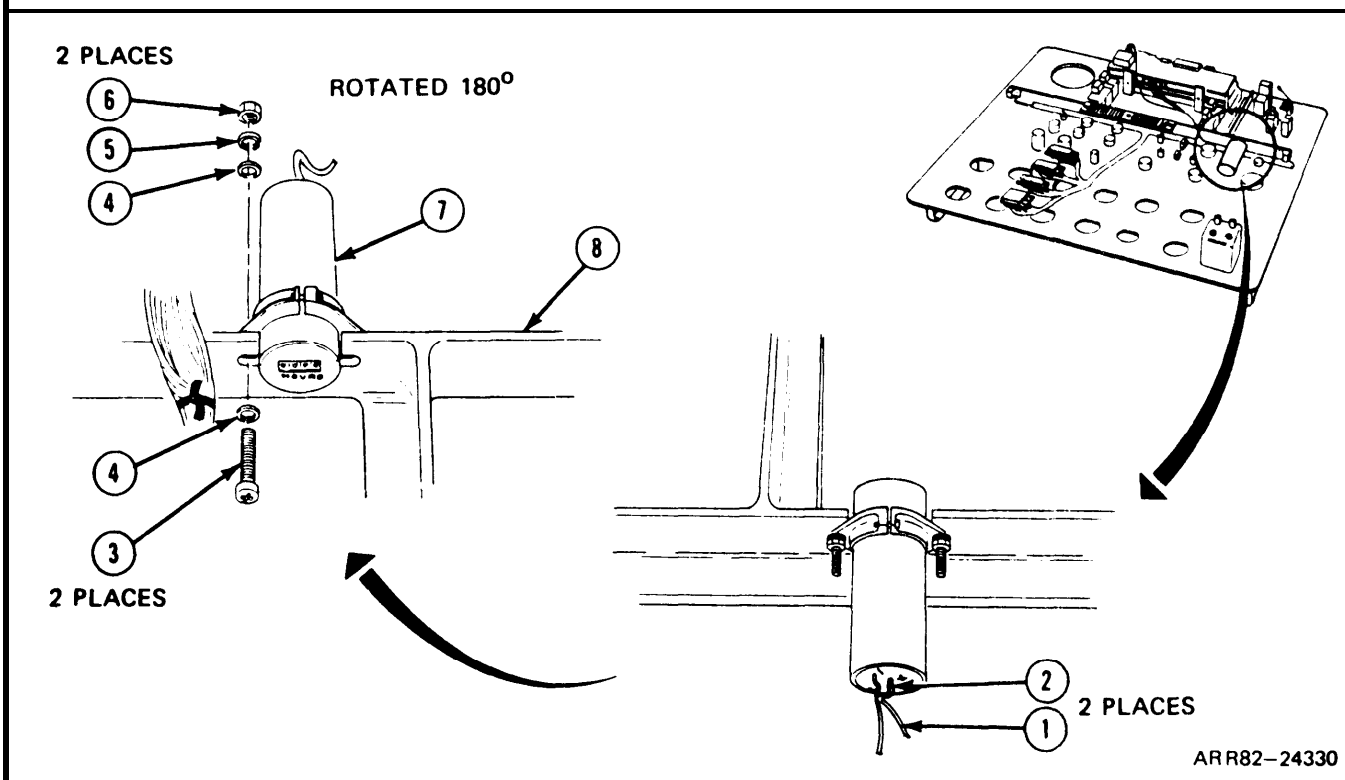
Install Meter:

3. Line up holes in new meter (7) with holes in structure (8).
4. Screw in and tighten two screws (3), four washers (4), two new lockwashers (5), and nuts (6).
5. Solder two wires (1) to terminals (2).

Follow-on Maintenance:

1. Install Panel assembly A1; refer to task 26.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para 4-18.

TASK 21 ENDS HERE



TASK 22. Install Variable Resistor or Switch Knob or Control Dial.

Applicability All Models

Common Tools:

- Key, hex, .050-inch
- Key, hex, 5/64-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure

Remove variable resistor or switch knob or control dial; refer to task 8.

FRAME 46

Install Variable Resistor Knob:

NOTE

- To install a variable resistor knob, do frame 43; to install a switch knob, do frame 44; to install a control dial, do frame 45.
- Use this frame to install any of seven variable resistor knobs:

BRIGHTNESS	R1	SYMBOLS	R5
CONTRAST	R2	RETICLE	R6
SENSITIVITY	R3	RETICLE BRIGHTNESS	R10
CONTRAST	R4		

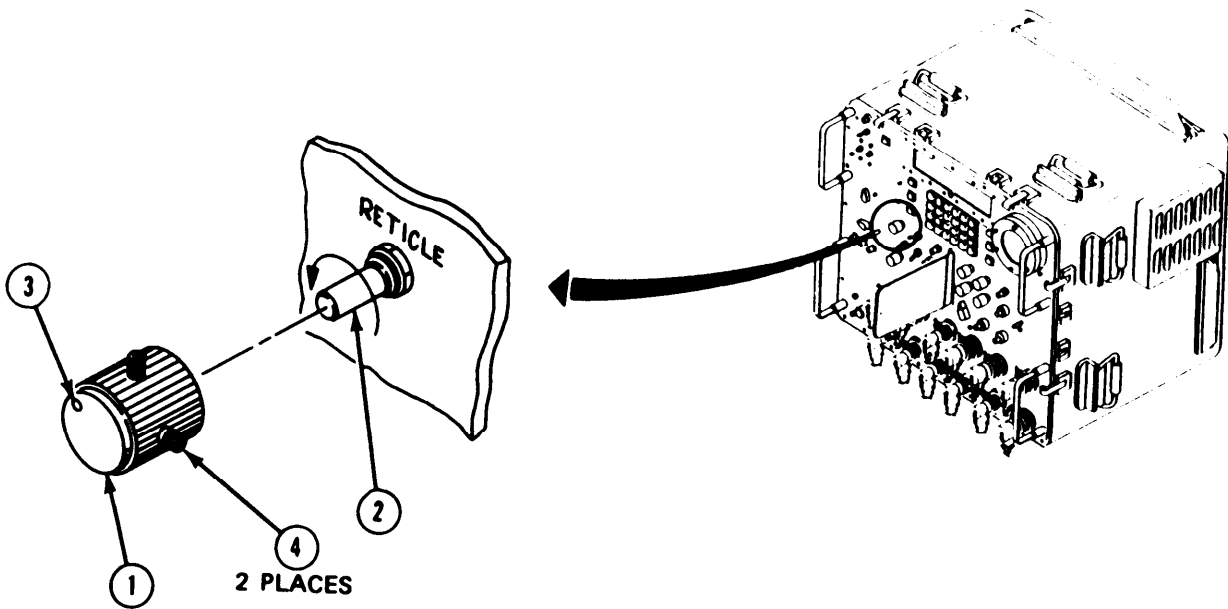
RETICLE variable resistor knob R10 (1) is shown.

1. Put knob (1) on post (2) so dot (3) is at far left position.
2. Screw in and tighten two setscrews (4) with 5/64-inch key.

Follow-on Maintenance:

Install thermal system test controller case cover; refer to volume 1, para. 4-18.

GO TO FRAME 47



ARR82-24331

FRAME 47

Install Switch Knob:

NOTE

Use this frame to install any of three switch knobs:

THERMAL MODE	S9
THERMAL TEST	S10
SYNC SELECT	S11

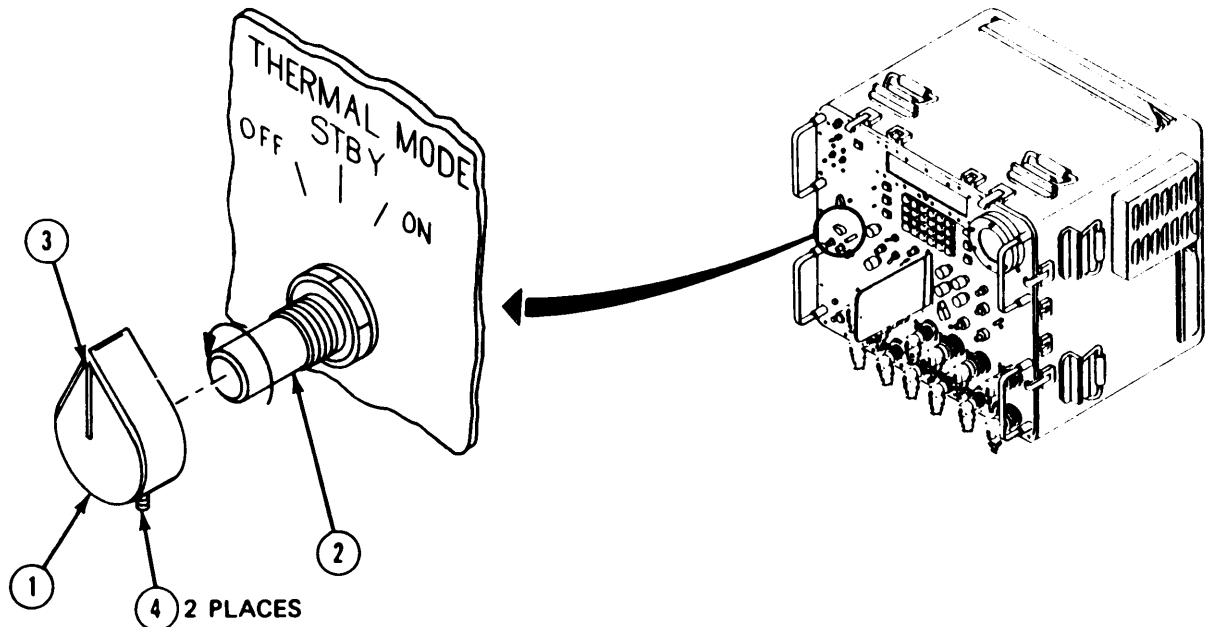
THERMAL MODE switch knob S9 (1) is shown.

1. Put knob (1) on post (2) so pointer (3) is at far left position.
2. Screw in and tighten two set screws (4) with .050-inch key.

Follow-on Maintenance:

Install thermal system test controller case cover; refer to volume 1, para. 4-18.

GO TO FRAME 48



ARR82-24332

FRAME 48

Install Control Dial:

NOTE

Use this frame to install any three control dials:

BORESIGHT AZ	R7
BORESIGHT EL	R8
AZ OFFSET	R13

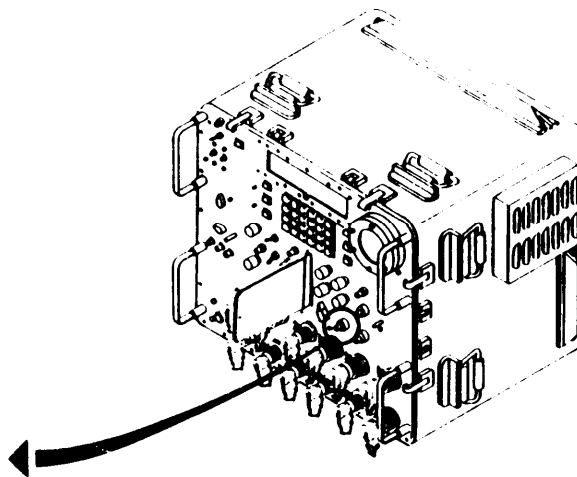
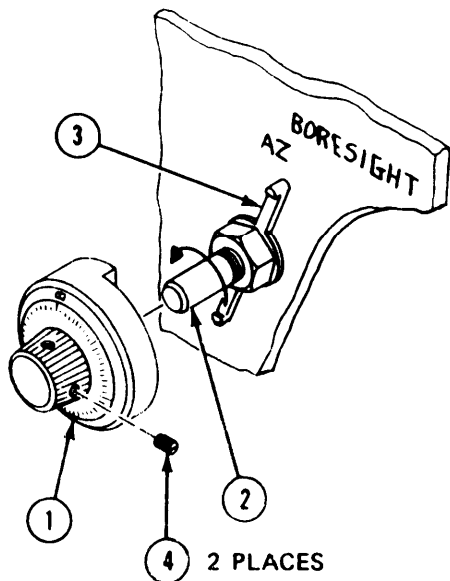
BORESIGHT AZ dial R7 (1) is shown.

1. Turn dial (1) so dial is set at 0.0.
2. Put dial (1) on post (2) so anti-rotation washer (3) fits in dia 0)
3. Screw in and tighten two setscrews (4) with .050-inch

Follow-on Maintenance:

Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 22 ENDS HERE



ARR82-24333

TASK 23. Install Board Assembly A1TB1.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Set, soldering and resoldering

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Solder (Item 29)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary procedure:

Remove board assembly A1TB1; refer to task 5.

FRAME 49

Install Board Assembly:

NOTE

Read paragraph 2-4 on tagging and soldering wires before doing any work.

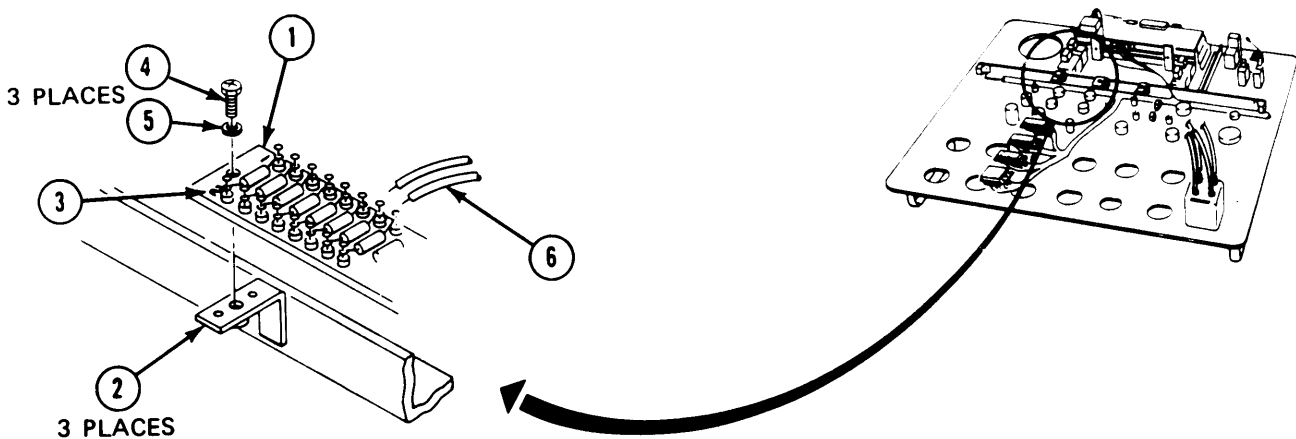
1. Line up board (1) on three support angles (2). Check numbers (3) on board (1) to be sure they prefacing up.
2. Screw in and tighten three machine screws (4) and flat washers (S) with screwdriver.

NOTE

If board was removed for accessory, go to follow-on maintenance and TASK 23 ENDS HERE.

3. Solder wires (6) to terminals of board (1); refer to wiring chart.

GO TO FRAME 50



ARR82-24334

FRAME 50

NOTE

Use this wiring chart for reference only.

Wiring chart for Board Assembly A1TB1

From	To	From	To	From	To
TBI-1	S2-A	TBI-18	TBI-20	TBI-37	SI0A-C2
TBI-1	TBI-35	TBI-19	S6-D	TBI-37	TBI-39
TBI-2	TBI-4	TBI-20	S7-1NO	TBI-38	TBI-44
TBI-3	S2-C	TBI-21	S7-A	TBI-39	S7-4C
TBI-3	AIP2-A6	TBI-22	S7-2NO	TBI-40	TBI-42
TBI-4	TBI-6	TBI-23	S7-D	TBI-41	P4-12
TBI-5	S3-D	TBI-24	TBI-26	TBI-42	S8-1
TBI-6	TBI-8	TBI-25	DS3-2	TBI-43	P4-11
TBI-7	S4-D	TBI-26	TBI-28	TBI-44	S8-3
TBI-8	TBI-10	TBI-27	AIP3-78	TBI-45	P3-11
TBI-9	DS2-A	TBI-28	TBI-30	TBI-46	R8-CW
TBI-10	TBI-12	TBI-29	DS4-2	TBI-47	R8-CCW
TBI-11	DS2-C	TBI-29	AIP4-19	TBI-48	P3-13
TBI-12	TBI-14	TBI-31	TBI-45	TBI-49	AIP3-16
TBI-13	S5-B	TBI-32	R7-CCW	TBI-50	R13-CCW
TBI-14	TBI-16	TBI-33	R7-CW	TBI-51	AIP3-18
TBI-15	S5-D	TBI-34	TBI-48	TBI-52	R13-CW
TBI-16	TBI-18	TBI-35	TBI-1		
TBI-17	S6-B	TBI-36	AIP2-A5		

Follow-on Maintenance:

1. Install Panel assembly A1; refer to task 26.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 23 ENDS HERE

TASK 24. Install Keyboard Assembly.

Applicability: All Models

Common Tools:

Set, soldering and resoldering
Wrench, open end, 1/4-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-136 (eight required)
Solder (Item 29)
Wire (bulk)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove keyboard assembly; refer to task 3.

FRAME 51

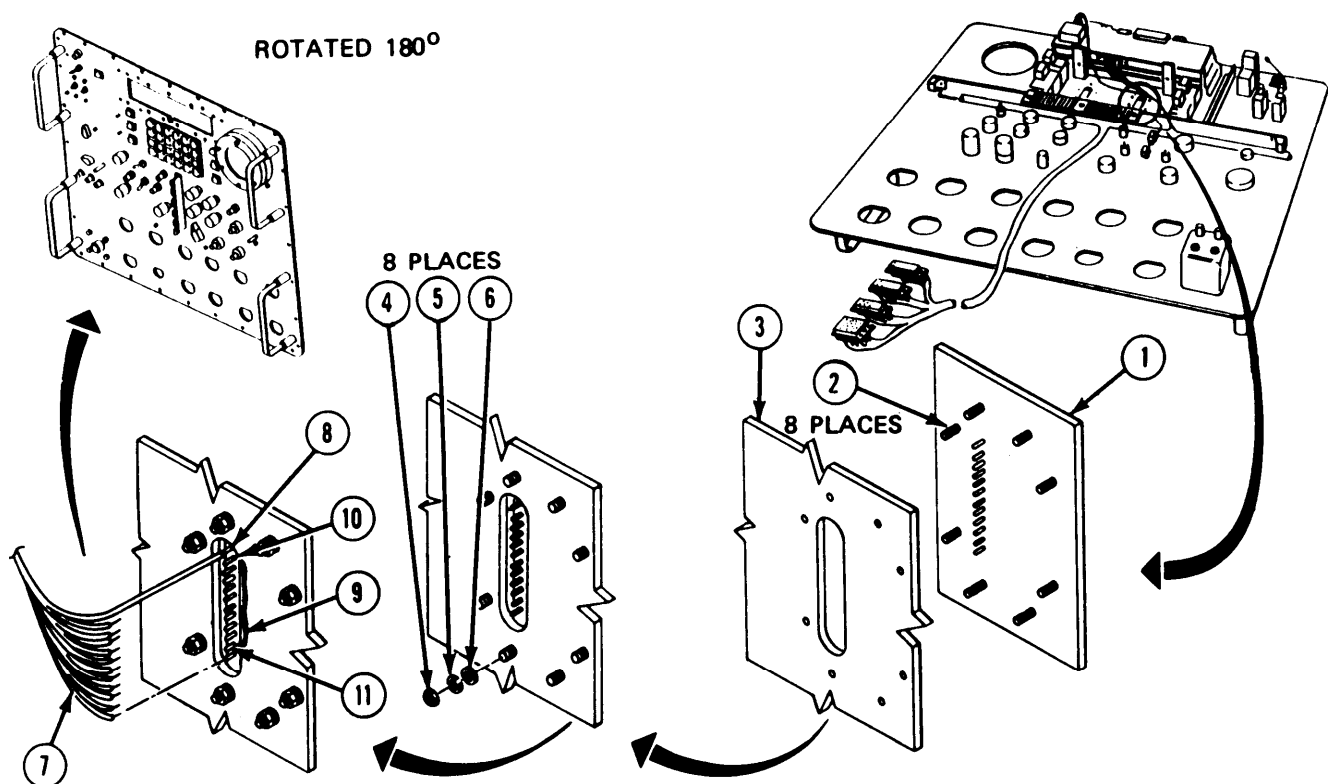
Install Keyboard Assembly:

NOTE

- Use this task to install either function or numeric keyboard assembly. Numeric keyboard assembly (1) is shown.
- Read paragraph 2-4 on soldering wires before doing any work.

1. Put eight posts (2) on keyboard (1) into holes on panel assembly (3).
2. Screw on and tighten eight hexagon plain nuts (4), new lockwashers (5), and flat washers (6) with wrench.
3. Solder wires (7) to terminals (8) and jumper wire (9) between terminals B (10) and H (11); refer to wiring chart.

GO GTO FRAME 52



ARR82-24335

FRAME 52

NOTE

Use this chart for reference only.

Wiring Chart for Keyboard Assembly KBD1 or KBD2

From	To	From	To
KBD1-A	S3-INO	KBD2-A	A1P2-P7
KBD1-A	KBD2-A	KBD2-B	KBD2-H
KBD1-B	KBD1-H	KBD2-B	A1P2-H7
KBD1-B	A1P2-G8	KBD2-C	A1P2-F8
KBD1-C	KBD2-C	KBD2-D	A1P2-H2
KBD1-D	A1P2-G7	KBD2-F	A1P2-H8
KBD1-F	A1P2-HI	KBD2-G	A1P2-G1
KBD1-G	KBD2-G	KBD2-J	1 P 2 - G 2
KBD1-J	KBD2-J		
KBD1-J	S4-INO		

Follow-on Maintenance:

1. Install panel assembly A1; refer to task 26.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller-case cover; refer to volume 1, para. 4-18.

TASK 24 ENDS HERE

TASK 25. Install Digital Indicator.

Applicability: All Models

Common Tools:

- Screwdriver, cross tip, No. 2
- Screwdriver, flat tip

Special Tools: None

Supplies:

- NOTE: Expendable supplies are defined in volume 1, appendix C.
- Lockwasher (96906) MS35338-136 (eight required)
- Solder (Item 29)

Personnel: One

Equipment Condition:

- Thermal system test controller on a clean work surface.

Preliminary Procedure:

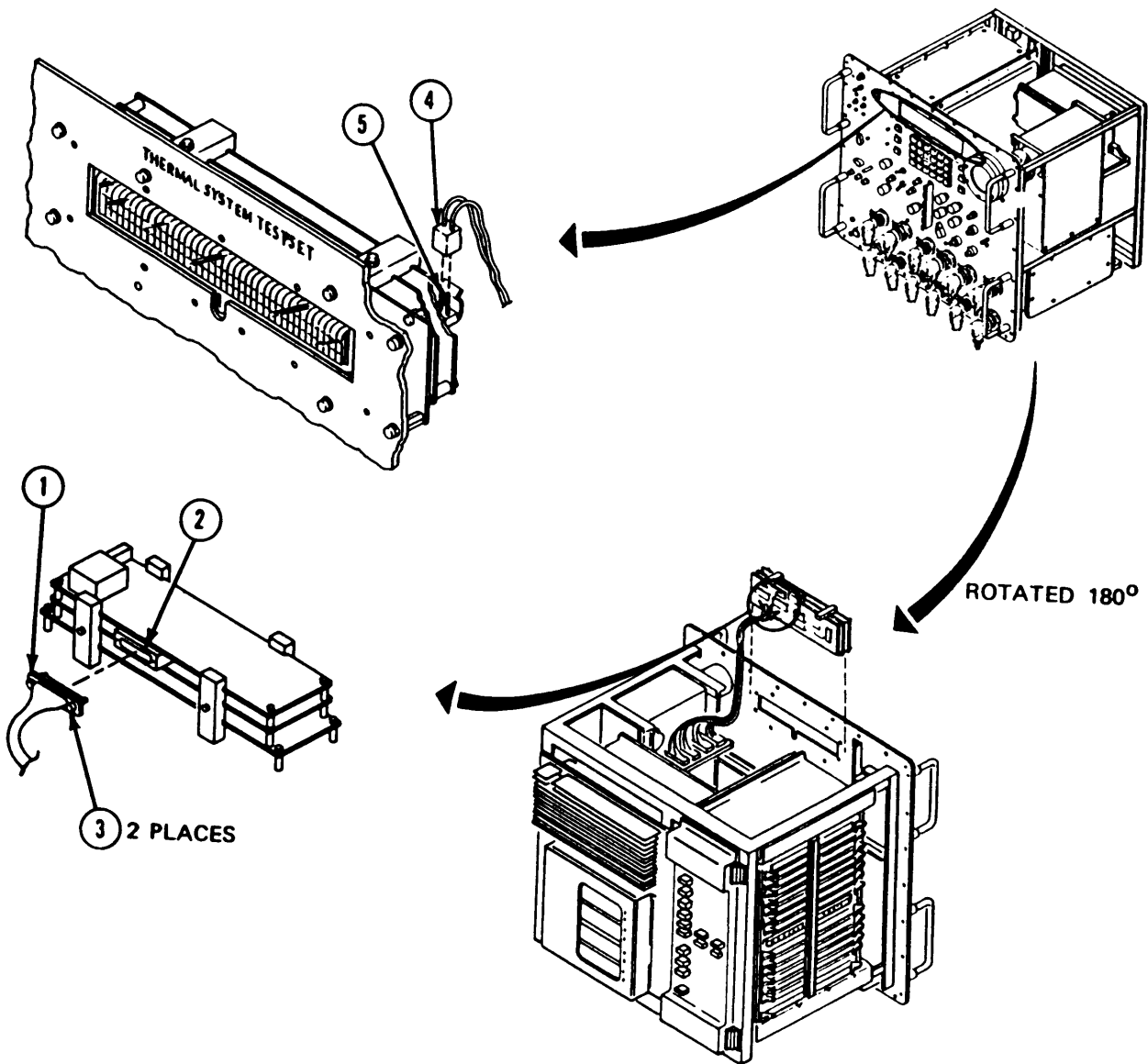
- Remove digital indicator; refer to task 2.

FRAME 53

Install Digital Indicator:

1. Put receptacle connector A1P5 (1) on jack (2). Screw in and tighten two electrical polarizing keys (3) with flat tip screwdriver.
2. Put electrical plug connector A1P6 (4) on jack (5).

GO TO FRAME 54



ARR82-24336

FRAME 54

Install Digital Indicator (Continued):

CAUTION

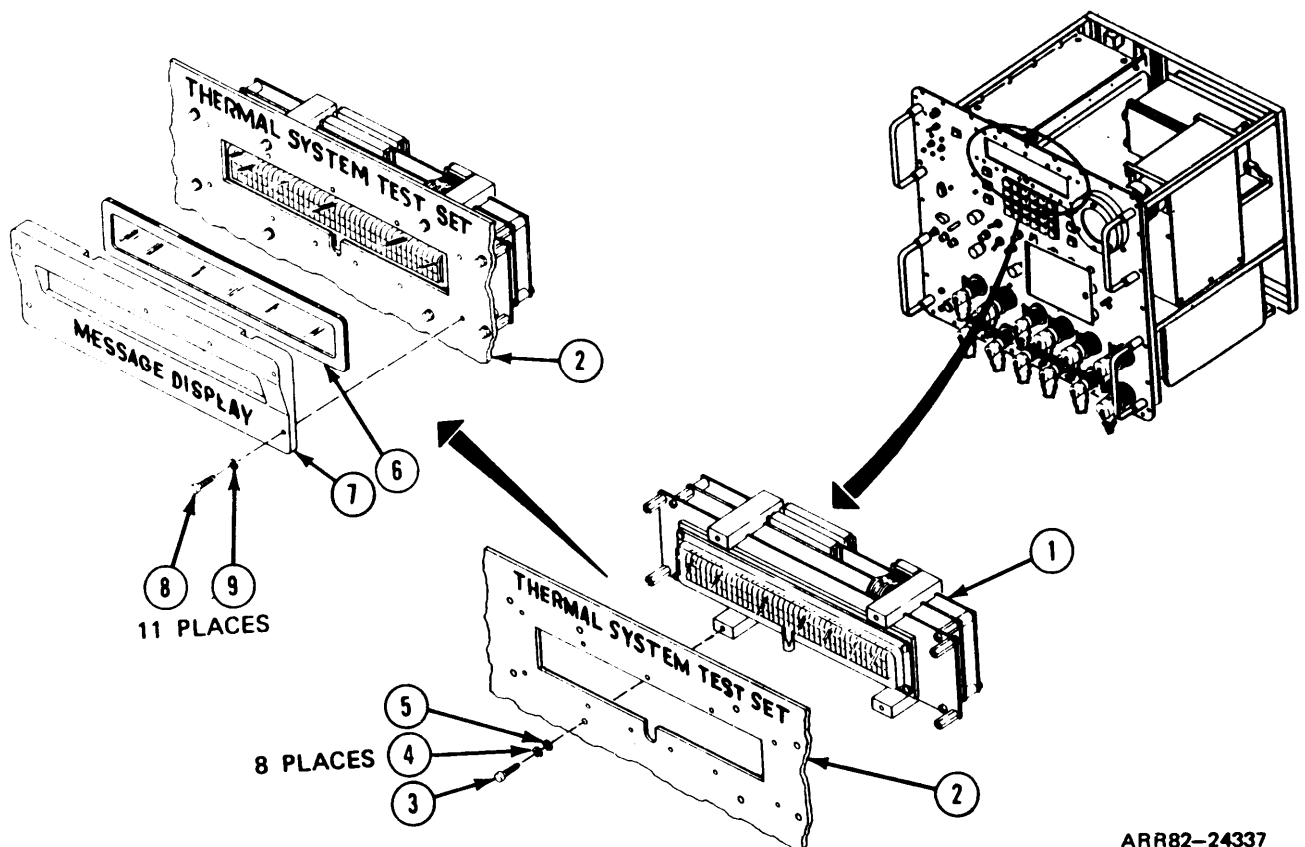
Digital Indicator (1) has a glass covered, vacuum sealed message display. Avoid breaking vacuum nipple or puncturing glass cover of message display. Avoid damage to circuits by not allowing digital indicator to hit against hard surface.

1. Line up holes in digital indicator (1) with holes in panel assembly (2).
2. Screw in and tighten eight machine screws (3), new lockwashers (4), and flat washers (5) with cross tip screwdriver.
3. Put EMI rectangular window (6) in alpha display bezel (7) and lineup holes in bezel (7) with holes in panel (2).
4. Screw in and tighten 11 machine screws (8) and flat washers (9) with cross tip screwdriver.

Follow-on Maintenance:

1. Install thermal system test controller; refer to para. 2-5, task 8.
2. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 54 ENDS HERE



TASK 26. Install Panel Assembly A1.

Applicability All Models

Common Tools:

- Pliers, wire twister
- Screwdriver, cross tip, No. 1
- Screwdriver, cross tip, No. 2
- Screwdriver, flat tip

Special Tools:

- Maintenance Kit, electrical connector repair, 12285360

Supplies:

- NOTE: Expendable supplies are defined in volume 1, appendix C.
- Lockwasher (96906) MS35338-135 (four required)
- Strap, electrical tiedown (96906) MS3367-1-9
- Wire, nonelectric (Item 36)

Personnel: Two

- Soldier A: Installs panel assembly A1.
- Soldier B: Helps Soldier A.

NOTE

Soldier B is needed only in frame 52.

Equipment Condition:

- Thermal system test controller on a clean work surface.

Preliminary Procedure:

- Remove panel assembly A1; refer to task 1.

FRAME 55

Install Panel Assembly:

CAUTION

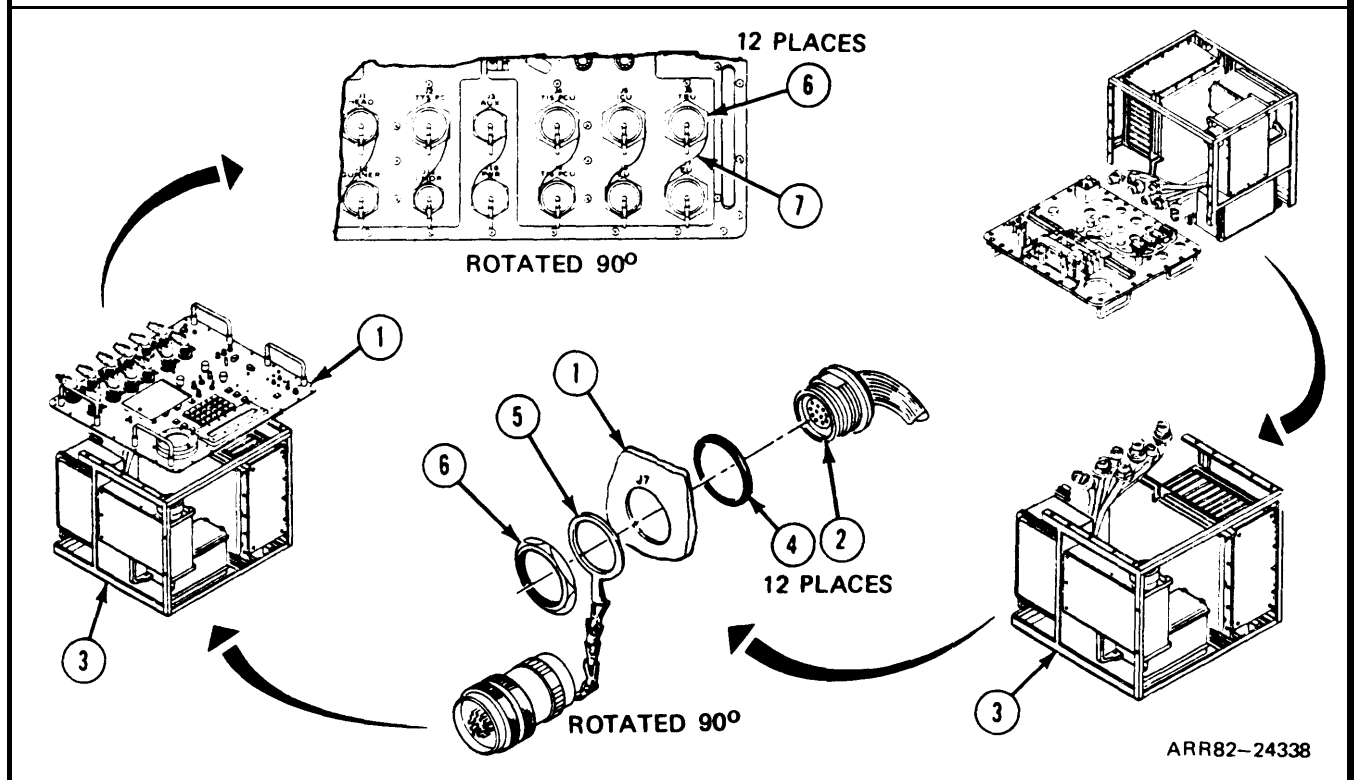
Weight of panel (1) can damage internal wiring. When putting in receptacle connectors (2), panel (1) must be supported to avoid damage towering.

- Solder A,
 1. Soldier B: Carefully lower chassis assembly (3) down to rest on backside.
- Solder A,
 2. Solder A: Put preformed packing (4) on 12 connectors (2).
- Solder A,
 3. Solder B: Lift and turn panel (1) and carefully set panel (1) on chassis assembly (3)

NOTE

- Repeat steps 4 and 5 for each of 12 connectors (2).
 - Soldier B is no longer needed in this task.
4. Put connector (2) through hole in panel (1).
5. Using jamnut wrench, put ring (5) and jamnut (6) on connectors (2).
6. Put lacing wire (7) through jamnut (6) with pliers.

GO TO FRAME 56

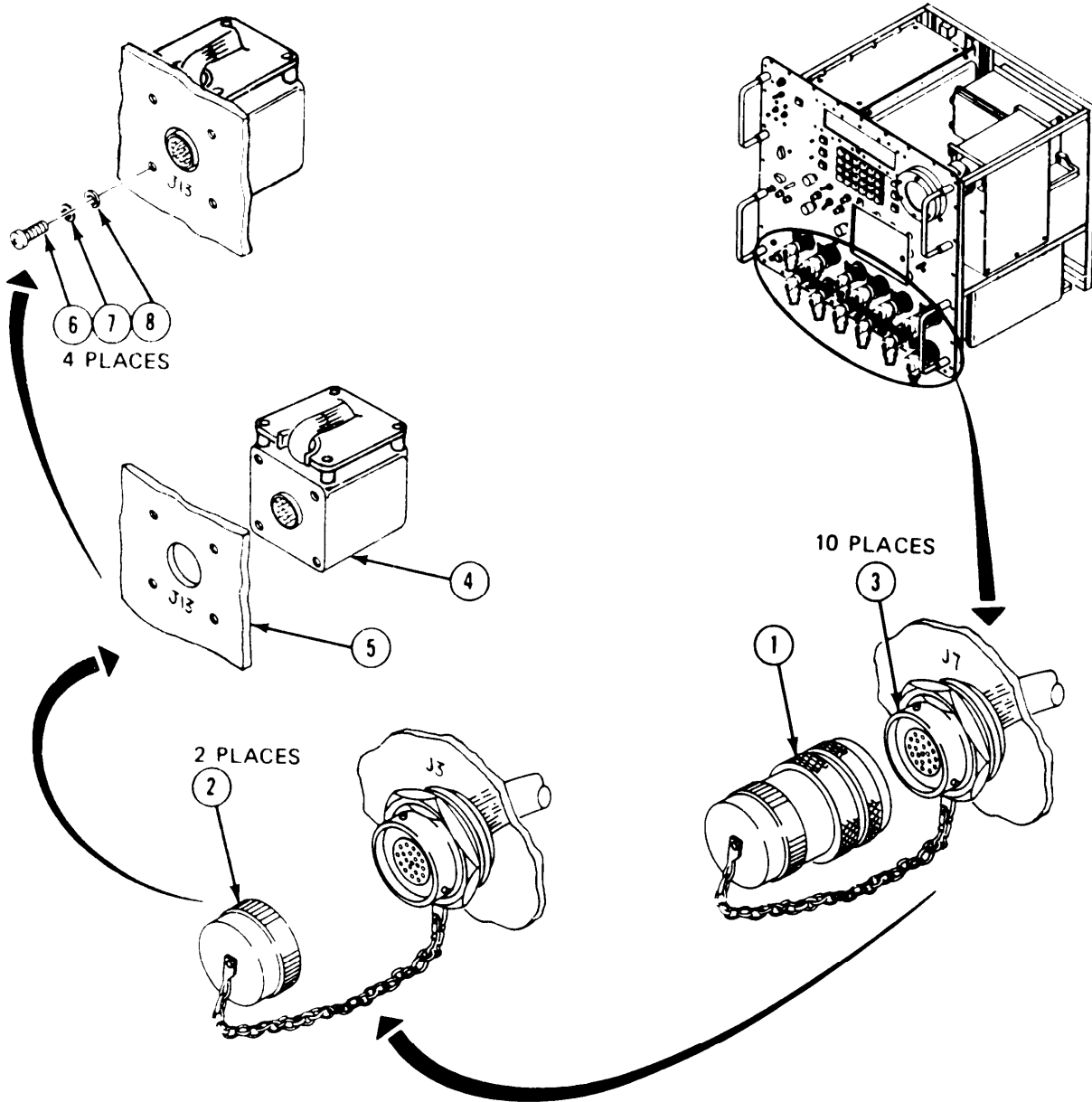


FRAME 56

Install Panel Assembly (Continued):

1. Put ten dummy connector plugs (1) and two electrical covers (2) on connectors (3).
2. Line up holes in RF1 filter assembly (4) with holes in panel (5).
3. Screw in and tighten four machine screws (6), new lockwashers (7), and flat washers (8) with cross tip screwdriver.

GO TO FRAME 57



ARR82-24339

FRAME 57

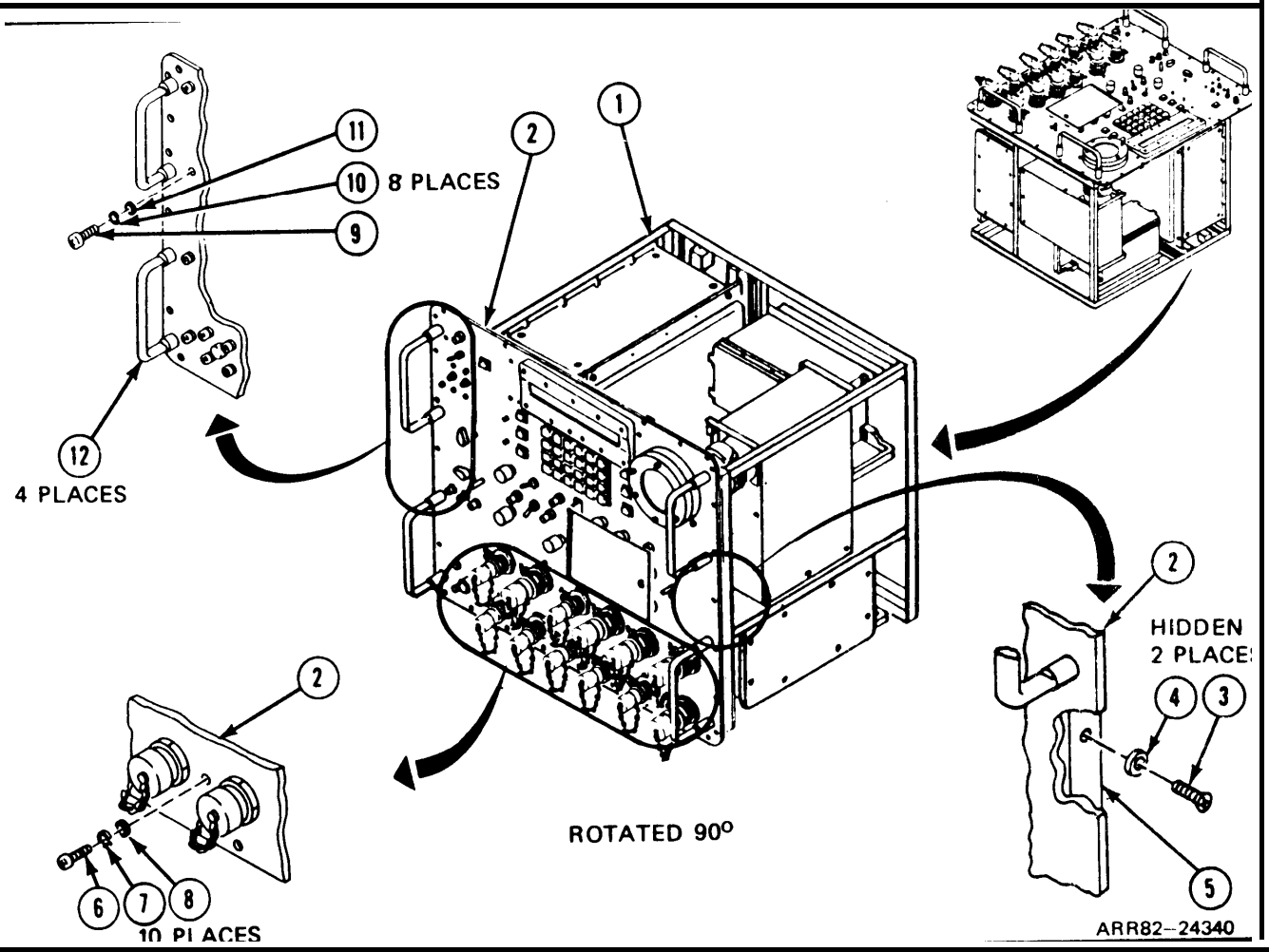
Install Panel Assembly (Continued):

CAUTION

Wiring can be damaged if tangled on chassis (1). To avoid damage to wiring, use care when lining up panel (2) with chassis (1).

1. Line up holes in panel (2) with holes in chassis (1).
2. Screw in and tighten two machine screws (3) and washers (4) to chassis angle (5) on each side of panel (2).
3. Screw in and tighten ten screws (6), lockwashers (7), and washers (8) near bottom of panel (2) with cross tip screwdriver.
4. Screw in and tighten eight machine screws (9), lockwashers (10), and flat washers (11) near handles (12) with cross tip screwdriver.

GO TO FRAME 58



FRAME 58

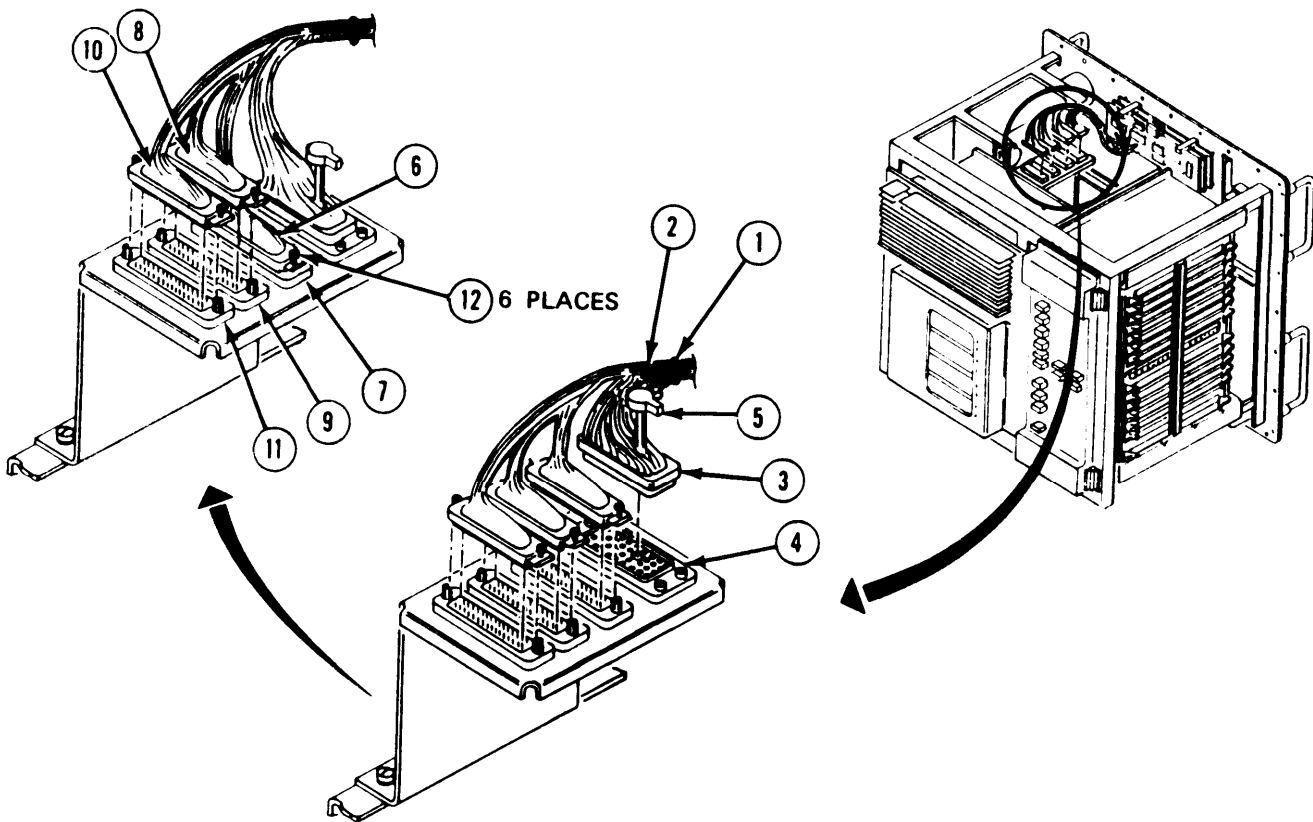
Install Panel Assembly (Continued):

1. Put electrical tiedown strap (1) on harness (2).
2. Put connector body plug A1P2 (3) on receptacle W16J1 (4) and turn handle (5) one-quarter turn clockwise to lock plug (3) on receptacle (4).
3. Put connector A1P3 (6) on receptacle W14J1 (7). Put connector A1P1 (8) on receptacle W17J1 (9). Put connector A1P4 (10) on receptacle W13J2 (11).
4. Screw in and tighten two electrical polarizing keys (12) on each of three connector A1P3 (6), A1P1 (8), and A1P4 (10) with flat tip screwdriver.

Follow-on Maintenance:

1. Install thermal system test controller; refer to para. 2-5, task 8.
2. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

END OF PANEL ASSEMBLY A1 MAINTENANCE



TASK 27. Replace Front Panel Decal.

Applicability All models

Common Tools:

Knife, craftman's

Special Tools: None

Supplies:

NOTE:Expendable supplies are defined in volume 1, appendix C.

Decal, front panel (19200) 9377381

Isopropyl alcohol (Item 17)

Rag, wiping (Item 24)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.

FRAME 59

Replace Front Panel Decal:

1. Lift edge of front panel decal (1) with knife and slowly pull decal (1) using knife to scrape wherever necessary.

WARNING

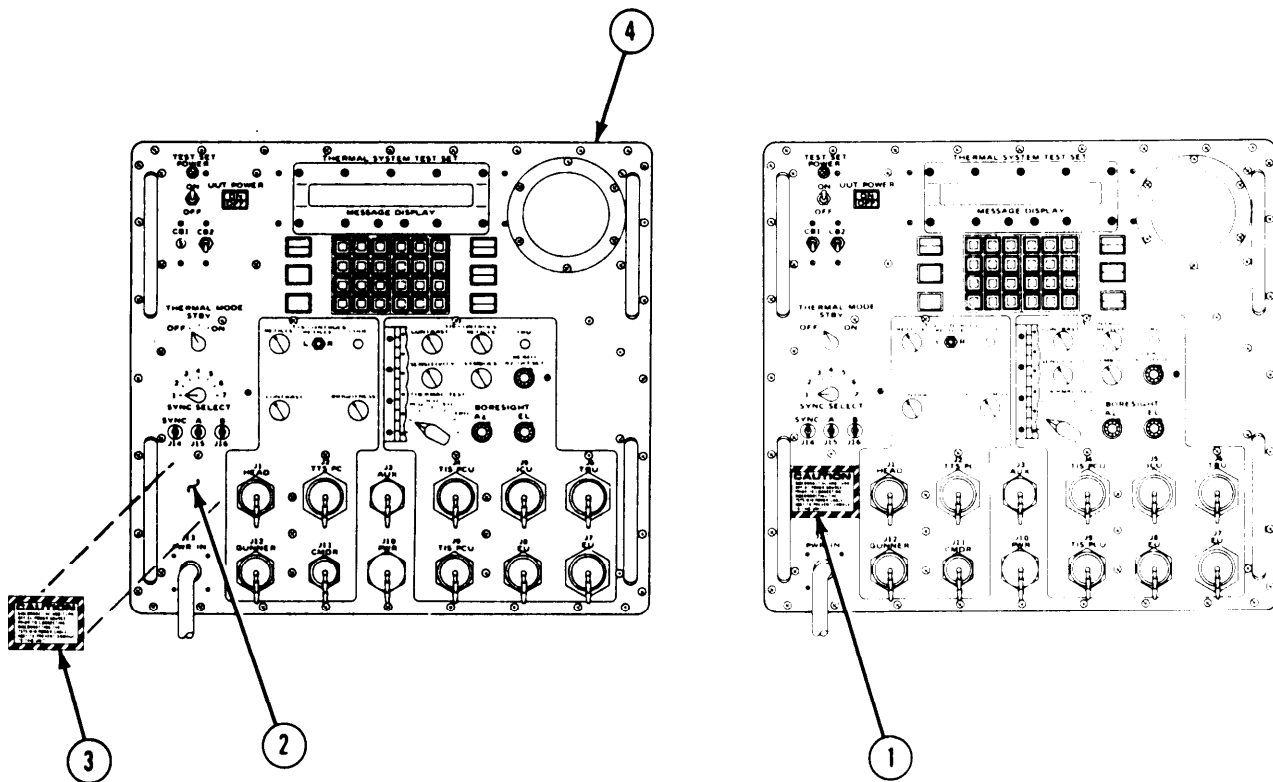
Isopropyl alcohol is toxic and extremely flammable. Use only in well-ventilated areas. Avoid prolonged or repeated breathing of vapors. Avoid prolonged contact with skin. Keep area free of sparks and open flames.

2. Clean area (2) using rag moistened with isopropyl alcohol.
3. Peel back off new decal (3) on area (2) of front panel (4).

Follow-on Maintenance:

Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 27 ENDS HERE



ARR82-24326.1

2-7. Digital Subsystem (DSS) Assembly A3.

Task	Title	Frame
1	Remove Electrical Card Holder	1
2	Replace Pad	2
3	Remove Circuit Card Assembly A2, A3, A4, A5, A6, A7, A9, A10, A13, or A14	3
4	Remove Digital Subsystem Assembly A3	4
5	Remove Plate	5
6	Remove Terminal Board	6 - 7
7	Replace Electrical-Mechanical Post	8
8	Remove End Plate	9
9	Remove Center Plate	10
10	Replace Isolation Wall	11
11	Replace Jack Tips	12
12	Replace Spring Tension Clip and Printed Circuit Card Holder	13
13	Repair Connector	14 - 15
14	Install Center Plate	16
15	Install End Plate	17
16	Install Terminal Board	18 - 19
17	Install Plate	20
18	Install Digital Subsystem Assembly A3	21 - 22
19	Install Circuit Card Assembly A2, A3, A4, A5, A6, A7, A9, A10, A13, or A14	23
20	Install Electrical Cardholder	24

TASK 1. Remove Electrical Card Holder

Applicability All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.

FRAME 1

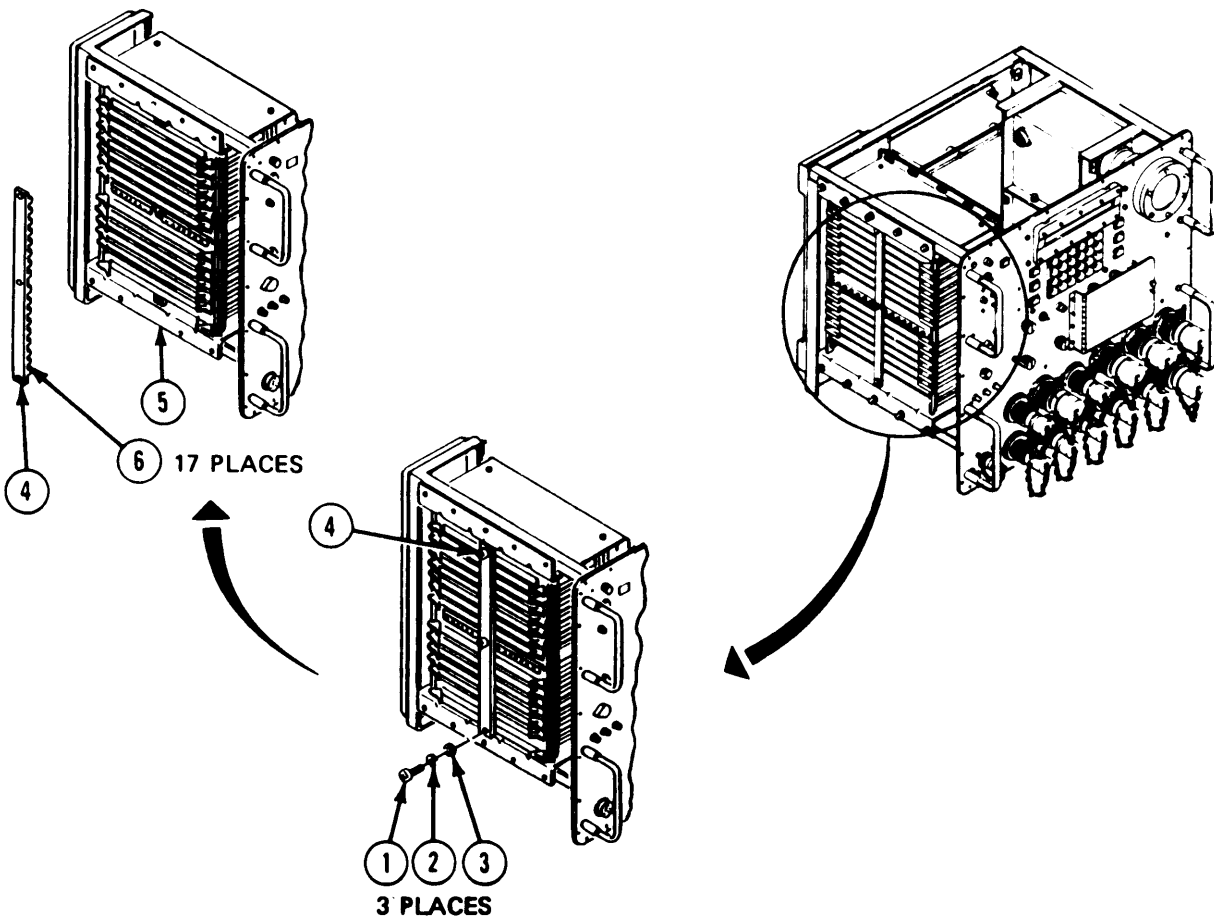
Remove Cardholder:

1. Unscrew and take out three machine screws (1), lockwashers (2), and flat washers (3) from holder (4) with screwdriver. Get rid of lockwashers (2).
2. Lift holder (4) off digital subsystem (DSS) assembly (5).
3. Look at holder (4) for cracks. If bad, turn in folder, go to follow-on maintenance, and TASK 1 ENDS HERE. If OK, go to step 4.
4. Look at 17 pads (6) for tears or worn spots. Replace pads (6); refer to task 2.

Follow-on Maintenance:

NOTE: To install card retainer, refer to task 20.

TASK 1 ENDS HERE



ARR82-24342

TASK 2. Replace Pad.

Applicability All Models

Common Tools:

Knife, pocket

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

Adhesive, liquid rubber (Item 4)

Brush, acid swabbing (Item 8)

Coating, chromate conversion (Item 10)

Dry Cleaning Solvent (Item 11)

Pad (19200) 12303363 (as required)

Pad (19200) 12303363-1 (as required)

Pad (19200) 12303363-2 (as required)

Rag, wiping (Item 24)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical card holder; refer to task 1.

FRAME 2

Remove Pad:

NOTE

Read paragraph 2-4 before doing any work.

Use this task to take off and put on any pad (1).

1. Scrape off bad pad (1) with knife. Get rid of pad (1).

WARNING

Solvents and adhesives burn easily and can give off harmful vapors. To avoid injury keep away from open fire and use them in a well-ventilated area.

2. Take adhesive off retainer (2) with solvent, rags, and knife.

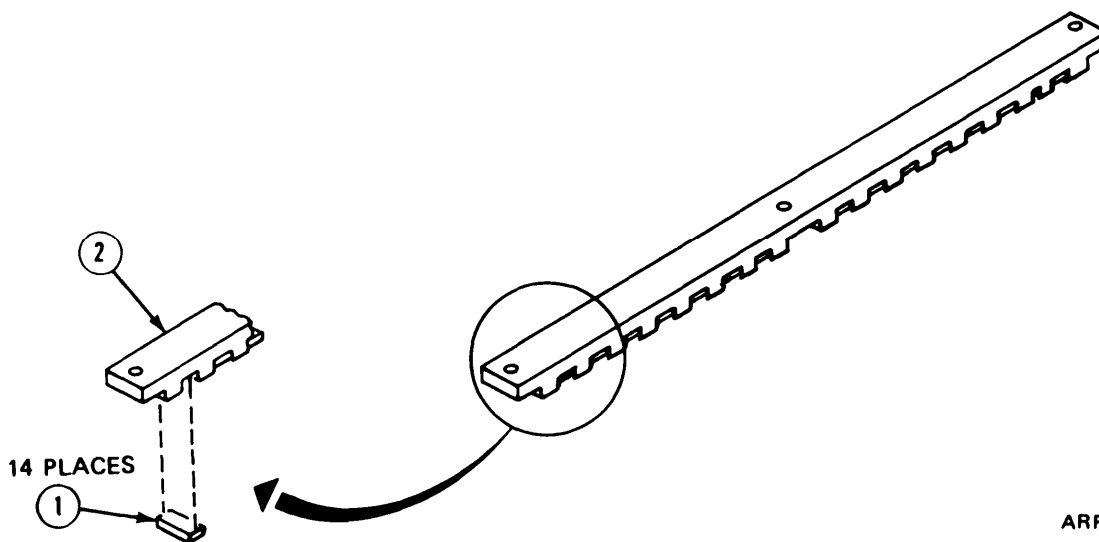
Install Pad:

3. Put adhesive on new pad (1) with brush.
4. Press new pad (1) in place on retainer (2). Wipe off excess adhesive with rag.
5. Put chromate conversion coating on retainer (2) with brush.

Follow-on Maintenance:

1. Install card retainer; refer to task 20.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para 4-18.

TASK 2 ENDS HERE



ARR82-24343

TASK 3. Remove Circuit Card Assembly A2, A3, A4, A5, A6, A7, A9, A10, A13, or A14.

Applicability: All Models

Common Tools: None

Special Tools: None

Supplies:

- NOTE:
- Expendable supplies are defined in volume 1, appendix C.
 - To remove more than one circuit card assembly, you will need:
 - Pencil, writing (Item 19)
 - Rag, wiping (Item 24)
 - Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical card holder; refer to task 1.

FRAME 3

Remove Card Assembly:

CAUTION

Touching card assembly components can damage components. Hold card assemblies by edges at all times. Do not flex or twist card assembly.

NOTE

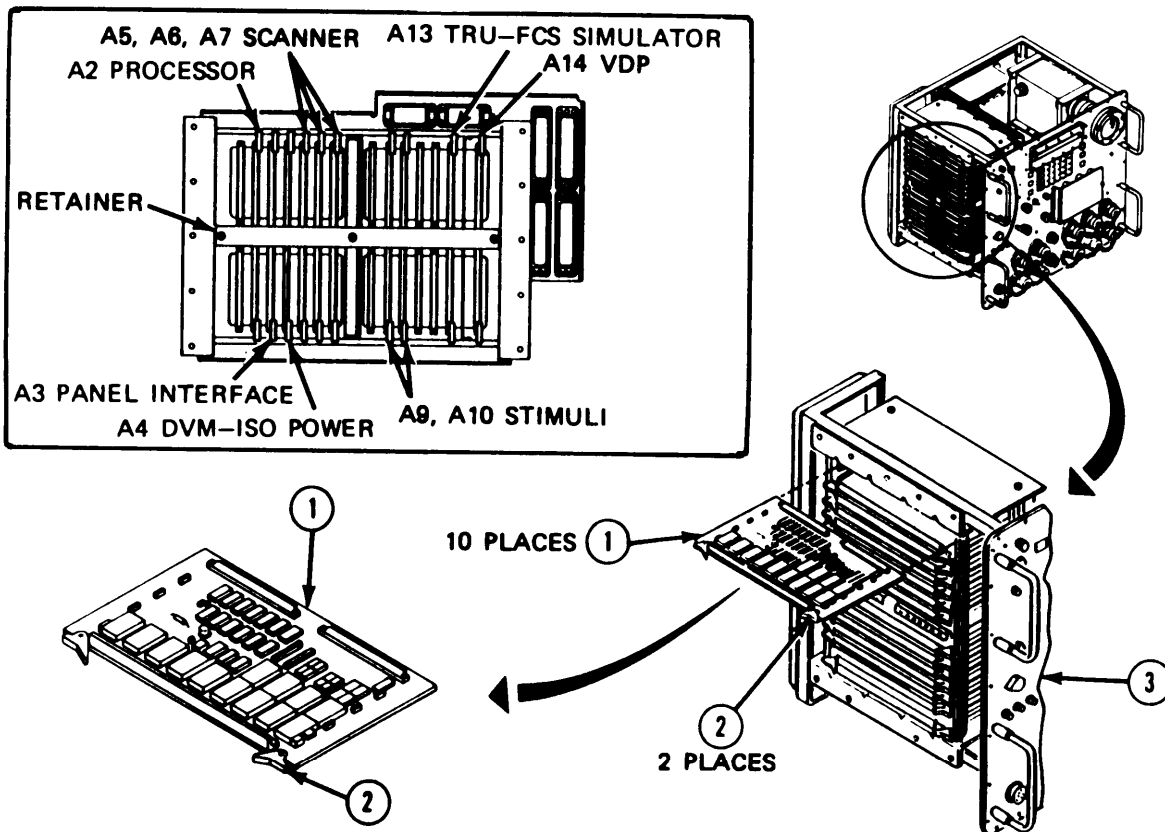
- Use this task to take out any of ten circuit card assemblies. Card assembly A2 (1) is shown.
- If removing more than one circuit card assembly, tag each card assembly and wrap with clean rag.

1. Pull out on ejectors (2) of circuit card assembly (1) to release card assembly (1).
2. Pull card (1) out of digital subsystem assembly (3).
3. Look at card assembly (1) for cracks. If bad, turn in. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install circuit card assembly A2, A3, A4, A5, A6, A7, A9, A10, A13, or A14, refer to task 19.

TASK 3 ENDS HERE



ARR82-24344

TASK 4. Remove Digital Subsystem Assembly A3.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: Two

Soldier A: Takes off hardware and harness connectors.

Soldier B: Lifts digital subsystem assembly A3 out of test controller chassis and helps Soldier A.

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.

FRAME 4

Remove Digital Subsystem:

- Soldier A:
1. Unlock and take off five receptacle connectors (1) from receptacles (2) by turning handle (3) one-quarter turn counterclockwise.
 2. Unscrew and take out ten machine screws (4), lockwashers (5), and flat washers (6) with screwdriver. Get rid of lockwashers (5).

CAUTION

To avoid damage to digital subsystem (7) and connectors (1), two soldiers are needed to lift digital subsystem (7) out of test controller chassis assembly (8).

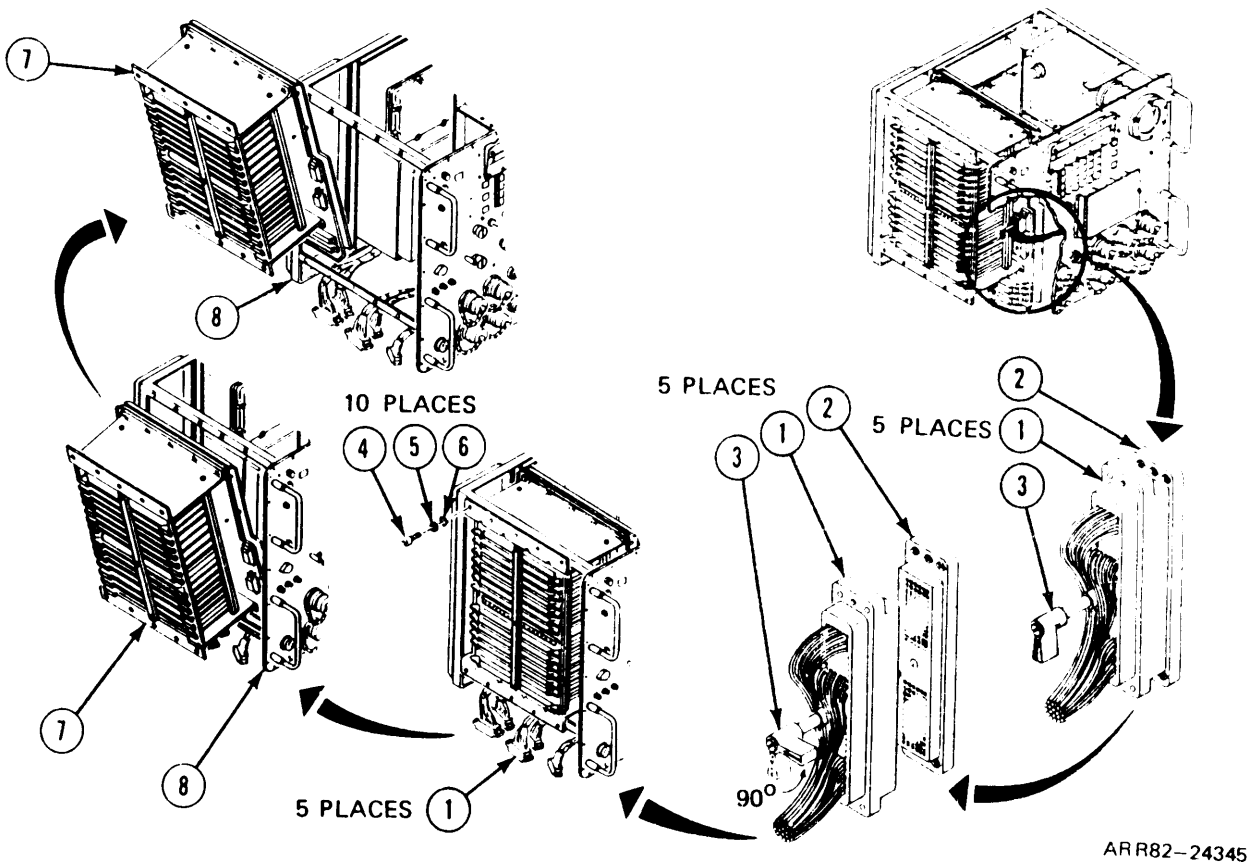
- Soldier A:
3. Clear away connectors (1).

- Soldier B:
4. Carefully tilt top of digital subsystem (7) out of chassis (8) and lift digital subsystem (7) up and out of chassis (8).

Follow-on Maintenance:

NOTE: To install digital subsystem assembly A3, refer to task 18.

TASK 4 ENDS HERE



TASKS. Remove Plate.

Applicability All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove digital subsystem assembly A3; refer to task 4.

FRAME 5

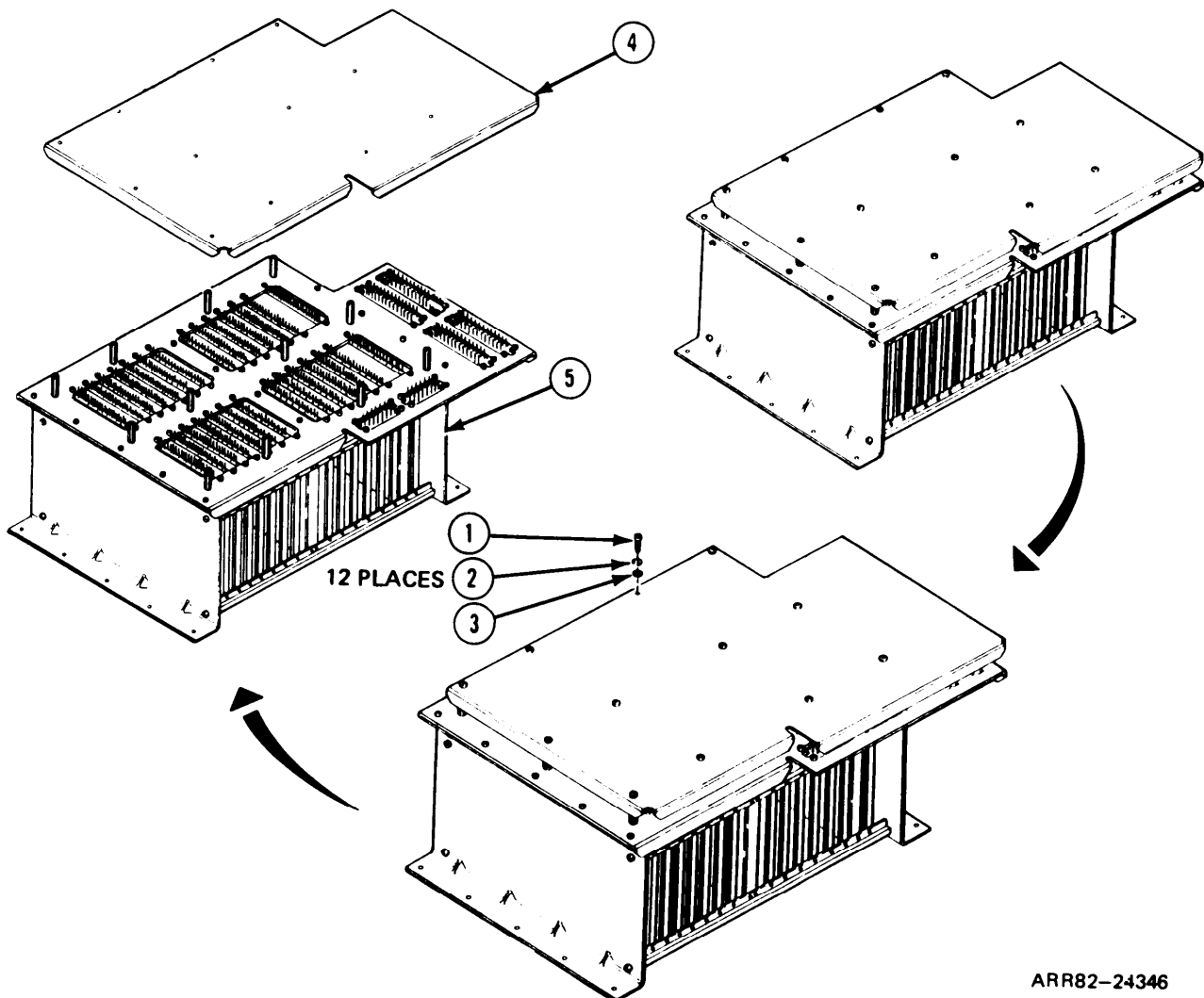
Remove Plate:

1. Unscrew and take out 12 machine screws (1), lockwashers (2), and flat washers (3) with screwdriver. Get rid of lockwashers (2).
2. Take plate (4) off of digital subsystem assembly A3 (5).
3. Look at plate (4) for cracks or dents. If bad, turn in plate. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install deflector plate, refer to task 17.

TASK 5 ENDS HERE



TASK 6. Remove Terminal Board

Applicability All Models

Common Tools:

- Knife, pocket
- Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical card holder; refer to task 1.
4. Remove circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 3.
5. Remove digital subsystem assembly A3; refer to task 4.
6. Remove plate; refer to task 5.

FRAME 6

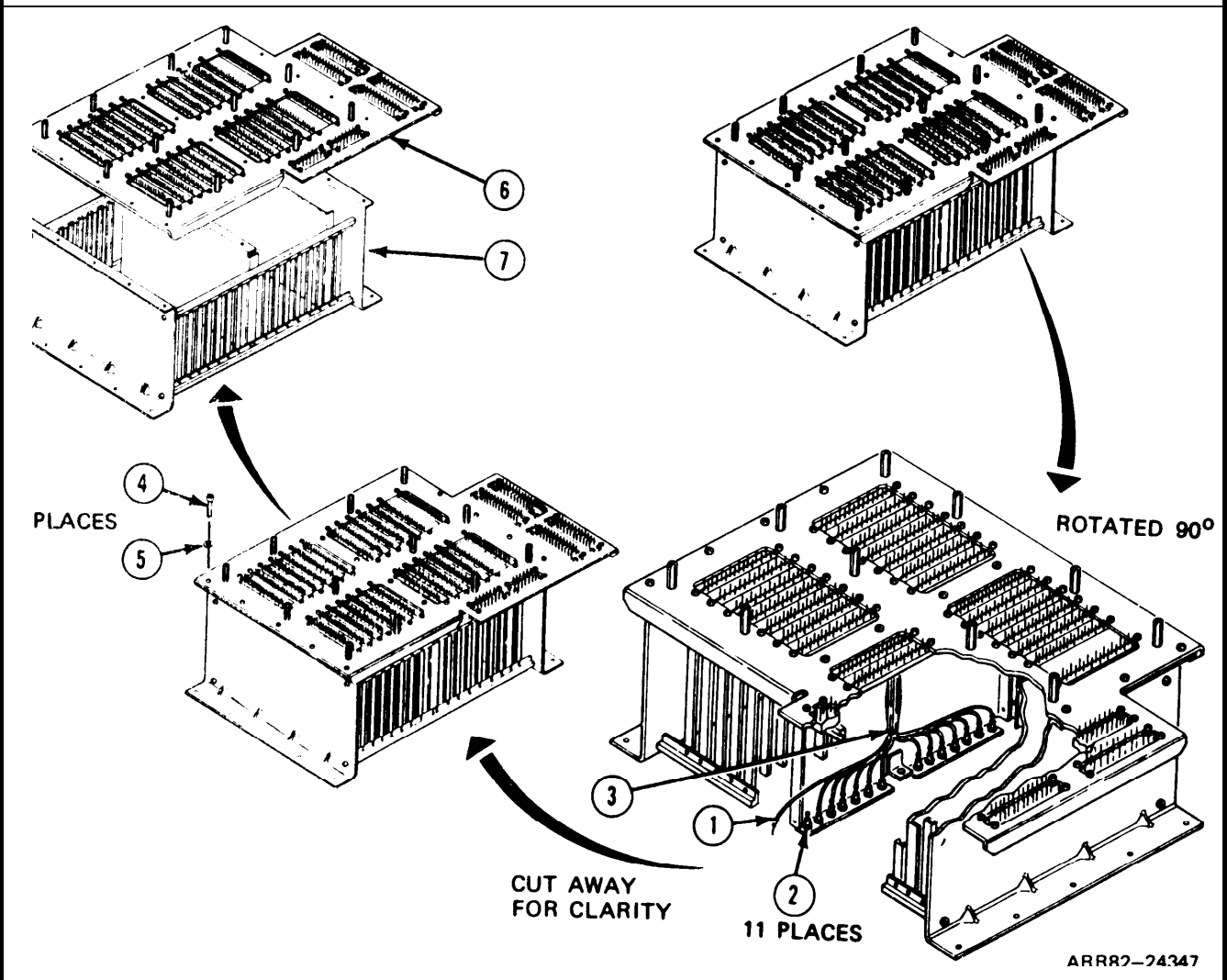
Remove Terminal Board:

NOTE

Read paragraph 2-4 on tagging and soldering wires before doing any work,

1. Tag and unsolder eleven wires (1) from jack tips (2).
2. Cut and remove tie wrap (3) with knife.
- 3 Unscrew and take out 14 machine screws (4) and flat washers (5) with screwdriver.
4. Lift terminal board (6) off of digital subsystem assembly (7). Look at terminal board (6) for bends or cracks. If bad, turn in terminal board (6), go to follow-on maintenance, and TASK 6 ENDS HERE. If OK, GO TO FRAME 7.

GO TO FRAME 7



FRAME 7

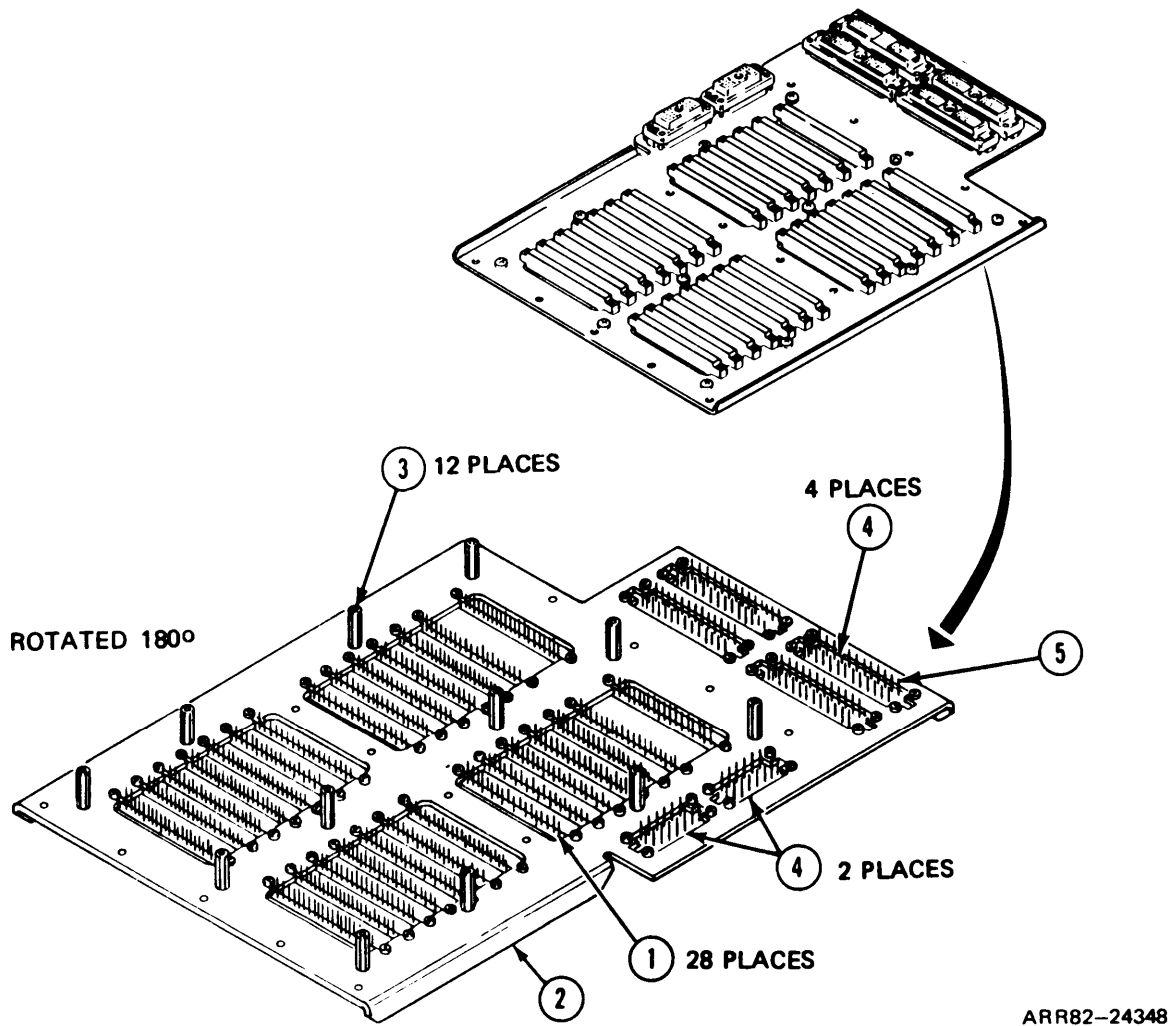
Inspect Terminal Board:

1. Look at 28 receptacle connectors (1) for cracks and bent or broken pins. If bad, turn in terminal board (2), go to follow-on maintenance, and TASK 6 ENDS HERE. If OK, go to step 2.
2. Look at 12 electrical-mechanical posts (3) for cracks or looseness. If bad, replace post (3); refer to task 7. If OK, go to step 3.
3. Look at six connectors (4) for cracks and bent or broken electrical contacts (5). If bad, replace contacts (5); refer to task 13. If OK, set terminal board (2) aside for later use.

Follow-on Maintenance:

NOTE: To install terminal board, refer to task 16.

TASK 6 ENDS HERE



TASK 7. Replace Electrical-Mechanical Post.

Applicability: All Models

Common Tools:

- Screwdriver, cross tip, No. 2
- Wrench, combination, 1/4-inch

Special Tools: None

Supplies:

- Lockwasher (96906) MS35338-135 (as required)
- Post, electrical-mechanical (80205) NAS 1786-06-16 (as required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

1. Remove thermal system test controller case cover; refer to volume 1, para, 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical card holder; refer to task 1.
4. Remove circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 3.
5. Remove digital subsystem assembly A3; refer to task 4,
6. Remove plate; refer to task 5.
7. Remove terminal board; refer to task 6.

FRAME 8

Remove Post:

NOTE

Use this task to replace any of 12 posts (1).

1. Unscrew and takeout 12 screws (2), lockwashers (3), and flat washers (4) with screwdriver and wrench. Get rid of lockwashers (3).
2. Take off and get rid of post (1).

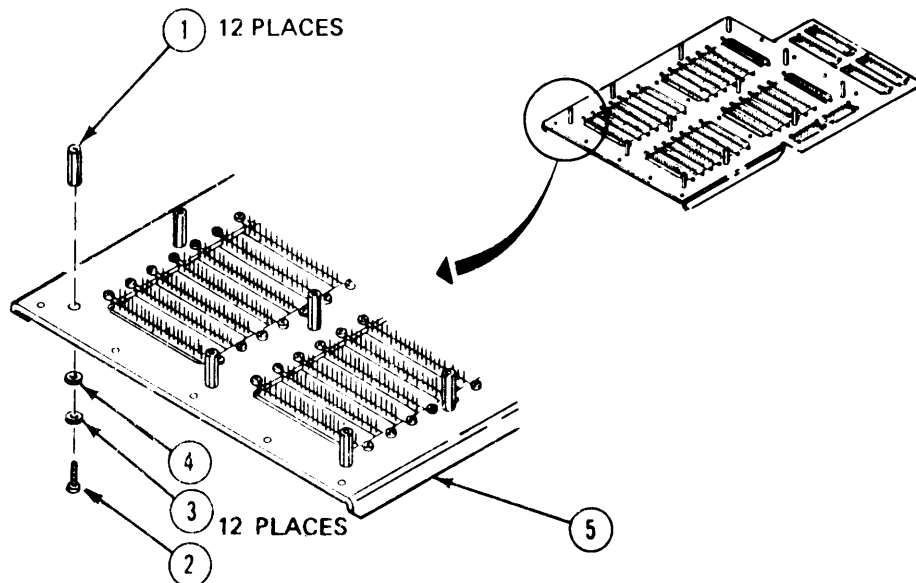
Install Post:

3. Line up new post (1) with hole in terminal board (5).
4. Screw in and tighten 12 screws (2), new lockwashers (3), and washers (4) with screwdriver and wrench.

Follow-on Maintenance:

1. Install terminal board; refer to task 16.
2. Install plate; refer to task 17.
3. install digital subsystem assembly A3; refer to task 18.
4. Install circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 19.
5. Install electrical card holder; refer to task 20.
6. Install thermal system test controller; refer to para. 2-5, task 8.
7. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 7 ENDS HERE



ARR82-24349

TASK 8. Remove End Plate.

Applicability All Models

Common Tools:

Screwdriver, flat tip, No. 2

Supplies: None

Special Tools: None

Personnel One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical card holder; refer to task 1.
4. Remove circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 3.
5. Remove digital subsystem assembly A3; refer to task 4.
6. Remove plate; refer to task 5.
7. Remove terminal board; refer to task 6.

FRAME 9

Remove End Plate:

NOTE

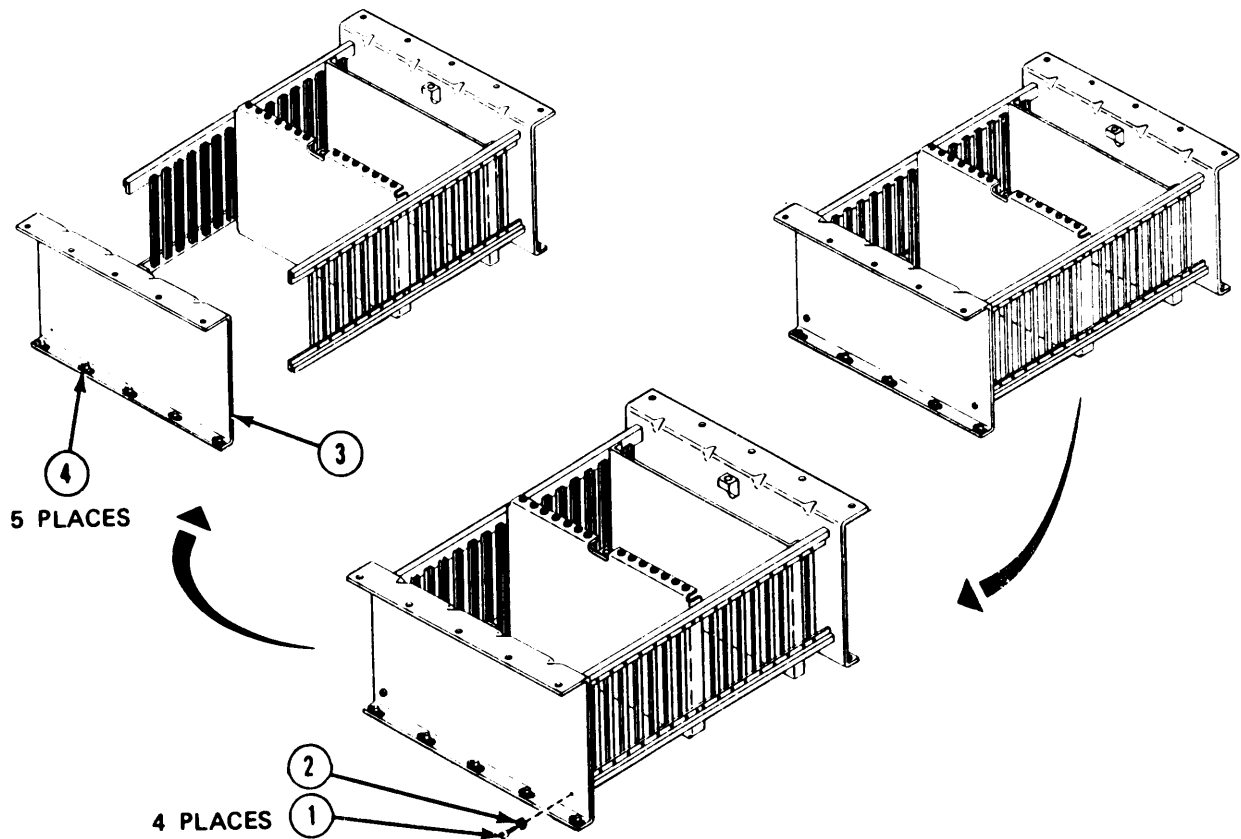
- Use this task to remove either of two end plates.
- Read paragraph 2-4 on replacing nutplates before doing any work.

1. Unscrew and takeout four machine screws (1) and lockwashers (2) with screwdriver. Take off end plate (3) and get rid of lockwashers (2).
2. Look at end plate (3) for cracks or bends. If bad, turn in end plate, go to follow-on maintenance, and TASK 8 ENDS HERE. If OK, go to step 3.
3. Look at end plate (3) for loose or missing plain self-locking nuts (4) or stripped threads. If bad, replace nut (4).

Follow-on Maintenance:

NOTE: To install end plate, refer to task 15.

TASK 8 ENDS HERE



ARR82-24350

TASK 9. Remove Center Plate.

Applicability: All Models

Common Tools:

Drill, 1/4-inch
Drill Bit, 1/16-inch
Hammer, machinist's
Punch, drive pin, 1/16-inch

Special Tool: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical card holder; refer to task 1.
4. Remove circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 3.
5. Remove digital subsystem assembly A3; refer to task 4.
6. Remove plate; refer to task 5.
7. Remove terminal board; refer to task 6.

FRAME 10

Remove Center Plate:

NOTE

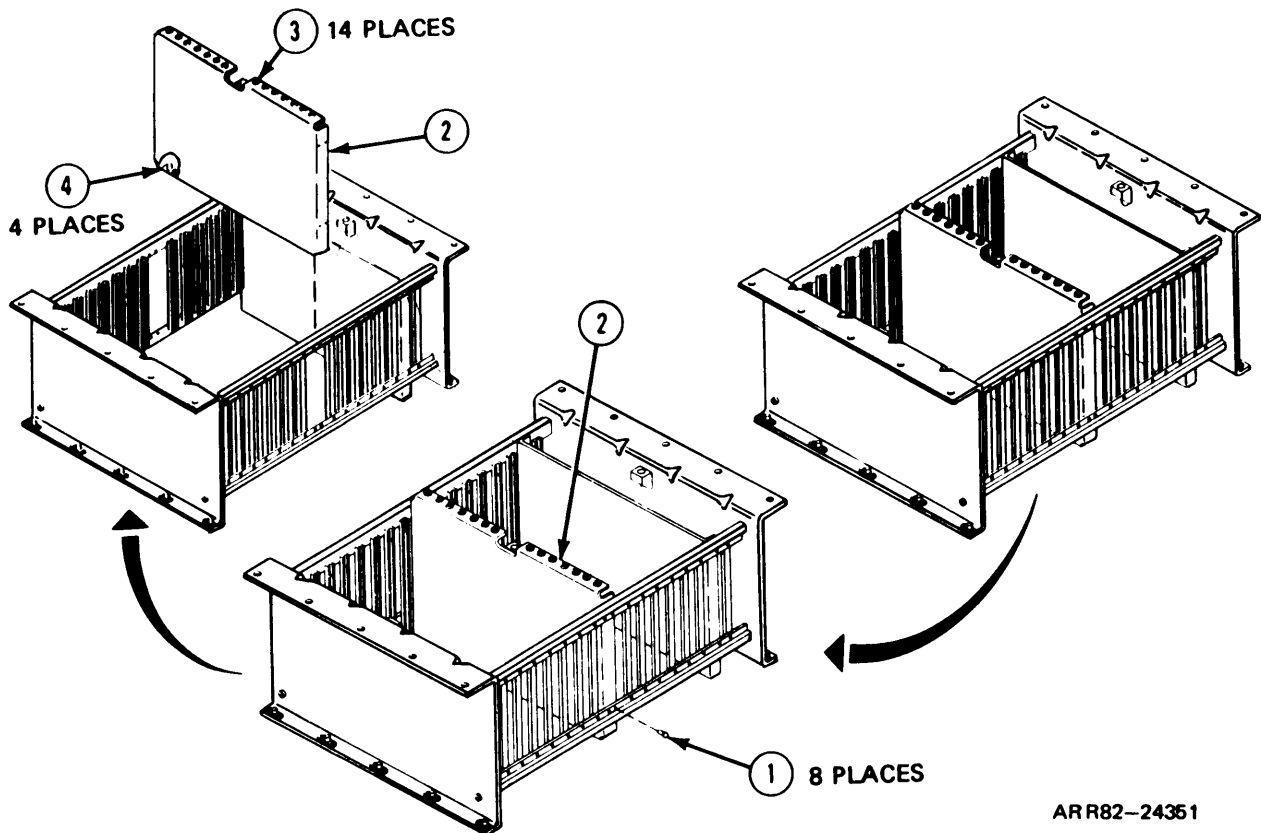
Read paragraph 2-4 on replacing nutplates and rivets before doing any work.

1. Take out eight tubular rivets (1) from center plate (2) with drill, bit, punch, and hammer.
2. Take out center plate (2). Look at center plate (2) for cracks or bends. If bad, turn in, go to follow-on maintenance, and TASK 9 ENDS HERE. If OK, go to step 3.
3. Look at center plate (2) for loose or broken jack tips (3). If bad, replace jack tips (3); refer to task 11.
4. Look at center plate (2) for loose or missing plain self-locking nuts (4) or stripped threads. If bad; replace nut (4).

Follow-on Maintenance:

NOTE: To install center plate, refer to task 14.

TASK 9 ENDS HERE



TASK 10. Replace Isolation Wall.

Applicability: All Models

Common Tools:

Hammer, machinist's
Pin, drift
Punch, center
Punch, drive pin, 1/16-inch

Special Tools: None

Supplies:

Rivet (96906) MS16535-3 (four required)
Wail, isolation (19200) 12303445

Personnel: Two

Soldier A: Replaces isolation wall.
Soldier B: Helps Soldier A.

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para.2-5, task 2.
3. Remove electrical card holder; refer to task 1.
4. Remove circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A 10, A 13, and A 14; refer to task 3.
5. Remove digital subsystem assembly A3; refer to task 4.
6. Remove plate; refer to task 5.
7. Remove terminal board; refer to task 6.

FRAME 11

Remove Isolation Wall:

NOTE

Read paragraph 2-4 on replacing rivets before doing any work.

Soldier A: 1. Take out four tubular rivets (1) from isolation wall (2).

Soldier A: 2. Lift isolation wall (2) out of card cage (3). Turn in isolation wall (2).

Install Isolation wall:

Soldier A: 3. Line up rivet holes (4) in new isolation wall (2) with holes (5) in digital card cage (3).

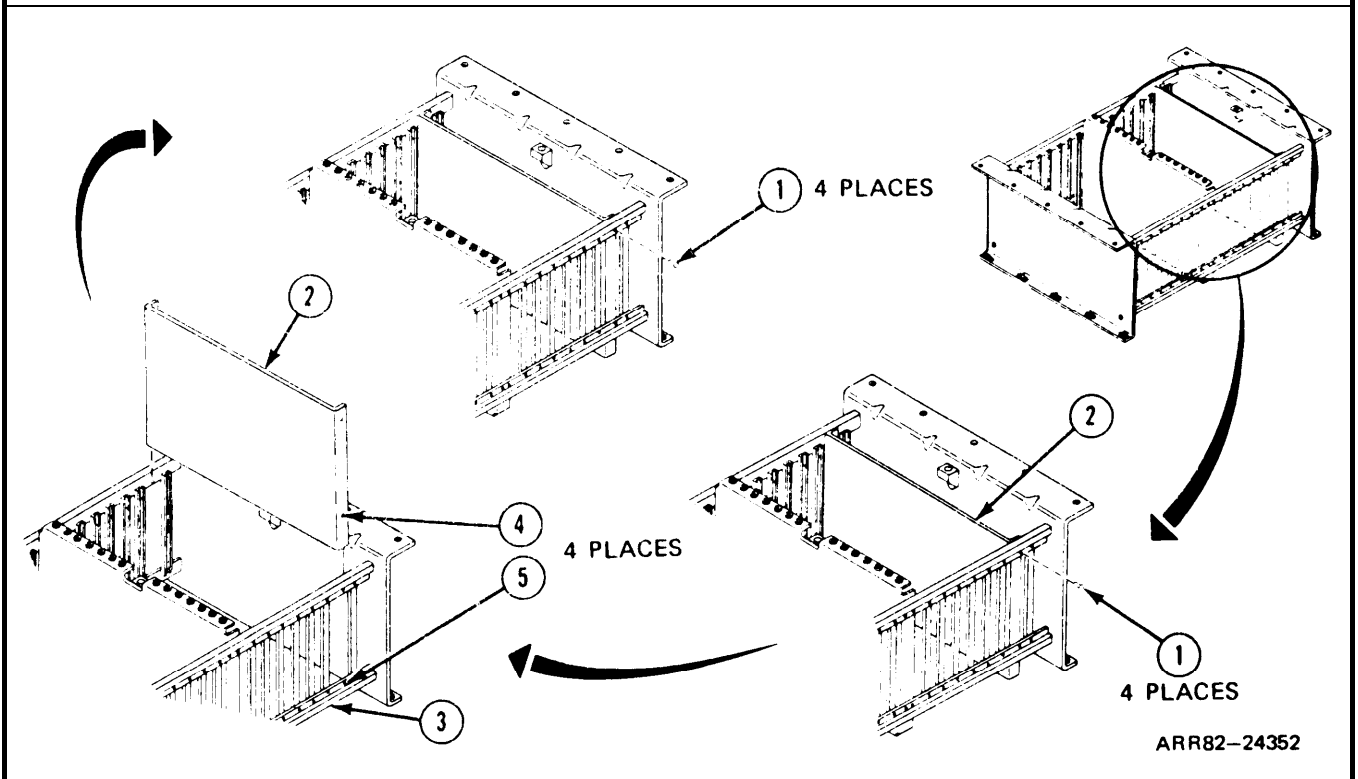
Soldier A,

Soldier B: 4. Put in four new rivets (1).

Follow-on Maintenance:

1. Install terminal board; refer to task 16.
2. Install plate; refer to task 17.
3. Install digital subsystem assembly A3; refer to task 8.
4. Install circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 19.
5. Install electrical card holder; refer to task 20.
6. Install thermal system test controller; refer to para.2-5, task 8.
7. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 10 ENDS HERE



TASK 11. Replace Jack Tips.

Applicability: All Models

Common Tools:

Set, soldering and resoldering
Wrench, combination, 5/16-inch
Wrench, combination, 11/32-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

Jack, tip-black (81349) M39024-10-03 (as required)

Jack, tip-red (81349) M39024-10-02 (as required)

Pencil, writing (Item 19)

Solder (Item 29)

Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical card holder; refer to task 1.
4. Remove circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 3.

FRAME 12

Replace Jacks:

NOTE

- Use this task to replace any of 14 jacks (1). Jack 4 (1) is shown.
- Read paragraph 2-4 on soldering and tagging wires before doing any work.

Remove Jack:

1. Tag and unsolder wire (2) from jack (1).
2. Unscrew and take off nut (3) and lockwasher (4) from jack (1), with 5/16 and 11/32-inch wrenches.
3. Pull jack (1) out of center of plate (5). Turn in jack(1).

Install Jack:

NOTE

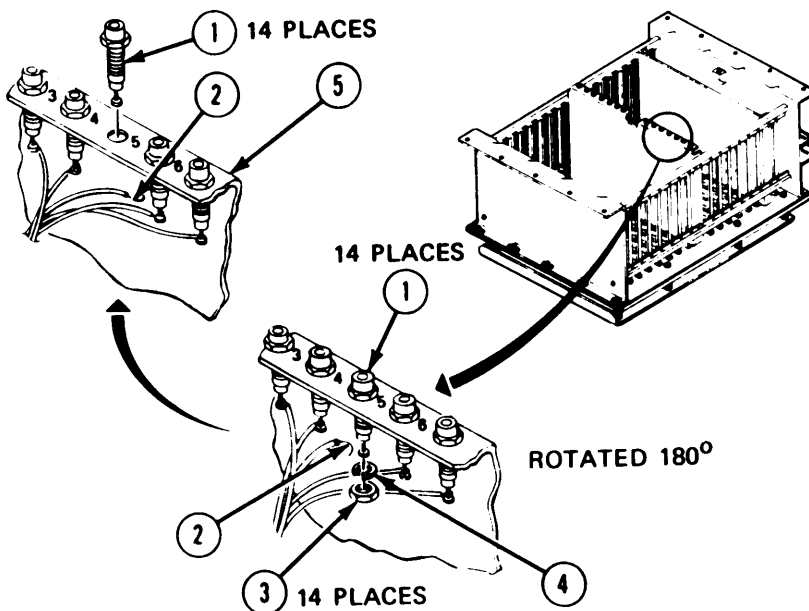
Refer to table below when installing new test point jacks (1).

4. Put new jack (1) into hole in center plate (5).
5. Screw on and tighten nut (3) and lockwasher (4) with 5/16 and 11/32-inch wrenches.
6. Solder wire (2) to new jack (1).

Follow-on Maintenance:

1. Install circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 19.
2. Install electrical card holder; refer to task 20.
3. Install thermal system test controller; refer to para. 2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 11 ENDS HERE



TEST POINT NUMBER	JACK COLOR
1	RED
2	BLACK
3	RED
4	BLACK
5	RED
6	RED
7	BLACK
8	RED
9	BLACK
10	RED
11	BLACK
12	RED
13	BLACK
14	RED

ARR82-24353

TASK 12. Replace Spring Tension Clip and Printed Circuit Cardholder.

Applicability: All Models

Common Tools:

Hammer, machinist's
Pin, drift
Punch, center
Punch, drive pin, 1/16-inch

Special Tools: None

Supplies:

Clip, spring tension (19200) 12303362 (as required)
Holder, printed circuit card (19200) 12303361 (as required)
Rivet, tubular (96906) MS16535-4 (as required)

Personnel: Two

Soldier A: Replaces clip and holder.
Soldier B: Helps Soldier A.

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical card holder; refer to task 1.
4. Remove circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 3.
5. Remove digital subsystem assembly A3; refer to task 4.
6. Remove plate; refer to task 5.

FRAME 13

Remove Clip and Holder:

NOTE

- Use this task to replace any of 28 clips and holders.
- Read paragraph 2-4 on replacing rivets before doing any work.

Soldier A: 1. Take out two tubular rivets (1) from clip (2) and holder (3).

Soldier A: 2. Take of clip (2) and holder (3).

Install Clip and Holder:

Soldier A: 3. Line up new clip (2) and holder (3) with holes in digital card cage assembly (4).

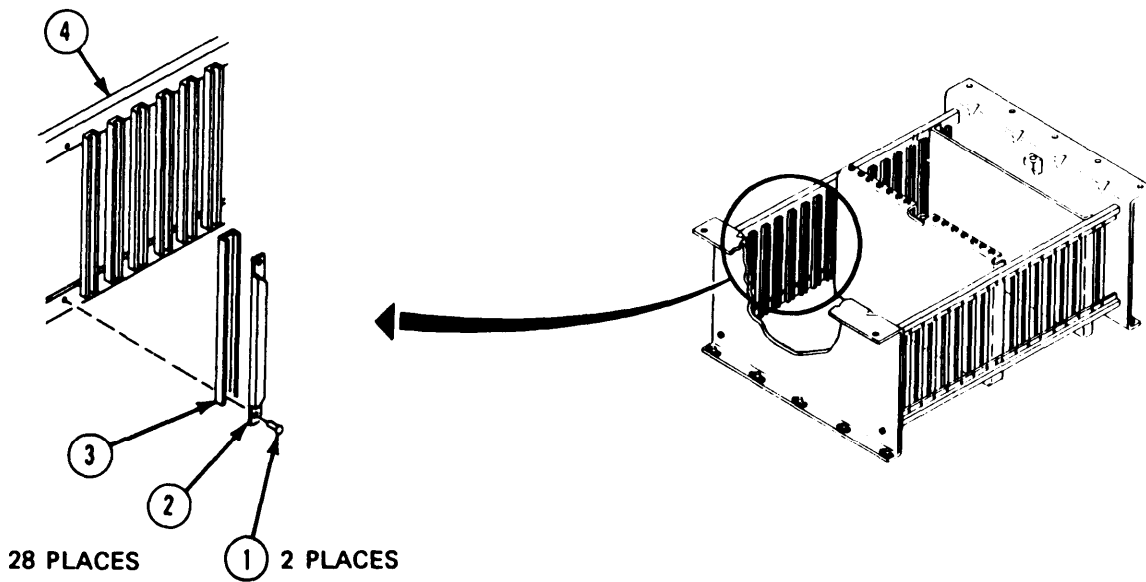
Soldier A,

Soldier B: 4. Put new rivet (1) through clip (2) and holder (3).

Follow-on Maintenance:

1. Install plate; refer to task 17.
2. Install digital subsystem assembly A3; refer to task 18.
3. Install circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 19.
4. Install electrical card holder; refer to task 20.
5. Install thermal system test set controller; refer to para. 2-5, task 8.
6. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 12 ENDS HERE



ARR82-24354

TASK 13. Repair Connector.

Applicability: All Models

Common Tools:

- Pliers, diagonal cutting
- Pliers, round nose
- Tool, crimp (5120-01-019-0812)
- Tool, extractor (5120-01-162-9472)
- Tool, wire wrapping (5130-00-919-3486)

Special Tools: None

Supplies:

- NOTE:** Expendable supplies are defined in volume 1, appendix C.
- Contact, electrical (71468) 030-2235-002 (as required)
- Pencil, writing (Item 19)
- Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical card holder; refer to task 1.
4. Remove circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 3.
5. Remove digital subsystem assembly A3; refer to task 4.
6. Remove plate; refer to task 5.

FRAME 14

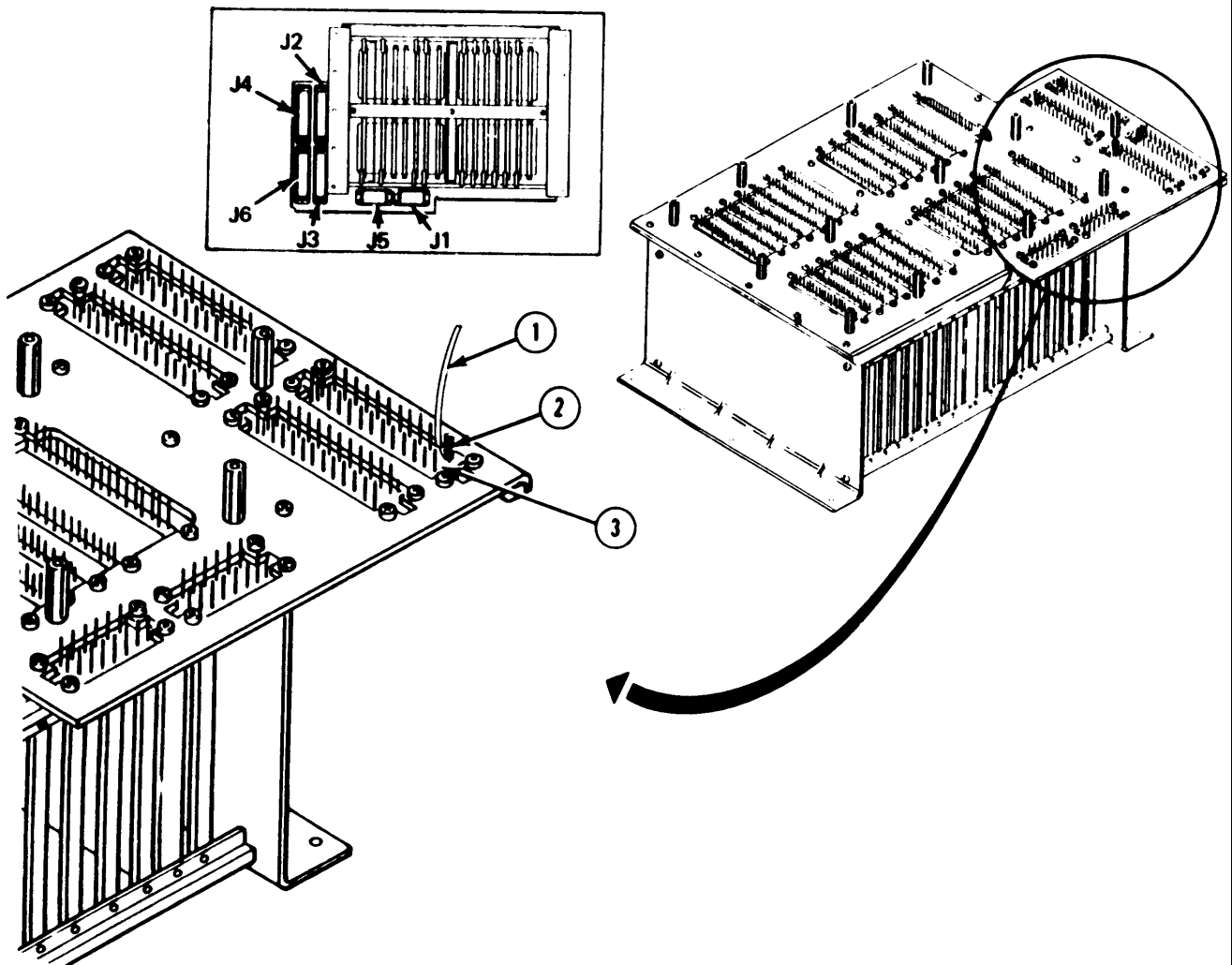
Remove Electrical Contact:

NOTE

- Use this task to repair any of six connectors J1 thru J6.
- Position of J3/J6 on TSTS serial numbers 101-126 reversed.
- Read paragraph 2-4 before doing any work.

1. Tag and remove wire (1) from electrical contact (2) with round nose pliers.
2. Remove contact (2) from connector (3) with extractor to tool.
3. Get rid of contact (2).

GO TO FRAME 15



ARR82-24355

FRAME 15

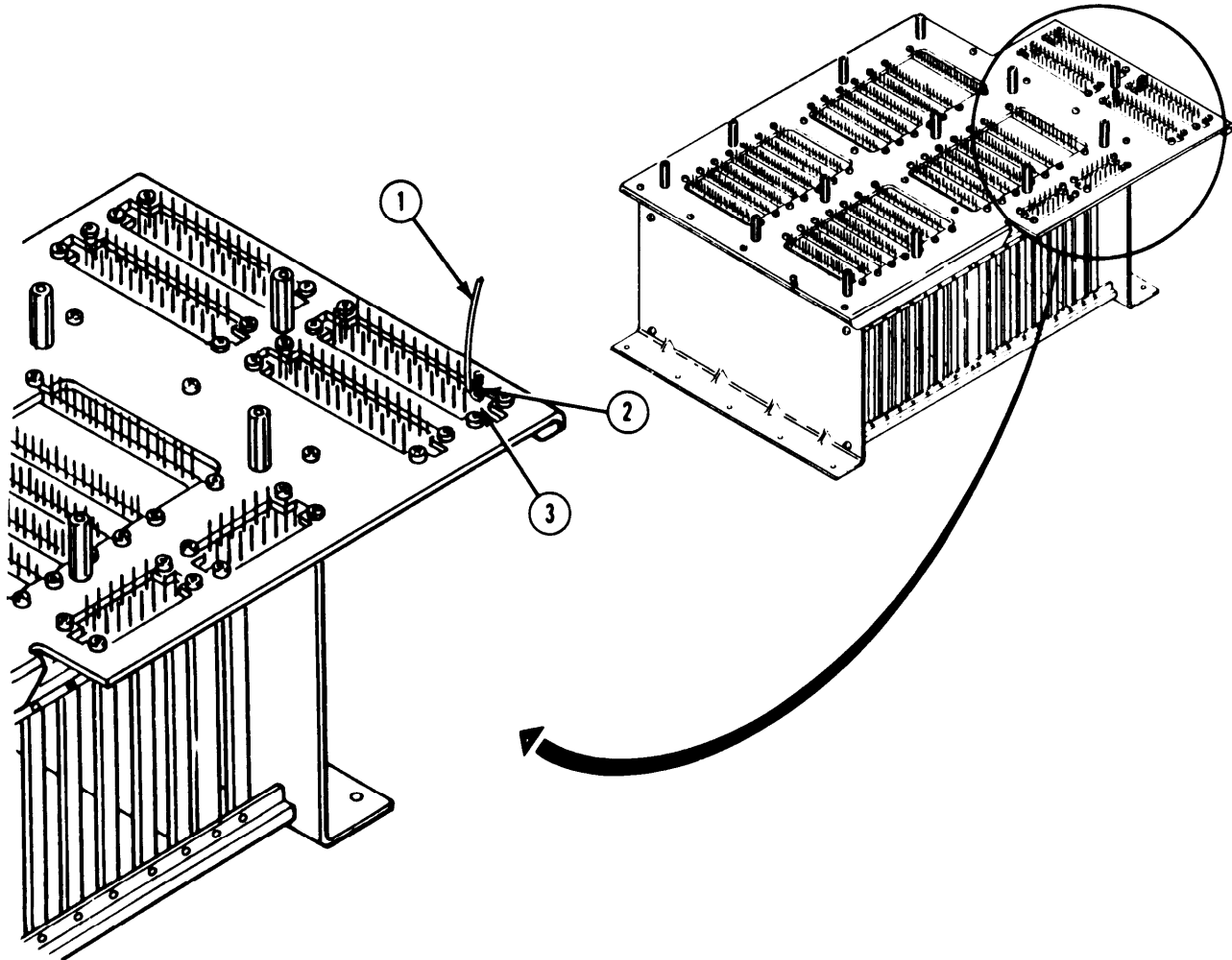
Install Contact:

1. Put new contact (1) in connector (2).
2. Connect wire (3) to contact (1) with wire wrap tool.

Follow-on Maintenance:

1. Install plate; refer to task 17.
2. Install digital subsystem assembly A3; refer to task 18.
3. Install circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 19.
4. Install electrical cardholder; refer to task 20.
5. Install thermal system test controller; refer to para. 2-5, task 8.
6. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 13 ENDS HERE



ARR82-24356

TASK 14. Install Center Plate.

Applicability: All Models

Common Tools:

Hammer, machinist's
Pin, drift
Punch, center

Special Tools: None

Supplies:

Rivet, tubular (96906) MS16535-4 (eight required)

Personnel: Two

Soldier A: Installs center plate.
Soldier B: Helps Soldier A.

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove center plate; refer to task 9.

FRAME 16

Install Center Plate:

NOTE

Read paragraph 2-4 on replacing rivets before doing any work.

Soldier A: 1. Position center plate (1) between guide supports (2) so that plain self-locking nuts (3) on center plate (1) are toward isolation wall (4). Lineup rivet holes (5) in center plate (1) with holes (6) in supports (2).

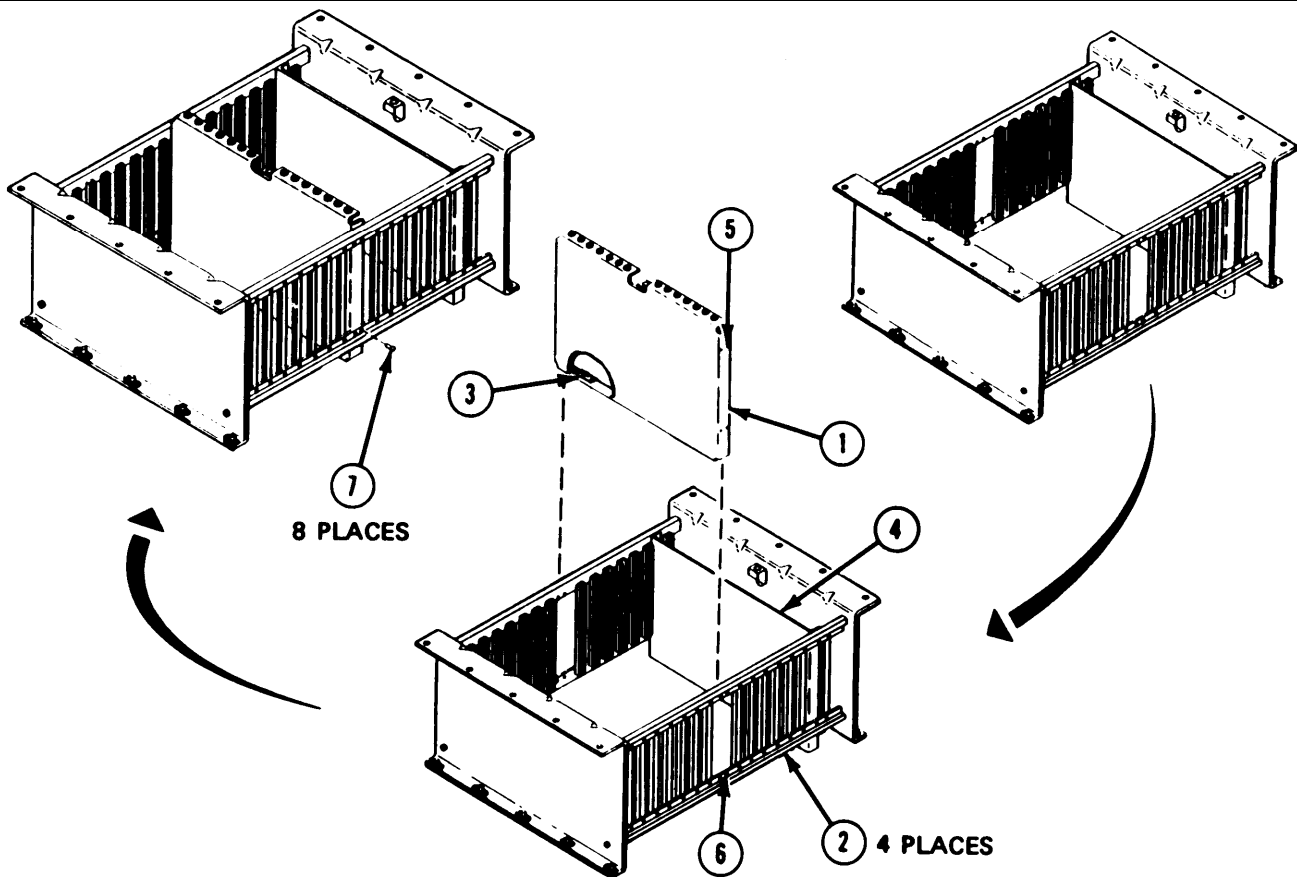
Soldier A,

Soldier B: 2. Put in eight new rivets (7).

Follow-on Maintenance:

1. Install terminal board; refer to task 16.
2. Install plate; refer to task 17.
3. Install digital subsystem assembly A3; refer to task 18.
4. Install circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 19.
5. Install electrical card holder; refer to task 20.
6. Install thermal system test controller; refer to para. 2-5, task 8.
7. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 14 ENDS HERE



ARR82-24357

TASK 15. Install End Plate.

Applicability: All Models

Common Tools:

Screwdriver, flat tip, No. 2

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-137 (4 required per end plate)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove end plate; refer to task 8.

FRAME 17

Install End Plate:

NOTE

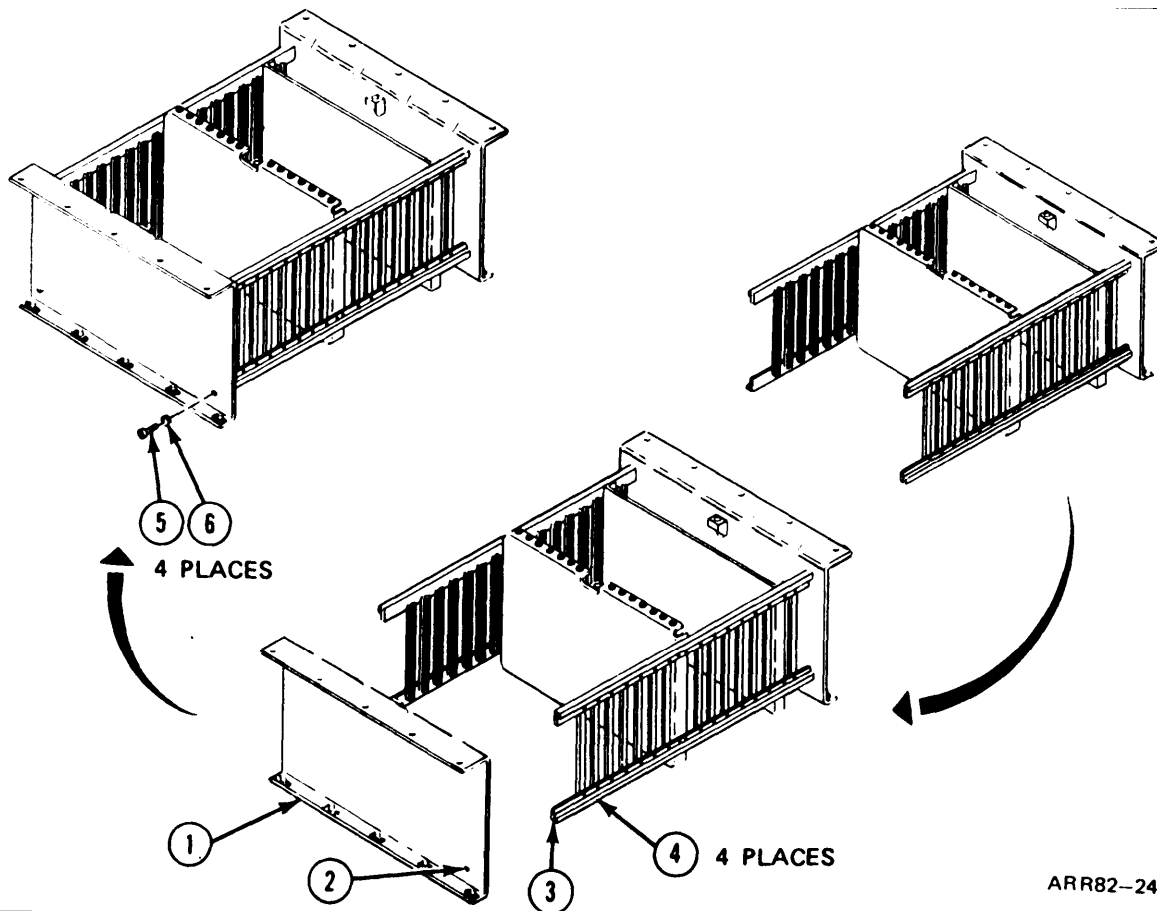
Use this task to install either of two end plates (1).

1. Line up holes (2) in end plate (1) with holes (3) in guide supports (4).
2. Screw in and tighten four machine screws (5) and new lockwashers (6) with screwdriver.

Follow-on Maintenance:

1. Install terminal board assembly; refer to task 16.
2. Install plate; refer to task 17.
3. Install digital subsystem assembly A3; refer to task 18.
4. Install circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 19.
5. Install electrical card holder; refer to task 20.
6. Install thermal system test controller; refer to para. 2-5, task 8.
7. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 15 ENDS HERE



ARR82-24358

TASK 16. Install Terminal Board.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Set, soldering and resoldering

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Solder (Item 29)
Strap, tiedown (Item 32)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove terminal board; refer to task 6.

FRAME 18

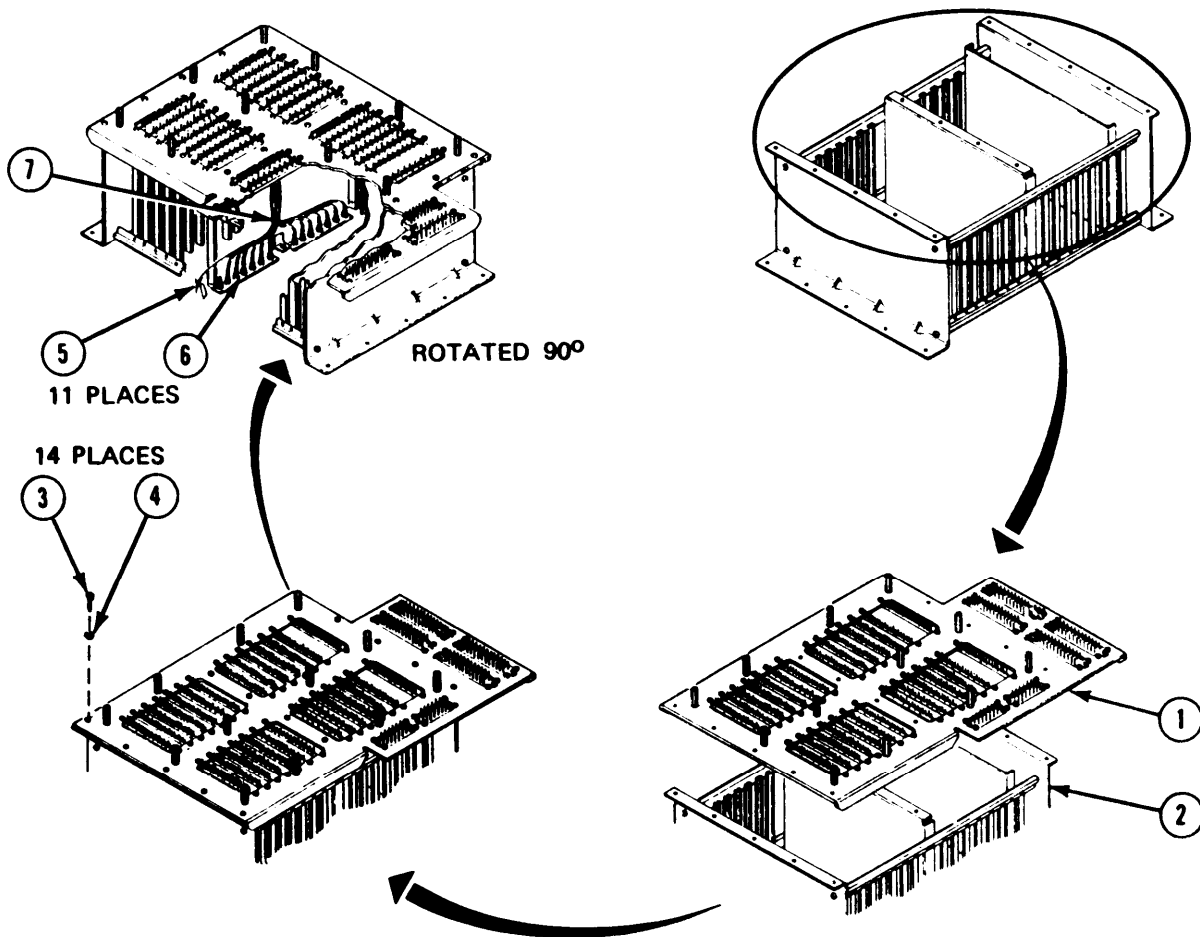
Install Terminal Board:

NOTE

Read paragraph 2-4 on soldering before doing any work.

1. Line up holes in terminal board (1) with holes in digital card cage (2).
2. Screw in and tighten 14 machine screws (3) and flat washers (4) with screwdriver.
3. Solder 11 wires (5) to jack tips (6); refer to wiring chart on frame 19.
4. Put tie wrap (7) around 11 wires (5).

GO TO FRAME 19



ARR82-24359

FRAME 19

Install Terminal Board (Continued):

Wiring Chart for Terminal Board

From	To	From	To
TP1	J1-D1	TP7	J1-B4
TP2	J1-H1	TP8	XA04-A70
TP3	J1-A5	TP9	XA04-A68
TP4	J1-A6	TP10	XA05-B66
TP5	J1-A7	TP11	XA05-B29
TP6	J1-B3		

Follow-on Maintenance:

1. Install plate; refer to task 17.
2. install digital subsystem assembly A3; refer to task 18.
3. Install circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 19.
4. Install electrical card holder; refer to task 20.
5. Install thermal system test controller; refer to para. 2-5, task 8.
6. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 16 ENDS HERE

TASK 17. Install Plate.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-136 (12 required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove plate; refer to task 5.

FRAME 20

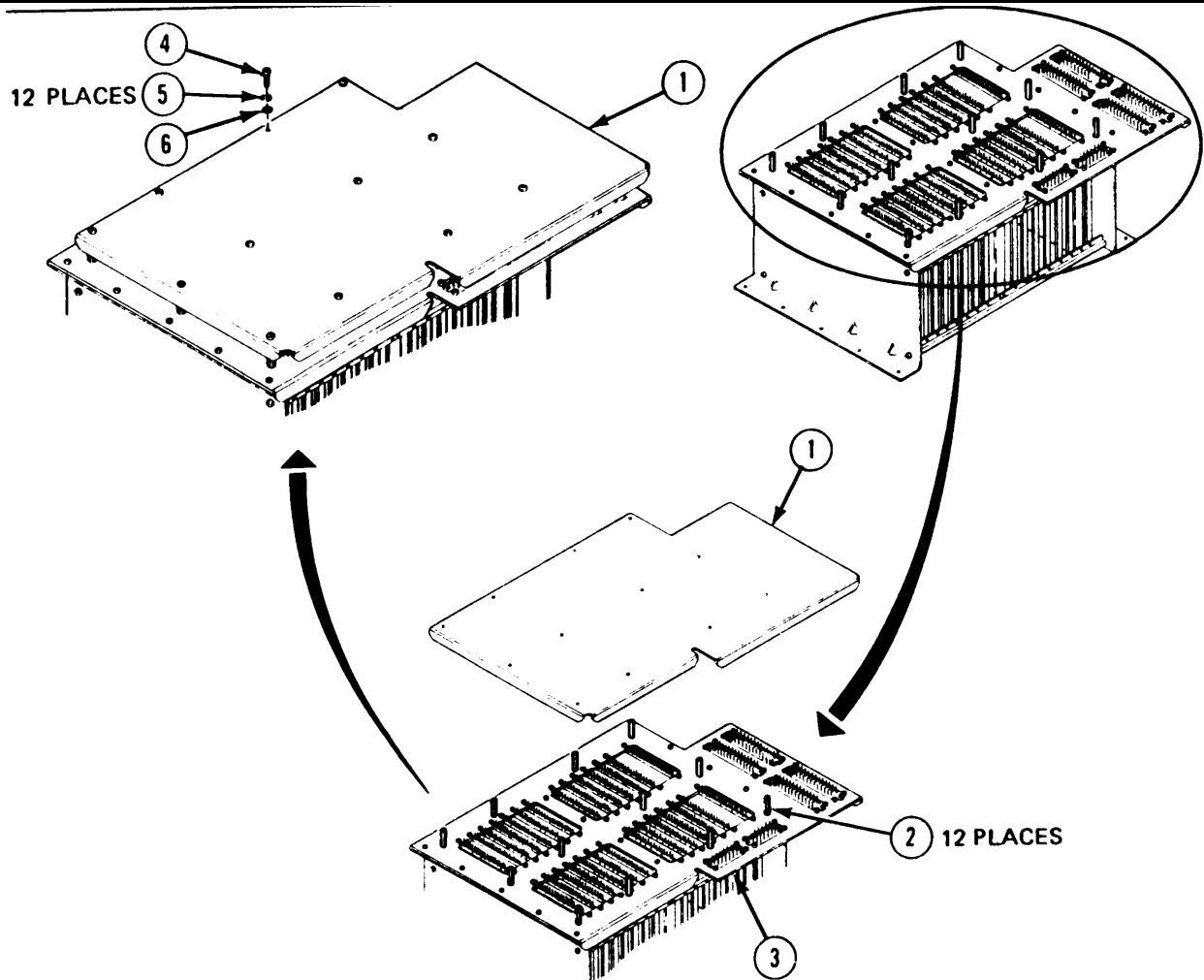
Install Plate:

1. Line up holes in plate (1) with 12 electrical-mechanical posts (2) on terminal board (3).
2. Screw in and tighten 12 machine screws (4), new lockwashers (5), and flat washers (6) with screwdriver.

Follow-on Maintenance:

1. Install digital subsystem assembly A3; refer to task 18.
2. Install circuit card assemblies A2, A3, A4, A5, A6, A7, A9, A10, A13, and A14; refer to task 19.
3. Install electrical card holder; refer to task 20.
4. Install thermal system test controller; refer to para. 2-5, task 8.
5. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 17 ENDS HERE



ARR82-24360

TASK 18. Install Digital Subsystem Assembly A3.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-138 (10 required)

Personnel: Two

Soldier A: Lines up DSS in chassis assembly and installs connectors.

Soldier B: Clears away harness, installs hardware, and helps Soldier A.

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove digital subsystem assembly A3; refer to task 4.

FRAME 21

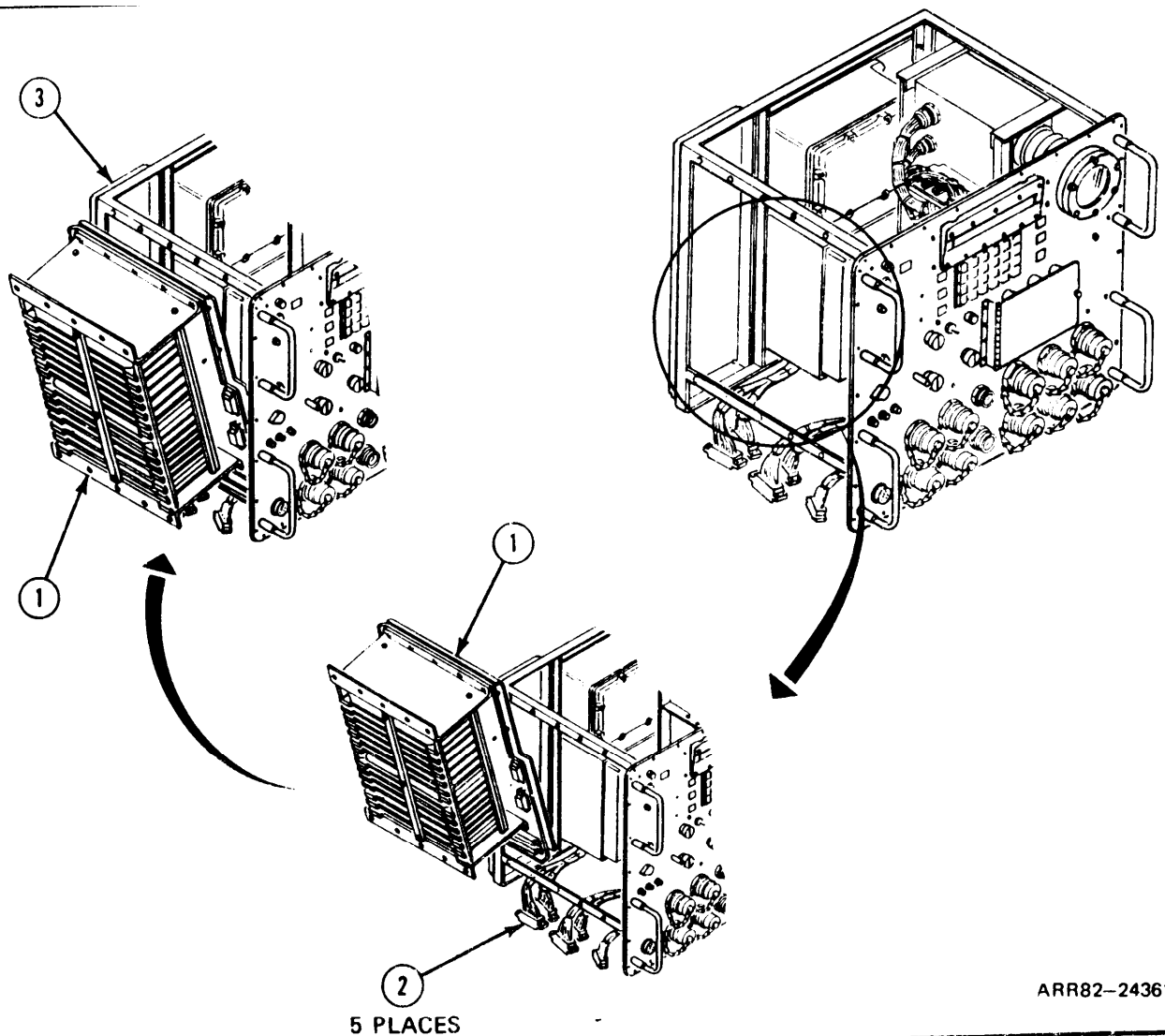
Install Digital Subsystem Assembly (DSS):

CAUTION

When lifting DSS, avoid damage to any components or wiring by clearing wires away from DSS.

- Soldier A: 1. Lift DSS (1) off of bench.
- Soldier B: 2. Clear away five receptacle connectors (2) and guide bottom of DSS (1) into place.
- Soldier B: 3. Line up holes in test controller chassis assembly (3).

GO TO FRAME 22



FRAME 22

Install Digital Subsystem Assembly (Continued):

1. Screw in and tighten ten machine screws (1), new lockwashers (2), and flat washers (3) with screwdriver.

NOTE

Soldier B is no longer needed in this task.

2. Line up five receptacle connectors (4) on connectors (5). Refer to table 1.

CAUTION

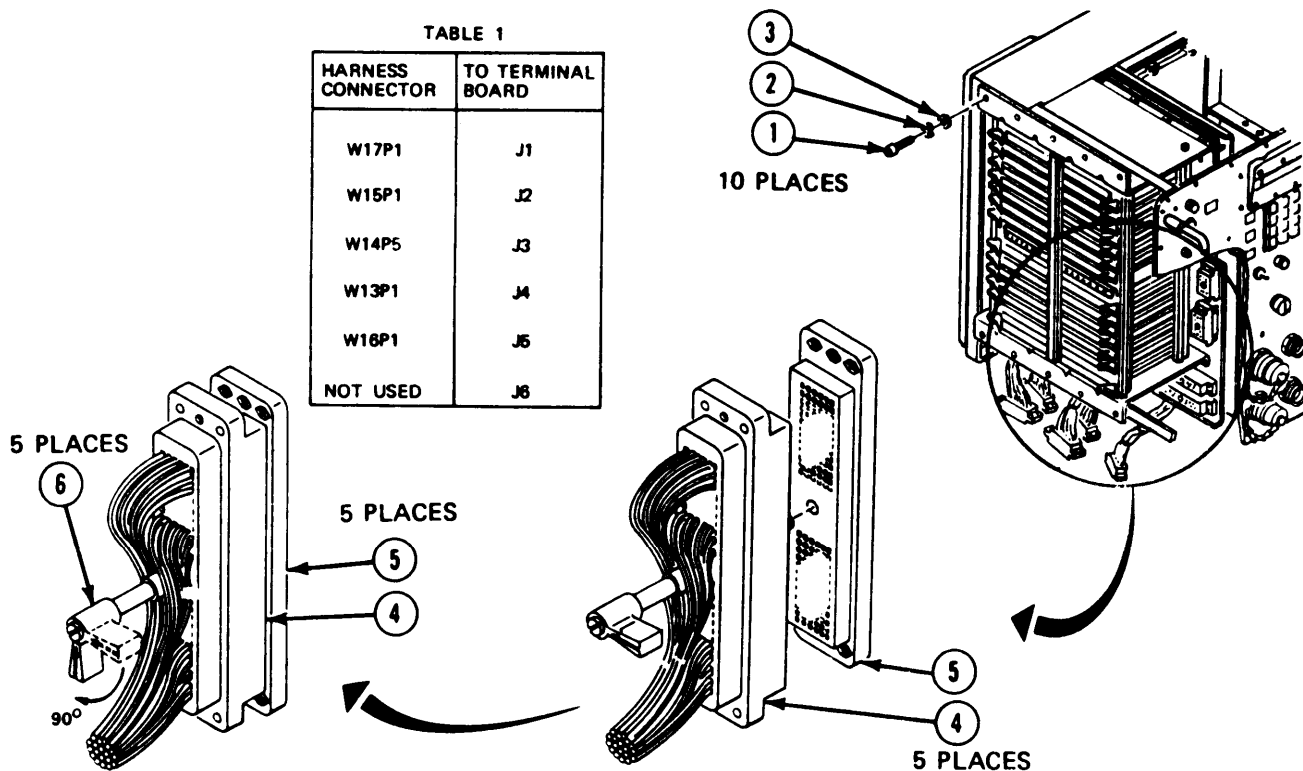
DL-type connectors are made to be used without safety wire. Locking action also pushes contacts together. Connector must be locked tighten receptacle to make continuity.

3. Turn handle (6) one-quarter turn clockwise to lock connector (4) in place. Be sure handle locking action is felt and handle (6) cannot be turned more.

Follow-on Maintenance:

1. Install thermal system test controller; refer to para. 2-5, task 8.
2. Install thermal system test controller case cover; refer to volume 1, para 4-18.

TASK 18 ENDS HERE



ARR82-24362

TASK 19. Install Circuit Card Assembly A2, A3, A4, A5, A6, A7, A9, A10, A13, or A14.

Applicability: All Models

Common Tools: None

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove circuit card assembly A2, A3, A4, A5, A6, A7, A9, A10, A13, or A14; refer to task 3.

FRAME 23

Install Circuit Card Assembly:

CAUTION

Touching card assembly components can damage components. Hold card assembly by edges at all times. Do not flex or twist card assembly.

NOTE

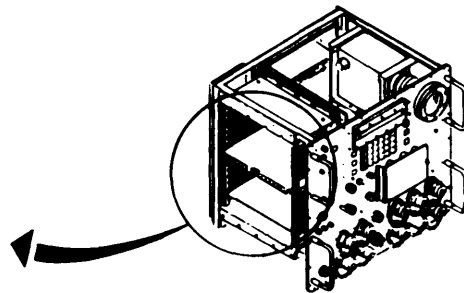
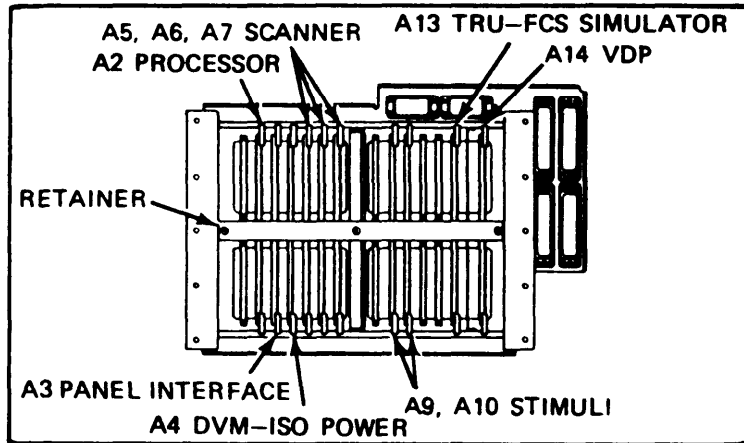
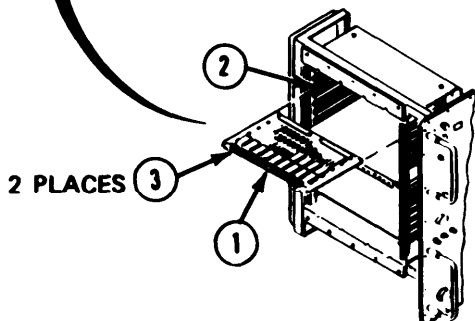
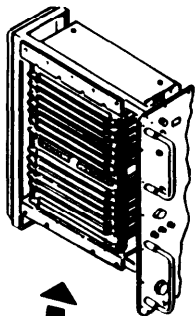
Use this task to install any of ten card assemblies. Card A2 (1) is shown.

1. Put card assembly (1) in slot (2). Make sure that two ejectors (3) are out.
2. Push down on card assembly (1) until it is seated.
3. Push down two ejectors (3) to lock card assembly (1) in place.

Follow-on Maintenance:

1. Install electrical card holder, refer to task 20.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller-case cover; refer to volume 1, para. 4-18.

TASK 19 ENDS HERE



ARR82-24363

TASK 20. Install Electrical Card Holder.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-138 (three required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove electrical card holder; refer to task 1.

FRAME 24

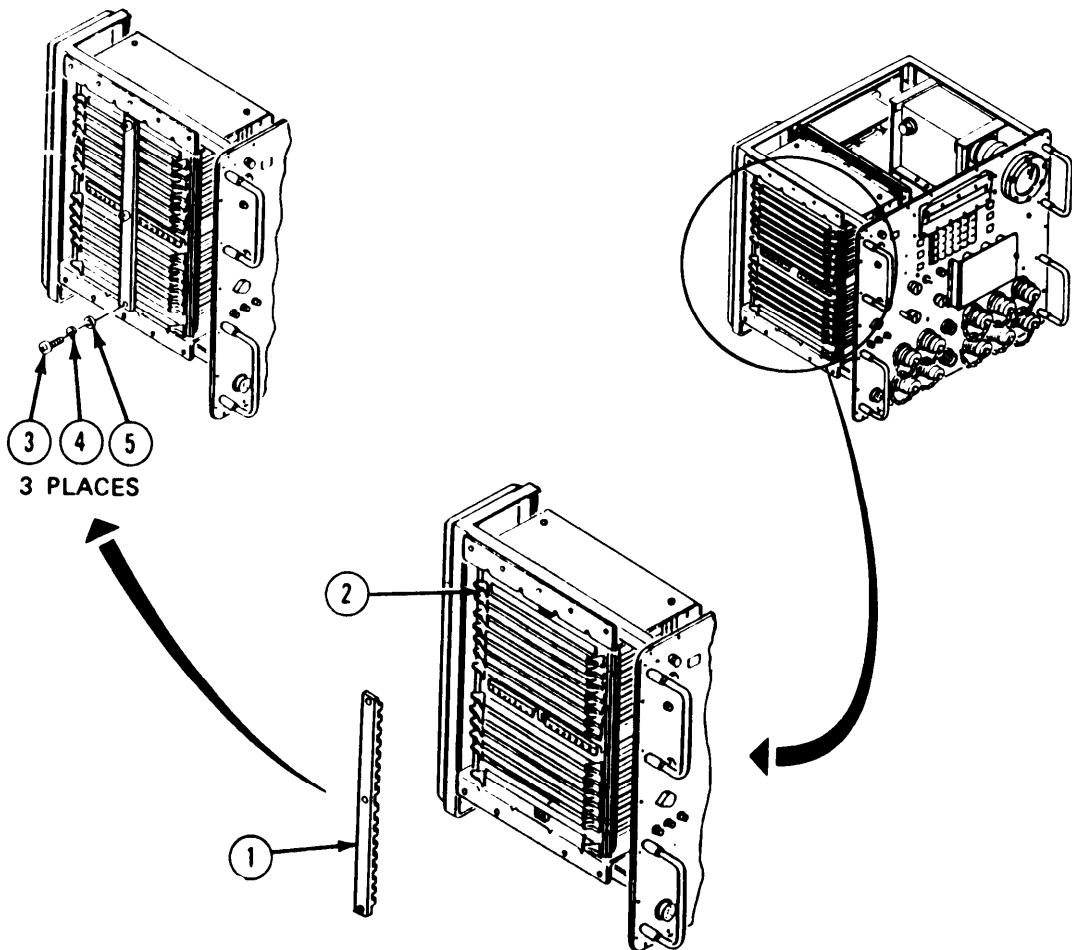
Install Electrical Card Holder:

1. Line up holes in holder (1) with holes in digital subsystem assembly (2).
2. Screw in and tighten three machine screws (3), new lockwashers (4), and flat washers (5) with screwdriver.

Follow-on Maintenance:

1. Install thermal system test controller; refer to para. 2-5, task 8.
2. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

END OF DIGITAL SUBSYSTEM (DSS) A3 MAINTENANCE



ARR82-24364

2-8. Image Display Unit (IDU) Simulator Assembly A2.

Task	Title	Frame
1	Remove IDU Assembly A2	1
2	Remove Cover	2
3	Remove Circuit Card Assembly A1 or A2	3
4	Remove Power Supply	4
5	Remove Electron Tube Assembly, Clamp, and CRT Support	5 - 6
6	Repair Electron Tube Assembly	7 - 10
7	Remove Eyepiece Assembly, Adapter, and IDU Graticule	11
8	Remove and Replace R1 or C1	2-13
9	Remove IDU Cable Assembly	14
10	Repair IDU Cable Assembly	5-25
11	Repair Housing	26
12	Install IDU Cable Assembly	27
13	Install Eyepiece Assembly, Adapter, and IDU Graticule	28
14	Install Electron Tube Assembly, Clamp and CRT Support	29-30
15	Install Power Supply	31
16	Install Circuit Card Assembly A1 or A2	32
17	Install Cover	33
18	Install IDU Assembly A2	34

Task 1. Remove IDU Assembly A2.

Applicability: All Models

Common Tools:

- Screwdriver, cross tip, No. 2
- Screwdriver, cross tip, offset, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller for access only; refer to para. 2-5, task 1.

FRAME 1

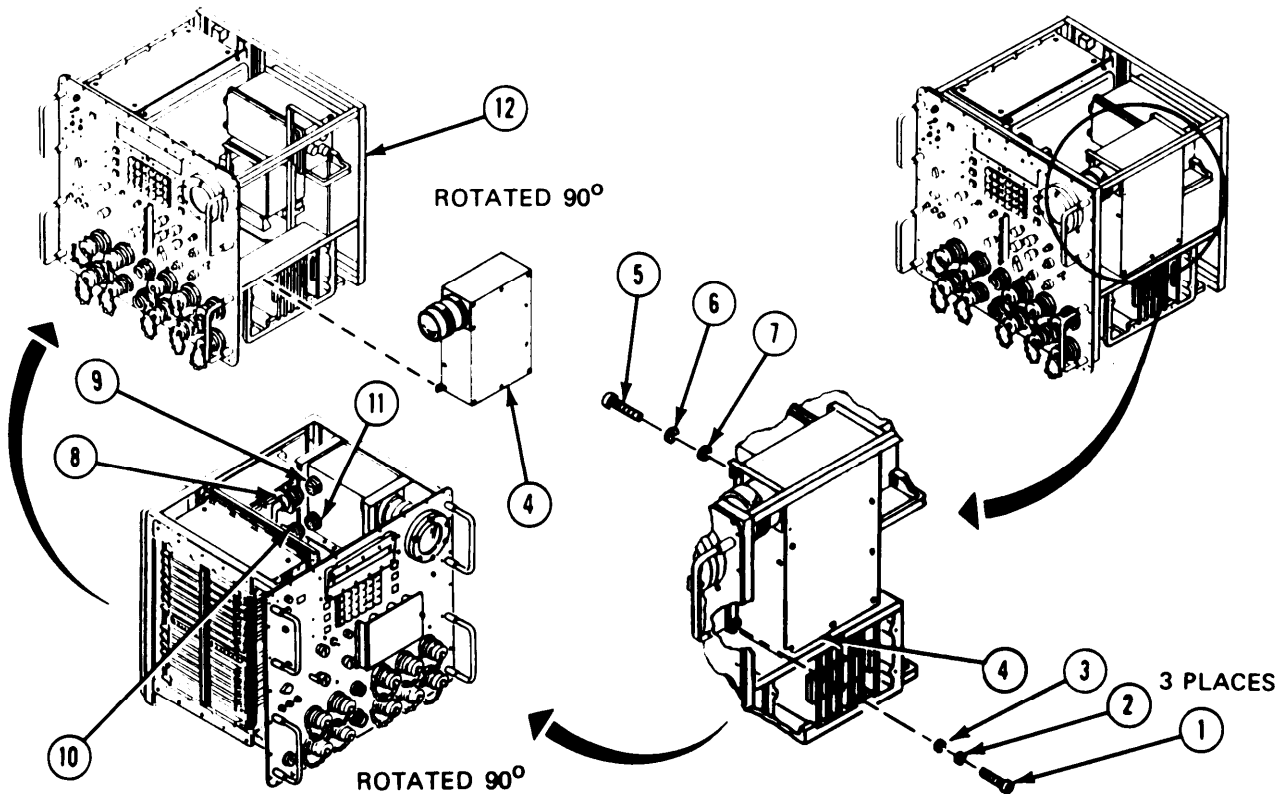
Remove IDU:

1. Unscrew and take out three machine screws (1), lockwashers (2), and flat washers (3) from IDU (4) with cross tip screwdriver. Get rid of lockwashers (2).
2. Unscrew and take out machine screw (5), lockwasher (6), and flat washer (7) from IDU (4) with offset screwdriver. Get rid of lockwasher (6).
3. Disconnect electrical plug connector W14P4 (8) from receptacle connector J2 (9) and W14P3 (10) from J1 (11).
4. Takeout IDU (4) from thermal system test controller (12) and place on a clean work surface.

Follow-on Maintenance:

NOTE: To install IDU assembly A2, refer to task 18

TASK 1 ENDS HERE



ARR82-24365

TASK 2. Remove Cover.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove IDU assembly A2; refer to task 1.

FRAME 2

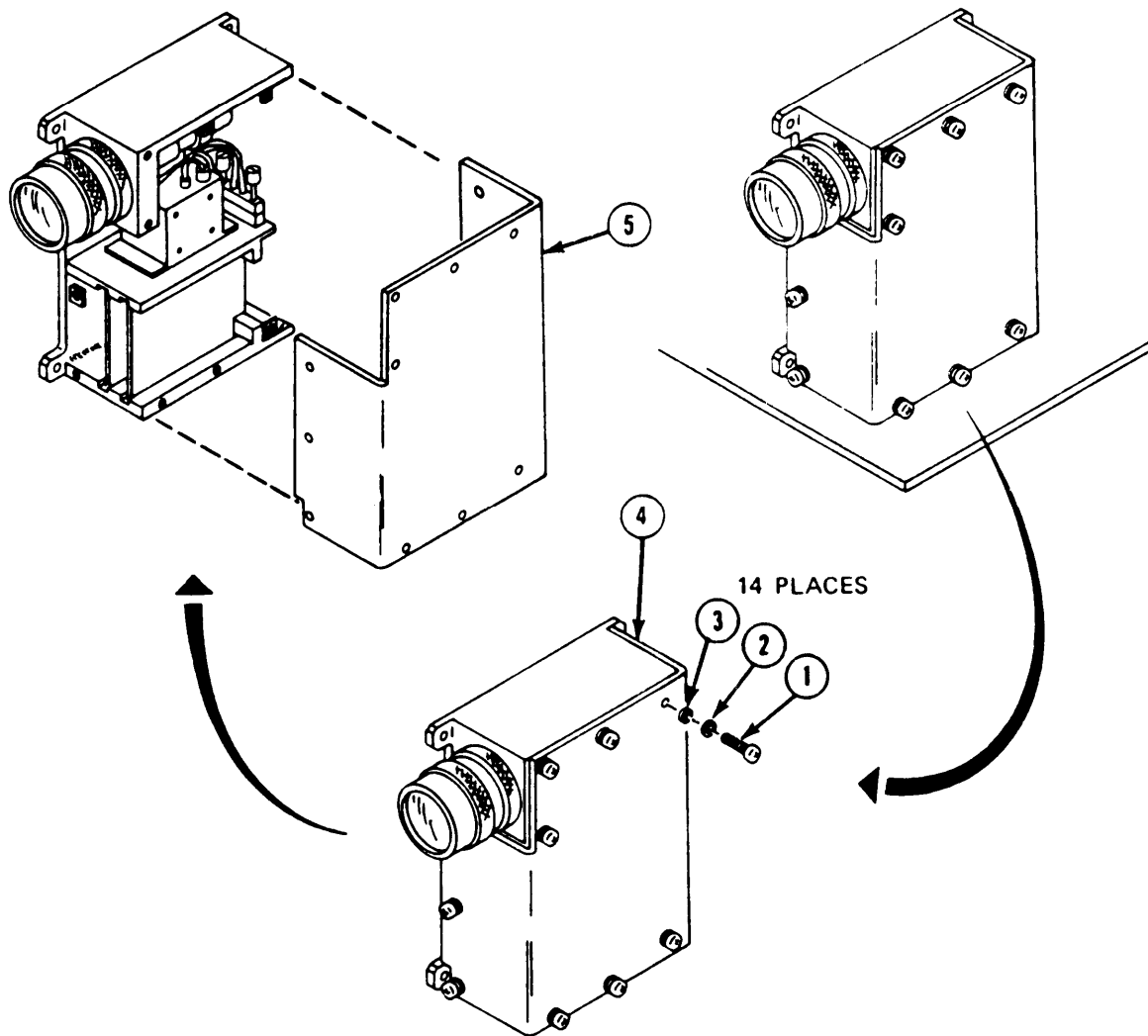
Remove Cover:

1. Unscrew and take out 14 machine screws (1), lockwashers (2), and flat washers (3) from IDU assembly (4) with screwdriver. Get rid of lockwashers (2).
2. Take off cover (5).
3. Look at cover (5) for cracks or dents. If bad, turn in. If OK, set aside for later use-

Follow-on Maintenance:

NOTE: To install cover, refer to task 17.

TASK 2 ENDS HERE



ARR82-24366

TASK 3. Remove Circuit Card Assembly A1 or A2.

Applicability: All Models

Common Tools:

Key, hex, 3/32-inch SM-C-807183

Special Tools:

Puller, handle

Supplies:

- NOTE:**
- Expendable supplies are defined in volume 1, appendix C.
 - To remove both circuit card assemblies you will need:
 - Pencil, writing (Item 19)
 - Rag, wiping (Item 24)
 - Tag, marker (as required) (Item 34)

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove IDU assembly A2; refer to task 1.
4. Remove cover; refer to task 2.

FRAME 3

Remove Circuit Card:

CAUTION

Touching circuit card components can damage components. Hold card assemblies by edges at all times. Do not flex or twist card.

NOTE

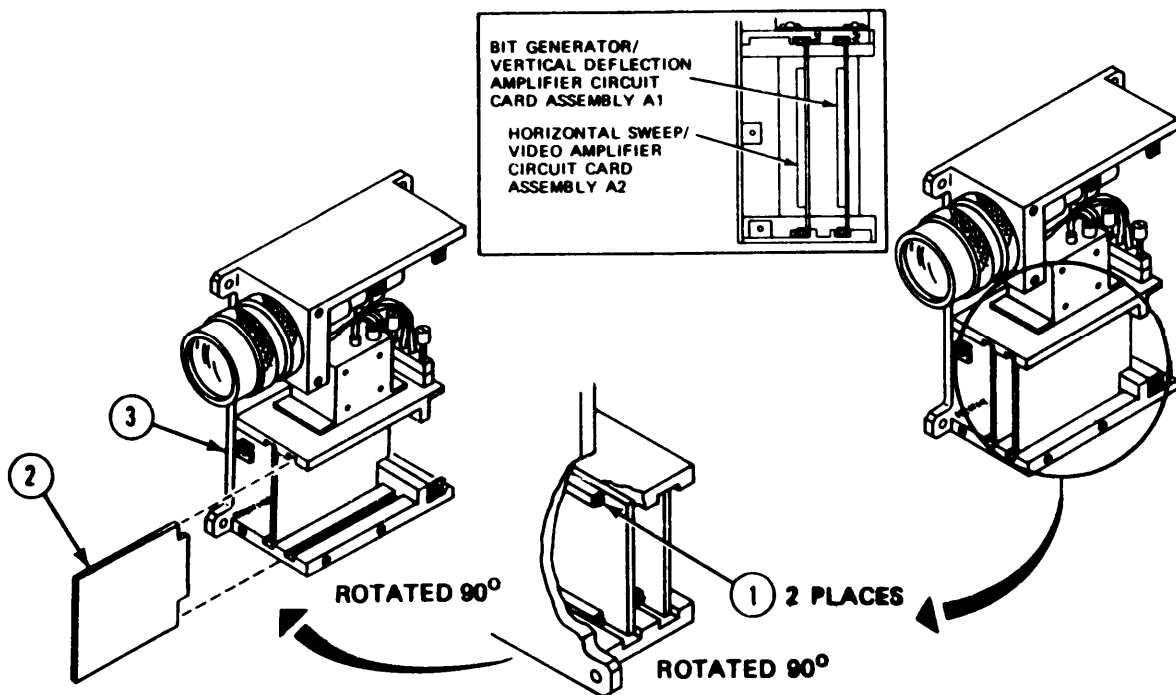
- Use this procedure to remove either circuit card assembly A1 or A2. Circuit card assembly A1 is shown.
- If removing both circuit card assemblies for repair of IDU, tag each card and wrap with clean rag.

1. Loosen two screws (1) with key.
2. Using handle puller, pull circuit card assembly (2) out of IDU assembly (3).
3. Look at circuit card assembly (2) for cracks or loose components. If bad, turn in. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install circuit card assembly A1 or A2, refer to task 16.

TASK 3 ENDS HERE



ARR82-24367

TASK 4. Remove Power Supply.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, offset, No. 1

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove IDU assembly A2; refer to task 1.
4. Remove cover; refer to task 2.
5. Remove circuit card assemblies A1 and A2; refer to task 3.

FRAME 4

Remove Power Supply:

WARNING

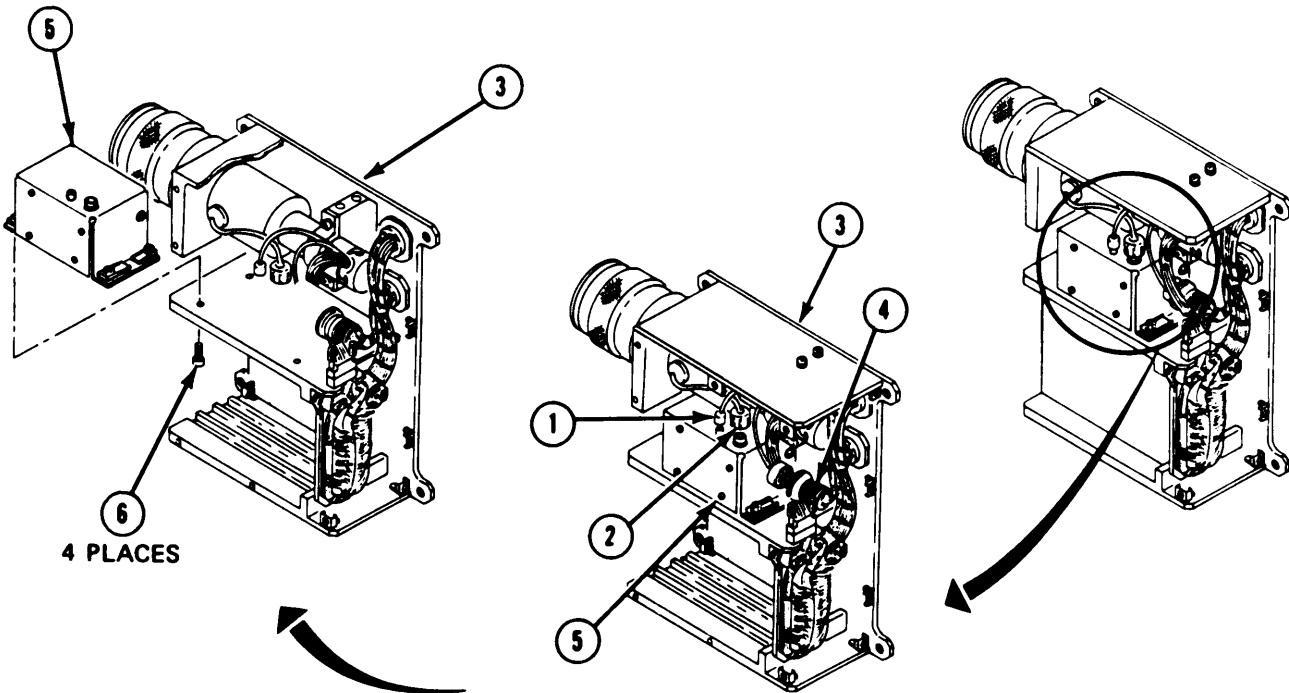
A3P1 (1) and A3P2 (2) leads contain voltages that may cause death on contact even when test set power is off. To avoid electric shock, connect housing (3) to facility ground. Ensure no part of body touches metal while removing leads. Remove leads and touch exposed metal part of lead to chassis.

1. Unscrew and take off electrical lead A3P1 (1), lead A3P2 (2), and electrical plug connector W1P3 (4) from power supply (5).
2. Unscrew and take out four machine screws (6) with screwdriver.
3. Take power supply (5) out of housing (3).
4. Look at power supply (5) for cracks. If bad, turn in. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install power supply, refer to task 15.

TASK 4 ENDS HERE



ARR82-24368

TASK 5. Remove Electron Tube Assembly, Clamp, and CRT Support.

Applicability: All Models

Common Tools:

Knife, pocket
Screwdriver, cross tip, No. 2
Screwdriver, flat tip
Tray, nesting

Special Tools: None

Supplies:

Inserts, screw thread (96906) MS122159 (as required)

Personnel: One

Equipment Condition:

Thermal test system controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove IDU assembly A2; refer to task 1.
4. Remove cover; refer to task 2.

FRAME 5

Remove Electron Tube, Retaining Strap, and CRT Support:

WARNING

A3P1 (1) and A3P2 (2) leads contain voltages that may cause death on contact even when test set power is off. To avoid electric shock, connect housing (3) to facility ground. Ensure no part of body touches metal while removing leads. Remove leads and touch exposed leads to chassis.

1. Unscrew and take off electrical lead A3P1 (1) and lead A3P2 (2) from power supply (4).

CAUTION

Jack screws (5) will tighten or loosen only one side of electrical plug connector A3P3 (6) at a time. To avoid cracking plug A3P3 (6) turn jack screws alternately.

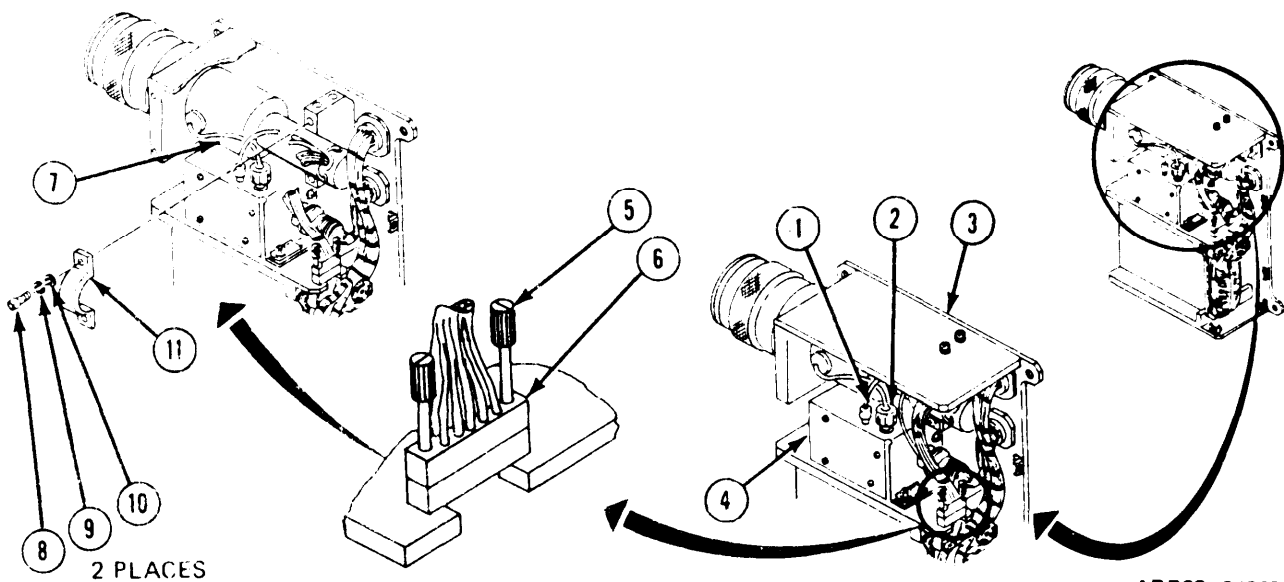
2. Loosen alternately two jack screws (5) holding plug A3P3 (6) with flat tip screwdriver. Take off plug A3P3 (6).

WARNING

Electron tube assembly (7) is breakable. To avoid injury and damage, handle electron tube assembly (7) carefully.

3. Unscrew and take out two machine screws (8), lockwashers (9), and flat washers (10) with cross tip screwdriver. Get rid of lockwashers (9).
4. Remove retaining strap (11) while holding electron tube assembly (7). Look at strap (11) for cracks. If bad, turn in strap (11). If OK, set aside for later use.

GO TO FRAME 6



FRAME 6

Remove Electron Tube, Retaining Strop, and CRT Support (Continued):

NOTE

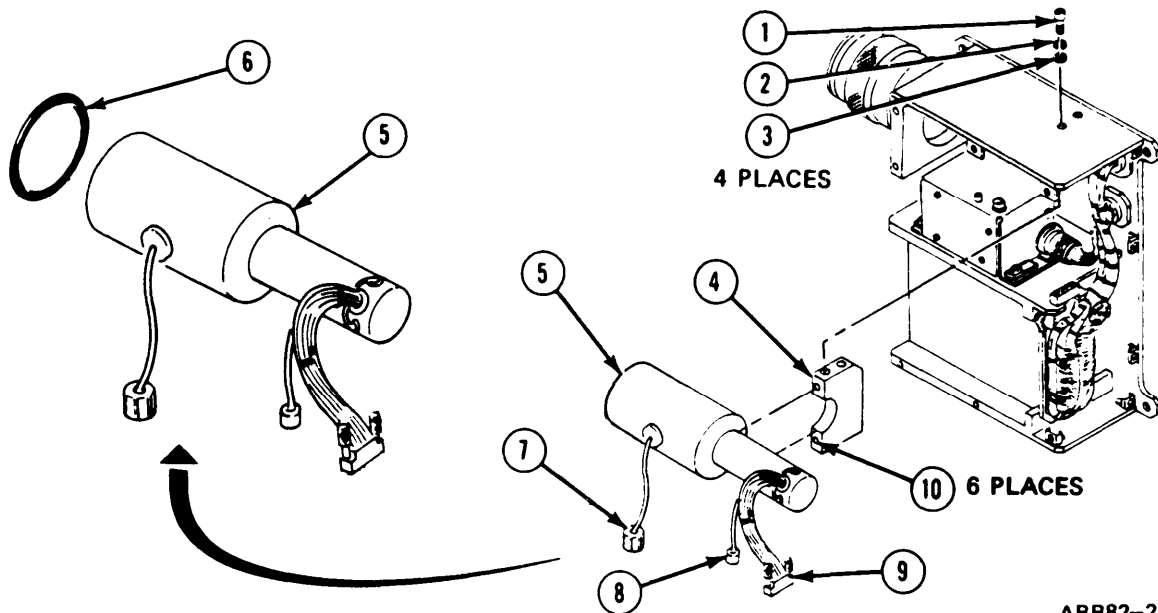
Read paragraph 2-4 on replacing inserts before doing any work.

1. Unscrew and take out four machine screws (1), lockwashers (2), and flat washers (3) with screwdriver. Get rid of lockwashers (2).
2. Slide CRT support (4) as far toward rear of electron tube (5) as it will go.
3. Pull out electron tube assembly (5). Take preformed packing (6) from around electron tube assembly (5). Get rid of packing (6).
4. Look at electron tube assembly (5) for cracks or damaged lead A3P1 (7) and electrical lead A3P2 (8). If bad, turn in. If plug A3P3 (9) is damaged, repair electron tube assembly (5); refer to task 6.
5. If electron tube assembly (5) is OK, wrap it in packing and place in nesting tray so plug A3P3 (9) is exposed. This is to protect electron tube assembly (5) for later use.
6. Take out CRT support (4). Look at support (4) for loose screw thread inserts (10). Replace any bad inserts (10). If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install electron tube assembly, refer to task 14.

TASK 5 ENDS HERE



TASK 6. Repair Electron Tube Assembly

Applicability: All Models

Common Tools:

Faceshield, industrial NSN 4240-00-542-2048
Knife, pocket
Pliers, diagonal cutting
Pliers, long round nose
Positioner NSN5120-00-127-4688
Rule, machinist's, 6-inch
Set, soldering and resoldering

Special Tools:

Gun, thermal, 8031088
Maintenance Kit, electrical connector repair, 12285360

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Connector, electrical plug (81349) M28748/7E00S1A or
Connector, electrical plug (81349) M28748/13E00S1A
Contact, electrical (81349) M39029/34-440 (used on M28748/13E00S1A only) (as required)
Pencil, writing (Item 19)
Rag, wiping (Item 24)
Sleeving, insulation, MIL-1-23053/5-102-0 (Bulk)
Sleeving, insulation, MIL-1-23053/5-103-0 (Bulk)
Solder (Item 29)
Tag, marker (Item 34) (as required)
Tape, lacing (Item 35)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover, refer to volume 1, para 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove IDU assembly A2; refer to task 1.
4. Remove cover; refer to task 2.
5. Remove electron tube assembly and clamp; refer to task 5.

FRAME 7

Remove Electrical Plug Connector P3:

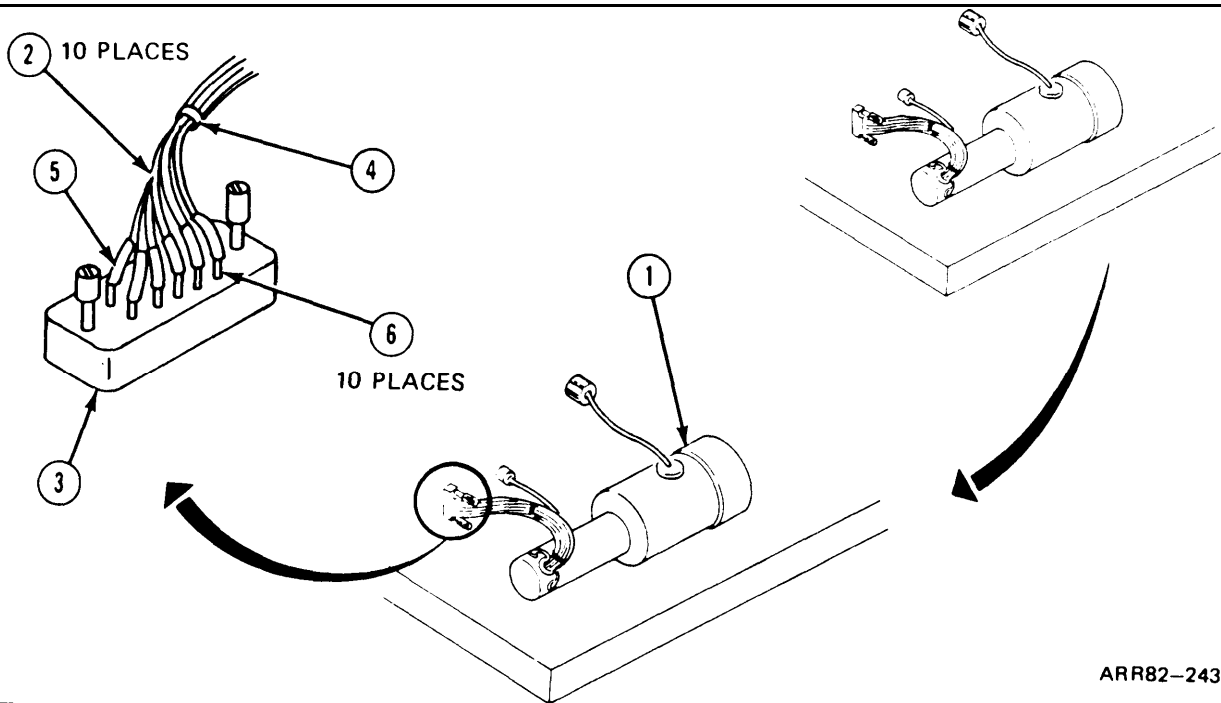
WARNING

Electron tube in electronic tube assembly (1) is breakable. Put on faceshield before handling tube assembly (1). Make sure tube assembly (1) is pointed away from you. If breakage causes injury, flush wound with freshwater and notify medic.

NOTE

- Read paragraph 2-4 on tagging and soldering wires, and installing insulation sleeving before doing any work.
 - If connector wires (2) are soldered, go to step 1. If connector wires (2) are crimped, GO TO FRAME 9.
1. Put tube assembly (1) in tray so that only connector P3 (3) is exposed. Cover tube assembly (1) with rags.
 2. Cut off lacing tape (4) with diagonal cutting pliers. Get rid of lacing tape (4).
 3. Carefully cut insulation sleeving (5) off 10 wires (2) with knife. Get rid of sleeving (5).
 4. Unsolder wires (2) from terminals (6) of connector P3 (3). Turn in connector P3 (3).

GO TO FRAME 8



FRAME 8

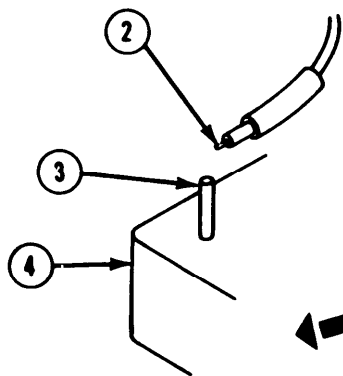
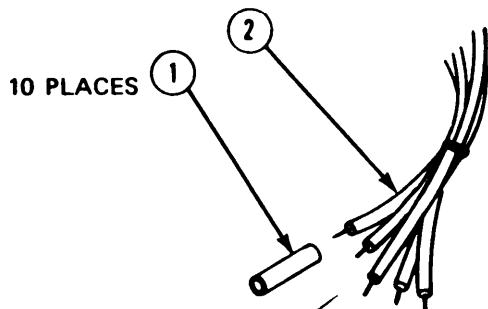
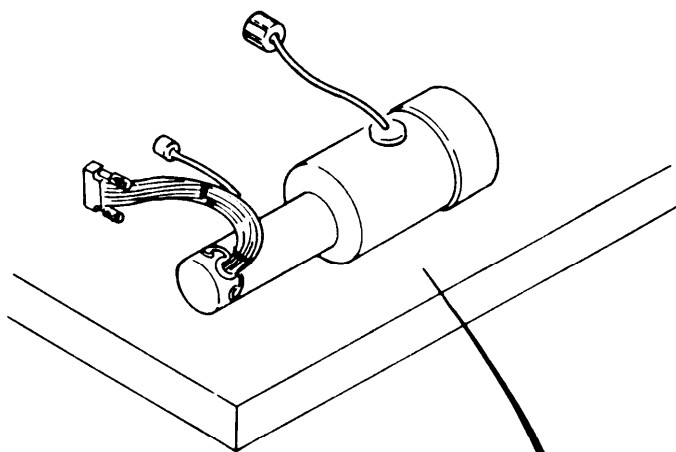
Install Connector P3:

1. Measure and cut four 1-inch pieces of new MIL-1-23053/5-102-0 sleeving (1) and six 1-inch pieces of new MIL-1-23053/5-103-0 sleeving (1) with rule and knife.
2. Slide sleeving (1) on wires (2).
3. Solder wires (2) to terminals (3) of new connector (4).

GO TO FRAME 10 STEP 5

WIRING TABLE- CONNECTOR P3

A	ORANGE-WHITE	24 GAGE
C	ORANGE	
D	BLACK	
F	BLACK-WHITE	
H	BROWN	18 GAGE
K	BROWN	
N	BLACK	
P	BLUE	
Y	GREEN	
C	YELLOW	



FRAME 9

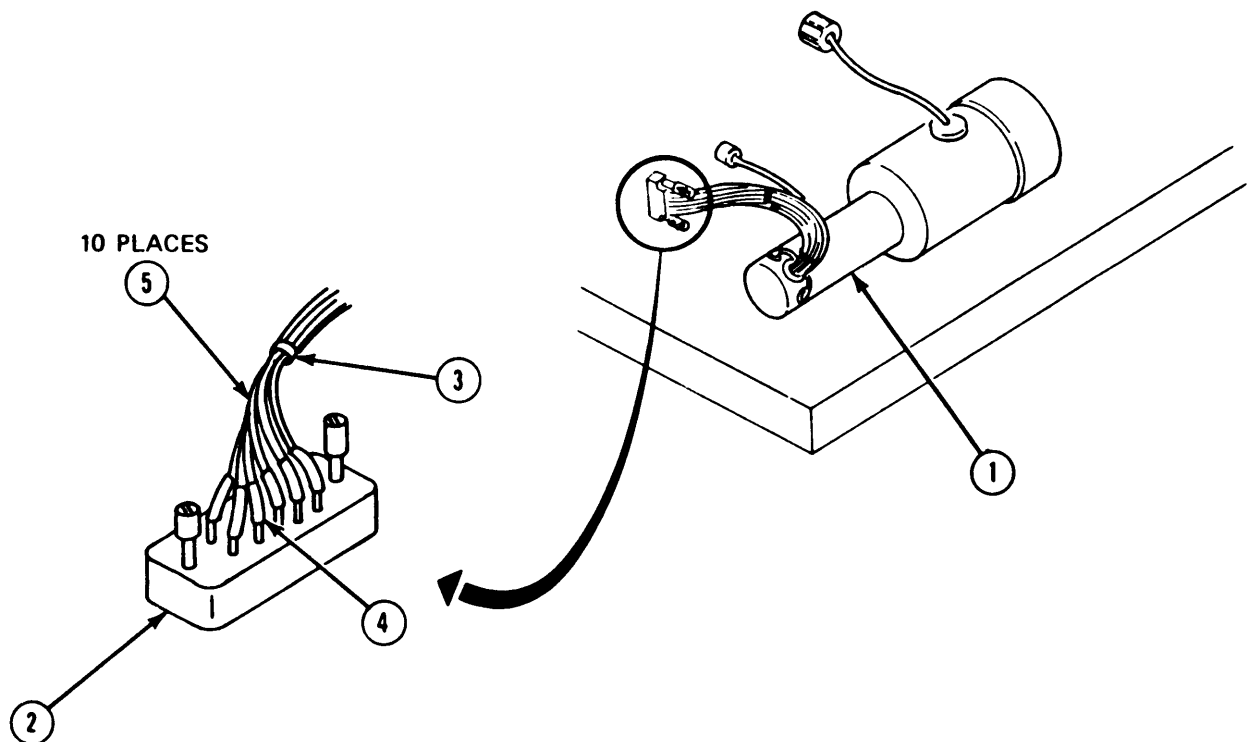
Remove Connector P3:

WARNING

Electron tube in electronic tube assembly (1) is breakable. Put on faceshield before handling tube assembly (1). Make sure tube assembly (1) is pointed away from you. If breakage causes injury, flush wound with freshwater and notify medic.

1. Put tube assembly (1) in tray so that only connector P3 (2) is exposed. Cover tube assembly (1) with rags.
2. Cut off lacing tape (3) with diagonal cutting pliers. Get rid of lacing tape (3).
3. Carefully cut sleeving (4) off wires (5) with knife. Get rid of sleeving (4).
4. Cut connector P3 (2) off wires (5) with diagonal cutting pliers. Turn in connector P3 (2).

GO TO FRAME 10



ARR82-24373

FRAME 10

Install Connector P3:

1. Measure and cut four 1-inch pieces of new MIL-1-23053/5-102-0 sleeving (1) and six 1-inch pieces of new MIL-1-23053/5-103-0 sleeving (1) with rule and knife.
2. Slide sleeving (1) on wires (2).
3. Using crimping tool and positioner, crimp new electrical contacts (3) on wires (2).
4. Push wires (2) and contacts (3) in new connector P3 (4).
5. Slide sleeving (1) over terminals (5). Using thermal gun, shrink sleeving (1).
6. Tie wires (2) with lacing tape (6). Take tube assembly (7) out of tray and set on clean work surface.

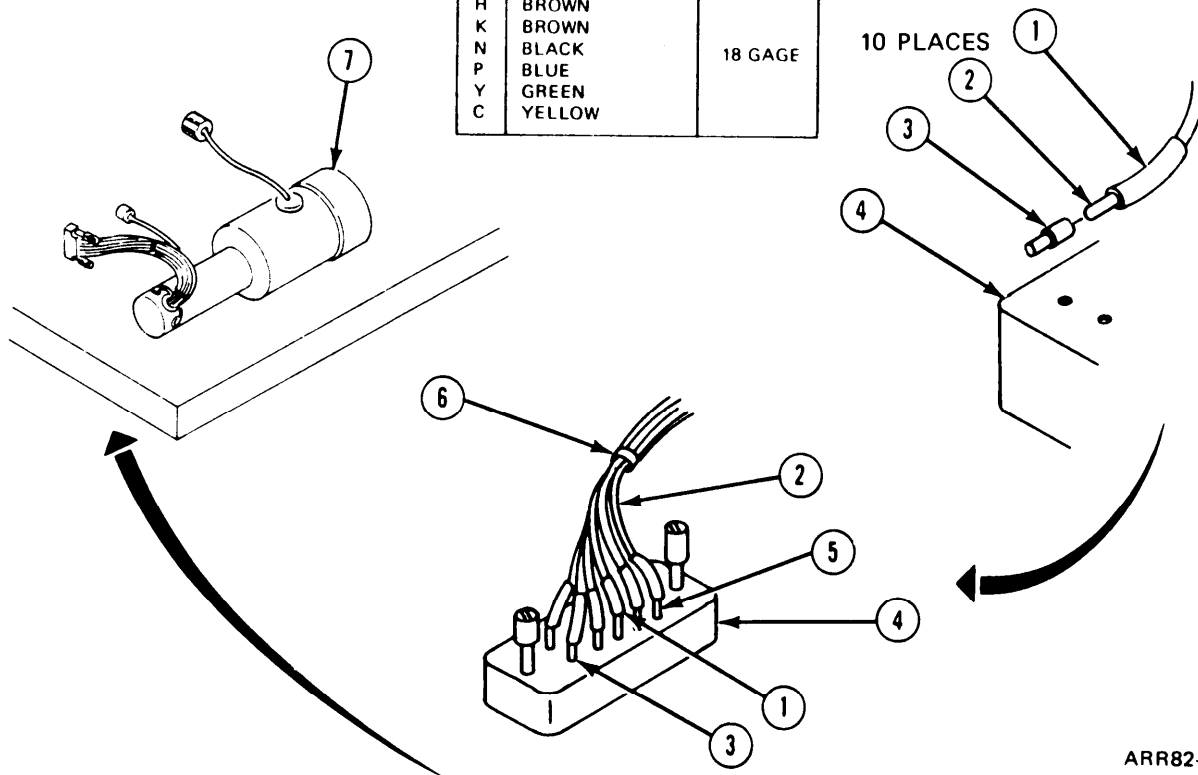
Follow-on Maintenance:

NOTE: To install electron tube assembly and clamp, refer to task 14.

TASK 6 ENDS HERE

WIRING TABLE-CONNECTOR P3

A	ORANGE - WHITE	24 GAGE
C	ORANGE	
D	BLACK	
F	BLACK - WHITE	
H	BROWN	18 GAGE
K	BROWN	
N	BLACK	
P	BLUE	
Y	GREEN	
C	YELLOW	



ARR82-24374

TASK 7. Remove Eyepiece Assembly, and IDU Graticule.

Applicability: All Models

Common Tools:

Key, hex, 9/64-inch
Knife, pocket

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove IDU assembly A2; refer to task 1.

FRAME II

Remove Eyepiece, Adapter, and Graticule:

CAUTION

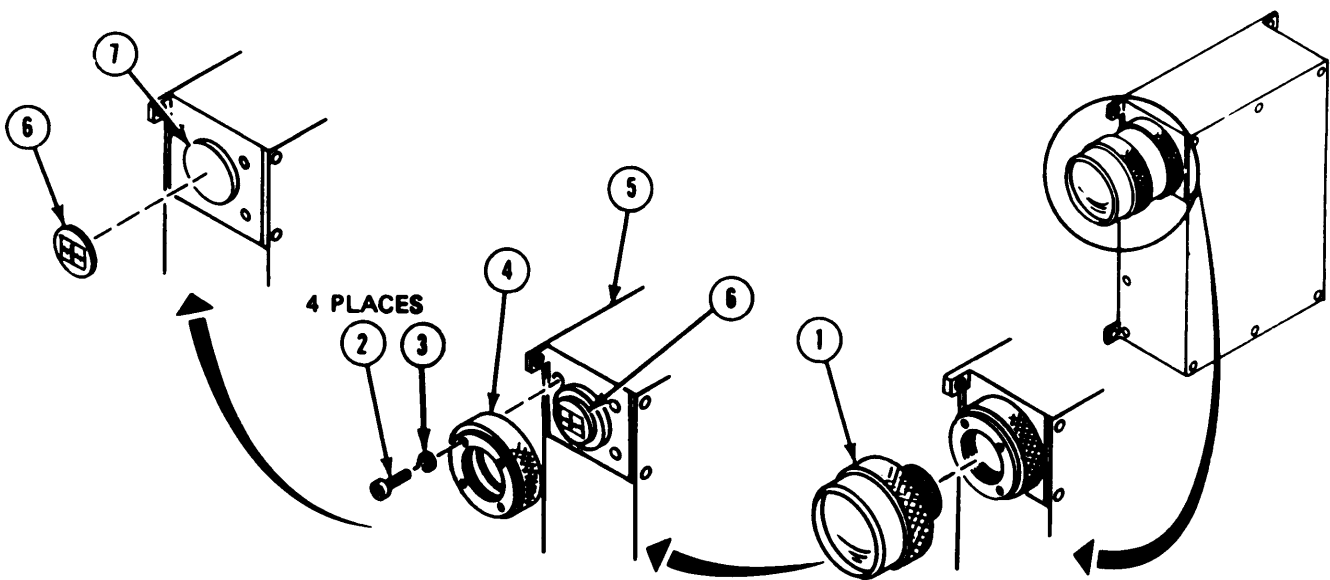
Eyepiece assembly (1) is breakable. To avoid breaking eyepiece (1), handle it carefully.

1. Unscrew and takeoff eyepiece (1). Look at eyepiece (1) for scratches or cracks. If bad, turn in. If OK, set aside for later use.
2. Take out four socket head cap screws (2) and lockwashers (3) from adapter (4) with key. Get rid of lockwashers (3).
3. Takeoff adapter (4) from IDU assembly (5). Look at adapter (4) for cracks. If bad, turn in adapter (4). If OK, set aside for later use.
4. Look at IDU graticule (6) for scratches and cracks; if bad, GO TO STEP 5. If OK, GO TO FOLLOW-ON MAINTENANCE.
- 50 Loosen adhesive and take IOU graticule (6) off electron tube assembly (7) with knife. Turn in IDU graticule (6).

Follow-on Maintenance:

NOTE: To install eyepiece assembly, adapter, and IDU graticule, refer to task 13.

TASK 7 ENDS HERE



ARR82-24375

TASK 8. Remove and Replace R1 or C1.**Applicability:** All Models**Common Tools:**

Knife, craftsman
Pliers, diagonal cut
Pliers, round nose
Rule, machinist's, 6-inch
Set, soldering and resoldering

Special Tools: None**Supplies:**

NOTE: Expendable supplies are defined in volume 1, appendix C.
Capacitor (81349) M39003/01-2971, C1
Pencil, writing (Item 19)
Resistor (81349) RCR20G2R7JS, R1
Sealing Compound (Item 27)
Sleeving, insulation, (81349) M230353/5-202-C (as required)
Sleeving, insulation, (81349) M230353/5-204-C (as required)
Solder (Item 29)
Tag, marker (as required) (Item 34)

Personnel: One**Equipment Condition:**

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove IOU assembly A2; refer to task 1.
4. Remove cover; refer to task 2.

FRAME 12

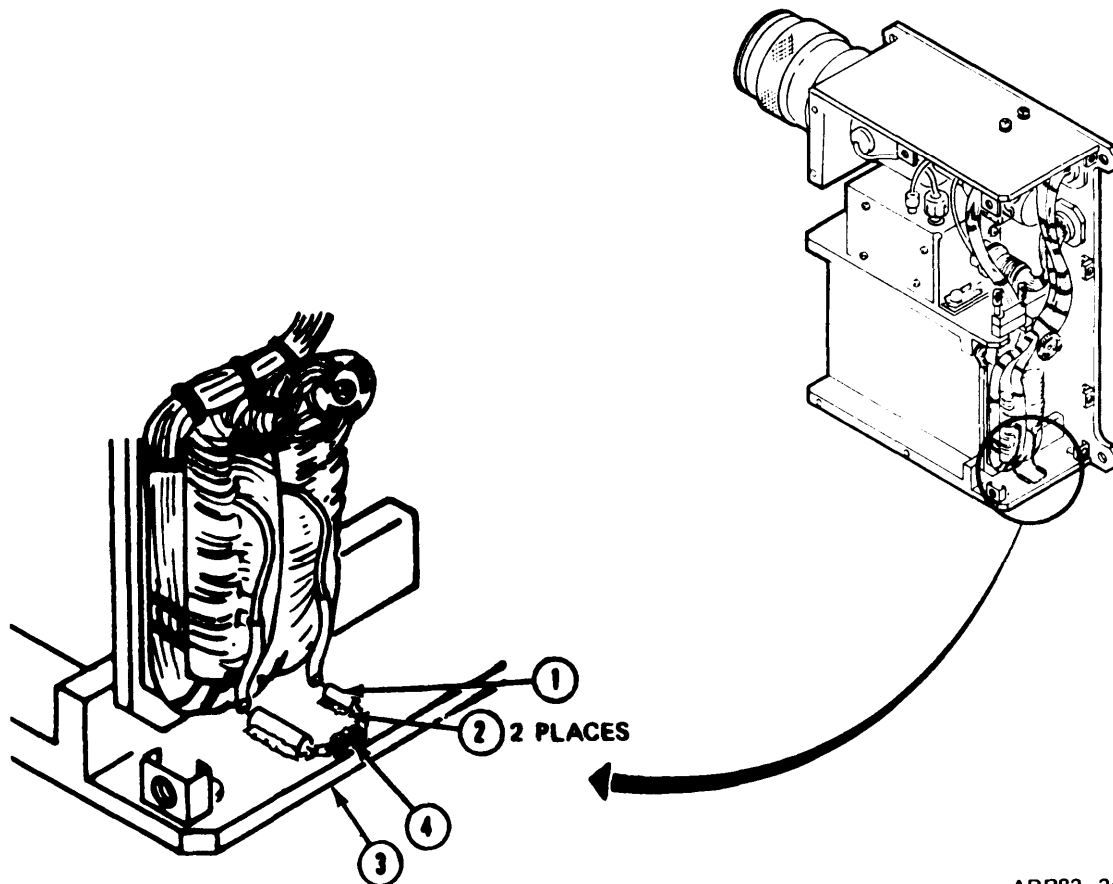
Remove R1 or C1:

NOTE

- Read paragraph 2-4 on tagging and soldering wires before doing any work.
- Use this task for removing and installing either R1 or C1. R1 (1) is shown.

1. Cut off sealing compound (2) between resistor R1 (1) and frame (3), and solder connection (4) and frame (3).
2. Unsolder and take off resistor R1 (1) with round nose pliers.
3. Cut and form leads of replacement resistor to match the leads of resistor R1 (1) with round nose pliers and diagonal cut pliers. Turn in old resistor R1 (1).

GO TO FRAME 13



ARR82-24375.1

FRAME 13

Replace R1 or C1:

WARNING

Sealing compound can burn easily and give off harmful vapors. To avoid injury, keep away from open fire and use in a well-ventilated area.

1. Bond resistor R1 (1) to frame (2) with sealing compound.
2. Measure and cut new insulation sleeving (3) with rule and knife, and slide insulation sleeving (3) over resistor R1 leads (4).

NOTE

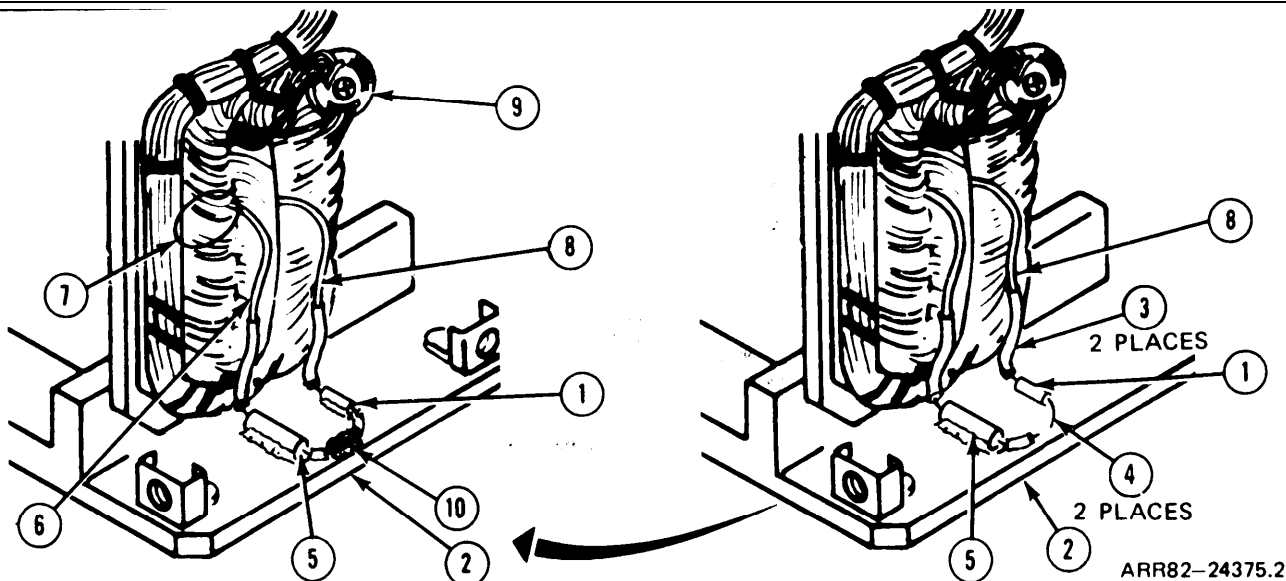
During step 2, if replacing capacitor C1 (5), solder negative lead of capacitor C1 (5) to resistor R1 (1) and positive lead of capacitor C1 (5) to harness wire (6) attached to E10 (7).

3. Solder resistor R1 (1) to negative lead of capacitor C1 (5) and to harness wire (8) attached to E2 (9).
4. Bond solder connection (10) between resistor R1 (1) and capacitor C1 (5) away from frame (2) with sealing compound so that connector (1) does not contact frame (2).

Follow-on Maintenance:

1. Install cover; refer to task 17.
2. Install IDU assembly A2; refer to task 18.
3. Install thermal system test controller; refer to para. 2-5, task 2.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-17.

TASK 8 ENDS HERE



TASK 9. Remove IDU Cable Assembly.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove IOU assembly A2; refer to task 1.
4. Remove eyepiece assembly, adapter, and IDU graticule; refer to task 7.
5. Remove cover; refer to task 2.
6. Remove circuit card assemblies A1 and A2; refer to task 3.
7. Remove power supply; refer to task 4.
8. Remove electron tube assembly and clamp; refer to task 5.

FRAME 14

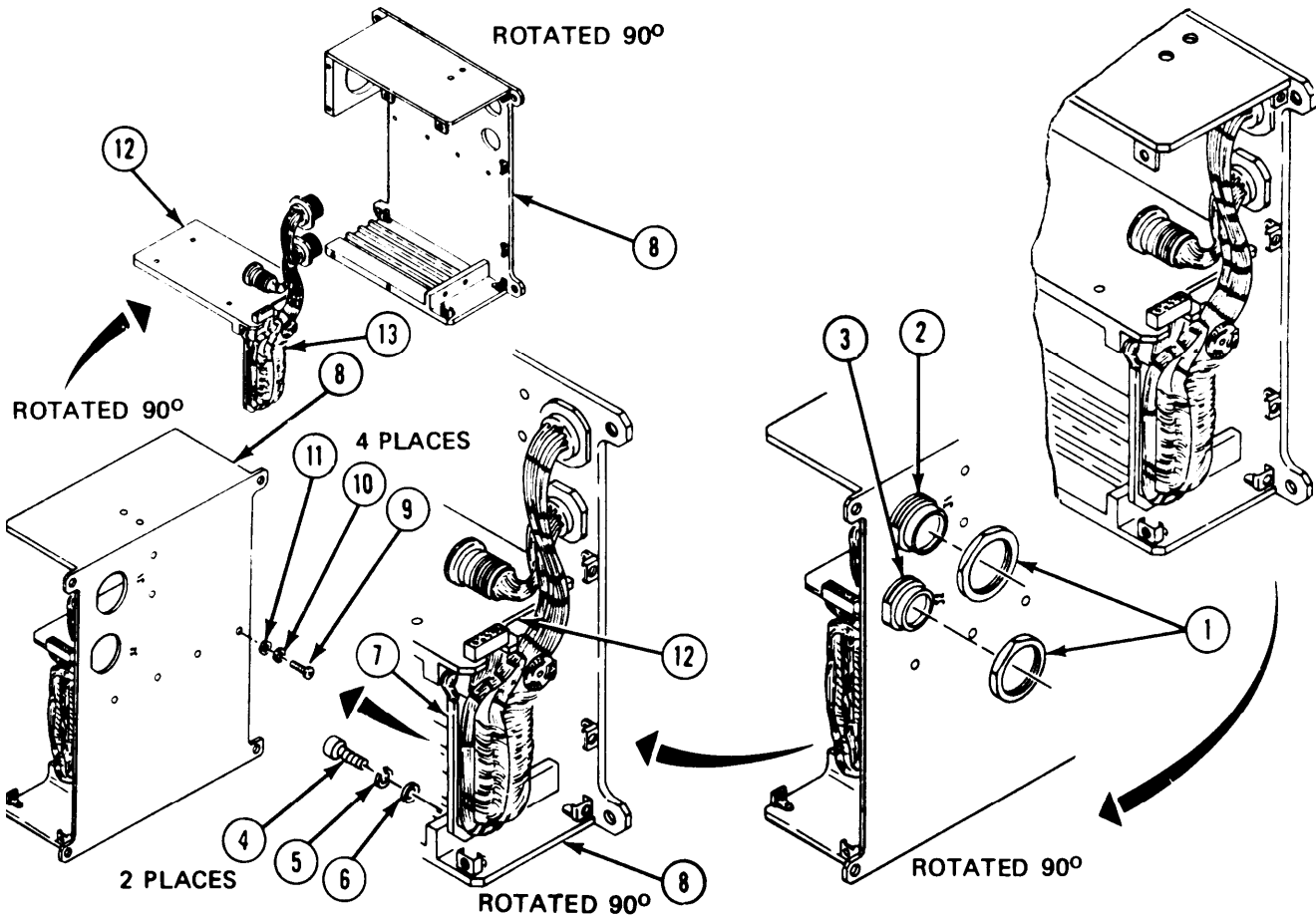
Remove Cable Assembly:

1. Using jamnut wrench, unscrew and take off two jamnuts (1) from J1 receptacle connectors (2) and J2 (3).
2. Unscrew and take out two machine screws (4), lockwashers (5), and flat washers (6) holding bracket (7) to housing (8) with screwdriver. Get rid of lockwashers (5).
3. Unscrew and take out four machine screws (9), lockwashers (10), and flat washers (11) holding bracket (12) to housing (8) with screwdriver. Get rid of lockwashers (10).
4. Take out IDU cable assembly (13) from housing (8).
5. Look at IDU cable assembly (13) for loose components or damage. If bad, repair IDU cable assembly (13); refer to task 10.

Follow-on Maintenance:

NOTE: To install IDU cable assembly, refer to task 12.

TASK 9 ENDS HERE



ARR82-24376

TASK 10. Repair IDU Cable Assembly.

Applicability: All Models

Common Tools:

Knife, pocket
Pliers, diagonal cutting
Screwdriver, cross tip, No. 1
Set, soldering and resoldering
Wrench, combination, 1/8-inch
Wrench, combination, 3/16-inch

Special Tools:

Gun, thermal, 8031088
Maintenance Kit, electrical connector repair, 12285360

Supplies:

NOTE:. Expendable supplies are defined in volume 1, appendix C.

Insert, screw thread (96906) MS122119 (as required)
Insert, screw thread (96906) MS122116 (as required)
Lockwasher (96906) MS35338-135 (as required)
Lockwasher (96906) MS35338-136 (as required)
Pencil, writing (Item 19)
Sleeving, insulation (Bulk)
Solder (Item 29)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove IDU assembly A2; refer to task 1.
4. Remove cover; refer to task 2.
5. Remove circuit card assemblies A1 and A2; refer to task 3.
6. Remove power supply; refer to task 4.
7. Remove electron tube assembly and clamp; refer to task 5.
8. Remove IDU cable assembly; refer to task 9.

FRAME 15

Repair Connectors W1P3, W1J1, or W1J2:

NOTE

Read paragraph 2-4 on repairing connectors and tagging wires before doing any work.

Use this procedure to repair electrical plug connector W1P3, or receptacle connector W1J1 or W1J2.

To replace receptacle connector W1J3, do frames 14 and 15.

To replace terminal lug, do frame 16.

To replace terminal lug or electrical-mechanical post do frame 17.

To replace bracket, do frames 18 and 19.

To replace receptacle connector W1XA1 or W1XA2, do frame 20.

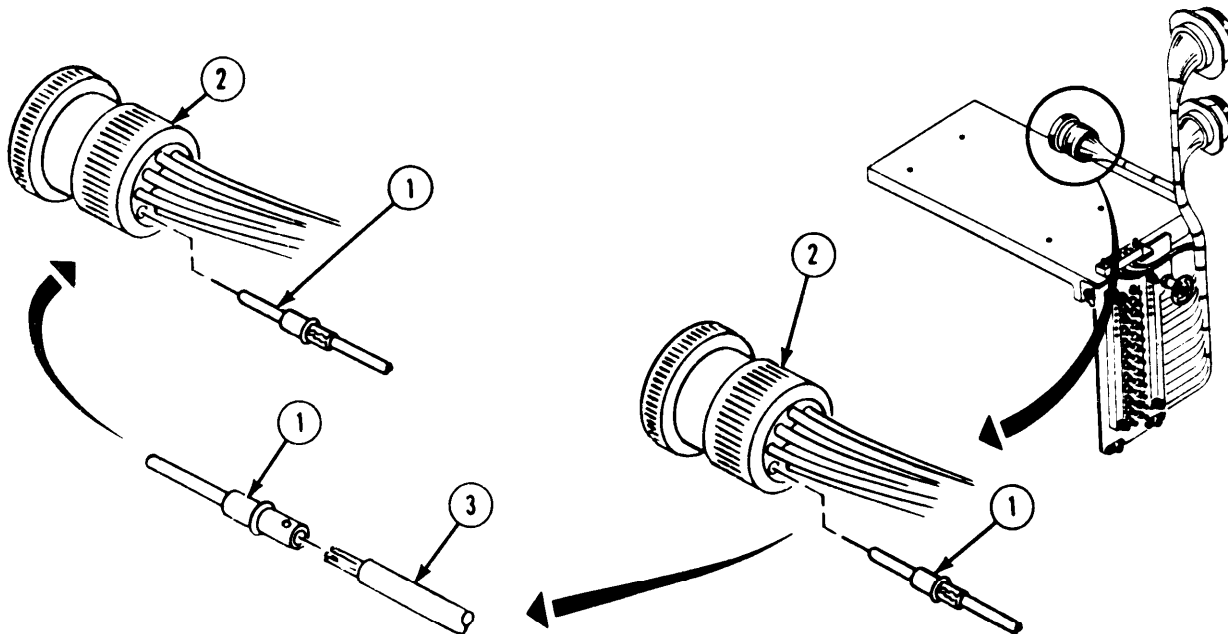
To replace electrical bracket, do frames 21 and 22.

1. Using removal tool, take out bad contact (1) from connector (2).
2. Cut off bad contact (1) with pliers. Get rid of contact (1).
3. Using stripping tool, strip wire (3).
4. Using crimp tool, put new contact (1) on wire (3) and crimp.
5. Using insertion tool, put contact (1) in connector (2).

NOTE

If repairing connectors W1P3, W1J1, or W1J2 only, go to follow-on maintenance, and TASK 10 ENDS HERE.

GO TO FRAME 16



ARR82-24377

FRAME 16

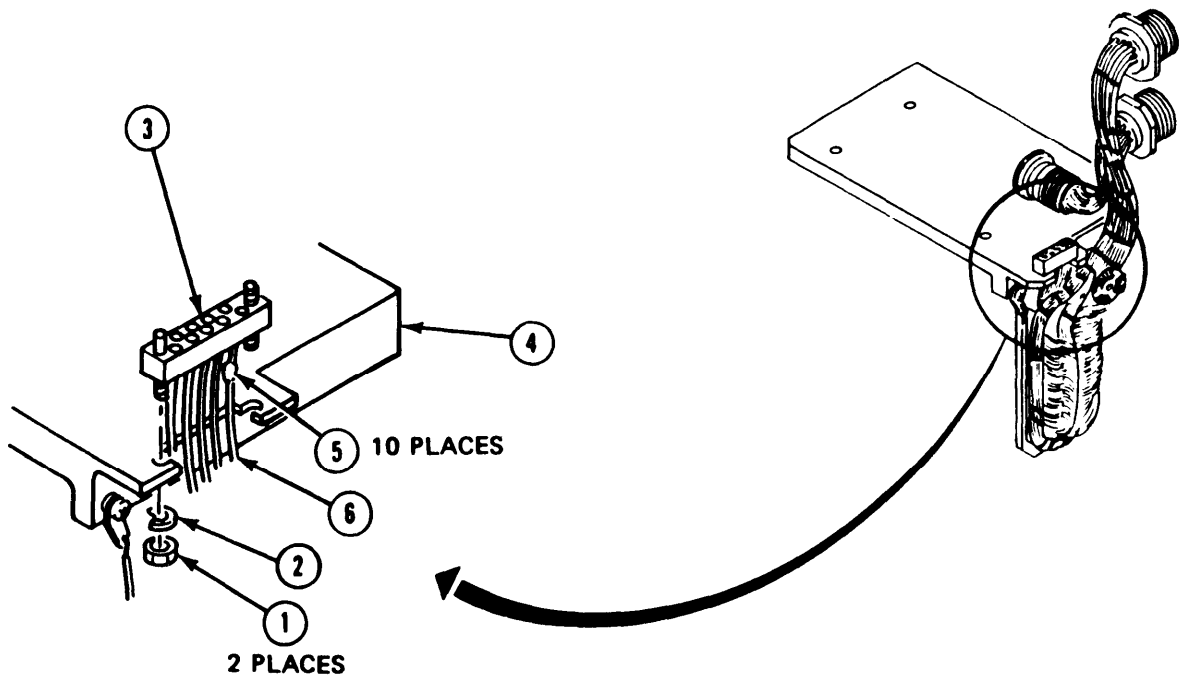
Remove Connector W1J3:

NOTE

Read paragraph 2-4 on tagging and soldering wires before doing any work.

1. Unscrew and take off two nuts (1) and lockwashers (2) holding connector W1J3 (3) to bracket (4) with 1/8-inch wrench. Get rid of lockwashers (2).
2. Take connector W1J3 (3) off bracket (4).
3. Cut off insulation sleeving (5) on ten wires (6). Tag and unsolder ten wires (6). Turn in connector W1J3 (3).

GO TO FRAME 17



ARR82-24378

FRAME 17

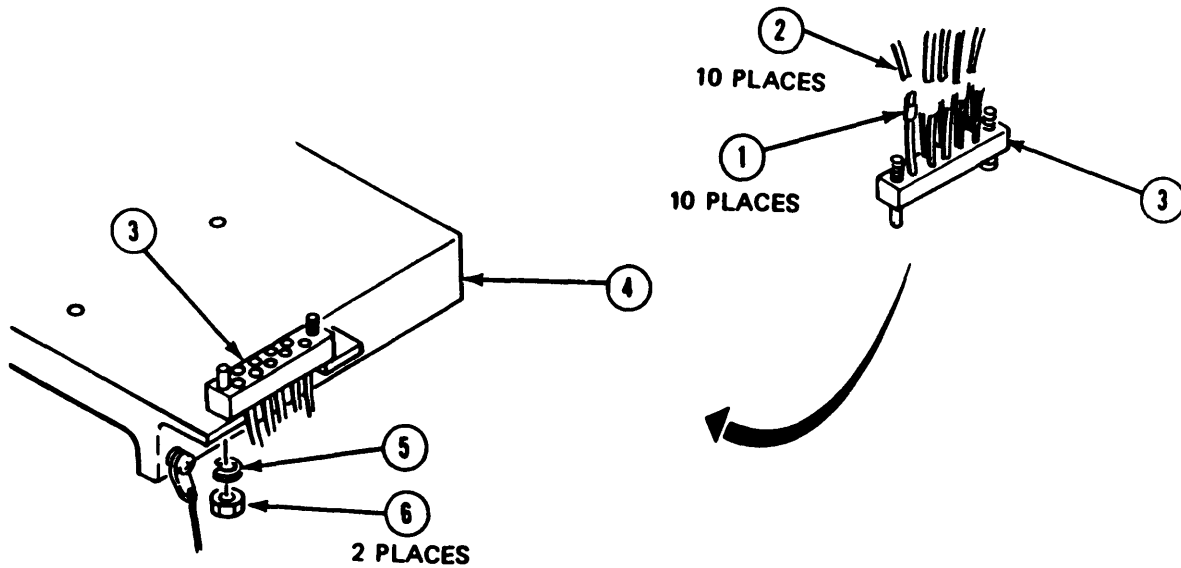
Install Connector W1J3:

1. Cut ten 1-inch pieces of insulation sleeving (1) with knife. Slip new sleeving (1) over ten wires (2) and solder wires (2) to contacts. Refer to wiring chart, frame 23.
2. Slide insulation sleeving (1) over solder joints and using thermal gun, shrink insulation sleeving (1).
3. Put connector W1J3 (3) on bracket (4) and screw in and tighten two new lockwashers (5) and nuts (6) with 1/8-inch wrench.

NOTE

If replacing connector W1J3 only, go to follow-on maintenance, and TASK 10 ENDS HERE,

GO TO FRAME 18



ARR82-24379

FRAME 18

Remove Terminal Lug:

NOTE

- Read paragraph 2-4 on tagging and soldering wires before doing any work.

1. Unscrew and take off machine screw (1), lockwasher (2), flat washer (3), and terminal lug (4) from bracket (5) with screwdriver. Get rid of lockwasher (2).
2. Unsolder wire (6) from terminal lug (4).
3. Turn in terminal lug (4).

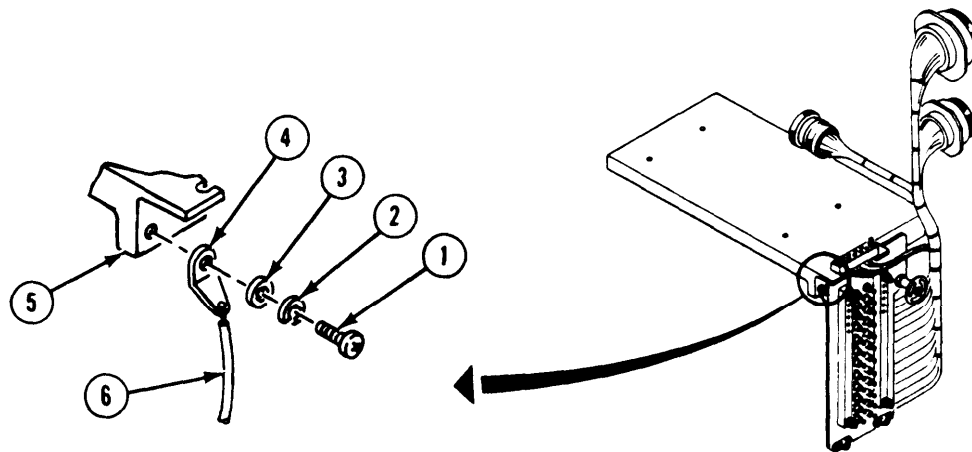
Install Terminal Lug:

4. Solder wire (6) to new terminal lug (4).
5. Screw in and tighten screw (1), new lockwasher (3), and new terminal lug (4) into bracket (S) with screwdriver.

NOTE

If replacing terminal lug only, got ot follow-on maintenance, and TASK 10 ENDS HERE.

GO TO FRAME 19



ARR82-24380

FRAME 19

Remove Terminal Lug or Electrical-Mechanical Post:

1. Unscrew and take out machine screw (1), lockwasher (2), flat washer (3), and terminal lug (4) with screwdriver. Get rid of lockwasher (2).
2. If terminal lug (4) is bad, unsolder 34 wires (5) and turn in terminal lug (4). If OK, go to step 4.
3. Solder 34 wires (5) on new terminal lug (4).

NOTE

If replacing post (6), continue with step 4. If not, go to step 6.

4. Unscrew and take out machine screw (7), lockwasher (8), flat washer (9), and post (6) with screwdriver. Get rid of lockwasher (8) and turn in post (6).

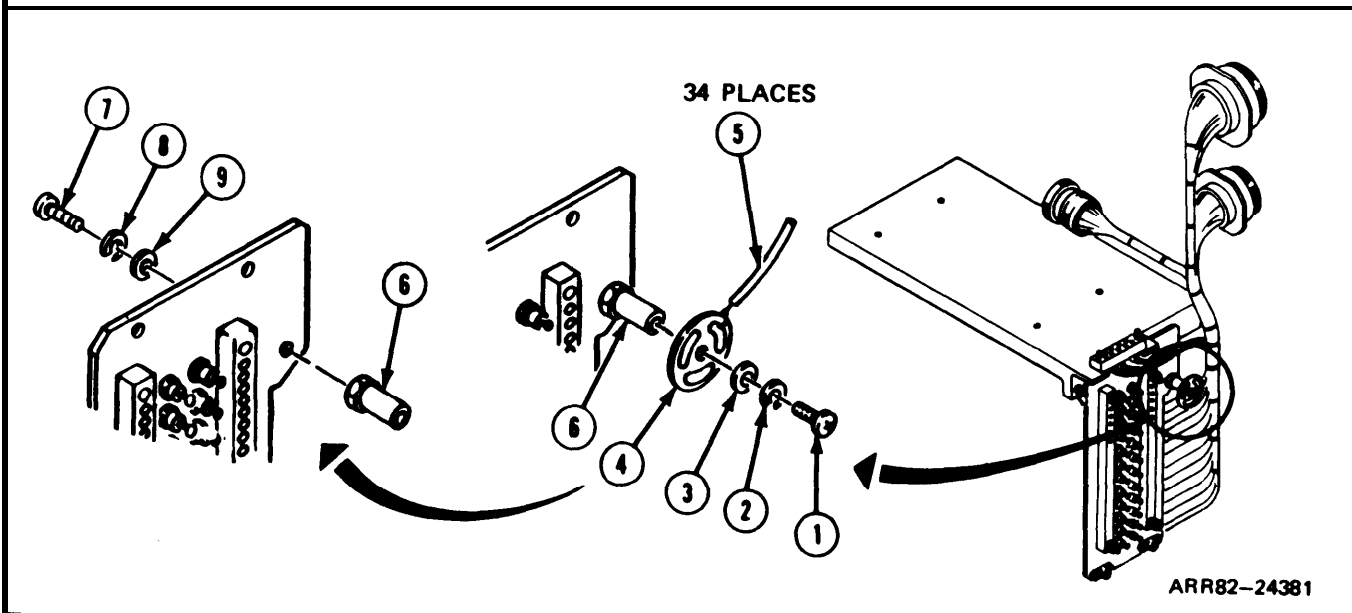
Install Terminal Lug or Post:

5. Screw in and tighten screw (7), new lockwasher (8), washer (9), and new post (6) with screwdriver.
6. Screw in and tighten screw (1), new lockwasher (2), washer (3), and new terminal lug (4) with screwdriver.

NOTE

If replacing terminal lug or post only, go to follow-on maintenance, and TASK 10 ENDS HERE.

GO TO FRAME 20



FRAME 20

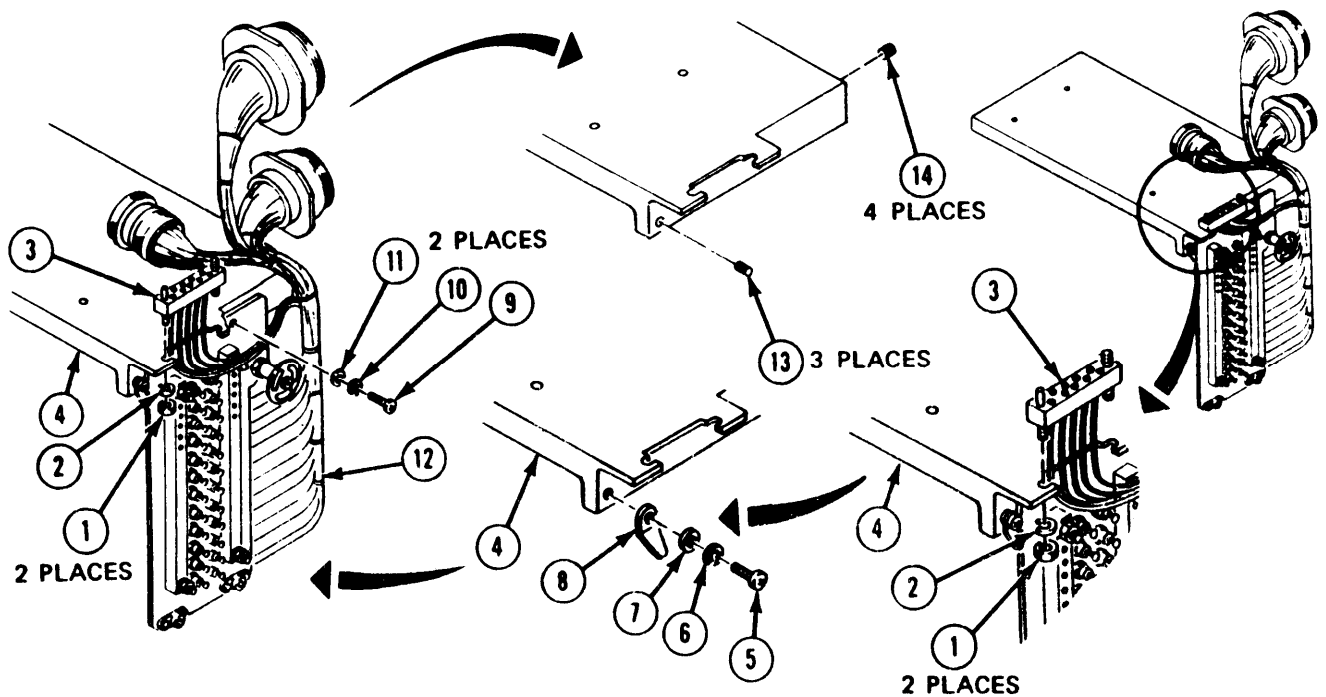
Remove Bracket:

NOTE

Read paragraph 2-4 on replacing inserts before doing any work.

1. Unscrew and take off two nuts (1) and lockwashers (2) holding connector W1J3 (3) to bracket (4) with 1/8-inch wrench. Get rid of lockwashers (2).
2. Take connector W1J3 (3) off bracket (4).
3. Unscrew and take off machine screw (5), lockwasher (6), flat washer (7), and terminal lug (8) from bracket (4) with screwdriver. Get rid of lockwashers (6).
4. Unscrew and take out two machine screws (9), lockwashers (10), and flat washers (11) with screwdriver. Get rid of lockwashers (10). Take electrical (12) off of bracket (4).
5. Look at bracket (4) for loose screw thread inserts (13, 14). Replace bad inserts (13, 14). If OK set aside for later use.

GO TO FRAME 21



ARR82-24382

FRAME 21

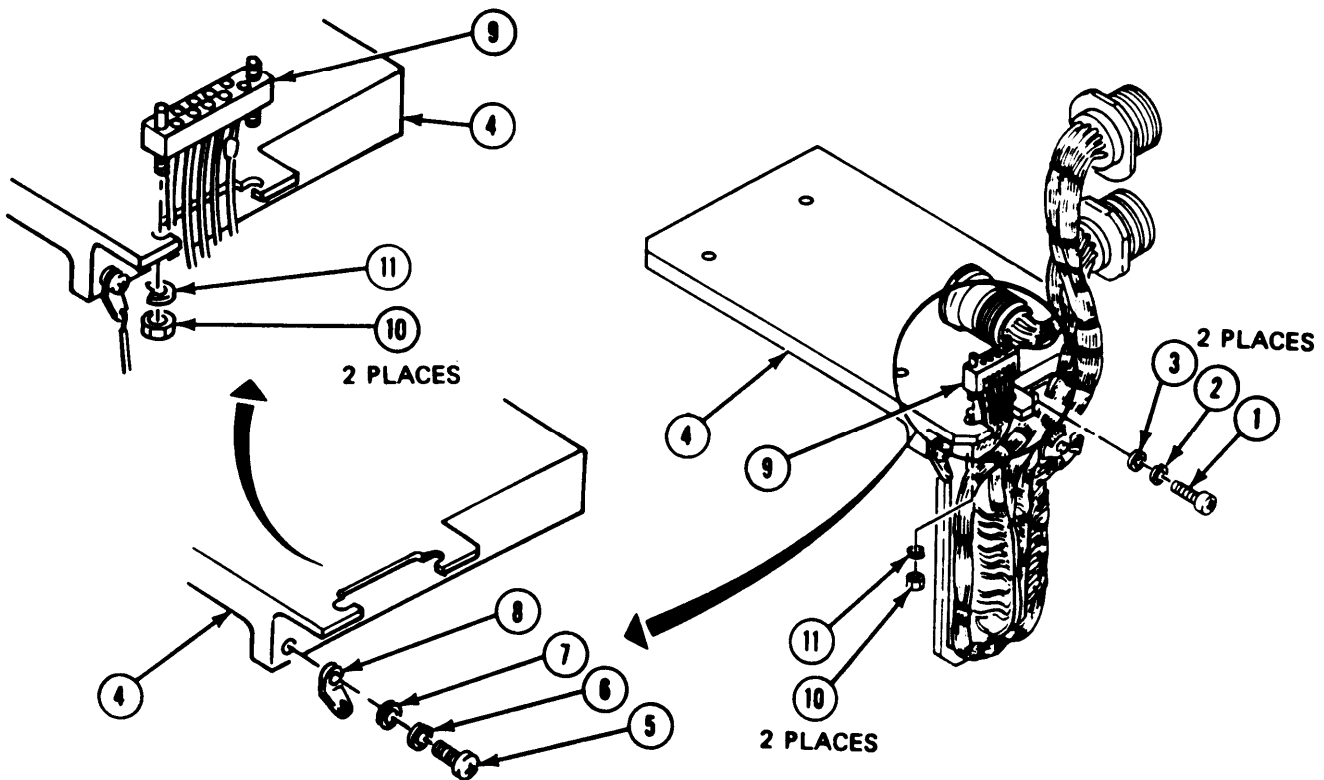
Install Bracket:

1. Screw in and tighten two screws (1), new lockwashers (2), and washers(3) to new bracket (4) with screwdriver.
2. Screw in and tighten screw (5), new lockwasher (6), washer (7), and terminal lug (8) on new bracket (4) with screwdriver.
3. Put connector W1J3 (9) on bracket (4). Screw in and tighten two nuts (10) and new lockwashers (11) with 1/8-inch wrench.

NOTE

If replacing bracket only, go to follow-on maintenance, and TASK 10 ENDS HERE.

GO TO FRAME 22



ARR82-24383

FRAME 22

Remove Receptacle Connector W1XA1 or W1XA2:

NOTE

- Use this procedure to replace either receptacle connector W1XA1 or W1XA2. W1XA1 is shown.
- Read paragraph 2-4 on tagging and soldering wires before doing any work.

1. Tag and unsolder wires (1) going to connector (2).
2. Unscrew and take out two mount screws (3), flat washers (4), lockwashers (5), and hexagon plain nuts (6) from connector (2) with 3/16-inch wrench.
3. Get rid of lockwashers (5) and turn in connector (2).

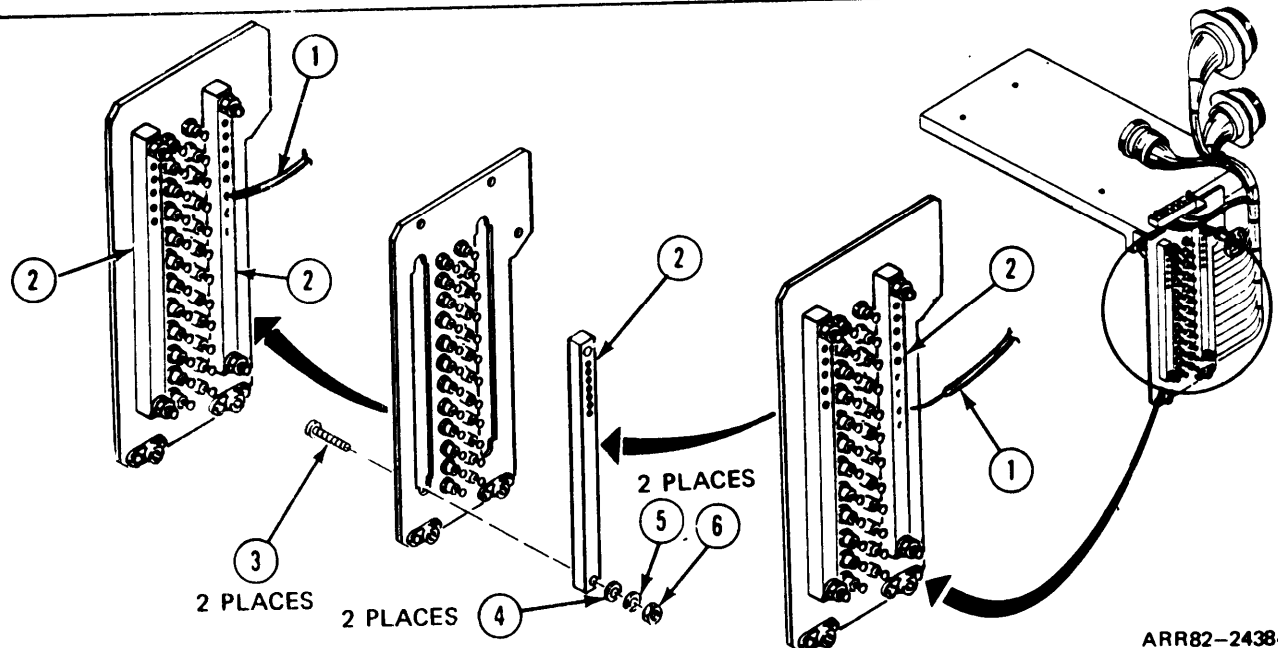
Install Connector W1XA1 or W1XA2:

4. Screw in and tighten two screws (3), washers (4), new lockwashers (5), and nuts (6) with screwdriver.
5. Solder wires (1) to new connector (2). Refer to wiring chart, frame 23.

NOTE

If replacing connector W1XA1 or W1XA2 only, go to follow-on maintenance, and TASK 10 ENDS HERE.

GO TO FRAME 23



ARR82-24384

FRAME 23

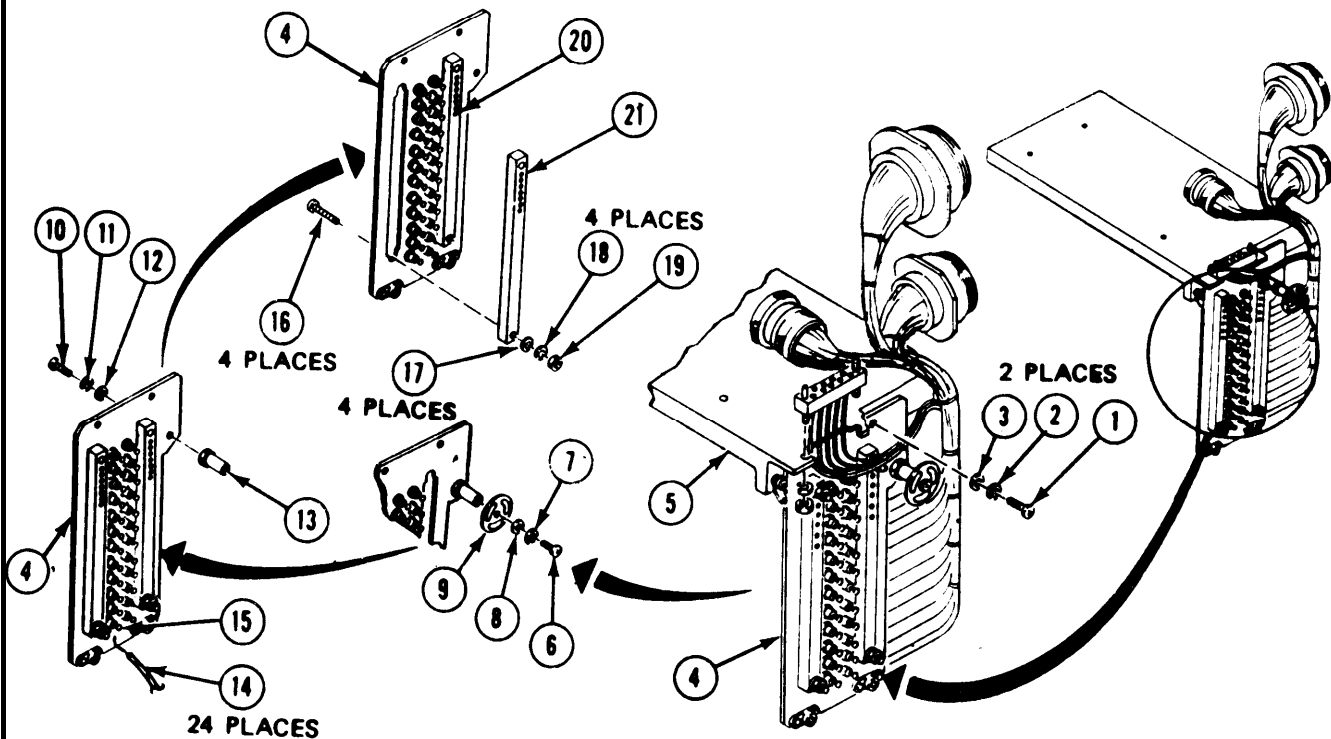
Remove Electrical Bracket:

NOTE

Read paragraph 2-4 on tagging and soldering wires before doing any work.

1. Unscrew and take out two machine screws (1), lockwashers (2), and flat washers (3) holding bracket (4) to bracket (5) with screwdriver. Get rid of lockwashers (2).
2. Unscrew and take out machine screw (6), lockwasher (7), flat washer (8), and terminal lug (9) with screwdriver. Get rid of lockwasher (7).
3. Unscrew and take out machine screw (10), lockwasher (11), flat washer (12), and electrical-mechanical post (13) with screwdriver. Get rid of lockwasher (11).
4. Tag and unsolder wires (14) going to 24 terminals (15).
5. Unscrew and take out four mount screws (16), flat washers (17), lockwashers (18), and hexagon plain nuts (19) with 3/16-inch wrench. Get rid of lockwashers (18).
6. Take connectors W1XA1 (20) and W1XA2 (21) out of bracket (4). W1XA2 is shown. Turn in bracket (4).

GO TO FRAME 24



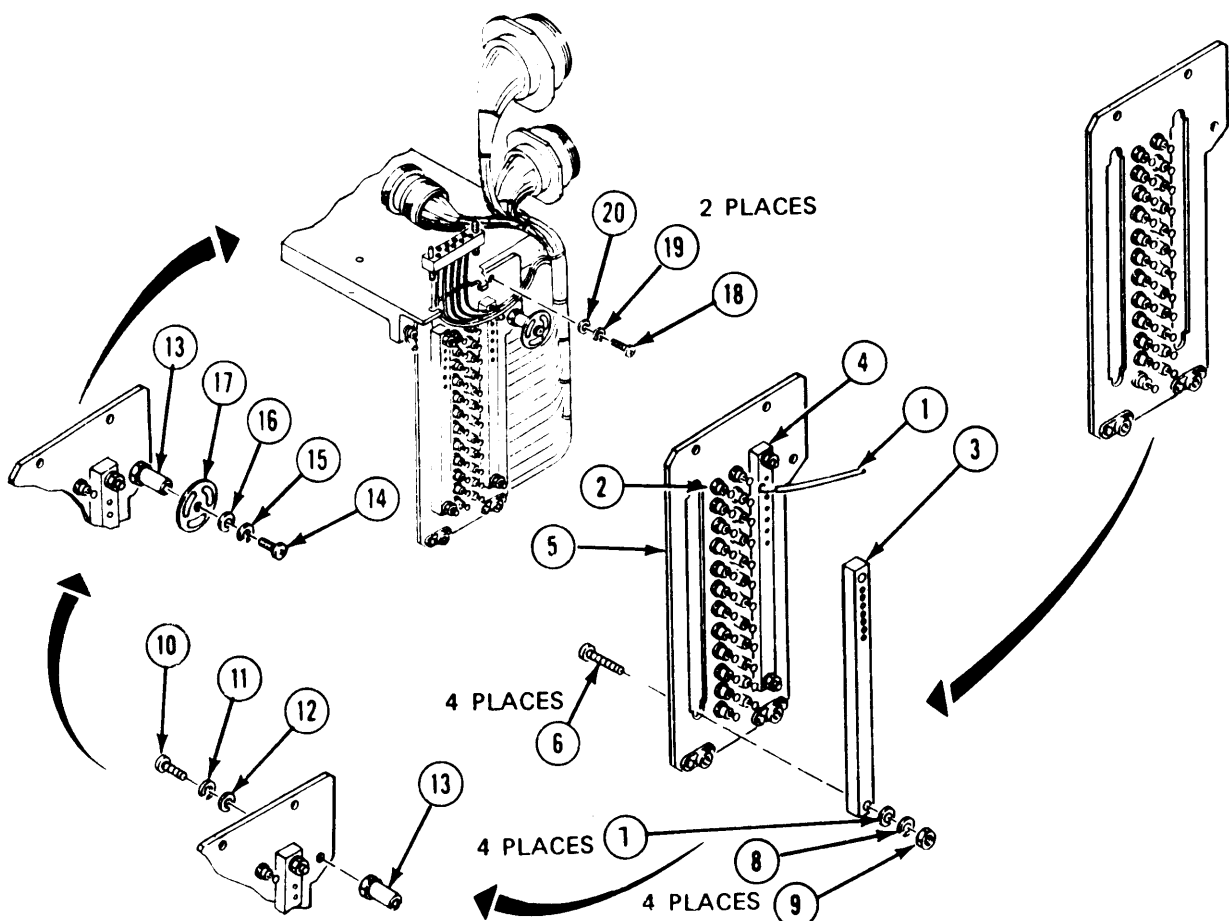
ARR82-24385

FRAME 24

Install Electrical Bracket:

1. Solder wires (1) to terminals (2). Refer to wiring chart, frame 23.
2. Put connectors W1XA1 (3) and W1XA2 (4) into bracket (5). W1XA2 is shown.
3. Screw in and tighten four screws (6), washers (7), new lockwashers (8), and nuts (9) with 3/16-inch wrench.
4. Screw in and tighten screw (10), new lockwasher (11), washer (12), and insulated standoff (13) with screwdriver.
5. Screw in and tighten screw (14), new lockwasher (15), washer (16), and terminal lug (17) with screwdriver.
6. position bracket (5) and screw in and tighten two screws (18) 9 new lockwashers (19), and washers (20) with screwdriver.

GO TO FRAME 25



ARR82-24386

FRAME 25

NOTE

Use this chart for reference only.

Wiring Chart for IDU Cable W1

From	To	From	To	From	To
W1J3-A	E17	W1XA1-1	E14	W1XA2-20	E6
W1J3-C	W1XA2-3	W1XA1-7	E16	W1XA2-23	E7
W1J3-D	W1XA1-62	W1XA1-16	E18	W1XA2-24	E8
W1J3-N	E1	W1XA1-20	E19	W1XA2-27	E22
W1J3-P	W1P3-G	W1XA1-25	E20	W1XA2-33	E24
W1J3-Y	W1XA2-8	W1XA1-24	E9	W1XA2-14	W1J1-PP
W1J3- <u>C</u>	W1XA2-15	W1XA1-65	E25	W1XA2-62	W1J1- <u>M</u>
W1J3-K	E12	W1XA1-8	E23	W1XA2-6	W1J1- <u>N</u>
W1J3-H	W1XA1-5	W1XA1-44	E10	W1XA2-4	W1J1- <u>Q</u>
W1XA1-63	W1J1-BB	W1XA1-41	E3	W1XA2-19	W1J1- <u>R</u>
W1XA1-42	W1J1-CC	W1XA1-5	J3-H	W1XA2-9	W1J1- <u>S</u>
W1XA1-43	W1J1-EE	W1XA2-12	E17	W1XA2-13	W1J1- <u>T</u>
W1XA1-31	W1J1-FF	W1XA2-41	E3	W1XA2-34	E13
W1XA1-13	W1J1-M	W1XA2-49	ES	W1XA2-35	E15
W1XA1-38	W1J1-N	W1XA2-52	E6	W1J2-A	W1XA1-9
W1XA1-27	E22	W1XA2-55	E7	W1J2-B	W1XA1-10
W1XA1-33	E25	W1XA2-57	E8	W1J2-D	W1XA1-2
W1XA1-34	E14	W1XA2-63	E23	W1J2-E	W1XA1-36
W1XA1-49	E18	W1XA2-64	E4	W1J2-Y	W1XA1-15
W1XA1-52	E19	W1XA2-65	E24	W1J2-Z	W1XA1-21
W1XA1-55	E20	W1XA2-66	E10	W1J2-G	E2
W1XA1-57	E9	W1XA2-11	W1XA1-4	W1J2-H	E2
W1XA1-12	J1-P	W1XA2-18	W1XA1-3	W1J2-R	E2
W1XA1-17	J1- <u>Y</u>	W1XA2-25	W1XA1-14	W1J2-S	W1XA2-59
W1XA1-18	J1-V	W1XA2-39	E2	W1J2-T	W1XA2-58
W1XA1-19	J1-W	W1XA2-40	E2	W1J2-V	W1XA2-31
W1XA1-6	E2	W1XA2-50	E2	W1J2-W	W1XA2-30
W1XA1-39	E2	W1XA2-60	E2	W1J2-N	W1XA2-56
W1XA1-40	E2	W1XA2-61	E2	W1J2- <u>A</u>	W1J1-PP
W1XA1-50	E2	W1XA2-1	E13		
W1XA1-60	E2	W1XA2-7	E16		
W1XA1-61	E2	W1XA2-16	ES		

Follow-on Maintenance:

NOTE: To install IDU cable assembly, refer to task 12.

TASK 10 ENDS HERE

TASK 11. Repair Housing.

Applicability: All Models

Common Tools: None

Special Tools: None

Supplies:

Insert, screw thread (96906) MS122118 (as required)
Insert, screw thread (96906) MS122119 (as required)
Insert, screw thread (96906) MS122116 (as required)
Nut, self-locking, plain (80205) NAS1033A06 (as required)
Nut, self-locking, plain (96906) MS21076L3 (as required)
Rivet, solid (96906) MS20426AD3-6 (as required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para.4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove IDU assembly A2; refer to task 1.
4. Remove cover; refer to task 2.
5. Remove circuit card assemblies A1 and A2; refer to task 3.
6. Remove power supply; refer to task 4.
7. Remove electron tube assembly, clamp, and CRT support; refer to task 5.
8. Remove eyepiece assembly and adapter; refer to task 7.
9. Remove IDU cable assembly refer to task 9.

FRAME 26

Repair Housing:

NOTE

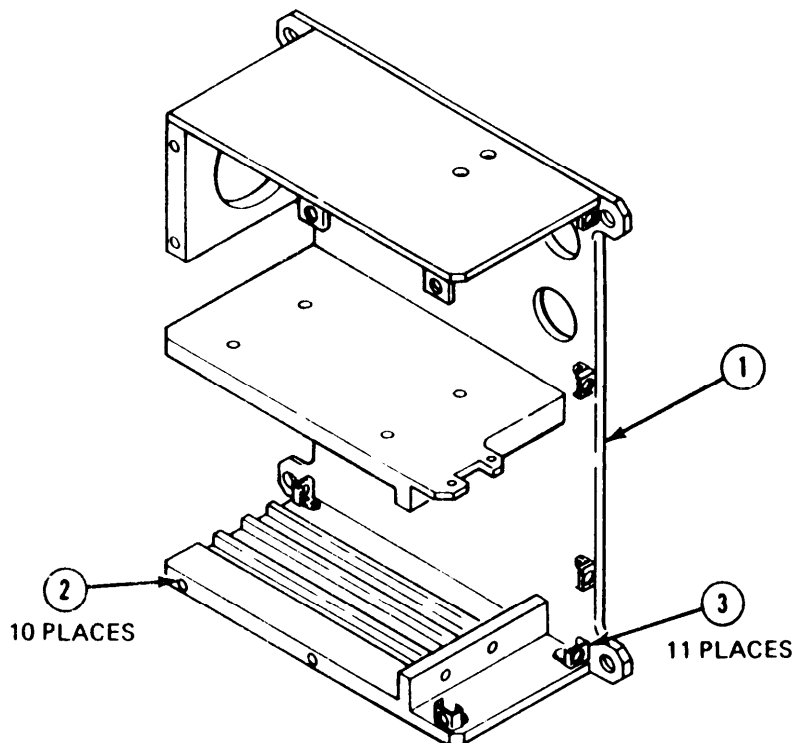
Read paragraph 2-4 on replacing inserts, replacing nutplates, and replacing rivets before doing any work.

1. Look at housing (1) for cracks or bends. If bad, turn in housing (1). If OK, do step 2.
2. Look at housing (1) for loose inserts (2) and plain self-locking nuts (3). Replace any bad inserts (2) or nuts (3). If OK, set aside for later use.

Follow-on Maintenance:

1. Install IDU cable assembly; refer to task 12.
2. Install electron tube assembly, clamp, and CRT support; refer to task 14.
3. Install power supply; refer to task 15.
4. Install circuit card assemblies A1 and A2; refer to task 16.
5. Install eyepiece assembly and adapter; refer to task 13.
6. Install cover; refer to task 17.
7. Install IDU assembly A2; refer to task 18.
8. Install thermal system test controller; refer to para. 2-5, task 8.
9. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 11 ENDS HERE



ARR82-24387

TASK 12 Install IDU Cable Assembly.

Applicability: All Models

Common Tools:

Extension, socket, 5-inch, 3/8-inch drive
Screwdriver, cross tip, No. 2
Wrench, socket, 3/8-inch drive

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies:

Lockwasher (96906) MS35338-136 (six required)

Personnel: One

Equipment Conditions:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove IDU cable assembly; refer to task 9

FRAME 27

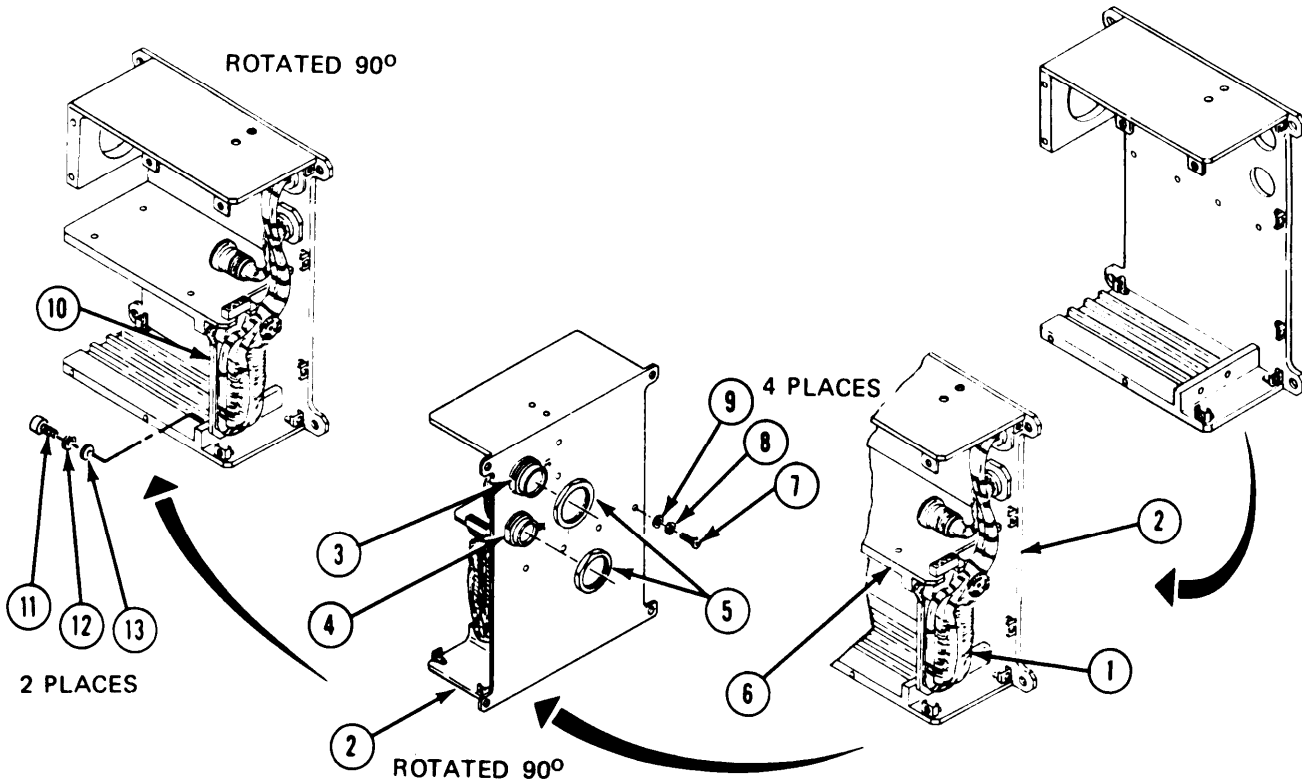
Install Cable Assembly:

1. Position IDU cable assembly (1) inside housing (2).
2. Using jamnut wrench, put receptacle connectors J1 (3) and J2 (4) into housing (2) and tighten two jamnuts (5).
3. Position bracket (6) and screw in and tighten four machine screws (7), new lockwashers (8), and flat washers (9) with screwdriver.
4. Position electrical bracket (10) and screw in and tighten two machine screws (11), new lockwashers (12), and flat washers (13) with screwdriver.

Follow-on Maintenance:

1. Install electron tube assembly and clamp; refer to task 14.
2. Install power supply; refer to task 15.
3. Install circuit card assemblies A1 and A2, refer to task 16.
4. Install cover; refer to task 17.
5. Install eyepiece assembly and adapter; refer to task 13.
6. Install IDU assembly A2; refer to task 18.
7. Install thermal system test controller; refer to para. 2-5, task 8.
8. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 12 ENDS HERE



TASK 13 Install Eyepiece Assembly, Adapter, and IDU Graticule.

Applicability: All Models

Common Tools:

Key, hex, 9/64-inch

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-137 (four required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove eyepiece assembly, adapter, and IDU graticule; refer to task 7.

FRAME 28

Install Eyepiece, Adapter, and Graticule:

NOTE

If IDU graticule (1) was removed, go to volume III, figure 7-33. If adapter (2) was removed, go to step 1. If only eyepiece assembly (3) was removed, go to step 2.

1. Put adapter (2) onto housing (4) and screw in and tighten four socket head cap screws (5) and new lockwashers (6) with key.

CAUTION

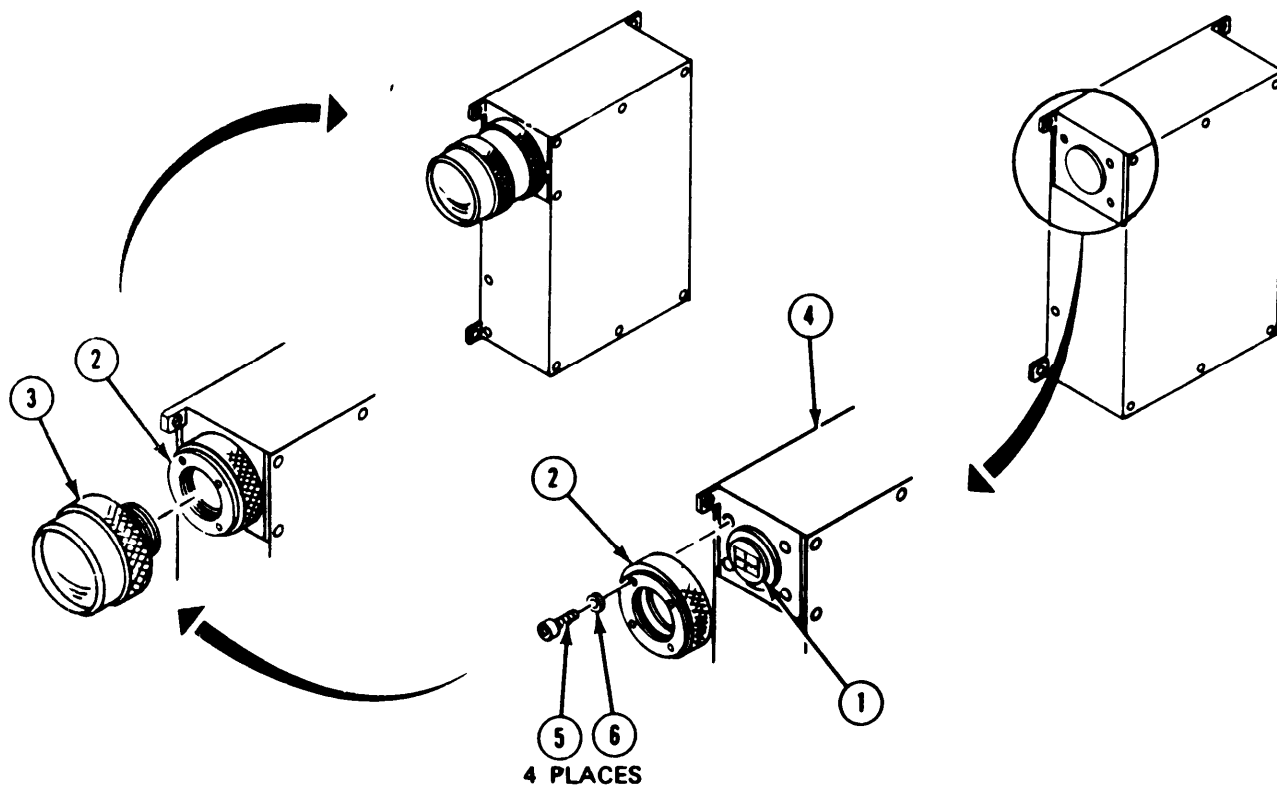
Eyepiece (3) is breakable. To avoid damaging eyepiece (3), handle carefully.

2. Screw eyepiece (3) into adapter (2).

Follow-on Maintenance:

1. Install IDU assembly A2; refer to task 18.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 13 ENDS HERE



ARR82-24389

TASK 14 Install Electron Tube Assembly, Clamp, and CRT Support.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Screwdriver, flat tip

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-137 (two required)
Lockwasher (96906) MS35338-136 (four required)
Packing, preformed (96906) MS9068-143

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove electron tube assembly, clamp, and CRT support; refer to task 5.

FRAME 29

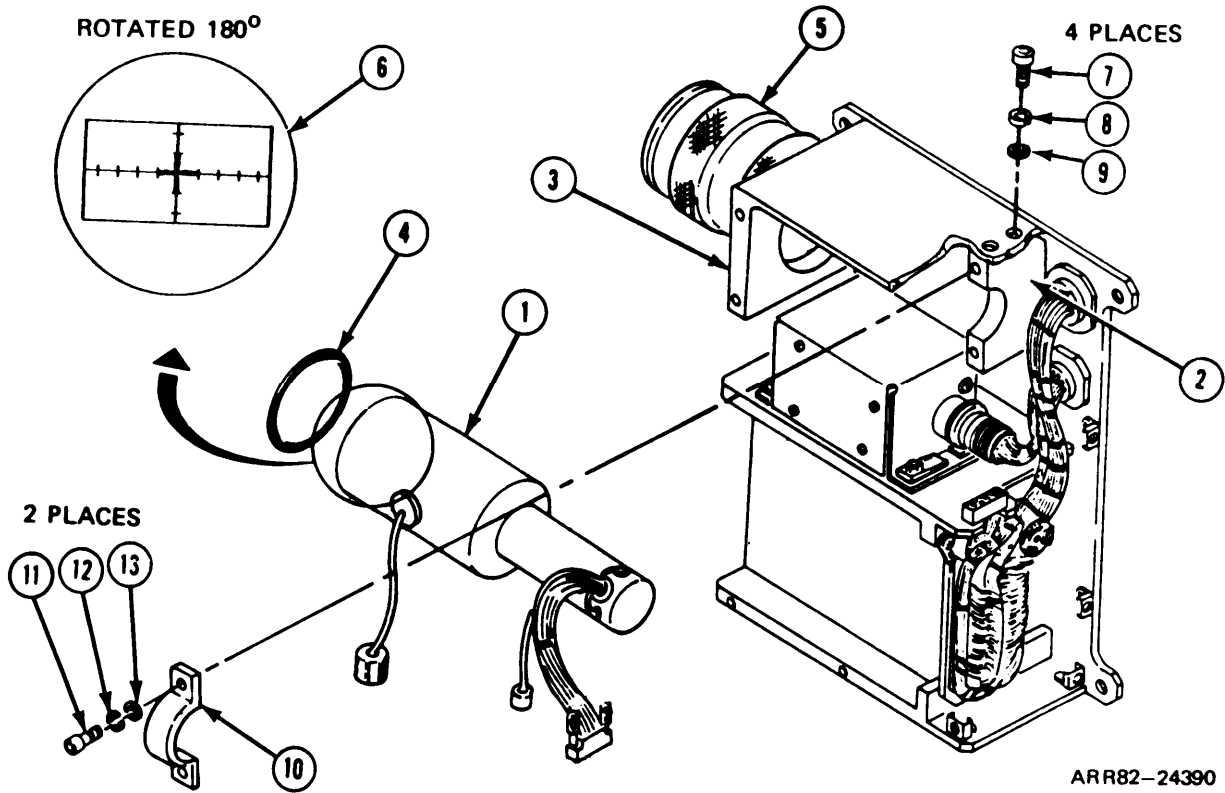
Install Electron Tube Assembly, Clamp, and CRT Support:

WARNING

Electron tube assembly (1) is breakable. To avoid injury and damage, handle electron tube assembly (1) carefully.

1. If electron tube assembly (1) was turned in during task 5, install new IDU graticule; refer to task 13.,
2. Place CRT support (2) in housing (3); slide CRT support (2) as far to rear as possible.
3. Put electron tube assembly (1) with preformed packing (4) into position in housing (3). Looking thru eyepiece assembly (5) rotate electron tube (1) so that graticule (5) is aligned horizontally and vertically.
4. Line up new CRT support (2) with holes in housing (3).
5. Screw in and tighten four machine screws (7), new lockwashers (8), and flat washers (9) with flat-tip screwdriver.
6. While holding electron tube assembly (1), put on retaining strap (10) and screw in and tighten two screws (11), new lockwashers (12), and washers (13) with cross tip screwdriver.

GO TO FRAME 30



ARR82-24390

FRAME 30

Install Electron Tube Assembly and CRT Support (Continued):

1. Connect lead A3P2 (1) to jack J1(2) and connect lead A3P1 (3) to jack J2 (4) on power supply (5).

CAUTION

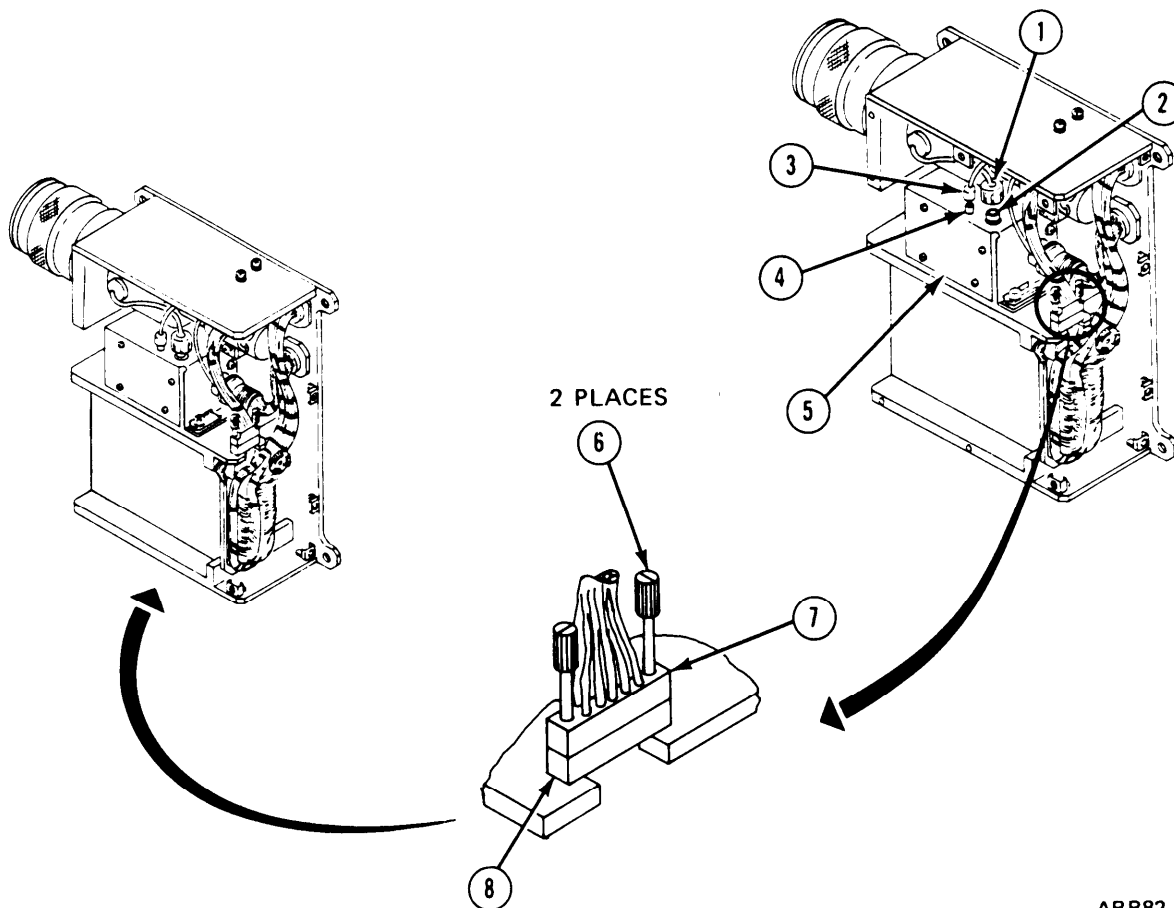
Jack screws (6) will tighten or loosen only one side of electrical plug connector A3P3 (7) at a time. To avoid cracking plug A3P3 (7), turn jack screws (6) alternately.

2. Connect plug A3P3 (7) to receptacle connector (8) and alternately tighten two jack screws (6) with flat tip screwdriver.

Follow-on Maintenance:

1. Install cover; refer to task 17
2. Install IDU assembly A2; refer to task 18
3. Install thermal system test controller; refer to para. 2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 14 ENDS HERE



ARR82-24391

TASK 15. Install Power Supply.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove power supply; refer to task 4.

FRAME 31

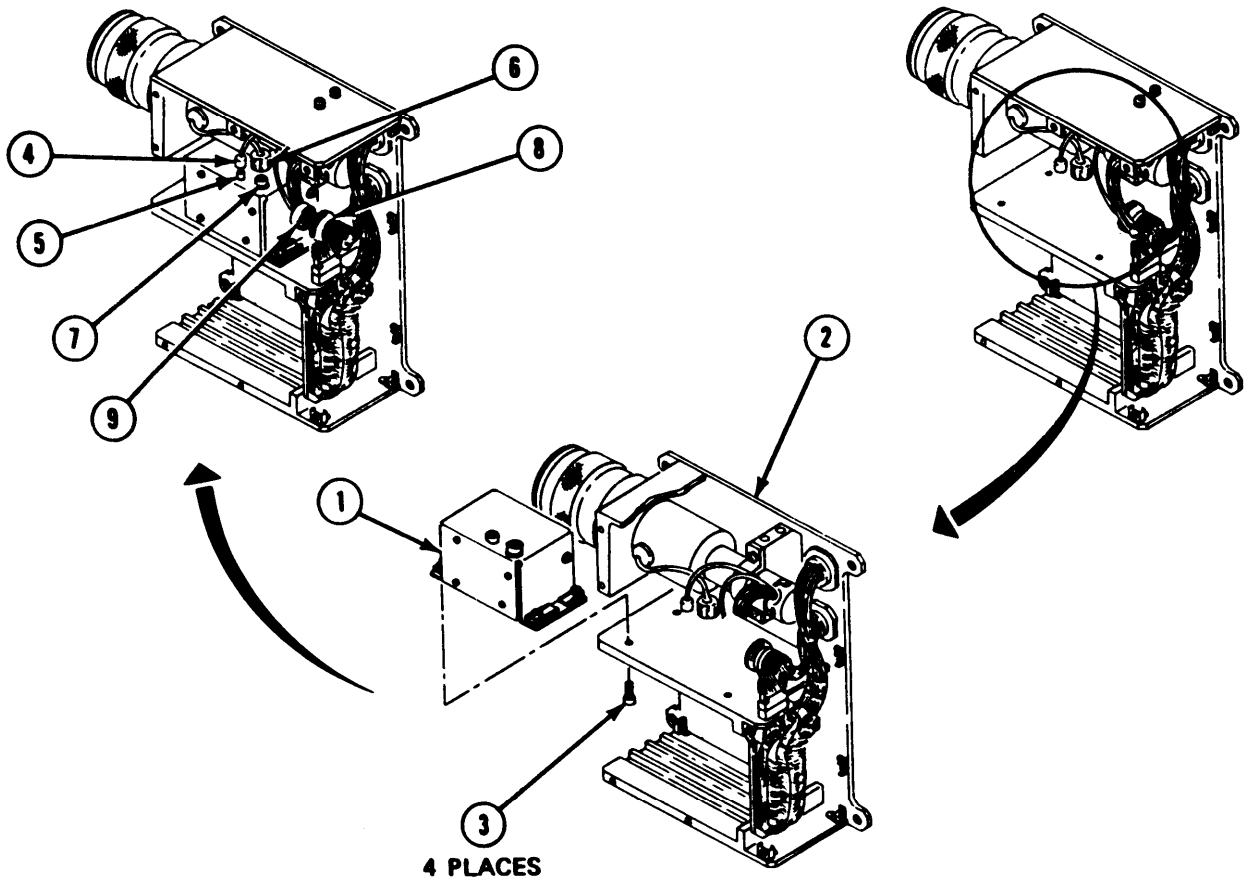
Install Power Supply:

1. Put power supply (1) into housing (2).
2. Screw in and tighten four machine screws (3) with screwdriver.
3. Connect electrical lead A3P1(4) to jack J2 (5), Connect lead A3P2 (6) to jack J1 (7), and connect electrical plug connector (8) to jack J3 (9) and tighten all three plugs.

Follow-on Maintenance:

1. Install circuit card assemblies A1 and A2; refer to task 16
2. Install cover; refer to task 17
3. Install IDU assembly A2; refer to task 18
4. Install thermal system test controller; refer to para.2-5, task 8.
5. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 15 ENDS HERE



ARR82-24392

TASK 16. Install Circuit Card Assembly A1 or A2.

Applicability: All Models

Common Tools:

Key, hex, 3/32-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove circuit card assembly A1 or A2; refer to task 3.

FRAME 32

Install Circuit Card:

CAUTION

Touching circuit card components can damage components. Hold card assemblies by edges at all times. Do not flex or twist card.

NOTE

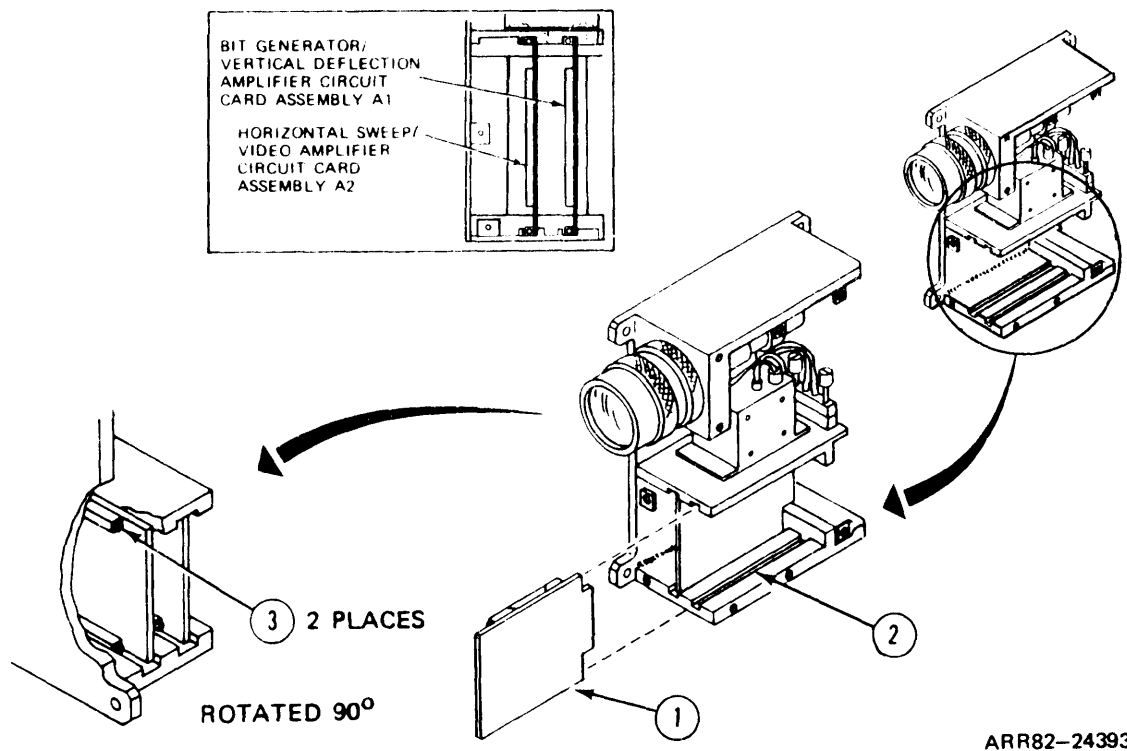
Use this procedure to install either circuit card assemblies A1 or A2. Circuit card A1 (1) is shown.

1. Gently slide circuit card assembly (1) into slot (2). Put thumbs on corners of card (1) and push in until card (1) seats.
2. Tighten two screws (3) with key.

Follow-on Maintenance:

1. Install cover; refer to task 17
2. Install IDU assembly A2; refer to task 18
3. Install thermal system test controller; refer to para. 2-5, task 8.
4. install thermal system test controlier case cover; refer to volume 1, para. 4-18.

TASK 16 ENDS HERE



TASK 17. Install Cover.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-136 (14 required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove cover; refer to task 2.

FRAME 33

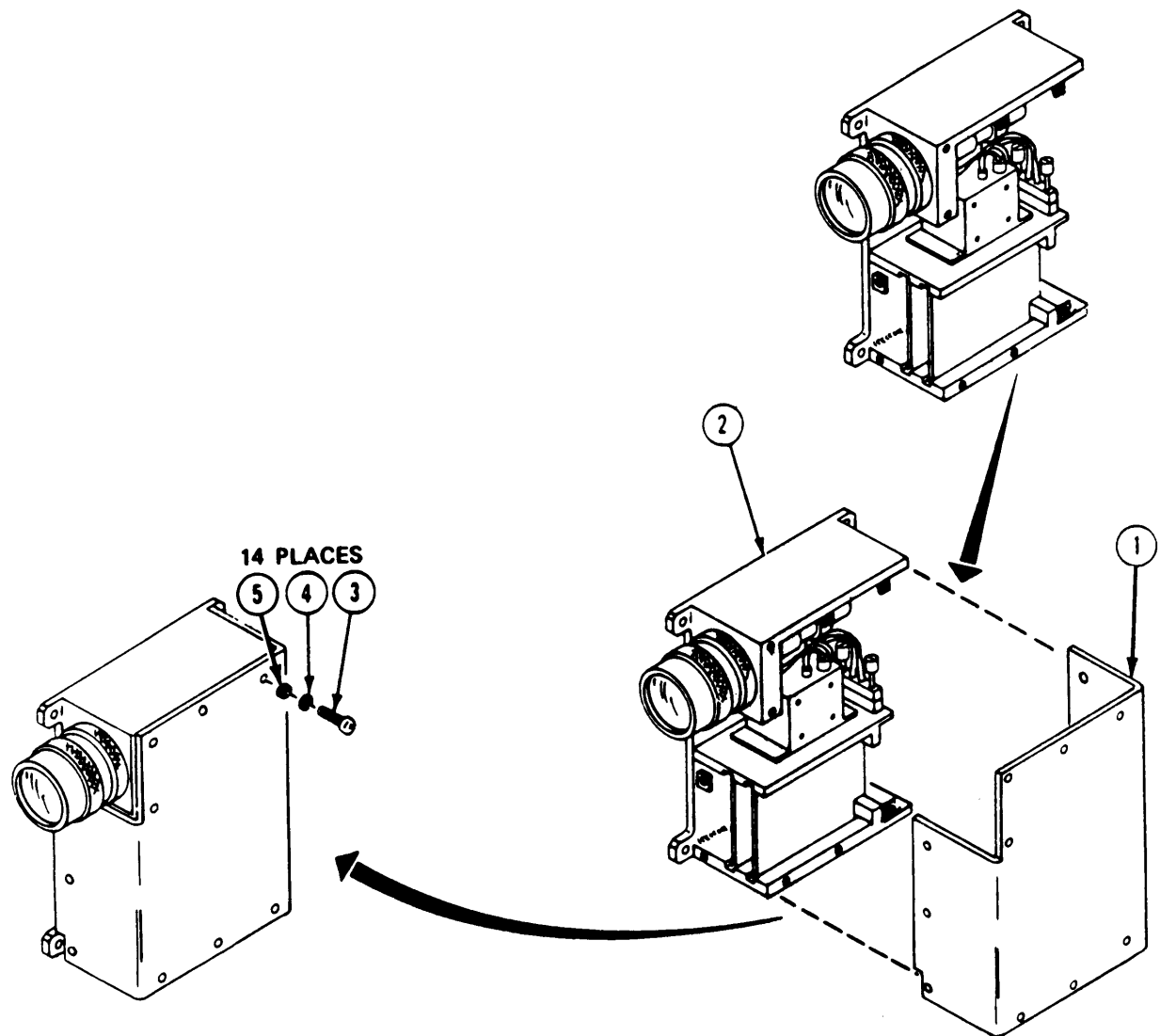
Install Cover:

1. Place cover (1) on housing (2).
2. Screw in and tighten 14 machine screws (3), new lockwashers (4), and flat washers (5) with screwdriver.

Follow-on Maintenance:

1. Install IDU assembly A2; refer to task 18
2. Install thermal system test controller; refer to para.2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 17 ENDS HERE



ARR82-24394

TASK 18. Install IDU Assembly A2.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 2 NSN 5120-00-879-3547
Screwdriver, cross tip, No. 2

Special Tools:

Wrench Set, socket 12285468

Supplies:

Lockwasher (96906) MS35338-138 (three required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove IDU assembly A2; refer to task 1.
Remove Digital indicator; refer to para.2-6, task 2.

FRAME 34

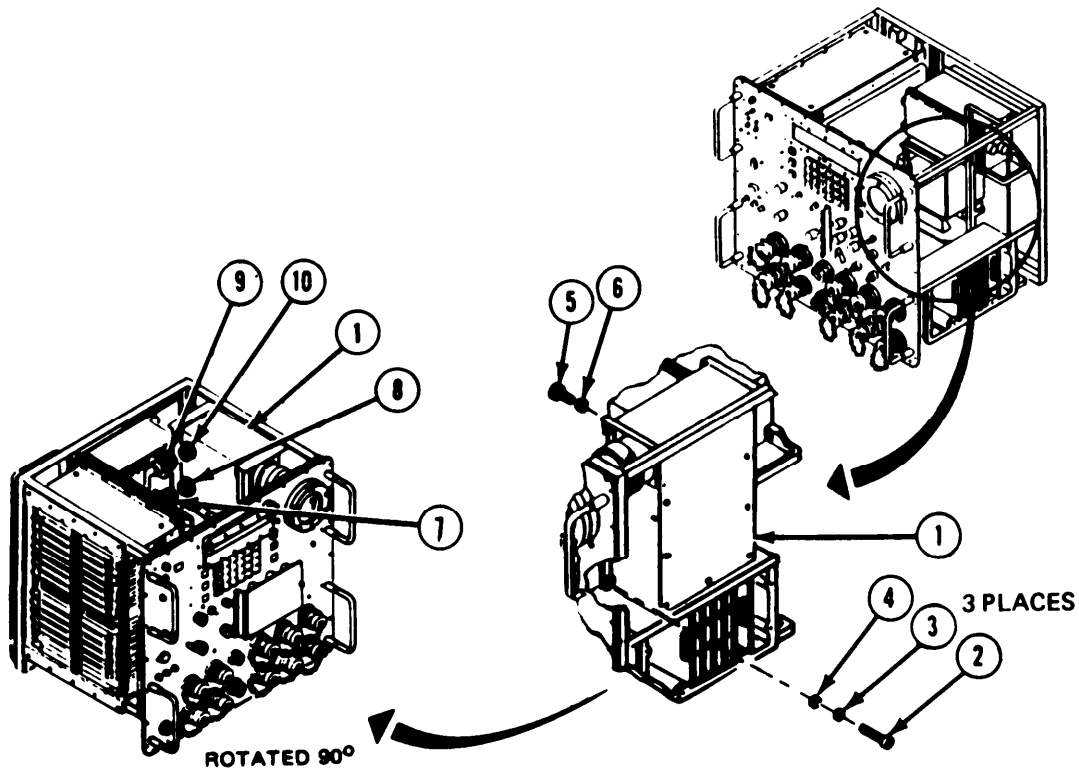
Install IDU Assembly:

1. Position IDU assembly (1) and screw in three machine screws (2), new lockwashers (3), and flat washers (4) with cross tip screwdriver.
2. Screw in machine screw (5) and flat washer (6) with cross tip screwdriver.
3. Torque screws (2 and 5) between 10 and 20 pound-inches (1.1 and 2.3 Newton-meters) with torque screwdriver, and No. 2 cross tip bit.
4. Connect plug connector body W14P4 (7) to receptacle connector J2 (8) and plug connector body W14P3 (9) to receptacle connector J1 (10).

Follow-on Maintenance:

1. Install Digital Indicator, para. 2-6, task 25.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

END OF IMAGE DISPLAY UNIT (IOU) MAINTENANCE



ARR82-24395

2-9. Power Module A6.

Task	Title	Frames
1	Remove Power Module A6	1 - 2
2	Remove Connector Bracket	3
3	Repair Connector Bracket	4 - 7
4	Replace Relay K1, K2, or K3	8 - 12
5	Remove Relay Bracket	13-14
6	Remove Circuit Card Assembly A2	15
7	Remove Terminal Boards	16
8	Remove Power Supply PS1, PS2, PS3, or PS4	17
9	Remove Power Module Base	18
10	Replace Electrical Plug Connector A6A1P1, A6A1P2, or A6IP3	19-20
11	Replace Receptacle Connector A6J5	21-22
12	Replace Connector A6P1	23-24
13	Replace Terminal Lug	25-26
14	Replace Tie Wrap Support	27-28
15	Replace Enclosure	29-30
16	Install Power Module Base	31
17	Install Power Supply PS1, PS2, PS3, or PS4	32-33
18	Install Terminal Boards	34
19	Install Circuit Card Assembly A2	35
20	Install Relay Bracket	36
21	Install Connector Bracket	37
22	Install Power Module A6	38-39

TASK I. Remove Power Module A6.

Applicability: All Models

Common Tool:

- Screwdriver, cross tip, No. 2
- Screwdriver, cross tip, offset, No. 2
- Wrench, combination 1/4-inch

Special Tool: None

Supplies: None

Personnel: One

Equipment Conditions:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.

FRAME 1

Remove Power Module:

CAUTION

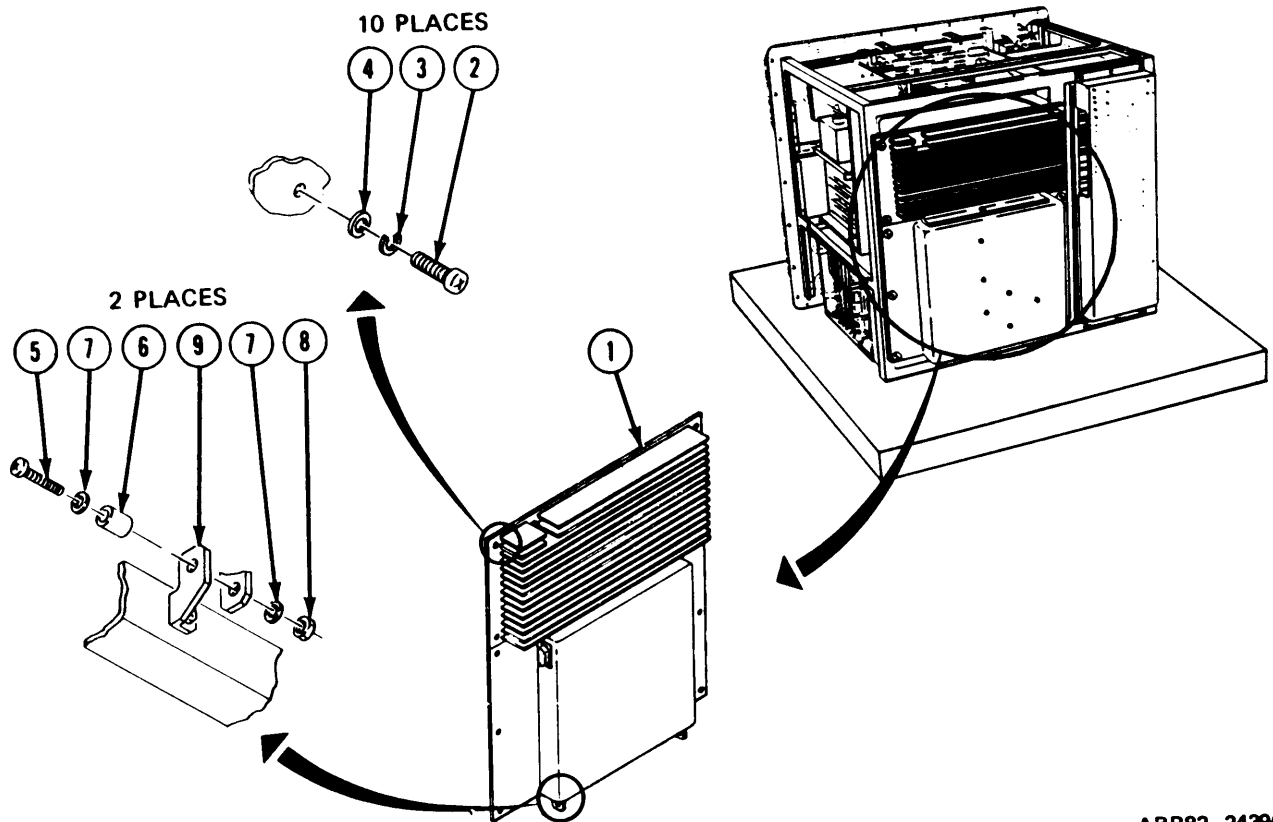
Power module (1) has cables attached. To avoid damaging cables, take out power module (1) carefully.

NOTE

If taking out power module (1) for access, do steps 1 and 2 only.

1. Unscrew and takeout ten machine screws (2), lockwashers (3), and flat washers (4) with cross tip screwdriver. Get rid of lockwashers (3).
2. Carefully swing power module (1) down and out until it stops.
3. Unscrew and take out two machine screws (5), two sleeve spacers (6), four flat washers (7), and two self-locking nuts (8) from angle bracket (9) with offset screwdriver and wrench.

GO TO FRAME 2



ARR82-24396

FRAME 2

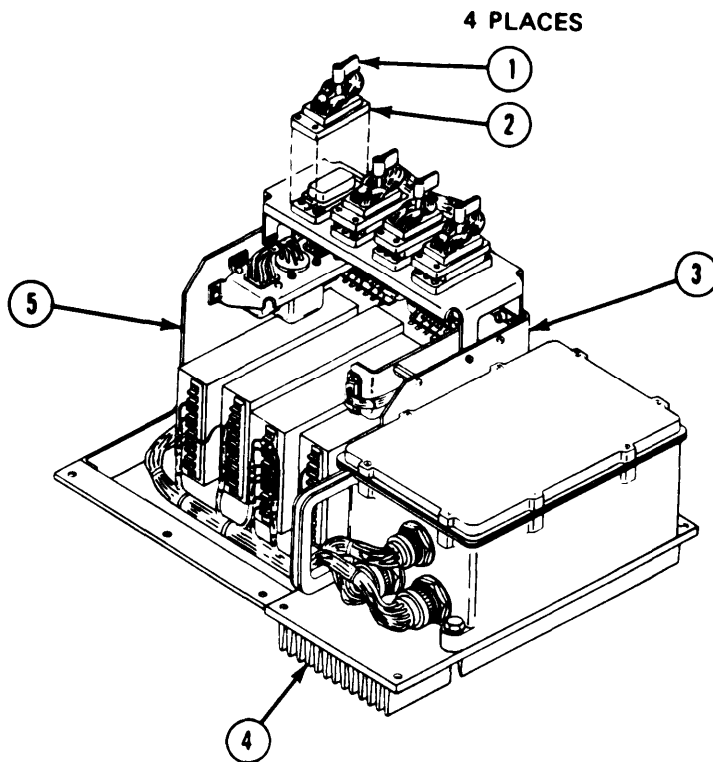
Remove Power Module (Continued):

1. Turn four handles (1) on receptacle connectors (2) one-quarter turn counterclockwise and takeoff connectors (2).
2. Carefully takeout power module (3) and lay it face down on power module base (4).
3. Look at enclosure (5) for cracks or dents. If bad, replace enclosure; refer to task 15.

Follow-on Maintenance:

NOTE: To install power module A6, refer to task 22.

TASK I ENDS HERE



ARR82-24397

TASK 2. Remove Connector Bracket.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6 for access only; refer to task 1.

FRAME 3

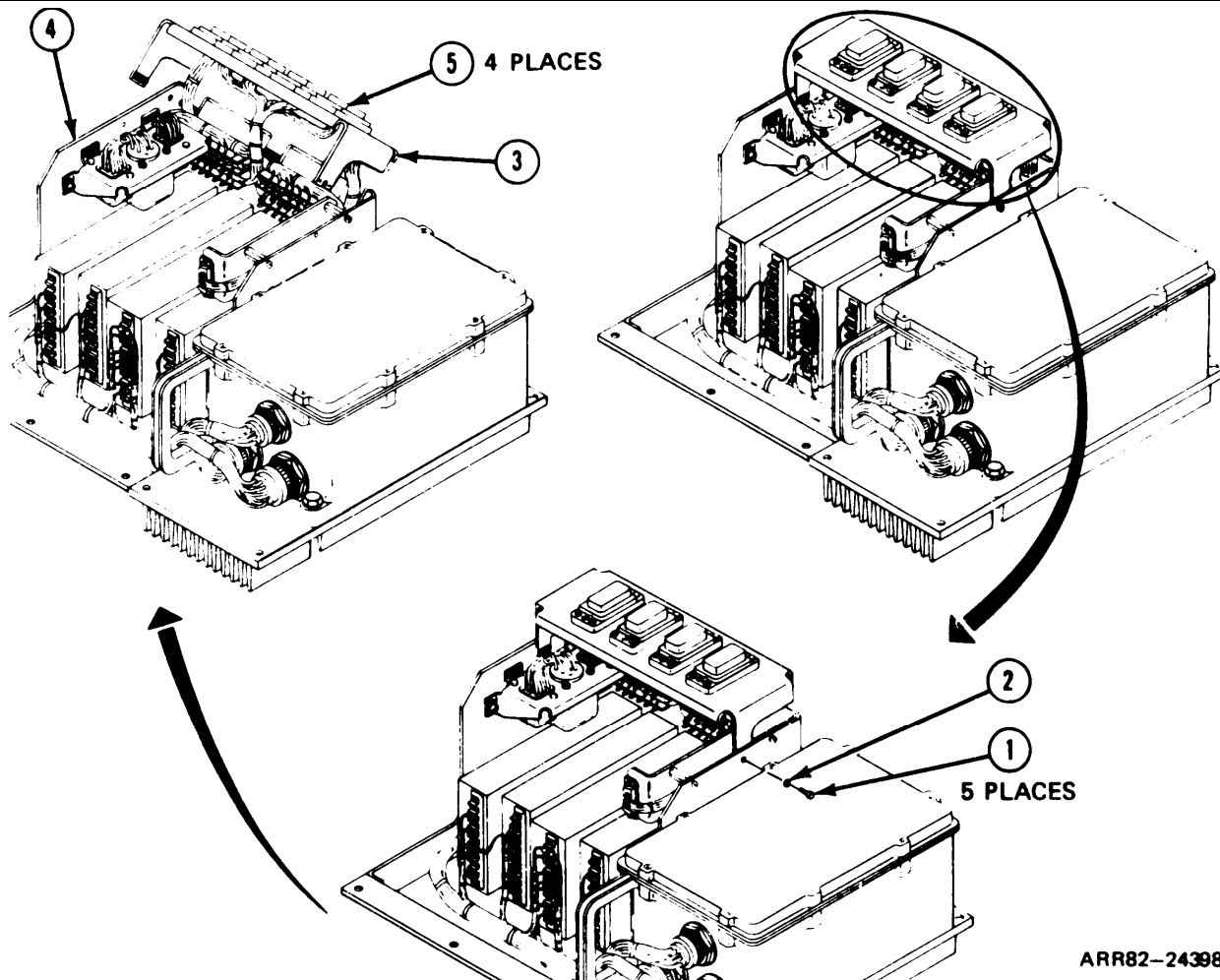
Remove Bracket:

1. Unscrew and takeout five machine screws (1) and flat washers (2) using screwdriver.
2. Tilt connector bracket (3) off enclosure (4).
3. Look at connector bracket (3) for cracks, dents, or loose plain self-locking nuts. If bad, repair connector bracket (3); refer to task 3.
4. Look at each receptacle connector body (5) for loose or damaged electrical contacts. If bad, repair connector (5) by replacing bad contacts; refer to task 3.
5. Look at each connector (5) for cracks or other damage. If bad, replace connector (5); refer to task 3.

Follow-on Maintenance:

NOTE: To install connector bracket, refer to task 21.

TASK 2 ENDS HERE



ARR82-24398

TASK 3. Repair Connector Bracket.

Applicability: All Models

Common Tools:

Crimp Tool, 5120-01-019-0812
Pliers, diagonal cutting
Removal Tool, 5120-01-019-0803
Screwdriver, cross tip, No. 1
Wrench, combination, 5-32-inch

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Contact, electrical (81349) 5999-00-478-4402 (as required)
Lockwasher (96906) MS35338-135 (four required per connector)
Nut, self-locking, plain (96906) MS21076L08 (as required)
Pencil, writing (item 19)
Rivet, solid (96906) MS20426AD3-6
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6 for access only; refer to task 1.
4. Remove connector bracket; refer to task 2.

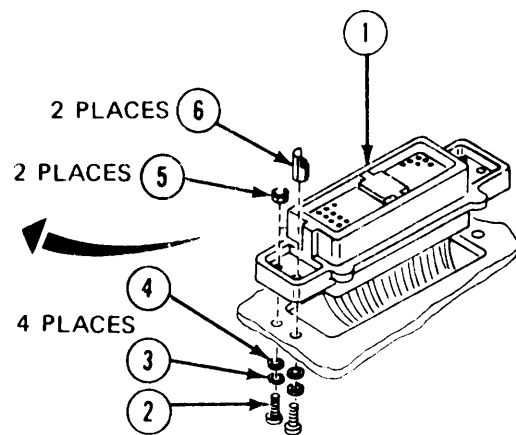
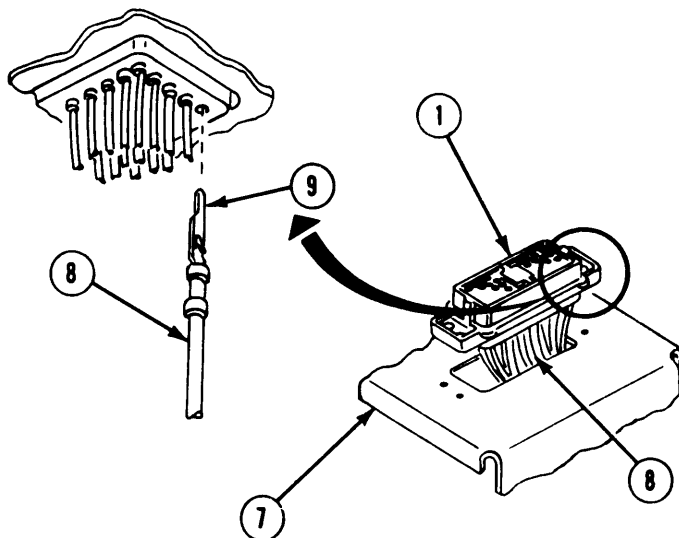
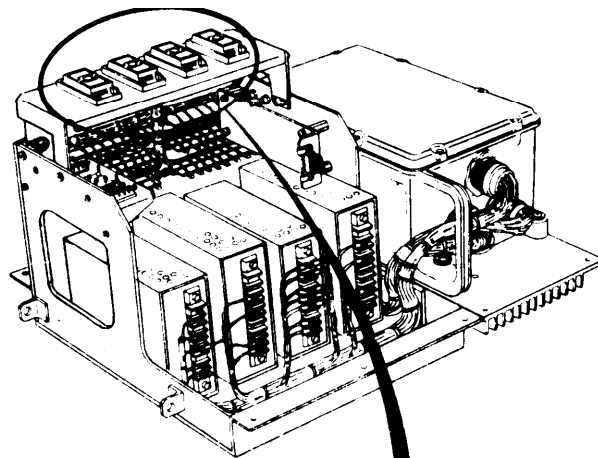
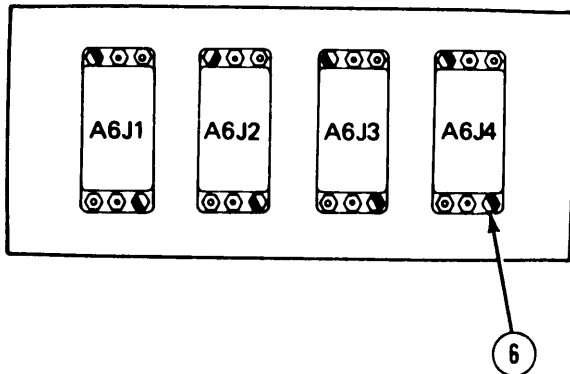
FRAME 4

Remove Receptacle Connector Body A6J1 through A6J4:

NOTE

- This task removes one or more connectors A6J1 through A6J4. Connector A6J1 (1) is shown.
- If connector bracket is bad, remove all four connectors.
- If connector bracket and all connectors are OK, GO TO FRAME 7.
- Read paragraph 2-4 on tagging wires and replacing contacts before doing any work.

1. Unscrew and take out four machine screws (2), lockwashers (3), flat washers (4), two nuts (5), and two electrical polarizing keys (6) with screwdriver and wrench. Get rid of lockwashers (3).
2. Slowly lift connector (1) off connector bracket (7) to get to wires (8).
3. Look at connector (1) for loose or damaged electrical contacts (9). If bad, repair connector A6J1, A6J2, A6J3, or A6J4 by replacing bad contacts; refer to frame 6.
4. Using removal tool, pull out contacts (9) (with wires attached) from connector (1).
5. Look at connector (1) for cracks or other damage. If bad, turn in connector (1).
GO TO FRAME 5



ARR82-24399

FRAME 5

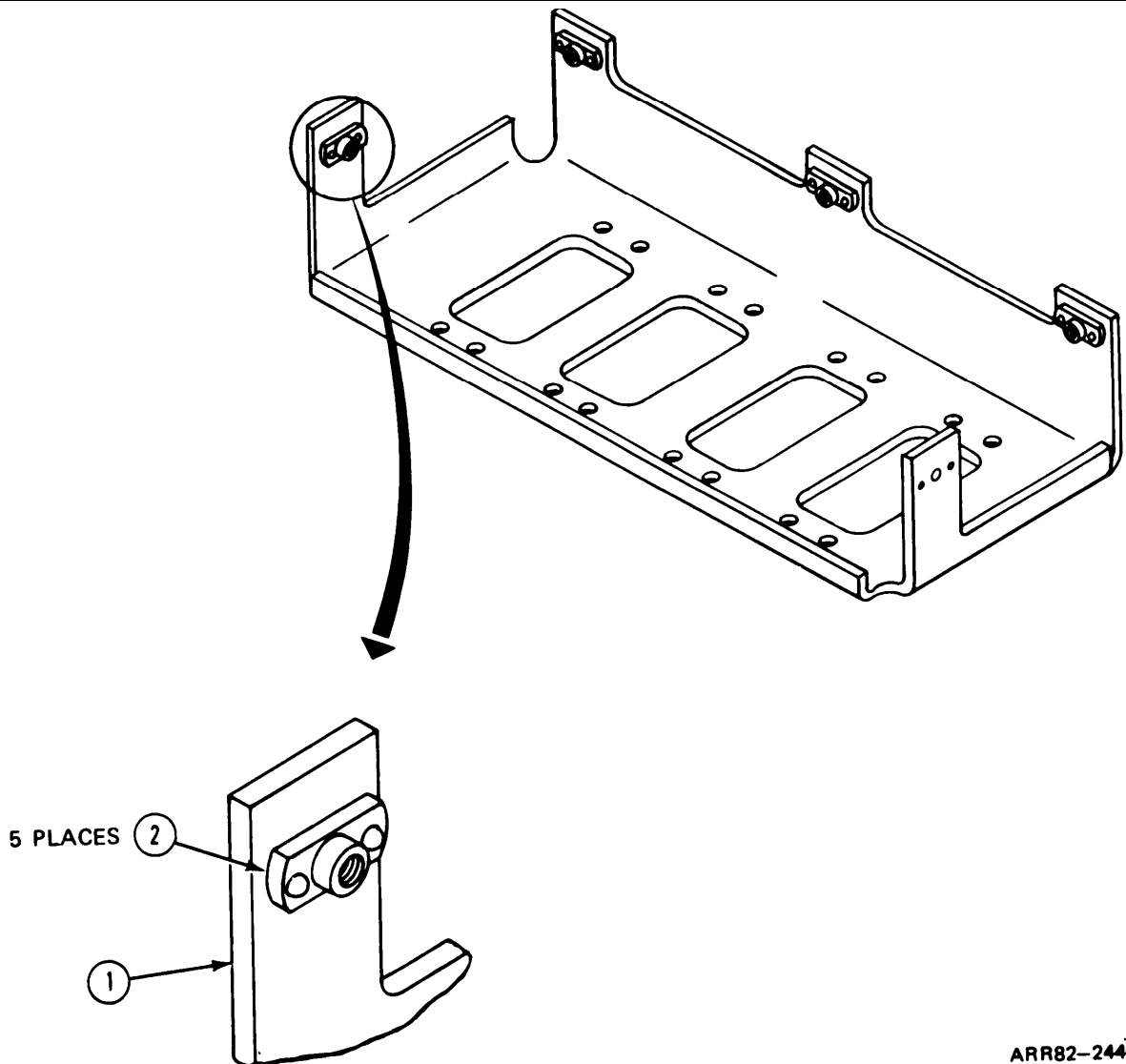
Repair Connector Bracket:

NOTE

- If connector bracket is OK, GO TO FRAME 70
- Read paragraph 2-4 on replacing nutplates before doing any work.

1. Look at connector bracket (1) for cracks or dents. If bad, turn in connector bracket (1).
2. Look at plain self-locking nuts (2). Replace all loose nuts (2).

GO TO FRAME 6



ARR82-24400

FRAME 6

Replace Contacts:

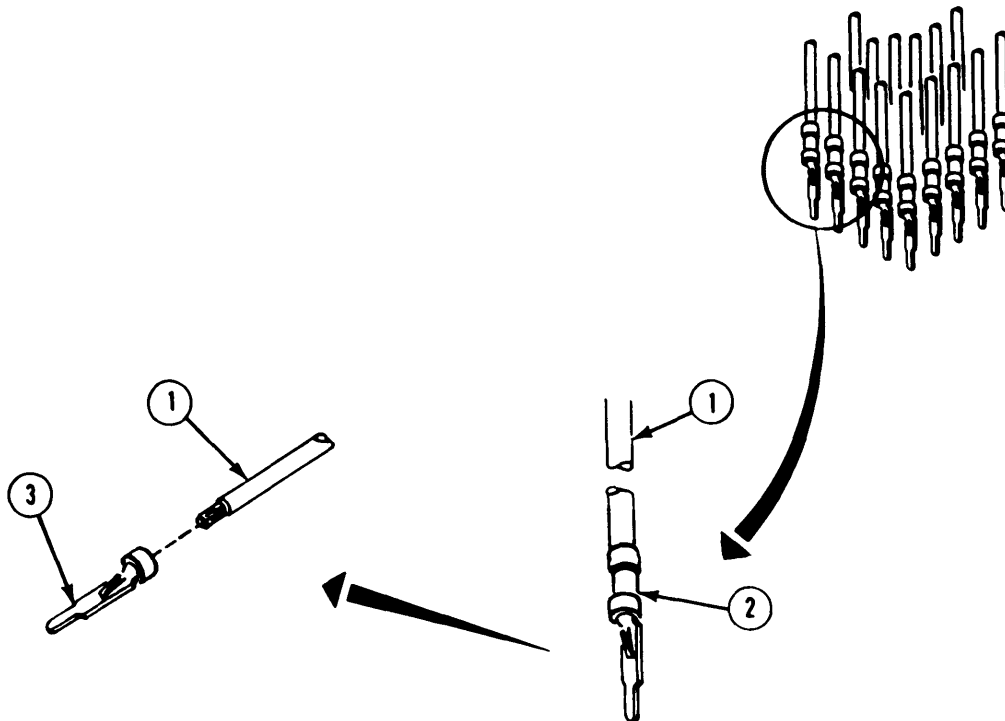
NOTE

Use this task to repair contacts on any of four connectors A6J1, A6J2, A6J3, or A6J4.

If all contacts are OK GO TO FRAME 7.

1. Cut wire(1) near contact (2) with pliers. Get rid of contact (2).
2. Using stripping tool, strip wire (1).
3. Insert stripped wire (1) into new contact (3).
4. Fasten contact (3) to wire (1) with crimping tool.

GO TO FRAME 7



ARR82-24401

FRAME 7

Install Connector:

NOTE

Use this task to install any of four connectors A6J1, A6J2, A6J3, or A6J4. Connector A6J1 (1) is shown.

Read paragraph 2-4 on installing contacts before doing any work.

1. Put wire contacts (2) in connector (1).

CAUTION

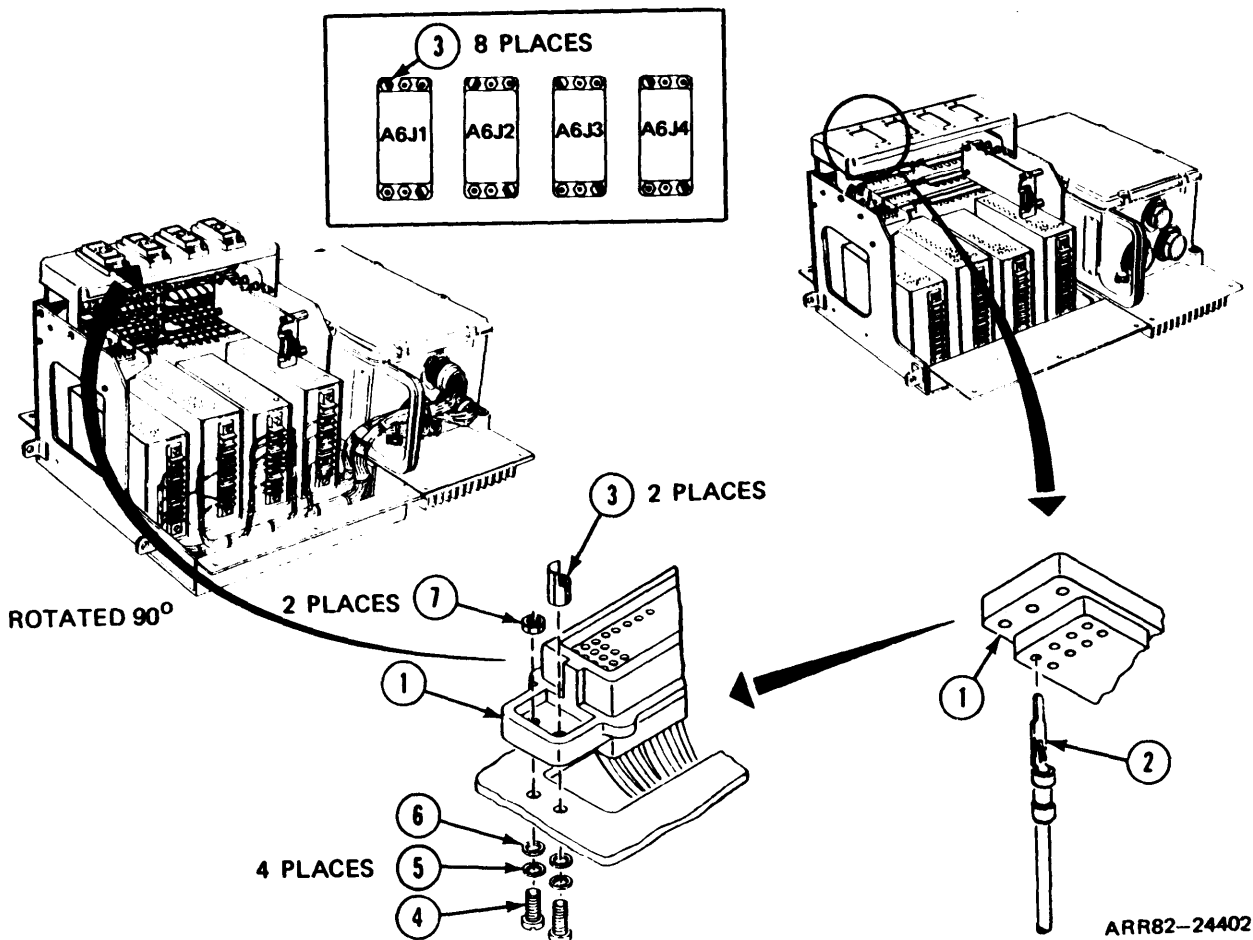
If keys (3) are put back in turned the wrong way on connector (1), the wrong plug may be installed on connector and equipment can be damaged. Be sure to put keys (3) back in as shown in connector identifier box on diagram.

2. Screw in four screws (4), new lockwashers (5), washers (6), two nuts (7), and two keys (3) on connector (1) with screwdriver and wrench.

Follow-on Maintenance:

NOTE: To install connector bracket, refer to task 21.

TASK 3 ENDS HERE



TASK 4. Replace Relay K1, K2, or K3.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Set, soldering and resoldering
Wrench, socket, 1/4-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-136 (as required)
Pencil, writing (Item 19)
Relay, electromagnetic K1, K2 (96906) MS27400-9
Relay, electromagnetic K3 (96906) MS27418-1B
Solder (Item 29)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.
4. Remove connector bracket; refer to task 2.
5. Remove relay bracket; refer to task 5.

FRAME 8

Remove Electromagnetic Relay K1 or K2:

CAUTION

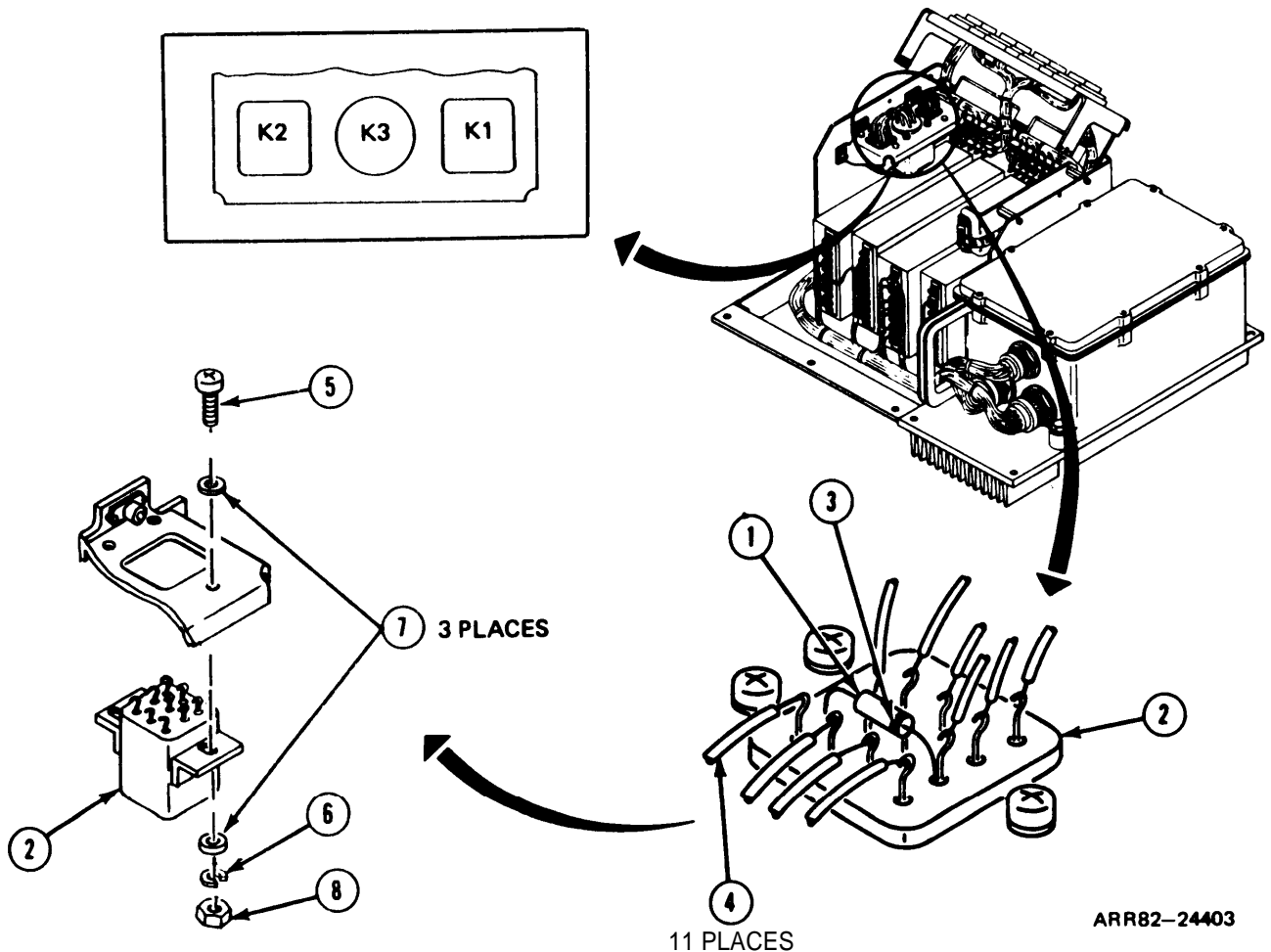
If semiconductor device (1) is put back on relay (2) backwards, electrical components will be damaged. When unsoldering semiconductor (1) make sure semiconductor (1) is tagged to show band (3) in proper direction on relay (2).

NOTE

- Read paragraph 2-40 on tagging and soldering wires before doing any work.
- To remove relay K1 or K2, go to step 1. Relay K1 (2) is shown.

To remove relay K3, GO TO FRAME 9.

1. Tag and unsolder 11 wires (4) and semiconductor (1) from relay (2).
 2. Unscrew and take off three machine screws (5), three lockwashers (6), six flat washers (7), and three hexagon plain nuts (8) with screwdriver and wrench. Get rid of lockwashers (6).
 3. Takeout relay (2). If bad, turn in. If OK, set aside for later use.
 4. Look at semiconductor (1) for cracks. If bad, turn in. If OK, set aside for later use.
- GO TO FRAME 9 OR 10



FRAME 9

Remove Relay K3:

CAUTION

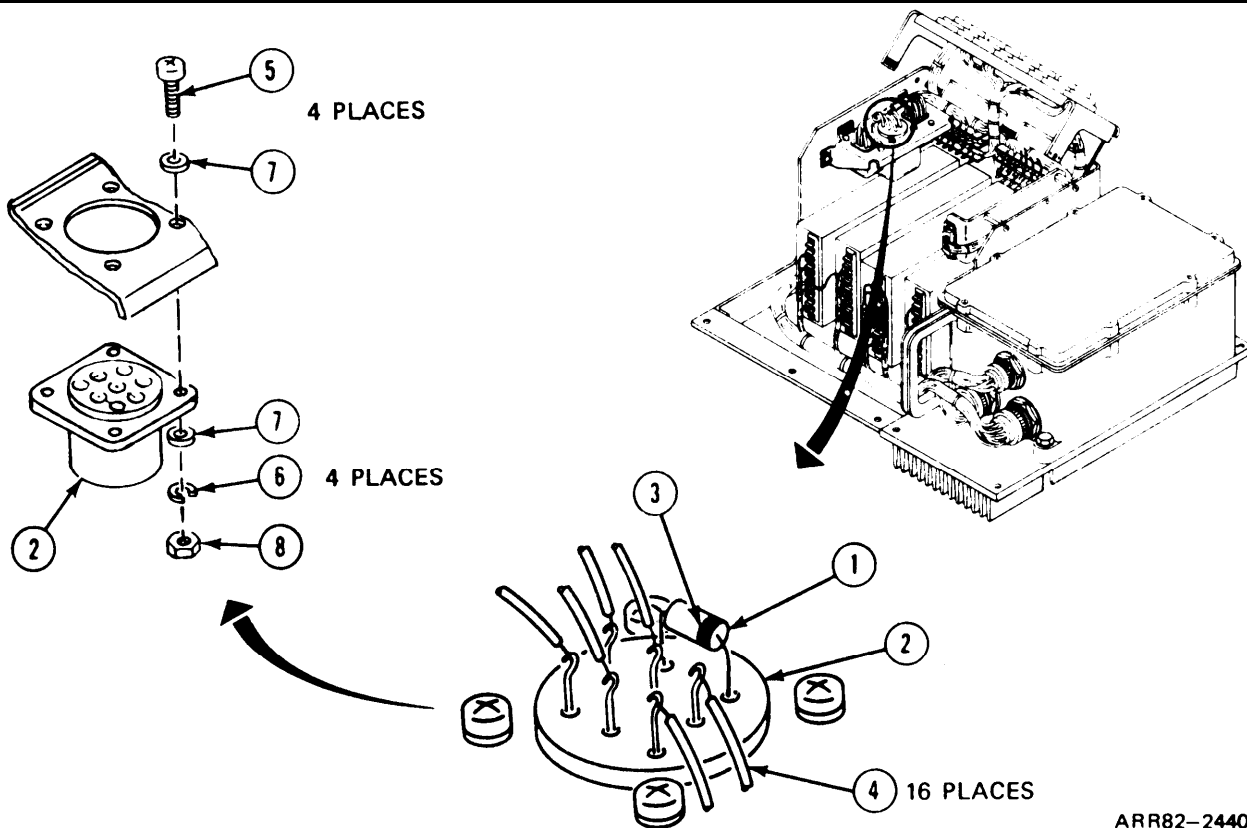
If semiconductor (1) is put back on relay (2) backwards, electrical components will be damaged. When unsoldering semiconductor (1), make sure semiconductor (1) is tagged to show band (3) in proper direction on relay (2).

NOTE

Read paragraph 2-4 on soldering and tagging wires before doing any work.

1. Tag and unsolder wires (4) and semiconductor (1) from relay (2).
2. Unscrew and take off four screws (5), four lockwashers (6), eight washers (7), and four nuts (8) with screwdriver and wrench. Get rid of lockwashers (6).
3. Take out relay (2). If bad, turn in. If OK, set aside for later use.
4. Look at semiconductor (1) for cracks. If bad, turn in. If OK, set aside for later use.

GO TO FRAME 10



ARR82-24404

FRAME 10

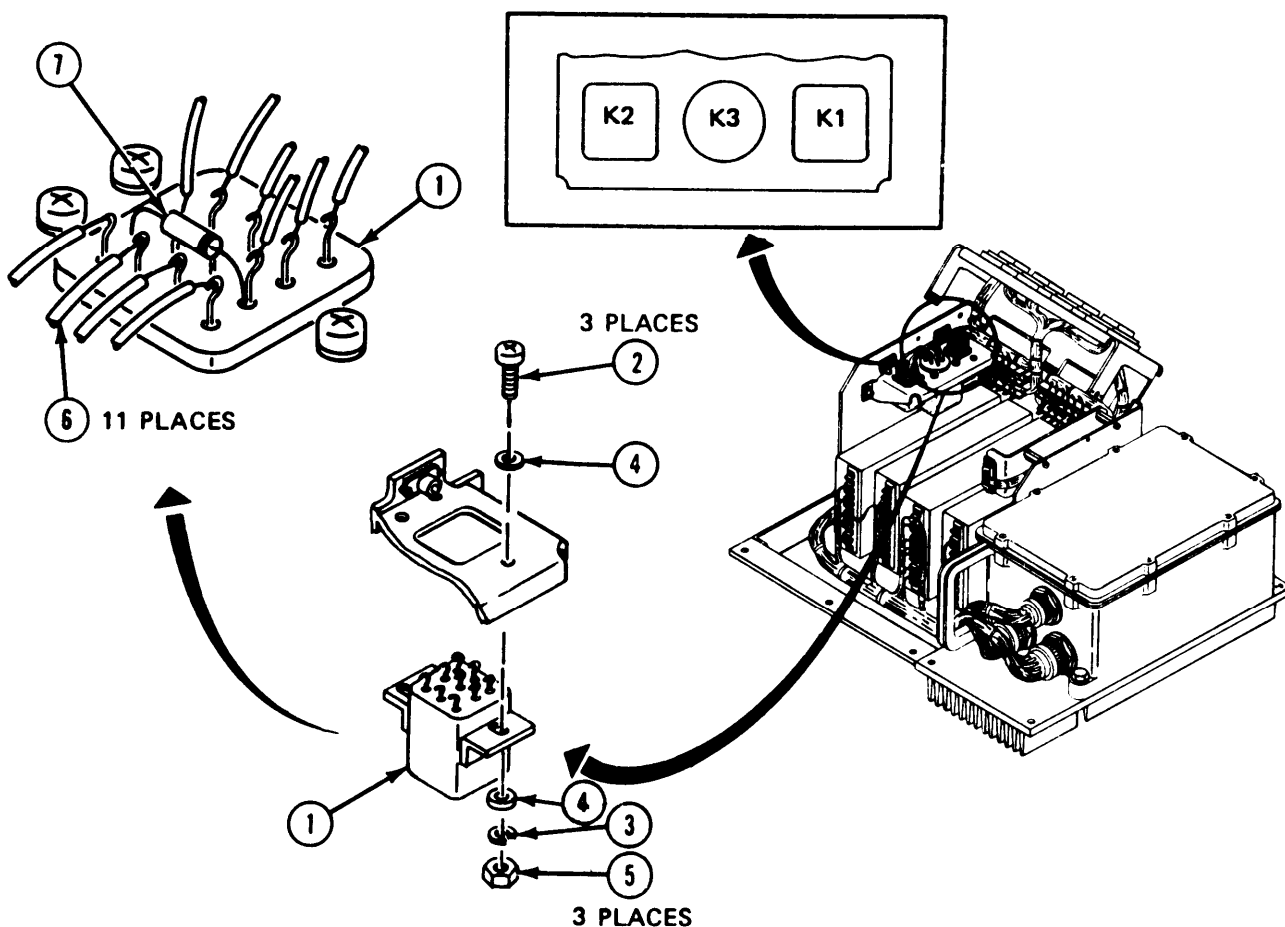
Install Relay K1 or K2:

NOTE

- Use this procedure to install either relay K1 or K2. Relay K1 (1) is shown.
- To install relay K3, GO TO FRAME 11.

1. Screw in three screws (2), three new lockwashers (3), six washers (4), and three nuts (5) with screwdriver and wrench.
2. Install relay bracket; refer to task 20.
3. Solder 11 wires (6) and semiconductor (7) to relay (1); refer to wiring chart, frame 12.

GO TO FRAME 11



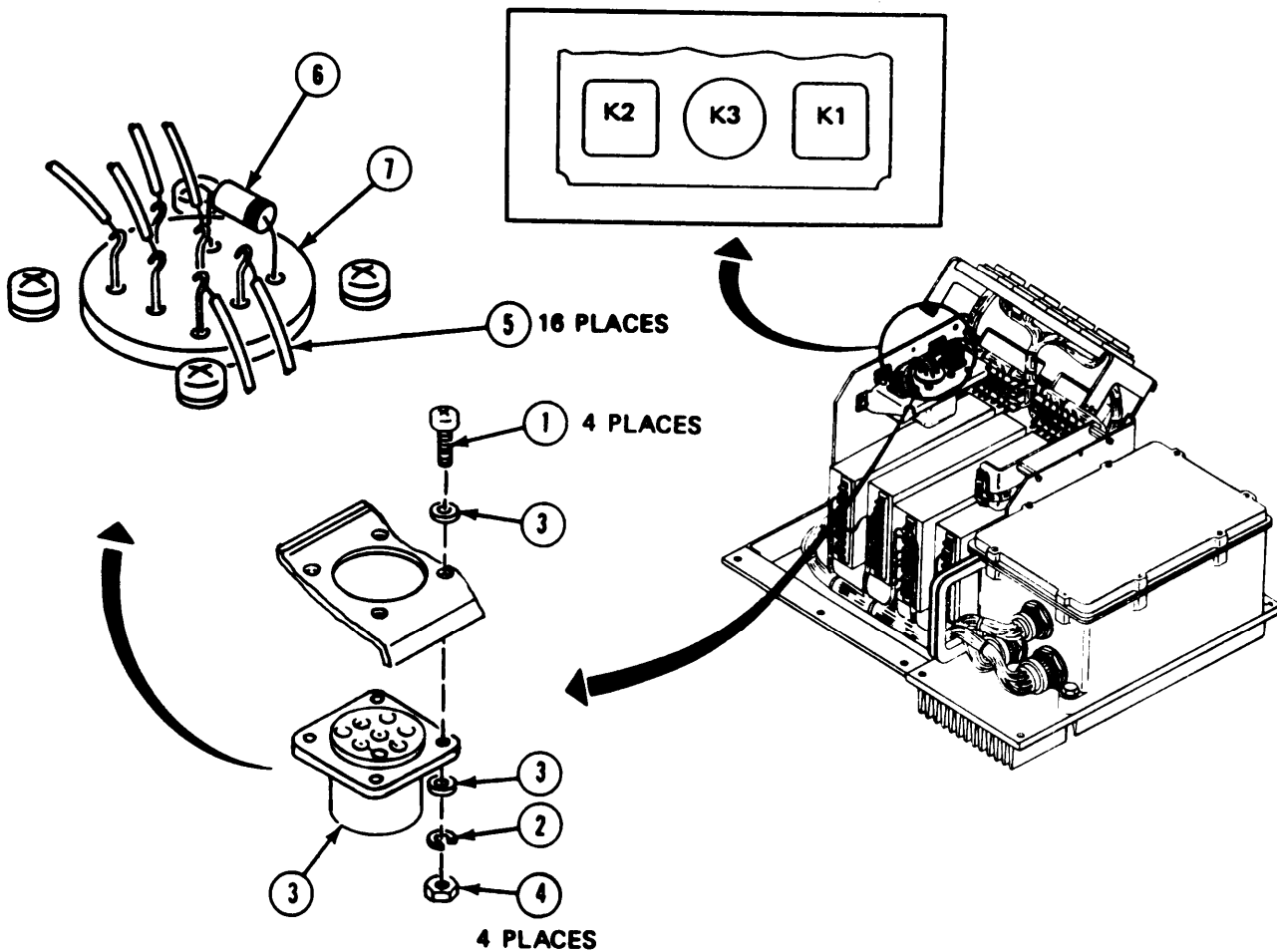
ARR82-24405

FRAME 11

Install Relay K3:

1. Screw in four screws (1), four new lockwashers (2), eight washers (3), and four nuts (4) with screwdriver and wrench.
2. Install relay bracket; refer to task 20.
3. Solder 16 wires (5) and semiconductor (6) to relay (7); refer to wiring chart, frame 12.

GO TO FRAME 12



ARR82-24406

FRAME 12

Install Relay K1, K2, K3:

Wiring Chart for Relays K1, K2, K3

From	To	From	To	From	To
K1-X1	K2-X1	K2-X1	K1-X1	K3-X1	TB 1 -52
K1-X1	TB1-51	K2-X2	A6J2-E2	K3-X2	A6J3-P1
K1-X2	A6J2-E 1	K2-B1	K1-B1	K3-B1	K1-B1
K1-B1	K2-B1	K2-C1	K1-C1	K3-B1	A6J3-E4
K1-B1	K3-B 1	K2-C1	K2-D2	K3-B1	A6J3-E2
K1-C1	K2-C1	K2-C2	TB1-58	K3-B1	A6J3-A1
K1-C1	K3-C1	K2-B2	TB1-57	K3-B2	TB1-50
K1-C1	K 1-D2	K2-D1	A6J2-G8	K3-C2	TB1-63
K 1-B2	TB1-48			K3-C1	A6J3-E5
K 1-C2	TB1-49			K3-C1	A6J3-E3
K 1-D3	A6J2-G7			K3-C1	A6J3-A2
				K3-C1	K1-C1

Follow-on Maintenance:

1. Install connector bracket; refer to task 21.
2. Install power module A6; refer to task 22.
3. Install thermal system test controller; refer to para.2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 4 ENDS HERE

TASK 5. Remove Relay Bracket.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.
4. Remove connector bracket; refer to task 2.

FRAME 13

Remove Relay Bracket:

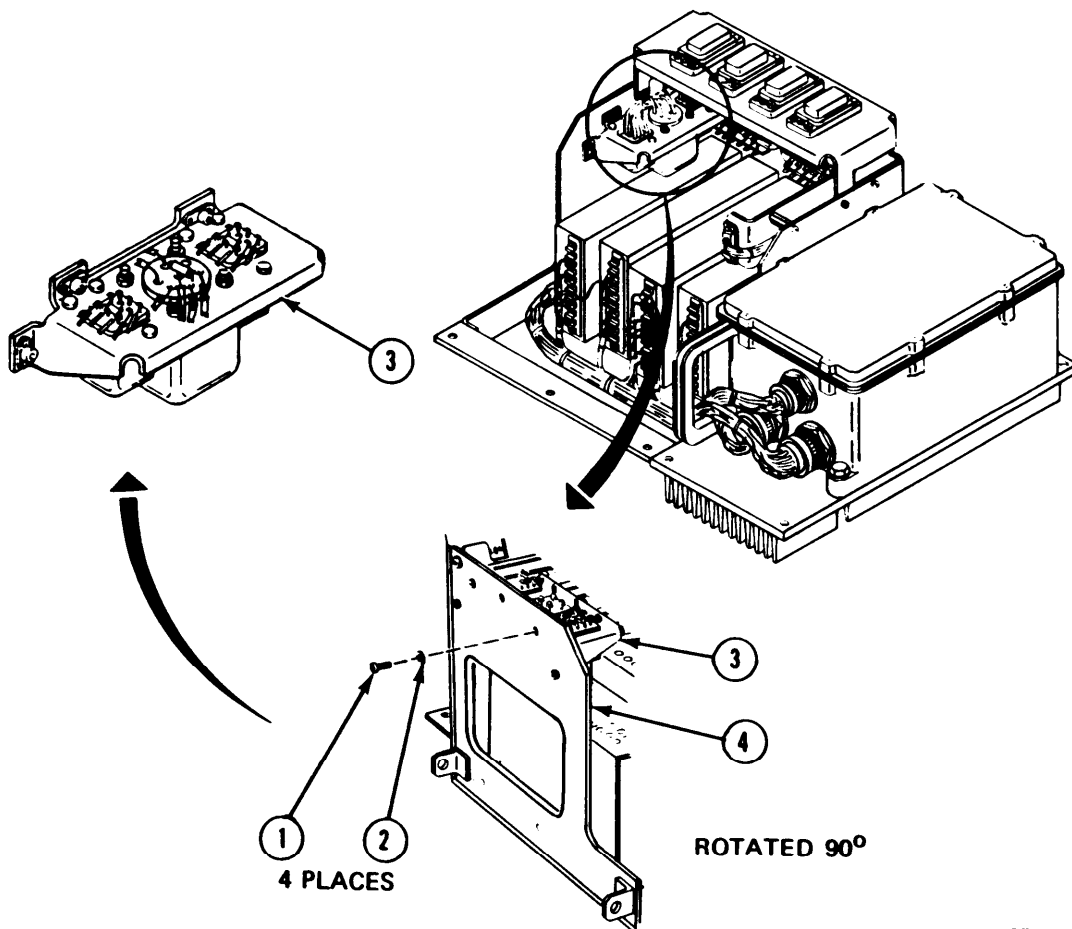
1. Unscrew and takeout four machine screws (1) and flat washers (2) with screwdriver.
2. Take out relay bracket (3) from enclosure (4).

NOTE

If performing task for accessorily, go to follow-on maintenance, and TASK 5 ENDS HERE.

3. Look at relay bracket (3) for cracks, dents, or loose nutplates. If bad, GOT O FRAME 14. If OK, set aside for later use, go to follow-on maintenance, and TASK 5 ENDS HERE.

GO TO FRAME 14



FRAME 14

Repair Relay Bracket:

NOTE

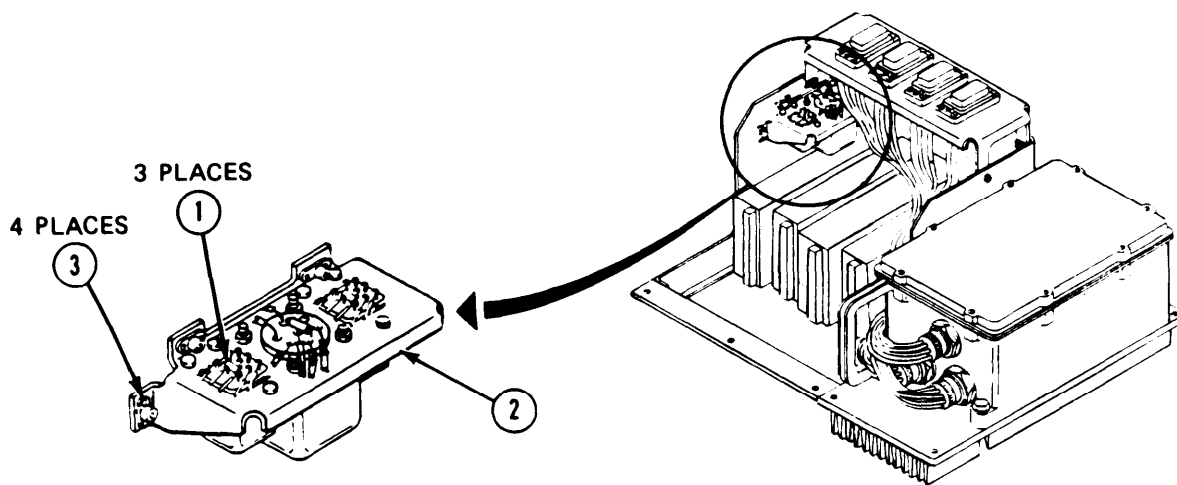
Read paragraph 2-4 on replacing nutplates before doing any work.

1. Remove electromagnetic relays (1) from relay bracket (2); refer to task 4.
2. Look at relay bracket (2) for cracks or dents. If bad, turn in relay bracket (2).
3. Look at plain self-locking nuts (3). Replace all loose nuts (3).
4. Install relays (1) on relay bracket (2); refer to task 4.

Follow-on Maintenance:

NOTE: To install relay bracket, refer to task 20.

TASK 5 ENDS HERE



ARR82-24408

TASK 6. Remove Circuit Card Assembly A2.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Screwdriver, flat tip

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.
4. Remove power control unit A6A1; refer to para, 2-10, task 1.

FRAME 15

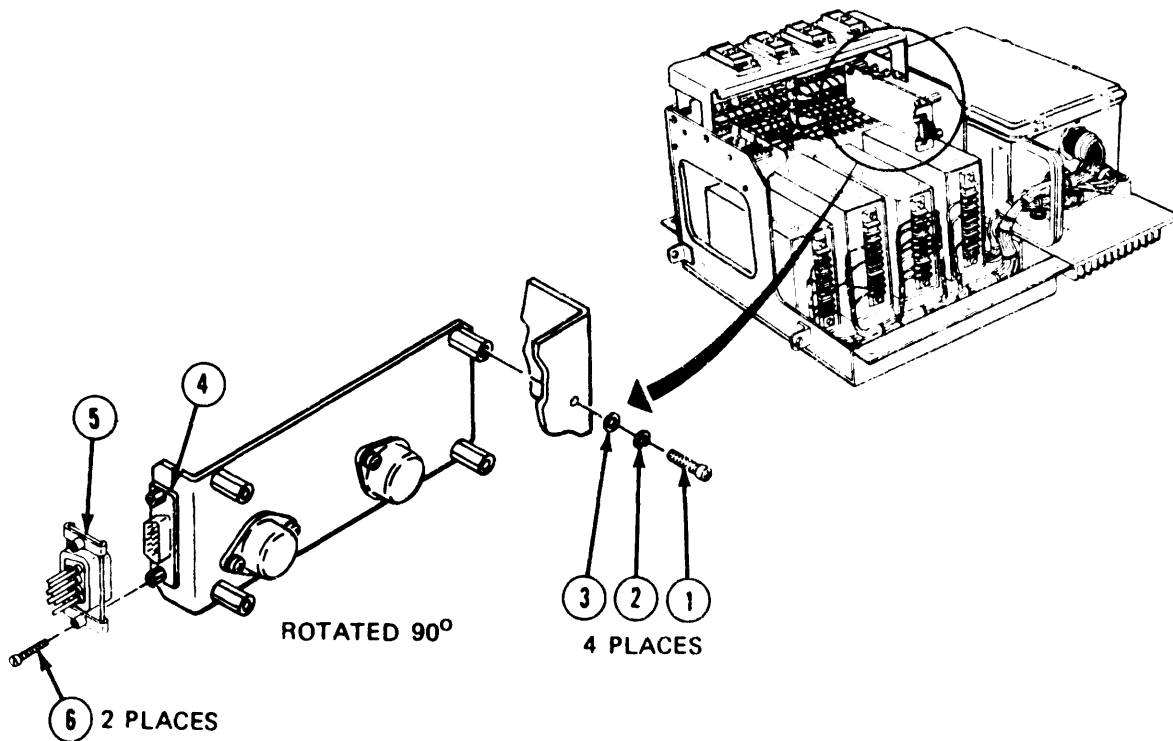
Remove Circuit Card Assembly A2:

1. Unscrew two screws (1) holding receptacle connector P1 (2) to circuit card assembly (3) using flat tip screwdriver.
2. Unscrew and take out four machine screws (4), lockwashers (5), and flat washers (6) from circuit card assembly (3) with cross tip screwdriver. Get rid of lockwashers (5).
3. Lift out and position circuit card assembly (3) so connector P1 (2) is exposed.
4. Take off connector P1 (2) from circuit card assembly (3).
5. Look at circuit card assembly (3) for cracks or bends. If bad, turn in. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install circuit card assembly A2, refer to task 19.

TASK 6 ENDS HERE



ARR82-24409

TASK 7. Remove Terminal Boards.

Applicability: All Models

Common Tools:

Pliers, diagonal cutting
Screwdriver, cross tip, No. 1
Set, soldering and resoldering

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Pencil, writing (Item 19)
Solder (Item 29)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.
4. Remove connector bracket; refer to task 2.
5. Remove relay bracket; refer to task 5.
6. Remove circuit card assembly A2; refer to task 6.

FRAME 16

Remove Terminal Board:

NOTE

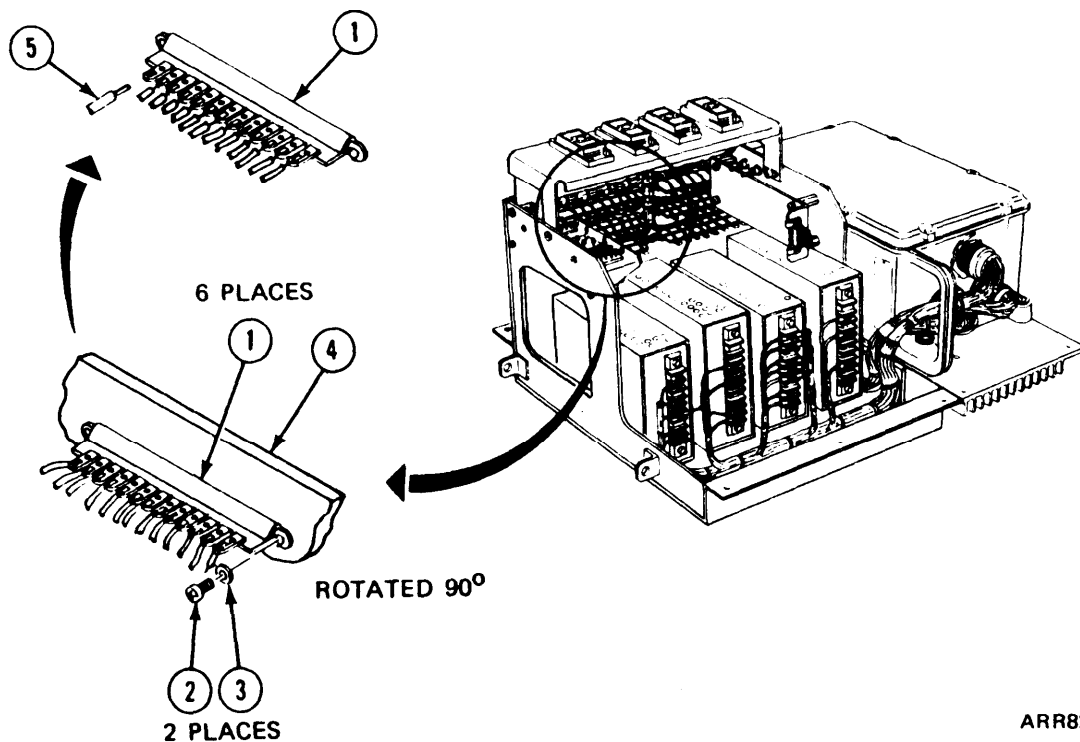
- If terminal board (1) is being removed for access only, do steps 1 and 2 only.
- Read paragraph 2-4 on tagging and soldering wires before doing any more work.
- Use this task to replace any of six terminal boards (1).

1. Unscrew and take out two machine screws (2) and flat washers (3) from terminal board (1) with screwdriver.
2. Carefully pull terminal board (1) away from wall of enclosure (4).
3. Cut lacing tape as needed to gain access to wires (5) with pliers.
4. Tag and unsolder wires (5) from terminal board (1).
5. Turn in bad terminal board (1).
6. Solder wires (5) to new terminal board (1).

Follow-on Maintenance:

NOTE: To install terminal boards, refer to task 18.

TASK 7 ENDS HERE



ARR82-24410

TASK 8. Remove Power Supply PS1, PS2, PS3, or PS4.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 1

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

Pencil, writing (Item 19)

Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.

FRAME 17

Remove Power Supply:

NOTE

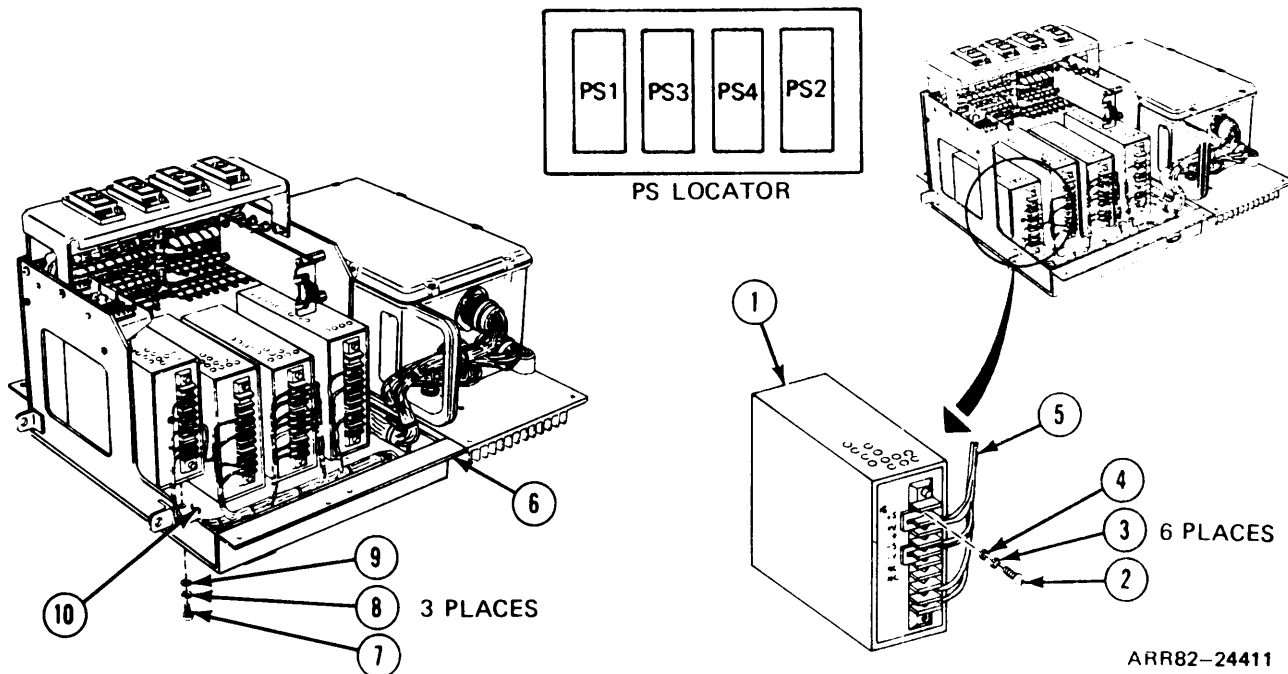
- Use this task to remove power supply PS1, PS2, PS3, or PS4. Power supply PS1 is shown.
- Read paragraph 2-4 on tagging wires before doing any work.
- If power supply (1) is being removed for access; do steps 1, 2, and 3 only.

1. Unscrew and take out six screws (2), lockwashers (3), and washers (4) holding wires (5) to power supply (1) with screwdriver.
2. Tilt power module (6) enough to unscrew and take out three machine screws (7), lockwashers (8), and washers (9) from enclosure (10) with screwdriver. Get rid of lockwashers (8).
3. Slowly take out power supply (1).
4. If power supply (1) is bad, turn in. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install power supply PS1, PS2, PS3, or PS4, refer to task 17.

TASK 8 ENDS HERE



TASK 9. Remove Power Module Base.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Wrench, combination, 11/32-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.
4. Remove power control unit A6A1; refer to para. 2-10, task 1.

FRAME 18

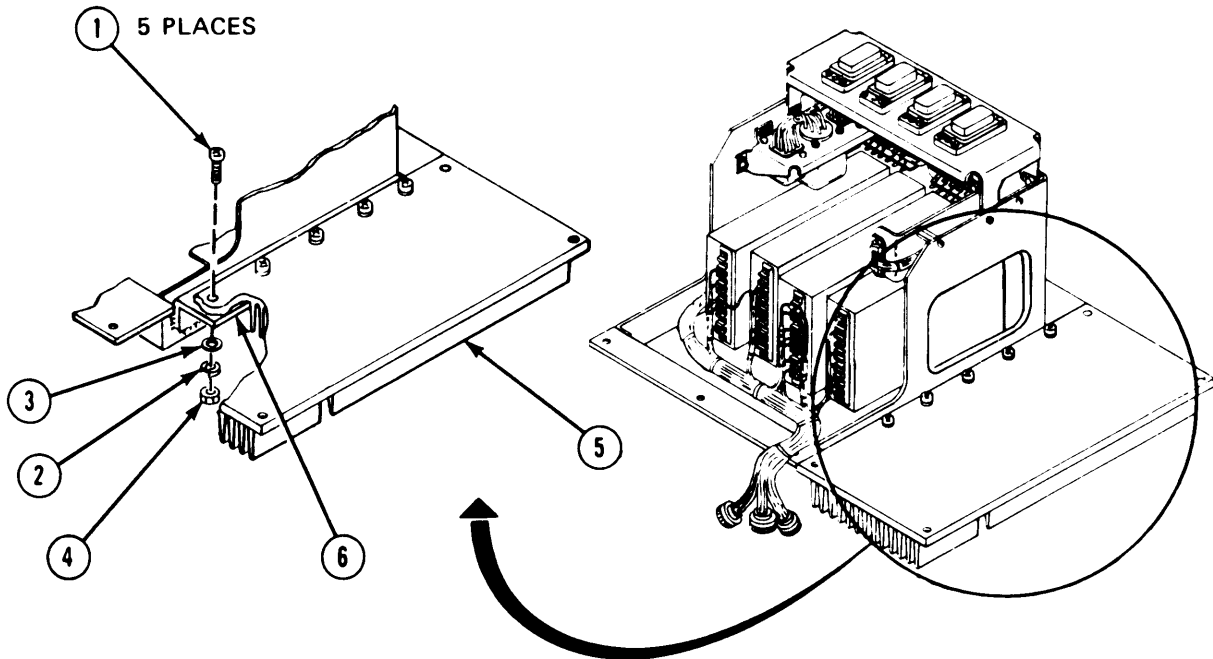
Remove Power Module Base:

1. Take out five machine screws (1), lockwashers (2), flat washers (3), and hexagon plain nuts (4) with screwdriver and wrench. Get rid of lockwashers (2).
2. Remove base (5) from enclosure angle (6).
3. Look at power module base (5) for cracks. If bad, turn in. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install power module base, refer to task 16.

TASK 9 ENDS HERE



ARR82-24412

TASK 10. Replace Electrical Plug Connectors A6A1P1, A6A1P2, or A6A1P3.

Applicability: All Models

Common Tools:

Pliers, diagonal cutting

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies:

NOTE Expendable supplies are defined in volume 1, appendix C.

Connector, plug, electrical (96906) M83723/75R22-55N (as required)

Connector, plug, electrical (81349) MS3475L22-55PW (as required)

Connector, plug, electrical (96906) MS3475L20-41P (as required)

Pencil, writing (Item 19)

Strap, tiedown, electrical components (as required) (Item 32)

Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.

FRAME 19

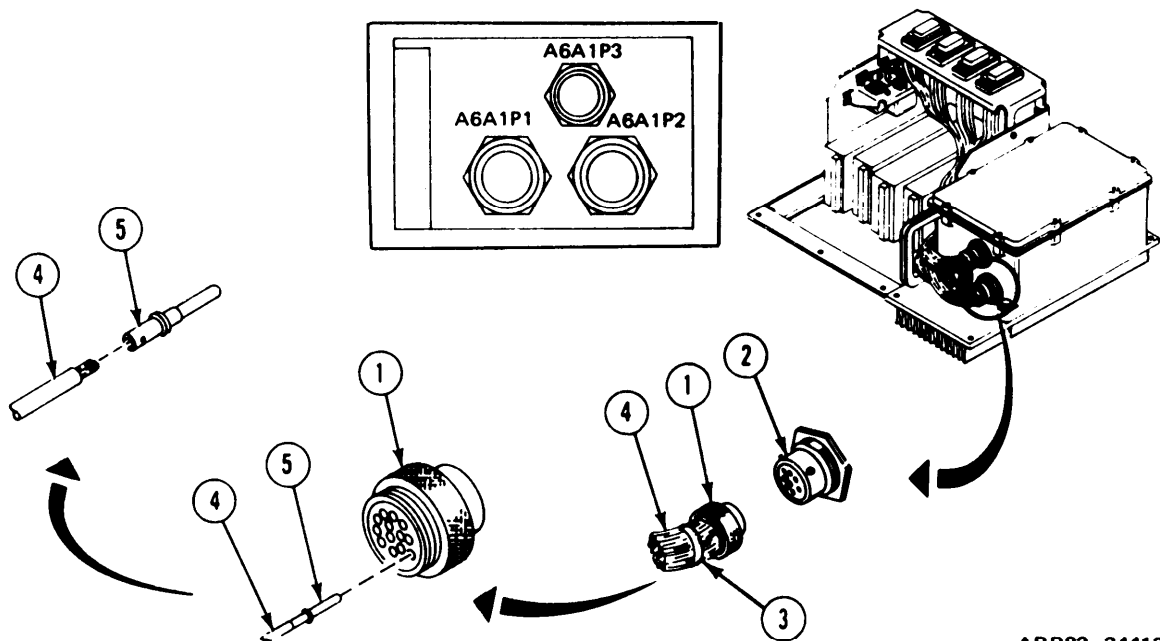
Remove Connector:

NOTE

- Read paragraph 2-4 on tagging wires, crimping wires, and replacing contacts before doing any work.
- Use this task to replace electrical plug connector A6A1P1, A6A1P2, or A6A1P3. Connector A6A1P2 is shown.

1. Disconnect connector (1) from PCU connector A6A1P2 (2).
2. Cut tiedown straps (3) with pliers as needed for access.
3. Remove wires (4) to damaged connector (1) with extract tool. Turn in connector (1).
4. Look at contacts (5) for bends, breaks, or corrosion. If bad, replace contacts (5).

GO TO FRAME 20



ARR82-24413

FRAME 20

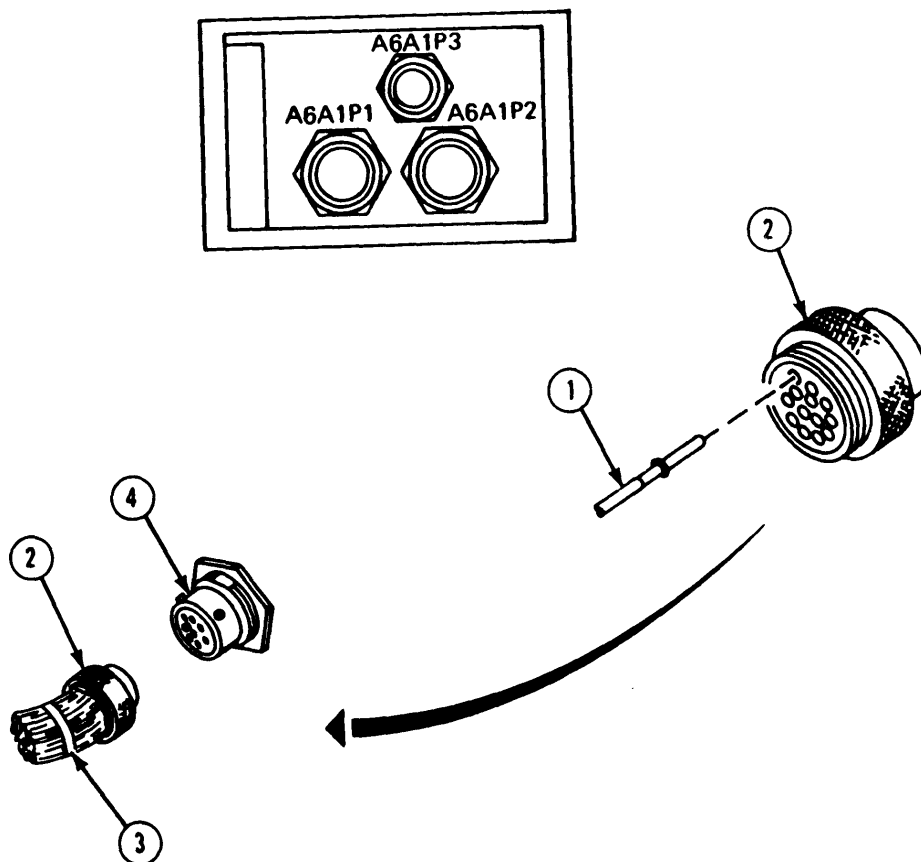
Install Connector:

1. Using insert tool, install wires (1) in new connector (2).
2. Put on tiedown straps (3).
3. Plug connector (2) into PCU connector A6A1P2 (4).

Follow-on Maintenance:

1. Install power module A6; refer to task 22.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 10 ENDS HERE



ARR82-24414

TASK 11. Replace Receptacle Connector A6J5.

Applicability: All Models

Common Tools:

Socket, 1/4-inch drive, 3/16-inch
Socket Wrench, ratchet, 1/4-inch square drive
Wrench, combination, 3/16-inch

Special Tools:

Maintenance Kit, electrical connector repair, 12285360
Wrench set, socket 12285468

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Connector, receptacle (81349) M24308/2-1
Pencil, writing (Item 19)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.

FRAME 21

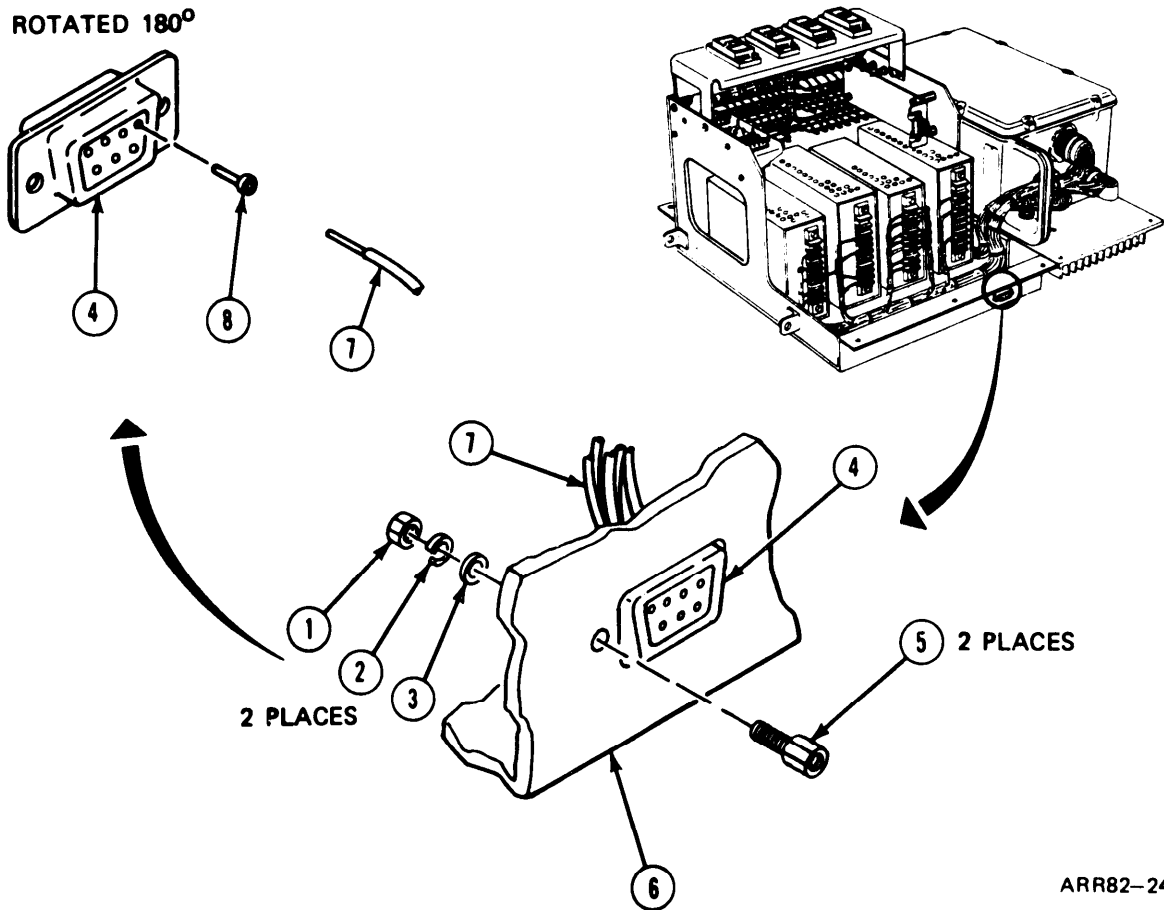
Remove Connector:

NOTE

Read paragraph 2-4 on tagging and crimping wires before doing any work.

1. Remove two nuts (1), lockwashers (2), and washers (3) from connector (4) with wrench, socket, and ratchet.
2. Take out connector (4) and electrical polarizing keys (5) from enclosure (6) with socket, ratchet, and wrench.
3. Using extract tool, remove wires (7) from connector (4). Get rid of connector (4).
4. Look at contacts (8) for bends, breaks, or corrosion. If bad, replace contacts (8).

GO TO FRAME 22



FRAME 22

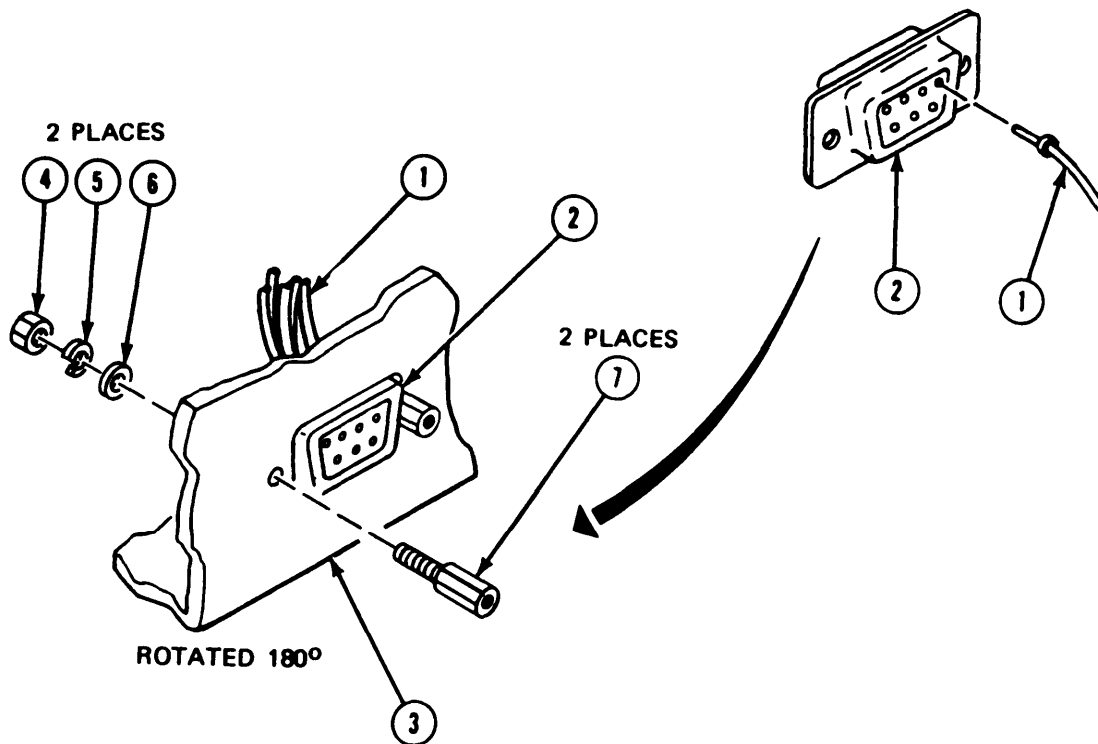
Install Connector:

1. Using insert tool, install wires (1) in new connector (2).
2. Position connector (2) on enclosure (3). Screw on two nuts (4), lockwashers (5), washers (6), and keys (7).
3. Torque nuts (4) between 5 and 6 pound-inches (0.57 and 0.68 Newton meter) with socket, torque wrench, and combination wrench.

Follow-on Maintenance:

1. Install power module A6; refer to task 22.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 11 ENDS HERE



ARR82-24416

TASK 12. Replace Receptacle Connector A6P1.

Applicability: All Models

Common Tools:

Insert-Extract Tool, 5120-01-015-4209
Screwdriver, flat tip

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Connector, receptacle (81349) M24308/2-2
Pencil, writing (Item 19)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.

FRAME 23

Remove Connector:

NOTE

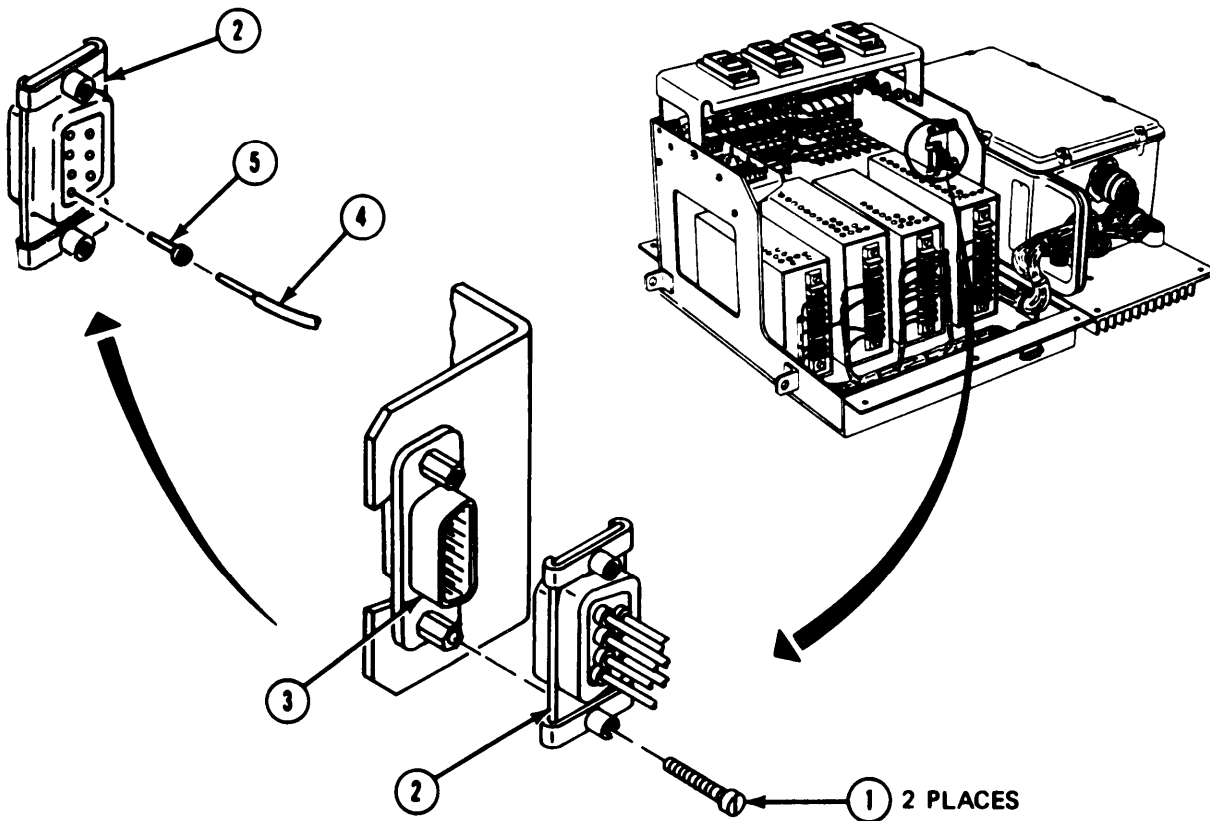
Read paragraph 2-4 on tagging and crimping wires before doing any work.

1. Unscrew and takeout two screws (1) from connector (2) with screwdriver.
2. Pull connector (2) off of receptacle connector J1 (3).
3. Using extract tool, remove wires (4) from connector (2). Look at contacts (5), if bad replace contacts (5). Turn in connector (2).

Install Connector:

4. Using insert tool, install wires (4) in new connector (2); refer to wiring chart, frame 24.
5. Position connector (2) on connector J1 (3) and tighten two screws (1) with screwdriver.

GO TO FRAME 24



ARR82-24417

FRAME 24

NOTE

Use this wiring chart for reference only.

Wiring Chart for Connector A6P1

From	To	From	To
A6P1-1	TB1-66	A6P1-11	TB1-46
A6P1-3	TB1-67	A6P1-13	TB1-68
A6P1-5	TB1-45	A6P1-15	TB1-69
A6P1-7	TB1-44	A6P1-4	A6J3-C4
A6P1-9	TB1-47	A6P1-12	TB1-50

Follow-on Maintenance:

1. Install power module A6; refer to task 22.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover, refer to volume 1, para. 4-18.

TASK 12 ENDS HERE

TASK 13. Replace Terminal Lug.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 2
Screwdriver, cross-tip, No. 2
Set, soldering and resoldering
Wrench, combination, 1/4-inch

Special Tools:

Wrench Set, socket, 12285468

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-136 (two required)
Pencil, writing (Item 19)
Solder (Item 29)
Tag, marker (as required) (Item 34)
Terminal Lug (19200) 12303323

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.

FRAME 25

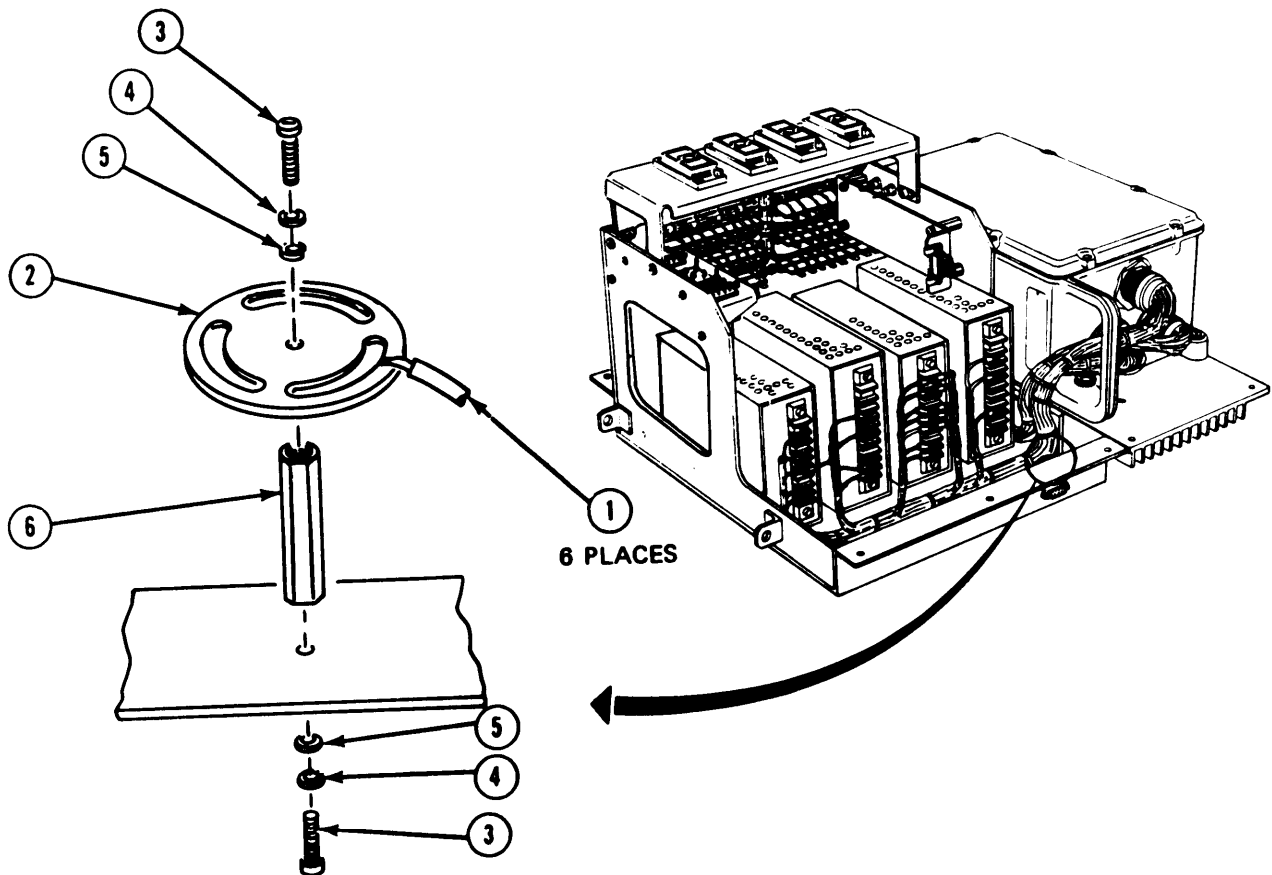
Remove Terminal Lug:

NOTE

Read paragraph 2-4 on tagging and crimping wires before doing any work.

1. Tag and unsolder six wires (1) from terminal lug (2).
2. Unscrew and take off two machine screws (3), lockwashers (4), and flat washers (5) with screwdriver and wrench. Get rid of lockwashers (4).
3. Take off electrical-mechanical post (6) and terminal lug (2).

GO TO FRAME 26



ARR82-24418

FRAME 26

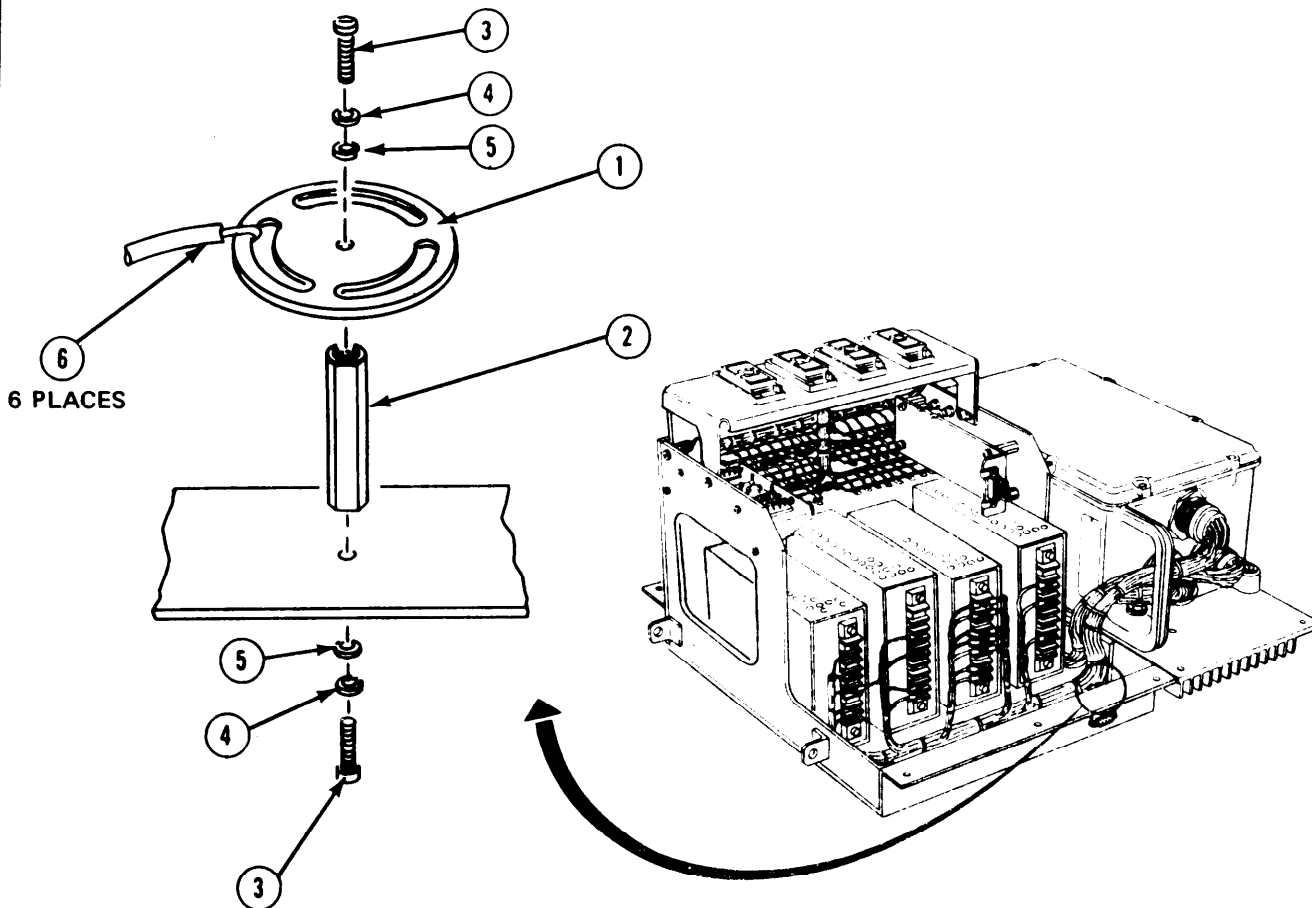
Install Terminal Lug:

1. Position new terminal lug (1) with post (2) in place.
2. Screw in two screws (3), new lockwashers (4), and washers (5) with screwdriver and bit. Torque screws between 6 and 7 pound inches (0.67 and 0.79 Newton meter).
3. Solder six wires (6) to terminal lug (1).

Follow-on Maintenance:

1. Install power module A6; refer to task 22.
2. Install thermal system test controller; refer para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 13 ENDS HERE



ARR82-24419

TASK 14. Replace Tiewrap Support.

Applicability: All Models

Common Tools:

Pliers, diagonal cutting
Screwdriver, cross tip, No. 1
Wrench, combination 1/4-inch

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-136
Strap, tiedown (96906) MS3367-1-9 (as required)
Support, tiewrap (19200) 12303132

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

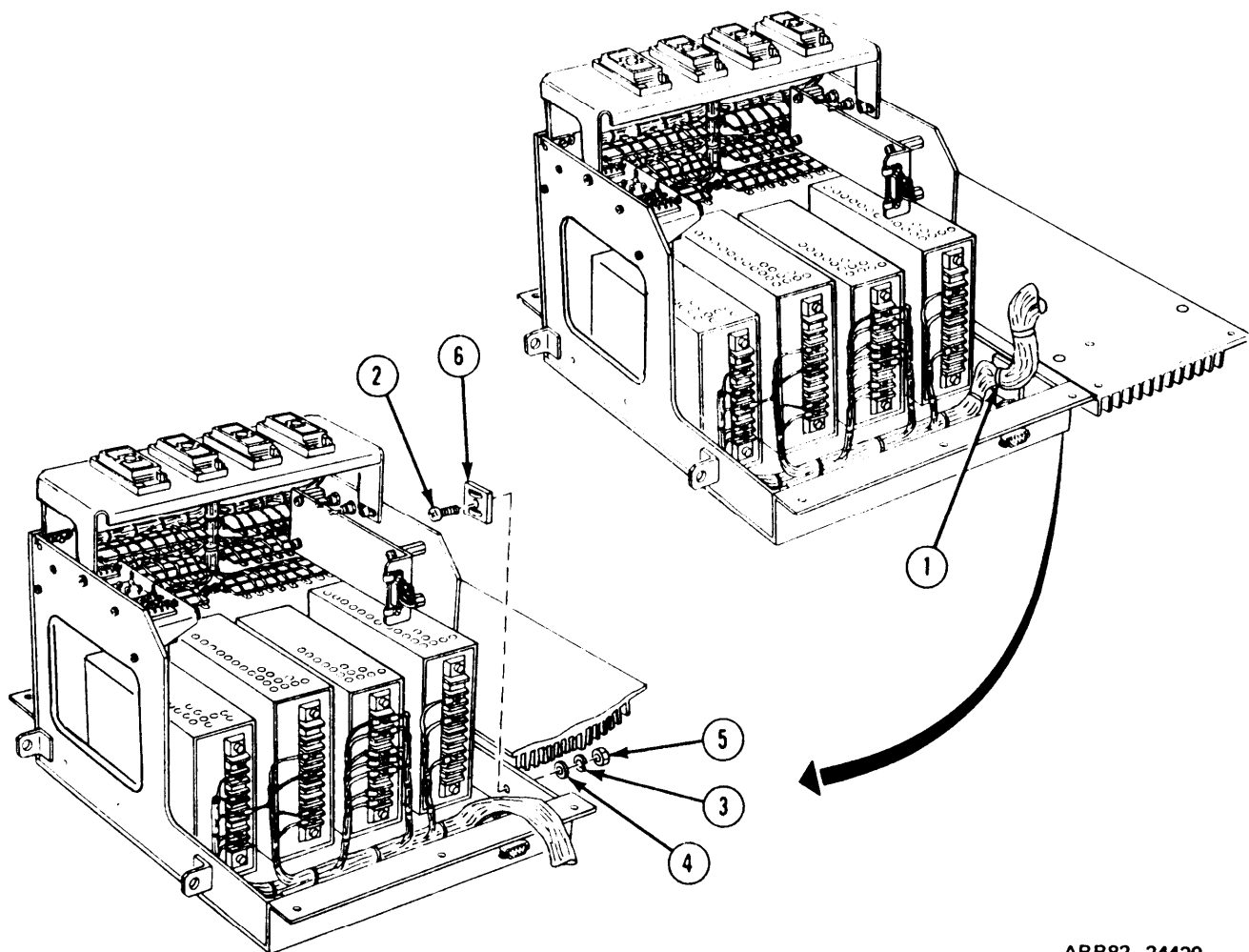
1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.
4. Remove power control unit A6A1; refer to para. 2-10, task 1.

FRAME 27

Remove Support:

1. Cut off electrical tiedown strap (1) with pliers.
2. Unscrew and take out machine screw (2), lockwasher (3), flat washer (4), and hexagon plain nut (5) with screwdriver and wrench. Get rid of lockwasher (3).
3. Take off tiwrap support (6).

GO TO FRAME 28



ARR82-24420

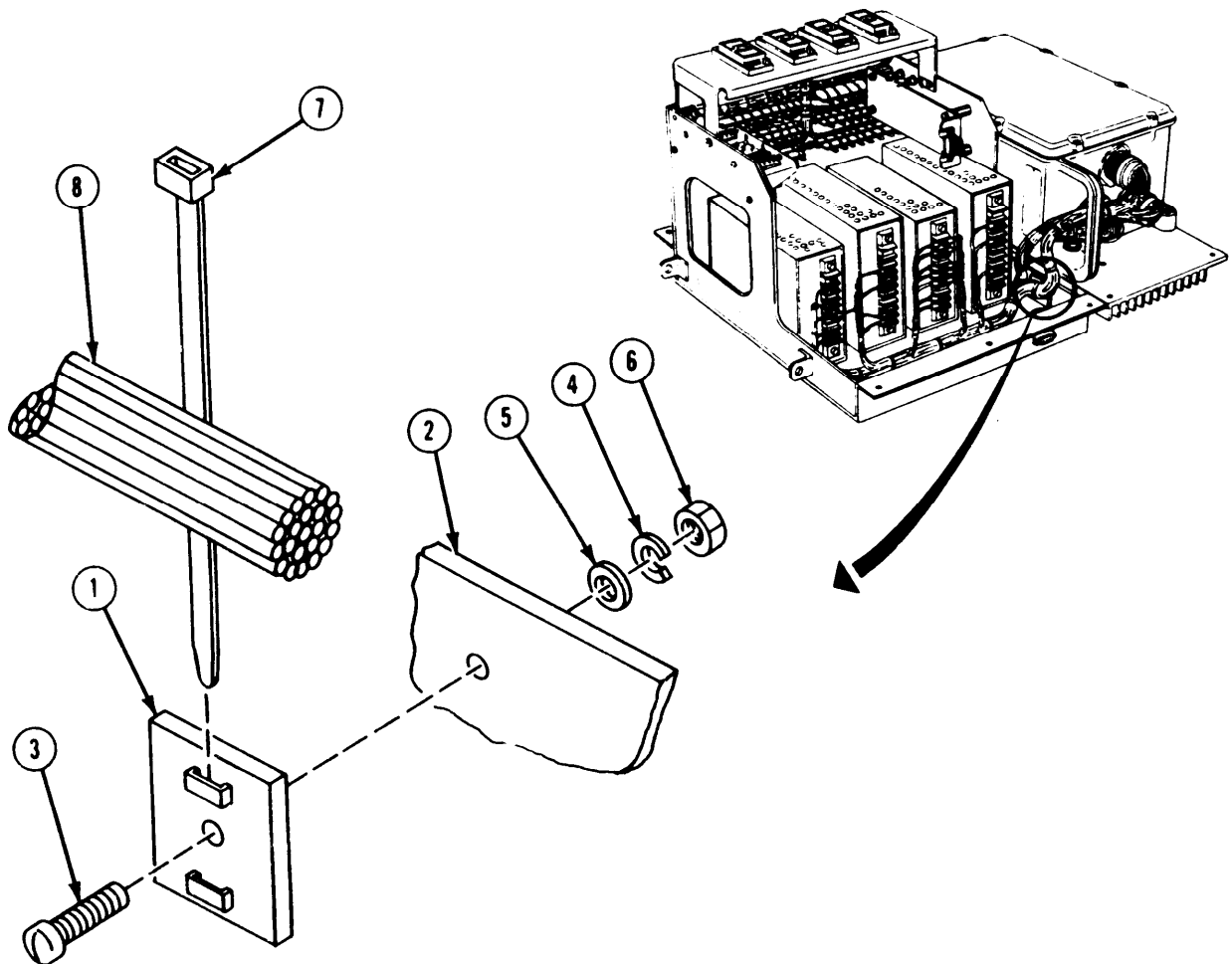
FRAME 28**Install Support:**

1. Peel backing off support (1) and position support (1) on enclosure (2).
2. Put in and tighten screw (3), new lockwasher (4), washer (5), and nut (6) with screwdriver and wrench.
3. Put tiedown strap (7) around cables (8) and through support (1).

Follow-on Maintenance:

1. Install power control unit A6A1; refer to para. 2-10, task 2.
2. Install power module A6; refer to task 22.
3. Install thermal system test controller; refer to para. 2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 14 ENDS HERE



ARR82-24421

TASK 15. Replace Enclosure.

Applicability: All Models

Common Tools:

Pliers, diagonal cutting

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Enclosure, power module, (19200) 12303518
Strap, tiedown, electrical components (Item 32)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

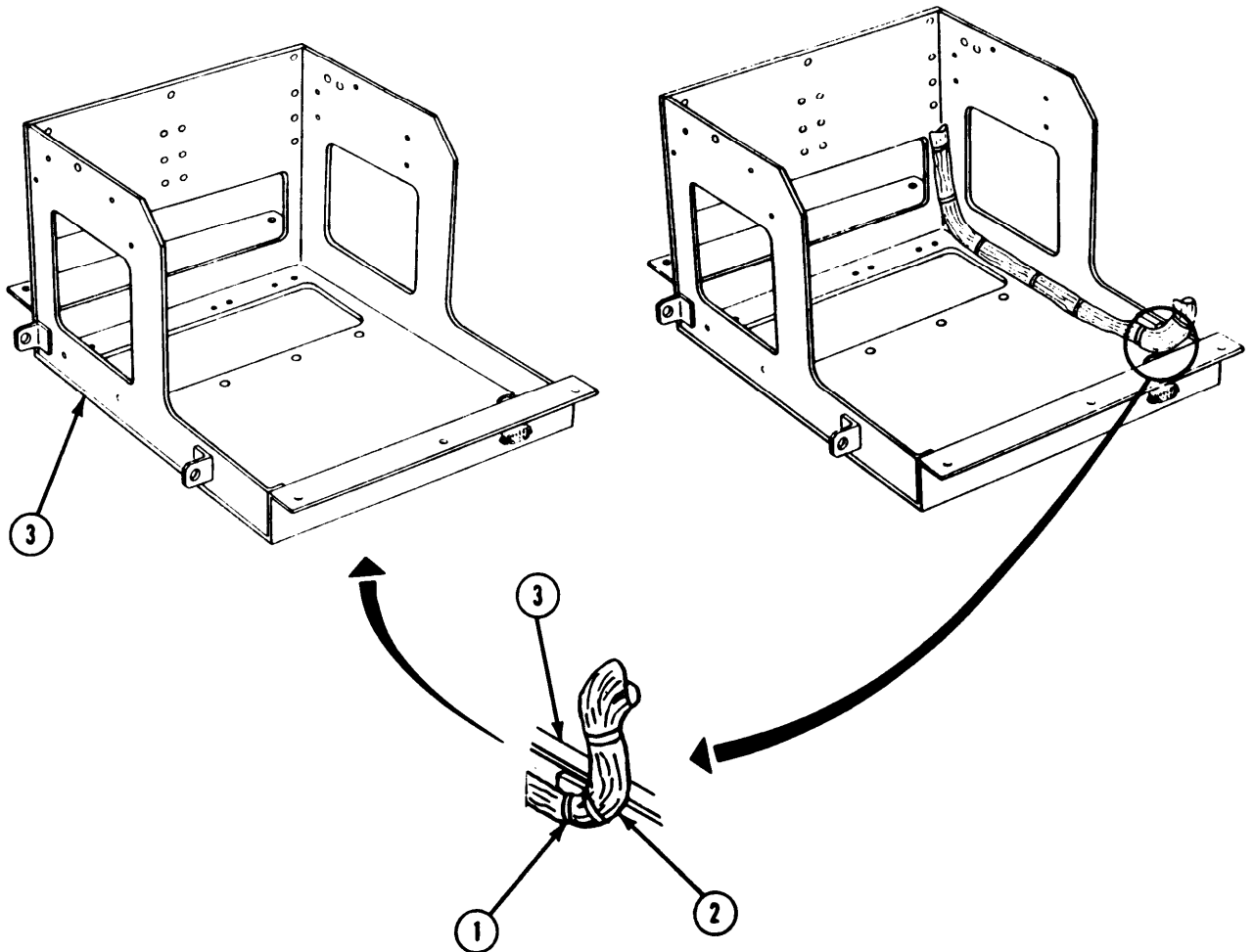
1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller refer to para. 2-5, task 2.
3. Remove power module A6; refer to task 1.
4. Remove power control unit A6A1; refer to para. 2-10, task 1.
5. Remove connector bracket; refer to task 2.
6. Remove relay bracket; refer to to task 5.
7. Remove circuit card assembly A2; refer to task 6.
8. Remove terminal boards; refer to task 7.
9. Remove power supplies PS1, PS2, PS3, and PS4; refer to task 8.
10. Remove receptacle connector A6J5; refer to task 11.
11. Remove terminal lug; refer to task 13.
12. Remove power module base; refer to task 9.

FRAME 29

Remove Enclosure:

1. Cut tiedown strap (1) with pliers.
2. Carefully lift out wiring harness (2) from enclosure (3). Set wiring harness (2) aside for later use. Turn in enclosure (3).

GO TO FRAME 30



ARR82-24422

FRAME 30

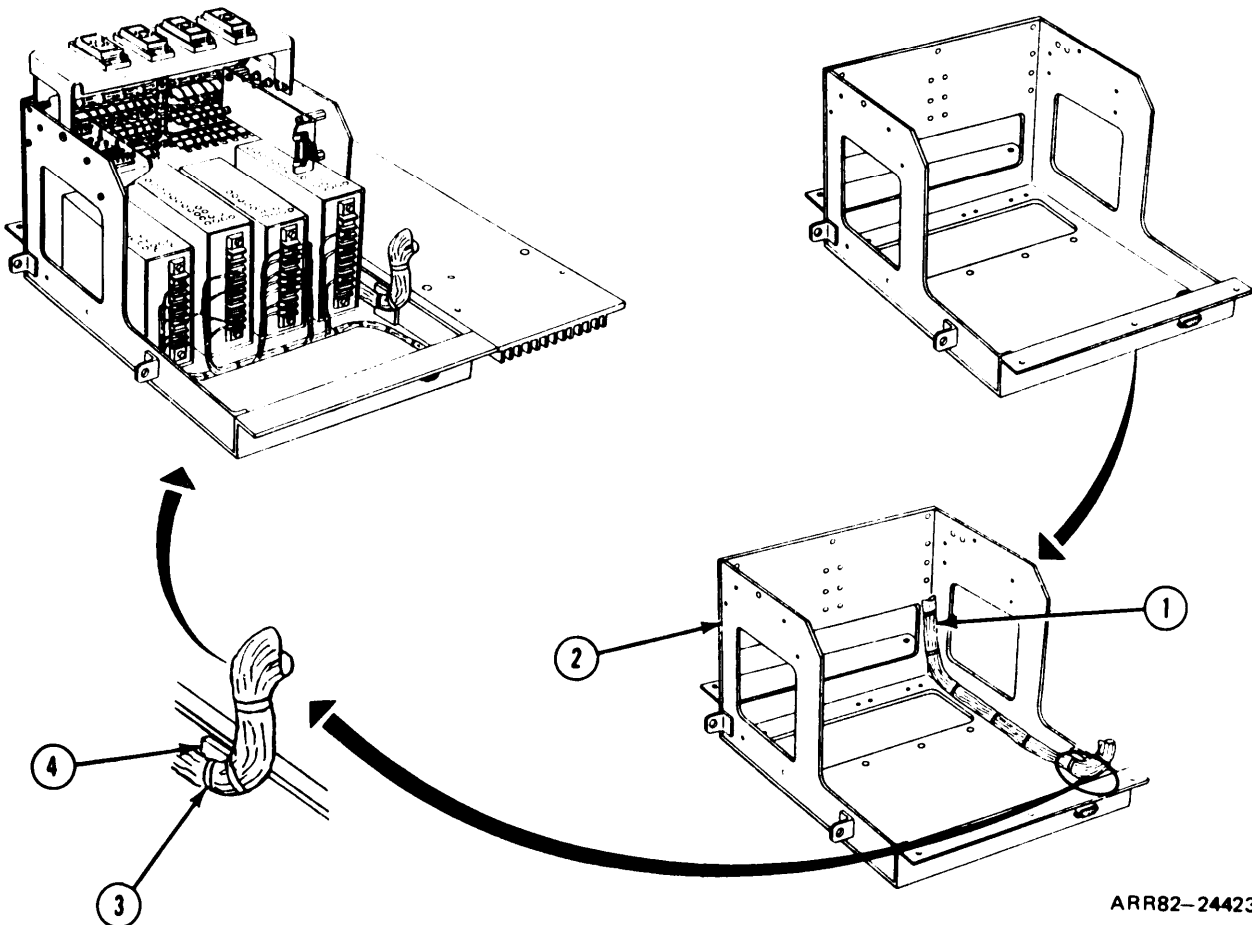
Install Enclosure:

1. Position wiring harness (1) into enclosure (2).
2. Install tiedown strap (3) on wiring harness (1) and support (4).

Follow-on Maintenance:

1. Install power module base; refer to task 16.
2. Install terminal lug; refer to task 13.
3. Install receptacle connector A6J5; refer to task 11.
4. Install power supplies PS1, PS2, PS3, and PS4; refer to task 17.
5. Install terminal boards; refer to task 18.
6. Install circuit card assembly A2; refer to task 19.
7. Install relay bracket; refer to task 20.
8. Install connector bracket; refer to task 21.
9. Install power control unit A6A1; refer to para. 2-10, task 2.
10. Install power module A6; refer to task 22.
11. Install thermal system test controller; refer to para. 2-5, task 8.
12. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 15 ENDS HERE



ARR82-24423

TASK 16. Install Power Module Base.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Wrench, combination, 11/32-inch

Special Tools:

Wrench Set, socket, 12285468

Supplies:

Lockwasher (96906) MS35338-138 (five required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

Remove power module base; refer to task 9.

FRAME 31

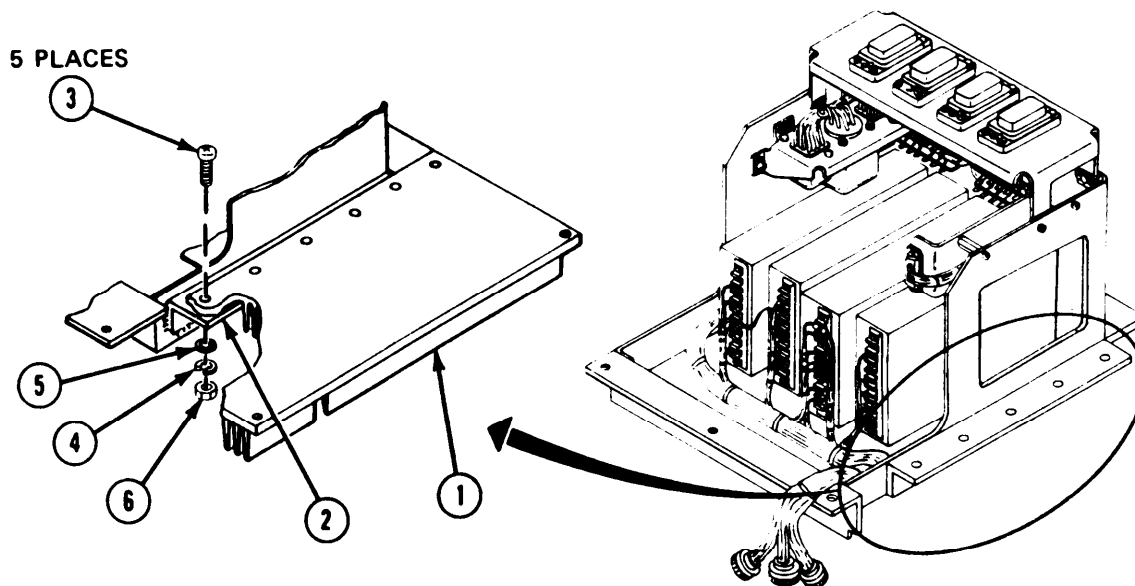
Install Power Module Base:

1. Position power module base (1) on enclosure angle (2).
2. Screw in five machine screws (3), new lockwashers (4), flat washers (5), and hexagon plain nuts (6) with screwdriver and wrench.
3. Using torque screwdriver and socket, torque nuts (6) between 12 and 15 pound-inches (1.4 and 1.7 Newton meters).

Follow-on Maintenance:

1. Install power control unit A6A1; refer to para. 2-10, task 2.
2. Install power module A6; refer to task 22.
3. Install thermal system test controller; refer to para. 2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 16 ENDS HERE



ARR82-24424

TASK 17. Install Power Supply PS1, PS2, PS3, or PS4.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 1
Screwdriver, cross tip, No. 1

Special Tools:

Wrench Set, socket, 12285468

Supplies:

Lockwasher (96906) MS35338-136 (three required per power supply)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove power supply PS1, PS2, PS3, or PS4; refer to task 8.

FRAME 32

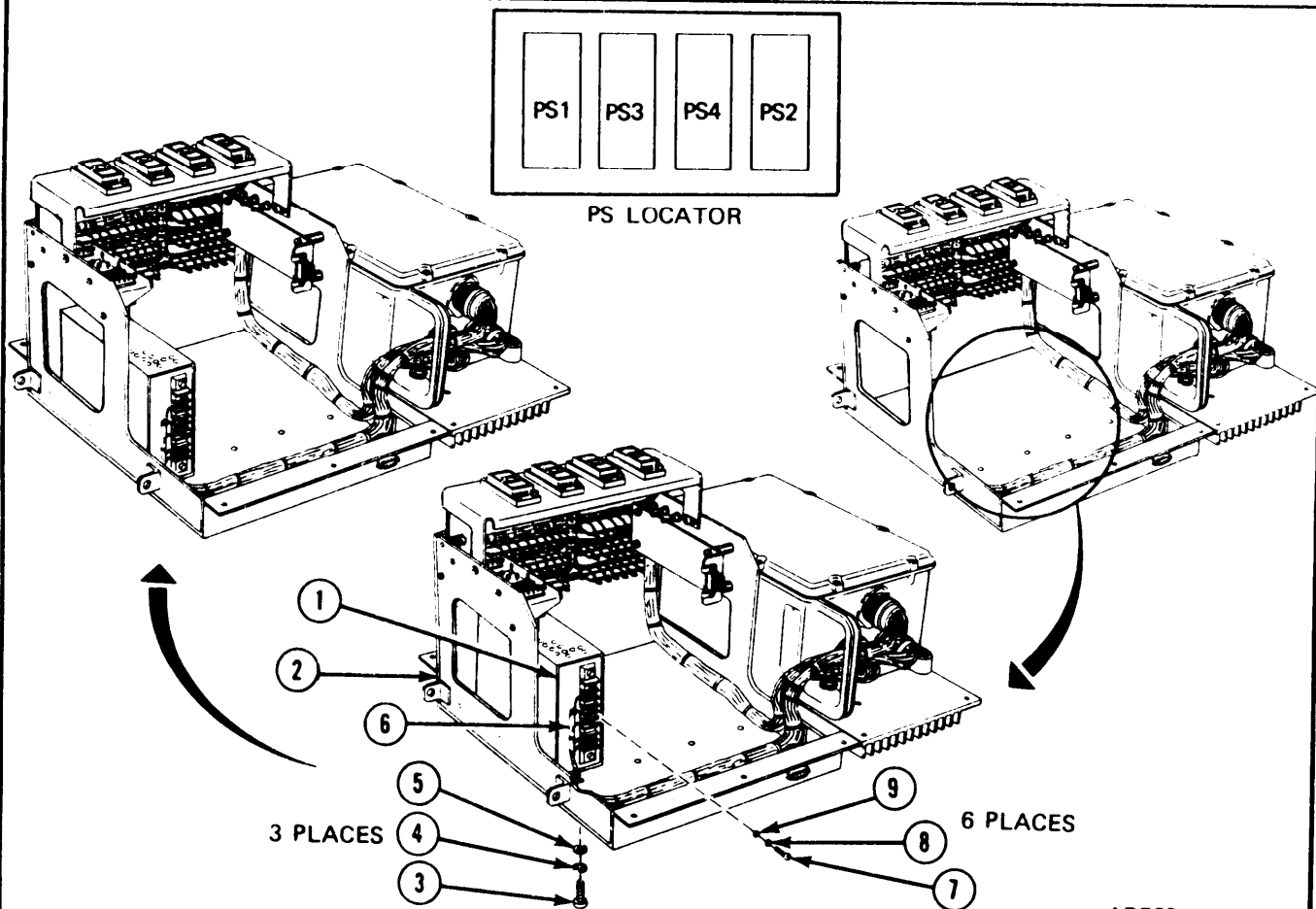
Install Power Supply:

NOTE

- Use this task to install power supply PS1, PS2, PS3, or PS4. Power supply PS1 (1) is shown.
- If power supply was removed for access, do steps 1 and 2 only.

1. Carefully position power supply (1) on enclosure (2).
2. Screw in three machine screws (3), new lockwashers (4), and flat washers (5) with screwdriver. Using torque screwdriver and bit, torque screws between 6 and 7 pound-inches (0.67 and 0.79 Newton meter).
3. Reconnect wires (6) to new power supply (1); screw in and tighten six screws (7), new lockwashers (8), and washers (9) with screwdriver; refer to wiring chart, frame 33.

GO TO FRAME 33



ARR82-24425

FRAME 33

NOTE

Use this wiring chart for reference only.

Wiring Chart for Power Supplies PS1, PS2, PS3, PS4

From	To	From	To
PS1-+S	TB1-52	PS3-+S	TB1-59
PS1-+V	PS1-+S	PS3-+V	PS3-+S
PS1--V	TB1-53	PS3--V	TB1-56
PS1--S	PS1--V	PS3--S	PS3--V
AC input	A6J5-1	PS3-RV1	PS3-RV2
AC input	A6J5-2	AC input	A6J5-1
PS2-+S	TB1-56	AC input	A6J5-2
PS2-+V	PS2-+S	PS4-+S	TB1-54
PS2--V	TB1-60	PS4-+V	PS4-+S
PS2--S	PS2--V	PS4--V	TB1-55
PS2-RV1	PS2-RV2	PS4--S	PS4--V
AC input	A6J5-1	AC input	A6J5-1
AC input	A6J5-2	AC input	A6J5-2

Follow-on Maintenance:

1. Install power module A6; refer to task 22.
2. Install thermal system test controller: refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 17 ENDS HERE

TASK 18. Install Terminal Boards.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 2

Screwdriver, cross tip, No. 2

Special Tools:

Wrench Set, socket, 12285468

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

Tape, lacing (Item 35)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove terminal boards; refer to task 7.

FRAME 34

Install Terminal Board:

NOTE

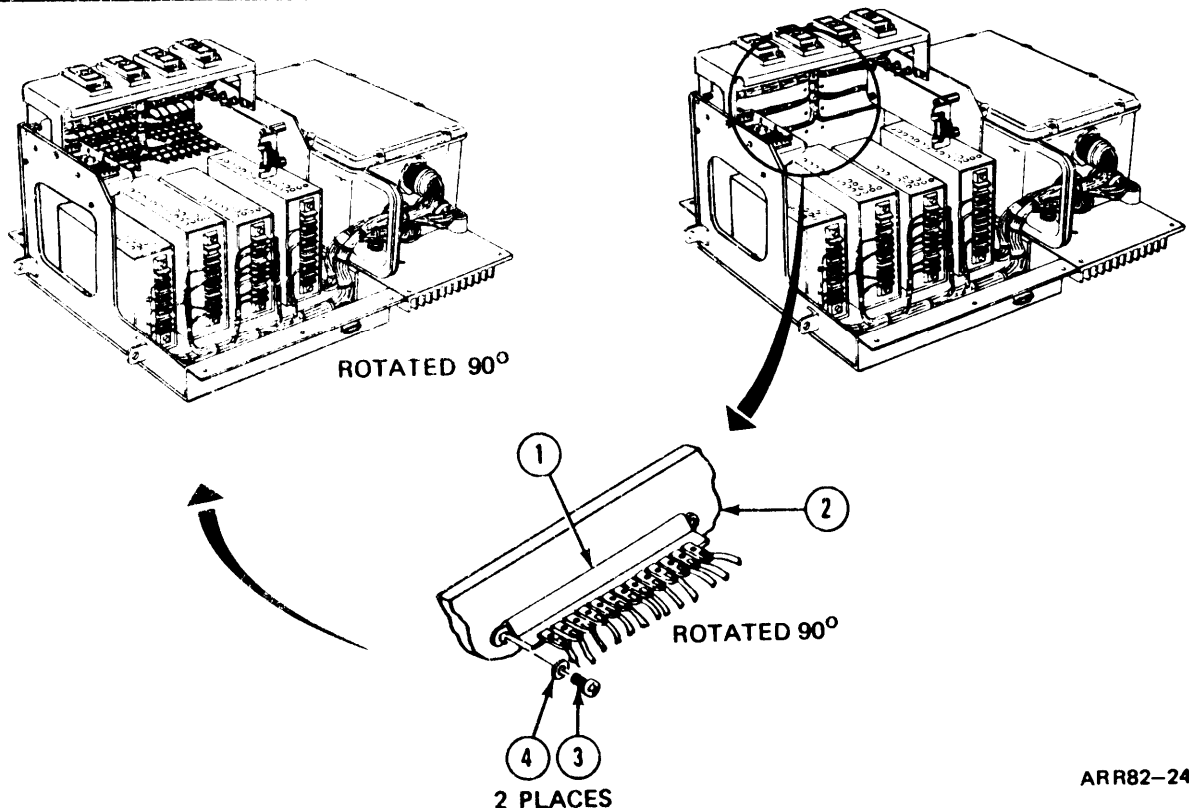
Use this task to install any of six terminal boards (1).

1. Position terminal board (1) on wall of enclosure (2).
2. Screw in two machine screws (3) and flat washers (4) on terminal board (1) with screwdriver.
3. Using torque screwdriver and cross-tip bit, torque screws (3) between 5 and 6 pound-inches (0.56 and 0.68 Newton meter).
4. Put on lacing tape.

Follow-on Maintenance:

1. Install circuit card assembly A2; refer to task 19.
2. Install relay bracket; refer to task 20.
3. Install connector bracket; refer to task 21.
4. Install power module A6; refer to task 22.
5. Install thermal system test controller; refer to para. 2-5, task 8.
6. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 18 ENDS HERE



TASK 19. Install Circuit Card Assembly A2.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 2
Screwdriver, cross tip, No. 2
Screwdriver, flat tip

Special Tools:

Wrench Set, socket, 1228546P

Supplies:

Lockwashers (96906) MS35338-136 (four required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove circuit card assembly A2; refer to task 6.

FRAME 35

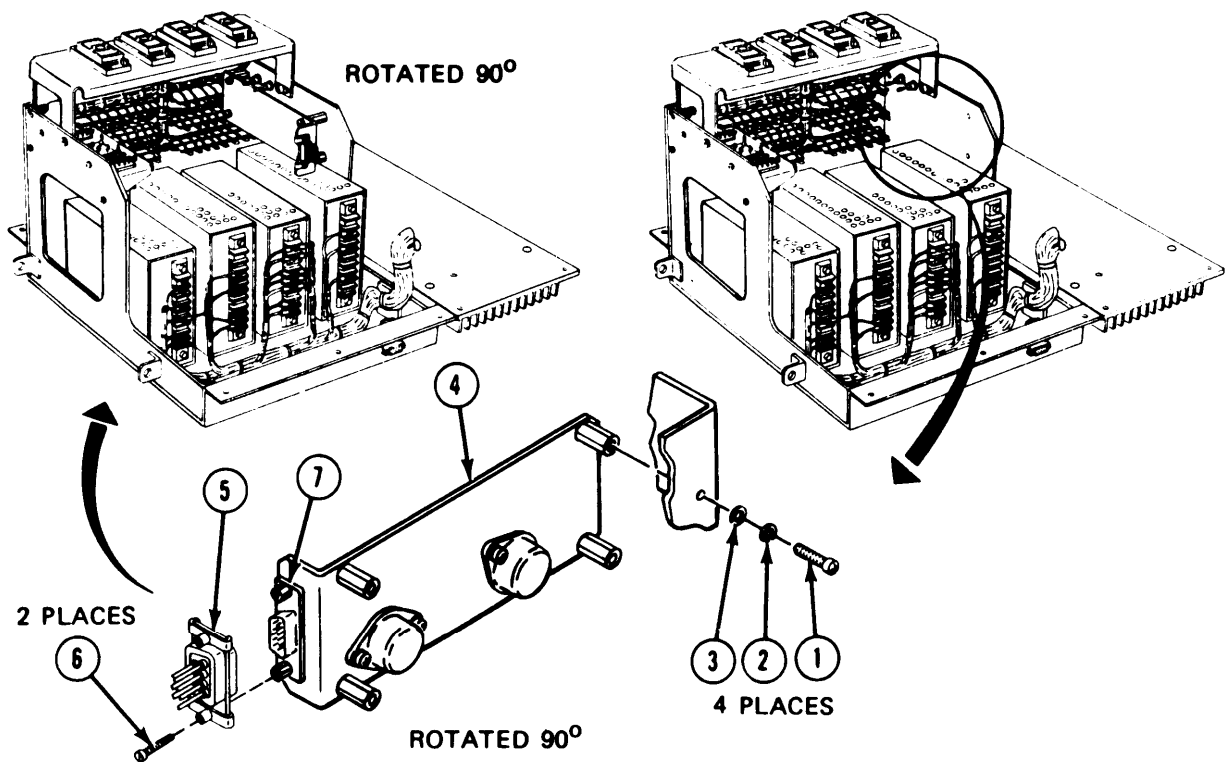
Install Circuit Card Assembly A2:

1. Screw in four machine screws (1), new lockwashers (2), and flat washers (3) on circuit card A2 (4) with cross tip screwdriver.
2. Connect receptacle connector P1 (5) by screwing in and tightening two screws (6) on connector (5) to receptacle J1 (7) connector with flat tip screwdriver.
3. Using torque screwdriver and cross tip bit, torque four screws (1) between 6 and 7 pound-inches (0.68 and 0.79 Newton meter).

Follow-on Maintenance:

1. Install power control unit A6A1; refer to para. 2-10, task 2.
2. Install power module A6; refer to task 22.
3. Install thermal system test controller; refer to para. 2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 19 ENDS HERE



ARR82-24427

TASK 20. Install Relay Bracket.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 2

Screwdriver, cross tip, No. 2

Special Tools:

Wrench Set, socket, 12285468

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

Remove relay bracket; refer to task 5.

FRAME 36

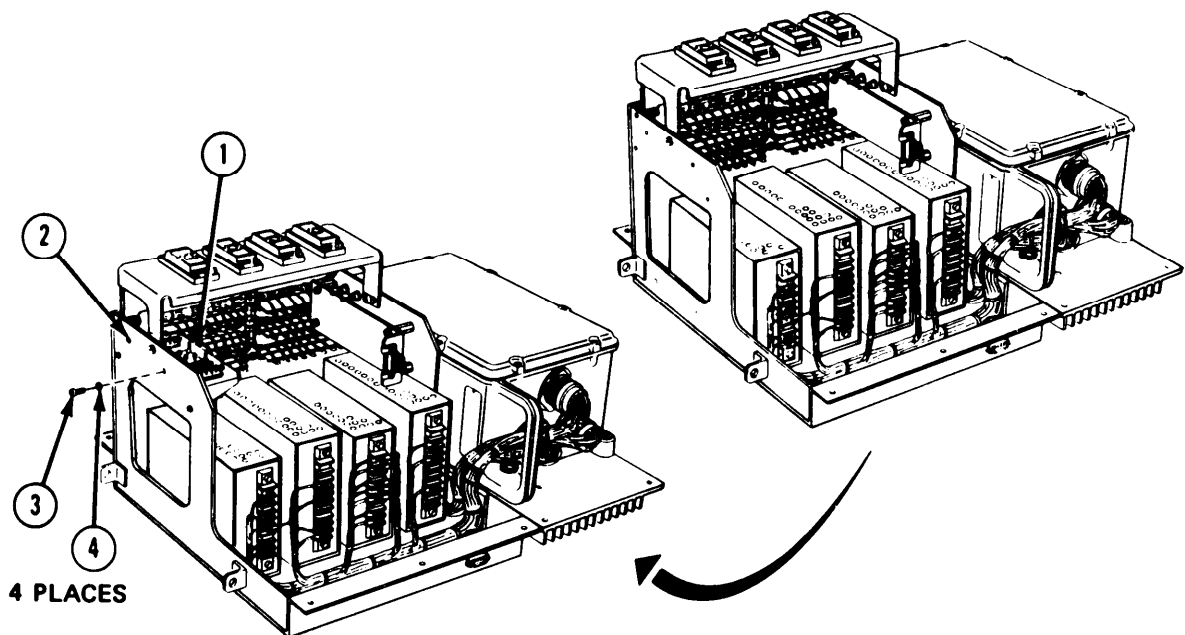
Install Relay Bracket:

1. Line up relay bracket (1) with holes in enclosure (2).
2. Screw in four machine screws (3) and flat washers (4) with screwdriver.
3. Using torque screwdriver and cross tip bit, torque screws (3) between 6 and 7 pound-inches (0.68 and 0.79 Newton meter).

Follow-on Maintenance:

1. Install connector bracket; refer to task 21.
2. Install power module A6; refer to task 22.
3. Install thermal system test controller; refer to para. 2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 20 ENDS HERE



ARR82-24428

TASK 21. Install Connector Bracket.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 2

Screwdriver, cross tip, No. 2

Special Tools:

Wrench Set, socket, 12285468

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove connector bracket; refer to task 2.

FRAME 37

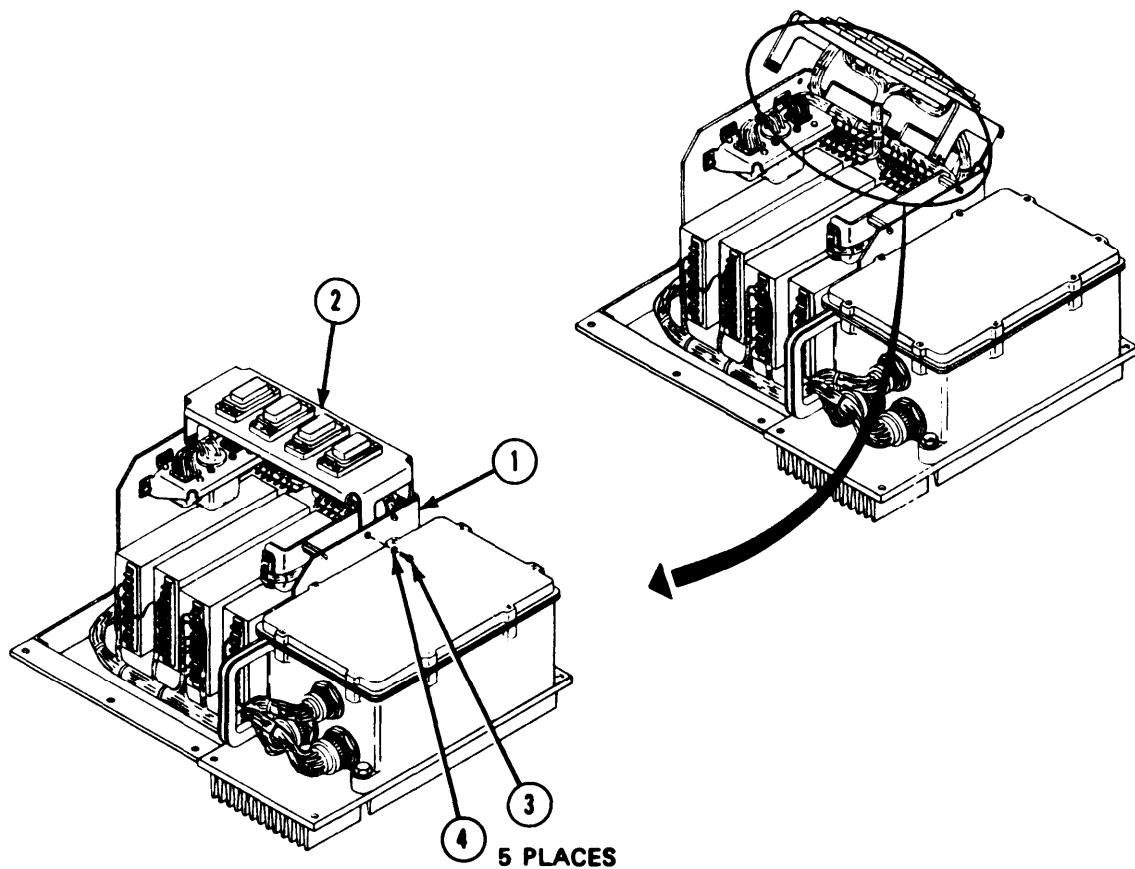
Install Connector Bracket:

1. Line up holes of enclosure (1) with holes in connector bracket (2).
2. Screw in five machine screws (3) and flat washers (4) in connector bracket (2) with screwdriver.
3. Using torque screwdriver and cross tip bit, torque screws (3) between 9 and 12 pound-inches (1.02 and 1.36 Newton meters).

Follow-on Maintenance:

1. Install power module A6; refer to task 22.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system controller case cover; refer to volume 1, para. 4-18.

TASK 21 ENDS HERE



ARR82-24429

TASK 22. Install Power Module A6.

Applicability All Models

Common Tools:

Bit, cross tip, No. 2 NSN 5120-00-879-3547

Screwdriver, cross tip, No. 2

Wrench, combination 1/4-inch

Special Tools:

Wrench Set, socket 12285468

Supplies:

Lockwasher (96906) MS35338-138 (ten required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove power module A6; refer to task 1.

FRAME 38

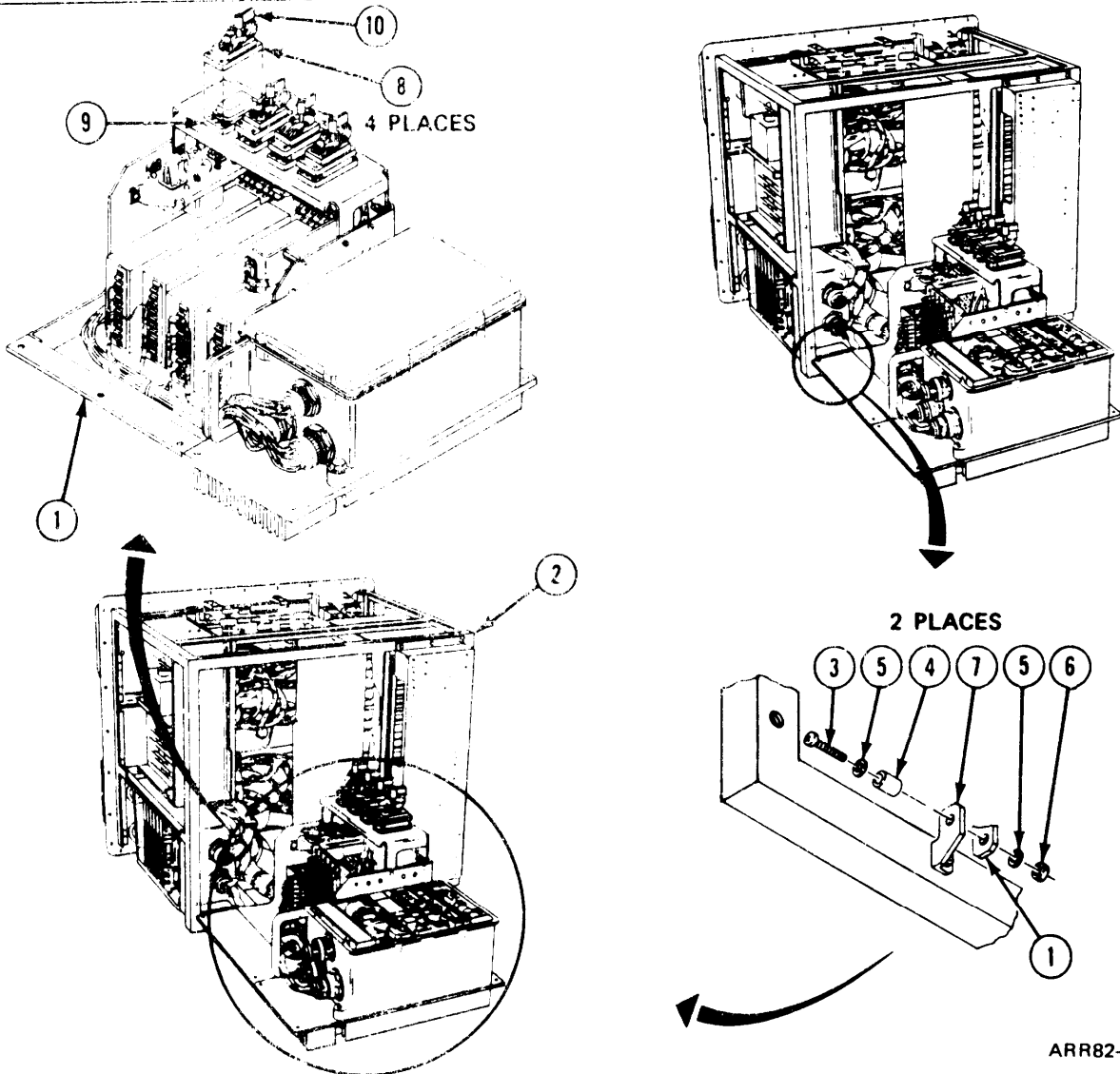
Install Power Module A6:

NOTE

If power module (1) was lowered for access only, GO TO FRAME 39.

1. Line up holes in power module (1) with holes in chassis (2).
2. Screw in two machine screws (3), two sleeve spacers (4), four flat washers (5), and two self-locking nuts (6) on angle bracket (7) with screwdriver and wrench.
3. Torque screws (3) between 10 and 20 pound-inches (1.1 and 2.3 Newton-meters) with torque screwdriver, and No. 2 cross tip bit.
4. Position receptacle connector (8) on receptacle connector body (9). Push in and turn handle (10) one-quarter turn clockwise on four connectors (8).

GO TO FRAME 39



FRAME 39

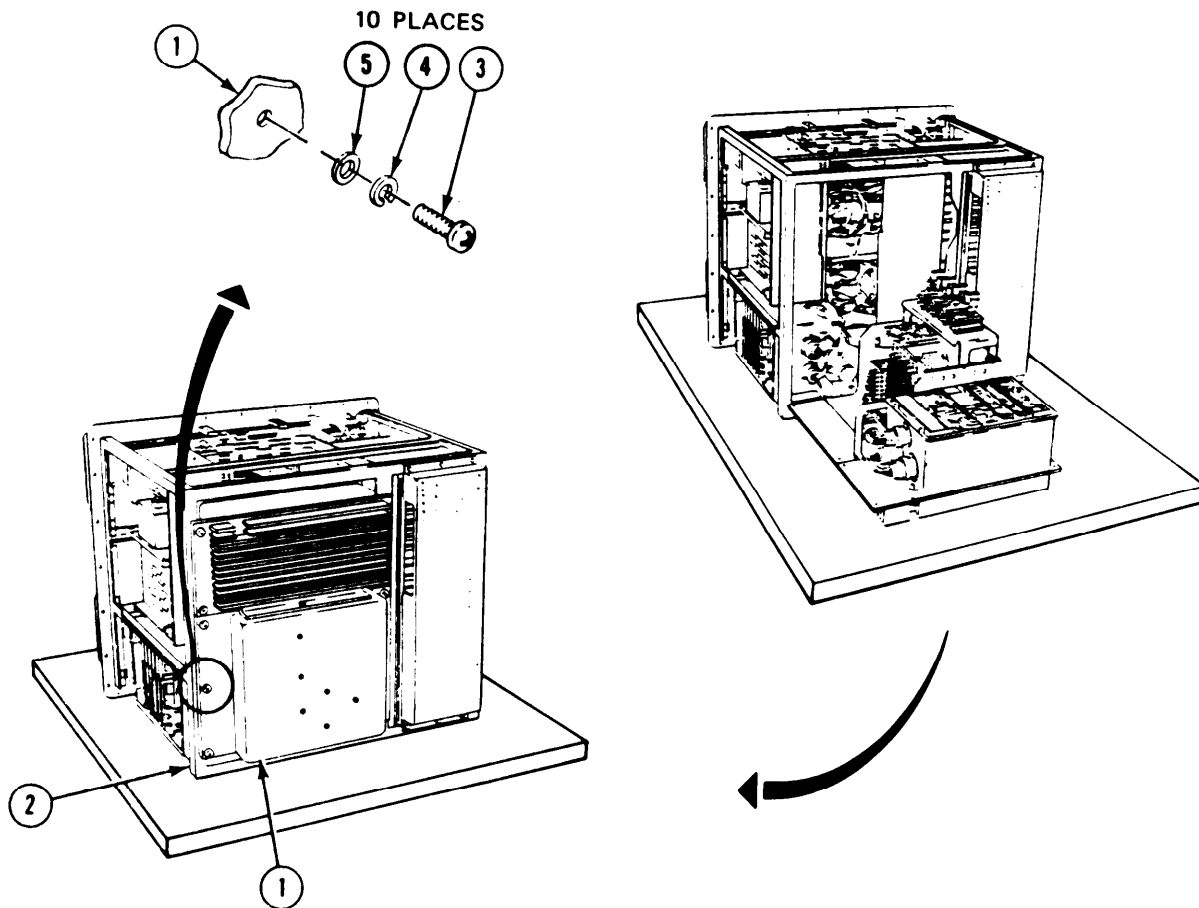
Install Power Module A6 (Continued):

1. Raise power module (1) and align holes in power module (1) with holes in chassis (2).
2. Screw in ten machine screws (3), new lockwashers (4), and flat washers (5) with screwdriver.
3. Torque screws (3) between 10 and 20 pound-inches (1.1 and 2.3 Newton-meters) with torque screwdriver, and No. 2 cross tip bit.

Follow-on Maintenance:

1. Install thermal system test controller; refer to para. 2-5, task 8.
2. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

END OF POWER MODULE A6 MAINTENANCE



ARR82-24431

2-10. Power Control Unit (PCU) A6A1.

Task	Title	Frames
1	Remove Power Control Unit A6A1 Install Power Control Unit A6A1	1
2		2 - 3

TASK 1. Remove Power Control Unit A6A1.

Applicability: All Models

Common Tools:

Wrench, combination, 1/2-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para.4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove power module A6 for access only; refer to para. 2-9, task 1.

FRAME 1

Remove PCU:

1. Disconnect three electrical plug connectors A6A1P1, A6A1P2, and A6A1P3 (1) from three PCU receptacle connectors (2).
2. Unscrew and take out three machine bolts (3), lockwashers (4), and flat washers (5) with wrench. Get rid of lockwashers (4). Set screws (3) and washers (5) aside for later use.
3. Lift PCU (6) off power module base (7) and place PCU (6) on a clean surface.
4. Look at PCU (6) for cracks or breaks. If bad, turn in.

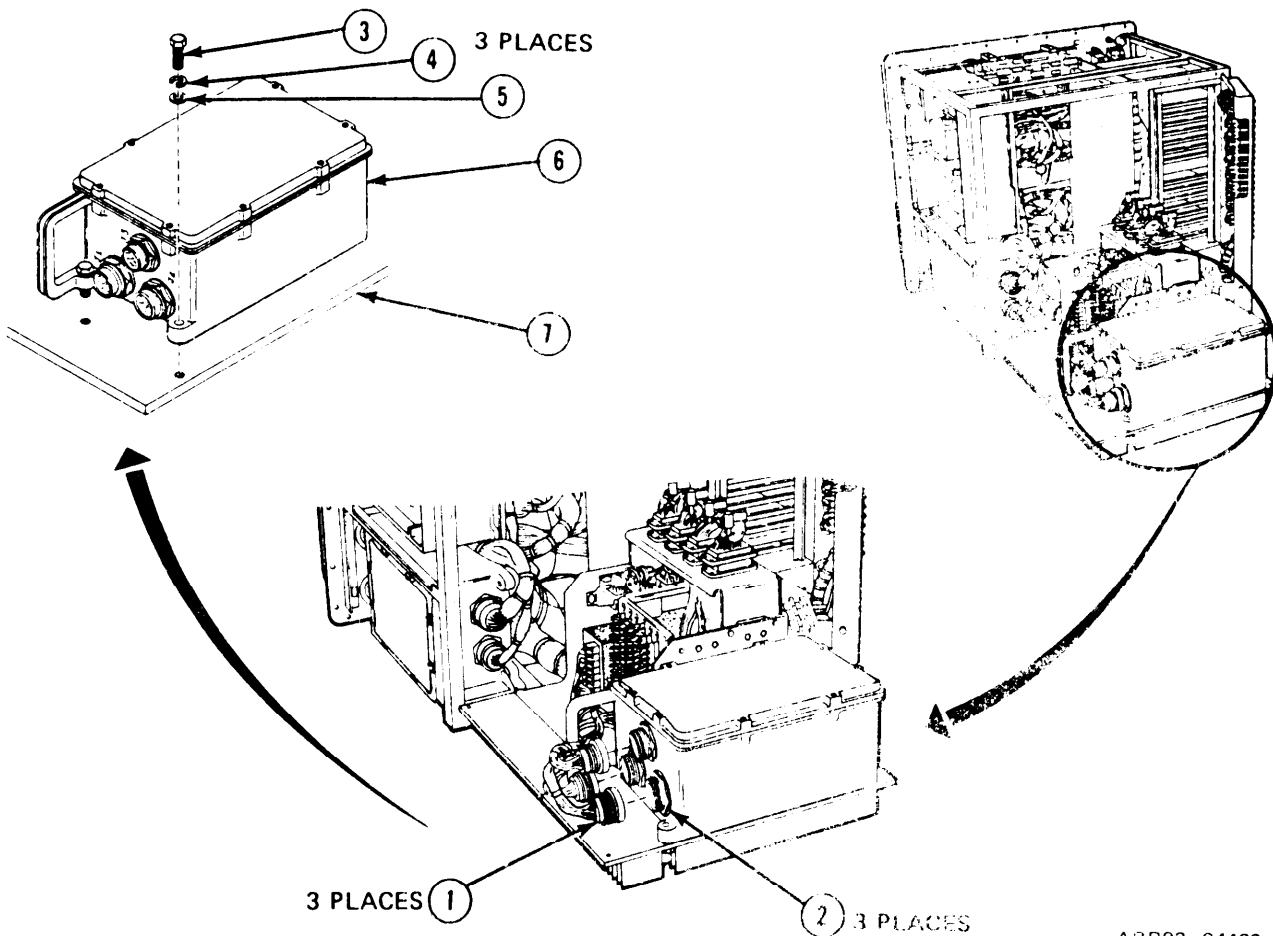
NOTE

Maintenance procedures for the repair of the PCU can be found in TM 9-1200-206-34-2-2.

Follow-on Maintenance:

NOTE: To install power control unit, refer to task 2.

TASK 1 ENDS HERE



ARR82-24432

TASK 2. Install Power Control Unit A6A1.

Applicability: All Models

Common Tools:

Extension, socket wrench, 3/8-inch square drive, 5-inch
Socket, socket wrench, 3/8-inch square drive, 9/16-inch
Wrench, combination 9/16-inch
Wrench, torque, 3/8-inch square drive, 0-160 pound inches

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-140 (three required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove power control unit (PCU) A6A1; refer to task 1.

FRAME 2

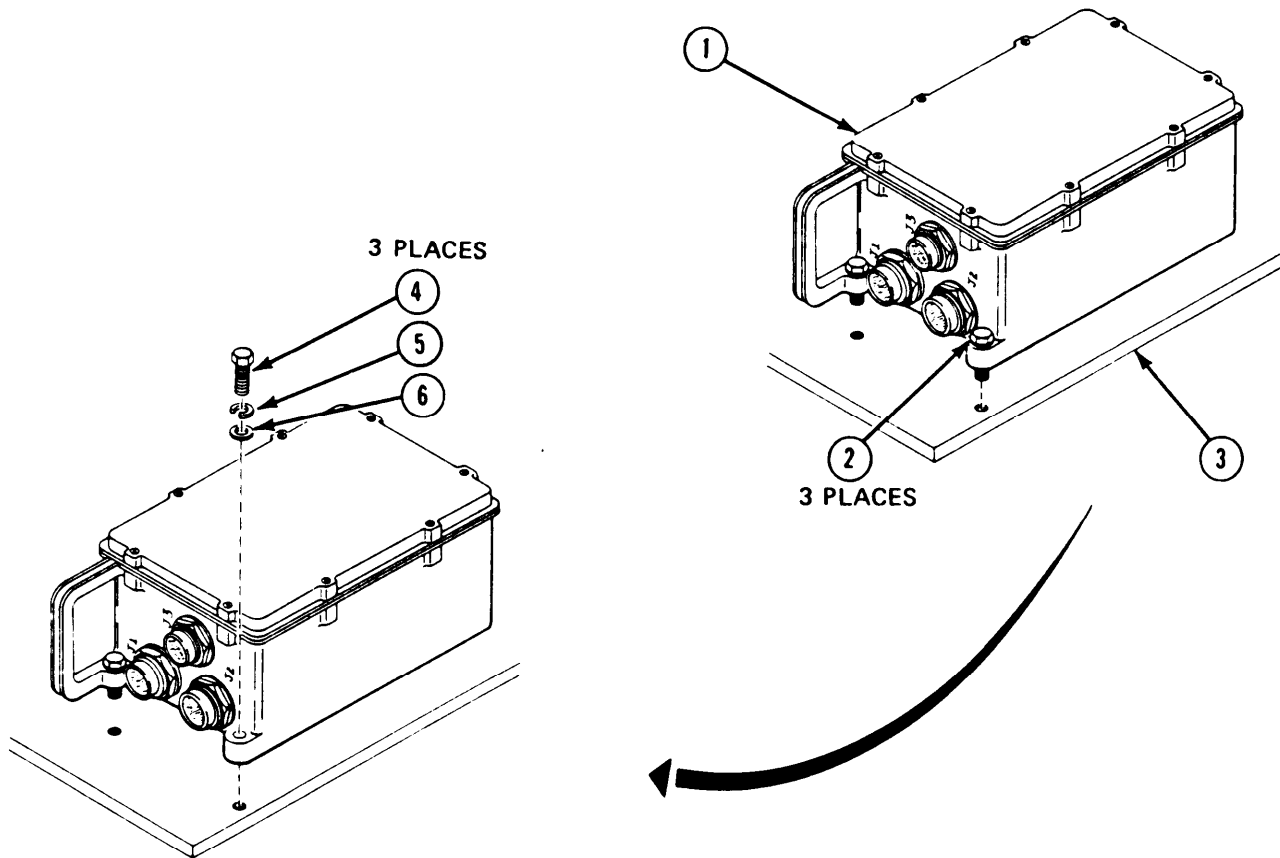
Install PCU:

NOTE

If PCU (1) was not turned in during task 1, go to step 2. If PCU (1) was turned in during task 1, start with step 1.

1. Unscrew three captive screws (2) from PCU with wrench. Get rid of captive screws (2).
2. Position PCU (1) on power module base (3). Align three holes in PCU (1) with holes in base (3).
3. Screw in three machine screws (4), new lockwashers (5), and flat washers (6) with wrench.
4. Torque screws (4) between 100 and 130 pound-inches (11.3 and 14.7 Newton-meters) with torque wrench, socket, and extension.

GO TO FRAME 3



ARR82-24433

FRAME 3

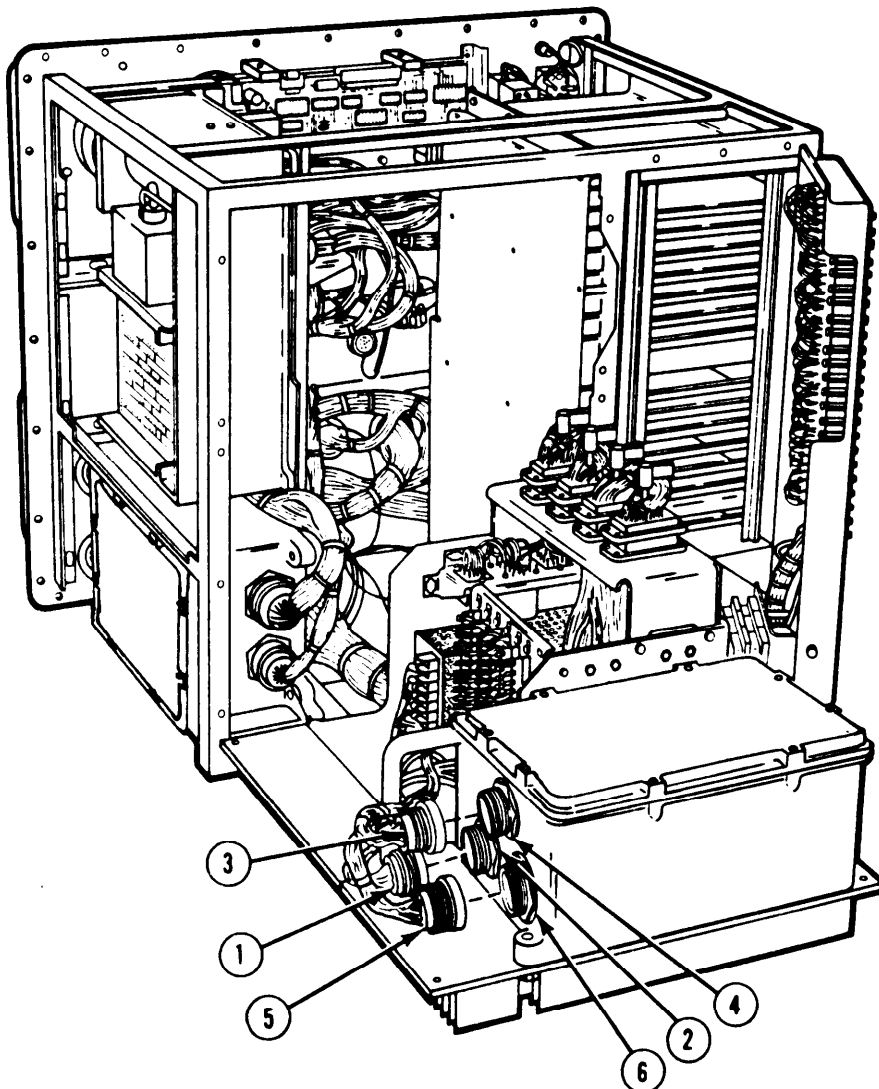
Install PCU (Continued):

1. Connect electrical plug connector A6A1P1 (1) to receptacle connector A6A1J1 (2).
2. Connect electrical plug connector A6A1P2 (3) to receptacle connector A6A1J2 (4).
3. Connect electrical plug connector A6A1P3 (5) to receptacle connector A6A1J3 (6).

Follow-on Maintenance:

1. Install power module A6; refer to paragraph 2-9, task 22.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

END OF POWER CONTROL UNIT (PCU) A6A1 MAINTENANCE



ARR82-24434

2-11. Electrical Load Bank A5.

Task	Title	Frames
1	Remove Electrical Load Bank A5	1
2	Remove Panel Connector Bracket	2
3	Remove Receptacle Connector Body A5J1, A5J2, or A5J3	3
4	Repair Connector A5J1, A5J2, or A5J3	4
5	Remove Cover	5
6	Remove Circuit Card Assembly TB1 or Terminal Board Assembly TB2	6
7	Repair Circuit Card Assembly TB1 or Terminal Board Assembly TB2	7
8	Replace Electrical Components: Resistors, Relays, and Capacitor	8 - 13
9	Replace Terminal Lug E1, E2, E4, E5, E6, or E7 and Electrical-Mechanical Post	14 - 15
10	Replace Terminal Stud E3, E8, or E9	16
11	Replace Butt Hinge	17
12	Install Circuit Card Assembly TB1 or Terminal Board Assembly TB2	18
13	Install Cover	19
14	Install Receptacle Connector Body A5J1, A5J2, or A5J3	20
15	Install Panel Connector Bracket	21
16	Install Electrical Load Bank A5	22

TASK 1. Remove Electrical Load Bank A5.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.

FRAME 1

Remove Electrical Load Bank A5:

1. Unscrew and takeout six machine screws (1), lockwashers (2), and flat washers (3) from electrical load bank (4) with screwdriver. Get rid of lockwashers (2).
2. Open load bank (4).

NOTE

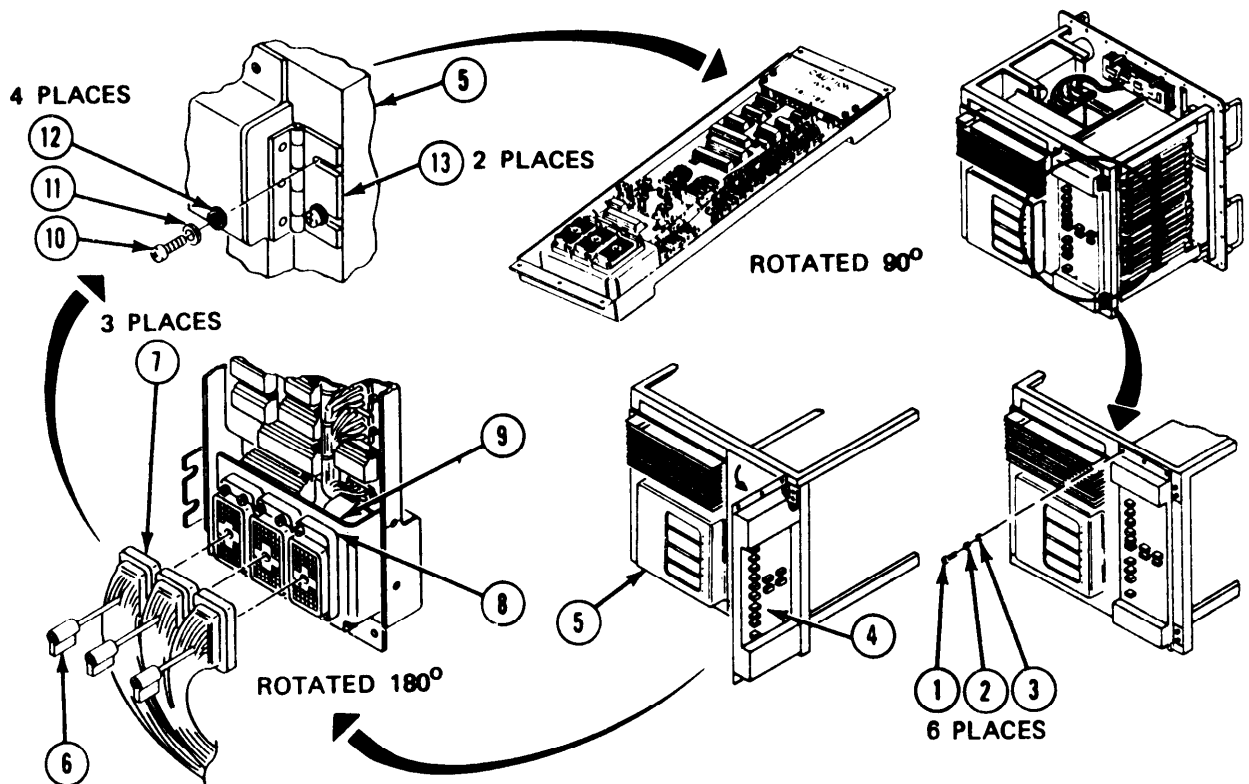
If only access to load bank (4) is required, go to follow-on maintenance, and **TASK 1 ENDS HERE**. If removing load bank (4) from test controller chassis (5), go to step 3.

3. Turn handles (6) on three harness plugs (7) one quarter-turn counterclockwise and take plugs (7) off of three receptacle connectors (8) on connector bracket (9).
4. Unscrew and take out four machine screws (10), lockwashers (11), flat washers (12) from two butt hinges (13) with screwdriver. Get rid of lockwashers (11).
5. Take load bank (4) off of test controller chassis (5) and place on a clean work surface.

Follow-on Maintenance:

NOTE: To install electrical load bank A5, refer to task 16.

TASK 1 ENDS HERE



ARR82-24435

TASK 2. Remove Panel Connector Bracket.

Applicability: All Models

Common Tools:
Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:
Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical load bank A5; refer to task 1.

FRAME 1

Remove Panel Connector Bracket:

NOTE

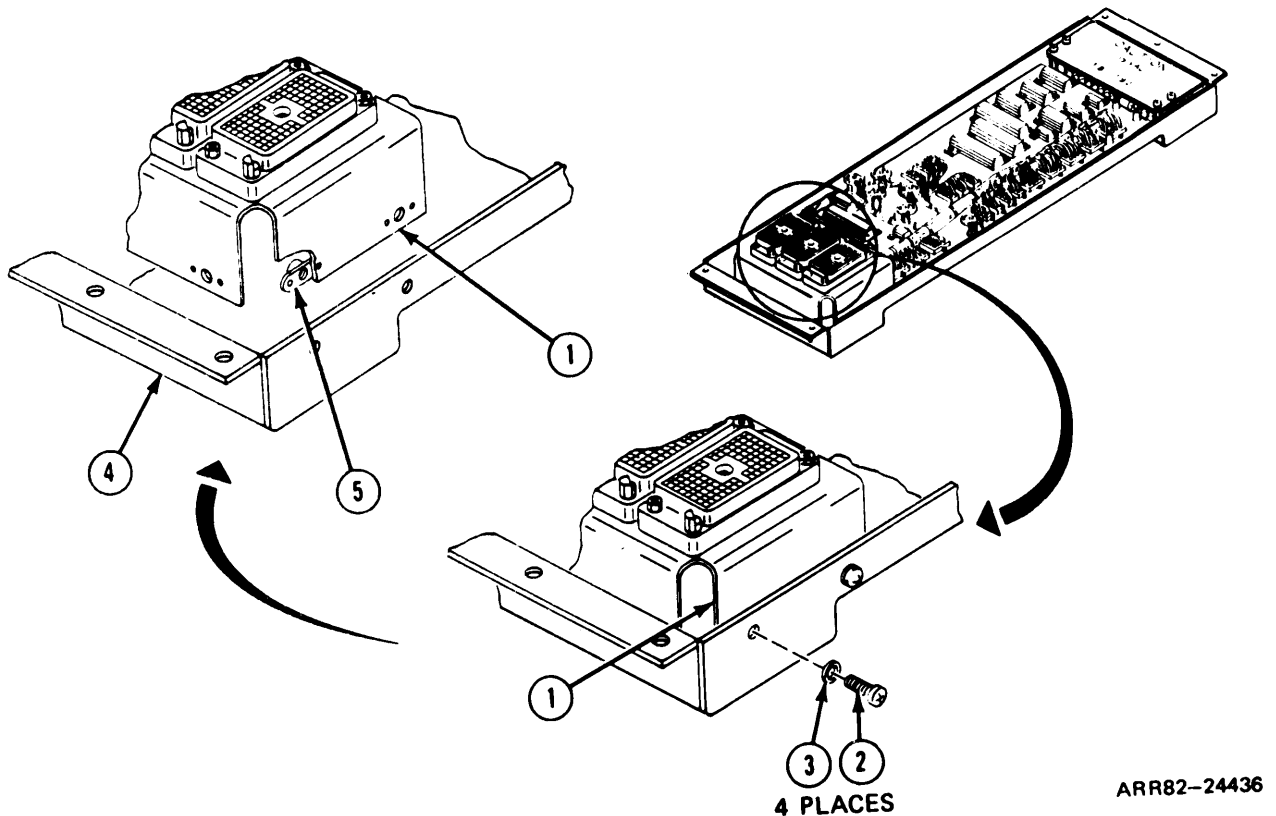
- Read paragraph 2-4 on replacing nutplates before doing any work.
- If taking out connector bracket (1) for access only, do steps 1 and 2 only.

1. Unscrew and take out four machine screws (2) and flat washers (3) with screwdriver.
2. Lift bracket (1) away from chassis (4).
3. Look at bracket (1) for cracks, bends, and stripped holes. If bad, remove connectors, refer to task 3, and turn in bracket (1). If OK, do step 4.
4. Look at bracket (1) for damaged plain self-locking nuts (5). If bad, replace nut (5). If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install panel connector bracket, refer to task 15.

TASK ENDS HERE



TASK 3. Remove Receptacle Connector Body A5J1, A5J2, or A5J3.

Applicability. All Models

Common Tools:

- Screwdriver, cross tip, No. 1
- Wrench, combination, 1/4-inch

Special Tools: None

Supplies: None

Personnel One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical load bank A5; refer to task 1.
4. Remove panel connector bracket; refer to task 2.

FRAME 3

Remove Receptacle Connector Body:

NOTE

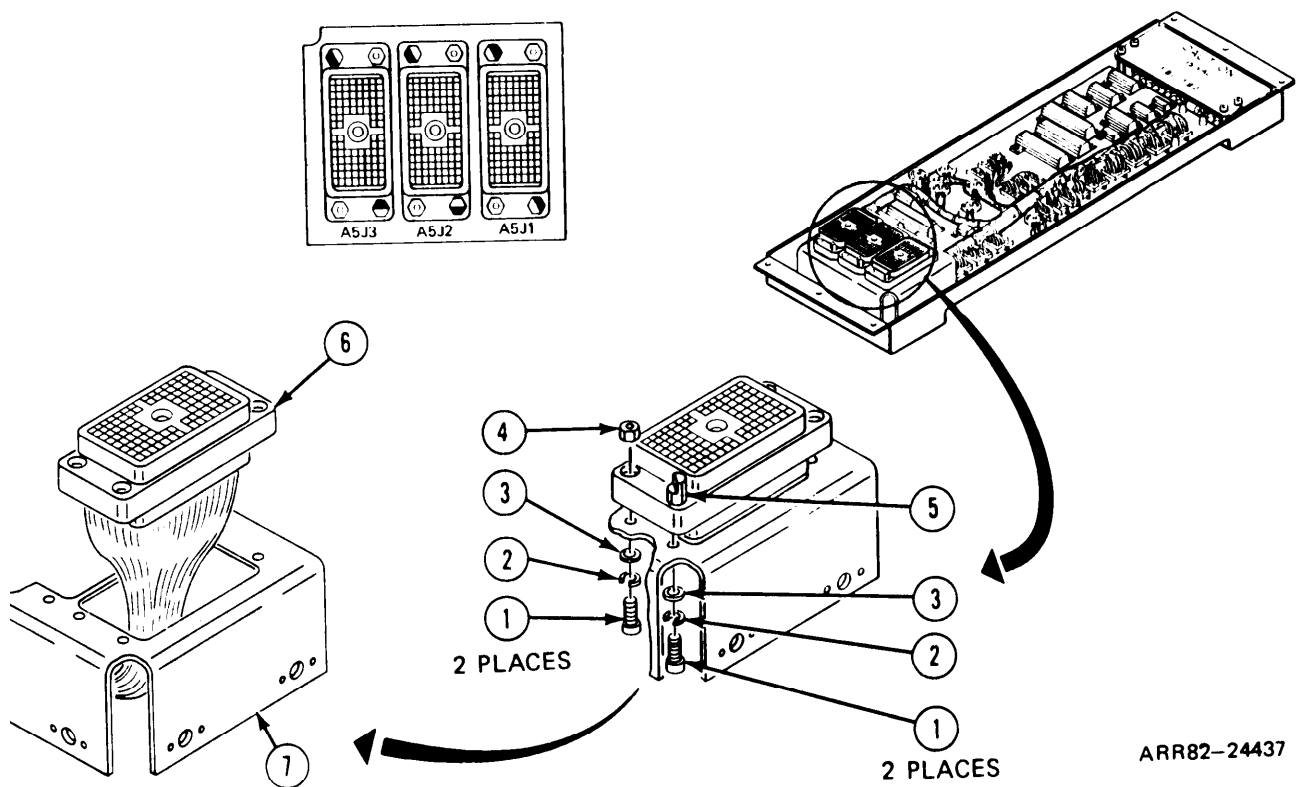
Use this task to take out connector A5J1, A5J2, or A5J3.
Connector A5J3 is shown.

1. Takeout four machine screws (1), four lockwashers (2), four flat washers (3), two hexagon plain nuts (4), and two electrical polarizing keys (5) with screwdriver and wrench. Get rid of lockwashers (2).
2. Slowly lift connector (6) off bracket (7).

Follow-on Maintenance:

NOTE To install receptacle connector body A5J1, A5J2, or A5J3, refer to task 14.

TASK 3 ENDS HERE



TASK 4. Repair Connector A5J1, A5J2, or A5J3.

Applicability: All Models

Common Tech

Crimp Tool, 5120-01-019-0812
Pliers, diagonal cutting
Removal Tool, 5120-01-019-0803
Stripper, wire

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Contact, electrical (81349) 12303108 (as required)
Pencil, writing (Item 19)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical load bank AS; refer to task 1.
4. Remove panel connector bracket; refer to task 2.
5. Remove receptacle connector body A5J1, A5J2, or A5J3; refer to task 3.

FRAME 4

Remove Electrical Contact:

NOTE

- Use this task to repair receptacle connector body A5J1, A5J2, or A5J3. Connector A5J3 (1) is shown.
- Repair of connector (1) is done by replacing bad contacts (2).
- Read paragraph 2-4 on tagging wires before doing any work.

1. Take bad contact (2) out of connector (1) with removal tool.
2. Cut off bad contact (2) with pliers. Get rid of bad contact (2).

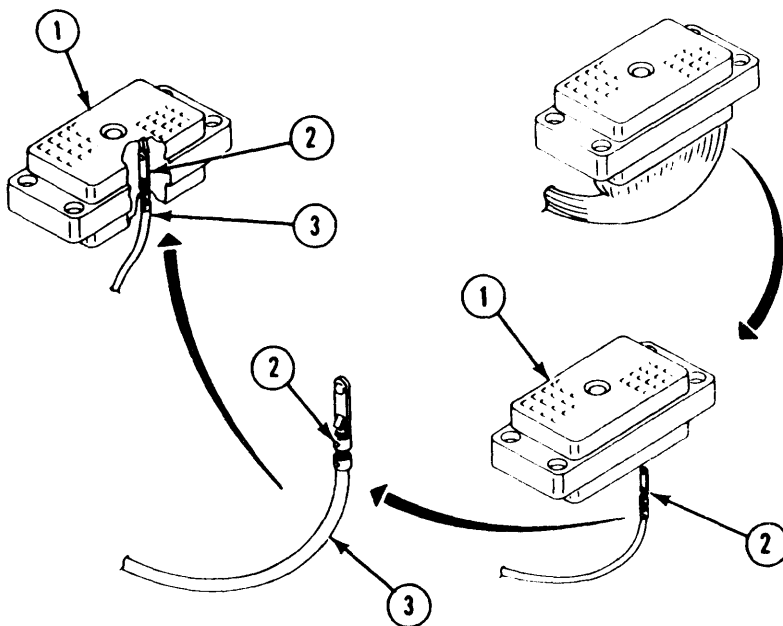
Install Contact:

3. Strip wire (3) with wire stripper.
4. Crimp new contact (2) on wire (3) with crimp tool.
5. Push new contact (2) into connector (1) until snap is heard and contact (2) is locked in place.
6. Repeat steps 1 through 5 as needed to repair connector.

Follow-on Maintenance:

NOTE: To install connector A5J1, A5J2, or A5J3, refer to task 14.

TASK 4 ENDS HERE



ARR82-24438

TASKS 5. Remove Cover.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 1

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical load bank A5; refer to task 1.

FRAME 5

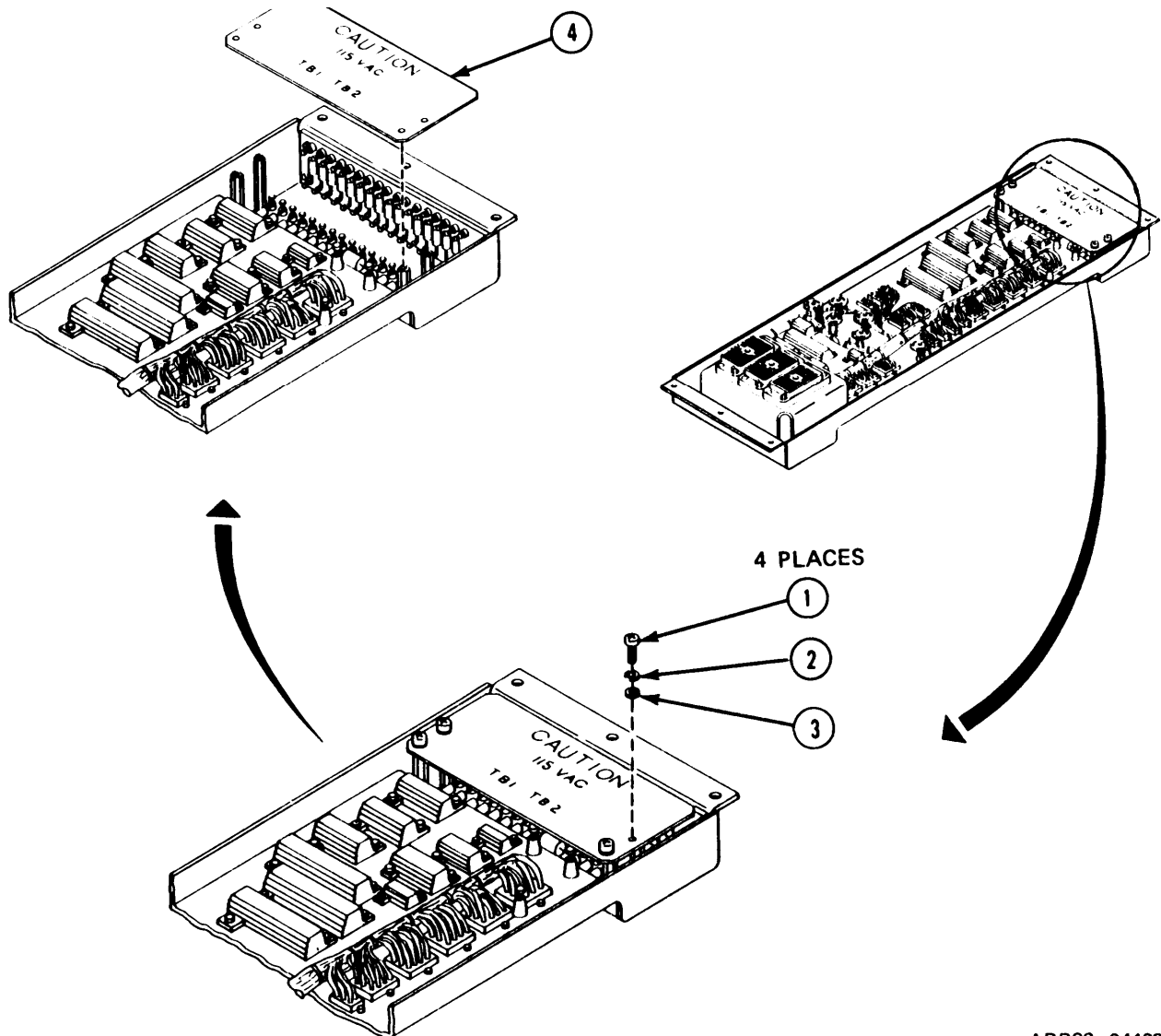
Remove Cover:

1. Take out four machine screws (1), lockwashers (2), and flat washers (3) with screwdriver. Get rid of lockwashers (2).
2. Take off cover (4).
3. Check cover (4) for bends, breaks, or cracks. If bad, turn in. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install cover, refer to task 13.

TASK 5 ENDS HERE



TASK 6. Remove Circuit Card Assembly TB1 or Terminal Board Assembly TB2.

Applicability: All Models

Common Tools:

Pliers, diagonal cutting
Screwdriver, cross tip, No. 1
Set, soldering and resoldering
Wrench, combination, 3/16-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Pencil, writing (Item 19)
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical load bank AS, refer to task 1.
4. Remove cover; refer to task 5.

FRAME 6

Remove TB1 or TB2:

NOTE

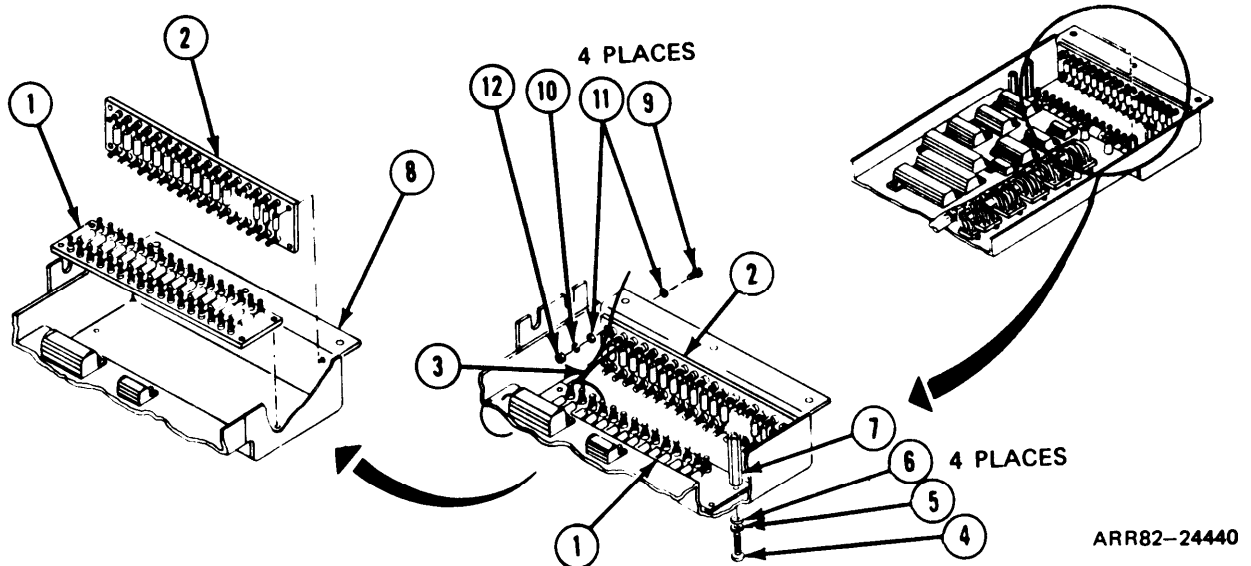
- To remove circuit card assembly TB1 (1) do steps (2) and 3.
- To remove terminal board assembly TB2 (2) do steps 4, 5, and 6.
- Read paragraph 2-4 on tagging and soldering wires before doing any work.

1. Cut lacing tape as needed with pliers and unsolder wires (3) from TB1 (1).
2. Unscrew and take out four machine screws (4), lockwashers (5), flat washers (6), and electrical-mechanical posts (7) with screwdriver and wrench. Get rid of lockwashers (5).
3. Lift circuit card assembly TB1 (1) out of electrical load bank (8).
4. Unscrew and take out four machine screws (9), four lockwashers (10), eight flat washers (11), and four hexagon plain nuts (12) with screwdriver and wrench. Get rid of lockwashers (10).
5. Lift terminal board TB2 (2) out of load bank as (8).
6. Tag and unsolder wires (3) from TB2 (2).

Follow-on Maintenance:

NOTE: To install circuit card assembly TB1 or terminal board assembly TB2, refer to task 12.

TASK 6 ENDS HERE



TASK 7. Repair Circuit Card Assembly TB1 or Terminal Board Assembly TB2.

Applicability: All Models

Common Tools:

- Pliers, diagonal cutting
- Pliers, long nose
- Set, soldering and resoldering

Special Tools: None

Supplies:

- NOTE:** Expendable supplies are defined in volume 1, appendix C.
- Resistor, fixed, wire (81349) RCR32G103JS, R26-R37, R40-R43, R46-R49 (as required)
 - Resistor, fixed, wire (81349) RCR20G821JS, R44-R50 (as required)
 - Resistor, fixed, wire (81349) RCR32G682JS, R51, R52 (as required)
 - Resistor, fixed, wire (81349) RCR07G273JS, R53-R56 (as required)
 - Resistor, fixed, wire (81349) RWR80N18R2FM, R3 (as required)
 - Resistor, fixed, wire (81349) RWR80N69R8FM, R8, R9 (as required)
 - Solder (Item 29)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical load bank A5; refer to task 1.
4. Remove cover; refer to task 5.
5. Remove circuit card assembly TB1 or terminal board assembly TB2; refer to task 6.

FRAME 7

Repair TB1 or TB2:

NOTE

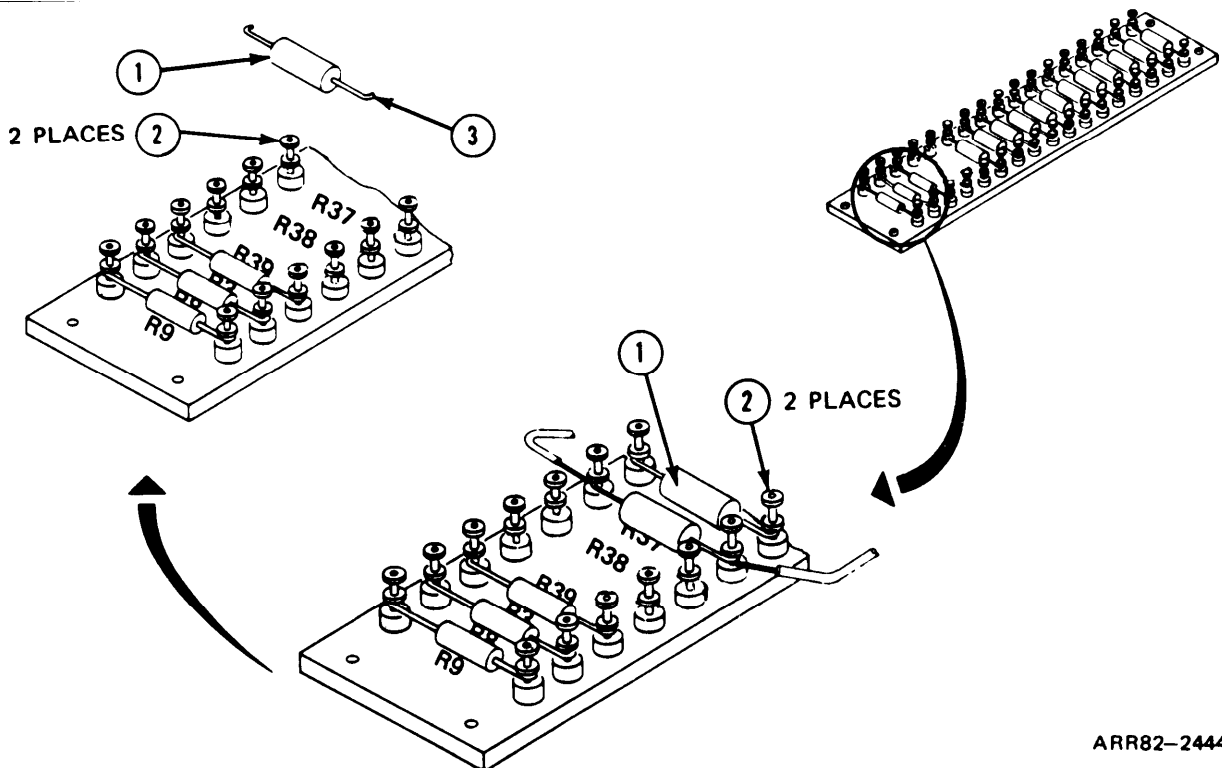
- Read paragraph 2-4 on tagging and soldering wires before doing any work.
- Use this task to repair circuit card assembly TB or terminal board assembly TB2. TB2 is shown.
- Number on circuit card or terminal board refers to resistor directly above it.

1. Unsolder and takeoff wire fixed resistor (1) from two terminals (2) with long nose pliers. Turn in resistor (1).
2. Put new resistor (1) in place between two terminals (2) and solder resistor leads (3) to two terminals (2). Cut off excess lead (3) from resistor (1) with diagonal pliers.
3. Repeat steps 1 and 2 as needed to repair TB1 or TB2.

Follow-on Maintenance:

NOTE: To install circuit card assembly TB1 or terminal board assembly TB2, refer to task 12.

TASK 7 ENDS HERE



ARR82-24441

TASK 8. Replace Electrical Components: Resistors, Relays, and Capacitor.

Applicability: All Models

Common Tools:

Pliers, long nose
Screwdriver, cross tip, No. 1
Set, soldering and resoldering
Wrench, combination, 5/32-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Capacitor (81349) M83421/01-5-150P, C1
Electromagnetic Relay (81349) M6106-27-017, K6-K16
Electromagnetic Relay (81349) M6106-28-017, K1-KS, K17-K19
Lockwasher (96906) MS35338-134 (as required)
Pencil, writing (Item 19)
Resistor, wire, fixed (81349) RER50F8R06M, R1
Resistor, wire, fixed (81349) RER50F1R50R, R2
Resistor, wire, fixed (81349) RER50F15ROM, R4, R6
Resistor, wire, fixed (81349) RER45F2100M, R5
Resistor, wire, fixed (81349) RER40F24R9M, R7
Resistor, wire, fixed (81349) RER55F6650M, R10R12
Resistor, wire, fixed (81349) RER55F2210M, R13-R16
Resistor, wire, fixed (81349) RER45F8R45R, R17
Resistor, wire, fixed (81349) RER40F 12R7R, R18
Resistor, wire, fixed (81349) RER55F18R7M, R19
Resistor, wire, fixed (81349) RER50F2R5M, R20
Resistor, wire, fixed (81349) RER45F6R34M, R21
Resistor, wire, fixed (81349) RER50F13R3M, R22
Resistor, wire, fixed (81349) RER50F12R7M, R23
Resistor, wire, fixed (81349) RER55F6R34M, R24
Resistor, wire, fixed (81349) RER50F1R3M, R25
Resistor, wire, fixed (81349) RER60FR499M, R45
Solder (Item 29)
Tag, marker (as required) (Item 34)
Tape, lacing (Item 35)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical load bank A5; refer to task 1.

FRAME 8

Replace Resistor:

NOTE

- Use this task to replace any of 23 resistors mounted by screws to a load bank chassis. R12 is shown here.
- Resistor numbers are next to resistors on chassis.
- To replace R13, R14, R15, or R16; refer to task 2 first for access.
- Read paragraph 2-4 on tagging and soldering wires before doing any work.

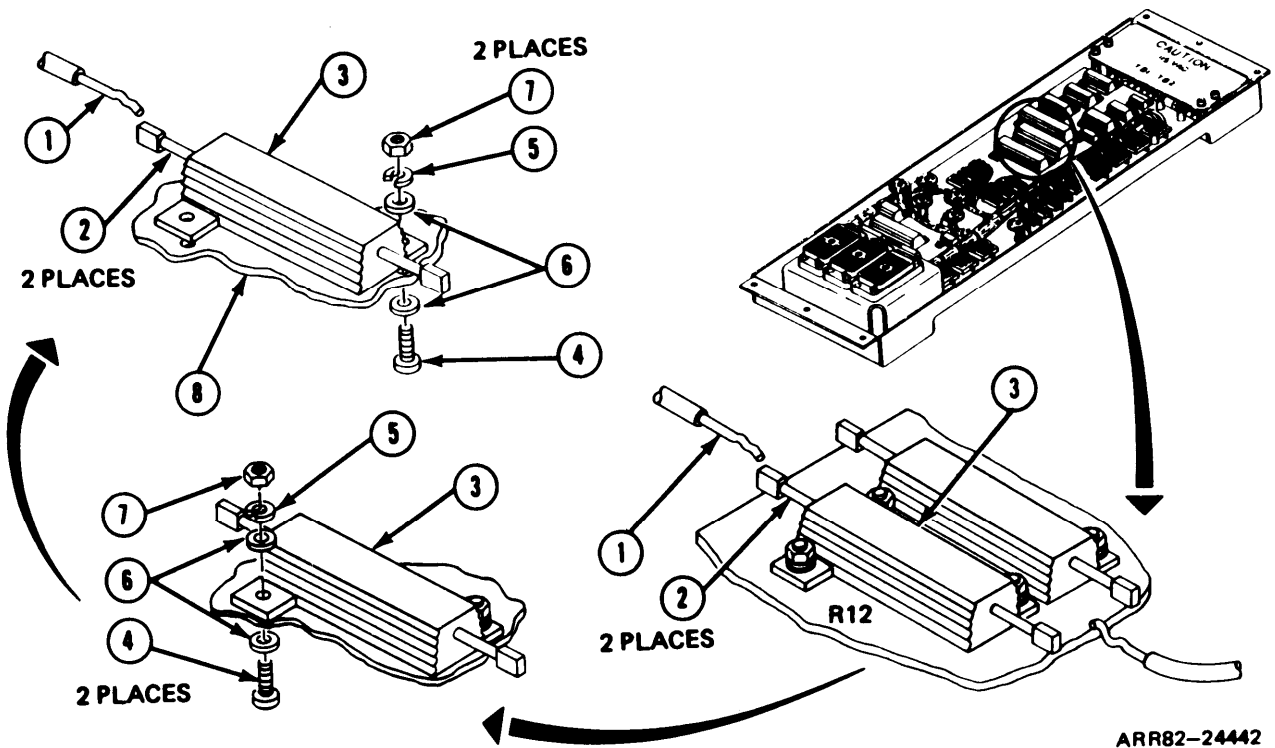
Remove Resistor:

1. Tag and unsolder two wires (1) from two leads (2) of wire fixed resistor (3).
2. Unscrew and take out two machine screws (4), two lockwashers (5), four flat washers (6), and two hexagon plain nuts (7) with screwdriver and wrench. Turn in resistor (3) and lockwashers (5).

Install Resistor:

3. Place new resistor (3) over holes in chassis (8).
4. Screw in and tighten two screws (4), two new lockwashers (5), four washers (6), and two nuts (7) with screwdriver and wrench.
5. Solder two resistor leads (2) to two wires (1).

GO TO FRAME 9



FRAME 9

Replace Electromagnetic Relay:

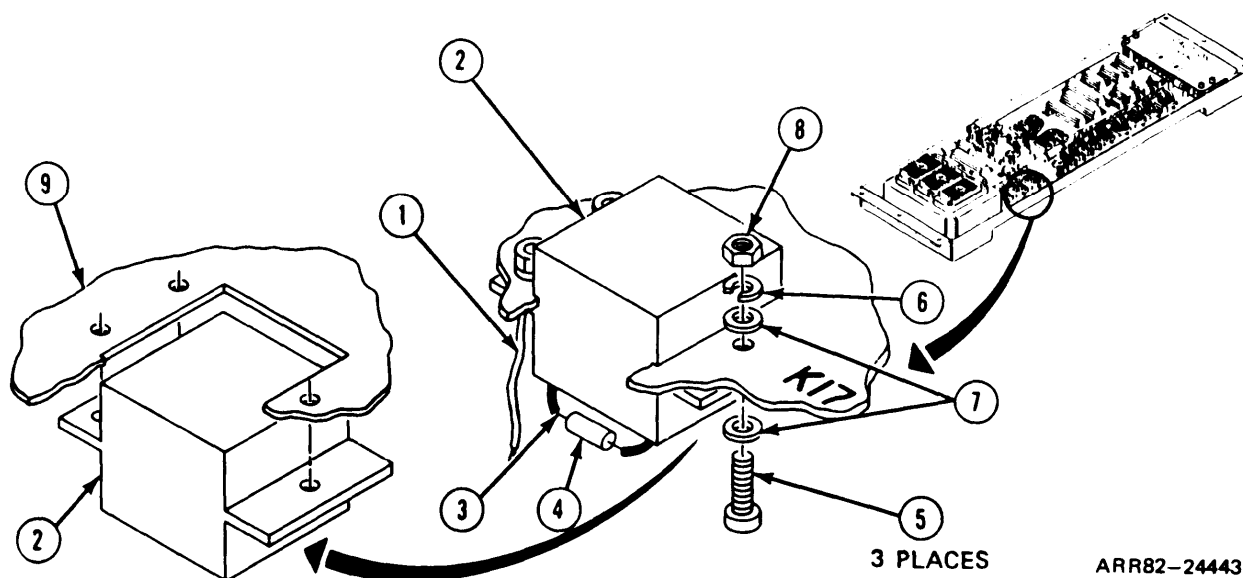
NOTE

- If replacing relay K1, K2, K3, K4, K5, K17, K18, or K19; do frames 9 and 10. Relay K 17 is shown.
- If replacing relay K6, K7, K8, K9, K10, K11, K12, K13, K14, K15, or K16; go to frame 11.
- Relay numbers are next to relays on chassis.
- Read paragraph 2-4 on tagging wires, and installing sleeving before doing any work.

Remove Relay:

1. Cut lacing tape with pliers and tag and unsolder wires (1) from relay (2).
2. Cut sleeving (3) with pliers and unsolder semiconductor device (4) from relay (2).
3. Unscrew and take out three machine screws (5), three lockwashers (6), six flat washers (7), and three hexagon plain nuts (8) with screwdriver and wrench. Get rid of lockwashers (6).
4. Take relay (2) out of chassis (9). Turn in relay (2).

GO TO FRAME 10



FRAME 10

Install Relay:

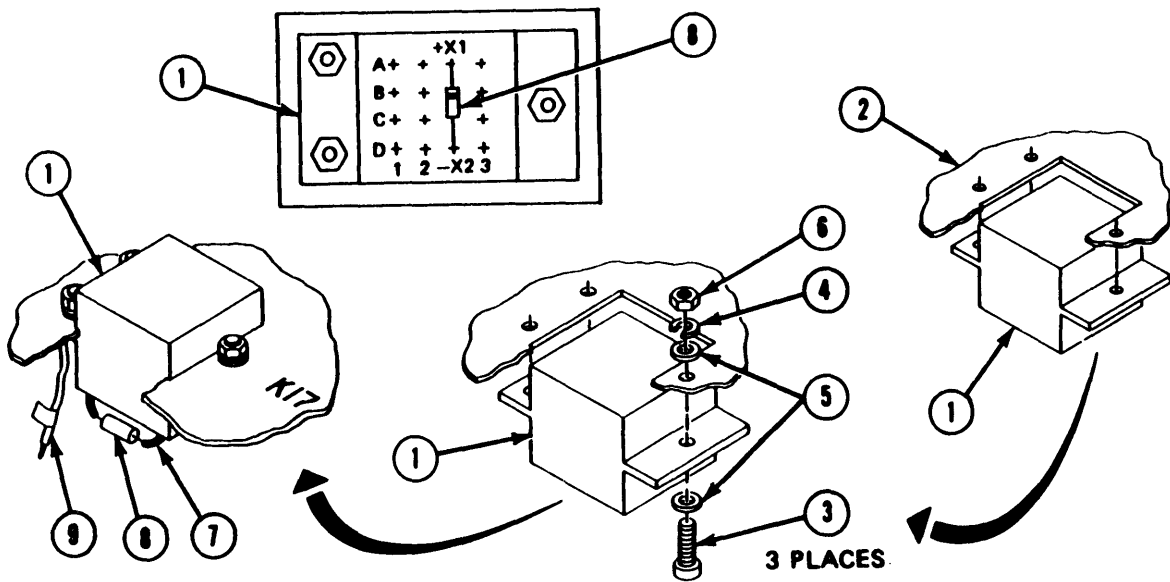
1. Line up holes in new relay (1) with holes in chassis (2).
2. Screw in and tighten three screws (3), three new lockwashers (4), six washers (5), and three nuts (6) with screwdriver and wrench.
3. Install two sleeveings (7) to semiconductor (8).

CAUTION

Backward installed semiconductor (8) can cause damage to relay (1). Make sure the band on the semiconductors facing toward the correct pin on relay (1).

4. Install semiconductor (8) to relay (1).
5. Solder wires (9) to relay (1) and put on lacing tape,

GO TO FRAME 11



ARR82-24444

FRAME 11

Replace Relay (Continued):

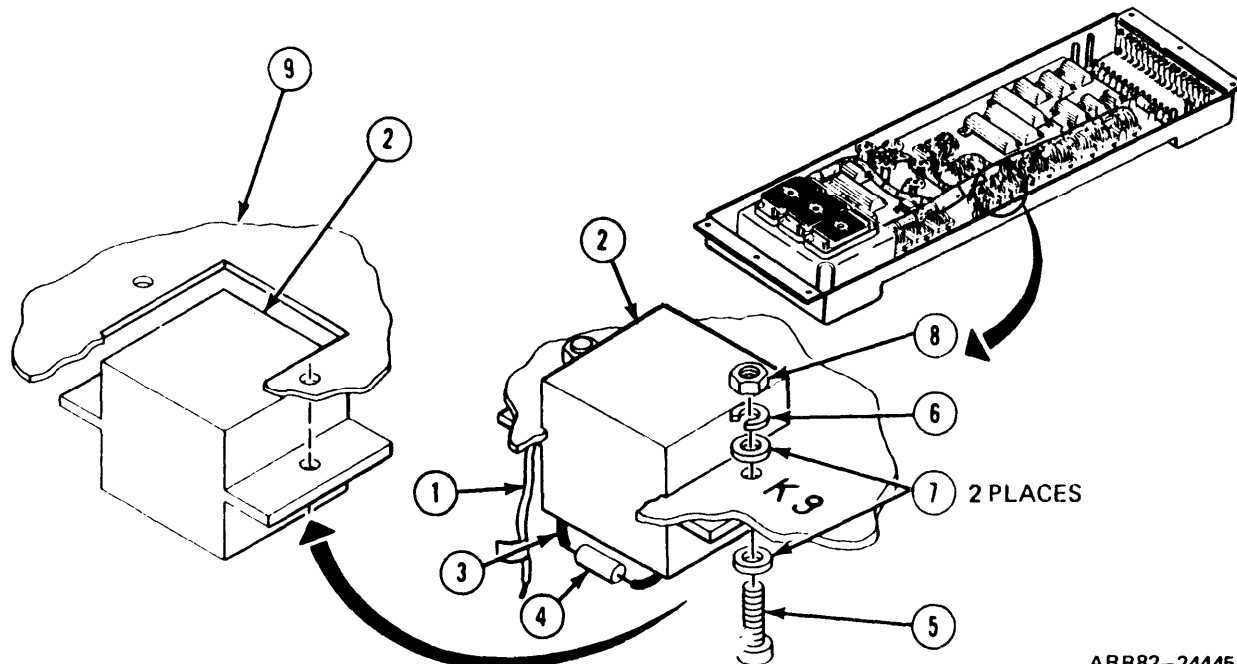
NOTE

- If replacing relay K6, K7, K8, K9, K10, K11, K12, K13, K14, K15, or K16, do frames II and 12. Relay K9 is shown.
- Relay numbers are next to relays on chassis.
- Read paragraph 2-4 on tagging wires, soldering and installing sleeving before doing any work.

Remove Relay:

1. Cut lacing tape with pliers and unsolder wires (1) from relay (2).
2. Cut sleeving (3) with pliers and unsolder semiconductor (4) from relay (2).
3. Unscrew and take out two screws (5), two lockwashers (6), four washers (7), and two nuts (8) with screwdriver and wrench. Get rid of lockwashers (6).
4. Take relay (2) out of chassis (9). Turn in relay (2).

GO TO FRAME 12



ARR82-24445

FRAME 12

Install Relay:

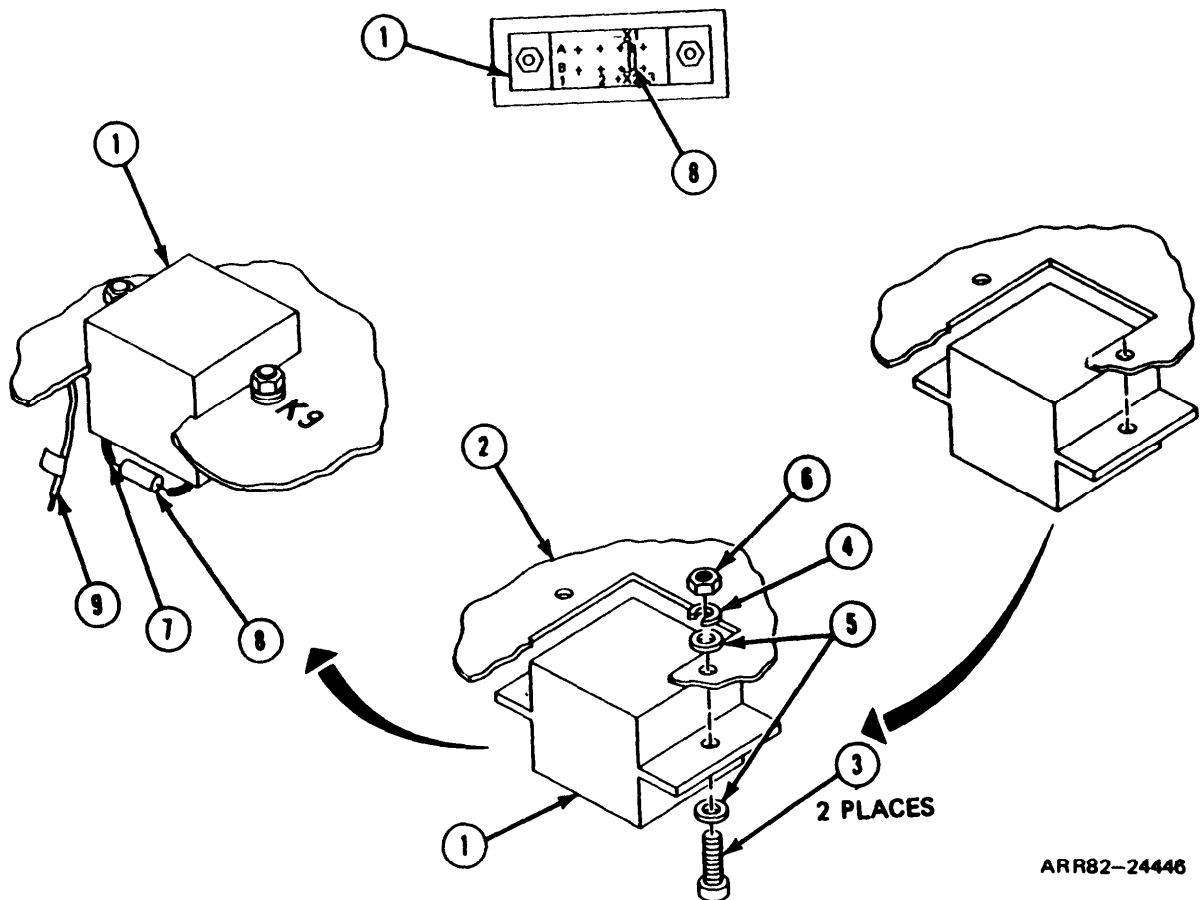
1. Line up holes in new relay (1) with holes in chassis (2).
2. Screw in and tighten two screws (3), two new lockwashers (4), four washers (5), and two nuts (6) with screwdriver and wrench.
3. Install two sleeveings (7) to semiconductor device (8).

CAUTION

Backward installed semiconductor (8) can cause damage to relay (1). Make sure the band on the semiconductor (8) is facing toward the correct pin on relay (1).

4. Install semiconductor (8) to relay (1).
5. Solder wires (9) to relay (1) and put on lacing tape.

GO TO FRAME 13



FRAME 13

Replace Capacitor:

NOTE

- Capacitor number is next to capacitor on chassis.
- Read paragraph 2-4 on soldering before doing any work.

Remove Capacitor:

1. Unsolder and take off capacitor (1) from terminal studs E8 (2) and E9 (3).

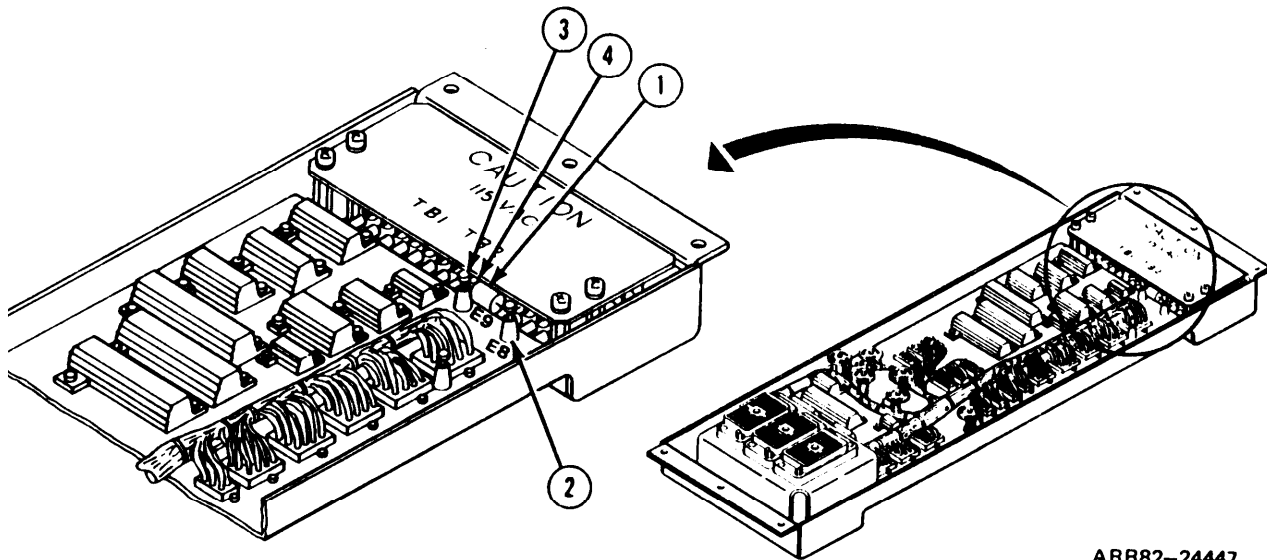
Install Capacitor:

2. Wrap leads (4) of new capacitor (1) around terminals E8 (2) and E9 (3).
3. Solder leads (4) to terminals E8 (2) and E9 (3).

Follow-on Maintenance:

1. Install electrical load bank A5; refer to task 16.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 8 ENDS HERE



TASK 9. Replace Terminal Lug E1, E2, E4, E5, E6, or E7 and Electrical-Mechanical Post.

Applicability: All Models

Common Tools:

- Bit, cross tip, No. 2
- Pliers, diagonal cutting
- Pliers, long nose
- Screwdriver, cross tip, No. 2
- Set, soldering and resoldering
- Wrench, combination, 1/4-inch

Special Tools:

- Wrench Set, socket, 12285468

Supplies:

- NOTE: Expendable supplies are defined in volume 1, appendix C.
- Lockwasher (96906) MS35338-136 (as required)
 - Pencil, writing (Item 19)
 - Post, electrical-mechanical (19200) 12303288 (as required)
 - Solder (Item 29)
 - Tag, marker (as required) (Item 34)
 - Tape, lacing (Item 35)
 - Terminal Lug (19200) 12303323 (as required)

Personnel: One

Equipment Condition:

- Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical load bank AS; refer to task 1.

FRAME 14

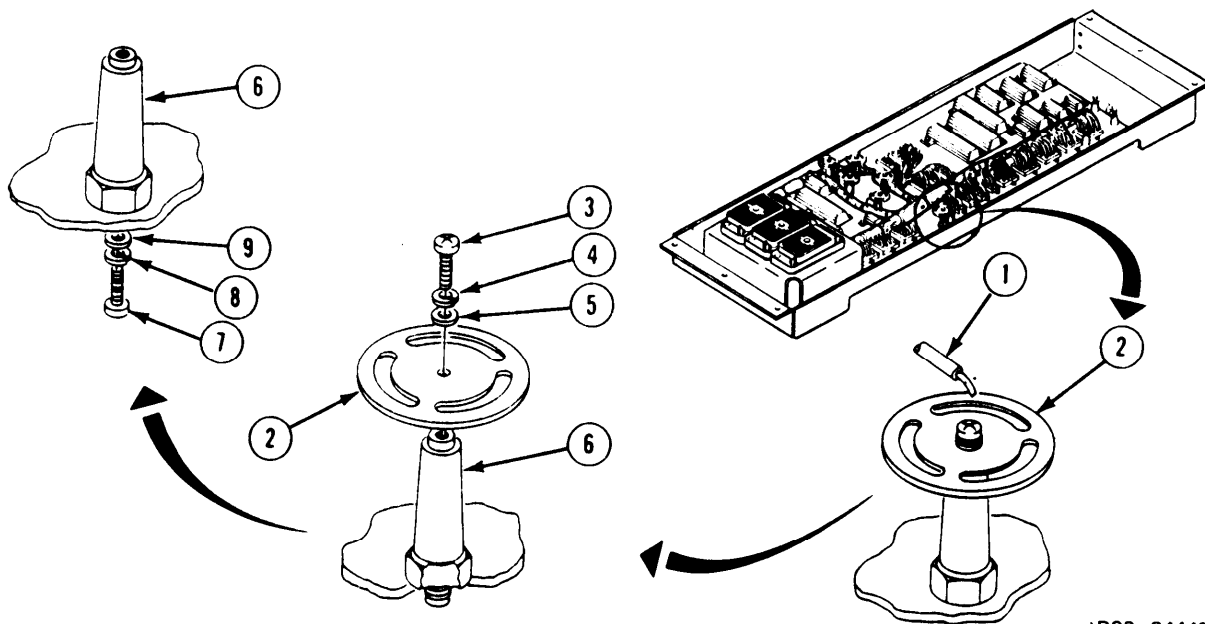
Remove Terminal Lug and Electrical-Mechanical Post:

NOTE

- Use this task to replace any of six terminal lugs or posts E1, E2, E4, E5, E6, or E7. Terminal lug E4 is shown.
- If replacing only post do steps 1 and 3 through 6.
- Read paragraph 2-4 on tagging and soldering wires before doing any work.

1. Cut lacing tape off of wires (1) with diagonal pliers.
2. Tag and unsolder and takeoff wires (1) from terminal lug (2) with soldering gun and long nose pliers.
3. Unscrew and takeout machine screw (3), lockwasher (4), and flat washer (5) with screwdriver. Get rid of lockwasher (4).
4. Lift terminal lug (2) off post (6). Look at terminal lug (2) for cracks. If bad, turn in terminal lug (2). If OK, set aside for later use.
5. Unscrew and takeout screw (7), lockwasher (8), and washer (9) with screwdriver and wrench. Get rid of lockwasher (8).
6. Look at post (6) for cracks. If bad, turn in post (6). If OK, set aside for later use.

GO TO FRAME 15



ARR82-24448

FRAME 15

Install Terminal Lug and Electrical-Mechanical Post:

1. Line up hole in new post (1) with hole in chassis (2) and screw in screw (3) new lockwasher (4), and washer (5) with screwdriver and wrenches.
2. Using torque screwdriver and bit, torque screw (3) between 6 and 7 Pound-inches (0.68 and 0.79 Newton meter).
3. Line up hole in new terminal lug (6) with hole in post (1) and screw in screw (7), new lockwasher (8), and washer (9) with screwdriver.
4. Using torque screwdriver and bit, torque screw (7) between 6 and 7 pound-inches (0.68 and 0.79 Newton meter).

NOTE

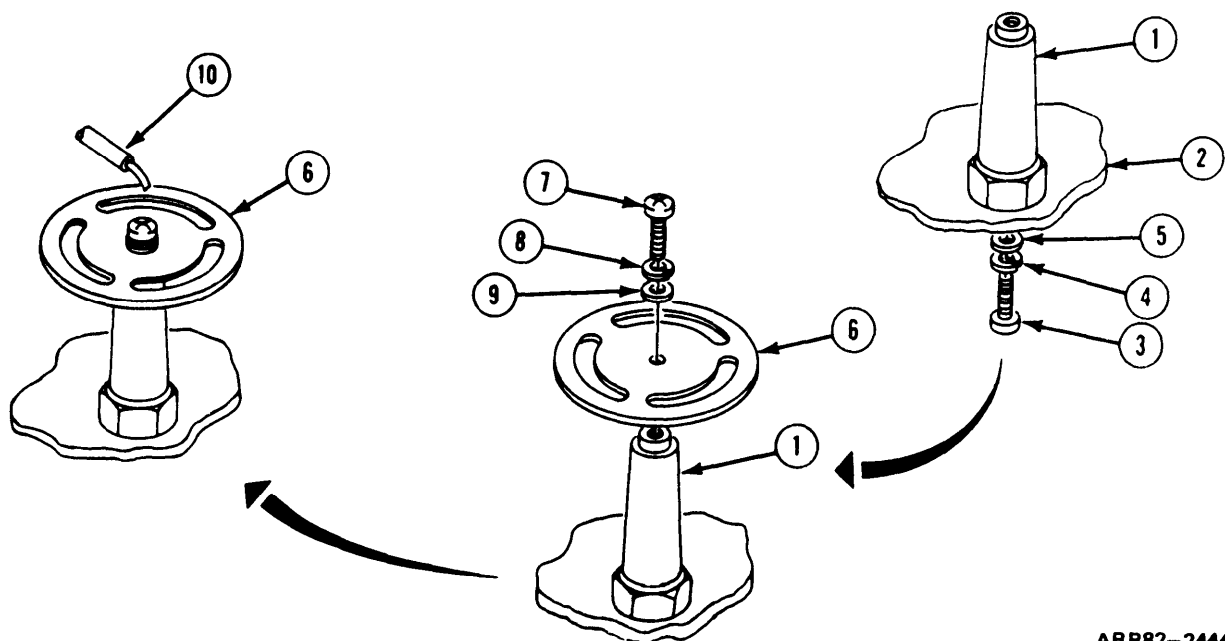
If replacing only post (1), go to step 6.

5. Solder wires (10) to terminal lug (6).
6. Put lacing tape on wires (10) as needed.

Follow-on Maintenance:

1. Install electrical load bank A5; refer to task 16.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 9 ENDS HERE



ARR82-24449

TASK 10. Replace Terminal Stud E3, E8, or E9.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 2
Pliers, long nose
Screwdriver, cross tip, No. 2
Set, soldering and resoldering
Wrench, combination, 1/4-inch

Special Tools:

Wrench Set, socket, 12285468

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-136
Solder (Item 29)
Stud, terminal (19200) 12303287

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical load bank A5; refer to task 1.

FRAME 16

NOTE

- Use this task to replace any of three terminals E3, E8, or E9. Terminal E9 is shown.
- Read paragraph 2-4 on tagging and soldering wires before doing any work.

Remove Terminal Stud:

1. Tag and unsolder and takeoff wire (1) from terminal E9 (2) with pliers.
2. Unscrew and take out machine screw (3), lockwasher (4), and flat washer (5) with screwdriver and wrench. Turn in terminal (2) and get rid of lockwasher (4).

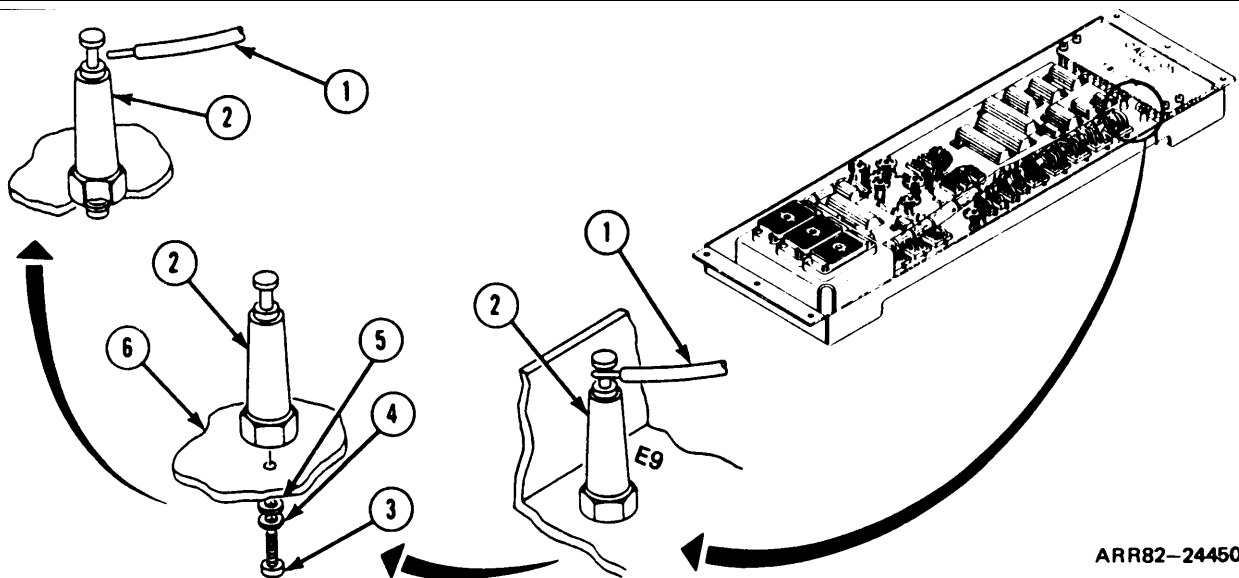
Install Terminal:

3. Line up hole in new terminal (2) with hole in chassis (6).
4. Screw in screw (3), new lockwasher (4), and washer (5) with screwdriver and wrench.
5. Using torque screwdriver and bit, torque screw (3) between 6 and 7 pound-inches (0.68 and 0.79 Newton meter) with handle, extension, and bit.
6. Solder wire (1) to terminal (2).

Follow-on Maintenance:

1. Install electrical load bank A5; refer to task 16.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 10 ENDS HERE



TASK 11. Replace Butt Hinge.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Wrench, combination, 5/16-inch

Special Tools: None

Supplies:

Hinge, butt (19200) 12303474
Lockwasher (96906) MS35338-137 (six required)

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove electrical load bank A5; refer to task 1.
4. Remove connector bracket; refer to task 2.
5. Remove cover; refer to task 5.

FRAME 17

Remove Hinge:

- Take out six machine screws (1), six lockwashers (2), twelve flat washers (3), and six hexagon plain nuts (4) with screwdriver and wrench. Get rid of lockwashers (2).
2. Remove butt hinge (5) from chassis (6).

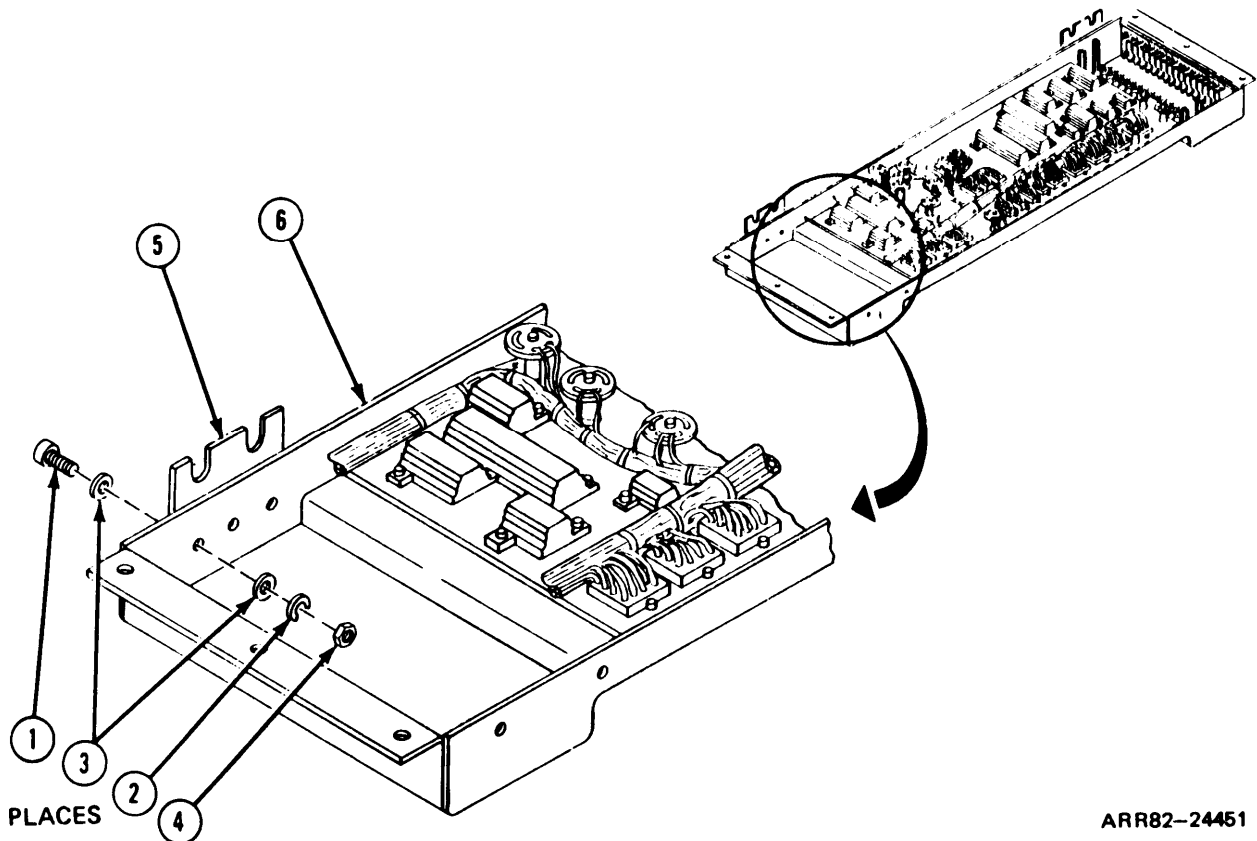
Install Hinge:

1. Line up holes in new hinge (5) with chassis (6).
4. Screw in and tighten six screws (1), six new lockwashers (2), twelve washers (3), and six nuts (4) with screwdriver and wrench.

Follow-on Maintenance:

1. Install cover; refer to task 13.
2. Install connector bracket; refer to task 15.
3. Install electrical load bank A5; refer task 16.
4. Install thermal system test controller; refer to para. 2-5, task 8.
5. Install thermal system test controller case cover; refer to volume 1, para. 4-18. 18.

TASK 11 ENDS HERE



TASK 12. Install Circuit Card Assembly Test or Terminal Board Assembly Test.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 1
Pliers, long nose
Screwdriver, cross tip, No. 1
Set, soldering and resoldering
Wrench, combination, 3/16-inch

Special Tools:

Wrench Set, socket, 12285468

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-135 (four required per terminal board assembly)
Solder (Item 29)
Tape, lacing (Item 35)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove circuit card assembly TB1 or terminal board assembly TB2; refer to task 6.

FRAME 18

Install TB1 or TB2:

NOTE

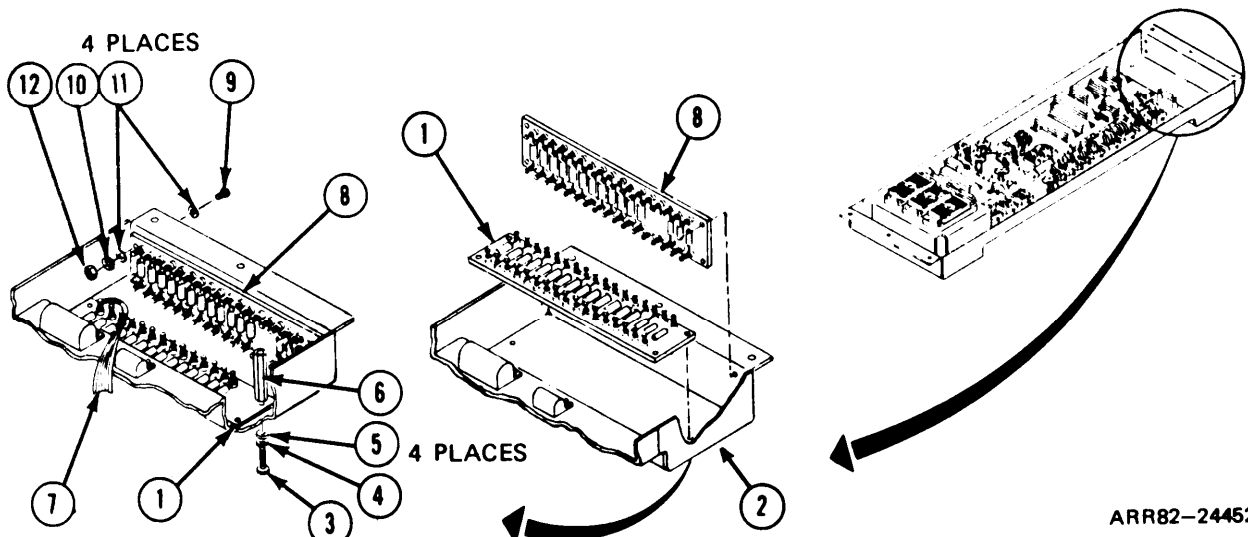
- To install circuit card assembly TB1 (1), do steps 1, 2, and 3. To install terminal board assembly TB2 (8), do steps 1 through 6.
- Read paragraph 2-4 on soldering wires before doing any work.

1. Line up holes in circuit card assembly TB1 (1) with holes in chassis (2) and screw in four machine screws (3), new lockwashers (4), flat washers (5), and electrical-mechanical posts (6) with screwdriver and wrenches.
2. Using torque screwdriver and bit, torque screws (3) between 5 and 6 pound-inches (0.57 and 0.68 Newton meter).
3. Solder wires (7) to circuit card assembly TB1 (1).
4. Solder wires (7) to terminal board TB2 (8) and put lacing tape on wires (7) as needed.
5. Line up holes interterminal board TB2 (8) with holes in chassis (2) and screw in four machine screws (9), four new lockwashers (10), eight flat washers (11), and four plain hexagon nuts (12) with screwdriver and wrench.
6. Using torque screwdriver and bit, torque screws (9) between 5 and 6 pound-inches (0.57 and 0.68 Newton meter).

Follow-on Maintenance:

1. Install cover; refer to task 13.
2. Install electrical load bank A5; refer to task 16.
3. install thermal system test controller; refer to para. 2-5, task 8.
4. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 12 ENDS HERE



ARR82-24452

TASK 13. Install Cover.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 2

Screwdriver, cross tip, No. 2

Special Tools:

Wrench Set, socket, 12285468

Supplies:

Cover (19200) 12303120

Lockwasher (96906) MS35338-135 (four required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure

Remove cover; refer to task 5.

FRAME 19

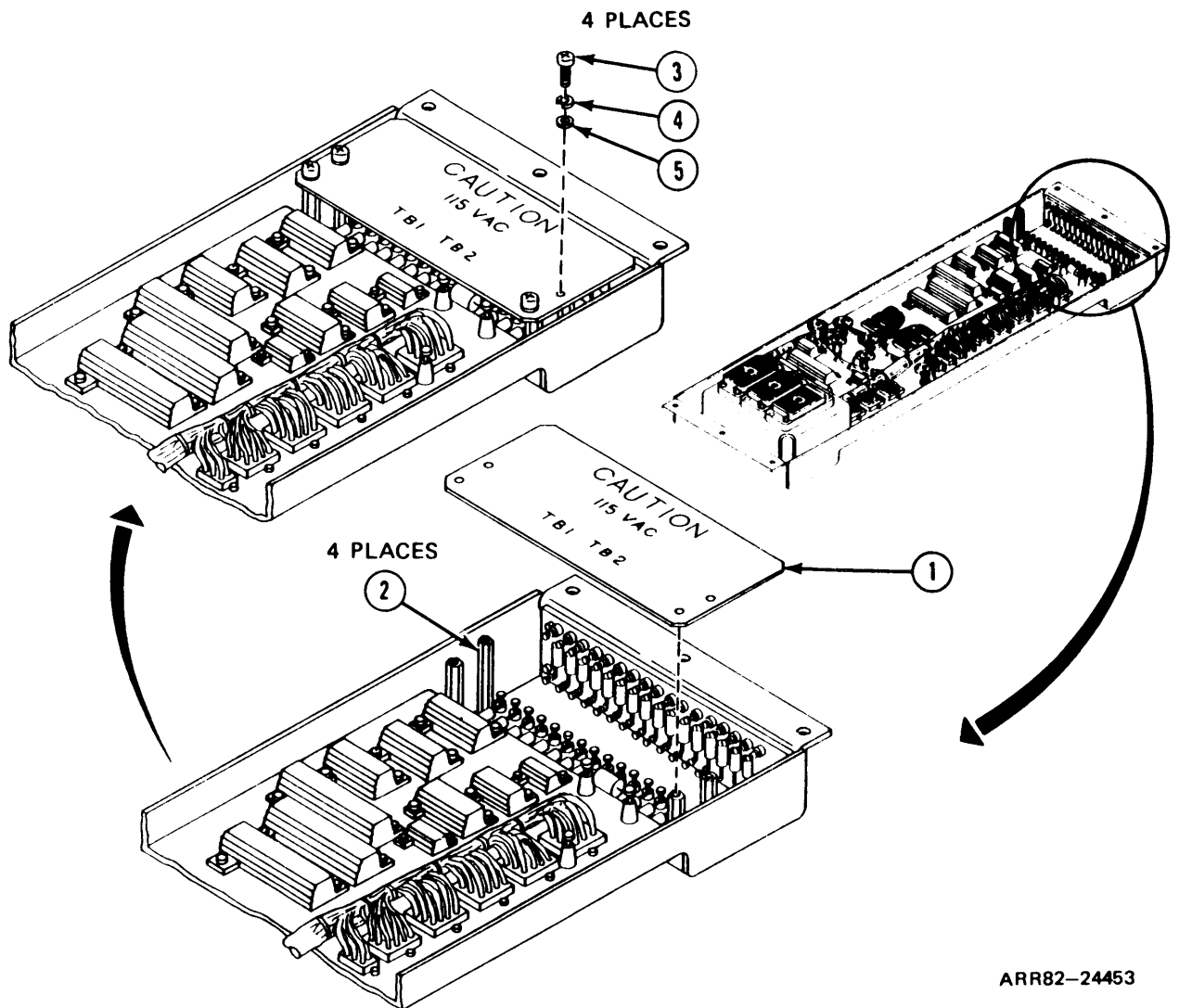
Install Cover:

1. Line up holes in cover (1) with holes in electrical-mechanical posts (2).
2. Screw in and tighten four machine screws (3), new lockwashers (4), and flat washers (5) with screwdriver.
3. Using torque screwdriver and bit, torque screws (3) between 5 and 6 pound-inches (0.57 and 0.68 Newton meter).

Follow-on Maintenance:

1. Install electrical load bank A5; refer to task 16.
2. Install thermal system test controller case; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 13 ENDS HERE



ARR82-24453

TASK 14. Install Receptacle Connector Body A5J1, A5J2, or A5J3.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 1
Screwdriver, cross tip, No. 1

Special Tools:

Wrench Set, socket, 12285468

Supplies:

Lockwasher (96906) MS35338-135 (four required per connector)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove receptacle connector body A5J1, A5J2, or A5J3; refer to task 3.

FRAME 20

Install Connector:

NOTE

Use this task to install any of three connectors A5J1, A5J2, or A5J3. Connector A5J3 (1) is shown.

1. Line up holes in receptacle connector body (1) with holes in connector bracket (2).

CAUTION

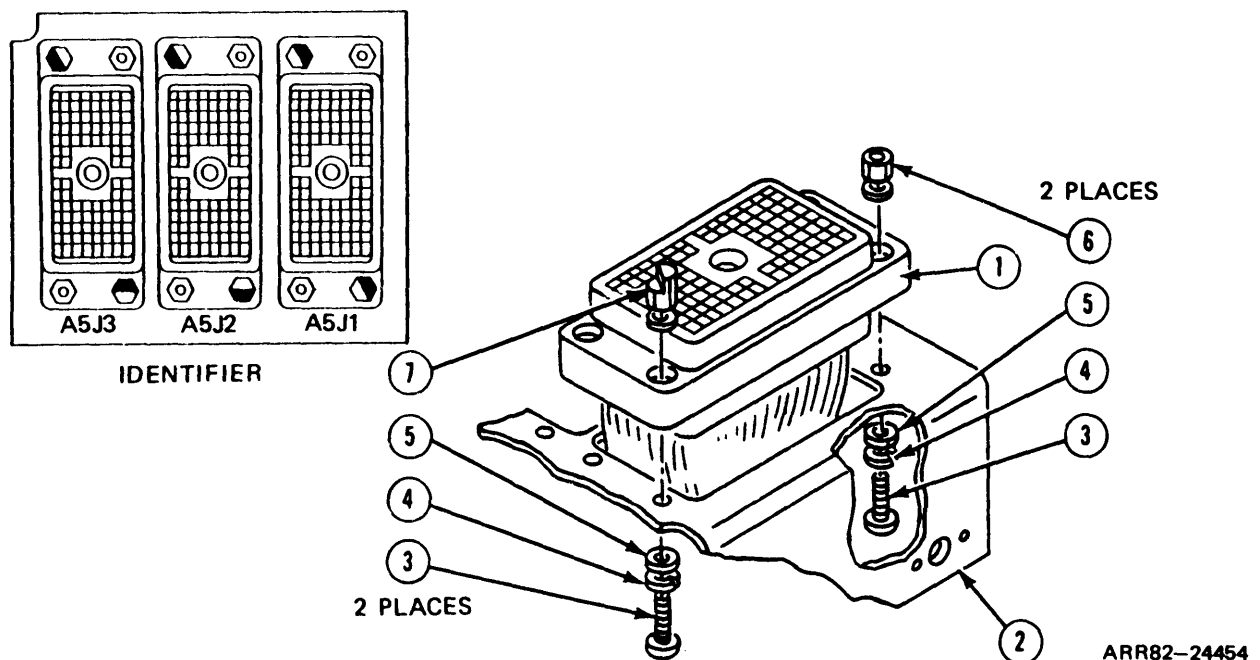
If keys are put back and turned wrong way on connector, the wrong plug maybe installed on the connector and equipment can be damaged. Be sure to put keys back in as shown in identifier.

2. Screw in four machine screws (3), four new lockwashers (4), four flat washers (5), two hexagon plain nuts (6), and two electrical polarizing keys (7) with screwdriver.
3. Using torque screwdriver and bit, torque screws (3) between 5 and 6 pound-inches (0.57 to 0.68 Newton meter).

Follow-on Maintenance:

1. Install panel connector bracket; refer to task 15.
2. Install electrical load bank A5; refer to task 16.
3. install thermal system test controller case; refer to para. 2-5, task 8.
4. install thermal test controller case cover; refer to volume 1, para. 4-18.

TASK 14 ENDS HERE



TASK 15. Install Panel Connector Bracket.

Applicability: All Models

Common Tools:

Bit, cross tip, No. 2

Screwdriver, cross tip, No. 2

Special Tools:

Wrench Set, socket, 12285468

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface:

Preliminary Procedure:

Remove panel connector bracket; refer to task 2.

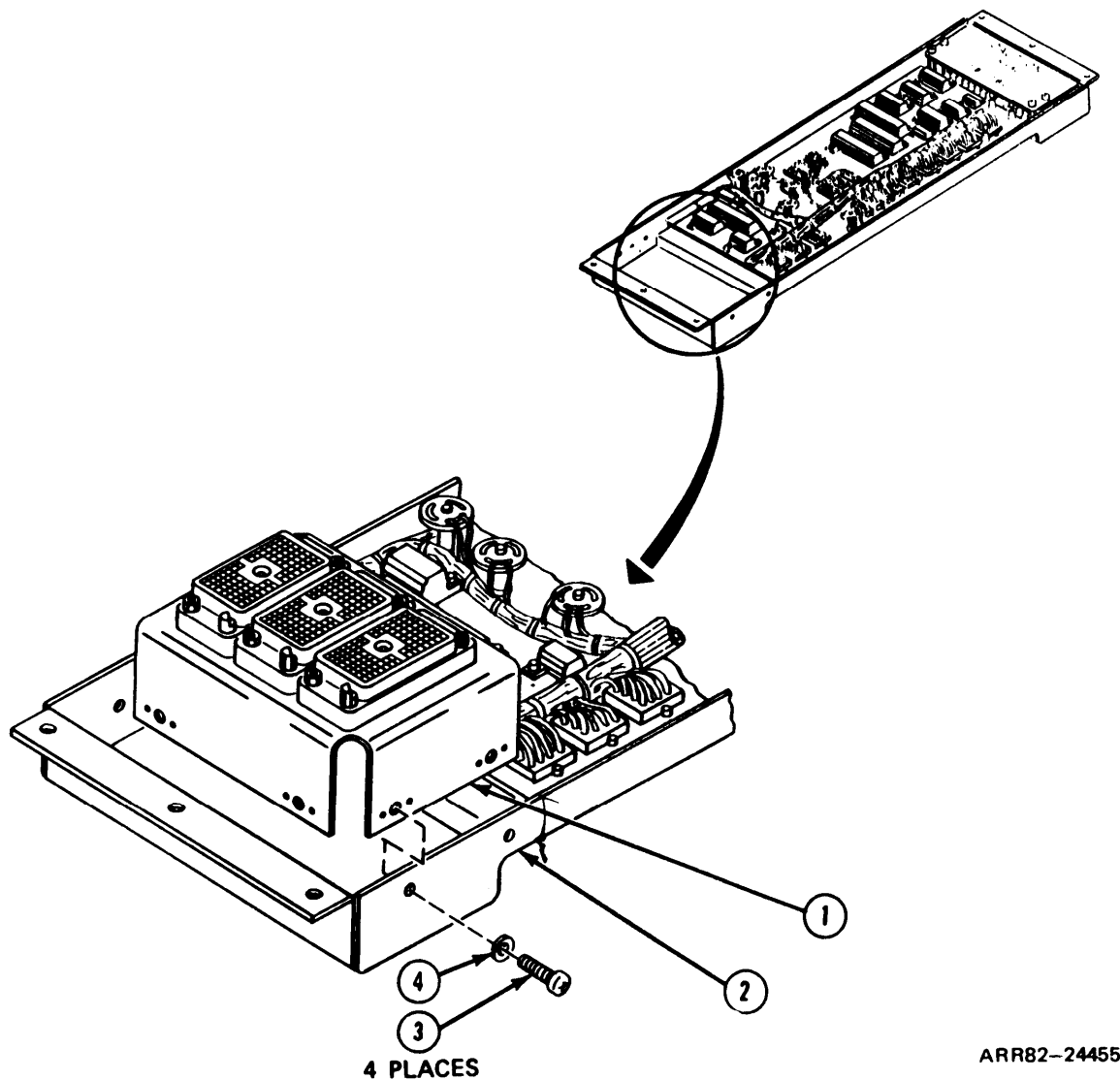
FRAME 2**Install Bracket:**

1. Line up holes in connector bracket (1) with holes in electrical load bank A5 (2).
2. Screw in four machine screws (3) and flat washers (4) with screwdriver.
3. Using torque screwdriver and bit, torque screws (3) between 12 and 15 pound-inches (1.4 and 1.7 Newton meters).

Follow-on Maintenance:

1. Install electrical load bank A5; refer to task 16.
2. Install thermal system test controller; refer to para. 2-5, task 8.
3. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

TASK 15 ENDS HERE



TASK 16. install Electrical Load Bank A5.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-135 (four required)

Lockwasher (96906) MS35338-138 (six required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove electrical load bank A5; refer to task 1.

FRAME 22

Install Load Bank:

NOTE

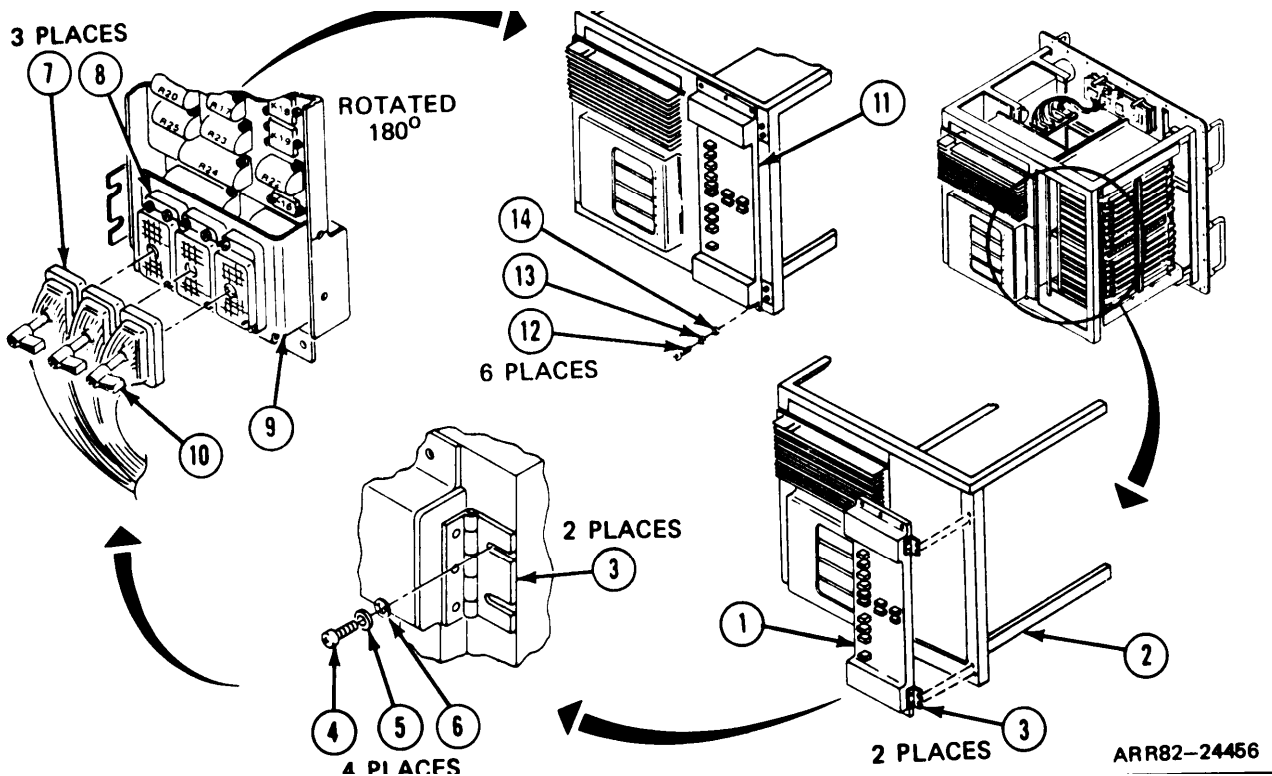
If load bank A5 (1) was removed and taken off of chassis (2), do steps 1 through 4. If load bank was opened for access only, go to step 4.

1. Position electrical load bank (1) on chassis (2) and line up butt hinges (3) with holes in chassis (2).
2. Screw in and tighten four machine screws (4), new lockwashers (5), and flat washers (6) into hinges (3) with screwdriver.
3. Line up three electrical connector plugs (7) with receptacle connector bodies (8) on connector bracket (9). Turn handles (10) on three plugs (7) one quarter turn clockwise to lock plugs (7) to connectors (8).
4. Close load bank (11) and put in six machine screws (12), new lockwashers (13), and flat washers (14) with screwdriver.

Follow-on Maintenance:

1. Install thermal system test controller; refer to para. 2-5, task 8.
2. install thermal system test controller case cover; refer to volume 1, para. 4-18.

END OF ELECTRICAL LOAD BANK A5 MAINTENANCE



2-12. Electronics Unit (EU) A4.

Task	Title	Frames
1	Remove Electronics Unit (EU) A4	1
2	Install Electronics Unit (EU) A4	2

TASK 1. Remove Electronics Unit (EU) A4.

Appiicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.

FRAME 1

Remove EU:

1. Unscrew and takeout three machine screws (1), lockwashers (2), and flat washers (3). Get rid of iockwashers (2). Set screws (1) and washers (3) aside for later use.
2. Take out electronics unit (4).
3. Take off two plugs (5).
4. Look at electronics unit (4) for damage. If bad, turn in a

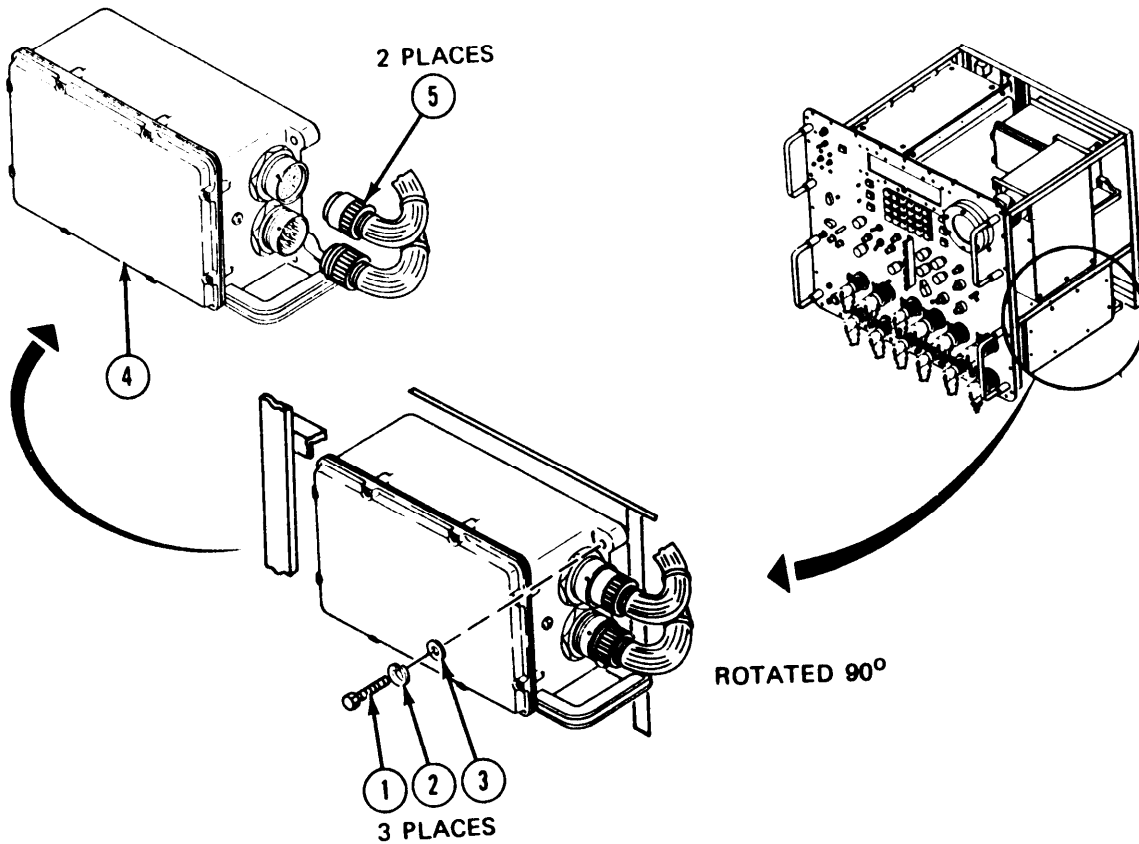
NOTE

Maintenance procedures for the repair of the EU can be found in TM 9-1200-206-34-2-2.

Follow-on Maintenance:

NOTE: To install electronics unit (EU) A4, refer to task 2.

TASK 1 ENDS HERE



ARR82-24457

TASK 2. install Electronics Unit (EU) A4.

Applicability: All Models

Common Tools:

Adapter, 1/4-3/8, 5120-00-224-9219
Bit, cross tip, No. 3, 5120-00-785-8151
Screwdriver, cross tip, No. 3
Wrench, combination, 9/16-inch
Wrench, torque, 0-60 inch-pounds, 5120-00-529-2552

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-139 (3 required)

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove electronics unit (EU); refer to task 1.

FRAME 2

Install EU:

NOTE

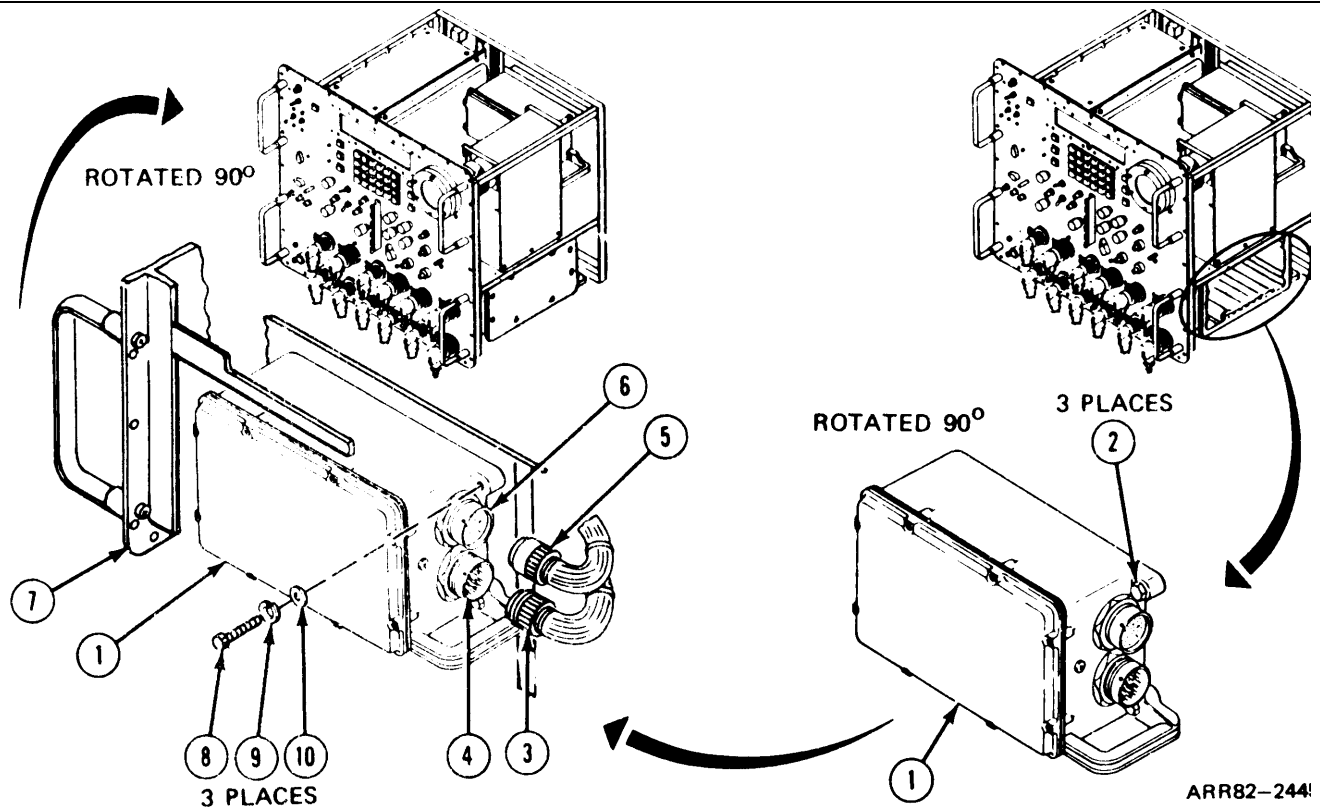
if EU (1) has captive screws (2) installed, go to step 1. If not, go to step 2.

1. Remove three captive screws (2) with wrench. Get rid of captive screws (2).
2. Connect plug W14P1 (3) to receptacle connector J1 (4) and connect W14P2 (5) to receptacle connector J2 (6).
3. Put electronics unit (1) into chassis (7).
4. Screw in three machine screws (8), new lockwashers (9), and flat washers (10) with cross tip screwdriver.
5. Torque screws (8) between 40 and 50 pound-inches (4.5 and 5.7 Newton-meters) with torque wrench, adapter and No. 3 cross tip bit.

Follow-on Maintenance:

1. Install thermal system test controller; refer to para. 2-5, task 8.
2. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

END OF ELECTRONICS UNIT (EU) A4 MAINTENANCE



2-13. Front Panel Connectors Bracket.

Task	Title	Frames
1	Remove Front Panel Connectors Bracket	1 - 2
2	Repair Front Panel Connectors Bracket	3
3	Install Front Panel Connectors Bracket	4 - 6

TASK I. Remove Front Panel Connectors Bracket.

Applicability: All Models

Common Tools:

- Screwdriver, cross tip, No. 1
- Screwdriver, cross tip, No. 2
- Wrench, combination, 3/16-inch
- Wrench, combination, 7/32-inch
- Wrench set, socket, single socket spinner, 3/16-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

1. Remove thermal system test controller case cover; refer to volume I, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to para. 2-6, task 1.
4. Remove power module A6 for access only; refer to para. 2-9, task I.
5. Remove IDU assembly A2; refer to para. 2-8, task I.

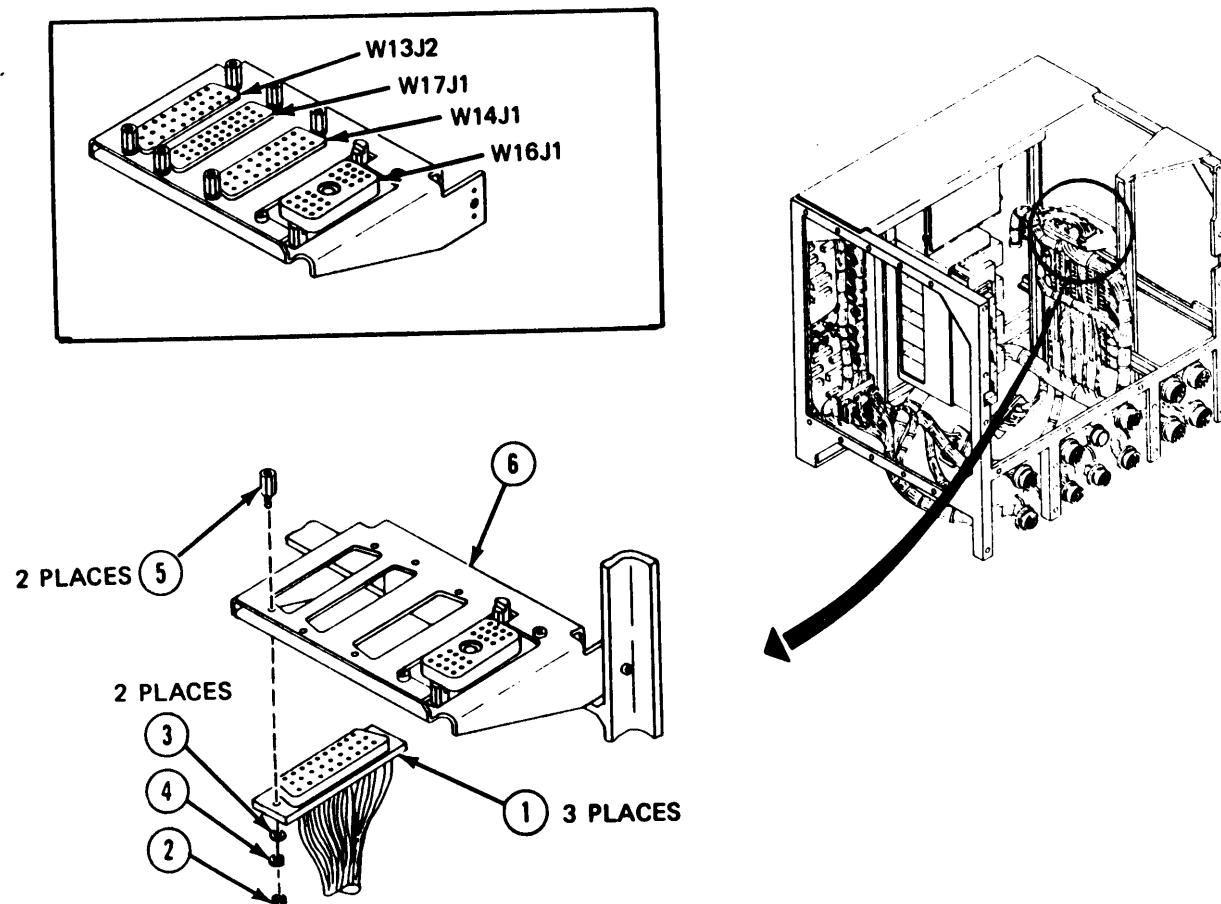
FRAME 1

Remove Connector:

NOTE

- Use this procedure to remove receptacle connectors W13J2, W17J1, W14J1, and W16J1. Connector W13J2 (1) is shown.
 - To remove connector W16J1, go to frame 2.
1. Unscrew and take out two hexagon plain nuts (2), flat washers (3), lockwashers (4), and electrical jack sockets (5) with 3/16-inch single socket spinner socket wrench and 3/16-inch combination wrench. Get rid of lockwashers (4).
 2. Move connector (1) away from under side of front panel connector bracket (6).

GO TO FRAME 2



ARR82-24459

FRAME 2

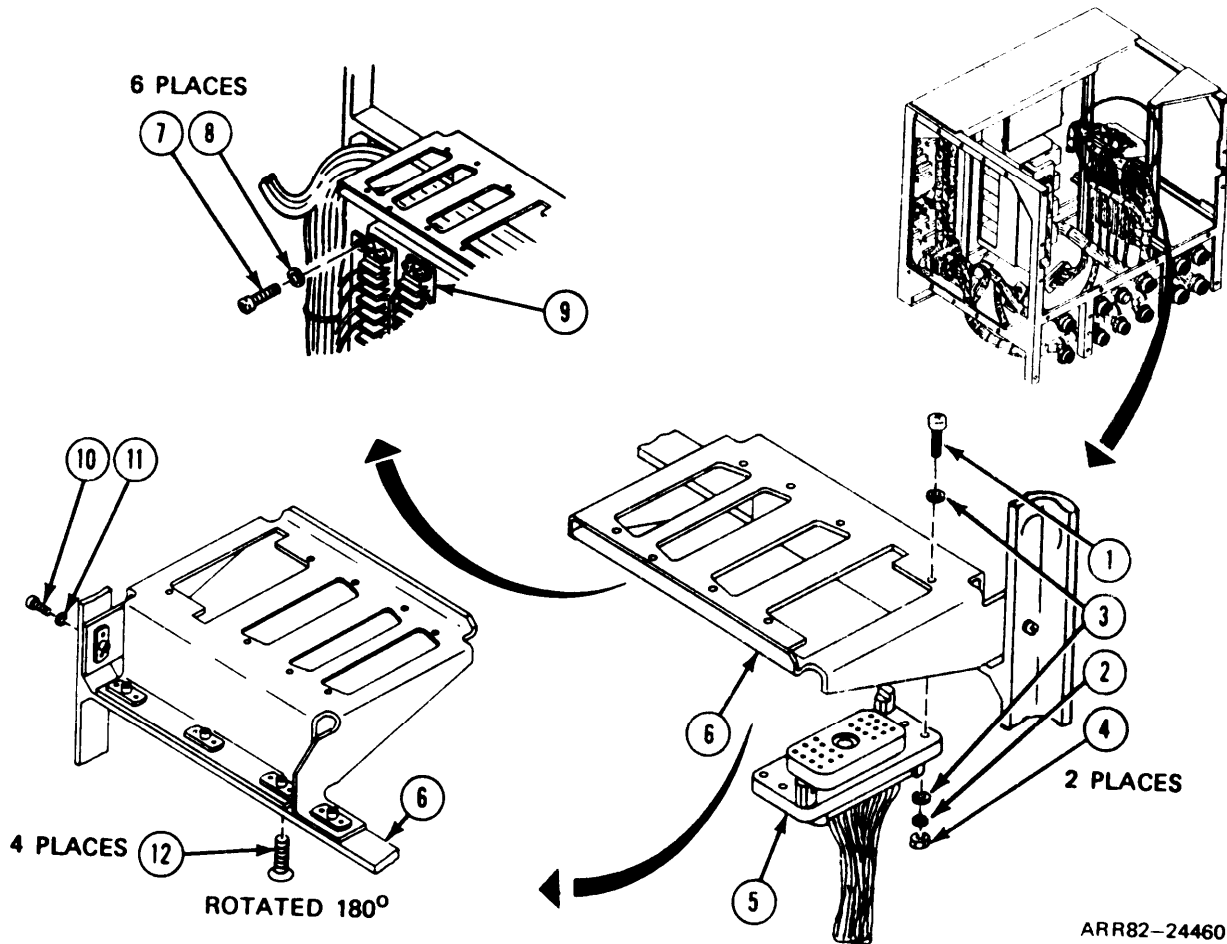
Remove Connector (Continued):

1. Takeout two machine screws (1), two lockwashers (2) four flat washers (3), and two hexagon plain nuts (4) with cross tip screwdriver No. 1 and 7/32-inch wrench. Get rid of lockwashers (2).
2. Move connector W16J1 (5) away from under side of bracket (6).
3. Unscrew and take out six machine screws (7) and flat washers (8) from bracket (6).
4. Move bracket (9) away from under side of bracket (6).
5. Take out machine screw (10) and flat washer (11) with cross tip screwdriver No. 2.
6. Take out four machine screws (12) with cross tip screwdriver No. 2.

Follow-on Maintenance:

NOTE: To install front panel connectors bracket, refer to task 3.

TASK 1 ENDS HERE



TASK 2. Repair Front Panel Connectors Bracket.

Applicability All Models

Common Tools:

Drill, 1/4-inch
Drill Bit, 1/16-inch
Hammer, ball peen
Pin, drift

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Film, chemical (Item 12)
Nut, self-locking, plain (96906) MS21076L08 (five per bracket)
primer (Item 23)
Rivet, solid (96906) MS20426AD3-6 (10 required)

Personnel: Two

Soldier A: Repairs front panel connectors bracket.
Soldier B: Helps Soldier A.

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to para. 2-6, task 1.
4. Remove power module A6 for access only; refer to para. 2-9, task 1.
5. Remove IDU assembly A2; refer to para. 2-8, task 1.
6. Remove front panel connectors bracket; refer to task 1.

FRAME 3

Repair Bracket:

NOTE

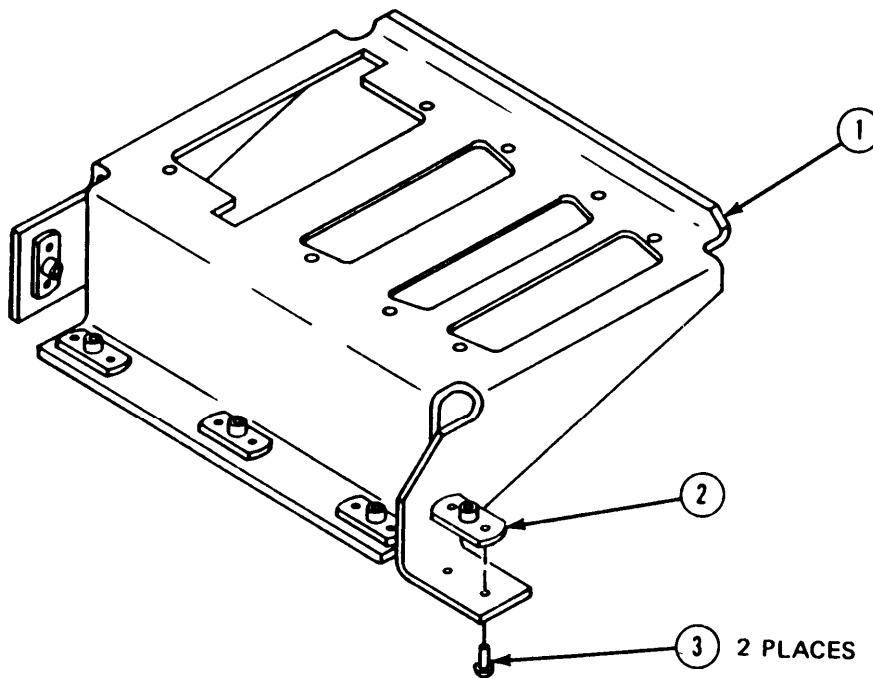
Read paragraph 2-4 on replacing nut plates before doing any work.

- Soldier A: 1. Look at bracket (1) for cracks, breaks, or corrosion. If bad, turn in. If OK, go to step 2.
- Soldier A: 2. Look at plain self-locking nut (2). If bad, take out two solid rivets (3) holding defective nut (2).
- Soldier A: 3. Line up holes in new nut (2) with holes in bracket (1).
- Soldier A,
Soldier B: 4. Put new rivets (3) in bracket (1) and nut (2).

Follow-on Maintenance:

NOTE: To install front panel connectors bracket, refer to task 3.

TASK 2 ENDS HERE



ARR82-24461

TASK 3. install Front PanelConnectors Bracket.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Wrench, combination, 3/16-inch
Wrench, combination, 7/32-inch
Wrench Set, socket, single socket spinner, 3/16-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedure:

Remove front panel connectors bracket; refer to task 1.

FRAME 4

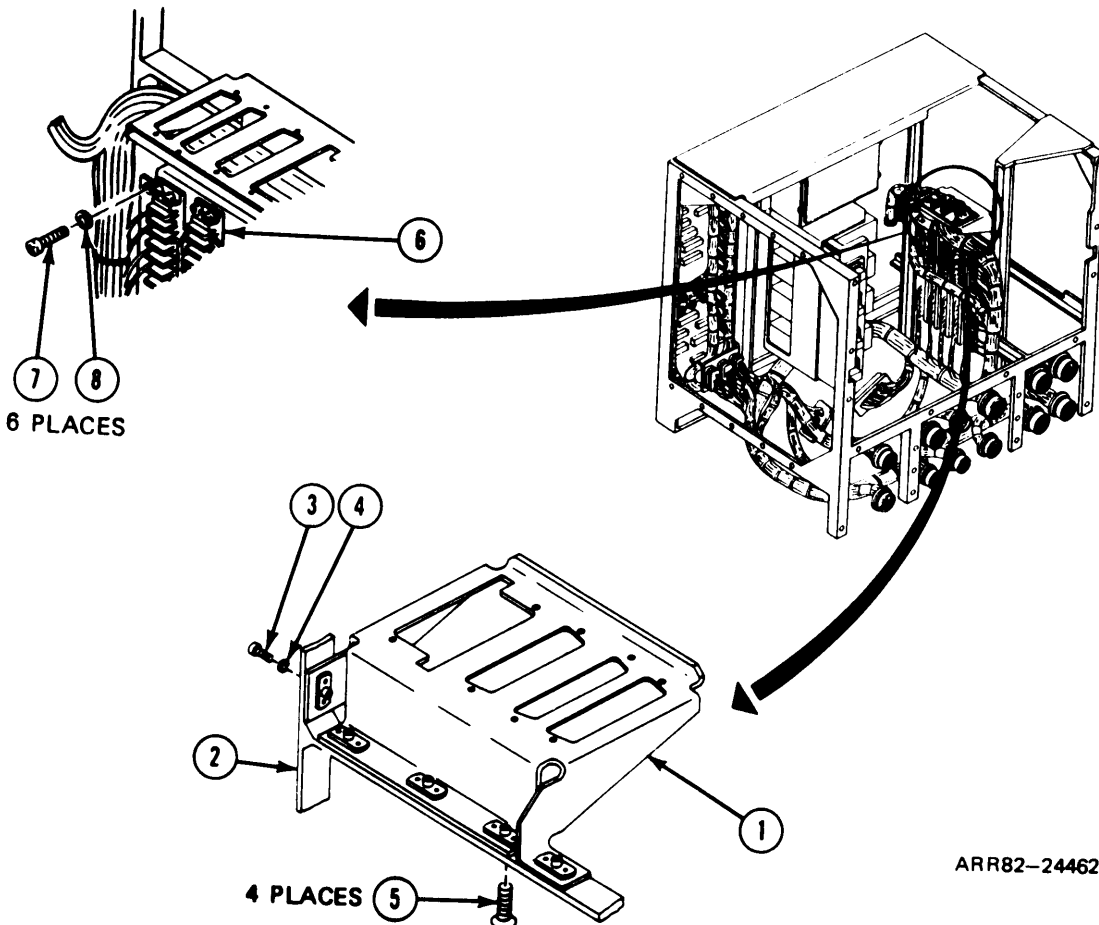
Install Bracket:

NOTE

- Use this procedure to install harness connector W16J1 W14J1, W17J1, and W 13J2. Connector W16J1 is shown.
- To install connectors W13J2, W17J1, and W14J1, go to frame 6.

1. Line up bracket (1) on chassis angles (2).
2. Screw in and tighten machine screw (3) and flat washer (4) with cross tip screwdriver.
3. Screw in and tighten four machine screws (5) with cross tip screwdriver.
4. Lineup holes in bracket (6) with holes in bracket (1). Screw in and tighten six machine screws (7) and flat washers (8) with cross tip screwdriver No. 2.

GO TO FRAME 5

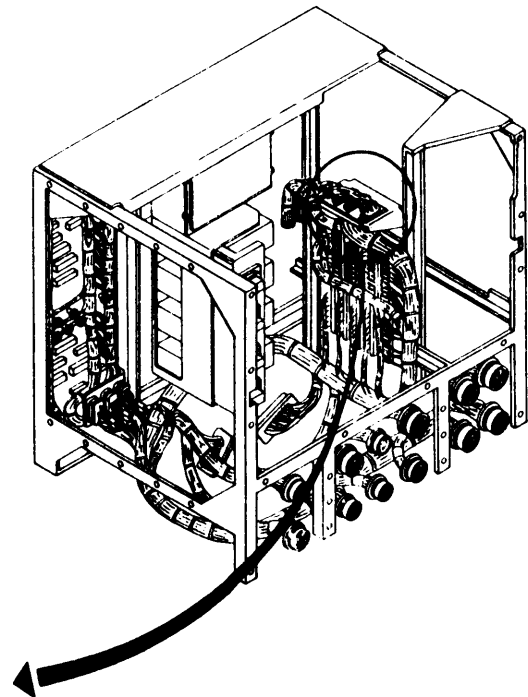
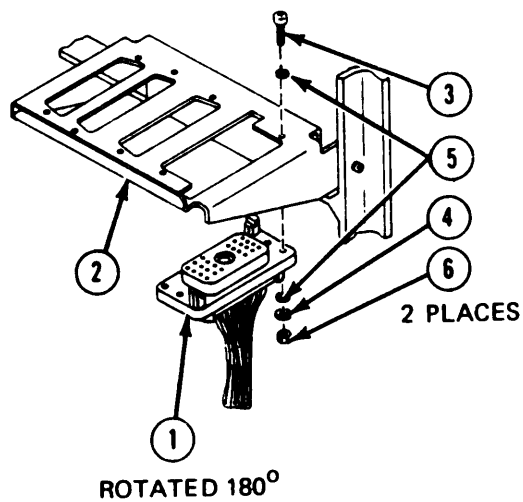
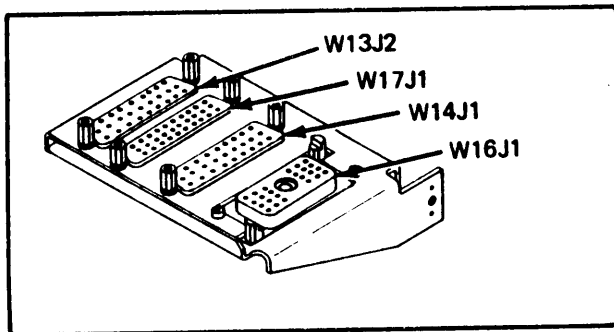


FRAME 5

Install Connector:

1. Move connector W16J1 (1) to under side of bracket (2).
2. Screw in and tighten two machine screws (3), two new lockwashers (4), four flat washers (5), and two hexagon plain nuts (6) with 3/16-inch single socket spinner socket wrench and 7/32-inch combination wrench.

GO TO FRAME 6



ARR82-24463

FRAME 6

Install Connector:

NOTE

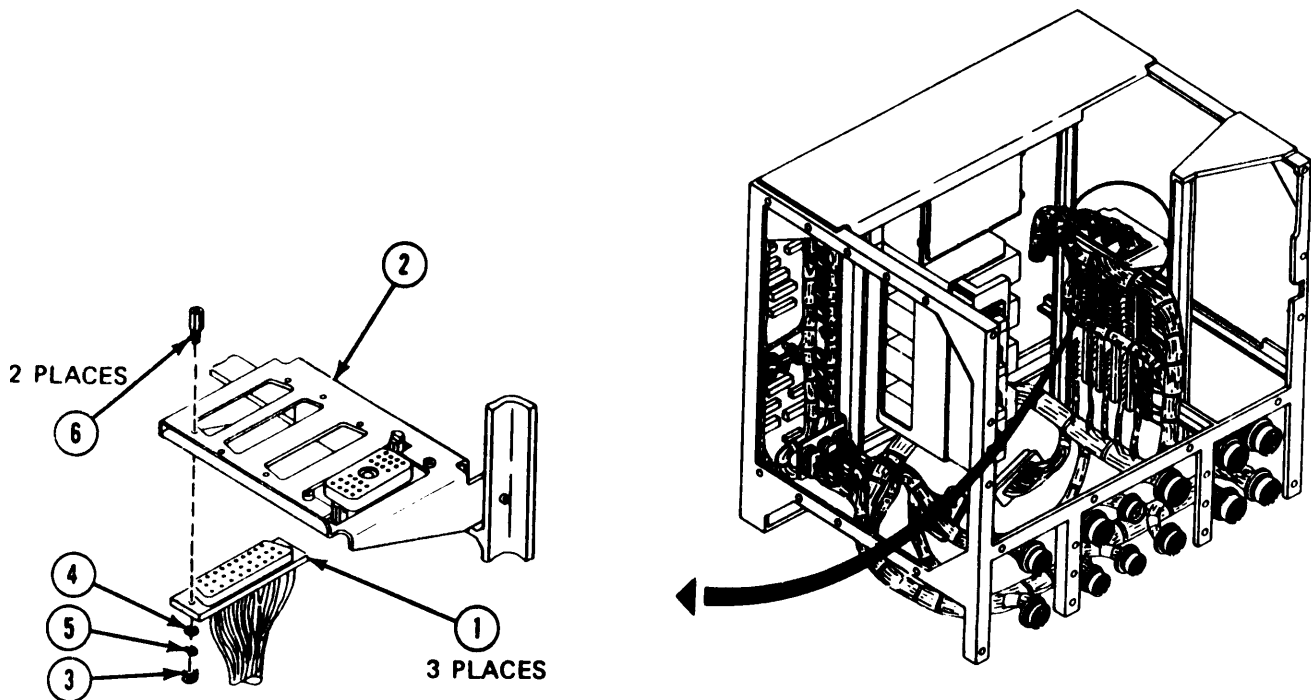
Use this procedure to install connectors W3J2, W17J1, and W14J1. Connector W13J2 (1) is shown.

1. Line up connector (1) on bracket (2).
2. Screw in and tighten two hexagon Plain nuts (3), flat washers (4), new lockwashers (S), and electrical jack socket (6) with 3/16-inch single socket spinner socket wrench and 3/16-inch combination wrench.

Follow-on Maintenance:

1. Install IDU assembly A2; refer to para. 2-8, task 19.
2. Install power module A6; refer to para. 2-9, task 22.
3. Install panel assembly A1; refer to para. 2-6, task 25.
4. Install thermal system test controller; refer to para. 2-5, task 8.
5. install thermal system test controller case cover; refer to volume 1, para. 4-18.

END OF FRONT PANEL CONNECTORS BRACKET MAINTENANCE



ARR82-24464

2-14. Chassis Assembly.

Task	Title	Frames
1	Repair Chassis Assembly	1 - 4

TASK 1. Repair Chassis Assembly.

Applicability: All Models

Common Tools:

- Extractor, insert 5120-00-723-6833
- Hammer, machinist's
- Insert, insert 5120-00-797-2404
- Pin, drift
- Press 3444-00-243-2654
- Punch, drive pin, 3/32-inch
- Punch, drive pin, 1/4-inch
- Punch, drive pin, 5/16-inch
- Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

- NOTE:** Expendable supplies are defined in volume 1, appendix C.
- Film, chemical (Item 12)
 - Insert, screw, threaded (96906) MS124655 (as required)
 - Lockwasher (96906) MS35338-136 (4 required)
 - Nut, plain, clinch (81349) M45938/4-10 (as required)
 - Nut, plain, clinch (81349) M45938/4-11 (as required)
 - Nut, plain, plate (19200) 12303266-4 (as required)
 - Primer, zinc chromate (Item 23)
 - Rivet, solid (96906) MS20426AD3-6 (as required)

Personnel: Two

- Soldier A: Repairs chassis assembly.
- Soldier B: Helps Soldier A.

NOTE

Soldier B is not needed until frame 4.

Equipment Condition:

Thermal system test controller on a clean work surface.

Preliminary Procedures:

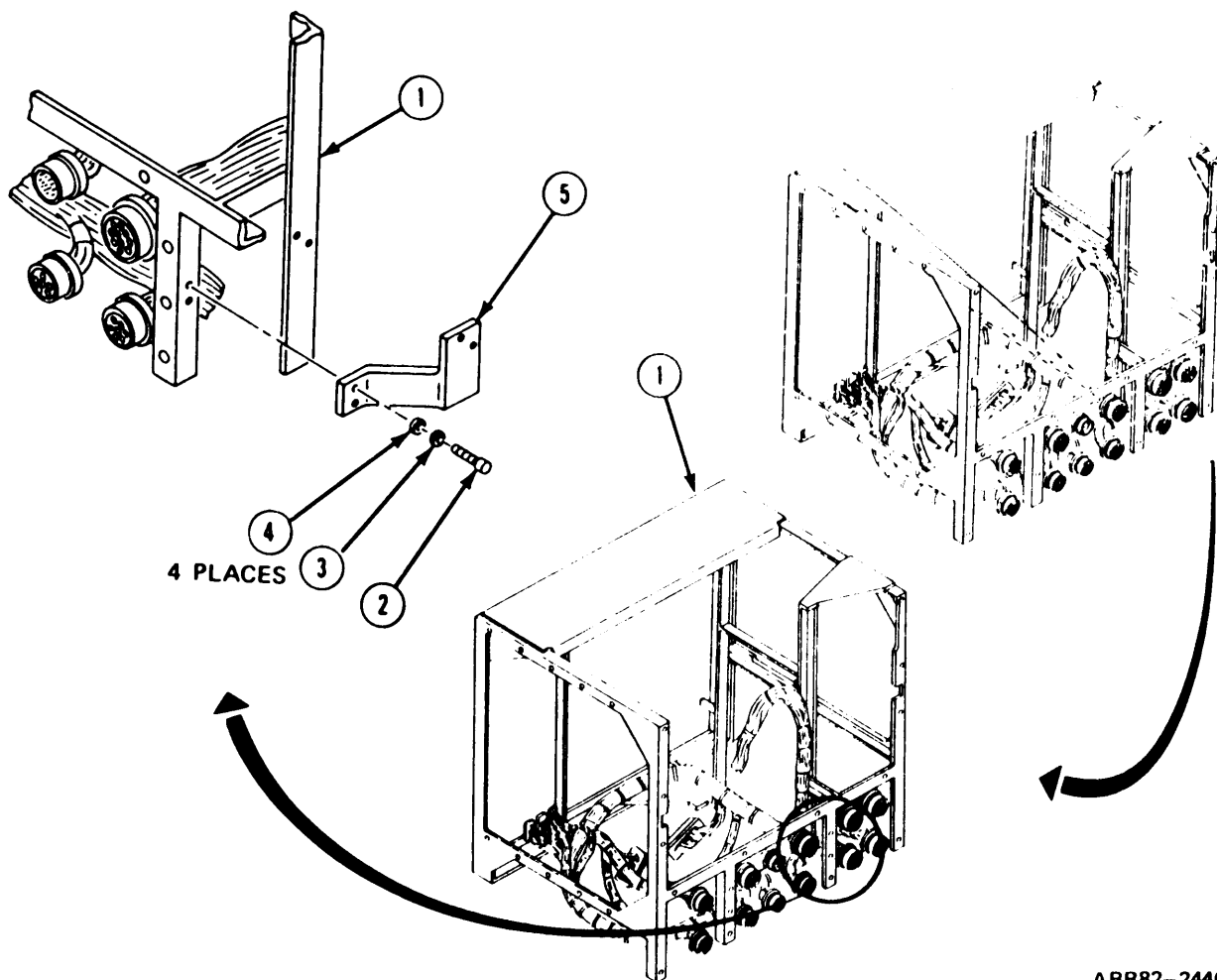
1. Remove thermal system test controller case cover; refer to volume 1, para. 4-17.
2. Remove thermal system test controller; refer to para. 2-5, task 2.
3. Remove panel assembly A1; refer to para. 2-6, task 1.
4. Remove digital subsystem assembly A3; refer to para. 2-7, task 4.
5. Remove IDU assembly A2; refer to para. 2-8, task 1.
6. Remove power module A6; refer to para. 2-9, task 1.
7. Remove electrical load bank A5; refer to para. 2-11, task 1.
8. Remove electronics unit (EU); refer to para. 2-12, task 1.
9. Remove front panel connectors bracket; refer to para. 2-13, task 1.

FRAME 1

Repair Chassis:

1. Look at chassis assembly (1) for cracked, bent, or broken welds. If bad, do follow-on maintenance, turn in TSTC and TASK 1 ENDS HERE.
2. Unscrew and take out four machine screws (2), lockwashers (3), and flat washers (4) with screwdriver. Get rid of lockwashers (3).
3. Look at chassis angle (5) for cracks or bends. If bad, turn in.
4. Position chassis angle (5) on chassis (1).
5. Screw in and tighten four screws (2), new lockwamsers (3), and washers (4) with screwdriver.

GO TO FRAME 2



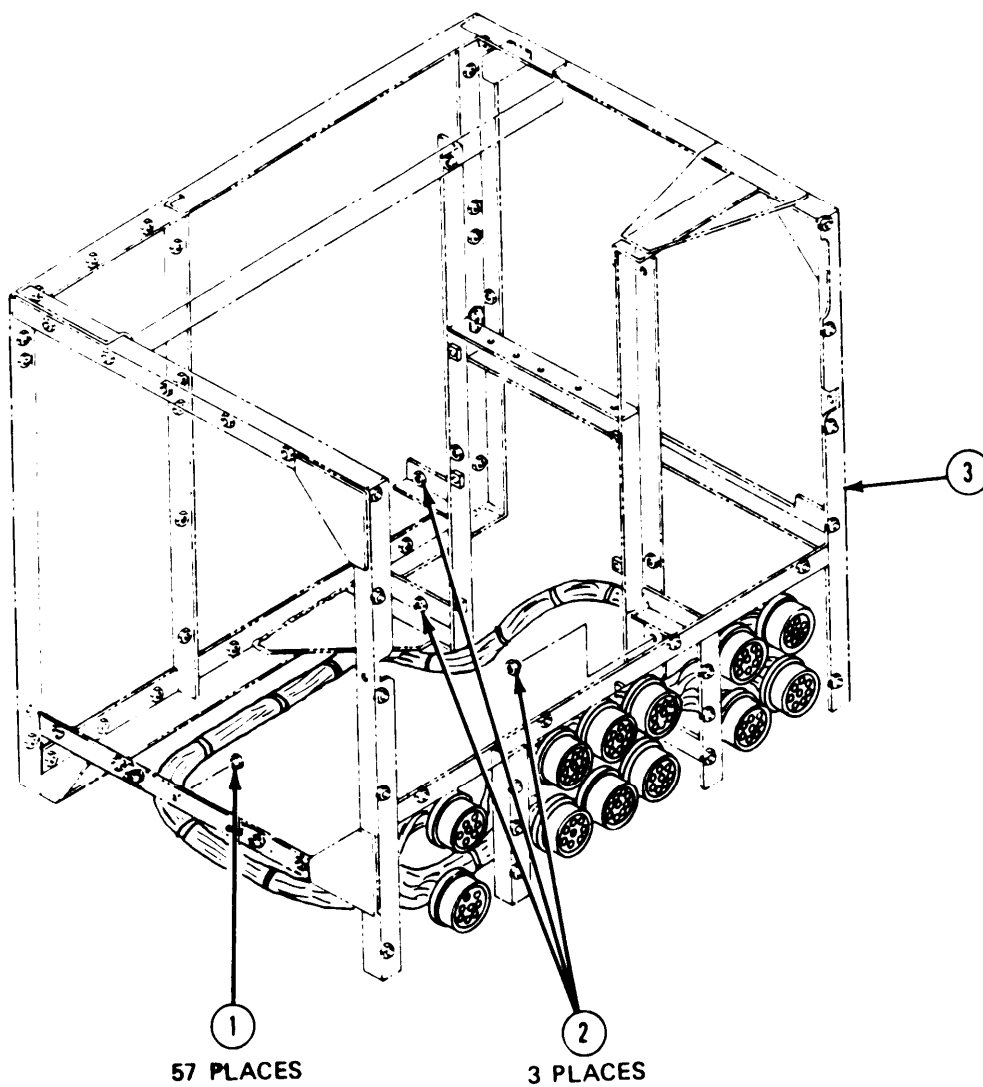
ARR82-24465

FRAME 2

Replace Nuts:

1. Look at plain clinch nuts (1,2) for cracks, breaks or stripped threads. If bad, go to step 2. If OK, go to frame 3.
2. Take out bad nuts (1) with hammer and 1/4-inch punch.
3. Take out bad nuts (2) with hammer and 5/16-inch punch.
4. Put new nuts (1, 2) in chassis (3) with press.

GO TO FRAME 3



ARR82-24466

FRAME 3

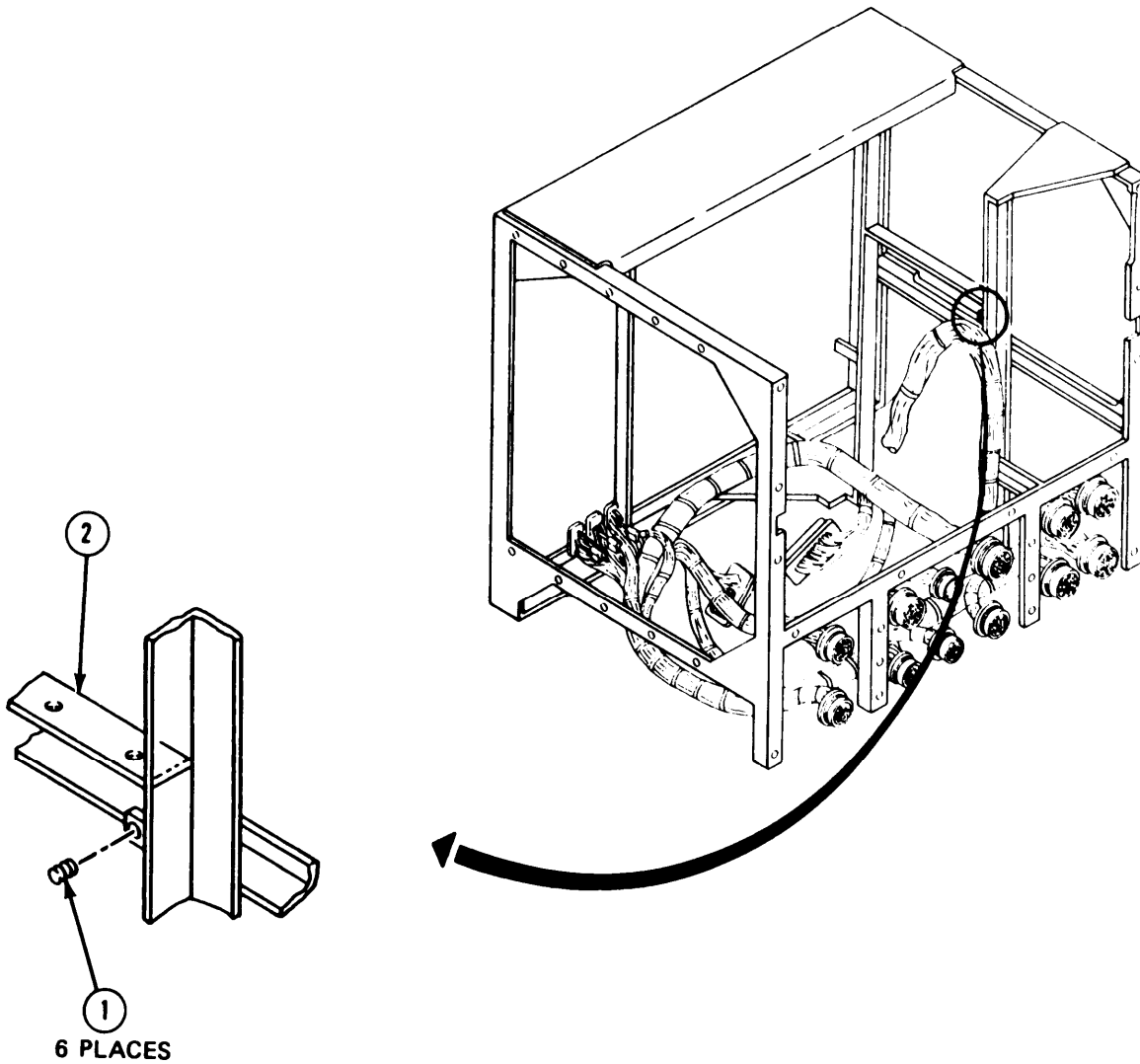
Replace Inserts:

NOTE

Read paragraph 2-4 on replacing inserts before doing any work.

1. Look at screw thread insert (1). If bad, go to step 2. If OK, go to frame 4.
2. Take out insert (1) with insert extractor. Get rid of insert (1).
3. Screw new insert (1) into chassis (2) with insert inserter.

GO TO FRAME 4



ARR82-24467

FRAME 4

Replace Plain Nut Plates:

NOTE

Read paragraph 2-4 on replacing plain nut plates before doing any work.

Soldier A: 1. Look at plain nut plates (1). If bad go to step 2. If OK, go to follow-on maintenance and TASK 1 ENDS HERE.

Soldier A: 2. Takeout two solid rivets (2) holding nutplate (1) with 3/32-inch punch and hammer. Get rid of rivets and nutplate.

Soldier A: 3. Line upholes in new nutplate (1) and chassis (3).

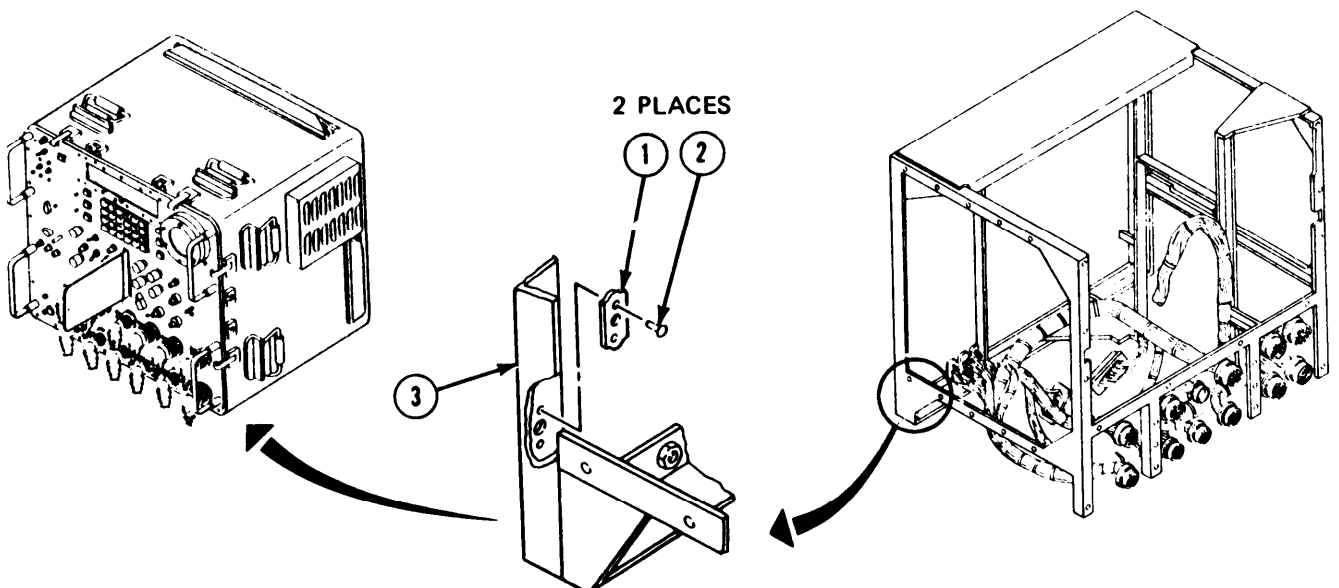
Soldier A,

Soldier B: 4. Put two new rivets (2) in nutplate (1) and chassis (3).

Follow-on Maintenance:

1. Install front panel connectors bracket; refer to para. 2-13, task 3.
2. Install electronics unit (EU); refer to para. 2-12, task 2.
3. Install electrical load bank A5; refer to para. 2-11, task 18.
4. Install power module A6; refer to para. 2-9, task 23.
5. Install IDU assembly A2; refer to para. 2-8, task 19.
6. Install digital subsystem assembly A3; refer to para. 2-7, task 18.
7. Install panel assembly A1; refer to para. 2-6, task 25.
8. Install thermal system test controller; refer to para. 2-5, task 8.
9. Install thermal system test controller case cover; refer to volume 1, para. 4-18.

END OF STRUCTURAL CHASSIS MAINTENANCE



CHAPTER 3 ACCESSORY STORAGE ASSEMBLY

3-1. General. This chapter contains job tasks that tell you how to repair the accessory storage assembly. The job tasks tell you how to remove and install components and assemblies of the accessory case assembly. Defective components and assemblies removed from the accessory storage assembly are not covered in this manual for repair at this maintenance level. These defective items are turned in for repair. Repair of the accessory storage assembly at this maintenance level is done by replacing any bad components or assemblies with good components or assemblies.

3-2. Equipment Items Covered. Table 3-1 lists the equipment items covered in this chapter. The assemblies making up the accessory storage assembly are listed along with the section and page number where they are found in this chapter.

Table 3-1. Equipment Items Covered

Paragraph	Title	Page
3-5	Accessory Storage Assembly	3-5
3-6	Cable Assemblies W1-W12	3-9
3-7	PCU Holding Fixture	3-25
3-8	LED Viewer Assembly	3-54
3-9	TRU Holding Plate Assembly	3-58

3-3. Equipment Items Not Covered. Table 3-2 lists the equipment items that are not covered in this chapter. Some of these items may need to be replaced or repaired at this maintenance level. If the item cannot be replaced or repaired, the item is turned in.

Table 3-2. Equipment Items Not Covered

Title	Book Where Found
ICU Viewer Assembly	Volume 1, Chapter 4
Test Target Reticle	Volume 1, Chapter 4
Handle Puller	Volume 1, Chapter 4
Adapter Cover	Volume 1, Chapter 4
Focal Alignment Tool	Volume 1, Chapter 4
Electrical Extender Card	Volume 1, Chapter 4
Spanner Wrench	Volume 1, Chapter 4
Video Multiplexer Assembly	Volume 1, Chapter 4

3-4. General Maintenance Instructions. The following maintenance practices must be followed anytime you are working on the accessory storage assembly.

NOTE

Electrical connector repair maintenance kit 12285360 contains instructions and tools needed for repair and replacement of connectors, receptacles, contacts, and wires.

a. Soldering Techniques. Solder connections must be bright clean before soldering. Remove dirt and grease from connections with freon (Item 13, appendix C) and acid swabbing brush (Item 8, appendix C). Solder (Item 29, appendix C) must be non-acid type. Rosin flux (Item 25, appendix C) should be used. All wires, parts, and solder iron must be pre-tinned for good connection and maximum transfer of heat. Clean all solder joints with acid swabbing brush and isopropyl alcohol (Item 17, appendix C) after soldering to obtain a clean, bright surface.

b. Crimping Wires. Cutoff and get rid of broken, bent, or discolored contacts with pliers. Strip insulation from wires with a thermal wire stripper.

NOTE

Color bands on contacts indicate size of wire; for example, contacts with green color bands for 22-26 gauge wire. Contacts with red color bands are for 20-24 gauge wire.

Put contact into crimping tool with color band toward rear. Put bare wire into contact and squeeze crimping tool. Takeout crimped contact from tool and check crimp by looking in inspection hole. You must be able to see end of bare wire.

c. Tagging Electrical Wires. Look at component or part to see if wiring or component has numbers or letters. Write numbers or letters on tag (Item 34, appendix C) with pencil (Item 19, appendix C). Fasten tag on wire. Remove tags after parts or wires are installed. If you cannot tag a wire because it must fit through a small hole, you cannot reach it, or it has no markings, write down the wire location and terminating point. After connecting wires without tags, check continuity of wire to make sure it is connected to the correct point.

d. Replacing Wires.

WARNING

Use solvent in a well ventilated area away from open flame. Solvent can burn easily and may give off harmful vapor.

Cut shrinkable sleeving from terminals of wire to be replaced. Unsolder wire or cut if crimped. When soldering or unsoldering wires, hold the bare wire near the soldering point with long round nose pliers. Pliers act as a heat sink preventing heat damage to electrical and electronic components. Cut new wire to desired length and slide new heat-shrinkable tubing over ends of wire. Push sleeving back and strip insulation off wire with thermal wire stripper. Solder or crimp wire to end terminal. Clean soldered joint with acid swabbing brush (Item 8, appendix C) and solvent cleaning compound, (Item 30, appendix C). Slide sleeving over connection. Using thermal gun, shrink sleeving.

e. Installing Heat Shrinkable Sleeving. Heat-shrinkable sleeving should be twice the diameter of the part it will be shrunk over. Slide sleeving over wire and terminal. Hold thermal gun 4 to 5 inches away from sleeving and apply heat for 30 seconds. Take thermal gun away as soon as sleeving forms to shape of wire and terminal. Let sleeving cool 30 seconds before handling.

f. Replacing Diodes (semiconductors), Relays, Potentiometers, Switches, Circuit Breakers, Wires, and Capacitors.

WARNING

Capacitors may hold high voltage that can cause injury. Before removing capacitors, short them to ground.

CAUTION

Use low-wattage soldering iron when replacing components or parts on printed circuit boards or connectors. Printed circuits or connectors can be damaged if high-wattage soldering iron is used.

When replacing diodes, coat mica washers and mount with silicone compound (Item 27, appendix C). Put one washer on threaded end of diode before inserting diode in mounting hole. When replacing potentiometers, switches, and circuit breakers, be sure keyways, washers, and tabs are lined up in mounting holes before tightening hardware. When soldering capacitors, relays, circuit breakers, wires, and diodes, hold terminal lugs and leads with long round nose pliers to keep parts from overheating.

g. Removing and Installing Connectors. If connectors cannot be removed by hand, use slip joint conduit style pliers with plastic jaw inserts to loosen them. Finish removal by hand. Straighten any bent pins with long round nose pliers. When installing connectors on larger harnesses, another soldier may be needed to help align the mating ends of the cable. Make sure that pins and keyways line up. Tighten twist-snap-type connectors until a click is heard and tighten screw-on-type until the ratchet noise is no longer heard to indicate that connectors are tight.

h. Replacing Connectors. Cut boot from adapter with knife. If lacing is installed, remove lacing from radio frequency adapter. Unscrew adapter and slide back over cable. Unsolder wires from connector contacts. If wires are crimp type, remove contacts and wires from connector with insert-extract tool. Slide new boot and adapter over cable. Solder wires to connector. If wires are crimp type, crimp wires to contacts and insert them in connector using insert-extract tool. Screw on adapter. Lace shielding of radio frequency adapter to cable in three places if required. Slip boot over adapter and shrink with thermal gun.

i. Repairing Connectors and Modules. Hold connector with back end toward you. Slide extract end of insert-extract tool over wire of contact to be taken out. Slide tool along wire and into hole until it engages contact, and a slight pressure is felt; the contact is now unlocked. Pull contact and wire out of connector. Cut off bad contacts. Strip insulation from wire with thermal stripper and place new contact in crimping tool. Put bare wire in contact and crimp it. Look through inspection hole of contact for end of bare wire. You must be able to see bare wire in contact. If you do not see bare wire, remove wire and crimp it again. Hold colored end

of insertion tool toward connector. Lay wire along slot in tool. Leave at least 1/2-inch of wire sticking out of end of tool. Pull wire back through tool until crimped shoulder seats against tips of tool. Push contact into connector until it stops. Contact is now locked in connector. Put sealing plugs in all empty contact holes in connector. Tighten retaining nut with slip joint conduit style pliers with plastic inserts. To remove modules, slide points of extract tool into indents of module and push tool until clips unlock. Hold extract tool tight and pull module out. To install new module, push module into rail assembly until a firm snap is felt and a click is heard. Look into inspection hole to be sure clip is in place.

j. Cleaning Electrical Components.

WARNING

Use solvent in a well-ventilated area away from open flame.
Solvent can burn easily and may give off harmful vapors.

Clean dirt, grease, dust, and old compounds off cable harnesses, parts, connectors, and receptacles by dipping them into a container filled with solvent cleaning compound (Item 30, appendix C). Shake parts in solvent or wipe them clean with a lint-free cloth (Item 9, appendix C). Clean dirt, grease, and dust off recessed areas with acid swabbing brush or (Item 8, appendix C) lint-free cloth. Dry components/parts, connectors, and receptacles completely with low-pressure, dry compressed air, or with a clean, lint-free cloth.

k. Cleaning Threaded Holes. Threaded holes in metal must be thoroughly clean when sealing compounds are used to lock screws in place. Take off old sealing compound from threads with tap and tap wrench. Blow loose particles out of holes with compressed air, then clean threads with solvent cleaning compound (Item 30, appendix C) and acid swabbing brush (Item 8, appendix C). Let holes dry before putting in screws.

l. Replacing Inserts.

WARNING

Primers can burn easily and can give off harmful vapors. To avoid injury, keep away from open fire and use in a well-ventilated area.

Takeout insert with insert extractor and get rid of insert. Clean area thoroughly and blow loose particles out of holes with compressed air. After cleaning, all parts should be completely dry and free of corrosion products, scale, paint, grease, oil, flux, and other foreign materials. Coat outside of new insert with unthinned primer (Item 23, appendix C). While primer is wet screw insert in housing with inserter. Unscrew and takeout inserter. If insert is in a blind hole break off tang from insert with tang break-off tool and get rid of tang. When primer has dried thoroughly, coat any exposed surfaces with chemical film (Item 12, appendix C)

3-5. Accessory Storage Assembly.

Task	Title	Frame
1	Replace Identification Plate	1
2	Replace Accessory Storage Assembly Case	2

TASK 1. Replace Identification Plate.

Applicability: All Models

Common Tools:

- Die Set, alphabet, 1/8-inch
- Die Set, numbers, 1/8-inch
- Hammer, ball peen
- Knife, pocket

Special Tools: None

Supplies:

- NOTE:** Expendable supplies are defined in volume 1, appendix C.
- Methyl-Ethyl-Keytone (Item 18, appendix C)
 - Plate, identification (19200) 12303107
 - Rag, wiping (Item 24)

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedures: None

FRAME 1

Remove Identification Plate:

WARNING

Solvents burn easily and can give off harmful vapors. To avoid injury keep away from open fire and use them in a well-ventilated area.

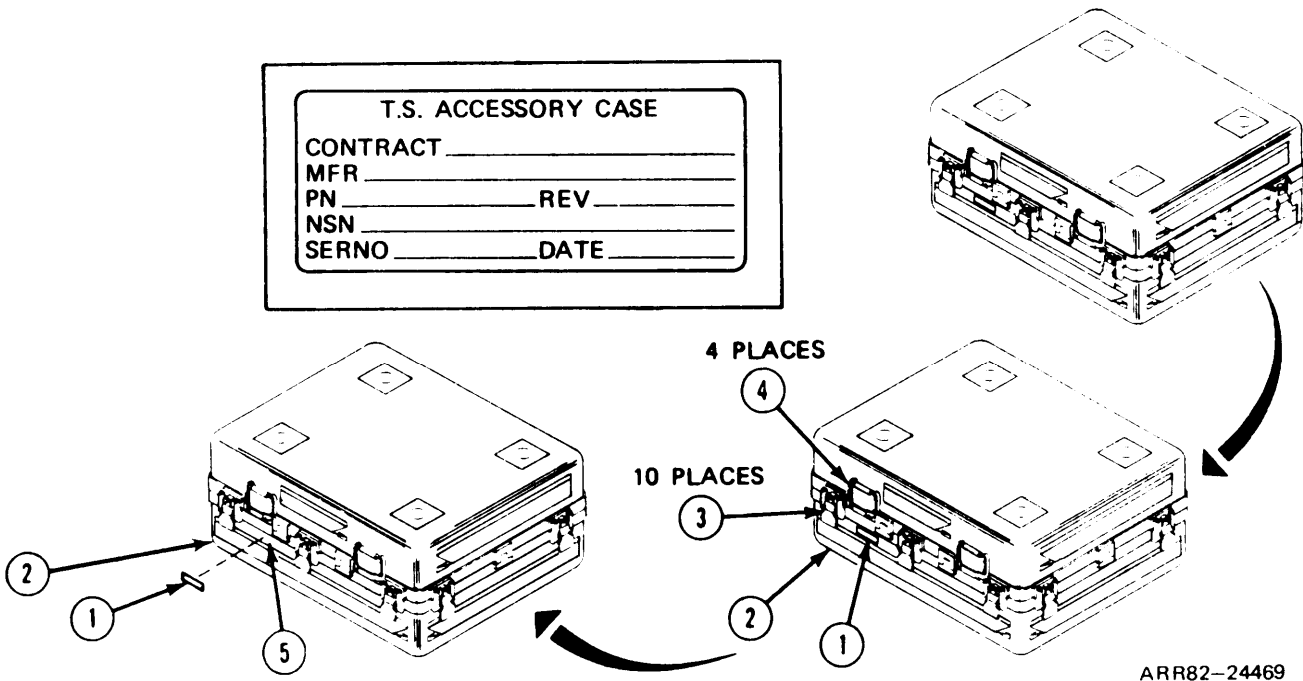
1. Scrape identification plate (1) off of accessory case (2) with knife.
2. Look at case (2) for cracks and damaged latches (3) and handles (4). If bad. refer to task 2. If OK, go to step 3.

Install Identification Plate:

3. Stamp serial number on new identification plate with die set and hammer.
4. Clean area (5) with cloth.
5. Apply methyl-ethyl-keytone to back of new identification plate (1).
6. Firmly press new identification plate (1) into place on case (2).

Follow-on Maintenance: None

TASK 1 ENDS HERE



TASK 2. Replace Accessory Storage Case.

Applicability: All Models

Common Tools: None

Special Tools: None

Supplies:

Accessory storage assembly (19200) 12303230

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedure:

Remove accessory storage assembly cover and equipment; refer to volume 1, para. 4-17.

FRAME 2

Remove Foam:

1. Carefully pull foam (1) away from inside edge of accessory storage case (2).
2. Lift foam (1) out of case (2) by alternately pulling opposite corners (3).
3. Look at foam (1) for bears. If bad, turn in cushion (1). If OK, set aside for later use.
4. Turn in complete case (4).

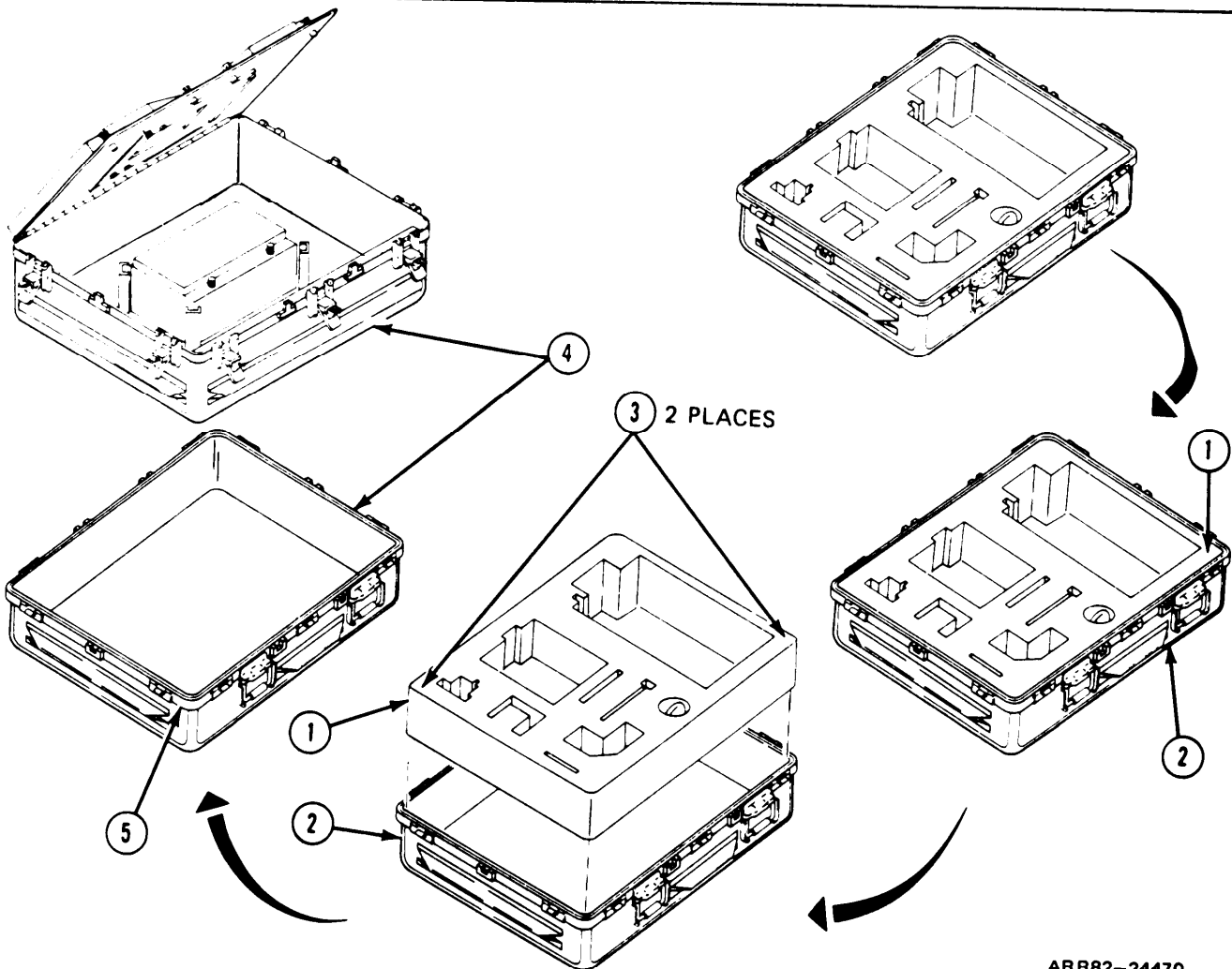
Install Foam:

5. Push foam (1) into new case (2) until foam (1) is under lip (5) of case (2).

Follow-on Maintenance:

Install accessory storage case equipment and cover; refer to volume 1, para. 4-18.

END OF ACCESSORY STORAGE ASSEMBLY CASE MAINTENANCE



ARR82-24470

3-6. Cable Assemblies W1 through W12.

Task	Title	Frames
1	Repair Cable Assemblies W1 through W9	1
2	Repair Cable Assembly W10	2-5.4
3	Repair Cable Assembly W11	6 - 10
4	Repair Cable Assembly W12	11-16

TASK 1. Repair Cable Assemblies W1 through W9.

Applicability: All Models

Common Tools:

Knife, craftsman's

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies:

W1 Cable

- Connector, plug, electrical P2 (96906) MS27467T19F35P
- Connector, plug, electrical P1 (96906) MS3475L14-19SW
- Cover, protective (19200) 12301880
- Cover, protective (19200) 12301877

W2 Cable

- Connector, plug, electrical P1 (96906) MS3475L14-5S
- Connector, plug, electrical P2 (96906) MS3475L22-55P
- Connector, plug, electrical P3 (96906) MS27467T25F35PB
- Cover, protective (19200) 12301907
- Cover, protective (19200) 12301882
- Cover, protective (19200) 12301880
- Contact, electrical (81349) M39029/58-360 (as required)

W3 Cable

- Connector, plug, electrical P3 (96906) MS27467T25F35PD
- Connector, plug, electrical P1 (96906) MS3475L14-15SY
- Connector, plug, electrical P1 (96906) MS3475L20-41SY
- Connector, plug, electrical P2 (96906) MS3475L22-55SY
- Contact, electrical (81349) M39029/58-360 (as required)
- Cover, protective (19200) 12301882
- Cover, protective (19200) 12301880
- Cover, protective (19200) 12301907
- Cover, protective (19200) 12301881

W4 Cable

- Connector, plug, electrical P1 (96906) M83723/75R22556
- Connector, plug, electrical P3 (96906) MS27467T23F35PC
- Connector, plug, electrical P4 (96906) MS27467T25F35PA
- Connector, plug, electrical P2 (96906) MS34751-24-61P
- Contact, electrical (81349) M39029/58-360 (as required)
- Cover, protective (19200) 12301882
- Cover, protective (19200) 12301907

Supplies (Continued)

W5 Cable

Connector, plug, electrical P3 (96906) MS27467T25F35P
Connector, plug, electrical P2 (96906) MS3475L22-55SX
Connector, plug, electrical P1 (96906) MS3475L24-61S
Contact, electrical (81349) M39029/58-360 (as required)
Cover, protective (19200) 12301907
Cover, protective (19200) 12301887

W6 Cable

Connector, plug, electrical P1 (96906) M83723/75R2255N
Connector, plug, electrical P5 (96906) MS27467T22F-2P
Connector, plug, electrical P4 (96906) MS27467T25F35PC
Connector, plug, electrical P3 (96906) MS3475L20-41P
Connector, plug, electrical P2 (96906) MS3475L22-55PW
Contact, electrical (81349) M39029/58-360 (as required)
Contact, electrical (81349) M39029/58-362 (as required)
Contact, electrical (81349) M39029/4110 (as required)
Cover, protective (19200) 12301882
Cover, protective (19200) 12301881
Cover, protective (19200) 12301907

W7 Cable

Connector, plug, electrical P4 (96906) MS27467T23F35PA
Connector, plug, electrical P3 (96906) MS3475L14-18S
Connector, plug, electrical P2 (96906) MS3475L16-23S
Connector, plug, electrical P1 (96906) MS3475L20-41S
Contact, electrical (81349) MS39029/58-360 (as required)
Cover, protective (19200) 12301877
Cover, protective (19200) 12301881
Cover, protective (19200) 12301880

W8 Cable

Connector, plug, electrical P3 (96906) MS27467T23F35PB
Connector, plug, electrical P2 (96906) MS3475L18-11S
Connector, plug, electrical P1 (96906) MS3475L22-55SW
Contact (81349) M39029/58-360 (as required)
Cover, protective (19200) 12301882
Cover, protective (19200) 12301877

W9 Cable

Connector, plug, electrical P1 (96906) 27467T19F-35S
Connector, plug, electrical P2 (96906) 27484T22F-35P
Contact, electrical (81349) M39029/58-360 (as required)
Contact, electrical (81349) M39029/56-348 (as required)
Cover, protective (19200) 12301877

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove W1 through W9 cables from accessory storage case; refer to volume 1, para. 4-17.

FRAME 1

Repair W1 through W9 Cables:

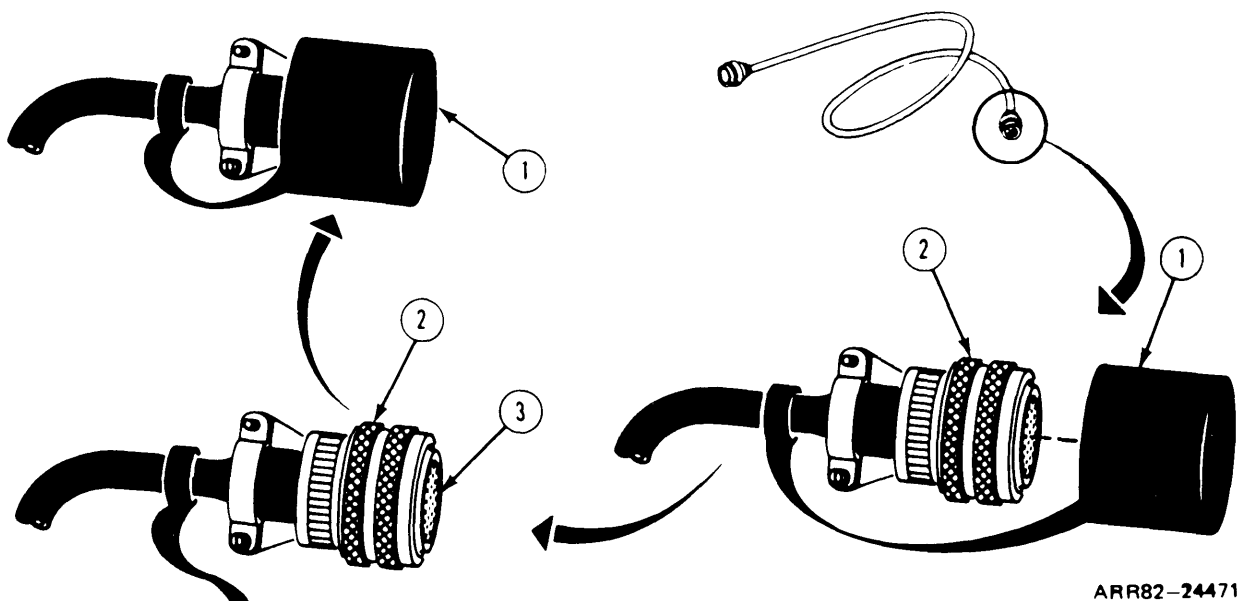
NOTE

- Use this task to repair any of W1 through W9 cables. W1 cable is shown here.
 - Read paragraph 3-4 on repairing cables before doing any work.
1. Take protective cover (1) off of electrical connector plug (2). Look at cover (1) for cracks. If bad, turn in cover (1). If OK, set aside for later use.
 2. Look at connectors (2) for loose, bent, broken or missing contacts (3). If bad, take out contacts (3) with extract tool and get rid of contacts (3). Put in new contacts (3) with insert tool. If OK, put cover (1) on connector (2).

Follow-on Maintenance:

1. Install W1 through W9 cables in accessory storage case; refer to volume 1, para. 4-18.
2. Install accessory storage assembly cover; refer to volume 1, para. 4-18.

TASK 1 ENDS HERE



TASK 2. Repair W10 Cable.

Applicability: All models

Common Tools:

Gun, thermal
Knife, craftman's
Multi meter, digital
Pliers, diagonal cutting
Pliers, needle nose
Pliers, straight nose
Rule, machinist's, 6-inch
Screwdriver, cross tip, No. 2
Screwdriver, flat tip, 3/16-inch
Set, soldering and resoldering

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

Brush, acid swabbing (Item 8)
Connector, plug, electrical (96906) MS3126F14-19S
Contact, electrical (81349) MS39029/56-348 (as required)
Cover, protective (05593) 100860
Cover, protective (05593) 100861
Cover, protective (19200) 12301880
Decal, fuse cannister (19200) 9377380
Fuse, cartridge (81349) F03A250V10A (as required)
Fuseholder (19200) 9377397
Grease, KRYTOX (Item 14)
Isopropyl alcohol (Item 17)
Label, caution (19200) 9377391
Lockwasher (96906) MS35338-136 (as required)
Pencil, writing (Item 19)
Rag, wiping (Item 24)
Sleeving, insulation (80205) M23053/5-109-0 (as required)
Sleeving, insulation (81349) M23053/5-111-0 (as required)
Solder (Item 29)
Tag, marker (Item 34) (as required)
Terminal Lug (96906) MS25036-154 (as required)
Terminal lug (96906) MS77068-2 (as required)

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove W10 cable from accessory storage assembly; refer to volume 1, para. 4-17

FRAME 2

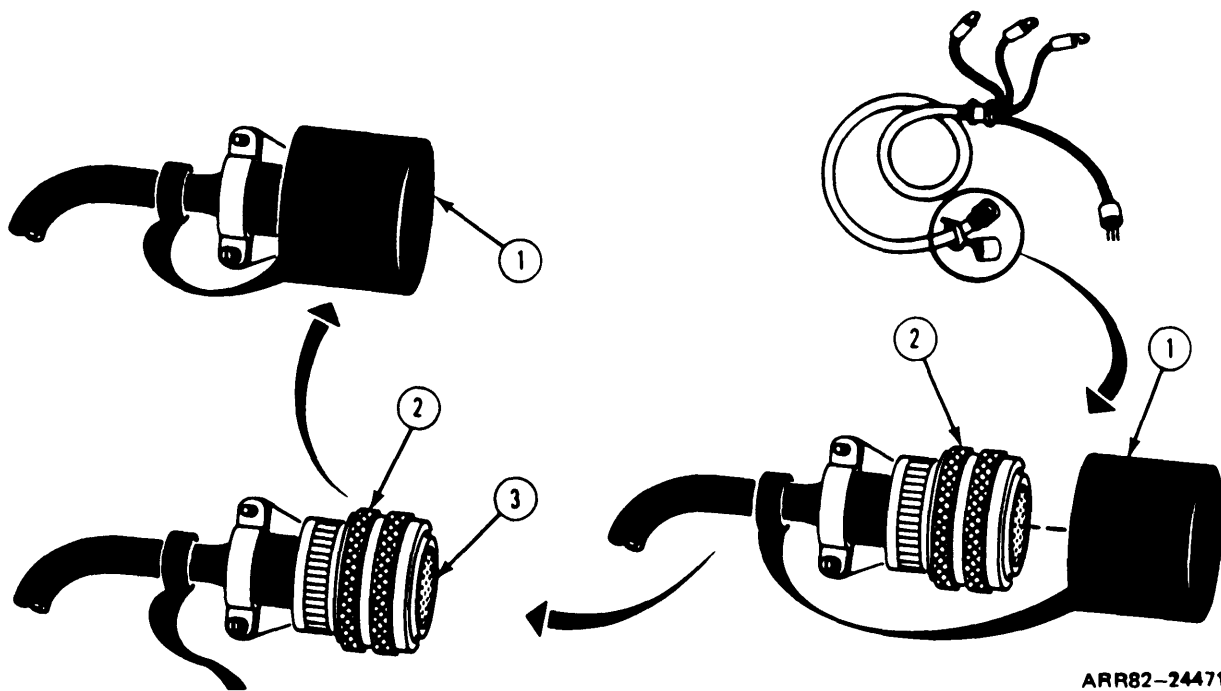
Repair Connector:

NOTE

Read paragraph 3-4 on repairing cables before doing any work.

1. Take protective cover (1) off of electrical connector plug (2). Look at cover for cracks. If bad, turn in cover (1). If OK, set aside for later use.
2. Look at connector (2) for loose, bent broken or missing contacts (3). If bad, takeout contacts (3) with extract tool and get rid of contacts (3). Put in new contacts (3) with insert tool. If OK, put cover (1) on connector (2).

GO TO FRAME 3



FRAME 3

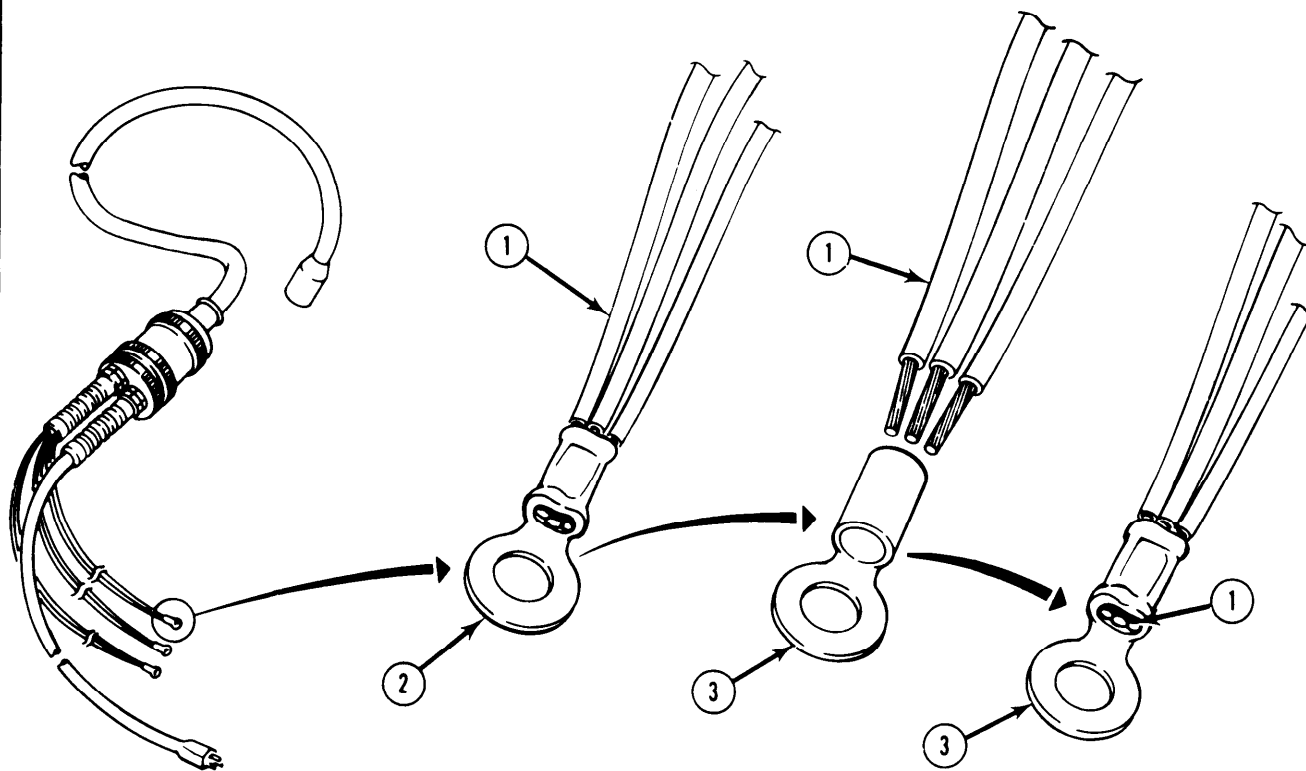
Repair Terminal Lug:

NOTE

- Read paragraph 3-4 on tagging and soldering wires before doing any work.
- Use this task to repair terminals on any of three sets of W 10 cable leads.
- If all terminals are OK, GO TO FRAME 4.

1. Look at wires (1) for loose, bent, broken or missing terminals (2). If bad, tag and cut wires (1) with diagonal cutting pliers near bad terminal (2). Get rid of terminal (2).
2. Using stripping tool, strip wires (1) to fit in new terminal MS25036-154 (3).
3. Insert stripped wires (1) into new terminal (3).
4. Fasten terminal (3) to wires (1) with crimping tool.
5. Solder ends of wires (1) to terminal (3).

GO TO FRAME 4



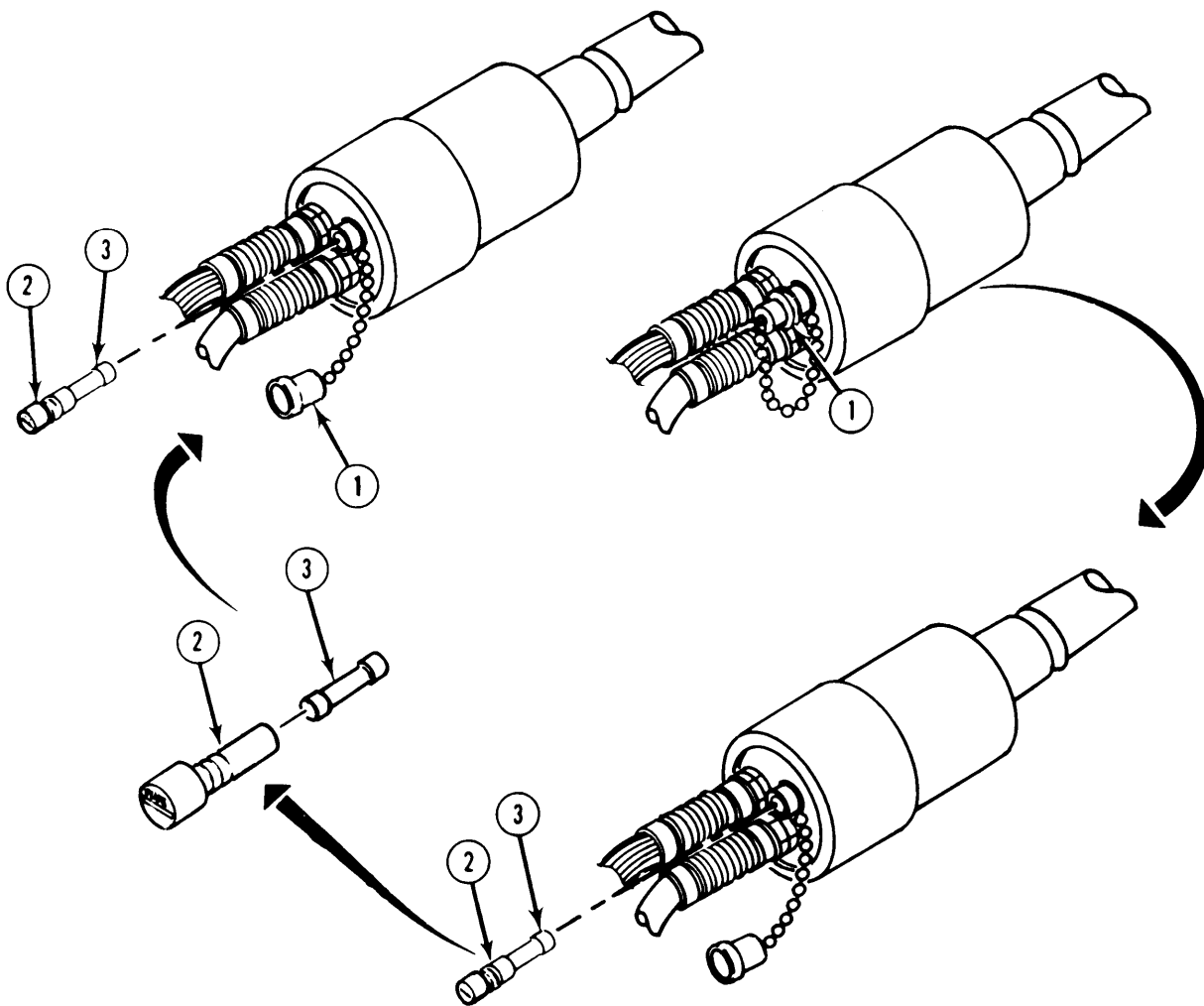
ARR82-24471.2

FRAME 4

Replace Fuse:

1. Unscrew and remove cap (1). Unscrew and take out fuse cap (2) and fuse (3) with flat tip screwdriver. Remove fuse (3) from fuse cap (2).
2. Set up multimeter to check for continuity. Check fuse (3) continuity. If bad, get rid of bad fuse and replace with new fuse.
3. Insert fuse (3) in fuse cap (2). Screw in and tighten fuse cap (2) and fuse (3) with flat tip screwdriver.
4. Screw on and tighten cap (1).

GO TO FRAME 5



ARR82-24471.

FRAME 5

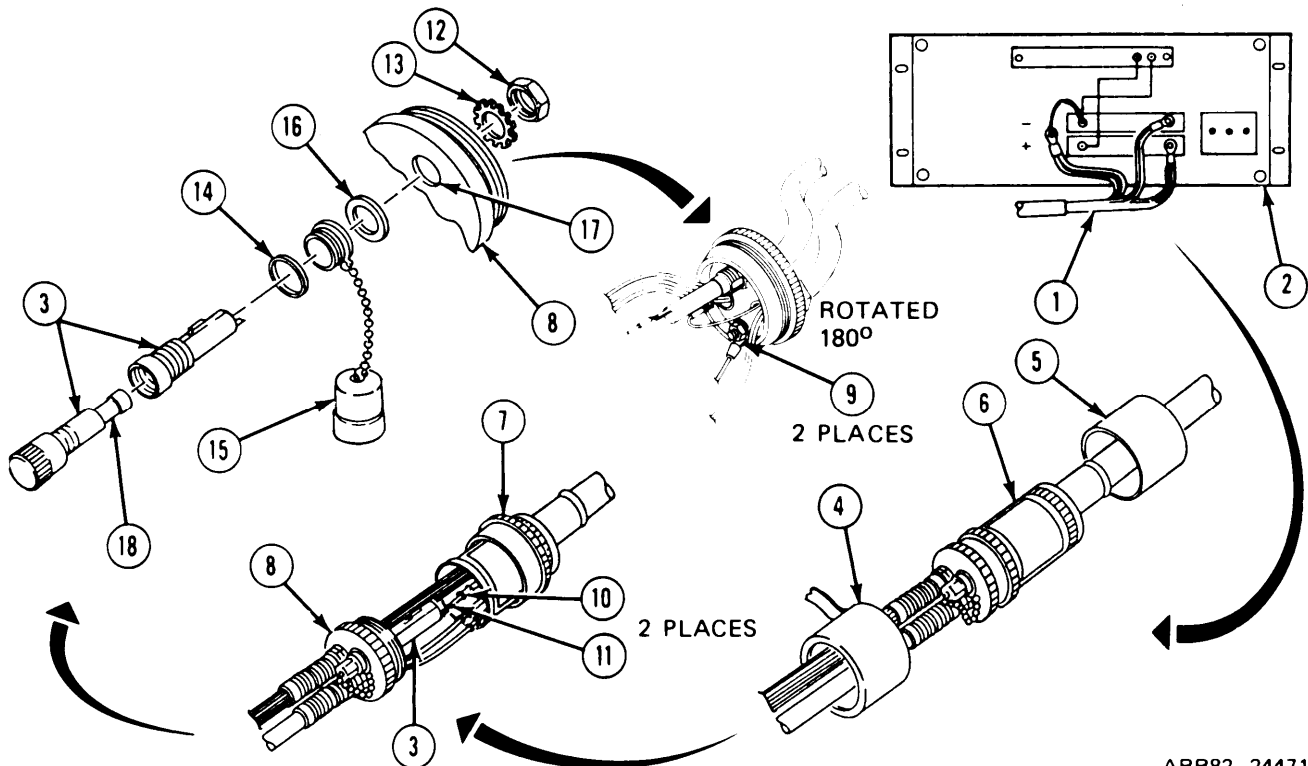
Replace Fuseholder:

NOTE

- Refer to paragraph 3-4 on tagging and soldering wires before beginning work.
- If W10 cable leads (1) are connected to power supply output bus terminals on rear of power supply (2), disconnect leads (1) before replacing fuseholder (3); refer to volume III, para. 4-18. Connect leads (1) when task is finished; refer to volume III, para. 4-17.

1. Slide protective covers (4 and 5) off fuse cannister (6). Using soft jawpliers, open cannister (6) by unscrewing retaining ring (7) from cannister cap (8).
2. Inspect terminal lugs (9) for loose or broken wires. If bad, refer to frame 5.2.
3. Cut and takeoff insulation sleeving (10) from fuseholder (3) with knife. Tag and unsolder wires (11) from fuseholder (3).
4. Unscrew and takeoff nut (12) and lockwasher (13) with needle nose pliers. Get rid of fuseholder (3), preformed packing (14), cap with chain ring (15), RFI gasket (16), lockwasher (13), and nut (12).
5. Put new fuseholder (3) through hole (17) in cannister cap (8), making sure that preformed packing (14), cap with chain ring (15), gasket (16), and a good fuse (18) are in place.
6. Screw on and tighten nut (12) and lockwasher (13) with needle nose pliers.

GO TO FRAME 5.1



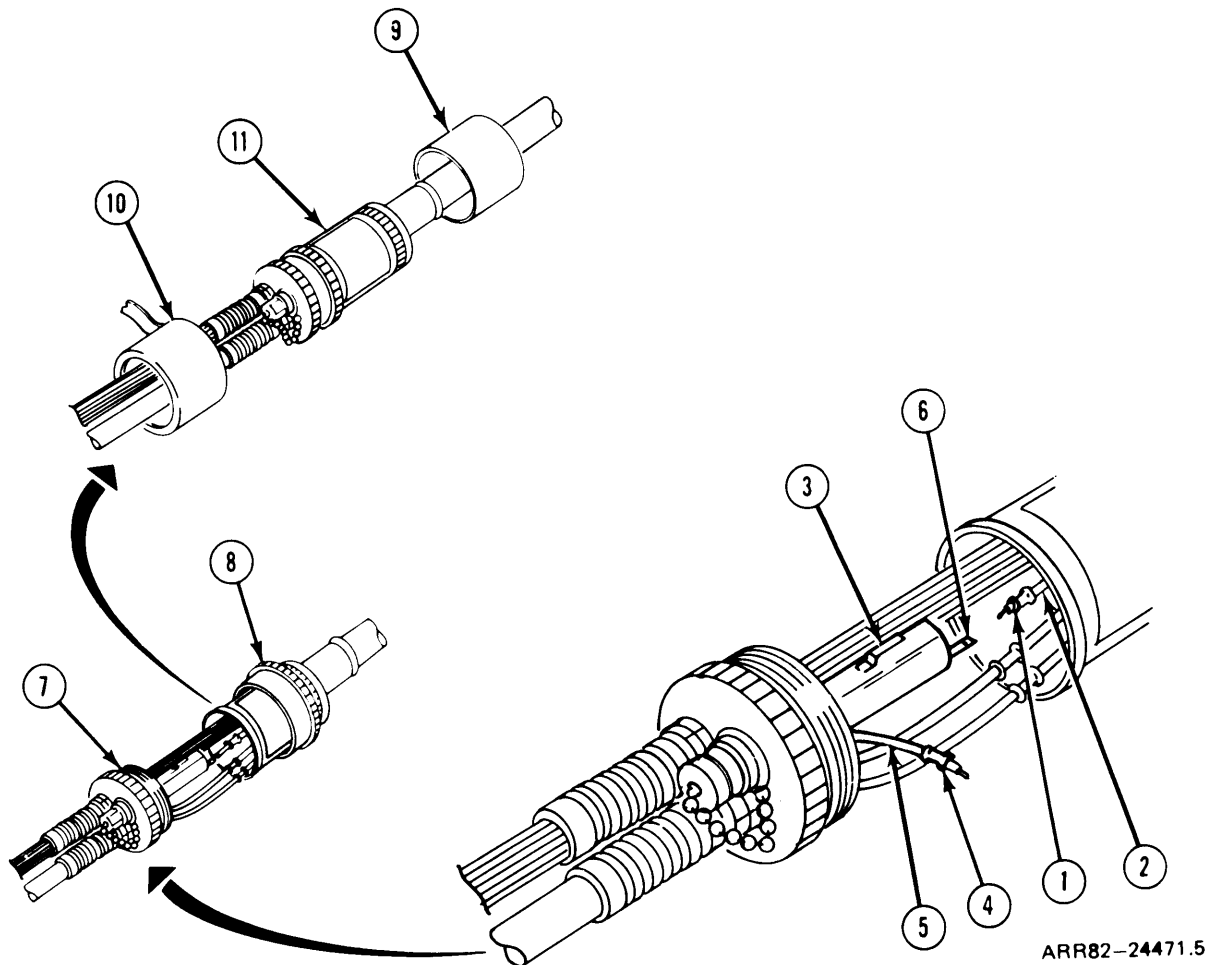
ARR82-24471.4

FRAME 5.1

Replace Fuseholder (Continued):

1. Measure and cut new insulation sleeving M23053/5-109-0 (1) for wire (2) and fuseholder contact (3) with rule and knife. Slide sleeving (1) over wire (2).
2. Measure and cut new insulation sleeving M23053/5-111-0 (4) for wire (5) and fuseholder contact (6) with rule and knife. Slide sleeving (4) over wire (5).
3. Solder wire (2) to contact (3) and solder wire (5) to contact (6).
4. Slide sleeving (1 and 4) over contacts (3 and 6) and shrink sleeving (1 and 4) with thermal gun.
5. Apply thin film of grease to threads of cannister cap (7) with brush.
6. Screw on and hand-tighten retaining ring (8) to cannister cap (7). Slide protective covers (9 and 10) on cannister (11).

GO TO FRAME 5.2



FRAME 5.2

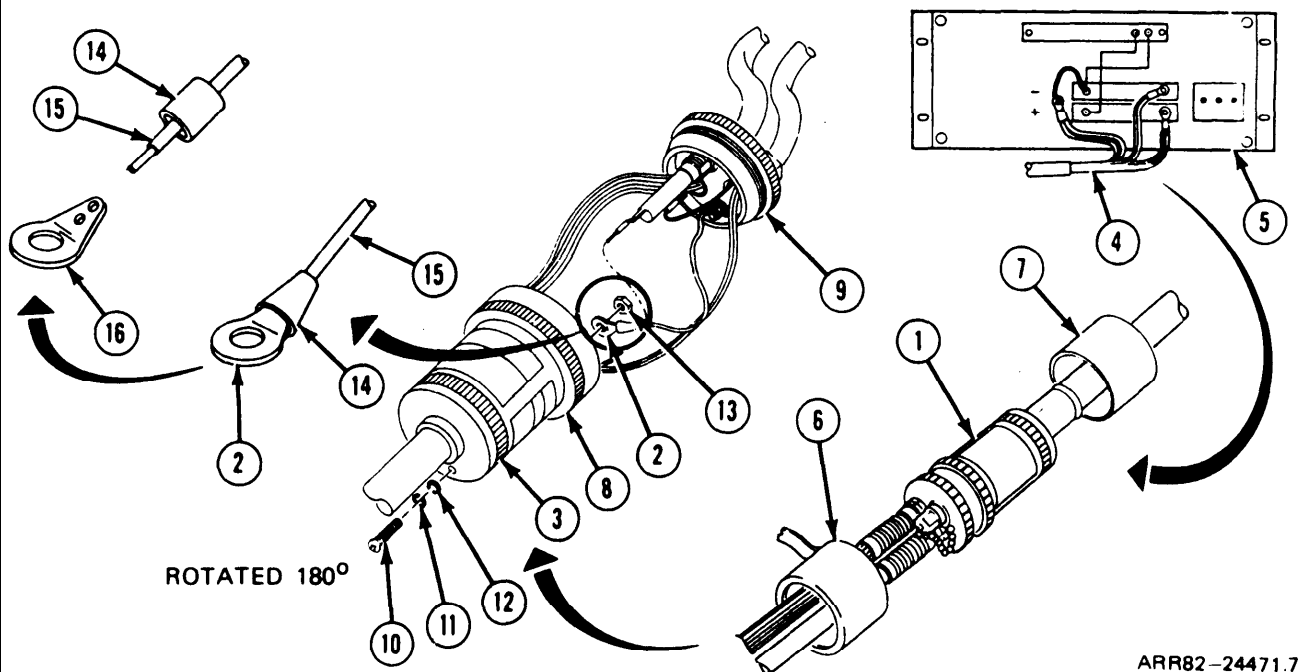
Replace Terminal Lug:

NOTE

- Refer to paragraph 3-4 on desoldering and soldering wires before beginning work.
- Use this task to replace either of two lugs on fuse cannister (1). Lug (2) on cannister can (3) is shown here.
- If W10 cable leads (4) are connected to power supply output bus terminals on rear of power supply (5), disconnect leads (4) before replacing lug (2); refer to volume III, para. 4-18. Connect leads (4) when task is finished; refer to volume III, para. 4-17.

1. Slide protective covers (6 and 7) off cannister (1). Using soft jaw pliers, open cannister (1) by unscrewing retaining ring (8) from cannister cap (9).
2. Unscrew and take out machine screw (10), lockwasher (11), flat washer (12), and plain nut (13) with cross tip screwdriver and straight nose pliers. Get rid of lockwasher (11).
3. Hold lug (2) with straight nose pliers. Cut and take off insulation sleeving (14) with knife. Unsolder wire (15) from lug (2).
4. Measure and cut new insulation sleeving M23053/5-109-0 (14) with rule and knife. Slide sleeving (14) over wire (15).
5. Solder new lug MS77068-2 (16) to wire (15). Slide sleeving (14) over solder connection of lug (2) and shrink sleeving (14) with thermal gun.

GO TO FRAME 5.3

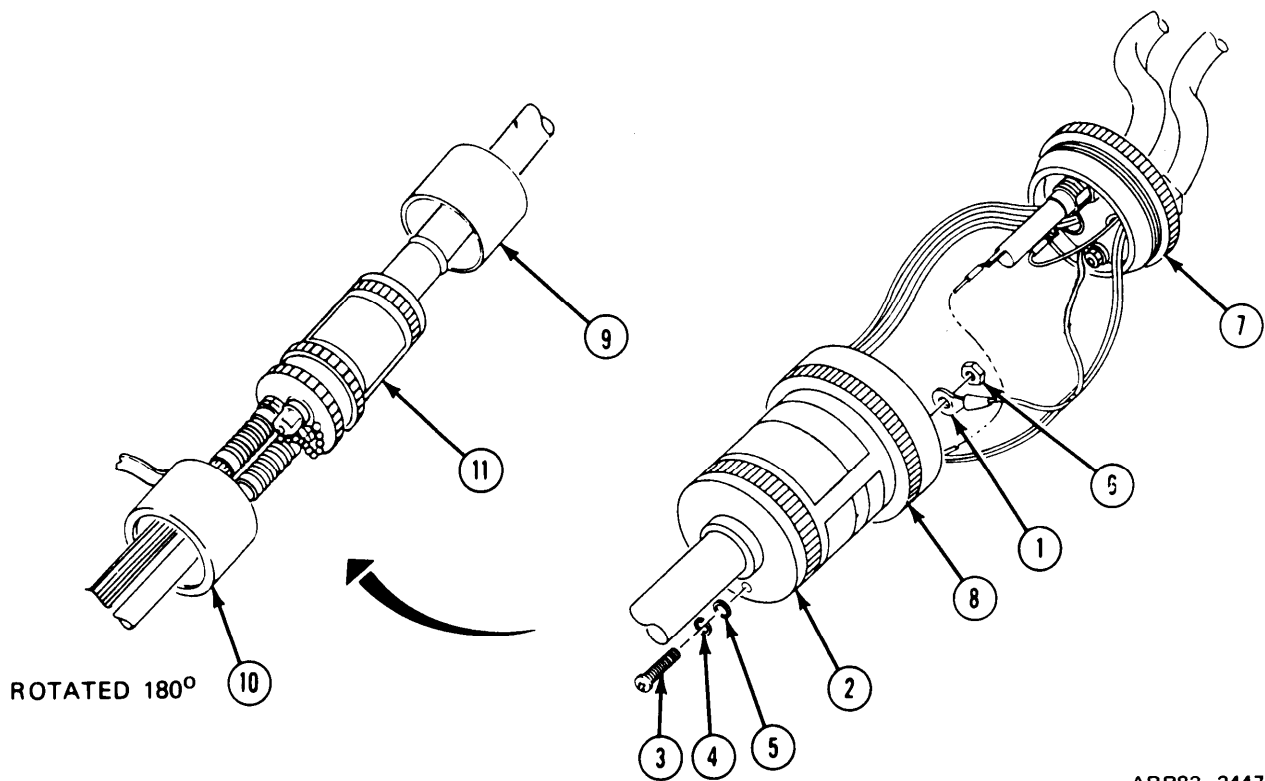


FRAME 5.3

Replace Terminal Lug (Continued):

1. Line up hole in lug (1) with hole in cannister can (2).
2. Screw in and tighten screw (3), new lockwasher (4), flat washer (5), and nut (6) with cross tip screwdriver and straight nose pliers.
3. Apply thin film of grease to threads of cannister cap (7) with brush.
4. Screw on and hand-tighten retaining ring (8) to cannister cap (7). Slide protective covers (9 and 10) on cannister (11).

TO FRAME 5.4



FRAME 5.4

Remove Fuse Cannister Decal or Label:

NOTE

Use this task to replace either the decal or label on fuse cannister (1). Caution label (2) is shown.

1. Slide protective covers (3 and 4) off cannister (1). Look at covers (3 and 4) for cracks. If bad, turn in cover (3 or 4). If OK, set aside for later use.
2. Lift edge of label (2) with knife and slowly pull label (2) off, using knife to scrape wherever necessary.

WARNING

Isopropyl alcohol is toxic and extremely flammable. Use only in well-ventilated areas. Avoid prolonged or repeated breathing of vapors. Avoid prolonged contact with skin. Keep area free of sparks and open flames.

3. Clean area (5) using rag moistened with isopropyl alcohol.

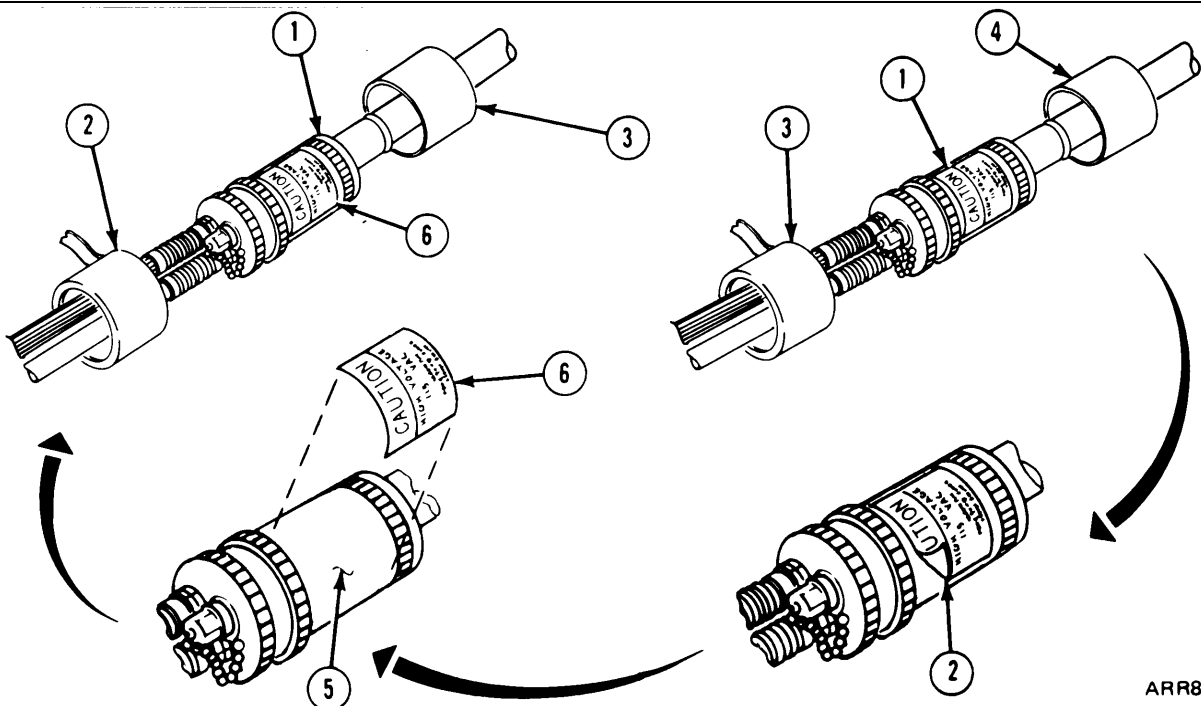
Install Fuse Cannister Decal or Label:

4. Peel back off new label (6) and press label (6) on area (5) of cannister (1).
5. Slide protective covers (3 and 4) on cannister (1).

Follow-on Maintenance:

1. Install W10 cable in accessory storage assembly; refer to volume 1, para. 4-18.
2. Install accessory storage assembly cover; refer to volume 1, para. 4-18.

TASK 2 ENDS HERE



ARR82 -24471.6

TASK 3 Repair Cable Assembly W11.

Applicability: All Models

Common Tools:

Knife, craftman's
Pliers, diagonal cutting
Screwdriver, cross tip, No. 1
Screwdriver, flat tip
Set, soldering and resoldering
Wrench, combination, 3/4-inch

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.

Clip, electrical (80063) SM-C-806038-1
Connector, plug, electrical (96906) MS27467T19F35S
Contact, electrical (81349) MS39029/56-348 (as required)
Decal (80063) SM-C-807249-1
Lockwasher (96906) MS35338-134 (six required)
Pencil, writing (Item 19)
Probe Assembly E1 (80063) SM-C-806066-1
Rag, wiping (Item 24)
Switch, push S1 (96906) MS25098-3FR
Tag, marker (Item 34) (as required)

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove cable assembly W11 from accessory storage assembly; refer to volume 1, para. 4-17.

FRAME 6

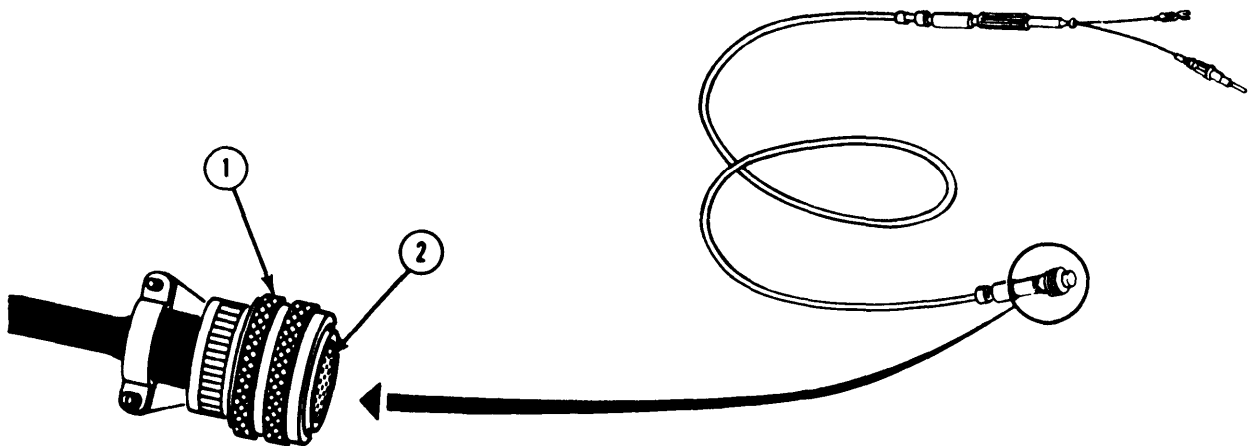
Repair Connector:

NOTE

Read paragraph 3-4 on repairing connectors before doing any work.

1. Look at electrical connector plug (1) for loose, bent, broken, or missing electrical contacts (2). If bad, takeout contacts (2) with extract tool and get rid of contacts (2). Put in new contacts (2) with insert tool.

GO TO FRAME 7



ARR82-24472

FRAME 7

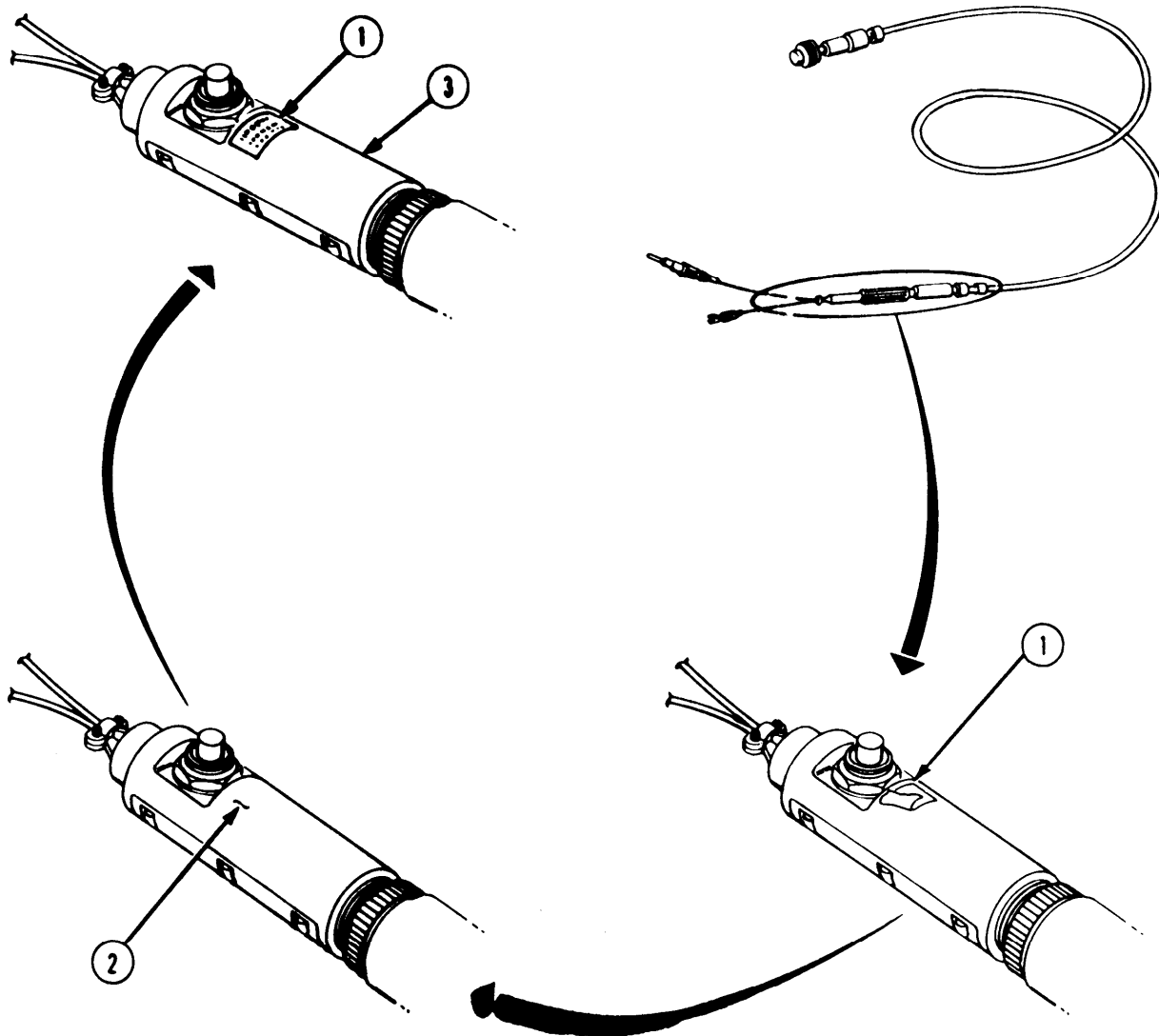
Remove Decal:

1. Scrape off decal (1) with knife.
2. Clean area (2) with wiping rag.

Install Decal:

3. Peel back off new decal (1) and press decal (1) on case handle (3).

GO TO FRAME 8



ARR82-24473

FRAME 8

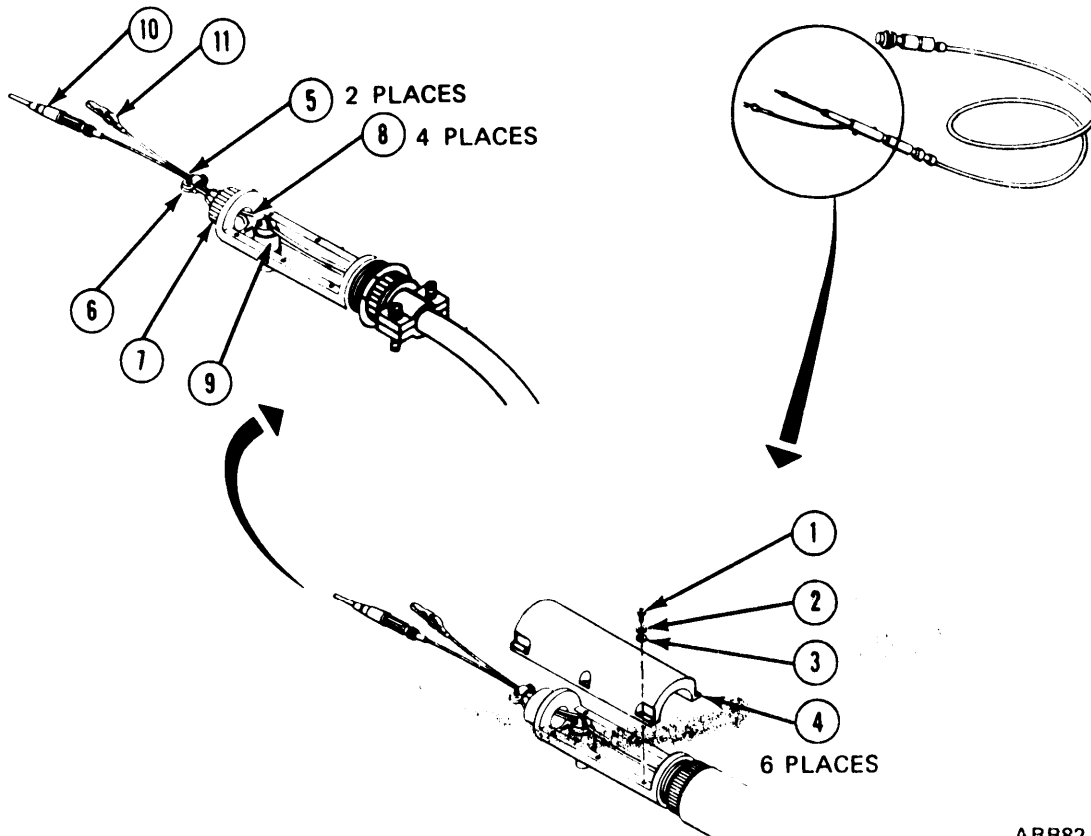
Remove Push Switch S1:

NOTE

Read paragraph 3-4 on tagging and soldering wires before doing any work.

1. Unscrew and take out six machine screws (1), lockwashers (2), and flat washers (3) from handle cover (4) with cross tip screwdriver. Get rid of lockwashers (2).
2. Lift off handle cover (4).
3. Unscrew but do not take out two screws (5) on electrical cable clamp (6) with flat tip screwdriver.
4. Unscrew sleeve nut (7). Slide clamp (6) out of way.
5. Tag and unsolder four wires (8) from switch (9). Look at probe assembly (10) and electrical clip (11) for cracks. If probe assembly (10) is bad, turn in. If OK, set aside for later use. If clip (11) is bad, cut off old clip (11) with pliers and solder on new clip (11). If OK, set aside for later use.

GO TO FRAME 9



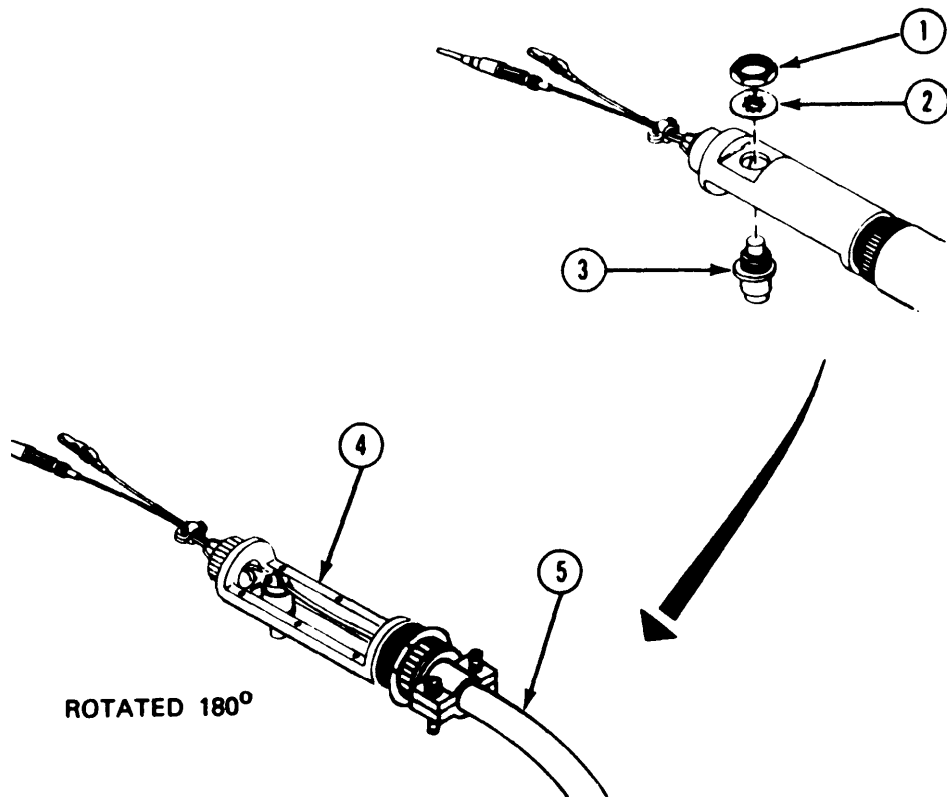
ARR82-24474

FRAME 9

Remove Push Switch S1 (Continued):

1. Unscrew jamnut (1) and lockwasher (2) from switch (3) with wrench. Look at switch (3) for cracks. If bad, turn in switch (3). If OK, set aside for later use.
2. Look at handle case (4) for cracks or breaks. If bad GO TO FRAME 10 and turn in cable assembly W11. If OK, set aside for later use.
3. Look at cable (5) for cuts or breaks. If bad refer to para 3-4. If OK, set aside for later use.

GO TO FRAME 10



FRAME 10

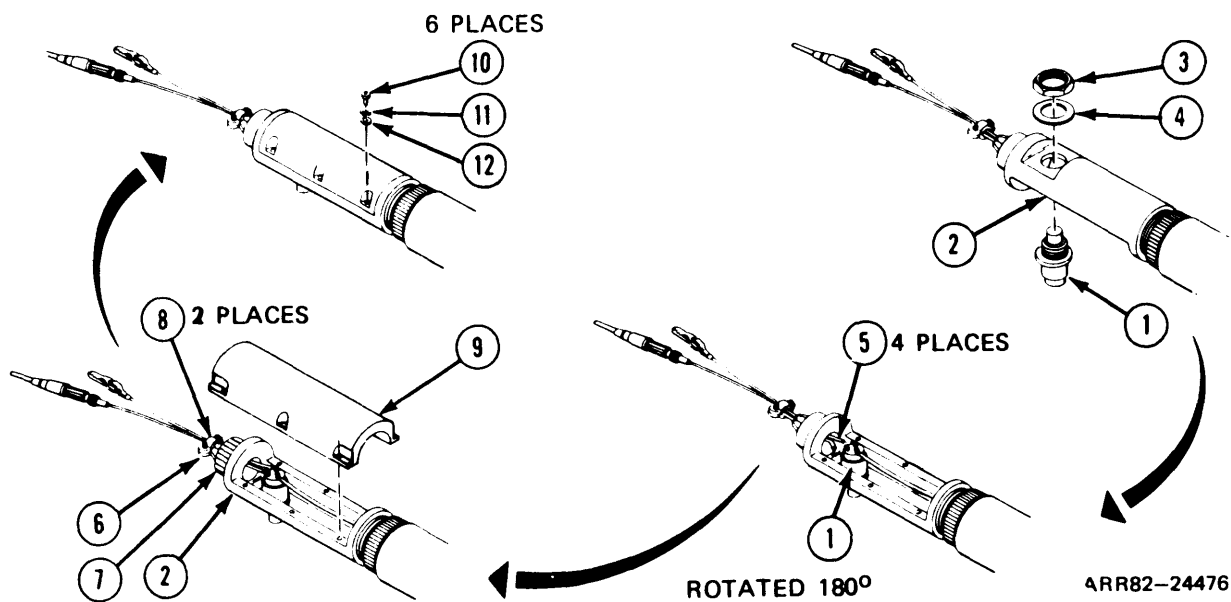
Install Push Switch S1:

1. Put switch (1) through hole in handle case (2). Screw on and tighten jamnut (3) and lockwasher (4) with wrench.
2. Solder four wires (5) to switch (1).
3. Slide clamp (6) close to handle case (2). Screw on and tighten sleeve nut (7).
4. Screw in and tighten two screws (8) on clamp (6) with flat tip screwdriver.
5. Line up holes in cover (9) with holes in case (2).
6. Screw in and tighten six screws (10), new lockwashers (11), and washers (12) with cross tip screwdriver.

Follow-on Maintenance:

1. Install cable assembly W11 in accessory storage assembly; refer to volume 1, para. 4-18.
2. Install accessory storage assembly cover; refer to volume 1, para. 4-18.

TASK 3 ENDS HERE



TASK 4. Repair Cable Assembly W12.

Applicability: All Models

Common Tools:

Knife, craftsman's
Pliers, diagonal cutting
Screwdriver, cross tip, No. 1
Set, soldering and resoldering
Wrench, combination, 3/4-inch

Special Tools:

Maintenance Kit, electrical connector repair, 12285360

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Clip, electrical E2 (80063) SM-C-806038-1
Connector, electrical, plug (96906) MS27467T19F35S
Contact, electrical (81349) M39029/56-348 (as required)
Decal (80063) SM-C-807249-2
Lockwasher (96906) MS35338-134 (eight required)
Pencil, writing (Item 19)
Probe, high voltage E1 (80063) SM-D-807239
Rag, wiping (Item 24)
Switch, push S1 (96906) MS25089-3FR
Tag, marker (as required) (Item 34)
Terminal Board TB1 (80063) SM-D-807245

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove cable assembly W12 from accessory storage assembly refer to volume 1, para. 4-17.

FRAME 11

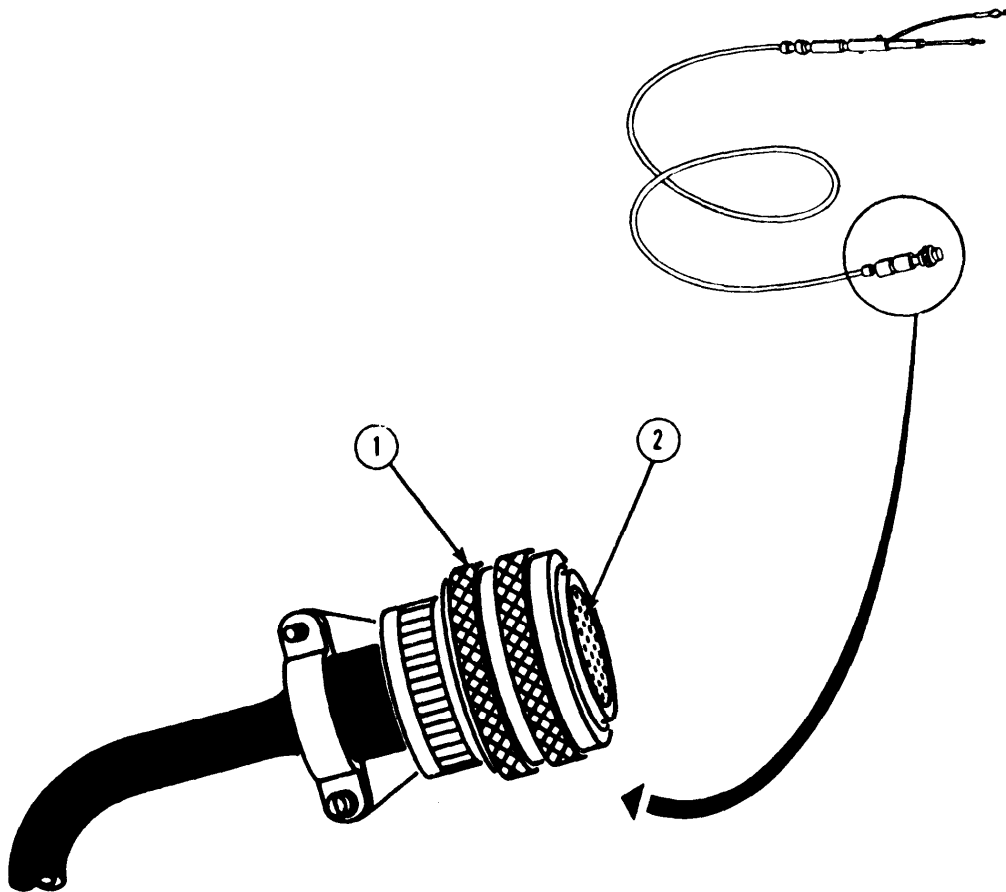
Repair Connector:

NOTE

Read paragraph 3-4 on repairing connectors before doing any work.

1. Look at electrical connector plug (1) for cracks and bent electrical contacts (2). bad, takeout contacts (2) with extract tool and get rid of contacts (2).
2. Put in new contacts (2) with insert tool.

GO TO FRAME 12



ARR82-24477

FRAME 12

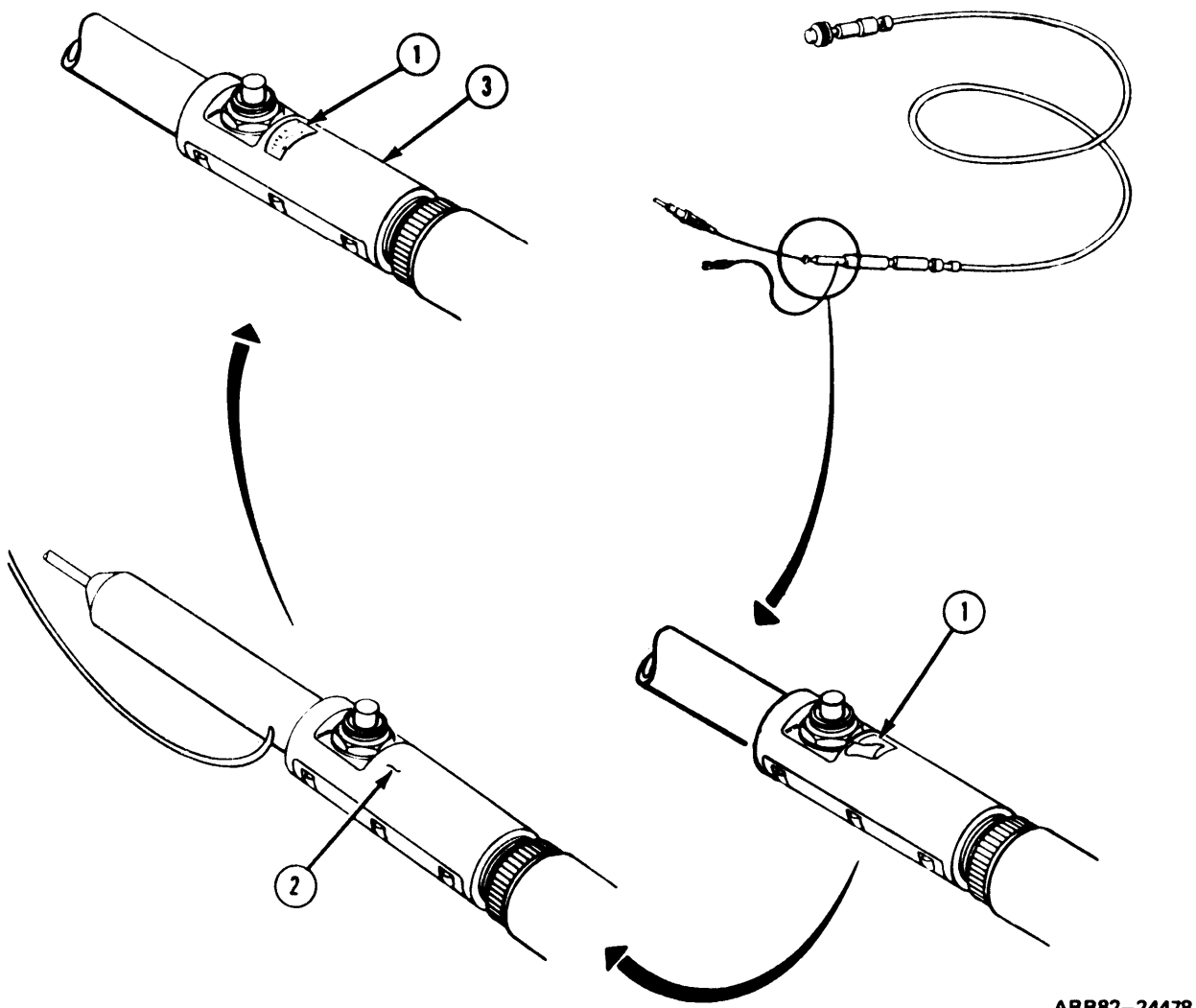
Remove Decal:

1. Scrape off decal (1) with knife.
2. Clean area (2) with wiping rag.

Install Decal:

3. Peel back off new decal (1) and press decal (1) on base (3).

GO TO FRAME 13



FRAME 13

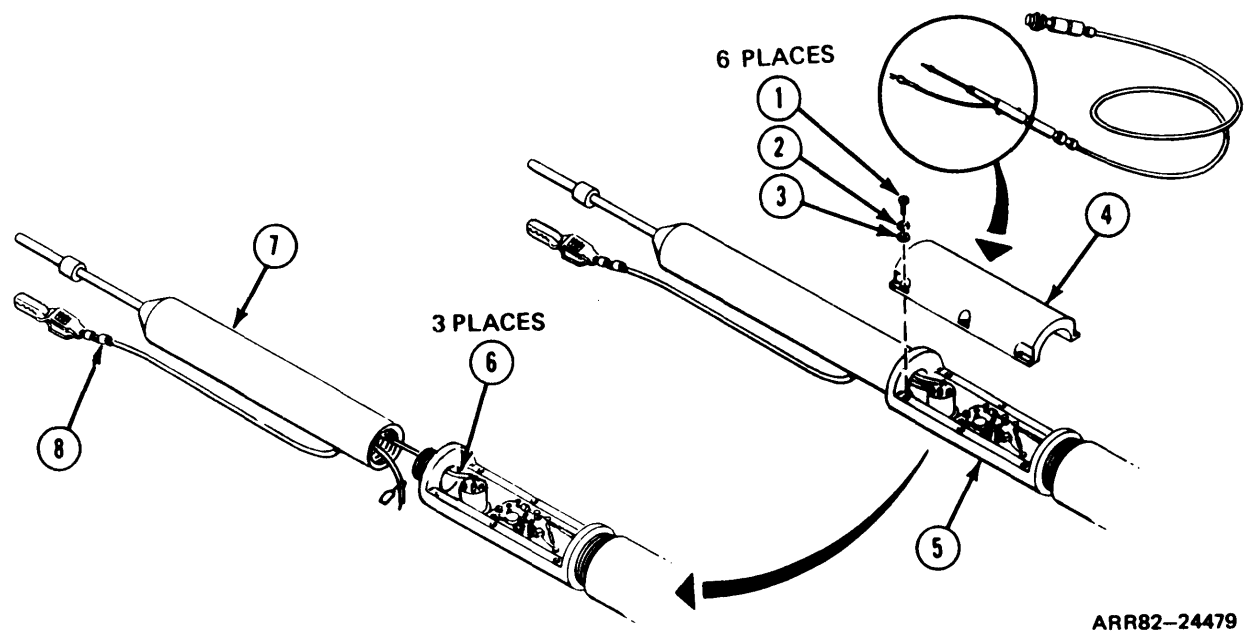
Remove High Voltage Probe E1:

NOTE

Read paragraph 3-4 on tagging and soldering wires before doing any work.

1. Unscrew and take out six machine screws (1), lockwashers (2), and flat washers (3) with screwdriver. Get rid of lockwashers (2).
2. Lift handle cover (4) off of base (5).
3. Tag and unsolder three wires (6) from high voltage probe (7).
4. Unscrew and take off high voltage probe (7) from base (S).
5. Look at high voltage probe (7) for cracks. If bad, turn in probe (7). If OK, set aside for later use.
6. Look at electrical clip (8) for loose connection or cracks. If bad, turn in clip (8). If OK, set aside for later use.

GO TO FRAME 14



FRAME 14

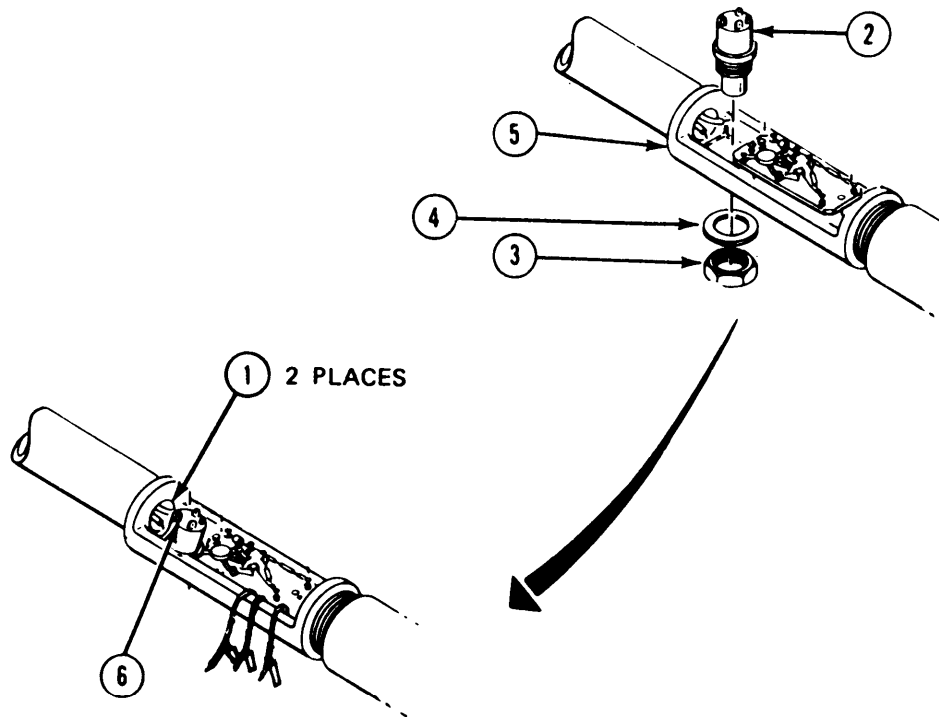
Remove Push Switch S1:

1. Tag and unsolder two wires (1) from push switch (2).
2. Unscrew jamnut (3) and lockwasher (4) with wrench. Look at switch (2) for cracks. If bad, turn in switch. If OK, set aside for later use.

Install Switch:

3. Put switch (2) into base (5).
4. Screw in and tighten jamnut (3) and washer (4) with wrench.
5. Solder two wires (1) to terminals (6).

GO TO FRAME 15



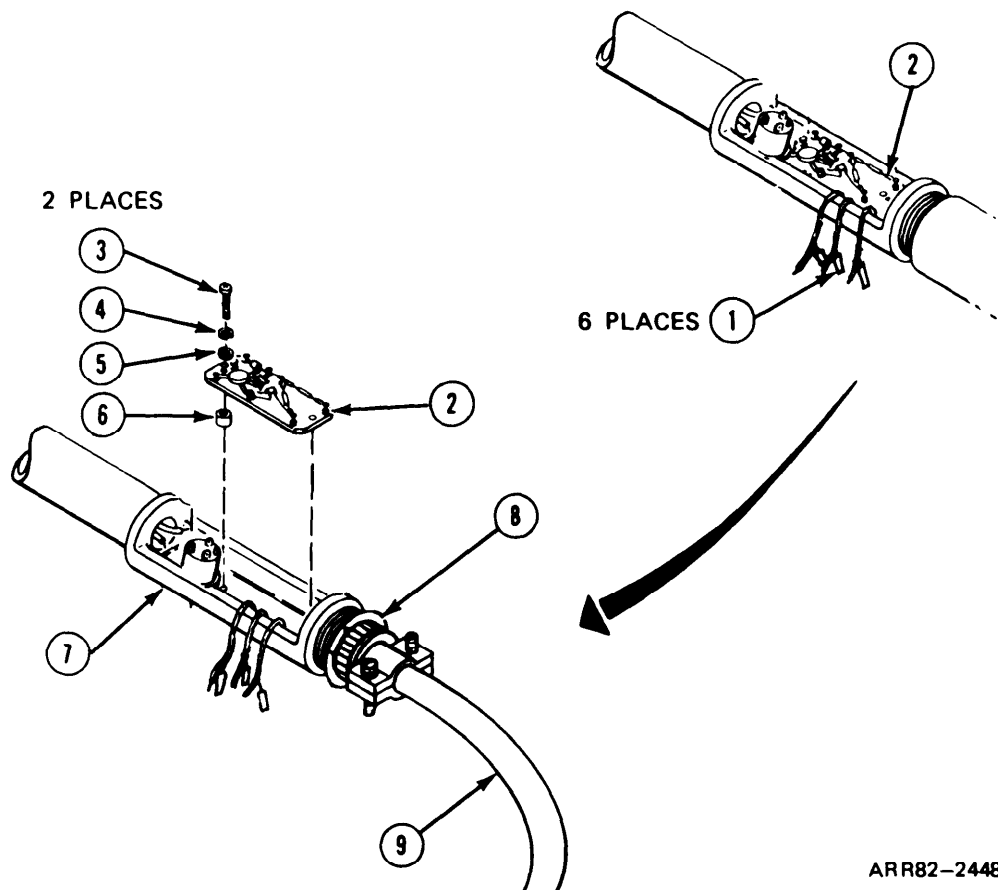
ARR82-24480

FRAME 15

Remove Terminal Board:

1. Tag and unsolder six wires (1) from terminal board (2).
2. Unscrew and take out two machine screws (3), lockwashers (4), flat washers (5), and sleeve spacers (6) with screwdriver. Get rid of lockwashers (4).
3. Lift terminal board (2) out of base (7). If bad, turn in terminal board (2). If OK, set aside for later use.
4. Look at base (7) for cracks and breaks. If bad, GO TO FRAME 16 and turn in cable assembly W12 (8). If OK, set aside for later use.
5. Look at cable (9) for cuts or breaks. If bad repair cable (9). If OK, set aside for later use.

GO TO FRAME 16



ARR82-24481

FRAME 16

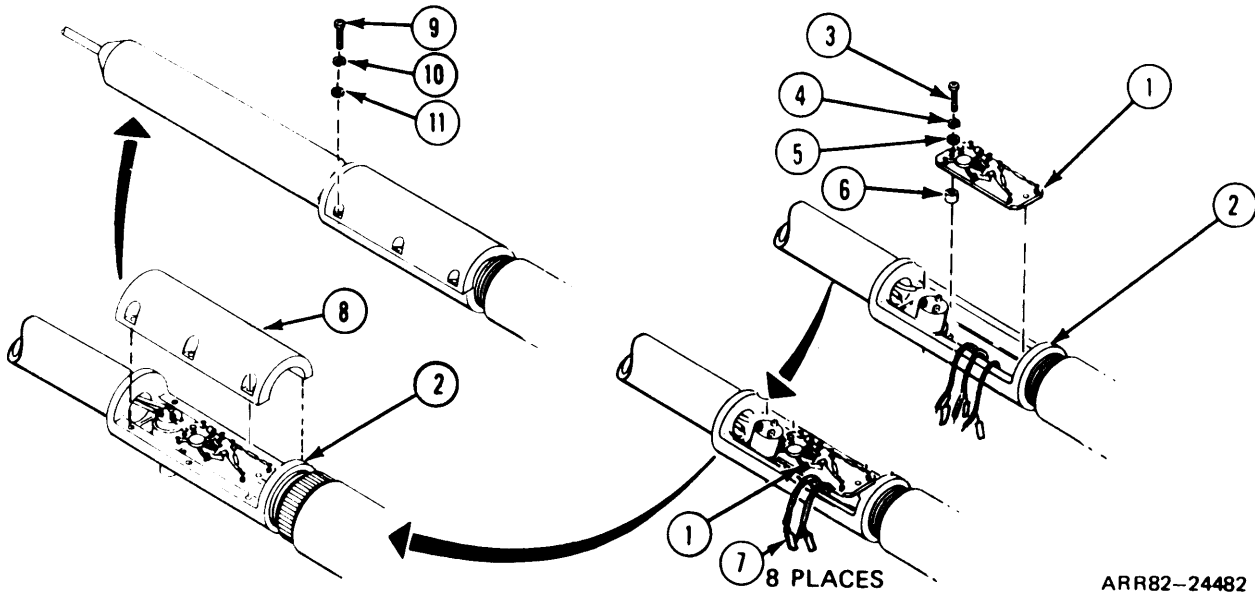
Install Terminal Board:

1. Line up holes in terminal board (1) with holes in handle base (2).
2. Screw in and tighten two screws (3), new lockwashers (4), washers spacers (6) with screwdriver.
3. Solder eight wires (7) to terminal board (1).
4. Line up holes in handle cover (8) with holes in base (2).
5. Screw in and tighten six screws (9), new lockwashers (10), and washers (11) with screwdriver.

Follow-on Maintenance:

1. Install cable assembly W12 in accessory storage assembly; refer to volume 1, para. 4-18.
2. Install accessory storage assembly cover; refer to volume 1, para. 4-18.

END OF CABLE ASSEMBLIES W1 THROUGH W12 MAINTENANCE



3-7. PCU Holding Fixture.

Task	Title	Frames
1	Remove Front Fan Guard	1
2	Remove Fan and Rear Fan Guard	2
3	Remove Cable and Cord Assemblies	3 - 4
4	Remove Toggle Switch S1	5
5	Remove Bracket	6
6	Remove Leg	7
7	Replace Holding Fixture Base	8 - 9
8	Install Leg	10
9	Install Bracket	11
10	Install Toggle Switch S1	12
11	Install Cable and Cord Assemblies	13-14
12	Install Fan and Rear Fan Guard	15
13	Install Front Fan Guard	16

TASK 1. Remove Front Fan Guard.

Applicability: All Models

Common Tools:

- Screwdriver, cross tip, No. 2
- Wrench, combination, 1/4-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Conditions:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove PCU holding fixture from accessory storage assembly; refer to volume 1, para. 4-17.

FRAME 1

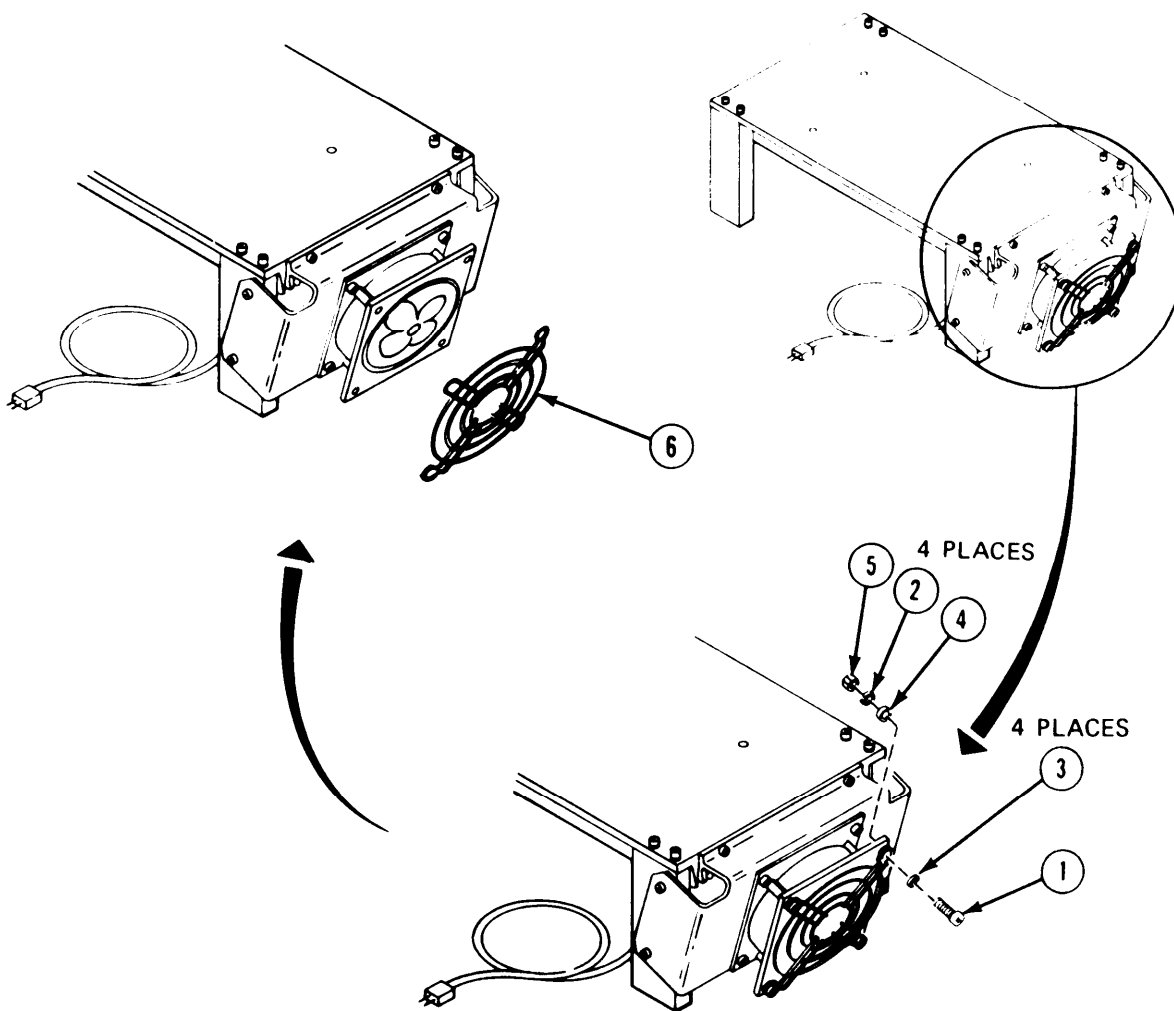
Remove Fan guard:

1. Unscrew and take out four machine screws (1), lockwashers (2), flat washers (3), washers (4), and nuts (5) with screwdriver and wrench. Get rid of lockwashers (2).
2. Take off fan guard (6).
3. Look at fan guard (6) for cracks or bends. If bad, turn in fan guard (6). If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install front fan guard, refer to task 13.

TASK 1 ENDS HERE



TASK 2. Remove Fan and Rear Fan Guard.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 1
Wrench, combination, 1/4-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Conditions:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove PCU holding fixture from accessory storage assembly; refer to volume 1, para. 4-17.

FRAME 2

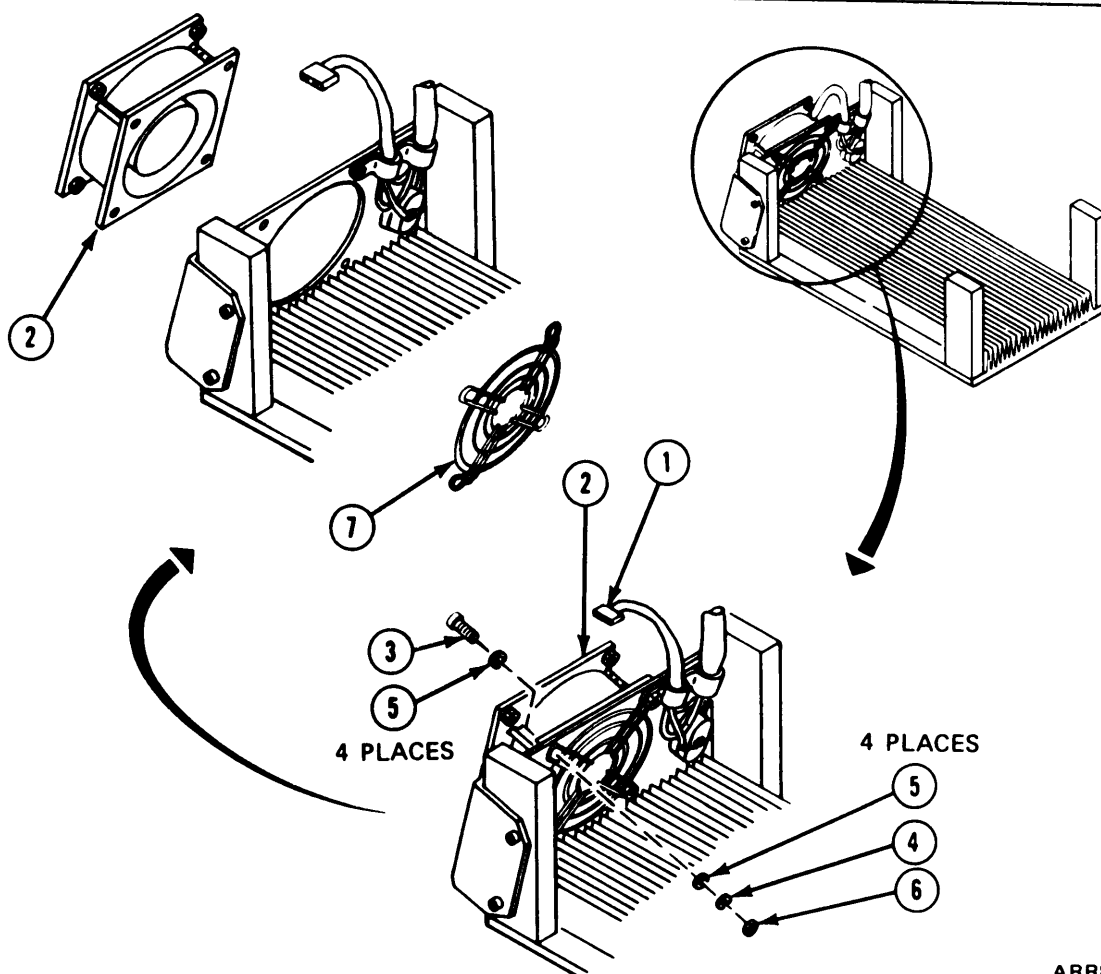
Remove Fan and Guard:

1. Take off plug (1) from tubeaxial fan (2).
2. Unscrew and take out four machine screws (3), four lockwashers (4), eight flat washers (5), and four plain hexagon nuts (6) with screwdriver and wrench. Get rid of lockwashers (4).
3. Take off fan (2) and fan guard (7).
4. Look at fan (2) for cracks and bent blades. If bad, turn in fan (2). If OK, set aside for later use.
5. Look at fan guard (7) for cracks or bends. If bad, turn in fan guard (7). If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install fan and rear fan guard, refer to task 12.

TASK 2 ENDS HERE



ARR82-24484

TASK 3. Remove Cable and Cord Assemblies.

Applicability: All Models

Common Tools:

Knife, pocket
Pliers, diagonal cutting
Screwdriver, cross tip, No. 2
Set, soldering and resoldering
Wrench, combination, 1/4-inch
Wrench, combination, 11/32-inch

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Conditions:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove PCU holding fixture from accessory storage assembly; refer to volume 1, para. 4-17.

FRAME 3

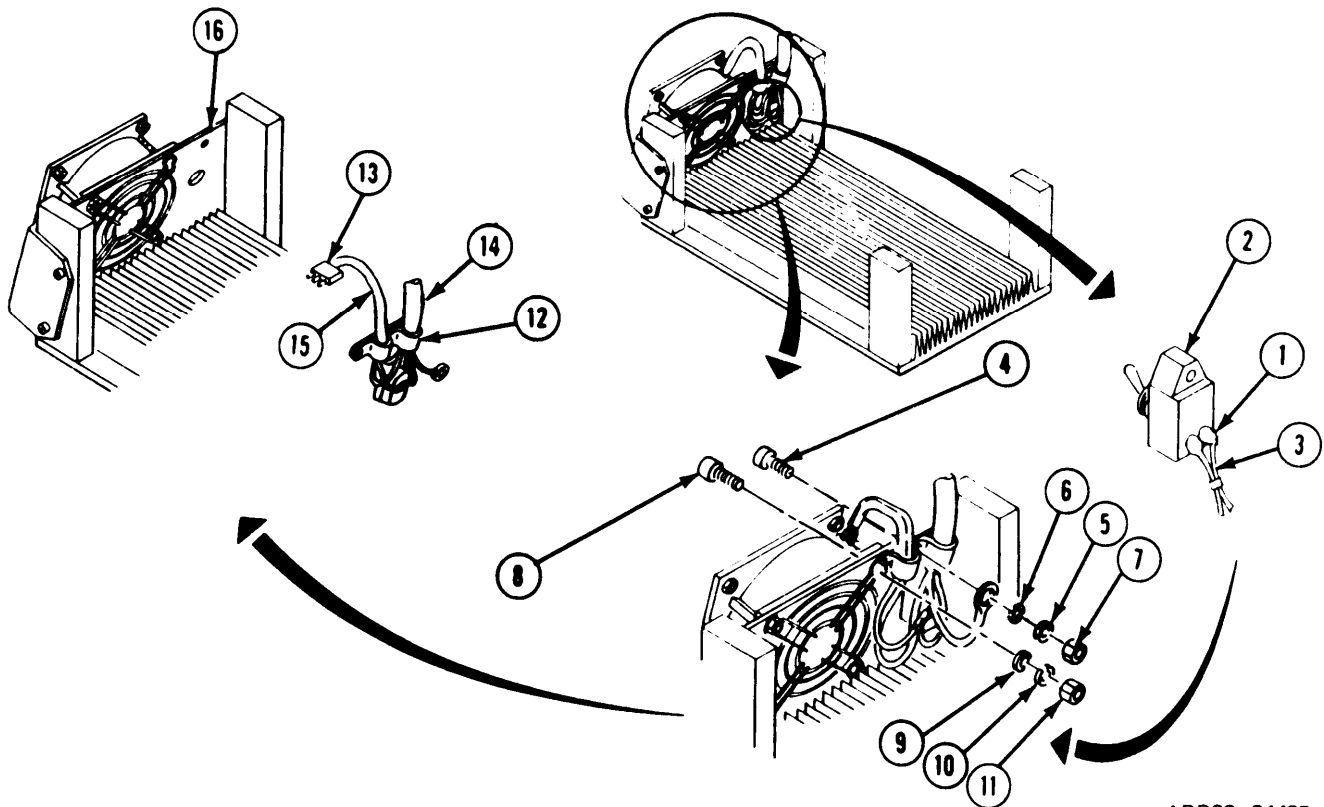
Remove Cable and Cord Assemblies:

NOTE

Read paragraph 2-4 on soldering and tagging wires before doing any work.

1. Take potting compound (1) off of toggle switch (2) with knife.
2. Tag and unsolder two wires (3) from switch (2).
3. Unscrew and take out machine screw (4), lockwasher (5), flat washer (6), and plain hexagon nut (7) with screwdriver and 11/32-inch wrench. Get rid of lockwasher (5).
4. Unscrew and take out machine screw (8), lockwasher (9), flat washer (10), and plain hexagon nut (11) with 1/4-inch wrench. Get rid of lockwasher (9).
5. Take off loop clamp (12). Disconnect plug (13) and lift cable assembly (14) and cord assembly (15) off of bracket (16).
6. Look at assembly (14, 15) for cracked or split wires. If bad, GO TO FRAME 4. If OK, set aside for later use.

GO TO FRAME 4



ARR82-24485

FRAME 4

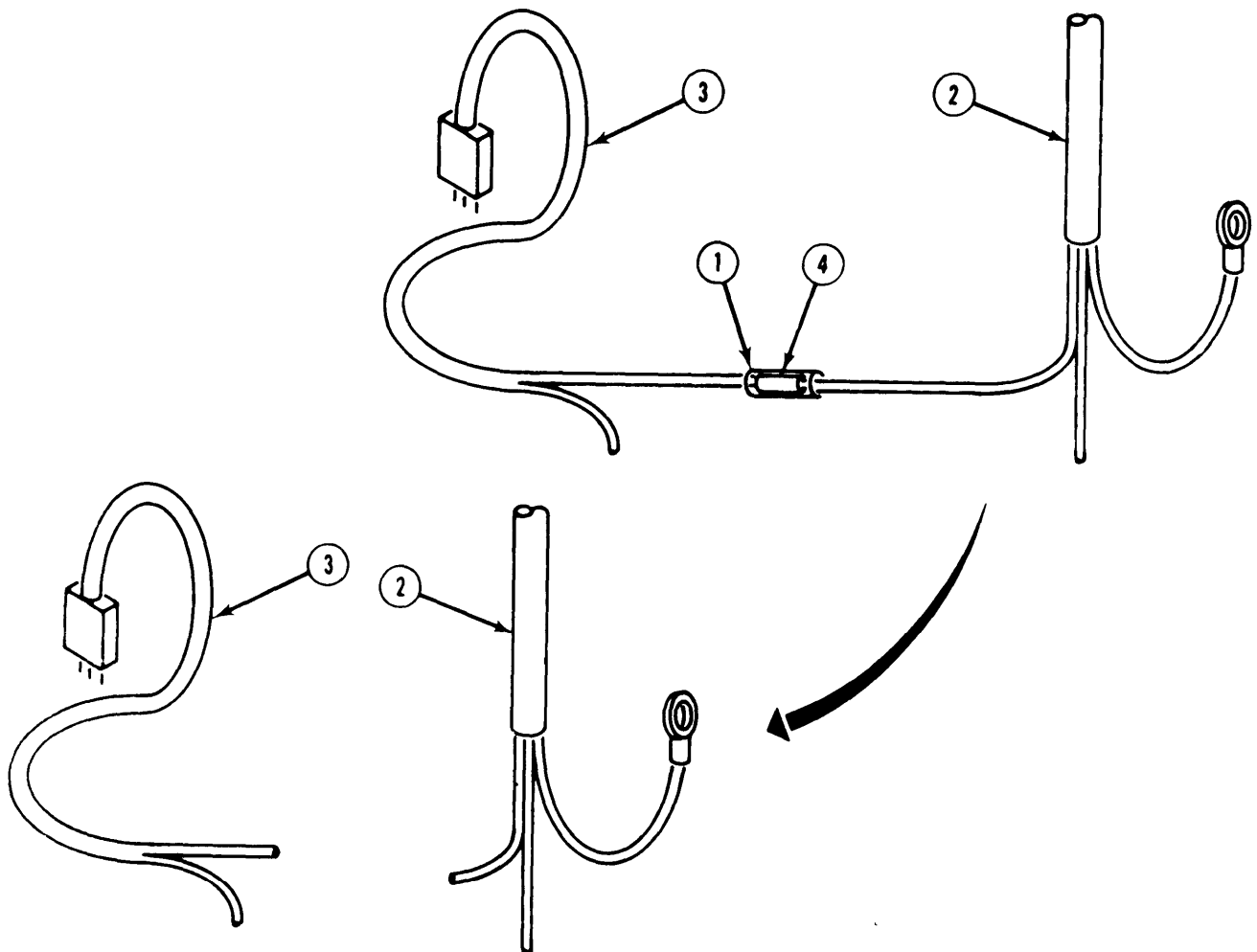
Remove Cable and Cord Assemblies (Continued):

1. Cut and takeoff insulation sleeving (1) from cable assembly (2) and cord assembly (3) with pocket knife.
2. Cut cable assembly (2) and cord assembly (3) at conductor splice (4) with diagonal pliers. Get rid of splice (4). Turn in bad assembly (2, 3).

Follow-on Maintenance:

NOTE: To install cable and cord assemblies, refer to task 11.

TASK 3 ENDS HERE



ARR82-24486

TASK 4. Remove Toggle Switch (S1).

Applicability: All Models

Common Tools:

Knife, pocket
Pliers, slip joint
Set, soldering and resoldering

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Tag, marker (as required) (Item 34)

Personnel: One

Equipment Conditions:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove PCU holding fixture from accessory storage assembly; refer to volume 1, para. 4-17.

FRAME 5

Remove Switch:

NOTE

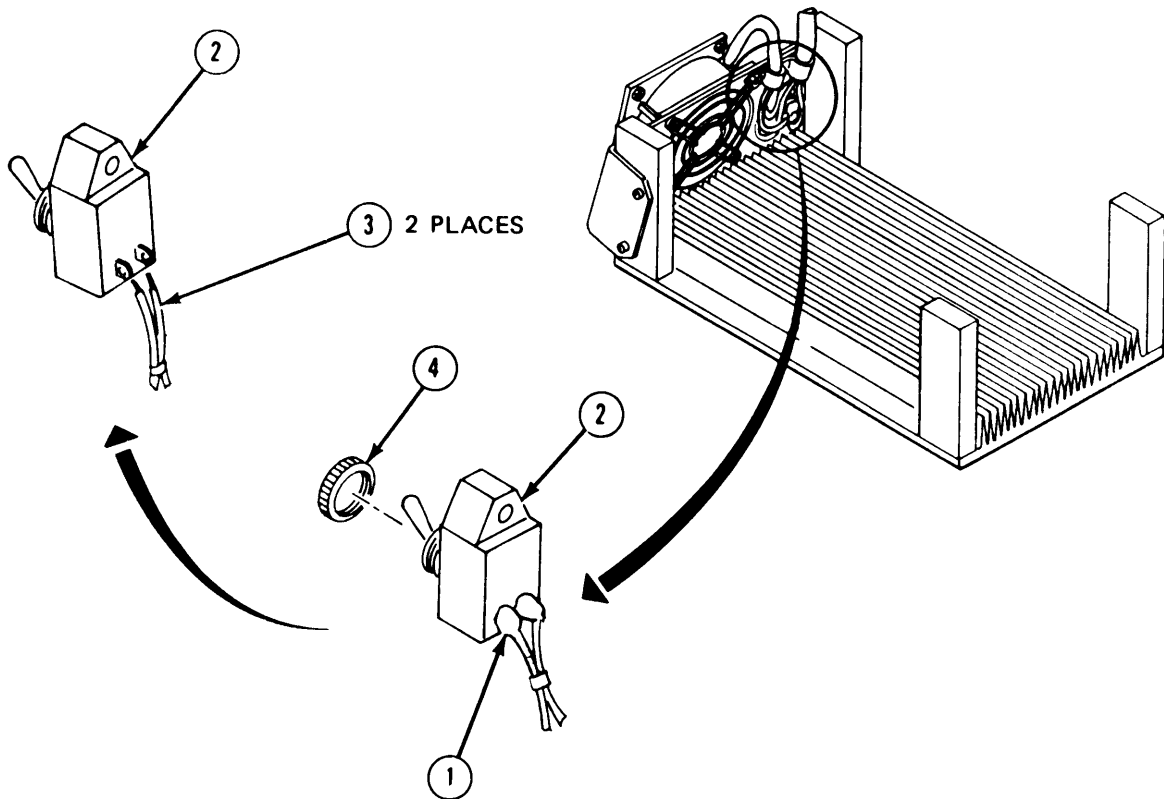
Read paragraph 2-4 on soldering and tagging wires before doing any work.

1. Take potting compound (1) off of toggle switch (2) with knife.
2. Tag and unsolder two wires (3) from switch (2).
3. Unscrew and takeoff nut (4) from switch (2) with pliers. Look at switch (2) for cracks, breaks, or bad contacts. If bad, turn in. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install toggle switch S1, refer to task 10.

TASK 4 ENDS HERE



ARR82-24487

TASK 5. Remove Bracket.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove PCU holding fixture from accessory storage assembly; refer to volume 1, para. 4-17.
3. Remove front fan guard; refer to task 1.
4. Remove fan and rear vanguard; refer to task 2.
5. Remove cable and cord assemblies; refer to task 3.
6. Remove toggle switch S1; refer to task 4.

FRAME 6

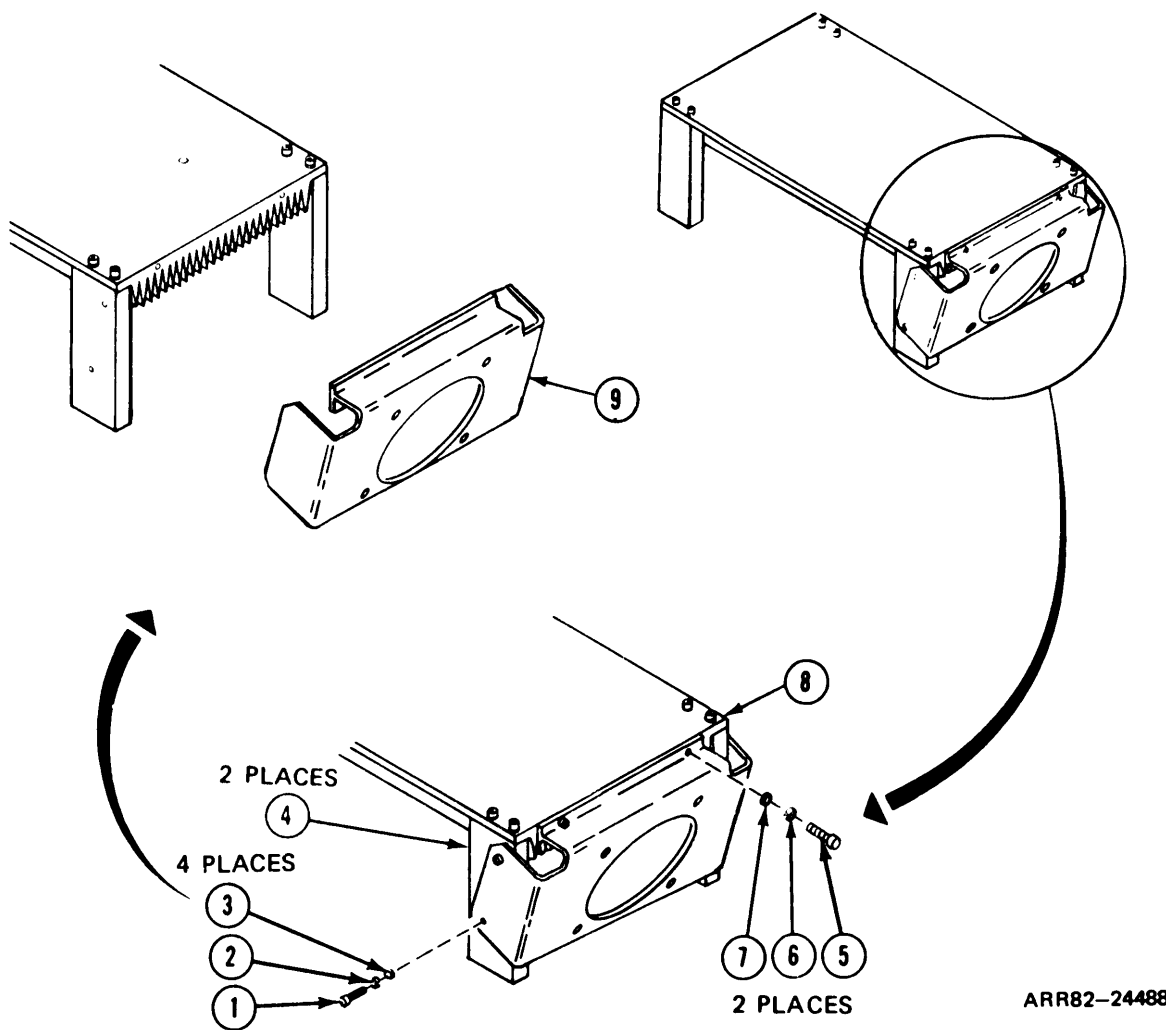
Remove Bracket:

1. Unscrew and take out four machine screws (1), lockwashers (2), and flat washers (3) from two legs (4) with screwdriver. Get rid of lockwashers (2).
2. Unscrew and take out two screws (5), lockwashers (6), and washers (7) from holding fixture base (8) with screwdriver. Get rid of lockwashers (6).
3. Take off bracket (9).
4. Look at bracket (9) for cracks. If bad, trun in bracket (9). If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install bracket, refer to task 9.

TASK 5 ENDS HERE



TASK 6. Remove Leg.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove PCU holding fixture from accessory storage assembly; refer to volume 1, para. 4-17.

FRAME 7

Remove Leg:

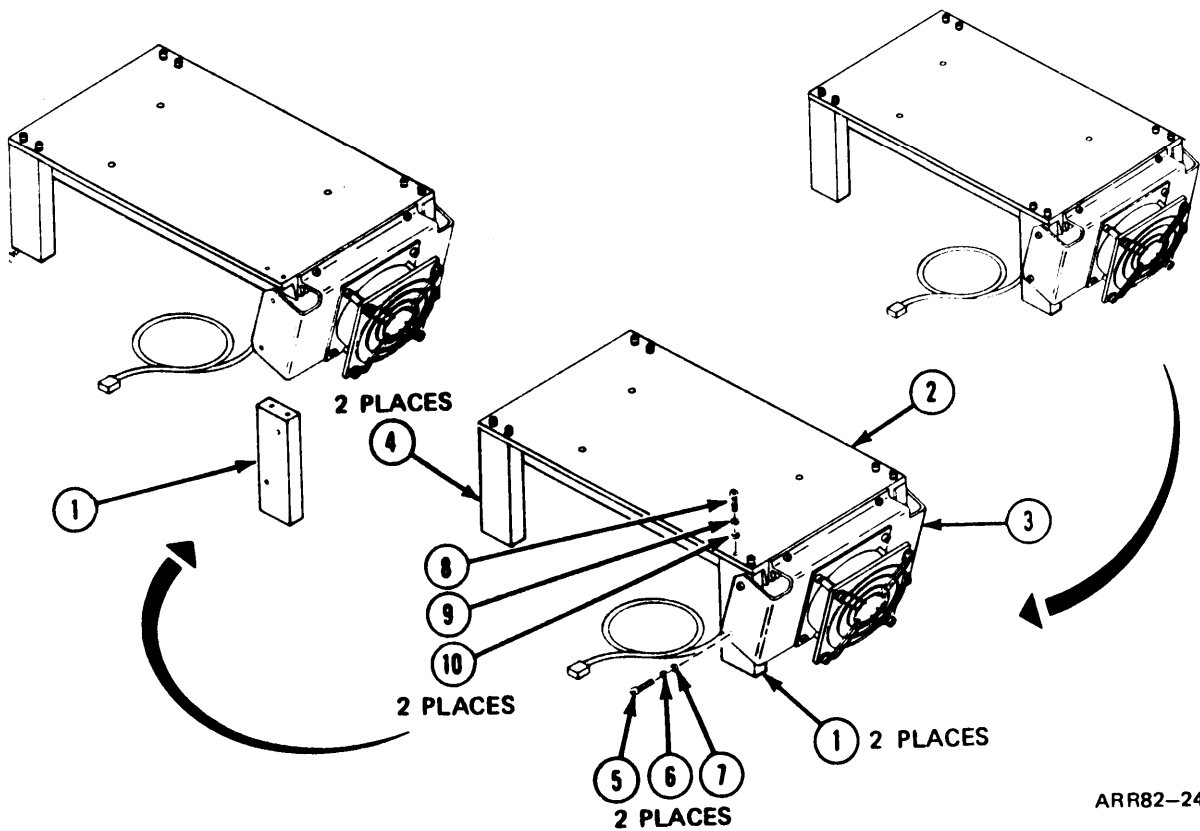
NOTE

- o If removing front leg (1) attached to holding fixture base (2) and bracket (3), do steps 1 through 3 for each leg removed.
 - o If removing rear leg (4) attached only to base (2), do steps 4 and 5 for each leg removed.
1. Unscrew and take out two machine screws (5), lockwashers (6), and flat washers (7) from bracket (3) with screwdriver. Get rid of lockwashers (6).
 2. Unscrew and take out two screws (8), lockwashers (9), and washers (10) from base (2) with screwdriver. Get rid of lockwashers (9).
 3. Take off leg (1). Look at leg (1) for stripped screw holes. If bad, turn in leg (1). If OK, set aside for later use.
 4. Unscrew and take out two machine screws (8), lockwashers (9), and flat washers (10) from base (2) with screwdriver. Get rid of lockwashers (9).
 5. Take off leg (4). Look at leg (4) for stripped screw holes. If bad, turn in leg (4). If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install leg, refer to task 8.

TASK 6 ENDS HERE



ARR82-24489

TASK 7. Replace Holding Fixture Base.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Base, holding fixture (19200) 12303378

Insert, screw thread (96906) MS51831-104

Lockwasher (96906) MS35338-137 (10 required)

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove PCU holding fixture from accessory storage assembly; refer to volume 1, para. 4-17.

FRAME 8

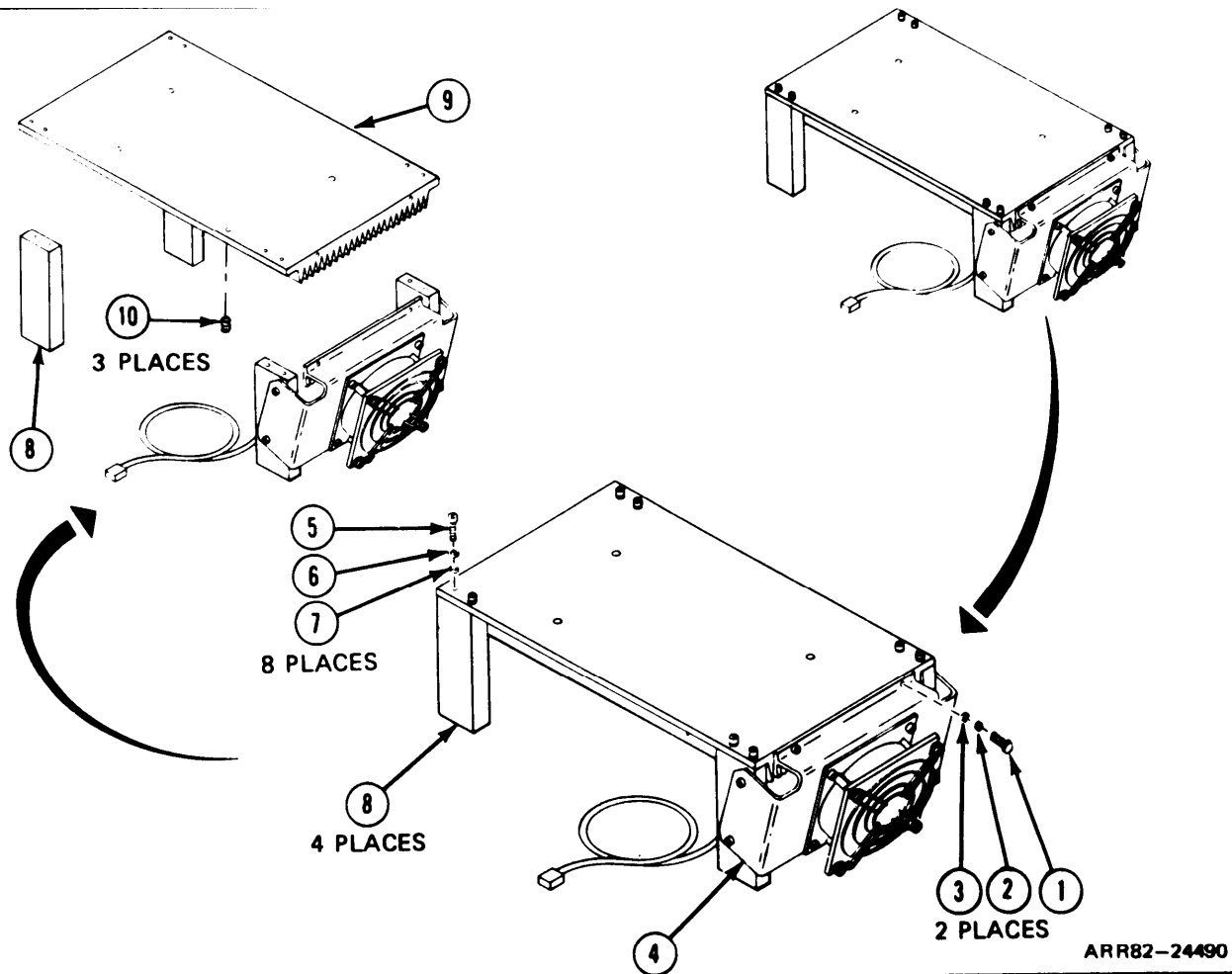
Remove Base:

NOTE

Read paragraph 3-4 on replacing inserts before doing any work.

1. Take out two machine screws (1), lockwashers (2), and flat washers (3) from bracket (4) with screwdriver. Get rid of lockwashers (2).
2. Unscrew and take out eight machine screws (5), lockwashers (6), and flat washers (7) from legs (8) with screwdrivers. Get rid of lockwashers (6).
3. Lift base (9) off legs (8).
4. Look at base (9) for damaged screw thread inserts (10). If bad, replace inserts (10).
5. Look at base (9) for damage. If bad, turn in base (9).

GO TO FRAME 9



FRAME 9

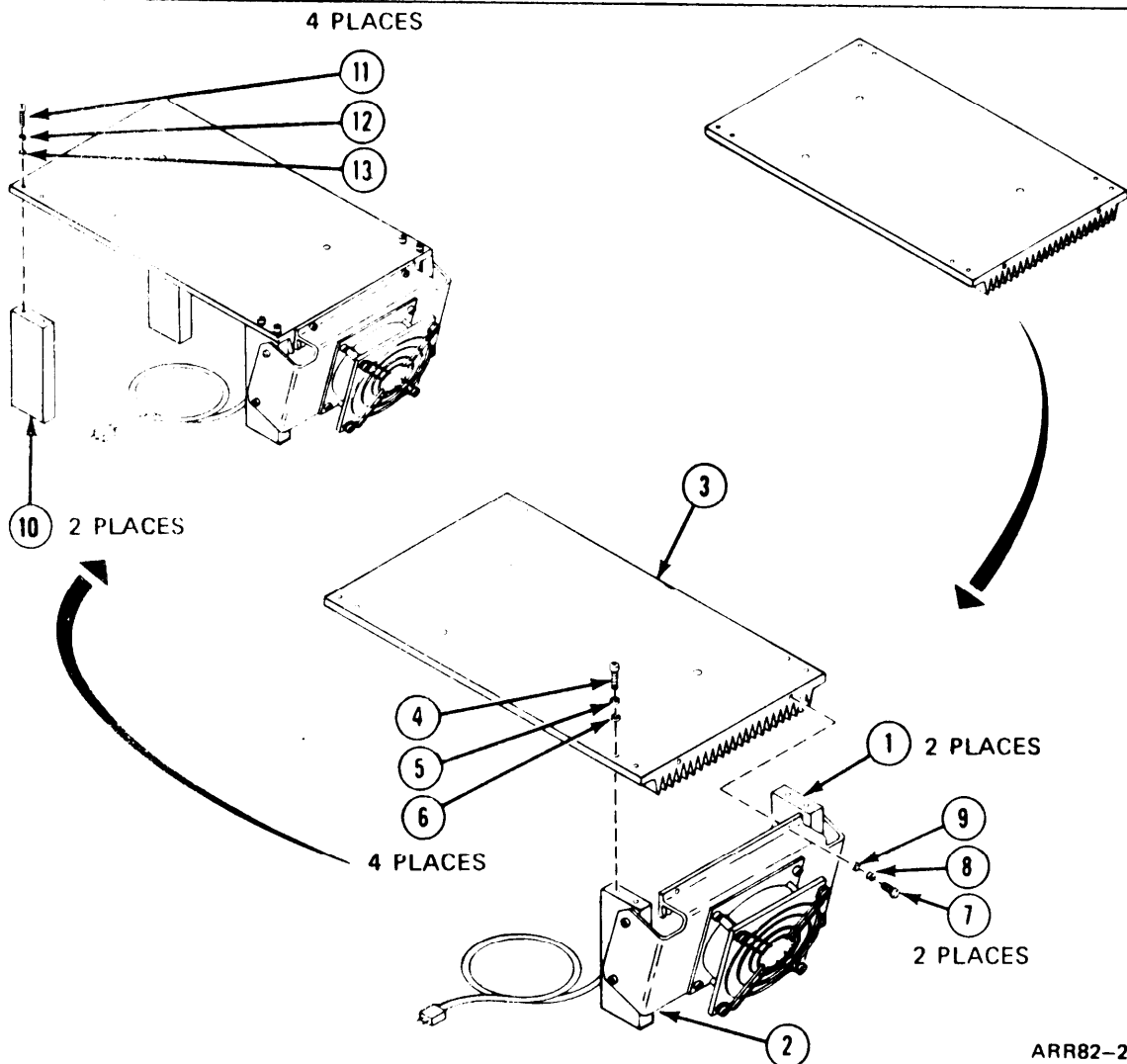
Install Base:

1. Put two legs (1) with bracket (2) under base (3) and screw in and tighten four machine screws (4), new lockwashers (5), and flat washers (6) with screwdriver.
2. Screw in and tighten two machine screws (7), new lockwashers (8), and flat washers (9) in bracket (2) with screwdriver.
3. Put two legs (10) under base (3) and screw in and tighten four screws (11), new lockwashers (12), and washers (13) with screwdriver.

Follow-on Maintenance:

1. Install PCU holding fixture in accessory storage assembly; refer to volume 1, para. 4-18.
2. Install accessory storage assembly cover; refer to volume 1, para. 4-18.

TASK 7 ENDS HERE



ARR82-24491

TASK 8. Install Leg.

Applicability All Models

Common tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Leg (19200) 12303380 (as required)

Leg (19200) 12303381 (as required)

Lockwasher (96906) MS35338-137 (12 required)

Personnel: One

EquipmentCondition:

Accessory storage assembly on a clean work surface.

Preliminary Procedure:

Remove leg; refer to task 6.

FRAME 10

Install Legs:

NOTE

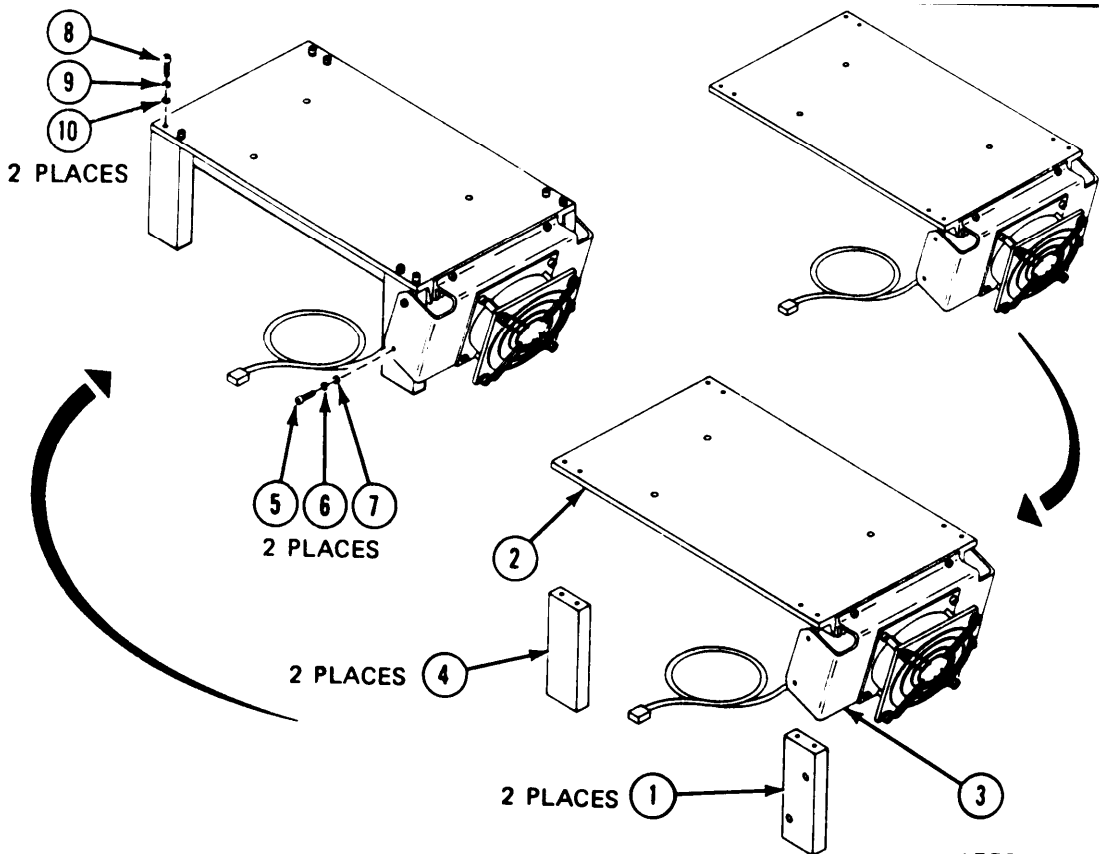
- If installing front leg (1) attached to holding fixture base (2) and bracket (3), do steps 1 and 2 for each leg (1) installed.
- If installing rear leg (4) attached only to base (2), do step 2 for each leg (4) installed.

1. Screw in and tighten two machine screws (5), new lockwashers (6), and flat washers (7) with screwdriver.
2. Screw in and tighten two machine screws (8), new lockwashers (9), and flat washers (10) with screwdriver.

Follow-on Maintenance:

1. Install PCU in holding fixture in accessory storage assembly; refer to volume 1, Para. 4-18.
2. Install accessory storage assembly cover; refer to volume 1, para. 4-18.

TASK 8 ENDS HERE



ARR82-24492

TASK 9. Install Bracket.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Bracket (19200) 12303379

Lockwasher (96906) MS35338-137 (six required)

Personnel: One

Equipment Conditions:

Accessory storage assembly on a clean work surface.

Preliminary Procedure:

Remove bracket; refer to task 5.

FRAME 11

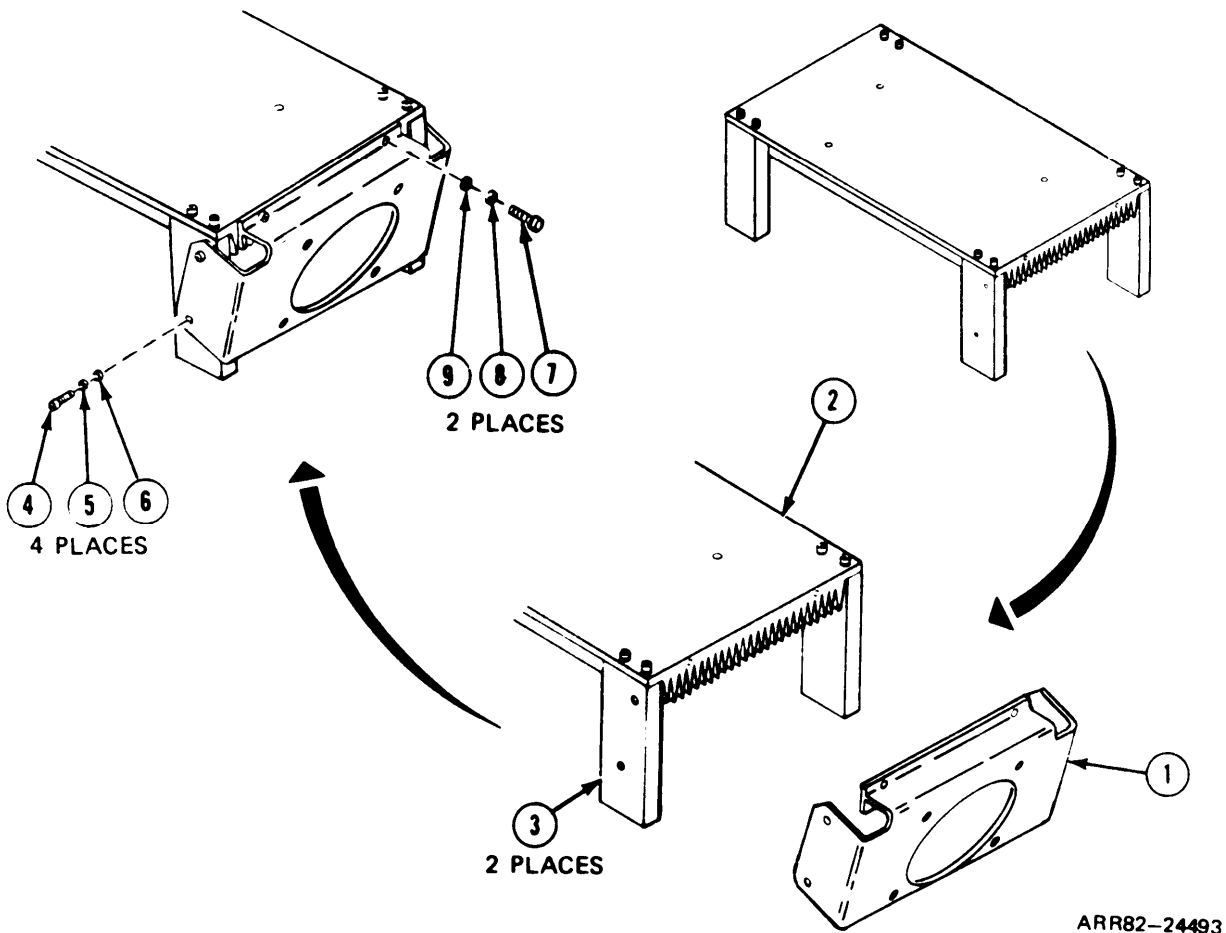
Install Bracket:

1. Line up holes in bracket (1) with holes in holding fixture base (2) and leg (3).
2. Screw in and tighten four machine screws (4), new lockwashers (5), and flat washers (6) with screwdriver.
3. Screw in and tighten two screws (7), new lockwashers (8), and washers (9) with screwdriver.

Follow-on Maintenance:

1. Install toggle switch S1; refer to task
2. Install cable and cord assemblies; refer to task 11.
3. Install fan and rear fan guard; refer to task 12.
4. Install front vanguard; refer to task 13.
5. Install PCU holding fixture in accessory storage assembly; refer to volume 1, para. 4-18.
6. install accessory storage assembly cover; refer to volume 1, para. 4-18.

TASK 9 ENDS HERE



TASK 10. Install Toggle Switch (S1).

Applicability: All Models

Common Tools:

Knife, pocket
Set, soldering and resoldering

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Lockwasher (96906) MS35338-137 (two required)
Potting Compound (Item 20)
Switch, toggle (96906) 12303294
Tag, marker (as required) (item 34)

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedure:

Remove toggle switch S1; refer to task 4.

FRAME 12

Install Switch:

NOTE

Read paragraph 2-4 on resoldering and soldering wires before doing any work.

1. Screw plain hexagon nut (1) half-way on switch (2).
2. Position switch (2) in place and screw on nut (3) with pliers.
3. Solder two wires (4) to new switch (2).

WARNING

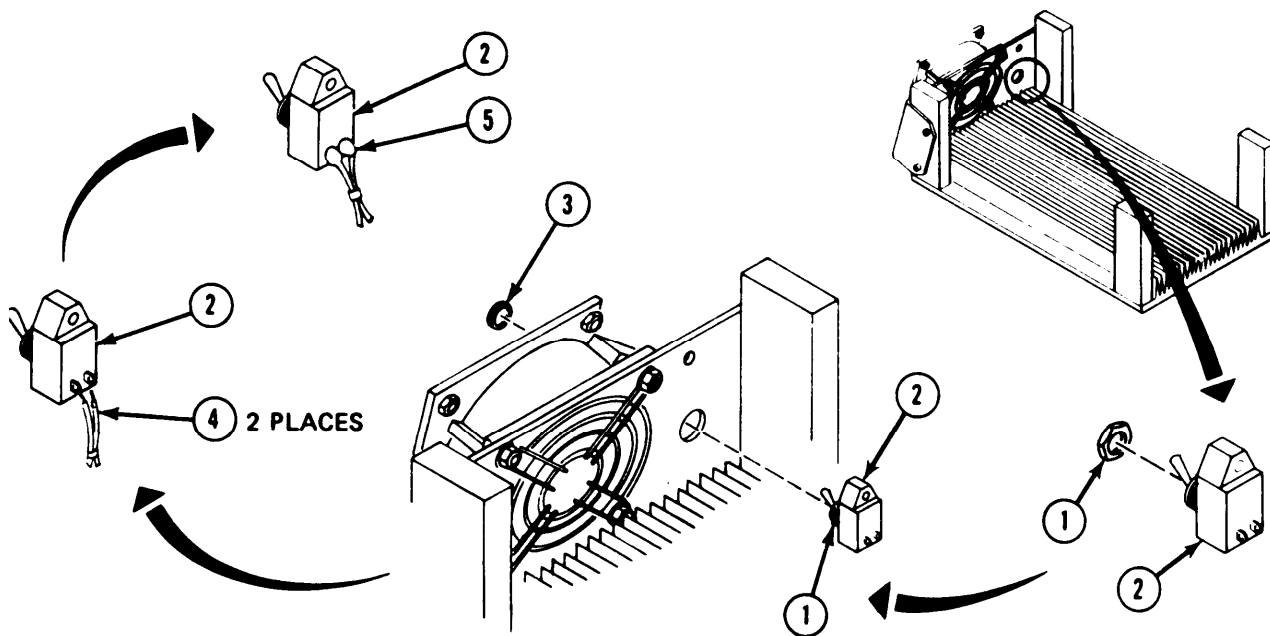
Potting compound is toxic and extremely flammable. Use only in well ventilated areas. Avoid prolonged or repeated breathing of vapors. Avoid prolonged contact with skin. Keep the area free of sparks and open flames.

4. Put potting compound (5) on switch (2).

Follow-on Maintenance:

1. Install PCU holding fixture in accessory storage case; refer to volume 1, para. & 18.
2. Install accessory storage case cover; refer to volume 1, para. 4-18.

TASK 10 ENDS HERE



ARR82-24494

TASK 11. Install Cable and Cord Assemblies.

Applicability: All Models

Common Tools:

Knife, pocket
Pliers, diagonal cutting
Rule, machinist's, 6-inch
Screwdriver, cross tip, No. 2
Wrench, combination, 1/4-inch
Wrench, combination, 11/32-inch
Gun, thermal
Set, soldering and resoldering

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Cable Assembly (19200) 12303292 (as required)
Cord Assembly (19200) 12303291 (as required)
Lockwasher (96906) MS35338-137 (two required)
Potting Compound (Item 20)
Sleeving, insulation (Item 28) (Bulk)
Splice, conductor (81349) M83519/1-2 (as required)

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedure:

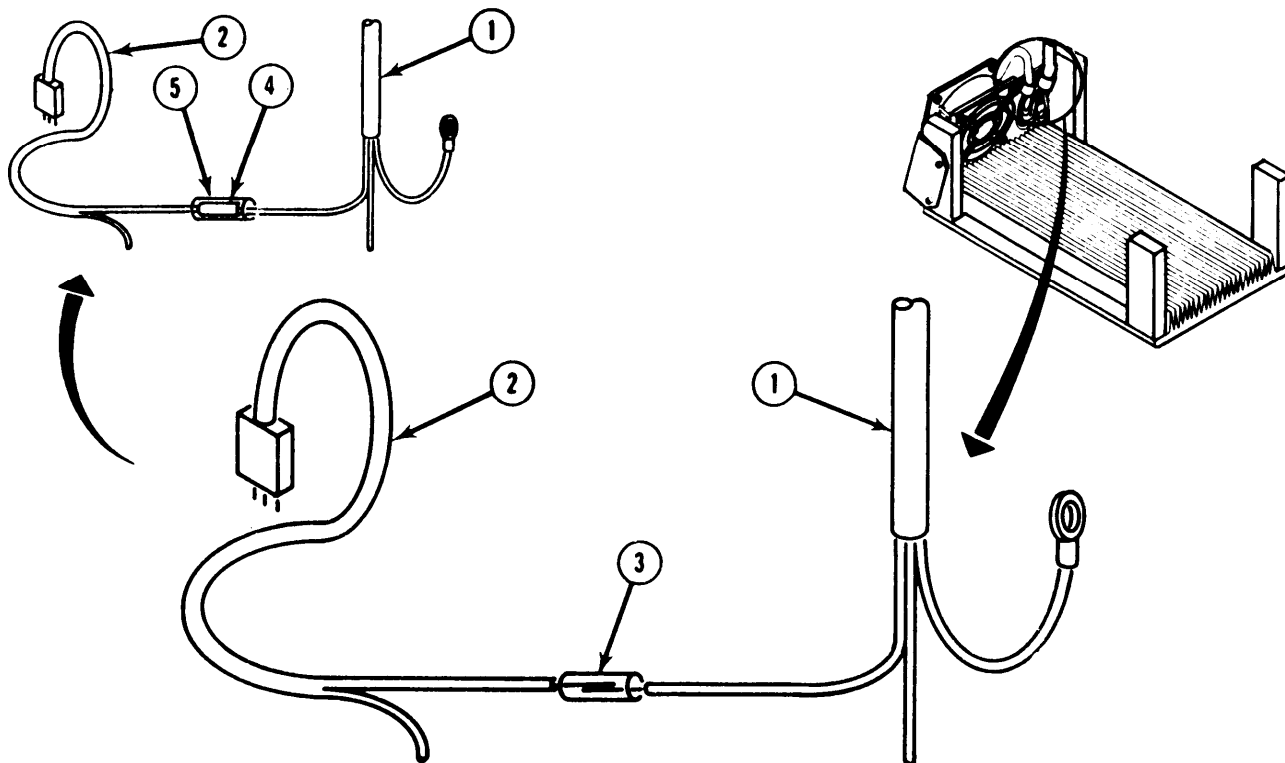
Remove cable and cord assemblies; refer to task 3.

FRAME 13

Install Cable and Cord Assemblies:

- Read paragraph 3-4 on soldering wires before doing any work.
 - If cable assembly (1) or cord assembly (2) was not turned in, GO TO FRAME 14.
1. Strip new cable assembly (1) and new cord assembly (2) with pliers.
 2. Measure and cut new insulation sleeving (3) with rule and knife and slide sleeving (3) over cable assembly (1) and cord assembly (2).
 3. Connect cable assembly (1) and cord assembly (2) with new conductor splice (4). Crimp splice (4) with crimp tool.
 4. Slide new insulation sleeving (5) over splice (4) and shrink sleeving (5) with thermal gun.

GO TO FRAME 14



ARR82-24495

FRAME 14

Install Cable and Cord Assemblies (Continued):

1. Line up holes in two loop clamps (1) with holes in bracket (2).
2. Screw in and tighten terminal lug (3), machine screw (4) new lockwasher (5), two flat washers (6) and plain hexagon nut (7) with screwdriver and 11/32-inch wrench.
3. Screw in and tighten machine screw (8), new lockwasher (9), flat washer (10), and plain hexagon nut (11) with screwdriver and 1/4-inch wrench to hold tubeaxial fan (12) to bracket (2).
4. Put plug (13) on fan (12).
5. Solder two wires (14) to switch terminals (15).

WARNING

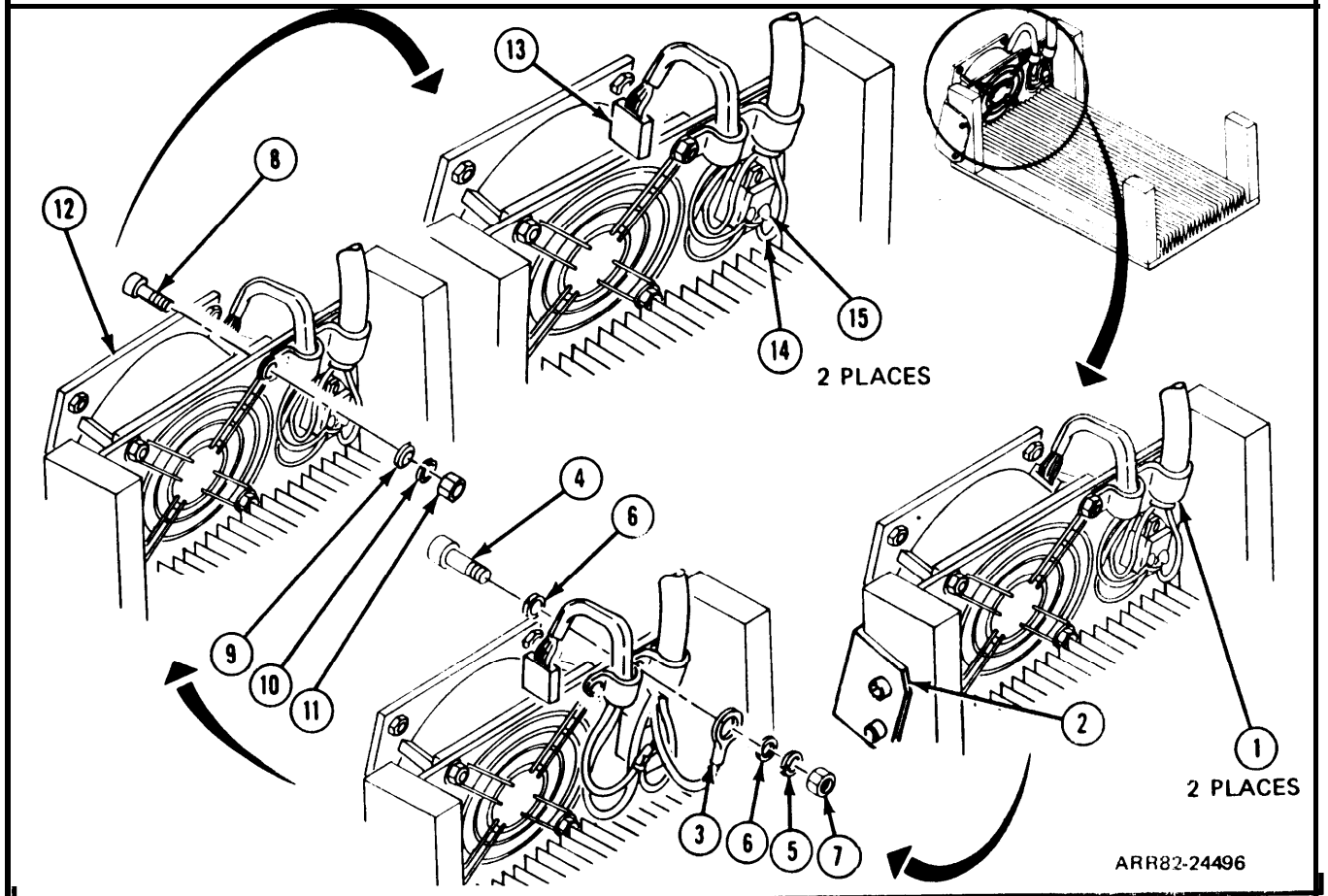
Potting compound is toxic and extremely flammable. Use only in well ventilated areas. Avoid prolonged or repeated breathing of vapors. Avoid prolonged contact with skin. Keep the area free of sparks and open flames.

6. Put potting compound on switch terminals (15).

Follow-on Maintenance:

1. Install PCU holding fixture in accessory storage case; refer to volume 1, para. 4-18.
2. Install accessory storage case cover; refer to volume 1, para. 4-18.

TASK 11 ENDS HERE



TASK 12. Install Fan and Rear Fan Guard .

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 1
Wrench, combination, 1/4-inch

Special Tools: None

Supplies:

Lockwasher (96906) MS35338 137 (four required)

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedure:

Remove fan and rear fan guard; refer to task 2.

FRAME 15

Install Fan and Guard:

CAUTION

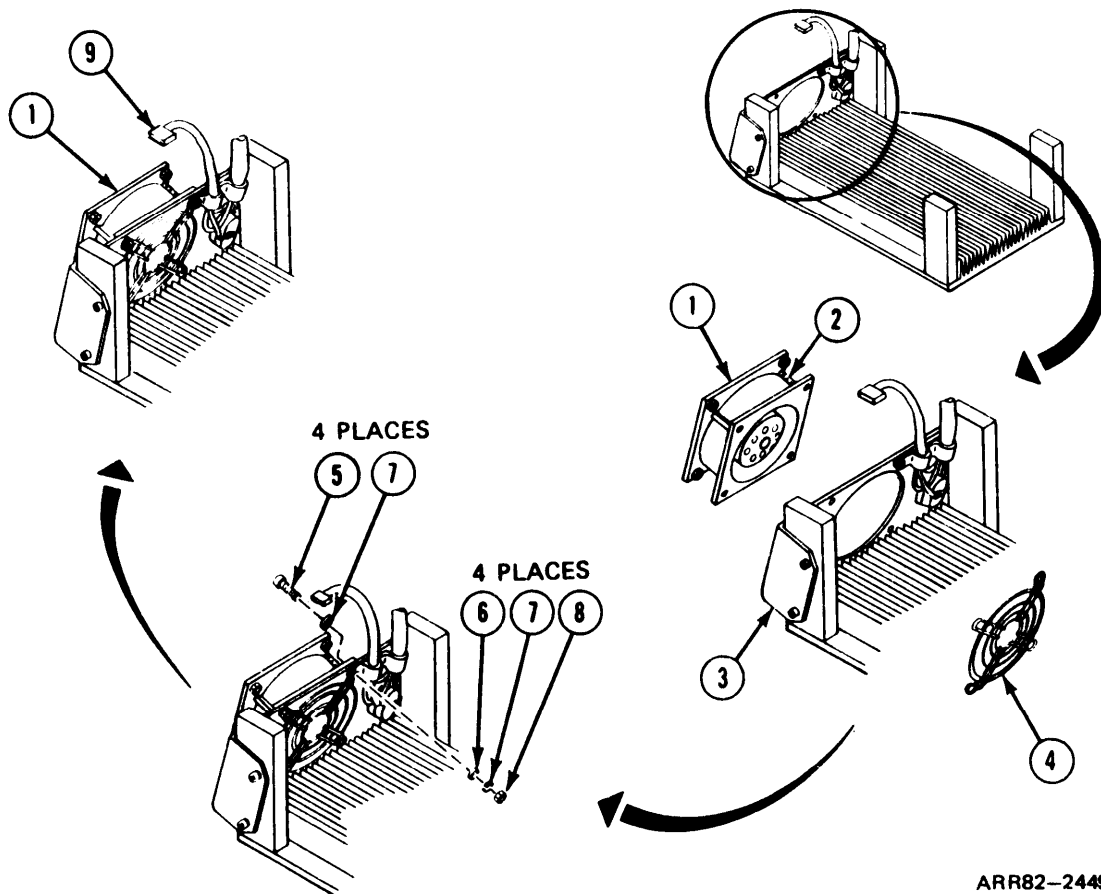
Damage to PCU components could result if tubeaxial fan (1) is in-stalled backwards. Make sure arrow (2) on fan (1) is pointing to bracket (3).

1. Line up holes in fan (1) and rear fan guard (4) with holes in bracket (3).
2. Screw in and tighten four machine screws (5), four new lockwashers (6), eight flat washers (7), and four plain hexagon nuts (8) with screwdriver and wrench.
3. Put plug (9) on fan (1).

Follow-on Maintenance:

1. Install PCU holding fixture in accessory storage assembly; refer to volume 1, para. 4-18.
2. Install accessory storage assembly cover; refer to volume 1, para. 4-18.

TASK 12 ENDS HERE



ARR82-24497

TASK 13. Install Front Fan Guard.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2
Wrench, combination, 5/16-inch

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-137 (four required)

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedure:

Remove front fan guard; refer to task 1.

FRAME 16

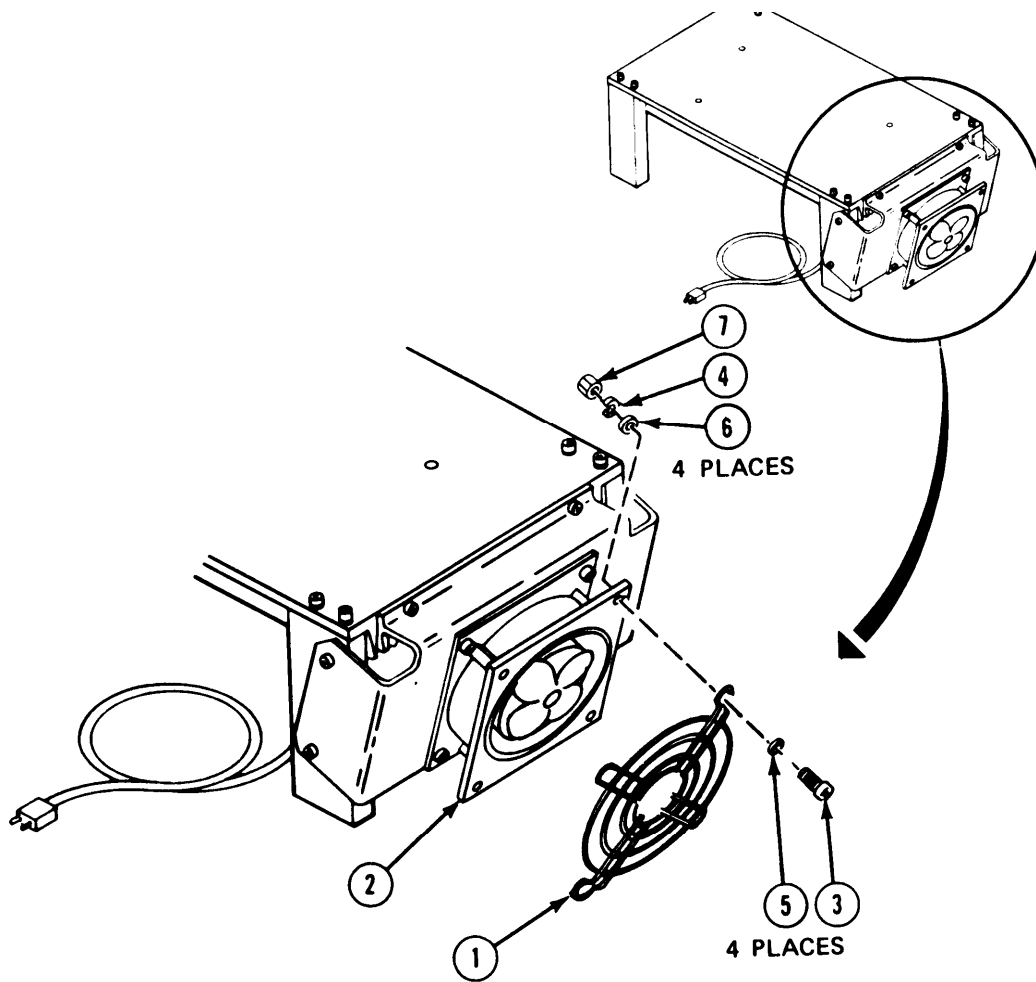
Install Guard:

1. Line up holes in front fan guard (1) with holes in tubeaxial fan (2).
2. Screw in and tighten four machine screws (3), new lockwashers (4), flat washers (5), washers (6) and plain hexagon nuts (7) with screwdriver and wrench.

Follow-on Maintenance:

1. install PCU holding fixture in accessory storage assembly; refer to volume 1, para. 4-18.
2. install accessory storage assembly cover; refer to volume 1, para. 4-18.

END OF PCU HOLDING FIXTURE MAINTENANCE



ARR82-24498

3-8. LED Viewer Assembly.

Task	Title	Frames
1	Replace LED Viewer Assembly Eyepiece	1
2	Replace Housing Mount	2

TASK 1. Replace LED Viewer Assembly Eyepiece.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 1

Special Tools: None

Supplies:

Eyepiece assembly (80063) SM-D-805180
 Lockwasher (96906) MS35338-136B (four required)

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove LED viewer assembly from accessory storage assembly; refer to volume 1, para. 4-17.

FRAME 1

Remove Eyepiece Assembly:

1. Unscrew and take out four machine screws (1), lockwashers (2), and flat washers (3) with screwdriver. Get rid of lockwashers (2).
2. Take eyepiece assembly (4) off of LED viewer telescope assembly (5). Turn in eyepiece (4).

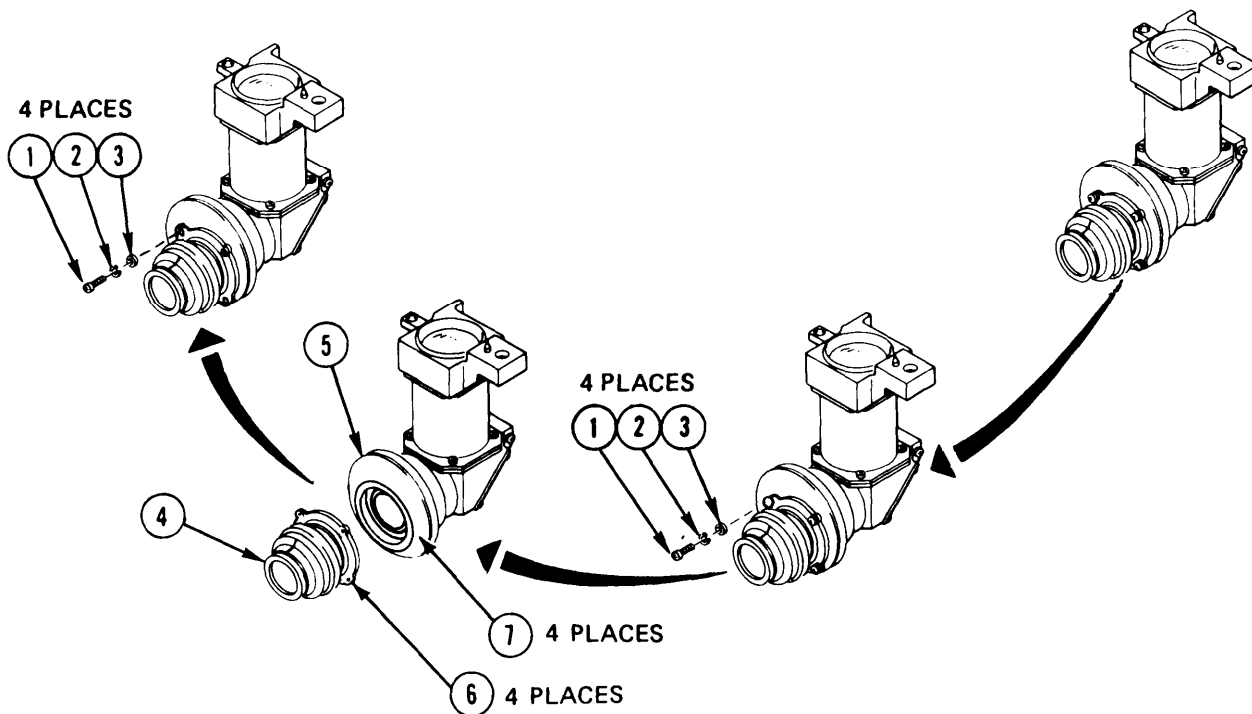
Install Eyepiece:

3. Line up holes (6) in new eyepiece assembly (4) with holes (7) in LED viewer assembly (5).
4. Screw in and tighten four screws (1), new lockwashers (2), and washers (3) with screwdriver.

Follow-on Maintenance:

1. Install LED viewer assembly in accessory storage assembly; refer to volume 1, para. 4-18.
2. install accessory storage assembly cover; refer to volume 1, para. 4-18.

TASK 1 ENDS HERE



ARR82-24499

TASK 2. Replace Housing Mount.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 1
Wrench, combination, 5/8-inch

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-136B (four required)
Lockwasher (96906) MS35338-142 (one required)
Mount, housing (80063) SM-D-805840

Personnel: One

Equipment Conditional:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove LED viewer assembly from accessory storage assembly; refer to volume 1, para. 4-17.

FRAME 2

Remove Mount:

1. Unscrew and take out four machine screws (1), lockwashers (2), and flat washers (3) with screwdriver. Get rid of lockwashers (2).
2. Lift housing mount (4) off of LED viewer assembly (5).
3. Unscrew and take out from housing mount one machine screw (6), lockwasher (7), and flat washer (8) with wrench. Get rid of lockwasher (7). Turn in housing mount (4).

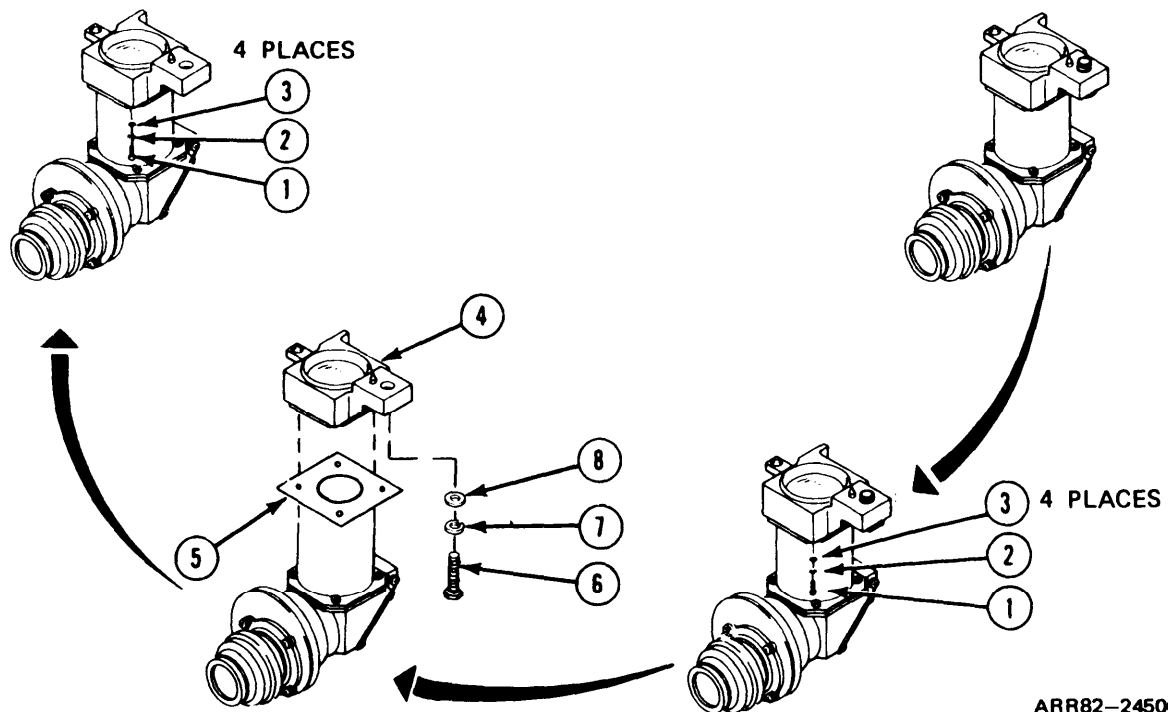
Install Housing Mount:

4. Screw in one screw (6), new lockwasher (7), and washer (8) in new housing mount (4) with wrench.
5. Lineup holes in new housing mount (4) with holes in LED viewer assembly (5).
6. Screw in and tighten four screws (1), new lockwashers (2), and washers (3) with screwdriver.

Follow-on Maintenance:

1. Install LED viewer assembly in accessory storage assembly; refer to volume 1, para. 4-18.
2. Install accessory storage assembly cover; refer to volume 1, para. 4-18.

END OF LED VIEWER ASSEMBLY MAINTENANCE



3-9. TRU Holding Plate Assembly.

Task	Title	Frames
1	Repair TRU Holding Plate Assembly	1

TASK 1. Repair TRU Holding Plate Assembly.

Applicability: None

Common Tools:

Wrench, combination, 5/8-inch

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-142 (4 required)

Personnel: One

Equipment Condition:

Accessory storage assembly on a clean work surface.

Preliminary Procedures:

1. Remove accessory storage assembly cover; refer to volume 1, para. 4-17.
2. Remove TRU holding plate assembly from accessory storage assembly; refer to volume 1, para. 4-17.

FRAME 1

Remove Plate:

1. Unscrew and take out four machine screws (1), lockwashers (2), and flat washers (3) with wrench. Get rid of lockwashers (2).
2. Look at screws (1) for stripped or damaged threads. If bad, turn in screws (1). If OK, set aside for later use.
3. Look at plate (4) for cracks, breaks, or broken mirror. If bad, turn in plate (4). If OK, set aside for later use.

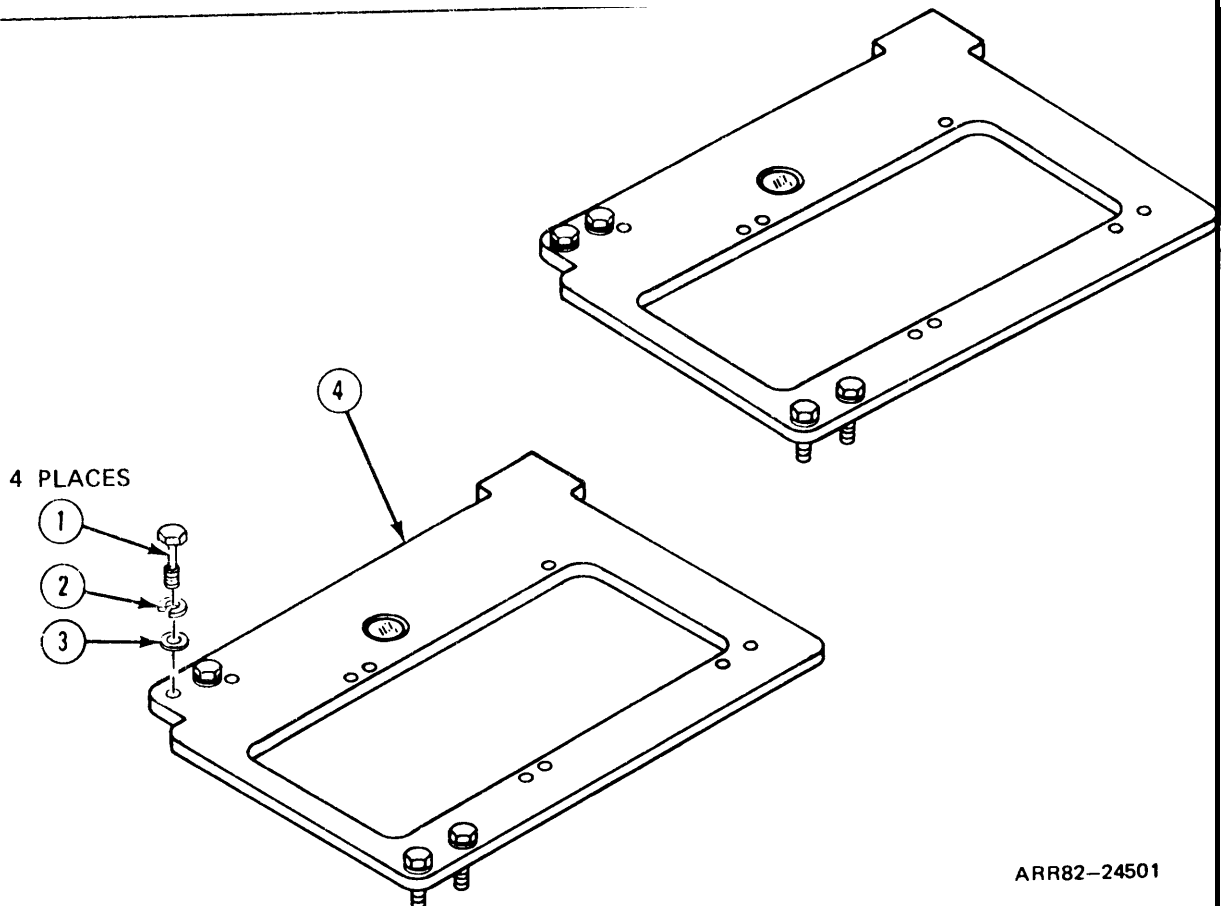
Install Plate:

4. Screw in and tighten four screws (1), new lockwashers (2), and washers (3) in plate (4) with wrench.

Follow-on Maintenance:

1. install TRU holding plate assembly in accessory storage assembly refer to volume 1, para. 4-18.
2. Install accessory storage assembly cover; refer to volume 1, para. 4-18.

END OF TRU HOLDING PLATE ASSEMBLY MAINTENANCE



CHAPTER 4 HOLDING FIXTURES

4-1. General. This chapter contains job tasks that tell you how to repair the holding fixtures. The job tasks tell you how to remove and install components and assemblies of the holding fixtures. Defective components and assemblies removed from the holding fixtures are not covered in this manual for repair at this maintenance level. These defective items are turned in for repair. Repair of the holding fixtures at this maintenance level is done by replacing any bad components or assemblies with good components or assemblies.

4-2. Equipment Items Covered. Table 4-1 lists the equipment items covered in this chapter. The assemblies making up the holding fixtures are listed along with the section and page number where they are found in this chapter.

Table 4-1. Equipment Items Covered

Paragraph	Title	Page
4-5	Holding Fixture Assembly	4-5
4-6	Command Holding Fixture Assembly	4-29

4-3. Equipment Items Not Covered. None.

4-4. General Maintenance Instructions. The following maintenance practices must be followed any time you are working on the test set.

NOTE

Electrical connector repair maintenance kit 12285360 contains instructions and tools needed for repair and replacement of connectors, receptacles, contacts, and wires.

a. Soldering Techniques. Solder connections must be bright clean before soldering. Remove dirt and grease from connections with freon (Item 13, appendix C) and acid swabbing brush (Item 8, appendix C). Solder (Item 29, appendix C) must be non-acid type. Rosin flux (Item 25, appendix C) should be used. All wires, parts, and solder iron must be pre-tinned for good connection and maximum transfer of heat. Clean all solder joints with acid swabbing brush and isopropyl alcohol (Item 17, appendix C) after soldering to obtain a clean, bright surface.

b. Crimping Wires. Cut off and get rid of broken, bent, or discolored contacts with pliers. Strip insulation from wires with a thermal wire stripper.

NOTE

Color bands on contacts indicate size of wire; for example, contacts with green color bands for 22-26 gauge wire. Contacts with red color bands are for 20-24 gauge wire.

Put contact into crimping tool with color band toward rear. Put bare wire into contact and squeeze crimping tool. Takeout crimped contact from tool and check crimp by looking through inspection hole. You must be able to see end of bare wire.

c. Tagging Electrical Wires. Look at component or part to see if wiring or component has numbers or letters. Write numbers or letters on tag (Item 34, appendix C) with (Item 19, appendix C) pencil. Fasten tag on wire. Remove tags after parts or wires are installed. If you cannot tag a wire or component for some reason, write down the wire location and terminating point. After connecting wires without tags, check continuity of wire to make sure it is connected to the correct point.

d. Replacing Wires.

WARNING

Use solvent in a well ventilated area away from open flame. Solvent can burn easily and may give off harmful vapor.

Cut shrinkable sleeving from terminals of wire to be replaced. Unsolder wire or cut if crimped. When soldering or unsoldering wires, hold the bare wire near the soldering point with long round nose pliers. Pliers act as a heat sink preventing heat damage to electrical and electronic components. Cut new wire to desired length and slide new heat-shrinkable tubing over ends of wire. Push sleeving back and strip insulation off wire with thermal wire stripper. Solder or crimp wire to end terminal. Clean soldered joint with acid swabbing brush (Item 8, appendix C) and solvent cleaning compound (Item 30, appendix C). Slide sleeving over connection. Using thermal gun, shrink sleeving.

e. Installing Heat Shrinkable Sleeving. Heat-shrinkable sleeving should be twice the diameter of the part it will be shrunk over. Slide sleeving over wire and terminal. Hold thermal gun 4 to 5 inches away from sleeving and apply heat for 30 seconds. Take thermal gun away as soon as sleeving forms to shape of wire and terminal. Let sleeving cool 30 seconds before handling.

f. Replacing Diodes (semiconductors), Relays, Potentiometers, Switches, Circuit Breakers, Wires, and Capacitors.

WARNING

Capacitors may hold high voltage that can cause injury. Before removing capacitors, short them to ground.

CAUTION

Use low-wattage soldering iron when replacing components or parts on printed circuit boards or connectors. Printed circuits or connectors can be damaged if high-wattage soldering iron is used.

When replacing diodes, coat mica washers and mount with silicone compound (Item 27, appendix C). Put one washer on threaded end of diode before inserting diode in mounting hole. When replacing potentiometers, switches, and circuit breakers, be sure keyways, washers, and tabs are lined up in mounting holes before tightening hardware. When soldering capacitors, relays, circuit breakers, wires, and diodes hold terminal lugs and leads with long round nose pliers to keep parts from overheating.

g. Removing and Installing Connectors.. If connectors cannot be removed by hand, use slip joint conduit style pliers with plastic jaw inserts to loosen them. Finish removal by hand. Straighten any bent pins with long round nose pliers. When installing connectors on larger harnesses, another soldier may be needed to help align the mating ends of the cable. Make sure that pins and keyways lineup. Tighten twist-snap-type connectors until a click is heard and tighten screw-on-type until the ratchet noise is no longer heard to indicate that connectors are tight.

h. Replacing Connectors. Cut boot from adapter with knife. If lacing is installed, remove lacing from radio frequency adapter. Unscrew adapter and slide back over cable. Unsolder wires from connector contacts. If wires are crimp type, remove contacts and wires from connector with insert-extract tool. Slide new boot and adapter over cable. Solder wires to connector. If wires are crimp type, crimp wires to contacts and insert them in connector using insert-extract tool. Screw on adapter. Lace shielding of radio frequency adapter to cable in three places if required. Slip boot over adapter and shrink with thermal gun.

i. Repairing Connectors and Modules . Hold connector with back end toward you. Slide extract end of insert-extract tool over wire of contact to be taken out. Slide tool along wire and into hole until it engages contact, and a slight pressure is felt; the contact is now unlocked. Pull contact and wire out of connector. Cutoff bad contacts. Strip insulation from wire with thermal stripper and place new contact in crimping tool. Put bare wire in contact and crimp it. Look through inspection hole of contact for end of bare wire. You must be able to see bare wire in contact. If you do not see bare wire, remove wire and crimp it again. Hold colored end of insertion tool toward connector. Lay wire along slot in tool. Leave at least 1/2-inch of wire sticking out of end of tool. Pull wire back through tool until crimped shoulder seats against tip of tool. Push contact into connector until it stops. Contact is now locked in connector. Put sealing plugs in all empty contact holes in connector. Tighten retaining nut with slip joint conduit style pliers with plastic inserts. To remove modules, slide points of extract tool into indents of module and push tool until clips unlock. Hold extract tool tight and pull module out. To install new module, push module into rail assembly until a firm snap is felt and a click is heard. Look into inspection hole to be sure clip is in place.

j. Cleaning Electrical Components.

WARNING

Use solvent in a well-ventilated area away from open flame. Solvent can burn easily and may give off harmful vapors.

Clean dirt, grease, dust, and old compounds off cable harnesses, parts, connectors, and receptacles by dipping them into a container filled with solvent cleaning compound (item 30, appendix C). Shake parts insolvent or wipe them clean with a lint-free cloth (Item 9, appendix C). Clean dirt, grease, and dust off recessed areas with acid swabbing brush (item 8, appendix C) or lint-free cloth. Dry components/parts, connectors, and receptacles completely with low-pressure, dry compressed air, or with a clean, lint-free cloth.

k. Cleaning Threaded Holes. Threaded holes in metal must be thoroughly clean when sealing compounds are used to lock screws in place. Take off old sealing compound from threads with tap and tap wrench. Blow loose particles out of holes with compressed air, then clean threads with solvent cleaning compound (Item 30, appendix C) and acid swabbing brush (Item 8, appendix C). Let holes dry before putting unscrews.

l. Replacing Inserts.

WARNING

Primers can burn easily and can give off harmful vapors. To avoid injury, keep away from open fire and use in well-ventilated area.

Take out insert with insert extractor and get rid of insert. Clean area thoroughly, blow loose particles out of hole with compressed air. After cleaning, all parts shall be completely dry and free of corrosion products, scale, paint, grease, oil, flux, and other foreign materials. Coat outside of new insert with unthinned primer (Item 23, appendix C). While primer is wet screw insert in housing with insert tool. Unscrew and take out insert tool. If insert is in a blind hole, break off tang from insert with tang break-off tool and get rid of tang. When primer has dried thoroughly, coat any exposed surfaces with chemical film (Item 12, appendix C).

4-5. Holding Fixture Assembly.

Task	Title	Frames
1	Remove Pin, Revolving Plate, and Spindle Assembly	1
2	Remove Stationary Plate	2
3	Remove Elevation Adjustment Assembly	3
4	Remove Elevating Plunger	4
5	Repair Elevating Plunger	5
6	Repair Elevation Adjustment Assembly	6 - 7
7	Replace Base Plate	8 - 9
8	Install Elevating Plunger	10
9	Install Elevation Adjustment Assembly	11
10	Install Stationary Plate	12
11	Install Pin, Revolving Plate, and Spindle Assembly	13

TASK 1. Remove Pin, Revolving Plate, and Spindle Assembly.

Applicability: All Models

Common Tools:

Key, hex, 3/16-inch

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Holding fixture assembly on a clean work surface.

Preliminary Procedures: None

FRAME 1

Remove Pin, Plate, and Assembly:

NOTE

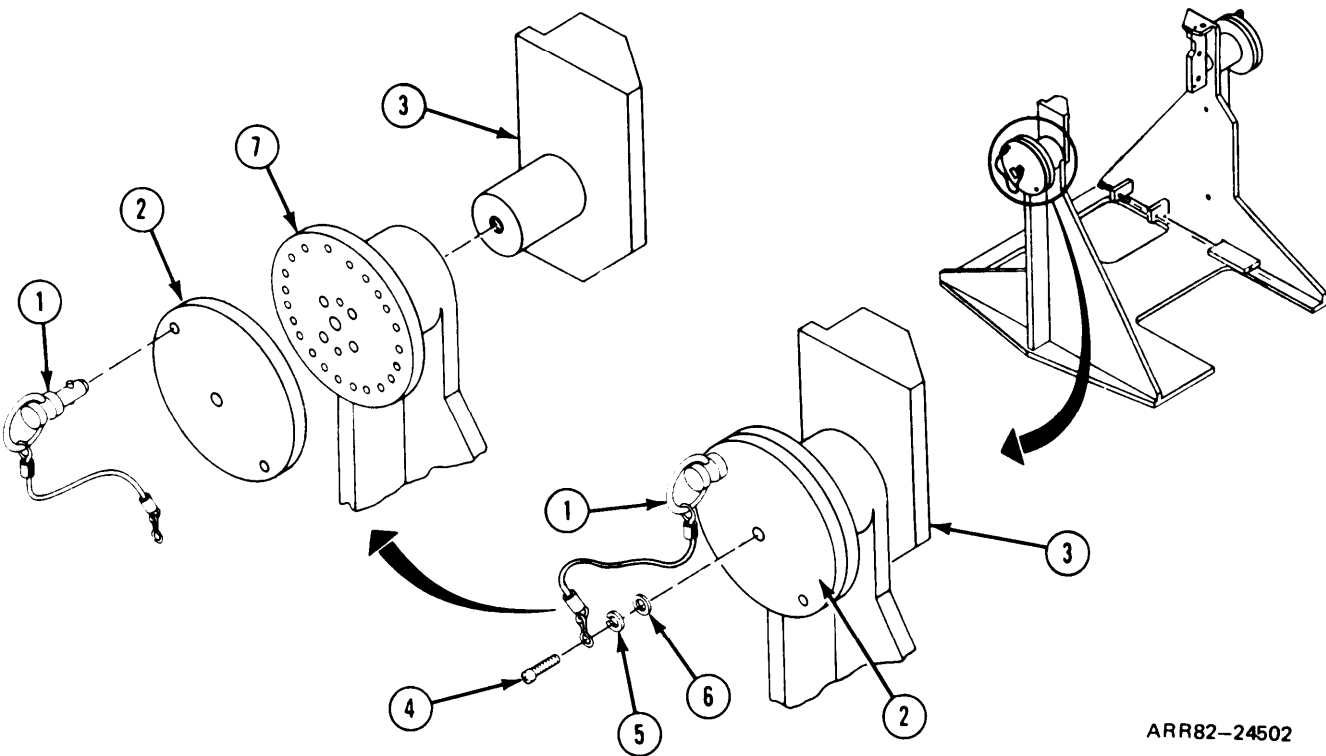
Use this task to remove either of two pins (1), revolving plates (2), or spindle assemblies (3). Only one pin (1), revolving plate (2), and spindle assembly (3) are shown.

1. Unscrew and take out cap socket screw (4), lockwasher (5), and flat washer (6) from pin(1) with key. Get rid of lockwasher (5).
2. Pull out pin (1) and lift revolving plate (2) off of riser assembly (7). Pull spindle assembly (3) out of riser assembly (7).
3. Look at pin (1), revolving plate (2), and spindle assembly (3) for cracks and bends. If bad, turn in pin (1), revolving plate (2), or spindle assembly (3). If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install pin, revolving plate, and spindle assembly, refer to task 11.

TASK 1 ENDS HERE



ARR82-24502

TASK 2. Remove Stationary Plate.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Holding fixture assembly on a clean work surface.

Preliminary Procedure:

Remove pin, revolving plate, and spindle assembly; refer to task 1.

FRAME 2

Remove Plate:

NOTE

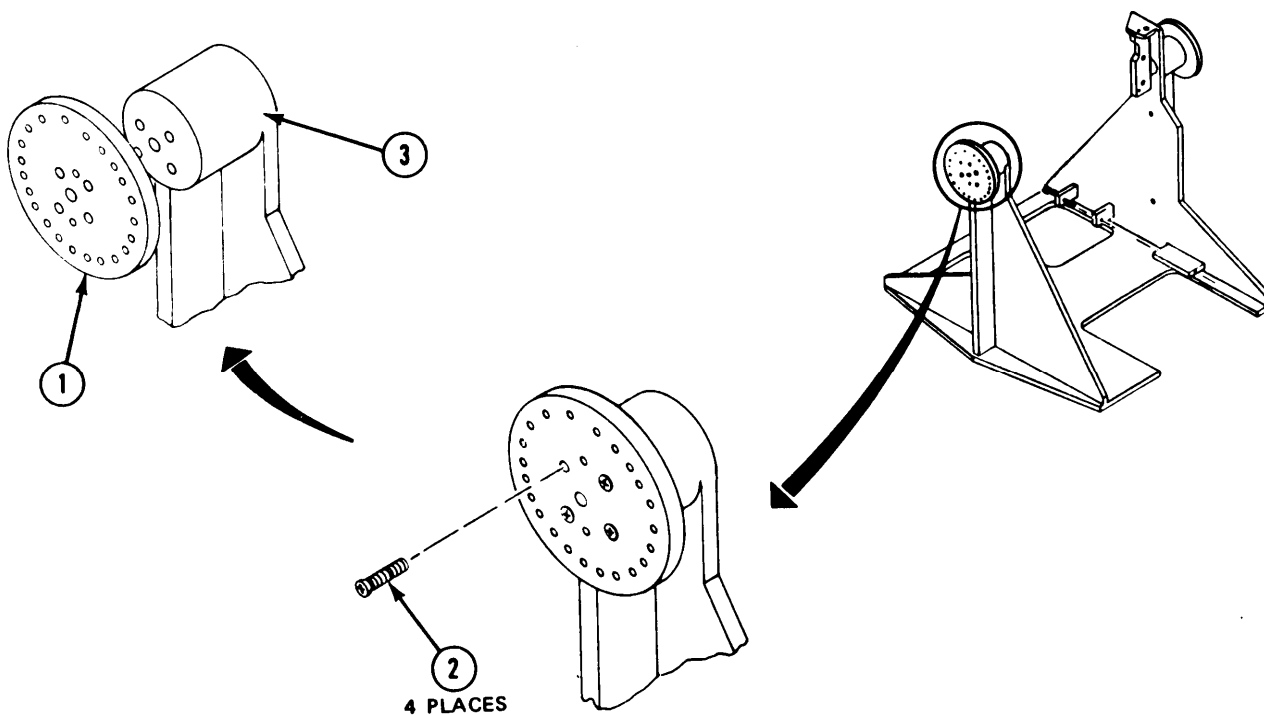
Use this task to remove either of two stationary plates (1).
Only one stationary plate (1) is shown.

1. Unscrew and take out four machine screws (2) with screwdriver. Set screws (2) aside for later use.
2. Take stationary plate (1) off of riser assembly (3). Look at stationary plate (1) for cracks or breaks. If bad, turn in. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install stationary plate, refer to task 10.

TASK 2 ENDS HERE



ARR82-24503

TASK 3. Remove Elevation Adjustment Assembly.

Applicability: All Models

Common Tools:

Screwdriver, flat tip

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Holding fixture assembly on a clean working surface.

Preliminary Procedures: None

FRAME 3

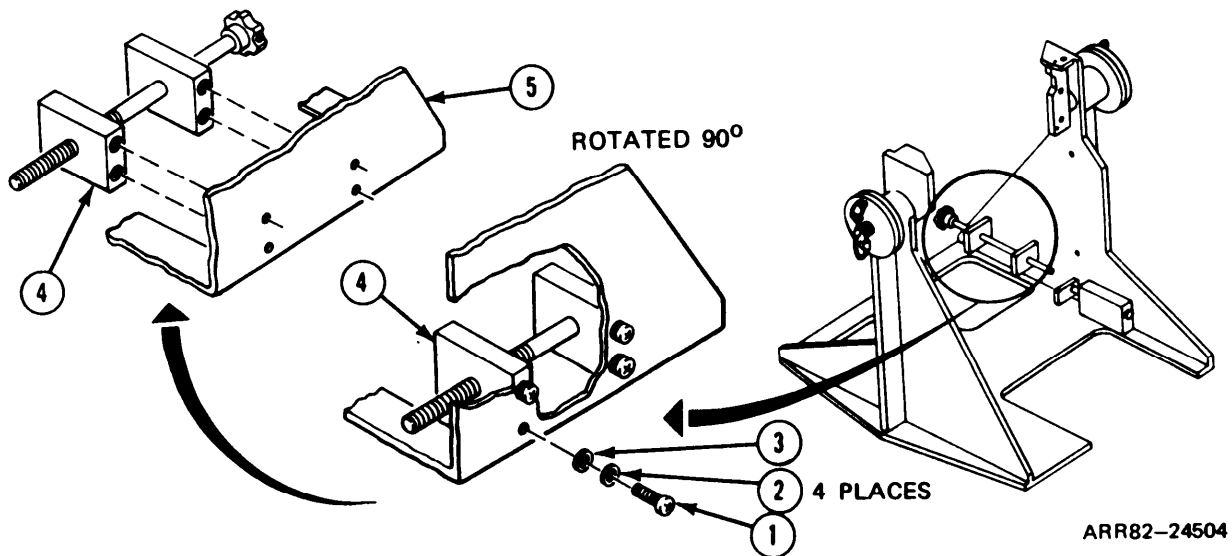
Remove Adjustment Assembly:

1. Unscrew and take out four machine screws (1), lockwashers (2), and flat washers (3) from elevation adjustment assembly (4) with screwdriver. Get rid of lockwashers (2).
2. Lift elevation adjustment assembly (4) off of riser assembly (5) and set aside for later use.

Follow-on Maintenance:

NOTE: To install elevation adjustment assembly, refer to task 9.

TASK 3 ENDS HERE



TASK 4. Remove Elevating Plunger.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Holding fixture assembly on a clean work surface.

Preliminary Procedures: None

FRAME 4

Remove Plunger:

NOTE

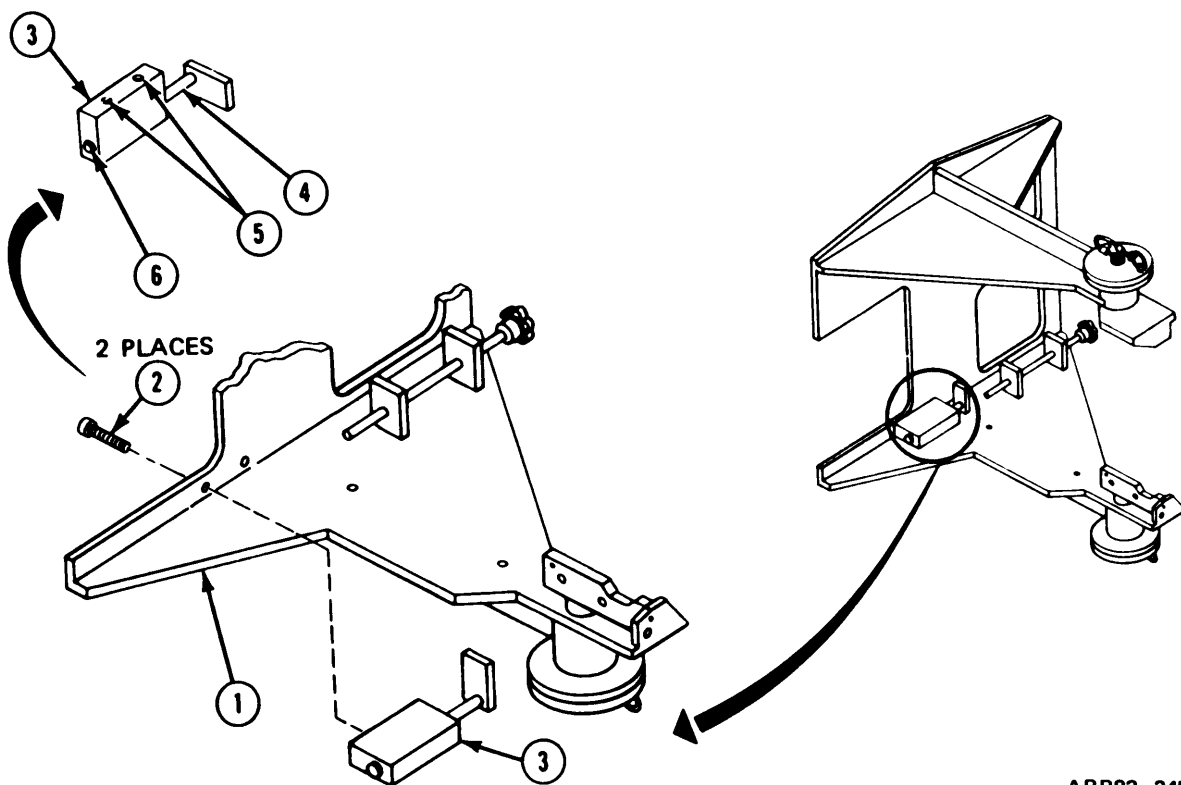
Read paragraph 4-4 on replacing inserts before doing any work.

1. Rotate holding fixture assembly (1) on its side so that machine screws (2) can be reached.
2. Unscrew and take out two screws (2) from elevating plunger (3) with screwdriver.
3. Lift elevating plunger (3) off of holding fixture (1).
4. Look at elevating plunger (3) for bent plunger (4), bad screw thread inserts (5), and damaged guide (6). Replace bad insert (5). If plunger (4) or guide (6) is bad, go to task 5. If OK, set aside for later use.

Follow-on Maintenance:

NOTE: To install elevating plunger assembly, refer to task 8.

TASK 4 ENDS HERE



ARR82-24505

TASK 5. Repair Elevating Plunger.

Applicability: All Models

Common Tools:

Key, hex, 1/4 inch

Special Tools: None

Supplies:

Guide (54490) 5002736 (if required)

Plunger (54490) 5002737 (if required)

Setscrew (96906) MS51031-147 (if required)

Spring, helical (54490) 5002719- 1 (if required)

Personnel: One

Equipment Condition:

Holding fixture assembly on a clean work surface.

Preliminary Procedure

Remove elevating plunger; refer to task 4.

FRAME 5

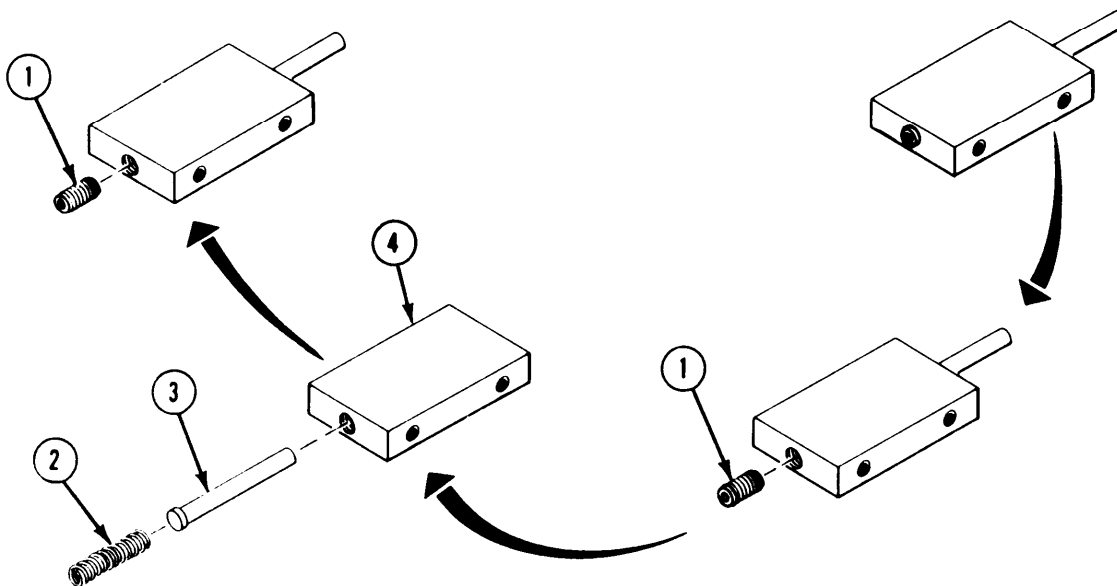
Repair Plunger:

1. Unscrew and takeout setscrew (1) with key. Look at setscrew (1) for stripped threads or damage. If bad, turn in setscrew (1). If OK, set aside for later use.
2. Take spring (2) and plunger(3) out of hole in guide (4). plunger (3) is bad turn in. If OK, set aside for later use. If guide (4) is bad, turn in. If OK, set aside for later use.
3. Look at spring (2) for bends. If spring (2) is bad, turn in. If O.K, set aside for later use.
4. Put plunger (3) and spring (2) in guide (4).
5. Screw in and tighten setscrew (1) with key.

Follow-on Maintenance:

NOTE: To install elevating plunger, refer to task 8.

TASK 5 ENDS HERE



ARR82-24506

TASK 6. Repair Elevation Adjustment Assembly.

Applicability: All Models

Common Tools:

Key, hex, 5/64-inch
Screwdriver, jeweler's

Special Tools: None

Supplies:

Insert, screw thread (96906) MS 124735
Insert, screw thread (96906) MS 12212 I

Personnel: One

Equipment Condition:

Holding fixture assembly on a clean work surface

Preliminary Procedure:

Remove elevation adjustment assembly; refer to task 3 .

FRAME 6

Repair Elevation Adjustment Assembly:

NOTE

Read paragraph 4-4 on replacing inserts before doing any work.

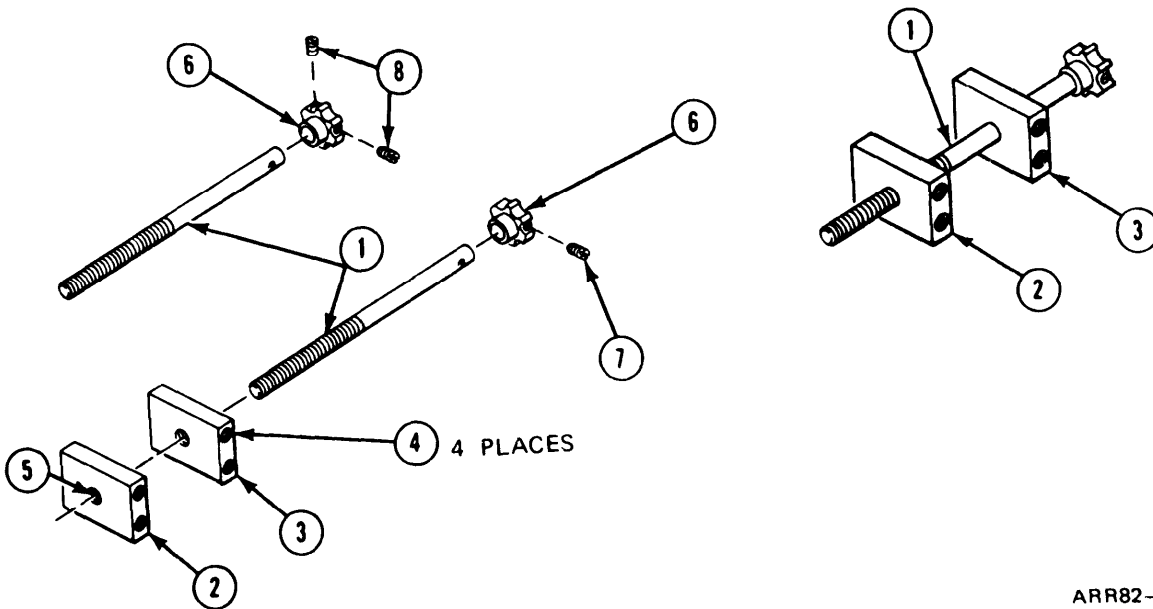
1. Unscrew shaft (1) from block (2). Slide block (3) off shaft (1). Look at blocks (2, 3) for cracks or breaks. If bad, turn in blocks (2,3).
2. Look at two mounting blocks (2,3) for bad inserts (4) or insert (5). If bad, replace inserts (4,5). If OK, set blocks (2,3) aside for later use.
3. Look at shaft (1) for stripped threads, loose or broken knob (6). If bad, read note. If OK, GO TO FRAME 7.

NOTE

If knob (6) has only one setscrew (7) do step 4 and GO TO FRAME 7. If knob (6) has two setscrews (8) do step 5 and GO TO FRAME 7.

4. Unscrew and take out setscrew (7) with screwdriver. Take knob (6) off shaft (1). Set good parts aside for later use. Turn in bad parts.
5. Unscrew and take out two setscrews (8) with key. Take knob (6) off shaft (1). Set good parts aside for later use. Turn in bad parts.

GO TO FRAME 7



ARR82-24507

FRAME 7

Repair Elevation Adjustment Assembly (Continued):

NOTE

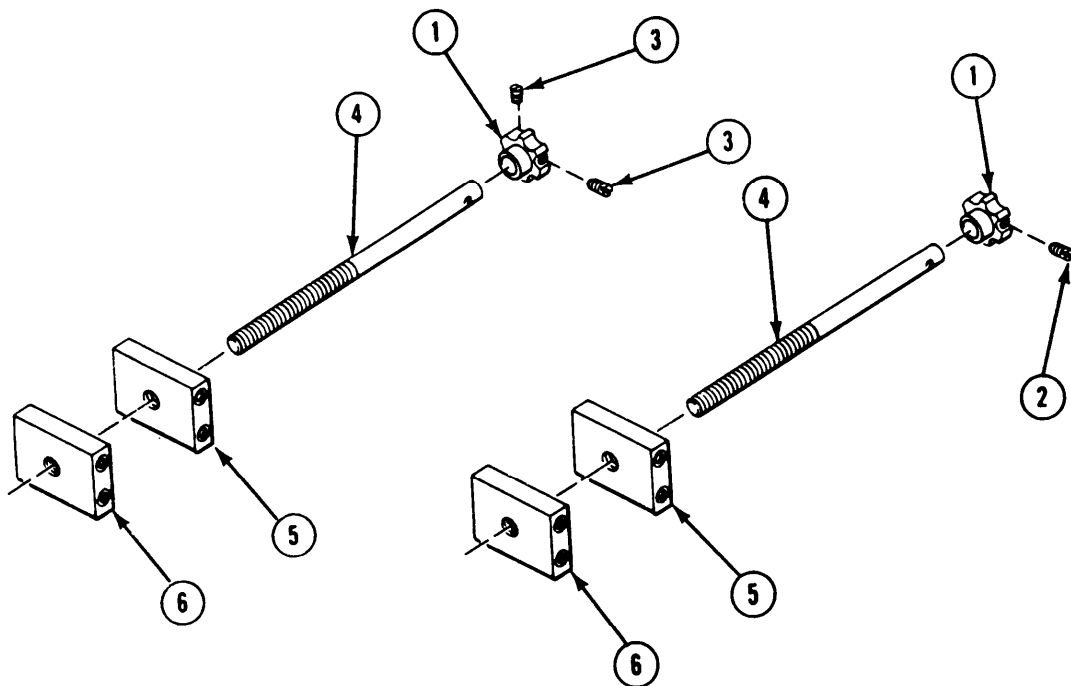
Do steps 1 and 2 for installing knob (1) with one set screw (2). Do steps 3 and 4 for installing knob (1) with two set screws (3).

1. Put knob (1) on shaft (4). Screw in and tighten screw (2) with screwdriver.
2. Slide shaft (4) through block (5) and screw into block (6). Go to follow-on maintenance.
3. Put knob (1) on shaft (4). Screw in and tighten two screws (3) with key.
4. Slide shaft (4) through block (5) and screw into block (6).

Follow-on Maintenance:

NOTE: To install elevation adjustment assembly, refer to task 9.

TASK 6 ENDS HERE



ARR82-24508

TASK 7. Replace Base Plate.

Applicability: All Models

Common Tools:

Key, hex, 5/32-inch

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-138B (12 required)

Plate, base (80063) SM-D-805808

Personnel: One

Equipment Condition:

Holding fixture assembly on a clean work surface.

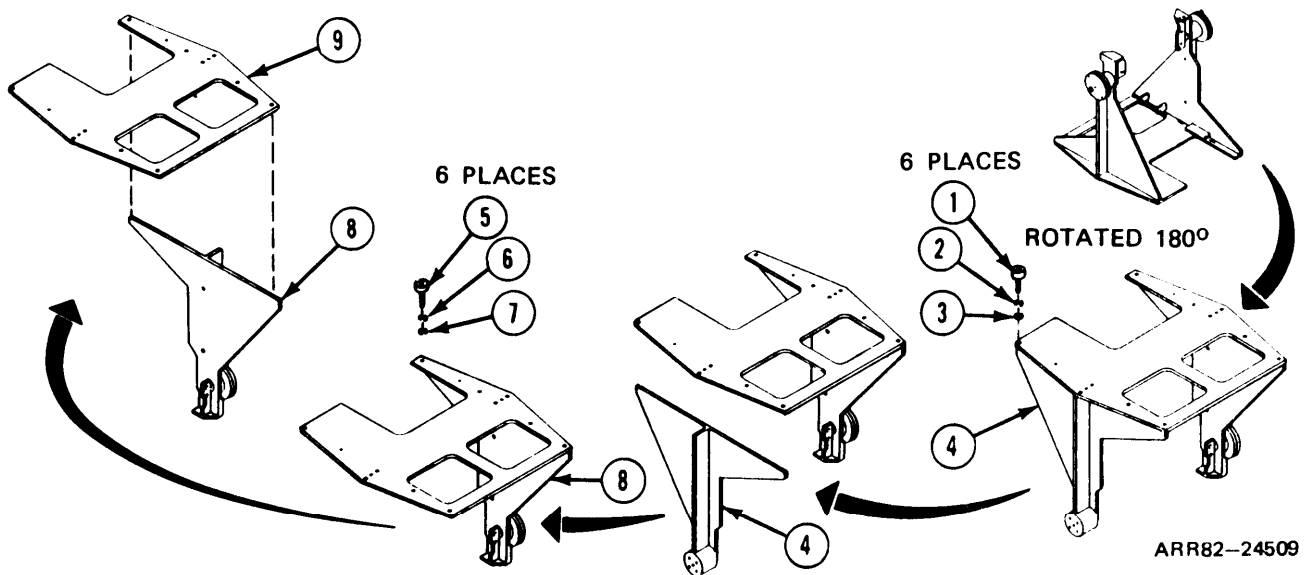
Preliminary Procedure: None

FRAME 8

Remove Riser Assemblies:

1. Unscrew and take out six cap socket screws (1), lockwashers (2), and flat washers (3) from riser assembly (4) with key. Get rid of lockwashers (2).
2. Look at riser assembly (4) for cracks and bends. If bad, do tasks 1 through 4 and turn in riser assembly (4). If OK, set aside for later use.
3. Unscrew and takeout six screws (5), lockwashers (6), and washers (7) from riser assembly (8) With key. Get rid of lockwashers (6).
4. Look at riser assembly (8) for cracks and bends. If bad, do tasks 1 through 4 and turn in riser assembly (8). If OK, set aside for later use.
5. Turn in base plate (9).

GO TO FRAME 9



FRAME 9

Install Riser Assemblies:

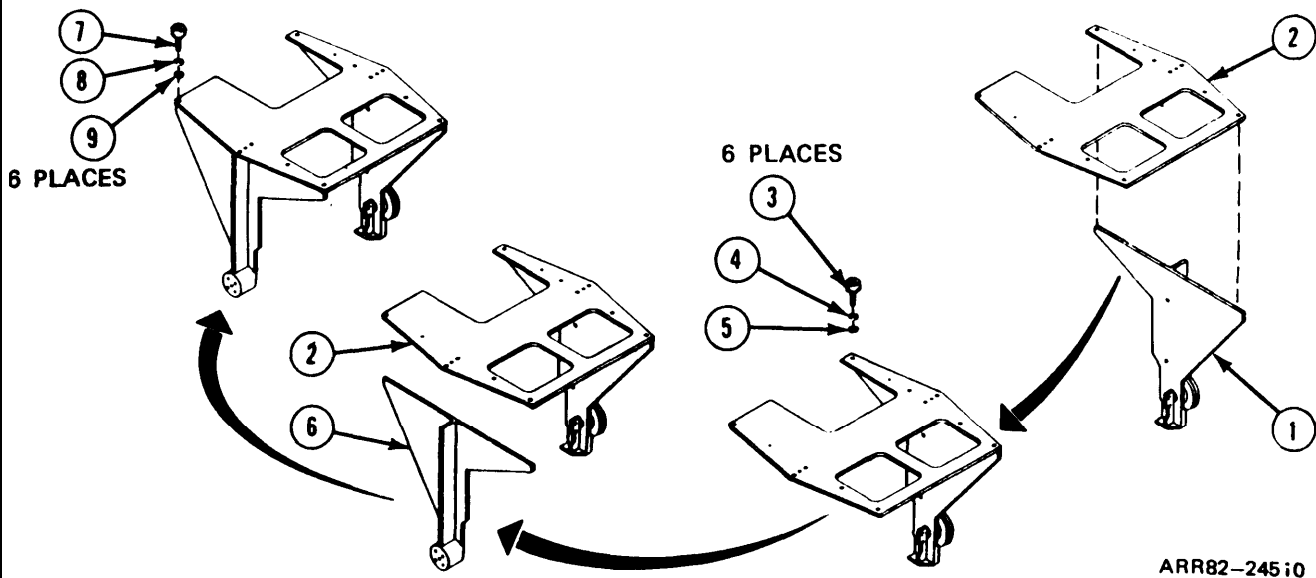
1. Line up holes in riser assembly (1) with holes in new base plate (2).
2. Screw in and tighten six screws (3), new lockwashers (4), and washers (5) with key.
3. Lineup holes in riser assembly (6) with holes in new base plate (2).
4. Screw in and tighten six screws (7), new lockwashers (8), and washers (9) with key.

NOTE

If tasks 1 through 4 were used to complete frame 8, do tasks 8 through 11.

Follow-on Maintenance: None

TASK 7 ENDS HERE



TASK 8. Install Elevating Plunger.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies: None

Personnel: One

Equipment Condition:

Holding fixture assembly on a clean work surface.

Preliminary Procedure:

Remove elevating plunger; refer to task 4.

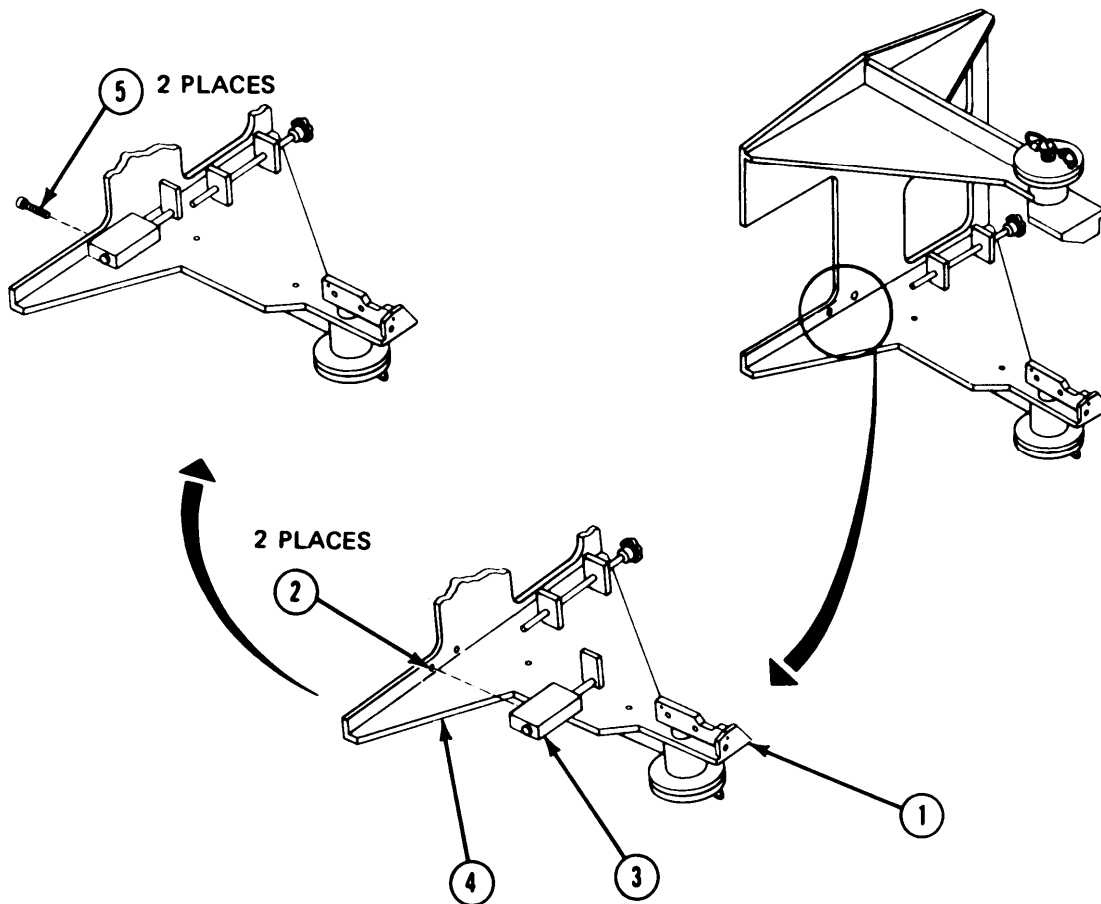
FRAME 10

Install Plunger:

1. Rotate holding fixture assembly (1) on its side to obtain access to holes (2).
2. Line up holes in elevating plunger guide (3) with holes in riser assembly (4).
3. Screw in and tighten two machine screws (5) in elevating plunger guide (3) with screwdriver.

Follow-on Maintenance: None

TASK 8 ENDS HERE



ARR82-24511

TASK 9. Install Elevation Adjustment Assembly.

Applicability: All Models

Common Tools:

Screwdriver, flat tip

Special Tools:

Lockwasher (96906) MS35338-138 (four required)

Supplies: None

Personnel: One

Equipment Condition:

Holding fixture assembly on a clean work surface.

Preliminary Procedure:

Remove elevation adjustment assembly; refer to task 3.

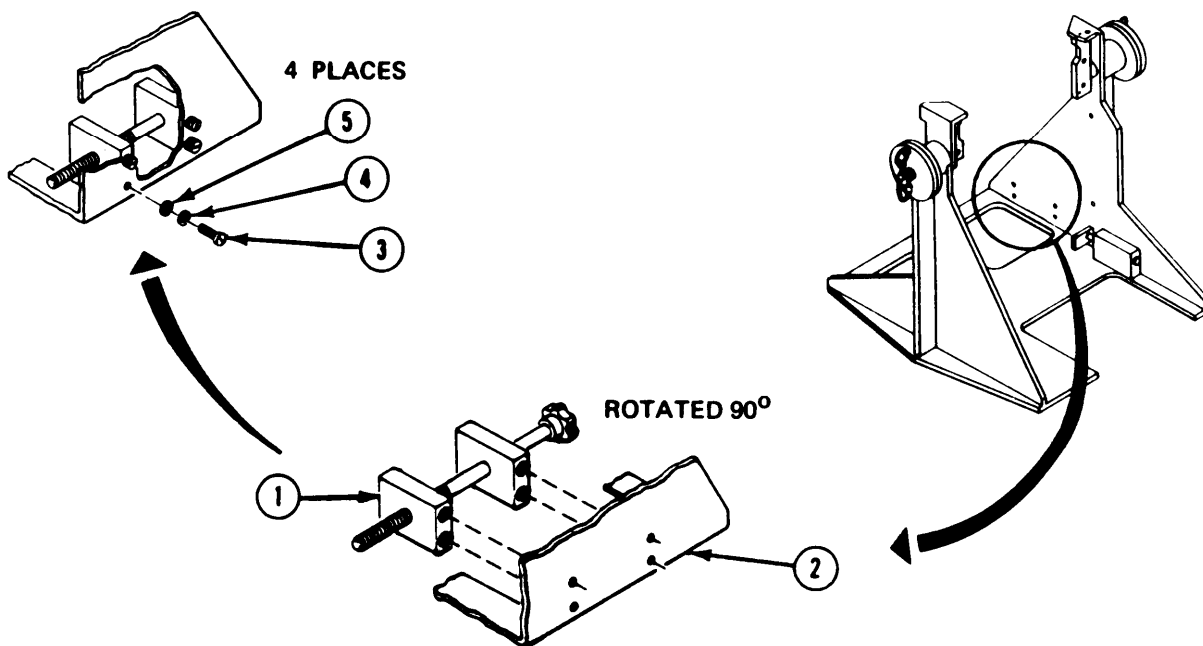
FRAME 11

Install Adjustment Assembly:

1. Line up holes in elevation adjustment assembly (1) with holes in riser assembly (2).
2. Screw in and tighten four machine screws (3), new lockwashers (4), and flat washers (5) with screwdriver.

Follow-on Maintenance: None

TASK 9 ENDS HERE



ARR82-24512

TASK 10. Install Stationary Plate.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

NOTE: Expendable supplies are defined in volume 1, appendix C.
Sealing compound (Item 26)

Personnel: One

Equipment Condition:

Holding fixture assembly on a clean work surface.

Preliminary Procedure:

Remove stationary plate; refer to task 2.

FRAME 12

Install Plate:

NOTE

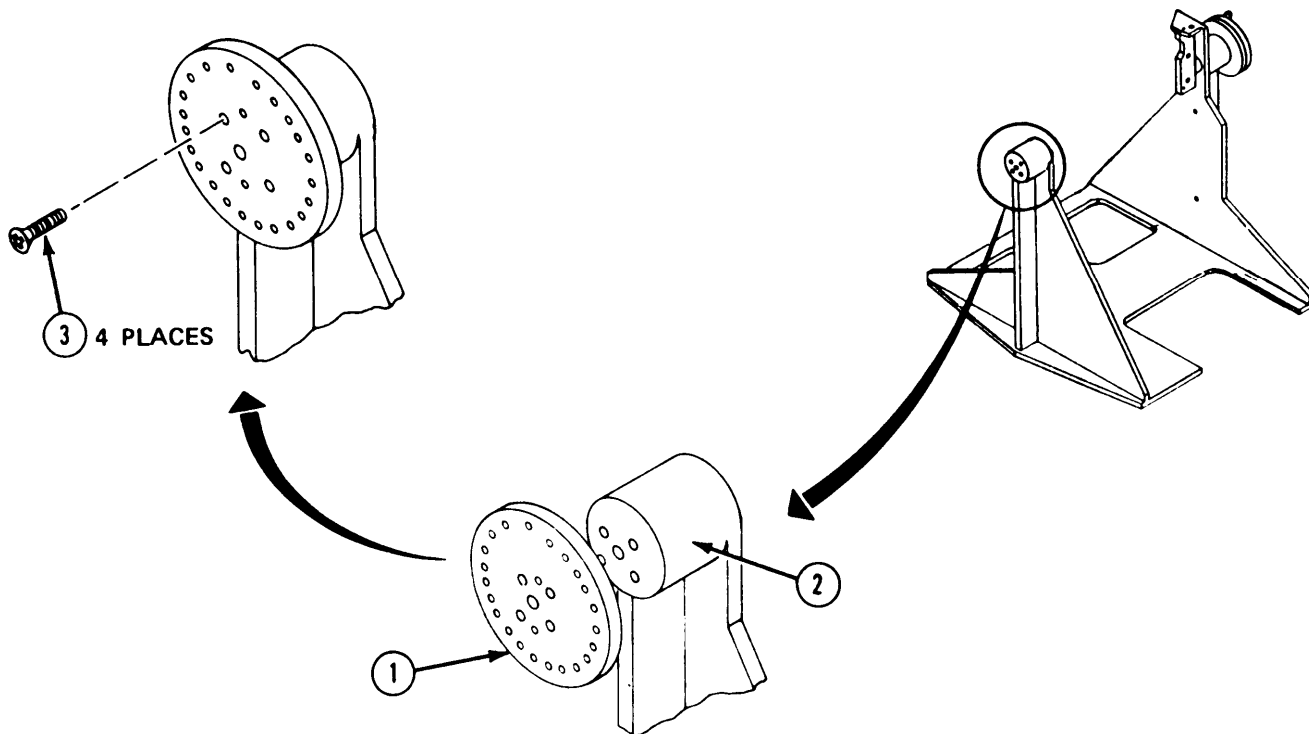
Use this task to install either of two stationary plates (1).
Only one stationary plate (1) is shown.

1. Line up holes in stationary plate (1) with holes in riser assembly (2).
2. Apply sealing compound to four machine screws (3) with screwdriver.
3. Screw in and tighten four screws (3) with screwdriver.

Follow-on Maintenance:

Install pin, revolving plate, and spindle assembly, refer to task 11.

TASK 10 ENDS HERE



ARR82-24513

TASK 11. Install Pin, Revolving Plate, and Spindle Assembly.

Applicability: All Models

Common Tools:

Key, hex, 3/16-inch

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-139B (as required)

Personnel: **One**

Equipment Condition:

Holding fixture assembly on a clean work surface.

Preliminary Procedure:

Remove pin, revolving plate, and spindle assembly; refer to task 1.

FRAME 13

Install Pin, Plate, and Assembly:

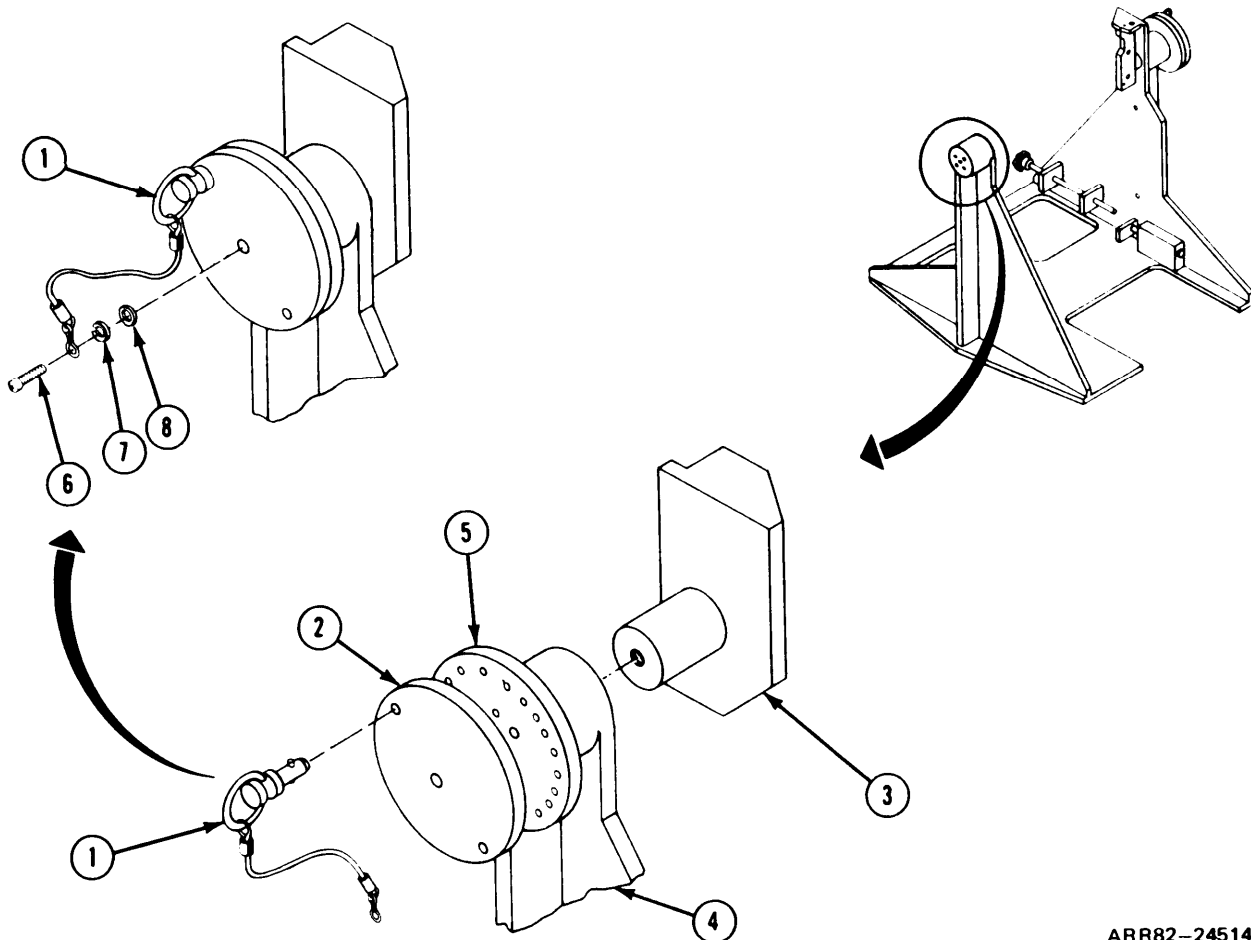
NOTE

Use this task to install either of two pins (1), revolving plates (2), or spindle assembly (3).

1. Put spindle assembly (3) through hole in riser assembly (4).
2. Line up hole in revolving plate (2) with hole in stationary plate (5) and put pin (1) in hole in revolving plate (2).
3. Put cap socket screw (6) through hole in pin (1) and screw in and tighten screw (6), new lockwasher (7), and flat washer (8) with key.

Follow-on Maintenance: None

END OF HOLDING FIXTURE ASSEMBLY MAINTENANCE



ARR82-24514

4-6. Command Holding Fixture Assembly.

Task	Title	Frames
1	Repair Command Holding Fixture Assembly	1 - 2

TASK 1. Repair Command Holding Fixture Assembly.

Applicability: All Models

Common Tools:

Screwdriver, cross tip, No. 2

Special Tools: None

Supplies:

Lockwasher (96906) MS35338-139 (four required)

Personnel: One

Equipment Condition:

Command holding fixture assembly on a clean work surface.

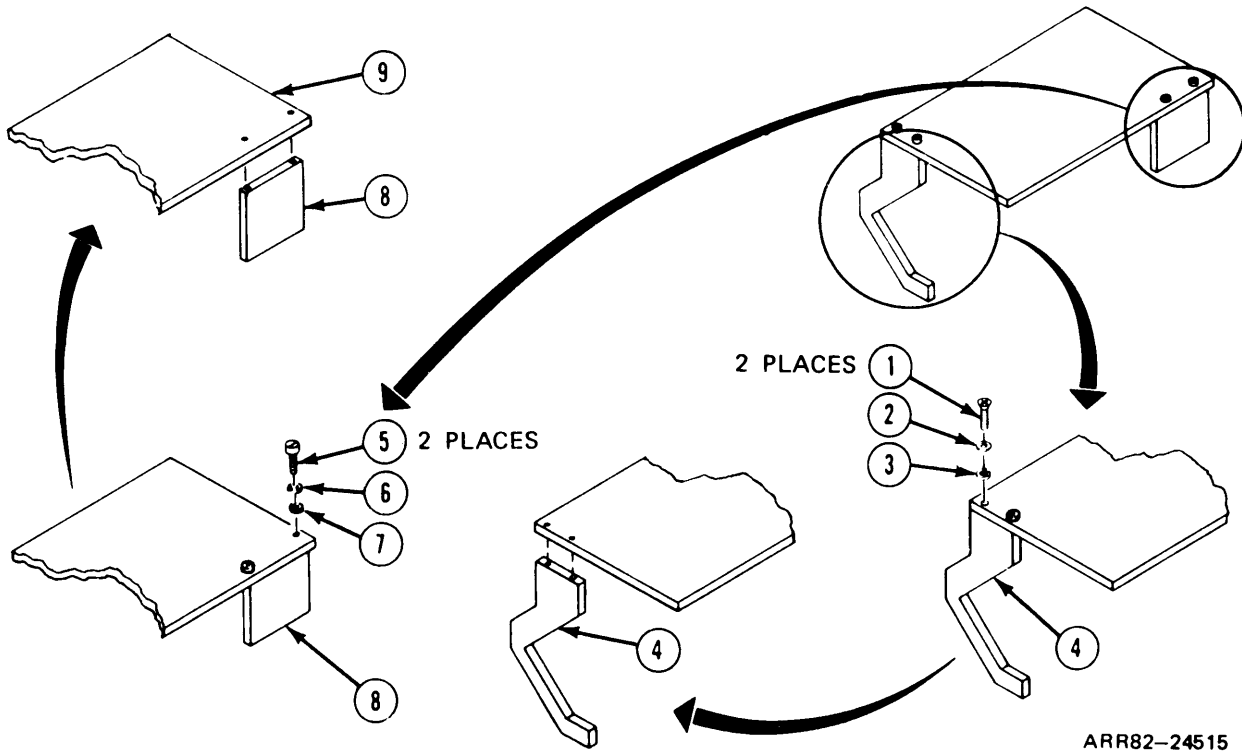
Preliminary Procedures: None

FRAME 1

Remove Front and Rear Brackets:

1. Unscrew and take out two machine screws (1), lockwashers (2), and flat washers (3) from front bracket (4) with screwdriver. Get rid of lockwashers (2).
2. Look at front bracket (4) for cracks and bends. If bad, turn in front bracket (4). If OK, set aside for later use.
3. Unscrew and take out two screws (5), lockwashers (6), and washers (7) from rear bracket (8) with screwdriver. Get rid of lockwashers (6).
4. Look at rear bracket (8) for cracks and dents. If bad, turn in rear bracket (8). If OK, set aside for later use.
5. Look at base plate (9) for cracks and dents. If bad, turn in base plate (9). If OK, set aside for later use.

GO TO FRAME 2



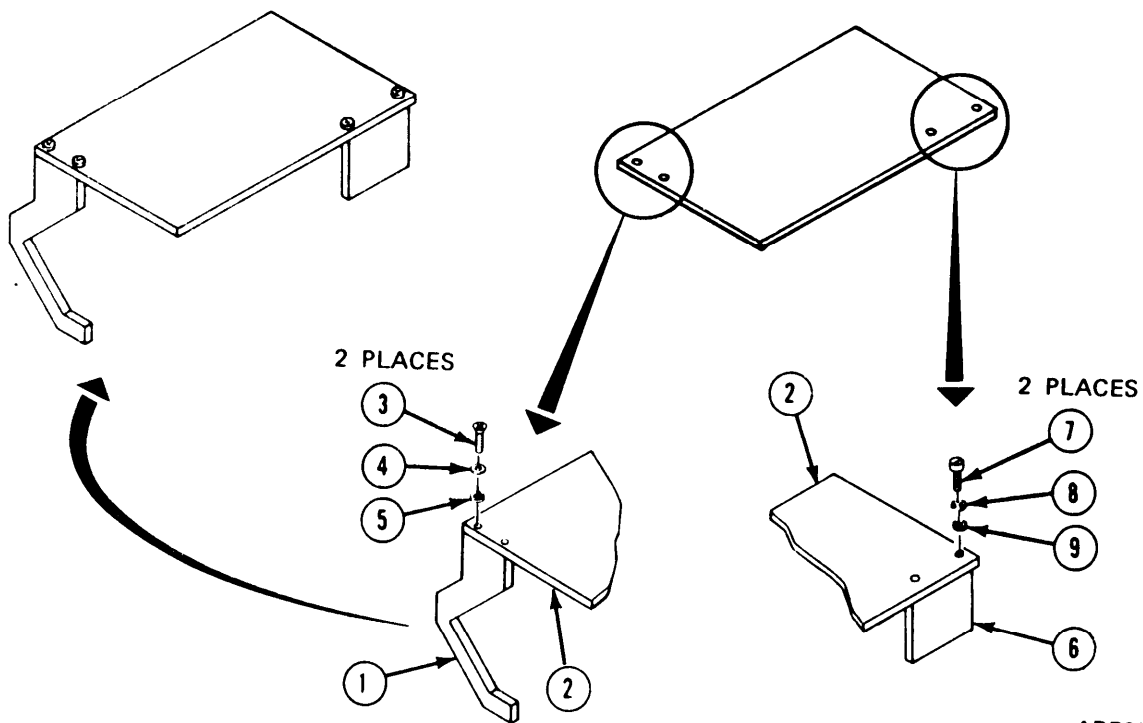
FRAME 2

Install Front and Rear Brackets:

1. Line up holes in front bracket (1) with holes in base plate (2).
2. Screw in and tighten two screws (3), new lockwashers (4), and washers (5) with screwdriver.
3. Line up holes in rear bracket (6) with holes in base plate (2).
4. Screw in and tighten two screws (7), new lockwashers (8), and washers (9) with screwdriver.

Follow-on Maintenance: None

END OF COMMAND HOLDING FIXTURE ASSEMBLY MAINTENANCE



ARR82-24516

**APPENDIX A
DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS LIST
(INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS)**

Section I. INTRODUCTION

A-1 Scope.

This manual lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of Operator, Organizational, Direct Support, and General Support maintenance of the M-1 combat tank. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the Source, Maintenance, and Recoverability (SMR) codes.

A-2. General.

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in NSN sequence.

b. Section III. Special Tools List A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL for the performance of maintenance.

c. Section IV. National Stock Number and Part Number Index. A list, in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

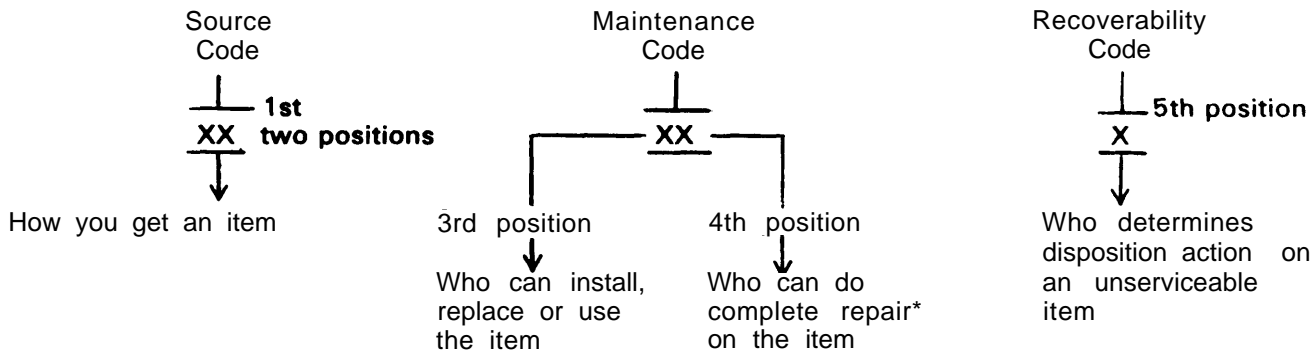
A-3. Explanation of Columns

a. Illustration (Column (1)). This column is divided as follows:

(1) ((a) FIG NO.) Figure Number. Indicates the figure number illustrating an exploded view of a functional group.

(2) ((b) ITEM NO.). Indicates the number used to identify items called out in the illustration.

b. SMR CODE (Column (2)). The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instructions, as shown in the following breakout:



*Complete Repair: Maintenance capacity, capability, and authority to perform all the corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) Source Code. The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Source codes are always the first two positions of the SMR code. Explanations of source codes follow:

Code	Explanation
PA PB PC PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3rd position of the SMR code.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3rd position of the SMR code. The complete kit must be requisitioned and applied.
MO - (Made at erg) MF - (Made at DS) MH - (Made at GS) MD- (Made at Depot)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by NSN in the Description column and listed in the Bulk Material group in the repair parts list in this manual. If the item is authorized to you by the 3rd position code of the SMR code, but the source code indicates it is made at a higher category, order the item from the higher category of maintenance.
AO - (Assembled by erg)	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the category of

Code	Explanation
AF - (Assembled by DS)	maintenance indicated by the source code. If the 3rd position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher category, order the item from the higher category of maintenance.
AH - (Assembled by GS)	
AD - (Assembled by Depot)	

- XA - Do not requisition an "XA"-coded item. Order its next higher assembly. (Also refer to the NOTE below.)
- XB - If an "XB" item is not available from salvage, order it using the FSCM and part number given.
- XC - Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
- XD - Item is not stocked. Order an "XD"-coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE: Cannibalization or controlled exchange, when authorized, may be used as source of supply for items with the above source codes, except for those source coded "XA."

(2) Maintenance Code. Maintenance codes tell you the category(s) of maintenance authorized to USE and REPAIR support Items. The maintenance codes are entered in the third and fourth positions of the SMR Code as follows:

(a) The maintenance code entered in the third position tells you the lowest maintenance category authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following categories of maintenance.

Code	Application/Explanation
C	-Crew or operator maintenance done within organizational maintenance.
O	-Organizational category can remove, replace, and use the item.
F	-Direct support category can remove, replace, and use the item.
H	-General support category can remove, replace, and use the item.
L	-Specialized repair activity can remove, replace, and use the item.
D	-Depot category can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance category with the capability to do complete repair, (i.e., perform all authorized repair functions). (NOTE: Some limited repair may be done on the item at a lower category of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.) This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	-Organizational is the lowest category that can do complete repair of the item.
F	-Direct support is the lowest category that can do complete repair of the item.
H	-General support is the lowest category that can do complete repair of the item.

- | Code | Application/Explanation |
|------|--|
| L | -Specialized repair activity (designate the specialized repair activity) is the lowest category that can do complete repair of the item. |
| D | -Depot is the lowest category that can do complete repair of the item. |
| Z | -Nonreparable. No repair is authorized. |
| B | -No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user level. |

(3) Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

Recoverability Codes	Definition
Z	-Nonreparable item. When unserviceable, condemn and dispose of the item at the category of maintenance shown in 3rd position of SMR Code.
O	-Reparable item. When uneconomically repairable, condemn and dispose of the item at organizational category.
F	-Reparable item. When uneconomically repairable, condemn and dispose of the item at the direct support category.
H	-Reparable item. When uneconomically repairable, condemn and dispose of the item at the general support category.
D	-Reparable item. When beyond lower category repair capability, return to depot. Condemnation and disposal of item not authorized below depot category.
L	-Reparable item. Condemnation and disposal not authorized below specialized repair activity.
A	-Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. National Stock Number (Column (3)). Lists the National stock number (NSN) assigned to the item. Use the NSN for requests/requisitions.

d. FSCM Column (4). The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item,

e. Part Number (Column (5)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

NOTE: When you use an NSN to requisition an item, the item you receive may have a different part number from the part ordered, but go ahead and use or furnish it as the replacement part.

f. Description (Column (6)). This column includes the following information:

- (1) The Federal item name and, when required, a minimum description to identify the item.
- (2) Not Applicable.
- (3) Items that are included in kits and sets are listed below the name of the kit or set.
- (4) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.
- (5) NSN's for bulk materials are referenced in the description column in the line item entry for the item to be manufactured/fabricated.
- (6) When the part to be used differs between serial numbers of the same model, the effective serial numbers are shown as the last line of the description.
- (7) Not Applicable.
- (8) In the Special Tools List section, the basis of issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionately.

g. U/M (Column (7)). The Unit of Measure (U/M) indicates the measure (e.g., foot, gallon, pound) or count (e.g., each, dozen, gross) of a listed item. A two-character alpha code (e.g., FT, GL, LB, EA, DZ, GR) appears in this column to indicate the measure or count. If the U/M code appearing in this column differs from the Unit of Issue (U/I) code listed in the Army Master Data File (AMDF), request the lowest U/I that will satisfy your needs.

h. QTY INC IN UNIT (Column (8)). The Quantity Incorporated in Unit (QTY INC IN UNIT) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers).

A-4. Special Information.

- a. Not Applicable.
- b. Bulk materials required to manufacture items are listed in the Bulk Material Group of this manual. NSN's for bulk materials are also referenced in the description column of the line entry for the item to be manufactured/fabricated. Detailed manufacturing instructions for items source coded to be manufactured or fabricated are found in the maintenance section of this manual.
- c. Detailed assembly instructions for items source coded to be assembled from component spare/repair parts are found in the maintenance section of this manual. Items that make up the assembly are listed immediately following the assembled item entry.
- d. Line item entries for repair parts kits and sets appear as the last entries in the repair parts listing for the figure in which their parts are listed as repair parts.
- e. Not Applicable.
- f. For a listing of all applicable publications pertaining to the MI tank, see TM 9-2350-255-L, List of Applicable Publications.

g. Not Applicable.

h. Item numbers appearing in parentheses, i.e., (8), signify components that are supplied only as part of the item having the same number or indicate continuation of an item.

A-5. How to Locate Repair Parts.

a. When National Stock Number or Part Number is Not Known:

(1) First. Using the table of contents, determine the functional group or subfunctional group to which the item belongs. This is necessary since figures are prepared for functional groups and subfunctional groups, and listings are divided into the same groups.

(2) Second. Find the figure covering the functional group or subfunctional group to which the item belongs.

(3) Third. Identify the item on the figure and note the item number of the item.

(4) Fourth. Refer to the Repair Parts List for the figure to find the line item entry for the item number note on the figure.

b. When National Stock Number or Part Number is Known:

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. The NSN index is in National Item Identification Number (NIIN)* sequence. The part numbers in the Part Number index are listed in ascending alphanumeric sequence. Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

*The NIIN consists of the last 9 digits of the NSN (i.e., 5305 $\frac{\text{NSN}}{\text{NIIN}}$ -01-674-1 467).

(2) Second. After finding the figure and item number, verify that the item is the one you are looking for, then locate the item number in the repair parts list for the figure.

A-6. Abbreviations.

<u>Abbreviations</u>	<u>Explanation</u>
ICU	Image Control Unit
IDU	Image Display Unit
TIS	Thermal Imaging System
TSTS	Thermal System Test Controller
TTS	Thermal Test Set

SECTION II. REPAIR PARTS LIST

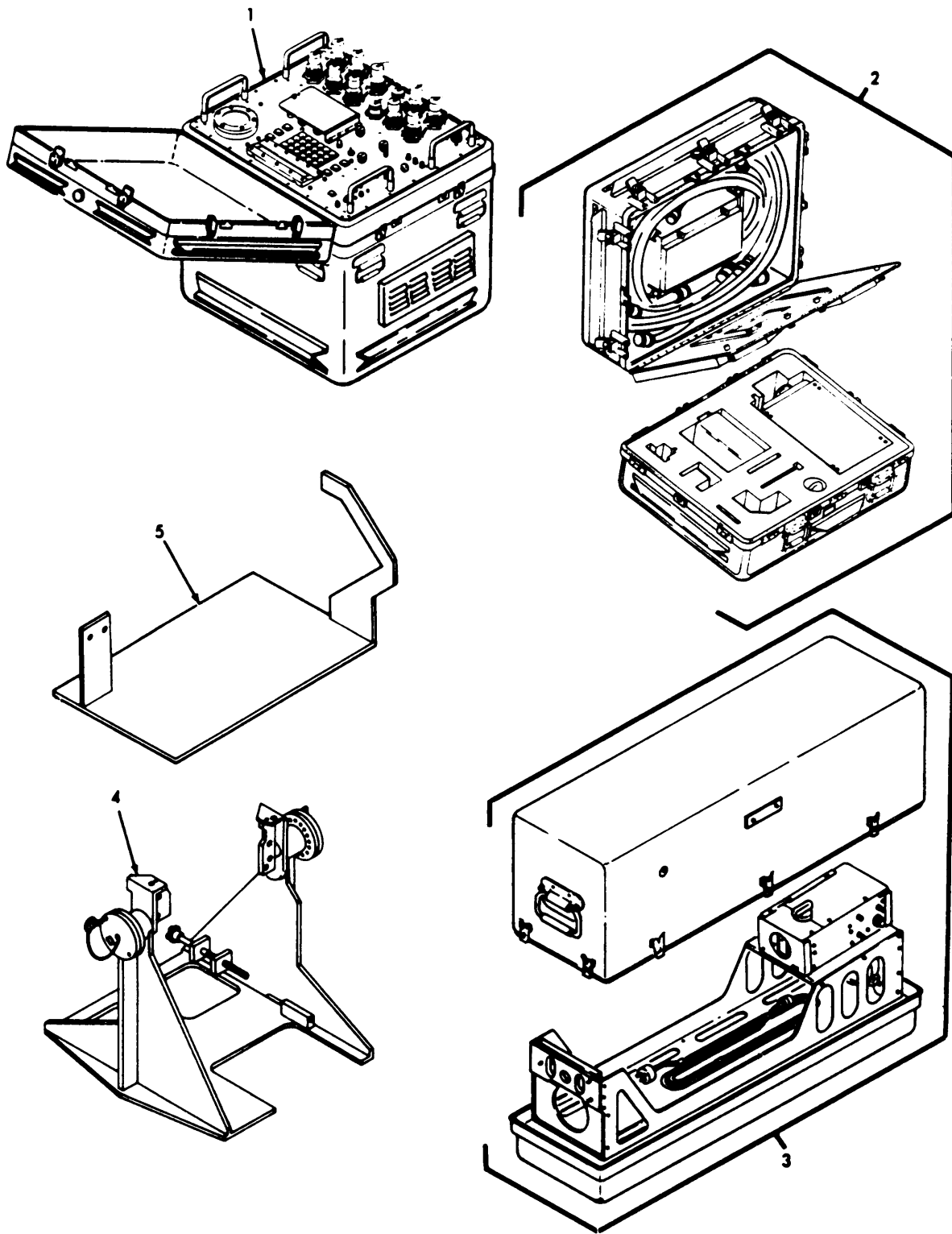


FIGURE A-1 THERMAL SYSTEM TEST SET COMPONENT PARTS
(ASSY P/N 12303300).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 00					
FIGURE A-1 THERMAL SYSTEM TEST SET COMPONENT PARTS					
1	PAFZZ	19200	12303531	TEST CONTROLLER (FOR COMPONENT PARTS SEE GROUP 01)	1
2	AFFFF	19200	12303424	ACCESSORY STORAGE (FOR COMPONENT PART SEE GROUP 02)	1
3	PFDD	80063	SM-D-805691	COLLIMATOR, THERMAL SIGHT (FOR COMPONENT PARTS SEE TM11-5855-255- 14&P)	1
4	PBFFF	80063	SM-D-805806	HOLDING FIXTURE, ASS (FOR COMPONENT PARTS SEE GROUP 03)	1
5	PBFFF	80063	SM-D-807163	HOLDING FIXTURE, COM (FOR COMPONENT PARTS SEE GROUP 04)	1

END OF FIGURE

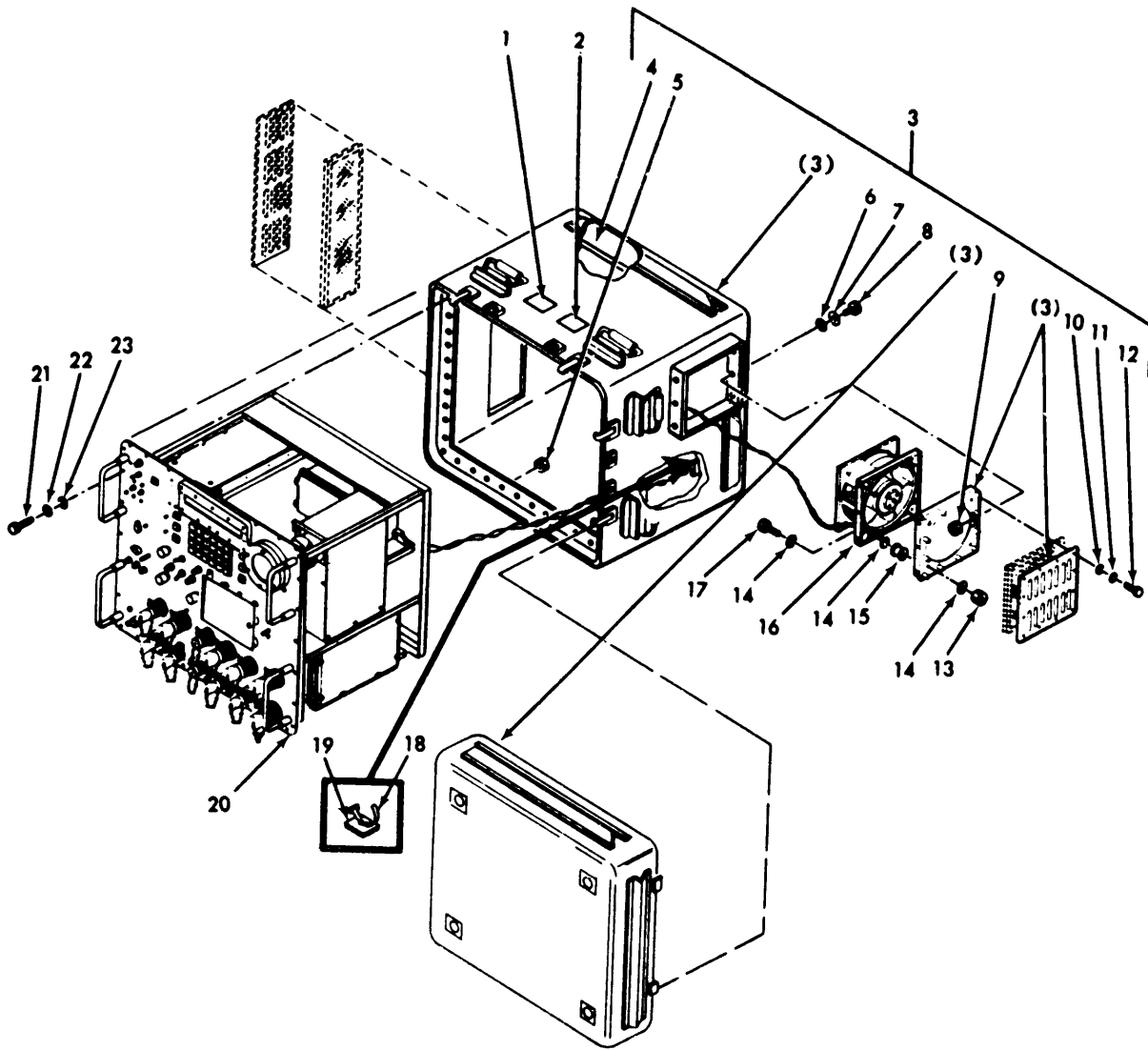


FIGURE A-2 THERMAL SYSTEM TEST CONTROLLER COMPONENTS PARTS (ASSY P/N 12303531) AND CASE ASSEMBLY.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01					
FIGURE A-2 THERMAL SYSTEM TEST					
CONTROLLER COMPONENT PARTS AND CASE					
ASSEMBLY					
1	PAFZZ	19200	12303550	PLATE, IDENTIFICATIO (12285280 CAN BE USED IN LIEU OF 12303550)	1
2	PAFZZ	19200	12303106	PLATE, IDENTIFICATION (12285280 CAN BE USED IN LIEU OF 12303106)	1
3	PBFFF	19200	12303496	CASE ASSEMBLY, CONTR	1
4	MFFZZ	81349	MILC26861	CUSHIONING (MAKE FROM MIL-C-26861B, CLASS 6, GRADE B)	V
5	PAFZZ	81349	M45938/4-10	.NUT, PLAIN, CLINCH	32
6	PAFZZ	80205	NAS620C8L	.WASHER, FLAT	6
7	PAFZZ	96906	MS35338-137	.WASHER, LOCK	6
8	PAFZZ	96906	MS51957-45	.SCREW, MACHINE	6
9	PAFZZ	81349	M45938-4-8	.NUT, PLAIN, CLINCH	6
10	PAFZZ	80205	NAS620C6L	.WASHER, FLAT	12
11	PAFZZ	96906	MS35338-136	.WASHER, LOCK	12
12	PAFZZ	80205	NAS1635-06-12	.SCREW, MACHINE	12
13	PAFZZ	80205	NAS1291C08M	NUT, SELF-LOCKING, EX	4
14	PAFZZ	88044	AN960C8L	WASHER, FLAT	12
15	PAFZZ	96906	MS35489-4	GROMMET, NONMETALLIC	4
16	PBFFF	19200	12303374	FAN ASSEMBLY, COOLIN INTERCONNECT, W18 (FOR COMPONENT PARTS SEE GROUP 0103)	1
17	PAFZZ	80205	NAS1635-08-14	SCREW, MACHINE	4
18	PAFZZ	96906	MS3367-4-9	STRAP, TIEDOWN	2
19	PAFZZ	19200	12303133	SUPPORT, TIE WRAP	2
20	XAFFF	19200	12303439	CHASSIS ASSEMBLY (FOR COMPONENT PARTS SEE GROUP 0101)	1
21	PAFZZ	80205	NAS1635-3-8	SCREW, MACHINE	32
22	PAFZZ	96906	MS35338-138	WASHER, LOCK	32
23	PAFZZ	80205	NAS620C10L	WASHER, FLAT	32

END OF FIGURE

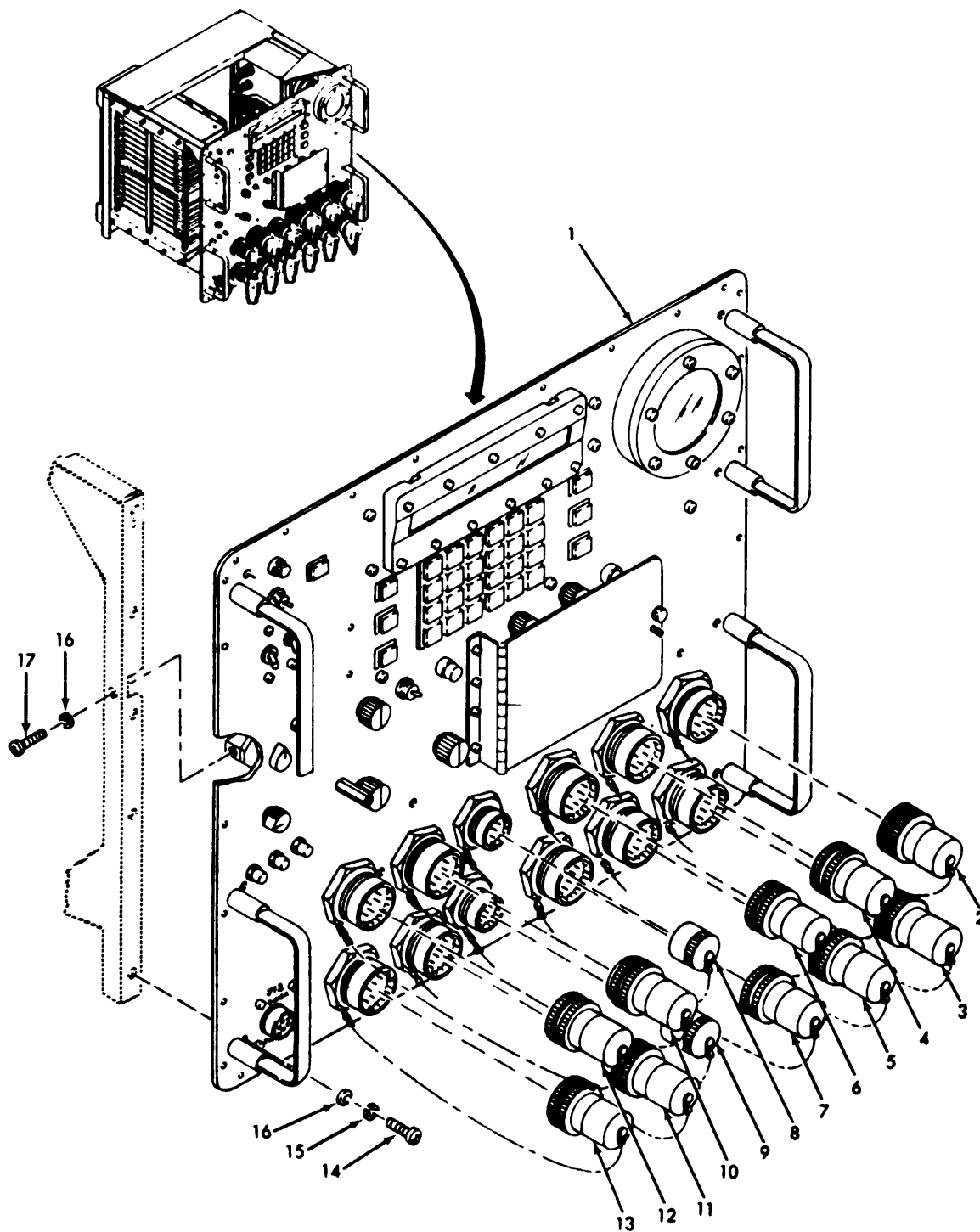


FIGURE A-3 THERMAL SYSTEM TEST CONTROLLER CHASSIS
ASSEMBLY COMPONENT PARTS
(ASSY P/N 12303439, SHEET 1 OF 5).

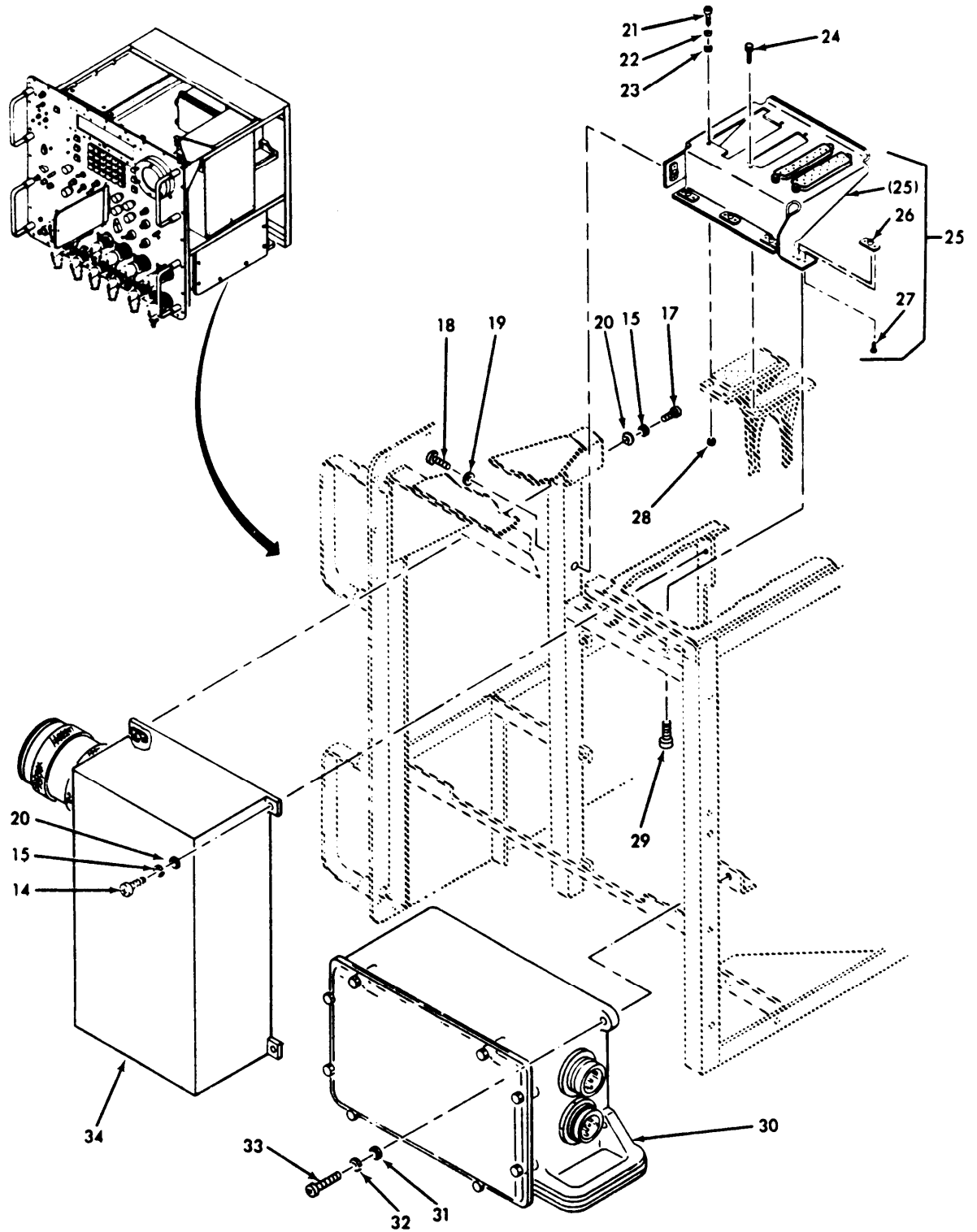


FIGURE A-3 THERMAL SYSTEM TEST CONTROLLER CHASSIS
 ASSEMBLY COMPONENT PARTS (ASSY P/N 12303439.
 SHEET 2 OF 5) AND FRONT PANEL BRACKET.

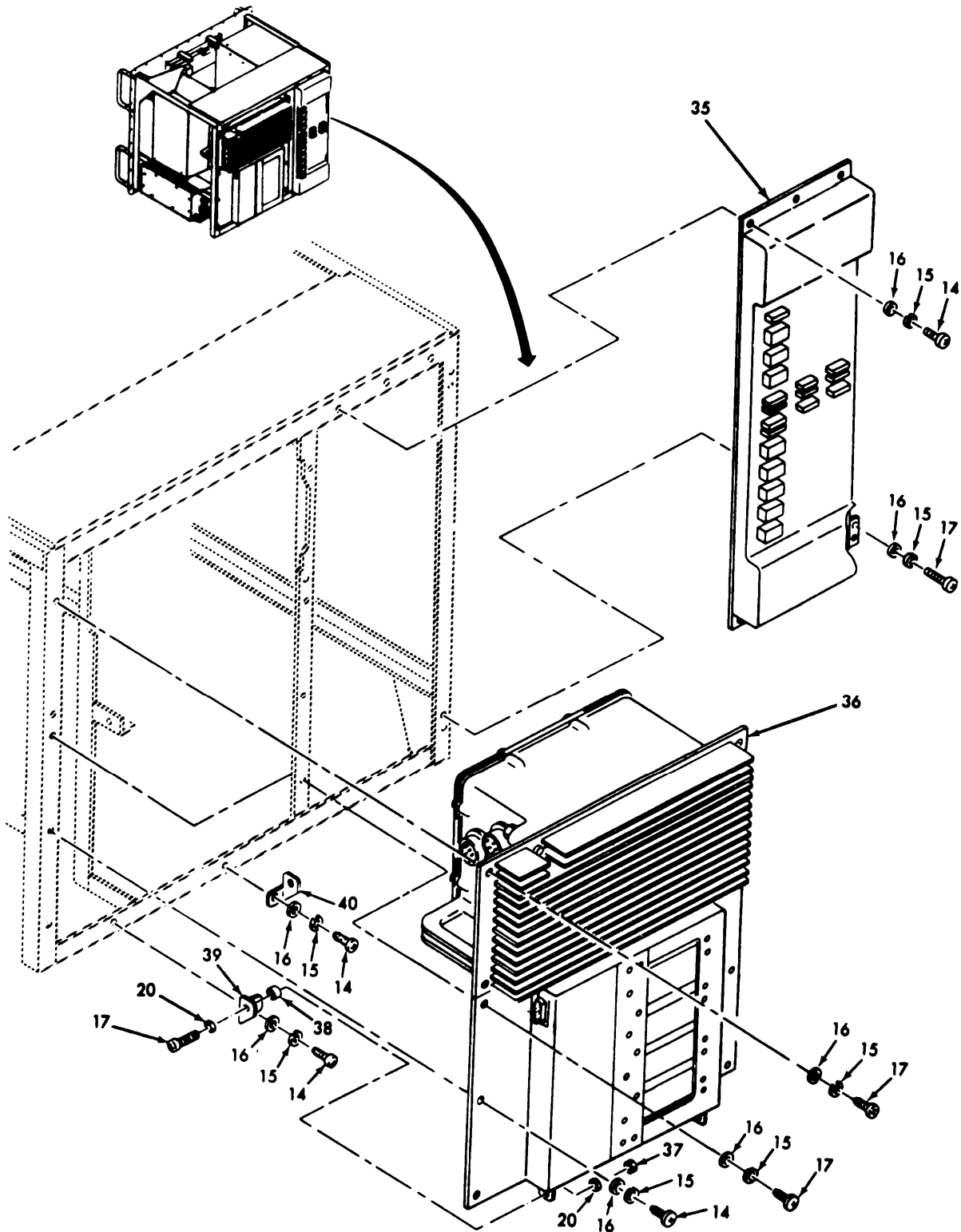


FIGURE A-3 THERMAL SYSTEM TEST CONTROLLER CHASSIS
ASSEMBLY COMPONENT PARTS
(ASSY P/N 12303439, SHEET 3 OF 5).

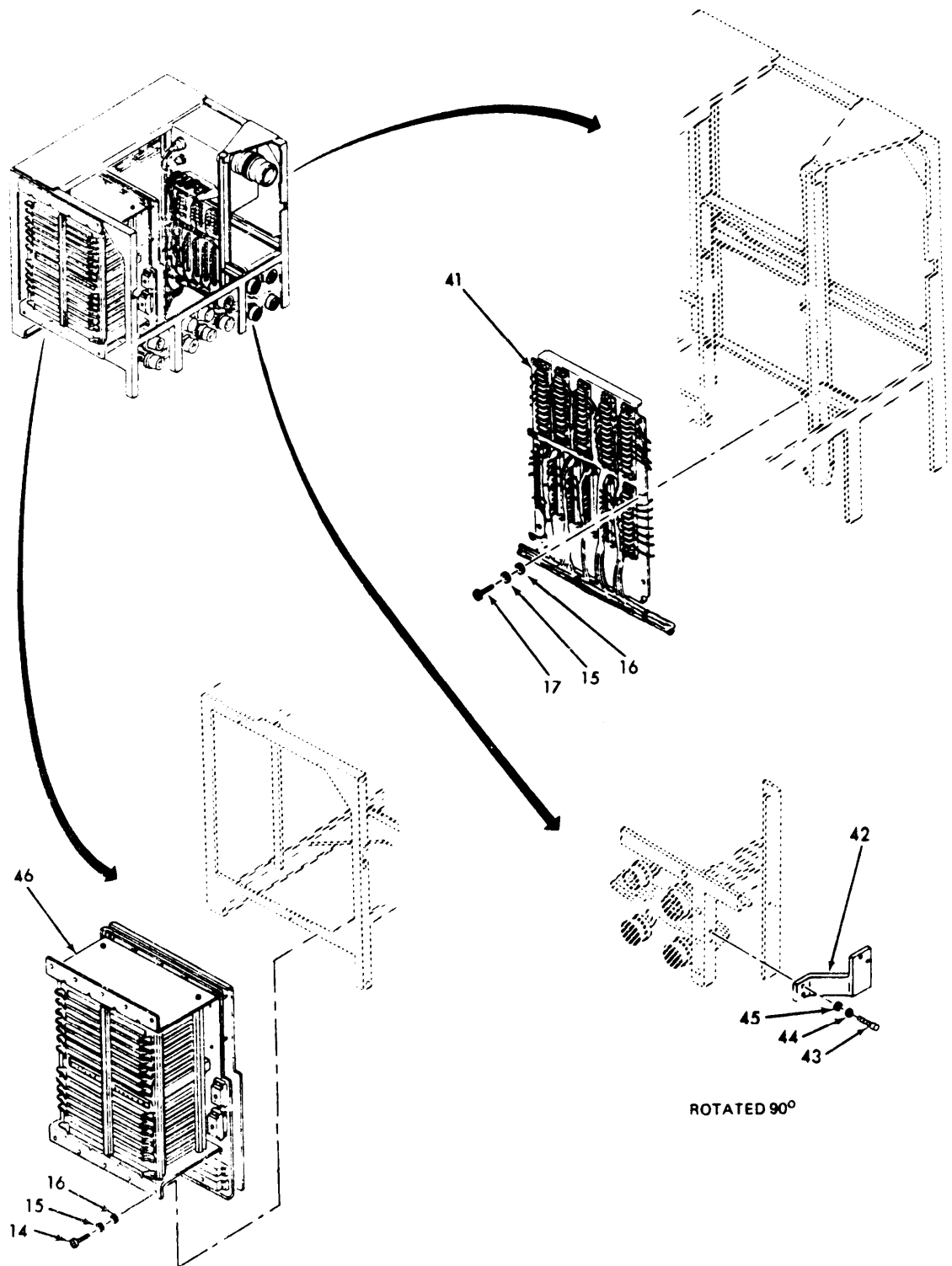


FIGURE A-3 THERMAL SYSTEM TEST CONTROLLER CHASSIS
ASSEMBLY COMPONENT PARTS
(ASSY P/N 12303439, SHEET 4 OF 5).

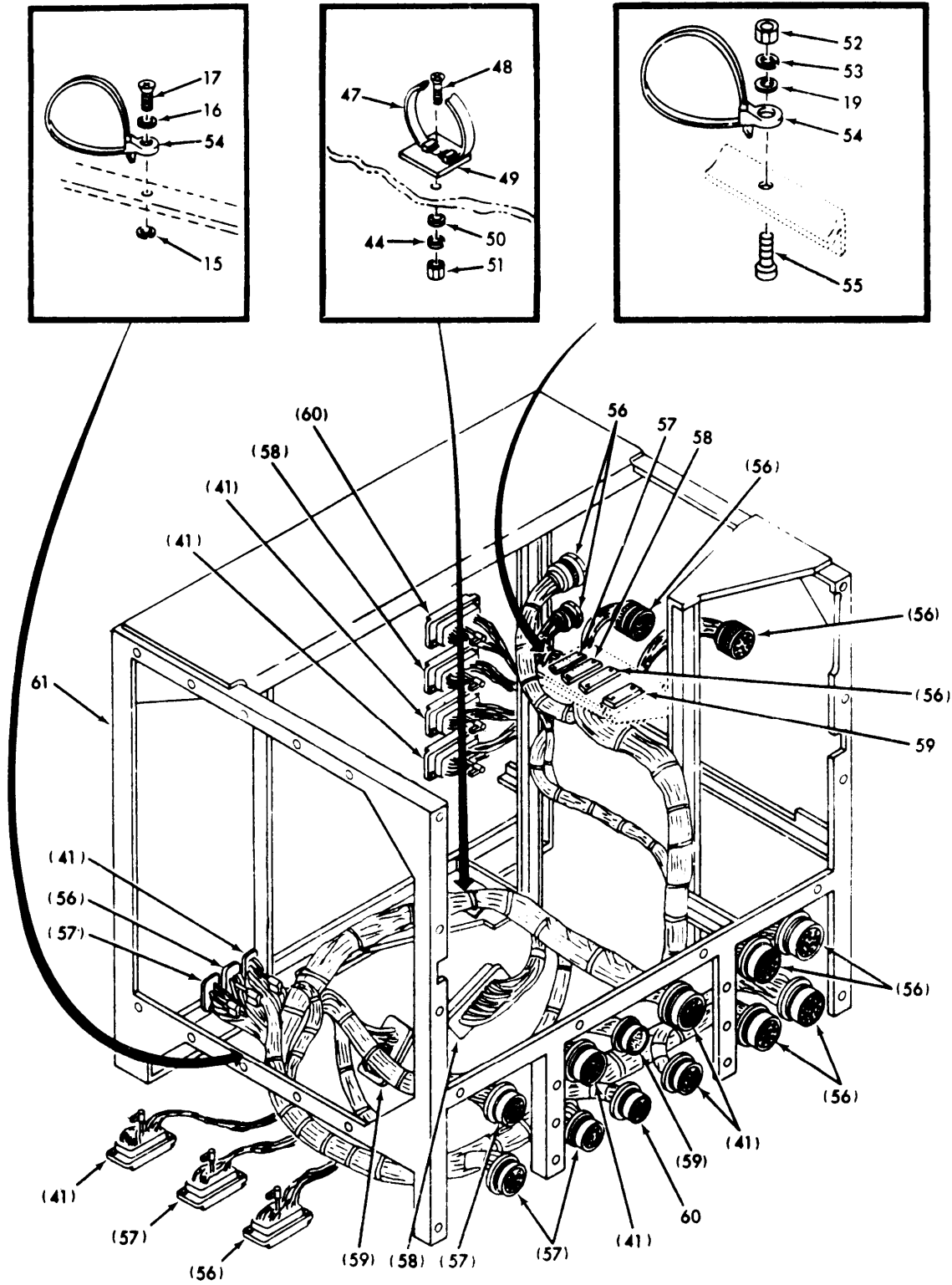


FIGURE A-3 THERMAL SYSTEM TEST CONTROLLER CHASSIS ASSEMBLY COMPONENT PARTS (ASSY P/N 12303439. SHEET 5 OF 5).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0101 FIGURE A-3 THERMAL SYSTEM TEST CONTROLLER CHASSIS ASSEMBLY COMPONENT PARTS	
1	XAFFF	19200	12303464	PANEL ASSEMBLY A1 (FOR COMPONENT PARTS SEE GROUP 010101)	1
2	PAFZZ	19207	12303454	DUMMY CONNECTOR,PLU ELECTRICAL P6A (MATES WITH J6)	1
3	PAFZZ	19207	12303451	DUMMY CONNECTOR,PLU ELECTRICAL P7A (MATES WITH J7)	1
4	XDFZZ	19207	12303455	DUMMY CONNECTOR,PLU P5A (MATES WITH J5)	1
5	PAFZZ	19207	12303459	DUMMY CONNECTOR,PLU ELECTRICAL P8A (MATES WITH J8)	1
6	PAFZZ	19207	12303453	DUMMY CONNECTOR,PLU P4A (MATES WITH J7)	1
7	PAFZZ	19207	12303456	DUMMY CONNECTOR,PLU P9A (MATES WITH J9)	1
8	PAFZZ	96906	MS27502F19N	COVER,ELECTRICAL CO	1
9	PAFZZ	96906	MS27502F23N	COVER,ELECTRICAL CO	1
10	PAFZZ	19207	12303452	DUMMY CONNECTOR,PLU ELECTRICAL P2A (MATES WITH J2)	1
11	PAFZZ	19200	12303458	CONNECTOR BODY,RECE P11A (MATES WITH J11)	1
12	PAFZZ	19207	12303457	DUMMY CONNECTOR,PLU P1A (MATES WITH J1)	1
13	PAFZZ	19207	12303450	DUMMY CONNECTOR,PLU ELECTRICAL P12A (MATES WITH J12)	1
14	PAFZZ	80205	NAS1635-3-8	SCREW,MACHINE	49
15	PAFZZ	96906	MS35338-138	WASHER,LOCK	63
16	PAFZZ	80205	NAS620C10L	WASHER,FLAT	62
17	PAFZZ	80205	NAS1635-3-10	SCREW,MACHINE	19
18	PAFZZ	80205	NAS1635-08-10	SCREW,MACHINE	1
19	PAFZZ	80205	NAS620C8	WASHER,FLAT	2
20	PAFZZ	88044	AN960C10L	WASHER,FLAT	8
21	PAFZZ	80205	NAS1635-04-8	SCREW,MACHINE	2
22	PAFZZ	96906	MS35338-135	WASHER,LOCK	2
23	PAFZZ	80205	NAS620C4L	WASHER,FLAT	2
24	PAFZZ	81349	M24308/26-1	JACKSOCKET,ELECTRIC	6
25	XDFFA	19200	12303538	BRACKET,FRONT PANEL	1
26	PAFZZ	96906	MS21076L08	.NUT,SELF-LOCKING,PL	5
27	PAFZZ	96906	MS20426AD3-5	.RIVET,SOLID	10
28	PAFZZ	80205	NAS671C4	NUT,PLAIN,HEXAGON	2
29	PAFZZ	96906	MS24693C50	SCREW,MACHINE	4
30	PAFDD	19200	12272535	ELECTRONIC UNIT,THE A4 (SEE TM9- 1200-206-34P FOR COMPONENT PARTS)	1
31	PAFZZ	88044	AN960C416L	WASHER,FLAT	3
32	PAFZZ	96906	MS35338-139	WASHER,LOCK	3
33	PAFZZ	80205	NAS1635-4-18	SCREW,MACHINE	3
34	AFFFF	19200	12303415	IMAGE DISPLA UNIT A2 (FOR COMPONENT PARTS SEE GROUP 010103)	1

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
35	PAFFF	19200	12303405	LOAD BANK,ELECTRICA A5 (FOR COMPONENT PARTS SEE GROUP 010105)	1
36	AFFFF	19200	12303402	POWER MODULE A6 (FOR COMPONENT PARTS SEE GROUP 010104)	1
37	PAFZZ	80205	NAS1291C3M	NUT,SELF-LOCKING,EX	2
38	PAFZZ	80205	NAS43DD3-18	SPACER,SLEEVE	2
39	PAFZZ	19207	12303536-2	BRACKET,ANGLE	1
40	PAFZZ	19200	12303536-1	BRACKET,ANGLE	1
41	PADDD	19200	12303403	WIRING HARNESS INTERNAL,PCU INTERCONNECT W15 (FOR COMPONENT PARTS SEE GROUP 010110)(USED ON SERNO 126 AND SUB)	1
42	PAFZZ	19200	12303588	ANGLE,CHASSIS	1
43	PAFZZ	80205	NAS1635-06-6	SCREW,MACHINE	4
44	PAFZZ	96906	MS35338-136	WASHER,LOCK	6
45	PAFZZ	80205	NAS620C6L	WASHER,FLAT	4
46	AFFFF	19200	12303440	DIGITAL SUBSYSTEM A3 (FOR COMPONENT PARTS SEE GROUP 010102)	1
47	PAFZZ	96906	MS3367-1-9	STRAP,TIEDOWN	2
48	PAFZZ	96906	MS24693C28	SCREW,MACHINE	2
49	PAFZZ	19200	12303132	SUPPORT,TIE WRAP	2
50	PAFZZ	88044	AN960-C6	WASHER,FLAT	2
51	PAFZZ	80205	NAS671C6	NUT,PLAIN,HEXAGON	2
52	PAFZZ	80205	NAS671C8	NUT,PLAIN,HEXAGON	1
53	PAFZZ	96906	MS35338-137	WASHER,LOCK	1
54	PAFZZ	19200	12303320	STRAP,TIEDOWN,ELECT	3
55	PAFZZ	96906	MS24693C51	SCREW,MACHINE	1
56	PADDD	19200	12303387	WIRING HARNESS INTERNAL TIS INTERCONNECT W14 (FOR COMPONENT PARTS SEE GROUP 010109)(USED ON SERNO 126 AND SUB)	1
57	PADDD	19200	12303386	WIRING HARNESS INTERNAL TIS INTERCONNECT W13 (FOR COMPONENT PARTS SEE GROUP 010108 (USED ON SERNO 126 AND SUB)	1
58	PADDD	19200	12303462	WIRING HARNESS INTERNAL POWER DISTRIBUTION W17 (FOR COMPONENT PARTS SEE GROUP 010112)(USED ON SERNO 126 AND SUB)	1
59	PADDD	19200	12303414	WIRING HARNESS INTERNAL PANEL INTERCONNECT W16 (FOR COMPONENT PARTS SEE GROUP 010111 (USED ON SERNO 126 AND SUB)	1
60	PADDD	19200	12303463	WIRING HARNESS INTERNAL TIS INTERCONNECT W19 (FOR COMPONENT PARTS SEE GROUP 010107)(USED ON SERNO 126 AND SUB)	1
61	XAFFF	19200	12303513	CHASSIS (FOR COMPONENT PARTS SEE GROUP 010114)	1

END OF FIGURE

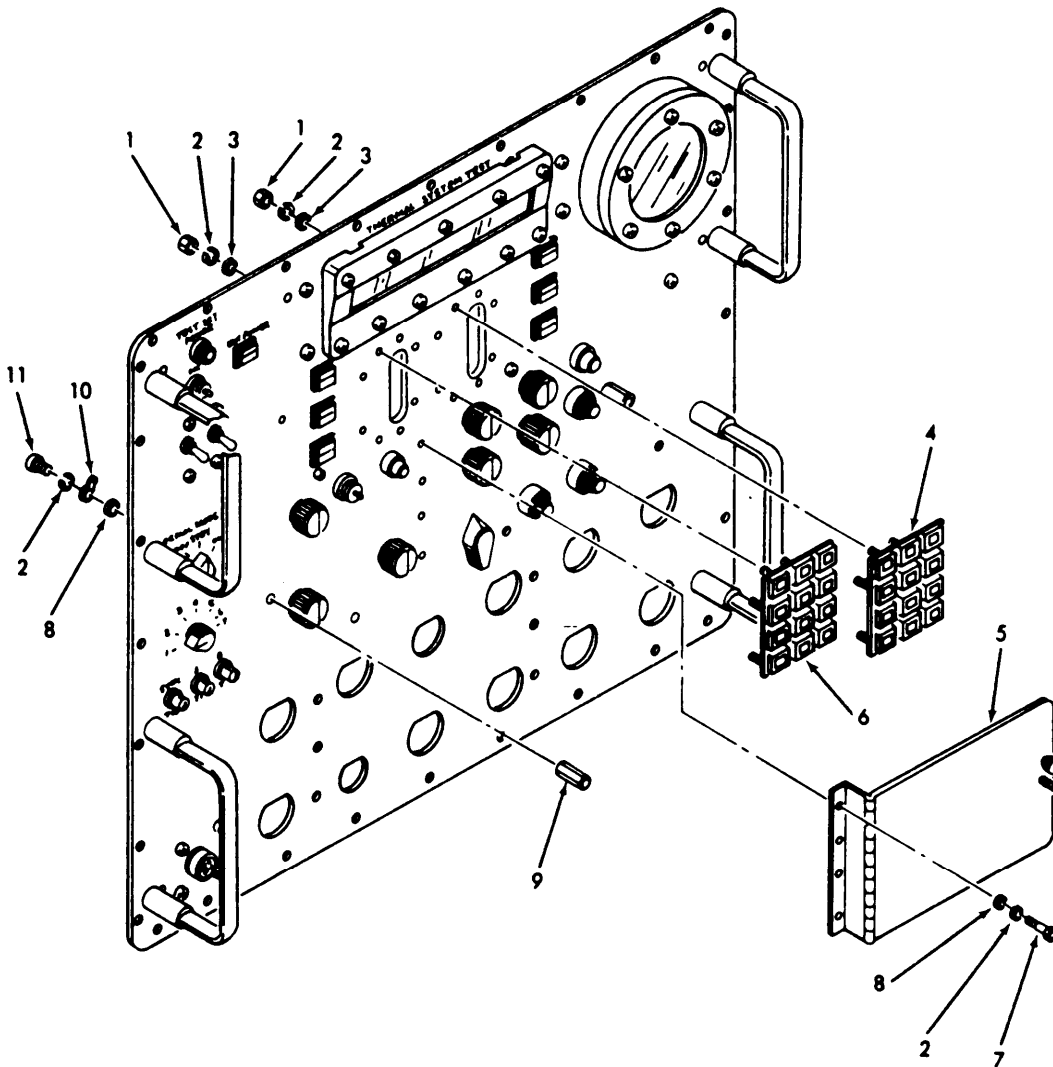


FIGURE A-4 PANEL ASSEMBLY AI COMPONENT PARTS
{ASSY P/N 12303408, 12303464, SHEET 1 OF 5}.

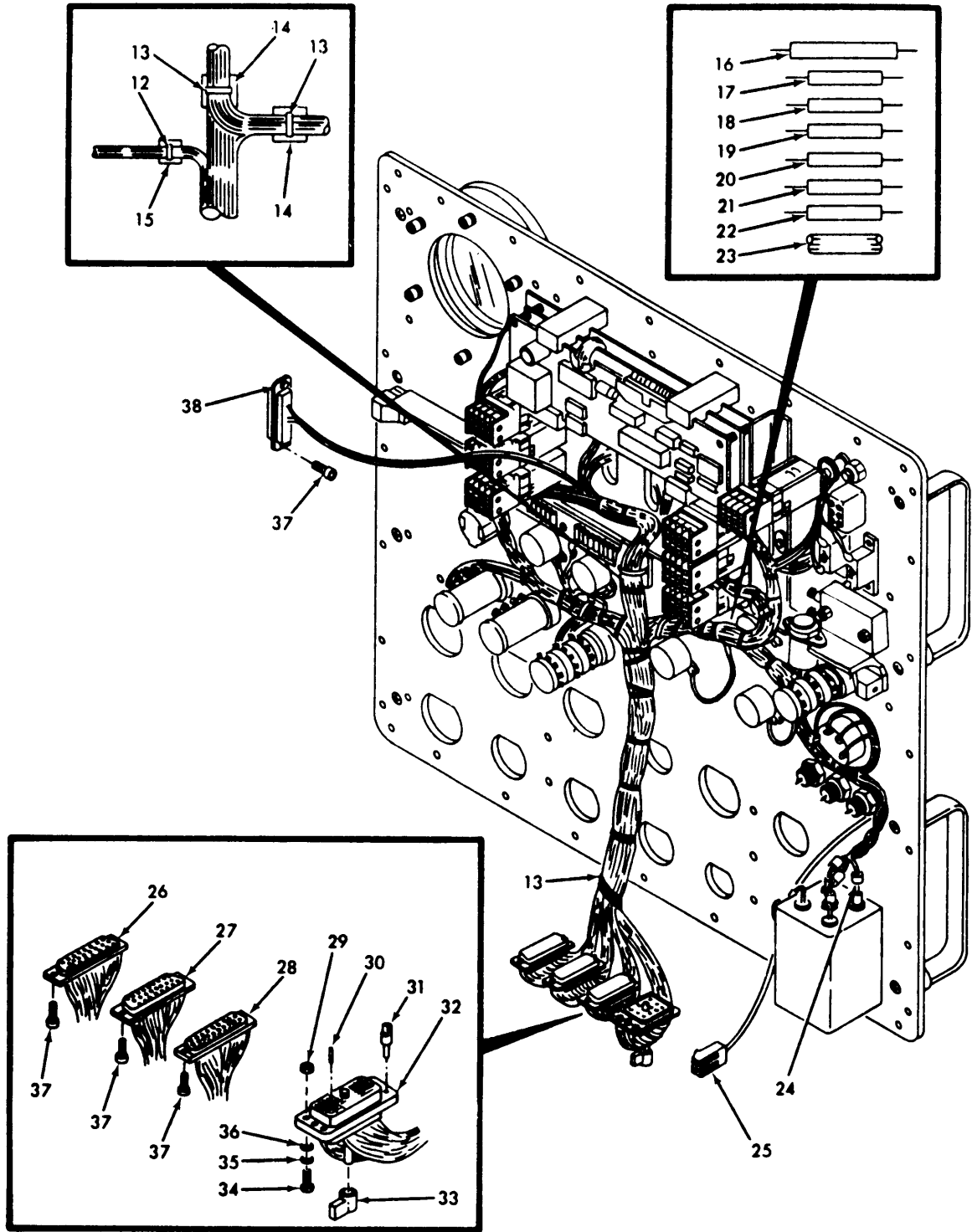


FIGURE A-4 PANEL ASSEMBLY A1 COMPONENT PARTS
 (ASSY P/N 12303408, 12303464, SHEET 2 OF 5)
 AND RECEPTACLE CONNECTORS PL. P5, P3, P4.

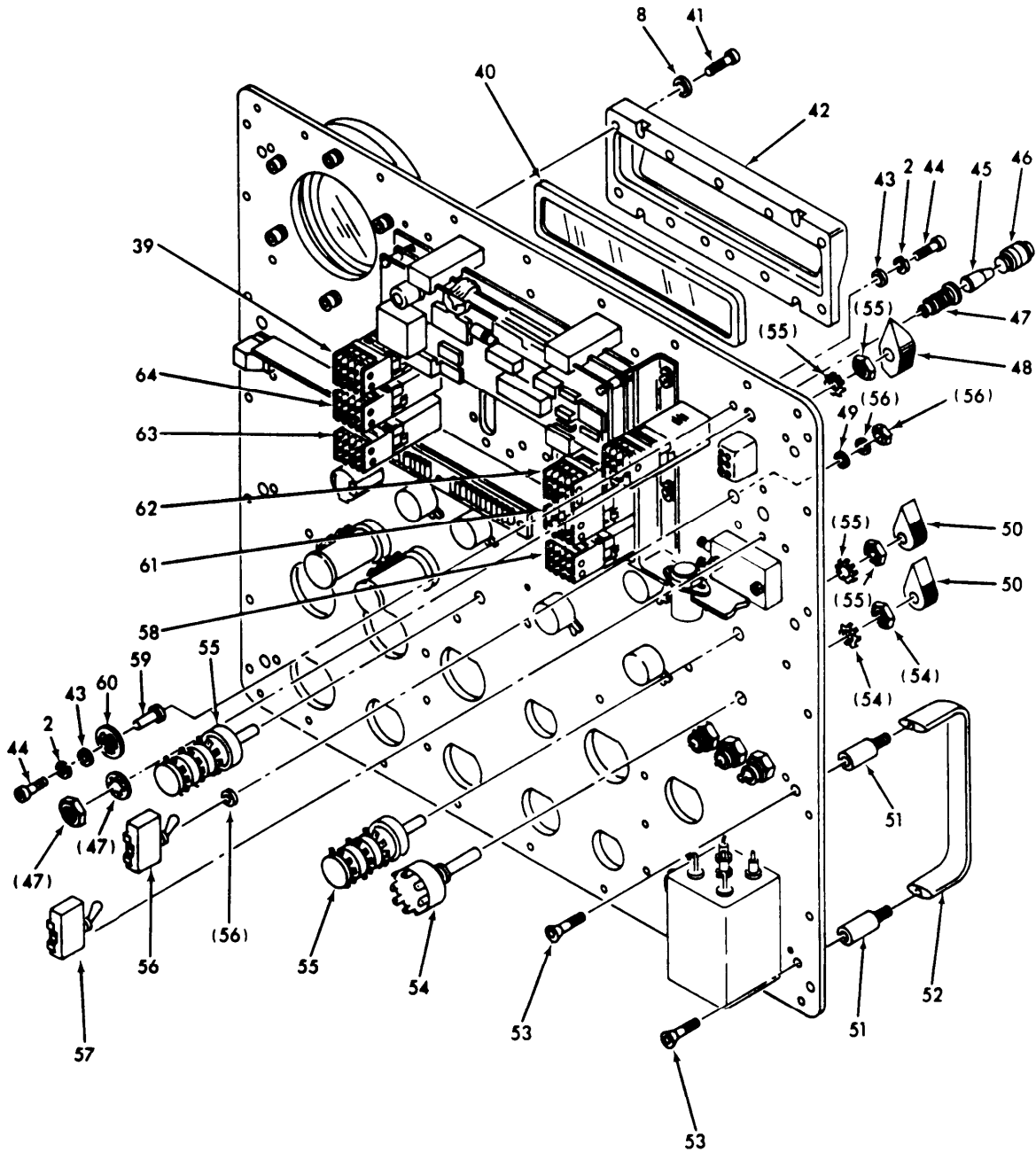


FIGURE A-4 PANEL ASSEMBLY A1 COMPONENT PARTS
(ASSY P/N 12303408, 12303464. SHEET 3 OF 5).

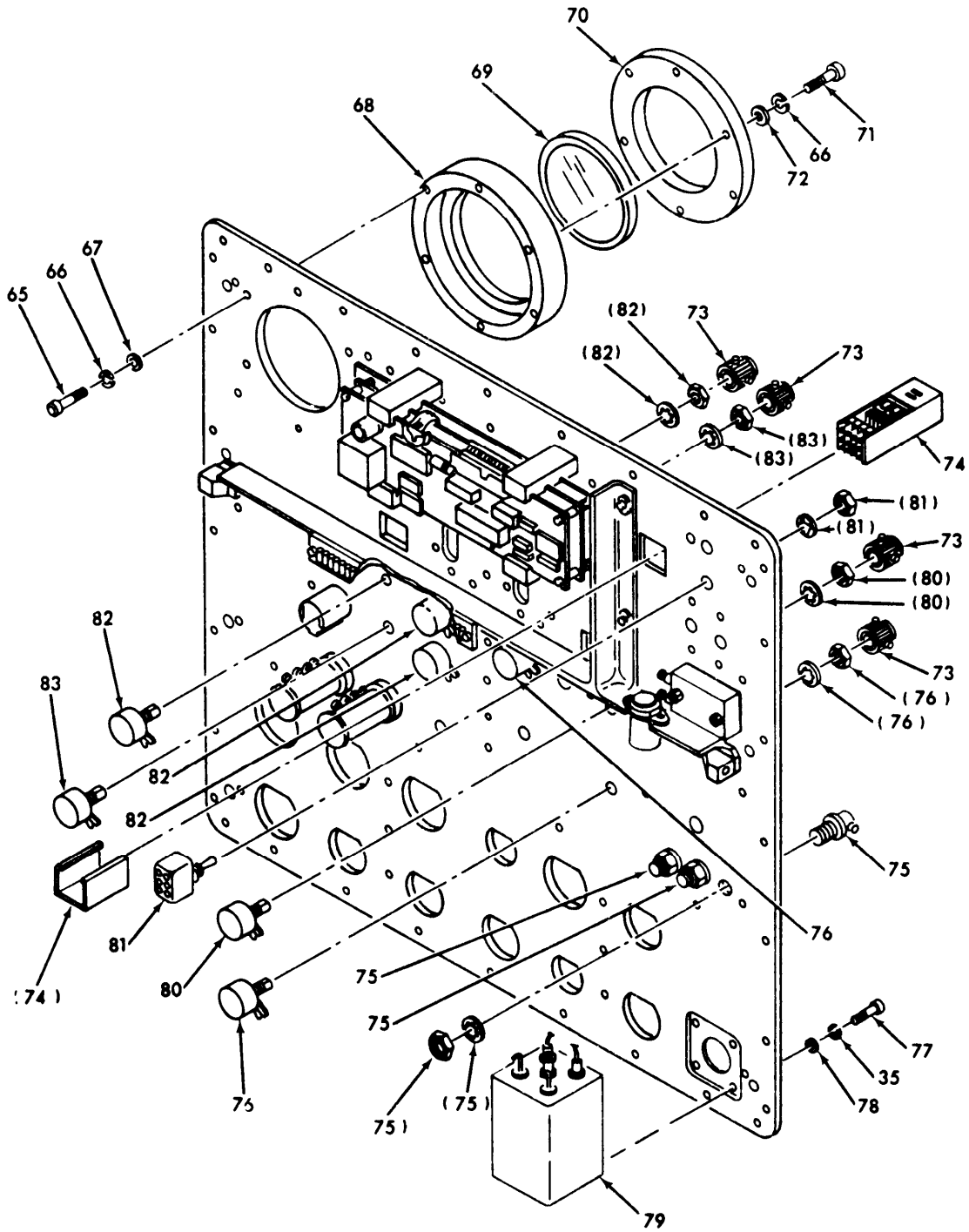


FIGURE A-4 PANEL ASSEMBLY AI COMPONENT PARTS
(ASSY P/N 12303408, 12303464 SHEET 4 OF 5).

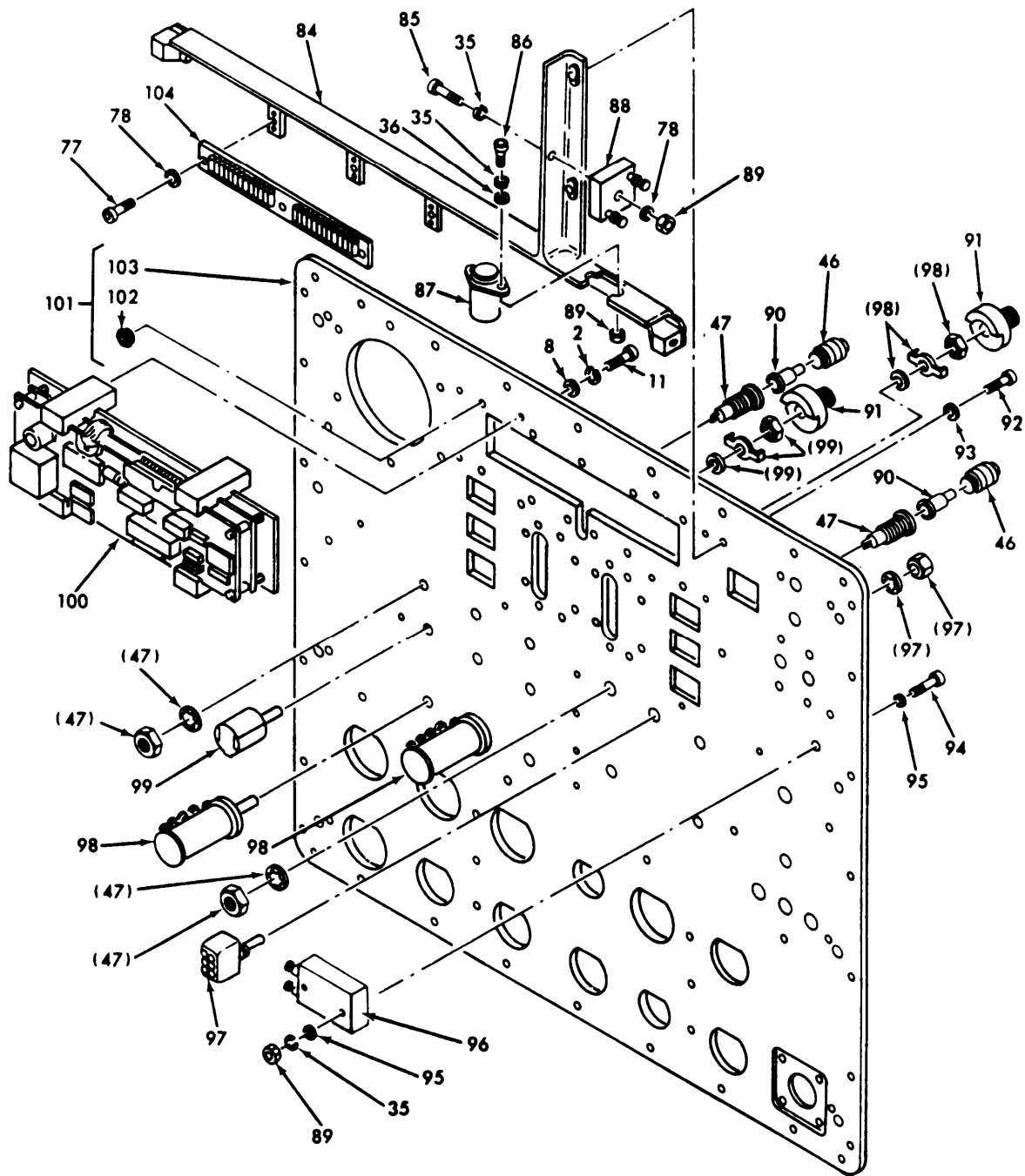


FIGURE A-4 PANEL ASSEMBLY A1 COMPONENT PARTS
(ASSY P/N 12303408. 12303464, SHEET 5 OF 5).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01010100					
FIGURE A-4 PANEL ASSEMBLY A1					
COMPONENT PARTS					
1	PAFZZ	80205	NAS671C6	NUT,PLAIN,HEXAGON	16
2	PAFZZ	96906	MS35338-136	WASHER,LOCK	32
3	PAFZZ	88044	AN960-C6	WASHER,FLAT	16
4	PBFFF	19200	12303371	KEYBOARD ASSEMBLY (FOR COMPONENT PARTS SEE GROUP 01010102)	1
5	PBFZZ	19200	12303370	DOOR,ACCESS	1
6	PBFFF	19200	12303527	KEYBOARD ASSEMBLY (FOR COMPONENT PARTS SEE GROUP 01010103)	1
7	PAFZZ	80205	NAS1635-06-6	SCREW,MACHINE	4
8	PAFZZ	80205	NAS620C6	WASHER,FLAT	25
9	PAFZZ	80205	NAS1786-06-18	POST,ELECTRICAL-MEC	2
10	PAFZZ	96906	MS77068-2	TERMINAL,LUG	1
11	PAFZZ	80205	NAS1635-06-8	SCREW,MACHINE	10
12	PAFZZ	96906	MS3367-4-9	STRAP,TIEDOWN (USED ON NHA 12303464)	9
13	PAFZZ	96906	MS3367-1-9	STRAP,TIEDOWN ELECTRICAL	2
14	PAFZZ	19200	12303133	SUPPORT,TIE WRAP	2
15	PAFZZ	19200	12303132	SUPPORT,TIE WRAP	1
16	MFFZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-060-3009)	V
17	MFFZZ	81349	M47206-22II3-902	WIRE (MAKE MIL-W-47206-22-II-3-902)	V
18	MFFZZ	81349	M47206-22IV2-090	WIRE (MAKE FROM MIL-W-47206-22IV2-090)	V
19	MFFZZ	81349	M47206-22V1-009	WIRE (MAKE FROM MIL-W-47206-V-1-009)	V
20	MFFZZ	18876	MIS26877/2-20U	WIRE (MAKE FROM MIS26877/2-20U20AWG)	V
21	MFFZZ	18876	MIS26877/2-22U	WIRE (MAKE FROM MIS26877/2-22U22AWG)	V
22	MFFZZ	18876	MIS26877/3-22U	WIRE (MAKE FROM MIS26877/3-22U)	V
23	MFFZZ	81349	M23053/5-103-0	INSULATION SLEEVING (MAKE FROM MIL-I-23053/5 CLASS 1, SIZE 03,BLACK)	V
24	PAFZZ	81349	M83519/1-1	SPLICE,CONDUCTOR	2
25	PAFZZ	19200	12303257	CONNECTOR,PLUG,ELEC P6	1
26	PAFZZ	81349	M24308/2-5	CONNECTOR,RECEPTACL P4	1
27	PAFZZ	81349	M24308/2-4	CONNECTOR,RECEPTACL P1	1
28	PAFZZ	81349	M24308/2-15	CONNECTOR,RECEPTACL P3	1
29	PAFZZ	96906	MS35649-244	NUT,PLAIN,HEXAGON (USED ON 12303464)	2
30	PAFZZ	19200	12303108	CONTACT,ELECTRICAL	156
31	PAFZZ	19200	12303109	POLARIZING KEY,ELEC ELECTRICAL	2
32	PAFZZ	19207	12303242	CONNECTOR BODY,PLUG P2	1
33	XDFZZ	19200	12303549	HANDLE	1
34	PAFZZ	80205	NAS1635-04-7	SCREW,MACHINE (USED ON 12303464)	4
35	PAFZZ	96906	MS35338-135	WASHER,LOCK (USED ON NHA 12303464)	13
36	PAFZZ	80205	NAS620C4L	WASHER,FLAT	6
37	PAFZZ	81349	M24308/25-9	SCREW-LOCK ASSEMBLY ELECTRICAL	8

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
38	PAFZZ	81349	M24308/4-3	CONNECTOR, RECEPTACL P5	1
39	PAFZZ	19200	12303295	LIGHT-SWITCH S7	1
40	PBFZZ	19200	12303324	WINDOW, OBSERVATION	1
41	PAFZZ	80205	NAS1635-06-12P	SCREW, MACHINE	11
42	PBFZZ	19200	12303412	BEZEL, ALPHA DISPLAY	1
43	PAFZZ	80205	NAS620C6L	WASHER, FLAT	2
44	PAFZZ	80205	NAS1635-06-4	SCREW, MACHINE	2
45	PAFZZ	19200	12303135	LAMP, INCANDESCENT DS1	1
46	PAFZZ	81349	LC25CN2	LENS, LIGHT	1
47	PAFZZ	81349	LH73/2	LIGHT, INDICATOR	3
48	PAFZZ	96906	MS91528-2L4B	KNOB	1
49	PAFZZ	88044	AN960C816	WASHER, FLAT	1
50	PAFZZ	96906	MS91528-1T2B	KNOB	2
51	PAFZZ	19200	12303436	HANDLE, EXTENSION	8
52	PAFZZ	19200	12303357	HANDLE, BOW	4
53	PAFZZ	96906	MS24693C272	SCREW, MACHINE	8
54	PAOZZ	19207	12303296	SWITCH, ROTARY S11	1
55	PAFZZ	19200	12303298	SWITCH, ROTARY S9-S10	2
56	PAFZZ	19200	12303121	CIRCUIT BREAKER CB2	1
56	PAFZZ	96906	MS25036-148	TERMINAL, LUG	5
57	PAFZZ	96906	MS25244-P-5	CIRCUIT BREAKER CB1 (USED ON 12303408)	1
57	PAFZZ	19200	12303350	CIRCUIT BREAKER CB1 (USED ON 12303464)	1
58	PAFZZ	19200	12303303	LIGHT-SWITCH S4	1
59	PAFZZ	19200	12272133	POST, ELECTRICAL-MEC	1
60	PAFZZ	19200	11732676-2	TERMINAL, CIRCULAR E1 (USED ON 12303464)	1
61	PAFZZ	19200	12303302	LIGHT, SWITCH S3	1
62	PAFZZ	19200	12303306	LIGHT-SWITCH DS2	1
63	PAFZZ	19207	12303305	LIGHT-SWITCH S6	1
64	PAFZZ	19200	12303304	INDICATOR, LIGHT S5	1
65	PAFZZ	80205	NAS1635-3-7	SCREW, MACHINE	6
66	PAFZZ	96906	MS35338-138	WASHER, LOCK	12
67	PAFZZ	80205	NAS620C10	WASHER, FLAT	12
68	PBFZZ	19200	12303400	SPACER, BEZEL	1
69	PBFZZ	19200	12303325	WINDOW, OBSERVATION	1
70	PBFZZ	19200	12303413	SPACER, BEZEL	1
71	PAFZZ	80205	NAS1635-3-10P	SCREW, MACHINE	6
72	PAFZZ	80205	NAS620C10L	WASHER, FLAT	6
73	PAFZZ	96906	MS91528-2E2B	KNOB	7
74	PAFZZ	19200	12303301	LIGHT-SWITCH S2	1
75	PAFZZ	19207	12303258	CONNECTOR, PLUG	3
76	PAFZZ	81349	RV4NAYS253A	RESISTOR, VARIABLE, N R1, R2	2
77	PAFZZ	80205	NAS1635-04-6	SCREW, MACHINE	7
78	PAFZZ	80205	NAS620C4	WASHER, FLAT	8
79	PAFZZ	19200	12303329	FILTER, RADIO FREQUE A1 (USED ON 12303464)	1
80	PAFZZ	81349	RV4NAYS500A	RESISTOR, VARIABLE, N RETICLE BRIGHTNESS R10	1
81	PAFZZZ	96906	MS24524-23	SWITCH, TOGGLE S1	1
82	PAFZZZ	81349	RV2SAYS103A	RESISTOR, VARIABLE, N TIS	3

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				SENSITIVITY, CONTRAST, RETICLE R3, R4, R6	
83	PAFZZ	81349	RV2SAYS252A	RESISTOR, VARIABLE, N SYMBOLS R5	1
84	XDFZZ	19200	12303539	STRUCTURE	1
85	PAFZZ	80205	NAS1635-04-14	SCREW, MACHINE	1
86	PAFZZ	80205	NAS1635-04-5	SCREW, MACHINE	2
87	PAFZZ	81349	M7793/5-001	METER, TIME TOTALIZI M1 (USED ON 12303408)	1
88	PAFZZ	19200	12272103	SEMICONDUCTOR DEVIC	1
89	PAFZZ	80205	NAS671C4	NUT, PLAIN, HEXAGON	5
90	PAFZZ	96906	MS25237-387	LAMP, INCANDESCENT DS3, DS4	2
91	PAFZZ	19200	12303358	DIAL, CONTROL	3
92	PAFZZ	80025	NAS1635-3-10	SCREW, MACHINE	6
93	PAFZZ	80205	NAS620C3	WASHER, FLAT (USED ON 12303408)	6
94	PAFZZ	80205	NAS1635-04-24	SCREW, MACHINE	2
95	PAFZZ	96906	MS15795-804	WASHER, FLAT	4
96	PAFZZ	19200	12303137	TRANSORB	1
97	PAFZZ	96906	MS90311-271	SWITCH, TOGGLE S8	1
98	PAFZZ	19200	12303311	RESISTOR, VARIABLE, W TIS BORESIGHT AZ, EL R7, R8	2
99	PAFZZ	19207	12303312	RESISTOR, VARIABLE, W TIS AZ OFFSET R13	1
100	PAFDD	19200	12303422	DISPLAY ASSEMBLY (FOR COMPONENT PARTS SEE GROUP 01010101)	1
101	XAFFF	19200	12303410	PANEL (USED ON 12303408)	1
101	XAFFF	19200	12303484	PANEL (USED ON 12303464)	1
102	PAFZZ	81349	M45938/4-6	.NUT, PLAIN, CLINCH	15
103	XAFZZ	19200	12303410-1	.PANEL (USED ON 12303410)	1
103	XAFZZ	19200	12303484-1	.PANEL (USED ON 12303484)	1
104	XDFFF	19200	12303437	BOARD ASSEMBLY TB1 (FOR COMPONENT PARTS SEE GROUP 01010104)	1

END OF FIGURE

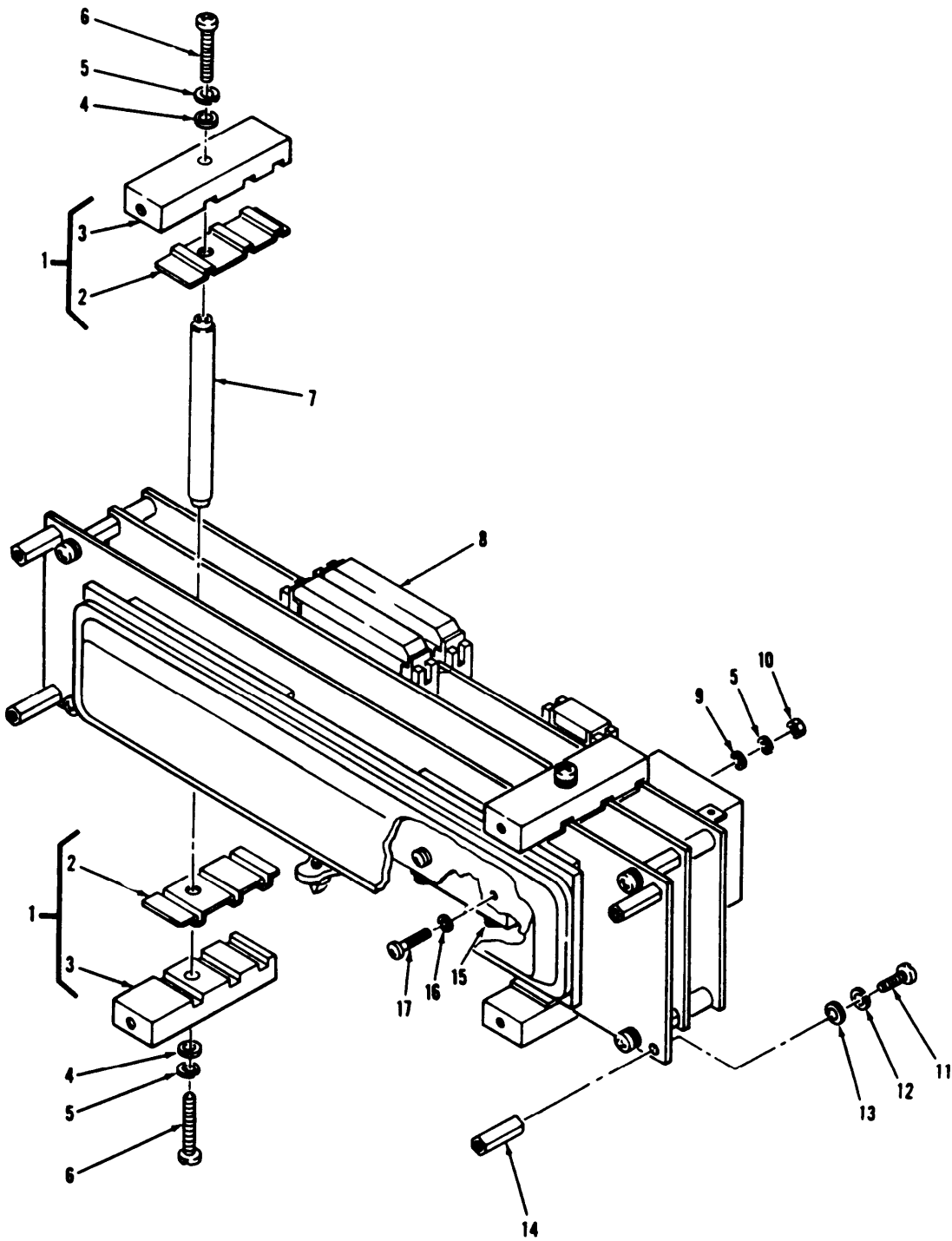


FIGURE A-5 DIGITAL INDICATOR ASSEMBLY COMPONENT PARTS (ASSY P/N 12303422) AND CLAMP.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 01010200	
				FIGURE A-5 DIGITAL INDICATOR	
				ASSEMBLY COMPONENT PARTS AND CLAMP	
1	XDDDD	19200	12303349	CLAMP ASSY, DISPLAY	4
2	MDOZZ	19200	12303348	.CUSHION (MAKE FROM MIL-R-6855-CL2 GR30)	1
3	XADZZ	19200	12303423	.CLAMP	1
4	PADZZ	80205	NAS620C4L	WASHER, FLAT	4
5	PADZZ	96906	MS35338-135	WASHER, LOCK	6
6	PADZZ	80205	NAS1635-04-12	SCREW, MACHINE	4
7	PBDZZ	19200	12303375	SPACER	2
8	XADDD	19200	12303328	MESSAGE DISPLAY	1
9	PADZZ	80205	NAS1515M04	INSULATOR, WASHER	2
10	PADZZ	80205	NAS671C4	NUT, PLAIN, HEXAGON	2
11	PADZZ	80205	NAS1635-06-4	SCREW, MACHINE	4
12	PADZZ	96906	MS35338-136	WASHER, LOCK	4
13	PADZZ	80205	NAS620C6L	WASHER, LOCK	4
14	PADZZ	80205	NAS1786C06-11	POST, ELECTRICAL-MEC	4
15	PADZZ	81349	M24308/26-1	JACKSOCKET, ELECTRIC	2
16	PADZZ	96906	MS15795-804	WASHER, LOCK	2
17	PADZZ	80205	NAS1635-04-6	SCREW, MACHINE	2

END OF FIGURE

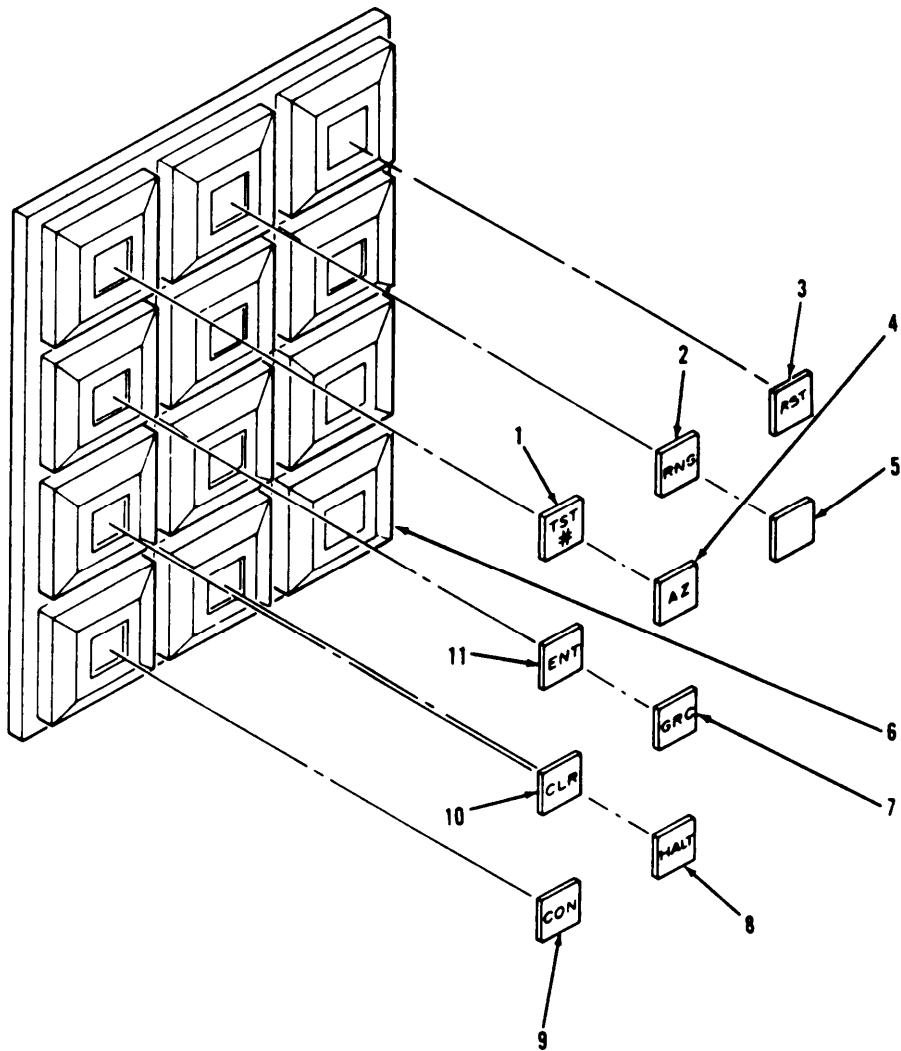


FIGURE A-6 KEYBOARD ASSY COMPONENT PARTS
(ASSY P/N 12303371).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 01010300	
				FIGURE A-6 KEYBOARD ASSEMBLY	
				COMPONENT PARTS	
1	XAFZZ	19200	12303479	KEYBOARD	1
1	XDFZZ	19200	12303229-13	INSERT,KEYBOARD WHT	1
2	XDFZZ	19200	12303229-14	INSERT,KEYBOARD WHT	1
3	XDFZZ	19200	12303229-21	INSERT,KEYBOARD WHT	1
4	XDFZZ	19200	12303229-16	INSERT,KEYBOARD WHT	1
5	XDFZZ	19200	12303480-2	INSERT,WHITE	3
7	XDFZZ	19200	12303229-18	INSERT,KEYBOARD WHT	1
8	XDFZZ	19200	12303229-20	INSERT,KEYBOARD WHT	1
9	XDFZZ	19200	12303229-19	INSERT,KEYBOARD WHT	1
10	XDFZZ	19200	12303229-17	INSERT,KEYBOARD WHT	1
11	XDFZZ	19200	12303229-15	INSERT,KEYBOARD WHT	1

END OF FIGURE

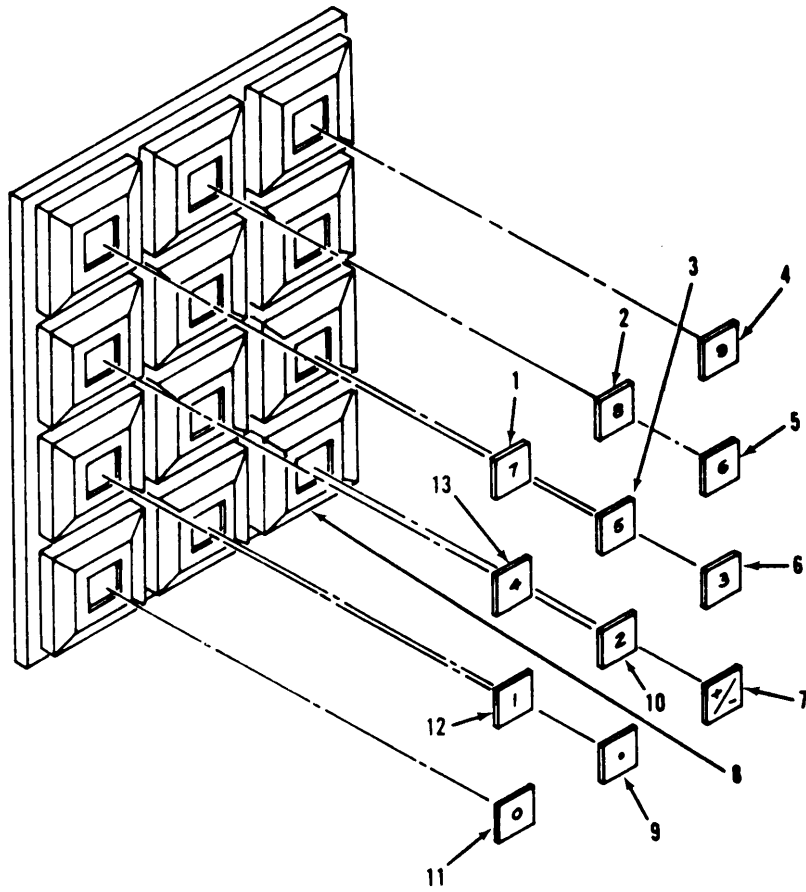


FIGURE A-7 KEYBOARD ASSY COMPONENT PARTS
(ASS Y 12303527).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 01010400	
				FIGURE A-7 KEYBOARD ASSEMBLY	
				COMPONENT PARTS	
1	XAFZZ	19200	12303479	KEYBOARD	1
1	XDFZZ	19200	12303229-7	INSERT,KEYBOARD BLK	1
2	XDFZZ	19200	12303229-8	INSERT,KEYBOARD BLK	1
3	XDFZZ	19200	12303229-5	INSERT,KEYBOARD BLK	1
4	XDFZZ	19200	12303229-9	INSERT,KEYBOARD BLK	1
5	XDFZZ	19200	12303229-6	INSERT,KEYBOARD BLK	1
6	XDFZZ	19200	12303229-3	INSERT,KEYBOARD BLK	1
7	XDFZZ	19200	12303229-12	INSERT,KEYBOARD BLK	1
9	XDFZZ	19200	12303229-11	INSERT,KEYBOARD BLK	1
10	XDFZZ	19200	12303229-2	INSERT,KEYBOARD BLK	1
11	XDFZZ	19200	12303229-10	INSERT,KEYBOARD BLK	1
12	XDFZZ	19200	12303229-1	INSERT,KEYBOARD BLK	1
13	XDFZZ	19200	12303229-4	INSERT,KEYBOARD BLK	1

END OF FIGURE

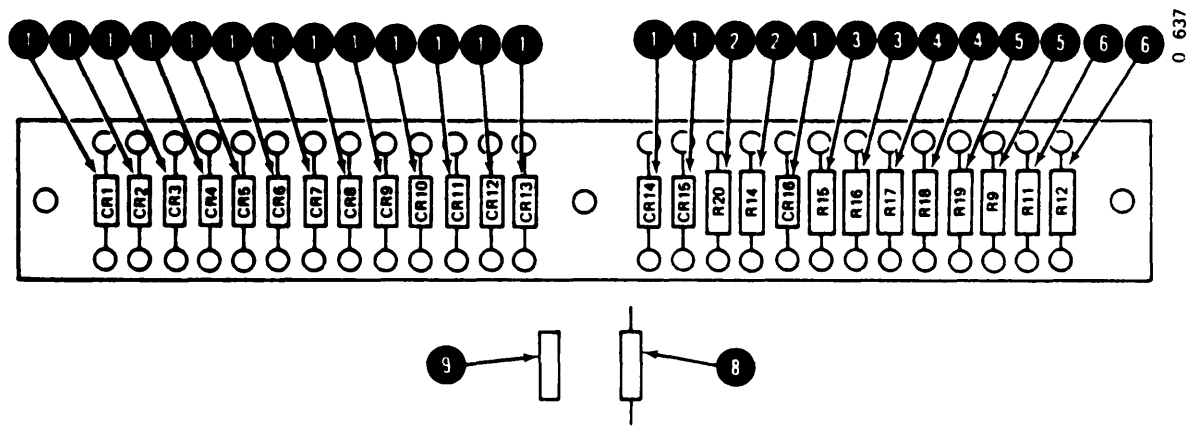


FIGURE A-8 BOARD ASSY TBI COMPONENT PARTS
(ASSY P/N 12303437).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01010500					
FIGURE A-8 BOARD ASSEMBLY TB1					
COMPONENT PARTS					
1	PAFZZ	81349	JAN1N3600	SEMICONDUCTOR DEVIC CR1-CR16	16
2	PAFZZ	81349	RNC60H1001FS	RESISTOR, FIXED, FILM R14, R20-	2
3	PAFZZ	81349	RNC60H3011FS	RESISTOR, FIXED, FILM R15, R16	2
4	PAFZZ	81349	RNC60H2051FS	RESISTOR, FIXED, FILM R17, R18	2
5	PAFZZ	81349	RNC60H1002FS	RESISTOR, FIXED, FILM R9, R19	2
6	PAFZZ	81349	RNC60H5111FS	RESISTOR, FIXED, FILM R11, R12	2
7	XAFZZ	19200	12303481	TERMINAL BOARD	1
8	MFFZZ	81348	QQW343TYPES22AWG	WIRE, ELECTRICAL (MAKE FROM NSN 6145-00-669-6564	V
9	MFFZZ	81349	MILI221229	SLEEVING (MAKE FROM MIL-I-22129 22 AWG)	V

END OF FIGURE

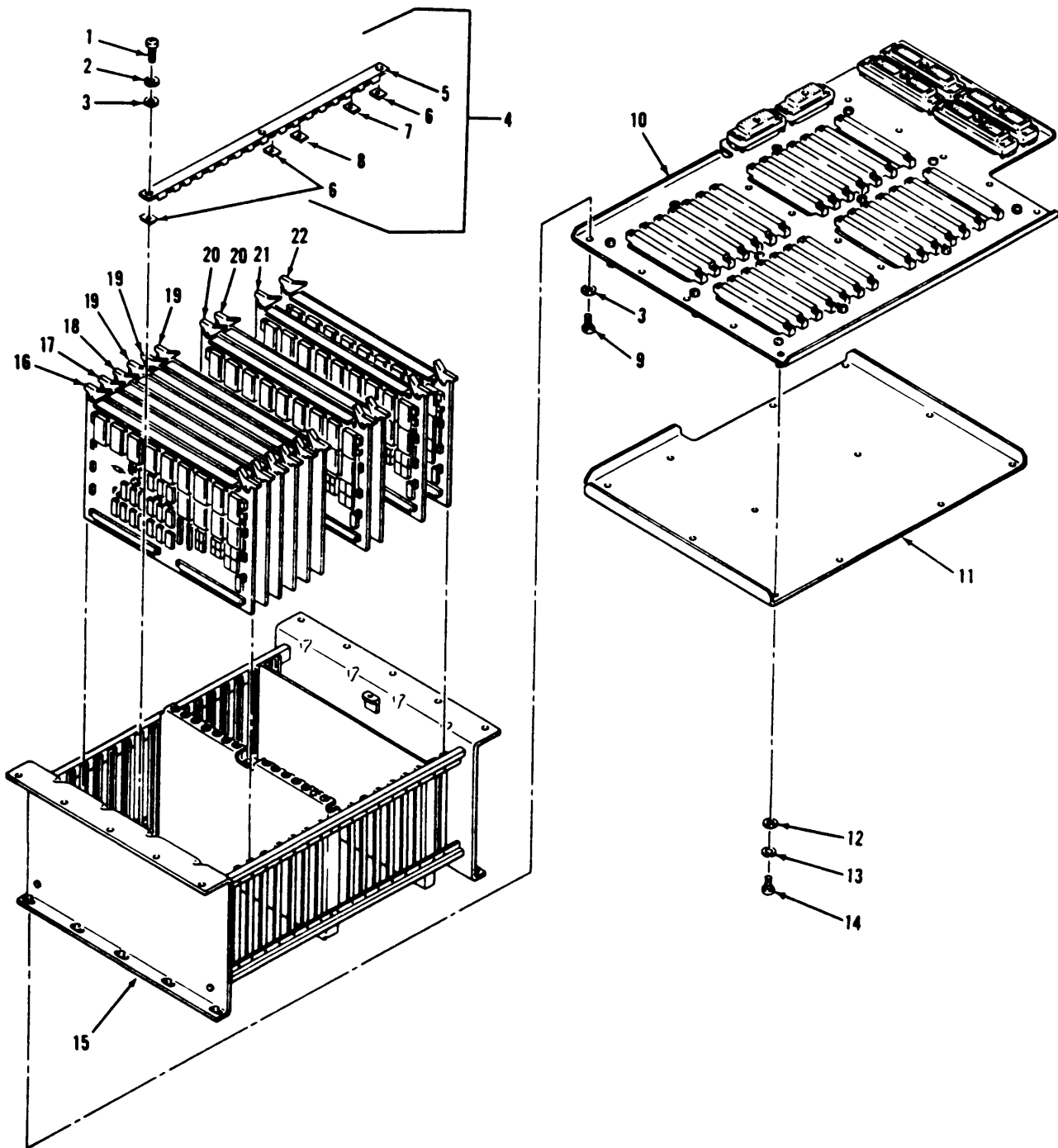


FIGURE A-9 DIGITAL SUBSYSTEM ASSEMBLY A3 COMPONENT PARTS (ASSY P/N 12303440) AND ELECTRICAL CARD HOLDER.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01010600					
FIGURE A-9 DIGITAL SUBSYSTEM					
ASSEMBLY A3 COMPONENT PARTS AND					
ELECTRICAL CARD HOLDER					
1	PAFZZ	80205	NAS1635-3-12	SCREW,MACHINE	3
2	PAFZZ	96906	MS35338-138	WASHER,LOCK	3
3	PAFZZ	80205	NAS620C10L	WASHER,FLAT	17
4	PAFFF	19200	12303514	HOLDER,ELECTRICAL C	1
5	XAFZZ	19200	12303364	.RETAINER	1
6	MFFZZ	19200	12303363-1	.PAD (MAKE FROM MIL-C-3133 TY OPT)	3
7	MFFZZ	19200	12303363	.PAD (MAKE FROM MIL-C-3133 TY OPT 062SHEET)	13
8	MFFZZ	19200	12303363-2	.PAD (MAKE FROM MIL-C-3133,TY OPT)	1
9	PAFZZ	80205	NAS1635-3-8	SCREW,MACHINE	14
10	PBFDD	19200	12303442	TERMINAL BOARD (FOR COMPONENT PARTS SEE GROUP 01010209)	1
11	XDFZZ	19200	12303382	PLATE	1
12	PAFZZ	80205	NAS620C6L	WASHER,FLAT	12
13	PAFZZ	96906	MS35338-136	WASHER,LOCK	12
14	PAFZZ	80205	NAS1635-06-6	SCREW,MACHINE	12
15	XDFFF	19200	12303441	CARD CAGE,DIGITAL (FOR COMPONENT PARTS SEE GROUP 01010210)	1
16	PAFDD	19207	12303448	CIRCUIT CARD ASSEMB PROCESSOR A2 (FOR COMPONENT PARTS SEE GROUP 01010202)	1
17	PAFDD	19200	12303388	CIRCUIT CARD ASSEMB PANEL INTERFACE A3 (FOR COMPONENT PARTS SEE GROUP 01010203)	1
18	PAFDD	19200	12303510	CIRCUIT CARD ASSEMB DVM-ISO A4 (FOR COMPONENT PARTS SEE GROUP 01010900)	1
19	PAFDD	19200	12303507	CIRCUIT CARD ASSEMB SCANNER A5,A6, A7 (FOR COMPONENT PARTS SEE GROUP 01011000)	3
20	PAFDD	19200	12303528	CIRCUIT CARD ASSEMB STIMULI A9, A10 (FOR COMPONENT PARTS SEE GROUP 0101206)	2
21	PAFDD	19200	12303391	CIRCUIT CARD ASSEMB TRU-FCS SIMULATOR A13 (FOR COMPONENT PARTS SEE GROUP 01010207)	1
22	PAFDD	19200	12303397	PRINTED CIRCUIT BOA VIDEO DATA PROCESSOR A14 (FOR COMPONENT PARTS SEE GROUP 01010208) (FOR COMPONENT PARTS SEE G	1

END OF FIGURE

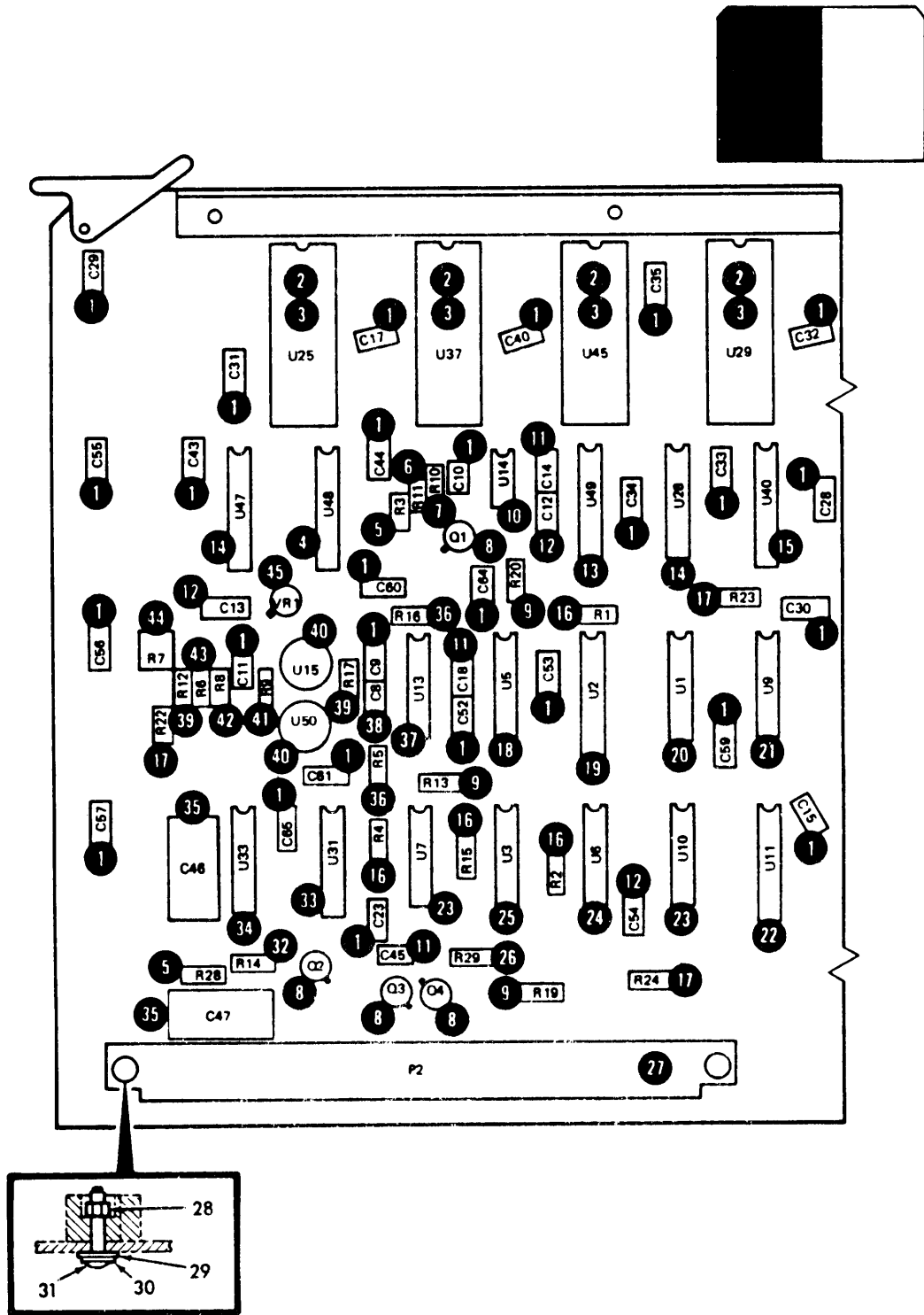


FIGURE A-10 PROCESSOR CIRCUIT CARD ASSEMBLY A2 COMPONENT PARTS (ASSY P/N 12303448, SHEET 1 OF 2).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01010700					
FIGURE A-10 PROCESSOR CIRCUIT CARD					
ASSEMBLY A2 COMPONENT PARTS					
1	PADZZ	81349	M39014/01-1593	CAPACITOR, FIXED, CER C3-C7, C9-C11, C15, C-17, C21-C25-C44, C48, C52, C53, C55-C57, C59-61, C64, C65	45
2	PADZZ	81349	M83734/8-015	SOCKET, PLUG-IN ELEC XU25, XU27, XU29, XU32, XU34, XU36, XU37, XU43-XU46	11
3	PADZZ	19200	12303327	MICROCIRCUIT, DIGITA U25, U27, U29 U32, U34, U36, U37, U43, U46	11
4	PADZZ	19200	12303130	MICROCIRCUIT, DIGITA U48	1
5	PADZZ	81649	RCR07G1222JS	RESISTOR, FIXED, COMP R3, R28	2
6	PADZZ	81349	RCR07G513JS	RESISTOR, FIXED, COMP R11	1
7	PADZZ	81349	RCR07G272JS	RESISTOR, FIXED, COMP R10	1
8	PADZZ	81349	JAN2N2222A	TRANSISTOR Q1-A4	4
9	PADZZ	81349	RCR07G222JS	RESISTOR, FIXED, COMP R13, R18-R20	4
10	PADZZ	81349	M38510/10901BPB	MICROCIRCUIT, LINEAR U14	1
11	PADZZ	81349	M39014/02-1419	CAPACITOR, FIXED, CER C14, C18, C54	4
12	PADZZ	81349	M39014/02-1338	CAPACITOR, FIXED CER C1, C12, C13, C54	4
13	PADZZ	81349	M38510/11107BEC	MICROCIRCUIT, LINEAR U49	1
14	PADZZ	81349	M38510/30701BEB	MICROCIRCUIT, DIGITA U28, U30, U35, U47	4
15	PADZZ	14933	8001802EB	MICROCIRCUIT, DIGITA U40	1
16	PADZZ	81349	RCR05G681JS	RESISTOR, FIXED, COMP R1, R2, R4, R15 R21	5
17	PADZZ	81349	RCR07G393JS	RESISTOR, FIXED, COMP R22-R24	3
18	PADZZ	81349	M38510/30003BCB	MICROCIRCUIT, DIGITA U5	1
19	PADZZ	81349	M8340102M3001JB	RESISTOR NETWORK, F1 U2	1
20	PADZZ	81349	M38510/07005BCB	MICROCIRCUIT, DIGITA U1	1
21	PADZZ	81349	M38510/00803BCB	MICROCIRCUIT, DIGITA U9	1
22	PADZZ	81349	12303172	MICROCIRCUIT, DIGITA U7, U10	2
23	PADZZ	81349	M38510/30001BCB	MICROCIRCUIT, DIGITA U7, U10	2
24	PADZZ	81349	M38510/30501BCB	MICROCIRCUIT, DIGITA U6	1
25	PADZZ	81349	M38510/00801BCB	MICROCIRCUIT, DIGITA U3	1
26	PADZZ	81349	RCR07G200JS	RESISTOR, FIXED, COMP R29	1
27	PADZZ	81349	M55302/57-B70Y	CONNECTOR, RECEPTACL P1, P2	2
28	PADZZ	80205	NAS671C4	NUT, PLAIN, HEXAGON	4
29	PADZZ	96906	MS15795-803	WASHER, FLAT	4
30	PADZZ	96906	MS35338-135	WASHER, LOCK	4
31	PADZZ	80205	NAS1635-04-6	SCREW, MACHINE	4
32	PADZZ	81349	RCR07G752JS	RESISTOR, FIXED, COMP R14	1
33	PADZZ	81349	M38510/30005BCB	MICROCIRCUIT, DIGITA R14	1
34	PADZZ	81349	M38510/07201BCB	MICROCIRCUIT, DIGITA U8, U33	2
35	PADZZ	81349	M39003/01-3032	CAPACITOR, FIXED, ELE C46, C47	2
36	PADZZ	81349	RCR07G204JS	RESISTOR, FIXED, COMP R5, R16	2
37	PADZZ	81349	M38510-31401BEB	MICROCIRCUIT, DIGITA U13	1
38	PADZZ	81349	M39014/02-1356	CAPACITOR, FIXED, CER C8	1
39	PADZZ	81349	RCR07G202JS	RESISTOR, FIXED, COMP R12, R17	2
40	PADZZ	81349	M38510/10304BGC	MICROCIRCUIT, LINEAR U15, U50	2
41	PADZZ	81349	RCR07G152JS	RESISTOR, FIXED, COMP R9	1
42	PADZZ	81349	RCR07G821JS	RESISTOR, FIXED, COMP R8	1
43	PADZZ	81349	RCR07G102JS	RESISTOR, FIXED, COMP R6	1

SECTION II

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(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
44	PADZZ	81349	RJR26FX203P	RESISTOR,VARIABLE,N R7	1
45	PADZZ	19200	12303222	MICROCIRCUIT,LINEAR VR1	1
46	PADZZ	81349	M38510/32403BRB	MICROCIRCUIT DIGITA U16,U17,U20-U22	5
47	PADZZ	96906	MS16535-78	RIVET,TUBULAR	4
48	XADZZ	19207	12303525	STIFFENER	1
49	PADZZ	19207	12303176	EJECTOR	2
50	PADZZ	81349	M38510-32803BRB	MIRCROCIRCUIT,DIGITA U18,U19	2
51	PADZZ	81349	M39014/01-1329	CAPACITOR,FIXED,CER C19,C20	2
52	PADZZ	19200	12303101	CRYSTAL Y1	1
53	PADZZ	19200	12303170	MICROCIRCUIT,DIGITA U12	1
54	PADZA	81349	M83734/10-015	SOCKET,PLUG-IN ELEC XU12	1
55	PADZZ	81349	M39003-01-3021	CAPACITOR,FIXED,ELE C2	1
56	PADZZ	81349	M38510/07009BEB	MICROCIRCUIT,DIGITA U38	1
57	PADZZ	19200	12303102	MICROCIRCUIT,DIGITA U4	1
58	PADZZ	81349	M38510/23802BVB	MICROCIRCUIT,DIGITA U41,U42	2
59	PADZZ	81349	M38510/30007BCB	MICROCIRCUIT,DIGITA U23	1
60	PADZZ	19200	12303156	MICROCIRCUIT,DIGITA U26	1
61	PADZZ	19200	12303154	MIRCROCIRCUIT,DIGITA U39	1
62	XADZZ	19200	12303151	BOARD,PRINTED CIRCUIT	1
63	MDDZZ	81349	MIL-W-583 TYPE T	WIRE (MAKE FROM MIL-W-583)	V
64	MDDZZ	81348	QQW343S24S1B	WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-012-1664)	V

END OF FIGURE

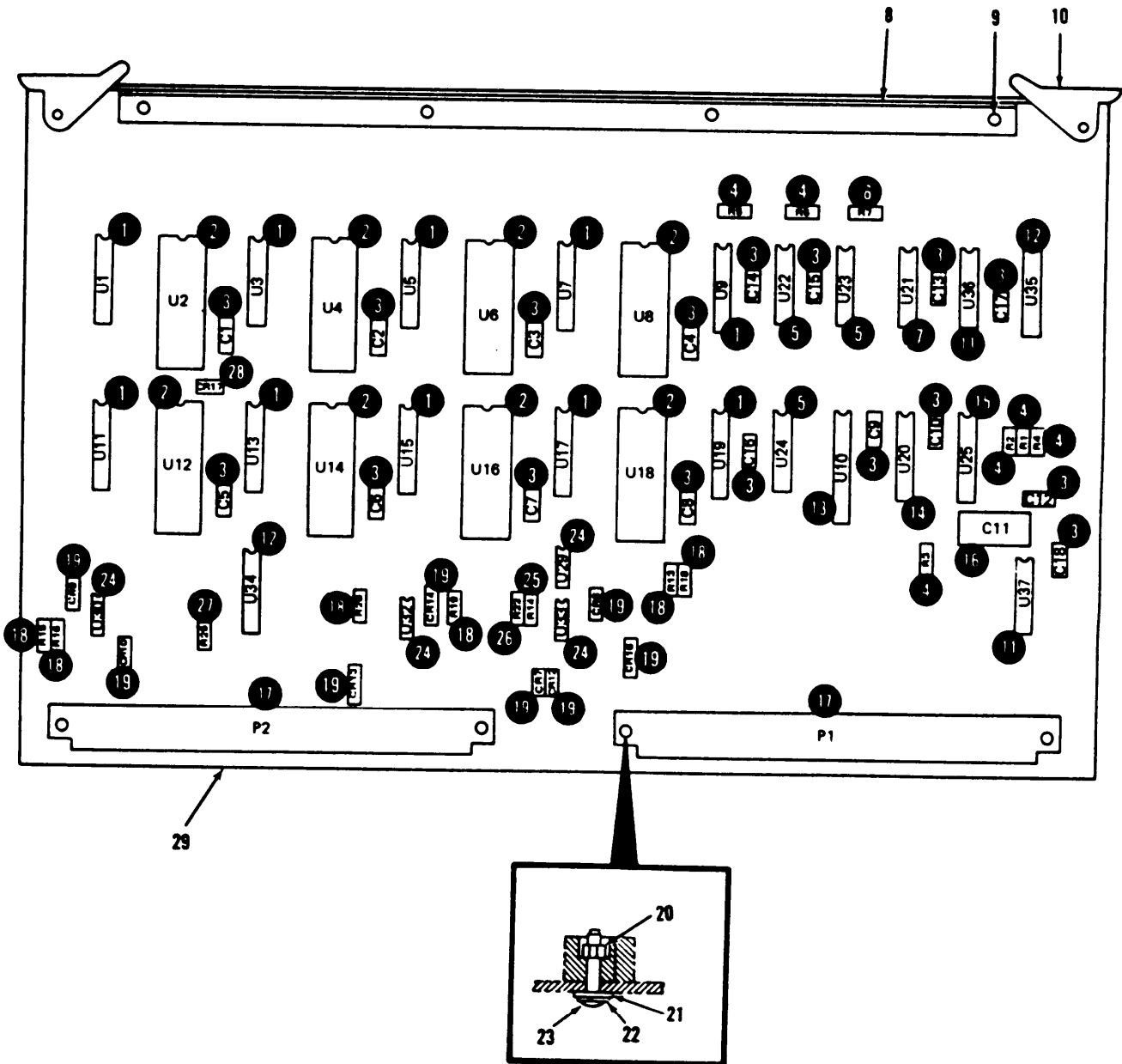


FIGURE A-1 PANEL INTERFACE CIRCUIT CARD ASSEMBLY A3
COMPONENT PARTS (ASSY P/N 12303388).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01010800					
FIGURE A-11 PANEL INTERFACE CIRCUIT					
CARD ASSEMBLY A3 COMPONENT PARTS					
1	PADZZ	81349	M8340102M2001JB	RESISTOR NETWORK,FI U1,U3,U5,U7,U9 U11,U13,U15,U17,U19	10
2	PADZZ	81349	M38510/01401BJB	MICROCIRCUIT,DIGITA U2,U4,U6,U8 U12,U14,U16,U18	8
3	PADZZ	81349	M39014/01-1593	CAPACITOR, FIXED, CER C1-C10,C12-C18	17
4	PADZZ	81349	RCR07G202JS	RESISTOR, FIXED, COMP R1-R6	6
5	PADZZ	19200	12303131	MICROCIRCUIT, LINEAR U22-U24	3
6	PADZZ	81349	RCR07G102JS	RESISTOR, FIXED, COMP R7	1
7	PADZZ	81349	M38510-01602BCB	MICROCIRCUIT, DIGITA U21	1
8	XADZZ	19207	12303525	STIFFENER	1
9	PADZZ	96906	MS16535-78	RIVET, TUBULAR	4
10	PADZZ	19207	12303176	EJECTOR	2
11	PADZZ	01295	SNC54125J-00	MICROCIRCUIT, DIGITA U36,U37	2
12	PADZZ	81349	M38510/05504BEB	MICROCIRCUIT, DIGITA U34,U35	2
13	PADZZ	81349	M38510-32401BRB	MICROCIRCUIT, DIGITA U10	1
14	PADZZ	19200	12303104	INTERGRATED CIRCUIT U20	1
15	PADZZ	81349	M8340102H1001JB	RESISTOR NETWORK, FI U25	1
16	PADZZ	81349	M39003/01-3015	CAPACITOR, FIXED, ELE C11	1
17	PADZZ	81349	M55302/57-B70Y	CONNECTOR, RECEPTACL P1,P2	2
18	PADZZ	81349	RCR07G162JS	RESISTOR, FIXED, COMP R13,R15,R16 R18-R20	6
19	PADZZ	81349	JANTX1N3600	SEMICONDUCTOR DEVIC CR7-CR10,CR12, CR14,CR16	8
20	PADZZ	80205	NAS671C4	NUT, PLAIN, HEXAGON	4
21	PADZZ	96906	MS15795-803	WASHER, FLAT	4
22	PADZZ	96906	MS35338-135	WASHER, LOCK	4
23	PADZZ	80205	NAS1635-04-6	SCREW, MACHINE	4
24	PADZZ	19207	12303110	COUPLER, OPTOELECTRO U29,U30,U32,U33	4
25	PADZZ	81349	RCR07G391JS	RESISTOR, FIXED, COMP R14	1
26	PADZZ	81349	RCR07G122JS	RESISTOR, FIXED, COMP R22	1
27	PADZZ	81349	RCR07G203JS	RESISTOR, FIXED, COMP R25	1
28	PADZZ	81349	JAN1N4107	SEMICONDUCTOR DEVIC CR17	1
29	XADZZ	19200	12303315	BOARD	1

END OF FIGURE

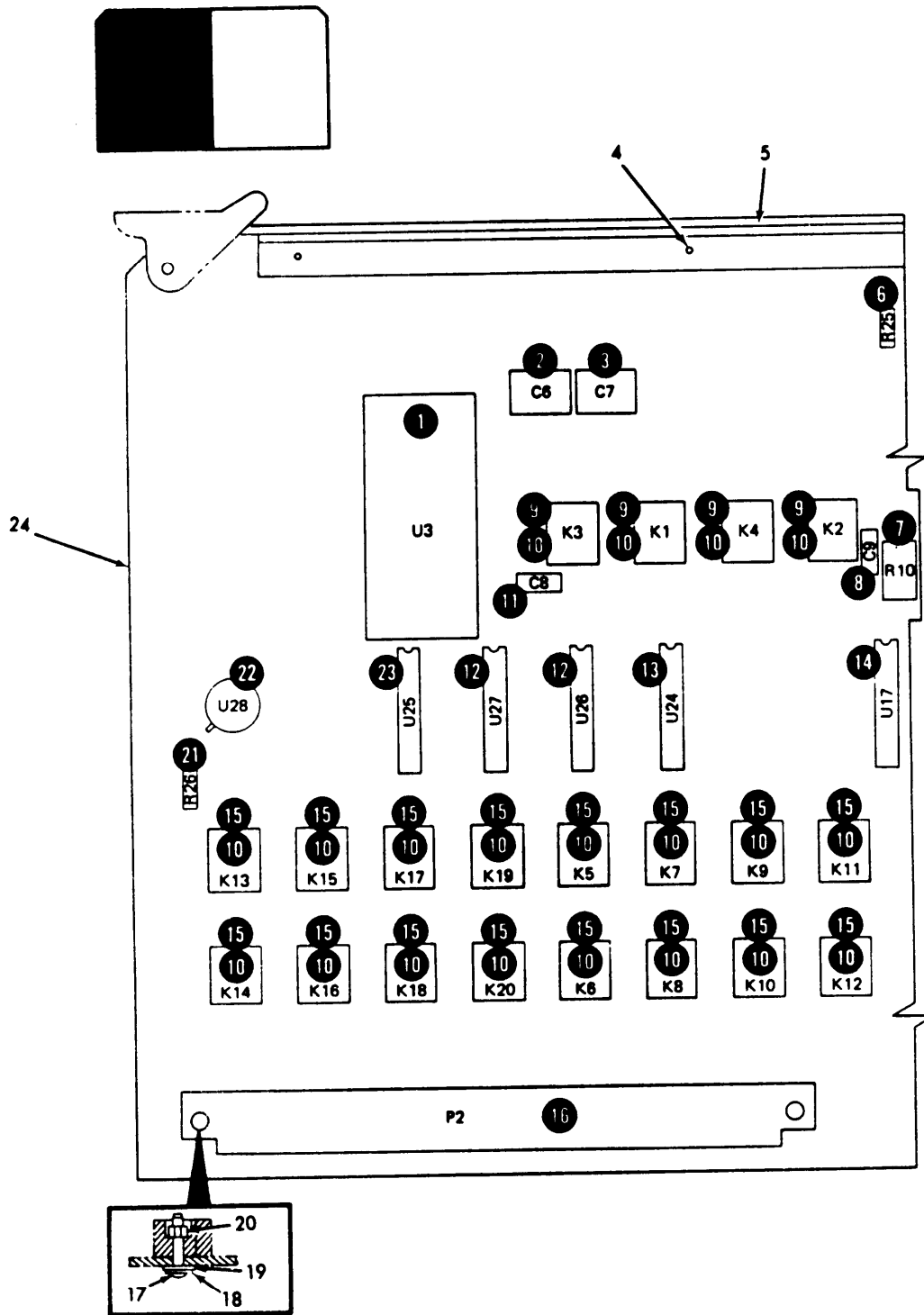


FIGURE A-12 DIGITAL VOLTMETER CIRCUIT CARD ASSEMBLY A4
 COMPONENT PARTS (ASSY P/N 12303510, SHEET 1 OF 2).

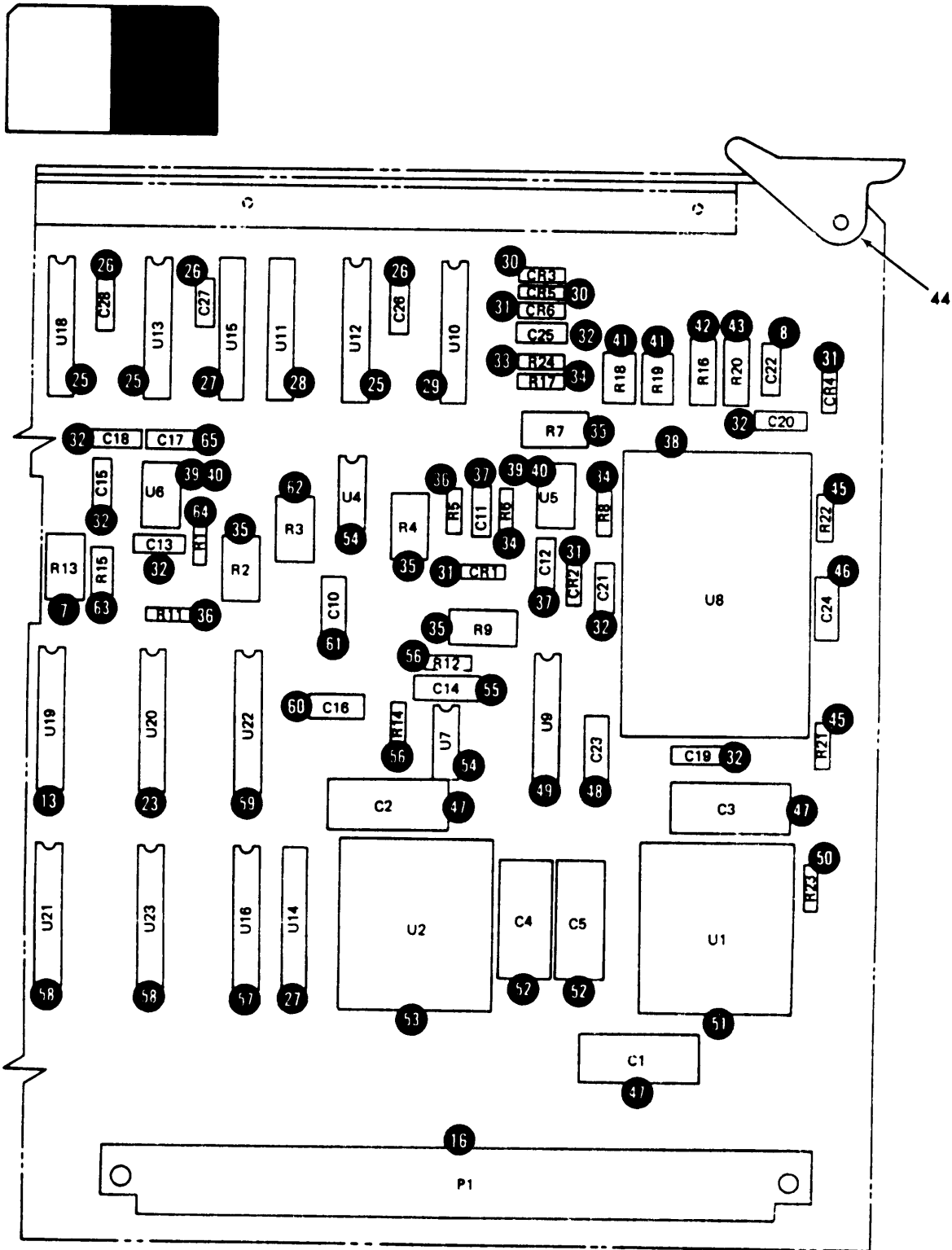


FIGURE A-12 DIGITAL VOLTMETER CIRCUIT CARD ASSEMBLY .44
 COMPONENT PARTS (ASSY P/N 12303510, SHEET 2 OF 2).

SECTION II

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(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01010900					
FIGURE A-12 DIGITAL VOLTMETER					
CIRCUIT CARD ASSEMBLY A4 COMPONENT					
PARTS.					
1	PADZZ	19200	12303228	RESISTOR NETWORK,FI U3	1
2	PADZZ	19207	12303233	CAPACITOR,VARIABLE, C6	1
3	PADZZ	19200	12303234	CAPACITOR,VARIABLE, C7	1
4	PADZZ	96906	MS16535-78	RIVET,TUBULAR	4
5	XADZZ	19207	12303525	STIFFENER	1
6	PADZZ	81349	RCR07G391JS	RESISTOR,FIXED,COMP R25	1
7	PADZZ	81349	RBR56L20001BR	RESISTOR,FIXED,WIRE R10,R13	2
8	PADZZ	81349	M39014-02-1338	CAPACITOR,FIXED,CER C9,C22	2
9	PADZZ	81349	M28776/1-030P	RELAY,HYBRID K1-K4	4
10	PADZZ	81349	M38527/05-003D	MOUNTING PAD,ELECTR XK1-XK20	20
11	PADZZ	81349	CMR04F221GODR	CAPACITOR,FIXED,MIC C8	1
12	PADZZ	81349	M38510/01104BEB	MICROCIRCUIT,DIGITA U26,U27	2
13	PADZZ	19200	12303130	MICROCIRCUIT,DIGITA U19,U24	2
14	PADZZ	81349	M8340105K1001FG	RESISTOR NETWORK,FI U17	1
15	PADZZ	81349	M39016/20-054P	RELAY,ELECTROMAGNET K5-K20	16
16	PADZZ	81349	M55302/57-B70Y	CONNECTOR,RECEPTACL P1,P2	2
17	PADZZ	80205	NAS1635-04-6	SCREW,MACHINE	4
18	PADZZ	96906	MS35338-135	WASHER,LOCK	4
19	PADZZ	96906	MS15795-803	WASHER,FLAT	4
20	PADZZ	80205	NAS671C4	NUT,PLAIN,HEXAGON	4
21	PADZZ	81349	RCR07G302JS	RESISTOR,FIXED,COMP R26	1
22	PADZZ	19200	12303222	MICORCIRCUIT,LINEAR U28	1
23	PADZZ	81349	M38510/30003BCB	MICROCIRCUIT,DIGITA U20,U25	2
24	XADZZ	19200	12303512	BOARD DIG VOLT	1
25	PADZZ	19200	12303140	COUPLER,OPTOELECTRO U12,U13,U18	3
26	PADZZ	81349	M39014/02-1350	CAPACITOR,FIXED,CER C26-C28	3
27	PADZZ	81349	M8340105M2001JC	RESISTOR NETWORK,FI U14,U15	2
28	PADZZ	81349	M8340105M3900JC	RESISTOR NETWORK,FI U11	1
29	PADZZ	19200	12303131	MICROCIRCUIT,LINEAR U10	1
30	PADZZ	81349	JAN1N5711	SEMICONDUCTOR DEVIC CR3,CR5	2
31	PADZZ	81349	JANTX1N3600	SEMICONDUCTOR DEVIC CR1,CR2,CR4,CR6	4
32	PADZZ	81349	M39014/02-1419	CAPACITOR,FIXED,CER C13,C15,C18-C21,C25	7
33	PADZZ	81349	RCR07G105JS	RESISTOR,FIXED,COMP R24	1
34	PADZZ	81349	RCR07G103JS	RESISTOR,FIXED,COMP R6,R8,R17	3
35	PADZZ	81349	RBR56L10001BR	RESISTOR,FIXED,WIRE R2,R4,R7,R9	4
36	PADZZ	81349	RCR07G512JS	RESISTOR,FIXED,COMP R5,R11	2
37	PADZZ	81349	M39014/01-1330	CAPACITOR,FIXED,CER C11,C12	2
38	PADZZ	19207	12303161	CONVERTOR,ANALOG TO U8	1
39	PADZZ	81349	M68510/10104BGC	MICROCIRCUIT,LINEAR U5,U6	2
40	PADZZ	19200	12303314	SPREADER	2
41	PADZZ	81349	RJR26FW253P	RESISTOR R18,R19	2
42	PADZZ	81349	RCR07G395JS	RESISTOR,FIXED,COMP R16	1
43	PADZZ	81349	RCR07G186JS	RESISTOR,FIXED,COMP R20	1
44	PADZZ	19207	12303176	EJECTOR	2
45	PADZZ	81349	RCR07G202JS	RESISTOR,FIXED,COMP R21,R22	2
46	PADZZ	81349	M39014/01-1323	CAPACITOR,FIXED,CER C24	1

SECTION II

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(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
47	PADZZ	981349	M39003/01-3032	CAPACITOR, FIXED, ELE C1-C3	3
48	PADZZ	81349	M39014/02-1332	CAPACITOR, FIXED, CER C23	1
49	PADZZ	19200	12303142	MICROCIRCUIT, LINEAR U9	1
50	PADZZ	81349	RCR07G392JS	RESISTOR, FIXED, COMP R23	1
51	PADZZ	19200	12303166	POWER SUPPLY U1	1
52	PADZZ	81349	M39003/01-3026	CAPACITOR, FIXED, ELE C4, C5	2
53	PADZZ	19200	12303165	POWER SUPPLY U2	1
54	PADZZ	19200	12303390	MICROCIRCUIT, LINEAR U4, U7	2
55	PADZZ	81349	M39014/02-1356	CAPACITOR, FIXED, CER C14	1
56	PADZZ	81349	RCR07G244JS	RESISTOR, FIXED, COMP R12, R14	2
57	PADZZ	19200	12303104	INTEGRATED CIRCUIT U16	1
58	PADZZ	19200	12303123	MICROCIRCUIT, DIGITA U21, U23	2
59	PADZZ	81349	M38510/30701BEB	MICROCIRCUIT, DIGITA U22	1
60	PADZZ	81349	M39014/02-1354	CAPACITOR, FIXED, CER C16	1
61	PADZZ	81349	M39014/01-1336	CAPACITOR, FIXED, CER C10	1
62	PADZZ	81349	RBR56L38301BR	RESISTOR, FIXED, WIRE R3	1
63	PADZZ	81349	RBR56L22600BR	RESISTOR, FIXED, WIRE R15	1
64	PADZZ	81349	RCR07G474JS	RESISTOR, FIXED, COMP R1	1
65	PADZZ	81349	M39014-01-1339	CAPACITOR, FIXED, CER C17	1

END OF FIGURE

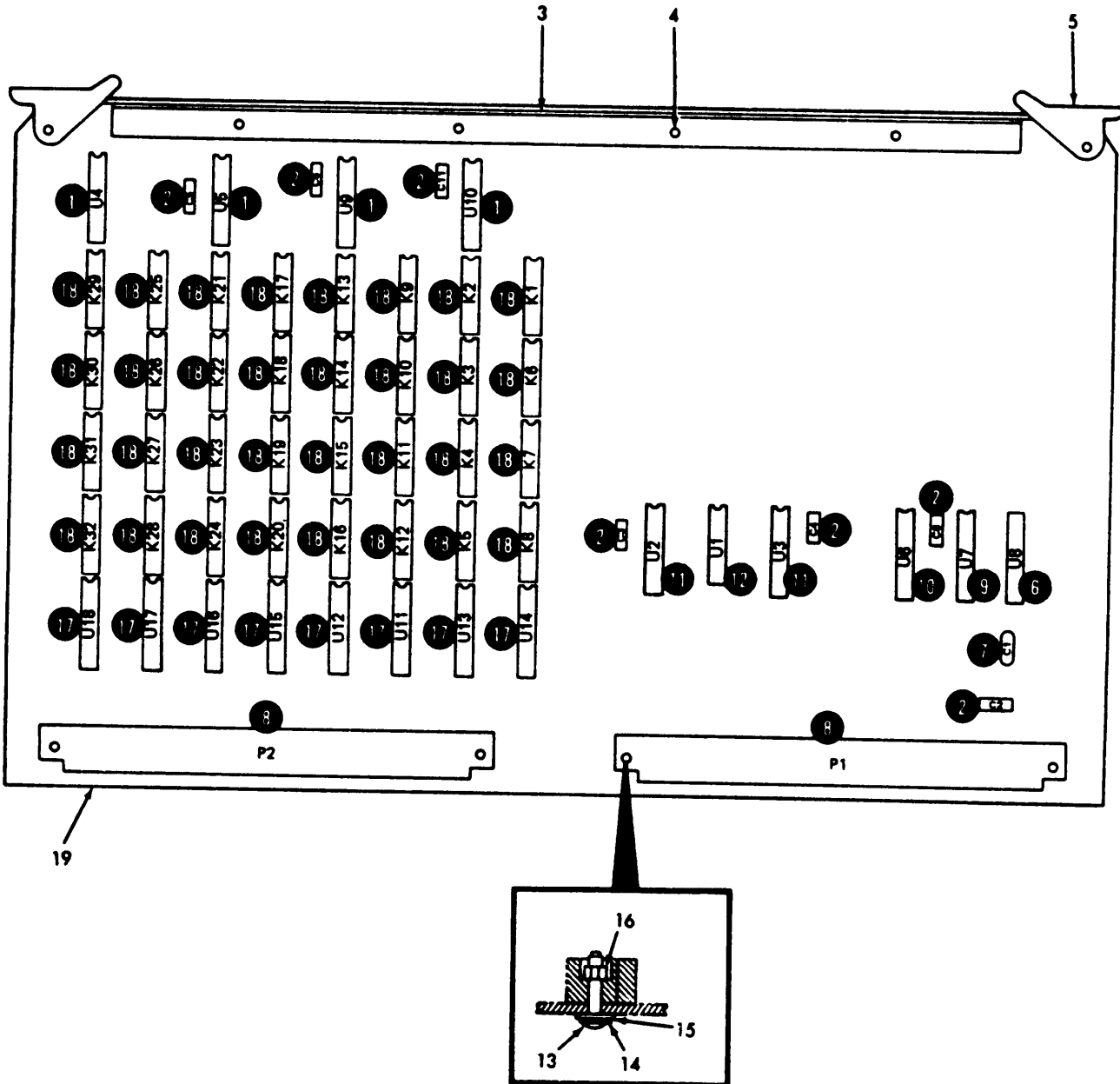


FIGURE A-13 SCANNER CIRCUIT CARD ASSEMBLY A5, A6, A7
COMPONENT PARTS (ASSY P/N 12303507).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01011000					
FIGURE A-13 SCANNER CIRCUIT CARD					
ASSEMBLY A5,A6,A7 COMPONENT PARTS					
1	PADZZ	81349	M38510/01004BEB	MICROCIRCUIT,DIGITA U4,U5,U9,U1	4
2	PADZZ	81349	M39014/02-1350	CAPACITOR,FIXED,CER C2-C6,C8-C11	7
3	XADZZ	19207	12303525	STIFFENER	1
4	PADZZ	96906	MS16535-78	RIVET,TUBULAR	4
5	PADZZ	19207	12303176	EJECTOR	2
6	PADZZ	81349	M8340105M2001JC	RESISTOR NETWORK,FI U8	1
7	PADZZ	81349	M39003/01-2979	CAPACITOR,FIXED,ELE 1	1
8	PADZZ	81349	M55302/57-B70Y	CONNECTOR,RECEPTACL P1,P2	2
9	PADZZ	19200	12303104	INTEGRATED CIRCUIT U7	1
10	PADZZ	81349	M38510/32601BEB	MICROCIRCUIT,DIGITA U6	1
11	PADZZ	19200	12303130	MICROCIRCUIT,DIGITA U2,U3	2
12	PADZZ	81349	M38510/30003BCB	MICROCIRCUIT,DIGITA U1	1
13	PADZZ	80205	NAS1635-04-6	SCREW,MACHINE	4
14	PADZZ	96906	MS35338-135	WASHER,LOCK	4
15	PADZZ	96906	MS15795-803	WASHER,FLAT	4
16	PADZZ	80205	NAS671C4	NUT,PLAIN,HEXAGON	4
17	PADZZ	81349	M8340102M1001JA	RESISTOR NETWORK,FI U11-U18	8
18	PADZZ	19200	12303365	RELAY,DIP K1-K32 (REPLACEMENT FOR 12303192)	32
19	XADZZ	19200	12303508	PRINTED CIRCUIT, BOARD	1

END OF FIGURE

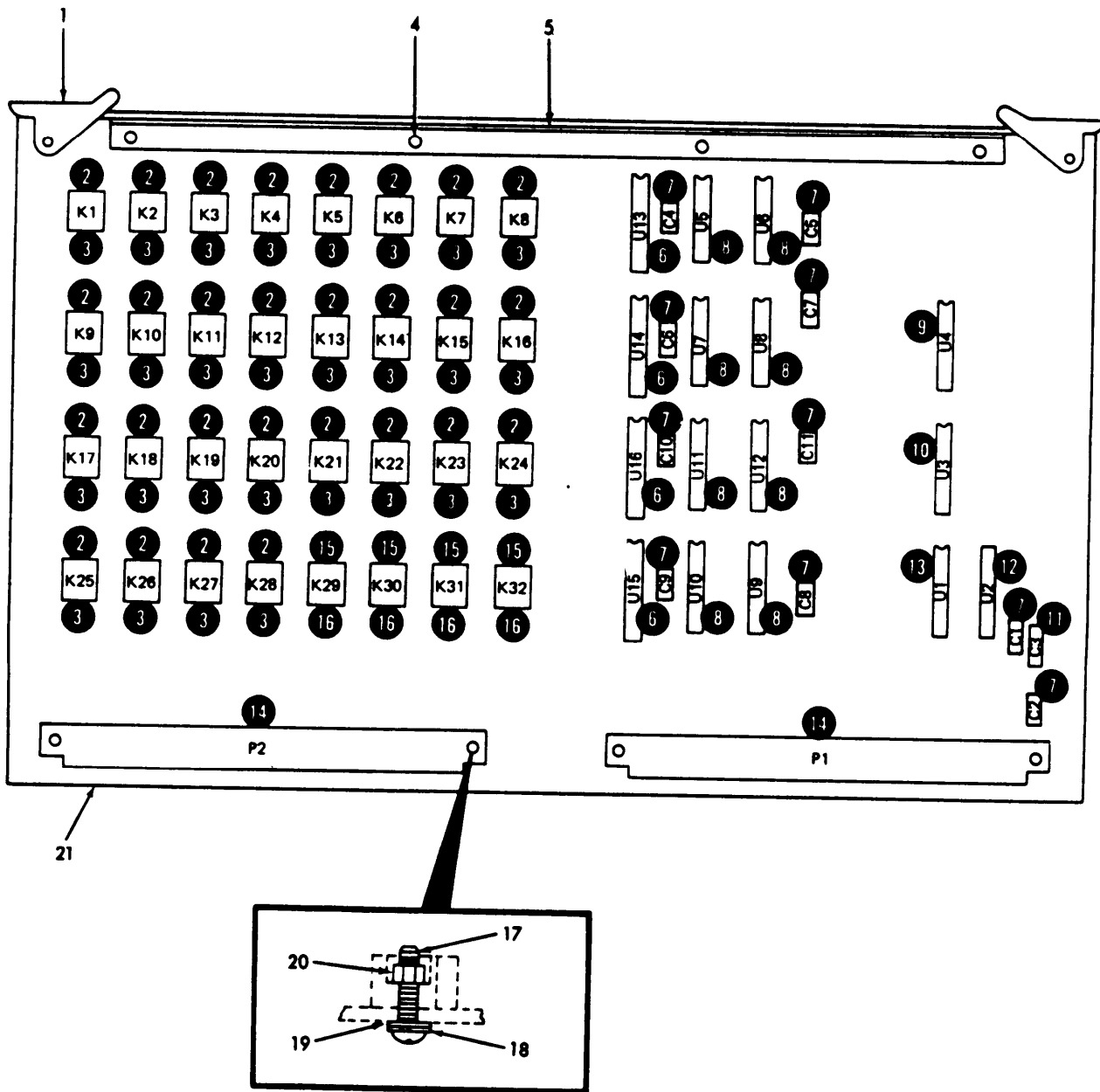


FIGURE A-14 STIMULI CIRCUIT CARD ASSEMBLY A9, A10
 COMPONENT PARTS (ASSY P/N 12303528).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01011100					
FIGURE A-14 STIMULI CIRCUIT CARD					
ASSEMBLY A9,A10 COMPONENT PARTS					
1	PADZZ	19207	12303176	EJECTOR	2
2	PADZZ	81349	M38527/05-001D	MOUNTING PAD,ELECTR XK1-XK28	28
3	PADZZ	81349	M39016/24-030P	RELAY,ELECTROMAGNET K1-K28	28
4	PADZZ	96906	MS16535-78	RIVET,TUBULAR	4
5	XADZZ	19207	12303525	STIFFENER	1
6	PADZZ	19200	12303180	INTEGRATED CIRCUIT U13-U16	4
7	PADZZ	81349	M39014/02-1350	CAPACITOR, FIXED, CER C1,C2,C4-C11	10
8	PADZZ	19200	12303130	MICROCIRCUIT, DIGITA U5-U12	8
9	PADZZ	81349	M38510/30003BCB	MICROCIRCUIT, DIGITA U4	1
10	PADZZ	81349	M38510/32601BEB	MICROCIRCUIT, DIGITA U3	1
11	PADZZ	81349	M39003/01-2979	CAPACITOR, FIXED, ELE C3	1
12	PADZZ	81349	M8340105M2001JC	RESISTOR NETWORK, FI U2	1
13	PADZZ	19200	12303104	INTEGRATED CIRCUIT U1	1
14	PADZZ	81349	M55302/57-B70Y	CONNECTOR, RECEPTACL P1, P2	2
15	PADZZ	81349	M38527/05-003D	MOUNTING PAD, ELECTR XK29-XK32	4
16	PADZZ	81349	M39016/20-054P	RELAY, ELECTROMAGNET K29-K32	4
17	PADZZ	80205	NAS1635-04-6	SCREW, MACHINE	4
18	PADZZ	96906	MS35338-135	WASHER, LOCK	4
19	PADZZ	96906	MS15795-803	WASHER, LOCK	4
20	PADZZ	80205	NAS671C4	NUT, PLAIN, HEXAGON	4
21	XADZZ	19200	12303530	BOARD	1

END OF FIGURE

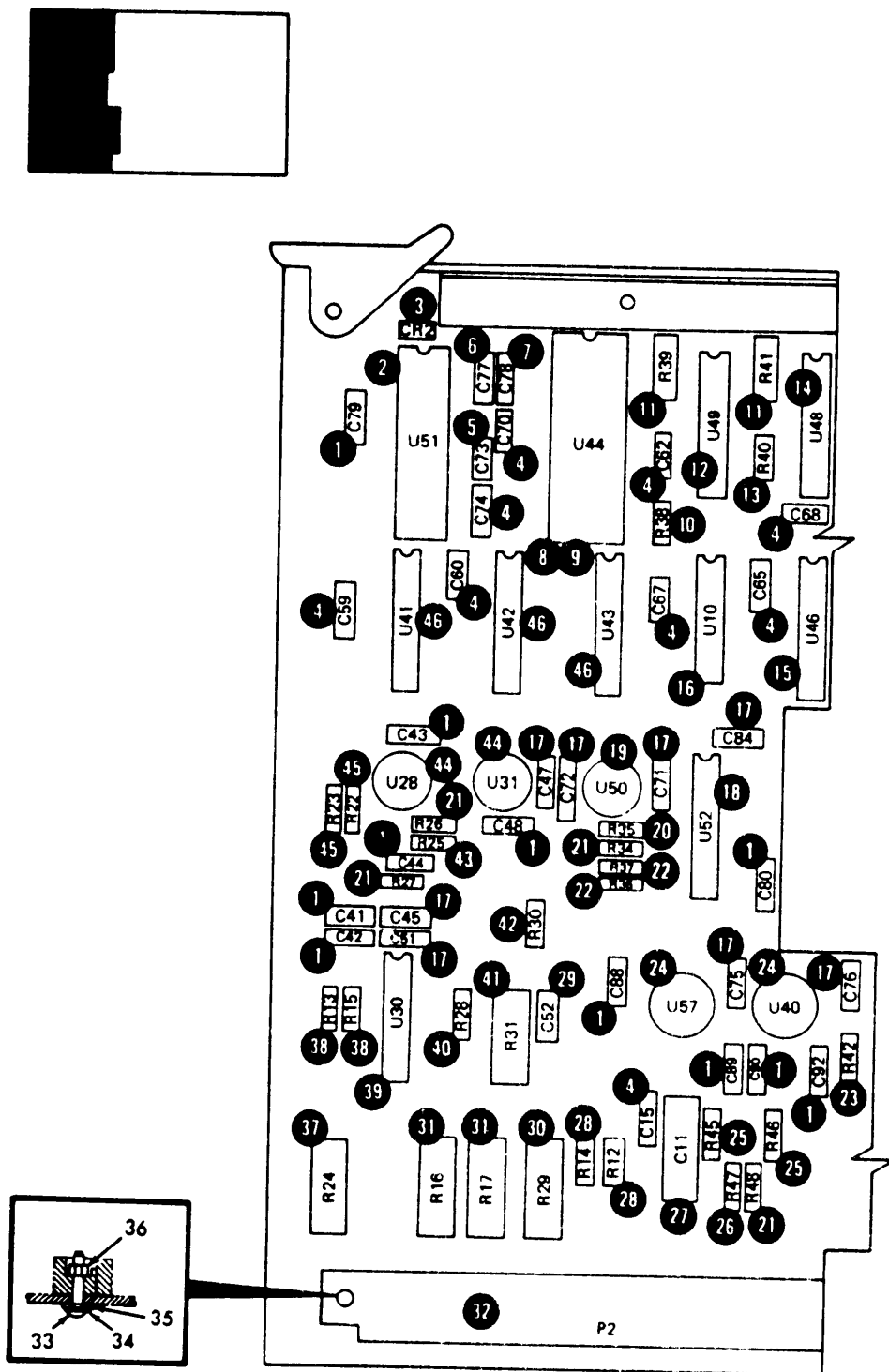


FIGURE A-15 TRU-FCS SIMULATOR CIRCUIT CARD ASSEMBLY A13
COMPONENT PARTS (ASSY P/N 12303391, SHEET 1 OF 3).

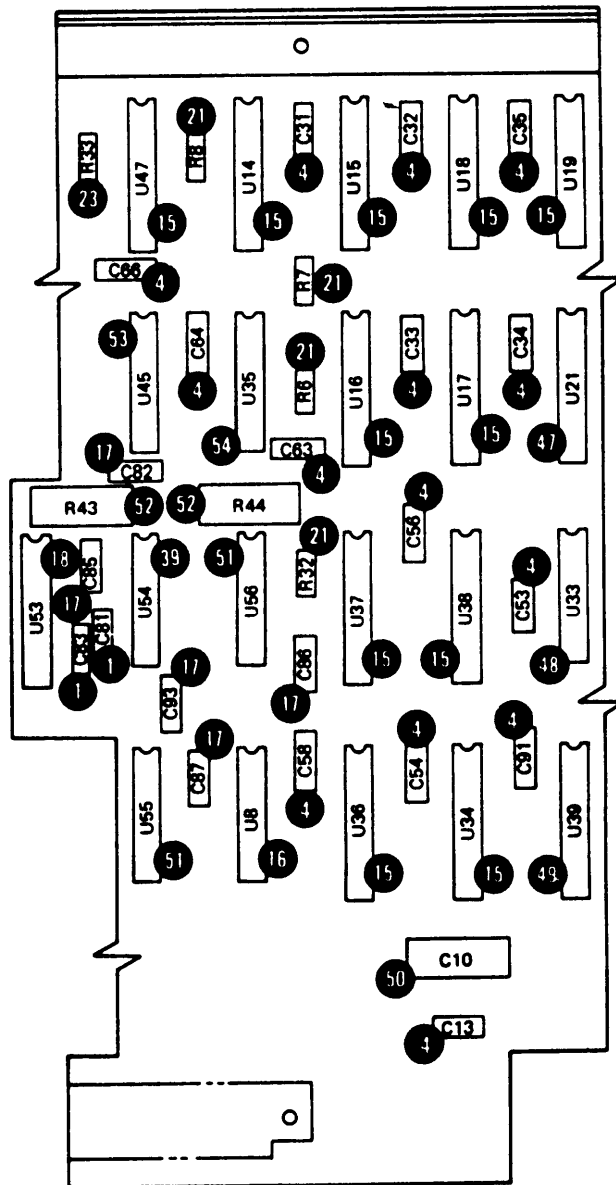
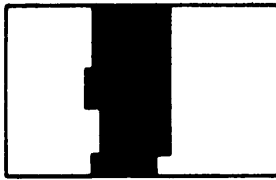


FIGURE A-15 TRU-FCS SIMULATOR CIRCUIT CARD ASSEMBLY A13
 COMPONENT PARTS (ASSY P/N 12303391, SHEET 2 OF 3).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01011200					
FIGURE A-15 TRU-FCS SIMULATOR					
CIRCUIT CARD ASSEMBLY A13 COMPONENT					
PARTS					
1	PADZZ	81349	M39014/02-1419	CAPACITOR, FIXED, CER C30, C41-C44, C48, C79-C81, C83, C88-C90, C92	14
2	PADZZ	19200	12303143	CONVERTER, DIGITAL T U6, U51	2
3	PADZZ	81349	JANIN3600	SEMICONDUCTOR DEVIC CR1, CR2	2
4	PADZZ	81349	M39014/01-1593	CAPACITOR, FIXED, CER C4-C7, C12, C13, C15, C16, C19-C24, C26, C28, C31-C38, C46, C53, C54, C56, C58-C60, C62-C68, C70, C74, C91	41
5	PADZZ	81349	M39014/01-1575	CAPACITOR, FIXED, CER C25, C39, C40, C73	4
6	PADZZ	81349	M39014/01-1357	CAPACITOR, FIXED, CER C27, C77	2
7	PADZZ	81349	M39014/01-1335	CAPACITOR, FIXED, CER C29, C78	2
8	PADZZ	19200	12303327	MICROCIRCUIT, DIGITA U44 (REPLACEMENT FOR 12303271-1)	1
9	PADZZ	81349	M83734/8-015	SOCKET, PLUG-IN ELEC XU44	1
10	PADZZ	81349	RCR07G823JS	RESISTOR, FIXED, COMP R2, R38	2
11	PADZZ	81349	RJR26FW103P	RESISTOR, VARIABLE, N R3, R5, R39, R41	4
12	PADZZ	81349	M38510/30902BEB	MICROCIRCUIT, DIGITA U49	1
13	PADZZ	81349	RCR07G105JS	RESISTOR, FIXED, COMP R4, R40	2
14	PADZZ	19200	12303271-2	MICROCIRCUIT, DIGITA U48	1
15	PADZZ	81349	M38510/31512BEB	MICROCIRCUIT, DIGITA U14-U20, U34, U36-U38, U46, U47	13
16	PADZZ	81349	M38510/30001BCB	MICROCIRCUIT, DIGITA U8, 710, U58	3
17	PADZZ	81349	M39014/02-1356	CAPACITOR, FIXED, CER C45, C47, C51, C71, C72, C75, C76, C82, C84-C87, C93	13
18	PADZZ	81349	M38510/11107BEC	MICROCIRCUIT, LINEAR U52, U53	2
19	PADZZ	19200	12272055	MICROCIRCUIT, LINEAR U50	1
20	PADZZ	81349	RCR07G221JS	RESISTOR, FIXED, COMP R35	1
21	PADZZ	81349	RCR07G102JS	RESISTOR, FIXED, COMP R6-R9, R26, R27, R32, R34, R48	9
22	PADZZ	81349	RCR07G152JS	RESISTOR, FIXED, COMP R36, R37	2
23	PADZZ	81349	RCR07G202JS	RESISTOR, FIXED, COMP R1, R33, R42	3
24	PADZZ	19200	12272041	MICROCIRCUIT, LINEAR U40, U57	2
25	PADZZ	81349	RNC55H61R9FS	RESISTOR, FIXED, FILM R45, R46	1
26	PADZZ	81349	RCR07G821JS	RESISTOR, FIXED, COMP R47	1
27	PADZZ	81349	M39003/01-3012	CAPACITOR, FIXED, ELE C11	1
28	PADZZ	81349	RNC60H82R5FS	RESISTOR, FIXED, FILM R12, F14	2
29	PADZZ	81349	M39014/02-1360	CAPACITOR, FIXED, CER C52	1
30	PADZZ	81349	RNC65H2371FS	RESISTOR, FIXED, FILM R29	1
31	PADZZ	81349	RNC65H2370FS	RESISTOR, FIXED, FILM R16, R17	2
32	PADZZ	81349	M55302/57-B70Y	CONNECTOR, RECEPTACL P1, P2	2
33	PADZZ	80205	NAS1635-04-6	SCREW, MACHINE	4
34	PADZZ	96906	MS35338-135	WASHER, LOCK	4
35	PADZZ	96906	MS15795-803	WASHER, FLAT	4
36	PADZZ	80205	NAS671C4	NUT, PLAIN, HEXAGON	4
37	PADZZ	81349	RNC65H2052FS	RESISTOR, FIXED, FILM R24	1
38	PADZZ	81349	RCR07G104JS	RESISTOR, FIXED, COMP R13, R15	2
39	PADZZ	81349	M38510/10102BCB	MICROCIRCUIT, LINEAR U30, U54	2

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
40	PADZZ	81349	RNC60H3832FS	RESISTOR, FIXED, FILM R28	1
41	PADZZ	81349	RNC65H5621FS	RESISTOR, FIXED, FILM R31	1
42	PADZZ	81349	RNC60H1001FS	RESISTOR, FIXED, FILM R30	1
43	PADZZ	81349	RCR07G243JS	RESISTOR, FIXED, COMP R5	1
44	PADZZ	19200	12272081	MICROCIRCUIT, LINEAR U28, U31	2
45	PADZZ	81349	RWR81S10R0FR	RESISTOR, FIXED, WIRE R22, R23	2
46	PADZZ	81349	M38510-31509BEB	MICROCIRCUIT, DIGITA U41, U43	3
47	PADZZ	81349	M38510/00104BCB	MICROCIRCUIT, DIGITA U2, U12, U21	3
48	PADZZ	81349	M38510/31501BCB	MICROCIRCUIT, DIGITA U33	1
49	PADZZ	81349	M38510/10403BEB	MICROCIRCUIT, LINEAR U26, U27, U39	3
50	PADZZ	81349	M39003/01-3032	CAPACITOR, FIXED, ELE C3, C10	2
51	PADZZ	81349	M38510/30605BCB	MICROCIRCUIT, DIGITA U55, U56	2
52	PADZZ	81349	RNC65H1002FS	RESISTOR, FIXED, FILM R43, R44	2
53	PADZZ	81349	M38510/31301BCX	MICROCIRCUIT, DIGITA U45	1
54	PADZZ	81349	M38510/30003BCB	MICROCIRCUIT, DIGITA U9, U35	2
55	PADZZ	81349	M38510/30602BEB	MICROCIRCUIT, DIGITA U23-U25	3
56	PADZZ	19200	12303153	MICROCIRCUIT, DIGITA U7	1
57	XADZZ	19207	12303525	STIFFENER	1
58	PADZZ	96906	MS16535-78	RIVER, TUBULAR	4
59	PADZZ	19207	12303176	EJECTOR	2
60	PADZZ	81349	M38510/30007BCB	MICROCIRCUIT, DIGITA U5	1
61	PADZZ	81349	M39003-01-3021	CAPACITOR, FIXED, ELE C2	1
62	PADZZ	81349	M38510-32803BRB	MICROCIRCUIT, DIGITA U4	1
63	PADZZ	19200	12303104	INTEGRATED CIRCUIT U3	1
64	PADZZ	81349	M8340105M2001JC	RESISTOR NETWORK, FI U1, U11	2
65	PADZZ	81349	RWR80S90R9FS	RESISTOR, FIXED, WIRE R49 (USED ON SER. NO. 126 AND SUB)	1
66	PADZZ	81349	RCR07G121JS	RESISTOR, FIXED, COMP R18-R21	4
67	PADZZ	19200	12272072	MICROCIRCUIT, DIGITA U29	1
68	PADZZ	81349	M38510/07101BCB	MICROCIRCUIT, DIGITA U22 U22	1
69	PADZZ	81349	M38510/08101BCB	MICROCIRCUIT, LINEAR U13	1
70	XADZZ	19200	12303286	BOARD, PRINTED WIRIN	1
71	MDDZZ	81349	MIL-W-583 TYPE T	WIRE (MAKE FROM MIL-W-583, CL105, TYPE T2)	V
71	MDDZZ	81348	QQW343S32S1T	WIRE (USED ON SER. NO. 126 AND SUB)	V
72	MDDZZ	81349	MIL-I-22129AWG30	SLEEVING (MAKE FROM MIL-I-22129 30AWG) (USED ON SER. NO. 126 AND SUB)	V

END OF FIGURE

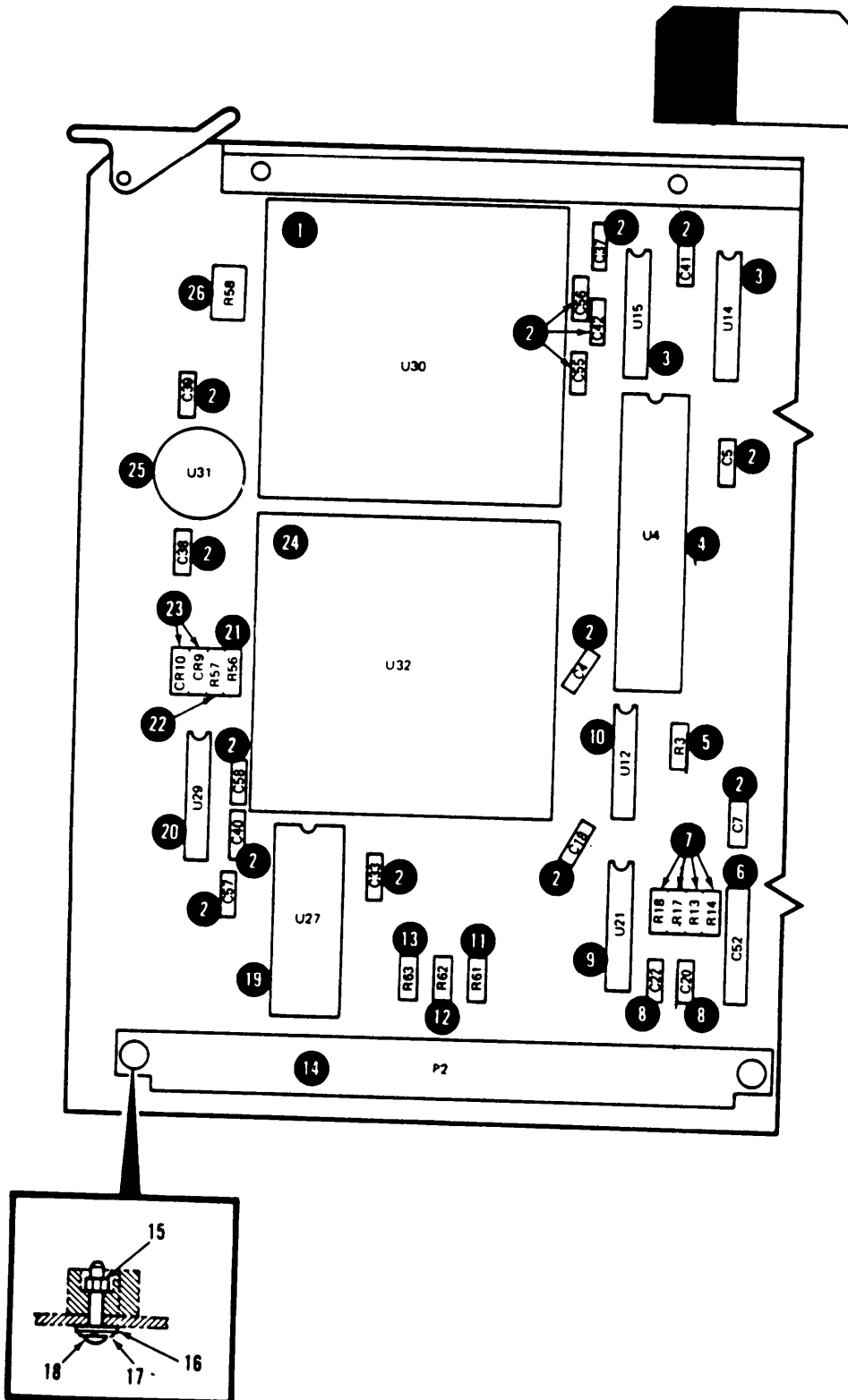


FIGURE A-16 VIDEO DATA PROCESSOR CIRCUIT CARD ASSEMBLY
A14 COMPONENT PARTS (ASSY P/N 12303397, SHEET 1 OF 3).

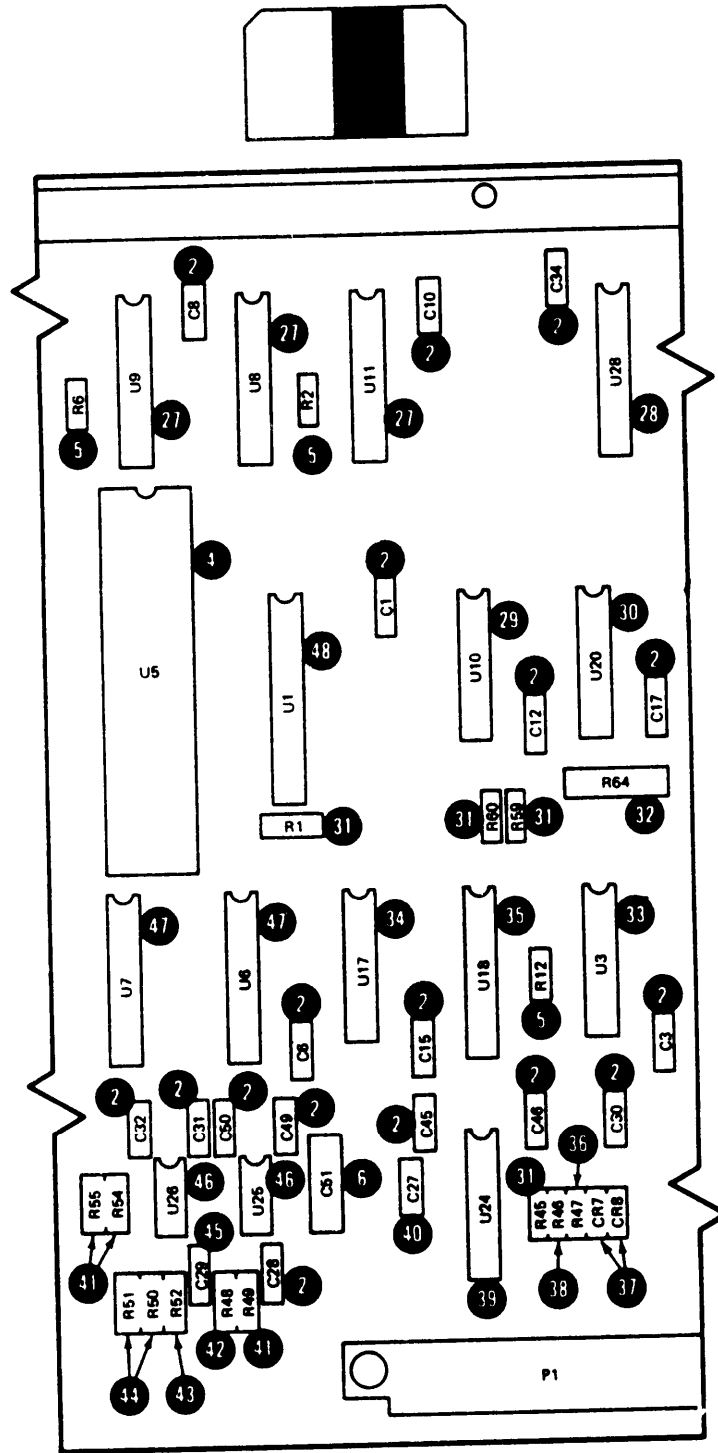


FIGURE A-16 VIDEO DATA PROCESSOR CIRCUIT CARD ASSEMBLY
 A14 COMPONENT PARTS (ASSY P/N 12303397, SHEET 2 OF 3).

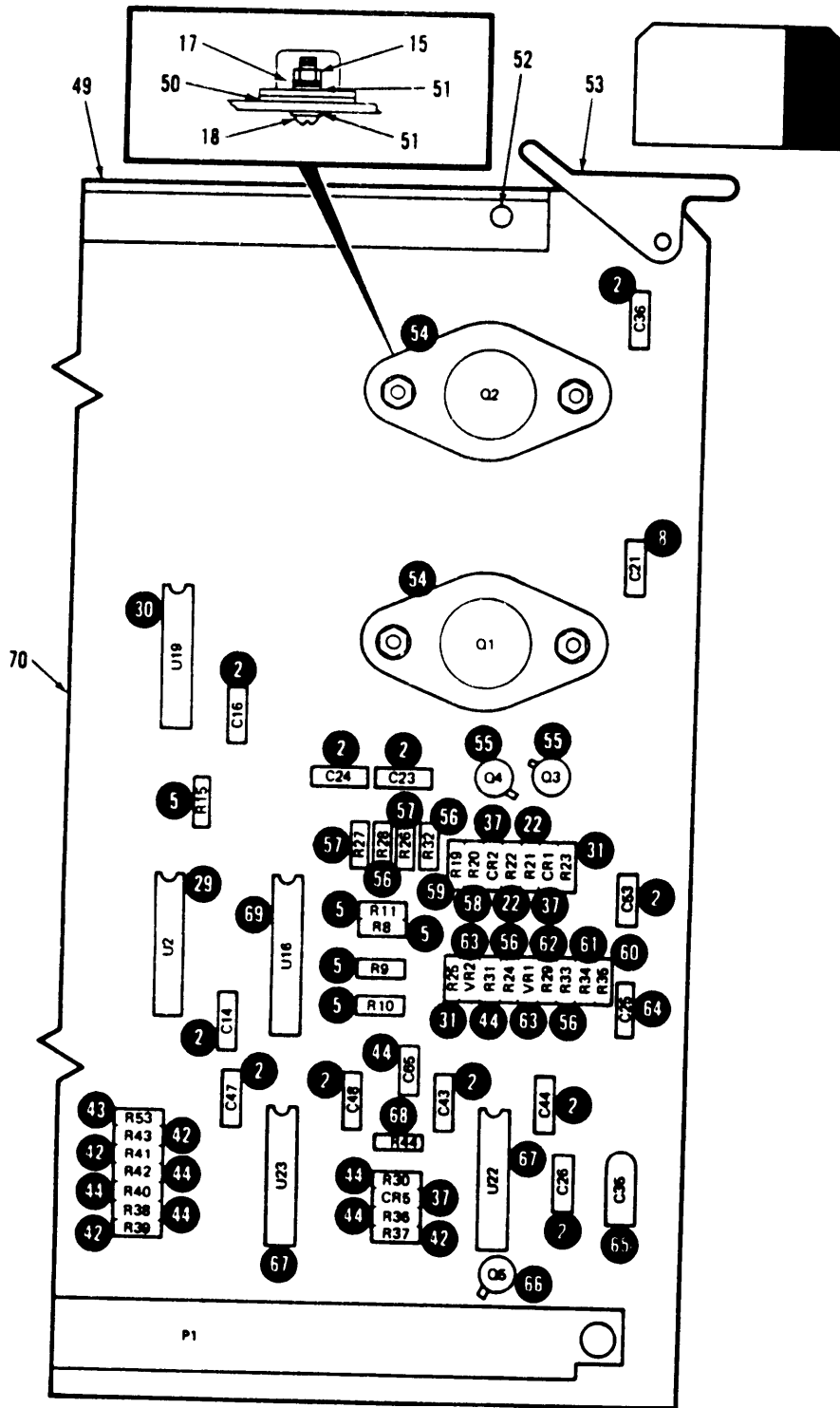


FIGURE A-16 VIDEO DATA PROCESSOR CIRCUIT CARD ASSEMBLY
 A14 COMPONENT PARTS (ASSY P/N 12303397, SHEET 3 OF 3).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01011300					
FIGURT A-16 VIDEO DATA PROCESSOR					
CIRCUIT CARD ASSEMBLY A14 COMPONENT					
PARTS					
1	PADZZ	19200	12303149	MICROCIRCUIT, LINEAR U30	1
2	PADZZ	81349	M39014/01-1593	CAPACITOR, FIXED, CER C1, C3-C-8, C10, C12, C14-C18, C23, C24, C26, C28, C30-C34, C36-C50, C53, C55-C58	43
3	PADZZ	34148	93L16DMQB	MICROCIRCUIT, DIGITA U14, U15	2
4	PADZZ	19200	12303153	MICROCIRCUIT, DIGITA U4, U5	2
5	PADZZ	81349	RCR07G202JS	RESISTOR, FIXED, COMP R2, R3, R6, R8-R12, R15	9
6	PADZZ	81349	M39003/01-3015	CAPACITOR, FIXED ELE E063375	2
C51, C52					
7	PADZZ	81349	RCR07G121JS	RESISTOR, FIXED, COMP R13, R14, R17, R18	4
8	PADZZ	81349	M39014/02-1338	CAPACITOR, FIXED, CER C20-C22	3
9	PADZZ	19200	12272072	MICROCIRCUIT, DIGITA U21	1
10	PADZZ	81349	M38510/08101BCB	MICROCIRCUIT, LINEAR U12	1
11	PADZZ	81349	RCR07G162JS	RESISTOR, FIXED, COMP R61	1
12	PADZZ	81349	RCR07G681JS	RESISTOR, FIXED, COMP R62	1
13	PADZZ	81349	RCR07G562JS	RESISTOR, FIXED, COMP R63	1
14	PADZZ	81349	M55302/57-B70Y	CONNECTOR, RECEPTACL P1, P2	2
15	PADZZ	80205	NAS671C4	NUT, PLAIN, HEXAGON	8
16	PADZZ	96906	MS15795-803	WASHER, FLAT	4
17	PADZZ	96906	MS35338-135	WASHER, LOCK	8
18	PADZZ	80205	NAS1635-04-6	SCREW, MACHINE	8
19	PADZZ	81349	M38510/01401BJB	MICROCIRCUIT, DIGIT U27	1
20	PADZZ	81349	M38510/11107BEC	MICROCIRCUIT, LINEAR U29	1
21	PFZZ	81349	RCR07G510JS	RESISTOR, FIXED R56	1
22	PADZZ	81349	RCR07G201JS	RESISTOR, FIXED, COMP R21, R22, R57	3
23	PADZZ	81349	JAN1N4148	SEMICONDUCTOR DEVIC CR9, CR10	2
24	PADZZ	19200	12303146	CONVERTER, ANALOG TO U32	1
25	PADZZ	19200	12272041	MICROCIRCUIT, LINEAR U31	1
26	PADZZ	81349	RJR26FX101P	RESISTOR, VARIABLE, N R58	1
27	PADZZ	81349	M38510-31509BEB	MICROCIRCUIT, DIGITA U8, U9, U11	3
28	PADZZ	81349	M38510/30901BEB	MICROCIRCUIT, DIGITA U28	1
29	PADZZ	81349	M38510/30001BCB	MICROCIRCUIT, DIGITA U2, U10	2
30	PADZZ	81349	M38510/00903BCB	MICROCIRCUIT, DIGITA U19, U20	2
31	PADZZ	81349	RCR07G102JS	RESISTOR, FIXED, COMP R1, R23, R25, R45, R59, R60	6
32	PADZZ	81349	RCR32G102JS	RESISTOR, FIXED, COMP R64	1
33	PADZZ	81349	M38510/30003BCB	MICROCIRCUIT, DIGITA U3	1
34	PADZZ	81349	M38510/30102BCB	MICROCIRCUIT, DIGITA U17	1
35	PADZZ	81349	M38510/31512BEB	MICROCIRCUIT, DIGITA U18	1
36	PADZZ	81349	RCR07G204JS	RESISTOR, FIXED, COMP R47	1
37	PADZZ	81349	JAN1N3600	SEMICONDUCTOR DEVIC CR1, CR2, CR5, CR7, CR8	5
38	PADZZ	81349	RCR07G114JS	RESISTOR, FIXED, COMP R46	1
39	PADZZ	19200	12303167	MICROCIRCUIT, LINEAR U24	1
40	PADZZ	81349	M39014/02-1419	CAPACITOR, FIXED, CER C27	1

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
41	PADZZ	81349	RCR07G512JS	RESISTOR, FIXED, COMP R49, R54, R55	3
42	PADZZ	81349	RCR07G203JS	RESISTOR, FIXED, COMP R37, R39, R41, R43, R48	5
43	PADZZ	81349	RCR07G433JS	RESISTOR, FIXED, COMP R52, R53	2
44	PADZZ	81349	RCR07G103JS	RESISTOR, FIXED, COMP R30, R31, R36 R38, R40, R42, R50, R51, R65	9
45	PADZZ	81349	M39014/01-1359	CAPACITOR, FIXED, CER C29	1
46	PADZZ	19200	12303390	MICROCIRCUIT, LINEAR U25, U26	2
47	PADZZ	81349	M38510/05504BEB	MICROCIRCUIT, DIGITA U6, U7	2
48	PADZZ	81349	M38510-32803BRB	MICROCIRCUIT, DIGITA U1	1
49	XADZZ	19207	12303525	STIFFENER	1
50	PADZZ	81349	M38527/8-22P	INSULATOR, PLATE	2
51	PADZZ	80205	NAS620C4L	WASHER, FLAT	8
52	PADZZ	96906	MS16535-78	RIVET, TUBULAR	4
53	PADZZ	19207	12303176	EJECTOR	2
54	PADZZ	19200	11732633	TRANSISTOR Q1, Q2	2
55	PADZZ	81349	JAN2N2222A	TRANSISTOR Q3, Q4	2
56	PADZZ	81349	RNC60H1002FS	RESISTOR, FIXED, FILM R24, R28, R32, R33	4
57	PADZZ	81349	RNC60H4992FS	RESISTOR, FIXED, FILM R26, R27	2
58	XDDZZ	81349	RWR80S5R11FS	RESISTOR, FIXED, WIRE R20	1
59	PADZZ	81349	RCR07G470JS	RESISTOR, FIXED, COMP R19	1
60	PADZZ	81349	RNC60H3241FS	RESISTOR, FIXED, FILM R35	1
61	PADZZ	81349	RNC60H1003FS	RESISTOR, FIXED, FILM R34	1
62	PADZZ	81349	RNC60H2003FS	RESISTOR, FIXED, FILM R29	1
63	PADZZ	81349	JAN1N751A	SEMICONDUCTOR DEVIC VR1, VR2	2
64	PADZZ	81349	M39014-01-1566	CAPACITOR, FIXED, CER C25	1
65	PADZZ	81349	M39003/01-2979	CAPACITOR, FIXED, ELE C35	1
66	PADZZ	19207	12303225	TRANSISTOR Q5	1
67	PADZZ	81349	M38510/11001BCB	MICROCIRCUIT, LINEAR U22, U23	2
68	PADZZ	81349	RCR07G333JS	RESISTOR, FIXED, COMP R44	1
69	PADZZ	19200	12303104	INTEGRATED CIRCUIT U16	1
70	XADZZ	19200	12303227	BOARD, PRINTED WIRIN	1

END OF FIGURE

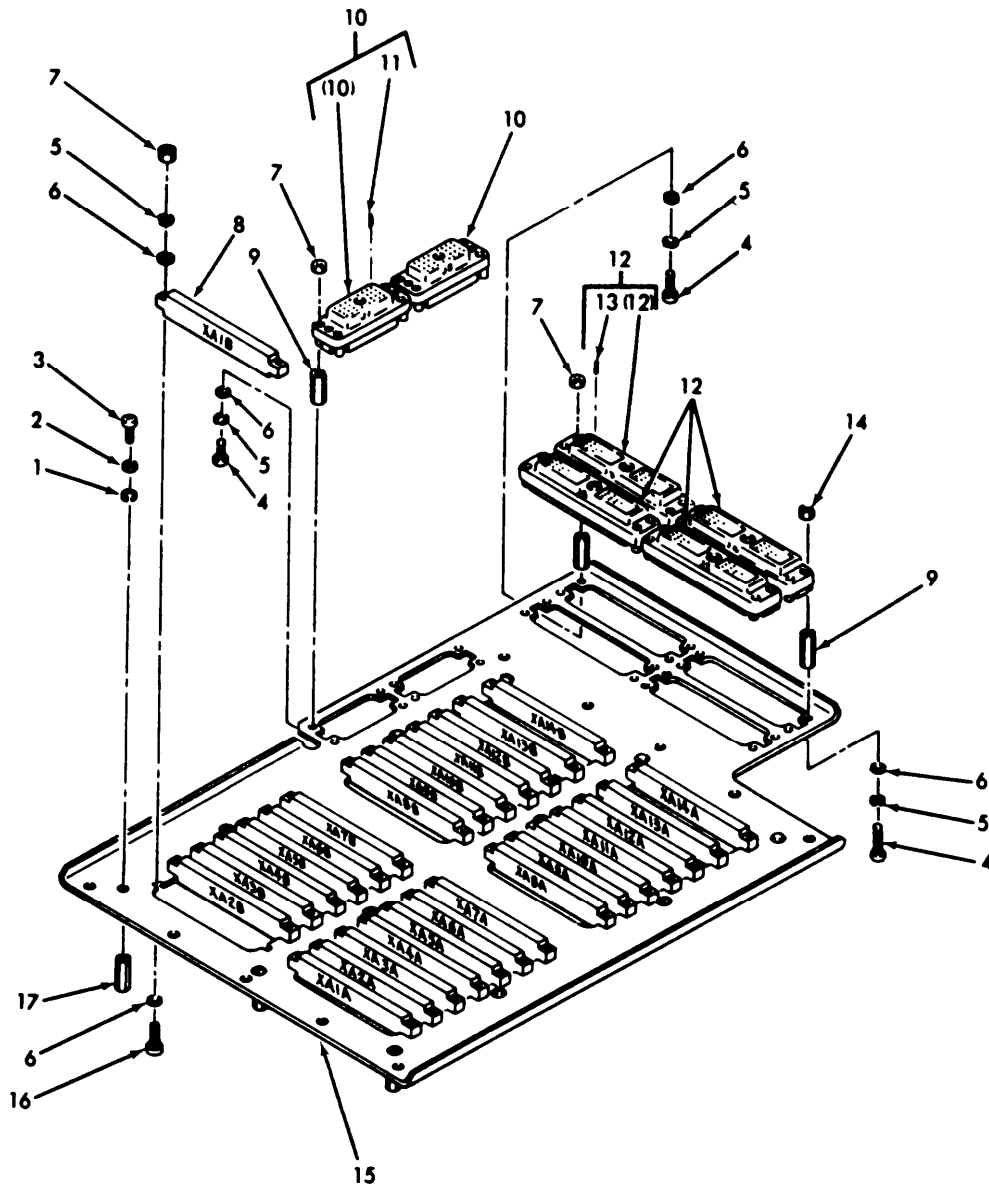


FIGURE A-17 TERMINAL BOARD ASSEMBLY COMPONENT PARTS
 (ASSY P/N 12303442) AND CONNECTORS
 J1, J5, J2, J3, J4, J6.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01011400					
FIGURE A-17 TERMINAL BOARD ASSEMBLY					
COMPONENT PARTS AND CONNECTORS J1, J5,J2,J3,J4,J6					
1	PAFZZ	80205	NAS620C6L	WASHER, FLAT	12
2	PAFZZ	96906	MS35338-136	WASHER, LOCK	12
3	PAFZZ	80205	NAS1635-06-7	SCREW, MACHINE	12
4	PAFZZ	80205	NAS1635-04-14	SCREW, MACHINE	24
5	PAFZZ	96906	MS35338-135	WASHER, LOCK	80
6	PAFZZ	80205	NAS620C4L	WASHER, FLAT	136
7	PAFZZ	80205	NAS671C4	NUT, PLAIN, HEXAGON	68
8	PADZZ	81349	M55302/58-D70Y	CONNECTOR, RECEPTACL XA1A-XA14A XA1B-XA14B	28
9	PAFZZ	80205	NAS43DD0-28	SPACER, SLEEVE	24
10	XDDDD	19200	12303255	CONNECTOR J1, J5	2
11	PAFZA	71468	030-2235-002	CONTACT, ELECTRICAL	192
12	XDDDD	19200	12303256	CONNECTOR J2-J4, J6	4
13	PAFZA	71468	030-2235-002	CONTACT, ELECTRICAL	156
14	PAFZZ	19200	12303109	POLARIZING KEY, ELEC	1
15	XADZZ	19200	12303438	PLATE, CONN	1
16	PAFZZ	80205	NAS1635-04-8	SCREW, MACHINE	56
17	PAFZZ	80205	NAS1786-06-16	POST, ELECTRICAL-MEC	12
18	PADZZ	81349	M81822/3-B28-0	WIRE, ELECTRICAL (OPTIONAL WITH M81822/1-B28-0) (MAKE FROM NSN 6145-01-103-7275)	V

END OF FIGURE

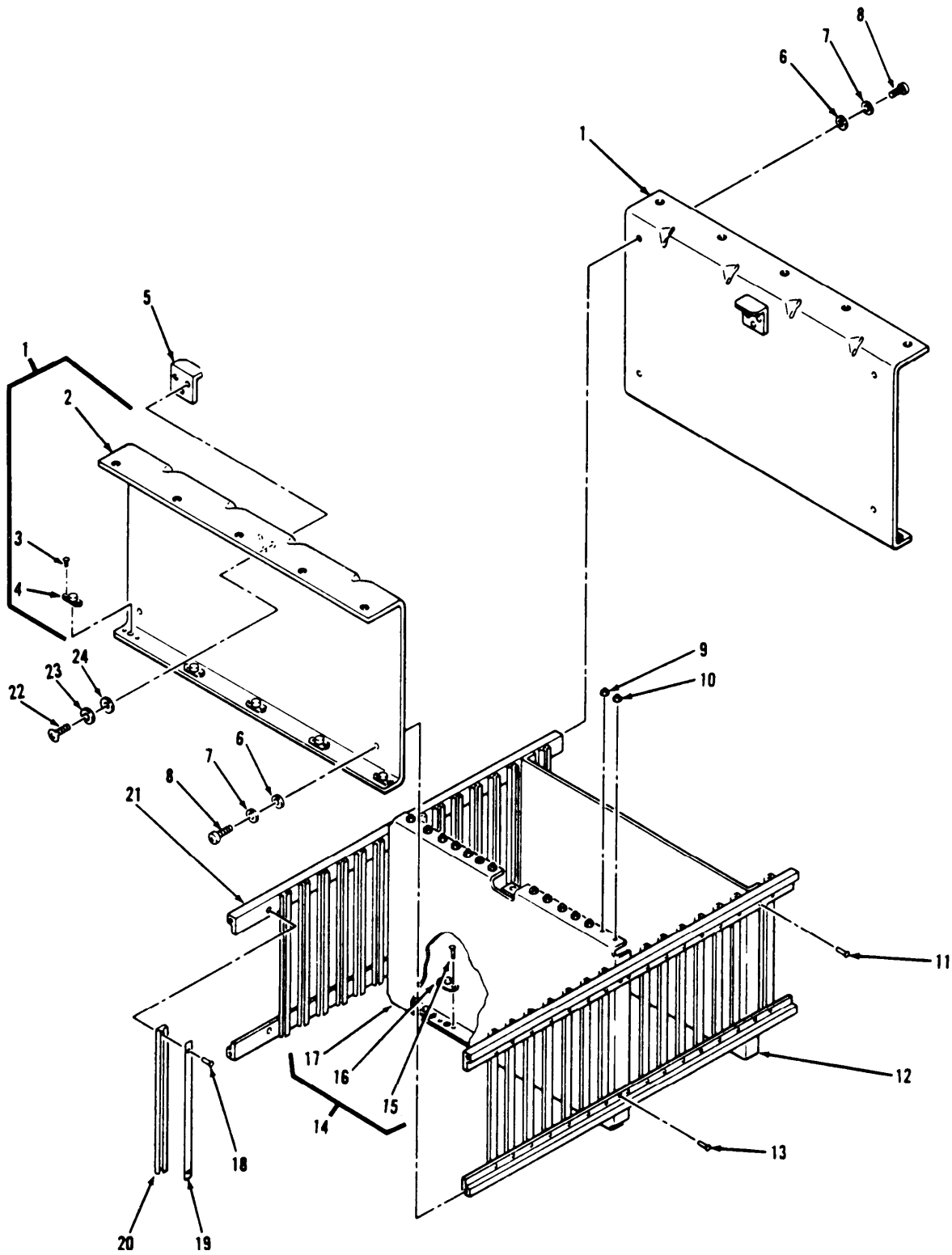


FIGURE A-18 DIGITAL CARD CAGE ASSEMBLY COMPONENT PARTS (ASSY P/N 12303441), END PLATE, AND CENTER PLATE.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01011500					
FIGURE A-18 DIGITAL CARD CAGE					
ASSEMBLY COMPONENT PARTS ,END PLATE, AND CENTER PLATE					
1	XDFFF	19200	12303443	END PLATE	2
2	XAFZZ	19200	12303443-1	.PLATE	1
3	PAFZZ	96906	MS20426AD3-6	.RIVET,SOLID	10
4	PAFZZ	96906	MS21076L3	NUT,SELF-LOCKING,PL PLAIN	5
5	XDFZZ	19200	12303261	ANGLE	3
6	PAFZZ	80205	NAS620C8	WASHER,FLAT	8
7	PAFZZ	96906	MS35338-137	WASHER,LOCK	8
8	PAFZZ	96906	MS51957-45	SCREW,MACHINE	8
9	PAFZZ	81349	M39024/10-03	JACK,TIP	6
10	PAFZZ	81349	M39024/10-02	JACK,TIP	8
11	PAFZZ	96906	MS16535-3	RIVET,TUBULAR	4
12	XDFZZ	19200	12303445	WALL,ISOL	1
13	PAFZZ	96906	MS16535-4	RIVET,TUBULAR	8
14	XDFFF	19200	12303444	CENTER PLATE	1
15	PAFZZ	96906	MS20426AD3-6	.RIVET,SOLID	8
16	PAFZZ	96906	MS21076L3	.NUT,SELF-LOCKING,PL PLAIN	4
17	XAFZZ	19200	12303444-1	.PLATE	1
18	PAFZZ	96906	MS16535-2	RIVET,TUBULAR	56
19	PAFZZ	19200	12303362	CLIP,SPRING TENSION	28
20	PAFZZ	19207	12303361	HOLDER,PRINTED CIRC	28
21	PBFZZ	19200	12303360	HOLDER,ELECTRICAL C	4
22	PAFZZ	80205	NAS1635-04-6	SCREW,MACHINE	9
23	PAFZZ	96906	MS35338-135	WASHER,LOCK	9
24	PAFZZ	80205	NAS620C4L	WASHER,FLAT	9

END OF FIGURE

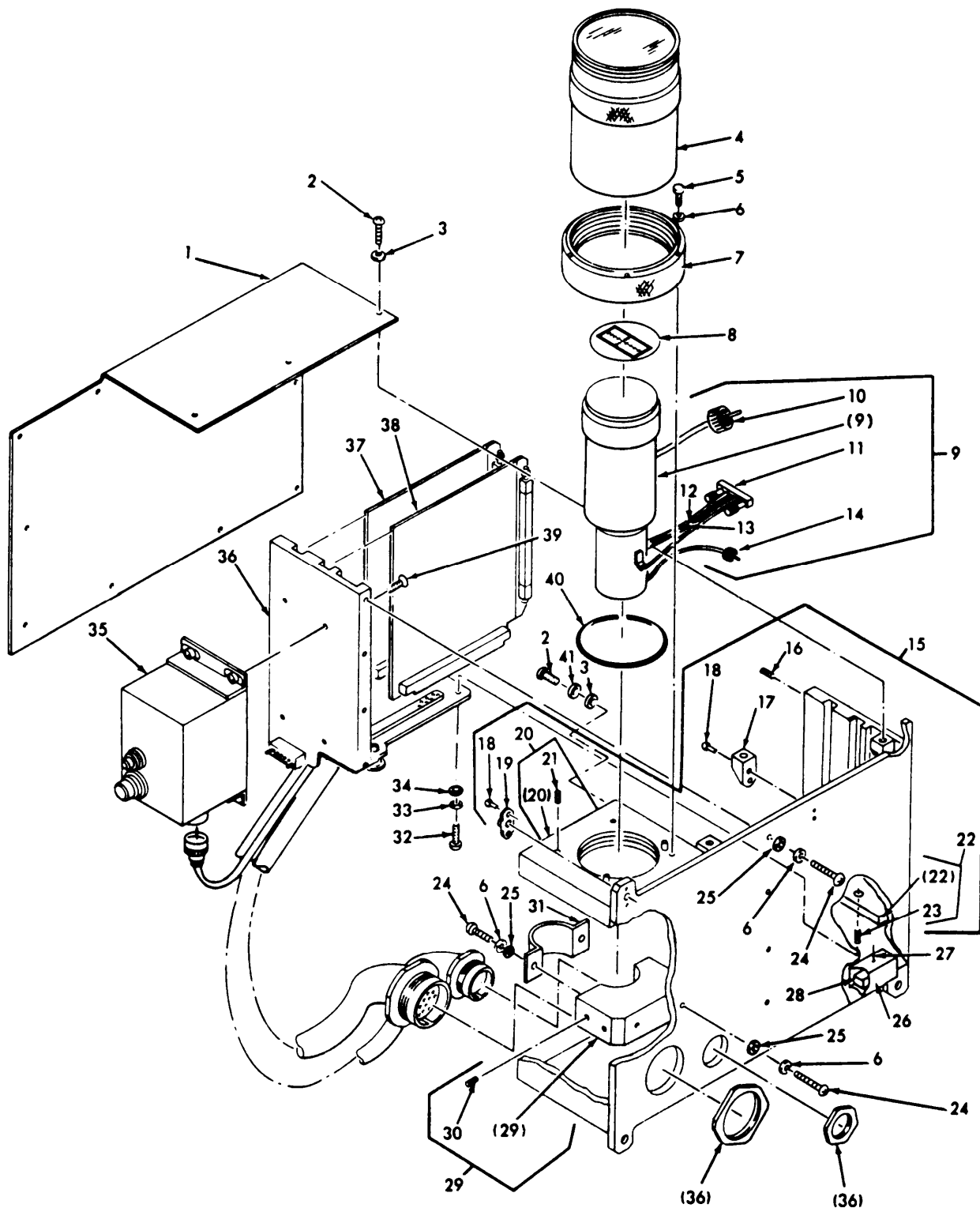


FIGURE A-19 IMAGE DISPLAY UNIT ASSEMBLY A2 COMPONENT PARTS
 (ASSY P/N 12303415) ELECTRON TUBE ASSEMBLY, CONNECTOR
 CENTER SUPPORT, HOUSING HOLDER, AND PLATE.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01011600					
FIGURE A-19 IMAGE DISPLAY UNIT					
ASSEMBLY A2 COMPONENT PARTS ELECTRON					
TUBE ASSEMBLY, CONNECTOR, CENTER					
SUPPORT, HOUSING HOLDER, AND PLATE					
1	XDFZZ	19200	12303419	COVER	1
2	PAFZZ	80205	NAS1635-06-6	SCREW,MACHINE	14
3	PAFZZ	80205	NAS620C6	WASHER,FLAT	14
4	PBFDD	19200	12303299	EYEPIECE ASSEMBLY,O	1
5	PAFZZ	80205	NAS1352C08-16	SCREW,CAP,SOCKET HE HEAD	4
6	PAFZZ	96906	MS35338-137	WASHER,LOCK	14
7	XDFZZ	19200	12303524	ADAPTER	1
8	PAFZZ	19200	12303411	GRATICLE, IDU	1
9	PAFFF	19200	12271813	ELECTRON TUBE A3	1
10	XAFZZ	00779	859331-2	.LEAD P2	1
11	PAFZZ	81349	M28748/7-E00S1A	.CONNECTOR,PLUG,ELEC P3	1
12	XAFZZ	81349	MILW16878/5EE22	.WIRE (MAKE FROM MIL-W-16878/5-EE-22, 19STRAND)	V
13	XAFZZ	81349	MILW16878/3D22	.WIRE (MAKE FROM MIL-W-16878/3-D-22,19STRAND)	V
14	XAFZZ	00779	830611	.LEAD,ELECTRICAL P1	1
15	XDFFF	19200	12303416	HOUSING	1
16	PAFZZ	96906	MS122118	.INSERT,SCREW THREAD	4
17	PAFZZ	96906	MS21076L3	.NUT,SELF-LOCKING,PL	1
18	PAFZZ	96906	MS20426AD3-6	.RIVET,SOLID	22
19	PAFZZ	80205	NAS1033A06	.NUT,SELF-LOCKING,PL	10
20	XAFFF	19200	12303566	.HOLDER	1
21	PAFZZ	96906	MS122119	. .INSERT	4
22	XAFFF	19200	12303568	.PLATE	1
23	PAFZZ	96906	MS122116	. .INSERT,SCREW THREAD	2
24	PAFZZ	80205	NAS1635-08-10	SCREW,MCAHINE	10
25	PAFZZ	80205	NAS620C8	WASHER,FLAT	10
26	PAFZZ	81349	M39003/01-2971	CAPACITOR,FIXED,ELE C1	1
27	MFFZZ	81349	M16878/4-22-9	WIRE (USED ON SER. NO. 126 AND SUB) (MAKE FROM MIL-W-16878/4 AWG22-9)	V
28	PAFZZ	81349	RCR20G2R7JS	RESISTOR,FIXED,COMP R1	1
29	XDFFF	19200	12303418	SUPPORT,CRT	1
30	PAFZZ	96906	MS122159	.INSERT,SCREW THREAD	6
31	PAFZZ	19200	12303420	STRAP,RETAINING	1
32	PAFZZ	80205	NAS1635-04-6	SCREW,MACHINE	2
33	PAFZZ	96906	MS35338-135	WASHER,LOCK	2
34	PAFZZ	80205	NAS620C4	WASHER,FLAT	2
35	PAFZZ	19200	12271832	POWER SUPPLY	1
36	PAFFF	19200	12303487	CABLE ASSY,1DU (FOR COMPONENT PARTS SEE GROUP 01010306)	1
37	PAFDD	19200	12272297	AMPLIFIER,VIDEO A1 (SEE TM9-1200-206-34P FOR COMPONENT PARTS)	1
38	PAFDD	19200	12271817	CIRCUIT CARD ASSEMB A2 (SEE TM9-1200-206-34P FOR COMPONENT PARTS)	1
39	PAFZZ	96906	MS24693C49	SCREW,MACHINE	4

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
40	PAFZZ	96906	MS9068-143	PACKING, PREFORMED	1
41	PAFZZ	96906	MS35338-136	WASHER, LOCK	4

END OF FIGURE

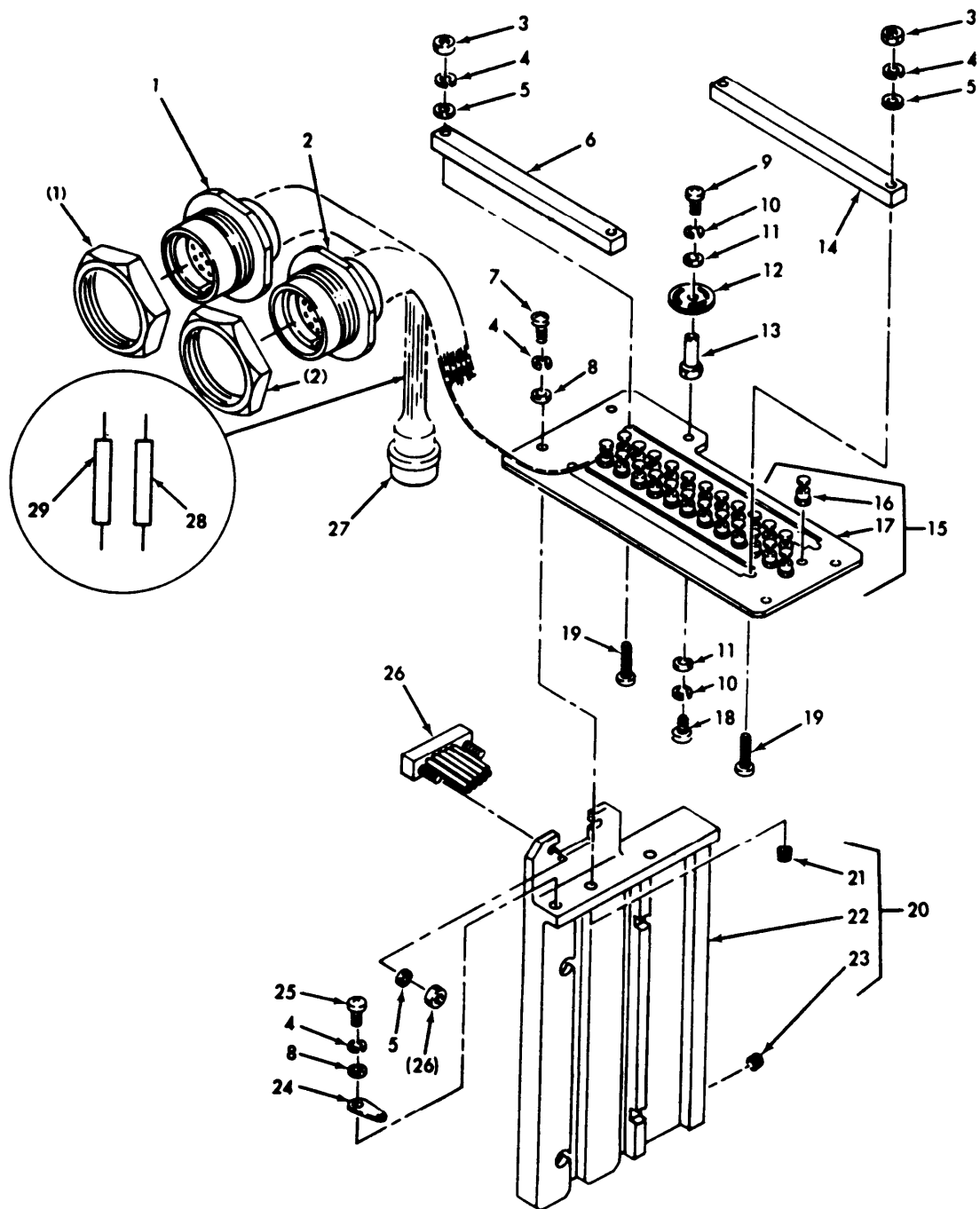


FIGURE A-20 IDU CABLE ASSY W/ COMPONENT PARTS (ASSY P/N 12303487), BRACKET, AND ELECTRICAL BRACKET.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01012000 FIGURE A-20 IDU CABLE ASSEMBLY W1 COMPONENT PARTS BRACKET, AND ELECTRICAL BRACKET.					
1	PAFZZ	96906	MS3474L24-61P	CONNECTOR,RECEPTACL J1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR	1
2	PAFZZ	96906	MS3474L22-55PX	CONNECTOR,RECEPTACL J2 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR	1
3	PAFZZ	80205	NAS671C4	NUT,PLAIN,HEXAGON	4
4	PAFZZ	96906	MS35338-135	WASHER,LOCK	7
5	PAFZZ	80205	NAS620C4L	WASHER,FLAT	6
6	PAFZZ	81349	M55302/58A66Y	CONNECTOR,RECEPTACL XA1	1
7	PAFZZ	80205	NAS1635-04-6	SCREW,MACHINE	2
8	PAFZZ	80205	NAS620C4	WASHER,FLAT	3
9	PAFZZ	80205	NAS1635-06-3	SCREW,MACHINE	1
10	PAFZZ	96906	MS35338-136	WASHER,LOCK	2
11	PAFZZ	80205	NAS620C6L	WASHER,FLAT	2
12	PAFZZ	19200	11732676-2	TERMINAL,CIRCULAR (REPLACEMENT FOR 12303323)	1
13	PAFZZ	19200	12272133	POST,ELECTRICAL-MEC	1
14	PAFZZ	81349	M55302/58A66Y	CONNECTOR,RECEPTACL XA2 (REPLACED BYM55302/65-66Y6)	1
15	PBFFF	19200	12303523	BRACKET,ELECTRICAL	1
16	PAFZZ	19200	12303289	.TERMINAL,STUD	24
17	XAFZZ	19200	12303523-1	.BRACKET	1
18	PAFZZ	80205	NAS1635-06-4	SCREW,MACHINE	1
19	PAFZZ	19200	12303213	SCREW,SHOULDER	4
20	XDFFF	19200	12303417	BRACKET	1
21	PAFZZ	96906	MS122116	.INSERT,SCREW THREAD	3
22	XAFZZ	19200	12303417-1	.BRACKET	1
23	PAFZZ	96906	MS122119	.INSERT,SCREW THREAD	4
24	PAFZZ	96906	MS77068-1	TERMINAL,LUG	1
25	PAFZZ	80205	NAS1635-04-4	SCREW,MACHINE	1
26	PAFZZ	81349	M28748/8E00F1A	CONNECTOR,RECEPTACL J3	1
27	PAFZZ	96906	MS3476L12-10S	CONNECTOR,PLUG,ELEC P3 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR	1
28	MFFZZ	18876	MIS26877/2-22SJ	WIRE (MAKE FROM MIS26877/2-22SJ)	V
29	MFFZZ	81349	MILW16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM MIL-W- 16878/4E22U9, 19 STRANDS)	V

END OF FIGURE

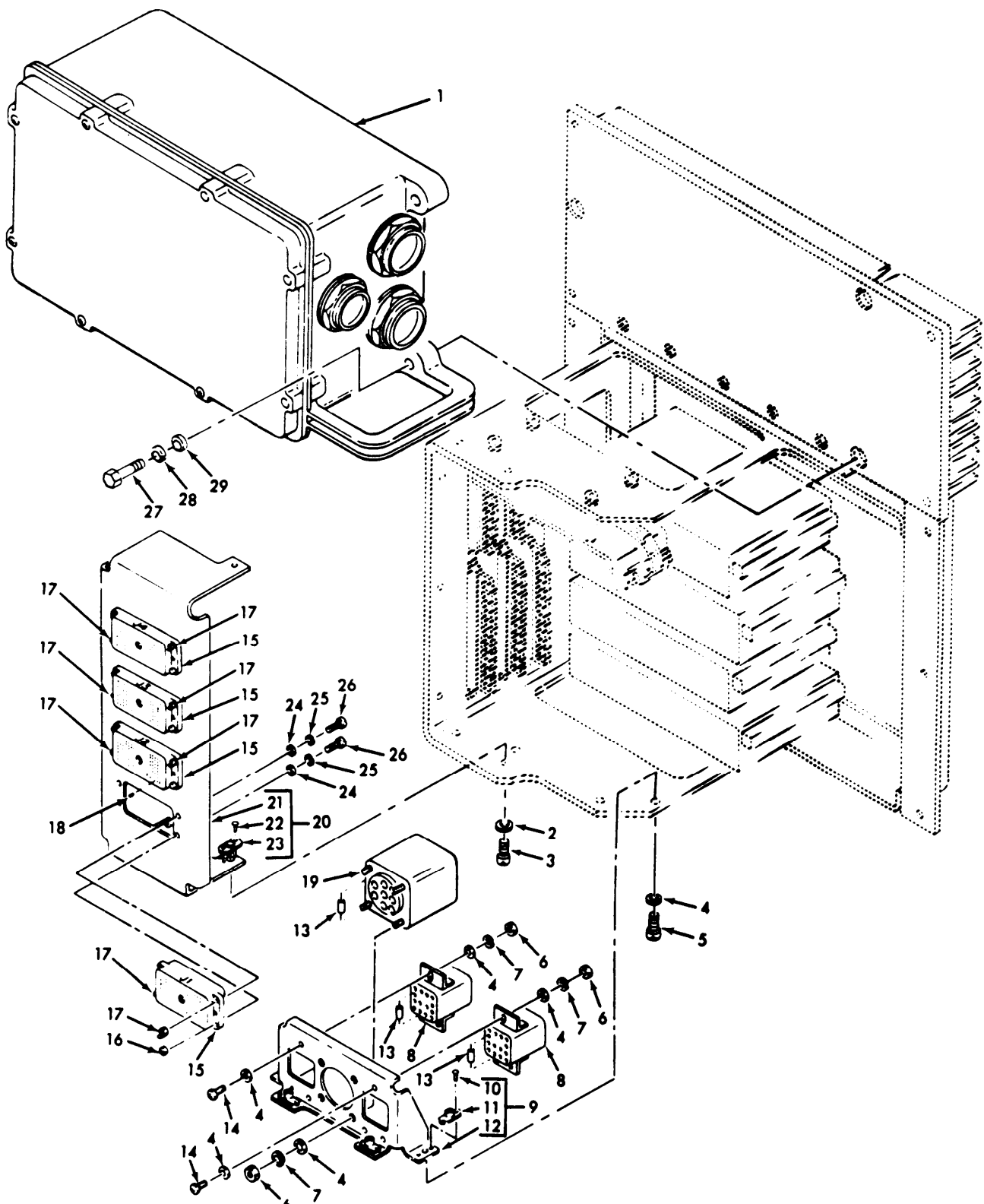


FIGURE A-21 POWER MODULE ASSEMBLY A6 COMPONENTS PARTS
(ASSY P/N 1230402, SHEET 1 OF 3) CONNECTOR BRACKET
AND RELAY BRACKET

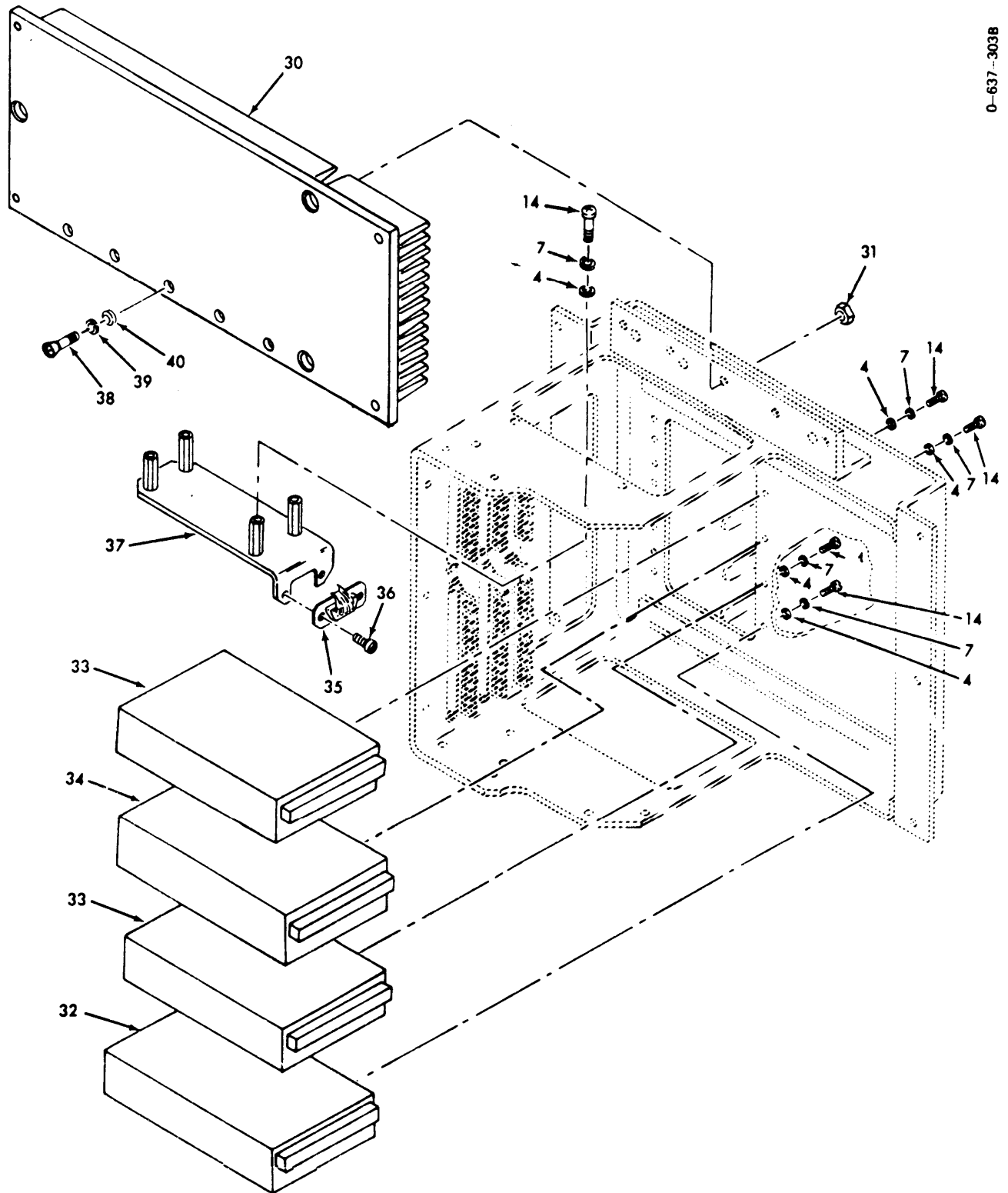


FIGURE A-21 POWER MODULE ASSEMBLY A6 COMPONENT PARTS
(ASSY P/N 1230402, SHEET 2 OF 3)

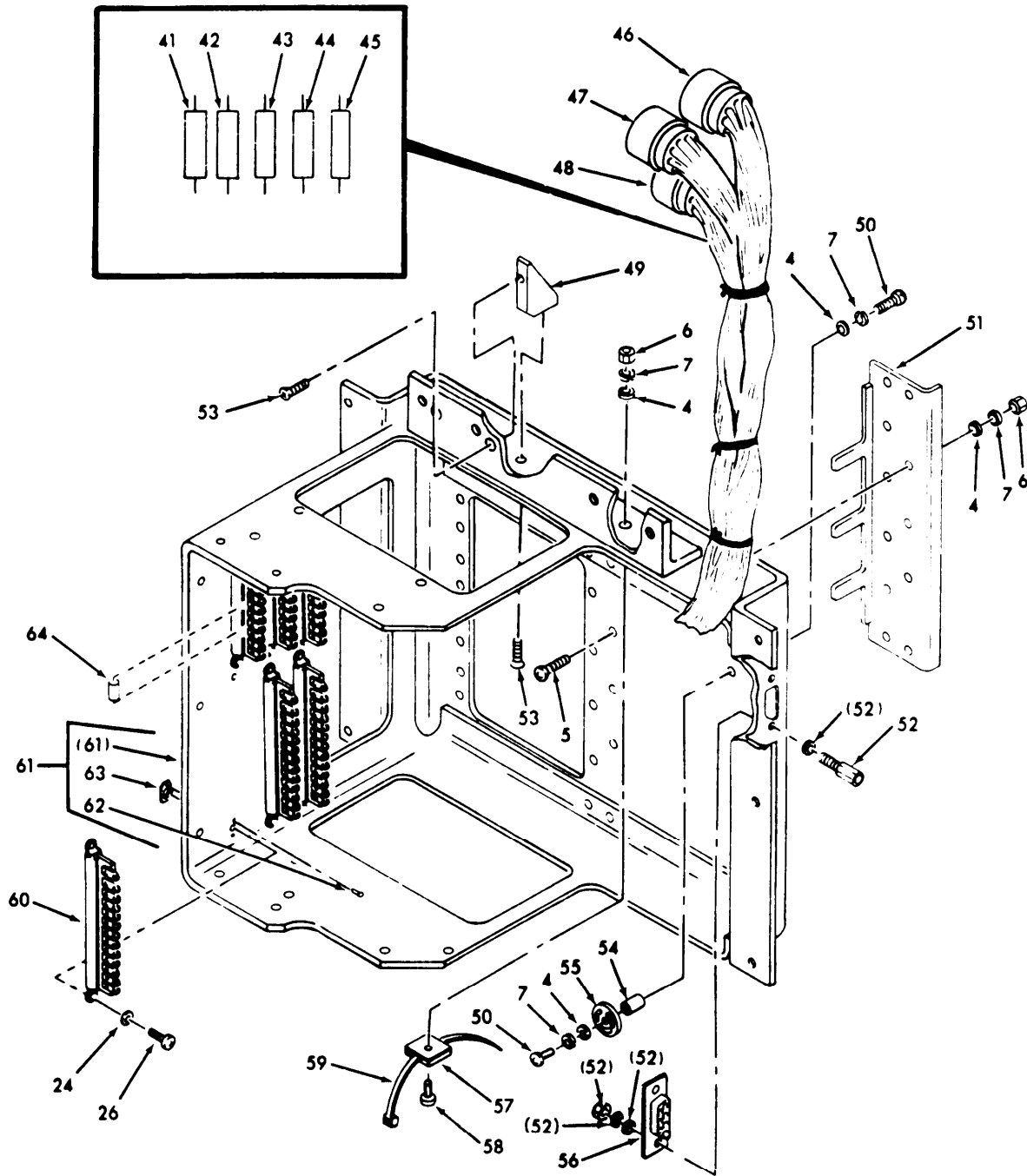


FIGURE A-21 POWER MODULE ASSEMBLY A6 COMPONENT PARTS (ASSY P/N 12303402, SHEET 3 OF 3) AND ENCLOSURE.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01012100					
FIGURE A-21 POWER MODULE ASSEMBLY					
A6 COMPONENT PARTS CONNECTOR BRACKET AND RELAY BRACKET					
1	PAFDD	19200	12272555	POWER CONTROL UNIT A1 (SEE TM9- 1200-206-34P FOR COMPONENT PARTS)	1
1	PAFDD	19200	12271750	POWER CONTROL UNIT A1 (USED ON SER. NO. 101 THRU 125) (SEE TM9-1200- 206-34P FOR COMPONENT PARTS)	1
2	PAFZZ	80205	NAS620C8L	WASHER, FLAT	5
3	PAFZZ	96906	MS51957-45	SCREW, MACHINE	5
4	PAFZZ	80205	NAS620C6L	WASHER, FLAT	45
5	PAFZZ	80205	NAS1635-06-8	SCREW, MACHINE	11
6	PAFZZ	80205	NAS671C6	NUT, PLAIN, HEXAGON	17
7	PAFZZ	96906	MS35338-136	WASHER, LOCK	35
8	PAFZZ	96906	MS27400-9	RELAY, ELCTROMAGNET K1, K2	2
9	XDFFF	19200	12303526	BRACKET, RELAY	1
10	PAFZZ	96906	MS20426AD3-6	.RIVET, SOLID	8
11	PAFZZ	96906	MS21076-06	.NUT, SELF-LOCKING, PL	4
12	XAFZZ	19200	12303526-1	.BRACKET	1
13	PAFZZ	81349	JANTX1N645	SEMICONDUCTOR DEVIC CR1-CR3	3
14	PAFZZ	80205	NAS1635-06-6	SCREW, MACHINE	22
15	PAFZZ	19200	12303243	CONNECTOR BODY, RECE J1-J4	4
16	PAFZZ	80205	NAS671C4	NUT, PLAIN, HEXAGON	8
17	PAFZZ	19200	12303109	POLARIZING KEY, ELEC	8
18	PAFZZ	19200	12303108	CONTACT, ELECTRICAL	384
19	PAFZZ	96906	MS27418-1B	RELAY, ELECTROMAGNET K3	1
20	XDFFF	19200	12303535	BRACKET, CONNECTOR	1
21	XAFZZ	19200	12303535-1	BRACKET	1
22	PAFZZ	96906	MS20426AD3-6	RIVET, SOLID	10
23	PAFZZ	96906	MS21076L08	NUT, SELF-LOCKING, PL	5
24	PAFZZ	80205	NAS620C4L	WASHER, FLAT	28
25	PAFZZ	96906	MS35338-135	WASHER, LOCK	16
26	PAFZZ	80205	NAS1635-04-6	SCREW, MACHINE	28
27	PAFZZ	88044	AN5CH13	BOLT, MACHINE	3
28	PAFZZ	96906	MS35338-140	WASHER, LOCK	3
29	PAFZZ	88044	AN960C516L	WASHER, FLAT	3
30	XDFZZ	19200	12303517	BASE, POWER MODULE	1
31	PAFZZ	80205	NAS671C10	NUT, PLAIN, HEXAGON	5
32	PAFZZ	19207	12303558	POWER SUPPLY PS1	1
33	PAFZZ	19200	12303557	POWER SUPPLY PS2, PS3	2
34	PAFZZ	19207	12303556	POWER SUPPLY PS4	1
35	PAFZZ	81349	M24308/2-2	CONNECTOR, RECEPTACL P1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
36	PAFZZ	81349	M24308/25-9	SCREW-LOCK ASSEMBLY	2
37	PAFDD	19200	12303522	CIRCUIT CARD ASSEMB A2 (FOR COMPONENT PARTS SEE GROUP 01010404)	1
38	PAFZZ	96906	MS24693C273	SCREW, MACHINE	5
39	PAFZZ	96906	MS35338-138	WASHER, LOCK	5
40	PAFZZ	80205	NAS620C10L	WASHER, FLAT	5
41	MFFZZ	18876	M26877/3-22U902	WIRE (MAKE FROM M1S26877/3-22U902)	V

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
42	MFFZZ	18876	MIS26877/2-22U90	WIRE (MAKE FROM MIS26877/2-22U90)	V
43	MFFZZ	81349	M47206-22IV2-090	WIRE (MAKE FROM MIL-W-47206-22-IV-2-90)	V
44	MFFZZ	81349	M47206-22II3-902	WIRE (MAKE FROM MIL-W-47206-22-II-3-902)	V
45	PAFZZ	96906	MS3475L22-55PW	CONNECTOR, PLUG, ELEC P2 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
46	PAFZZ	96906	MS3475L20-41P	CONNECTOR, PLUG, ELEC P3 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
47	PAFZZ	81349	M83723/75R2255N	CONNECTOR, PLUG, ELEC P1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
48	XDFZZ	19200	12303544	GUSSET, ANGLE	3
49	PAFZZ	80205	NAS1635-06-4	SCREW, MACHINE	2
50	XDFZZ	19200	12303543	BRACE	1
51	PAFZZ	81349	M24308/26-2	SHELL, ELECTRICAL CO	2
52	PAFZZ	80205	NAS1102-04-8	SCREW, MACHINE	5
53	PAFZZ	80205	NAS1786C06-8	POST, ELECTRICAL-MEC	1
54	PAFZZ	19200	12272134	TERMINAL, LUG E1 (REPLACED BY 11732676-2)	1
54	PAFZZ	19200	11732676-2	TERMINAL, CIRCULAR E1 (REPLACES 12303323)	1
55	PAFZZ	81349	M24308/2-1	CONNECTOR, RECEPTACL J5	1
56	PAFZZ	19200	12303132	SUPPORT, TIE WRAP	1
57	PAFZZ	96906	MS51959-26	SCREW, MACHINE	1
58	PAFZZ	96906	MS3367-1-9	STRAP, TIEDOWN	1
59	PAFZZ	19200	12303319	TERMINAL BOARD	6
60	XDFZ	19200	12303518	ENCLOSURE	1
61	PAFZZ	96906	MS20426AD3-6	RIVET, SOLID	24
62	PAFZZ	96906	MS21076-L04	NUT, SELF-LOCKING, PL	12
63	PAFZZ	81349	RCR20G103JS	RESISTOR, FIXED, COMP	1

END OF FIGURE

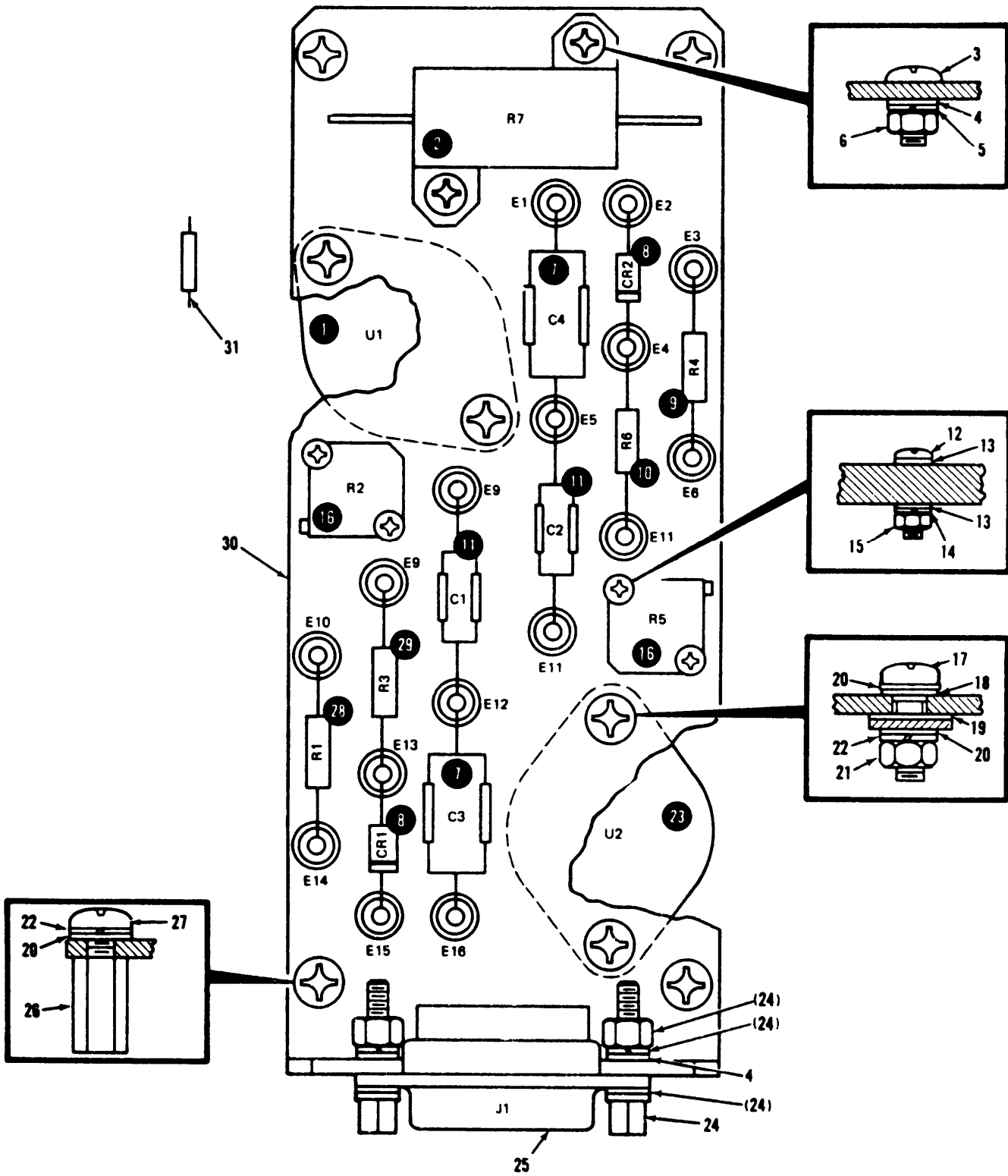


FIGURE A-22 CIRCUIT CARD ASSEMBLY A2 COMPONENT PARTS (ASSY P/N 12303522) AND CONNECTOR J1.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01013850					
FIGURE A-22 CIRCUIT CARD ASSEMBLY A2					
COMPONENT PARTS AND CONNECTOR J1					
1	PADZZ	19200	12303185	REGULATOR,VOLTAGE U1	1
2	PADZZ	81349	RER70F61R9R	RESISTOR,FIXED,WIRE R7	1
3	PADZZ	80205	NAS1635-04-6	SCREW,MACHINE	2
4	PADZZ	80205	NAS620C4	WASHER,FLAT	6
5	PADZZ	96906	MS35338-135	WASHER,LOCK	2
6	PADZZ	80205	NAS671C4	NUT,PLAIN,HEXAGON	2
7	PADZZ	81349	M39006/22-0571	CAPACITOR,FIXED,ELE C3,C4	2
8	PADZZ	81349	JAN1N4249	SEMICONDUCTOR DEVIC CR1,CR2	2
9	PADZZ	81349	RNC60H5490FS	RESISTOR,FIXED,FILM R4	1
10	PADZZ	81349	RNC60H1500FS	RESISTOR,FIXED,FILM R6	1
11	PADZZ	81349	M39003/01-3085	CAPACITOR,FIXED,ELE C1,C2	2
12	PADZZ	80205	NAS1635-02-8	SCREW,MACHINE	4
13	PADZZ	80205	NAS620C2	WASHER,FLAT	8
14	PADZZ	96906	MS35338-134	WASHER,LOCK	4
15	PADZZ	80205	NAS671C2	NUT,PLAIN,HEXAGON	4
16	PADZZ	81349	M39015/2-002LP	RESISTOR,VARIABLE,W R2,R5	2
17	PADZZ	80205	NAS1635-06-8	SCREW,MACHINE	4
18	PADZZ	81349	M38527/9-05S	INSULATOR,BUSHING	4
19	PADZZ	19200	12303134	INSULATOR,WASHER	4
20	PADZZ	80205	NAS620C6	WASHER,FLAT	12
21	PADZZ	80205	NAS671C6	NUT,PLAIN,HEXAGON	4
22	PADZZ	96906	MS35338-136	WASHER,LOCK	8
23	PADZZ	19200	12303183	REGULATOR,VOLTAGE U2	1
24	PADZZ	81349	M24308/26-2	SHELL,ELECTRICAL CO	2
25	PADZZ	81349	M24308/4-2	CONNECTOR,RECEPTACL J1	1
26	PADZZ	80205	NAS1786C06-8	POST,ELECTRICAL-MEC	4
27	PADZZ	80205	NAS1635-06-6	SCREW,MACHINE	4
28	PADZZ	81349	RNC60H5620FS	RESISTOR,FIXED,FILM R1	1
29	PADZZ	81349	RNC60H2870FS	RESISTOR,FIXED,FILM R3	1
30	XADZZ	19200	12303236	PLATE	1
31	MDDZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM M16878/ 4-22-9	V

END OF FIGURE

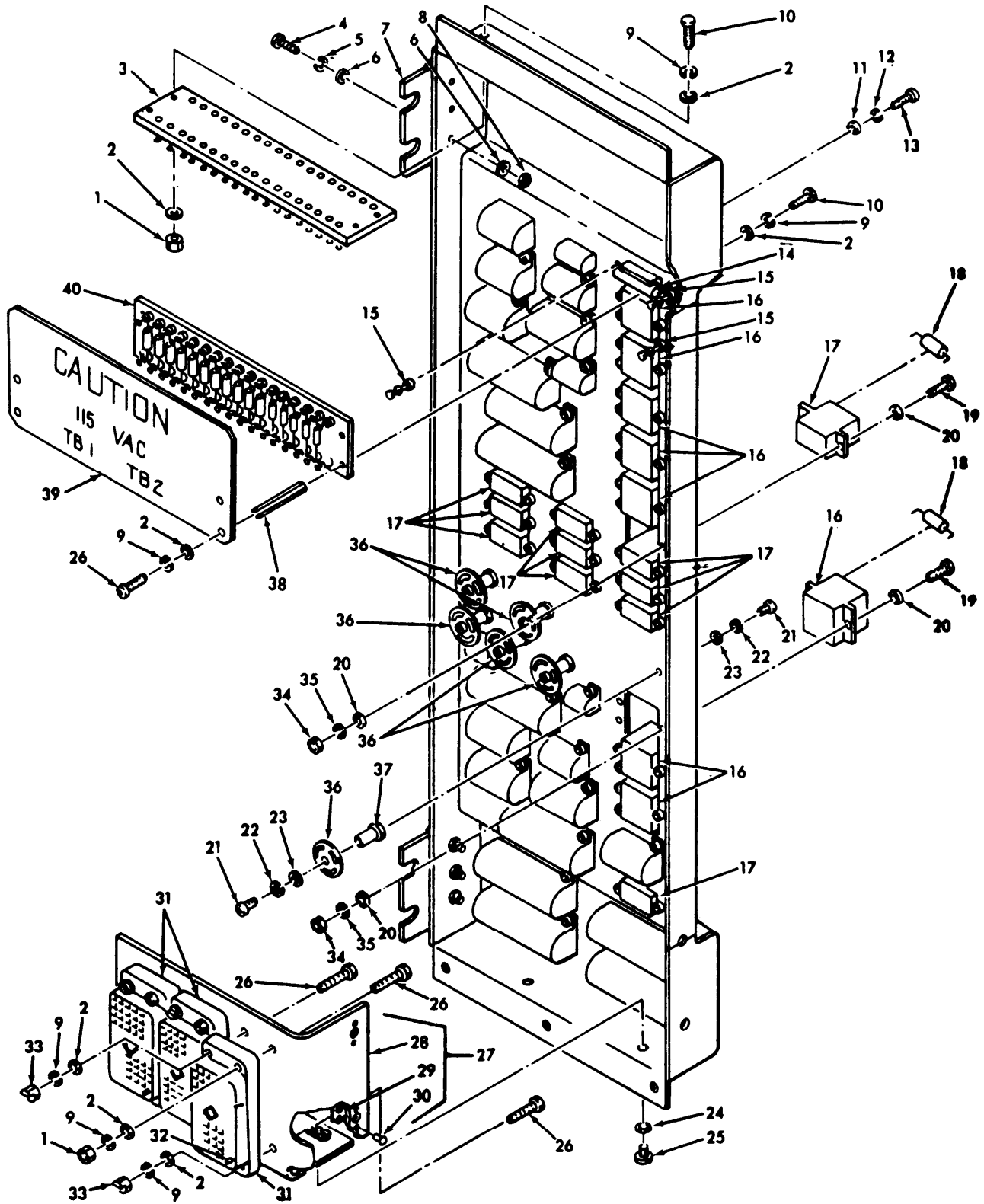


FIGURE A-23 ELECTRICAL LOAD BANK ASSEMBLY A5 COMPONENT PARTS (ASSY P/N 12303405, SHEET 1 OF 2) AND CONNECTOR BRACKET.

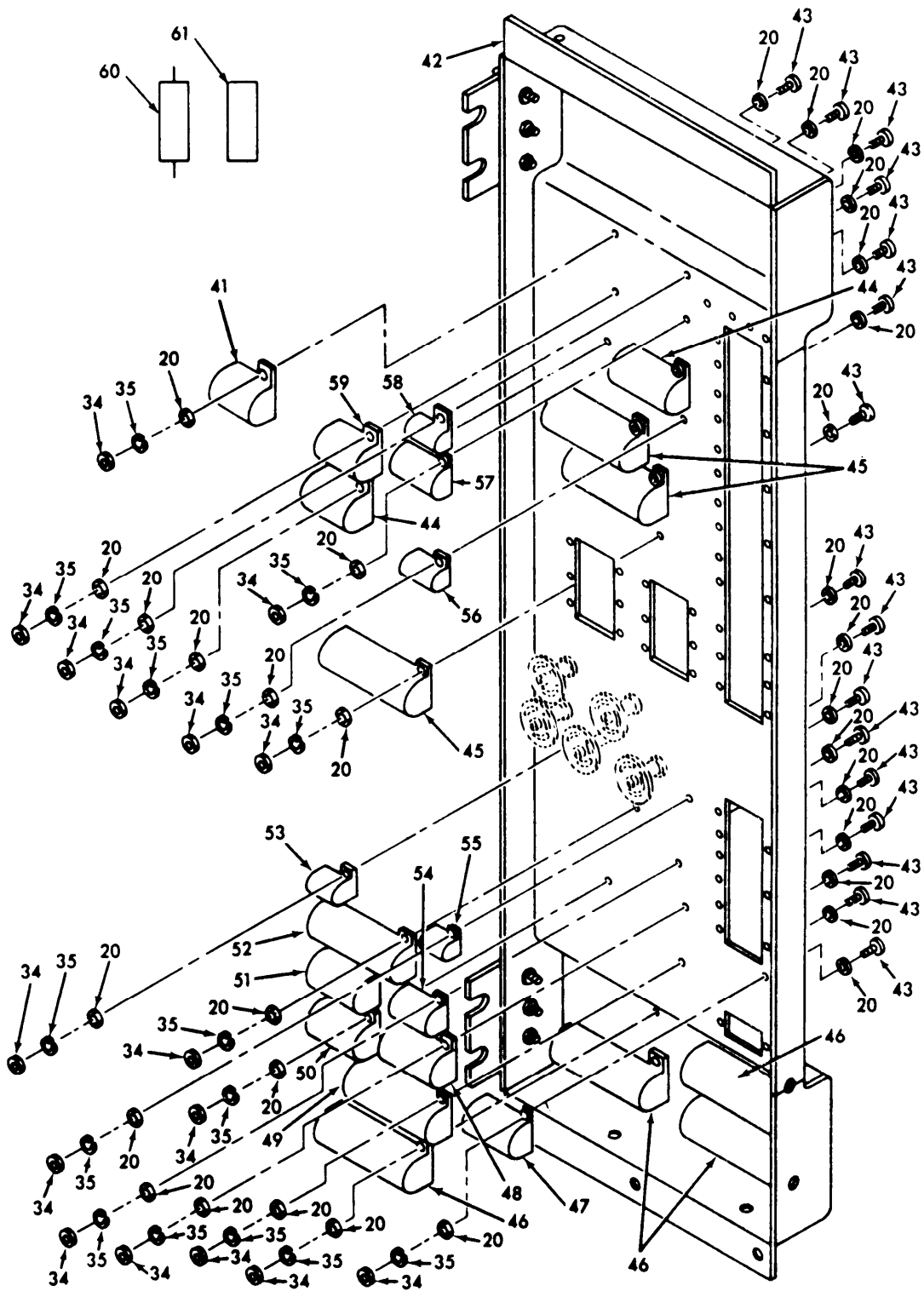


FIGURE A-23 Electrical LOAD BANK ASSEMBLY A5 COMPONENT PARTS (ASSY P/N 12303405, SHEET 2 OF 2) AND CONNECTOR BRACKET.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01013900					
FIGURE A-23 ELECTRICAL LOAD BANK					
ASSEMBLY A5 COMPONENT PARTS AND					
CONNECTOR BRACKET					
1	PAFZZ	80205	NAS671C4	NUT,PLAIN,HEXAGON	10
2	PAFZZ	80205	NAS620C4L	WASHER,FLAT	28
3	PAFFF	19200	12303124	TERMINAL BOARD TB2 (FOR COMPONENT PARTS SEE GROUP 01010502)	1
4	PAFZZ	80205	NAS1635-08-6	SCREW,MACHINE	6
5	PAFZZ	96906	MS35338-137	WASHER,LOCK	6
6	PAFZZ	80205	NAS620C8L	WASHER,FLAT	12
7	PAFZZ	19200	12303474	HINGE,BUTT	2
8	PAFZZ	80205	NAS671C8	NUT,PLAIN,HEXAGON	6
9	PAFZZ	96906	MS35338-135	WASHER,LOCK	24
10	PAFZZ	80205	NAS1635-04-7	SCREW,MACHINE	8
11	PAFZZ	80205	NAS620C6L	WASHER,FLAT	3
12	PAFZZ	96906	MS35338-136	WASHER,LOCK	3
13	PAFZZ	80205	NAS1635-06-4	SCREW,MACHINE	3
14	PAFZZ	81349	M83421/01-5149R	CAPACITOR,FIXED,MET C1	1
15	PAFZZ	19200	12303287	TERMINAL,STUD E3,E8,E9	3
16	PAFZZ	81349	M6106/28-018U	RELAY,ELCTROMAGNET K1-K5,K17-K19	8
17	PAFZZ	81349	M6106/27-018U	RELAY,ELECTROMAGNET K6-K16	11
18	PAFZZ	81349	JAN1N645	SEMICONDUCTOR DEVIC	19
19	PAFZZ	80205	NAS1635-02-4	SCREW,MACHINE	46
20	PAFZZ	80205	NAS620C3L	WASHER,FLAT	184
21	PAFZZ	80205	NAS1635-06-4	SCREW,MACHINE	12
22	PAFZZ	96906	MS35338-136	WASHER,LOCK	12
23	PAFZZ	80205	NAS620C6L	WASHER,FLAT	12
24	PAFZZ	80205	NAS620C10L	WASHER,FLAT	4
25	PAFZZ	80205	NAS1635-3-8	SCREW,MACHINE	4
26	PAFZZ	80205	NAS1635-04-6	SCREW,MACHINE	16
27	XAFFF	19200	12303520	BRACKET,CONN	1
28	XAFZZ	19200	12303520-1	.BRACKET	1
29	PAFZZ	96906	MS21076L3	.NUT,SELF-LOCKING,PL	4
30	PAFZZ	96906	MS20426AD3-6	.RIVET,SOLID	8
31	PAFZZ	19200	12303243	CONNECTOR BODY,RECE J1-J3	3
32	PAFZZ	19200	12303108	CONTACT,ELECTRICAL	288
33	PAFZZ	19200	12303109	POLARIZING KEY,ELEC	6
34	PAFZZ	80205	NAS671C2	NUT,PLAIN,HEXAGON	92
35	PAFZZ	96906	MS35338-134	WASHER,LOCK	92
36	PAFZZ	19200	11732676-2	TERMINAL,CIRCULAR E1,E2,E4-E7 (REPLACEMENT FOR 12303323)	6
37	PAFZZ	19200	12272133	POST,ELECTRICAL-MEC	6
38	PAFZZ	80205	NAS1786C04-18	POST,ELECTRICAL-MEC	4
39	XDFZZ	19200	12303120	COVER	1
40	PAFFF	19200	12303122	CIRCUIT CARD ASSEMB TB1 (FOR COMPONENT PARTS SEE GROUP 01010503)	1
41	PAFZZ	81349	RER50F8R06R	RESISTOR,FIXED,WIRE R1	1
42	XAFZZ	19200	12303113	CHASSIS	1
43	PAFZZ	80205	NAS1635-02-5	SCREW,MACHINE	46
44	PAFZZ	81349	RER50F15R0R	RESISTOR,FIXED,WIRE R4,R6	2

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
45	PAFZZ	81349	RER55F6650R	RESISTOR, FIXED, WIRE R10-R12	3
46	PAFZZ	81349	RER55F2210R	RESISTOR, FIXED, WIRE R13-R16	4
47	PAFZZ	81349	RER50F13R3R	RESISTOR, FIXED, WIRE R22	1
48	PAFZZ	81349	RER50F12R7R	RESISTOR, FIXED, WIRE R23	1
49	PAFZZ	81349	RER55F6R34R	RESISTOR, FIXED, WIRE R24	1
50	PAFZZ	81349	RER50F11R3R	RESISTOR, FIXED, WIRE R25	1
51	PAFZZ	81349	RER50F25R5R	RESISTOR, FIXED, WIRE R20	1
52	PAFZZ	81349	RER55F18R7R	RESISTOR, FIXED, WIRE R19	1
53	PAFZZ	81349	RER45F6R34R	RESISTOR, FIXED, WIRE R21	1
54	PAFZZ	81349	RER45F8R45R	RESISTOR, FIXED, WIRE R17	1
55	PAFZZ	81349	RER40F12R7R	RESISTOR, FIXED, WIRE R18	1
56	PAFZZ	81349	RER40FR499R	RESISTOR, FIXED, WIRE R45	1
56	PAFZZ	81349	RER60FR499R	RESISTOR, FIXED, WIRE R45 (REPLACEMENT FOR RER40FR499FM)	1
57	PAFZZ	81349	RER45F2100R	RESISTOR, FIXED, WIRE R5	1
58	PAFZZ	81349	RER40F24R9R	RESISTOR, FIXED, WIRE R7	1
59	PAFZZ	81349	RER50F1R50R	RESISTOR, FIXED, WIRE R2	1
61	MFFZZ	81349	M23053/5-105-C	INSULATION SLEEVING (MAKE FROM NSN 5970-01-132-9963)	V
62	MFFZZ	81349	M23053/5-206-C	INSULATION SLEEVING	V

END OF FIGURE

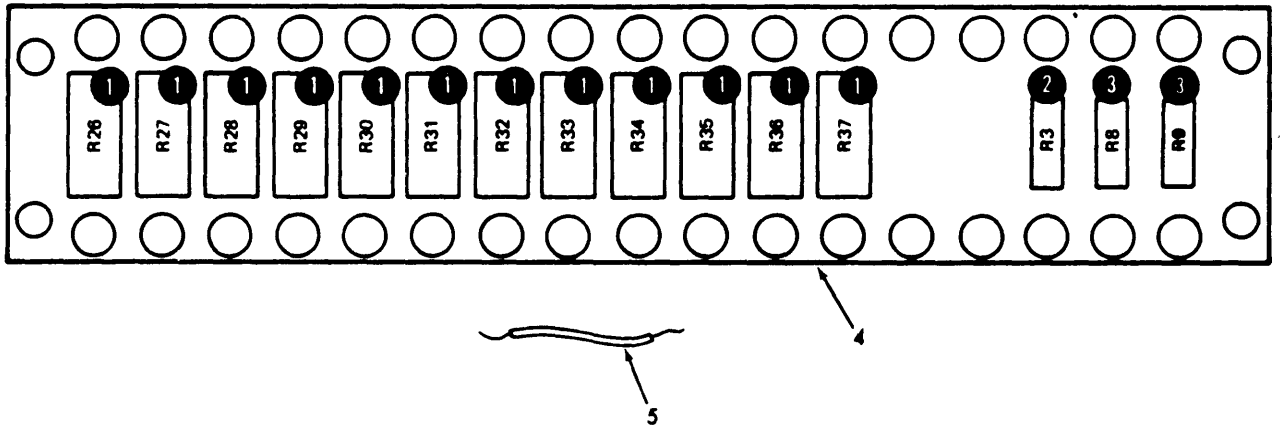


FIGURE A-24 TERMINAL BOARD ASSEMBLY TB2 COMPONENT PARTS (ASSY P/N 12303124).

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 01014000					
FIGURE A-24 TERMINAL BOARD ASSEMBLY TB2 COMPONENT PARTS.					
1	PAFZZ 81349	RCR32G103JS		RESISTOR, FIXED, COMP R26-R37.....	12
2	PAFZZ 81349	RWR80N18R2FS		RESISTOR, FIXED, WIRE R3.....	1
3	XDFZZ 81349	RWR80N69R8FS		RESISTOR, FIXED, WIRE R8, R9.....	2
4	XAFZZ 19200	12303125		TERMINAL BOARD.....	1
5	MFFZZ 81348	QQW343TYPES22AWG		WIRE, ELECTRICAL (MAKE FROM NSN 6145-00-669-6564).....	V

END OF FIGURE

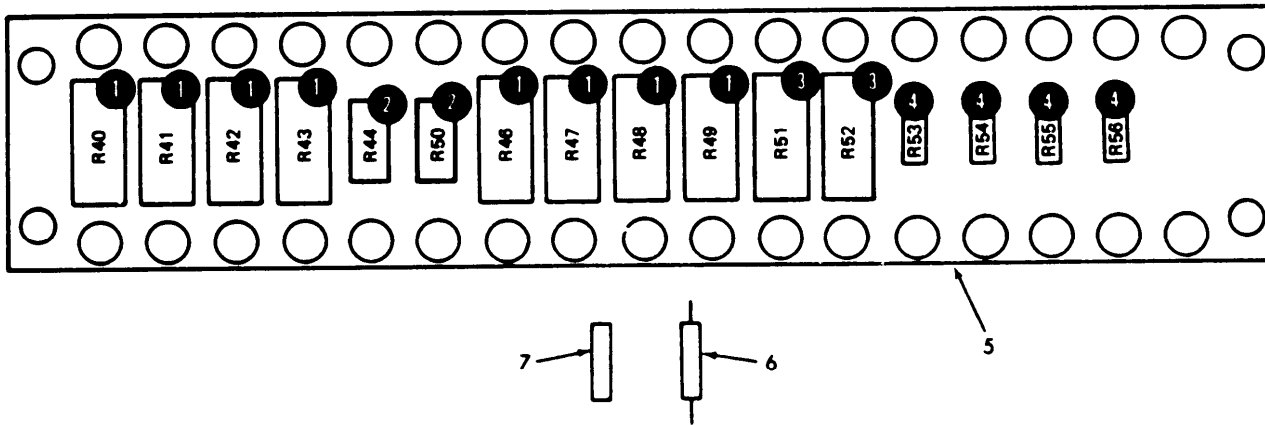


FIGURE A-25 CIRCUIT CARD ASSEMBLY TB1 COMPONENT PARTS (ASSY P/N 12303122).

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES(UOC)	(6) QTY
GROUP 01014100					
FIGURE A-25 CIRCUIT CARD ASSEMBLY					
TB1 COMPONENT PARTS.					
1	PAFZZ 81349		RCR32G103JS	RESISTOR, FIXED, COMP R40-R43, R46-R49	8
2	PAFZZ 81349		RCR20G821JS	RESISTOR, FIXED, COMP R44, R50.....	2
3	PAFZZ 81349		RCR32G682JS	RESISTOR, FIXED, COMP R51, R52.....	2
4	PAFZZ 81349		RCR07G273JS	RESISTOR, FIXED, COMP R53-R56.....	4
5	XAFZZ 19200		12303125	TERMINAL BOARD.....	1
6	MFFZZ 81348		QQW343PYPE22AWG	WIRE, ELECTRICAL (MAKE FROM QQW343, V TYPE S, 22 AWG, TINNED).....	
7	MFFZZ 81349		MIL122129 AWG22	SLEEVING (MAKE FROM MIL-1-22129 22 V AWG).....	

END OF FIGURE

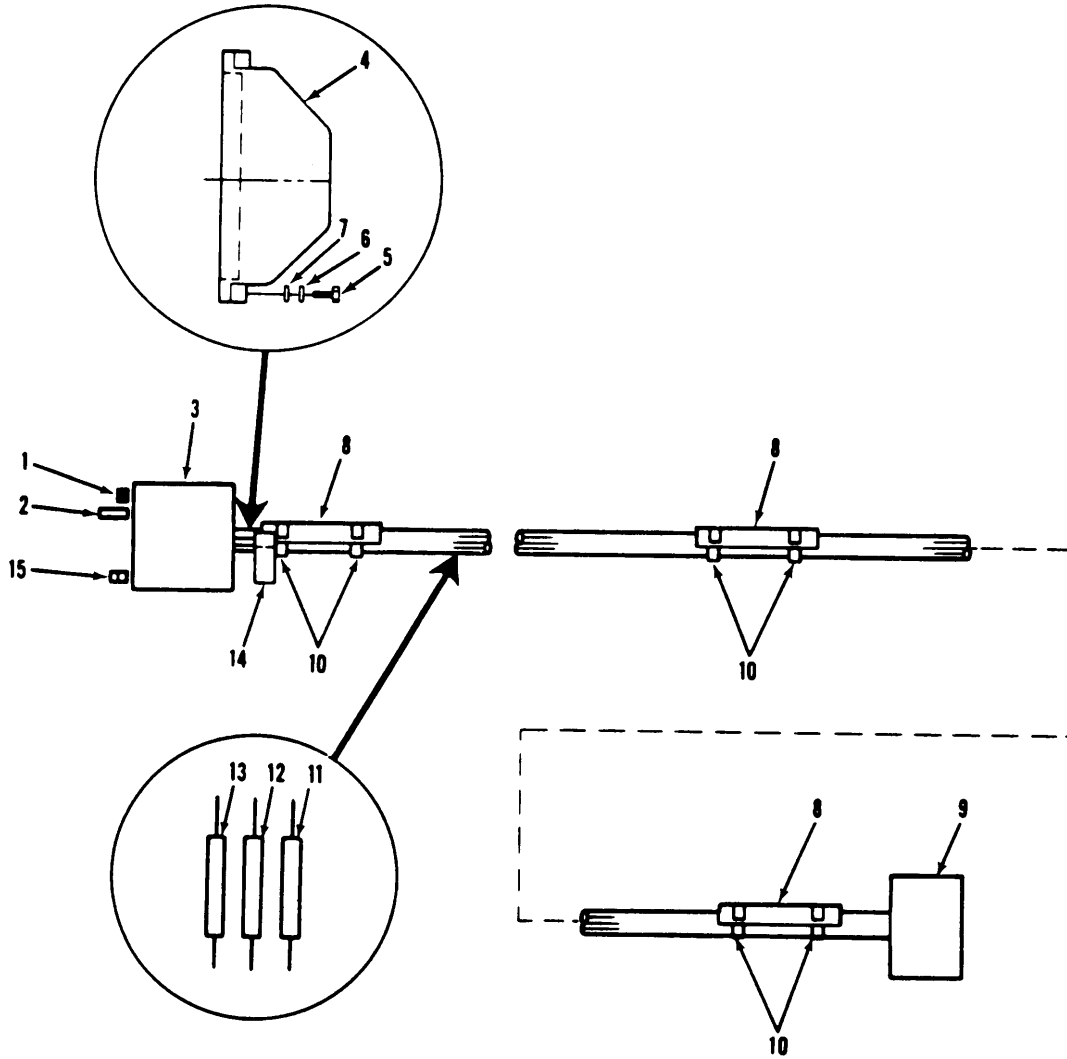


FIGURE A-26 INTERNAL TIS INTERCONNECT WIRING HARNESS
ASSEMBLY W19 COMPONENT PARTS (ASSY P/N 12303548,
12303463) AND RECEPTACLE CONNECTOR J10.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01015200 FIGURE A-26 INTERNAL TIS INTERCONNECT WIRING HARNESS ASSEMBLY W19 COMPONENT PARTS AND RECEPTACLE CONNECTOR J10.					
1	PADZZ	96906	MS35649-244	NUT,PLAIN,HEXAGON (USED ON 12303463	2
2	PADZZ	19200	12303108	CONTACT,ELECTRICAL	73
3	PADZZ	19207	12303242	CONNECTOR BODY,PLUG P1	1
4	PADZZ	19200	12303318	CONNECTOR,BODY (USED ON NHA 12303463)	1
5	PADZZ	80205	NAS1635-04-7	SCREW,MACHINE (USED ON 12303463)	4
6	PADZZ	96906	MS35338-135	WASHER,LOCK (USED ON 12303463)	4
7	PADZZ	80205	NAS620C4L	WASHER,FLAT (USED ON 12303463)	4
8	PADZZ	19200	12303116	PLATE,IDENTIFICATIO	3
9	PADZZ	96906	MS27468T23F35S	CONNECTOR,RECEPTACL J10	1
10	PADZZ	96906	MS3367-2-9	STRAP,TIEDOWN,ELECT	6
11	MDDZZ	81349	M47206-22IV2-090	WIRE (USED ON NHA 12303548) (MAKE FROM M47206-22IV2-090)	V
11	MDDZZ	18876	MIS26877/2-22SJ	WIRE (USED ON 12303463) (MAKE FROM MIS26877/2-22SJ90)	V
12	MDDZZ	18876	MIS26877/2-22U	WIRE (MAKE FROM MIS26877/2-22U90)	V
13	MDDZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (USED ON NHA 12303548) (MAKE FROM NSN 6145-01- 060-3009)	V
14	XDDZZ	19200	12303549	HANDLE	1
15	PADZZ	19200	12303109	POLARIZING KEY,ELEC	2

END OF FIGURE

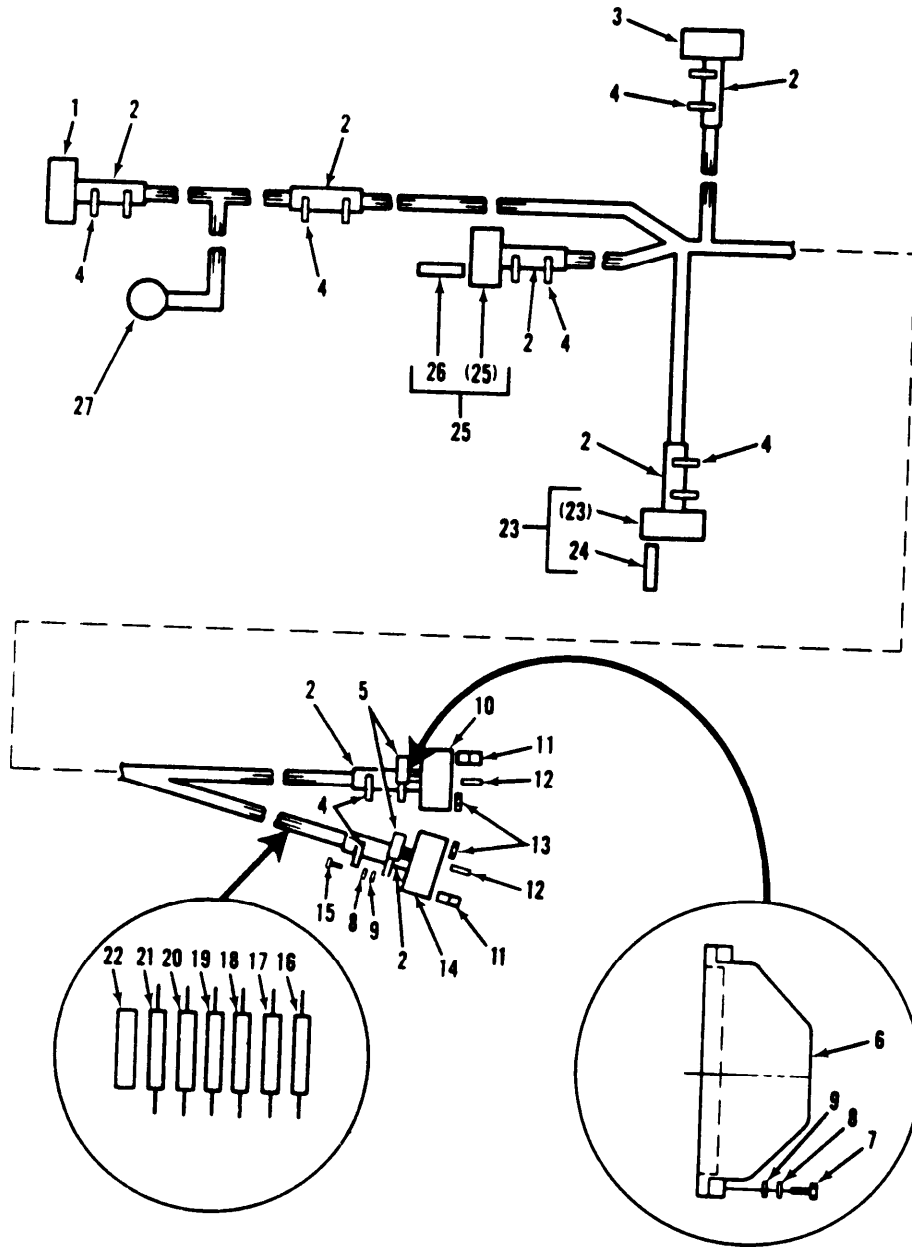


FIGURE A-27 INTERNAL TIS INTERCONNECT WIRING HARNESS
 ASSEMBLY W13 COMPONENT PARTS ASSY P/N 12303532,
 12303386) AND RECEPTACLE CONNECTORS J2, J1, J12, J11.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01015300					
FIGURE A-27 INTERNAL TIS					
INTERCONNECT WIRING HARNESS ASSEMBLY					
W13 COMPONENT PARTS AND RECEPTABLE					
CONNECTORS J2,J1,J12,J11.					
1	PADZZ	81349	M24308/4-5	CONNECTOR,RECEPTACL J2	1
2	PADZZ	19200	12303316	PLATE,IDENTIFICATIO	7
3	PADZZ	96906	MS27468E23F35SB	CONNECTOR,RECEPTACL J1	1
4	PADZZ	96906	MS3367-2-9	STRAP,TIEDOWN,ELECT	14
5	XDDZZ	19200	12303549	HANDLE	2
6	PADZZ	19200	12303317	CONNECTOR,BODY (USED ON NHA 12303386)	1
7	PADZZ	80205	NAS1635-04-7	SCREW,MACHINE (USED ON 12303386)	4
8	PADZZ	96906	MS35338-135	WASHER,LOCK (USED ON NHA 12303386)	6
9	PADZZ	80205	NAS620C4L	WASHER,FLAT (USED ON NHA 12303386)	6
10	PADZZ	19200	12303344	CONNECTOR BODY,PLUG P1	1
11	PADZZ	19200	12303109	POLARIZING KEY,ELEC	4
12	PADZZ	19200	12303108	CONTACT,ELECTRICAL	154
13	PADZZ	96906	MS35649-244	NUT,PLAIN,HEXAGON (USED ON NHA 12303386)	2
14	PADZZ	19207	12303242	CONNECTOR BODY,PLUG P2	1
15	PADZZ	80205	NAS1635-04-6	SCREW,MACHINE (USED ON NHA 12303386)	2
16	MDDZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (USED ON NHA 12303386) (MAKE FROM M16878/4E22-9	V
17	MDDZZ	18876	MIS26877/2-22U	WIRE (MAKE FROM MIS26877/2-22U90)	V
18	MDDZZ	81349	M47206-22IV2-090	WIRE (USED ON NHA 12303532) (MAKE FROM MIL-W-47206-22IV2-090)	V
18	MDDZZ	18876	MIS26877/2-22SJ	WIRE (USED ON NHA 12303386) (MAKE FROM MIS26877/2-22SJ90)	V
19	MDDZZ	81349	M47206-22II3-902	WIRE (USED ON NHA 12303532) (MAKE FROM MIL-W-47206-22-II-3-9-0-2)	V
19	MDDZZ	18876	MIS26877/3-22SJ	WIRE (USED ON NHA 12303386) (MAKE FROM MIS26877/3-22SJ902)	V
20	MDDZZ	81349	M47206-22II49025	WIRE (USED ON NHA 12303532) (MAKE FROM MIL-W-47206-22-II-4-9025)	V
20	MDDZZ	18876	MIS26877/4-22SJ	WIRE (USED ON NHA 12303386) (MAKE FROM MIS26877/4-22SJ902)	V
21	MDDZZ	18876	MIS26877/3-22U	WIRE (MAKE FROM MIS26877/3-22U-902)	V
22	MDDZZ	81349	M23053/5-103-0	INSULATION SLEEVING (USED ON NHA 12303386) (MAKE FROM NSN 5970-00-812- 2974)	V
23	PADZZ	96906	MS27468T19F35S	CONNECTOR,RECEPTACL J11	1
24	PADZZ	81349	M39029/56-348	.CONTACT,ELCECTRICAL	66
25	PADDD	96906	MS27468E23F35SA	CONNECTOR,RECEPTACL J12	1
26	PADZZ	81349	M39029/56-348	.CONTACT,ELECTRICAL	100
27	PADZZ	96906	MS25036-148	TERMINAL,LUG	44

END OF FIGURE

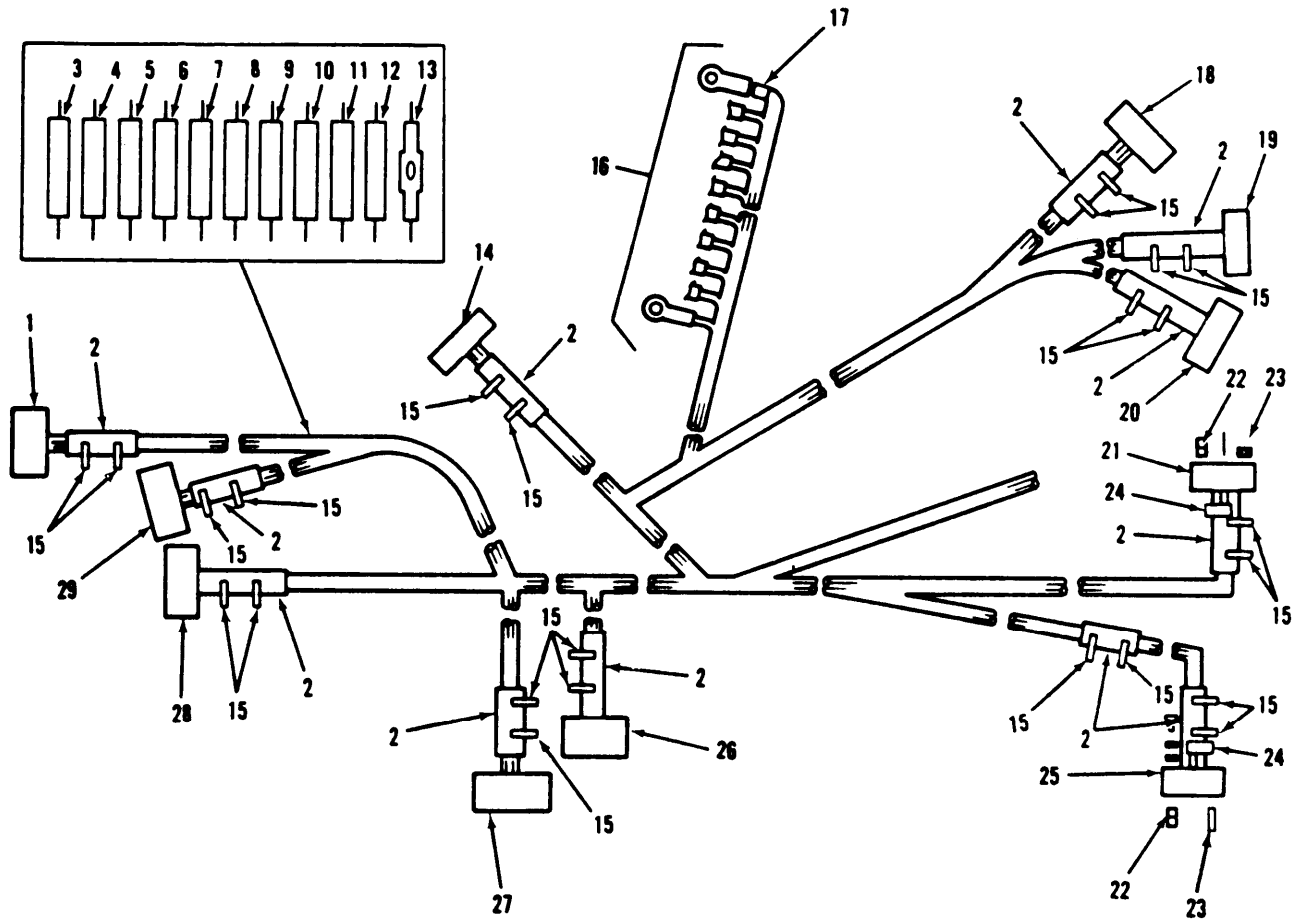


FIGURE A-28 INTERNAL TIS INTERCONNECT WIRING HARNESS ASSEMBLY W14 COMPONENT PARTS (ASSY P/N 12303533) AND RECEPTACLE CONNECTORS J1, J8, J6, J5, J7.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01015400					
FIGURE A-28 INTERNAL TIS					
INTERCONNECT WIRING HARNESS ASSEMBLY					
W14 COMPONENT PARTS AND RECEPTACLE					
CONNECTORS J1,J8,J6,J5,J7					
1	PADZZ	96906	MS3476L24-61P	CONNECTOR,PLUG,ELEC P2	1
2	PADZZ	19200	12303316	PLATE,IDENTIFICATIO	12
3	MDDZZ	81349	M47206-22V1-009	WIRE (MAKE FROM MIL-W-47206-22VI-009)	V
4	MDDZZ	81349	M16878/4BFE0	WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-017-9693)	V
5	MDDZZ	81349	MIL-W-16878/4	WIRE,ELECTRICAL (MAKE FROM NSN 6145-00-817-3609)	V
6	MDDZZ	81349	MIL-W-16878/4	WIRE,ELECTRICAL (MAKE FROM NSN 6145-00-062-6685)	V
7	MDDZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-060-3009)	V
8	MDDZZ	81349	M47206-22IV2-090	WIRE (MAKE FROM MIL-W-47206-22-IV-2-090)	V
9	MDDZZ	18876	MIS26877/2-22	WIRE (MAKE FROM MIS26877/2-22)	V
10	MDDZZ	18876	MIS26877/3-22	WIRE (MAKE FROM MIS26877/3-22)	V
11	MDDZZ	81349	M47206-22II3-902	WIRE (MAKE FROM MIL-W-47206-22-II-3-902)	V
12	MDDZZ	19200	12273413	CABLE (MAKE FROM NSN 4931-01-158-4490)	V
13	PADZZ	81349	M83519/1-1	SPLICE,CONDUCTOR	V
14	PADZZ	96906	MS27468E25F35S	CONNECTOR,RECEPTACL J5	1
15	PADZZ	96906	MS3367-2-9	STRAP,TIEDOWN,ELECT	24
16	PADZZ	96906	MS25036-148	TERMINAL,LUG	47
17	MDDZZ	81349	MILI23053/5	SLEEVING (MAKE FROM MIL-I-23053/5, CLASS 1,BLACK)	V
18	PADZZ	81349	M24308/4-15	CONNECTOR,RECEPTACL J1	1
19	PADZZ	96906	MS3476L22-55SX	CONNECTOR,PLUG,ELEC P4	1
20	PADZZ	96906	MS3476L24-61S	CONNECTOR,PLUG,ELEC P3	1
21	PADZZ	19200	12303344	CONNECTOR BODY,PLUG P5	1
22	PADZZ	19200	12303108	CONTACT,ELECTRICAL	252
23	PADZZ	19200	12303109	POLARIZING KEY,ELEC	4
24	XDDZZ	19200	12303549	HANDLE	2
25	PADZZ	19207	12303242	CONNECTOR BODY,PLUG P6	1
26	PADZZ	96906	MS27468T23F35SC	CONNECTOR,RECEPTACL J8	1
27	PADZZ	96906	MS27468E25F35SA	CONNECTOR,RECEPTACL J7	1
28	PADZZ	96906	MS27468T25F35SD	CONNECTOR,RECEPTACL J6	1
29	PADZZ	81349	M83723/75R22556	CONNECTOR,PLUG,ELEC P1	1

END OF FIGURE

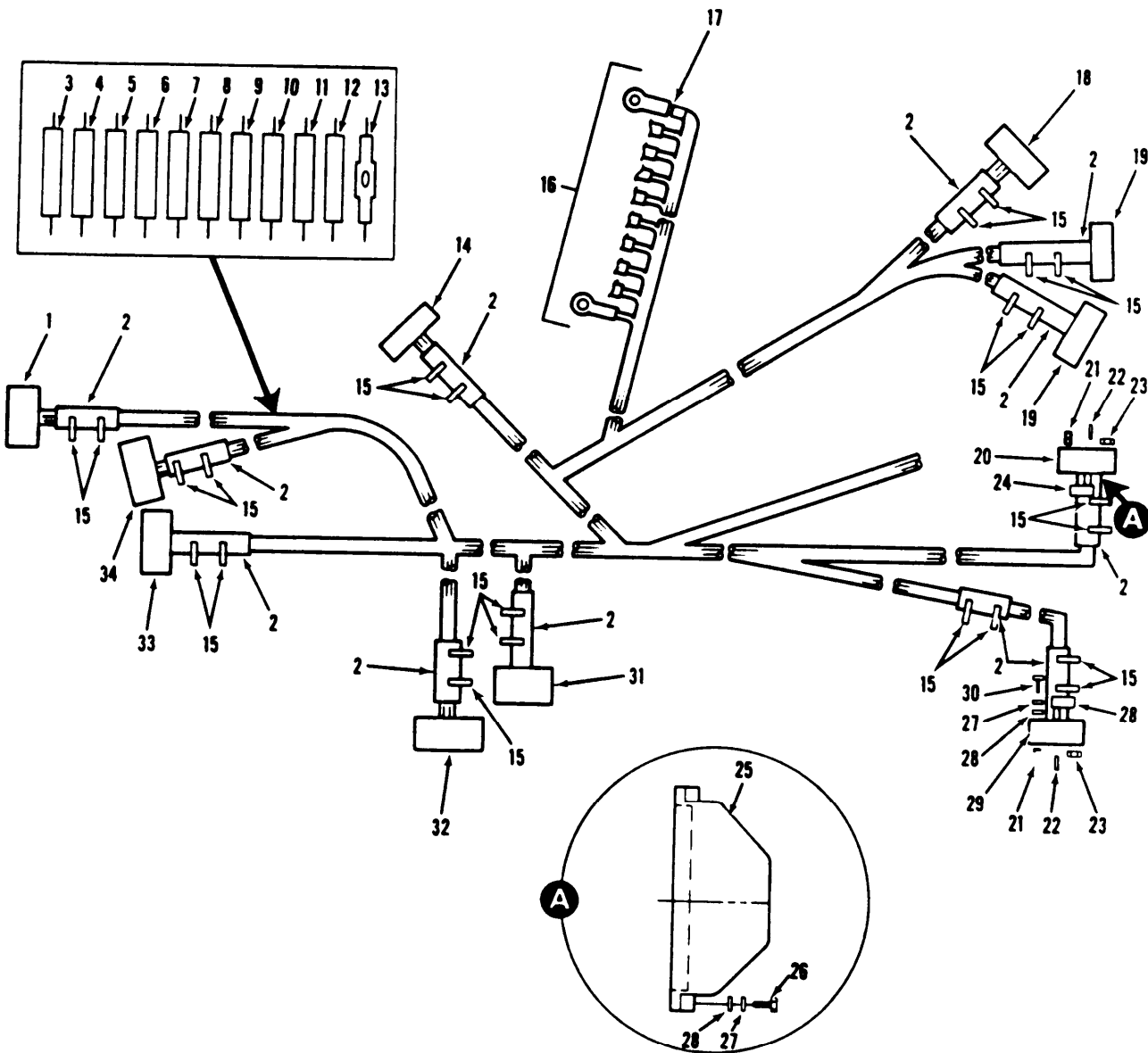


FIGURE A-28A INTERNAL TIS INTERCONNECT WIRING HARNESS ASSEMBLY W14 COMPONENT PARTS (ASSY P/N 12303387) AND RECEPTACLE CONNECTORS J1, J8, J6, J5, J7.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 010154001					
FIGURE A-28A INTERNAL TIS					
INTERCONNECT WIRING HARNESS ASSEMBLY					
W14 COMPONENT PARTS AND RECEPTACLE					
CONNECTORS J1,J8,J6,J5,J7.					
1	PADZZ	96906	MS3476L24-61P	CONNECTOR,PLUG,ELEC P2	1
2	PADZZ	19200	12303316	PLATE,IDENTIFICATIO	12
3	MDDZZ	18876	MIS26877/3-22SJ	WIRE (MAKE FROM MIS26877/3-22SJ902)	V
4	MDDZZ	81349	M16878/4E22-0	WIRE,ELECTRICAL (MAKE FROM MIL-W-16878/4E22-0)	V
5	MDDZZ	81349	M16878/4E22-1	WIRE,ELECTRICAL (MAKE FROM MIL-W-16878/4E22-1)	V
6	MDDZZ	81349	M16878/4E22-2	WIRE,ELECTRICAL (MAKE ROM MIL-W-16878/4E22-2)	V
7	MDDZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM MIL-W-16878/4E22-9)	V
8	MDDZZ	18876	MIS26877/2-22SJ	WIRE (MAKE FROM MIS26877/2-22JJ90)	V
9	MDDZZ	18876	MIS26877/2-22U	WIRE (MAKE FROM MIS26877/2-22U)	V
10	MDDZZ	18876	MIS26877/3-22U	WIRE (MAKE FROM MIS26877/3-22U)	V
11	MDDZZ	18876	MIS26877/1-22SJ9	CABLE,SPECIAL PURPO (MAKE FROM MIS26877/4-22SJ9)	V
12	MDDZZ	19200	12273413	CABLE (MAKE FROM NSN 4931-01-158-4490)	V
13	PADZZ	81349	M83519/1-1	SPLICE,CONDUCTOR	V
14	PADZZ	96906	MS27468E25F35S	CONNECTOR,RECEPTACL J5	1
15	PADZZ	96906	MS3367-2-9	STRAP,TIEDOWN ELECT	24
16	PADZZ	96906	MS25036-148	TERMINAL,LUG	47
17	MDDZZ	81349	M23053/5-103-0	INSULATION SLEEVING (MAKE FROM MIL-I-23053/5,CLASS 1,BLACK)	V
18	PADZZ	81349	M24308/4-15	CONNECTOR,RECEPTACL J1	1
19	PADZZ	96906	MS3476L24-61S	CONNECTOR,PLUG,ELEC P3,P4	2
20	PADZZ	19200	12303344	CONNECTOR BODY,PLUG P5	1
21	PADZZ	19200	12303109	POLARIZING KEY,ELEC	4
22	PADZZ	19200	12303108	CONTACT,ELECTRICAL	215
23	PADZZ	96906	MS35649-244	NUT,PLAIN,HEXAGON	2
24	XDDZZ	19200	12303549	HANDLE	2
25	PADZZ	19200	12303317	CONNECTOR,BODY	1
26	PADZZ	80205	NAS1635-04-7	SCREW,MACHINE	4
27	PADZZ	96906	MS35338-135	WASHER,LOCK	6
28	PADZZ	80205	NAS620C4L	WASHER,LOCK	6
29	PADZZ	19207	12303242	CONNECTOR BODY,PLUG P6	1
30	PADZZ	80205	NAS1635-04-6	SCREW,MACHINE	2
31	PADZZ	96906	MS27468T23F35SC	CONNECTOR,RECEPTACL J8	1
32	PADZZ	96906	MS27468E25F35SA	CONNECTOR,RECEPTACL J7	1
33	PADZZ	96906	MS27468T25F35SD	CONNECTOR,RECEPTACL J6	1
34	PADZZ	81349	M83723/75R22556	CONNECTOR,PLUG,ELEC P1	1

END OF FIGURE

A-28A-1

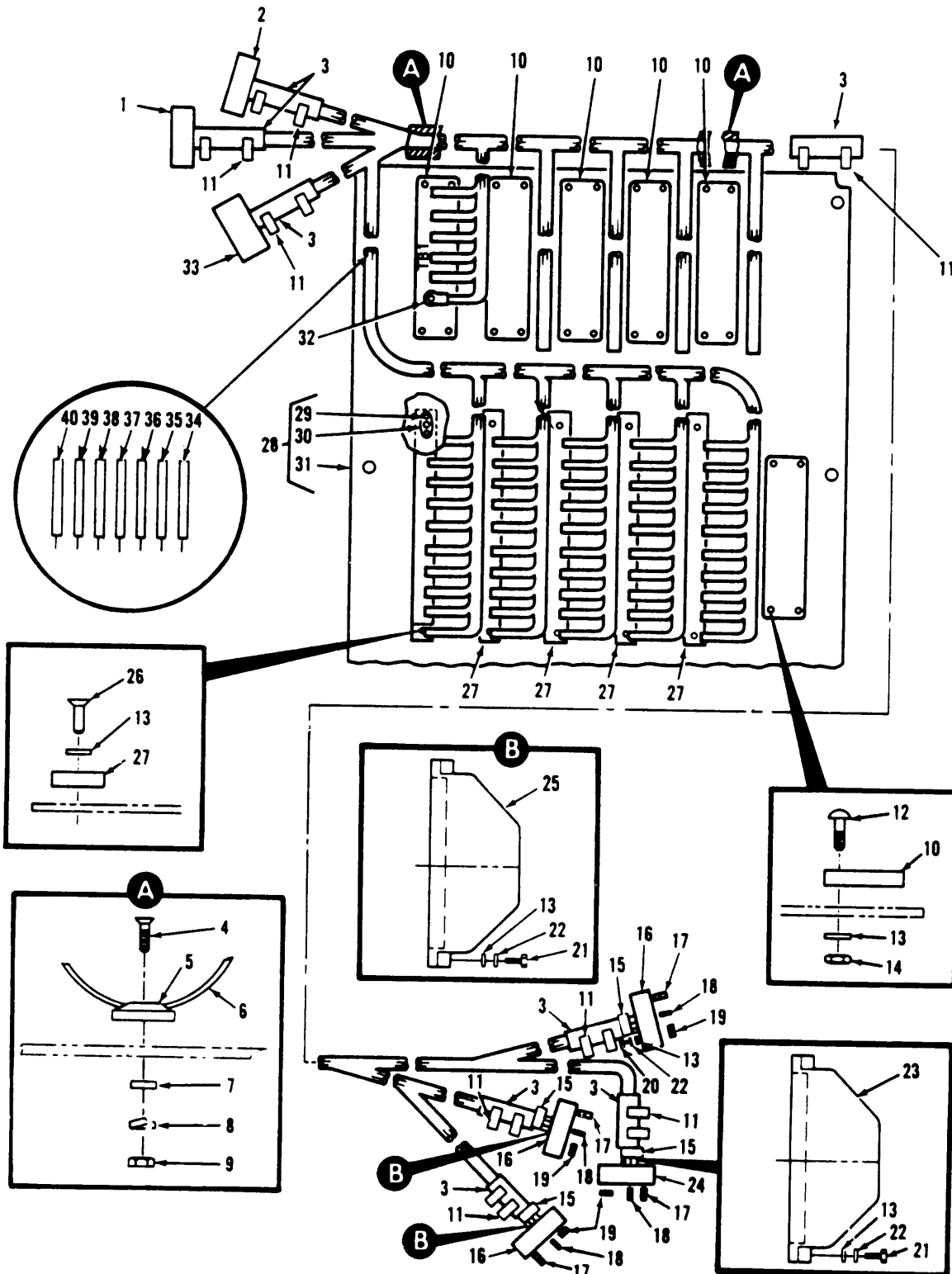


FIGURE A-29 INTERNAL PCU INTERCONNECT WIRING HARNESS ASSEMBLY W15 COMPONENT PARTS (ASSY P/N 12303534, 12303403) BRACKET, AND RECEPTACLE CONNECTORS J4, J9, J2.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01015500					
FIGURE A-29 INTERNAL PCU					
INTERCONNECT WIRING HARNESS ASSEMBLY					
W15 COMPONENT PARTS BRACKET, AND					
RECEPTACLE CONNECTORS J4, J9, J2.					
1	PADZZ	96906	MS27468E25F35SC	CONNECTOR, RECEPTACL J4	1
2	PADZZ	96906	MS27468T23F2S	CONNECTOR, RECEPTACL J9	1
3	PADZZ	19200	12303316	PLATE, IDENTIFICATIO	8
4	PADZZ	96906	MS24693C29	SCREW, MACHINE	2
5	PADZZ	19200	12303132	SUPPORT, TIE WRAP	2
6	PADZZ	96906	MS3367-1-9	STRAP, TIEDOWN	2
7	PADZZ	80205	NAS620C6L	WASHER, FLAT	2
8	PADZZ	96906	MS35338-136	WASHER, LOCK	2
9	PADZZ	80205	NAS671C6	NUT, PLAIN, HEXAGON	2
10	PADZZ	81349	37TB10	TERMINAL BOARD THERMAL	6
11	PADZZ	96906	MS3367-2-9	STRAP, TIEDOWN, ELECT	16
12	PADZZ	80205	NAS1635-04-10	SCREW, MACHINE	24
13	PADZZ	80205	NAS620C4L	WASHER, FLAT (USED ON 12303403)	74
14	PADZZ	80205	NAS1291C04M	NUT, SELF-LOCKING, EX	24
15	XDDZZ	19200	12303549	HANDLE	4
16	PADZZ	19207	12303242	CONNECTOR BODY, PLUG P2-P4	3
17	PADZZ	19200	12303109	POLARIZING KEY, ELEC	8
18	PADZZ	19200	12303108	CONTACT, ELECTRICAL	341
19	PADZZ	96906	MS35649-244	NUT, PLAIN, HEXAGON (USED ON 12303403)	8
20	PADZZ	80205	NAS1635-04-6	SCREW, MACHINE (USED ON 12303403)	4
21	PADZZ	80205	NAS1635-04-7	SCREW, MACHINE (USED ON 12303403)	12
22	PADZZ	96906	MS35338-135	WASHER, LOCK (USED ON 12303403)	16
23	PADZZ	19200	12303317	CONNECTOR, BODY (USED ON 12303403)	1
24	PADZZ	19200	12303344	CONNECTOR BODY, PLUG P1	1
25	PADZZ	19200	12303318	CONNECTOR, BODY (USED ON 12303403)	2
26	PADZZ	80205	NAS1635-04-5	SCREW, MACHINE	10
27	PADZZ	19200	12303319	TERMINAL BOARD	5
28	XDDDD	19200	12303537	BRACKET	1
29	PADZZ	96906	MS20426AD3-6	RIVET, SOLID	20
30	PADZZ	96906	MS21076-L04	NUT, SELF-LOCKING, PL	10
31	XADZZ	19200	12303537-1	.BRACKET	1
32	PADZZ	96906	MS25036-148	TERMINAL, LUG	74
33	PADZZ	96906	MS27468E25F35SB	CONNECTOR, RECEPTACL J2	1
34	MDDZZ	81349	M16878/4BFE9	WIRE, ELECTRICAL (MAKE FROM MIL-W- 16878/4-E-22-9)	V
35	MDDZZ	18876	MIS26877/2-22U	WIRE (USED ON 12303534) (MAKE FROM MIS26877/2-22U)	V
35	MDDZZ	18876	MIS26877/2-22SJ	WIRE (MAKE FROM MIS26877/2- 22SJ90) (USED ON 12303403)	V
36	MDDZZ	18876	MIS26877/3-22U	WIRE (MAKE FROM MIS26877/3-22U-902)	V
37	MDDZZ	81349	M47206-22V1-9	WIRE, ELECTRICAL (USED ON 12303534) (MAKE FROM NSN 6154-01-060- 3009)	V
37	MDDZZ	18876	MIS26877/1-22SJ9	CABLE, SPECIAL PURPO (MAKE FROM MIS26877/1-22J9) (USED ON 12303403)	V

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
38	MDDZZ	81349	M47206-22IV2-90	WIRE (USED ON 12303534)(MAKE FROM MIL-W-47206-22IV2-90)	V
38	MDDZZ	18876	MIS26877/2-22U	WIRE (MAKE FROM MIS26877/2-22U90)(USED ON 12273403)	V
39	MDDZZ	81349	M47206-22II3-902	WIRE (USED ON 12303534)(MAKE FROM MIL-W-47206-22II3-902)	V
39	MDDZZ	18876	MIS26877/3-22SJ	WIRE (MAKE FROM MIS 26877/3-22SJ902)(USED ON 12303403)	V
40	MDDZZ	81349	M23053/5-103-0	INSULATION SLEEVING (MAKE FROM NSN 5970-00-812-2974)	V

END OF FIGURE

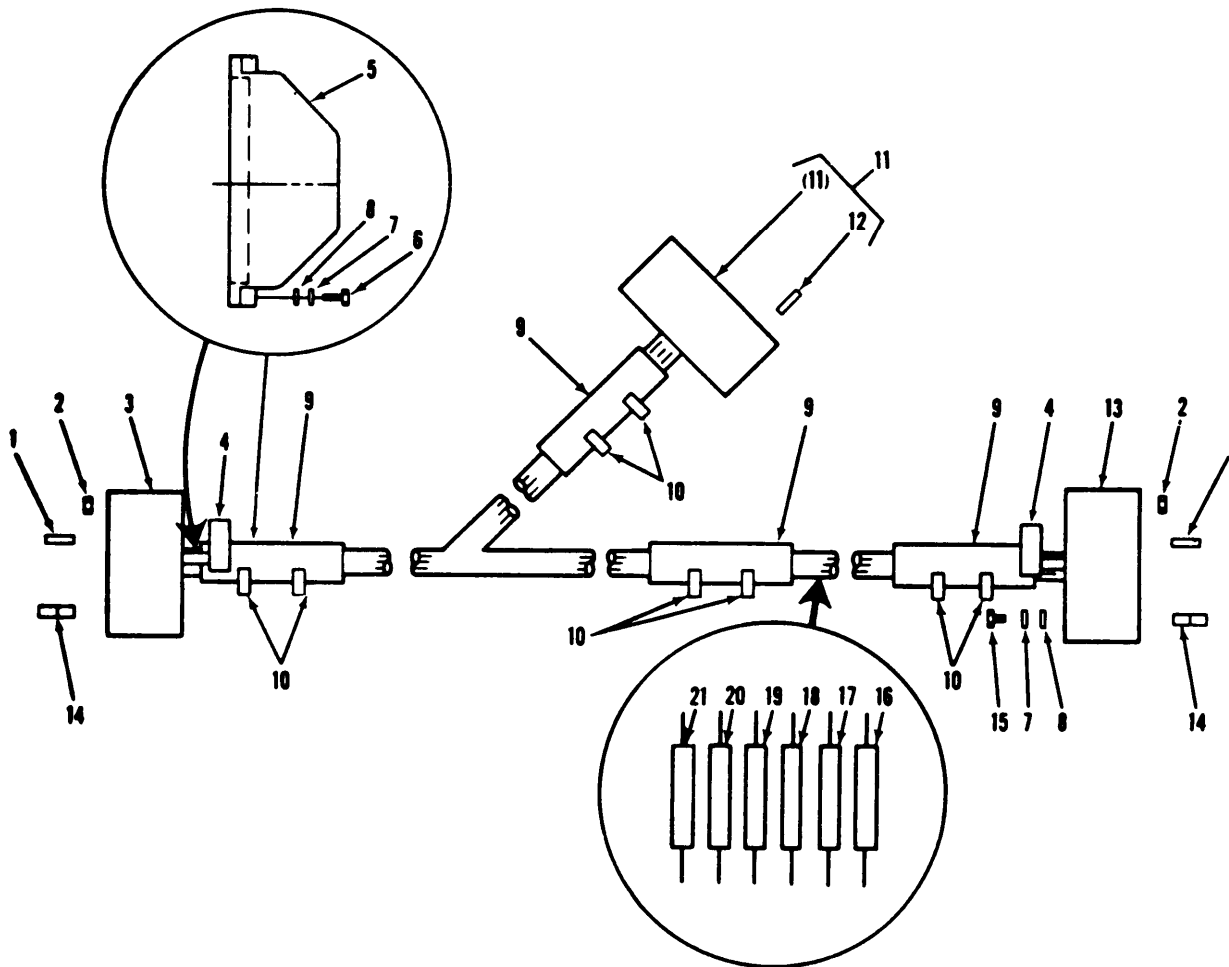


FIGURE A-30 INTERNAL PANEL INTERCONNECT WIRING HARNESS ASSEMBLY W16 COMPONENT PARTS (ASSY P/N 12303372, 12303414) AND RECEPTACLE CONNECTOR J3.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01015600					
FIGURE A-30 INTERNAL PANEL					
INTERCONNECT WIRING HARNESS ASSEMBLY					
W16 COMPONENT PARTS AND RECEPTACLE					
CONNECTOR J3					
1	PADZZ	19200	12303108	CONTACT,ELECTRICAL	106
2	PADZZ	96906	MS35649-244	NUT,PLAIN,HEXAGON (USED ON 12303414)	4
3	PADZZ	19207	12303242	CONNECTOR BODY,PLUG P1	1
4	XDDZZ	19200	12303549	HANDLE	1
5	PADZZ	19200	12303318	CONNECTOR,BODY (USED ON 12303414)	1
6	PADZZ	80205	NAS1635-04-7	SCREW,MACHINE (USED ON 12303414)	4
7	PADZZ	96906	MS35338-135	WASHER,LOCK (USED ON 12303414)	8
8	PADZZ	80205	NAS620C4L	WASHER,FLAT (USED ON 12303414)	8
9	PADZZ	19200	12303316	PLATE IDENTIFICATIO	4
10	PADZZ	96906	MS3367-2-9	STRAP,TIEDOWN,ELECT	8
11	PADZZ	96906	MS27468T19F35P	CONNECTOR,RECEPTACL J3	1
12	PADZZ	81349	M39029/58-360	.CONTACT,ELECTRICAL	66
13	PADZZ	19200	12303243	CONNECTOR BODY,RECE J1	1
14	PADZZ	19200	12303109	POLARIZING KEY,ELEC	4
15	PADZZ	80205	NAS1635-04-6	SCREW,MACHINE (USED ON 12303414)	4
16	MDDZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-060-3009)	V
17	MDDZZ	18876	MIS26877/3-22U	WIRE (MAKE FROM MIS26877/3-22U902)	V
18	MDDZZ	18876	MIS26877/2-22U	WIRE (MAKE FROM MIS26877/2-22U90)	V
19	MDDZZ	81349	M47206-22II3-902	WIRE (MAKE FROM MIL-W-47206-22II3- 9-0-2)(USED ON 12303372)	V
19	MDDZZ	18876	MIS26877/3-22SJ	WIRE (MAKE FROM MIS26877/3- 22SJ902)(USED ON 12303414)	V
20	MDDZZ	81349	M47206-22V1-009	WIRE (MAKE FROM MIL-W-47206-22V1- 009)(USED ON 12303372)	V
20	MDDZZ	18876	MIS26877/1-22SJ9	CABLE,SPECIAL PURPO (MAKE FROM MIS26877/1-22SJ9)(USED ON 12303414)	V
21	MDDZZ	81349	M47206-22IV2-090	WIRE (MAKE FROM MIL-W-47206-22IV2- 9-0)(USED ON 12303372)	V
21	MDDZZ	18876	MIS26877/2-22SJ	WIRE (MAKE FROM MIS26877/2- 22SJ90)(USED ON 12303414)	V

END OF FIGURE

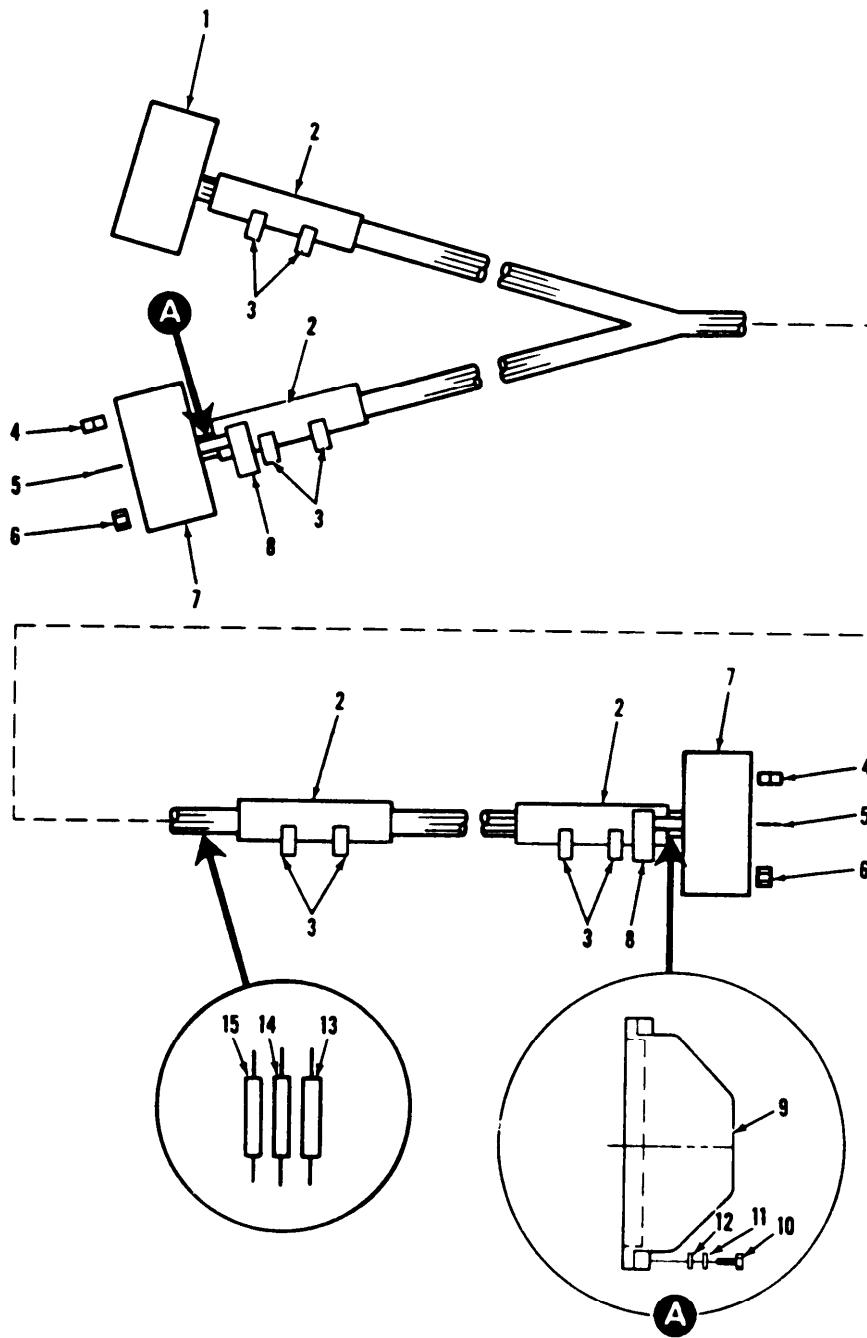


FIGURE A-31 INTERNAL POWER DISTRIBUTION WIRING HARNESS ASSEMBLY W17 COMPONENT PARTS (ASSY P/N 12303373, 12303462) AND RECEPTACLE CONNECTOR J1.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 01015800	
				FIGURE A-31 INTERNAL POWER	
				DISTRIBUTION WIRING HARNESS ASSEMBLY	
				W17 COMPONENT PARTS AND RECEPTACLE	
				CONNECTOR J1	
1	PADZZ	81349	M24308/4-4	CONNECTOR,RECEPTACL J1	1
2	PADZZ	19200	12303316	PLATE,IDENTIFICATIO	4
3	PADZZ	96906	MS3367-2-9	STRAP,TIEDOWN,ELECT	8
4	PADZZ	19200	12303109	POLARIZING KEY,ELEC	4
5	PADZZ	19200	12303108	CONTACT,ELECTRICAL	67
6	PADZZ	96906	MS35649-244	NUT,PLAIN,HEXAGON (USED ON 12303462)	4
7	PADZZ	19207	12303242	CONNECTOR BODY,PLUG P1,P2	2
8	XDDZZ	19200	12303549	HANDLE	2
9	PADZZ	19200	12303318	CONNECTOR,BODY (USED ON 12303462)	2
10	PADZZ	80205	NAS1635-04-7	SCREW,MACHINE (USED ON 12303462)	8
11	PADZZ	96906	MS35338-135	WASHER,LOCK (USED ON 12303462)	8
12	PADZZ	80205	NAS620C4L	WASHER,FLAT (USED ON 12303462)	8
13	MDDZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-060-3009)	V
14	MDDZZ	18876	MIS26877/2-22U	WIRE (MAKE FROM MIS26877/2-22U90)	V
15	MDDZZ	81349	M47206-22IV2-090	WIRE (USED ON 12303373) (MAKE FROM MIL-W-47206-22IV2-09-0)	V
15	MDDZZ	18876	MIS26877/2-22SJ	WIRE (USED ON 12303462) (MAKE FROM MIS26877/2-22SJ90)	V

END OF FIGURE

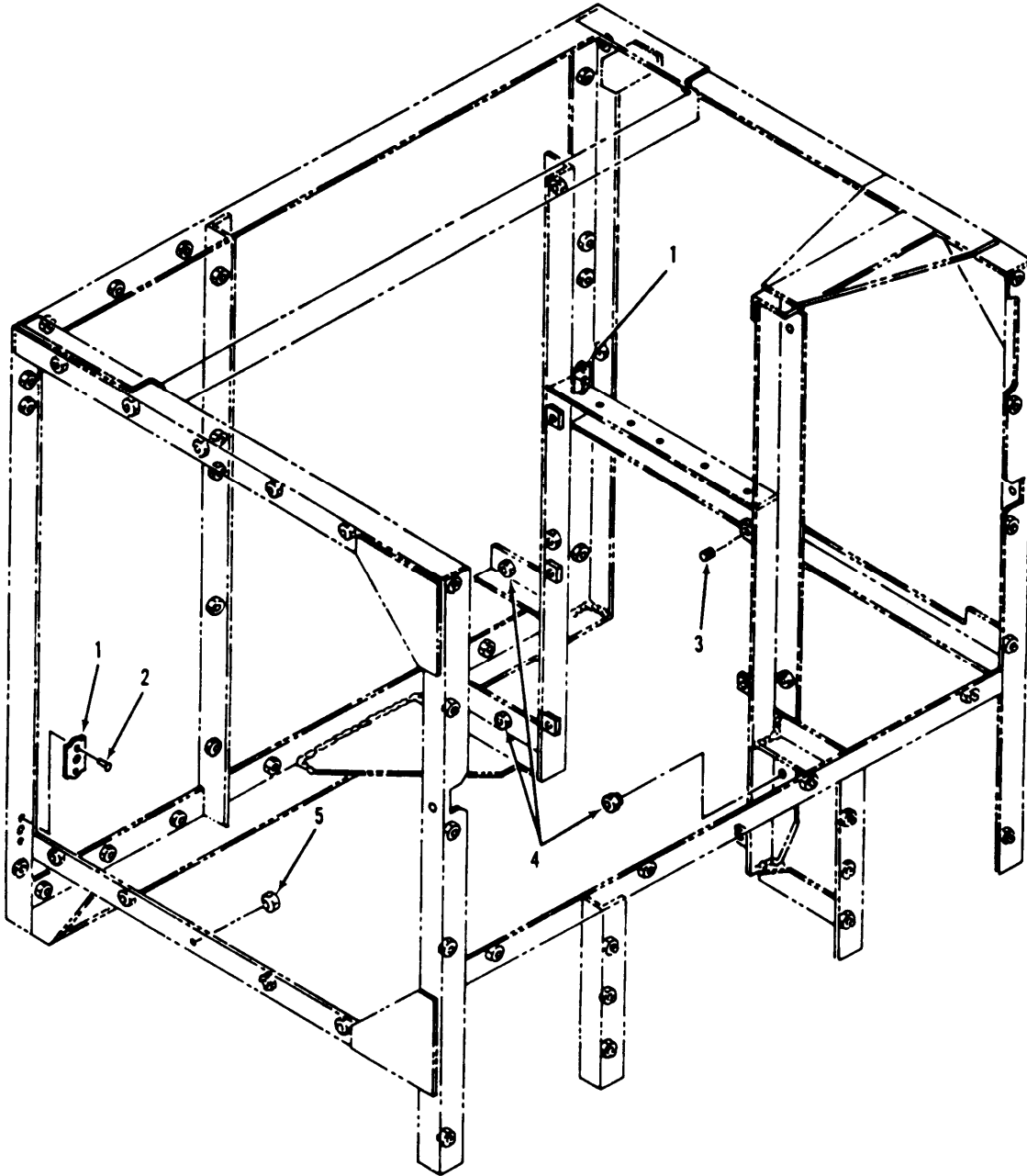


FIGURE A-32 CHASSIS ASSEMBLY COMPONENT PARTS
(ASSY P/N 12303513).

SECTION II TM9-4931-381-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP FIGURE A-32 CHASSIS ASSEMBLY COMPONENT PARTS.	
1	PAFZZ	19207	12303266-4	NUT,PLAIN,PLATE	2
2	PAFZZ	96906	MS20426AD3-6	RIVET,SOLID	4
3	PAFZZ	96906	MS124655	INSERT,SCREW THREAD	6
4	PAFZZ	81349	M45938/4-11	NUT,PLAIN,CLINCH	3
5	PAFZZ	81349	M45938/4-10	NUT,PLAIN,CLINCH	57

END OF FIGURE

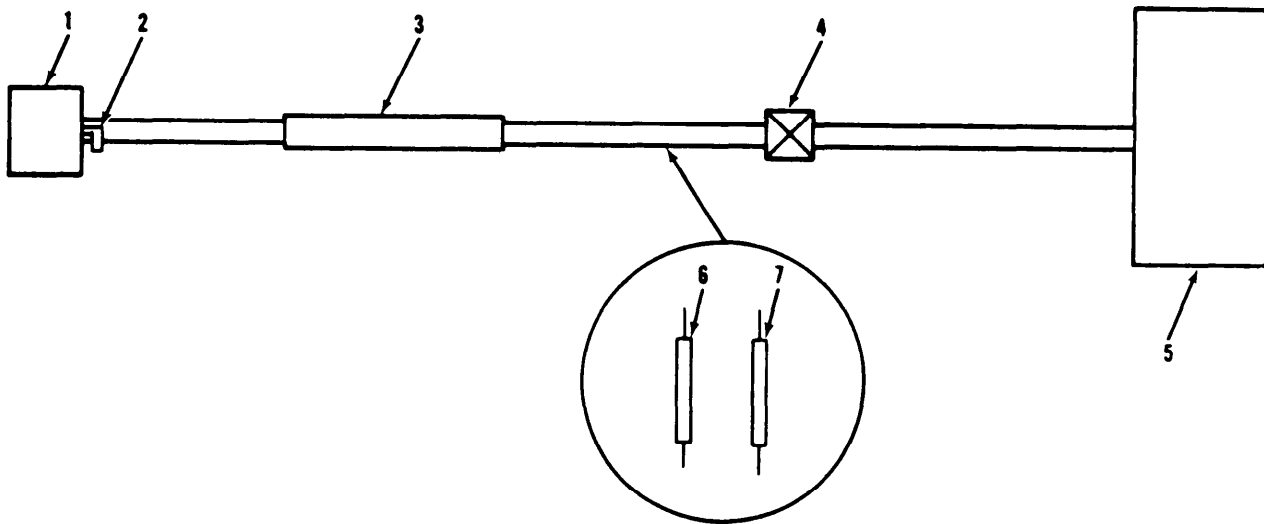


FIGURE A-33 COOLING INTERCONNECT FAN ASSEMBLY W18
COMPONENT PARTS (ASSY P/N 12303374) AND
RECEPTACLE CONNECTOR PI.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0103 FIGURE A-33 COOLING INTERCONNECT FAN ASSEMBLY W18 COMPONENT PARTS AND RECEPTACLE CONNECTOR P1.	
1	PAFZZ	81349	M24308/4-1	CONNECTOR,RECEPTACL P1	1
2	PAFZZ	81349	M24308/25-9	SCREW-LOCK ASSEMBLY	2
3	MFFZZ	81349	M23053/5-103-0	INSULATION SLEEVING (MAKE FROM MIL-V I-23053/5-103-0) (REPLACES P/N M23053/5-105-C	
4	PAFZZ	81349	M83519/1-2	SPLICE,CONDUCTOR	2
5	PAFZZ	19200	12303559	FAN,COOLING	1
6	MFFZZ	81349	M16878/4BFEO	WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-017-9693)	V
7	MFFZZ	18876	MIS26877/2-22U	WIRE (MAKE FROM MIS26877/2-22U)	V

END OF FIGURE

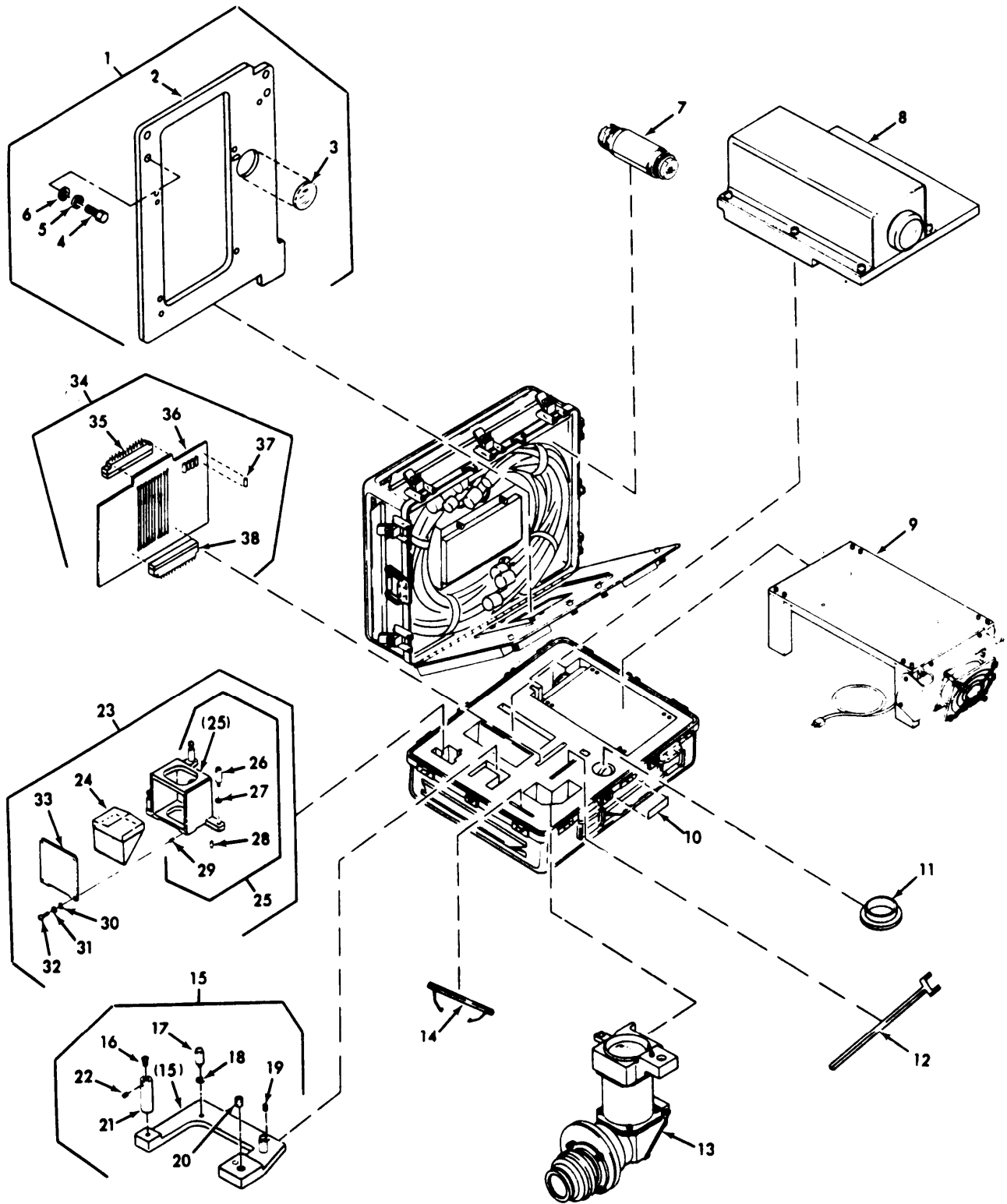


FIGURE A-34 ACCESSORY STORAGE ASSEMBLY COMPONENT
ASSY P/N 12303424, SHEET 1 OF 2, ELECTRICAL,
EXTENDER CARD, TEST TARGET RETICLE HOUSING, ADAPTER
COVER, AND TRU HOLDING PLATE ASSEMBLY.

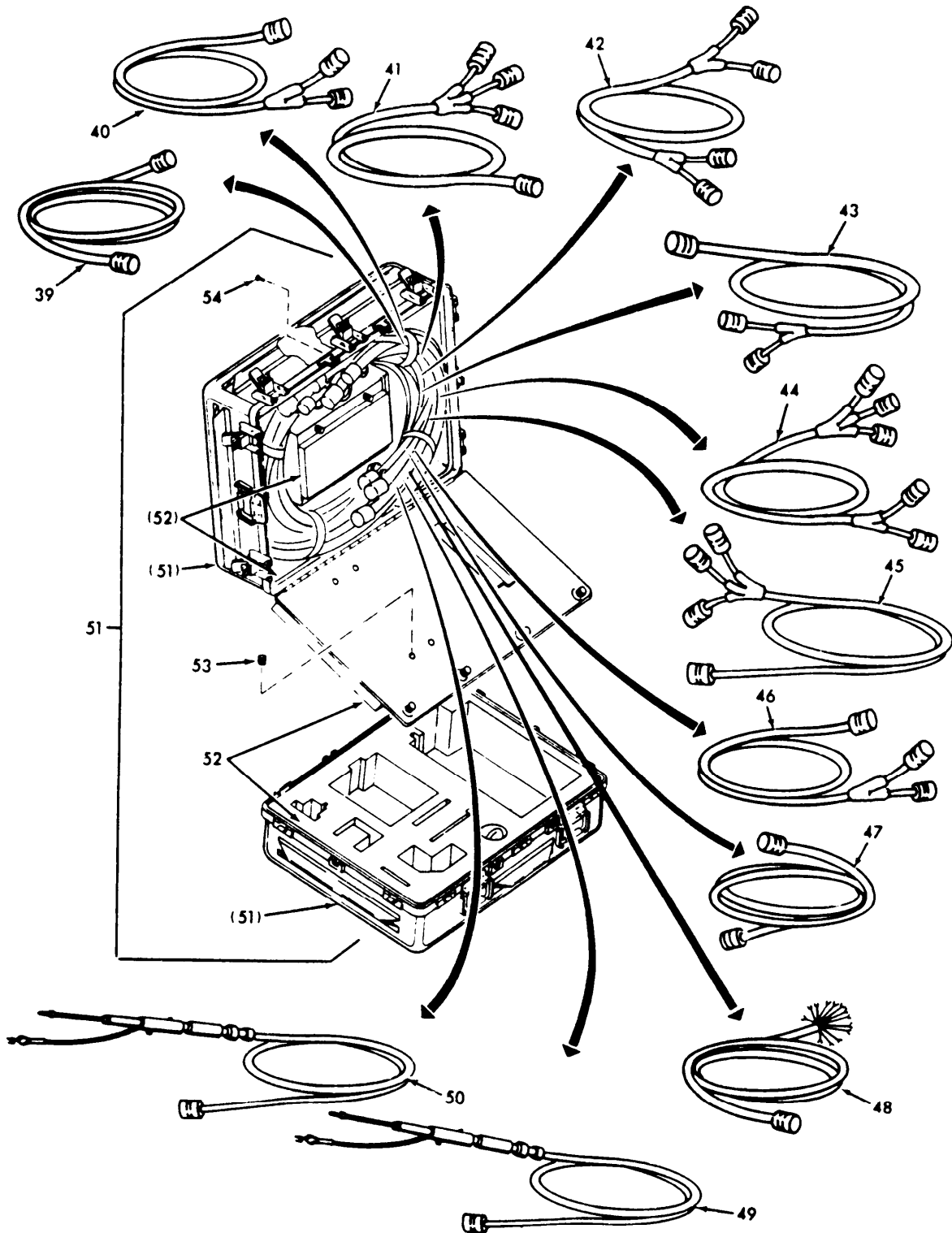


FIGURE A-34 ACCESSORY STORAGE ASSEMBLY COMPONENT PARTS (ASSY P/N 12303424, SHEET 2 OF 2) AND ASSEMBLY CASE.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 02	
				FIGURE A-34 ACCESSORY STORAGE	
				ASSEMBLY COMPONENT PARTS, ELECTRICAL	
				EXTENDER CARD, TEST TARGET RETICLE,	
				HOUSING, ADAPTER COVER, AND TRU	
				HOLDING PLATE ASSEMBLY.	
1	PAFFF	54490	5002660	PLATE ASSEMBLY TRU HOLDING	1
2	XDFZZ	54490	5002661	.PLATE	1
3	XDFZZ	54490	5002662	.MIRROR	1
4	PAFZZ	80063	SM-C-804917	.SCREW, MACHINE	4
5	PAFZZ	96906	MS35338-142	.WASHER, LOCK	4
6	PAFZZ	96906	MS15795-816	.WASHER, FLAT	4
7	PAFDD	19200	12303541	MULTIPLEXER ELECTRICAL (FOR	1
				COMPONENT PARTS SEE GROUP 0211)	
8	PAFDD	19200	12303376	VIEWER ASSEMBLY, IMA (FOR COMPONENT	1
				PARTS SEE GROUP 0215)	
9	PBFFF	19200	12303377	HOLDING FIXTURE, CON PCU	1
				HEATSINK (FOR COMPONENT PARTS SEE	
				GROUP 0216) T PARTS SEE	
				GROUP 0216)	
10	PAFZZ	19200	12303107	PLATE, ID	1
11	PAFZZ	80063	SM-C-807161	WRENCH, SPANNER	1
12	PAFZZ	80063	SM-C-805850	TOOL, FOCAL ALIGNMEN	1
13	PAFDD	80063	SM-D-805768	LED VIEWER ASSEMBLY (FOR COMPONENT	1
				PARTS SEE GROUP 0219)	
14	PAFZZ	80063	SM-C-807183	HANDLE PULLER	1
15	PAFZZ	80063	SM-D-805853	ADAPTER, COVER	1
16	PAFZZ	96906	MS122079	.INSERT, SCREW THREAD	1
17	PAFZZ	80063	SM-C-805957-1	.SCREW, ASSEMBLY PANE	2
18	PAFZZ	80063	SM-C-805950-1	.BUSHING, MACHINE THR	2
19	PAFZZ	96903	MS122081	.INSERT, SCREW THREAD	1
20	PAFZZ	96906	MS124659	.INSERT, SCREW THREAD	1
21	XDFZZ	80063	SM-C-807125	ROD	1
22	PAFZZ	96906	MS51021-36	SETSCREW	1
23	PBFDD	80063	SM-C-805408	TEST TARGET RETICLE	1
24	PADZZ	80063	SM-D-807173	PRISM, OPTICAL	1
25	XDDDD	80063	SM-D-805127	.HOUSING	1
26	PADZZ	80063	SM-C-805957-1	.SCREW, ASSEMBLY PANE	3
27	PADZZ	80063	SM-C-805950-1	.BUSHING, MACHINE THR	3
28	XDDZZ	80063	SM-C-773451-7	.PIN	2
29	PADZZ	96906	MS122116	.INSERT, SCREW THREAD	4
30	PADZZ	80205	NAS620C4	.WASHER, FLAT	4
31	PADZZ	96906	MS35338-135B	.WASHER, LOCK	4
32	PADZZ	96906	MS51957-13B	.SCREW, MACHINE	4
33	XDDZZ	80063	SM-C-805429	.COVER	1
34	PAFDD	19207	12303160	EXTENDER CARD, ELECT	1
35	PADZZ	19207	12303259	.CONNECTOR, RECEPTACL J1	1
36	XADZZ	19200	12303158	.EXTENDER BOARD	1
37	PADZZ	81349	M39024/11-01	.JACK, TIP TP1-TP5	5
38	PADZZ	80063	SM-C-773541-5	.CONNECTOR, PLUG, ELEC P1	1
39	PBFFF	19200	12303425	CABLE ASSEMBLY, SPEC W1 (FOR	1

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
40	PBFFF	19200	12303426	COMPONENT PARTS SEE GROUP 0202) CABLE ASSEMBLY,SPEC W2 (FOR COMPONENT PARTS SEE GROUP 0203)	1
41	PAFFF	19200	12303427	CABLE ASSEMBLY,SPEC W3 (FOR COMPONENT PARTS SEE GROUP 0204)	1
42	PAFFF	19200	12303428	CABLE ASSEMBLY,SPEC W4 (FOR COMPONENT PARTS SEE GROUP 0205)	1
43	PAFFF	19200	12303429	CABLE ASSEMBLY,SPEC W5 (FOR COMPONENT PARTS SEE GROUP 0206)	1
44	PAFFF	19200	12303430	CABLE ASSEMBLY,SPEC W6 (FOR COMPONENT PARTS SEE GROUP 0207)	1
45	PBFFF	19200	12303431	CABLE ASSEMBLY,SPEC W7 (FOR COMPONENT PARTS SEE GROUP 0208)	1
46	PBFFF	19200	12303432	CABLE ASSEMBLY,SPEC W8 (FOR COMPONENT PARTS SEE GROUP 0209)	1
47	PAFFF	19200	12303433	CABLE ASSEMBLY,SPEC W9 (FOR COMPONENT PARTS SEE GROUP 0210)	1
48	PAFFF	19200	12303354	CABLE ASSEMBLY,SPEC W10 (FOR COMPONENT PARTS SEE GROUP 0212)(USED ON SERIAL NUMBER 126 & SUB)	1
49	PBFFF	19200	12303446	CABLE ASEMBLY,SPEC W11 (FOR COMPONENT PARTS SEE GROUP 0213)	1
50	PBFFH	19200	12303447	CABLE ASSEMBLY,SPEC W12 (FOR COMPONENT PARTS SEE GROUP 0214)	1
51	PBFFF	19200	12303230	CASE,ACCESSORY	1
52	MFFZZ	81349	MILP26514	.FOAM (MAKE FROM MIL-P-26514 TYPE 1,CLASS 2,GRADE A)	V
53	PAFZZ	96906	MS21208F7-15	.INSERT,SCREW THREAD	4
54	PAFZZ	96906	MS51849-32	SCREW,MACHINE	2

END OF FIGURE

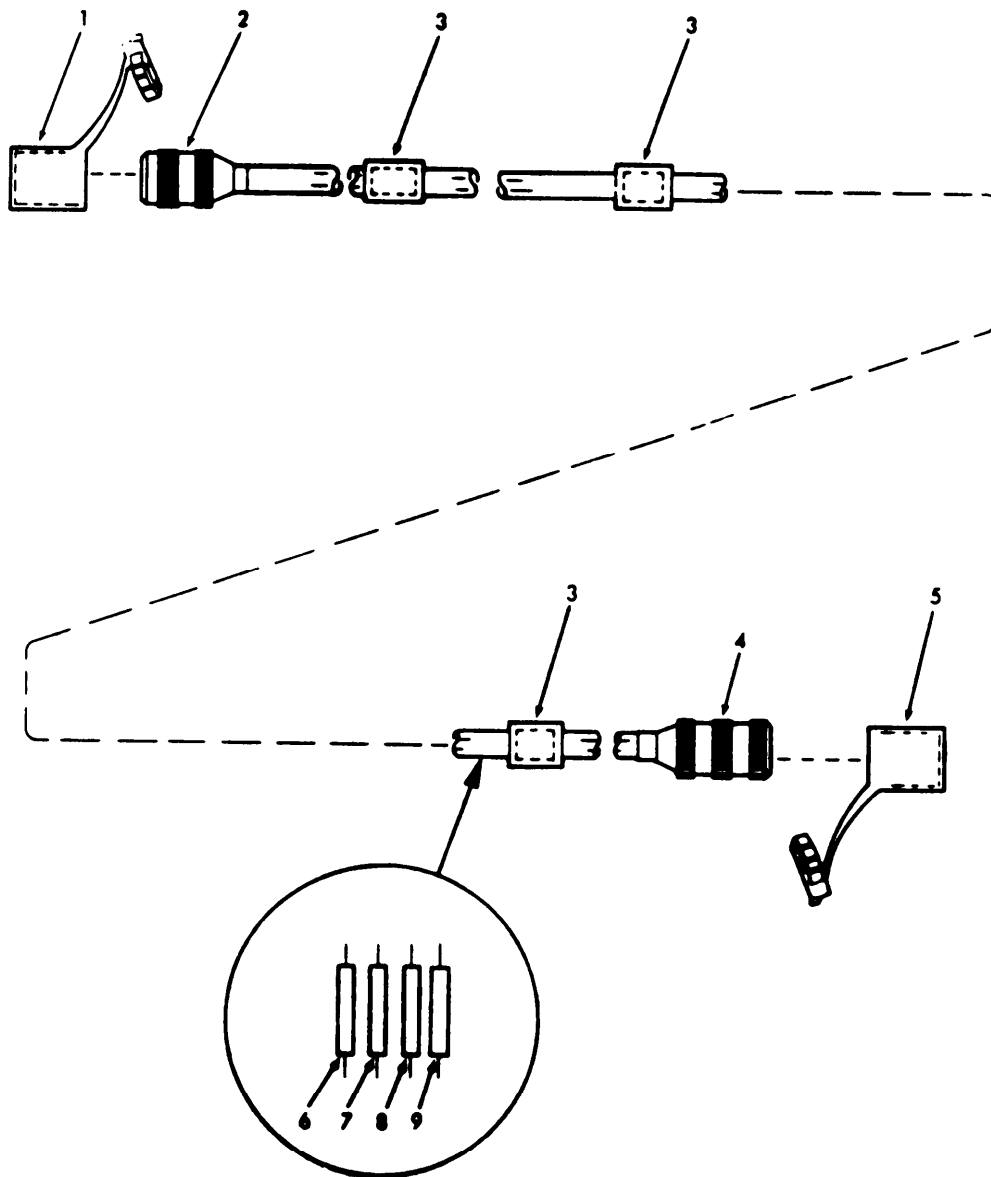


FIGURE A-35 CABLE ASSEMBLY WI COMPONENT PARTS (ASSY P/N 12303425) AND ELECTRICAL PLUG CONNECTOR P2.

SECTION II TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP FIGURE A-35 CABLE ASSEMBLY W1 COMPONENT PARTS AND ELECTRICAL PLUG CONNECTOR P2.	
1	PAFZZ	19207	12301880	.COVER,PROTECTIVE,DU	1
2	PAFZZ	96906	MS3475L14-19SW	.CONNECTOR,PLUG,ELEC P1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
3	MFFZZ	81349	MILI23053/5	.SLEEVING (MAKE FROM MIL-I-23053/5, CLASS 1 BLACK)	V
4	PAFZZ	96906	MS27467T19F35P	.CONNECTOR,PLUG,ELEC ELECTRICAL P2	1
5	PAFZZ	19207	12301877	.COVER,PROTECTIVE	1
6	XAFZZ	81348	QQ-B-575 36AWG	.BRAID,WIRE (MAKE FROM QQ-B-757 36AWG)	V
7	MFFZZ	18876	MIS26877/2-22U	.WIRE (MAKE FROM M27500-22RC2U00)	V
8	MFFZZ	81349	M16878/4BFE9	.WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-060-3009)	V
9	MFFZZ	81349	M47206-22II3-902	.WIRE (MAKE FROM MIL-W-47206-22-II- 3-902)	V
				END OF FIGURE	

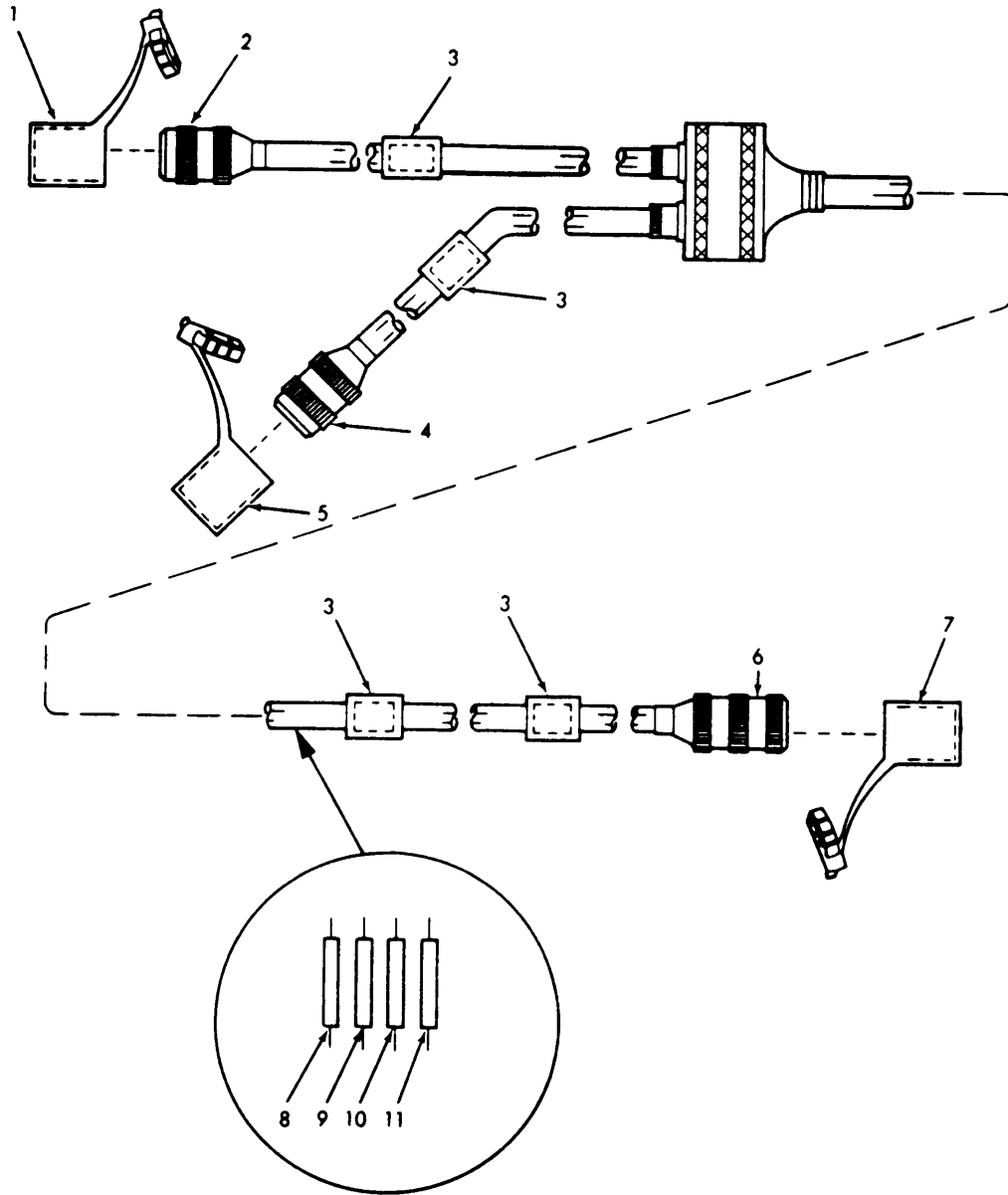


FIGURE A-36 CABLE ASSEMBLY W2 COMPONENT PARTS (ASSY P/N 12303426) AND ELECTRICAL PLUG CONNECTOR P3.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 0203					
FIGURE A-36 CABLE ASSEMBLY W2					
COMPONENT PARTS AND ELECTRICAL PLUG					
CONNECTOR P3.					
1	PAFZZ	19207	12301907	.COVER,PROTECTIVE	1
2	PAFZZ	96906	MS3475L14-5S	.CONNECTOR,PLUG,ELEC ELECTRICAL P1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
3	MFFZZ	81349	MILI23053/5	.SLEEVING (MAKE FROM MIL-I-23053/5, CLASS 1,BLACK)	V
4	PAFZZ	96906	MS3475L22-55P	.CONNECTOR,PLUG,ELEC ELECTRICAL P2 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
5	PAFZZ	19207	12301882	.COVER,PROTECTIVE	1
6	PAFZZ	96906	MS27467T25F35PB	.CONNECTOR,PLUG,ELEC ELECTRICAL P3	1
7	PAFZZ	19207	12301880	.COVER,PROTECTIVE,DU	1
8	MFFZZ	81349	M16878/4BFE9	.WIRE,ELECTRICAL (MAKE FROM MIL-W- 16878/4-22EU9 WHITE)	V
9	XAFZZ	81348	QQ-B-575	BRAID,WIRE	V
10	MFFZZ	18876	MIS26877/2-22U	.WIRE (MAKE FROM MIS26877/2-22U)	V
11	MFFZZ	81349	M47206-22II3-902	.WIRE (MAKE FROM MIL-W-47206-22-II- 3-902)	V

END OF FIGURE

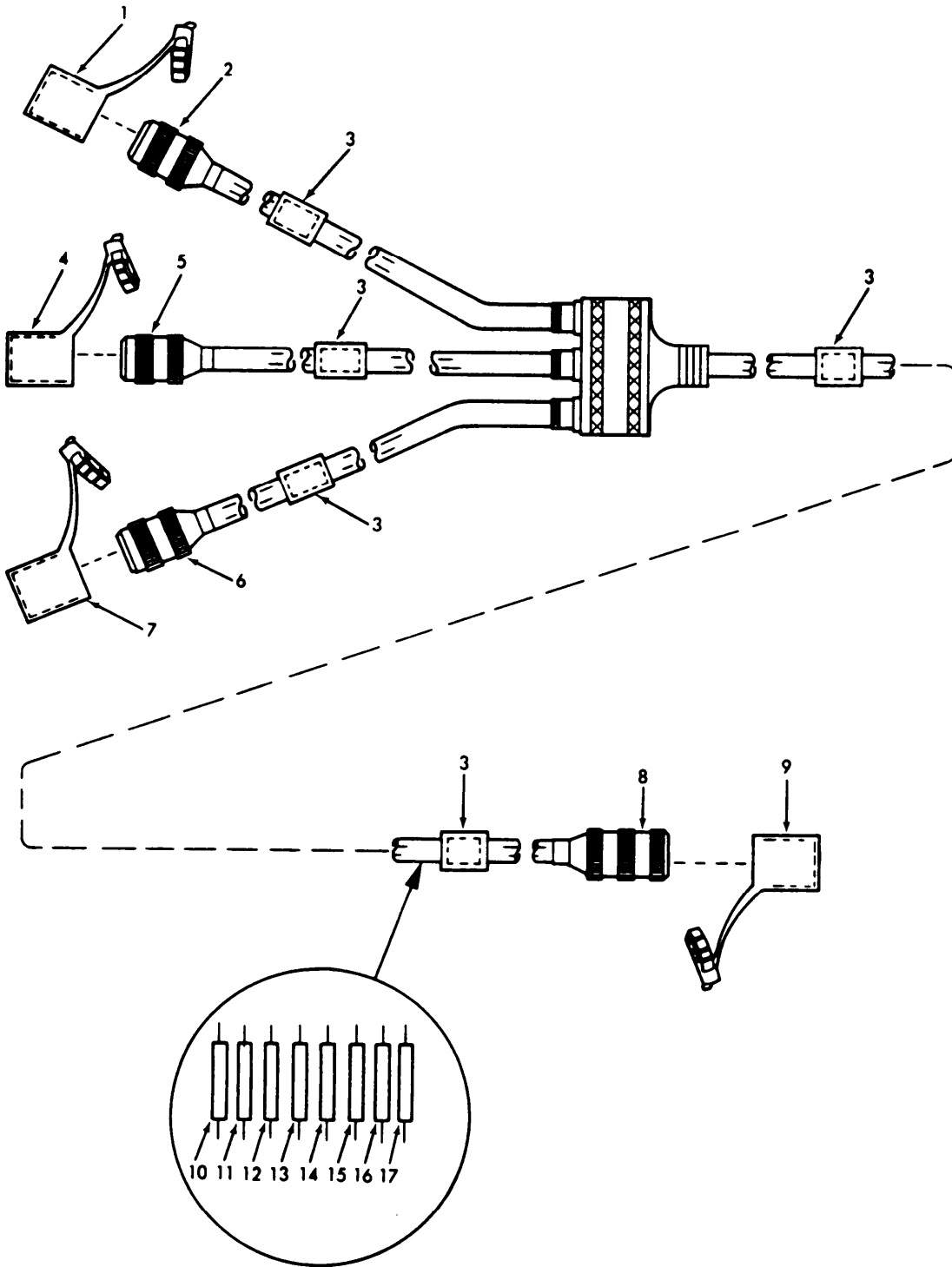


FIGURE A-37 CABLE ASSEMBLY W3 COMPONENT PARTS (ASSY P/N 12303427) AND ELECTRICAL PLUG CONNECTOR P3.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 0204					
FIGURE A-37 CABLE ASSEMBLY W3					
COMPONENT PARTS AND ELECTRICAL PLUG					
CONNECTOR P3.					
1	PAFZZ	19207	12301882	.COVER,PROTECTIVE	1
2	PAFZZ	96906	MS3475L22-55SY	.CONNECTOR,PLUG,ELEC ELECTRICAL P2 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
3	MFFZZ	81349	MILI23053/5	.SLEEVING (MAKE FROM MIL-I-23053/5, CLASS 1,BLACK)	V
4	PAFZZ	19207	12301881	.COVER,PROTECTIVE	1
5	PAFZZ	96906	MS3475L20-41SY	.CONNECTOR,PLUG,ELEC ELECTRICAL P1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
6	PAFZZ	96906	MS3475W14-15SY	.CONNECTOR,PLUG,ELEC ELECTRICAL P4 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
7	PAFZZ	19207	12301880	.COVER,PROTECTIVE,DU	1
8	PAFZZ	96906	MS27467T25F35PD	.CONNECTOR,PLUG,ELEC ELECTRICAL P3	1
9	PAFZZ	19207	12301907	.COVER,PROTECTIVE	1
10	MFFZZ	18876	M26877/3-22U902	.WIRE (MAKE FROM M27500-22RC3U00)	V
11	MFFZZ	18876	MIS26877/2-22U90	.WIRE (MAKE FROM M27500-22RC2U00)	V
12	MFFZZ	81349	M47206-22II3-902	.WIRE (MAKE FROM MIL-W-47203-22-II- 3-902)	V
13	MFFZZ	81349	M47206-22II2-090	.WIRE (MAKE FROM MIL-W-47206-22-II- 2-090)	V
14	MFFZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-060-3009)	V
15	XAFZZ	81348	QQ-B-575 36AWG	.BRAID,WIRE (MAKE FROM QQ-B-575- 36AWG)	V
16	MFFZZ	19200	12273413	.CABLE (MAKE FROM NSN 4931-01-158- 4490)	V
17	MFFZZ	81349	M47206-22V1-009	.WIRE (MAKE FROM MIL-W-47206-22-V- 1-009)	V

END OF FIGURE

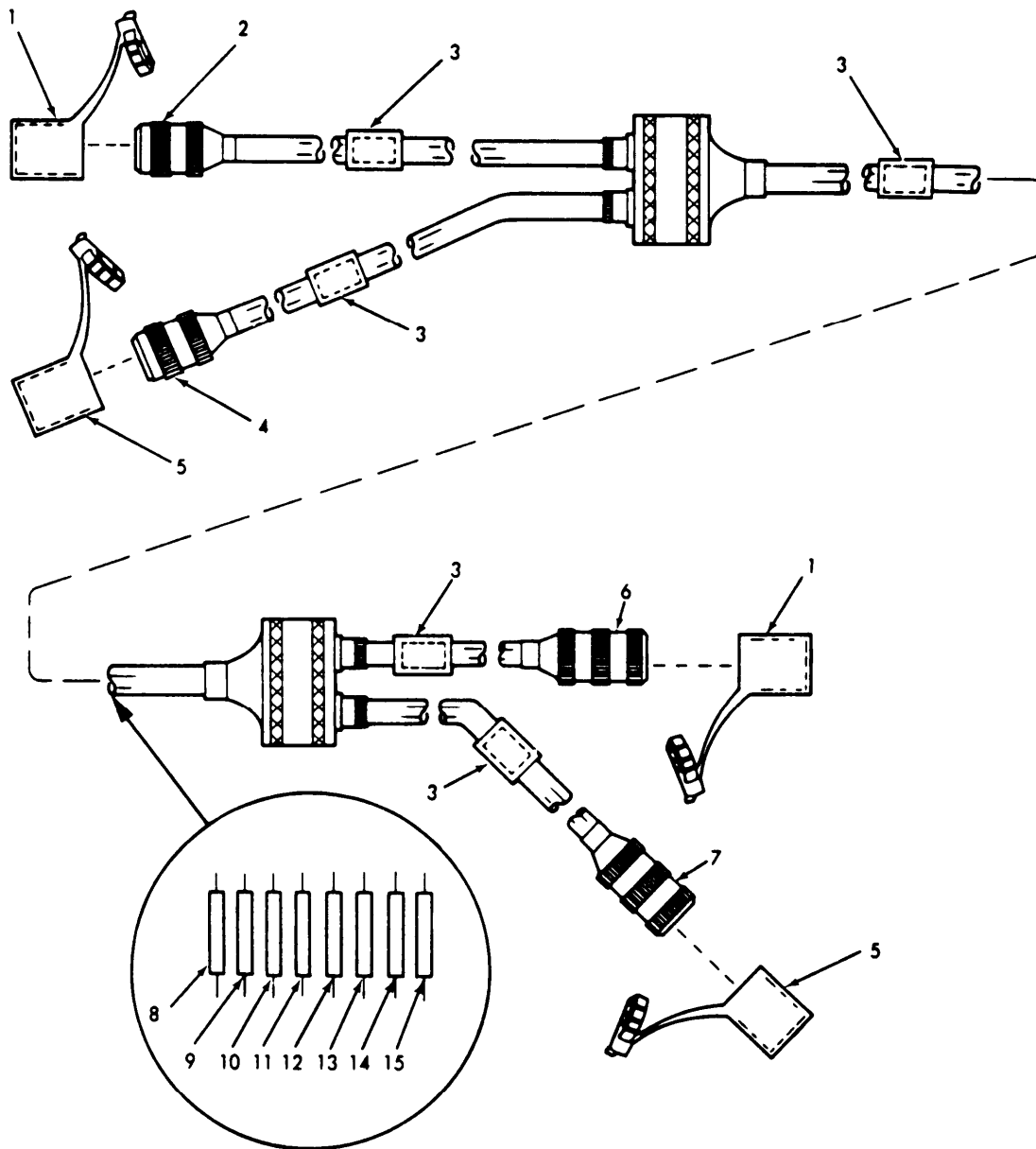


FIGURE A-38 CABLE ASSEMBLY W4 COMPONENT PARTS (ASSY P/N 12303428) AND ELECTRICAL PLUG CONNECTOR P4, P3.

SECTION II TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0205 FIGURE A-38 CABLE ASSEMBLY W4 COMPONENT PARTS AND ELECTRICAL PLUG CONNECTOR P4,P3.	
1	PAFZZ	19207	12301882	.COVER,PROTECTIVE	2
2	PAFZZ	81349	M83723/75R22556	.CONNECTOR,PLUG,ELEC P1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
3	MFFZZ	81349	MILI23053/5	.SLEEVING (MAKE FROM MIL-I-23053/5, CLASS 1,BLACK)	V
4	PAFZZ	96906	MS3475L24-61P	.CONNECTOR,PLUG,ELEC ELECTRICAL P2 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
5	PAFZZ	19207	12301907	.COVER,PROTECTIVE	2
6	PAFZZ	96906	MS27467T23F35PC	.CONNECTOR,PLUG,ELEC ELECTRICAL P3	1
7	PAFZZ	96906	MS27467T25F35PA	.CONNECTOR,PLUG,ELEC ELECTRICAL P4	1
8	MFFZZ	81349	M16878/4BFE9	.WIRE,ELECTRICAL (MAKE FROM NSN 6145-00-060-3009)	V
9	MFFZZ	81349	M47206-22II2-090	.WIRE (MAKE FROM MIL-W-47206-22-II- 2-090)	V
10	MFFZZ	81349	M47206-22II3-902	.WIRE (MAKE FROM MIL-W-47206-22-II- 3-902)	V
11	MFFZZ	18876	MIS26877/2-22U90	.WIRE (MAKE FROM MIS26877/22U90)	V
12	MFFZZ	19200	12273413	.CABLE (MAKE FROM NSN 4931-01-158- 4490)	V
13	MOOZZ	18876	M26877/3-22-902	.WIRE (MAKE FROM MIS26877/3-22-902)	V
14	MFFZZ	81349	M47206-22V1-009	.WIRE (MAKE FROM MIL-W-47206-22-V- 1-009)	V
15	XAOZZ	81348	QQ-B-575 36AWG	.BRAID,WIRE (MAKE FROM QQ-B-575- 36AWG)	V

END OF FIGURE

SECTION II TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0206 FIGURE A-39 CABLE ASSEMBLY W5 COMPONENT PARTS AND ELECTRICAL PLUG CONNECTOR P3.	
1	PAFZZ	19207	12301907	.COVER,PROTECTIVE	2
2	PAFZZ	96906	MS3475L24-61S	.CONNECTOR,PLUG,ELEC ELECTRICAL P1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
3	MFFZZ	81349	MILI23053/5	.SLEEVING (MAKE FROM MIL-I-23053/5, CLASS 1,BLACK)	V
4	PAFZZ	96906	MS3475L22-55SX	.CONNECTOR,PLUG,ELEC ELECTRICAL P2 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
5	PAFZZ	19207	12301882	.COVER,PROTECTIVE	1
6	PAFZZ	96906	MS27467T25F35P	.CONNECTOR,PLUG,ELEC P3	1
7	MFFZZ	81349	M16878/4BFE9	.WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-060-3009)	V
8	MFFZZ	81349	M47206-22II2-090	.WIRE (MAKE FROM MIL-W-47206-22-II- 2-090)	V
9	MFFZZ	19200	12273413	.CABLE (MAKE FROM NSN 4931-01-158- 4490)	V
10	MFFZZ	81349	M47206-22V1-009	.WIRE (MAKE FROM MIL-W-47206-22-V- 1-009)	V
11	XAFZZ	81348	QQ-B-575 36AWG	.BRAID,WIRE (MAKE FROM QQ-B-575- 36AWG)	V

END OF FIGURE

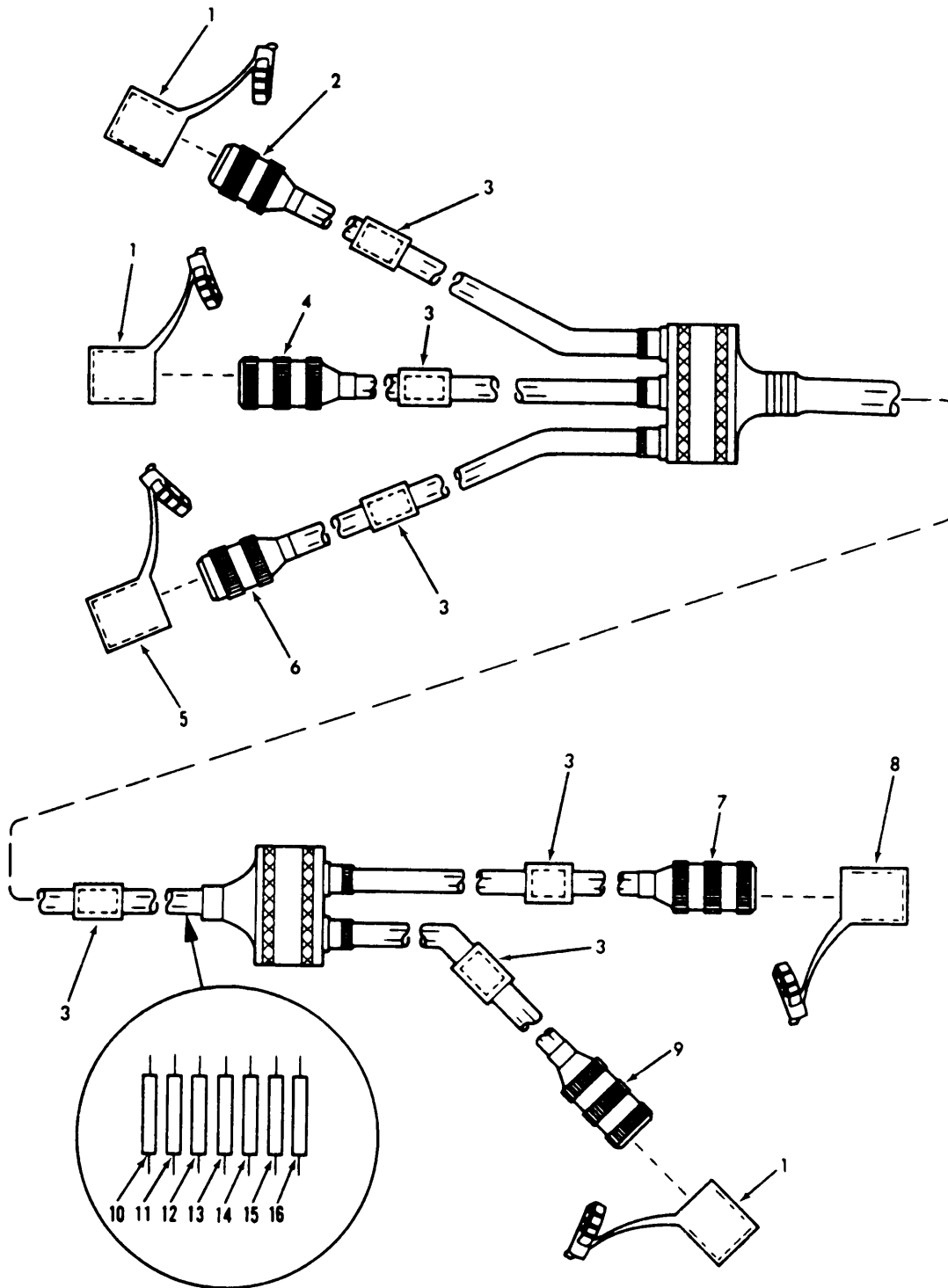


FIGURE A-40 CABLE ASSEMBLY W6 COMPONENT PARTS (ASSY P/N 12303430) AND ELECTRICAL PLUG CONNECTOR P4, P5.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0207 FIGURE A-40 CABLE ASSEMBLY W6 COMPONENT PARTS AND ELECTRICAL PLUG CONNECTOR P4,P5.	
1	PAFZZ	19207	12301882	COVER,PROTECTIVE	3
2	PAFZZ	96906	MS3475L22-55PW	CONNECTOR,PLUG,ELEC ELECTRICAL P2 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
3	MFFZZ	81349	MILI23053/5	SLEEVING (MAKE FROM MIL-I-23053/5, CLASS1,BLACK)	V
4	PAFZZ	81349	M83723/75R2255N	.CONNECTOR,PLUG,ELEC ELECTRICAL P1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
5	PAFZZ	19207	12301881	COVER,PROTECTIVE	1
6	PAFZZ	96906	MS3475L20-41P	.CONNECTOR,PLUG,ELEC P3 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
7	PAFZZ	96906	MS27467T25F35PC	.CONNECTOR,PLUG,ELEC P4	1
8	PAFZZ	19207	12301907	COVER,PROTECTIVE	1
9	PAFZZ	96906	MS27467T23F2P	.CONNECTOR,PLUG,ELEC ELECTRICAL P5	1
10	MFFZZ	18876	M26877/3-22U902	.WIRE (MAKE FROM MIS26877/3-22U902)	V
11	MFFZZ	18876	MIS26877/2-22U90	.WIRE (MAKE FROM NSN 6145-01-060- 3009)	V
12	MFFZZ	81349	M16878/4BFE9	.WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-060-3009)	V
13	MFFZZ	81349	M47206-22V1-009	WIRE (MAKE FROM MIL47206-22-V-1- 009)	V
14	MFFZZ	81349	M47206-22II2-090	WIRE (MAKE FROM MIL-W-47206-22-II- 2-090)	V
15	MFFZZ	81349	M47206-22II3-902	WIRE (MAKE FROM MIL-W-47206-22II2- 090)	V
16	XAFZZ	81348	QQ-B-575 36AWG	.BRAID,WIRE (MAKE FROM QQ-B-575- 36AWG)	V

END OF FIGURE

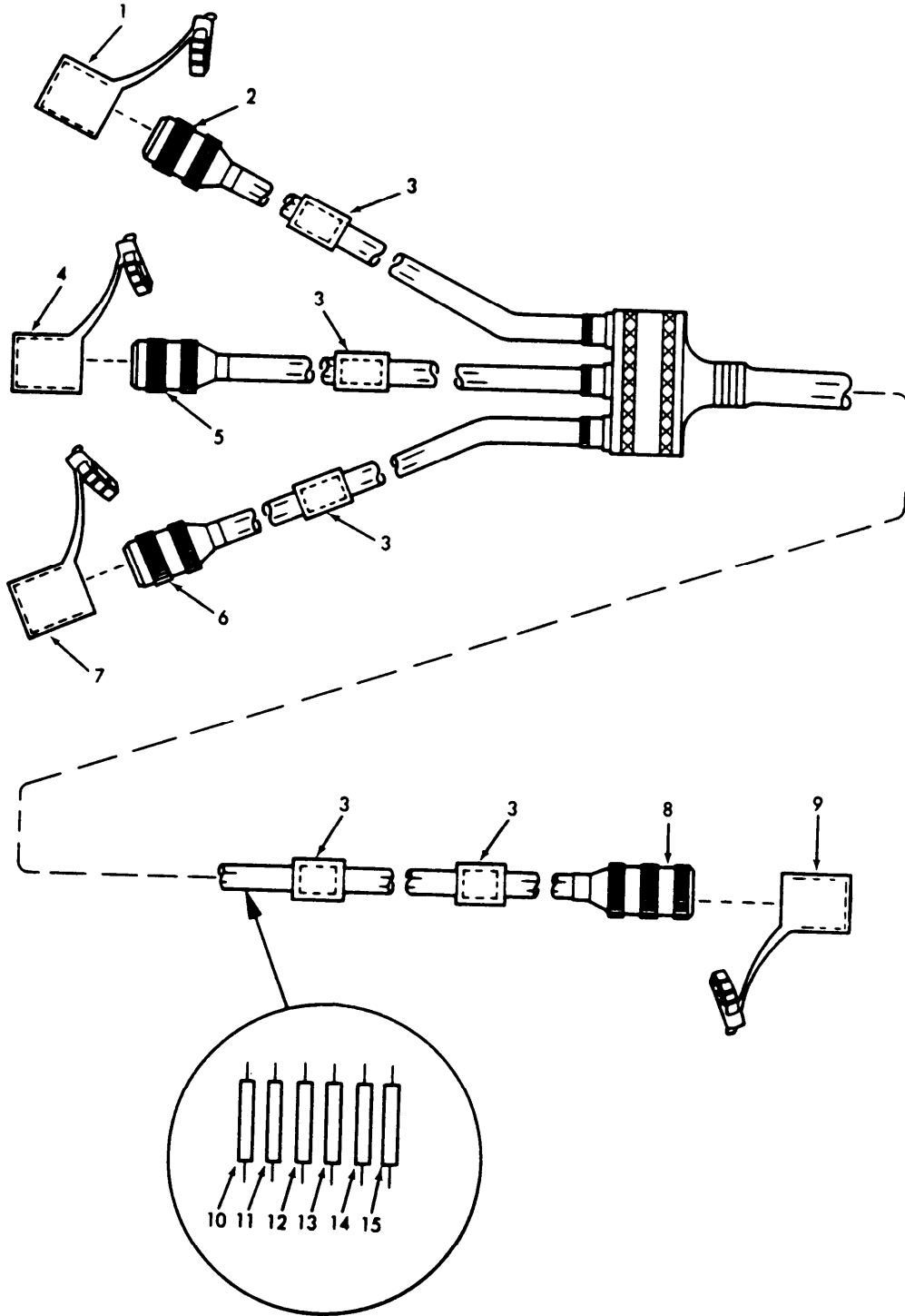


FIGURE A-41 CABLE ASSEMBLY W7 COMPONENT PARTS (ASSY P/N 12303431) AND ELECTRICAL PLUG CONNECTOR P4.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0208 FIGURE A-41 CABLE ASSEMBLY W7 COMPONENT PARTS AND ELECTRICAL PLUG CONNECTOR P4.	
1	PAFZZ	19207	12301877	COVER,PROTECTIVE	1
2	PAFZZ	96906	MS3475L16-23S	CONNECTOR,PLUG,ELEC P2 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
3	MFFZZ	81349	MILI23053/5	SLEEVING (MAKE FROM MIL-I-23053/5, CLASS 1,BLACK)	V
4	PAFZZ	19207	12301881	COVER,PROTECTIVE	1
5	PAFZZ	96906	MS3475L20-41S	CONNECTOR,PLUG,ELEC ELECTRICAL P1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
6	PAFZZ	96906	MS3475L14-18S	CONNECTOR,PLUG,ELEC P3 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
7	PAFZZ	19207	12301880	COVER,PROTECTIVE,DU	1
8	PAFZZ	96906	MS27467T23F35PA	CONNECTOR,PLUG,ELEC P4	1
9	PAFZZ	19207	12301882	COVER,PROTECTIVE	1
10	XAFZZ	81348	QQ-B-575 36AWG	BRAID,WIRE (MAKE FROM QQ-B-575- 36AWG)	V
11	MFFZZ	81349	M16878/4BFE9	WIRE,ELECTIRCAL (MAKE FROM NSN 6145-01-060-3009)	V
12	MFFZZ	81349	M47206-22II2-090	WIRE (MAKE FROM MIL-W-47206-2-II- 2-090)	V
13	MFFZZ	81349	M47206-22II3-902	WIRE (MAKE FROM MIL-W-47206-22-II- 3-9-0-2)	V
14	MFFZZ	18876	MIS26877/2-22U90	WIRE (MAKE FROM MIS26877/2-22U90)	V
15	MFFZZ	81349	M47206-22II49025	WIRE (MAKE FROM MIL-W-47206-22-II- 4-9025)	V

END OF FIGURE

A-41-1

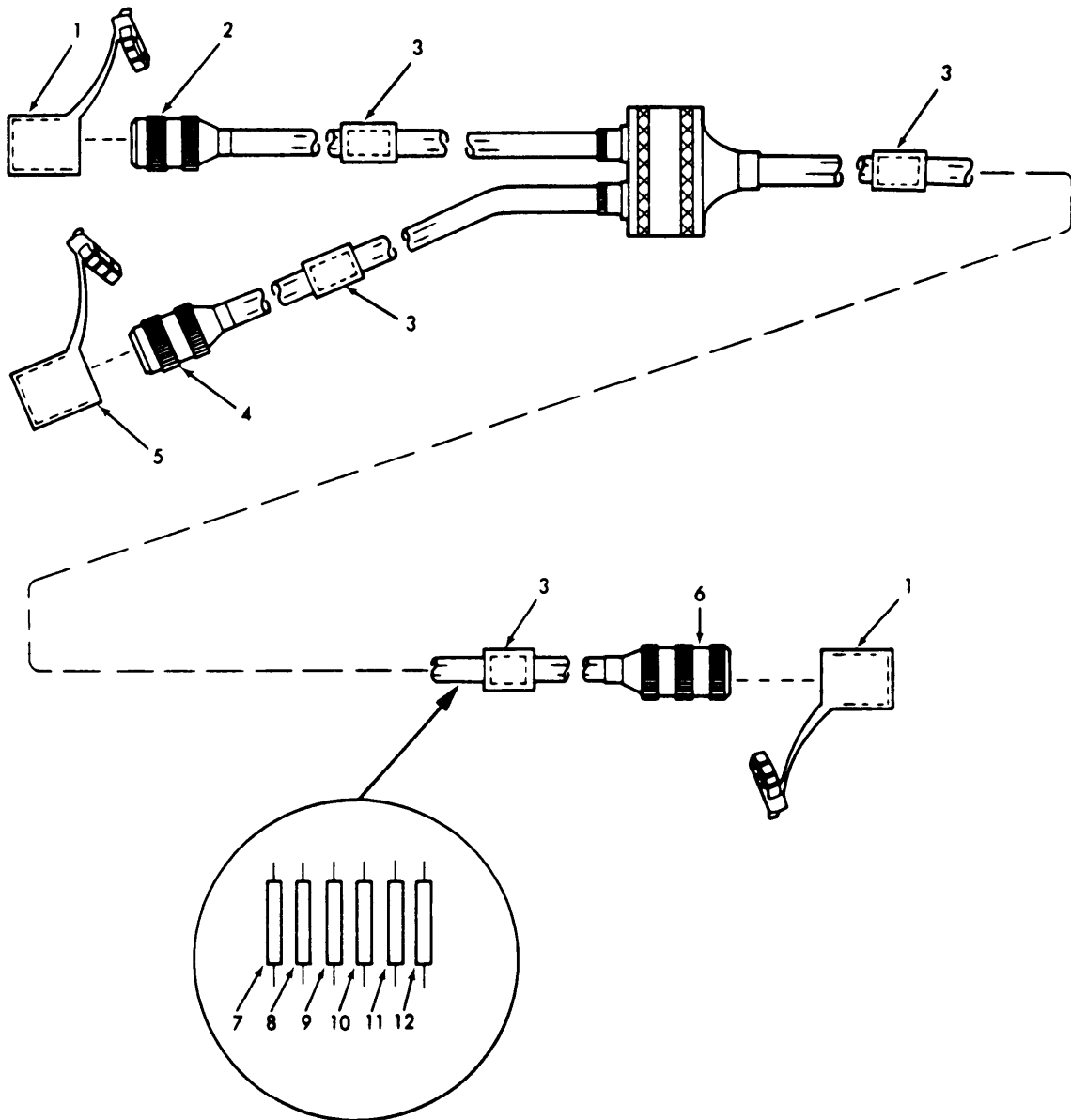


FIGURE A-42 CABLE ASSEMBLY W8 COMPONENT PARTS (ASSY P/N 12303432) AND ELECTRICAL PLUG CONNECTOR P3.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0209 FIGURE A-42 CABLE ASSEMBLY W8 COMPONENT PARTS AND ELECTRICAL PLUG CONNECTOR P3.	
1	PAFZZ	19207	12301882	COVER,PROTECTIVE	2
2	PAFZZ	96906	MS3475L22-55SW	CONNECTOR,PLUG,ELEC P1 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
3	MFFZZ	81349	MILI23053/5	SLEEVING (MAKE FROM MIL-I-23053/5, CLASS 1,BLACK)	V
4	PAFZZ	96906	MS3475L18-11S	CONNECTOR,PLUG,ELEC P2 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
5	PAFZZ	19207	12301877	COVER,PROTECTIVE	1
6	PAFZZ	96906	MS27467T23F35PB	CONNECTOR,PLUG,ELEC ELECTRICAL P3 (USE REPAIR KIT 12285360 FOR CONTACT REPAIR)	1
7	XAFZZ	81348	QQ-B-575 36AWG	BRAID,WIRE (MAKE FROM QQ-B-575- 36AWG)	V
8	MFFZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM MIL-W- 16878/4E22-U-9)	V
9	MFFZZ	81349	M47206-22II3-902	WIRE (MAKE FROM MIL-W-47206-22-II- 3-9-0-2)	V
10	MFFZZ	81349	M47206-22II49025	WIRE (MAKE FROM MIL-W-47206-22-II- 4-9025)	V
11	MFFZZ	18876	MIS26877/2-22U90	WIRE (MAKE FROM MIS26877/2-22U90)	V
12	MFFZZ	18876	M26877/3-22U902	WIRE (MAKE FROM MIS26877/3-22U-90200)	V

END OF FIGURE

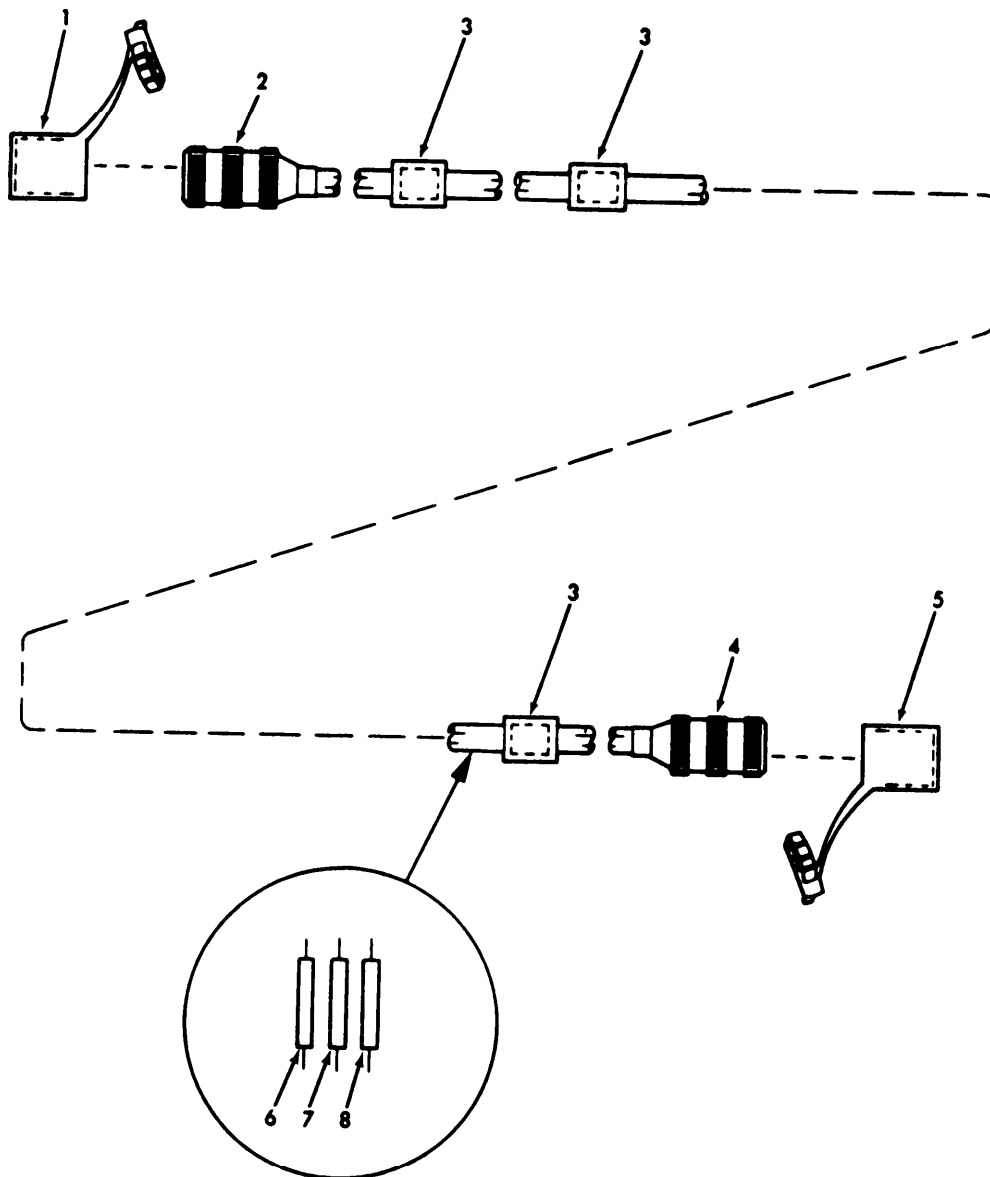


FIGURE A-43 CABLE ASSEMBLY W9 COMPONENT PARTS (ASSY P/N 12303433) AND ELECTRICAL PLUG CONNECTOR P2, P1.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0210 FIGURE A-43 CABLE ASSEMBLY W9 COMPONENT PARTS AND ELECTRICAL PLUG CONNECTOR P2,P1.	
1	PAFZZ	19207	12301877	COVER,PROTECTIVE	1
2	PAFZZ	96906	MS27467T19F35S	CONNECTOR,PLUG, ELEC P1	1
3	MFFZZ	81349	MILI23053/5	SLEEVING (MAKE FROM MIL-I-23053/5, CLASS 1,BLACK)	V
4	PAFZZ	96906	MS27484T22F35P	CONNECTOR,PLUG,ELEC P2	1
5	PAFZZ	19207	12301882	COVER,PROTECTIVE	1
6	MFFZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM MIL-W- 16878/4BFE9)	V
7	MFFZZ	81349	M47206-22V1-009	WIRE (MKAE FROM MIL-W-47206-22-IV- 1-9)	V
8	XAFZZ	81348	QQ-B-575 36AWG	BRAID,WIRE (MAKE FROM QQ-B-575 36AWG)	V
				END OF FIGURE	

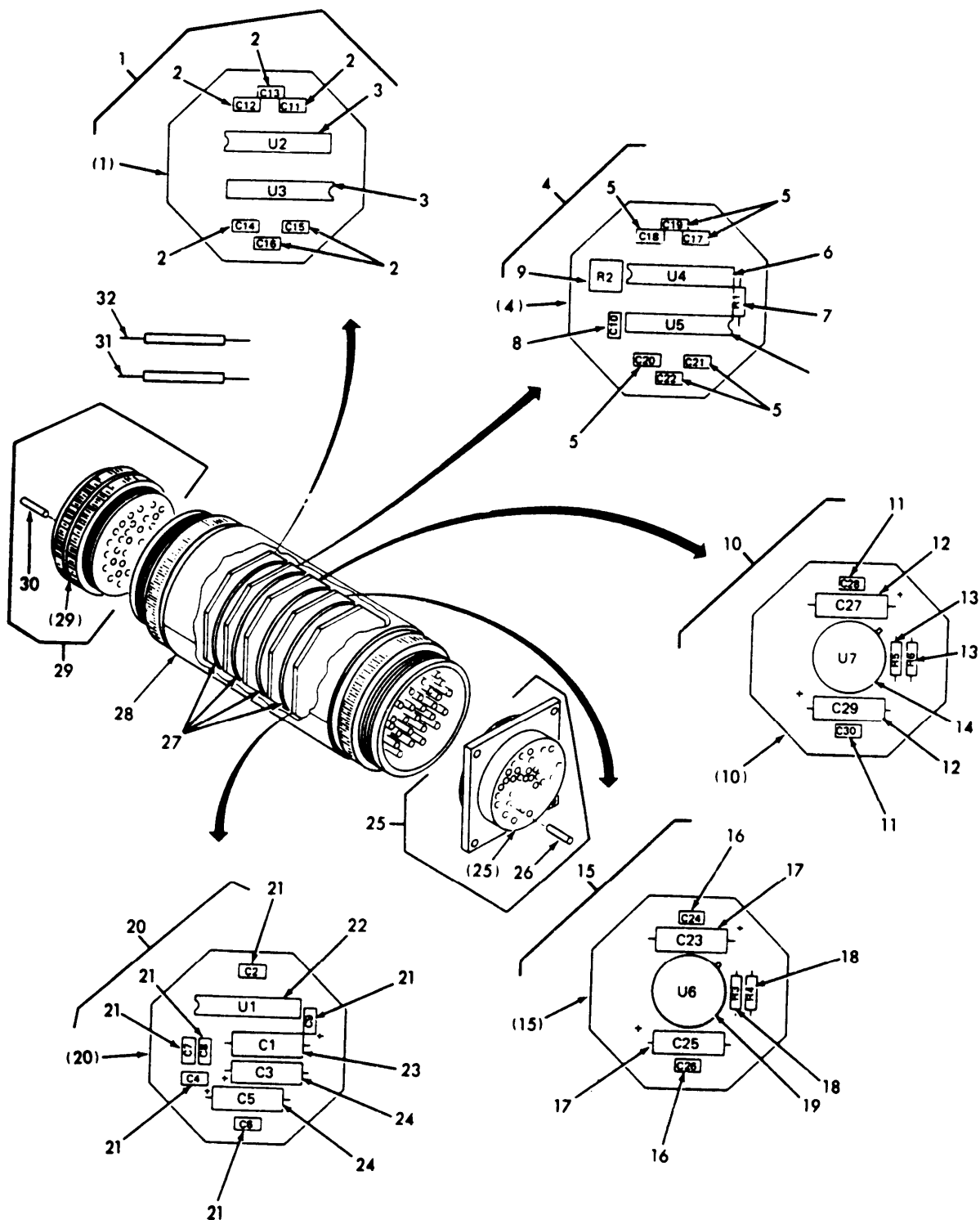


FIGURE A-44 VIDEO MULTIPLEXER ASSEMBLY COMPONENT PARTS
 (ASSY P/N 12303541), PRINTED CIRCUIT BOARD
 MULTIPLEXER A1-A5, ELECTRICAL PLUG CONNECTOR J1. AND
 RECEPTACLE CONNECTOR J1.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 0211					
FIGURE A-44 VIDEO MULTIPLEXER					
ASSEMBLY COMPONENT PARTS PRINTED					
CIRCUIT BOARD MULTIPLEXER A1-A5,					
ELECTRICAL PLUG CONNECTOR J1, AND					
RECEPTACLE CONNECTOR J1.					
1	PADDD	19200	12303551	PRINTED CIRCUIT BOA MULTIPLEXER A1	1
2	PADZZ	81349	M39014/01-1593	.CAPACITOR, FIXED, CER C11-C16	6
3	PADZZ	81349	M38510/11107BEC	.MICROCIRCUIT, LINEAR U2, U3	2
4	PADDD	19200	12303552	PRINTED CIRCUIT BOA MULTIPLEXER A2	1
5	PADZZ	81349	M39014/01-1593	.CAPACITOR, FIXED, CER C17-C22	6
6	PADZZ	81349	M38510/11107BEC	.MICROCIRCUIT, LINEAR U4, U5	2
7	PADZZ	81349	RCR07G471JS	.RESISTOR, FIXED, COMP R1	1
8	PADZZ	81349	M39014/01-1575	.CAPACITOR, FIXED, CER C10	1
9	PADZZ	81349	RJR26FP102P	.RESISTOR, VARIABLE, N R2	1
10	PADDD	19200	12303553	PRINTED CIRCUIT BOA A3	1
11	PADZZ	81349	M39014/02-1356	.CAPACITOR, FIXED, CER C28, C30	2
12	PADZZ	81349	M39003-01-3088	.CAPACITOR, FIXED, ELE C27, C29	2
13	PADZZ	81349	RCR07G161JS	.RESISTOR, FIXED, COMP R5, R6	2
14	PADZZ	19200	12272041	.MICROCIRCUIT, LINEAR U7	1
15	PADDD	19200	12303554	PRINTED CIRCUIT BOA A4	1
16	PADZZ	81349	M39014/02-1356	.CAPACITOR, FIXED, CER C24, C26	2
17	PADZZ	81349	M39003-01-3088	.CAPACITOR, FIXED, ELE C23, C25	2
18	PADZZ	81349	RCR07G161JS	.RESISTOR, FIXED, COMP R3, R4	2
19	PADZZ	19200	12272041	.MICROCIRCUIT, LINEAR U6	1
20	PADDD	19200	12303555	PRINTED CIRCUIT BOA A5	1
21	PADZZ	81349	M39014/01-1593	.CAPACITOR, FIXED, CER C2, C4, C6-C9	6
22	PADZZ	81349	M38510/30701BEB	.MICROCIRCUIT, DIGITA U1	1
23	PADZZ	81349	M39003/01-2991	.CAPACITOR, FIXED, ELE C1	1
24	PADZZ	81349	M39003/03-0366	.CAPACITOR, FIXED, ELE C3, C5	2
25	PADDA	96906	MS27472T22B35S	CONNECTOR, RECEPTACL J1	1
26	PADZZ	81349	M39029/57-354	.CONTACT, ELECTRICAL	100
27	PADZZ	19200	12303597	INSULATOR	4
28	PADZZ	19200	12303195	ADAPTER, CABLE CLAMP	1
29	PADZZ	96906	MS27484T22B35PD	CONNECTOR, PLUG, ELEC P1	1
30	PADZZ	81349	M39029/58-360	.CONTACT, ELECTRICAL	100
31	MDDZZ	81348	QQW343TYS22AWG	WIRE (MAKE FROM QQ-W-343 TYPE S 22 AWG)	V
32	MDDZZ	81349	M16878/4BFE9	WIRE, ELECTRICAL (MAKE FROM MIL-W-16878/4-22-9)	V

END OF FIGURE

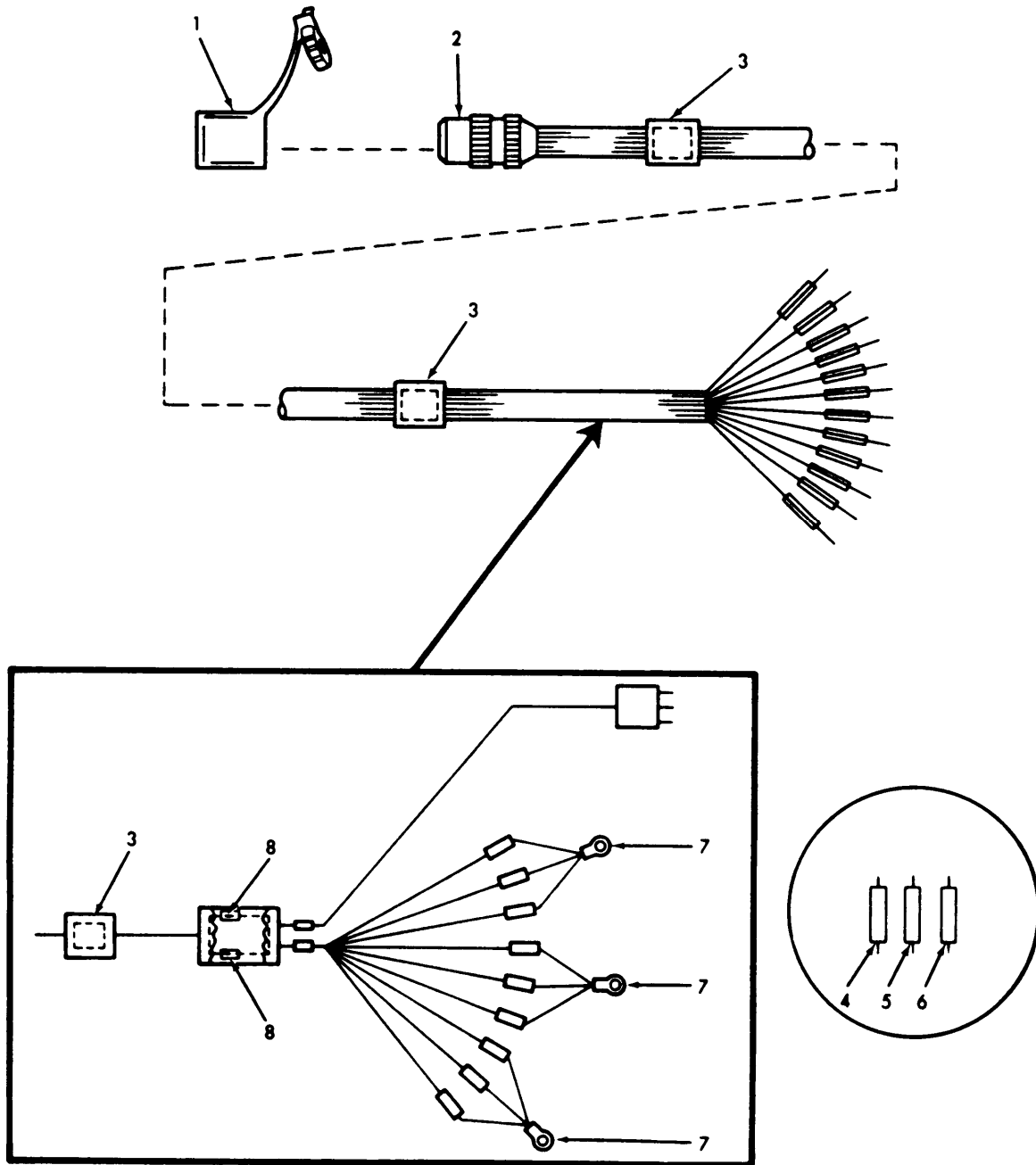


FIGURE A-45 CABLE ASSEMBLY W/O COMPONENT PARTS (ASSY P/N 12303434, 12303354) AND ELECTRICAL PLUG CONNECTOR PI.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 0212					
FIGURE A-45 CABLE ASSEMBLY W10					
COMPONENT PARTS AND ELECTRICAL PLUG					
CONNECTOR P1.					
1	PAFZZ	19207	12301880	COVER,PROTECTIVE,DU	1
2	PAFZZ	96906	MS3476W14-19S	CONNECTOR,PLUG,ELEC P1	1
3	MFFZZ	81349	MILI23053/5	SLEEVING (MAKE FROM MIL-I-23053/5, CLASS 1,BLACK)(USED ON 12303434)	V
3	MFFZZ	81349	M23053/5-103-0	INSULATION SLEEVING (MAKE FROM NSN 5970-00-812-2974)(USED ON 12303354)	V
4	XAFZZ	81349	QQ-B-575 36AWG	BRAID,WIRE (MAKE FROM QQ-B-575- 36AWG)	V
5	MFFZZ	81349	M16878/4BFE9	WIRE,ELECTRICAL (MAKE FROM NSN 6145-01-060-3009)(USED ON 12303434).	V
5	MFFZZ	81349	M16878/4E22-0	WIRE,ELECTRICAL (MAKE FROM MIL-W- 16878/4E22-0)(USED ON 12303354)	V
6	MFFZZ	18876	MIS26877/3-20U	WIRE,ELECTRICAL (MAKE FROM MIS26877/3-20U-902)	V
7	PAFZZ	96906	MS25036-154	TERMINAL,LUG (USED ON 12303354)	3
8	PAFZZ	81349	FM09A250V6A	FUSE,CARTRIDGE F1,F2 (USED ON 12303354)	2

END OF FIGURE

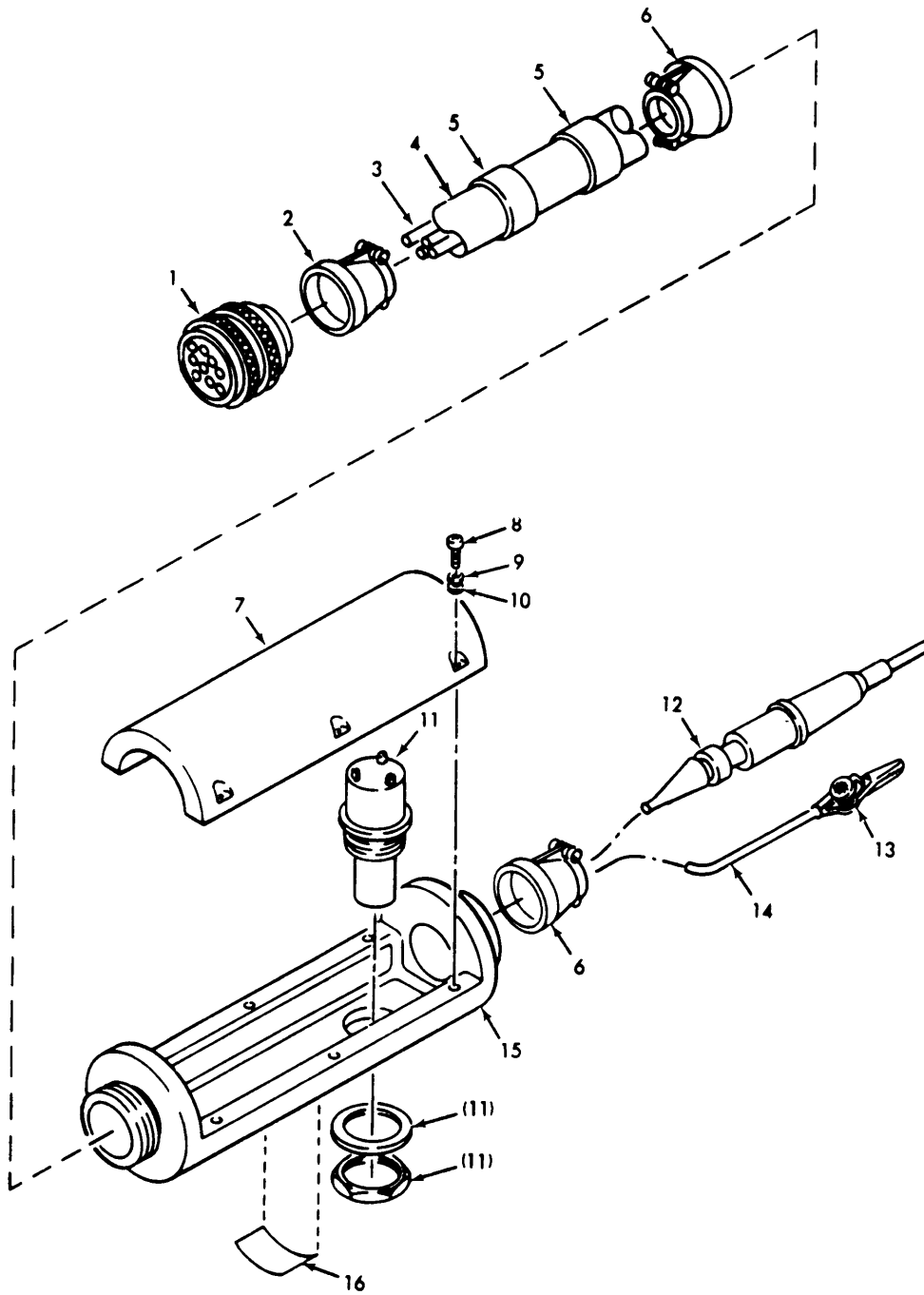


FIGURE A-46 CABLE ASSEMBLY W11 COMPONENT PARTS (ASSY P/N 12303446) AND ELECTRICAL PLUG CONNECTOR P1.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 0213					
FIGURE A-46 CABLE ASSEMBLY W11					
COMPONENT PARTS AND ELECTRICAL PLUG					
CONNECTOR P1.					
1	PAFZZ	96906	MS27467T19F35S	CONNECTOR, PLUG, ELEC P1	1
2	PAFZZ	81349	M85049/52-1-18W	CLAMP, CABLE, ELECTRI ELECTRICAL	1
3	MFFZZ	81349	M22759/18-22-9	WIRE, ELECTRICAL (MAKE FROM NSN 6145-01-013-8452)	V
4	XDFZZ	80063	SM-C-772445	MARKER	2
5	PAFZZ	81349	M85049/52-1-14W	CLAMP, CABLE, ELECTRI ELECTRICAL	2
6	XDFZZ	80063	SM-C-807242	HANDLE, COVER	1
7	PAFZZ	96906	MS51957-4	SCREW, MACHINE	6
8	PAFZZ	96906	MS35338-134	WASHER, LOCK	6
9	PAFZZ	96906	MS15795-802	WASHER, FLAT	6
10	PAFZZ	96906	MS25089-3FR	SWITCH, PUSH S1	1
11	PAFZZ	80063	SM-C-806066-1	PROBE ASSEMBLY E1	1
12	PAFZZ	80063	SM-C-806038-1	CLIP, ELECTRICAL E2	1
13	MFFZZ	81349	M22759/18-20-9	WIRE (MAKE FROM MIL-W-22759/18-20- 9)	V
14	XAFZZ	80063	SM-C-807241	BASE	1
15	XDFZZ	80063	SM-C-807249-1	DECAL	1

END OF FIGURE

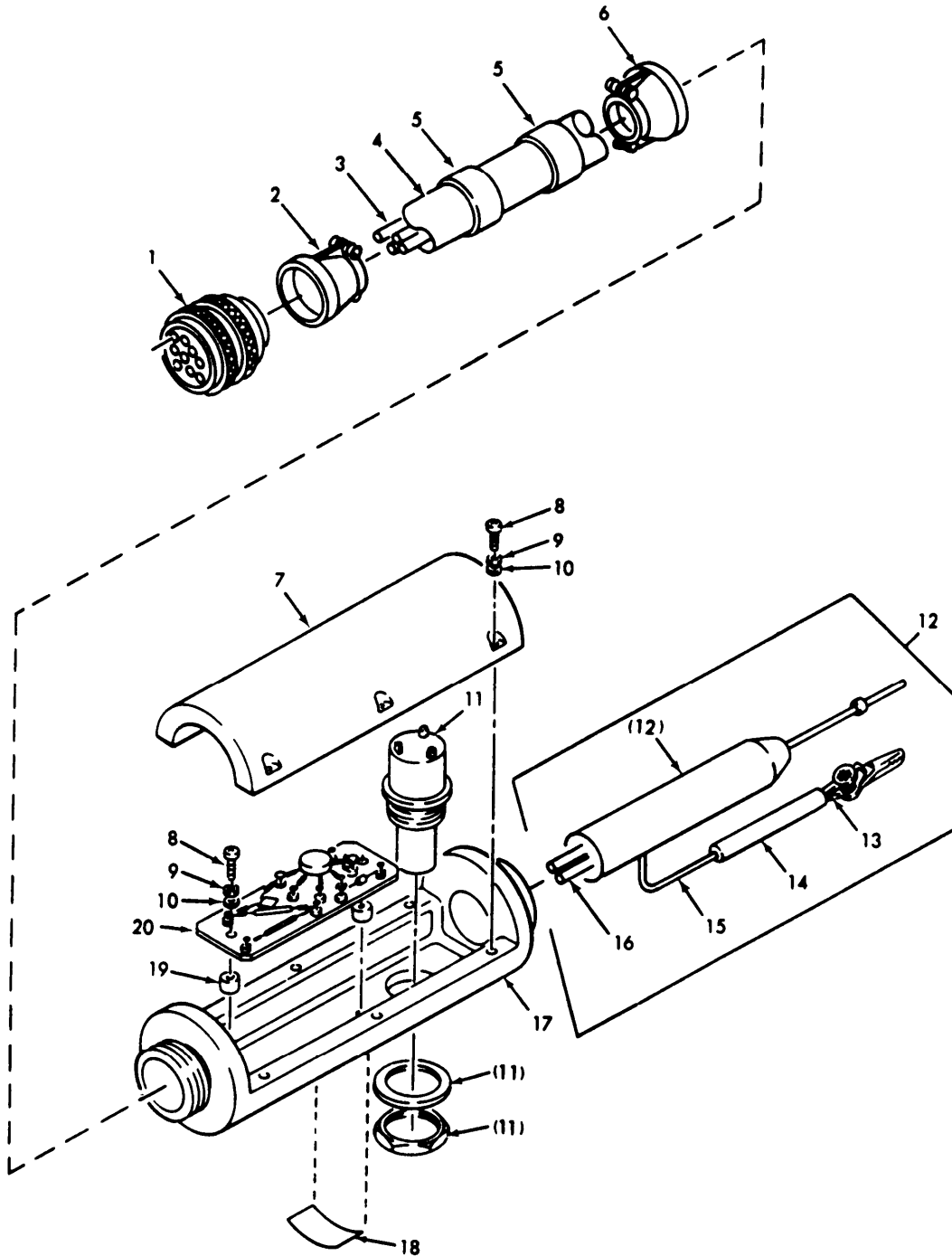


FIGURE A-47 CABLE ASSEMBLY W12 COMPONENT (ASSY P/N 12303447),
ELECTRICAL PLUG CONNECTOR PI. AND HIGH VOLTAG PROBE EI.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 0214					
FIGURE A-47 CABLE ASSEMBLY W12					
COMPONENT PARTS, ELECTRICAL PLUG					
CONNECTOR P1, AND HIGH VOLTAGE PROBE					
E1.					
1	PAFZZ	96906	MS27467T19F35S	CONNECTOR, PLUG, ELEC P1	1
2	PAFZZ	81349	M85049/52-1-18W	CLAMP, CABLE, ELECTRICAL	1
3	MFFZZ	81349	M22759/18-22-9	WIRE, ELECTRICAL (MAKE FROM NSN 6145-01-13-8452)	V
4	XDFZZ	80063	SM-C-772455	MARKER	2
5	PAFZZ	81349	M85049/52-1-14W	CLAMP, CABLE, ELECTRICAL	1
6	XDFZZ	80063	SM-C-807242	HANDLE, COVER	1
7	PAFZZ	96906	MS51957-4	SCREW, MACHINE	8
8	PAFZZ	96906	MS35338-134	WASHER, LOCK	8
9	PAFZZ	96906	MS15795-802	WASHER, FLAT	8
10	PAFZZ	96906	MS25089-3FR	SWITCH, PUSH S1	1
11	PAFFH	80063	SM-D-807239	PROBE, HIGH VOLTAGE E1	1
12	PAFZZ	80063	SM-C-806038-1	.CLIP, ELECTRICAL E2	1
13	MFFZZ	81349	MILI631TYFFORMU	.SLEEVING (MAKE FROM MIL-I- 631D.263IDFUCILITYFGRCCAT1BLACK)	1
14	MFFZZ	81349	M22759/18-20-9	.WIRE (MAKE FROM MIL-W-22759/18-20- 9)	V
15	MFFZZ	81349	M22759/18-22-9	.WIRE, ELECTRICAL (MAKE FROM MIL-W- 22759/18-22-9)	V
16	XAFZZ	80063	SM-C-807241	BASE	1
17	XDFZZ	80063	SM-C-807249-2	DECAL	1
18	PAFZZ	06540	9222N115-0	SPACER, SLEEVE	2
19	PAFZZ	80063	SM-D-807245	TERMINAL BOARD TB1	1

END OF FIGURE

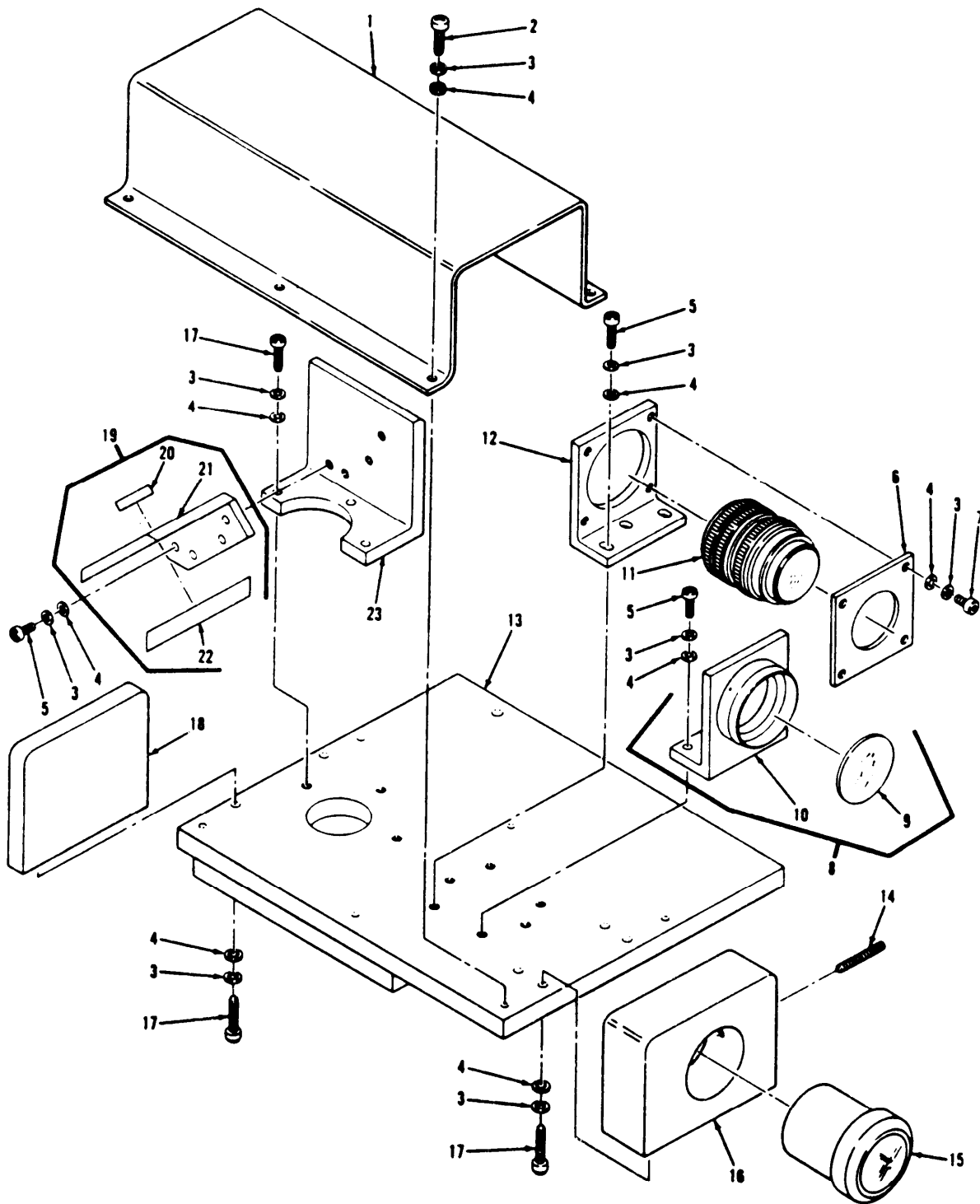


FIGURE A-48 ICU VIEWER ASSEMBLY COMPONENT PARTS (ASSY P/N 12303376). RETICLE ASSEMBLY. AND MIRROR ASSEMBLY.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 0215					
FIGURE A-48 ICU VIEWER ASSEMBLY					
COMPONENT PARTS, RETICLE ASSEMBLY,					
AND MIRROR ASSEMBLY.					
1	XDDZZ	19200	12303490	COVER	1
2	PADZZ	96906	MS51957-63B	SCREW,MACHINE	6
3	PADZZ	96906	MS35338-138B	WASHER,LOCK	29
4	PADZZ	88044	AN960XC10L	WASHER,FLAT	29
5	PADZZ	96906	MS16995-37B	SCREW,CAP,SOCKET HE HEAD	10
6	XDDZZ	19200	12303497	SPACER	1
7	PADZZ	96906	MS16995-36B	SCREW,CAP,SOCKET HE HEAD	4
8	PBDDD	19200	12303246	RETICLE ASSEMBLY,OP	1
9	XDDDD	19200	12303248	.RETICLE	1
10	XADZZ	19200	12303247	.BRACKET	1
11	PBDZZ	19200	12303252	LENS,ENLARGER	1
12	XDDZZ	19200	12303495	BRACKET LENS HOLD	1
13	XADZZ	19200	12303489	PLATE,BASE MOUNT	1
14	PADZZ	19200	12303254	SETSCREW	1
15	PBDZZ	19200	12303253	LENS,PHOTOMICROGRAP	1
16	XDDZZ	19200	12303500	MOUNT,EYEPiece	1
17	PADZZ	96906	MS16995-39B	SCREW,CAP,SOCKET HE HEAD	9
18	XDDZZ	19200	12303492	END PLATE	1
19	PBDDD	19200	12303249	MIRROR ASSEMBLY	1
20	XDDZZ	19200	12303251	.PLUG	1
21	XADZZ	19200	12303493	.BRACKET	1
22	PBDZZ	19200	12303250	.MIRROR,GLASS	1
23	XDDZZ	19200	12303494	BRACKET SUPPORT	1

END OF FIGURE

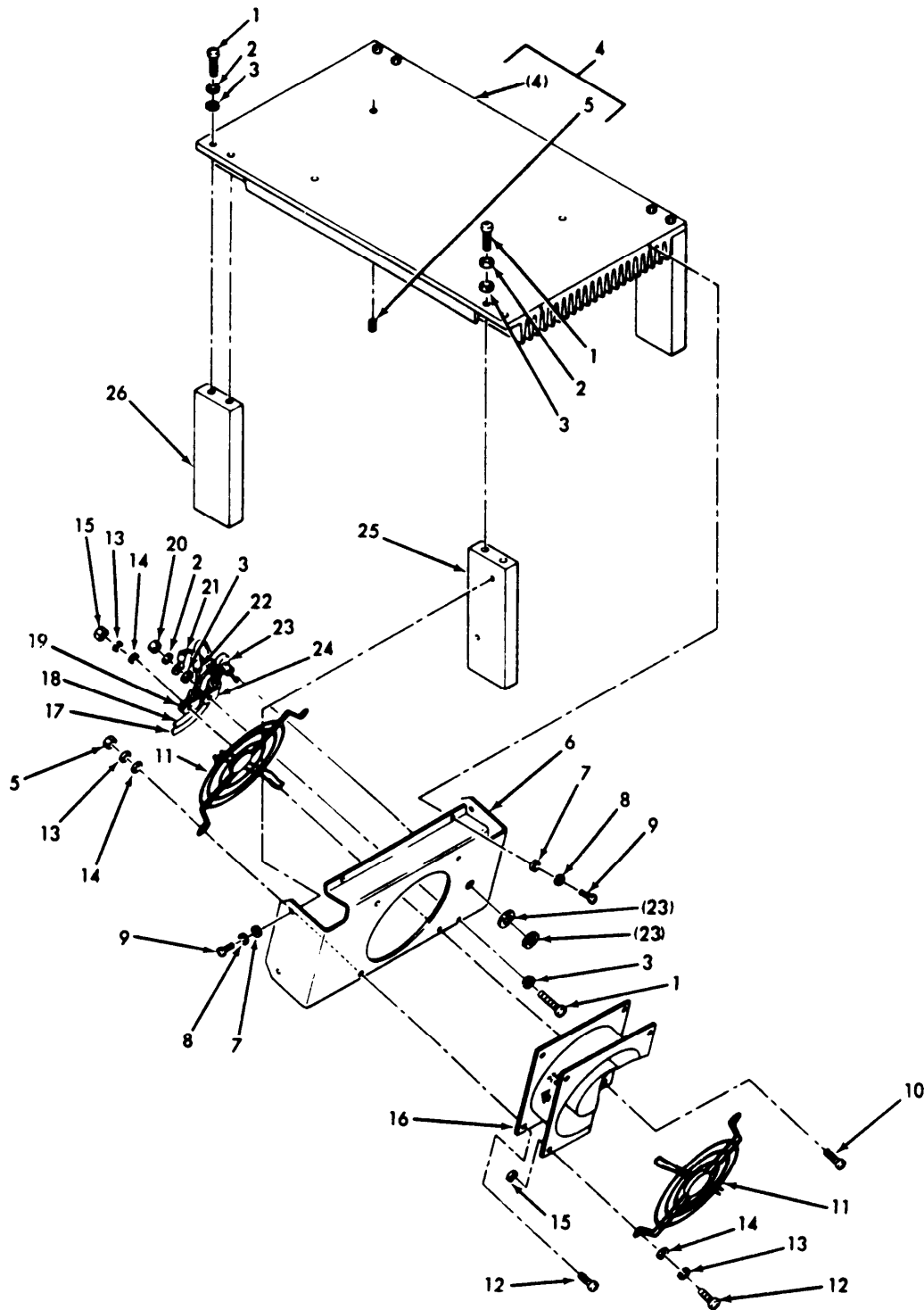


FIGURE A-49 HOLDING FIXTURE ASSEMBLY COMPONENT PARTS (ASSY P/N 12303377) AND HOLDING FIXTURE BASE.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 0216					
FIGURE A-49 HOLDING FIXTURE ASSEMBLY					
COMPONENT PARTS AND HOLDING FIXTURE					
BASE.					
1	PAFZZ	80205	NAS1635-3-10	SCREW, MACHINE	9
2	PAFZZ	96906	MS35338-138	WASHER, LOCK	9
3	PAFZZ	80205	NAS620C10	WASHER, FLAT	10
4	XDFFF	19200	12303378	BASE, HOLDING FIXTURE	1
5	PAFZZ	96906	MS51831-104	INSERT, SCREW THREAD	3
6	XDFZZ	19200	12303379	BRACKET	1
7	PAFZZ	80205	NAS620C8	WASHER, FLAT	6
8	PAFZZ	96906	MS35338-137	WASHER, LOCK	6
9	PAFZZ	80205	NAS1635-08-6	SCREW, MACHINE	6
10	PAFZZ	80205	NAS1635-06-12	SCREW, MACHINE	1
11	PAFZZ	19200	12303321	GUARD, FAN	2
12	PAFZZ	80205	NAS1635-06-10	SCREW, MACHINE	7
13	PAFZZ	96906	MS35338-136	WASHER, LOCK	8
14	PAFZZ	88044	AN960-C6	WASHER, FLAT	8
15	PAFZZ	80205	NAS671C6	NUT, PLAIN, HEXAGON	8
16	PAFZZ	28875	WS2107F-1110	FAN, TUBEAXIAL	1
17	PAFZZ	19200	12303292	CABLE ASSEMBLY, SPEC	1
18	PAFZZ	19200	12303291	CORD ASSEMBLY, ELECT	1
19	PAFZZ	96906	MS25281-F3	CLAMP, LOOP	1
20	PAFZZ	80205	NAS671C10	NUT, PLAIN, HEXAGON	1
21	PAFZZ	96906	MS25036-103	TERMINAL, LUG	1
22	PAFZZ	81349	M83519/1-2	SPLICE, CONDUCTOR	1
23	PAFZZ	19200	12303294	SWITCH, TOGGLE S1	1
24	PAFZZ	96906	MS25281F5	CLAMP, LOOP	1
25	XDFZZ	19200	12303380	LEG	2
26	XDFZZ	19200	12303381	LEG	2

END OF FIGURE

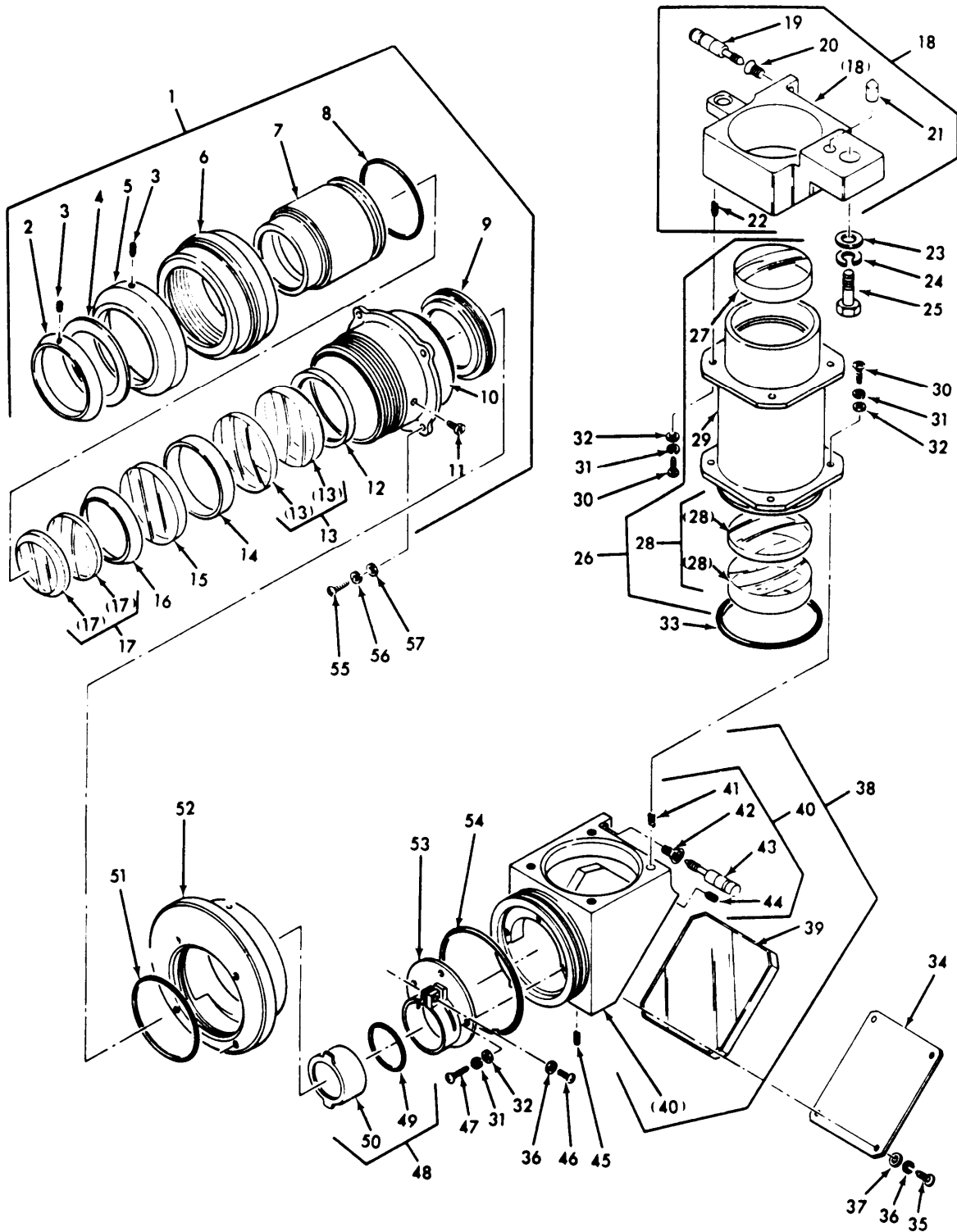


FIGURE A-50 LED VIEWER ASSEMBLY COMPONENT PARTS (ASSY P/N SM-D805768), EYEPIECE ASSEMBLY, RETICLE ASSEMBLY, HOUSING MOUNT, HOUSING ASSEMBLY, MIRROR ASSEMBLY, AND HOUSING.

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 0219					
FIGURE A-50 LED VIEWER ASSEMBLY					
COMPONENT PARTS,EYEPIECE ASSEMBLY,					
RETICLE ASSEMBLY, HOUSING MOUNT,					
HOUSING ASSEMBLY, MIRROR ASSEMBLY,					
AND HOUSING.					
1	PADDD	80063	SM-D-805180	EYEPIECE ASSEMBLY,O	1
2	XDDZZ	80063	SM-C-805138	.INDEX	1
3	PADZZ	80063	SM-C-806043-1	.SCREW,MACHINE	6
4	XDDZZ	80063	SM-C-805081	.RING	1
5	XDDZZ	80063	SM-D-805078	SCALE,DIOPTER	1
6	XDDZZ	80063	SM-C-805079	.ADAPTER	1
7	XADZZ	80063	SM-D-805083	.BARREL,LENS	1
8	PADZZ	80063	SM-C-805970-1	.PACKING,PREFORMED	1
9	XDDZZ	80063	SM-C-805085	.STOP	1
10	XDDFF	80063	SM-D-805074-2	.ADAPTER	1
11	PADZZ	80063	SM-C-805082	SCREW,GUIDE	1
12	XDDZZ	80063	SM-C-805076	.RING	1
13	PADZZ	80063	SM-C-805189	.LENS,ASSEMBLY	1
14	XDDZZ	80063	SM-C-805075	.SPACER,NO.2	1
15	PADZZ	80063	SM-D-805163	.LENS NO 3 EYEPIECE	1
16	XDDZZ	80063	SM-C-805077	.SPACER,NO.1	1
17	PADZZ	80063	SM-D-805190	.LENS,ASSEMBLY	1
18	XDDDD	80063	SM-D-805840	MOUNT,HOUSING	1
19	PADZZ	80063	SM-C-805957-1	.SCREW,ASSEMBLY PANE ASSEMBLY	2
20	PADZZ	80063	SM-C-805950-1	.BUSHING,MACHINE THR	2
21	XDDZZ	80063	SM-C-808392	.PIN,TAPERED	1
22	XDDZZ	96906	MS122078	.INSERT,SCREW THREAD	4
23	PADZZ	96906	MS15795-816	WASHER,FLAT	1
24	PADZZ	96906	MS35338-142	WASHER,LOCK	1
25	PADZZ	80063	SM-C-804917	SCREW,MACHINE	1
26	PADDL	80063	SM-D-805773	HOUSING ASSEMBLY	1
27	PADZZ	80063	SM-D-805769	.LENS,NO 1,LED TELES	1
28	PADZZ	80063	SM-C-805770	.LENS ASSEMBLY NO 2	1
29	XDDZZ	80063	SM-D-805774	.HOUSING,LENS	1
30	PADSS	96906	MS51957-28B	SCREW,MACHINE	8
31	PADSS	96906	MS35338-136B	WASHER,LOCK	11
32	PADSS	19207	5159005	WASHER,FLAT	11
33	PADSS	96906	MS28775-136	PACKING,PREFORMED	1
34	XDDZZ	80063	SM-C-805780	.COVER,MIRROR	1
35	PADZZ	96906	MS51957-14B	SCREW,MACHINE	4
36	PADZZ	96906	MS35338-135B	WASHER,LOCK	4
37	PADZZ	96906	MS15795-804B	WASHER,FLAT	4
38	XDDDD	80063	SM-C-807191	MIRROR HOUSING	1
39	PADZZ	80063	SM-D-805779	.MIRROR,FOLD	1
40	XDDDD	80063	SM-D-805775	.HOUSING,FOLD MIRROR	1
41	PADZZ	96906	MS122076	.INSERT,SCREW THREAD	4
42	PADZZ	80063	SM-C-805957-1	.SCREW,ASSEMBLY PANE ASSEMBLY	2
43	PADZZ	80063	SM-C-805950-1	.BUSHING,MACHINE THR	2
44	PADZZ	96906	MS122078	.INSERT,SCREW THREAD	7
45	PADZZ	80063	SM-C-773929-8	SETScrew	4

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
46	PADZZ	96906	MS16995-9B	SCREW,CAP, SOCKET HE	1
47	PADZZ	96906	MS51957-27B	SCREW,MACHINE	3
48	XDDDD	80063	SM-C-805776	RETICLE ASSEMBLY	1
49	XDDZZ	80063	SM-D-805778	RETICLE	1
50	XADZZ	80063	SM-C-805777	HOUSING	1
51	PADZZ	96906	MS28775-137	PACKING,PERFORMED	1
52	XDDZZ	80063	SM-D-805839	RING	1
53	XDDZZ	80063	SM-C-807124	MOUNT,HOUSING	1
54	PADZZ	81349	M83461/1-141	PACKING,PREFORMED	1
55	PADZZ	96906	MS51957-28B	SCREW,MACHINE	4
56	PADZZ	96906	MS35338-136B	WASHER,LOCK	4
57	PAFZZ	19207	5159005	WASHER,FLAT	4

END OF FIGURE

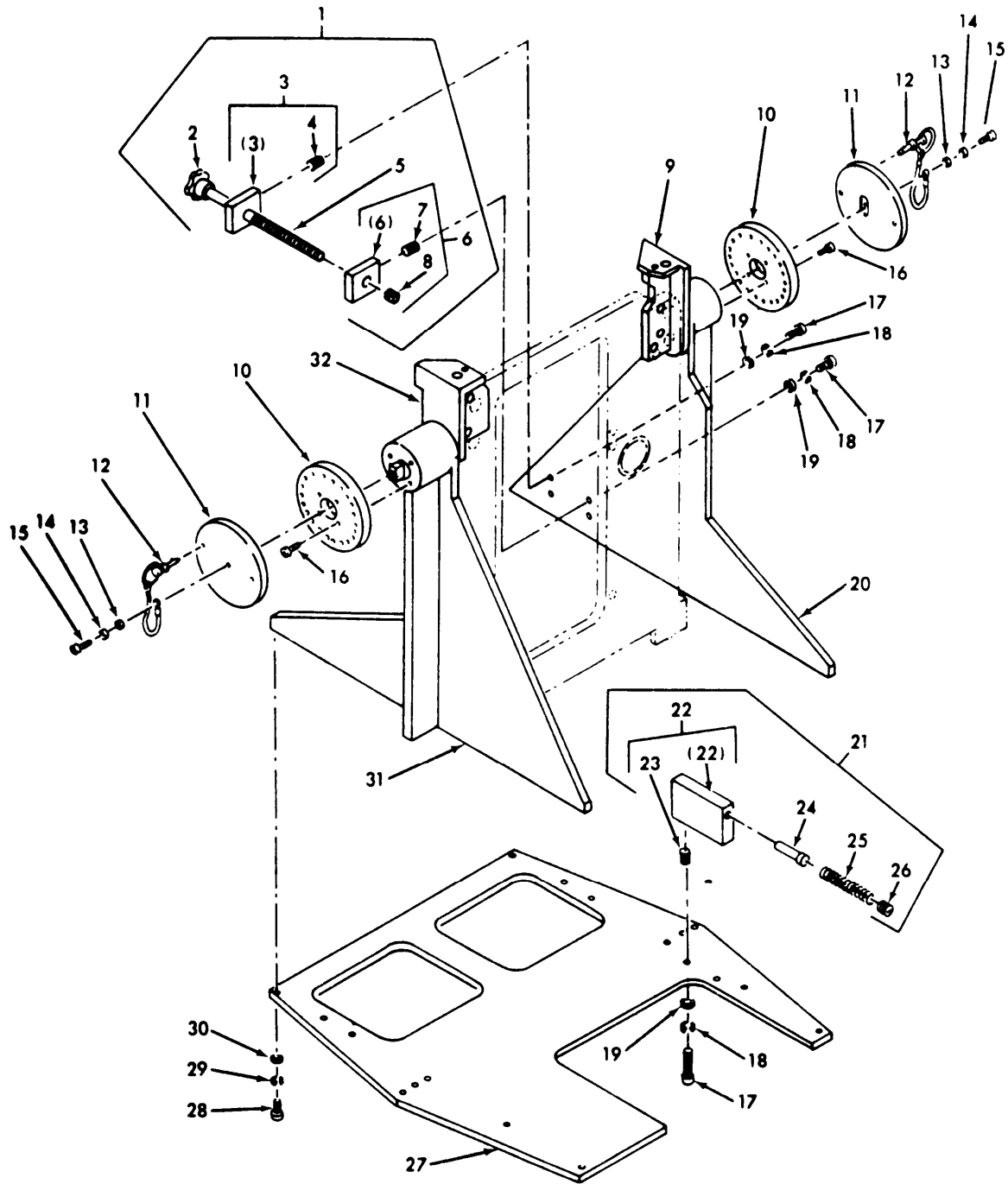


FIGURE A-51 HOLDING FIXTURE ASSEMBLY COMPONENT PARTS
 (ASSY P/N SM-D-805806). ELEVATION ADJUSTMENT
 ASSEMBLY, BLOCK ASSEMBLY, MOUNTING BLOCK, ELEVATION
 PLUNGER, AND GUIDE ASSEMBLY

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 03					
FIGURE A-51 HOLDING FIXTURE ASSEMBLY COMPONENT PARTS, ELEVATION ADJUSTMENT ASSEMBLY, BLOCK ASSEMBLY, MOUNTING BLOCK, ELEVATION PLUNGER, AND GUIDE ASSEMBLY.					
1	PAFFF	54490	5002731	ADJUSTMENT ASSEMBLY	1
2	PAFZZ	96906	MS91531-3N2B	.KNOB	1
3	XDFFF	54490	5002733-1	.BLOCK	1
4	PAFZZ	96906	MS124735	..INSERT,SCREW THREAD	2
5	XDFZZ	54490	5002734	.SHAFT	1
6	XDFFF	54490	5002733-2	.BLOCK	1
7	PAFZZ	96906	MS124735	..INSERT,SCREW THREAD	2
8	PAFZZ	96906	MS122121	..INSERT,SCREW THREAD	1
9	XDFZZ	80063	SM-D-805813	SPINDLE ASSEMBLY RIGHT	1
10	XDFZZ	80063	SM-D-805825	PLATE	2
11	XDFZZ	80063	SM-C-805826	PLATE	2
12	XDFZZ	80063	SM-D-805834	PIN	2
13	PAFZZ	96906	MS15795-810B	WASHER,FLAT	2
14	PAFZZ	96906	MS35338-139B	WASHER,LOCK	2
15	PAFZZ	96906	MS16996-21B	SCREW,CAP,SOCKET HE HEAD	2
16	PAFZZ	96906	MS51960-64B	SCREW,MACHINE	8
17	PAFZZ	96906	MS51957-65	SCREW,MACHINE	6
18	PAFZZ	96906	MS35338-138	WASHER,LOCK	6
19	PAFZZ	96906	MS15795-808	WASHER,FLAT	6
20	XDFZZ	80063	SM-D-805807	RISER ASSEMBLY RIGHT	1
21	PAFOO	54490	5002735	PLUNGER,ELEVATING	1
22	XDFOO	54490	5002736	.GUIDE	1
23	PAFZZ	96906	MS124735	..INSERT,SCREW THREAD	2
24	XDFZZ	54490	5002737	.PLUNGER	1
25	PAFZZ	54990	5002719-1	SPRING,HELICAL	1
26	PAFZZ	96906	MS51031-147	.SETSCREW	1
27	XDFZZ	80063	SM-D-805808	PLATE,BASE	1
28	PAFZZ	96906	MS16996-10B	SCREW,CAP,SOCKET HE HEAD	12
29	PAFZZ	96906	MS35338-138B	WASHER,LOCK	12
30	PAFZZ	96906	MS15795-808B	WASHER,FLAT	12
31	XDFZZ	80063	SM-D-805809	RISER ASSEMBLY LEFT	1
32	XDFZZ	80063	SM-D-805819	SPINDLE ASSEMBLY LEFT	1

END OF FIGURE

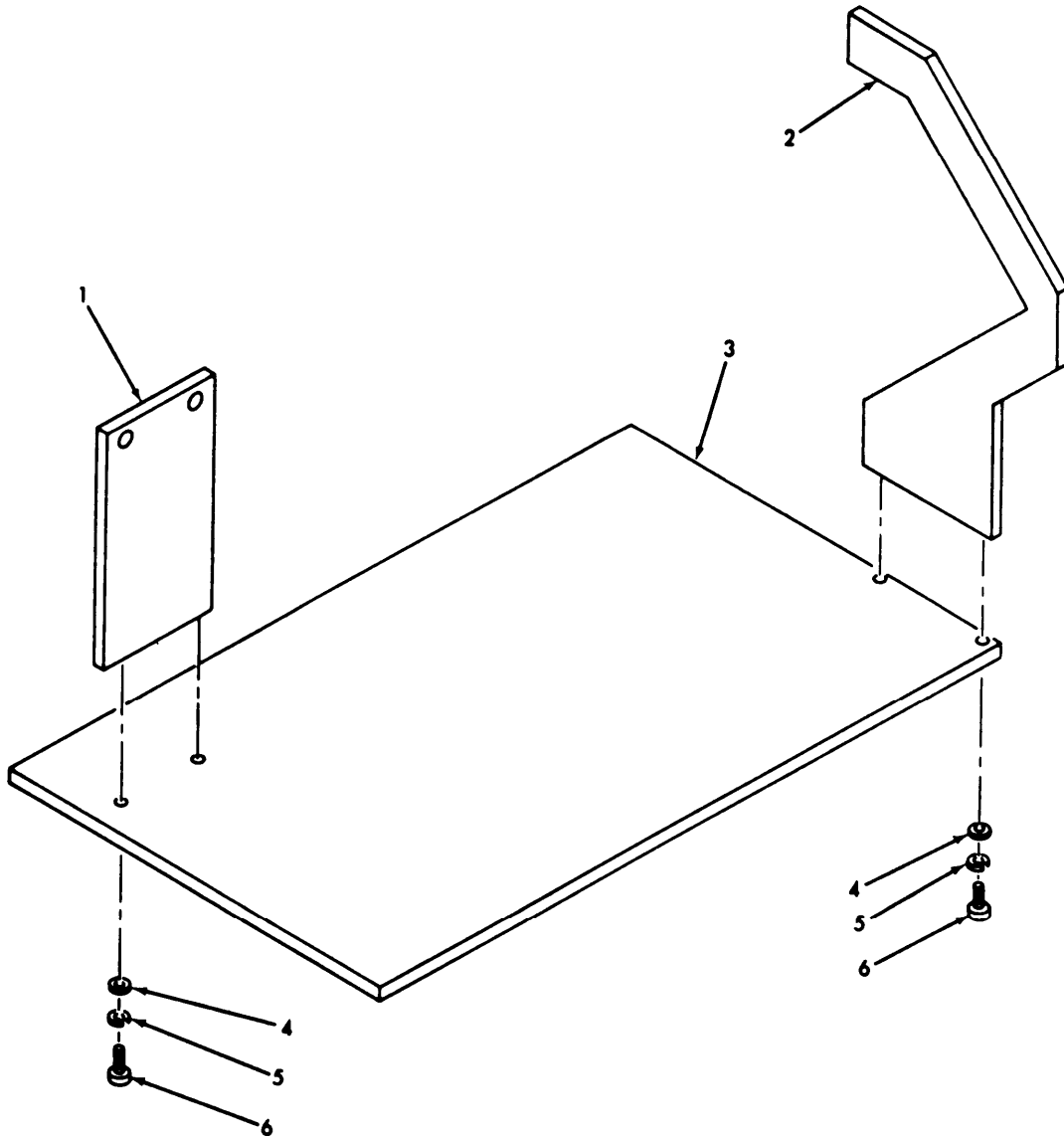


FIGURE A-52 COMMAND HOLDING FIXTURE ASSEMBLY COMPONENT PARTS (ASSY P/N SM-D-807163).

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 04	
				FIGURE A-52 COMMAND HOLDING FIXTURE	
				ASSEMBLY COMPONENT PARTS.	
1	XDFZZ	80063	SM-C-807164	BRACKET, REAR	1
2	XDFZZ	80063	SM-C-807165	BRACKET, FRONT	1
3	XDFZZ	80063	SM-C-807166	PLATE, BASE	1
4	PAFZZ	80205	NAS620C416	WASHER, FLAT	4
5	PAFZZ	96906	MS35338-139	WASHER, LOCK	4
6	PAFZZ	96906	MS51958-79	SCREW, MACHINE	4

END OF FIGURE

SECTION II

TM9-4931-381-14&P-2

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 9999 BULK MATERIAL LISTING	
10	PAFZZ	18876	MIS26877/2-20U	WIRE	V
12	PAFZZ	18876	MIS26877/2-22U	WIRE	V

END OF FIGURE

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM	
	FIG.	ITEM				
5905-00-004-7650	22	10	5310-00-057-0573	20	8	
5910-00-007-2004	44	12		22	4	
	44	17		34	30	
	44	23	5305-00-059-3675	52	6	
5962-00-007-4079	15	39	5320-00-063-5479	18	18	
5910-00-010-8157	15	27	5999-00-065-1833	46	12	
5910-00-010-8666	15	6		47	12	
5910-00-010-8717	10	1	5305-00-066-7327	3	48	
	11	3	5305-00-068-5287	19	39	
	15	4	5310-00-069-5291	3	19	
	16	2		18	6	
	44	2		19	25	
	44	5		49	7	
	44	21	5975-00-074-2072	3	47	
	5910-00-010-8718	10	12		4	13
		12	8		21	58
		16	8		29	6
		10	11	5305-00-079-5835	3	29
5910-00-010-8721	12	32	5961-00-082-4073	22	8	
	15	1	5305-00-082-6782	34	22	
	16	40	5961-00-087-6047	23	18	
	19	40	5305-00-088-9665	29	4	
5970-00-034-6842	5	9	5305-00-088-9666	3	55	
5940-00-038-7483	4	60	5910-00-096-4644	12	37	
	20	12	5910-00-096-5160	16	45	
	21	54	5365-00-097-4399	47	18	
	23	36	5910-00-098-9242	16	64	
	4	48	5910-00-098-9277	12	60	
	22	13	5365-00-103-9727	34	18	
	15	37		34	27	
	5305-00-050-9231	51	17		50	20
	5305-00-051-0227	4	53		50	43
	5310-00-054-0041	2	10	5905-00-104-8368	16	59
3		45	5905-00-105-7764	10	9	
4		43	5905-00-105-7767	12	64	
5		13	5905-00-106-1248	11	18	
9		12		16	11	
17		1	5905-00-106-1249	16	21	
20		11	5905-00-106-1356	10	41	
21		4		15	22	
23		11	5905-00-106-3666	12	34	
23		23		16	44	
29		7	5905-00-106-9346	24	1	
5305-00-054-5638		46	7		25	1
		47	7	5905-00-106-9356	11	27
5305-00-054-6670		2	8		16	42
		18	8	5905-00-110-0388	15	38
		21	3	5905-00-110-7620	10	43
5310-00-057-0573		4	78		11	6
		19	34		15	21

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM
	FIG.	ITEM			
5905-00-110-7620	16	31	5905-00-121-9932	11	25
5905-00-111-1679	12	36		12	6
	16	41	5905-00-122-0004	16	43
5905-00-111-1686	44	13	5910-00-124-0659	15	5
	44	18		44	8
5905-00-111-4727	10	7	5905-00-131-1255	10	5
5905-00-111-4845	16	22		11	26
5905-00-111-4852	19	8	5935-00-131-9680	34	37
5910-00-113-5286	10	38	5905-00-131-9729	12	21
	12	55	5905-00-135-3972	10	26
	15	17	5905-00-135-3973	15	20
	44	11	5905-00-135-6046	16	12
	44	16	5905-00-136-3890	10	6
5910-00-113-5445	12	65	5905-00-136-7103	10	36
5910-00-113-5465	15	9		16	36
5910-00-113-5470	15	7	5905-00-137-8746	22	16
5910-00-113-5471	12	61	5905-00-138-1283	8	5
5910-00-113-5492	12	46		16	56
5910-00-113-5499	12	26	5310-00-138-4258	48	4
	13	2	5905-00-140-6967	23	44
	14	7	5905-00-141-0591	21	63
5910-00-113-5689	11	16	5905-00-141-0743	12	50
	16	6	5905-00-141-0744	16	13
5940-00-113-9828	4	56	5905-00-141-1132	10	32
	27	27	5905-00-141-1295	15	43
	28	16	5910-00-143-0501	12	48
	29	32	5940-00-143-4771	49	21
	28A	16	5910-00-144-4383	12	52
5905-00-114-0708	10	39	5905-00-147-9841	15	30
	11	4	5305-00-150-3485	50	46
	12	45	5905-00-153-4587	15	25
	15	23	5935-00-153-6239	28	29
	16	5		38	2
5910-00-114-0755	10	51		28A	34
5305-00-114-8859	49	12	5910-00-154-0547	10	35
5905-00-115-8055	10	17		12	47
5305-00-116-1811	20	25		15	50
5905-00-116-8554	12	33	5975-00-156-3253	26	10
	15	13		27	4
5905-00-116-8569	25	2		28	15
5320-00-117-6939	3	27		29	11
5905-00-118-4559	16	68		30	10
5905-00-118-4560	12	42		31	3
5905-00-119-3504	25	4		28A	15
5905-00-119-8768	10	42	5310-00-167-0806	4	49
	15	26	5310-00-167-0812	3	20
5905-00-119-8812	15	66	5310-00-167-0814	21	29
	16	7	5905-00-169-9454	15	31
5905-00-120-9154	44	7	5962-00-173-9776	16	30
5905-00-121-9861	16	32	5325-00-174-5317	2	15

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM
	FIG.	ITEM			
5910-00-176-2641	19	26	5910-00-236-8745	10	55
5905-00-180-8315	10	16		15	61
5306-00-182-1849	21	27	5305-00-240-7149	23	19
5305-00-182-9492	4	71	5305-00-240-7151	5	6
5310-00-184-8628	34	6	5305-00-241-1076	4	86
	50	23		29	26
5910-00-192-7180	13	7	5310-00-243-4764	51	14
	14	11	5905-00-244-7911	25	3
	16	65	5905-00-250-1558	23	56
5310-00-194-3649	51	30	6645-00-255-1370	4	87
5905-00-197-4289	8	2	5905-00-256-5066	22	28
	15	42	5340-00-290-4480	51	4
5305-00-197-8890	17	3		51	7
5305-00-197-8987	3	21		51	23
	17	16	5905-00-317-8761	23	59
5340-00-200-7224	34	19	5962-00-318-2223	15	47
5310-00-208-3786	3	28	5962-00-324-1456	11	2
	4	89		16	19
	5	10	5962-00-336-7468	11	11
	10	28	5962-00-349-6236	16	3
	11	20	5905-00-352-8758	23	58
	12	20	5962-00-361-8732	10	25
	13	16	5305-00-362-3206	4	11
	14	20		21	5
	15	36		22	17
	16	15	5340-00-368-4708	34	16
	17	7	5962-00-369-9839	10	21
	20	3	5935-00-375-0007	44	29
	21	16	5905-00-400-9747	12	62
	22	6	5905-00-401-7444	15	52
	23	1	5905-00-402-1011	12	63
5910-00-211-1261	22	11	5905-00-402-1384	8	4
5305-00-213-8741	51	15	5905-00-402-9229	8	3
5305-00-218-5447	22	12	5905-00-403-3156	8	6
5310-00-224-0746	34	31	5305-00-403-3463	9	1
	50	36	5305-00-403-3465	3	18
5310-00-224-0747	50	31		19	24
	50	56	5961-00-403-3908	11	28
5310-00-224-0749	48	3	5905-00-403-4472	22	29
	51	29	5905-00-405-8355	16	57
5940-00-230-0515	45	7	5905-00-407-2160	16	61
5961-00-232-3279	12	30	5935-00-407-5462	28	20
5305-00-236-1782	4	34		28A	19
	23	10	5935-00-410-9252	31	1
	26	5	5905-00-412-0820	15	28
	27	7	5305-00-415-2205	51	16
	29	21	5935-00-415-5402	28	1
	30	6		28A	1
	31	10	5305-00-419-0820	51	28
	28A	25	5340-00-421-1189	34	20

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM
	FIG.	ITEM			
5355-00-421-5109	4	50	5935-00-489-1997	4	26
5935-00-424-9737	28	19	5905-00-489-2240	16	60
5962-00-430-2737	12	12	5935-00-489-9999	4	38
	13	1	5935-00-490-3743	22	25
5962-00-430-2740	11	7	5935-00-490-5219	21	55
5905-00-432-0464	15	40	5935-00-490-5220	21	35
5905-00-434-0466	4	82	5935-00-490-8389	27	1
5905-00-435-6374	15	10	5935-00-491-3740	20	2
5905-00-435-6414	16	38	5305-00-494-7333	34	32
5961-00-436-8787	11	19	5935-00-496-7835	20	27
	12	31	5305-00-498-1261	4	77
6210-00-438-2234	4	47		5	17
4140-00-442-3490	49	16		10	31
5305-00-448-6500	50	30		11	23
	50	55		12	17
5305-00-448-6547	50	47		13	13
5305-00-458-2829	4	41		14	17
5305-00-458-2832	3	43		15	33
	4	7		16	18
	9	14		18	22
	19	2		19	32
	21	14		20	7
	22	27		21	26
5305-00-459-1160	23	43		22	3
5305-00-459-1165	4	85		23	26
	17	4		27	15
5305-00-459-4687	50	35		29	20
5305-00-460-0673	4	65		30	15
5305-00-460-3411	4	94		28A	30
5905-00-462-4891	12	35	5935-00-501-1665	28	18
5905-00-462-4995	12	7		28A	18
5935-00-466-3394	33	1	5935-00-503-9986	26	9
5935-00-468-2838	21	47	5905-00-509-3821	23	48
	40	4	5310-00-515-7449	3	31
5310-00-470-3000	51	13	5305-00-517-6471	48	2
5999-00-473-3551	30	12	5935-00-521-2543	35	4
	44	30	5935-00-521-2547	30	11
5340-00-473-3887	19	30	5935-00-521-2548	43	2
5905-00-476-7856	22	2		46	1
5999-00-478-4402	44	26		47	1
5340-00-479-9197	19	21	5935-00-521-2702	4	28
	20	23	5310-00-531-9514	3	50
5905-00-479-9951	16	62		4	3
5305-00-480-8898	2	21		49	14
	3	14	5905-00-539-1559	4	76
	9	9	5962-00-542-9418	15	49
	23	25	5310-00-558-6207	2	14
5905-00-482-0791	15	41	5365-00-580-3563	3	38
5905-00-484-0266	12	43	5905-00-581-1860	4	80
5905-00-485-4648	12	56	5320-00-584-0672	18	3

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM		
	FIG.	ITEM					
5320-00-584-0672	18	15	5310-00-723-9676	20	5		
	19	18		21	24		
	21	10		23	2		
	21	22		26	7		
	21	61		27	9		
	23	30		29	13		
	29	29		30	8		
	32	2		31	12		
	5310-00-595-6211	10		29	28A	28	
		11		21	5975-00-727-5153	2	18
		12		19		4	12
13		15	19	16			
14		19	18	9			
15		35	21	57			
16		16	4	90			
5310-00-595-6761		46	9	20		1	
		47	9	18		13	
5305-00-604-0340		19	5	4		93	
5355-00-614-0400		51	2	21		11	
5930-00-615-8895	46	10	23	41			
	47	10	21	62			
5310-00-616-8660	3	51	29	30			
	4	1	5310-00-771-7361	3	26		
	21	6		21	23		
	22	21		18	4		
	29	9		18	6		
	49	15		19	17		
	5310-00-619-1148	51		19	23	29	
		5340-00-634-7860		34	53	5310-00-773-7624	4
	5930-00-655-4241	4		81	19		3
	5940-00-682-2477	20		24	22		20
	5365-00-684-5983	17		9	5310-00-781-9483		2
5310-00-687-6664	50	37		3			16
5961-00-702-3435	8	1	4	72			
	15	3	9	3			
	16	37	21	40			
5935-00-702-4199	18	10	23	24			
5320-00-721-5243	10	47	5310-00-782-1349	4			95
	11	9		5			16
	12	4		50		32	
	13	4		50		57	
	14	4		19		19	
	15	58		21	31		
	16	52		49	20		
	5310-00-723-9676	3		23	5310-00-812-4294	22	15
		4		36		23	34
		5		4		50	33
		16		51		16	63
17		6	21	52			
18		24	50	41			
			5330-00-818-4591				
			5961-00-821-2309				
		5305-00-823-5806					
		5340-00-826-4023					

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM
	FIG.	ITEM			
5940-00-827-2653	4	10	5310-00-933-8118	18	23
5330-00-833-1429	50	51		19	33
5340-00-834-8789	49	24		20	4
5310-00-837-1381	3	2		21	25
	23	8		22	5
5340-00-842-5920	19	23		23	9
	20	21		26	6
	34	29		27	8
5340-00-843-0003	50	44		29	22
5310-00-845-2359	29	14		30	7
5310-00-845-5030	2	13		31	11
5945-00-850-1144	21	19		28A	27
5905-00-873-2996	22	9	5310-00-933-8119	2	7
5310-00-880-5975	2	6		3	53
	21	2		18	7
	23	6		19	6
5905-00-881-7810	4	83		23	5
5310-00-894-3638	3	37		49	8
5961-00-898-2101	21	13	5310-00-933-8120	2	22
5320-00-923-9849	18	11		3	15
5310-00-928-2690	22	14		4	66
	23	35		9	2
	46	8		21	39
	47	8		49	2
5310-00-929-6395	2	11		51	18
	3	44	5310-00-933-8121	3	32
	4	2		52	5
	5	12	5310-00-934-9748	4	29
	9	13		26	1
	17	2		27	13
	19	41		29	19
	20	10		30	2
	21	7		31	6
	22	22		28A	23
	23	12	5961-00-938-1135	16	23
	23	22	5310-00-947-4348	2	5
	29	8		32	5
	49	13	5961-00-951-8757	10	8
5930-00-931-9710	4	97		16	55
5310-00-933-8118	3	22	5310-00-952-0309	52	4
	4	35	5355-00-958-9982	4	73
	5	5	5305-00-959-4158	21	38
	10	30	5310-00-970-4841	23	20
	11	22	5310-00-973-8786	34	5
	12	18		50	24
	13	14	5310-00-974-6623	21	28
	14	18	5905-00-974-6796	15	45
	15	34	5935-00-976-5425	4	27
	16	17	5940-00-983-6051	29	10
	17	5	5340-00-986-2929	32	3

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STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM
	FIG.	ITEM			
5310-00-989-0640	4	67	5999-01-030-7135	17	11
	49	3		17	13
5340-00-998-0611	49	19	5305-01-030-8753	34	54
5962-01-010-7808	12	39	5962-01-031-1918	10	24
5305-01-015-0994	23	4	5962-01-031-7030	10	23
	49	9		15	16
5305-01-015-5686	48	5		16	29
5935-01-015-8263	28	14	5935-01-032-4429	37	2
	28A	14	5962-01-034-2146	15	69
5935-01-015-8264	28	27		16	10
	28A	32	5905-01-035-8165	13	17
5935-01-015-8265	29	1	5935-01-035-8813	41	5
5962-01-015-8539	11	12	5935-01-036-0928	36	4
	16	47	5935-01-036-0929	21	45
5935-01-016-2437	36	6		40	2
5935-01-017-0141	40	7	5935-01-041-6437	20	26
5935-01-017-0158	29	33	5910-01-043-5775	12	11
5305-01-020-0176	29	12	5935-01-043-7773	17	8
5305-01-020-0177	4	44	5999-01-044-5781	12	10
	5	11		14	15
	20	18	5310-01-044-6568	4	102
	21	49	5905-01-045-4784	23	47
	23	13	5305-01-045-9544	20	9
	23	21	5905-01-047-2251	44	9
5945-01-020-5009	21	8	5905-01-047-5172	15	11
5962-01-026-2491	10	56	5962-01-048-7767	10	40
5962-01-026-2493	10	59	5962-01-050-0918	10	14
	15	60		12	59
5962-01-026-6052	10	20		44	22
5935-01-026-6339	39	6	5962-01-050-0919	15	12
5962-01-026-8818	15	68	5962-01-050-0920	16	28
5962-01-026-8823	10	34	5905-01-051-1743	11	1
5905-01-027-5604	10	19	5935-01-052-7239	34	38
5962-01-027-6863	10	18	5935-01-052-9436	3	24
	12	23		5	15
	13	12	5305-01-054-2776	34	17
	14	9		34	26
	15	54		50	19
	16	33		50	42
5961-01-028-7047	16	54	5962-01-058-1539	16	34
5305-01-029-8873	2	12	5970-01-058-6445	16	50
	49	10	5935-01-058-6508	20	6
5305-01-029-8874	2	17		20	14
5305-01-030-1754	48	7	1240-01-063-1397	50	17
5305-01-030-2255	3	17	1240-01-063-1398	50	13
	4	92	5305-01-063-1399	50	11
	49	1	5305-01-063-1549	34	4
6210-01-030-2332	4	46		50	25
5962-01-030-6352	10	33	5305-01-063-1555	50	3
5340-01-030-6854	51	8	1240-01-063-1588	50	1

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STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		FIG.	ITEM	
	FIG.	ITEM			
5935-01-063-4390	43	4	5935-01-085-6517	13	8
4931-01-063-6129	34	23		14	14
4931-01-063-6132	1	4		15	32
4931-01-063-6133	1	5		16	14
4931-01-063-6137	34	13	5962-01-086-7634	10	46
4931-01-063-6164	50	26	5905-01-087-9333	12	27
4931-01-063-6165	50	39		13	6
4931-01-063-6167	46	11		14	12
4931-01-063-6173	47	11		15	64
1240-01-063-6180	50	15	5935-01-089-0661	39	4
4931-01-064-1372	50	27	5935-01-091-1277	42	6
4931-01-064-1373	50	8	5935-01-091-1278	38	6
5120-01-064-1379	34	14	5935-01-091-1283	28	26
5962-01-065-7027	15	46		28A	31
	16	27	5925-01-091-9400	4	57
5340-01-066-2840	49	5	5935-01-091-9546	19	11
5962-01-067-3073	15	55	5935-01-092-3425	42	2
5935-01-067-7248	41	8	5935-01-092-3426	39	2
5962-01-068-1039	10	37	5935-01-092-3427	35	2
5935-01-068-2691	27	23	5935-01-092-3434	21	46
5120-01-068-3719	34	11		40	6
5940-01-068-6817	47	19	5962-01-092-6229	13	10
5935-01-068-9369	38	7		14	10
5935-01-068-9370	37	8	5962-01-093-8823	11	13
5962-01-068-9593	15	51	5340-01-096-7217	21	53
5330-01-069-1563	50	8		22	26
5962-01-069-2637	15	15	5962-01-097-3892	10	13
	16	35		15	18
5962-01-069-3045	10	10		16	20
5910-01-071-5650	44	24		44	3
5935-01-071-7666	38	4		44	6
5905-01-073-2507	12	41	5935-01-098-1685	21	51
5970-01-074-6857	22	18		22	24
5960-01-074-8964	19	9	5310-01-099-7981	32	4
1240-01-074-8969	21	1	5340-01-100-8184	4	59
1240-01-074-8970	19	35		20	13
1240-01-074-9026	19	38		23	37
5855-01-077-4523	1	3	5962-01-100-8193	15	24
5962-01-077-5083	15	48		16	25
5935-01-078-4517	45	2		44	14
5340-01-079-1774	5	14		44	19
5905-01-079-4609	10	44	5962-01-100-8195	15	67
5962-01-080-6488	16	67		16	9
5310-01-081-8534	2	9	5905-01-100-8228	16	26
5855-01-082-3693	34	15	5940-01-101-7031	21	54
5855-01-083-0593	34	12	5961-01-101-7050	4	88
5999-01-084-0860	14	2	5935-01-102-0336	10	2
5935-01-085-6517	10	27		15	9
	11	17	5962-01-102-9453	15	19
	12	16	6145-01-103-7275	17	18

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STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM
	FIG.	ITEM			
5962-01-105-4029	15	44	5940-01-136-2540	33	4
5999-01-106-7076	27	24		49	22
	27	26	4931-01-136-7257	2	3
5935-01-108-3800	42	4	4931-01-136-7258	33	5
5962-01-110-2679	10	50	4931-01-136-7360	4	68
	15	62	4931-01-136-7261	4	4
	16	48	4931-01-136-7385	4	5
5962-01-111-9754	10	15	4931-01-137-4891	34	1
5935-01-113-0585	10	54	4931-01-137-4892	34	8
5920-01-113-5182	45	8	4931-01-137-4893	49	11
5330-01-115-2216	50	54	4931-01-137-4977	34	39
5945-01-115-7256	14	3	4931-01-137-4978	34	47
5935-01-116-0868	41	6	4931-01-137-4980	34	49
5905-01-117-6196	23	9	4931-01-137-5135	19	4
5910-01-119-4302	22	7	6150-01-137-5156	3	35
4931-01-119-5753	36	1	4931-01-137-5161	34	40
	37	9	4931-01-137-5162	34	41
	38	5	4931-01-137-5163	34	42
	39	1	4931-01-137-5164	34	43
	40	8	4931-01-137-5165	34	44
4931-01-119-5754	36	5	4931-01-137-5166	34	45
	37	1	4931-01-137-5167	34	46
	38	1	4931-01-137-5168	34	50
	39	5	4931-01-137-5174	9	22
	40	1	4931-01-137-5178	23	40
	41	9	4931-01-138-3875	34	51
	42	1	4931-01-138-3876	11	14
	43	5		12	57
4931-01-119-5763	35	5		13	9
	41	1		14	13
	42	5		15	63
	43	1		16	69
4931-01-119-5765	37	4	4931-01-138-3877	34	9
	40	5	4931-01-138-3878	51	1
	41	4	4931-01-138-3879	51	21
5910-01-121-0375	23	14	5930-01-138-3935	49	23
5945-01-123-7621	12	15	6150-01-138-3942	49	18
	14	16	6760-01-138-3952	48	11
5905-01-123-7832	11	15	6760-01-138-3953	48	15
5340-01-126-4951	23	38	5999-01-138-3968	4	62
6650-01-129-6087	34	24	5999-01-138-3969	4	63
4931-01-130-5695	1	1	5999-01-138-3970	4	74
4931-01-134-6738	35	1	5999-01-138-3971	4	61
	36	7	5999-01-138-3972	4	58
	37	7	5999-01-138-4020	9	4
	41	7	5999-01-138-4583	4	30
	45	1		21	18
5940-01-135-7076	4	24		23	32
	28	13		26	2
	28A	13		27	12

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STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM
	FIG.	ITEM			
5999-01-138-4583	28	22	4931-01-140-2252	4	6
	29	18	4931-01-140-2253	4	70
	30	1	4931-01-140-2254	4	42
	31	5	5910-01-140-2255	12	2
	28A	22	5910-01-140-2256	12	3
5962-01-138-4672	10	57	5935-01-140-2268	4	25
5962-01-138-4673	15	14	5935-01-140-2269	44	28
5935-01-138-4677	4	31	5962-01-140-2270	10	45
	17	14		12	22
	21	17	5962-01-140-2271	12	54
	23	33		16	46
	26	15	5962-01-140-2272	12	49
	27	11	5962-01-140-2273	11	5
	28	23		12	29
	29	17	5962-01-140-2274	16	39
	30	14	5962-01-140-2275	16	1
	31	4	5962-01-140-2276	10	22
	28A	21	5962-01-140-2277	10	53
4931-01-138-6927	2	16	5962-01-140-2278	10	60
4931-01-138-7027	4	40	5962-01-140-2279	10	61
4931-01-138-7028	4	69	5962-01-140-2280	10	4
4931-01-138-7029	19	36		12	13
4931-01-138-7030	19	8		13	11
4931-01-138-7036	3	42		14	8
5970-01-138-7037	44	27	5962-01-140-2281	12	58
4931-01-138-7038	48	19	5905-01-140-2282	12	1
5940-01-138-7082	23	3	4931-01-140-2283	4	51
4931-01-138-7085	21	32	5962-01-140-2284	15	2
4931-01-138-7086	21	34	6210-01-140-2285	4	64
4931-01-138-7087	21	33	4931-01-140-2286	9	16
4931-01-138-7089	49	17	4931-01-140-2287	9	19
4931-01-138-7167	48	8	4931-01-140-2288	9	18
4931-01-138-7197	4	100	4931-01-140-2289	9	21
5999-01-138-7199	34	34	4931-01-140-2290	9	17
4931-01-138-7200	44	1	4931-01-140-2291	9	20
4931-01-138-7201	44	4	4931-01-140-2292	21	37
4931-01-138-7202	44	10	5935-01-140-2293	4	32
4931-01-138-7203	44	15		26	3
4931-01-138-7204	44	20		27	14
5935-01-138-7216	3	11		28	25
5962-01-139-2909	14	6		29	16
5940-01-139-2910	23	15		30	3
5930-01-139-2911	4	55		31	7
5930-01-139-2912	4	54		28A	29
5355-01-139-2913	4	91	5962-01-140-2294	12	38
5999-01-139-2917	4	39	5962-01-140-2295	16	24
5340-01-139-2919	4	52	5961-01-140-2296	12	25
5905-01-139-2920	4	99	5961-01-140-2297	11	24
5310-01-139-5005	32	1	6110-01-142-0632	22	1
5935-01-140-1420	36	2	6110-01-142-0633	22	23

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STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM
	FIG.	ITEM			
5940-01-142-0635	20	16	5340-01-156-9479	3	40
5935-01-142-0638	34	35	5935-01-157-0571	29	2
5935-01-142-0641	20	15	5962-01-157-2258	15	53
5935-01-142-0642	27	10	5935-01-157-2677	28	28
	28	21		28A	33
	29	24	5935-01-157-3063	4	75
	28A	20	4931-01-158-0230	18	20
5935-01-142-0643	21	15	5340-01-158-2083	3	39
	23	31	5905-01-160-0026	15	65
	30	13	5305-01-160-0771	50	45
5811-01-142-3435	34	7	5340-01-160-4679	17	17
5305-01-144-1449	48	14	4931-01-161-3557	12	40
5940-01-144-2798	21	59	5975-01-161-3584	3	54
	29	27	5961-01-161-8866	16	66
6130-01-144-2799	12	53	1240-01-162-0367	21	1
5962-01-144-5047	15	56	1240-01-162-0368	3	30
	16	4	5305-01-162-9711	48	17
6130-01-144-7830	12	51	4931-01-163-1327	3	49
5905-01-144-7850	4	98		4	15
5940-01-144-8042	9	10		21	56
1015-01-146-1390	19	37		29	5
4931-01-146-6246	5	7	6240-01-163-1364	4	45
5999-01-146-6247	18	21	5935-01-163-3224	46	5
4931-01-146-6498	48	22		47	5
5340-01-146-7688	19	31	5970-01-169-0495	22	19
4931-01-148-4731	10	49	5340-01-169-5697	4	9
	11	10	4931-01-169-6862	4	96
	12	44	9905-01-169-6892	27	2
	13	5		28	2
	14	1		29	3
	15	59		30	9
	16	53		31	2
5305-01-148-7570	51	26		28A	2
5935-01-150-5536	44	25	5935-01-170-2155	3	8
5945-01-151-7443	12	9	5905-01-170-5669	23	53
5340-01-152-0342	18	19	5905-01-170-5739	24	2
5935-01-153-7520	41	2	5905-01-170-5740	23	46
5935-01-153-9189	3	3	5905-01-170-5741	23	52
5935-01-153-9190	3	10	5905-01-170-5742	23	51
5935-01-154-0728	3	13	5905-01-170-5743	23	55
5935-01-154-0729	3	6	5905-01-170-5744	23	45
5935-01-154-0730	3	2	5905-01-170-5745	23	57
5935-01-154-0731	3	7	5935-01-170-5772	37	5
5935-01-154-0732	3	12	5905-01-170-7729	23	54
5935-01-154-0733	3	5	5905-01-170-7730	23	56
5935-01-154-1005	3	9	5905-01-171-5620	23	50
5935-01-154-2362	40	9	5305-01-176-1973	20	19
5935-01-154-2489	27	3	5935-01-177-9556	46	2
5935-01-154-7418	37	6		47	2
5340-01-154-8287	23	7	5905-01-178-9015	12	28

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STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		FIG.	ITEM	
	FIG.	ITEM			
5935-01-179-3497	4	37			
	21	36			
	33	2			
5962-01-181-4286	10	58			
6110-01-185-9091	4	56			
4931-01-193-4740	2	19			
	4	14			
	10	52			
4931-01-200-4160	26	4			
	29	25			
	30	5			
	31	9			
	4931-01-203-7460	27	6		
		29	23		
4931-01-203-7461	28B	25			
	3	60			
4931-01-203-7468	3	57			
4931-01-203-7469	3	56			
4931-01-203-7470	3	41			
4931-01-203-7471	3	59			
4931-01-203-7472	3	58			
4931-01-203-7473	4	79			
5915-01-203-7474	34	48			
4931-01-203-7475	10	3			
	15	8			
	26	8			
9905-01-203-8030	12	14			
5905-01-205-7354	13	18			
4931-01-206-6233	3	33			
5305-01-211-1449	4	57			
6110-01-211-8389	23	17			
5945-01-212-0643	23	16			
5945-01-216-8691					

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FSCM	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
		STOCK NUMBER			
88044	AN5CH13	5306-00-182-1849		21	27
88044	AN960-C6	5310-00-531-9514		3	50
				4	3
				49	14
88044	AN960C10L	5310-00-167-0812		3	20
88044	AN960C416L	5310-00-515-7449		3	31
88044	AN960C516L	5310-00-167-0814		21	29
88044	AN960C8L	5310-00-558-6207		2	14
88044	AN960C816	5310-00-167-0806		4	49
88044	AN960XC10L	5310-00-138-4258		48	4
81349	CMR04F221GODR	5910-01-043-5775		12	11
81349	FM09A250V6A	5920-01-113-5182		45	8
81349	JANTX1N3600	5961-00-436-8787		11	19
				12	31
81349	JANTX1N645	5961-00-898-2101		21	13
81349	JAN1N3600	5961-00-702-3435		8	1
				15	3
				16	37
81349	JAN1N4107	5961-00-403-3908		11	28
81349	JAN1N4148	5961-00-938-1135		16	23
81349	JAN1N4249	5961-00-082-4073		22	8
81349	JAN1N5711	5961-00-232-3279		12	30
81349	JAN1N645	5961-00-087-6047		23	18
81349	JAN1N751A	5961-00-821-2309		16	63
81349	JAN2N2222A	5961-00-951-8757		10	8
				16	55
81349	LC25CN2	6210-01-030-2332		4	46
81349	LH73/2	6210-00-438-2234		4	47
81349	MIL-W-16878/4			28	5
				28	6
81349	MIL-W-583 TYPE T			10	63
				15	71
81349	MILC26861			2	4
81349	MILI221229			8	9
81349	MILI22129 AWG22			25	7
81349	MILI22129AWG30			15	72
81349	MILI23053/5			28	17
				35	3
				36	3
				37	3
				38	3
				39	3
				40	3
				41	3
				42	3
				43	3
				45	3
81349	MILI631TYFFORMU			47	13
81349	MILP26514			34	52
81349	MILW16878/3D22			19	13
81349	MILW16878/4BFE9			20	29

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FSCM	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
		STOCK NUMBER			
81349	MILW16878/5EE22			19	12
18876	MIS26877/1-22SJ9			29	37
				30	20
				28A	11
18876	MIS26877/2-20V			4	20
				150	10
18876	MIS26877/2-22			28	9
18876	MIS26877/2-22SJ			20	28
				26	11
				27	18
				29	35
				30	21
				31	15
				28A	8
18876	MIS26877/2-22U			4	21
				26	12
				27	17
				29	35
				29	38
				30	18
				31	14
				33	7
				35	7
				36	10
				150	12
				28A	9
18876	MIS26877/2-22U90			21	42
				37	11
				38	11
				40	11
				41	14
				42	11
18876	MIS26877/3-20U			45	6
18876	MIS26877/3-22			28	10
18876	MIS26877/3-22SJ			27	19
				29	39
				30	19
				28A	3
18876	MIS26877/3-22U			4	22
				27	21
				29	36
				30	17
				28A	10
18876	MIS26877/4-22SJ			27	20
96906	MS122076	5340-00-826-4023		50	41
96906	MS122078			50	22
		5340-00-843-0003		50	44
96906	MS122079	5340-00-368-4708		34	16
96906	MS122081	5340-00-200-7224		34	19
96906	MS122116	5340-00-842-5920		19	23
				20	21

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FSCM	PART NUMBER	PART NUMBER INDEX	
		STOCK NUMBER	FIG. ITEM
96906	MS122116	5340-00-842-5920	34 29
96906	MS122118	5340-00-734-5525	19 16
96906	MS122119	5340-00-479-9197	19 21
			20 23
96906	MS122121	5340-01-030-6854	51 8
96906	MS122159	5340-00-473-3887	19 30
96906	MS124655	5340-00-986-2929	32 3
96906	MS124659	5340-00-421-1189	34 20
96906	MS124735	5340-00-290-4480	51 4
			51 7
			51 23
96906	MS15795-802	5310-00-595-6761	46 9
			47 9
96906	MS15795-803	5310-00-595-6211	10 29
			11 21
			12 19
			13 15
			14 19
			15 35
			16 16
96906	MS15795-804	5310-00-782-1349	4 95
			5 16
96906	MS15795-804B	5310-00-687-6664	50 37
96906	MS15795-808	5310-00-619-1148	51 19
96906	MS15795-808B	5310-00-194-3649	51 30
96906	MS15795-810B	5310-00-470-3000	51 13
96906	MS15795-816	5310-00-184-8628	34 6
			50 23
96906	MS16535-2	5320-00-063-5479	18 18
96906	MS16535-3	5320-00-923-9849	18 11
96906	MS16535-4	5320-00-764-2432	18 13
96906	MS16535-78	5320-00-721-5243	10 47
			11 9
			12 4
			13 4
			14 4
			15 58
			16 52
96906	MS16995-36B	5305-01-030-1754	48 7
96906	MS16995-37B	5305-01-015-5686	48 5
96906	MS16995-39B	5305-01-162-9711	48 17
96906	MS16995-9B	5305-00-150-3485	50 46
96906	MS16996-10B	5305-00-419-0820	51 28
96906	MS16996-21B	5305-00-213-8741	51 15
96906	MS20426AD3-5	5320-00-117-6939	3 27
96906	MS20426AD3-6	5320-00-584-0672	18 3
			18 15
			19 18
			21 10
			21 22
			21 61

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FSCM	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
		STOCK NUMBER			
96906	MS20426AD3-6	5320-00-584-0672		23	30
				29	29
				32	2
96906	MS21076-L04	5310-00-771-7360		21	62
				29	30
96906	MS21076-06	5310-00-764-6597		21	11
96906	MS21076L08	5310-00-771-7361		3	26
96906	MS21076L3	5310-00-771-7406		21	23
				18	4
				18	16
				19	17
				23	29
				34	53
96906	MS21208F7-15	5340-00-634-7860		4	81
96906	MS24524-23	5930-00-655-4241		4	53
96906	MS24693C272	5305-00-051-0227		21	38
96906	MS24693C273	5305-00-959-4158		3	48
96906	MS24693C28	5305-00-066-7327		29	4
96906	MS24693C29	5305-00-088-9665		19	39
96906	MS24693C49	5305-00-068-5287		3	29
96906	MS24693C50	5305-00-079-5835		3	55
96906	MS24693C51	5305-00-088-9666		49	21
96906	MS25036-103	5940-00-143-4771		4	56
96906	MS25036-148	5940-00-113-9828		27	27
				28	16
				29	32
				28A	16
96906	MS25036-154	5940-00-230-0515		45	7
96906	MS25089-3FR	5930-00-615-8895		46	10
				47	10
96906	MS25237-387	6240-00-763-7744		4	90
96906	MS25244-P-5	5925-01-091-9400		4	57
96906	MS25281-F3	5340-00-998-0611		49	19
96906	MS25281F5	5340-00-834-8789		49	24
96906	MS27400-9	5945-01-020-5009		21	8
96906	MS27418-1B	5945-00-850-1144		21	19
96906	MS27467T19F35P	5935-00-521-2543		35	4
96906	MS27467T19F35S	5935-00-521-2548		43	2
				46	1
				47	1
96906	MS27467T23F2P	5935-01-154-2362		40	9
96906	MS27467T23F35PA	5935-01-067-7248		41	8
96906	MS27467T23F35PB	5935-01-091-1277		42	6
96906	MS27467T23F35PC	5935-01-091-1278		38	6
96906	MS27467T25F35P	5935-01-026-6339		39	6
96906	MS27467T25F35PA	5935-01-068-9369		38	7
96906	MS27467T25F35PB	5935-01-016-2437		36	6
96906	MS27467T25F35PC	5935-01-017-0141		40	7
96906	MS27467T25F35PD	5935-01-068-9370		37	8
96906	MS27468E23F35SA			27	25
96906	MS27468E23F35SB	5935-01-154-2489		27	3

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FSCM	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
		STOCK NUMBER			
96906	MS27468E25F35S	5935-01-015-8263		28	14
				28A	14
96906	MS27468E25F35SA	5935-01-015-8264		28	27
				28A	32
96906	MS27468E25F35SB	5935-01-017-0158		29	33
96906	MS27468E25F35SC	5935-01-015-8265		29	1
96906	MS27468T19F35P	5935-00-521-2547		30	11
96906	MS27468T19F35S	5935-01-068-2691		27	23
96906	MS27468T23F2S	5935-01-157-0571		29	2
96906	MS27468T23F35S	5935-00-503-9986		26	9
96906	MS27468T23F35SC	5935-01-091-1283		28	26
				28A	31
96906	MS27468T25F35SD	5935-01-157-2677		28	28
				28A	33
96906	MS27472T22B35S	5935-01-150-5536		44	25
96906	MS27484T22B35PD	5935-00-375-0007		44	29
96906	MS27484T22F35P	5935-01-063-4390		43	4
96906	MS27502F19N	5935-01-170-2155		3	8
96906	MS27502F23N	5935-01-154-1005		3	9
96906	MS28775-136	5330-00-818-4591		50	33
96906	MS28775-137	5330-00-833-1429		50	51
96906	MS3367-1-9	5975-00-074-2072		3	47
				4	13
				21	58
				29	6
96906	MS3367-2-9	5975-00-156-3253		26	10
				27	4
				28	15
				29	11
				30	10
				31	3
				28A	15
96906	MS3367-4-9	5975-00-727-5153		2	18
				4	12
96906	MS3474L22-55PX	5935-00-491-3740		20	2
96906	MS3474L24-61P	5935-00-763-8249		20	1
96906	MS3475L14-18S	5935-01-116-0868		41	6
96906	MS3475L14-19SW	5935-01-092-3427		35	2
96906	MS3475L14-5S	5935-01-140-1420		36	2
96906	MS3475L16-23S	5935-01-153-7520		41	2
96906	MS3475L18-11S	5935-01-108-3800		42	4
96906	MS3475L20-41P	5935-01-092-3434		21	46
				40	6
96906	MS3475L20-41S	5935-01-035-8813		41	5
96906	MS3475L20-41SY	5935-01-170-5772		37	5
96906	MS3475L22-55P	5935-01-036-0928		36	4
96906	MS3475L22-55PW	5935-01-036-0929		21	45
				40	2
96906	MS3475L22-55SW	5935-01-092-3425		42	2
96906	MS3475L22-55SX	5935-01-089-0661		39	4
96906	MS3475L22-55SY	5935-01-032-4429		37	2

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FSCM	PART NUMBER	PART NUMBER INDEX	
		STOCK NUMBER	FIG. ITEM
96906	MS3475L24-61P	5935-01-071-7666	38 4
96906	MS3475L24-61S	5935-01-092-3426	39 2
96906	MS3475W14-15SY	5935-01-154-7418	37 6
96906	MS3476L12-10S	5935-00-496-7835	20 27
96906	MS3476L22-55SX	5935-00-424-9737	28 19
96906	MS3476L24-61P	5935-00-415-5402	28 1
			28A 1
96906	MS3476L24-61S	5935-00-407-5462	28 20
			28A 19
96906	MS3476W14-19S	5935-01-078-4517	45 2
96906	MS35338-134	5310-00-928-2690	22 14
			23 35
			46 8
			47 8
96906	MS35338-135	5310-00-933-8118	3 22
			4 35
			5 5
			10 30
			11 22
			12 18
			13 14
			14 18
			15 34
			16 17
			17 5
			18 23
			19 33
			20 4
			21 25
			22 5
			23 9
			26 6
			27 8
			29 22
			30 7
			31 11
			28A 27
96906	MS35338-135B	5310-00-224-0746	34 31
			50 36
96906	MS35338-136	5310-00-929-6395	2 11
			3 44
			4 2
			5 12
			9 13
			17 2
			19 41
			20 10
			21 7
			22 22
			23 12
			23 22

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FSCM	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
		STOCK NUMBER			
96906	MS35338-136	5310-00-929-6395		29	8
				49	13
96906	MS35338-136B	5310-00-224-0747		50	31
				50	56
96906	MS35338-137	5310-00-933-8119		2	7
				3	53
				18	7
				19	6
				23	5
				49	8
				2	22
96906	MS35338-138	5310-00-933-8120		3	15
				4	66
				9	2
				21	39
				49	2
				51	18
				48	3
96906	MS35338-138B	5310-00-224-0749		51	29
96906	MS35338-139	5310-00-933-8121		3	32
				52	5
96906	MS35338-139B	5310-00-243-4764		51	14
96906	MS35338-140	5310-00-974-6623		21	28
96906	MS35338-142	5310-00-973-8786		34	5
				50	24
96906	MS35489-4	5325-00-174-5317		2	15
96906	MS35649-244	5310-00-934-9748		4	29
				26	1
				27	13
				29	19
				30	2
				31	6
				28A	23
96906	MS51021-36	5305-00-082-6782		34	22
96906	MS51031-147	5305-01-148-7570		51	26
96906	MS51831-104	5340-01-066-2840		49	5
96906	MS51849-32	5305-01-030-8753		34	54
96906	MS51957-13B	5305-00-494-7333		34	32
96906	MS51957-14B	5305-00-459-4687		50	35
96906	MS51957-27B	5305-00-448-6547		50	47
96906	MS51957-28B	5305-00-448-6500		50	30
				50	55
96906	MS51957-4	5305-00-054-5638		46	7
				47	7
96906	MS51957-45	5305-00-054-6670		2	8
				18	8
				21	3
				48	2
96906	MS51957-63B	5305-00-517-6471		51	17
96906	MS51957-65	5305-00-050-9231		51	17
96906	MS51958-79	5305-00-059-3675		52	6
96906	MS51959-26	5305-00-763-6961		21	57

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		STOCK NUMBER	FIG. ITEM
96906	MS51960-64B	5305-00-415-2205	51 16
96906	MS77068-1	5940-00-682-2477	20 24
96906	MS77068-2	5940-00-827-2653	4 10
96906	MS90311-271	5930-00-931-9710	4 97
96906	MS9068-143	5330-00-019-9481	19 40
96906	MS91528-1T2B	5355-00-421-5109	4 50
96906	MS91528-2E2B	5355-00-958-9982	4 73
96906	MS91528-2L4B	5355-00-043-1986	4 48
96906	MS91531-3N2B	5355-00-614-0400	51 2
81349	M16878/4-22-9		19 27
81349	M16878/4BFE0		28 4
			33 6
81349	M16878/4BFE9		4 16
			22 31
			26 13
			27 16
			28 7
			29 34
			30 16
			31 13
			35 8
			36 8
			37 14
			38 8
			39 7
			40 12
			41 11
			42 8
			43 6
			44 32
			45 5
			28A 7
81349	M16878/4E22-0		45 5
			28A 4
81349	M16878/4E22-1		28A 5
81349	M16878/4E22-2		28A 6
81349	M22759/18-20-9		46 13
			47 14
81349	M22759/18-22-9		46 3
			47 3
			47 15
81349	M23053/5-103-0		4 23
			27 22
			29 40
			33 3
			45 3
			28A 17
81349	M23053/5-105-C		23 61
81349	M23053/5-206-C		23 62
81349	M24308/2-1	5935-00-490-5219	21 55
81349	M24308/2-15	5935-00-521-2702	4 28

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FSCM	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
		STOCK NUMBER			
81349	M24308/2-2	5935-00-490-5220		21	35
81349	M24308/2-4	5935-00-976-5425		4	27
81349	M24308/2-5	5935-00-489-1997		4	26
81349	M24308/25-9	5935-01-179-3497		4	37
				21	36
				33	2
81349	M24308/26-1	5935-01-052-9436		3	24
				5	15
81349	M24308/26-2	5935-01-098-1685		21	51
				22	24
81349	M24308/4-1	5935-00-466-3394		33	1
81349	M24308/4-15	5935-00-501-1665		28	18
				28A	18
81349	M24308/4-2	5935-00-490-3743		22	25
81349	M24308/4-3	5935-00-489-9999		4	38
81349	M24308/4-4	5935-00-410-9252		31	1
81349	M24308/4-5	5935-00-490-8389		27	1
18876	M26877/3-22-902			38	13
18876	M26877/3-22U902			21	41
				37	10
				40	10
				42	12
81349	M28748/7-E00S1A	5935-01-091-9546		19	11
81349	M28748/8E00F1A	5935-01-041-6437		20	26
81349	M28776/1-030P	5945-01-151-7443		12	9
81349	M38510-01602BCB	5962-00-430-2740		11	7
81349	M38510-31401BEB	5962-01-068-1039		10	37
81349	M38510-31509BEB	5962-01-065-7027		15	46
				16	27
81349	M38510-32401BRB	5962-01-093-8823		11	13
81349	M38510-32803BRB	5962-01-110-2679		10	50
				15	62
				16	48
81349	M38510/00104BCB	5962-00-318-2223		15	47
81349	M38510/00801BCB	5962-00-361-8732		10	25
81349	M38510/00803BCB	5962-00-369-9839		10	21
81349	M38510/00903BCB	5962-00-173-9776		16	30
81349	M38510/01004BEB	5962-00-430-2737		12	12
				13	1
81349	M38510/01401BJB	5962-00-324-1456		11	2
				16	19
81349	M38510/05504BEB	5962-01-015-8539		11	12
				16	47
81349	M38510/07005BCB	5962-01-026-6052		10	20
81349	M38510/07009BEB	5962-01-026-2491		10	56
81349	M38510/07101BCB	5962-01-026-8818		15	68
81349	M38510/07201BCB	5962-01-026-8823		10	34
81349	M38510/08101BCB	5962-01-034-2146		15	69
				16	10
81349	M38510/10102BCB	5962-00-007-4079		15	39
81349	M38510/10104BGC	5962-01-010-7808		12	39

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		STOCK NUMBER			
81349	M38510/10304BGC	5962-01-048-7767		10	40
81349	M38510/10403BEB	5962-00-542-9418		15	49
81349	M38510/10901BPB	5962-01-069-3045		10	10
81349	M38510/11001BCB	5962-01-080-6488		16	67
81349	M38510/11107BEC	5962-01-097-3892		10	13
				15	18
				16	20
				44	3
				44	6
81349	M38510/23802BVB	5962-01-181-4286		10	58
81349	M38510/30001BCB	5962-01-031-7030		10	23
				15	16
				16	29
81349	M38510/30003BCB	5962-01-027-6863		10	18
				12	23
				13	12
				14	9
				15	54
				16	33
81349	M38510/30005BCB	5962-01-030-6352		10	33
81349	M38510/30007BCB	5962-01-026-2493		10	59
				15	60
81349	M38510/30102BCB	5962-01-058-1539		16	34
81349	M38510/30501BCB	5962-01-031-1918		10	24
81349	M38510/30602BEB	5962-01-067-3073		15	55
81349	M38510/30605BCB	5962-01-068-9593		15	51
81349	M38510/30701BEB	5962-01-050-0918		10	14
				12	59
				44	22
81349	M38510/30901BEB	5962-01-050-0920		16	28
81349	M38510/30902BEB	5962-01-050-0919		15	12
81349	M38510/31301BCX	5962-01-157-2258		15	53
81349	M38510/31501BCB	5962-01-077-5083		15	48
81349	M38510/31512BEB	5962-01-069-2637		15	15
				16	35
81349	M38510/32403BRB	5962-01-086-7634		10	46
81349	M38510/32601BEB	5962-01-092-6229		13	10
				14	10
81349	M38527/05-001D	5999-01-084-0860		14	2
81349	M38527/05-003D	5999-01-044-5781		12	10
				14	15
81349	M38527/8-22P	5970-01-058-6445		16	50
81349	M38527/9-05S	5970-01-074-6857		22	18
81349	M39003-01-3021	5910-00-236-8745		10	55
				15	61
81349	M39003-01-3088	5910-00-007-2004		44	12
				44	17
81349	M39003/01-2971	5910-00-176-2641		19	26
81349	M39003/01-2979	5910-00-192-7180		13	7
				14	11
				16	65

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		STOCK NUMBER	FIG. ITEM
81349	M39003/01-2991	5910-00-007-3974	44 23
81349	M39003/01-3012	5910-00-010-8157	15 27
81349	M39003/01-3015	5910-00-113-5689	11 16
			16 6
81349	M39003/01-3026	5910-00-144-4383	12 52
81349	M39003/01-3032	5910-00-154-0547	10 35
			12 47
			15 50
81349	M39003/01-3085	5910-00-211-1261	22 11
81349	M39003/03-0366	5910-01-071-5650	44 24
81349	M39006/22-0571	5910-01-119-4302	22 7
81349	M39014-01-1339	5910-00-113-5445	12 65
81349	M39014-01-1566	5910-00-098-9242	16 54
81349	M39014-02-1338	5910-00-010-8718	12 8
81349	M39014/01-1323	5910-00-113-5492	12 46
81349	M39014/01-1329	5910-00-114-0755	10 51
81349	M39014/01-1330	5910-00-096-4644	12 37
81349	M39014/01-1335	5910-00-113-5470	15 7
81349	M39014/01-1336	5910-00-113-5471	12 61
81349	M39014/01-1357	5910-00-010-8666	15 6
81349	M39014/01-1359	5910-00-096-5160	16 45
81349	M39014/01-1575	5910-00-124-0659	15 5
			44 8
81349	M39014/01-1593	5910-00-010-8717	10 1
			11 3
			15 4
			16 2
			44 2
			44 5
			44 21
81349	M39014/02-1332	5910-00-143-0501	12 48
81349	M39014/02-1338	5910-00-010-8718	10 12
			16 8
81349	M39014/02-1350	5910-00-113-5499	12 26
			13 2
			14 7
81349	M39014/02-1354	5910-00-098-9277	12 60
81349	M39014/02-1356	5910-00-113-5286	10 38
			12 55
			15 17
			44 11
			44 16
81349	M39014/02-1360	5910-00-113-5465	15 29
81349	M39014/02-1419	5910-00-010-8721	10 11
			12 32
			15 1
			16 40
81349	M39015/2-002LP	5905-00-137-8746	22 16
81349	M39016/20-054P	5945-01-123-7621	12 15
			14 16
81349	M39016/24-030P	5945-01-115-7256	14 3

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		STOCK NUMBER			
81349	M39024/10-02	5935-00-702-4199		18	10
81349	M39024/10-03	5935-00-762-0312		18	9
81349	M39024/11-01	5935-00-131-9680		34	37
81349	M39029/56-348	5999-01-106-7076		27	24
				27	26
81349	M39029/57-354	5999-00-478-4402		44	26
81349	M39029/58-360	5999-00-473-3551		30	12
				44	30
81349	M45938-4-8	5310-01-081-8534		2	9
81349	M45938/4-10	5310-00-947-4348		2	5
				32	5
81349	M45938/4-11	5310-01-099-7981		32	4
81349	M45938/4-6	5310-01-044-6568		4	102
81349	M47206-22112-090			37	13
				38	9
				39	8
				40	14
				41	12
81349	M47206-22113-902			4	17
				21	44
				27	19
				28	11
				29	39
				30	19
				35	9
				36	11
				37	12
				38	10
				40	15
				41	13
				42	9
81349	M47206-221149025			27	20
				41	15
81349	M47206-22IV2-090			4	18
				21	43
				26	11
				27	18
				28	8
				30	21
				31	15
81349	M47206-22IV2-90			29	38
81349	M47206-22V1-009			4	19
				28	3
				30	20
				37	17
				38	14
				39	10
				40	13
				43	7
81349	M47206-22V1-9			29	37

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FSCM	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM		
		STOCK NUMBER					
81349	M55302/57-B70Y	5935-01-085-6517		10	27		
				11	17		
				12	16		
				13	8		
				14	14		
				15	32		
				16	14		
			81349	M55302/58-D70Y	5935-01-043-7773	17	8
			81349	M55302/58A66Y	5935-01-058-6508	20	6
						20	14
			81349	M6106/27-018U	5945-01-212-0643	23	17
			81349	M6106/28-018U	5945-01-216-8691	23	16
			81349	M7793/5-001	6645-00-255-1370	4	87
			81349	M81822/3-B28-0	6145-01-103-7275	17	18
			81349	M8340102H1001JB	5905-01-123-7832	11	15
			81349	M8340102M1001JA	5905-01-035-8165	13	17
81349	M8340102M2001JB	5905-01-051-1743	11	1			
81349	M8340102M3001JB	5905-01-027-5604	10	19			
81349	M8340105K1001FG	5905-01-205-7354	12	14			
81349	M8340105M2001JC	5905-01-087-9333	12	27			
			13	6			
			14	12			
			15	64			
81349	M8340105M3900JC	5905-01-178-9015	12	28			
81349	M83421/01-5149R	5910-01-121-0375	23	14			
81349	M83461/1-141	5330-01-115-2216	50	54			
81349	M83519/1-1	5940-01-135-7076	4	24			
			28	13			
			28A	13			
81349	M83519/1-2	5940-01-136-2440	33	4			
			49	22			
81349	M83723/75R2255N	5935-00-468-2838	21	47			
			40	4			
81349	M83723/75R22556	5935-00-153-6239	28	29			
			38	2			
			28A	34			
81349	M83734/10-015	5935-01-113-0585	10	54			
81349	M83734/8-015	5935-01-102-0336	10	2			
			15	9			
81349	M85049/52-1-14W	5935-01-163-3224	46	5			
			47	5			
81349	M85049/52-1-18W	5935-01-177-9556	46	2			
			47	2			
80205	NAS1033A06	5310-00-810-8060	19	19			
80205	NAS1102-04-8	5305-00-823-5806	21	52			
80205	NAS1291C04M	5310-00-845-2359	29	14			
80205	NAS1291C08M	5310-00-845-5030	2	13			
80205	NAS1291C3M	5310-00-894-3638	3	37			
80205	NAS1352C08-16	5305-00-604-0340	19	5			
80205	NAS1515M04	5970-00-034-6842	5	9			
80205	NAS1635-02-4	5305-00-240-7149	23	19			

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		STOCK NUMBER	FIG. ITEM
80205	NAS1635-02-5	5305-00-459-1160	23 43
80205	NAS1635-02-8	5305-00-218-5447	22 12
80205	NAS1635-04-10	5305-01-020-0176	29 12
80205	NAS1635-04-12	5305-00-240-7151	5 6
80205	NAS1635-04-14	5305-00-459-1165	4 85
			17 4
80205	NAS1635-04-24	5305-00-460-3411	4 94
80205	NAS1635-04-4	5305-00-116-1811	20 25
80205	NAS1635-04-5	5305-00-241-1076	4 86
			29 26
80205	NAS1635-04-6	5305-00-498-1261	4 77
			5 17
			10 31
			11 23
			12 17
			13 13
			14 17
			15 33
			16 18
			18 22
			19 32
			20 7
			21 26
			22 3
			23 26
			27 15
			29 20
			30 15
			28A 30
80205	NAS1635-04-7	5305-00-236-1782	4 34
			23 10
			26 5
			27 7
			29 21
			30 6
			31 10
			28A 25
80205	NAS1635-04-8	5305-00-197-8987	3 21
			17 16
80205	NAS1635-06-10	5305-00-114-8859	49 12
80205	NAS1635-06-12	5305-01-029-8873	2 12
			49 10
80205	NAS1635-06-12P	5305-00-458-2829	4 41
80205	NAS1635-06-3	5305-01-045-9544	20 9
80205	NAS1635-06-4	5305-01-020-0177	4 44
			5 11
			20 18
			21 49
			23 13
			23 21
80205	NAS1635-06-6	5305-00-458-2832	3 43

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FSCM	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
80205	NAS1635-06-6	5305-00-458-2832	4	7
			9	14
			19	2
			21	14
80205	NAS1635-06-7	5305-00-197-8890	22	27
	80205	NAS1635-06-8	17	3
80205	NAS1635-08-10	5305-00-403-3465	4	11
			21	5
			22	17
			3	18
80205	NAS1635-08-14	5305-01-029-8874	19	24
80205	NAS1635-08-6	5305-01-015-0994	2	17
80205	NAS1635-3-10	5305-01-030-2255	23	4
			49	9
			3	17
			4	92
80205	NAS1635-3-10P	5305-00-182-9492	49	1
80205	NAS1635-3-12	5305-00-403-3463	4	71
80205	NAS1635-3-7	5305-00-460-0673	9	1
80205	NAS1635-3-8	5305-00-480-8898	4	65
80205	NAS1635-4-18	5305-01-211-1449	2	21
			3	14
			9	9
			23	25
			3	33
			17	17
			4	9
			23	38
			5	14
			21	53
80205	NAS1786-06-16	5340-01-160-4679	22	26
80205	NAS1786-06-18	5340-01-169-5697	17	9
80205	NAS1786C04-18	5340-01-126-4951	4	9
80205	NAS1786C06-11	5340-01-079-1774	23	38
80205	NAS1786C06-8	5340-01-096-7217	5	14
80205	NAS43DD0-28	5365-00-684-5983	21	53
80205	NAS43DD3-18	5365-00-580-3563	22	26
80205	NAS620C10	5310-00-989-0640	17	9
80205	NAS620C10L	5310-00-781-9483	3	38
			4	67
			49	3
			2	23
			3	16
			4	72
			9	3
			21	40
			23	24
			22	13
80205	NAS620C2	5310-00-043-4708	4	93
80205	NAS620C3	5310-00-764-3919	23	20
80205	NAS620C3L	5310-00-970-4841	4	78
80205	NAS620C4	5310-00-057-0573	19	34
80205	NAS620C4L	5310-00-723-9676	20	8
			22	4
			34	30
			3	23
			4	36
			4	36

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FSCM	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
80205	NAS620C4L	5310-00-723-9676	5	4
			16	51
			17	6
			18	24
			20	5
			21	24
			23	2
			26	7
			27	9
			29	13
			30	8
			31	12
			28A	28
80205	NAS620C416	5310-00-952-0309	52	4
80205	NAS620C6	5310-00-773-7624	4	8
			19	3
			22	20
80205	NAS620C6L	5310-00-054-0041	2	10
			3	45
			4	43
			5	13
			9	12
			17	1
			20	11
			21	4
			23	11
			23	23
			29	7
80205	NAS620C8	5310-00-069-5291	3	19
			18	6
			19	25
			49	7
80205	NAS620C8L	5310-00-880-5975	2	6
			21	2
			23	6
80205	NAS671C10	5310-00-812-4292	21	31
			49	20
80205	NAS671C2	5310-00-812-4294	22	15
			23	34
80205	NAS671C4	5310-00-208-3786	3	28
			4	89
			5	10
			10	28
			11	20
			12	20
			13	16
			14	20
			15	36
			16	15
			17	7
			20	3

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FSCM	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
		STOCK NUMBER			
80205	NAS671C4	5310-00-208-3786		21	16
				22	6
				23	1
80205	NAS671C6	5310-00-616-8660		3	51
				4	1
				21	6
				22	21
				29	9
				49	15
80205	NAS671C8	5310-00-837-1381		3	52
				23	8
81348	QQ-B-575			36	9
81348	QQ-B-575 36AWG			35	6
				37	15
				38	15
				39	11
				40	16
				41	10
				42	7
				43	8
				45	4
				25	6
		81348	QQW343PYPES22AWG		
81348	QQW343S24S1B			15	71
81348	QQW343S32S1T			8	8
81348	QQW343TYPES22AWG			24	5
81348	QQW343TYS22AWG			44	31
81349	RBR56L10001BR	5905-00-462-4891		12	35
81349	RBR56L20001BR	5905-00-462-4995		12	7
81349	RBR56L22600BR	5905-00-402-1011		12	63
81349	RBR56L38301BR	5905-00-400-9747		12	62
81349	RCR05G681JS	5905-00-180-8315		10	16
81349	RCR07G102JS	5905-00-110-7620		10	43
				11	6
				15	21
				16	31
				12	34
				16	44
				15	38
				12	33
				15	13
				16	38
81349	RCR07G103JS	5905-00-106-3666		15	66
81349	RCR07G104JS	5905-00-110-0388		16	7
81349	RCR07G105JS	5905-00-116-8554		10	5
81349	RCR07G114JS	5905-00-435-6414		11	26
81349	RCR07G121JS	5905-00-119-8812		10	41
81349	RCR07G122JS	5905-00-131-1255		15	22
81349	RCR07G122JS	5905-00-131-1255		44	13
81349	RCR07G152JS	5905-00-106-1356		44	18
81349	RCR07G161JS	5905-00-111-1686		11	18
81349	RCR07G162JS	5905-00-106-1248		11	18

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		STOCK NUMBER	FIG. ITEM
81349	RCR07G162JS	5905-00-106-1248	16 11
81349	RCR07G186JS	5905-00-484-0266	12 43
81349	RCR07G200JS	5905-00-135-3972	10 26
81349	RCR07G201JS	5905-00-111-4845	16 22
81349	RCR07G202JS	5905-00-114-0708	10 39
			11 4
			12 45
			15 23
			16 5
81349	RCR07G203JS	5905-00-106-9356	11 27
			16 42
81349	RCR07G204JS	5905-00-136-7103	10 36
			16 36
81349	RCR07G221JS	5905-00-135-3973	15 20
81349	RCR07G222JS	5905-00-105-7764	10 9
81349	RCR07G243JS	5905-00-141-1295	15 43
81349	RCR07G244JS	5905-00-485-4648	12 56
81349	RCR07G272JS	5905-00-111-4727	10 7
81349	RCR07G273JS	5905-00-119-3504	25 4
81349	RCR07G302JS	5905-00-131-9729	12 21
81349	RCR07G333JS	5905-00-118-4559	16 68
81349	RCR07G391JS	5905-00-121-9932	11 25
			12 6
81349	RCR07G392JS	5905-00-141-0743	12 50
81349	RCR07G393JS	5905-00-115-8055	10 17
81349	RCR07G395JS	5905-00-118-4560	12 42
81349	RCR07G433JS	5905-00-122-0004	16 43
81349	RCR07G470JS	5905-00-104-8368	16 59
81349	RCR07G471JS	5905-00-120-9154	44 7
81349	RCR07G474JS	5905-00-105-7767	12 64
81349	RCR07G510JS	5905-00-106-1249	16 21
81349	RCR07G512JS	5905-00-111-1679	12 36
			16 41
81349	RCR07G513JS	5905-00-136-3890	10 6
81349	RCR07G562JS	5905-00-141-0744	16 13
81349	RCR07G681JS	5905-00-135-6046	16 12
81349	RCR07G752JS	5905-00-141-1132	10 32
81349	RCR07G821JS	5905-00-119-8768	10 42
			15 26
81349	RCR07G823JS	5905-00-435-6374	15 10
81349	RCR20G103JS	5905-00-141-0591	21 63
81349	RCR20G2R7JS	5905-00-111-4852	19 28
81349	RCR20G821JS	5905-00-116-8569	25 2
81349	RCR32G102JS	5905-00-121-9861	16 32
81349	RCR32G103JS	5905-00-106-9346	24 1
			25 1
81349	RCR32G682JS	5905-00-244-7911	25 3
81349	RER40FR499R	5905-01-170-7730	23 56
81349	RER40F12R7R	5905-01-170-5743	23 55
81349	RER40F24R9R	5905-00-352-8758	23 58
81349	RER45F2100R	5905-01-170-5745	23 57

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		STOCK NUMBER	FIG. ITEM
81349	RER45F6R34R	5905-01-170-5669	23 53
81349	RER45F8R45R	5905-01-170-7729	23 54
81349	RER50F1R50R	5905-00-317-8761	23 59
81349	RER50F11R3R	5905-01-171-5620	23 50
81349	RER50F12R7R	5905-00-509-3821	23 48
81349	RER50F13R3R	5905-01-045-4784	23 47
81349	RER50F15R0R	5905-00-140-6967	23 44
81349	RER50F25R5R	5905-01-170-5742	23 51
81349	RER50F8R06R	5905-00-767-1674	23 41
81349	RER55F18R7R	5905-01-170-5741	23 52
81349	RER55F2210R	5905-01-170-5740	23 46
81349	RER55F6R34R	5905-01-117-6196	23 49
81349	RER55F6650R	5905-01-170-5744	23 45
81349	RER60FR499R	5905-00-250-1558	23 56
81349	RER70F61R9R	5905-00-476-7856	22 2
81349	RJR26FP102P	5905-01-047-2251	44 9
81349	RJR26FW103P	5905-01-047-5172	15 11
81349	RJR26FW253P	5905-01-073-2507	12 41
81349	RJR26FX101P	5905-01-100-8228	16 26
81349	RJR26FX203P	5905-01-079-4609	10 44
81349	RNC55H61R9FS	5905-00-153-4587	15 25
81349	RNC60H1001FS	5905-00-197-4289	8 2
			15 42
81349	RNC60H1002FS	5905-00-138-1283	8 5
			16 56
81349	RNC60H1003FS	5905-00-407-2160	16 61
81349	RNC60H1500FS	5905-00-004-7650	22 10
81349	RNC60H2003FS	5905-00-479-9951	16 62
81349	RNC60H2051FS	5905-00-402-1384	8 4
81349	RNC60H2870FS	5905-00-403-4472	22 29
81349	RNC60H3011FS	5905-00-402-9229	8 3
81349	RNC60H3241FS	5905-00-489-2240	16 60
81349	RNC60H3832FS	5905-00-432-0464	15 40
81349	RNC60H4992FS	5905-00-405-8355	16 57
81349	RNC60H5111FS	5905-00-403-3156	8 6
81349	RNC60H5490FS	5905-00-873-2996	22 9
81349	RNC60H5620FS	5905-00-256-5066	22 28
81349	RNC60H82R5FS	5905-00-412-0820	15 28
81349	RNC65H1002FS	5905-00-401-7444	15 52
81349	RNC65H2052FS	5905-00-048-7135	15 37
81349	RNC65H2370FS	5905-00-169-9454	15 31
81349	RNC65H2371FS	5905-00-147-9841	15 30
81349	RNC65H5621FS	5905-00-482-0791	15 41
81349	RV2SAYS103A	5905-00-434-0466	4 82
81349	RV2SAYS252A	5905-00-881-7810	4 83
81349	RV4NAYS253A	5905-00-539-1559	4 76
81349	RV4NAYS500A	5905-00-581-1860	4 80
81349	RWR80N18R2FS	5905-01-170-5739	24 2
81349	RWR80N69R8FS		24 3
81349	RWR80S5R11FS		16 58
81349	RWR80S90R9FS	5905-01-160-0026	15 65

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		STOCK NUMBER	FIG. ITEM
81349	RWR81S10R0FR	5905-00-974-6796	15 45
80063	SM-C-772445		46 4
80063	SM-C-772455		47 4
80063	SM-C-773451-7		34 28
80063	SM-C-773541-5	5935-01-052-7239	34 38
80063	SM-C-773929-8	5305-01-160-0771	50 45
80063	SM-C-804917	5305-01-063-1549	34 4
			50 25
80063	SM-C-805075		50 14
80063	SM-C-805076		50 12
80063	SM-C-805077		50 16
80063	SM-C-805079		50 6
80063	SM-C-805081		50 4
80063	SM-C-805082	5305-01-063-1399	50 11
80063	SM-C-805085		50 9
80063	SM-C-805138		50 2
80063	SM-C-805189	1240-01-063-1398	50 13
80063	SM-C-805408	4931-01-063-6129	34 23
80063	SM-C-805429		34 33
80063	SM-C-805770	4931-01-064-1373	50 28
80063	SM-C-805776		50 48
80063	SM-C-805777		50 50
80063	SM-C-805780		50 34
80063	SM-C-805826		51 11
80063	SM-C-805850	5855-01-083-0593	34 12
80063	SM-C-805950-1	5365-00-103-9727	34 18
			34 27
			50 20
			50 43
80063	SM-C-805957-1	5305-01-054-2776	34 17
			34 26
			50 19
			50 42
80063	SM-C-805970-1	5330-01-069-1563	50 8
80063	SM-C-806038-1	5999-00-065-1833	46 12
			47 12
80063	SM-C-806043-1	5305-01-063-1555	50 3
80063	SM-C-806066-1	4931-01-063-6167	46 11
80063	SM-C-807124		50 53
80063	SM-C-807125		34 21
80063	SM-C-807161	5120-01-068-3719	34 11
80063	SM-C-807164		52 1
80063	SM-C-807165		52 2
80063	SM-C-807166		52 3
80063	SM-C-807183	5120-01-064-1379	34 14
80063	SM-C-807191		50 38
80063	SM-C-807241		46 14
			47 16
80063	SM-C-807242		46 6
			47 6
80063	SM-C-807249-1		46 15

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FSCM	PART NUMBER	PART NUMBER INDEX	
		STOCK NUMBER	FIG. ITEM
80063	SM-C-807249-2		47 17
80063	SM-C-808392		50 21
80063	SM-D-805074-2		50 10
80063	SM-D-805078		50 5
80063	SM-D-805083		50 7
80063	SM-D-805127		34 25
80063	SM-D-805163	1240-01-063-6180	50 15
80063	SM-D-805180	1240-01-063-1588	50 1
80063	SM-D-805190	1240-01-063-1397	50 17
80063	SM-D-805691	5855-01-077-4523	1 3
80063	SM-D-805768	4931-01-063-6137	34 13
80063	SM-D-805769	4931-01-064-1372	50 27
80063	SM-D-805773	4931-01-063-6164	50 26
80063	SM-D-805774		50 29
80063	SM-D-805775		50 40
80063	SM-D-805778		50 49
80063	SM-D-805779	4931-01-063-6165	50 39
80063	SM-D-805806	4931-01-063-6132	1 4
80063	SM-D-805807		51 20
80063	SM-D-805808		51 27
80063	SM-D-805809		51 31
80063	SM-D-805813		51 9
80063	SM-D-805819		51 32
80063	SM-D-805825		51 10
80063	SM-D-805834		51 12
80063	SM-D-805839		50 52
80063	SM-D-805840		50 18
80063	SM-D-805853	5855-01-082-3693	34 15
80063	SM-D-807163	4931-01-063-6133	1 5
80063	SM-D-807173	6650-01-129-6087	34 24
80063	SM-D-807239	4931-01-063-6173	47 11
80063	SM-D-807245	5940-01-068-6817	47 19
01295	SNC54125J-00	5962-00-336-7468	11 11
28875	WS2107F-1110	4140-00-442-3490	49 16
71468	030-2235-002	5999-01-030-7135	17 11
			17 13
19200	11732633	5961-01-028-7047	16 54
19200	11732676-2	5940-00-038-7483	4 60
			20 12
			21 54
			23 36
19200	12271750	1240-01-074-8969	21 1
19200	12271813	5960-01-074-8964	19 9
19200	12271817	1240-01-074-9026	19 38
19200	12271832	1240-01-074-8970	19 35
19200	12272041	5962-01-100-8193	15 24
			16 25
			44 14
			44 19
19200	12272055	5962-01-102-9453	15 19
19200	12272072	5962-01-100-8195	15 67

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FSCM	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
19200	12272072	5962-01-100-8195	16	9
19200	12272081	5962-01-105-4029	15	44
19200	12272103	5961-01-101-7050	4	88
19200	12272133	5340-01-100-8184	4	59
			20	13
			23	37
19200	12272134	5940-01-101-7031	21	54
19200	12272297	1015-01-146-1390	19	37
19200	12272535	1240-01-162-0368	3	30
19200	12272555	1240-01-162-0367	21	1
19200	12273413		28	12
			37	16
			38	12
			39	9
			28A	12
19207	12301877	4931-01-119-5763	35	5
			41	1
			42	5
			43	1
19207	12301880	4931-01-134-6738	35	1
			36	7
			37	7
			41	7
			45	1
19207	12301881	4931-01-119-5765	37	4
			40	5
			41	4
19207	12301882	4931-01-119-5754	36	5
			37	1
			38	1
			39	5
			40	1
			41	9
			42	1
			43	5
19207	12301907	4931-01-119-5753	36	1
			37	9
			38	5
			39	1
			40	8
19200	12303101	4931-01-200-4160	10	52
19200	12303102	5962-01-138-4672	10	57
19200	12303104	4931-01-138-3876	11	14
			12	57
			13	9
			14	13
			15	63
			16	69
19200	12303106		2	2
19200	12303107		34	10
19200	12303108	5999-01-138-4583	4	30

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FSCM	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM			
		STOCK NUMBER						
19200	12303108	5999-01-138-4583		21	18			
				23	32			
				26	2			
				27	12			
				28	22			
				29	18			
				30	1			
				31	5			
				28A	22			
			19200	12303109	5935-01-138-4677		4	31
							17	14
	21	17						
	23	33						
	26	15						
	27	11						
	28	23						
	29	17						
	30	14						
	31	4						
	28A	21						
19207	12303110	5961-01-140-2297		11	24			
19200	12303113			23	42			
19200	12303116	9905-01-203-8030		26	8			
19200	12303120			23	39			
19200	12303121	6110-01-185-9091		4	56			
19200	12303122	4931-01-137-5178		23	40			
19200	12303123	5962-01-140-2281		12	58			
19200	12303124	5940-01-138-7082		23	3			
19200	12303125			24	4			
				25	5			
19200	12303130	5962-01-140-2280		10	4			
				12	13			
				13	11			
				14	8			
				11	5			
19200	12303131	5962-01-140-2273		12	29			
19200	12303132	4931-01-163-1327		3	49			
				4	15			
				21	56			
				29	5			
				2	19			
19200	12303133	4931-01-193-4740		4	14			
19200	12303134	5970-01-169-0495		22	19			
19200	12303135	6240-01-163-1364		4	45			
19200	12303137	4931-01-169-6862		4	96			
19200	12303140	5961-01-140-2296		12	25			
19200	12303142	5962-01-140-2272		12	49			
19200	12303143	5962-01-140-2284		15	2			
19200	12303146	5962-01-140-2295		16	24			
19200	12303149	5962-01-140-2275		16	1			
19200	12303151			10	62			

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FSCM	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
		STOCK NUMBER			
19200	12303153	5962-01-144-5047		15	56
				16	4
19200	12303154	5962-01-140-2279		10	61
19200	12303156	5962-01-140-2278		10	60
19200	12303158			34	36
19207	12303160	5999-01-138-7199		34	34
19207	12303161	5962-01-140-2294		12	38
19200	12303165	6130-01-144-2799		12	53
19200	12303166	6130-01-144-7830		12	51
19200	12303167	5962-01-140-2274		16	39
19200	12303170	5962-01-140-2277		10	53
19200	12303172	5962-01-140-2276		10	22
19207	12303176	4931-01-148-4731		10	49
				11	10
				12	44
				13	5
				14	1
				15	59
				16	53
19200	12303180	5962-01-139-2909		14	6
19200	12303183	6110-01-142-0633		22	23
19200	12303185	6110-01-142-0632		22	1
19200	12303195	5935-01-140-2269		44	28
19200	12303213	5305-01-176-1973		20	19
19200	12303222	5962-01-140-2270		10	45
				12	22
19207	12303225	5961-01-161-8866		16	66
19200	12303227			16	70
19200	12303228	5905-01-140-2282		12	1
19200	12303229-1			7	12
19200	12303229-10			7	11
19200	12303229-11			7	9
19200	12303229-12			7	7
19200	12303229-13			6	1
19200	12303229-14			6	2
19200	12303229-15			6	11
19200	12303229-16			6	4
19200	12303229-17			6	10
19200	12303229-18			6	7
19200	12303229-19			6	9
19200	12303229-2			7	10
19200	12303229-20			6	8
19200	12303229-21			6	3
19200	12303229-3			7	6
19200	12303229-4			7	13
19200	12303229-5			7	3
19200	12303229-6			7	5
19200	12303229-7			7	1
19200	12303229-8			7	2
19200	12303229-9			7	4
19200	12303230	4931-01-138-3875		34	51

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FSCM	PART NUMBER	PART NUMBER INDEX	
		STOCK NUMBER	FIG. ITEM
19207	12303233	5910-01-140-2255	12 2
19200	12303234	5910-01-140-2256	12 3
19200	12303236		22 30
19207	12303242	5935-01-140-2293	4 32
			26 3
			27 14
			28 25
			29 16
			30 3
			31 7
			28A 29
19200	12303243	5935-01-142-0643	21 15
			23 31
			30 13
19200	12303246	4931-01-138-7167	48 8
19200	12303247		48 10
19200	12303248		48 9
19200	12303249	4931-01-138-7038	48 19
19200	12303250	4931-01-146-6498	48 22
19200	12303251		48 20
19200	12303252	6760-01-138-3952	48 11
19200	12303253	6760-01-138-3953	48 15
19200	12303254	5305-01-144-1449	48 14
19200	12303255		17 10
19200	12303256		17 12
19200	12303257	5935-01-140-2268	4 25
19207	12303258	5935-01-157-3063	4 75
19207	12303259	5935-01-142-0638	34 35
19200	12303261		18 5
19207	12303266-4	5310-01-139-5005	32 1
19200	12303271-2	5962-01-138-4673	15 14
19200	12303286		15 70
19200	12303287	5940-01-139-2910	23 15
19200	12303289	5940-01-142-0635	20 16
19200	12303291	6150-01-138-3942	49 18
19200	12303292	4931-01-138-7089	49 17
19200	12303294	5930-01-138-3935	49 23
19200	12303295	5999-01-139-2917	4 39
19207	12303296	5930-01-139-2912	4 54
19200	12303298	5930-01-139-2911	4 55
19200	12303299	4931-01-137-5135	19 4
19200	12303301	5999-01-138-3970	4 74
19200	12303302	5999-01-138-3971	4 61
19200	12303303	5999-01-138-3972	4 58
19200	12303304	6210-01-140-2285	4 64
19207	12303305	5999-01-138-3969	4 63
19200	12303306	5999-01-138-3968	4 62
19200	12303311	5905-01-144-7850	4 98
19207	12303312	5905-01-139-2920	4 99
19200	12303314	4931-01-161-3557	12 40
19200	12303315		11 29

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FSCM	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
19200	12303316	9905-01-169-6892	27	2
			28	2
			29	3
			30	9
			31	2
			28A	2
19200	12303317	4931-01-203-7461	27	6
			29	23
			28B	25
19200	12303318	4931-01-203-7460	26	4
			29	25
			30	5
			31	9
19200	12303319	5940-01-144-2798	21	59
			29	27
19200	12303320	5975-01-161-3584	3	54
19200	12303321	4931-01-137-4893	49	11
19200	12303324	4931-01-138-7027	4	40
19200	12303325	4931-01-138-7028	4	69
19200	12303327	5962-01-203-7479	10	3
			15	8
19200	12303328		5	8
19200	12303329	5915-01-203-7474	4	79
19200	12303344	5935-01-142-0642	27	10
			28	21
			29	24
			28A	20
19200	12303348		5	2
19200	12303349		5	1
19200	12303350	6110-01-211-8389	4	57
19200	12303354	4931-01-203-7475	34	48
19200	12303357	5340-01-139-2919	4	52
19200	12303358	5355-01-139-2913	4	91
19200	12303360	5999-01-146-6247	18	21
19207	12303361	4931-01-158-0230	18	20
19200	12303362	5340-01-152-0342	18	19
19200	12303363		9	7
19200	12303363-1		9	6
19200	12303363-2		9	8
19200	12303364		9	5
19200	12303365	4931-01-206-6233	13	18
19200	12303370	4931-01-136-7385	4	5
19200	12303371	4931-01-136-7261	4	4
19200	12303374	4931-01-138-6927	2	16
19200	12303375	4931-01-146-6246	5	7
19200	12303376	4931-01-137-4892	34	8
19200	12303377	4931-01-138-3877	34	9
19200	12303378		49	4
19200	12303379		49	6
19200	12303380		49	25
19200	12303381		49	26

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FSCM	PART NUMBER	PART NUMBER INDEX	
		STOCK NUMBER	FIG. ITEM
19200	12303382		9 11
19200	12303386	4931-01-203-7469	3 57
19200	12303387	4931-01-203-7470	3 56
19200	12303388	4931-01-140-2290	9 17
19200	12303390	5962-01-140-2271	12 54
			16 46
19200	12303391	4931-01-140-2289	9 21
19200	12303397	4931-01-137-5174	9 22
19200	12303400	4931-01-136-7260	4 68
19200	12303402		3 36
19200	12303403	4931-01-203-7471	3 41
19200	12303405	6150-01-137-5156	3 35
19200	12303410		4 101
19200	12303410-1		4 103
19200	12303411	4931-01-138-7030	19 8
19200	12303412	4931-01-140-2254	4 42
19200	12303413	4931-01-140-2253	4 70
19200	12303414	4931-01-203-7472	3 59
19200	12303415		3 34
19200	12303416		19 15
19200	12303417		20 20
19200	12303417-1		20 22
19200	12303418		19 29
19200	12303419		19 1
19200	12303420	5340-01-146-7688	19 31
19200	12303422	4931-01-138-7197	4 100
19200	12303423		5 3
19200	12303424		1 2
19200	12303425	4931-01-137-4977	34 39
19200	12303426	4931-01-137-5161	34 40
19200	12303427	4931-01-137-5162	34 41
19200	12303428	4931-01-137-5163	34 42
19200	12303429	4931-01-137-5164	34 43
19200	12303430	4931-01-137-5165	34 44
19200	12303431	4931-01-137-5166	34 45
19200	12303432	4931-01-137-5167	34 46
19200	12303433	4931-01-137-4978	34 47
19200	12303436	4931-01-140-2283	4 51
19200	12303437		4 104
19200	12303438		17 15
19200	12303439		2 20
19200	12303440		3 46
19200	12303441		9 15
19200	12303442	5940-01-144-8042	9 10
19200	12303443		18 1
19200	12303443-1		18 2
19200	12303444		18 14
19200	12303444-1		18 17
19200	12303445		18 12
19200	12303446	4931-01-137-4980	34 49
19200	12303447	4931-01-137-5168	34 50

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		STOCK NUMBER	FIG. ITEM
19207	12303448	4931-01-140-2286	9 16
19207	12303450	5935-01-154-0728	3 13
19207	12303451	5935-01-153-9189	3 3
19207	12303452	5935-01-153-9190	3 10
19207	12303453	5935-01-154-0729	3 6
19207	12303454	5935-01-154-0730	3 2
19207	12303455		3 4
19207	12303456	5935-01-154-0731	3 7
19207	12303457	5935-01-154-0732	3 12
19200	12303458	5935-01-138-7216	3 11
19207	12303459	5935-01-154-0733	3 5
19200	12303462	4931-01-203-7473	3 58
19200	12303463	4931-01-203-7468	3 60
19200	12303464		3 1
19200	12303474	5340-01-154-8287	23 7
19200	12303479		6 1
			7 1
19200	12303480-2		6 5
19200	12303481		8 7
19200	12303484		4 101
19200	12303484-1		4 103
19200	12303487	4931-01-138-7029	19 36
19200	12303489		48 13
19200	12303490		48 1
19200	12303492		48 18
19200	12303493		48 21
19200	12303494		48 23
19200	12303495		48 12
19200	12303496	4931-01-136-7257	2 3
19200	12303497		48 6
19200	12303500		48 16
19200	12303507	4931-01-140-2287	9 19
19200	12303508		13 19
19200	12303510	4931-01-140-2288	9 18
19200	12303512		12 24
19200	12303513		3 61
19200	12303514	5999-01-138-4020	9 4
19200	12303517		21 30
19200	12303518		21 60
19200	12303520		23 27
19200	12303520-1		23 28
19200	12303522	4931-01-140-2292	21 37
19200	12303523	5935-01-142-0641	20 15
19200	12303523-1		20 17
19200	12303524		19 7
19207	12303525		10 48
			11 8
			12 5
			13 3
			14 5
			15 57

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FSCM	PART NUMBER	PART NUMBER INDEX	
		STOCK NUMBER	FIG. ITEM
19207	12303525		16 49
19200	12303526		21 9
19200	12303526-1		21 12
19200	12303527	4931-01-140-2252	4 6
19200	12303528	4931-01-140-2291	9 20
19200	12303530		14 21
19200	12303531	4931-01-130-5695	1 1
19200	12303535		21 20
19200	12303535-1		21 21
19200	12303536-1	5340-01-156-9479	3 40
19207	12303536-2	5340-01-158-2083	3 39
19200	12303537		29 28
19200	12303537-1		29 31
19200	12303538		3 25
19200	12303539		4 84
19200	12303541	5811-01-142-3435	34 7
19200	12303543		21 50
19200	12303544		21 48
19200	12303549		4 33
			26 14
			27 5
			28 24
			29 15
			30 4
			31 8
			28A 24
			2 1
19200	12303550		44 1
19200	12303551	4931-01-138-7200	44 4
19200	12303552	4931-01-138-7201	44 10
19200	12303553	4931-01-138-7202	44 15
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00779	830611		19	14
00779	859331-2		19	10
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ii

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FO-2 title is incorrect. It should be "DC Amplifier schematic Diagram"

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TEAR A1

PERFORATED LINE

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
 1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
 1 Kilogram = 1000 Grams = 2.2 Lb.
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
 1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
 1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

TEMPERATURE

$\frac{5}{9}(\text{°F} - 32) = \text{°C}$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $\frac{5}{9} \text{°C} + 32 = \text{°F}$

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621

