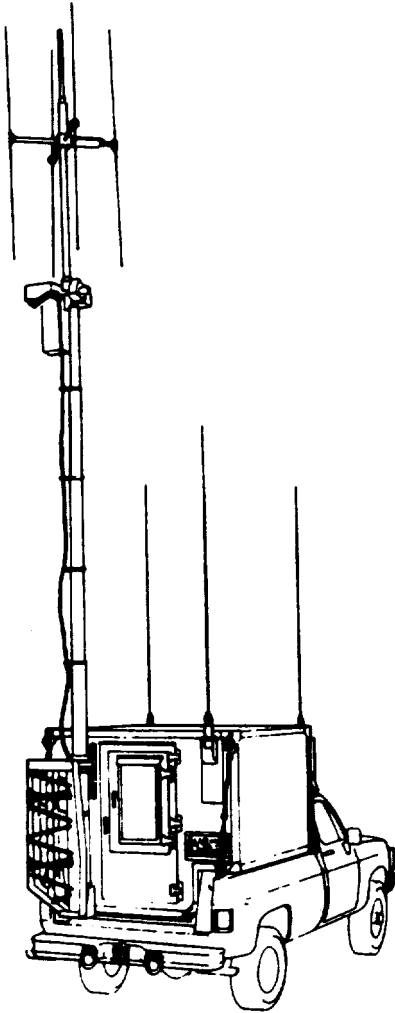


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TM 32-5895-070-24&P



ORGANIZATIONAL,
DIRECT SUPPORT,
AND GENERAL
SUPPORT MAIN-
TENANCE MANUAL
INCLUDING
REPAIR PARTS
AND SPECIAL
TOOLS LIST

RADIO RECEIVING SET
AN/TRQ-32(v)

INCLUDING

AN/TRQ-32(V)1 (NSN 5895-01-167-7655)

AN/TRQ-32(V)2 (NSN 5895-01-167-7656)

HEADQUARTERS, DEPARTMENT OF THE ARMY

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13 NOVEMBER 1987

**CHANGE
NO. 1**

**HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C. 3 August 1989**

**ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT
MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL
TOOLS**

TM 32-5895-070-24&P, 13 Nov 1987, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. New or changed material is indicated by a vertical bar in the margin of the page.
3. Added or revised illustrations are indicated by a vertical bar in the margin of the page or a pointing hand in the illustration.

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

By Order of the Secretary of the Army:

CARL E. VUONO
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Chief of Staff

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LIST OF EFFECTIVE PAGES

NOTE: The portion of the text affected by the change is indicated by a vertical line in the outer margin of the page. Changes to illustrations are indicated by miniature pointing hands or a vertical line in the outer margin of the page. Changes to wiring diagrams are indicated by shaded areas.

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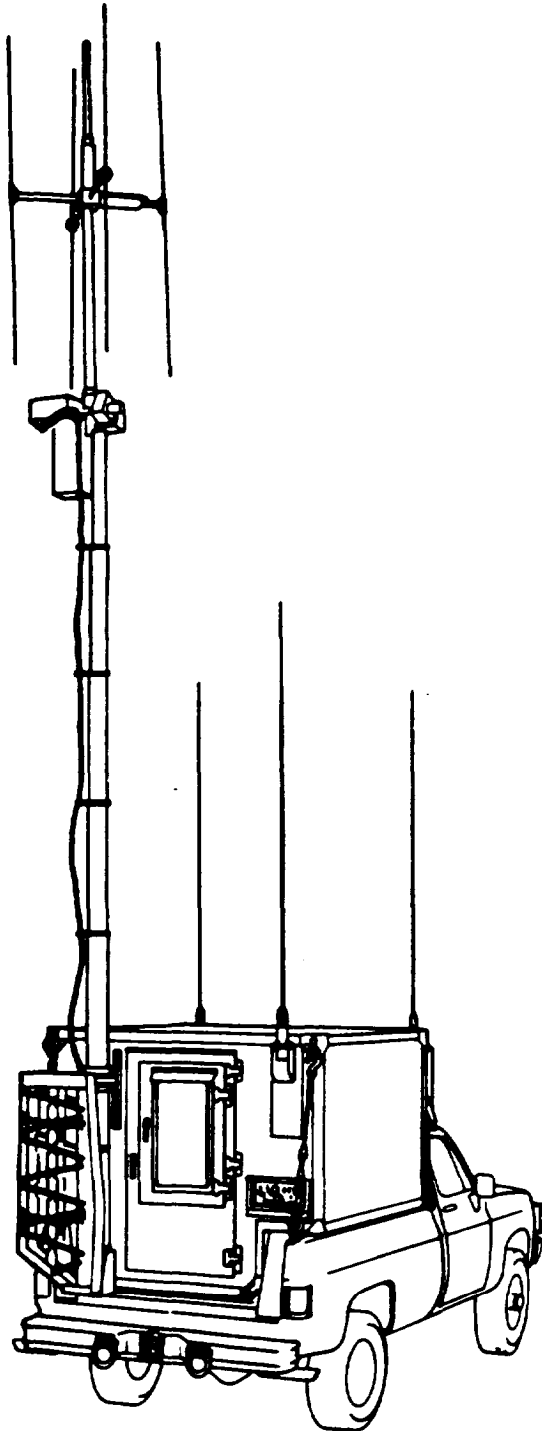
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* Zero in this column indicates an original page.

DEPLOYED OPERATION WITH LONG RANGE ANTENNAS

WARNING



NEVER ERECT THESE LONG RANGE ANTENNAS DIRECTLY UNDER POWERLINES

If you must erect these long range antennas near powerlines, powerline poles or towers, or buildings with overhead powerline connections, never put the antenna closer than two times the antenna height from the base of the powerline, pole, tower or buildings.

NEVER ATTEMPT TO ERECT ANY LONG RANGE ANTENNA WITHOUT A FULL TEAM

Before erecting any long range antenna, inspect all the parts making up the antenna kit. Do not erect the antenna if any parts are missing or damaged.

Do as much of the assembly work as possible on the ground.

When erecting the antenna, allow only team personnel in the erection area.

If you suspect that powerlines have made accidental contact with your antenna, stop operating, rope off the antenna area, and notify your superiors.

If the weather in your area can cause ice to form on your long range antenna, rope off the area and post it with warning signs like "BEWARE OF FALLING ICE".

Do not try to erect any antenna during an electrical storm.

CARBON MONOXIDE (EXHAUST GAS) CAN KILL YOU

WARNING

VENTILATION IS ESSENTIAL

The shelter must be properly ventilated at all times when occupied by personnel.



Carbon monoxide is without color or smell, but can kill you. Breathing air with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Brain damage or death can result from heavy exposure. Carbon monoxide occurs in the exhaust fumes of fuel-burning heaters and internal combustion engines. Carbon monoxide can become dangerously concentrated under conditions of no air movement. Precautions must be followed to insure crew safety when the personnel heater, main or auxiliary engine or any vehicle is operated for any purpose.

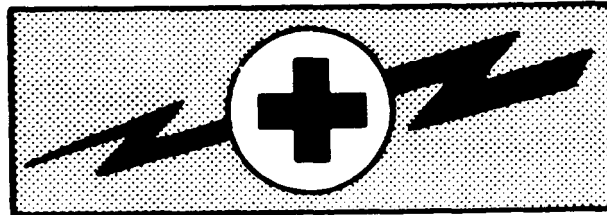
1. DO NOT operate personnel heater or engine of vehicle in a closed place unless the place has a lot of moving air.
2. DO NOT idle engine for long periods without ventilator blower operating. If tactical situation permits, open hatches.
3. DO NOT drive any vehicle with inspection plates, cover plates, or engine compartment doors removed unless necessary for maintenance purposes.
4. BE ALERT at all times during vehicle operation for exhaust odors and exposure symptoms. If either is present IMMEDIATELY VENTILATE personnel compartments. If symptoms persist, remove affected crew to fresh air; keep warm. DO NOT PERMIT PHYSICAL EXERCISE; if necessary, give artificial respiration.

FOR ARTIFICIAL RESPIRATION, REFER TO FM 21-11.

5. BE AWARE; the field protective mask for chemical-biological-radiological (CBR) protection will not protect you from carbon monoxide poisoning.

THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS GOOD VENTILATION.

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 who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When the technician is "aided 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 particular 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 or 120 volt ac input connections when installing or operating this equipment.

Whenever the nature of the operation permits, keep one hand away from the equipment to reduce the hazard of current flowing through the body.

WARNING: DO NOT BE MISLED BY THE TERM "LOW VOLTAGE". POTENTIALS AS LOW AS 50 VOLTS MAY CAUSE DEATH UNDER ADVERSE CONDITIONS.

For Artificial Respiration, refer to FM 21-11.



5

SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

1

DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL

2

IF POSSIBLE, TURN OFF THE ELECTRICAL POWER

3

IF YOU CANNOT TURN OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A WOODEN POLE OR A ROPE OR SOME OTHER INSULATING MATERIAL

4

SEND FOR HELP AS SOON AS POSSIBLE

5

AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION

**ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT
MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND
SPECIAL TOOLS LIST**

RADIO RECEIVING SET AN/TRQ-32(V)

**REPORTING ERRORS
AND RECOMMENDING IMPROVEMENTS**

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or Form DA 2028-2 located in back of this manual direct to: Commander, US Army Electronics Materiel Readiness Activity, ATTN: SELEM-MR-E-P, Vint Hill Farms Station, Warrenton, Va. 22186-5141. In either case, a reply will be furnished direct to you.

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FOLDOUTS

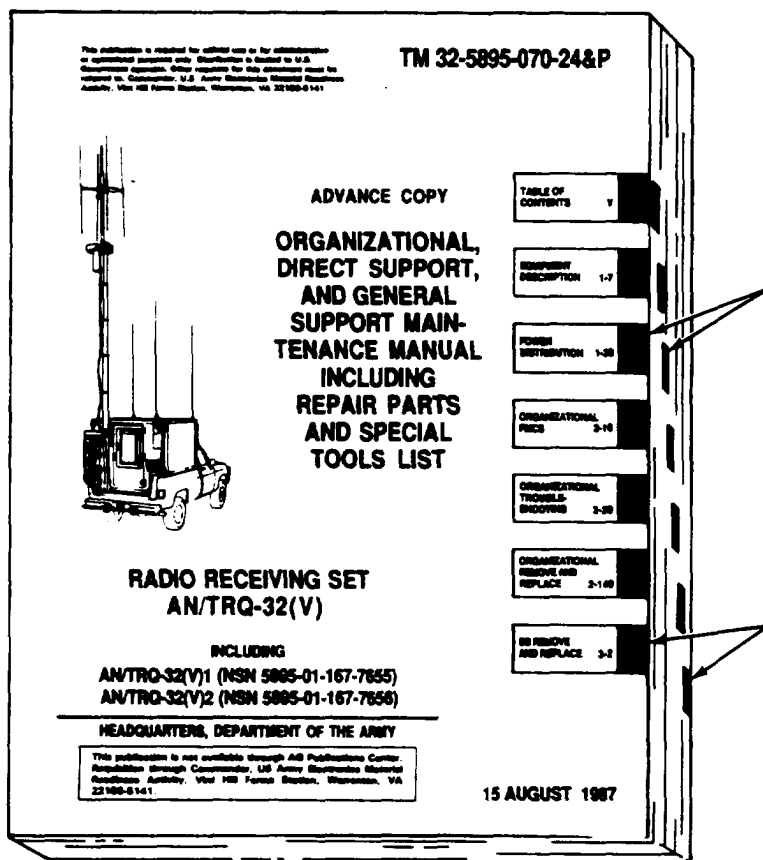
- FO-1. Interconnect Diagram
- FO-2. AC Distribution
- FO-3. DC Distribution
- FO-4. Cabling Diagram
- FO-5. Antenna Group Wiring Diagram
- FO-6. W33/W65/W67 Installation Wiring Diagram

HOW TO USE THIS MANUAL (1 of 2)

This manual is divided into 4 chapters:

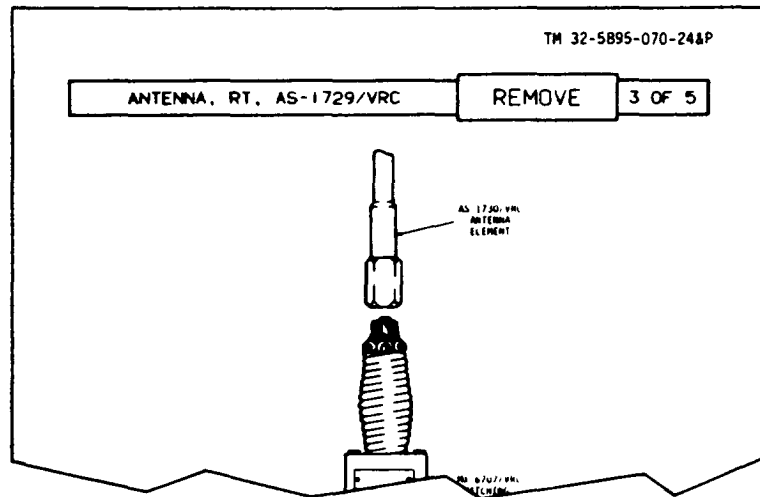
- o CHAPTER 1 contains an introduction to this manual and a functional description of Radio Receiving Sets AN/TRQ-32(V)1 and AN/TRQ-32(V)2.
- o CHAPTER 2 contains organizational maintenance instructions for the Radio Receiving Sets AN/TRQ-32(V)1 and AN/TRQ-32(V)2.
- o CHAPTER 3 contains direct support maintenance instructions for the Radio Receiving Sets AN/TRQ-32(V)1 and AN/TRQ-32(V)2.
- o CHAPTER 4 contains general support maintenance instructions for the Radio Receiving Sets AN/TRQ-32(V)1 and AN/TRQ-32(V)2.

Pages in this manual are numbered consecutively by chapter. Each chapter is divided into sections, and each section is indexed on the front cover and in the table of contents. On the front cover index, each section title is in a boxed blackened area. The blackened area matches a black mark appearing on the first page of that section in the manual. In the table of contents, each title that duplicates a title on the front cover index is highlighted with a box. The first page of each section contains a table that lists the contents and gives the index number of the data in that section.

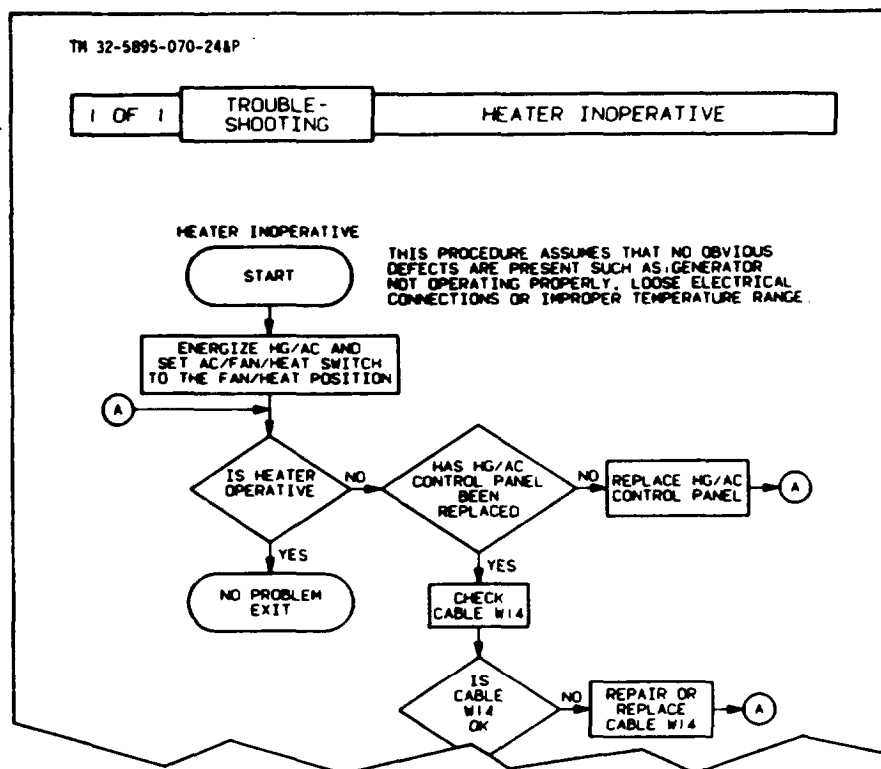


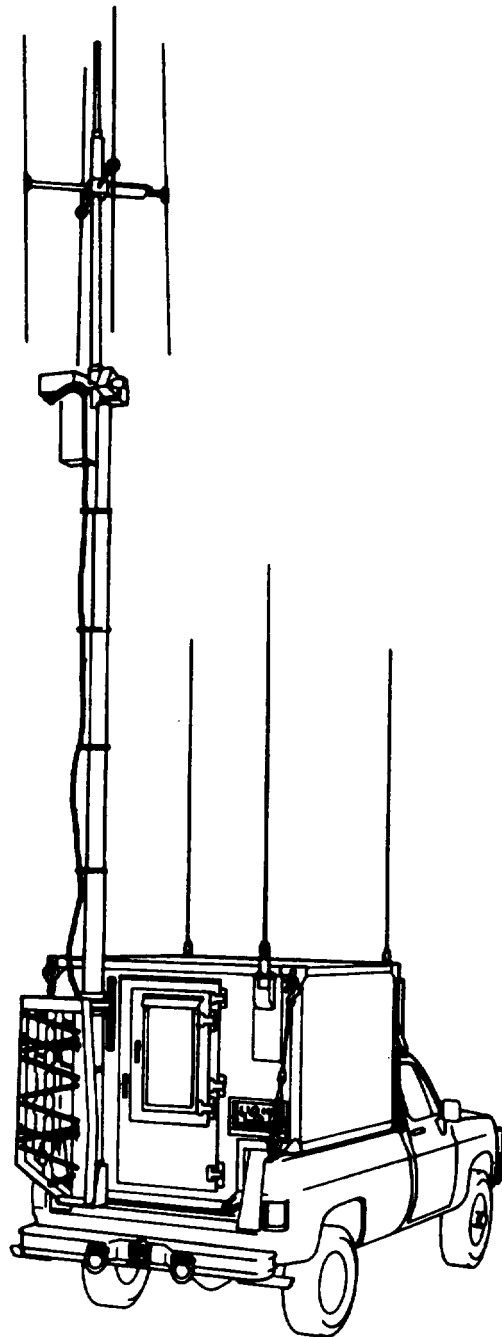
HOW TO USE THIS MANUAL
(2 of 2)

Where descriptive text or procedures require supporting illustrations, the illustration will medietely precede the text. Illustration numbers are not used in this manual.



When descriptive text or procedures with illustrations require more than one page, each page will carry the same title.





INTRODUCTION

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Section I.

GENERAL INFORMATION

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SCOPE.

TYPE OF MANUAL: Organizational, Direct Support, and General Support Maintenance

MODEL NUMBER AND EQUIPMENT NAME: Radio Receiving Set AN/TRQ-32(V)1 and Radio Receiving Set AN/TRQ-32(V)2.

PURPOSE OF EQUIPMENT: The AN/TRQ-32(V)1 and AN/TRQ-32(V)2 are mobile, multistation, ground-based communication-intercept (HF, UHF, and VHF) and direction-finding systems for support of the Army in the tactical environment, with the addition of data link capability provided only in the AN/TRQ-32(V)2. Both systems provide Very High Frequency (VHF) Direction Finding Line-of-Bearing (DF LOB) and ancillary functions.

MAINTENANCE FORMS, RECORDS, AND REPORTS.

Reports of Maintenance and Unsatisfactory Equipment. Department of the Army forms and procedures used for equipment maintenance will be those described by DA PAM 738-750, The Army Maintenance Management System (TAMMS).

Reporting of Packaging and Handling Deficiencies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2

Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38.

Refer to the latest issue of DA PAM 310-1 to determine editions, changes, or additional publications pertaining to the equipment.

Refer to DA PAM 310-1 to determine if there are Modification Work Orders (MWO) pertaining to the equipment.

DESTRUCTION OF ARMY ELECTRONICS MATERIEL.

Destruction of the Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2.

ADMINISTRATIVE STORAGE.

Administrative storage of equipment issued to and used by the Army activities shall be in accordance with TM 740-90-1.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your Radio Receiving Set AN/TRQ-32(V)1 or AN/TRQ-32(V)2 needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander, CECOM, ATTN: AMSEL-PA-MA-D, Ft. Mommouth, N.J. 07703. We'll send you a reply.

NOMENCLATURE CROSS REFERENCE LIST.

The following list should help you locate the official nomenclature of major equipment in Radio Receiving Sets AN/TRQ-32(V)1 and AN/TRQ-32(V)2. Official nomenclature must be used when completing forms or when looking up technical manuals.

COMMON NAMEOFFICIAL NOMENCLATURE

| | |
|------------------------|---------------------------------------------------------|
| Antenna | Antenna, AS-1729/VRC |
| Antenna Element | Antenna Element, MS-116A |
| Antenna Element | Antenna Element, MS-117A |
| Antenna Element | Antenna Element, MS-118A |
| Antenna Group | Antenna Group, OE-356/TRQ-32(V) |
| Antenna Mast Base | Mast Base, AB-15/GR |
| Antenna Power Supply | Antenna Power Supply, TL-3129 |
| Audio Frequency Switch | Switch, Audio Frequency SA-2171/VRC |
| Cable Assembly | Cable Assembly, W22 |
| Caution Panel | Panel, Fault Function 4408-100-29 |
| Compressor | Compressor Assembly, C51 10592-1 |
| Data Link Processor | Control, Processor, Data Link C-11844/TRQ-32(V) |
| Disk Drive Control | Control, Disk Drive C-1 1843/TRQ-32(V) |
| DF Array Antenna | Antenna, AS-3660/TRQ-32(V) |
| DFCU | Control, Direction Finder C-1 1002/USQ |
| EMI Filter Box | EMI Filter Box, A36 |
| Field Telephone | Set, Telephone TA-312/PT |
| Guard Receiver | Receiver, Radio R-442A/VRC |
| Hard Disk Drive | Recorder, Reproducer, Magnetic Disk RD-583/TRQ-32(V) |
| HF Receiver | Receiver, Radio R-2143/URR |
| HG/AC | Shelter Mounted Unit Assembly, C5118900-1 |

COMMON NAME

OFFICIAL NOMENCLATURE

| | |
|----------------------------------------------|---------------------------------------------------------------------|
| HG/AC Control Panel | Panel, Hydraulic Generator/Air Conditioner Control C5110892-1 |
| Hydraulic Generator/Air Conditioner Group | Generator, Hydraulic-Air Conditioner PU-784/TRQ-32(V) |
| Intercom Control Panel | Control, Intercommunication Set C-1611D/Ale |
| Intercom Control | Control, Intercommunication Set C-2298/VRC |
| J-Box | Junction Boxes, J-3513/VRC and J-3514/VRC |
| Junction Box | Interconnecting Box J-4099/TSQ-138 |
| Loudspeaker | Loudspeaker LS-454/U |
| KY-57 | Speech Security Equipment TSEC/KY-57 |
| KG-84 | Digital Security Equipment TSEC/KG-84 or TSEC/KG-84A |
| Level Indicator | Inclinometer, 5054585-1 |
| Magnetic Field Converter | Converter, Magnetic Field CV-3579/TSQ |
| Mounting Base | Mounting Base MT-1029 |
| Mounting Base | Mounting Base MT-1898 |
| Operator Control Panel | Panel, Operator Control MX-10570/TRQ-32(V) |
| Operator Terminal | Computer, Operator Terminal, Modified CP-1824/TRQ-32(V) |
| Pneumatic Mast | Pneumatic Mast C5110591-1 |
| Power Entry Panel | Power Entrance Box C5110911-1 |

COMMON NAMEOFFICIAL NOMENCLATURE

| | |
|-------------------------------|----------------------------------------------------------|
| Printer | Printer, Thermal RP-272/G |
| Pump Assembly | Pump Assembly, C5122498-1 |
| Receiver Control Unit (RCU) | Indicator, Receiver Control C-11383/TRR-35 (V) |
| Receiver-Enclosure Unit (REU) | Cabinet, Electronics, Quad Receiver CY-8324/TRR-35(V) |
| Receiver Power Supply | Power Supply, Receiver PP-7817/URR |
| Receiver Subsystem | Receiver Subsystem, AN/TRR-35(V)3 |
| RT-524A | Receiver-Transmitter, Radio RT-524A/VRC |
| Recorder | Recorder-Reproducer Sound Set AN/UNH-17A |
| Reservoir Assembly | Reservoir Assembly, C5122481-1 |
| RFDU | Unit, R.F. Distribution SA-2444/TRQ-32(V) |
| RFP | Processor, Radio Frequency MX-10526/TRQ-32(V) |
| RIU | Unit, Receiver Interface J-4144/TRR-35(V) |
| System Controller | Controller, System C-11845/TRQ-32(V) |
| Signal Display Unit | Unit, Signal Display ID-2349/TRR-35(V) |
| Shelter | Shelter, Electrical Equipment S-457B/G |
| Speed Control Group | Speed Control Group, C5118904-1 |

COMMON NAME

OFFICIAL NOMENCLATURE

| | |
|--------------------------|-----------------------------------------------------------|
| System Controller | Controller, System C-11845/TRQ-32(V) |
| System Power Supply | Power Supply PP-8179/TRQ-32(V) |
| UHF/Datalink Antenna | Antenna AS-3661/TRQ-32(V) |
| UHF Bandpass Filter | UHF Tunable Bandpass Filter, C5110526-1 |
| UHF Radio Control | Control, Set, Radio C-10547/ARC-164(V) |
| UHF Radio Mount | Mounting Base, Electrical Equipment MT-6017A/TRQ-32(V) |
| UHF Receiver-Transmitter | Receiver-Transmitter, Radio RT-1288A/ARC-164(V) |
| VHF Bandpass Filter | VHF Tunable Bandpass Filter, C5110525-1 |
| VHF/UHF Receiver | Receiver, Radio R-2144A/URR |

Section II.

EQUIPMENT DESCRIPTION AND DATA

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CAPABILITIES AND FEATURES.

The AN/TRQ-32(V)1 and AN/TRQ-32(V)2 are mobile, multistation, round based communication intercept and direction finding systems for support of the Army in the tactical environment, with the addition of data link capability provided only in the AN/TRQ-32(V)2. Both systems provide High Frequency (HF), Very High Frequency (VHF), and Ultra High Frequency (UHF) communications intercept. Both systems also provide Very High Frequency (VHF) Direction Finding Line-of-Bearing (DF LOB) and ancillary functions.

The AN/TRQ-32(V)2 incorporates a narrowband subsystem for automatic tasking, reporting, and control functions. It also implements the Net Station (NS) subset of the Net Radio Protocol (NRP). Both systems provide two operator positions to perform all necessary functions.

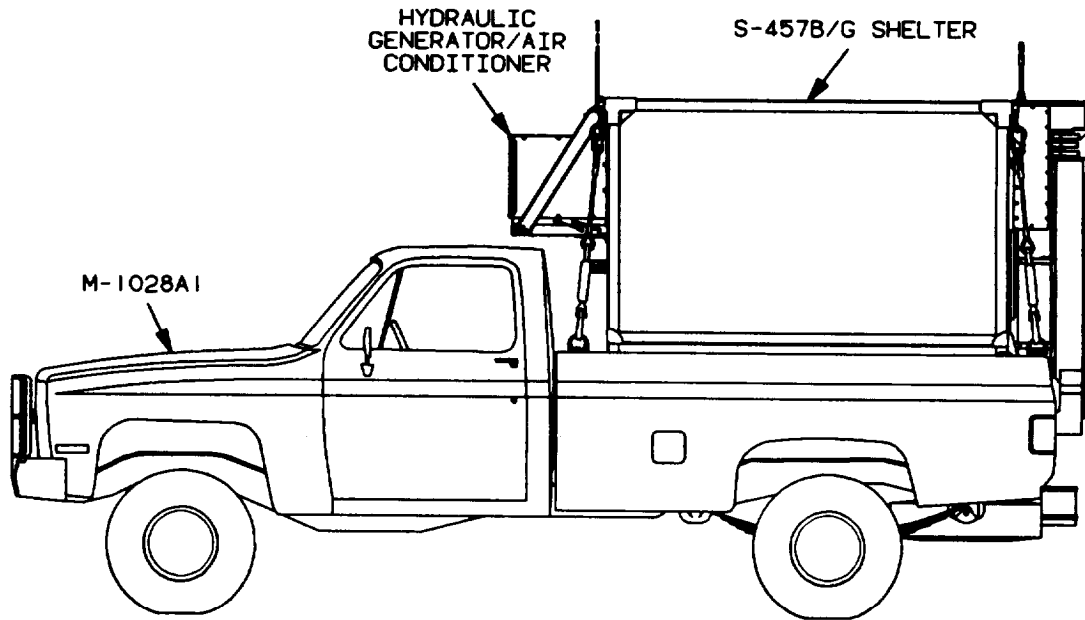
The electronic equipment is installed in an S-457 B/G shelter designed for installation on the M-1028A1 shelter carrier. The pneumatic mast, hydraulic generator/air conditioner 9HG/AC), compressor and storage tank are mounted on the exterior of the shelter. The hydraulic pump, hydraulic reservoir, and power takeoff (PTO) are mounted on the vehicle. The AN/TRQ-32(V)1 and AN/TRQ-32(V)2 are air transportable by C-130 or equivalent aircraft. Organizational maintenance must remove the front and rear whip antennas and bases when being transported by air. The AN/TRQ-32(V)1 and AN/TRQ-32(V)2 may be transported by rail if the shelter carrier and shelter are separated.

EQUIPMENT DATA.

Refer to operators manual TM 32-5895-070-10 for equipment data on AN/TRQ-32(V)1 and AN/TRQ-32(V)2 components.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

EXTERIOR ROADSIDE VIEW



M-1028A1. Provides mechanical power to the hydraulic pump that drives the hydraulic generator/air conditioner which provides the shelter with power needed to operate. This vehicle also provides 28 Vdc to the shelter in the mobile mode of operation.

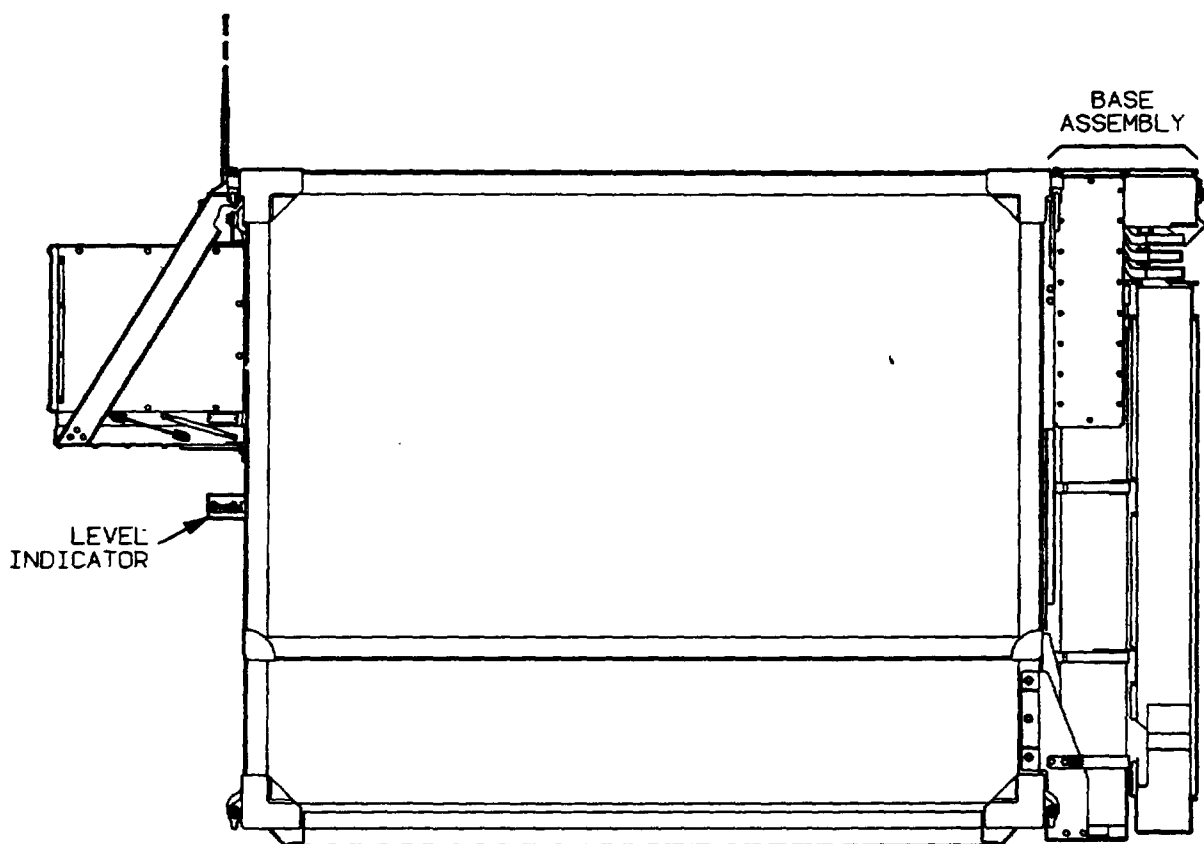
HYDRAULIC GENERATOR/AIR CONDITIONER. Provides 120/240 Vac power, 60 Hz, heating, or air conditioning to the shelter for equipment operation in the deployed mode of operation.

S-457B/G SHELTER. A fully insulated, weatherproof enclosure providing lights and convenience outlets for AC power. Two folding steps on the curbside provide access to the roof.

LOCATION OF EXTERIOR SUBASSEMBLIES AND ACCESSORY ITEMS.

Location of subassemblies and accessory items will familiarize the technician with complete layout of the shelter; thereby, reducing maintenance time and serving as a guide for the technician in determining completeness of the shelter.

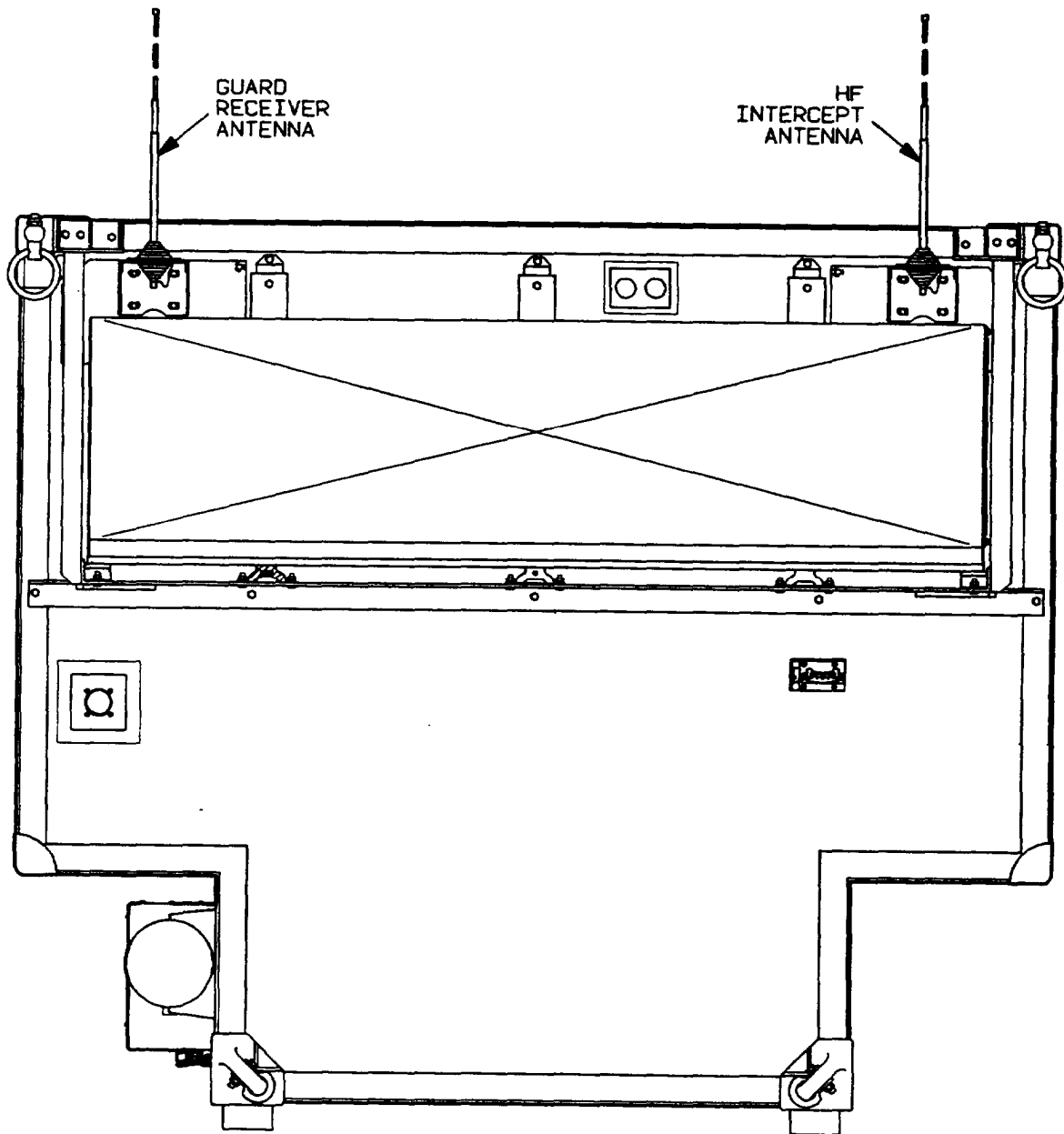
EXTERIOR ROADSIDE VIEW



BASE ASSEMBLY. Part of the antenna group. The base assembly contains the antenna power supply and the RF processor.

LEVEL INDICATOR. Provides the operator with a visual means of leveling the AN/TRQ-32(V)1 or AN/TRQ-32(V)2.

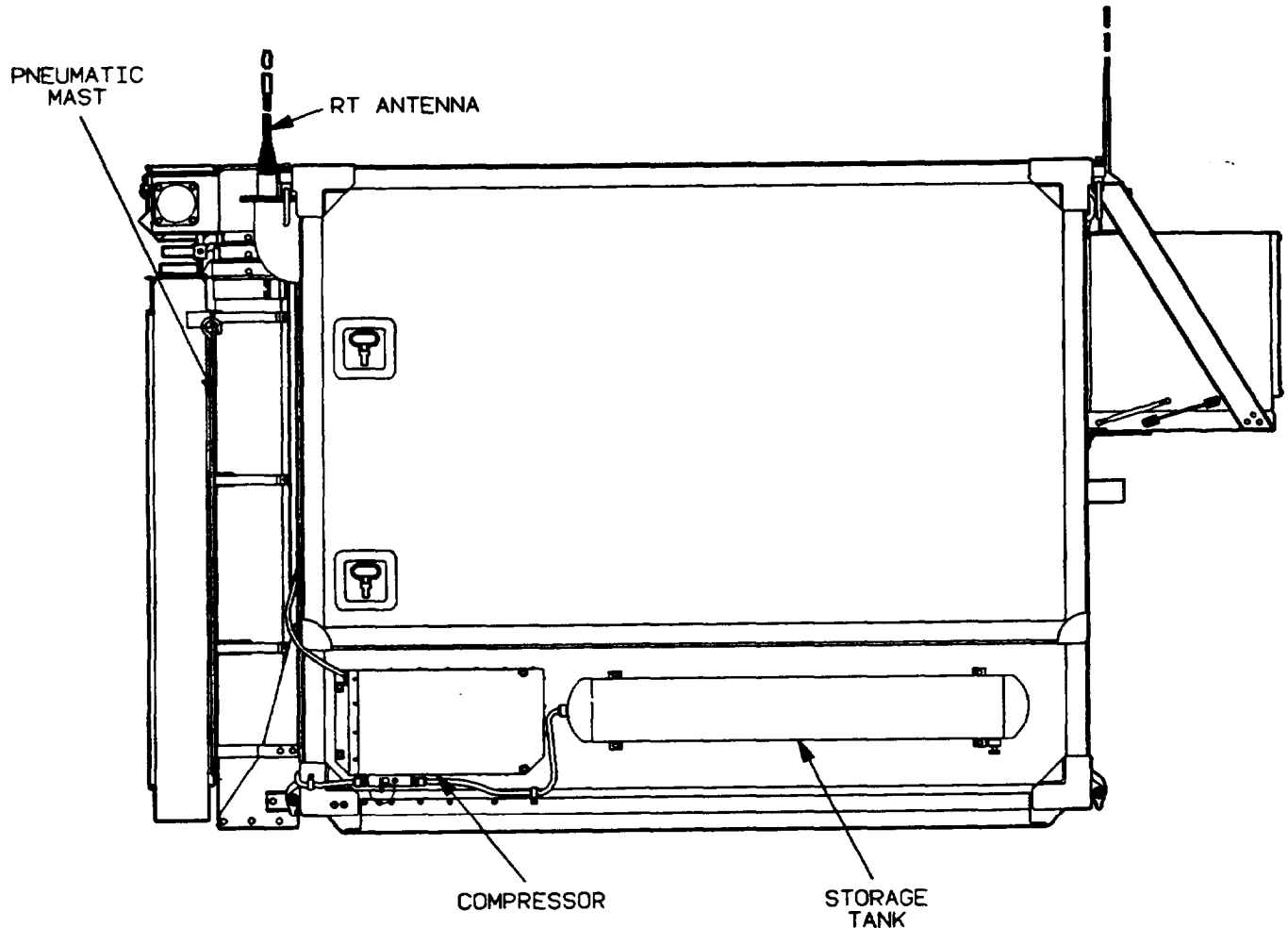
EXTERIOR FORWARD VIEW



GUARD RECEIVER ANTENNA. The guard receiver antenna is a VHF whip antenna that is used to receive VHF signals for the guard receiver. It is located on the front curbside of the shelter.

HF INTERCEPT ANTENNA. The HF intercept antenna is a HF whip antenna that is used to intercept HF signals for the R-2143/URR Receivers. It is located on the front roadside of the shelter.

CURBSIDE EXTERIOR VIEW



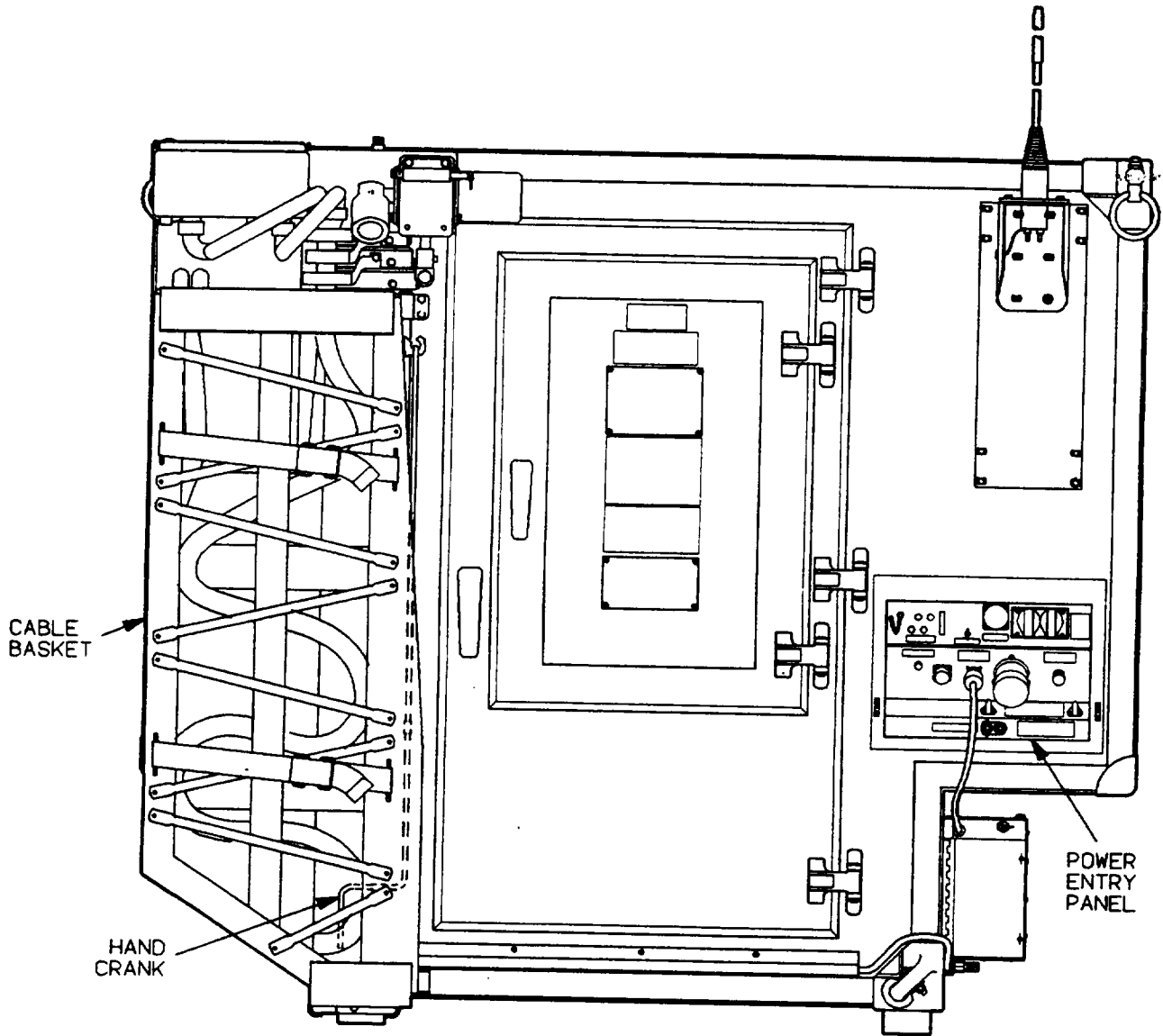
ANTENNA AS-1729/VRC. Used for receive and transmit by the R/T. It is located on the rear curbside of the shelter.

PNEUMATIC MAST. Used to elevate antenna group. It is located on the rear exterior of the shelter.

STORAGE TANK. Used to store compressed air from the compressor.

COMPRESSOR. Provides compressed air that is used to raise pneumatic mast.

REAR EXTERIOR VIEW



CABLE BASKET. Provides cable storage for the W22 cable when the pneumatic mast is retracted.

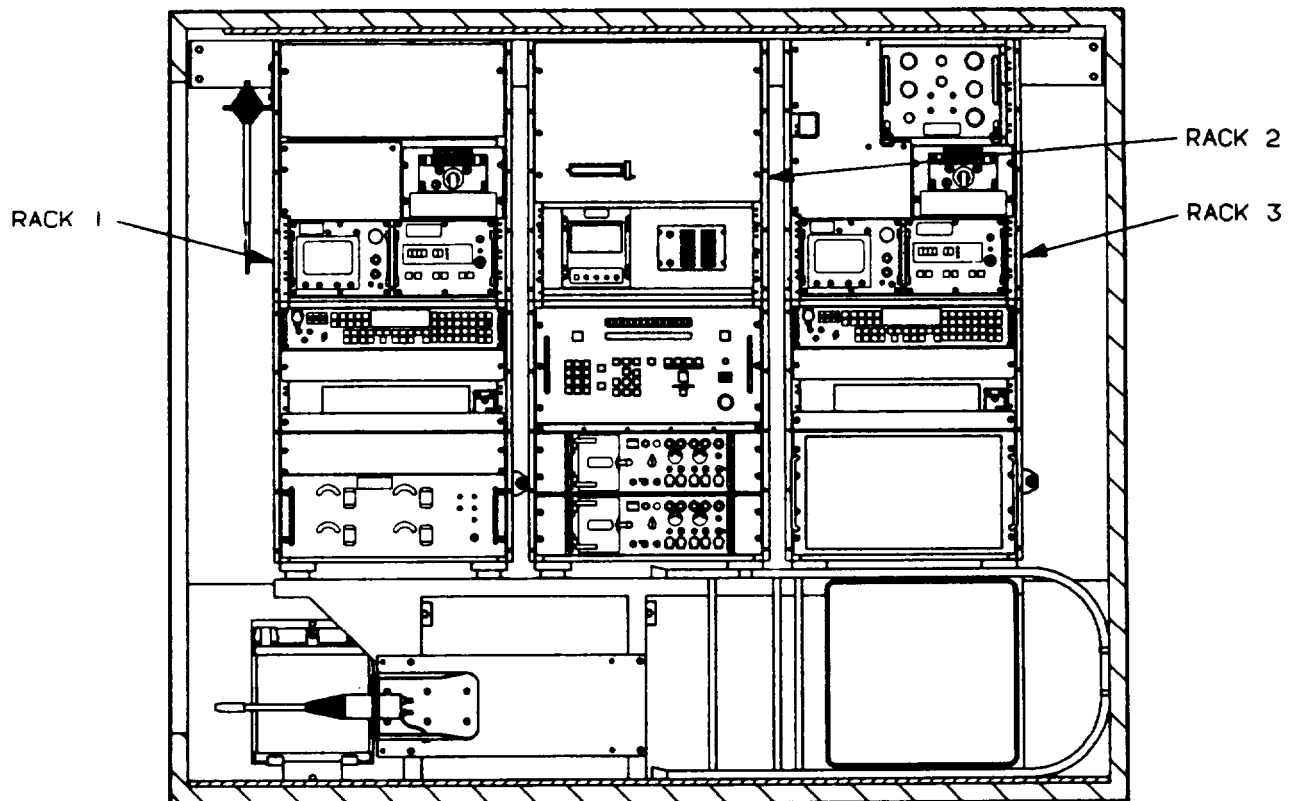
POWER ENTRY PANEL. Provides shelter with 120 Vac convenience outlet and external ground point for ground rod.

HAND CRANK. Used to elevate antenna group into a vertical position.

LOCATION OF INTERIOR SUBASSEMBLIES AND ACCESSORY ITEMS.

Location of subassemblies and accessory items will familiarize the technician with complete layout of the shelter; thereby, reducing maintenance time and serving as a guide for the technician in determining completeness of the shelter.

INTERIOR ROADSIDE VIEW

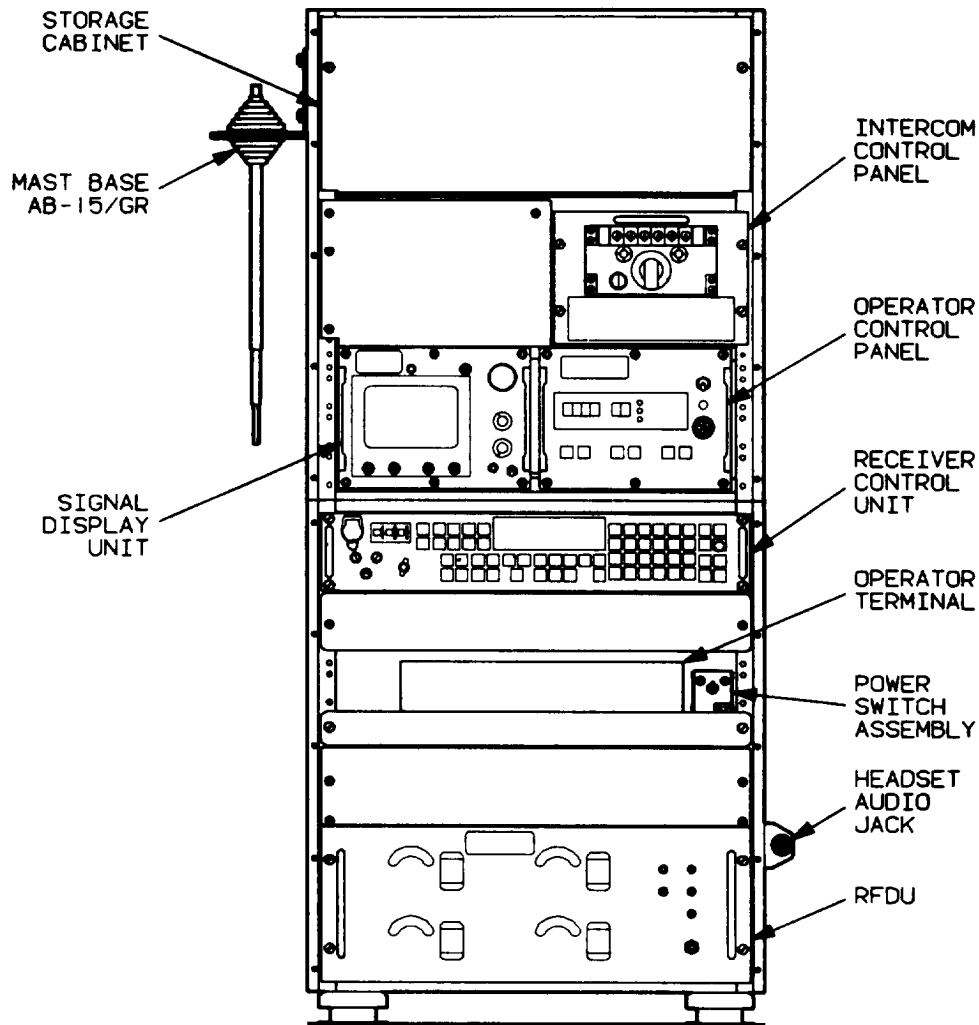


EQUIPMENT RACK 1. Equipment rack 1 contains the intercom control panel, signal display unit, operator control panel, receiver control unit, operator terminal, power switch assembly, RF distribution unit, headset audio jack, storage cabinet, and two storage locations for the mast bases AB-15/GR.

EQUIPMENT RACK 2. Equipment rack 2 contains the thermal printer, paper roller, caution panel, system controller, writing table and two recorders.

EQUIPMENT RACK 3. Equipment rack 3 contains the DF control unit, intercom control panel, signal display unit, operator control panel, receiver control unit, operator terminal, power switch assembly, headset audio jack, and receiver enclosure unit.

EQUIPMENT RACK 1



STORAGE CABINET. Provides operator storage space for headsets and other miscellaneous items.

- * INTERCOM CONTROL PANEL. Provides operator with the capability to listen to radio communications or intercepted signals, to transmit using VHF communications, and to communicate with other operators.
- * OPERATOR CONTROL PANEL. Provides operator with capability to control the DF subsystem and display DF and auto-DF Line-Of-Bearing (LOB). It also selects HF or VHF/UHF audio for recording.
- * RECEIVER CONTROL UNIT. Provides control and monitoring capabilities of the HF and VHF/UHF receivers.

* Indicates equipment also used in rack 3.

EQUIPMENT RACK 1 (CONT)

- * OPERATOR TERMINAL. Provides the primary operator interface to the system.
- * POWER SWITCH ASSEMBLY. Provides power to operator terminal when READY indicator is lit. If WAIT indicator is lit, no power is provided to the operator terminal until temperature rises above 0°C (32°F).
- * HEADSET AUDIO JACK. Used by the operator to listen to intercepted transmissions, transmit using VHF communications, and talk to the other operator through the intercom.

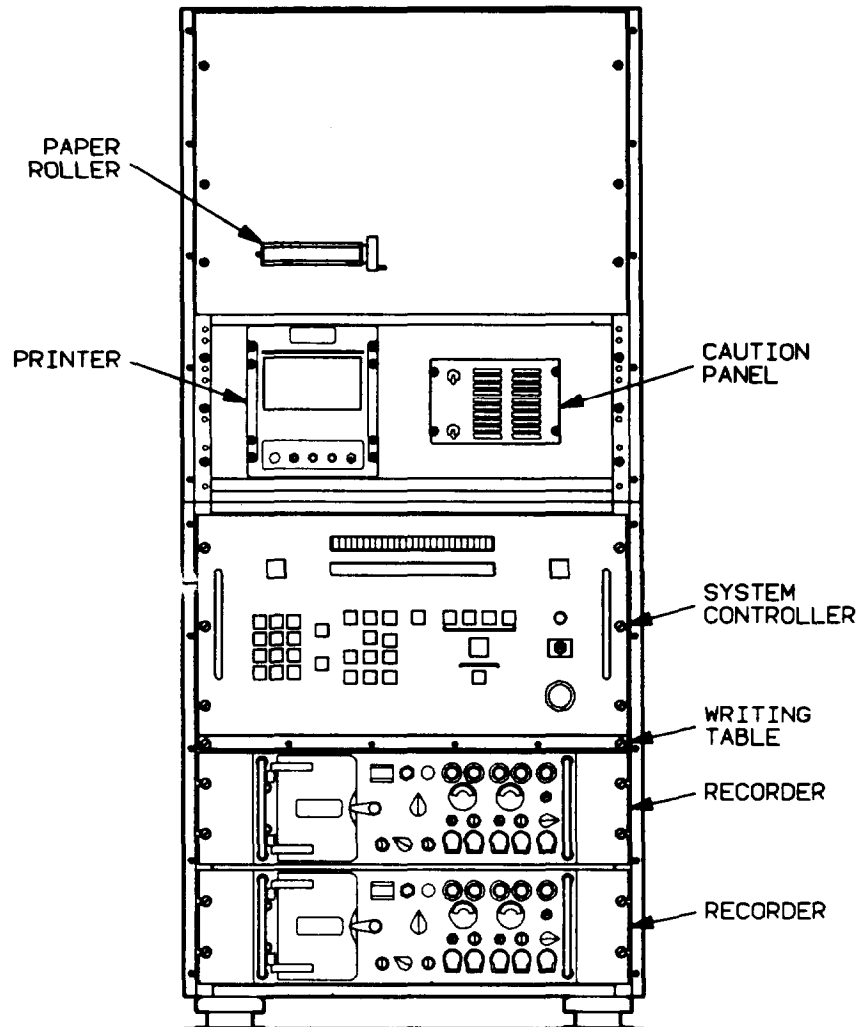
RF DISTRIBUTION UNIT. Selects the RF path for either HF or VHF/UHF intercept or VHF direction finding. It also switches the notch filters in to notch out transmitted RF signals from the intercepted path.

SIGNAL DISPLAY UNIT. Provides a visual display of the VHF/UHF signals.

MAST BASE AB-15/GR. Storage location of the mast bases for the guard receiver and HF intercept antennas.

* Indicates equipment also used in rack 3.

EQUIPMENT RACK 2



CAUTION PANEL. Provides the operator with a visual indication when the system fails.

SYSTEM CONTROLLER. Provides the operator with control of the system when not using the operator terminal.

WRITING TABLE. Provides operator with a smooth writing surface.

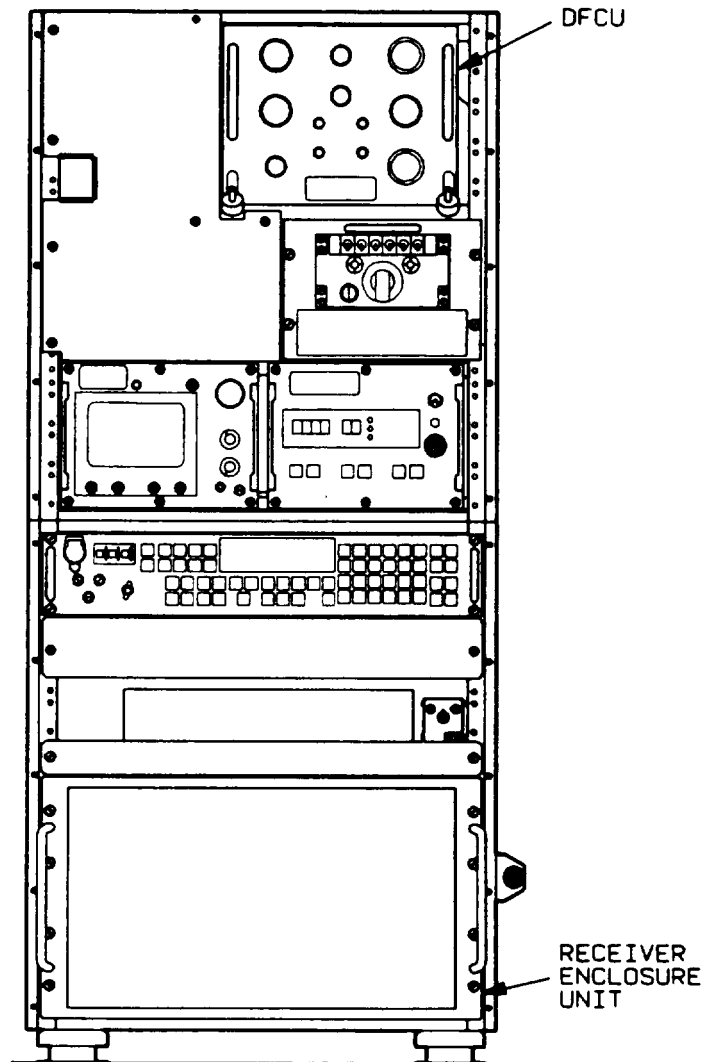
RECORDERS. Provides the operator with the capability of recording intercepted signals and operator comments. There are two recorders supplied, one for each operator position.

PRINTER. Provides the operator with printouts of system operations.

PAPER ROLLER. Provides convenient storage for printouts from thermal printout.

Equipment rack 3 contains most of the same equipment as equipment rack 1, with the exception of the DFCU and Receiver Enclosure Unit (REU) located in rack 3, and the RF distribution unit and a storage cabinet located in rack 1.

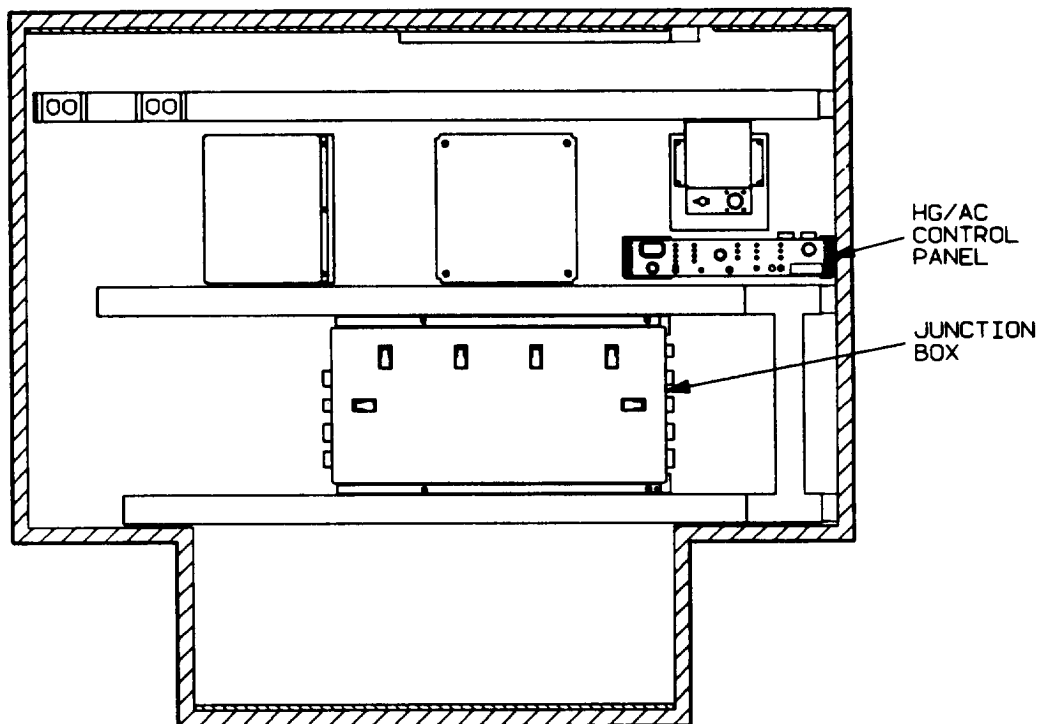
EQUIPMENT RACK 3



DFCU. Provides control of the OF process when requested by the system controller and outputs signals to the RF processor for controlling OF related functions.

RECEIVER ENCLOSURE UNIT. Contains the receiver power supply, receiver interface unit, two R-2143/URR receivers, and two R-2144A/URR receivers.

INTERIOR FORWARD VIEW



HG/AC CONTROL PANEL. Enables operator to select input power source, heat, or air conditioning. It also allows operator to monitor the generator, air conditioner, and vehicle fault indicators. The HG/AC control panel is located on the forward interior wall of the shelter.

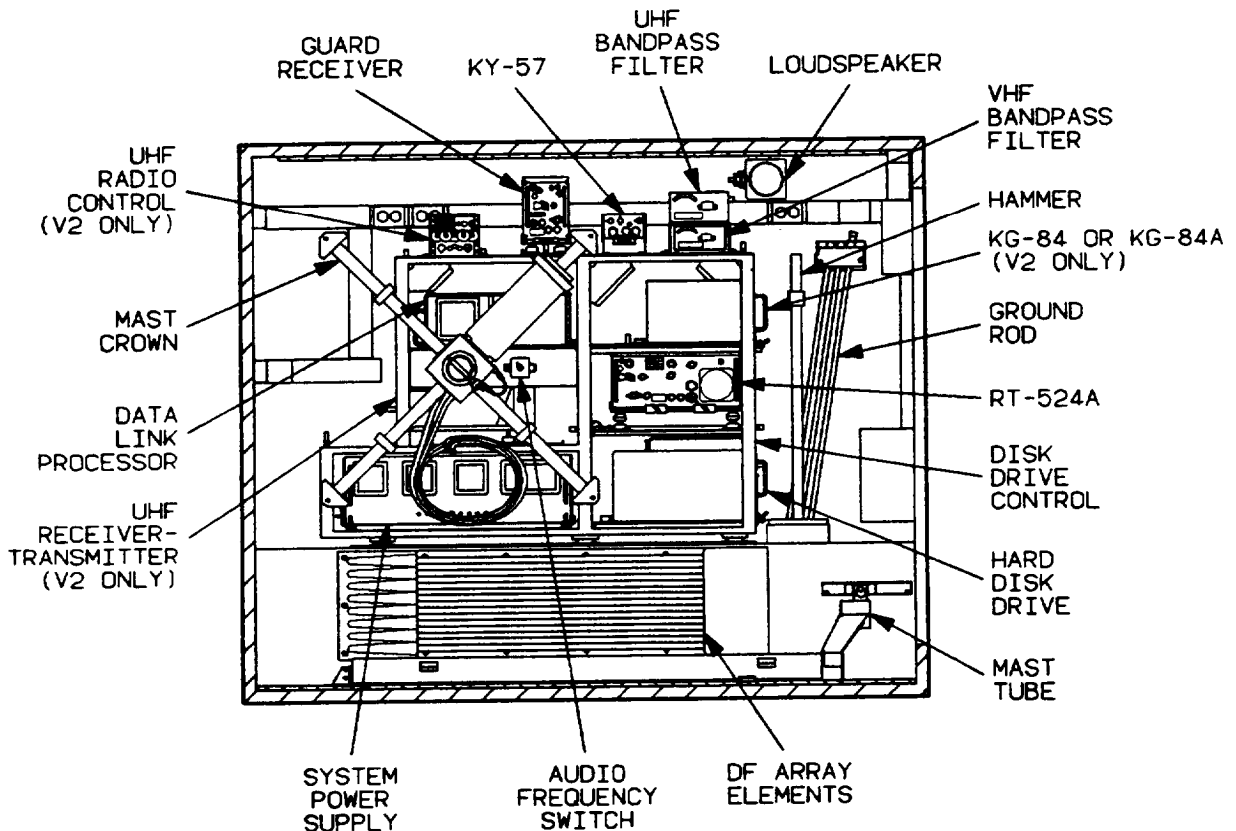
JUNCTION BOX. The junction box provides a central point for control and distribution of the audio and fault indicating signals.

EQUIPMENT RACK 4. Equipment rack 4 contains the mast crown storage hub, UHF radio control, guard receiver, TSEC/KY-57, UHF bandpass filter, VHF bandpass filter, TSEC/KG-84 (TSEC/KG-84A), RT-524A, disk drive control, hard disk drive, audio frequency switch, system power supply, UHF receiver-transmitter, and data link processor.

NOTE

The UHF radio control, TSEC/KG-84 (TSEC/KG-84A), and UHF receiver-transmitter will be used in the AN/TRQ-32(V)2 only.

INTERIOR CURBSIDE VIEW



MAST CROWN. Part of the antenna group. The mast crown supports the DF antenna elements and contains the magnetic field converter.

* UHF RADIO CONTROL. Provides remote operation for control of RT-1288A.

* Indicates equipment is used in AN/TRQ-32(V)2 only.

GUARD RECEIVER. Provides a means of command and control communications for the operator in the VHF band.

TSEC/TKY-57. Provides speech security (encryption and decryption) for the R/T and guard receiver.

UHF TUNABLE BANDPASS FILTER. Reduces interference, providing electromagnetic compatibility between the RT-1288A/ARC-164(V) and the AN/TRR-35(V)3 Receiving Set.

VHF TUNABLE BANDPASS FILTER. Reduces interference, providing electromagnetic compatibility between the RT-524A/VRC and the AN/TRR-35(V)3 Receiving Set.

LOUDSPEAKER. Provides audio output from the guard receiver.

HAMMER. Used to drive ground rods.

GROUND ROD. Provides for proper grounding of the system.

* TSEC/KG-84 (TSEC/KG-84A). Provides digital security (encryption and decryption) for the R/T-1288A.

RECEIVER-TRANSMITTER (R/T). Provides two-way FM communications in the VHF band and is used in the netting of the AN/TRQ-32(V) system.

DISK DRIVE CONTROL. Provides the necessary conversion to allow connection of the disk drive to the data bus.

HARD DISK DRIVE. Provides the medium for storing the operator terminal control program and the system data bases.

MAST TUBE. Part of the antenna group. Provides support for Mast Crown.

DF ARRAY ELEMENTS. Part of the antenna group. The DF antenna elements are used in direction finding and VHF intercept.

AUDIO FREQUENCY SWITCH. Provides a means of switching the TSEC/KY-57 between the R/T and guard receiver.

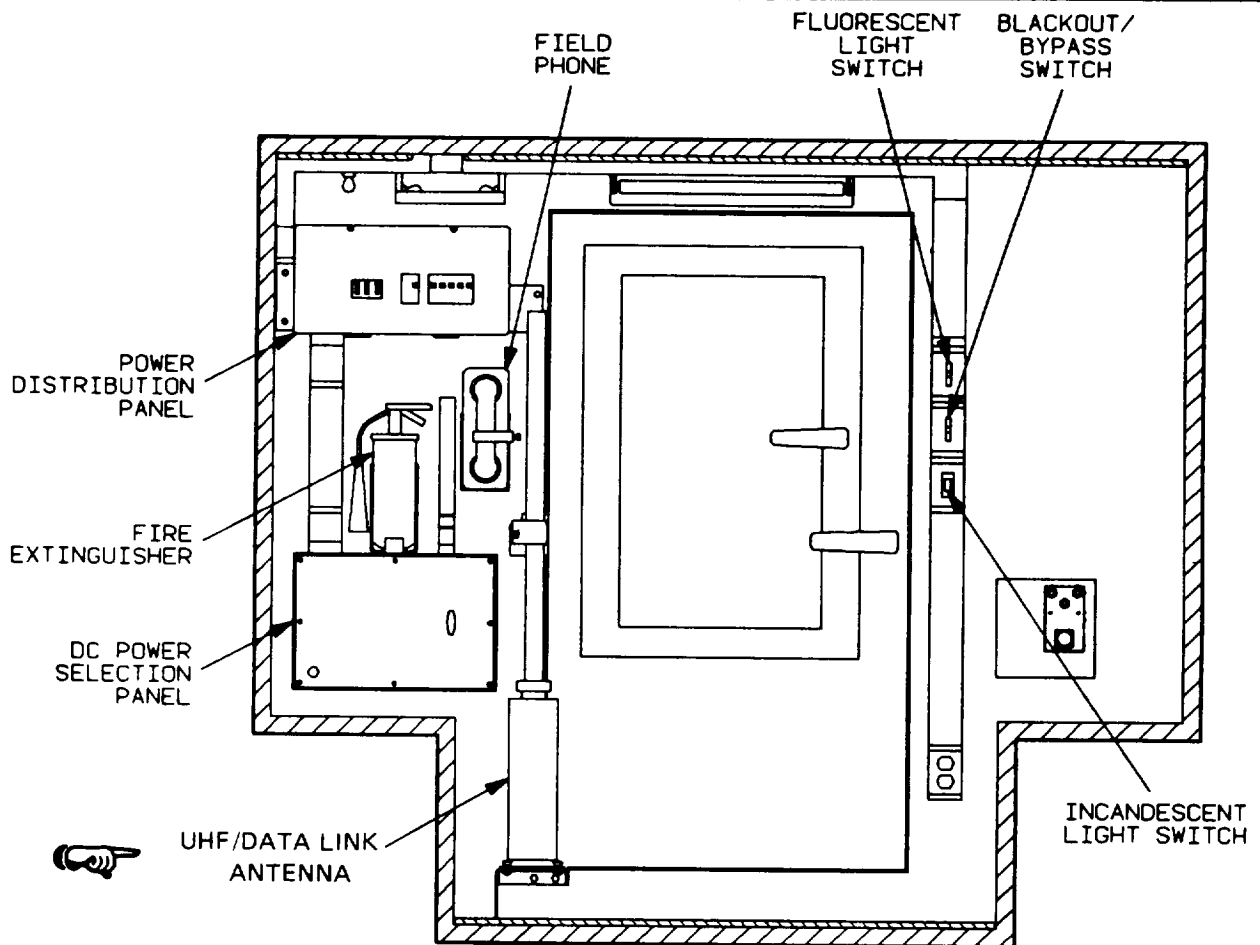
SYSTEM POWER SUPPLY. Provides low voltage DC power to the system. It also provides 115 Vat, 60 cycles (single phase), to the MT-6017A and 115 Vat, 400 cycles (three phase), to the DFCU for operating the fans.

* UHF RECEIVER-TRANSMITTER. Provides two-way UHF communications and is used in the transmission/reception of data for Data Link operation.

DATA LINK PROCESSOR. Provides all processing and control functions associated with implementation of the ASAS Data Link protocol.

* Indicates equipment is used in AN/TRQ-32(V)2 only.

INTERIOR REAR VIEW



FIRE EXTINGUISHER. Used as required

FIELD PHONE. Used as required.

POWER DISTRIBUTION PANEL. Provides the AC and DC power interface for the shelter equipment. All power for the equipment is controlled from this panel.

DC POWER SELECTION PANEL. Provides the operator with the capability of selecting the input power to the R/T. In the MOBILE position +28 Vdc is applied to the R/T from the vehicle. In the DEPLOYED position +28 Vdc is applied to the R/T from the system power supply.

FLUORESCENT LIGHT SWITCH. Used as required.

BLACKOUT/BYPASS SWITCH. Used as required.

INCANDESCENT LIGHT SWITCH. Used as required.

UHF/DATA LINK ANTENNA. The UHF/Data Link Antenna element is used for UHF interception and provides BITE signal transmission and UHF data transmission.

DIFFERENCES BETWEEN MODELS.

The ANfIRQ-32(V)1 is modified to a AN/TRQ-32(V)2 by the addition of three LRU'S which provide UHF data link capability.

| QTY | L.R.U. | (V)1 | (V)2 |
|-----|-----------------------------------------------------|------|------|
| 1 | ANTENNA, AS-1729 | X | X |
| 1 | ANTENNA GROUP | X | X |
| 1 | ANTENNA POWER SUPPLY, TL-3129 | X | X |
| 1 | AUDIO FREQUENCY SWITCH, SA-2171/VRC | X | X |
| 1 | CABLE ASSEMBLY, W22 | X | X |
| 1 | COMPRESSOR ASSEMBLY | X | X |
| 1 | DATA LINK PROCESSOR ASSEMBLY | X | X |
| 1 | DF ARRAY ANTENNA, AS-3660/TRQ-32(V) | X | X |
| 1 | DIRECTION FIND CONTROL, C-11002/USQ | X | X |
| 1 | DISK DRIVE CONTROL ASSEMBLY, C-11843/TRQ-32(V) | X | X |
| 1 | ELECTRICAL EQUIPMENT SHELTER, S-457B/G | X | X |
| 1 | ELECTRONIC QUAD RECEIVER CABINET, CY-8324/TRR-35(V) | X | X |
| 1 | EMI FILTER BOX, A36 | X | X |
| 1 | FAULT FUNCTION PANEL, 4408-100-29 | X | X |
| 1 | GEN/AIR COND CONTROL ASSEMBLY | X | X |
| 1 | INTERCOM SET, C-1611D/A1C | X | X |
| 2 | INTERCOMMUNICATION CONTROL, C-2298/VRC | X | X |
| 2 | INTERCONNECTION BOX, J-4099/TSQ-138 | X | X |
| 1 | J-BOX, J-3513 | X | X |
| 1 | J-BOX, J-3514 | X | X |
| 1 | LOUDSPEAKER, LS-454/U | X | X |
| 1 | MAGNETIC DISK RECORDER-REPRODUCER, RD-583/TRQ-32(V) | X | X |
| 1 | MAGNETIC FIELD CONVERTER, CV-3579/TSQ | X | X |
| 1 | MOUNTING BASE, MT-1029 | X | X |
| 1 | MOUNTING BASE, MT-1898 | X | X |
| 1 | MOUNTING BASE, MT-6017A/ARC-164(V) | X | X |
| 2 | OPERATOR CONTROL PANEL, MX-10570/TRQ-32(V) | X | X |
| 2 | OPERATOR TERMINAL, CP-1824/TRQ-32(V) | X | X |
| 1 | PNEUMATIC MAST | X | X |
| 1 | POWER SUPPLY, PP-7817/URR | X | X |
| 2 | POWER SWITCH ASSEMBLY, SA-2559/TRQ-32(V) | X | X |
| 1 | PUMP ASSEMBLY | X | X |
| 1 | RADIO FREQUENCY PROCESSOR, MX-10526/TRQ-32(V) | X | X |
| 1 | RECEIVER, RADIO, R-442A/VRC | X | X |
| 1 | RECEIVER, TRANSMITTER, RT-524A/VRC | X | X |
| 2 | RECEIVER, R-2143/URR | X | X |
| 2 | RECEIVER, R-2144A/URR | X | X |
| 2 | RECEIVER CONTROL INDICATOR, C-11383/TRR-35(V) | X | X |
| 1 | RECEIVER INTERFACE UNIT, J-4144/TRR-35(V) | X | X |
| 1 | RESERVOIR ASSEMBLY | X | X |
| 1 | RF DISTRIBUTION UNIT, SA-2444/TRQ-32(V) | X | X |
| 1 | SHELTER MOUNTED UNIT ASSEMBLY | X | X |
| 2 | SIGNAL DISPLAY UNIT, ID-2349/TRR-35(V) | X | X |

DIFFERENCES BETWEEN MODELS (CONT).

| QTY | L.R.U. | (V) 1 | (V) 2 |
|-----|---------------------------------------------------------------|-------|-------|
| 2 | SOUND RECORDER-REPRODUCER SET, UNH-17A | X | X |
| 1 | SPEECH SECURITY EQUIPMENT, TSEC/KY-57 | X | X |
| 1 | SYSTEM CONTROLLER, C-1 1845/TRQ-32(V) | | X |
| 1 | SYSTEM POWER SUPPLY, PP-8179/TRQ-32(V) | X | X |
| 1 | TELEPHONE SET, TA-312/PT | X | |
| 1 | THERMAL PRINTER, RP-272/G | | X |
| 1 | UHF BANDPASS FILTER | X | X |
| 1 | UHF INTERCEPT & DATALINK ANTENNA, AS-3661/TRQ-32(V) | X | X |
| 1 | VHF BANDPASS FILTER | X | X |
| 1 | DEDICATED LOOP ENCRYPTION DEVICE, TSEC/KG-84 (TSEC/KG-84A) | | X |
| 1 | RADIO RECEIVER-TRANSMITTER, RT-1288A/ARC-164(V) | | X |
| 1 | RADIO SET CONTROL, C-10547/ARC-164(V) | | X |

Section III.

FUNCTIONAL DESCRIPTION OF OVERALL SYSTEM OPERATION

The AN/TRQ-32(V)1 and AN/TRQ-32(V)2 are housed in a fixed shelter that is mounted on an M-1028A1 vehicle. Both are capable of radio transmission and reception while mobile, via the AN/VRC-47, using vehicle power. While deployed power is supplied by the hydraulic generator/air conditioner.

The AN/TRQ-32(V)1 and AN/TRQ-32(V)2 are mobile, multistation, ground-based communication-intercept (HF, UHF, and VHF) and direction-finding systems for support of the Arm in the tactical environment, with the addition of data link capability provided only in the AN/TRQ-32(V)2. Both systems provide Very High Frequency (VHF) Direction Finding Line-of-Bearing (DF LOB) and ancillary functions. The electronic equipment is installed in an S-457 B/G shelter.

The antenna mast, air compressor, storage tank and hydraulic generator/air conditioner are mounted on the exterior of the shelter. The hydraulic pump, hydraulic reservoir, and power takeoff (PTO) are mounted on the vehicle. The system provides for two operator positions to perform all necessary functions. The system is transportable by rail if the shelter carrier and shelter are separated, and is transportable by air after organizational maintenance has removed the front and rear whip antennas and bases.

Within the shelter, the major system electrical assemblies are installed in four equipment racks. Equipment rack 1 is for use by OPERATOR 1. Equipment rack 3 is for use by OPERATOR 2. Equipment rack 2 and rack 4 are shared by both operators.

Equipment rack 1 contains seven electronic assemblies, storage cabinet, and a headset audio jack. The electronic assemblies are: intercom control panel, operator control panel, signal display unit, receiver control unit, operator terminal, power switch assembly, and RF distribution unit.

Equipment rack 2 contains five electronic assemblies, paper roller, and a writing table. The electronic assemblies are: caution panel, thermal printer, system controller, and two recorders.

Equipment rack 3 contains eight electronic assemblies, and a headset audio jack. The electronic assemblies are: DFCU, intercom control panel, operator control panel, signal display unit, receiver control unit, operator terminal, power switch assembly, and a receiver enclosure unit.

NOTE

The UHF radio control, TSEC/KG-84 (TSEC/KG-84A), and UHF receiver-transmitter will be used in the AN/TRQ-32(V)2 only.

Equipment rack 4 contains thirteen electronic assemblies. The electronic assemblies are: UHF radio control, guard receiver, TSEC/KY-57, UHF tunable bandpass filter, VHF tunable bandpass filter, TSEC/KG-84 (TSEC/KG-84A), receiver-transmitter (R/T), disk drive control, hard disk drive, audio frequency switch, system power supply, UHF receiver-transmitter, and data link processor.

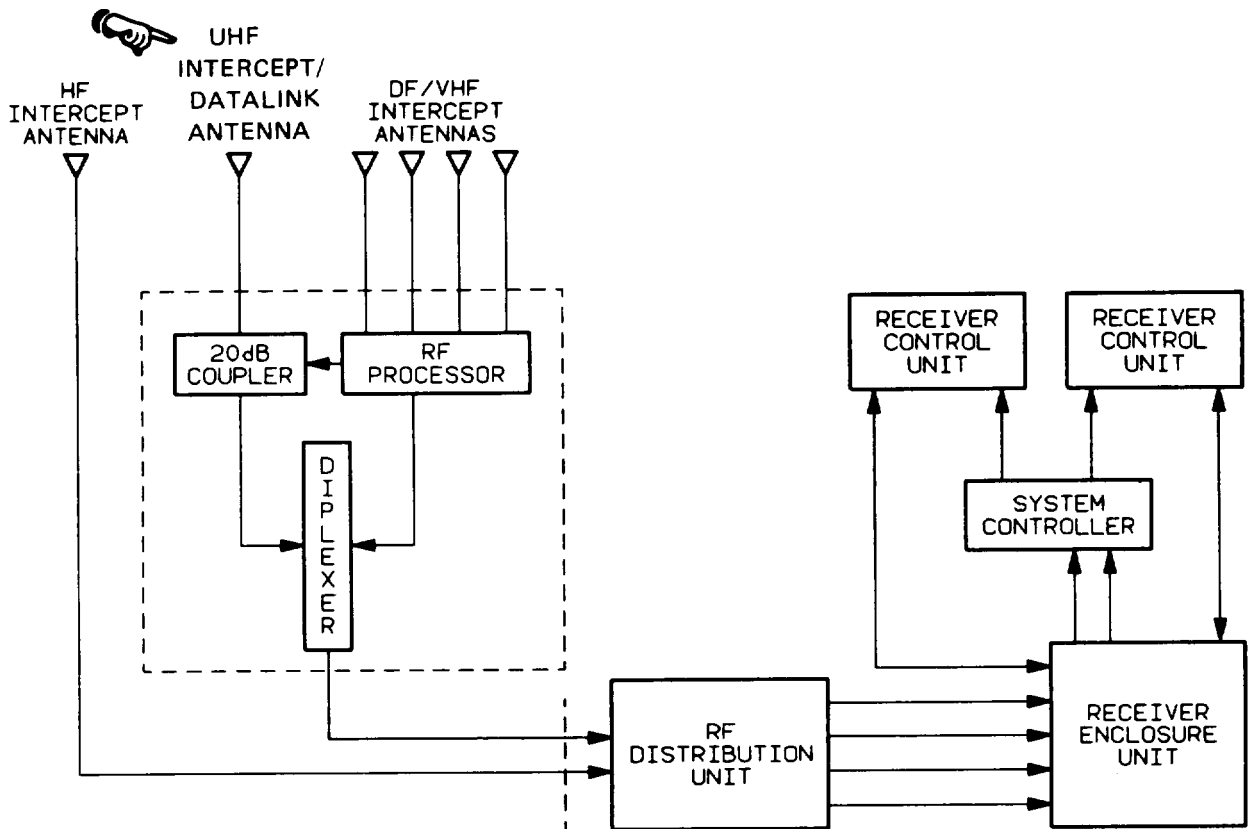
Also located within the shelter is a generator/air conditioner control panel, a power distribution panel, a DC selection panel, interconnection box J4099 and EMI filter box A36.

The electronic equipment provides for detecting RF signals in the HF, VHF, and UHF range bands, net capability in the VHF range, DF capability in the VHF range, data link capability, and recording of these intercepted signals. Up to four AN/TRQ-32(V)2 units may be netted together.

MODES OF OPERATION.

To provide a better understanding of AN/TRQ-32(V)1 and AN/TRQ-32(V)2 functions, the following operational modes are described: 1. intercept mode, 2. DF mode, 3. system audio operation, and 4. ASAS messages.

INTERCEPT MODE

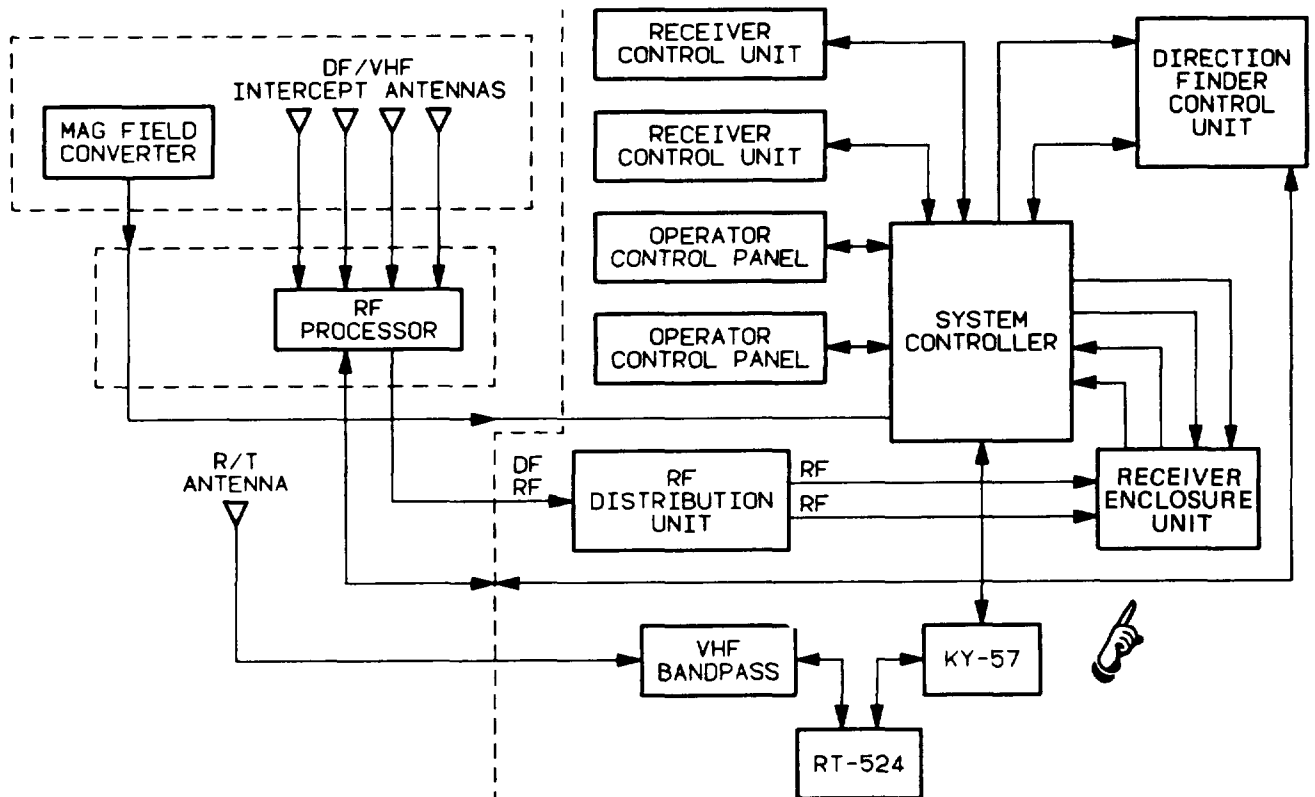


1. INTERCEPT MODE

In the intercept mode, the antenna used is determined by frequency of the target intercept signal and the receiver selected. When receiver A or R-2143 is selected, signals from the HF whip antenna (on front roadside of shelter) are routed through the RF Distribution Unit (RFDU), to the receiver (located in the quad receiver electronics cabinet). When receiver B or R-2144A is selected (for VHF intercept), signals from the four DF dipoles are combined (in the RF processor) and the resultant signal is routed (via cable W22) through the RFDU to the receiver. The UHF Intercept/Data Link antenna (located at the center of the DF array) is used for UHF intercept. Output from this antenna is fed to a coupler and diplexer in the antenna base assembly and combined with the output of the RF processor. The resultant signal provides the antenna input signal to the R-2144A receiver.

The receivers are digitally tuned and functional controlled by a serial 64-bit control word generated by the Receiver Control Unit (RCU). Receiver A is connected directly to the receiver enclosure which reads the incoming signal and determines which receiver will process it. Control signals for receiver B pass through the system controller before reaching the receiver enclosure. The system controller is used during DF and fix functions.

SYSTEM OPERATION DURING DF



2. SYSTEM OPERATION DURING MANUAL DF

The operator initiates a manual DF command when a target is found in the intercept mode. With the receiver tuned to the target frequency, the operator presses the DF button the Operator Control Panel (OCP). A signal sent to the system controller initiates the DF sequence.

The system controller inhibits changes in the Receiver Control Unit (RCU), reads the control word and verifies that the frequency is in the system DF range. The control word is again passed to the receiver and incorporated into a command word to the Direction Finding Control Unit (DFCU).

The DFCU controls the RF processor in the antenna base assembly. The two units (in combination with the four DF dipoles) determine the angle of arrival in relation to one of the dipoles. RF output from the antenna is fed through the RFDU to the receiver, which converts the information to the receiver IF frequency and sends it to a demodulator in the system controller. Output of the demodulator is sent to the DFCU to be used in the DF process. When an angle has been determined, it is sent to the system controller along with a quality factor.

The system controller reads the signal from the magnetic field converter (mounted on the antenna array) to determine in what direction the array is pointing (in relation to magnetic north). This reading is combined with the angle received from the DFCU to determine a Line-Of-Bearing (LOB) from the system location to the target emitter (also in relation to magnetic north). This reading is combined with a Grid-to-Magnetic correction factor (GM angle, entered by the operator) to arrive at a LOB that can be plotted on a map.

This angle is sent to the printer and OCP to be displayed along with the quality factor. The system controller then releases the RCU to continue tuning the receiver. In the Auto DF mode, DF initialization is performed by an output from the RCU that is active when a signal is present.

A. NETTED OPERATION AS NCS STATION

When either operator has receiver B tuned to a target emitter, a FIX may be obtained by pressing the FIX 1 or FIX 2 button on the system controller. When the FIX button is pressed, the system controller halts the receiver control unit and reads the control data. The control data is formatted into a message and routed to the KY-57 encryption device which encrypts the message and sends it to the RT-524A for transmission to the slave stations. The NCS then performs a DF and waits for the slave stations to report their LOB's and UTM locations. At the appointed time, the slave stations transmit their target data to the NCS.

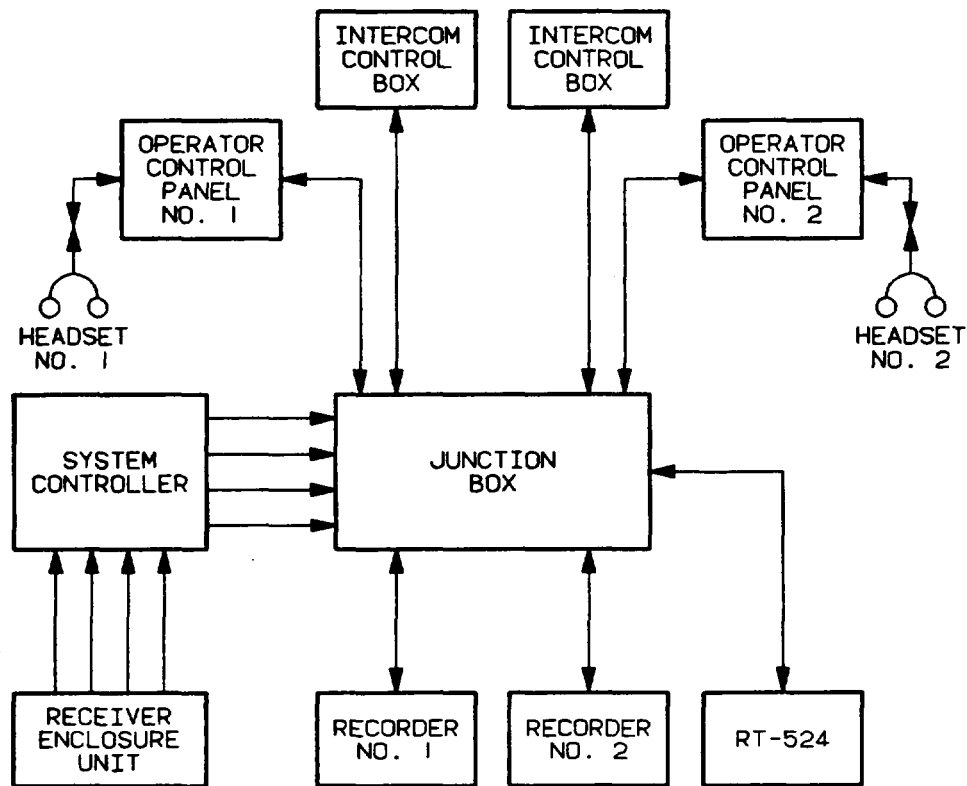
Target data transmitted to the NCS is received by the RT-524A radio through the rear whip antenna and VHF tunable bandpass filter. The data is then routed to the KY-57 for decryption and sent to the system controller which uses the data to compute a target location if possible. The operator terminals (when powered up) will also use the data to computer the fix.

B. NETTED OPERATION AS A SLAVE STATION

When a slave station is operated in the netted mode, the operator is limited to intercept, LOB and transcript functions. All bite tests are disabled and the RT-524A is disabled for voice communications. In addition, receiver B (in operator position no. 1) is retuned by the incoming message when a net fix is being performed.

When the tasking message is received by the RT-524A (and decrypted by KY-57) it is relayed to the system controller. The system controller halts receiver B (in operator position no.1) and retunes the receiver to the target frequency. DF is then performed and the results sent to the KY-57 (for encryption) and transmitted to the NCS via the RT-524A.

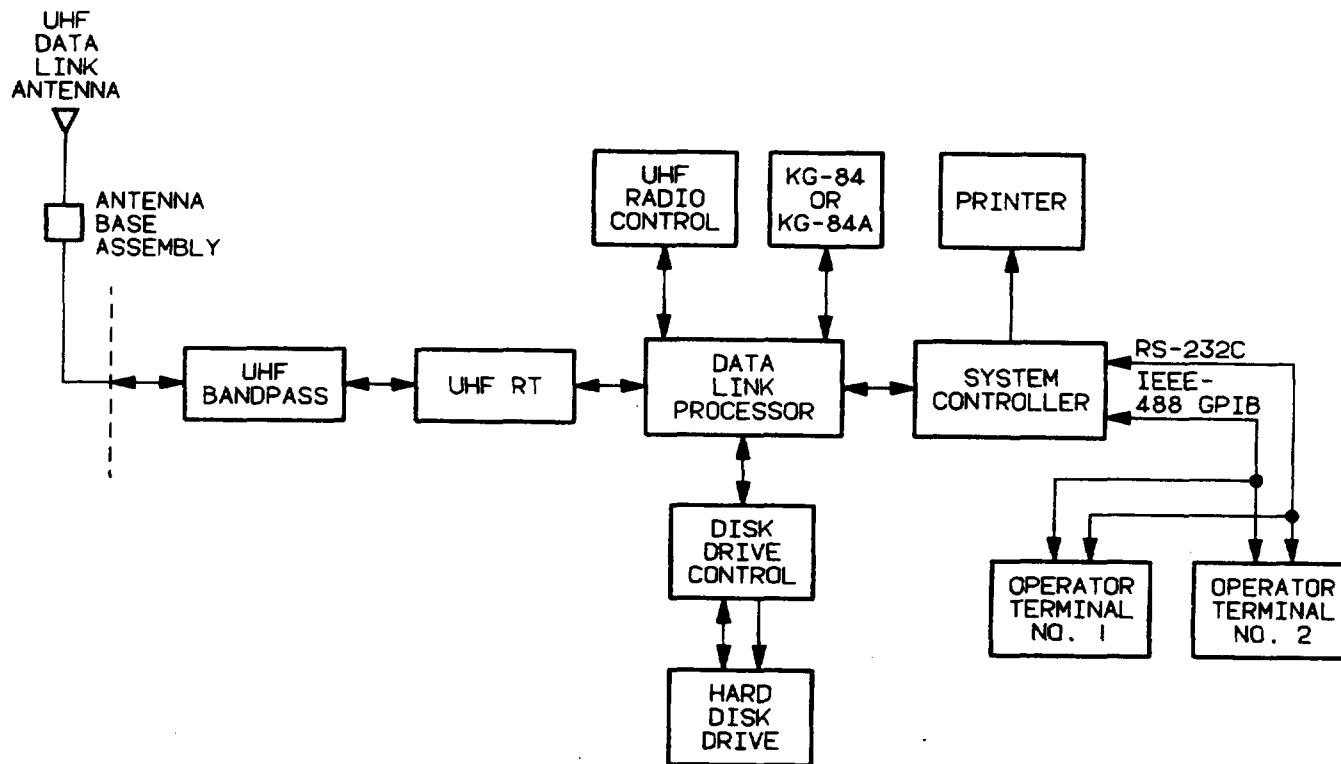
SYSTEM AUDIO OPERATION



3. SYSTEM AUDIO OPERATION

Audio signals to the operator headset and from the microphone are controlled by the C-1611 Intercom Control Box. Connection to the operator headset is through a standard audio connector on the equipment rack and operator control panel. Audio signals from the audio connector are routed through the J-4099 Junction Box. The audio signals are then routed through the C-1611 for selection and back to the J-4099 Junction Box. All audio sources are routed through the J-4099 Junction Box for distribution.

ASAS MESSAGES



4. ASAS MESSAGES (AN/TRQ-32(V)2 ONLY)

A. TRANSMITTING AN ASAS MESSAGE

When the operator selects create/transmit from the operator terminal, the body of the message is created in the terminal and stored on disk. The message may be left in storage, printed or transmitted. If the message is stored for later use, it is passed, via the General Purpose Information Bus (GPIB), to the disk drive control and hard disk drive assembly.

If the print or print and transmit options are selected, the terminal requests the printer from the system controller. The message is then routed (via a serial interface through the system controller) to the printer.

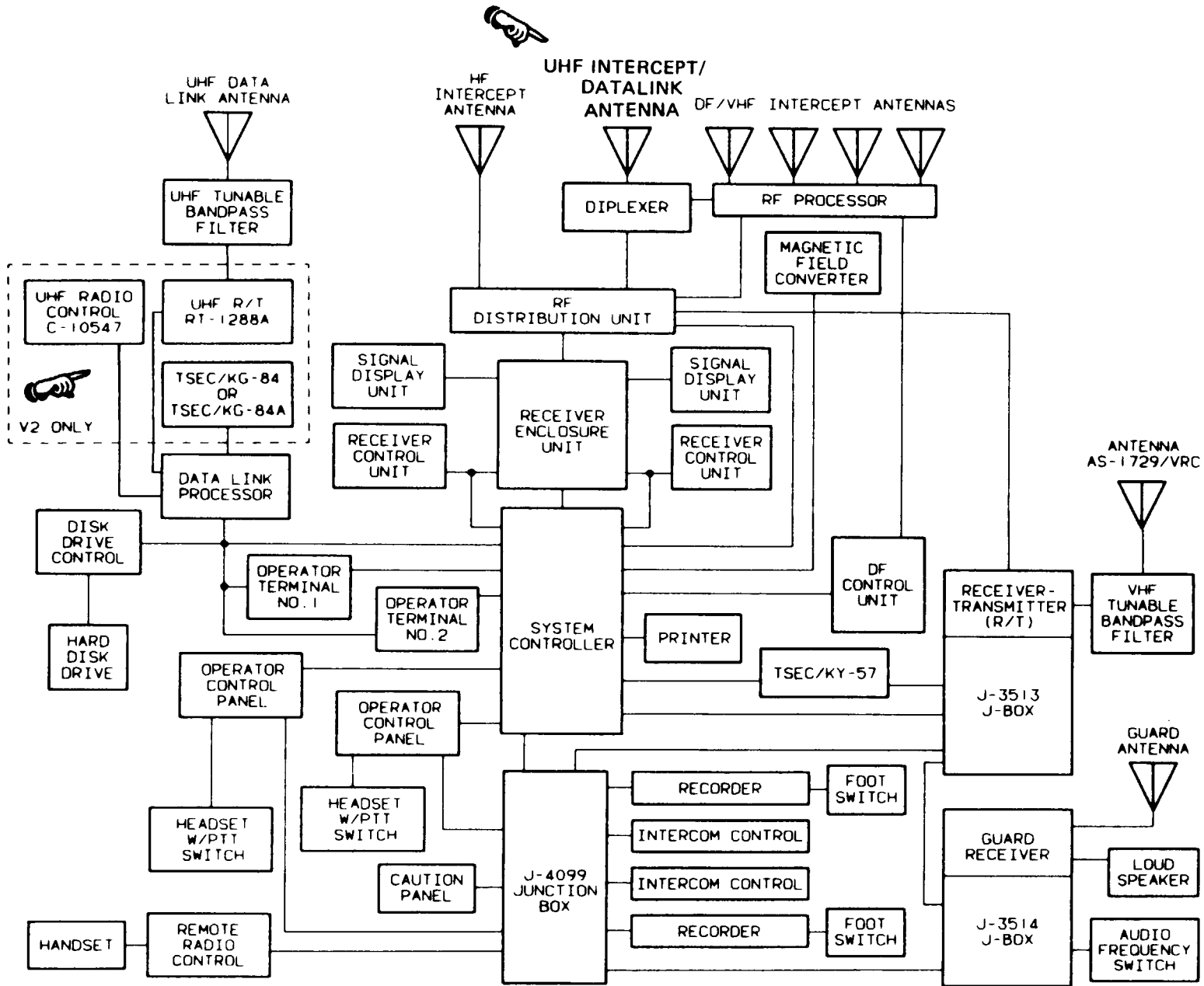
When a message is to be transmitted, the terminal sends the message to the data link processor for formatting. When enabled, the data link processor sends the message to the KC-84 (KG-84A) for encryption. The message is then passed to the RT-1288A for transmission (via the data link processor). RF from the RT-1288A passes through the UHF tunable bandpass filter and antenna cable to the UHF data link antenna (part of the antenna system on the mast).

B. RECEIVING AN ASAS MESSAGE

The RF signal is received via the data link antenna and routed through the antenna base assembly, through cable W22, to the UHF tunable bandpass filter. The bandpass filter must be manually tuned to the RT-1288A operating frequency. Signals from the bandpass filter are routed to the input of the RT-1288A for demodulation. Output from RT-1288A is routed (via the data link processor) to the KG-84 (KG-84A) for decryption. The signal is then sent back to the data link processor which reads the message header to determine what action (if any) is necessary. If the message is not for the system, it is ignored.

If the message is for the receiving station the data link processor informs the operator terminals (via the GPIB) that a message has been received. When the operator initiates a read message sequence, the data link processor passes the message to the terminal via the GPIB. The terminal then saves the message on the hard disk drive. The operator can display the message or print it on the printer.

When the message is recognized as a relay, the data link processor reformats the message with the new address. The message is then retransmitted.



AN/TRQ-32(V) BASIC BLOCK DIAGRAM

Functions of components shown in the AN/TRQ-32(V) BASIC BLOCK DIAGRAM areas follows:

1. ANTENNA AS-1729/VRC

This antenna is used for both receive and transmit by the R/T.

2. AUDIO FREQUENCY SWITCH

Used to switch the KY-57 between the R/T and the guard receiver.

3. CAUTION PANEL

Contains 20 indicator lights that are controlled by fault signals from various equipment to alert the operator when a fault occurs.

4. DATA LINK PROCESSOR

Provides the capability to perform all necessary ASAS datalink protocol. It receives and transmits messages from the KG-84 (KG-84A) and the RT-1288A. It provides message validation and automatic relay of messages to relay stations.

5. DF CONTROL UNIT

Accepts DF requests from the system controller and outputs signals to the RF processor for controlling DF related functions. This unit computes and reports the line-of-bearing to the system controller.

6. DF ARRAY ANTENNA

Supports the following items: DF/VHF/ intercept antenna elements, UHF/data link antenna, and the magnetic field converter.

7. DIPLEXER

Combines the outputs of the UHF intercept antenna and the VHF intercept antenna elements onto a single coaxial transmission line.

8. DISK DRIVE CONTROL

Provides the necessary conversion to allow connection of the Disk Drive to the data bus. This LRU contains its own power supply.

9. FOOT SWITCH

Provides remote operation of recorder AN/UN H-17A.

10. HYDRAULIC GENERATOR/AIR CONDITIONER

Provides 120/240 Vac 60 Hz power to the shelter for equipment operation in the deployed mode of operation.

11. GUARD ANTENNA

The AB-15/GR, MS-116A, MS-117A, and MS-118A make up the antenna for the guard receiver. This antenna is used in conjunction with the R-442A/VRC radio to monitor VHF communications. (It is identical to the HF intercept antenna.)

12. GUARD RECEIVER

Operated in the VHF band as a receiver for command and control communications. Its output is heard on the loudspeaker only.

13. HANDSET

Provides remote operation to the RT-524A/VRC.

14. HARD DISK DRIVE

Provides the system with mass storage which will be used to hold the operator terminal control program as well as the system database storage.

15. HEADSET

Provides operator capability to receive/transmit VHF communications; intercept HF, VHF and UHF communications; and communicate with the other operator.

16. HF INTERCEPT ANTENNA

The HF Intercept antenna is used in conjunction with the R-2143/URR Receiver to intercept HF signals.

17. INTERCOM CONTROL PANEL

Provides the operator with the capability to receive/transmit VHF radio communications, except guard receiver, or intercepted audio signals, and to communicate with the other operators. One intercom control panel is provided for each operator.

18. J-BOXES

The J-3513 and J-3514 J-boxes interface the VHF guard receiver and the R/T with the KY-57.

19. JUNCTION BOX, J-4099/TSQ-138

Provides a central point for control and distribution of the audio and fault indicating signals.

20. LOUDSPEAKER

The loudspeaker is used with the guard receiver.

21. MAGNETIC FIELD CONVERTER

Contains two sensing units which report to the system controller. The sensing units detect the orientation of the antenna and whether the antenna is tilted.

22. OPERATOR CONTROL PANEL (DCP)

Provides the operator with the capability to control the DF subsystem and display DF and auto-DF line-of-bearing. It also selects HF or VHF/UHF audio for recording. One OCP is provided for each operator.

23. OPERATOR TERMINAL

Enables operator capabilities such as menu-driven system control, graphic display and analyzing of Fix results, construction and editing of Task Log Worksheets, generation of reports, access to memo scratchpad areas, and search capability on selected database items.

24. RADIO RECEIVER SET, AN/TRR-35(V)3

The AN/TRR-35(V)3 contains:

a. RECEIVER ENCLOSURE UNIT (REU)

Contains a power supply, four receivers, and an interface unit. The interface unit is used to interface the receivers with two Receiver Control Units (RCU). Each RCU controls one HF and one VHF/UHF receiver. Received signals from the intercept antennas are routed to the four receivers. Two receivers (R-2143/URR) operate in the HF band and two receivers (R-2144A/URR) in the VHF/UHF band. The REU outputs a signal (BITE output) to the caution pane I to indicate trouble within the AN/TRR-35(V)3.

b. RECEIVER CONTROL UNIT (RCU)

Provides control of the receivers. Each RCU contains a readout display, a headset jack, and 70 switches and indicators used by the operator to control and monitor all receiver operations. One RCU is provided for each operator.

c. SIGNAL DISPLAY UNIT (SDU)

Provides a visual display of frequencies monitored by the VHF/UHF receiver. One SDU is provided for each operator.

25. RECEIVER-TRANSMITTER (R/T)

Provides two-way FM communications in the VHF band and is used in the netting of the AN/TRQ-32(V) system.

26. RECORDER

Contains a two-channel, four-track magnetic audio tape recorder for cassette tapes. Recording is controlled by the operator through the front panel controls and a foot switch. It is used to record intercept signals and operator comments. Two recording speeds are available for recording and for playback. One recorder is provided for each operator.

27. REMOTE RADIO CONTROL

The C-2298/VRC provides the operator with the capability of receiving and transmitting on the RT-524A from the cab of the vehicle.

28. RF DISTRIBUTION UNIT (RFDU)

Selects the RF path for either VHF/UHF interceptor VHF direction finding. The RFDU also switches the notch filters in to notch out transmitted RF signals from the intercepted path.

29. RF PROCESSOR

Used to process commands from the DF control unit to determine the location of detected unknown radio emitters.

30. SYSTEM CONTROLLER (SC)

Integrates the Direction Finding (DF) subsystem with the other subsystems. It can be remotely operated from the operator terminals. It also provides the line-of-bearing processing ability; controls the automatic netting function; enables operator inputs for Time Of Day (TOD) and for Universal Transverse Mercator (UTM) coordinates; provides the operator with the ability to request DF line-of-bearings or fixes when netted.

31. THERMAL PRINTER

Provides the operator with a hardcopy of BITE results, LOB's, fluxgate readings, fixes, and messages. The printer is controlled locally by the system controller or remotely by the operator terminals.

32. TSEC/KY-57

Provides speech security (encryption and decryption) for the VHF R/t and the guard receiver.

33. TSEC/KG-84 (TSEC/KG-84A)

Provides digital security (encryption and decryption) for the RT-1288A.

34. UHF/DATALINK ANTENNA

The data link antenna is used for both receive and transmit by the R/T-1288A. The antenna is also used for UHF intercept and radiates a BITE signal that is used for system troubleshooting.

35. UHF TUNABLE BANDPASS FILTER

Provides for electromagnetic compatibility between the RT-1 288A/ARC-164(V) and the AN/TRR-35(V)3 Receiving Set.

36. UHF RECEIVER-TRANSMITTER, RT-1288A/ARC-164(V)

Provides two-way UHF communications and is used in the transmission/reception of data for data link operation.

37. UHF RADIO CONTROL, C-10547/ARC-164(V)

The C-10547/ARC-164(V) Radio Set Control provides remote operation for control of RT-1288A.

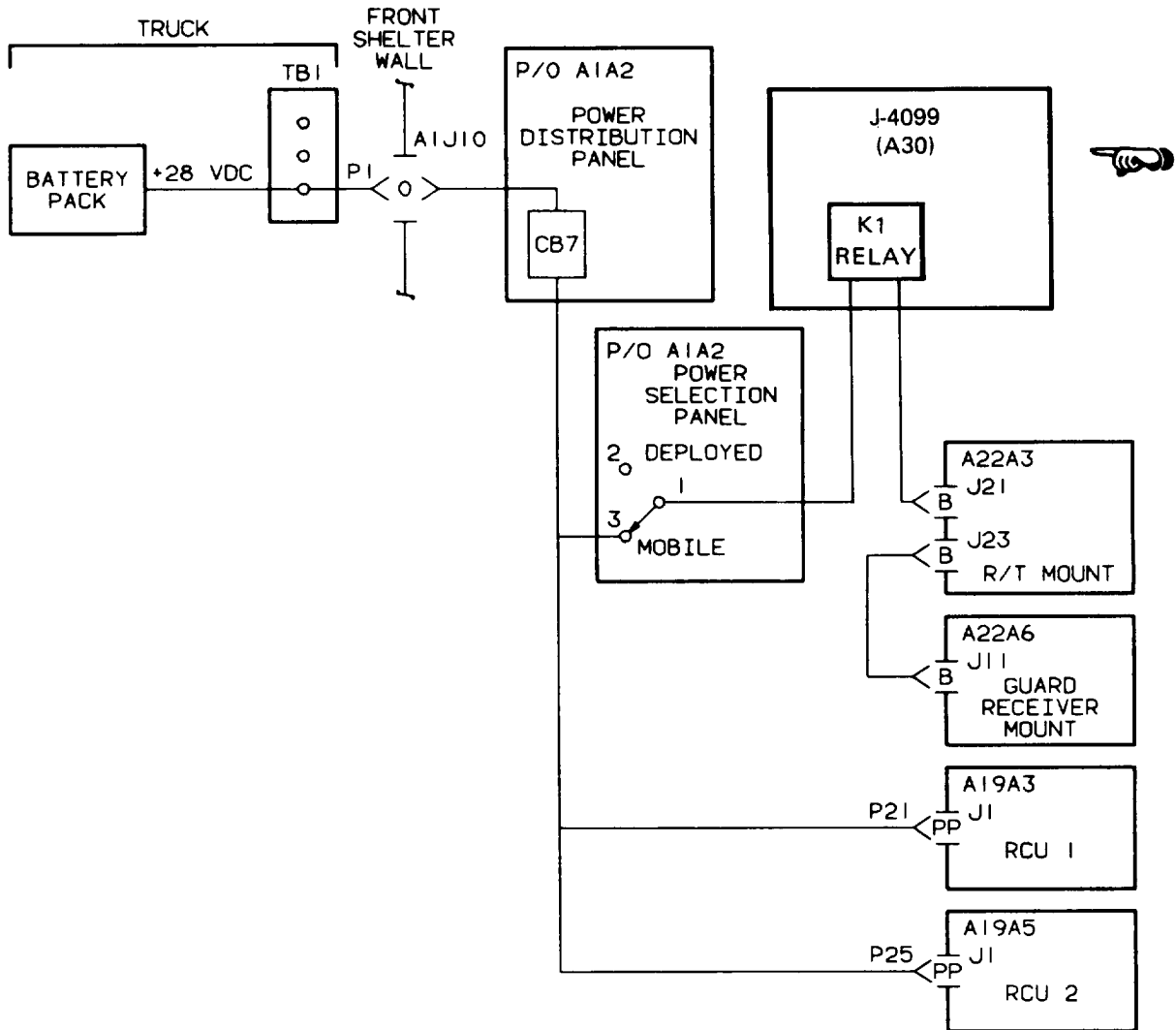
38. VHF TUNABLE BANDPASS FILTER

Provides electromagnetic compatibility between the RT-524A/VRC and the AN/TRR-35(V)3 Receiving Set.

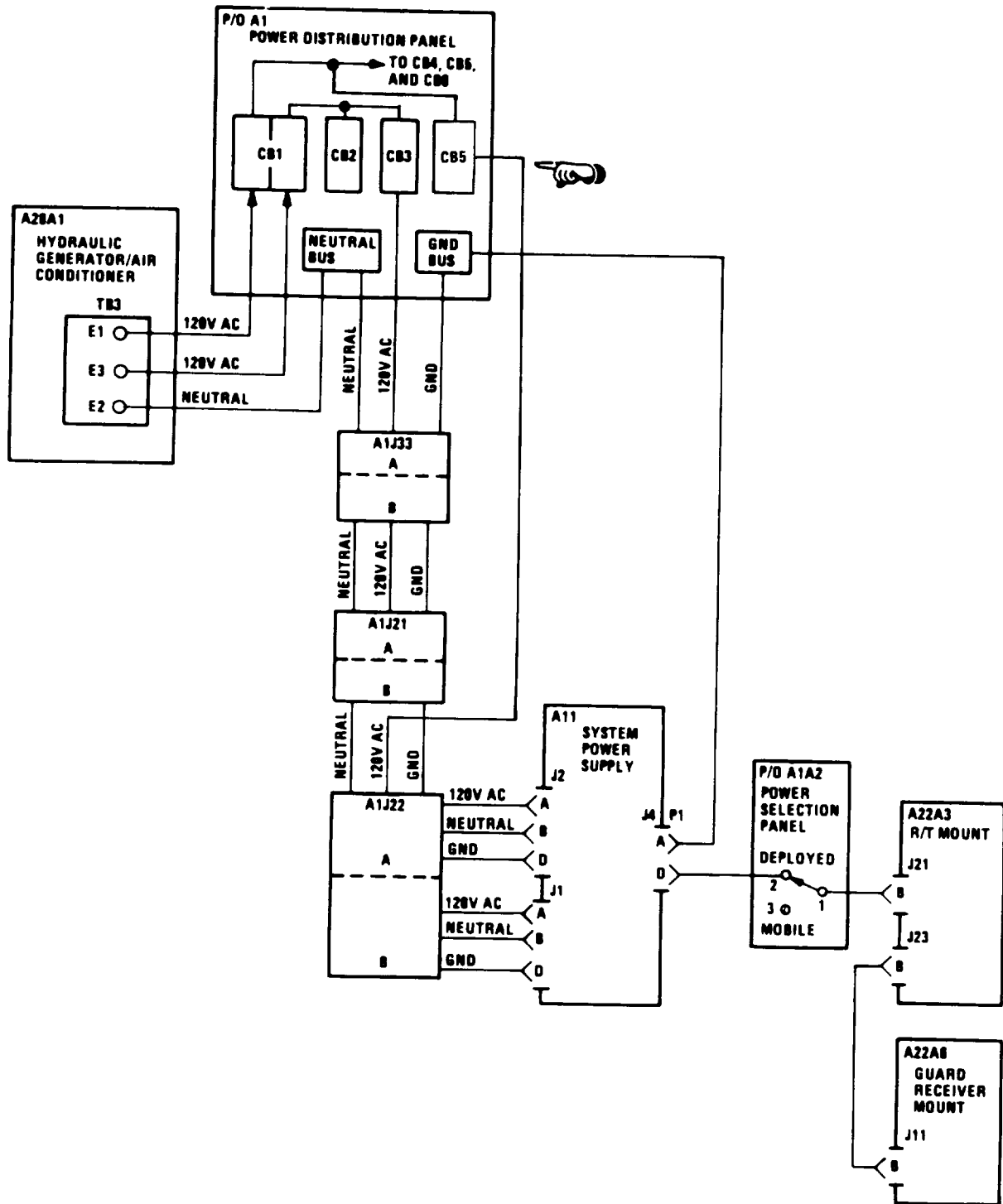
Section IV.

POWER DISTRIBUTION

GENERAL.



When the AN/TRQ-32(V)1 and AN/TRQ-32(V)2 are mobile, only the R/T is operational. During mobile operation, the DC power selection switch is set to the MOBILE position which applies + 28 Vdc power from the vehicle battery pack to the R/T; guard receiver, and K1 in the J-4099 Junction Box.



When the AN/TRQ-32(V)1 and AN/TRQ-32(V)2 are deployed and the hydraulic generator/air conditioner (HG/AC) is operating, 120 Vac is supplied by the HG/AC to the shelter equipment. When the DC power selection switch is set to the DEPLOYED position, the system power supply provides the +28 Vdc power for the R/T and guard receiver.

POWER DISTRIBUTION.

The vehicle battery pack supplies +28 Vdc power to TB1 and A1J10 to CB7, CB8, CB9, and AC relays A1K1-A1K4 in the power distribution panel. CB7 routes +28 Vdc power to both receiver control units (for memory power) and to S1 terminals 3 and 5 on the DC power selection panel. CB8 routes +28 Vdc power to the HG/AC control panel. CB9 routes +28 Vdc power to the compressor assembly. Relays A1K1, A1K2, A1K3, and A1K4 connect +28 Vdc to the caution panel when energized by 120 Vac from CB2, CB4, CB5, and CB6.

The HG/AC is the primary source of 120 Vac thru TB3 terminals E1, E2, and E3 to CB1 (MAIN circuit breaker) on the power distribution panel. CB1 routes power to CB2, CB3, CB4, CBS and CB6. CB2 routes 120 Vac thru EMI filter box (A36) to the antenna power supply (A31A2), signal display unit no. 1 (A19A2), RCU no. 1 (A19A3), recorder no. 1 (A4), system controller (A10), thru power switch no. 1 (A38) to operator terminal no. 1 (A9). CB3 routes 120 Vac to signal display unit no. 2 (A19A4), RCU no.2 (A19A5), recorder no. 2 (A16), thru power switch no. 2 (A39) to operator terminal (A25), and to the receiver enclosure unit (A19A1). CB4 routes 120 Vac to the TSEC/KG-84 (TSEC/KG-84A) (A26), data link processor (A37) thru disk drive control (A41) to the hard disk drive (A40). CB5 routes 120 Vac to the system power supply (All) that supplies 120 Vac power to the MT-6017A mount (A20) and 115 Vat, 400 Hz, 3 phase to the DFCU (A13). CB6 routes 120 Vac to A1J35, A1J31, A1J30 and A1J29 convenience outlets, and thru A1S5 and A1S2 to the flourescent lights.

When the DC power selection switch is in the MOBILE position, +28 Vdc is applied from the vehicle battery pack to the R/T and junction box. When the DC power selection switch is in the DEPLOYED position, +28 Vdc is applied to the R/T from the system power supply.

ORGANIZATIONAL MAINTENANCE PROCEDURES

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| Service Upon Receipt | 2-2 |
| Organizational Preventive Maintenance, Check, and Services | 2-10 |
| Troubleshooting | 2-20 |
| Removal and Replacement Procedures | 2-149 |

Section I.

**REPAIR PARTS, SPECIAL TOOLS, TMDE, AND
SUPPORT EQUIPMENT**

COMMON TOOLS AND EQUIPMENT

For authorized common tools and test equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

Special tools, TMDE, and support equipment and their purposes are identified in the Maintenance Allocation Chart (Appendix B). They are also listed in Appendix C.

ORGANIZATIONAL REPAIR PARTS

Repair parts are listed and illustrated in Appendix C of this manual.

Section II.

SERVICE UPON RECEIPT

ANTENNA INSTALLATION

Before the AN/TRQ-32(V)1 or AN/TRQ-32(V)2 can be put into service, the guard antenna, HF intercept antenna and RT-524A antenna must be installed onto the shelter.

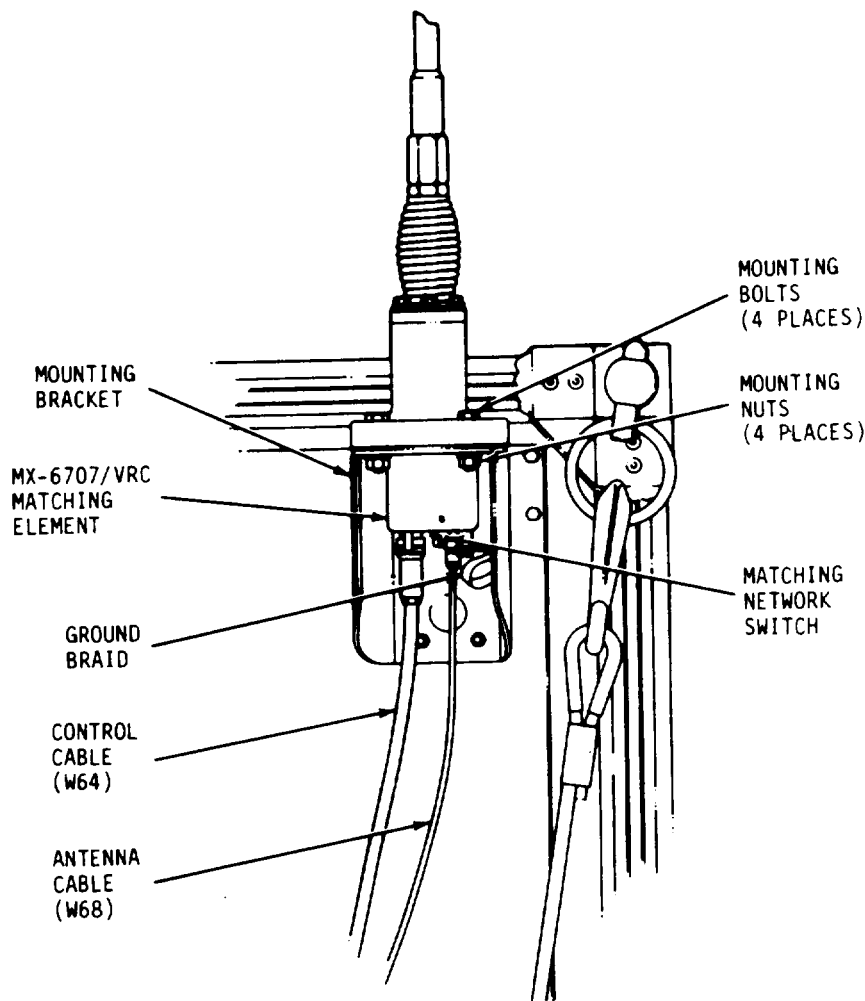
1. Remove antenna cables W68, W70, W71 and control cable W64 from storage compartment inside the shelter.
2. Unscrew base insulators from mounting brackets inside the shelter and remove the HF and guard antenna base assemblies from rack 1. Remove antenna elements MS-116A, MS-117A and MS-118A from the shelter.
3. Using a ratchet handle and 7/16" socket, remove and retain four bolts and lockwashers securing the RT-524 support and mounting plate assembly to its stored position inside the shelter.
4. Using a ratchet handle and 7/16" socket, remove and retain four bolts and lockwashers located at the top rear curbside of shelter.
5. Position the support and mounting plate assembly onto the top rear curbside of shelter. Using ratchet handle and 7/16" socket, secure the assembly with eight bolts, lockwashers and flat washers.

CAUTION

Do not tighten the MX-6707/VRC mounting bolts beyond 100 in. lb. maximum. Overtightening bolts may damage the plastic body of the MX-6707/VRC or the helix screw threads in the nuts.

CAUTION

Do not paint the plastic body of the MX-6707/VRC or attempt to remove paint using paint remover. Paint removing solvents may damage the plastic body of the MX-6707/VRC. Clean surface of the MX-6707/VRC with clean water only.

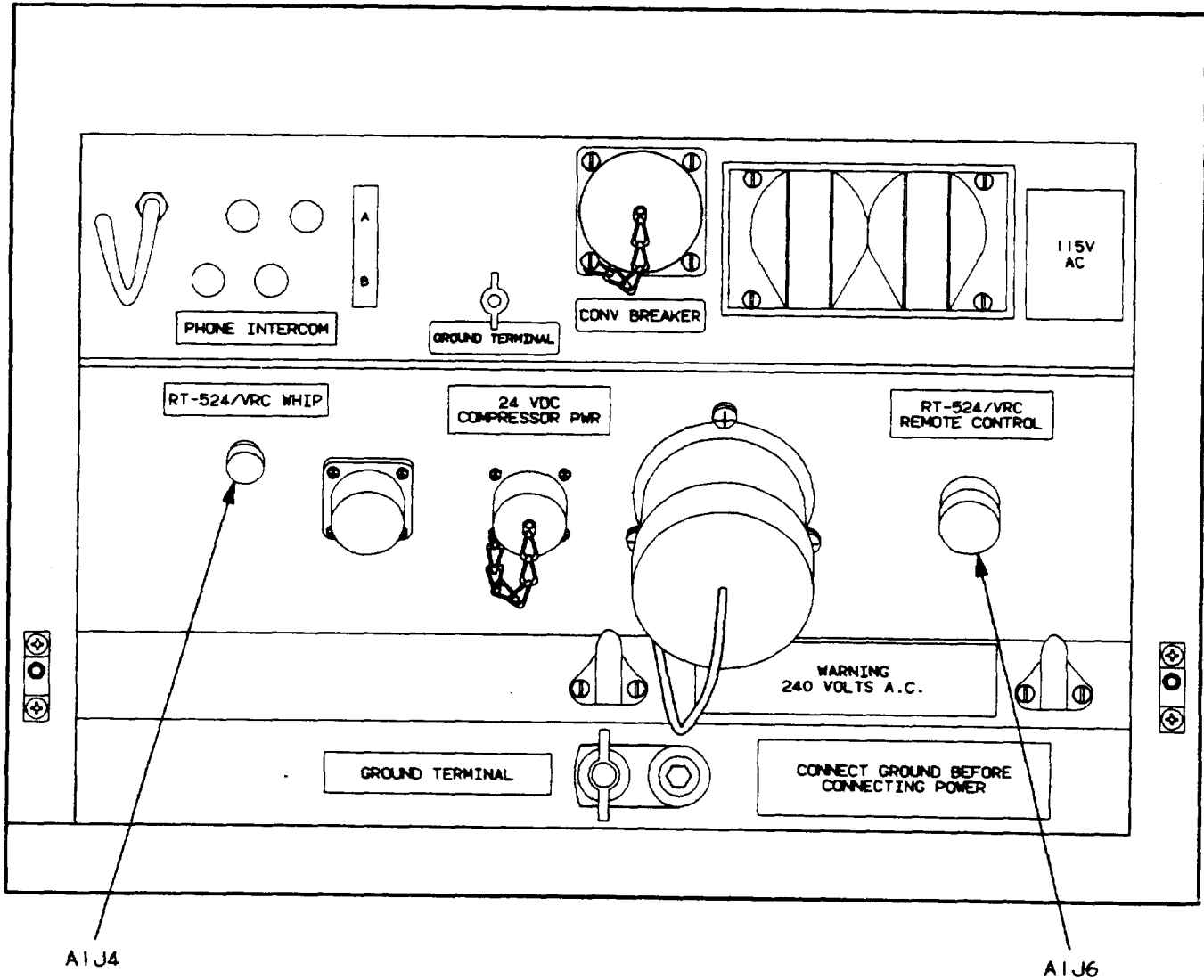


6. Install MX-6707/VRC matching element in mounting bracket with the antenna matching network switch to the rear.
7. Using a 3/8" drive ratchet, 6" extension, 9/16" socket 9/16" box end wrench secure matching element to mounting bracket with four bolts, lockwashers, and nuts. Using a torque wrench, torque mounting bolts to 100 in. lbs maximum.
8. Install the ground braid onto the matching element and secure with hex bolt and two lockwashers. Tight nut using 6" adjustable wrench.

NOTE

If antenna cables were stored, remove cables from storage.

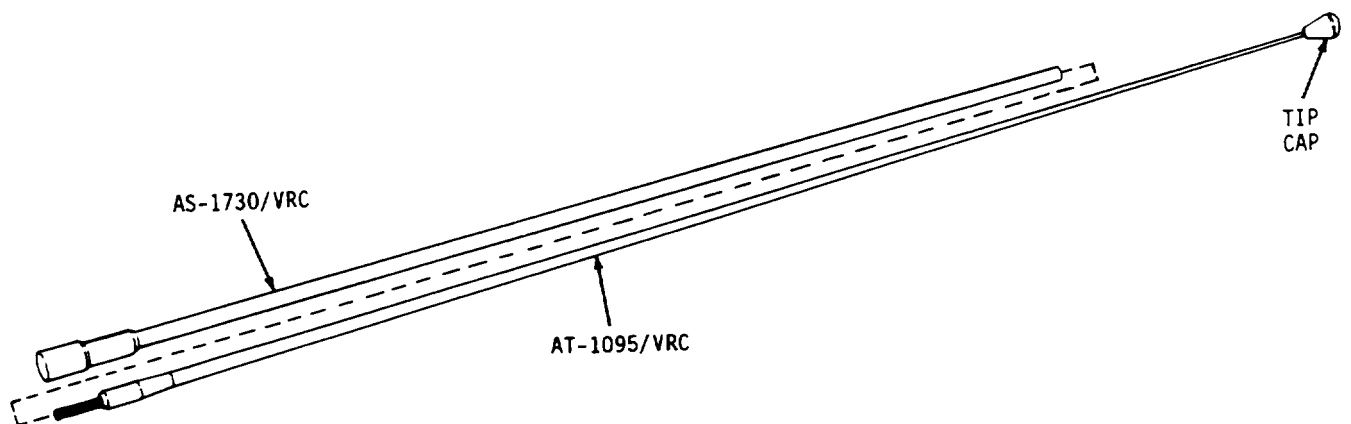
9. Connect control cable W64 to J551 on the MX-6707/VRC matching element.
10. Connect antenna cable W68 to J552 on the MX-6707/VRC matching element.



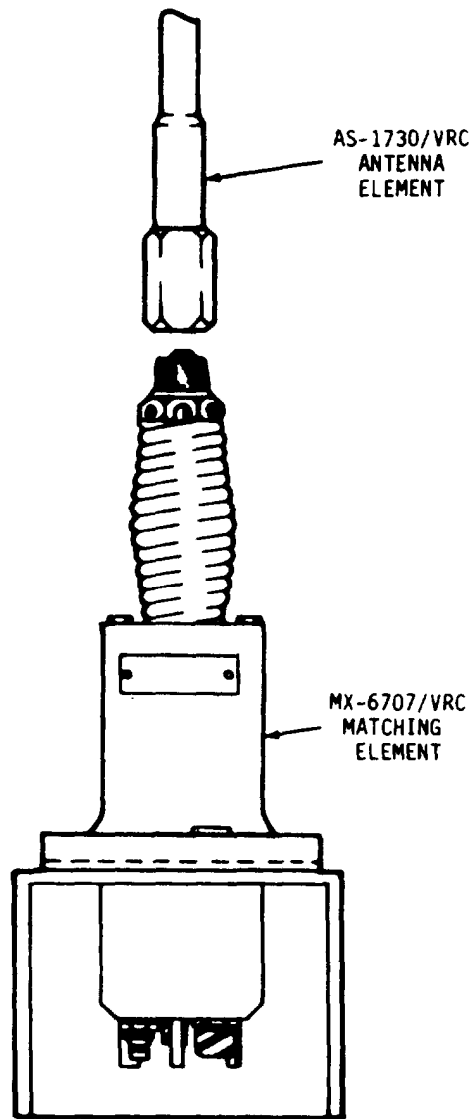
11. Remove dust covers from A1J4 and A1J6 on power entry panel.
12. Connect control cable W64 to power entry panel connector RT524/VRC Remote Control A1J6.
13. Connect antenna cable W68P1 to power entry panel connector RT524/VRC Whip A1J4.

WARNING

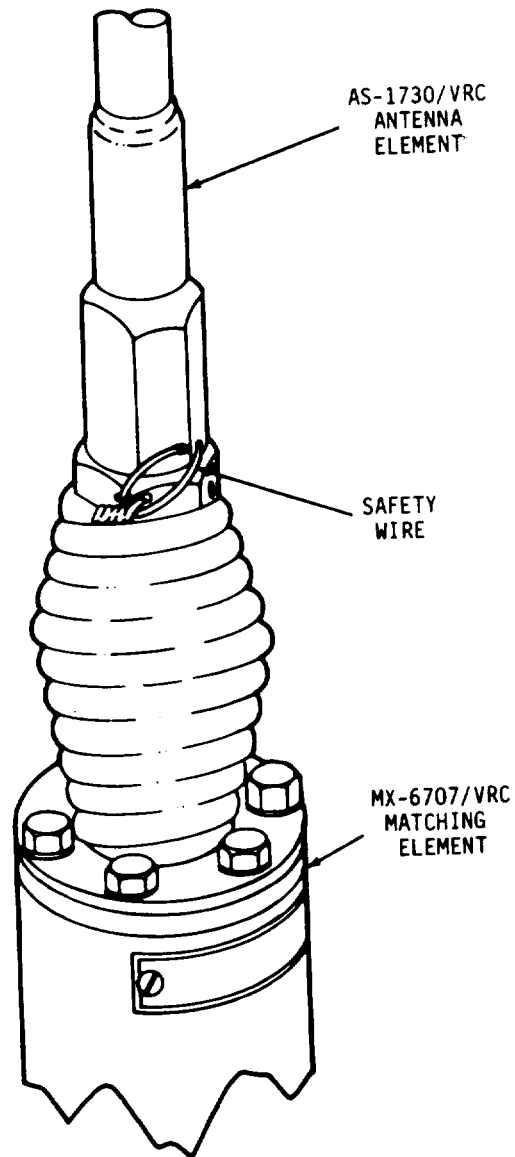
To prevent injury to personnel, ensure TIP CAP is on the top antenna element.



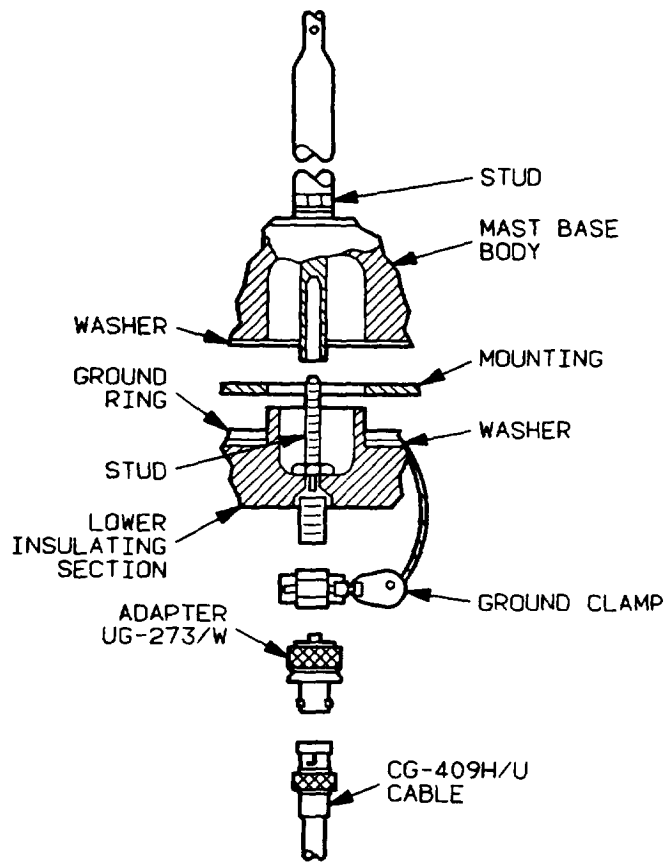
14. Apply a thin coating of silicone compound per MIL-S-8660 (Appendix D, Item 16) to the cleaned threads on male end of antenna element AT-1095/VRC and place into the female end of antenna element AS-1730/VRC. Screw elements together (hand tight).



15. Apply a thin coating of silicone compound per MIL-S-8660 (Appendix D, Item 16) to the cleaned threads on male end of matching element MX-6707/VRC.
16. Place female end of antenna element AS-1730/VRC onto male threads of matching element MX-6707/VRC and screw together (hand tight).



17. Route safety wire (Appendix D, Item 15) through the base of antenna element AS-1730/VRC and through matching element MX-6707/VRC. Twist wire ends together using 6" needle-nose pliers.
18. Tie down antenna using antenna tiedown.



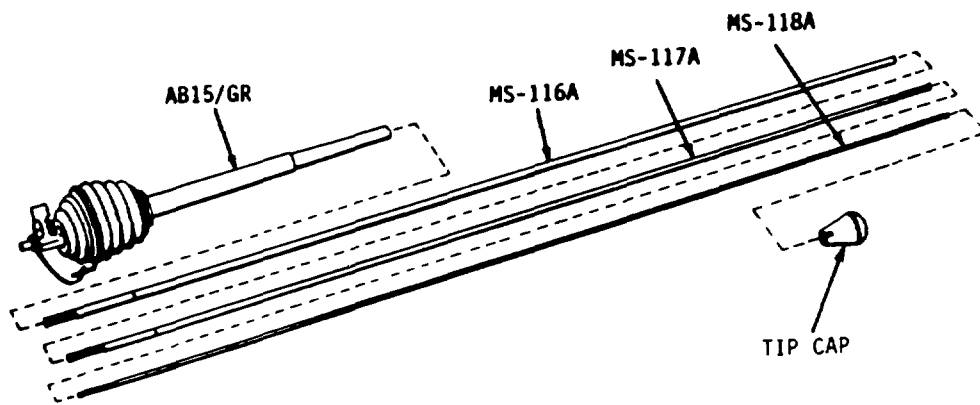
NOTE

There are two MS-116A, MS-117A, MS-118A, and AB-15/GR mast-bases located on the front of the shelter. This procedure applies to both antennas.

CAUTION

Use care not to drop insulators, washers, and ground ring when installing mast base.

19. Lubricate rubber washer used with the antenna base with silicone compound per MIL-S-8660 (Appendix D, Item 16).
20. Install antenna mast base to mounting bracket by holding the lower insulating section and screwing on the mast base body. (Hand tighten.)
21. Insure connector adapter UG-273/W and ground clamp around the adapter are tight.
22. Connect RF cable W70P2 or W71P2 to J1 on the VHF guard antenna base (A29) or HF intercept antenna base (A42).
23. Connect other end of cables W'70 and W71 to J14 and J16 on front of shelter exterior.



CAUTION

Ensure that antenna tip cap is on the top antenna element to prevent injury to personnel.

24. Clean threads of antenna elements and apply a thin coating of silicone compound per MIL-S-8660 (Appendix D, Item 16) to the male threads of the elements.
25. Screw antenna element MS-118A securely into antenna element MS-117A.
26. Screw antenna element MS-117A into antenna element MS-116A.
27. Screw antenna element MS-116A onto antenna mast base AB-15/GR.
28. Tie antennas down to tiedowns on front of vehicle using antenna tiedown.

SITE LOCATION

Select the site so the equipment will be on a relatively level plane with no obstructions that might interfere with the communications between the NCS and the SLAVE stations or the target emitter.

PRELIMINARY SERVICING AND ADJUSTMENT

Check the AN/TRQ-32(V)1 or AN/TRQ-32(V)2 for completeness using Chapter 1, Section II as a guide for component location.

For checkout of the equipment, after preliminary checks have been completed, follow the operating procedures outlined in TM 32-5895-070-10.

STATIONARY OPERATION

When operating in the deployed mode, ensure that the grounding stake is driven into the ground and connected to the power entry panel GROUND terminal by its grounding cable. The ground rod and cable are located on the curbside wall inside the shelter.

Section III.

ORGANIZATIONAL PREVENTIVE MAINTENANCE, CHECKS, AND SERVICES (PMCS)

NOTE

Destruction of equipment to prevent enemy use will be performed at the direction of the commander.

To be sure your equipment is ready for your mission, you must do scheduled preventive maintenance checks and services (PMCS). When you are doing any PMCS or routine checks, keep in mind the WARNINGS and CAUTIONS about electrical shock and bodily harm.

NOTE

If your equipment must be in operation all the time, check and service those items that can be checked and serviced without disturbing operation. Make complete checks and services when the equipment can be shutdown.

There are eight categories or intervals of PMCS: W, M, Q, S, A, B, HR and MI. They head the INTERVAL columns of the PMCS TABLE. A check mark in one or more of the INTERVAL columns indicates the check and/or service that should be performed by organizational maintenance at a particular time.

DEFENSE INSPECTOR AND SUPERVISOR COMMENTS
 The use of this form, and the 24-100, the equipment operator or the officer of the supply store of field no. location.

EQUIPMENT IDENTIFICATION
 1. NAME OF EQUIPMENT: BLAND AIRCRAFT 37 700-82 (V1)
 2. SERIAL NUMBER: 3700
 3. MODEL: 3700
 4. PARTS: 3700

APPLICATIONS & DEFENSES
 1. NUMBER: 32-5895-050-10
 2. DATE: MAR 1990
 3. NAME: _____

DEFECTS AND DEFICIENCIES
 1. DEFECTS AND DEFICIENCIES: THE POWER CABLE BUNDLE
 2. DEFECTS AND DEFICIENCIES: REPAIRS CABLE

NOTE
 Use your PMCS TABLE to get the number for the TM ITEM NO. column of DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

DA Form 2404

NOTE

Use Your PMCS TABLE to get the number for the TM ITEM NO. column of DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

Routine checks are not listed as PMCS checks. They are the following:

- o Cleaning
- o Dusting
- o Washing
- o Checking for frayed cables
- o Storing items when not in use
- o Covering unused receptacles
- o Checking for loose nuts, bolts, and screws
- o Checking for shelter skin punctures, cracks, or open seams.

Routine checks are things that you should do anytime you see they must be done. If you find a routine check like one of those listed in your PMCS TABLE, it was listed because other personnel reported problems with this item.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES

| W - Weekly Q - Quarterly A - Annually HR - Hours of Operation M - Monthly S - Semi-annually B - Bi-annually MI - Minutes of Operation | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---|---|---|---|---|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ITEM NO. | INTERVAL | | | | | | | | ITEM TO BE INSPECTED/PROCEDURE |
| | W | M | Q | S | A | B | HR | MI | |
| | | | | | | | | | SYSTEM INSPECTIONS: |
| 1. | | X | | | | | | | Inspect truck for physical discrepancies IAW PMCS table in Operator Manual TM 9-2320-289-10. |
| 2. | | X | | | | | | | Inspect the components of the installation kit for physical discrepancies IAW PMCS table in Installation Kit Manual TM 5-2320-531-24&P. |
| 3. | | | X | | | | | | Inspect under vehicle on skid plate for leaking hydraulic fluid, loose or damaged hydraulic lines, and damage to pump. |
| 4. | | X | | | | | | | Inspect shelter for damage, scratched or peeling paint, loose or damaged connectors and cables, loose or damaged antenna mounting brackets, and tiedowns properly installed (hooks outward). Refer to TM 32-5410-001-24&P. |
| 5. | | | X | | | | | | Inspect guard receiver antenna and HF intercept antenna for damage and cleanliness, proper cable connections, and secured properly to mounting brackets. |
| 6. | | | X | | | | | | Inspect HG/AC shelter mounted unit for damage, leakage, or loose mounting hardware, hydraulic lines, connectors, and cover. |
| 7. | | | X | | | | | | Inspect inclinometer assembly for damage, loose hardware, and cleanliness. |
| 8. | | | X | | | | | | *Inspect HG/AC reservoir for damage, leakage, loose hoses, connectors, and brackets. |
| 9. | | | X | | | | | | Inspect reservoir fluid level (should be at FULL mark when operating HG/AC, or between tip of dip stick and FULL mark when cold or before use). |
| 10. | | | X | | | | | | Inspect pneumatic mast, cable basket, base assembly, air line, and cables for damage, leakage, water accumulation, looseness, abrasions, and cleanliness. |

* Shelter must be removed.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (CONT)

| ITEM NO. | INTERVAL | | | | | | | | ITEM TO BE INSPECTED/PROCEDURE |
|----------|----------|---|---|---|---|---|-----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | W | M | Q | S | A | B | HR | MI | |
| 11. | | | X | | | | | | Inspect VHF RT antenna, for damage and cleanliness properly safety wired, and cables secured. |
| 12. | | | X | | | | | | Inspect power entry panel for damage, cleanliness, loose connectors, missing dust covers, wing nuts, and connecting cables. |
| 13. | | | X | | | | | | *Inspect air compressor assembly for damage, cleanliness, loose or damaged connectors, hoses and fittings. |
| 14. | | | X | | | | | | Clean air compressor filters, fill mast lubricator, and check for water accumulation in regulator. |
| 15. | | | X | | | | | | *Inspect air storage tank for damage, leakage, water accumulation and looseness. |
| 16. | | | X | | | | | | Inspect shelter door for damage, loose clamps, leakage and cleanliness of door seals and filter. |
| 17. | | | X | | | | | | Inspect shelter interior for damage and cleanliness, assemblies and accessories properly secured in appropriate rack or storage location, and loose connectors and hardware. |
| 18. | | X | | | | | | | Inspect, and clean or replace as necessary, door vent filter. |
| 19. | | X | | | | | | | Clean EMI filter on front of receiver drawer assembly. |
| 20. | | | | | | | 500 | | HG/AC SERVICE (for the following service procedures, refer to TM 5-4120-391-14) Replace hydraulic filter element. |
| 21. | | | | | | X | | | Replace intake air filters. |
| 22. | | X | | | | | | | Adjust air conditioner drive belt. |
| 23. | | | | | | | 40 | | Clean oil cooler. |
| 24. | | | | | | | 40 | | Clean intake air filters. |

* Shelter must be removed.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (CONT)

| W - Weekly | | Q - Quarterly | | A - Annually | | HR - Hours of Operation | | | |
|-------------|----------|-------------------|---|-----------------|---|---------------------------|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M - Monthly | | S - Semi-annually | | B - Bi-annually | | MI - Minutes of Operation | | | |
| ITEM NO. | INTERVAL | | | | | | | | ITEM TO BE INSPECTED/PROCEDURE |
| | W | M | Q | S | A | B | HR | MI | |
| 25. | | | X | | | | | | Check for proper operation, controls, indicators, and burned out lights. |
| 26. | | | X | | | | | | <p>COMPRESSOR SERVICE</p> <p>Replace pressure regulator filter on air compressor assembly in accordance with the following:</p> <ol style="list-style-type: none"> a. On the power distribution panel, place MAST circuit breaker to off (down) position. b. Open auxiliary air valve on the compressor manifold, outside shelter, under curbside knee. c. On the air compressor, unlock two clinch nut fasteners securing air compressor door and open door. <p style="text-align: center;">NOTE</p> <p>When removing the air cup from pressure regulator, the large o-ring may stay with the regulator. If this occurs, remove the o-ring from the regulator, and install it on top of the air cup.</p> <ol style="list-style-type: none"> d. On the compressor pressure regulator, unscrew air cup. Remove and retain air cup and large o-ring. e. On the compressor pressure regulator, unscrew guidepost. Remove guidepost (with filter, louver and gasket) from pressure regulator. f. Remove the filter, louver and gasket from guidepost. Retain the guidepost, louver and gasket. g. Position new filter (Appendix D, Item 22) and the louver and gasket onto guidepost. h. Screw guidepost into pressure regulator and hand tighten. |

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (CONT)

| W - Weekly | | Q - Quarterly | | A - Annually | | HR -Hours of Operation | | | |
|-------------|----------|-------------------|---|-----------------|---|---------------------------|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M - Monthly | | S - Semi-annually | | B - Bi-annually | | MI - Minutes of Operation | | | |
| ITEM NO. | INTERVAL | | | | | | | | ITEM TO BE INSPECTED/PROCEDURE |
| | W | M | Q | S | A | B | HR | MI | |
| 27. | | | | | | X | | | <p align="center">NOTE</p> <p>When installing the air cup, ensure that the large o-ring is at top of the air cup.</p> <ul style="list-style-type: none"> i. Wipe air cup inside and outside with clean cloth to remove dirt or water accumulation. j. Screw air cup and large o-ring into pressure and hand tighten. k. On air compressor, close door and secure with two clinch nut fasteners. l. On air compressor manifold, close the auxiliary air valve. <p>Replace the air compressor top and bottom air intake filter elements as follows:</p> <ul style="list-style-type: none"> a. On the power distribution panel, place MAST circuit breaker to off (down) position. b. On the air compressor, unlock the two clinch nut fasteners securing air compressor door. Open door. c. On the air compressor, remove screen cap and filter element. Install replacement filter element (Appendix D, Item 23) and secure with screen cap. d. On air compressor, close door and secure with two clinch nut fasteners. e. Place MAST circuit breaker to on (up) position. |

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (CONT)

| W - Weekly | | Q - Quarterly | | A - Annually | | HR - Hours of Operation | | | |
|-------------|----------|-------------------|---|-----------------|---|---------------------------|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M - Monthly | | S - Semi-annually | | B - Bi-annually | | MI - Minutes of Operation | | | |
| ITEM NO. | INTERVAL | | | | | | | | ITEM TO BE INSPECTED/PROCEDURE |
| | W | M | Q | s | A | B | HR | MI | |
| 28. | | | | | | | | | <p>UNSCHEDULED SERVICE</p> <p>Fill mast lubricator on the air compressor assembly when oil level goes down to the empty mark in accordance with the following:</p> <ol style="list-style-type: none"> a. On the power distribution panel, place mast control valve to the DOWN position. b. On the air compressor, open the auxiliary air valve on the compressor manifold and bleed off air supply. c. At base of mast, open drain cock and bleed off air pressure. d. On the air compressor, unlock two clinch nut fasteners securing air compressor door and open door. e. Using a flat tip screwdriver with 1" shaft, remove and retain fill plug from mast lubricator. <p style="text-align: center;">NOTE</p> <p style="text-align: center;">Do not overfill oil cup.</p> <ol style="list-style-type: none"> f. Using a hand oiler, add hydraulic fluid (Appendix D, Item 8) to mast lubricator until fluid level reaches the FULL line. g. At top of mast lubricator, install fill plug. Tighten fill plug using a flat tip screwdriver with a 1" shaft. h. On air compressor, close door and secure with two clinch nut fasteners. i. On air compressor manifold, close auxiliary air valve. |

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (CONT)

| W - Weekly | | Q - Quarterly | | A - Annually | | HR - Hours of Operation | | | |
|-------------|----------|-------------------|---|-----------------|---|---------------------------|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M - Monthly | | S - Semi-annually | | B - Bi-annually | | MI - Minutes of Operation | | | |
| ITEM NO. | INTERVAL | | | | | | | | ITEM TO BE INSPECTED/PROCEDURE |
| | W | M | Q | S | A | B | HR | MI | |
| 29. | | | | | | | | | <p>UNSCCHEDULED SERVICE (CONT)</p> <p>j. At base of pneumatic mast, close drain cock.</p> <p>Adjust mast lubricator on the air compressor assembly as follows:</p> <p>a. On the air compressor, unlock two clinch nut fasteners securing air compressor door and open door.</p> <p style="text-align: center;">NOTE</p> <p>Mast lubricator fluid level must be above the EMPTY line and below the FULL line to perform the following procedures.</p> <p>b. On the air compressor, place mast control valve to the HOLD position, and allow compressor to run until it stops.</p> <p>c. On the air compressor, check high pressure gauge for a reading of 100 p.s.i. plus or minus 5 p.s.i.</p> <p style="text-align: center;">NOTE</p> <p>Ensure that there are no obstructions above mast.</p> <p>d. On the air compressor, place mast control valve to the UP position.</p> <p>e. At top of mast lubricator, observe that one drop of fluid is dispensed every 30 seconds during elevation of mast.</p> <p>f. To adjust mast lubricator, lift locking ring on adjustment knob to unlock knob.</p> <p>g. At top of mast lubricator, turn adjustment left to decrease fluid flow or right to increase fluid flow.</p> |

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (CONT)

| W - Weekly | | Q - Quarterly | | A - Annually | | HR -Hours of Operation | | | |
|-------------|----------|-------------------|---|-----------------|---|---------------------------|----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M - Monthly | | S - Semi-annually | | B - Bi-annually | | MI - Minutes of Operation | | | |
| ITEM NO. | INTERVAL | | | | | | | | ITEM TO BE INSPECTED/PROCEDURE |
| | W | M | Q | S | A | B | HR | MI | |
| 30. | | | | | | | | | <p>UNSCCHEDULED SERVICE (CONT)</p> <p>h. At top of mast lubricator, press down locking ring on adjustment knob to lock knob in place.</p> <p>i. On the air compressor, place mast control valve to the DOWN position.</p> <p>j. On the air compressor, close door and secure with two clinch nut fasteners.</p> <p>Adjust air pressure regulator on the air compressor assembly as follows:</p> <p>a. On the air compressor, unlock two clinch nut fasteners securing air compressor door and open door.</p> <p>b. On the air compressor, place MAST control valve to the HOLD position.</p> <p>c. On the power distribution panel, place the MAST circuit breaker to the on (up) position and allow the compressor to run until it stops.</p> <p>d. On the compressor, check high pressure gauge for a reading of 100 p.s.i. plus or minus 5 p.s.i.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">Ensure there are no obstructions above mast.</p> <p>e. On air compressor, place mast control valve to the UP position and extend mast.</p> <p>f. On air compressor, check low pressure gauge for a reading of 25 p.s.i. plus or minus 1 p.s. i.</p> <p>g. On air compressor, place mast control valve in the DOWN position and allow mast to fully retract.</p> |

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (CONT)

| W-Weekly M - Monthly | | Q - Quarterly S-Semi-annually | | A-Annually B - Bi-annually | | HR -Hours of Operation MI - Minutes of Operation | | | |
|-------------------------|----------|----------------------------------|---|-------------------------------|---|-----------------------------------------------------|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ITEM NO. | INTERVAL | | | | | | | | ITEM TO BE INSPECTED/PROCEDURE |
| | W | M | Q | s | A | B | HR | MI | |
| | | | | | | | | | <p>UNSCHEDULED SERVICE (CONT)</p> <ul style="list-style-type: none"> h. On compressor regulator, lift locking ring on adjustment knob and turn knob to the left until it stops. i. On air compressor, place mast control valve to the UP position. j. On pressure regulator, slowly turn adjustment knob to the right until mast begins to extend. k. On the air compressor, place mast control valve to the HOLD position. l. On pressure regulator, slowly turn adjustment valve to the right until low pressure gauge shows 25 p.s.i. plus or minus 1 p.s. i. Push down locking ring on adjustment knob to lock knob in place. m. On air compressor, place mast control valve to the DOWN position. n. Close air compressor door and secure with two clinch nut fasteners. |

Section IV.

TROUBLESHOOTING

INTRODUCTION

Troubleshooting at Organizational level maintenance consists of isolating the failure to a subsystem and testing that subsystem to find the failed LRU using off-line-bite or standard troubleshooting procedures. Upon finding a failed LRU, the Organizational level technician will replace the failed unit and sent it to the next higher level of maintenance.

NOTE

After replacing any equipment, be sure to run off-line-bite to ensure that the equipment functions properly.

TROUBLESHOOTING AND TESTING WITH BITE

The following is a description of built-in tests (BITE) that maybe utilized when troubleshooting and testing system hardware. All of the following tests are ran from the operator terminals; however, in the event of operator terminal malfunction, the tests may be run from the system controller. The technician must specify which component is to be tested and which test is to be performed.

The operator terminal built-in tests menu consists of the following sub-menus:

SYSTEM CONTROLLER TESTS
DATA LINK TESTS
OPERATOR TERMINAL TESTS
DISK TESTS
PRINTER TESTS

SYSTEM CONTROLLER TESTS

Allows the operator to select any system controller BITE test to be executed from the operator terminal.

To execute a system controller BITE test, select the test on the operator terminal and press the CODE-RETURN key.

NOTE

To execute the tests from the system controller, enter the number of the test on the system controller keypad and press the TEST key. All tests may be terminated by pressing the TEST key a second time.

The following is a list and explanation of all of the tests.

O. SYSTEM CONTROLLER DUAL INTENSITY LAMP TEST.

Verify that MAN, NCS, SLV 1, SLV 2, SLV 3, HDG ENBL, FIX, NET INTR, and FIX ENBL lamps are lit. The system controller display will read "LAMP TEST IN PROGRESS". This test will automatically terminate in 5 seconds and the lamps will return to their previous state and the display will be cleared. If any faulty lamps are detected, replace the inoperative lamps.

1. SYSTEM CONTROLLER INTERNAL TEST.

This test runs the system controller internal tests. The system controller display will read "SYSTEM BUSY" while the test is in progress. If the test passes, the system controller display will read "SC INTERNAL TEST PASSED" and the fault lamp on the CAUTION PANEL will go out.

If the test fails, the system controller display will read one of the following:

"SC CPU CCA A1 TEST #NN FAILED"
 "SC MEMORY CCA A2 TEST #NN FAILED"
 "SC I/O CCA A3 TEST #NN FAILED"
 "SC I/O CCA A4 TEST #NN FAILED"
 "SC I/O CCA A5 TEST #NN FAILED"
 "SC I/O CCA A6 TEST #NN FAILED"
 "SC I/O CCA A7 TEST #NN FAILED"
 "SC I/O CCA A8 TEST #NN FAILED"

The SYS CONTROLLER lamp on the CAUTION PANEL will remain lit if the test fails.

If test 1 fails, a fault is indicated in the system controller.

2. SYSTEM CONTROLLER FRONT PANEL DISPLAY TEST.

This test checks the ability of the system controller display to display all characters. The display is 40 characters wide. The test generates full display lines of identical characters and scrolls them through the system controller display at a one line per second rate. The character set consists of 0 through 9 and A through Z. This allows the operator to determine the display capabilities of the system controller display. This test will autoterminate after all possible characters have been scrolled through the display. Upon termination of this test, the display will be cleared.

If test 2 fails, a fault is indicated in the system controller.

3. SYSTEM CONTROLLER FRONT PANEL KEYPAD TEST.

This test allows the operator to determine the ability of the system controller keypad to generate the valid key values. Upon entering this test, the system controller display will read:

"PRESS ANY KEY"

The operator presses the FIX 1 key, the system controller will read:

"PRESS ANY KEY" FIX 1"

The only active keys are FIX 1, FIX 2, DF #1, and OF #2.

4. MAGNETIC FIELD CONVERTER TEST.

This test displays the current antenna heading from the magnetic field converter on the system controller display. If the magnetic field converter is working, the system controller display will read "ANTENNA HEADING = DDD.D" This reading will always be "in decimal degrees.

NOTE

If the magnetic field converter output is bad or disconnected, the system controller display may still display an antenna heading. The antenna heading should always be checked with a reading from the compass prior to operating the system.

If the magnetic field converter is NOT working, the system controller display may read "FLUXGATE FAILED TO RESPOND" or "WARNING, INCONSISTENT FLUXGATE DATA". If the magnetic field converter fails, manually enter the antenna heading.

If the system controller is NOT working, the system controller display will read "SC I/O CCA AS TEST 60 FAILED."

If test 4 fails, a fault is indicated in the system controller or the magnetic field converter.

5. DF CONTROL UNIT BITE TEST.

This test allows the operator to test the DFCU and RF processor using receiver #1. The system controller sends a test command to the OF control unit and waits for a reply. If the DF control unit does not send a reply to the system controller, the system controller display will read 'DFCU FAILED TO RESPOND'. When the DF control unit sends a reply to the system controller, the system controller replies with a BITE command.

This allows the DF control unit to run its local BITE. If the DF control unit test passes, the system controller display will read 'OF S/S TEST PASSED'. If the DF control unit test fails, the system controller display will read "DF S/S FAULT F:hhhh S1:hhhh S2:hhhh.

6. DF CONTROL UNIT BITE TEST.

Same as test 5 except receiver 2 is used.

7. OPERATOR CONTROL PANEL TEST.

This test allows the operator to check the display capability of the operator control panels. This test must be performed for each operator control panel. The system controller display will read 'DEPRESS DF KEY ON DCP#1 or #2'. The DF KEY that is pressed will light for 2 seconds and then go out. All LED's and the NET BUSY indicator will light on the operator control panel being checked. The hex character set will then be scrolled through the display of the operator control panel being checked. Test 7 checks only the operator control panel on which the DF KEY was depressed. It will be necessary to perform this test a second time to check the other operator control panel .

If test 7 fails, a fault is indicated in the operator control panel being tested.

8. BITE OSCILLATOR ON TEST.

This test allows the operator to turn on the BITE oscillator via the DF control unit and RF processor. When the BITE oscillator is on, the system controller display will read "BITE OSCILLATOR ON". If the BITE oscillator does not come on, the system controller display will read "DFCU FAILED TO RESPOND". Turn the BITE oscillator off. The system controller display will read "BITE OSCILLATOR OFF". If the BITE oscillator can not be turned off, the system controller display will read "DFCU FAILED TO RESPOND". The only way to turn the BITE oscillator off in this case is to secure power to the OF control unit and RF processor and reinitialize them.

If test 8 fails, a fault is indicated in the DF control unit or the RF processor.

9. DF DEMOD TEST VIA RECEIVER #1.

This test checks the DF demod via receiver#1. The system controller instructs the DF control unit to turn the BITE oscillator on. (If the DF control unit can not turn the BITE oscillator on, the system controller display will read "DFCU FAILED TO RESPOND" and terminates the test.) The system controller display reads "BITE OSCILLATOR ON". The system controller then reads the BITE output from the DF demod. If the test passes, the system controller display will read "DF DEMOD PASSED". If the test fails, the system controller display will read "DF DEMOD CCA A14 FAILED".

If test 9 fails, a fault is indicated in the system controller. Fault indicated on caution panel.

10. DF DEMOD TEST VIA RECEIVER #2.

Same as test 9 except receiver #2 is used.

11. SONALERT TEST.

This test turns on the sonalert on the system controller for one second.

If test 11 fails, a fault is indicated in the system controller.

12. SYSTEM PRINTER TEST.

This test allows the operator to determine if the printer is capable of receiving commands from the system controller and if the printer is able to print the entire character set. If the test passes, the printer will print:

```
!"#$%&'()*+,-./0123456789:; = ?@ABCDEFGH  
IJKLMNOPQRSTUVWXYZ[]  
*****
```

```
TIME NOT ENTERED.  
.ANTENNA HEADING = 013.0
```

```
AN/TRQ32 READY FOR OPERATION
```

The system controller display will then read "PRINTER PASSED". If the test fails, the system controller display will read "PRINTER FAILED".

If test 12 fails, a fault is indicated in the system controller or the system printer.

13. AUDIO FILTER TEST.

This test allows the operator to check the audio filter. The system controller turns on the audio oscillator and checks the BITE output from the audio filter. If the test passes, the system controller will read "AUDIO OSC. ON, AUDIO FILTER PASSED". If the test fails, the system controller will read "AUD OSC. ON, AUD FILTER CCA A14 FAILED". In either case the audio oscillator is left on. To turn the audio oscillator off, follow instructions on terminal display.

If test 13 fails, a fault is indicated in the system controller.

14. 19. RECEIVER CHAIN OPERATOR PERFORMANCE TESTS.

These tests verify performance of the intercept receiver chain, the RFDU, and the AN/TRR-35(V)3 subsystem. The RFDU contains a 28.000 MHz oscillator which is turned on during any of these tests. This oscillator can be placed in the circuit in such a way as to isolate a fault or verify proper operation. To stop any of these tests follow instructions on terminal display.

To verify proper operation, initiate test 15. Tune all receivers to 28.001 MHz in CW mode and listen for tone in headset. If tone is not heard in any receiver, initiate test 14. If tone is still not heard, a fault in the AN/TRR-35(V)3 or in the audio subsystem is indicated. If the tone is heard, a fault in the RFDU is indicated. If the fault is indicated in the AN/TRR-35(V)3 VHF/UHF receiver, further isolation can be achieved by tuning the SDU to 28.000 MHz and checking for the signal. If the signal is present, a fault in the audio subsystem is indicated.

The performance of the VHF notch filters can be verified by tuning the VHF/UHF receivers to 56.001 MHz and listening for a tone when test 18 is in progress. When the tone is heard, tune the notch filters to 56.001 MHz. Alternating between test 15 and test 18 should cause the tone to go on and off .

Tests 16, 17, and 19 can be conducted to verify that the RFDU switches from the intercept to the DF path.

RFDU CONTROL LINES

| TEST | OSCILLATOR DIRECTION | FILTER ENBL | OP #1 VHF/UHF RCVR | OP #2 VHF/UHF RCVR |
|------|----------------------|-------------|--------------------|--------------------|
| 14 | OUTPUT | OFFLINE | INTERCEPT | INTERCEPT |
| 15 | INPUT | OFFLINE | INTERCEPT | INTERCEPT |
| 16 | INPUT | OFFLINE | DF | INTERCEPT |
| 17 | INPUT | OFFLINE | INTERCEPT | DF |
| 18 | INPUT | ONLINE | INTERCEPT | INTERCEPT |
| 19 | INPUT | ONLINE | OF | INTERCEPT |

While each test is in process, the system controller will display one of the following:

| TEST | SYSTEM CONTROLLER DISPLAY |
|------|------------------------------------------|
| 14 | "RFDU TEST (OSC:OUT FIL:OFF 1:INT 2:INT" |
| 15 | "RFDU TEST OSC:IN FIL:OFF 1:INT 2:INT" |
| 16 | "RFDU TEST OSC:IN FIL:OFF 1:DF 2:INT" |
| 17 | "RFDU TEST OSC:IN FIL:OFF 1:INT 2:DF" |
| 18 | "RFDU TEST OSC:IN FIL:ON 1:INT 2:INT" |
| 19 | "RFDU TEST OSC:IN FIL:ON 1:DF 2:INT" |

DATA LINK TESTS

Tells the data link to perform a selftest and report the results.

OPERATOR TERMINAL TESTS

Presents the following list of operator terminal internal tests; display test, keyboard test, internal tests, media usage, and software version.

PERFORM DISPLAY TEST - Presents 3 different patterns on the terminal display.

PERFORM KEYBOARD TEST - Prompts operator to press each key on the operator terminal and verifies the ability to sense the keypress.

PERFORM INTERNAL TESTS - Performs a series of internal terminal tests.

SHOW MEMORY AND MEDIA USAGE - Displays amount of data storage used and available.

DISPLAY FIRMWARE VERSION NUMBER - Recalls the software version of the operator terminal based software and the version of the operator program stored on disk.

DISK TESTS

Requests the disk drive control to perform a self test.

PRINTER TESTS

Tests the ability of the operator terminal to output data to the printer.

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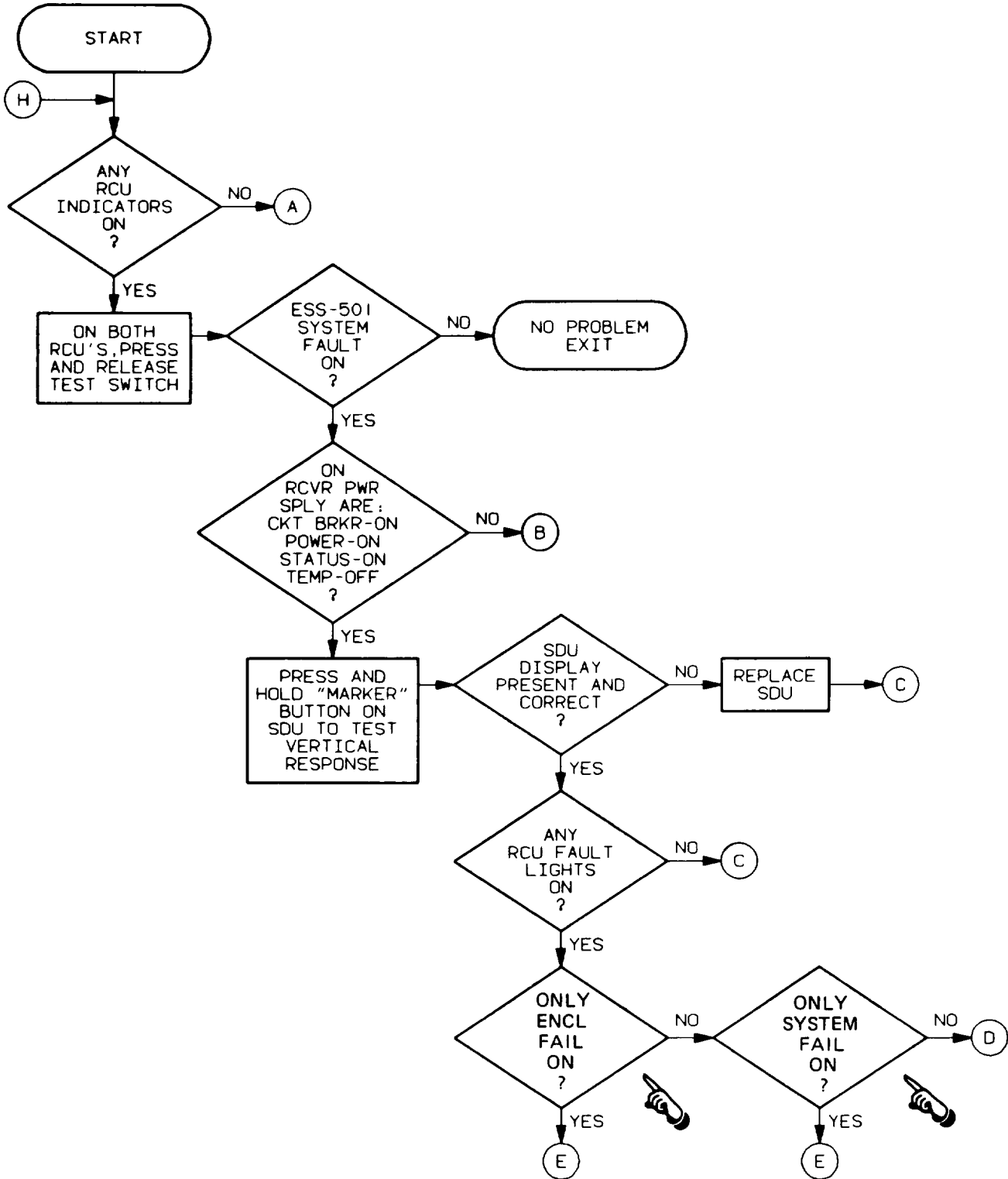
SYSTEM CONTROLLER (CONT)

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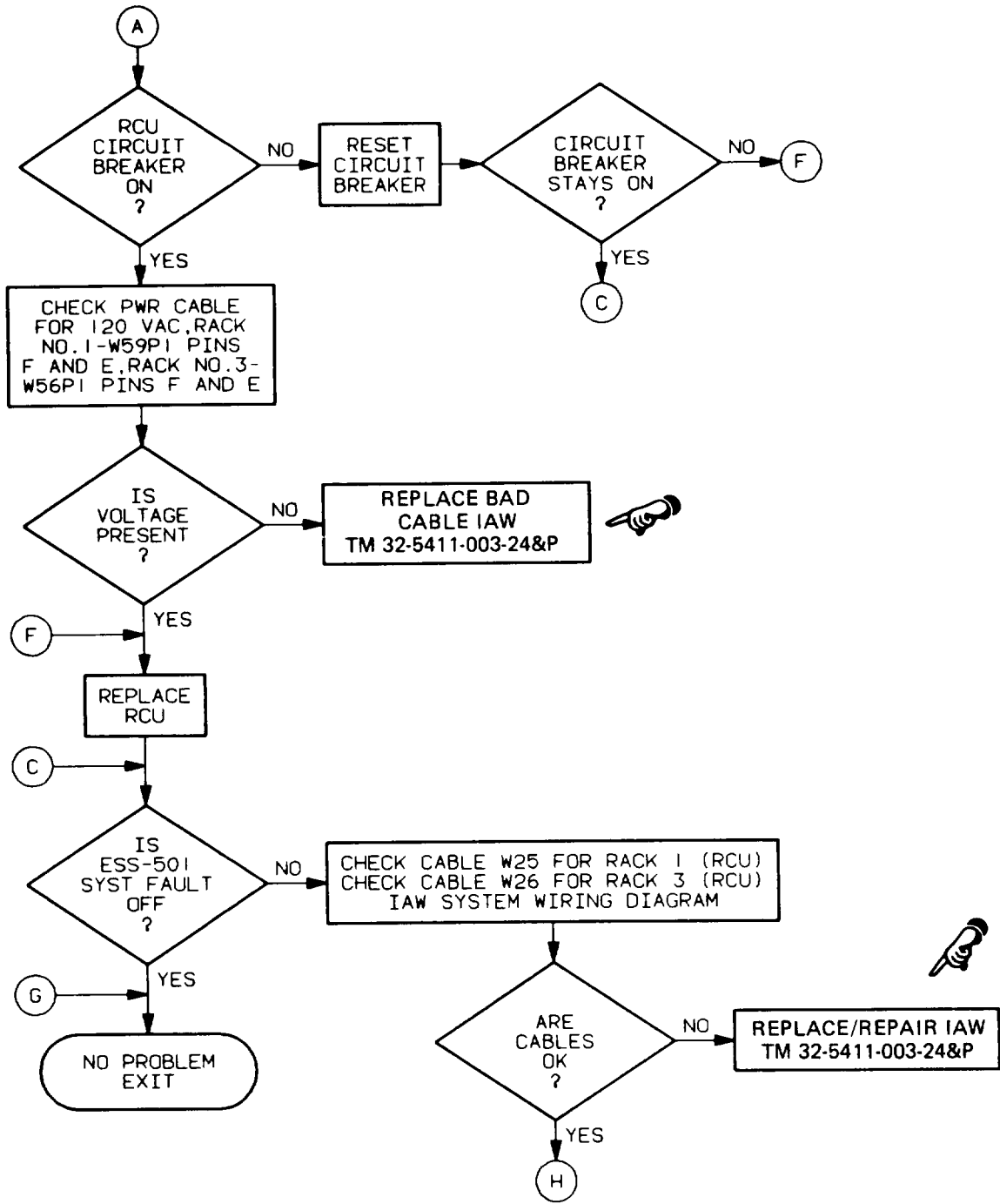
- 1. System power supply 2-138

1. ESS-501 SYS lamp on and/or AN/TRR-35(V) not operating:



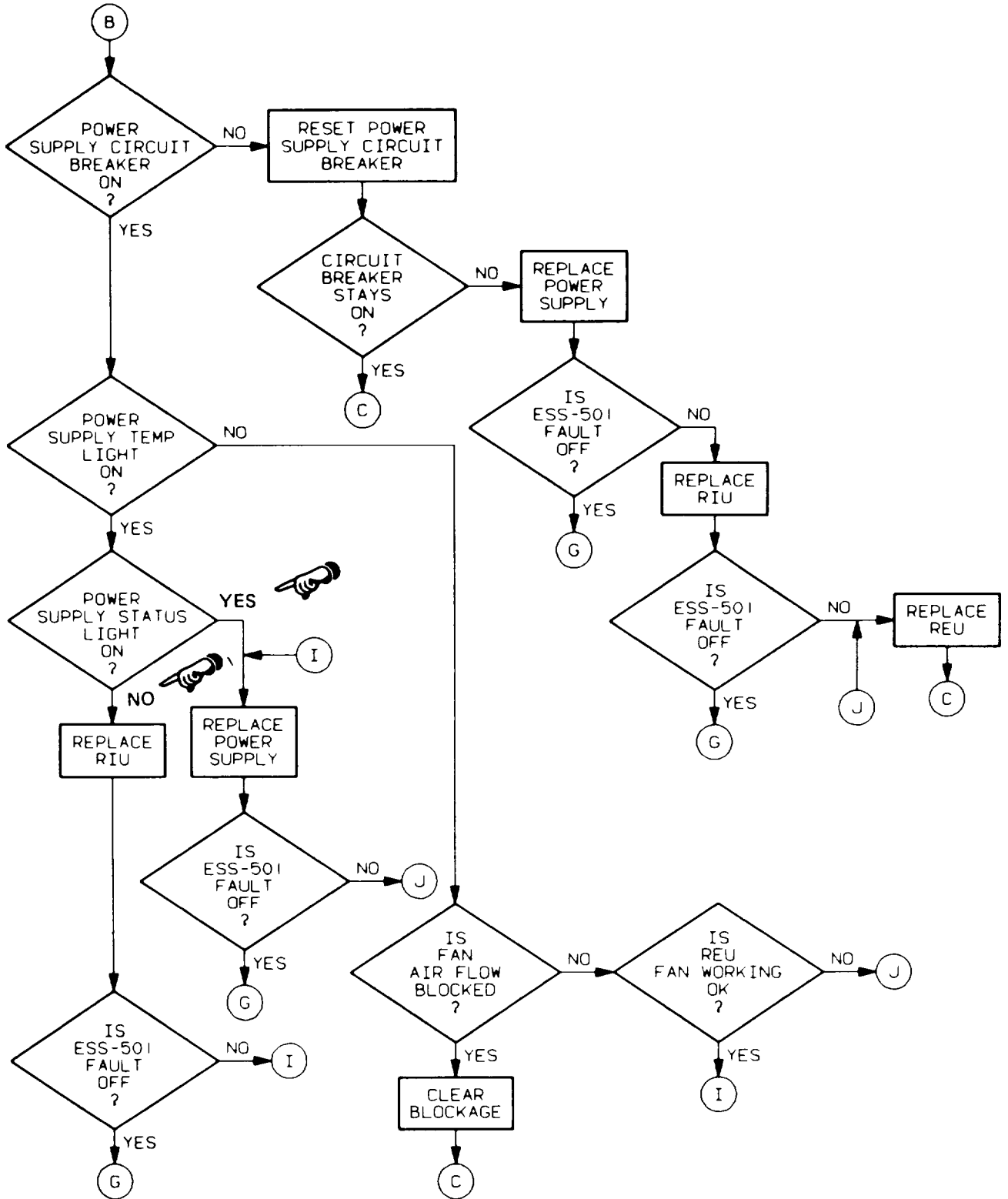
| | | |
|--------|------------------------|----------------------|
| 2 OF 5 | TROUBLESHOOTING | AN/TRR-35(V)3 |
|--------|------------------------|----------------------|

1. ESS-501 SYS lamp on and/or AN/TRR-35(V) not operating (Cont):

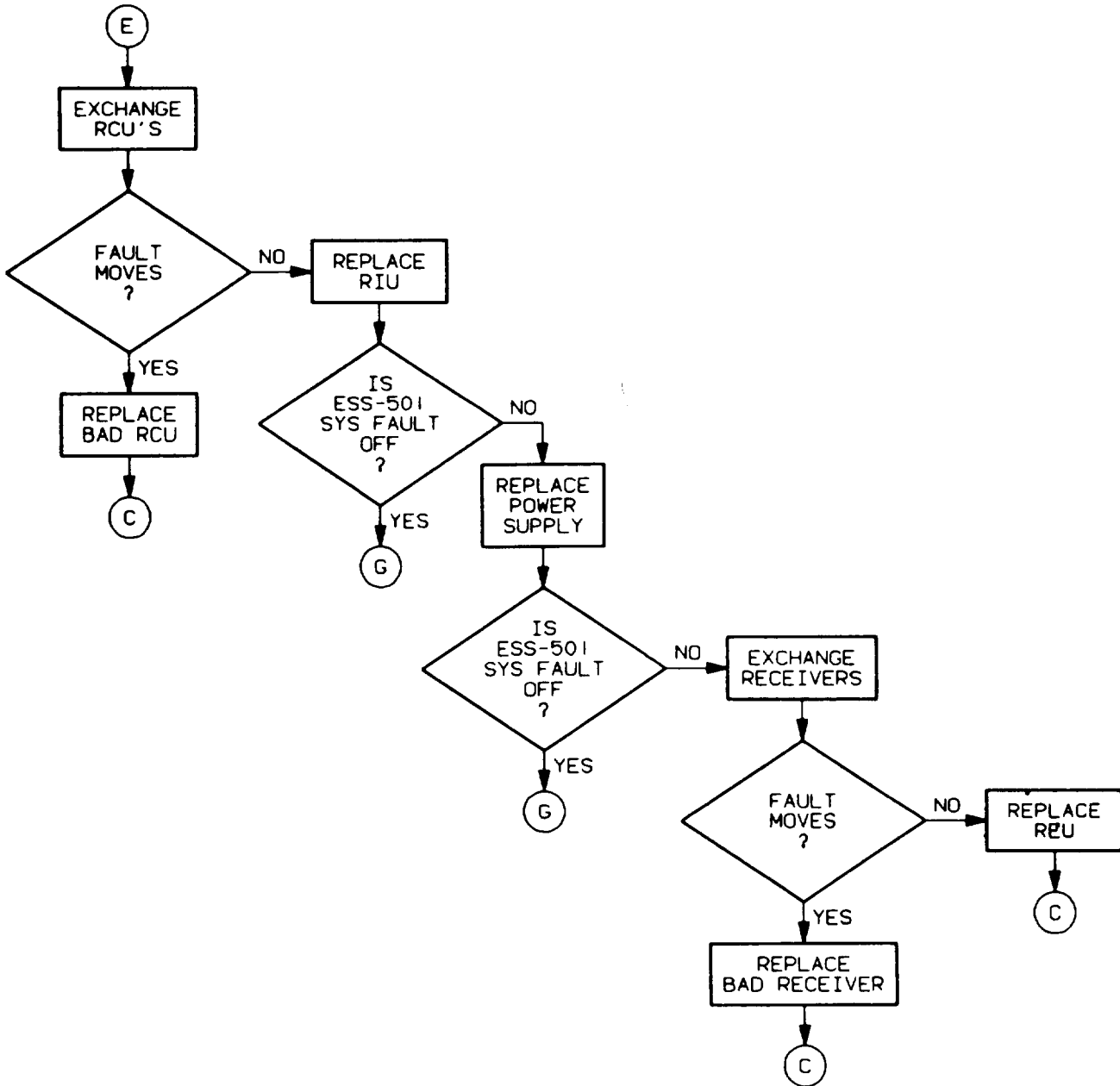


| | | |
|---------------|-----------------|--------|
| AN/TRR-35(V)3 | TROUBLESHOOTING | 3 OF 5 |
|---------------|-----------------|--------|

1. ESS-501 SYS lamp on and/or AN/TRR-35(V) not operating (Cont):



1. ESS-501 SYS lamp on and/or AN/TRR-35(V) not operating (Cont):

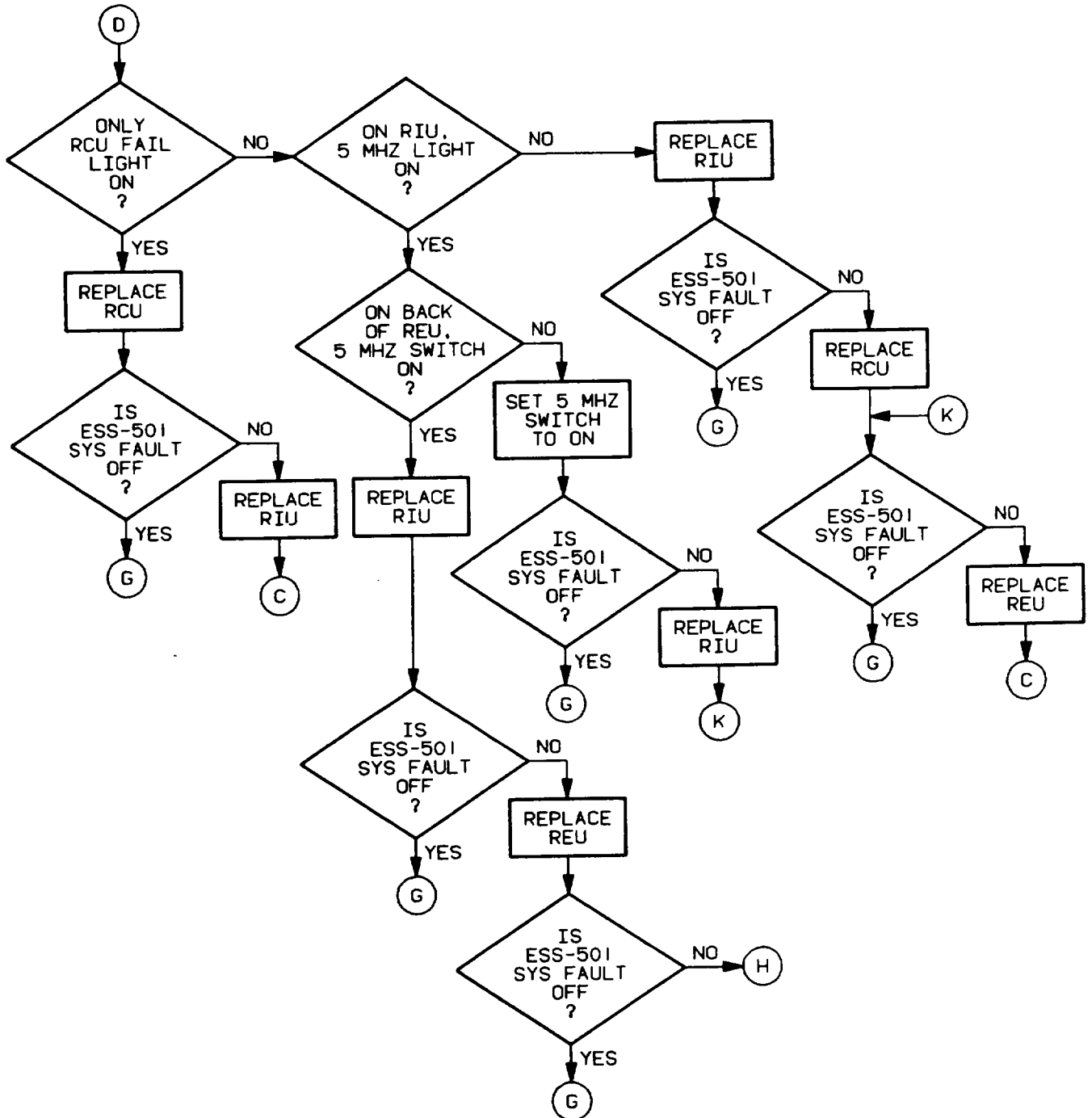


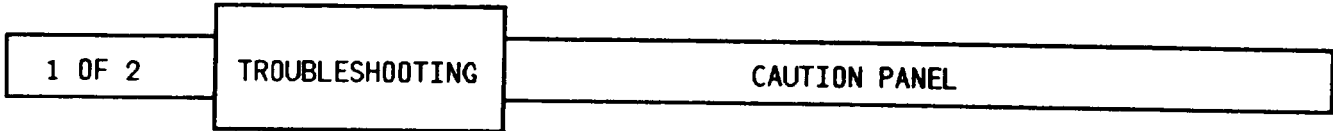
AN/TRR-35 (V) 3

TROUBLESHOOTING

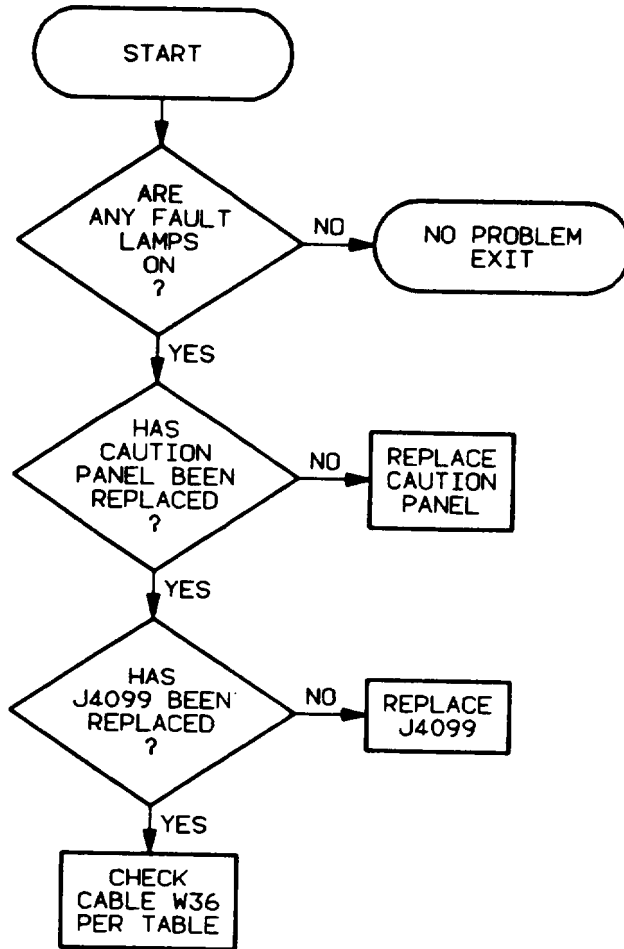
5 OF 5

1. ESS-501 SYS lamp on and/or AM/TRR-35(V) not operating (Cont):





Caution Panel:



CAUTION PANEL

TROUBLESHOOTING

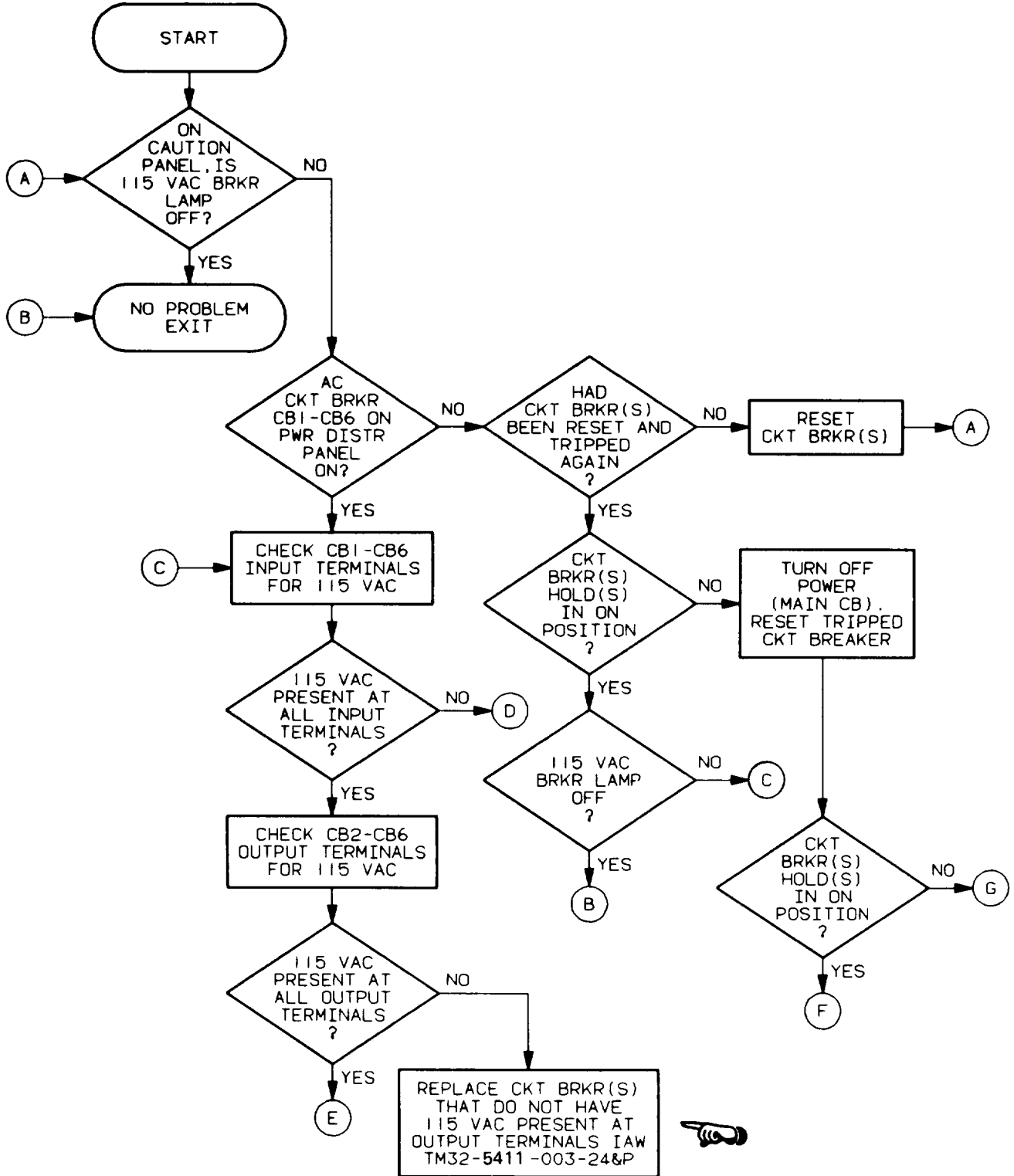
2 OF 2

Caution Panel (Cont):

| FROM | PIN | TO | PIN | SIGNAL |
|--------------|----------|-------------|-----|---------------------------|
| W36P2(A30J2) | KK | W36P1(A8J1) | A | ESS-501 SYS |
| W36P2(A30J2) | <u>H</u> | W36P1(A8J1) | B | 28 VDC BRKR |
| W36P2(A30J2) | GG | W36P1(A8J1) | C | 115 VAC BRKR |
| W36P2(A30J2) | <u>A</u> | W36P1(A8J1) | P | SYS PWR SPLY |
| W36P2(A30J2) | BB | W36P1(A8J1) | D | DF ANT TILT |
| W36P2(A30J2) | FF | W36P1(A8J1) | E | SYS CONTROLLER |
| W36P2(A30J2) | <u>M</u> | W36P1(A8J1) | F | NO DF ANT PWR |
| W36P2(A30J2) | <u>B</u> | W36P1(A8J1) | H | DF FAULT |
| W36P2(A30J2) | AA | W36P1(A8J1) | J | HYDR LEVEL |
| W36P2(A30J2) | K | W36P1(A8J1) | K | LOW FUEL |
| W36P2(A30J2) | <u>Z</u> | W36P1(A8J1) | L | ENGINE |
| W36P2(A30J2) | <u>Q</u> | W36P1(A8J1) | Y | GEN FAULT |
| W36P2(A30J2) | JJ | W36P1(A8J1) | M | AC FAULT |
| W36P2(A30J2) | L | W36P1(A8J1) | N | RFI DETECTED |
| W36P2(A30J2) | <u>N</u> | W36P1(A8J1) | Z | DATA LINK |
| W36P2(A30J2) | MM | W36P1(A8J1) | AA | DRIVE TRAIN |
| W36P2(A30J2) | EE | W36P1(A8J1) | BB | ALTERNATOR |
| W36P2(A30J2) | V | W36P1(A8J1) | DD | HYDR TEMP |
| W36P2(A30J2) | <u>X</u> | W36P1(A8J1) | W | 28 VDC CAUTION PNL PWR |
| W36P2(A30J2) | <u>Y</u> | W36P1(A8J1) | X | 28 VDC CAUTION PNL LIGHTS |

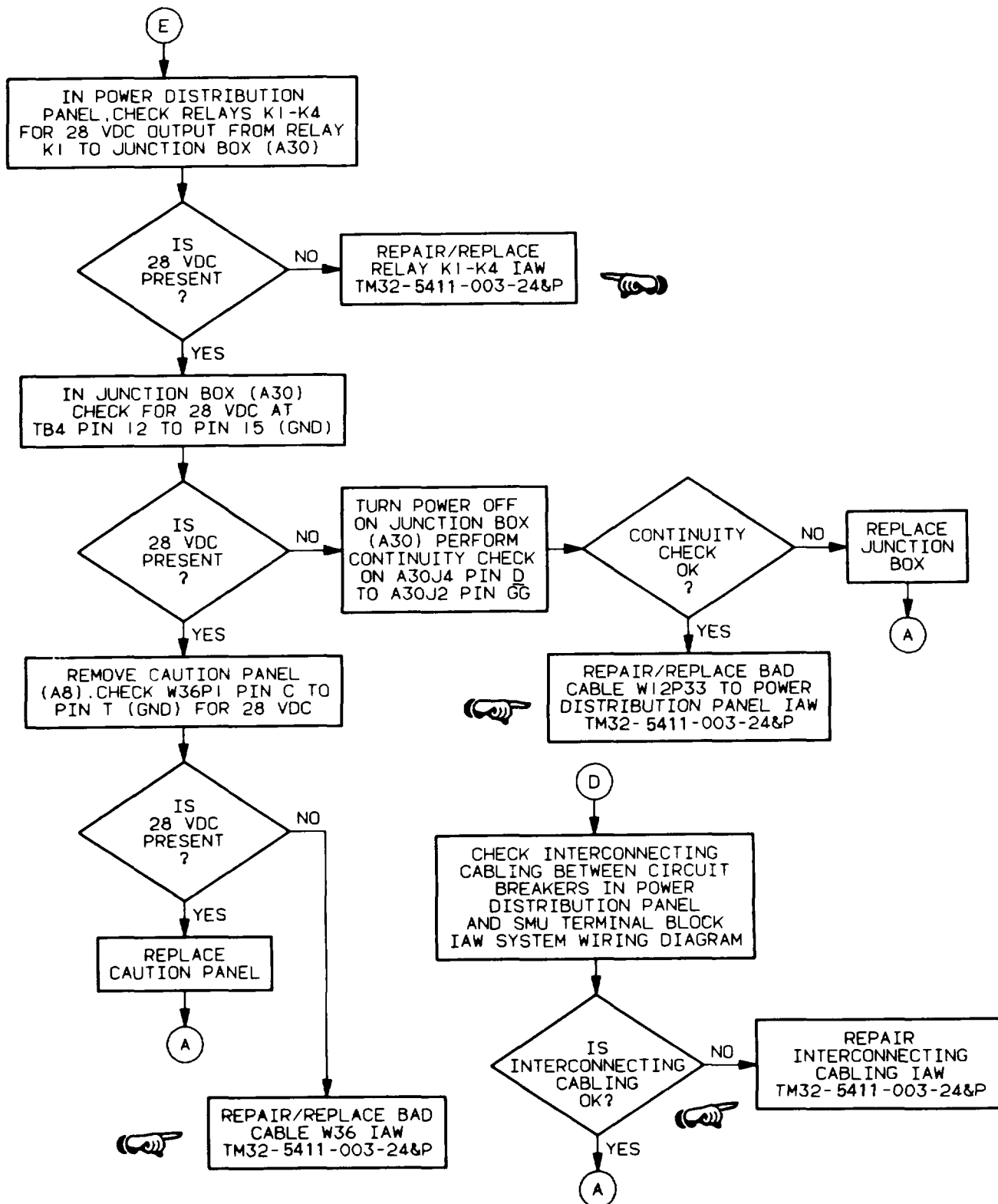
10F3 TROUBLESHOOTING CAUTION PANEL LAMPS

1. 115 VAC BRKR lamp on:



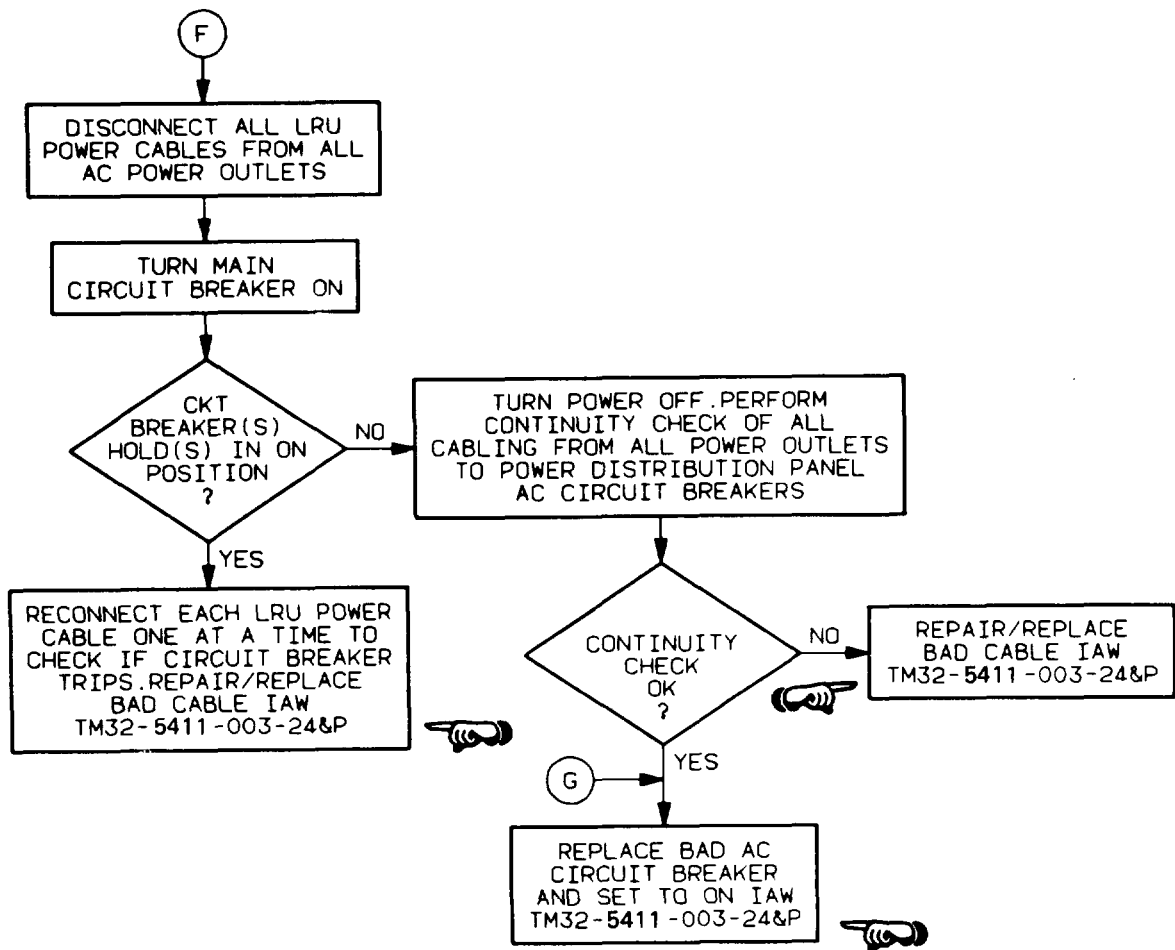
| | | |
|----------------------------|------------------------|---------------|
| CAUTION PANEL LAMPS | TROUBLESHOOTING | 2 OF 3 |
|----------------------------|------------------------|---------------|

1. 115 VAC BRKR lamp on (Cont):



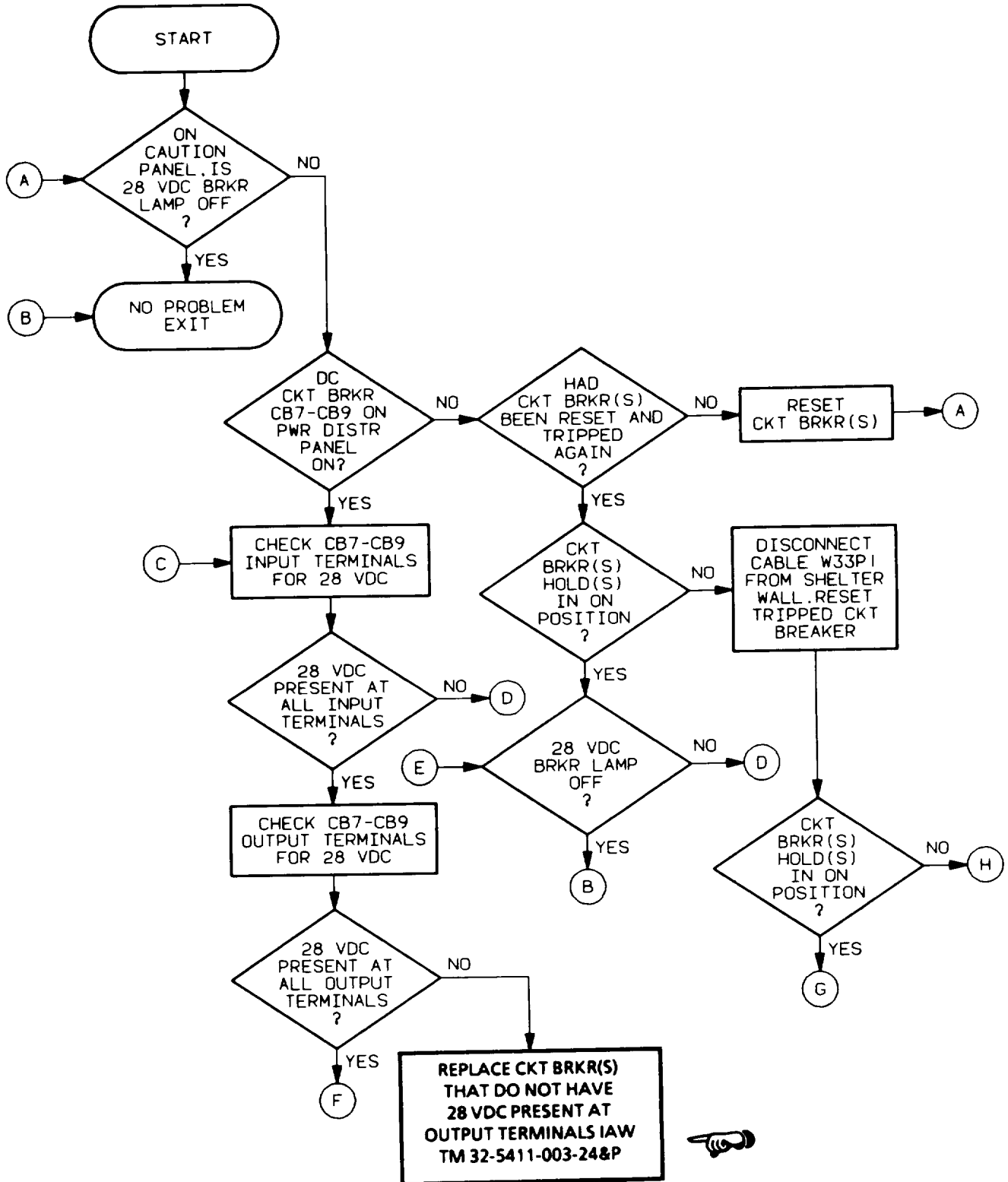
3 OF 3 TROUBLESHOOTING CAUTION PANEL LAMPS

1. 115 VAC BRKR lamp on (Cont):



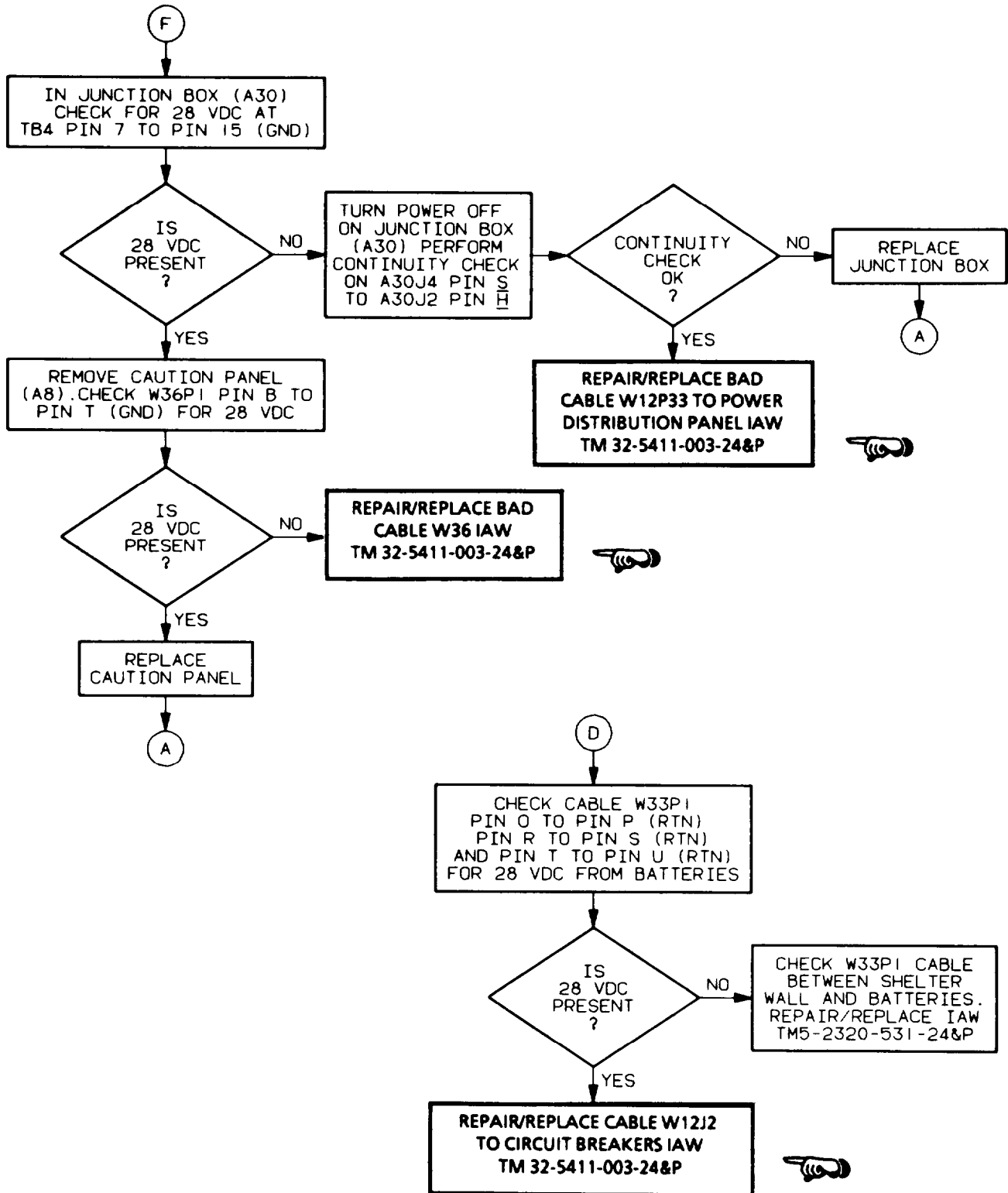
CAUTION PANEL LAMPS TROUBLESHOOTING 1 OF 3

2. 28 VDC BRKR lamp on:



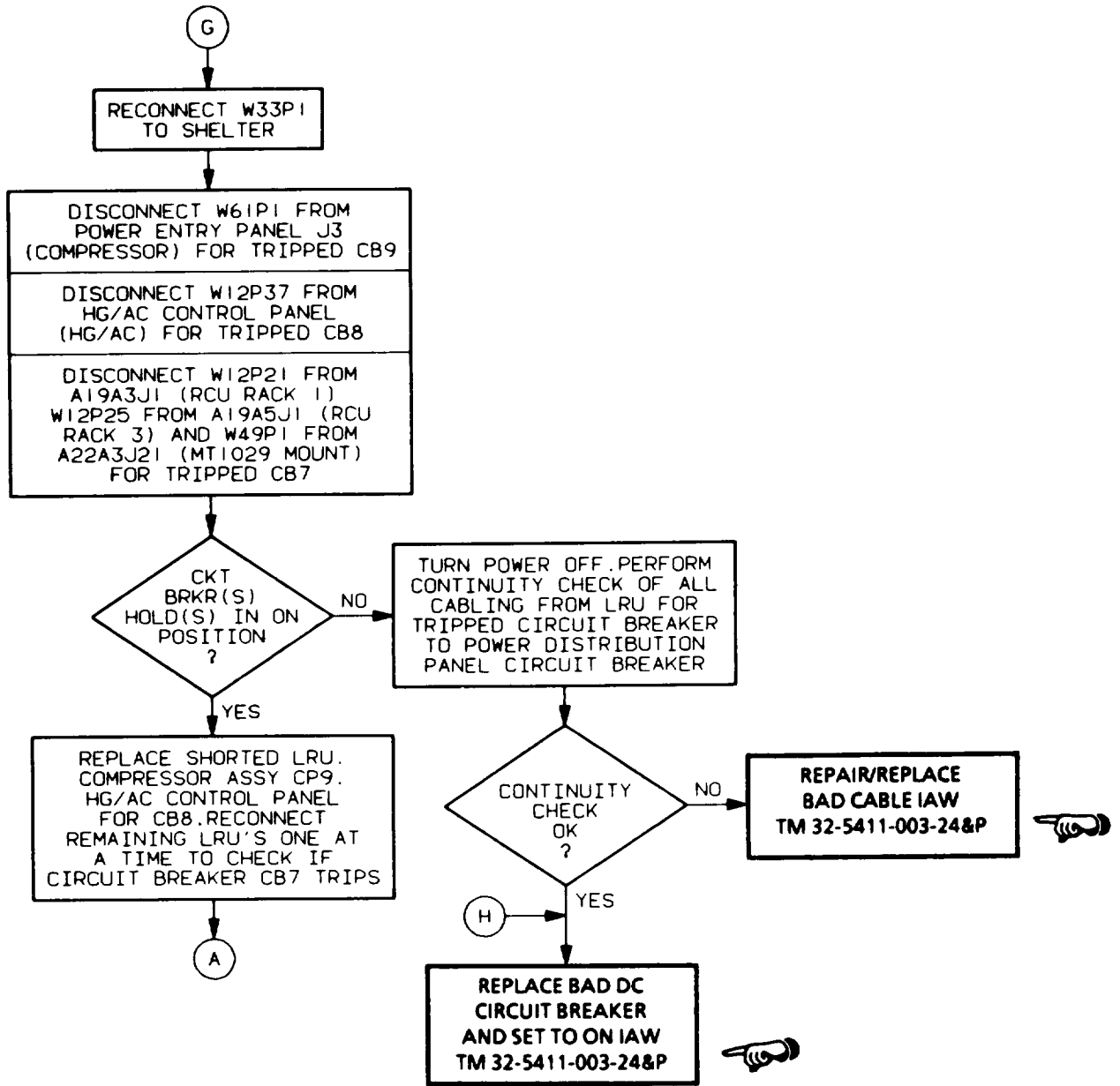
2 OF 3 TROUBLESHOOTING CAUTION PANEL LAMPS

2. 28 VDC BRKR lamp on (Cont):



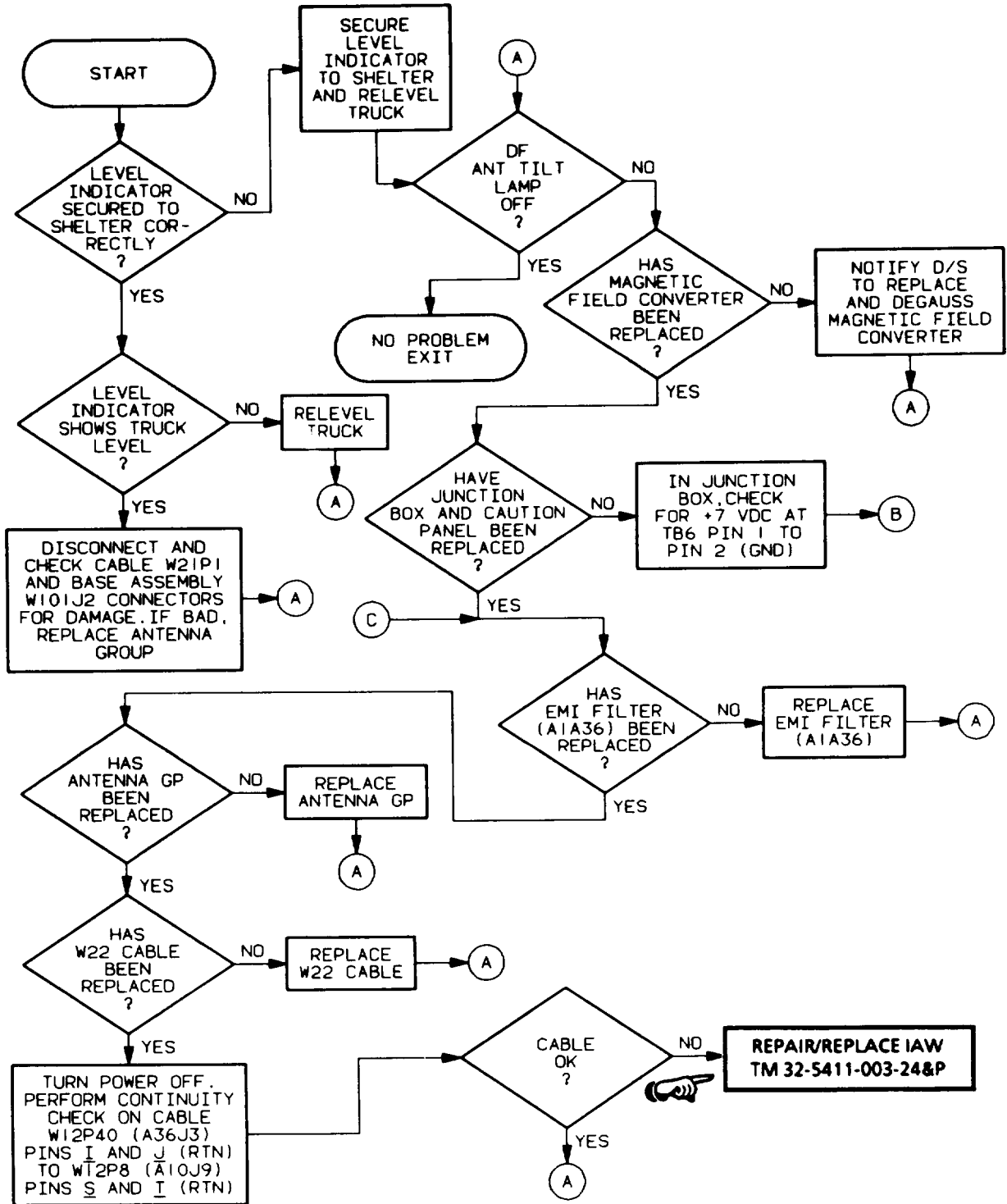
| | | |
|---------------------|-----------------|--------|
| CAUTION PANEL LAMPS | TROUBLESHOOTING | 3 OF 3 |
|---------------------|-----------------|--------|

2. 28 VDC BRKR lamp on (Cont):



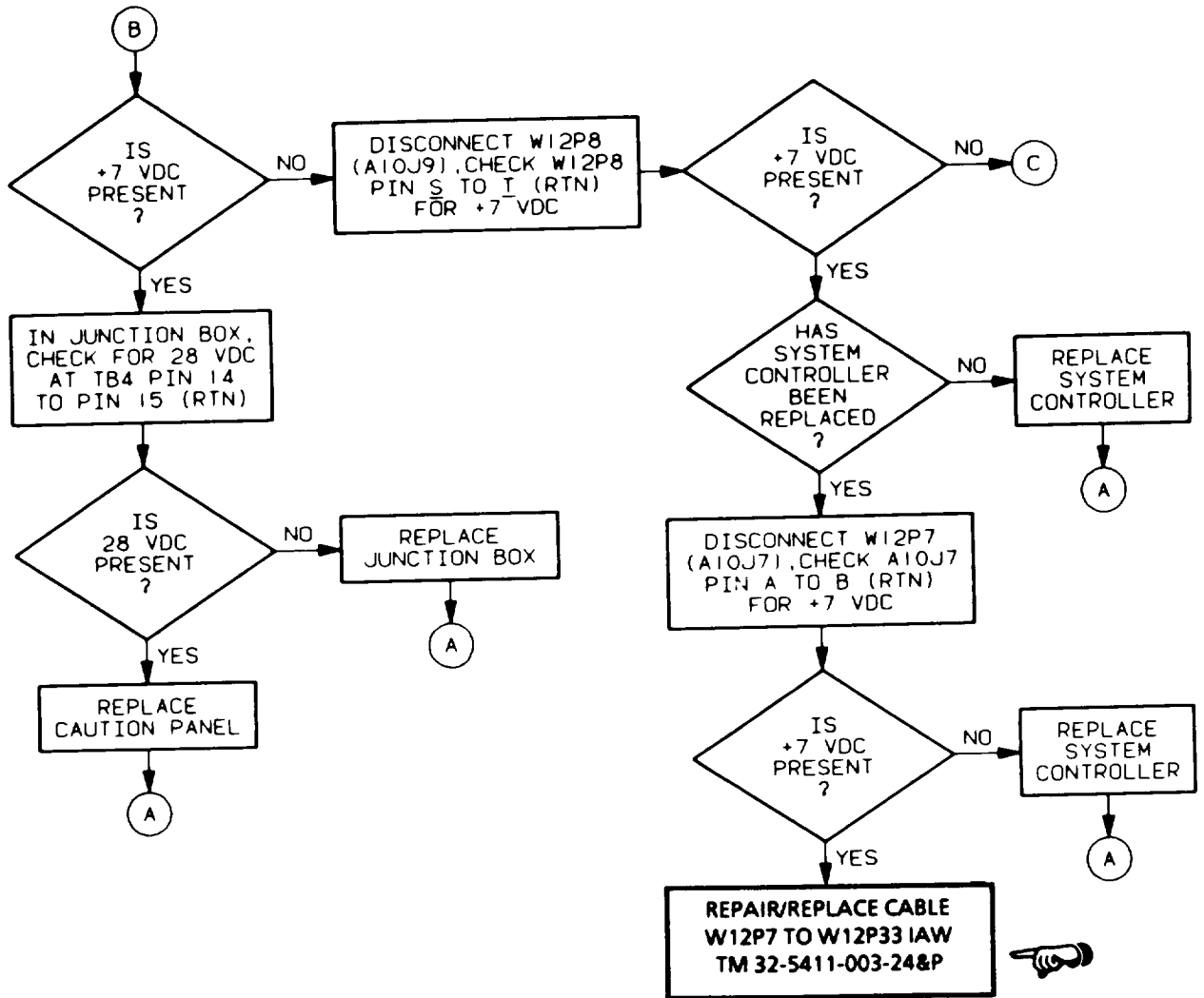
1 OF 2 **TROUBLESHOOTING** CAUTION PANEL LAMPS

7. DF ANT TILT lamp on:



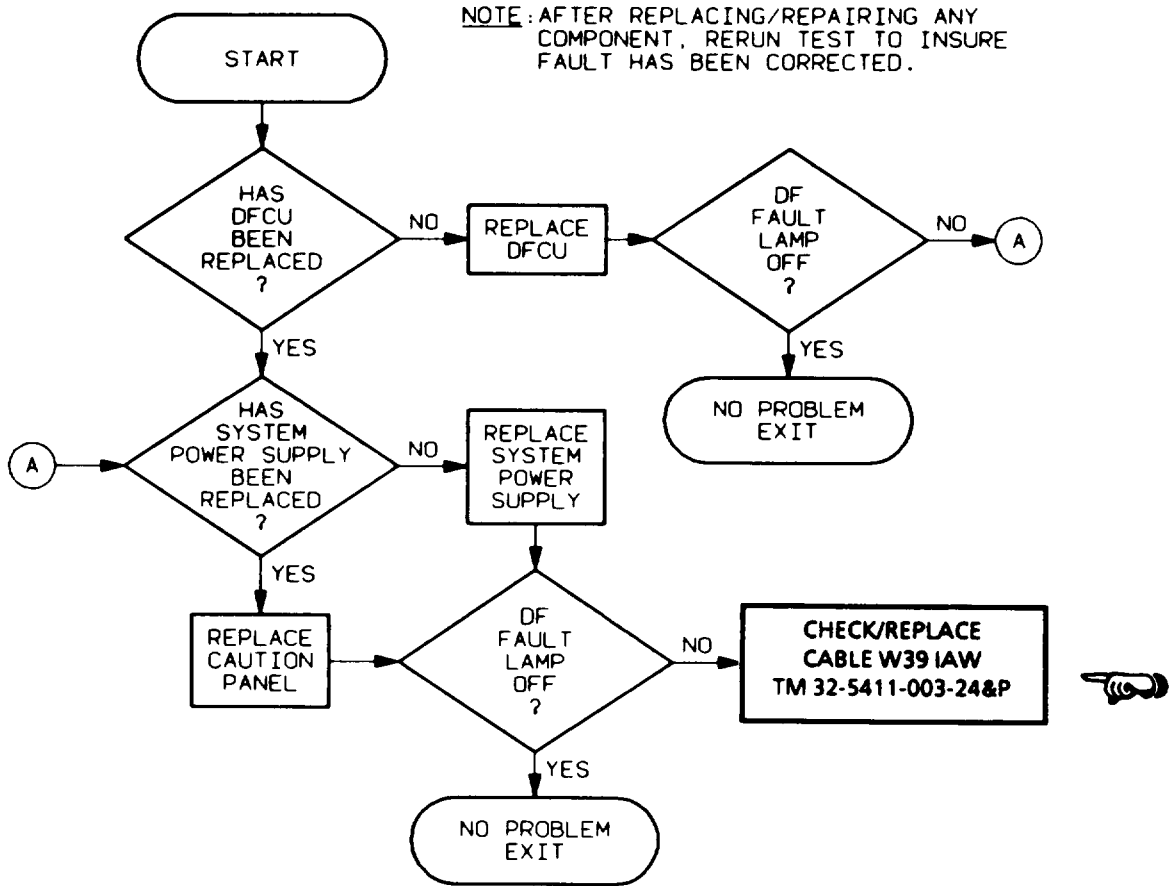
CAUTION PANEL LAMPS TROUBLESHOOTING 2 OF 2

7. DF ANT TILT lamp on (Cont):



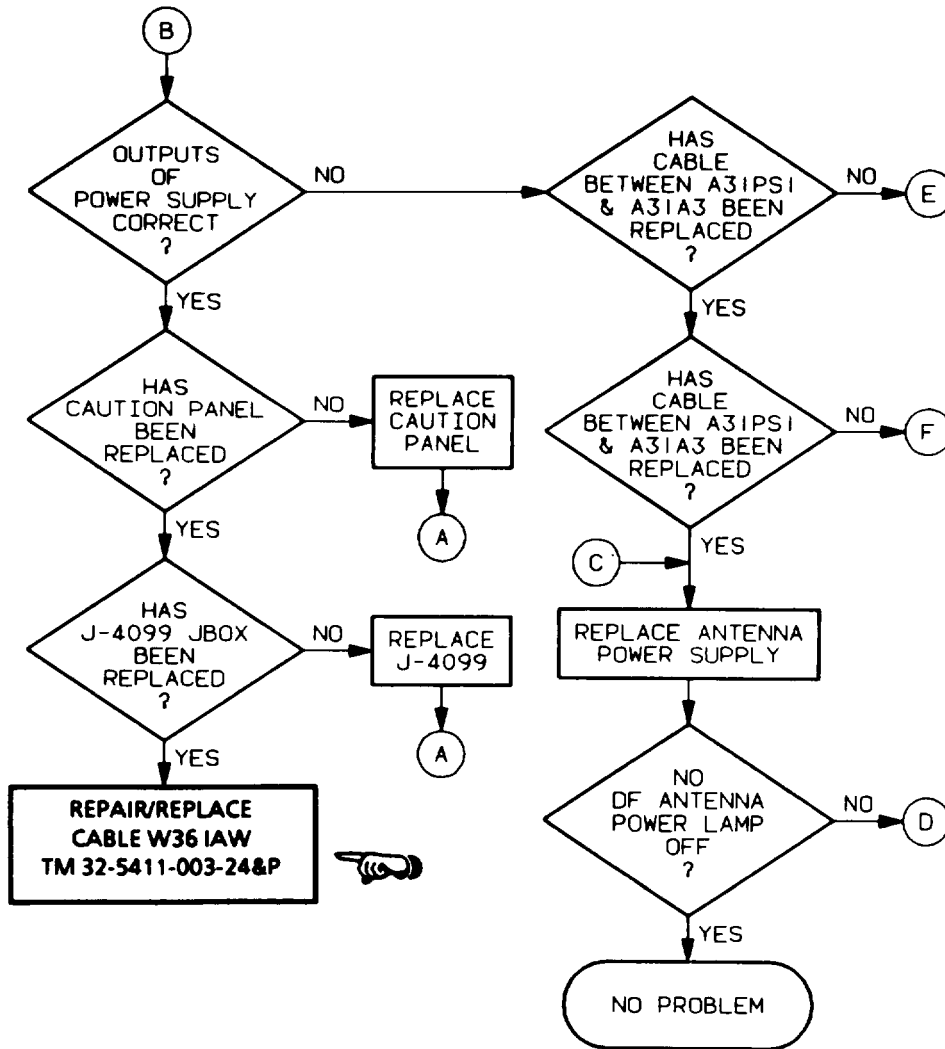
1 OF 1 TROUBLESHOOTING CAUTION PANEL LAMPS

8. DF FAULT lamp on:

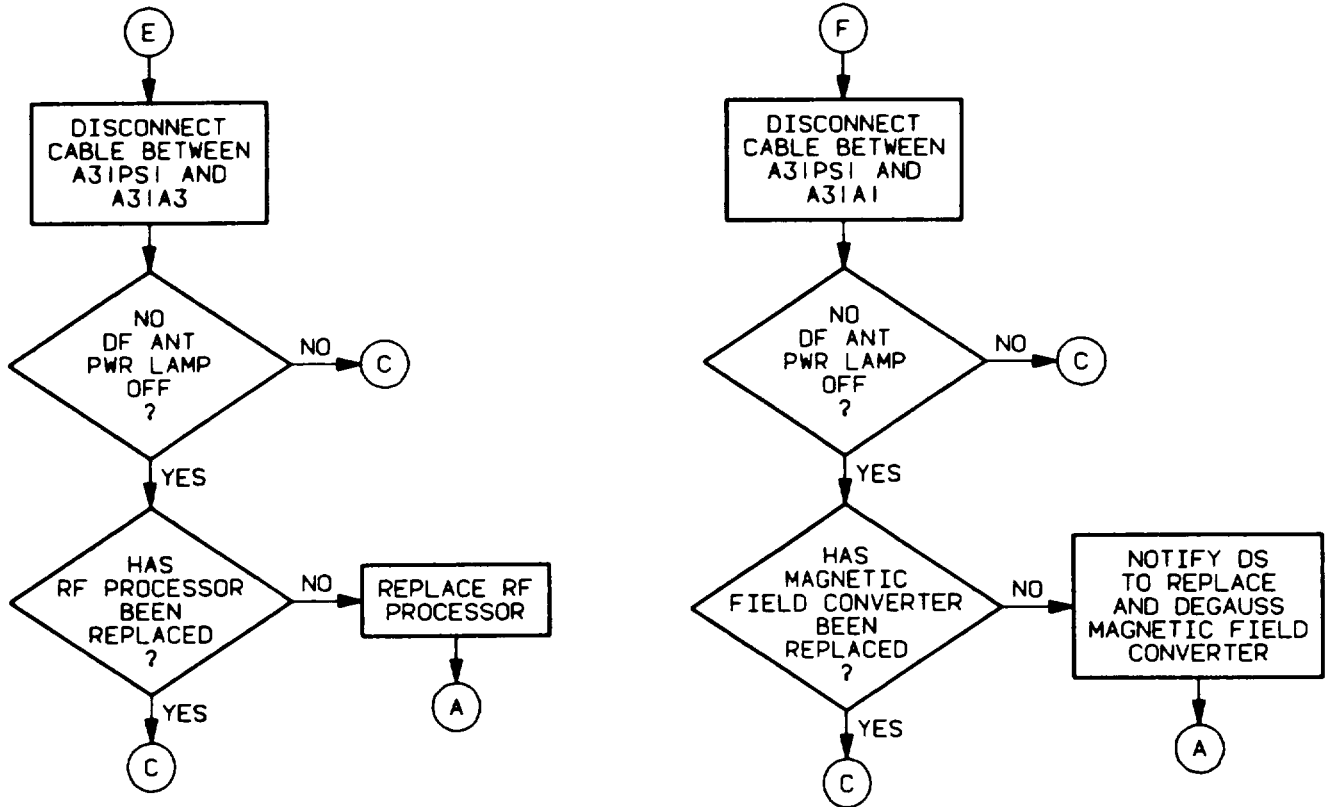


2 OF 3 TROUBLESHOOTING CAUTION PANEL LAMPS

15. NO DF ANT PWR lamp on (Cont):

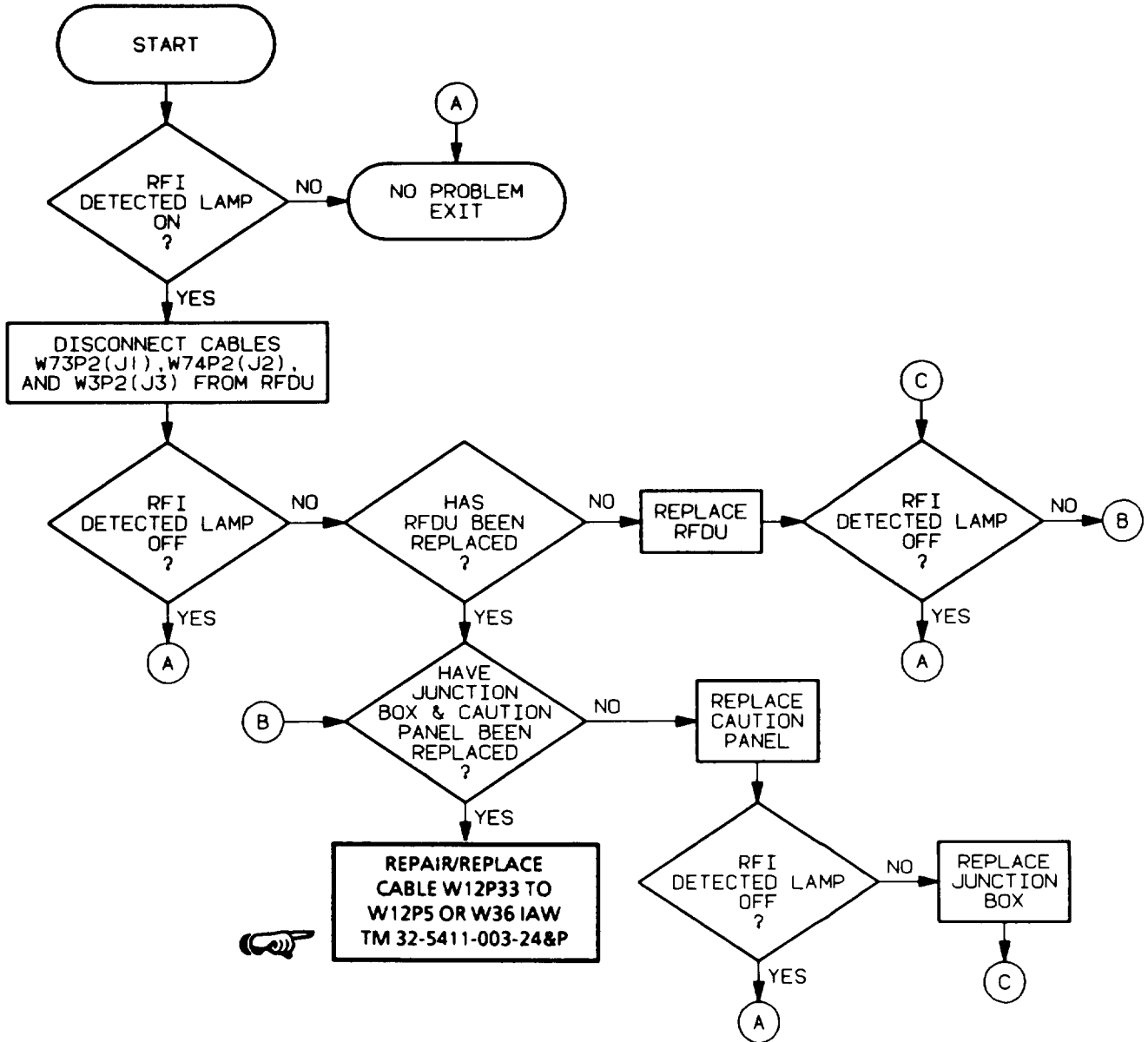


15. NO DF ANT PWR lamp on (Cont):

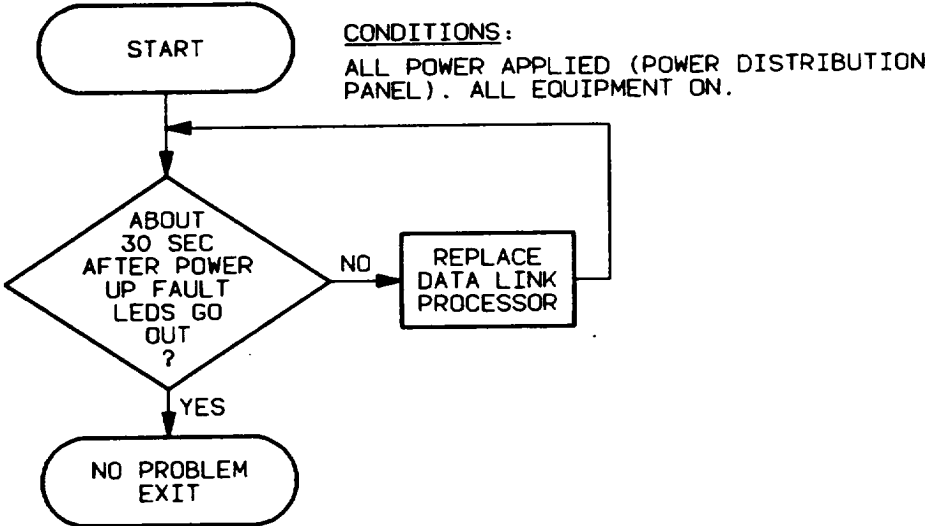


| | | |
|--------|------------------------|----------------------------|
| 1 OF 1 | TROUBLESHOOTING | CAUTION PANEL LAMPS |
|--------|------------------------|----------------------------|

16. RFI DETECTED lamp on:

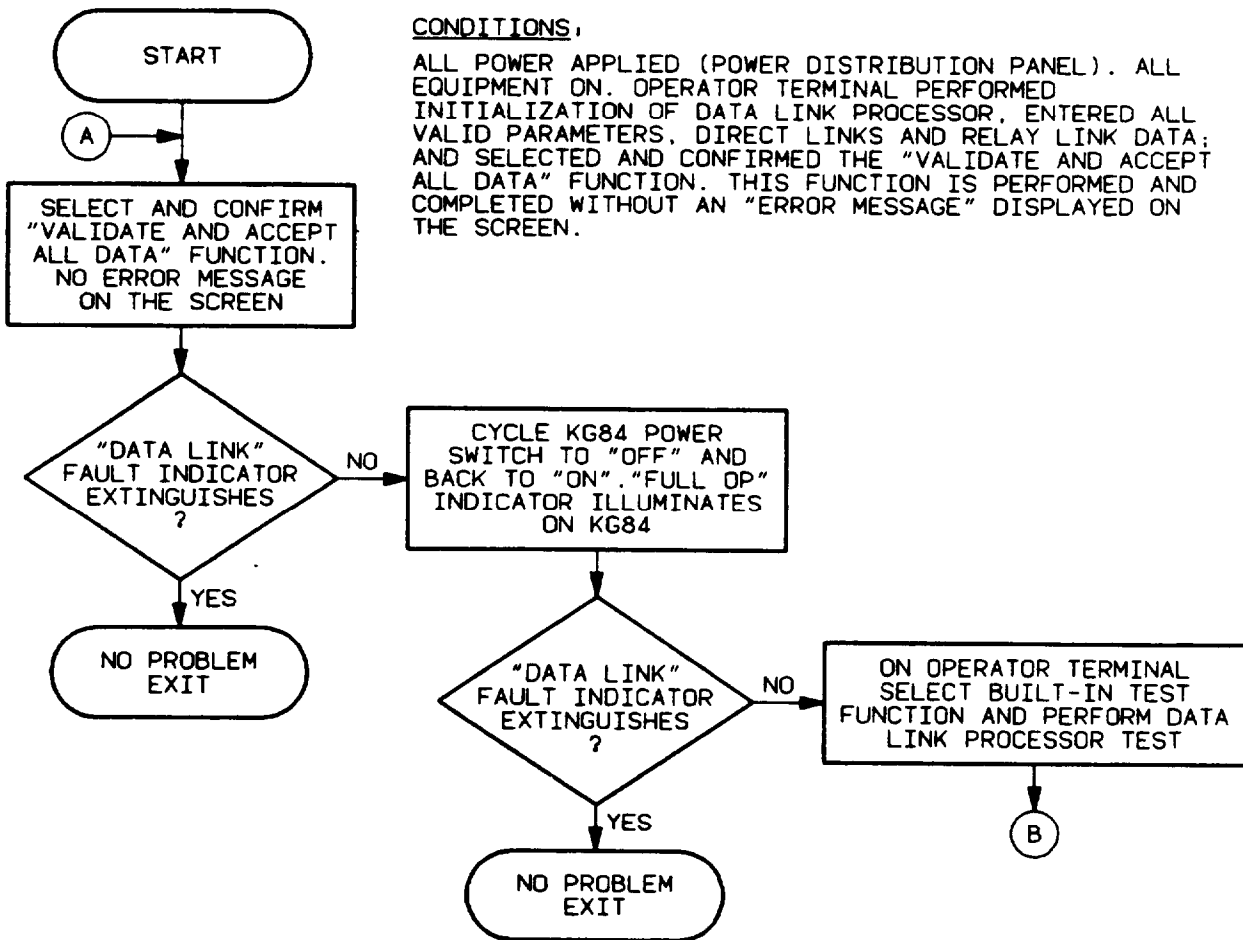


1. Any fault LEDs stay on after power-up:



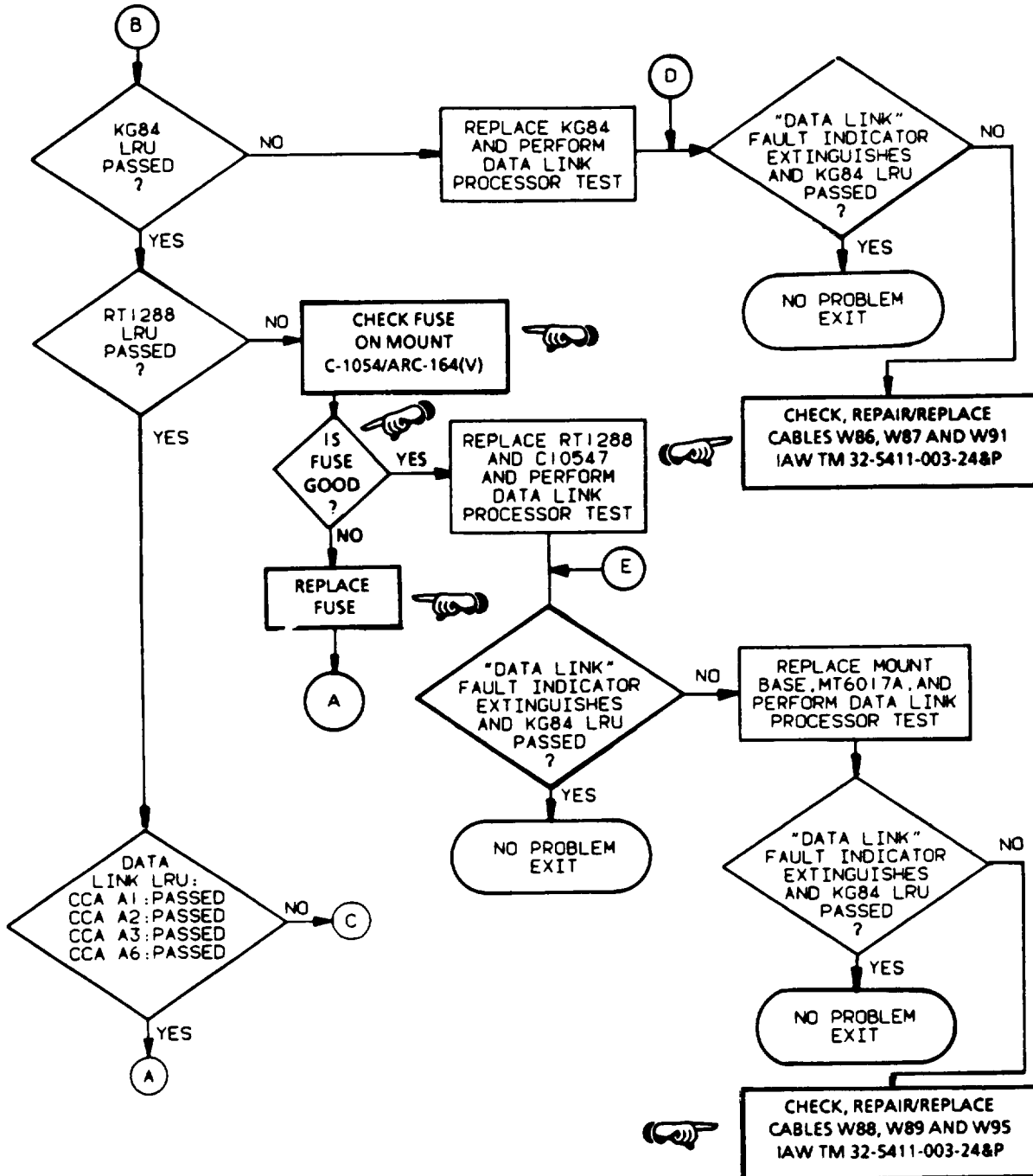
2. DATA LINK fault lamp on caution panel comes on during operation:

NOTE: EITHER A KG-84 OR KG-84A MAY BE USED IN THE AN/TRQ-32(V)2.



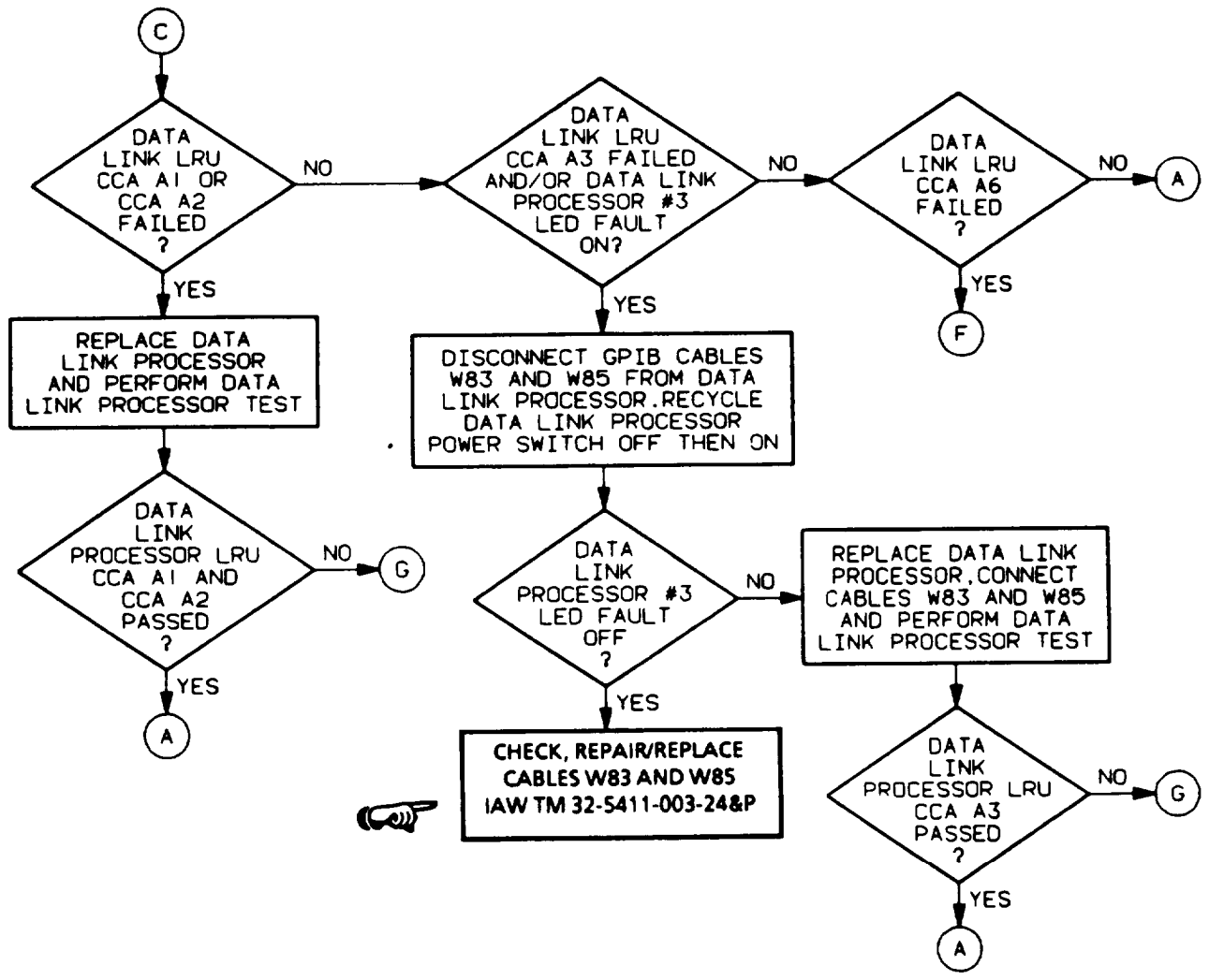
DATA LINK TROUBLESHOOTING 2 OF 4

2. DATA LINK fault lamp on caution panel comes on during operation (Cont):



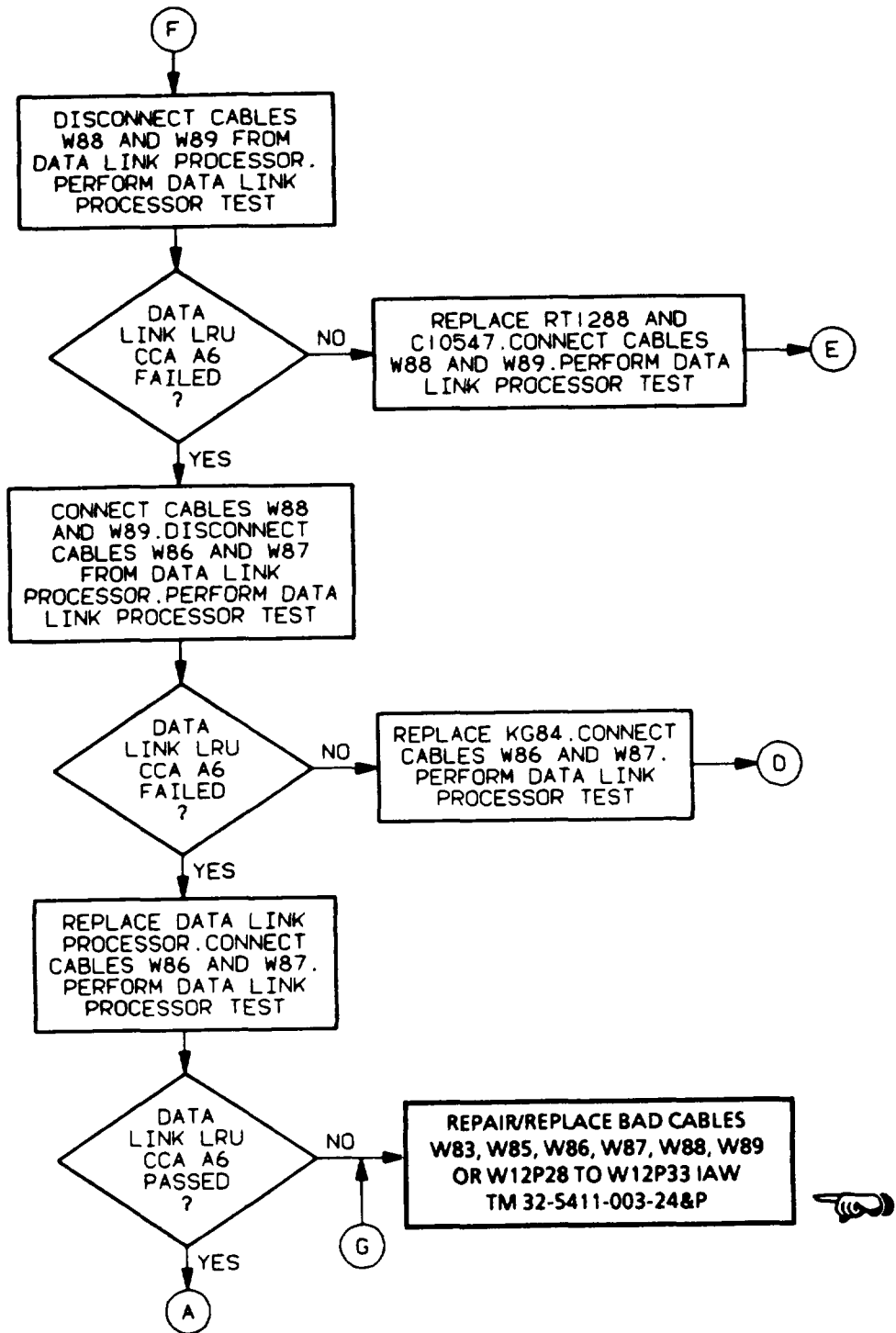
3 OF 4 **TROUBLESHOOTING** DATA LINK

2. DATA LINK fault lamp on caution panel comes on during operation (Cont):

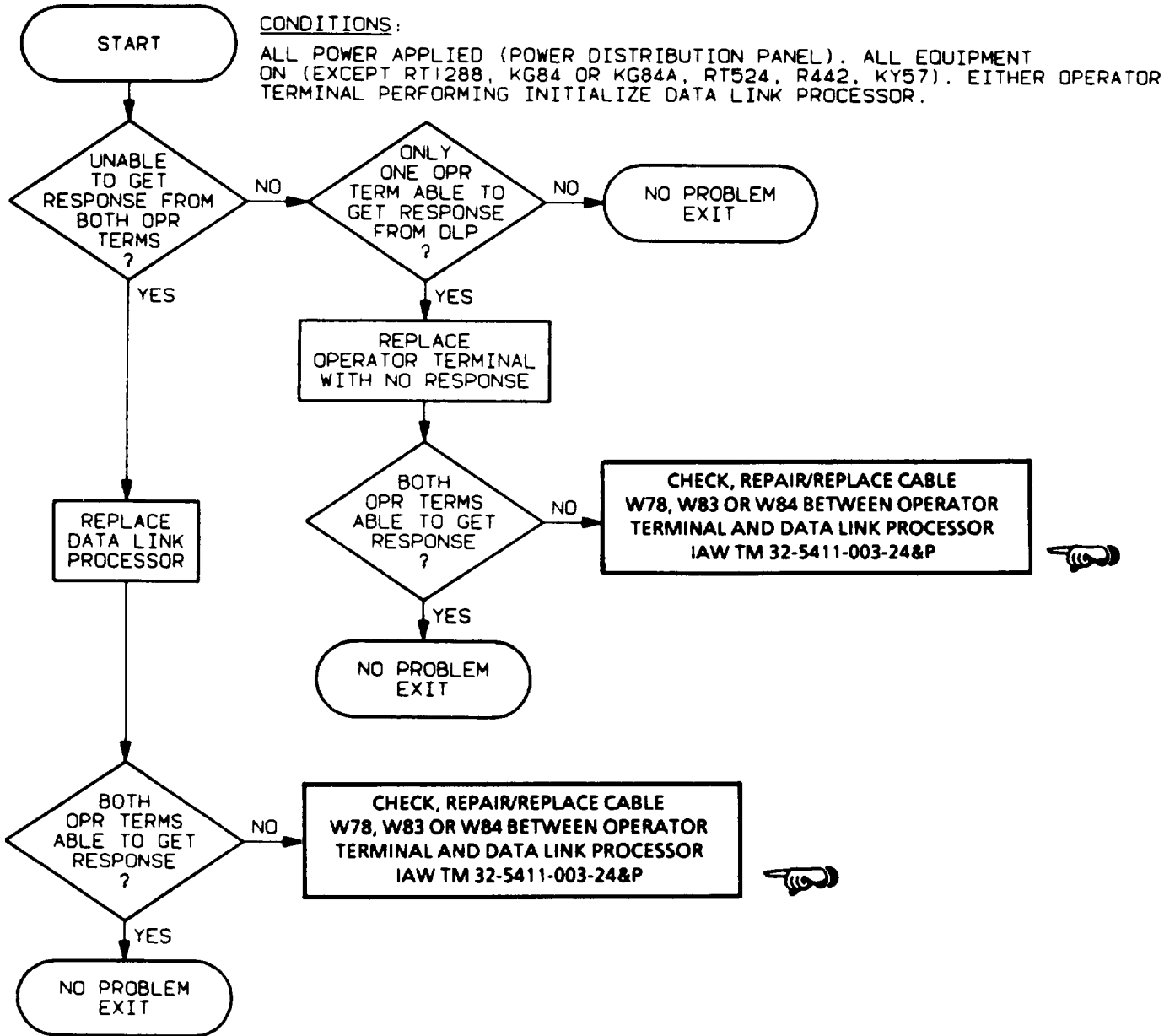


| | | |
|-----------|-----------------|--------|
| DATA LINK | TROUBLESHOOTING | 4 OF 4 |
|-----------|-----------------|--------|

2. DATA LINK fault lamp on caution panel comes on during operation (Cont):



3. Error message displayed due to no response from data link processor to operator terminal:



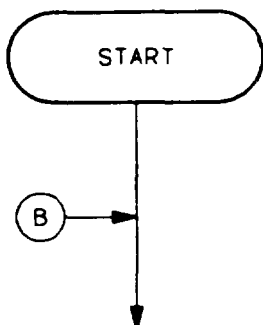
4. Data link transmission failures:

CONDITIONS:

ALL POWER APPLIED (POWER DISTRIBUTION PANEL). ALL EQUIPMENT ON (EXCEPT RT524,R442,AND KY57). OPERATOR TERMINAL PROGRAM-PERFORM "INITIALIZE DATA LINK PROCESSOR" FUNCTION. THE FREQUENCY (350 MHZ) USED TO TUNE RF COMPONENTS IS AN EXAMPLE. ACTUAL FREQUENCY USED FOR THIS TEST TRANSMISSION MUST BE DETERMINED BY YOUR LOCAL OPERATING DIRECTIVES.

DISCREPANCY:

ERROR MESSAGE DISPLAYED ON THE OPERATOR TERMINAL SCREEN DUE TO DATA LINK PROCESSOR INABILITY TO ESTABLISH ASAS DATA LINK NET WITH ANOTHER STATION.

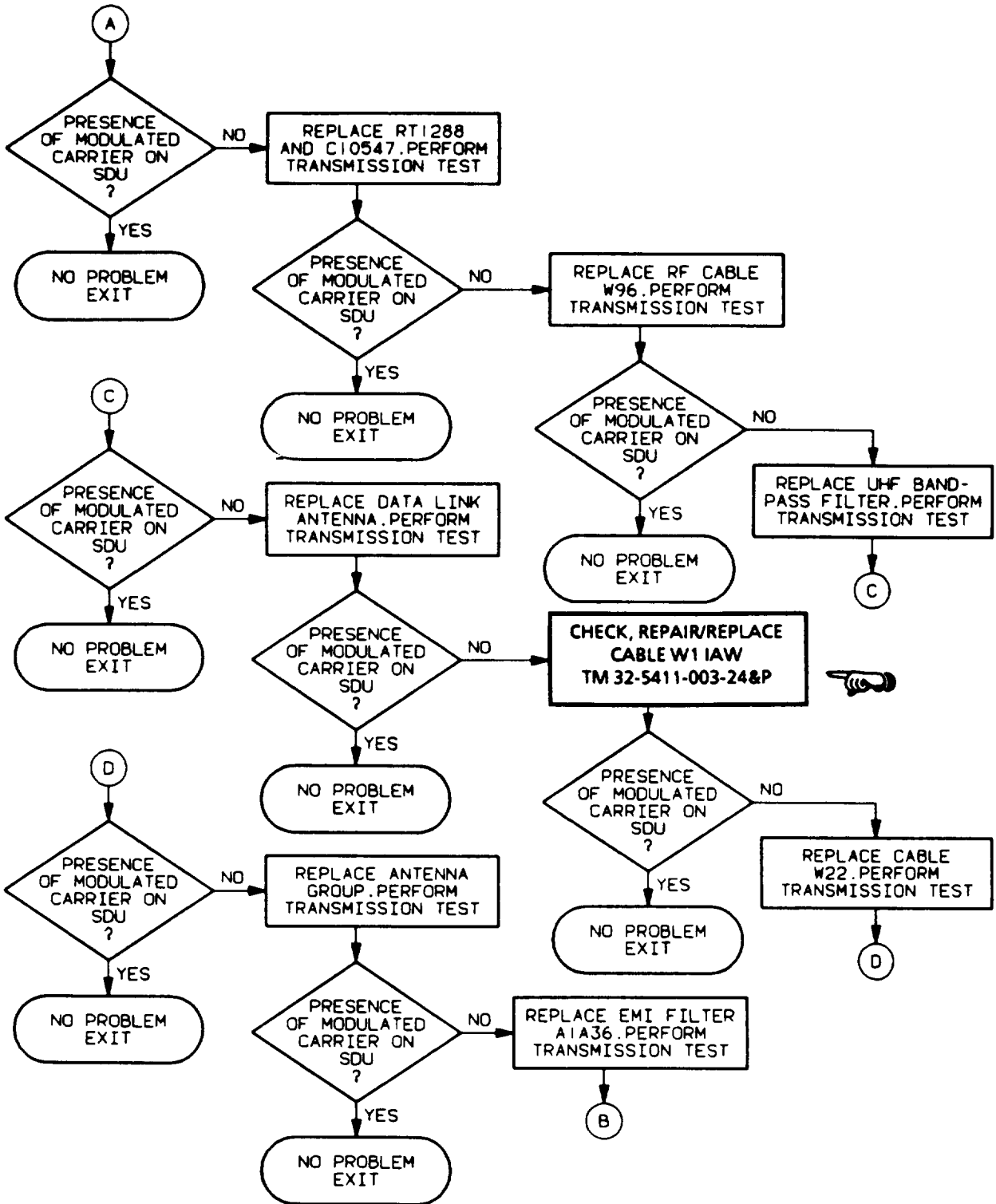


TEST RT1288, C10547,UHF BANDPASS FILTER, DATA LINK ANTENNA, AND CABLES FOR TRANSMISSION Capability
SET UP EQUIPMENT AS FOLLOWS:

- TUNE RT1288 USING C10547 CONTROL TO 350.00 MHZ AND SET MANUAL/PRESET SWITCH TO "MANUAL";
- CONFIGURE KG84 OR KG84A FOR OPERATION.
- RCU, POSITION 1,CONFIGURE CONTROLS:RCVR B,MAN MODE,50 KHZ BW,FAST AGCV,0 DB ATTEN,CW MODE. 350.000 MHZ AND PRESS CF/SF;
- SDU,POSITION 1, CONFIGURE CONTROLS:0.7 MHZ SWEEP BANDWIDTH,0 DB ATTEN,VARI-SWEEP OFF,
- RFDU,UHF FILTER NOT TUNED TO 350 MHZ;
- UHF BANDPASS FILTER TUNED TO 350 MHZ;
- DATA LINK ANTENNA ASSEMBLED ON MAST CROWN WITH CABLE W20P4(J4) CONNECTED TO THE BASE ASSEMBLY:
- OPERATOR TERMINAL,POSITION 1,SELECT "DATA LINK PARAMETERS" FUNCTION ON "SET-UP DATA LINK" MENU. SELECT "CONTENTION" DATA LINK MODE.BAUD RATE "1200", NRP ADDRESS "DG", AND USE MINIMUM VALUES FOR REST OF PARAMETERS.SELECT "DIRECT LINK" FUNCTION AND ENTER ONE DIRECT LINK MODE DESIGNATOR AND NAME.SELECT "ESTABLISH NET" FUNCTION ON "CREATE/TRANSMIT MESSAGE" MENU UNDER "MANAGE ASAS MESSAGES" AND CONFIRM.ON "SERVICE MESSAGE ENVELOPE" FORM ENTER NAME OF DIRECT LINK AND WHEN CONFIRMED. THE TRANSMISSION WILL BE ACCOMPLISHED.
- VERIFY TRANSMITTED SIGNAL BY VIEWING FOUR BRIEF PERIODS OF MODULATED CARRIER ON SDU. PRESENCE OF MODULATED CARRIER ON SDU IS PROOF OF TRANSMISSION BY DATA LINK PROCESSOR,AND RT1288,C10547,UHF BANDPASS FILTER,DATA LINK ANTENNA,AND CABLES ARE OPERATIONAL.ERROR MESSAGES ON OPERATOR TERMINAL FOR DIRECT LINK NOT ESTABLISHED,SHOULD BE IGNORED FOR THIS TEST.

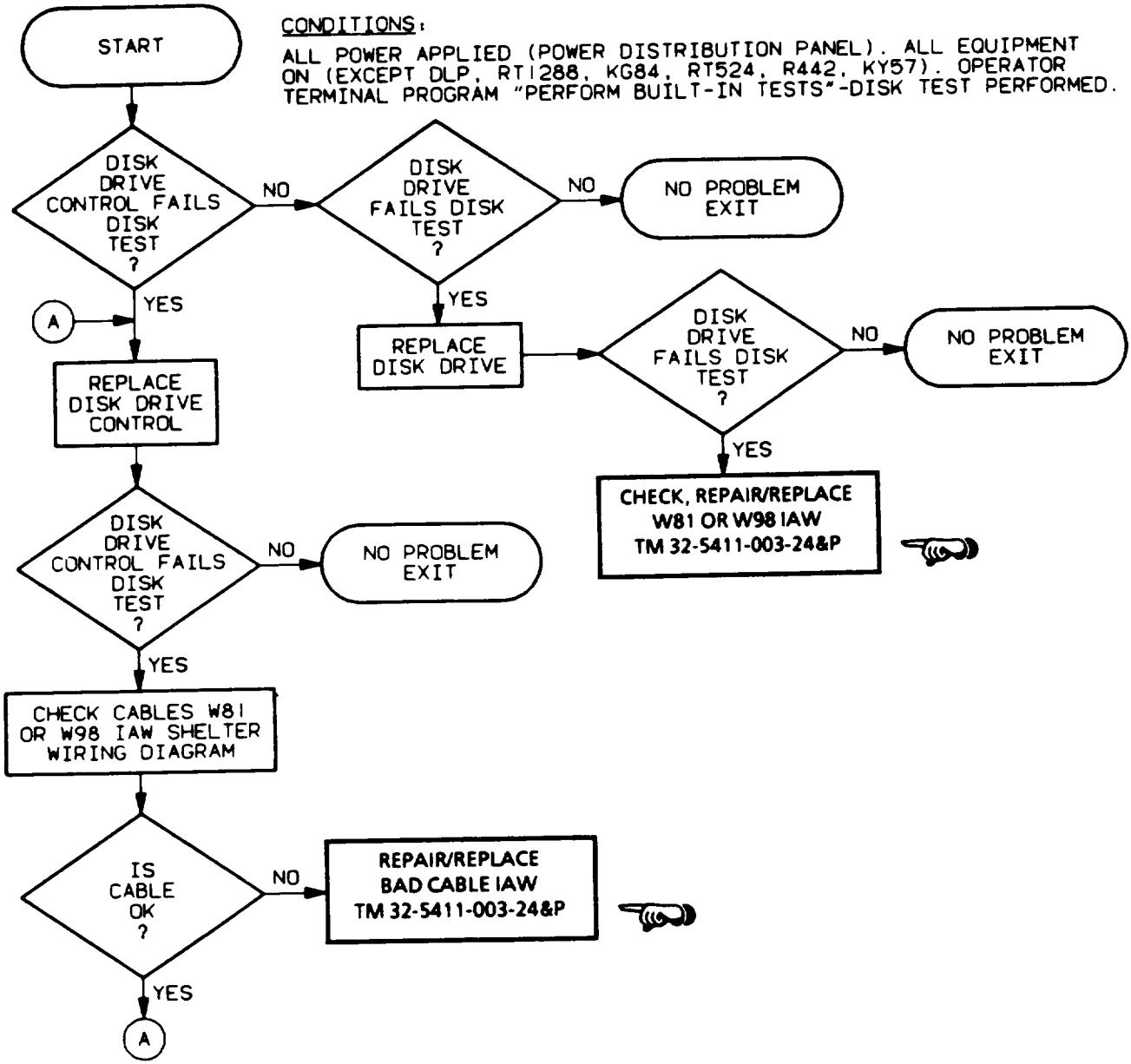


4. Data link transmission failures (Cont):



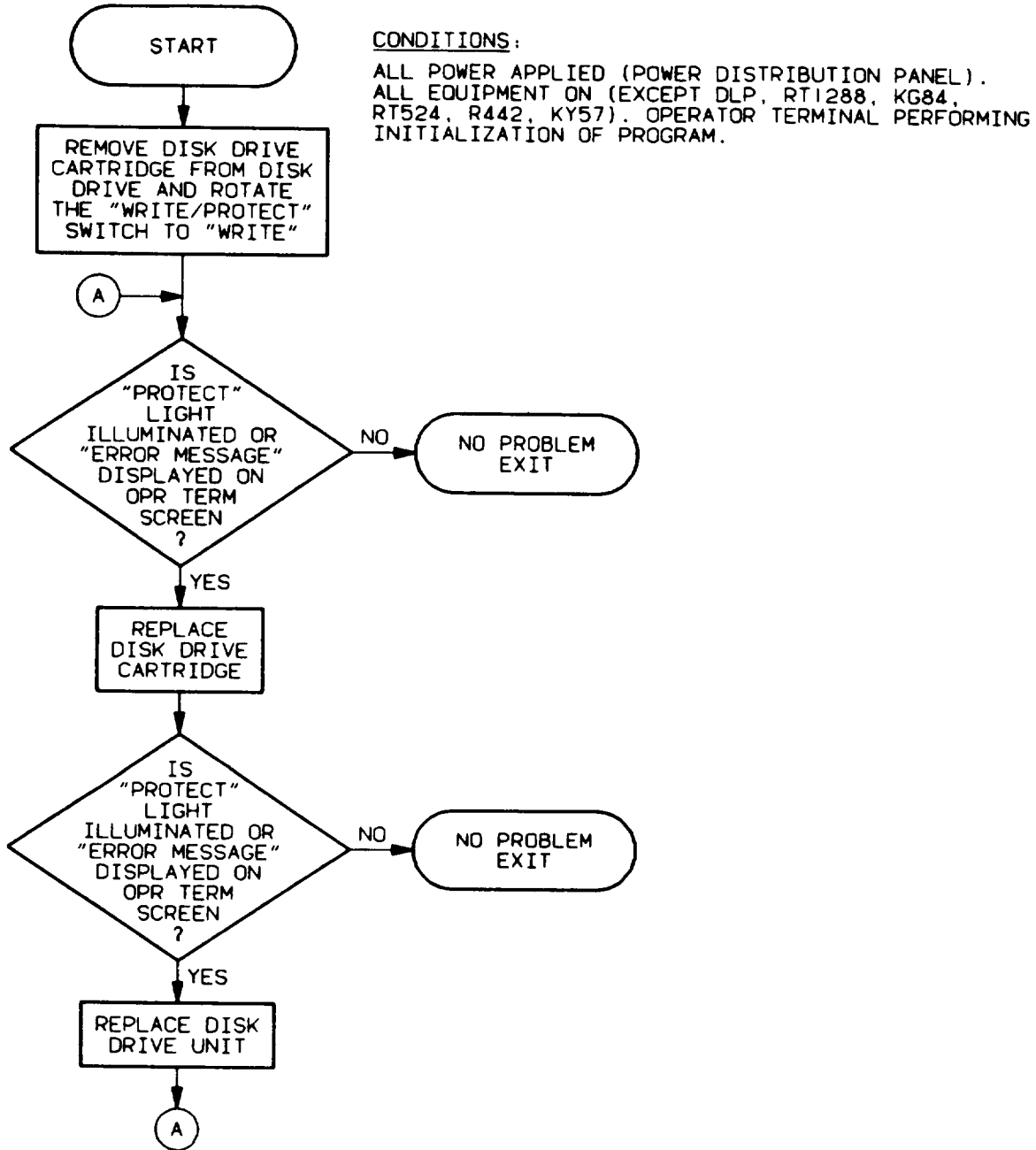
| | | |
|------------|-----------------|--------|
| DISK DRIVE | TROUBLESHOOTING | 1 OF 1 |
|------------|-----------------|--------|

1. Operator terminal Disk Test failed:



| | | |
|--------|-----------------|------------|
| 1 OF 1 | TROUBLESHOOTING | DISK DRIVE |
|--------|-----------------|------------|

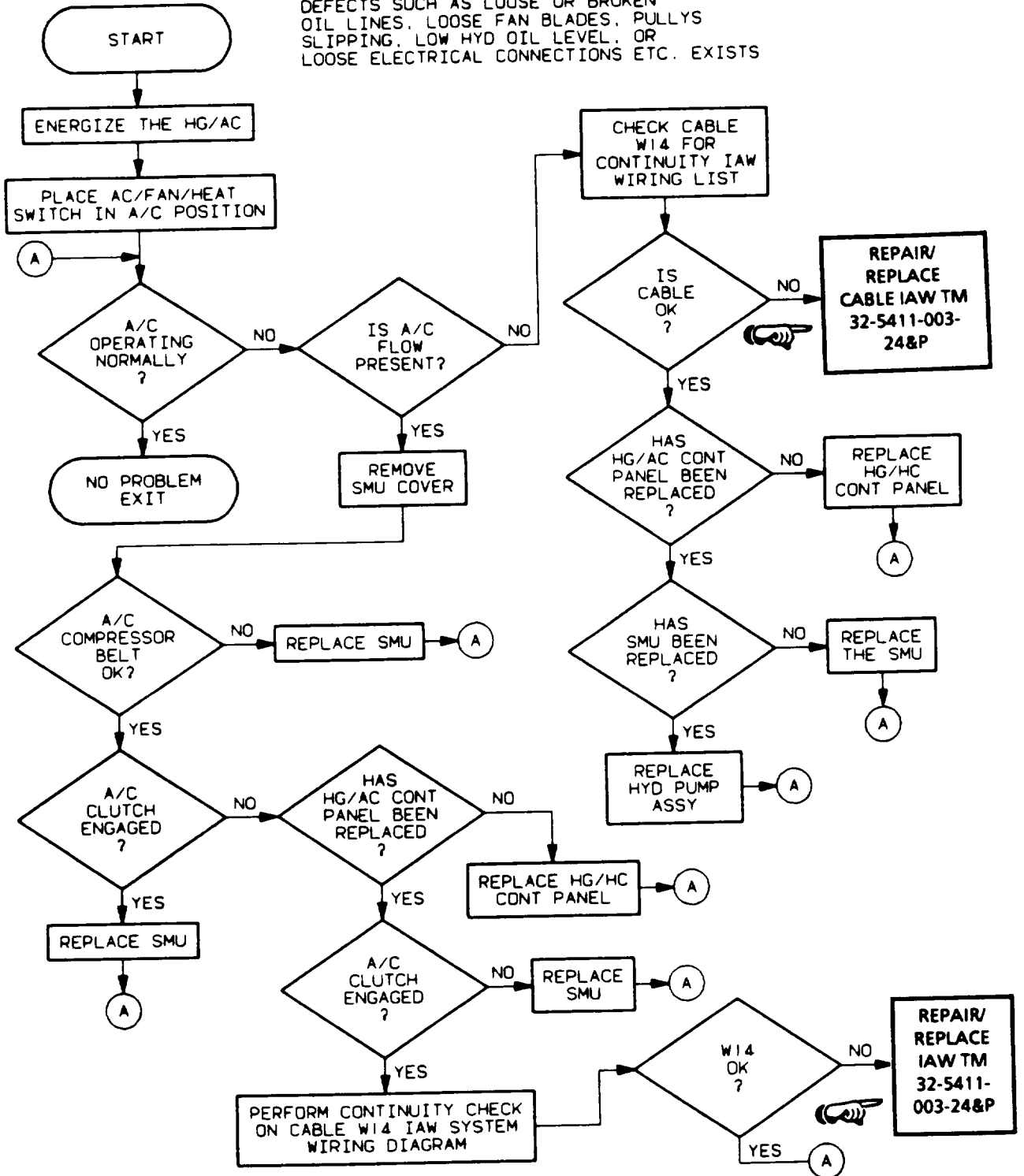
2. PROTECT lamp illuminated on disk drive or error message displayed on operator terminal screen:



| | | |
|-------------|-----------------|--------|
| HG/AC GROUP | TROUBLESHOOTING | 1 OF 1 |
|-------------|-----------------|--------|

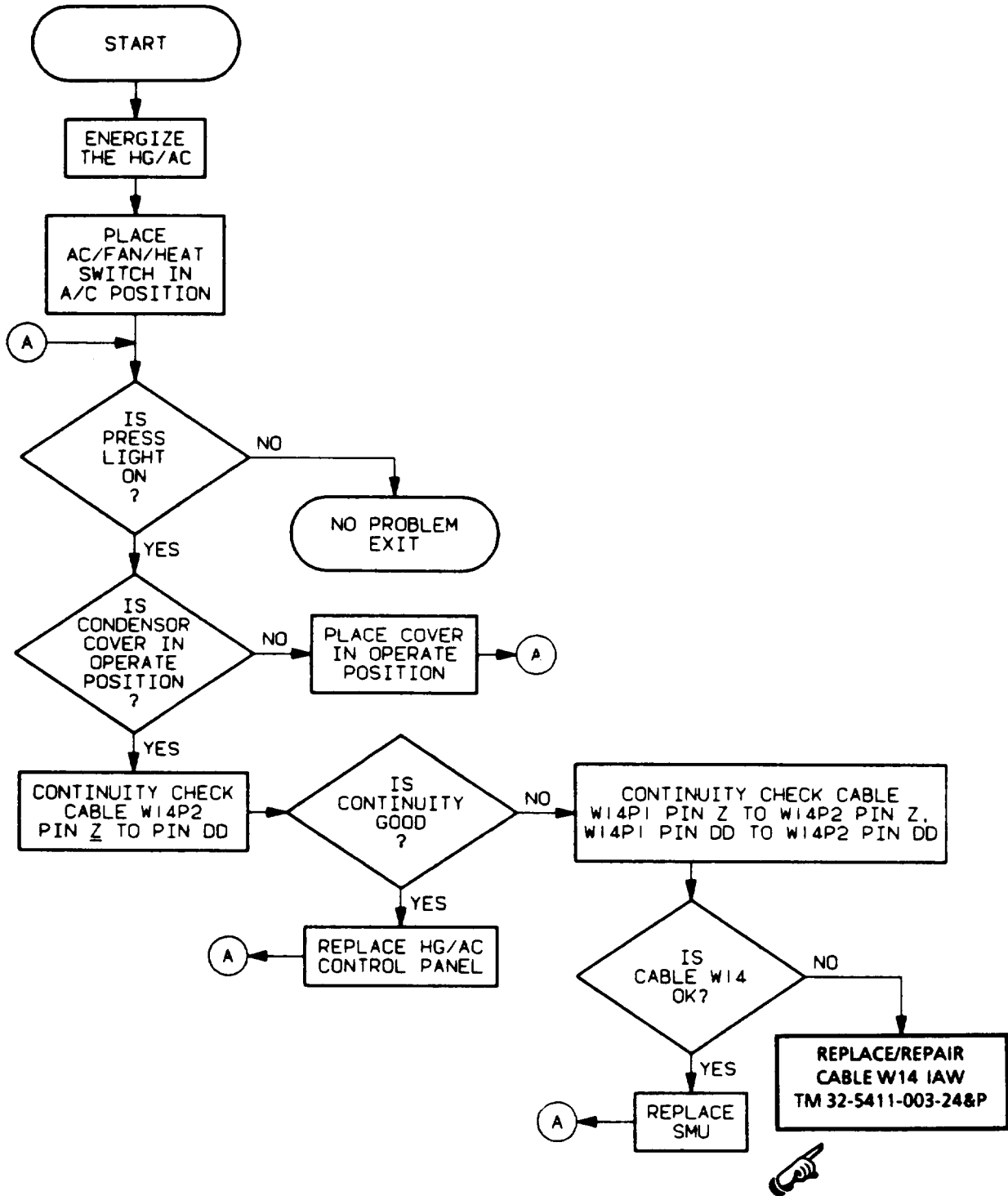
1. A/C CIRC lamp on, GENERATOR ok:

THIS PROCEDURE ASSUMES THAT NO OBVIOUS DEFECTS SUCH AS LOOSE OR BROKEN OIL LINES, LOOSE FAN BLADES, PULLYS SLIPPING, LOW HYD OIL LEVEL, OR LOOSE ELECTRICAL CONNECTIONS ETC. EXISTS

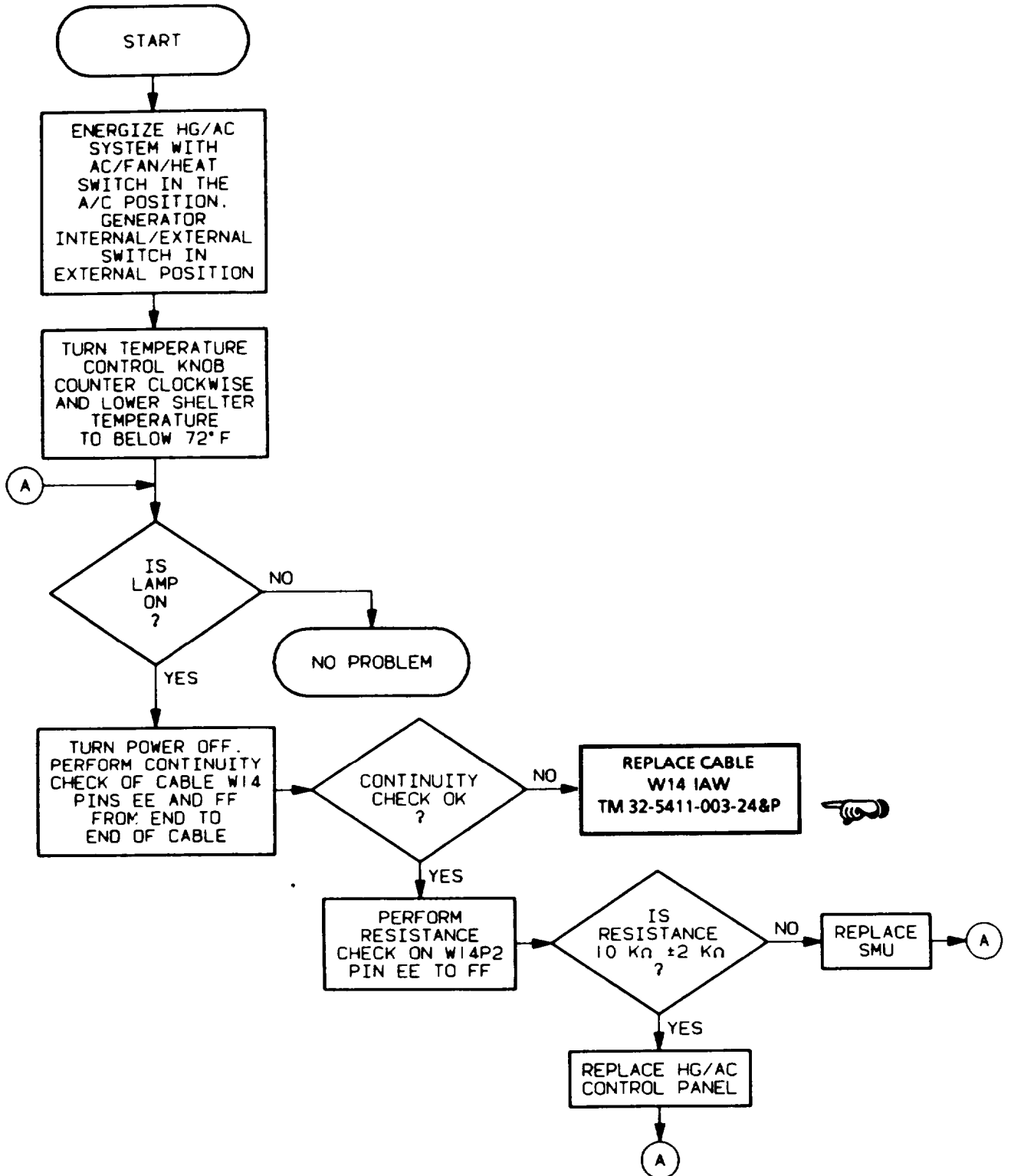


| | | |
|--------|------------------------|--------------------|
| 1 OF 1 | TROUBLESHOOTING | HG/AC GROUP |
|--------|------------------------|--------------------|

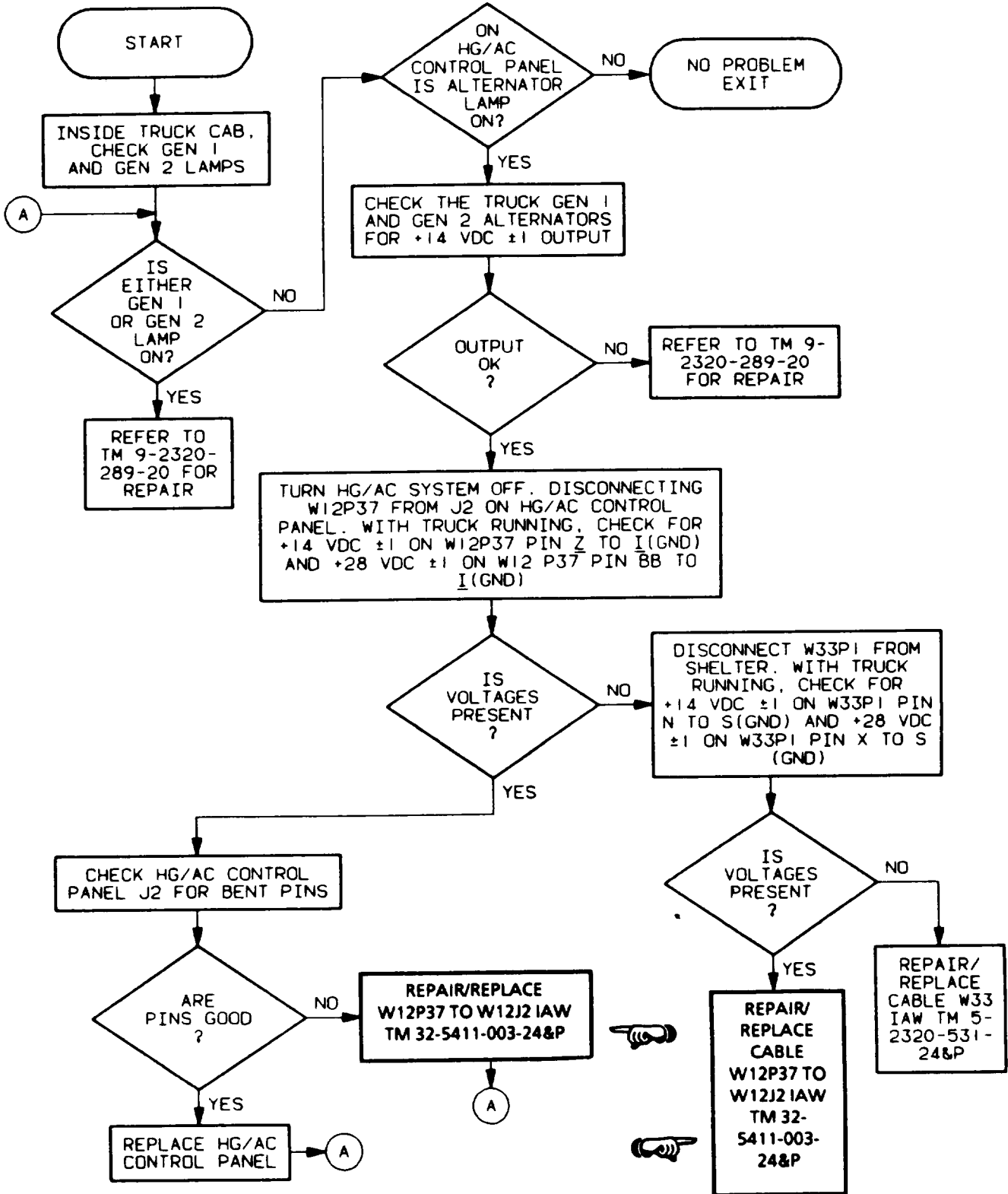
2. A/C PRESS lamp on, GENERATOR ok:



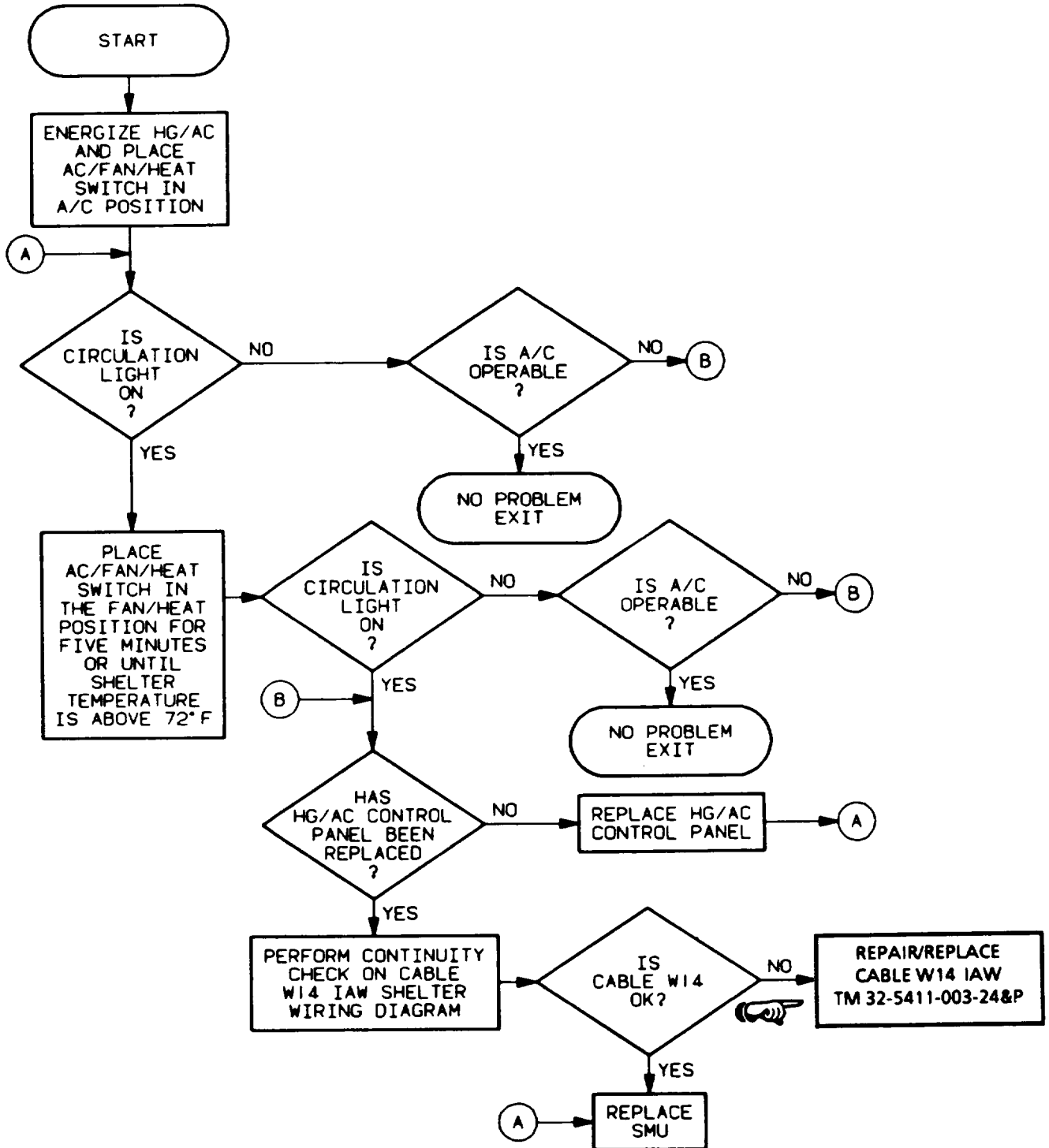
3. A/C TEMP lamp on:



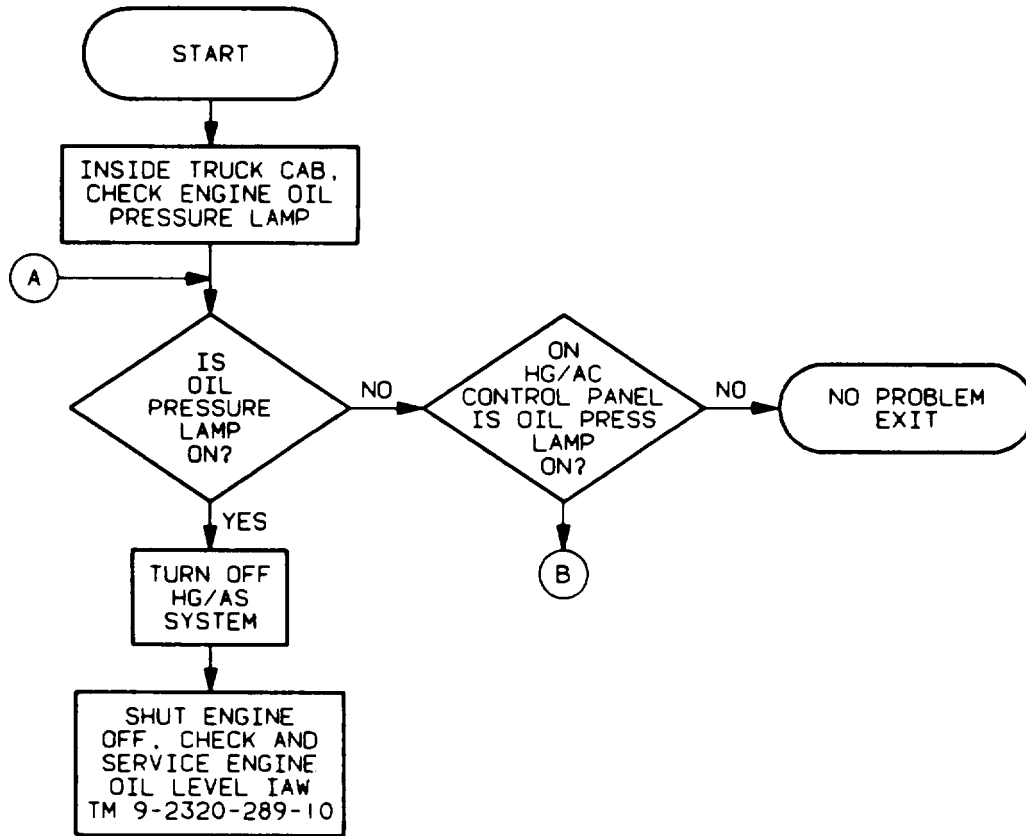
4. ALTERNATOR lamp and audio alarm on:



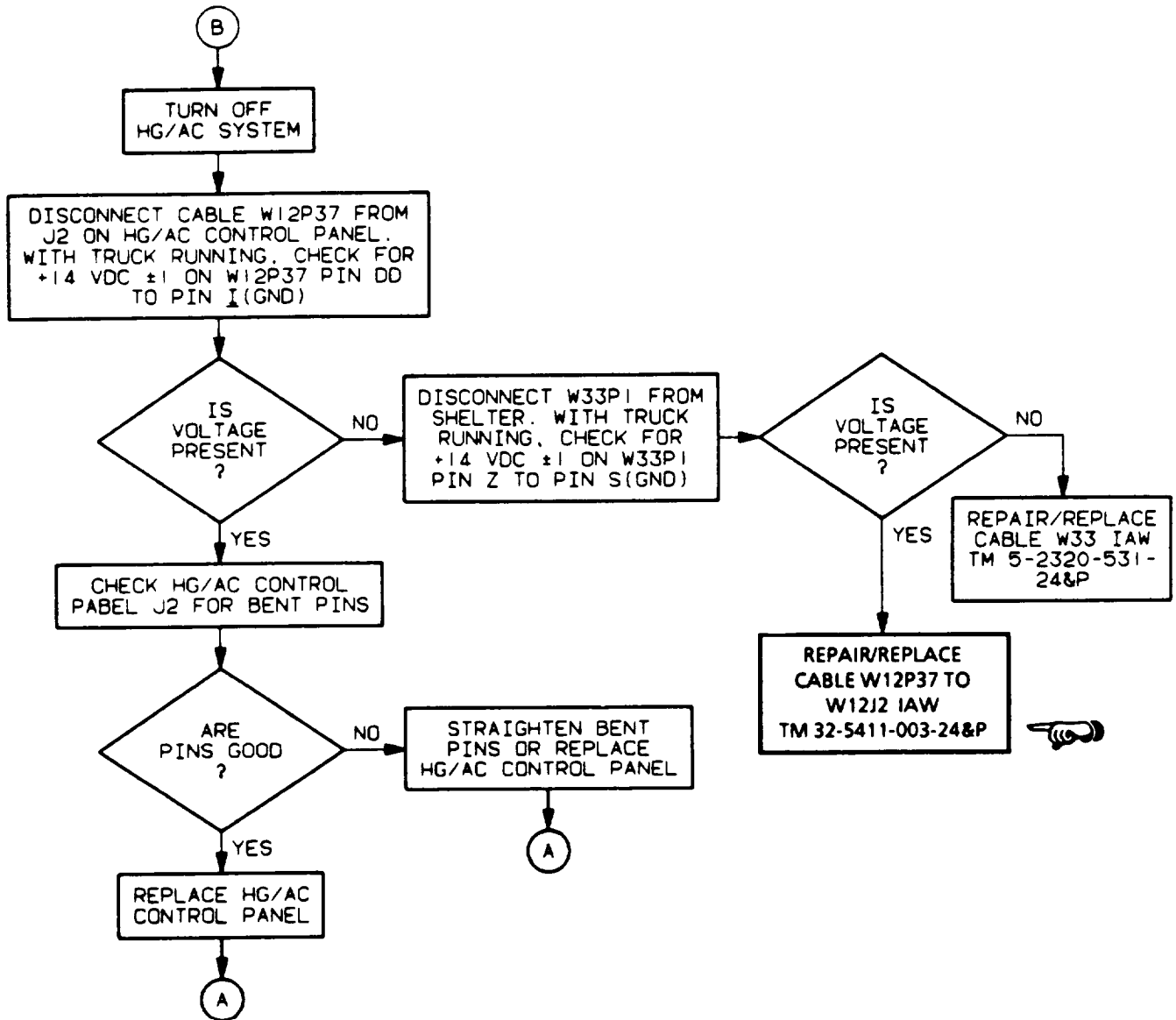
5. A/C CIRC lamp on continuously or intermittently:

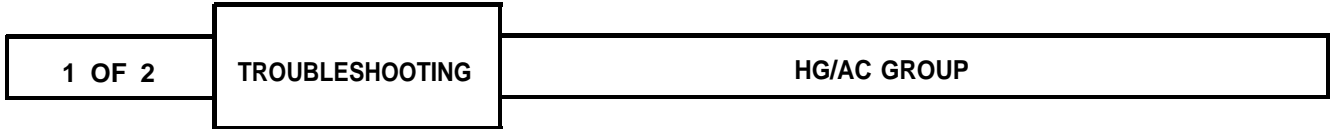


6. VEHICLE OIL PRESS lamp and audio alarm on:

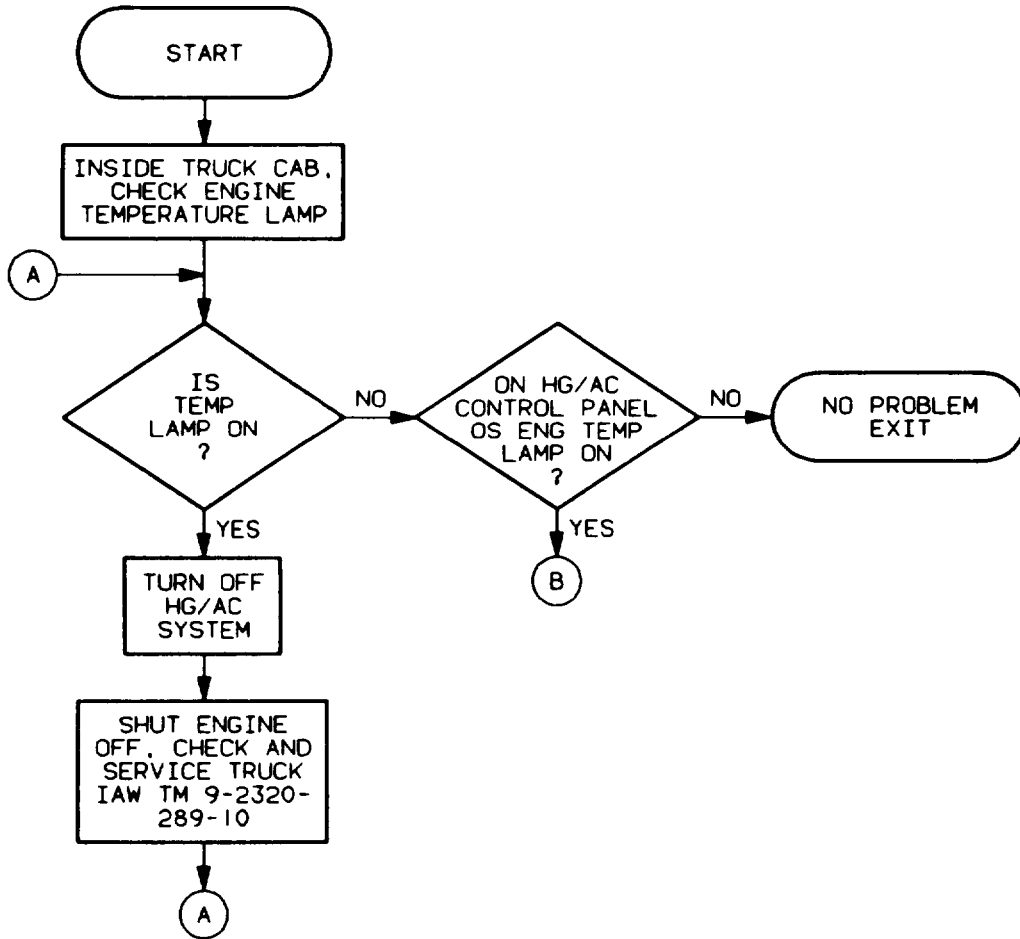


6. VEHICLE OIL PRESS lamp and audio alarm on (Cont):



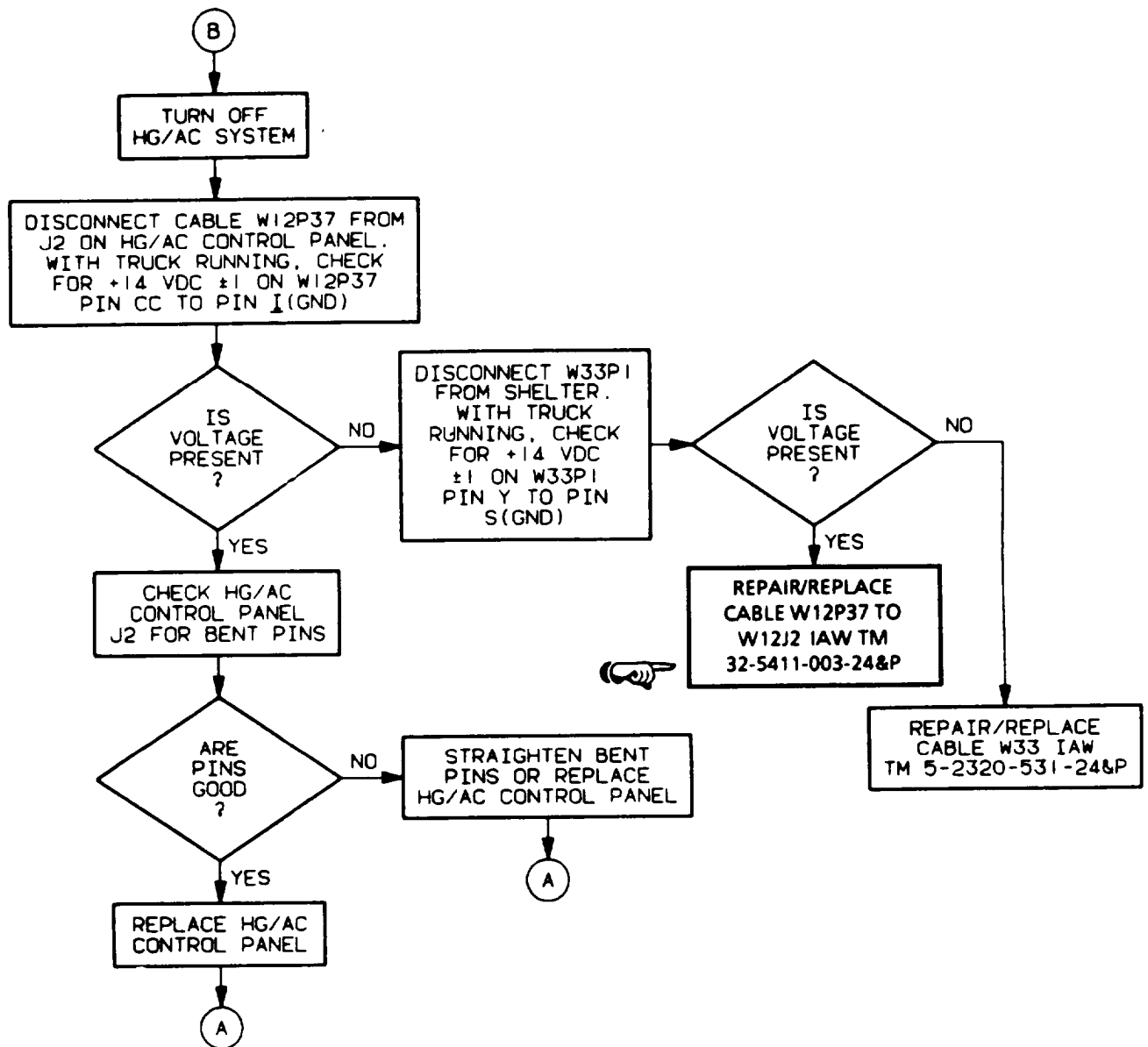


7. VEHICLE ENG TEMP lamp and audio alarm on:



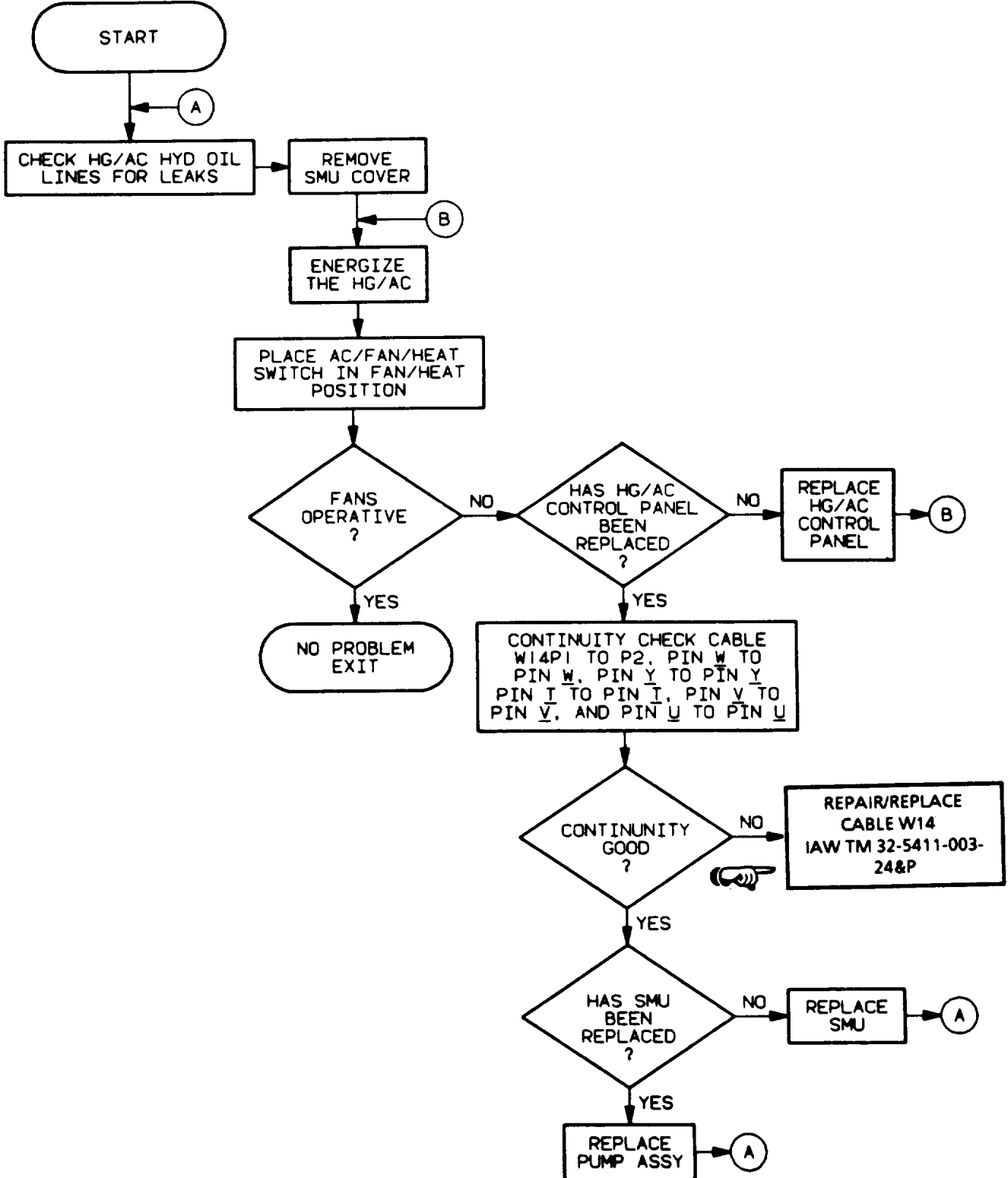
| | | |
|-------------|-----------------|--------|
| HG/AC GROUP | TROUBLESHOOTING | 2 OF 2 |
|-------------|-----------------|--------|

7. VEHICLE ENG TEMP lamp and audio alarm on (Cont):

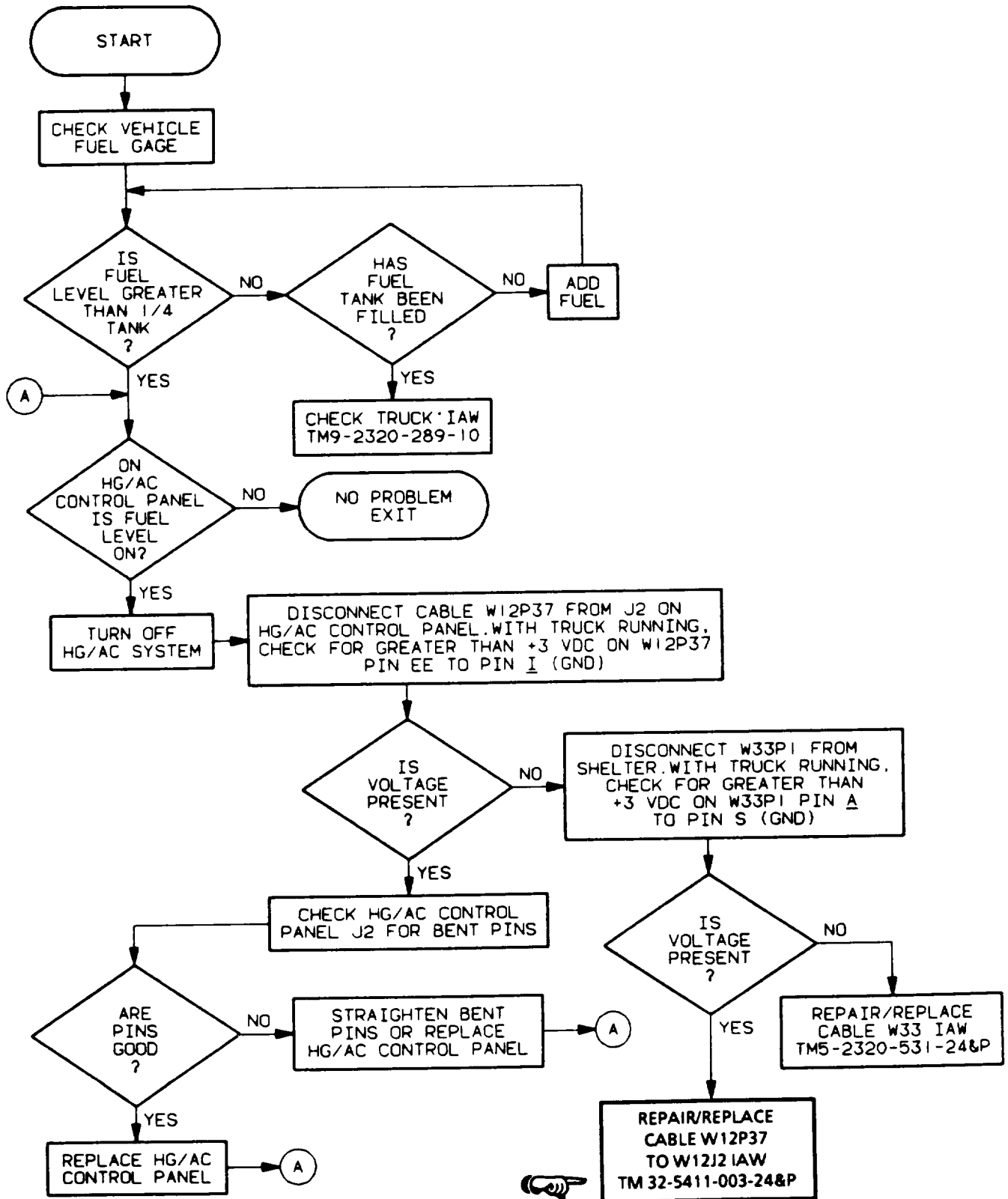


| | | |
|--------|-----------------|-------------|
| 1 OF 1 | TROUBLESHOOTING | HG/AC GROUP |
|--------|-----------------|-------------|

8. Fans not operating, GENERATOR ok:

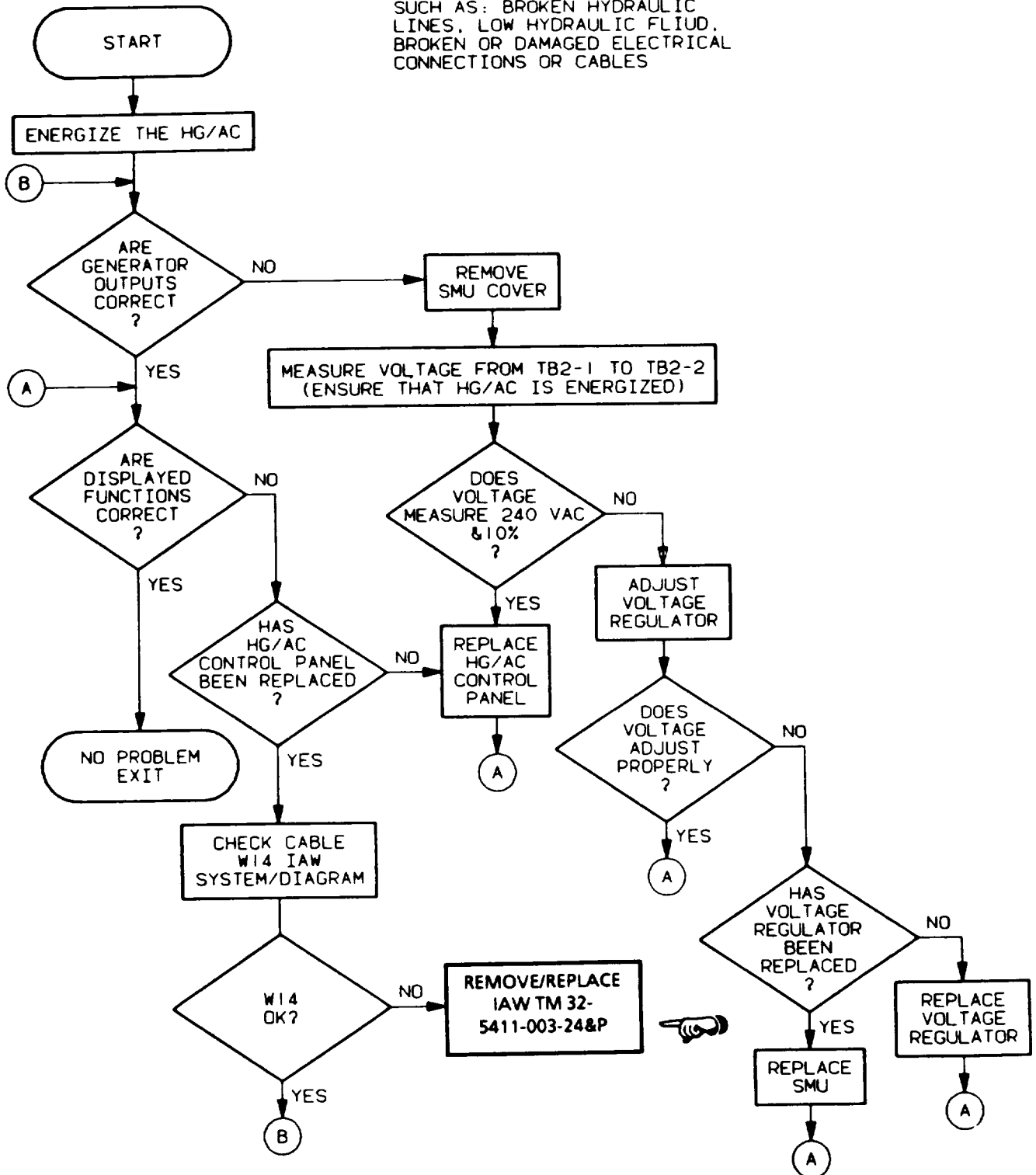


9. VEHICLE FUEL LEVEL lamp on:



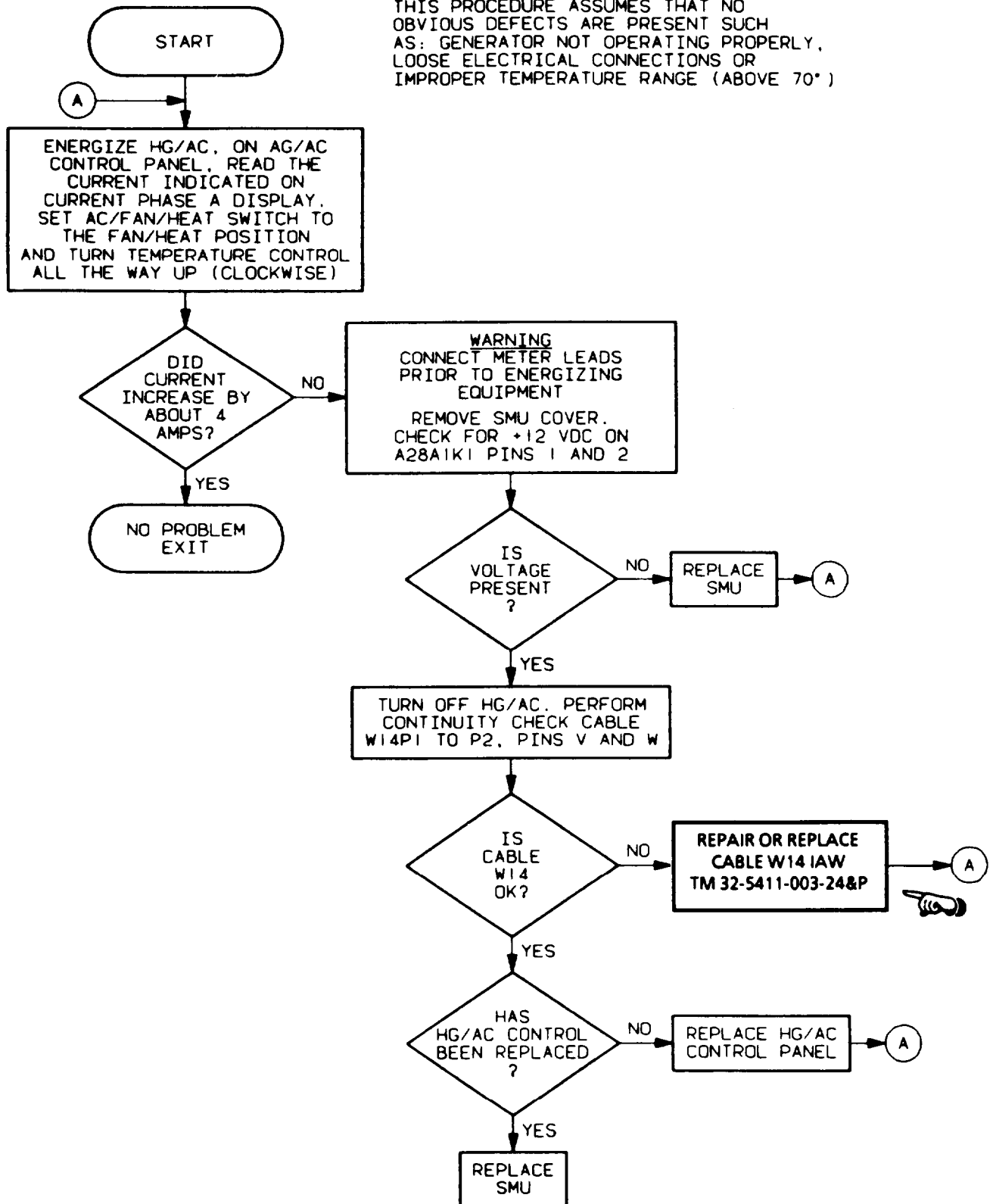
11. Generator output voltage too low or too high:

THIS PROCEDURE ASSUMES THAT NO OBVIOUS DEFECTS ARE PRESENT SUCH AS: BROKEN HYDRAULIC LINES, LOW HYDRAULIC FLUID, BROKEN OR DAMAGED ELECTRICAL CONNECTIONS OR CABLES



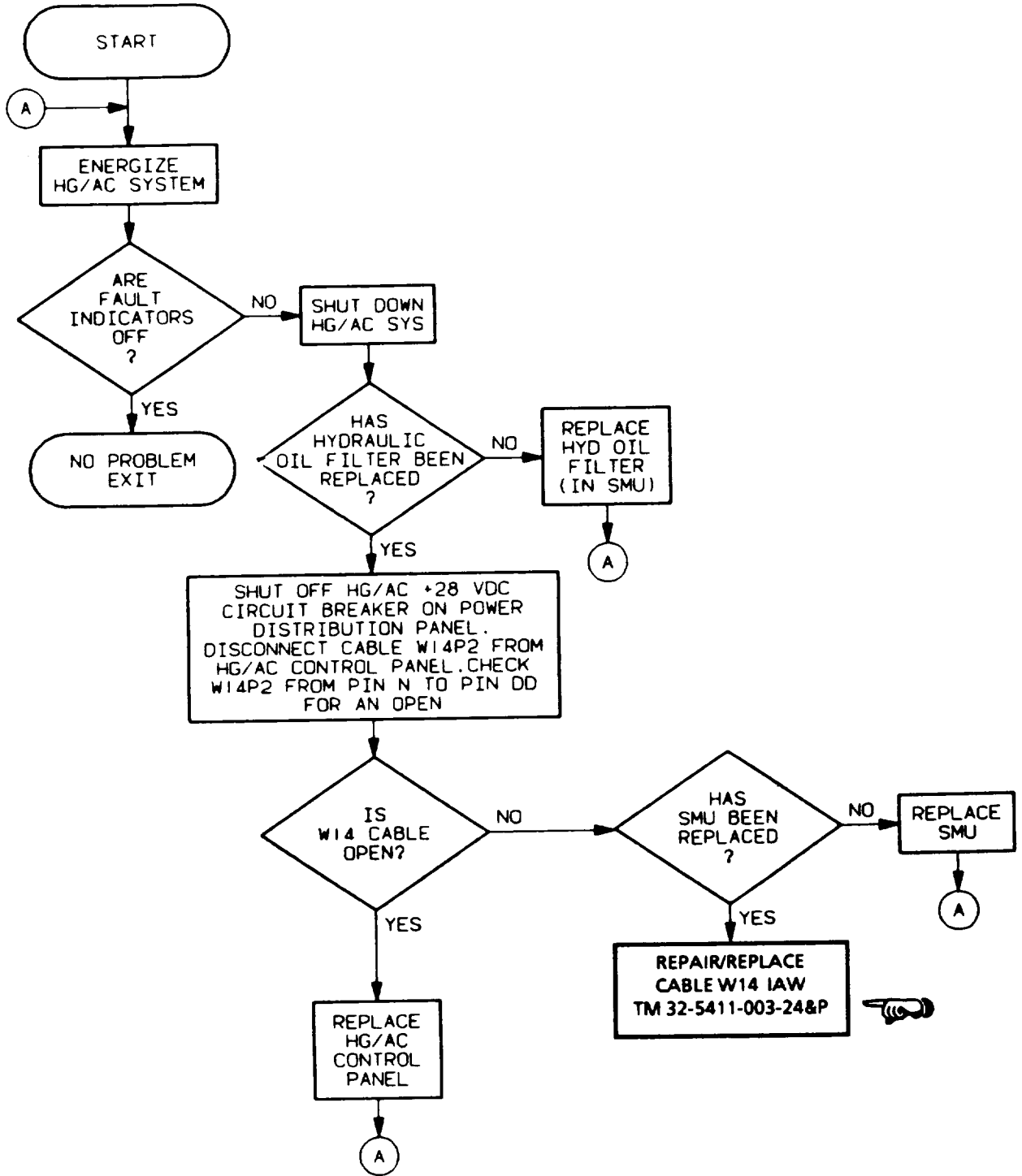
| | | |
|-------|------------------------|--------------------|
| 10F 1 | TROUBLESHOOTING | HG/AC GROUP |
|-------|------------------------|--------------------|

12. Heater inoperative:



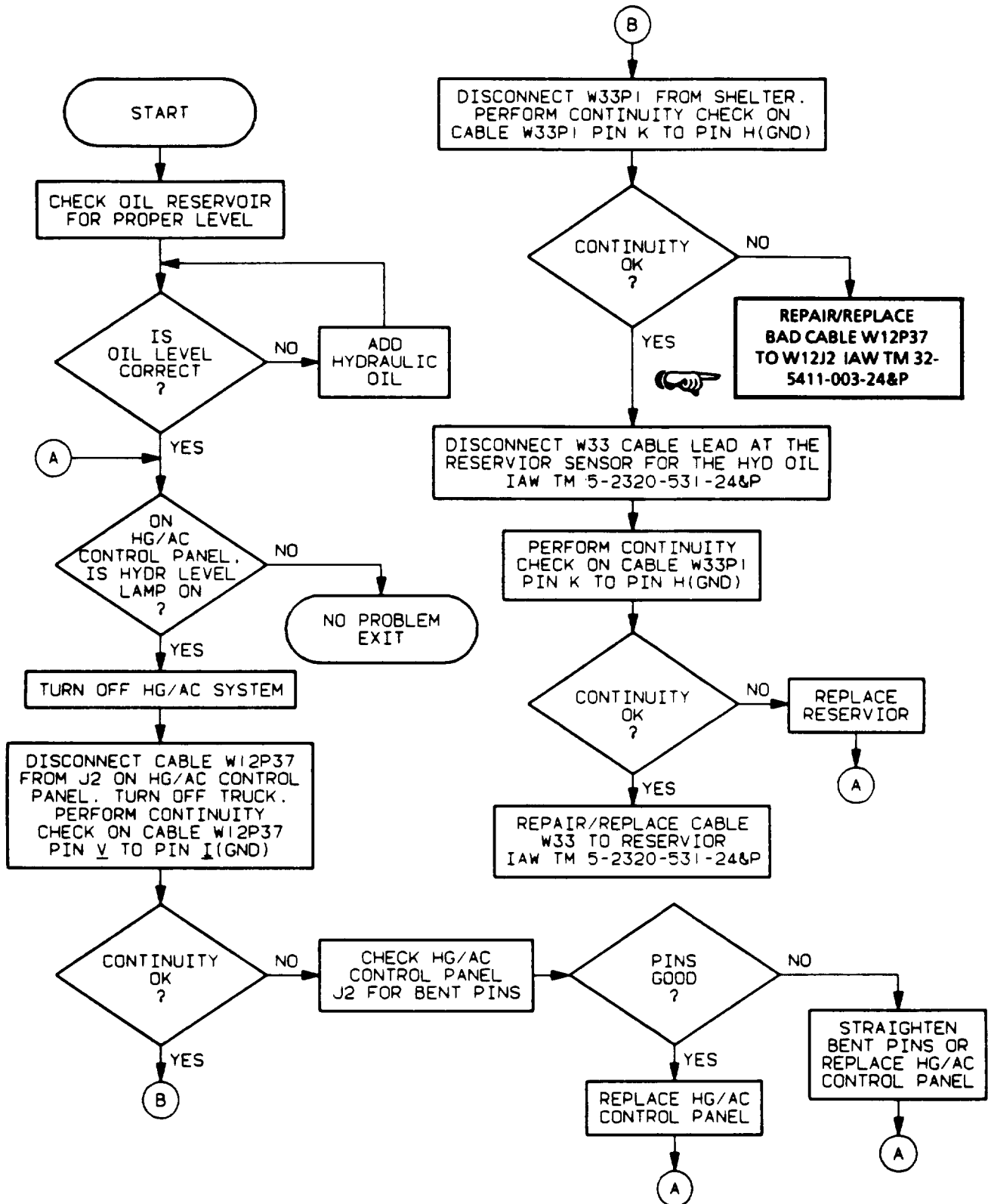
| | | |
|-------------|-----------------|--------|
| HG/AC GROUP | TROUBLESHOOTING | 1 OF 1 |
|-------------|-----------------|--------|

13. HG/AC control panel fault lamps all on, generator and A/C operating normally:

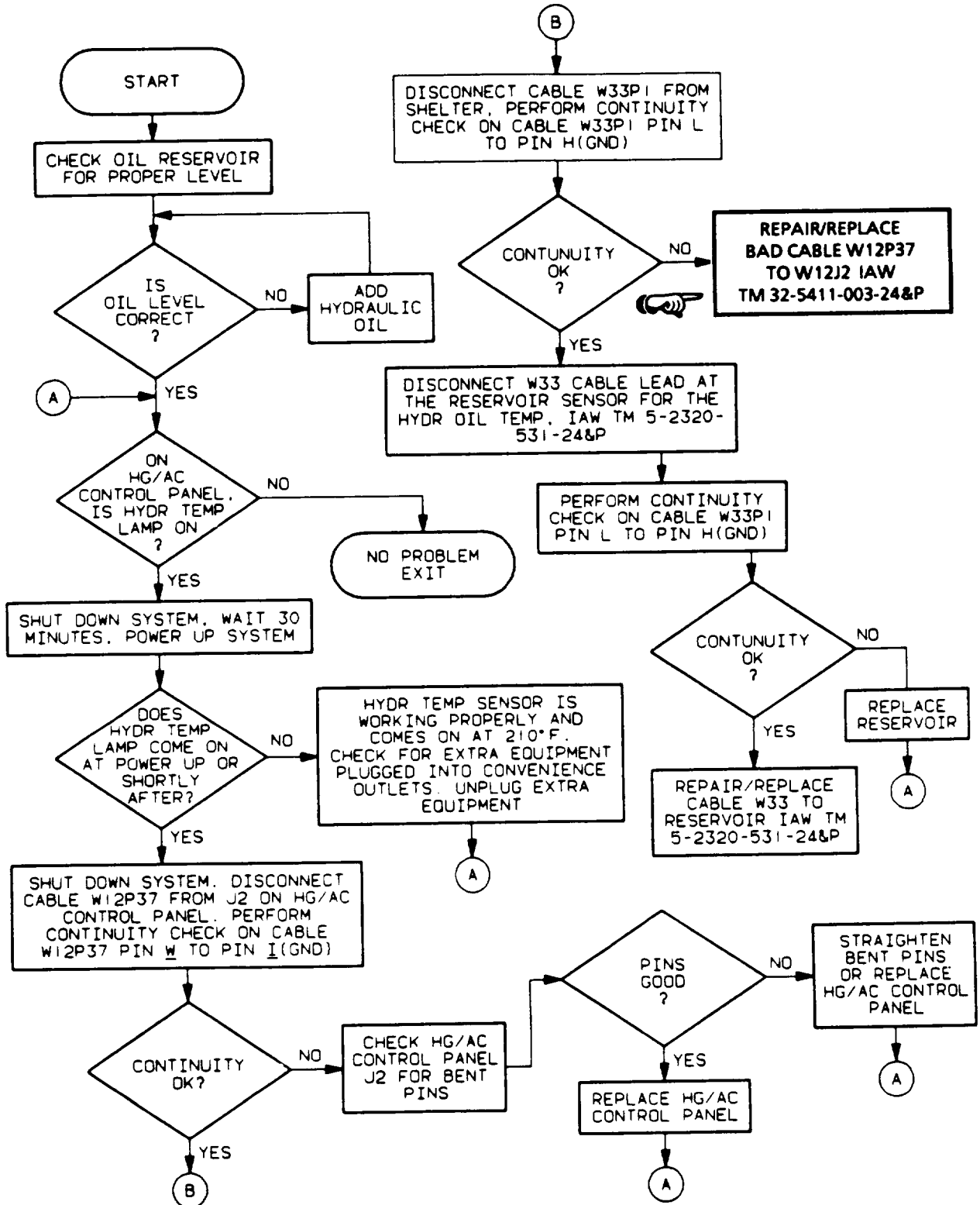


| | | |
|--------|-----------------|-------------|
| 1 OF 1 | TROUBLESHOOTING | HG/AC GROUP |
|--------|-----------------|-------------|

14. VEHICLE HYDR LEVEL lamp and audio alarm on:

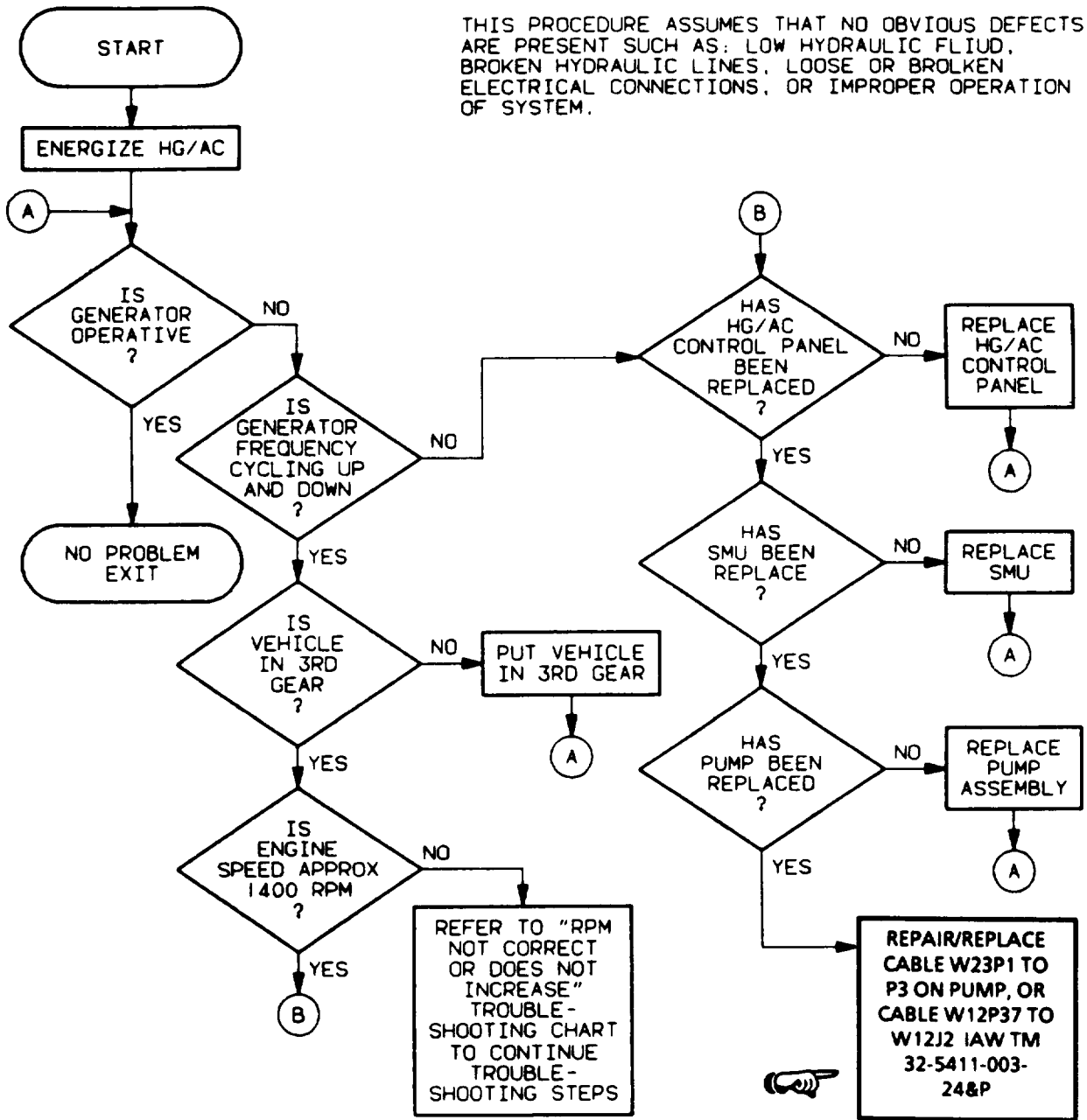


15. VEHICLE HYDR TEMP lamp and audio alarm on:



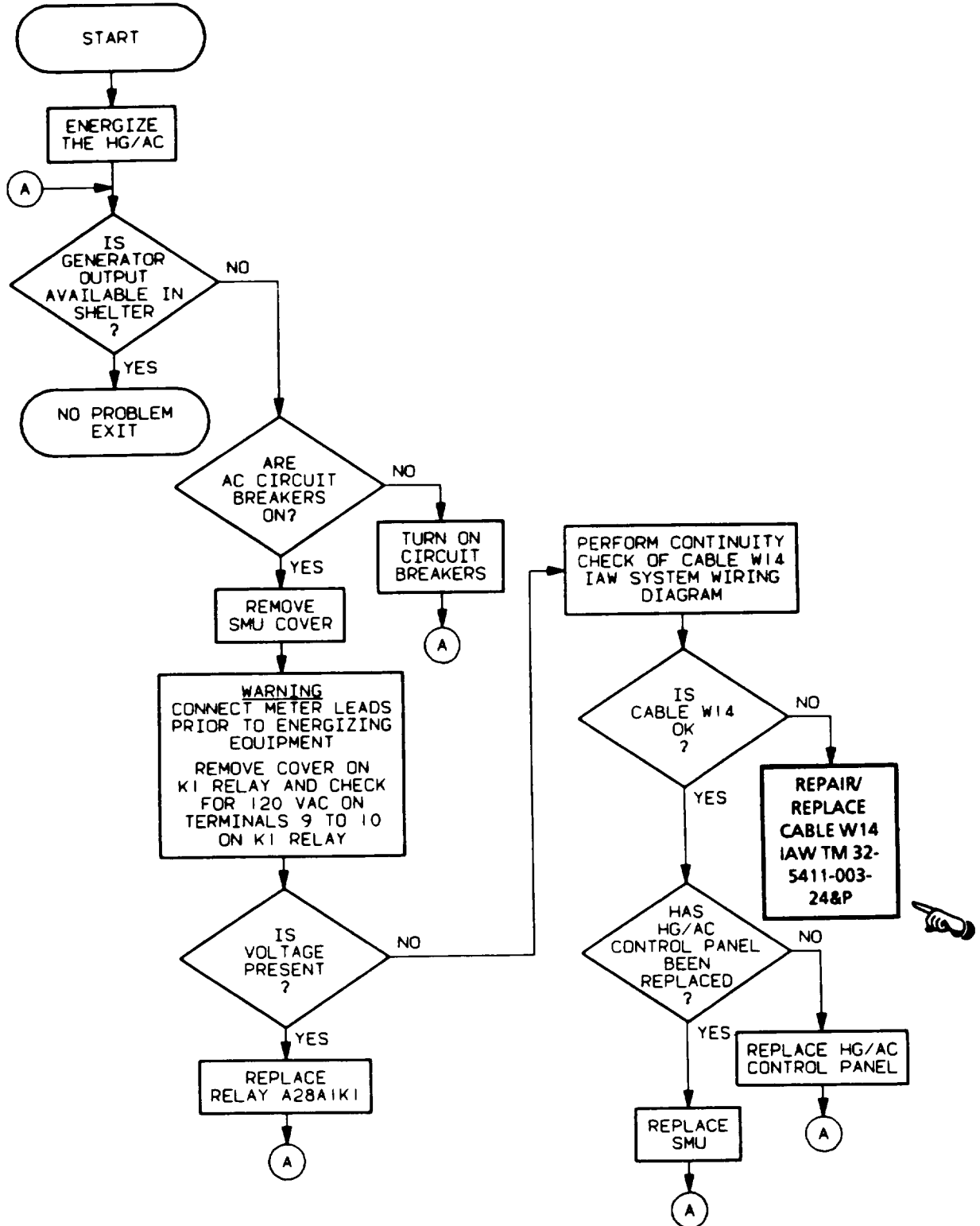
| | | |
|--------|-----------------|-------------|
| 1 OF 1 | TROUBLESHOOTING | HG/AC GROUP |
|--------|-----------------|-------------|

16. Incorrect frequency reading and/or UND-F or OV-F frequency LEDs on:

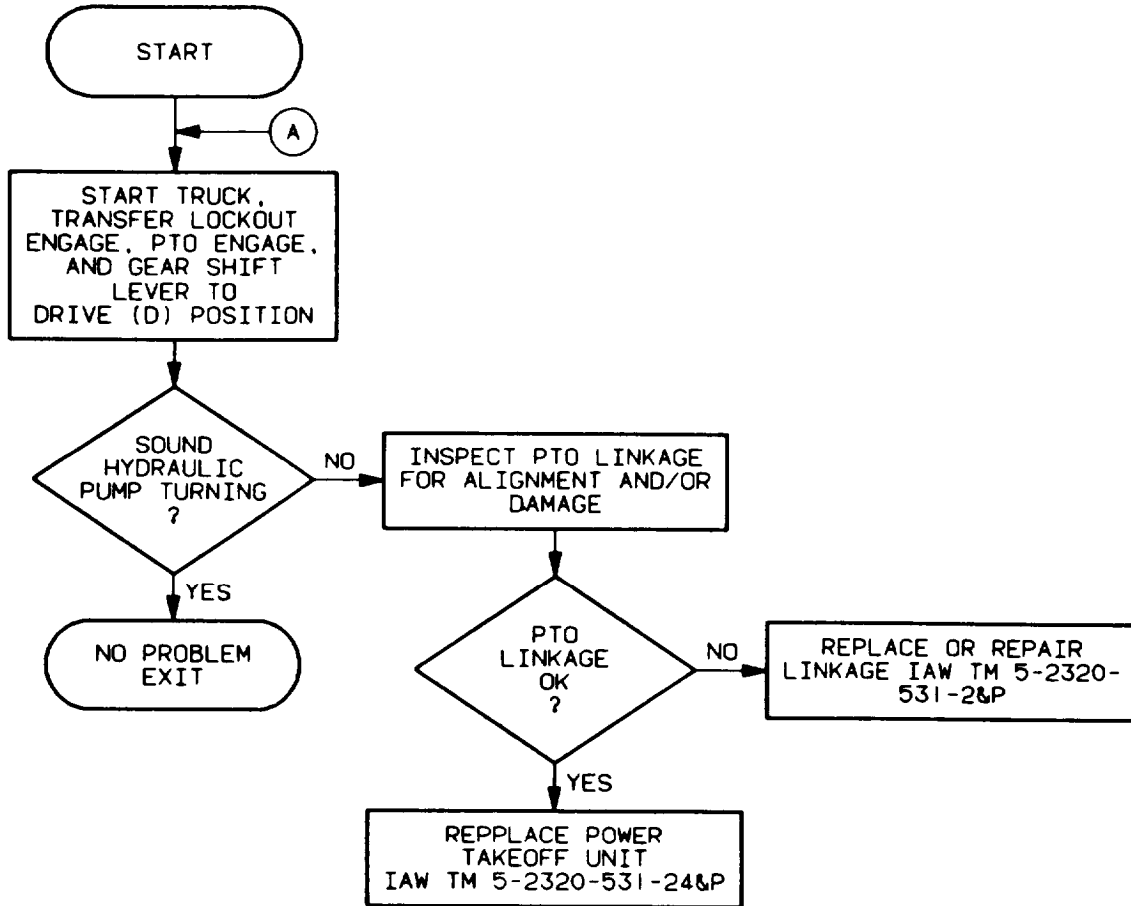


| | | |
|-------------|-----------------|--------|
| HG/AC GROUP | TROUBLESHOOTING | 1 OF 1 |
|-------------|-----------------|--------|

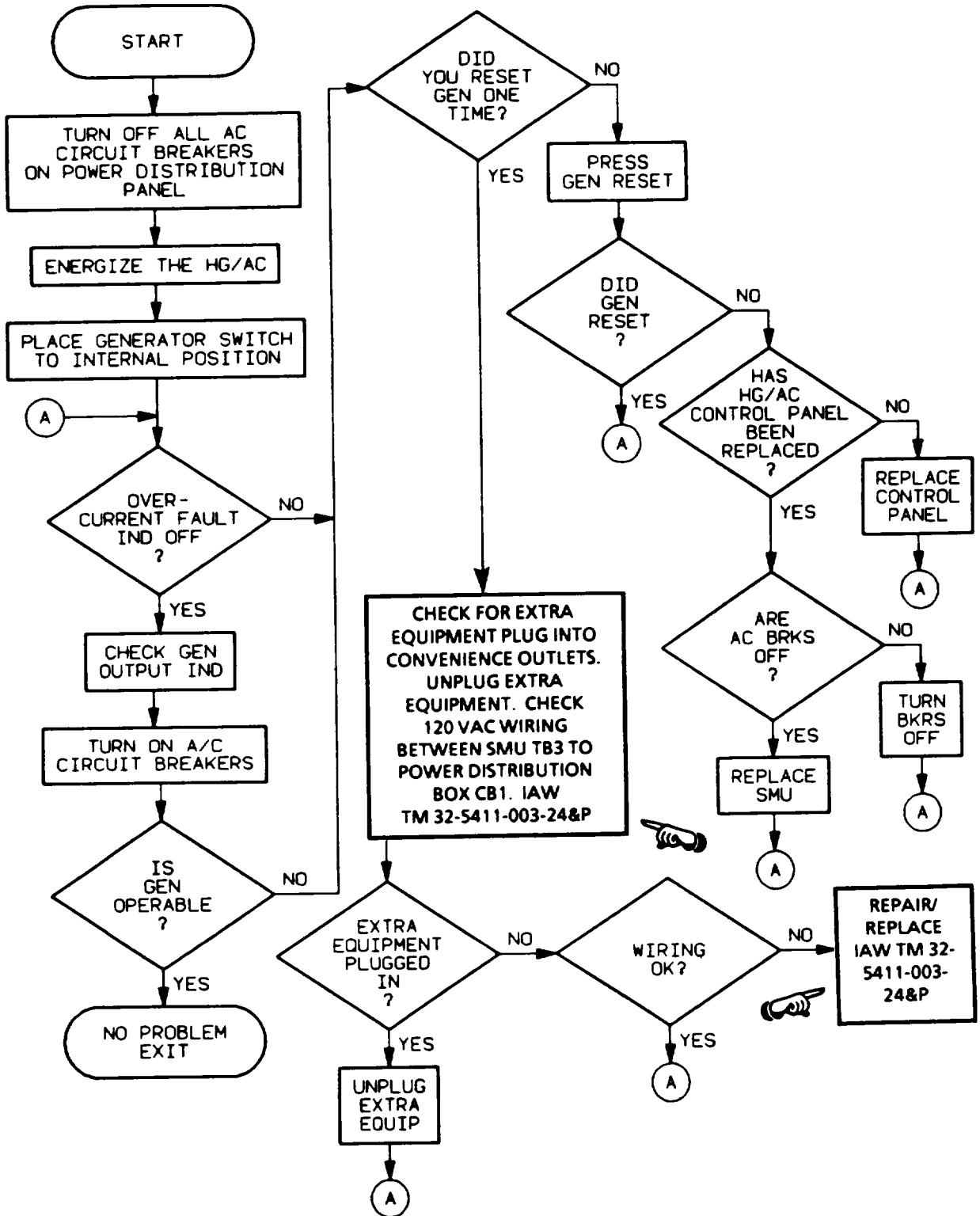
17. No shelter power, voltage and frequency indications ok:



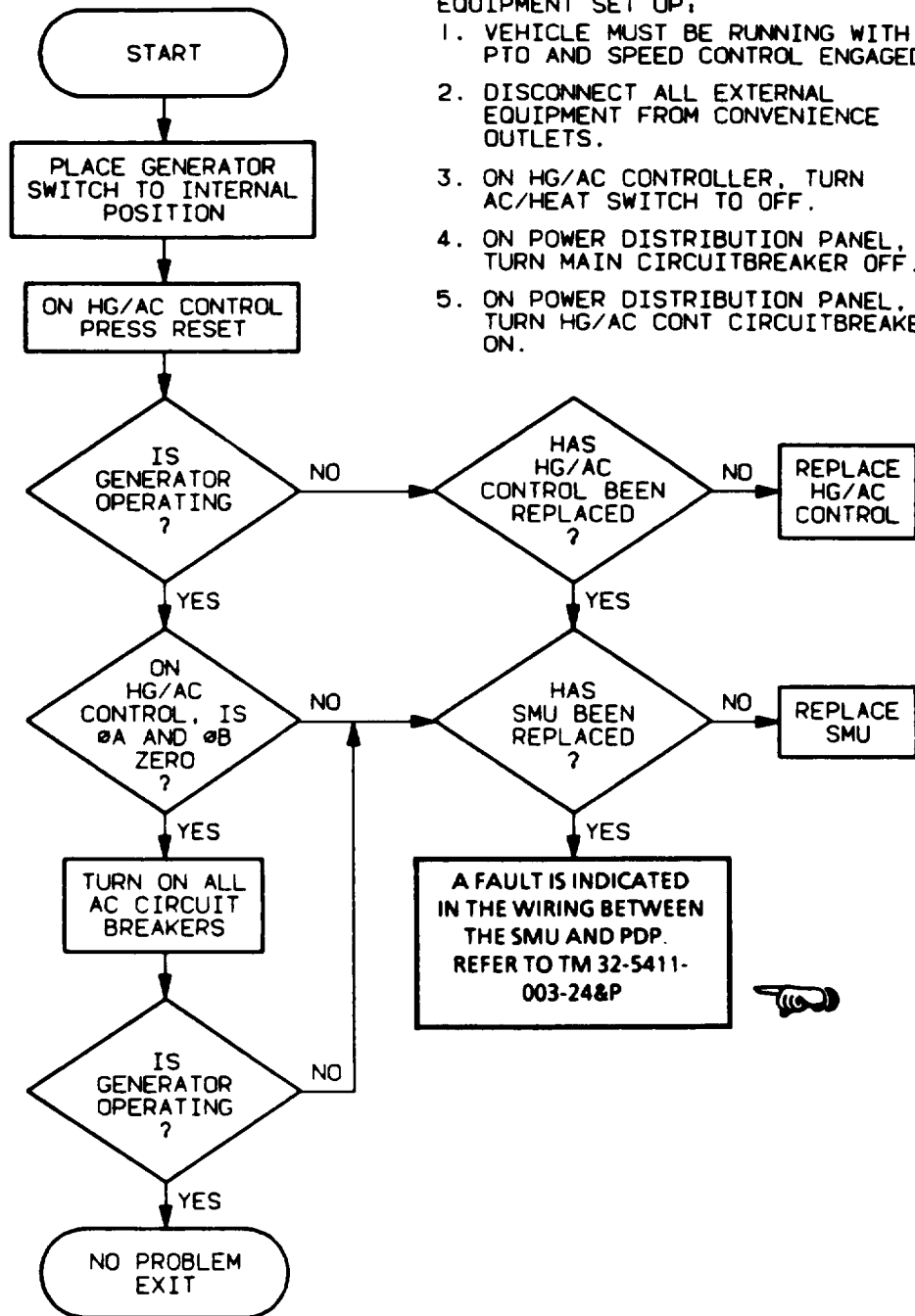
18. No sound of hydraulic pump turning:

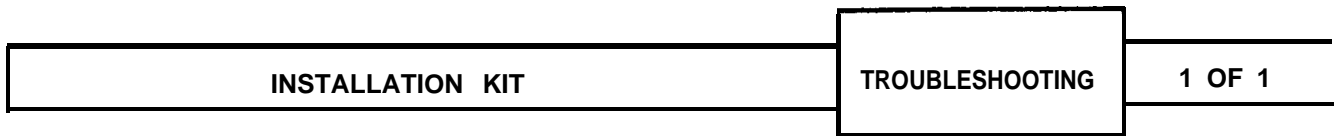


19. OV-C \blacklozenge A AND/OR OV-C \blacklozenge B lamp on, A/C ok:



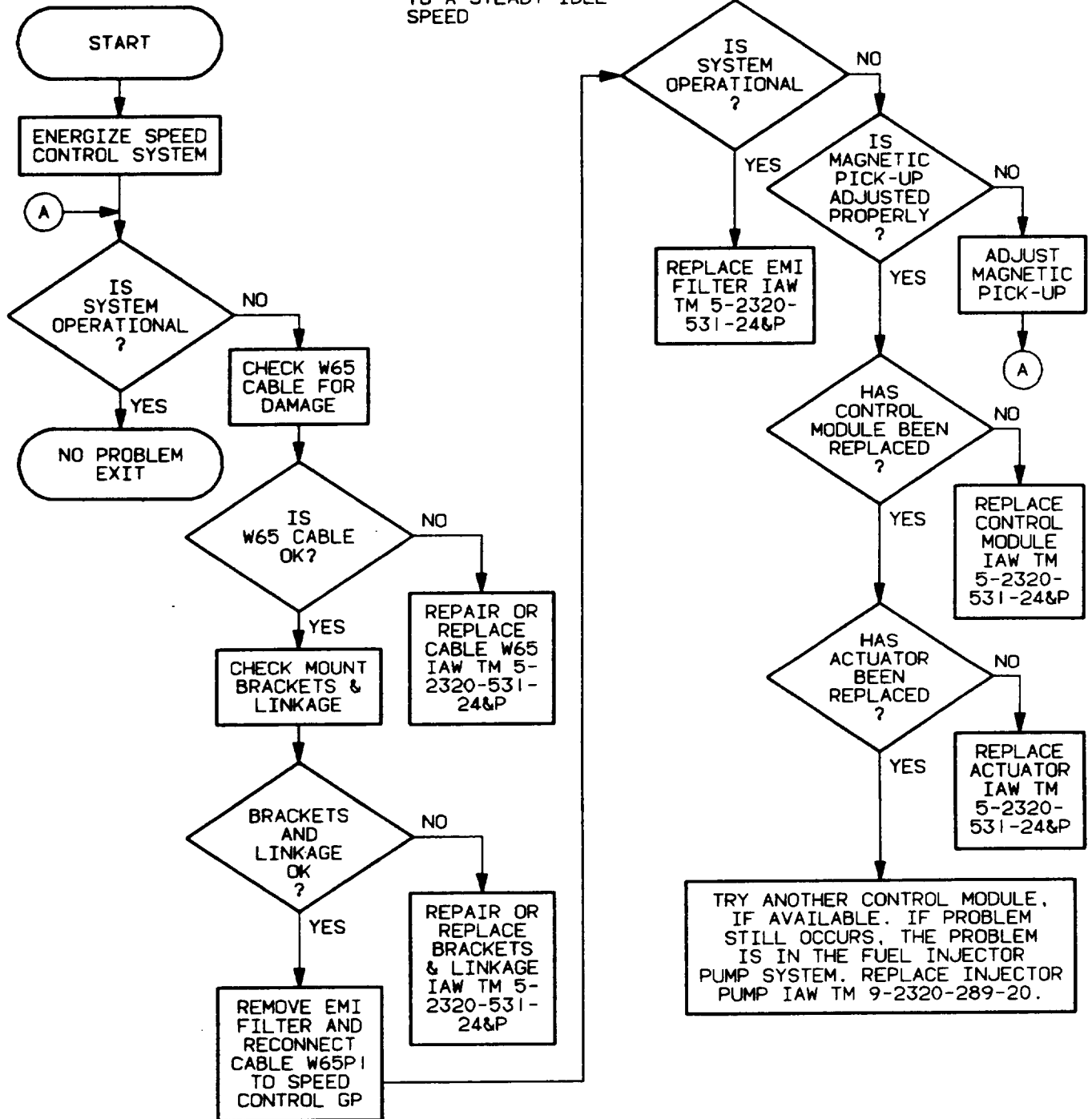
20. **OV-C_A** and/or **OV-C_B** lamp on, A/C ok (assume a fault exists in the generator and not in the load):



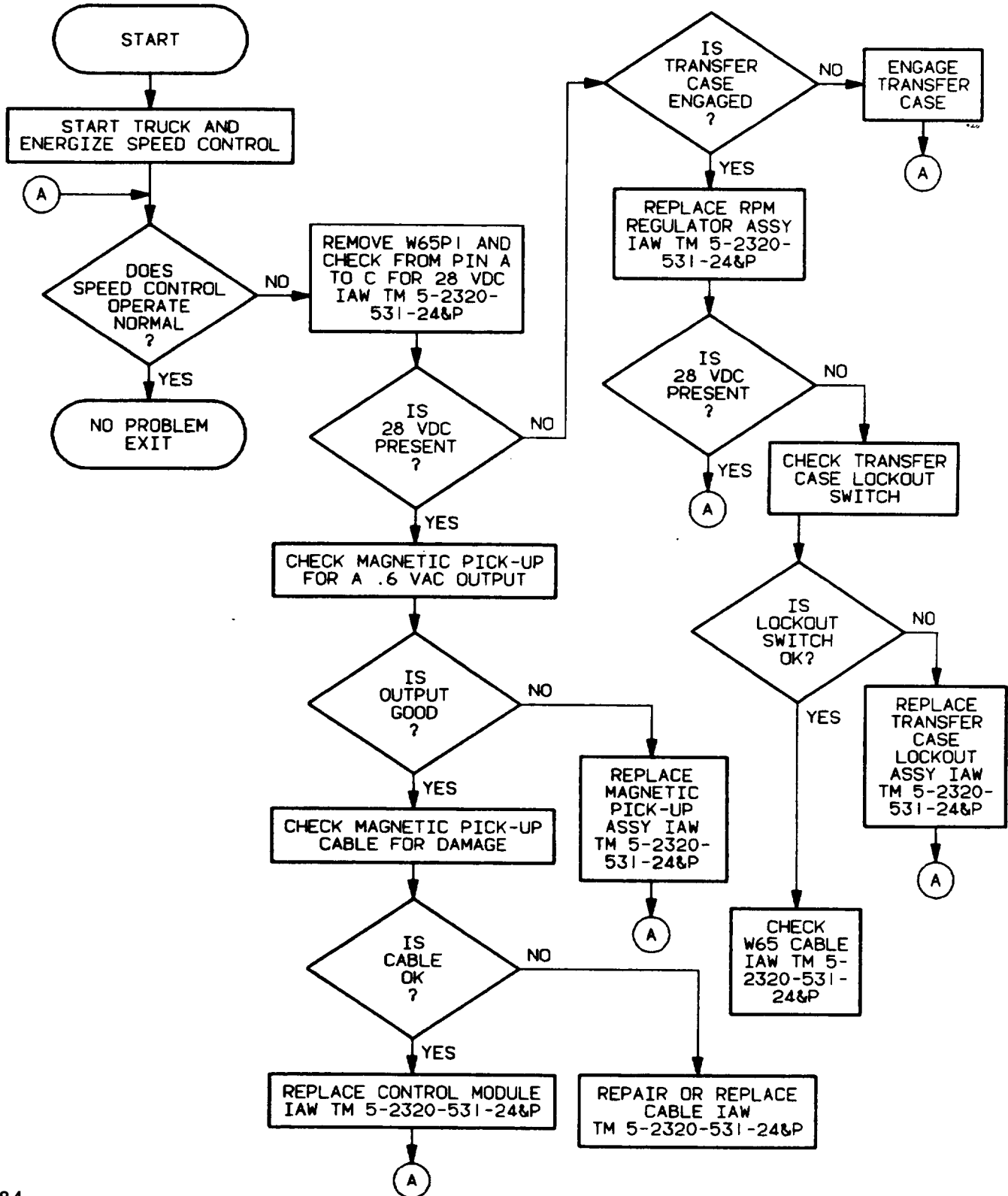


1. Erratic speed control operation:

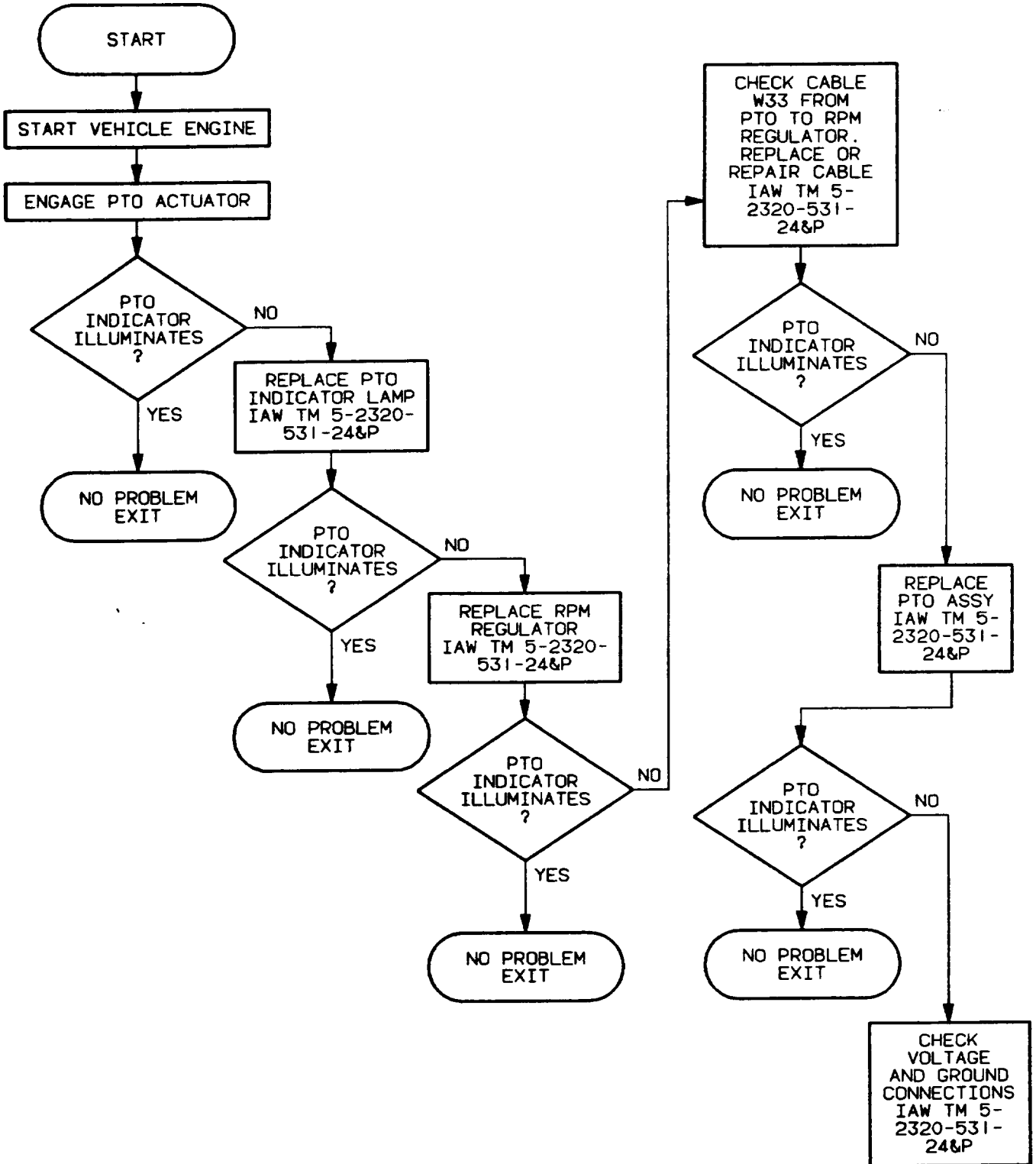
NOTE: ENGINE WARMED UP TO A STEADY IDLE SPEED



2. No response from speed control:

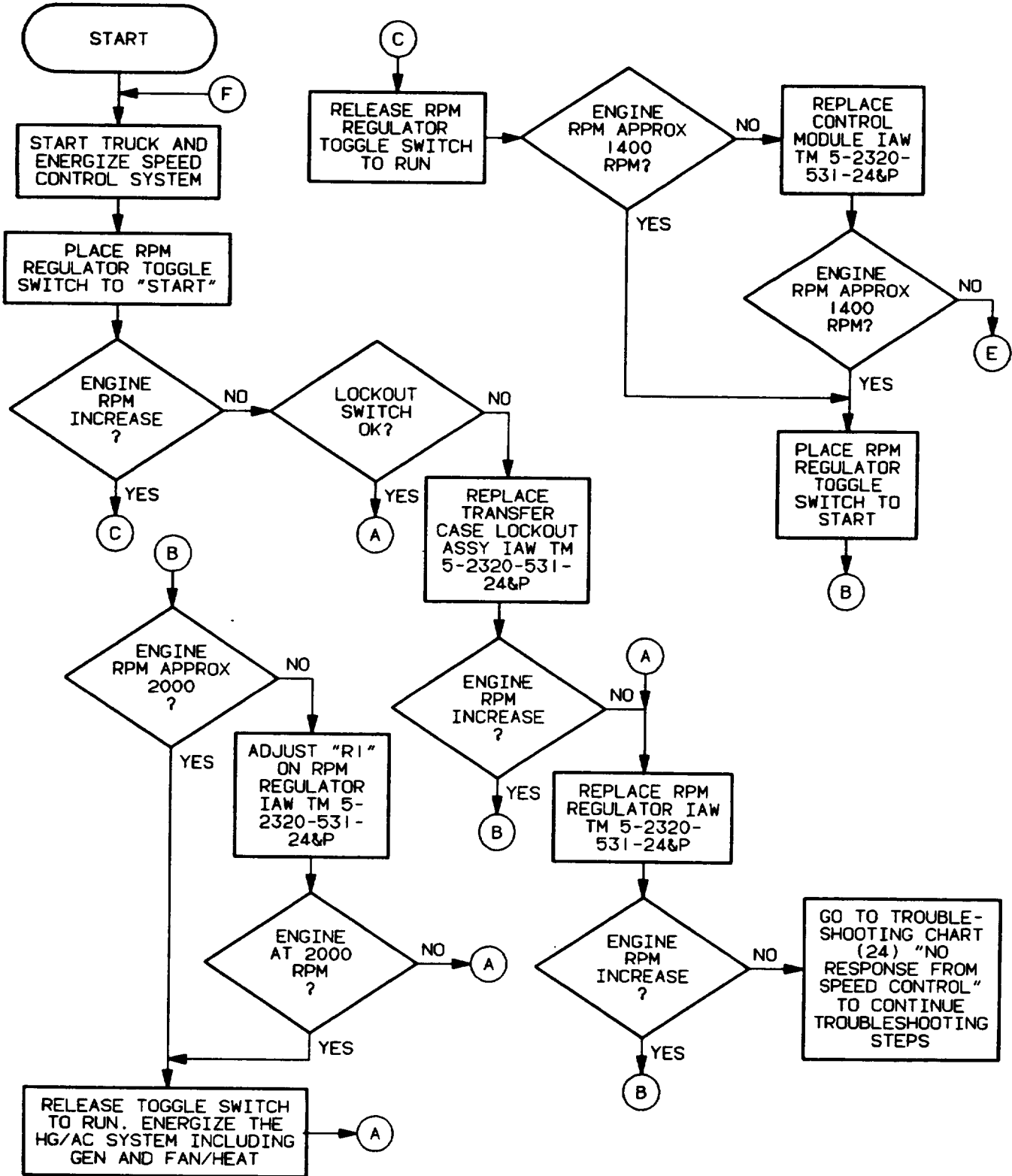


3. PTO ENGAGED indicator does not illuminate:

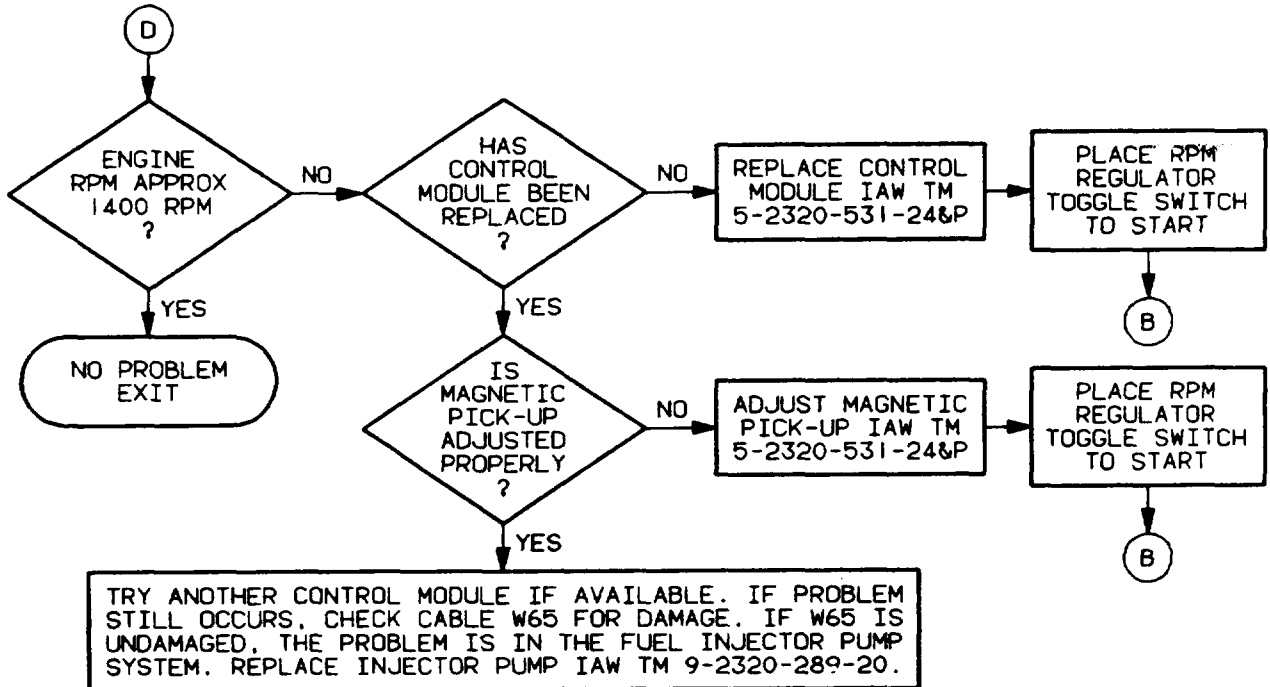


1 OF 2 TROUBLESHOOTING INSTALLATION KIT

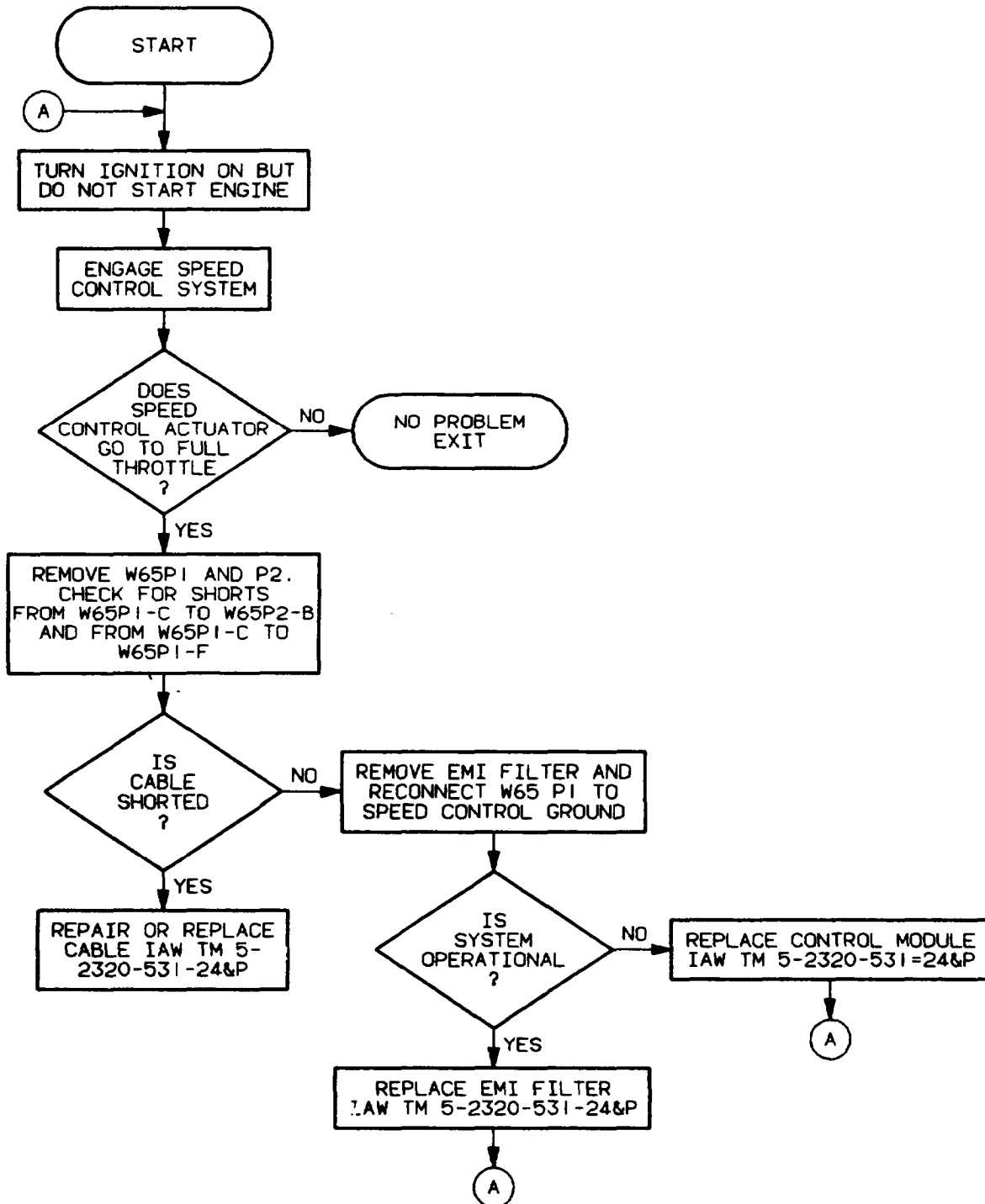
4. RPM not correct or does not increase:



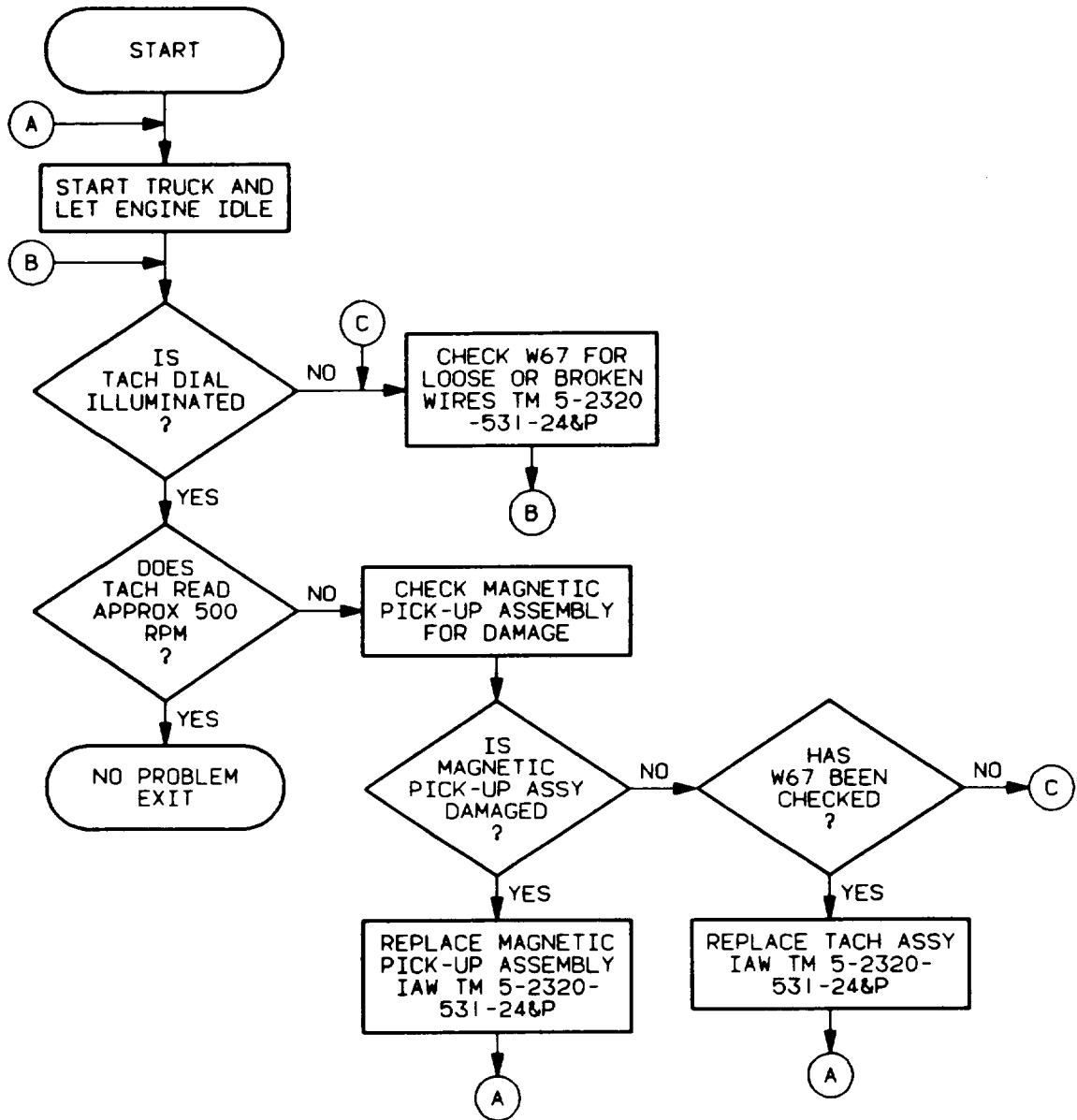
4. RPM not correct or does not increase (Cont):



5. Speed control actuator goes to full throttle (engine not running):



6. Tachometer does not operate or indicates wrong RPM:

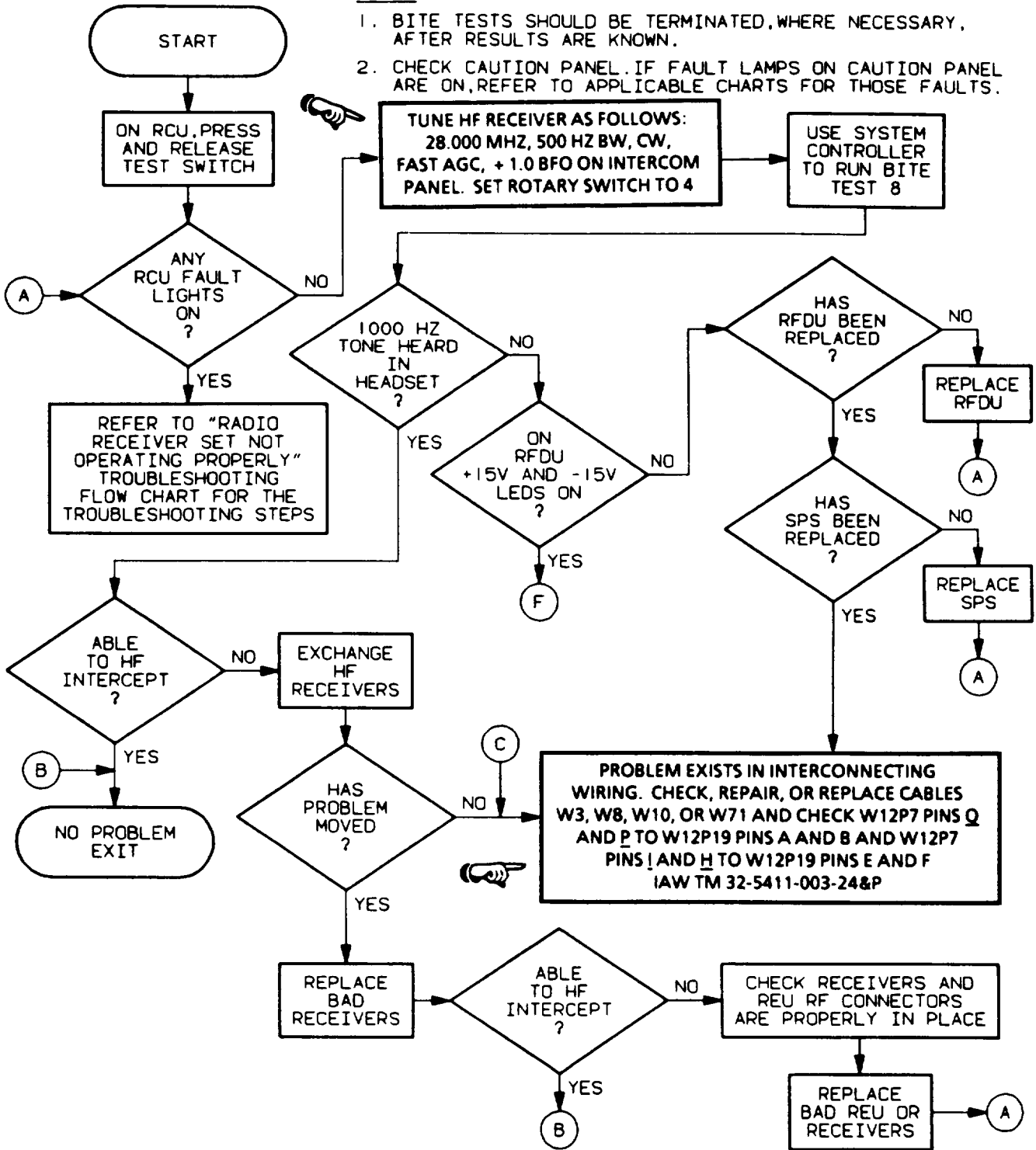


1 OF 3 **TROUBLESHOOTING** INTERCEPT

1. Unable to HF intercept (no audio):

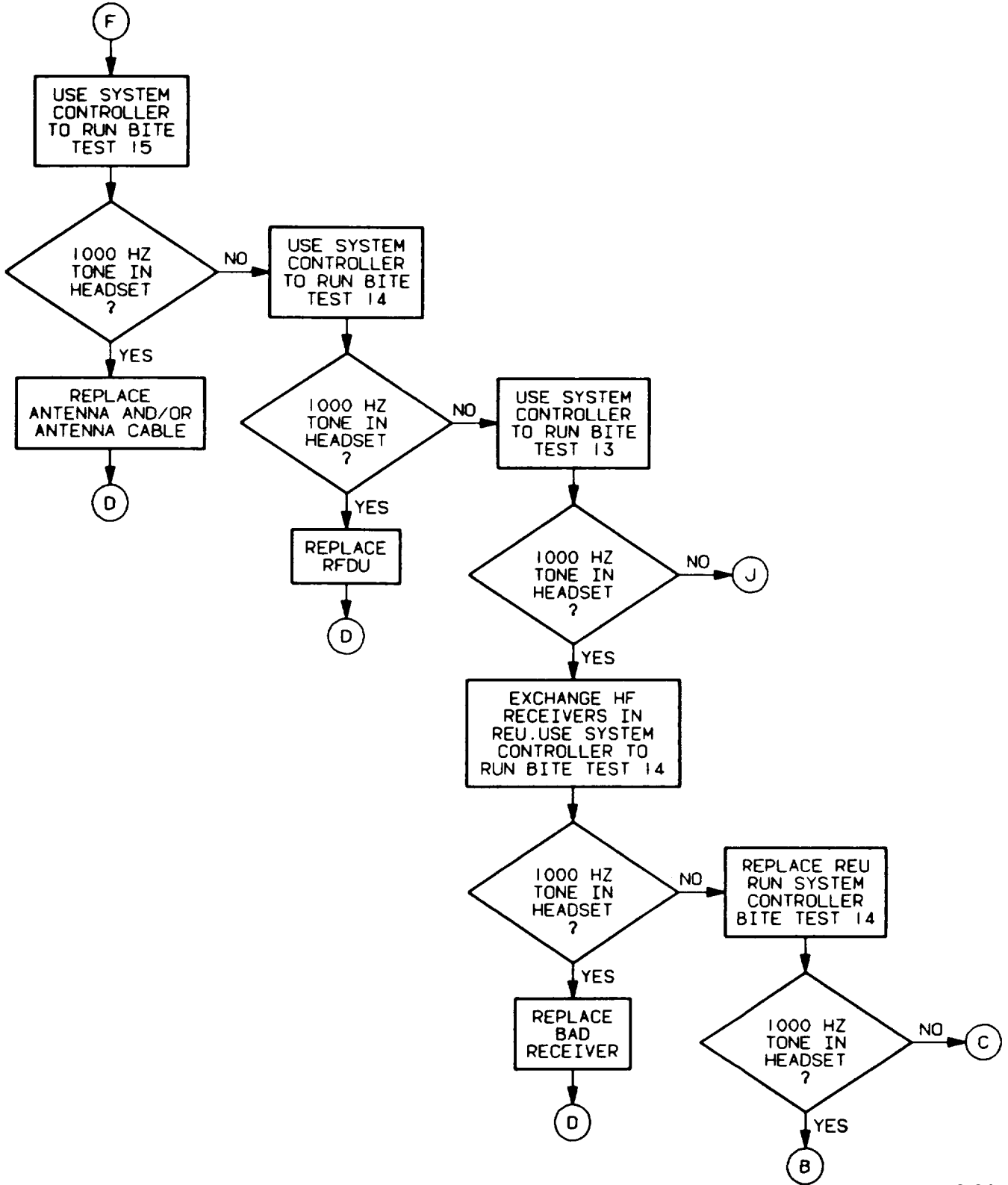
NOTES:

1. BITE TESTS SHOULD BE TERMINATED, WHERE NECESSARY, AFTER RESULTS ARE KNOWN.
2. CHECK CAUTION PANEL. IF FAULT LAMPS ON CAUTION PANEL ARE ON, REFER TO APPLICABLE CHARTS FOR THOSE FAULTS.



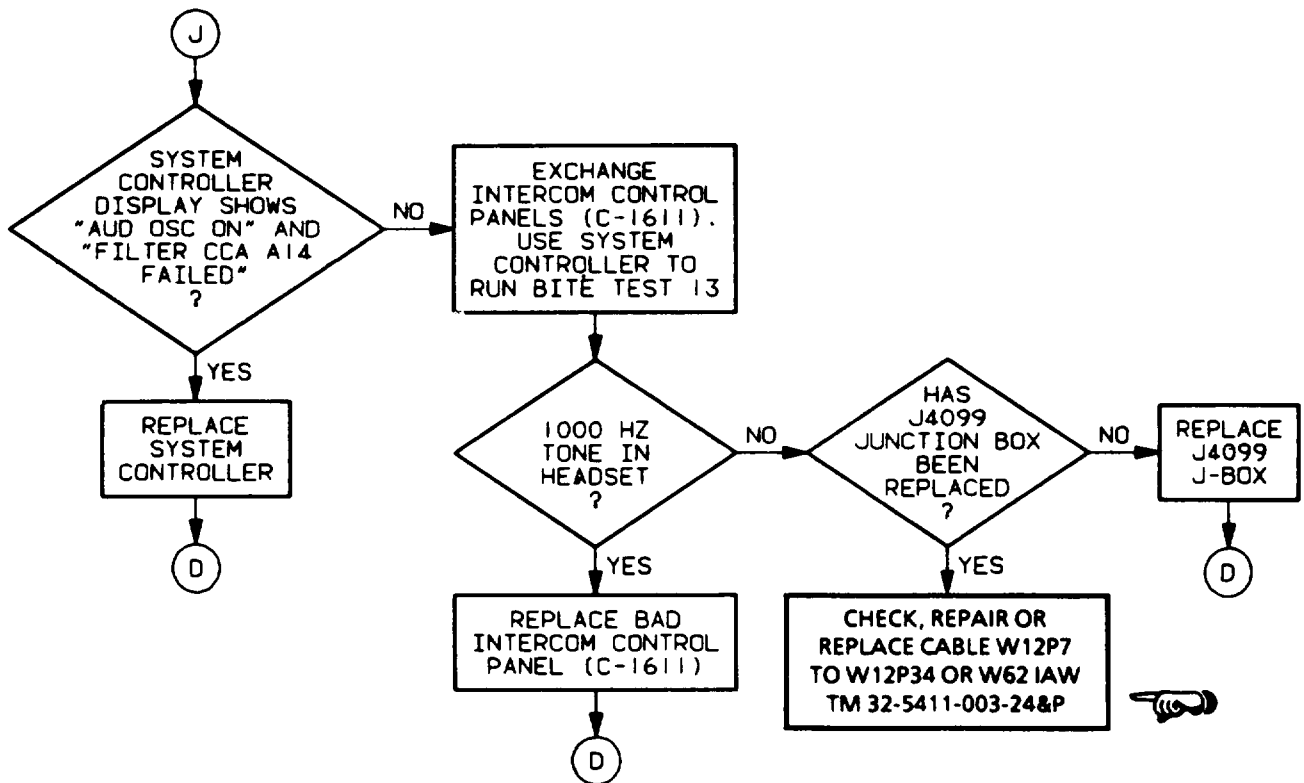
INTERCEPT TROUBLESHOOTING 2 OF 3

1. Unable to HF intercept (no audio) (Cont):

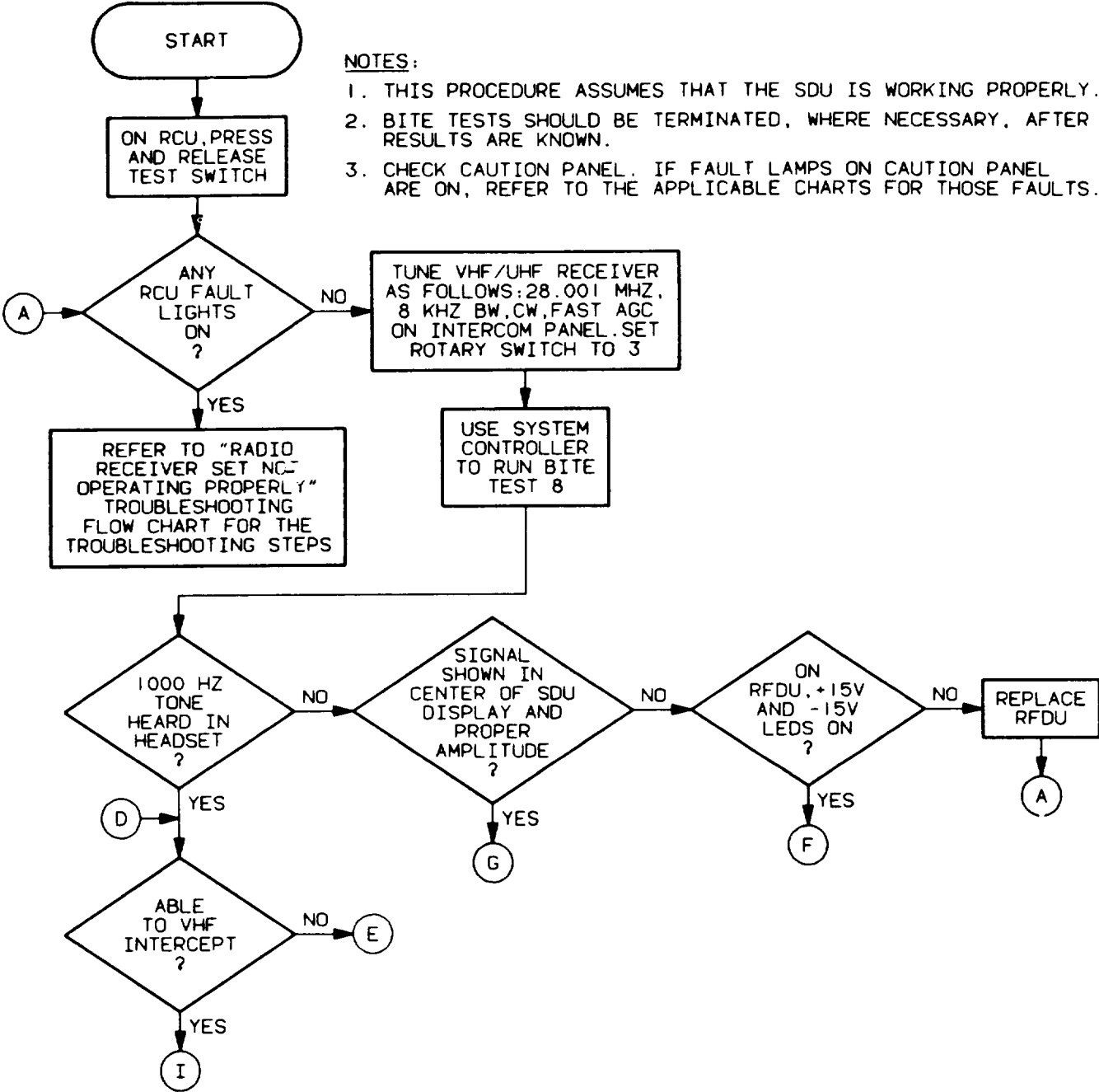


| | | |
|--------|------------------------|------------------|
| 3 OF 3 | TROUBLESHOOTING | INTERCEPT |
|--------|------------------------|------------------|

1. Unable to HF intercept (no audio):

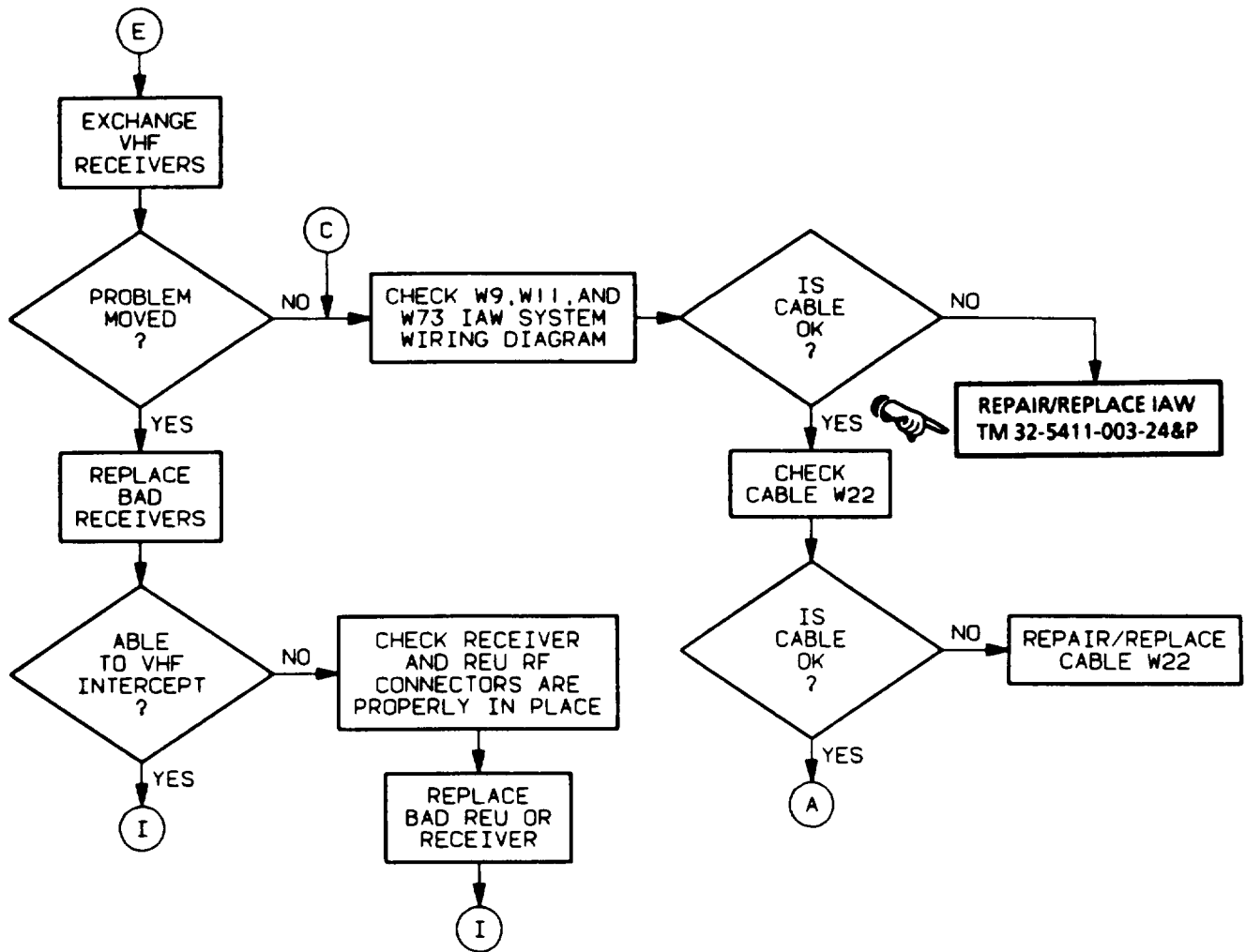


2. Unable to VHF and/or UHF intercept (no audio):



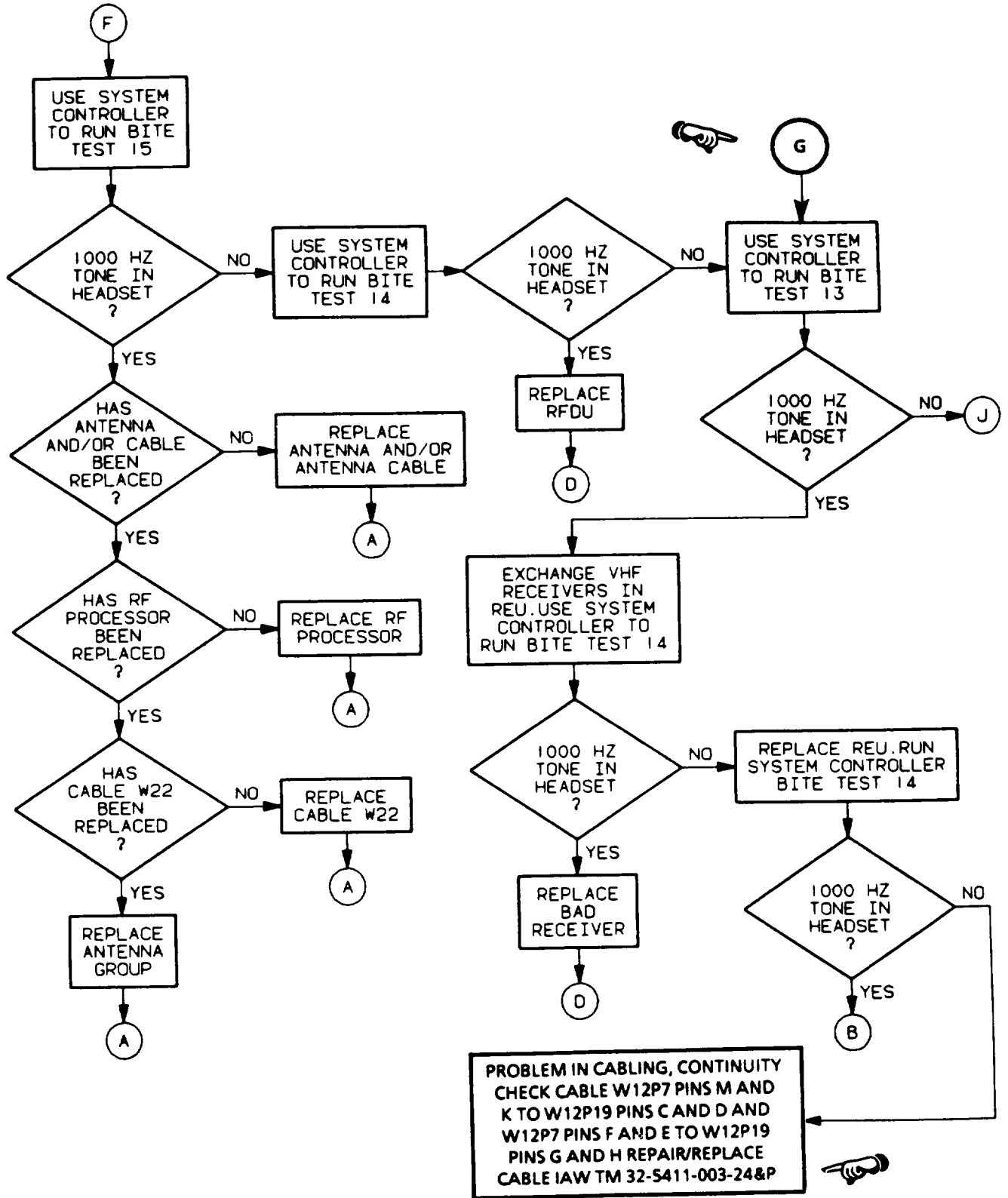
| | | |
|--------|------------------------|------------------|
| 2 OF 5 | TROUBLESHOOTING | INTERCEPT |
|--------|------------------------|------------------|

2. Unable to VHF and/or UHF intercept (no audio) (Cont):



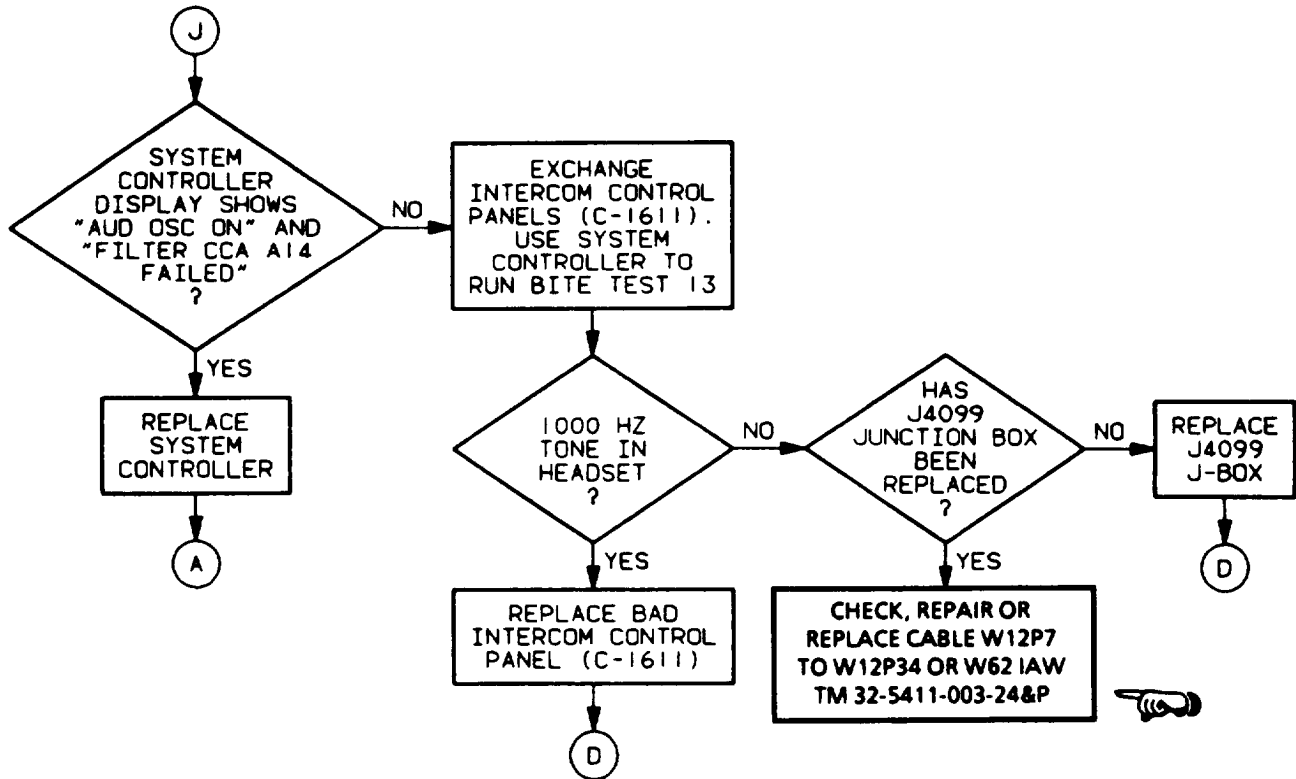
INTERCEPT TROUBLESHOOTING 3 OF 5

2. Unable to VHF and/or UHF intercept (no audio) (Cont):

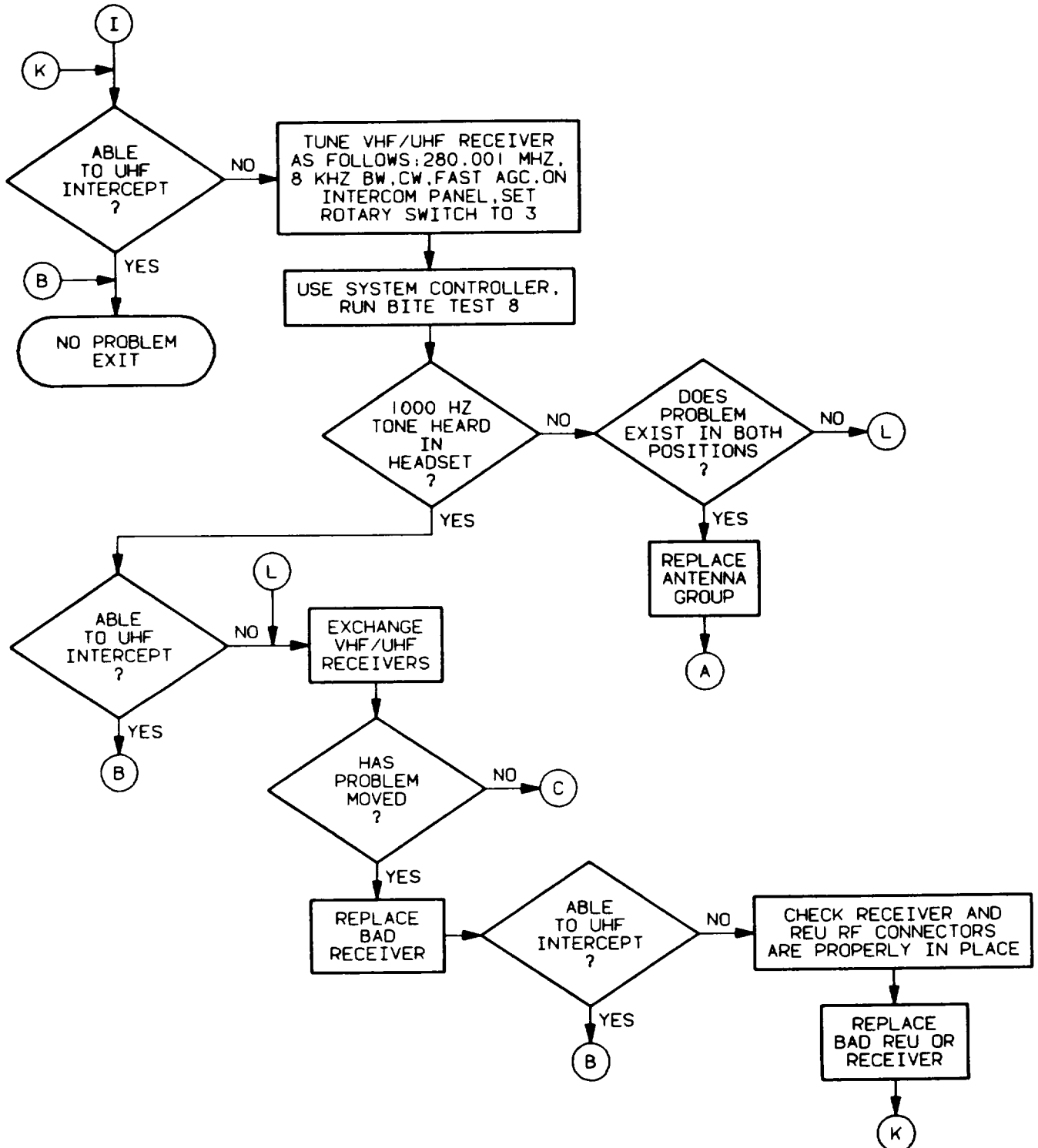


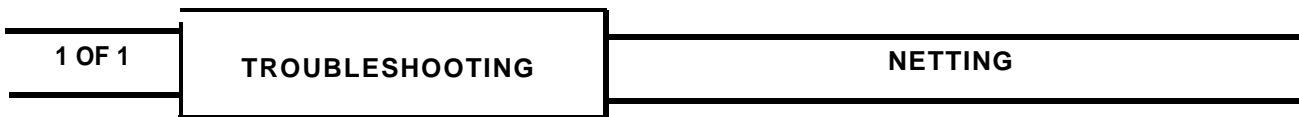
| | | |
|--------|-----------------|-----------|
| 4 OF 5 | TROUBLESHOOTING | INTERCEPT |
|--------|-----------------|-----------|

2. Unable to VHF and/or UHF intercept (no audio) (Cont):

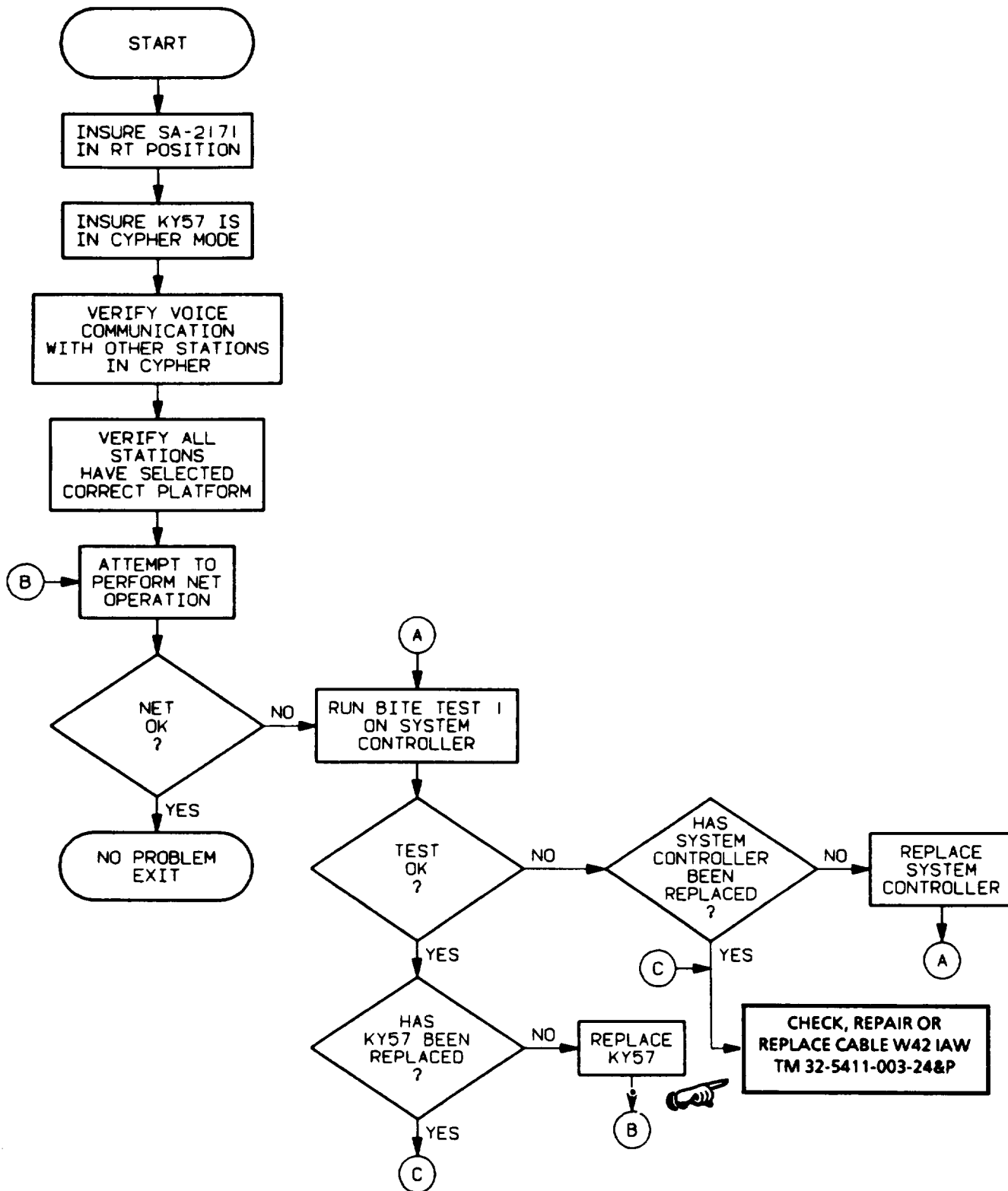


2. Unable to VHF and/or UHF intercept (no audio) (Cont):



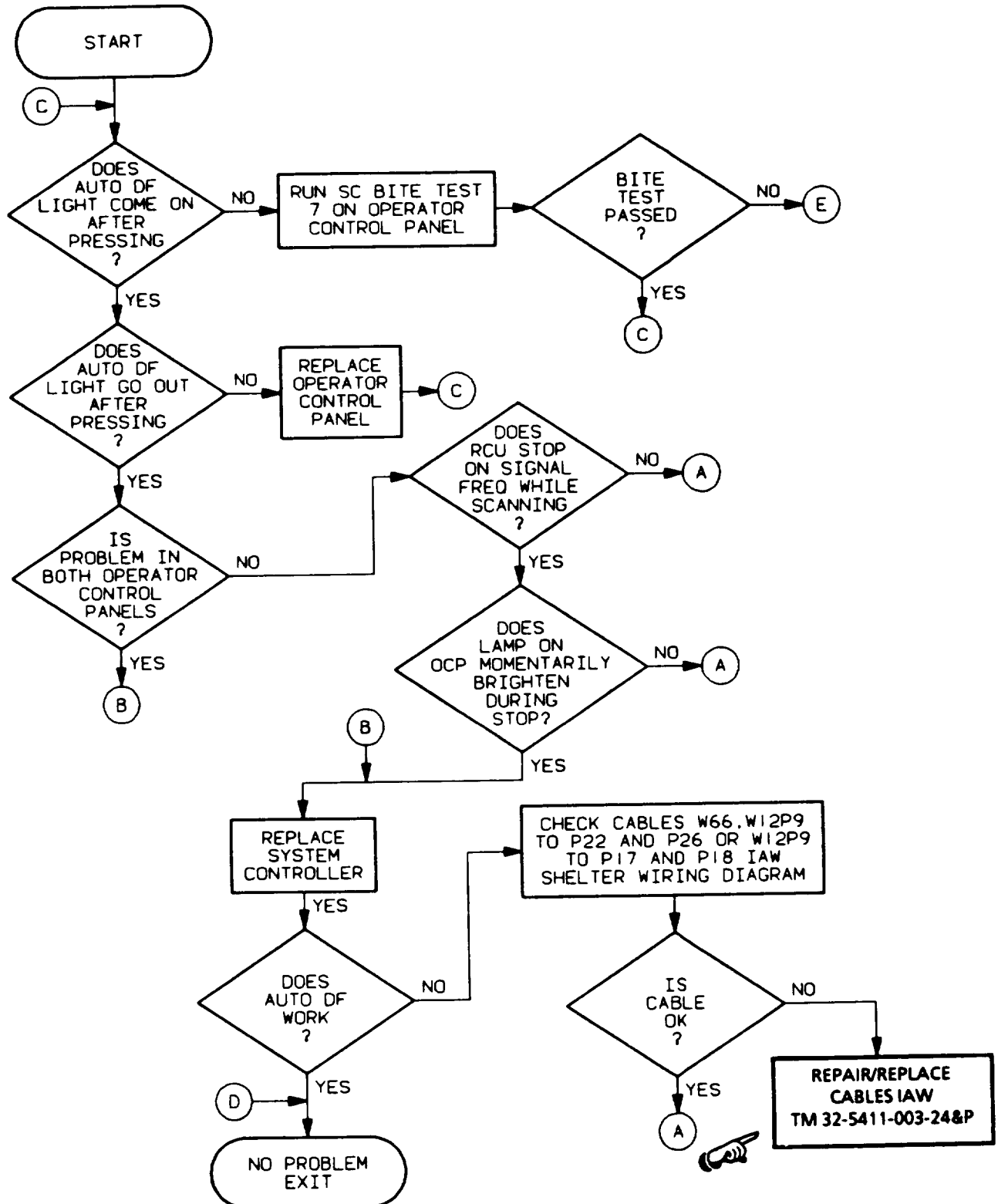


1. No net capability:



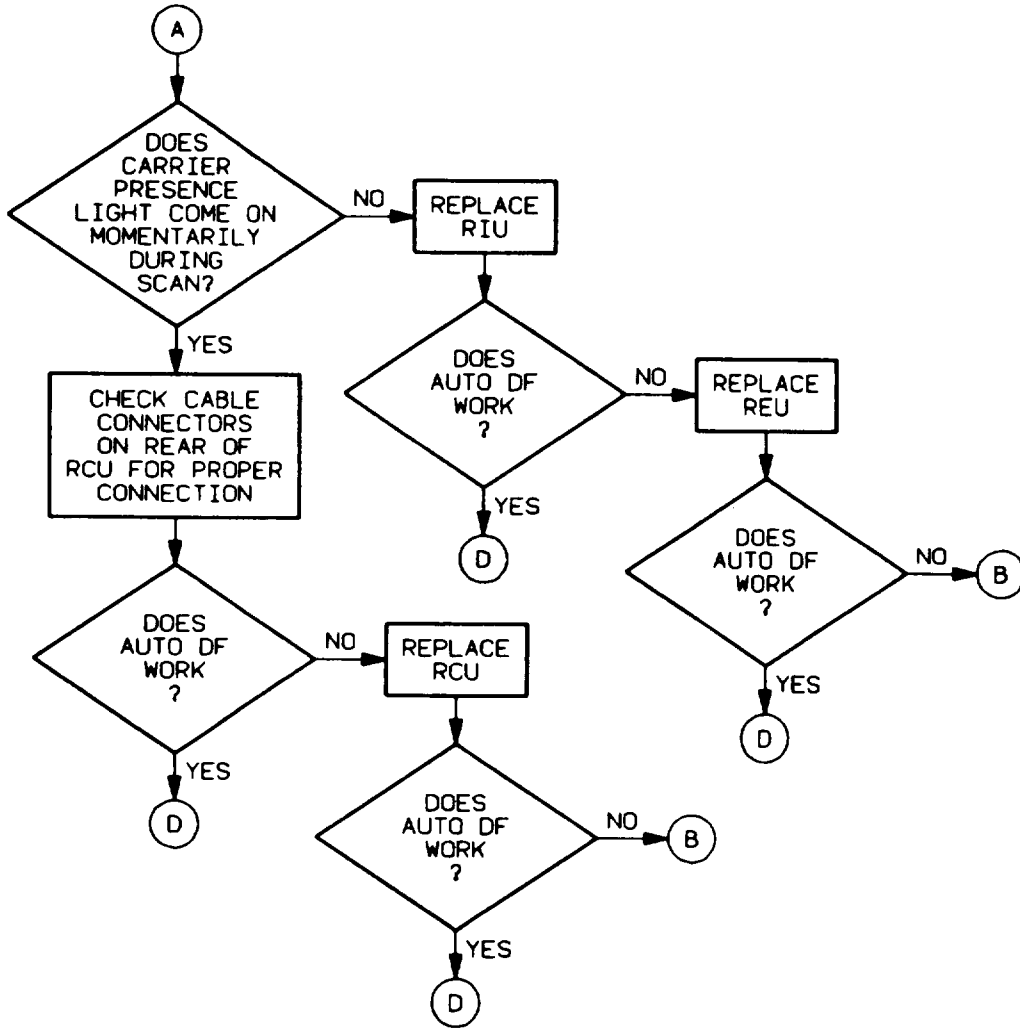
OPERATOR CONTROL PANEL TROUBLESHOOTING 1 OF 3

1. AUTO DF does not work, DF ok:

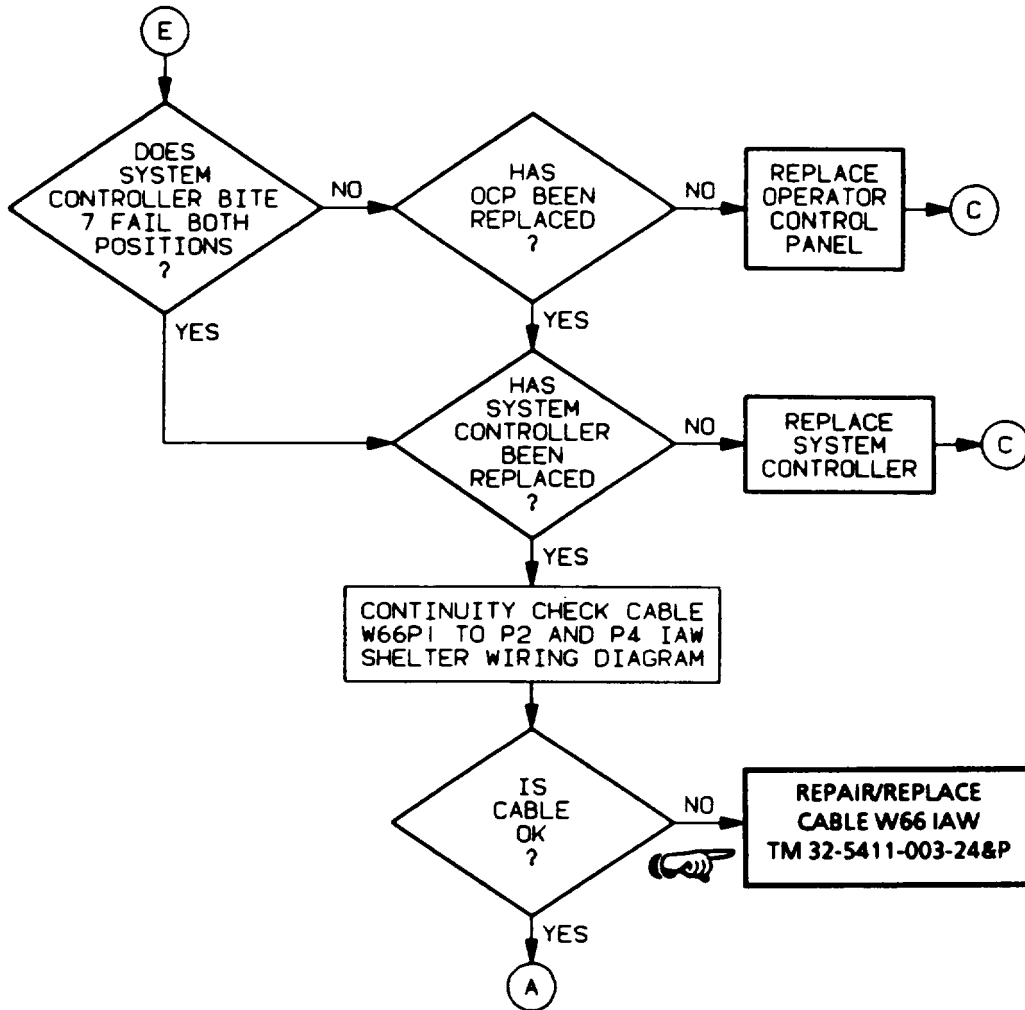


| | | |
|--------|-----------------|------------------------|
| 2 OF 3 | TROUBLESHOOTING | OPERATOR CONTROL PANEL |
|--------|-----------------|------------------------|

1. AUTO DF does not work, DF ok (Cont):

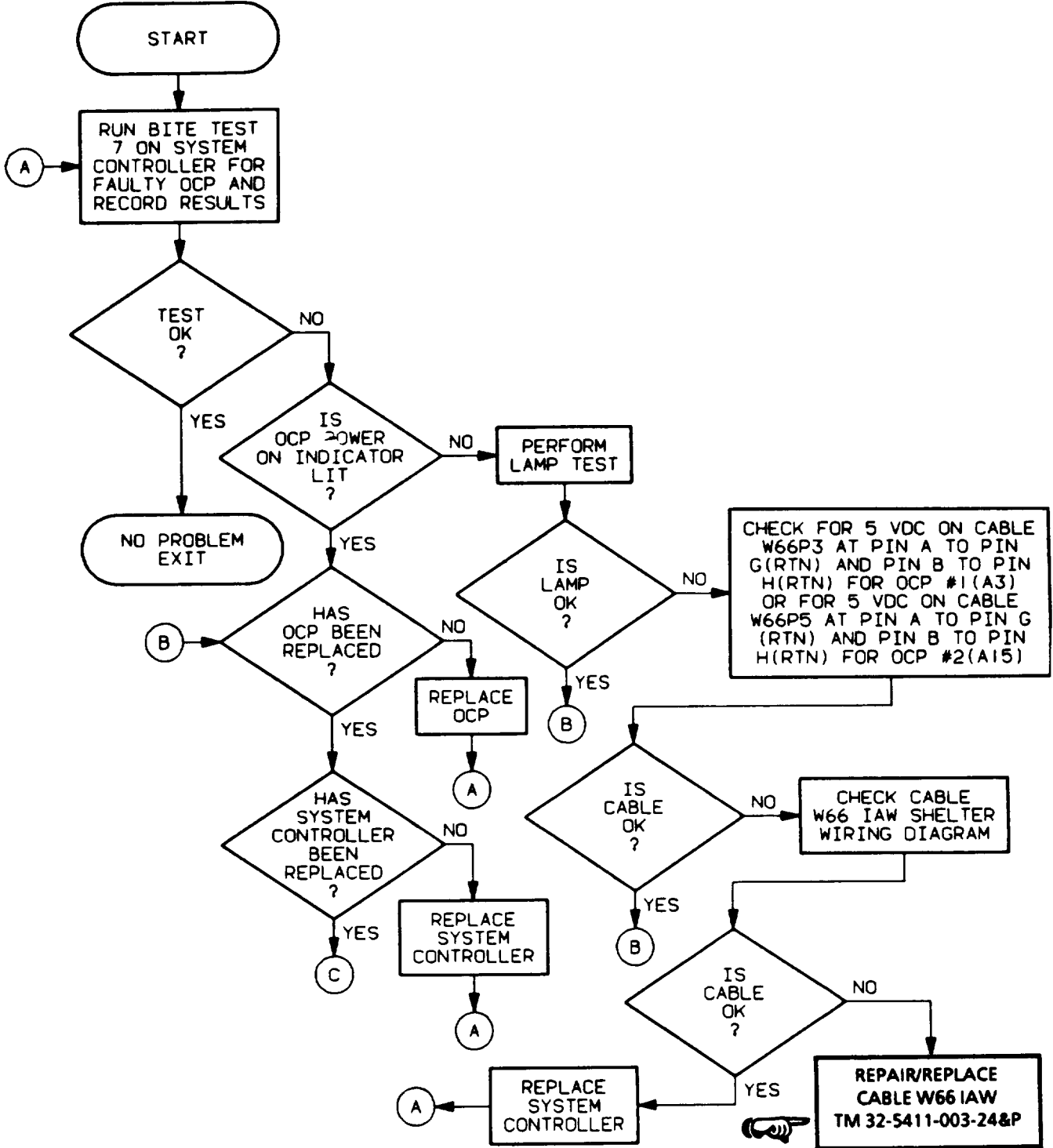


1. AUTO DF does not work, DF ok (Cont):



| | | |
|--------|-----------------|------------------------|
| 1 OF 1 | TROUBLESHOOTING | OPERATOR CONTROL PANEL |
|--------|-----------------|------------------------|

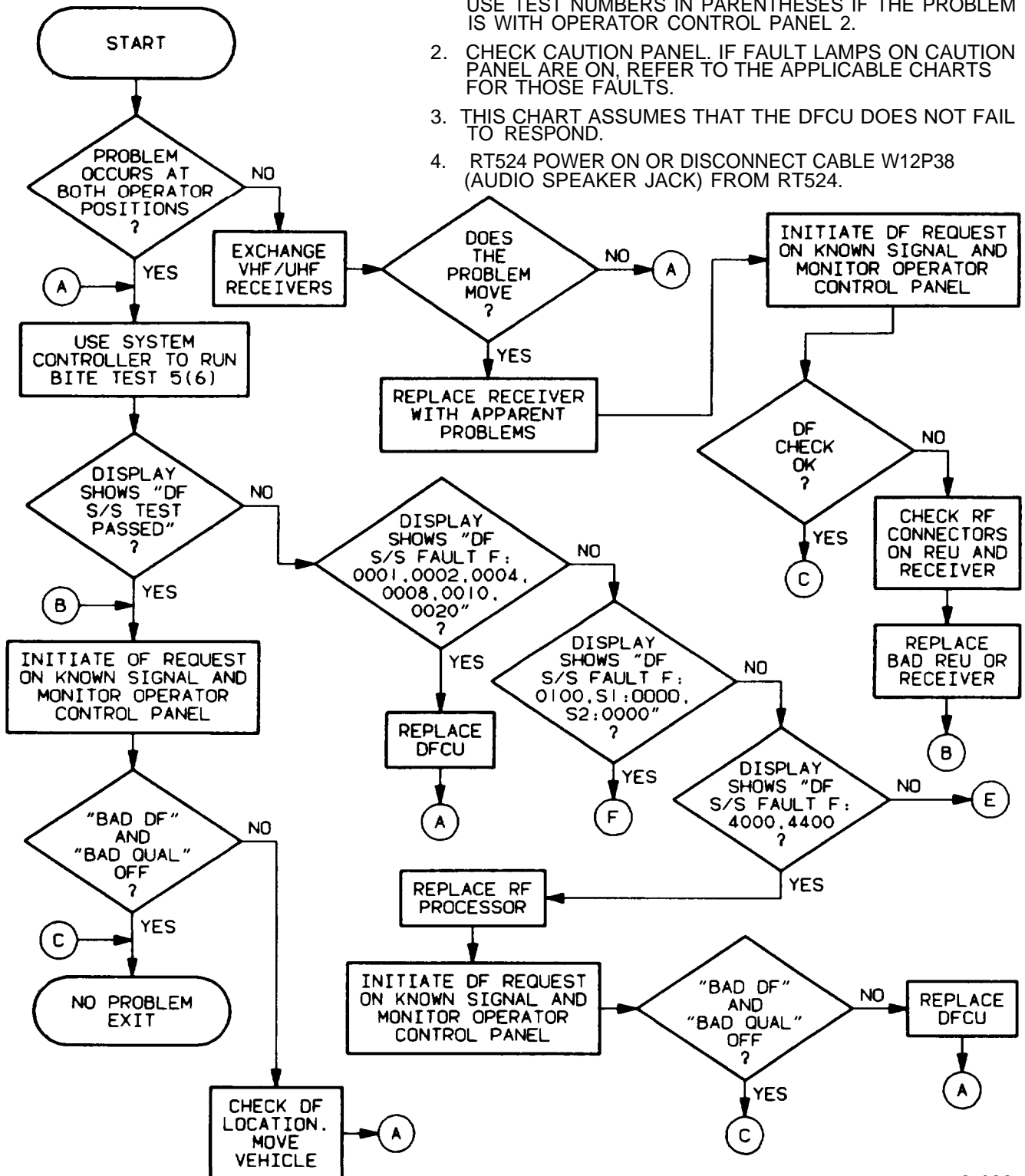
2. No or incorrect display:



3. Unable to OF - shows BAD DF, BAD QUAL light on:

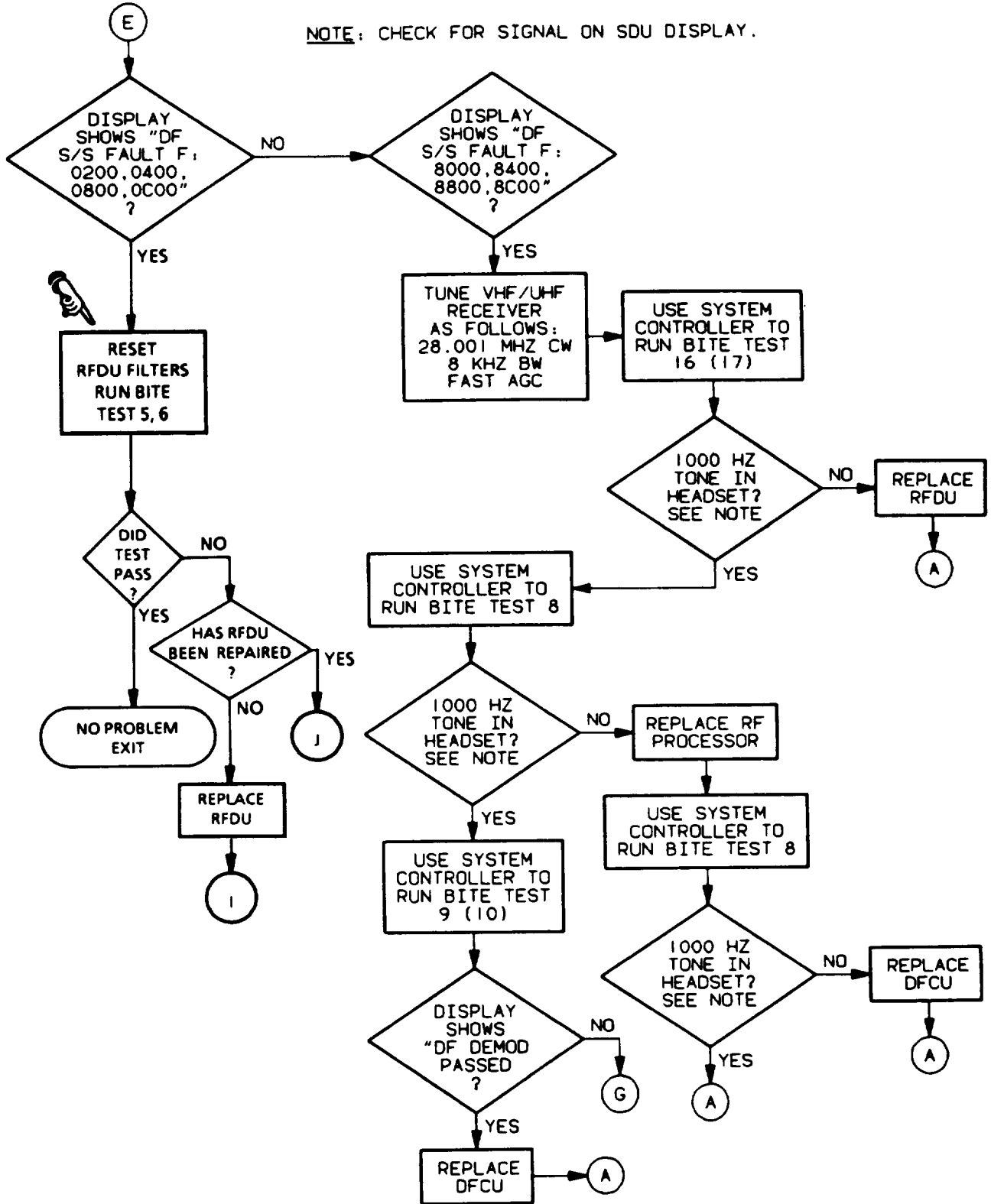
NOTES:

1. TEST NUMBERS ARE FOR OPERATOR CONTROL PANEL 1. USE TEST NUMBERS IN PARENTHESES IF THE PROBLEM IS WITH OPERATOR CONTROL PANEL 2.
2. CHECK CAUTION PANEL. IF FAULT LAMPS ON CAUTION PANEL ARE ON, REFER TO THE APPLICABLE CHARTS FOR THOSE FAULTS.
3. THIS CHART ASSUMES THAT THE DFCU DOES NOT FAIL TO RESPOND.
4. RT524 POWER ON OR DISCONNECT CABLE W12P38 (AUDIO SPEAKER JACK) FROM RT524.

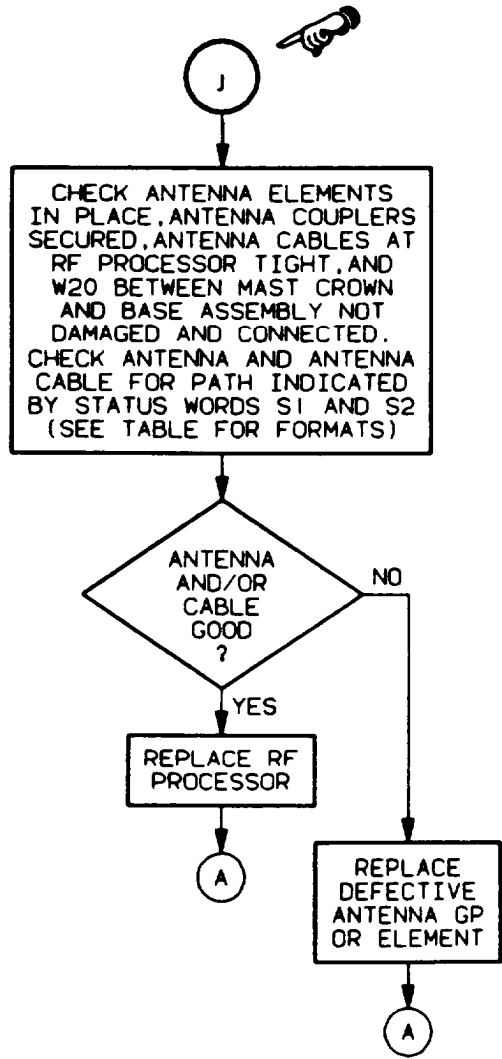


2 OF 6 TROUBLESHOOTING OPERATOR CONTROL PANEL

3. Unable to DF - shows BAD DF, BAD QUAL light on (Cont):

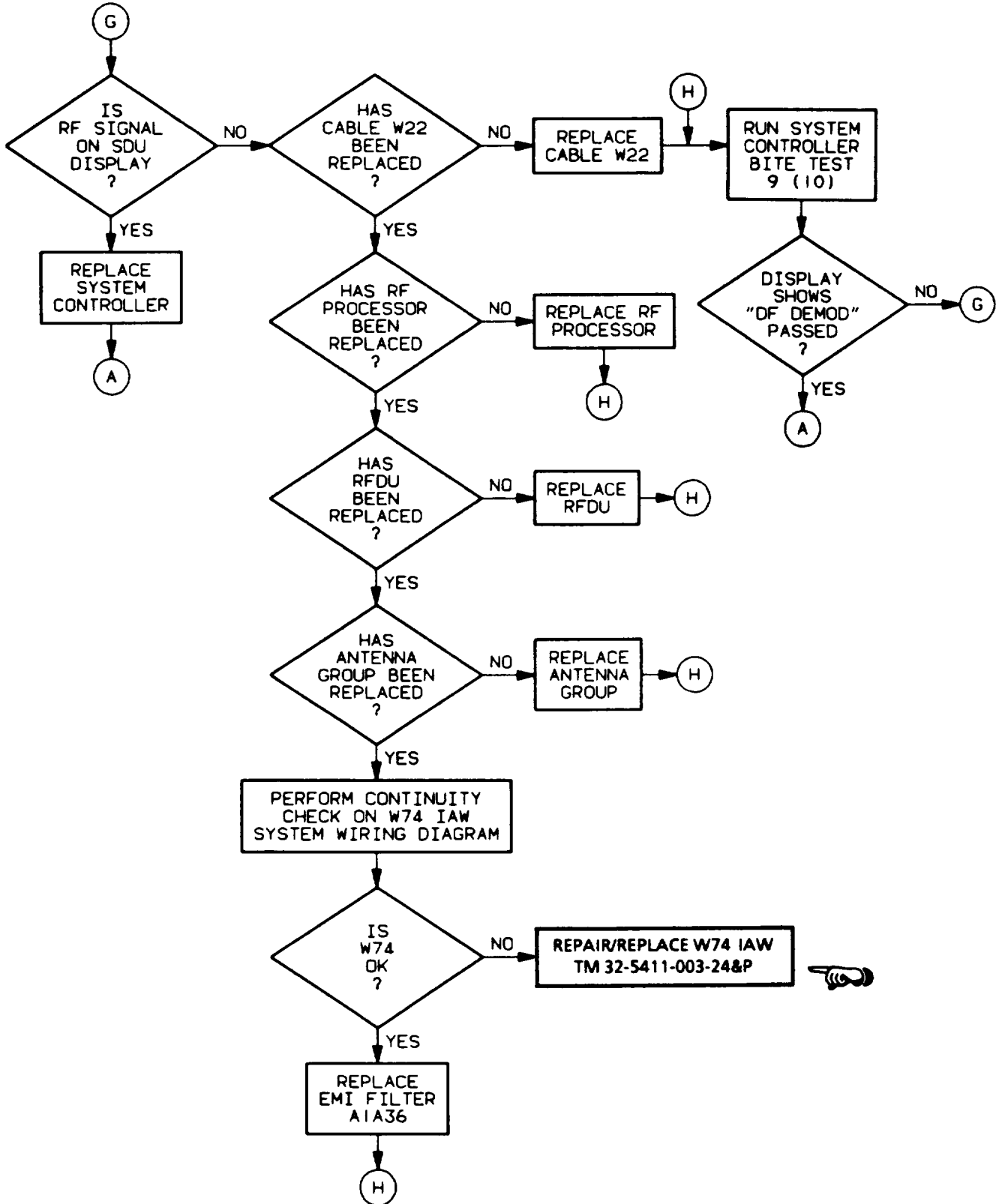


3. Unable to DF - shows BAD DF, BAD QUAL light on (Cont):



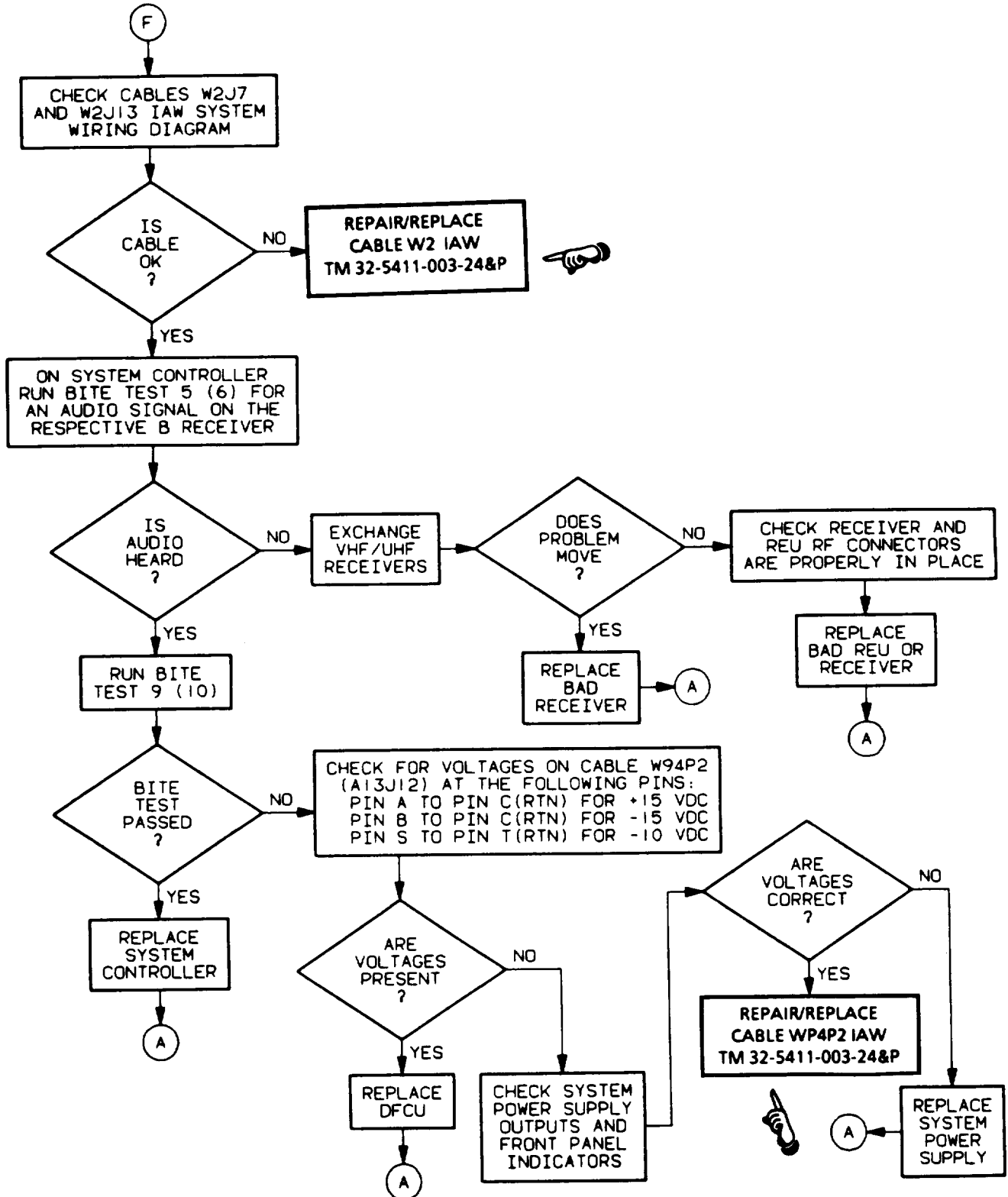
OPERATOR CONTROL PANEL TROUBLESHOOTING 3 OF 6

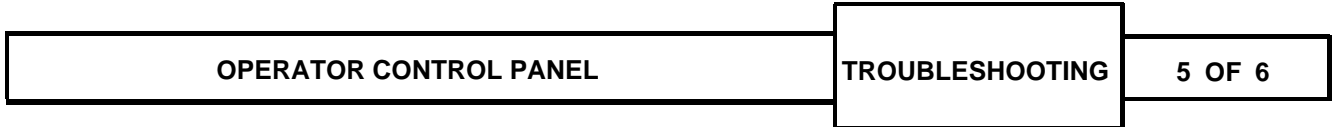
3. Unable to DF - shows BAD DF, BAD QUAL light on (Cont):



| | | |
|--------|------------------------|-------------------------------|
| 4 OF 6 | TROUBLESHOOTING | OPERATOR CONTROL PANEL |
|--------|------------------------|-------------------------------|

3. Unable to DF - shows BAD DF, BAD QUAL light on (Cont):





3. Unable to DF - shows BAD DF, BAD QUAL light on (Cont):

EXAMPLE OF ANTENNA/ANTENNA PATH GAIN FAILURE:

A. FAULT S/S F:0800 S1:36DB S2:0000

B. DECODE S1:36DB

| | | | | |
|-------|-------------|-----------|---------|---------|
| | 3 | 6 | D | B |
| CODE: | 0 0 1 1 | 0 1 10 | 1 1 01 | 1 0 1 1 |
| BIT: | 15,14,13,12 | 11,10,9,8 | 7,6,5,4 | 3,2,1,0 |

FAILURE:

ANTENNA/ANTENNA PATH (BASELINE) #1, #2, #3, #4 LOW AND MID FREQUENCY GAIN FAILURE. LOW AND MID FREQUENCY GAIN TRACKING FAILURE.

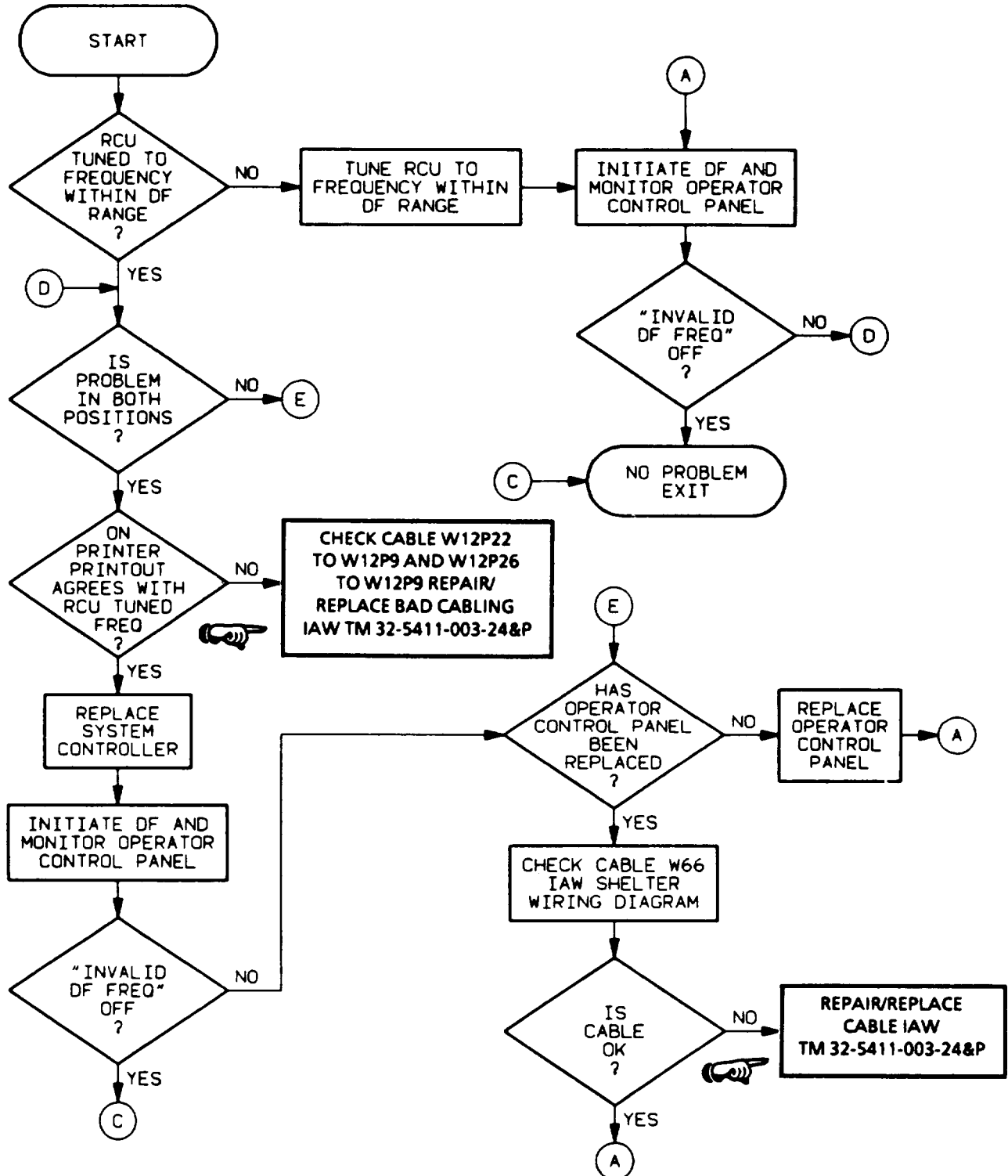
HEXIDECIMAL TO BIT CODE:

| | |
|----------|----------|
| 0 = 0000 | 8 = 1000 |
| 1 = 0001 | 9 = 1001 |
| 2 = 0010 | A = 1010 |
| 3 = 0011 | B = 1011 |
| 4 = 0100 | C = 1100 |
| 5 = 0101 | D = 1101 |
| 6 = 0110 | E = 1110 |
| 7 = 0111 | F = 1111 |

3. Unable to DF - shows BAD DF, BAD QUAL light on (Cont):

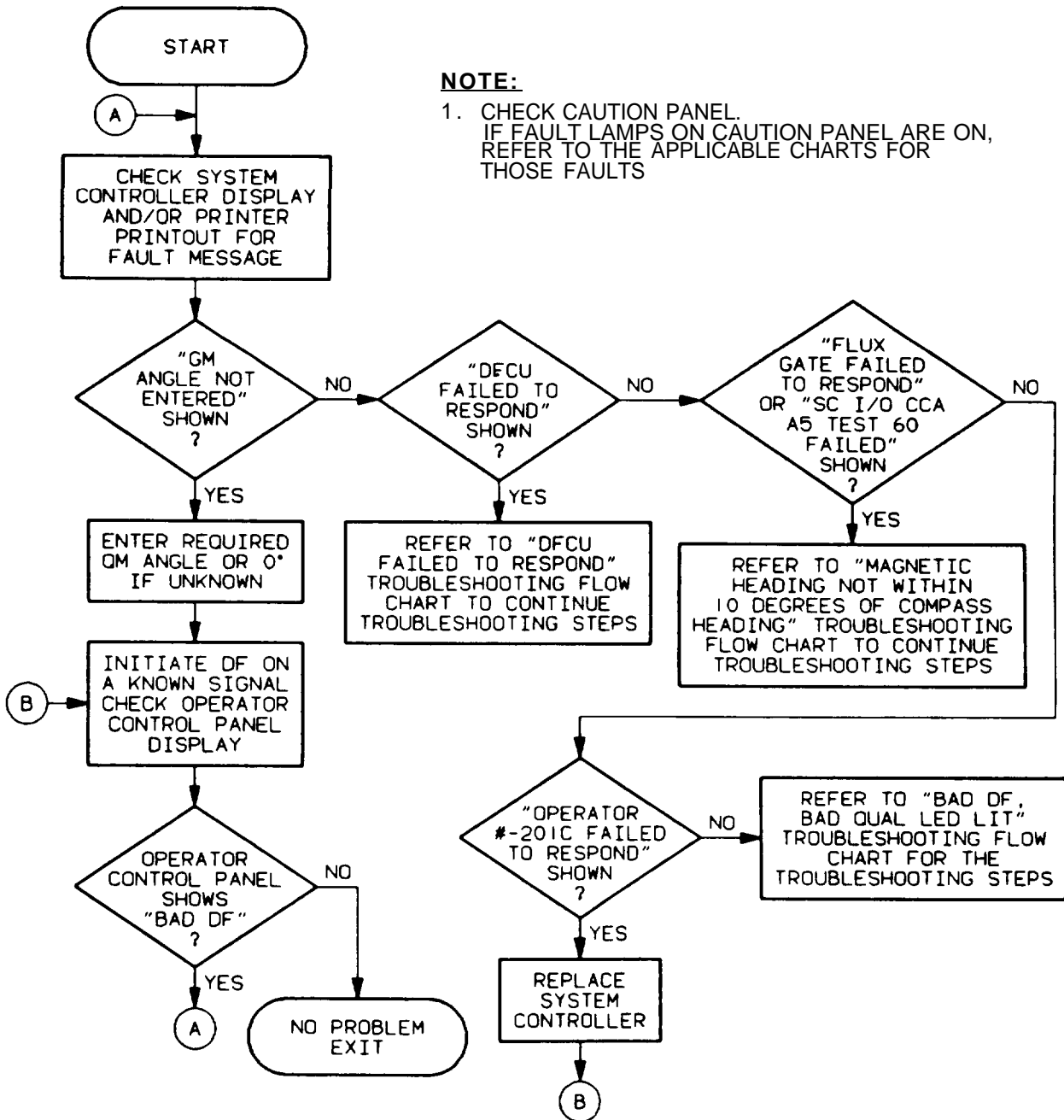
| STATUS WORD FORMATS | |
|-------------------------------------|--------------------------------------------------|
| BIT | DESCRIPTION |
| S1 FORMATS FOR FAULT 0200 | |
| BIT 3 = 1 | ANTENNA/ANTENNA PATH FAILURE, ANTENNA 1 |
| BIT 2 = 1 | ANTENNA/ANTENNA PATH FAILURE, ANTENNA 2 |
| BIT 1 = 1 | ANTENNA/ANTENNA PATH FAILURE, ANTENNA 3 |
| BIT 0 = 1 | ANTENNA/ANTENNA PATH FAILURE, ANTENNA 4 |
| S1 FORMATS FOR FAULTS 0C00 AND 0800 | |
| BIT 14 = 1 | HIGH FREQUENCY GAIN TRACKING FAILURE |
| BIT 13 = 1 | MID FREQUENCY GAIN TRACKING FAILURE |
| BIT 12 = 1 | LOW FREQUENCY GAIN TRACKING FAILURE |
| BIT 11 = 1 | BASELINE #4 HIGH FREQUENCY GAIN FAILURE |
| BIT 10 = 1 | BASELINE #4 MID FREQUENCY GAIN FAILURE |
| BIT 9 = 1 | BASELINE #4 LOW FREQUENCY GAIN FAILURE |
| BIT 8 = 1 | BASELINE #3 HIGH FREQUENCY GAIN FAILURE |
| BIT 7 = 1 | BASELINE #3 MID FREQUENCY GAIN FAILURE |
| BIT 6 = 1 | BASELINE #3 LOW FREQUENCY GAIN FAILURE |
| BIT 5 = 1 | BASELINE #2 HIGH FREQUENCY GAIN FAILURE |
| BIT 4 = 1 | BASELINE #2 MID FREQUENCY GAIN FAILURE |
| BIT 3 = 1 | BASELINE #2 LOW FREQUENCY GAIN FAILURE |
| BIT 2 = 1 | BASELINE #1 HIGH FREQUENCY GAIN FAILURE |
| BIT 1 = 1 | BASELINE #1 MID FREQUENCY GAIN FAILURE |
| BIT 0 = 1 | BASELINE #1 LOW FREQUENCY GAIN FAILURE |
| S2 FORMATS FOR FAULTS 0C00 AND 0400 | |
| BIT 11 = 1 | BASELINE #4 HIGH FREQUENCY PHASE BALANCE FAILURE |
| BIT 10 = 1 | BASELINE #4 MID FREQUENCY PHASE BALANCE FAILURE |
| BIT 9 = 1 | BASELINE #4 LOW FREQUENCY PHASE BALANCE FAILURE |
| BIT 8 = 1 | BASELINE #3 HIGH FREQUENCY PHASE BALANCE FAILURE |
| BIT 7 = 1 | BASELINE #3 MID FREQUENCY PHASE BALANCE FAILURE |
| BIT 6 = 1 | BASELINE #3 LOW FREQUENCY PHASE BALANCE FAILURE |
| BIT 5 = 1 | BASELINE #2 HIGH FREQUENCY PHASE BALANCE FAILURE |
| BIT 4 = 1 | BASELINE #2 MID FREQUENCY PHASE BALANCE FAILURE |
| BIT 3 = 1 | BASELINE #2 LOW FREQUENCY PHASE BALANCE FAILURE |
| BIT 2 = 1 | BASELINE #1 HIGH FREQUENCY PHASE BALANCE FAILURE |
| BIT 1 = 1 | BASELINE #1 MID FREQUENCY PHASE BALANCE FAILURE |
| BIT 0 = 1 | BASELINE #1 LOW FREQUENCY PHASE BALANCE FAILURE |

4. Unable to DF - shows BAD DF, INVALID DF FREQ:



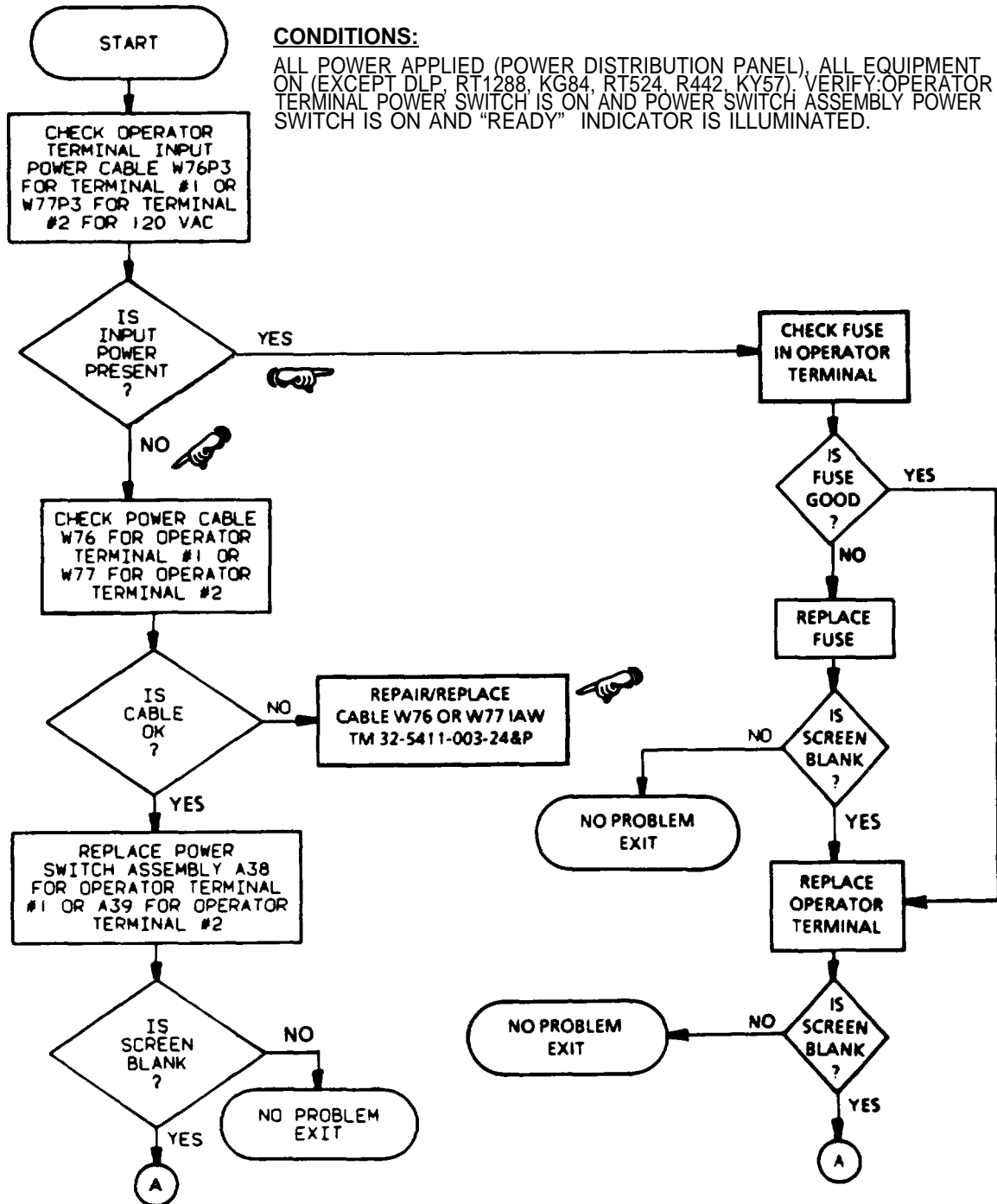
1 OF 1 TROUBLESHOOTING OPERATOR CONTROL PANEL

5. Unable to DF - chows BAD OF, no fault lamps lit, RCU works properly in normal intercept mode:



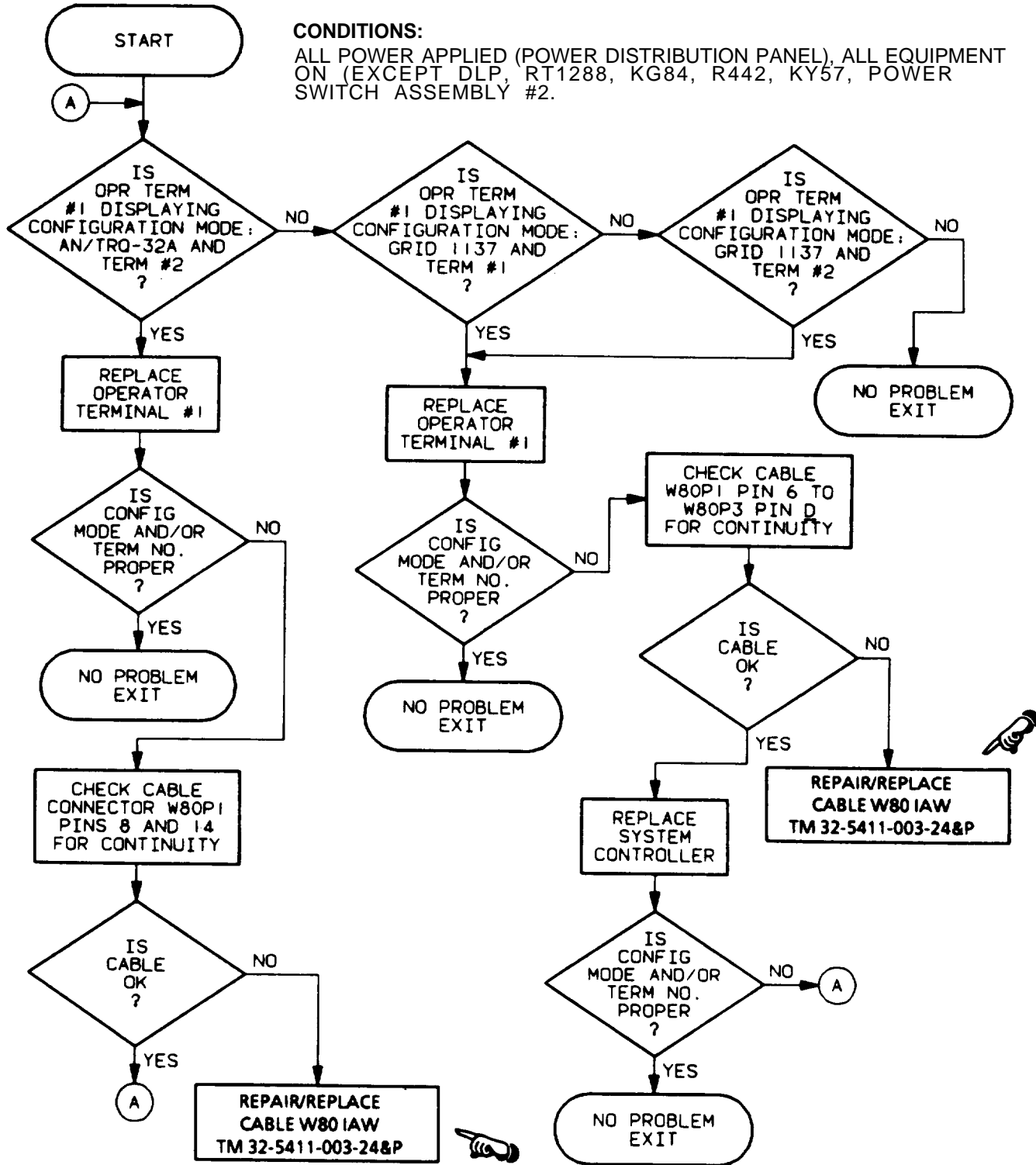
| | | |
|-------------------|-----------------|--------|
| OPERATOR TERMINAL | TROUBLESHOOTING | 1 OF 1 |
|-------------------|-----------------|--------|

1. Blank screen:

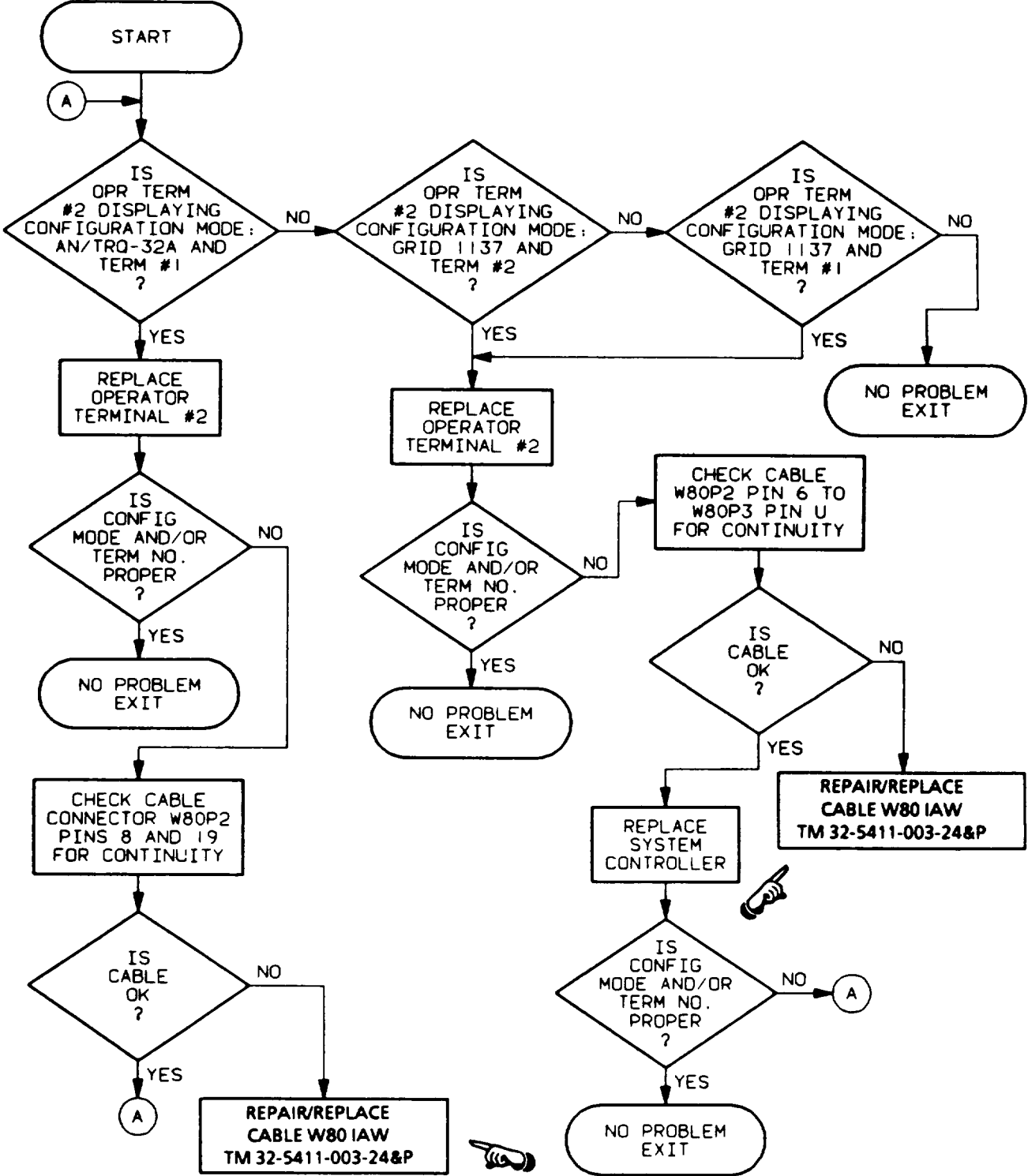


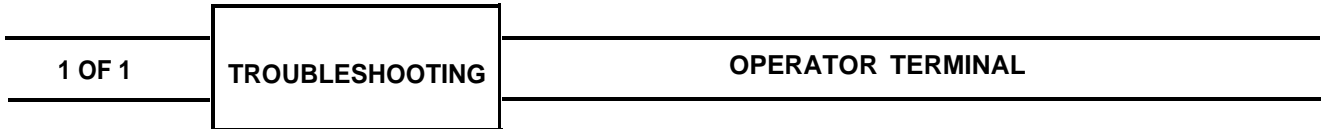
| | | |
|--------|-----------------|-------------------|
| 1 OF 1 | TROUBLESHOOTING | OPERATOR TERMINAL |
|--------|-----------------|-------------------|

2. Improper configuration mode and/or terminal number displayed on terminal #1:

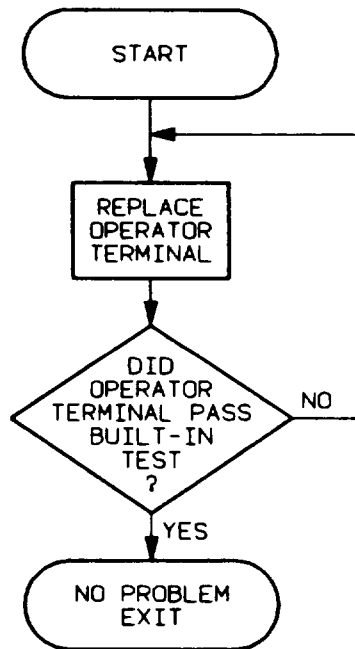


3. Improper configuration mode and/or terminal number displayed on terminal #2:





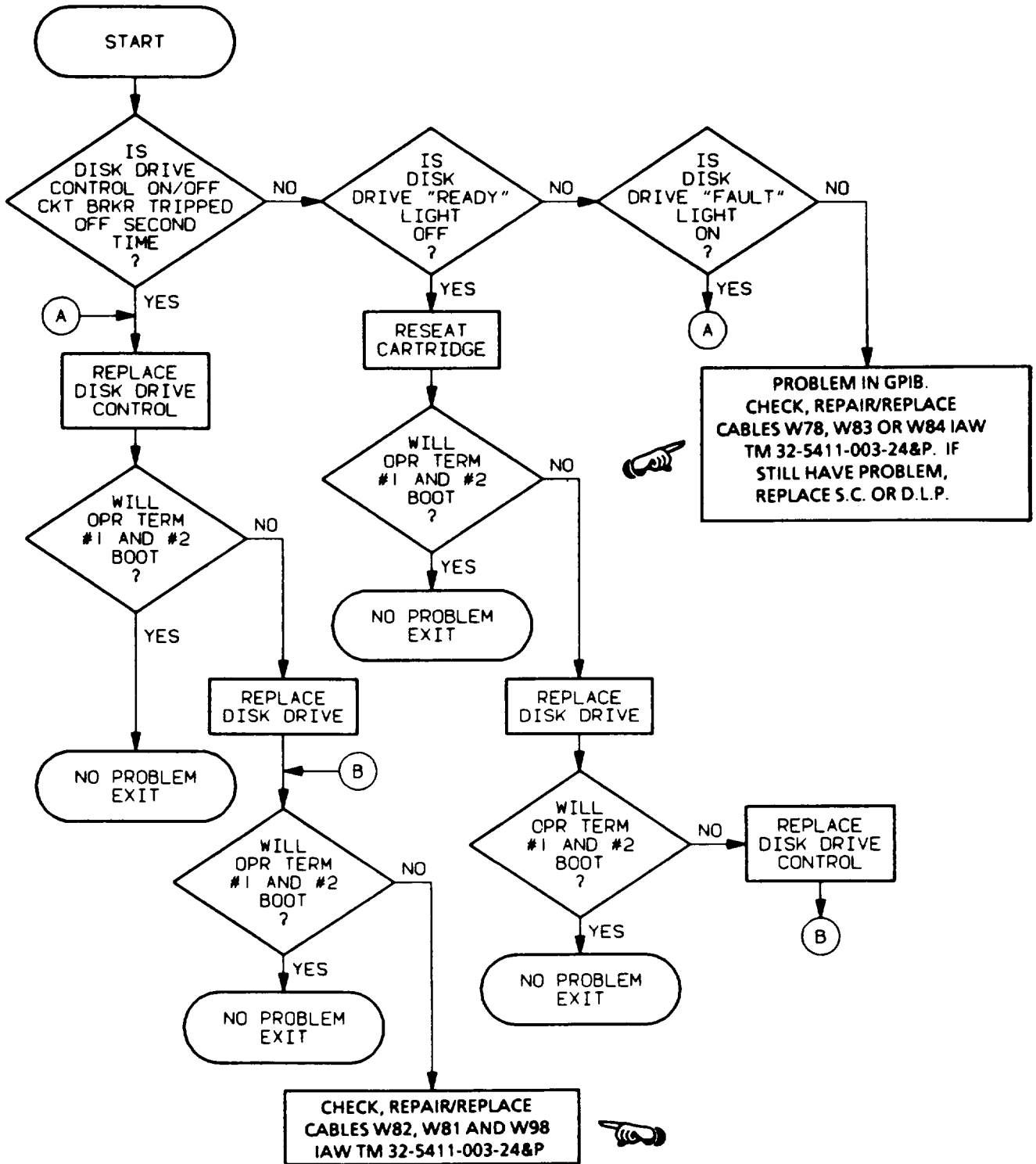
4. Operator terminal fails built-in tests:

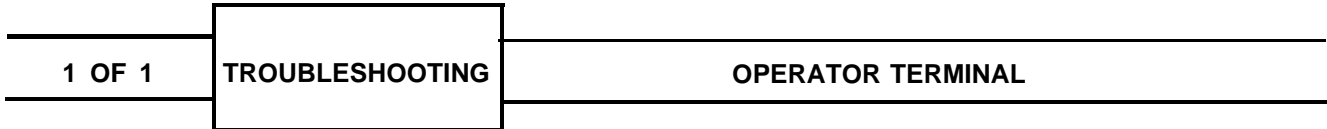


CONDITIONS:

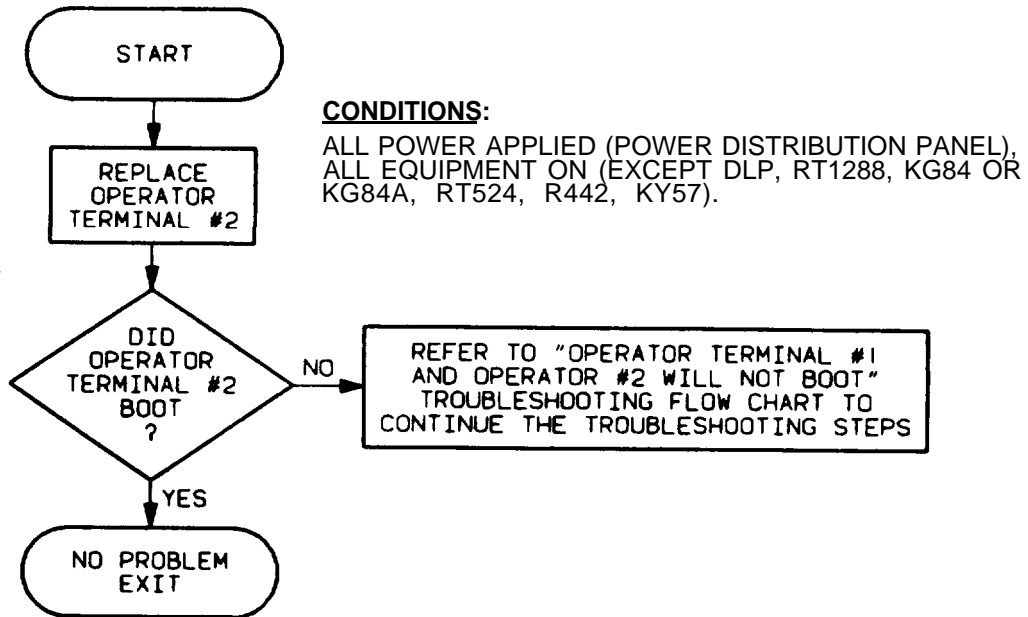
ALL POWER APPLIED (POWER DISTRIBUTION PANEL), ALL EQUIPMENT ON (EXCEPT DLP, RT1288, KG84, RT534, R442, KY57). OPERATOR TERMINAL PROGRAM "PERFORM BUILT-IN TESTS" -OPERATOR TERMINAL TESTS PERFORMED.

5. Operator terminal #1 and operator terminal #2 will not boot:

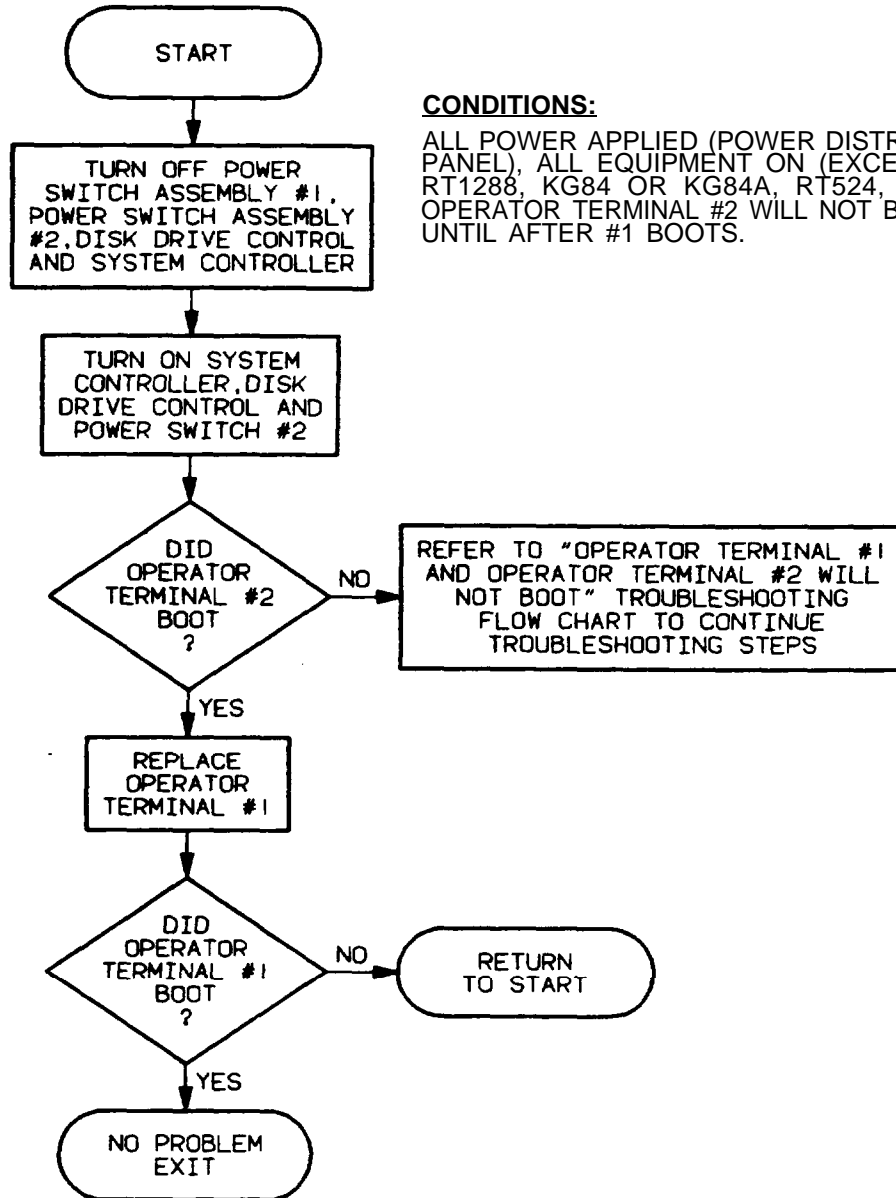


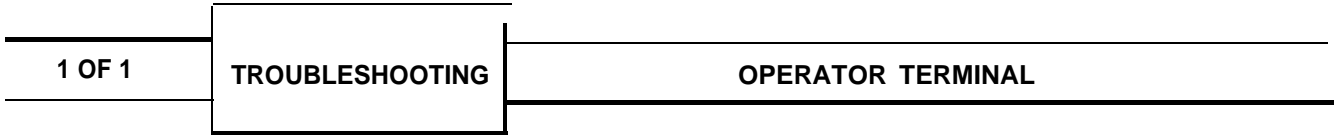


6. Operator terminal #1 boots, and operator terminal #2 will not boot:

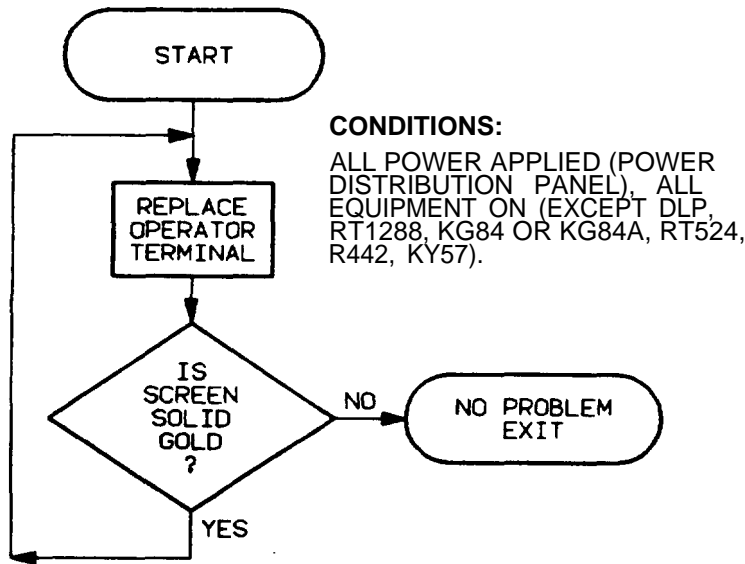


7. Operator terminal #1 will not boot:





8. Solid gold screen:

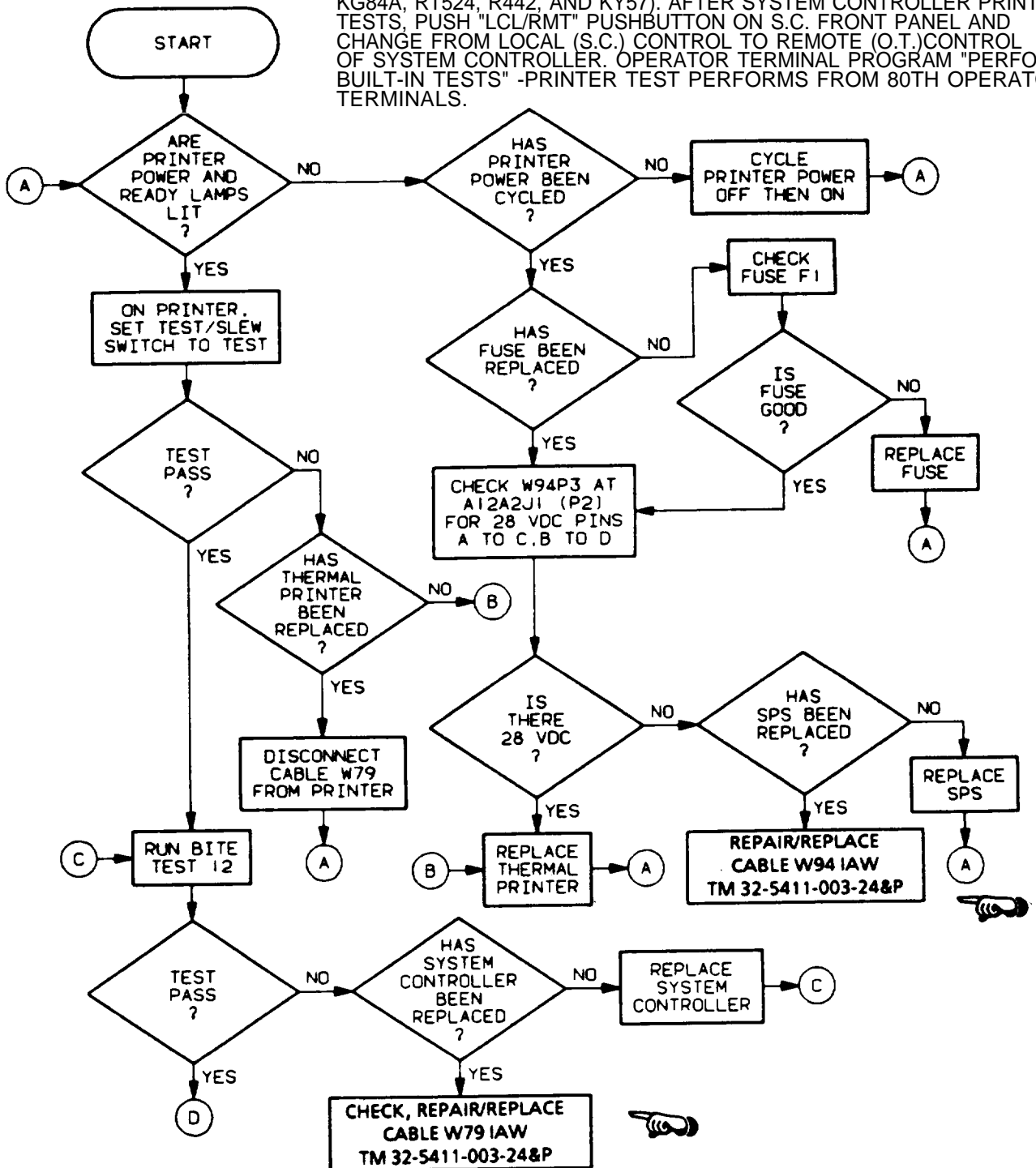


PRINTER TROUBLESHOOTING 1 OF 2

1. No printout or incorrect printout on printer:

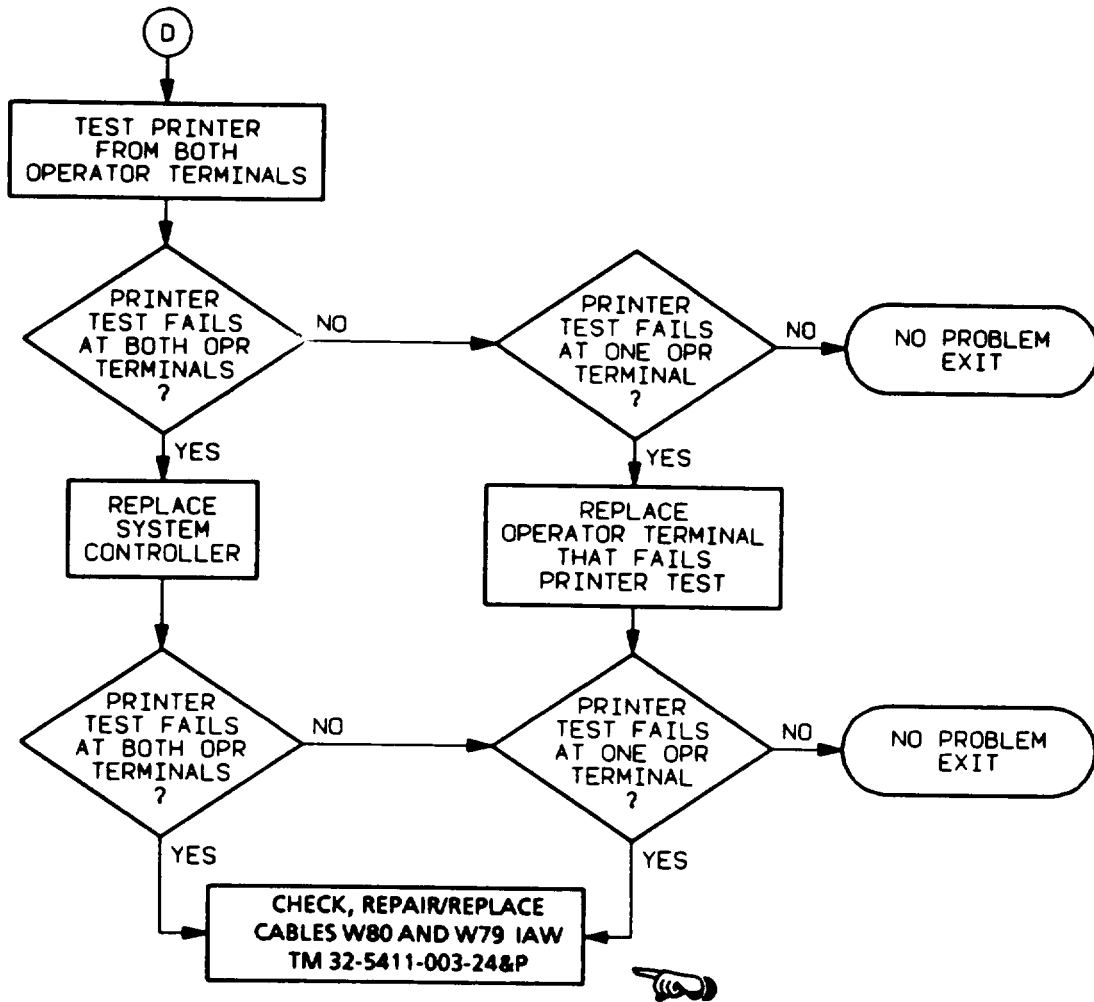
CONDITION:

ALL POWER APPLIED AND EQUIPMENT ON (EXCEPT RT1288, KG84 OR KG84A, RT524, R442, AND KY57). AFTER SYSTEM CONTROLLER PRINTER TESTS, PUSH "LCL/RMT" PUSHBUTTON ON S.C. FRONT PANEL AND CHANGE FROM LOCAL (S.C.) CONTROL TO REMOTE (O.T.) CONTROL OF SYSTEM CONTROLLER. OPERATOR TERMINAL PROGRAM "PERFORM BUILT-IN TESTS" -PRINTER TEST PERFORMS FROM 80TH OPERATOR TERMINALS.



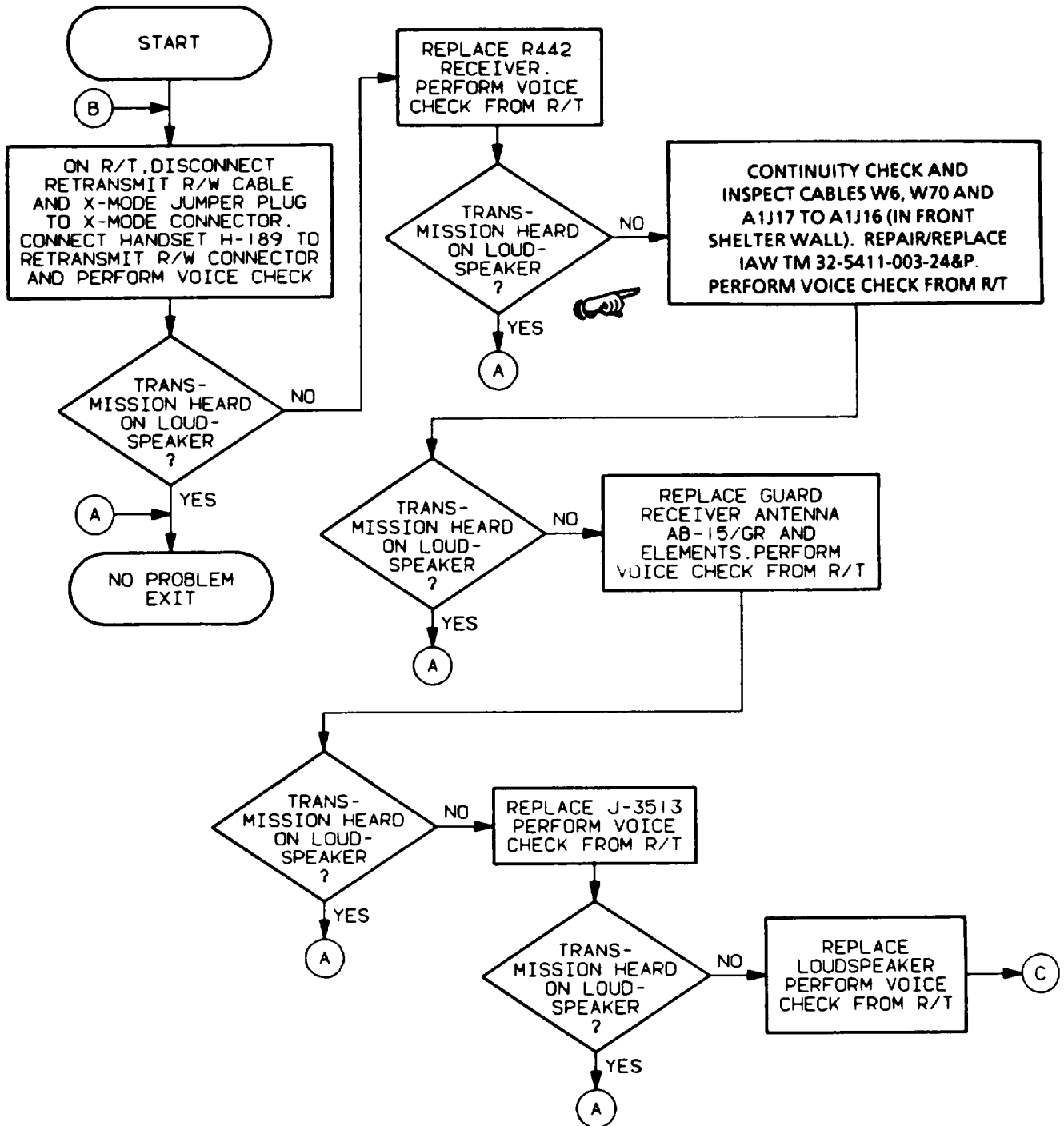
| | | |
|--------|-----------------|---------|
| 2 OF 2 | TROUBLESHOOTING | PRINTER |
|--------|-----------------|---------|

1. No printout or incorrect printout on printer (Cont):



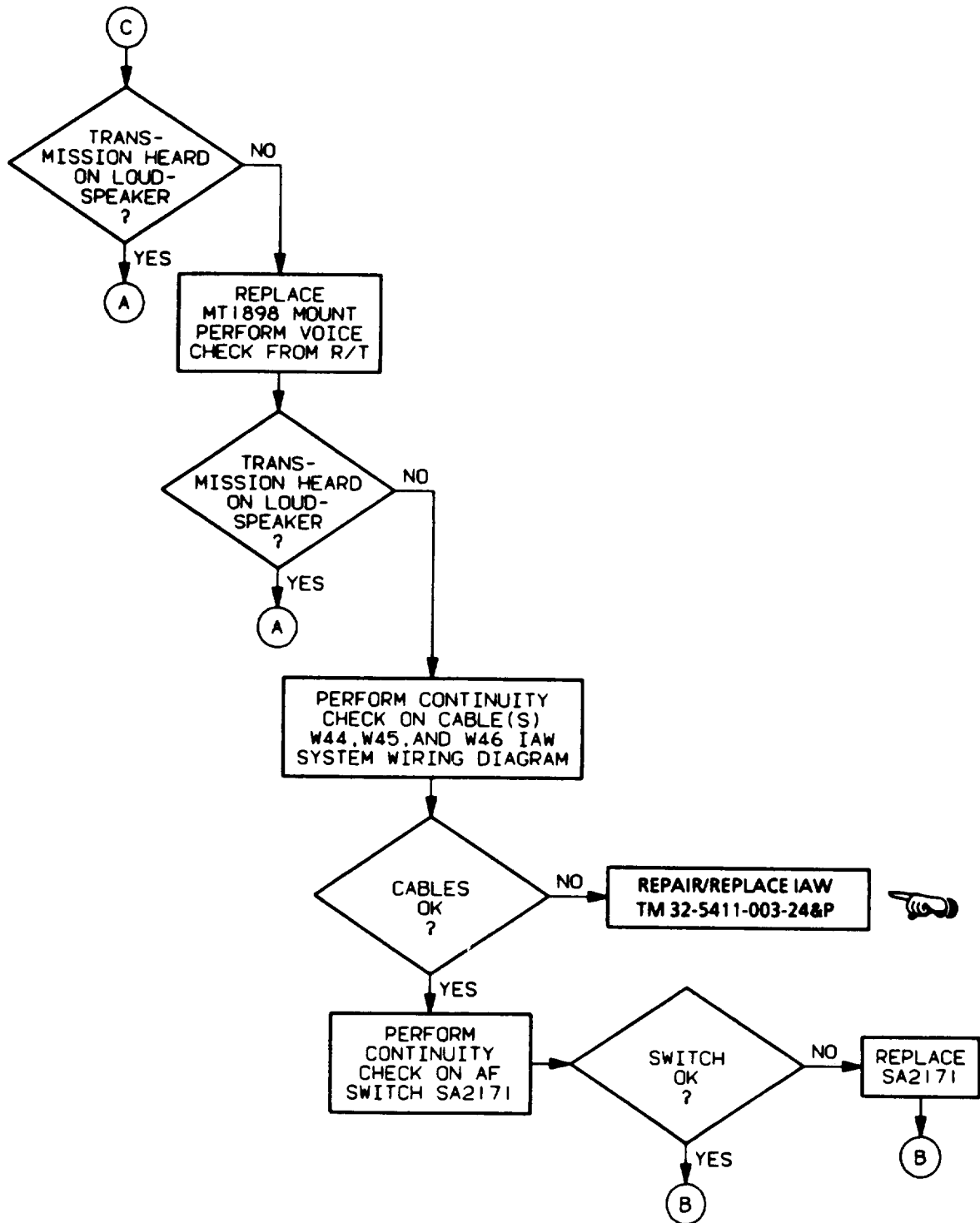
| | | |
|----------------------|-----------------|--------|
| RADIO COMMUNICATIONS | TROUBLESHOOTING | 1 OF 2 |
|----------------------|-----------------|--------|

1. No communications on guard receiver:



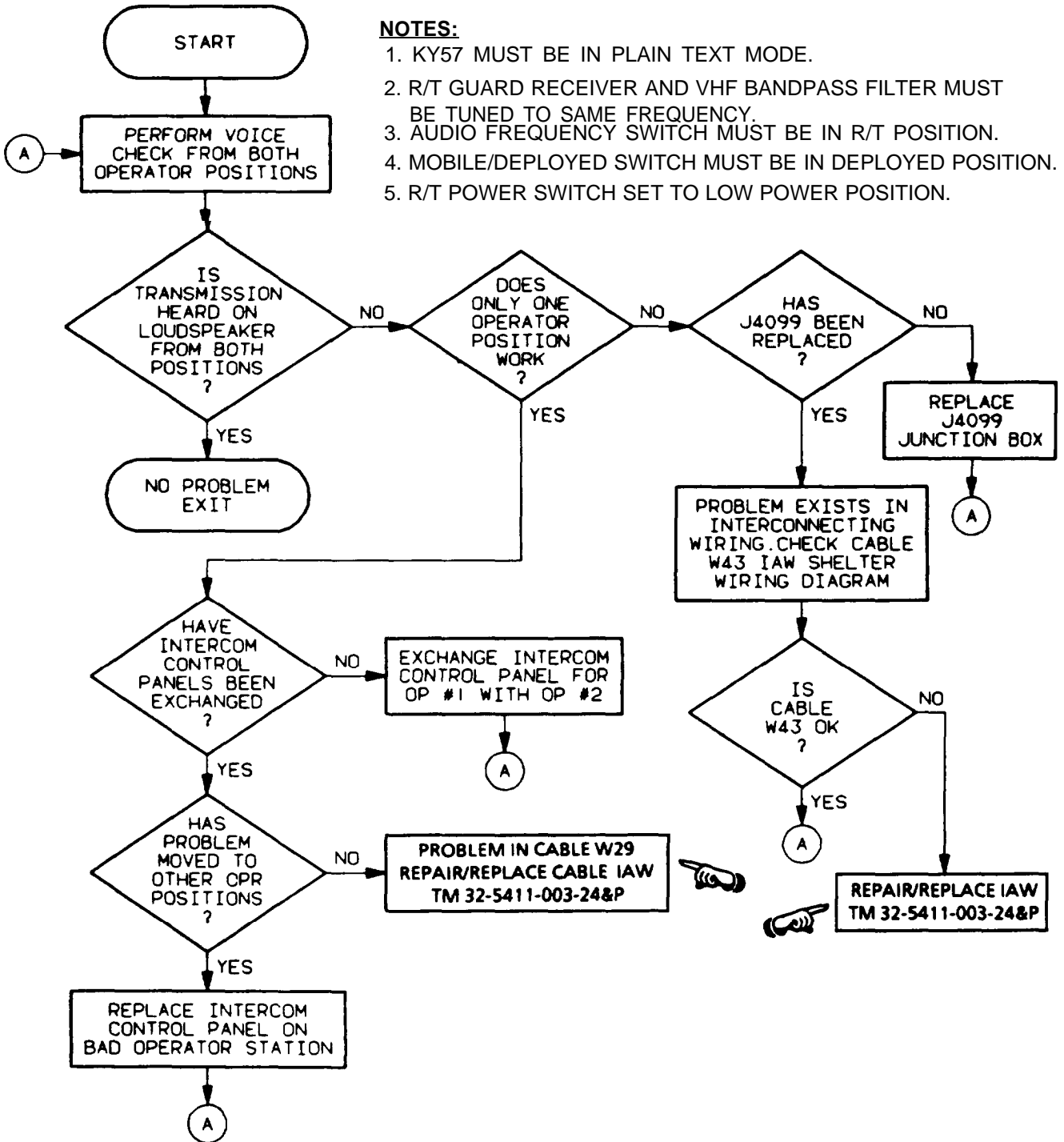
| | | |
|--------|------------------------|-----------------------------|
| 2 OF 2 | TROUBLESHOOTING | RADIO COMMUNICATIONS |
|--------|------------------------|-----------------------------|

1. No communications on guard receiver (Cont):



| | | |
|----------------------|-----------------|--------|
| RADIO COMMUNICATIONS | TROUBLESHOOTING | 1 OF 1 |
|----------------------|-----------------|--------|

2. No voice communications from operator #1 or operator #2 position only:



NOTES:

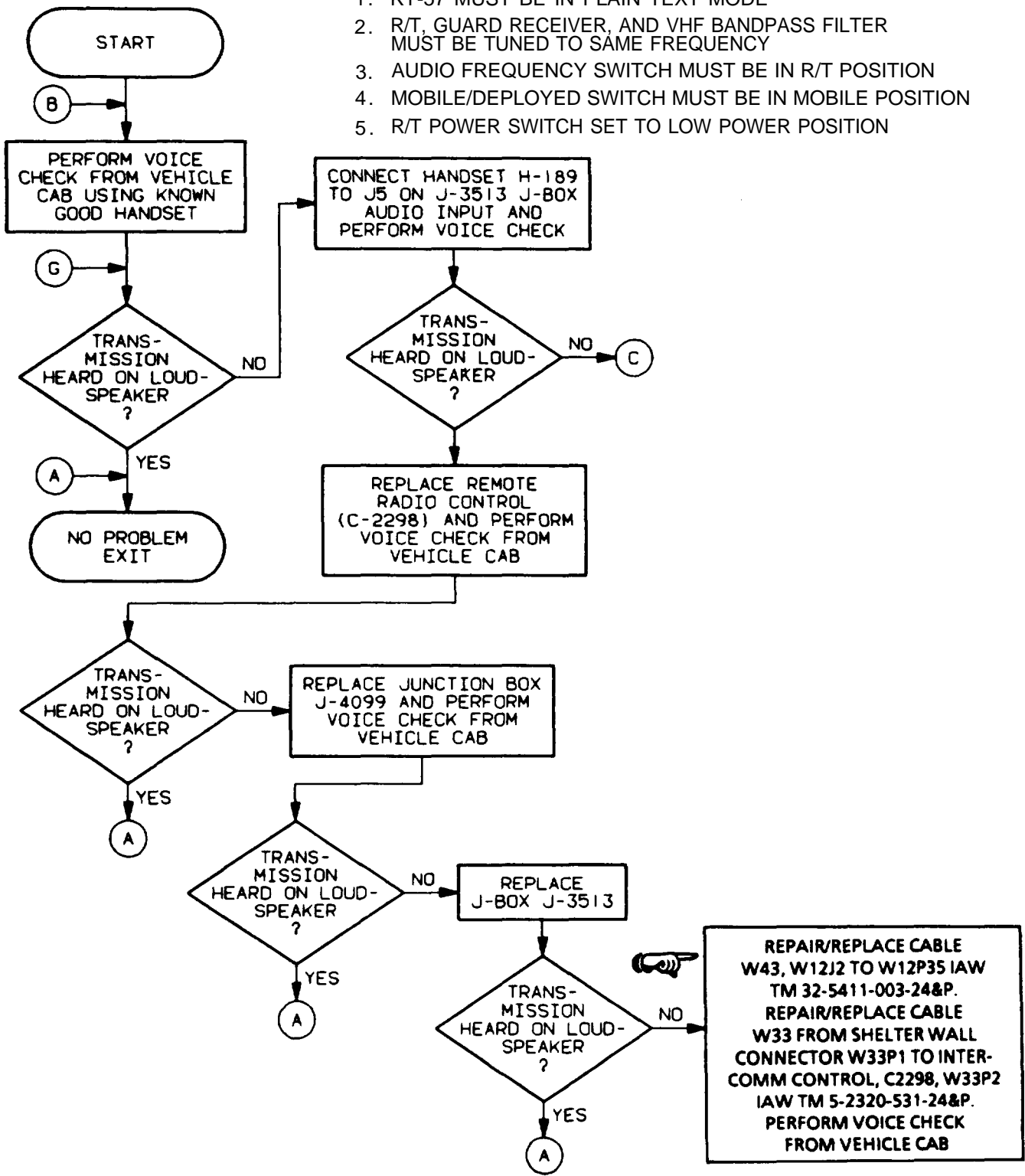
1. KY57 MUST BE IN PLAIN TEXT MODE.
2. R/T GUARD RECEIVER AND VHF BANDPASS FILTER MUST BE TUNED TO SAME FREQUENCY.
3. AUDIO FREQUENCY SWITCH MUST BE IN R/T POSITION.
4. MOBILE/DEPLOYED SWITCH MUST BE IN DEPLOYED POSITION.
5. R/T POWER SWITCH SET TO LOW POWER POSITION.

1 OF 4 TROUBLESHOOTING RADIO COMMUNICATIONS

3. No voice communication from vehicle cab:

NOTES:

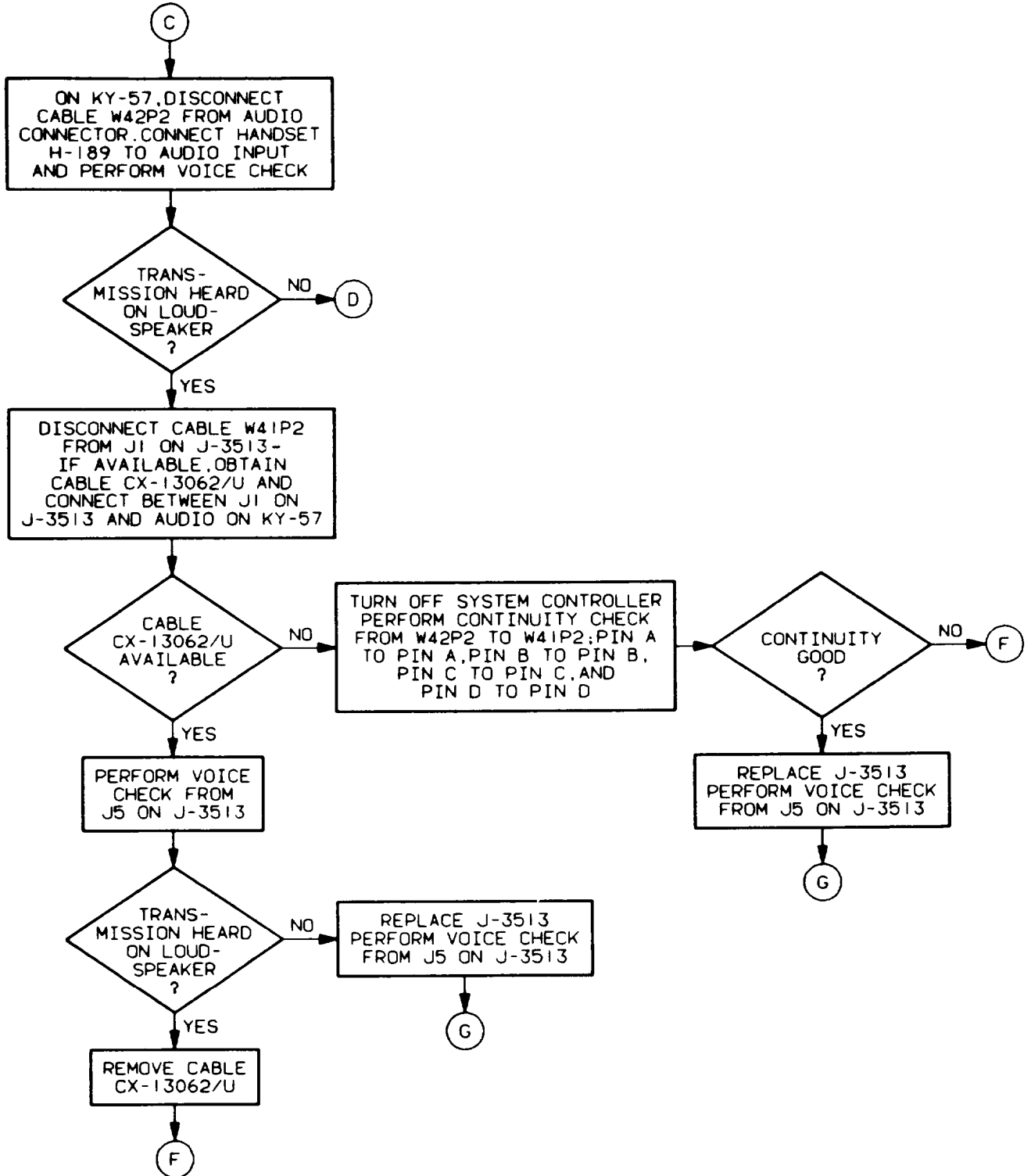
1. KY-57 MUST BE IN PLAIN TEXT MODE
2. R/T, GUARD RECEIVER, AND VHF BANDPASS FILTER MUST BE TUNED TO SAME FREQUENCY
3. AUDIO FREQUENCY SWITCH MUST BE IN R/T POSITION
4. MOBILE/DEPLOYED SWITCH MUST BE IN MOBILE POSITION
5. R/T POWER SWITCH SET TO LOW POWER POSITION



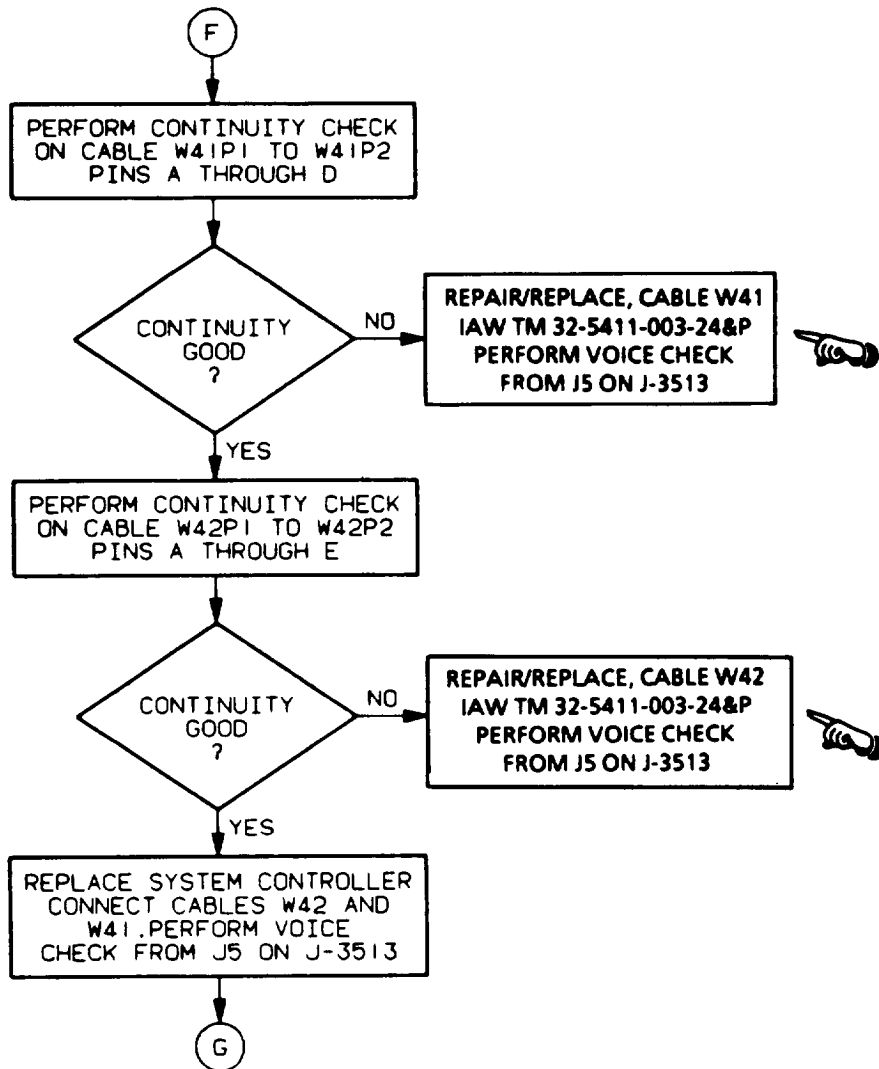
RADIO COMMUNICATIONS

TROUBLESHOOTING 2 OF 4

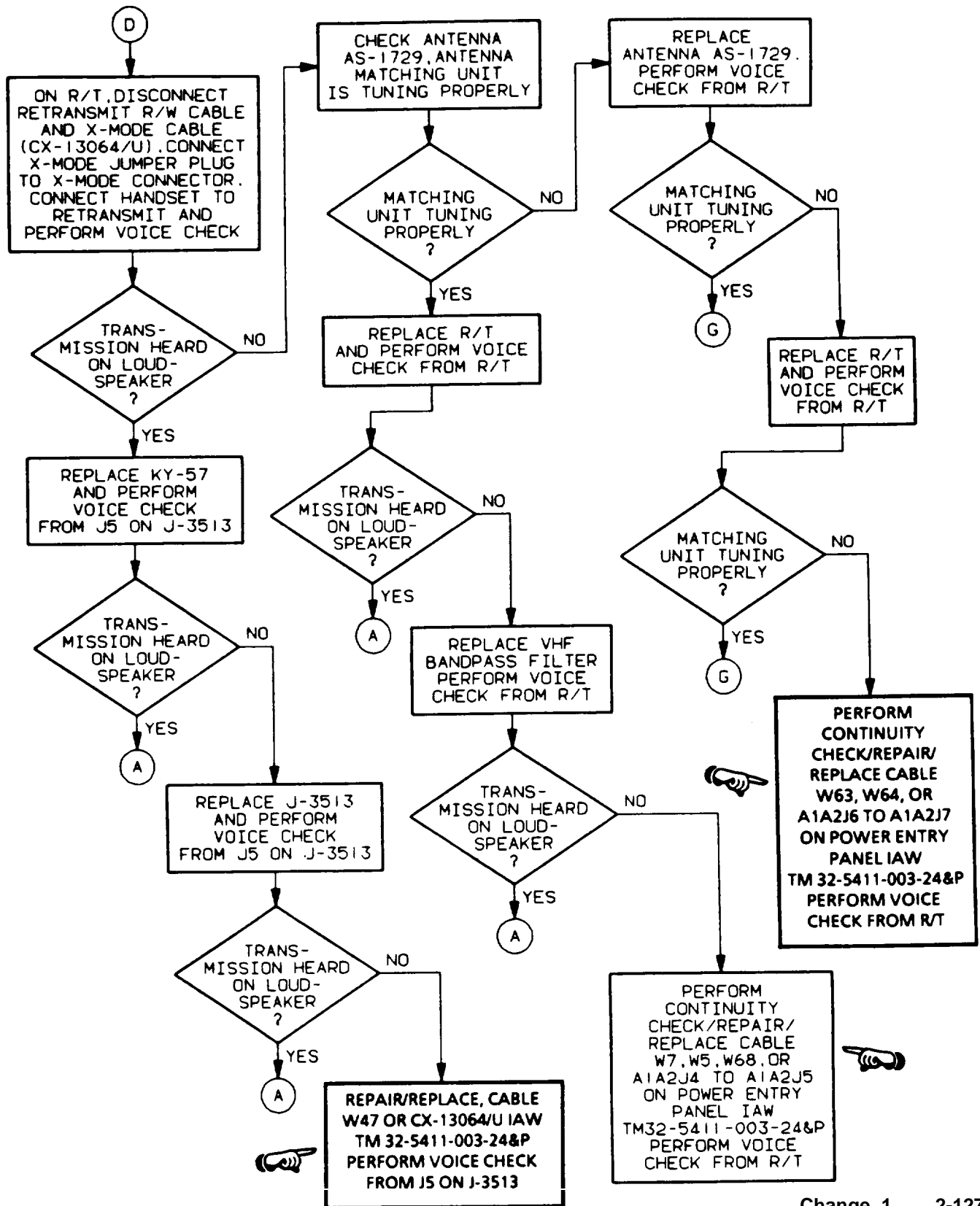
3. No voice communication from vehicle cab (Cont):



3. No voice communication from vehicle cab (Cont):

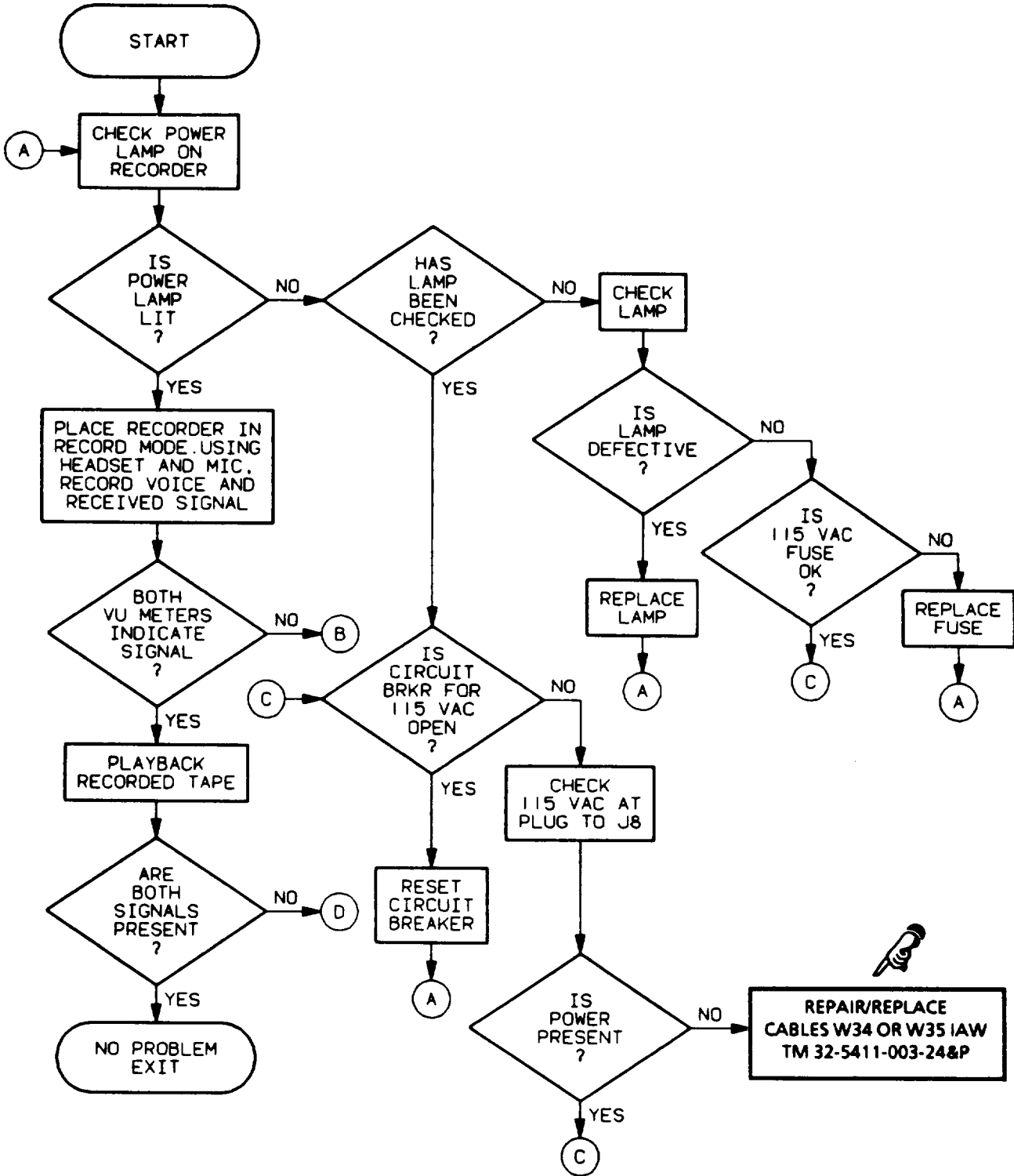


3. No voice communication from vehicle cab (Cont):



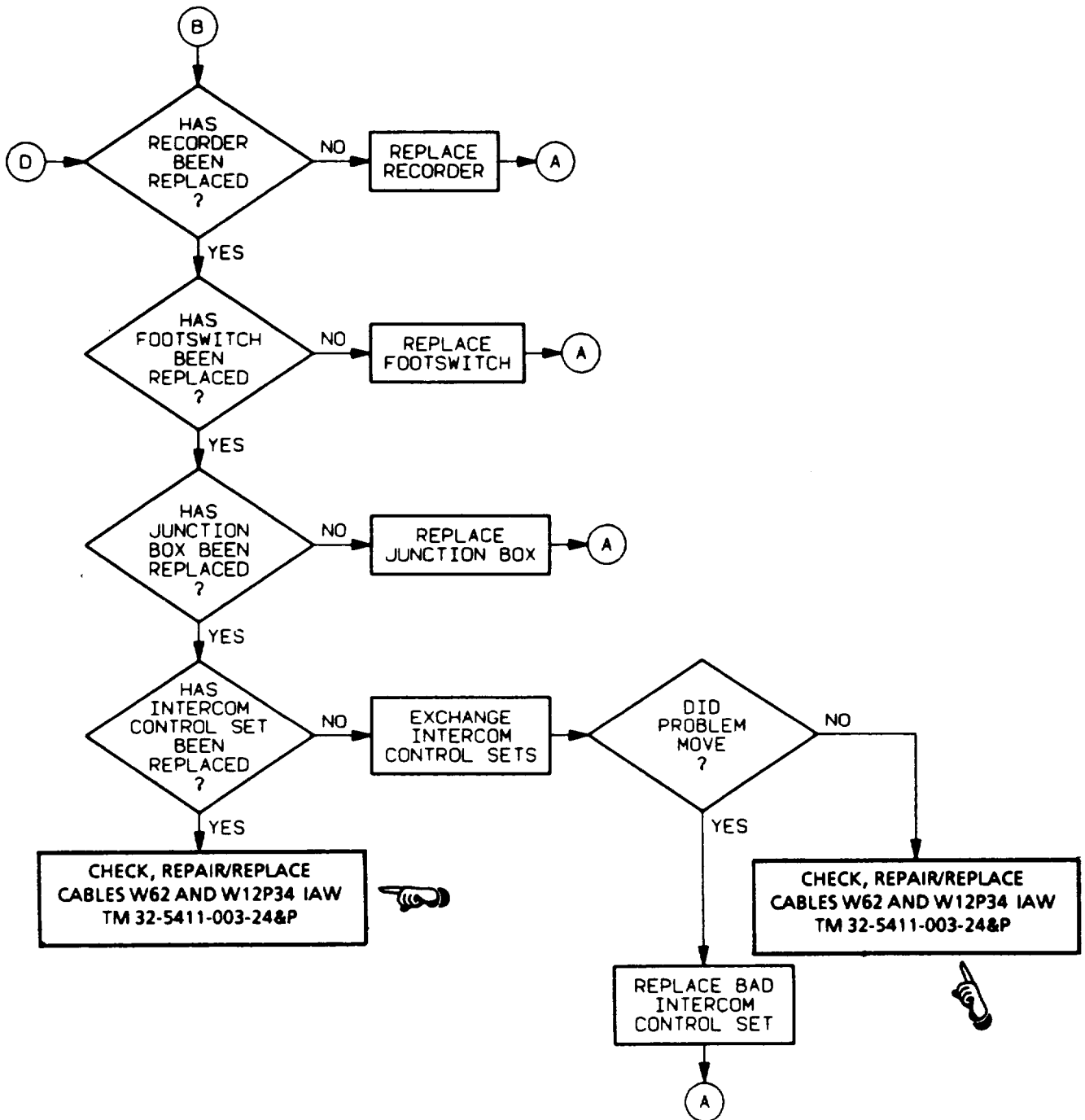
1 OF 2 TROUBLESHOOTING RECORDER-REPRODUCER

1. UNH-17 does not record:

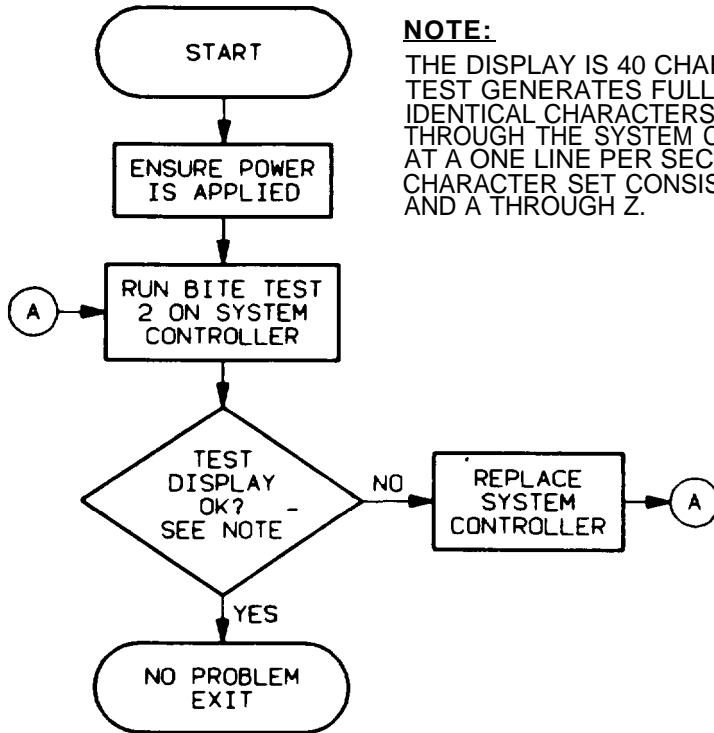


| | | |
|---------------------|-----------------|--------|
| RECORDER/REPRODUCER | TROUBLESHOOTING | 2 OF 2 |
|---------------------|-----------------|--------|

1. UNH-17 does not record (Cont):



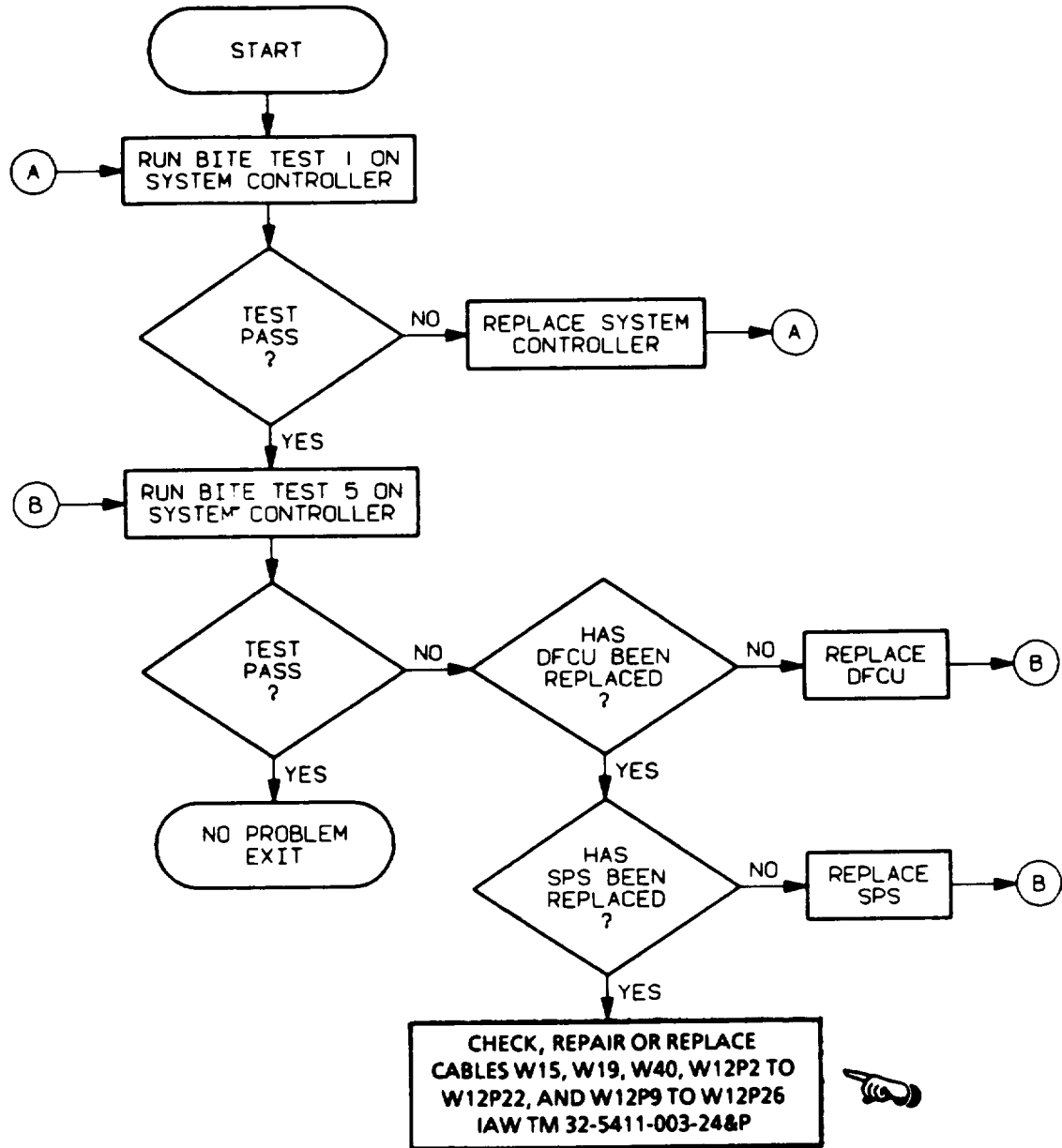
1. System controller display blank or has improper characters:



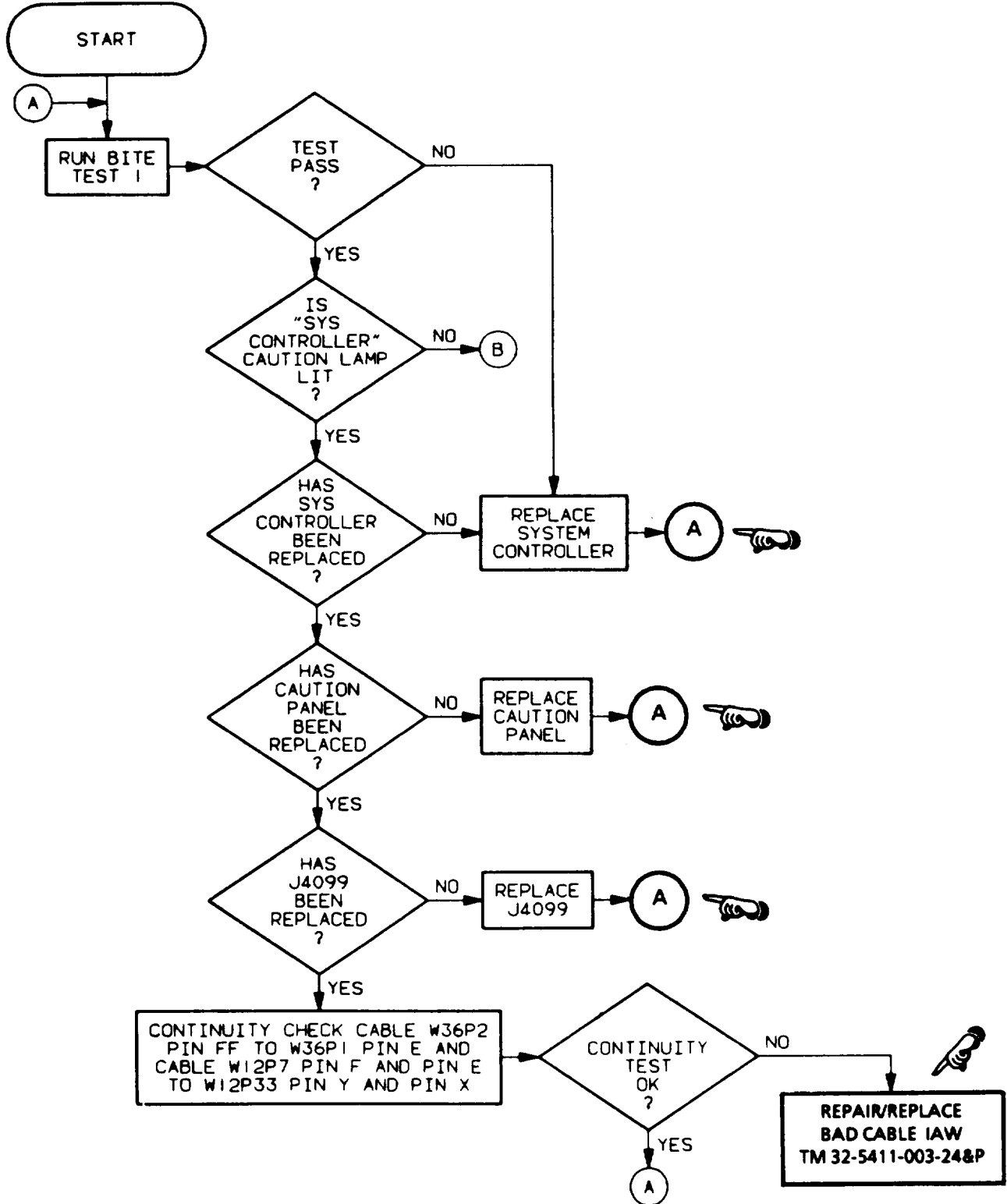
NOTE:

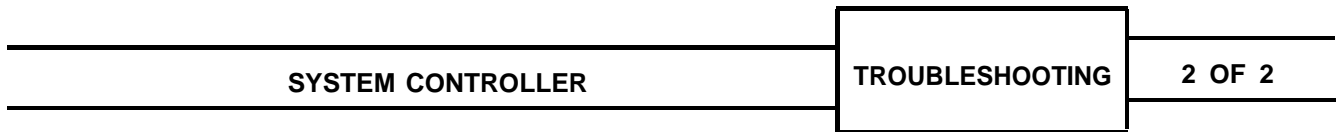
THE DISPLAY IS 40 CHARACTERS WIDE. THE TEST GENERATES FULL DISPLAY LINES OF IDENTICAL CHARACTERS AND SCROLLS THEM THROUGH THE SYSTEM CONTROLLER DISPLAY AT A ONE LINE PER SECOND RATE. THE CHARACTER SET CONSISTS OF 0 THROUGH 9 AND A THROUGH Z.

2. System controller display reads DFCU FAILED TO RESPOND:

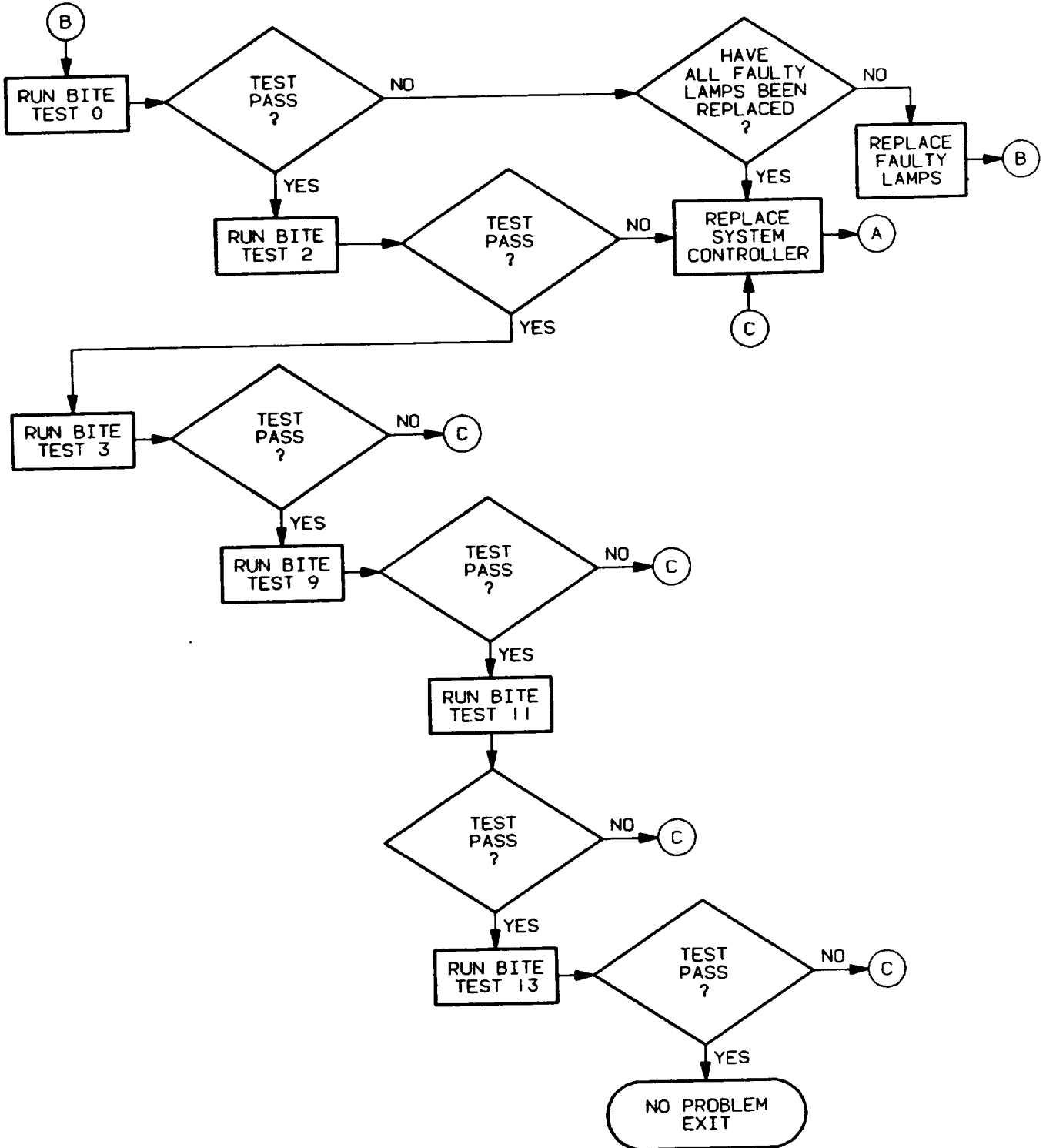


3. System controller does not operate properly:





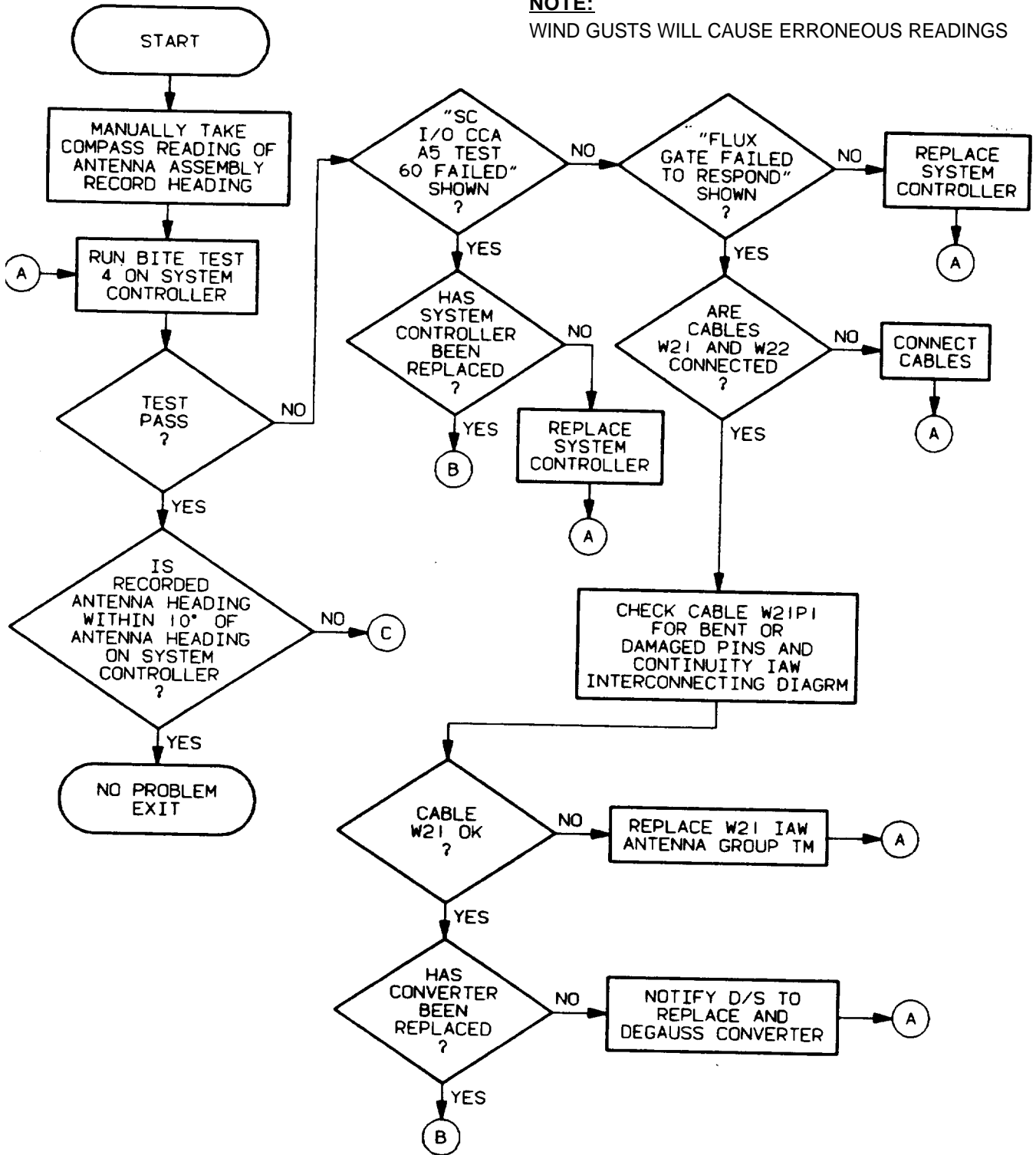
3. System controller does not operate properly (Cont):



1 OF 2 TROUBLESHOOTING SYSTEM CONTROLLER

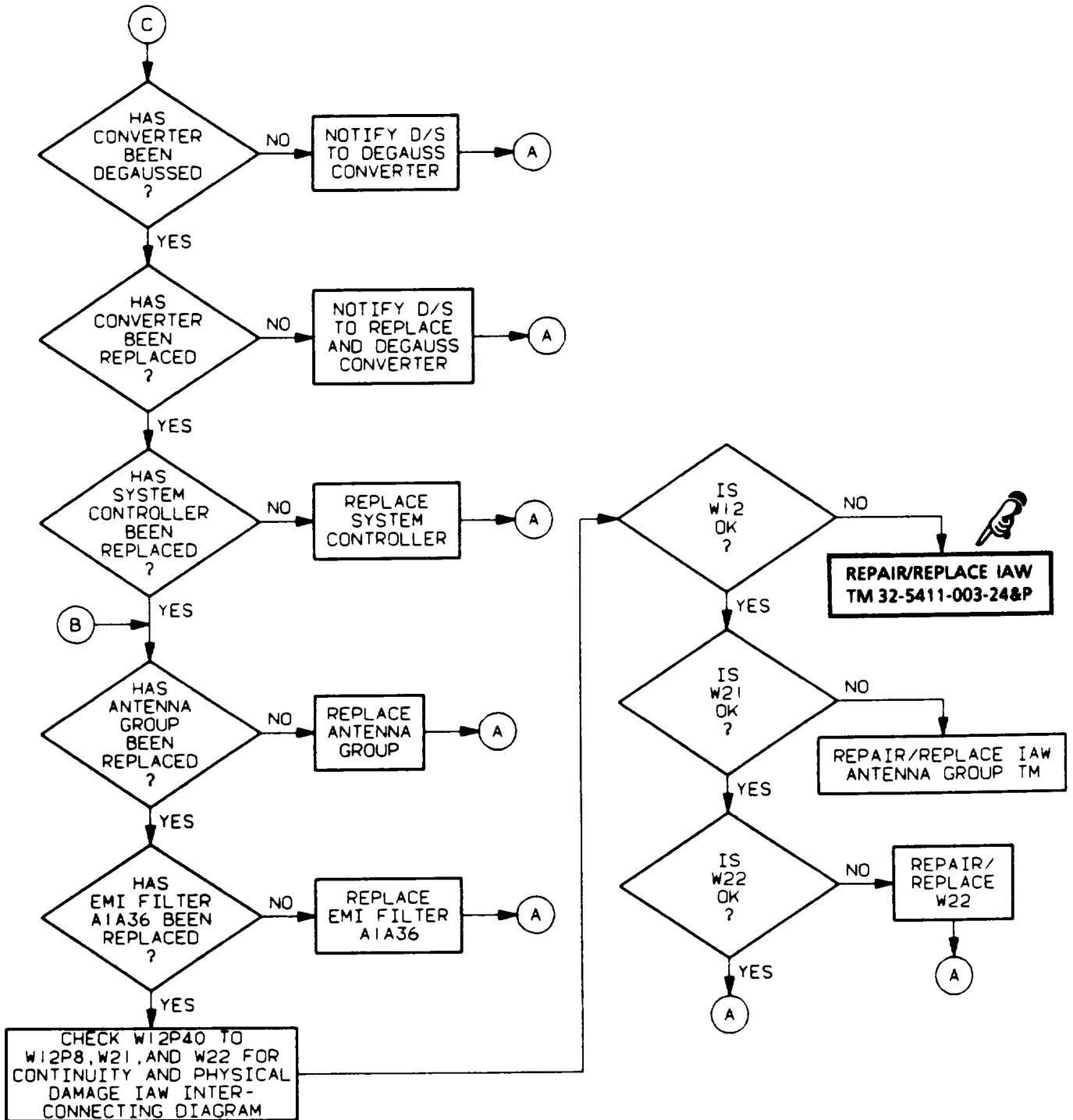
4. System controller magnetic heading not within 10 degrees of compass heading:

NOTE:
WIND GUSTS WILL CAUSE ERRONEOUS READINGS



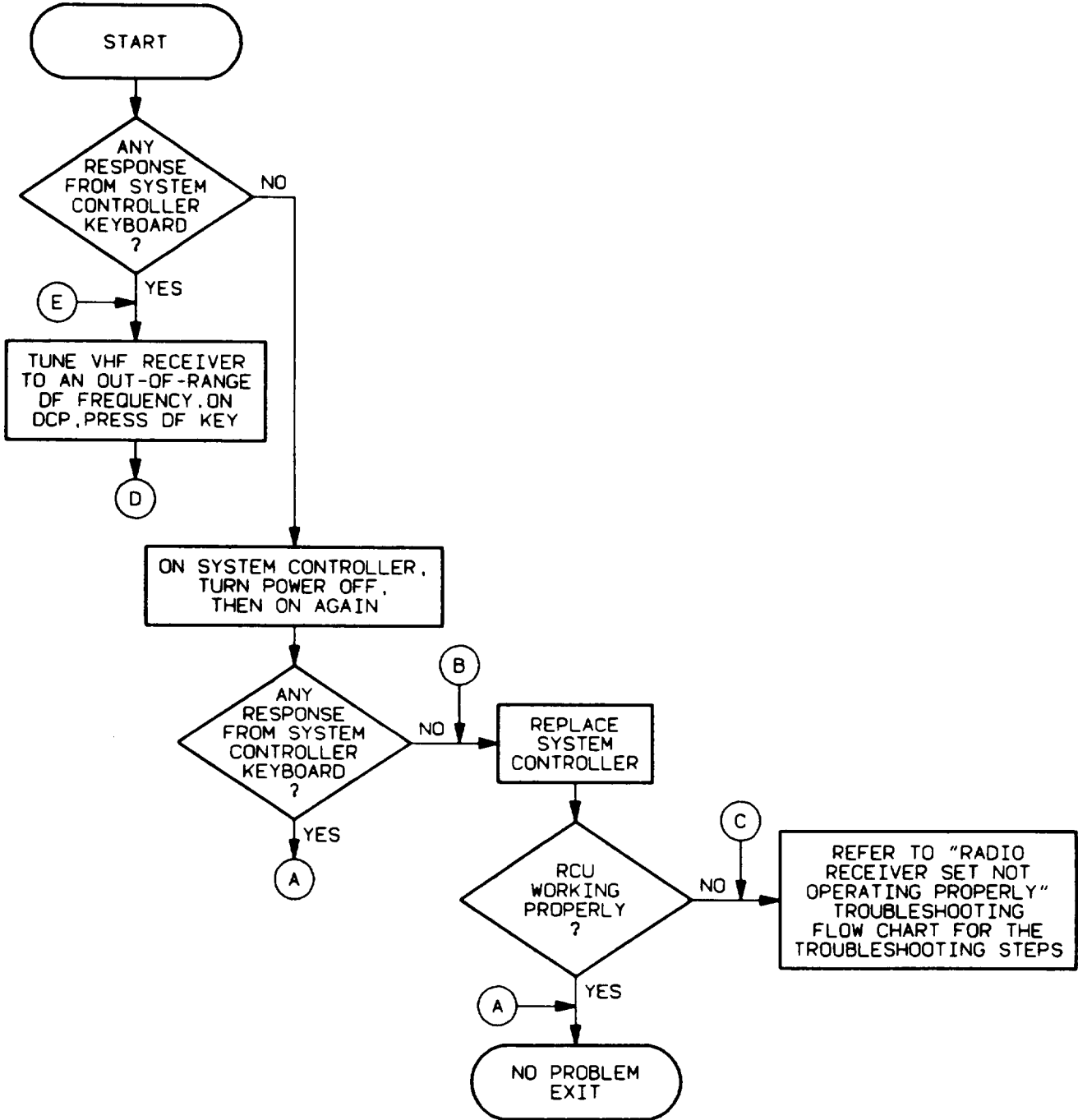
| | | |
|--------------------------|------------------------|---------------|
| SYSTEM CONTROLLER | TROUBLESHOOTING | 2 OF 2 |
|--------------------------|------------------------|---------------|

4. System controller magnetic heading not within 10 degrees of compass heading (Cont):

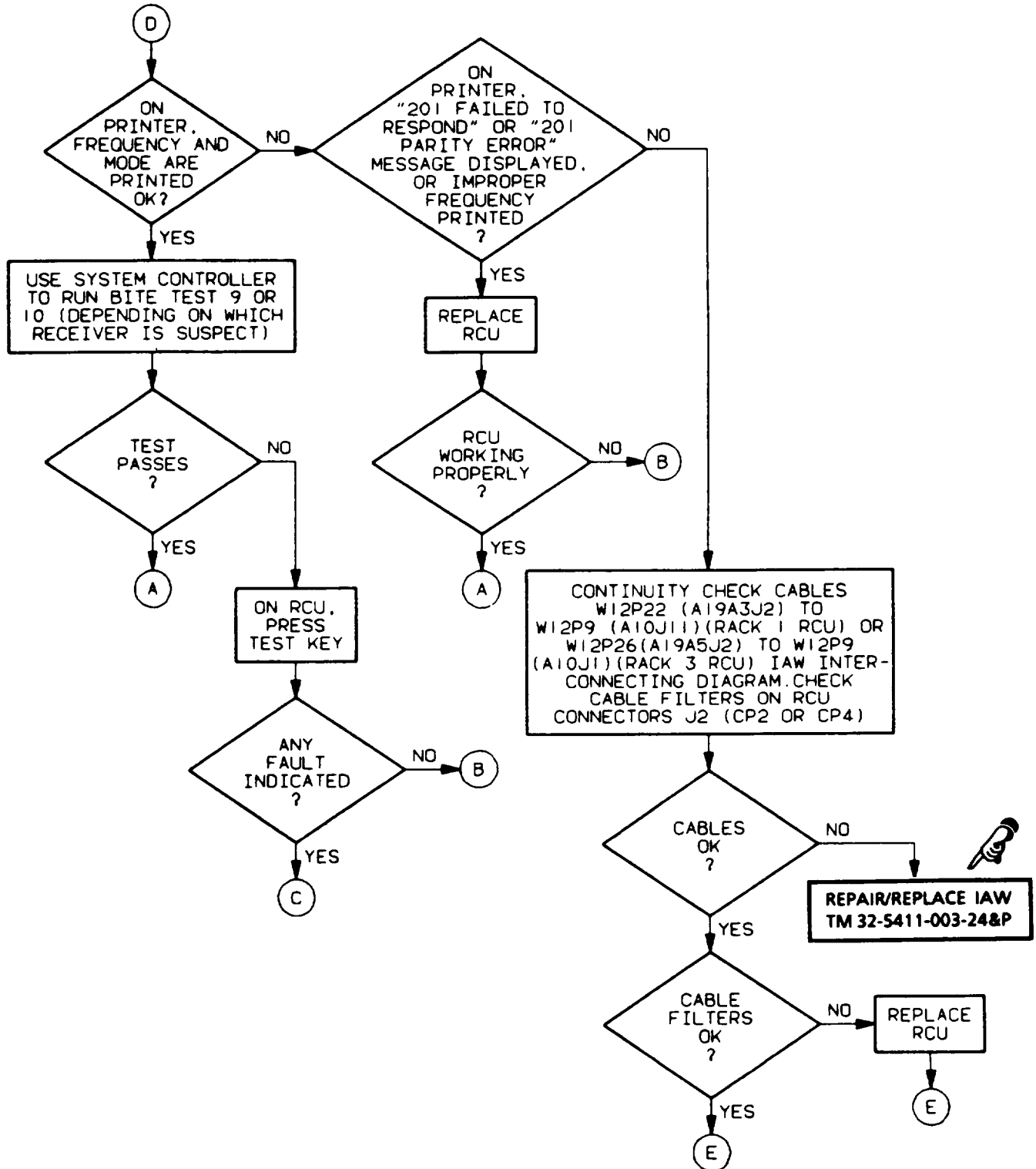


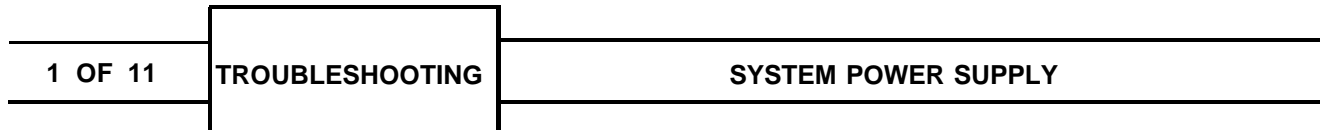
| | | |
|--------|-----------------|-------------------|
| 1 OF 2 | TROUBLESHOOTING | SYSTEM CONTROLLER |
|--------|-----------------|-------------------|

5. System controller unable to control RCU during OF and net, or provides improper control:



5. System controller unable to control RCU during DF and net, or provides improper control (Cont):





1. System power supply:

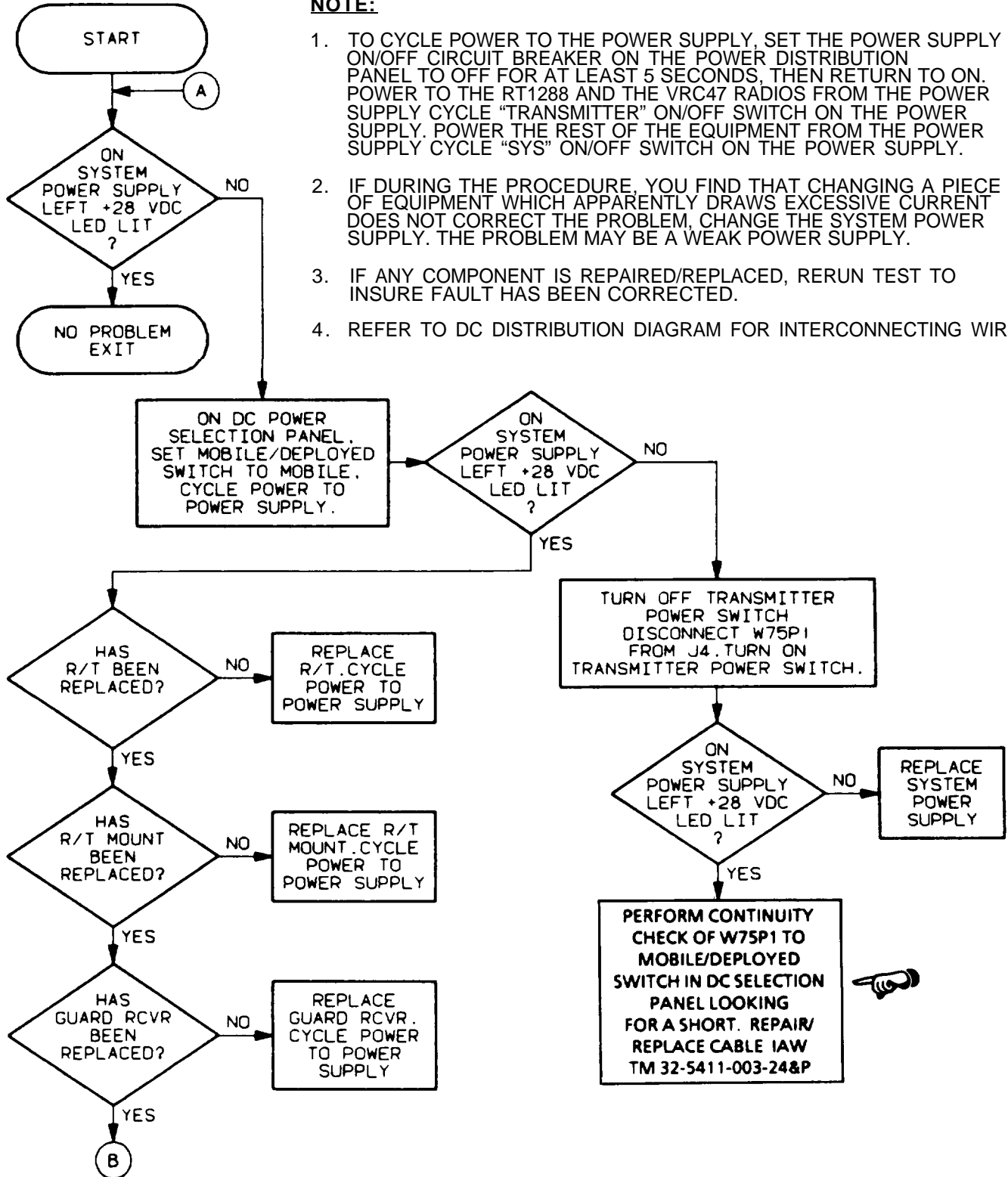
1. LEFT +28 VDC LAMP OUT - SEE SHEET 2
2. SECOND FROM LEFT +28 VDC LAMP OUT - SEE SHEET 4
3. 30 LAMP OUT - SEE SHEET 5
4. ALL LAMPS OUT - SEE SHEET 6

| | | |
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| SYSTEM POWER SUPPLY | TROUBLESHOOTING | 2 OF 11 |
|----------------------------|------------------------|----------------|

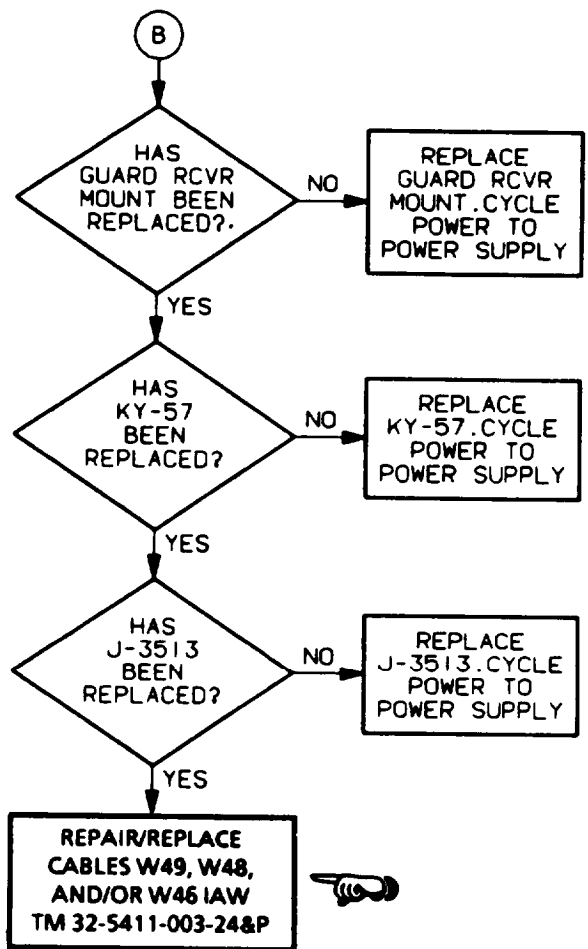
1. System power supply (Cont):

NOTE:

1. TO CYCLE POWER TO THE POWER SUPPLY, SET THE POWER SUPPLY ON/OFF CIRCUIT BREAKER ON THE POWER DISTRIBUTION PANEL TO OFF FOR AT LEAST 5 SECONDS, THEN RETURN TO ON. POWER TO THE RT1288 AND THE VRC47 RADIOS FROM THE POWER SUPPLY CYCLE "TRANSMITTER" ON/OFF SWITCH ON THE POWER SUPPLY. POWER THE REST OF THE EQUIPMENT FROM THE POWER SUPPLY CYCLE "SYS" ON/OFF SWITCH ON THE POWER SUPPLY.
2. IF DURING THE PROCEDURE, YOU FIND THAT CHANGING A PIECE OF EQUIPMENT WHICH APPARENTLY DRAWS EXCESSIVE CURRENT DOES NOT CORRECT THE PROBLEM, CHANGE THE SYSTEM POWER SUPPLY. THE PROBLEM MAY BE A WEAK POWER SUPPLY.
3. IF ANY COMPONENT IS REPAIRED/REPLACED, RERUN TEST TO INSURE FAULT HAS BEEN CORRECTED.
4. REFER TO DC DISTRIBUTION DIAGRAM FOR INTERCONNECTING WIRING.

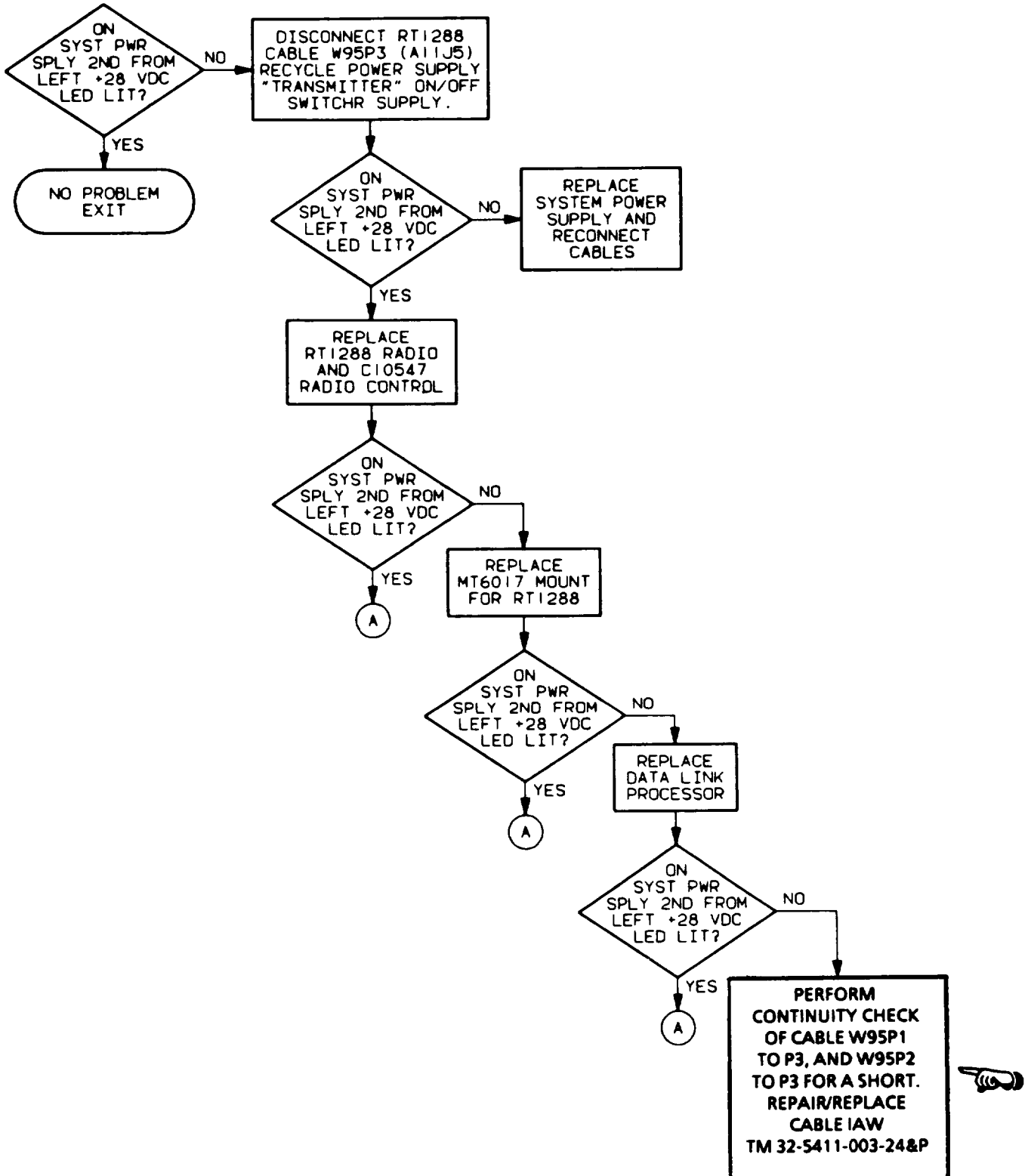


1. System power supply (Cont):



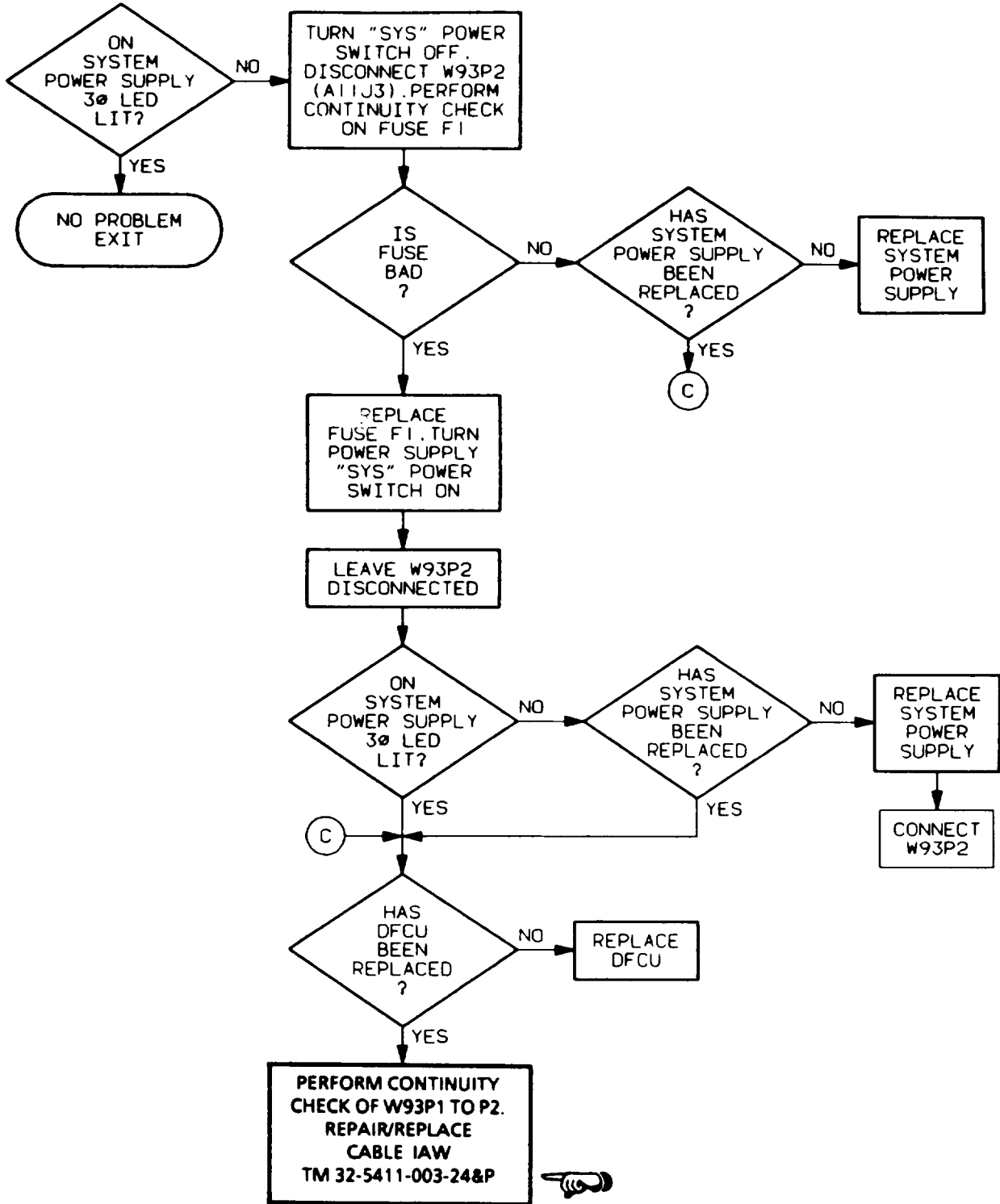
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| SYSTEM POWER SUPPLY | TROUBLESHOOTING | 4 OF 11 |
|---------------------|-----------------|---------|

1. System power supply (Cont):

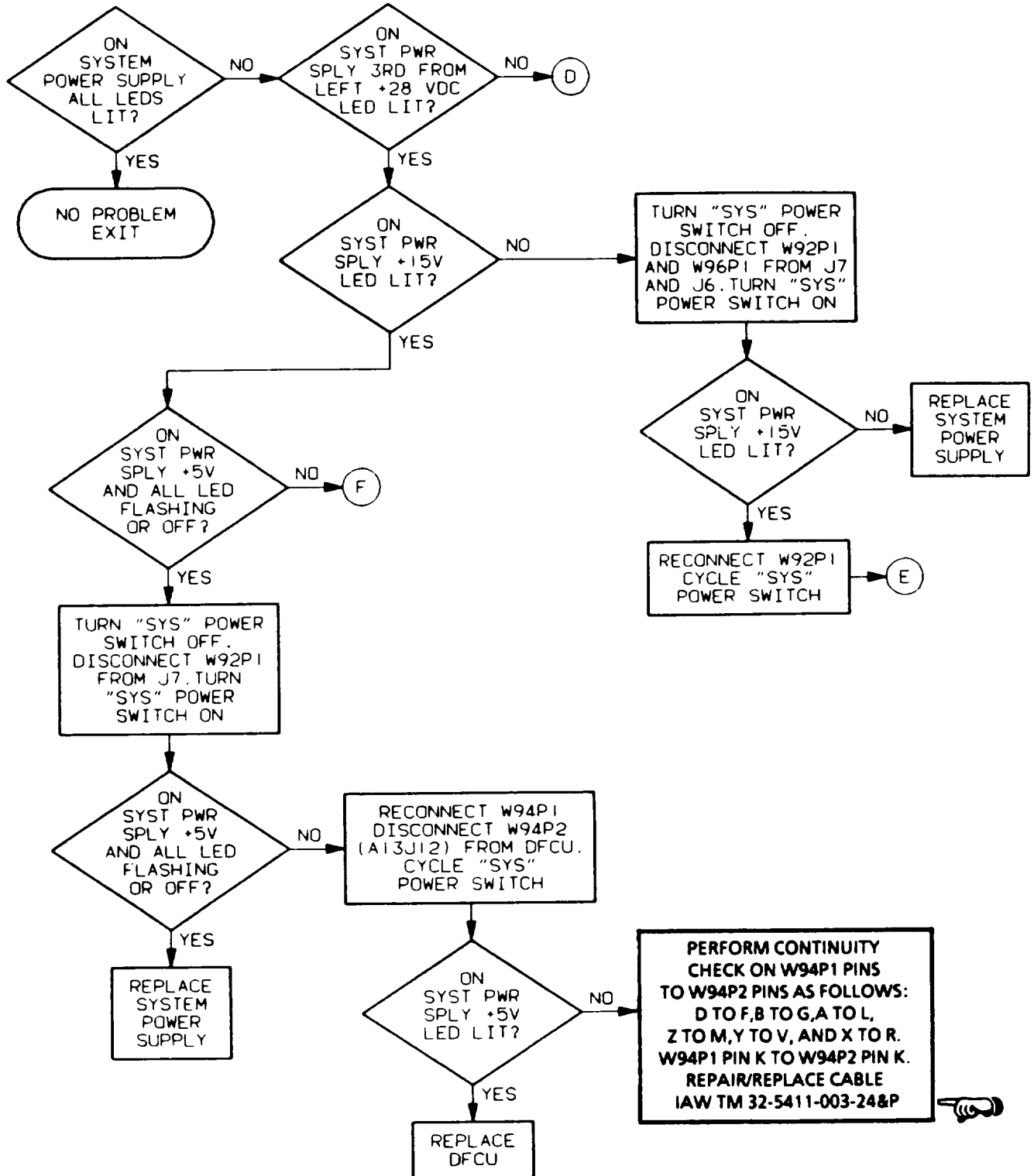


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| 5 OF 11 | TROUBLESHOOTING | SYSTEM POWER SUPPLY |
|---------|-----------------|---------------------|

1. System power supply (Cont):

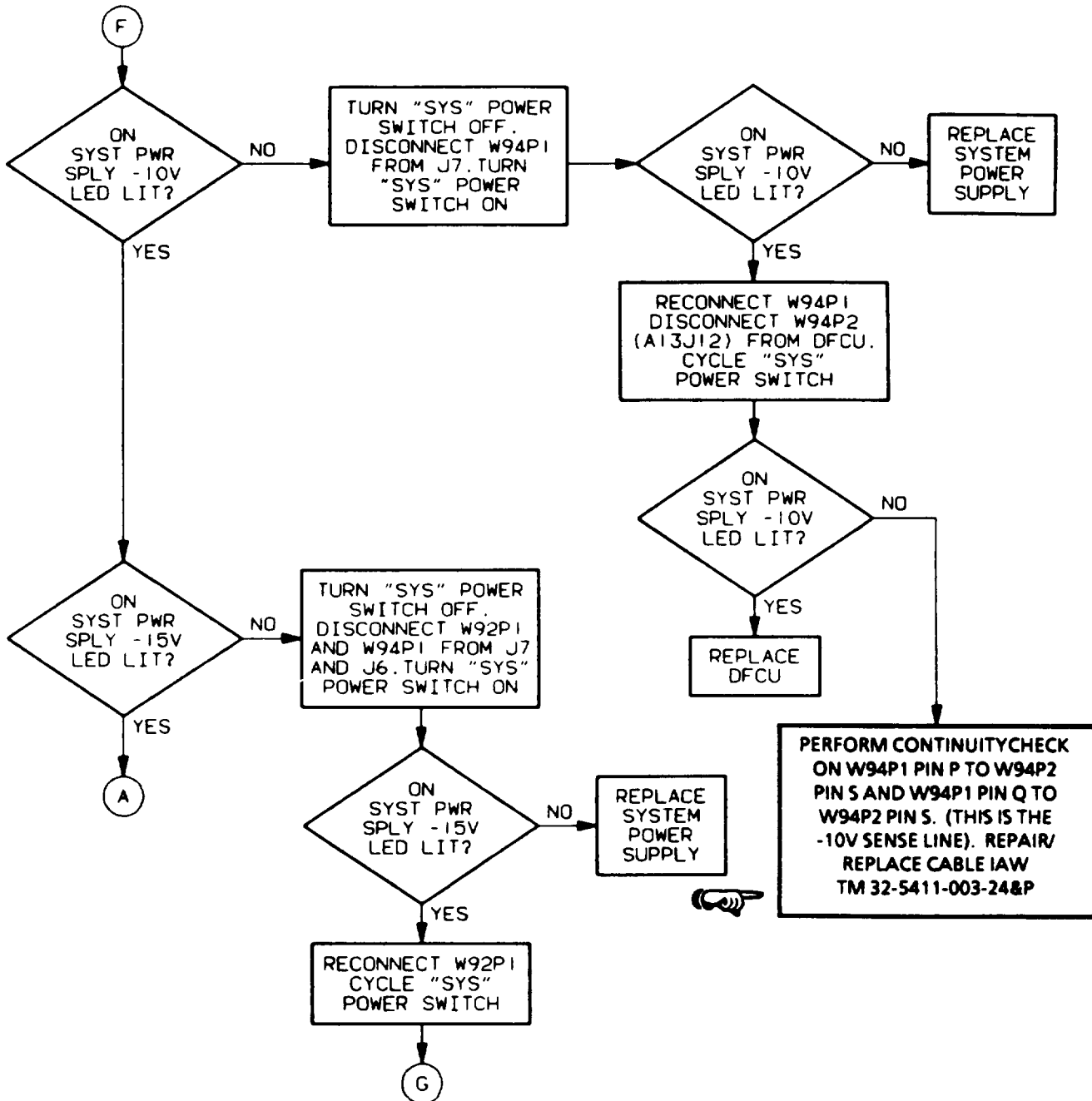


1. System power supply (Cont):



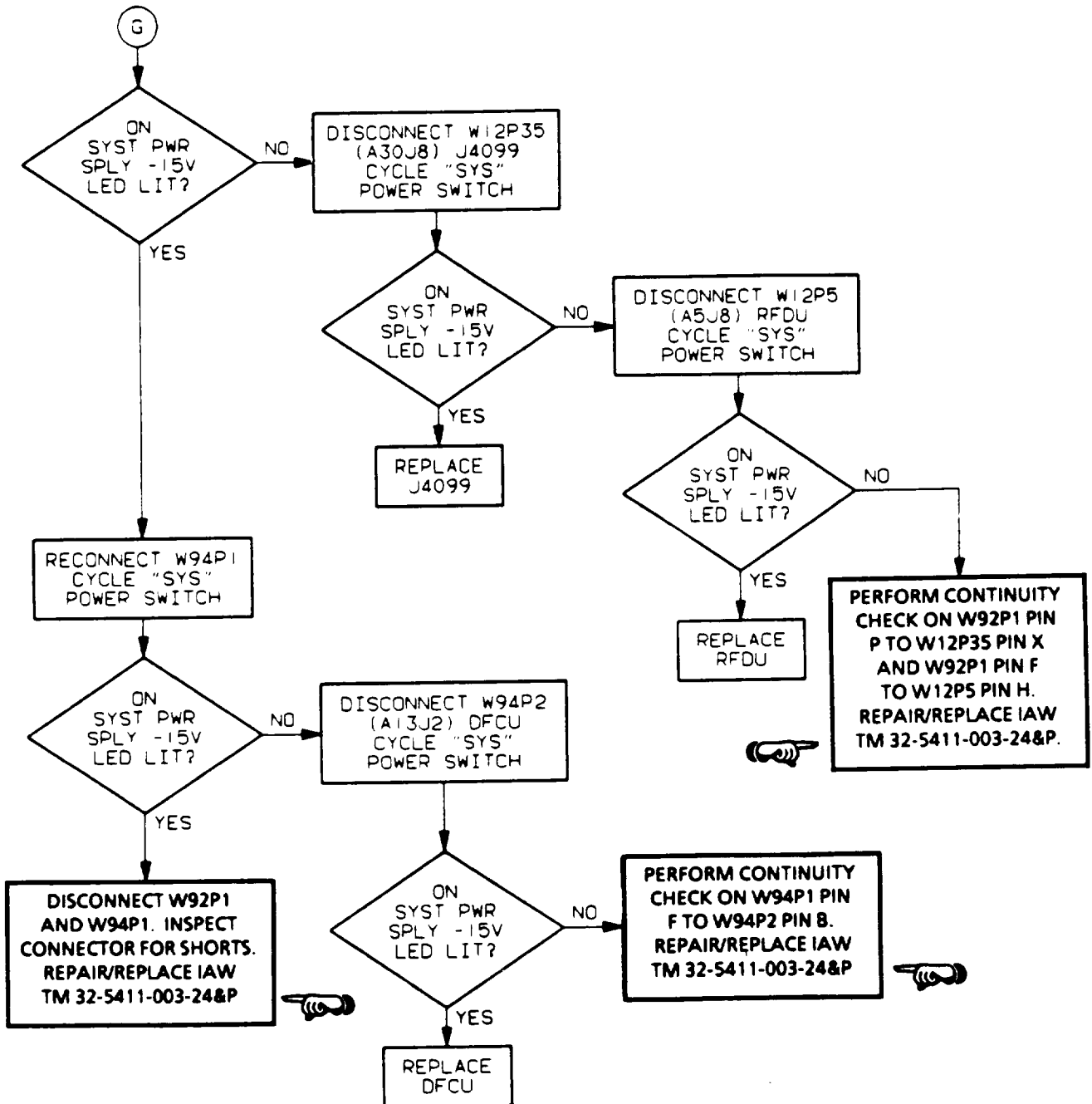
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| 7 OF 11 | TROUBLESHOOTING | SYSTEM POWER SUPPLY |
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1. System power supply (Cont):



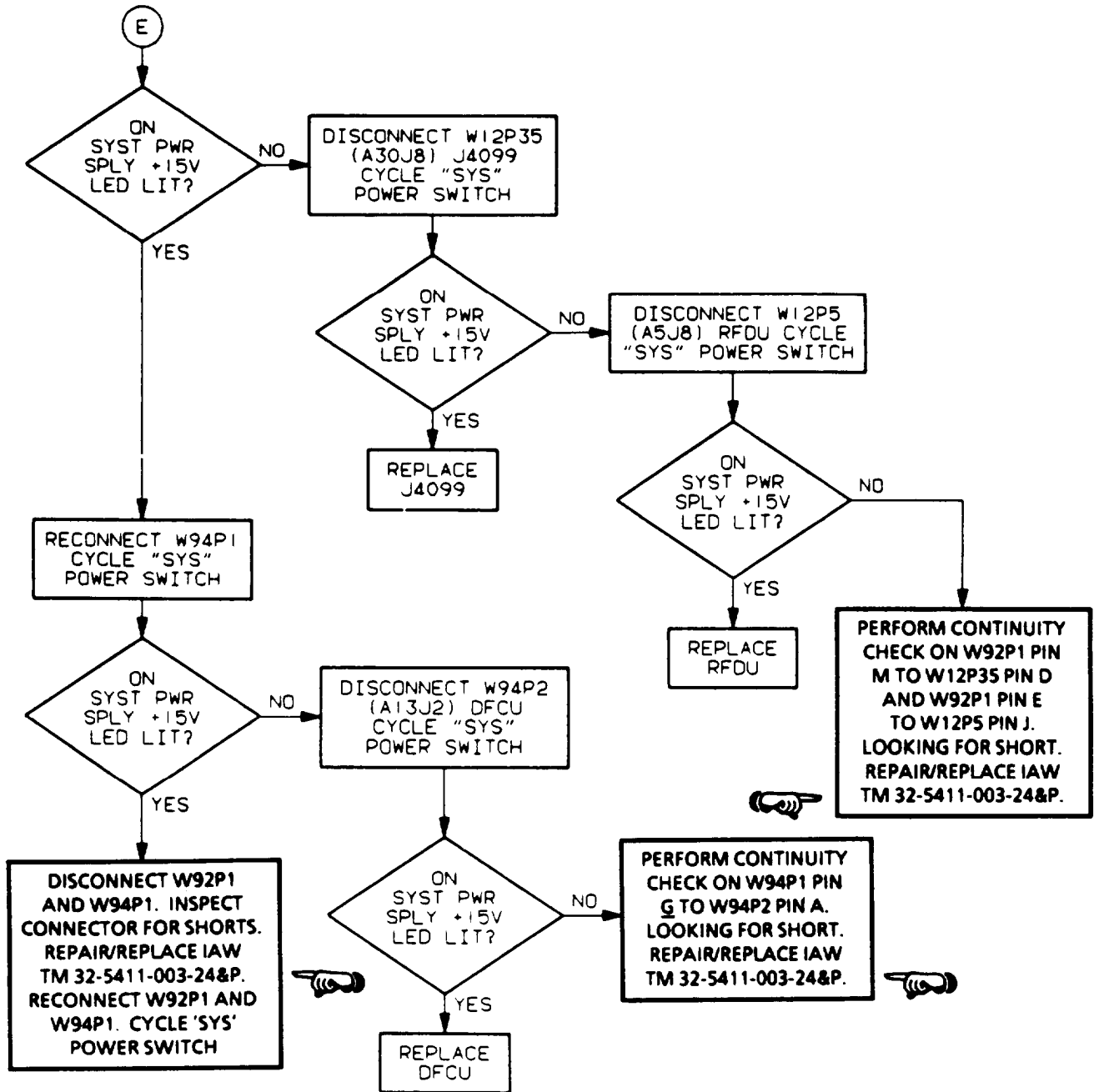
SYSTEM POWER SUPPLY **TROUBLESHOOTING** **8 OF 11**

1. System power supply (Cont):



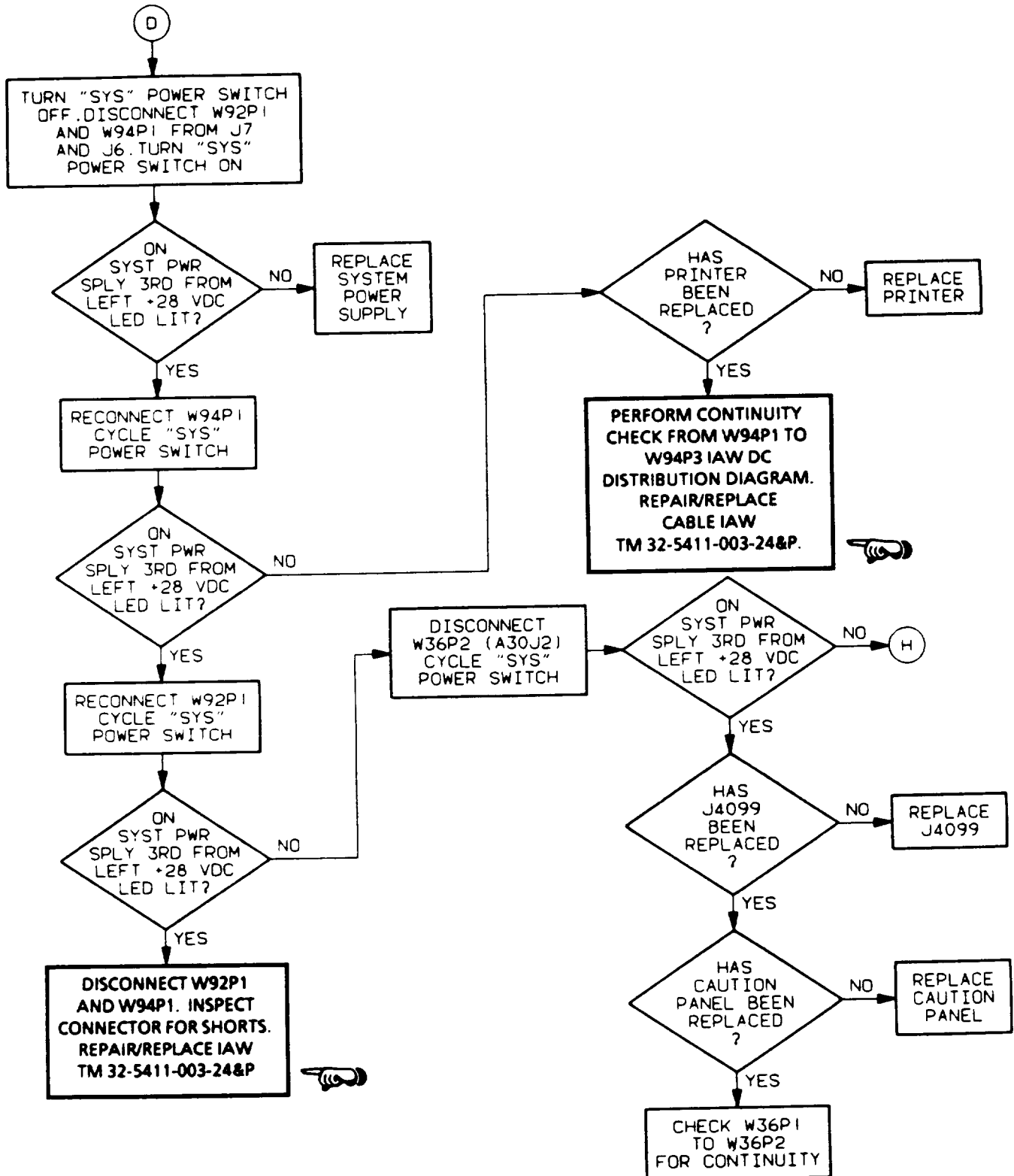
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| 9 OF 11 | TROUBLESHOOTING | SYSTEM POWER SUPPLY |
|---------|------------------------|----------------------------|

1. System power supply (Cont):



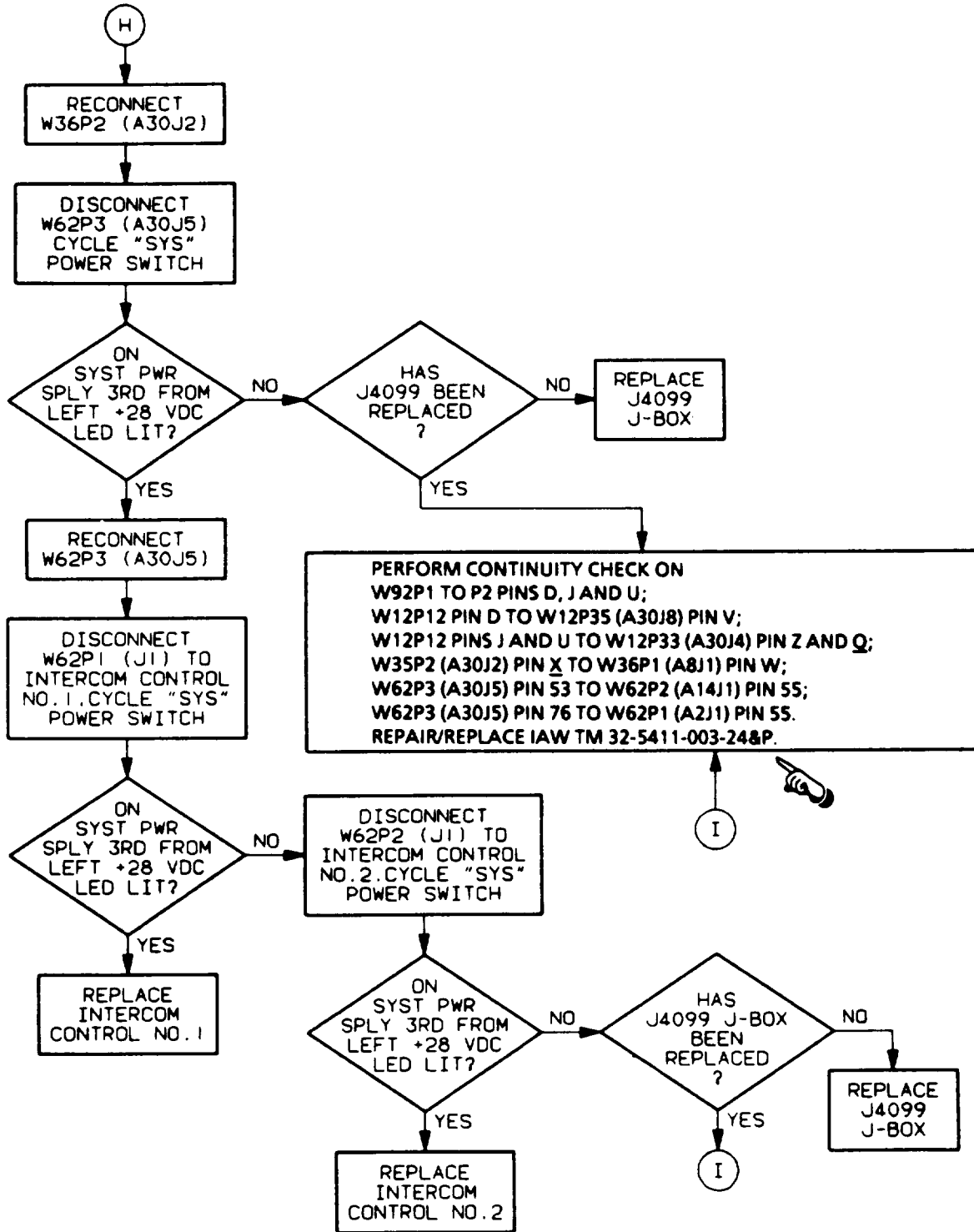
SYSTEM POWER SUPPLY TROUBLESHOOTING 10 OF 11

1. System Power supply (Cont):



11 OF 11 TROUBLESHOOTING SYSTEM POWER SUPPLY

1. System power supply (Cont):



Section V.

REMOVAL AND REPLACEMENT PROCEDURES

INTRODUCTION

To facilitate maintenance of Radio Set AN/TRQ-32(V)1 and AN/TRQ-32(V)2, removal and replacement procedures are provided.

Upon completion of replacement action, functional tests and checks shall be performed to ensure proper operation of the replaced component and its related system .

WARNING

HIGH VOLTAGE is present in this equipment. DEATH ON CONTACT may result if personnel fail to observe safety precautions. Learn the areas containing high voltage in each piece of equipment. Be careful not to contact high-voltage connections when installing or operating this equipment. Before working inside the equipment, turn power off and ground points of high potential before touching them.

NOTE

The antenna base assembly and mast crown assembly are a matched set. If either unit fails, both units must be replaced together.

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|------------------------------------------------------------|------------------------------------|-------------|
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|---------------------------------------------------|---------------------------------------------------|-------------|
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| VHF BANDPASS FILTER | IN SHELTER - EQUIPMENT RACK 4 | 2-438 |
| VOLTAGE REGULATOR ASSEMBLY | PART OF HG/AC (SHELTER MOUNTED UNIT) | 2-253 |

| | | |
|--------|--------|-------------------|
| 1 OF 6 | REMOVE | SHELTER, S-457B/G |
|--------|--------|-------------------|

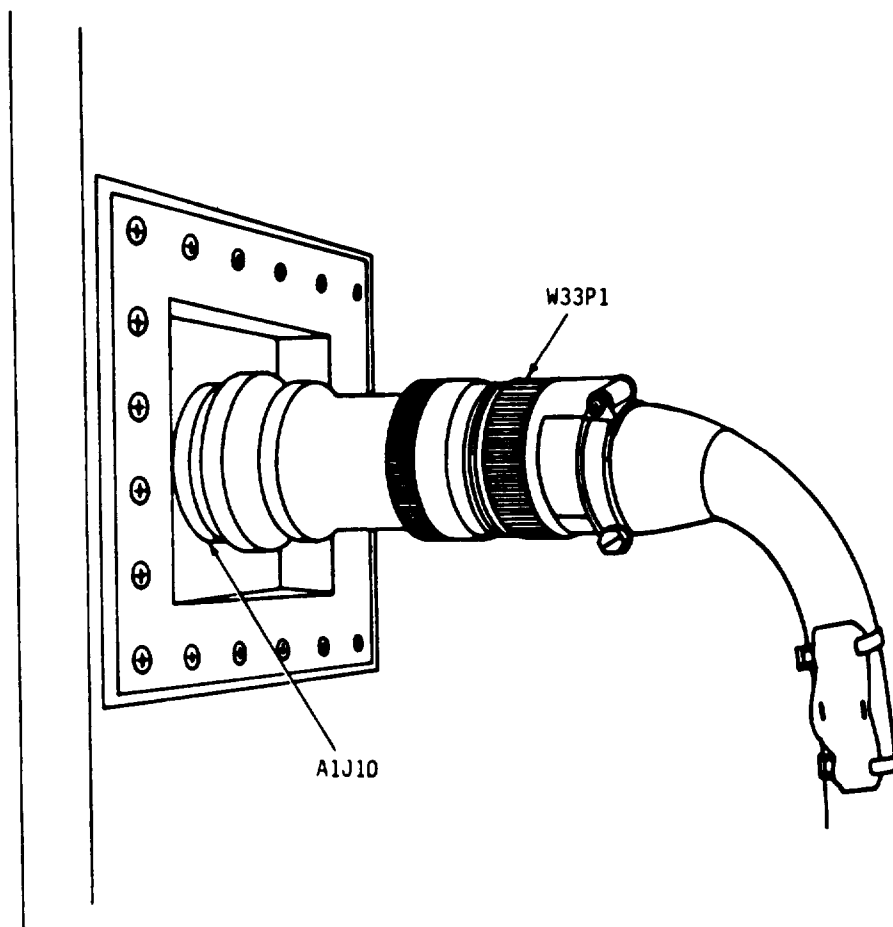
The shelter (A1) is located on vehicle bed.

Tools Required: Refrigerator Unit Tool Kit
5 Ton Wrecker
Rope

Personnel Required: 3

Remove the shelter as follows:

1. Position vehicle on level ground.
2. Prepare a level place, clear of debris for shelter to be placed when removed from vehicle.

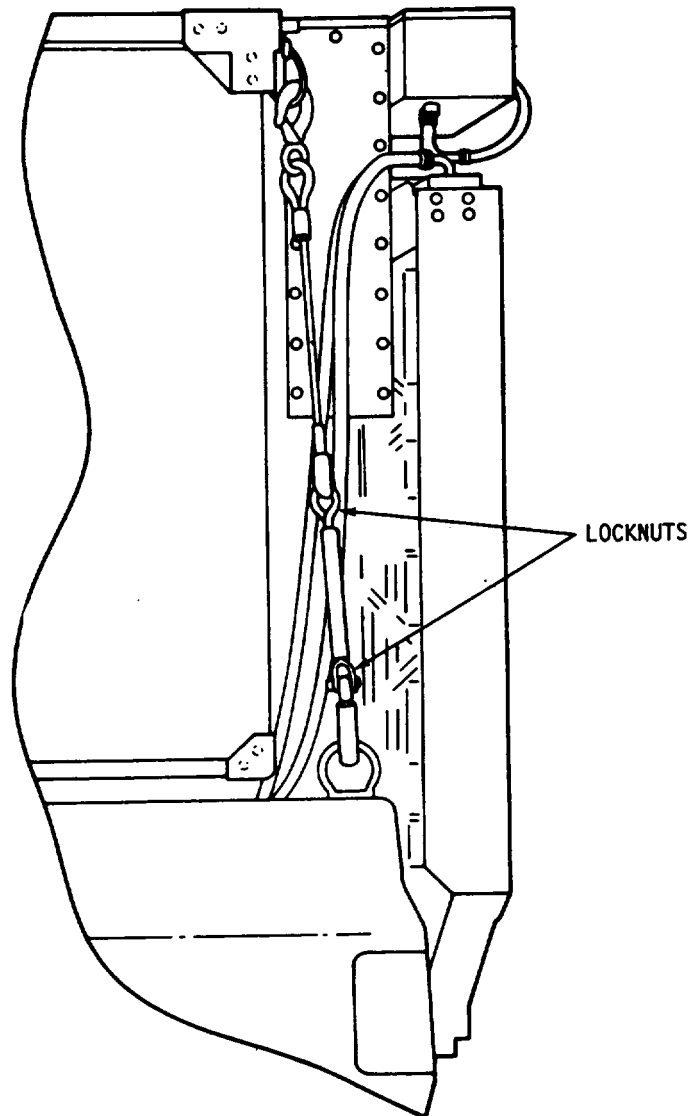


3. On front of shelter, disconnect W33P1 from A1J10.

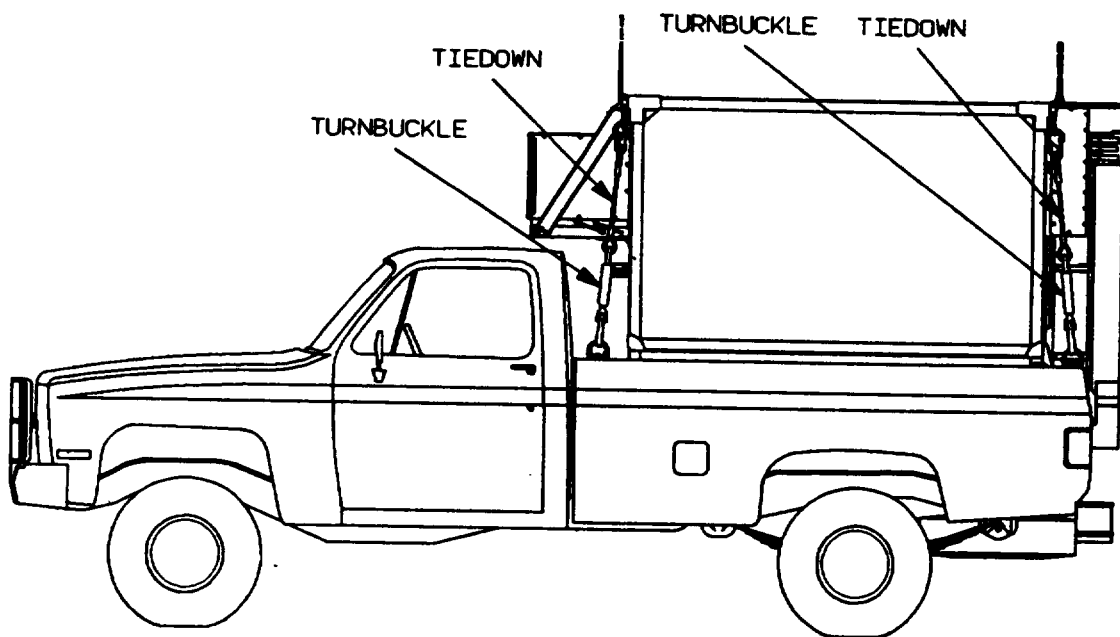
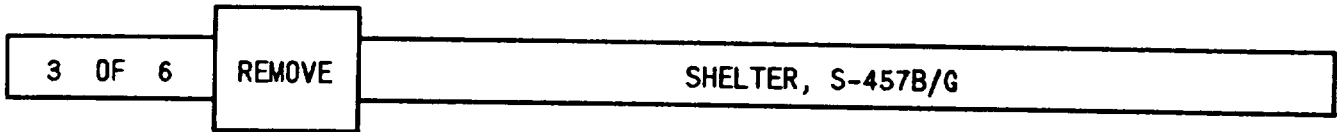
SHELTER, S-457B/G

REMOVE

2 OF 6

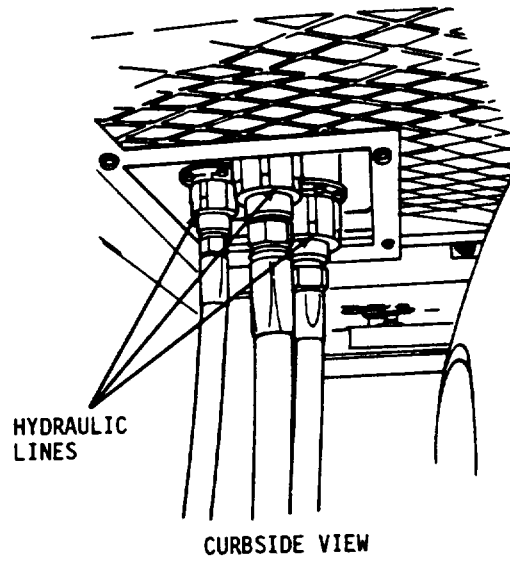
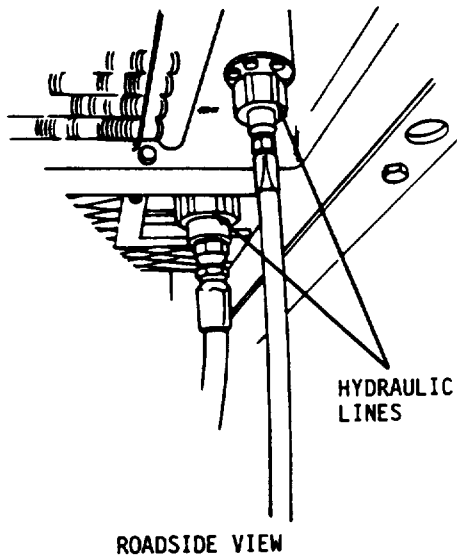


4. Using a 12" adjustable wrench to retain the turn buckles, loosen locknuts with a 3/4" open-end wrench on four shelter tiedowns.

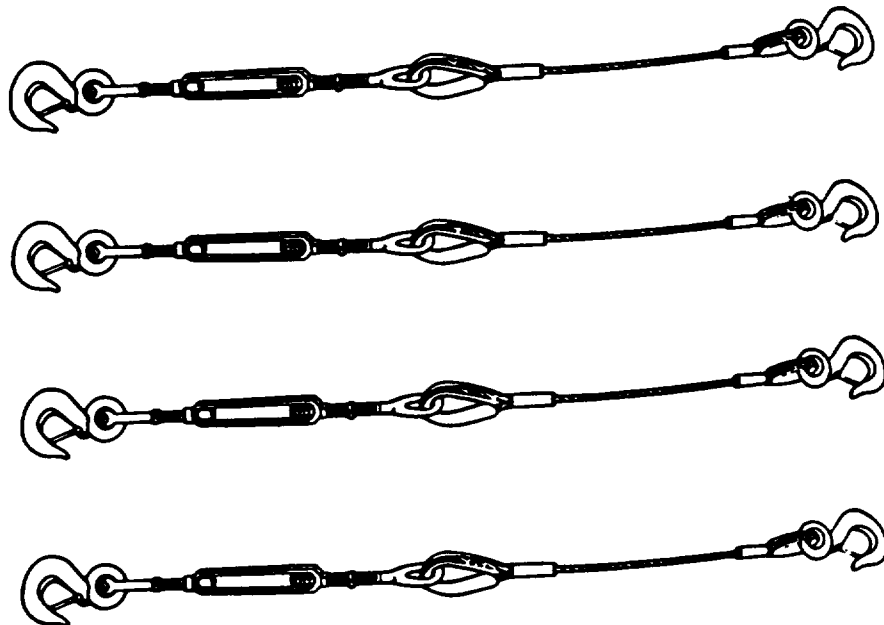


5. On vehicle bed, loosen turnbuckles and disconnect four shelter tiedowns.

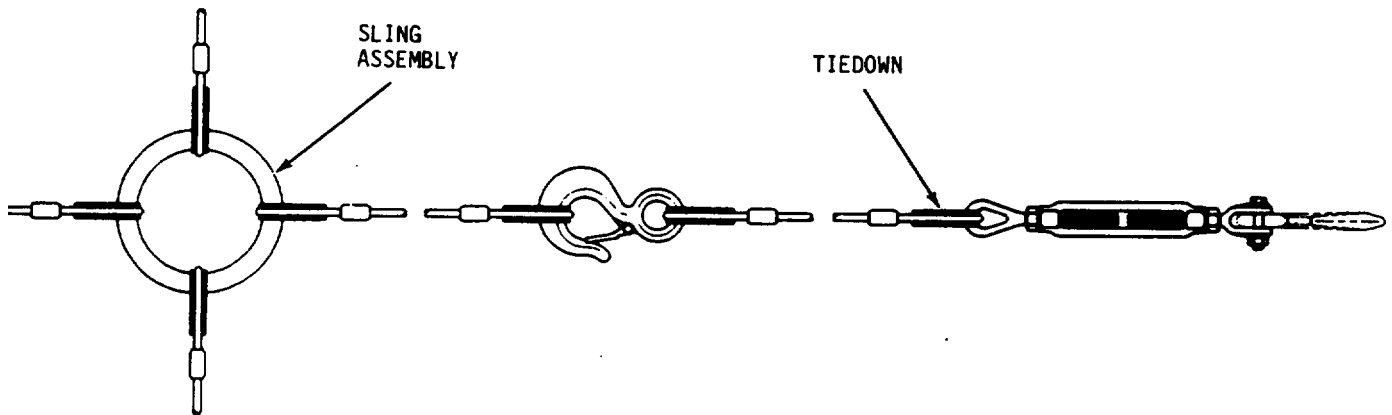
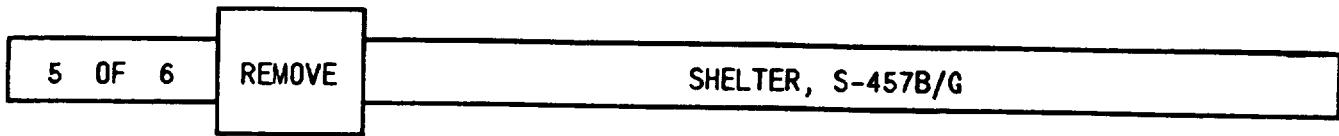
| | | |
|-------------------|--------|--------|
| SHELTER, S-457B/G | REMOVE | 4 OF 6 |
|-------------------|--------|--------|



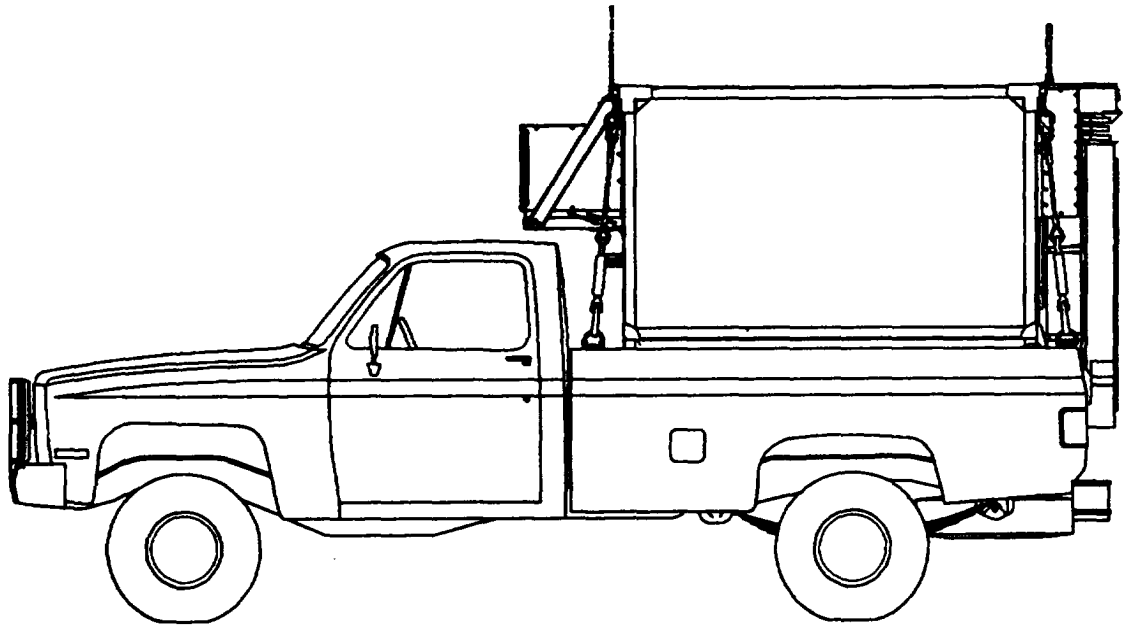
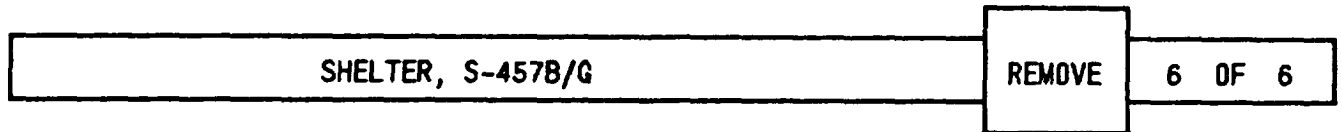
6. On bottom side of HG/AC, disconnects five hydraulic line connections from HG/AC.
7. Remove guard receiver/HF intercept and RT-524A antennas from shelter in accordance with procedures in Technical Manual TM 11-5820-401-12.



8. On shelter, disconnect four shelter tiedowns. Adjust shelter tiedowns to equal lengths and tighten locknuts.

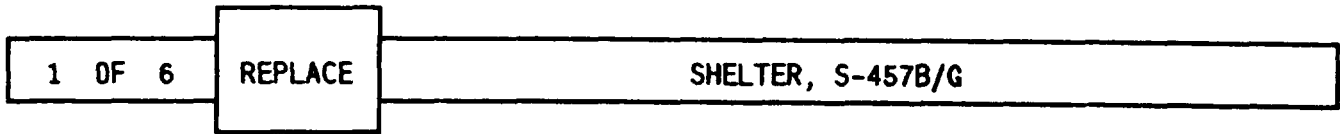


9. Connect lower ends of tiedowns to sling assembly.
10. Position wrecker to lift shelter from vehicle.
11. Place wrecker hook into lifting ring on sling assembly.
12. Tie a stabilizing rope to shackle on lower curbside corner of shelter.

**NOTE**

One man stabilizes shelter as second man lifts shelter from vehicle using wrecker.

13. Using wrecker hoist, lift shelter vertically unit clear of vehicle.
14. Drive vehicle out from under shelter.
15. Lower shelter onto area previously prepared.
16. Disconnect wrecker lifting hook from lifting ring on sling assembly.
17. Disconnect tiedowns from sling assembly and leave tiedowns attached to shelter.



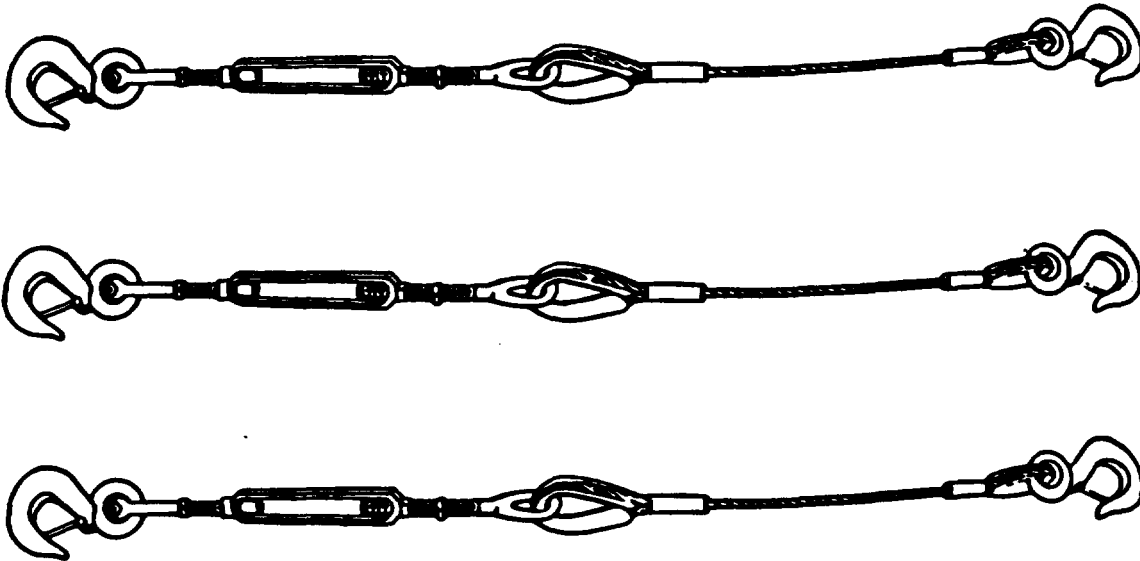
The shelter (A1) is located on vehicle bed.

Tools Required: Refrigerator Unit Tool Kit:
5 Ton Wrecker
Rope

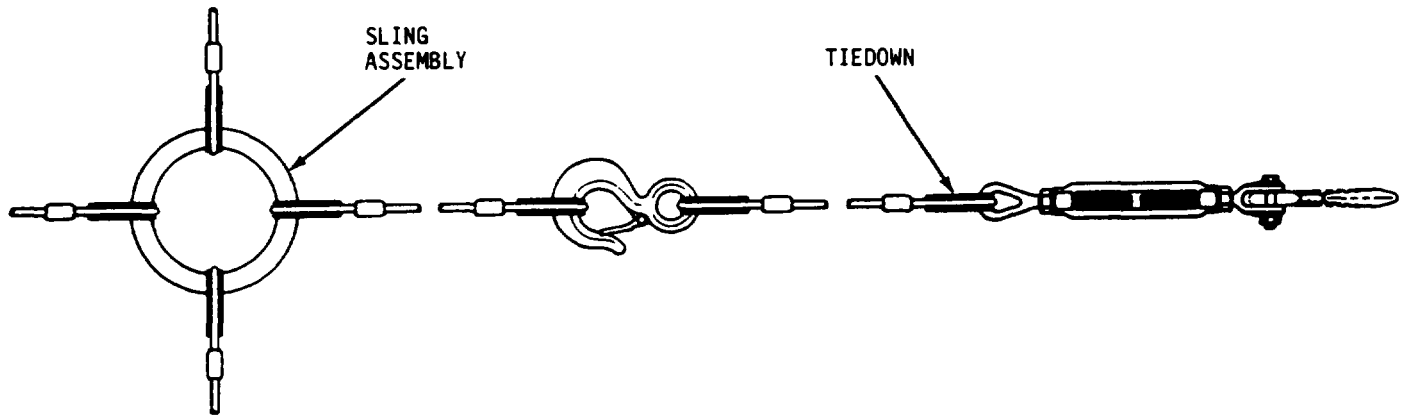
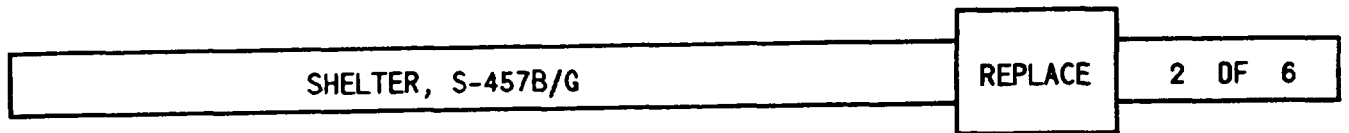
Personnel Required: 3

Replace shelter as follows:

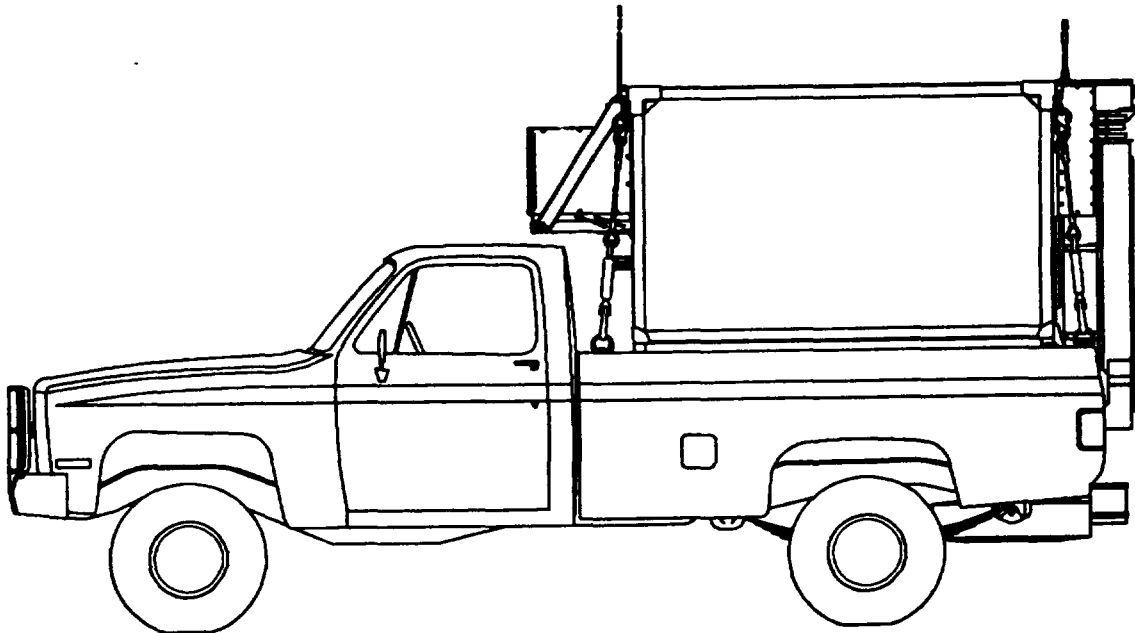
1. Position vehicle on level ground.



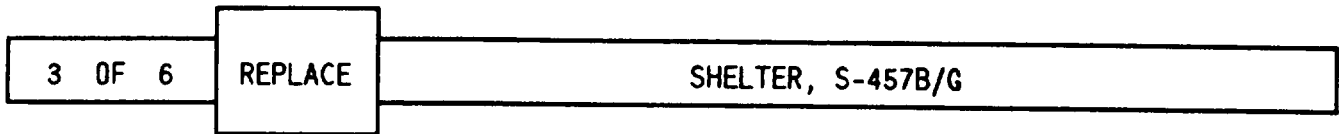
2. Ensure shelter tiedowns are equal in length.



3. Upper tiedown ends are connected to upper corners of shelter. Connect lower tiedown ends to sling assembly.
4. Position wrecker hoist over shelter.
5. Place wrecker hook into ring on sling assembly.
6. Tie a rope to shackle on lower curbside corner of shelter.



7. Lift shelter vertically until it will clear vehicle bed.



8. Back vehicle up until vehicle bed is under shelter.

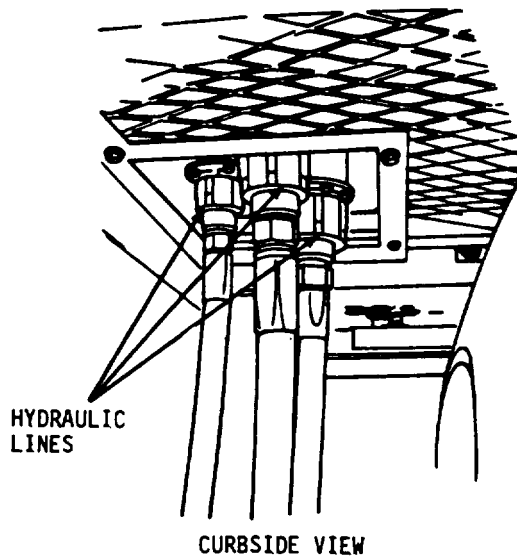
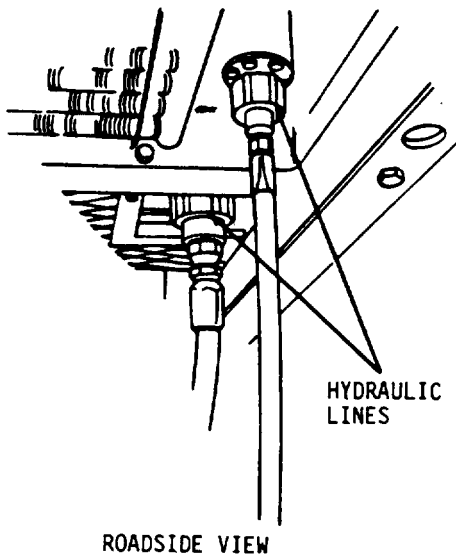
NOTE

One man stabilizes shelter with rope while second man lowers shelter onto vehicle bed with wrecker.

9 Lower shelter onto vehicle bed.

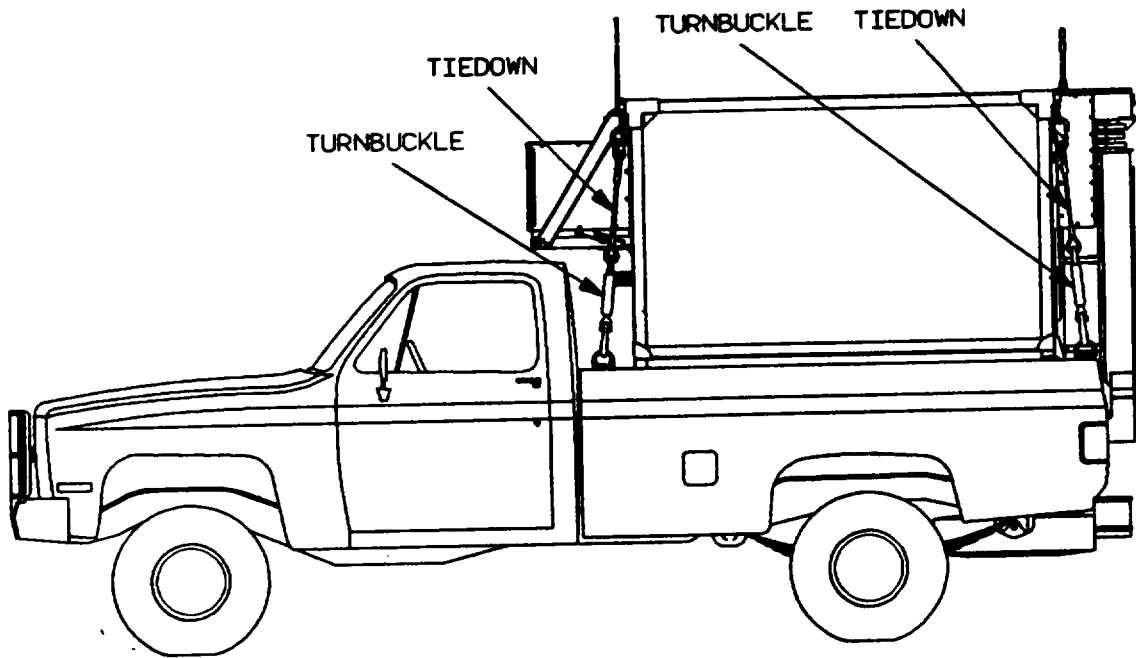
10. Disconnect wrecker lifting hook from sling assembly.

11. Disconnect four tiedowns from sling assembly.

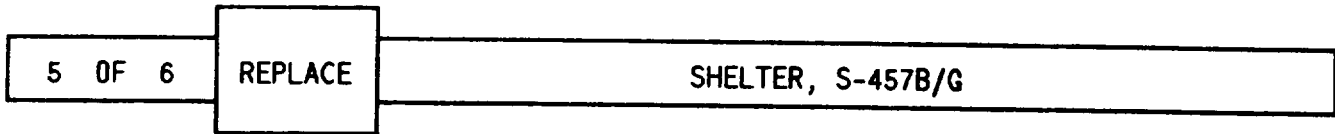


12. Connect five hydraulic lines to bottom of HG/AC.

| | | |
|-------------------|---------|--------|
| SHELTER, S-457B/G | REPLACE | 4 OF 6 |
|-------------------|---------|--------|

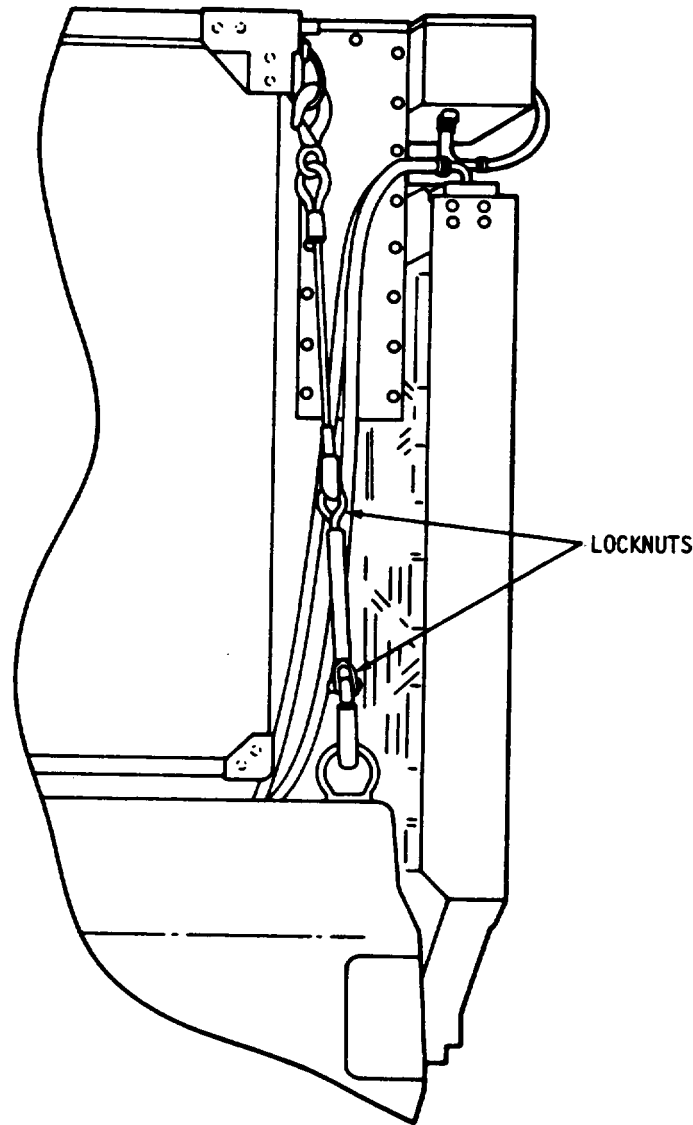


13. Connect four tiedowns to vehicle bed.



CAUTION

To prevent damage to shelter, turn hook points outward.

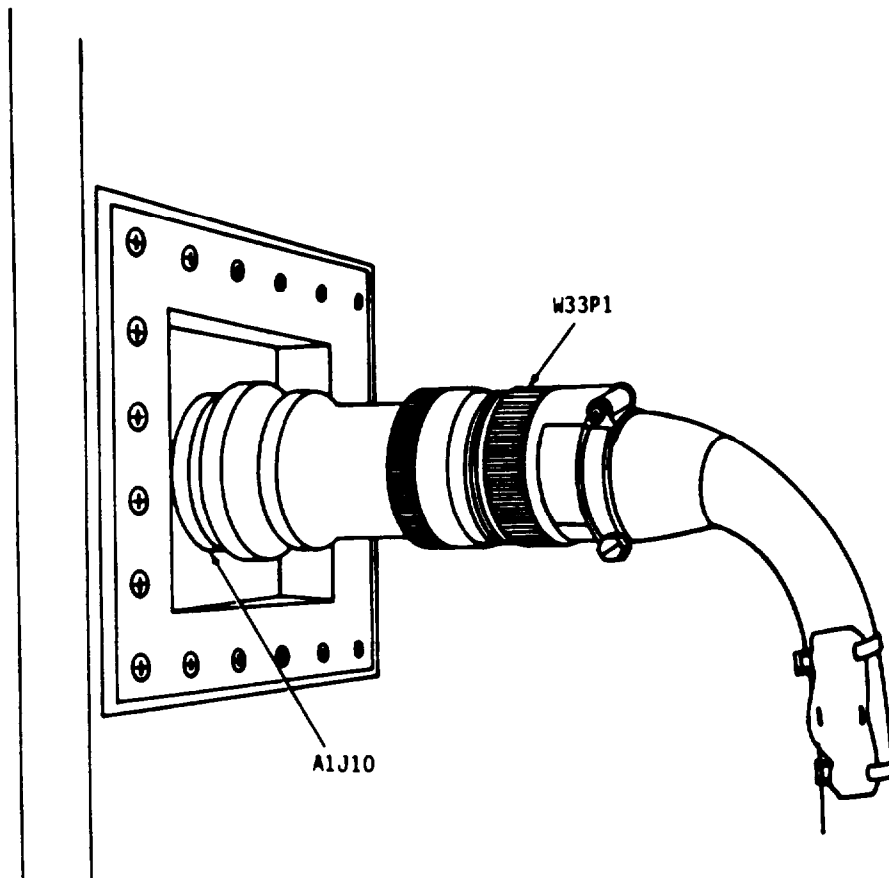


14. Hand tighten tiedowns. Using jack handle, turn turnbuckle one half turn.
15. Using a 12" adjustable wrench to retain the turn buckles, tighten locknuts with a 3/4" open-end wrench on four shelter tiedowns.

SHELTER, S-457B/G

REPLACE

6 OF 6



16. On front of shelter, connect W33P1 to A1J10.
17. Install guard receiver/HF intercept and RT-524A antennas onto shelter in accordance with procedures in Technical Manual TM 11-5820-401-12.

WARNING

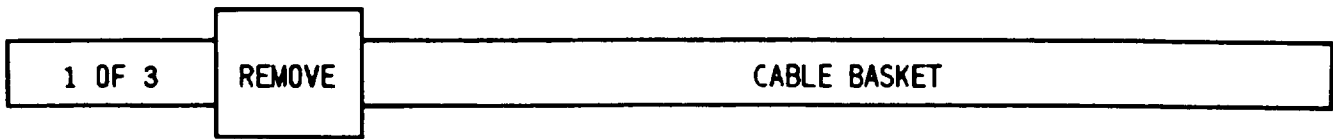
Hydraulic fluid M-17111 is not interchangeable with any other type or grade of fluid. Damage to equipment or injury of personnel may occur if fluid is interchanged.

NOTE

The HG/AC should be running to check for leaks and proper operation.

18. Check fluid level in hydraulic reservoir. Add hydraulic fluid (Appendix D, Item 8) if necessary.

Change 1 2-165

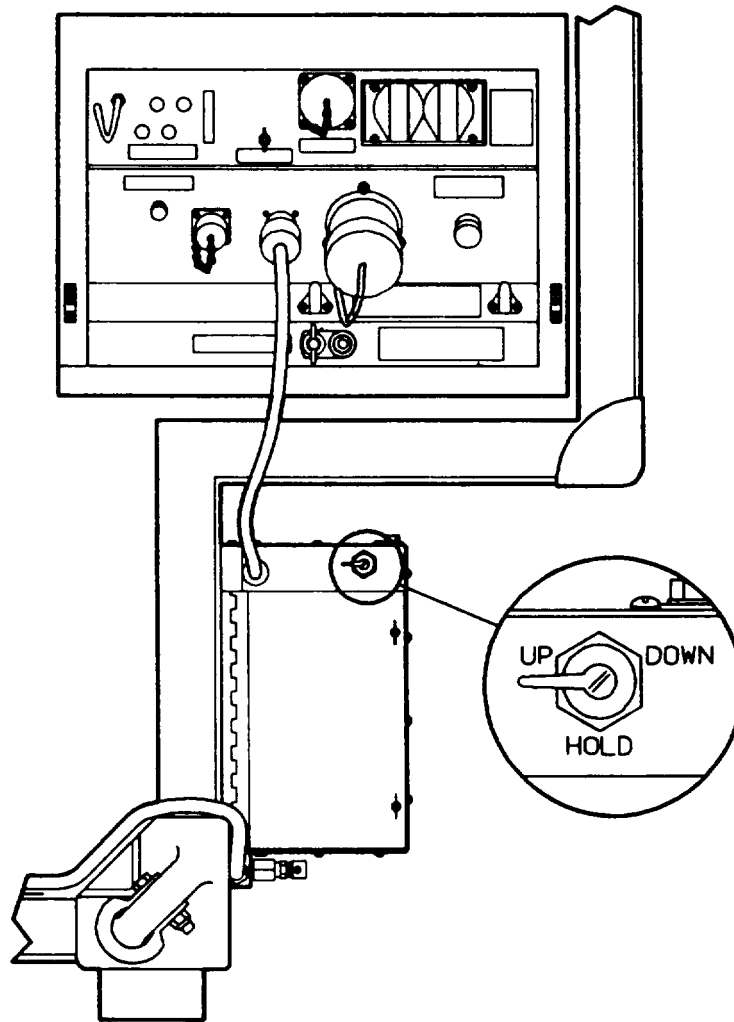


The cable basket is located on rear of shelter.

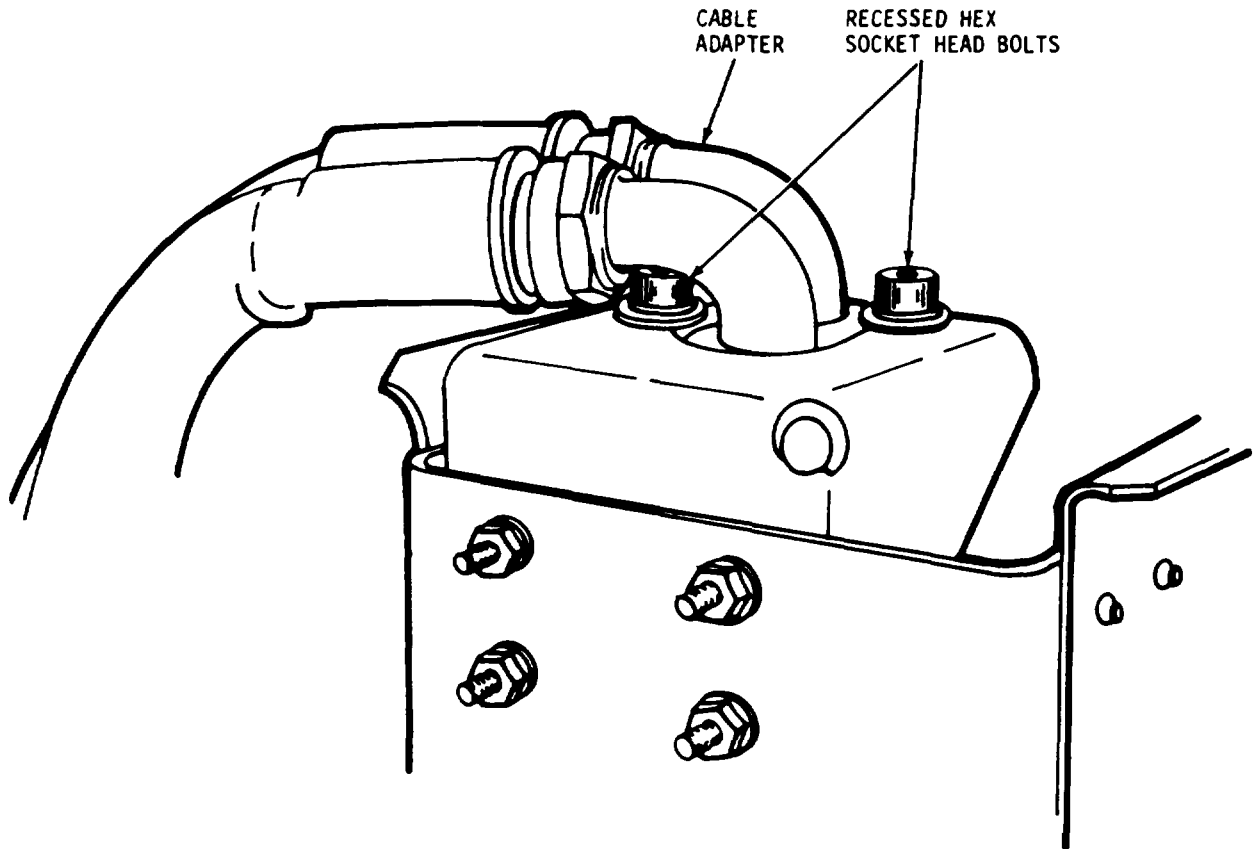
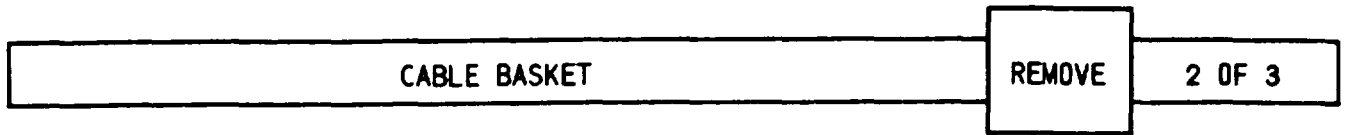
Tools Required: TK-101/G
18" Extension 3/8" Drive
1/2" Deep Socket 3/8" Drive

Personnel Required: 2

Remove cable basket as follows:

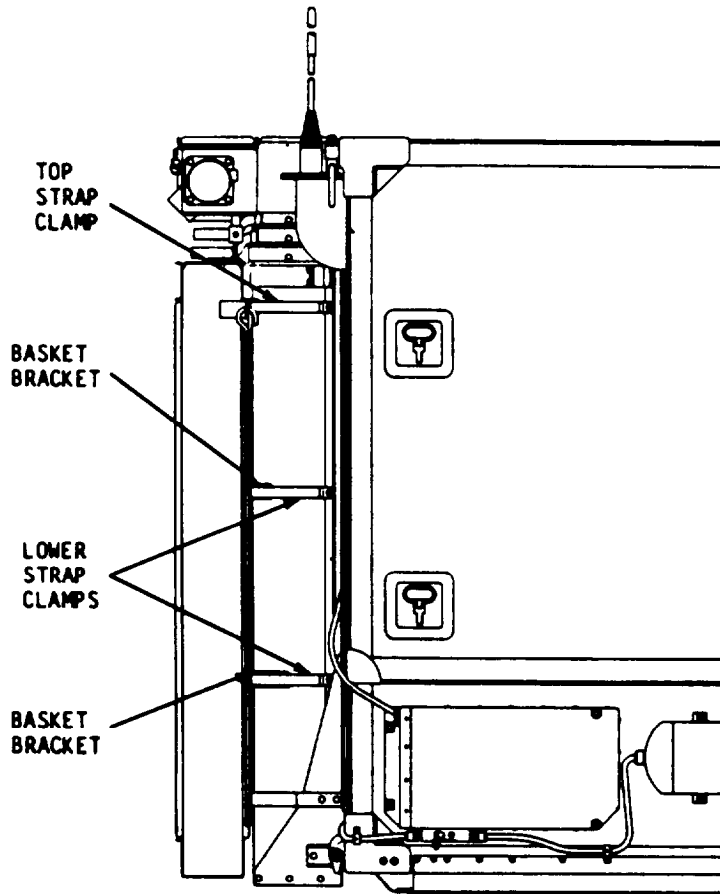


1. On cable basket, remove hand crank from storage position and store temporarily inside shelter,
2. On power distribution panel, place MAST circuit breaker to ON (up) position.
3. On compressor, place mast control valve in UP position and raise approximately two feet. If mast cannot be raised pneumatically, mast must be raised manually a minimum of two feet to gain access to top strap clamp, bolt, and nut.



4. Using a 3/16" hex wrench, remove and retain two recessed hex socket head bolt, lockwashers, and flat washers securing cable adapter to upper left corner of basket.
5. Move cable adapter and cable out of basket.

| | | |
|--------|---------------|---------------------|
| 3 OF 3 | REMOVE | CABLE BASKET |
|--------|---------------|---------------------|

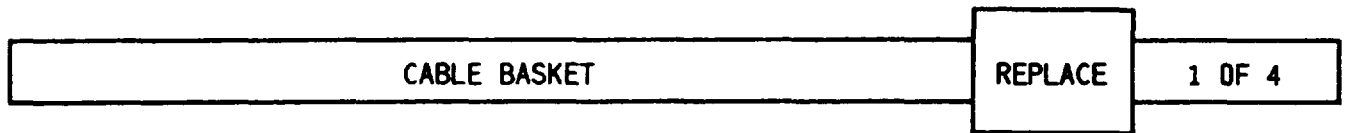


6. Using a ratchet handle, 18" extension, and 1/2" deep socket, loosen two lower strap clamps securing cable basket to pneumatic mast.
7. Slide strap clamps down and off cable basket mounting brackets.

CAUTION

When removing cable basket, use care not to damage drain cock located at base of pneumatic mast. A second person should guide cable basket away from drain cock.

8. Hold cable basket in place and loosen top strap clamp using a ratchet handle, 18" extension, and 1/2" deep socket. A second person should lower cable basket until cable basket rests on vehicle bumper.
9. Lift cable basket upward to free cable basket mounting bracket from strap clamp.
10. Remove cable basket from shelter.

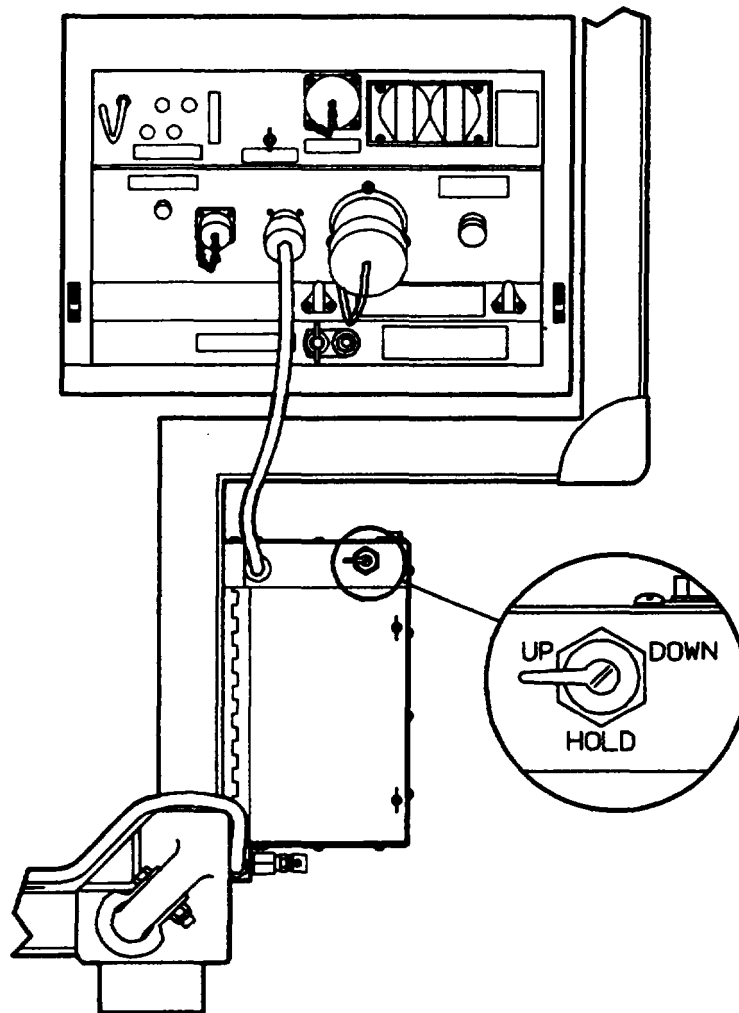


The cable basket is located on rear of shelter.

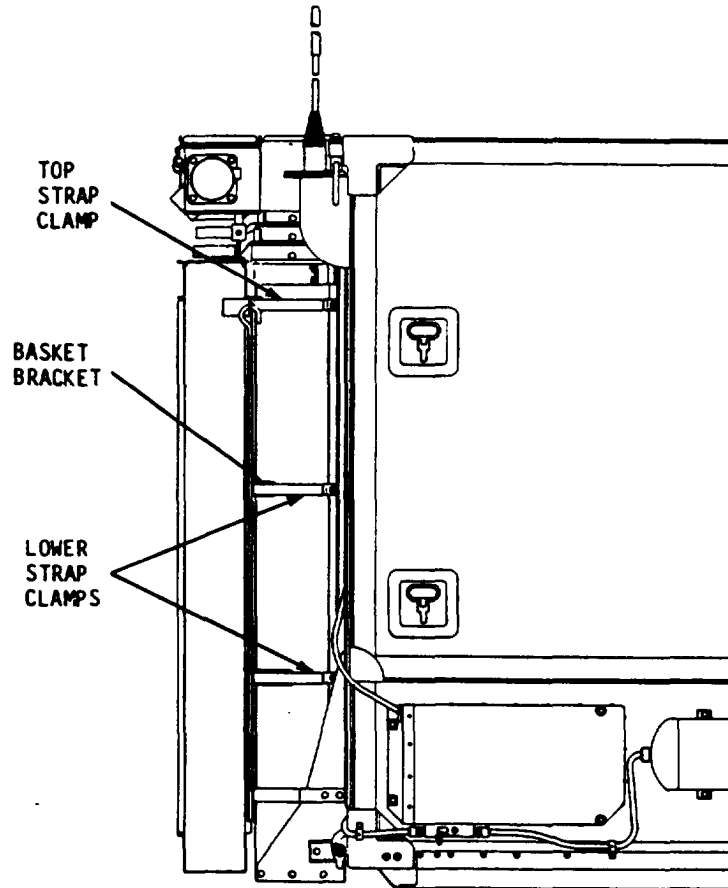
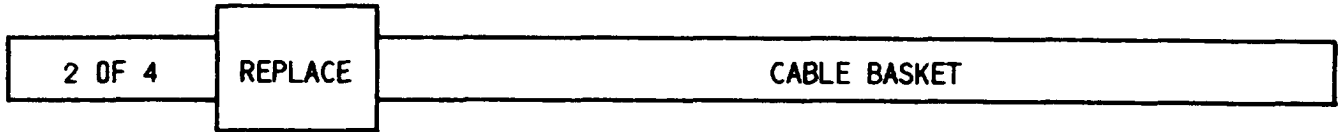
Tools Required: TK-101/G
 18" Extension 3/8" Drive
 1/2" Deep Socket 3/8" Drive

Personnel Required: 2

Replace cable basket as follows:



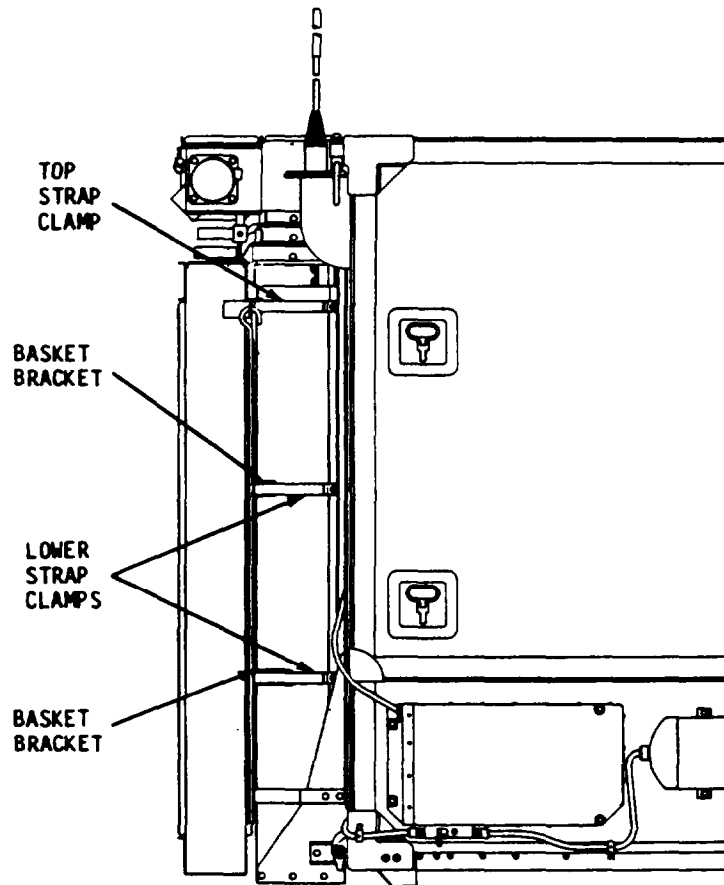
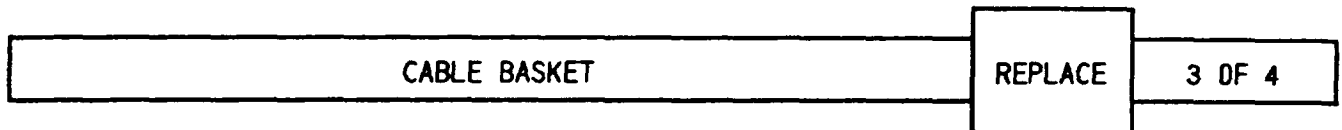
1. On power distribution panel, place MAST circuit breaker to ON (up) position.
2. On compressor, place pneumatic mast control valve in UP position. Raise pneumatic mast approximately two feet. If mast cannot be raised pneumatically, mast must be raised manually a minimum of two feet to gain access to top strap clamp, bolt, and nut.



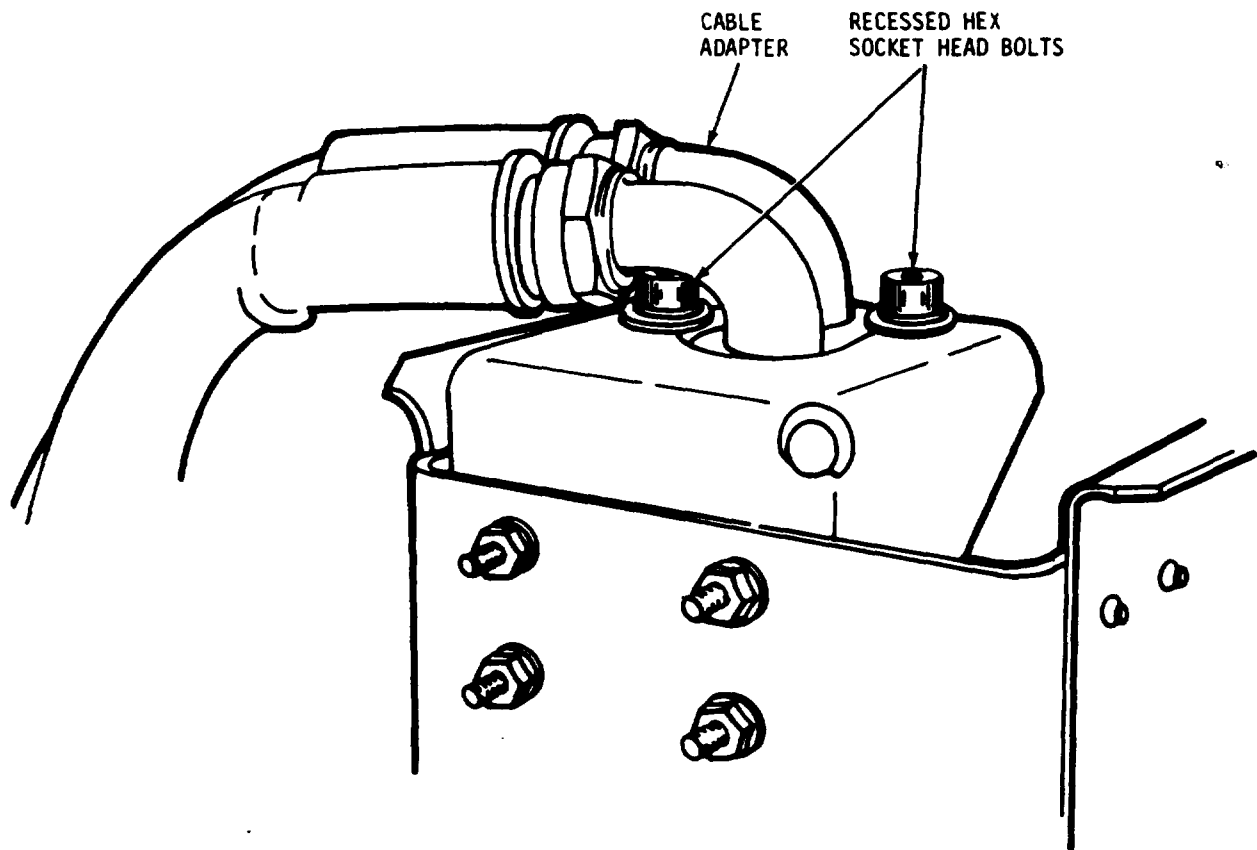
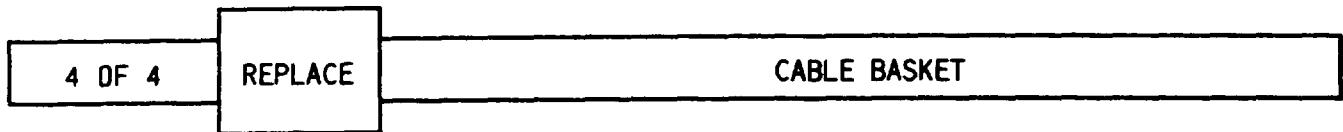
3. Using ratchet handle and 1/2" deep socket, loosen all three cable basket strap clamps.
4. Place top of cable basket against rear of truck and start antenna cable in basket.

CAUTION

When replacing cable basket, use care not to damage drain cock located at base of pneumatic mast. A second person should guide cable basket away from drain cock.



5. Hold top strap clamp approximately eight inches down from top of stationary mast section. Place clamp so bolt is between mast and shelter, and pointing toward roadside.
6. Second person lifts basket up and hooks top mounting bracket into top clamp and positions basket so it clears drain cock.
7. Slide clamp and basket up until bottom of basket is even with bottom of pneumatic mast. Using ratchet handle, 18" extension, and 1/2" deep socket, tighten top strap clamp.
8. Slide two lower strap clamps over basket mount brackets. Position clamps so bolts are between mast and shelter and pointing toward roadside. Using ratchet handle, 18" extension, and 1/2" deep socket, tighten clamps.

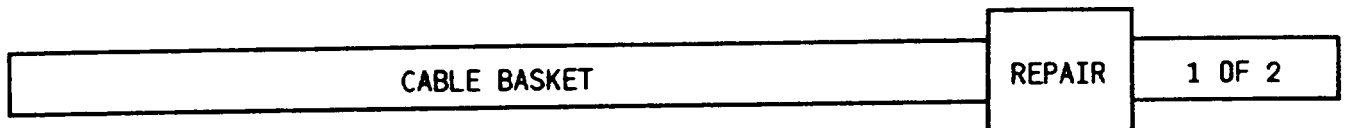


9. Using a 3/16" hex wrench, secure cable adapter on upper left corner of basket and tighten with two recessed hex socket head bolts, lockwashers and flat washers.

CAUTION

When lowering pneumatic mast, ensure there is clearance between back of cable basket and base assembly.

10. Obtain hand crank from temporary storage position and install in storage position on cable basket.
11. On compressor, place pneumatic mast control valve in DOWN position to lower pneumatic mast.
12. On power distribution panel, place MAST circuit breaker to OFF (down) position.

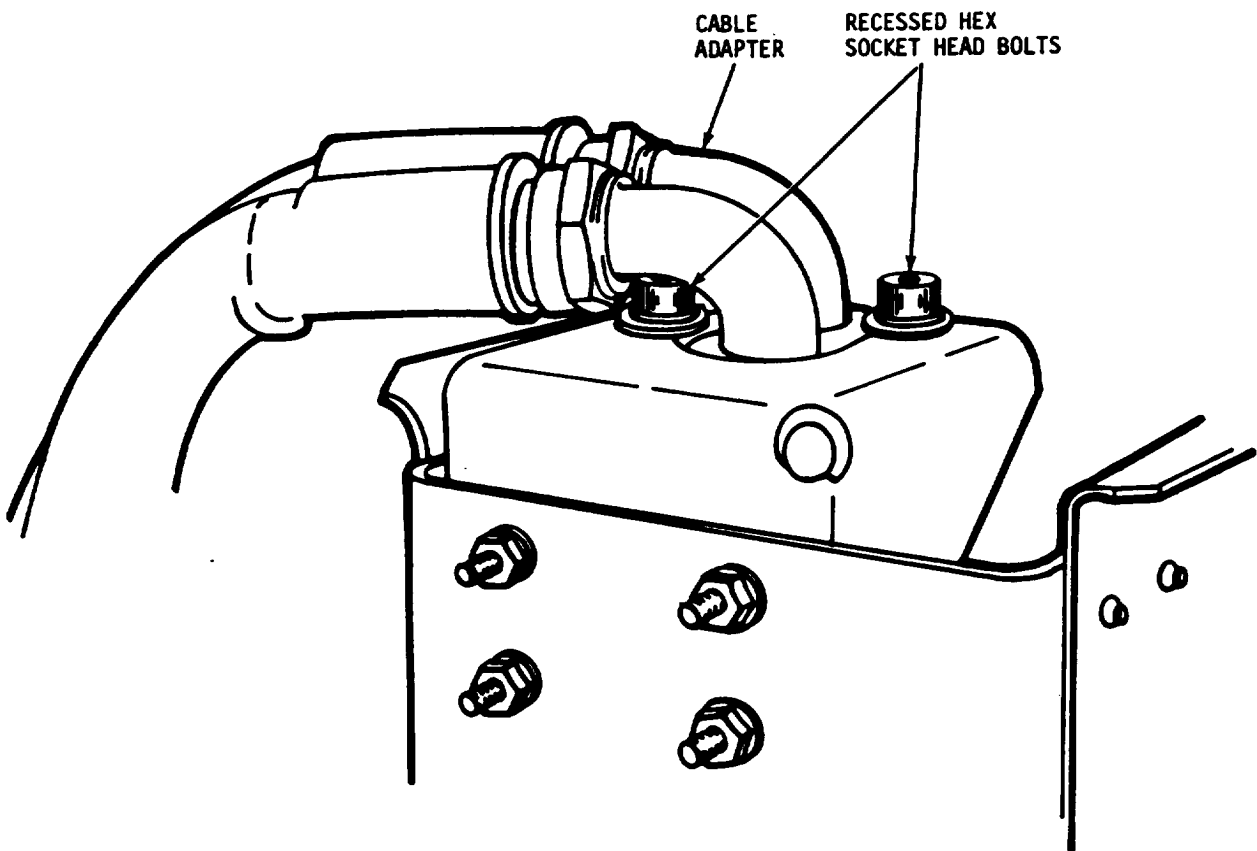


The following parts may be replaced to repair cable basket with cable basket installed on shelter.

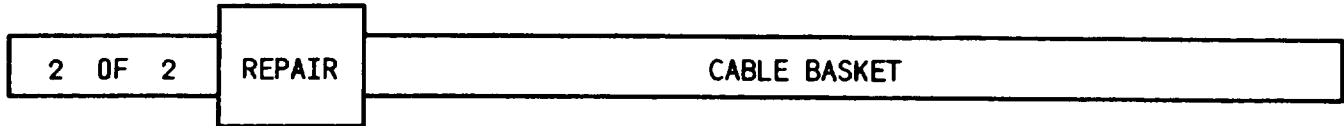
Tools Required: TK-100/G

Personnel Required: 1

Remove cable basket parts as follows.



1. To remove/replace cable support bracket, proceed as follows.
2. Using a 3/16" hex key wrench, remove and retain two hex socket head bolts, lockwashers, and flat washers securing cable adapter to cable support bracket.
3. Move cable adapter and cable away from cable support bracket.



4. Using a no.1 cross-tip screwdriver, no.1 cross-tip offset screwdriver, and 3/8" open-end wrench, remove and retain six screws, flat washers and nuts securing cable support bracket to cable basket. Remove cable support bracket.
5. Secure new cable support bracket onto cable basket with six screws, flat washers and nuts. Using a no.1 cross-tip screwdriver and 3/8" open-end wrench, tighten screws and nuts.
6. Secure cable adapter onto cable support bracket with two hex socket head bolts. Using a 3/16" hex key wrench, tighten bolts.
7. To remove/replace strap (webbing) or loop strap fastener proceed as follows.

NOTE

There are two sets of straps on cable basket. Each set of straps consists of a longer strap and a shorter strap fastened together. All straps are removed or replaced identically.

8. Unfasten strap set with defective part.
9. Using a no.1 offset cross-tip screwdriver and 11/32" open-end wrench, remove and retain two screws, flat washers and nuts securing loop strap fastener.
10. Remove defective strap or loop strap fastener and install new part.
11. Secure loop strap fastener and strap onto cable basket with two screws, flat washers and nuts. Using a no.1 offset cross-tip screwdriver and 11/32" open-end wrench, tighten nuts.
12. Fasten strap set.



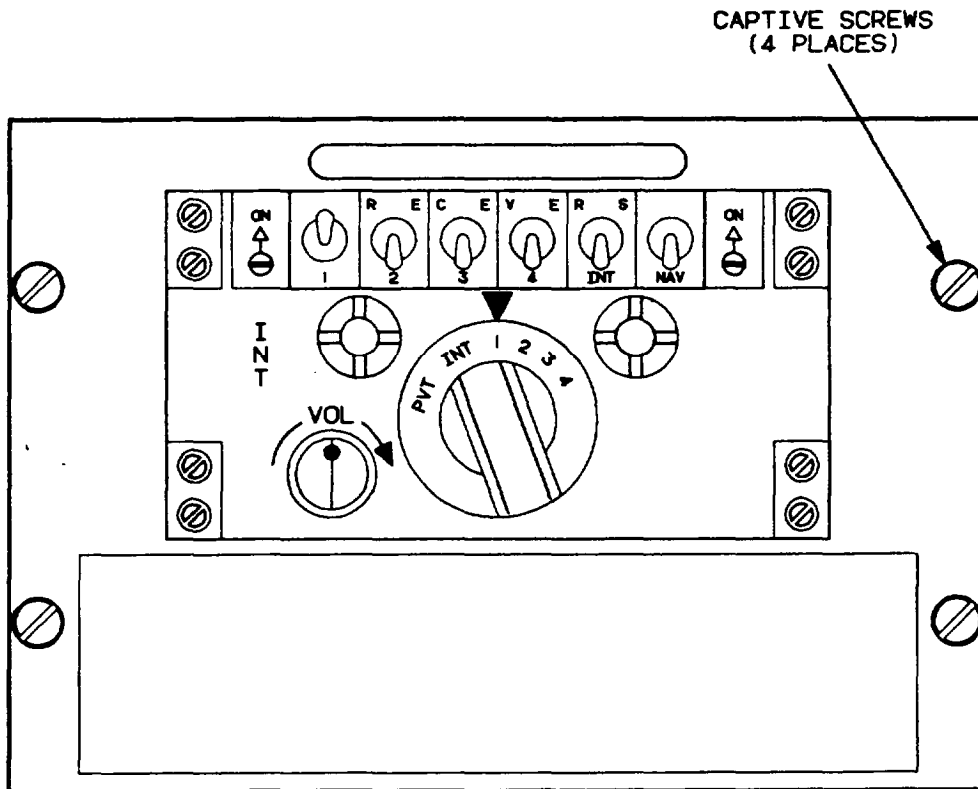
There are two intercom control panels (A2/A14) located equipment rack 1 and equipment rack 3.

Tools Required: TK-105/G

Personnel Required: 1

Remove intercom control panel (ICP) as follows:

1. On system power supply, place SYS ON/OFF switch to OFF (down) position.

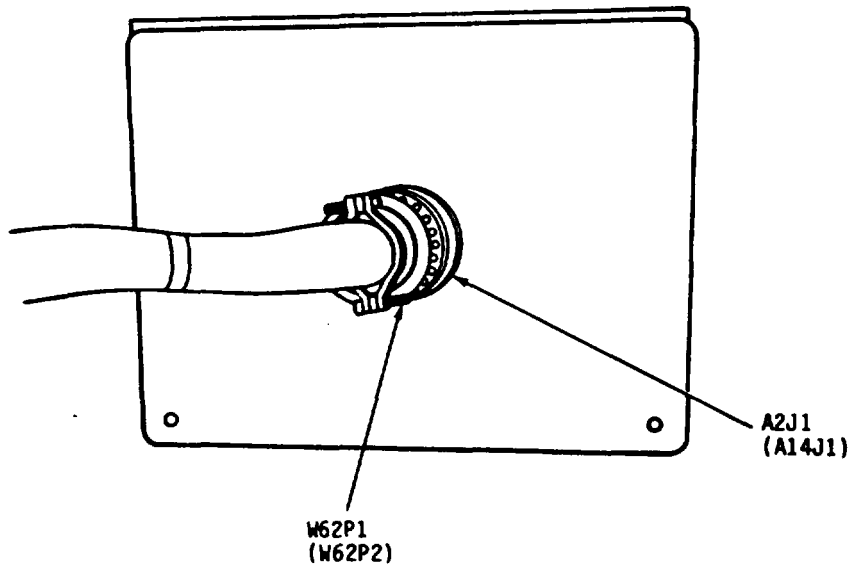


2. Using 1/4" flat-tip screwdriver, loosen four captive screws securing ICP to equipment rack.
3. Pull ICP forward until cable connector at rear of unit is accessible.



NOTE

Connector number listed is for unit A2 in equipment rack 1. Connector number in parenthesis is for unit A14 in equipment rack 3.



4. On rear of ICP, disconnect W62P1 (W62P2) from A2J1 (A14J1).



There are two intercom control panels (A2/A14), located in equipment rack 1 and equipment rack 3.

Tools Required: TK-105/G

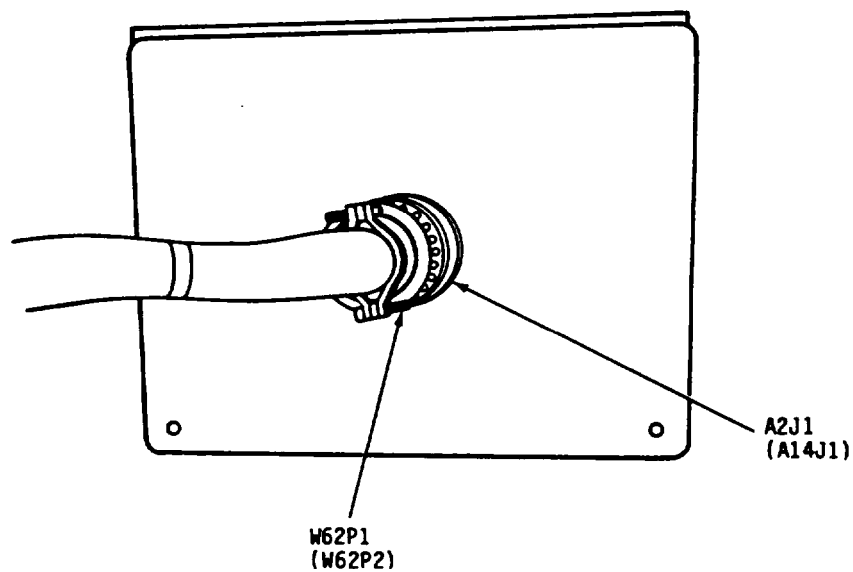
Personnel Required: 1

Replace intercom control panel (ICP) as follows:

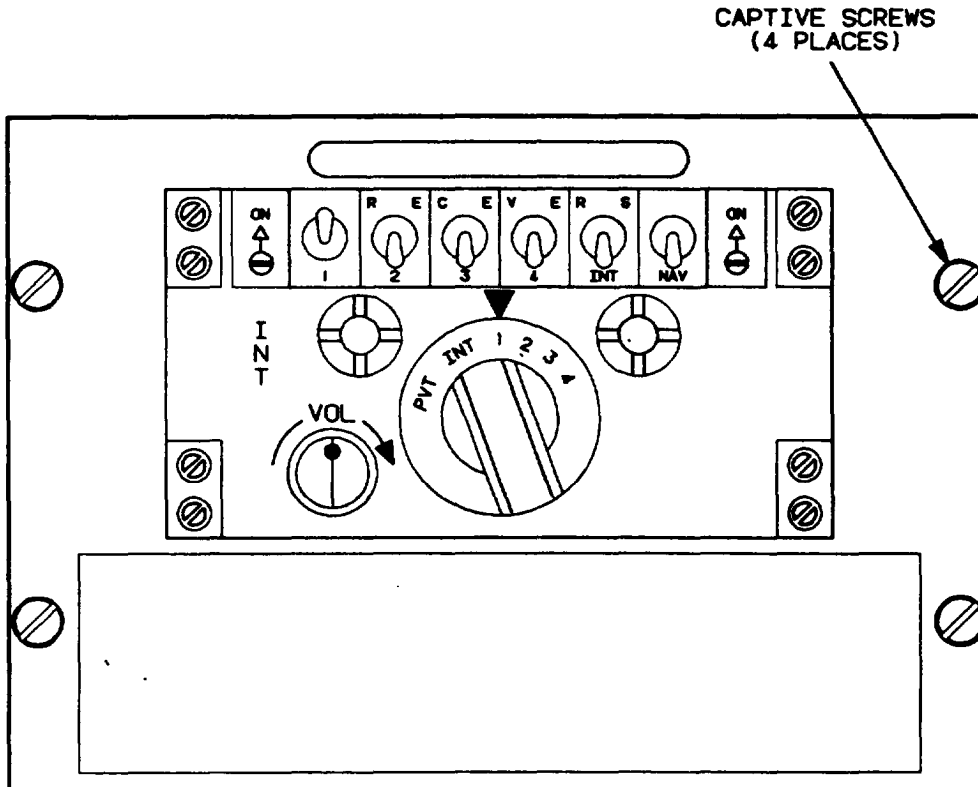
1. On system power supply, place SYS ON/OFF switch to OFF position.

NOTE

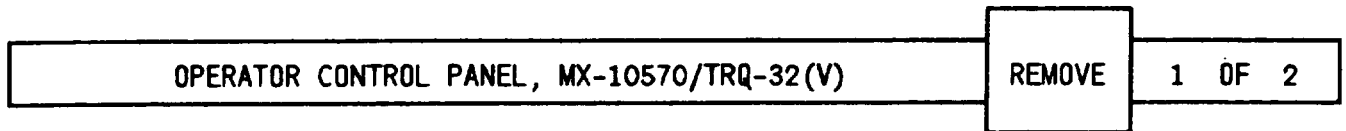
Connector number listed is for Unit A2 in equipment rack 1. Connector number in parentheses is for unit A14 in equipment rack 3.



2. On rear of ICP, connect W62P1 (W62P2) to A2J1 (A14J1).



3. Slide ICP completely into equipment rack and secure with four captive screws. Using a 1/4" flat-tip screwdriver, tighten screws.
4. On system power supply, place SYS ON/OFF switch to ON position.



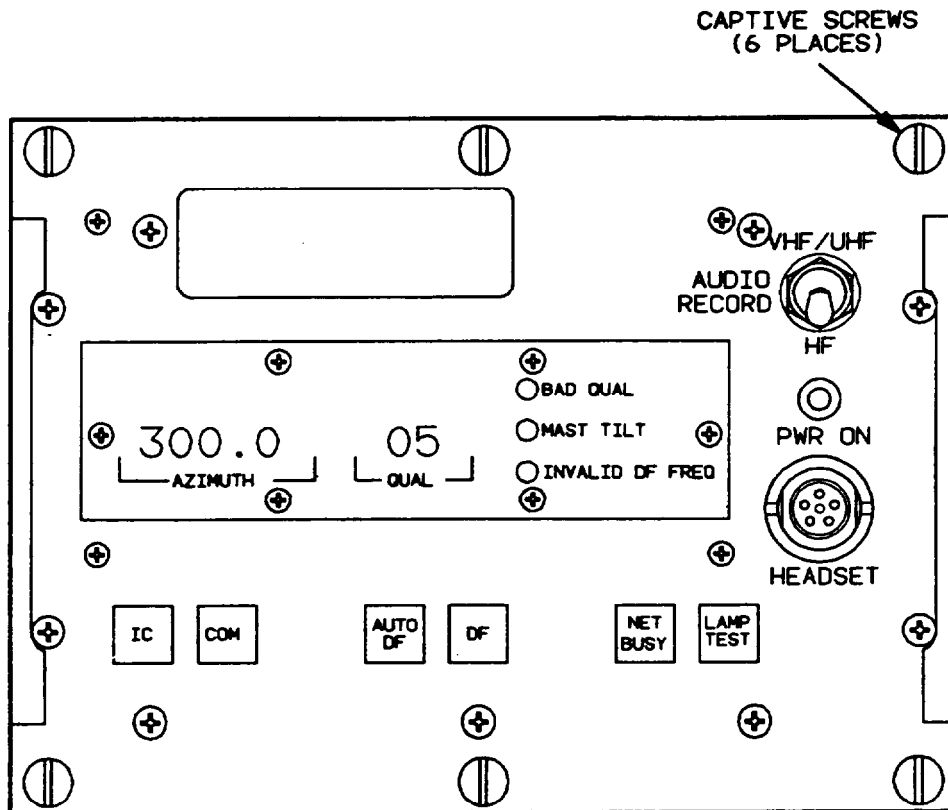
There are two operator control panels (A3/A15), located in equipment rack 1 and equipment rack 3.

Tools Required: TK-105/G

Personnel Required: 1

Remove operator control panel (OCP) as follows:

1. On system controller, place POWER ON/OFF switch to OFF position.
2. On system power supply, place SYS ON/OFF switch to OFF position.
3. If installed, disconnect headsets from front of OCP.

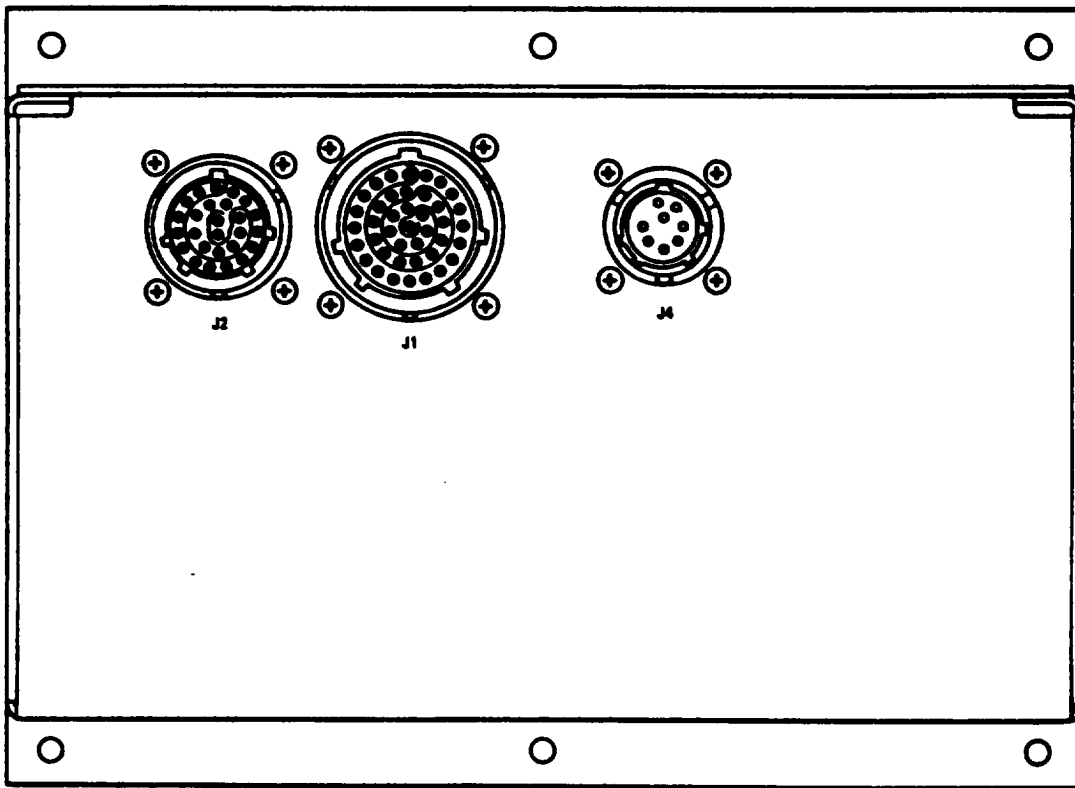


4. Using 1/4" flat-tip screwdriver, loosen six captive screws securing OCP to equipment rack.
5. Pull OCP completely out of equipment rack or until rear panel connectors are accessible.

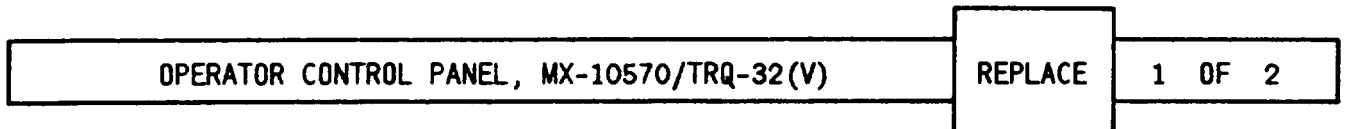


NOTE

Connector numbers listed are for unit A3 in equipment rack 1. Connector numbers in parenthesis are for unit A15 in equipment rack 3.



6. On rear of OCP, disconnect W66P2 (W66P4) from A3J1 (A15J1), W29P3 (W29P4) from A3J2 (A15J2) and W66P3 (W66P5) from A3J4 (A15J4).



There are two operator control panels (A3/A15), located in equipment rack 1 and equipment rack 3.

Tools Required: TK-105/G

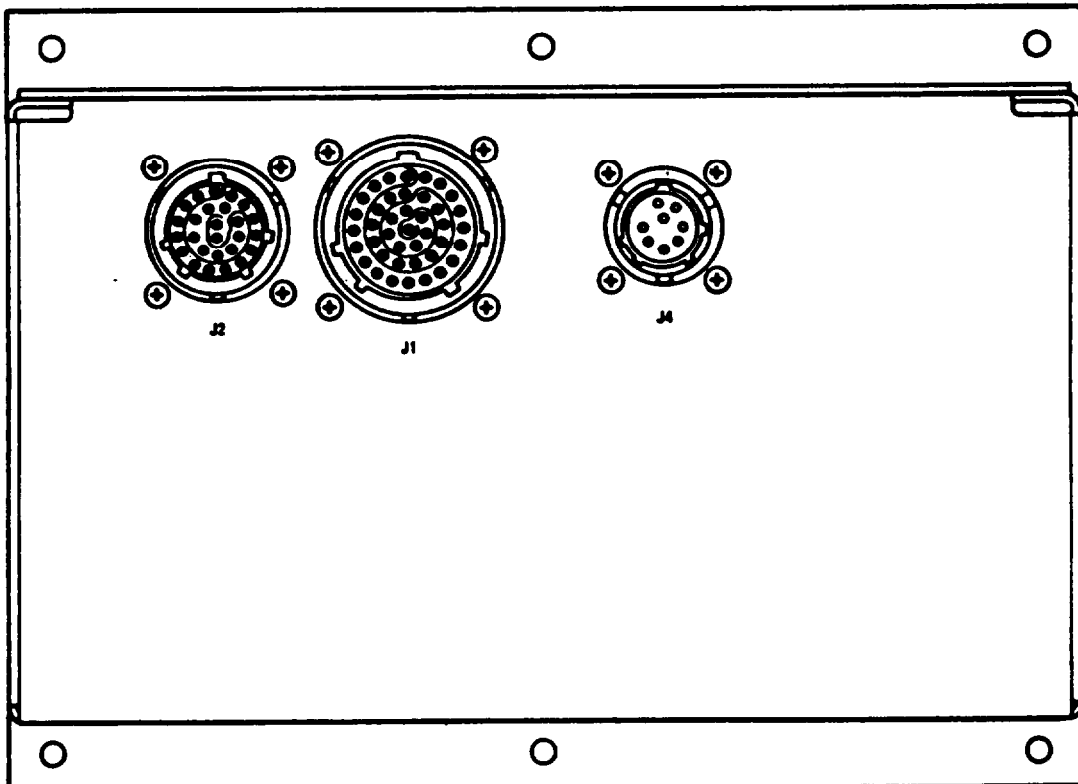
Personnel Required: 1

Replace operator control panel (OCP) as follows:

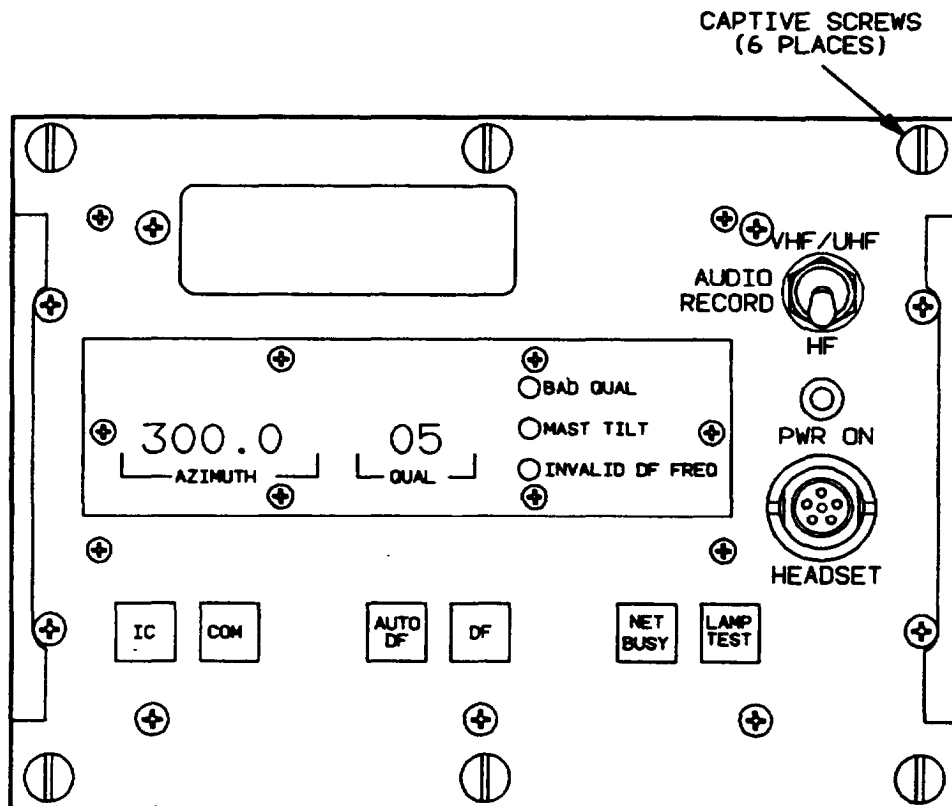
1. On system controller, place POWER ON/OFF switch to OFF position.
2. On system power supply, place SYS ON/OFF switch to OFF position.

NOTE

Connector numbers listed are for unit A3 in equipment rack 1. Connector numbers in parenthesis are for unit A15 in equipment rack 3.



3. On rear of OCP, connect W66P2 (W66P4) to A3J1 (A15J1), W29P3 (W29P4) to A3J2 (A15J2) and W66P3 (W66P5) to A3J4 (A15J4).



4. Slide OCP completely into equipment rack and secure with six captive screws. Using 1/4" flat-tip screwdriver tighten screws.
5. On system power supply, place SYS ON/OFF switch to ON position.
6. On system controller, place POWER ON/OFF switch to ON position.

OPERATOR CONTROL PANEL (MX-10570) LAMP REMOVE/REPLACE 1 OF 1

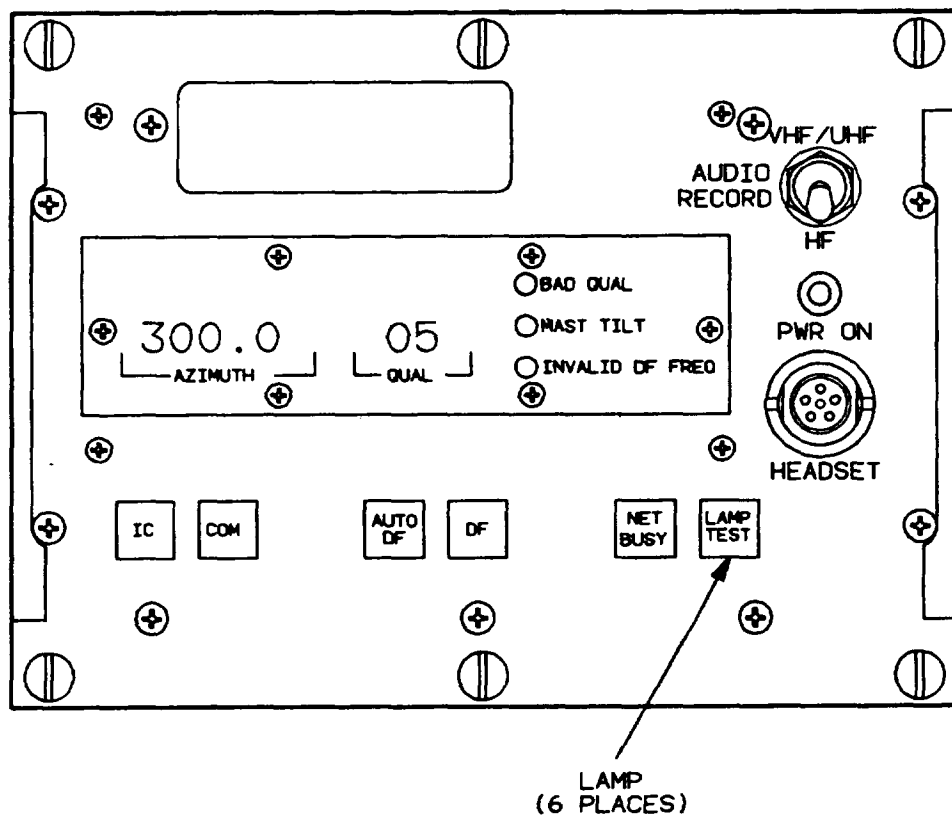
The operator control panel lamp is located on front panel.

Tools Required: NONE

Personnel Required: 1

Remove/replace operator control panel (OCP) lamp as follows.

1. On system controller, place POWER ON/OFF switch to OFF position.
2. On system power supply, place SYS ON/OFF switch to OFF position.



3. On OCP, grasp lens assembly on sides, and pull lamp from front panel.
4. Pull defective lamp from lens assembly and install new lamp.
5. Place lens assembly into lampholder housing of front panel. Press in to secure.
6. On system power supply, place SYS ON/OFF switch to ON position.
7. On system controller, place POWER ON/OFF switch to ON position.

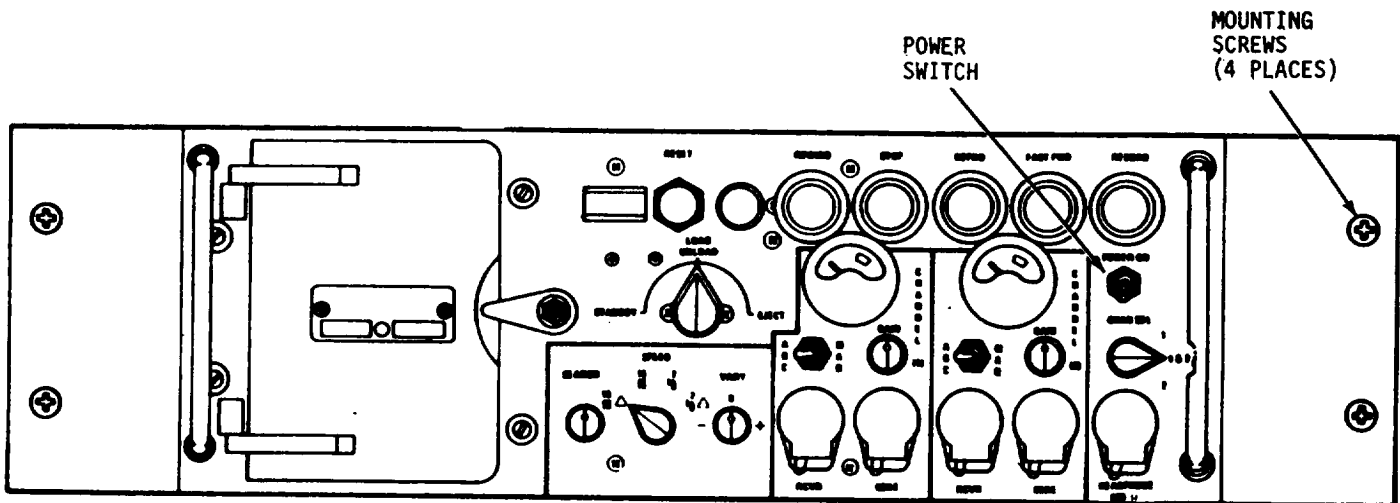


There are two recorders (A4/A16), located in equipment rack 2.

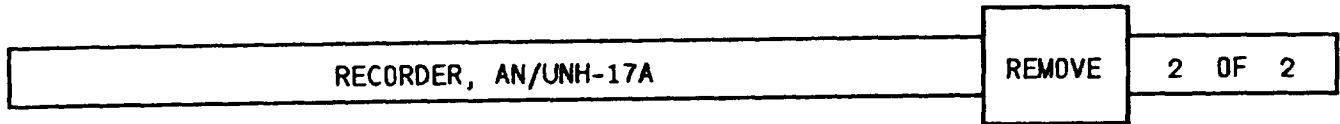
Tools Required: TK-105/G

Personnel Required: 1

Remove recorders as follows:

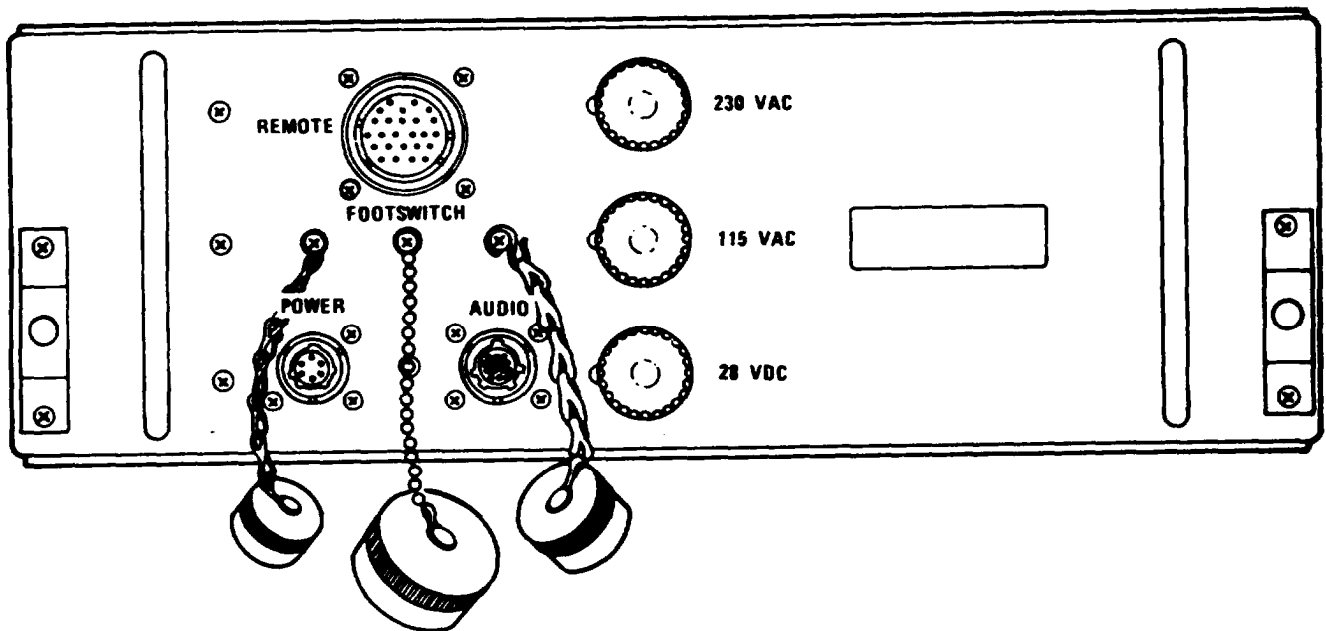


1. Place POWER ON switch on recorder to off (down) position.
2. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3 for A16) to OFF position.
3. Using a no.2 cross-tip screwdriver, remove and retain four screws, lockwashers and flat washers securing recorder to equipment rack.



NOTE

Connector numbers listed are for unit A4 connector numbers in parenthesis are for unit A16.



4. Pull recorder completely out of equipment rack or until rear panel connectors are accessible.
5. On rear of recorder, disconnect cables W34P1 (W35P2) from A4J8 (A16J8) POWER connector, W12P4 (W12P16) from A4J7 (A16J7) AUDIO connector, and W37P1 (W38P1) from FOOTSWITCH connector.
6. Secure protective covers on connectors.



There are two recorders (A4/A16), located in equipment rack 2.

Tools Required: TK-105/G

Personnel Required: 1

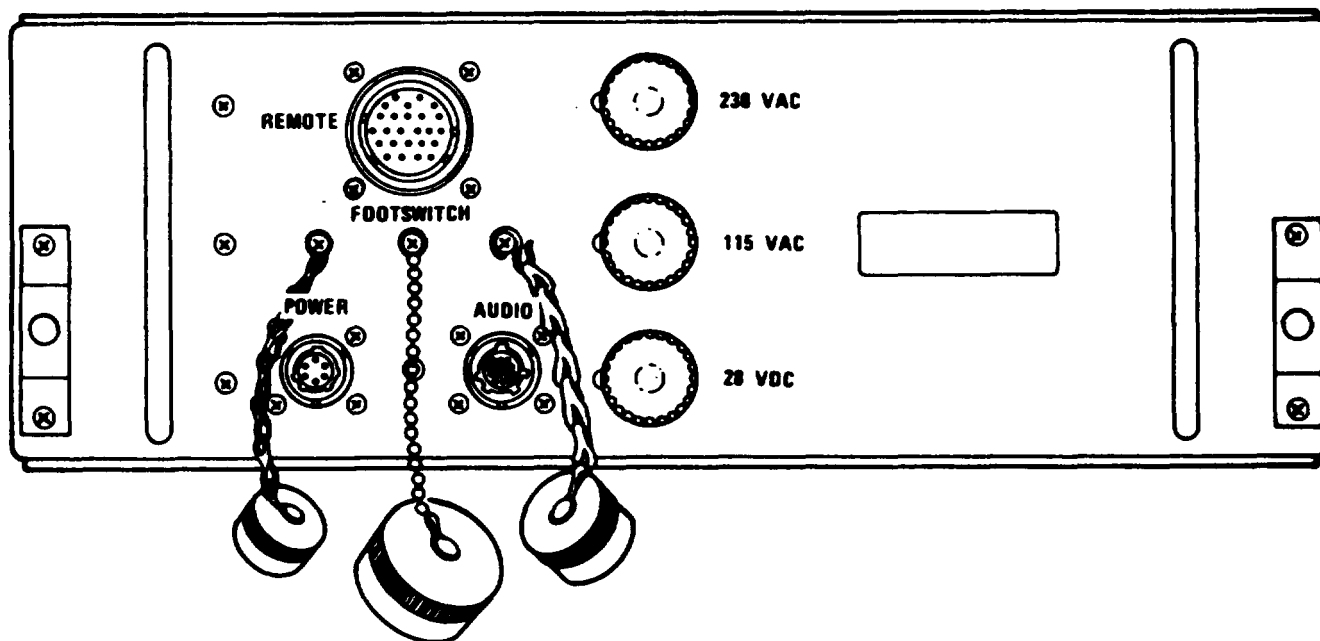
Replace recorders as follows:

1. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3 for A16) to OFF position.

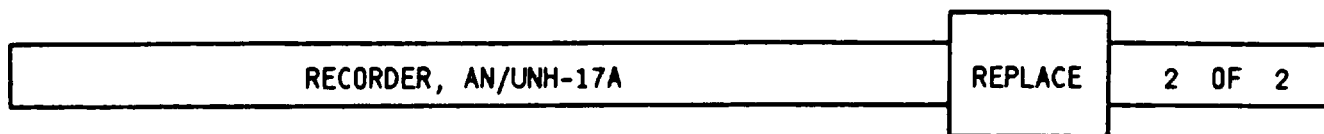
NOTE

Connector numbers listed are for unit A4. Connector numbers in parenthesis are for unit A16.

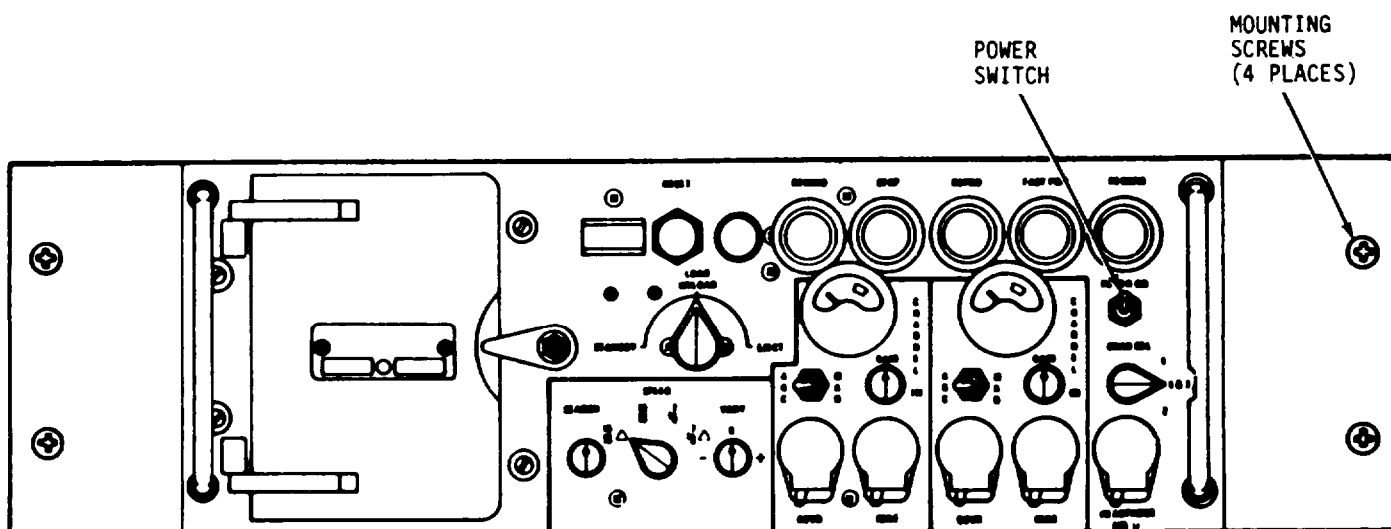
2. Slide recorder partially into equipment rack. Allow room to access cables at rear of unit. Remove protective covers from connectors.



3. At rear of recorder, connect cables W34P1 (W35P2) to A4J8 (A16J8) POWER connector, W12P4 (W12P16) to A4J7 (A16J7) AUDIO connector, and W37P1 (W38P1) to FOOTSWITCH connector.

**CAUTION**

When installing recorder, ensure loose protective caps do not catch on equipment rack and damage equipment or rack.



4. Slide recorder completely into equipment rack.
5. Slide recorder completely into equipment rack and secure with four screws, lockwashers and flat washers. Using a no. 2 cross-tip screwdriver, tighten screws.
6. On power distribution panel, place circuit breaker label RACK 1 AND 2 (RACK 2 AND 3 for A16) to ON (up) position.
7. On recorder, place POWER ON switch to on (up) position.

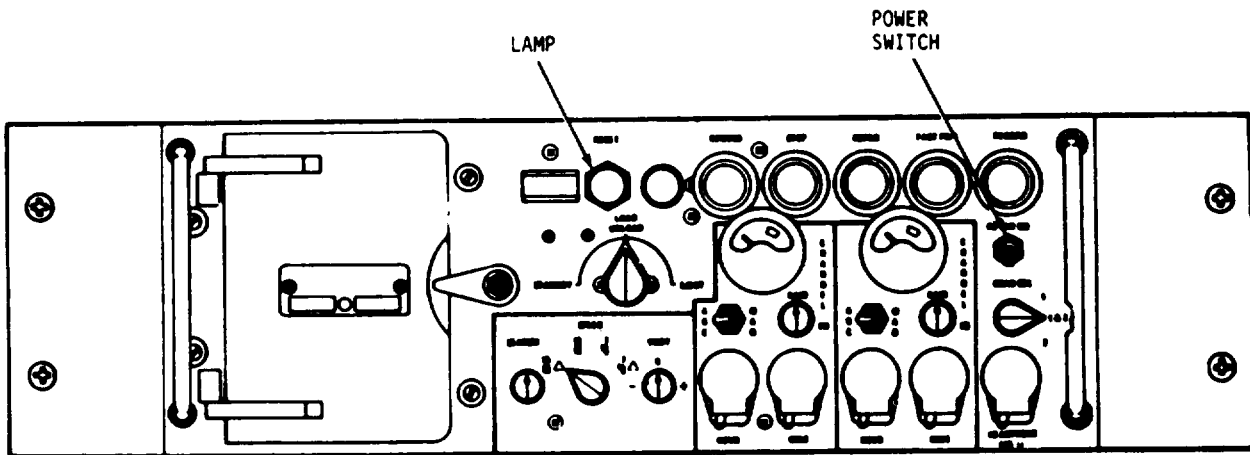
| | | |
|--------|-----------------------|----------------------|
| 1 OF 1 | REMOVE/REPLACE | RECORDER LAMP |
|--------|-----------------------|----------------------|

The recorder lamp is located inside lens lampholder on front panel of unit.

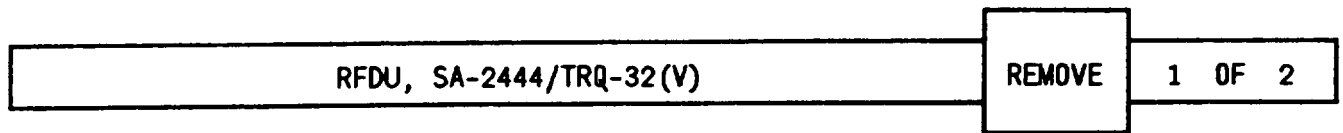
Tools Required: NONE

Personnel Required: 1

Remove/replace recorder lamp as follows:



1. On recorder, place POWER ON switch to off (down) position.
2. Turn lens lampholder counterclockwise to unscrew from housing. Remove and retain rubber o-ring.
3. Pull defective lamp out of lens lampholder and replace with new lamp and replace rubber o-ring.
4. Position lens lampholder into housing and turn clockwise to tighten.
5. On recorder place POWER ON switch to on (up) position.



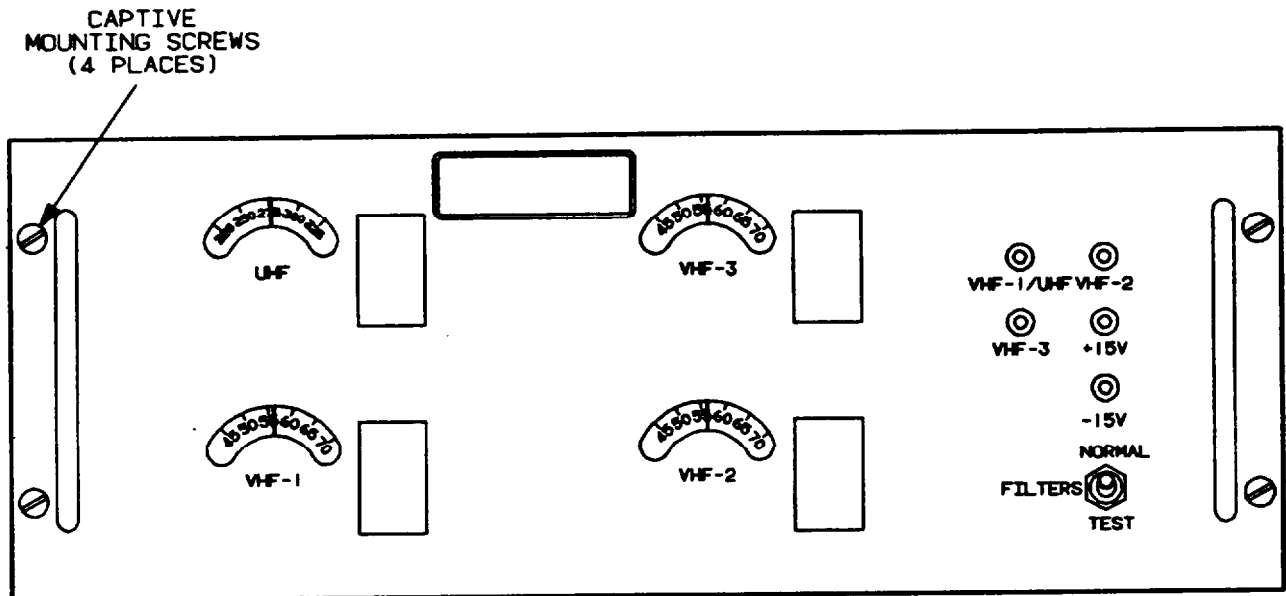
The RFDU (A5) is located in equipment rack 1.

Tools Required: TK-105/G

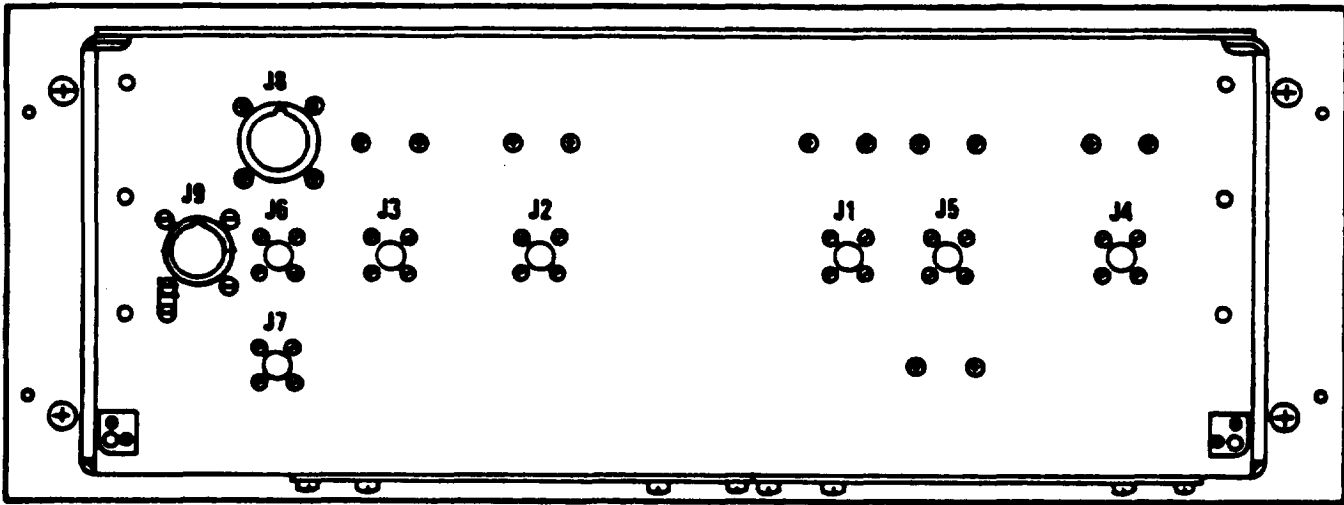
Personnel Required: 1

Remove RFDU as follows:

1. On system power supply, place SYS ON/OFF switch to OFF position.

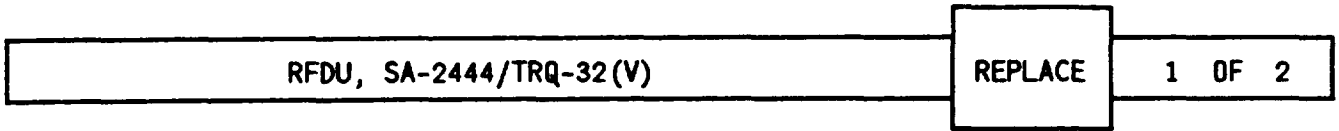


2. Using 1/4" flat-tip screwdriver, loosen four captive screws securing RFDU to equipment rack.
3. Slide RFDU forward until connectors on rear of unit are accessible.



4. At rear of RFDU, disconnect cables W73P2 from A5J1, W74P2 from A5J2, W3P2 from A5J3, W9P2 from A5J4, W11P2 from A5J5, W8P2 from A5J6, W10P2 from A5J7, and W12P5 from A5J8.

5. Remove RFDU completely from equipment rack.



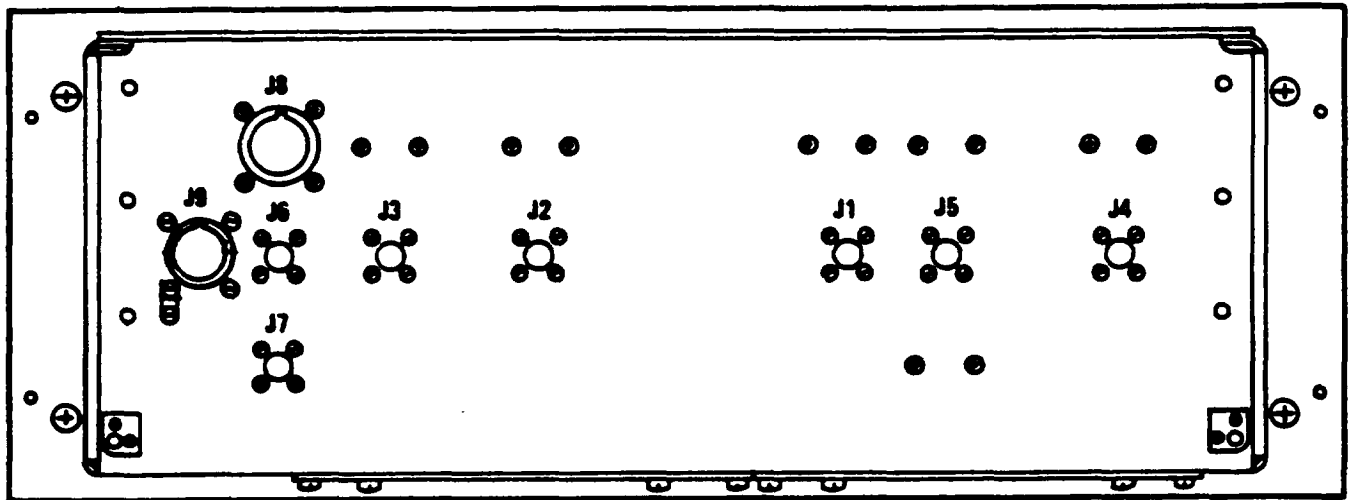
The RFDU (AS) is located in equipment rack 1.

Tools Required: TK-105/G

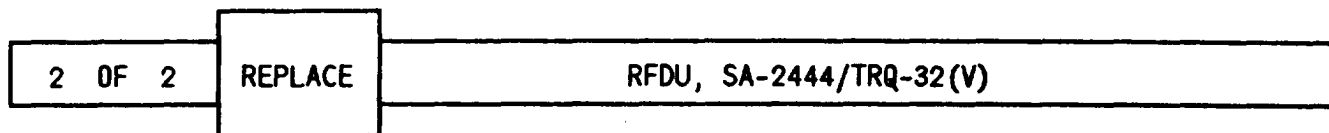
Personnel Required: 1

Replace RFDU as follows:

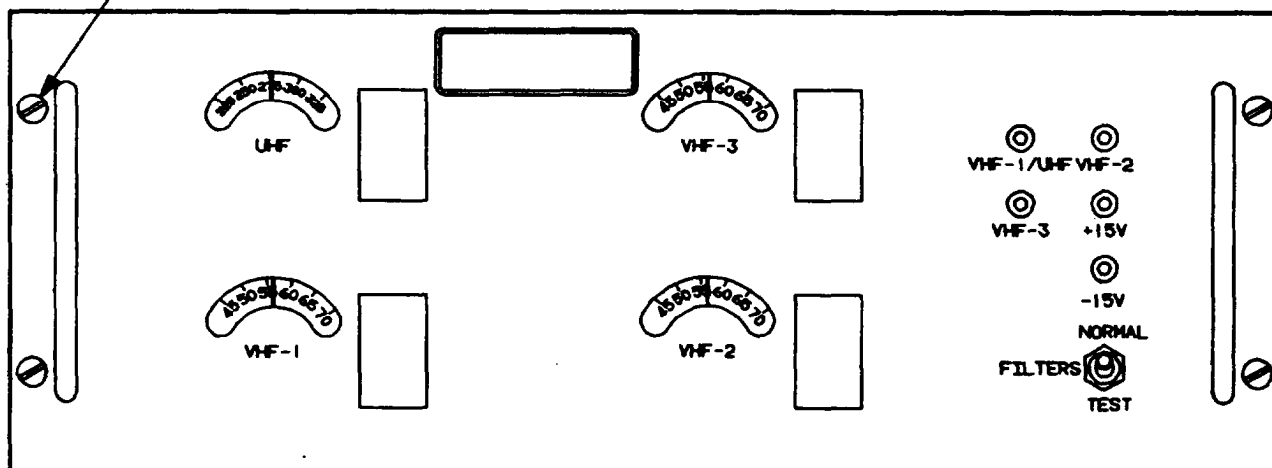
1. On system power supply, place SYS ON/OFF switch in OFF position.



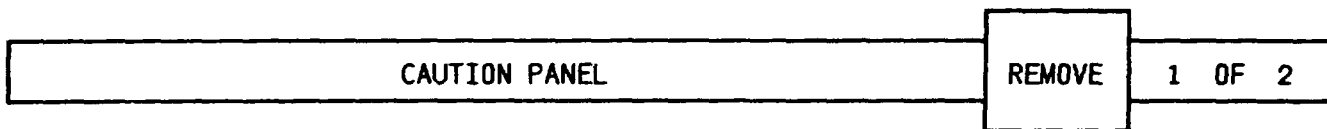
2. On rear of RFDU, connect cables W73P2 to A5J1, W74P2 to A5J2, W3P2 to A5J3, W9P2 to A5J4, W11P2 to A5J5, W8P2 to A5J6, W10P2 to A5J7, and W12P5 to A5J8.
3. Slide RFDU completely into equipment rack. Ensure cables are not crimped.



CAPTIVE
MOUNTING SCREWS
(4 PLACES)



4. Secure RFDU into equipment rack with four captive screws. Using a 1/4" flat-tip screwdriver, tighten screws.
5. On system power supply, place SYS ON/OFF switch to ON position.



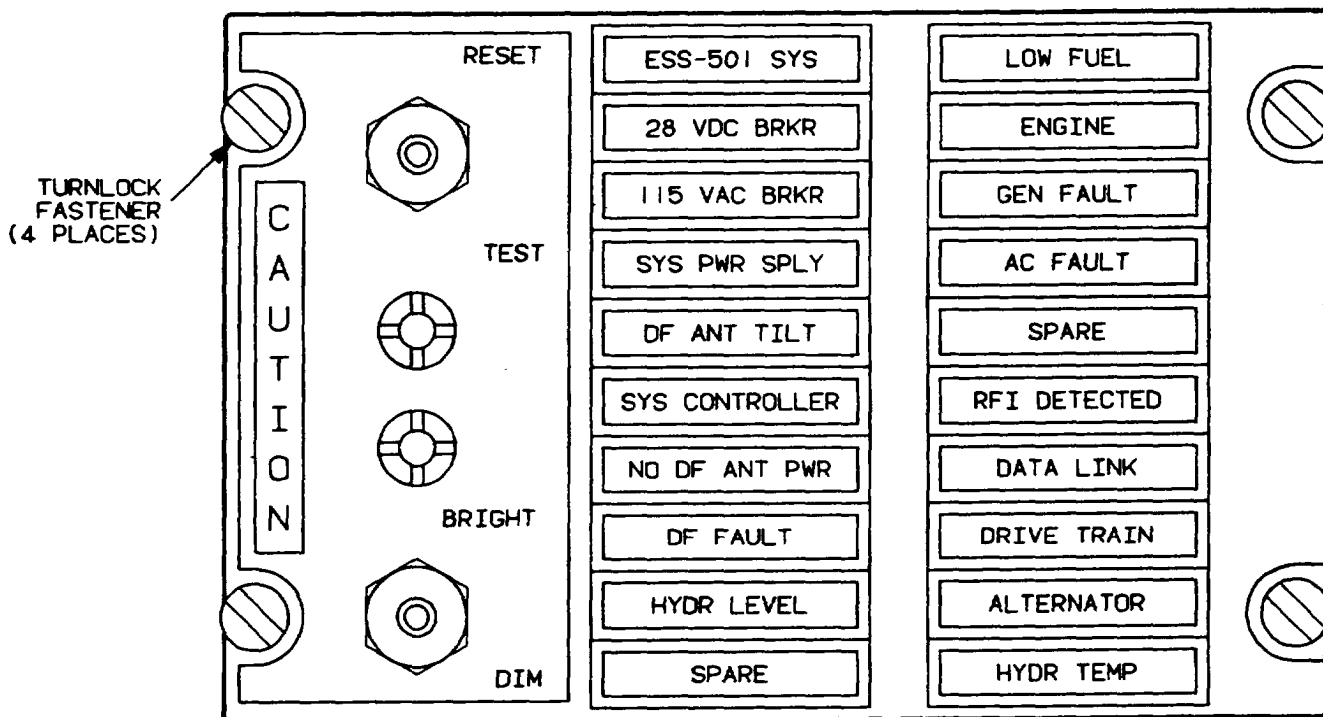
The caution panel (A8) is located in equipment rack 2.

Tools Required: TK-105/G

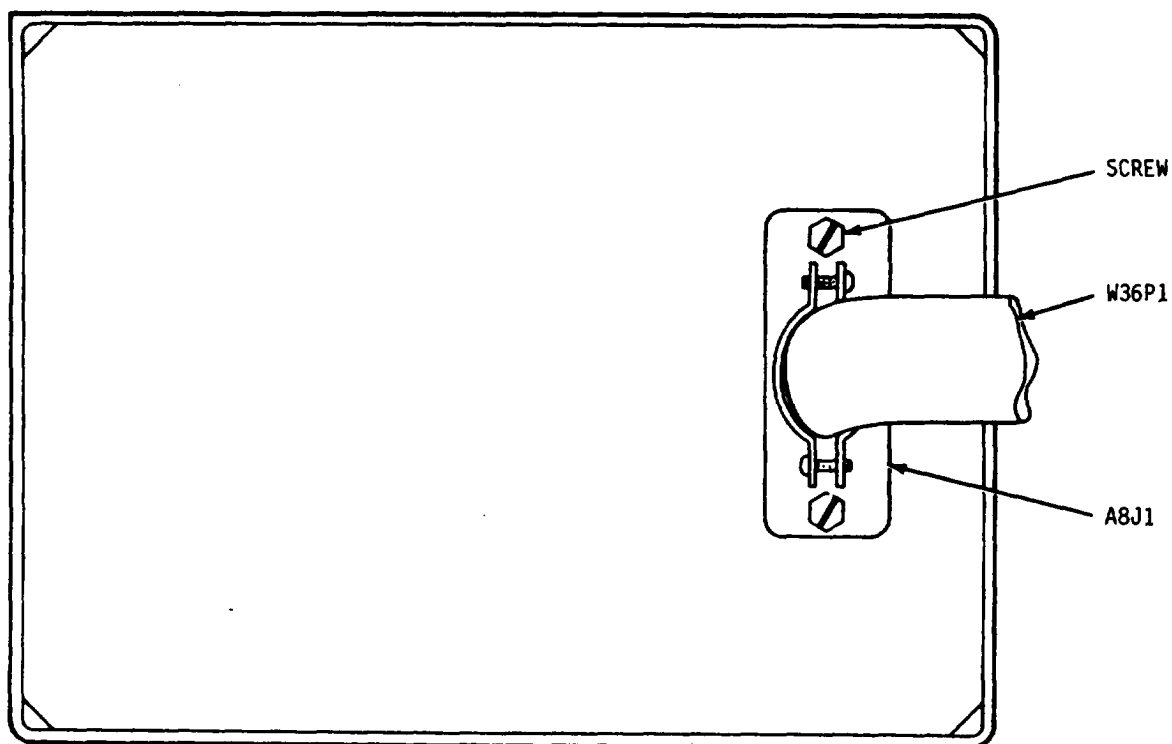
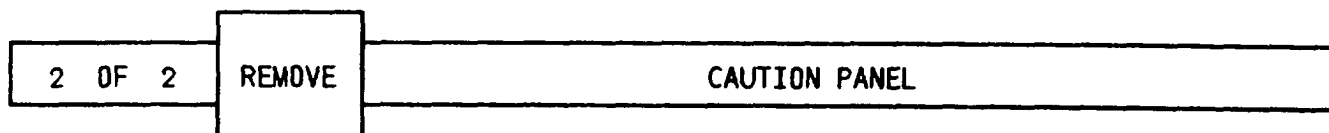
Personnel Required: 1

Remove caution panel as follows:

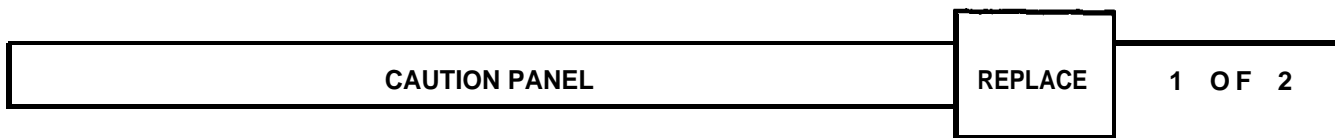
1. On system power supply, place SYS ON/OFF switch to OFF position.



2. Using 1/4" flat-tip screwdriver, loosen four turnlock fasteners securing caution panel to equipment rack.
3. Slide caution panel forward until connector at rear of unit is accessible.



4. On rear of caution panel, using a 1/4" flat-tip screwdriver, loosen two captiv. screws securing cable W36P1 to A8J1. Disconnect W36P1 from A8J1.
5. Remove and retain twenty lens inserts from front panel of caution panel in accordance with Caution Panel! Lens Remove procedure. Note position from which inserts are removed.



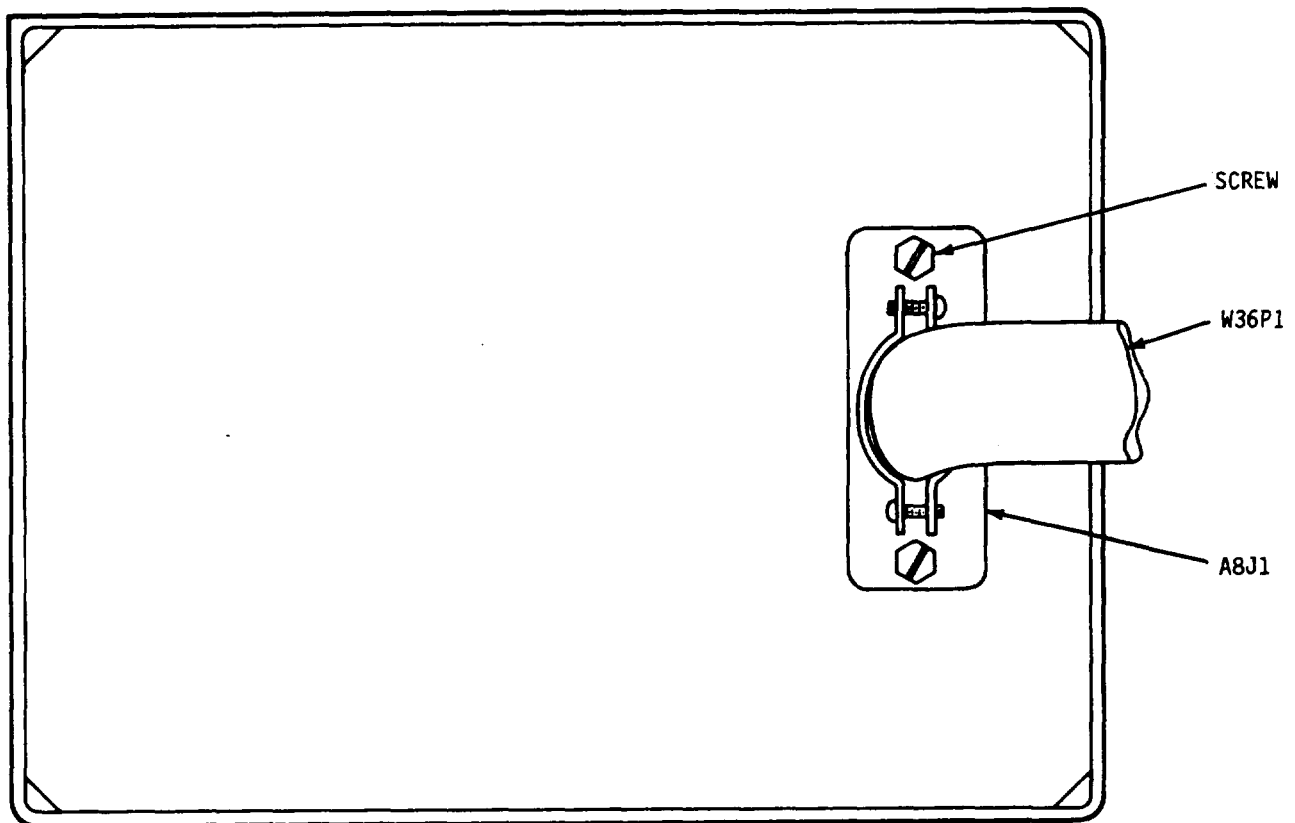
The caution panel (A8) is located in equipment rack 2.

Tools Required: TK-105/G

Personnel Required: 1

Replace caution panel as follows:

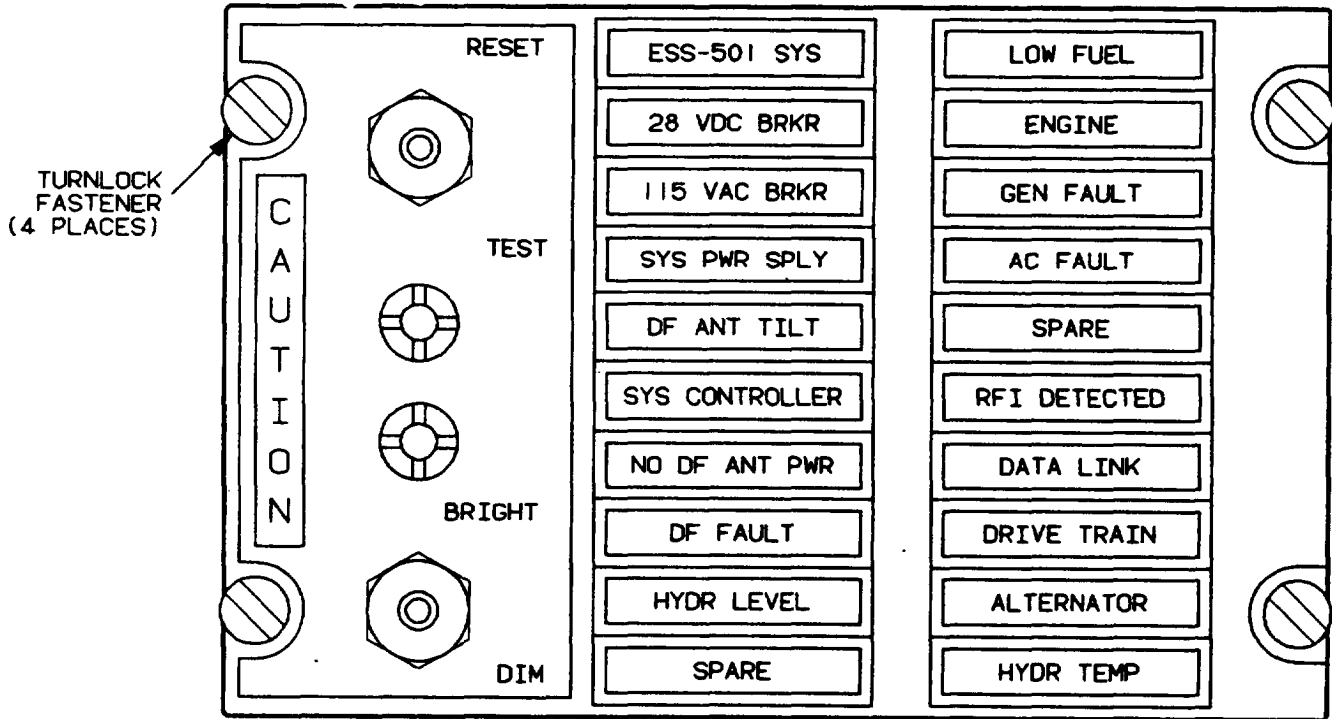
1. Install twenty lens inserts (previously removed) in accordance with Caution Panel Lens Replace procedure. Install lenses at positions previously noted.
2. On system power supply, place SYS ON/OFF switch in OFF position.



3. On rear of caution panel, secure cable W36P1 to A8J1 with two captive screws. Using a 1/4" flat-tip screwdriver, tighten screws.
4. Place caution panel in equipment rack 2.

2 OF 2 REPLACE

CAUTION PANEL



- Using a 1/4" flat-tip screwdriver, tighten four turnlock fasteners one quarter turn, securing caution panel to equipment rack.
- On system power supply, place SYS ON/OFF switch to ON position.

| | | |
|----------------------------|-----------------------|---------------|
| CAUTION PANEL LAMPS | REMOVE/REPLACE | 1 OF 1 |
|----------------------------|-----------------------|---------------|

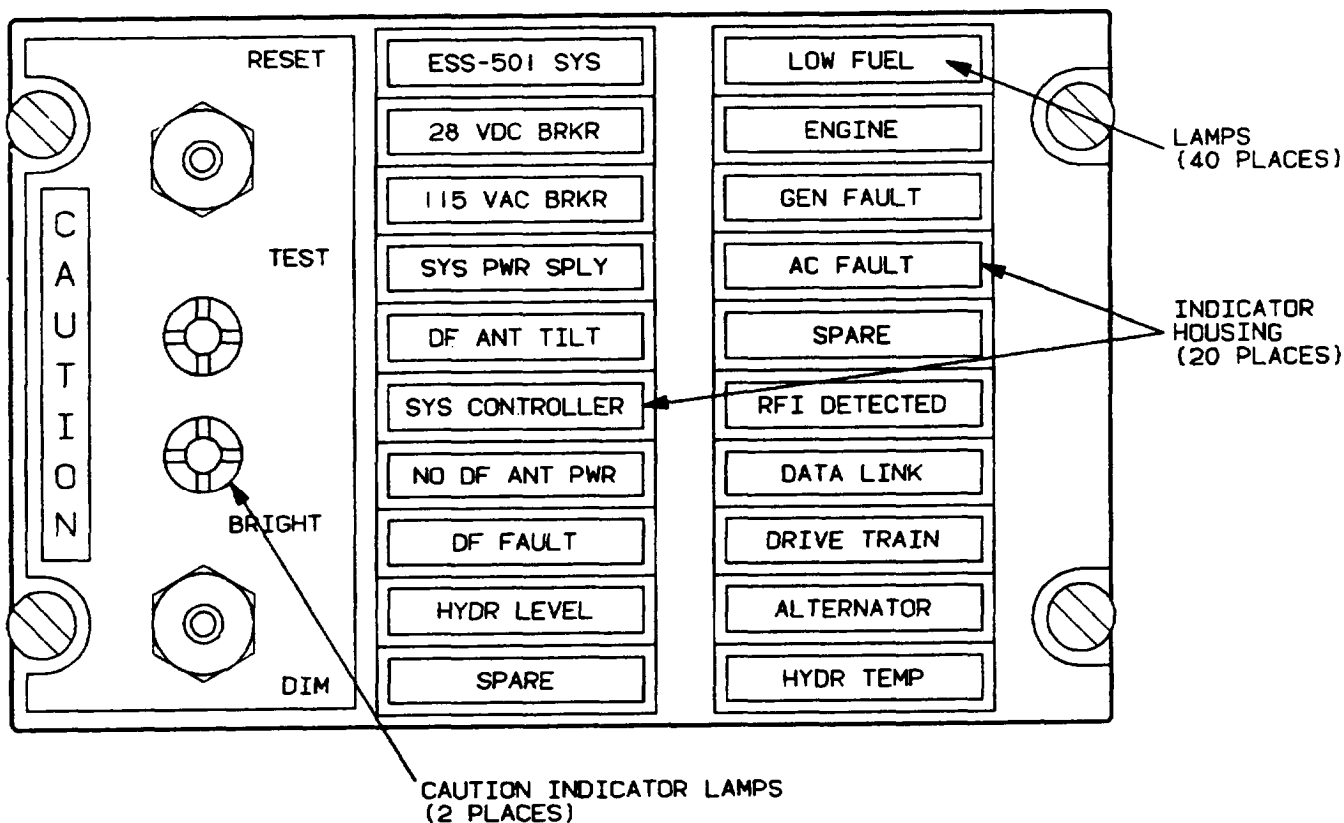
There are forty-two lamps inside the caution panel. Two lamps (located inside lens caps), illuminate the front panel. Each caution indicator contains two lamps.

Tools Required: NONE

Personnel Required: 1

Remove/replace caution panel lamps as follows.

1. On system power supply, place SYS ON/OFF switch to OFF position.
2. To remove/replace caution indicator lamps, unscrew lens cap counterclockwise and pull lamp from housing.



4. To remove/replace lamps, press on left side (or right side) of indicator housing to access lamps. Housing will pivot, allowing access to (two) lamps. Pull all defective lamps from housing and install new lamp.
5. Secure indicator lamp housing to its normal position.
6. On system power supply, place SYS ON/OFF switch to ON position.

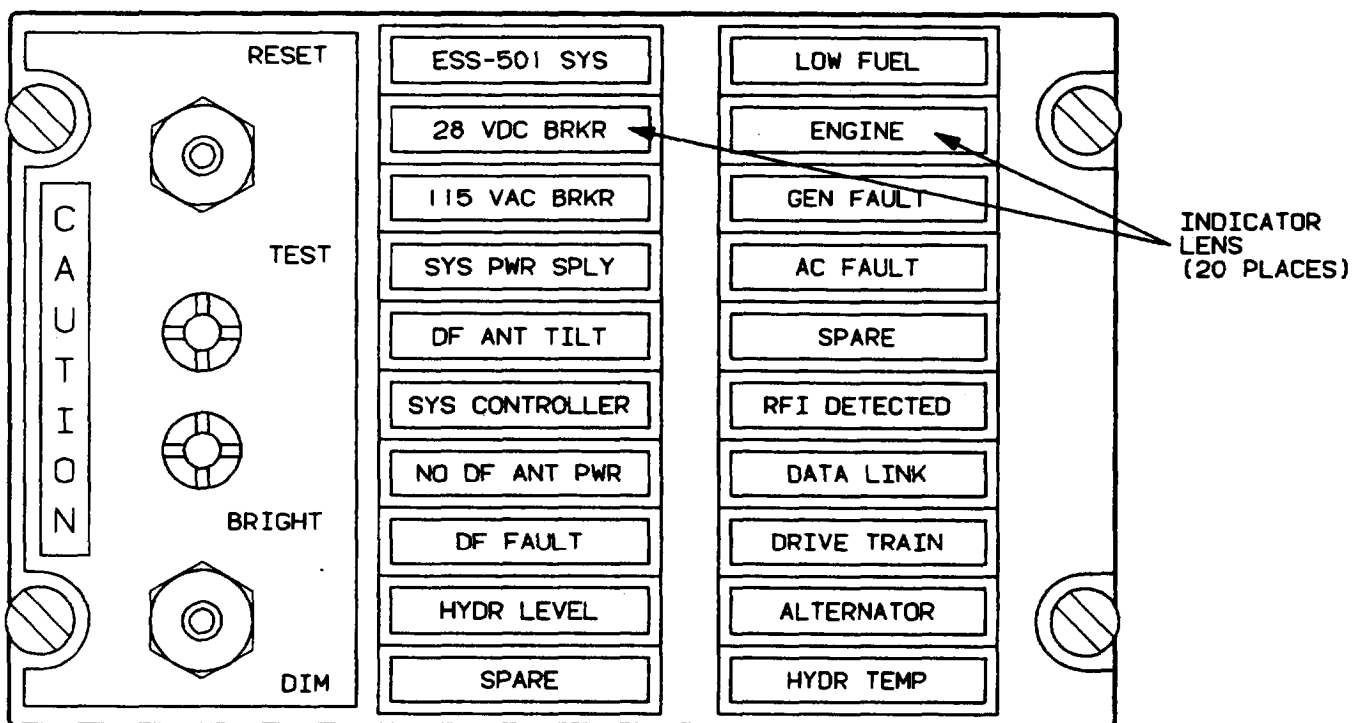
| | | |
|--------|----------------|--------------------|
| 1 OF 1 | REMOVE/REPLACE | CAUTION PANEL LENS |
|--------|----------------|--------------------|

There are twenty indicator lenses in the caution panel. Any of the twenty lenses may be removed/replaced with the following procedure.

Tools Required: NONE

Personnel Required: 1

Remove/replace lens as follows.



1. On caution panel, press left side of indicator. The indicator housing will pivot, allowing access to lens latch located on right side of housing.
2. Unsnap lens latch to access lens. There is a clear outer lens, a lettered middle lens, and a frosted inner lens in each housing.
3. Pull all three lenses partially out of housing enough to separate each one.
4. Remove only the lettered middle lens from housing and replace with new lens.
5. Place three lenses into indicator housing and close lens latch.
6. Pivot indicator housing into its normal position.

OPERATOR TERMINAL CP-1824/TRQ-32(V), FUSE

REMOVE/REPLACE

1 OF 4

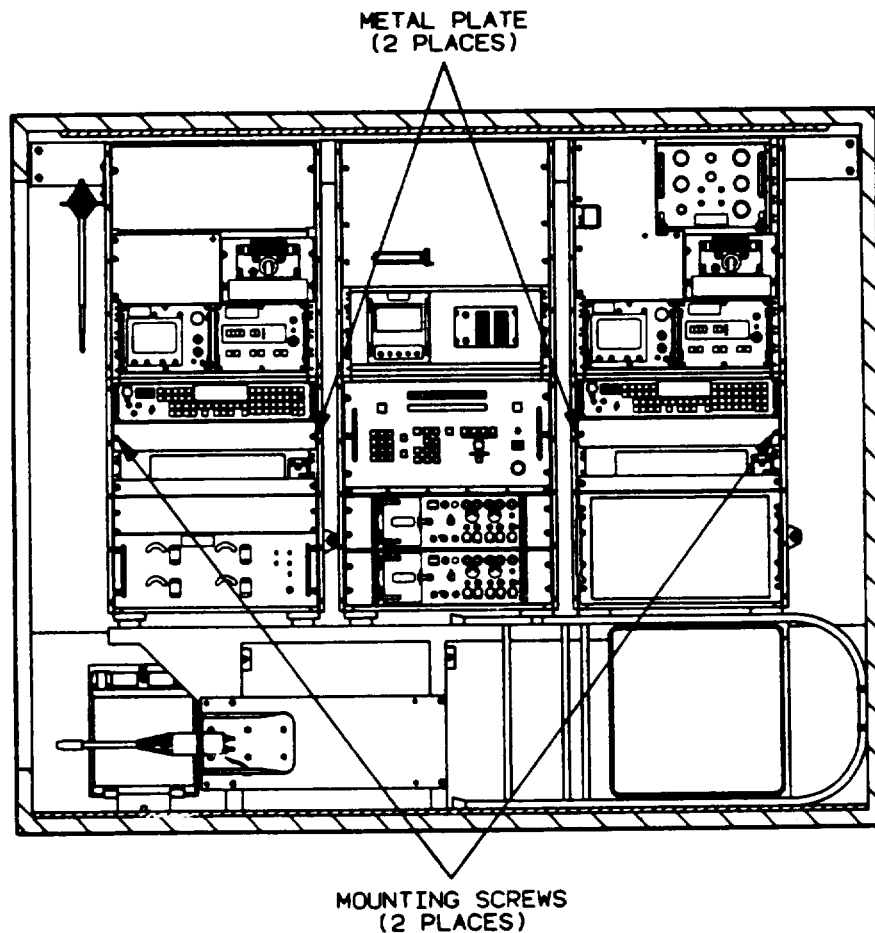
There are two operator terminals (A9/A25). Operator terminal #1 (A9) is located in equipment rack 1. Operator terminal #2 (A25) is located in equipment rack 3.

Tools Required: TK-105/G

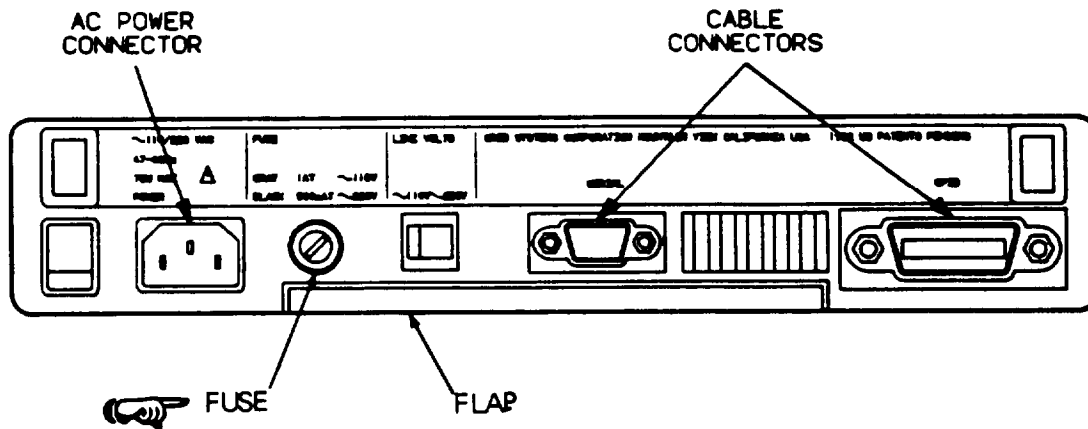
Personnel Required: 1

Remove operator terminal as follows:

1. If operator terminal is in stored position, loosen two turnlock fasteners securing front edge of mounting tray to equipment rack. Pull mounting tray forward to access operator terminal.
2. On system controller, place ON/OFF switch to OFF position.
3. On power switch assembly (A38 for terminal #1 and A39 for terminal #2), place ON/OFF switch to OFF position.



4. Using a no. 2 cross-tip screwdriver, remove and retain two screws, lockwashers and flat washers securing a metal plate to equipment rack just above operator terminal.



5. On rear of operator terminal, use a 1/8" flat-tip screwdriver and loosen captive screws securing two cable connectors to terminal.

NOTE

Connector number listed is for operator terminal #1 located in equipment rack 1. Connector number in parentheses is for operator terminal #2 located in equipment rack 3.

6. Disconnect W78P2 (W78P1) from J3 and W80P1 (W80P2) from J2.
7. Using a no. 1 cross-tip screwdriver, remove and retain three screws, lockwashers and flat washers from mounting strap securing operator terminal to mounting tray. Remove and retain mounting strap.
8. Lift rear end of operator terminal and disconnect AC Power connector W76P3 (W77P3) from J1. Remove operator terminal from mounting tray.
9. Using a flatblade screwdriver, remove fuse cap and fuse from operator terminal.
10. Remove defective fuse from cap and install new fuse.

OPERATOR TERMINAL CP-1824/TRQ-32(V), FUSE**REMOVE/REPLACE****3 OF 4**

There are two operator terminals. Operator terminal #1 (A9) is located in equipment rack 1. Operator terminal #2 (A25) is located in equipment rack 3.

Tools Required: TK-105/G

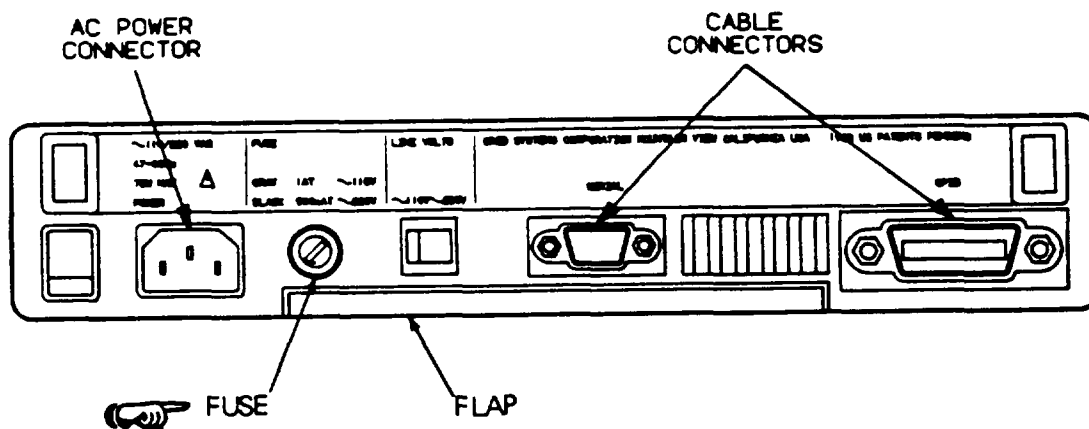
Personnel Required: 1

Replace operator terminal as follows:

11. Place operator terminal onto mounting tray with front of terminal against rubber cushions on mounting tray. Insure flap on bottom of terminal is in the up position. Lift rear of operator terminal and connect AC Power connector W76P3 (W77P3) to J1.
12. Secure operator terminal into mounting tray with mounting strap. Secure mounting strap to tray with three screws, lockwashers and flatwashers. Using a no. 1 cross-tip screwdriver, tighten screws.

NOTE

Connector number listed is for operator terminal #1 located in equipment rack 1. Connector number in parentheses is for operator terminal #2 located in equipment rack 3.

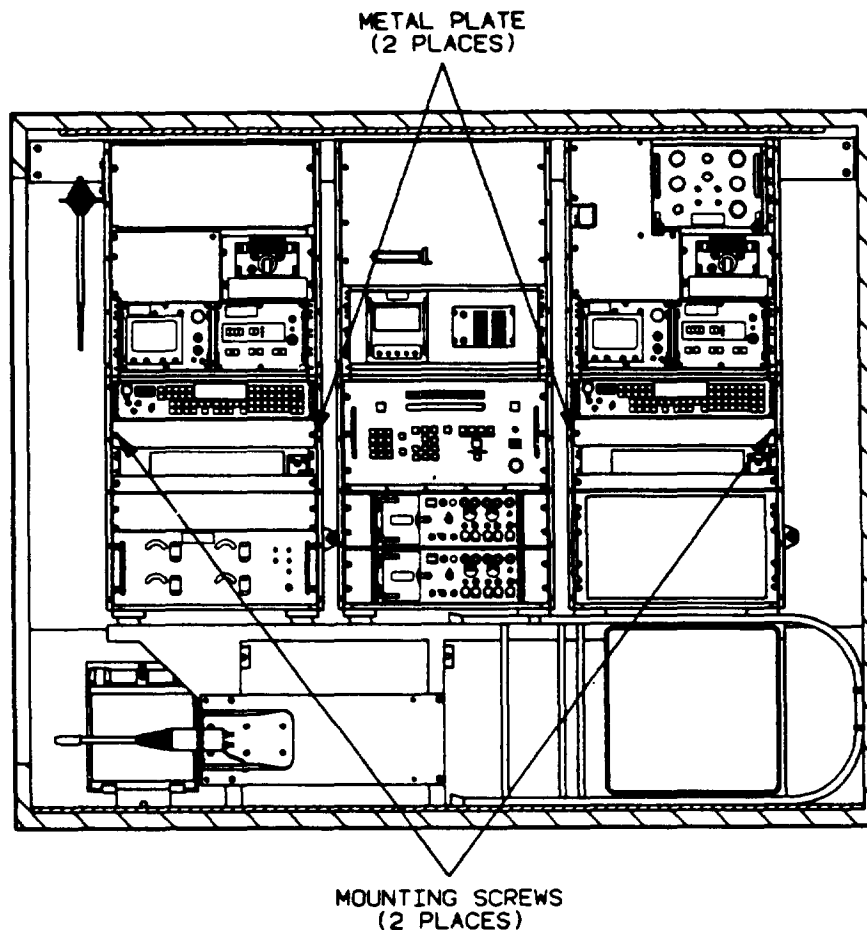


13. On rear of operator terminal, connect cables W78P2 (W78P1) to J3 and W80P1 (W80P2) to J2. Secure each connector with two captive screws. Using a 1/8" flat-tip screwdriver, tighten screws.

4 OF 4

REMOVE/REPLACE

OPERATOR TERMINAL, CP-1824/TRQ-32(V), FUSE



14. Above operator terminal, secure metal plate onto front of equipment rack with two screws, lockwashers and flat washers. Using a no. 2 cross-tip screwdriver, tighten screws.
15. On system controller, place POWER ON/OFF switch to ON position.
16. On power switch assembly (A38 for terminal #1 and A39 for terminal #2), place ON/OFF switch to ON position.
17. Press locking tabs on slide rails of mounting tray to unlock. Push mounting tray and operator terminal completely into equipment rack.
18. Secure mounting tray into equipment rack with two turnlock fasteners located at each side of mounting trays.

SYSTEM CONTROLLER, C-11845/TRQ-32(V)

REMOVE

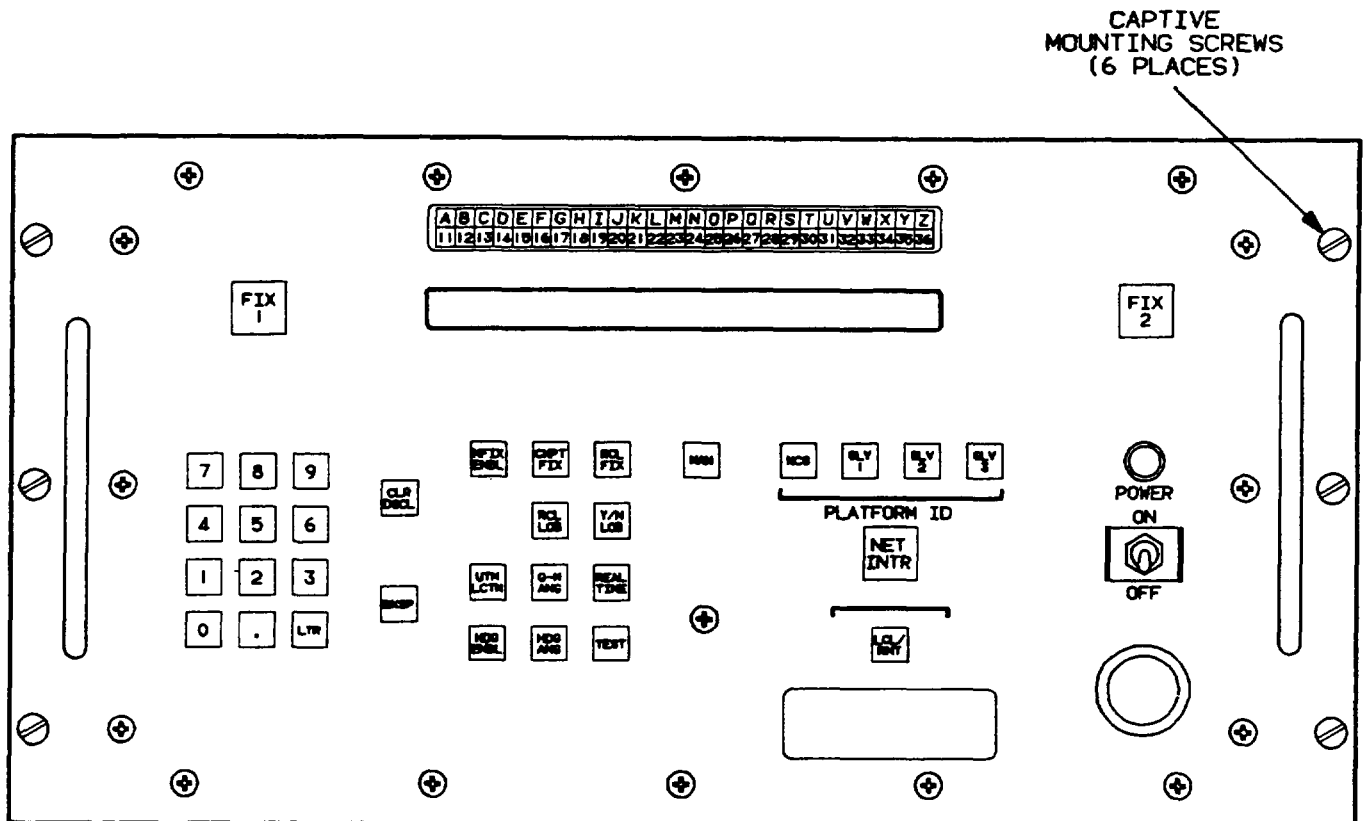
1 OF 2

The system controller (A10) is located in equipment rack 2.

Tools Required: TK-105/G

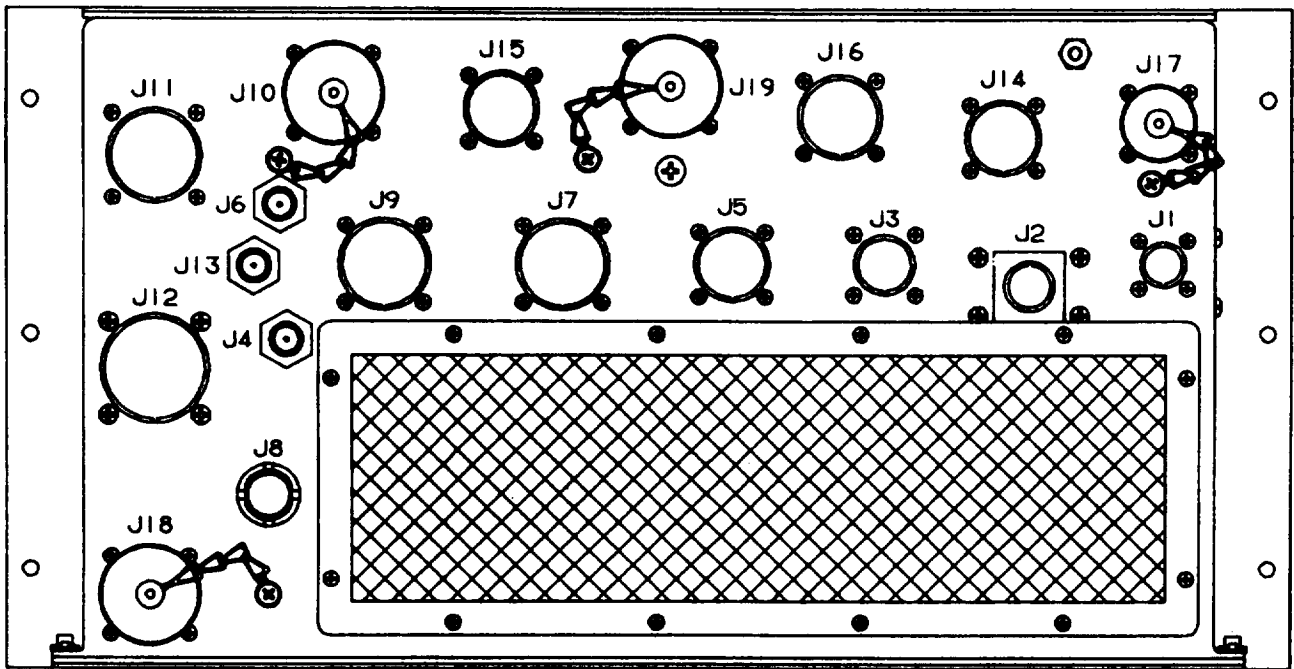
Personnel Required: 1

Remove system controller as follows:



1. On system controller, place POWER ON/OFF switch to OFF position.
2. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 to OFF position.
3. Using a 1/4" flat-tip screwdriver, loosen six captive screws securing system controller into equipment rack.
4. Slide system controller forward until cables at rear are accessible.

| | | |
|--------|--------|----------------------------------------|
| 2 OF 2 | REMOVE | SYSTEM CONTROLLER , C-11845/TRQ-32 (V) |
|--------|--------|----------------------------------------|



5. At rear of system controller, disconnect cables W41P1 from A10J1, W97P1 from A10J2, W79P1 from A10J3, W17P2 from A10J4, W19P1 from A10J5, W18P2 from A10J6, W12P7 from A10J7, W42P1 from A10J8, W12P8 from A10J9, W12P9 from A10J11, W66P1 from A10J12, W2P2 from A10J13, W78P3 from A10J14, W83P1 from A10J15, and W80P3 from A10J16 on system controller.
6. Remove system controller from equipment rack.

SYSTEM CONTROLLER, C-11845/TRQ-32(V)

REPLACE

1 OF 2

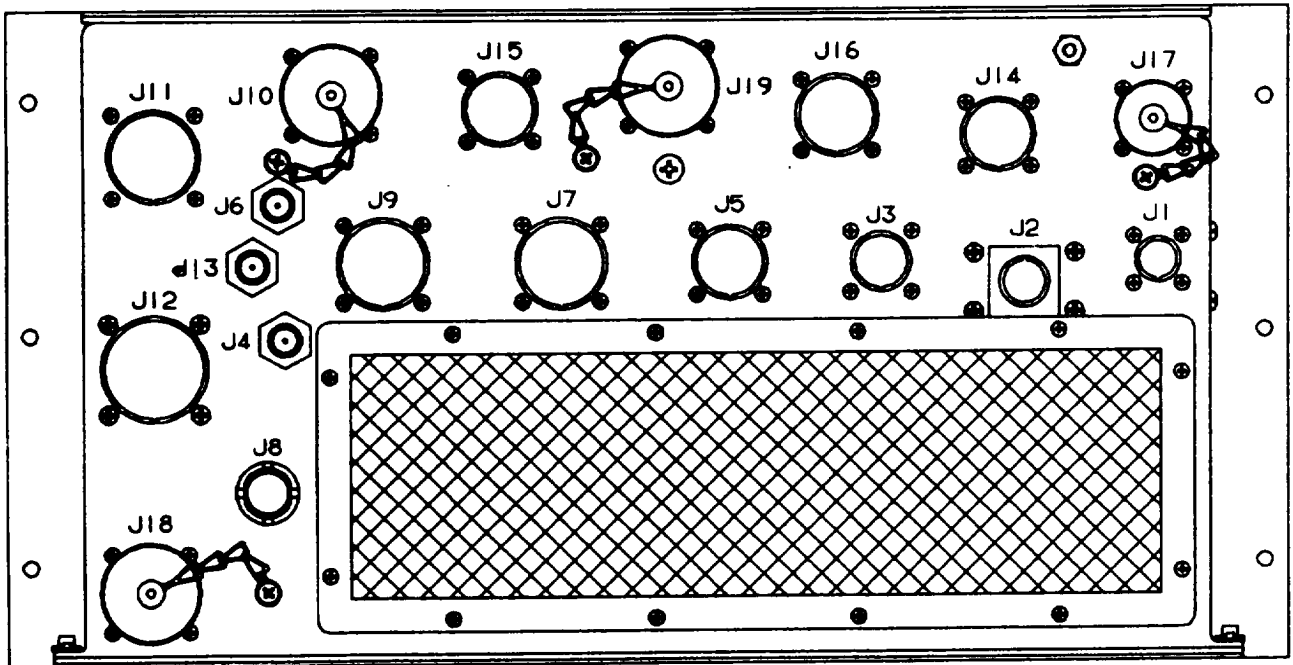
The system controller (A10) is located in equipment rack 2.

Tools Required: TK-105/G

Personnel Required: 1

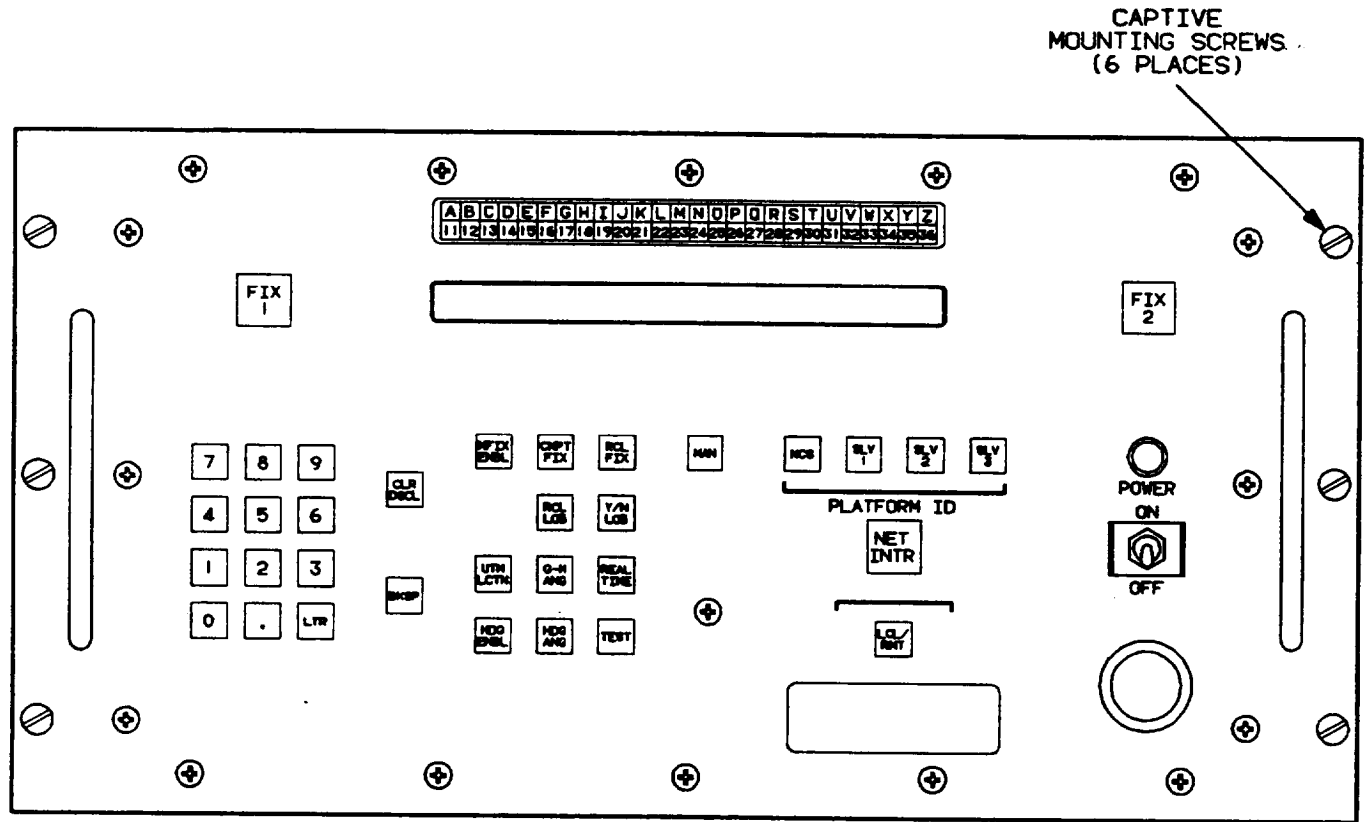
Replace system controller as follows:

1. On system controller, place POWER ON/OFF switch to OFF position.
2. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 to OFF position.
3. Place system controller partially into equipment rack, leaving access to cable connectors at rear of unit.



4. At rear of system controller, connect cables W41P1 to A10J1, W97P1 to A10J2, W79P1 to A10J3, W17P2 to A10J4, W19P1 to A10J5, W18P2 to A10J6, W12P7 to A10J7, W42P1 to A10J8, W12P8 to A10J9, W12P9 to A10J11, W66P1 to A10J12, W2P2 to A10J13, W78P3 to A10J14, W83P1 to A10J15, and W80P3 to A10J16.

| | | |
|--------|---------|--------------------------------------|
| 2 OF 2 | REPLACE | SYSTEM CONTROLLER, C-11845/TRQ-32(V) |
|--------|---------|--------------------------------------|



5. Slide system controller into equipment rack and secure with six captive screws. Using 1/4" flat-tip screwdriver, tighten screws.
6. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 to ON position.
7. Place POWER ON/OFF switch on system controller to ON position.

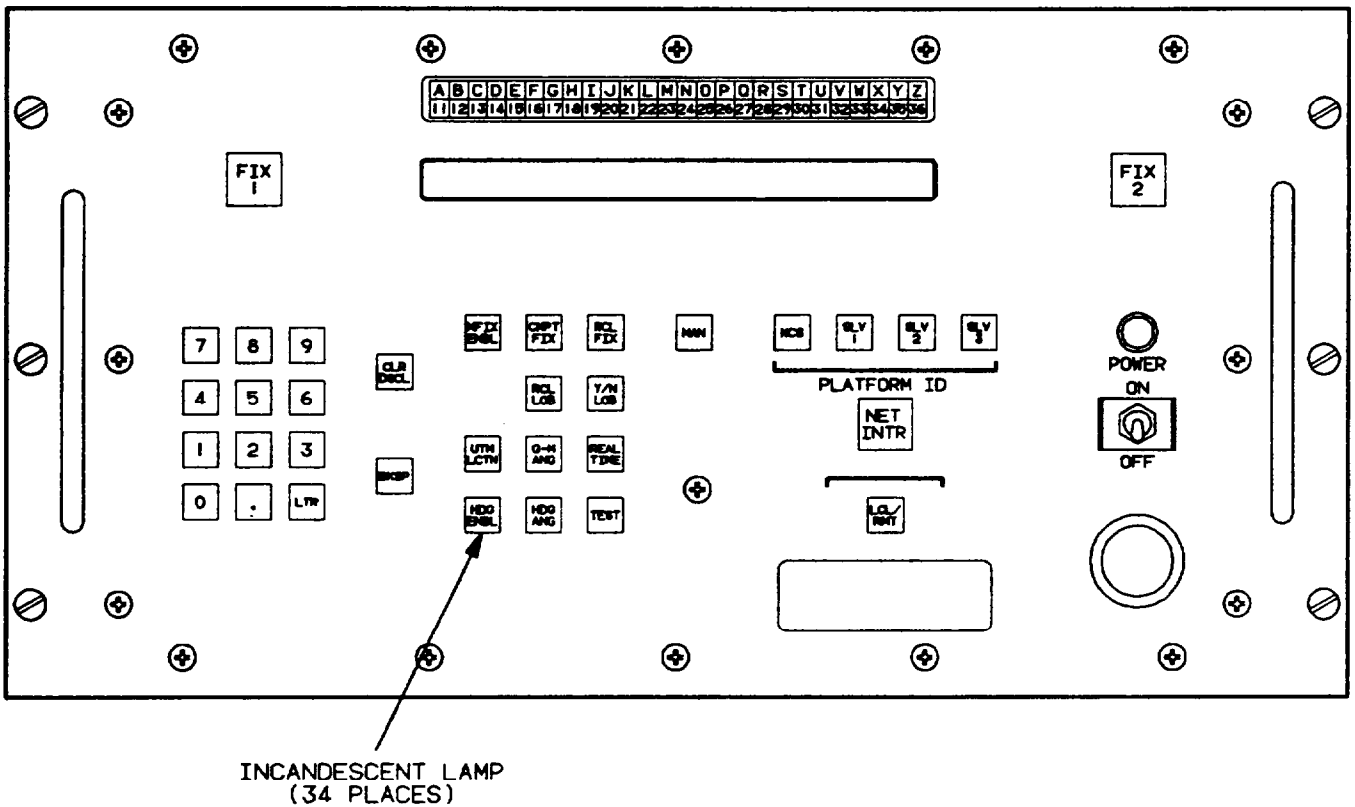
SYSTEM CONTROLLER (C-11845) LAMP **REMOVE/REPLACE** **1 OF 2**

There are thirty-four incandescent lamps (switch illumination) and one glow lamp (power on indicator) located on front panel of system controller.

Tools Required: NONE

Personnel Required: 1

Remove/replace system controller lamps as follows.

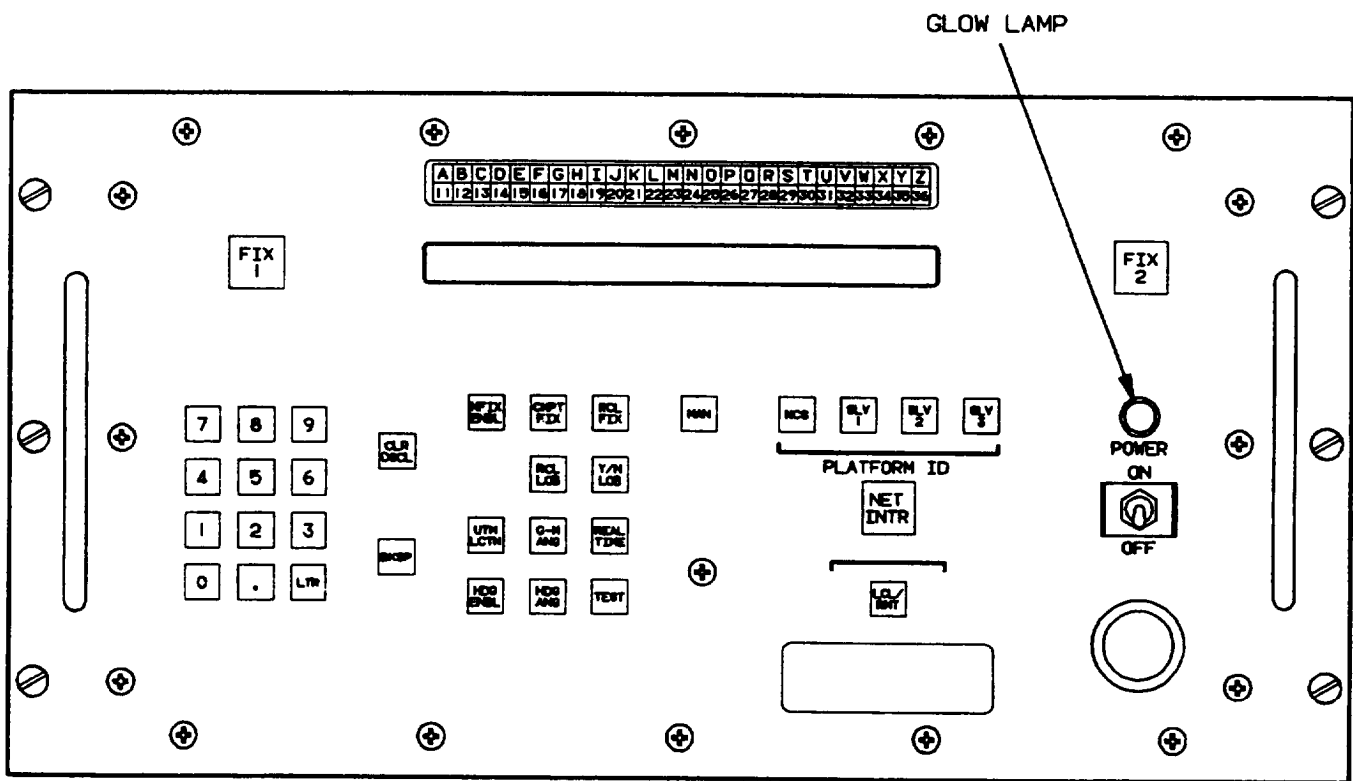


1. On system controller, place POWER ON/OFF switch to OFF position.
2. To remove/replace incandescent lamps, pull lens assembly and lamp out of switch housing. Pull defective lamp from lens assembly and install new lamp.
3. Place lens assembly and lamp into switch housing and push inward to secure.

2 OF 2

REMOVE/REPLACE

SYSTEM CONTROLLER (C-11845) LAMP



4. To remove/replace glow lamp (power ON indicator), turn lens lampholder counterclockwise to unscrew from lampholder housing. Pull defective lamp from lens lampholder and install new lamp.
5. Place lens lampholder and lamp into lampholder housing and turn clockwise to secure.
6. On system controller, place POWER ON/OFF switch to ON position.

SYSTEM CONTROLLER (C-11845) AIR FILTER

REMOVE/REPLACE

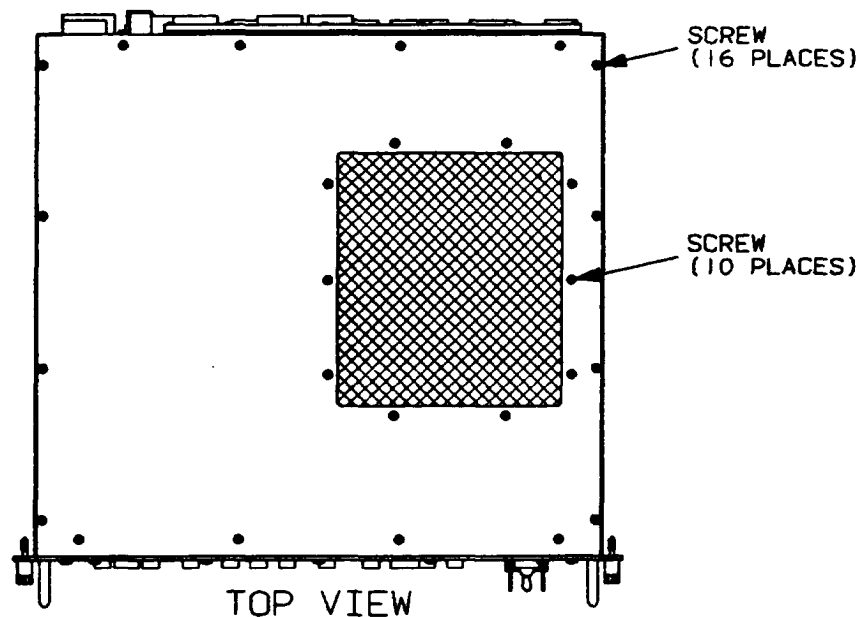
1 OF 3

There are two air filters on the system controller. They are located on top cover and rear panel .

Tools Required: TK-101/G
Soft brush

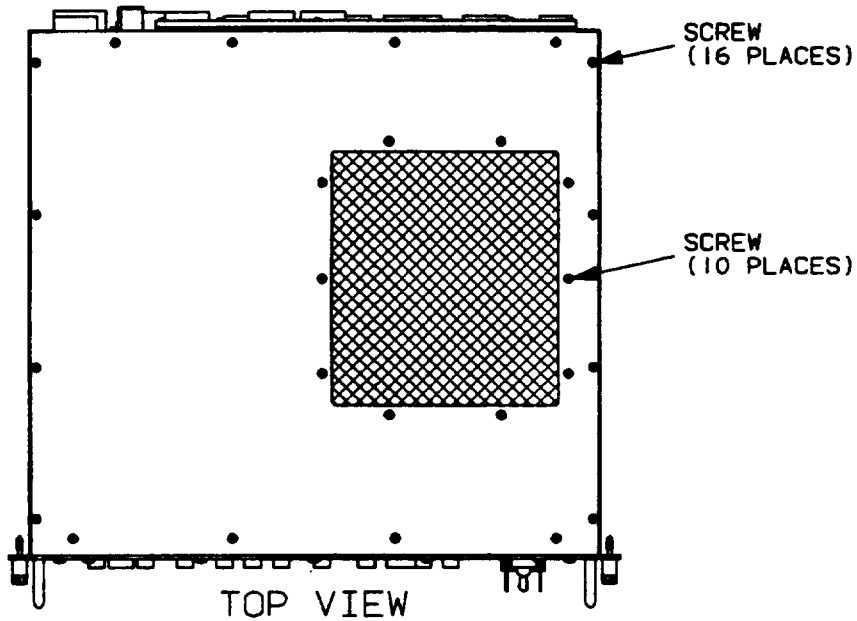
Personnel Required: 1

Remove/replace air filters as follows.



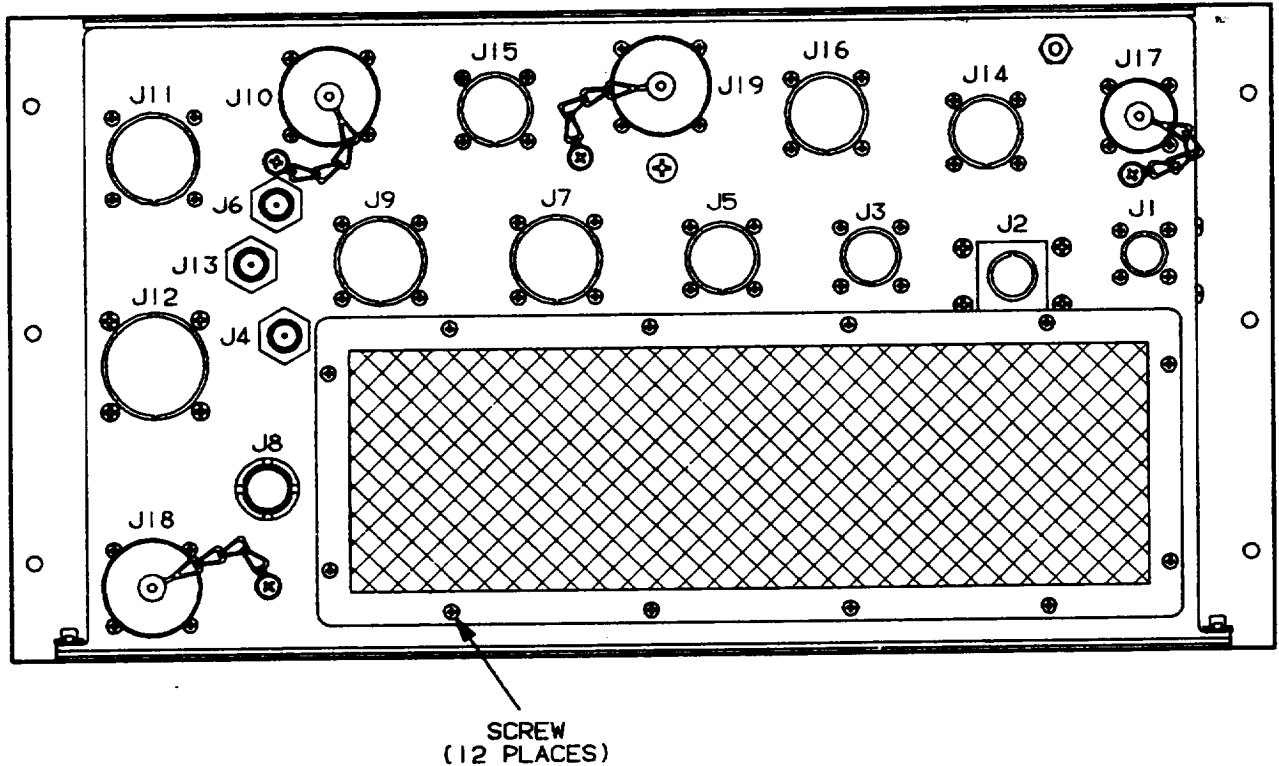
1. Remove system controller from equipment rack in accordance with System Controller Remove procedure in this manual.
2. To remove air filter from top cover, use a no.2 cross-tip screwdriver and remove sixteen screws securing top cover to system controller. Remove and retain cover and mounting hardware.
3. Using a no.2 cross-tip screwdriver and 1/4" socket wrench, remove and retain ten screws, lockwashers, flat washers and nuts securing air filter to top cover. Remove and retain air filter.

| | | |
|--------|----------------|----------------------------------------|
| 2 OF 3 | REMOVE/REPLACE | SYSTEM CONTROLLER (C-11845) AIR FILTER |
|--------|----------------|----------------------------------------|



4. To clean air filter, wash with water (or cleaner) and soft brush. Rinse air filter with clean water then allow to air dry.
5. To install air filter onto top cover of system controller, place air filter onto top cover and secure with ten screws, lockwashers, flat washers and nuts. Using a no. 2 cross-tip screwdriver and 1/4" socket wrench, tighten screws and nuts.
6. Place top cover on system controller and secure with sixteen screws. Using a no. 2 cross-tip screwdriver, tighten screws.

| | | |
|----------------------------------------|----------------|--------|
| SYSTEM CONTROLLER (C-11845) AIR FILTER | REMOVE/REPLACE | 3 OF 3 |
|----------------------------------------|----------------|--------|



7. Using a no .2 cross-tip screwdriver, remove and retain twelve screws securing air filter and air filter support from rear panel of system controller.
8. Remove and retain air filter and air filter support.
9. To clean air filter, wash with water (or cleaner) and soft brush. Rinse air filter with clean water then allow to air dry.
10. To install air filter, place air filter and air filter support onto rear panel of system controller and secure with twelve screws. Using a no. 2 cross-tip screwdriver, tighten screws.
11. Install system controller into equipment rack in accordance with System Controller Replace procedure in this manual.



The system power supply (All) is located in equipment rack 4.

Too Is Required: NONE

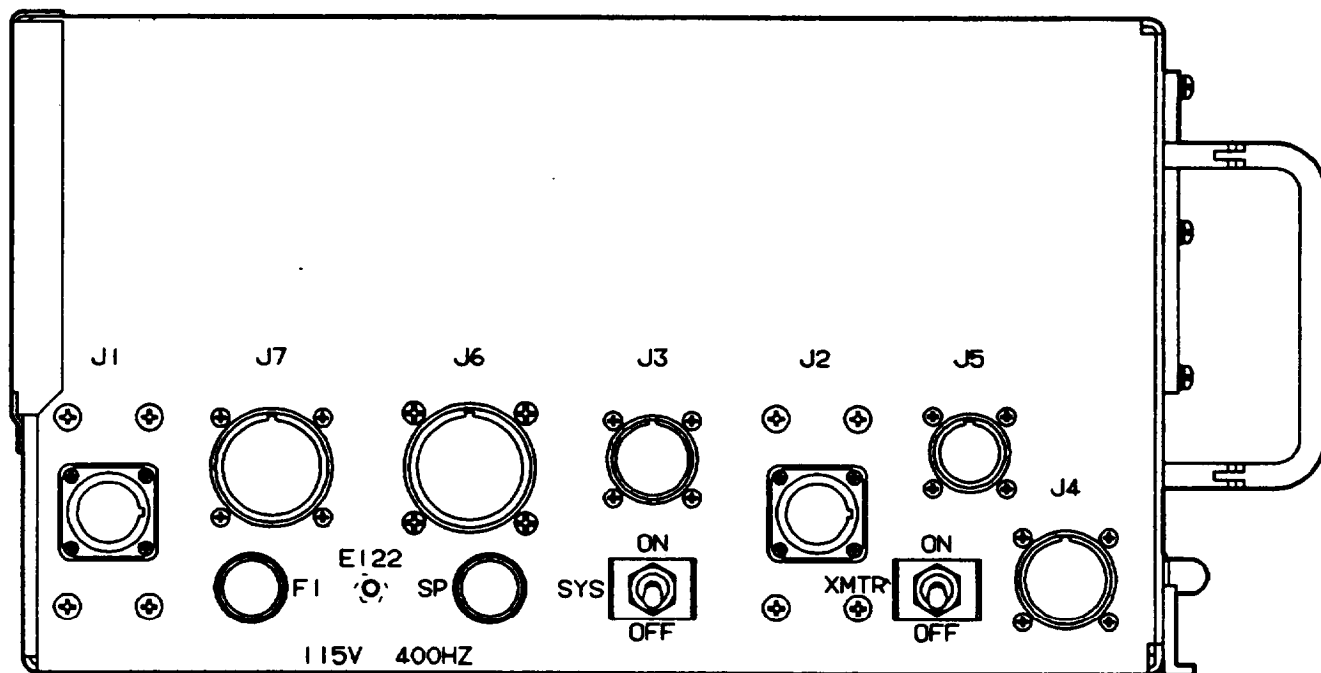
Personnel Required: 2

Remove system power supply as follows:

WARNING

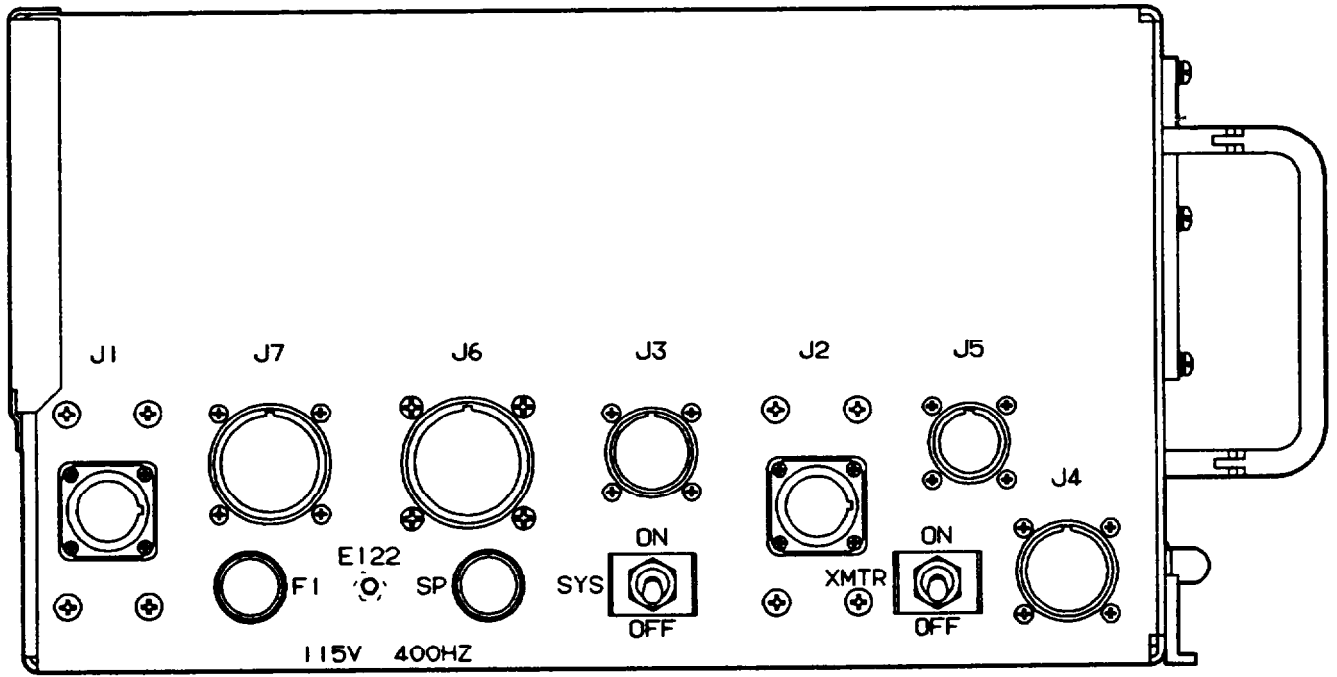
Two people are required to remove system power supply from equipment rack.

1. If mast crown is in stored position, remove in accordance with procedures in Technical Manual TM 32-5895-070-10.

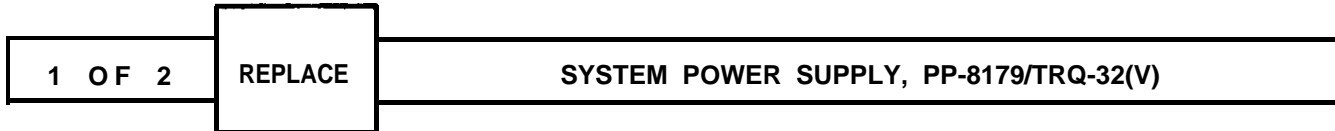


2. On system power supply, place XMTR and SYS ON/OFF switches to OFF position.
3. On power distribution panel, place circuit breaker labeled RACK 4 to OFF position.

| | | |
|-----------------------------------------|--------|--------|
| SYSTEM POWER SUPPLY , PP-8179/TRQ-32(V) | REMOVE | 2 OF 2 |
|-----------------------------------------|--------|--------|



4. On left side of system power supply, disconnect cables W99P2 from J1, W92P1 from J7, W94P1 from J6, W93P2 from J3, W100P2 from J2, W95P3 from J5 and W75P1 from J4.
5. At base of system power supply front panel, loosen and release two clamp bolt assemblies securing system power supply into equipment rack.
6. Slide system power supply forward and remove from equipment rack.



The system power supply (All) is located in equipment rack 4.

Tools Required: NONE

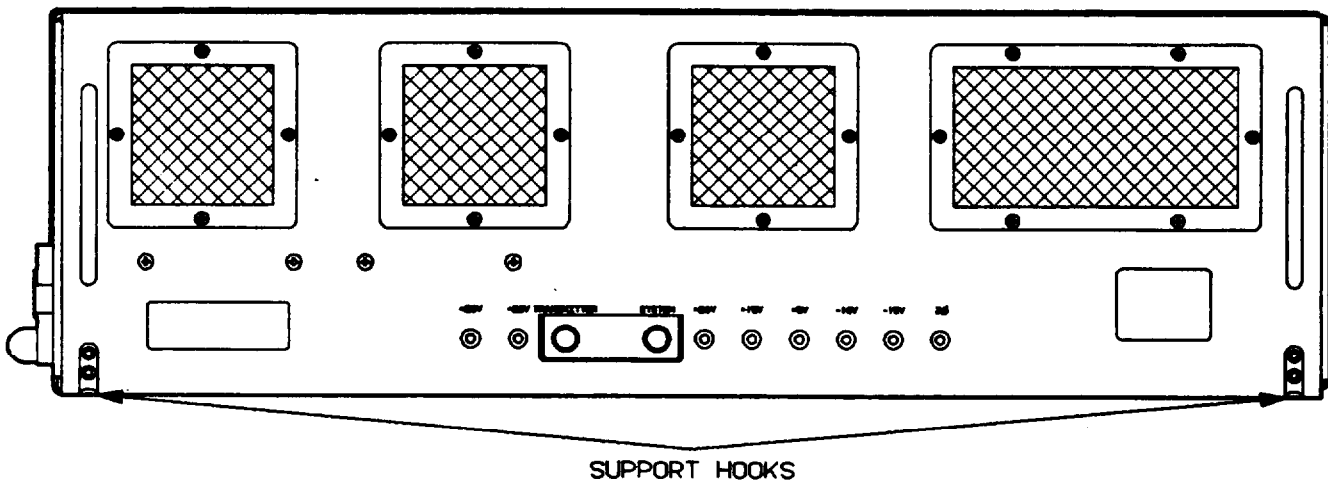
Personnel Required: 2

Replace system power supply as follows:

WARNING

Two people are required to lift system power supply into equipment rack.

1. On power distribution panel, place circuit breaker labeled RACK 4 to OFF position.

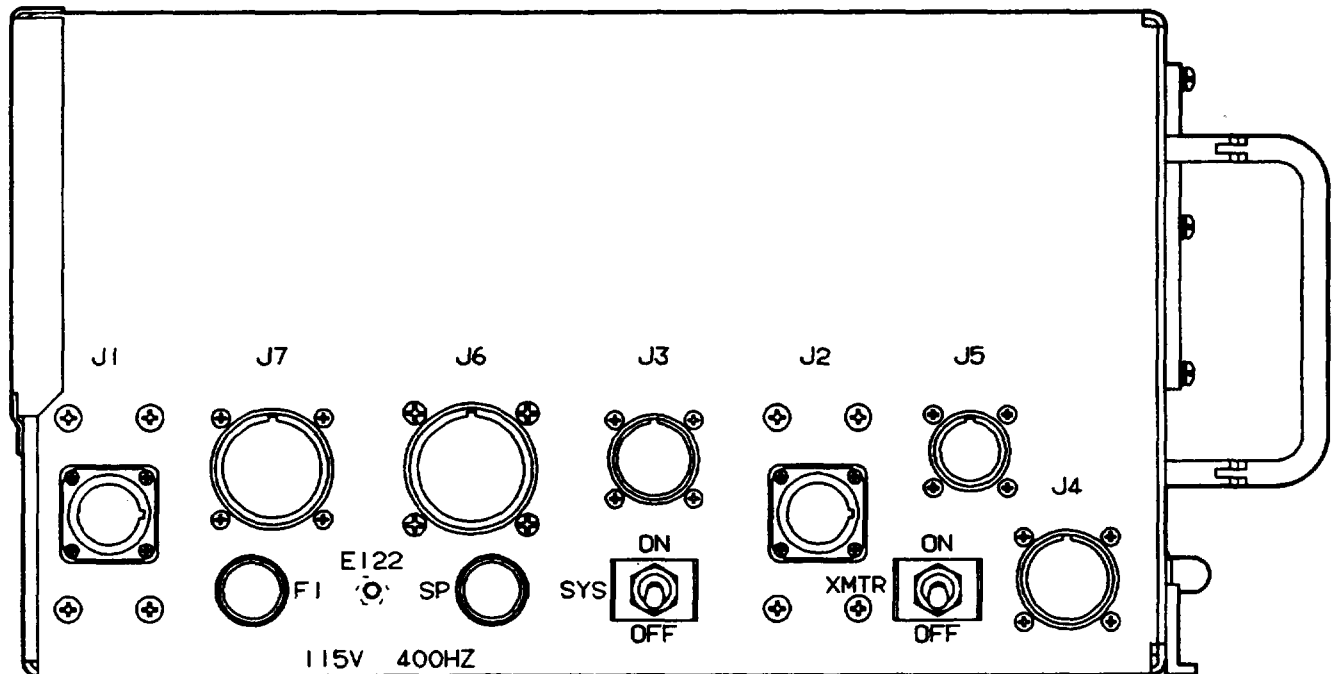


2. Slide system power supply into equipment rack. Ensure that alignment holes of system power supply are seated onto alignment pins in equipment rack.
3. On system power supply, position two clamp bolt assemblies onto support hooks located at base of system power supply front panel. Tighten clamp bolt assemblies to secure system power supply into equipment rack.

SYSTEM POWER SUPPLY, PP-8179/TRQ-32(V)

REPLACE

2 OF 2



4. On left side of system power supply, connect cables W99P2 to J1, W92P1 to J7, W94P1 to J6, W93P2 to J3, W100P2 to J2, W95P3 to J5 and W75P1 to J4.
5. On power distribution panel, place circuit breaker labeled RACK 4 to ON (up) position.
6. On system power supply, place XMTR and SYS ON/OFF switches to ON (up) position.

1 OF 1 REMOVE/REPLACE SYSTEM POWER SUPPLY (PP-8179) LAMP

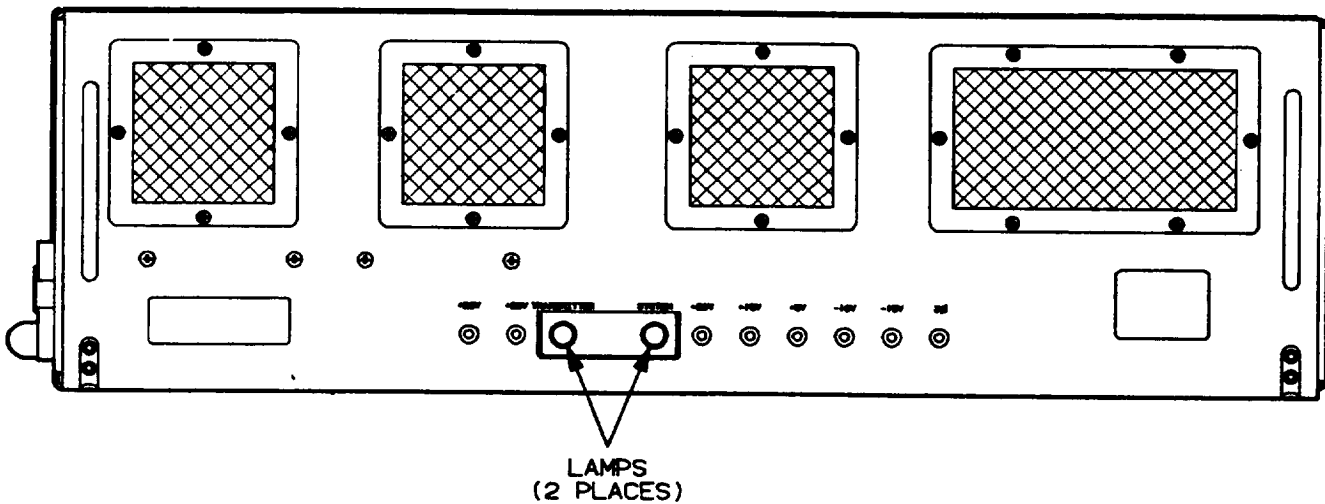
There are two lamps located on front panel of system power supply.

Tools Required: NONE

Personnel Required: 1

Remove system power supply lamps as follows.

1. On system power supply, place XMTR ON/OFF and SYS ON/OFF switches to OFF (down) position.



2. Turn lens lampholder counterclockwise to unscrew from lampholder housing. Remove lens lampholder from housing.
3. Pull defective lamp from lampholder and install new lamp.
4. Place lampholder into housing and turn clockwise to secure.
5. On system power supply, place XMTR ON/OFF and SYS ON/OFF switches to ON (up) position.

SYSTEM POWER SUPPLY (PP-8179) FUSE

REMOVE/REPLACE

1 OF 1

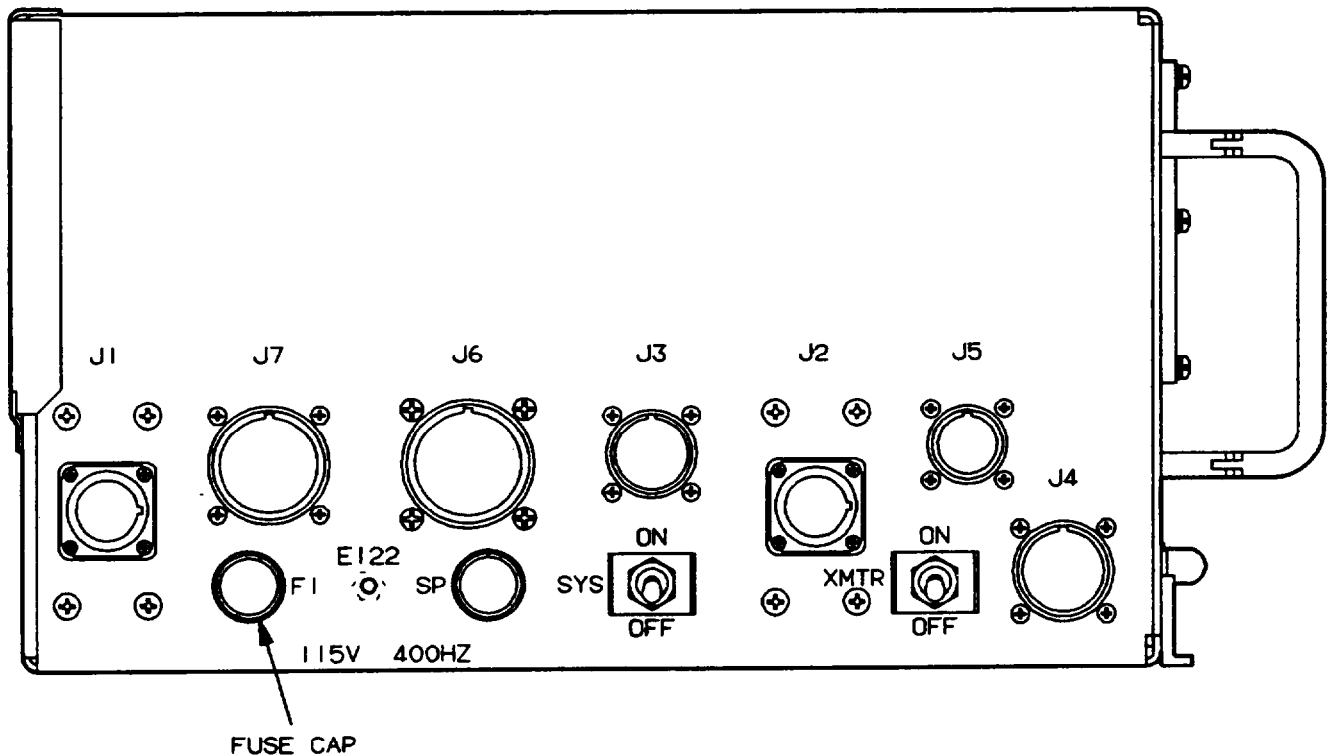
The system power supply fuse (F1) is located on left side of unit. Fuse (SP) is a spare fuse only.

Tools Required: NONE

Personnel Required: 1

Remove system power supply fuse as follows.

1. On system power supply, place SYS ON/OFF switch to OFF (down) position.



2. Turn metal cover protecting fuse cap counterclockwise to unscrew from fuseholder housing. Remove metal cover.
3. Push in on fuse cap and turn counterclockwise to unlock from housing. Remove fuse cap and fuse.
4. Pull defective fuse from fuse cap and install new fuse.
5. Position fuse cap and fuse into housing. Push in on fuse cap and turn clockwise to secure.
6. Place metal cover over fuse cap and onto housing. Turn metal cover clockwise to secure.
7. On system power supply, place SYS ON/OFF switch to ON (up) position.

| | | |
|--------|----------------|------------------------------------------|
| 1 OF 2 | REMOVE/REPLACE | SYSTEM POWER SUPPLY (PP-8179) AIR FILTER |
|--------|----------------|------------------------------------------|

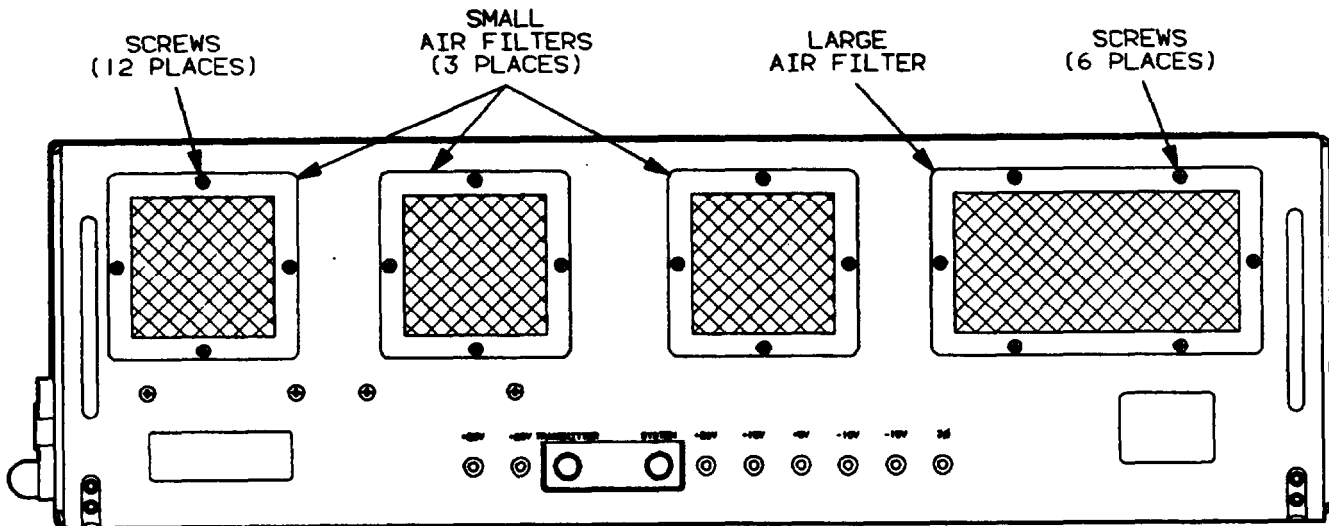
There are four air filters located on front panel of system power supply.

Tools Required: TK-105/G
Soft brush

Personnel Required: 1

Remove/replace system power supply air filters as follows.

1. If mast crown is in stored position, remove in accordance with Technical Manual TM 32-5895-070-10.
2. On power distribution panel, place circuit breaker labeled RACK 4 to OFF (down) position.
3. On system power supply, place XMTX ON/OFF and SYS ON/OFF switches to OFF (down) position.

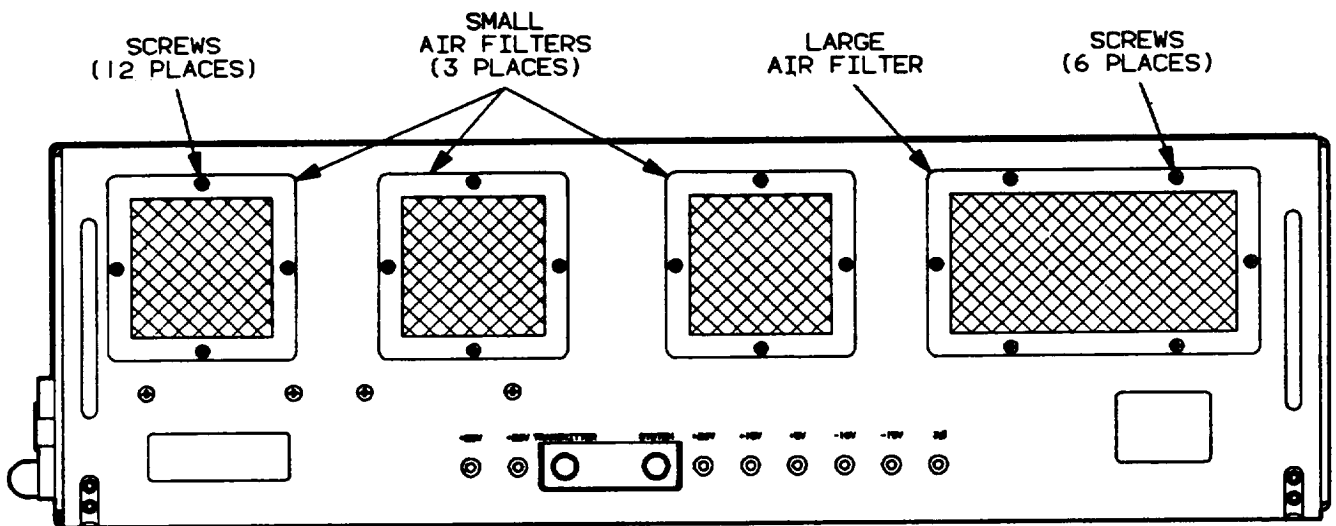


4. Using a no.2 cross-tip screwdriver, remove twelve screws securing three small air filters to system power supply front panel. Remove and retain twelve screws and three air filters.
5. Using a no.2 cross-tip screwdriver, remove six screws securing large air filter to system power supply front panel. Remove and retain six screws and air filter.
6. To clean air filters, wash with water (or cleaner) and soft brush (Appendix D, Item 1). Rinse air filters with clean water then allow to air dry.

SYSTEM POWER SUPPLY (PP-8179) AIR FILTER

REMOVE/REPLACE

2 OF 2



7. Place largest air filter onto front panel and secure with six screws. Using a no. 2 cross-tip screwdriver, tighten screws.
8. Place each small air filter onto system power supply front panel and secure with four screws each. Using a no. 2 cross-tip screwdriver, tighten screws.
9. On system power supply, place XMTR ON/OFF and SYS ON/OFF switches to ON (up) position.
10. On power distribution panel, place circuit breaker labeled RACK 4 to ON (up) position.

1 OF 2

REMOVE

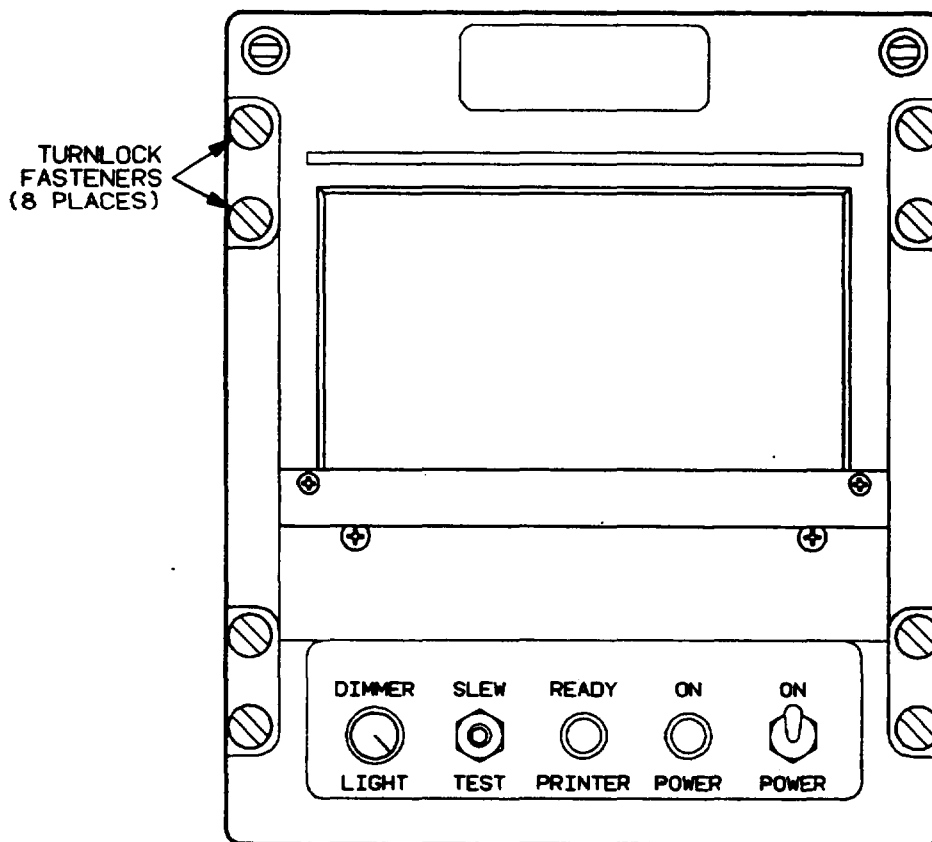
PRINTER, RP-272/G

The printer (A12) is located in equipment rack 2.

Tools Required: TK-105/G

Personnel Required: 1

Remove printer as follows:

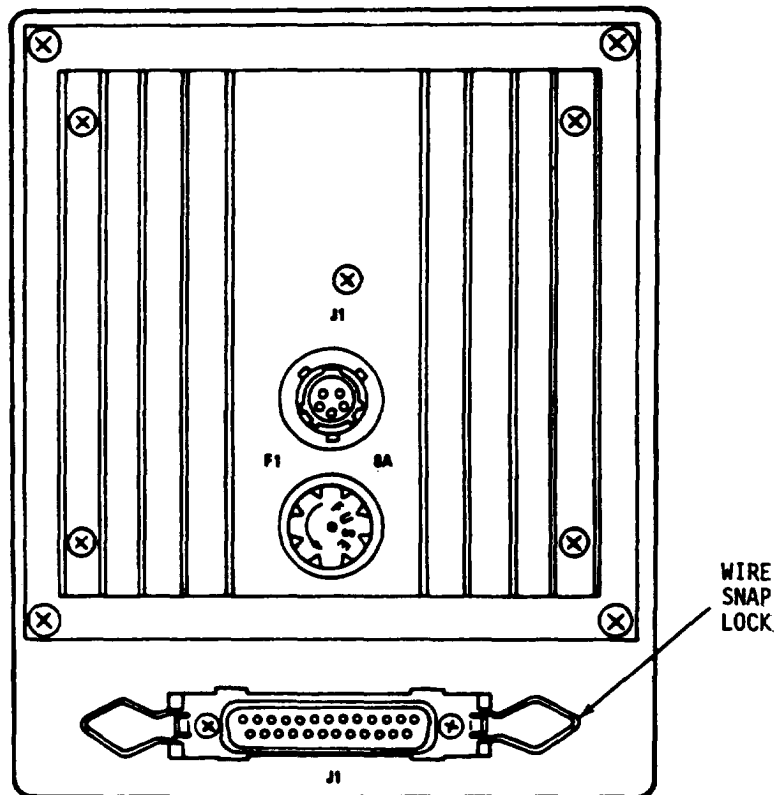


1. On front panel of printer, place POWER switch to off (down) position.
2. On system power supply, place SYS ON/OFF switch to OFF (down) position.
3. Cut printer paper and separate from printer paper take-up reel.
4. Using 1/4" flat-tip screwdriver, loosen eight turnlock fasteners securing printer into equipment rack.
5. Pull printer forward until connectors at rear are accessible.

PRINTER, RP-272/G

REMOVE

2 OF 2



6. On rear of printer, unlock wire snap lock and disconnect cable W79P2 from A12A1J1.
7. On rear of printer, disconnect W94P3 from A12A2J1.
8. Remove printer completely from equipment rack.



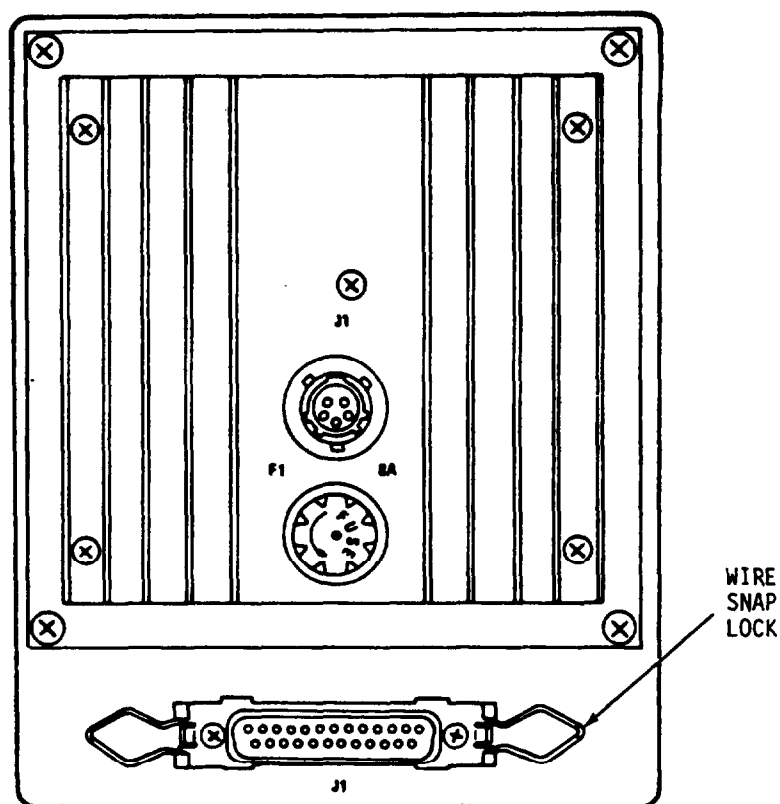
The printer (A12) is located in equipment rack 2.

Tools Required: TK-105/G

Personnel Required: 1

Replace printer as follows:

1. On system power supply, place SYS ON/OFF switch to OFF position.
2. Place printer partially into equipment rack, leaving access to connectors at rear.

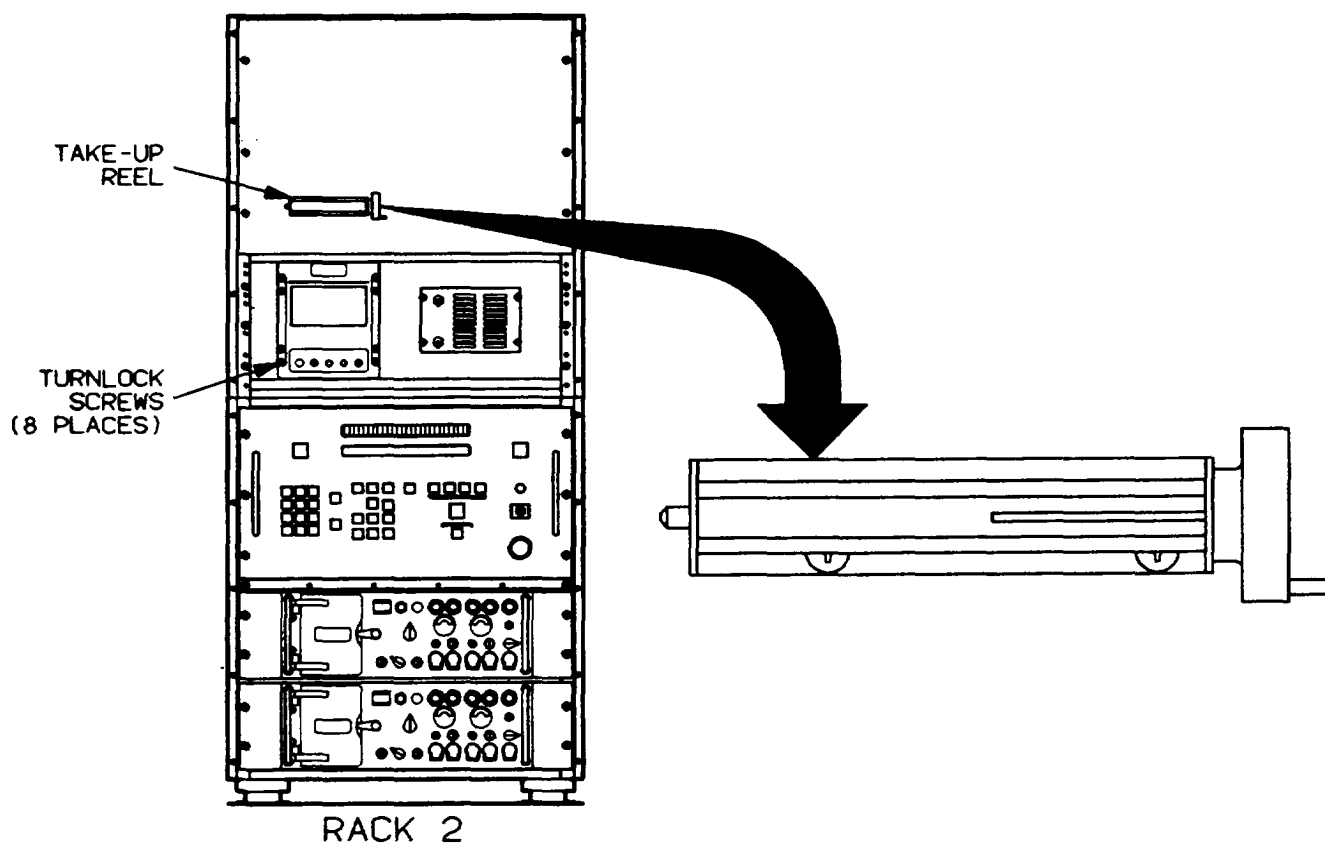


3. On rear of printer, connect cable W79P2 to A12A1J1 and secure with wire snap lock.
4. On rear of printer, connect W94P3 to A12A2J1.

PRINTER, RP-272/G

REPLACE

2 OF 2



5. Place printer completely into equipment rack and secure with eight turnlock fasteners. Using a 1/4" flat-tip screwdriver, tighten fasteners.
6. On system power supply, place SYS ON/OFF switch to ON position.
7. On front panel of printer, place POWER switch to ON position.
8. On front panel of printer, place SLEW/TEST switch into SLEW position and advance paper (Appendix D, Item 12) until it reaches take-up reel.
9. Connect paper to take-up reel.

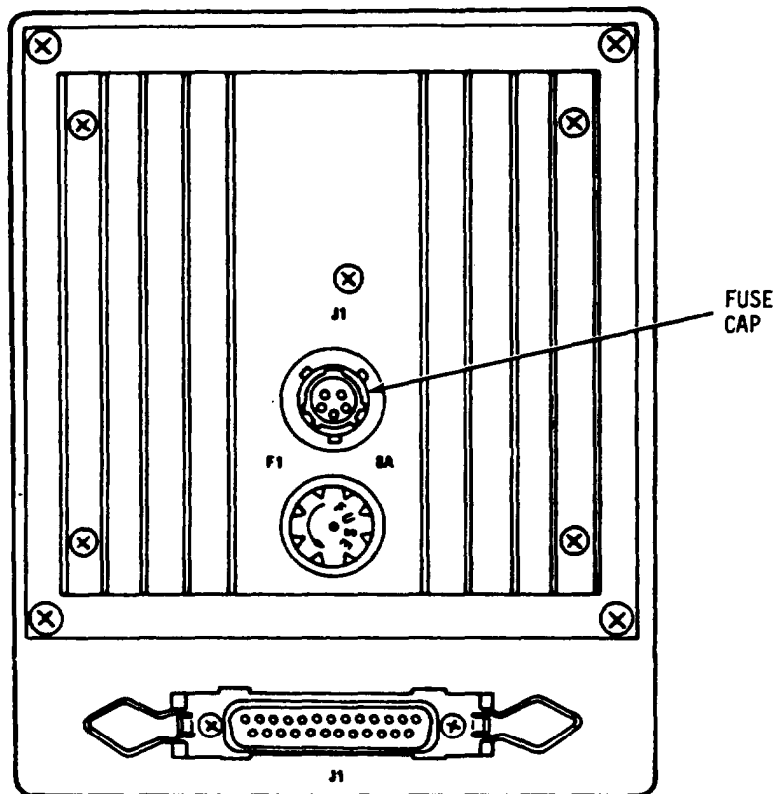
The Printer fuse is located on rear panel of printer.

Tools Required: TK-105/G

Personnel Required: 1

Remove printer fuse as follows.

1. Remove printer from equipment rack in accordance with Printer Remove procedure in this manual.



2. On rear panel of printer, push in fuse cap and turn counterclockwise to unlock fuse cap from fuseholder housing. Remove fuse cap and fuse.
3. Pull defective fuse from fuse cap and install new fuse.
4. Position fuse cap and fuse into fuseholder housing and turn clockwise to secure.
5. Install printer into equipment rack in accordance with Printer Replace procedure in this manual

| | | |
|--------------------------|---------------|---------------|
| DFCU, C-11002/USQ | REMOVE | 1 OF 1 |
|--------------------------|---------------|---------------|

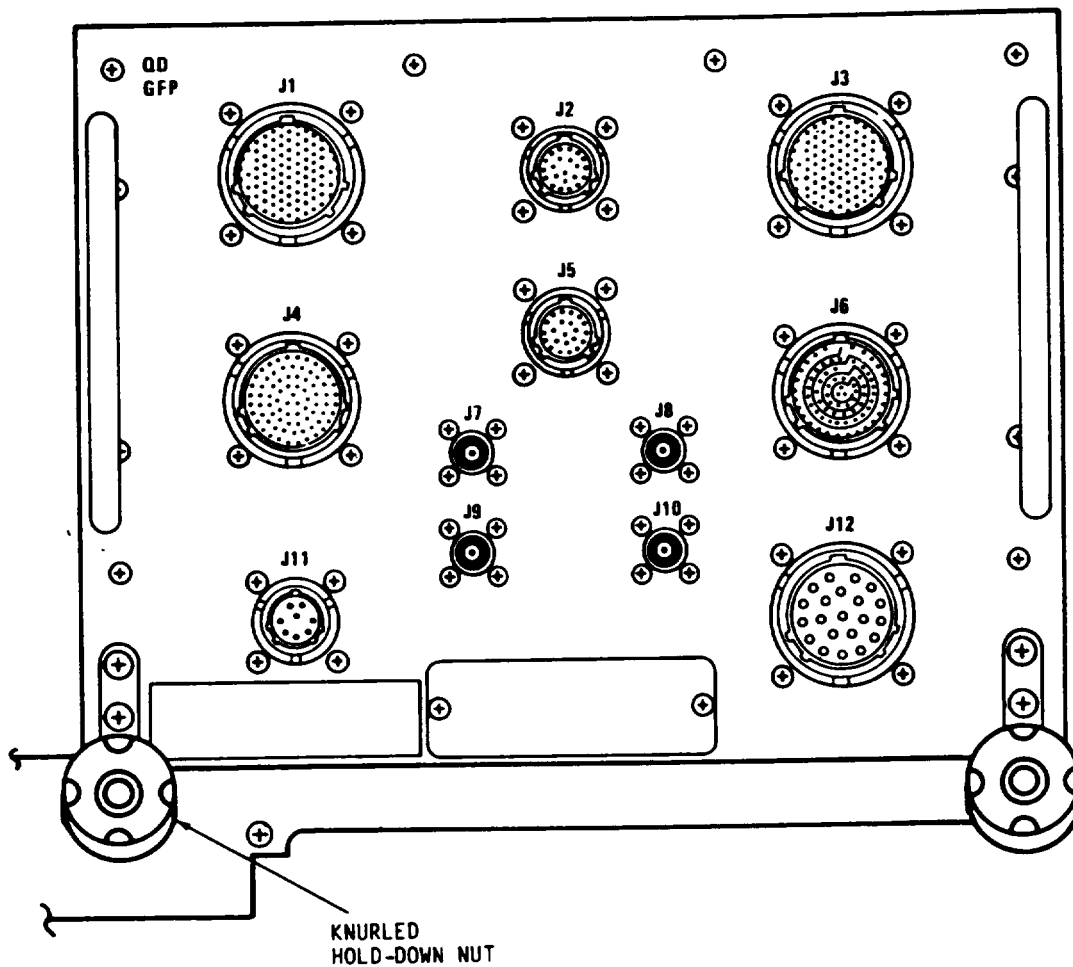
The DFCU (A13) is located in equipment rack 3.

Tools Required: NONE

Personnel Required: 1

Remove DFCU as follows:

1. On system power supply, place SYS ON/OFF switch to OFF position.



2. On front of DFCU, disconnect W12P13 from A13J2, W19P2 from A13J5, W15P1 (Jumper Plug) from A13J4, W2P1 from A13J7, W93P1 from A13J11, and W94P2 from A13J12.
3. Loosen and release two clamp bolt assemblies securing DFCU to equipment rack.
4. Pull DFCU forward and remove completely from equipment rack.



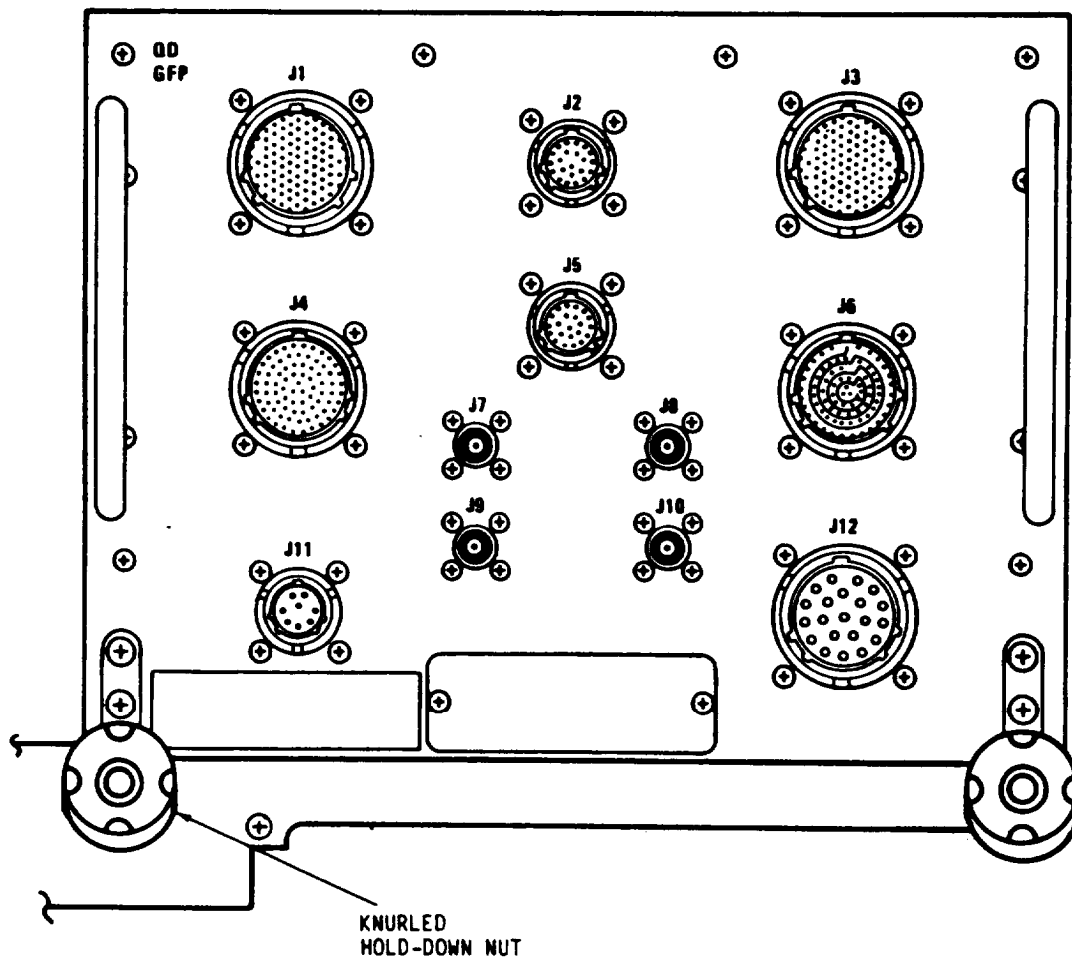
The DFCU (A13) is located in equipment rack 3.

Tools Required: NONE

Personnel Required: 1

Replace DFCU as follows:

1. On system power supply, place SYS ON/OFF switch to OFF position.
2. Slide DFCU into equipment rack and seat on guide pins.



3. Place clamp bolt assemblies over support hooks of DFCU front panel. Tighten clamp bolt assemblies, securing DFCU to equipment rack.
4. On front panel of the DFCU, connect W94P2 to A13J12, W93P1 to A13J11, W2P1 to A13J7, W15P1 (Jumper Plug) to A13J4, W19P2 to A13J5, and W12P13 to A13J2.
5. On system power supply, place SYS ON/OFF switch to ON position.

UHF RECEIVER-TRANSMITTER, RT-1288A/ARC-164(V)

REMOVE

1 OF 1

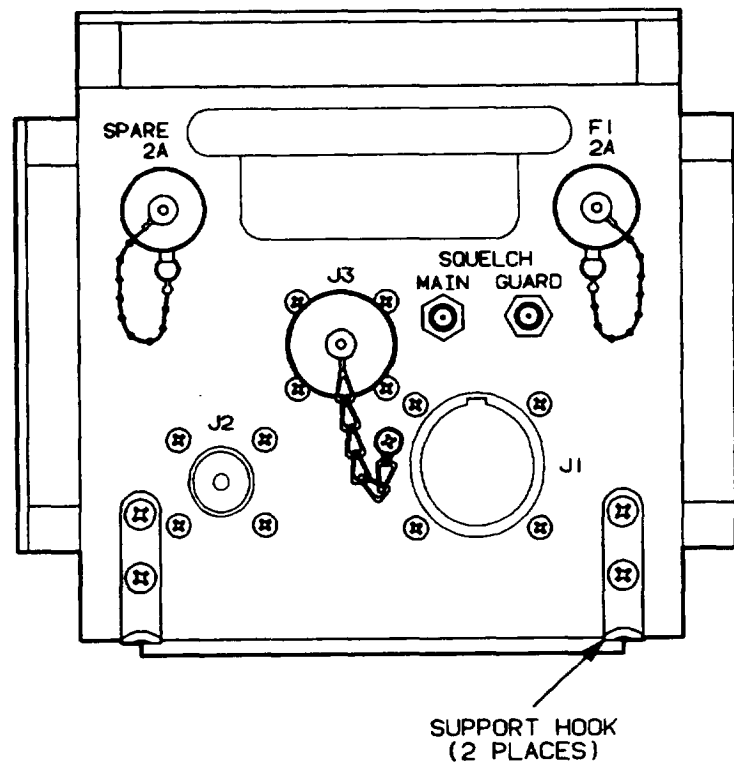
The UHF receiver-transmitter is located in equipment rack 4.

Tools Required: NONE

Personnel Required: 2

Remove UHF receiver-transmitter as follows:

1. On data link processor, place power ON/OFF switch to OFF position.
2. On system power supply, place XMTR ON/OFF switch to OFF position.



3. On UHF receiver-transmitter front panel, disconnect cables W88P2 from A21J1 and W96P2 from A21A1J2.
4. Loosen and release two clamp bolt assemblies securing UHF receiver-transmitter to mount.
5. Slide UHF receiver-transmitter to left and remove from mount.
6. Remove UHF receiver-transmitter from system.

| | |
|--------|---------|
| 1 OF 2 | REPLACE |
|--------|---------|

UHF RECEIVER-TRANSMITTER, RT-1288A/ARC-164(V)

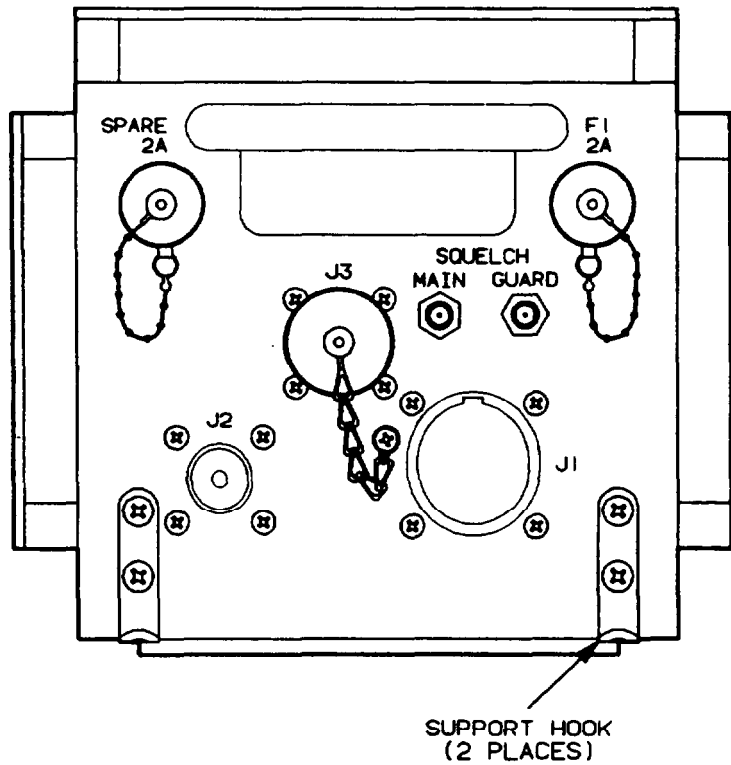
The UHF receiver-transmitter is located in equipment rack 4.

Tools Required: NONE

Personnel Required: 2

Replace UHF receiver-transmitter as follows:

1. On data link processor, place power ON/OFF switch to OFF position.
2. On system power supply, place XMTR ON/OFF switch to OFF position.



3. Place UHF receiver-transmitter into mount. Slide to right until alignment holes of UHF receiver-transmitter are seated onto guide pins of mount.
4. Ensure connector J4 of UHF receiver-transmitter mates correctly with connector J1 of mount.

| |
|-----------------------------------------------|
| UHF RECEIVER-TRANSMITTER, RT-1288A/ARC-164(V) |
|-----------------------------------------------|

| |
|---------|
| REPLACE |
|---------|

2 OF 2

5. Place two clamp bolt assemblies over support hooks on front panel of UHF receiver-transmitter. Tighten knobs on clamp bolt assemblies to secure UHF receiver-transmitter into mount.
6. On UHF receiver-transmitter, connect cables W88P2 to A21J1 and W96P2 to A21A1J2.
7. On system power supply, place XMTR ON/OFF switch to ON position.
8. On data link processor, place power ON/OFF switch to ON position.



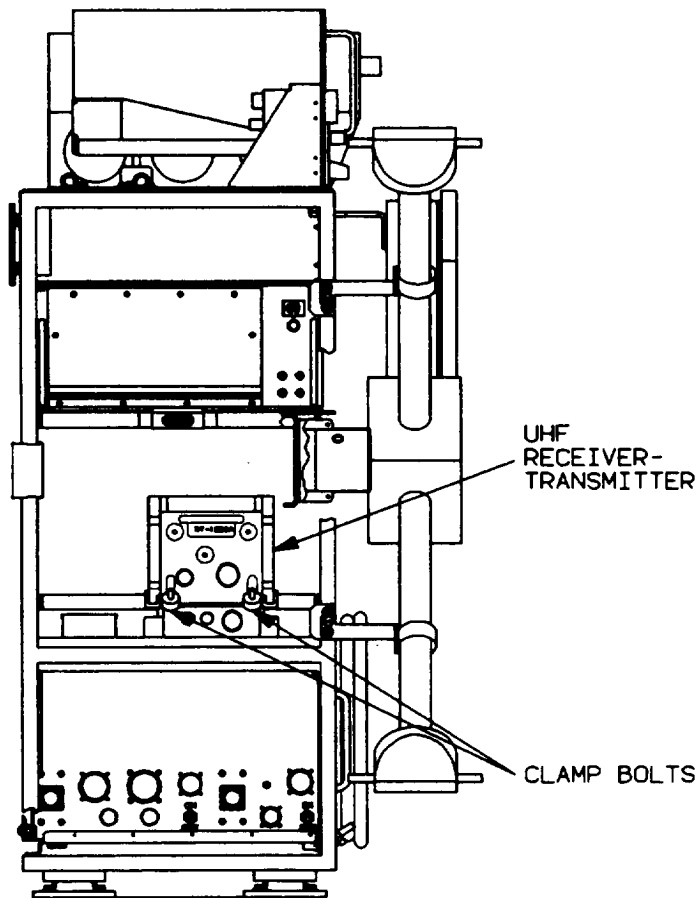
There are two fuses, SPARE and F1. SPARE is on left side, and F1 is on right side of UHF receiver-transmitter.

Tools Required: NONE

Personnel Required: 1

Remove UHF receiver-transmitter fuse as follows.

1. On system power supply, place XMTR ON/OFF switch to OFF position,



2. Remove metal fuse cover from fuseholder housing. Push in fuse cap and turn counterclockwise to unlock from fuseholder housing. Remove fuse cap and fuse from fuseholder housing.
3. Remove defective fuse from fuse cap and install new fuse.
4. Place fuse cap and fuse into housing. Push in fuse cap and turn clockwise to secure.
5. On system power supply, place XMTR ON/OFF switch to ON position.

AUDIO FREQUENCY SWITCH, SA-2171/VRC

REMOVE

1 OF 1

Audio frequency switch (A24) is located in equipment rack 4.

Tools Required: TK-101/G

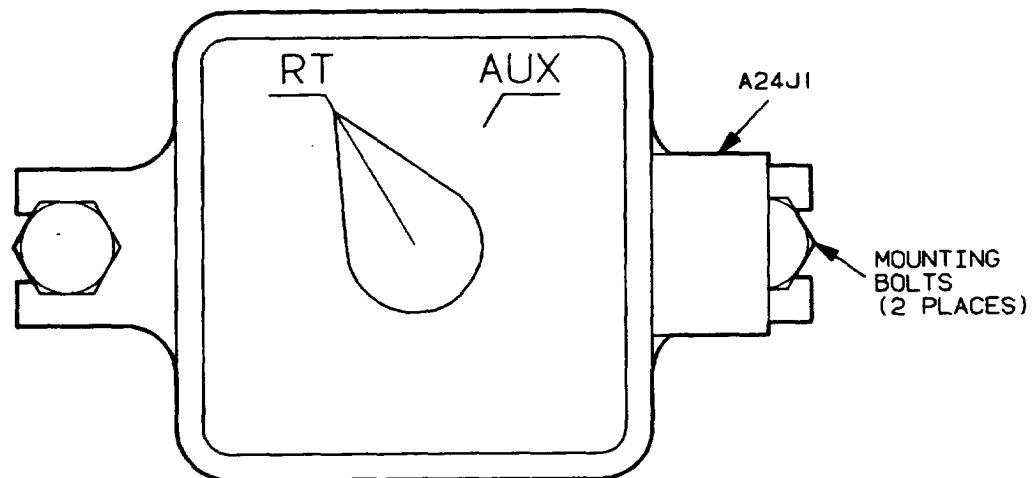
Personnel Required: 1

Remove audio frequency switch as follows:

NOTE

If VRC-47/ESS-501 MEMORY circuit breaker is turned OFF, it will cause receiver control units to lose all memory.

1. On power distribution panel, place VRC-47/ESS-501 MEMORY circuit breaker in OFF position.



2. On audio frequency switch, disconnect W45P2 from A24J1.
3. Using 7/16" open-end wrench, remove and retain two mounting bolts, lock washers, and flat washers securing audio frequency switch to equipment rack. Remove audio frequency switch from equipment rack.

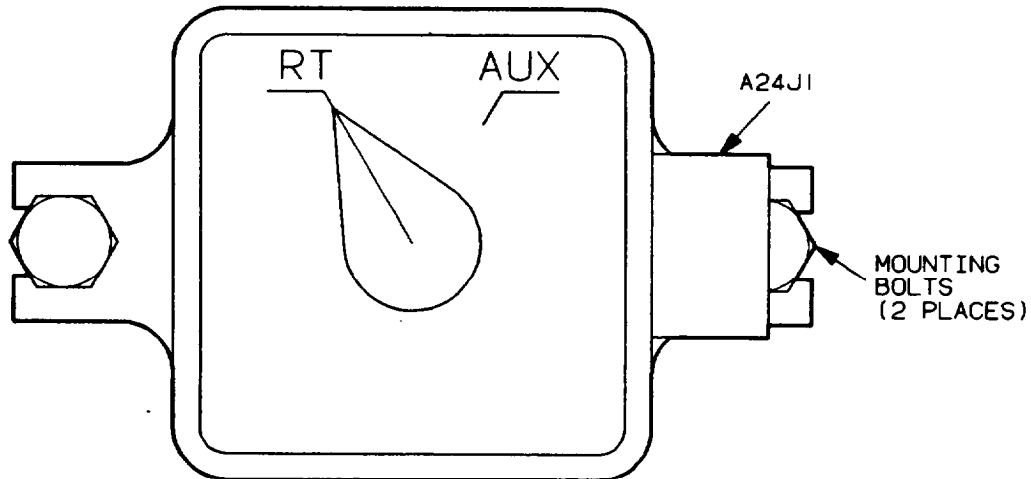


Audio frequency switch (A24) is located in equipment rack 4.

Tools Required: TK-101/G

Personnel Required: 1

Replace audio frequency switch as follows:



1. Place audio frequency switch on equipment rack and secure with two mounting bolts, lock washers and flat washers. Using a 7/16" open-end wrench, tighten mounting bolts.
2. On audio frequency switch, connect W45P2 to A24J1.
3. On power distribution panel, place circuit breaker labeled VCR-47/ESS-501 MEMORY to ON position.

FIELD TELEPHONE, TA-312/PT

REMOVE

1 OF 1

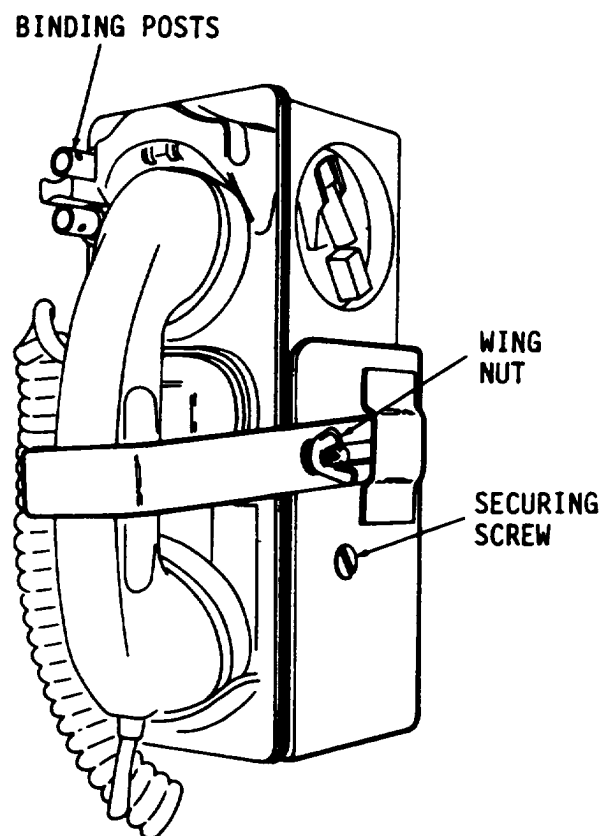
The field phone (A27) is located on inside rear wall of shelter.

Tools Required: TK-105/G

Personnel Required: 1

Remove field phone as follows:

1. Push in two binding posts and disconnect wires from field phone.



NOTE

The screw securing field phone to equipment rack may be a slotted or cross-tip screw.

2. Using a no. 2 cross-tip (or 1/4" flat-tip) screwdriver, remove and retain screw securing field phone set to mounting bracket.
3. Loosen wing nut on bracket securing handset. Pull bracket forward and place downward, out of way.
4. Pull field phone forward until free of mounting bracket. Remove and retain metal holding plate.

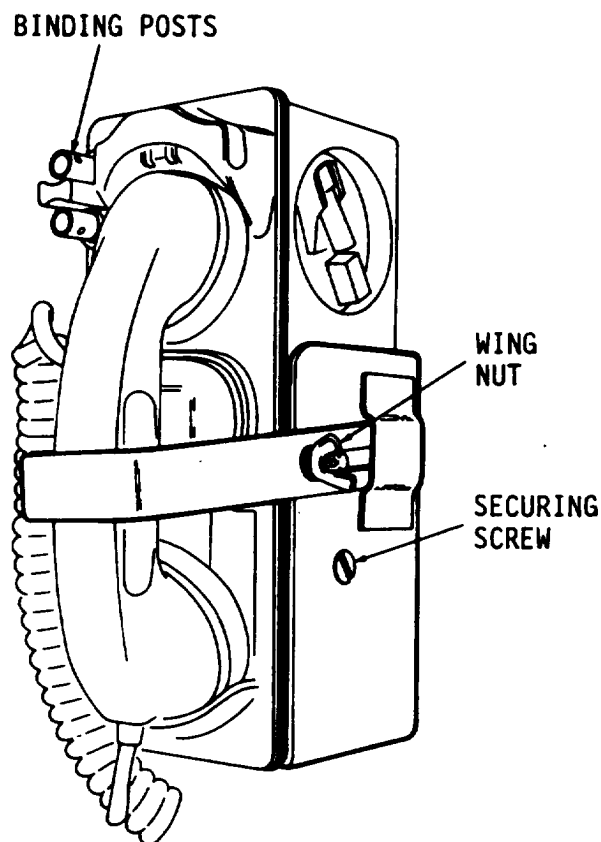
Field phone (A27) is located on inside rear wall of shelter.

Tools Required: TK-105/G

Personnel Required: 1

Replace field phone as follows:

1. Place field phone and metal holding plate into mounting bracket.



NOTE

The screw securing field phone may be a slotted or cross-tip screw.

2. Insert retaining screw through mounting bracket and into metal holding plate. Using a no. 2 cross-tip (or 1/4" flat-tip) screwdriver, tighten screw.
3. Position handset bracket over handset and tighten retaining wingnut.
4. Push in binding posts and insert wire.

HG/AC (SHELTER MOUNTED UNIT)

REMOVE

1 OF 6

The HG/AC (A28A1) is located on front of shelter above vehicle cab.

Tools Required: Refrigerator Unit Tool Set
 5 Ton Wrecker
 Sling Assembly
 Rope

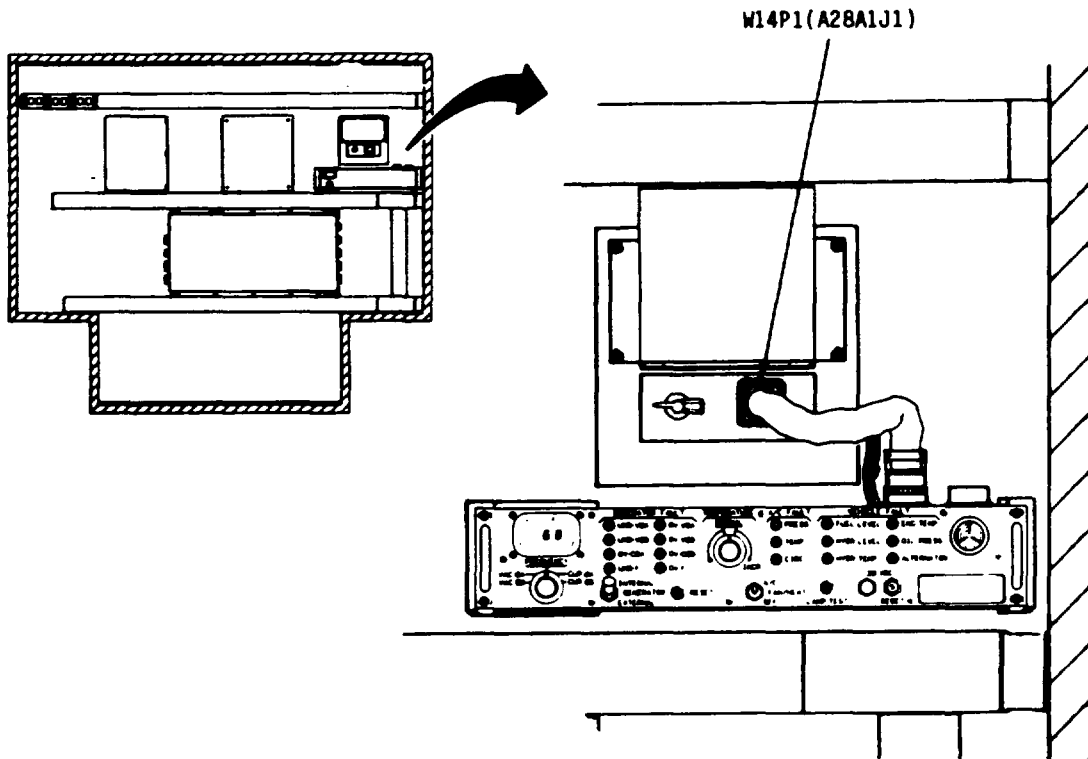
Personnel Required: 3

Remove HG/AC (shelter mounted unit) as follows:

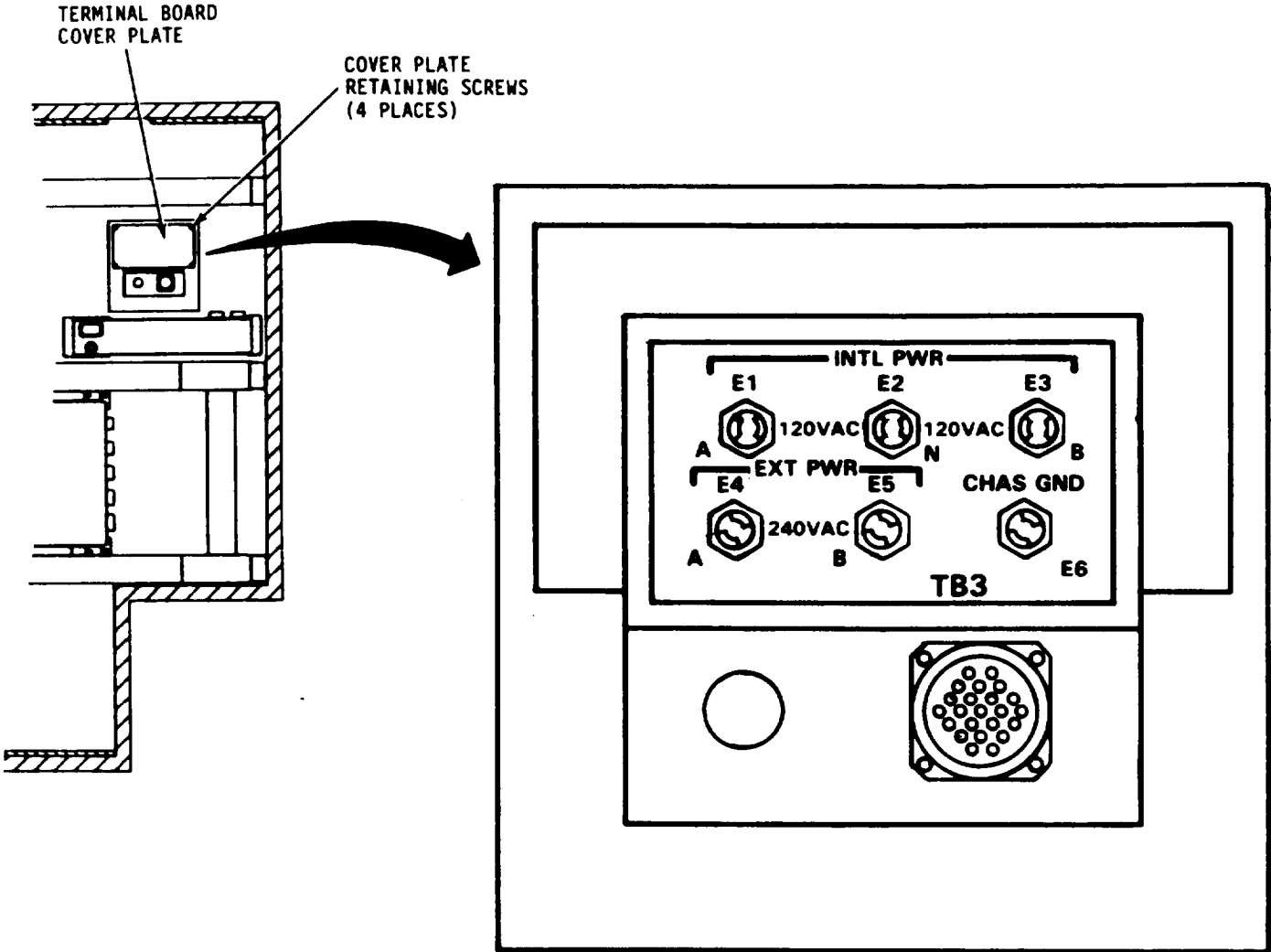
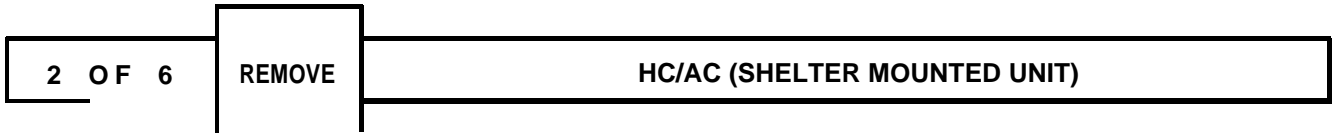
CAUTION

The shelter must be removed from vehicle before removing HG/AC to prevent possible damage to vehicle.

1. Remove shelter from vehicle in accordance with Shelter Remove procedure in this manual .
2. Prepare a place where HG/AC will be placed when removed from shelter. It should be level and clear of debris.

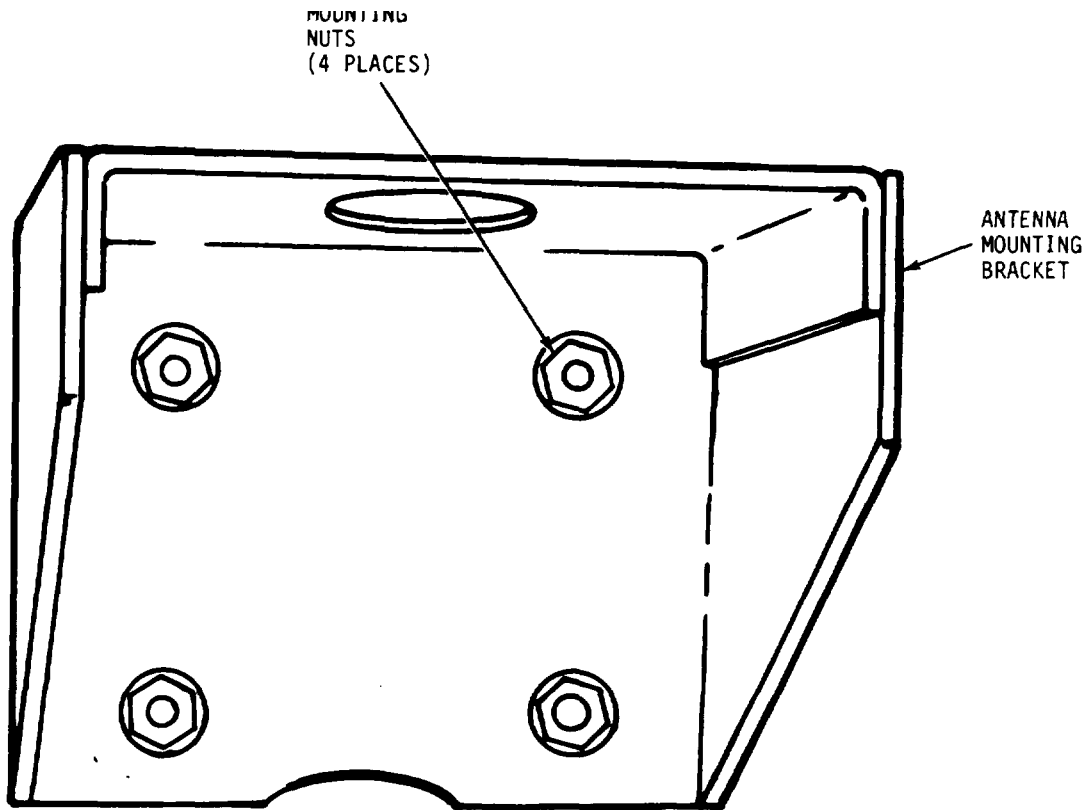


3. On front inside wall of shelter, disconnect cable W14P1 from A28A1J1 above HG/AC control.

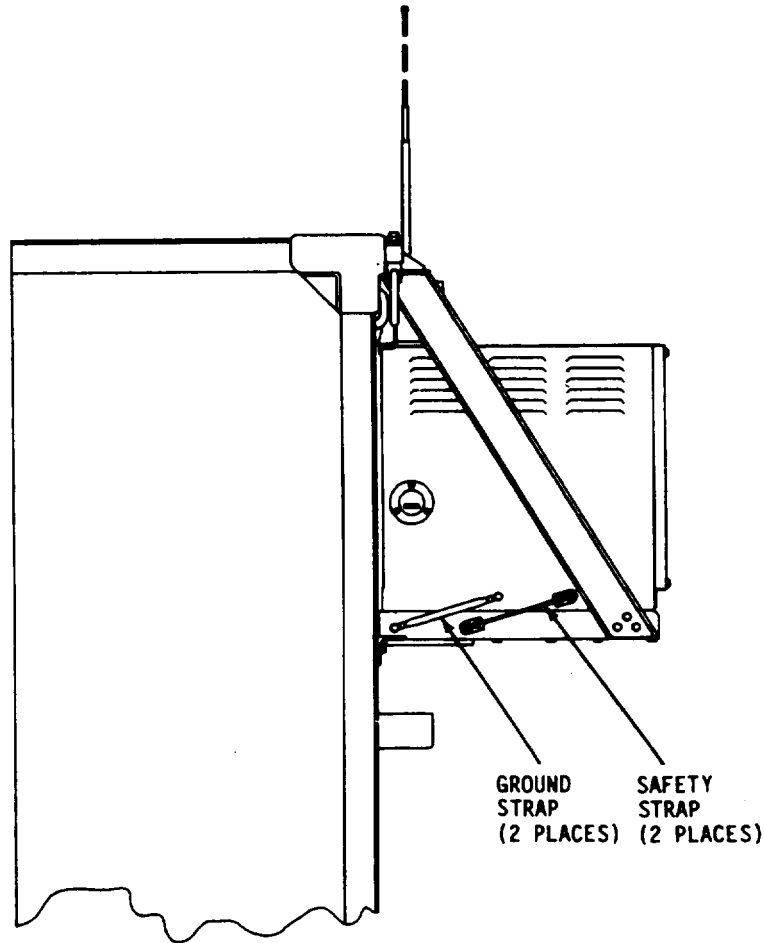


4. Using no. 2 cross-tip screwdriver, remove and retain four screws, lockwashers, and flat washers securing cover plate for terminal board (TB3).
5. Tag and identify wires connected to terminals E1 thru E6 of terminal board TB3.
6. Using a ratchet handle, 5" extension, and 5/8" socket, loosen nuts on terminals of TB3. Remove wires from terminals of TB3.

| | | |
|------------------------------|--------|--------|
| HC/AC (SHELTER MOUNTED UNIT) | REMOVE | 3 OF 6 |
|------------------------------|--------|--------|



7. Using a ratchet handle, 6" extension and 7/16" socket, remove and retain four nuts, lockwashers, and flat washers securing guard receiver antenna mounting bracket to front curbside of shelter. Remove antenna mounting bracket.
8. Using a ratchet handle, 6" extension and 7/16" socket, remove and retain four nuts, lockwashers, and flat washers securing HF intercept antenna mounting bracket to front roadside of shelter. Remove antenna mounting bracket.

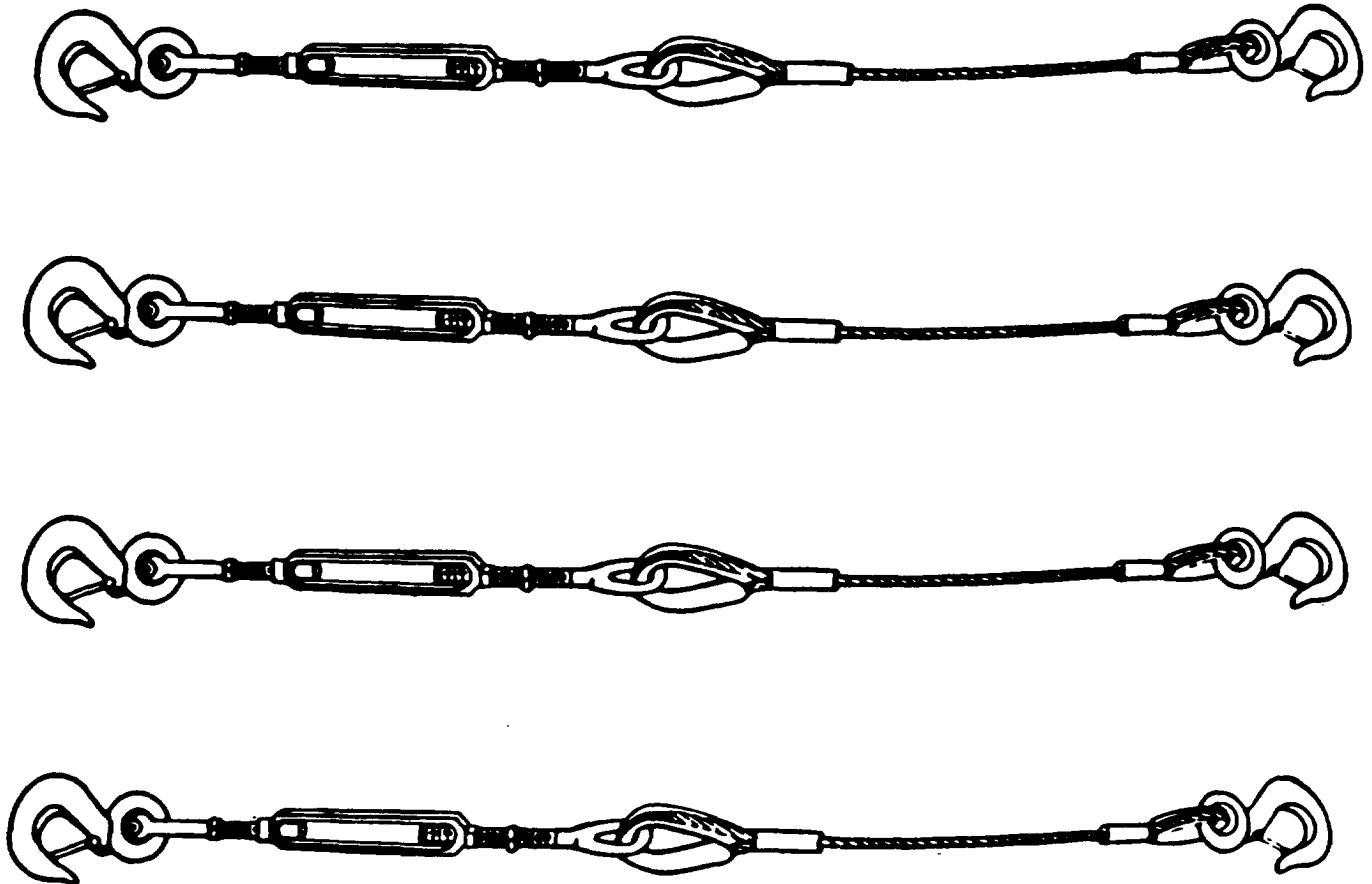


9. Using 1/2" open-end wrench, remove and retain cap screws and lockwashers securing ground straps on both sides of HG/AC.
10. Using no. 3 cross-tip screwdriver, remove and retain screws securing safety straps to both sides of HG/AC.
11. Using a ratchet handle, 6" extension and 9/16" socket, remove and retain seven cap screws, lockwashers and flat washers securing HG/AC base through rubber mounting brackets on HG/AC mounting frame.
12. Using a ratchet handle and 3/4" socket, remove and retain three cap screws, lockwasher, and flat washers securing top of HG/AC unit through rubber mounting brackets located at front of shelter.

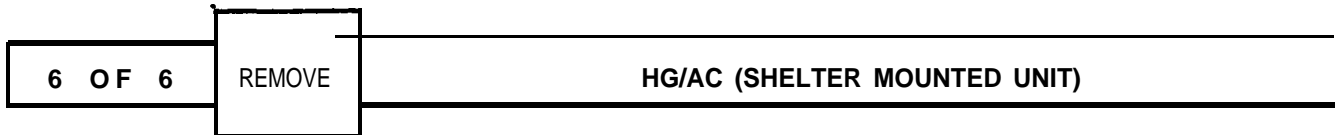
HG/AC (SHELTER MOUNTED UNIT)

REMOVE

5 OF 6



13. Remove four shelter tie downs from vehicle. Adjust to equal length and tighten locknuts against turn buckle.
14. Connect one end of tie downs to HG/AC lifting loops.
15. Connect other end of tie downs to lifting harness.
16. Connect lifting harness to wrecker hook.
17. Tie a rope to curbside corner of HG/AC.



NOTE

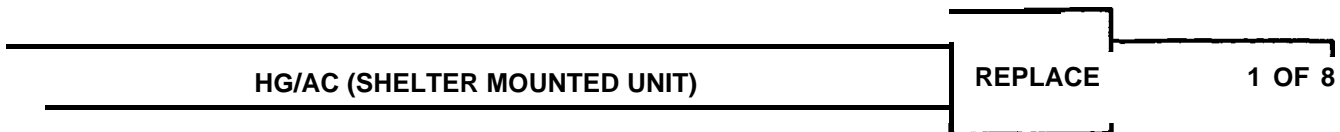
One man stabilizes HG/AC while second man lifts HG/AC from shelter with wrecker.

18. Using 5 ton wrecker, lift HG/AC up and away from shelter.

CAUTION

To prevent damage to oil coolers at bottom of HG/AC, ensure surface on which HG/AC is to be placed is level and clear of debris.

19. Lower HG/AC onto previously prepared surface.
20. Remove tie downs and lifting harness from HG/AC.
21. Using 1/2" open-end wrench, remove three cap screws, lockwashers and flat washers securing three mounting brackets to top of HG/AC.

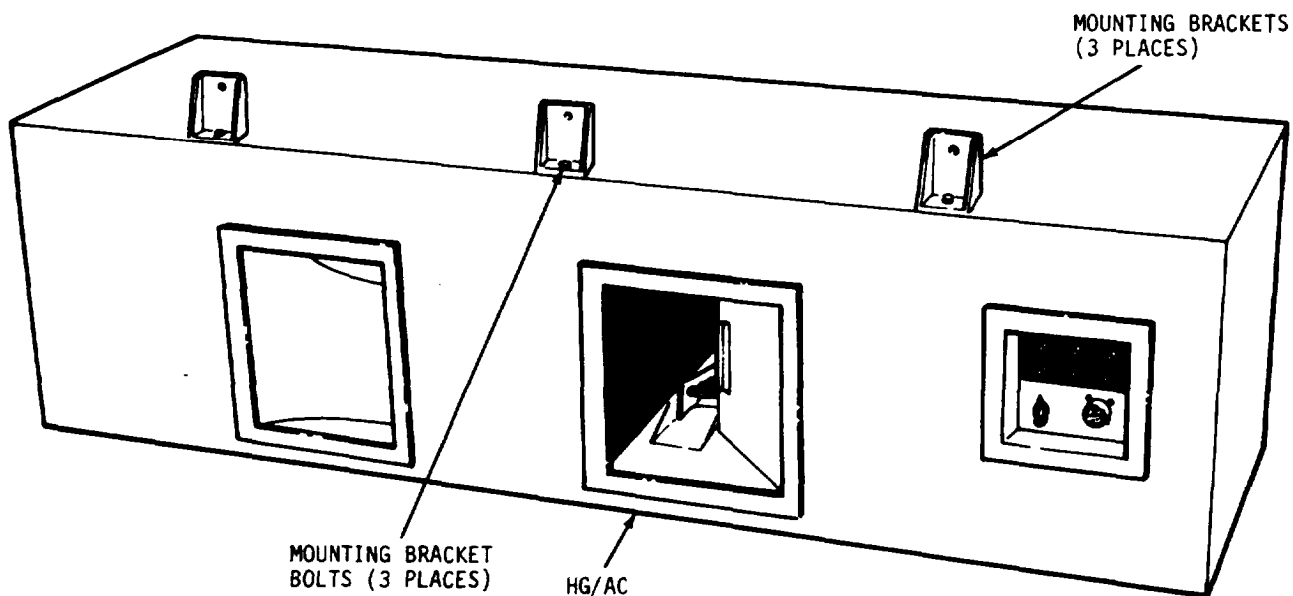


The HG/AC (A28A1) is located on front of shelter about vehicle cab.

Tools Required: Refrigerator Unit Tool Set
 5 Ton Wrecker
 Sling Assembly
 Rope

Personnel Required: 3

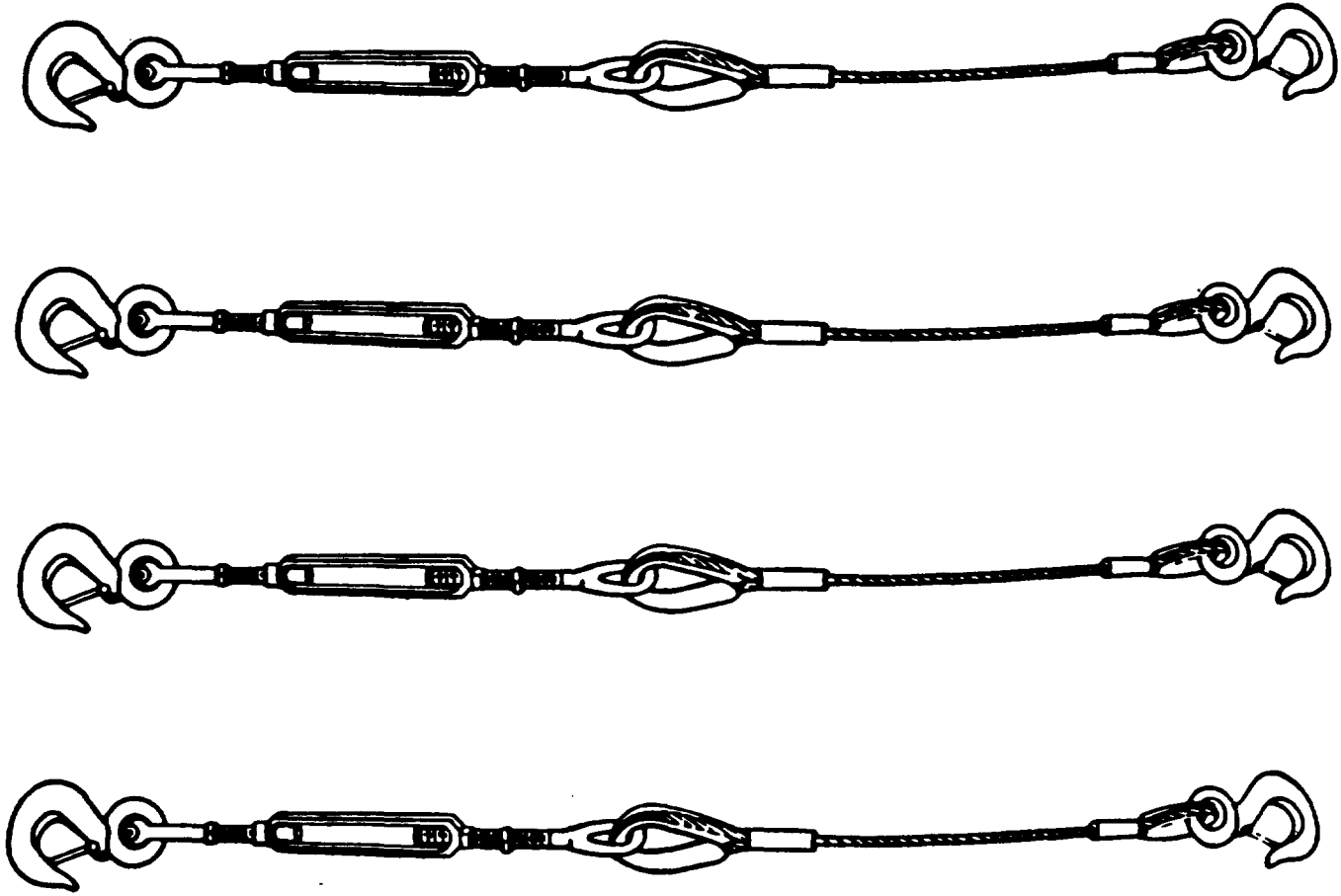
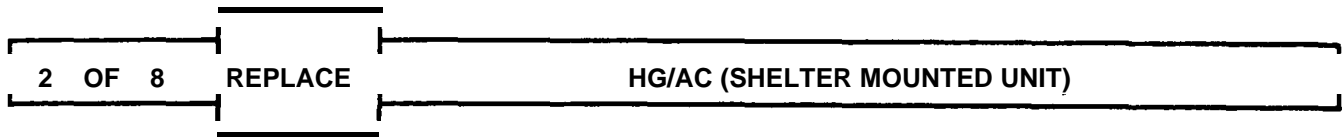
Replace HG/AC (shelter mounted unit) as follows:



1. Position three mounting brackets onto top of HG/AC and secure with three cap screws, lockwashers and flat washers. Using a 1/2" open-end wrench, tighten cap screws.

CAUTION

To reduce possibility of internal damage to HG/AC, ensure cover is in place when installing HG/AC onto shelter.

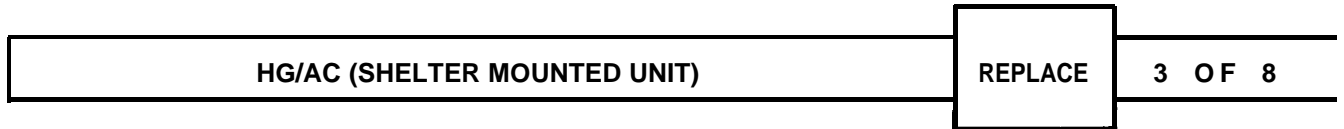


2. Ensure all shelter tie downs are equal in length.
3. Connect one end of tie downs to HG/AC lifting loops.
4. Connect other end of tie downs to lifting harness.
5. Connect lifting harness to wrecker hook.
6. Tie a rope to curbside corner of HG/AC.

NOTE

One man will use rope to stabilize HG/AC while second man operates wrecker to lift HG/AC onto shelter.

7. Using 5 ton wrecker, lift and position HG/AC above mounting frame.



CAUTION

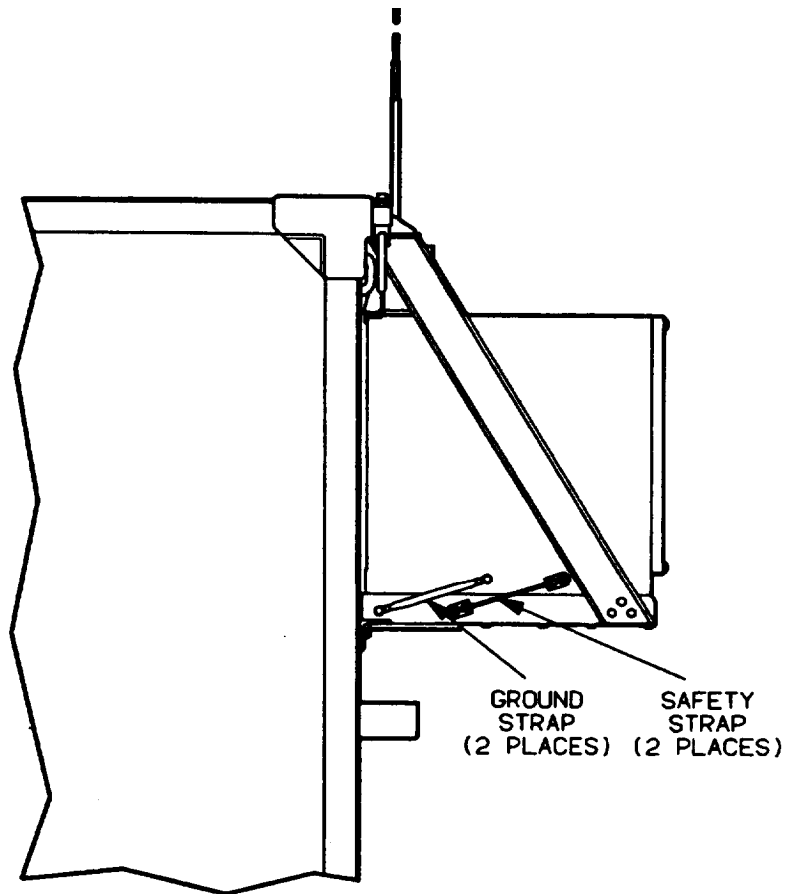
When positioning HG/AC onto shelter, ensure HG/AC clears top of mounting frame.

8. Lower HG/AC into place just above rubber mounting brackets on mounting frame.
9. Place seven cap screws, lockwashers and flat washers through rubber mounting brackets and into base of HG/AC. Lower HG/AC until seated onto mounting brackets. Using a ratchet handle, 6" extension and 9/16" socket, tighten cap screws.
10. Position three cap screws, lockwashers and flat washers through mounting brackets at top of HG/AC and into rubber mounting brackets on shelter. Using a ratchet and 3/4" socket, tighten cap screws.
11. Remove tie downs and lifting harness from HG/AC.

4 OF 8

REPLACE

HG/AC (SHELTER MOUNTED UNIT)

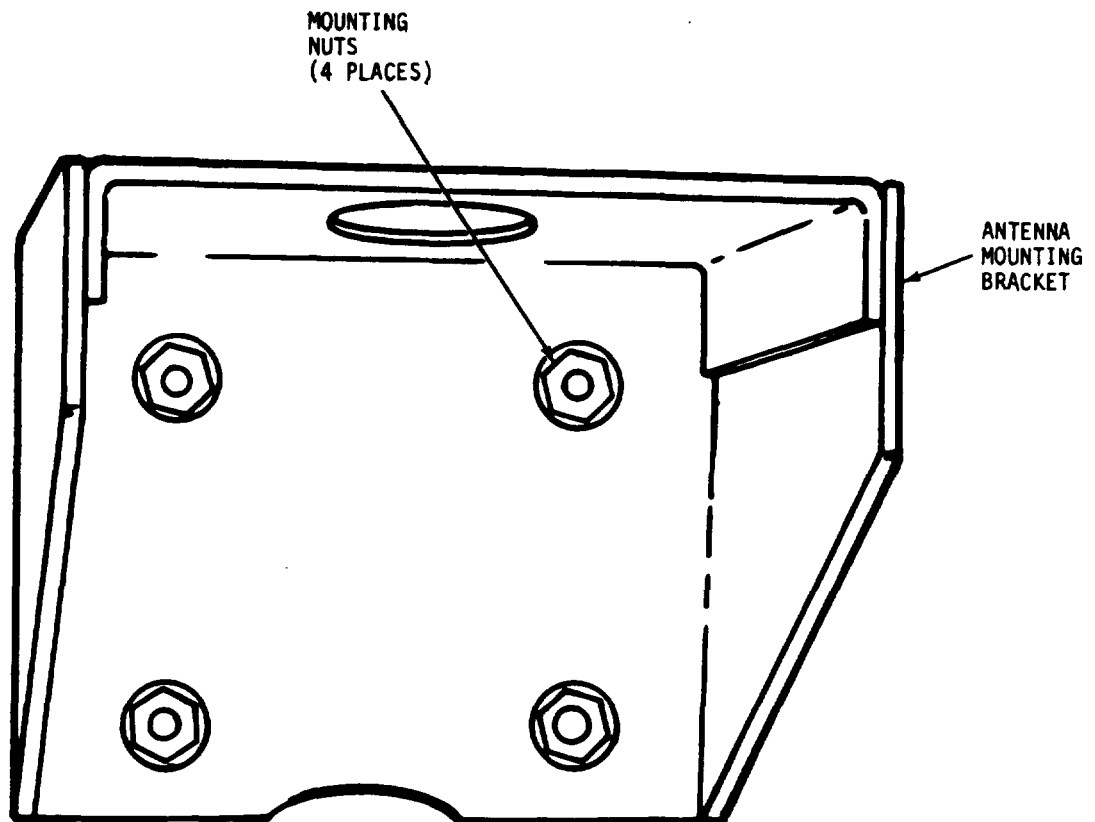


12. Secure safety strap to both sides of HG/AC with machine screw. Using a no. 3 cross-tip screwdriver, tighten screw.
13. Secure ground strap to both sides of HG/AC with cap screw, and lockwasher. Using a no. 3 cross-tip screwdriver, tighten cap screw.

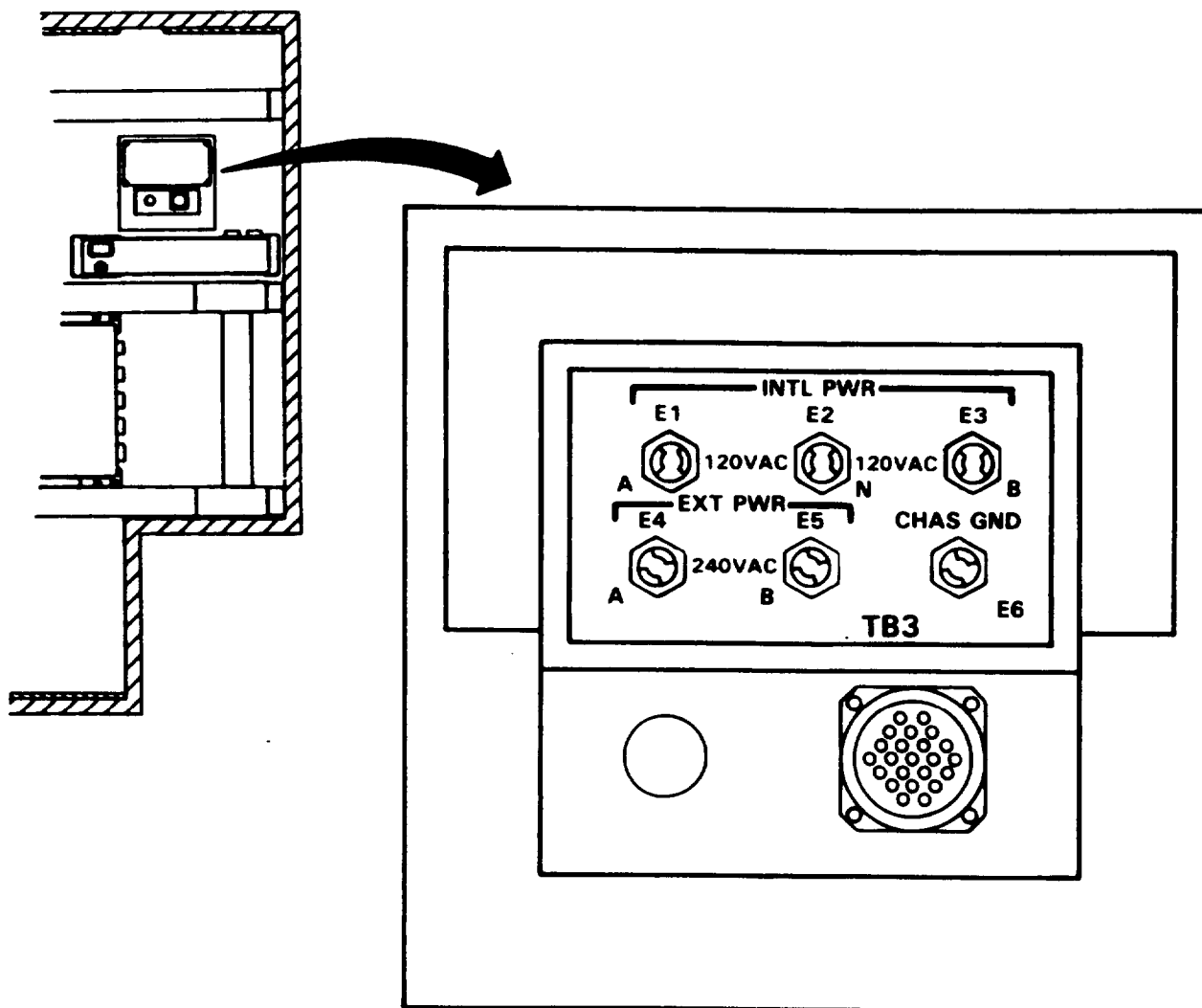
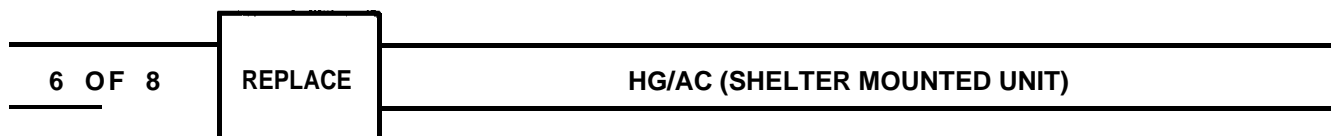
HG/AC (SHELTER MOUNTED UNIT)

REPLACE

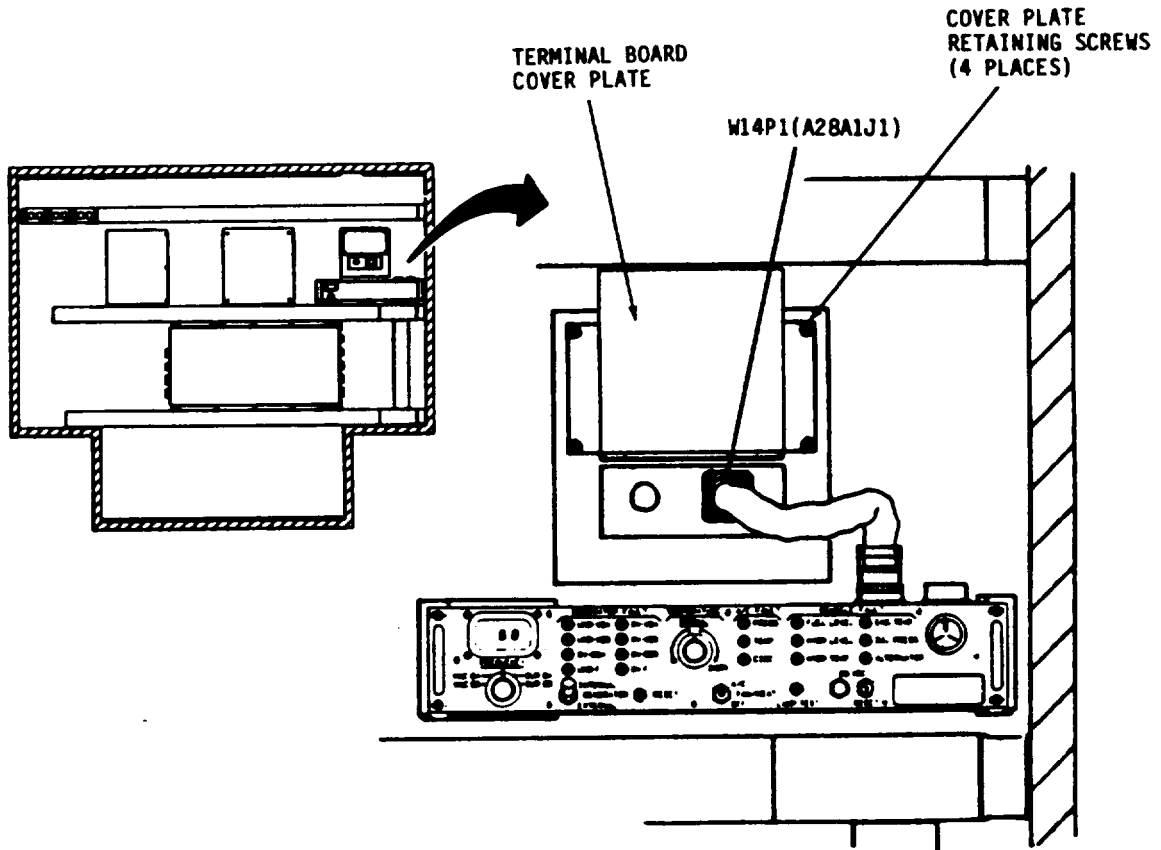
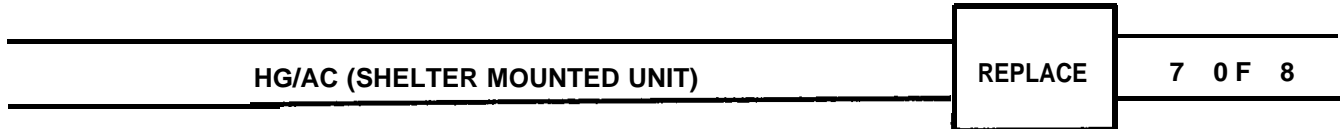
5 OF 8



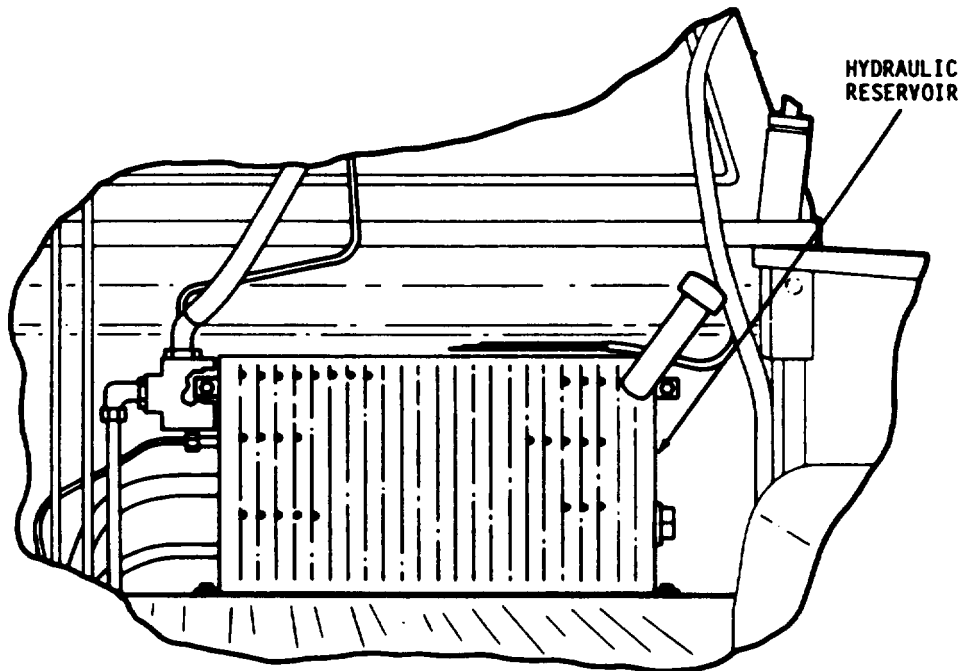
14. Secure HF intercept antenna mounting bracket onto front roadside of shelter with four hex nuts, lockwashers and flat washers. Using a ratchet handle, 6' extension and 7/16" socket, tighten hex nuts.
15. Secure guard receiver antenna mounting bracket onto front curbside of shelter with four hex nuts, lockwashers and flat washers. Using a ratchet handle, 6' extension and 7/16" socket, tighten hex nuts.



16. Using a ratchet handle, 5" extension, and 5/8" socket, loosen nuts on terminals of TB3.
17. Connect tagged wires to terminals E1 thru E6 of terminal board TB3. Using a ratchet handle, 5" extension, and 5/8" socket, tighten nuts on terminals. Remove wire tags.



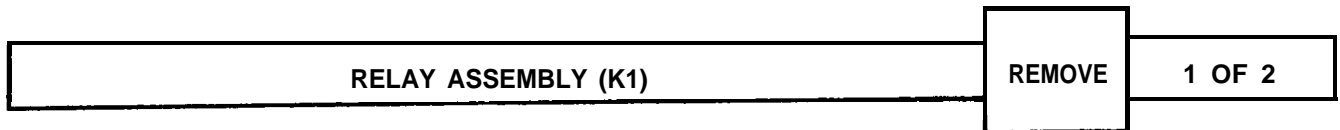
18. Secure cover plate over terminal board (T83) with four machine screws, lockwashers and flat washers. Using a no. 2 cross-tip screwdriver, tighten screws.
19. On front wall, in shelter, connect W14P1 to A28J1 on HG/AC.



WARNING

Hydraulic fluid M-17111 is not interchangeable with any other type or grade of fluid. Damage to equipment or injury of personnel may occur if fluid is interchanged.

20. At hydraulic reservoir, in vehicle bed, replenish fluid (Appendix D, Item 8).
21. Replace shelter on vehicle in accordance with Shelter Replace procedure in this manual.
22. Perform steps 19 through 39 of Pump Assembly Replacement procedure in this manual.



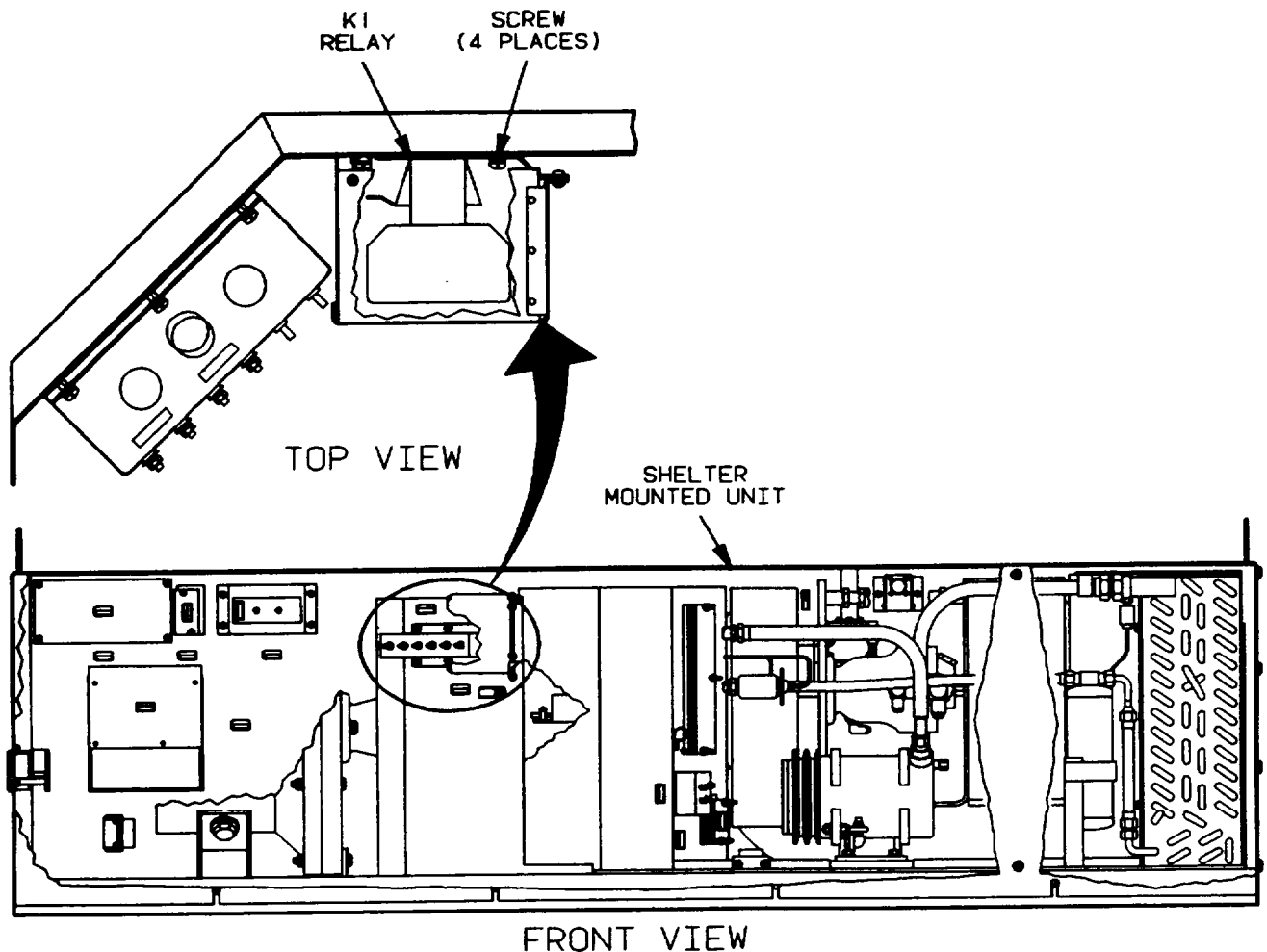
Relay assembly (K1) is located in HG/AC (shelter mounted unit).

Tools Required: Refrigerator Unit Tool Kit

Personnel Required: 1

Remove HG/AC relay assembly as follows.

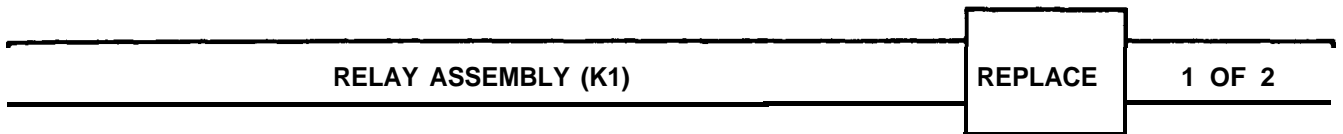
1. Using a 1/4" flat-tip screwdriver, loosen four captive screws at base of HG/AC shelter mounted unit cover.
2. Using a 1/4" flat-tip screwdriver, loosen se turnlock fasteners at top of HG/AC shelter mounted unit cover.
3. Remove and retain cover from HG/AC.



4. Using a no. 1 cross-tip screwdriver, remove and retain four screws and flat washers securing cover to relay assembly. Remove and retain cover.



5. Using cable tags, tag and identify all wires to be disconnected from relay assembly.
6. Using a 1/4" flat-tip screwdriver, loosen eight terminal screws on relay assembly. Remove six wires from wiring harness (W2) and two jumpers (W11 and W12).
7. Using a no.2 cross-tip screwdriver, remove and retain four screws, lockwashers and flat washers securing relay assembly to its mounting base.
8. Using a 1/4" flat-tip screwdriver, remove and retain two screws from relay terminals 9 and 10. Remove two wiring harness leads W1E6 and W1E16 from relay terminals.
9. Remove relay assembly from HG/AC.

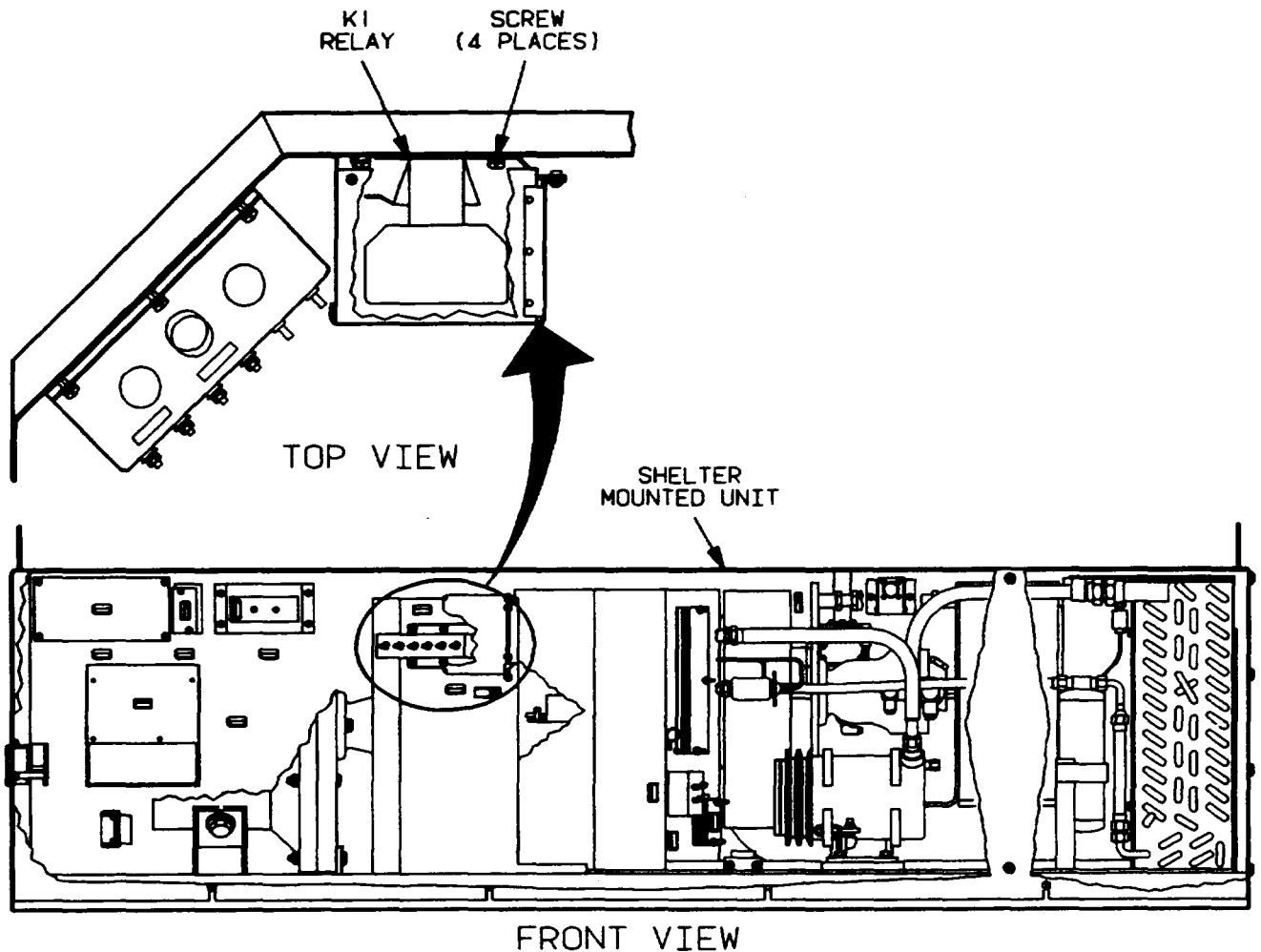


Relay assembly (K1) is located in HG/AC (shelter mounted unit).

Tools Required: Refrigerator Unit Tool Kit

Personnel Required: 1

Replace HG/AC relay assembly as follows.



1. With relay assembly near its mounting position, connect wire harness lead W1E5 onto terminal 9 and wire harness lead W1E16 to terminal 10. Using a 1/4" flat-tip screwdriver, tighten screws on terminals 9 and 10.
2. Secure relay assembly to its mounting base with four screws, lockwashers and flat washers. Using a no.2 cross-tip screwdriver, tighten screws.
3. Connect jumper leads (W12) between relay terminals 1 and 2. Using a 1/4" flat-tip screwdriver, tighten screws on terminals 1 and 2.



4. Connect jumper leads (W11) between relay terminals 3 and 4. Using a 1/4" flat-tip screwdriver, tighten screws on terminals 3 and 4.
5. Connect six leads from wire harness (W2) to relay terminals per wire tags. Using a 1/4" flat-tip screwdriver, tighten relay terminal screws.
6. Secure relay cover onto relay with four screws and flat washers. Using a no.1 cross-tip screwdriver, tighten screws.
7. Secure HG/AC cover onto HG/AC
8. Using a 1/4" flat-tip screwdriver, tighten six turnlock fasteners at top of HG/AC cover.
9. Using a 1/4" flat-tip screwdriver, tighten four captive screws at base of HG/AC cover.

VOLTAGE REGULATOR ASSEMBLY

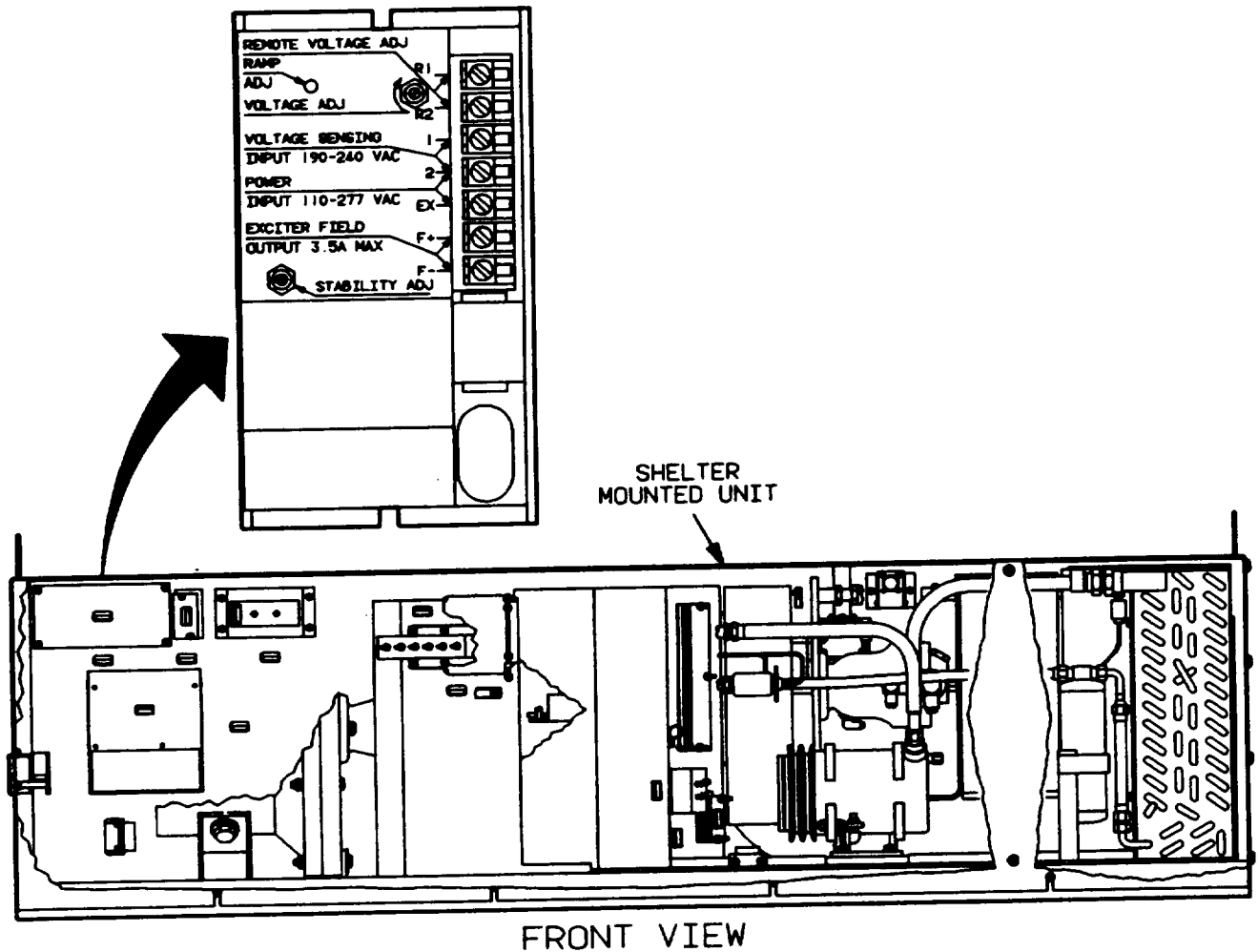
REMOVE 1 OF 2

Voltage regulator assembly is located in HG/AC (shelter mounted unit).

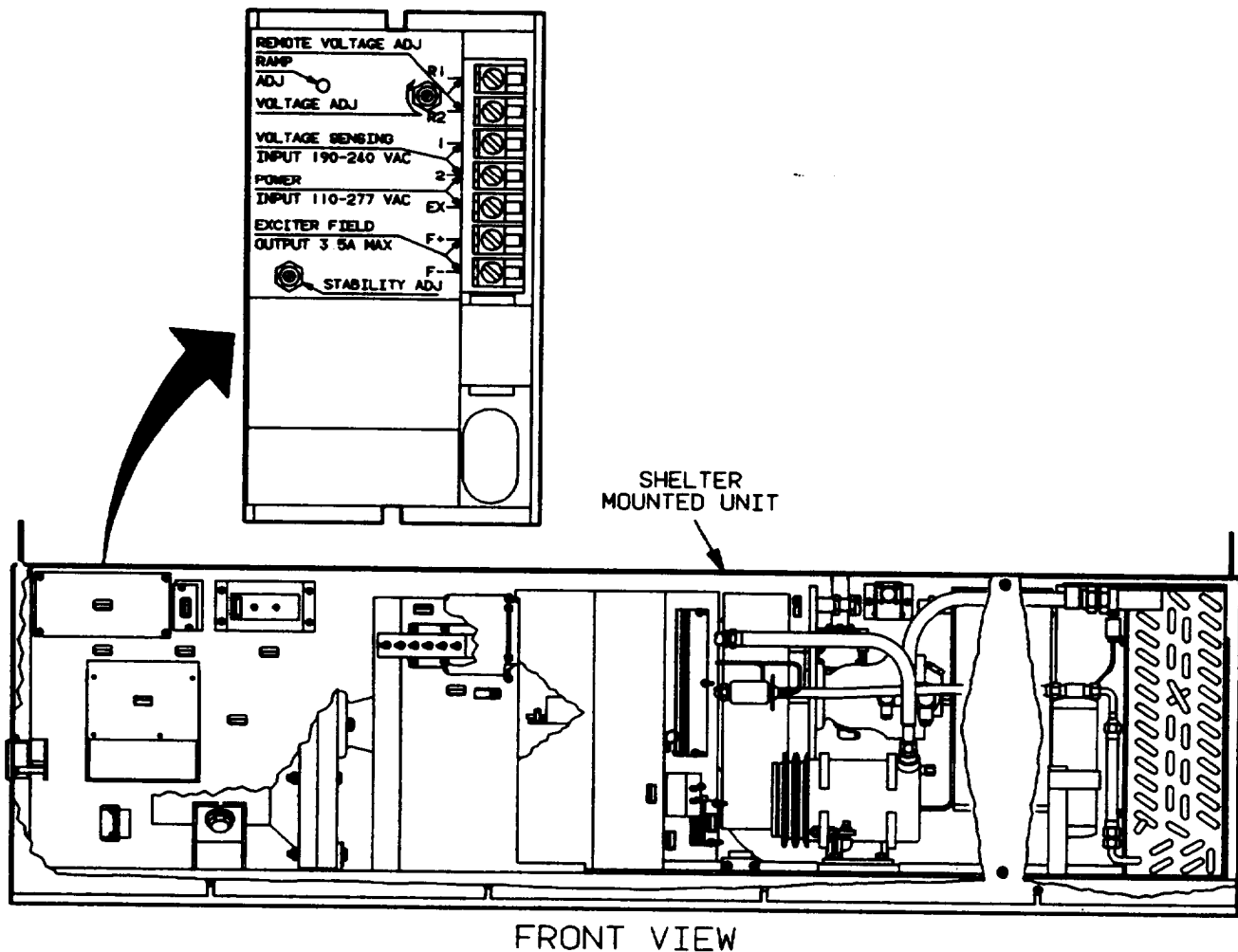
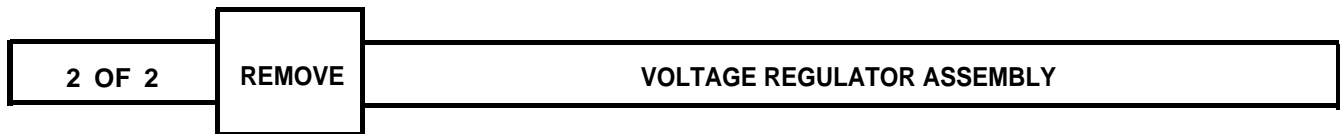
Tools Required: General Mechanic's Tool Kit

Personnel Required: 2

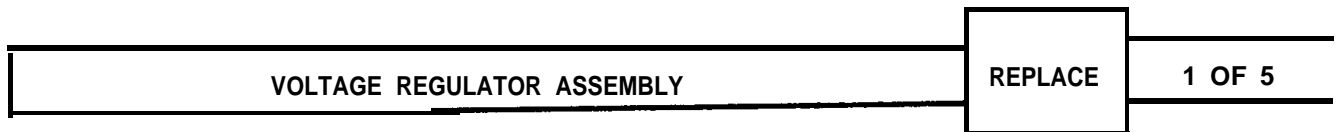
Remove HG/AC voltage regulator assembly as follows.



1. Use a 1/4" flat-tip screwdriver, loosen four captive screws at base of HG/AC cover.
2. Using a 1/4" flat-tip screwdriver, loosen six turnlock fasteners at top of HG/AC cover.
3. Remove cover from HG/AC.



4. Using a ratchet handle and 5/16" socket, remove and retain four nuts, lockwashers and flat washers securing protective cover over voltage regulator assembly. Remove and retain protective cover.
5. Using a 5/16" open-end wrench, remove and retain two nuts, lockwashers and flat washers securing voltage regulator assembly to wall of HG/AC.
6. Using cable tags, tag and identify all wires to be disconnected.
7. Using a no.2 cross-tip screwdriver, loosen seven terminal screws securing four wires (from W1 wire harness) and two jumpers (W9 and W10) to voltage regulator terminal strip.
8. Remove regulator assembly from HG/AC.

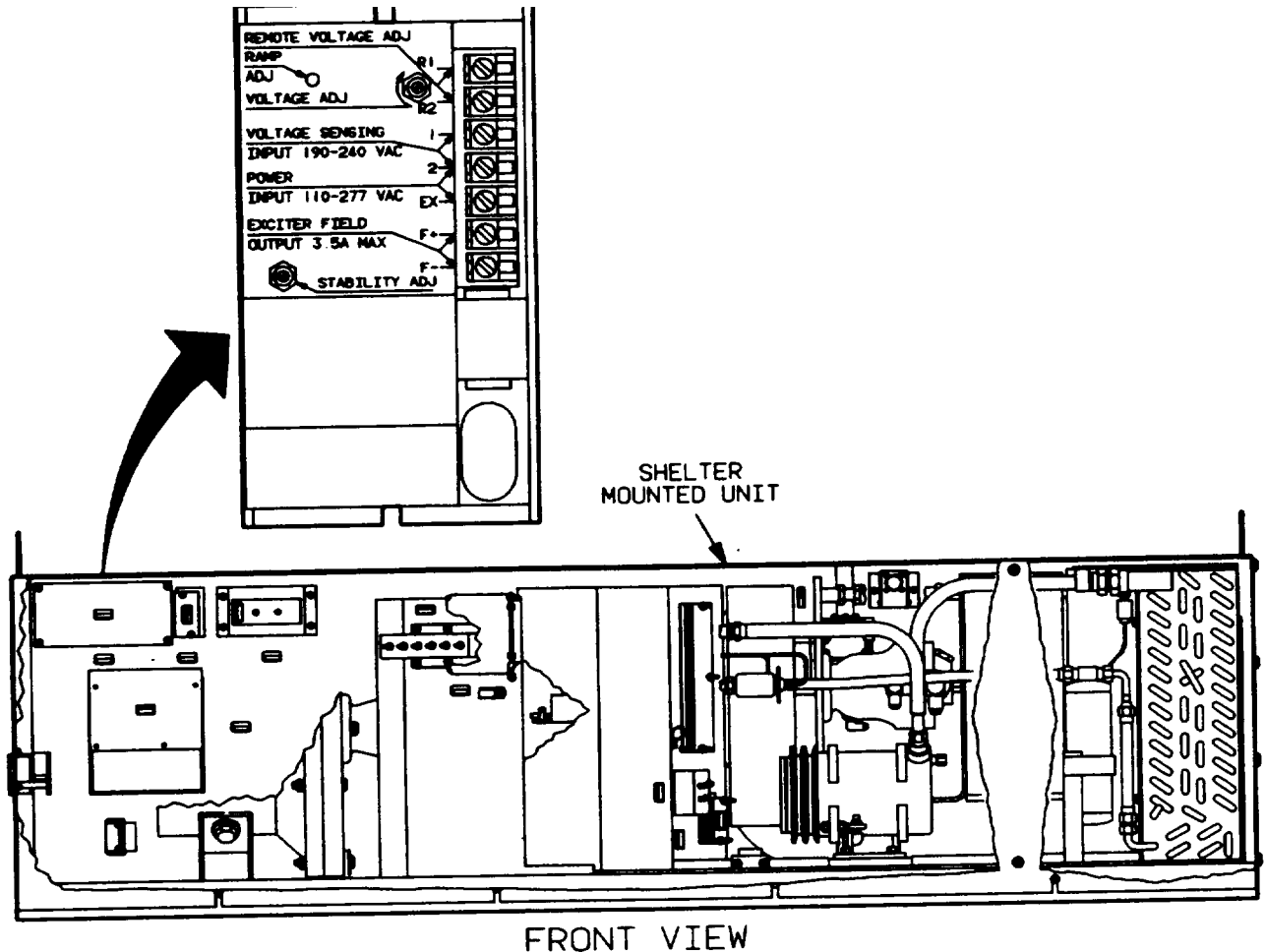


Voltage regulator assembly is located in HG/AC (shelter mounted unit).

Tools Required: General Mechanic's Tool Kit

Personnel Required: 2

Replace HG/AC voltage regulator assembly as follows.



1. Using a no.2 cross-tip screwdriver, loosen terminal screws R1 and R2 on voltage regulator terminal strip. Remove and discard jumper bar between terminals R1 and R2.
2. On voltage regulator terminal strip, connect jumper W9 between terminal R1 and R2. Using a no.2 cross-tip screwdriver, tighten terminal screws.
3. On voltage regulator terminal strip, connect jumper W10 between terminals 1 and EX. Using a no.2 cross-tip screwdriver, tighten terminal screw (EX).
4. Connect four wires from W1 wiring harness to terminals on regulator-terminal strip as identified per cable tags. Using a no.2 cross-tip screwdriver, tighten terminal screws. Remove all cable tags.

2 OF 5

REPLACE

VOLTAGE REGULATOR ASSEMBLY

5. Secure voltage regulator assembly between its mounting bolts on wall of HG/AC with two nuts, lockwashers and flat washers. Using a 5/16" open-end wrench, tighten nuts.
6. On roadside of HG/AC shelter mounted unit, unsnap dust cover.
7. On front wheel hubs of vehicle, move hub locks to FREE position.
8. Inside vehicle cab, place transmission gear shift lever to park (P) position.
9. Press and hold foot brake. Start vehicle engine and let idle.
10. Place transmission gear shift to drive (D) position. Pull out PTO control until PTO engages and PTO indicator illuminates.

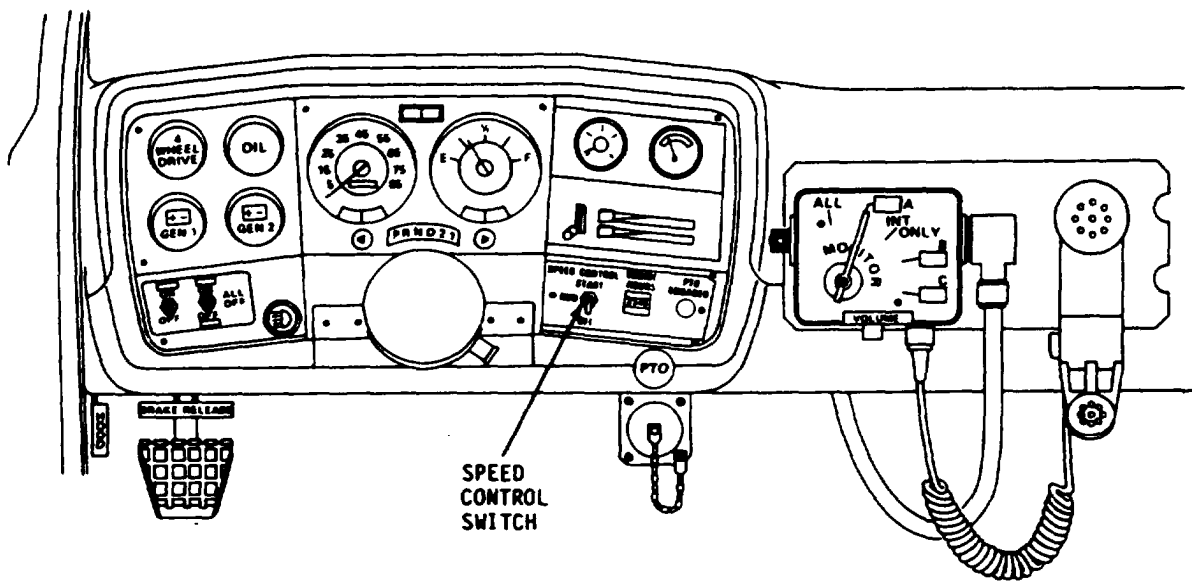
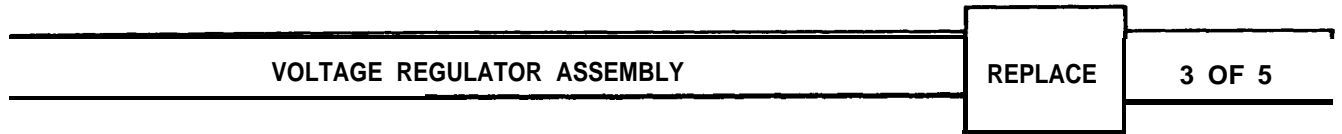
NOTE

It may be necessary to release foot brake and move vehicle forward slightly to allow PTO gears to engage.

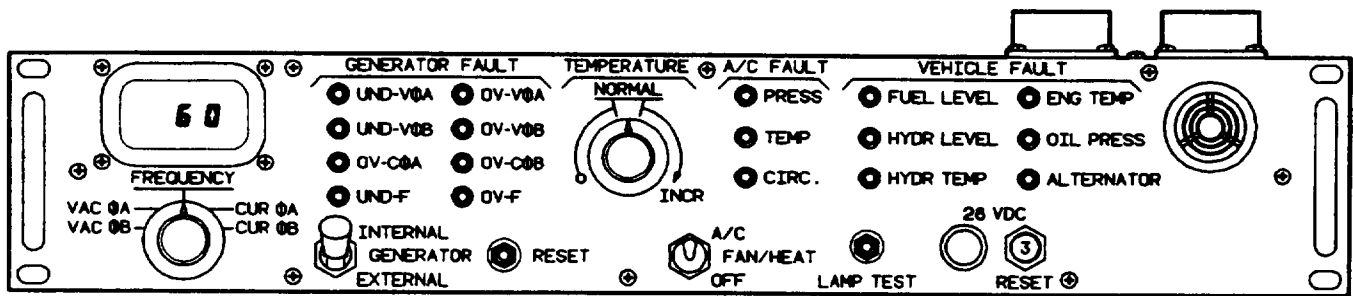
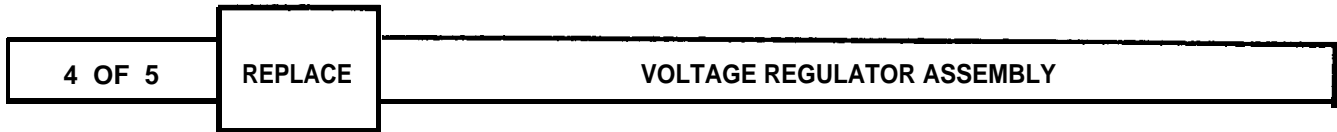
11. Place transmission gear shift to park (P) position and set emergency brake. Release foot brake.
12. Place chocks. under rear wheels of" vehicle.

WARNING

Personnel must stand clear during following steps. If transfer case is not in neutral (N), vehicle will attempt to move forward.



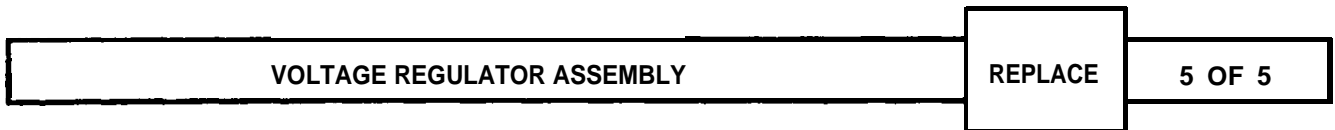
13. On RPM regulator panel (located on vehicle instrument panel), momentarily place engine speed control switch to START (up) position and hold for about two seconds to ensure transmission has shifted into third gear. Engine speed should reach about 2000 RPMs.
14. Release speed control switch. Speed control switch will return to RUN position. Engine speed should drop to approximately 1350 to 1400 RPMs.



NOTE

On HG/AC control panel, ensure GENERATOR switch is in EXTERNAL position and A/C switch is in OFF position before placing HG/AC CONT circuit breaker (on power distribution panel) to ON position.

15. On power distribution panel, place circuit breaker labeled HG/AC CONT to ON position.
16. On HG/AC control panel, place GENERATOR switch to INTERNAL position. Wait ten seconds for HG/AC generator to stabilize.
17. On HG/AC control panel, place display selection switch to VAC #A position and read voltage indication on display.
18. On voltage regulator assembly, using a 1/8" flat-tip screwdriver, adjust VOLTAGE ADJUST control for a reading of 120 Vac (on each phase) on display on voltage regulator assembly.

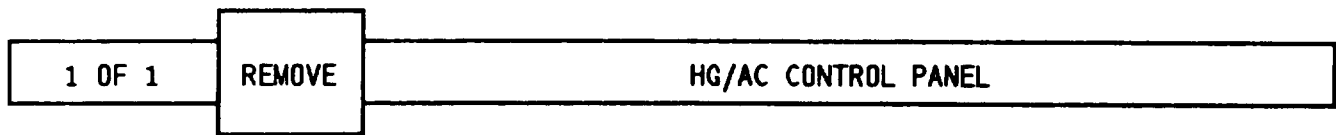


19. On HG/AC control panel, place display selection switch to VAC #B and compare voltage reading with VAC #A. Both phases should read approximately 120 Vat.

CAUTION

Wait fifteen seconds for generator to run down before placing circuit breaker labeled HG/AC CONT (on power distribution panel) to OFF position.

20. On HG/AC control panel, place GENERATOR switch to EXTERNAL position. Wait fifteen seconds for generator to run down.
21. In vehicle cab, place speed control switch on RPM regulator panel to OFF position. Disengage PTO and turn off ignition switch.
22. Place transfer case shift lever to 2H position. Place transmission gear shift lever to park (P) position and remove wheel chocks.
23. Secure protective cover onto mounting bolts over voltage regulator assembly with four nuts, lockwashers and flat washers. Using a ratchet handle and 5/16" socket, tighten nuts.
24. Place cover onto HG/AC.
25. Using a 1/4" flat-tip screwdriver, tighten six turnlock fasteners at top of HG/AC cover.
26. Using a 1/4" flat-tip screwdriver, tighten four captive screws at base of HG/AC cover.



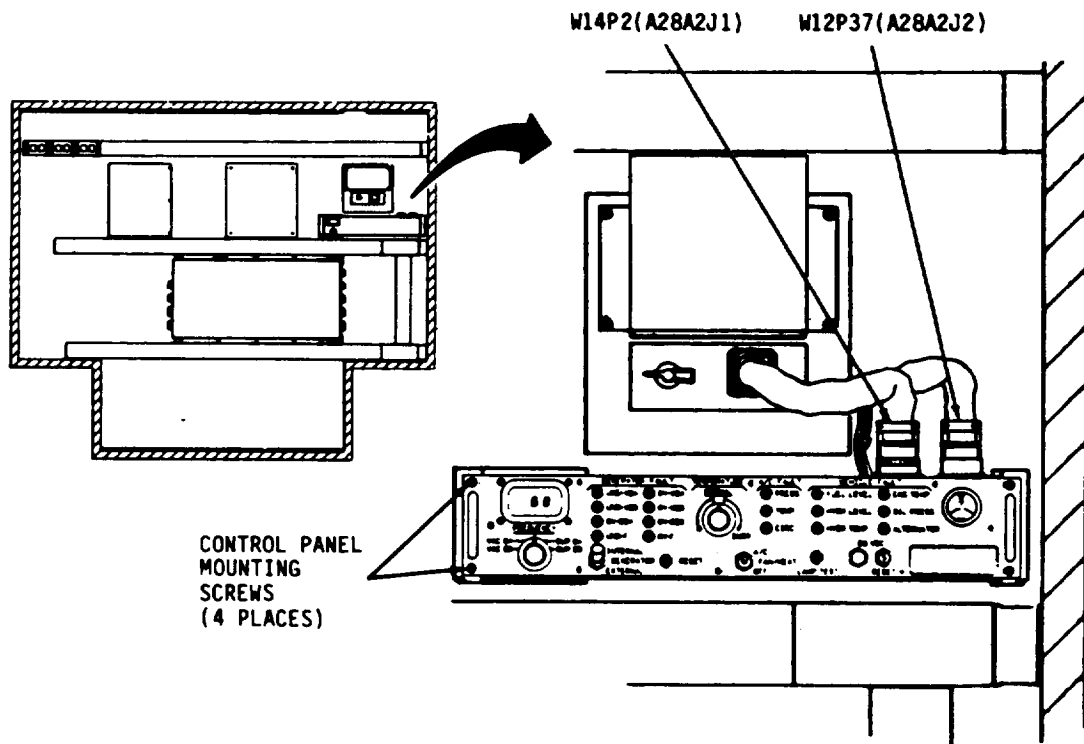
The HG/AC control panel (A28A2) is located inside shelter on front curbside wall.

Tools Required: TK-105/G

Personnel Required: 1

Remove HG/AC control panel as follows:

1. On HG/AC control panel, ensure GENERATOR INTERNAL/EXTERNAL switch is in EXTERNAL position. Place A/C-FAN/HEAT-OFF switch to OFF position.
2. On power distribution panel, place HG/AC CONT circuit breaker to OFF position.



3. On HG/AC control panel, disconnect W14P2 from A28A2J1 and W12P37 from A28A2J2.
4. Using no.2 cross-tip screwdriver, remove and retain four screws and flat washers that secure HG/AC control panel in mounting bracket.
5. Remove HG/AC control panel.



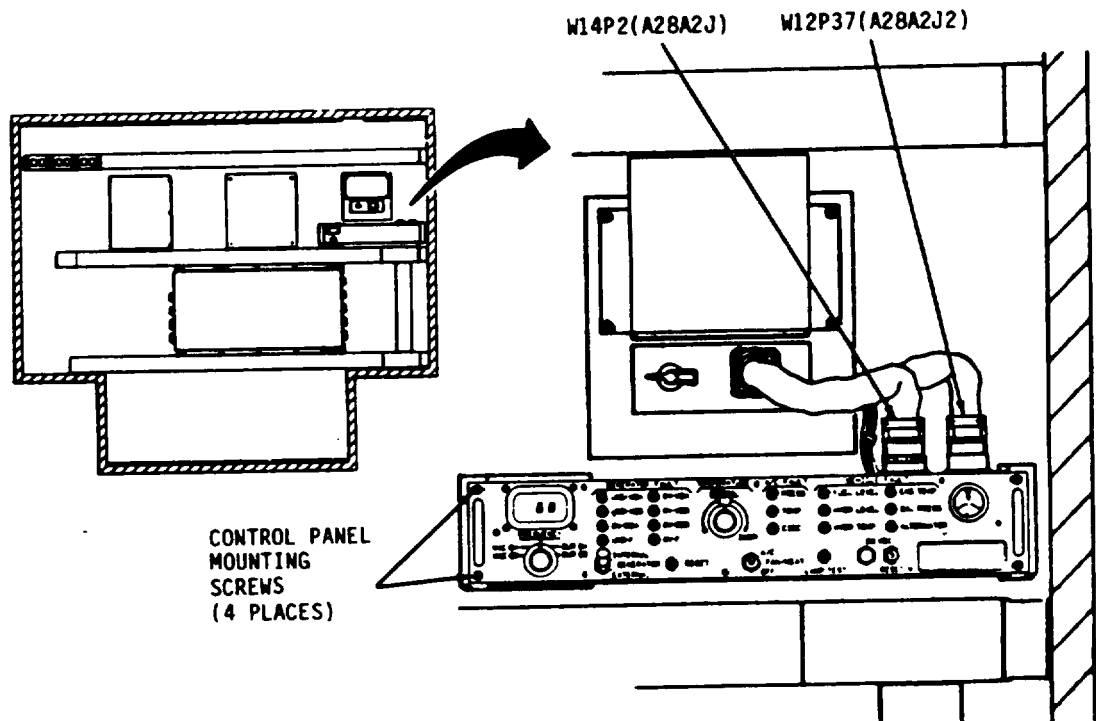
The HG/AC control panel (A28A2) is located inside shelter on front curbside wall.

Tools Required: TK-105/G

Personnel Required: 1

Replace HG/AC control panel as follows:

1. On power distribution panel, place HG/AC CONT circuit breaker in OFF position.



2. Secure HG/AC control panel into its mounting bracket with four machine screws and flat washers. Using no.2 cross-tip screwdriver, tighten screws.
3. On HG/AC control panel, connect cables W14P2 to A28A2J1 and W12P37 to A28A2J2.
4. On power distribution panel, place HG/AC CONT circuit breaker to ON position.

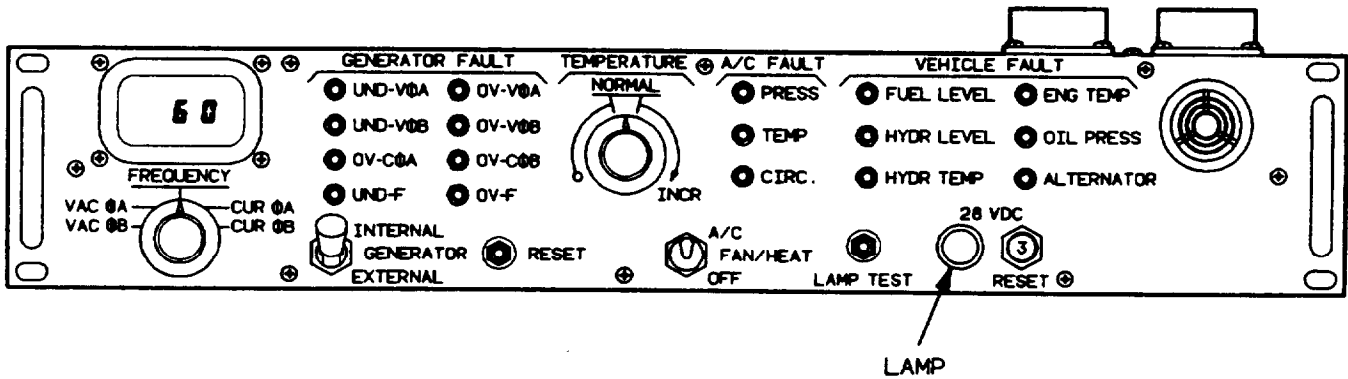
| | | |
|--------|----------------|--------------------------|
| 1 OF 1 | REMOVE/REPLACE | HG/AC CONTROL PANEL LAMP |
|--------|----------------|--------------------------|

The HG/AC control panel lamp is located on HG/AC control panel.

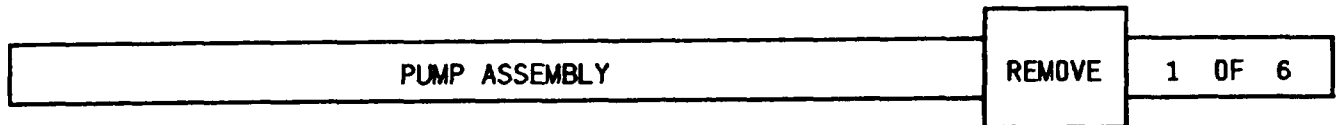
Tools Required: NONE

Personnel Required: 1

Remove/replace HG/AC Control Panel lamp as follows.



1. On HG/AC control panel, place INTERNAL/EXTERNAL switch to EXTERNAL position.
2. Turn lens lampholder counterclockwise to unscrew from housing. Remove lampholder and lamp from housing.
3. Pull defective lamp from lampholder and install new lamp.
4. Place lampholder and lamp into housing and turn clockwise to secure.
5. Push 28 VDC circuit breaker.



The pump assembly (A28A3) is mounted onto the power take-off unit located under the vehicle.

Tools Required: Refrigerator Unit Tool Set
Drip Pan
Safety Glasses
1-1/4" Open-end Wrench
8 Gal Capacity Container
Filter Wrench

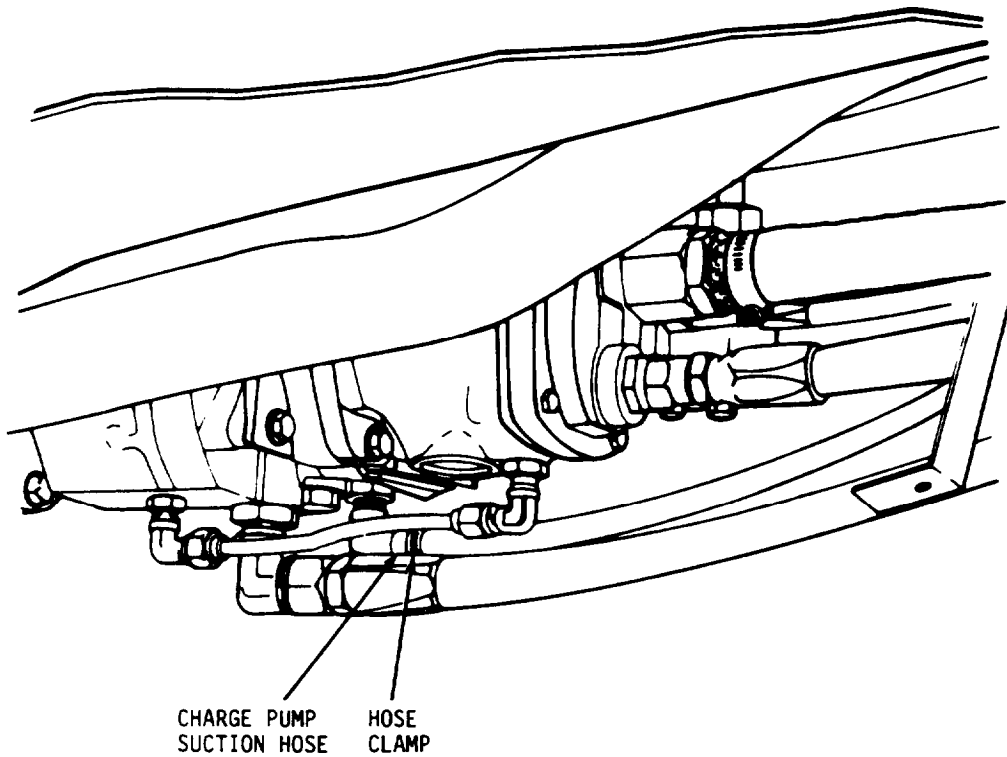
Personnel Required: 2

Remove pump assembly as follows:

WARNING

Ensure vehicle engine is off before performing following steps.

| | | |
|--------|--------|---------------|
| 2 OF 6 | REMOVE | PUMP ASSEMBLY |
|--------|--------|---------------|



1. Remove skid plate in accordance with TM 5-2320-531-24&P.
2. Tag and identify hydraulic lines before removing lines from pump assembly.

WARNING

Wear safety glasses when working with hydraulic fluids.

NOTE

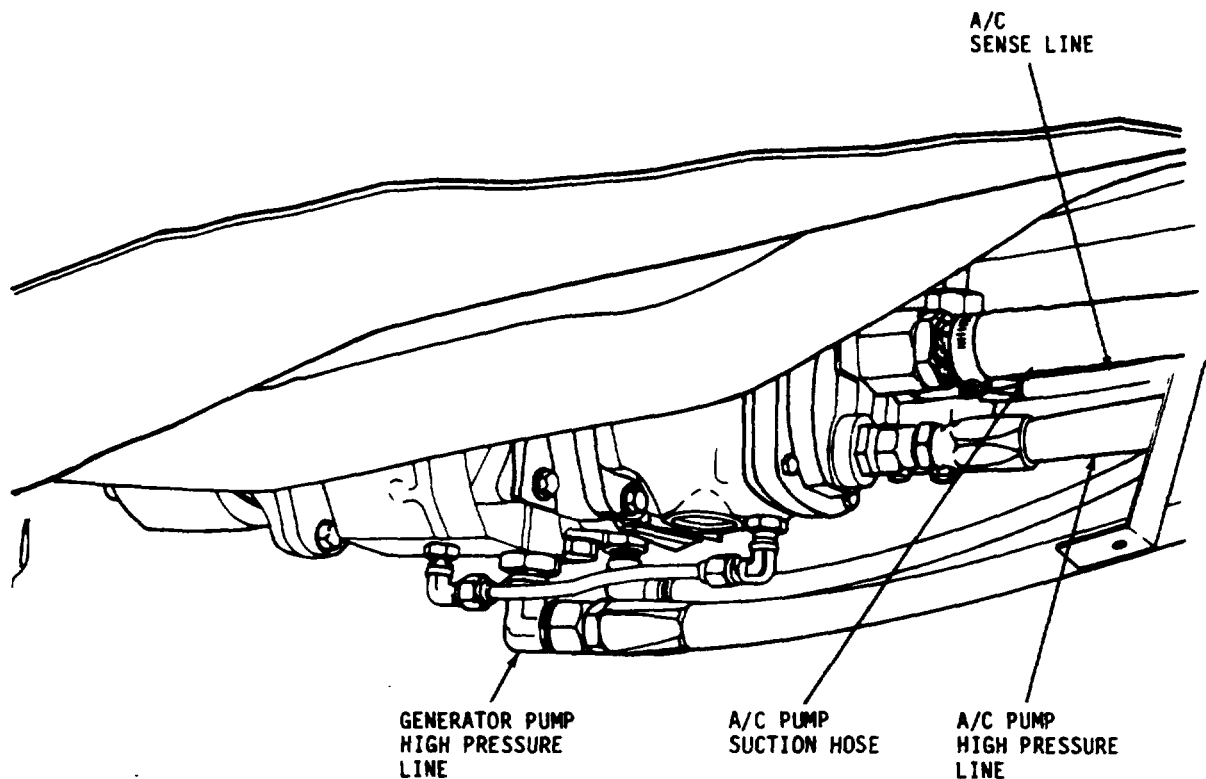
When removing hydraulic lines, drain hydraulic fluid into container with an eight gallon capacity. Use drip pan to catch drippings from disconnected lines.

3. Under pump assembly, place a container with an eight gallon capacity to catch hydraulic fluid. Place drip pan under container to catch hydraulic fluid dripping from disconnected hoses.
4. At pump assembly, slide protective sleeving away from charge pump hose connection. Using a 1/4" flat-tip screwdriver, loosen hose clamp on charge pump suction hose (smaller hose secured with hose clamp).
5. At pump assembly, pull charge pump suction hose from hose fitting and direct hydraulic fluid from hose into eight gallon container.

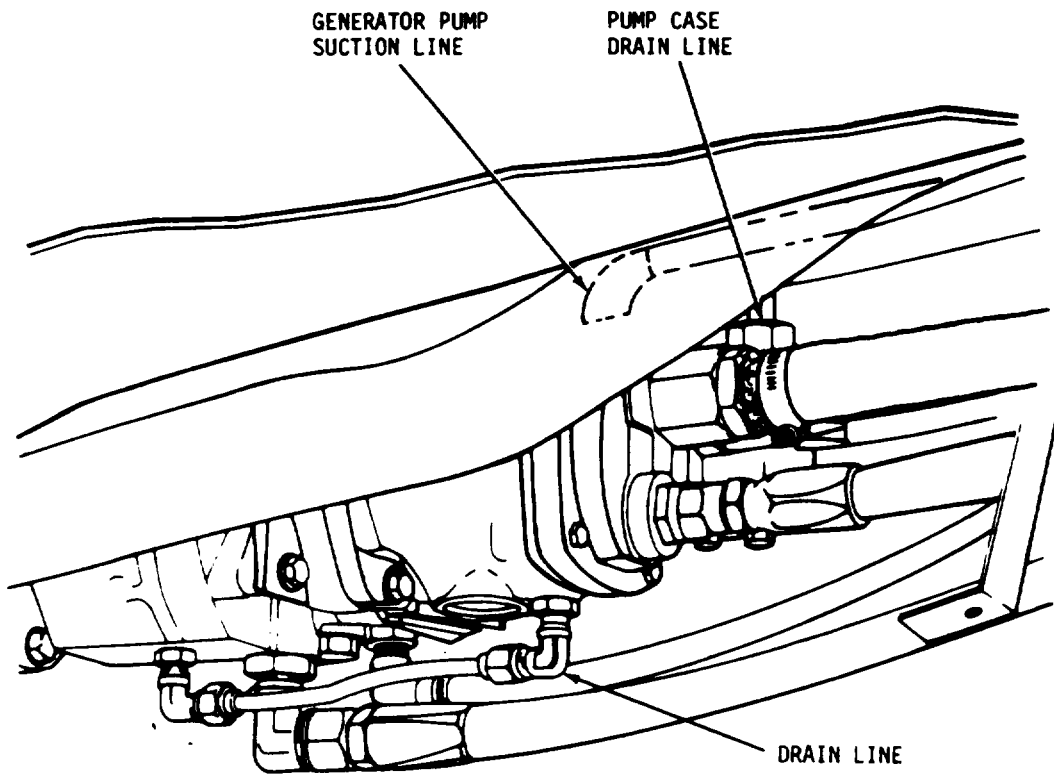
PUMP ASSEMBLY

REMOVE

3 OF 6



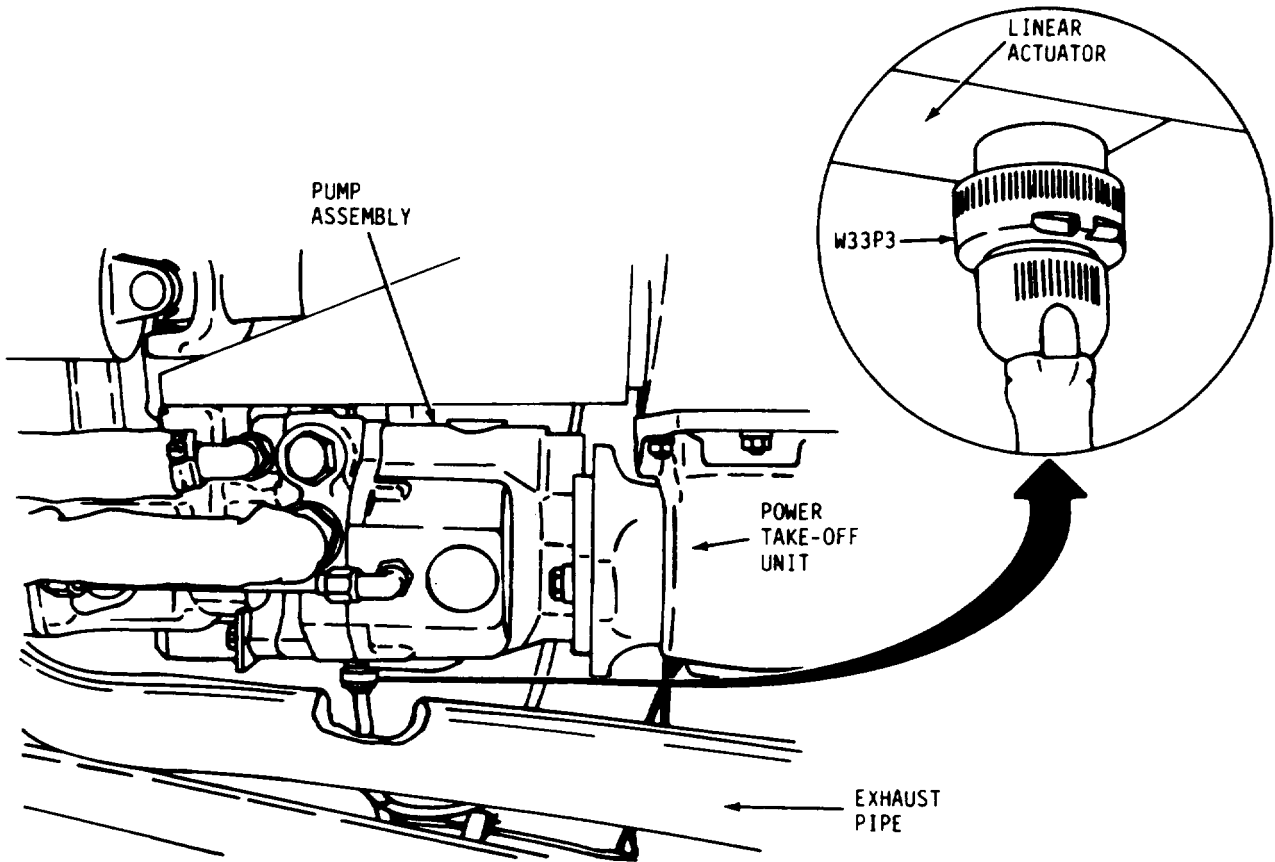
6. At pump assembly, slide protective sleeving away from generator pump high pressure line connection. Using a 1-1/4" open-end wrench, disconnect generator pump high pressure line from elbow on pump assembly.
- 7 At pump assembly, slide protective sleeving away from A/C pump high pressure line connection. Using a 1-1/4" open-end wrench, hold union in A/C pump high pressure line. Disconnect line from union using a 1" open-end wrench.
8. At pump assembly, slide protective sleeving away from A/C pump suction hose connection. Using a 1/4" flat-tip screwdriver, loosen hose clamp on A/C pump suction hose and pull hose from fitting on pump assembly.
9. At pump assembly, slide protective sleeving away from A/C sense line connection. Using a 3/4" open-end wrench, hold union in A/C sense line. Using a 9/16" open-end wrench, disconnect line from union.



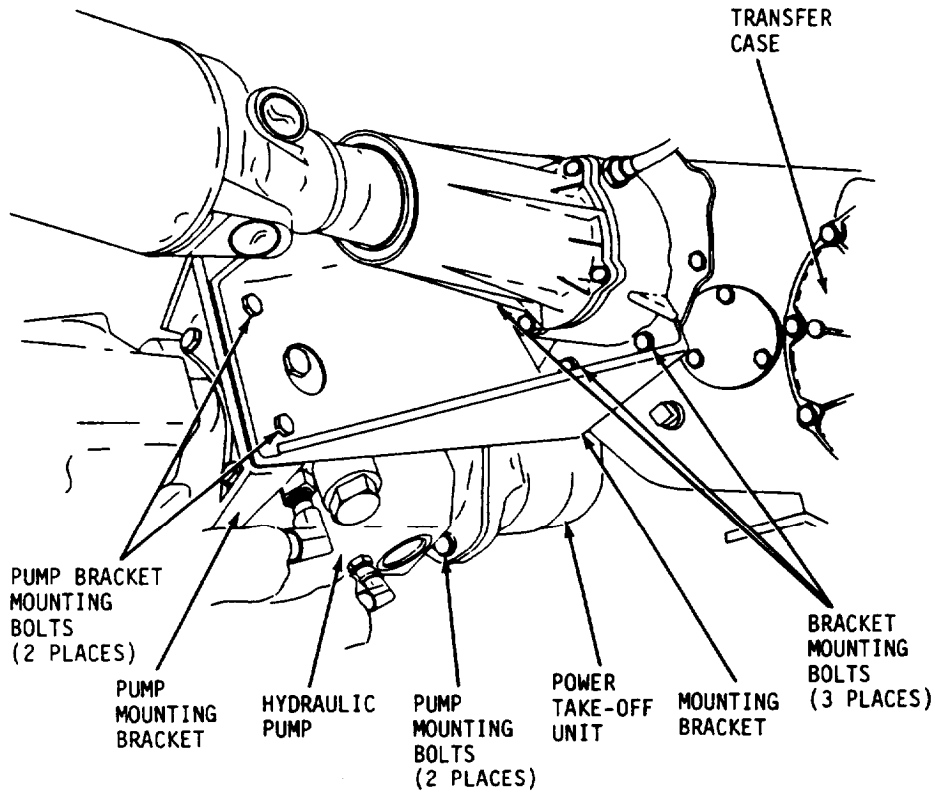
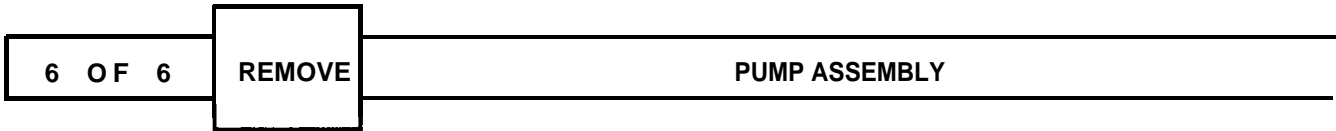
10. At pump assembly, slide protective sleeving away from pump case drain line connection. Using a 7/8" open-end wrench, disconnect pump case drain line from the elbow on pump assembly.
11. At pump assembly, slide protective sleeving away from generator pump suction line connection. Using a 1-1/4" open-end wrench, disconnect generator pump suction line from elbow on pump assembly.

NOTE

On pump assembly, do not remove drain line between generator hydraulic pump and A/C hydraulic pump.



- At roadside of pump assembly, disconnect vehicle cable plug (W33P3) from linear actuator.

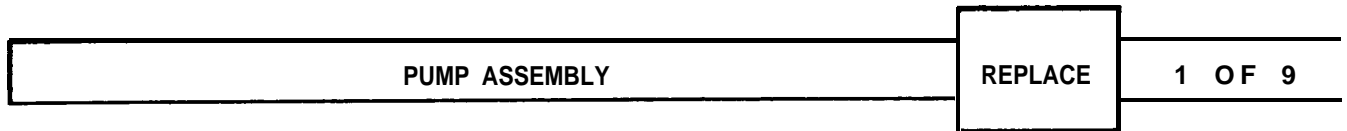


13. Using ratchet handle, 9/16" socket and 9/16" box-end wrench. remove and retain two cap screws, plain nuts, lockwashers and flat washers securing pump assembly mounting bracket to mounting bracket on vehicle transfer case.
14. Using ratchet handle, 6" extension and 9/16" socket, loosen three cap screws securing pump mounting bracket to transfer case. Loosen cap screws only, do not remove.

NOTE

Pump assembly weighs 60 lbs. and requires two people to lift it from vehicle.

15. Using 3/4" open-end wrench, remove and retain two cap screws and lockwashers securing pump assembly to power take-off unit. Carefully pull pump assembly toward rear of vehicle to remove pump from spline of power take-off unit. Remove pump assembly from vehicle.
16. Using ratchet handle, 6" extension and 9/16" socket, remove and retain two cap screws and lockwashers securing mounting bracket to pump assembly. Remove and retain bracket.
17. Reinstall cap screws and lockwashers onto pump assembly. Tighten screws using a ratchet handle, 6" extension and 9/16" socket.



The pump assembly (A28A3) is mounted onto the power take-off unit located under the vehicle.

Tools Required: Refrigerator unit Tool Set
Drip Pan
Safety Glasses
1-1/4" Open-end Wrench
8 Gal Capacity Container
Filter Wrench

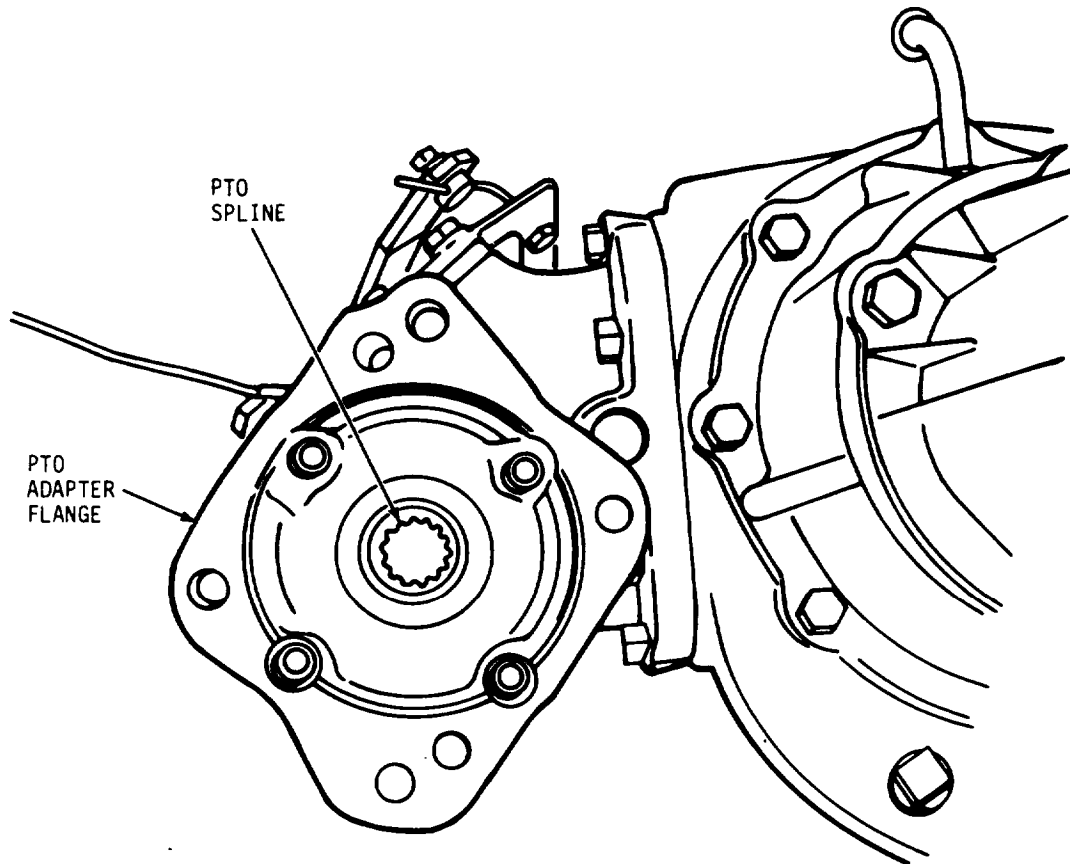
Personnel Required: 2

Remove pump assembly as follows:

WARNING

Ensure vehicle engine is off before performing the following steps.

| | | |
|--------|---------|---------------|
| 2 OF 9 | REPLACE | PUMP ASSEMBLY |
|--------|---------|---------------|



1. Using ratchet handle, 6" extension and 9/16" socket, remove and retain two cap screws and lockwashers from top of charge pump on pump assembly.
2. Position mounting bracket (at top of charge pump) onto pump assembly. Secure mounting bracket to pump assembly with two cap screws and lockwashers. Tighten screws using a ratchet handle, 6" extension and 9/16" socket.
3. Apply never seeze lubricant (Appendix D, Item 11) to splines on pump shaft.

NOTE

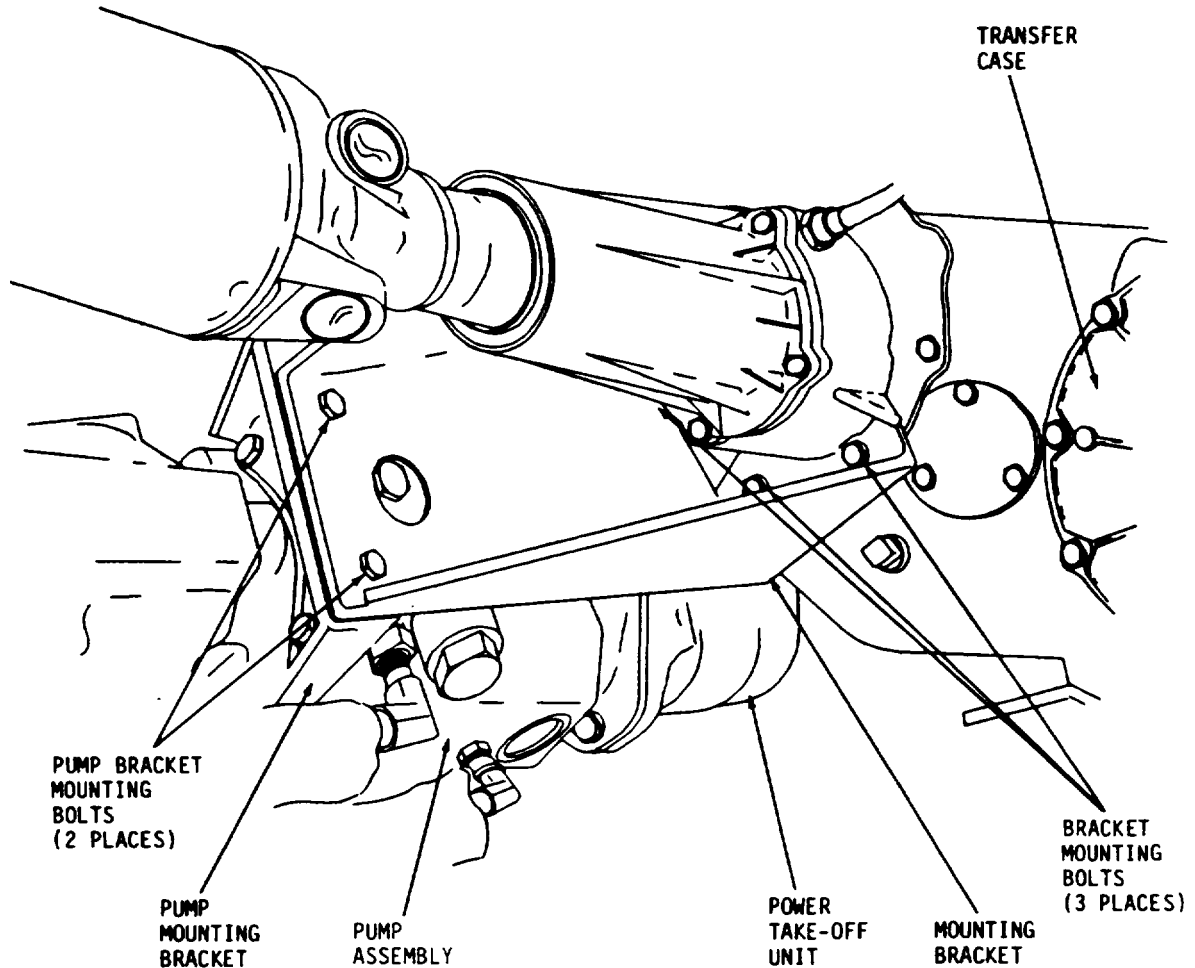
The pump assembly weighs 60 lbs. and requires two people to lift it onto the vehicle.

4. Carefully slide pump assembly drive shaft into splines on power take-off unit until shaft is fully engaged.
5. Secure pump assembly to power take-off unit with two cap screws and lockwashers. Tighten-screws using a 3/4" open-end wrench.

PUMP ASSEMBLY

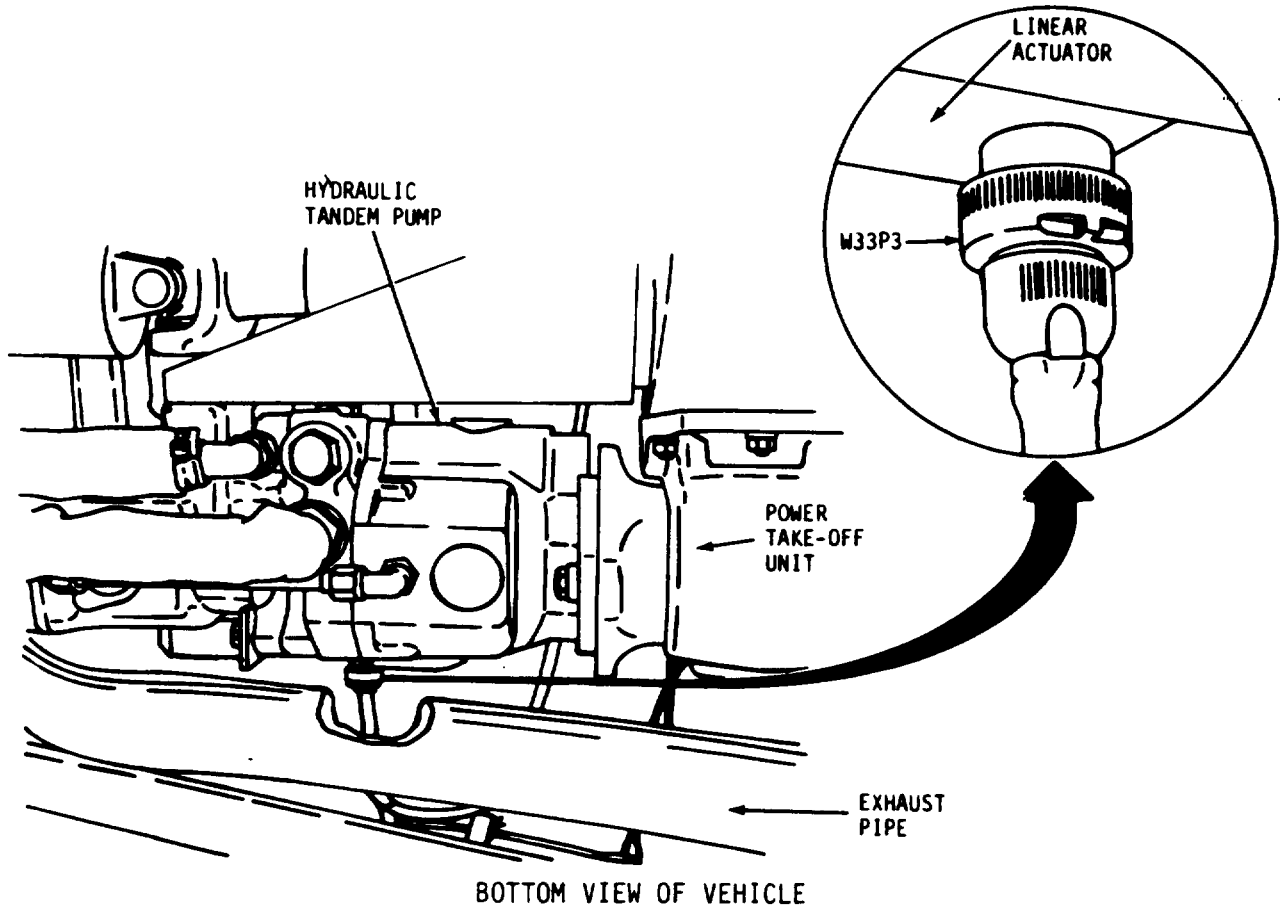
REPLACE

3 OF 9

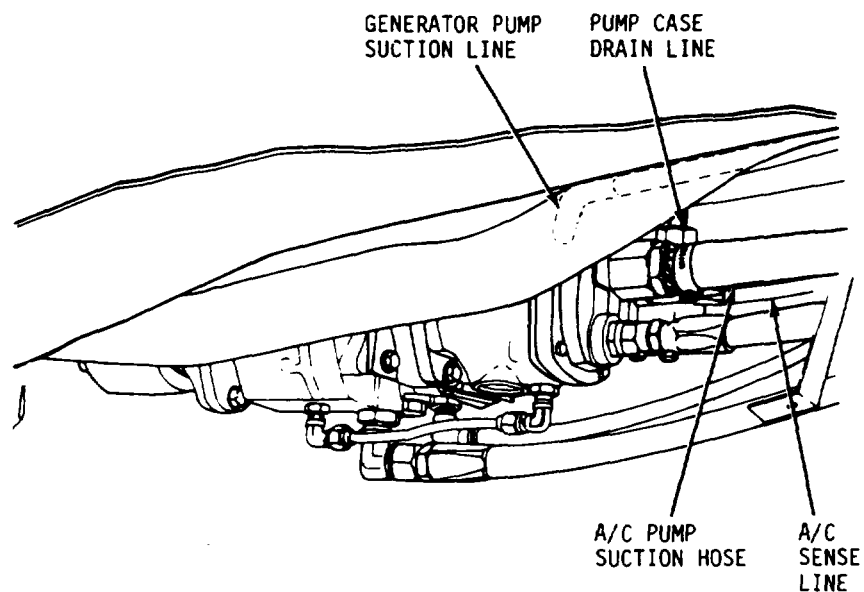
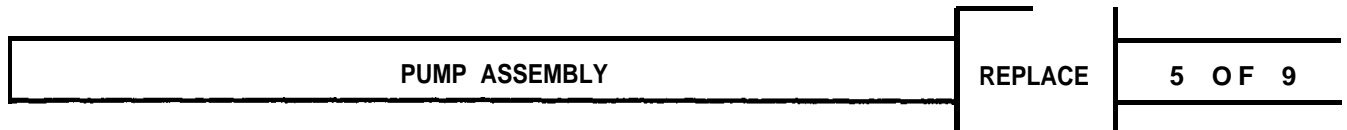


6. Using ratchet handle, 6" extension and 9/16" socket, tighten three cap screws securing pump assembly mounting bracket to vehicle transfer case.
7. Secure mounting bracket on pump assembly to mounting bracket on vehicle transfer case with two cap screws, lockwashers, flat washers and plain nuts. Tighten nuts using ratchet handle, 9/16" socket and 9/16" box-end wrench.

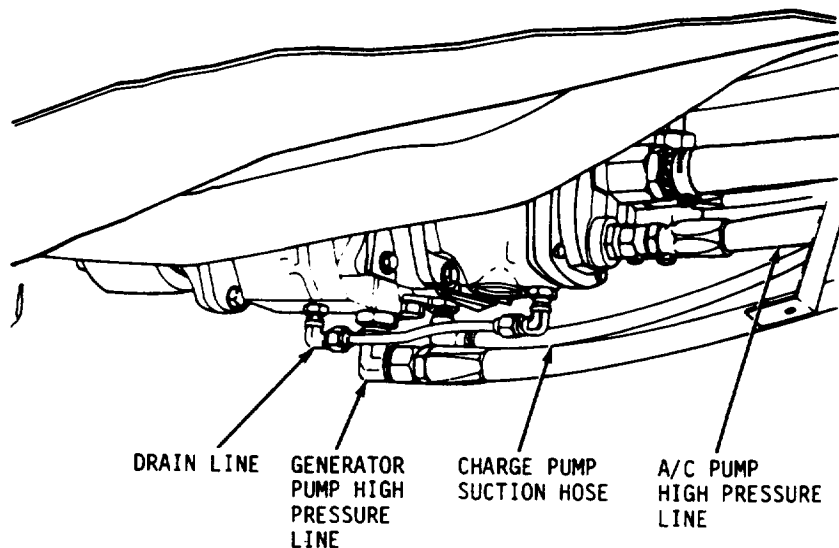
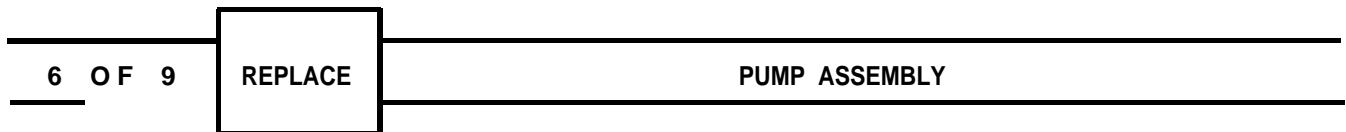
4 OF 9 REPLACE PUMP ASSEMBLY



8. At roadside of pump assembly, connect vehicle cable (W33P3) to connector on linear actuator.



9. At pump assembly, connect generator pump suction line to elbow on pump assembly. Use a 12" adjustable wrench to hold elbow and tighten connection on generator pump suction line using a 1-1/4" open-end wrench.
10. At pump assembly, connect pump case drain line to elbow on pump assembly. Use 7/8" open-end wrench to hold elbow and tighten connection on pump case drain line using 7/8" open-end wrench.
11. At pump assembly, connect A/C sense line to union on pump assembly. Use a 3/4" open-end wrench to hold union and tighten connection on A/C sense line using a 9/16" open-end wrench.
12. At pump assembly, connect A/C pump suction hose to hose fitting on pump assembly. Tighten hose clamp on A/C pump suction hose using a 1/4" flat-tip screwdriver.



13. At pump assembly, connect A/C pump high pressure line to union on pump assembly. Use a 1-1/4" open-end wrench to hold union and tighten connection on A/C pump high pressure line using 1" open-end wrench.
14. At pump assembly, connect charge pump suction hose to hose fitting on pump assembly. Tighten hose clamp on charge pump suction hose using a 1/4" flat-tip screwdriver.
15. At pump assembly, connect generator pump high pressure line to elbow on pump assembly. Use a 1" open-end wrench to hold elbow and tighten connection on generator pump high pressure line using a 1-1/4" open-end wrench.
16. Remove tags from hydraulic lines. Ensure drain line is installed between generator and A/C hydraulic pumps.

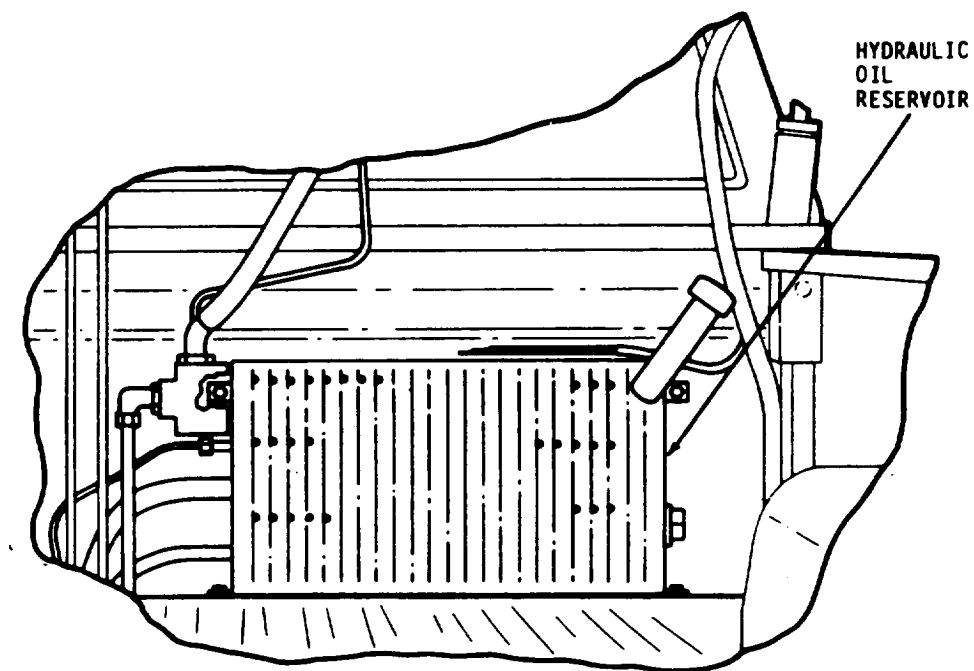
PUMP ASSEMBLY

REPLACE

7 OF 9

NOTE

After performing any task that requires opening the hydraulic system, replace hydraulic filter in HG/AC in accordance with TM 5-4120-391-14. Replace filter again after 100 hrs. of operation. Refer to PMCS TABLE for regular filter change interval.

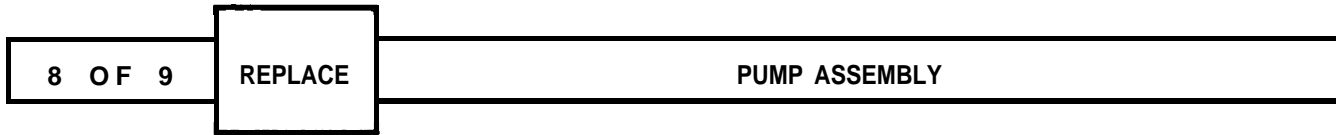
**WARNING**

Hydraulic fluid M-17111 is not interchangeable with any other type or grade of fluid. Damage to equipment or injury of personnel may occur if fluid is interchanged.

17. Fill reservoir assembly with hydraulic fluid (Appendix D, Item 8) until fluid just begins to show on filler cap dip stick.

CAUTION

Fluid level in reservoir will vary with temperature. Fill reservoir to the full mark on filler cap dip stick only when system is at operating temperature.



NOTE

The shelter must be installed on the vehicle in order to perform the following steps.

18. Place gear shift lever into PARK (P) and set EMERGENCY BRAKE.
19. Start vehicle engine.
20. Place gear shift lever into DRIVE (D).
21. Pull out PTO actuator control knob to ENGAGED PTO. Observe that PTO ENGAGED indicator comes on and that PTO gear engages.
22. Place gear shift lever into NEUTRAL (N).
23. Set transfer case control lever to NEUTRAL (N) and engage transfer lockout neutral position lock.

WARNING

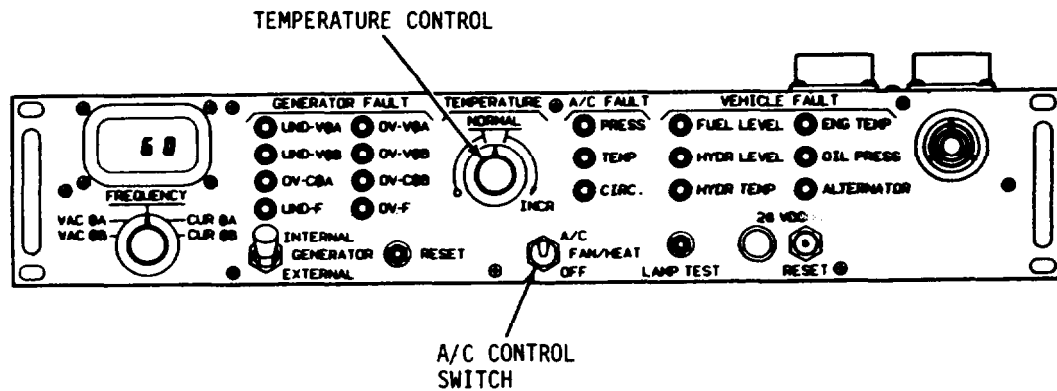
If shift lever on transfer case is not in NEUTRAL position, the vehicle will attempt to move forward when the transmission gear shift lever is moved to DRIVE position.

24. Set transmission gear shift lever to DRIVE (D).
25. Move speed control toggle switch momentarily to RUN position.
26. Move speed control toggle switch to START position and hold for about two seconds to assure that transmission has shifted to third gear. Engine speed should be 2000 RPM on tachometer.
27. Release toggle switch to RUN position. Engine speed should drop to approximately 1350 to 1400 RPM on tachometer.

WARNING

Hydraulic fluid M-17111 is not interchangeable with any other type or grade of fluid. Damage to equipment or injury of personnel may occur if fluid is interchanged.

28. Inspect pump assembly, hydraulic lines, and filter for leaks. Check fluid (Appendix D. Item 8) level in hydraulic reservoir. and fill if low.



29. On HG/AC control panel, place GENERATOR switch to the EXTERNAL position, and the A/C-FAN/HEAT switch to-OFF position.
30. On power distribution panel, place circuit breakers labeled HG/AC CONT, MAIN and POWER SUPPLY to ON position. On system power supply, place SYS ON/OFF switch to ON position.
31. On HG/AC control panel, place GENERATOR switch to the INTERNAL position.
32. Check for system malfunctions. Inside shelter, verify that no faults are indicated on HG/AC control panel or caution panel.
33. On HG/AC control panel, place A/C control switch in FAN/HEAT position and TEMPERATURE control in INCR position. Observe generator A/C control panel and caution panel for fault indications.
34. On HG/AC control panel, place A/C control switch in A/C position and TEMPERATURE control in full left position. Observe HG/AC control-panel and caution panel for fault indications.
35. If faults are indicated, refer to HG/AC troubleshooting. If not, proceed with normal operation.
36. On HG/AC control panel, place GENERATOR switch to the EXTERNAL position, and the A/C-FAN/HEAT switch to-the OFF position.
37. On power distribution panel, place circuit breakers labeled HG/AC CONT, MAIN and POWER SUPPLY to the OFF position. On system power supply, place SYS ON/OFF switch to OFF position.
38. Move speed control toggle switch to OFF. Push in PTO actuator control knob to disengage power take-off. Observe that PTO ENGAGED indicator is off, then turn off vehicle engine.
39. Place transmission gear shift lever into PARK (P) and transfer case lever to 2H.
40. Underneath vehicle, install skid plate in accordance with TM 5-2320-531-24&P.



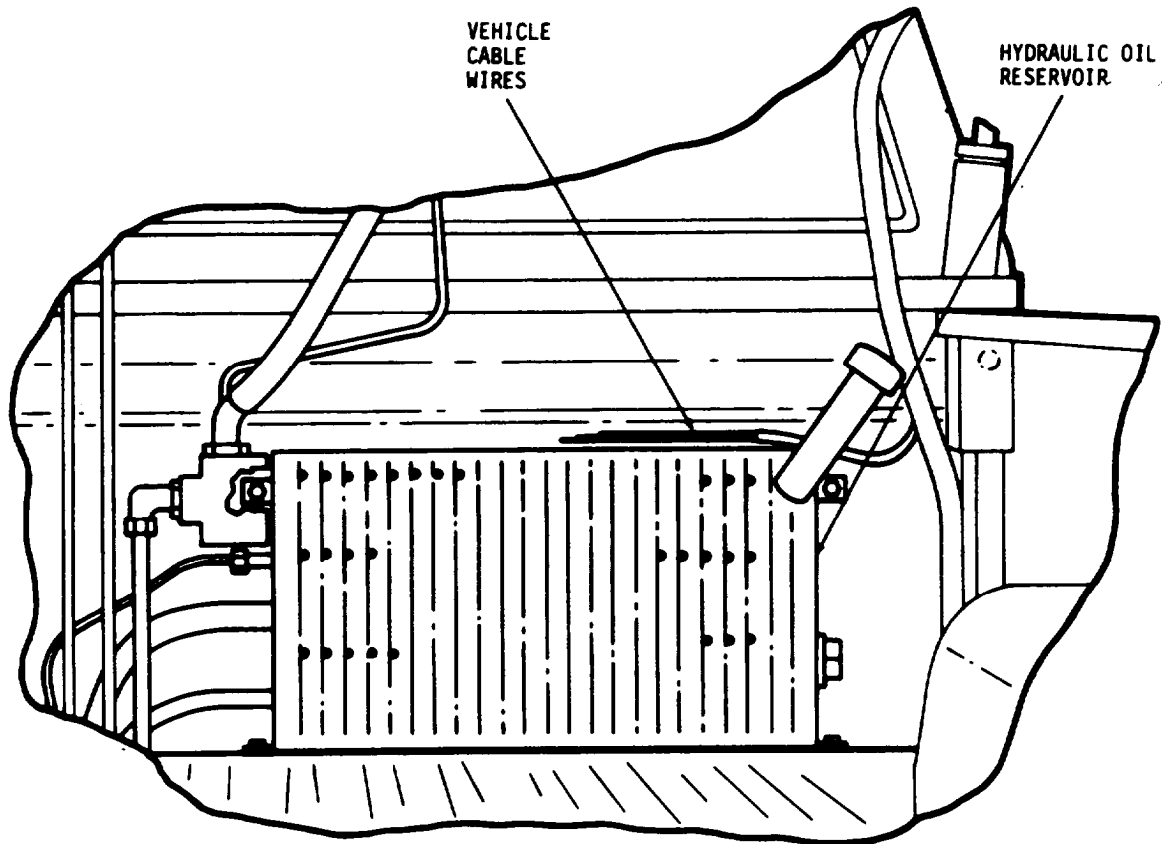
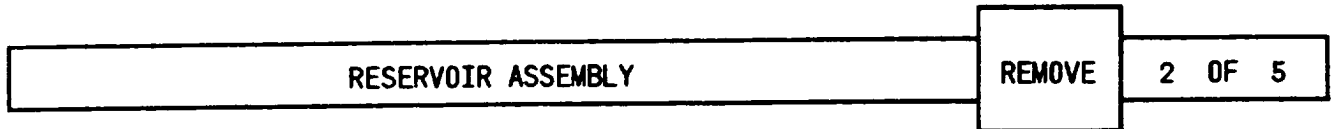
The reservoir assembly (A28A1) is located in the vehicle bed behind the vehicle cab.

Tools Required: Refrigerator Unit Tool Kit
General Mechanic's Tool Kit
8 Gallon Container
Drip Pan

Personnel Required: 1

Remove reservoir assembly as follows:

1. Remove shelter from vehicle in accordance with Shelter Remove procedure.



WARNING

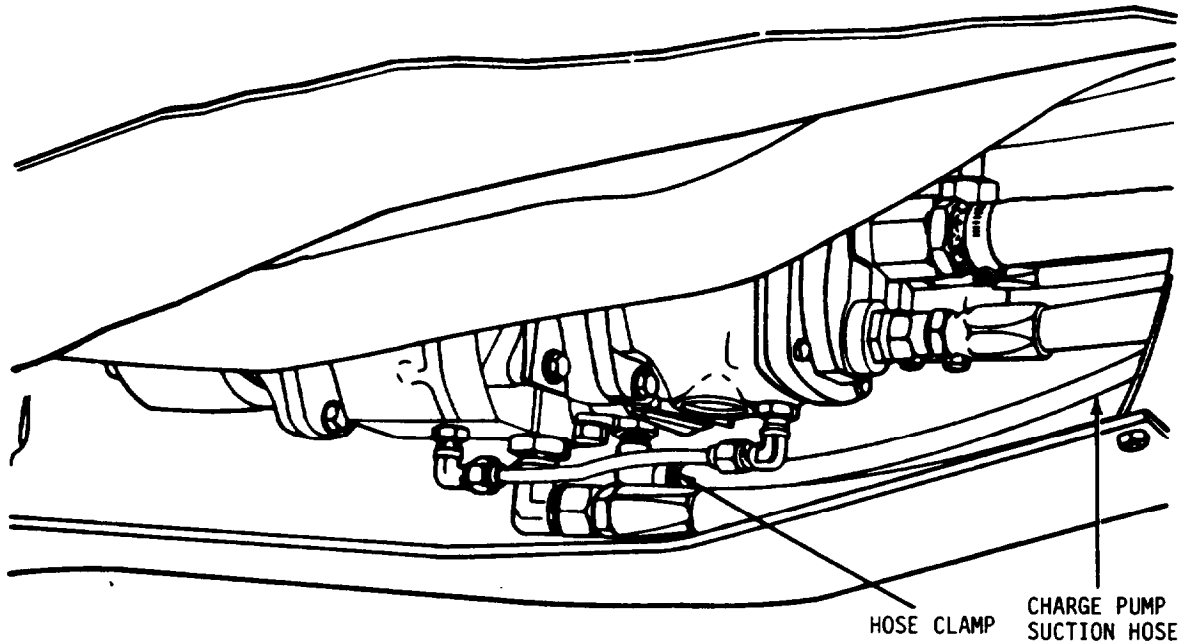
Ensure vehicle engine is off before performing the following steps.

2. Remove heat shrink tubing from vehicle cable wires. Slide cable shield away from sensor leads to expose cable splices and remove heat shrink tubing from splices.
3. Tag and identify three wires from vehicle cable to reservoir assembly.
4. Using diagonal cutting pliers, cut wires at splices.

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REMOVE

RESERVOIR ASSEMBLY



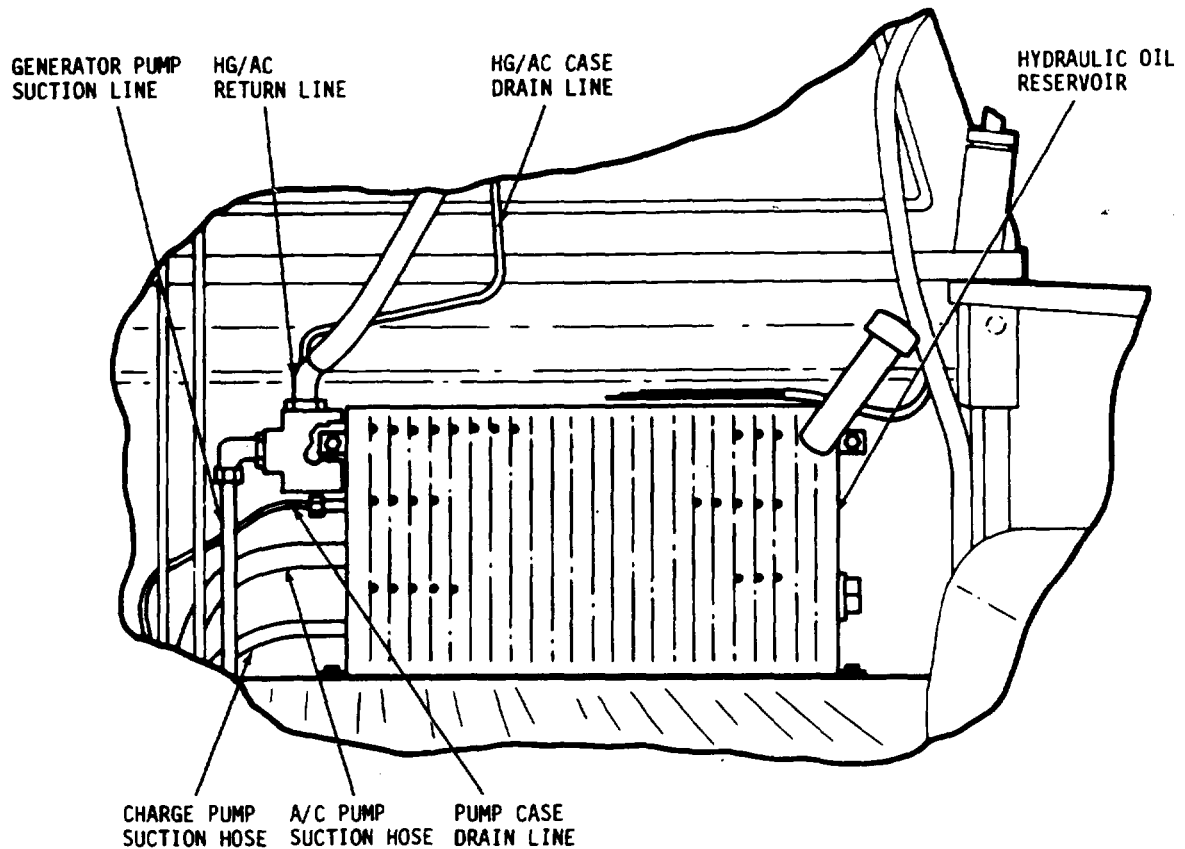
NOTE

When removing hydraulic lines, drain hydraulic fluid into container with an eight gallon capacity. Use drip pan to catch dripping fluid from disconnected lines.

WARNING

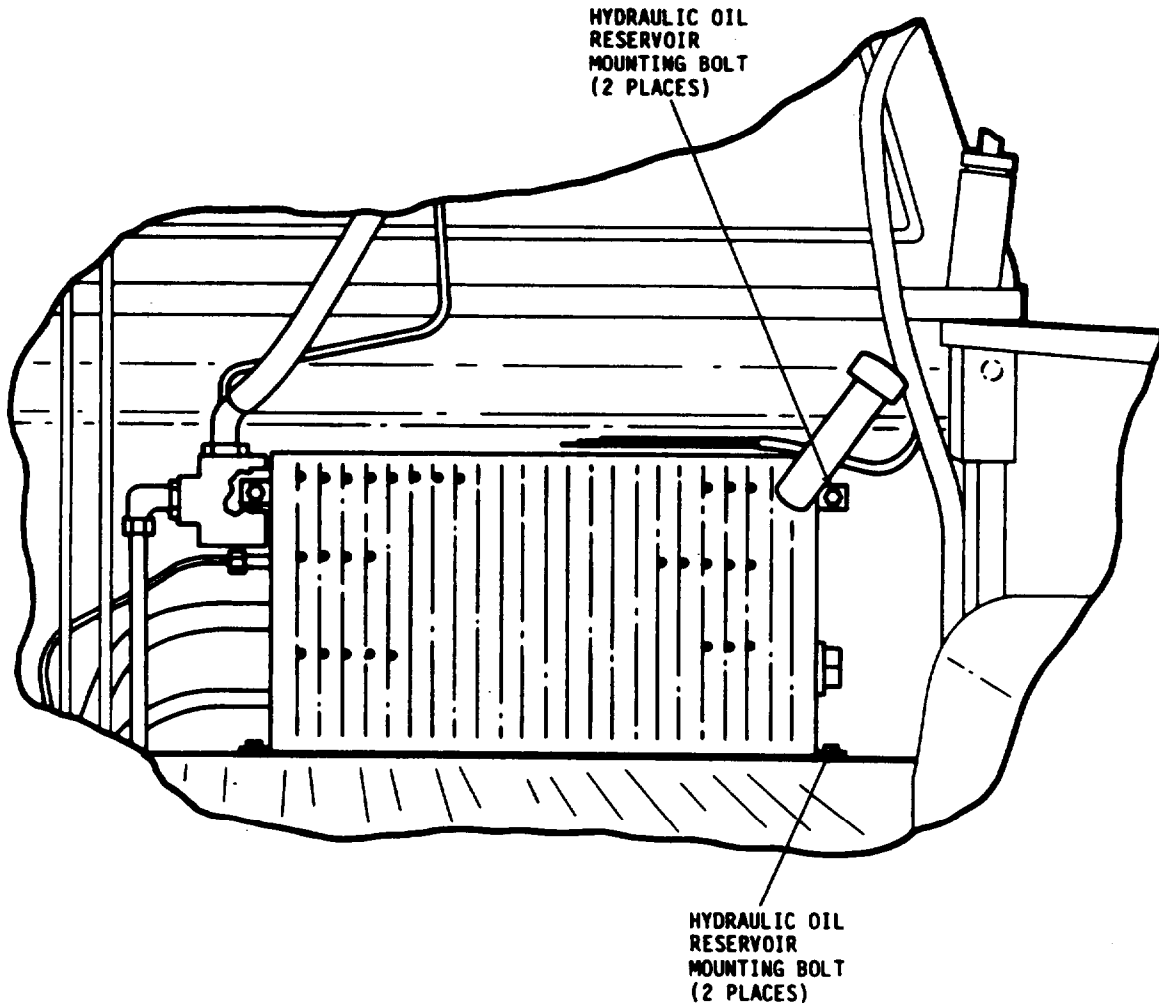
Wear safety goggles when working with hydraulic fluid.

5. At pump assembly, use a 1/4" flat-tip screwdriver to loosen hose clamp on charge pump suction hose (the smaller hose secured with hose clamp).
6. At pump assembly, remove charge pump suction hose from hose fitting. Route hydraulic fluid from hose into the eight gallon container.



7. Tag and identify lines before removing lines from reservoir assembly.
8. Using a 1-1/2" open-end wrench, disconnect HG/AC return line from elbow on reservoir assembly.
9. Using a 7/8" open-end wrench, disconnect HG/AC case drain line from elbow on reservoir assembly.
10. Using a 1-1/4" open-end wrench, disconnect generator pump suction line from elbow on reservoir assembly.
11. Using a 12" adjustable wrench, hold union in pump case drain line. Disconnect pump case drain line from union using a 7/8" open-end wrench.
12. Using a 1/4" flat-tip screwdriver, loosen hose clamp on A/C pump suction hose. Disconnect hose from hose fitting on reservoir assembly.
13. Using a 1/4" flat-tip screwdriver, loosen hose clamp on charge pump suction hose. Disconnect hose from hose fitting on reservoir assembly.

| | | |
|--------|--------|--------------------|
| 5 OF 5 | REMOVE | RESERVOIR ASSEMBLY |
|--------|--------|--------------------|



14. Using ratchet handle, 5" extension and 7/16" socket, remove and retain four cap screws, lockwashers and flat washers securing reservoir assembly into vehicle bed.
15. Remove reservoir assembly from vehicle bed.

RESERVOIR ASSEMBLY

REPLACE

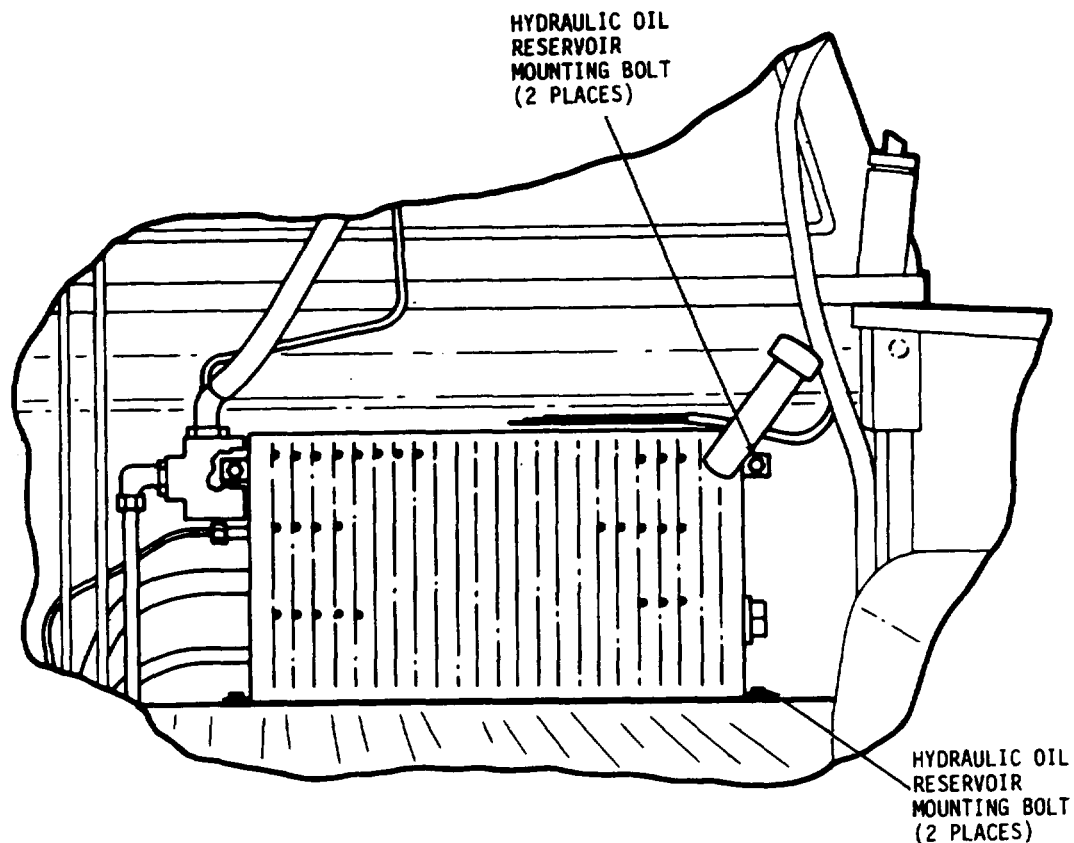
1 OF 5

The reservoir assembly (A28A4) is located in the vehicle bed behind the vehicle cab.

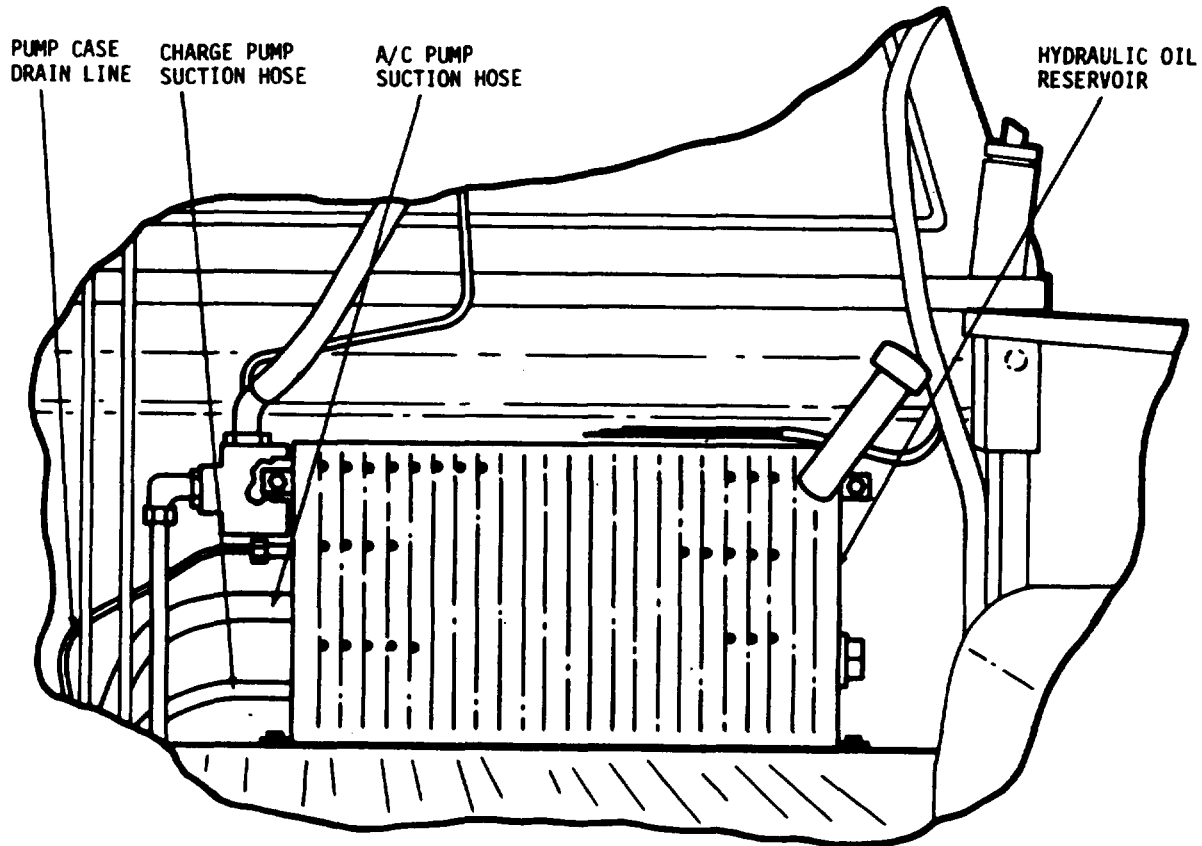
Tools Required: Refrigerator Unit Tool Kit
General Mechanic's Tool Kit
Heat Gun
Crimping Pliers
8 Gallon Container
Drip Pan

Personnel Required: 1

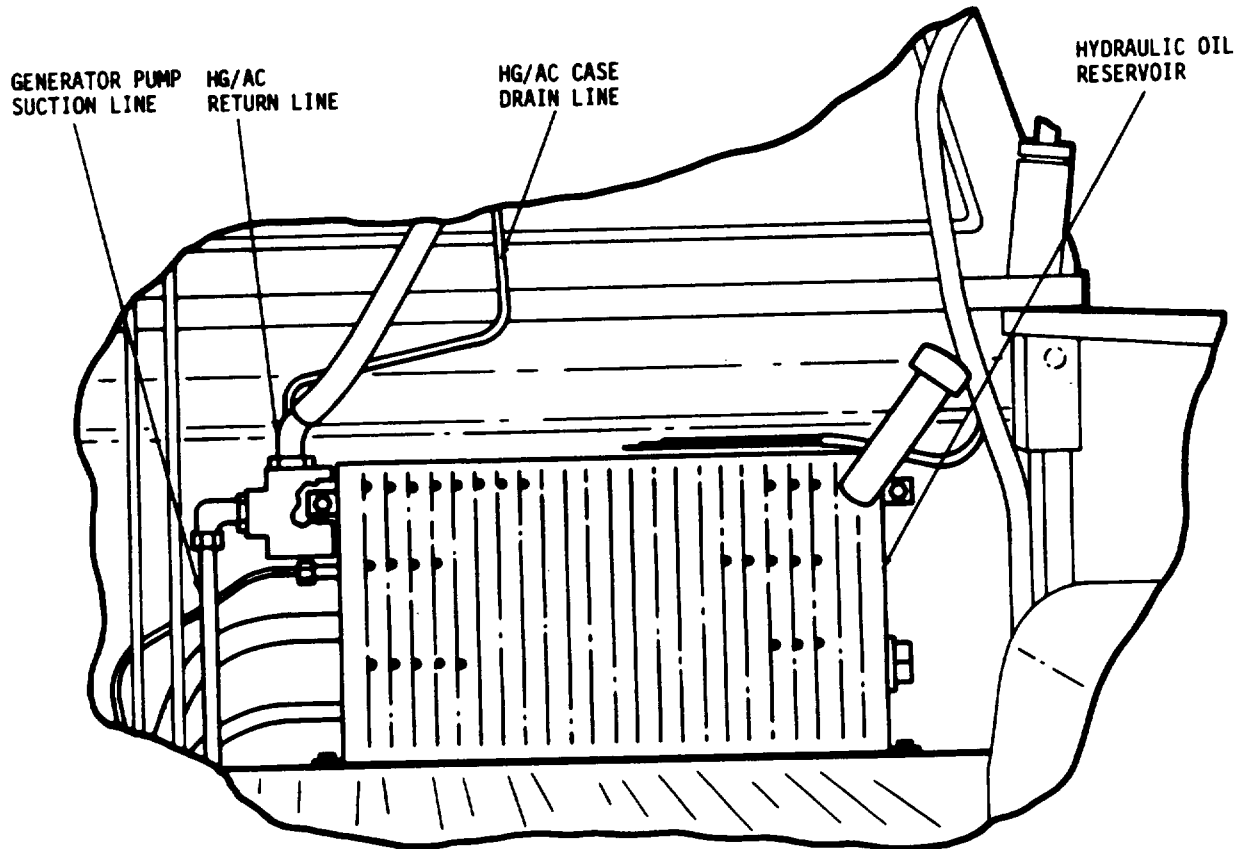
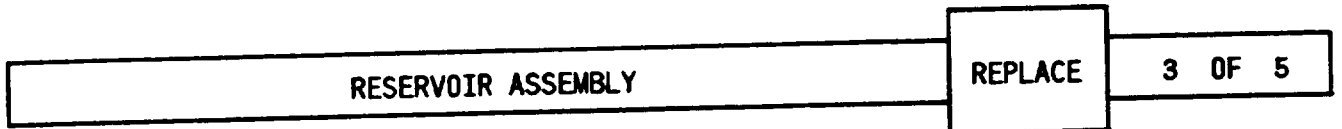
Replace reservoir assembly as follows:



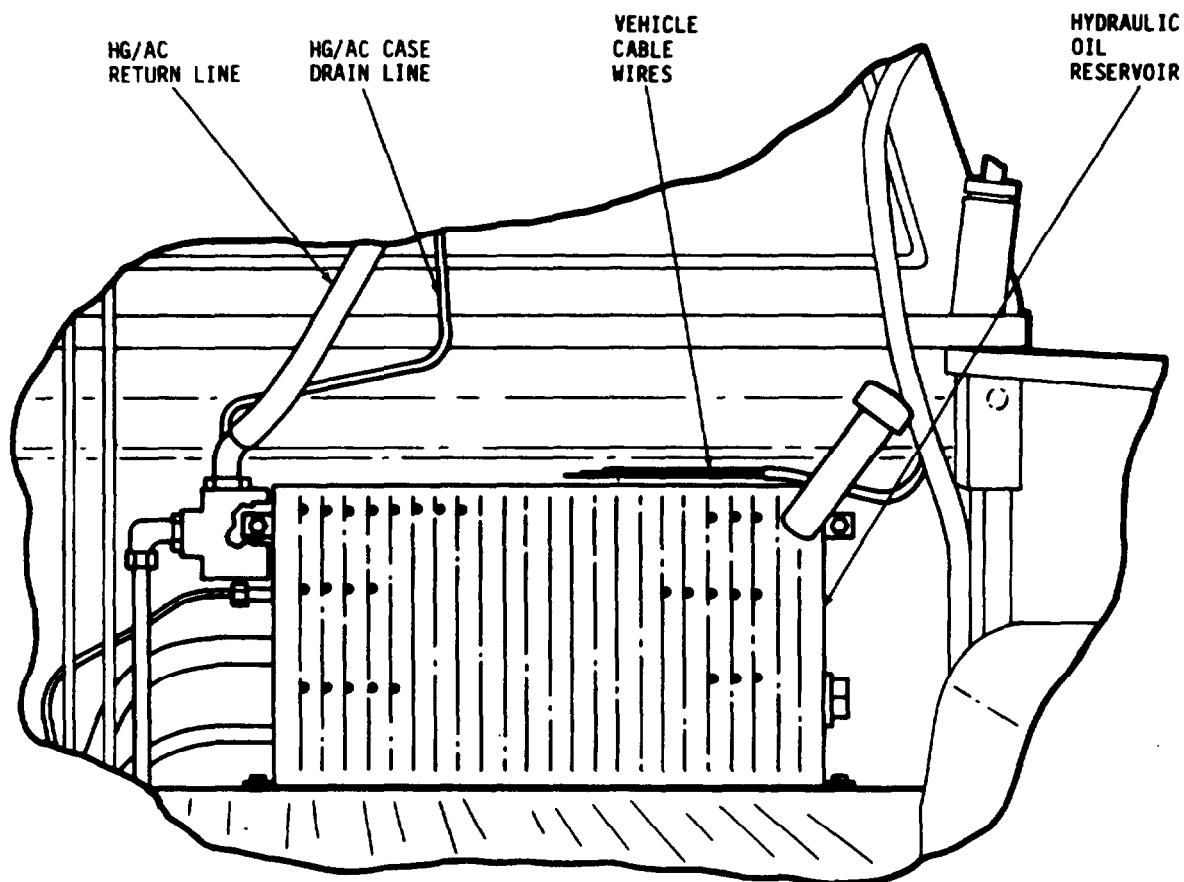
1. Using a putty knife, apply thermal joint compound (Appendix D, Item 19) to wall side of reservoir assembly.
2. Position reservoir assembly into vehicle bed and secure with four cap screws, lockwashers and flat washers. Tighten cap screws using ratchet handle, 5" extension and 7/16" socket.



3. Connect charge pump suction hose to hose fitting on reservoir assembly. Tighten hose clamp using a 1/4" flat-tip screwdriver.
4. Connect A/C pump suction hose to hose fitting on reservoir assembly. Tighten hose clamp using a 1/4" flat-tip screwdriver.
5. Connect pump case drain line to union on reservoir assembly. Use a 12" adjustable wrench to hold union and tighten pump case drain line using a 7/8" open-end wrench.



6. Connect generator pump suction line to elbow on reservoir assembly. Tighten line fitting to elbow using a 1-1/4" open-end wrench.
7. Connect HG/AC case drain line to elbow on reservoir assembly. Tighten line fitting to elbow using a 7/8" open-end wrench.
8. Connect HC/AC return line to elbow on reservoir assembly. Tighten line fitting to elbow using a 1-1/2" open-end wrench.

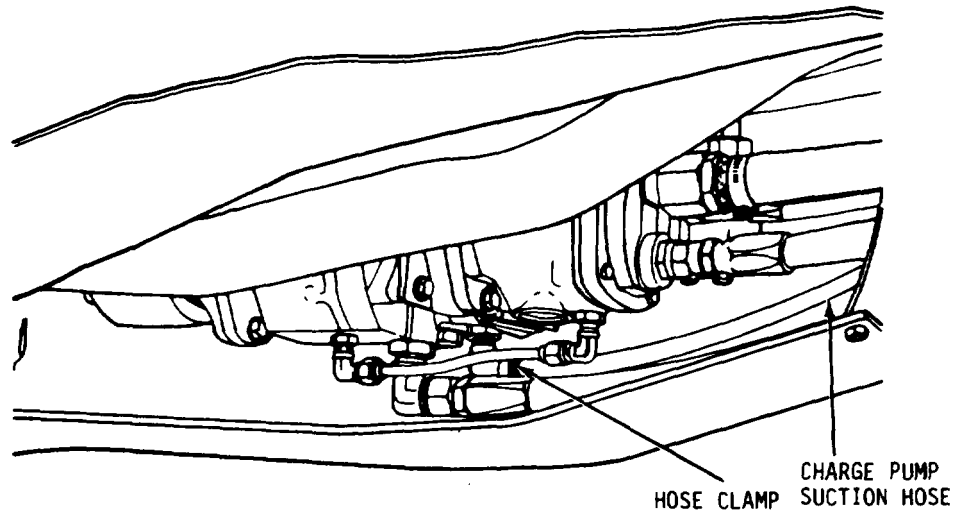


9. Remove tags from hydraulic lines.
10. Slide heat shrink tubing over vehicle cable (to sensor on reservoir assembly).
11. Slide heat shrink tubing over individual wires to be spliced.
12. Using splice fasteners, splice tagged wires from vehicle cable to sensor leads on the reservoir assembly. Crimp-splice fasteners using crimping pliers.
13. Remove cable tags and slide heat shrink tubing over individual splices. Apply heat to heat shrink tubing on splices using a heat gun.
14. Slide vehicle cable shield over cable splices. Slide heat shrink tubing over vehicle cable shield and apply heat to heat shrink tubing using a heat gun.

RESERVOIR ASSEMBLY

REPLACE

5 OF 5



15. Connect charge pump suction hose to hose fitting on pump assembly. Tighten hose clamp using a 1/4" flat-tip screwdriver.

NOTE

After performing any task that requires opening hydraulic system, replace hydraulic filter in HG/AC in accordance with TM 5-4120-391-14. Replace filter again after 100 hrs. of operation. Refer to PMCS TABLE for regular filter change interval.

WARNING

Hydraulic fluid M-17111 is not interchangeable with any other type or grade of fluid. Damage to equipment or injury of personnel may occur if fluid is interchanged.

16. Fill reservoir assembly with hydraulic fluid (Appendix D, Item 8) until fluid just begins to show on filler cap dip stick.

CAUTION

Fluid level in reservoir will vary with temperature. Fill reservoir to the full mark on filler cap dip stick only when system is at operating temperature.

17. Install shelter onto vehicle in accordance with Shelter Replace procedure.
18. Perform steps 19 through 39 of the Pump Assembly Replace procedure. With system at operating temperature, add hydraulic fluid until fluid level reaches the full mark on filler cap dip stick.

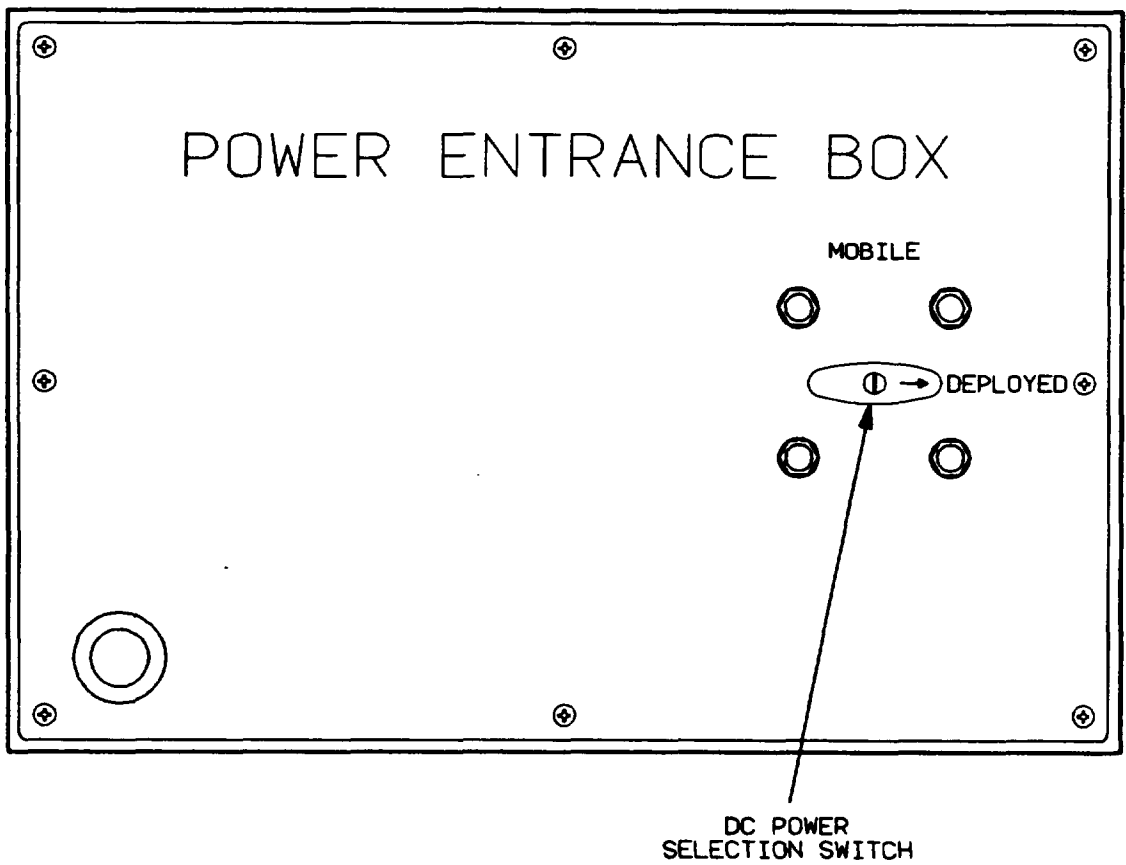


The junction box (A30) is located inside the shelter on the front wall.

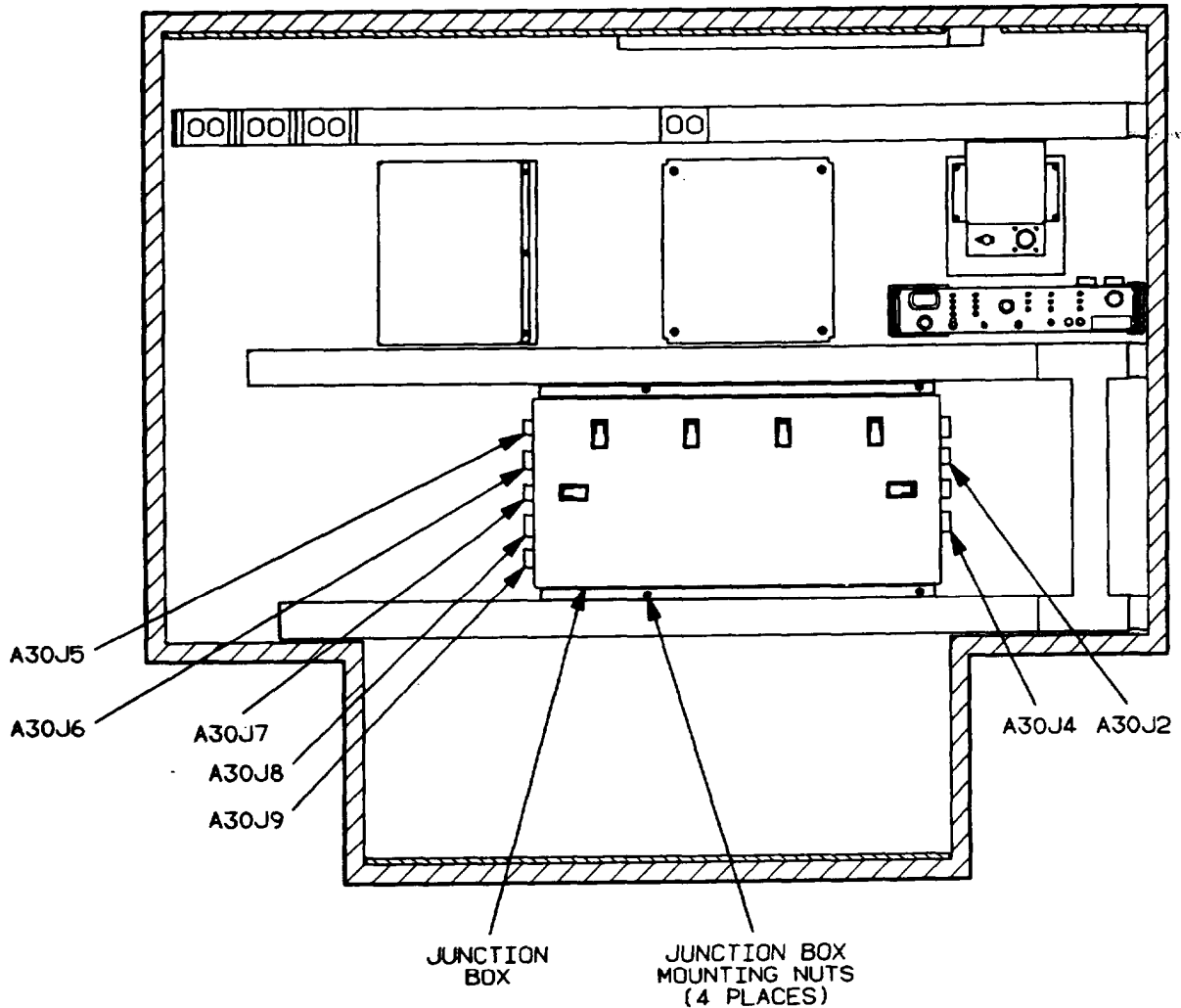
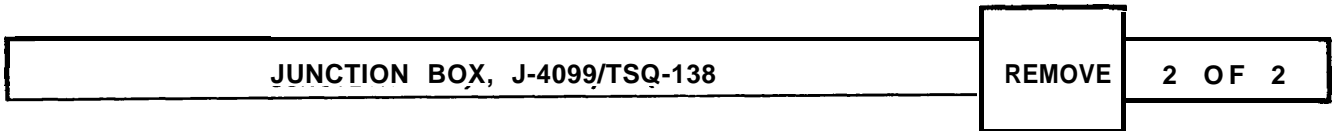
Tools Required: TK-101/G

Personnel Required: 1

Remove junction box as follows:



1. On DC power selection panel, place DC power selection switch to DEPLOYED position.
2. On system power supply, place SYS ON/OFF switch to OFF position.



3. On junction box, disconnect W36P2 from A30J2, W12P33 from A30J4, W62P3 from A30J5, W29P5 from A30J6, W12P34 from A30J7, W12P35 from A30J8, and W43P1 from A30J9.
4. Using ratchet handle, 6" extension and 7/16" socket, remove and retain four nuts, lockwashers and flat washers securing junction box to the shelter wall.
5. Remove junction box from shelter.

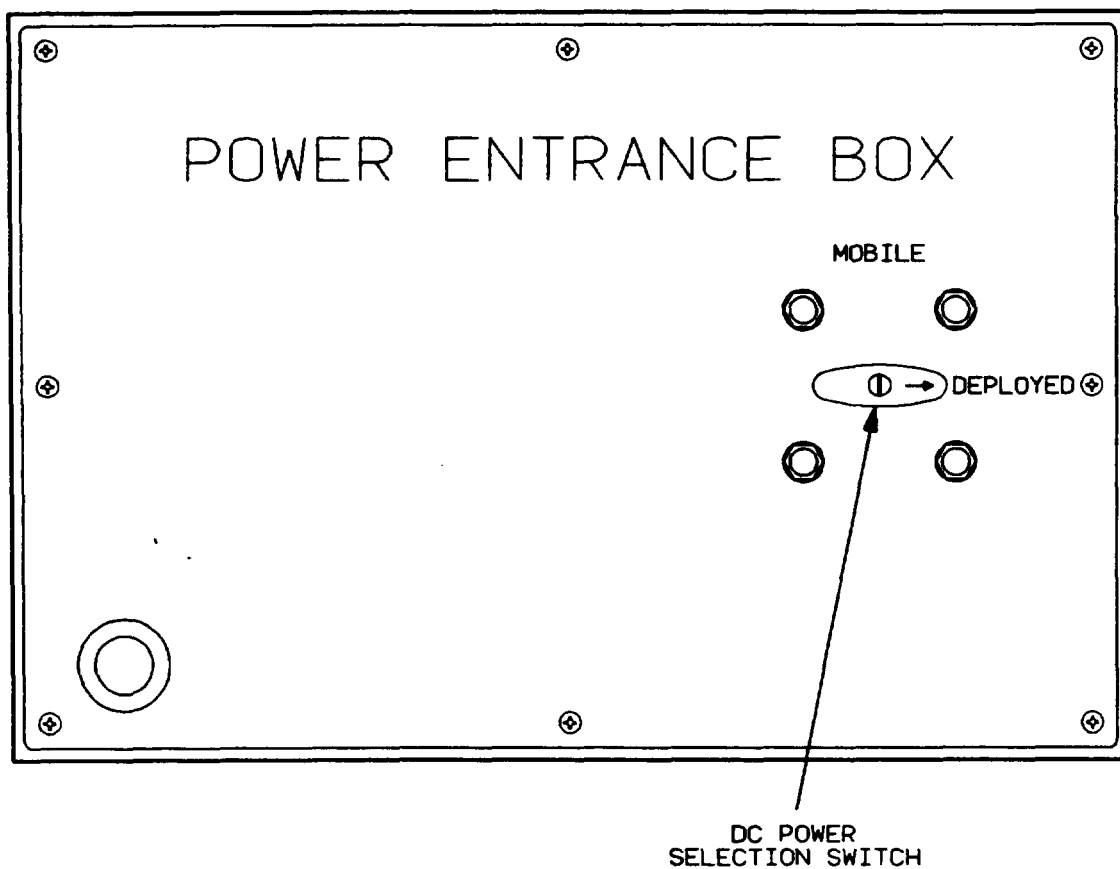


The junction box (A30) is located inside the shelter on the front wall.

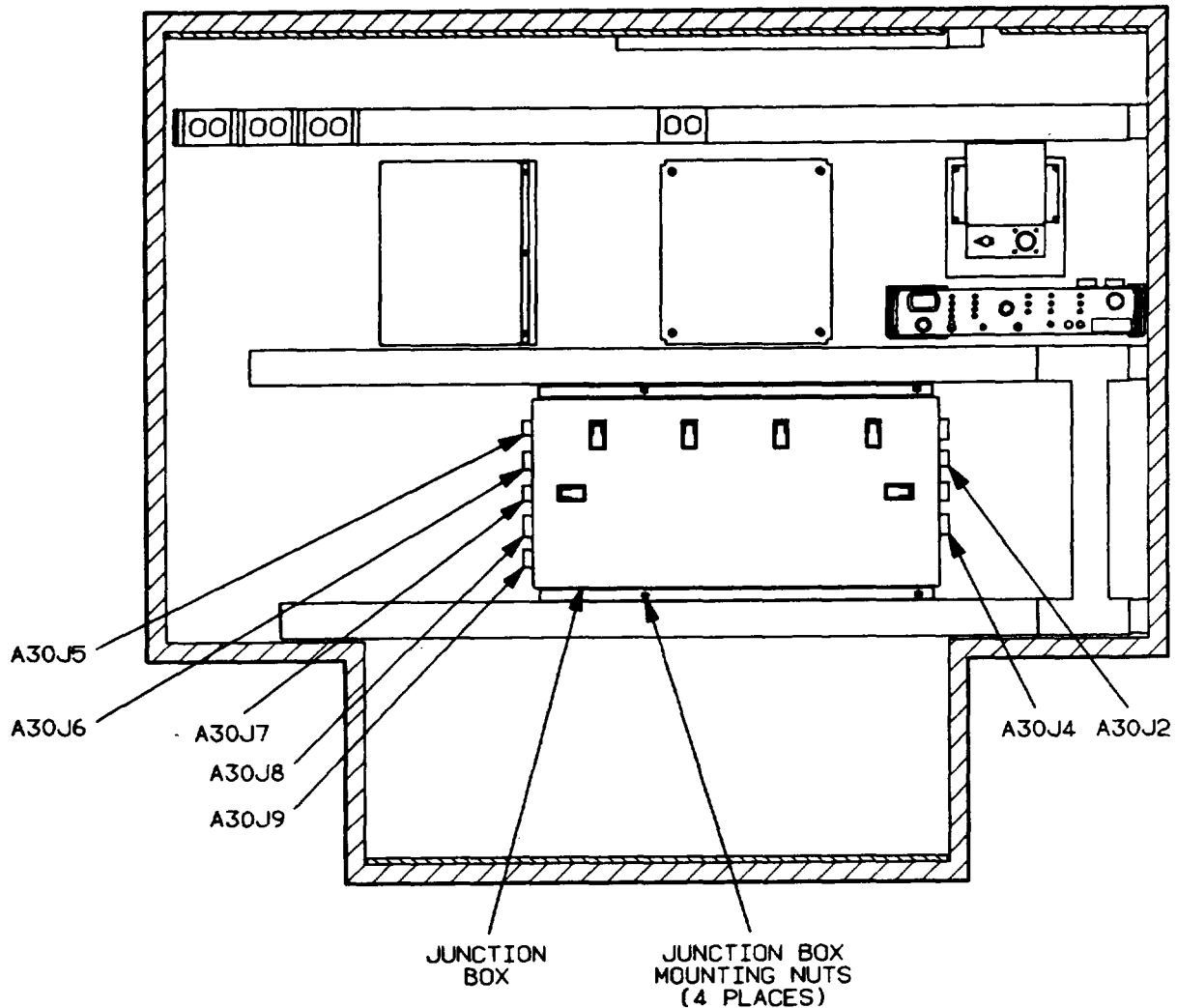
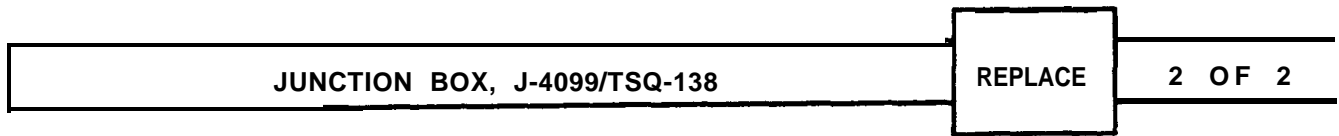
Tools Required: TK-101/G
AN/USM-486 Multimeter

Personnel Required: 1

Replace junction box as follows:



1. On DC power selection panel, place DC power selection switch to DEPLOYED position.
2. On system power supply, place SYS ON/OFF switch in OFF position.



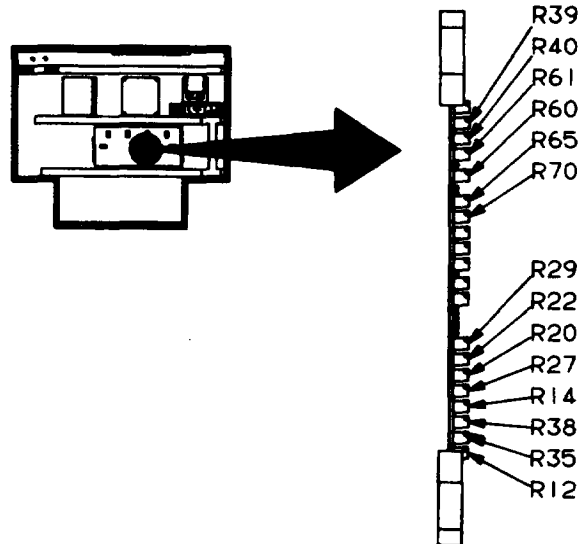
3. Place junction box onto shelter wall and secure with four nuts, lockwashers and flat washers. Use ratchet handle, 6" extension and 7/16" socket to tighten nuts.
4. On junction box, connect W36P2 to A30J2, W12P3 to A30J4, W62P3 to A30J5, W29P5 to A30J6, W12P34 to A30J7, W12P35 to A30J8, and W43P1 to A30J9.
5. On system power supply, place SYS ON/OFF switch to ON position.



NOTE

The following procedures identify the steps required to adjust audio-signals in J-4099/TSQ-138 junction box to a common level when used with AN/TRQ-32(V) system.

1. On system controller, perform BITE test no.13., (audio filter test). System controller displays - AUDIO OSC. ON, AUDIO FILTER PASSED.
2. On operator control panels, #1 and #2, set recorder switch to HF position.
3. On junction box, unlatch and open cover.



4. Using digital multimeter, place positive test lead on TB16 pin 1 and negative test lead on TB16 pin 2 (GND). Using a 1/8" flat-tip screwdriver, adjust R22 until multimeter reads 1.2 ± 0.1 Vat.
5. Using digital multimeter, place positive test lead on TB7 pin 15 and negative test lead on TB7 pin 13 (GND). Using a 1/8" flat-tip screwdriver, adjust R20 until multimeter reads 1.2 ± 0.1 Vat.
6. Using digital multimeter, place positive test lead on TB16 pin 13 and negative test lead on TB16 pin 12 (GND). Using a 1/8" flat-tip screwdriver, adjust R38 until multimeter reads 1.2 ± 0.1 Vat.
7. Using digital multimeter, place positive test lead on TB7 pin 10 and negative test lead on T87 pin 11 (GND). Using a 1/8" flat-tip screwdriver, adjust R35 until multimeter reads 1.2 ± 0.1 Vat.
8. On operator control panels, #1 and #2, set recorder switch to VHF/UHF position.

JUNCTION BOX, J-4099/TSQ-138

ADJUST

2 OF 2

9. Using digital multimeter, place positive test lead on TB13 pin 14 and negative test lead on TB13 pin 15 (GND). Using a 1/8" flat-tip screwdriver, adjust R14 until multimeter reads 1.2 ± 0.1 Vat.
10. Using digital multimeter, place positive test lead on TB7 pin 15 and negative test lead on TB7 pin 13 (GND). Using a 1/8" flat-tip screwdriver, adjust R12 until multimeter reads 1.2 ± 0.1 Vac.
11. Using digital multimeter, place positive test lead on TB16 pin 11 and negative test lead on TB16 pin 12 (GND). Using a 1/8" flat-tip screwdriver, adjust R29 until multimeter reads 1.2 ± 0.1 Vac.
12. Using digital multimeter, place positive test lead on TB7 pin 10 and negative test lead on TB7 pin 11 (GND). Using a 1/8" flat-tip screwdriver, adjust R27 until multimeter reads 1.2 ± 0.1 Vac.
13. On intercom control panels, #1 and #2, set all toggle switches to off (down) position. Set rotary switch to the 2 position.
14. On recorders no.1 and no.2, set the CHAN SEL switch to 1. Set CHANNEL (1) AGC/MAN switch to AGC position.
15. Using digital multimeter, place positive test lead on TB10 pin 4 and negative test lead on TB8 pin 15 (GND). Using a 1/8" flat-tip screwdriver, adjust R39 until multimeter reads 1.2 ± 0.1 Vac.
16. Using digital multimeter, place positive test lead on TB10 pin 5 and negative test lead on TB8 pin 15 (GND). Using a 1/8" flat-tip screwdriver, adjust R40 until multimeter reads 1.2 ± 0.1 Vac.
17. Using a 1/8" flat-tip screwdriver, turn adjustment on R65 clockwise (approximately 20 turns) until it-reaches end of its travel.
18. Using a 1/8" flat-tip screwdriver, turn adjustment on R70 clockwise (approximately 20 turns) until it reaches end of its travel.
19. Using a 1/8" flat-tip screwdriver, turn adjustment on R60 counterclockwise (approximately 20 turns) until it reaches end of its travel.
20. Using a 1/8" flat-tip screwdriver, turn adjustment on R60 clockwise approximately 10 turns.
21. Using a 1/8" flat-tip screwdriver, turn adjustment on R61 counterclockwise (approximately 20 turns) until it reaches end of its travel.
22. Using a 1/8" flat-tip screwdriver, turn adjustment on R61 clockwise approximately 10 turns.
23. On junction box, close and latch cover.
24. On system controller, press TEST key to terminate BITE test no.13 (audio filter test).

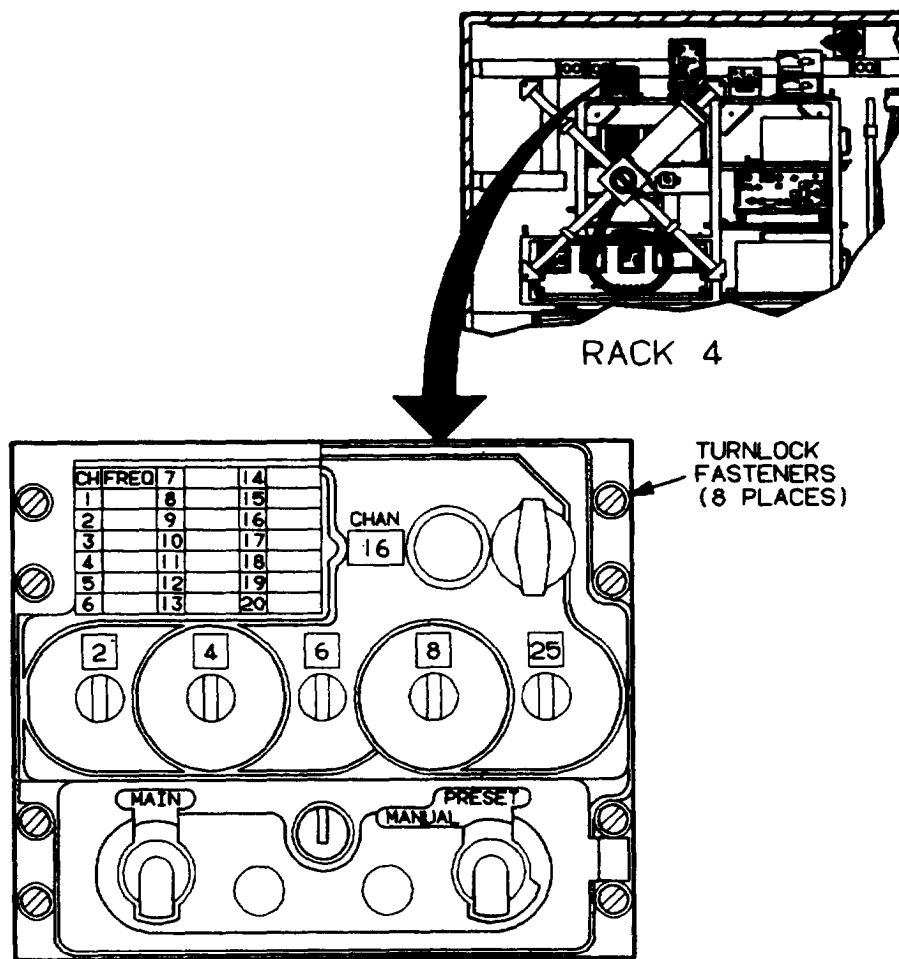


The UHF radio control (A33) is located in equipment rack 4.

Tools Required: TK-105/G

Personnel Required: 1

Remove UHF radio control as follows:



1. On data link processor, place power ON/OFF switch to OFF position.
2. On system power supply, place XMTR ON/OFF switch to OFF position.
3. On rear of UHF radio control, disconnect cable W89P2 from A33J1.
4. Using a 1/4" flat-tip screwdriver, unlock eight turn lock fasteners securing UHF radio control into equipment rack mounting bracket.
5. Slide UHF radio control out of equipment rack.

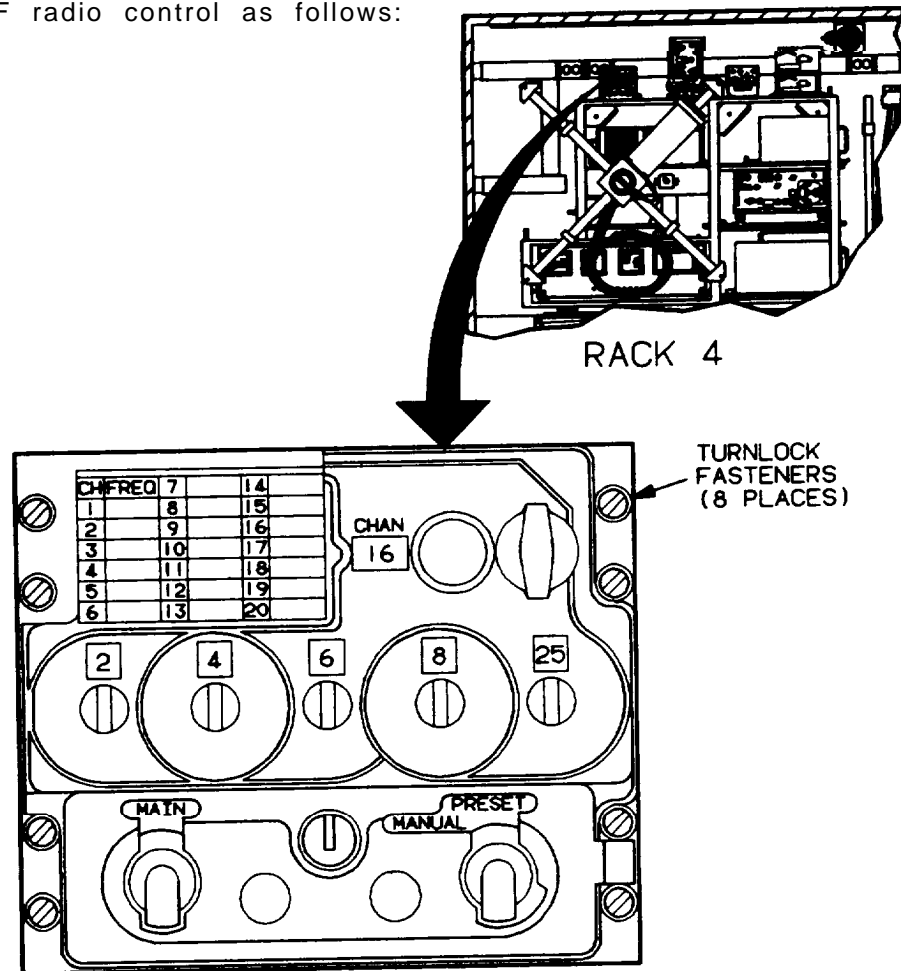
| | | |
|---------------------------------------|---------|--------|
| UHF RADIO CONTROL, C-10547/ARC-164(V) | REPLACE | 1 OF 1 |
|---------------------------------------|---------|--------|

The UHF radio control (A33) is located in equipment rack 4.

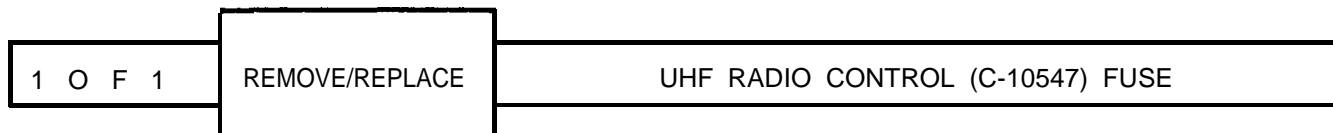
Tools Required: TK-105/G

Personnel Required: 1

Install UHF radio control as follows:



1. On data link processor, place power ON/OFF switch to OFF position.
2. On system power supply, place XMTR ON/OFF switch to OFF position.
3. Position UHF radio control into equipment rack mounting bracket. Using a 1/4" fiat-tip screwdriver, secure eight trunlock fasteners.
4. On rear of UHF radio control, connect cable W89P2 to A33J1.
5. On system power supply, place XMTR ON/OFF switch to ON position.
6. On data link processor, place power ON/OFF switch to ON position.

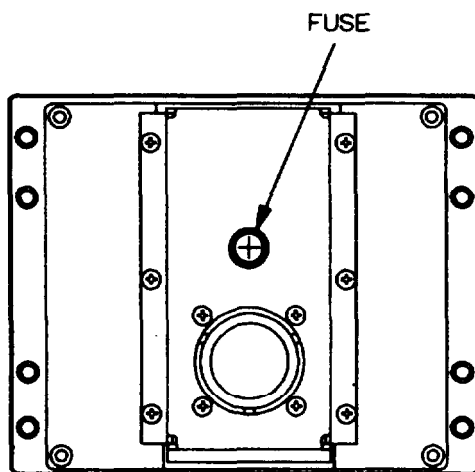


The UHF radio control fuse is located on the rear panel of unit.

Tools Required: NONE

Personnel Required: 1

Remove/replace UHF radio control fuse as follows.



1. On system power supply, place XMTR ON/OFF switch to OFF position.
2. Turn fuse cap counterclockwise to unscrew from fuseholder housing. Remove and retain fuse cap.
3. Pull defective fuse from fuse holder housing and install new fuse. Ensure leads on fuse are aligned with holes in fuseholder housing.
4. Position fuse cap onto fuseholder housing and turn clockwise to secure.
5. On system power supply, place XMTR ON/OFF switch to ON position.

DATA LINK PROCESSOR, C-11844/TRQ-32(V)

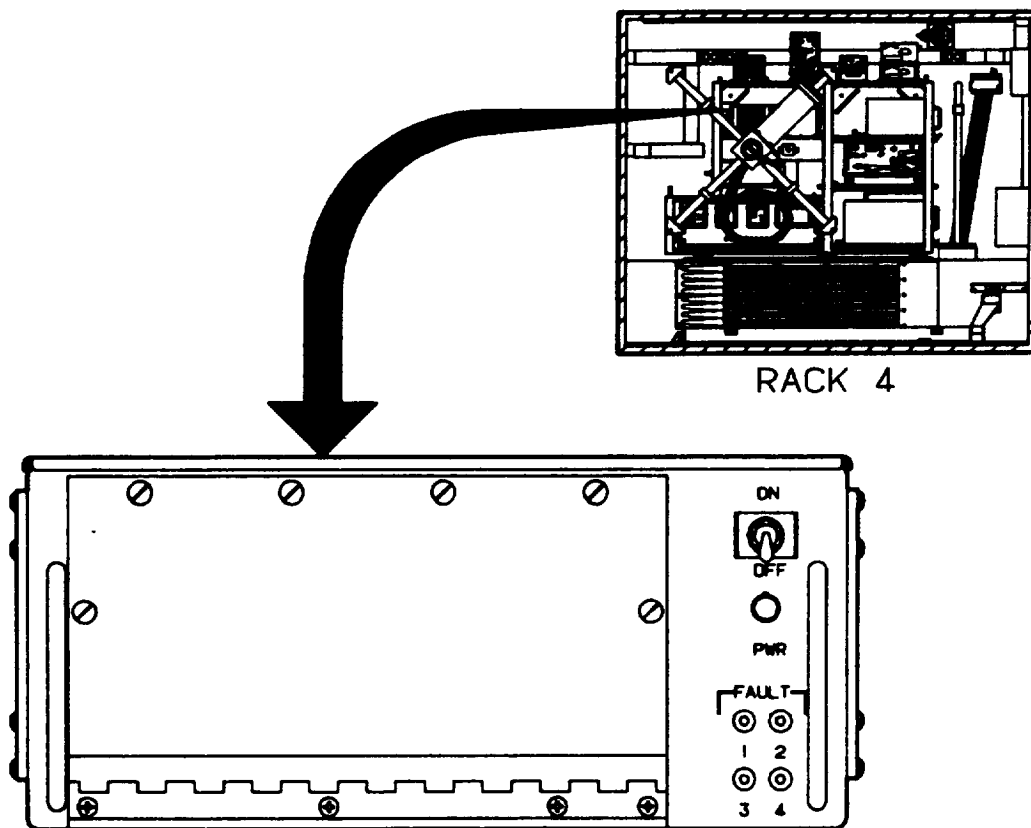
REMOVE 1 OF 1

The data link processor is located in equipment rack 4.

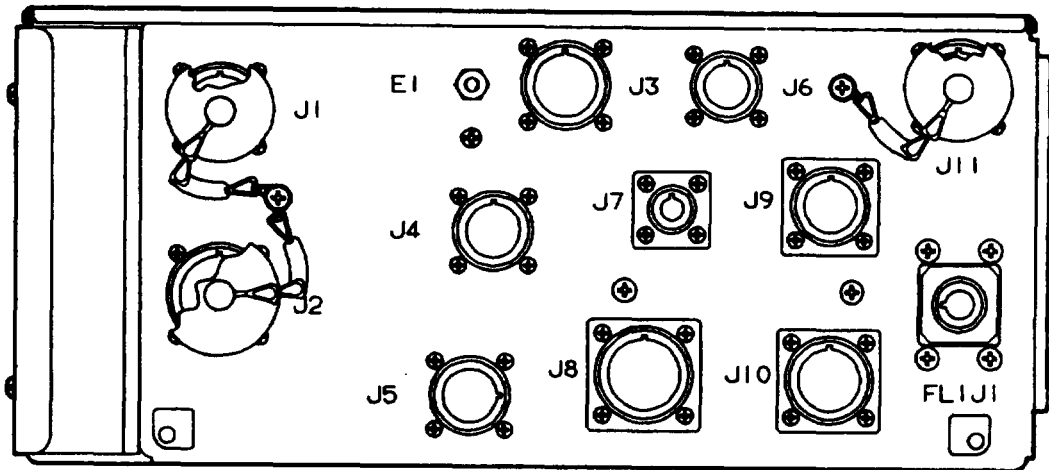
Tools Required: NONE

Personnel Required: 1

Remove data link processor as follows:



1. On front panel of data link processor, place power ON/OFF switch to OFF position.
2. On power distribution panel, place circuit breaker labeled RACK 4 to OFF position.
3. If mast crown is in stored position on equipment rack, remove mast crown in accordance with Mast Crown Remove procedures in this manual.



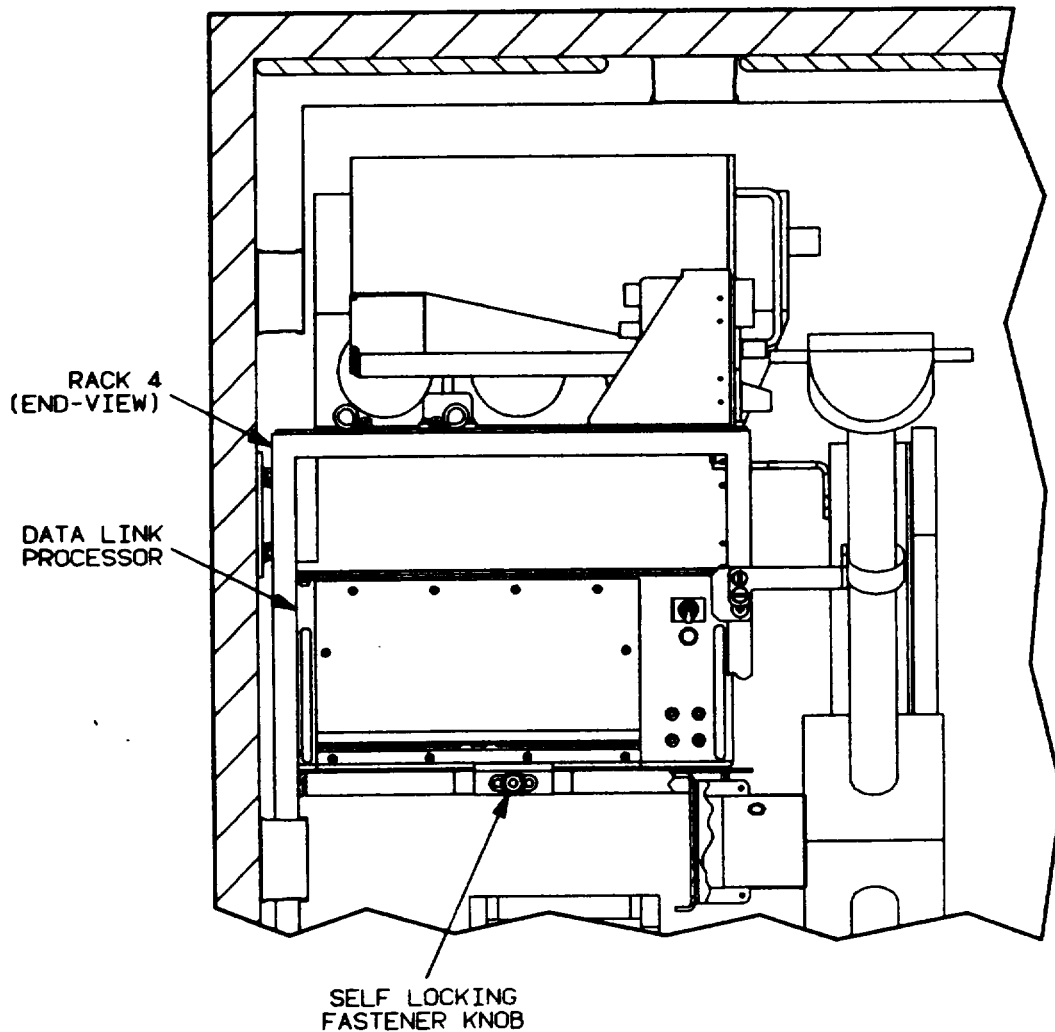
REAR VIEW

4. On rear panel of data link processor, disconnect cables W86P1 from A37J3, W83P2 from A37J4, W84P2 from A37J5, W85P1 from A37J6, W95P2 from A37J7, W89P1 from A37J8, W87P1 from A37J9, W88P1 from A37J10 and W90P1 from A37FL1J1.

DATA LINK PROCESSOR, C-11844/TRQ-32(V)

REMOVE

3 O F 3



5. At bottom of data link processor front panel, (pull to unlock) loosen knob on the self-locking fastener securing data link processor to equipment rack. Pull retaining plate away from edge of data link processor.
6. Slide data link processor left until clear of equipment rack guide pins.
7. On data link processor front panel, fold handles toward the center. Pull data link processor forward and remove from equipment rack.

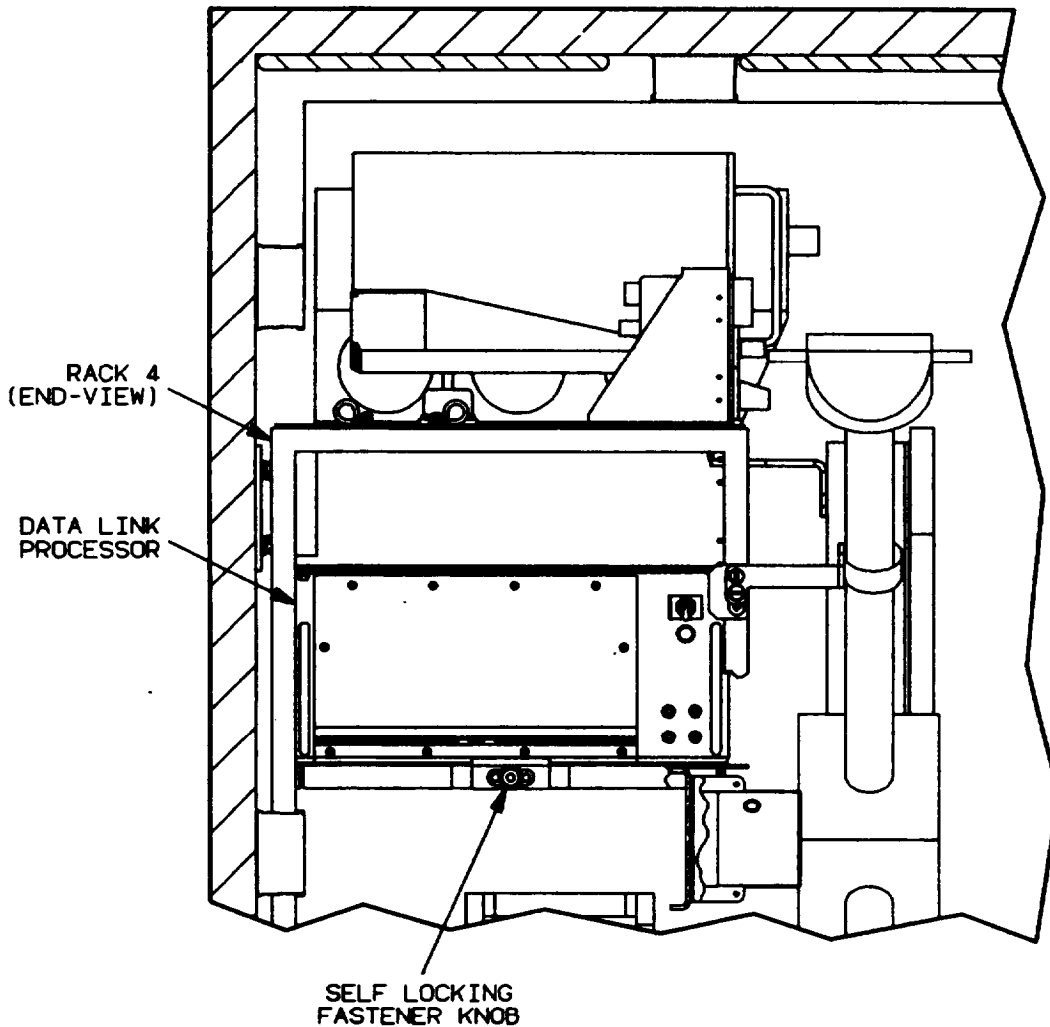
| | | |
|--------|---------|----------------------------------------|
| 1 OF 2 | REPLACE | DATA LINK PROCESSOR, C-11844/TRQ-32(V) |
|--------|---------|----------------------------------------|

The data link processor is located in equipment rack 4.

Tools Required: NONE

Personnel Required: 1

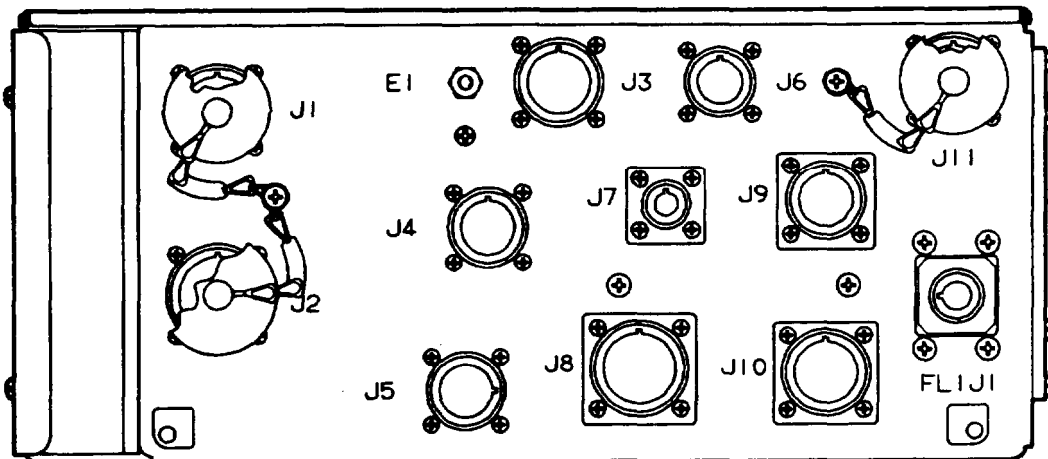
Replace data link processor as follows:



1. On power distribution panel, place circuit breaker labeled RACK 4 to OFF position.
2. On front panel of data link processor, place power ON/OFF switch to OFF position.
3. Place data link processor into equipment rack. Slide unit to the right until alignment holes on rear panel of unit are seated on equipment rack guide pins.
4. Push holding clamp and knob of self-locking fastener over mounting lip on front panel of data link processor. Tighten knob on self-locking fastener to secure data link processor into equipment rack.

DATA LINK PROCESSOR, C-11844/TRQ-32(V)

REPLACE 2 OF 2



REAR VIEW

5. On rear panel of data link processor, connect cables W90P1 to A37FL1J1, W88P1 to A37J10, W87P1 to A37J9, W89P1 to A37J8, W95P2 to A37J7, W85P1 to A37J6, W84P2 to A37J5, W83P2 to A37J4 and W86P1 to A37J3.
6. On power distribution panel, place circuit breaker labeled RACK 4 to ON position.
7. On front panel of data link processor, place power ON/OFF switch to ON position.
8. Return mast crown to stored position on equipment rack 4, if not in use.

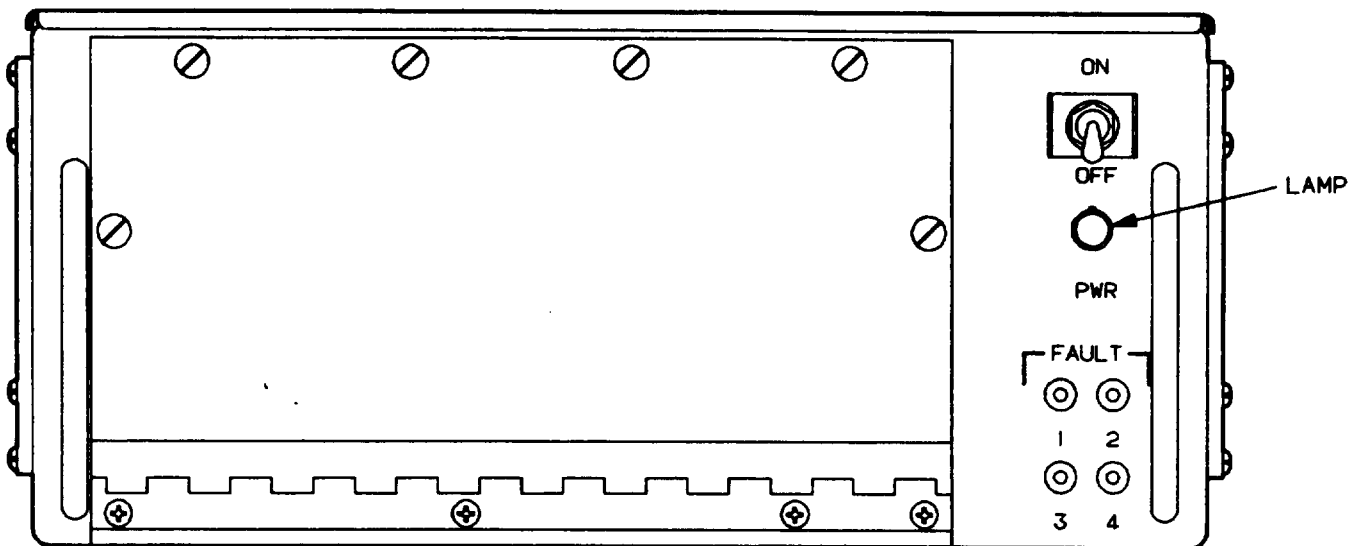


The data link processor lamp is located inside the lens lampholder on front panel.

Tools Required: NONE

Personnel Required: 1

Remove/replace data link processor lamp as follows.



1. On data link processor, place power ON/OFF switch to OFF position.
2. Turn lens lampholder counterclockwise to unscrew from housing.
3. Pull defective lamp out of lens lampholder and replace with new lamp.
4. Position lens lampholder into housing and turn clockwise to tighten.
5. On data link processor, place power ON/OFF switch to ON position.

DATA LINK PROCESSOR AIR FILTER

REMOVE/REPLACE

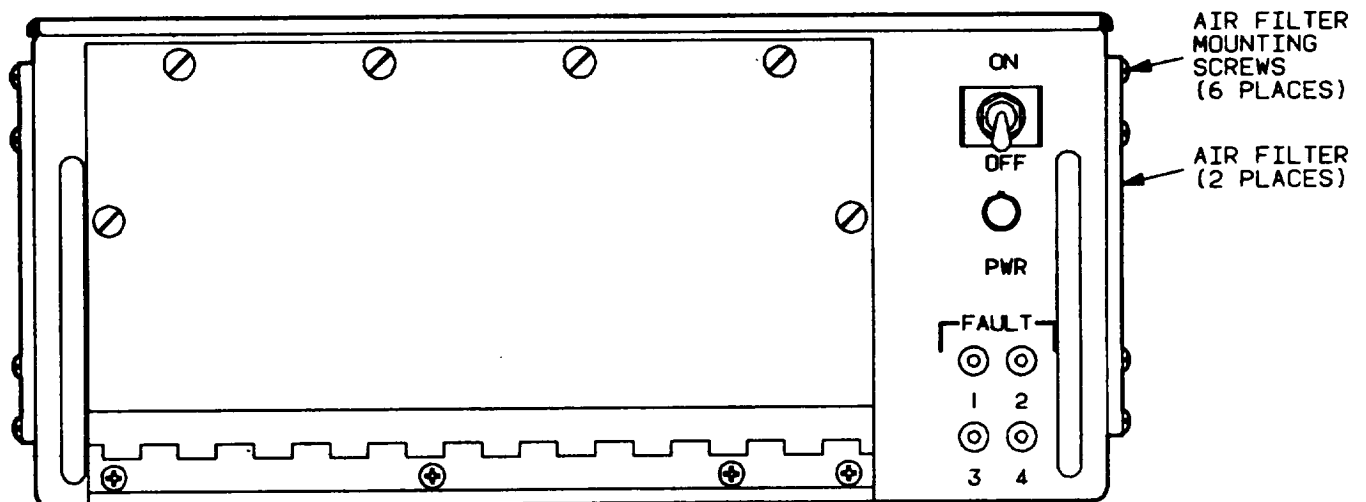
1 O F 1

There are two air filters on the data link processor. They are located at the right and left front sides of the unit.

Tools Required: TK-105/G
Soft brush

Personnel Required: 1

Remove/replace air filters as follows:



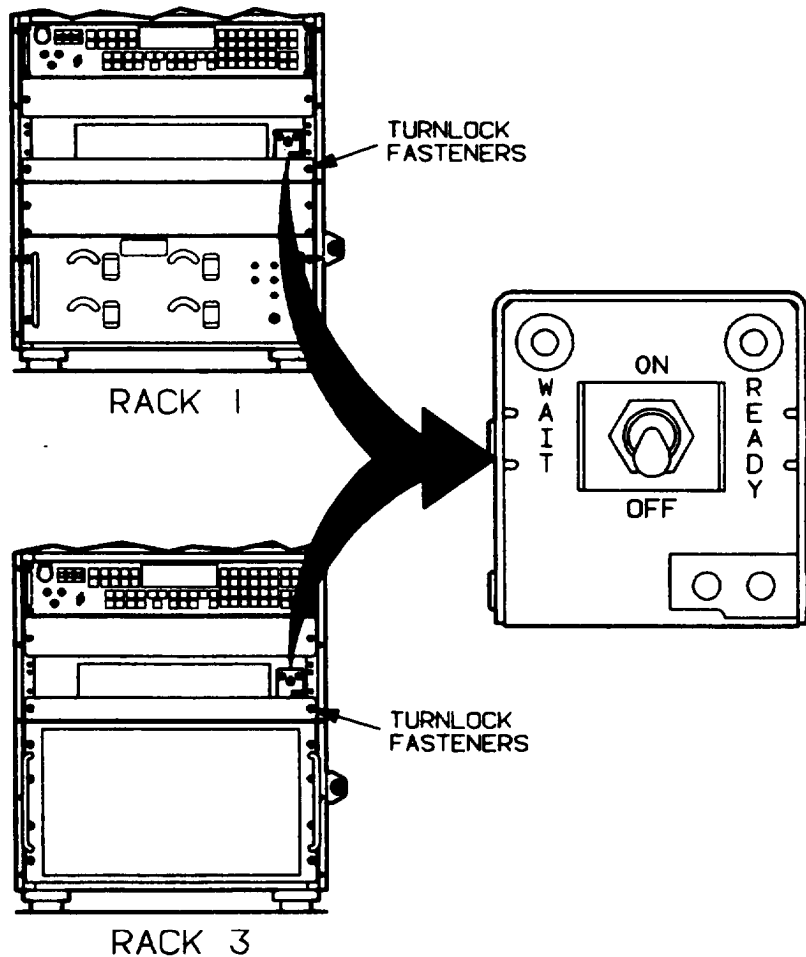
1. Remove data link processor from equipment rack in accordance with Data Link Remove procedure.
2. Using no. 2 cross-tip screwdriver, remove and retain six screws securing each air filter onto right and left side of data link processor.
3. To clean air filters, use water (or cleaner) (Appendix D, Item 4) and soft brush. Rinse air filters with clean water and allow to air dry.
4. Using a no. 2 cross-tip screwdriver, secure air filter (one on each side of data link processor) with six screws.
5. Install data link processor into equipment rack in accordance with Data Link Replace procedure.

There are two power switch assemblies (A38 and A39). Power switch assembly (A38) is located in equipment rack 1. Power switch assembly (A39) is located in equipment rack 3.

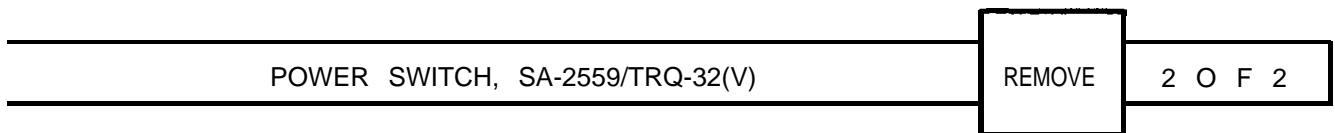
Tools Required: TK-101/G

Personnel Required: 1

Remove power switch assembly (either) as follows:

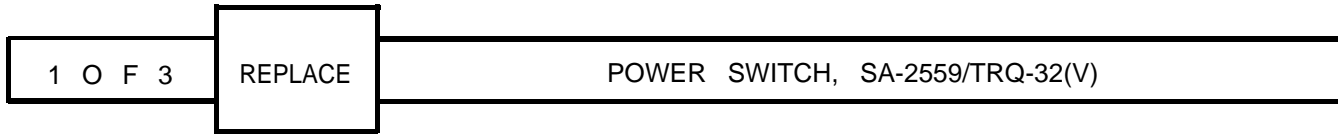


1. On system controller, place POWER ON/OFF switch to OFF position.
2. On power switch assembly, place power ON/OFF switch to OFF position.

**NOTE**

Circuit breaker and connector numbers listed are for A38 located in equipment rack 1. Circuit breaker and connector numbers in parenthesis are for A39 located in equipment rack 3.

3. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3) to OFF position.
4. If operator terminal is stored, loosen two turnlock fasteners securing operator terminal mounting tray into equipment rack.
5. Pull operator terminal mounting tray forward to access power switch.
6. On rear of power switch, disconnect cable W76P2 (W77P2) from A38J1 (A39J1).
7. Using no. 2 cross-tip screwdriver and 5/16" spin socket wrench, remove and retain two screws, lockwashers, flat washers and nuts securing power switch assembly onto operator terminal mounting tray.
8. Remove power switch assembly from operator terminal mounting tray.



There are two power switch assemblies (A38 and A39). Power switch assembly (A38) is located in equipment rack 1. Power switch assembly (A39) is located in equipment rack 3.

Tools Required: TK-101/G

Personnel Required: 1

Replace power switch assembly as follows:

1. On system controller, place POWER ON/OFF switch to OFF position.

NOTE

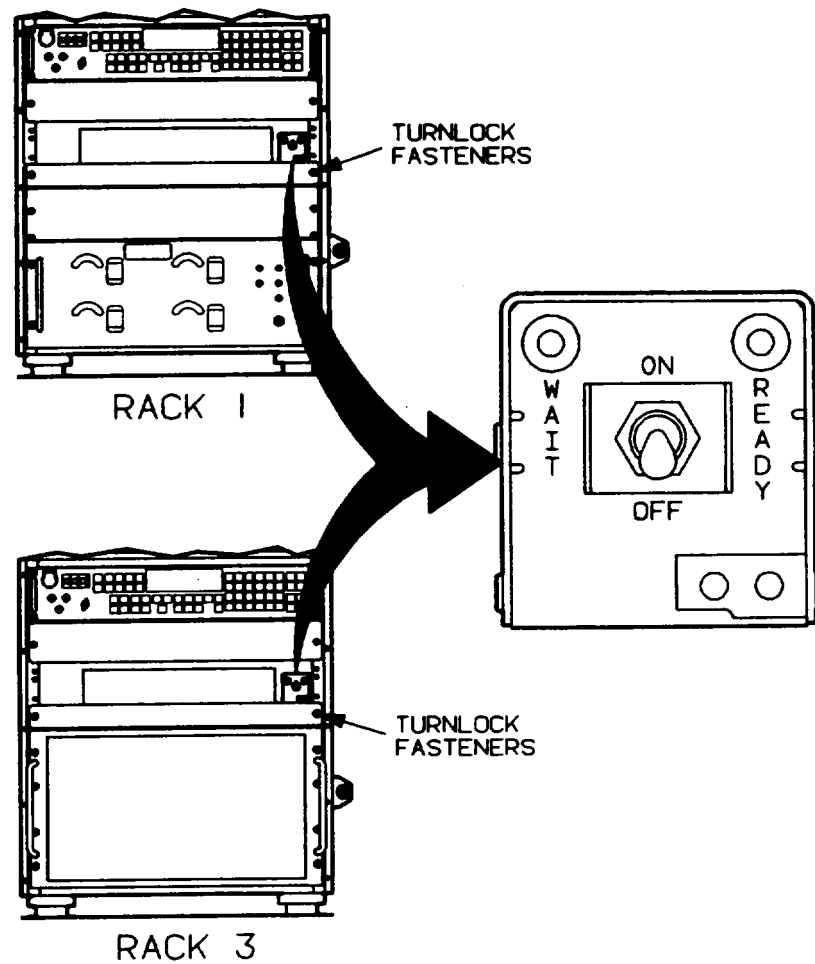
Circuit breaker and connector numbers listed are for A38 located in equipment rack 1. Circuit breaker and connector numbers in parenthesis are for A39 located in equipment rack 3.

2. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3) to OFF position.

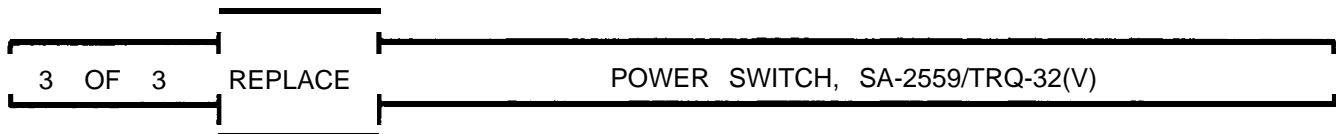
POWER SWITCH, SA-2559/TRQ-32(V)

REPLACE

2 O F 3



3. If operator terminal is in stored position, loosen two turnlock fasteners securing operator terminal mounting tray into equipment rack.
4. Pull operator terminal mounting tray forward out of equipment rack.



5. Position power switch assembly onto operator terminal mounting tray and secure with two screws, lockwashers, flat washers and nuts. Tighten screws and nuts using a no. 2 cross-tip screwdriver and 5/16" spin socket wrench.
6. On rear of power switch, connect cable W76P2 (W77P2) to A38J1 (A39J1).
7. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3) to ON position.
8. On power switch assembly, place power ON/OFF switch to ON position.
9. On system controller, place POWER ON/OFF switch to ON position.
10. To place operator terminal into stored position, press in locking tabs on slide rails of operator terminal mounting tray and push mounting tray into equipment rack, Lock two turnlock fasteners to secure.

DISK DRIVE CONTROL, C-11843/TRQ-32(V)

REMOVE 1 OF 3

The disk drive control assembly is located in equipment rack 4.

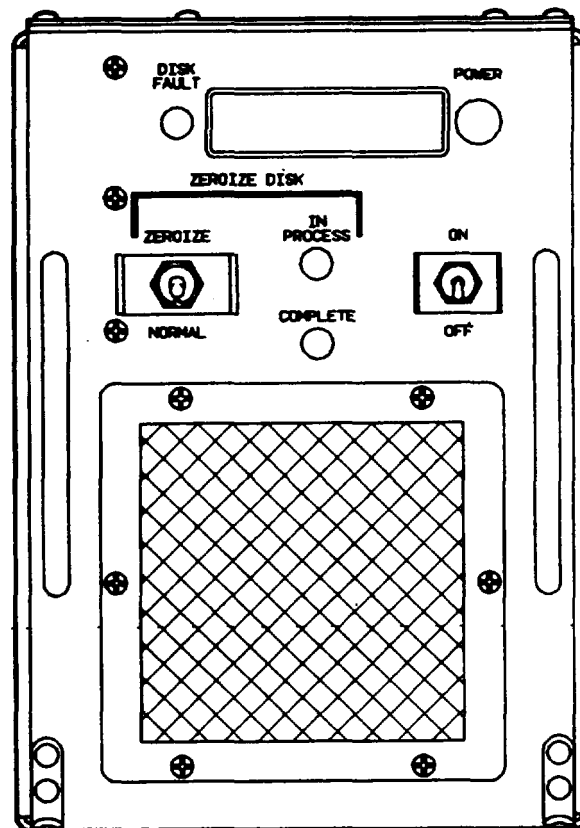
Tools Required: TK-105/G

Personnel Required: 1

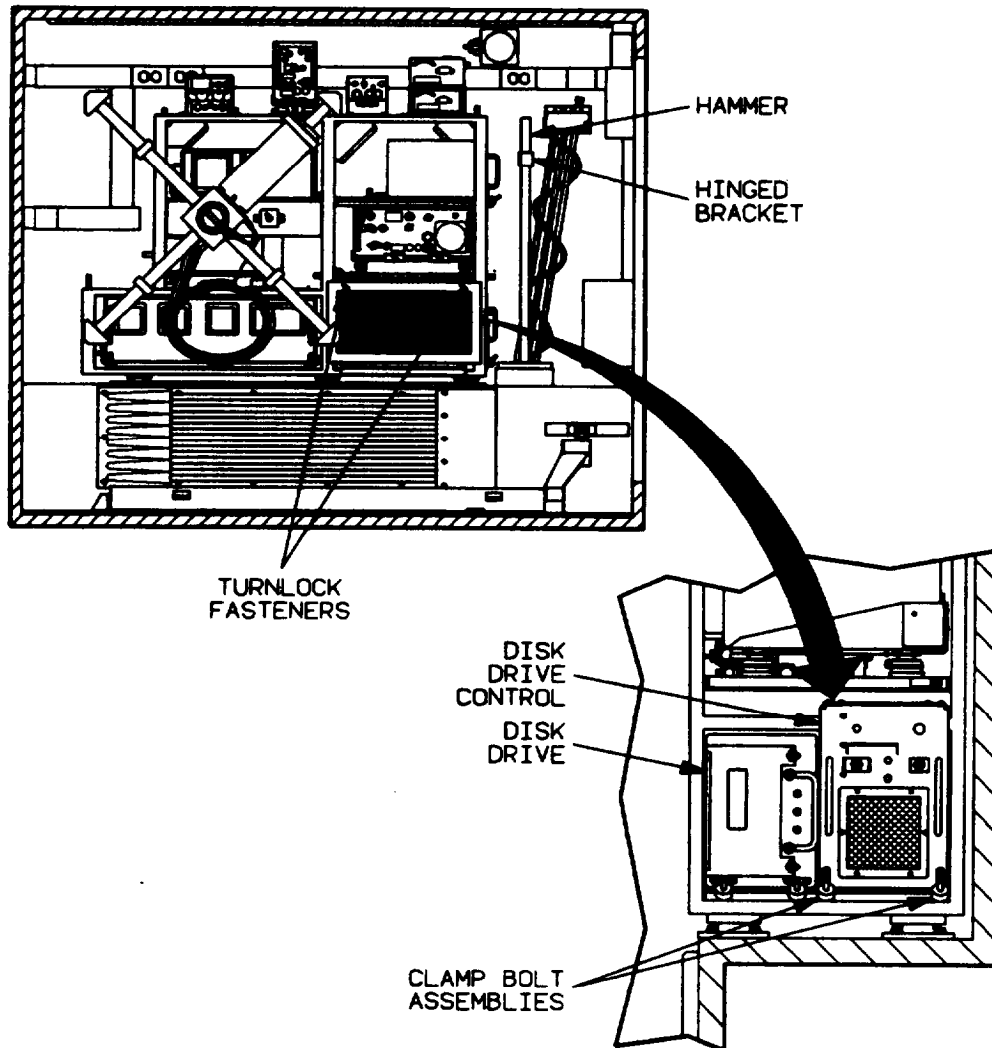
Remove disk drive control assembly as follows:

CAUTION

Before removing power to disk drive control assembly, verify that yellow SELECT light on disk drive is not lit.



1. On front panel of disk drive control assembly, place power ON/OFF switch to OFF position.
2. On power distribution panel, place circuit breaker labeled RACK 4 to OFF position.
3. Remove mast crown from equipment rack 4, if in stored position.



4. On equipment rack 4 (next to the disk drive), using a 1/4" inch flat-tip screwdriver, unlock two captive turn lock fasteners securing protective screen to equipment rack.

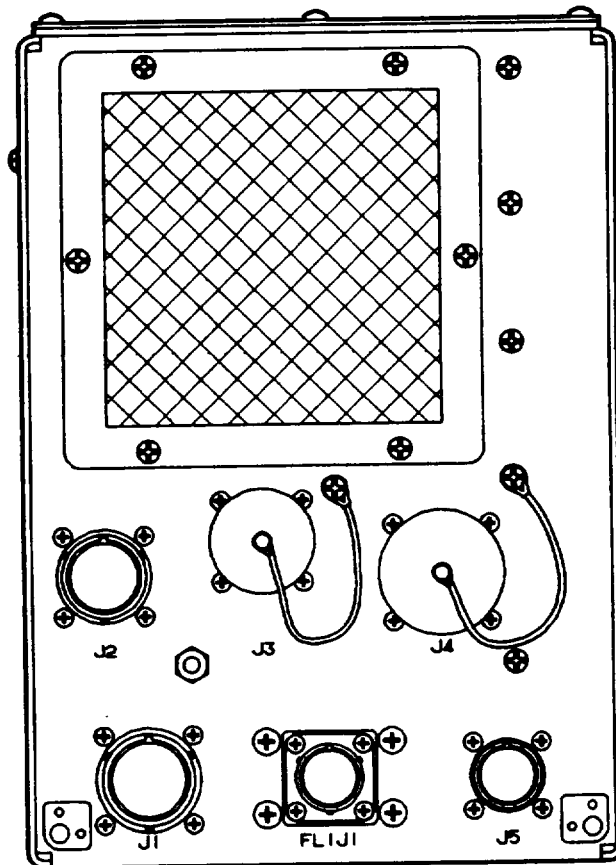
NOTE

Before disk drive control assembly can be removed, the sledge hammer (located to right of equipment rack 4) and disk drive (located in front of disk drive control assembly) will have to be removed or repositioned.

5. At sledge hammer handle, release turnlock fastener on hinged bracket securing hammer handle into its retaining bracket. Swing bracket away from handle.
6. Remove sledge hammer from its retaining bracket.

DISK DRIVE CONTROL, C-11843/TRQ-32(V)

REMOVE 3 OF 3



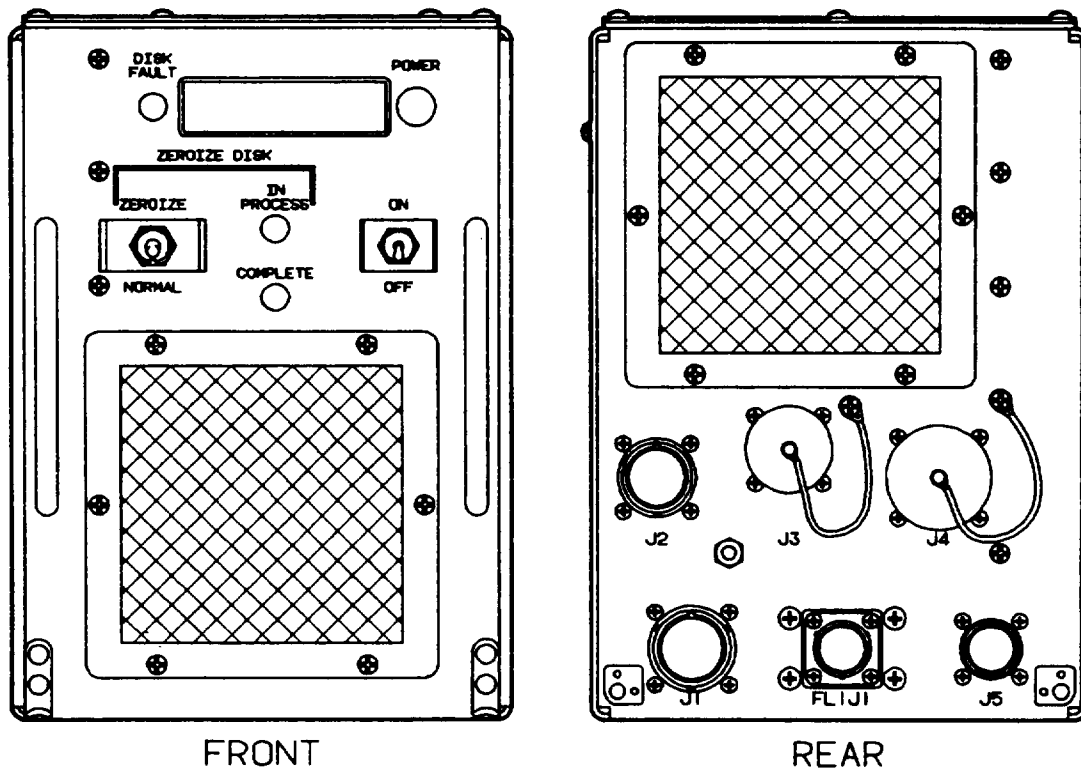
7. At bottom of disk drive front panel, loosen and release two clamp bolt assemblies securing disk drive to equipment rack.
8. Slide disk drive to right enough to allow access to cable connectors on rear panel of disk drive control assembly.
9. On rear panel of disk drive control assembly, disconnect W81P1 from A41J5, W82P1 from A41FL1J1, W98P1 from A41J1, and W84P1 from A41J2.
10. At bottom of disk drive control assembly front panel, loosen and release two clamp bolt assemblies securing unit to equipment rack.
11. Slide disk drive control assembly to right and tilt front end up to remove from equipment rack.

The disk drive control assembly is located in equipment rack 4.

Tools Required: TK-105/G

Personnel Required: 1

Replace disk drive control assembly as follows:

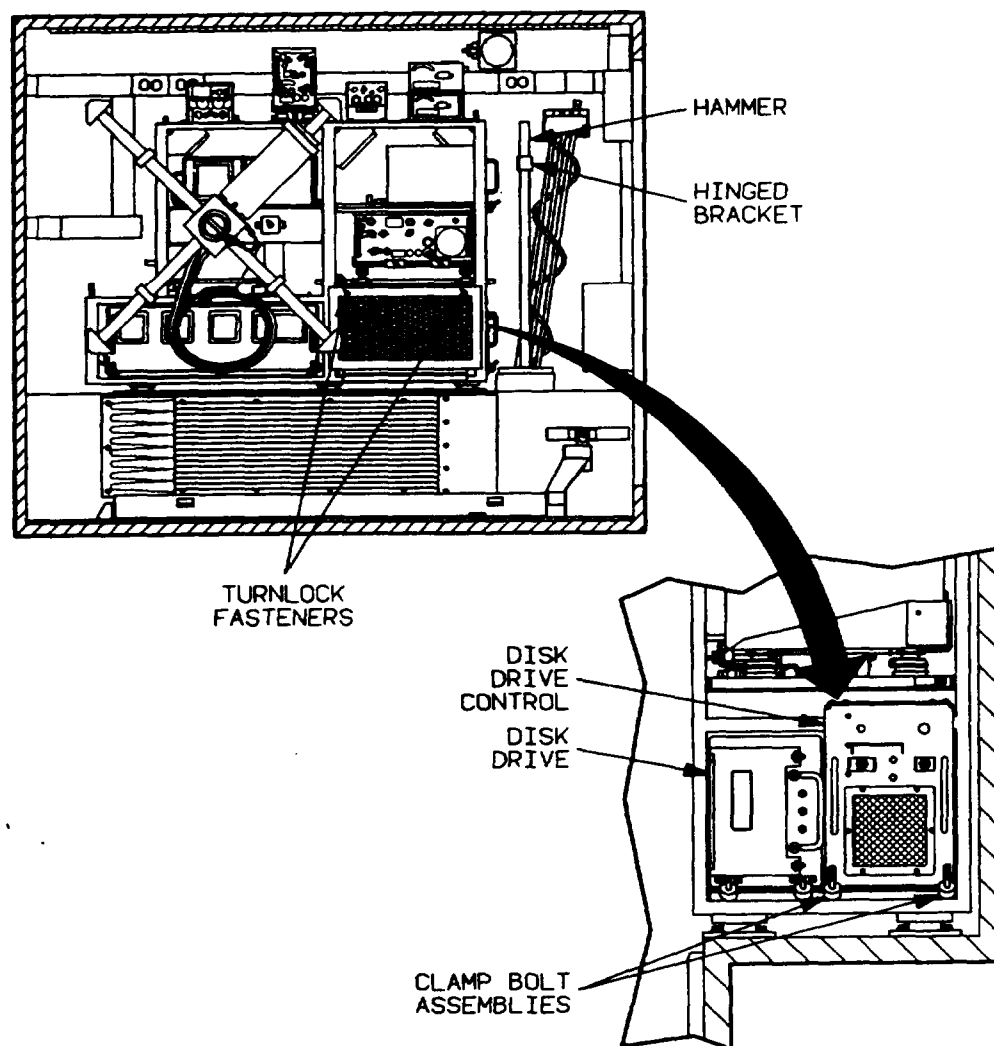


1. On power distribution panel, place circuit breaker labeled RACK 4 to OFF position.
2. On front panel of disk drive control assembly, place power ON/OFF switch to OFF position.
3. With front panel facing right and tilted up, guide disk drive control assembly into equipment rack and slide unit left until alignment holes in rear panel are seated on guide pins on equipment rack..
4. On disk drive control assembly, position two clamp bolt assemblies over support hooks at bottom of front panel. Tighten clamp bolts to secure unit into equipment rack.
5. On disk drive control assembly rear panel, connect cables W84P1 to A41J2, W98P1 to A41J1, W82P1 to A41FL1J1, and W81P1 to A41J5.

DISK DRIVE CONTROL, C-11843/TRQ-32(V)

REPLACE

2 O F 2



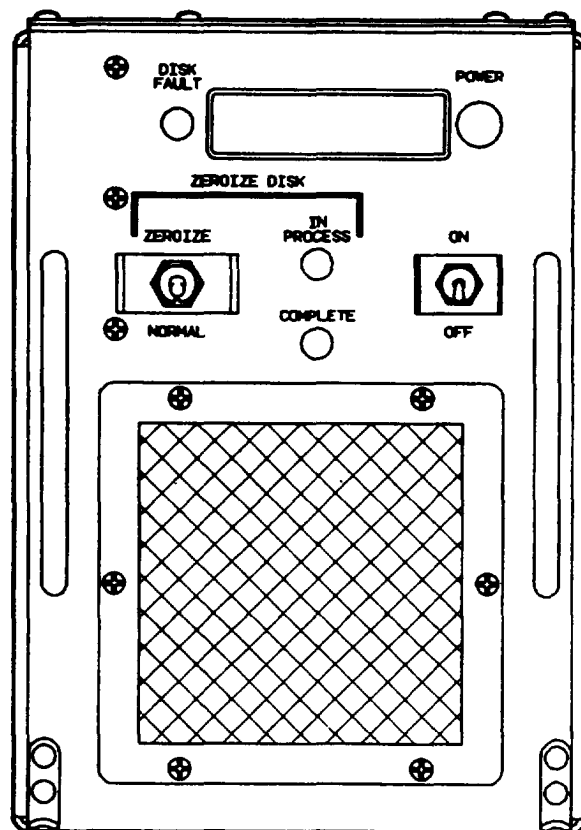
6. Slide disk drive to left until alignment holes on its rear panel are seated onto guide pins on equipment rack, and tighten two clamp bolt assemblies over support hooks at bottom of front panel to secure unit into rack.
7. On equipment rack 4 (next to disk drive), raise protective screen. Secure screen to rack with two turnlock fasteners using a 1/4" flat-tip screwdriver.
8. Place sledge hammer into retaining bracket. Close hinged bracket around sledge hammer handle, and lock turnlock fastener to secure hinged bracket.
9. On power distribution panel, place circuit breaker labeled RACK 4 to ON position.
10. On disk drive control assembly, place power ON/OFF switch to ON position.

The lamp for the disk drive control assembly is inside the lens lampholder located on the front panel.

Tools Required: NONE

Personnel Required: 1

Remove/replace disk drive control lamp as follows.



1. On disk drive control assembly, place power ON/OFF switch to OFF position.
2. Turn lens lampholder counterclockwise to unscrew from housing.
3. Pull defective lamp out of lens lampholder and replace with new lamp.
4. Position lens lampholder into housing and turn clockwise to tighten.
5. On disk drive control assembly, place power ON/OFF switch to ON position.

DISK DRIVE CONTROL AIR FILTER

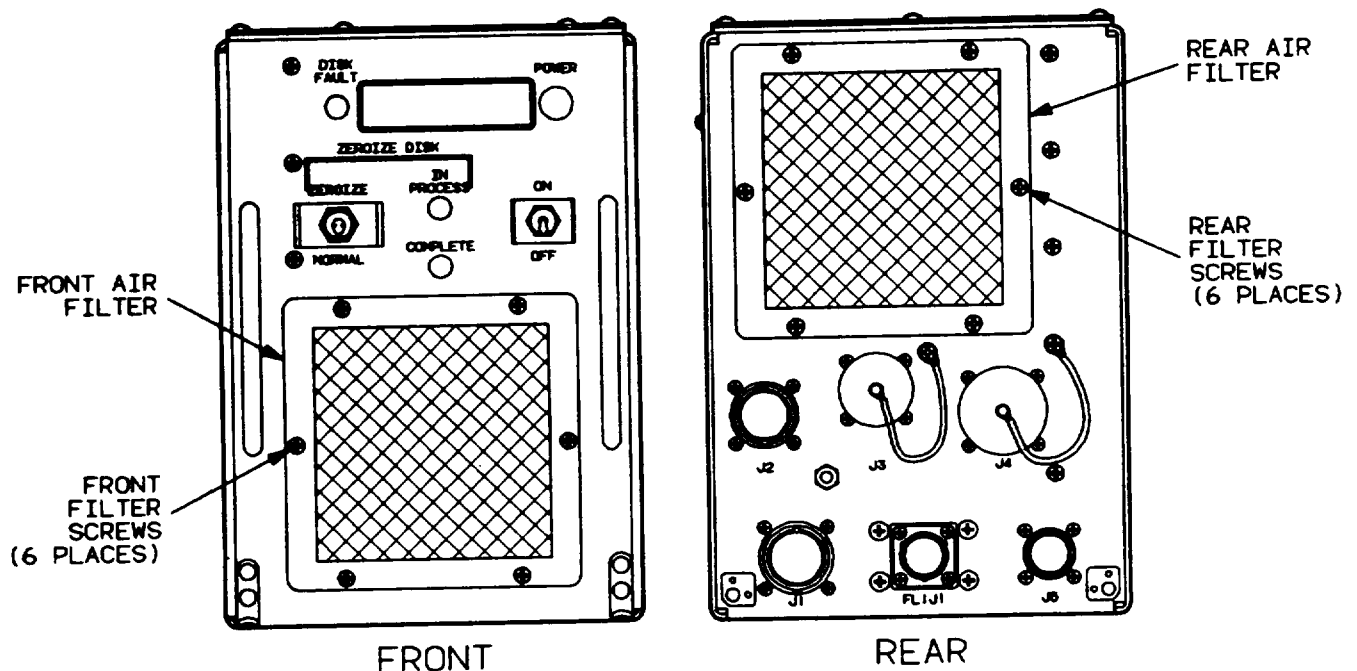
REMOVE/REPLACE 1 O F 1

There are two air filters on the disk drive control assembly. They are located on front and rear panels of unit.

Tools Required: TK-105/G
Soft brush

Personnel Required: 1

Remove/replace air filters as follows:



1. Remove disk drive control assembly from equipment rack in accordance with Disk Drive Control Remove procedure.
2. Using a no. 2 cross-tip screwdriver, remove and retain six screws securing each air filter (one on front panel of unit and one on rear panel) and remove air filters.
3. To clean air filters, use water (or cleaner) (Appendix D, Item 4) and soft brush. Rinse air filters with clean water and allow to air dry.
4. Position each air filter (one on front panel, and one on rear panel) and secure each with six screws. Tighten screws using a no. 2 cross-tip screwdriver.
5. Install disk drive control assembly into equipment rack in accordance with Disk Drive Control Replace procedure.

1 O F 1 REMOVE/REPLACE

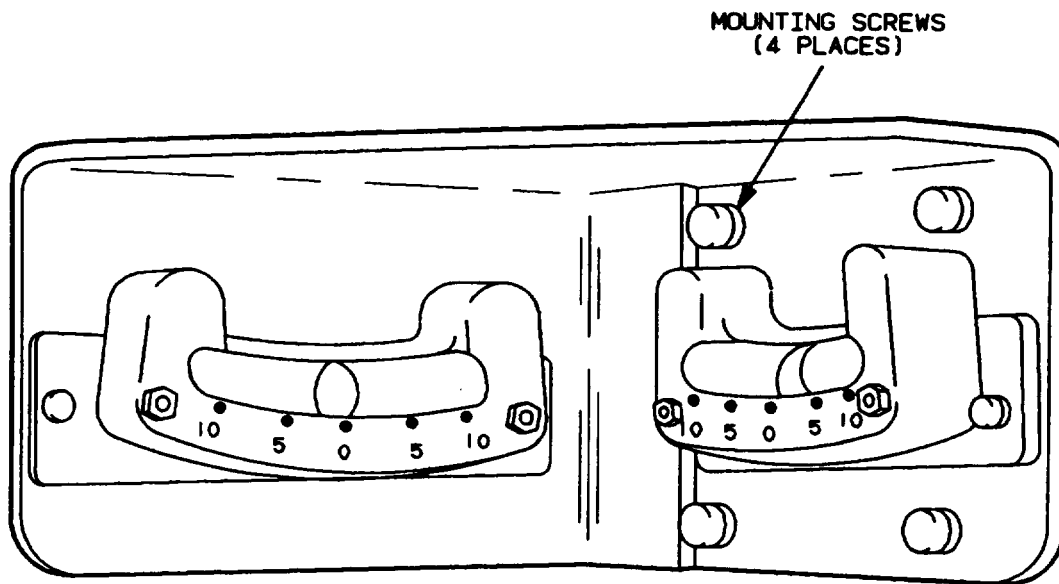
LEVEL INDICATOR

The level indicator is located between the cab of the vehicle and the front wall of the shelter.

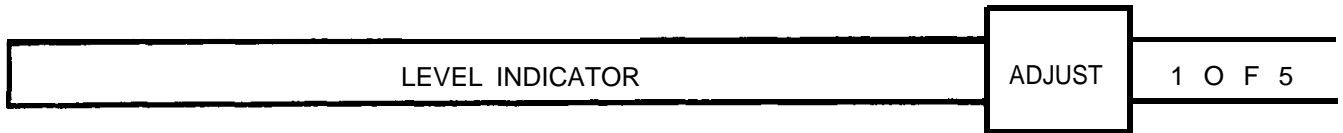
Tools Required: TK-105/G

Personnel Required: 1

Remove/replace level indicator as follows:



1. Using no. 2 cross-tip screwdriver, remove and retain four screws, lockwashers and flat washers securing level indicator bracket to front wall of shelter.
2. Remove level indicator.
3. To replace level indicator, place level indicator on front wall of shelter and secure with four screws, lockwashers and flat washers. Tighten screws using a no. 2 cross-tip screwdriver.
4. Perform Level Indicator Adjust procedure.



The level indicator is located between the cab of the vehicle and the front wall of the shelter.

Tools Required: TK-105/G
Inclinometer

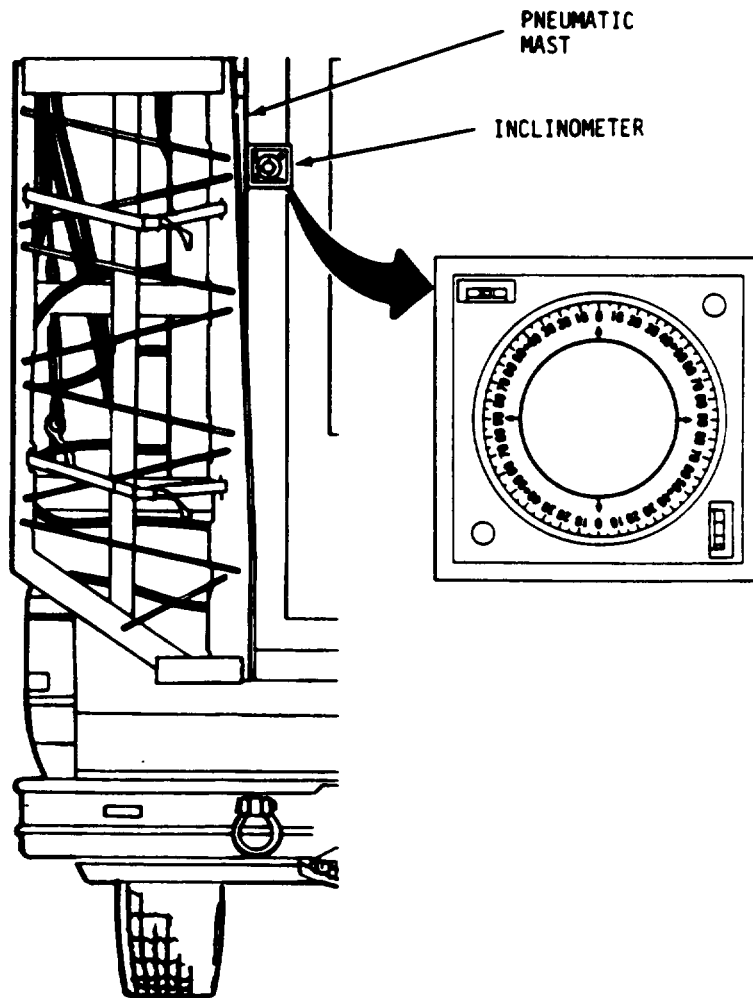
Personnel Required: 1

Adjust level indicator as follows:

NOTE

The vehicle does not have to be perfectly level. However, it does have to be within plus or minus 10 degrees of level. This is to prevent the bubbles of the LEVEL INDICATOR from going off the scale.

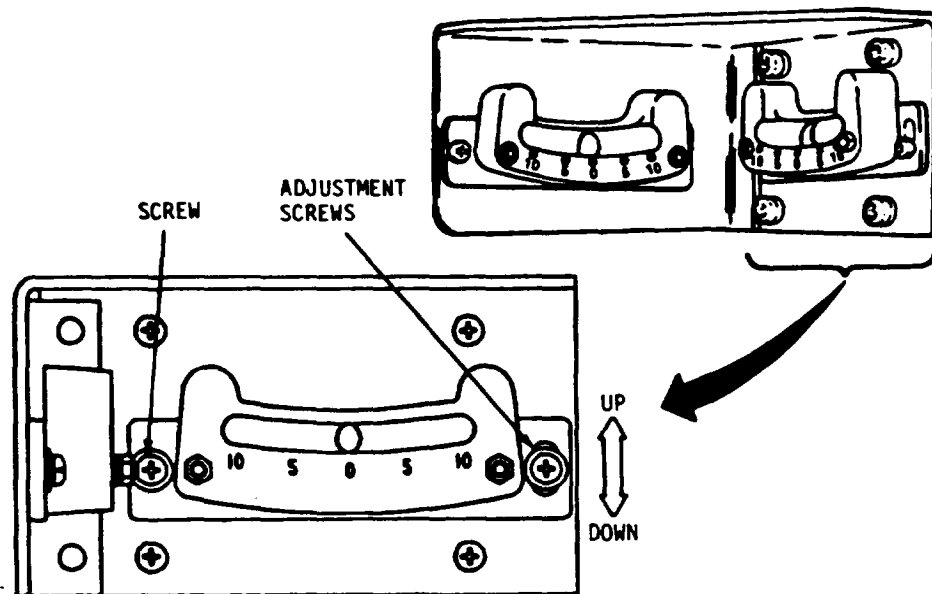
1. Drive vehicle onto a level surface.
2. Remove inclinometer from storage location.



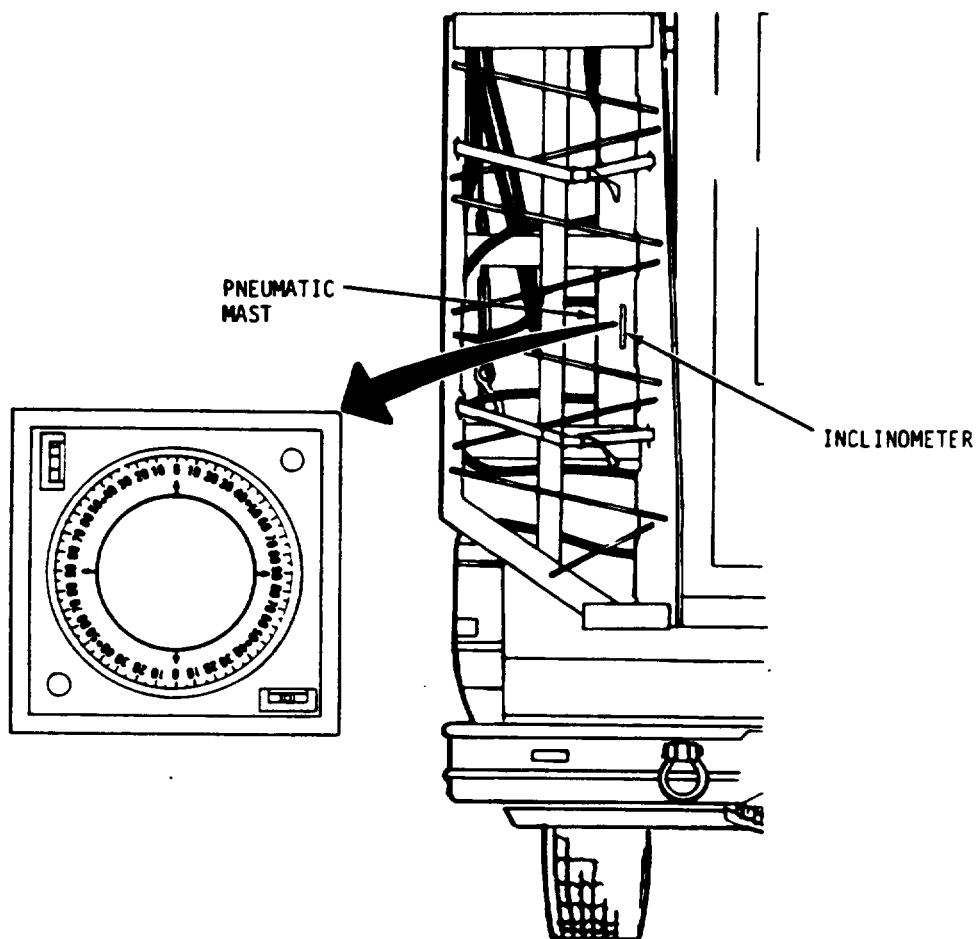
3. At rear of shelter, place inclinometer against lower mast section so that level bubble is parallel to rear shelter wall and inclinometer is vertical to ground.
4. Record angle indicated on inclinometer.

LEVEL INDICATOR

ADJUST 3 OF 5



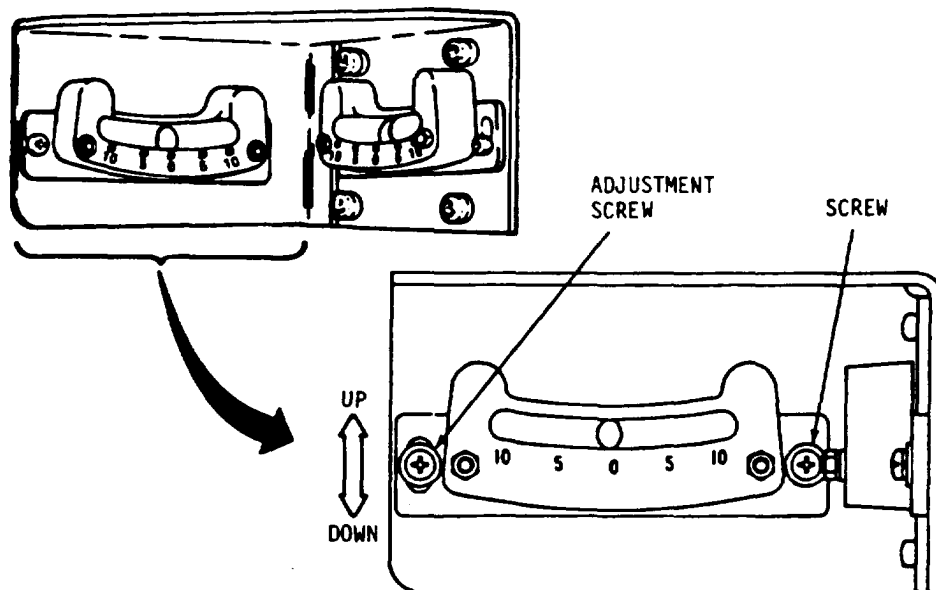
5. On front of shelter, using a no. 1 cross-tip screwdriver, loosen screws that hold level indicator bubble to mounting bracket. (This is the bubble that is parallel to front shelter wall.)
6. Move end of swivel plate up or down to move indicating ball to same angle reading (right of left of zero) as reading taken with inclinometer. The adjustment slot may be at either end of swivel plate.
7. Hold swivel plate in place and tighten screws, using a no. 1 cross-tip screwdriver. Verify that swivel plate did not move from set location.



8. At rear of shelter, place inclinometer against lower mast section so that level indicator is perpendicular to rear shelter wall and inclinometer is vertical to ground.
9. Record angle indicated on inclinometer.

LEVEL INDICATOR

ADJUST 5 OF 5



10. On front of shelter, using no. 1 cross-tip screwdriver, loosen screws holding level indicator bubble to mounting bracket. (This is the bubble that is perpendicular to the front shelter wall.)
11. Move end of swivel plate up or down to move indicating ball to reverse angle reading (right or left of zero) as reading taken with inclinometer. The adjust slot may be at either end of swivel plate.
12. Hold swivel plate in place and tighten screws, using a no. 1 cross-tip screwdriver. Verify that swivel plate did not move from set angle.
13. Place inclinometer in storage location.

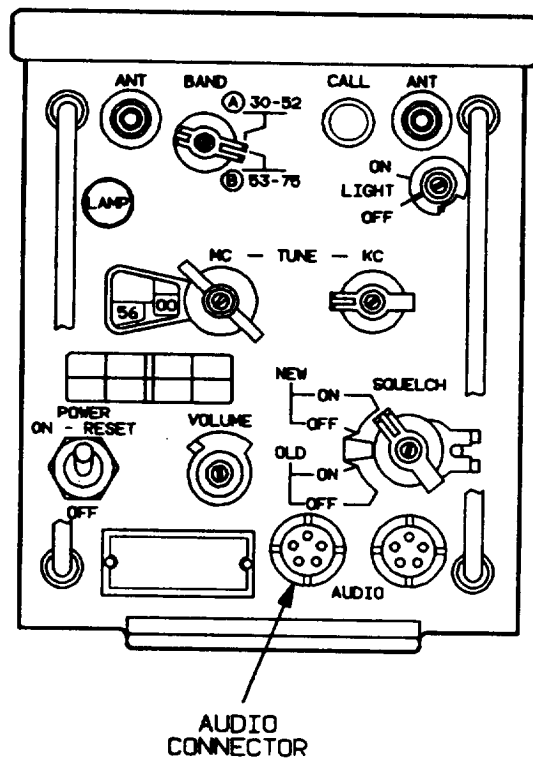
1 OF 2 REMOVE LOUDSPEAKER, LS-454/U

Loudspeaker LS-454/U is located inside the shelter on the curbside wall.

Tools Required: TK-101/G

Personnel Required: 1

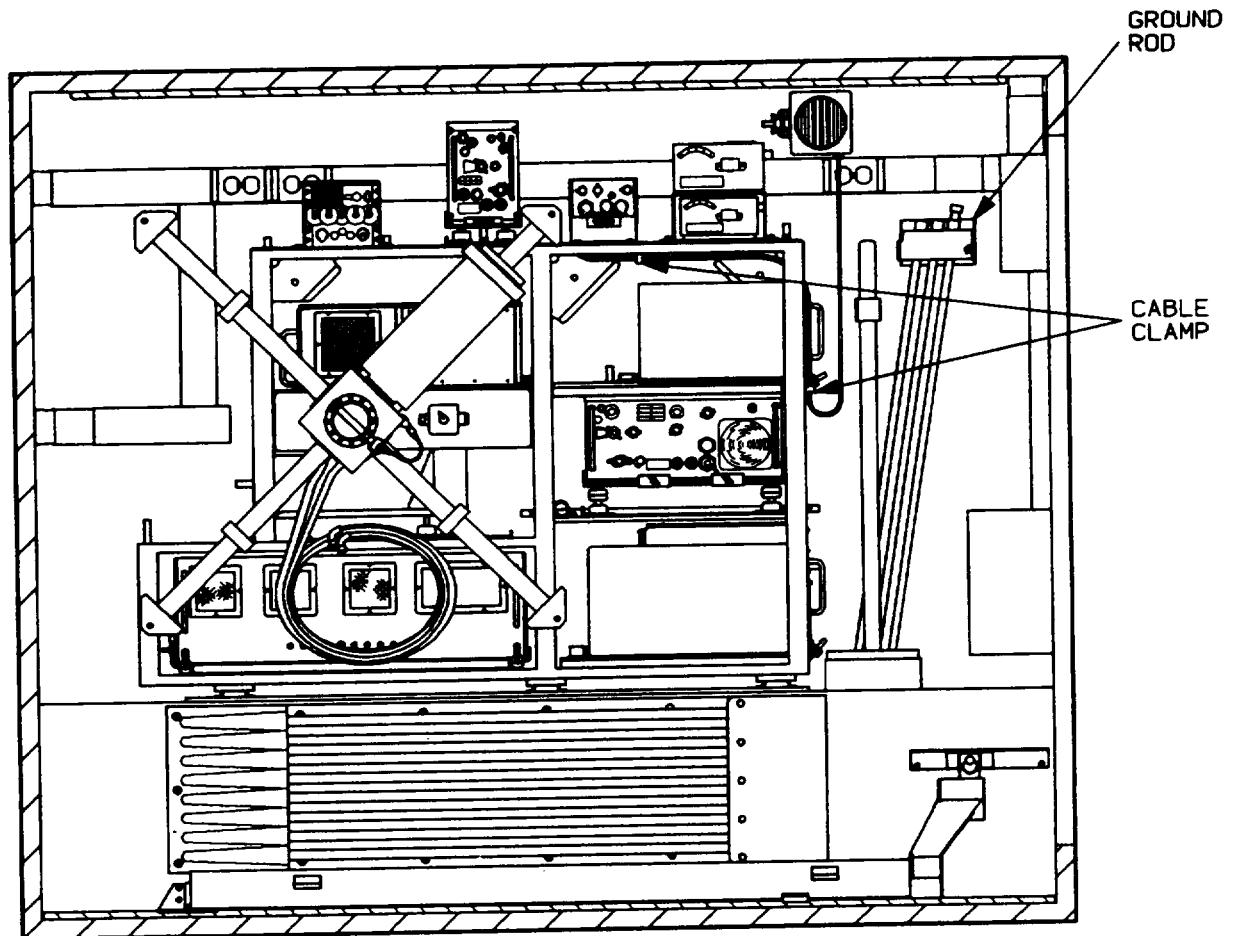
Remove loudspeaker as follows:



1. On guard receiver, disconnect loudspeaker cable from connector labeled AUDIO.

LOUDSPEAKER, LS-454/U

REMOVE 2 O F 2



2. Using a no. 2 cross-tip screwdriver and 11/32" open-end wrench, loosen machine screw, lockwasher, flat washer and hex nut from cable clamp securing cable harness containing loudspeaker cable.
3. Using 4" diagonal cutting pliers, cut cable tie downs securing cable in place.
4. On loudspeaker, remove and retain wing nut and lockwasher securing loudspeaker to mounting bracket.

1 O F 1 REPLACE

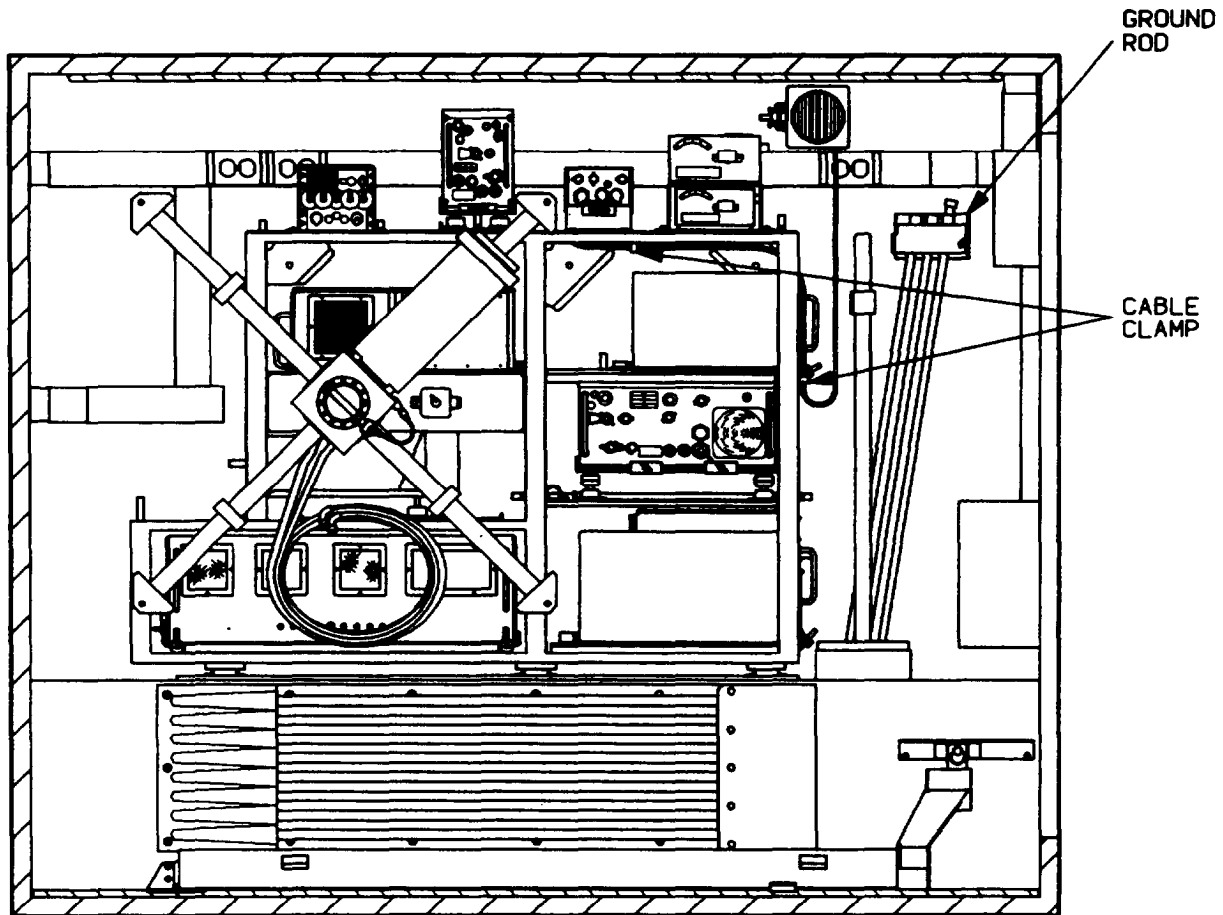
LOUDSPEAKER, LS-454/U

Loudspeaker LS-454/U is located inside the shelter on the curbside wall.

Tools Required: TK-101/G

Personnel Required: 1

Replace loudspeaker as follows:



1. Position loudspeaker mounting stud into mounting bracket on shelter wall.
2. Install wing nut and lockwasher onto loudspeaker mounting stud and hand tighten.
3. At top of equipment rack 4, route loudspeaker cable through wiring harness and through cable clamp. Secure clamp with a machine screw, lockwasher, flat washer and hex nut. Tighten screw and hex nut using a no. 2 cross-tip screwdriver and 11/32" open-end wrench.
4. Secure loudspeaker cable in place, using cable tie downs (Appendix D, Item 3).
5. On guard receiver, connect loudspeaker cable to either connector labeled AUDIO.

INTERCOM CONTROL SET, C-1611D/AIC

REMOVE 1 O F 2

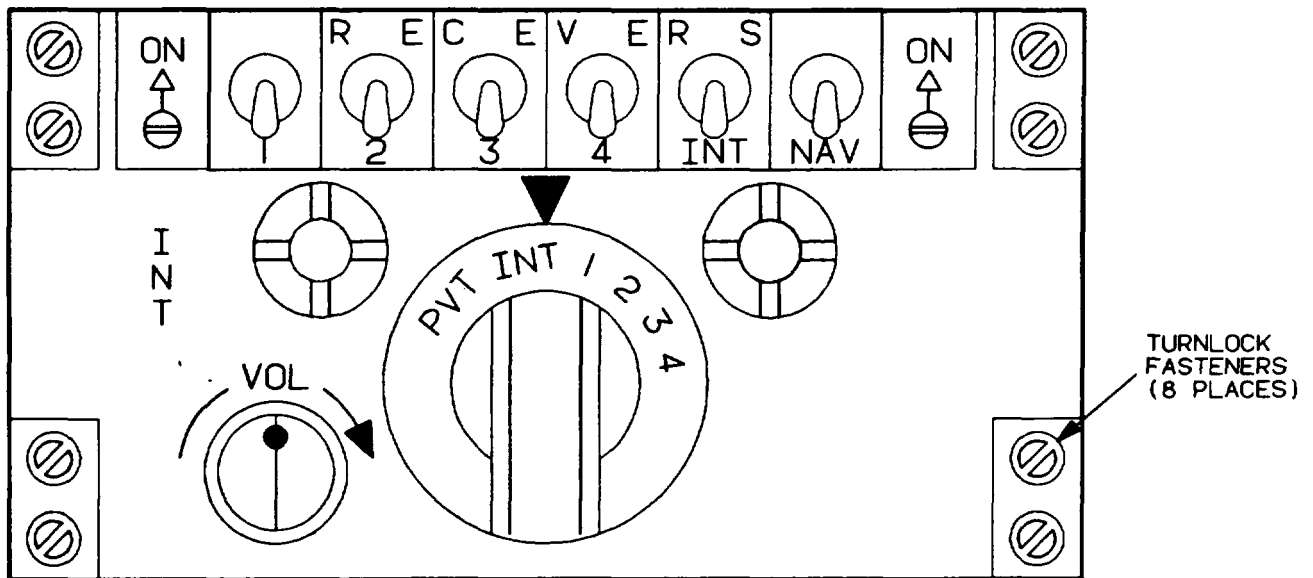
There are two intercom control sets. They are located in equipment rack 1 and rack 3.

Too Is Required: TK-105/G

Personnel Required: 1

Remove intercom control set as follows:

1. On system power supply, place SYS ON/OFF switch to OFF position.

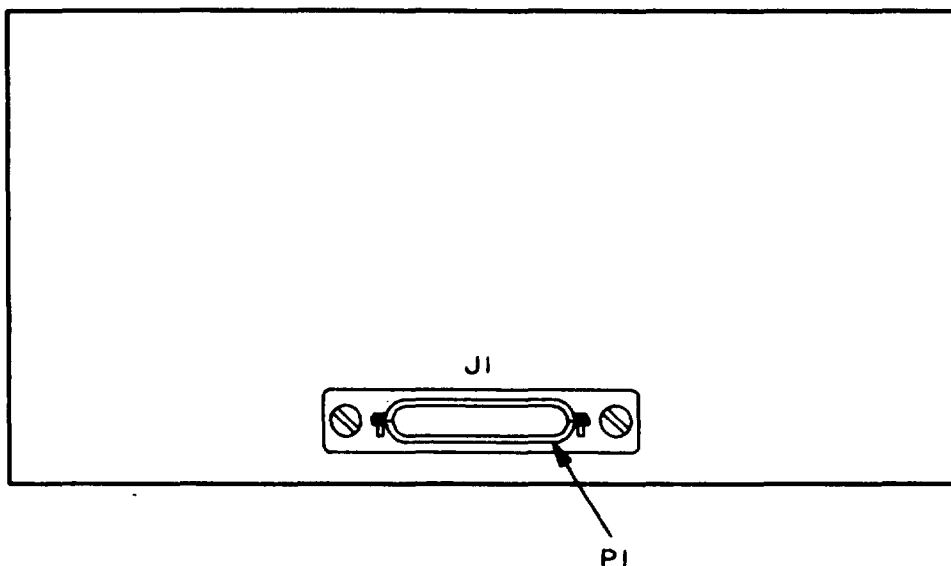


2. Using a 1/4" flat-tip screwdriver, loosen eight turnlock fasteners securing intercom control set into the intercom control panel.
3. Pull intercom control set forward until cable connector at rear of unit is accessible.

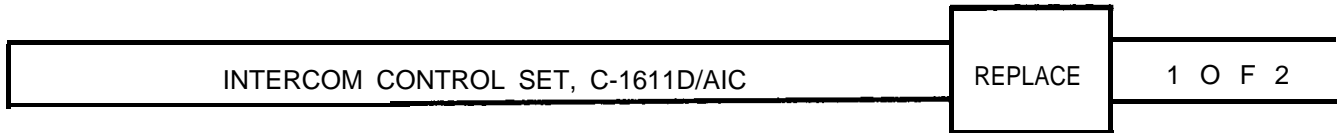


NOTE

Connector number listed is for unit A2A1 in equipment Rack 1. Connector number in parenthesis is for unit A14A1 in equipment rack 3.



4. At rear of intercom control set, using a 1/4" flat-tip screwdriver, loosen two turnlock fasteners securing cable connector P1 (P1) to J1 (J1).
5. Remove intercom control set from equipment rack.



There are two intercom control sets. They are located in equipment rack 1 and rack 3.

Tools Required: TK-105/G

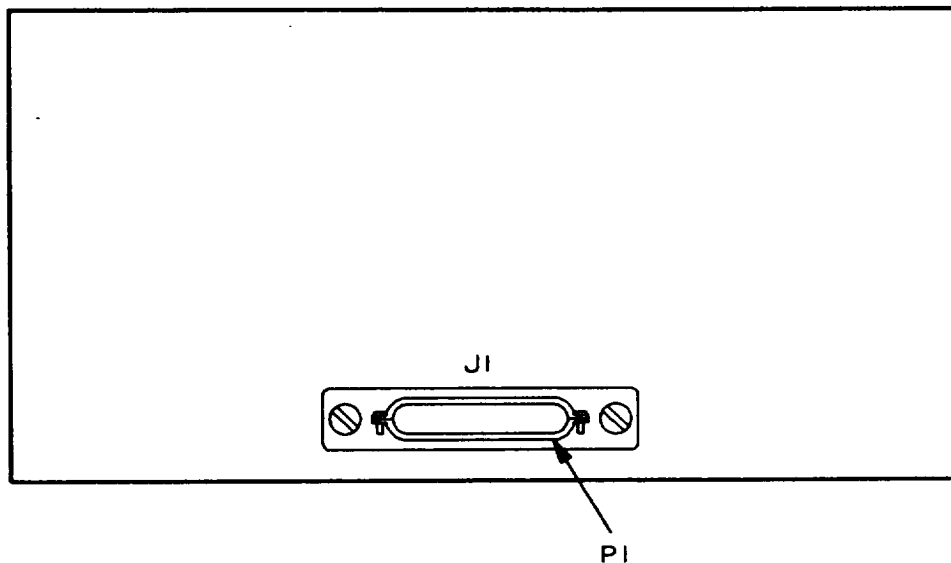
Personnel Required: 1

Replace intercom control set as follows:

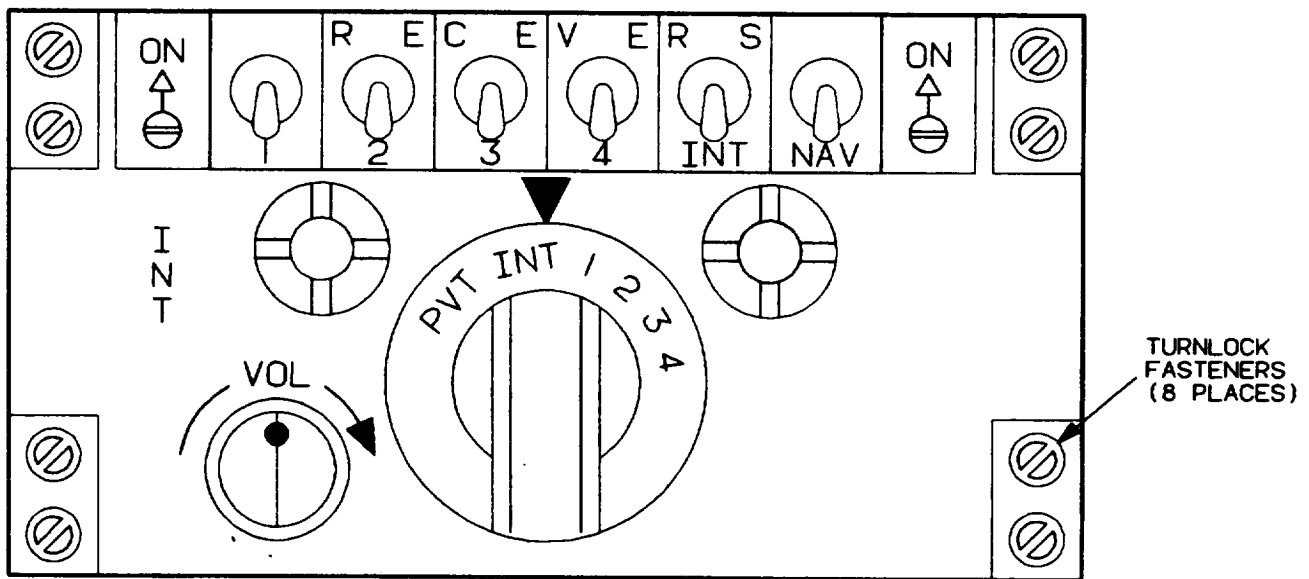
1. On system power supply, place SYS ON/OFF switch to OFF position.
2. Position intercom control set into intercom control panel, leaving rear of unit accessible.

NOTE

Connector number listed is for unit A2A1 in equipment Rack 1. Connector number in parentheses is for unit A14A1 in equipment rack 3.



3. On rear panel of intercom control set, connect cable connector P1 (P1) to J1 (J1). Secure connector P1 to J1 with two turnlock fasteners. Tighten turnlock fasteners using a 1/4" flat-tip screwdriver.



4. Position intercom control set into intercom control panel.
5. On front panel of intercom control set, tighten eight turnlock fasteners and secure intercom control set to intercom control panel. Tighten fasteners using a 1/4" flat-tip screwdriver.
6. On system power supply, place SYS ON/OFF switch to ON position.

INTERCOM CONTROL SET LAMP

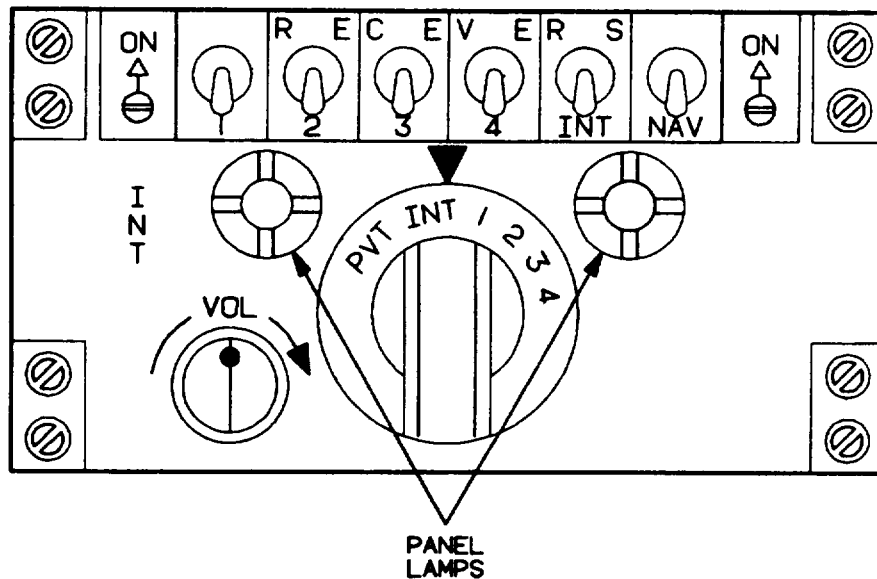
REMOVE/REPLACE 1 OF 1

There are two panel illumination lamps in each of the intercom control sets.

Tools Required: NONE

Personnel Required: 1

Remove/replace intercom control set lamps as follows:



1. On system power supply, place SYS ON/OFF switch to OFF position.
2. On intercom control set, turn lens lampholder counterclockwise to unscrew from housing.
3. Pull defective lamp out of lens lampholder and replace with new lamp.
4. Position lens lampholder into housing and turn clockwise to tighten.
5. On system power supply, place SYS ON/OFF switch to ON position.

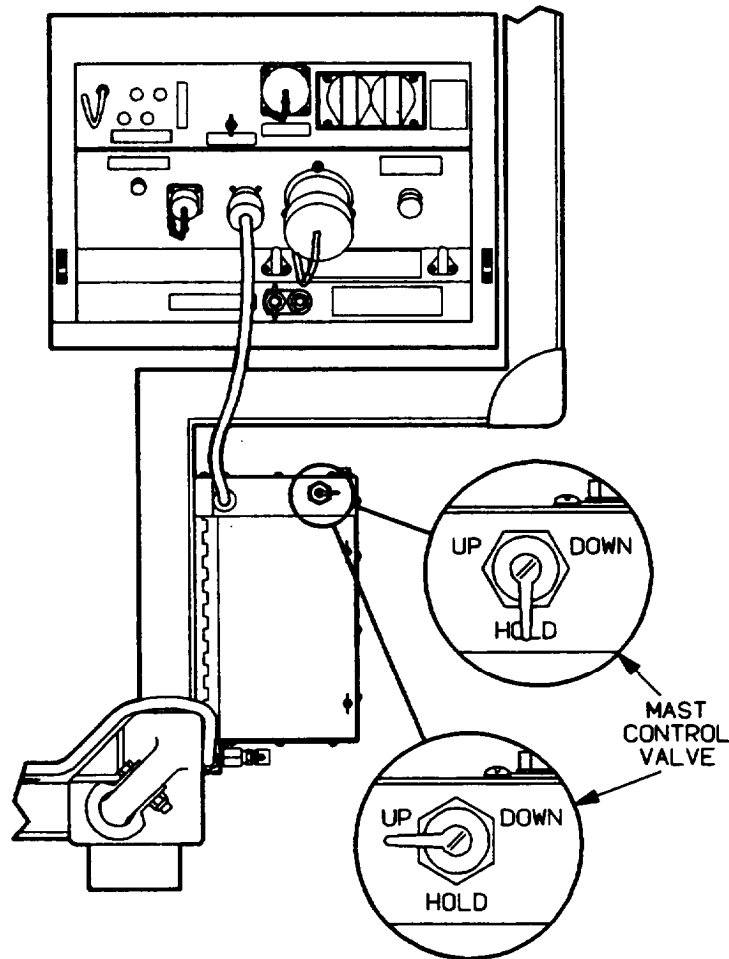
1 OF 6 REMOVE CABLE ASSEMBLY (W22)

Cable assembly (W22) is located outside and to the rear of the shelter.

Tools Required: TK-100/G

Personnel Required: 1

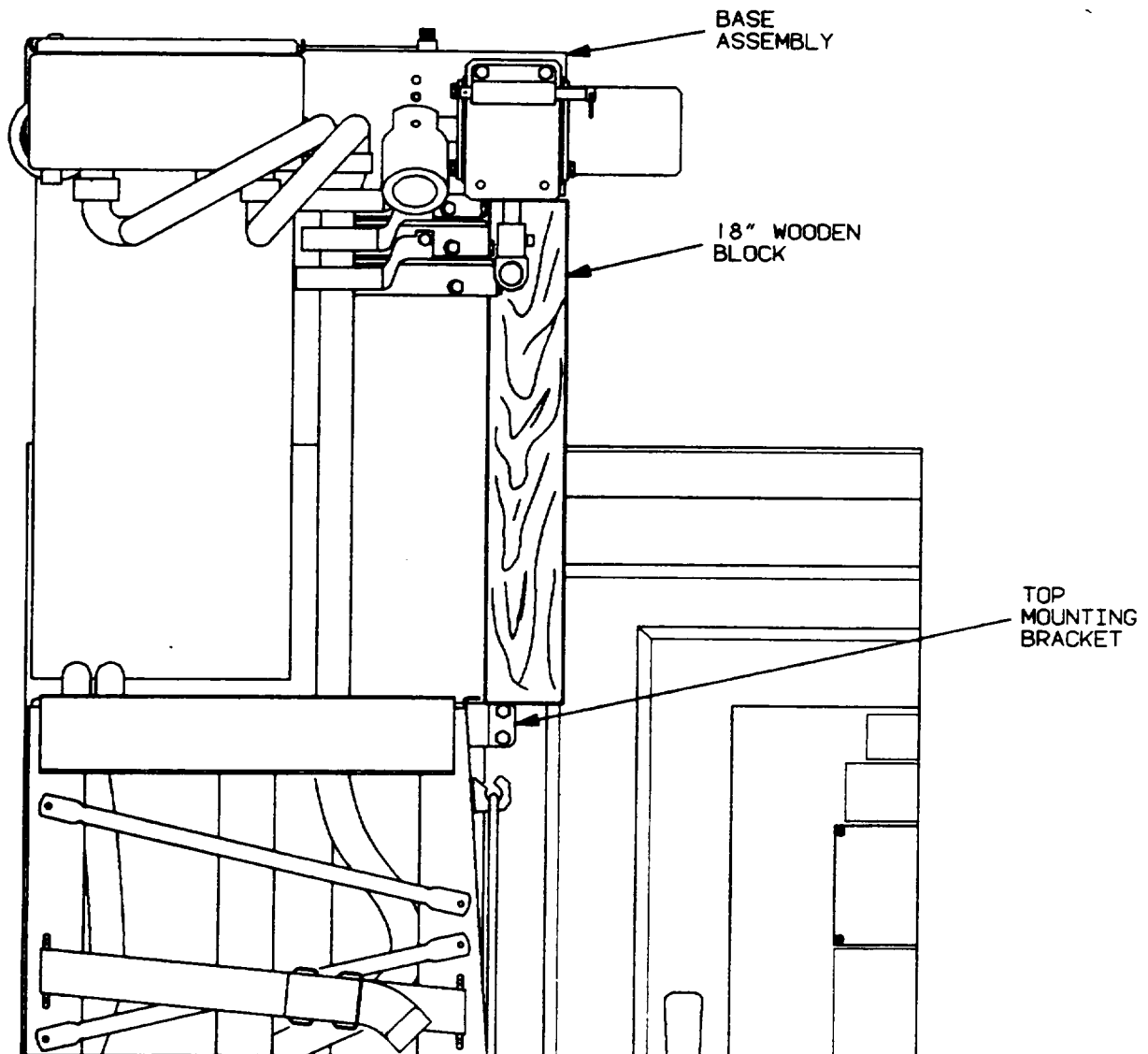
Remove cable assembly (W22) as follows:



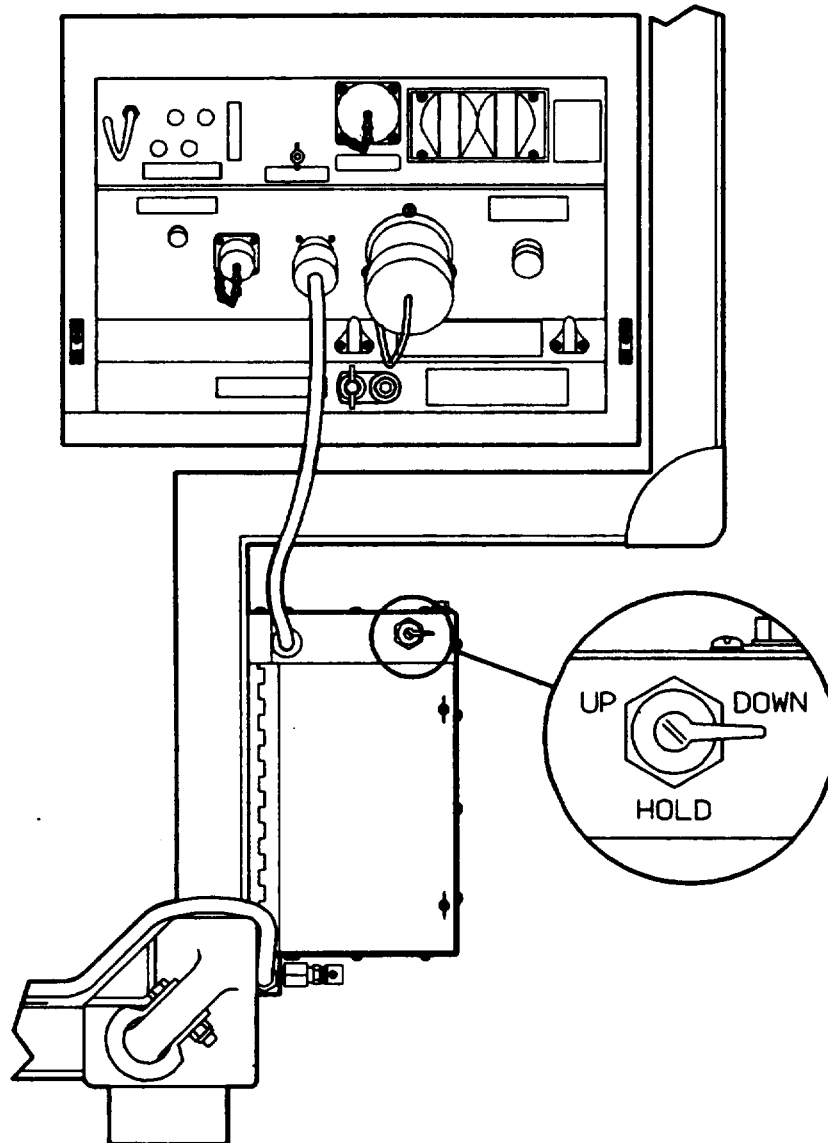
1. On power distribution panel, place circuit breakers labeled RACK 1 AND 2 and POWER SUPPLY to OFF position.
2. On power distribution panel, place circuit breaker labeled MAST to ON position.
3. On compressor assembly, place pneumatic mast control valve to UP position and raise pneumatic mast approximately one foot. Place pneumatic mast control valve to HOLD position.

CABLE ASSEMBLY (W22)

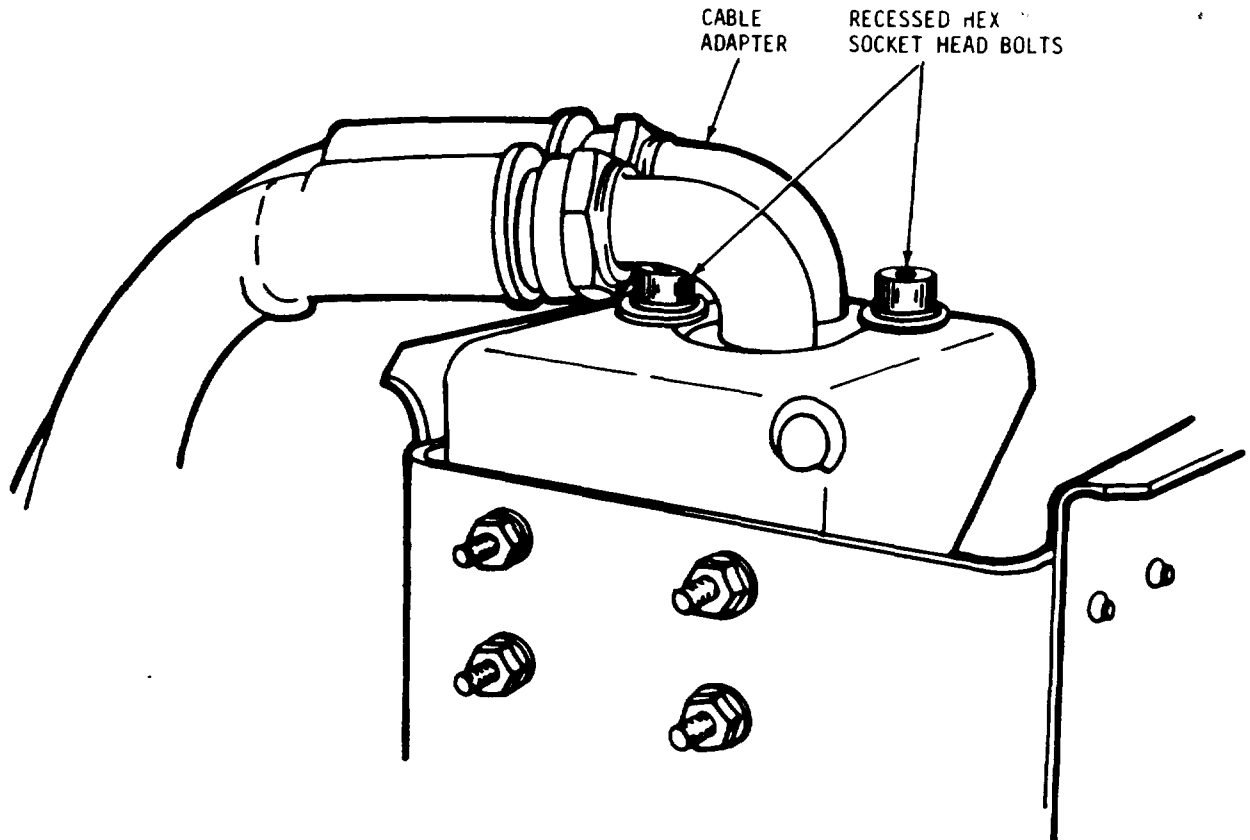
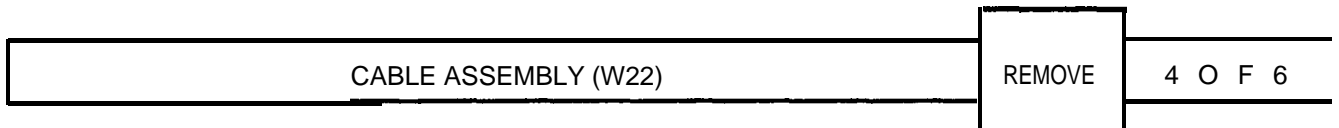
REMOVE 2 OF 6



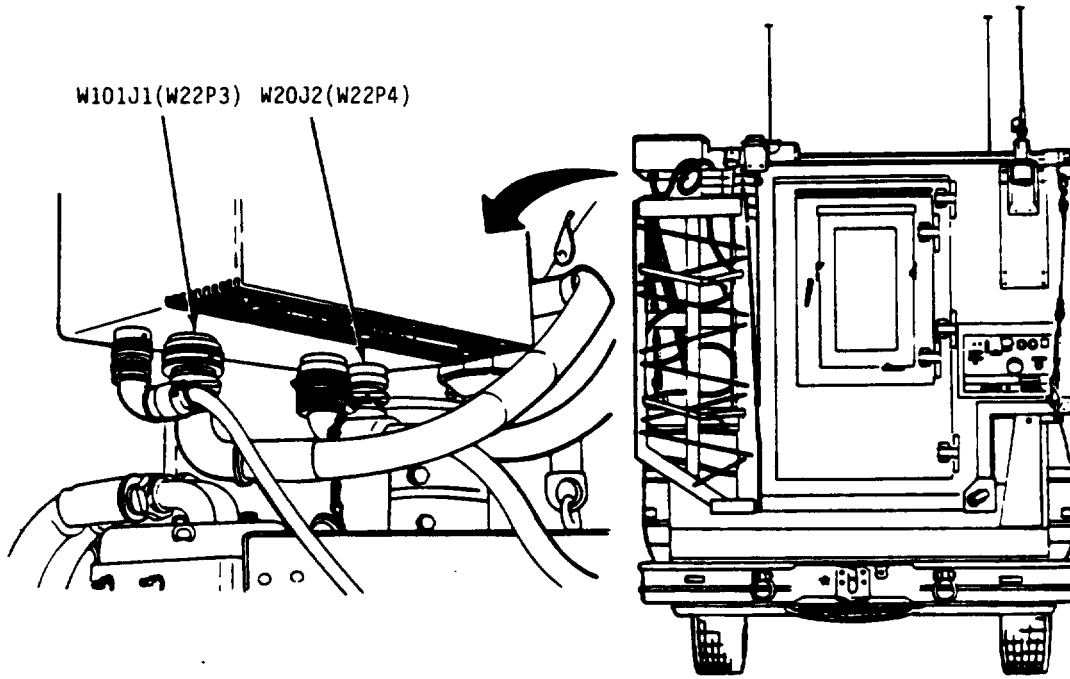
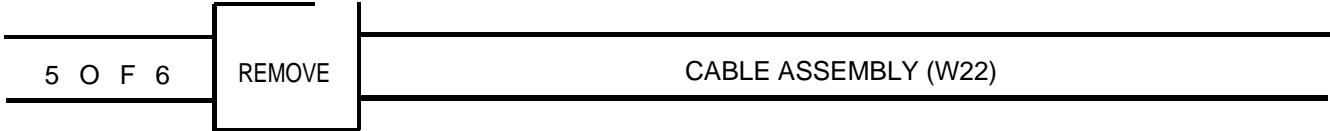
4. Position one end of a wooden block (18"x2"x4") against under side of base assembly (just above rear of shelter). Position other end of wooden block against top mounting bracket of pneumatic mast (next to shelter door). Refer to Appendix E for manufacture of wooden block.



5. On compressor assembly, place pneumatic mast control valve to DOWN position and slowly lower pneumatic mast until base assembly rests firmly on wooden block.



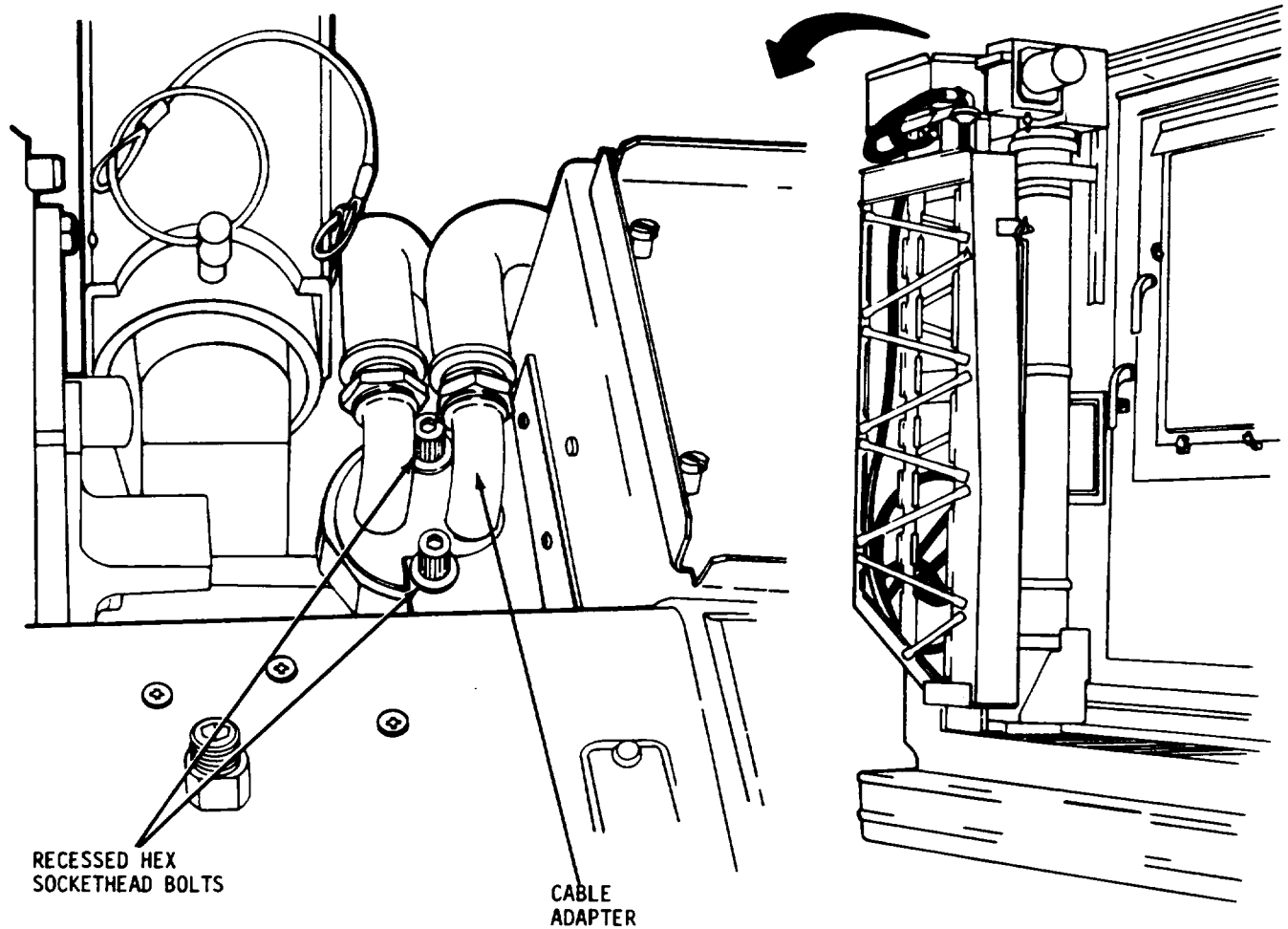
6. On rear wall of shelter, disconnect cables W22P1 from J1 and W22P2 from J1.
7. Using a 3/16" hex key wrench, remove and retain two recessed socket head screws, lockwashers and flat washers securing cable adapter to upper left corner of cable basket.
8. Move cable assembly (W22) away from cable basket.



9. Underneath base assembly, disconnect cables W22P3 from W101J1 and W22P4 from W20J2 .

CABLE ASSEMBLY (W22)

REMOVE 6 O F 6



10. Raise pneumatic mast to full height, remove block. Lower pneumatic mast.
11. Using a 3/16" hex key wrench, remove and retain two recessed hex socket head screws, lockwashers and flat washers securing cable adapter to base assembly.
12. Remove cable and cable adapter from cable guides.
13. Remove cable assembly from cable basket.

1 OF 6 REPLACE

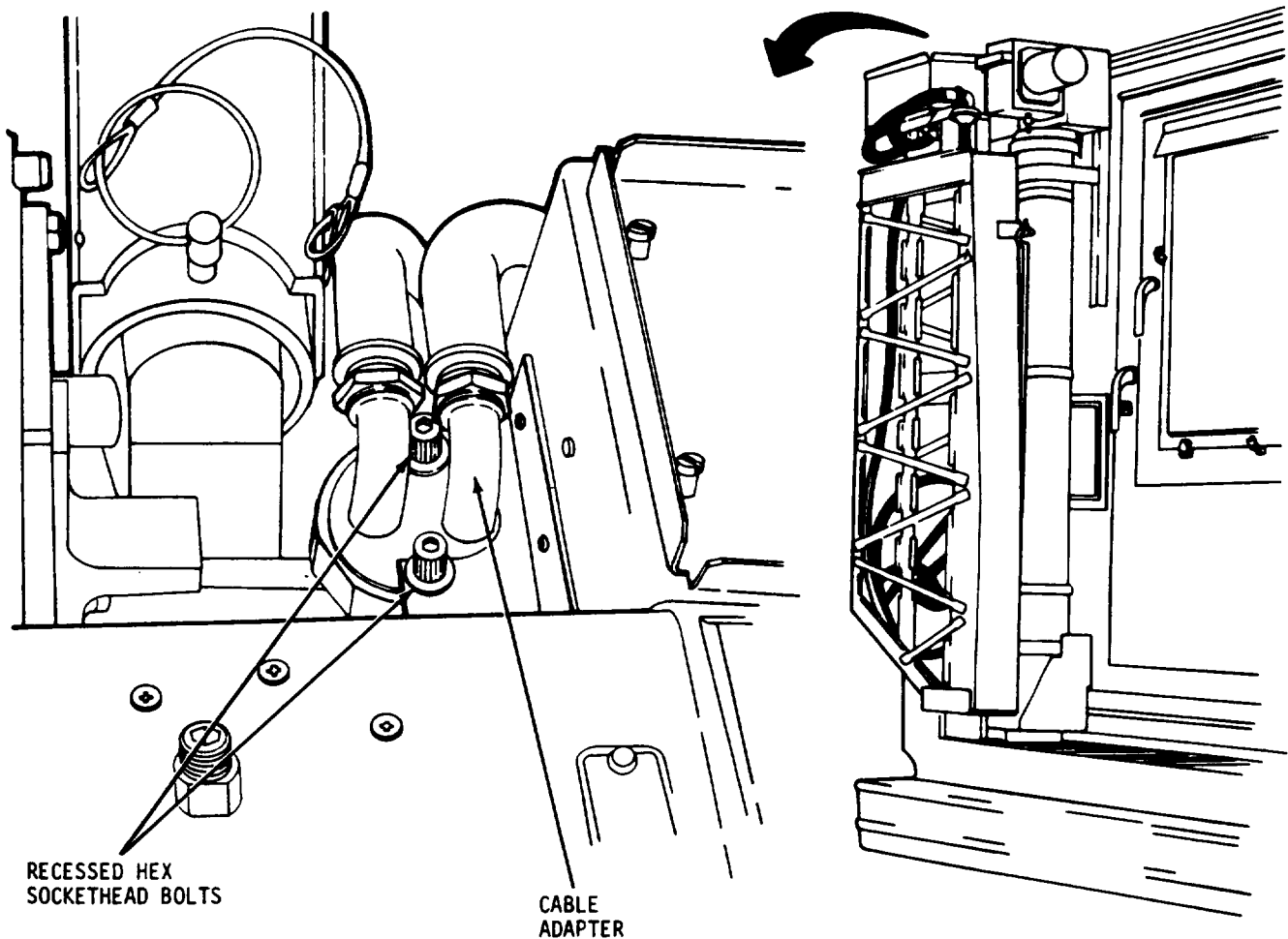
CABLE ASSEMBLY (W22)

Cable assembly (W22) is located outside and to the rear of the shelter.

Tools Required: TK-100/G

Personnel Required: 1

Replace cable assembly (W22) as follows:

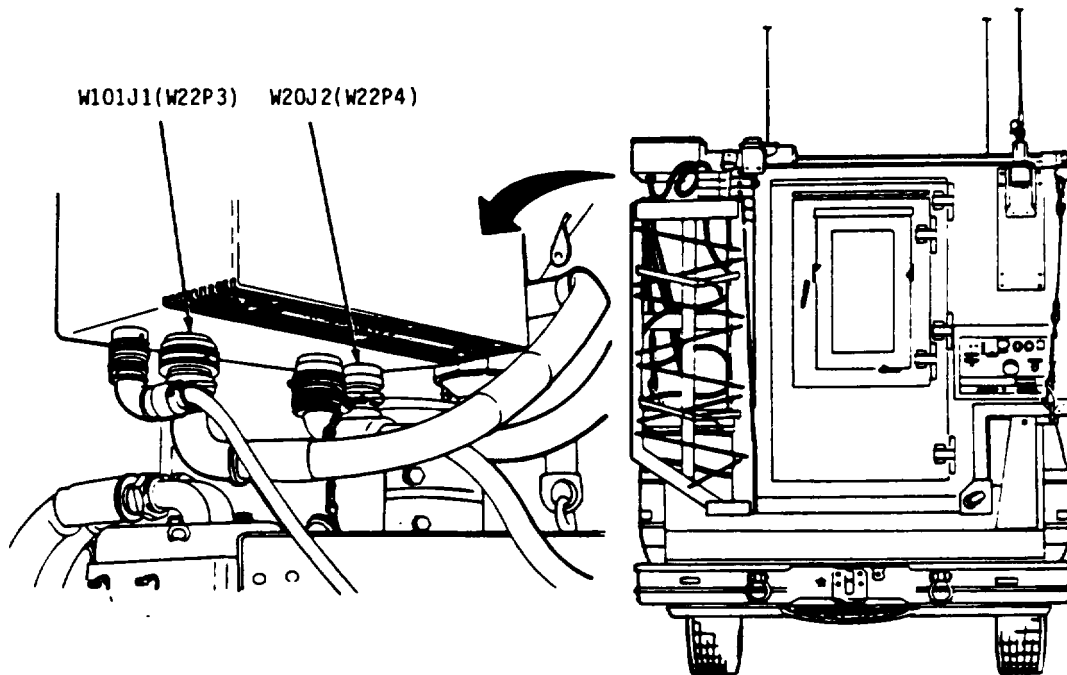


1. On power distribution panel, ensure circuit breakers labeled RACK 1 AND 2 and POWER SUPPLY are in OFF position. Ensure circuit breaker labeled MAST is in ON position.
2. Route upper end of cable (W22) and cable adapter through cable guides on pneumatic mast.
3. Position cable adapter onto mounted bracket located on antenna base assembly and secure with two hex socket head screws, lockwashers and flat washers. Tighten screws with a 3/16" hex key wrench.

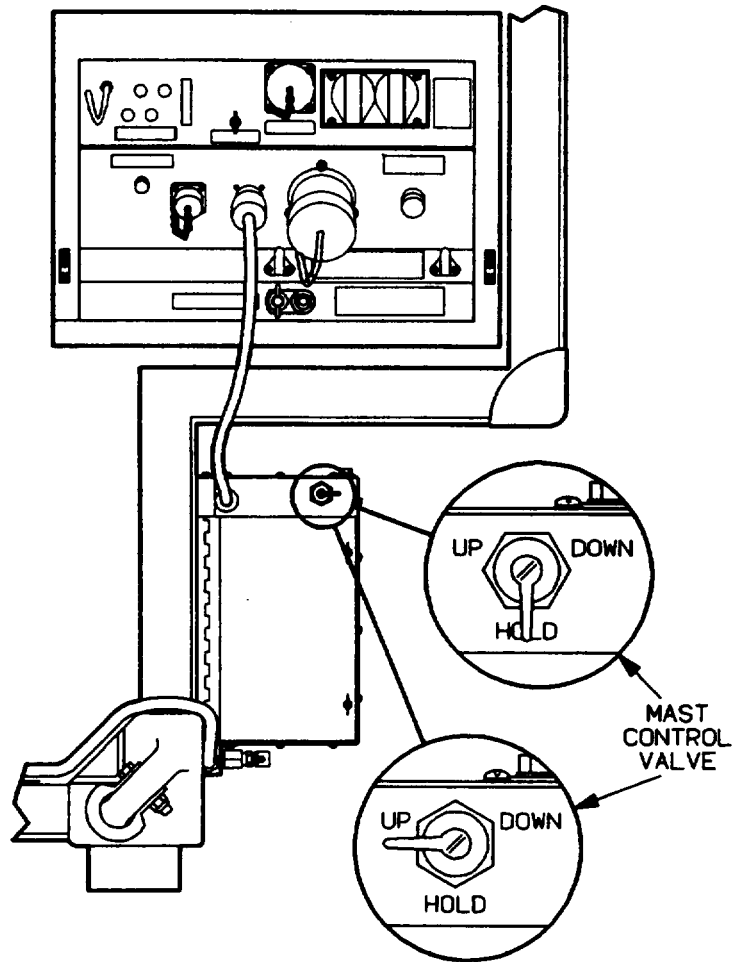
CABLE ASSEMBLY (W22)

REPLACE

2 O F 6



4. Underneath antenna base assembly, connect cables W22P3 to W101J1 and W22P4 to W20J2.

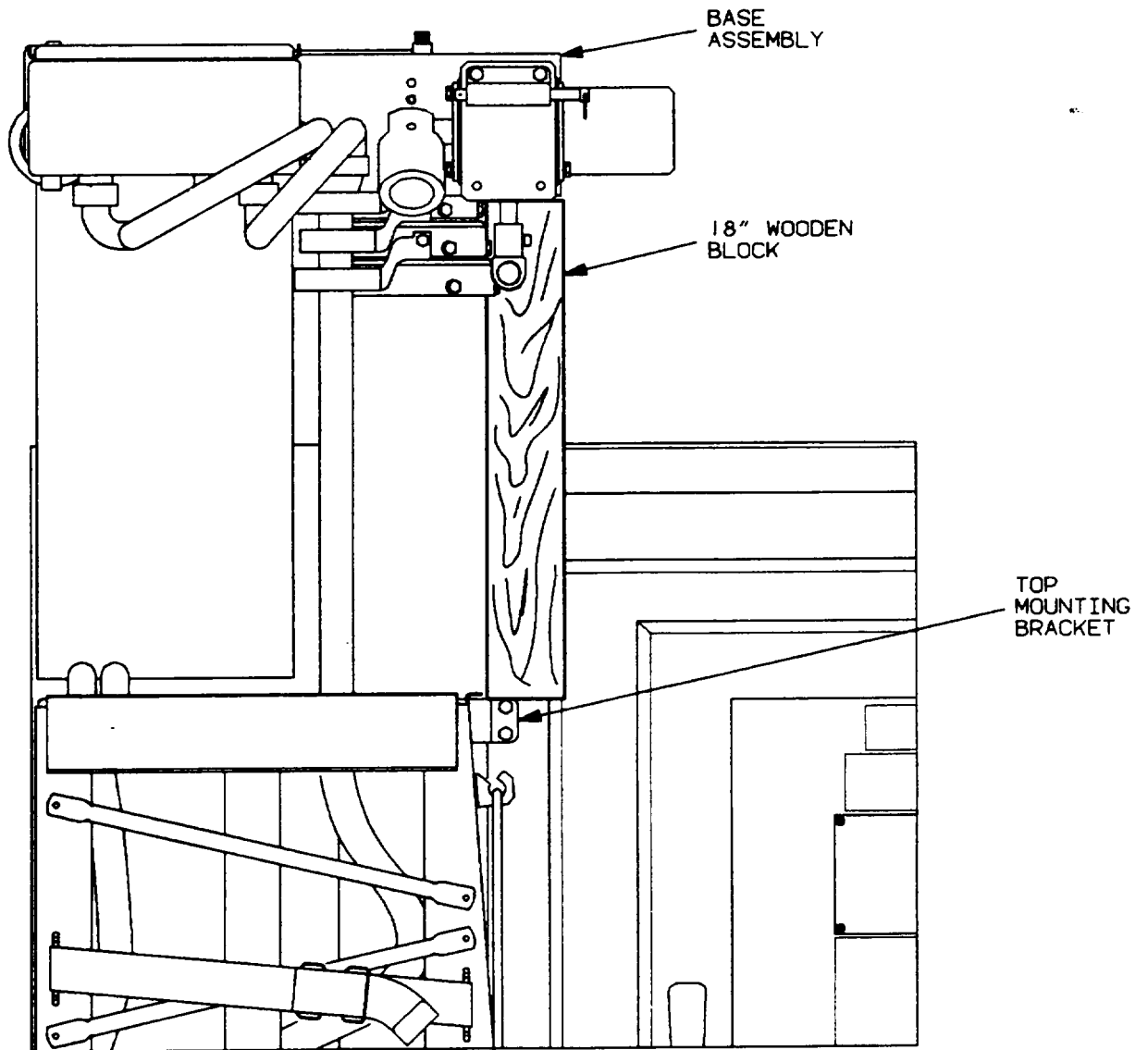


5. On compressor assembly, place pneumatic mast control valve to UP position and raise pneumatic mast approximately one foot. Place pneumatic mast control valve to HOLD position.

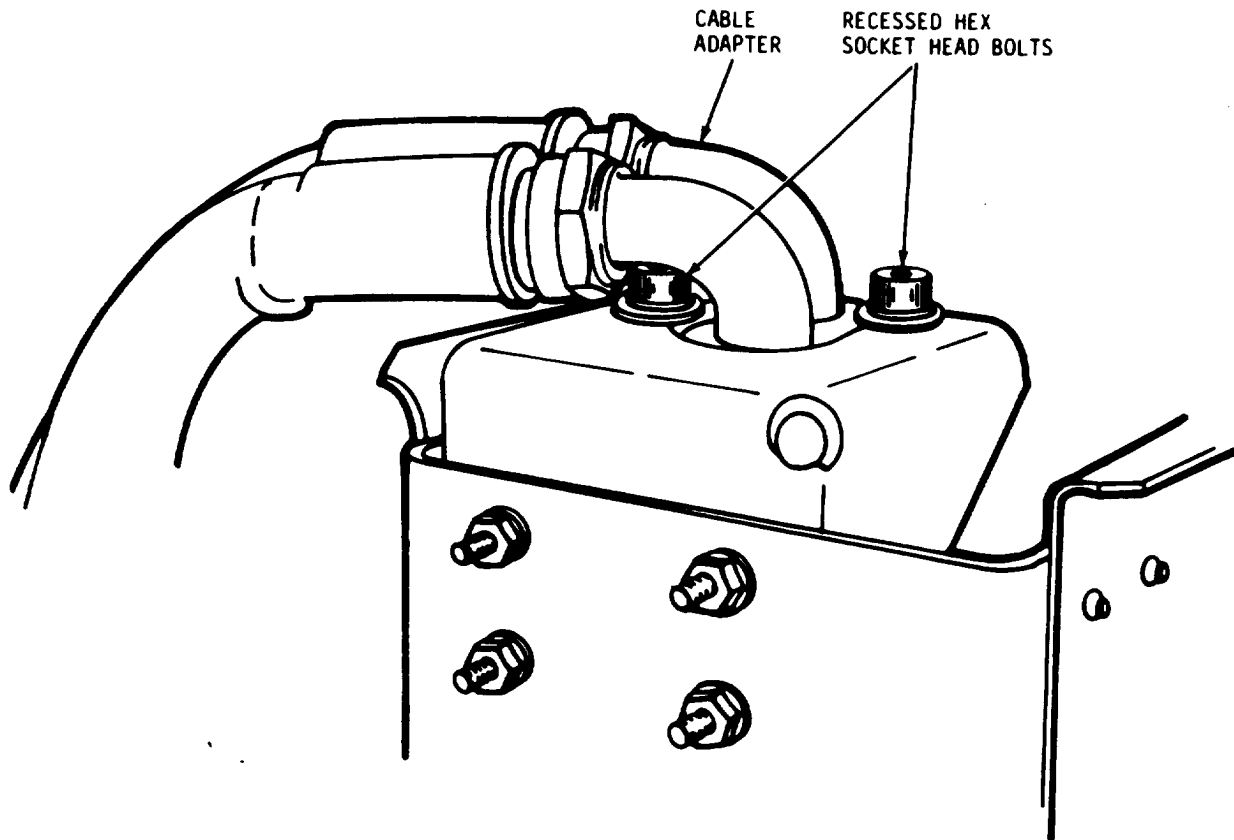
CABLE ASSEMBLY (W22)

REPLACE

4 O F 6



6. Remove wooden block from under antenna base assembly. Place pneumatic mast control valve to UP position and raise pneumatic mast to its full height.

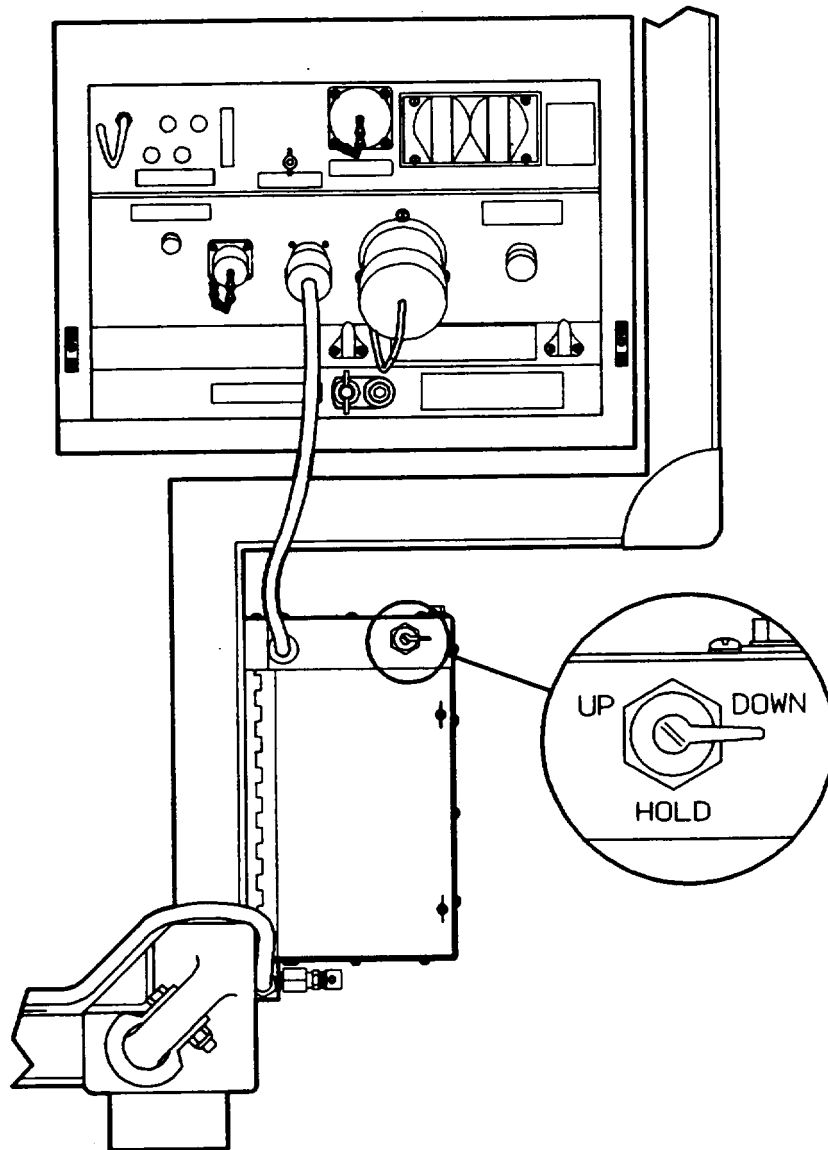


7. Position cable assembly into cable basket and position cable adapter onto mounting bracket at upper left corner of cable basket.
8. Secure cable adapter to mounting bracket with two recessed socket head screws, lock washers, and flat washers. Tighten screws using 3/16" hex key wrench.
9. On rear wall of shelter, connect cables W22P1 to J1 and W22P2 to J1.

CABLE ASSEMBLY (W22)

REPLACE

6 OF 6



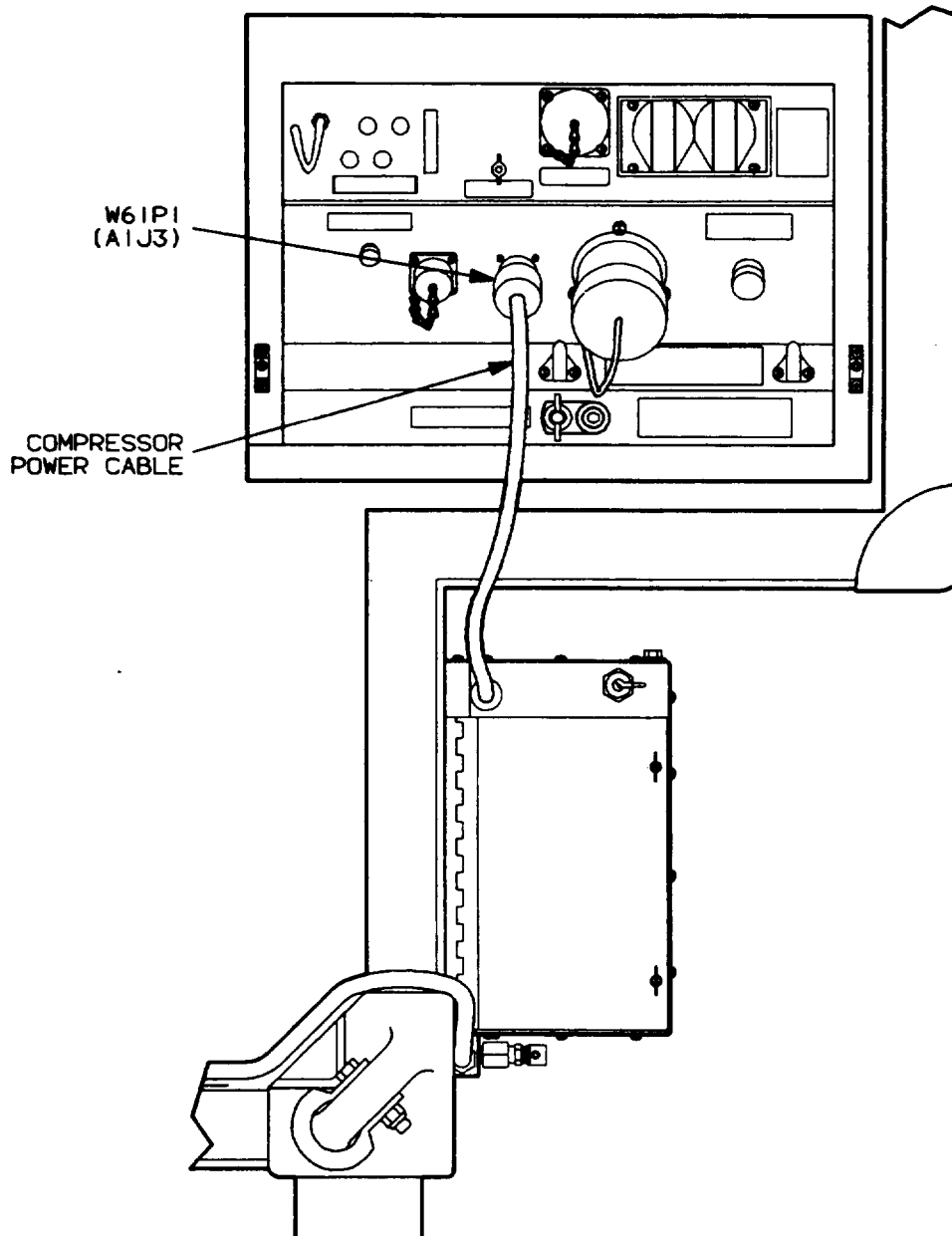
10. On compressor assembly, place pneumatic mast control valve to DOWN position and slowly lower pneumatic mast. Ensure cable assembly is properly positioned into cable basket.
11. On power distribution panel, place circuit breakers labeled RACK 1 AND 2 and POWER SUPPLY to ON position.

The compressor assembly is located outside the shelter under the curbside knee.

Tools Required: Refrigerator Unit Tool Kit

Personnel Required: 3

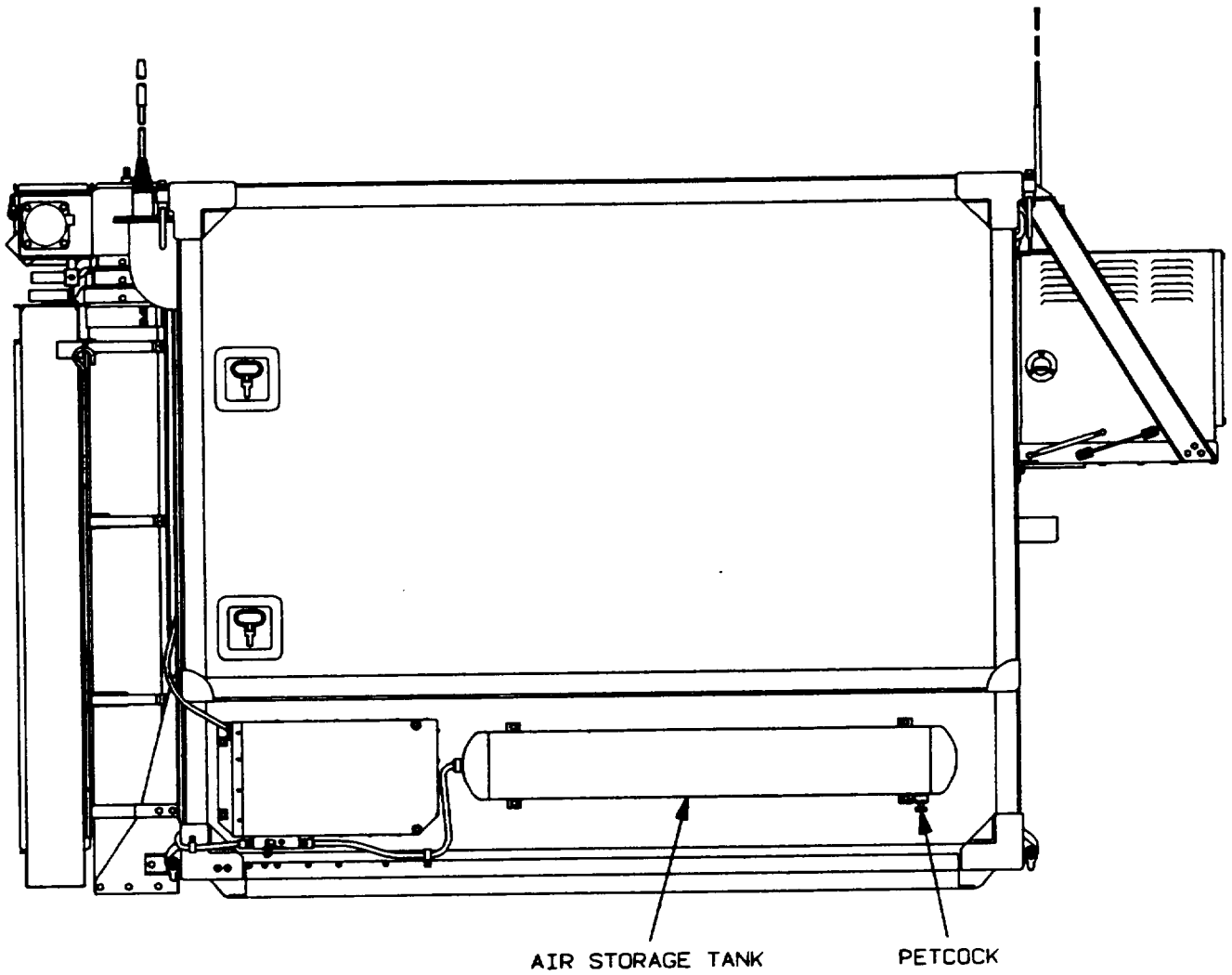
Remove compressor assembly as follows:



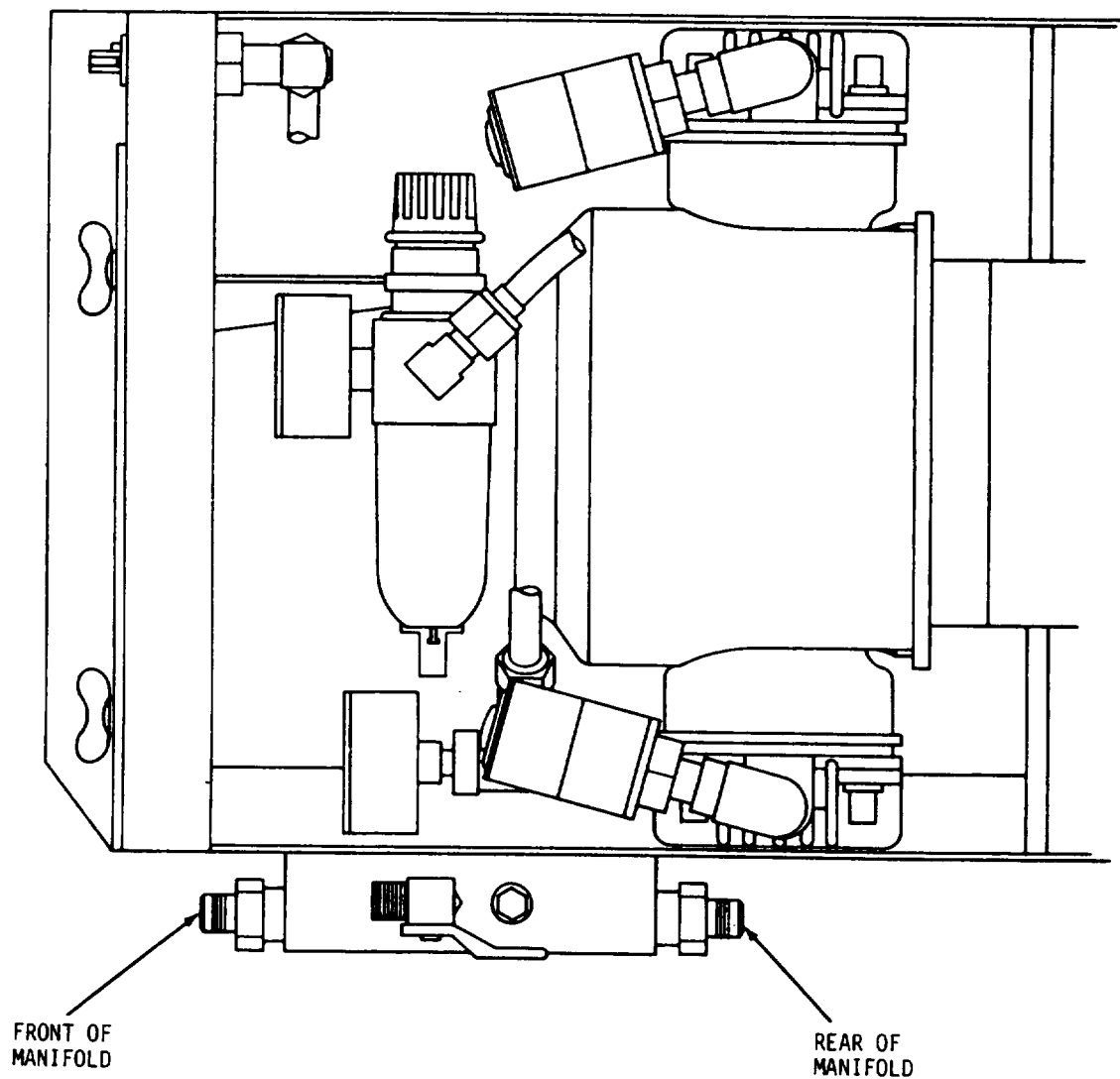
1. Remove shelter from vehicle in accordance with Shelter Remove procedure.
2. On power entry panel, disconnect air compressor power cable W61P1 from A1J3.

COMPRESSOR

REMOVE 2 OF 5



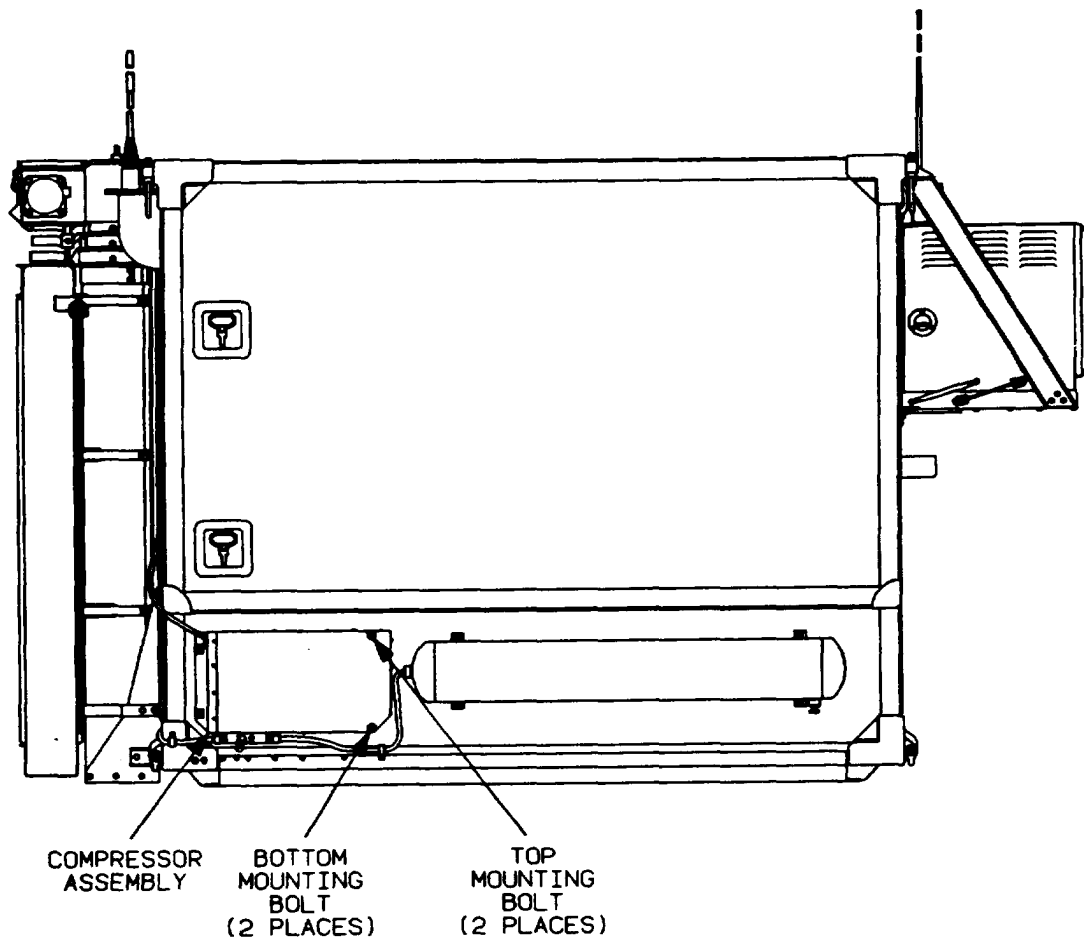
3. At rear of air storage tank, open drain cock and bleed off air pressure.



4. Using a 3/4" open-end wrench and a 12" adjustable wrench, disconnect high pressure air hose from rear of compressor manifold.
5. Using a 3/4" open-end wrench and a 12" adjustable wrench, disconnect low pressure air hose from front of compressor manifold.

COMPRESSOR

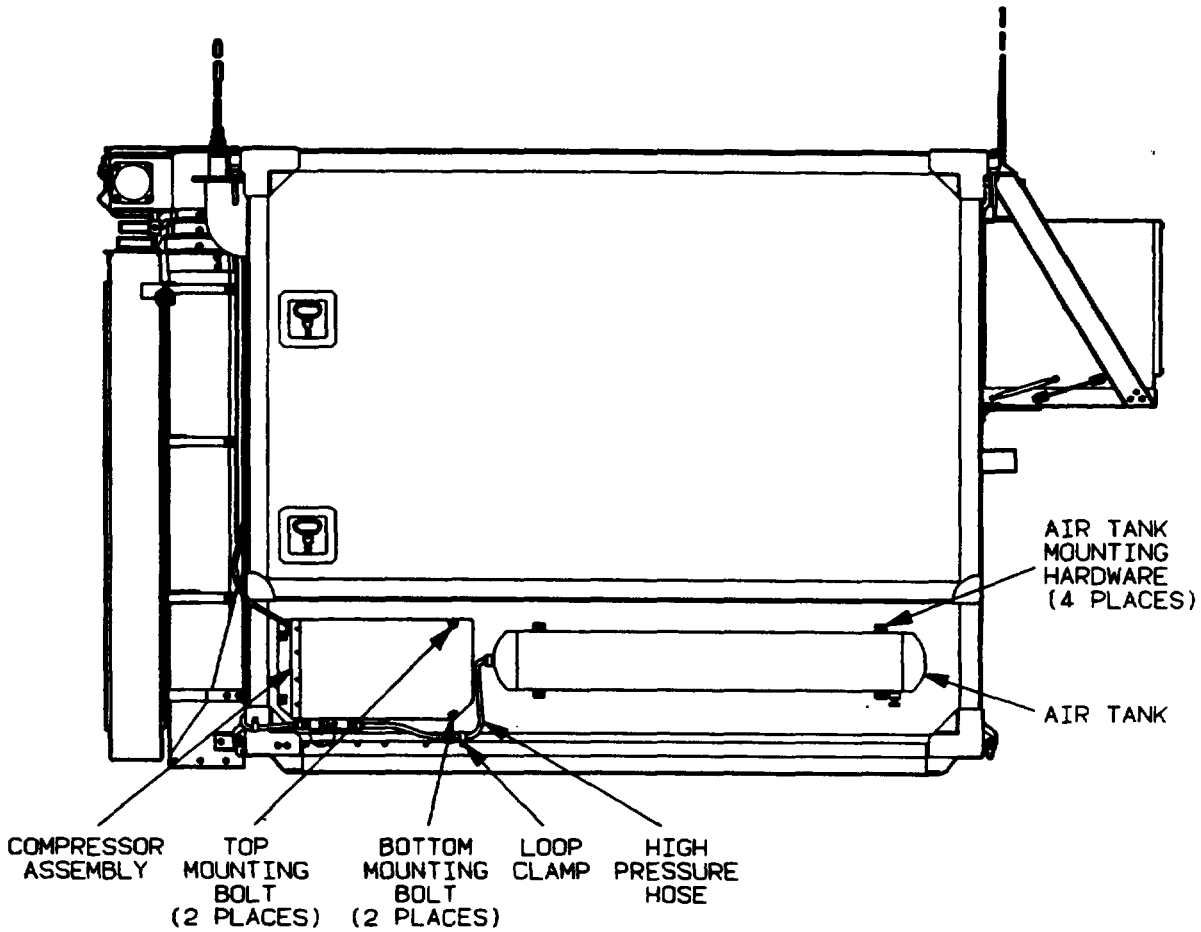
REMOVE 4 0 F 5

**CAUTION**

To prevent compressor assembly from falling and damaging compressor manifold, one person must support compressor while a second person loosens and removes mounting hardware.

6. Using a ratchet handle, 6" extension and $\frac{1}{2}$ " socket, remove and retain two cap crews, lockwashers and flat washers securing bottom of compressor assembly.

5 OF 5 REMOVE COMPRESSOR



7. Using a ratchet handle and 1/2" socket, remove and retain two top cap screws, lockwashers and flat washers securing top of compressor assembly.
8. Remove compressor assembly from shelter.
9. Using a no.2 cross-tip screwdriver, remove and retain machine screw and lockwasher securing loop clamp around high pressure hose. Remove and retain loop clamp.
10. Using a ratchet handle, 6" extension and 1/2" socket remove and retain four cap screws, lockwashers and flat washers securing air tank assembly.
11. Remove air tank and high pressure hose from shelter.
12. Using a 1-3/16" open-end wrench, remove male connection of high pressure hose from elbow on air tank.

 COMPRESSOR

REPLACE

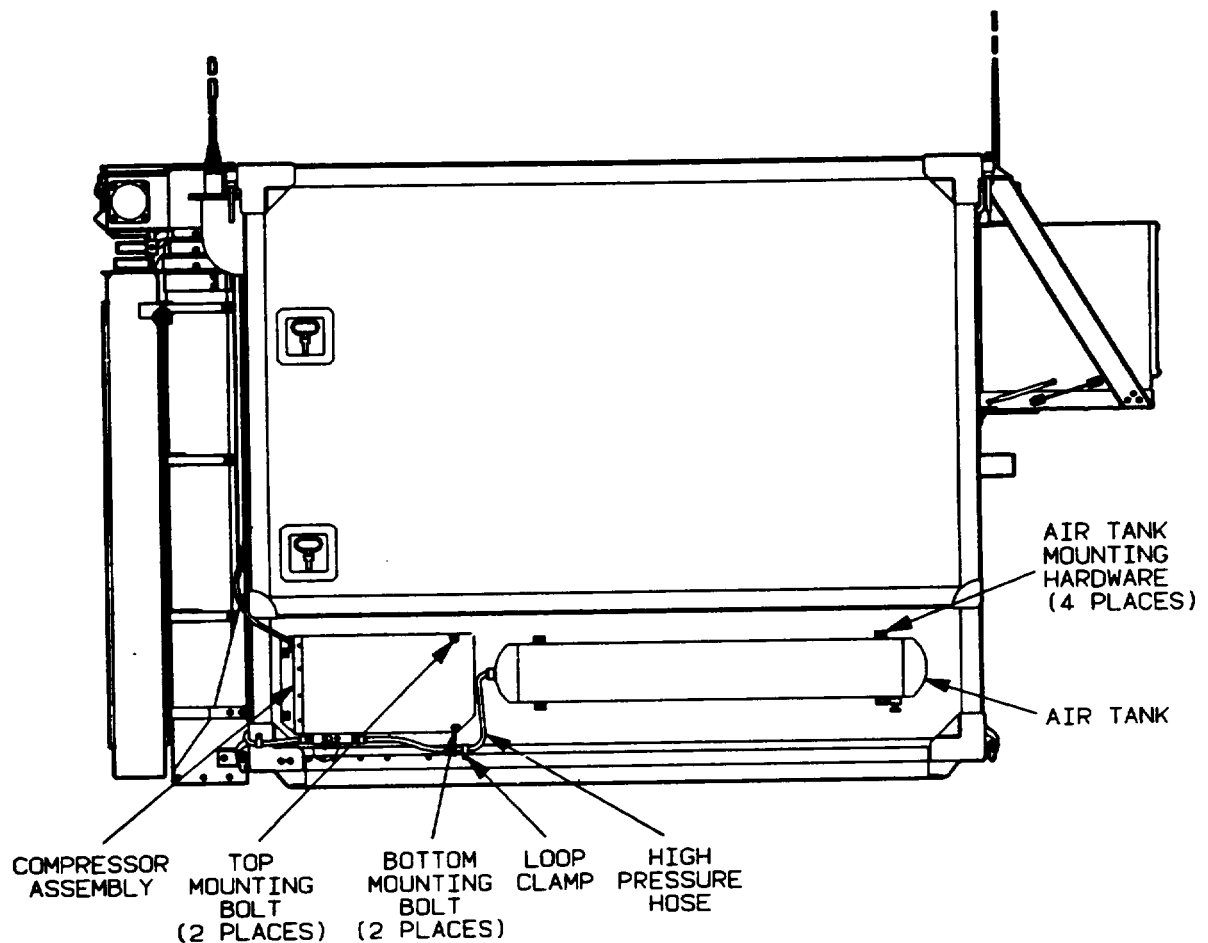
 1 OF 5

The compressor assembly is located outside the shelter under the curbside knee.

Tools Required: Refrigerator Unit Tool Kit

Personnel Required: 3

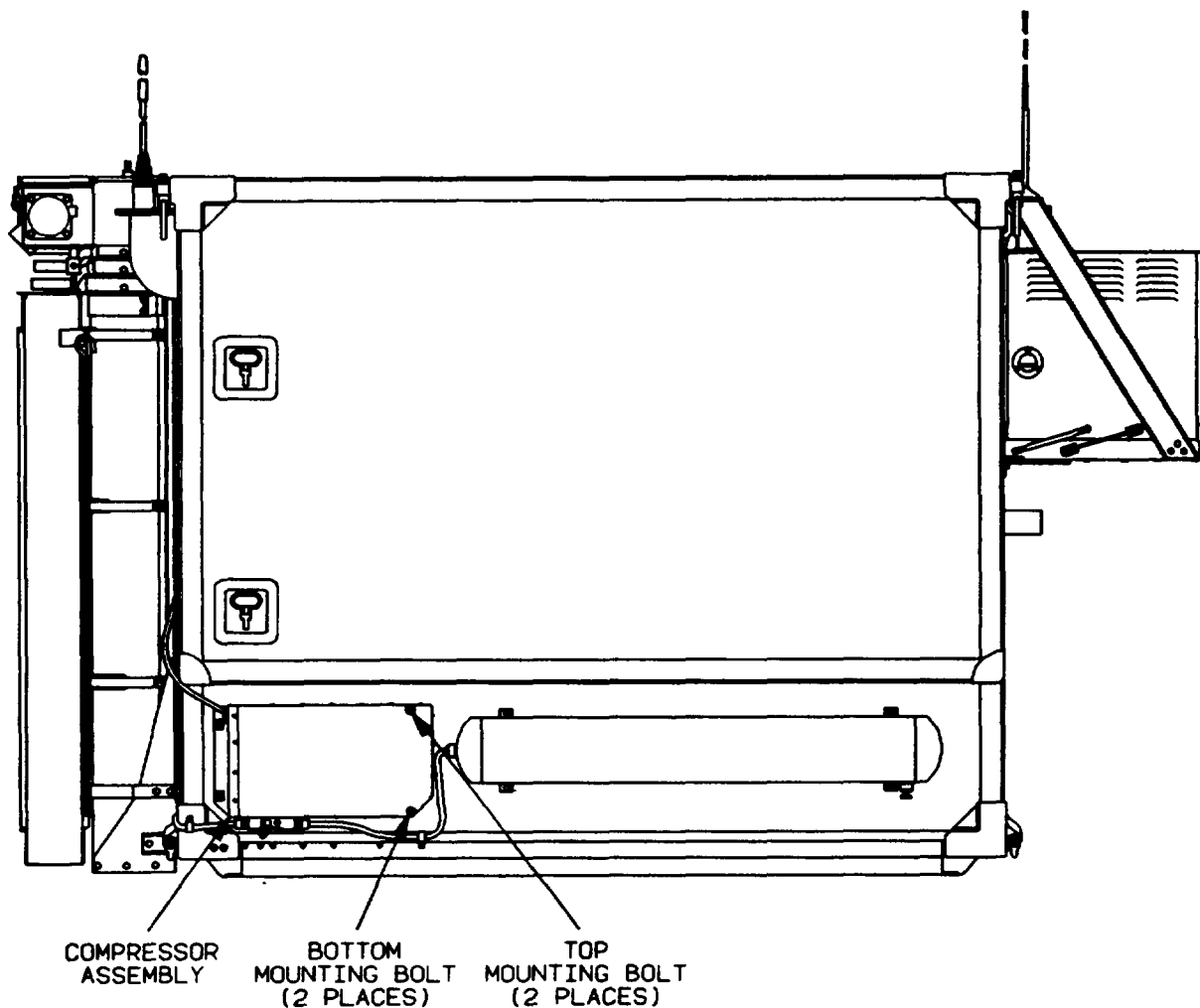
Replace compressor assembly as follows:



1. Apply thread sealant (Appendix D, Item 21) to male threads of high pressure hose.
2. Install male connection of high pressure air hose into elbow on air tank assembly. Tighten air hose connection using 1-3/16" open-end wrench.
3. Position air tank assembly onto shelter and secure with four cap screws, lockwashers and flat washers. Tighten cap screws using a ratchet handle, 6" extension and 1/2" socket.
4. Position loop clamp around high pressure air hose and onto shelter. Secure loop clamp with a machine screw and lockwasher. Tighten screw using a no.2 cross-tip screwdriver.

COMPRESSOR

2 OF 5 REPLACE



CAUTION

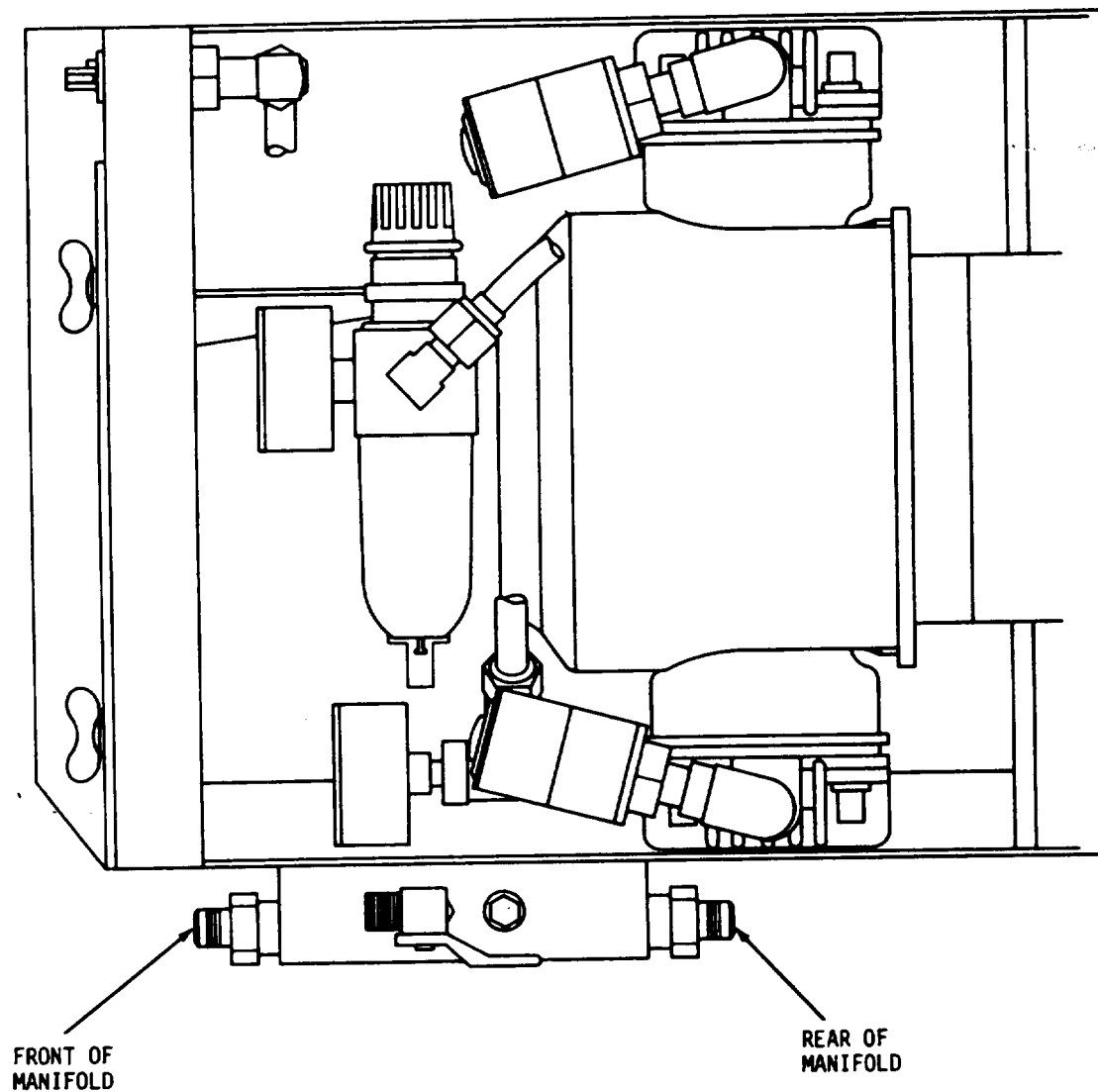
One person must support compressor assembly while a second person installs and tightens mounting hardware.

5. Position compressor onto shelter.
6. Secure top of compressor assembly to shelter with two cap screws, lockwashers, and flat washers. Using a ratchet handle, 6" extension and 1/2" socket, tighten cap screws.
7. Secure bottom of compressor assembly to shelter with two cap screws, lockwashers, and flat washers. Using a ratchet handle, 6" extension and 1/2" socket, tighten cap screws.

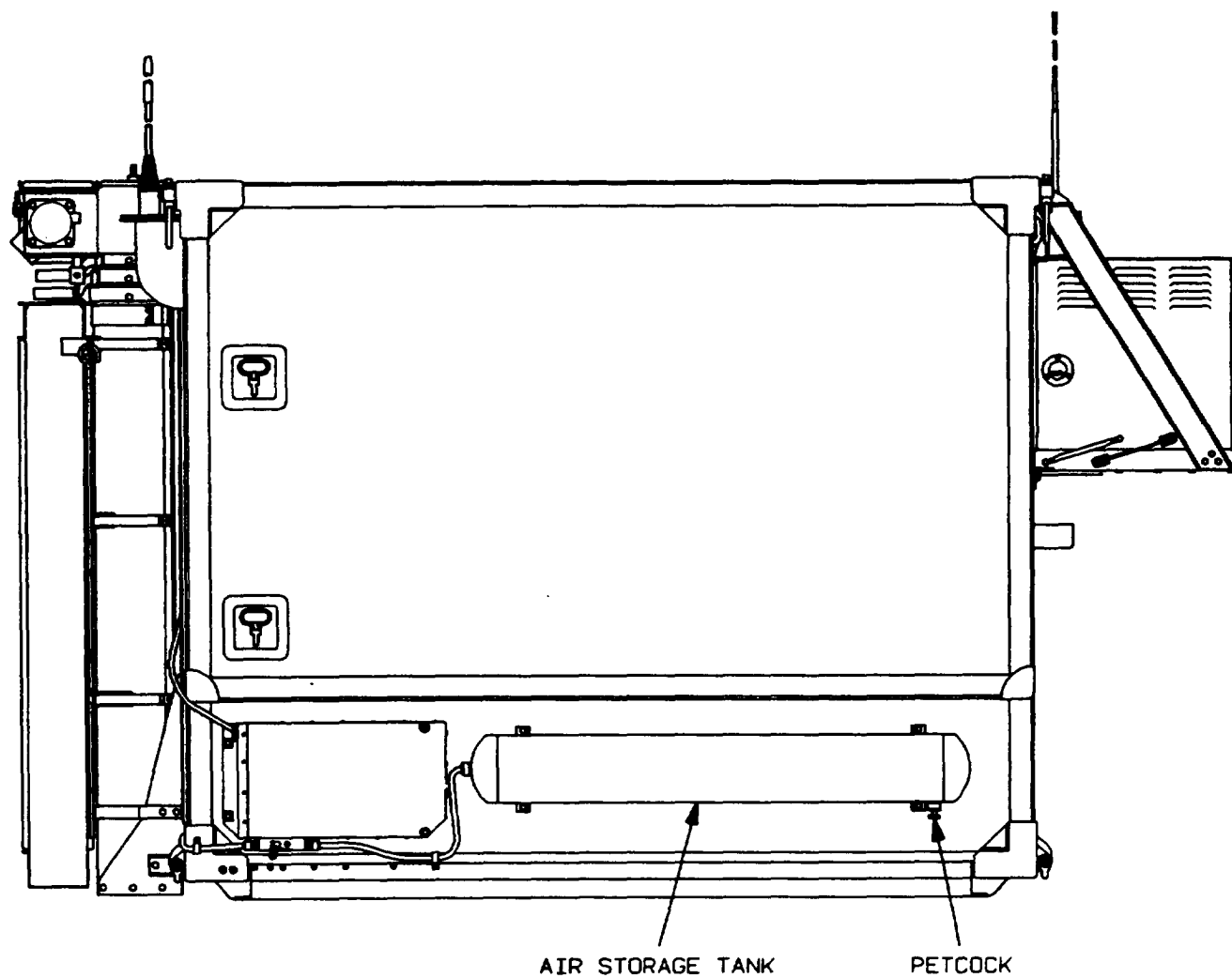
COMPRESSOR

REPLACE

3 OF 5



8. Apply thread sealant (Appendix D, Item 21) to threads of front and rear connections on compressor manifold.
9. Connect low pressure air hose onto front connection of compressor manifold. Tighten low air hose connection using a 3/4" open-end wrench and a 12" adjustable wrench.
10. Connect high pressure air hose onto rear connection of compressor manifold. Tighten high pressure air hose connection using a 3/4" open-end wrench and a 12" adjustable wrench.

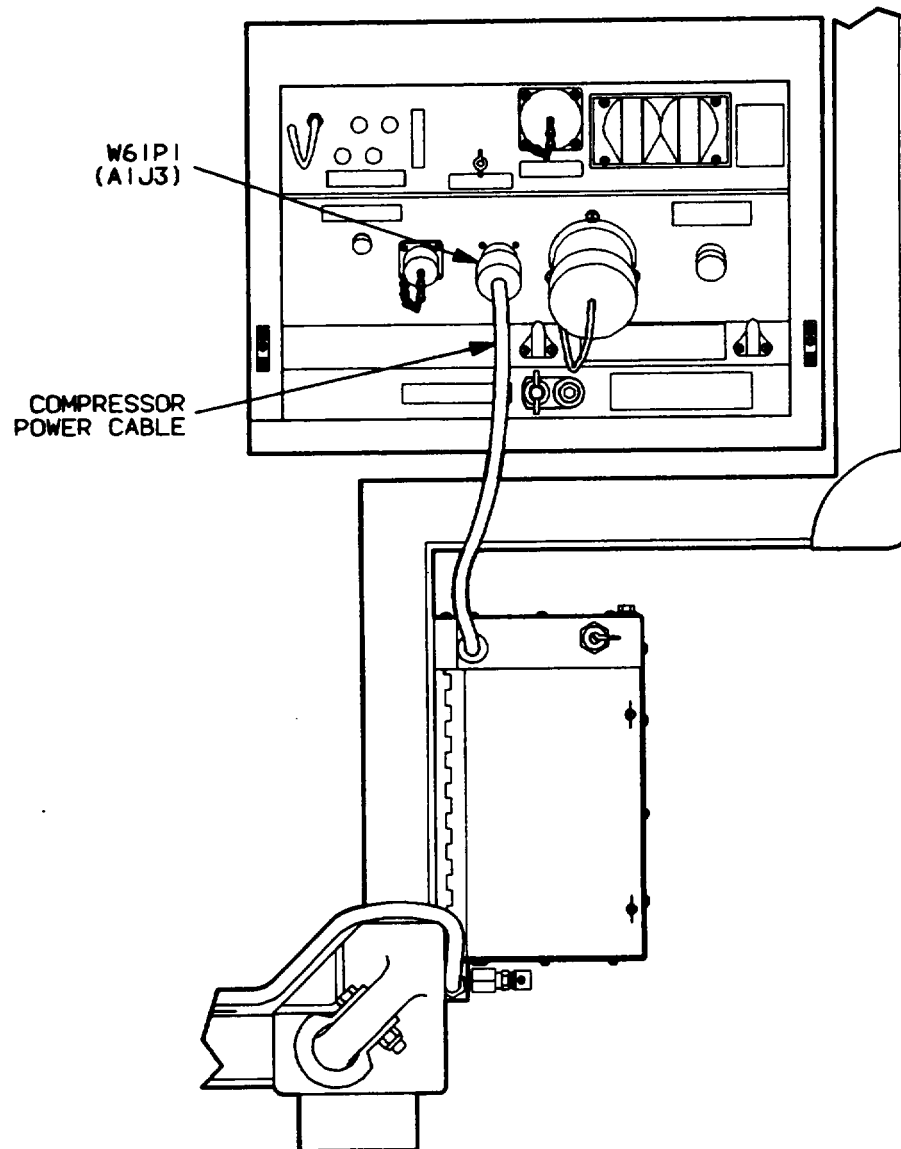


11. At rear of air storage tank, close drain cock.

COMPRESSOR

REPLACE

5 0 F 5



12. On power entry panel, connect compressor assembly power cable W61P1 to A1J3.

13. Install shelter onto vehicle in accordance with Shelter Replace procedure.

1 OF 7 REMOVE

PNEUMATIC MAST

The pneumatic mast is located on the rear of the shelter.

Tools Required: TK-100/G
TK-101/G
Refrigerator Unit Tool Kit
General Mechanic's Tool Kit
18" Extension.
7/16" Open-end Wrench

Personnel Required: 3

Remove pneumatic mast as follows:

1. Remove antenna assembly as described in the Operators Manual, TM 32-5895-070-10.

NOTE

If a leaky seal prevents the pneumatic mast from being raised (pneumatically), two people will be required to raise the mast (manually) the one foot necessary to access mounting hardware on the cable basket and base assembly.

WARNING

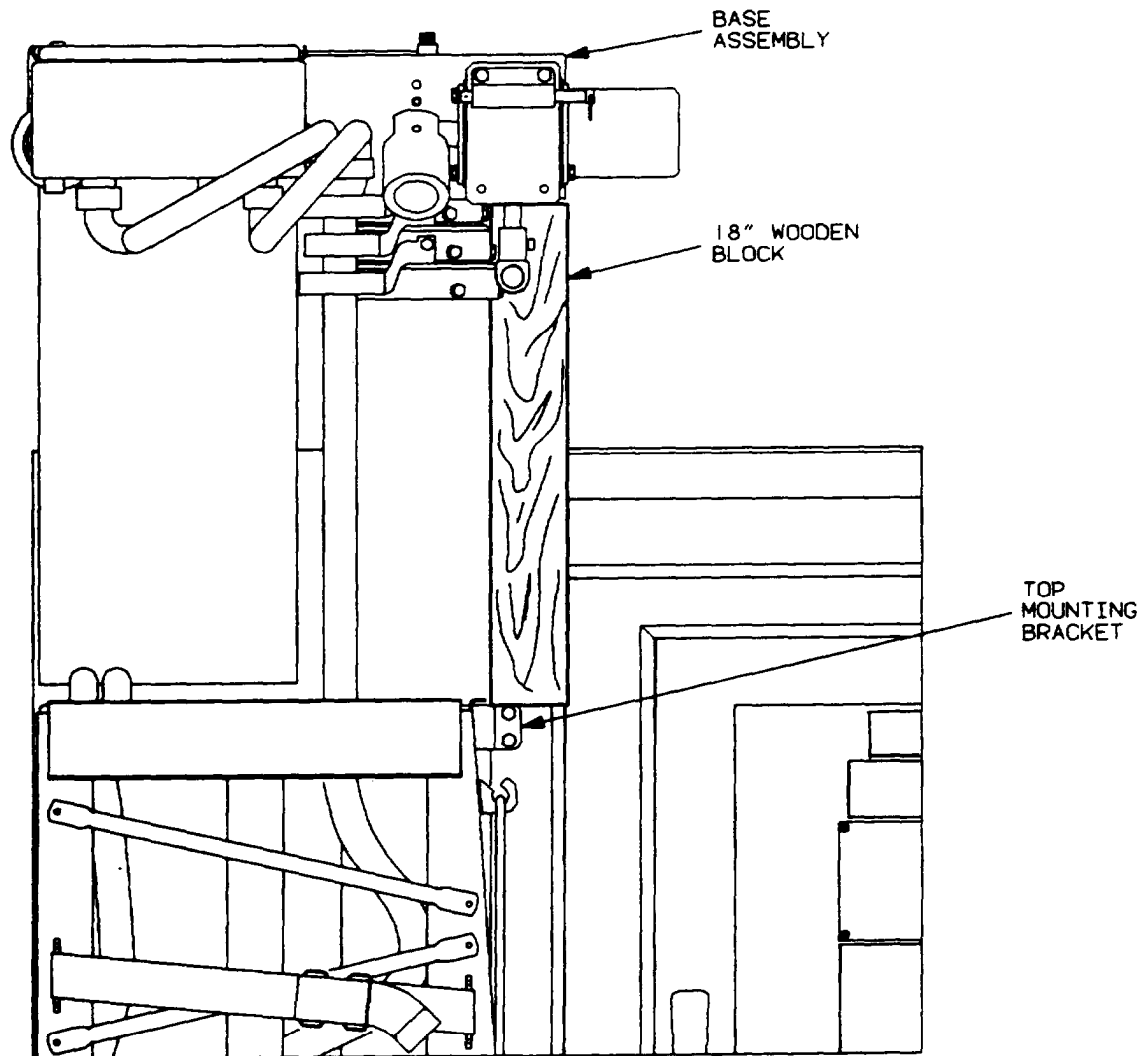
To prevent injury to personnel, block the pneumatic mast into position (using wooden block) while removing mounting hardware from the cable basket or antenna base assembly.

2. Remove cable basket in accordance with Cable Basket Remove procedure.
3. On compressor assembly, place mast control valve in DOWN position. Lower mast until mast extends about two feet above shelter roof. Place mast control valve into HOLD position.

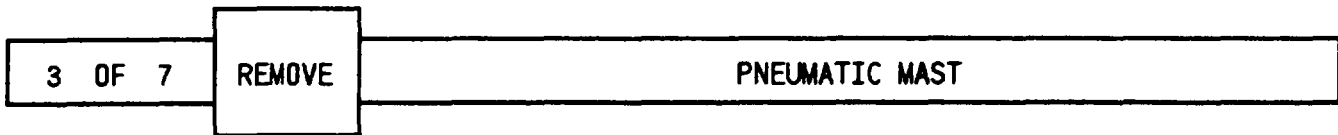
PNEUMATIC MAST&P

REMOVE

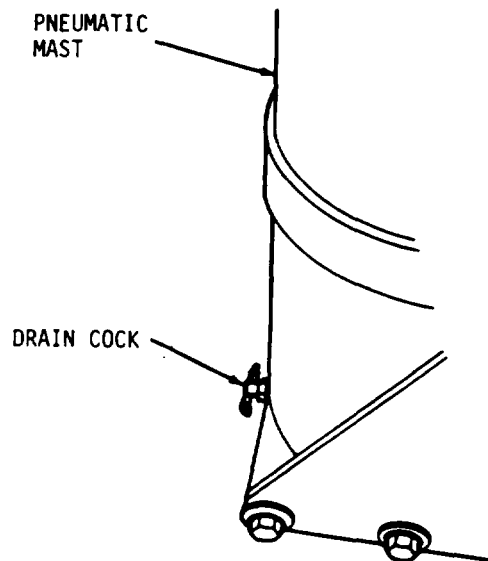
2 OF 7



4. At antenna base assembly, one person position a 18" wooden block between bottom side of antenna base assembly (next to shelter) and top side of pneumatic mast mounting bracket. Refer to Appendix E for manufacture of wooden block.
5. On compressor assembly, a second person will slowly move mast control valve into DOWN position and lower pneumatic mast until antenna base assembly is resting on block.
6. Remove antenna base assembly in accordance with Antenna Group Remove procedure in Chapter 3. Use only the steps required to remove the antenna base assembly from the pneumatic mast. Do not remove the power supply from the antenna base assembly.
7. At rear of shelter, disconnect W22P1 from J1 and W22P2 from J2.
8. Remove and retain cable (W22) in accordance with Cable Assembly Remove procedure.



9. On pneumatic mast, using a 7/16" open-end wrench, remove and retain six bolts, lockwashers, and flat washers, securing three cable guides. Remove and retain cable guides and hardware.
10. At top section of pneumatic mast, remove and retain antenna base assembly mounting socket.



CAUTION

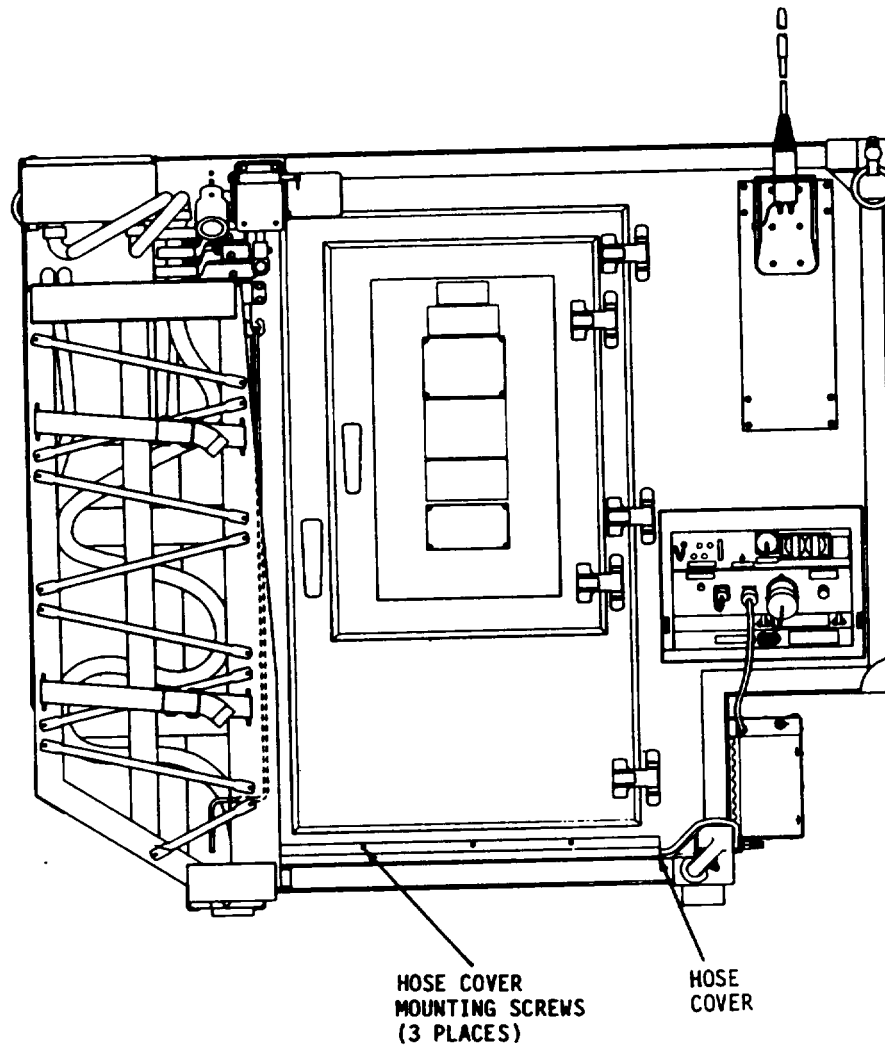
Use care when bleeding air pressure from the pneumatic mast, oil and water may spray from the drain cock.

11. At base of pneumatic mast, open drain cock and bleed off all air pressure.
12. Using 7/16" open-end wrench, remove drain cock from base of mast and retain.

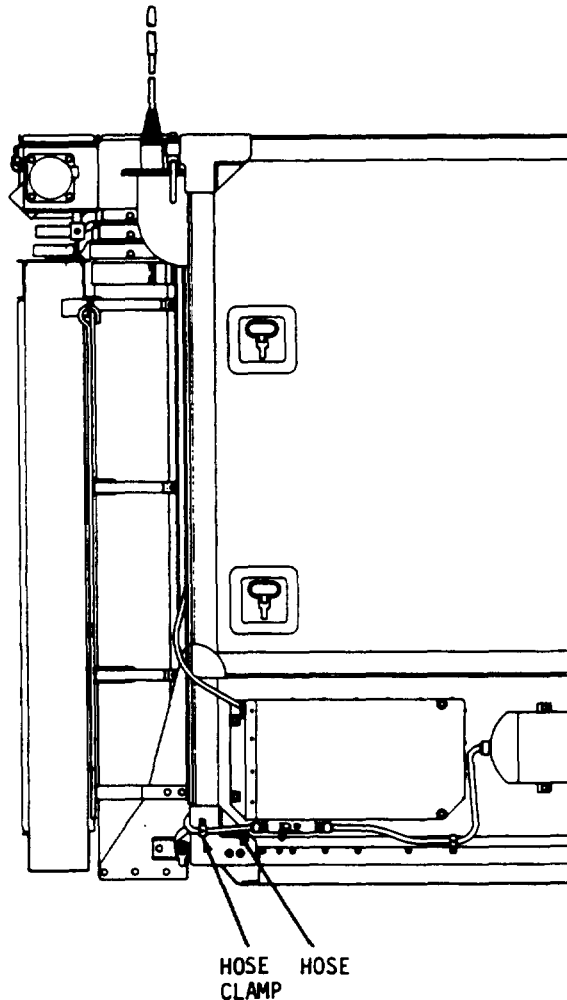
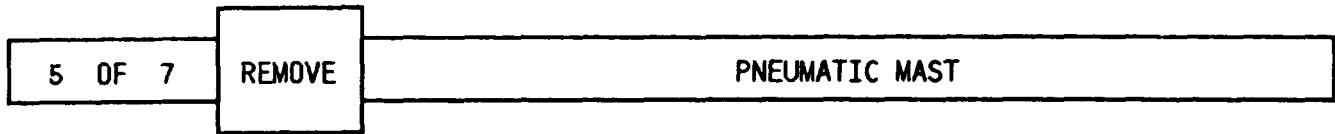
PNEUMATIC MAST

REMOVE

4 OF 7



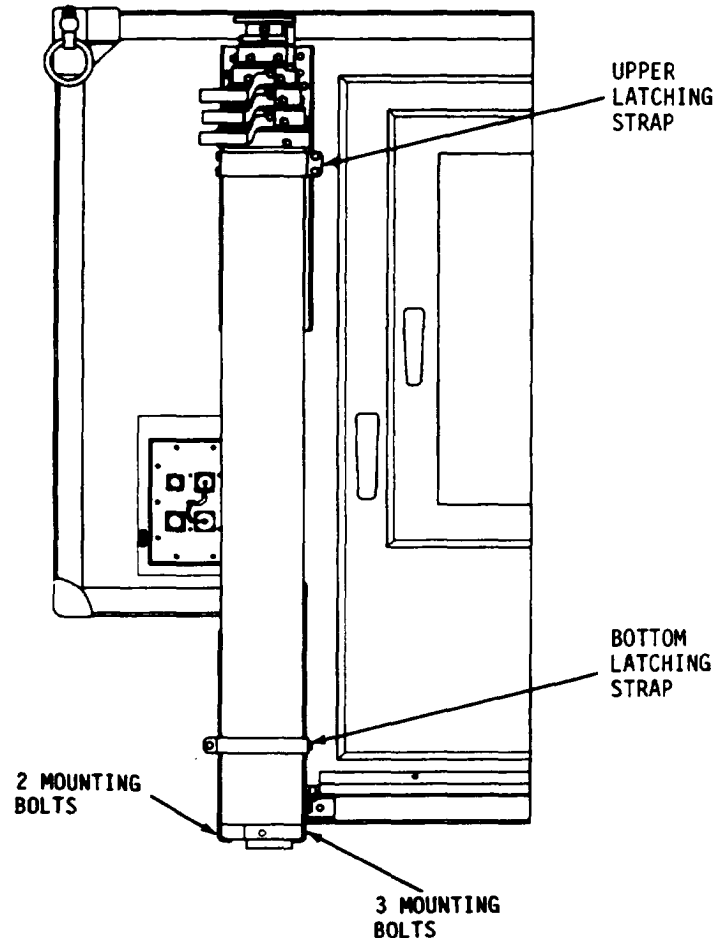
13. At bottom rear of shelter (underneath shelter door opening), using no.2 cross-tip screwdriver, remove and retain three screws, lockwashers and flat washers securing the hose cover to the shelter.
14. Remove and retain hose cover.



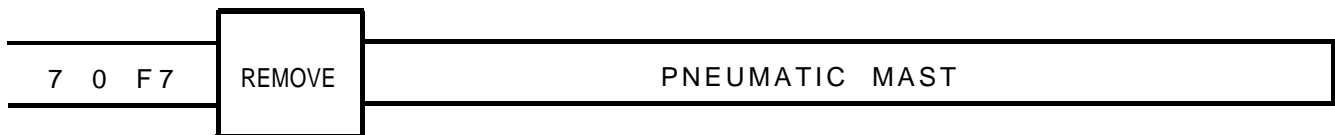
15. On air compressor manifold, using a 3/4" open-end wrench and a 12" adjustable wrench, disconnect low pressure air hose from front of compressor manifold.
16. At rear (lower curbside corner) of shelter, use a ratchet handle and 7/16" socket to remove cap screw, lockwasher and flat washer securing hose clamp to shelter. Remove and retain hose clamp and mounting hardware.
17. Using a 12" adjustable wrench, loosen locknuts on two rear shelter tiedown turnbuckles.
18. On vehicle bed, loosen turnbuckles and disconnect two rear shelter tiedowns.
19. At rear roadside corner of vehicle bed, using a ratchet handle, 12" extension, 3/4" deep socket and 3/4" open-end wrench, remove and retain locking nut and mounting bolt from tiedown post.
20. At rear roadside corner of vehicle bed, using a ratchet handle, 12" extension, 3/4" deep socket and 3/4" open-end wrench, remove and retain locking nuts from two mounting studs on tiedown post. Remove and retain tiedown post.

 PNEUMATIC MAST

REMOVE



21. At base of pneumatic mast, using a ratchet handle and 9/16" socket, remove and retain five cap screws, lockwashers and flat washers securing pneumatic mast base into mounting bracket. Three mounting screws are located on curbside of bracket. Two mounting screws are located on roadside of bracket.
22. At bottom end of pneumatic mast, using a ratchet handle and 9/16" socket, remove and retain two cap screws, lockwashers and flat washers securing bottom latching strap to curbside of mast mounting bracket.
23. At bottom end of pneumatic mast, using a ratchet handle, 9/16" socket and 9/16" open-end wrench, remove and retain a cap screw, two flat washers, a lockwasher and hex nut securing bottom latching strap to roadside of mast mounting bracket. Remove and retain latching strap.
24. At top end of pneumatic mast, using a ratchet handle and 9/16" socket, remove and retain four cap screws and flat washers securing upper latching strap to pneumatic mast mounting bracket. Remove and retain the latching strap.



NOTE

The pneumatic mast weighs 103 lbs. and requires three people to lift it from its mounting bracket.

25. Lift pneumatic mast off its mounting bracket. Carefully pull low pressure air hose through clearance hole in mounting bracket.

PNEUMATIC MAST

REPLACE

1 OF 5

The pneumatic mast is located on the rear of the shelter.

Tools Required: TK-100/G
TK-101/G
Refrigerator Unit Tool Kit
General Mechanic's Tool Kit
18" Extension
7/16" Open-end Wrench

Personnel Required: 3

Replace pneumatic mast as follows:

NOTE

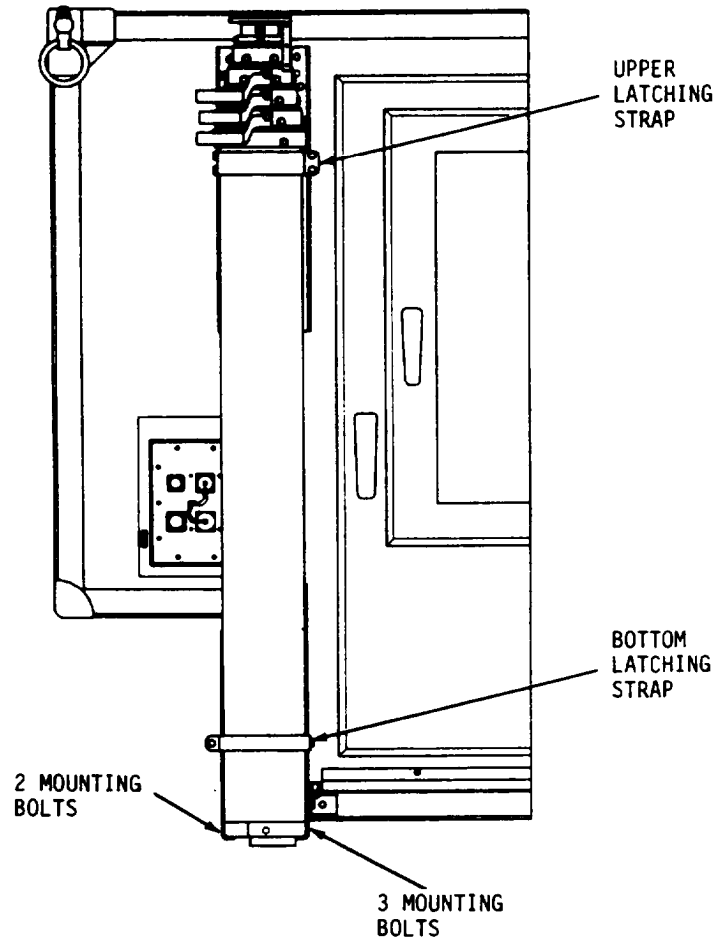
The pneumatic mast weighs 103 lbs. and requires three people to lift it onto its mounting bracket.

1. At rear of shelter, position base of pneumatic mast next to its mounting bracket.
2. With base of pneumatic mast near mounting position on vehicle, guide low pressure air hose through mounting bracket clearance hole.

NOTE

Position base of pneumatic mast into mounting bracket with its three mounting holes positioned toward curbside of shelter.

3. Lift pneumatic mast horizontally with its base towards rear of shelter. Position base into the base mounting bracket.
4. Tilt pneumatic mast upward until mast stands in vertical position.



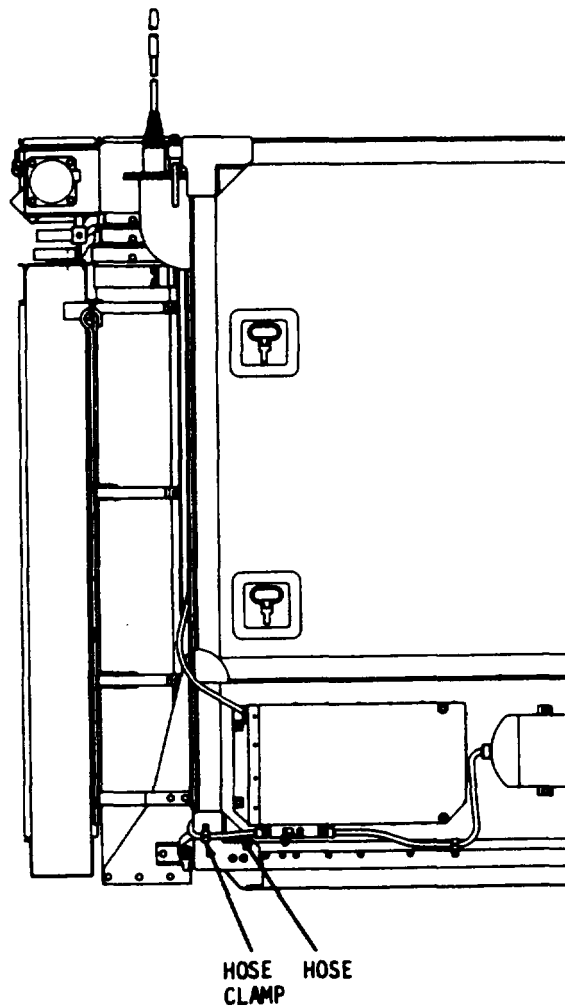
5. Position upper latching strap around pneumatic mast. Secure strap to mast mounting bracket with four cap screws and flat washers. Use a ratchet handle and 9/16" socket to install cap screws but do not tighten screws.
6. Inspect low pressure air hose. Ensure that air hose is properly routed through hole in base mounting bracket. Ensure that hose is not pinched, kinked or bent sharply.
7. Secure base of pneumatic mast with five cap screws, lockwashers and flat washers. Use ratchet handle and 9/16" socket to install cap screws but do not tighten screws.
8. Position bottom latching strap around pneumatic mast. Secure curbside end of latching strap to mast mounting bracket with two cap screws and flat washers. Use a ratchet handle and 9/16" socket to install cap screws but do not tighten screws.
9. Secure roadside end of bottom latching strap to mast mounting bracket with a cap screw, two flat washers, a lockwasher and hex nut. Use a 9/16" open-end wrench to hold hex nut and tighten cap screw using a ratchet handle and 9/16" socket.

PNEUMATIC MAST

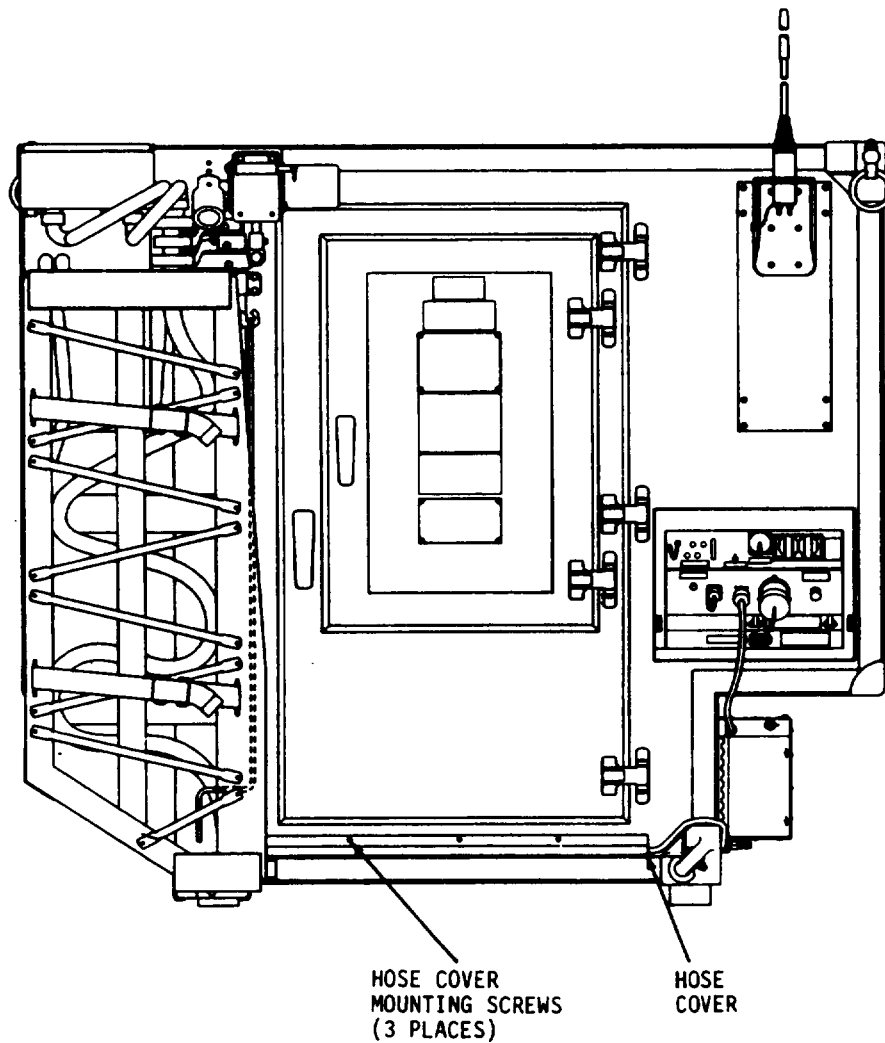
REPLACE

3 OF 5

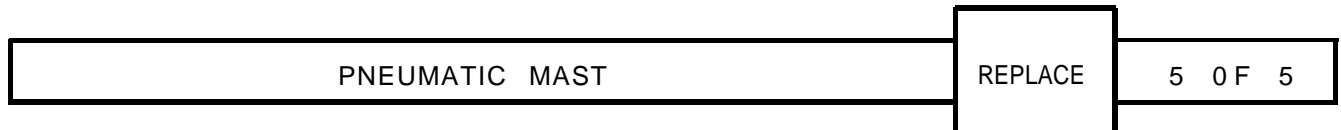
- Using a ratchet handle and 9/16" socket, tighten all cap screws on upper and lower latching straps.



- On front connection of compressor assembly manifold, remove thread sealant tape residue. Apply new thread sealant tape (Appendix D, Item 21) to threads of manifold connector.
- Connect low pressure air hose to front connector of compressor manifold. Use a 12" adjustable wrench to hold compressor manifold connection and tighten air hose connection using a 3/4" open-end wrench.
- Position loop clamp around air hose with loop facing downward. Secure loop clamp to shelter with a cap screw, lockwasher and flat washer. Tighten cap screw using a ratchet handle and 7/16" socket.



14. Position air hose cover over air hose and onto bottom rear of shelter. Secure air hose cover to shelter with three machine screws, lockwashers and flat washers. Tighten screws using a no.2 cross-tip screwdriver.



15. Position tiedown post onto rear roadside corner of vehicle bed and install two locking nuts onto mounting studs on the tiedown posts. Tighten locking nuts using a ratchet handle, 12" extension and 3/4" deep socket.
16. Position mounting bolt into tiedown post and through vehicle bed. Install locking nut onto mounting bolt. Hold mounting bolt using a 3/4" open-end wrench and tighten locking nut using a ratchet handle, 12" extension and 3/4" socket.
17. Position cable guides onto pneumatic mast sections and secure with six cap screws, lockwashers and flat washers. Tighten cap screws using a 7/16" open-end wrench.
18. Route cable (W22) through three cable guides.
19. Replace antenna base mounting socket.
20. Replace antenna base assembly in accordance with Antenna Croup Replace procedures in Chapter 3 of this manual.
21. Replace the cable basket in accordance with Cable Basket Replace procedure.
22. At rear roadside corner of shelter, connect cable W22P1 to J1 and W22P2 to J2.
23. Perform Reductor Vertical Lock Pin Adjust procedure.
24. On power distribution panel, place MAST circuit breaker to ON position.

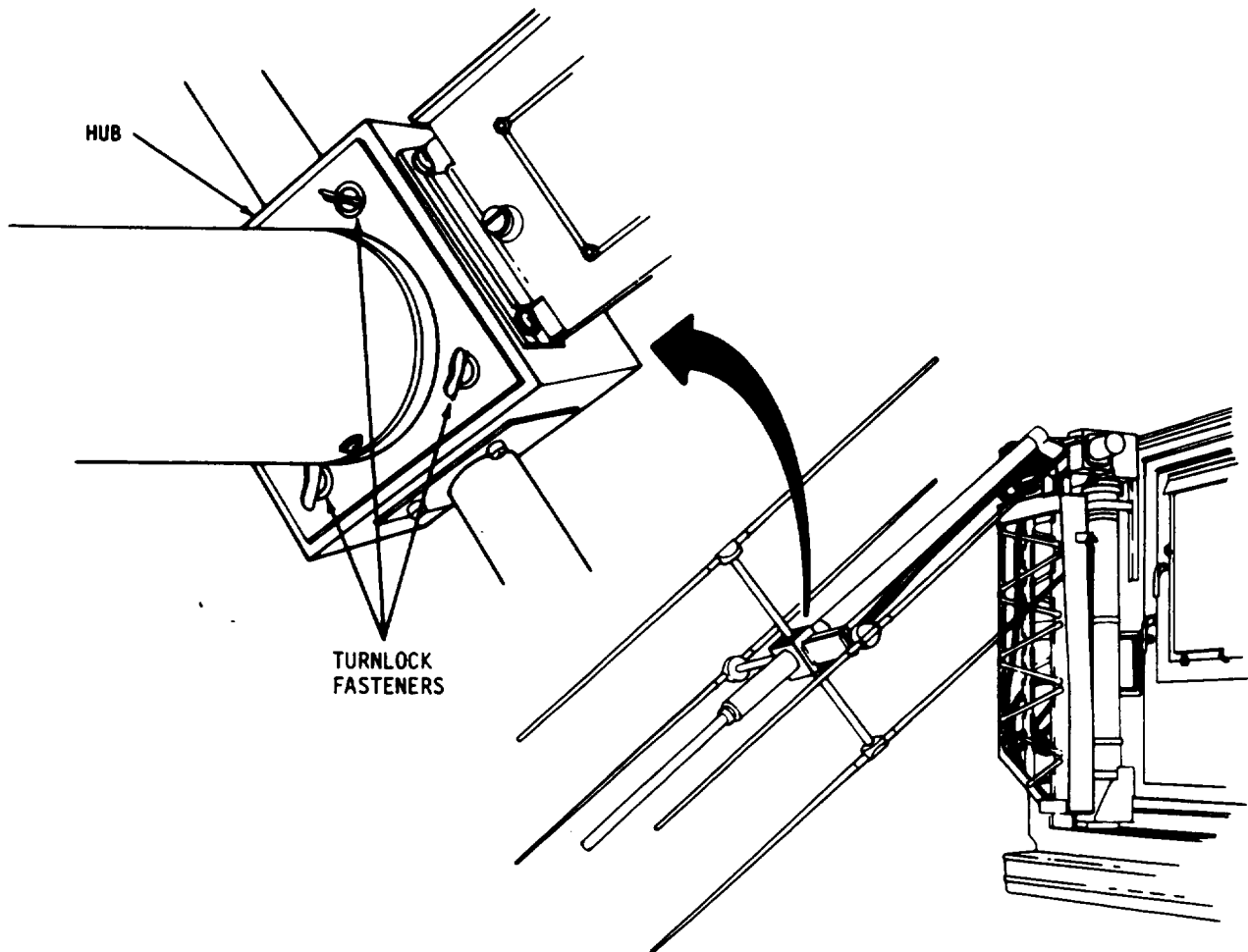
| | | |
|--------|--------|-----------------------------------------|
| 1 OF 1 | REMOVE | UHF/DATALINK ANTENNA, AS-3661/TRQ-32(V) |
|--------|--------|-----------------------------------------|

The UHF intercept antenna is located at the center of the mast crown assembly.

Tools Required: NONE

Personnel Required: 1

Remove UHF intercept antenna as follows:

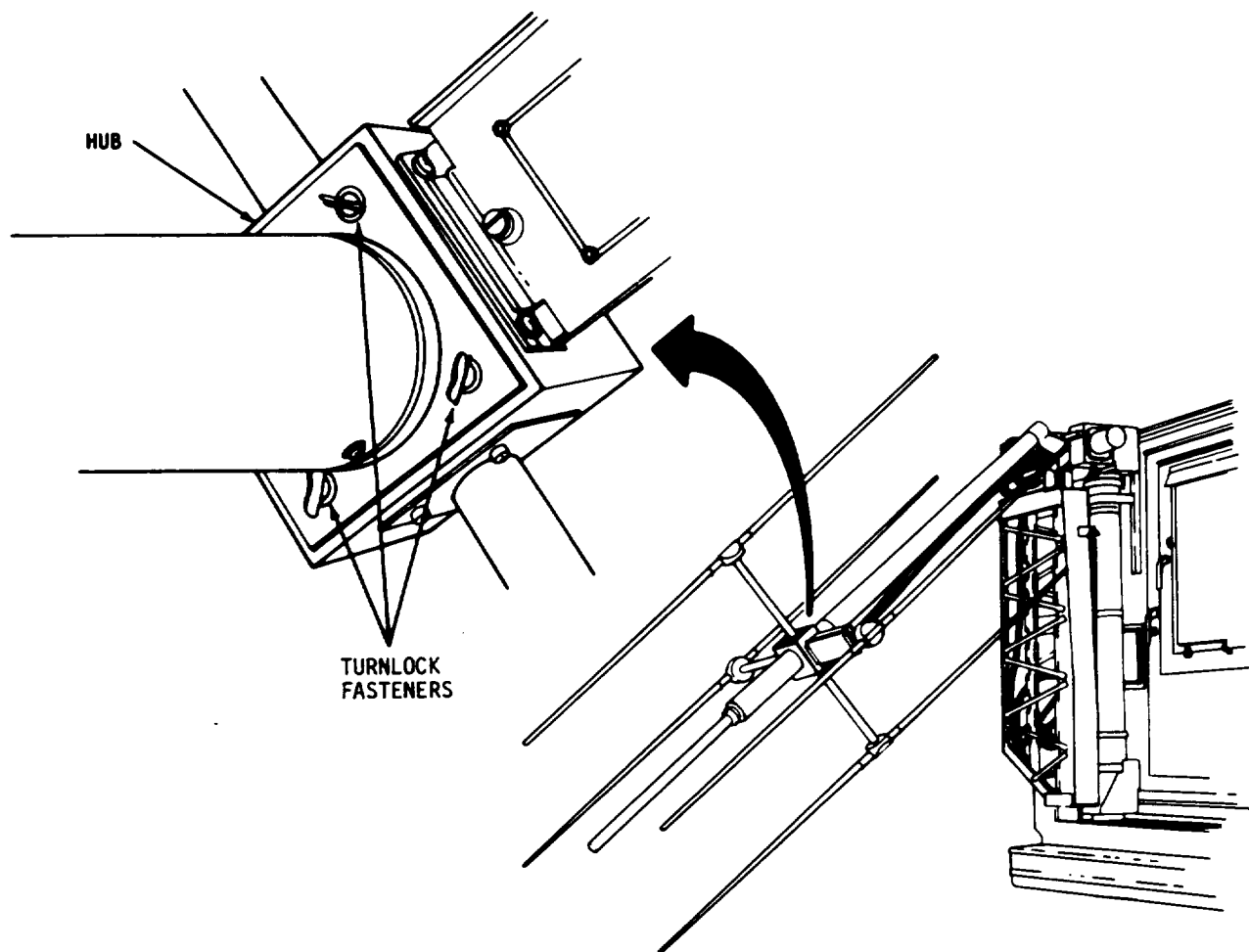


1. Lower antenna assembly in accordance with TM 32-55895-070-10, Preparation for Movement.
2. Loosen four turn lock fasteners securing UHF antenna to hub of mast crown.
3. Remove UHF intercept antenna from mast crown.

UHF/DATALINK ANTENNA, AS-3661/TRQ-32(V)

REMOVE

1 OF 1



1. Place UHF antenna on hub of mast crown assembly and secure with four turnlock fasteners (hand tighten).
2. Raise antenna to vertical position in accordance with TM 32-5895-070-10, Preparation for Movement.

| | | |
|--------|--------|----------------------------------|
| 1 OF 6 | REMOVE | RF PROCESSOR, MX-10526/TRQ-32(V) |
|--------|--------|----------------------------------|

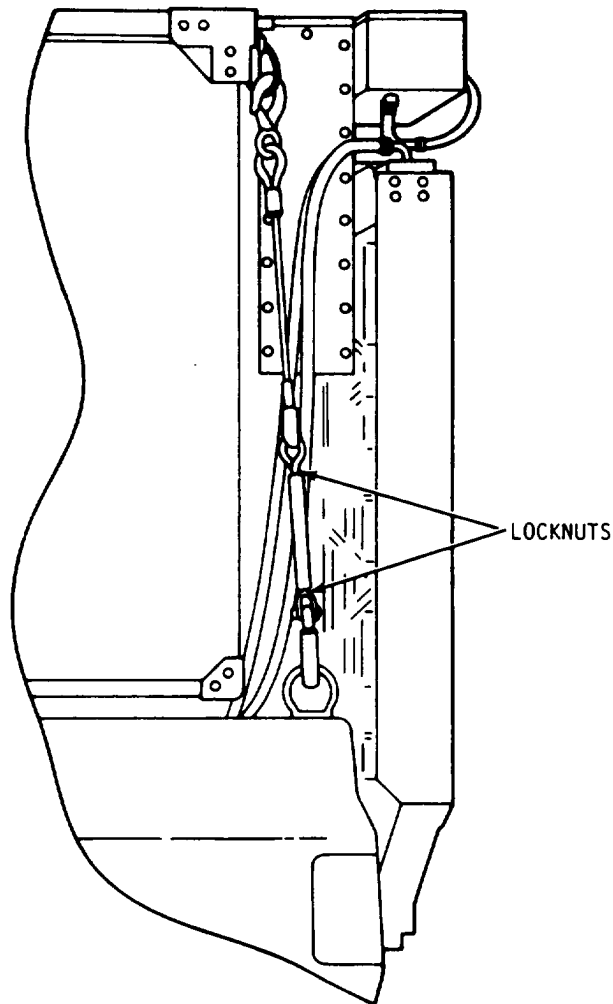
The RF Processor (A31A2A3) is located on the left side of the base assembly at the top of the pneumatic mast.

Tools Required: TK-100/G

Personnel Required: 2

Remove RF Processor as follows:

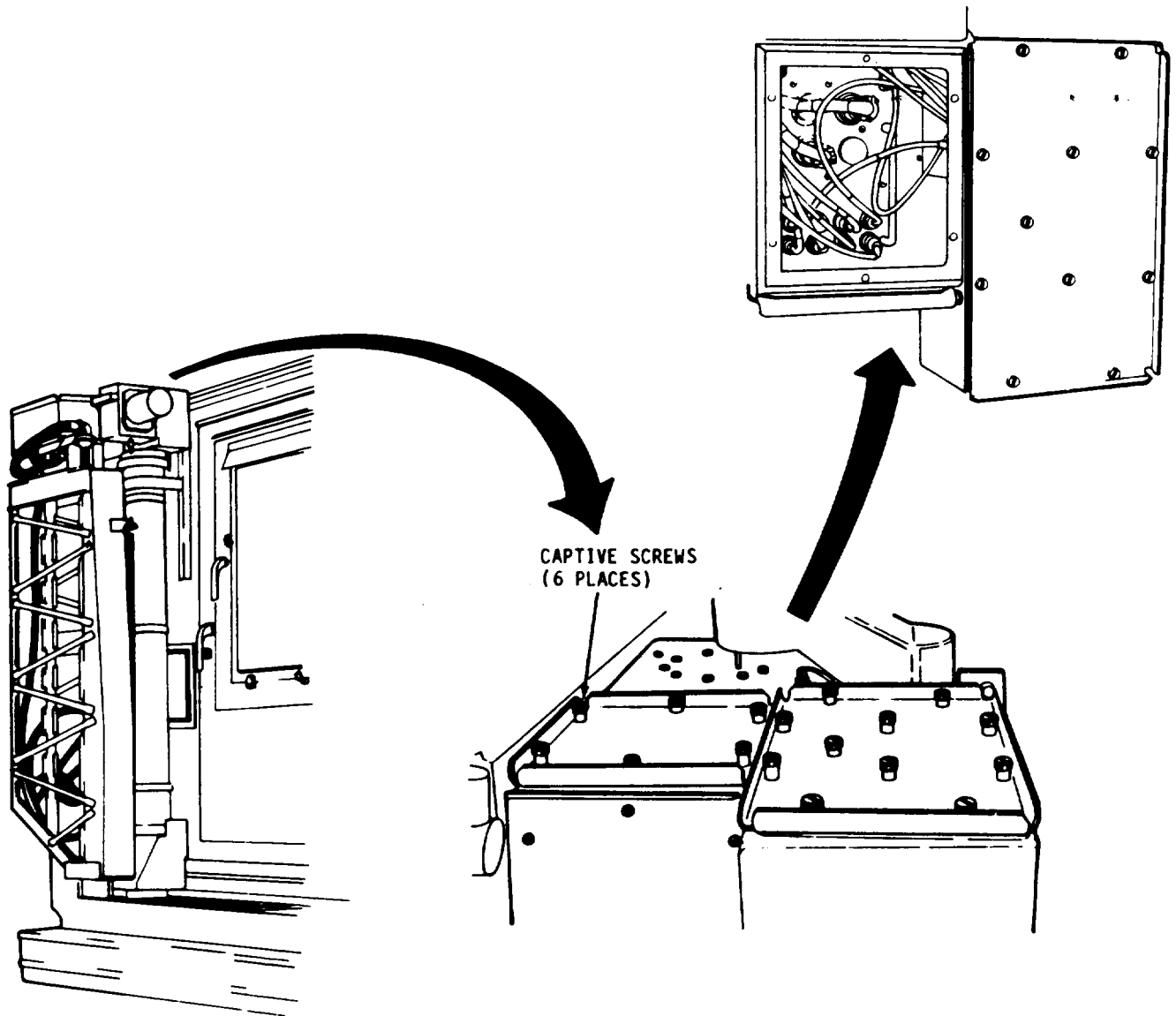
1. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 to the OFF position.
2. On system power supply, place XMTR ON/OFF switch to OFF position.



3. Using a 10" adjustable wrench, loosen two locknuts on rear roadside shelter tiedown.
4. Loosen turnbuckle on rear roadside shelter tie down. Remove and retain tiedown.

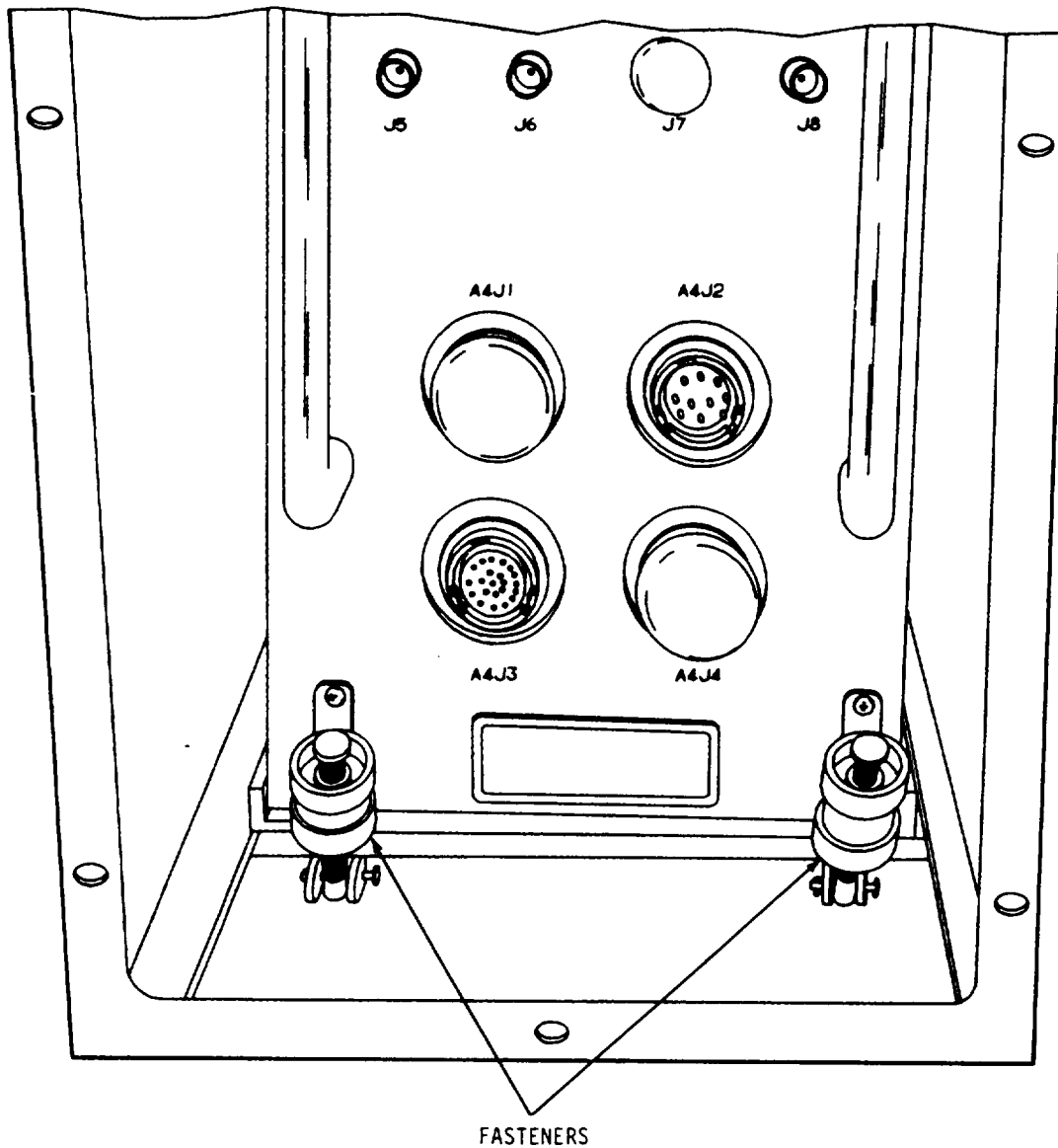
RF PROCESSOR, MX-10526/TRQ-32(V)

REMOVE 2 OF 6



5. Using a 1/4" flat-tip screwdriver, loosen six captive screws RF processor top cover. Remove and retain RF processor top cover.
6. At RF processor, disconnect cables W105P2 from A4J3, W105P3 from A4J2, W2oP2 from J5, W103P2 from J6, W102P2 from J8, W20P5 from J1, W20P6 from J2, W20P7 from J3 and W20P8 from J4.

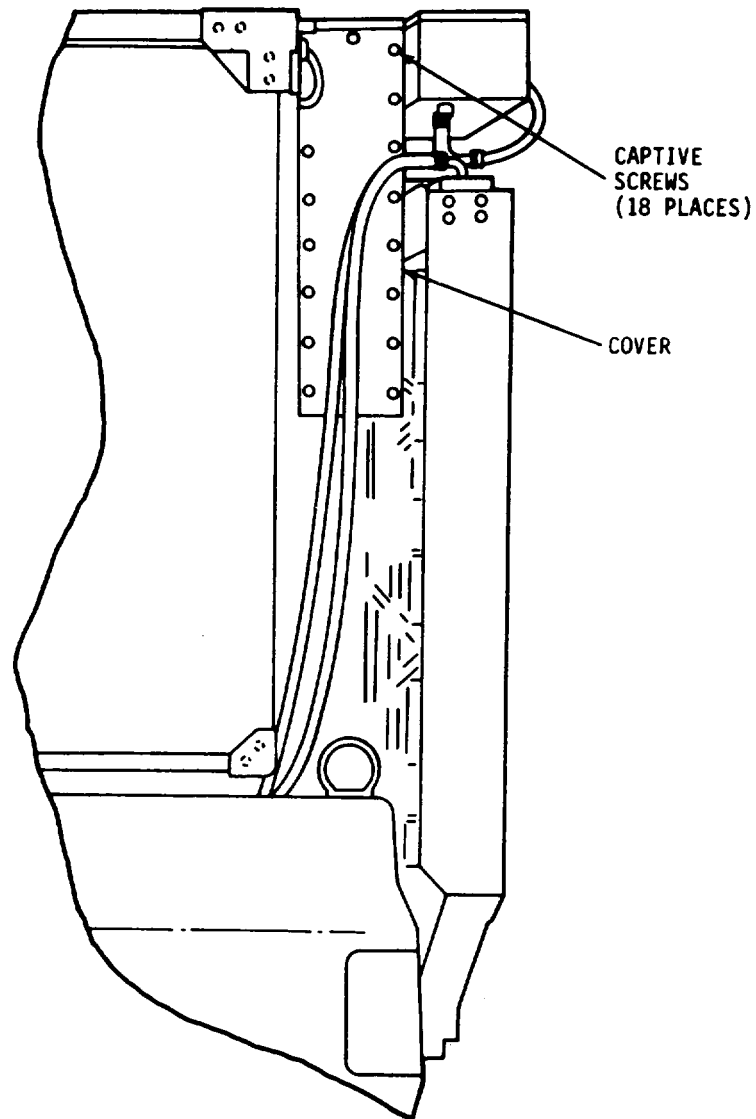
| | | |
|--------|--------|-----------------------------------|
| 3 OF 6 | REMOVE | RF PROCESSOR, MX-10526/TRQ-32 (V) |
|--------|--------|-----------------------------------|



7. Pull and turn two clamp bolt assemblies securing RF processor to EMI enclosure.

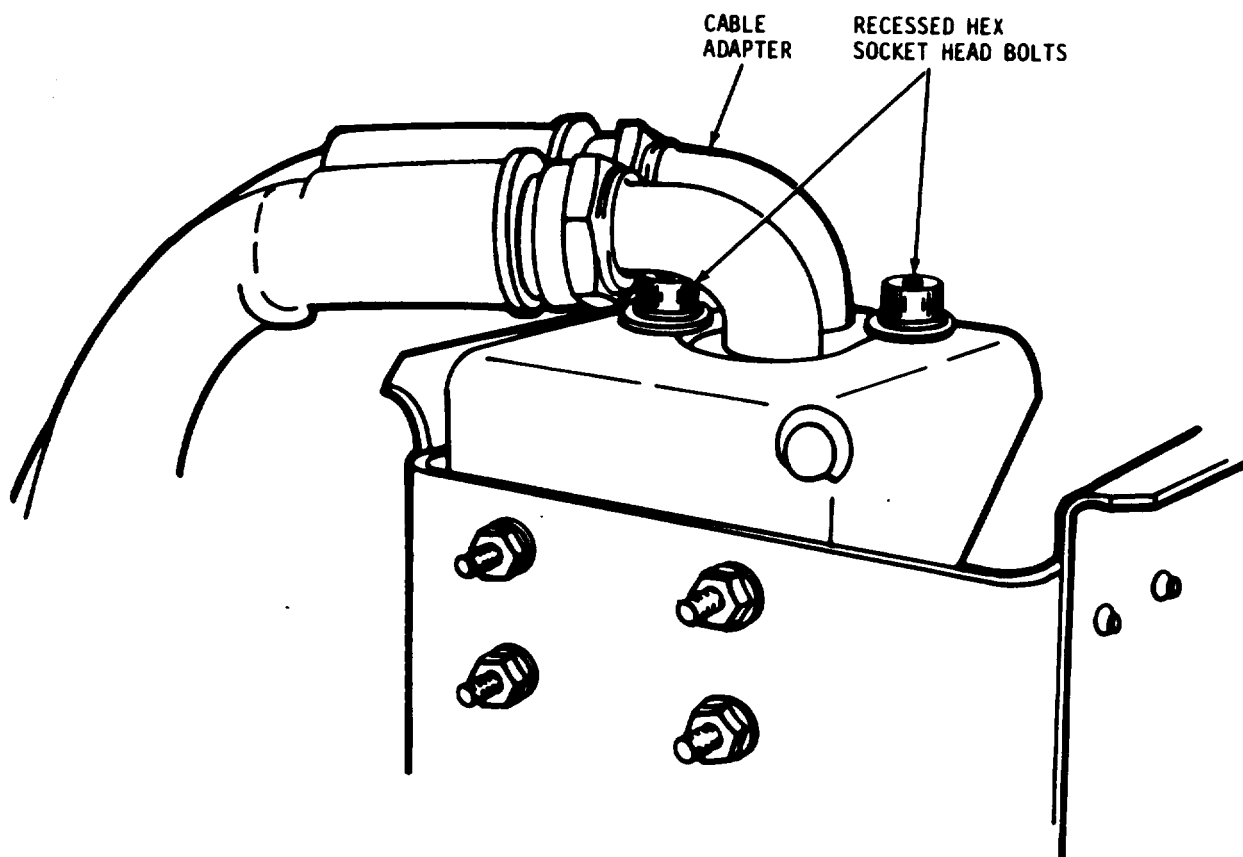
RF PROCESSOR, MX-10526/TRQ-32(V)

REMOVE 4 OF 6



8. Using a no.2 cross-tip screwdriver, loosen eighteen turnlock fasteners securing side cover of EMI enclosure. Remove and retain side cover.

| | | |
|--------|--------|----------------------------------|
| 5 OF 6 | REMOVE | RF PROCESSOR, MX-10526/TRQ-32(V) |
|--------|--------|----------------------------------|

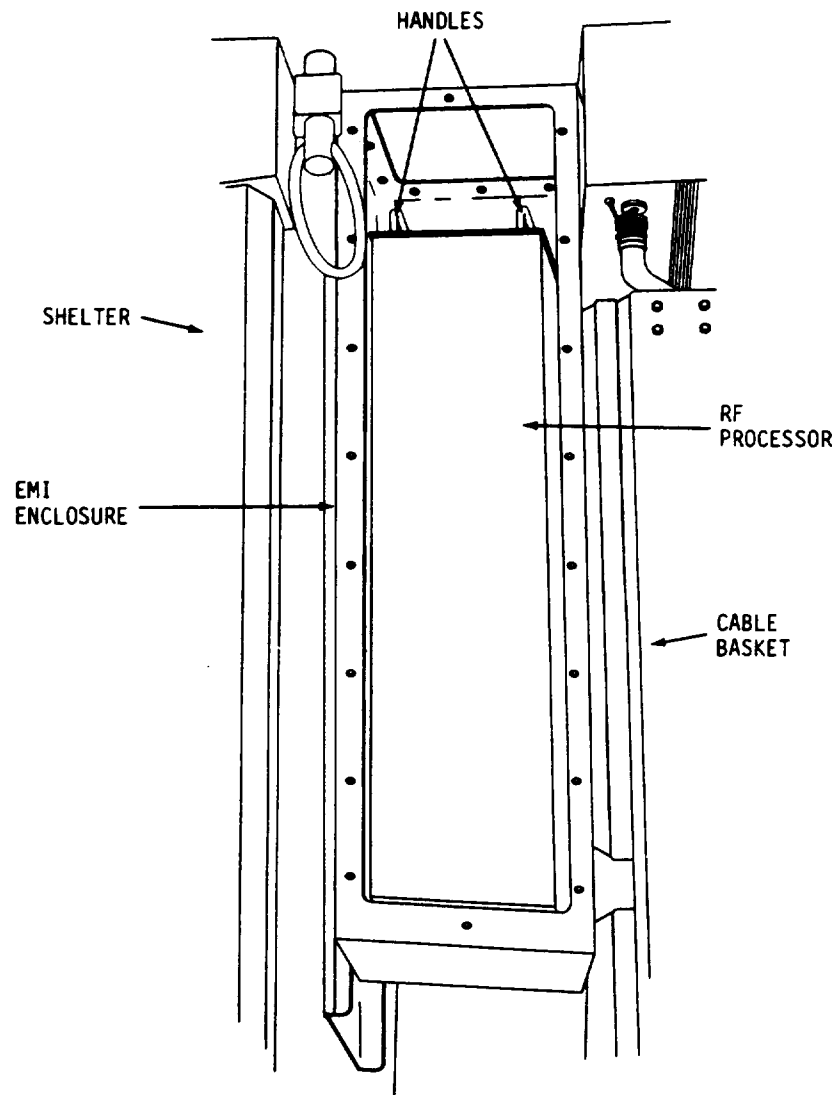


9. Using 3/16" hex key wrench, remove and retain two recessed hex socket head bolts securing cable adapter (W22) to upper left corner of cable basket.

RF PROCESSOR, MX-10526/TRQ-32(V)

REMOVE

6 OF 6



- 10 Grasp handles at top of processor and tilt processor out to clear mounting pins at bottom rear of processor.
11. A second person, will remove RF processor through side of EMI Enclosure. Carefully position antenna cables aside for required clearance.
12. Remove RF processor from EMI enclosure.



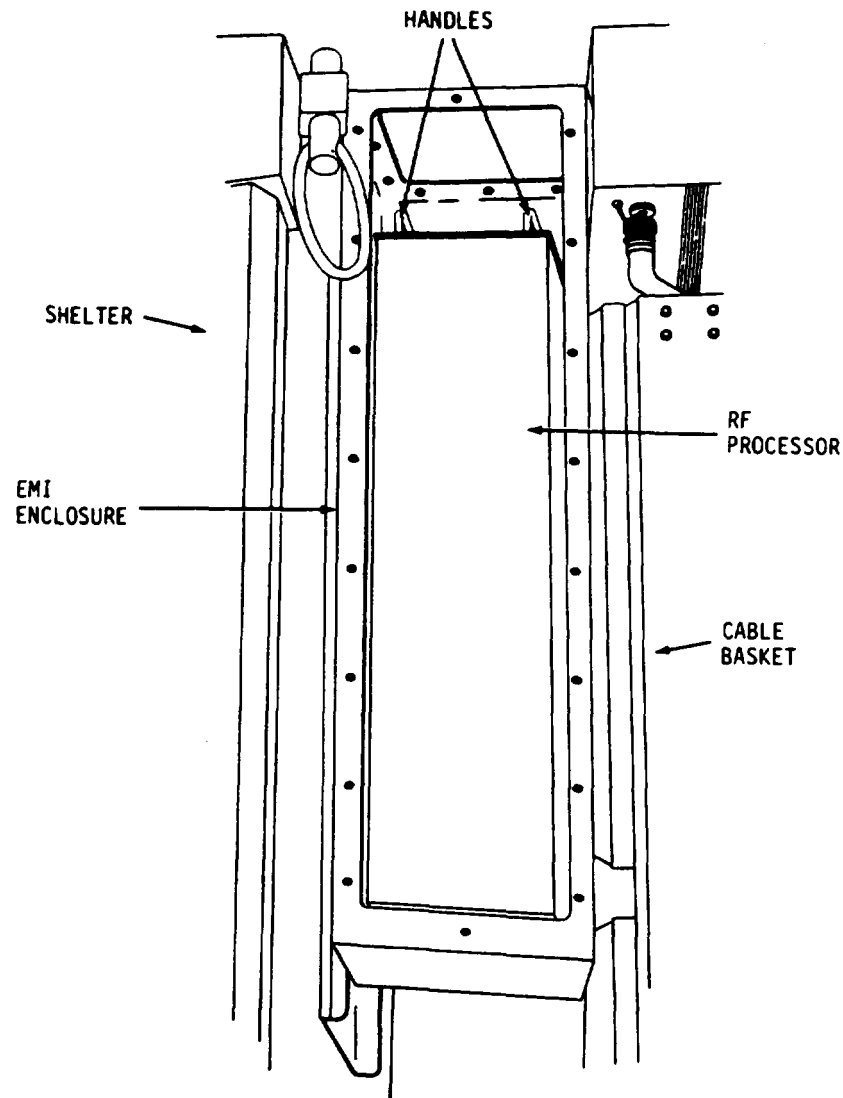
The RF processor (A31A2A3) is located on the left side of the base assembly at the top of the pneumatic mast.

Tools Required: TK-100/G

Personnel Required: 2

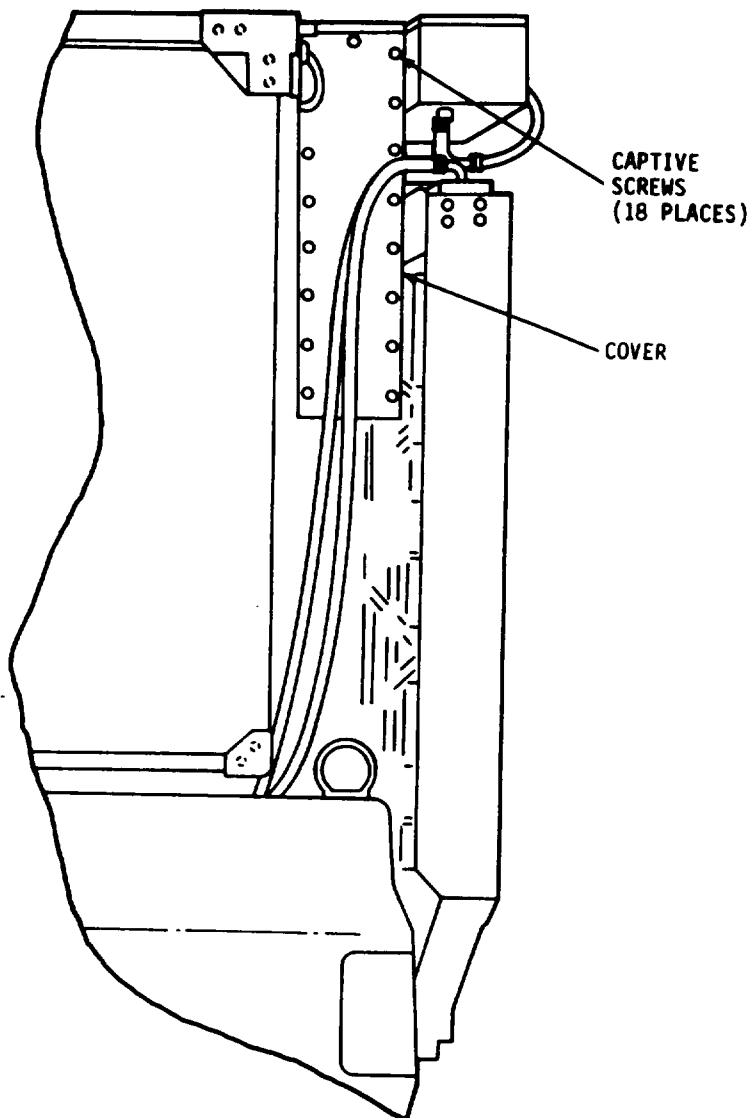
Replace RF processor as follows:

1. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 to OFF position.
2. On system power supply, place XMTR switch to OFF position.

**NOTE**

Ensure that cables are out of the way before performing next step.

3. One person lift and position processor through side of EMI enclosure.
4. A second person carefully position antenna cables aside for clearance and guide RF processor onto alignment pins at bottom of EMI enclosure.

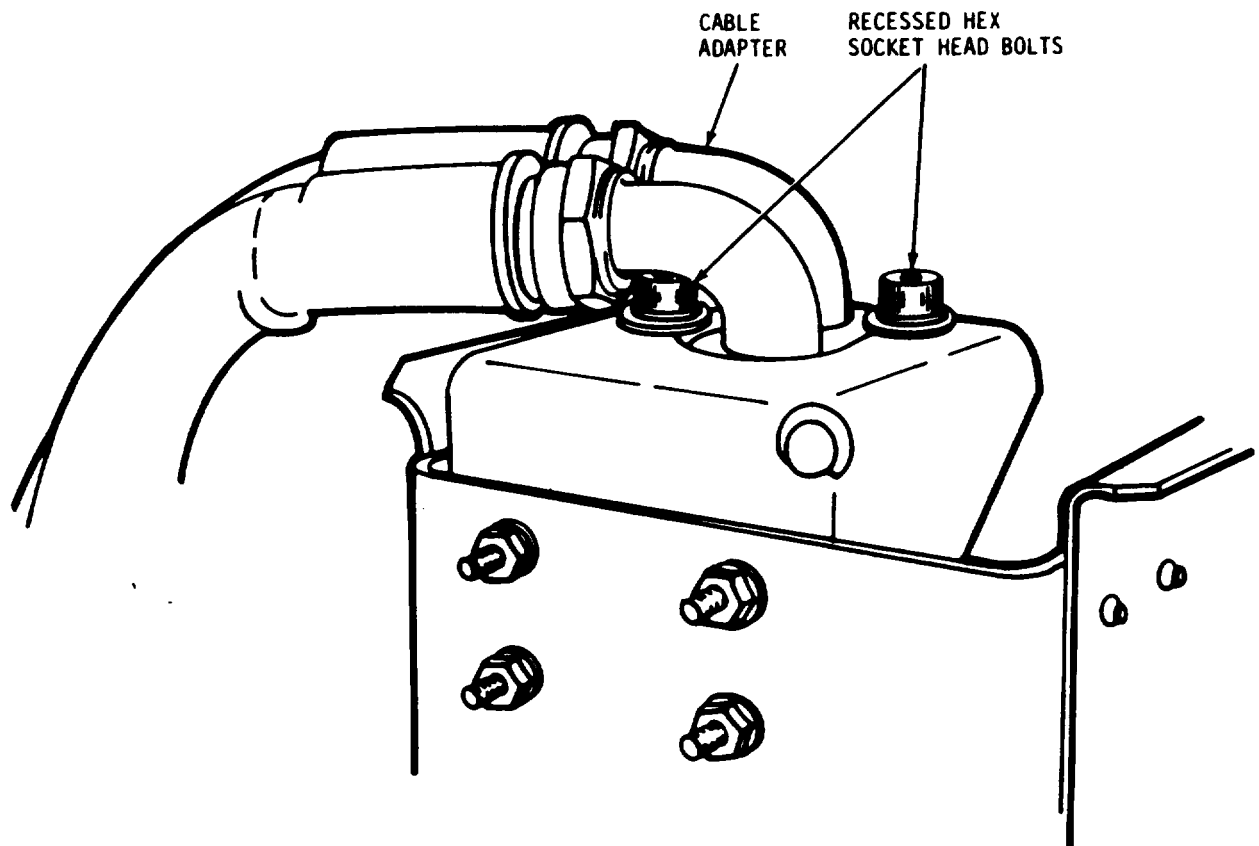


5. Position side cover onto EMI enclosure and secure with eighteen turnlock fasteners. Tighten fasteners using no.2 cross-tip screwdriver.

RF PROCESSOR, MX-10526/TRQ-32(V)

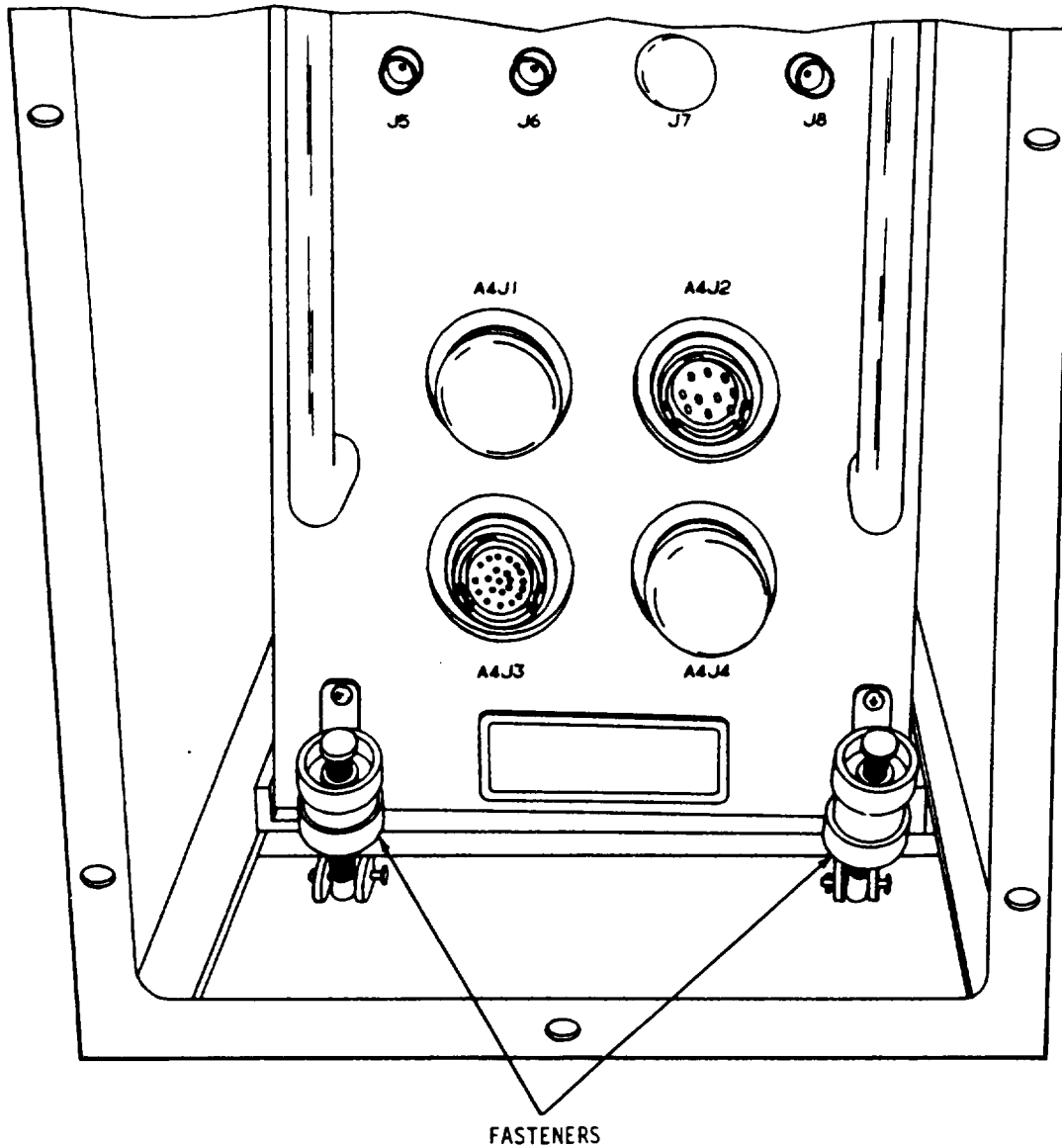
REPLACE

4 OF 7



6. Install (W22) cable adapter on upper left corner of cable basket and secure with two recessed hex socket head bolts. Tighten bolts using 3/16" hex key wrench.

5 OF 7 REPLACE RF PROCESSOR, MX-10526/TRQ-32(V)

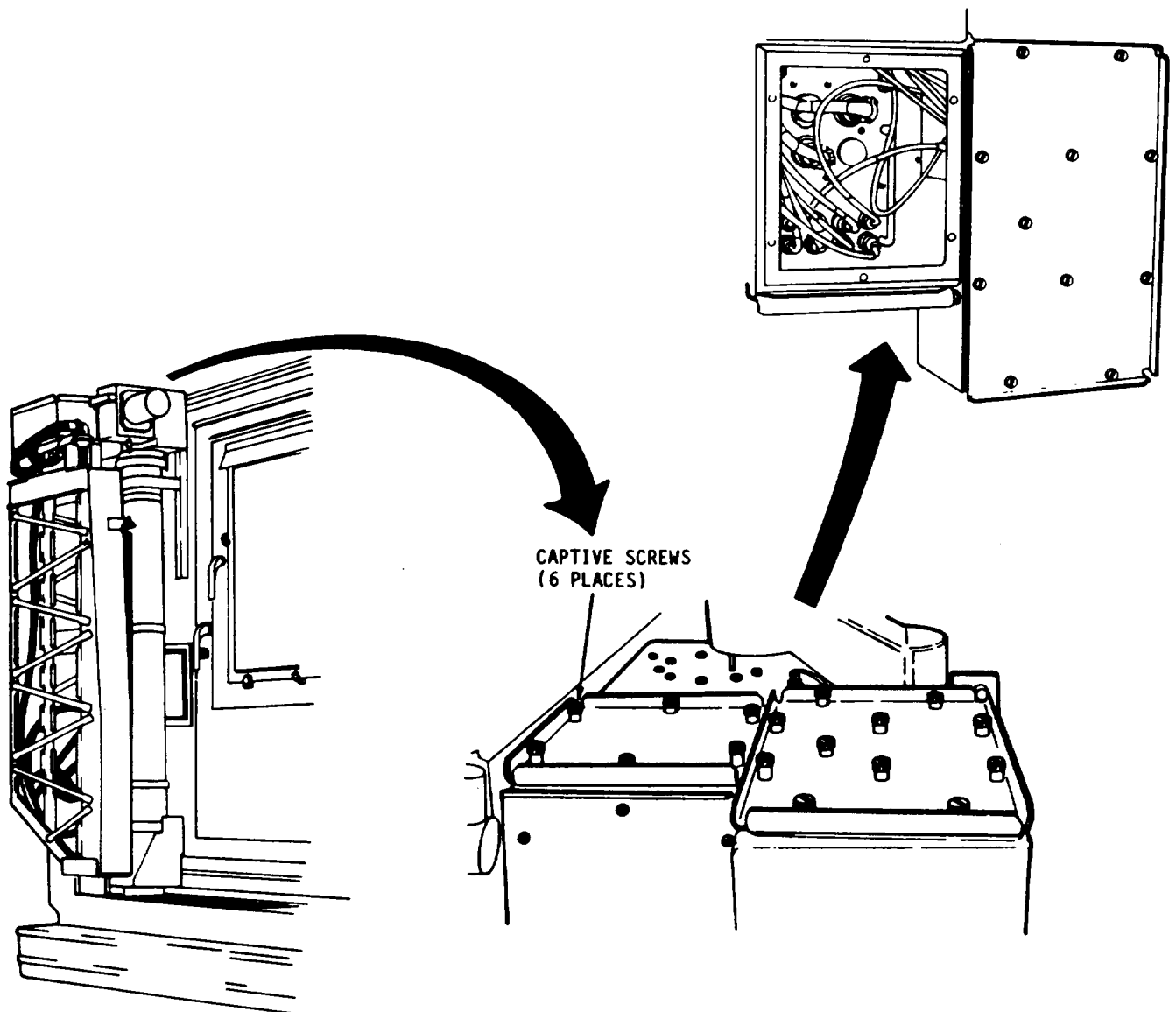


7. Position two clamp bolt assemblies onto support hooks at base of RF processor front panel. Tighten clamp bolt assemblies to secure RF processor into EMI enclosure.

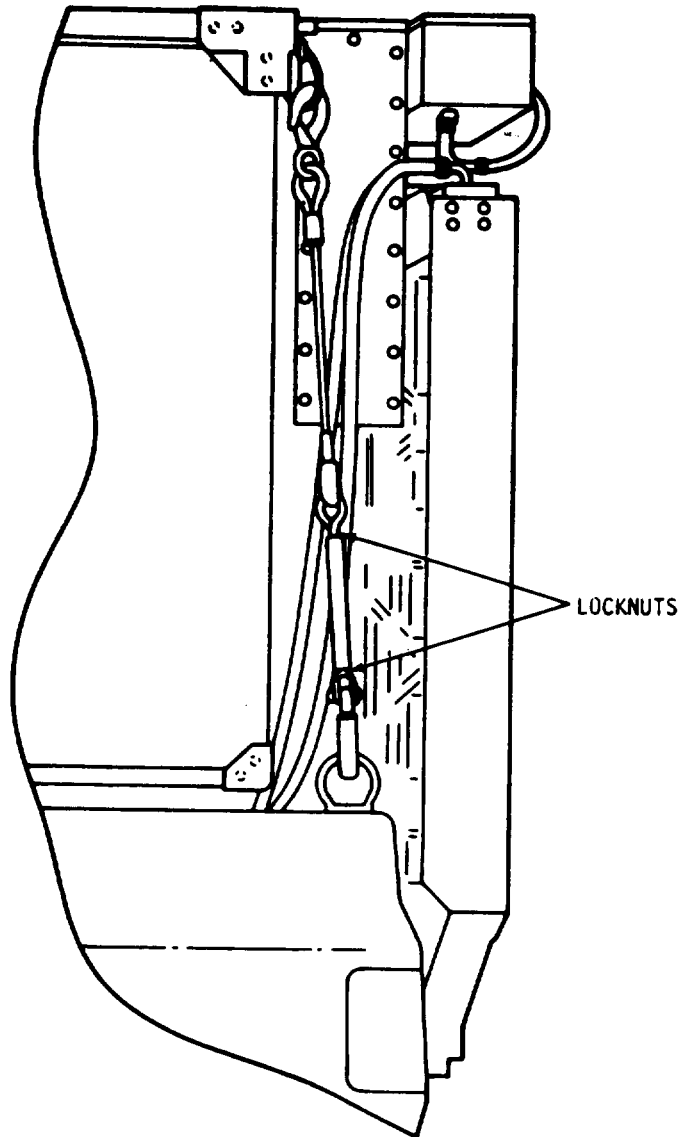
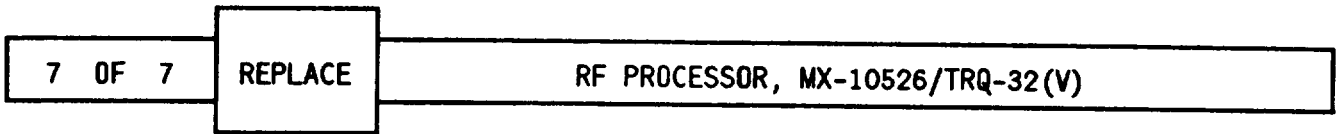
RF PROCESSOR, MX-10526/TRQ-32(V)

REPLACE

6 OF 7



8. On front panel of RF processor, connect cables W20P8 to J4, W20P7 to J3, W20P6 to J2, W20P5 to J1, W102P2 to J8, W103P2 to J6, W20P2 to J5, W105P2 to A4J3, and W105P3 to A4J2
9. Position top cover onto EMI enclosure and secure with six captive screws. Tighten screws using a 1/4" flat-tip screwdriver.



10. Attach rear roadside shelter tiedown to tiedown ring at top of shelter and tighten turnbuckle. Using a 10" adjustable wrench, tighten turnbuckle lock nut.
11. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 to ON position.
12. On system power supply, place XMTR ON/OFF switch to ON position.

REDUCTOR ASSEMBLY

REMOVE

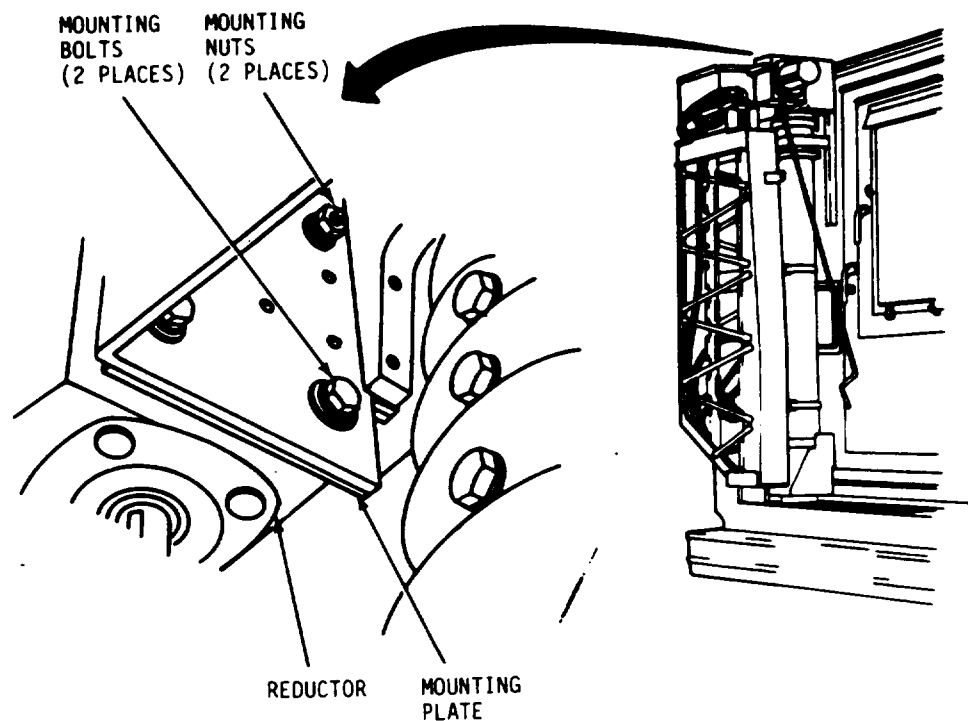
1 OF 4

The reductor assembly is located on the antenna base assembly at the top of the pneumatic mast.

Tools Required: TK-101/G
No.3 cross-tip screwdriver

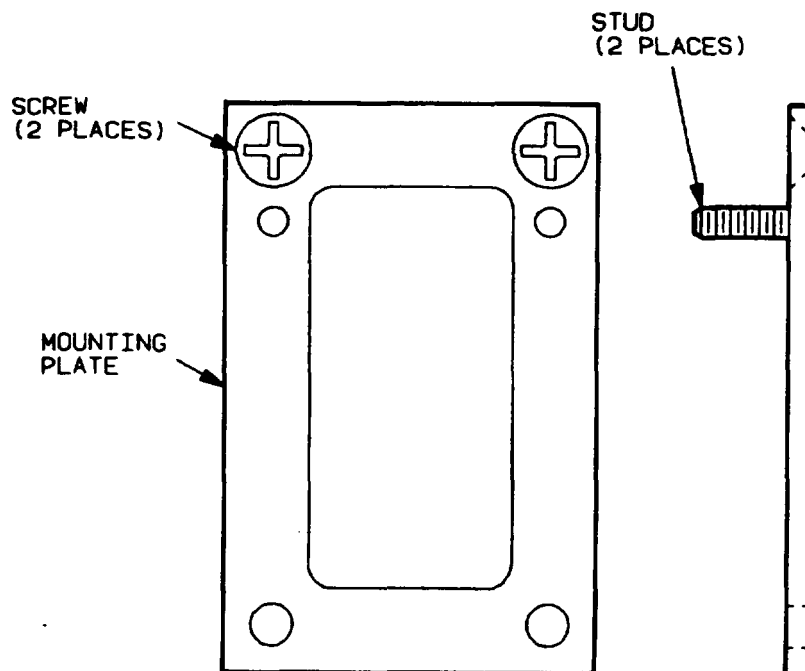
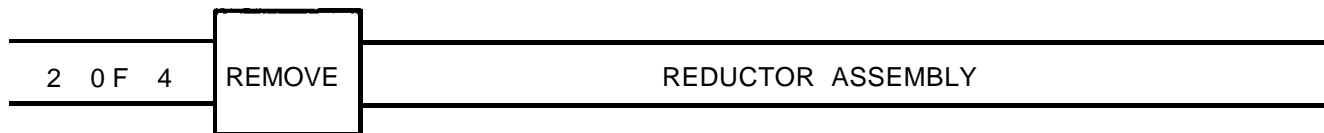
Personnel Required: 2

Remove reductor assembly as follows:

**CAUTION**

One person should support the reductor assembly while a second person removes the mounting hardware.

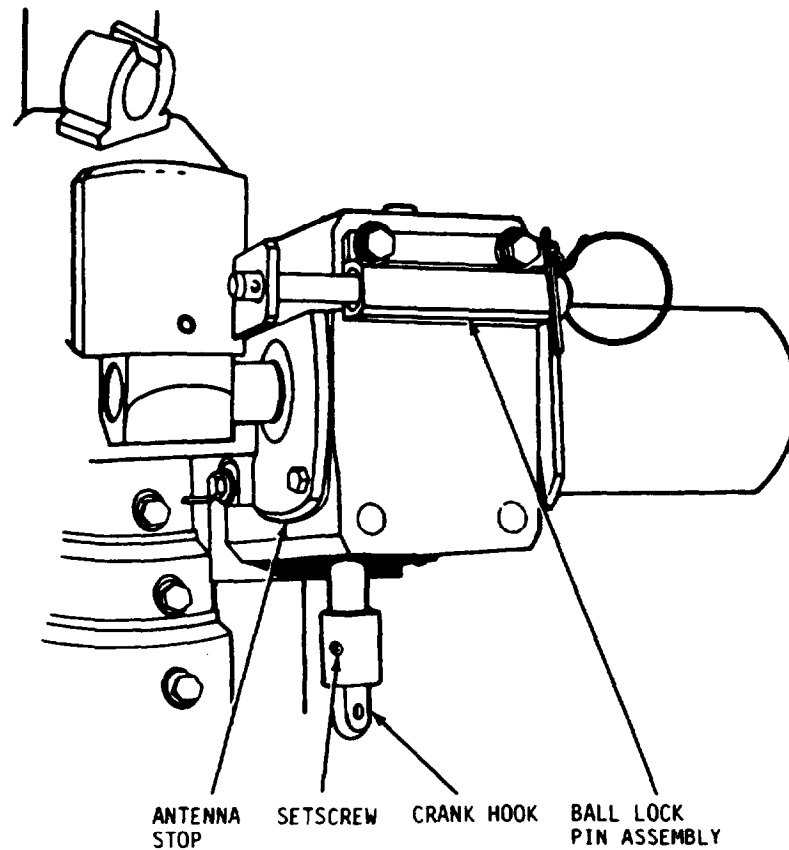
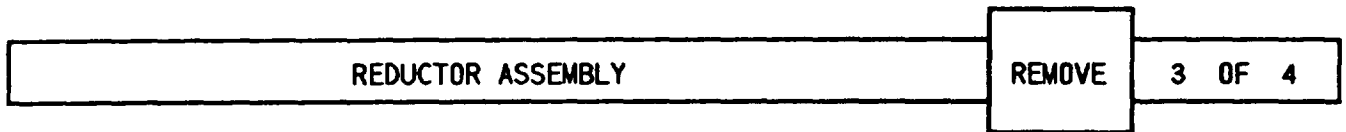
1. Remove and retain UHF intercept antenna, antenna elements, mast crown and mast tube in accordance with procedures in Operators Manual TM 32-5895-070-10.
2. Using a 9/16" open-end wrench, remove and retain two hex head bolts, two hex nuts, four lockwashers and flat washers securing reductor assembly to base assembly.
3. Remove reductor assembly from antenna base assembly.



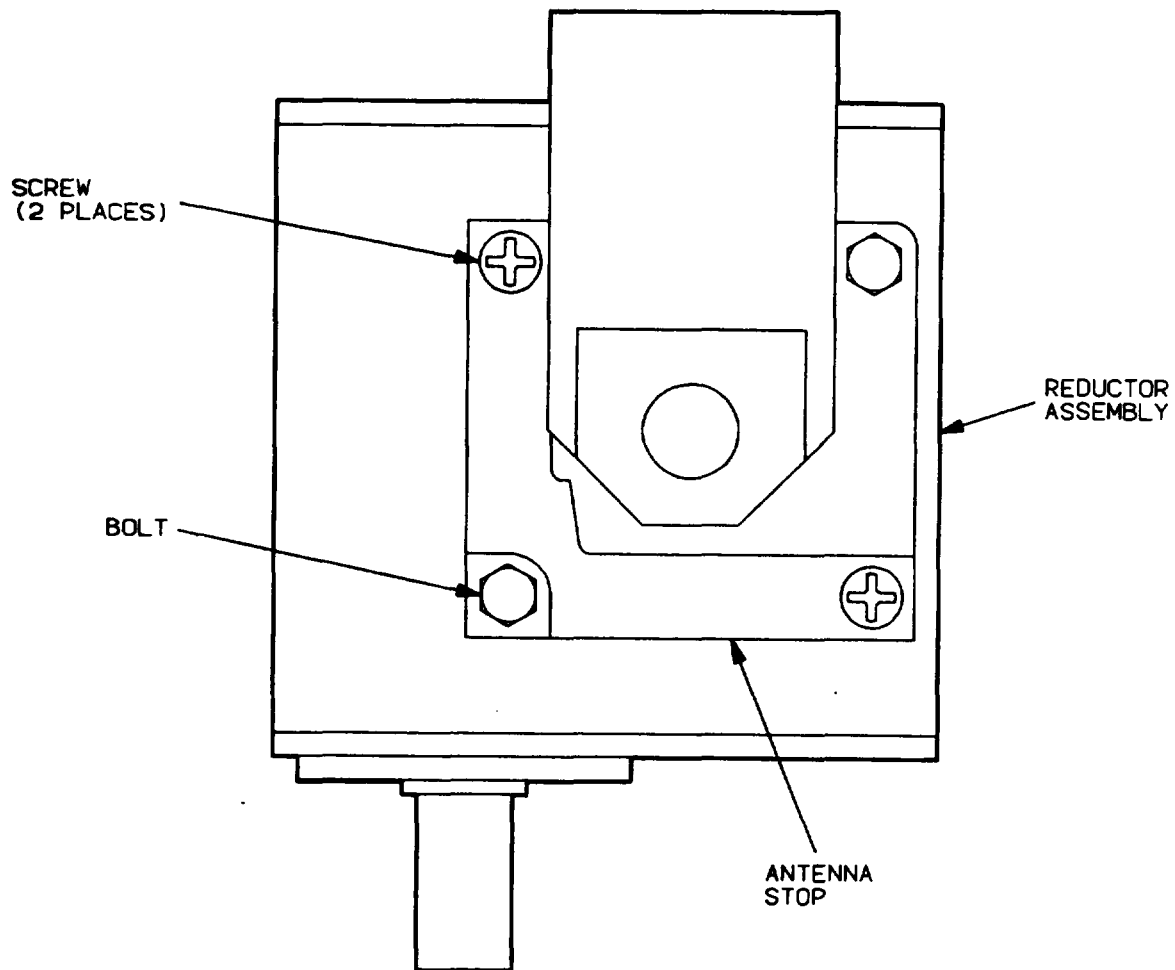
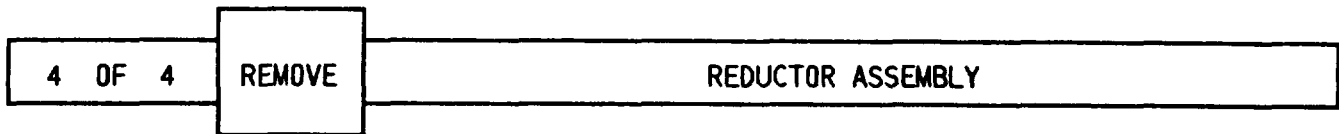
NOTE

Before returning old reductor to supply, remove and retain the following parts:

4. Using a no.3 cross-tip screwdriver, remove and retain two screws securing mounting plate to reductor assembly. Remove and retain mounting plate.



5. Using a ratchet handle and 9/16" socket, remove and retain two hex head bolts, lockwashers and flat washers securing pin guide to reductor assembly.
6. Remove and retain guide pin, ball lock pin, lanyard and shim from reductor assembly.
7. Using a 5/32" hex wrench, remove and retain set screw securing crank hook to shaft on reductor assembly. Remove and retain shaft key and crank hook.



8. Using a no.3 cross-tip screwdriver, ratchet handle and 9/16" socket, remove and retain two screws, a hex head bolt, lockwasher and flat washer securing antenna stop to reductor assembly. Remove and retain antenna stop.

NOTE

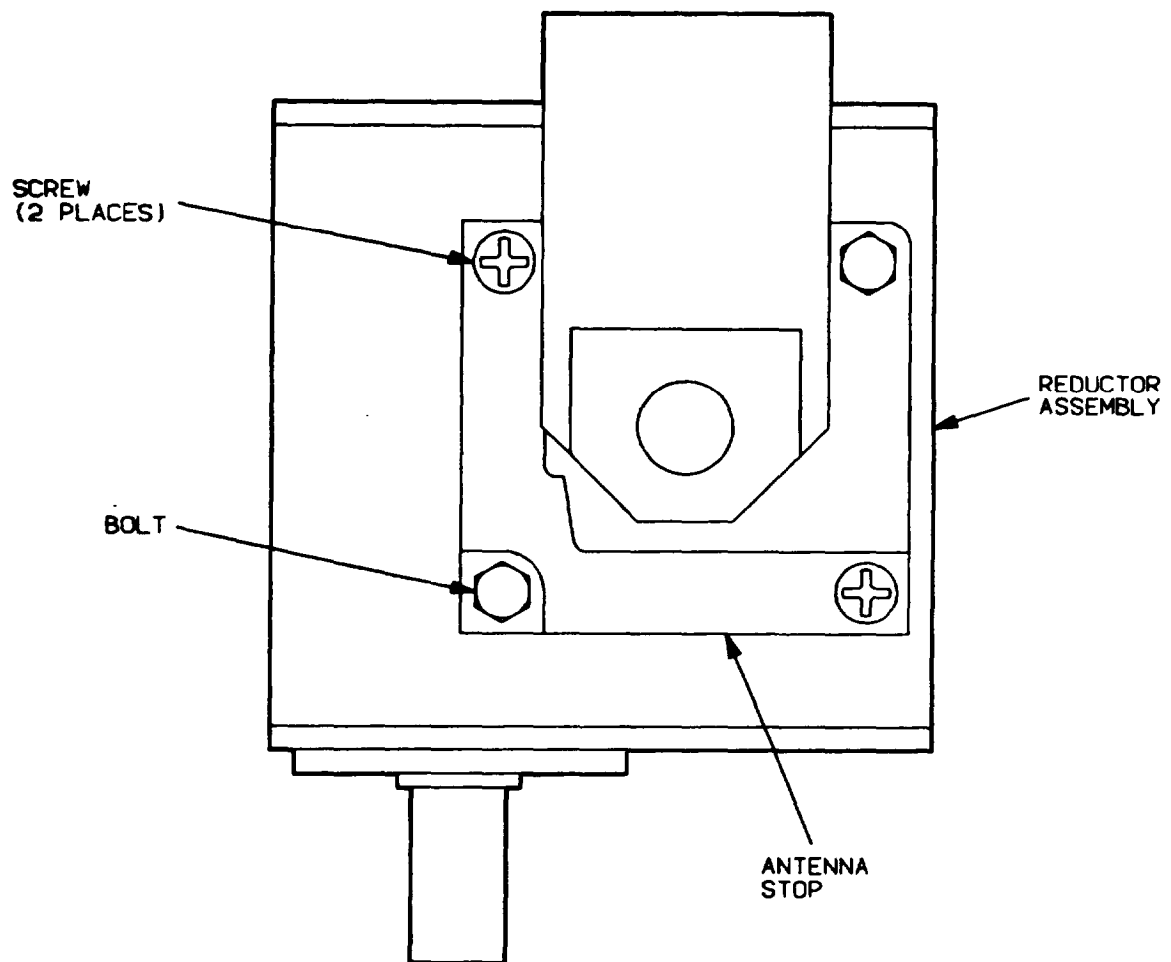
On replacement reductor assembly, bolts installed where antenna stops that are to be mounted are too short. Replace these bolts with bolts removed from the old reductor assembly. Install shorter bolts into old reductor assembly before returning old reductor assembly to supply.

The reductor assembly is located on the antenna base assembly at the top of the pneumatic mast.

Tools Required: TK-101/G
 No.3 cross-tip screwdriver

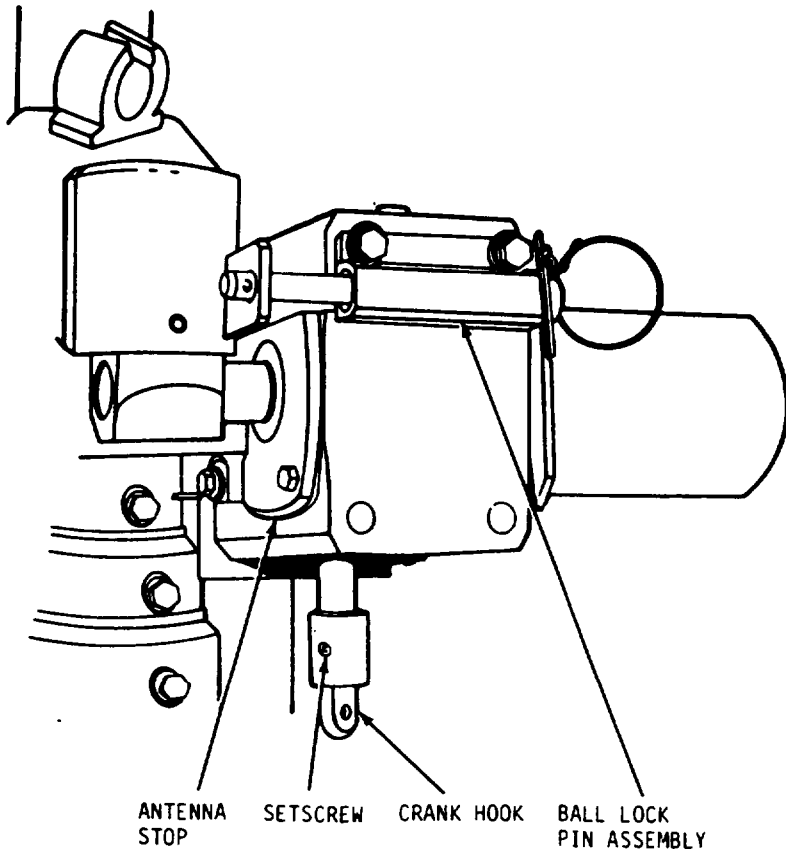
Personnel Required: 2

Replace reductor assembly as follows:

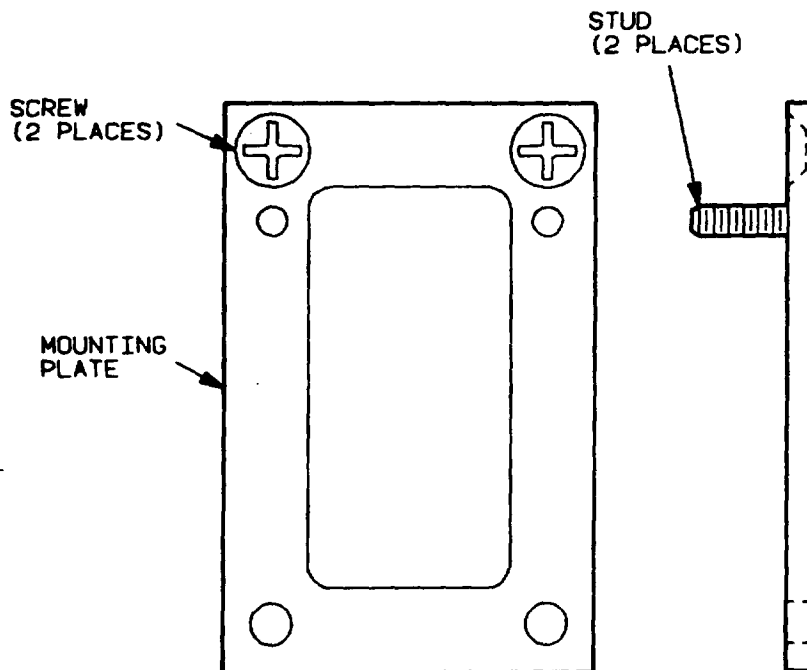


1. Position antenna stop onto reductor assembly and secure with two screws, a bolt, lockwasher and flat washer. Tighten screws and bolt using a no.3 cross-tip screwdriver, a ratchet handle and 9/16" socket.

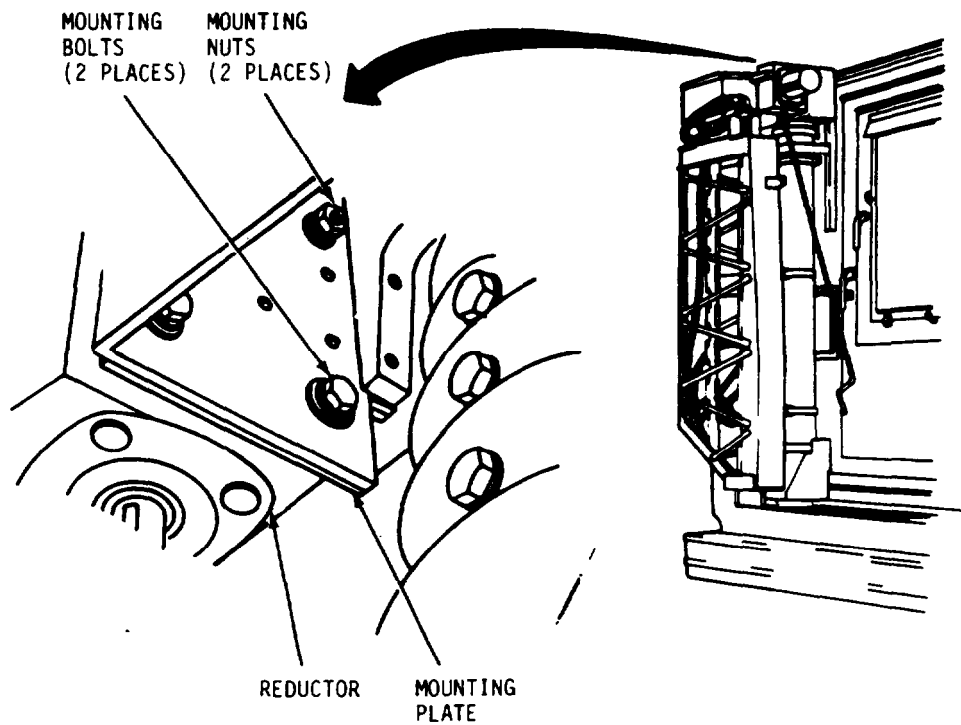
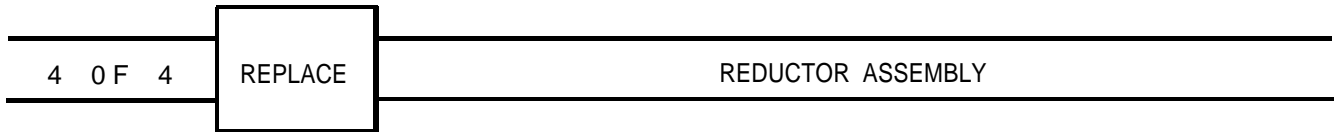
| | | |
|--------|---------|-------------------|
| 2 OF 4 | REPLACE | REDUCTOR ASSEMBLY |
|--------|---------|-------------------|



2. Position shaft key and crank hook on reductor shaft. Secure crank hook to shaft with a setscrew. Tighten setscrew using a 5/32" hex wrench.
3. Position shim, pin guide, ball lock pin and lanyard onto reductor assembly and secure with two hex head bolts, lockwashers and flat washers. Tighten bolts using a ratchet handle and 9/16" socket.



4. Position mounting plate onto mounting face of reductor assembly and secure with two screws. Tighten screws using a no.3 cross-tip screwdriver.



5. Position threaded studs on reductor assembly through mounting holes in antenna " base assembly. Secure reductor assembly to antenna base assembly with two hex nuts, two hex head bolts, four lockwashers and flat washers. Tighten nuts and bolts using a 9/16" open-end wrench.
6. Install UHF intercept antenna, antenna elements, mast crown and mast tube in accordance with procedures in Operators Manual TM 32-5895-070-10.
7. Adjust reductor vertical ball lock pin (if needed) in accordance with Vertical Bail Lock Pin Adjustment procedure.

REDUCTOR CRANK HOOK

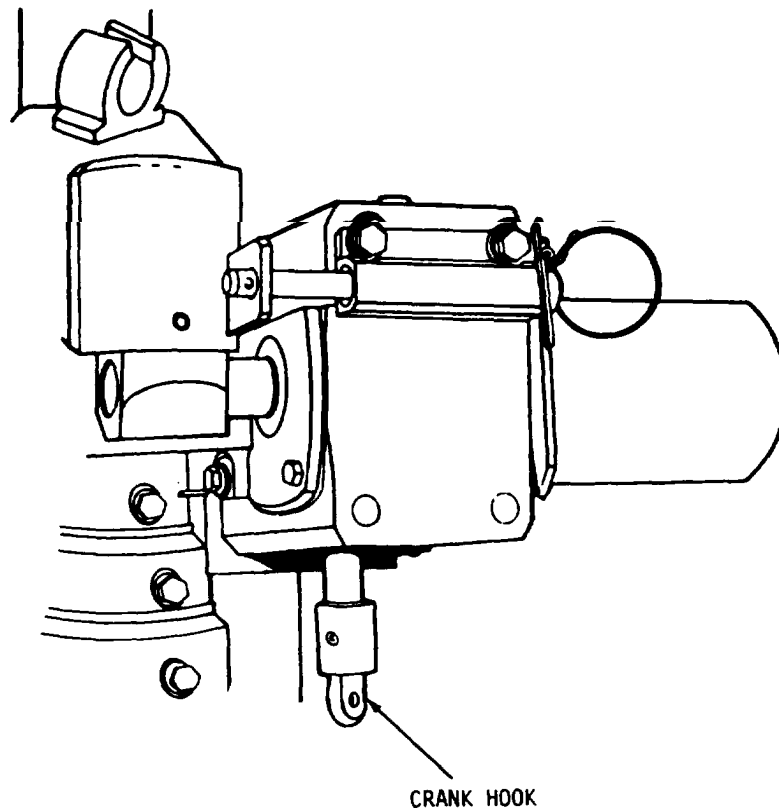
REMOVE/REPLACE 1 OF 1

The reductor crank hook is located on the reductor assembly,

Tools Required: TK-101/G

Personnel Required: 2

Remove/replace reductor crank hook as follows:



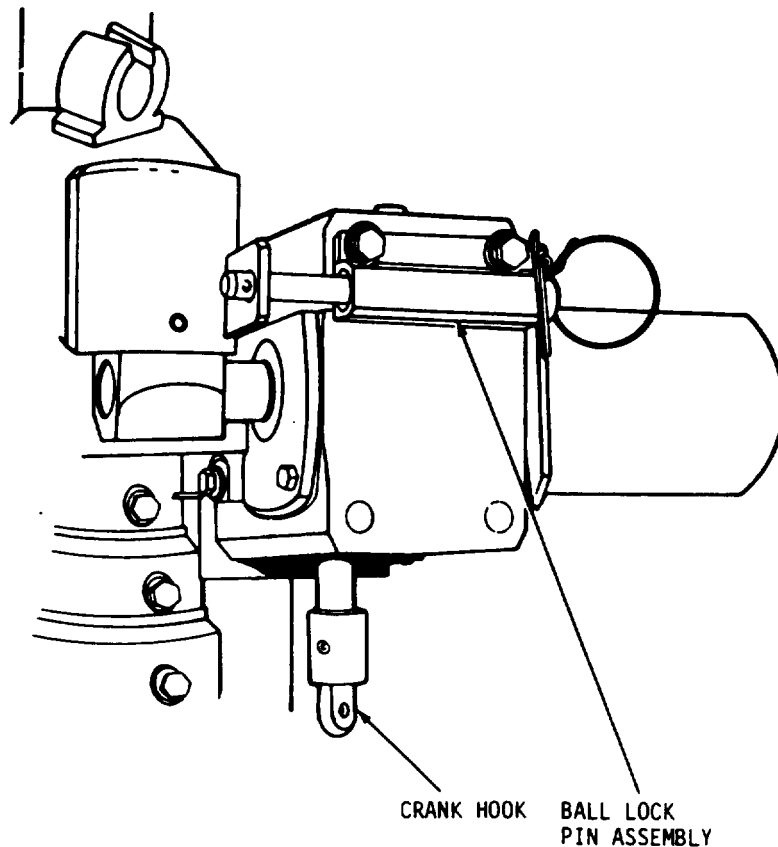
1. Using a 5/32" hex key wrench, remove and retain set screw securing crank hook to shaft on reductor assembly.
2. Remove crank hook from shaft on reductor assembly.
3. To replace reductor crank hook, position reductor crank hook onto shaft of reductor assembly. Ensure that key slot in crank hook is aligned with shaft key on reductor assembly.
4. Install setscrew into crank hook. Tighten setscrew using a 5/32" hex key wrench.

The reductor vertical ball lock pin is located on the reductor assembly at the top of the pneumatic mast.

Tools Required: TK-101/G

Personnel Required: 1

Adjust reductor vertical ball lock pin as follows:



1. Position mast tube onto antenna mast stub located on reductor assembly.
2. Secure mast tube to antenna mast stub with mast tube ball lock pin.
3. Using hand crank, turn reductor crank hook to raise mast tube to its vertical position.



CAUTION

Do not force reductor vertical ball lock pin into hole in mast tube pin tab. If ball lock pin is misaligned, forcing the pin may cause damage.

4. Push reductor vertical ball lock pin toward hole in mast tube pin tab until end of pin just makes contact with pin tab.
5. Visually check alignment of ball lock pin with hole in mast tube pin tab. If pin is aligned, push pin through hole in pin tab.
6. Grasp ring at end of ball lock pin and pull to remove pin (pin should pull out without difficulty).
7. If reductor vertical ball lock pin is misaligned with hole in mast tube pin tab, continue with following steps.
8. Using hand crank, lower mast tube to access antenna stop setscrew at top of antenna base assembly.
9. Using a 5/16" hex key wrench and 3/4" open-end wrench, adjust antenna stop setscrew until top of setscrew is 1" from top of antenna base assembly.
10. Check height of setscrew using a 6" steel machinist's rule, or until setscrew shows five threads above top of antenna stop nut.
11. Using hand crank, raise mast tube until it rests against antenna stop setscrew.
12. Push reductor vertical ball lock pin toward hole in mast tube pin tab. If pin is centered with hole in pin tab, push pin through hole. Pull pin to remove.
13. If ball lock pin does not bind, no further adjustment is needed. If pin is still misaligned continue with the following steps.
14. Using a ratchet handle and 9/16" socket, loosen two bolts securing pin guide to reductor assembly. This allows pin guide to move up and down.
15. Push ball lock pin through hole in mast tube pin tab.
16. Using a ratchet handle and 9/16" socket, tighten two bolts securing pin guide assembly to reductor assembly.
17. Check movement of ball lock pin while tightening bolts on pin guide assembly.

18. If ball lock pin binds as pin guide bolts are tightened, loosen bolts and add (or remove) shims between the pin guide assembly and reductor assembly.
19. Insert and remove ball lock pin several times to ensure proper alignment.
20. Remove reductor vertical ball lock pin from mast tube pin tab. Using hand crank, lower mast tube.
21. Pull mast tube ball lock pin out of mast tube and remove mast tube from mast stub .

| |
|---------------------------------|
| REDUCTOR VERTICAL BALL LOCK PIN |
|---------------------------------|

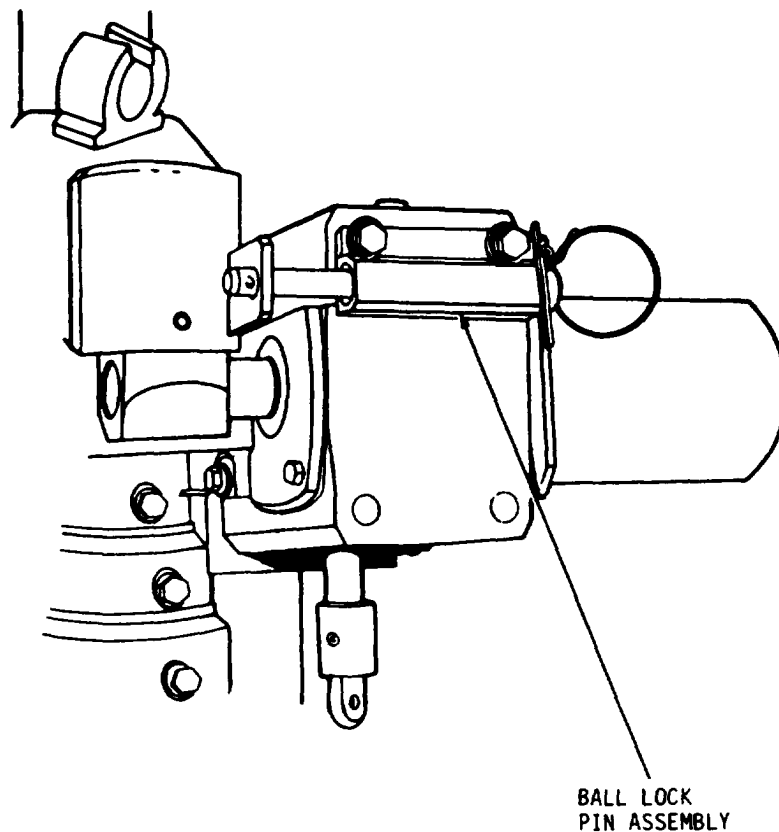
REMOVE/REPLACE

The reductor vertical ball lock pin is located on the reductor assembly located at the top of the pneumatic mast.

Tools Required: NONE

Personnel Required: 1

Remove/replace reductor vertical ball lock pin as follows:



1. Lift up end of split ring on the reductor vertical ball lock and slide end of lanyard around ring until lanyard is free of ring.
2. Remove reductor vertical ball lock pin.
3. To replace ball lock pin, lift up end of split ring on reductor vertical ball lock pin.
4. Position lanyard onto end of split ring and slide lanyard around ring until lanyard is fully captured by ring.

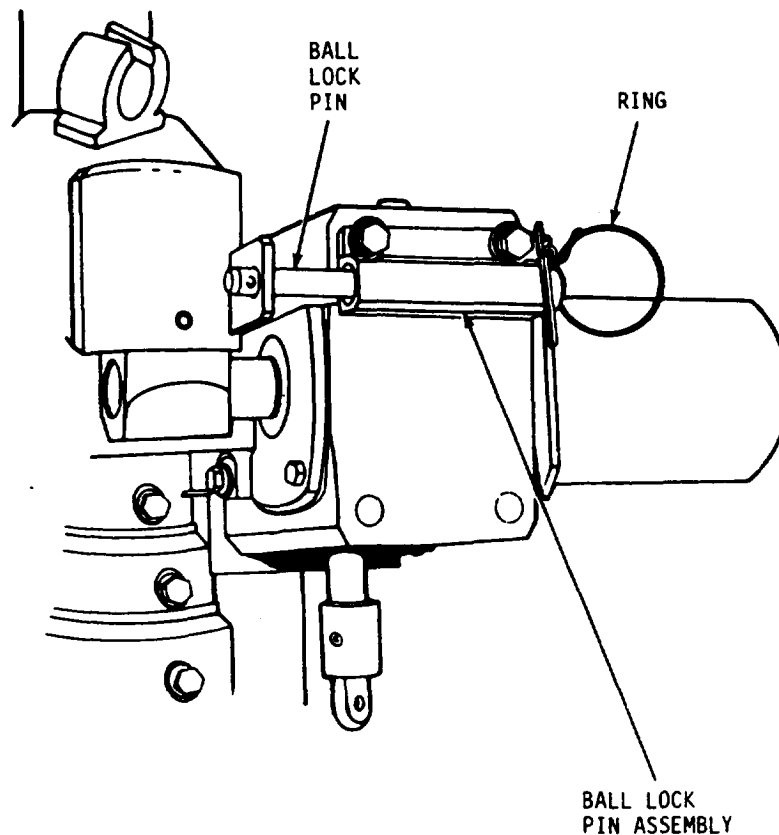
| | | |
|--------|--------|-----------------------------------------|
| 1 OF 1 | REMOVE | REDUCTOR VERTICAL BALL LOCK PIN LANYARD |
|--------|--------|-----------------------------------------|

The reductor vertical ball lock pin lanyard is located on the reductor assembly located at the top of the pneumatic mast.

Tools Required: TK-101/G

Personnel Required: 1

Remove reductor vertical ball lock pin lanyard as follows:



1. Using a ratchet handle and 9/16" socket, remove and retain hex head bolt, lockwasher and flat washer securing lanyard and ball lock pin to pin guide.
2. Lift up end of split ring on ball lock pin and slide lanyard around ring until lanyard is free of ring. Retain ball lock pin and ring.

REDUCTOR VERTICAL BALL LOCK PIN LANYARD

REPLACE

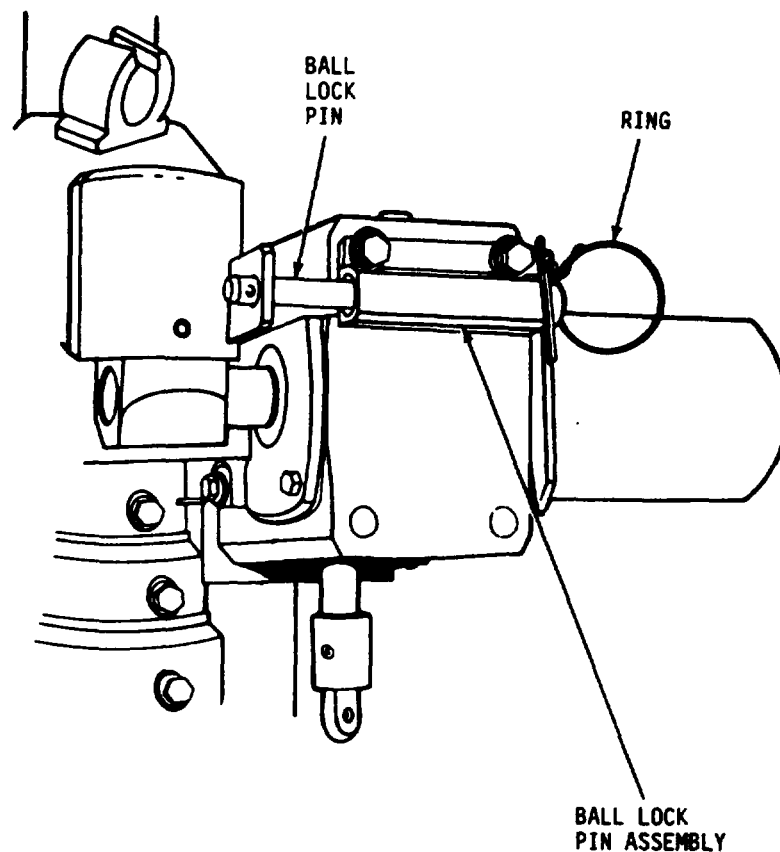
1 OF 1

The reductor vertical ball lock pin lanyard is located on the reductor assembly located at the top of the pneumatic mast.

Tools Required: TK-101/G

Personnel Required: 1

Replace reductor vertical ball lock pin lanyard as follows:



1. Lift up end of split ring on reductor vertical ball lock pin.
2. Position lanyard onto end of split ring and slide lanyard around ring until lanyard is fully captured by ring.
3. Position lanyard (with ball lock pin attached) onto pin guide and secure with a hex head bolt, lockwasher and flat washer. Tighten bolt using a ratchet handle and 9/16" socket.

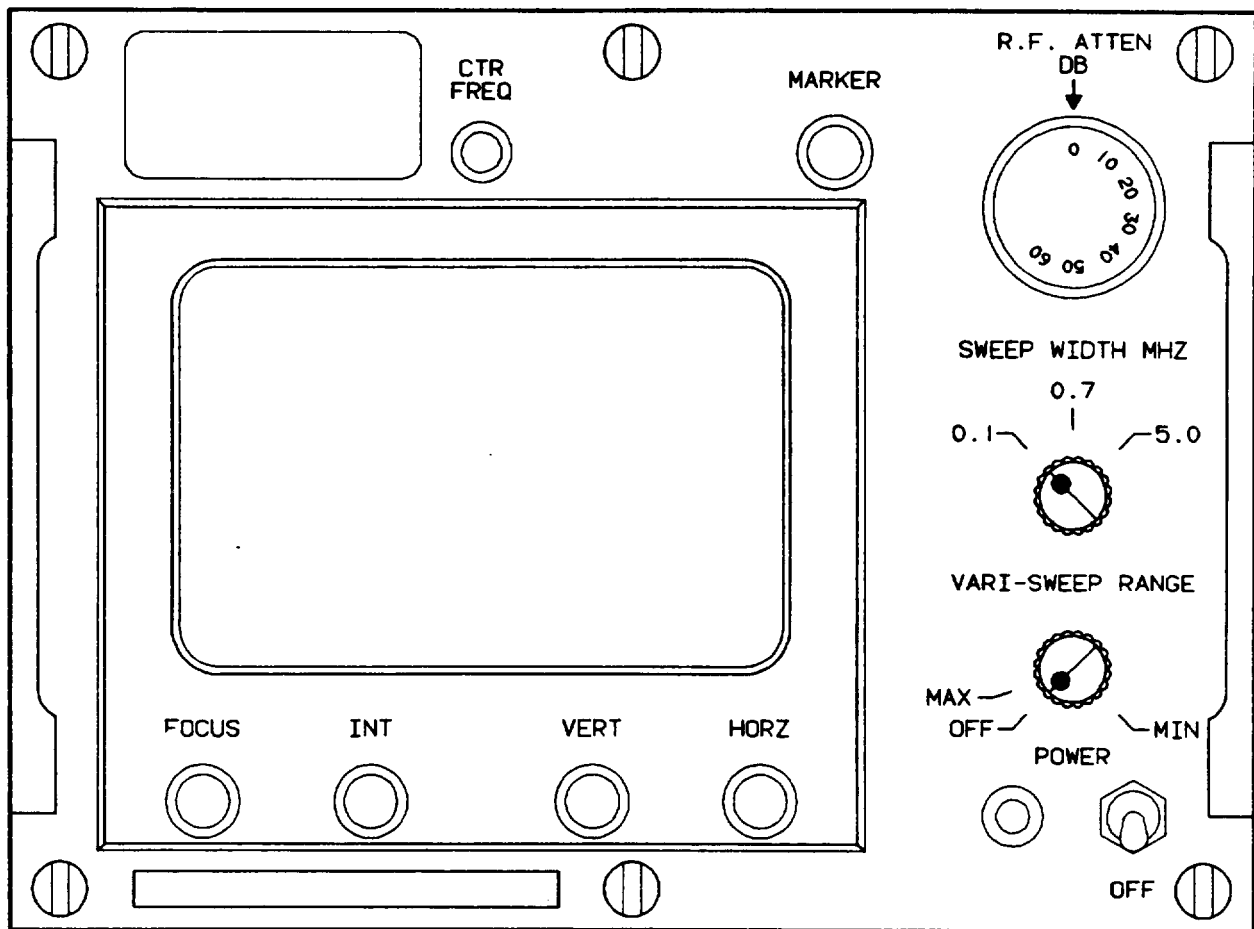


There are two signal display units (SDU). They are located in equipment rack 1 (A19A2) and equipment rack 3 (A19A4).

Tools Required: TK-105/G

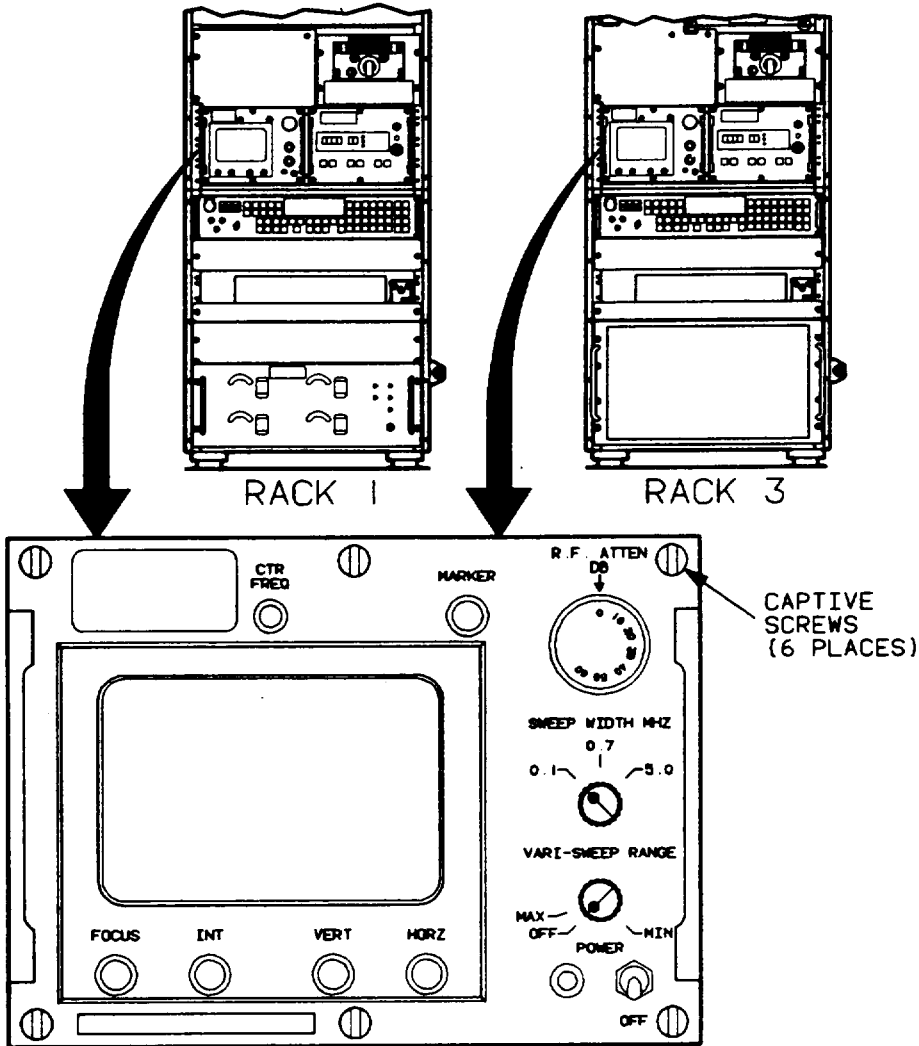
Personnel Required: 1

Remove signal display unit as follows:



1. Place POWER switch on SDU to OFF position.
2. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3 for A19A4) to OFF position.

SIGNAL DISPLAY UNIT, ID-2349/TRR-35 (V) REMOVE 2 OF 3

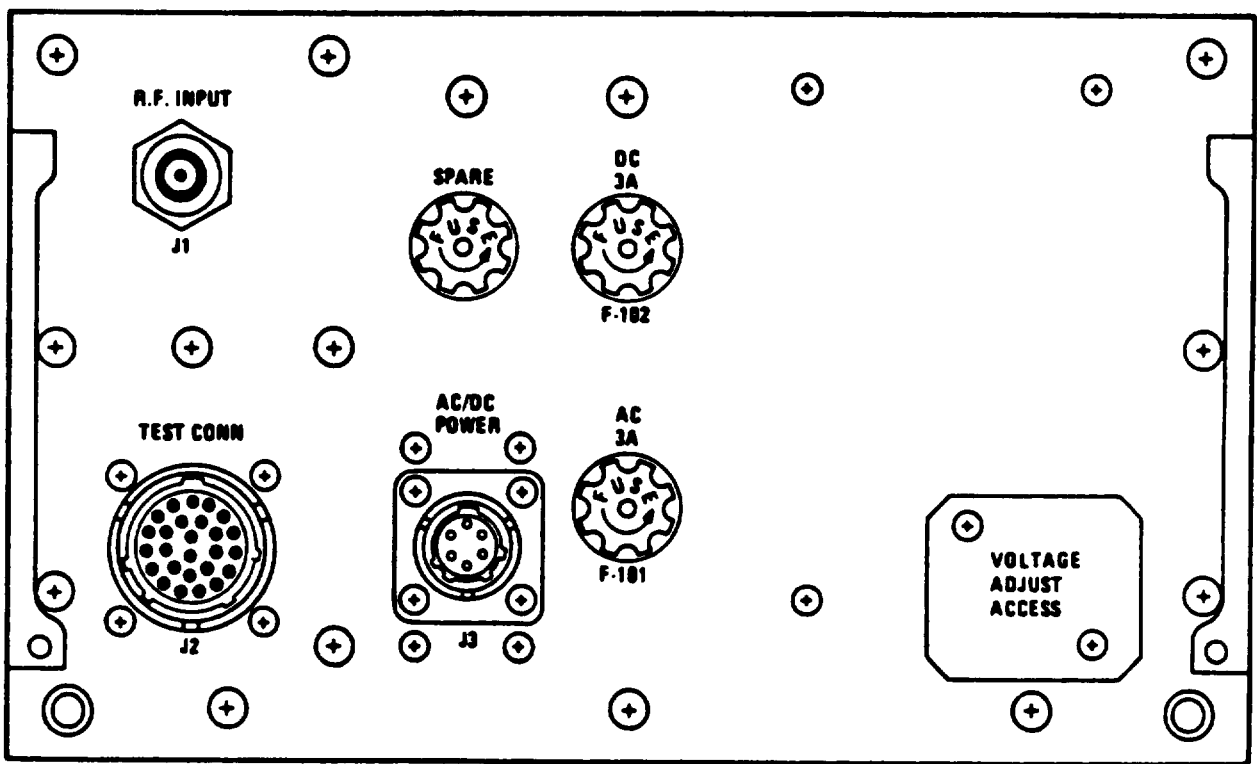


- 3. Using a 1/4" flat-tip screwdriver, loosen six captive screws securing SDU into equipment rack.
- 4. Slide SDU forward until connectors at rear of unit are accessible.

NOTE

Connector numbers listed are for unit A19A2 in equipment rack 1. Connector numbers in parentheses are for unit A19A4 in equipment rack 3.

| | | |
|--------|--------|----------------------------------------|
| 3 OF 3 | REMOVE | SIGNAL DISPLAY UNIT, ID-2349/TRR-35(V) |
|--------|--------|----------------------------------------|



5. At rear of SDU, disconnect cables W23P2 (W24P2) from A19A2J1 (J1), W12P20 (W12P24) from A19A2J2 (J2), and W30P1 (W55P1) from A19A2J3 (J3).
6. Remove SDU from equipment rack.

There are two signal display units (SDU). They are located in equipment rack 1 (A19A2) and equipment rack 3 (A19A4).

Tools Required: TK-105/G

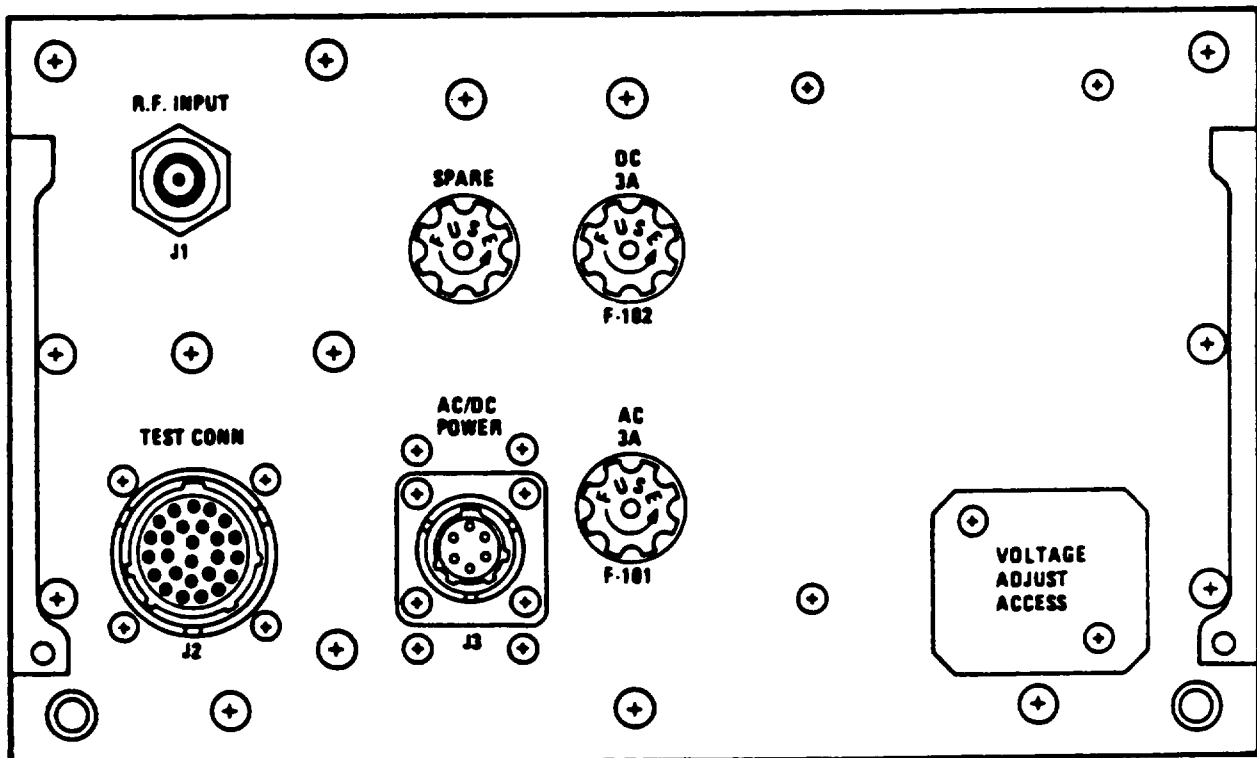
Personnel Required: 1

Replace signal display unit as follows:

1. Place POWER switch on SDU to OFF position.
2. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3 for A19A4) to OFF position.
3. Place SDU partially into equipment rack, leaving access to cable connectors at rear of unit.

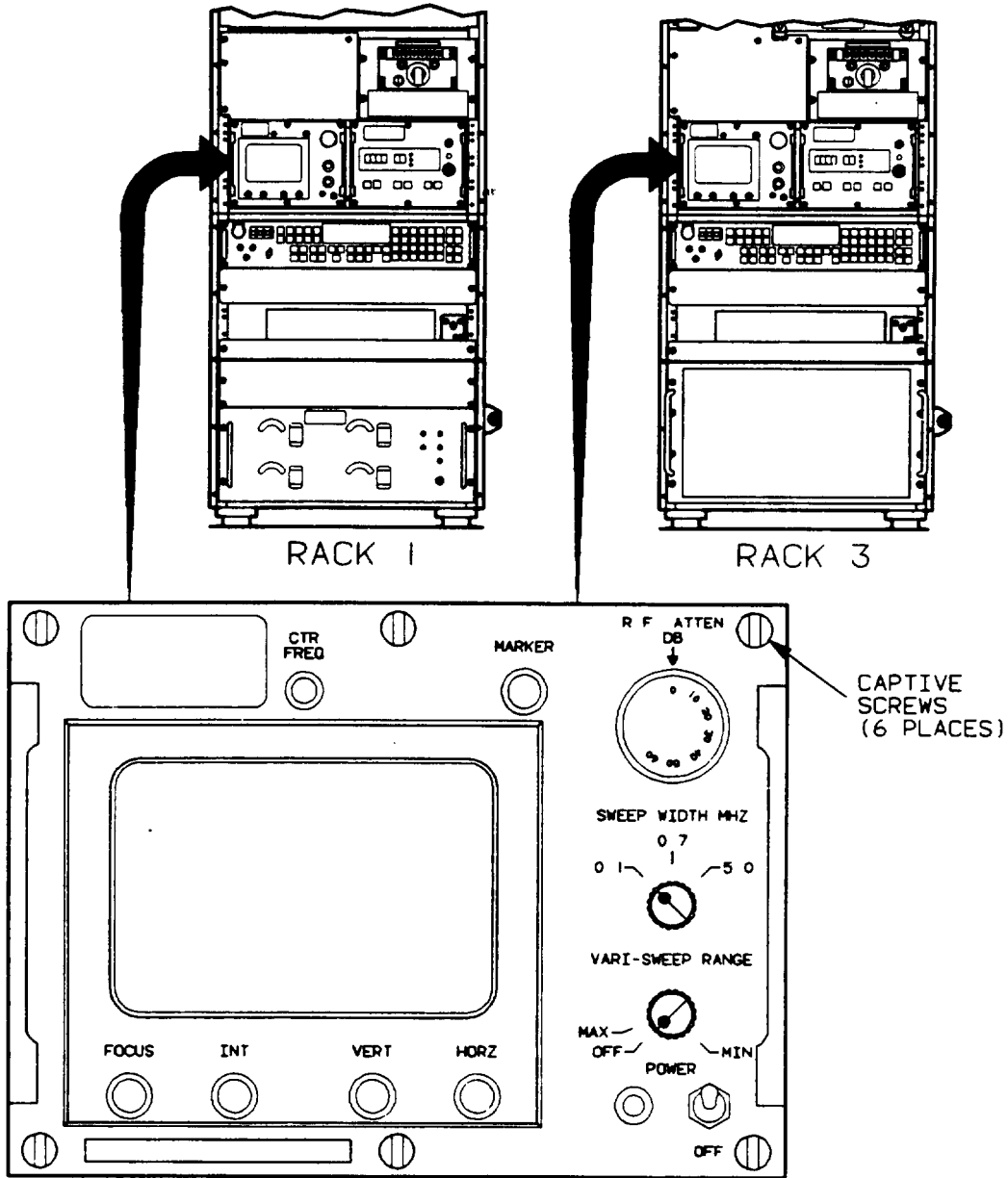
NOTE

Connector numbers listed are for unit A19A2 in equipment rack 1. Connector numbers in parentheses are for unit A19A4 in equipment rack 3.



4. At rear of SDU, connect cables W23P2 (W24P2) to A19A2J1 (J1), W12P20 (W12P24) to A19A2J2 (J2) and W30P1 (W55P1) to A19A2J3 (J3).

2 OF 2 REPLACE SIGNAL DISPLAY UNIT, ID-2349/TRR-35 (V)



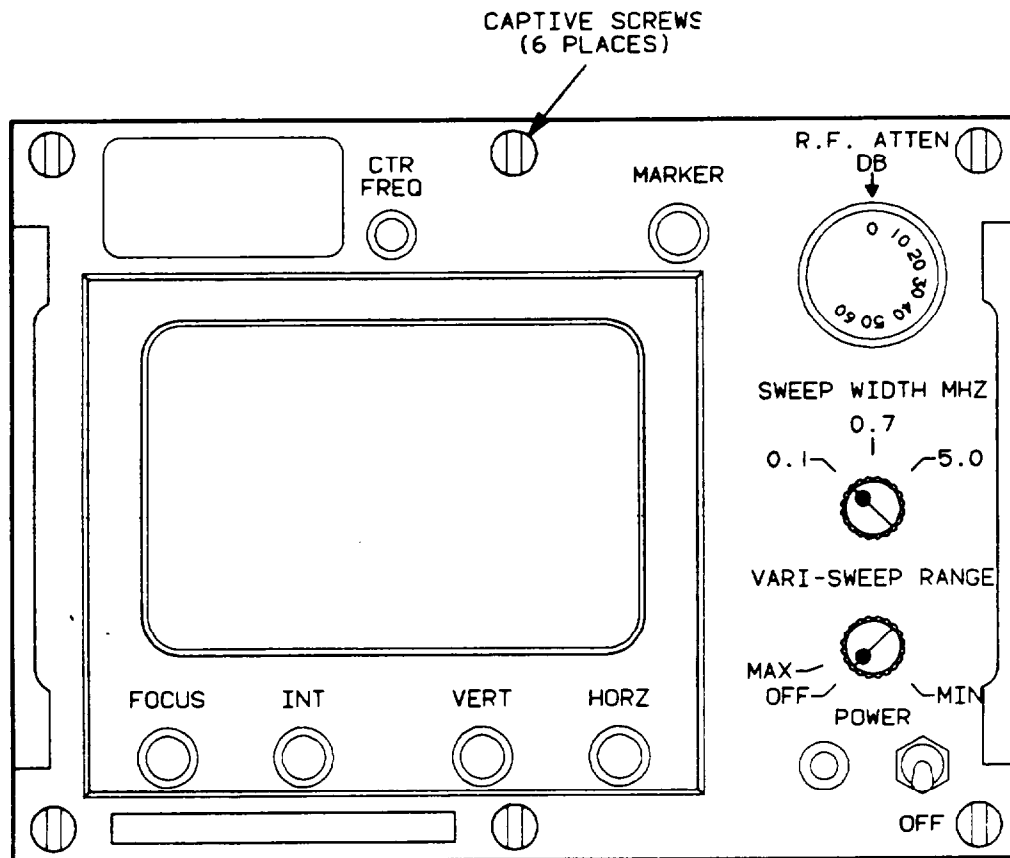
5. Slide SDU into position in rack and secure with six captive screws. Tighten screws using a 1/4" flat-tip screwdriver.
6. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND for A19A4) to ON position.
7. Place POWER switch on SDU to on (up) position.

There are two fuses (F101 and F102) located on the signal display unit (SDU). The replacement procedures for both fuses are the same.

Tools Required: TK-105/G

Personnel Required: 1

Remove the fuse as follows:

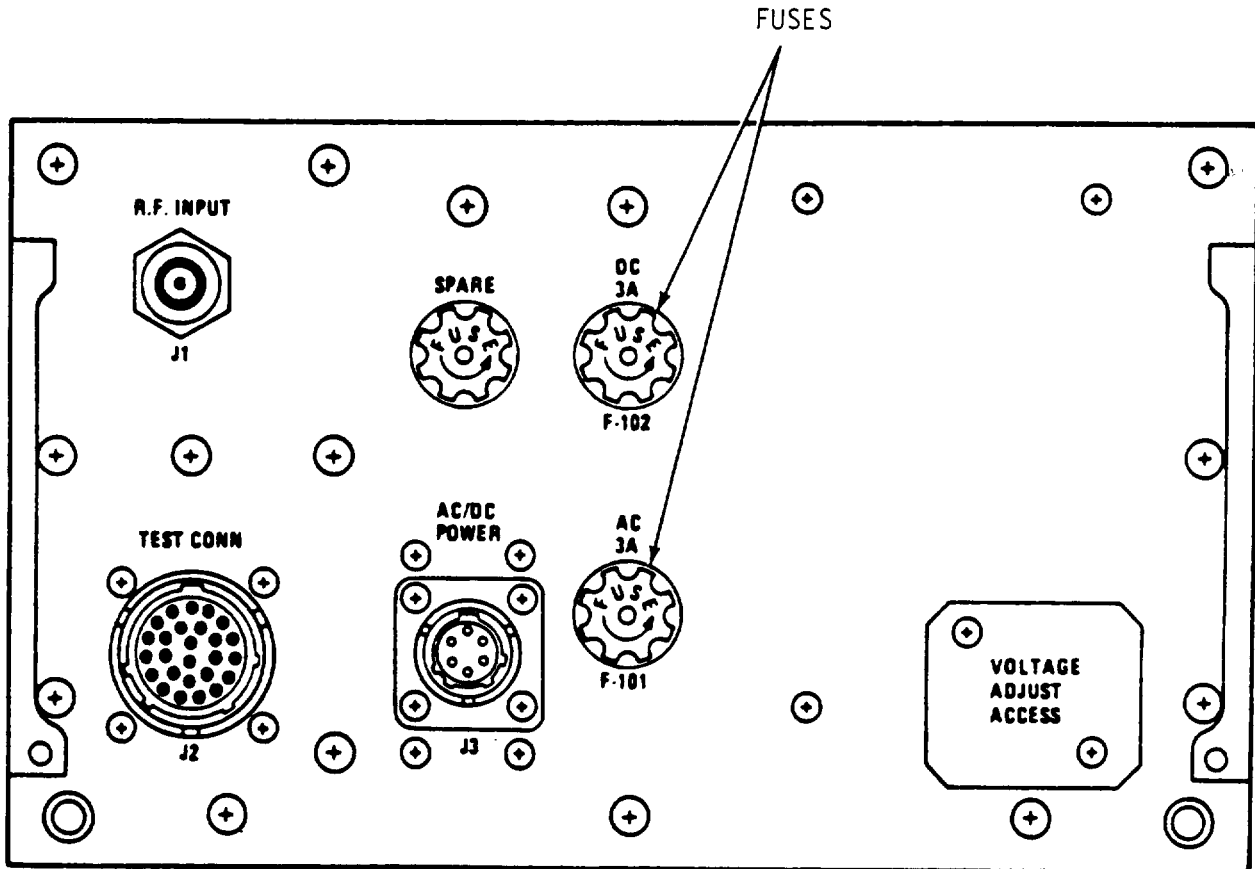


NOTE

Circuit breakers listed are for SDU located in equipment rack 1. Circuit breakers in parenthesis are for SDU in equipment rack 3.

1. On SDU front panel, place POWER switch to OFF position.
2. On power distribution panel, place circuit breakers labeled RACK 1 AND 2 (RACK 2 AND 3) to OFF position.
3. Using a 1/4" flat-tip screwdriver, loosen six captive screws securing SDU to equipment rack.

| | | |
|--------|-----------------------|-------------------------------------------|
| 2 OF 2 | REMOVE/REPLACE | SIGNAL DISPLAY UNIT (ID-2349) FUSE |
|--------|-----------------------|-------------------------------------------|



4. Pull SDU forward until fuseholder caps at rear of unit are accessible.
5. Push in fuse cap and turn counterclockwise to unlock from fuseholder housing. Remove fuse cap and fuse.
6. Pull defective fuse from fuse cap and install new fuse.
7. Position fuse cap and fuse into fuseholder housing. Push in fuse cap and turn clockwise to secure.
8. Push SDU into rack and secure with six captive screws. Tighten screws using a 1/4" flat-tip screwdriver.
9. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3) to ON position.
10. On SDU front panel, place POWER switch to on (up) position.

QUAD RECEIVER ELECTRONICS MODULES

REMOVE

1 OF 2

The quad receiver electronics cabinet (A19A1) contains six modules. The removal of each module is the same.

The following is a list of modules contained in the quad receiver electronics cabinet:

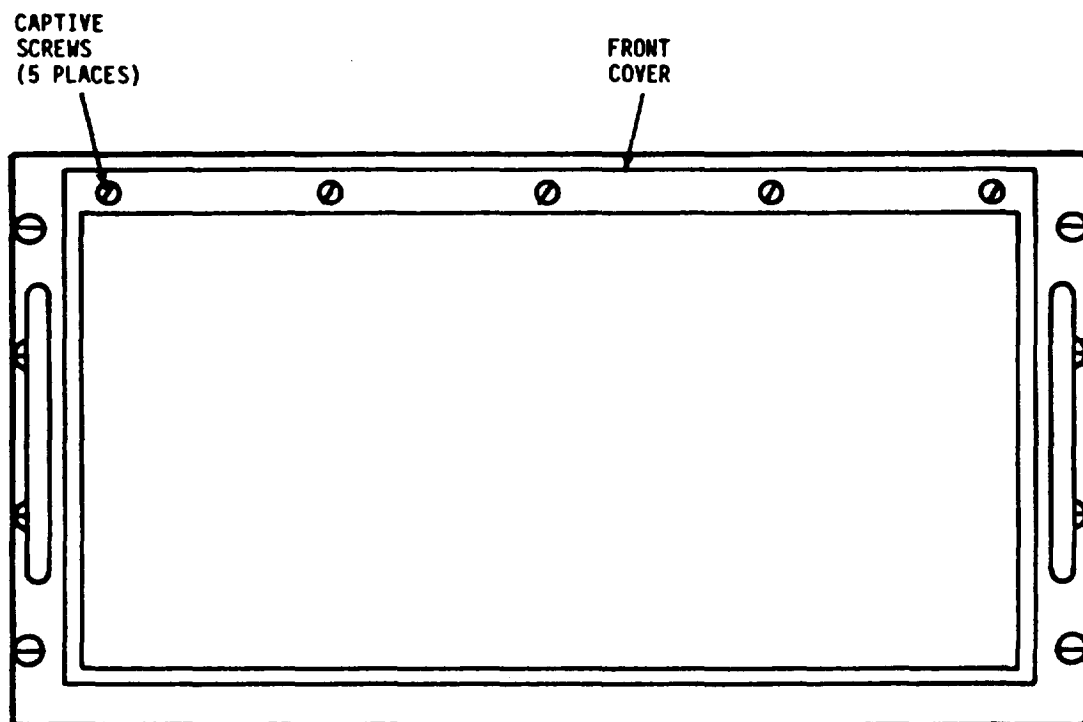
- a. Receiver, R-2143/URR (A19A1A1)
- b. Receiver, R-2144A/URR (A19A1A2)
- c. RIU, J-4144/TRR-35(V) (A19A1A3)
- d. Receiver, R-2143/URR (A19A1A4)
- e. Receiver, R-2144A/URR (A19A1A5)
- f. Receiver Power Supply, PP-7817/URR (A19A1A6).

Tools Required: TK-105/G

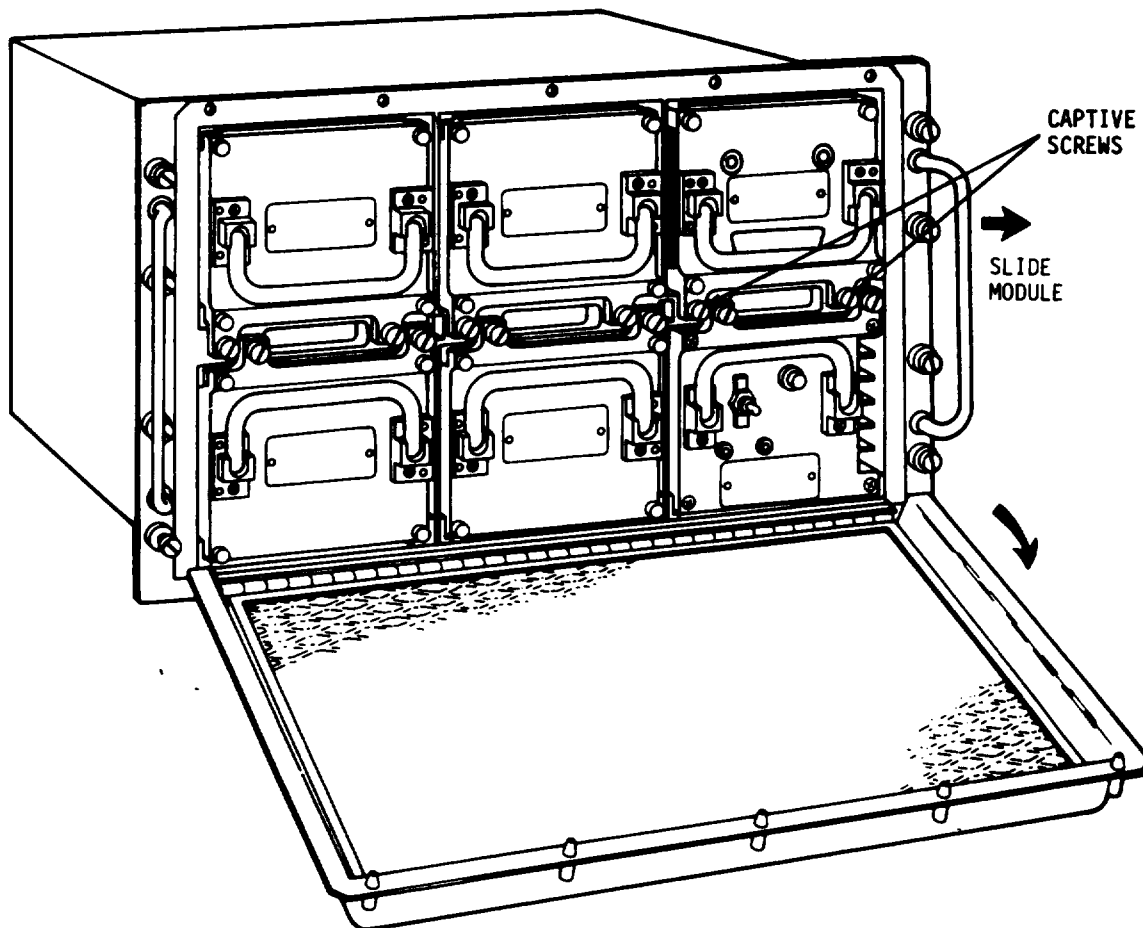
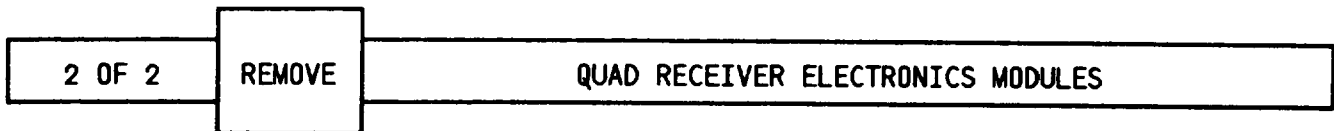
Personnel Required: 1

The following procedure applies to all modules in the quad receiver electronics cabinet. Remove the modules as follows:

1. On power distribution panel, place circuit breaker labeled RACK 2 and 3 to OFF position.



2. Using 3/16" flat-tip screwdriver, loosen five captive screws securing front cover.



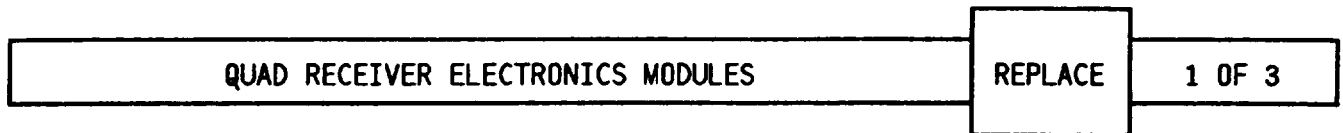
3. Lower front cover.

NOTE

In quad receiver electronics cabinet, two lower receiver modules are installed upside down.

4. Using **1/4"** flat-tip screwdriver, loosen two captive screws securing module into quad receiver electronics cabinet.

5. Slide module outward until free of unit and remove.



The quad receiver electronics cabinet (A19A1) contains six modules. The replacement of each module is the same.

The following is a list of modules contained in the quad receiver electronics cabinet:

- a. Receiver, R-2143/URR (A19A1A1)
- b. Receiver, R-2144A/URR (A19A1A2)
- c. RIU, J-4144/TRR-35(V) (A19A1A3)
- d. Receiver, R-2143/URR (A19A1A4)
- e. Receiver, R-2144A/URR (A19A1A5)
- f. Receiver Power Supply, PP-7817/URR (A19A1A6).

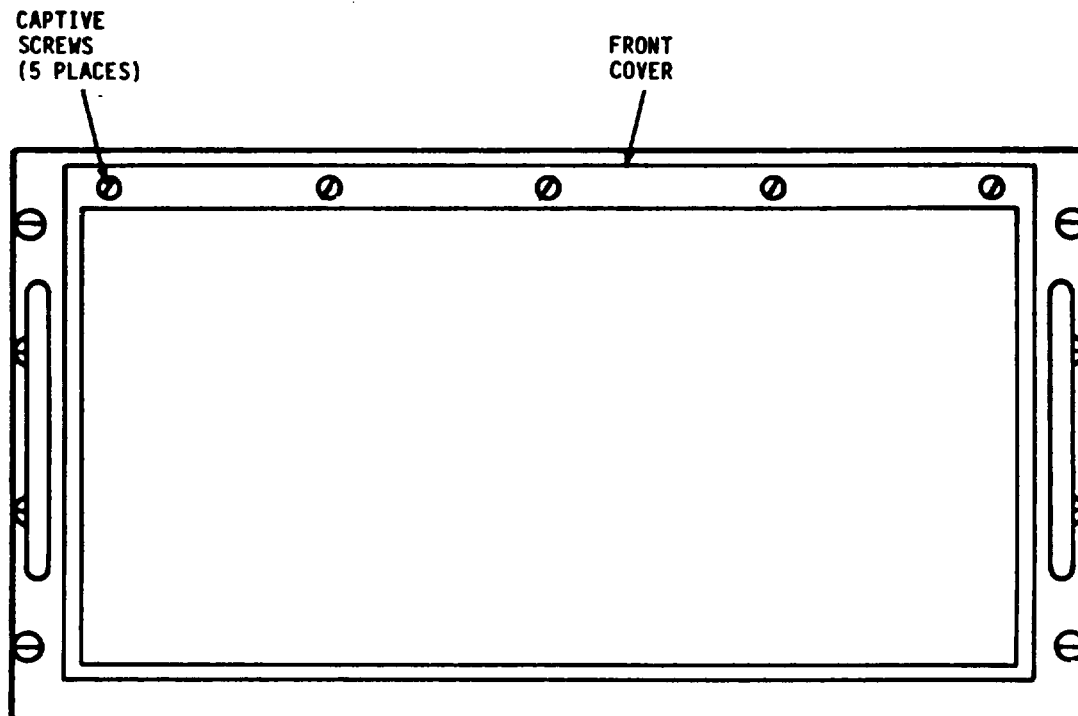
The following procedure applies to all modules in quad receiver electronics cabinet.

Tools Required: TK-105/G

Personnel Required: 1

Replace modules in the quad receiver electronics cabinet as follows:

1. On power distribution panel, place circuit breaker labeled RACK 2 AND 3 to OFF position.

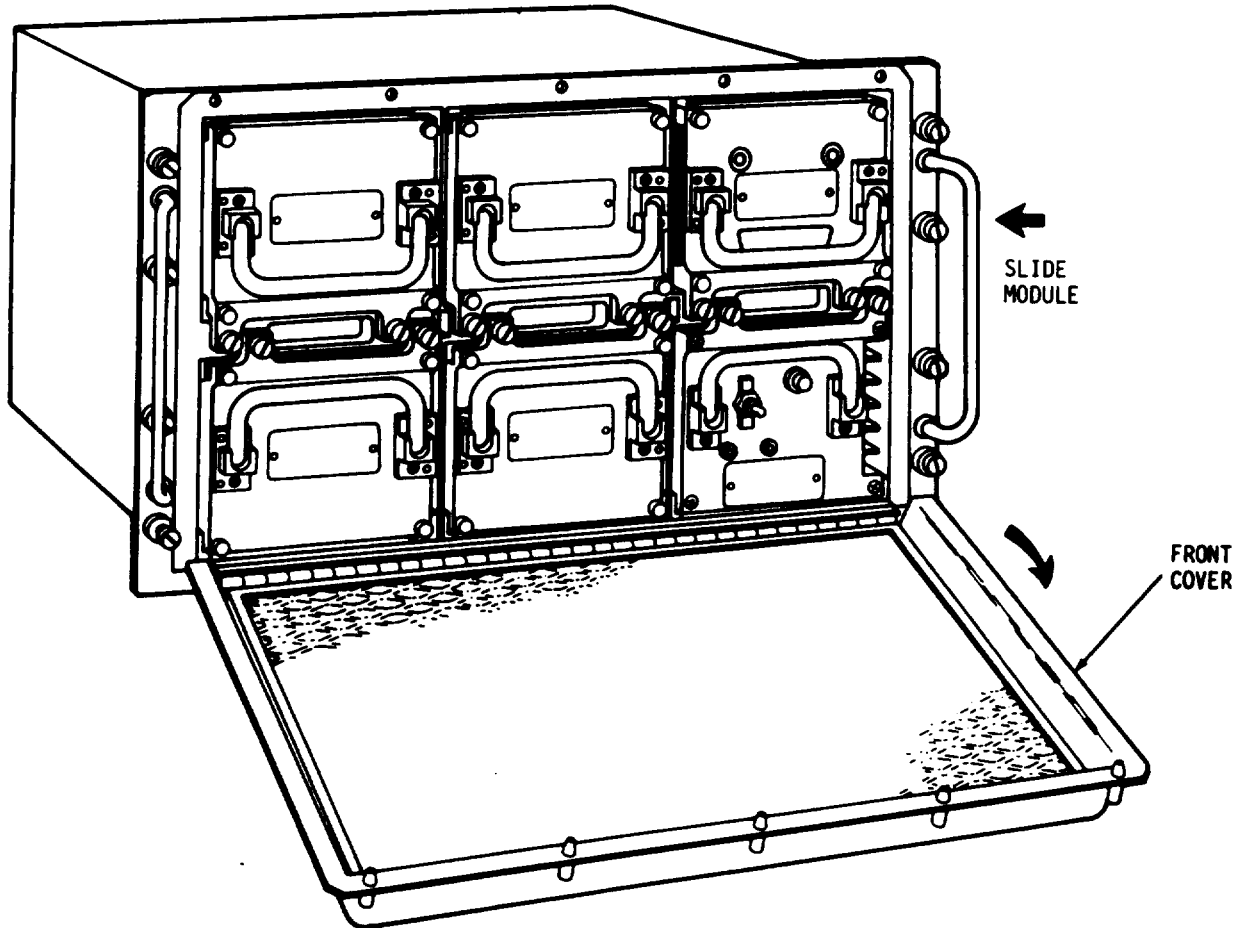


2. Using 3/16" flat-tip screwdriver, loosen five captive screws securing front cover.

2 OF 3

REPLACE

QUAD RECEIVER ELECTRONICS MODULES



3. Lower front cover.

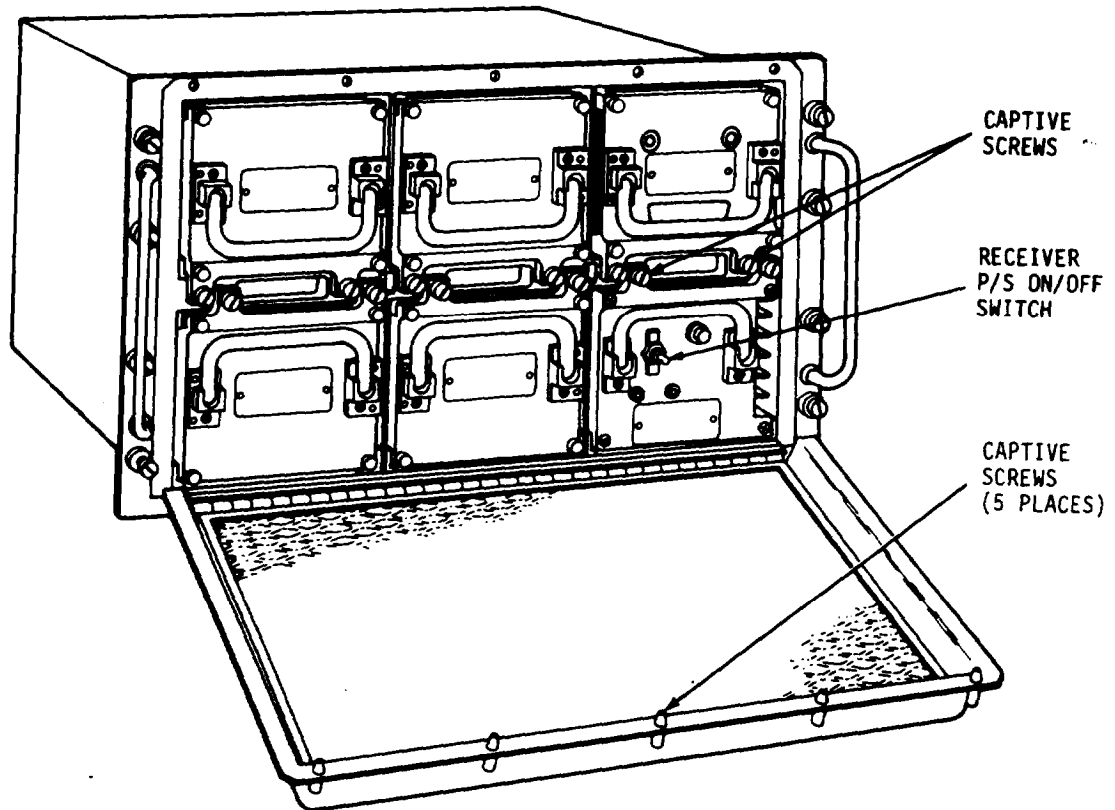
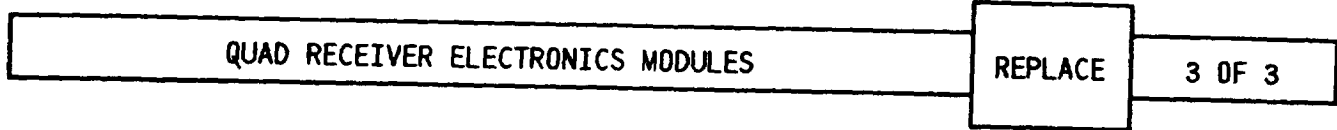
NOTE

In quad receiver electronics cabinet, two lower receiver modules are installed upside down.

CAUTION

Use care when installing modules into quad receiver electronics cabinet. To avoid damage to connectors, ensure connectors are not pushed out and are properly aligned.

4. Slide module into quad receiver electronics cabinet.



5. Secure module into quad receiver electronics cabinet with two captive screws. Tighten screws using a 1/4" flat-tip screwdriver.
6. On quad receiver electronics cabinet power supply, ensure ON/OFF circuit breaker is in ON position.

CAUTION

Before closing front cover insure that module handles are in stowed position.

7. Close front cover and secure with five captive screws. Tighten screws using a 3/16" flat-tip screwdriver.
8. On power distribution panel, place circuit breaker labeled RACK 2 AND 3 to ON position.



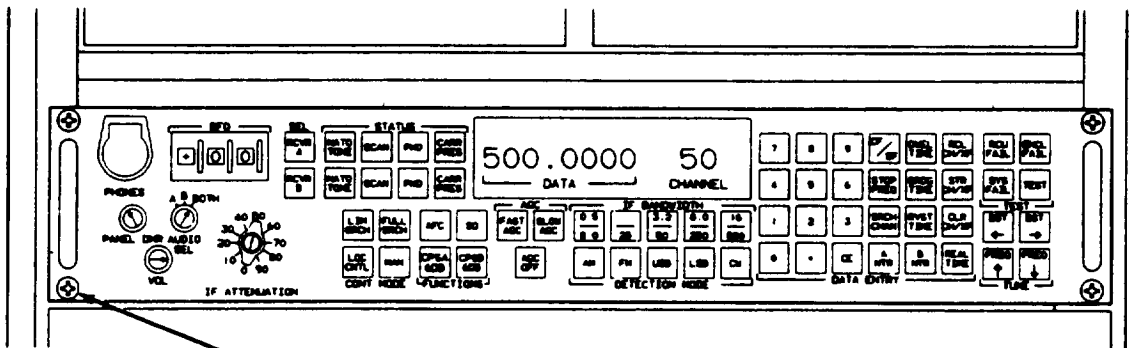
There are two receiver control units (A19A3 and A19A5). Receiver control unit (A19A3) is located in equipment rack 1. Receiver control unit (A19A5) is located in equipment rack 3.

Tools Required: TK-105/G

Personnel Required: 1

Remove receiver control unit as follows:

1. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3 for A19A5) to OFF position.
2. Place VRC-47/ESS-501 memory circuit breaker on power distribution panel to OFF (down) position.



**MOUNTING
SCREWS
(4 PLACES)**

3. Using no.2 cross-tip screwdriver, remove and retain four screws, flat washers, and lockwashers securing receiver control unit to the equipment rack.
4. Pull receiver control unit forward until cables at rear of unit are accessible.

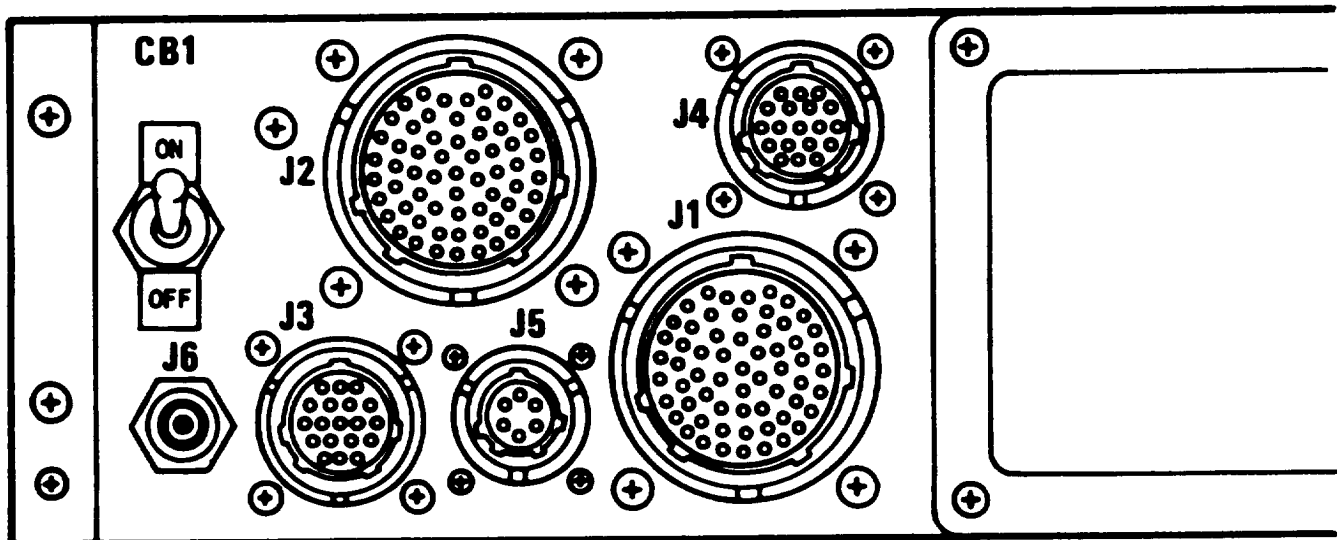
RECEIVER CONTROL UNIT, C-11383/TRR-35(V)

REMOVE

2 OF 2

NOTE

Connector numbers listed are for unit A19A3 in equipment rack 1. Connector numbers in parentheses are for unit A19A5 in equipment rack 3.



NOTE

Ensure line filters CP1 and CP2 (CP3 and CP4) remain with cables W12P21 and W12P22 (W12P25 and W12P26) when removing receiver control unit.

5. At rear of receiver control unit, disconnect W12P21 (W12P25) from A19A3J1 (A19A5J1), W12P22 (W12P26) from A19A3J2 (A19A5J2), W12P23 (W12P27) from A19A2J4 (A19A5J4), W59P1 (W56P1) from A19A3J5 (A19A5J5), and W25P2 (W26P2) from A19A3J6 (A19A5J6) on receiver control unit.
6. Remove receiver control unit from equipment rack.



There are two receiver control units (A19A3 and A19A5). Receiver control unit (19A3) is located in equipment rack 1. Receiver control unit (A19A5) is located in equipment rack 3.

Tools Required: TK-105/G

Personnel Required: 1

Replace receiver control unit as follows:

1. On power distribution panel, place circuit breaker labeled VRC-47/ESS-501 MEMORY to OFF position.
2. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3 for A19A5) to OFF position.
3. Position rear of receiver control unit into rack, leaving access to connecting cables at rear of unit.

NOTE

Connector numbers listed are for unit A19A3 in equipment rack 1. Connector number listed in parenthesis are for unit A19A5 in equipment rack 3.

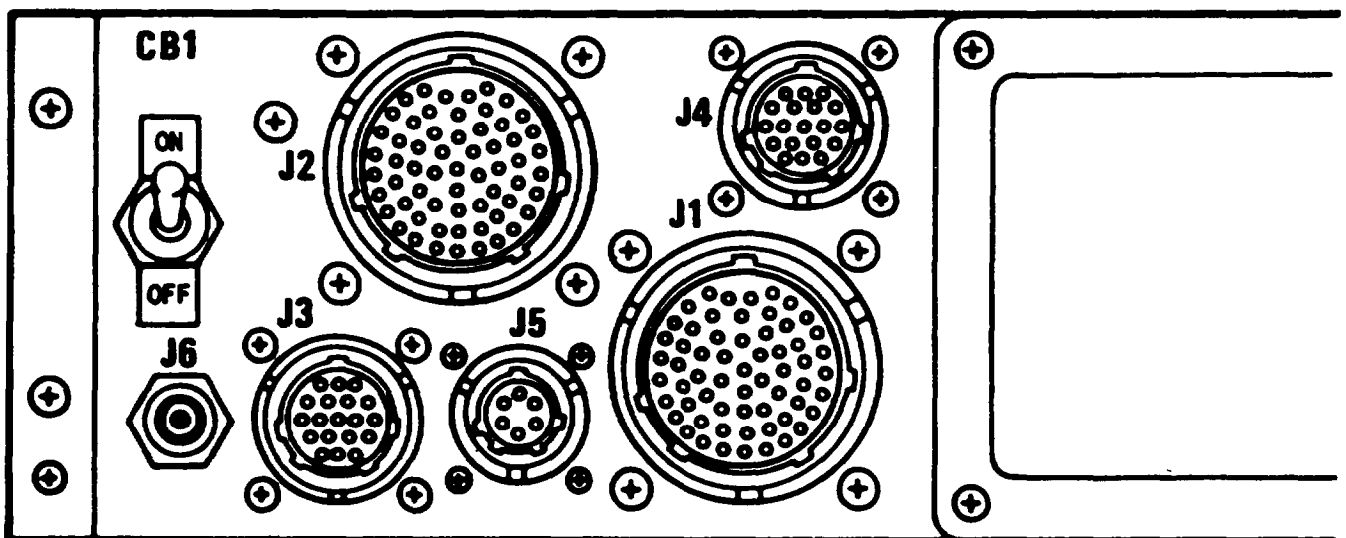
NOTE

Ensure line filters CP1 and CP2 (CP3 and CP4) are on cables W12P21 and W12P22 (W12P25 and W12P26) when replacing receiver control unit.

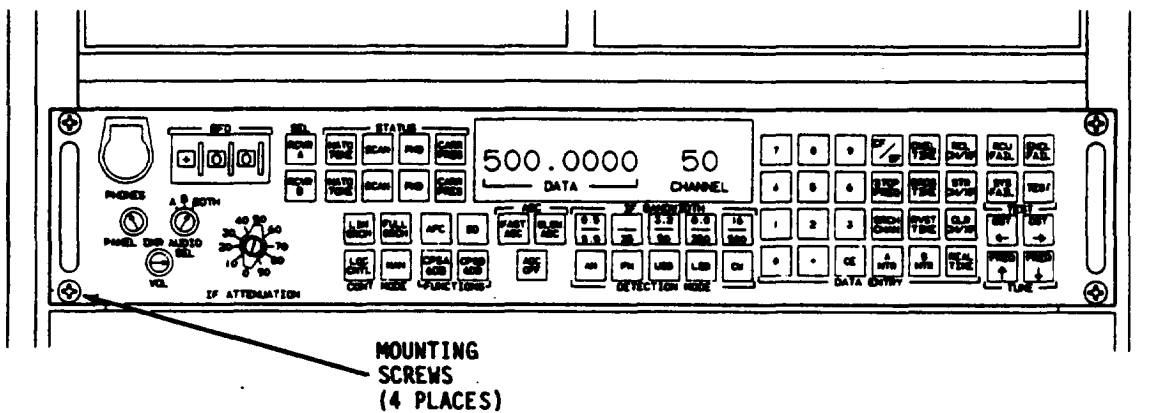
RECEIVER CONTROL UNIT, C-11383/TRR-35(V)

REPLACE

2 OF 3



4. At rear of receiver control unit, connect W12P21 (W12P25) to A19A3J1 (A19A5J1), W12P22 (W12P26) to A19A3J2 (A19A5J2), W12P23 (W12P27) to A19A3J4 (A19A5J4), W59P1 (W56P1) to A19A3J5 (A19A5J5), and W25P2 (W26P2) to A19A3J6 (A19A5J6).
5. Ensure circuit breaker CB1 at rear of receiver control unit is in ON position.
6. Slide receiver control unit into mounting position.



7. Secure receiver control unit into equipment rack with four screws, lockwashers, and flat washers. Tighten screws using no. 2 cross-tip screwdriver.
8. On power distribution panel, place circuit breaker labeled RACK 1 AND 2 (RACK 2 AND 3) to ON position.
9. On power distribution panel, place circuit breaker labeled VRC-47/ESS-501 MEMORY to ON position.

| | | |
|--------------------------------------|----------------|--------|
| RECEIVER CONTROL UNIT (C-11383) LAMP | REMOVE/REPLACE | 1 OF 1 |
|--------------------------------------|----------------|--------|

There are 63 lamps on the front panel of the receiver control unit. All lamps are removed/replaced identically.

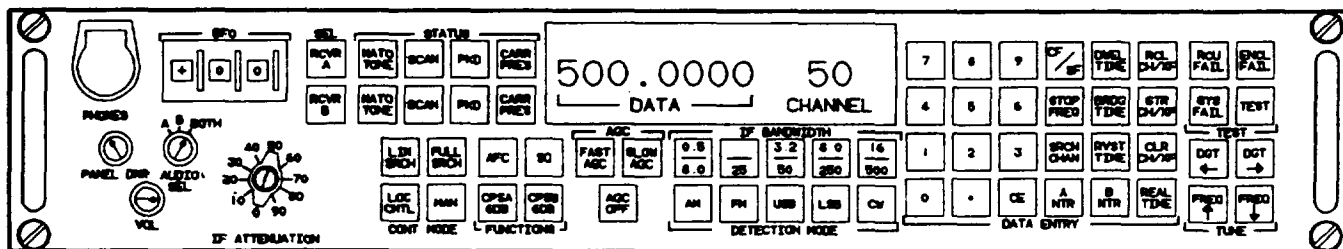
Tools Required: NONE

Personnel Required: 1

Remove/replace lamp as follows:

NOTE

Connector numbers listed are for unit A19A3 in equipment rack 1. Connector number listed in parenthesis are for unit A19A5 in equipment rack 3.



1. On power distribution panel, place circuit breakers labeled RACK 1 AND 2 (RACK 2 AND 3) and VRC-47/ESS-501 MEMORY to OFF position.
2. On receiver control unit, pull lens assembly and lamp from switch housing.
3. Pull defective lamp from lens assembly and install new lamp.
4. Position lens assembly and lamp into switch housing and press in to secure.
5. On power distribution panel, place circuit breakers labeled RACK 1 AND 2 (RACK 2 AND 3) and VRC-47/ESS-501 MEMORY to ON position.

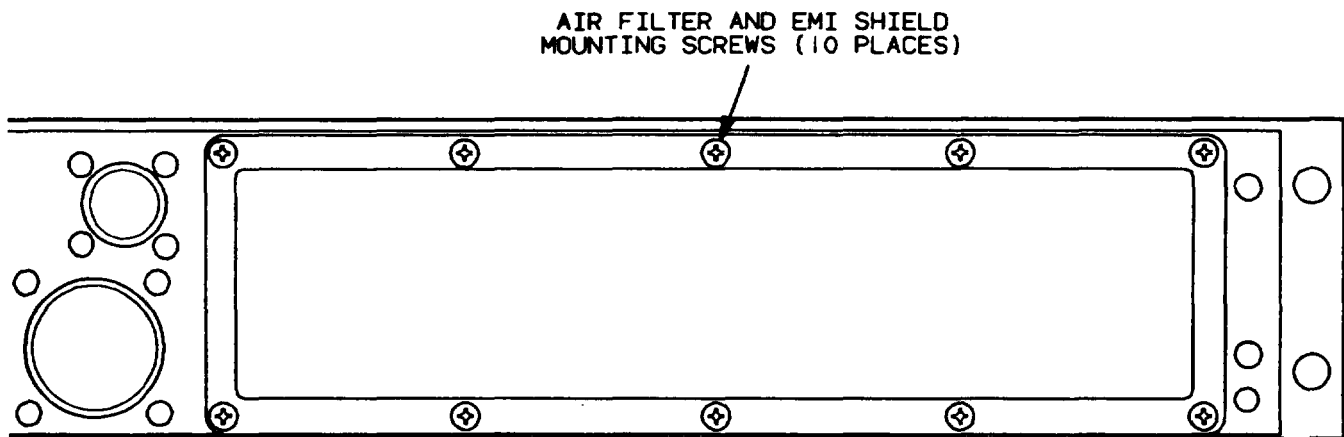
| | | |
|--------|----------------|--------------------------------------------|
| 1 OF 1 | REMOVE/REPLACE | RECEIVER CONTROL UNIT (C-11383) AIR FILTER |
|--------|----------------|--------------------------------------------|

The receiver control unit air filter is located on rear panel of unit.

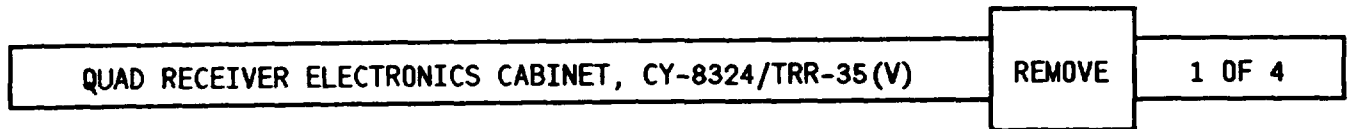
Tools Required: TK-105/G
Soft Brush

Personnel Required: 1

Remove/replace the air filters as follows:



1. Remove receiver control unit from equipment rack in accordance with Receiver Control Unit Remove procedure.
2. Using a no. 1 cross-tip screwdriver, remove and retain ten screws and lockwashers securing air filter and EMI shield to rear panel of receiver control unit.
3. Remove air filter and EMI shield from receiver control unit.
4. To clean air filter, wash with water (or cleaner) (Appendix D, Item 4) and soft brush. Rinse filter with clean water and allow to air dry.
5. Position air filter and EMI shield onto rear panel of receiver control unit and secure with ten screws and lockwashers. Tighten screws using a no.1 cross-tip screwdriver.
6. Install receiver control unit into equipment rack in accordance with Receiver Control Unit Replace procedure.



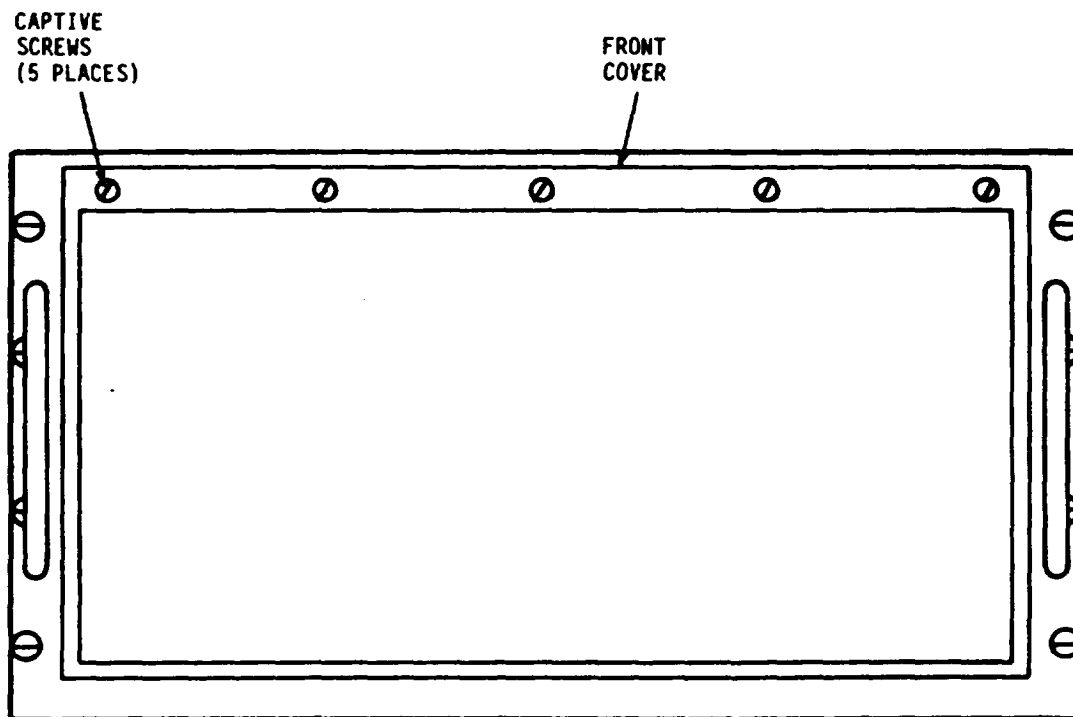
The quad receiver electronics cabinet (A19A1) is located in equipment rack 3.

The quad receiver electronics cabinet contains an EMI filter and six modules. To remove the quad receiver electronics cabinet, the six modules must be removed first.

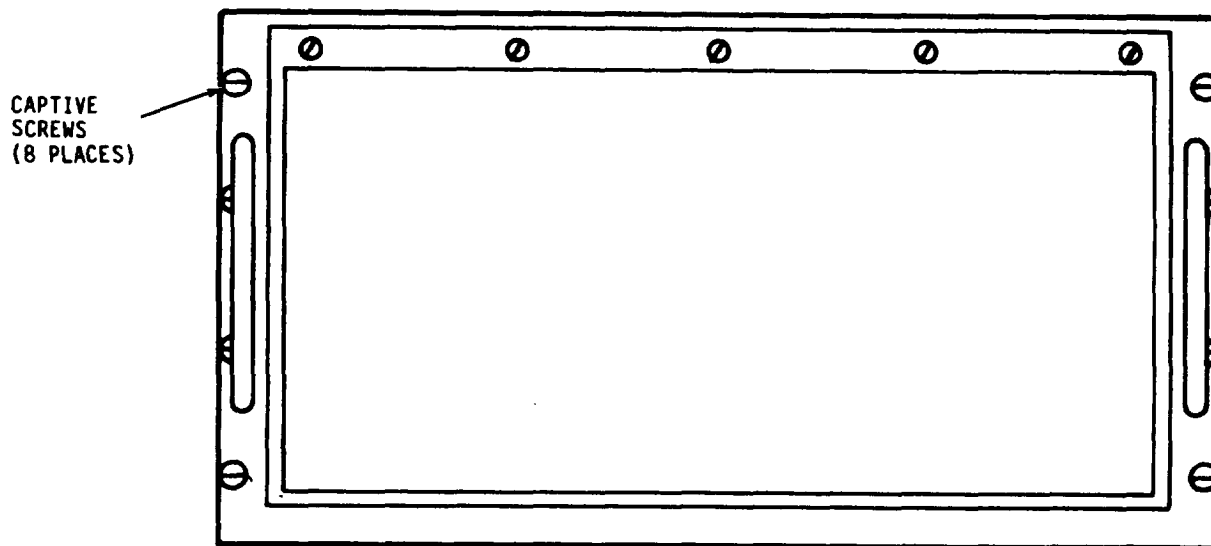
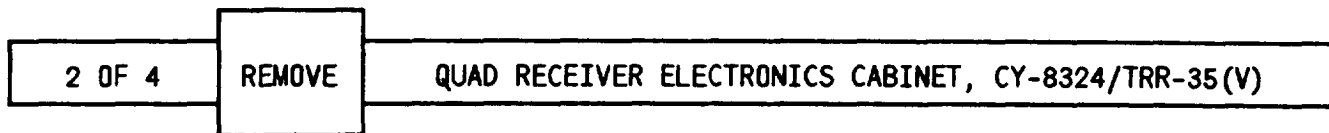
Tools Required: TK-105/G

Personnel Required: 1

Remove the quad receiver electronics cabinet (A19A1) as follows:



1. Remove modules in accordance with Quad Receiver Electronics Modules Remove procedure.
2. Close front cover and secure with five captive screws using 3/16" flat-tip screwdriver.

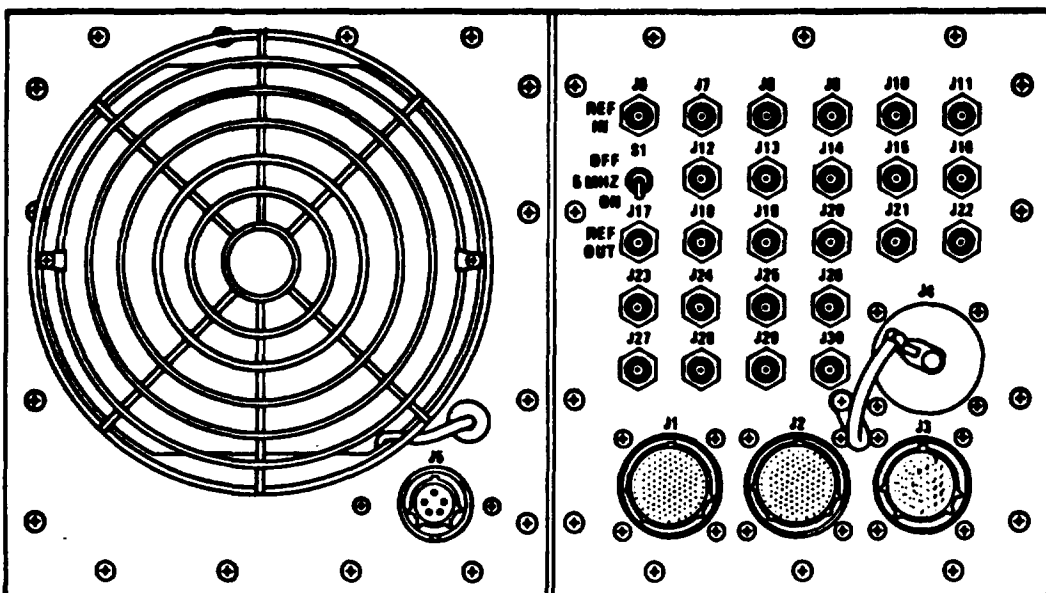


3. Using 1/4" flat-tip screwdriver, loosen eight captive mounting screws securing the quad receiver electronics cabinet to the equipment rack.
4. Slide quad receiver electronics cabinet outward until connectors on rear of unit are accessible.

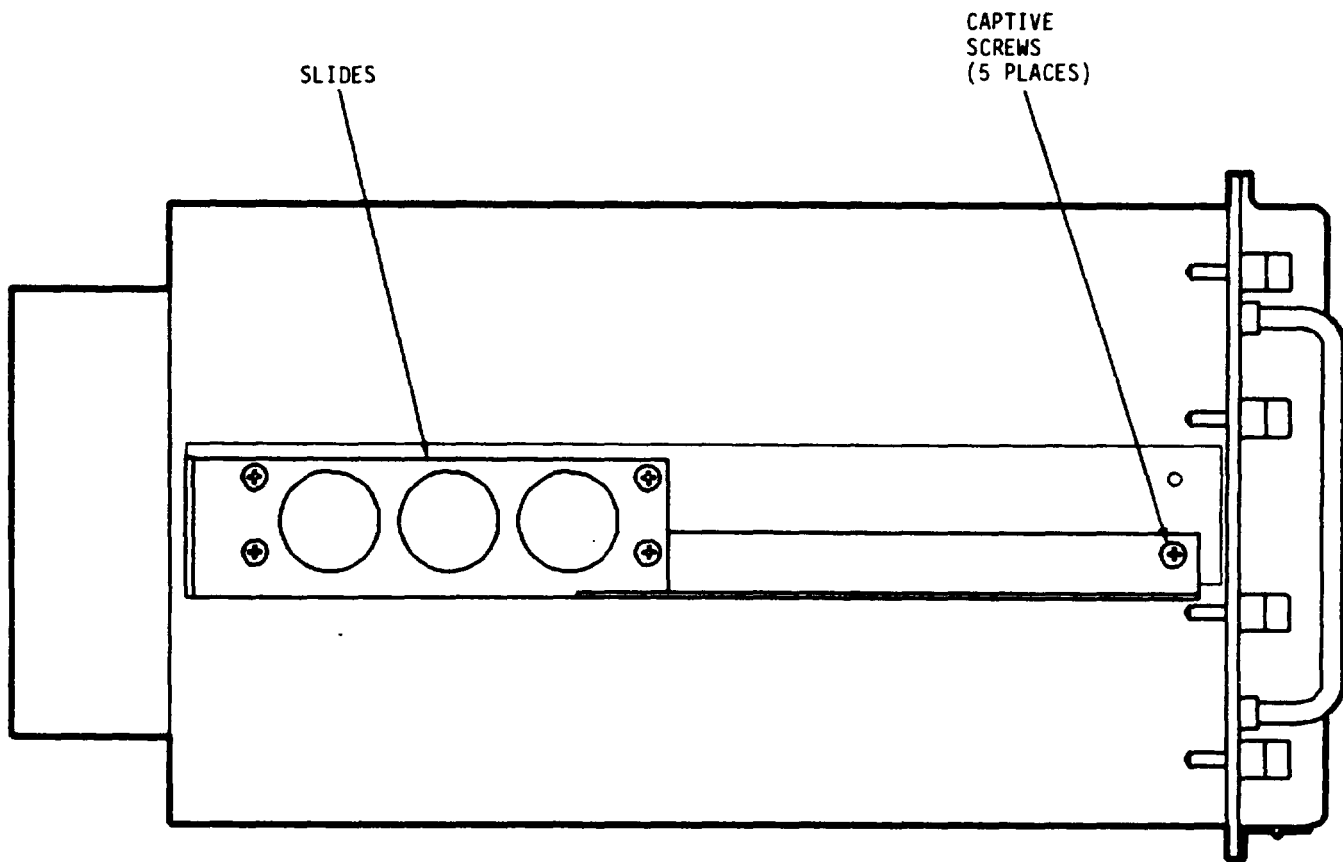
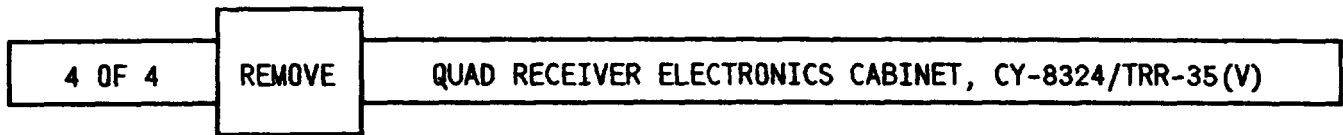
QUAD RECEIVER ELECTRONICS CABINET, CY-8324/TRR-35(V)

REMOVE

3 OF 4



5. At rear of quad receiver electronics cabinet, disconnect W57P1 from A19A1J5, W12P17 from A19A1J1, W12P18 from A19A1J2, W12P19 from A19A1J3, W8P1 from A19A1J8, W9P1 from A19A1J9, W10P1 from A19A1J10, W11P1 from A19A1J11, W13P1 from A19A1J6, W25P1 from A19A1J12, W17P1 from A19A1J14, W18P1 from A19A1J16, W13P2 from A19A1J17, W26P1 from A19A1J18, W23P1 from A19A1J20, and W24P1 from A19A1J22.
6. Remove quad receiver electronics cabinet from equipment rack.



7. Using a no. 2 cross-tip screwdriver, remove and retain five machine screws securing bracket and guide pin block (with its attaching hardware) to sides (right side and left side) of quad receiver electronics cabinet. Retain bracket and guide pin blocks.

| | | |
|-------------------------------------------------------------|----------------|---------------|
| QUAD RECEIVER ELECTRONICS CABINET, CY-8324/TRR-35(V) | REPLACE | 1 OF 3 |
|-------------------------------------------------------------|----------------|---------------|

The quad receiver electronics cabinet (A19A1) is located in equipment rack 3.

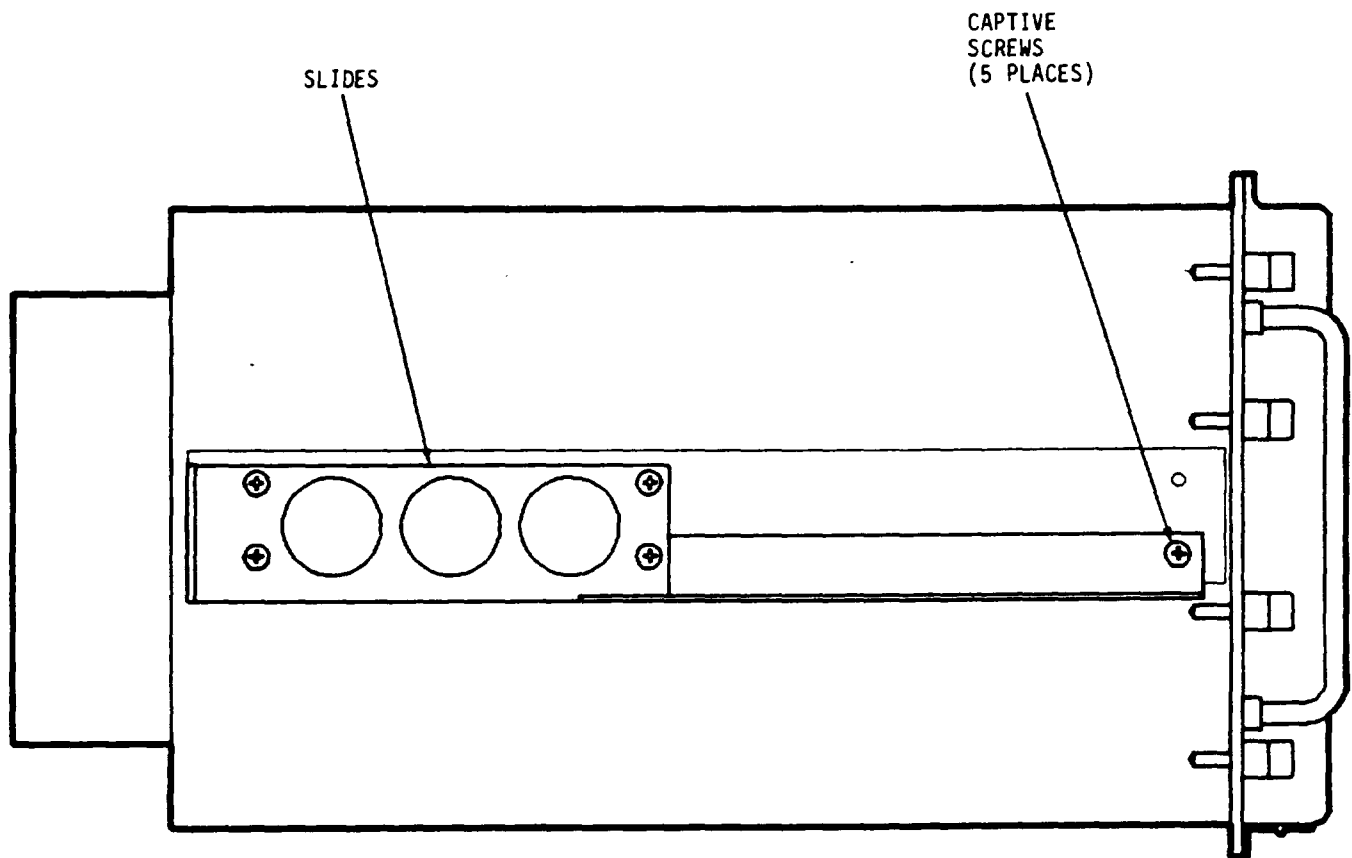
The quad receiver electronics cabinet contains an EMI filter and six modules. To replace the quad receiver electronics cabinet, the six modules must be removed first.

Tools Required: TK-105/G

Personnel Required: 1

Replace the quad receiver electronics cabinet (A19A1) as follows:

1. On power distribution panel, place circuit breaker labeled RACK 2 AND 3 into OFF position.

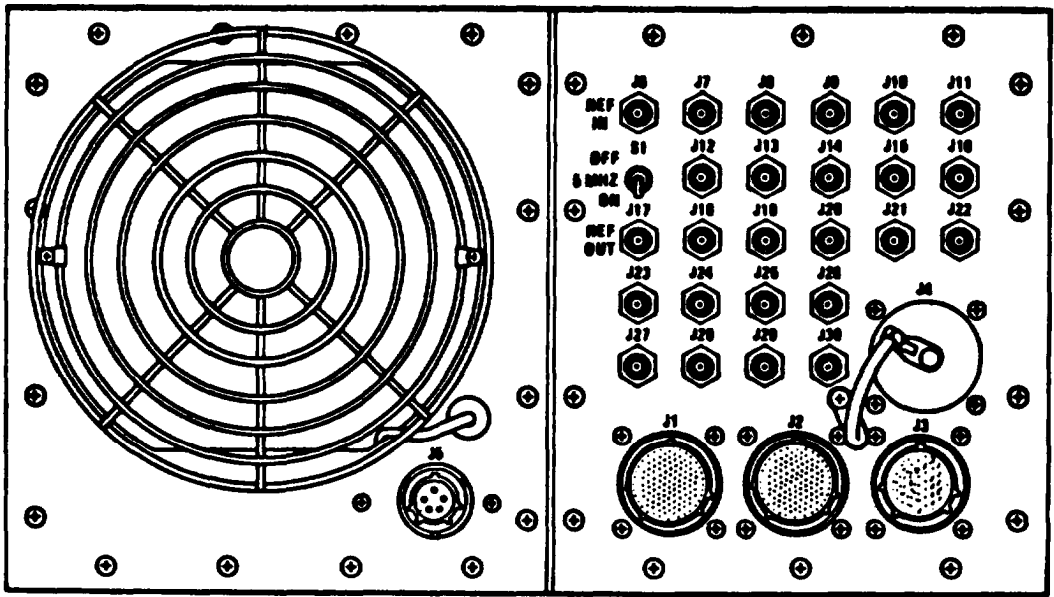


2. Position bracket and guide pin block onto side of quad receiver electronics cabinet and secure with five machine screws. Tighten screws using a no. 3 cross-tip screwdriver. (Repeat this step for other side of unit.)

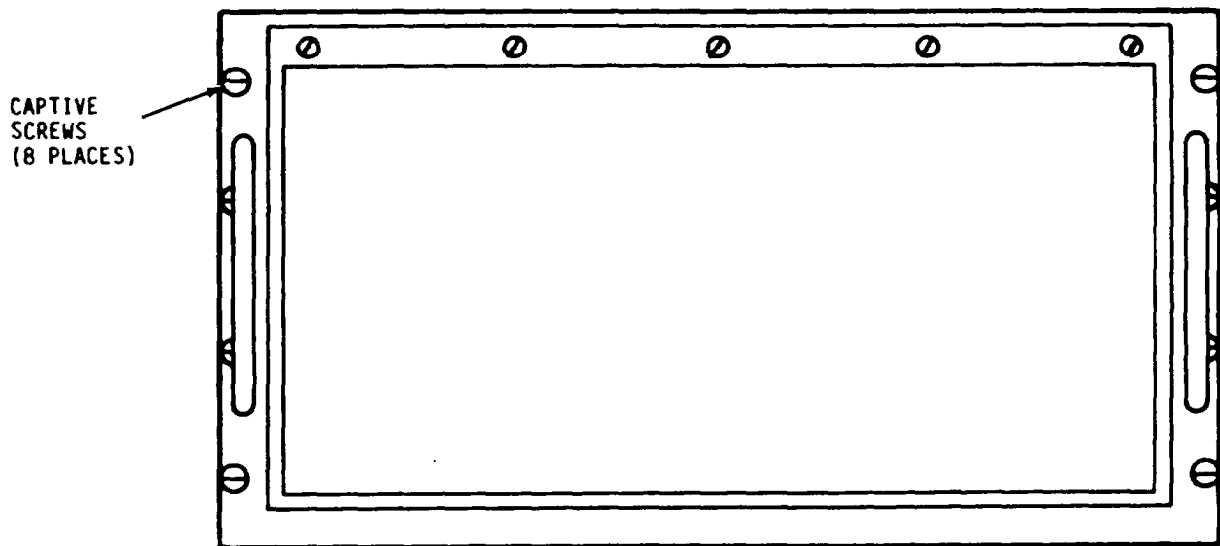
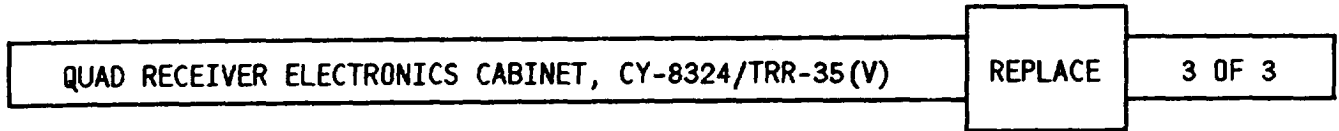
2 OF 3

REPLACE

QUAD RECEIVER ELECTRONICS CABINET, CY-8324/TRR-35(V)



3. Place quad receiver electronics cabinet partially into equipment rack, leaving room to access connectors on rear of unit.
4. At rear of quad receiver electronics cabinet connect W57P1 to A19A1J5, W12P17 to A19A1J1, W12P18 to A19A1J2, W12P19 to A19A1J3, W8P1 to A19A1J8, W9P1 to A19A1J9, W10P1 to A19A1J10, W11P1 to A19A1J11, W13P1 to A19A1J6, W25P1 to A19A1J12, W17P1 to A19A1J14, W18P1 to A19A1J16, W13P2 to A19A1J17, W26P1 to A19A1J18, W23P1 to A19A1J20, and W24P1 to A19A1J22.
5. Ensure 5 MHZ circuit breaker (S1) is in ON position.
6. Slide quad receiver electronics cabinet into equipment rack ensuring that slides on side of unit engage with slides on sides of rack.

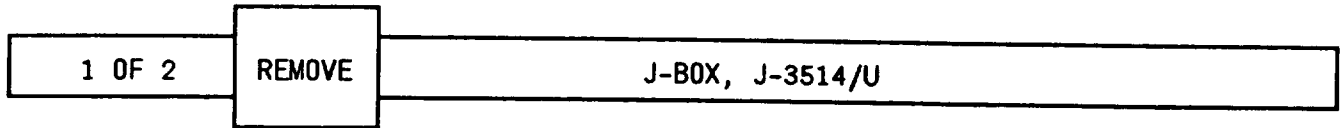


7. Secure quad receiver electronics cabinet into equipment rack with eight captive screws. Tighten screws using a 1/4" flat-tip screwdriver.

CAUTION

Install modules into quad receiver electronics cabinet slowly to prevent damage to the connectors.

8. Install modules into the quad receiver electronics cabinet in accordance with Quad Receiver Electronics Modules Replace procedure.

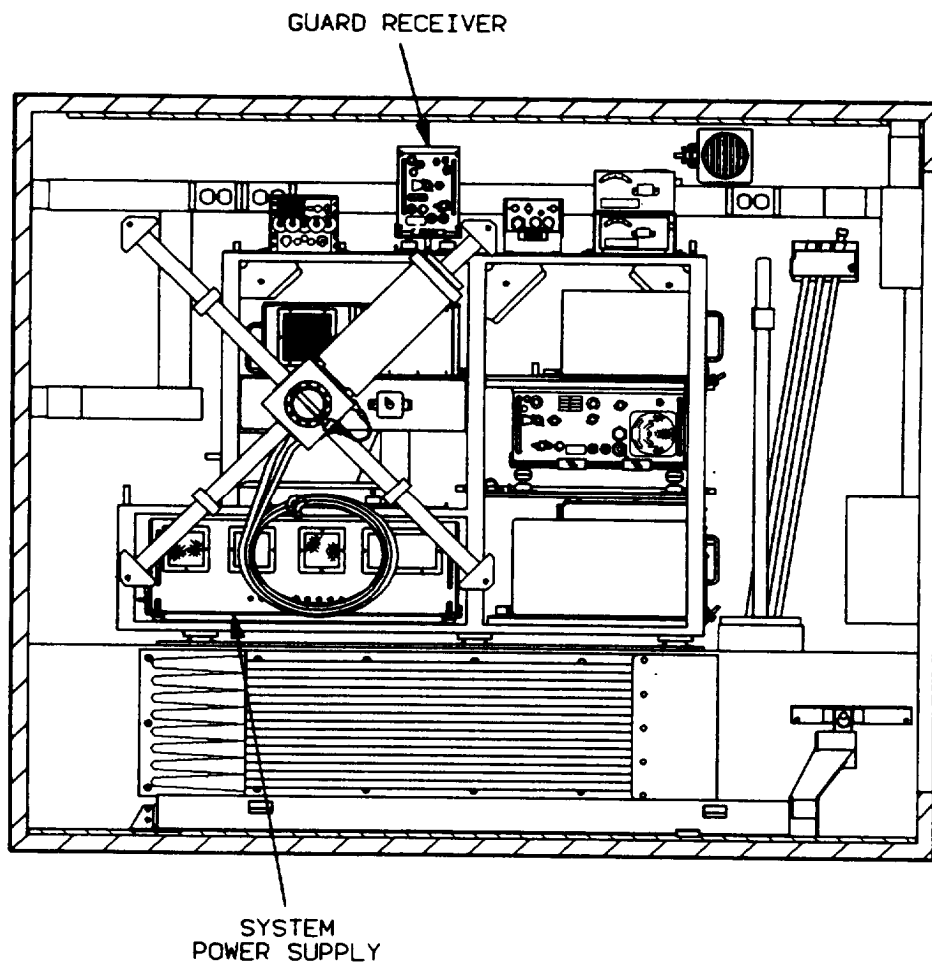


The J-3514/U interconnecting box is located underneath the R-442A mount in equipment rack 4.

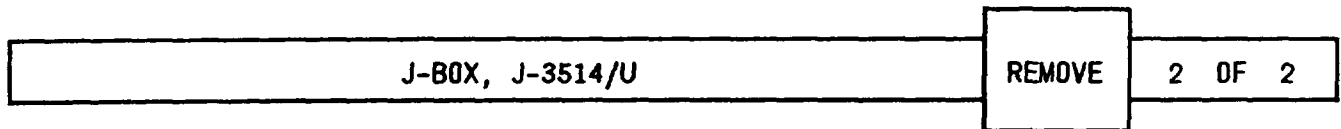
Tools Required: TK-101/G

Personnel Required: 1

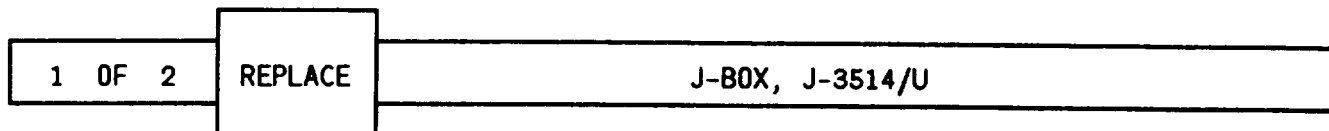
Remove the J-3514/U interconnecting box as follows:



1. On power selection panel, place DC power selection switch to DEPLOYED position.
2. On system power supply, place SYS ON/OFF switch to OFF position.
3. Remove R-442A/VRC radio receiver from mount in accordance with Technical Manual TM 11-5985-262-15.



4. On receiver mount, remove and retain four screws and flat washers securing top section of mount to shock mounts. Remove screws using a ratchet handle, 3" extension and 1/2' socket.
5. On receiver mount, using a no. 2 cross-tip screwdriver, remove and retain screw and lockwasher securing ground strap to top section of mount.
6. Lift top section of receiver mount (enough to access cables underneath).
7. Underneath receiver mount, disconnect cable W46P1 from J11 and J-box cable from J12.
8. Remove top section of receiver mount and set aside.
9. On J-box, disconnect cables W12P2 from J1, W44P1 from J3 and W45P1 from J4.
10. Remove J-3514/U J-box from receiver mount.

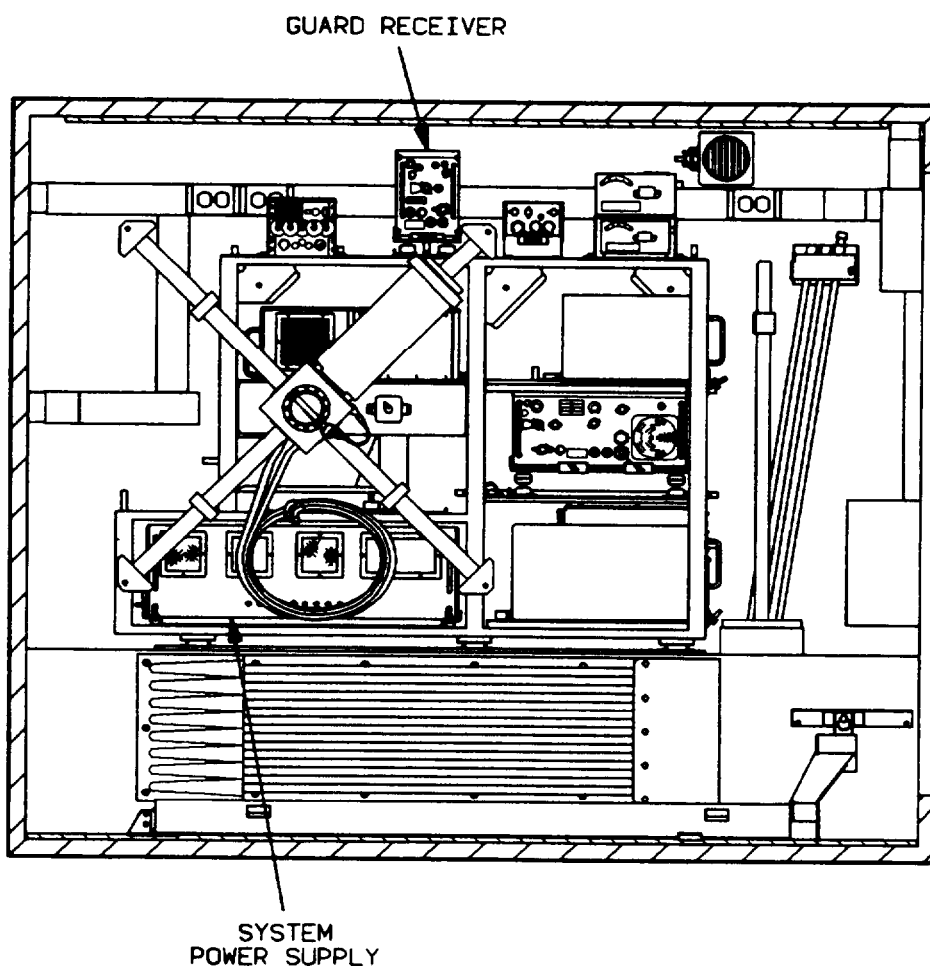


The J-3514/U interconnecting box is located underneath the R-442A mount in equipment rack 4.

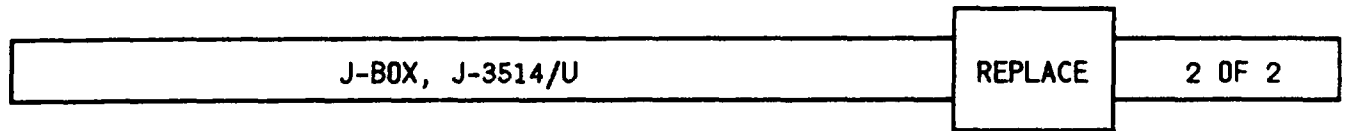
Tools Required: TK-101/G

Personnel Required: 1

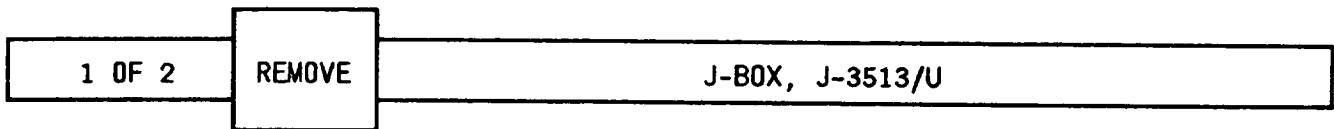
Replace the J-3514/U interconnecting box as follows:



1. On DC power selection panel, place DC power selection switch to DEPLOYED position.
2. On system power supply, place SYS ON/OFF switch to OFF position.
3. Position J-box adapter plate onto R-442A receiver shock mounts in equipment rack 4.



4. On J-box, connect cables W45P1 to J4, W44P1 to J3 and W12P2 to J1.
5. Position top section of receiver mount onto J-box adapter plate.
6. On receiver mount, connect cable from J-box to J12 and cable W46P1 to J11.
7. Secure top section of receiver mount and J-box adapter plate to shock mounts. with four screws and flat washers. Tighten screws using a ratchet handle, 3" extension and 1/2" socket.
8. Connect ground strap to top section of receiver mount and secure with a screw and lockwasher. Tighten screw using a no. 2 cross-tip screwdriver.
9. Install R-442A/VRC radio receiver into mount in accordance with TM 11-5985-262-15.

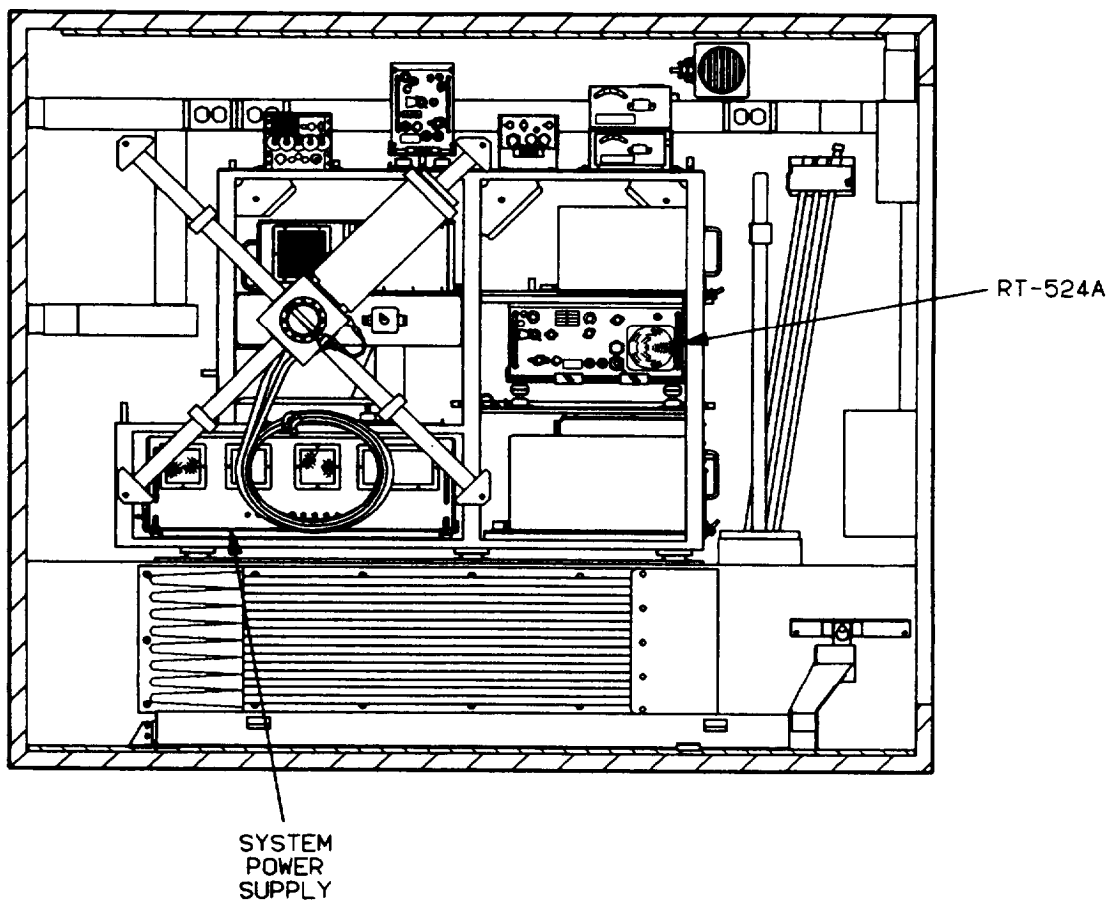


The J-3513/U interconnecting box is located underneath the RT-524A mount in equipment rack 4.

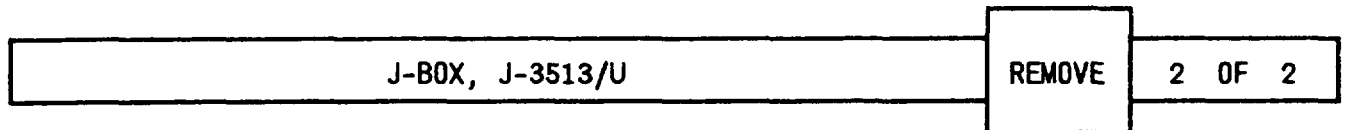
Tools Required: TK-101/G

Personnel Required: 1

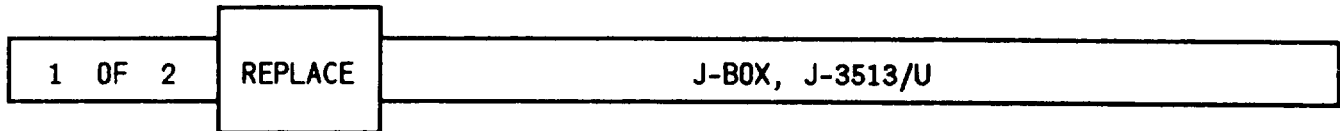
Remove the J-3513/U interconnecting



1. On DC power selection panel, place DC power selection switch to DEPLOYED position.
2. On system power supply, place SYS ON/OFF switch to OFF position.
3. Remove RT-524A/VRC Receiver-Transmitter from the system in accordance with TM 11-5895-262-15.



4. On RT-524A mount, using a no. 2 cross-tip screwdriver, remove and retain the screw and lockwasher securing ground strap to top section of mount.
5. On RT-524A mount, remove and retain five hex head bolts and flat washers securing top section of mount to shock mounts. Remove bolts using a ratchet handle, 3" extension and 1/2" socket.
6. Lift front edge of RT-524A mount enough to access cables underneath.
7. On J-box, disconnect cables labeled CX-13064/U from J6, W43P2 from J7, W41P2 from J1, W48P1 from J2, W47P1 from J3 and W44P2 from J4. Disconnect J-box cable from J22 on RT-524A mount.
8. On top section of the RT-524A mount, using a no.1 cross-tip screwdriver, remove and retain four screws from J-box mounting clamp plate. Remove mounting clamp plate.
9. Remove J-box and adapter plate.
10. Position J-box mounting clamp plate onto J-box adapter plate and secure with four screws Tighten screws using a no. 1 cross-tip screwdriver.

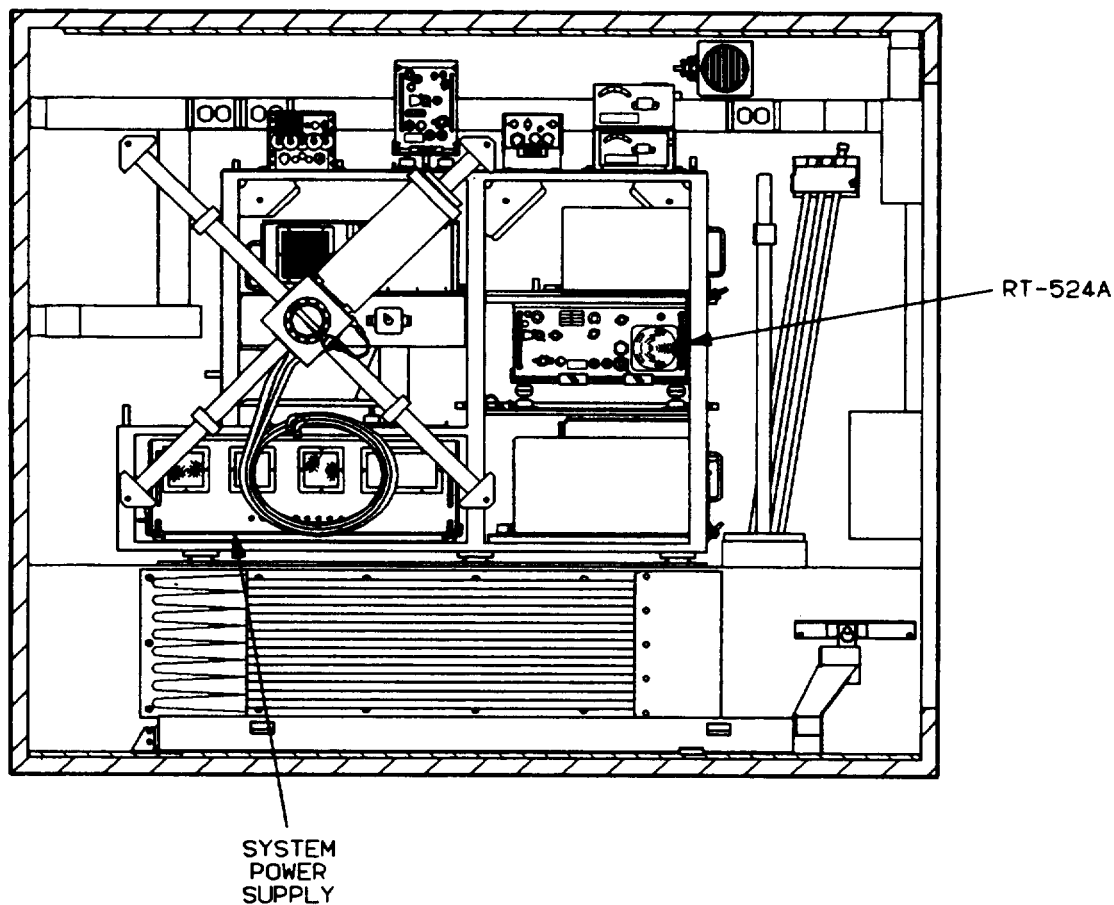


The J-3513/U interconnecting box is located underneath the RT-524A mount in equipment rack 4.

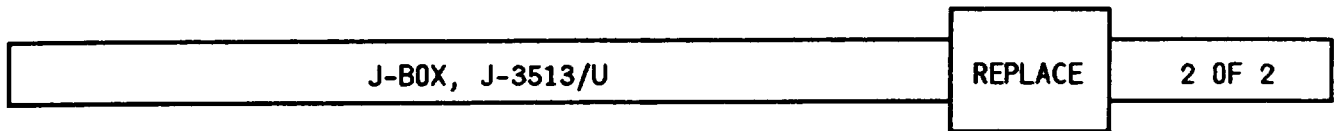
Tools Required: TK-101/G

Personnel Required: 1

Replace the J-3513/U interconnecting box as follows:



1. On DC power selection panel, place DC power selection switch to DEPLOYED position.
2. On system power supply, place SYS ON/OFF switch to OFF position.
3. On J-box adapter plate, remove four screws securing J-box mounting clamp plate. Remove the screws using a no. 1 cross-tip screwdriver.
4. Connect cable W44P2 to J4 on J-box.
5. Position J-box adapter plate underneath top section of RT-524A mount. Ensure that tabs on underside of RT-524A mount fit into slots in J-box adapter.



6. Position J-box mounting clamp plate onto top section of RT-524A mount and secure with four screws. Tighten screws using a no. 1 cross-tip screwdriver.
7. Lift front edge of RT-524A mount to access cables underneath.
8. On J-box, connect cables W43P2 to J7, W41P2 to J1, W48P1 to J2, W47P1 to J3, W44P2 to J4 and cable CX-13064/U to J6. Connect cable from J-box to J22 on RT-524A mount.
9. Position top section of RT-524A mount (with J-box adapter plate) onto shock mounts (in equipment rack 4) and secure with five hex head bolts and flat washers. Tighten screw using a no. 2 cross-tip screwdriver.
10. Connect ground strap to top section of RT-524A mount and secure with a screw and lockwasher. Tighten screw using a no. 2 cross-tip screwdriver.
11. Install RT-524A/VRC Receiver-Transmitter into mount in accordance with TM 11-5985-262-15.

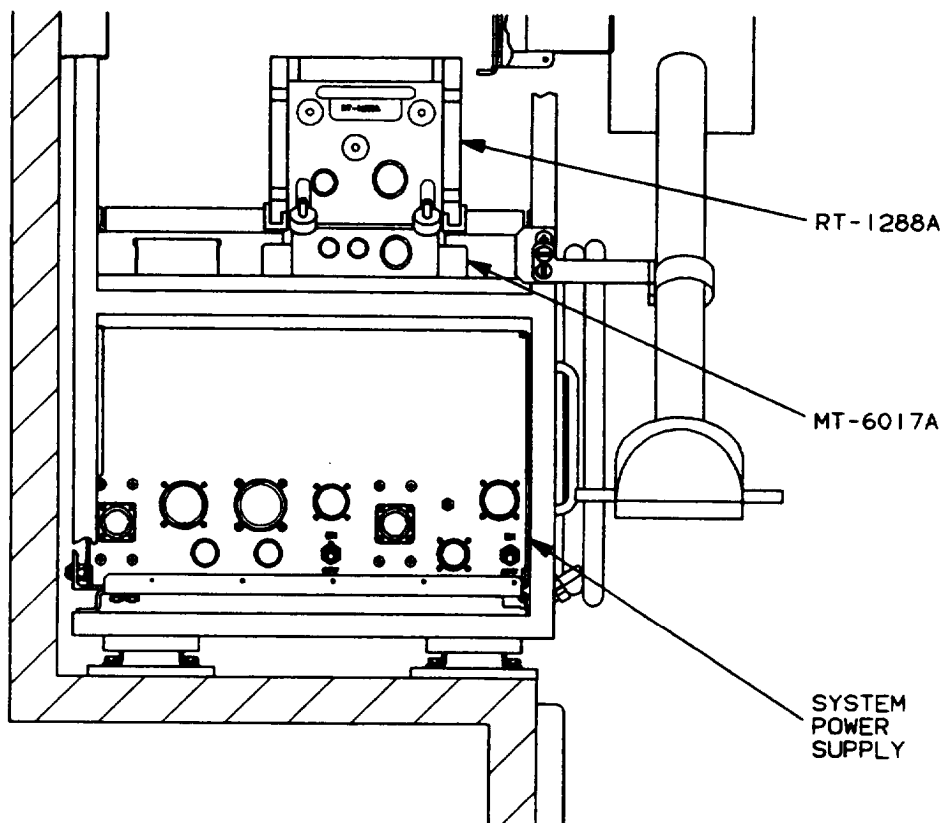
| | | |
|--------|--------|-----------------------------------|
| 1 OF 2 | REMOVE | MOUNTING BASE, MT-6017A/TRQ-32(V) |
|--------|--------|-----------------------------------|

The MT-6017A mounting base is located in equipment rack 4.

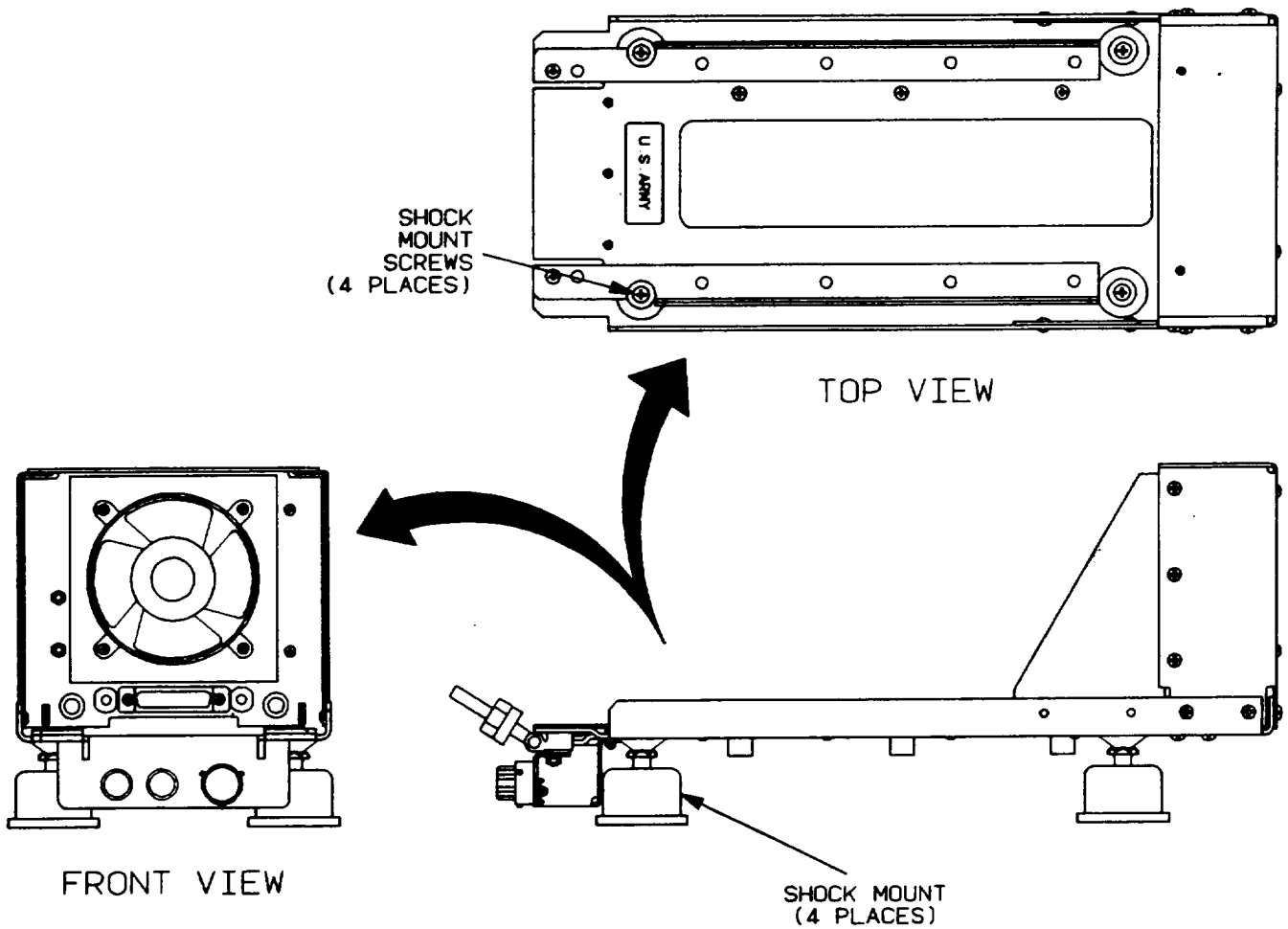
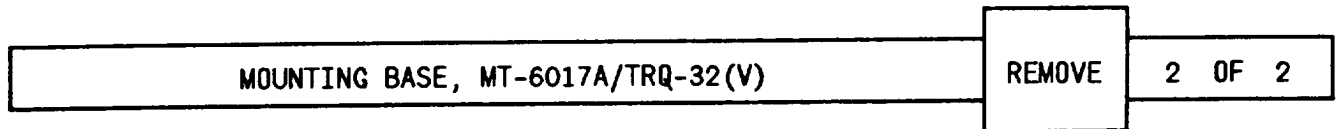
Tools Required: TK-101/G

Personnel Required: 1

Remove the MT-6017A mounting base as follows:



1. Remove RT-1288A Receiver-Transmitter from mounting base in accordance with UHF Receiver-Transmitter RT-1288A Remove procedure.
2. Remove system power supply from equipment rack 4 in accordance with System Power Supply Remove procedure.
3. At RT-1288A receiver-transmitter mounting base, using a no. 2 cross-tip screwdriver and 1/4" open-end wrench, remove and retain two screws, lockwashers and nuts securing two ground straps to equipment rack.



4. Using a no. 2 cross-tip screwdriver, remove and retain four screws and lockwashers securing RT-1288A receiver-transmitter mounting base to shock mounts. Remove mounting base from shock mounts.
5. Using a no. 2 cross-tip screwdriver and 5/16" open-end wrench, remove and retain sixteen screws, lockwashers, flat washers and nuts securing shock mount to equipment rack.
6. Install four shock mounts onto mounting base and secure with four screws and lockwashers. Tighten screws using a no. 2 cross-tip screwdriver.

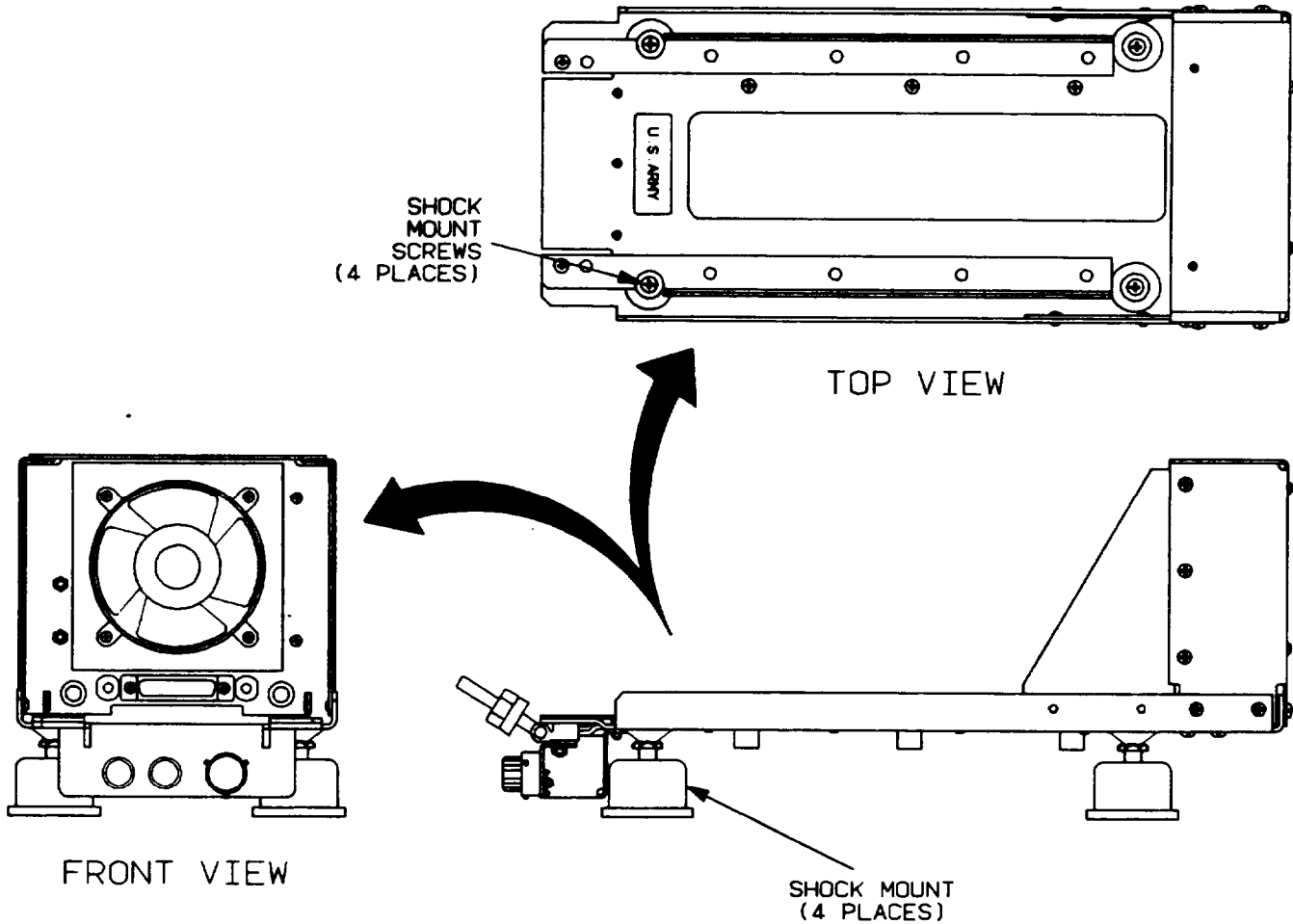


The MT-6017A Mounting Base is located in equipment rack 4.

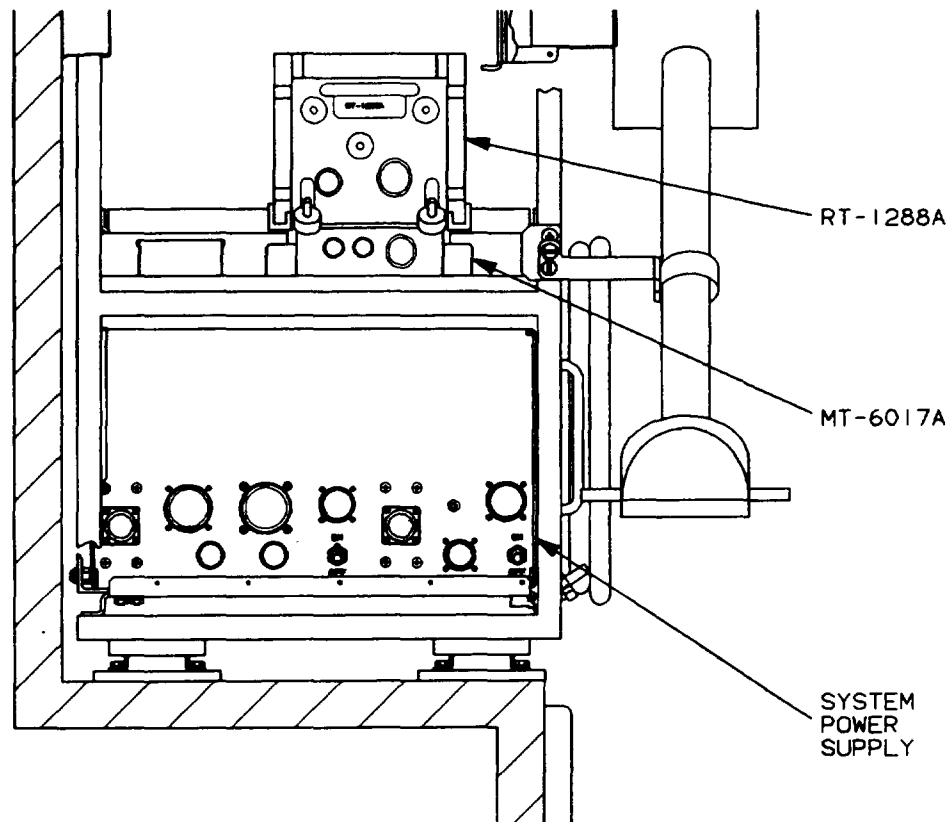
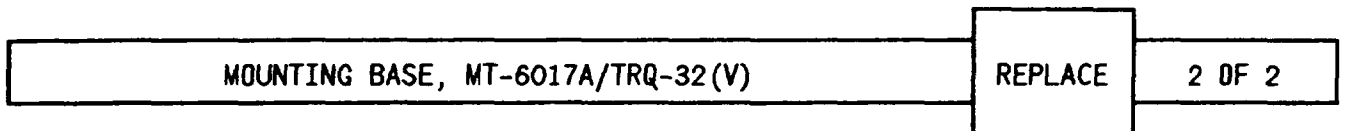
Tools Required: TK-101/G

Personnel Required: 1

Install the MT-6017A mounting base as follows:



1. On power distribution panel, place circuit breaker labeled RACK 4 to the OFF position.
2. Using a no. 2 cross-tip screwdriver, remove and retain four screws and lockwashers securing four shock mounts to mounting base.
3. In equipment rack 4, install four shock mounts onto rack and secure with sixteen screws, lockwashers, flat washers and nuts. Tighten the nuts using a no. 2 cross-tip screwdriver and 5/16" open-end wrench.
4. Position mounting base onto shock mounts and secure with four screws and lockwashers. Tighten screws using a no. 2 cross-tip screwdriver.



5. Connect two ground straps from mounting base to equipment rack with two screws, lockwashers and nuts. Tighten screws and nuts using a no. 2 cross-tip screwdriver and 1/4" open-end wrench.
6. Connect cable W95P1 to A20J2 on mounting base.
7. Install system power supply into equipment rack 4 in accordance with System Power Supply Replace procedure.
8. Install RT-1288A receiver-transmitter into mounting base in accordance with UHF Receiver-Transmitter RT-1288A Replace procedure.

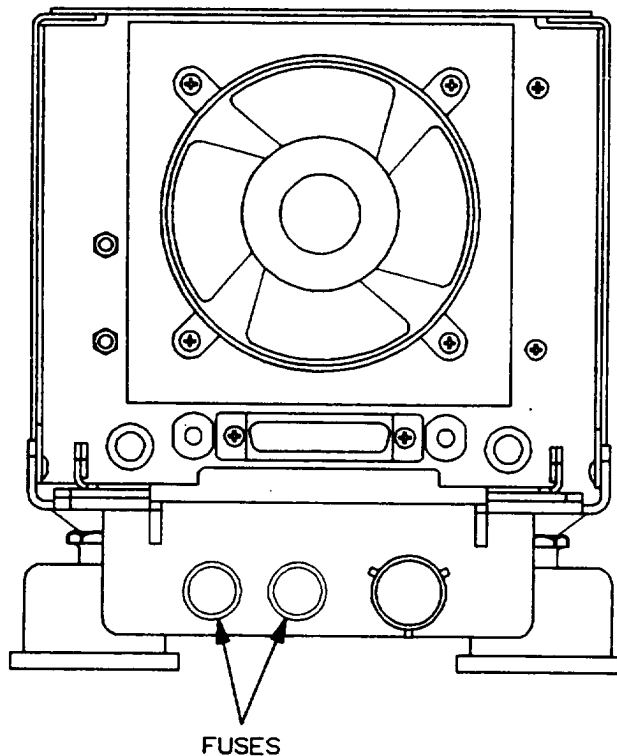


There are two fuses on the mounting base (F1 and F2). They are located at the front edge of the mounting base.

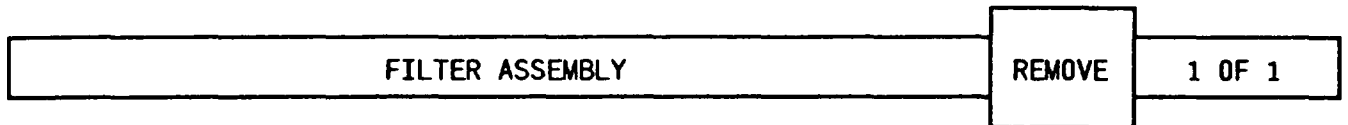
Tools required: NONE

Personnel Required: 1

Remove/replace the fuse (or fuses) as follows:



1. On system power supply, place XMTR and SYS ON/OFF switches to OFF position.
2. Push in and turn fuse cap counterclockwise to unlock from fuseholder housing. Remove fuse cap and fuse from fuseholder housing.
3. Remove defective fuse from fuse cap and install new fuse.
4. Position fuse cap and fuse into fuseholder housing and turn clockwise to secure.
5. On system power supply, place XMTR and SYS ON/OFF switches to ON position.

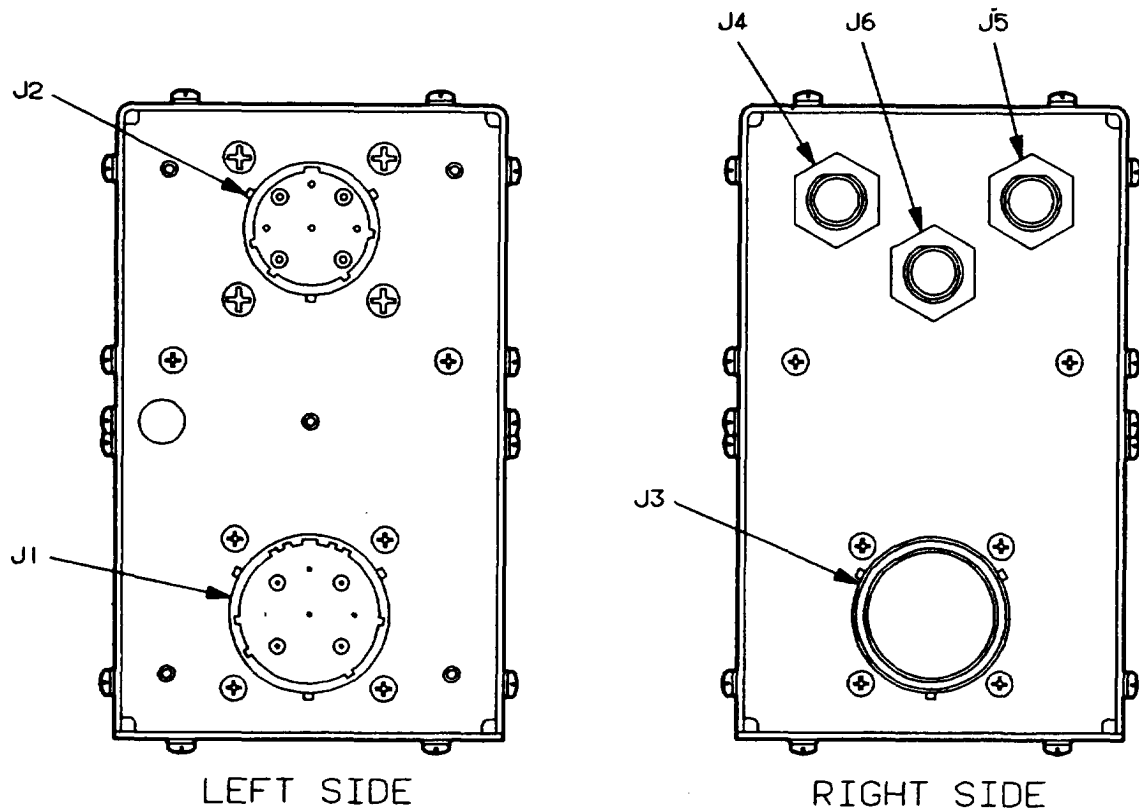


The filter assembly (A36) is located on the rear roadside corner of the shelter.

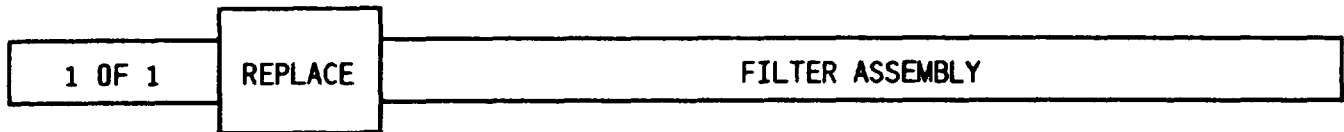
Tools Required: TK-105/G

Personnel Required: 1

Remove the filter assembly (A36) as follows:



1. On power distribution panel, place circuit breakers labeled RACK 1 AND 2 and RACK 2 AND 3 to OFF (down) position.
2. At roadside rear (inside) shelter, disconnect cables W12P40 from A36J3, W74P1 from A36J5, W73P1 from A36J4 and W1P1 from A36J6.
3. At roadside rear (outside) shelter, disconnect cables W22P1 from A36J1 and W22P2 from A36J5.
4. At roadside rear (outside) shelter, using a no. 2 cross-tip screwdriver, remove and retain five machine screws, lockwashers and flat washers securing filter assembly to inside wall of shelter.
5. Remove filter assembly from shelter.

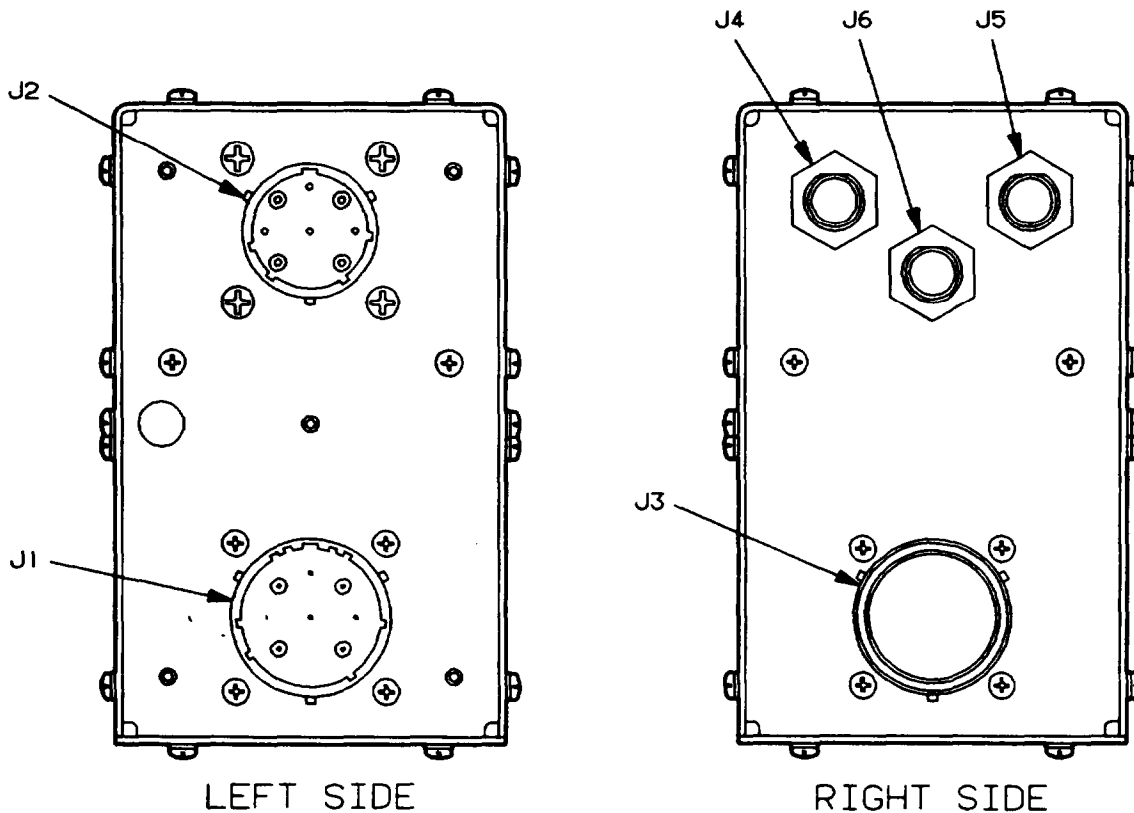


The filter assembly (A36) is located on the rear roadside corner of the shelter.

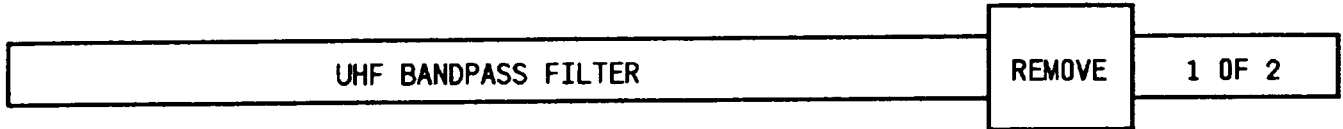
Tools Required: TK-105/G

Personnel Required: 1

Replace the filter assembly (A36) as follows:



1. On power distribution panel, place circuit breakers labeled RACK 1 AND 2 and RACK 2 AND 3 to OFF (down) position.
2. At rear roadside (inside) shelter, position filter assembly onto shelter wall. Outside of shelter, install five machine screws (with lockwashers and flat washers), through shelter wall and into filter assembly. Tighten screws using a no. 2 cross-tip screwdriver.
3. At roadside rear (inside) shelter, connect cables W12P40 to A36J3, W74P1 to A36J5, W73P1 to A36J4 and W1P1 to A36J6.
4. At roadside rear (inside) shelter, connect cables W22P1 to A36J1 and W22P2 to A36J5.
5. On power distribution panel, place circuit breakers labeled RACK 1 AND 2 and RACK 2 AND 3 to ON (up) position.

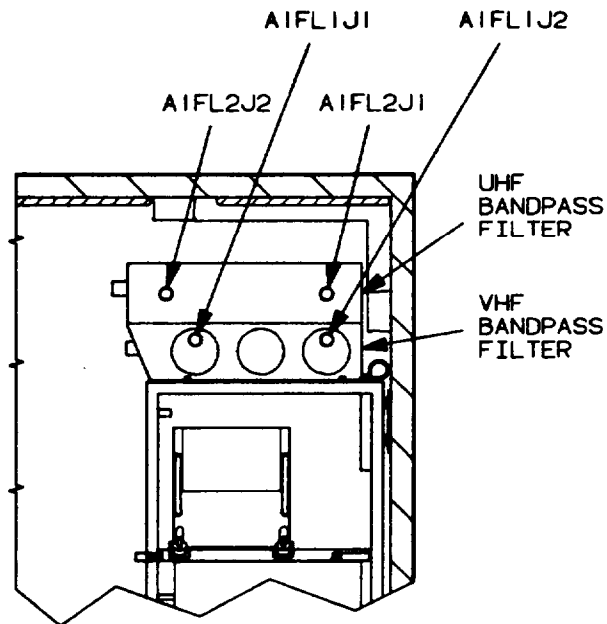


The UHF tunable bandpass filter (A1FL2) is located in equipment rack 4.

Tools Required: TK-105/G

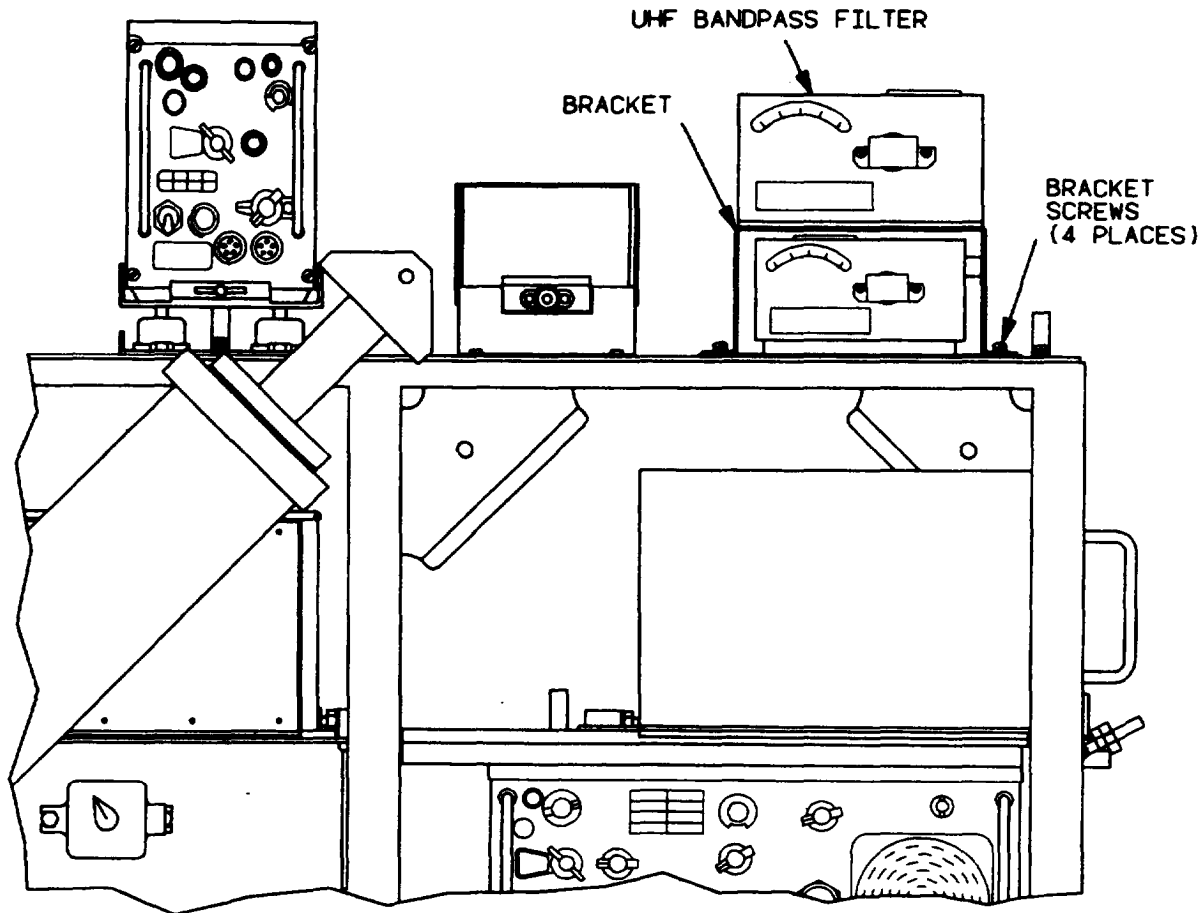
Personnel Required: 1

Remove the UHF tunable bandpass filter (A1FL2) as follows:

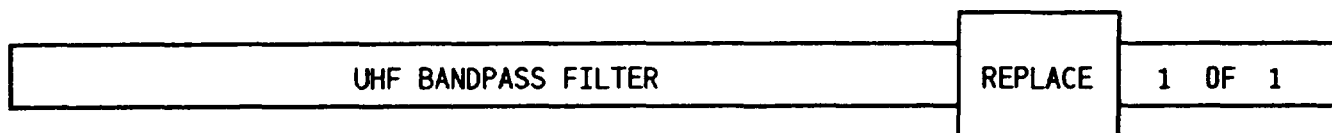


SIDE VIEW OF RACK 4

1. On system power supply, place XMTR ON/OFF switch to OFF position.
2. At right side of UHF tunable bandpass filter, disconnect cables W96P1 from J1 and W1P2 from J2.
3. At right side of VHF tunable bandpass filter, disconnect cables W7P2 from J1 and W5P2 from J2.



4. Using a no. 2 cross-tip screwdriver, remove and retain four screws, lockwashers and flat washers securing UHF tunable bandpass filter mounting bracket to equipment rack.
5. Slide mounting bracket and UHF tunable bandpass filter right until clear of VHF bandpass filter connectors.
6. Pull UHF tunable bandpass filter and mounting bracket forward and remove from equipment rack.
7. Using a no. 2 cross-tip screwdriver, remove and retain six screws, lockwashers, and flat washers securing mounting bracket to bottom of UHF tunable bandpass filter.
8. Remove and retain the UHF tunable bandpass filter mounting bracket.

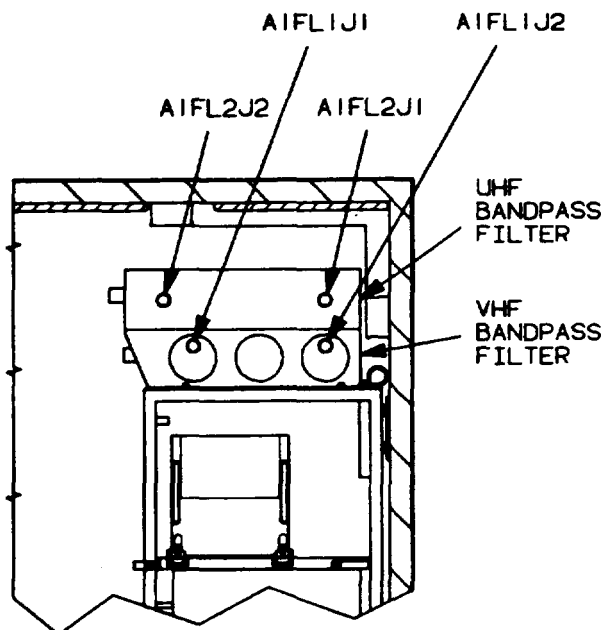


The UHF tunable bandpass filter (A1FL2) is located in equipment rack 4.

Tools Required: TK-105/G

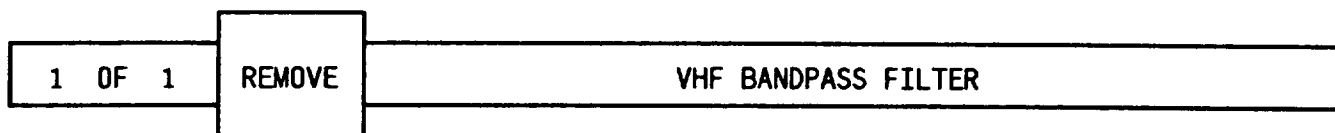
Personnel Required: 1

Replace the UHF tunable bandpass filter (A1FL2) as follows:



SIDE VIEW OF RACK 4

1. On system power supply, place XMTR ON/OFF switch to OFF position.
2. Position mounting bracket onto UHF tunable bandpass filter and secure with six screws, lockwashers and flat washers. Tighten screws using a no. 2 cross-tip screwdriver.
3. Position UHF tunable bandpass filter and mounting bracket over the VHF tunable bandpass filter. Use care not to damage threads on connectors of VHF tunable bandpass filter.
4. Secure UHF tunable bandpass filter to equipment rack with four screws, lockwashers and flat washers. Tighten screws using a no. 2 cross-tip screwdriver.
5. On right side of VHF tunable bandpass filter, connect cables W7P2 to J1 and W5P2 to J2. On right side of UHF tunable bandpass filter, connect cables W1P2 to J2 and W96P1 to J1.
6. On system power supply, place XMTR ON/OFF switch to ON position.

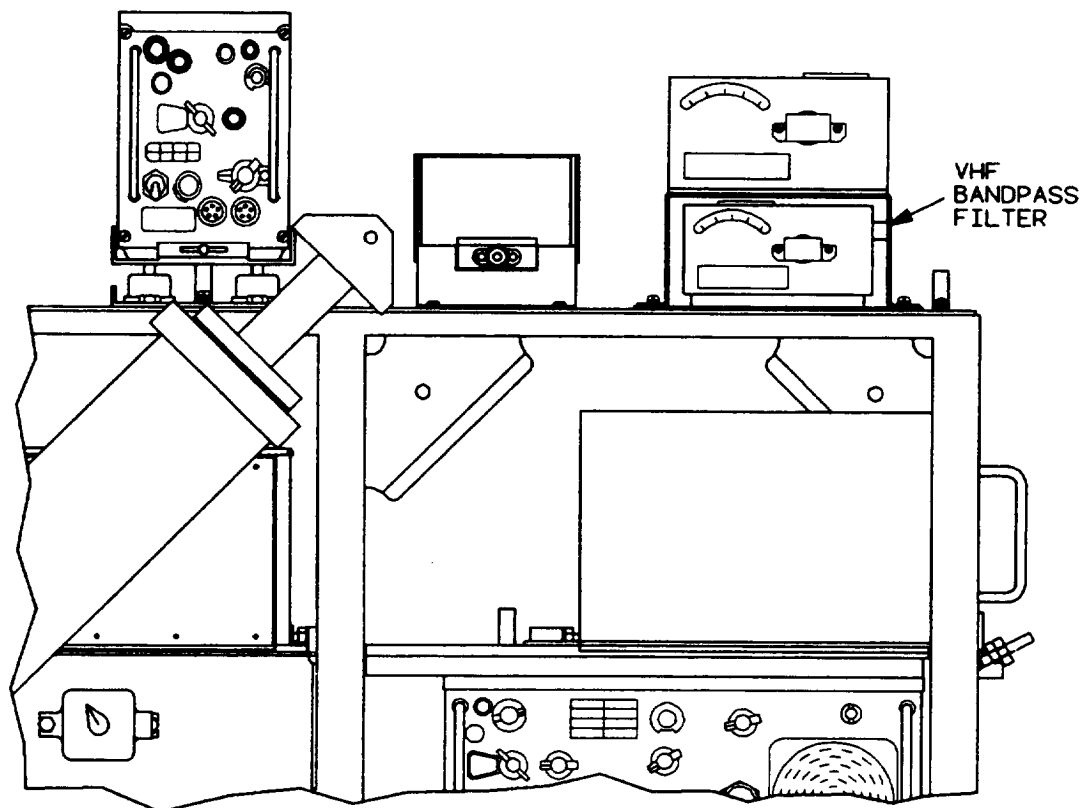


The VHF tunable bandpass filter (A1FL1) is located in equipment rack 4.

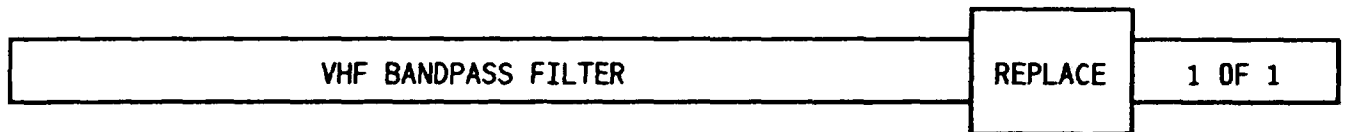
Tools Required: TK-105/G

Personnel Required: 1

Remove the VHF tunable bandpass filter (A1FL1) as follows:



1. On RT-524A, place rotary POWER switch to the OFF position.
2. Remove TSEC/KG-84 (TSEC/KG-84A) from equipment rack in accordance with procedures in TM 32-5895-070-10.
3. At right side of VHF tunable bandpass filter, disconnect cable W7P2 from J1 and W5P2 from J2.
4. On rack shelf underneath VHF tunable bandpass filter, using no. 2 cross-tip screwdriver, remove and retain four screws, lockwashers, and flat washers securing VHF tunable bandpass filter to equipment rack.
5. Slide VHF tunable bandpass filter left until connectors on right side of filter will clear mounting bracket of UHF tunable bandpass filter.
6. Pull VHF tunable bandpass filter forward and remove from equipment rack. Use care not to damage connector threads on right side of filter.



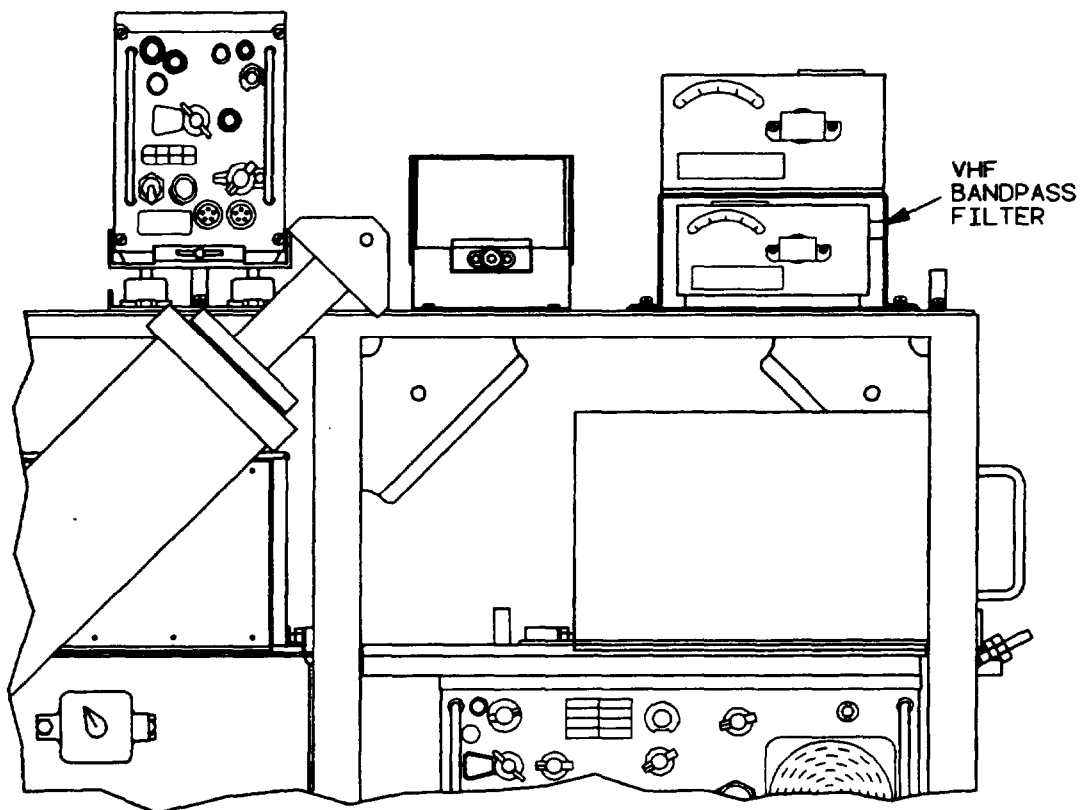
The VHF tunable bandpass filter (A1FL1) is located in equipment rack 4.

Tools Required: TK-105/G

Personnel Required: 1

Replace the VHF tunable bandpass filter as follows:

1. On RT-524A, place rotary POWER switch to OFF position.



2. Position VHF tunable bandpass filter into equipment rack and secure with four screws, lockwashers, and flat washers. Tighten screws using no.2 cross-tip screwdriver.
3. At right side of VHF tunable bandpass filter, connect cables W7P2 to J1 and W5P2 to J2.
4. Install TSEC/KG-84 into equipment rack in accordance with procedures in TM 32-5895-070-10.
5. On RT-524A, place rotary POWER switch to LOW position.



The guard receiver mount (A22A6) is located in equipment rack 4.

Tools Required: TK-101/G

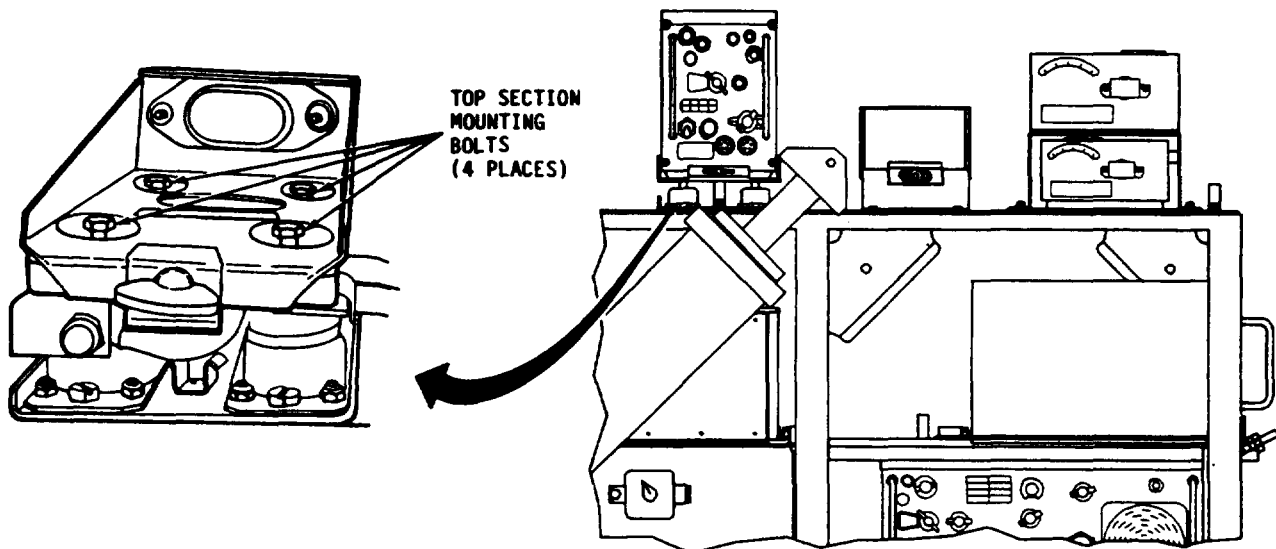
Personnel Required: 1

Remove the guard receiver mount as follows:

WARNING

Ensure power is removed prior to starting removal procedure.

1. On power distribution panel, place DC power selection switch to DEPLOYED position.
2. On system power supply, place switches SYS ON/OFF and XMTR ON/OFF to OFF position.
3. Remove guard receiver in accordance with Guard Receiver Remove procedure.

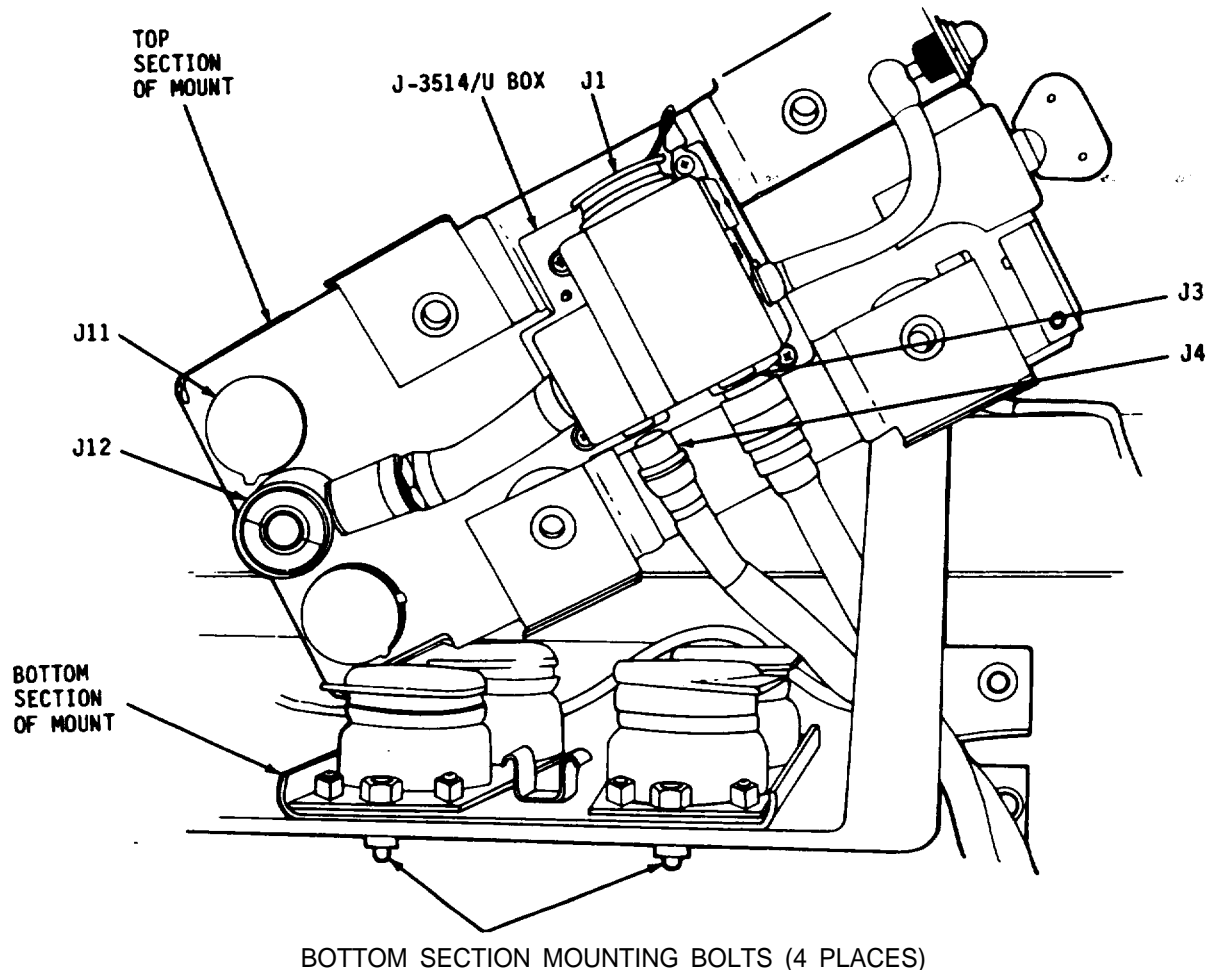


4. Using a ratchet handle, 3" extension and 1/2" socket, remove and retain four hex head-bolts and flat washers securing top section of mount to bottom section of mount.
5. Using a no.2 cross-tip screwdriver, remove and retain the screw and lockwasher securing ground strap to top section of mount.

GUARD RECEIVER MOUNT, MT-1898/VRC

REMOVE

2 OF 2



6. Underneath top section of mount, disconnect cable W46P1 from J11 and J-Box cable from J12. Lift off top section of mount to access cables underneath.
7. On J-3514/U J-Box, disconnect cables W12P2 from J1, W44P1 from J3, and W45P1 from J4.
8. Remove and retain J-3514/U J-Box.
9. Using a ratchet handle, 3" extension, 1/2" socket and 1/2" box-end wrench, remove and retain four hex head bolts and lockwashers securing bottom section of mount to rack.
10. Remove bottom section of mount from equipment rack.
11. Place top section of mount onto bottom section of mount and secure with four hex head bolts and flat washers. Tighten bolts using a ratchet handle, 3" extension and 1/2" socket.

The guard receiver mount (A22A6) is located in equipment rack 4,

Tools Required: TK-101/G

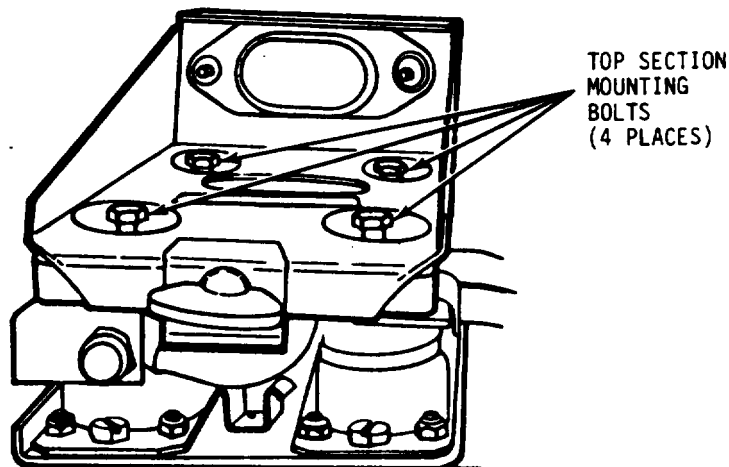
Personnel Required: 1

Replace the guard receiver mount as follows:

WARNING

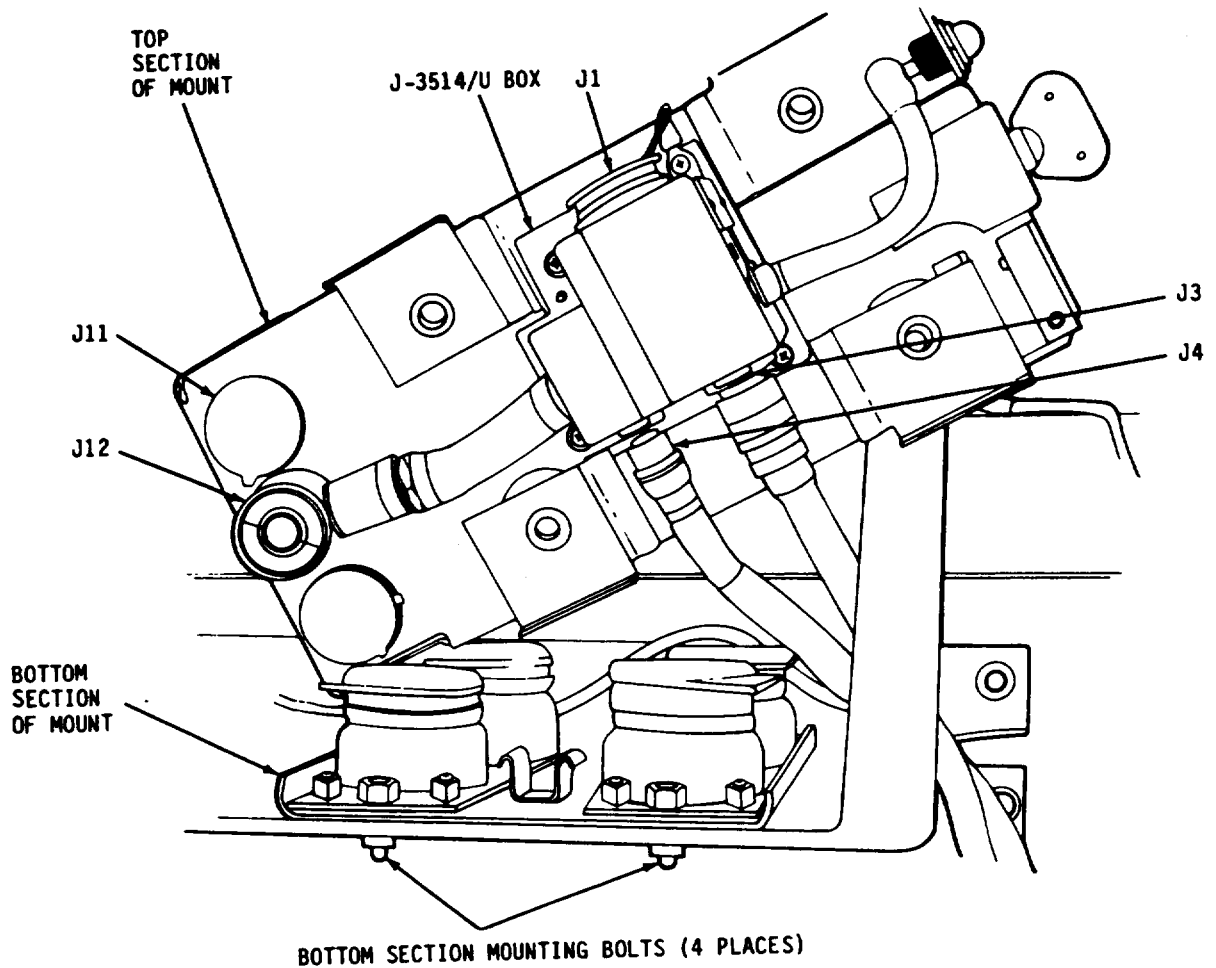
Ensure power is removed prior to starting replacement procedure.

1. On power distribution panel, place DC power selection switch to DEPLOYED position.
2. On system power supply, place switches SYS ON/OFF and XMTR ON/OFF to OFF position.



3. Using a ratchet handle, 3" extension, 1/2" box-end wrench, remove and retain four hex head bolts and flat washers securing top section of mount to bottom section of mount.
4. Using a no.2 cross-tip screwdriver, remove and retain the screw and lockwasher securing ground strap to top section of mount.

| | | |
|-----------------------------------|---------|--------|
| GUARD RECEIVER MOUNT, MT-1898/VRC | REPLACE | 2 OF 3 |
|-----------------------------------|---------|--------|

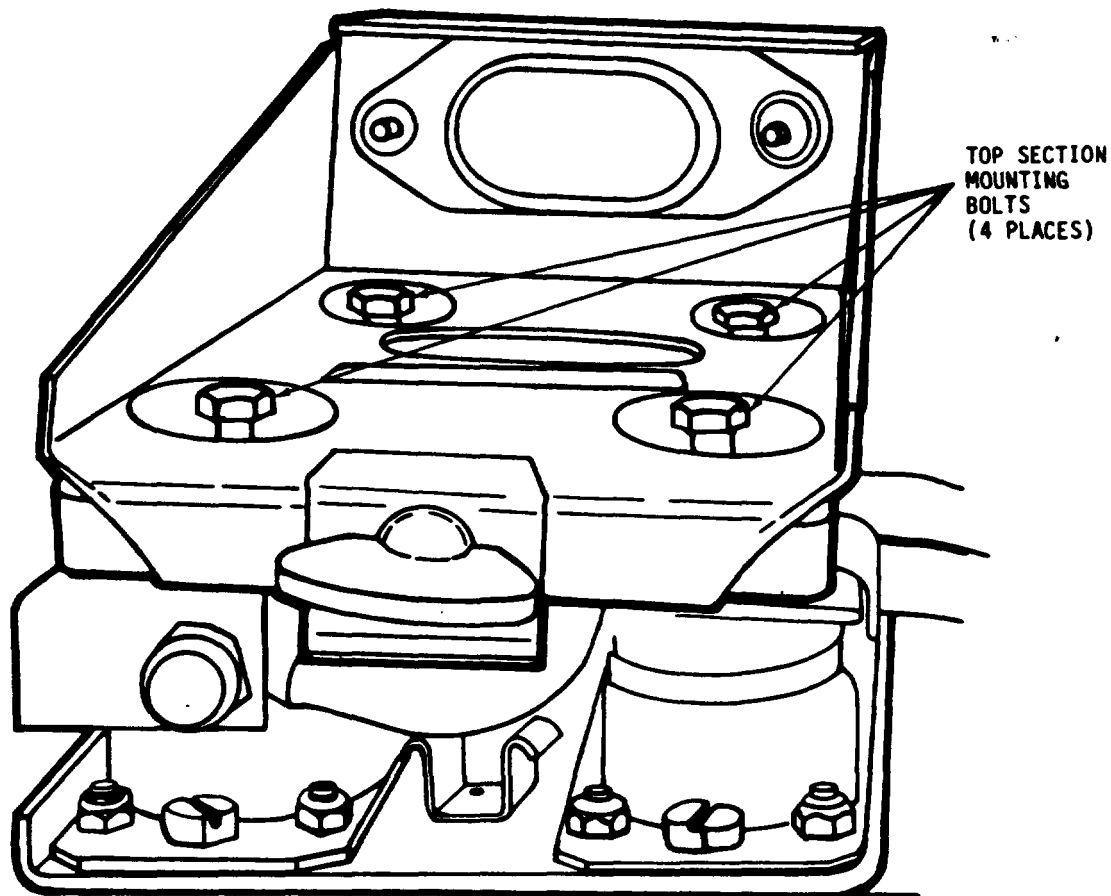


5. Lift off top section of mount.
6. Position bottom section of mount onto rack and secure with four hex head bolts and lockwashers. Tighten bolts using a ratchet handle, 3" extension, 1/2" socket and 1/2" box-end wrench.
7. On J-3514/U J-Box, connect cables W44P1 to J3, W45P1 to J4 and W12P2 to J1.
8. Position J-3514/U J-Box mounting underneath top section of mount.

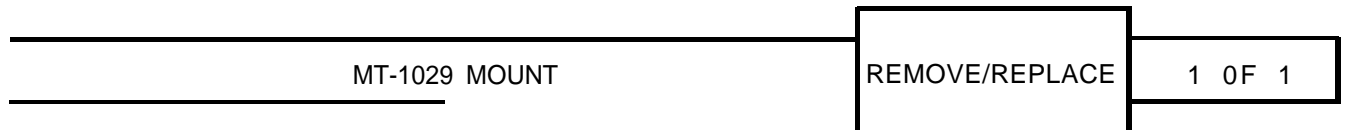
3 OF 3

REPLACE

GUARD RECEIVER MOUNT, MT-1898/VRC



9. Underneath top section of mount, connect J-Box cable to J12 and cable W46P1 to J11.
10. Position top section of mount (with J-8ox) onto bottom section of mount and secure with four hex head mounting bolts and flat washers. Tighten bolts using a ratchet handle, 3" extension, 1/2" socket.
11. Secure ground strap to top section of mount with a screw and lockwasher. Tighten screw using a no.2 cross-tip screwdriver.
12. Replace guard receiver in accordance with Guard Receiver Replace procedure.



The MT-1029 mount is located in equipment rack 4.

Refer to TM 11-5820-401-12 for removal and replacement procedures of R/T mount, MT-1029/VRC.

| | | |
|---------|----------------|----------------------------|
| 1 O F 1 | REMOVE/REPLACE | GUARD RECEIVER, R-442A/VRC |
|---------|----------------|----------------------------|

The R-442A guard receiver (A22A4) is located in equipment rack 4.

Refer to TM 11-5895-262-15 for removal and replacement procedures of Guard Receiver, R-442A/VRC.

GUARD RECEIVER LAMP

REMOVE/REPLACE

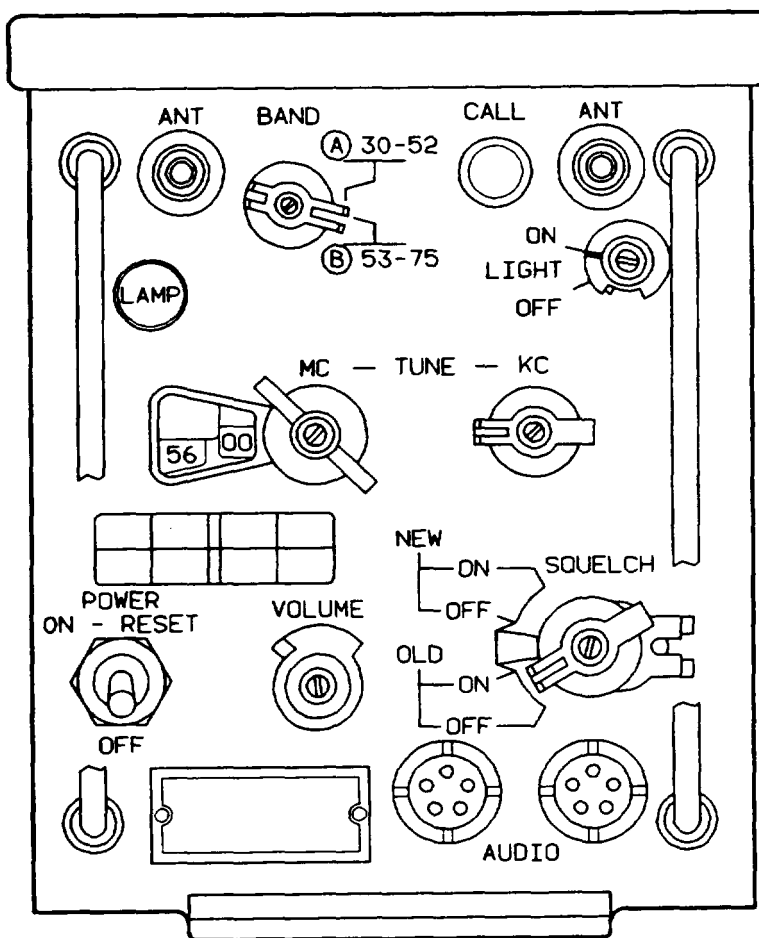
1 OF 1

There are two lamps on the Guard Receiver (panel illumination and call lamp).

Tools Required: NONE

Personnel Required: 1

Remove/replace the lamps as follows:



1. On guard receiver, place POWER ON/OFF switch to OFF (down) position.
2. Turn lamp cap (call lens lampholder) counterclockwise to unscrew from housing.
3. Pull defective lamp and o-ring from lens cap (call lens lampholder) and install new lamp.
4. Place lamp cap (call lens lampholder) and lamp into lampholder housing and turn clockwise to secure.
5. On guard receiver, place POWER ON/OFF switch to ON position.

| | | |
|--------|----------------|-----------------------------------------|
| 1 OF 1 | REMOVE/REPLACE | RADIO RECEIVER-TRANSMITTER, RT-524A/VRC |
|--------|----------------|-----------------------------------------|

The RT-524A receiver-transmitter is located in equipment rack 4.

Refer to TM 11-5895-262-15 for removal and replacement procedures for the radio receiver-transmitter, RT-524A/VRC.

RADIO RECEIVER-TRANSMIWER (RT-524A) LAMP

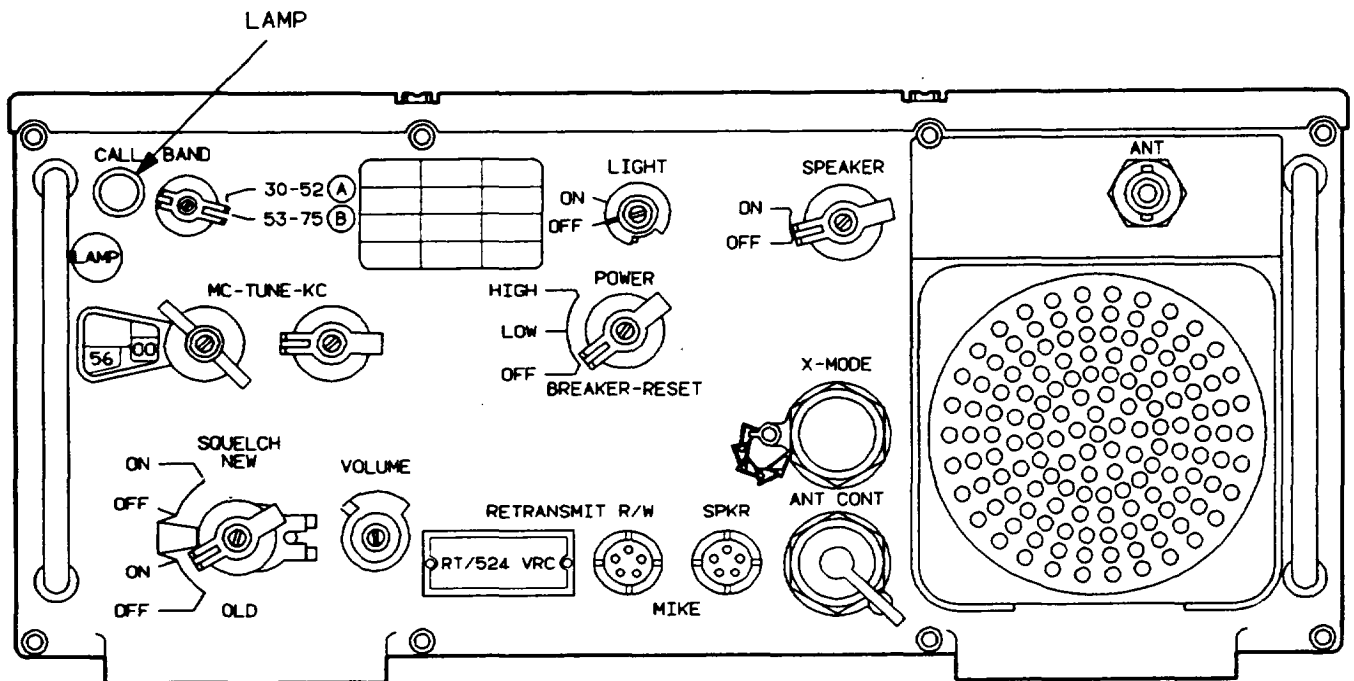
REMOVE/REPLACE

There are two lamps in the receiver-transmitter: The panel illumination lamp, and the call lamp.

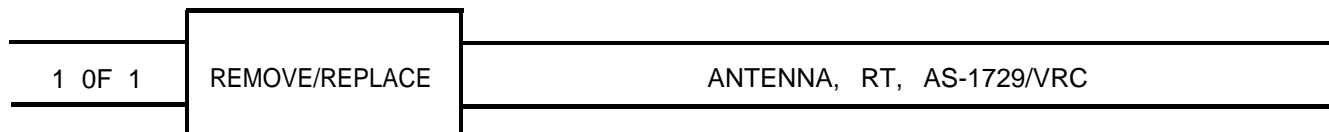
Tools Required: NONE

Personnel Required: 1

Remove/replace the receiver-transmitter lamps as follows:



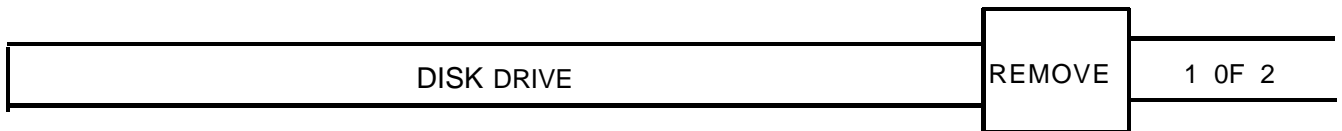
6. On receiver-transmitter, place rotary POWER switch to OFF position.
7. Turn lamp cap (call lens lampholder) counterclockwise to unscrew from lampholder housing.
8. Pull defective lamp out of lens cap (call lens lampholder) and install new lamp.
9. Position lamp cap (call lens lampholder) and lamp into lampholder housing and turn clockwise to secure.
10. On receiver-transmitter, place rotary POWER switch to LOW position.



Refer to TM 11-5820-401-12 for removal and replacement procedures of the antenna, RT, AS-1729/VRC.

NOTE

The antenna cable (W68P2) and control cable (W64P2) connecting the MX-6707/VRC matching element of the AS-1729/VRC antenna to the power entry panel should be stored when not in use.



The disk drive is located in equipment rack 4.

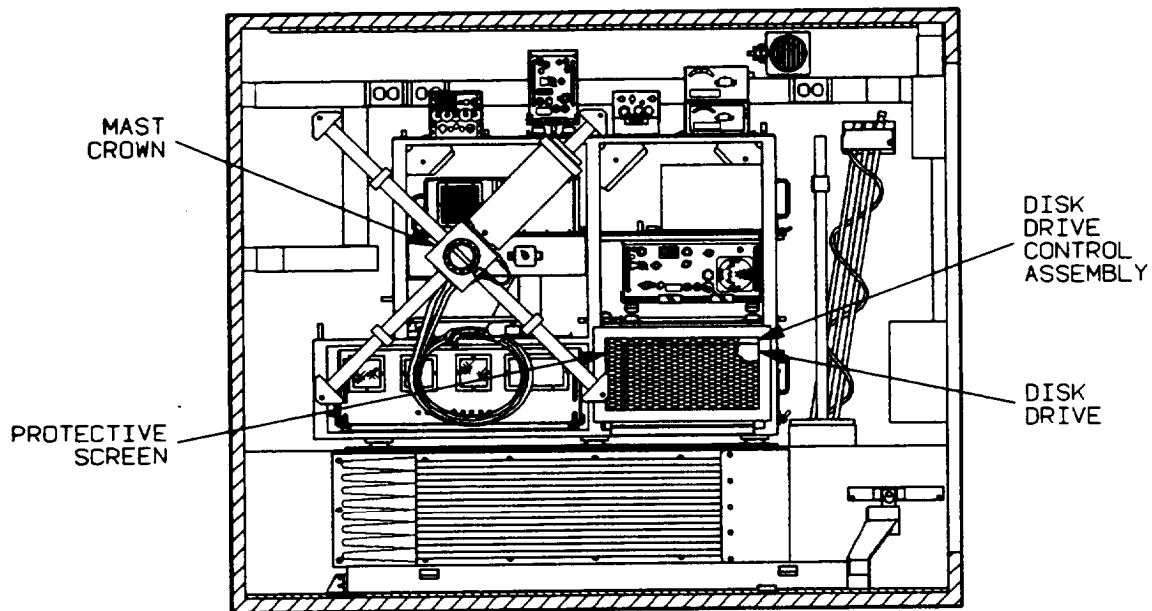
Tools Required: TK-105/G

Personnel Required: 1

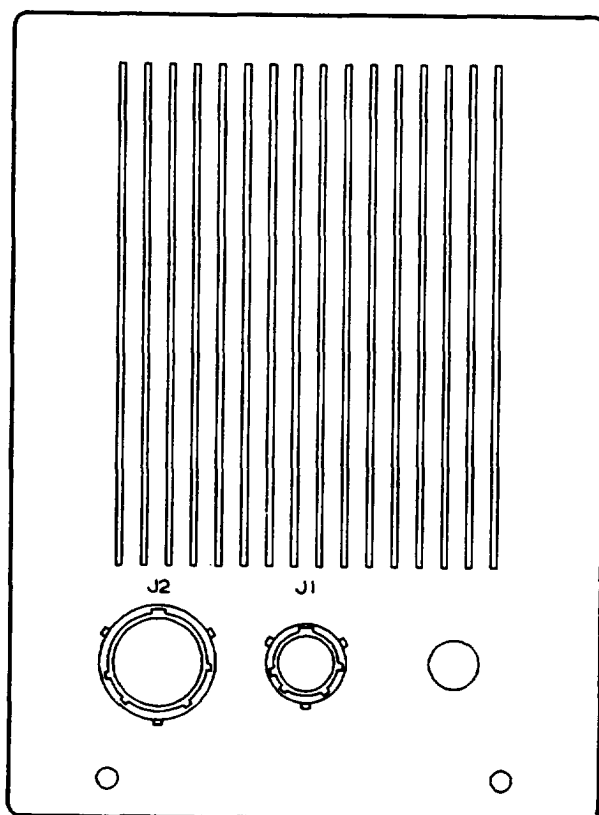
Remove disk drive as follows:

CAUTION

Before removing power to disk drive control assembly, verify yellow SELECT light on disk drive is not lit.



1. On front panel of disk drive control assembly, place power ON/OFF switch to OFF position.
2. On power distribution panel, place RACK 4 circuit breaker to OFF position.
3. Remove mast crown from equipment rack 4, if in stored position.
4. Using a 1/4" flat-tip screwdriver, unlock two captive turnlock fasteners securing protective screen of disk drive to equipment rack.



5. On front panel of disk drive, loosen and release two clamp bolt assemblies securing disk drive to equipment rack. Slide disk drive to the right until clear of guide pins.
6. At rear panel of disk drive, disconnect cables W81P2 from A40J1 and W98P2 from A40J2.
7. Pull rear of disk drive toward front of equipment rack and remove.

DISK DRIVE

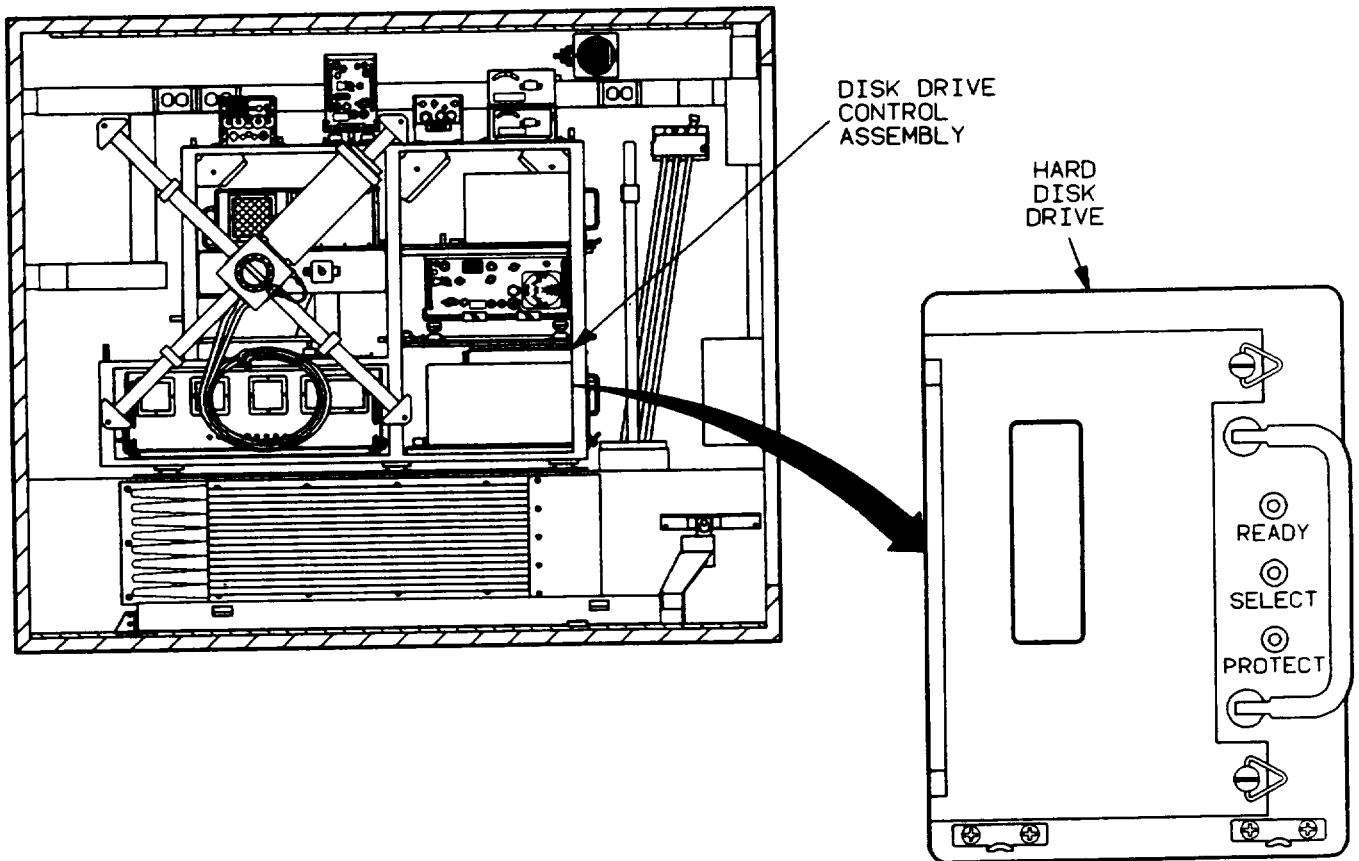
REPLACE 1 OF 2

The disk drive is located in equipment rack 4.

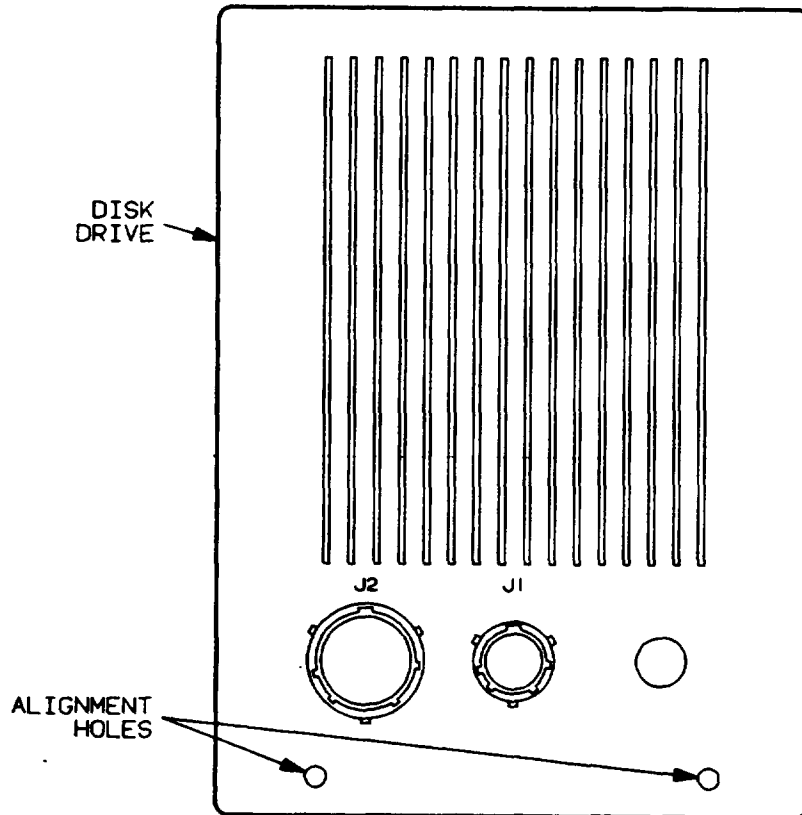
Tools Required: TK-105/G

Personnel Required: 1

Replace the disk drive as follows:



1. On power distribution panel, place circuit breaker labeled RACK 4 to OFF position.
2. On front panel of disk drive control assembly, place power ON/OFF switch to OFF position.
3. Slide disk drive into equipment rack, with front panel inserted first.



4. Slide disk drive back into guide pins of equipment rack mount.
5. At rear of disk drive, connect cables W98P2 to A40J2 and W81P2 to A40J1.
6. Secure clamp bolt assemblies over support hooks at bottom of disk drive front panel and tighten.
7. Secure protective screen to equipment rack with two turnlock fasteners. Using a 1/4" flat-tip screwdriver, tighten turnlock fasteners.
8. On power distribution panel, place circuit breaker labeled RACK 4 to ON position.
9. On disk drive control assembly, place power ON/OFF switch to ON position.

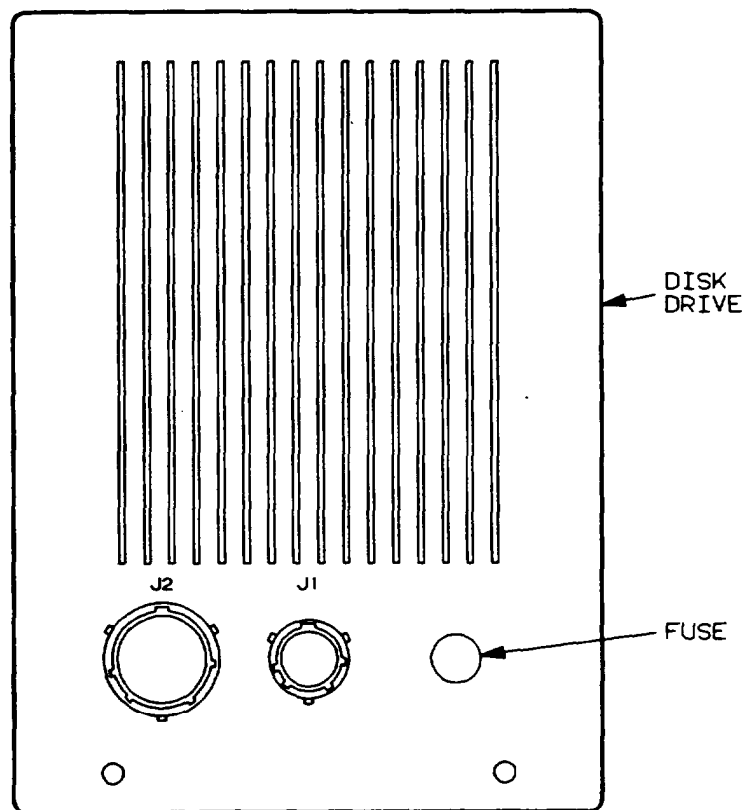
| | | |
|-----------------|----------------|--------|
| DISK DRIVE FUSE | REPLACE/REMOVE | 1 OF 2 |
|-----------------|----------------|--------|

The disk drive fuse is located on rear panel of unit.

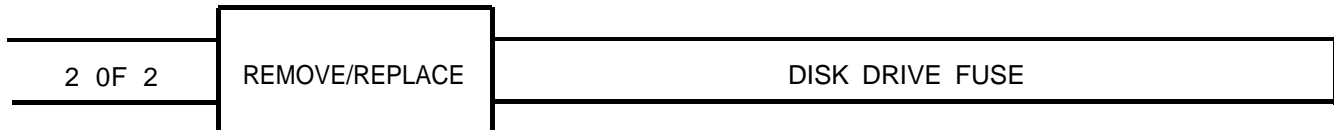
Tools Required: TK-101/G

Personnel Required: 1

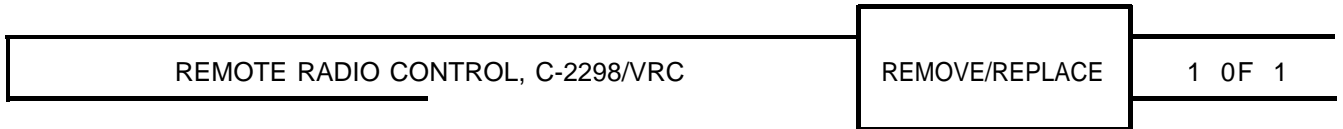
Remove the disk drive fuse as follows:



1. On disk drive control, place power ON/OFF switch to OFF position.
2. Next to disk drive, using a 1/4" flat-tip screwdriver, unlock two turnlock fasteners securing protective screen to equipment rack.
3. On rear panel of disk drive, push in on fuse cap and turn counterclockwise to unlock fuse cap from fuseholder housing.



4. Remove fuse cap and fuse from fuseholder housing.
5. Remove defective fuse from fuse cap and install new fuse.
6. Position fuse cap and fuse into fuseholder housing. Push fuse cap and turn clockwise to secure.
7. On disk drive control, place power ON/OFF switch to ON position.
8. Secure protective screen with two turnlock fasteners. Using a 1/4" flat-tip screwdriver, lock turnlock fasteners.



The remote radio control is located on the dashboard inside the vehicle cab.

Remove and replace the remote radio control in accordance with procedures in TM 11-5820-401-12.

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

| | <u>PAGE</u> |
|--------------------------------------------------------------------|-------------|
| Repair Parts, Special Tools, TMDE, and Support Equipment | 3-1 |
| Troubleshooting | 3-2 |
| Removal and Replacement Procedures | 3-2 |

SECTION I.

**REPAIR PARTS, SPECIAL TOOLS, TMDE, AND
SUPPORT EQUIPMENT**

This chapter contains maintenance instructions required to service and maintain your AN/TRQ-32(V)1 or AN/TRQ-32(V)2. The maintenance instructions are supported by common tools and equipment, special tools, repair parts list, and troubleshooting information. -The maintenance progresses from operational tests performed to locate a faulty unit through replacement of the faulty item.

TOOLS AND EQUIPMENT REQUIRED.

For authorized common tools and equipment refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

At Direct Support level maintenance, no special tools or support equipment are required for maintenance of the AN/TRQ-32(V)1 or AN/TRQ-32(V)2.

DIRECT SUPPORT REPAIR PARTS.

Repair parts are listed and illustrated in Appendix C (RPSTL) of this manual.

Section II.

TROUBLESHOOTING

There is no Direct Support (DS) Maintenance Level troubleshooting for the AN/TRQ-32(V)1 or AN/TRQ-32(V)2 system. All troubleshooting is accomplished at the Organizational Maintenance Level.

Section III.

REMOVAL AND REPLACEMENT

INTRODUCTION.

To facilitate maintenance of Radio Receiving Sets AN/TRQ-32(V)1 and AN/TRQ-32(V)2, removal and replacement procedures are provided.

Upon completion of replacement action, functional tests and checks shall be performed to ensure proper operation of the replaced component and its related system.

WARNING

High Voltage is used in the operation of this equipment. DEATH ON CONTACT may result if personnel fail to observe safety precautions. Learn the areas containing high voltage in each piece of equipment. Be careful not to make contact with high-voltage connections when installing or operating this equipment. Before working inside the equipment, turn power off and ground points of high potential before touching them.

NOTE

The antenna base assembly and mast crown assembly are a matched set. If either unit fails, both units must be replaced together.

| <u>UNIT</u> | <u>LOCATION</u> | <u>PAGE</u> |
|--------------------------------------------|--------------------------|-------------|
| ANTENNA GROUP ASSEMBLY OE-356/TRQ-32(V) | ON SHELTER - REAR | 3-3 |
| ANTENNA POWER SUPPLY, TL-3129 | IN ANTENNA BASE ASSEMBLY | 3-25 |
| MAGNETIC FIELD CONVERTER, CV-3579/TSQ | IN MAST CROWN | 3-15 |

ANTENNA GROUP ASSEMBLY

REMOVE

1 OF 6

The antenna group assembly is located on the pneumatic mast assembly on the rear roadside of the shelter.

Tools Required: TK-100/G
TK-101/G
TK-105/G

Personnel Required: 2

The antenna group comprises the following equipment:

- a. Base assembly
- b. Mast crown assembly

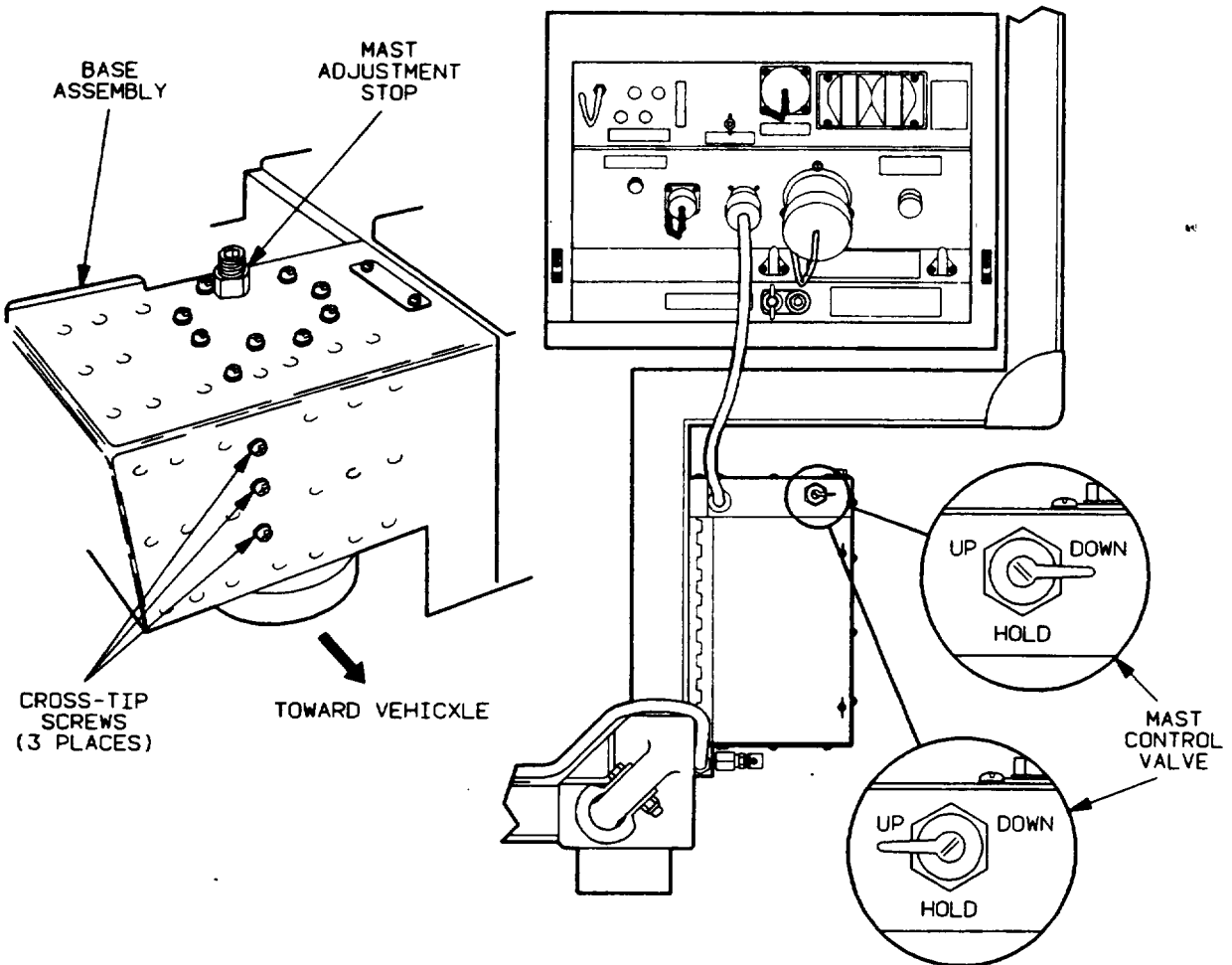
To remove the antenna group previously listed, it is necessary to remove and retain the following equipment for reinstallation with new antenna group.

- a. Reductor assembly
- b. RF processor assembly
- c. Antenna power supply
- d. Antenna elements
- e. UHF intercept antenna
- f. Magnetic field converter
- g. Mast tube
- h. Mast adjustment stop
- i. Reductor mounting plate

Remove the antenna group assembly as follows:

1. Remove and retain eight antenna elements from mast crown assembly. Refer to Operators Manual, TM 32-5895-070-10.
2. Remove and retain UHF intercept antenna. Refer to Operators Manual, TM 32-5895-070-10.
3. Remove and retain mast crown assembly. Refer to Operators Manual, TM 32-5895-070-10.
4. Remove and retain magnetic field converter from mast crown assembly in accordance with magnetic field converter procedure as described in this chapter.

2 OF 6 REMOVE ANTENNA GROUP ASSEMBLY

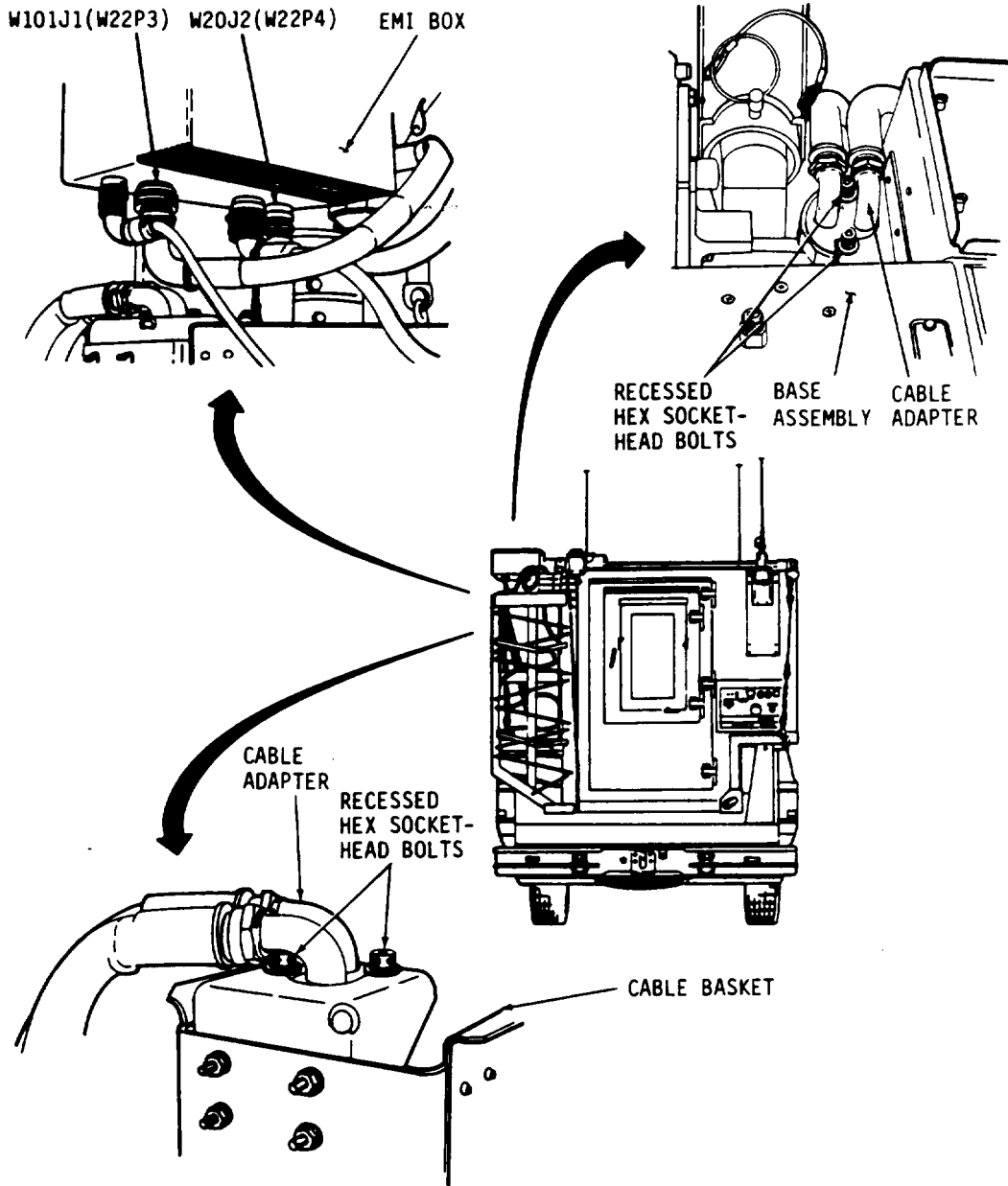


5. Remove and retain mast tube. Refer to Operators Manual, TM 32-5895-070-10.
6. Place mast control valve on compressor assembly in the UP position and raise pneumatic mast approximately one foot above shelter roof.
7. Place mast control valve in the HOLD position.
8. Using no.2 cross-tip screwdriver, remove three screws, lockwashers and flat washers from front side (toward cab) of base adapter.
9. Place mast control valve on compressor assembly in the DOWN position and lower pneumatic mast to rest position.
10. On power distribution panel, place RACK 1 AND 2 circuit breaker to OFF (down) position.
11. On system power supply, place SYS and XMTR ON/OFF switches to OFF (down) position.

ANTENNA GROUP ASSEMBLY

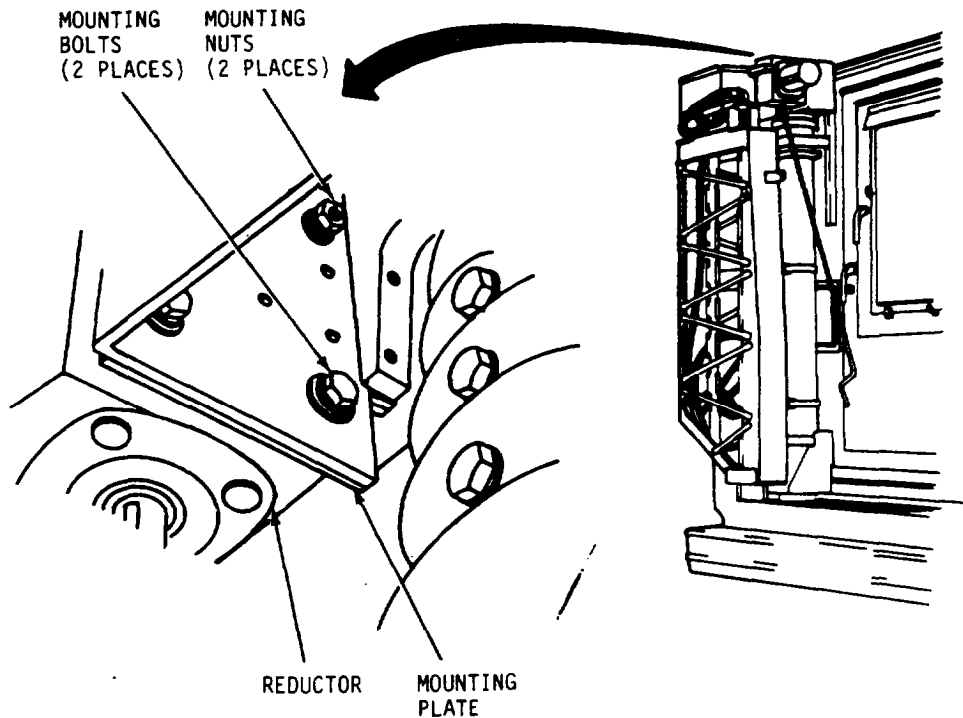
REMOVE

3 OF 6



12. Disconnect W22P3 from W101J1 and W22P4 from W20J2 on bottom of EMI box and move cables out of way.
13. Using 3/16" hex key wrench, remove two recessed hex socket bolts, flat washers, and lockwashers securing W22 cable adapter to base assembly.
14. Using 3/16" hex key wrench, remove two recessed hex socket bolts, flat washers, and lockwashers securing W22 cable adapter to top of cable basket.
15. Remove and retain RF processor in accordance with Chapter 2, Section V of this manual.

| | | |
|--------|--------|------------------------|
| 4 OF 6 | REMOVE | ANTENNA GROUP ASSEMBLY |
|--------|--------|------------------------|



16. Using 9/16" socket, remove two hex head bolts, lockwashers, flat washers, and two hex nuts, lockwashers, and flat washers securing reductor assembly to base assembly.
17. Remove and retain reductor assembly.
18. Using no.3 cross-tip screwdriver, remove two screws from reductor mounting plate. Remove the mounting plate from reductor.
19. Using 9/16" socket, secure mounting plate to base assembly without tightening completely, with two nuts, flat washers and lockwashers.

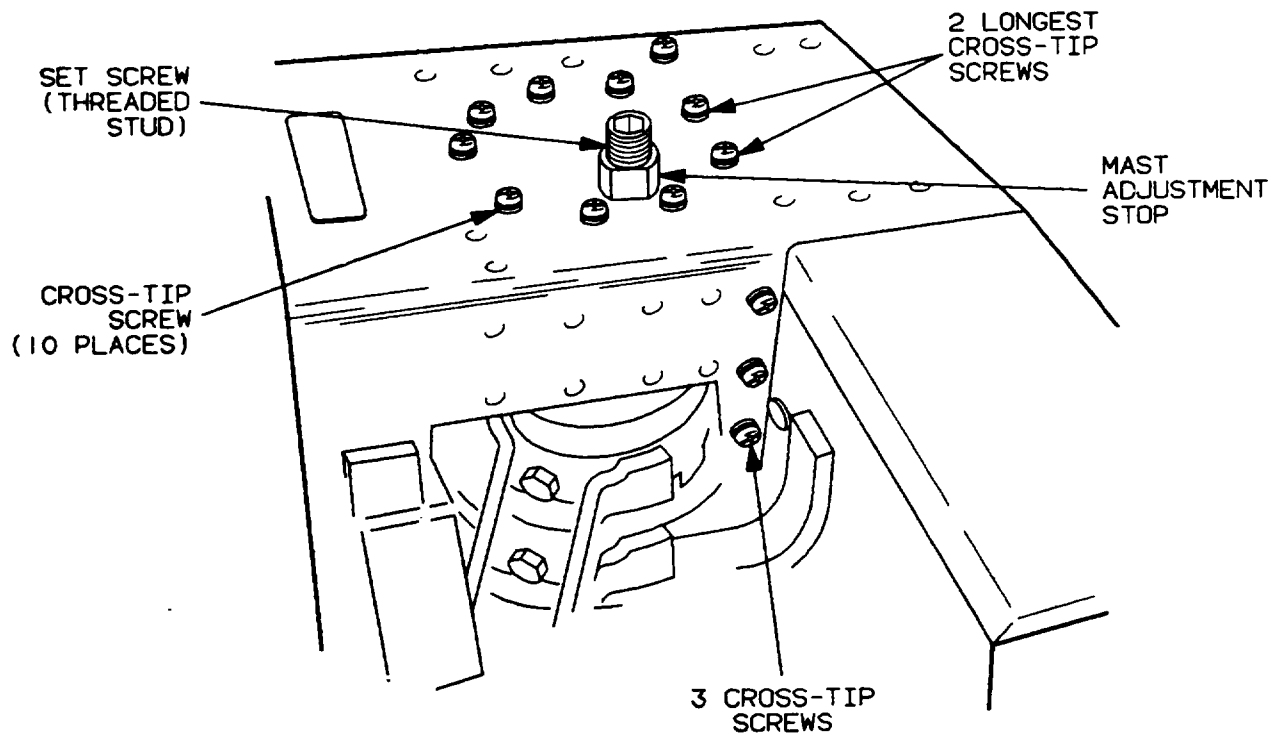
NOTE

The reductor is not part of the antenna group.

ANTENNA GROUP ASSEMBLY

REMOVE

5 OF 6



20. Using no.2 cross-tip screwdriver, remove three screws, lockwashers, and flat washers from rear of base adapter.
21. Using 5/16" hex key wrench, remove set screw from mast adjustment stop on top of base adapter.
22. Using no.3 cross-tip screwdriver, remove screw securing mast adjustment stop to base mounting socket assembly.



CAUTION

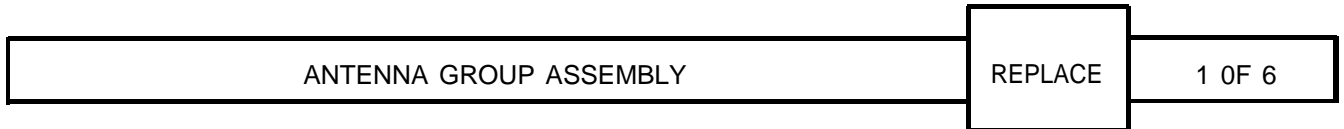
A second person is required to support antenna base assembly before removing ten screws securing base assembly to mast.

23. Using no.2 cross-tip screwdriver, remove ten screws, flat washers, and lockwashers securing base adapter to pneumatic mast.

CAUTION

Two people are required to lift and carry the base assembly to and from the pneumatic mast.

24. Lift antenna base assembly from pneumatic mast assembly and place on flat surface.
25. Remove antenna power supply from antenna base assembly in accordance with antenna power supply procedure as described in this chapter.



The antenna group assembly is located on the pneumatic mast assembly on the rear roadside of the shelter.

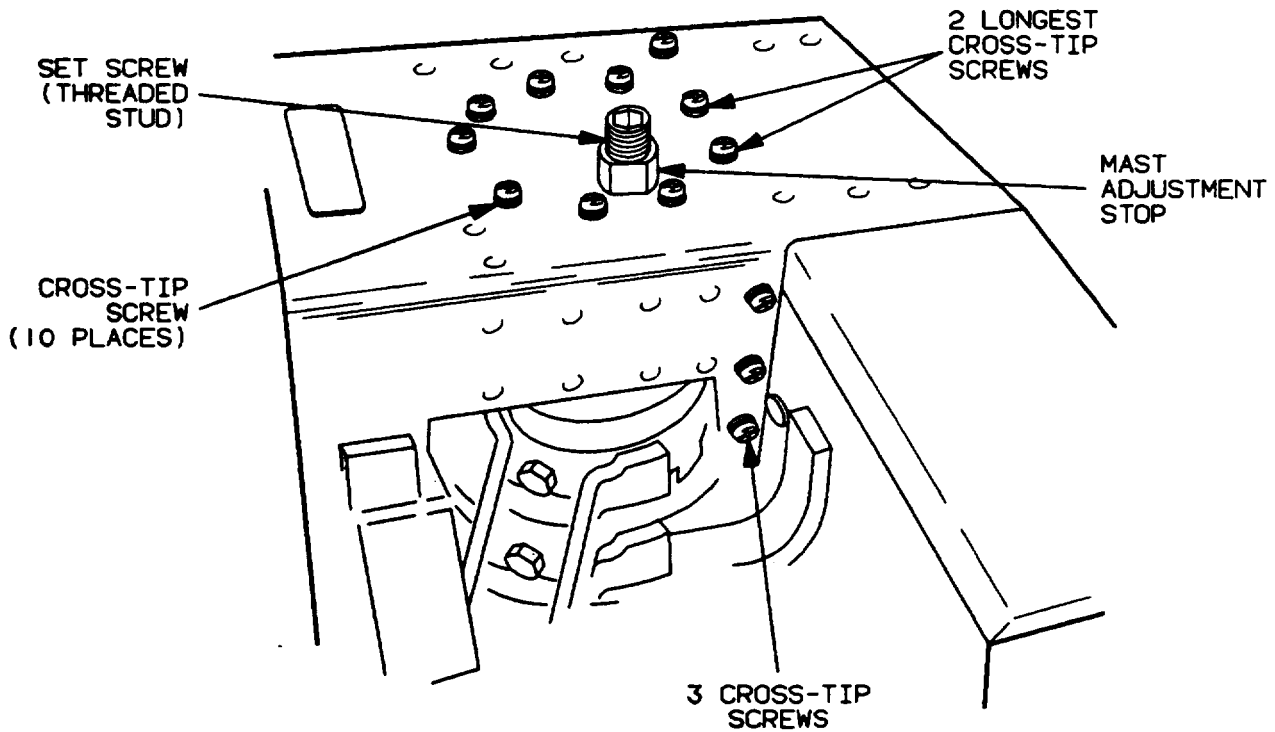
Tools Required: TK-100/G
TK-101/G
TK-105/G

Personnel Required: 2

Replace the antenna group assembly as follows:

1. On power distribution panel, place MAST, and RACK 1 AND 2 circuit breakers to OFF (down) position.
2. Install antenna power supply in accordance with antenna power supply procedure as described in this chapter.

| | | |
|--------|---------|------------------------|
| 2 OF 6 | REPLACE | ANTENNA GROUP ASSEMBLY |
|--------|---------|------------------------|

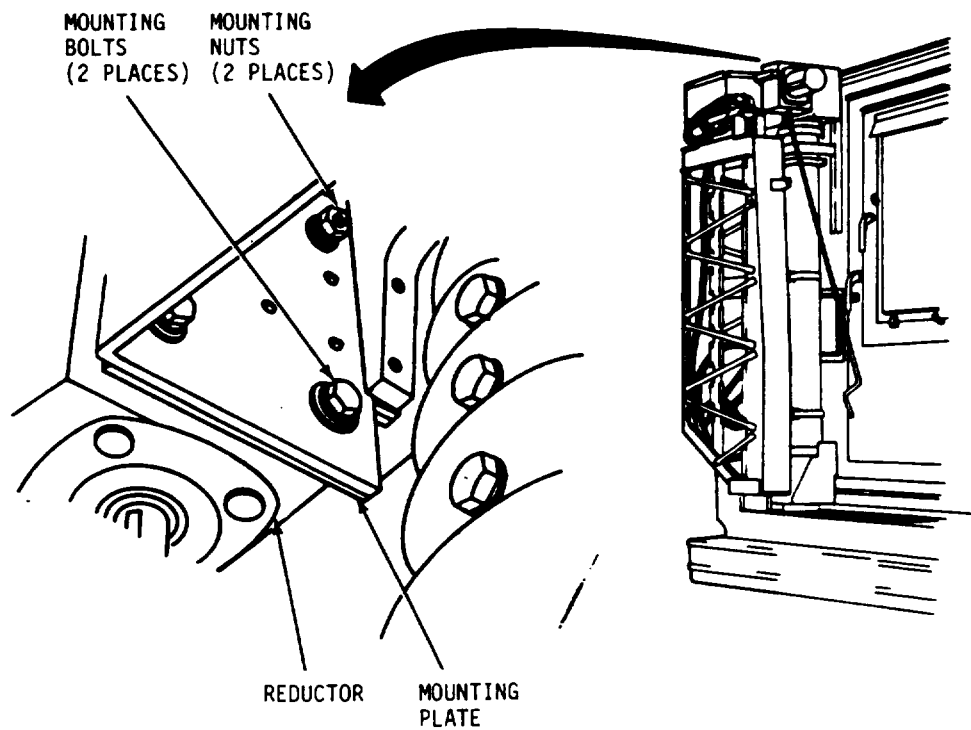


3. Using no.2 cross-tip screwdriver, secure antenna base assembly on pneumatic mast assembly with ten screws, lockwashers, and flat washers.
4. Using no.3 cross-tip screwdriver, secure mast adjustment stop over hole in top of base assembly with one screw.
5. Using 5/16" hex key wrench, install threaded alignment stud in mast adjustment stop .
6. Using no.2 cross-tip screwdriver, install three screws, lockwashers, and flat washers on rear of base assembly, next to reductor mount.

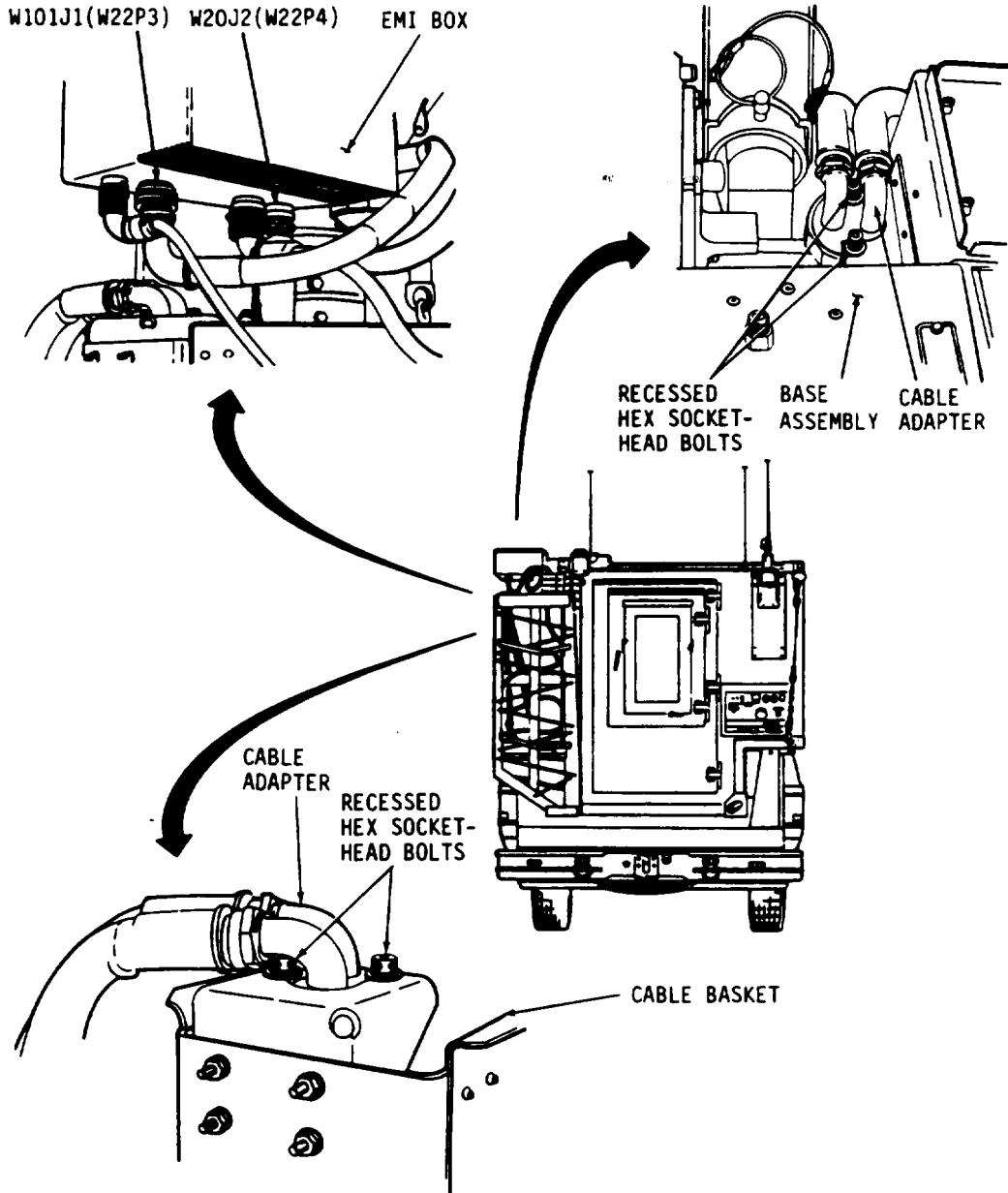
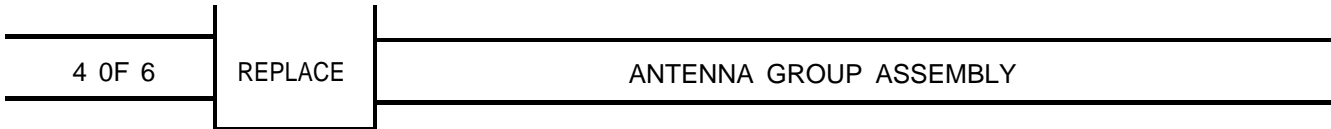
ANTENNA GROUP ASSEMBLY

REPLACE

3 OF 6



7. Align threaded studs through holes in base assembly. Using 9/16" socket, secure reductor assembly on base assembly with two hex nuts, lockwashers, flat washers, and two hex bolts.
8. Install RF processor in base assembly in accordance with Chapter 2, Section V of this manual.

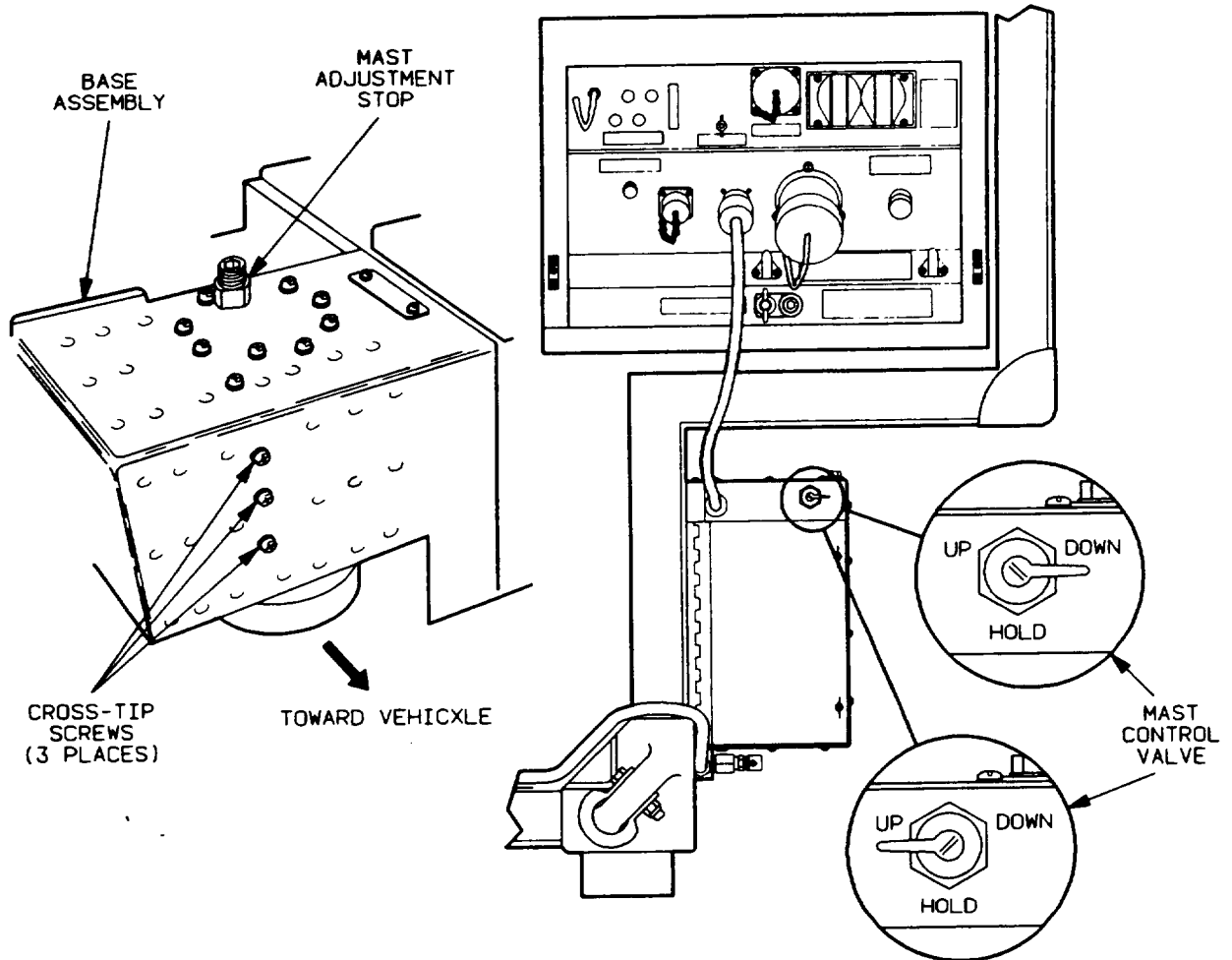


9. Using 3/16" hex key wrench, secure W22 cable adapter to top of cable basket with two recessed hex socket bolts, lockwashers, and flat washers.
10. Using 3/16" hex key wrench, secure W22 cable adapter on antenna base assembly with two recessed hex socket bolts, lockwashers, and flat washers.
11. Connect cables W22P3 to W101J1 and W22P4 to W20J2 on bottom of EMI box.

ANTENNA GROUP ASSEMBLY

REPLACE

5 OF 6



12. On system power supply, place SYS and XMTR ON/OFF switches in ON position.
13. On power distribution panel, place MAST and RACK 1 AND 2 circuit breakers in the ON position.
14. Place mast control valve in UP position and raise pneumatic mast approximately one foot above shelter roof.
15. Place mast control valve in the HOLD position.
16. Using no.2 cross-tip screwdriver, install three screws, lockwashers, and flat washers on front side (toward front of vehicle) of antenna base assembly.
17. Place mast control valve in the DOWN position and lower pneumatic mast to rest position.

6 0 F 6

REPLACE

ANTENNA GROUP ASSEMBLY

18. Install mast tube. Refer to Operators Manual, TM 32-5895-070-10.
19. Install magnetic field converter in mast crown in accordance with magnetic field converter procedure as described in this chapter.
20. Install mast crown. Refer to Operators Manual, TM 32-5895-070-10.
21. Install UHF intercept antenna. Refer to Operators Manual, TM 32-5895-070-10.
22. Install antenna elements on mast crown. Refer to Operators Manual TM 32-5895-070-10.
23. Adjust the antenna lock-pin in accordance with Chapter 2, Section V.

MAGNETIC FIELD CONVERTER, CV-3579/TSQ

REMOVE

1 OF 5

The magnetic field converter (P/O of A31) is located in one arm of the mast crown assembly.

Tools Required: TK-105/G
3/8" flat tip screwdriver

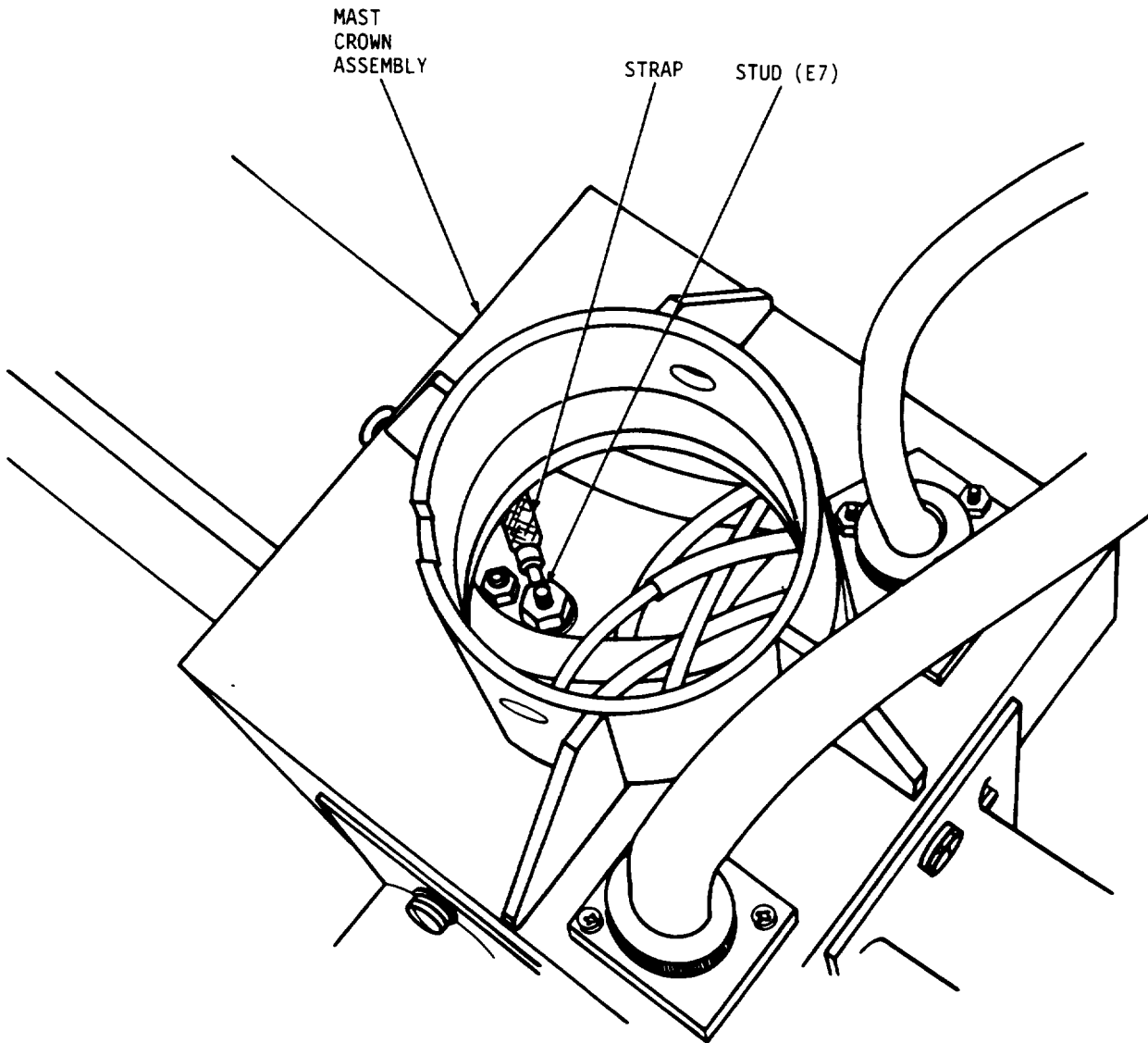
Personnel Required: 1

Remove the magnetic field converter as follows:

1. Remove mast crown assembly. Refer to Operators Manual, TM 32-5895-070-10.
2. Place mast crown assembly upside down on a flat surface.

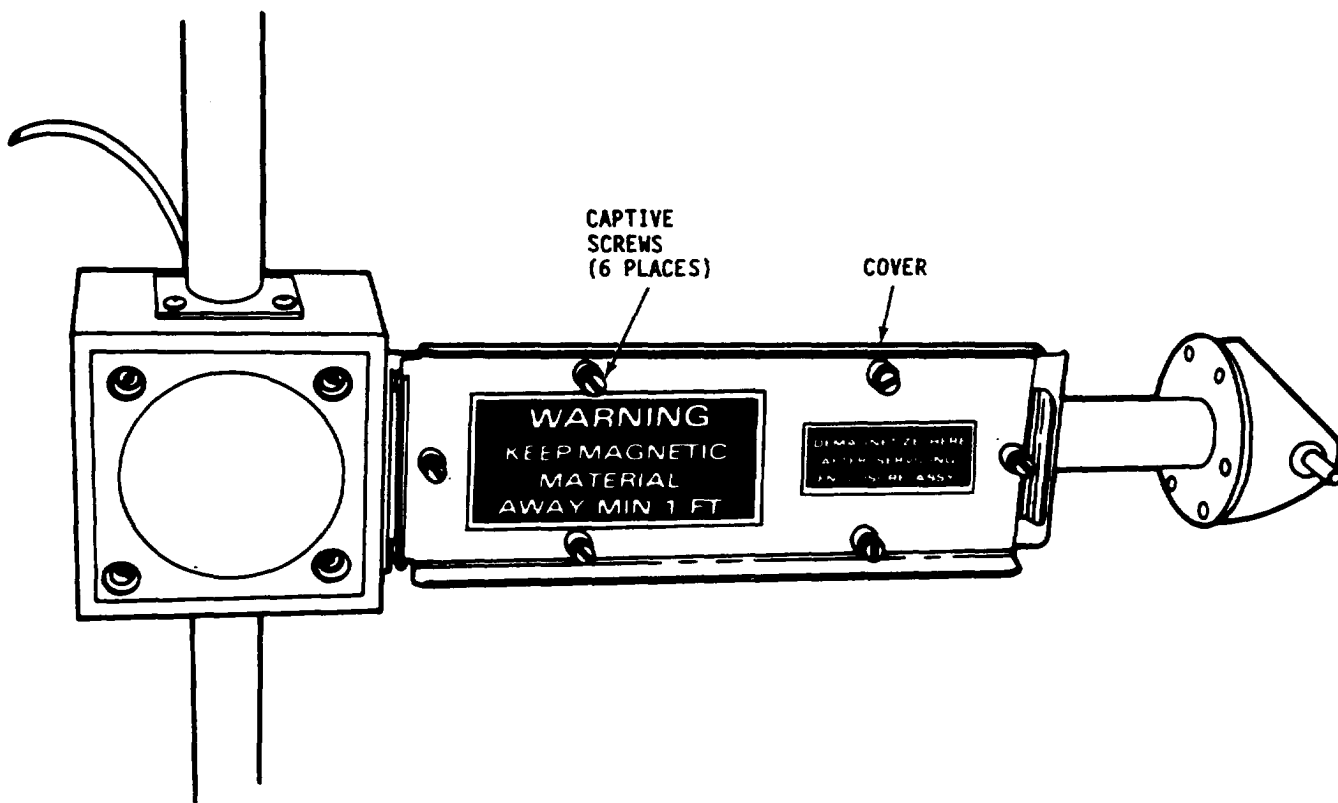
CAUTION

Do not use magnetized tools when working on the magnetic field converter.



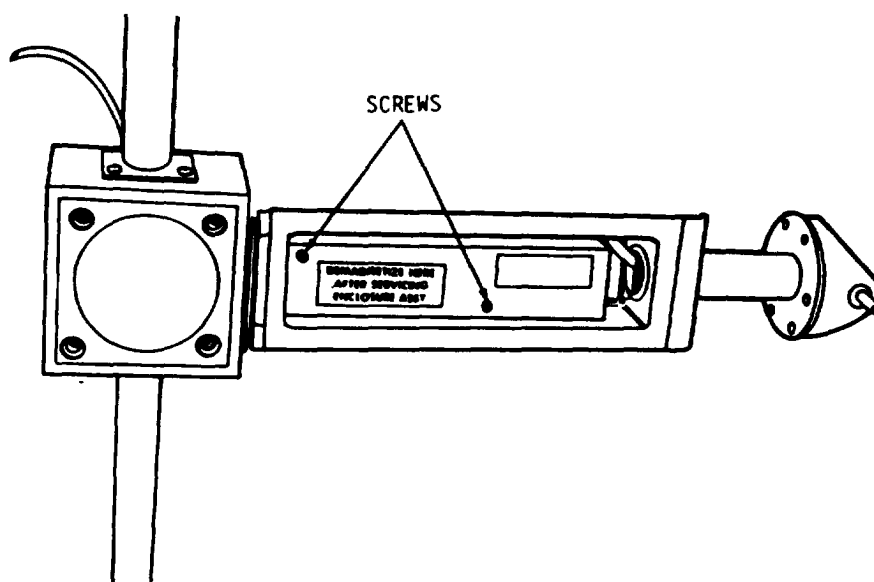
3. Using ratchet handle, 5" flexible extension, and 11/32" socket, remove nut and two washers from ground stud (E7).
4. Using round needle-nose pliers, remove the ground strap from the ground stud.
5. Place the mast crown assembly right side up.

| | | |
|---------------------------------------|--------|--------|
| MAGNETIC FIELD CONVERTER, CV-3579/TSQ | REMOVE | 3 OF 5 |
|---------------------------------------|--------|--------|

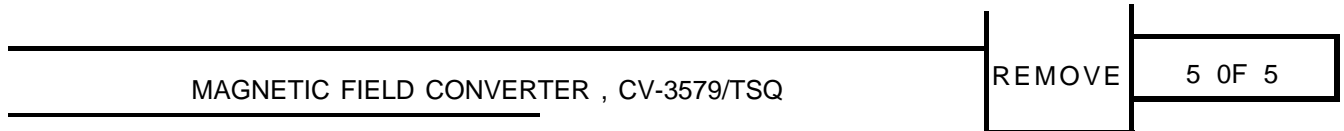


6. Using 3/8" flat tip screwdriver, loosen six captive screws securing the magnetic field converter cover to the mast crown.
7. Remove the magnetic field converter cover.

| | | |
|--------|--------|---------------------------------------|
| 4 OF 5 | REMOVE | MAGNETIC FIELD CONVERTER, CV-3579/TSQ |
|--------|--------|---------------------------------------|



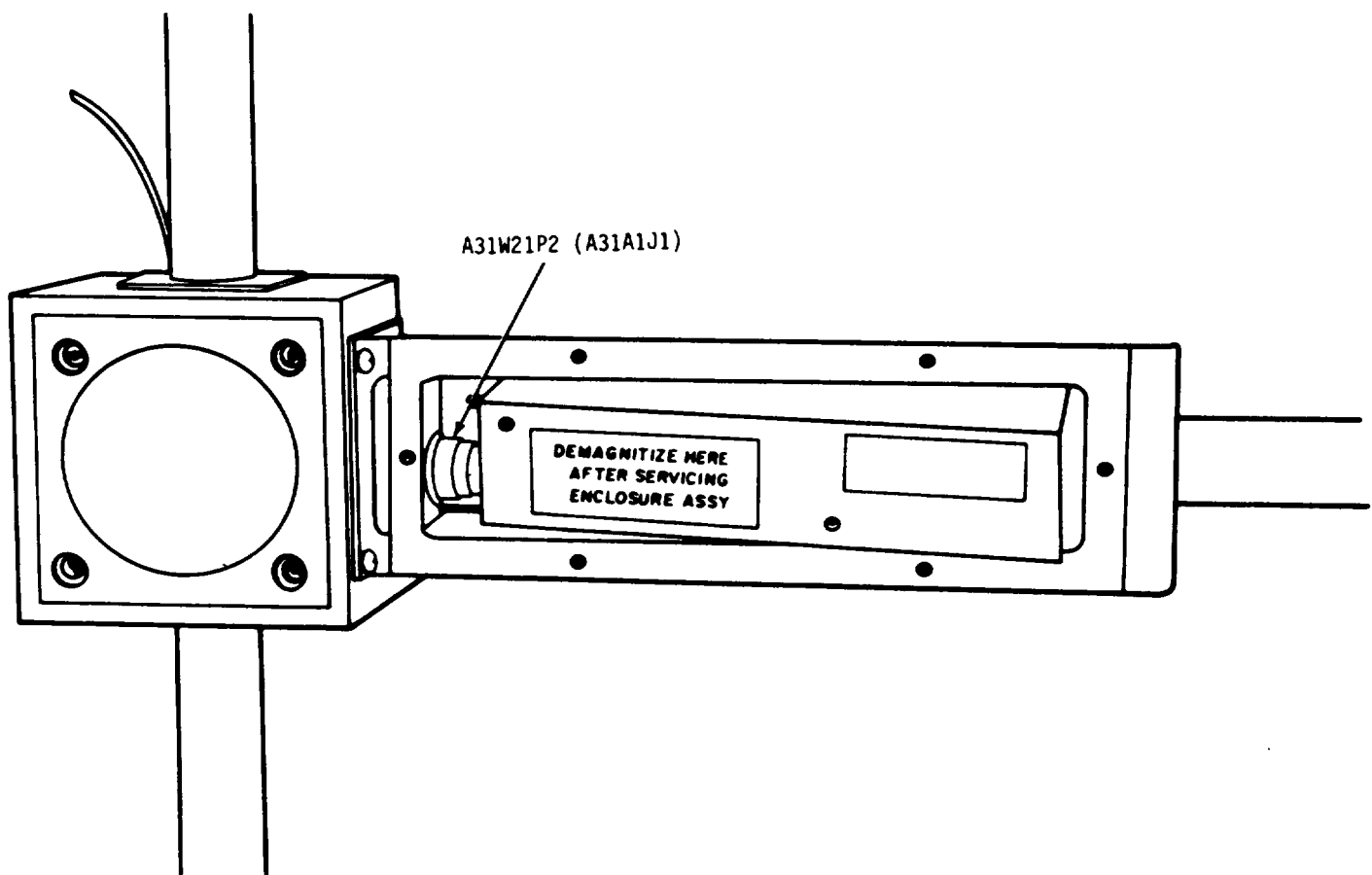
8. Using 1/4" flat tip screwdriver, remove and retain two screws and washers securing the magnetic field converter to the mast crown.



MAGNETIC FIELD CONVERTER , CV-3579/TSQ

REMOVE

5 OF 5



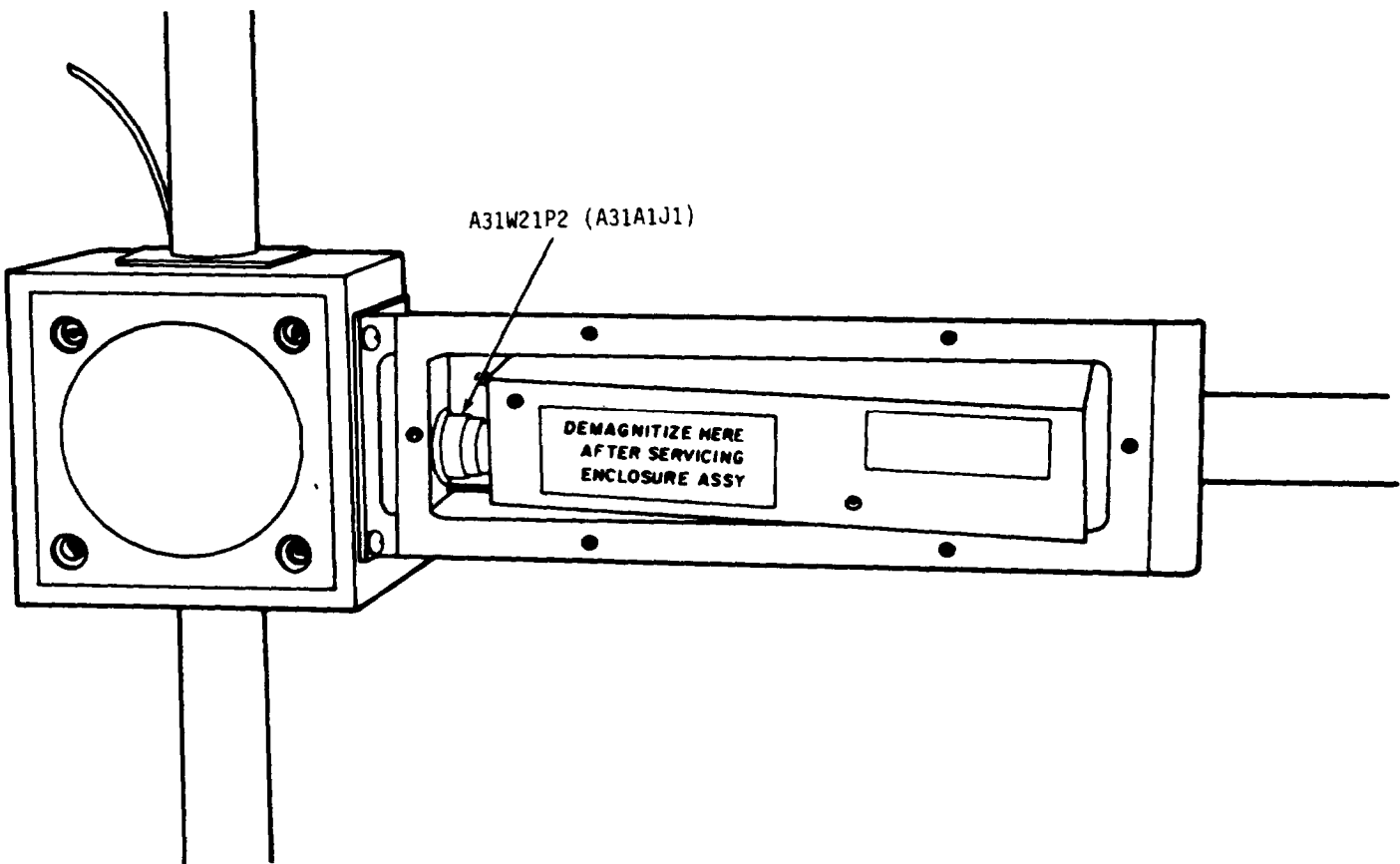
9. Slide magnetic field converter back far enough to disconnect cable W21P2 from connector A31A1J1.
10. Remove magnetic field converter from mast crown.

magnetic field converter (P/O antenna group A31) is located in one arm of the mast crown

Tools Required: TK-105/G
Degausser

Personnel Required: 1

Replace the magnetic field converter as follows:



CAUTION

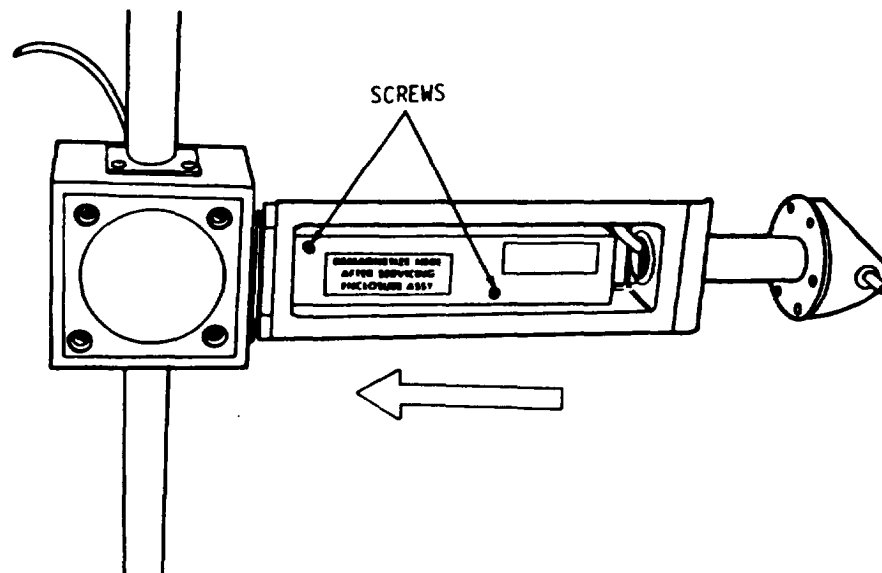
Do not use magnetized tools when replacing the magnetic field converter.

1. Place magnetic field converter in mast crown and connect cable W21P2 to connector A31A1J1.

MAGNETIC FIELD CONVERTER, CV-3579/TSQ

REPLACE

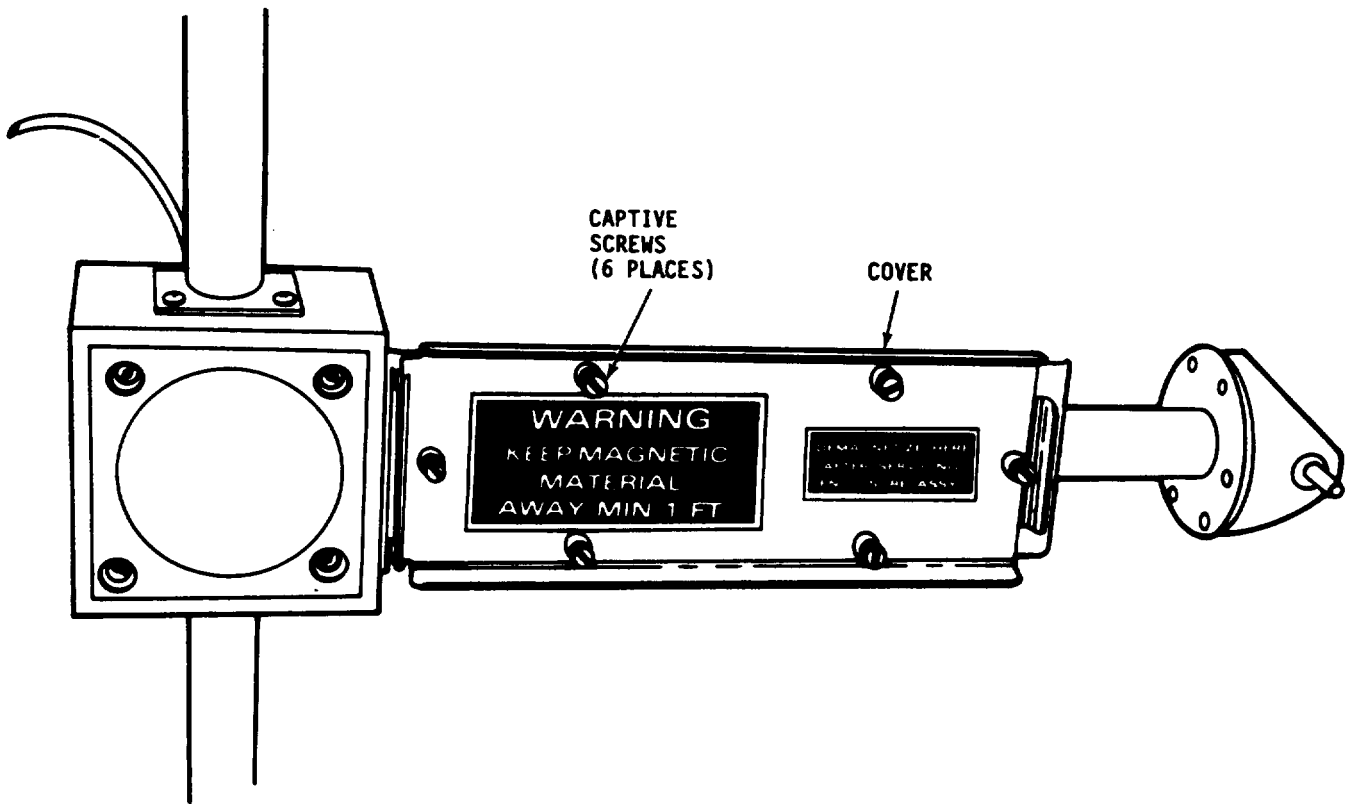
2 OF 5



2. Position magnetic field converter and secure with two screws and washers using 1/4" flat tip screwdriver.

NOTE

Inspect converter cover gasket on mast crown. Replace gasket, P/N C5114162-1 if it is distorted, cracked, or broken.

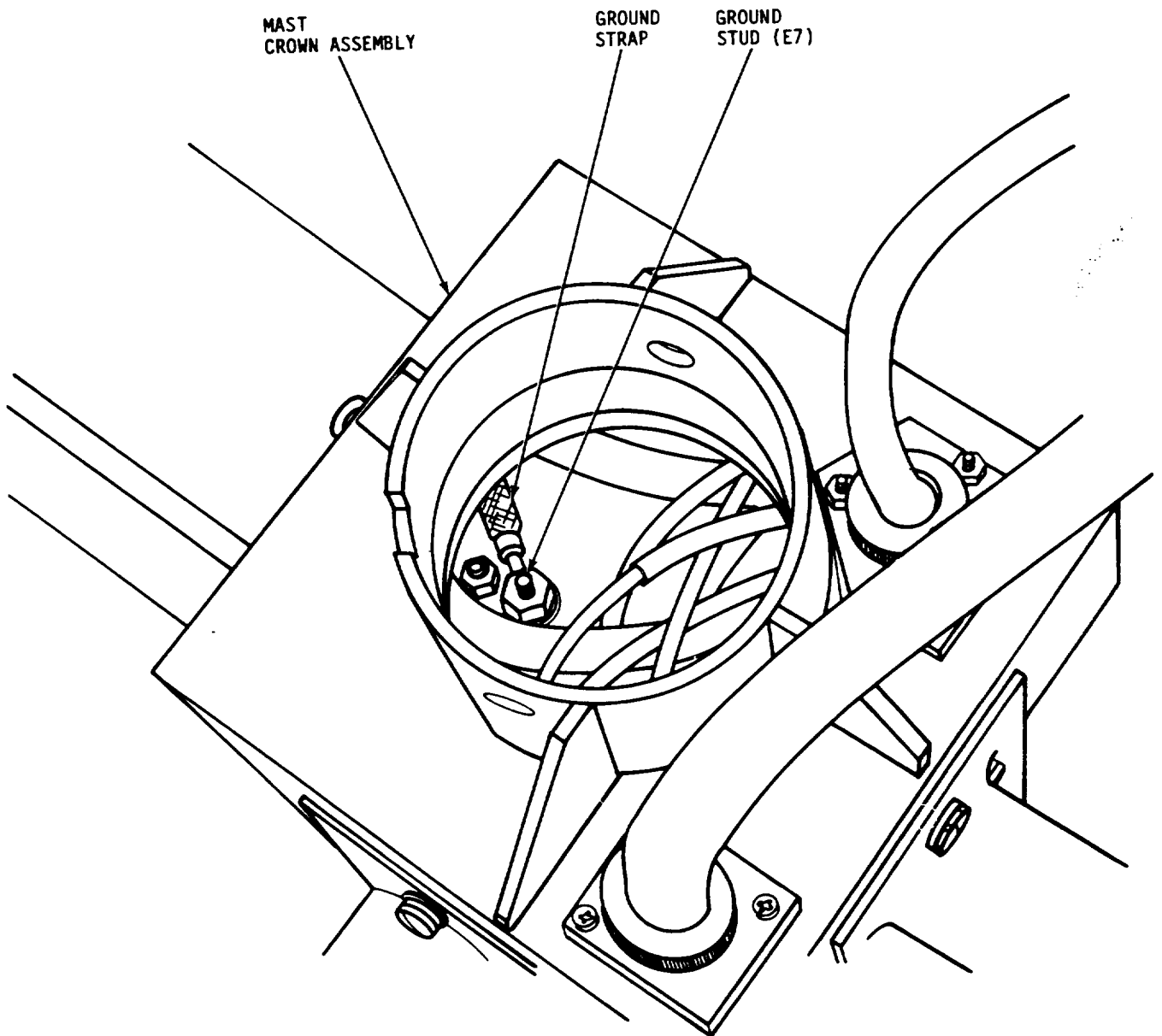


3. Place magnetic field converter cover on mast crown assembly and secure with six captive screws using 3/8" flat tip screwdriver.
4. Place mast crown assembly upside down.

MAGNETIC FIELD CONVERTER, CV-3579/TSQ

REPLACE

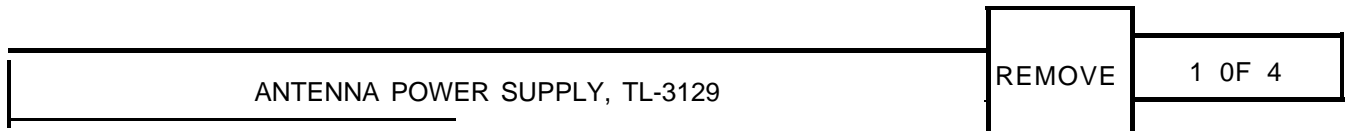
4 OF 5



5. Place ground wire on ground stud (E7) using round needle-nose pliers and secure with nut and washer using ratchet handle, 5" flexible extension, and 11/32" socket.



6. Place mast crown assembly right side up on flat surface outside of shelter.
7. Plug degausser into 120 Vac outlet.
8. Hold degausser a minimum of three feet above mast crown assembly.
9. Slowly lower the degausser towards the mast crown assembly until it is approximately one inch above magnetic field converter. Slowly rotate the degausser over the magnetic field converter in a clockwise direction for at least three complete rotations over the magnetic field converter.
10. Slowly withdraw the degausser vertically from the magnetic field converter for a minimum distance of three feet above the unit.
11. Unplug the degausser.
12. Replace mast crown assembly as described in Operators Manual, TM 32-5895-070-10.



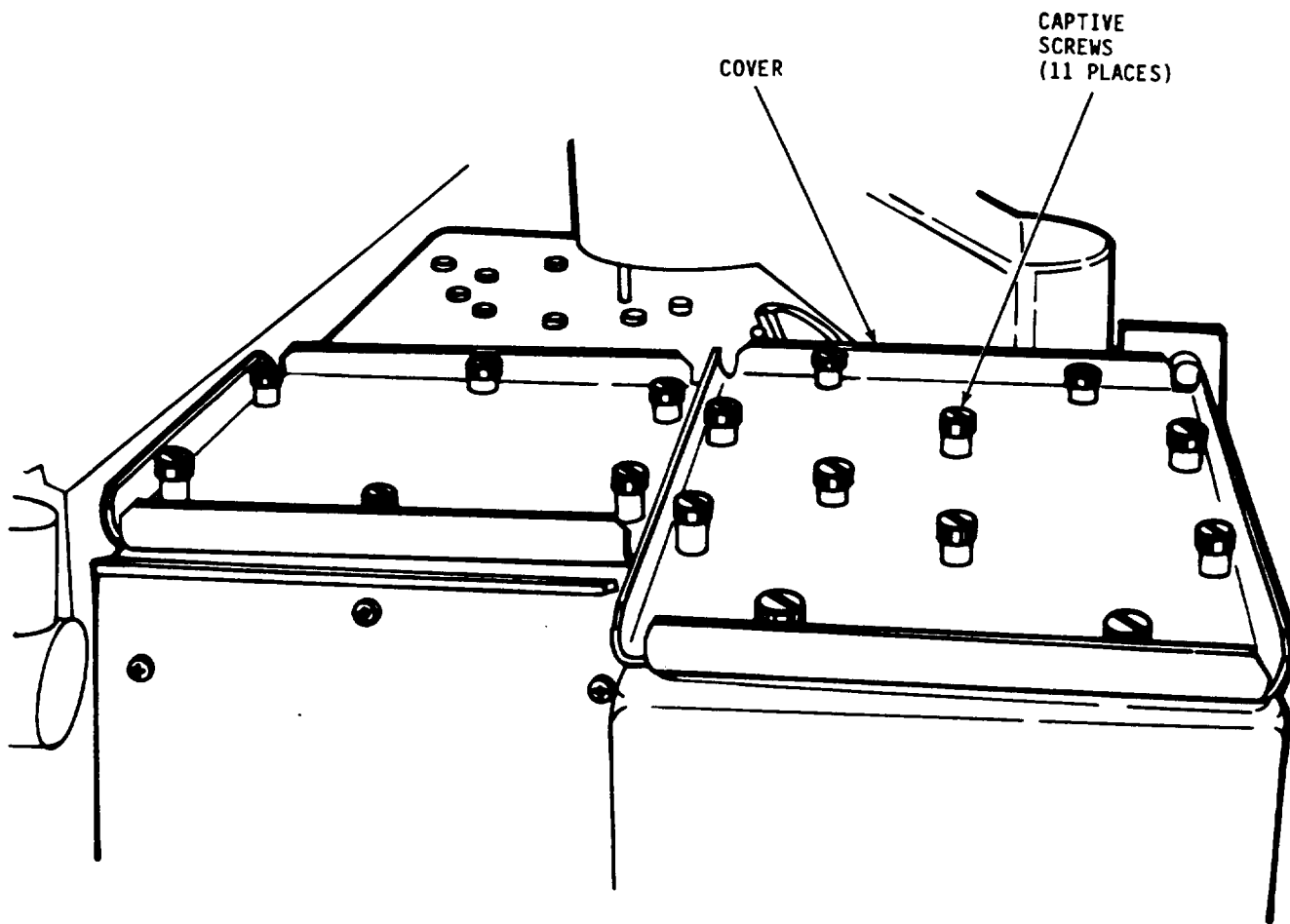
The power supply is located on the antenna base assembly at the top of the pneumatic mast on the rear roadside of shelter exterior.

Tools Required: TK-105/G
3/8" flat tip screwdriver

Personnel Required: 1

Remove antenna power supply as follows:

1. On power distribution panel, place RACK 1 AND 2 circuit breakers to OFF position.
2. On system power supply, place SYS and XMTR ON/OFF switches to OFF position.



3. Using 3/8" flat tip screwdriver, loosen eleven captive screws on cover over antenna power supply and remove and retain cover.

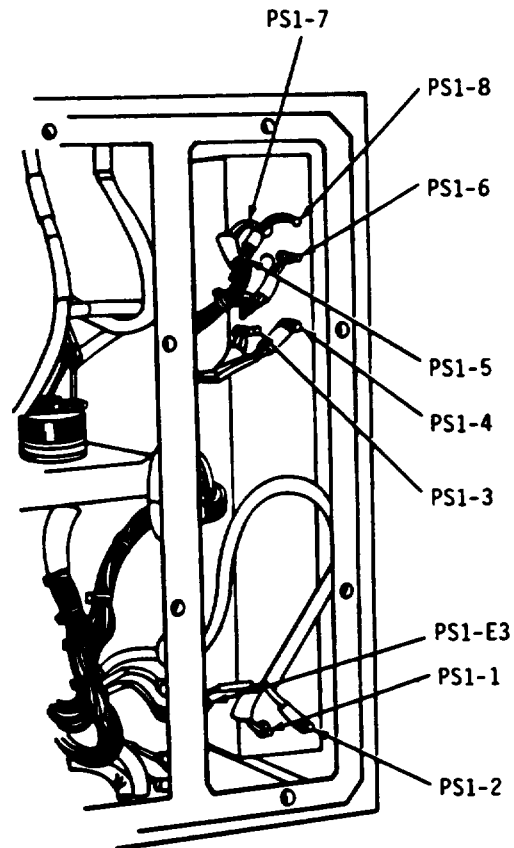
NOTE

Ensure all wires on the antenna power supply are tagged prior to removing.

ANTENNA POWER SUPPLY, TL-3129

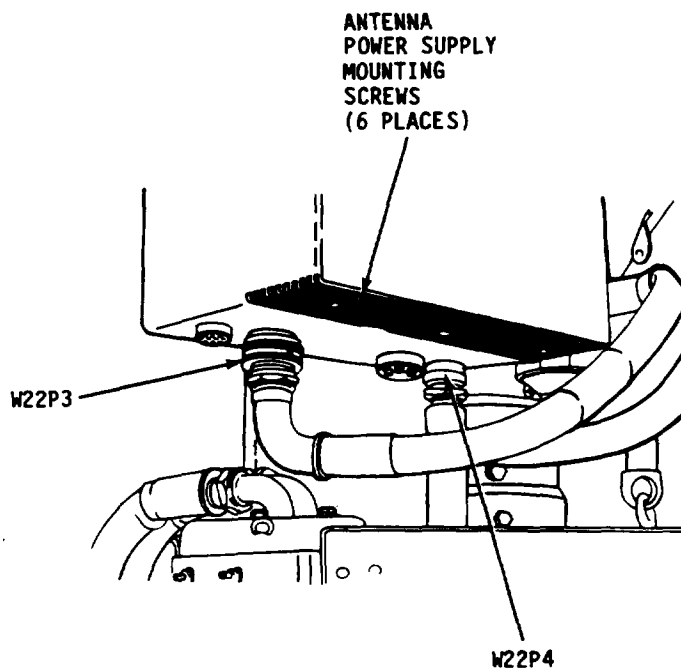
REMOVE

3 OF 4

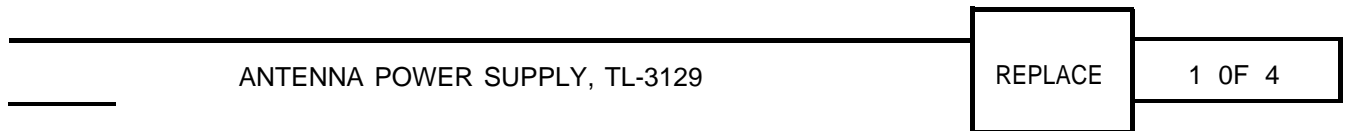


4. Using soldering iron, unsolder the following wires on antenna power supply.
 - a. Three red wires from PS1-8,
 - b. Three black wires from PS1-7,
 - c. Three black wires from PS1-6,
 - d. Two purple wires from PS1-5
 - e. Two red wires from PS1-4,
 - f. Two black wires from PS1-3,
 - g. One gray wire from PS1-2,
 - h. One white wire from PS1-1.

| | | |
|--------|--------|-------------------------------|
| 4 OF 4 | REMOVE | ANTENNA POWER SUPPLY, TL-3129 |
|--------|--------|-------------------------------|



5. Disconnect W22P3 from W101J1 and W22P4 from W20J2 on bottom of EMI Box and move cables out of way.
6. Using no.2 cross-tip screwdriver, remove and retain six screws, lockwashers and flat washers from under side of EMI box securing antenna power supply.
7. Remove antenna power supply.



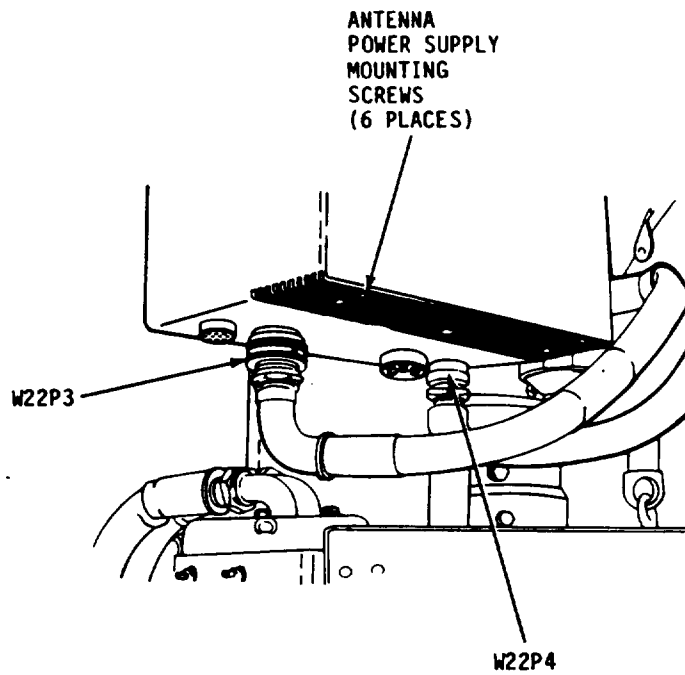
The power supply is located on the antenna base assembly at the top of the pneumatic mast on the rear roadside of shelter exterior.

Tools Required: TK-105/G
3/8" flat tip screwdriver

Personnel Required: 1

Replace antenna power supply as follows:

1. On power distribution panel, place RACK 1 AND 2 circuit breakers to OFF position.
2. On system power supply, place SYS and XMTR ON/OFF switches to OFF position.
3. Using no.2 cross-tip screwdriver, secure antenna power supply with six screws, lockwashers and flat washers on bottom of EMI box.

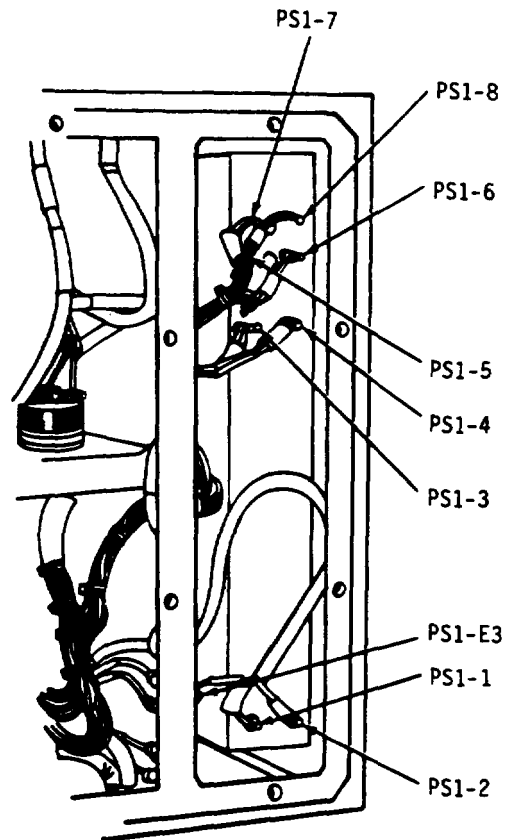


4. Connect W22P3 to W101J1 and W22P4 to W20J2 on bottom of EMI Box.

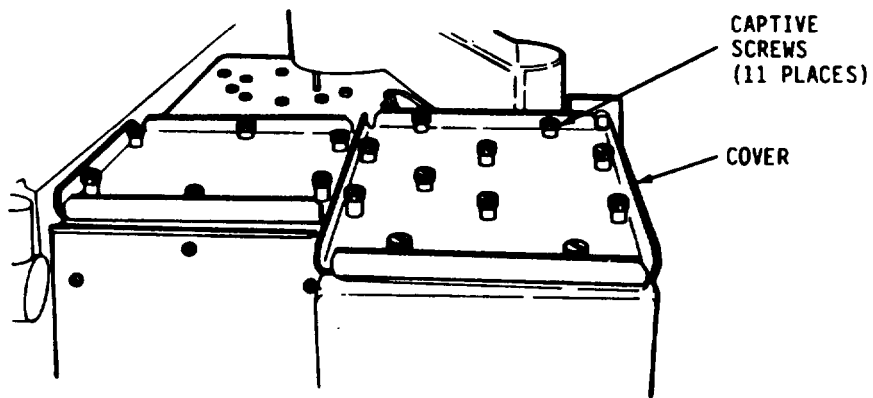
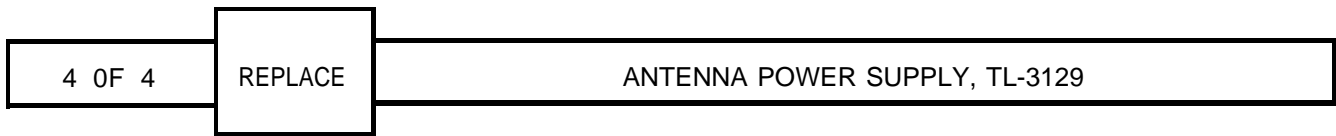
ANTENNA POWER SUPPLY, TL-3129

REPLACE

3 OF 4



5. Using soldering iron, solder (Appendix D, Item 18) the following wires on antenna power supply.
 - a. Three red wires to PS1-8,
 - b. Three black wires to PS1-7,
 - c. Three black wires to PS1-6,
 - d. Two purple wires to PS1-5,
 - e. Two red wires to PS1-4,
 - f. Two black wires to PS1-3,
 - g. One gray wire to PS1-2,
 - h. One white wire to PS1-1.



6. Using 3/8" flat tip screwdriver, install cover and secure with eleven captive screws.
7. On system power supply, place SYS and XMTR ON/OFF switches in ON position.
8. On power distribution panel, place RACK 1 AND 2 circuit breaker in ON position.

GENERAL SUPPORT MAINTENANCE PROCEDURES

There is no General Support (GS) Maintenance for the AN/TRQ-32(V)1 or AN/TRQ-32(V)2 system.

REFERENCES

A-1. SCOPE

This appendix lists forms and publications that are referenced in this manual or that contain information applicable to the operation and maintenance of Radio Receiving Set AN/TRQ-32(V)2.

A-2. FORMS

- Report of Packing and Handling Deficiencies DA Form 6
- Recommended Changes to Publications and Blank Forms DA Form 2028
- Equipment Inspection and Maintenance Worksheet DA Form 2404
- Discrepancy in Shipment Report.SF361
- Report of Discrepancy (ROD)SF364
- Quality Deficiency ReportSF368

A-3. FIELD MANUALS

- Installation Practices: Communication Systems
 Grounding, Bonding, and Shielding FM 11-487-4/TO 31-10-24
- First Aid for Soldiers FM 21-11

A-4. TECHNICAL MANUALS

- Organizational, Direct Support, and General
 Support Maintenance Manual (Including Repair Parts
 and Special Tools List) for Truck Installation Kit,
 MK-2291/TRQ-32(V) TM 5-2320-531-24&P
- Operator's, Organizational, Direct Support, and
 General Support Maintenance Manual for Hydraulic
 Generator/Air Conditioner Group, PU-784/TRQ-32(V) TM 5-4120-391-14
- Organizational, Direct Support, and General Support
 Repair Parts and Special Tools List for Hydraulic
 Generator/Air Conditioner Group, PU-784/TRQ-32(V) TM 5-4120-391-24P

Operator's Manual for Truck, Cargo, Tactical, 1-1/4 Ton, 4X4, M1008 (2320-01-123-6827); Truck, Cargo, Tactical, 1-1/4 Ton, 4X4 M1008A1 (2320-01-123-2671); Truck, Utility, Tactical, 3/4 Ton, 4X4, M1909 (2320-01-123-2665); Truck, Ambulance, Tactical, 1-1/4 Ton, 4X4, M1010 (2310-01-123-2666); Truck, Shelter Carrier, Tactical, 1-1/4 Ton, 4X4, M1028 (2320-01-127-5077); Truck, Chassis, Tactical, 1-1/4 Ton, 4X4, M1031 (2320-01-133-5368) TM 9-2320-289-10

Organizational Maintenance Manual for Truck, Cargo, Tactical, 1-1/4 Ton, 4X4, M1008 (2320-01-123-6827); Truck, Cargo, Tactical, 1-1/4 Ton, 4X4 M1008A1 (2320-01-123-2671); Truck, Utility, Tactical, 3/4Ton, 4X4, M1909 (2320-01-123-2665); Truck, Ambulance, Tactical, 1-1/4 Ton, 4X4, M1010 (2310-01-123-2666); Truck, Shelter Carrier, Tactical, 1-1/4 Ton, 4X4, M1028 (2320-01-127-5077); Truck, Chassis, Tactical, 1-1/4 Ton, 4X4, M1031 (2320-01-133-5368) TM 9-2320-289-20

Organizational Repair Parts and Special Tools List for Truck, Cargo, Tactical, 1-1/4 Ton, 4X4, M1008 (2320-01-123-6827); Truck, Cargo, Tactical, 1-1/4 Ton, 4X4 M1008A1 (2320-01-123-2671); Truck, Utility, Tactical, 3/4 Ton, 4X4, M1909 (2320-01-123-2665); Truck, Ambulance, Tactical, 1-1/4 Ton, 4X4, M1010 (2310-01-123-2666); Truck, Shelter Carrier, Tactical, 1-1/4 Ton, 4X4, M1028 (2320-01-127-5077); Truck, Chassis, Tactical, 1-1/4 Ton, 4X4, M1031 (2320-01-133-5368) TM 9-2320-289-20P

Direct Support and General Support Maintenance Manual for Truck, Cargo, Tactical, 1-1/4 Ton, 4X4, M1008 (2320-01-123-6827); Truck, Cargo, Tactical, 1-1/4 Ton, 4X4 M1008A1 (2320-01-123-2671); Truck, Utility, Tactical, 3/4 Ton, 4X4, M1909 (2320-01-123-2665); Truck, Ambulance, Tactical, 1-1/4 Ton, 4X4, M1010 (2310-01-123-2666); Truck, Shelter Carrier, Tactical, 1-1/4 Ton, 4X4, M1028 (2320-01-127-5077); Truck, Chassis, Tactical, 1-1/4 Ton, 4X4, M1031 (2320-01-133-5368) TM 9-2320-289-34

Direct Support and General Support Repair Parts and Special Tools List for Truck, Cargo, Tactical, 1-1/4 Ton, 4X4, M1008 (2320-01-123-6827); Truck, Cargo, Tactical, 1-1/4 Ton, 4X4 M1008A1 (2320-01-123-2671); Truck, Utility, Tactical, 3/4 Ton, 4X4, M1909 (2320-01-123-2665); Truck, Ambulance, Tactical, 1-1/4 Ton, 4X4, M1010 (2310-01-123-2666); Truck, Shelter Carrier, Tactical, 1-1/4 Ton, 4X4, M1028 (2320-01-127-5077); Truck, Chassis, Tactical, 1-1/4 Ton, 4X4, M1031 (2320-01-133-5368) TM 9-2320-289-34P

Lubrication Order for Truck, Cargo, Tactical, 1-1/4 Ton, 4X4, M1008 (2320-01-123-6827); Truck, Cargo, Tactical, 1-1/4 Ton, 4X4 M1008A1 (2320-01-123-2671); Truck, Utility, Tactical, 3/4 Ton, 4X4, M1909 (2320-01-123-2665); Truck, Ambulance, Tactical, 1-1/4 Ton, 4X4, M1010 (2310-01-123-2666); Truck, Shelter Carrier, Tactical, 1-1/4 Ton, 4X4, M1028 (2320-01-127-5077); Truck, Chassis, Tactical, 1-1/4 Ton, 4X4, M1031 (2320-01-133-5368) LO 9-2320-289-12

Operator and Organizational Maintenance Manual for Telephone Set, TA-312/PT (NSN 5805-00-543-0012) TM 11-5805-201-12

Organizational Repair Parts and Special Tools List for Telephone Set, TA-312/PT (NSN 5805-00-543-0012) TM 11-5805-201-20P

Direct Support, General Support, and Depot Maintenance Manual for Telephone Set, TA-312/PT (NSN 5805-00-543-0012) TM 11-5805-201-35

Direct Support, General Support, and Depot Repair Parts and Special Tools List for Telephone Set, TA-312/PT (NSN 5805-00-543-0012) TM 11-5805-201-35p

Operator's and Organizational Maintenance Manual for Communications Security Equipment, TSEC/KY-57 TM 11-5810-256-12

Direct Support and General Support Maintenance Manual for Communications Security Equipment, TSEC/KY-57 TM 11-5810-256-34

Direct Support and General Support Repair Parts and Special Tools List for Communications Security Equipment, TSEC/KY-57 TM 11-5810-256-34P

General Support Maintenance Manual for Communications Security Equipment, TSEC/KY-57 TM 11-5810-256-40

Operator's and Organizational Maintenance Manual for Installation Kits for Communications Security Equipment, TSEC/KY-57 TM 11-5810-312-12

Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Installation Kits for Communications Security Equipment, TSEC/KY-57 TM 11-5810-312-34&P

Operator's and Organizational Maintenance Manual for Tape Recorder, KOI-18/TSEC TM 11-5810-292-12

Direct Support Maintenance Manual for Tape Recorder, KOI-18/TSEC TM 11-5810-292-30

TM 32-5895-070-24&P

Direct Support and General Support Maintenance
Manual for Tape Recorder, KOI-18/TSEC TM 11-5810-292-34

General Support Maintenance Manual for Tape Recorder,
KOI-18/TSEC TM 11-5810-292-40

Operator's Manual, Radio Sets AN/VRC-12 (5820-00-223-7412),
AN/VRC-43 (5820-00-223-7415), AN/VRC-44
(5820-00-223-7417), AN/VRC-45 (5820-00-223-7418),
AN/VRC-46 (5820-00-223-7433), AN/VRC-47
(5820-00-223-7434), AN/VRC-48 (5820-00-223-7435),
AN/VRC-49 (5820-00-223-7437), AN/VRC-54
(5820-00-223-7567), and AN/VRC-55 (5820-00-402-2265);
Mounting MT-1029/VRC (5820-00-893-1323) and Mounting
MT-1898/VRC (5820-00-893-1324); Antenna AT-912/VRC
(5820-00-897-6357); Control Frequency Selector
C-2742/VRC (5820-00-892-3343) and Control, Radio
Set C-2299/VRC (5820-00-892-3340) TM 11-5820-401-10-1
NAVELEX 0967-432-3010

Organizational Maintenance Manual for Intercom Control,
C-1611D/AIC TM 11-5831-201-20

Direct Support, General Support, and Depot Maintenance
Manual for Intercom Control, C-1611D/AIC TM 11-5831-201-35

Direct Support and General Support Repair Parts and
Special Tools List for Intercom Control, C-1611D/AIC TM 11-5831-201-34P

Operator's, Organizational, Direct Support, and
General Support Maintenance Manual (Including
Repair Parts and Special Tools List) for Mast Base,
AB-15/GR TM 11-5895-230-14&P

Organizational, Direct Support, and General Support
Maintenance Manual for printer, RP-272/G TM 11-5895-1107-24-1

Operator, Organizational, Direct Support, General
Support, and Depot Maintenance Manual for Antenna,
AS-1729/VRC TM 11-5985-262-15

Organizational Repair Parts and Special Tools List
for Antenna, AS-1729/VRC TM 11-5985-262-20P

Direct Support and General Support Repair Parts and
Special Tools List for Antenna, AS-1729/VRC TM 11-5985-262-34P

Organizational, Direct Support, and General Support
Maintenance Manual (Including Repair Parts and
Special Tools List) for Shelter Assembly, S-457B/G TM 32-5411-003-24&P

General Support Maintenance Manual (Including
Repair Parts and Special Tools List) for DF Control
Unit, C-11002/USQ TM 32-5800-002-40&P

- General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Radio Frequency Processor, MX-10526/TRQ-32(V) TM 32-5800-003-40&P
- Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for DF Control (MOD), C-11002/USQ TM 32-5811-012-34&P
- Organizational and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for System Controller, C-11845/TRQ-32(V) TM 32-5811-136-23&P
- General Support Maintenance Manual (Including Repair Parts and Special Tools List) for RF Distribution Unit, SA-2444/TRQ-32(V) TM 32-5811-139-40&P
- General Support Maintenance Manual (Including Repair Parts and Special Tools List) for System Controller, C-11845/TRQ-32(V) TM 32-5811-144-40&P
- General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Power Supply, PP-8179/TRQ-32(V) TM 32-5811-145-40&P
- Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for UHF Intercept/Data Link Antenna, AS-3661/TRQ-32(V) TM 32-5811-151-24&P
- General Support Maintenance Manual (Including Repair Parts and Special Tools List for Data Link Processor, C-11844/TRQ-32(V) TM 32-5811-152-40&P
- Direct Support and General Support Maintenance Manual for Converter A/D, CV-3580/TSQ TM 32-5811-900-34
- Direct Support and General Support Maintenance Manual for Interconnection Box, J-3513/U TM 32-5810-312-34&P
- Operator's, Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Recorder-Reproducer Set, Sound AN/UNH-17A (NSN 5835-81-823-4332) TM 32-5835-005-14&P
- Operator's, Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Switch, SA-1921/G TM 32-5835-005-14&P
- General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Radio Receiver, R-2144/URR TM 32-5865-029-40&P

TM 32-5895-070-24&P

- General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Signal Display Unit, ID-2349/TRR-35(V) TM 32-5895-039-40&P
- General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Receiver Control Unit, C-11383/TRR-35(V) TM 32-5895-041-40&P
- Operator's Manual, Radio Receiving Set, AN/TRQ-32(V) TM 32-5895-070-10
- Hand Receipt Manual for Receiving Set, Radio AN/TRQ-32(V) TM 32-5895-070-10-HR
- Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for AN/TRQ-32(V) TM 32-5895-070-24&P
- Operator's, Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Digital Multimeter, AN/USM-486 TM 32-6625-2958-14&P
- General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Disk Drive Control, C-11843/TRQ-32(V) TM 32-7025-001-40&P
- Depot Maintenance Work Requirements for System Controller, C-11845/TRQ-32(V) DMWR 32-5811-136
- Depot Maintenance Work Requirements for Data Link Processor, C-11844/TRQ-32(V) DMWR 32-5811-152
- Depot Maintenance Work Requirements for Receiver Interface Unit, J-4144/TRR-35(V) DMWR 32-5895-034
- Depot Maintenance Work Requirements for Operator Control Panel, MX-10750/TRQ-32(V) DMWR 32-5895-035
- Depot Maintenance Work Requirements for Receiver Enclosure, CY-8324/TRR-35(V) DMWR 32-5895-035
- Depot Maintenance Work Requirements for Disk Drive Control, C-11843/TRQ-32(V) DMWR 32-7025-001

A-5. MISCELLANEOUS PUBLICATIONS

- The Army Maintenance Management System (TAMS) DA PAM 738-750

Field Instructions for Painting and Preserving
Electronics Command Equipment Including
Camouflage Pattern Painting of Electrical
Equipment Shelters TB 43-0118

Expendable Items (Except Medical, Class V, Repair
Parts, and Heraldic Items)CTA 50-970

Consolidated Index of Army Publications
and Blank FormsDA PAM-310-1

Preservation, Packaging, and Packing and Marking
Materials, Supplies, and Equipment Used by the Army. SB 11-573

Federal Supply Code for Manufacturers; United States
and Canada, Name to Code and Code Name (GSA-
FSS H4-1/H4-2)SB 708-41/42

APPENDIX B
MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. PURPOSE AND SCOPE

The Maintenance Allocation Chart (MAC) in Section II assigns all authorized maintenance functions and repair operations to be performed by the lowest appropriate maintenance category and delineates the tools and test equipment required to perform the operations. It is a controlling influence in the preparation of equipment publications and the selection of repair parts.

Section III lists the special tools and test equipment required for each maintenance function as referenced from Section II.

Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTENANCE FUNCTIONS

Definitions of the maintenance function terms are as follows:

- a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, or electrical characteristics with established standards through examination.
- b. Test. To verify serviceability and to detect incipient failure by measuring the mechanical or electrical characteristics with prescribed standards.
- c. Service. Operations required periodically to keep an item in proper operating condition, e.g., to clean, preserve, etc.
- d. Replace. The act of substituting a serviceable like part, subassembly, module, component, or assembly for an unserviceable counterpart.
- e. Repair. The application of maintenance services (inspect, test, service, replace) or other maintenance actions to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module, component, assembly, end item, or system. This function does not include the trial and error replacement of running spare type items such as fuses, lamps, or electron tubes.
- f. Adjust. To maintain or regulate, within prescribed limits, by bringing an item into proper or exact position, or by setting the operating characteristics to specified parameters.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II

- a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which are to identify components, assemblies, subassemblies, and modules within the next higher assembly.
- b. Column 2, Component/Assembly. Column 2 contains the noun names of components, assemblies, subassemblies and modules for which maintenance is authorized.
- c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in column 2. When items are listed without maintenance functions, it is solely for the purpose of having group numbers in the MAC and RPSTL coincide.
- d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a "worktime" figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform the maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance categories, appropriate "worktime" figures will be shown for each category. This number of task-hours specified by the "worktime" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under a typical field operating condition. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the Maintenance Allocation Chart. Subcolumns of column 4 are as follows:
 - C Operator/Crew
 - O Organizational
 - F Direct Support
 - H General Support
 - D Depot
- e. Column 5, Tools and Equipment. Column 5 specifies by code, those common tool sets (not individual tools) and special tools, test and support equipment required to perform the designated function.
- f. Column 6, Remarks. Column 6 contains an alphabetic code which leads to the remark in section IV, Remarks, which is pertinent to the item opposite the particular code.

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS. SECTION III

The tool and test equipment requirements have taken under consideration the maintenance levels, the tasks to be accomplished at the various levels, the inherent BIT capabilities of the system, and the equipments currently in the Military inventory.

- a. Column 1, Tool or Test Equipment Reference Code. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool and test equipment for the maintenance functions.
- b. Column 2, Maintenance Level. The codes in this column indicate the lowest maintenance level authorized to use the tool or test equipment.
- c. Column 3, Nomenclature. This column lists the noun name and nomenclature for the tools and test equipment required to perform the maintenance functions.
- d. Column 4, National/NATO Stock Number. This column lists the National or NATO Stock Number of the specific tool or test equipment.
- e. Column 5, Tool Number. This column lists the manufacturer's part number of the tool followed by the Federal Supply Code (5-digit) for the manufacturer in parentheses.

B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV

- a. Column 1, Reference Code. This code refers to the appropriate item in section II, column 6.
- b. Column 2, Remarks. This column provides the required explanatory information necessary to clarify items appearing in section 2.

SECTION II. MAINTENANCE ALLOCATION CHART
FOR
AN~RQ-32(V)

| (1) GROUP NO. | (2) COMPONENT/ ASSEMBLY | (3) MAINTENANCE FUNCTION | (4) MAINTENANCE CATEGORY | | | | | (5) TOOLS AND EQPT. | (6) REMARKS |
|------------------|---------------------------------------------------------|-----------------------------|-----------------------------|-----|-----|-----|---|-------------------------------|----------------|
| | | | C | O | F | H | D | | |
| 00 | Radio Receiving Set, AN/TRQ-32(V) (Unit 1) | Inspect | | 0.6 | | | | 1,3,5,6,7,8,10,11,14,15,16,18 | AZ |
| | | Test | | 0.4 | | | | | |
| | | Service | | 0.5 | | | | | |
| | | Adjust | | 0.1 | | | | | |
| | | Repair | | 1.0 | | | | | |
| 01 | Truck Installation Kit, MK-2298/TRQ-32(V) | Repair | | | 1.8 | | | | BA |
| | | Test | | 0.1 | R | | | | A |
| | | Repair | | 0.5 | | | | | A |
| | | Repair | | | 1.5 | | | | A |
| | | Adjust | | 0.1 | | | | | A |
| | | Adjust | | | 1.1 | | | | A |
| 02 | Shelter Assembly, (1A1) | Adjust | | 0.2 | | | | 15,16,17,21,8,12 | BD |
| | | Replace | | 1.4 | | | | 2,11 | BB |
| | | Repair | | 0.2 | | | | 15,16,17 | |
| 0201 | Modified Shelter (1A1A1) S-457B/G | Repair | | | 1.8 | | | | BC |
| | | Inspect | | 0.3 | | | | | |
| | | Service | | 0.2 | | | | 19 | |
| | | Repair | | 1.0 | | | | | B |
| 0202 | Intercom Control Panel (1A1A14, A2) | Repair | | | 1.0 | | | | B |
| | | Replace | | 0.1 | | | | 17 | C |
| 0203 | Operator Control Panel, MX-10750/TRQ-32(V) (1A1A3, A15) | Repair | | 1.0 | | | | | |
| | | Replace | | 0.1 | | | | 17 | |
| | | Repair | | 0.1 | | | X | | D |
| 0204 | Recorder-Reproducer, AN/UNH-17A (1A1A16, A4) | Repair | | 0.1 | | | | 17 | |
| | | Replace | | 0.1 | | | | | D |
| | | Repair | | | | 2.0 | | | F |

SECTION II. MAINTENANCE ALLOCATION CHART
FOR
AN/TRQ-32(V) (CONT)

| (1) GROUP NO. | (2) COMPONENT/ ASSEMBLY | (3) MAINTENANCE FUNCTION | (4) MAINTENANCE CATEGORY | | | | | (5) TOOLS AND EQPT. | (6) REMARKS | |
|---------------------|-----------------------------------------------------|------------------------------------------------|--------------------------------|-------------------|-----|---|-----|------------------------------|----------------|---------------|
| | | | C | O | F | H | D | | | |
| 0205 | RF Distribution Unit, SA-2444/ TRQ-32(V) (1A1A5) | Replace Repair | | 0.1 | | | | X | 17 | |
| 0206 | Fault Function Panel (1A1A8) | Replace Repair Repair | | 0.5 0.1 | 1.0 | | | | 17 | D H |
| 0207 | Operator Terminal, CP-1824/ TRQ-32(V) (1A1A25, A9) | Replace Repair | | 0.1 | | | | X | 17 | I |
| 0208 | System Controller C-11845/TRQ-32(V) (1A1A10) | Test Test Service Replace Repair Repair Repair | | | 0.1 | | | X | 16,19 17 | BE J |
| 0209 | System Power Supply, PP-8179/ TRQ-32(V) (1A1A11) | Service Replace Repair Repair | | 0.4 0.2 0.1 | 0.8 | | | X | 17,19 | J D,M N |
| 0210 | Thermal Printer, RP-272/G (1A1A12) | Service Replace Repair | | 0.5 0.1 0.1 | | | | | 17 17 | O M,O |
| 0211 | DF Control Unit, C-11002/USQ (1A1A13) | Replace Repair | | 0.1 | | | 0.3 | | | P |
| 0212 | Receiver-Transmitter, RT-1288A/ ARC-164(V) (1A1A21) | Replace Repair Repair | | 0.1 0.1 | 0.2 | | | | | M Q |

Section II. MAINTENANCE ALLOCATION CHART
FOR
AN/TRQ-32(V) (CONT)

| (1) GROUP NUMBER | (2) COMPONENT/ASSEMBLY | (3) MAINTENANCE FUNCTION | (4) MAINTENANCE CATEGORY | | | | | (5) TOOLS AND EQPT. | (6) REMARKS |
|------------------------|---------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-----|-----|---------------|-----------------------------------|-----------------|
| | | | C | O | F | H | D | | |
| 0213 | Comsec Equipment TSEC/KY-57 (1A1A23) | Replace Repair | * | 0.2 | | | | | R S |
| 0214 | Audio Frequency Switch, SA-2171/ VRC (1A1A24) | Replace Repair | | 0.1 | | 1.0 | | 16 | T |
| 0215 | Comm Security Equipment TSEC/KG-84 TSEC/KG-84A (1A1A26) | Replace Repair Repair | * | | 0.4 | 1.2 | | | R U U |
| 0216 | Telephone Set TA-312/PT (1A1A27) | Replace Repair | | 0.1 1.0 | | | | 17 | V |
| 0217 | HG/AC Group PU-784/TRQ-32(V) (1A1A28) | Service Adjust Repair | | 0.3 0.5 2.2 | | | | | W,Z Z X,Y |
| 021701 | Shelter Mounted Unit (1A1A28A1) | Service | | 0.3 | | | | 1,4,5, 9,12 | W,Z |
| | | Replace Repair Repair | | 2.8 0.4 | 1.0 | | 8,12 11,12 | Y Z | |
| 021702 | HG/AC Control Panel (1A1A28A2) | Replace | | 0.1 | | | | 12 | D,X Z |
| | | Repair Repair | | 0.1 | 1.0 | | | | |
| 021703 | Pump Assembly (1A1A28A3) | Replace | | 1.4 | | | | 1,5,12, 18 | Z |
| | | Repair | | | 1.0 | | | | |
| 021704 | Reservoir Assembly (1A1A28A4) | Replace | | 2.6 | | | | 1,5,6, 7,8,10, 11,12, 18 | Z |
| | | Repair | | | 1.0 | | | | |

SECTION II. MAINTENANCE ALLOCATION CHART
FOR
AN/TRQ-32(V) (CONT)

| (1) GROUP NO. | (2) COMPONENT/ ASSEMBLY | (3) MAINTENANCE FUNCTION | (4) MAINTENANCE CATEGORY | | | | | (5) TOOLS AND EQPT. | (6) REMARKS |
|------------------|------------------------------------------------|--------------------------------------------------|--------------------------------|-------------------|-----|-----|---|------------------------------|----------------|
| | | | C | O | F | H | D | | |
| 0218 | Junction Box, J-4099/TSQ-138 (1A1A30) | Replace Repair Repair Repair | | 0.3 1.0 | 1.0 | 1.0 | | 3,16 | AA AA AA |
| 0219 | Radio Set Control, C-10547/ARC-164(V) (1A1A33) | Replace Repair Repair | | 0.1 0.1 | 0.6 | | | 17 | M Q |
| 0220 | Data Link Processor C-11844/TRQ-32(V) (1A1A37) | Service Replace Repair Repair Repair | | 0.4 0.1 0.1 | 2.0 | | X | 17,19 | J D AB |
| 0221 | Disk Drive Control C-11843/TRQ-32(V) (1A1A41) | Service Replace Repair Repair | | 0.2 0.1 0.1 | | | X | 17,19 | J D |
| 0222 | Loudspeaker LS-454/U | Replace Repair | | 0.1 | | 1.0 | | 16 | AD |
| 0223 | Intercom Control Set, C-1611D/AIC (1A1A43,A44) | Replace Repair | | 0.1 0.8 | | | | 17 | D,AE |
| 0224 | Cable Assembly, W22 | Replace Repair | | 0.3 | | | X | 15 | I |
| 0225 | Compressor Assembly C5139844-1 | Service Replace Repair | | 0.2 1.6 | 1.0 | | | 12,22 8,12 | AF,AG AG |
| 0226 | Pneumatic Mast C5139843-1 | Replace Repair Repair | | 1.9 | 3.0 | 3.0 | | 2,11, 12,15, 16 | AH AH |

SECTION II. MAINTENANCE ALLOCATION CHART
FOR
AN/TRQ-32(V) (CONT)

| (1) GROUP NO. | (2) COMPONENT/ ASSEMBLY | (3) MAINTENANCE FUNCTION | (4) MAINTENANCE CATEGORY | | | | | (5) TOOLS AND EQPT. | (6) REMARKS |
|------------------|------------------------------------------------------------------|--------------------------------|--------------------------------|-----|-----|-----|---|------------------------------|----------------|
| | | | C | O | F | H | D | | |
| 0227 | Antenna Group Assembly, OE- 356/TRQ-32(V) (1A1A31) | Test | | | 1.8 | 0.5 | | 13,15, 16,17 | AI |
| | | Replace | | | 0.2 | | | | AI |
| 0228 | UHF Intercept/ Data Link Antenna, AS- 3661/TRQ-32(V) | Repair | | | | 1.8 | | | AI |
| | | Replace | | 0.1 | | | | | AJ |
| 0229 | Magnetic Field Converter, CV- 3579/TSQ | Repair | | | 1.0 | | | | |
| | | Replace | | | 0.3 | | | 14,17, 20 | I |
| 0230 | Radio Frequency Processor, MX- 10526/TRQ-32(V) | Repair | | | | | X | | |
| | | Replace | | 0.4 | | | | 14,15 | |
| 0231 | Antenna Power Supply, TL-3129 | Repair | | | | 0.1 | | | AK |
| | | Replace | | | 0.5 | | | 14,17 | |
| 0232 | Signal Display Unit, ID-2349/TRR- 35(V) (1A1A19A2,A4) | Repair | | | | | | | |
| | | Replace | | 0.1 | | | | 17 | |
| 0233 | Radio Receiver, R- 2144A/URR | Repair | | | | | | | |
| | | Replace | | 0.1 | | 0.5 | | 17 | AM |
| 0234 | Radio Receiver, R-2143/URR | Repair | | | | | X | | AN |
| | | Replace | | 0.1 | | | | 17 | AN |
| 0235 | Receiver Control Unit, C-11383/ TRR-35(V) (1A1A19A3,A5) | Repair | | | | | | | |
| | | Replace | | 0.3 | | | | 17,19 | J |
| | | Repair | | 0.1 | | | | 17 | |
| | | Repair | | 0.1 | | | X | 17 | D,AO |

SECTION II. MAINTENANCE ALLOCATION CHART
FOR
AN/TRQ-32(V) (CONT)

| (1) GROUP NO. | (2) COMPONENT/ ASSEMBLY | (3) MAINTENANCE FUNCTION | (4) MAINTENANCE CATEGORY | | | | | (5) TOOLS AND EQPT. | (6) REMARKS | |
|------------------|------------------------------------------------------------------------|----------------------------------------|--------------------------------|-------------------|---|-----|---|------------------------------|-------------------|------------|
| | | | C | O | F | H | D | | | |
| 0236 | Power Supply PP-7817/URR | Replace Repair Repair | | 0.1 0.1 | | | | X | 17 17 | AO I |
| 0237 | Receiver Interface Unit J-4144/ TRR-35(V) | Replace Repair | | 0.1 | | | | X | 17 | |
| 0238 | Quad Receiver Electronic Cabinet CY-8324/TRR-35(V) (1A1A19A1) | Service Replace Repair Repair | | 0.2 0.7 0.1 | | | | X | 17,19 17 17 | J AO |
| 0239 | J-Box, J-3514/U | Replace Repair | | 0.4 | | 1.0 | | | 16 | T |
| 0240 | J-Box, J-3513/U | Replace Repair | | 0.2 | | 1.0 | | | 16 | T |
| 0241 | Mounting Base, MT-6017A/TRQ- 32(V) (1A1A20) | Replace Repair Repair | | 0.5 0.3 | | 0.5 | | | 16 | M,AS AS |
| 0242 | UHF Bandpass Filter (1A1FL2) | Replace Repair | | 0.1 | | | | X | 17 | I |
| 0243 | VHF Bandpass Filter (1A1FL1) | Replace Repair | | 0.1 | | | | X | 17 | I |
| 0244 | Mounting, MT-1898/VRC | Replace Repair | | 0.3 0.5 | | | | | 16 | AT |
| 0245 | Mounting, MT-1029/VRC | Replace Repair | | 0.8 0.5 | | | | | 16,17 | AT |
| 0246 | Guard Receiver, R-442A/VRC | Replace Repair | | 0.1 1.0 | | | | | | D,AT |
| 0247 | Receiver-Trans- mitter, RT-524A/ VRC | Replace Repair | | 0.1 1.0 | | | | | | D,AT |

Section II. MAINTENANCE ALLOCATION CHART
FOR
AN/TRQ-32(V) (CONT)

| (1) GROUP NUMBER | (2) COMPONENT/ASSEMBLY | (3) MAINTENANCE FUNCTION | (4) MAINTENANCE CATEGORY | | | | | (5) TOOLS AND EQPT. | (6) REMARKS |
|------------------------|----------------------------------------------------------------|---------------------------------------|--------------------------------|------------|---|-----|---|------------------------------|----------------|
| | | | C | O | F | H | D | | |
| 0248 | Antenna, AS-1729/VRC | Replace Repair Repair Repair | | 0.2 0.5 | | 1.0 | | 16,17 | AU AU AU |
| 0249 | Magnetic Disk Recorder-Repro- ducer, RD-583/TRQ-32(V) | Repair | | 0.1 | | | | | M,AV, AW |
| 024901 | Disk Drive Cart- ridge, C5139838-1 | Replace Repair | * | | | | X | | R I |
| 024902 | Hard Disk Drive Enclosure, C5139622-1 | Replace Repair Repair | | 0.1 0.1 | | | X | 17 | M I |
| 0250 | Intercomm Control, C-2298/VRC | Replace Repair | | 0.1 0.3 | | | | 16 | AX |
| 0251 | Reductor Assembly, C5114171-1 | Replace | | 0.4 | | | | 13,16 | |
| 0252 | Guard Receiver Antenna (1A1A29) | Repair | | 0.1 | | | | | BH |
| 0253 | HF Intercept Antenna (1A1A42) | Repair | | 0.1 | | | | | BH |
| 0254 | Power Switch Assembly (1A1A38, 1A1A39) | Replace | | 0.1 | | | | 16 | |
| 0255 | Inclinometer Assembly, C5110910 | Replace | | 0.1 | | | | 17 | |
| 0256 | Filter Assembly (1A1A36) | Replace | | 0.1 | | | | 17 | |

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS
FOR
AN/TRQ-32(V)

| (1) TOOL OR TEST EQUIPMENT REF CODE | (2) MAINTENANCE CATEGORY | (3) NOMENCLATURE | (4) NATIONAL/NATO STOCK NUMBER | (5) TOOL NUMBER |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------|--------------------------------------|-----------------------|
| EQUIVALENT TOOLS AND TEST EQUIPMENT CAN BE SUBSTITUTED FOR THE ITEMS LISTED IN THE FOLLOWING TABLE. | | | | |
| 1 | 0 | SAFETY GOGGLES | 4240-00-052-3776 | A-A-1110 |
| 2 | 0 | 18 EXTENSION | 5120-00-273-9205 | A-A-2170 |
| 3 | 0 | MULTIMETER | 6625-01-145-2430 | AN/USM-486 |
| 4 | 0 | AIR BLOW GUN | 4940-00-333-5541 | DGA520 |
| 5 | 0 | FILTER WRENCH | 5120-00-865-0933 | GGG-R-200 |
| 6 | 0 | HEAT GUN | 4940-00-363-3225 | HG501 |
| 7 | 0 | CRIMING TOOL | 5120-00-132-6913 | M22520/5-01 |
| 8 | 0 | 5-TON WRECKER | 2320-00-051-0489 | M816 |
| 9 | 0 | HOSE ASSEMBLY | 4720-00-422-8540 | PH5032-1 |
| 10 | 0 | 1-1/2 OPEN END WRENCH | 5120-00-277-5072 | RX48 |
| 11 | 0 | TOOL KIT, GENERAL MECHANIC'S | 5180-00-699-5273 | SC5180-90-CI N05 |
| 12 | 0 | REFR UNIT, TOOL KIT | 1580-00-596-1474 | SC5180-90-CI N18 |
| 13 | F,0 | NO. 3 CROSS-TIP SCREWDRIVER | 5120-00-234-8912 | SSDP630 |
| 14 | F,0 | 3/8 FLAT TIP SCREWDRIVER | 5120-00-278-1280 | SSD8 |
| 15 | F,0 | TOOL KIT | 5180-00-605-0079 | TK-100/G |

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS
 FOR
 AN/TRQ-32(V) (CONT)

| (1) TOOL OR TEST EQUIPMENT REF CODE | (2) MAINTENANCE CATEGORY | (3) NOMENCLATURE | (4) NATIONAL/NATO STOCK NUMBER | (5) TOOL NUMBER |
|----------------------------------------------|--------------------------------|--------------------------|--------------------------------------|-----------------------|
| 16 | F,O | TOOL KIT | 5180-00-064-5178 | TK-101/G |
| 17 | F,O | TOOL KIT | 5180-00-610-8177 | TK-105/G |
| 18 | O | 1-1/4 OPEN END WRENCH | 5120-01-110-3357 | OEX40 |
| 19 | O | BRUSH | 8020-00-297-6657 | H-B-491 |
| 20 | F | DEGAUSSER | 6625-01-618-1681 | 1966-1-3355-1 |
| 21 | O | INCLINOMETER | 5895-01-223-8594 | 2136A11 |
| 22 | O | OILER, HAND | 4930-00-222-2975 | 226-334 |

Section IV. REMARKS

| REFERENCE CODE | REMARKS |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------|
| A | Refer to TM 5-2320-531-24&P. |
| B | Refer to TM 32-5411-003-24&P. |
| C | Refer to TM 32-5811-902-34&P. |
| D | Repair by replacement of defective lamps on-equipment. |
| F | Refer to TM 32-5835-005-14&P. |
| H | Refer to TM 55-1520-210-23. |
| I | Return unit to original equipment manufacturer for repair. |
| J | Clean air filters annually. |
| K | Refer to TM 32-5811-136-23&P. |
| M | Repair by replacing blown fuse on-equipment. |
| N | Return to OEM. |
| O | Refer to TM 11-5895-1107-24-1. Crew replaces paper. |
| P | Refer to TM 32-5811-012-34&P, TM 32-5800-002-40&P, and TM 32-5800-002-40P. |
| Q | Refer to TM 11-5841-286-13. |
| R | Unit is removed/replaced at crew maintenance level. Unserviceable disk drive cartridge must be zeroized prior to return to depot. |
| S | Refer to TM 11-5810-256-12. |
| T | Refer to TM 11-5810-312-34&P. |
| U | Refer to TM 11-5810-308-34. |
| V | Refer to TM 11-5805-20-12. |
| W | Service shelter-mounted unit by cleaning oil coolers, replacing hydraulic filter element, and cleaning/replacing intake air filters. |
| X | Repair by replacing defective unit or lamp on HG/AC control assembly. |
| Y | Repair shelter-mounted unit by replacing defective voltage regulator or K1 relay on-equipment. |
| Z | Refer to TM 5-4120-391-14. |
| AA | Refer to TM 32-5811-906-24&P. |
| AB | Refer to TM 32-5865-153-23&P. |
| AD | Refer to TM 11-5965-255-14&P. |

Section IV. REMARKS (CONT)

| REFERENCE CODE | REMARKS |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AE | Refer to TM 11-5831-201-20. |
| AF | Service compressor assembly by adjusting pressure regulator and mast lubricator, and by filling the mast lubricator with hydraulic fluid. |
| AG | TM number not yet assigned. |
| AH | TM number not yet assigned. |
| AI | TM number not yet assigned. |
| AJ | Refer to TM 32-5811-151-24&P. |
| AK | Refer to TM 32-5800-003-40 and TM 32-5800-003-40P. |
| AN | Return unit to USACEA for repair. |
| AO | Repair by resetting tripped circuit breaker on equipment. |
| AS | Refer to TM 11-5841-286-13. |
| AT | Refer to TM 11-5820-401-12. |
| AU | Refer to TM 11-5895-262-15. |
| AV | Crew level repairs the disk drive assembly by removing/replacing defective disk drive cartridge. |
| AW | Repair by removing/replacing defective disk drive enclosure. |
| AX | Refer to TM 11-5830-340-12. |
| AY | Depot to make repair/condemn decision. |
| AZ | Repair radio receiving set by accomplishing Organizational level repair of Truck Installation components and shelter assembly. |
| BA | Repair radio receiving set by accomplishing Direct Support level repair of Truck Installation components and shelter assembly. |
| BB | Repair shelter assembly by accomplishing Organizational level replacement of LRUs and by replacing following components: caution panel lens (20 each) (replace/reinstall); DF antenna elements; mast tube and ball lock pins; crank hook, antenna stop, pin guide, ball lock pin, and lanyard; cable storage assembly, cable support bracket, and (long and short) cable straps; and base mounting socket assembly. |
| BC | Repair shelter assembly by accomplishing Direct Support level replacement of LRUs. |

Section IV. REMARKS (CONT)

| REFERENCE CODE | REMARKS |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BD | Adjust shelter assembly by accomplishing the following procedures: inclinometer assembly level adjustment after inclinometer assembly replacement; antenna vertical lock pin adjustment after replacing reductor assembly, antenna base assembly, mast tube, pin guide, and pneumatic mast. |
| BH | Repair antenna by replacing the AB-15/GR Antenna Base, MS-116A Antenna Element, MS-117A Antenna Element or the MS-118A Antenna Element. |

APPENDIX C
REPAIR PARTS AND SPECIAL TOOLS LIST

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Section I.

INTRODUCTION

C-1. SCOPE

This appendix lists spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of organizational, direct support, and general support maintenance of the system. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

C-2. GENERAL

This appendix is divided into the following sections:

- a. Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of authorized parts. Parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure number and item number sequence.

- b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized for the performance of maintenance.
- c. Section IV. National Stock Number and Part Number Index. A list, in National Item Identification Number (NINN) 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. This index is followed by a cross-reference list of reference designators to figure and item numbers.

C-3. EXPLANATION OF COLUMNS

- a. Illustration. This column is divided as follows:
 - (1) Figure Number. Indicates the figure number of the illustration on which the item is shown.
 - (2) Item Number. The number used to identify the item called out in the illustration.
- b. Source, Maintenance, and Recoverability (SMR) Codes
 - (1) Source Code. Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

| <u>CODE</u> | <u>DEFINITION</u> |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PA | - Item procured and stocked to anticipated or known usage. |
| PB | - Item procured and stocked for insurance purpose because essentiality dictates that a minimum quantity be available in the supply system. |
| PC | - Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature. |
| PD | - Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfitting. Not subject to automatic replenishment. |

- PE - Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.
- PF - Support equipment which will not be stocked but which will be centrally procured on demand.
- PG - Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which, because of probable discontinuance or shutdown of production facilities, would prove uneconomical to reproduce at a later time.
- KD - An item of a depot overhaul/repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
- KF - An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.
- KB - Item included in both a depot overhaul/repair kit and a maintenance kit.
- MO - Item to be manufactured or fabricated at organizational level.
- MF - Item to be manufactured or fabricated at the direct support maintenance level.
- MH - Item to be manufactured or fabricated at the general support maintenance level.
- MD - Item to be manufactured or fabricated at the depot maintenance level.
- AO - Item to be assembled at organizational level.
- AF - Item to be assembled at direct support maintenance level.
- AH - Item to be assembled at general support maintenance level.
- AD - Item to be assembled at depot maintenance level.
- XA - Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.

- XB - Item is not procured or stocked. If not available through salvage, requisition.
- XC - Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
- XD - A support item that is not stocked. When required, item will be procured through normal supply channels.

NOTE

Cannibalization or salvage may be used as a source of supply for any items coded above except those coded XA and aircraft support items as restricted by AR 700-42.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

| <u>CODE</u> | <u>DEFINITION</u> |
|-------------|-------------------------------------------------------------------------------------------------------------|
| C - | Crew or operator maintenance performed within organizational maintenance. |
| O - | Support item is removed, replaced, used at the organizational level. |
| F - | Support item is removed, replaced, used at the direct support level. |
| H - | Support item is removed, replaced, used at the general support level. |
| D - | Support items that are removed, replaced, used at depot, mobile depot, or specialized repair activity only. |

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (ie, all authorized maintenance functions). This position will contain one of the following maintenance codes:

| <u>CODES</u> | <u>DEFINITION</u> |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0 - | The lowest maintenance level capable of complete repair of the support item is the organizational level. |
| F - | The lowest maintenance level capable of complete repair of the support item is the direct support level. |
| H - | The lowest maintenance level capable of complete repair of the support item is the general support level. |
| D - | The lowest maintenance level capable of complete repair of the support item is the depot support level. |
| L - | Repair restricted to Specialized Repair Activity. |
| Z - | Nonrepairable. No repair is authorized. |
| B - | No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc., at the user level. No parts or special tools are procured for the maintenance of this item. |

(3) Recoverability Code. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR code format as follows:

| <u>CODE</u> | <u>DEFINITION</u> |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Z | Nonrepairable item. When unserviceable, condemn and dispose at the level indicated in position 3. |
| 0 | Repairable item. When uneconomically repairable, condemn and dispose at organizational level. |
| F | Repairable item. When uneconomically repairable, condemn and dispose at the direct support level. |
| H | Repairable item. When uneconomically repairable, condemn and dispose at the general support level. |
| D | Repairable item. When beyond the lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level. |

- L - Repairable item. Repair, condemnation, and disposal not authorized below depot/speciaized repair activity level.
 - 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. Indicates the National stock number assigned to the item and which will be used for requisitioning.
- d. Part Number. 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 a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

- e. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer; distributor, Government agency, etc.
- f. Description. Indicates the Federal item name and, if required a minimum description to identify the item.
- g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in,- pr). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.
- h. Quantity Incorporated 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, of an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers, etc).

C-4. SPECIAL INFORMATION

- a. Usable On codes are shown in the description column. Uncoded items are applicable to all models. Identification of the usable codes used in this publication are:

| <u>CODE</u> | <u>USED ON</u> |
|-------------|----------------|
| U67 | AN/TRQ-32(V)1 |
| U68 | AN/TRQ-32(V)2 |

C-5. HOW TO LOCATE REPAIR PARTS

- a. When National stock number or part number is unknown.
 - (1) First. Using the table of contents, determine the functional group within which the item belongs. This is necessary since illustrations are prepared for functional groups and listings are divided into the same groups.
 - (2) Second. Find the illustration covering the functional group to which the item belongs.
 - (3) Third. Identify the item on the illustration and note the illustration figure and item number of the item.
 - (4) Fourth. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

- b. When the 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. This index is in NINN sequence followed by a list of part numbers in alphanumeric sequence, cross-referenced to the illustration figure number and item number.
 - (2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list.

C-6. ABBREVIATIONS.

| <u>Abbreviations</u> | <u>Explanation</u> |
|----------------------|--------------------|
| MOD | MODIFIED |
| HYDR | HYDRAULIC |
| ASSY | ASSEMBLY |
| EQPT | EQUIPMENT |
| PNL | PANEL |
| CONT | CONTROL |
| INSTL | INSTALLATION |

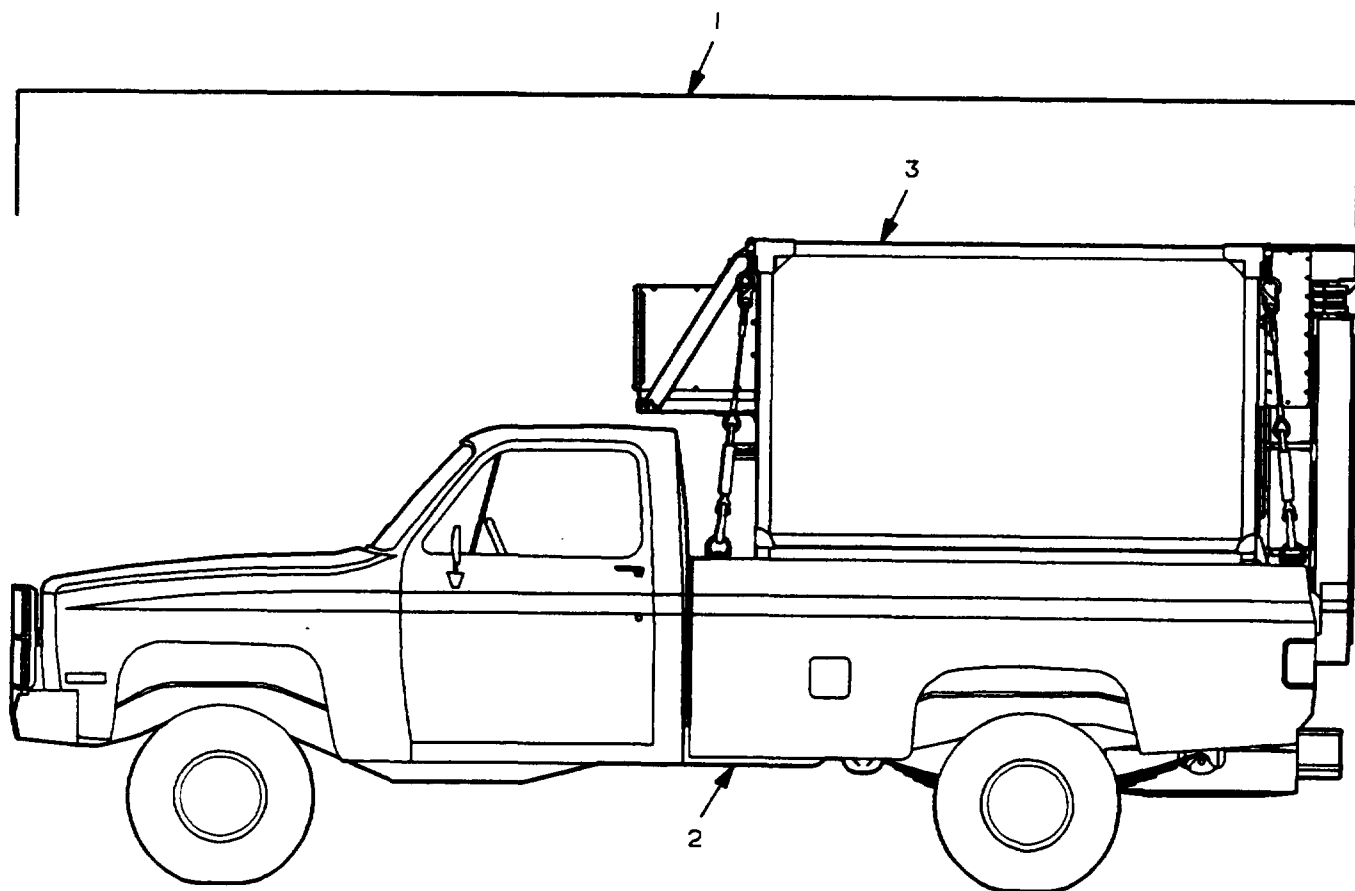


FIGURE C-1. RADIO RECEIVING SET AN/TRQ-32(V)

| (1) ILLUS | (2) | (3) | (4) | (5) | (6) | (7) | (8) | |
|-------------------|--------------------|-------------|-----------------------------|--------------------|-------|----------------------------------------------------------------------------|-------------|-------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | PART NUMBER | FSCM | DESCRIPTION UOC | U / M | INC IN UNIT |
| C-1 | | | 5895-01-167-7655 | | | GROUP: 00 RADIO RECEIVING U67 SET,AN/TRQ-32(V)1 | | |
| | | | 5895-01-167-7656 | | | RADIO RECEIVING U68 SET,AN/TRQ-32(V)2 | | |
| C-1 | 1 | PDODD | 5895-01-167-7656 | AN/TRQ- -32(V)2 | 57958 | RADIO RECEIVING SET (UNIT 1) | EA | 1 |
| C-1 | 2 | PDOFH | 5895-01-166-6959 | C5110798-1 | 57958 | KIT,INSTL,TRUCK (1A2) (SEE TM 5-2320-531-24&P FOR BREAKDOWN) | EA | 1 |
| C-1 | 3 | XDODD | | C5139841-1 | 57958 | SHELTER ASSEMBLY (A1A) (ALTERED FROM C5110458-2) (SEE FIGURE C-2) | EA | 1 |

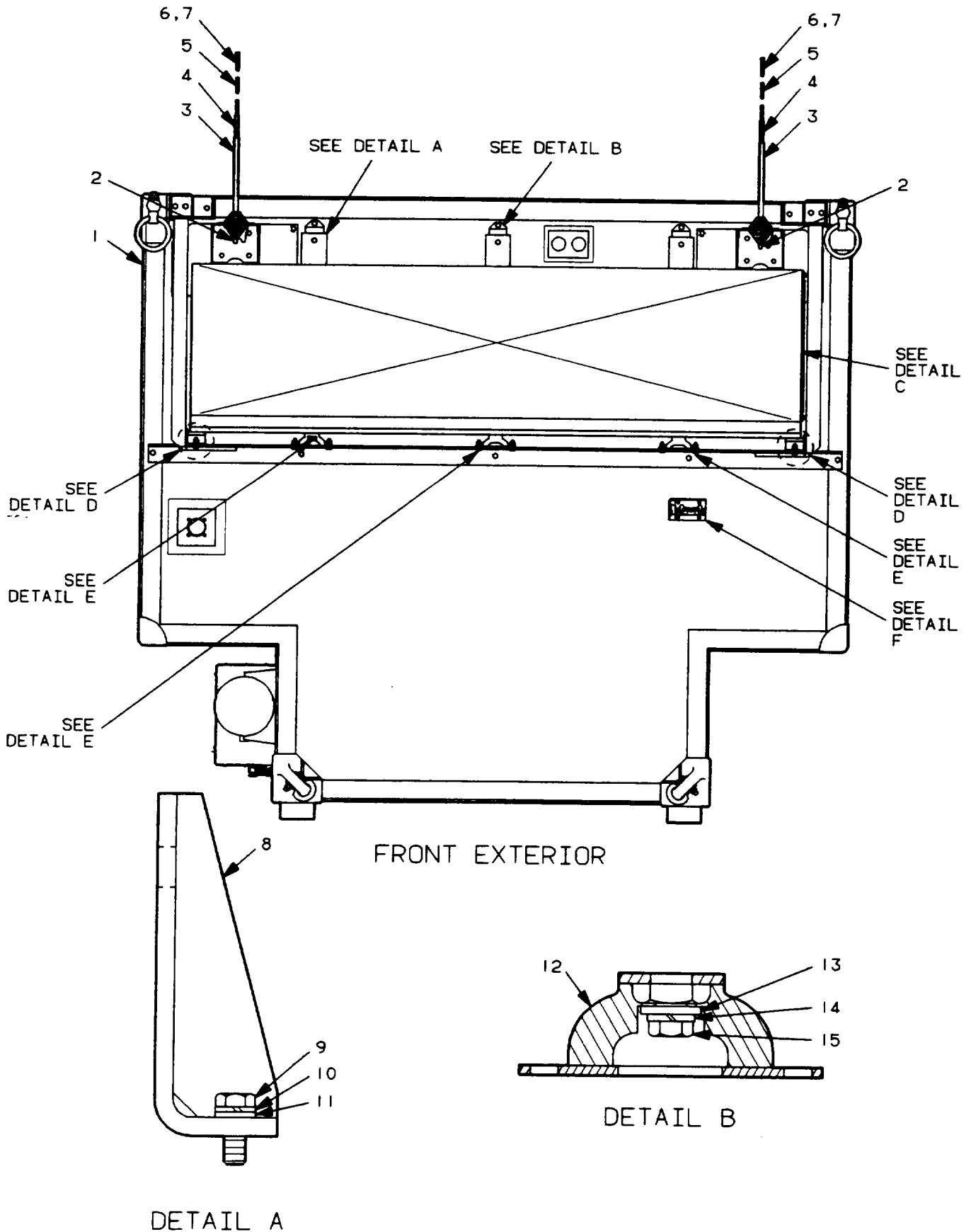
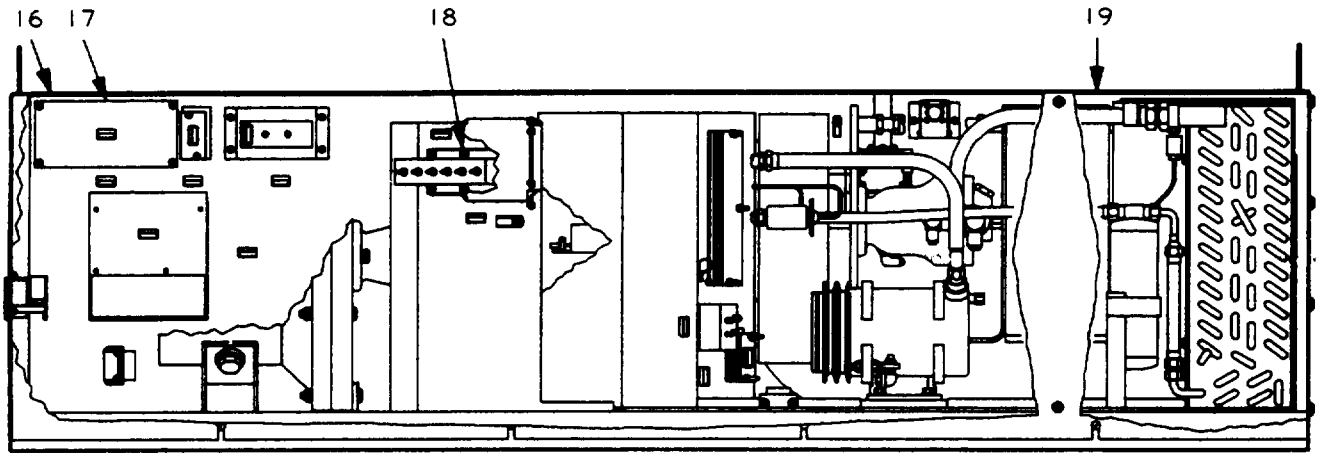
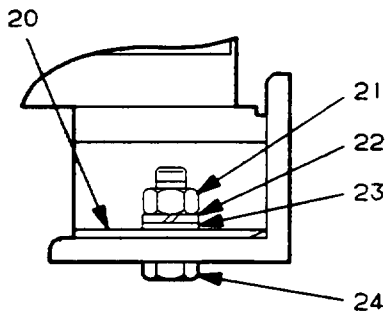


FIGURE C-2. SHELTER ASSEMBLY (SHEET 1 OF 24)

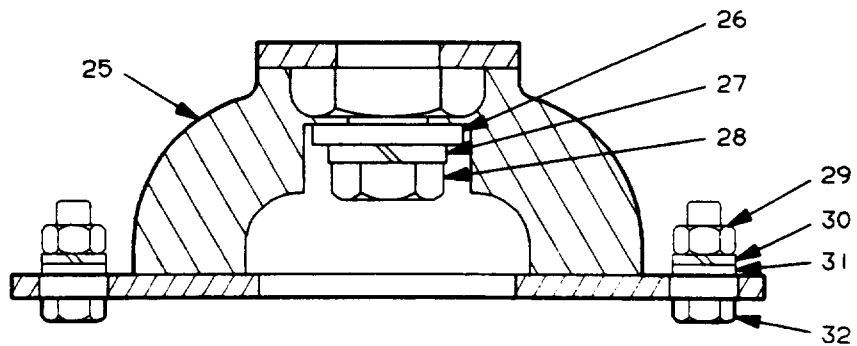
| (1) ILLUS (A) FIG NO. | (2) (B) ITEM NO. | (3) SMR CODE | (4) NATIONAL STOCK NUMBER | (5) PART NUMBER | (6) FSCM | TM32-5895-070-24&P DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|-----------------------------------|---------------------------|--------------------|------------------------------------|-----------------------|-------------|---------------------------------------------------------------------|-----|--------------------|---------------------------------|
| C-2 | | XDODD | | C5139841-1 | 57958 | GROUP:01 SHELTER ASSEMBLY (1A1A) (ALTERED FROM C5110458-2) | | REF | |
| C-2 | 1 | XDODD | | C5139842-1 | 57958 | SHELTER,MODIFIED (1A1A1) (ALTERED FROM C5110452-2) | | EA | 1 |
| C-2 | 2 | PAOZZ | 5985-00-149-3534 | UG273/U | 80058 | ADAPTER,CONNECTOR | | EA | 2 |
| C-2 | 3 | PAOZZ | 5985-00-221-5544 | AB-15/GR | 80058 | ANTENNA,MOD (1A1A29/A42) | | EA | 2 |
| C-2 | 4 | PAOZZ | 5985-00-199-8831 | MS-116-A | 80063 | MAST | | EA | 2 |
| C-2 | 5 | PAOZZ | 5985-00-115-7149 | MS-117-A | 80063 | MAST | | EA | 2 |
| C-2 | 6 | PAOZZ | 5985-00-238-7474 | MS-118-A | 80063 | MAST | | EA | 2 |
| C-2 | 7 | XDOZZ | | C5131104-1 | 57958 | HOLDER | | EA | 2 |
| C-2 | 8 | XDOZZ | 5340-00-775-5266 | C5118945-1 | 57958 | BRAKCECT | | EA | 3 |
| C-2 | 9 | XDOZZ | 5305-00-021-3801 | MS35307-411 | 96906 | SCREW,CAP | | EA | 3 |
| C-2 | 10 | XDOZZ | 5310-01-099-1648 | NAS1640-816 | 80205 | WASHER,LOCK | | EA | 3 |
| C-2 | 11 | XDOZZ | 5310-00-167-0806 | AN960C816 | 88044 | WASHER,FLAT | | EA | 3 |
| C-2 | 12 | XDOZZ | | C5131405-1 | 57958 | ISOLATOR,CONTROL | | EA | 3 |
| C-2 | 13 | XDOZZ | 5310-00-167-0804 | AN960C616 | 88044 | WASHER,FLAT | | EA | 6 |
| C-2 | 14 | XDOZZ | 5310-01-244-8303 | MS35338-141 | 96906 | WASHER,LOCK | | EA | 6 |
| C-2 | 15 | XDOZZ | 5306-00-543-4405 | MS35307-334 | 96906 | SCREW,CAP | | EA | 6 |



DETAIL C



DETAIL D
(TYPICAL 2 PLACES)



DETAIL E

FIGURE C-2. SHELTER ASSEMBLY (SHEET 2 OF 24)

| (1) ILLUS (A) (B) FIG ITEM NO. NO. | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|------------------------------------------------|----|--------------------|------------------------------------|-----------------------|-------------|------------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 16 | PDOFH | 4120-01-168-0087 | C5110460-1 | 57958 | HYDR GEN/AIR COND GROUP (1A1A28) | | EA | 1 |
| C-2 | 17 | PAOZZ | 6110-01-267-6514 | C5118812-1 | 57958 | VOLTAGE REG(VR1) | | EA | 1 |
| C-2 | 18 | PAOZZ | | C5118837-1 | 57958 | RELAY (1A1A28A1K1) | | EA | 1 |
| C-2 | 19 | PAOFH | 5411-01-186-8422 | C5118900-1 | 57958 | SHELTER MOUNTED UNIT (1A1A28A1) | | EA | 1 |
| C-2 | 20 | XDOZZ | | C5131354-1 | 57958 | ISOLATOR | | EA | 4 |
| C-2 | 21 | XDOZZ | 5310-00-913-8881 | MS51971-3 | 96906 | NUT, PLAIN | | EA | 8 |
| C-2 | 22 | XDOZZ | 5310-00-984-7042 | NAS1640-616 | 80205 | WASHER, LOCK | | EA | 8 |
| C-2 | 23 | XDOZZ | 5310-00-167-0804 | AN960C616 | 88044 | WASHER, FLAT | | EA | 8 |
| C-2 | 24 | XDOZZ | 5305-00-576-5417 | MS35307-360 | 96906 | BOLT, MACHINE | | EA | 8 |
| C-2 | 25 | XDOZZ | | C5131405-1 | 57958 | ISOLATOR, CONTROL | | EA | 3 |
| C-2 | 26 | XDOZZ | 5310-00-167-0804 | AN960C616 | 88044 | WASHER, FLAT | | EA | 3 |
| C-2 | 27 | XDOZZ | 5310-01-244-8303 | MS35338-141 | 96906 | WASHER, LOCK | | EA | 3 |
| C-2 | 28 | XDOZZ | 5305-00-021-3740 | MS35307-364 | 96906 | SCREW, CAP | | EA | 3 |
| C-2 | 29 | XDOZZ | 5310-00-913-8881 | MS51971-3 | 96906 | NUT, PLAIN | | EA | 6 |
| C-2 | 30 | XDOZZ | 5310-00-984-7042 | NAS1640-616 | 80205 | WASHER, LOCK | | EA | 6 |
| C-2 | 31 | XDOZZ | 5310-00-167-0804 | AN960C616 | 88044 | WASHER, FLAT | | EA | 6 |
| C-2 | 32 | XDOZZ | 5306-00-576-5417 | MS35307-360 | 96906 | BOLT, MACHINE | | EA | 6 |

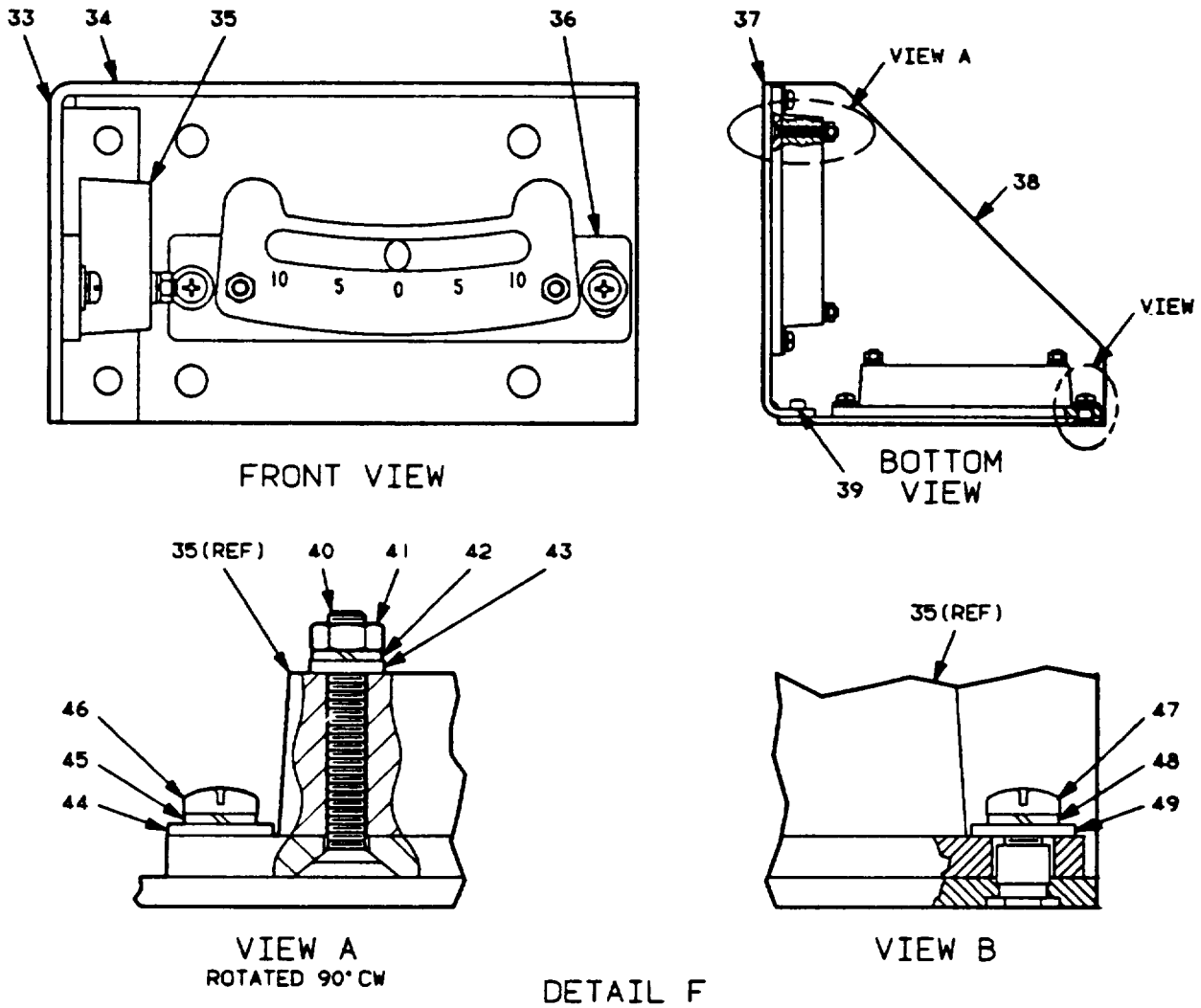
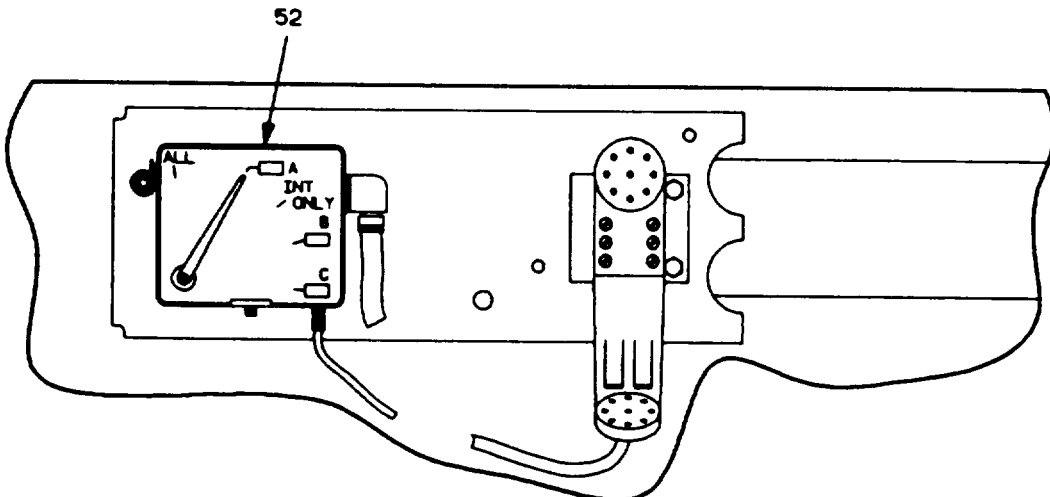
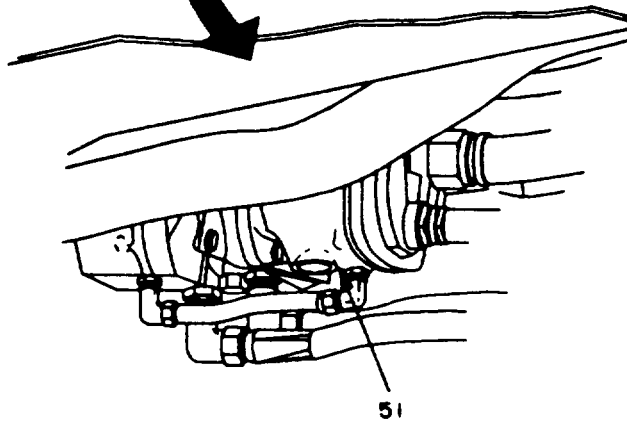
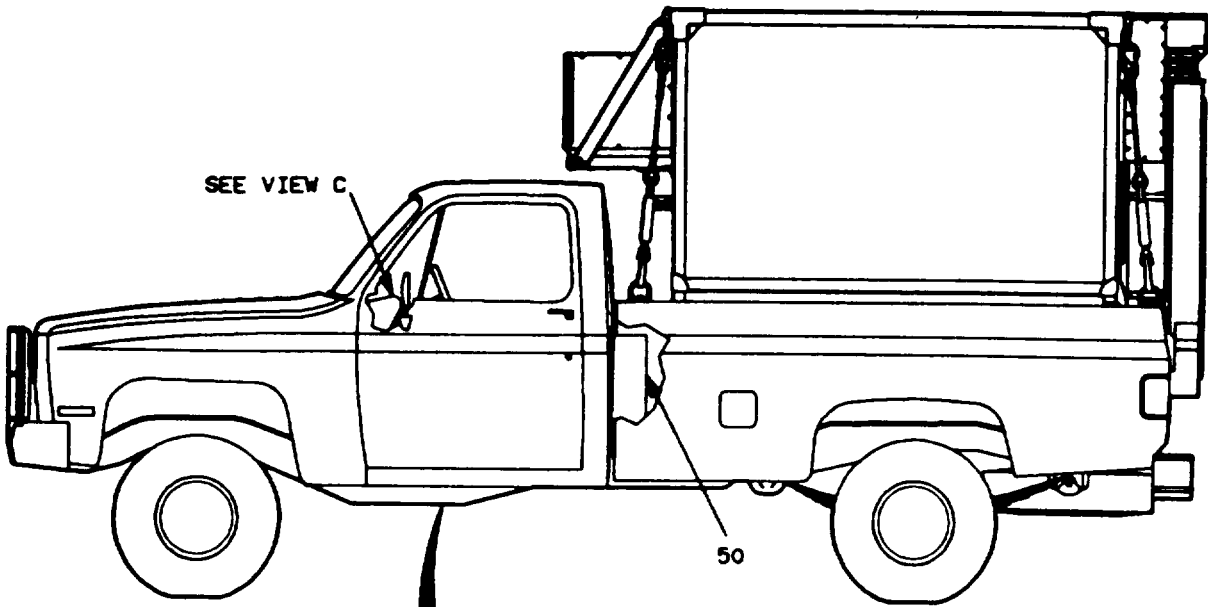


FIGURE C-2. SHELTER ASSEMBLY (SHEET 3 OF 24)

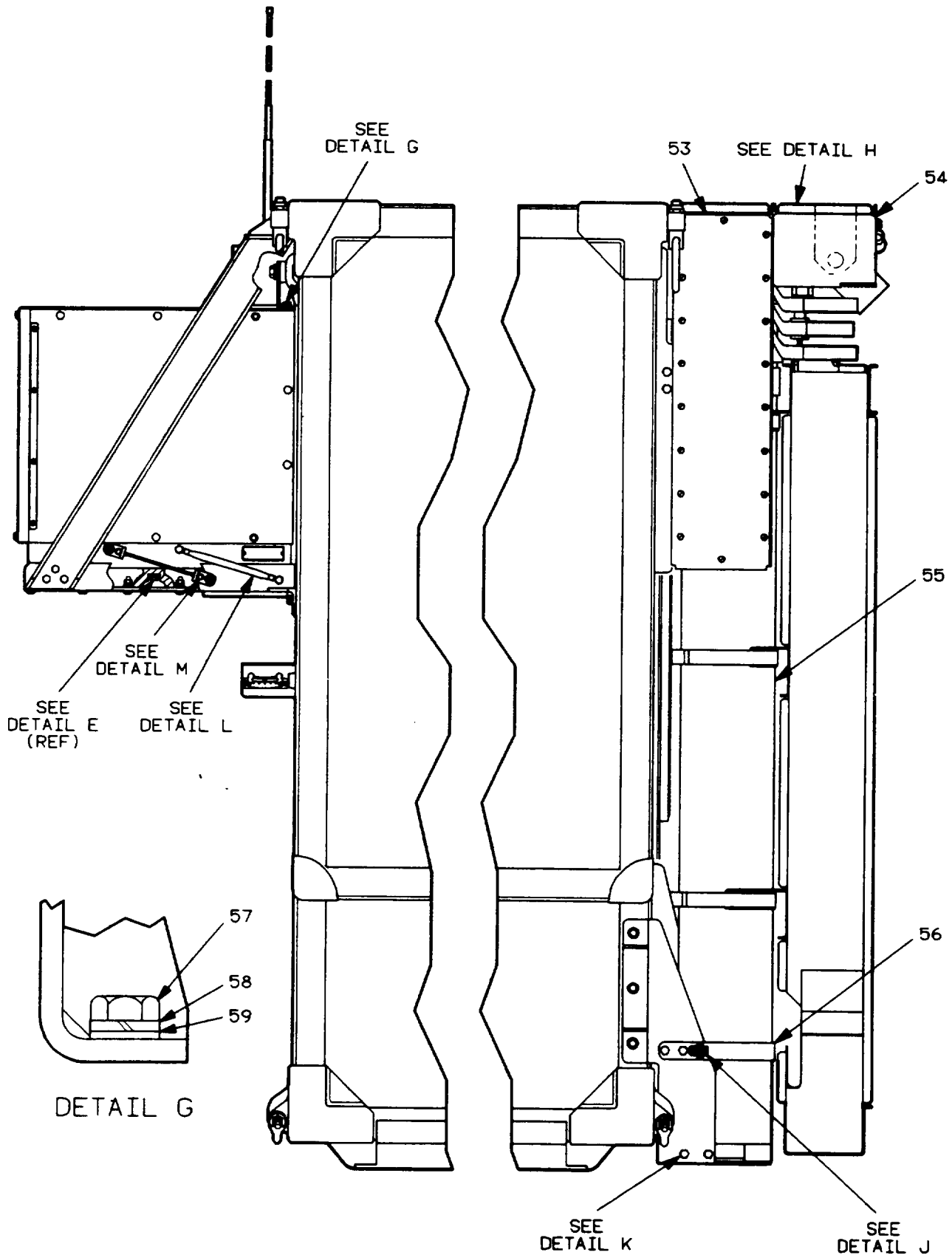
| (1) ILLUS (A) (B) FIG ITEM NO. NO. | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|------------------------------------------------|----|--------------------|------------------------------------|-----------------------|-------------|------------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 33 | PAOOO | 5985-01-275-9928 | C5110910-1 | 57958 | INCLINOMETER ASSY | | EA | 1 |
| C-2 | 34 | XDOZZ | | C5110909-1 | 57958 | BRACKET | | EA | 1 |
| C-2 | 35 | PAOZZ | 5985-01-275-6272 | 5054585-1 | 57958 | INCLINOMETER | | EA | 2 |
| C-2 | 36 | XDOZZ | | C5110908-1 | 57958 | PLATE, SWIVEL | | EA | 2 |
| C-2 | 37 | XDOZZ | | C5110805-1 | 57958 | INSERT | | EA | 4 |
| C-2 | 38 | XDOZZ | | C5110909-101 | 57958 | BRACKET | | EA | 1 |
| C-2 | 39 | XDOZZ | 5320-00-117-6939 | MS20426AD3-5 | 96906 | RIVET, SOLID | | EA | 3 |
| C-2 | 40 | XDOZZ | 5305-00-908-2829 | MS24693C8 | 96906 | SCREW, MACHINE | | EA | 4 |
| C-2 | 41 | XDOZZ | 5310-00-208-3786 | NAS671C4 | 80205 | NUT-PLAIN, HEXAGON | | EA | 4 |
| C-2 | 42 | XA | 5310-00-933-8118 | NAS1640-4 | 80205 | WASHER, LOCK | | EA | 4 |
| C-2 | 43 | XDOZZ | 5310-00-057-0573 | NAS620C4 | 80205 | WASHER, FLAT | | EA | 4 |
| C-2 | 44 | XDOZZ | 5310-01-141-6672 | AN960C4 | 88044 | WASHER, FLAT | | EA | 4 |
| C-2 | 45 | XA | 5310-00-933-8118 | NAS1640-4 | 80205 | WASHER, LOCK | | EA | 4 |
| C-2 | 46 | XDOZZ | 5305-00-054-5647 | MS51957-13 | 96906 | SCREW, MACHINE | | EA | 4 |
| C-2 | 47 | XDOZZ | 5305-00-059-3660 | MS51958-64 | 96906 | SCREW, MACHINE | | EA | 4 |
| C-2 | 48 | XDOZZ | 5310-00-933-8120 | MS35338-138 | 96909 | WASHER, LOCK | | EA | 4 |
| C-2 | 49 | XDOZZ | 5310-00-442-6911 | NAS1640-10 | 80205 | WASHER, FLAT | | EA | 4 |



VIEW C

FIGURE C-2. SHELTER ASSEMBLY (SHEET 4 OF 24)

| (1) ILLUS (A) | (2) ITEM (B) | (3) SMR NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|---------------------|--------------------|-------------------------------------------|-----------------------|-------------|------------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 50 | PAOFH 5895-01-171-3475 | C5122481-1 | 57958 | RESERVOIR ASSY (1A1A28A4) | | EA | 1 |
| C-2 | 51 | PAOFH 5895-01-171-3477 | C5122498-1 | 57958 | PUMP ASSY (1A1A28A3) | | EA | 1 |
| C-2 | 52 | PAOFF 5830-00-892-3339 | C2298/VRC | 40404 | INTERCOM REMOTE ELEMENT | | EA | 1 |



ROADSIDE EXTERIOR

FIGURE C-2. SHELTER ASSEMBLY (SHEET 5 OF 24)

| (1) ILLUS (A) | | (2) | (3) | (4) | (5) | TM32-5895-070-24&P (6) DESCRIPTION | (7) | (8) QTY |
|---------------------|-------------|-------------|-----------------------------|----------------|-------|--------------------------------------------------------|-------------|-------------------|
| FIG NO. | ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | PART NUMBER | FSCM | | U / M | INC IN UNIT |
| C-2 | 53 | PAODD | 5811-01-162-2447 | C5114095-1 | 57958 | R.F.PROCESSOR (1A1A31A2A3) | EA | 1 |
| C-2 | 54 | PDOHD | 5985-01-274-8935 | C5139845-1 | 57958 | ANTENNA GROUP (A1A131) (ALTERED FROM C5114098-1) | EA | 1 |
| C-2 | 55 | PAOHD | 5985-01-274-8920 | C5139843-1 | 57958 | PNEUMATIC MAST (ALTERED FROM C5110591-1) | EA | 1 |
| C-2 | 56 | XDOZZ | | C5110623-1 | 57958 | STRAP,LATCHING | EA | 1 |
| C-2 | 57 | XDOZZ | 5306-00-543-4405 | MS35307-334 | 96906 | BOLT,MACHINE | EA | 3 |
| C-2 | 58 | XDOZZ | 5310-00-989-0640 | NAS1640-516 | 80205 | WASHER,LOCK | EA | 3 |
| C-2 | 59 | XDOZZ | 5310-00-167-0803 | AN960C516 | 88044 | WASHER,FLAT | EA | 3 |

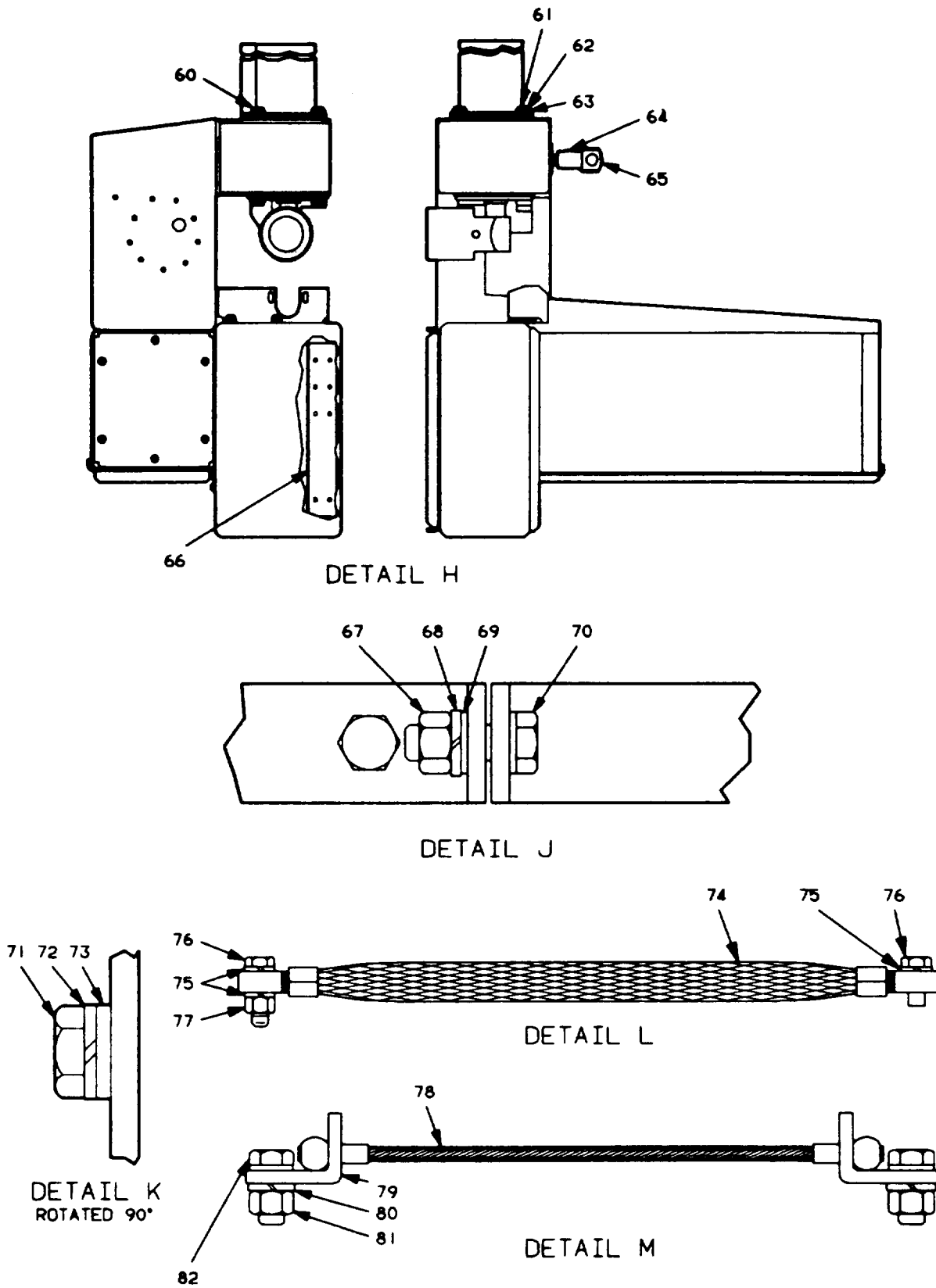
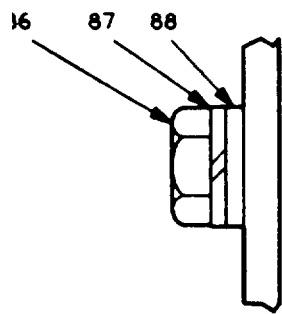
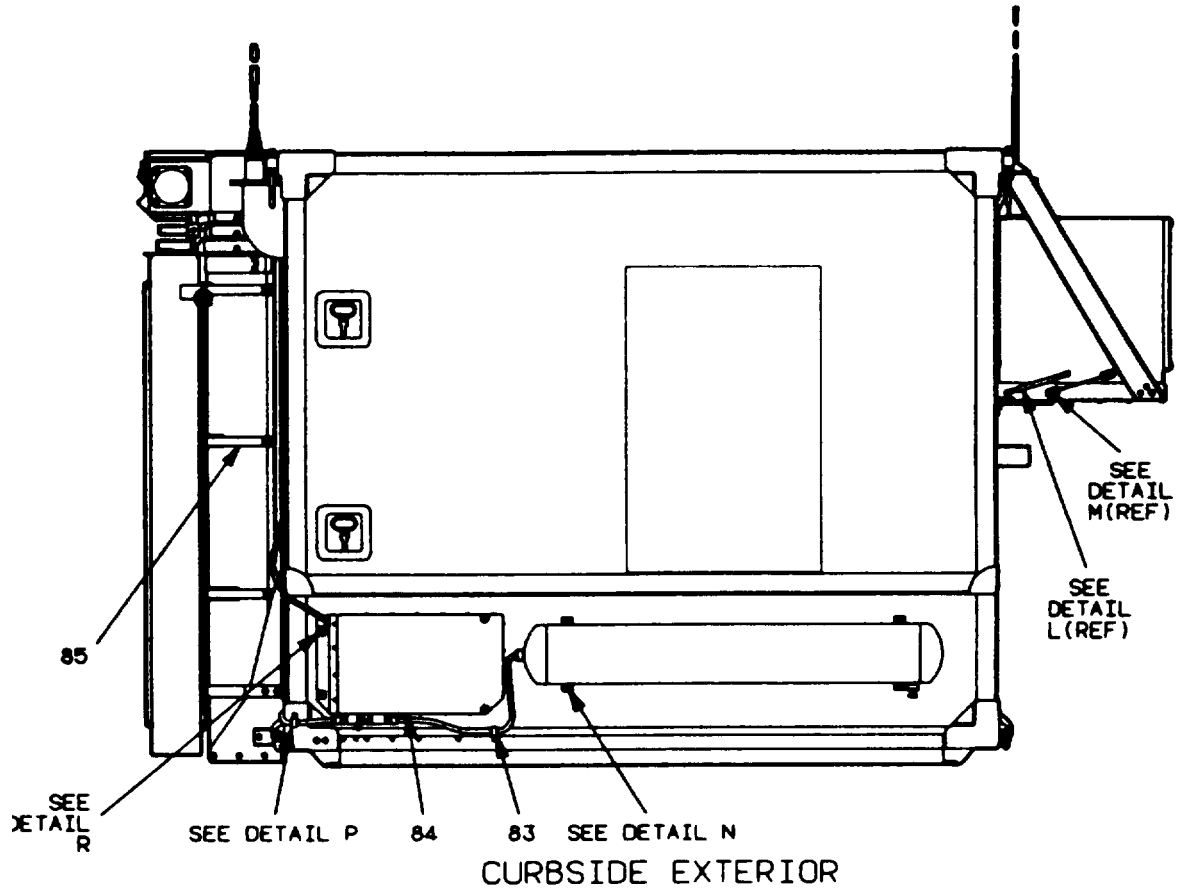
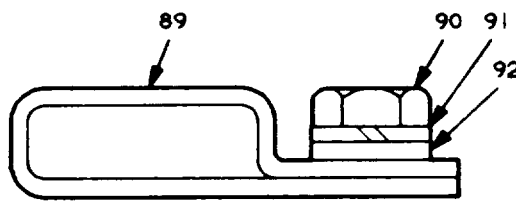


FIGURE C-2. SHELTER ASSEMBLY (SHEET 6 OF 24)

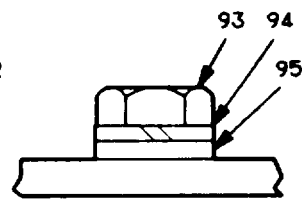
| (1) ILLUS (A) (B) FIG ITEM NO. NO. | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|------------------------------------------------|----|--------------------|------------------------------------|-----------------------|-------------|------------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 60 | XDOZZ | 5305-00-455-9960 | MS24693C12 0 | 96906 | SCREW, MACHINE | | EA | 2 |
| C-2 | 61 | XDOZZ | 5305-00-021-3801 | MS35307-336 | 96906 | SCREW, CAP | | EA | 1 |
| C-2 | 62 | XDOZZ | 5310-00-974-6623 | MS35338-140 | 96906 | WASHER, LOCK | | EA | 3 |
| C-2 | 63 | XDOZZ | 5310-00-625-5756 | MS15795-812 | 96906 | WASHER, FLAT | | EA | 3 |
| C-2 | 64 | XDOZZ | 5305-00-027-6244 | MS51021-69 | 96906 | SET, SCREW | | EA | 1 |
| C-2 | 65 | XDOZZ | | C5114136-1 | 57958 | LOOP, CRANK | | EA | 1 |
| C-2 | 66 | PAODD | 6130-01-163-6149 | TL-3129 | 04879 | POWER SUPPLY (PS1) | | EA | 1 |
| C-2 | 67 | XDOZZ | 5310-00-913-8881 | MS51971-3 | 96906 | NUT, PLAIN | | EA | 1 |
| C-2 | 68 | XDOZZ | 5310-01-244-8303 | MS35338-141 | 96906 | WASHER, LOCK | | EA | 2 |
| C-2 | 69 | XDOZZ | 5310-00-167-0804 | AN960C616 | 88044 | WASHER, FLAT | | EA | 2 |
| C-2 | 70 | XDOZZ | 5305-00-717-5467 | MS35307-362 | 96906 | SCREW, CAP | | EA | 1 |
| C-2 | 71 | XDOZZ | 5305-00-576-5417 | MS35307-360 | 96906 | SCREW, CAP | | EA | 5 |
| C-2 | 72 | XDOZZ | 5310-01-244-8303 | MS35338-141 | 96906 | WASHER, LOCK | | EA | 5 |
| C-2 | 73 | XDOZZ | 5310-00-167-0804 | AN960C616 | 88044 | WASHER, FLAT | | EA | 5 |
| C-2 | 74 | XDOZZ | 5999-01-261-9138 | C5131255-1 | 57958 | STRAP, GROUND | | EA | 2 |
| C-2 | 75 | XDOZZ | 5310-00-019-0676 | MS3533-109 | 96906 | WASHER, LOCK | | EA | 4 |
| C-2 | 76 | XDOZZ | 5306-01-034-6615 | MS35307-333 | 96906 | SCREW, CAP | | EA | 4 |
| C-2 | 77 | XDOZZ | 5310-00-767-0445 | MS51971-2 | 96906 | NUT, PLAIN | | EA | 4 |
| C-2 | 78 | XDOZZ | | C5131256-1 | 57958 | WIRE ROPE ASSY | | EA | 2 |
| C-2 | 79 | XDOZZ | | C5131257-1 | 57958 | BRACKET, MOUNTING | | EA | 4 |
| C-2 | 80 | XDOZZ | 5310-00-019-0676 | MS35333-109 | 96906 | WASHER, LOCK | | EA | 4 |
| C-2 | 81 | XDOZZ | 5310-00-767-0445 | MS51971-2 | 96906 | NUT, PLAIN | | EA | 4 |
| C-2 | 82 | XDOZZ | 5305-00-455-9960 | MS24693C12 0 | 57958 | SCREW, MACHINE | | EA | 4 |



DETAIL N
ROTATED 90°



DETAIL P
ROTATED 90°



DETAIL R
ROTATED 90°

FIGURE C-2 . SHELTER ASSEMBLY (SHEET 7 OF 24)

| (1) ILLUS (A) FIG NO. | (2) (B) ITEM NO. | (3) SMR CODE | (4) NATIONAL STOCK NUMBER | (5) PART NUMBER | (6) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|-----------------------------------|---------------------------|--------------------|------------------------------------|-----------------------|-------------|------------------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 83 | XDOZZ | 5340-00-775-5266 | MS9350-12 | 96906 | CLAMP, LOOP- CUSHION | | EA | 1 |
| C-2 | 84 | PAOHH | 5985-01-274-8934 | C5139844-1 | 57958 | COMPRESSOR ASSY (ALTERED FROM C5110592-1 | | EA | 1 |
| C-2 | 85 | XDOZZ | | C5114220-1 | 57958 | CLAMP, CABLE BASKET | | EA | 1 |
| C-2 | 86 | XDOZZ | 5306-00-543-4405 | MS35307-334 | 96906 | SCREW, CAP | | EA | 4 |
| C-2 | 87 | XDOZZ | 5310-00-989-0640 | NAS1640-516 | 80205 | WASHER, LOCK | | EA | 4 |
| C-2 | 88 | XDOZZ | 5310-00-167-0803 | AN960C516 | 88044 | WASHER, FLAT | | EA | 4 |
| C-2 | 89 | XDOZZ | 5340-00-775-5266 | MS9350-12 | 96906 | CLAMP, LOOP- CUSHION | | EA | 1 |
| C-2 | 90 | XDOZZ | 5305-00-021-3668 | MS35307-310 | 96906 | SCREW, CAP | | EA | 1 |
| C-2 | 91 | XDOZZ | 5310-01-249-9376 | MS35338-139 | 96906 | WASHER, LOCK | | EA | 1 |
| C-2 | 92 | XDOZZ | 5310-00-531-9515 | AN960C416 | 88044 | WASHER, FLAT | | EA | 1 |
| C-2 | 93 | XDOZZ | 5306-00-637-9674 | MS35307-336 | 96906 | SCREW, CAP | | EA | 2 |
| C-2 | 94 | XDOZZ | 5310-00-952-0309 | NAS1640-516 | 80205 | WASHER, LOCK | | EA | 2 |
| C-2 | 95 | XDOZZ | 5310-00-167-0803 | AN960C516 | 88044 | WASHER, FLAT | | EA | 2 |

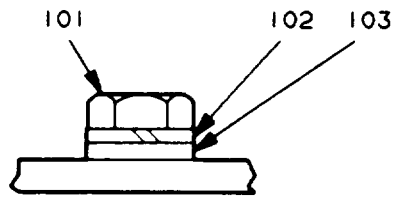
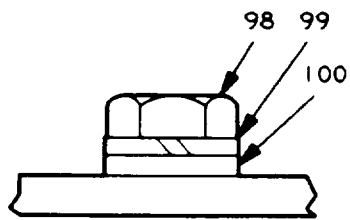
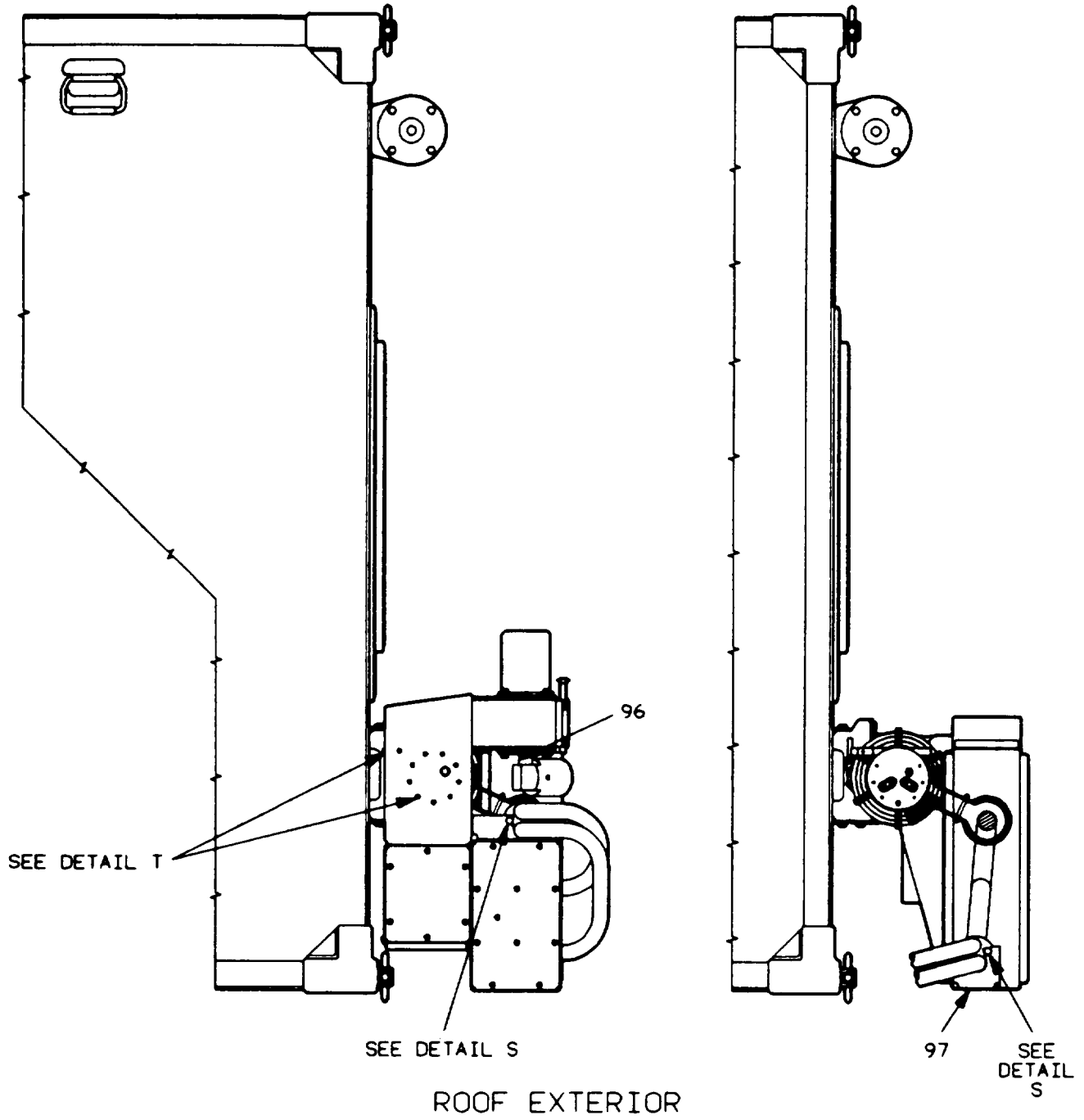
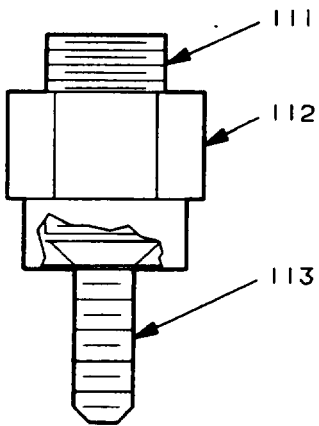
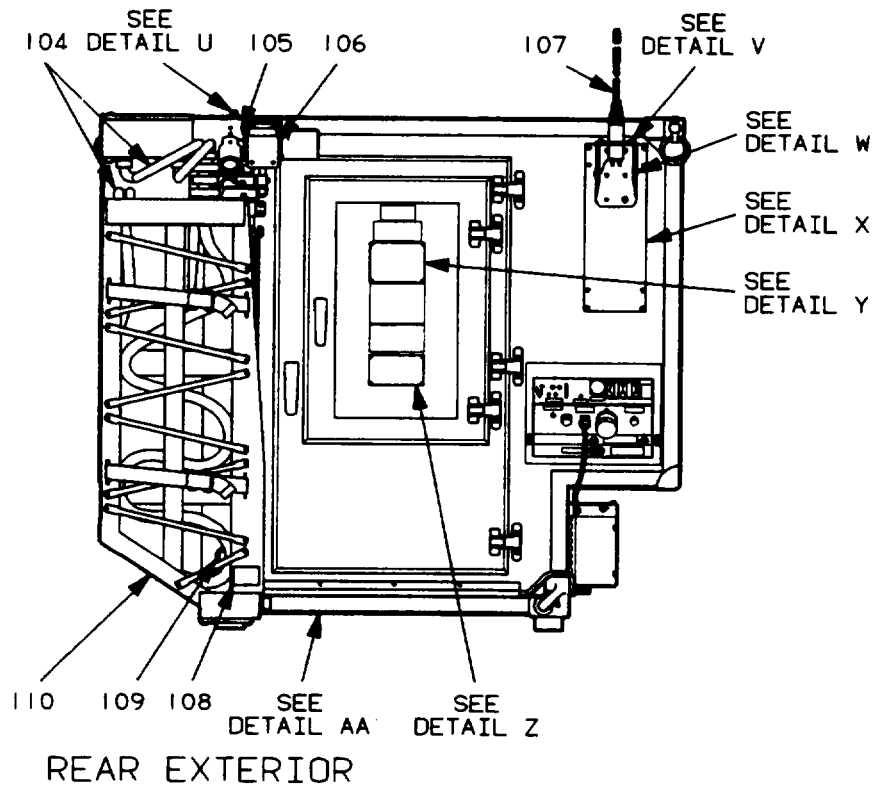
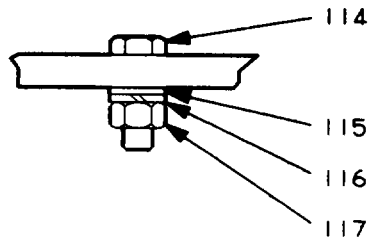


FIGURE C-2. SHELTER ASSEMBLY (SHEET 8 OF 24)

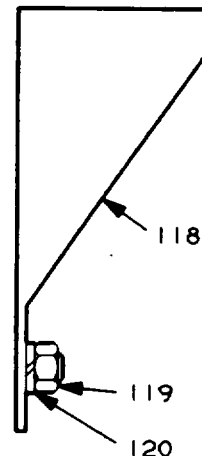
| TM32-5895-070-24&P | | | | | | | | |
|--------------------|------|----------|------------------|--------------|-------------|------------------|------|----|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | |
| ILLUS | | | | | DESCRIPTION | | QTY | |
| (A) | (B) | NATIONAL | | | | U | INC | |
| FIG | ITEM | STOCK | PART | | | / | IN | |
| NO. | NO. | CODE | NUMBER | FSCM | UOC | M | UNIT | |
| C-2 | 96 | XDOZZ | | C5114181-1 | 57958 | STOP, ANTENNA | EA | 1 |
| C-2 | 97 | XDOZZ | | C5114183-1 | 57958 | BRACKET | EA | 1 |
| C-2 | 98 | XDOZZ | 5305-00-992-6057 | MS16995-48 | 96906 | SCREW, CAP | EA | 4 |
| C-2 | 99 | XDOZZ | 5310-01-249-9376 | MS35338-139 | 96906 | WASHER, LOCK | EA | 4 |
| C-2 | 100 | XDOZZ | 5310-00-952-0309 | NAS620C416 | 88044 | WASHER, FLAT | EA | 4 |
| C-2 | 101 | XDOZZ | 5305-01-147-9753 | NAS1802-3-13 | 80205 | SCREW, HEX, HEAD | EA | 16 |
| C-2 | 102 | XDOZZ | 5310-00-933-8120 | MS35338-138 | 96906 | WASHER, LOCK | EA | 16 |
| C-2 | 103 | XDOZZ | 5310-00-442-6911 | NAS1640-10 | 80205 | WASHER, FLAT | EA | 16 |



DETAIL U



DETAIL V



DETAIL W

FIGURE C-2. SHELTER ASSEMBLY (SHEET 9 OF 24)

| (1) ILLUS (A) (B) FIG ITEM NO. NO. | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|------------------------------------------------|-----|--------------------|------------------------------------|-----------------------|-------------|------------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 104 | PAODD | 5995-01-167-8445 | C5114156-1 | 57958 | CABLE ASSY,W22 | | EA | 1 |
| C-2 | 105 | XDOZZ | | C5114224-1 | 57958 | PIN,BALL,LOCK | | EA | 1 |
| C-2 | 106 | PAOZD | 5895-01-179-0671 | C5114171-1 | 57958 | REDUCTOR ASSY | | EA | 1 |
| C-2 | 107 | PAOPH | 5985-00-985-9024 | AS-1729/VRC | 80058 | ANTENNA | | EA | 1 |
| C-2 | 108 | XDOZZ | | C5114199-1 | 57958 | LABEL (NO STEP) | | EA | 1 |
| C-2 | 109 | PAOZZ | 5340-01-185-3282 | C5114135-1 | 57958 | CRANK,HOOK | | EA | 1 |
| C-2 | 110 | XDOZH | | C5114201-1 | 57958 | CABLE STOWAGE ASSY | | EA | 1 |
| C-2 | 111 | XDOZZ | | C5114240-1 | 57958 | SET,SCREW | | EA | 1 |
| C-2 | 112 | XDOZZ | | C5114237-1 | 57958 | MAST,ADJUSTABLE STOP | | EA | 1 |
| C-2 | 113 | XDOZZ | 5305-00-051-0227 | MS24693C272 | 96906 | SCREW,MACHINE | | EA | 1 |
| C-2 | 114 | XDOZZ | 5305-00-847-1159 | MS35307-365 | 96906 | SCREW,CAP | | EA | 4 |
| C-2 | 115 | XDOZZ | 5310-00-225-5328 | MS15795-841 | 96906 | WASHER,FLAT | | EA | 4 |
| C-2 | 116 | XDOZZ | 5310-01-244-8303 | MS35338-141 | 96906 | WASHER,LOCK | | EA | 4 |
| C-2 | 117 | XDOZZ | 5310-00-477-6768 | MS35649-2384 | 96906 | NUT,PLAIN | | EA | 4 |
| C-2 | 118 | XDOZZ | 5820-00-740-1780 | SCD189023 | 80063 | SUPPORT ASSY | | EA | 1 |
| C-2 | 119 | XDOZZ | 5310-00-250-9477 | MS35649-2254 | 96906 | NUT,PLAIN | | EA | 6 |
| C-2 | 120 | XDOZZ | 5310-00-022-8834 | MS35333-108 | 6906 | WASHER,LOCK | | EA | 6 |

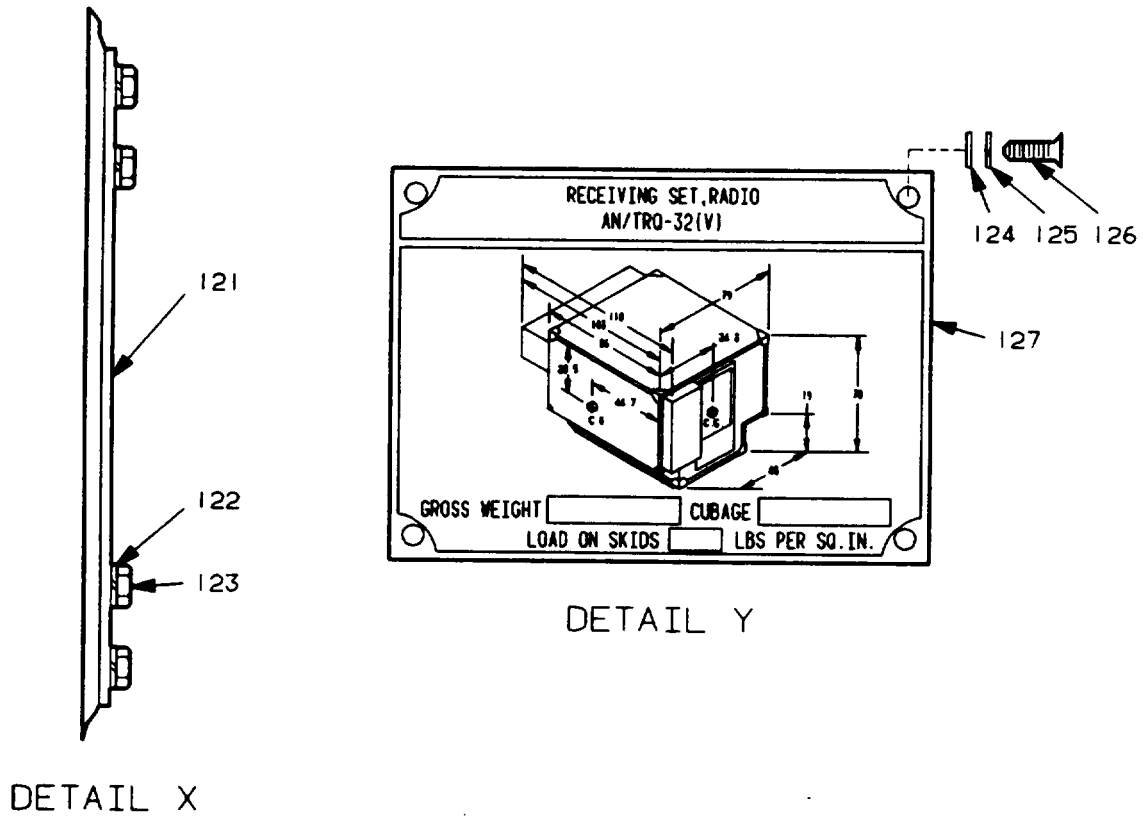
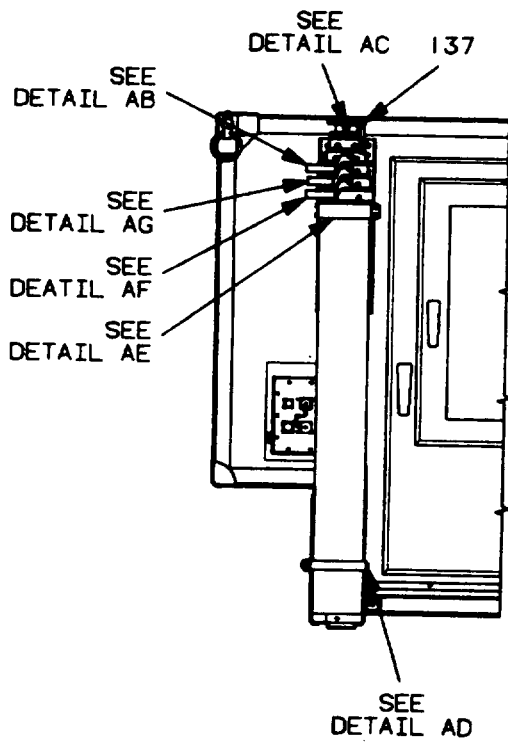
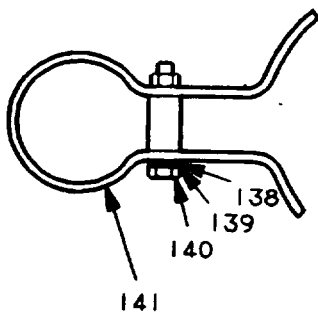


FIGURE C-2. SHELTER ASSEMBLY (SHEET 10 OF 24)

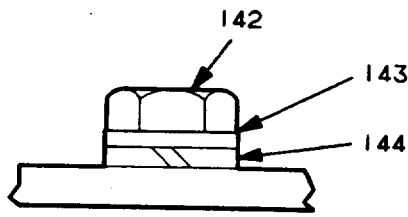
| (1) ILLUS (A) (B) FIG ITEM NO. NO. | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|------------------------------------------------|-----|--------------------|------------------------------------|-----------------------|-------------|------------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 121 | XDOZZ | | 0099-2-3029 | 15942 | PLATE ,MOUNTING | | EA | 1 |
| C-2 | 122 | XDOZZ | 5310-00-022-8834 | MS35333-108 | 96906 | WASHER , LOCK | | EA | 8 |
| C-2 | 123 | XDOZZ | 5305-00-207-8253 | MS35307-308 | 96906 | SCREW , CAP | | EA | 8 |
| C-2 | 124 | XDOZZ | 5310-00-225-5328 | MS15795-841 | 96906 | WASHER , FLAT | | EA | 8 |
| C-2 | 125 | XDOZZ | 5310-01-067-9589 | MS35338-137 | 96906 | WASHER , LOCK | | EA | 8 |
| C-2 | 126 | XDOZZ | 5305-00-054-6670 | MS51957-45 | 96906 | SCREW , MACHINE | | EA | 8 |
| C-2 | 127 | XDOZZ | | C5131081-2 | 57958 | PLATE , IDENT | | EA | 1 |
| C-2 | 128 | XDOZZ | | C5131080-103 | 57958 | PLATE , IDENT | | EA | 1 |
| C-2 | 129 | XDOZZ | | C5131080-2 | 57958 | PLATE , IDENT | | EA | 1 |
| C-2 | 130 | XDOZZ | 5305-00-054-6670 | MS51957-45 | 96906 | SCREW , MACHINE | | EA | 8 |
| C-2 | 131 | XDOZZ | 5310-01-249-9376 | MS35338-139 | 96906 | WASHER , LOCK | | EA | 1 |
| C-2 | 132 | XDOZZ | 5310-00-225-5328 | MS15795-841 | 96906 | WASHER , FLAT | | EA | 8 |
| C-2 | 133 | XDOZZ | | C5110949-1 | 57958 | BRACKET HOSE MOUNT | | EA | 1 |
| C-2 | 134 | XDOZZ | 5310-00-442-6911 | NAS1640-10 | 80205 | WASHER , FLAT | | EA | 3 |
| C-2 | 135 | XDOZZ | 5305-00-059-3661 | MS51958-65 | 96906 | SCREW , MACHINE | | EA | 3 |
| C-2 | 136 | XDOZZ | 5310-00-933-8120 | MS35338-138 | 96906 | WASHER , LOCK | | EA | 3 |



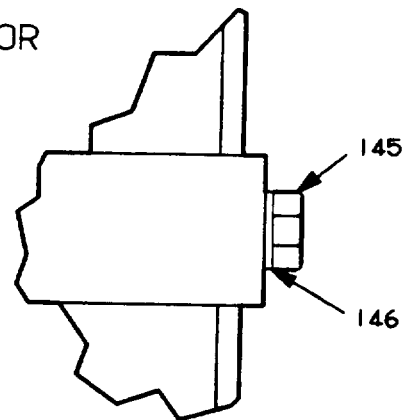
ROADSIDE REAR EXTERIOR



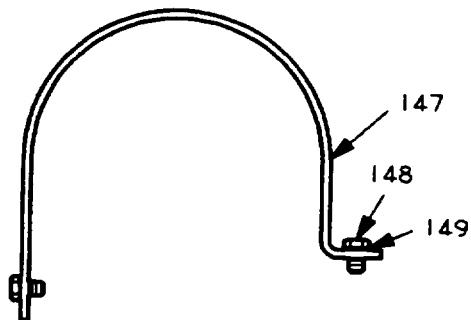
DETAIL AB



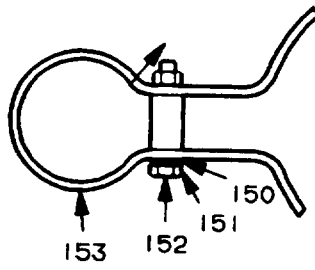
DETAIL AC



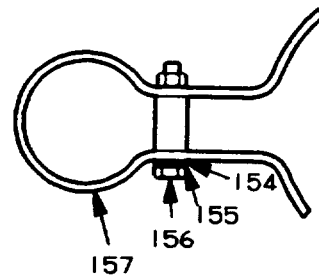
DETAIL AD



DETAIL AE



DETAIL AF



DETAIL AG

FIGURE C-2. SHELTER ASSEMBLY (SHEET 11 OF 24)

| (1) ILLUS (A) (B) FIG ITEM NO. NO. | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|------------------------------------------------|-----|--------------------|------------------------------------|-----------------------|-------------|------------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 137 | XDOZZ | 5985-01-194-0925 | C5114192-1 | 57958 | SOCKET BASE | | EA | 1 |
| C-2 | 138 | XDOZZ | 5310-00-582-5677 | MS15795-810 | 96906 | WASHER, FLAT | | EA | 2 |
| C-2 | 139 | XDOZZ | 5310-01-249-9376 | MS35338-139 | 96906 | WASHER, LOCK | | EA | 2 |
| C-2 | 140 | XDOZZ | 5305-00-021-3616 | MS35307-305 | 96906 | SCREW, CAP | | EA | 1 |
| C-2 | 141 | XDOZZ | | C5114187-1 | 57958 | CABLE GUIDE ASSY | | EA | 1 |
| C-2 | 142 | XDOZZ | 5305-01-014-7483 | MS35307-306 | 96906 | SCREW, CAP | | EA | 2 |
| C-2 | 143 | XDOZZ | 5310-00-952-0309 | NAS620C416 | 80205 | WASHER, FLAT | | EA | 2 |
| C-2 | 144 | XDOZZ | 5310-01-249-9376 | MS35338-139 | 96906 | WASHER, LOCK ASSY | | EA | 2 |
| C-2 | 145 | XDOZZ | 5305-00-576-5417 | MS35307-360 | 96906 | SCREW, CAP | | EA | 2 |
| C-2 | 146 | XDOZZ | 5310-00-167-0804 | AN960C616 | 88044 | WASHER, FLAT | | EA | 2 |
| C-2 | 147 | XDOZZ | | C5110620-1 | 57958 | STRAP | | EA | 1 |
| C-2 | 148 | XDOZZ | 5305-00-576-5417 | MS35307-360 | 96906 | SCREW, CAP | | EA | 4 |
| C-2 | 149 | XDOZZ | 5310-00-167-0804 | AN960C616 | 88044 | WASHER, FLAT | | EA | 4 |
| C-2 | 150 | XDOZZ | 5310-00-582-5677 | MS15795-810 | 96906 | WASHER, FLAT | | EA | 2 |
| C-2 | 151 | XDOZZ | 5310-01-249-9376 | MS35338-139 | 96906 | WASHER, LOCK | | EA | 2 |
| C-2 | 152 | XDOZZ | 5305-00-021-3616 | MS35307-305 | 96906 | SCREW, CAP | | EA | 2 |
| C-2 | 153 | XDOZZ | | C5114187-3 | 57958 | CABLE GUIDE ASSY | | EA | 1 |
| C-2 | 154 | XDOZZ | 5310-00-582-5677 | MS15795-810 | 96906 | WASHER, FLAT | | EA | 2 |
| C-2 | 155 | XDOZZ | 5310-01-249-4376 | MS35338-139 | 96906 | WASHER, LOCK | | EA | 2 |
| C-2 | 156 | XDOZZ | 5305-00-021-3616 | MS35307-305 | 96906 | SCREW, CAP | | EA | 2 |
| C-2 | 157 | XDOZZ | | C5114187-2 | 57958 | CABLE GUIDE ASSY | | EA | 1 |

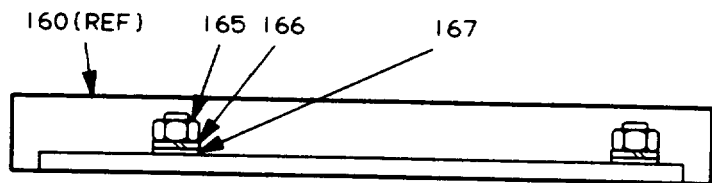
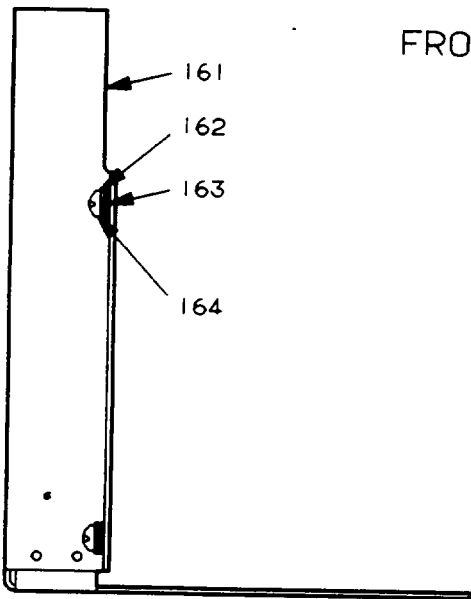
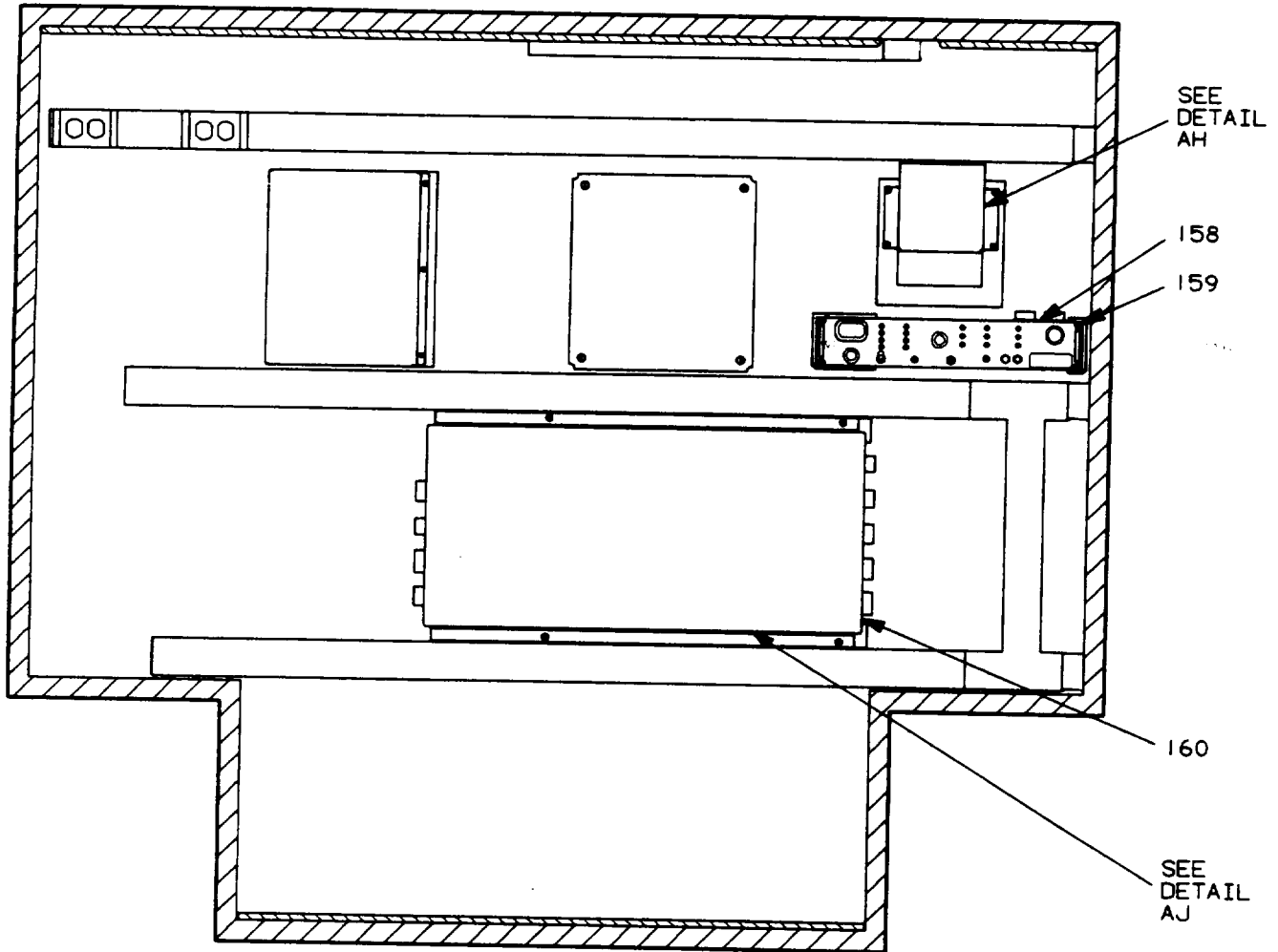


FIGURE C-2. SHELTER ASSEMBLY (SHEET 12 OF 24)

| TM32-5895-070-24&P | | | | | | | | | |
|--------------------|------|----------|------------------|-------------|-------------|---------------------------------|------|---|--|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | | |
| ILLUS | | | | | DESCRIPTION | | QTY | | |
| (A) | (B) | NATIONAL | | | | U | INC | | |
| FIG | ITEM | STOCK | PART | | | / | IN | | |
| NO. | NO. | NUMBER | NUMBER | FSCM | | M | UNIT | | |
| | | | | | UOC | | | | |
| C-2 | 158 | PAOFH | 5895-01-186-8416 | C5110892-1 | 57958 | GEN/AIR CONT ASSY (1A1A28A2) | EA | 1 | |
| C-2 | 159 | XDOZZ | 5305-00-059-3659 | MS51958-63 | 96906 | SCREW,MACHINE | EA | 4 | |
| C-2 | 160 | PAODD | 5811-01-164-9988 | 5051015-1 | 57958 | INTERCONNECTION BOX (1A1A30) | EA | 1 | |
| C-2 | 161 | XDOZZ | | C5110968-1 | 57958 | BRACKET ASSY | EA | 1 | |
| C-2 | 162 | XDOZZ | 5310-00-933-8120 | MS35338-138 | 96906 | WASHER,LOCK | EA | 4 | |
| C-2 | 163 | XDOZZ | 5310-00-442-6911 | NAS1640-10 | 80205 | WASHER,FLAT | EA | 4 | |
| C-2 | 164 | XDOZZ | 5305-00-059-3661 | MS51958-65 | 96906 | SCREW,MACHINE | EA | 4 | |
| C-2 | 165 | XDOZZ | 5310-00-903-5966 | MS51971-1 | 96906 | NUT,PLAIN | EA | 4 | |
| C-2 | 166 | XDOZZ | 5310-01-249-9376 | MS35338-139 | 96906 | WASHER,LOCK | EA | 4 | |
| C-2 | 167 | XDOZZ | 5310-00-952-0309 | NAS620C416 | 80205 | WASHER,FLAT | EA | 4 | |

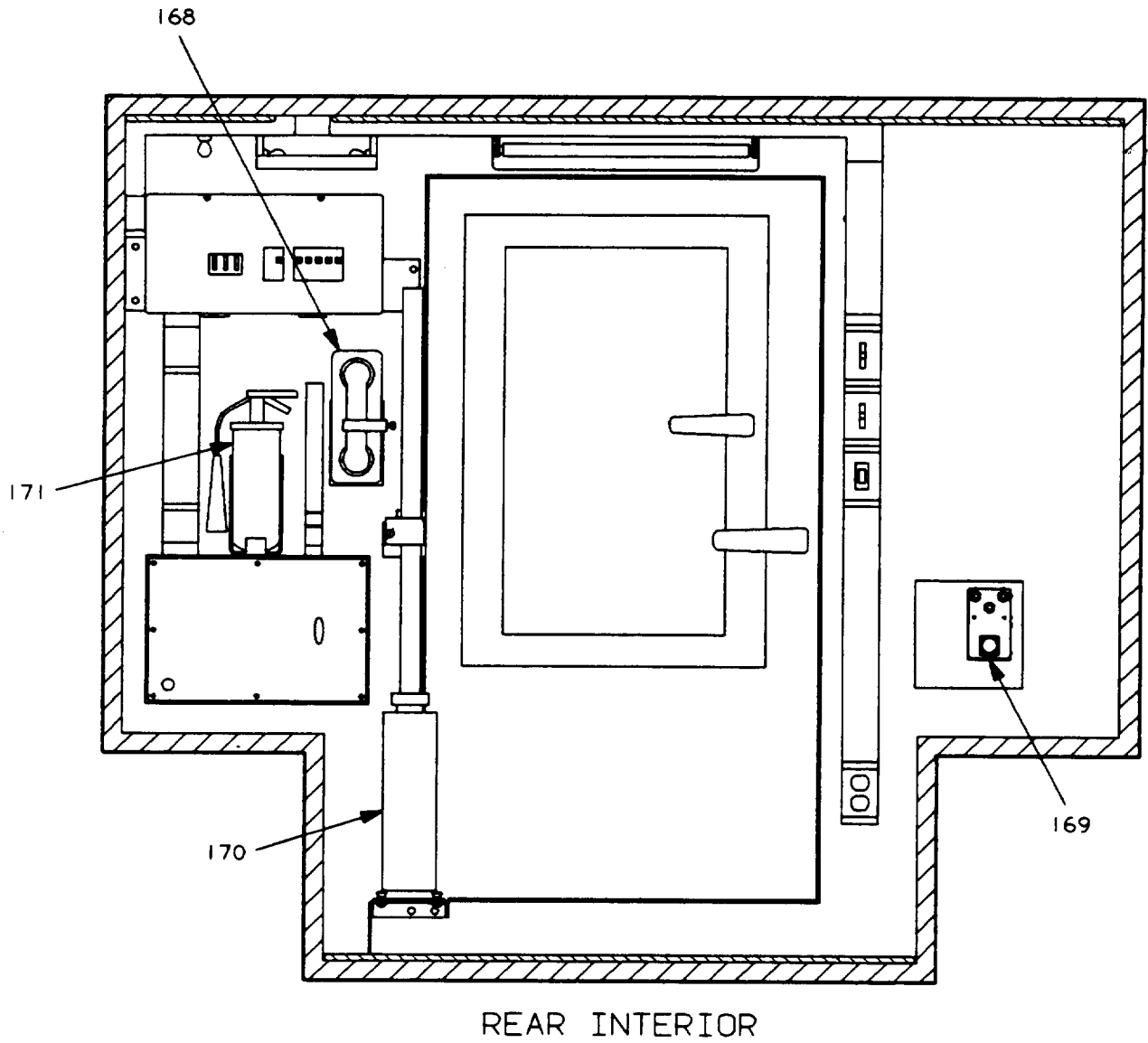


FIGURE C-2. SHELTER ASSEMBLY (SHEET 13 OF 24)

| (1) ILLUS (A) | (2) (B) ITEM | (3) SMR STOCK | (4) NATIONAL PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | (7) U / M | (8) QTY INC IN UNIT |
|---------------------|--------------------|---------------------|-----------------------------------|-------------|------------------------------------------|--------------------|---------------------------------|
| C-2 | 168 | PAOOH | 5805-00-543-0012 | TA-312/PT | 81349 INTERPHONE (1A1A27) | | EA 1 |
| C-2 | 169 | XDOZD | | C5131068-1 | 57958 FILTER ASSY | | EA 1 |
| C-2 | 170 | PAOHD | 5811-01-162-2450 | C5114102-1 | 57958 UHF INTERCEPT/ DATA ANTENNA | | EA 1 |
| C-2 | 171 | PAOZZ | 4210-00-708-0031 | MILE52031 | 81349 FIRE EXTINGUISHER | | EA 1 |

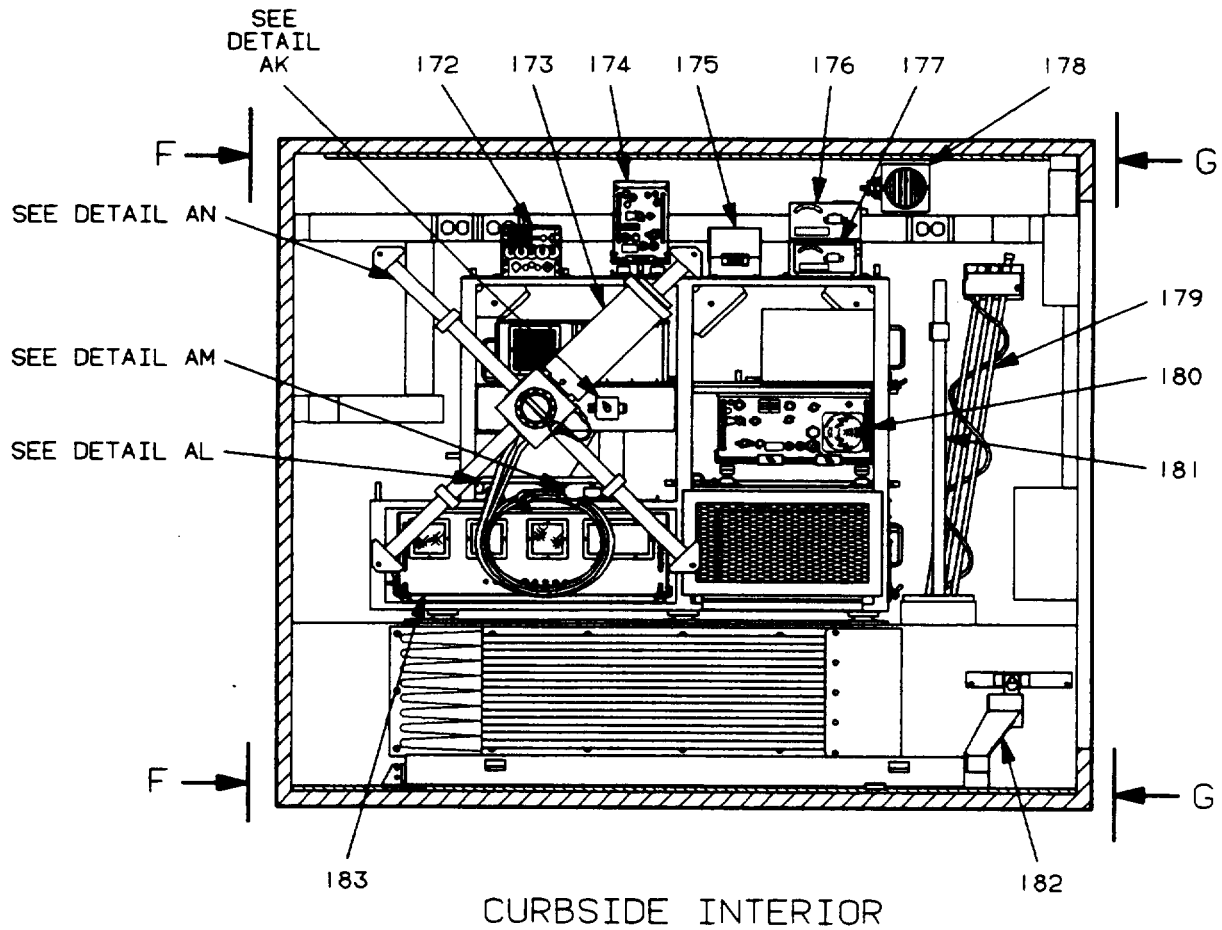


FIGURE C-2. SHELTER ASSEMBLY (SHEET 14 OF 24)

| (1) ILLUS (A) FIG NO. | (2) (B) ITEM NO. | (3) SMR CODE | (4) NATIONAL STOCK NUMBER | (5) PART NUMBER | (6) FSCM | TM32-5895-070-24&P DESCRIPTION UOC | (7) U / M | (8) QTY INC IN UNIT |
|-----------------------------------|---------------------------|--------------------|------------------------------------|-------------------------|-------------|------------------------------------------|--------------------|---------------------------------|
| C-2 | 172 | PAODD | 5821-01-070-4433 | C-10547/ARC 164 (V)2 | 80063 | CONTROL,RADIO U68 SET (1A1A133) | EA | 1 |
| C-2 | 173 | PAFDD | 5865-01-084-0421 | 1951-1-4880- | 15942 | MAG FIELD CONVERTER | EA | 1 |
| C-2 | 174 | PAODD | 5820-01-140-9070 | R442AVRC | 80058 | RADIO,RECEIVER (1A1A22) | EA | 1 |
| C-2 | 175 | PAODD | 5811-01-200-4514 | TSEC/KY57 | 81349 | SPEECH SECURITY EQPT (1A1A23) | EA | 1 |
| C-2 | 176 | PAODD | 5915-01-165-6223 | C5110526-1 | 57958 | FILTER,UHF BANDPASS (1A1FL2) | EA | 1 |
| C-2 | 177 | PAODD | 5915-01-165-6224 | C5110525-1 | 57958 | FILTER,VHF BANDPASS (1A1FL1) | EA | 1 |
| C-2 | 178 | PAOZZ | 5965-00-876-2375 | LS-454/U | 80063 | LOUDSPEAKER | EA | 1 |
| C-2 | 179 | PAOZZ | 5975-00-878-3791 | A104 | 82370 | GROUNDING ROD | EA | 1 |
| C-2 | 180 | PAODD | 5811-01-200-1587 | RT-524A/VRC | 80058 | RADIO,RECEIVER (1A1A22) | EA | 1 |
| C-2 | 181 | PAOZZ | 5120-00-251-4489 | H8H | 77348 | HAMMER | EA | 1 |
| C-2 | 182 | PAOZZ | | C5139846-1 | 57958 | MAST,TUBE ASSY | EA | 1 |
| C-2 | 183 | PAODD | 6130-01-259-3074 | C5139273-1 | 57958 | SYSTEM POWER SUPPLY ASSY (1A1A11) | EA | 1 |

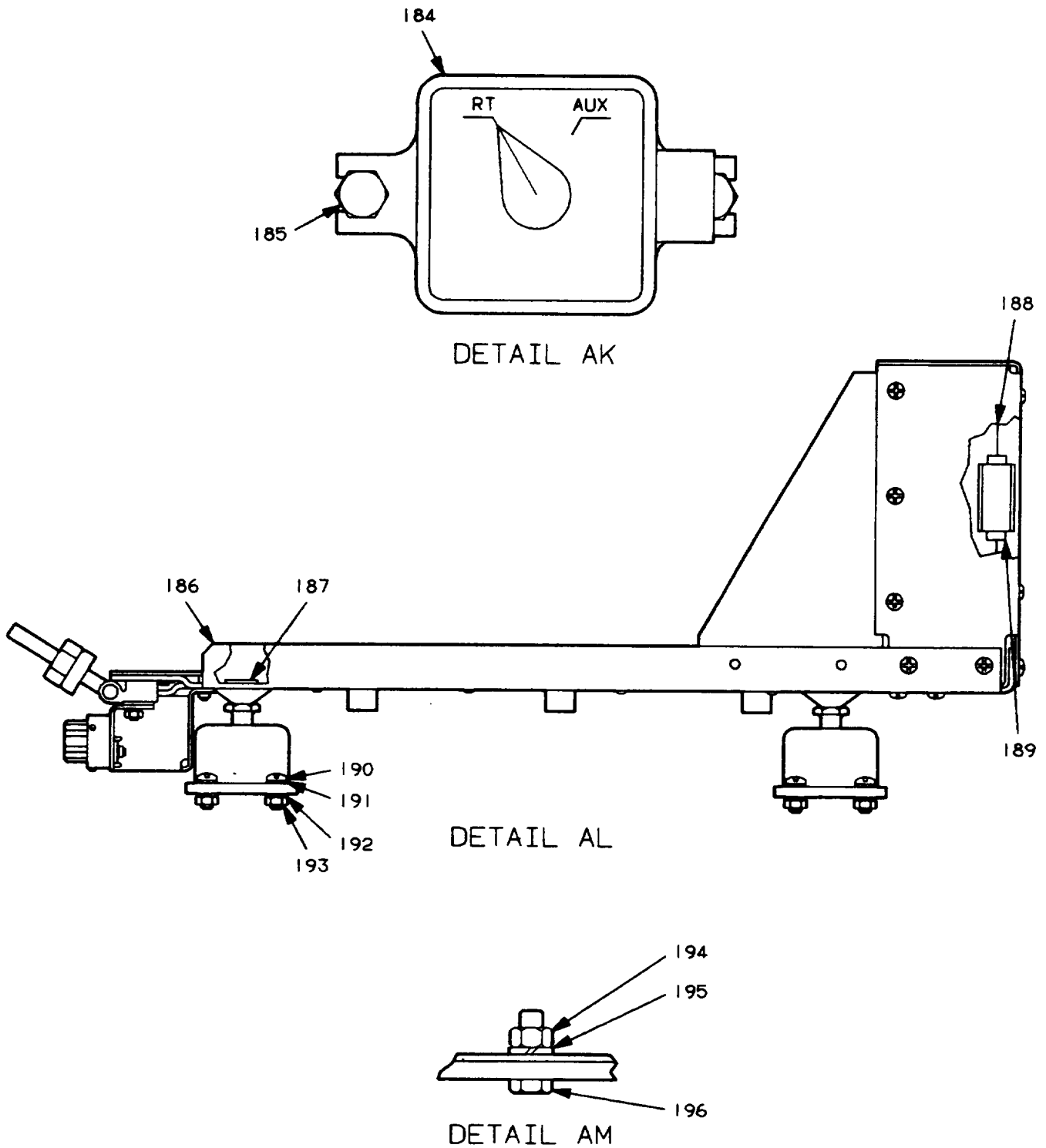
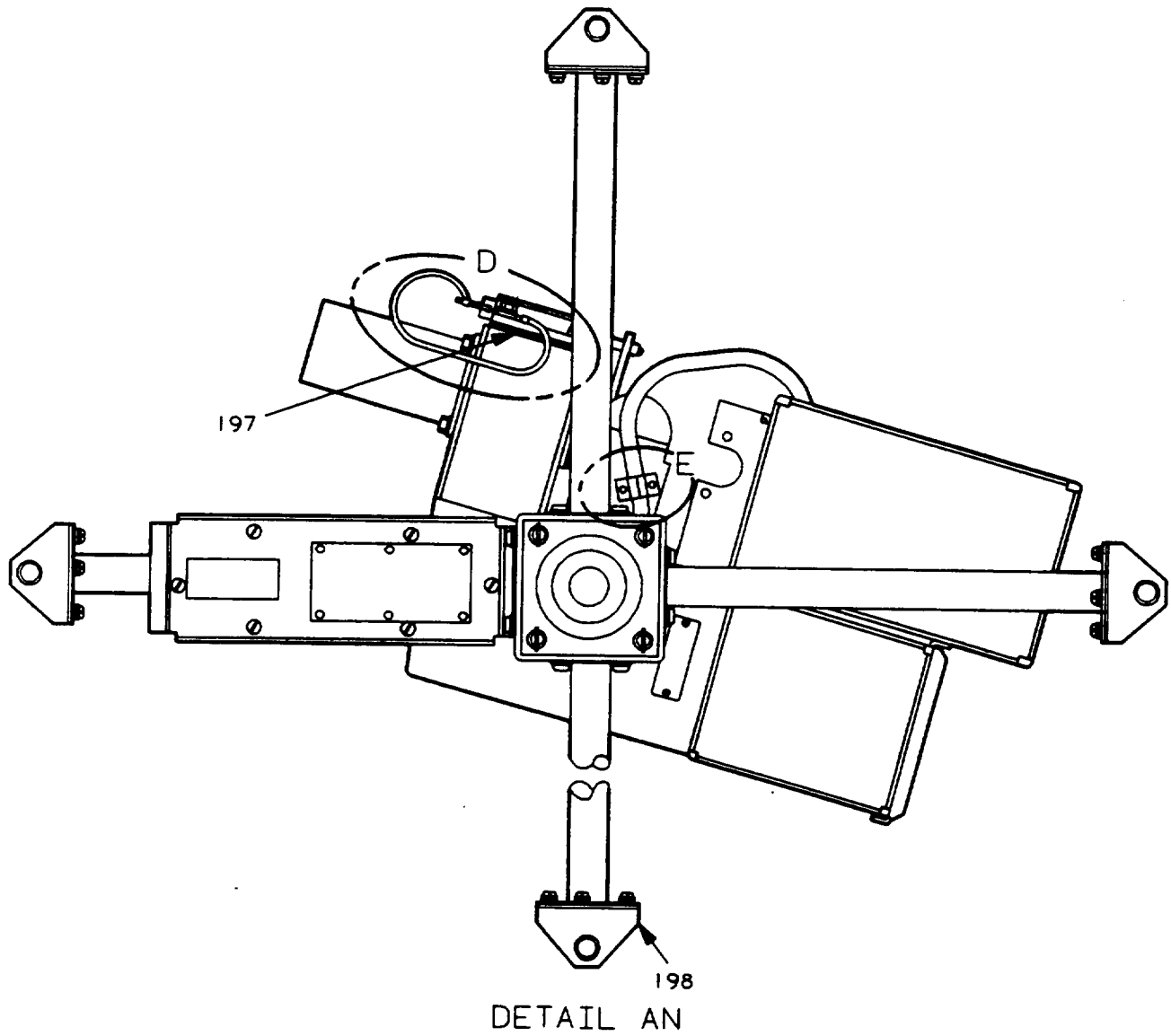
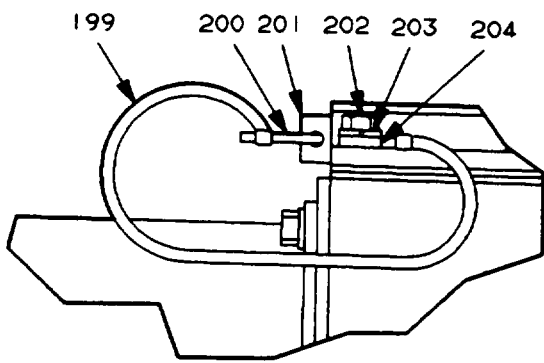


FIGURE C-2. SHELTER ASSEMBLY (SHEET 15 OF 24)

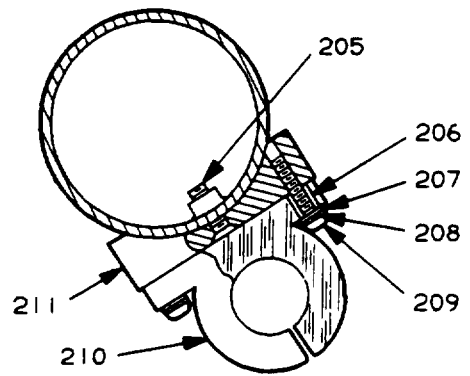
| (1) ILLUS (A) FIG NO. | (2) (B) ITEM NO. | (3) SMR CODE | (4) NATIONAL STOCK NUMBER | (5) PART NUMBER | (6) FSCM | TM32-5895-070-24&P DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|-----------------------------------|---------------------------|--------------------|------------------------------------|-----------------------|-------------|---------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 184 | PAOFD | 5810-01-063-2875 | SA-2171/VRC | 81349 | SWITCH,AUDIO FREQ- UENCY (1A1A24) | | EA | 1 |
| C-2 | 185 | XDOZZ | 5305-01-014-7483 | MS35307-306 | 96906 | SCREW,CAP | | EA | 2 |
| C-2 | 186 | PAOHD | 5795-01-258-8013 | C5139282-1 | 57958 | MOUNTING BASE, MODIFIED (1A1A20) | | EA | 1 |
| C-2 | 187 | XDOZZ | | C5139683-101 | 57958 | PLATE,IDENT | | EA | 1 |
| C-2 | 188 | PAFZZ | | C5110627-1 | 57958 | FAN (B1) | | EA | 1 |
| C-2 | 189 | PAFZZ | | M83421/01-10 | 81349 | CAPACITOR, FIXED PLASTIC DIEI (C1) | | EA | 1 |
| C-2 | 190 | XDOZZ | 5305-00-054-6670 | MS51957-45 | 96906 | SCREW,MACHINE | | EA | 16 |
| C-2 | 191 | XDOZZ | 5310-00-069-5291 | NAS620C8 | 80205 | WASHER,FLAT | | EA | 16 |
| C-2 | 192 | XDOZZ | 5310-01-067-9589 | MS35338-137 | 96906 | WASHER,LOCK | | EA | 16 |
| C-2 | 193 | XDOZZ | 5310-00-837-1381 | NAS671C8 | 80205 | NUT | | EA | 16 |
| C-2 | 194 | XDOZZ | 5310-00-616-8660 | NAS671C6 | 80205 | NUT | | EA | 2 |
| C-2 | 195 | XDOZZ | 5310-00-019-0676 | MS35333-105 | 96906 | WASHER,LOCK | | EA | 2 |
| C-2 | 196 | XDOZZ | 5305-00-054-5647 | MS51957-28 | 96906 | SCREW,MACHINE | | EA | 2 |



DETAIL AN



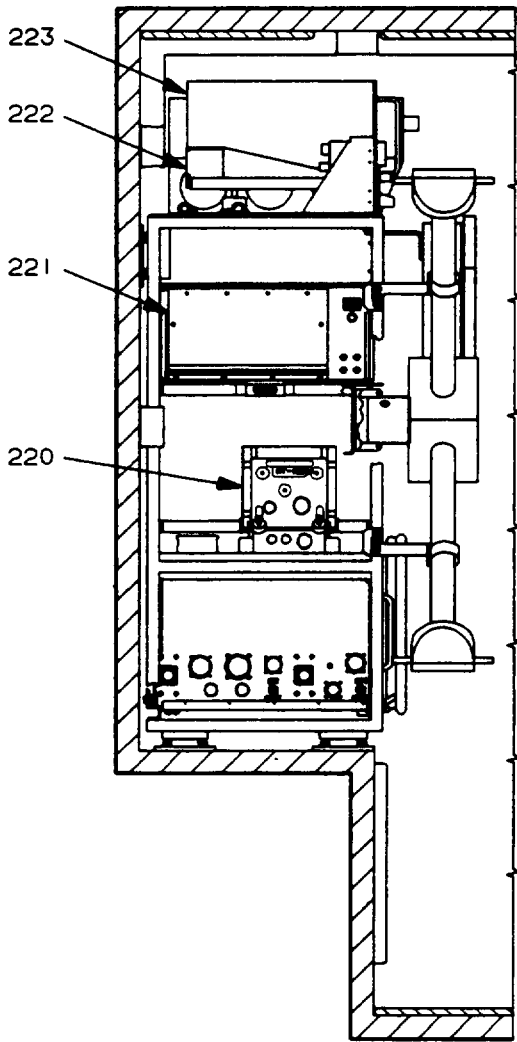
VIEW D



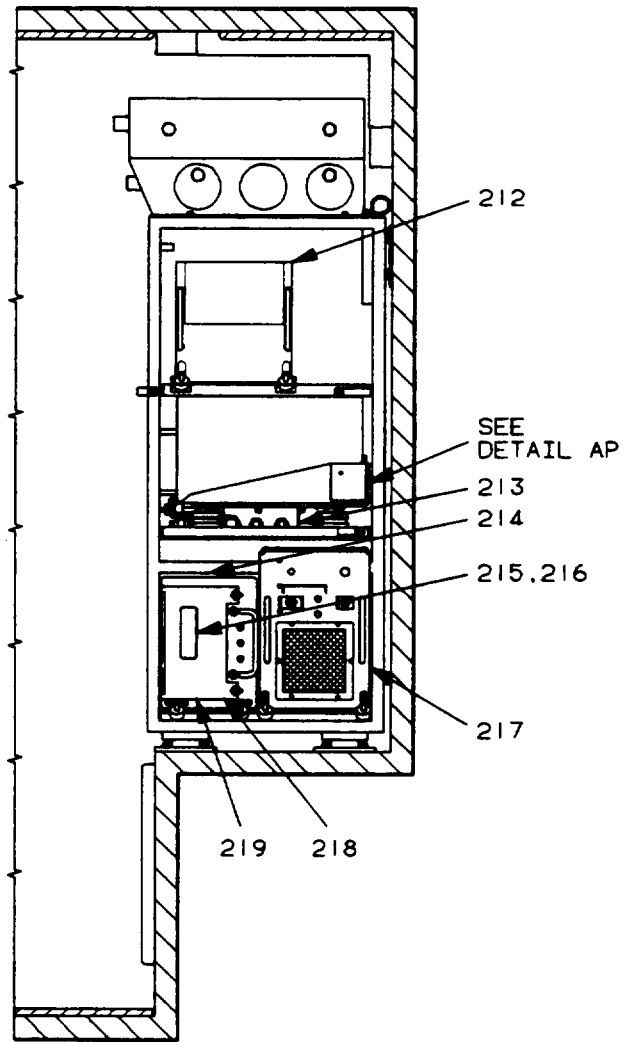
VIEW E

FIGURE C-2. SHELTER ASSEMBLY (SHEET 16 OF 24)

| (1) ILLUS (A) | | (2) | (3) | (4) | (5) | TM32-5895-070-24&P (6) DESCRIPTION | (7) | (8) QTY INC IN UNIT |
|---------------------|-------------|-------------|-----------------------------|--------------------|-------|------------------------------------------|-------------|---------------------------------|
| FIG NO. | ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | PART NUMBER | FSCM | UOC | U / M | |
| C-2 | 197 | XDOZZ | | C5114200-1 | 57958 | SHIM | EA | V |
| C-2 | 198 | PAOZF | 5985-01-168-5295 | C5114140-1 | 57958 | ANTENNA, ELEMENT ASSY | EA | 8 |
| C-2 | 199 | XDOZZ | | LT1504-C12-9 | 84256 | LANYARD ASSY | EA | 1 |
| C-2 | 200 | XDOZZ | | C5114191-1 | 57958 | GUIDE, PIN | EA | 1 |
| C-2 | 201 | PAOZZ | | M45952/1-C8- 56 | 81349 | PIN, BALL, LOCK | EA | 1 |
| C-2 | 202 | XDOZZ | 5305-00-576-5417 | MS35307-360 | 96906 | SCREW, CAP | EA | 2 |
| C-2 | 203 | XDOZZ | 5310-01-244-8303 | MS35338-141 | 96906 | WASHER, LOCK | EA | 2 |
| C-2 | 204 | XDOZZ | 5310-00-773-7618 | MS15795-814 | 96906 | WASHER, FLAT | EA | 2 |
| C-2 | 205 | XDOZZ | 5305-00-043-0267 | S24693C274 | 96906 | SCREW, MACHINE | EA | 2 |
| C-2 | 206 | XDOZZ | | NAS1057T3A- 025 | 80205 | SPACER, SLEEVE | EA | 6 |
| C-2 | 207 | XDOZZ | | C5114230-1 | 57958 | WASHER, RUBBER | EA | 6 |
| C-2 | 208 | XDOZZ | 5310-01-067-9589 | MS35338-137 | 96906 | WASHER, LOCK | EA | 6 |
| C-2 | 209 | XDOZZ | 5305-00-054-6671 | MS51957-46 | 96906 | SCREW, MACHINE | EA | 6 |
| C-2 | 210 | XDOZZ | | C5114223-1 | 57958 | CLIP, ANTENNA MAST | EA | 3 |
| C-2 | 211 | XDOZZ | | C5114225-1 | 57958 | BRACKET, CLIP | EA | 2 |



VIEW F



VIEW G

FIGURE C-2. SHELTER ASSEMBLY (SHEET 17 OF 24)

| (1) ILLUS (A) FIG NO. | (2) (B) ITEM NO. | (3) SMR CODE | (4) NATIONAL STOCK NUMBER | (5) PART NUMBER | (6) FSCM | TM32-5895-070-24&P DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|-----------------------------------|---------------------------|--------------------|--------------------------------------|-------------------------|----------------|------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 212 | PAODD | 5895-01-250-2416 5810-01-068-3693 | TSEC/KG84 TSEC/KG84A | 80058 80058 | COMPUTER U68 (1A1A26) | | EA | 1 |
| C-2 | 213 | PAOHD | 5895-01-147-3334 | J-3514/U | 80063 | INTERCON BOX | | EA | 1 |
| C-2 | 214 | XDOZZ | | C5110852- 110 | 57958 | NAME PLATE | | EA | 1 |
| C-2 | 215 | PAODD | 7045-01-260-4984 | C5139838-2 | 57958 | DISK,CARTRIDGE PROGRAMMED | | EA | 1 |
| C-2 | 216 | PADDD | 7045-01-261-9877 | C5139776-1 | 57958 | DISK,CARTRIDGE UNPROGRAMMED | | EA | 1 |
| C-2 | 217 | PAODD | 7025-01-257-0178 | C5139278-1 | 57958 | DISK DRIVE CONTROL (1A1A41) | | EA | 1 |
| C-2 | 218 | XC | | C5139819-1 | 57958 | HARD DISK DRIVE ASSY (1A1A40) | | EA | 1 |
| C-2 | 219 | PAODD | 5895-01-257-0176 | C5139622-1 | 58958 | HARD DISK DRIVE ENCLOSURE | | EA | 1 |
| C-2 | 220 | PAODD | 5820-01-156-0387 | RT1288A/ ARC-164(V) | 80058 | RCVR/XMTR- U68 RADIO(1A1A21) | | EA | 1 |
| C-2 | 221 | PAODD | 5865-01-257-0174 | C5139288-1 | 57958 | DATA LINK PROCESSOR (1A1A37) | | EA | 1 |
| C-2 | 222 | PAOHD | 5820-00-893-1324 | MT-1898/VRC | 80058 | TRAY MOUNTING | | EA | 1 |
| C-2 | 223 | PAOHD | 5810-01-044-0533 | J-3513/U | 80063 | INTERCON BOX | | EA | 1 |

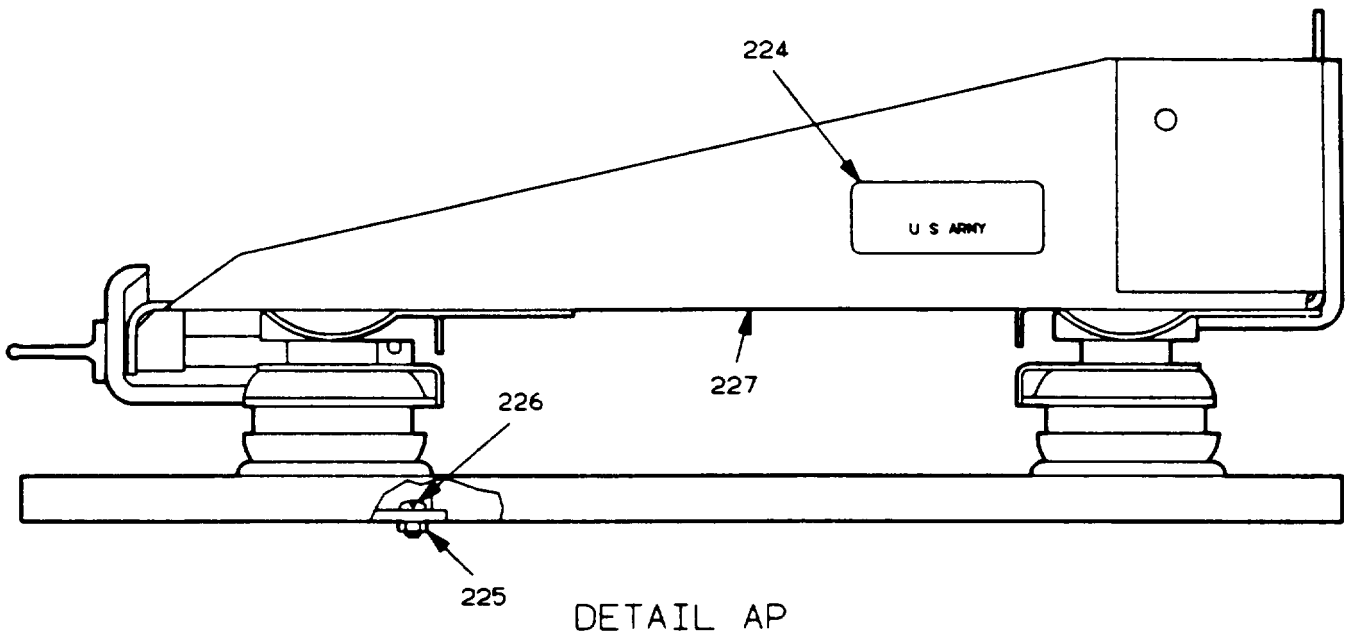


FIGURE C-2. SHELTER ASSEMBLY (SHEET 18 OF 24)

| (1) ILLUS (A) | (2) ITEM (B) | (3) SMR NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|---------------------|--------------------|-------------------------------------------|-----------------------|-------------|------------------------------------------|---------------------------|--------------------|---------------------------------|
| C-2 | 224 | XDOZZ | | C5139683-1 | 57958 | PLATE, IDENT | | EA 1 |
| C-2 | 225 | XDOZZ | 5310-00-877-5797 | MS21044N3 | 96906 | NUT, SELF-LOCKING | | EA 20 |
| C-2 | 226 | XDOZZ | 5305-00-908-2829 | MS24693S272 | 96906 | SCREW, MACHINE | | EA 20 |
| C-2 | 227 | PAOOH | 5820-00-893-1323 | MT-1029/VRC | 57958 | MOUNTING BASE (1A1A45) | | EA 1 |

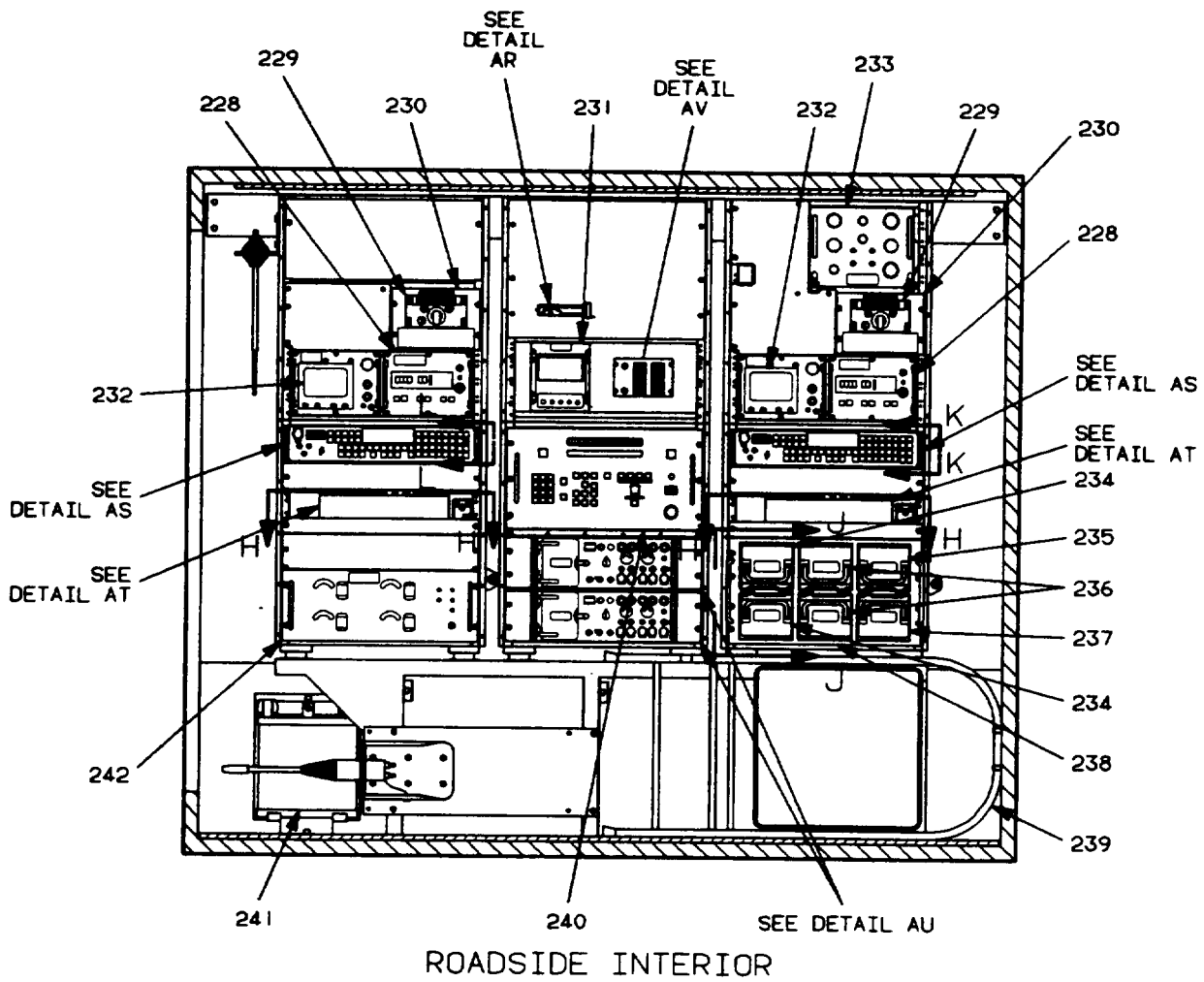


FIGURE C-2. SHELTER ASSEMBLY (SHEET 19 OF 24)

| (1) ILLUS (A) FIG NO. | (2) (B) ITEM NO. | (3) SMR CODE | (4) NATIONAL STOCK NUMBER | (5) PART NUMBER | (6) FSCM | TM32-5895-070-24&P DESCRIPTION UOC | (7) U / M | (8) QTY INC IN UNIT |
|-----------------------------------|---------------------------|--------------------|------------------------------------|-----------------------|-------------|---------------------------------------------------------|--------------------|---------------------------------|
| C-2 | 228 | PAODD | 5895-01-165-6225 | C5110453-1 | 57958 | OPERATOR CONTROL PANEL ASSY (1A1A3/A15) | EA | 2 |
| C-2 | 229 | PAOHH | 5831-00-933-9822 | C-1611D/AIC | 81349 | INTERCOM SET CONTROL (1A1A43/A44) | EA | 1 |
| C-2 | 230 | PAOHD | 5811-01-164-6261 | 5048981-1 | 81349 | INTERCOM CONT PNL (1A1A2/A14) | EA | 2 |
| C-2 | 231 | PAODD | 5895-01-168-0084 | 914645-801 | 57958 | PRINTE THERMAL (1A1A12) | EA | 1 |
| C-2 | 232 | PAODD | 5895-01-166-6949 | 707237-801 | 37695 | SIGNAL DISPLAY UNIT (1A1A19A2/A4) | EA | 2 |
| C-2 | 233 | PAOHD | 5895-01-115-9154 | 5065934-1 | 57958 | CONTROL, DF, ESL, (1A1A13) | EA | 1 |
| C-2 | 234 | PAODD | 5865-01-140-5013 | 706272-802 | 37695 | RCVR (1A1A19A1A1/A4) | EA | 2 |
| C-2 | 235 | PAODD | 5895-01-166-6951 | 707240-801 | 37695 | RECEIVER, INTERFACE J-4144/TRR-35(V) (1A1A19A1A3) | EA | 1 |
| C-2 | 236 | PAODD | 5865-01-136-8672 | 706692-802 | 37695 | RCVR (1A1A19A1A2/A5) | EA | 2 |
| C-2 | 237 | PAODD | 5895-01-168-0086 | 535311-801 | 57958 | POWER SUPPLY, PP-8179/URR (1A1A19A1A6) | EA | 1 |
| C-2 | 238 | PAODD | 5999-01-275-6273 | 707238-802 | 37695 | RECEIVER, DRAWER ASSY(1A1A19A1) | EA | 1 |
| C-2 | 239 | PAOZZ | 7105-00-663-8475 | AA-C-291 | 81349 | CHAIR, FOLDING | EA | 1 |
| C-2 | 240 | PAODD | 5811-01-257-0175 | C5139263-1 | 57958 | SYSTEM CONTROL ASSY (1A1A10) | EA | 1 |
| C-2 | 241 | PAOZZ | | 0188-2-4085 | 15942 | BASKET, WASTE | EA | 1 |
| C-2 | 242 | PAOHD | 5811-01-165-0405 | C5110454-1 | 57958 | RADIO, FREQUENCY DISTRIBUTION UNIT (1A1A5) | EA | 1 |

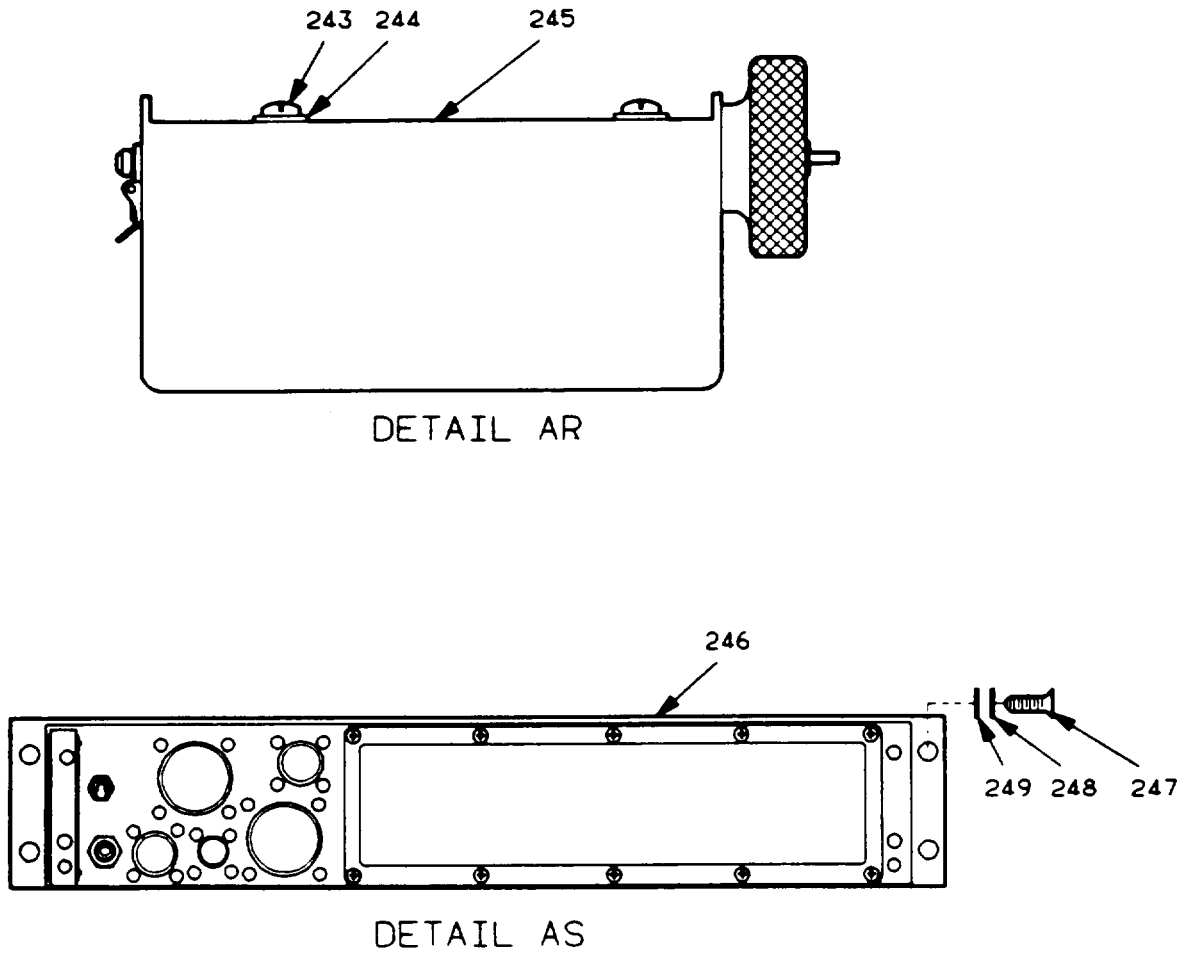
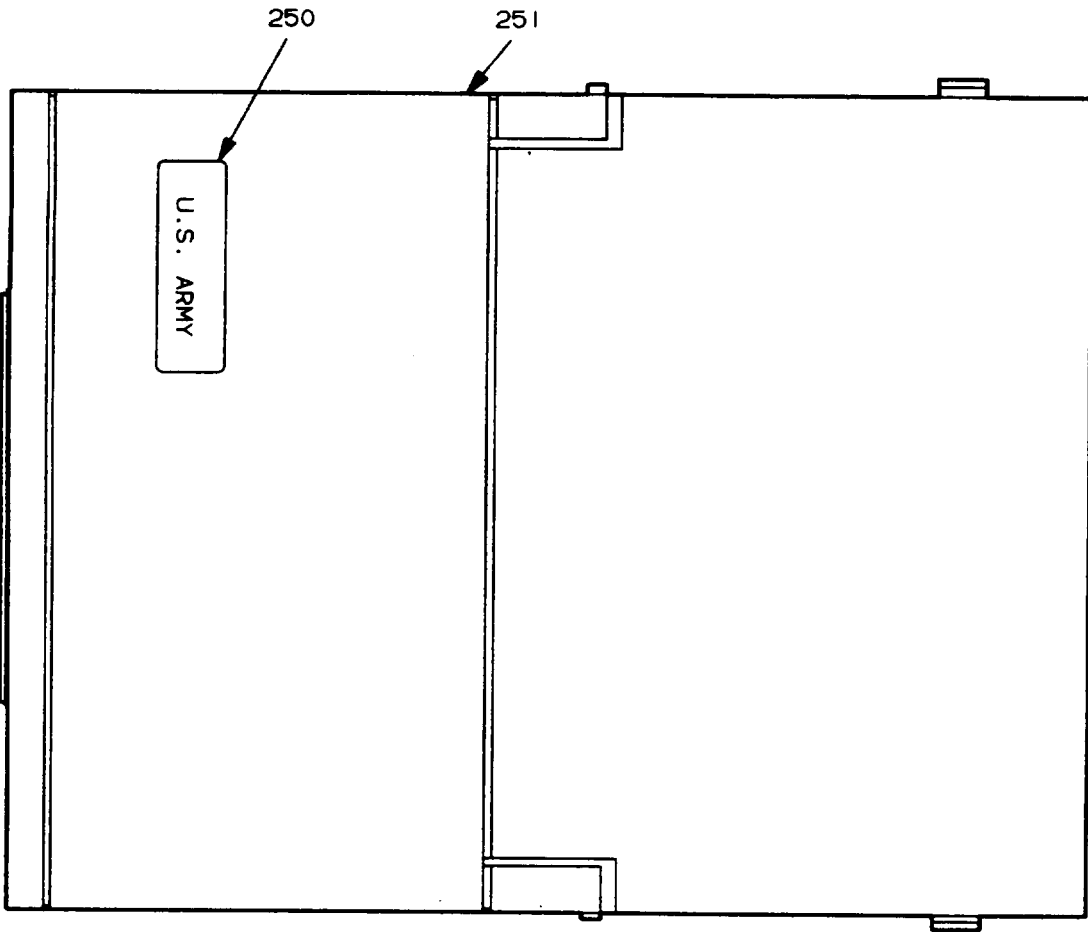
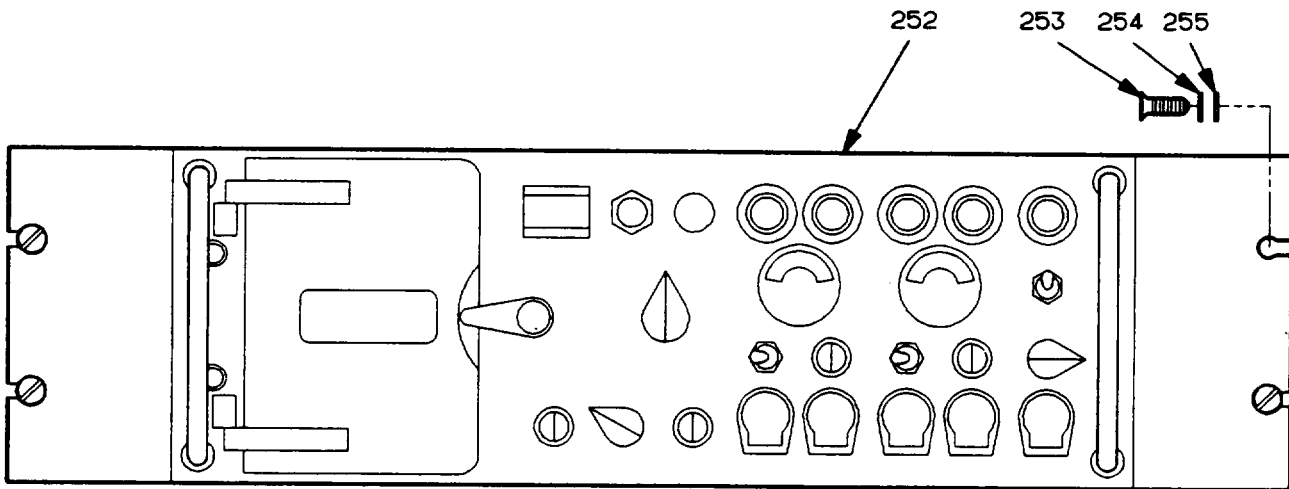


FIGURE C-2. SHELTER ASSEMBLY (SHEET 20 OF 24)

| (1) ILLUS (A) | (2) (B) | (3) NATIONAL STOCK | (4) PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | (7) U / M | (8) QTY INC IN UNIT |
|---------------------|------------|--------------------------|-----------------------|-------------|------------------------------------------------------|--------------------|---------------------------------|
| C-2 | 243 | XDOZZ 5305-00-054-6653 | MS51957-29 | 96906 | SCREW, MACHINE | EA | 2 |
| C-2 | 244 | XDOZZ 5310-00-773-7624 | NAS620C6 | 80205 | WASHER, FLAT | EA | 2 |
| C-2 | 245 | XDOZZ | 813568-801 | 57958 | PAPER ROLLER ASSY | EA | 1 |
| C-2 | 246 | PAODD 5895-01-166-6958 | 706687-804 | 37695 | RCVR CNTL INDC (C11383/TRR-35(V) (1A1A19A3/A5) | EA | 2 |
| C-2 | 247 | XDOZZ 5305-00-059-3661 | MS51958-65 | 96906 | SCREW, MACHINE | EA | 4 |
| C-2 | 248 | XDOZZ 5310-00-933-8120 | MS35338-138 | 96906 | WASHER, LOCK | EA | 4 |
| C-2 | 249 | XDOZZ 5310-00-442-6911 | NAS1640-10 | 80205 | WASHER, FLAT | EA | 4 |



DETAIL AT
(TYPICAL 2 PLACES)



DETAIL AU
(TYPICAL 2 PLACES)

FIGURE C-2. SHELTER ASSEMBLY (SHEET 21 OF 24)

| | | | | | | TM32-5895-070-24&P | | |
|-------|------|----------|------------------|-------------|-------------|---------------------------------------------|------|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | |
| ILLUS | | | | | DESCRIPTION | | QTY | |
| (A) | (B) | NATIONAL | | | | U | INC | |
| FIG | ITEM | STOCK | PART | | | / | IN | |
| NO. | NO. | CODE | NUMBER | FSCM | UOC | M | UNIT | |
| C-2 | 250 | XDHZZ | | C5110852-9 | 57958 | NAME PLATE | EA | 2 |
| C-2 | 251 | PAODD | 7025-01-257-0177 | C5139624-1 | 57958 | OPEERATOR TERMINAL, MODIFIED(1A1A9/A25) | EA | 2 |
| C-2 | 252 | PAOHD | 5835-01-023-4332 | AN/UNH17A | 80058 | RECORDER- REPRODUCER SET, (1A1A4/A16) | EA | 2 |
| C-2 | 253 | XDOZZ | 5305-00-059-3657 | MS51958-65 | 96906 | SCREW,MACHINE | EA | 8 |
| C-2 | 254 | XDOZZ | 5310-00-933-8120 | MS35338-138 | 96906 | WASHER, LOCK | EA | 8 |
| C-2 | 255 | XDOZZ | 5310-00-442-6911 | NAS1640-10 | 80205 | WASHER, FLAT | EA | 8 |

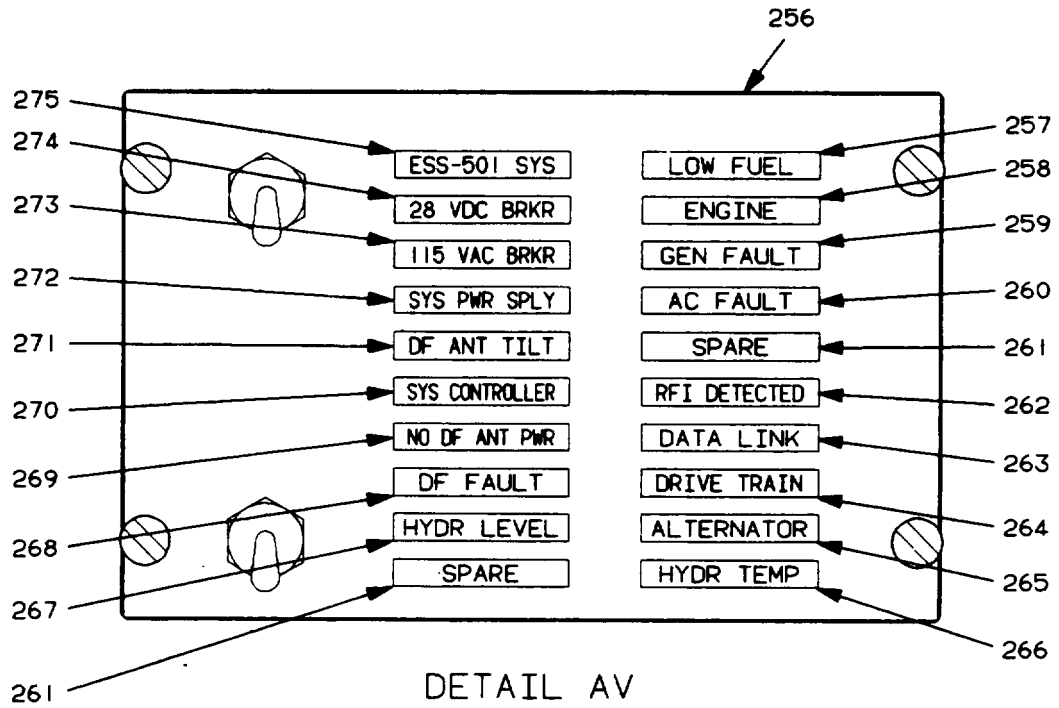


FIGURE C-2. SHELTER ASSEMBLY (SHEET 22 OF 24)

| (1) ILLUS (A) (B) FIG ITEM NO. NO. | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | TM32-5895-070-24&P (6) DESCRIPTION | UOC | (7) U / M | (8) QTY INC IN UNIT |
|------------------------------------------------|-----|--------------------|------------------------------------|-----------------------|-------------|------------------------------------------|-----|--------------------|---------------------------------|
| C-2 | 256 | PAOHD | 1680-00-903-4378 | 4408-100-29 | 96182 | FAULT FUNCTION PANEL (1A1A8) | | EA | 1 |
| C-2 | 257 | PAOZZ | 5850-01-275-6293 | C5114113-18 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 258 | PAOZZ | 5850-01-275-9929 | C5114113-19 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 259 | PAOZZ | 5850-01-275-6300 | C5114113-11 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 260 | PAOZZ | 5850-01-275-6301 | C5114113-12 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 261 | PAOZZ | 5850-01-275-6292 | C5114113-17 | 57958 | LENS, CAUTION PNL | | EA | 2 |
| C-2 | 262 | PAOZZ | 5850-01-275-6294 | C5114113-20 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 263 | PAOZZ | 5850-01-275-6288 | C5114113-2 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 264 | PAOZZ | 5850-01-275-6290 | C5114113-15 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 265 | PAOZZ | 5850-01-275-6291 | C5114113-16 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 266 | PAOZZ | 5850-01-275-6299 | C5114113-10 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 267 | PAOZZ | 5850-01-275-6298 | C5114113-9 | 57958 | LENS, CAUTION | | PNL | EA |
| C-2 | 268 | PAOZZ | 5850-01-275-6297 | C5114113-8 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 269 | PAOZZ | 5850-01-275-6296 | C5114113-7 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 270 | PAOZZ | 5850-01-275-6295 | C5114113-6 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 271 | PAOZZ | 5850-01-275-6285 | C5114113-5 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 272 | PAOZZ | 5850-01-275-6286 | C5114113-3 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 273 | PAOZZ | 5850-01-275-6289 | C5114113-14 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 274 | PAOZZ | 5850-01-275-6287 | C5114113-4 | 57958 | LENS, CAUTION PNL | | EA | 1 |
| C-2 | 275 | PAOZZ | 5355-01-262-3551 | C5114113-1 | 57958 | LENS, CAUTION PNL | | EA | 1 |

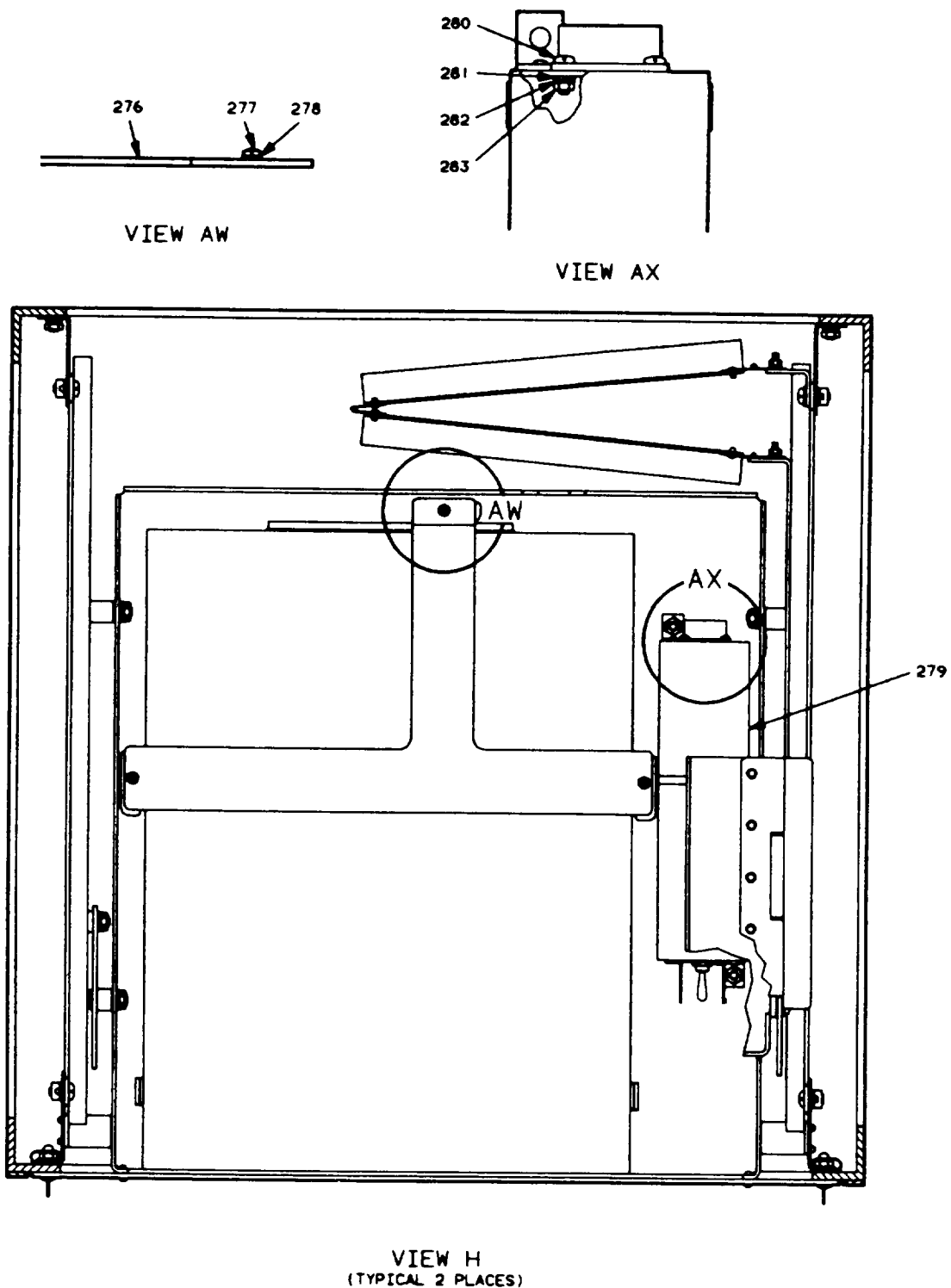
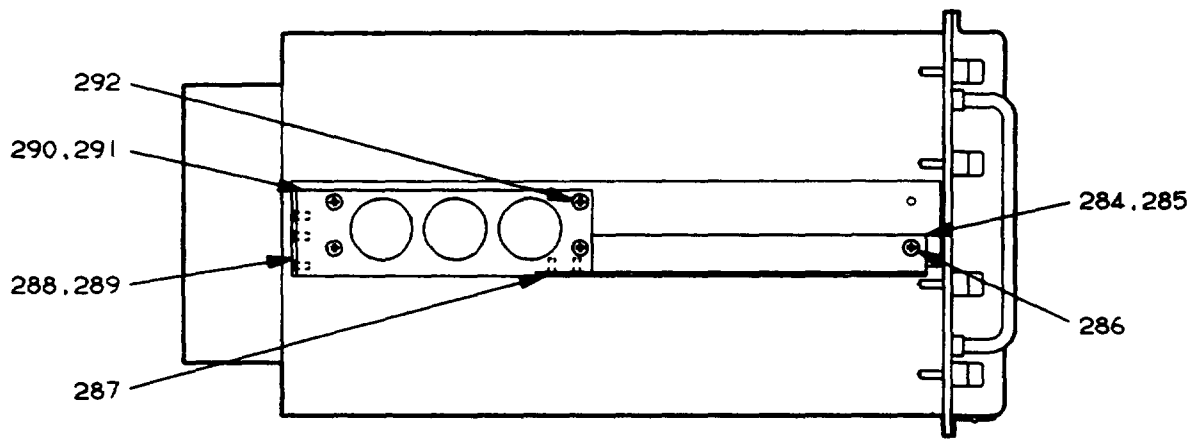
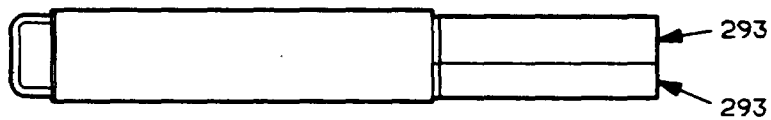


FIGURE C-2. SHELTER ASSEMBLY (SHEET 23 OF 24)

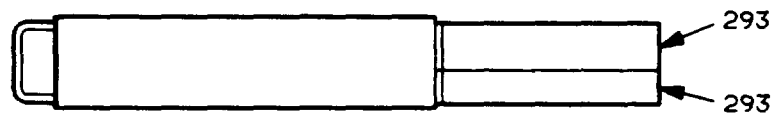
| TM32-5895-070-24&P | | | | | | | | | |
|--------------------|------|----------|------------------|-------------|-------------|-----|-----|------|---|
| (1) | (2) | (3) | (4) | (5) | (6) | | (7) | (8) | |
| ILLUS | | | | | DESCRIPTION | | | QTY | |
| (A) | (B) | NATIONAL | | | | | U | INC | |
| FIG | ITEM | STOCK | PART | | | | / | IN | |
| NO. | NO. | CODE | NUMBER | NUMBER | FSCM | UOC | M | UNIT | |
| C-2 | 276 | XDOZZ | | C5139688-1 | 57958 | | | EA | 2 |
| C-2 | 277 | XDOZZ | 5305-00-054-6653 | MS51957-29 | 96906 | | | EA | 4 |
| C-2 | 278 | XDOZZ | 5310-00-773-7624 | NAS620C6 | 80205 | | | EA | 4 |
| C-2 | 279 | PAOZZ | 5930-01-258-8009 | C5139341-1 | 57958 | | | EA | 2 |
| | | | | | | | | | |
| C-2 | 280 | XDOZZ | 5305-00-781-5664 | MS24693C271 | 96906 | | | EA | 4 |
| C-2 | 281 | XDOZZ | 5310-00-989-0640 | NAS620C10 | 80205 | | | EA | 4 |
| C-2 | 282 | XDOZZ | 5310-00-933-8120 | MS35338-138 | 96906 | | | EA | 4 |
| C-2 | 283 | XDOZZ | 5310-00-812-4292 | NAS671C10 | 80205 | | | EA | 4 |



VIEW J



VIEW J



VIEW L

FIGURE C-2. SHELTER ASSEMBLY (SHEET 24 OF 24)

| (1) ILLUS (A) FIG NO. | (2) (B) ITEM NO. | (3) SMR CODE | (4) NATIONAL STOCK NUMBER | (5) PART NUMBER | (6) FSCM | TM32-5895-070-24&P DESCRIPTION UOC | (7) U / M | (8) QTY INC IN UNIT |
|-----------------------------------|---------------------------|--------------------|------------------------------------|-----------------------|-------------|---------------------------------------------------------------------|--------------------|---------------------------------|
| C-2 | 284 | XDOZZ | | C5110492-1 | 57958 | BRACKET | EA | 1 |
| C-2 | 285 | XDOZZ | | C5110492-2 | 57958 | BRACKET | EA | 1 |
| C-2 | 286 | XDOZZ | 5305-00-059-3657 | MS51958-61 | 96906 | SCREW,MACHINE | EA | 2 |
| C-2 | 287 | XDOZZ | 5305-00-068-5287 | MS24693C49 | 96906 | SCREW,MACHINE | EA | 4 |
| C-2 | 288 | XDOZZ | | C5131039-1 | 57958 | BRACKET | EA | 2 |
| C-2 | 289 | XDOZZ | 5305-00-068-5287 | MS24693C49 | 96906 | SCREW,MACHINE | EA | 6 |
| C-2 | 290 | XDOZZ | | C5110496-1 | 57958 | BLOCK,GUIDE PIN | EA | 1 |
| C-2 | 291 | XDOZZ | | C5110496-2 | 57958 | BLOCK,GUIDE PIN | EA | 1 |
| C-2 | 292 | XDOZZ | 5305-00-959-4158 | MS24693C273 | 96906 | SCREW,MACHINE | EA | 8 |
| C-2 | 293 | PAOZZ | | C5131395-1 | 57958 | ADAPTER,CONNECTOR INLINE RFI FILTERED (CP1) (CP2) (CP3) (CP4) | EA | 4 |

SECTION III. SPECIAL TOOLS LIST

| (1) ILLUS (a) (b) FIG ITEM NO. NO. | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION UOC | (7) U / M | (8) QTY INC IN UNIT |
|------------------------------------------------|--------------------|------------------------------------|-----------------------|-------------|-------------------------------|--------------------|---------------------------------|
|------------------------------------------------|--------------------|------------------------------------|-----------------------|-------------|-------------------------------|--------------------|---------------------------------|

(NOT APPLICABLE)

SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

| STOCK NUMBER | FIG NO. | ITEM NO. | STOCK NUMBER | FIG NO. | ITEM NO. |
|------------------|---------|----------|------------------|---------|----------|
| 1680-00-903-4378 | C-2 | 256 | 5310-00-225-5328 | C-2 | 115 |
| 4120-01-168-0087 | C-2 | 16 | 5310-00-250-9477 | C-2 | 119 |
| 4120-00-708-0031 | C-2 | 171 | 5310-00-442-6911 | C-2 | 49 |
| 5120-00-251-4489 | C-2 | 181 | 5310-00-531-9515 | C-2 | 92 |
| 5305-00-021-3616 | C-2 | 152 | 5310-00-616-8660 | C-2 | 194 |
| 5305-00-021-3668 | C-2 | 90 | 5310-00-773-7618 | C-2 | 204 |
| 5305-00-021-3740 | C-2 | 28 | 5310-00-773-7624 | C-2 | 244 |
| 5305-00-021-3801 | C-2 | 9 | 5310-00-477-6768 | C-2 | 117 |
| 5305-00-027-6244 | C-2 | 64 | 5310-00-767-0445 | C-2 | 77 |
| 5305-00-043-0267 | C-2 | 205 | 5310-00-812-4292 | C-2 | 283 |
| 5305-00-051-0227 | C-2 | 113 | 5310-00-837-1381 | C-2 | 193 |
| 5305-00-054-5647 | C-2 | 46 | 5310-00-903-5966 | C-2 | 165 |
| 5305-00-054-6653 | C-2 | 243 | 5310-00-913-8881 | C-2 | 21 |
| 5305-00-054-6670 | C-2 | 126 | 5310-00-933-8118 | C-2 | 45 |
| 5305-00-059-3657 | C-2 | 253 | 5310-00-933-8120 | C-2 | 48 |
| 5305-00-059-3659 | C-2 | 159 | 5310-00-952-0309 | C-2 | 94 |
| 5305-00-059-3660 | C-2 | 47 | 5310-00-974-6623 | C-2 | 62 |
| 5305-00-059-3661 | C-2 | 135 | 5310-00-984-7042 | C-2 | 22 |
| 5305-00-068-5287 | C-2 | 287 | 5310-01-067-9589 | C-2 | 125 |
| 5305-00-207-8253 | C-2 | 123 | 5310-01-099-1648 | C-2 | 10 |
| 5305-00-455-9960 | C-2 | 82 | 5310-01-141-6672 | C-2 | 44 |
| 5305-00-576-5417 | C-2 | 71 | 5310-01-244-8303 | C-2 | 14 |
| 5305-00-717-5467 | C-2 | 70 | 5310-01-249-9376 | C-2 | 91 |
| 5305-00-781-5664 | C-2 | 280 | 5320-00-117-6939 | C-2 | 39 |
| 5305-00-847-1159 | C-2 | 114 | 5340-00-775-5266 | C-2 | 8 |
| 5305-00-908-2829 | C-2 | 40 | 5340-01-185-3282 | C-2 | 109 |
| 5305-00-959-4158 | C-2 | 292 | 5411-01-186-8422 | C-2 | 19 |
| 5305-00-992-6057 | C-2 | 98 | 5805-00-543-0012 | C-2 | 168 |
| 5305-01-014-7483 | C-2 | 142 | 5810-01-118-7766 | C-2 | 212 |
| 5305-01-147-9753 | C-2 | 101 | 5811-01-162-2447 | C-2 | 53 |
| 5305-00-543-4405 | C-2 | 15 | 5811-01-162-2450 | C-2 | 170 |
| 5305-00-576-5417 | C-2 | 24 | 5811-01-164-6261 | C-2 | 230 |
| 5305-00-637-9674 | C-2 | 93 | 5811-01-164-9988 | C-2 | 160 |
| 5306-01-034-6615 | C-2 | 76 | 5811-01-165-0405 | C-2 | 242 |
| 5310-00-019-0676 | C-2 | 75 | 5811-01-200-1587 | C-2 | 180 |
| 5310-00-022-8834 | C-2 | 120 | 5811-01-200-4514 | C-2 | 175 |
| 5310-00-057-0573 | C-2 | 43 | 5820-00-893-1323 | C-2 | 227 |
| 5310-00-167-0803 | C-2 | 59 | 5820-00-893-1324 | C-2 | 222 |
| 5310-00-067-0804 | C-2 | 13 | 5820-01-140-9070 | C-2 | 174 |
| 5310-00-167-0806 | C-2 | 11 | 5820-01-156-0387 | C-2 | 220 |
| 5310-00-208-3786 | C-2 | 41 | 5821-01-070-4433 | C-2 | 172 |

TM32-5895-070-24&P
S INDEX

| STOCK NUMBER | FIG NO. | ITEM NO | STOCK NUMBER | FIG NO. | ITEM NO |
|------------------|---------|---------|------------------|---------|---------|
| 5830-00-892-3339 | C-2 | 52 | 5895-01-166-6949 | C-2 | 232 |
| 5831-00-933-9822 | C-2 | 229 | 5895-01-166-6951 | C-2 | 235 |
| 5835-01-023-4332 | C-2 | 252 | 5895-01-166-6958 | C-2 | 246 |
| 5850-01-262-3551 | C-2 | 275 | 5895-01-168-0086 | C-2 | 237 |
| 5850-01-275-6285 | C-2 | 271 | 5895-01-179-0671 | C-2 | 106 |
| 5850-01-275-6286 | C-2 | 272 | 5895-01-186-8416 | C-2 | 158 |
| 5850-01-275-6287 | C-2 | 274 | 5895-01-257-0176 | C-2 | 219 |
| 5850-01-275-6288 | C-2 | 263 | 5915-01-165-6223 | C-2 | 176 |
| 5850-01-275-6289 | C-2 | 273 | 5915-01-165-6224 | C-2 | 177 |
| 5850-01-275-6290 | C-2 | 264 | 5930-01-258-8009 | C-2 | 279 |
| 5850-01-275-6291 | C-2 | 265 | 5965-00-876-2375 | C-2 | 178 |
| 5850-01-275-6292 | C-2 | 261 | 5975-00-878-3791 | C-2 | 179 |
| 5850-01-275-6293 | C-2 | 257 | 5985-00-115-7149 | C-2 | 5 |
| 5850-01-275-6294 | C-2 | 262 | 5985-00-149-3534 | C-2 | 2 |
| 5850-01-275-6295 | C-2 | 270 | 5985-00-199-8831 | C-2 | 4 |
| 5850-01-275-6296 | C-2 | 269 | 5985-00-221-5544 | C-2 | 3 |
| 5850-01-275-6297 | C-2 | 268 | 5985-00-238-7474 | C-2 | 6 |
| 5850-01-275-6298 | C-2 | 267 | 5985-00-985-9024 | C-2 | 107 |
| 5850-01-275-6299 | C-2 | 266 | 5985-01-194-0925 | C-2 | 137 |
| 5850-01-275-6300 | C-2 | 259 | 5985-01-274-8920 | C-2 | 55 |
| 5850-01-275-6301 | C-2 | 260 | 5985-01-274-8934 | C-2 | 84 |
| 5850-01-275-9929 | C-2 | 258 | 5985-01-274-8935 | C-2 | 54 |
| 5865-01-084-0421 | C-2 | 173 | 5985-01-275-6272 | C-2 | 35 |
| 5865-01-136-8672 | C-2 | 236 | 5985-01-275-9928 | C-2 | 33 |
| 5865-01-140-5013 | C-2 | 234 | 5999-01-261-9138 | C-2 | 74 |
| 5865-01-257-0174 | C-2 | 221 | 5999-01-275-6273 | C-2 | 238 |
| 5895-01-115-9154 | C-2 | 233 | 6110-01-267-6514 | C-2 | 17 |
| 5895-01-165-6225 | C-2 | 228 | 6130-01-259-3074 | C-2 | 183 |
| | | | 7025-01-257-0177 | C-2 | 251 |

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| PART NUMBER | FSCM | FIG NO | ITEM NO | PART NUMBER | FSCM | FIG NO | ITEM NO |
|--------------|-------|--------|---------|-------------|-------|--------|---------|
| AA-C-291 | 81348 | C-2 | 239 | C5114113-11 | 57958 | C-2 | 259 |
| AB-15/GR | 80058 | C-2 | 3 | C5114113-12 | 57958 | C-2 | 260 |
| AN/UNH17A | 58350 | C-2 | 252 | C5114113-14 | 57658 | C-2 | 273 |
| AN960C4 | 88044 | C-2 | 44 | C5114113-15 | 57958 | C-2 | 264 |
| AN960C416 | 88044 | C-2 | 92 | C5114113-16 | 57958 | C-2 | 265 |
| AN960C516 | 88044 | C-2 | 59 | C5114113-17 | 57958 | C-2 | 261 |
| AN960C616 | 88044 | C-2 | 13 | C5114113-18 | 57958 | C-2 | 257 |
| AN960C816 | 88044 | C-2 | 11 | C5114113-19 | 57958 | C-2 | 258 |
| AS-1729/VRC | 80058 | C-2 | 107 | C5114113-2 | 57958 | C-2 | 263 |
| A104 | 82370 | C-2 | 179 | C5114113-20 | 57958 | C-2 | 262 |
| C-10547/ | | | | C5114113-3 | 57958 | C-2 | 272 |
| ARC164/V/ | 80058 | C-2 | 172 | C5114113-4 | 57958 | C-2 | 274 |
| C-1611D/AIC | 80058 | C-2 | 229 | C5114113-5 | 57958 | C-2 | 271 |
| C2298/VRC | 40404 | C-2 | 52 | C5114113-6 | 57958 | C-2 | 270 |
| C5110453-1 | 57958 | C-2 | 239 | C5114113-7 | 57958 | C-2 | 269 |
| C5110454-1 | 57958 | C-2 | 242 | C5114113-8 | 57958 | C-2 | 268 |
| C5110492-1 | 57958 | C-2 | 284 | C5114113-9 | 57958 | C-2 | 267 |
| C5110492-2 | 57958 | C-2 | 285 | C5114135-1 | 57958 | C-2 | 109 |
| C5110496-1 | 57958 | C-2 | 290 | C5114136-1 | 57958 | C-2 | 65 |
| C5110496-2 | 57958 | C-2 | 291 | C5114140-1 | 57958 | C-2 | 198 |
| C5110525-1 | 57958 | C-2 | 177 | C5114156-1 | 57958 | C-2 | 104 |
| C5110526-1 | 57958 | C-2 | 176 | C5114171-1 | 57958 | C-2 | 106 |
| C5110620-1 | 57958 | C-2 | 147 | C5114181-1 | 57958 | C-2 | 96 |
| C5110623-1 | 57958 | C-2 | 56 | C5114183-1 | 57958 | C-2 | 97 |
| C5110627-1 | 57958 | C-2 | 188 | C5114187-1 | 57958 | C-2 | 141 |
| C5110798-1 | 57958 | C-1 | 2 | C5114187-2 | 57958 | C-2 | 157 |
| C5110805-1 | 57958 | C-2 | 37 | C5114187-3 | 57958 | C-2 | 153 |
| C5110852-110 | 57958 | C-2 | 214 | C5114191-1 | 57958 | C-2 | 200 |
| C5110852-9 | 57958 | C-2 | 250 | C5114192-1 | 57958 | C-2 | 137 |
| C5110892-1 | 57958 | C-2 | 158 | C5114199-1 | 57958 | C-2 | 108 |
| C5110908-1 | 57958 | C-2 | 36 | C5114200-1 | 57958 | C-2 | 197 |
| C5110909-1 | 57958 | C-2 | 34 | C5114201-1 | 57958 | C-2 | 110 |
| C5110909-101 | 57958 | C-2 | 38 | C5114220-1 | 57958 | C-2 | 85 |
| C5110910-1 | 57958 | C-2 | 33 | C5114223-1 | 57958 | C-2 | 210 |
| C5110949-1 | 57958 | C-2 | 133 | C5114224-1 | 57958 | C-2 | 105 |
| C5110968-1 | 57958 | C-2 | 161 | C5114225-1 | 57958 | C-2 | 211 |
| C5114095-1 | 57958 | C-2 | 53 | C5114230-1 | 57958 | C-2 | 207 |
| C5114102-1 | 57958 | C-2 | 170 | C5114237-1 | 57958 | C-2 | 112 |
| C5114113-1 | 57958 | C-2 | 275 | C5114240-1 | 57958 | C-2 | 111 |
| C5114113-10 | 57958 | C-2 | 266 | C5118812-1 | 57958 | C-2 | 17 |
| | | | | C5118837-1 | 57958 | C-2 | 18 |

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ALPHA NUMERIC INDEX

| PART NUMBER | FSCM | FIG NO | ITEM NO | PART NUMBER | FSCM | FIG NO | ITEM NO |
|--------------|-------|--------|---------|--------------|-------|--------|---------|
| C5118945-1 | 57958 | C-2 | 8 | MS15795-810 | 96906 | C-2 | 150 |
| C5122481-1 | 57958 | C-2 | 50 | MS15795-812 | 96906 | C-2 | 63 |
| C5122498-1 | 57958 | C-2 | 51 | MS15795-814 | 96906 | C-2 | 204 |
| C5131039-1 | 57958 | C-2 | 288 | MS15795-841 | 96906 | C-2 | 115 |
| C5131068-1 | 57958 | C-2 | 169 | MS16995-48 | 96906 | C-2 | 98 |
| C5131080-103 | 57958 | C-2 | 128 | MS20426AD3-5 | 96906 | C-2 | 39 |
| C5131080-2 | 57958 | C-2 | 129 | MS21044N3 | 96906 | C-2 | 225 |
| C5131081-2 | 57958 | C-2 | 127 | MS24693C120 | 96906 | C-2 | 82 |
| C5131104-1 | 57958 | C-2 | 7 | MS24693C271 | 96906 | C-2 | 280 |
| C5131255-1 | 57958 | C-2 | 74 | MS24693C272 | 96906 | C-2 | 113 |
| C5131256-1 | 57958 | C-2 | 78 | MS24693C273 | 96906 | C-2 | 292 |
| C5131257-1 | 57958 | C-2 | 79 | MS24693C274 | 96906 | C-2 | 205 |
| C5131354-1 | 57958 | C-2 | 20 | MS24693C249 | 96906 | C-2 | 287 |
| C5131395-1 | 57958 | C-2 | 293 | MS35307-305 | 96906 | C-2 | 152 |
| C5131405-1 | 57958 | C-2 | 12 | MS35307-306 | 96906 | C-2 | 142 |
| C5139263-1 | 57958 | C-2 | 240 | MS35307-308 | 96906 | C-2 | 123 |
| C5139273-1 | 57958 | C-2 | 183 | MS35307-310 | 96906 | C-2 | 90 |
| C5139278-1 | 57958 | C-2 | 217 | MS35307-333 | 96906 | C-2 | 76 |
| C5139282-1 | 57958 | C-2 | 186 | MS35307-334 | 96906 | C-2 | 15 |
| C5139288-1 | 57958 | C-2 | 221 | MS35307-336 | 96906 | C-2 | 93 |
| C5139341-1 | 57958 | C-2 | 279 | MS35307-360 | 96906 | C-2 | 24 |
| C5139622-1 | 57958 | C-2 | 219 | MS35307-362 | 96906 | C-2 | 70 |
| C5139624-1 | 57958 | C-2 | 251 | MS35307-364 | 96906 | C-2 | 28 |
| C5139683-101 | 57958 | C-2 | 187 | MS35307-365 | 96906 | C-2 | 114 |
| C5139683-103 | 57958 | C-2 | 224 | MS35307-411 | 96906 | C-2 | 9 |
| C5139776-1 | 57958 | C-2 | 216 | MS35333-108 | 96906 | C-2 | 120 |
| C5139819-1 | 57958 | C-2 | 218 | MS35333-109 | 96906 | C-2 | 75 |
| C5139838-1 | 57958 | C-2 | 215 | MS35338-137 | 96906 | C-2 | 125 |
| C5139841-1 | 57958 | C-1 | 3 | MS35338-138 | 96906 | C-2 | 48 |
| C5139843-1 | 57958 | C-2 | 55 | MS35338-139 | 96906 | C-2 | 91 |
| C5139844-1 | 57958 | C-2 | 84 | MS35338-140 | 96906 | C-2 | 62 |
| C5139845-1 | 57958 | C-2 | 54 | MS35338-141 | 96906 | C-2 | 14 |
| C5139846-1 | 57958 | C-2 | 182 | MS35649-2254 | 96906 | C-2 | 119 |
| H8H | 77348 | C-2 | 181 | MS35649-2384 | 96906 | C-2 | 117 |
| LS-454/U | 80058 | C-2 | 178 | MS51021-69 | 96906 | C-2 | 64 |
| LT504-C12-9 | 84256 | C-2 | 199 | MS51957-13 | 96906 | C-2 | 46 |
| MS-116-A | 80063 | C-2 | 4 | MS51957-28 | 96906 | C-2 | 196 |
| MS-117-A | 80063 | C-2 | 5 | MS51957-29 | 96906 | C-2 | 243 |
| MS-118-A | 80063 | C-2 | 6 | MS51957-45 | 96906 | C-2 | 126 |
| | | | | MS51957-46 | 96906 | C-2 | 209 |
| | | | | MS51958-61 | 96906 | C-2 | 286 |

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| PART NUMBER | FSCM | FIG NO | ITEM NO | PART NUMBER | FSCM | FIG NO | ITEM NO |
|---------------|-------|--------|---------|---------------|-------|--------|---------|
| MSS1958-64 | 96906 | C-2 | 47 | R442AVRC | 80058 | C-2 | 174 |
| MSS1958-65 | 96906 | C-2 | 135 | SA-2171/RC | 80058 | C-2 | 184 |
| MSS1971-1 | 96906 | C-2 | 165 | SC-D-189023 | 80063 | C-2 | 118 |
| MSS1971-2 | 96906 | C-2 | 77 | TA-312/PT | 80058 | C-2 | 168 |
| MSS1971-3 | 96906 | C-2 | 21 | TL-3129 | 4879 | C-2 | 66 |
| MS9350-12 | 96906 | C-2 | 83 | TSEC/KG84 | 98230 | C-2 | 212 |
| MT-1029/VRC | 81349 | C-2 | 227 | TSEC/KY57 | 80058 | C-2 | 175 |
| MILE52031 | 81349 | C-2 | 171 | UG273/U | 80058 | C-2 | 2 |
| M45952/1- | | | | 0099-2-3029 | 15942 | C-2 | 121 |
| C8-56 | 81349 | C-2 | 201 | 0188-2-4085 | 15942 | C-2 | 241 |
| M83421/01-101 | 81349 | C-2 | 189 | 1951-1-4880-2 | 15942 | C-2 | 173 |
| NAS1057T3A- | | | | 4408-100-29 | 96182 | C-2 | 256 |
| 25 | 80205 | C-2 | 206 | 5048981-1 | 57958 | C-2 | 230 |
| NAS1640-10 | 80205 | C-2 | 49 | 5051015-1 | 57958 | C-2 | 160 |
| NAS1640-4 | 80205 | C-2 | 45 | 5054585-1 | 57958 | C-2 | 35 |
| NAS1640-516 | 80205 | C-2 | 58 | 5065934-1 | 57958 | C-2 | 233 |
| NAS1640-616 | 80205 | C-2 | 22 | 535311-801 | 57958 | C-2 | 237 |
| NAS1640-816 | 80205 | C-2 | 10 | 706272-802 | 37695 | C-2 | 234 |
| NAS1802-3-13 | 80205 | C-2 | 101 | 706687-804 | 37695 | C-2 | 246 |
| NAS620C10 | 80205 | C-2 | 281 | 706692-802 | 37695 | C-2 | 263 |
| NAS620C4 | 80205 | C-2 | 43 | 707237-801 | 37695 | C-2 | 232 |
| NAS620C416 | 80205 | C-2 | 100 | 707238-802 | 37695 | C-2 | 238 |
| NAS620C6 | 80205 | C-2 | 294 | 707240-801 | 37695 | C-2 | 235 |
| NAS620C8 | 80205 | C-2 | 191 | 813568-801 | 57958 | C-2 | 245 |
| NAS671C10 | 80205 | C-2 | 283 | 914645-801 | 57958 | C-2 | 231 |
| NAS671C4 | 80205 | C-2 | 41 | | | | |
| NAS671C6 | 80205 | C-2 | 194 | | | | |
| NAS671C8 | 80205 | C-2 | 193 | | | | |
| RT-524A/VRC | 80058 | C-2 | 180 | | | | |
| RTL288A/ARC- | | | | | | | |
| 164 | 80058 | C-2 | 220 | | | | |

REFERENCE DESIGNATOR INDEX

| REFERENCE DESIGNATOR | FIG NO | ITEM NO | REFERENCE DESIGNATOR | FIG NO | ITEM NO |
|-------------------------|--------|------------|-------------------------|--------|------------|
| I | C-1 | 1 | 1A1A19A5 | C-2 | 246 |
| 1A1 | C-1 | 3 | 1A1A20 | C-2 | 186 |
| 1A2 | C-1 | 2 | 1A1A21 | C-2 | 220 |
| 1A1A1 | C-2 | 1 | 1A1A22 | C-2 | 174 |
| 1A1FL1 | C-2 | 177 | 1A1A23 | C-2 | 175 |
| 1A1FL2 | C-2 | 176 | 1A1A24 | C-2 | 184 |
| 1A1A2 | C-2 | 230 | 1A1A25 | C-2 | 251 |
| 1A1A3 | C-2 | 228 | 1A1A26 | C-2 | 212 |
| 1A1A4 | C-2 | 252 | 1A1A27 | C-2 | 168 |
| 1A1A5 | C-2 | 242 | 1A1A28 | C-2 | 16 |
| 1A1A8 | C-2 | 256 | 1A1A28A1 | C-2 | 19 |
| 1A1A9 | C-2 | 251 | 1A1A28A2 | C-2 | 158 |
| 1A1A10 | C-2 | 240 | 1A1A28A3 | C-2 | 51 |
| 1A1A11 | C-2 | 183 | 1A1A28A4 | C-2 | 50 |
| 1A1A12 | C-2 | 231 | 1A1A28A1K1 | C-2 | 18 |
| 1A1A13 | C-2 | 233 | 1A1A28A1VR1 | C-2 | 17 |
| 1A1A14 | C-2 | 230 | 1A1A29 | C-2 | 3 |
| 1A1A15 | C-2 | 228 | 1A1A30 | C-2 | 160 |
| 1A1A19A1 | C-2 | 238 | 1A1A31 | C-2 | 54 |
| 1A1A19A1A1 | C-2 | 234 | 1A1A31A2A3 | C-2 | 53 |
| 1A1A19A1A2 | C-2 | 236 | 1A1A33 | C-2 | 172 |
| 1A1A19A1A3 | C-2 | 235 | 1A1A37 | C-2 | 221 |
| 1A1A19A1A4 | C-2 | 234 | 1A1A38 | C-2 | 279 |
| 1A1A19A1A5 | C-2 | 236 | 1A1A39 | C-2 | 279 |
| 1A1A19A1A6 | C-2 | 237 | 1A1A40 | C-2 | 218 |
| 1A1A19A2 | C-2 | 232 | 1A1A41 | C-2 | 217 |
| 1A1A19A3 | C-2 | 246 | 1A1A42 | C-2 | 3 |
| 1A1A19A4 | C-2 | 232 | 1A1A43 | C-2 | 229 |
| | | | 1A1A44 | C-2 | 229 |
| | | | 1A1A45 | C-2 | 227 |

| BULK MATERIAL | | | | | | | | | |
|---------------|-------|------------------|---------------|-------|----------------------|-----|------|--|--|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | | |
| ILLUS | | | | | DESCRIPTION | | QTY | | |
| (A) | (B) | NATIONAL | | | | U | INC | | |
| FIG | ITEM | STOCK | PART | | | / | IN | | |
| NO. | NO. | NUMBER | NUMBER | FSCM | UOC | M | UNIT | | |
| BULK | XDOZZ | 6145-00-819-6235 | M16878/4BHB5 | 81349 | WIRE, ELECTRICAL | FT | 1 | | |
| BULK | XDOZZ | 6145-00-581-1615 | M16878/4BHB0 | 81349 | WIRE, ELECTRICAL | FT | 1 | | |
| BULK | XDOZZ | 6145-00-500-3079 | M16878/4BHB9 | 81349 | WIRE, ELECTRICAL | FT | 1 | | |
| BULK | XDOZZ | 6145-00-548-0969 | M16868/4BFB9 | 81349 | WIRE, ELECTRICAL | FT | 1 | | |
| BULK | XDOZZ | | SN60WRMAP2 | 81348 | SOLDER, TIN ALLOY | LB | 1 | | |
| BULK | XDOZZ | | M7444-3-1-78 | 81348 | INSULATION, SLEEVING | FT | 1 | | |
| BULK | XDOXX | 5970-01-164-7406 | M23053/5-103C | 81349 | INSULATION, SLEEVING | FT | 1 | | |
| BULK | XDOZZ | | QQW343S22SIT | 81348 | WIRE, ELECTRICAL | FT | 1 | | |
| BULK | XDOZZ | | C5131424-5 | 57958 | INSULATION, SLEEVING | FT | 1 | | |
| BULK | XDOZZ | | C5131400-1 | 57958 | THERMAL, JOINT COMP | LB | 1 | | |
| BULK | XDOZZ | 5905-01-173-4880 | M16878/4BJE9 | 81349 | WIRE, ELECTRICAL | FT | 1 | | |
| BULK | XDOZZ | 6145-00-062-5700 | M16878/4BFE9 | 81349 | WIRE, ELECTRICAL | FT | 1 | | |
| BULK | XDOZZ | 6145-00-542-2773 | RG400U | 81349 | CABLE, RADIO FREQ | FT | 1 | | |
| BULK | XDOZ | 5970-00-761-1795 | M23053/8-005C | 81349 | INSULATION, SLEEVING | FT | 1 | | |
| BULK | XDOZZ | 5325-01-025-4479 | MS21266-3N | 96906 | GROMMET, PLASTIC | EA | 1 | | |
| BULK | XDOZZ | 4020-00-630-4874 | MILR30500 | 81349 | ROPE, POLYESTER | FT | 1 | | |
| BULK | XDOZZ | | QQB575R36T375 | 81349 | BRAID, WIRE | FT | 1 | | |

APPENDIX D
EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I.

INTRODUCTION

D-1. SCOPE

This appendix lists expendable supplies and materials you will need to maintain the system. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

D-2. EXPLANATION OF COLUMNS

- a. Column 1 - Item Number. This number is assigned to the entry in the listing and is referenced to the narrative instructions to identify the material (e.g., "Use cleaning compound (Appendix D, Item 3)").
- b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.
 - C - Operator/Crew
 - O - Organizational Maintenance
 - F - Direct Support Maintenance
 - H - General Support Maintenance
- c. Column 3 - National Stock Number. This is the National Stock Number assigned to the item; use it to request or requisition the item.
- d. Column 4 - Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.
- e. Column 5 - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., e.a, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

SECTION II.
EXPENDABLE SUPPLIES AND MATERIALS LIST (CONT)

| (1) ITEM NO. | (2) LEVEL | (3) NATIONAL STOCK NUMBER | (4) DESCRIPTION | (5) U/M |
|--------------------|--------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------|
| 1 | 0 | 8020-00-297-6657 | BRUSH | EA |
| 2 | 0 | 9905-00-721-8698 | CABLE TAGS | EA |
| 3 | 0 | 5975-00-166-0092 | CABLE TIE DOWN MS3367-6 | EA |
| 4 | 0 | 7930-01-109-8144 | CLEANER | QT |
| 5 | 0 | 6850-00-105-3084 | CLEANING COMPOUND, FREON TF (TRICHLOROTRIFLUOROETHANE) | OZ |
| 6 | 0 | 9150-00-753-4648 | GREASE, GRAPHITE | LB |
| 7 | 0 | 6810-00-264-6715 | GREASE; MOLYBDENUM DISULFIDE (81349) MIL-M-7866C | LB |
| 8 | 0 | 9150-00-261-8317 | HYDRAULIC FLUID | 5 GAL |
| 9 | 0 | 5970-00-761-1795 5970-01-164-7406 NOT AVAILABLE NOT AVAILABLE | INSULATION SLEEVING (81349) M23053/8-005C (81349) M23053/5-108C (81349) M7444-3-1-78 (57958) C5131424-5 | FT |
| 10 | 0 | 7530-00-761-1795 | LABEL (FOR WIRE TAGS) | RO |
| 11 | 0 | NOT AVAILABLE | LUBRICANT, NEVER SEEZE (15145) P/N 60155 C5131401-1 | CN |
| 12 | 0 | 9150-00-231-9062 | OIL, GENERAL PURPOSE, LUBRICATION (81348) FED-VV-L-800 | QT |
| 13 | 0 | 7530-01-120-3695 | PAPER, THERMAL PRINTING (37695) 347625-2 | RO |
| 14 | 0 | 4020-00-630-4874 | ROPE, POLYESTER MIL-R-30500 | FT |
| 15 | 0 | NOT AVAILABLE | SAFETY WIRE | RO |

SECTION II.
EXPENDABLE SUPPLIES AND MATERIALS LIST (CONT)

| (1) ITEM NO. | (2) LEVEL | (3) NATIONAL STOCK NUMBER | (4) DESCRIPTION | (5) U/M |
|--------------------|--------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------|------------|
| 16 | 0 | 6850-00-880-7616 | SILICONE COMPOUND MIL-S-8660 | TU |
| 17 | 0 | | SPLICE,FASTENER, ELECTRIC 5940-01-079-1647 M7928/5-3 5940-01-079-1375 M7928/5-4 5940-01-079-1936 M7928/5-5 | EA |
| 18 | 0 | 3439-00-555-4629 | SOLDER | EA |
| 19 | 0 | NOT AVAILABLE | THERMAL JOINT COMPOUND WAKEFIELD ENG. (05820) P/N 827841-52 TYPE 120 (FOR RESERVOIR) C5131400-1 | TU |
| 20 | 0 | NOT AVAILABLE | THREAD LUBRICANT (57958) C5131401-1 | TU |
| 21 | 0 | 8030-00-889-3535 | THREAD SEALANT MIL-T-27730 | EA |
| 22 | 0 | NOT AVAILABLE | ELEMENT,FILTER 5726-01 | EA |
| 23 | 0 | 5330-00-599-1301 | ELEMENT,FILTER,FELT (57958) C5132677-2 | EA |

APPENDIX E
ILLUSTRATED LIST OF MANUFACTURED ITEMS

Section I.
INTRODUCTION

E-1. SCOPE

This appendix includes complete instructions for making items authorized to be manufactured or fabricated at organizational, direct support, or general support maintenance.

E-2. PART NUMBER INDEX

A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the figure which covers fabrication criteria.

E-3. MATERIALS

All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration,

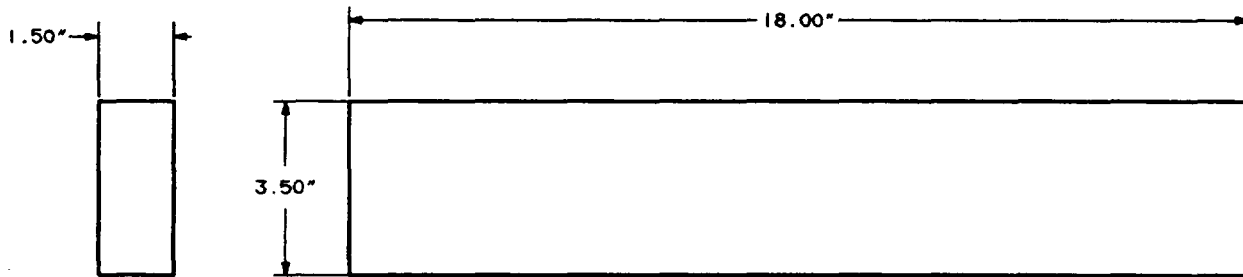
Section II.

MANUFACTURED ITEMS PART NUMBER INDEX

| PART NUMBER | DESCRIPTION | FIG . NO. |
|-------------|---------------|-----------|
| N/A | Block, Wooden | E-1 |

Section III.

MANUFACTURED ITEMS ILLUSTRATIONS



NOTE:

1. FABRICATE FROM NSN 5510-00-220-6194 (2" X 4" X 8')
2. WOOD - 2" X 4" (1.5" X 3.5") X 18"
3. DIMENSIONS IN INCHES

Figure E-1. Wooden Block

GLOSSARY

Section I

ABBREVIATIONS

| | | |
|------|-------|----------------------------------------|
| AC | ..... | Alternating Current |
| ACT, | ..... | Actuator |
| AFC | ..... | Automatic Frequency Control |
| AGC | ..... | Automatic Gain Control |
| ALT | ..... | Alternator |
| AM | ..... | Amplitude Modulation |
| ANT | ..... | Antenna |
| ASAS | ..... | All Source Analysis System |
| ASSY | ..... | Assembly |
| AUD | ..... | Audio |
| AUX | ..... | Auxiliary |
| A/C | ..... | Air Conditioning |
| BAA | ..... | Balance |
| BFO | ..... | Beat Frequency Oscillator |
| BIT | ..... | Build In Test |
| BITE | ..... | Built In Test Equipment |
| BKSP | ..... | Backspace |
| BRGD | ..... | Bridge |
| BRKR | ..... | Breaker |
| BE | ..... | Bandwidth |
| CARR | ..... | Carrier |
| CHAN | ..... | Channel |
| CB | ..... | Circuit Breaker |
| CE | ..... | Clear Entry |
| ELK | ..... | Clock |
| CAR | ..... | Clear |
| COMA | ..... | Communication |
| CONT | ..... | Control |
| CRT | ..... | Cathode Ray Tube |
| CAL | ..... | Control |
| CW | ..... | Continuous Wave |
| DB | ..... | Deci be l |
| DC | ..... | Direct Current |
| OH | ..... | Detector |
| OF | ..... | Direction Finding |
| DOT | ..... | Digit |
| DFCU | ..... | Direction Finding Control Unit |
| DMR | ..... | Dimmer |
| DMWR | ..... | Depot Maintenance Work Requirement |
| DO | ..... | Direct Support |
| DWEL | ..... | Dwell |
| EMI | ..... | Electromagnetic Interference |
| ERA | ..... | Electronic Material Readiness Activity |

Section I

ABBREVIATIONS (Cont)

| | |
|-------|----------------------------------------------|
| ENCL | Enclosure |
| ENG | Engine |
| ERR | Error |
| EVAP | Evaporator |
| FM | Frequency Modulation |
| FREQ. | Frequency |
| FSCM | Federal Supply Code for Manufacturers |
| GEN | Generator |
| GND | Ground |
| GS | General Support |
| GSERD | Ground Support Equipment Recommendation Data |
| HAG | Heading |
| HOST | Head Set |
| HEX | Hexagon |
| HF | High Frequency |
| HG/AC | Hydraulic Generator/Air Conditioner |
| HYD | Hydraulic |
| HYDR | Hydraulic |
| HZ | Hertz |
| IAW | In Accordance With |
| ID | Identification |
| ICP | Intrcom Control Panel |
| INIT | Initiate |
| INT | Intercom |
| J-BOX | Junction Box |
| LED | Light Emitting Diode |
| LIN | Linear |
| LOB | Line of Bearing |
| LRU | Line Replaceable Unit |
| LSA | Logistic Support Analysis |
| LSB | Lower Side Band |
| LSAR | Logistic Support Analysis Record |
| MAC | Maintenance Allocation Chart |
| MHZ | Mega Hertz |
| MIC | Microphone |
| MTOE | Modified Table of Organization and Equipment |
| NCS | Net Control Station |
| NIIN | National Item Identification Number |
| NSN | National Stock Number |
| NTR | NATO Tone Reject |
| OCP | Operator Control Panel |
| Osc | Oscillator |
| PKD | Parked |
| PMCS | Preventive Maintenance Checks and Services |
| PN | Part Number |
| PRES | Presence |
| PRESS | Pressure |
| PSIG | Pounds per Square Inch Gage |

Section I

ABBREVIATIONS (Cont)

| | |
|-------|---------------------------------------------|
| PTO | Power Take-Off |
| PTT | Press To Talk |
| PWR | Power |
| QUAL | Quality |
| RCU | Receiver Control Unit |
| RCVR | Receiver |
| REC | Receive |
| REU | Receiver Enclosure Unit |
| RF | Radio Frequency |
| RFDU | Radio Frequency Distribution Unit |
| RFI | Radio Frequency Interference |
| RFP | Radio Frequency Processor |
| RIU | Receiver Interface Unit |
| RPL | Replace |
| RPM | Revolutions Per Minute |
| RPSTL | Repair Parts and Special Tool List |
| RTN | Return |
| RVST | Revisit |
| RX | Receiver |
| R/T | Receiver/Transmitter |
| SC | System Controller |
| SDU | Signal Display Unit |
| SEL | Select |
| SMR | Source Maintenance Recoverability |
| SMU | Shelter Mounted Unit |
| SPLY | Supply |
| SQ | Squelch |
| SRCH | Search |
| SSB | Single Side Band |
| SYS | system |
| TACH | Tachometer |
| TB | Terminal Board |
| TEMP | Temperature |
| TM | Technical Manual |
| TMDE | Test, Measurement, and Diagnostic Equipment |
| TOD | Time of Day |
| TTL | Transistor Transistor Logic |
| UHF | Ultra High Frequency |
| UNBAL | Unbalance |
| USB | Upper Side Band |
| UTM | Universal Transverse Mercator |
| VAC | Voltage Alternator Current |
| VDC | Voltage Direct Current |
| VENT | Ventilator |
| VHF | Very High Frequency |
| VOL | Volume |
| VU | Volume Unit |

Section II

DEFINITION OF UNUSUAL TERMS

BEARING - A horizontal direction of one point with respect to another or to the compass.

DEGAUSS - Demagnetize.

FLUXGATE - A device used to indicate the direction of the terrestrial magnetic field.

INCLINOMETER - An instrument for indicating a deviation from true vertical.

NETTING - Process of making a network.

PARITY - The state of being odd or even used as the basis of a method of detecting errors in binary-coded data.

UNIVERSAL TRANSVERSE MERCATOR - A military grid map using Mercator projection so that at all places the degrees of latitude and longitude have to each other the same ratio causing a rhumb line between two places to always be a straight line.

ZEROIZE - Process of erasing data from the disk drive or communication security equipment.

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|-------------------------------------|---------------------------------------------------------------------------------|
| HIGHEST USED | NOT USED |
| A42 | A6 7 17 18 32 35 |
| CP4 W68 | W1 THRU 21 23 THRU 60 62 63 65 66 67 |
| A1 ASSY C5110452-2 | |
| A36 FL2 J36 | A3 THRU 35 J1 3 5 10 11 12 13 21 22 27 THRU 31 35 |
| S1 W100 | W4 16 20 21 31 32 33 37 38 39 40 50 THRU 54 58 61 65 67 68 69 72 |
| A1A2 ASSY C5110911 1 | |
| A1 CB10 E2 J5 K4 TB3 | J1 2 4 |
| A1A2A1 ASSY C5132681-1 | |
| E9 | |
| A1A36 ASSY C5131068-1 | |
| J6 | |
| A1W1 ASSY C5118821-1 | |
| P2 | |
| A1W2 ASSY C5118827-5 | |
| P2 | |
| A1W3 ASSY C5118822-1 | |
| P2 | |
| A1W5 ASSY 5118824-1 | |
| P2 | |
| A1W6 ASSY C5118825 1 | |
| P2 | |
| A1W7 ASSY C5118824 2 | |
| P2 | |
| A1W8 ASSY C5118826 1 | |
| P2 | |

| REFERENCE DESIGNATION CONT | |
|----------------------------|--------------------------------------------------|
| A1W9 ASSY C5118826 2 | |
| P2 | |
| A1W10 ASSY C5118826-3 | |
| P2 | |
| A1W11 ASSY C5118826-4 | |
| P2 | |
| A1W12 ASSY C5139618-1 | |
| P40 | P3 6 11 14 15 27 29 THRU 32 36 39 J1 |
| J2 | |
| A1W13 ASSY C5118827 6 | |
| P2 | |
| A1W14 ASSY C5118829-1 | |
| P2 | |
| A1W15 ASSY C5118842-1 | |
| P1 | |
| A1W17 ASSY C5118826-5 | |
| P2 | |
| A1W18 ASSY C5118826-6 | |
| P2 | |
| A1W19 ASSY C5118841-1 | |
| P2 | |
| A1W23 ASSY C5118827-1 | |
| P2 | |
| A1W24 ASSY C5118827-2 | |
| P2 | |
| A1W25 ASSY C5118827 3 | |
| P2 | |
| A1W26 ASSY C5118827-4 | |
| P2 | |
| A1W27 ASSY C5110788-1 | |
| P2 | |
| A1W28 ASSY C5110788-1 | |
| P2 | |
| A1W29 ASSY C5110786-1 | |
| P5 | |
| A1W30 ASSY C5118843-1 | |
| P2 | |

| REFERENCE DESIGNATION CONT | |
|----------------------------|--|
| A1W34 ASSY C5110789-1 | |
| P2 | |
| A1W35 ASSY C5110789 1 | |
| P2 | |
| A1W36 ASSY C5110790 1 | |
| P2 | |
| A1W41 ASSY 5110764 1 | |
| P2 | |
| A1W42 ASSY C5110765 1 | |
| P2 | |
| A1W43 ASSY C5110791-1 | |
| P2 | |
| A1W44 ASSY CX13067/U | |
| P2 | |
| A1W45 ASSY CX13063/U | |
| P2 | |
| A1W46 ASSY CX4721/U | |
| P2 | |
| A1W47 ASSY CX13061/U | |
| P2 | |
| A1W48 ASSY CX13063/U | |
| P2 | |
| A1W48 ASSY CX13063/U | |
| P2 | |
| A1W49 ASSY CX4720/U | |
| P1 | |
| A1W55 ASSY C5118843-1 | |
| P2 | |
| A1W56 ASSY C5110768-1 | |
| P2 | |
| A1W57 ASSY C5110769 1 | |
| P2 | |
| A1W59 ASSY C5110770 1 | |
| P2 | |
| A1W60 ASSY C5110777 1 | |
| P2 | |
| A1W62 ASSY C5110785 1 | |
| P3 | |

| REFERENCE DESIGNATION CONT | |
|----------------------------|--|
| A1W63 ASSY C5110983-1 | |
| P2 | |
| A1W64 ASSY C5110983-1 | |
| P2 | |
| A1W66 ASSY C5122555-1 | |
| P5 | |
| A1W70 ASSY GFE | |
| P2 | |
| A1W71 ASSY GFE | |
| P2 | |
| A1W73 ASSY C5118821-1 | |
| P2 | |
| A1W74 ASSY C5118821-2 | |
| P2 | |
| A1W75 ASSY C5139452-1 | |
| E1 P1 | |
| A1W76 ASSY C5139327-1 | |
| P3 | |
| A1W77 ASSY C5139327-2 | |
| P3 | |
| A1W78 ASSY C5139328-1 | |
| P3 | |
| A1W79 ASSY C5139329-1 | |
| P2 | |
| A1W80 ASSY C5139330-1 | |
| P3 | |
| A1W81 ASSY C5139331-1 | |
| P2 | |
| A1W82 ASSY C5139332-1 | |
| P2 | |
| A1W83 ASSY C5139333-1 | |
| P2 | |
| A1W84 ASSY C5139333-2 | |
| P2 | |
| A1W85 ASSY C5139334-1 | |
| P2 | |
| A1W86 ASSY C5139335-1 | |
| P2 | |

| REFERENCE DESIGNATION CONT | |
|-----------------------------|-----------|
| A1W87 ASSY C5139336 1 | |
| P2 | |
| A1W88 ASSY C5139337 1 | |
| P2 | |
| A1W89 ASSY C5139338-1 | |
| P2 | |
| A1W90 ASSY C5139332-1 | |
| P2 | |
| A1W91 ASSY C5139339-1 | |
| P2 | |
| A1W92 ASSY C5139340-1 | |
| P2 | |
| A1W93 ASSY C5139420-1 | |
| P2 | |
| A1W94 ASSY C5139421 1 | |
| P3 | |
| A1W95 ASSY C5139442-1 | |
| P3 | |
| A1W96 ASSY C5139444 1 | |
| P2 | |
| A1W97 ASSY C5139618 1 | |
| P2 | |
| A1W98 ASSY C5139489 1 | |
| P2 | |
| A1W99 ASSY C5139619-1 | |
| P2 | |
| A1W100 ASSY C5139620 1 | |
| P2 | |
| A2 ASSY 5048981 1 | |
| J1 | |
| A3 ASSY C5110453 1 | |
| J4 | |
| A4 ASSY UNH17A | |
| J8 | J1 THRU 6 |
| A5 ASSY C5110454-1 | |
| J8 | |
| A8 ASSY 1680-00-903 4378 | |
| J1 | |

| REFERENCE DESIGNATION CONT | |
|--------------------------------|----------------------------------------------------|
| A9 ASSY C5139624-1 | |
| J3 | |
| A10 ASSY C5139263-1 | |
| J16 | |
| A11 ASSY C5139273-1 | |
| J7 | |
| A12 ASSY 914645-801 | |
| A1J1 A2J1 | |
| A13 ASSY 5065934 1 | |
| J12 | J1 3 6 10 |
| A14 ASSY 5048981-1 | |
| J5 | J2 3 4 |
| A15 ASSY C5110453-1 | |
| J4 | J3 |
| A16 ASSY UNH17A | |
| J8 | J1 THRU J6 |
| A19 ASSY 707239 803 | |
| A1J22 | A1J4 7 13 15 19 21 |
| A2J3 A3J3 A4J3 A5J3 | A3J3 A5J3 |
| A20 ASSY C5139282-1 | |
| J2 | J1 |
| A21 ASSY SA2171/VRC | |
| J2 | |
| A22 ASSY AN/VRC47 | |
| A2J7 A3J23 A5J4 A6J11 | A2J5 6 A3J1 THRU J20 22 A5J2 A6J1 THRU 10 |

| REFERENCE DESIGNATION CONT | |
|------------------------------|--------------|
| A23 ASSY TSEC/KY57 | |
| A1J3 A2J2 | A1J2 A2J1 |
| A24 ASSY SA 2171/VRC | |
| J1 | |
| A25 ASSY C5139624-1 | |
| J3 | |
| A26 ASSY TSEC/KG 84 | |
| J3 | |
| A28 ASSY C5110460-1 | |
| J2 A1J1 A2J1 | J1 |
| A29 ASSY GFE | |
| J1 | |
| A30 ASSY 5051015-1 | |
| J9 | J1 3 |
| A33 ASSY C10547/ARC164(V) | |
| J1 | |
| A37 ASSY C5139288-1 | |
| J10 | J2 3 7 9 |
| A40 ASSY C5139622 1 | |
| J2 | J1 |
| A41 ASSY C5139278-1 | |
| J2 | |
| A42 ASSY GFE | |
| J1 | |
| W22 ASSY C5114156-1 | |
| P4 | |
| W61 ASSY C5110772 1 | |
| P1 | |

| REFERENCE DESIGNATION CONT | |
|----------------------------|--|
| W64 ASSY C5110983-1 | |
| P2 | |
| W68 ASSY GFE | |
| P2 | |

| SH NO | INDEX DESCRIPTION |
|-------|------------------------------------------------------------------------------|
| 1 | COVER PAGE |
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| 3 | CABLE ASSEMBLY A1W12 A1W92 |
| 4 | CABLE ASSEMBLY A1W12 |
| 5 | CABLE ASSEMBLY A1W12 |
| 6 | CABLE ASSEMBLY A1W12 |
| 7 | CABLE ASSEMBLY A1W12 |
| 8 | CABLE ASSEMBLY A1W12 |
| 9 | CABLE ASSEMBLY A1W12 |
| 10 | CABLE ASSEMBLY A1W12 |
| 11 | CABLE ASSEMBLY A1W1 A1W2 A1W3 A1W5 A1W6 A1W7 A1W8 A1W9 A1W10 A1W11 A1W13 |
| 12 | CABLE ASSEMBLY A1W14 A1W15 A1W79 |
| 13 | CABLE ASSEMBLY A1W17 A1W18 A1W19 W22 A1W88 A1W96 |
| 14 | CABLE ASSEMBLY A1W23 THRU A1W29 |
| 15 | CABLE ASSEMBLY A1W29 A1W30 A1W34 A1W35 A1W97 |
| 16 | CABLE ASSEMBLY A1W36 A1W93 A1W94 |
| 17 | CABLE ASSEMBLY A1W41 THRU A1W49 A1W85 |
| 18 | CABLE ASSEMBLY A1W55 A1W56 A1W57 A1W59 W61 A1W99 A1W100 |
| 19 | CABLE ASSEMBLY A1W62 |
| 20 | CABLE ASSEMBLY A1W63 W64 A1W66 |
| 21 | CABLE ASSEMBLY W68 A1W70 A1W71 A1W73 A1W74 A1W75 |
| 22 | CABLE ASSEMBLY A1W60 AND SHELTER WIRING LIGHTING AND CONVENIENCE CIRCUITS |
| 24 | CABLE ASSEMBLY A1W76 A1W78 |
| 25 | CABLE ASSEMBLY A1W77 A1W80 A1W83 |
| 26 | CABLE ASSEMBLY A1W86 |
| 27 | CABLE ASSEMBLY A1W87 A1W91 A1W95 |
| 28 | CABLE ASSEMBLY A1W82 A1W84 A1W89 A1W90 |
| 29 | CABLE ASSEMBLY A1W81 A1W98 |

| | | |
|-----------------------------------|-----|----|
| X | XXX | -X |
| TERMINAL NUMBER | | |
| PARTIAL REFERENCE DESIGNATION | | |
| SHEET NO OF ORIGIN OR DESTINATION | | |

TYPICAL CIRCUIT CONTINUATION CODE

NOTES

- 1.0 GENERAL
 - 1 1 INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY DOD-STD-100
 - 1 2 CHARACTERS UNDERLINED DENOTE LOWER CASE
- 2.0 SPECIFIC
 - 2 1 PARTIAL REFERENCE DESIGNATIONS ARE SHOWN FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER AND SUBASSEMBLY DESIGNATION !
 - 2 2 REFERENCE ASSEMBLY C5110458-2

Figure FO-1. Interconnect Diagram (Sheet 1 of 29)

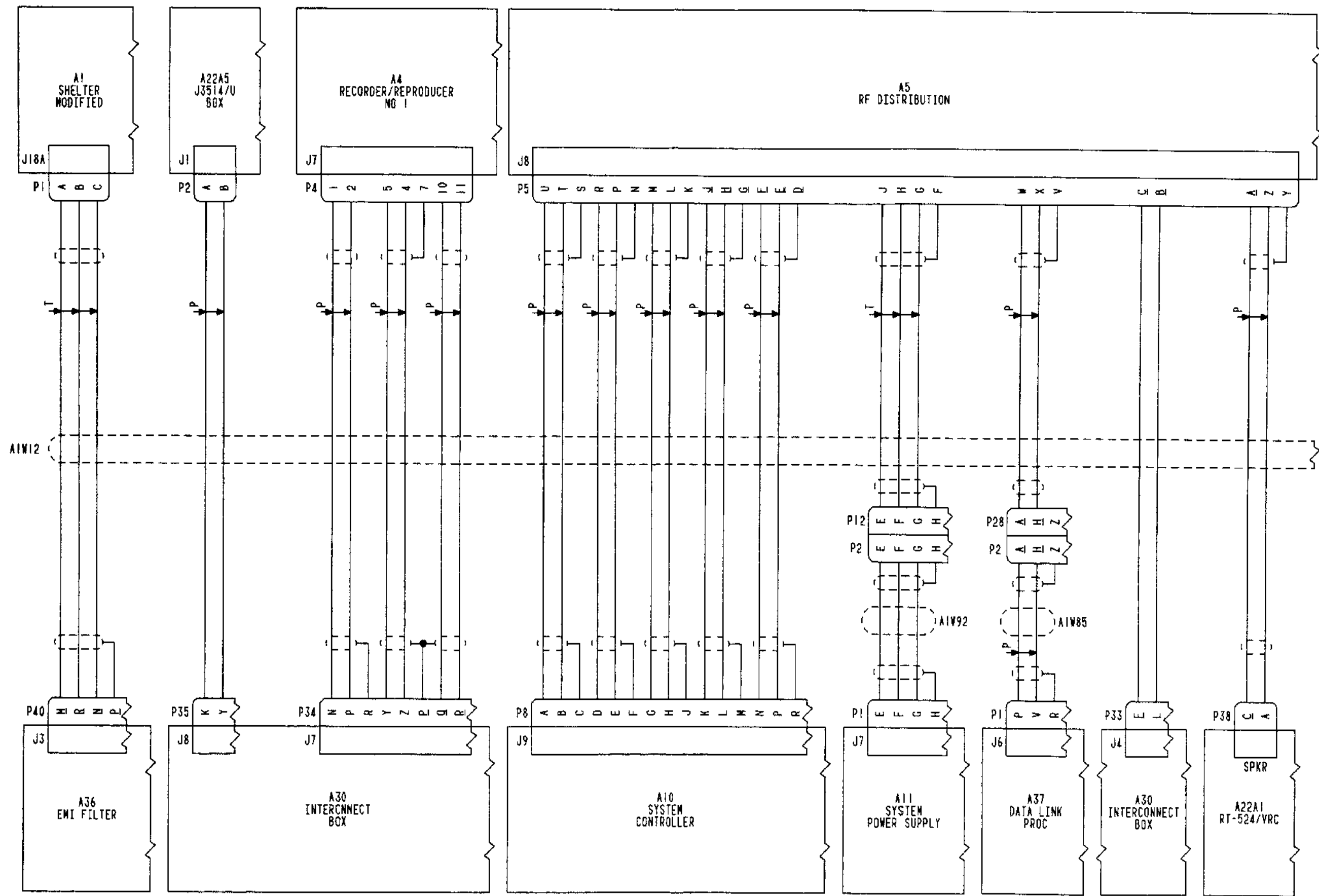


Figure FO-1. Interconnect Diagram
(Sheet 2 of 29)

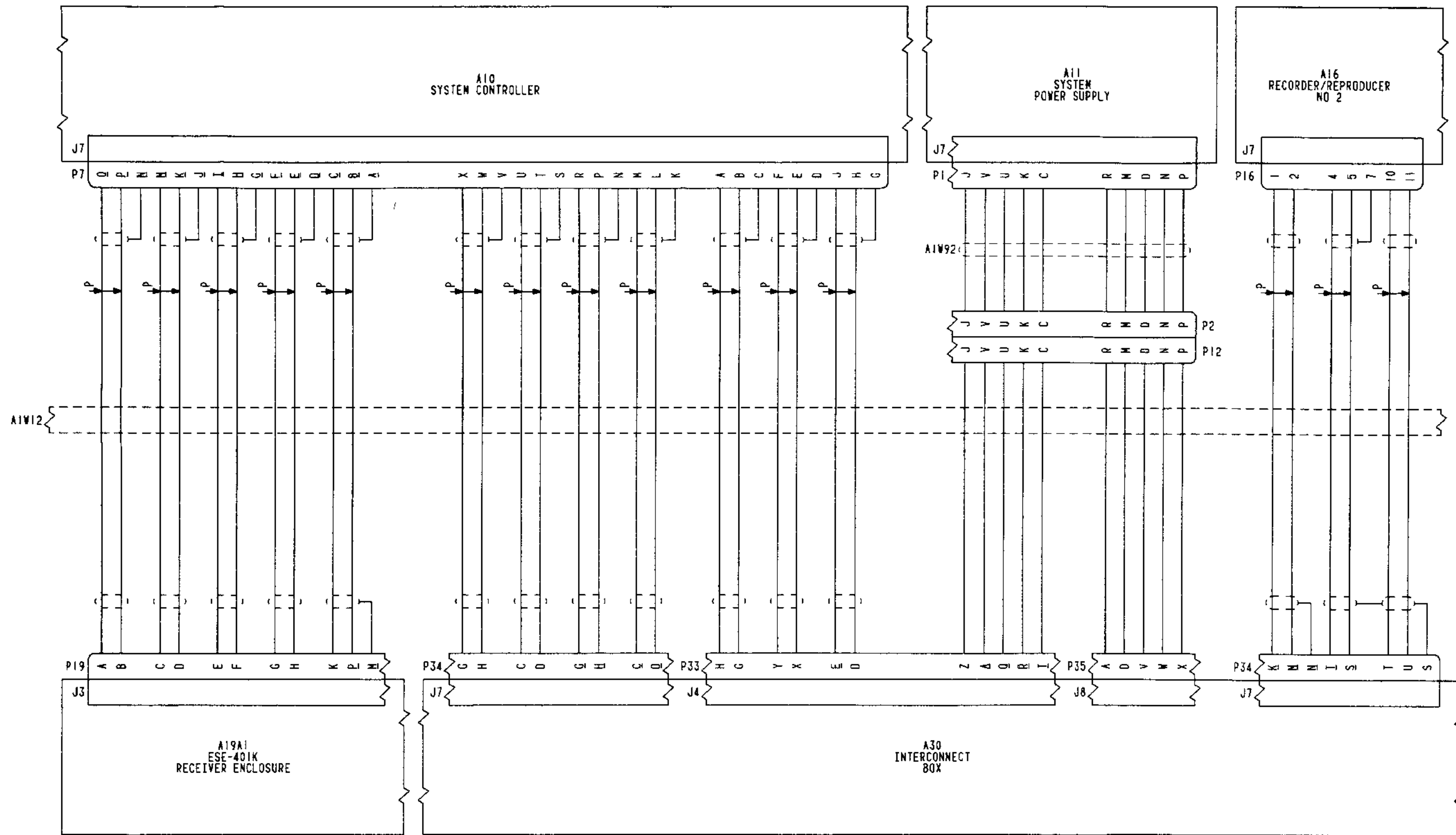


Figure FO-1. Interconnect Diagram
(Sheet 3 of 29)

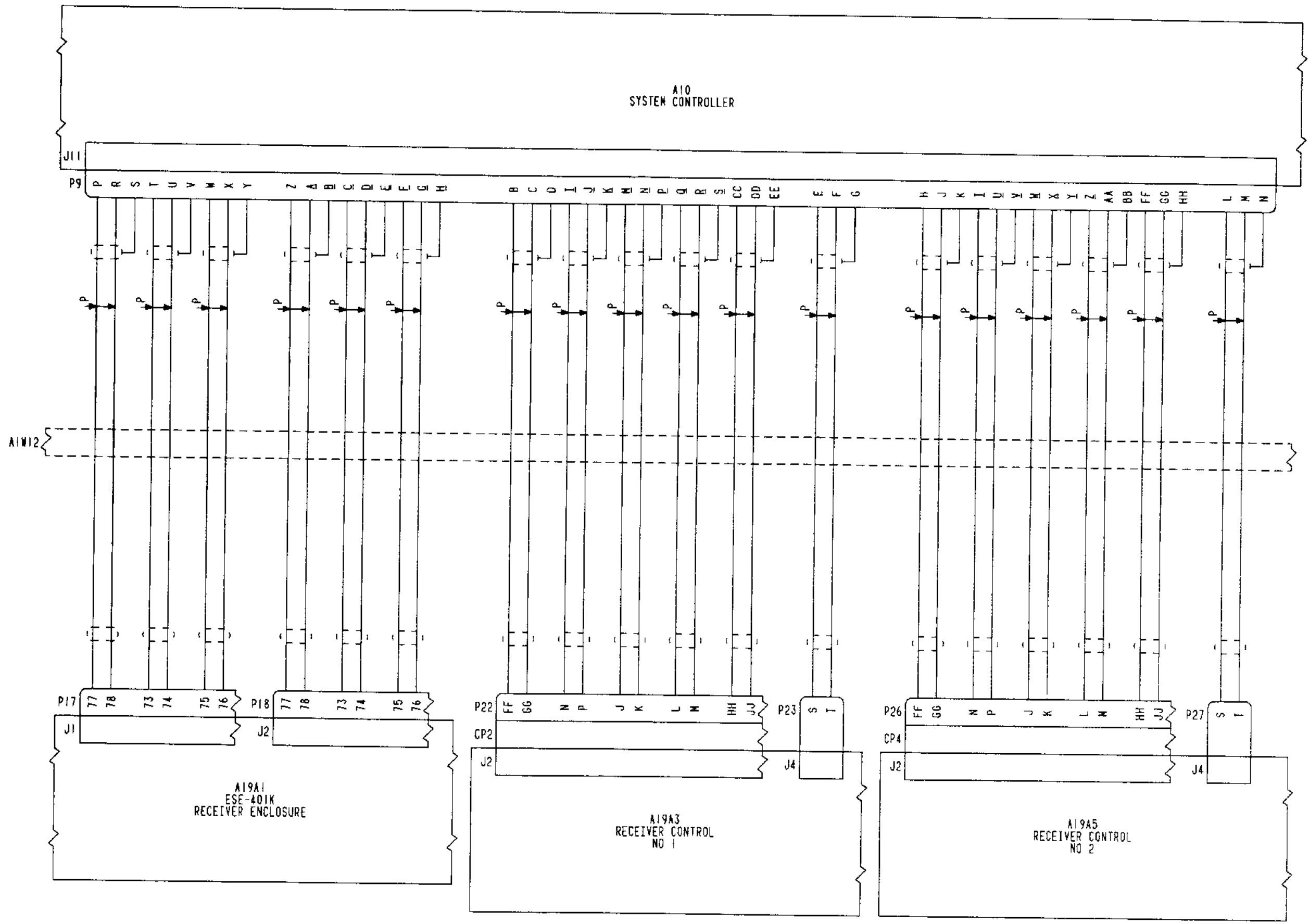


Figure FO-1. Interconnect Diagram
(Sheet 4 of 29)

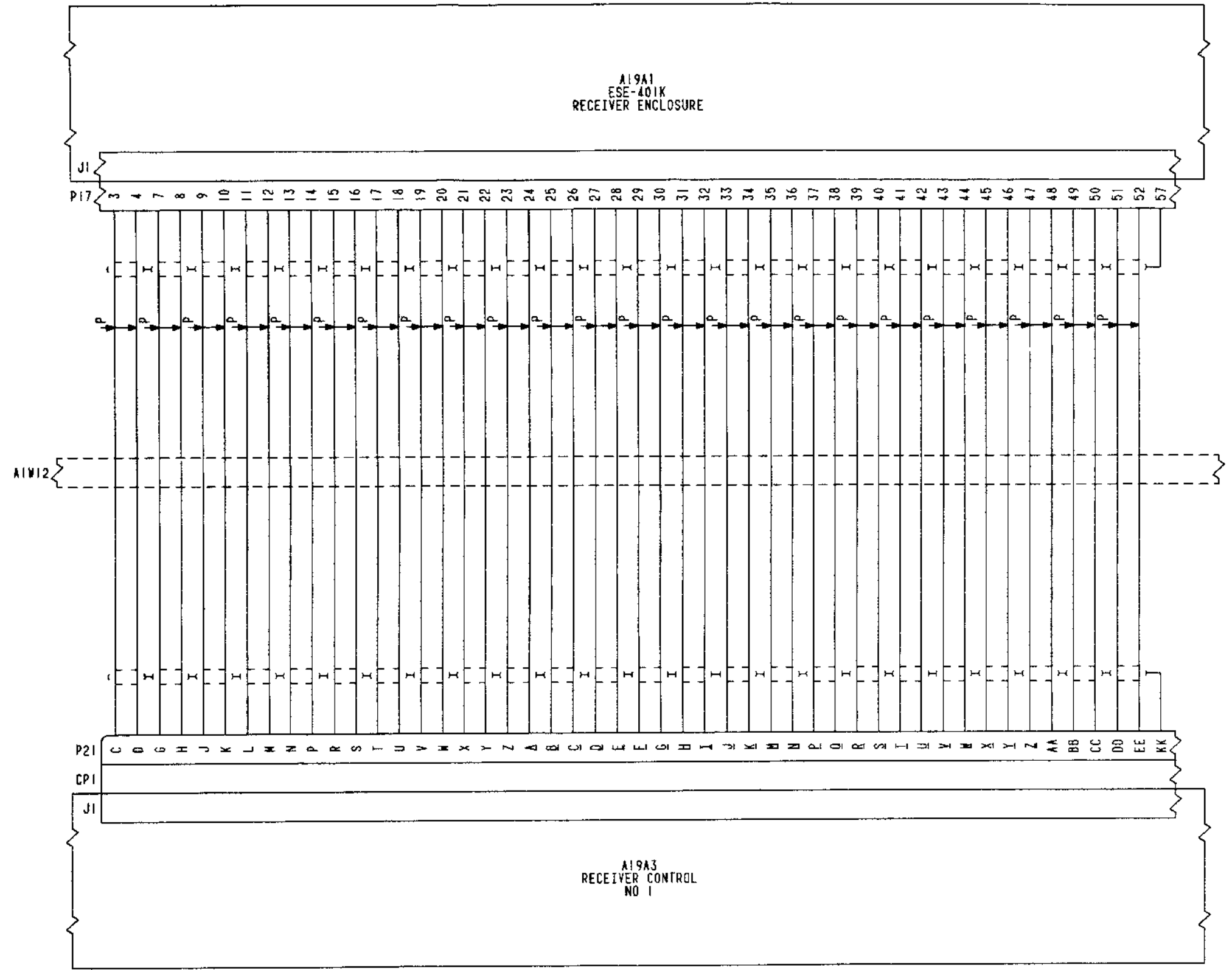


Figure FO-1. Interconnect Diagram
(Sheet 5 of 29)

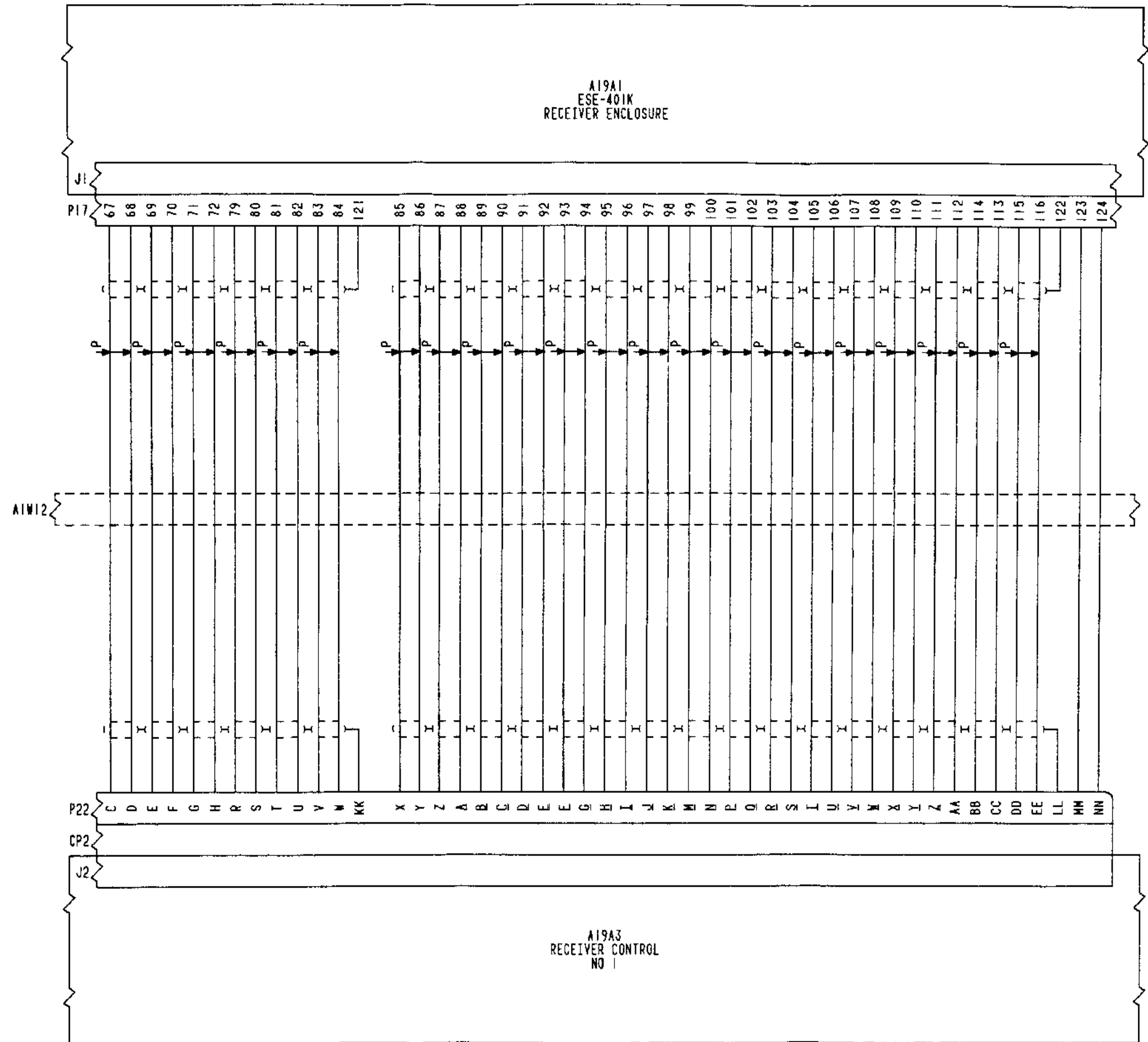


Figure FO-1. Interconnect Diagram
(Sheet 6 of 29)

A19A1
ESE-401K
RECEIVER ENCLOSURE

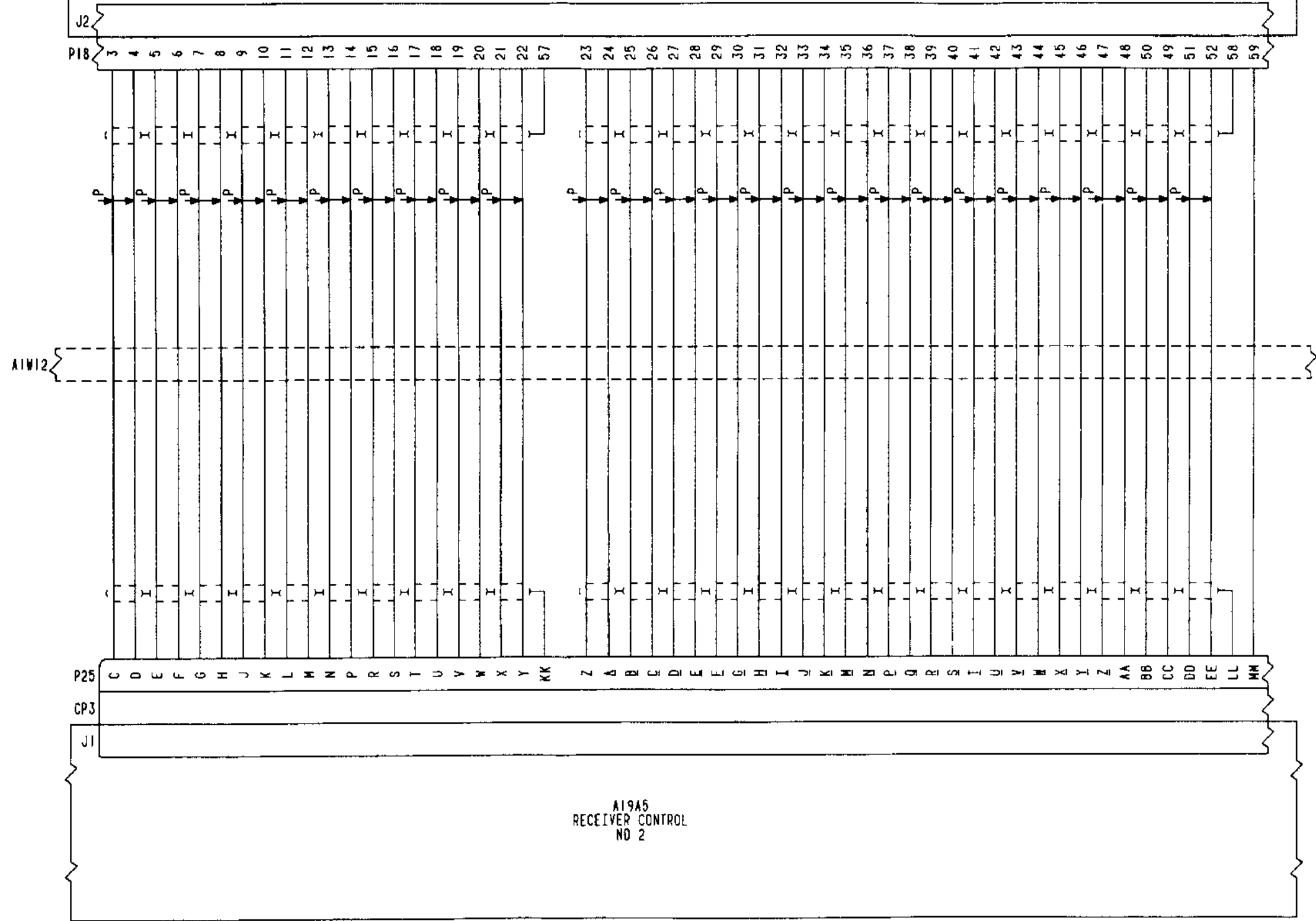


Figure FO-1. Interconnect Diagram
(Sheet 7 of 29)

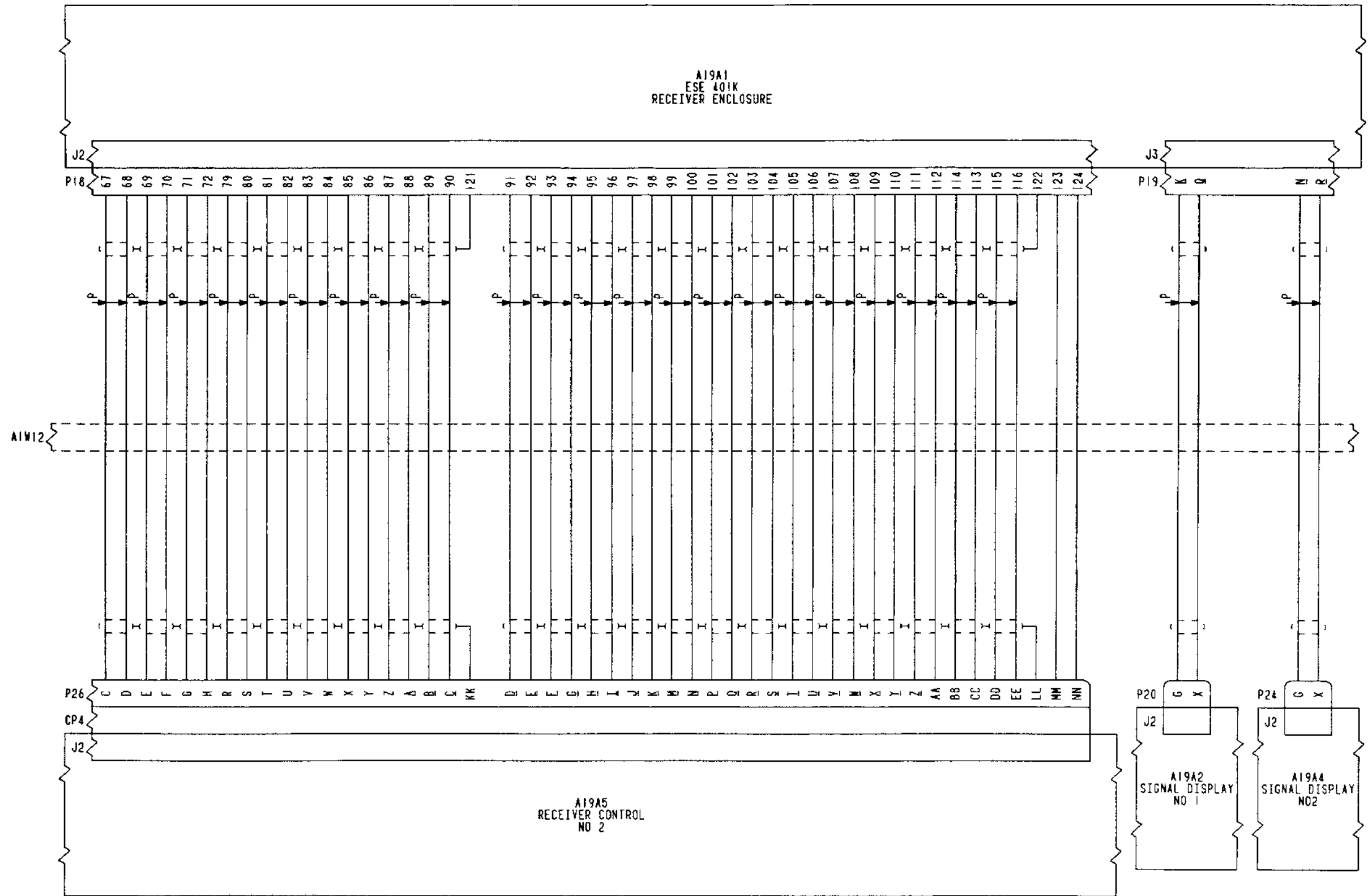


Figure FO-1. Interconnect Diagram
(Sheet 8 of 29)

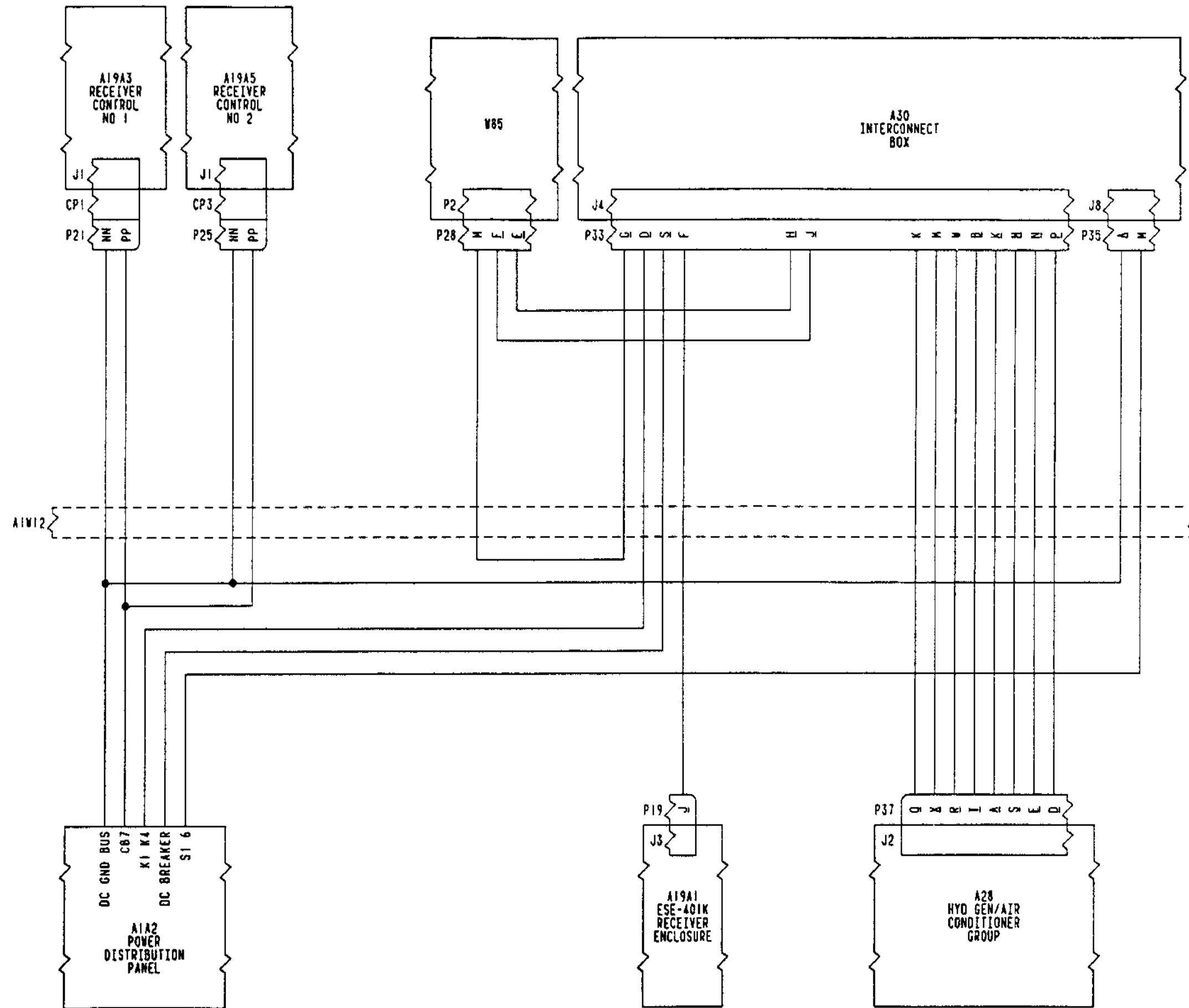


Figure FO-1. Interconnect Diagram
(Sheet 9 of 29)

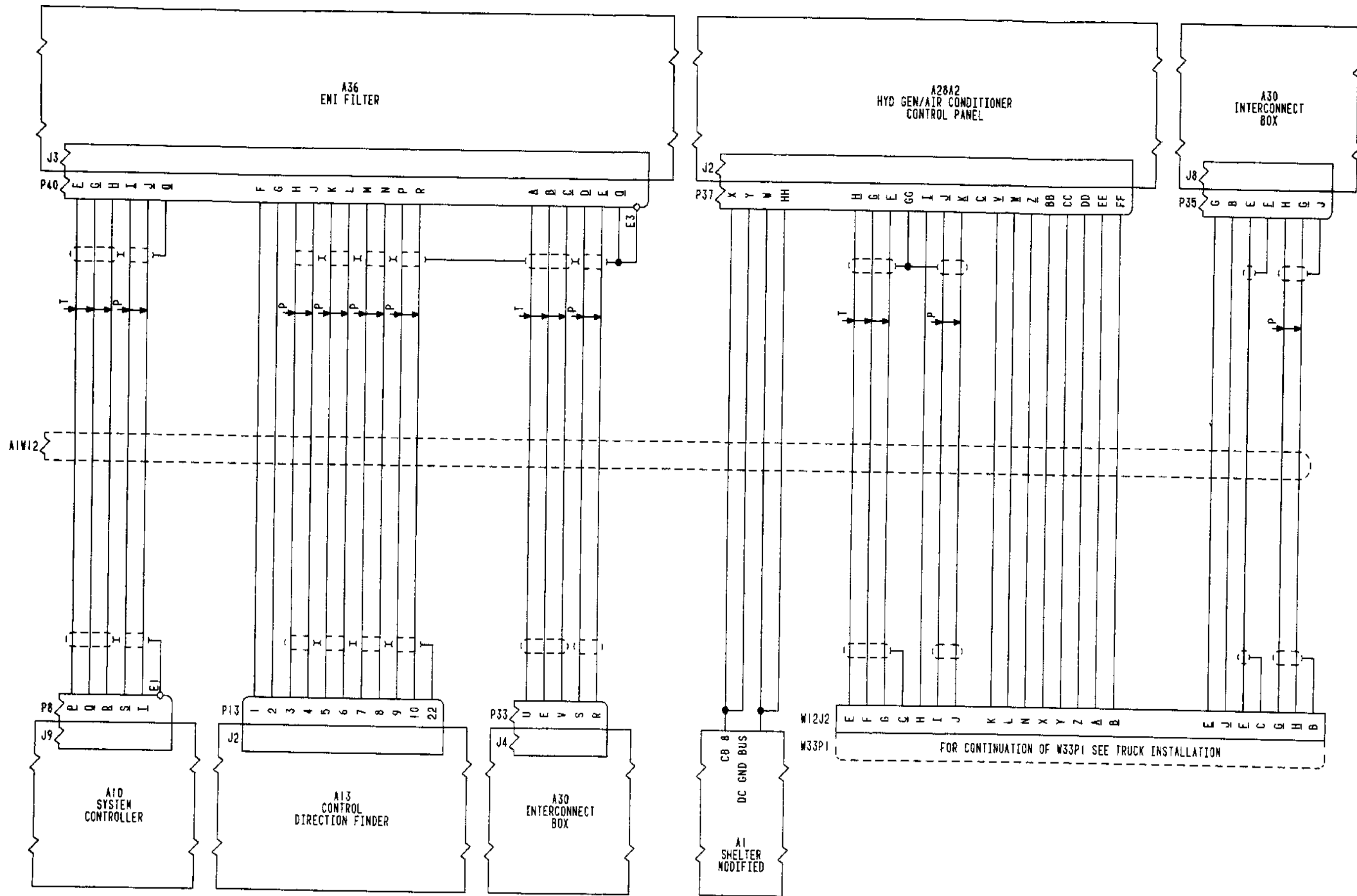


Figure FO-1. Interconnect Diagram
(Sheet 10 of 29)

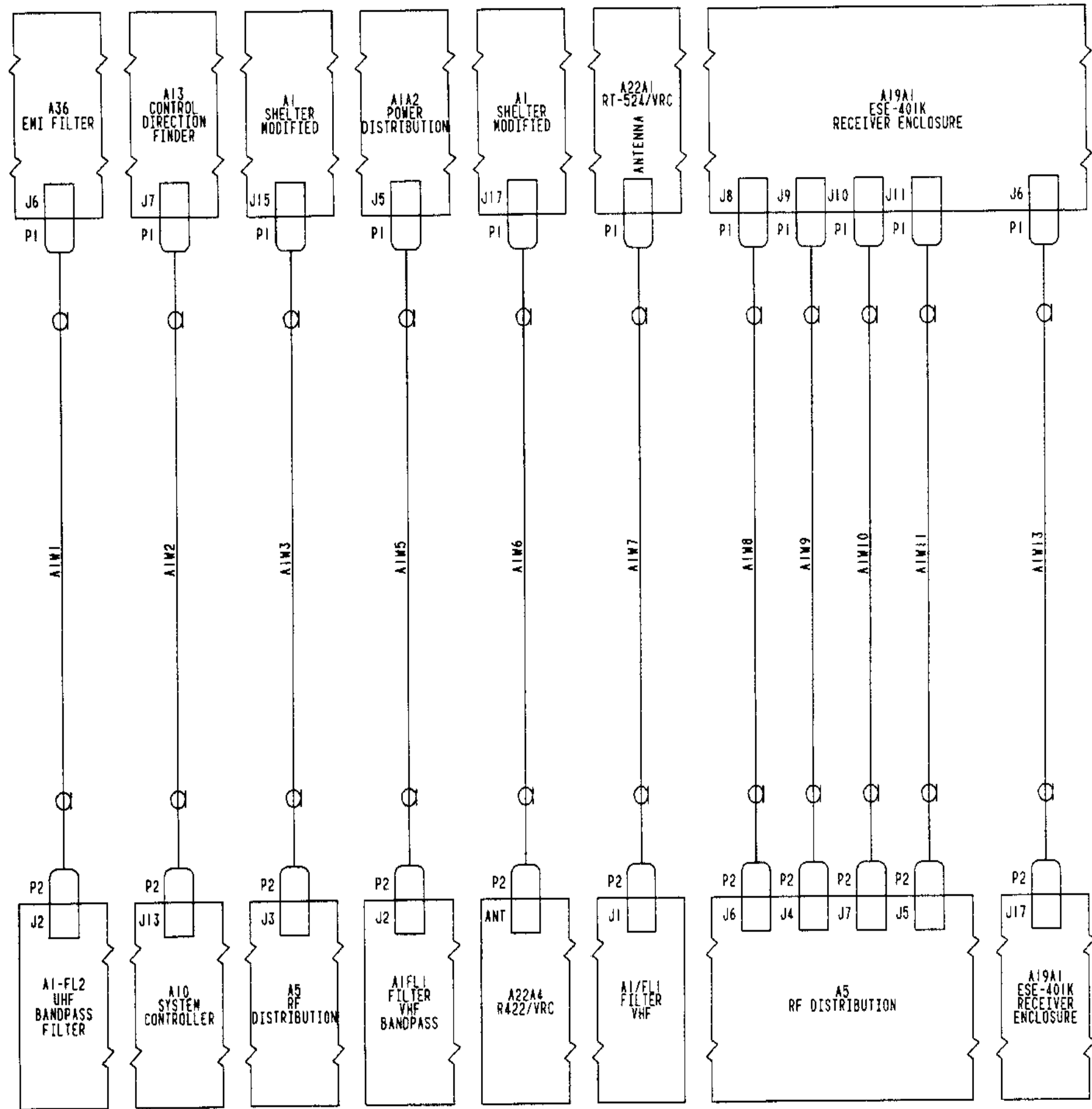


Figure FO-1. Interconnect Diagram
(Sheet 11 of 29)

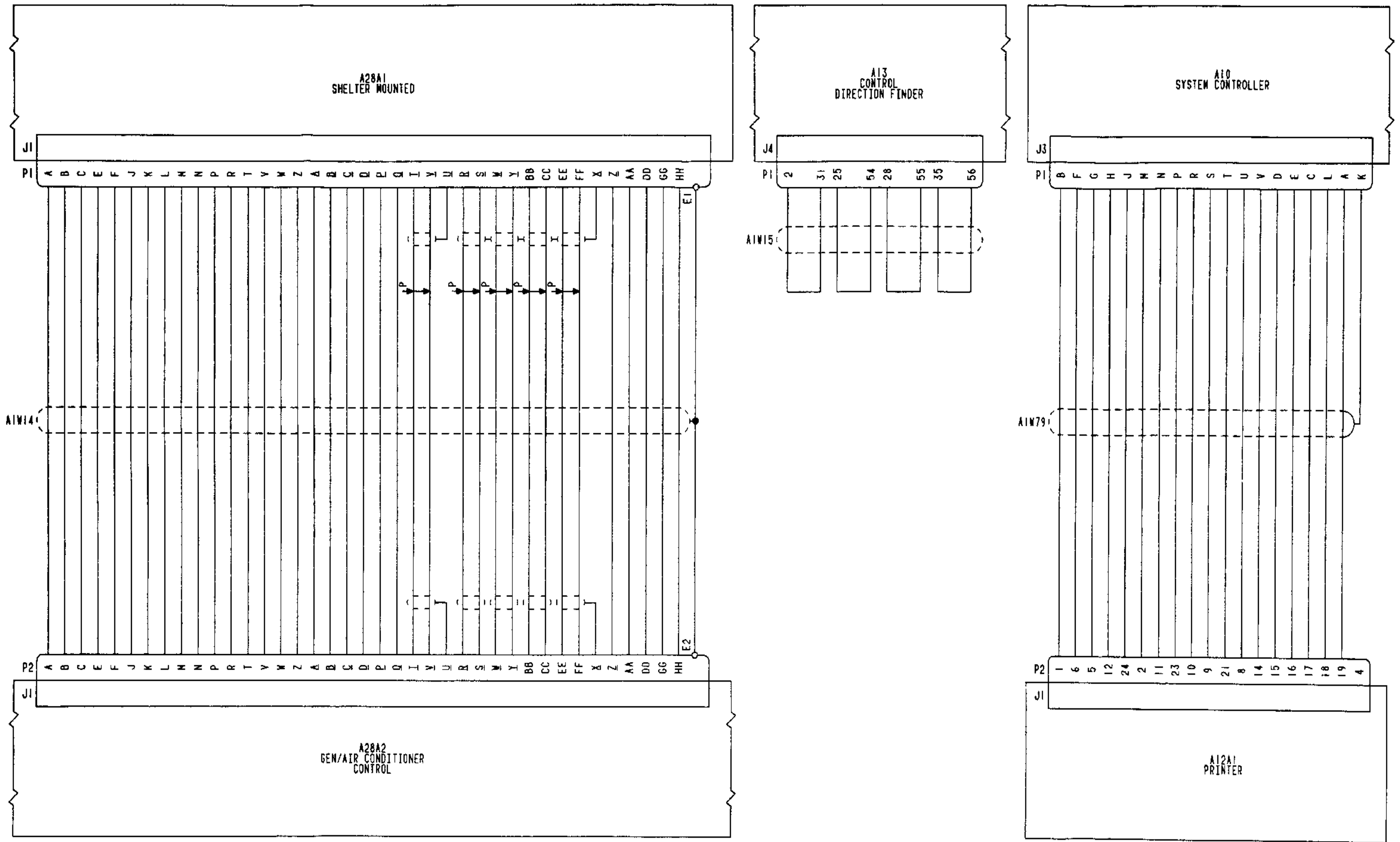


Figure FO-1. Interconnect Diagram
(Sheet 12 of 29)

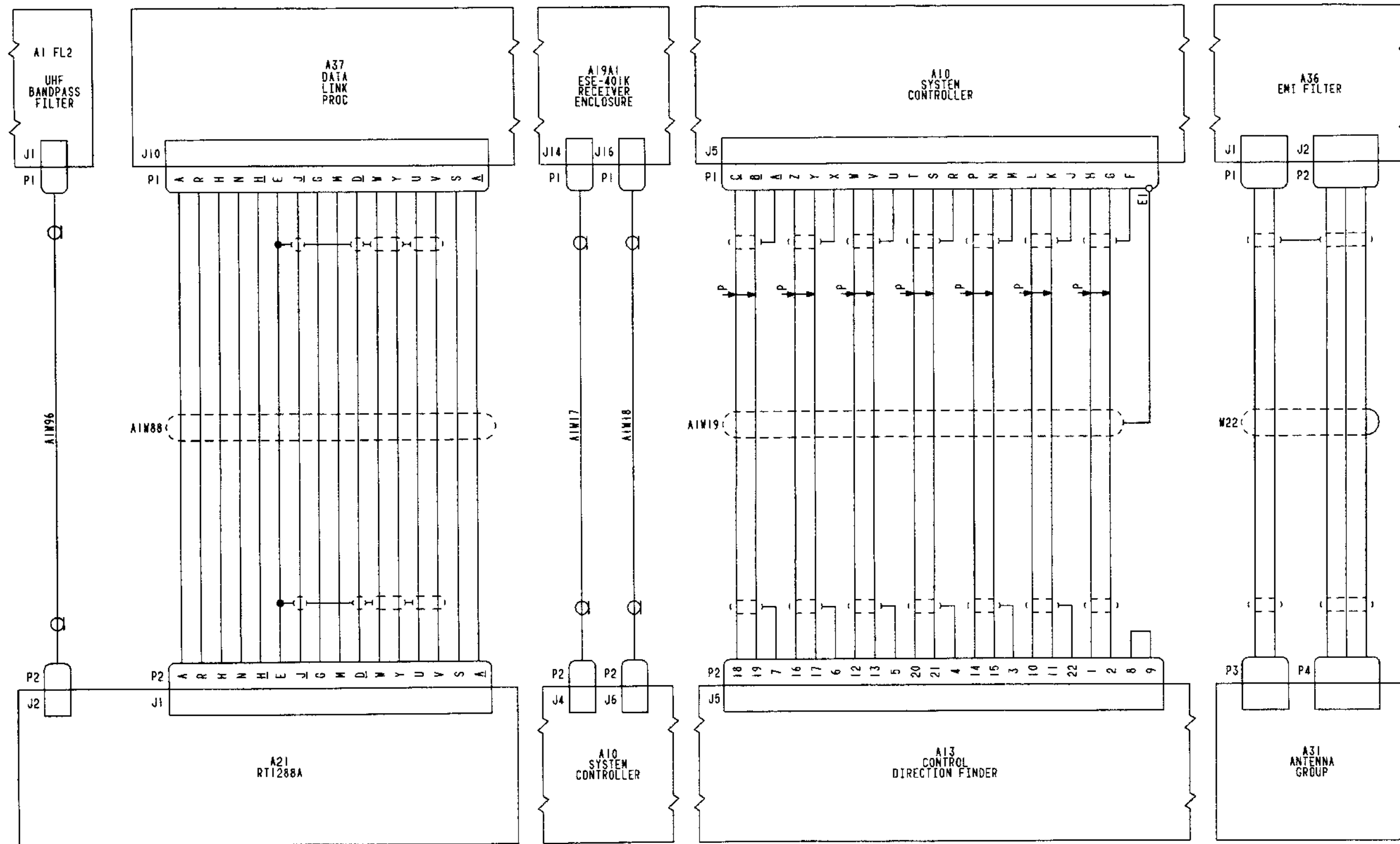


Figure FO-1. Interconnect Diagram
(Sheet 13 of 29)

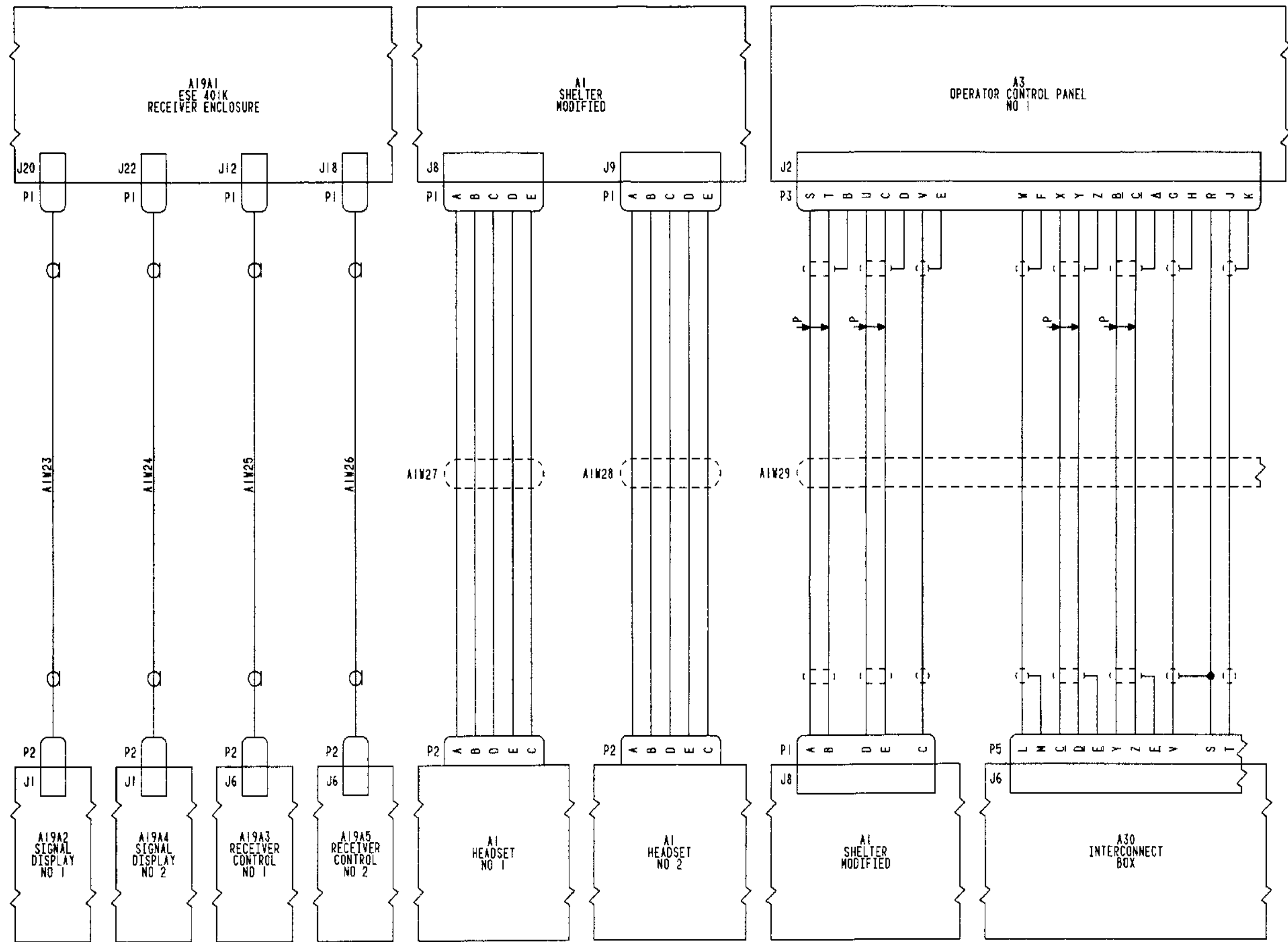


Figure FO-1. Interconnect Diagram
(Sheet 14 of 29)

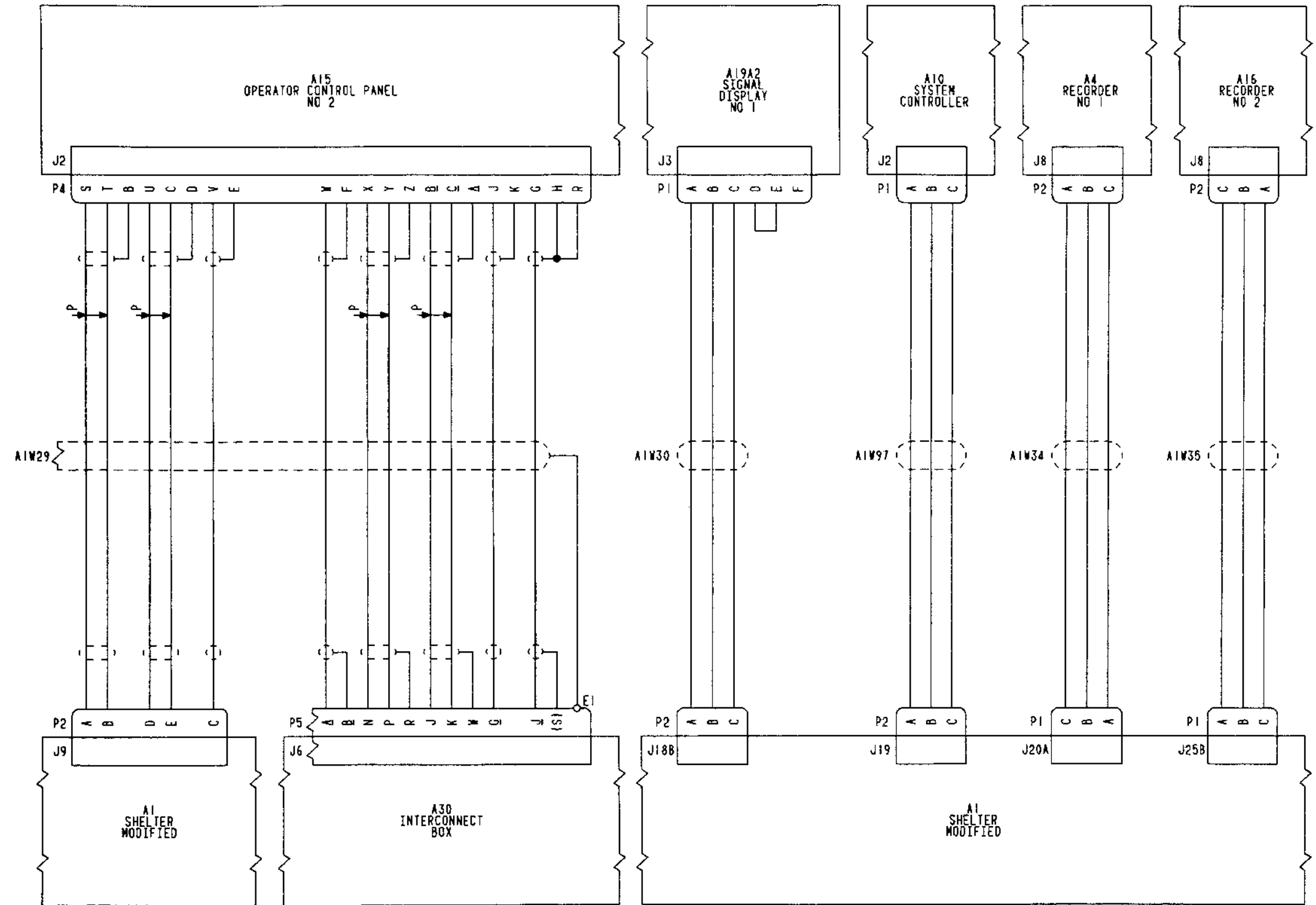


Figure FO-1. Interconnect Diagram
(Sheet 15 of 29)

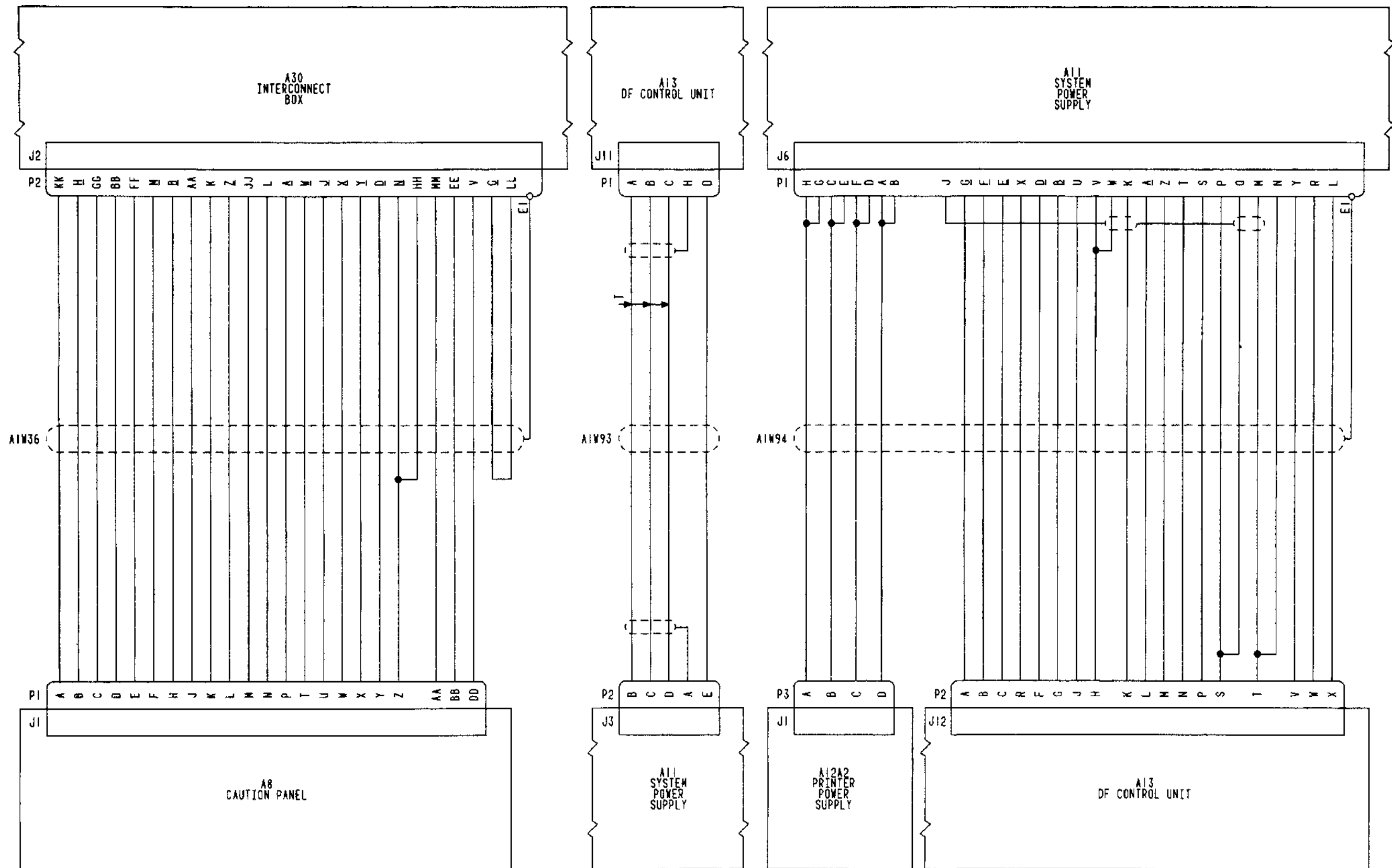


Figure FO-1. Interconnect Diagram
(Sheet 16 of 29)

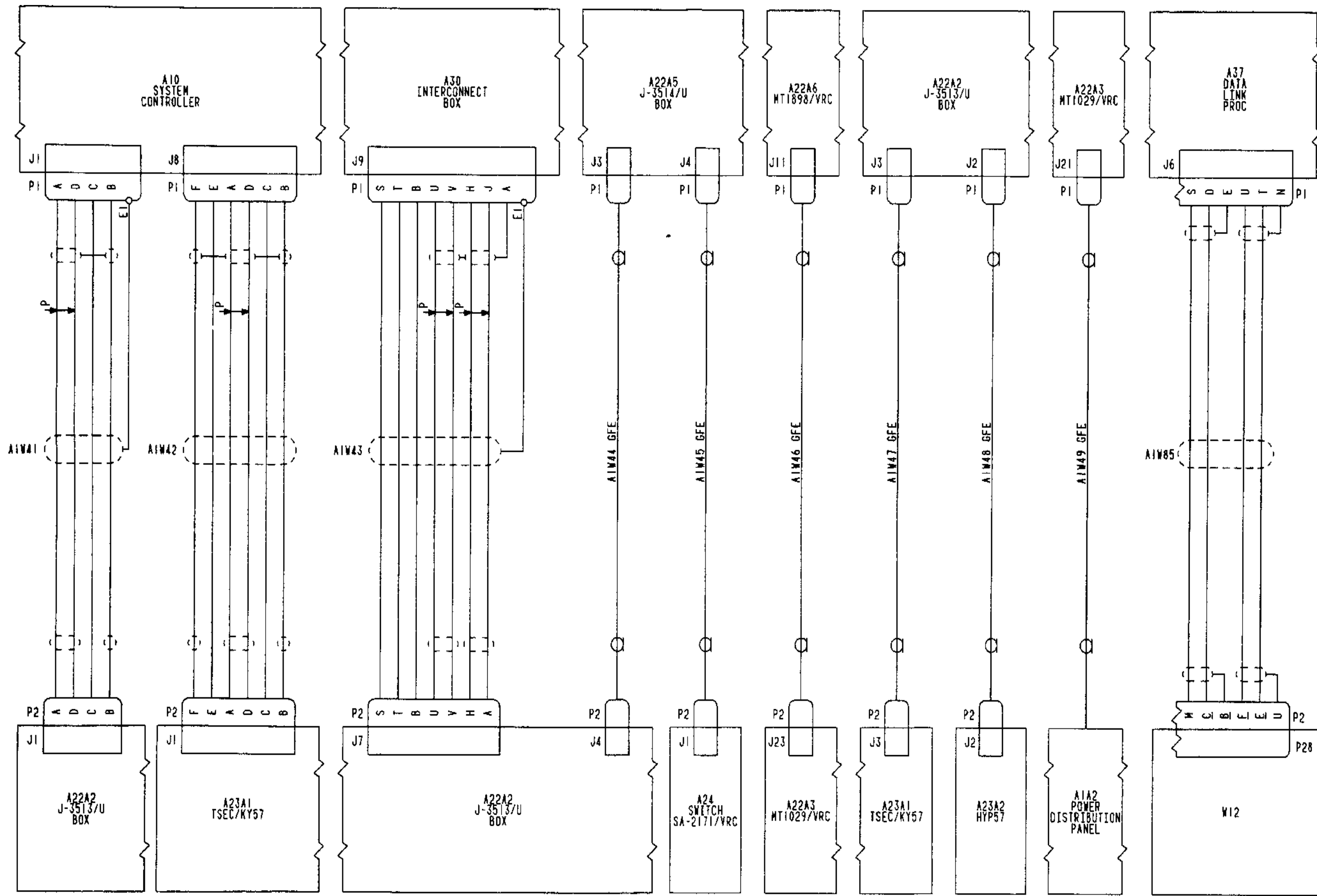


Figure FO-1. Interconnect Diagram
(Sheet 17 of 29)

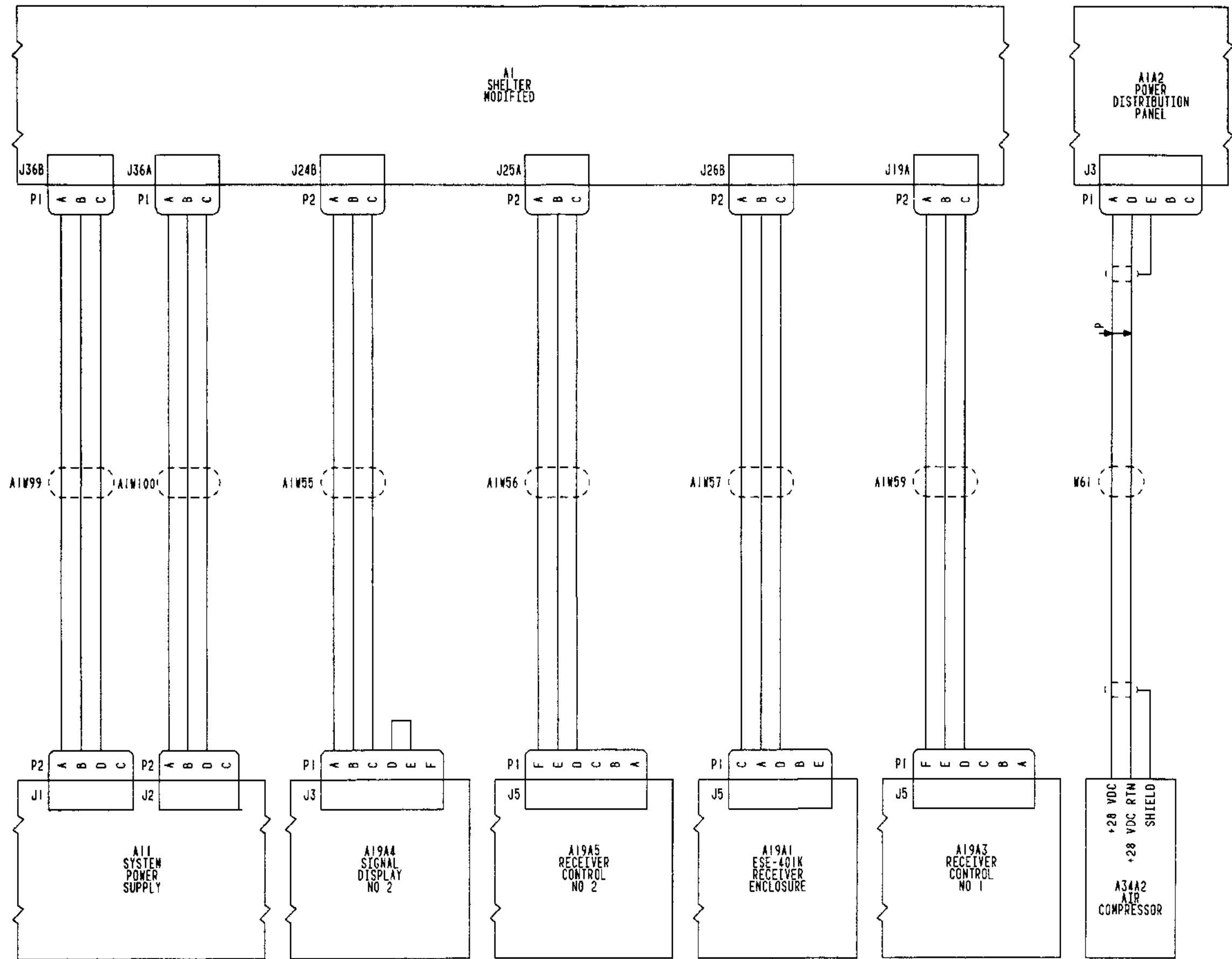


Figure FO-1. Interconnect Diagram
(Sheet 18 of 29)

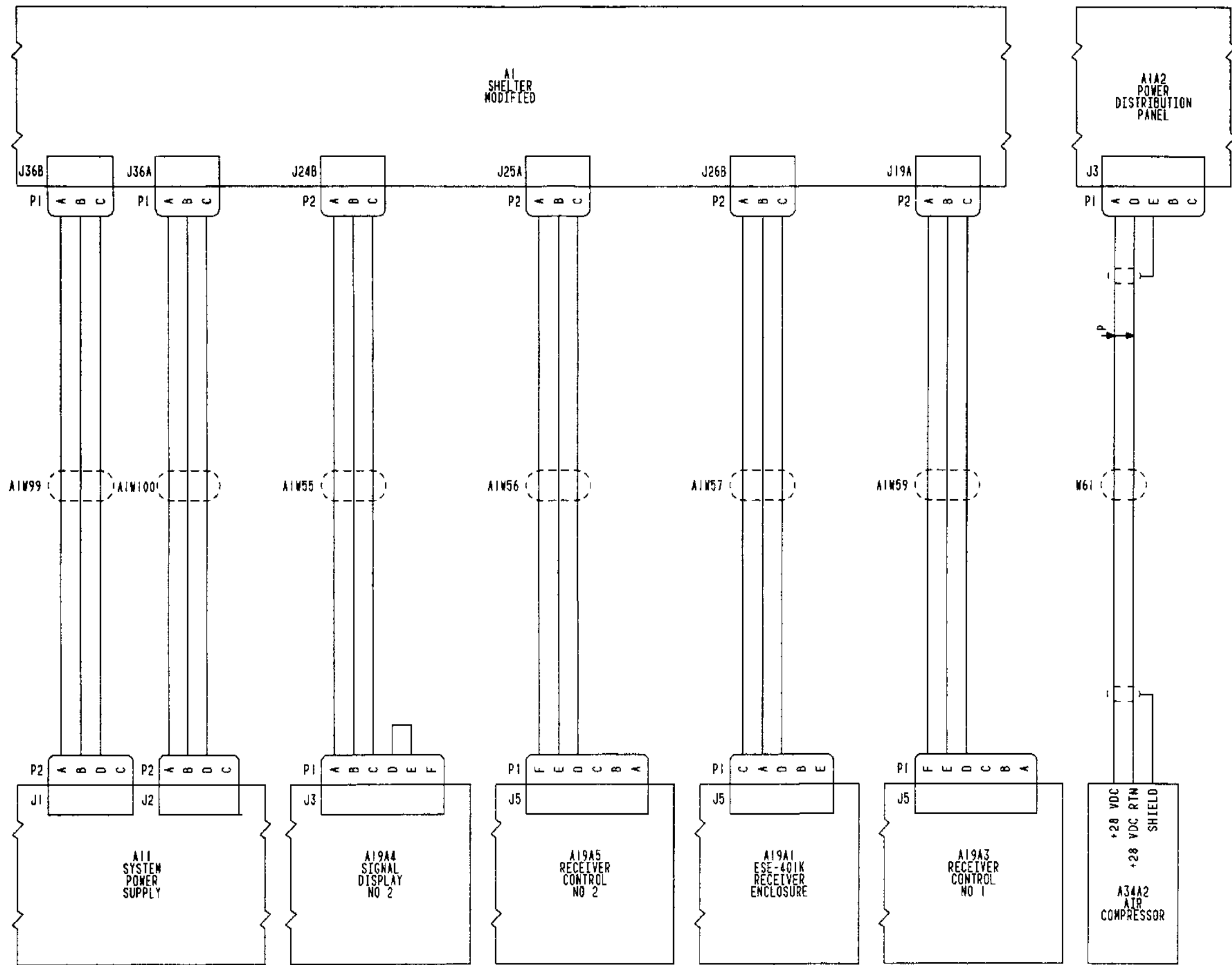


Figure FO-1. Interconnect Diagram
(Sheet 18 of 29)

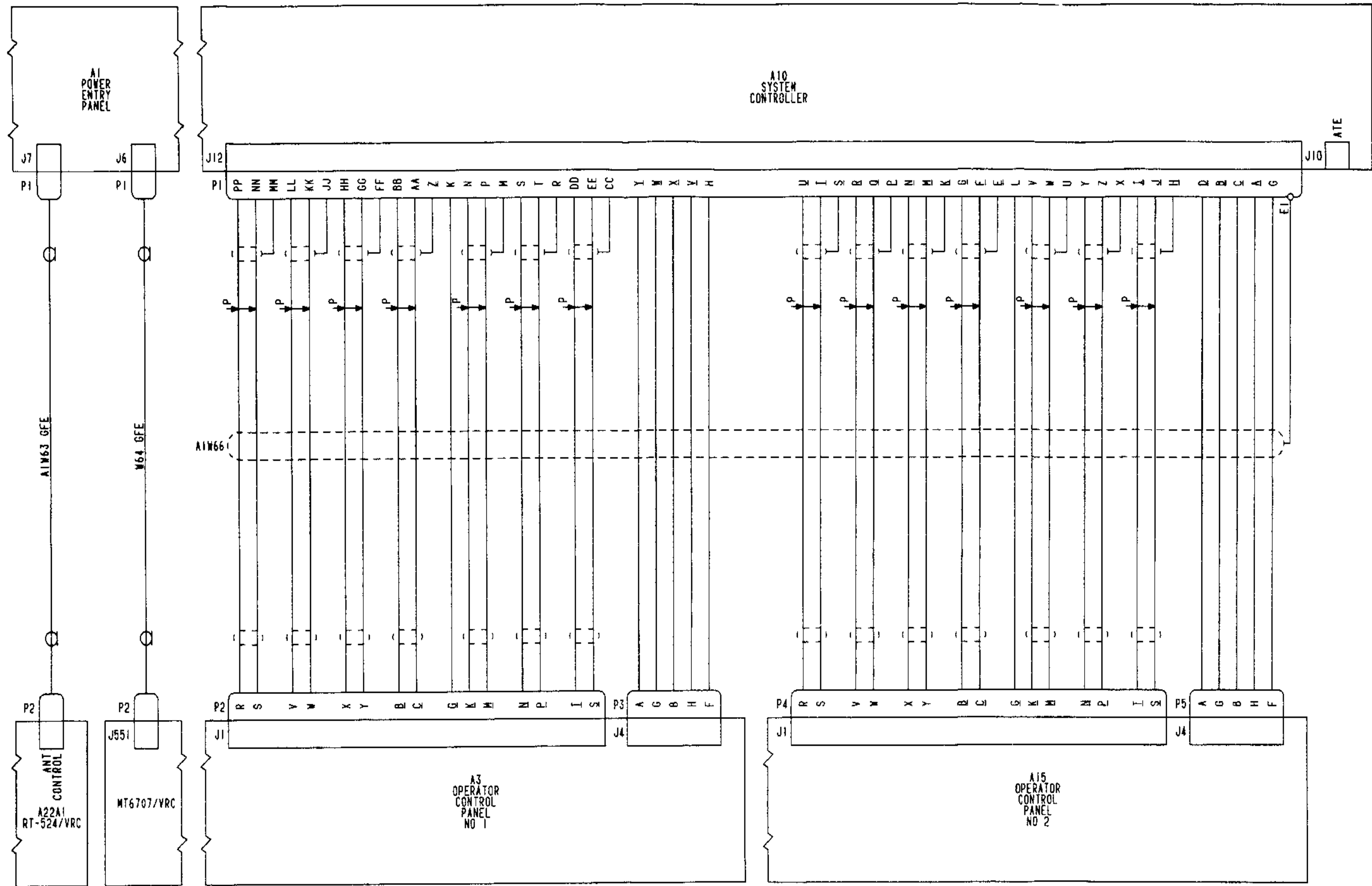


Figure FO-1. Interconnect Diagram
(Sheet 20 of 29)

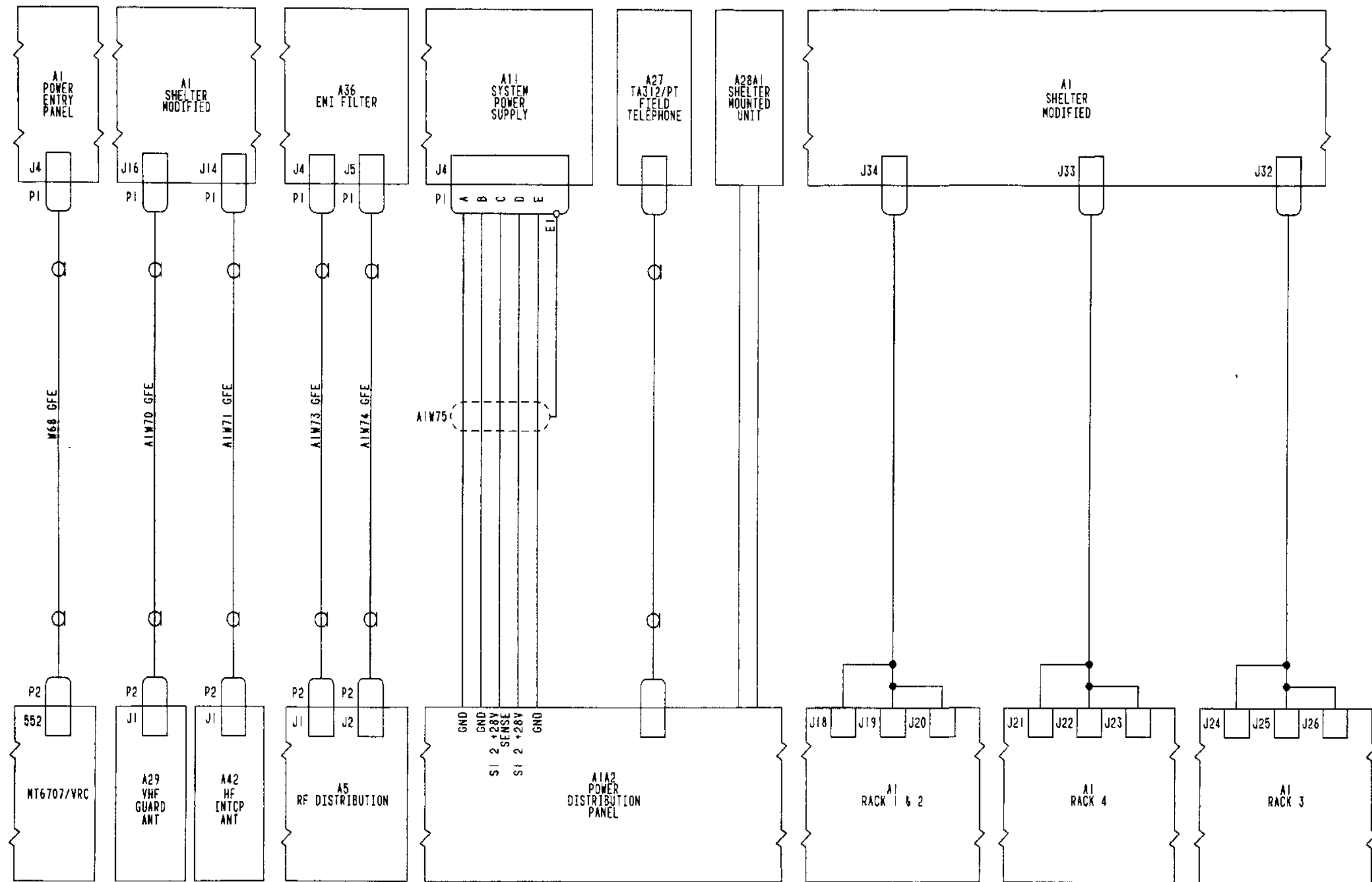


Figure FO-1. Interconnect Diagram
(Sheet 21 of 29)

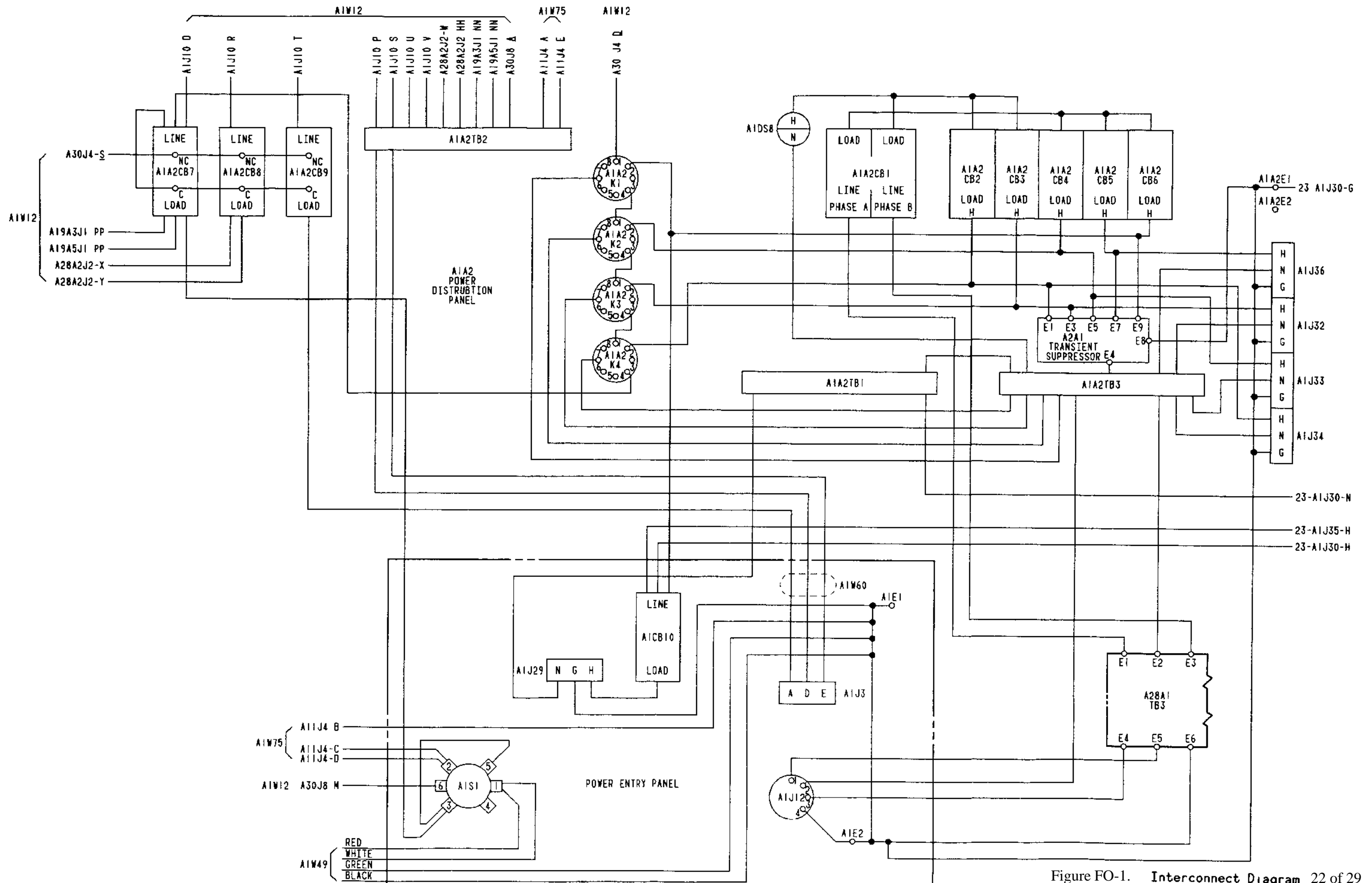


Figure FO-1. Interconnect Diagram 22 of 29

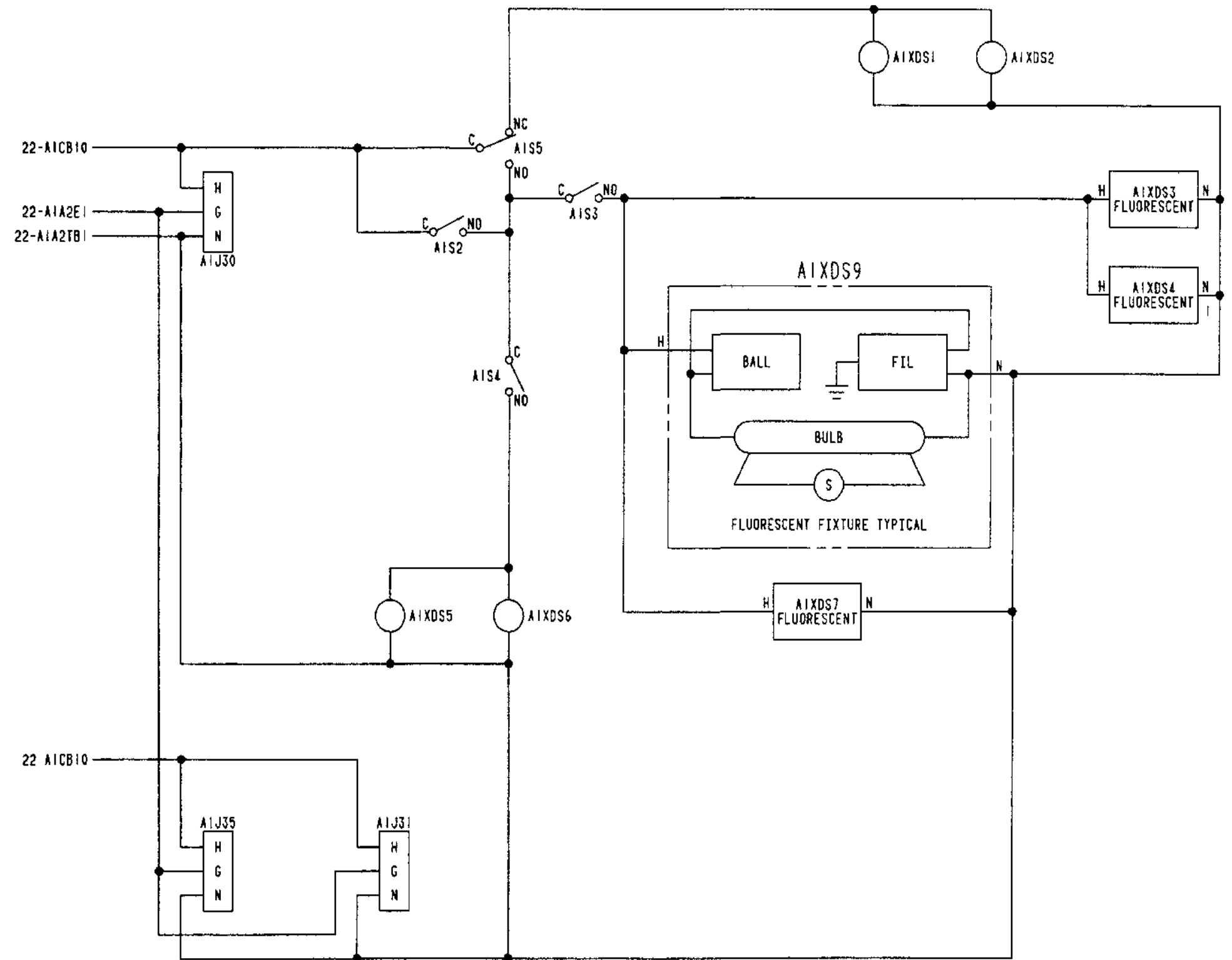


Figure FO-1. Interconnect Diagram
(Sheet 23 of 29)

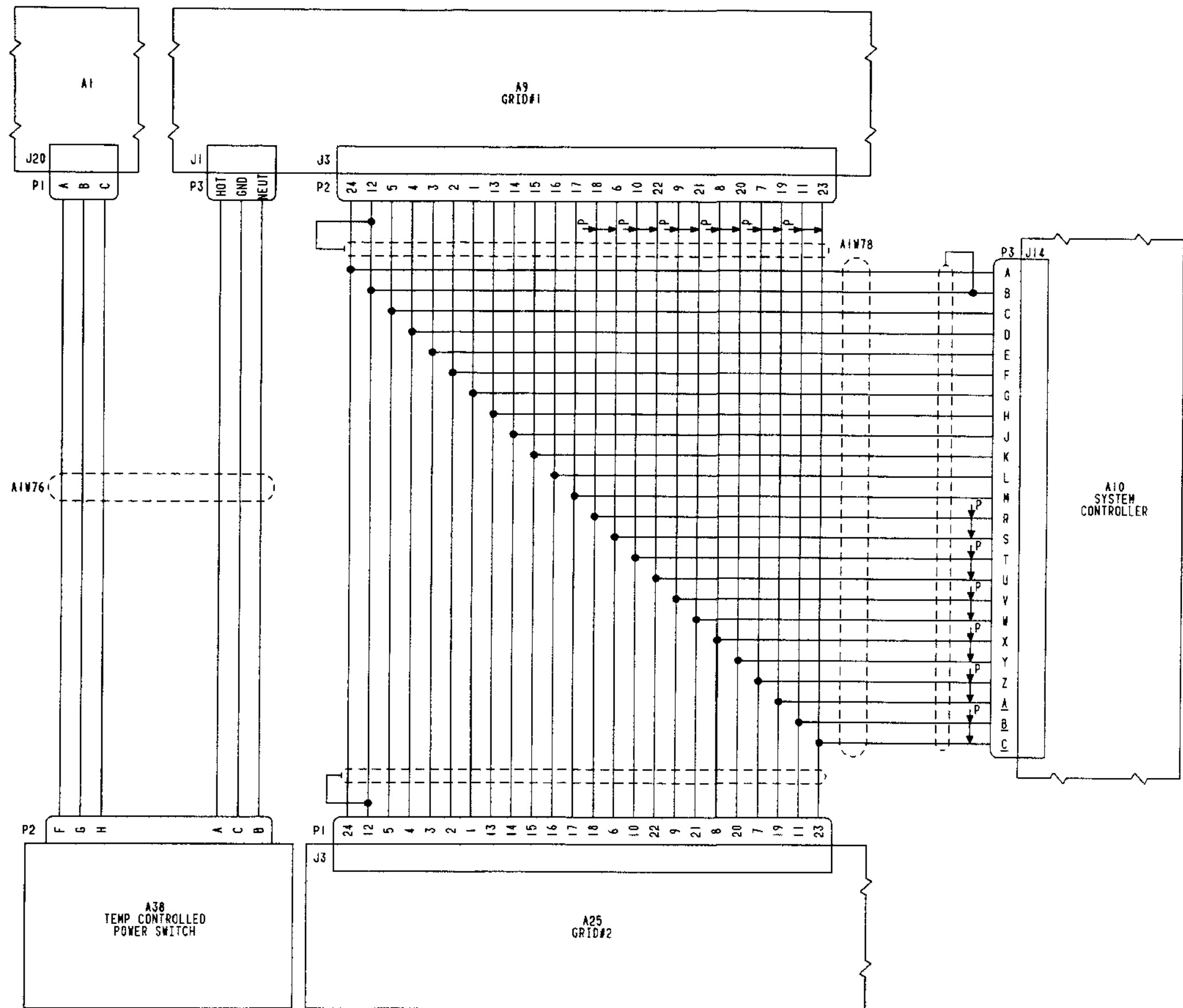


Figure FO-1. Interconnect Diagram
(Sheet 24 of 29)

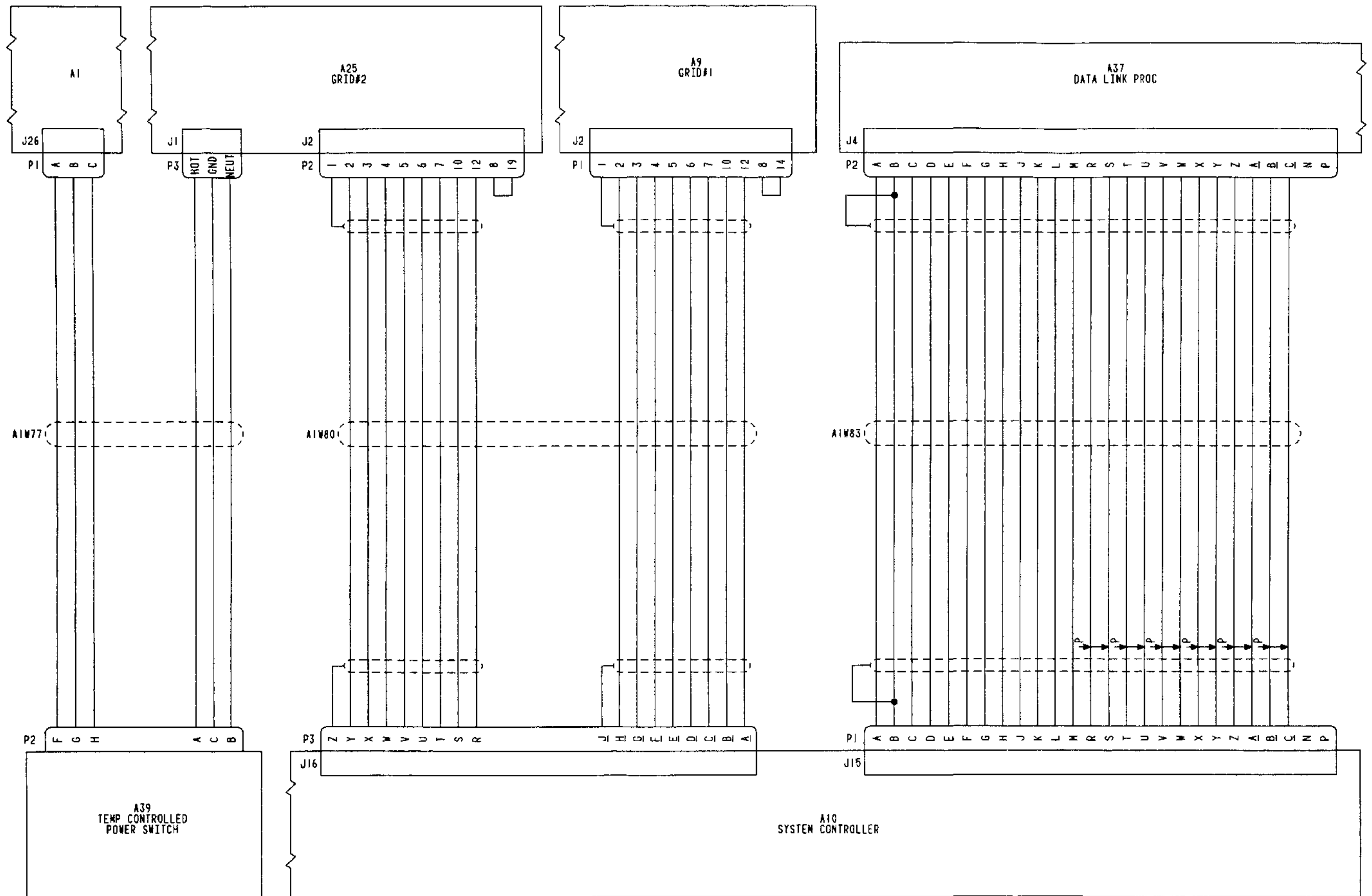


Figure FO-1. Interconnect Diagram
(Sheet 25 of 29)

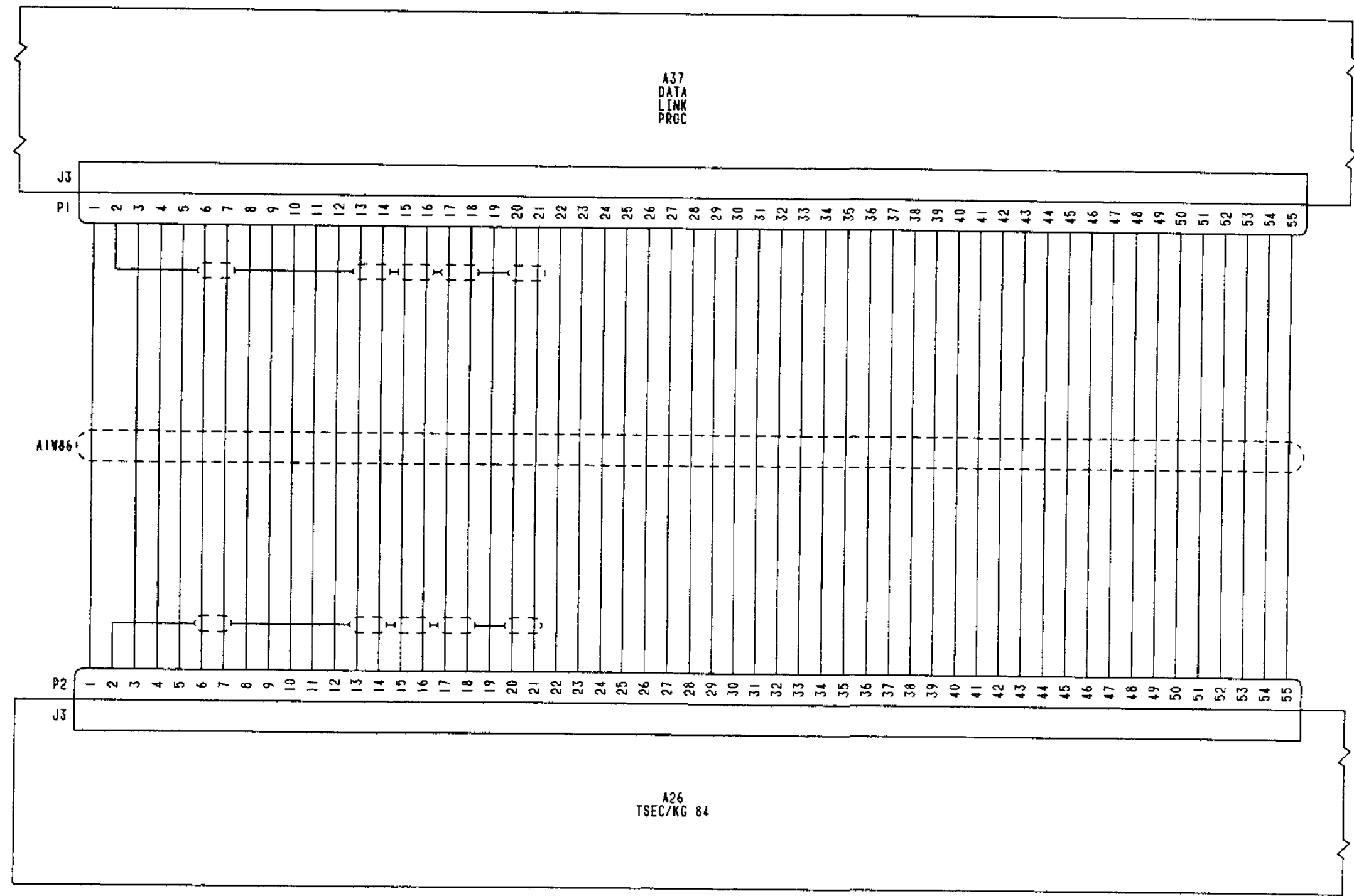


Figure FO-1. Interconnect Diagram
(Sheet 26 of 29)

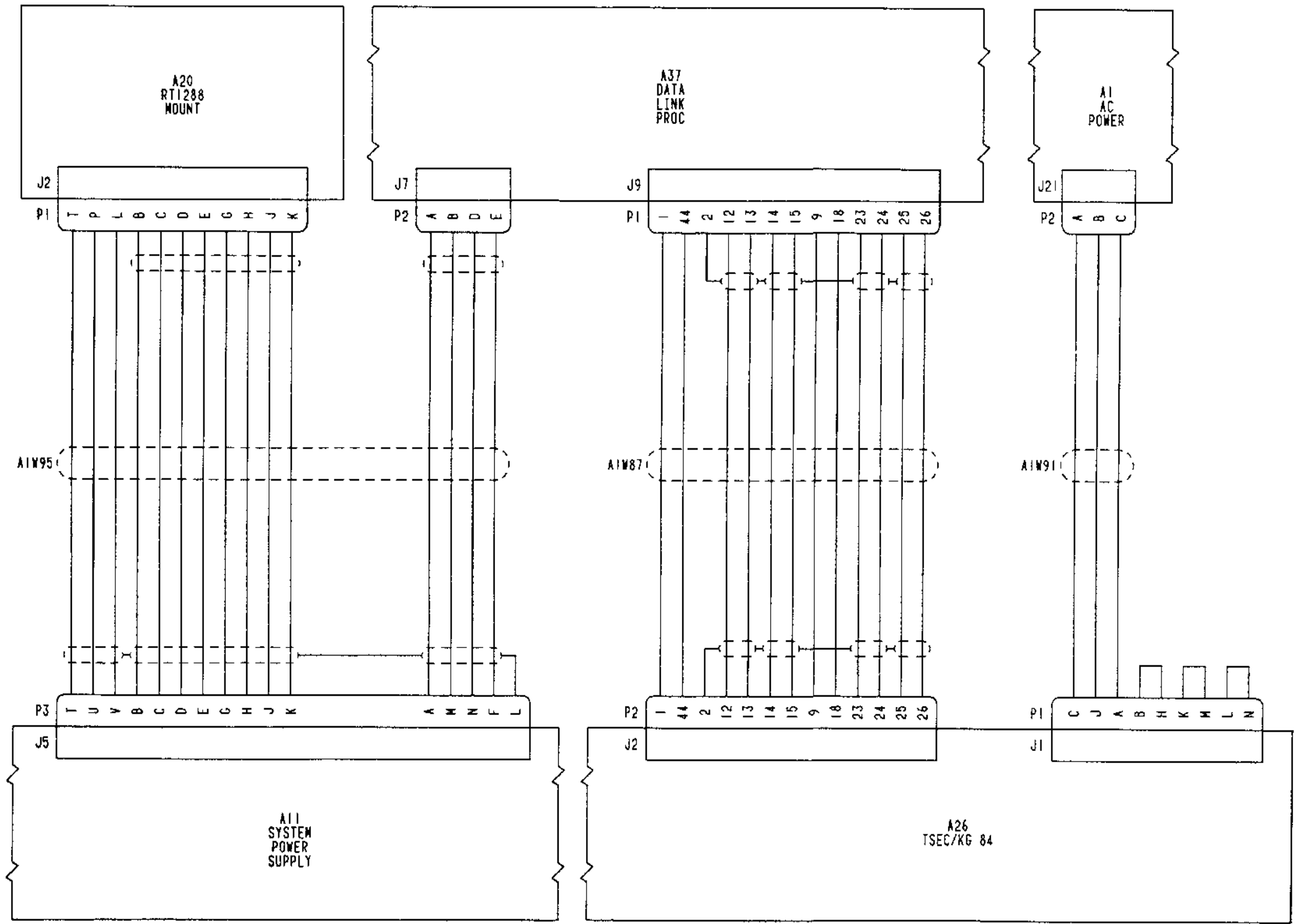


Figure FO-1. Interconnect Diagram
(Sheet 27 of 29)

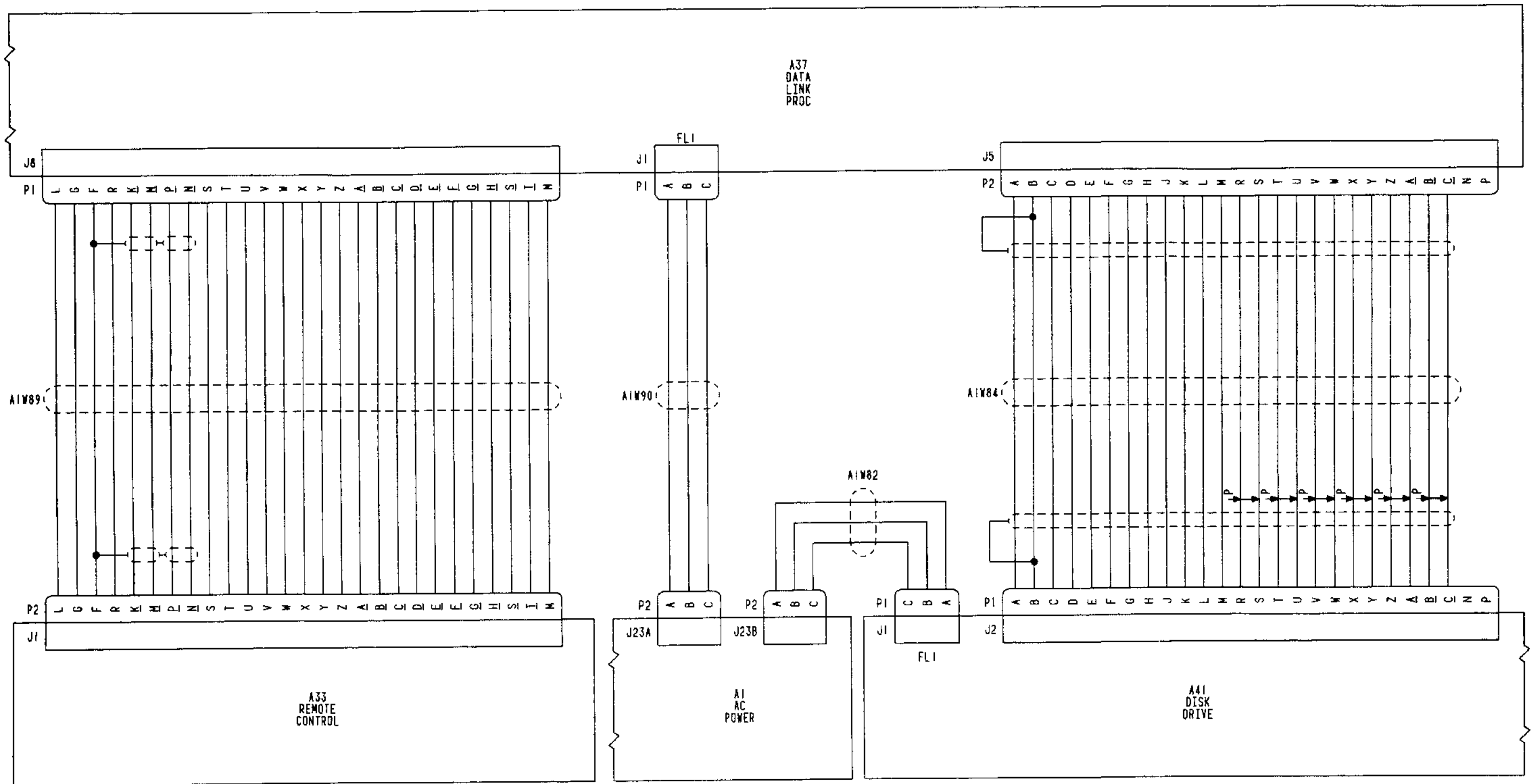


Figure FO-1. Interconnect Diagram
(Sheet 28 of 29)

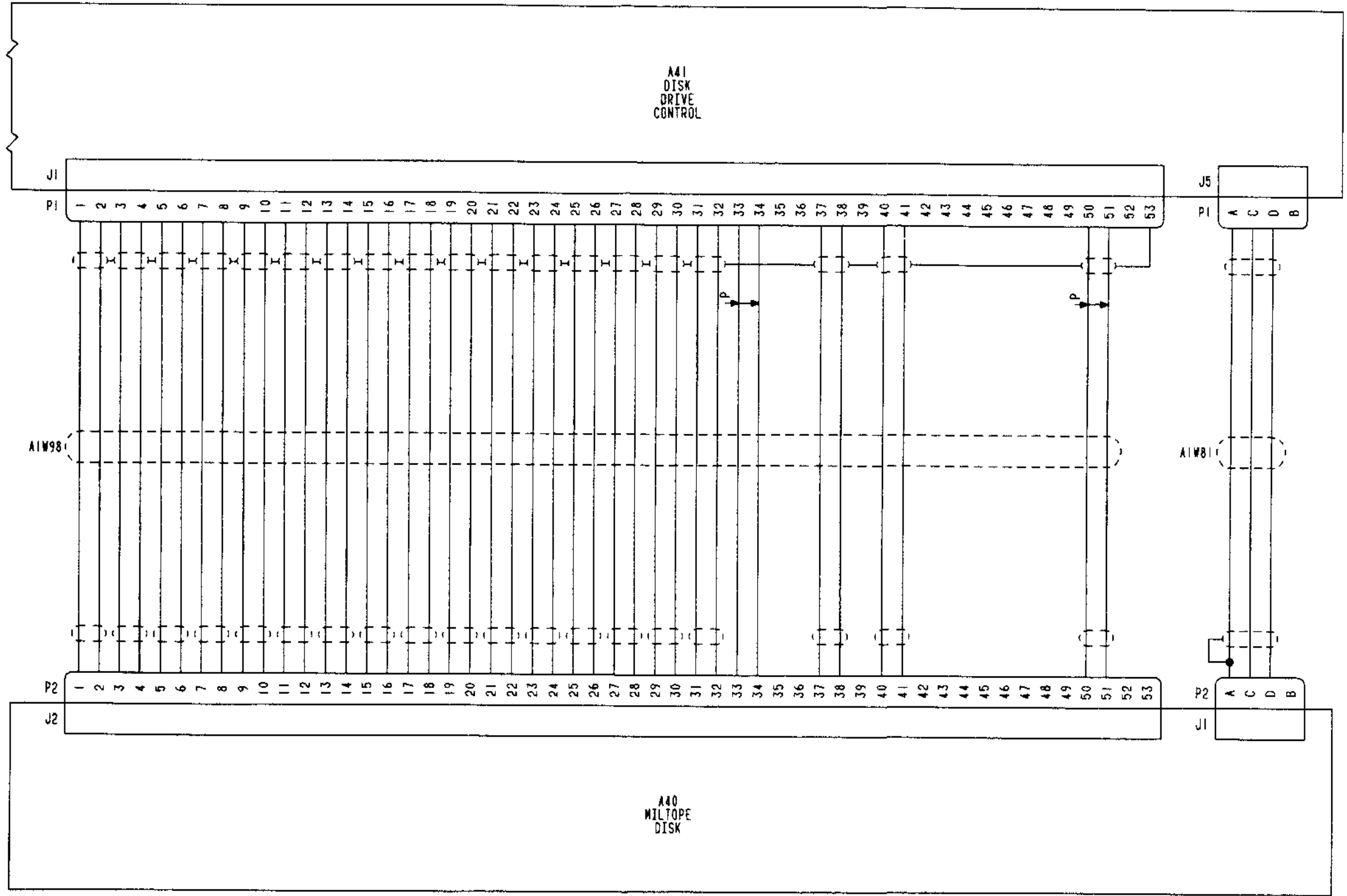


Figure FO-1. Interconnect Diagram
(Sheet 29 of 29)

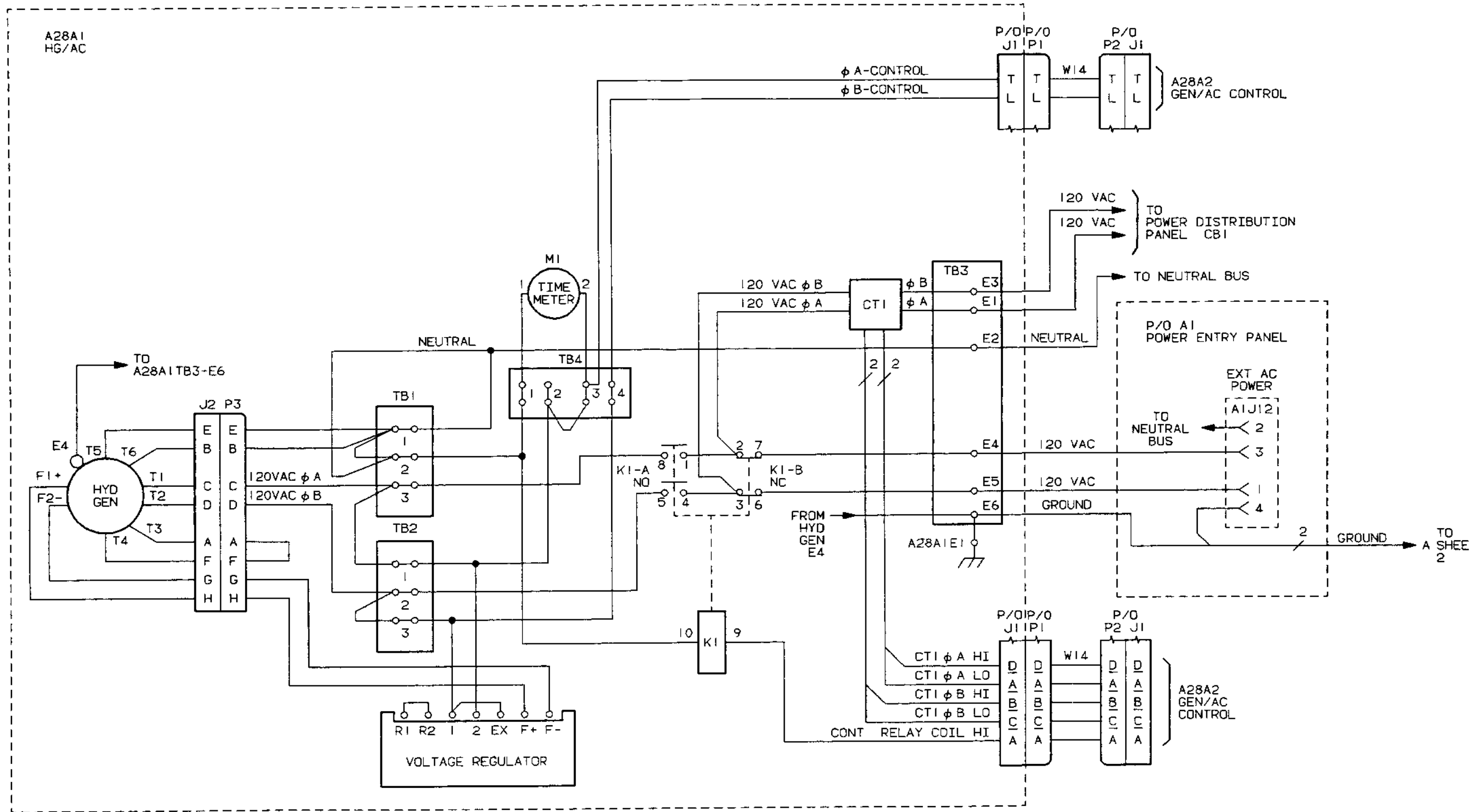


Figure FO-2. AC Distribution
(Sheet 1 of 4)

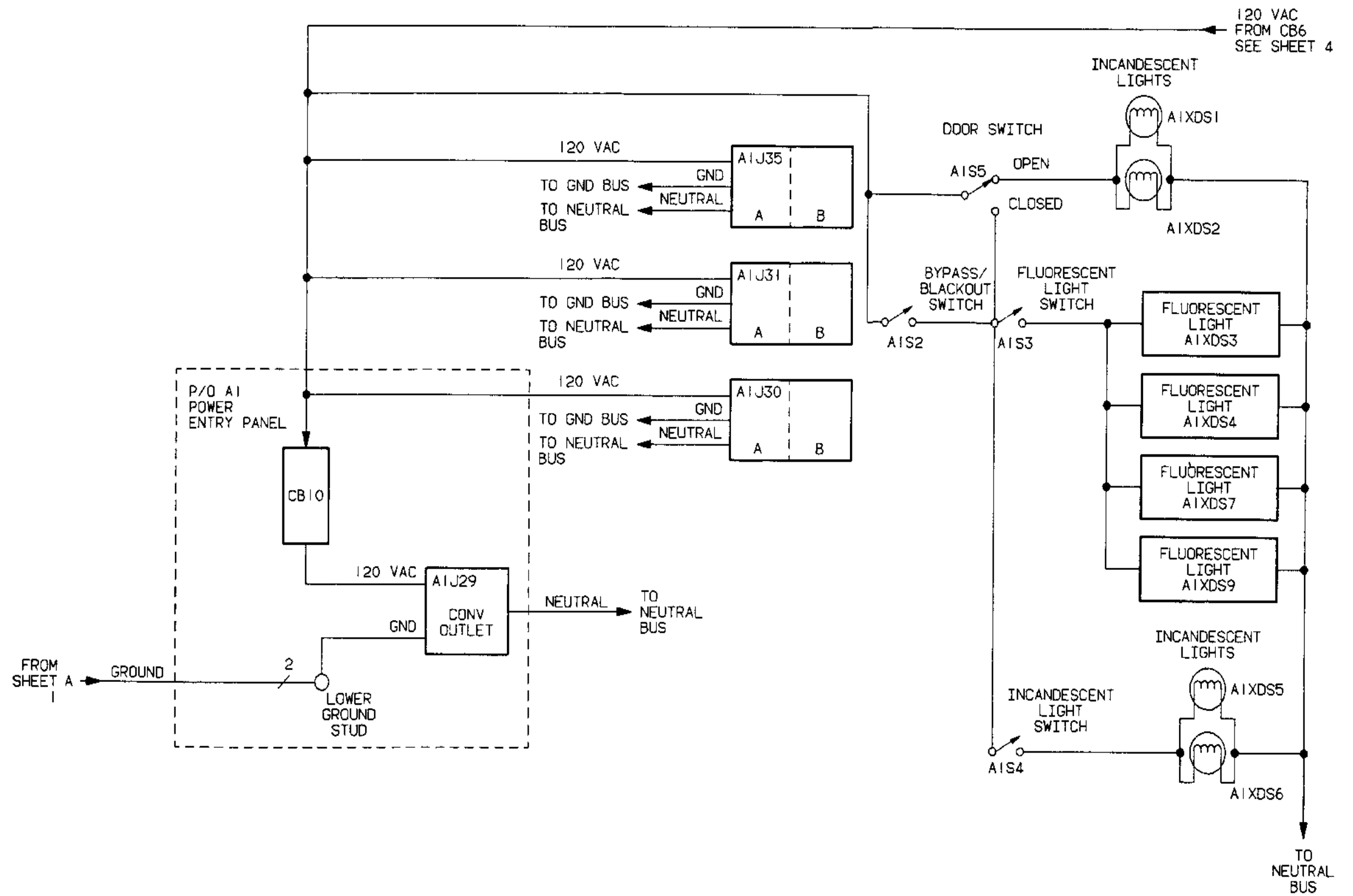


Figure FO-2. AC Distribution
(Sheet 2 of 4)

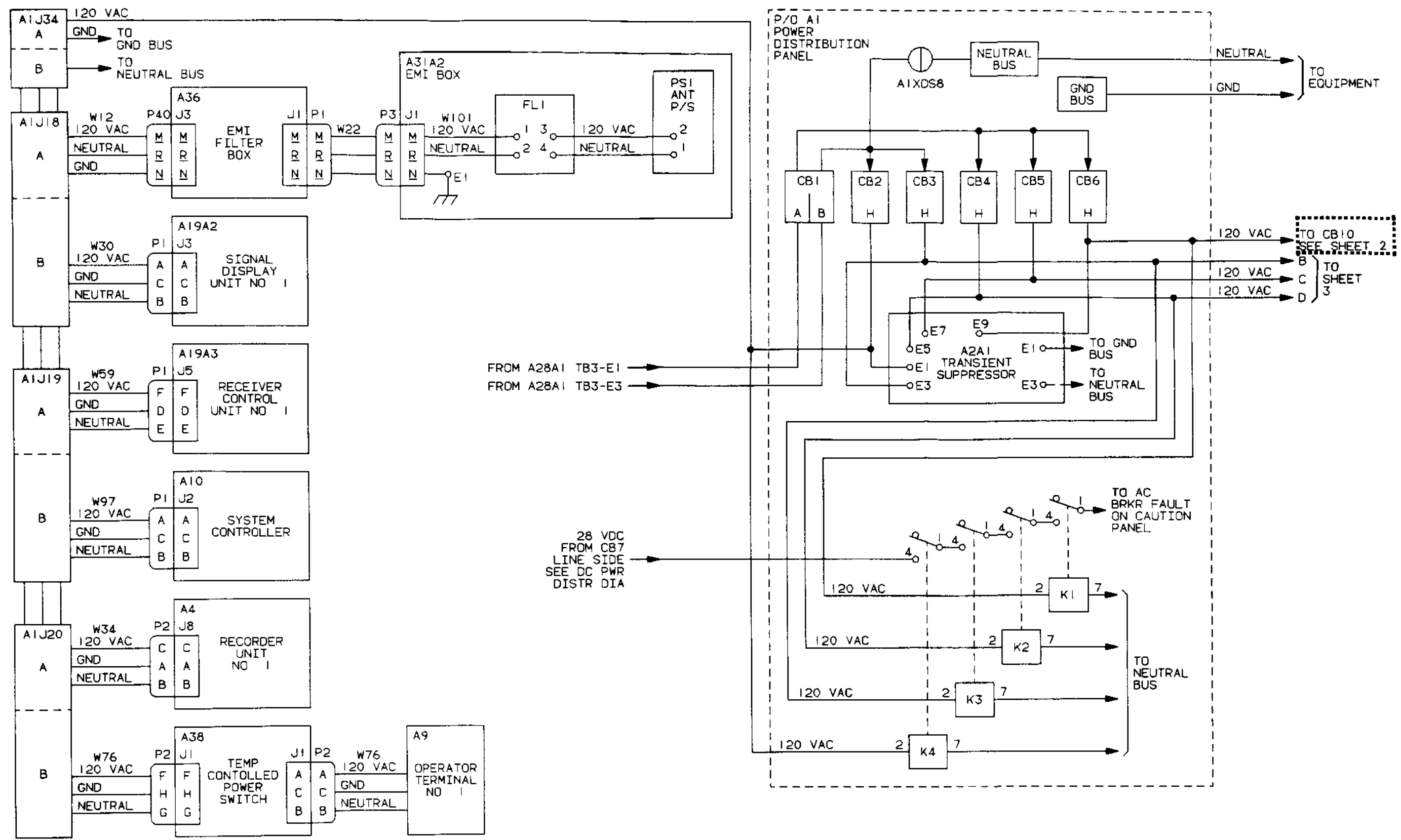


Figure FO-2 AC Distribution
(Sheet 4 of 4)
Change 1

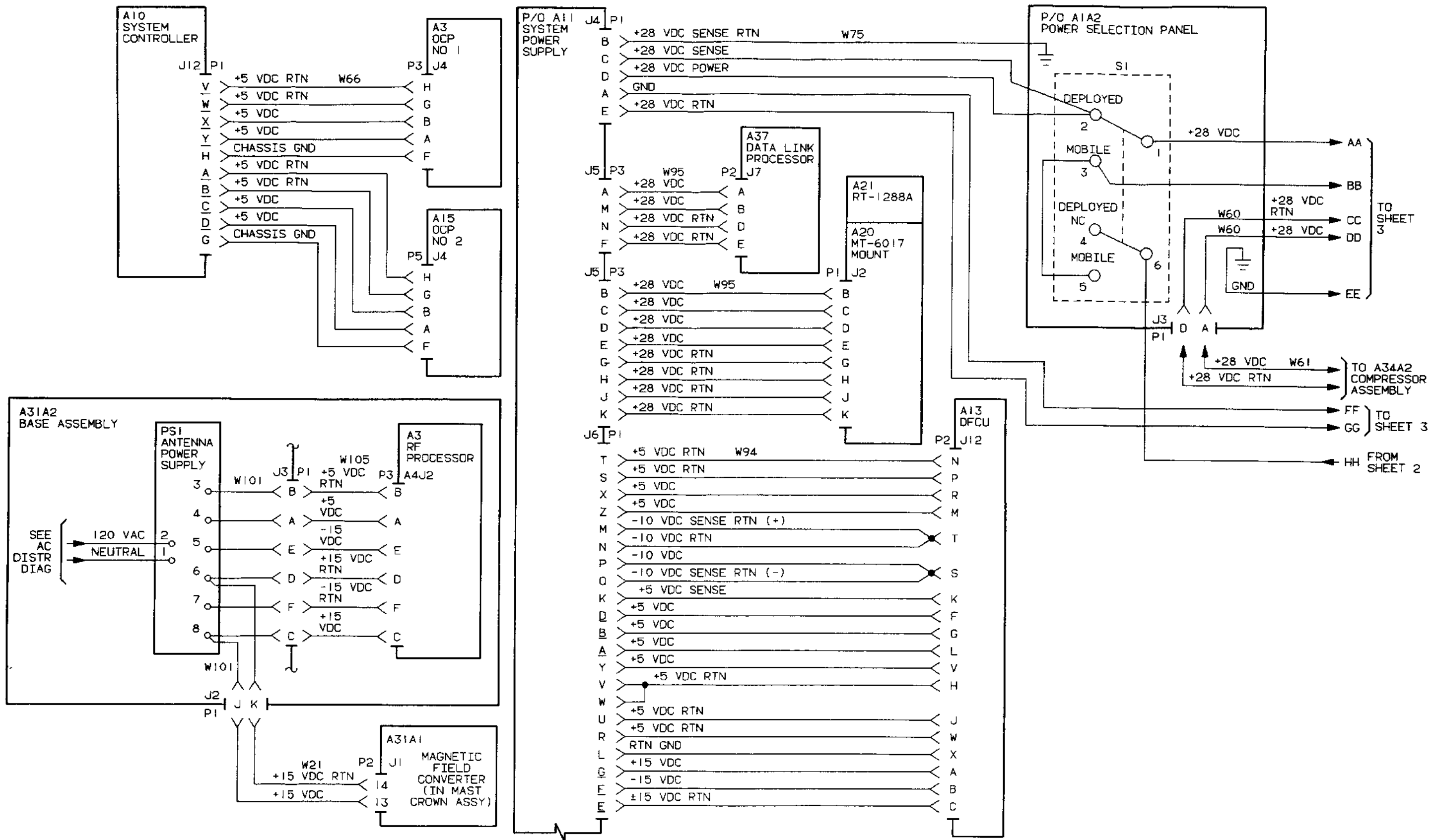


Figure FO-3 DC Distribution
(Sheet 1 of 3)

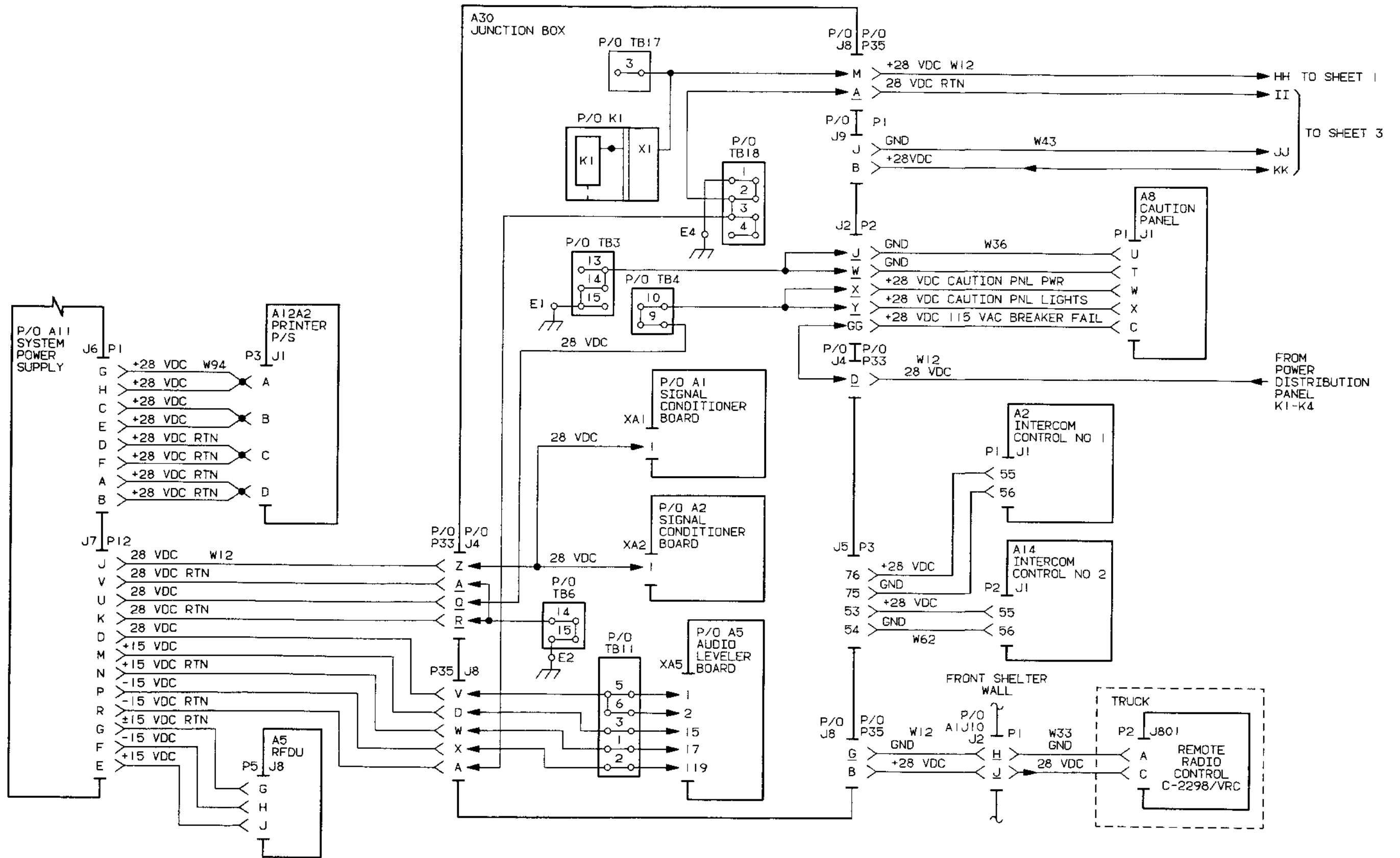


Figure FO-3 DC Distribution
(Sheet 2 of 3)

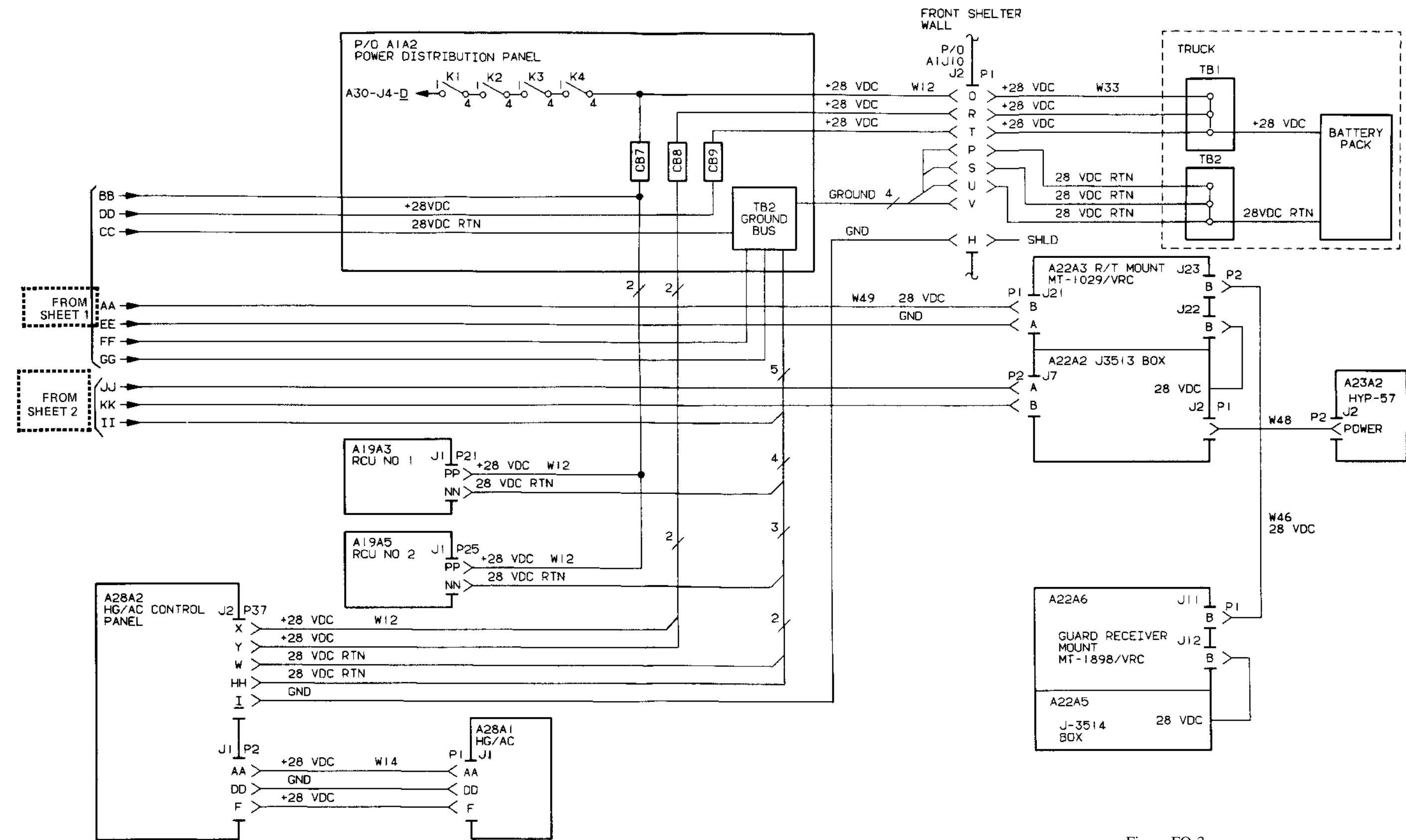


Figure FO-3 DC Distribution
(Sheet 3 of 3)
Change 1

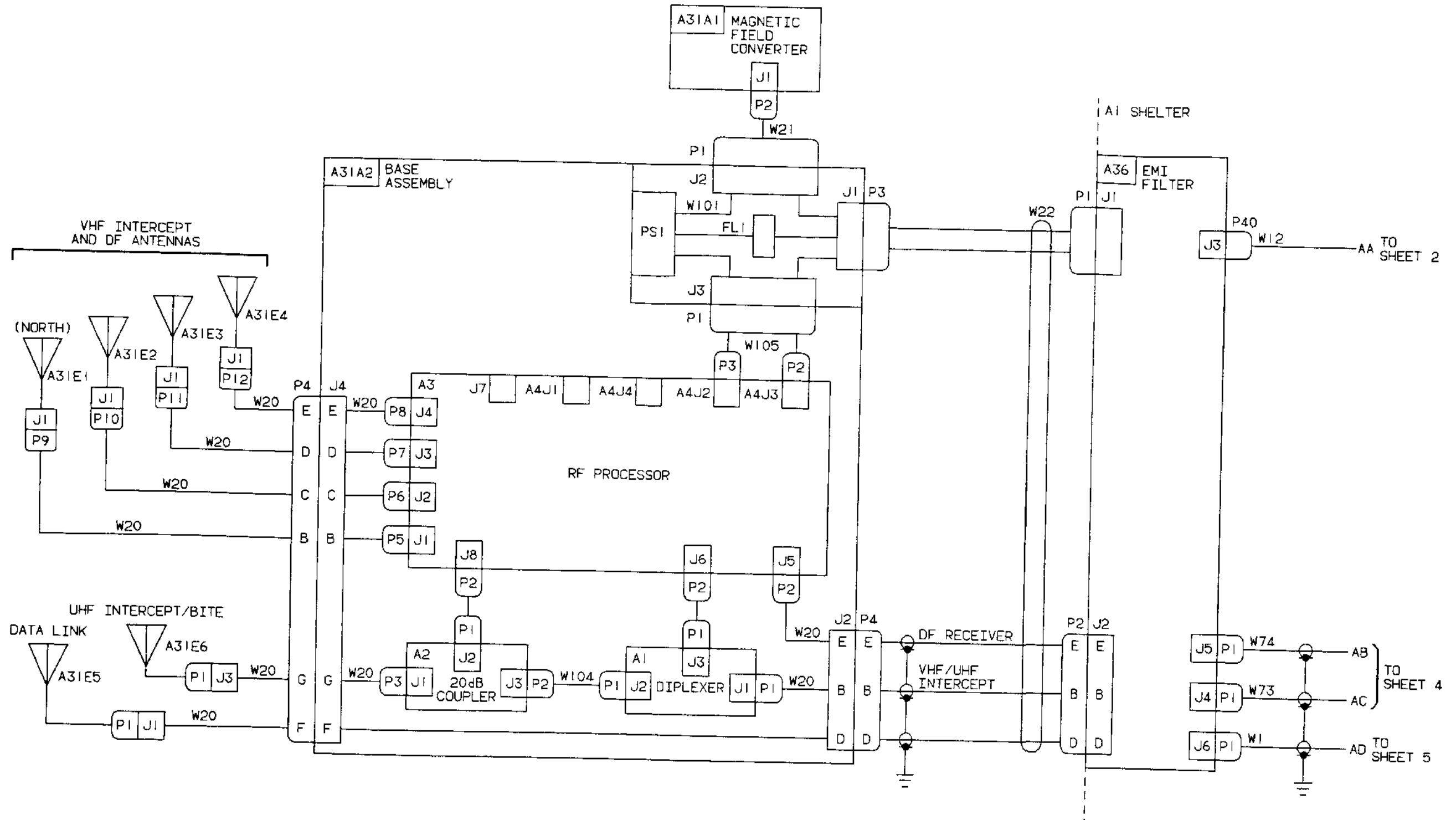


Figure FO-4. Cabling Diagram
(Sheet 1 of 6)

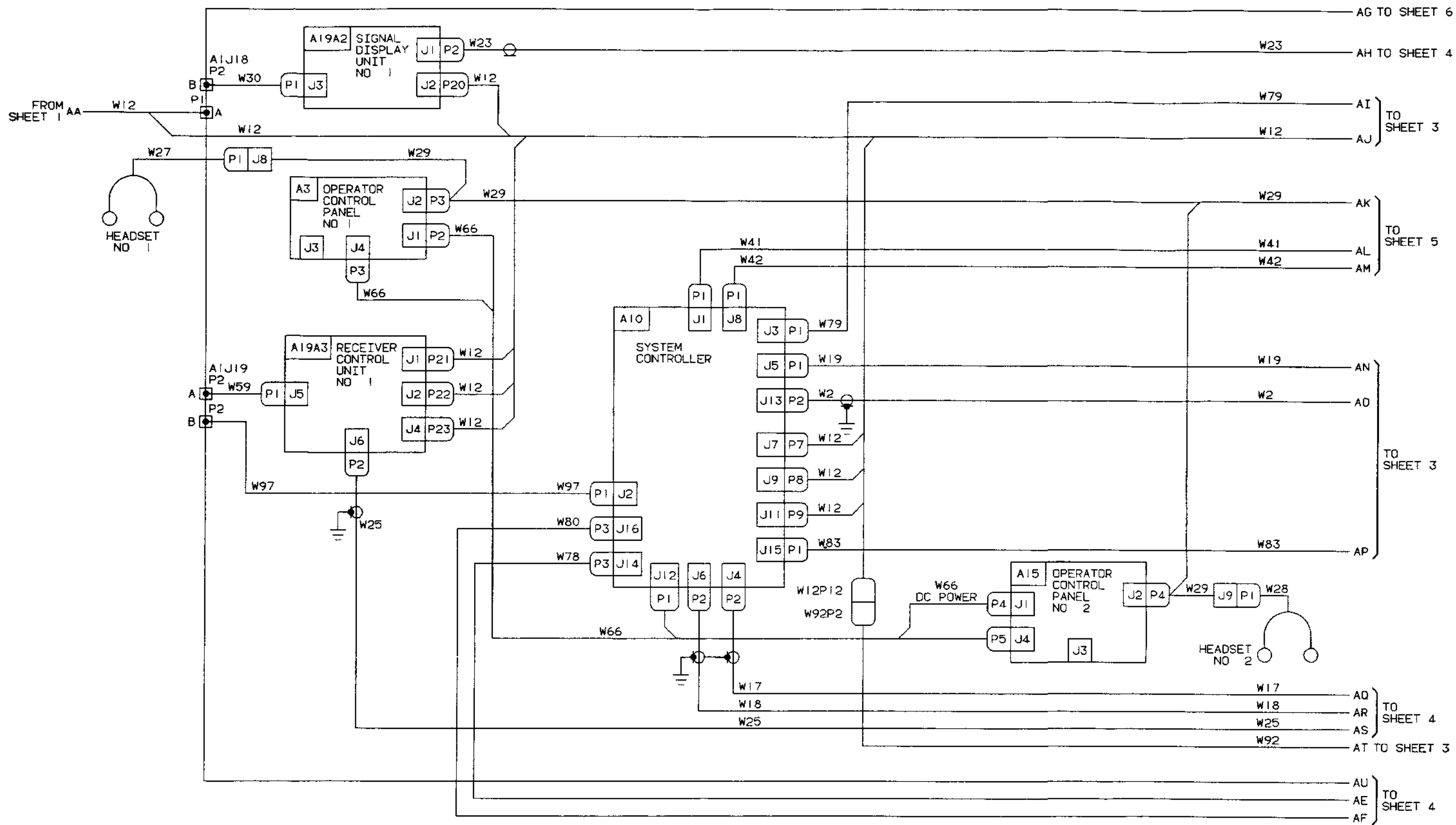


Figure FO-4. Cabling Diagram
(Sheet 2 of 6)

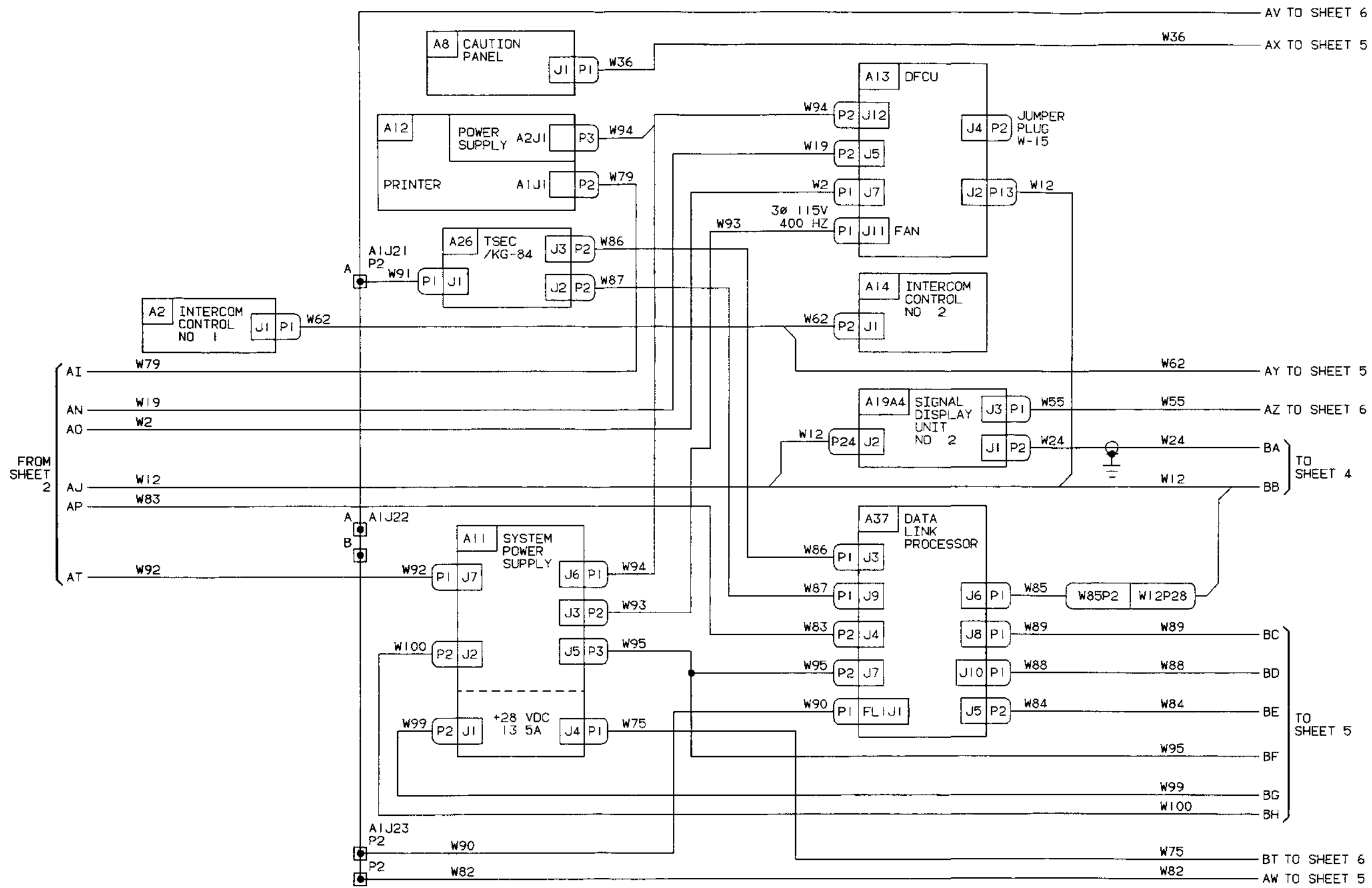


Figure FO-4. Cabling Diagram
(Sheet 3 of 6)

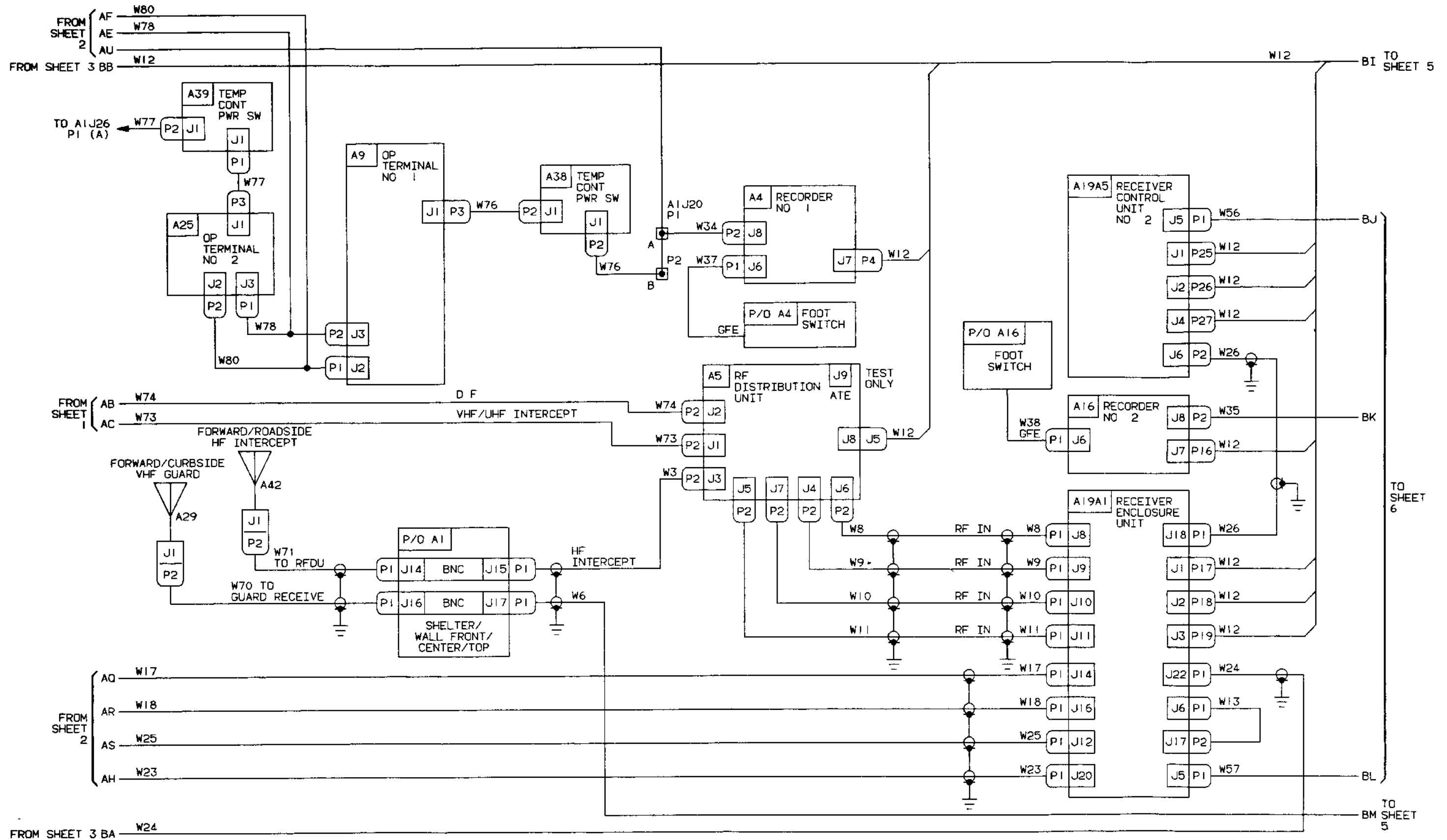


Figure FO-4. Cabling Diagram (Sheet 4 of 6)

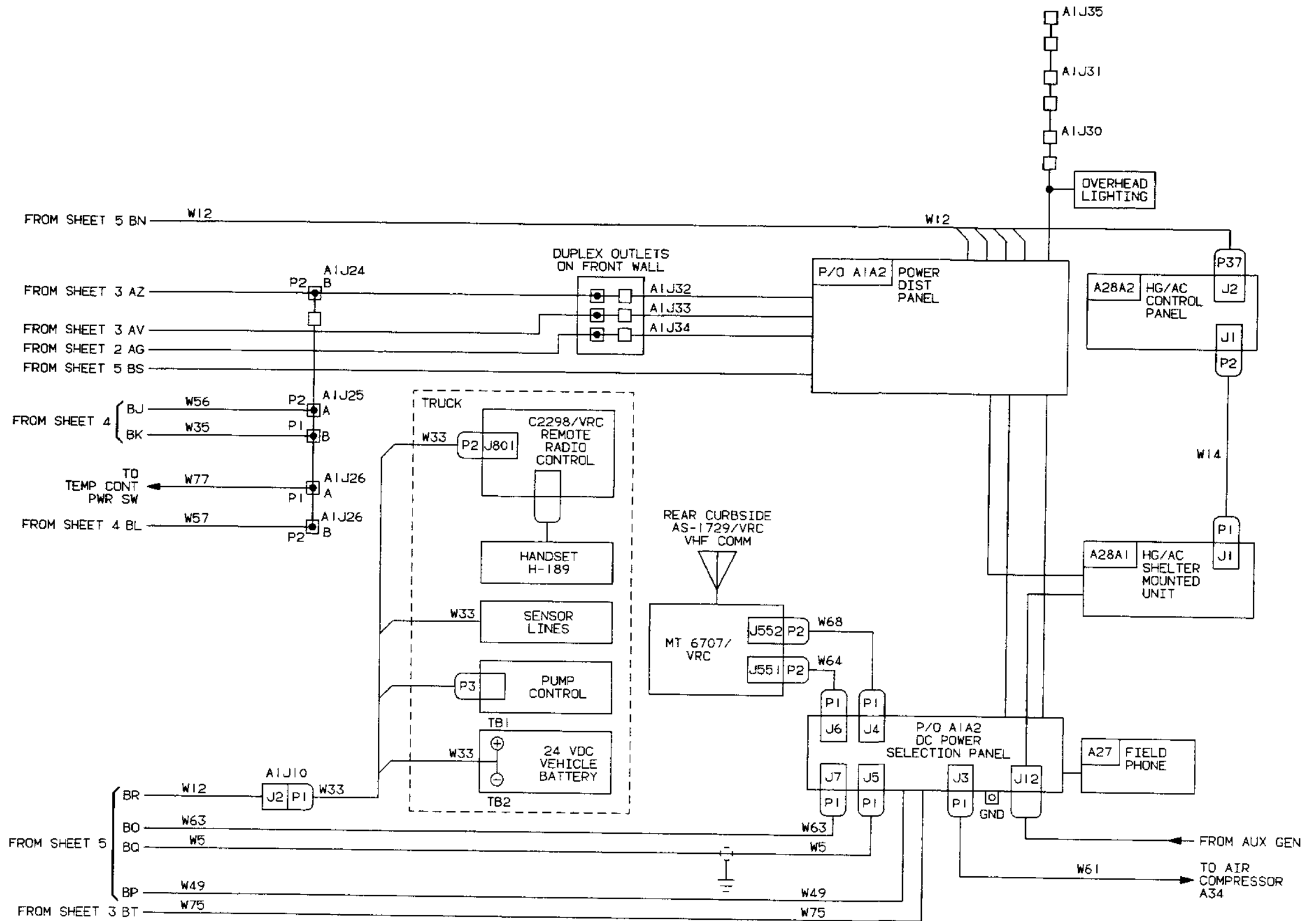


Figure FO-4. Cabling Diagram
(Sheet 6 of 6)

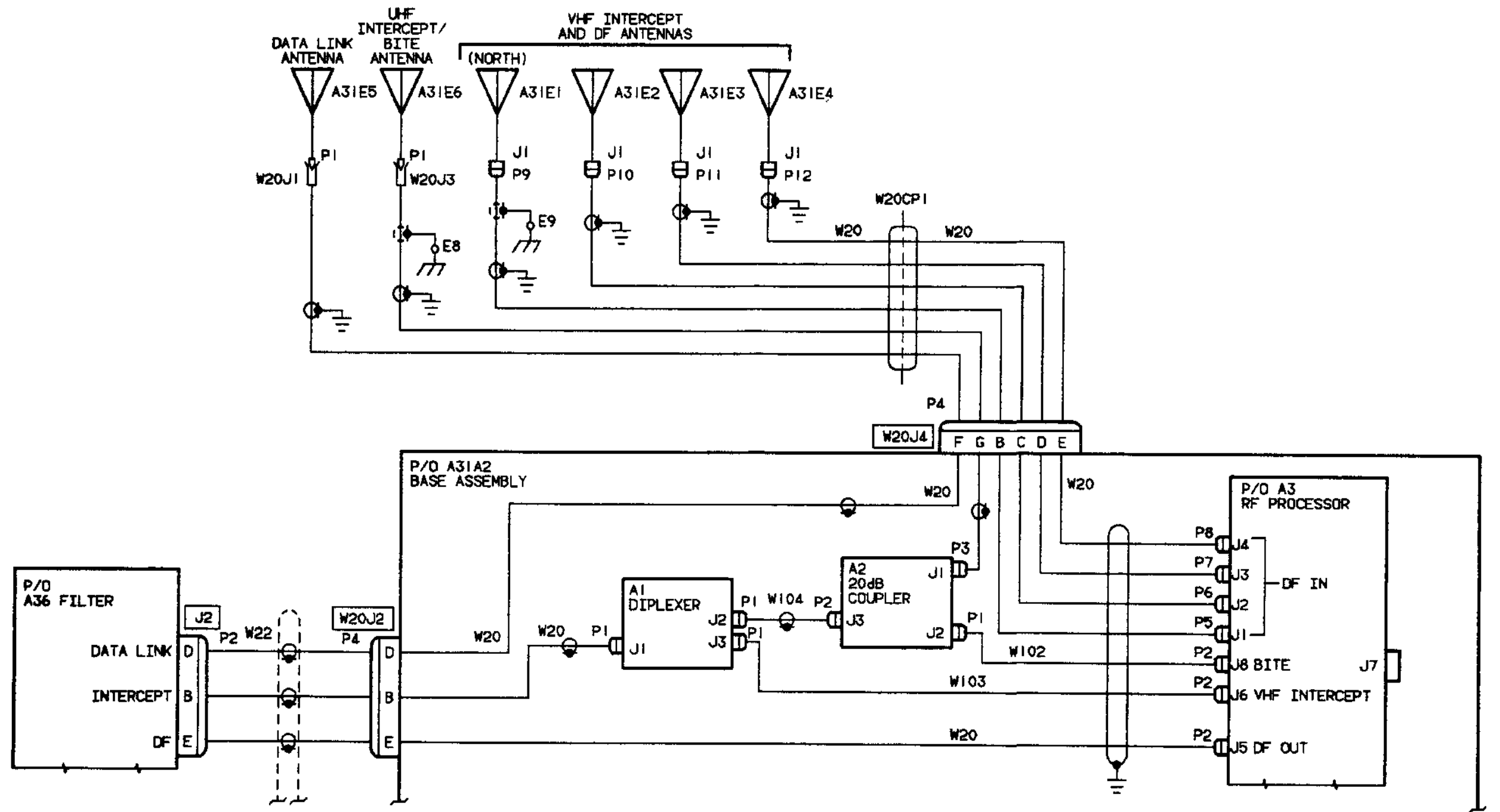


Figure FO-5. Antenna Group Wiring Diagram (Sheet 1 of 2)

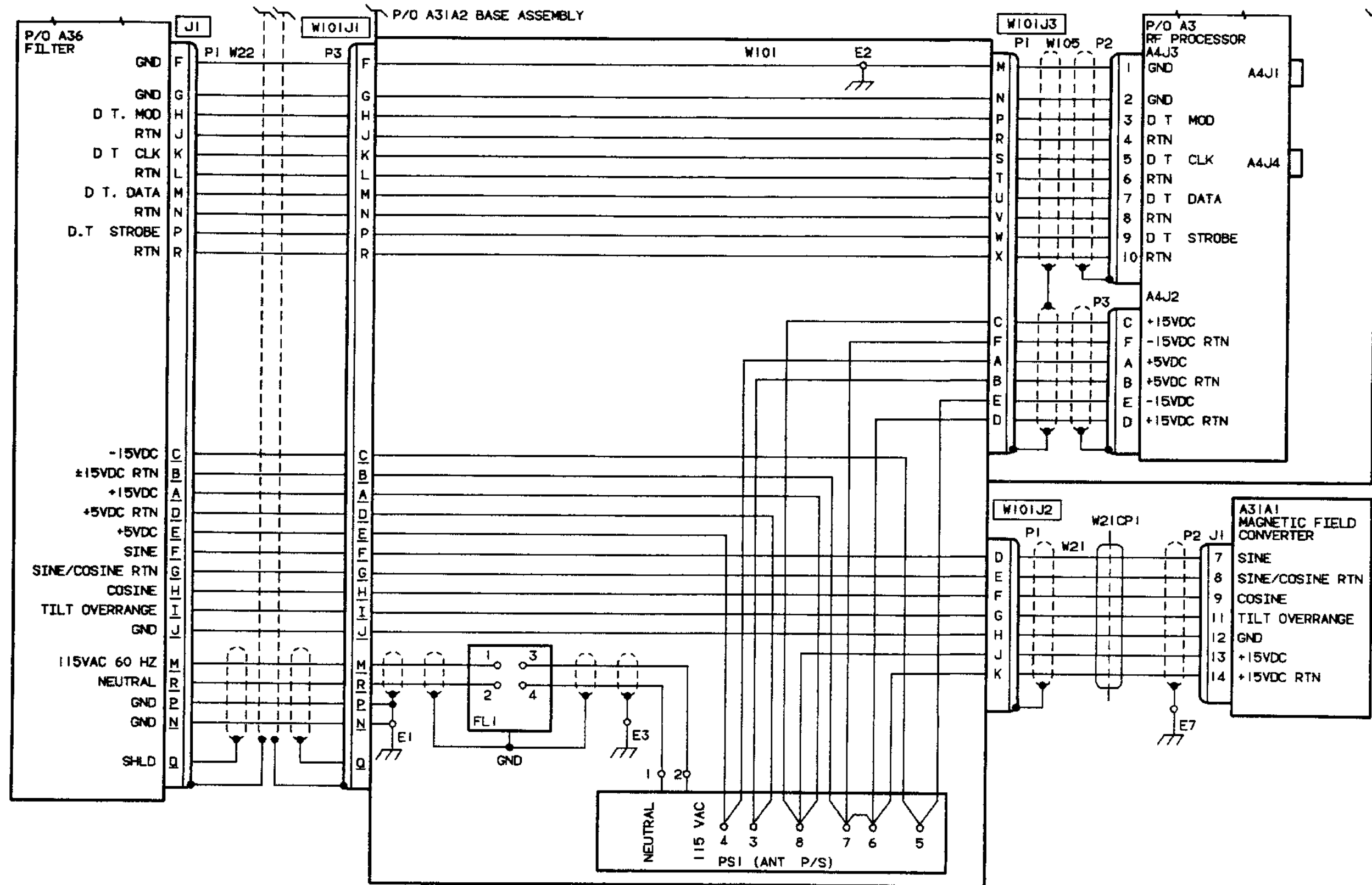
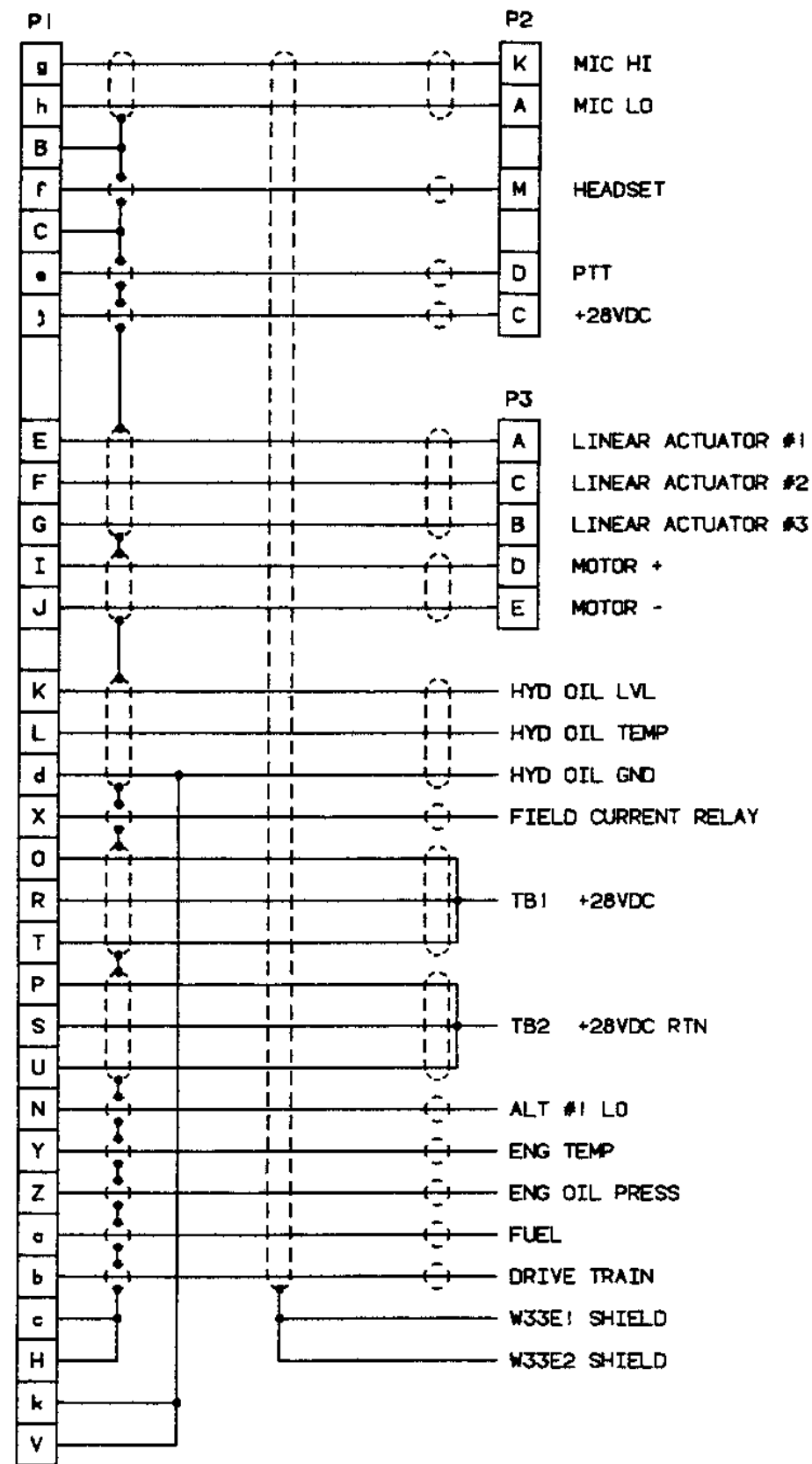
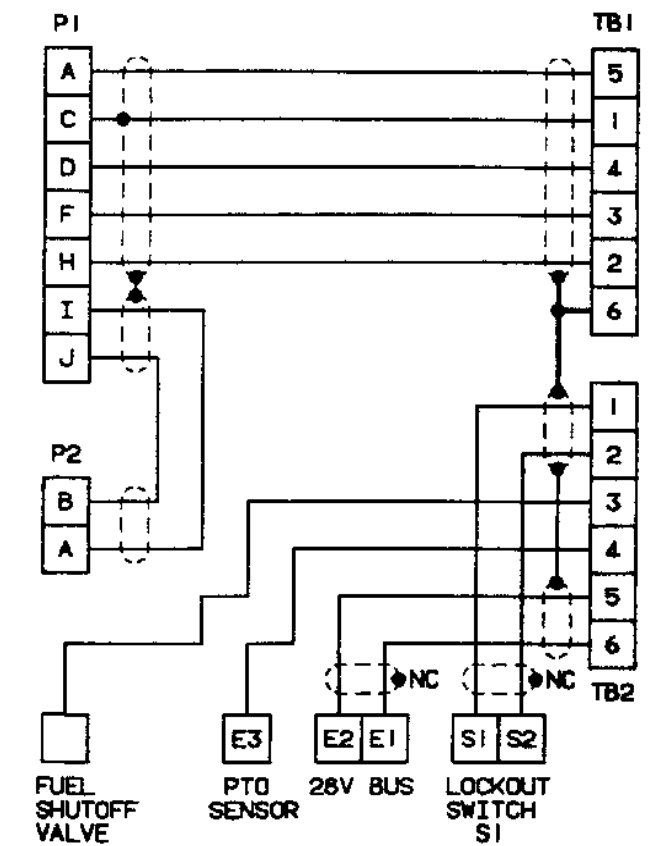


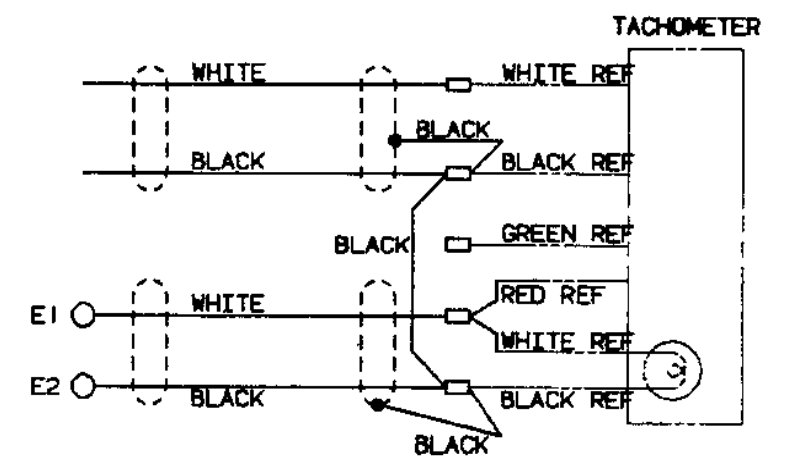
Figure FO-5. Antenna Group Wiring Diagram (Sheet 2 of 2)



W-33



W-65



W-67

Figure FO-6. W33/W65/W67 Wiring Diagram

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL MANUALS



SOMETHING WRONG WITH THIS MANUAL?

THEN... JOT DOWN THE DOPE ABOUT IT ON THIS FORM, TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

FROM: (YOUR UNIT'S COMPLETE ADDRESS)

DATE

PUBLICATION NUMBER

TM 32-5895-070-24&P

DATE

TITLE

System Maintenance Manual For AN/TRQ-32(V)

BE EXACT... PIN-POINT WHERE IT IS

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

| PAGE NO. | PARA-GRAPH | FIGURE NO. | TABLE NO. |
|----------|------------|------------|-----------|
| 1-6 | 3h. | | |
| 3-4 | | 3 | |

This paragraph is totally wrong. The switch settings for this radio are to be for VHF operation. All switch settings are presently set for UHF operation.

Recommend PCRB switch is set to the ON position.

This illustration needs a side view also. Callouts must be added to existing illustration.

TEAR ALONG DOTTED LINE

SAMPLE

TYPED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE:

DA FORM 2028-2 (TEST) 1 AUG 74

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR MANUAL "FIND" MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

FWD4818-26

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CUT ALONG DOTTED LINE

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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

