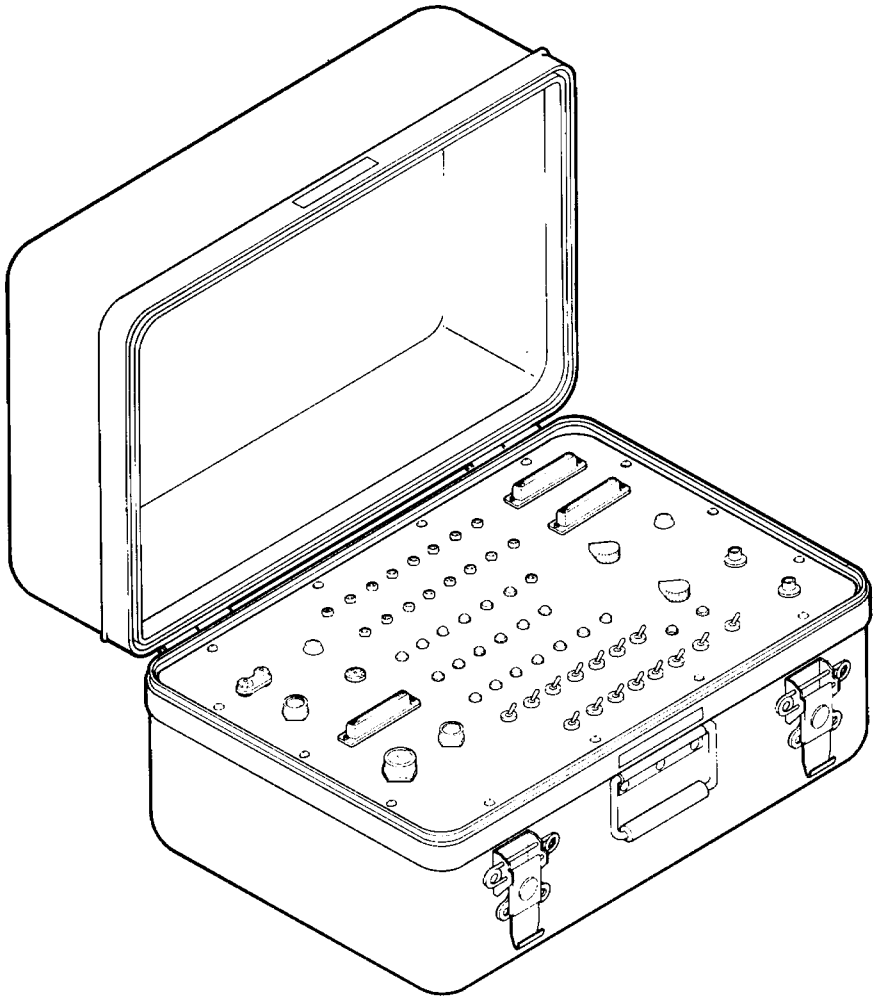
**ARMY TM 11-6625-3212-14&P**
**NAVY ET901-BA-OMP-010/TS-4252-GRC215**
**AIR FORCE TO 33D7-50-1321-1**

# OPERATORS UNIT, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS



## TEST SET, VEHICULAR ADAPTER TS-4252/GRC-215 (NSN 6625-01-263-5485)

**DEPARTMENTS OF THE ARMY, THE NAVY, AND THE AIR FORCE**
**15 JUNE 1990**

## 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 DRY WOODEN POLE OR A DRY 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

TECHNICAL MANUAL
No. 11-6625-3212-14&P
TECHNICAL MANUAL
No. ET901-BA-OMP-010/TS-4252-GRC215
TECHNICAL ORDER
No. 33D7-50-1312-1

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

Washington, DC, 15 June 1990

# OPERATOR'S, UNIT, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

## TEST SET, VEHICULAR ADAPTER TS-4252/GRC-215 (NSN 6625-01-263-5485)

**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 DA Form 2028-2 located in back of this manual, direct to: Commander, US Army Communication Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-ME-PS, Fort Monmouth, NJ 07703-5000.**

**For Air Force, submit AFTO Form 22 (Technical Order System Publication Improvement Report and Reply) in accordance with para 6-5, Section VI, T.O. 00-5-1. Forward direct to prime ALC/MST.**

**For Navy, mail comments to the Commander, Space and Naval Warfare Systems Command, ATTN: SPAWAR 8122, Washington, DC 20363-5100.**

**In either case a reply will be furnished direct to you.**

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## LIST OF ILLUSTRATIONS



## LIST OF TABLES

# SECTION I
# INTRODUCTION

## 1-1. SCOPE.

This manual contains operation and maintenance instructions for the Vehicular Adapter Test Set TS-4252/GRC-215, as shown in Figure 1-1. The material includes operating instructions, functional descriptions, maintenance and troubleshooting procedures, Repair Parts and Special Tools Lists, and instructions for preparation for use, storage and shipment of the Test Set.

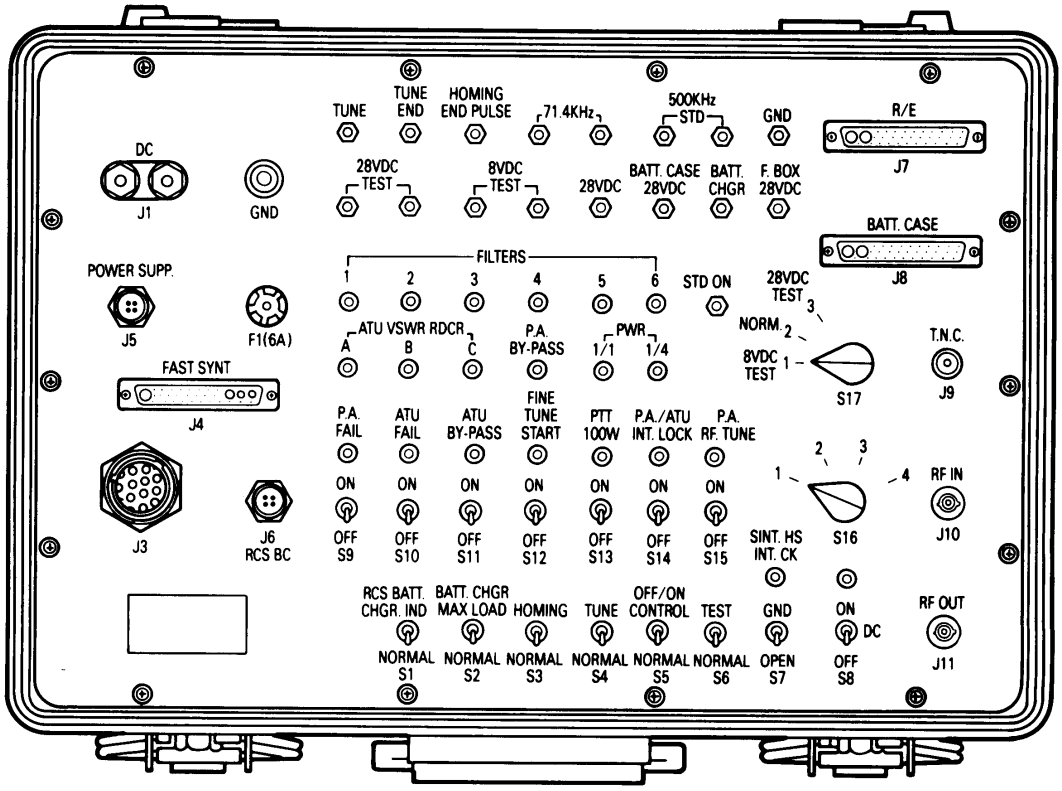



*Figure 1-1. Vehicular Adapter Test Set*

## 1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS

a. Reports of Maintenance and Unsatisfactory Equipment. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, as contained in Maintenance Management Update. Air Force personnel will use AFR 66-1 for maintenance reporting and TO-00-35D54 for unsatisfactory equipment reporting. Navy personnel will report maintenance performed utilizing the Maintenance Data Collection Subsystem (MDCS) IAW OPNAVINST 4790.2, Vol 3 and unsatisfactory material/conditions (UR submissions) IAW OPNAVINST 4790.2, Vol 2, chapter 17.

## 1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS (Cont.)

b. Reporting of Item and Packaging Discrepancies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 73511-2/DLAR 4140.55/SECNAVINST 4355.18/AFR 400-54/MCO 4430.3J.

c. Transportation Discrepancy Report (TDR) (SF 361). Fill out and forward Transportation Discrepancy Report (TDR) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

## 1-3. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

a. Army. If your Vehicular Adapter Test Set 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 or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSELPA-MA-D, Fort Monmouth, New Jersey 07703-5000. We'll send you a reply.

b. Navy. Navy personnel are encouraged to submit EIR's through their local Beneficial Suggestion Program.

c. Air Force. Air Force personnel are encouraged to submit EIR's in accordance with AFR 900-4.

## 1-4. DESTRUCTION OF MATERIEL TO PREVENT ENEMY USE

a. Army. The destruction of Army electronic materiel to prevent enemy use shall be in accordance with TM 750-244-2.

b. Navy. Navy Personnel comply with the local Command Material Destruction Plan.

c. Air Force. Air Force personnel comply with TM 750-244-2 or the local Emergency Destruction plan.

## 1-5. EQUIPMENT DATA

a. Electrical Characteristics

Power Source: +28.0 VDC at 2.0 A
Power Output: +28.0 and +8.5 VDC

b. Physical Characteristics

| | | | |
|---|---|---|---|
| Width: | 17 in. | Height: | 10.25 in. |
| Depth: | 12 in. | Weight: | 16 lbs. |

## 1-6. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

Special tools, TMDE, and support equipment are listed in the Maintenance Allocation Chart (MAC), Appendix B.

# SECTION II
# FUNCTIONAL DESCRIPTION

## 2-1. GENERAL

This section describes the Vehicular Adapter Test Set TS-4252/GRC- 215, including listings of controls and functional descriptions of major components with a block diagram.

## 2-2. DESCRIPTION

The TS-4252/GRC-215 tests and verifies the operation of the MT-6452/GRC-215. Tests points on the front panel can measure the status of the operating voltages and control signals of the Unit Under Test (UUT). Front panel switches control test conditions, and front panel LEDS (light-emitting diodes) show the status of the UUT, such as which harmonic filter is selected, the presence of operating voltage to the test set, and the operating power level selected.

## 2-3. CONTROLS AND INDICATORS (Cont.)

Figures 2-1 through 2-3 illustrate the locations of front panel indicators and test points. Table 2-1 lists the controls and indicators by callout number and gives a description of each.

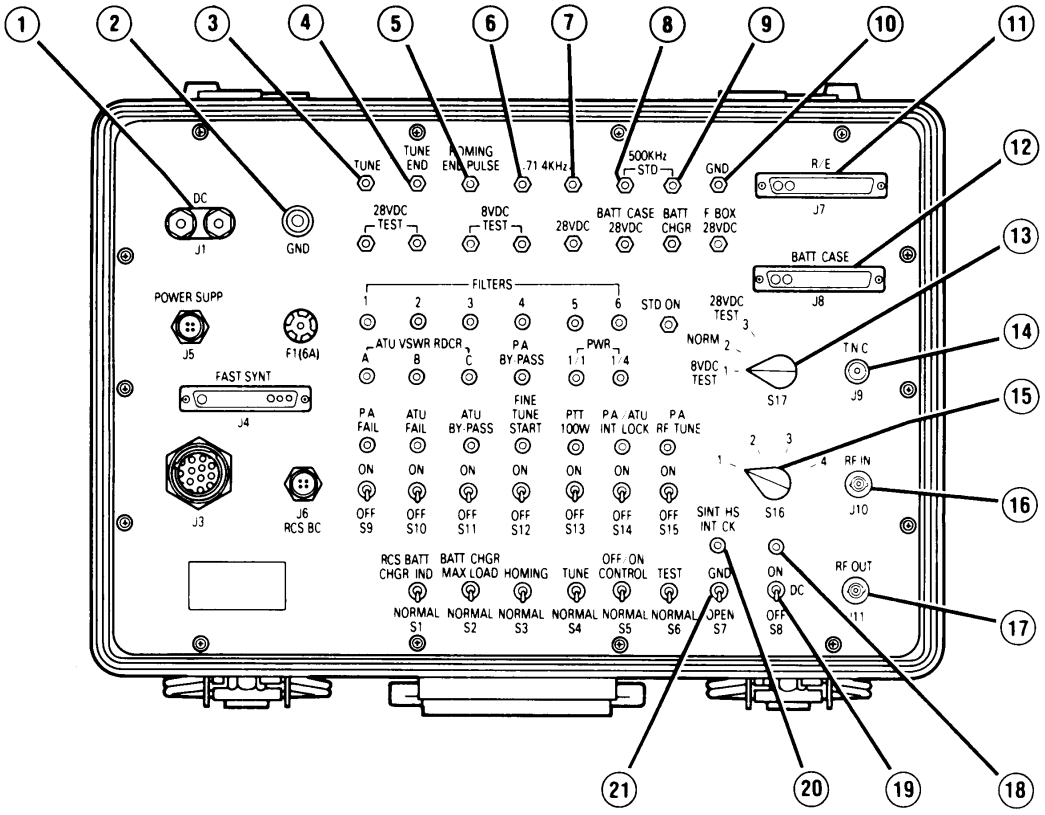



*Figure 2-1. Vehicular Adapter Test Set Front Panel*

*Table 2-1. Vehicular Adapter Test Set Controls and Indicators (1 of 6)*

| Fig. and Index No. | | Name | Purpose |
|---|---|---|---|
| 2-1- | (1) | J1 | +28.0 VDC from external power supply. |
| - | (2) | GND | Chassis ground. |
| - | (3) | TP1 | Tune signal generated by R/E, processed by VA, and applied to ATU. |
| - | (4) | TP2 | Tune End pulse sent to the R/E signaling the end of the tuning phase. |

**2-3. CONTROLS AND INDICATORS (Cont.)**

*Table 2-1. Vehicular Adapter Test Set Controls and Indicators (2 of 6)*

| Fig. and Index No. | | Name | Purpose |
|---|---|---|---|
| 2-1- | (5) | TP3 | Homing End pulse sent to the R/E signaling the end of the homing phase. |
| - | (6) | TP4 | 71.4 Khz synchronization signal used by the VA switching regulator. |
| - | (7) | TP5 | Chassis ground. |
| - | (8) | TP6 | 500 KHz signal from Fast Synthesizer of VA. |
| - | (9) | TP7 | Chassis ground. |
| - | (10) | Gnd | Chassis ground. |
| - | (11) | J7 | Connects P3 of VA to test set. |
| - | (12) | J8 | Connects J4 of VA to test set. |
| - | (13) | S17 | Selects between current or voltage measurement of +28.0 and +8.5 VDC at TP8 through TP11. In position 2 TP9 monitors +28.0 VDC and TP10 +8.5 VDC. In position 1 the +8.5 VDC current can be measured through TP10 and TP11. In position 3 the +28.0 VDC current can be measured through TP8 and TP9. |
| - | (14) | J9 | Connects J8 of VA to test set. |
| - | (15) | S16 | Selects signal generated by Fast Synthesizer to be applied to J9, J10, or J11. |
| - | (16) | 03 | J10 RF input. |
| - | (17) | J11 | RF output. |
| - | (18) | DS21 | Indicates presence of +28.0 VDC to test set. |
| - | (19) | S8 | Switch used to control distribution of DC power to test set and UUT. |
| - | (20) | DS20 | Indicates Fast Synthesizer interlock condition. |
| - | (21) | S7 | Grounds pin 23 of J4 to activate the Fast Synthesizer. |

**2-3. CONTROLS AND INDICATORS (Cont.)**

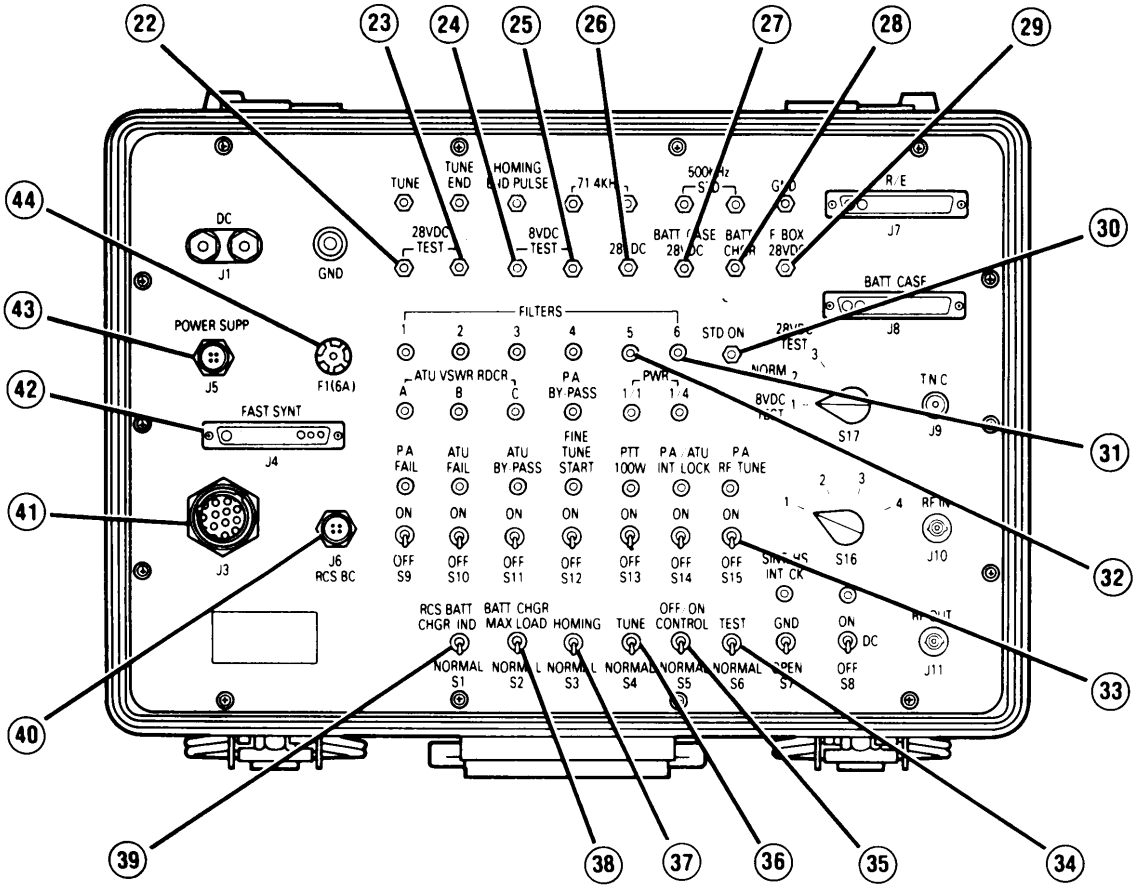



*Figure 2-2. Vehicular Adapter Test Set Front Panel*

*Table 2-1. Vehicular Adapter Test Set Controls and Indicators (3 of 6)*

| Fig. and Index No. | | Name | Purpose |
|---|---|---|---|
| 2-2 - | (22) | TP8 | +28.0 VDC current test point. |
| - | (23) | TP9 | +28.0 VDC from external power supply. |
| - | (24) | TP10 | +8.5 VDC supplied by U1 voltage regulator in test set. |
| - | (25) | TP11 | +8.5 VDC current test point. v |
| - | (26) | TP12 | +28.0 VDC from the VA to RCS rechargeable battery. |
| - | (27) | TP13 | +28.0 VDC from VA to Battery Case. |

## 2-3. CONTROLS AND INDICATORS (Cont.)

*Table 2-1. Vehicular Adapter Test Set Controls and Indicators (4 of 6)*

| Fig. and Index No. | | Name | Purpose |
|---|---|---|---|
| 2-2 - | (28) | TP14 | +28.0 VDC from VA to RCS. |
| - | (29) | TP15 | +28.0 VDC from VA to Filter Box. |
| - | (30) | TP17 | +12.0 VDC STANDARD ON ENABLE signal from Fast Synthesizer interlock. |
| - | (31) | DS3 | Indicates FL6 of PA is selected. |
| - | (32) | DS2 | Indicates FL5 of PA is selected. |
| - | (33) | S15 | Grounds pin E of J3 to simulate a PA RF Tune signal from the ATU. |
| - | (34) | S6 | Grounds pins 5 through 14 and 17 of J7 to test logic buffers internal to VA. |
| - | (35) | S5 | Grounds pin 33 of J7 to simulate a signal from the R/E to disconnect the +28.0 and +8.5 VDC input to the VA. |
| - | (36) | S4 | Connects +5.0 VDC to pin 34 of J7 to simulate a signal generated by the R/EW indicate the Tune condition. In the NORMAL position pin 34 is grounded. |
| - | (37) | S3 | Grounds pin C of J3 to simulate a Homing signal generated by the ATU. |
| - | (38) | S2 | Connects R1 load resistor to test the RCS +28.0 VDC charge voltage under maximum load conditions. |
| - | (39) | S1 | Grounds pin B of J6 to indicate to VA presence of a rechargeable battery in the RCS. |
| - | (40) | J6 | Connects P1 of VA to test set. |
| - | (41) | J3 | Connects J5 of VA to test set. |
| - | (42) | J4 | Connects J1 of UUT to test set. |
| - | (43) | J5 | Connects +28.0 and +8.5 VDC to UUT. |
| - | (44) | F1 | 6 amp fuse. |

**2-3. CONTROLS AND INDICATORS (Cont.)**

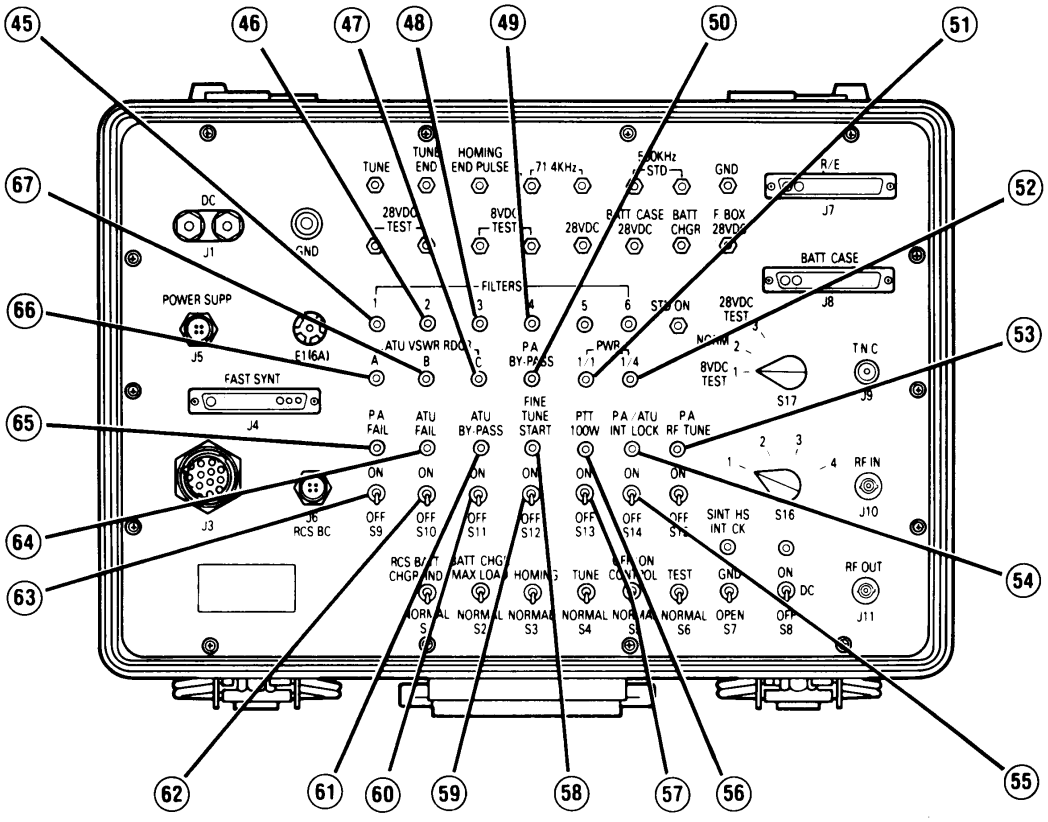



*Figure 2-3. Vehicular Adapter Test Set Front Panel*

Table 2-1. Vehicular Adapter Test Set
Controls and Indicators (5 of 6)

| Fig. and Index No. | | Name | Purpose |
|---|---|---|---|
| 2-3 - | (28) | DS4 | Indicates FL1 of PA is selected. |
| - | (29) | DS5 | Indicates FL2 of PA is selected. |
| - | (30) | DS12 | Indicates VSWR reducer network Code C. |
| - | (31) | DS6 | Indicates FL3 of PA is selected. |
| - | (32) | DS1 | Indicates FL4 of PA is selected. |
| - | (33) | DS11 | Indicates PA BY-PASS. |
| - | (34) | DS9 | Indicates PA is operating at full power. |

**2-3. CONTROLS AND INDICATORS (Cont.)**

*Table 2-1. Vehicular Adapter Test Set*
*Controls and Indicators (6 of 6)*

| Fig. and Index No. | | Name | Purpose |
|---|---|---|---|
| 2-3 - | (52) | DS10 | Indicates PA is operating at 1/4 of full power. |
| - | (53) | DS14 | Indicates PA RF Tune signal to VA from ATU. |
| - | (54) | DS17 | Indicates PA/ATU interlock signal to VA from PA and ATU. |
| - | (55) | S14 | Grounds pins L and T of J3 to simulate a PA/ATU Interlock signal from the PA and ATU. |
| - | (56) | DS18 | Indicates R/E PTT 100W condition. |
| - | (57) | S13 | Grounds pin 15 of J7 to simulate a PTT 10OW signal. In the OFF position pin 15 is connected to ground. |
| - | (58) | DS7 | Indicates Fine Tune Start signal from VA. |
| - | (59) | S12 | Grounds pin 40 of J7 to simulate a Fine Tune Start signal to the VA from the R/E. |
| - | (60) | S11 | Grounds pin 18 of J7 to simulate a ATU BY-PASS signal to the VA. |
| - | (61) | DS15 | Indicates by-pass of the ATU. |
| - | (62) | S10 | Grounds pin M of J3 to simulate a ATU FAULT signal to VA. |
| - | (63) | S9 | Grounds pin N of J3 to simulate a PA FAULT signal to VA. |
| - | (64) | DS16 | Indicates ATU fail condition. |
| - | (65) | DS19 | Indicates PA fail condition. |
| - | (66) | DS8 | Indicates VSWR reducer network Code A. |
| - | (67) | DS13 | Indicates VSWR reducer network Code B. |

## 2-3. CONTROLS AND INDICATORS (Cont.)

*Table 2-2. Vehicular Adapter Test Set Cable Assemblies*

| Cable | Part Number | Title |
|---|---|---|
| W1 | 569712-801 | DC Power Cable |
| W52 | 3-94295//B | None |
| W53 | 3-94296//B | None |
| W54 | 3-94297//B | None |
| W55 | 3-94298//B | None |
| W56 | 3-94299//B | None |

## 2-4. FUNCTIONAL DESCRIPTION OF VEHICULAR ADAPTER TEST SET

The TS-4252/GRC-215 tests the operation of the Vehicular Adapter. Test set front panel LEDs, test points, and switches create and monitor test conditions to isolate faults to the subassembly level.

Test set power is supplied by an external power supply, via connector J1 of the test set. The +28.0 VDC is routed through switch S8, fuse F1, and switch S17 to connector J5 which provides +28.0 VDC to the UUT (see FO-1). LED DS21 lights whenever +28.0 VDC is present, indicating when +28.0 VDC is applied to the test set. The +28.0 VDC input is also routed to a regulator, which regulates the input to +8.5 VDC. This +8.5 VDC is used as a power source for LEDs DS1 through DS20. The LEDs are driven by buffer transistors Q1 through Q20. The +8.5 VDC is connected to the transistor collectors and LEDs through pull-up resistors. When the transistors are biased on, the collector current causes a voltage drop across the pull-up resistors. With the anodes effectively at ground, the LEDs are turned off. When the transistors are biased off, no current flows through the pull-up resistors, resulting in +8.5 VDC at the anodes of the LEDs, causing them to turn on. Transistor bias is provided by the voltage divider that is formed by the resistor network and connected to the base of each transistor. The voltage divider distributes enough voltage across the base to emitter junction to forward-bias this junction and cause the transistor to conduct. Connecting a ground potential to the point between the 12K and 3.9K resistors causes the bias voltage to go to zero and turns the transistor off.

The exceptions are transistors Q3, Q15, Q16, Q17, Q18, and Q20 which drive LEDs DS10, DS15, DS16, DS17, DS19, and DS20 respectively. Q3 and Q15 are identical circuits. Only Q3's operation is described. Q3 has DS10 in series with its collector. When it conducts DS10 will light. The input of E18 will cause Q7 and Q3 to conduct or not.

## 2-4. FUNCTIONAL DESCRIPTION OF VEHICULAR ADAPTER TEST SET (Cont.)

DS9 will light when E18 is low and DS10 will light when E18 is high. Q16 and Q17 are identical circuits. Only Q16's operation is described. Q16 receives its base bias from E32. A high will cause Q16 to conduct. Ground is felt at E33 and DS16 will not be lit. A low on the base will cause the transistor to cut off and +8.0 VDC is felt at E33 lighting the LED. Q18 is a similar circuit. DS19 is in series with its collector and works just the opposite. When Q18 is conducting the LED is lit. Q20 is biased to conduct under normal operation. When its base is grounded Q20 cuts off and +8.0 VDC is felt at the cathode of DS20 causing it to light.

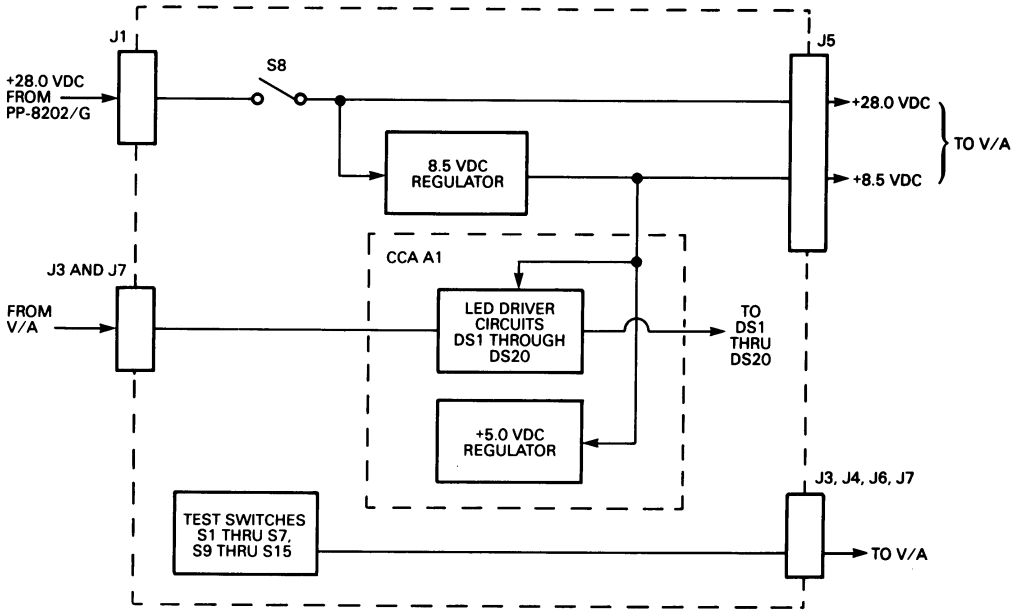



*Figure 2-4. Block Diagram*

The +8.5 VDC output of U1 is further regulated to +5.0 VDC by U2. The +5.0 VDC output is used to simulate PTT 100W and TUNE signals to the VA. Switches S4 and S13 switch between the +5.0 VDC and ground. Switch S2, when closed, places a 140-ohm resistor load on pin A of connector J6 to test the maximum current rating of the +28.0 VDC charging voltage from the VA. Closing switch S1 grounds pin B of connector J6, indicating to the VA that a rechargeable battery is present.

## 2-4. FUNCTIONAL DESCRIPTION OF VEHICULAR ADAPTER TEST SET (Cont.)

On connector J3, switch S15, when closed, grounds pin E, simulating a RF TUNE signal from the ATU to the VA. In the same manner, switch S9 simulates a PA FAIL signal, S10 an ATU FAULT signal, S3 a HOMING signal, and S14 an ATU INTERLOCK signal by grounding pins N, M, C, L and T, respectively.

On connector J7, switch S12, when closed, grounds pin 40, simulating a FINE TUNE START signal generated by the R/E to the VA. Switch S5 controls the ON/OFF signal to the VA by grounding pin 33. Switch S11 simulates an ATU bypass signal from the R/E by grounding pin 18. Switch S6 grounds pins 5 through 14 and pin 17. Check the PA interface (A1A1A5) in the VA. It lights FILTER SELECT LEDs 1 through 6, VSWR REDUCERs (RCDR) A, B, and C, PWR 1/1, and PA BYPASS.

On connector J4, switch S7 activates the Fast Synthesizer of the VA by grounding pin 23. Switch S16 selects one of four frequencies from the Fast Synthesizer to bring up on front panel connector J10. These four signals are position 1, 500 KHz, position 2, 74.5/75.5 MHz, position 3, VCO, and position 4, STD 10 MHz.

## SECTION III
## PREPARATION FOR USE

### 3-1. GENERAL

This section contains instructions for preparation for use of Vehicle Adapter Test Set TS-4252/GRC-215. These include instructions for unpacking, if any special procedures are required, inspecting unpacked equipment for damage, and any preliminary servicing procedures required to prepare the equipment for operation.

### 3-2. UNPACKING

No special procedures are required for removing the test set from its shipping container. Use normal care in handling electronic equipment. Avoid jarring test set during removal.

### 3-3. CHECKING UNPACKED EQUIPMENT

a. Reporting of Item and Packaging Discrepancies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 73511-2/DLAR 4140.55/SECNAVINST 4355.18/AFR 400-54/MCO 4430.3J.

b. Transportation Discrepancy Report (TDR) (SF 361). Fill out and forward Transportation Discrepancy Report (TDR) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

c. Refer to DA Pam 25-30 to see if your equipment has had any Modification Work Orders (MWO) applied.

### 3-4. PRELIMINARY SERVICING OF EQUIPMENT

Prior to placing the test set in service, perform the following visual inspection procedures. Do not connect unit to primary power source or any other equipment during these procedures.

a. Check all front panel connectors for broken, bent or missing pins.

b. Check all front panel mounted switches, lamps, or other hardware for damage.

# SECTION IV
# OPERATION

## 4-1. GENERAL

This section contains operating procedures for the Vehicular Adapter Test Set TS-4252/GRC-215.

## 4-2. INITIAL POSITION OF CONTROLS.

Table 4-1 lists the initial positions of the front panel controls prior to operating the equipment. See Figures 2-1 through 2-3 for location of front panel controls.

*Table 4-1. Initial Position of Controls*

| Fig. and Index No. | Control Name | Position |
|---|---|---|
| 2-1 - (21) | S7 | OPEN |
| - (15) | S16 | 1 |
| - (13) | S17 | 2 (NORM) |
| - (19) | S8 | OFF |
| 2-2 - (33) | S15 | OFF |
| - (34) through (39) | S6 through S1 | NORMAL |
| 2-3- (55), (60), and (62) | S14, S11 and S10 | ON |
| - (57), (59), and (63) | S13, S12, and S9 | OFF |

## 4-3. OPERATING INSTRUCTIONS

Begin with the initial control settings, as shown in Table 4-1. The test set lid stores the cable assemblies. Connect cable W1 to connector J1 on the test fixture and connect to a power supply, adjusted to +28.0 VDC. Follow the test procedures in the technical manual for the UUT. When the test procedures are completed, switch S8 to OFF, switches S1 through S6 to OFF, switch S7 to OPEN, switches S9 and S15 to OFF, S16 to position 1 and S17 to position 2.

## SECTION V
## MAINTENANCE

### 5-1. GENERAL

This section contains operational check procedures, the symptom index, troubleshooting flowcharts, and removal/replacement procedures for Vehicular Adapter Test Set TS-4252/GRC-215.

The operational check is performed using the following test equipment.

Test Equipment

| | |
|---|---|
| Digital Multimeter, AN/USM-486 | W1 DC Power Cable, 569712-801 |
| Power Supply, PP-8202/G | (P/O TS-4252/GRC-215) |
| Power Supply, PP-3940B | |

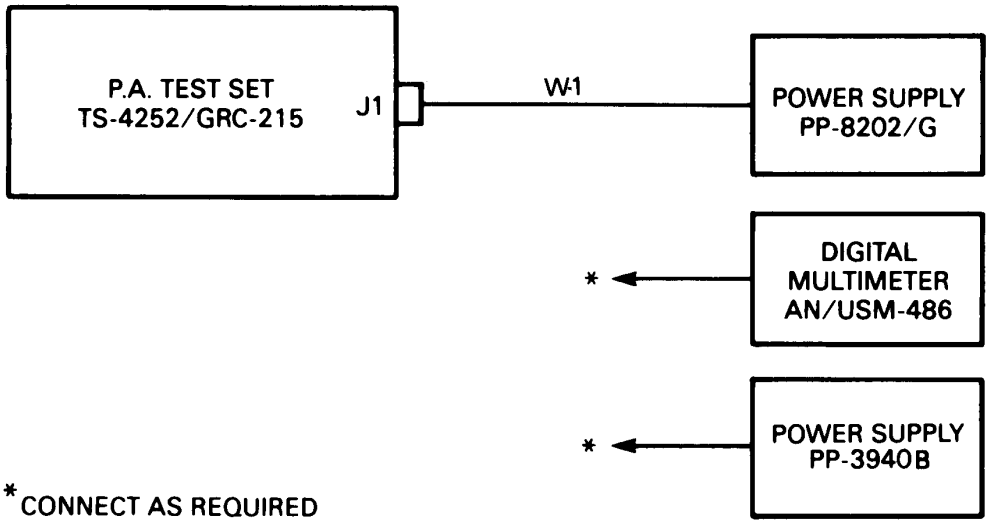



*Figure 5-1. Operational Test Setup*

## 5-2. OPERATIONAL CHECK OF VEHICULAR ADAPTER TEST SET

a. Continuity Check

1. Disconnect the test set from power supply and measure for less than 1.5 ohms resistance between the following points:

| FROM | | TO |
|---|---|---|
| +28 VDC TEST-RIGHT | (TP9) | J5 pin C |
| | J1-BLK | J5 pin B |
| +8.5 VDC TEST LEFT | (TP10) | J5 pin A |
| 71.4 KHz BLK | (TP5) | J5 pin B |
| 71.4 KHz RED | (TP4) | J8 pin 25 |
| BATT CASE +28.0 VDC | (TP13) | J8 pin 19 |
| 71.4 KHz BLK | (TP5) | J6 pin D |
| BATT CHGR | (TP13) | J6 pin C |
| +28.0 VDC | (TP12) | J6 pin A |
| 71.4 KHz BLK | (TP5) | J5 pins 26,31,33 |
| 500 KHz STD BLK | (TP7) | J4 pins 22,27,28,30 |
| 500 KHz STD BLK | (TP7) | J7 pins 1,26,31 |
| 500 KHz STD RED | (TP6) | J7 pin 27 |
| F BOX +28.0 VDC | (TP15) | J7 pin 4 |
| STD ON | (TP17) | J7 pin 30 |
| TUNE END | (TP2) | J7 pin 38 |
| HOMING END PULSE | (TP3) | J7 pin 39 |
| | GND | J3 pin A |
| | GND | chassis |
| | GND | 500 KHz STD BLK (TP7) |
| | GND | 71.4 KHz BLK (TP5) |

2. Verify continuity between 500 KHz STD BLK (TP7) and the outer conductor of J4 pins A1, A2, A3, and A4, as well as J7 pins A1 and A2.

3. Set switch S8 to ON switch S17 as listed below and verify continuity or an open circuit between the following points:

| S17 SETTING | FROM | TO | RESISTANCE |
|---|---|---|---|
| 3 | J1-RED | J5 pin C | More than 20 Megohms |
| 2 | J1-RED | J5 pin C | Less than 1.5 ohms |
| 1 | J1-RED | J5 pin C | Less than 1.5 ohms |

4 Return switch S8 to OFF, set switch S1 as listed below and verify continuity or an open circuit between the following points:

| S1 SETTING | FROM | TO | RESISTANCE |
|---|---|---|---|
| RCS.BATT CHGR IND | 71.4 KHz BLK | J6 pin B | Less than 1.5 ohms |
| NORMAL | 71.5 KHz BLK | J6 pin B | More than 20 Megohms |

## 5-2. OPERATIONAL CHECK OF VEHICULAR ADAPTER TEST SET (Cont.)

5 Set switch S16 as listed below and measure for less than 1.5 ohms resistance between the following points:

| S16 SETTING | FROM | TO |
|---|---|---|
| 1 | J11 center pin | J7-27 |
| 1 | J10 center pin | J4-A3 |
| 2 | J11 center pin | J7-A2 |
| 2 | J10 center pin | J4-A2 |
| 3 | J11 center pin | J7-A1 |
| 3 | J10 center pin | J4-A4 |
| 4 | J11 center pin | J9 center pin |
| 4 | J10 center pin | J4-27 |

6 Set switch S7 as listed below and verify continuity or an open circuit between the following points:

| S7 SETTING | FROM | TO | RESISTANCE |
|---|---|---|---|
| GND | GND | J4 pin 23 | Less than 1.5 ohms |
| OPEN | GND | J4 pin 23 | More than 20 Megohms |

7 Set switch S6 as listed below and verify continuity or an open circuit between the following points:

| S6 SETTING | FROM | TO | RESISTANCE |
|---|---|---|---|
| TEST | GND | J7 pin 7 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 7 | More than 20 Megohms |
| TEST | GND | J7 pin 5 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 5 | More than 20 Megohms |
| TEST | GND | J7 pin 6 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 6 | More than 20 Megohms |
| TEST | GND | J7 pin 8 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 8 | More than 20 Megohms |
| TEST | GND | J7 pin 9 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 9 | More than 20 Megohms |
| TEST | GND | J7 pin 10 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 10 | More than 20 Megohms |
| TEST | GND | J7 pin 11 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 11 | More than 20 Megohms |
| TEST | GND | J7 pin 12 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 12 | More than 20 Megohms |
| TEST | GND | J7 pin 13 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 13 | More than 20 Megohms |
| TEST | GND | J7 pin 14 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 14 | More than 20 Megohms |
| TEST | GND | J7 pin 17 | Less than 1.5 ohms |
| NORMAL | GND | J7 pin 17 | More than 20 Megohms |

**5-2. OPERATIONAL CHECK OF VEHICULAR ADAPTER TEST SET (Cont.)**

8. Set switches as listed below and verify continuity or an open circuit between the following points:

| SET-UP | FROM | TO | RESISTANCE |
|---|---|---|---|
| S11 to ON | GND | J7 pin 18 | Less than 1.5 ohms |
| S11 to OFF | GND | J7 pin 18 | More than 20 Megohms |
| S5 to OFF/ON | GND | J7 pin 33 | Less than 1.5 ohms |
| S5 to NORMAL | GND | J7 pin 33 | More than 20 Megohms |
| S12 to ON | GND | J7 pin 40 | Less than 1.5 ohms |
| S12 to OFF | GND | J7 pin 40 | More than 20 Megohms |
| S14 to ON | J3 pin L | J3 pin T | Less than 1.5 ohms |
| S14 to ON | J3 pin L | J3 pin A | Less than 1.5 ohms |
| S14 to OFF | J3 pin L | J3 pin A | More than 20 Megohms |
| S10 to ON | J3 pin M | J3 pin A | Less than 1.5 ohms |
| S10 to OFF | J3 pin M | J3 pin A | More than 20 Megohms |
| S3 to ON | J3 pin C | J3 pin A | Less than 1.5 ohms |
| S3 to OFF | J3 pin C | GND | More than 20 Megohms |
| S9 to ON | J3 pin N | GND | Less than 1.5 ohms |
| S9 to OFF | J3 pin N | GND | More than 20 Megohms |
| S15 to ON | J3 pin E | GND | Less than 1.5 ohms |
| S15 to OFF | J3 pin E | GND | More than 20 Megohms |

b. Load Resistors Check

1. Set switch S2 and S17 as listed below and measure the resistance between the following points:

| SET-UP | FROM | TO | RESISTANCE |
|---|---|---|---|
| S2 to MAX LOAD | +28.0 VDC | GND | 126 to 154 ohms |
| S2 to NORMAL | +28.0 VDC | GND | More than 20 Megohms |
| S17 to NORM TEST-RIGHT | TUNE (TP1) +28.0 VDC | | 10.8 to 13.2 Kohms |

c. Input Power Check

1. Reconnect the test set to the power supply and adjust to +28.0 VDC. Set S8 to ON and verify that the DC ON, PWR 1/4, ATU BY-PASS, ATU FAIL, and PA/ATU INT LOCK are lit.

2. Connect the negative probe of DMM to GND, set switches as listed below and verify the following voltages with the positive probe connected to the following test points:

| SET-UP | TP | VOLTAGE |
|---|---|---|
| S17 to 2 | +8.5 VDC LEFT | +8.5 (+8.25 to +8.75) VDC |
| S17 to 1 | +8.5 VDC RIGHT | +8.5 (+8.25 to +8.75) VDC |
| N/A | TUNE | +28.0 (+27.0 to +29.0) VDC |
| N/A | J3 pin F | +28.0 (+27.0 to +29.0) VDC |

**5-2. OPERATIONAL CHECK OF VEHICULAR ADAPTER TEST SET (Cont.)**

3. Connect the negative probe of DMM to GND, set switches as listed below and verify the following voltages with the positive probe connected to the following test points:

| SET-UP | TP | VOLTAGE |
|---|---|---|
| N/A | J7 pin 16 | +14.0 (+12.6 to +15.4) VDC |
| S4 to TUNE | J7 pin 34 | +5.0 (+4.75 to 5.25) VDC |
| S4 to NORMAL | J7 pin 34 | +0.0 (-0.25 to +0.25) VDC |
| S13 to ON | J7 pin 15 | +5.0 (+4.75 to 5.25) VDC |
| S13 to OFF | J7 pin 15 | +0.0 (-.025 to +0.25) VDC |

d. LED check

1. Connect a ground to the connector pins listed below and observe that the associated LED lights:

| Pin | LED |
|---|---|
| J3 pin D | Fine Tune Start (DS7) |
| J3 pin P | PWR SEL 1/1 (DS9) |
| J3 pin H | CODE A VSWR RDCR (DS8) |
| J3 pin J | CODE B VSWR RDCR (DS13) |
| J3 pin K | CODE C VSWR RDCR (DS12) |
| J3 pin R | PA BY-PASS (DS11) |
| J3 pin S | PTT 100W (DS18) |
| J3 pin U | FL1 (DS4) |
| J3 pin V | FL2 (DS5) |
| J3 pin W | FL3 (DS6) |
| J3 pin X | FL4 (DS1) |
| J3 pin Y | FL5 (DS2) |
| J3 pin Z | FL6 (DS3) |
| J3 pin c | PA RF TUNE (DS14) |
| J7 pin 41 | SINT. HS INT. CK (DS20) |

2. Using PP-3940B, connect +5.0 VDC to the following pins and observe the associated LEDs:

| Pin | LED |
|---|---|
| J7 pin 3 | PA FAIL (DS19) is lit |
| J7 pin 23 | ATU/FAULT (DS16) is not lit |
| J7 pin 24 | PA/ATU INT. LOCK (DS17) is not lit |

3. Connect a ground to the following pins and observe the associated LED's:

| Pin | LED |
|---|---|
| J3 pin P | PWR SEL 1/4 (DS10) is not lit<br>PWR SEL 1/1 (DS59) is not lit |
| J3 pin | G ATU BY-PASS (DS15) is not lit |

**5-2. OPERATIONAL CHECK OF VEHICULAR ADAPTER TEST SET (Cont.)**

e. Continuity Testing of Associated Cables.

1. Test continuity of each cable (UUT), W1, W52, W53, W54, W55 and W56, for less than 0.5 ohms resistance with DMM, (See FO-2).

## 5-3. SYMPTOM INDEX

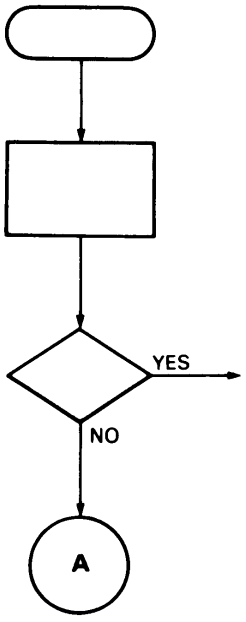
The following chart is intended to assist in rapid identification and replacement of faulty components.

| SYMPTOM | TROUBLESHOOTING FLOWCHART PARAGRAPH |
|---|---|
| +28.0, +8.5, or +5.0 VDC Missing | 5-6 |
| Front panel LED DS1, DS2, DS3, DS4, DS5, DS6, DS7, DS8, DS9, DS11, DS12, DS13, DS14, OR DS18 Faulty | 5-7 |
| Front panel LED DS10 or DS15 Faulty | 5-8 |
| Front panel LED DS16 or DS17 Faulty | 5-9 |
| Front panel LED DS19 Faulty | 5-10 |
| Front panel LED DS20 Faulty | 5-11 |

## 5-4. FLOWCHARTS AND HOW TO USE THEM

The flowcharts make troubleshooting easier and give maintenance personnel a clear path to follow.

To use the flowchart begin at start and follow the path indicated by the arrow. Perform the task given by the symbol block and then follow the arrow to the next block. At the decision symbol be sure to follow the correct path indicated by YES or NO.

| SYMBOL | MEANING |
|---|---|
|  | Start and finish symbol indicates starting and finishing points.<br><br>Task symbol indicates what to do and where to do it.<br><br>Decision symbol (yes or no) indicates that a decision must be made. The direction to go from the decision symbol depends on the decision made.<br><br>Continuation symbol indicates that the path continues to or comes from another flowchart. |

## 5-5. TROUBLESHOOTING

**INITIAL SETUP**

| Test Equipment | Equipment Condition |
|---|---|
| Digital Multimeter, AN/USM-486 | Test Set Connected as shown. |
| Power Supply, PP-8202/G | |
| Power Supply, PP-3940B | Adjust PP-8202/G power supply to +28.0 (+27.0 to +29.0) VDC. |
| W1 DC Power Cable, 569712-801 (P/O TS-4252/GRC-215) | Adjust PP-3940B power supply to +5.0 (+4.75 to +5.25) VDC. |
| **Tools** | |
| Tool Kit TK-17 | |

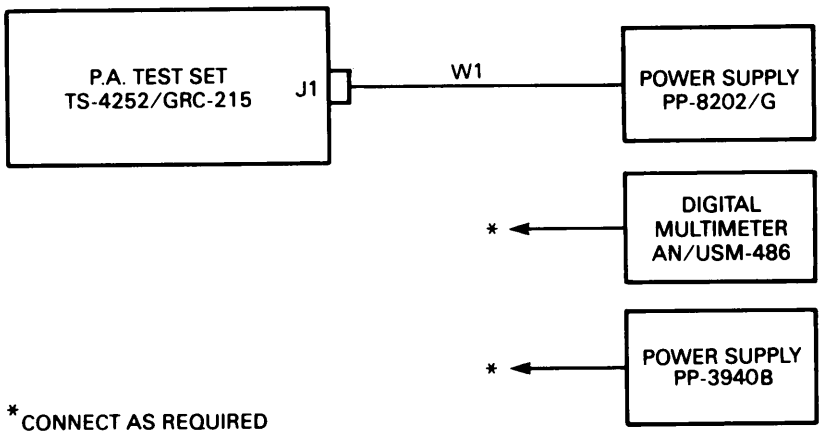
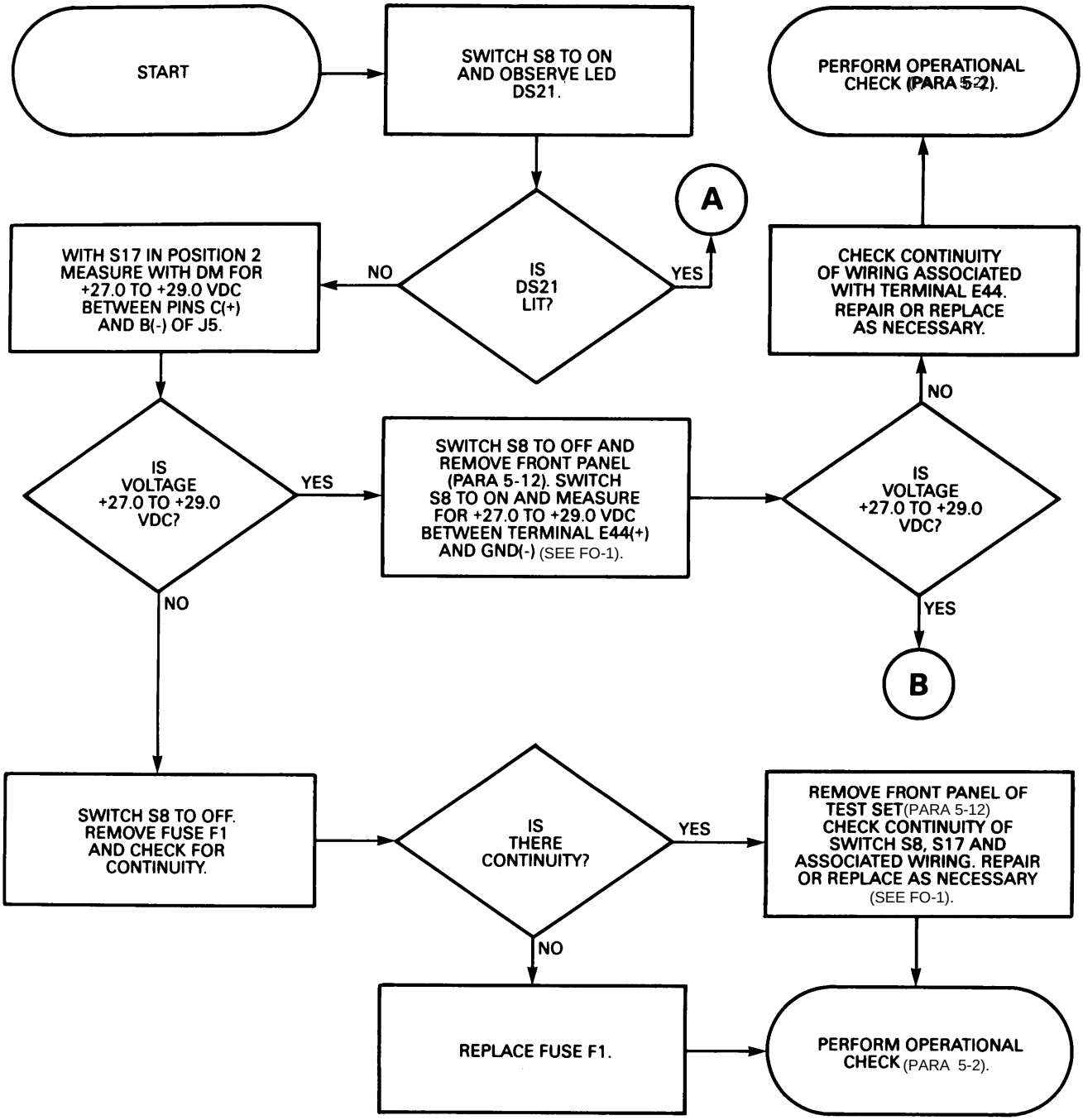


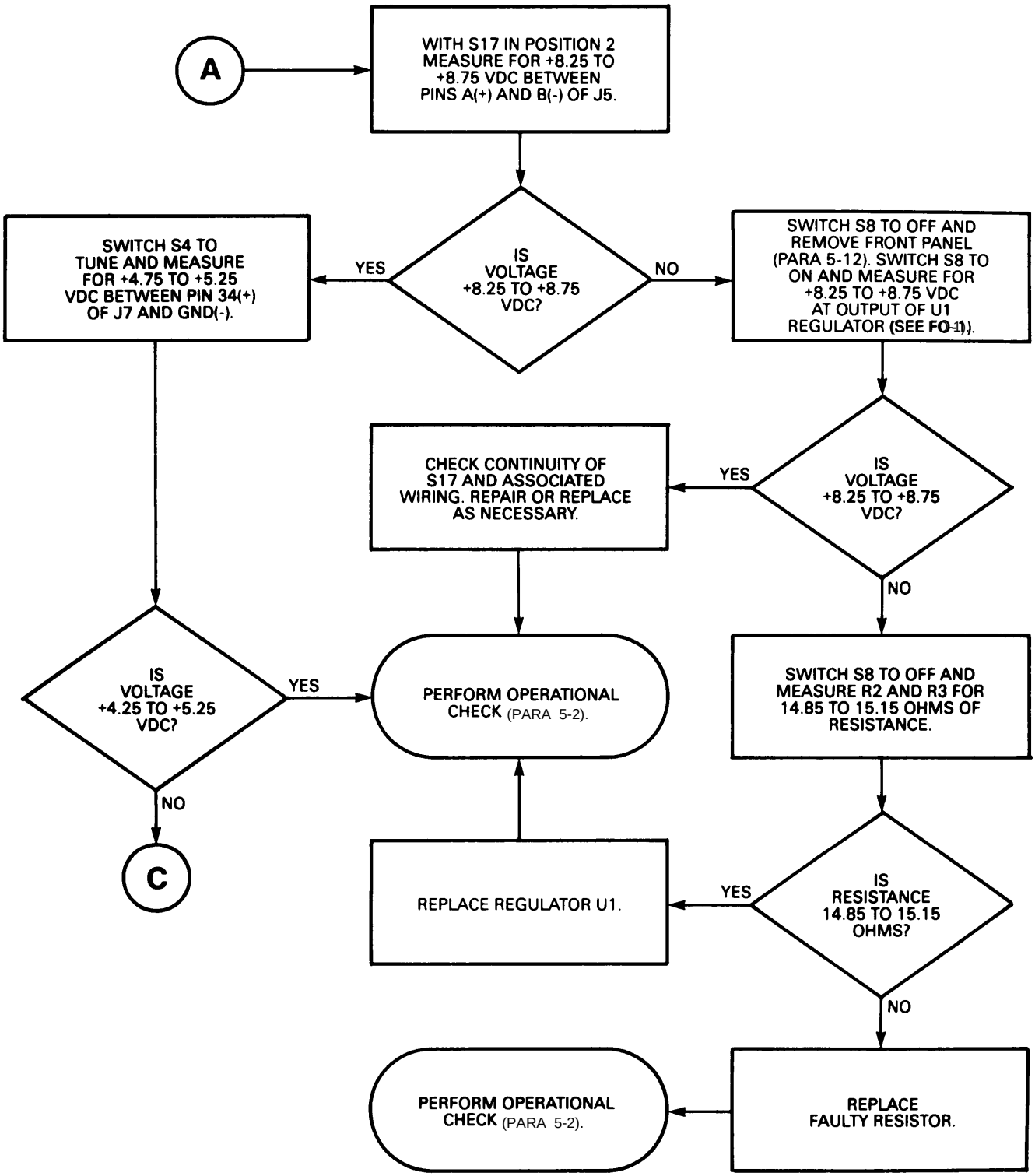

Figure 5-2 Initial kSetup

## 5-6. +28.0, +8.5, OR +5.0 VDC MISSING

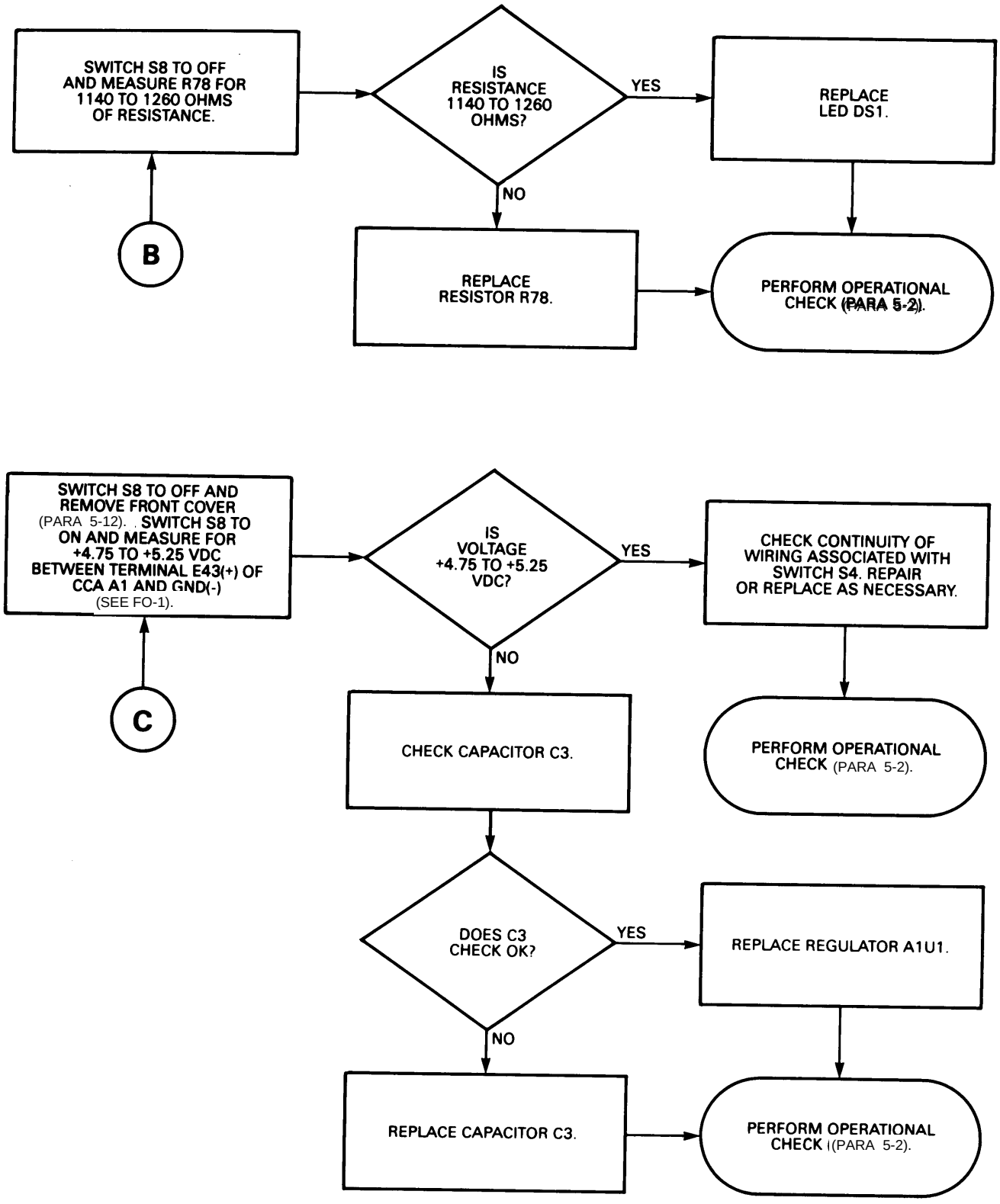
Refer to paragraph 5-5 for initial setup illustration and test equipment listing.



**5-6. +28.0, +8.5, OR +5.0 VDC MISSING (Cont.)**

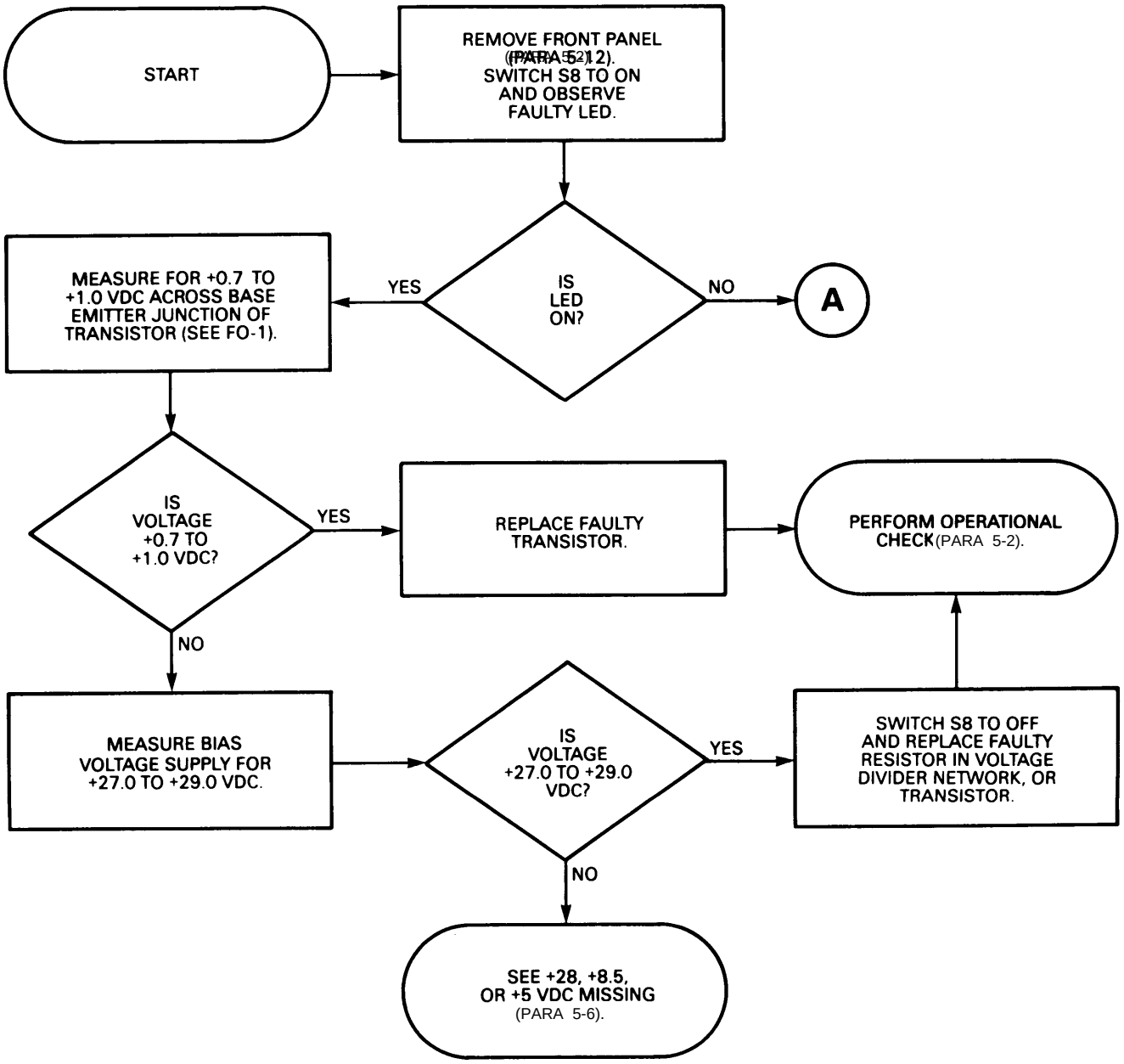


**5-6. +28.0, +8.5, OR +5.0 VDC MISSING (Cont.)**

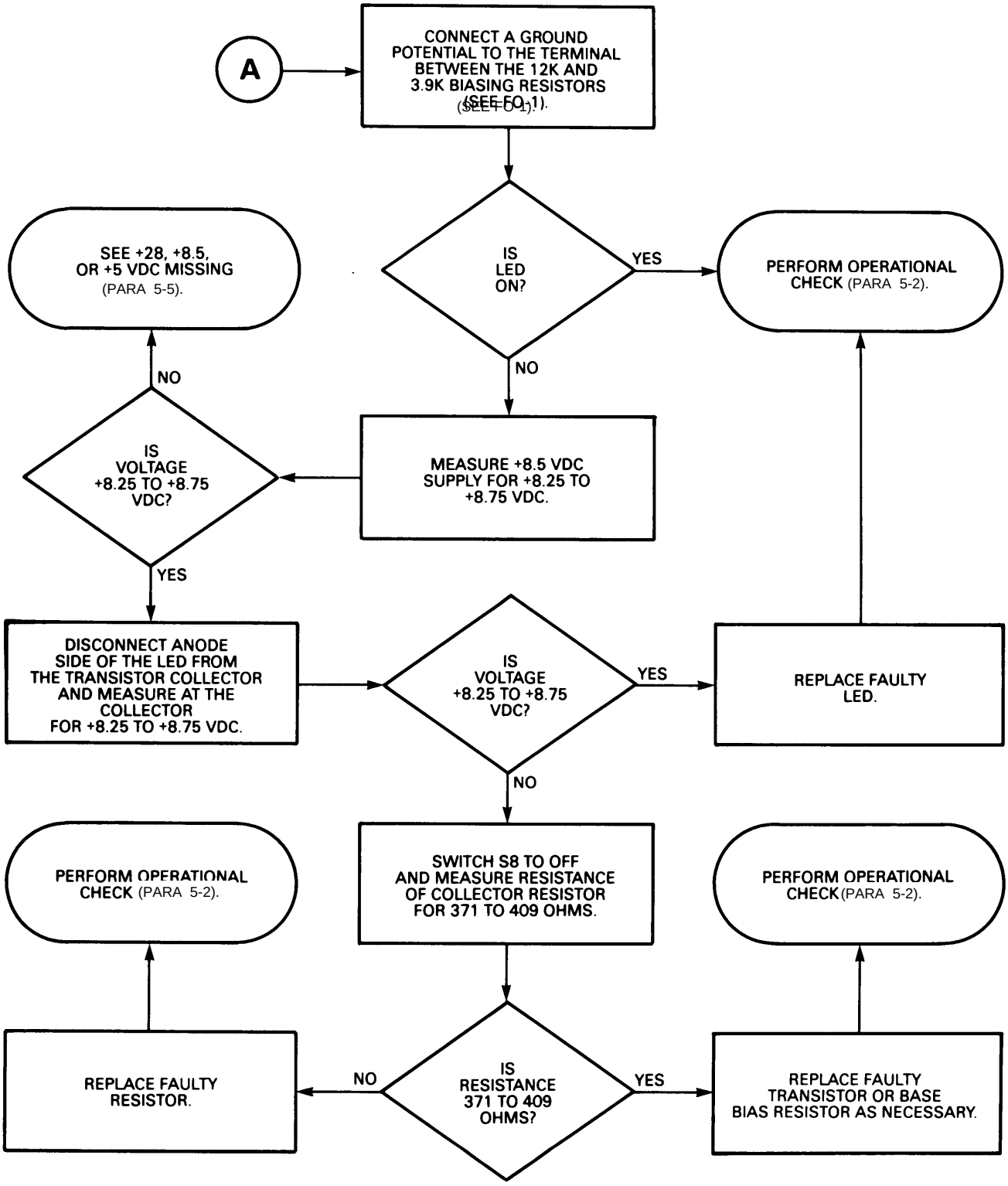


## 5-7. FRONT PANEL LED DS1, DS2, DS3, DS4, DS5, DS6, DS7, DS8, DS9, DS11, DS12, DS13, DS14, OR DS18 FAULTY

Refer to paragraph 5-5 for initial setup illustration and test equipment listing.

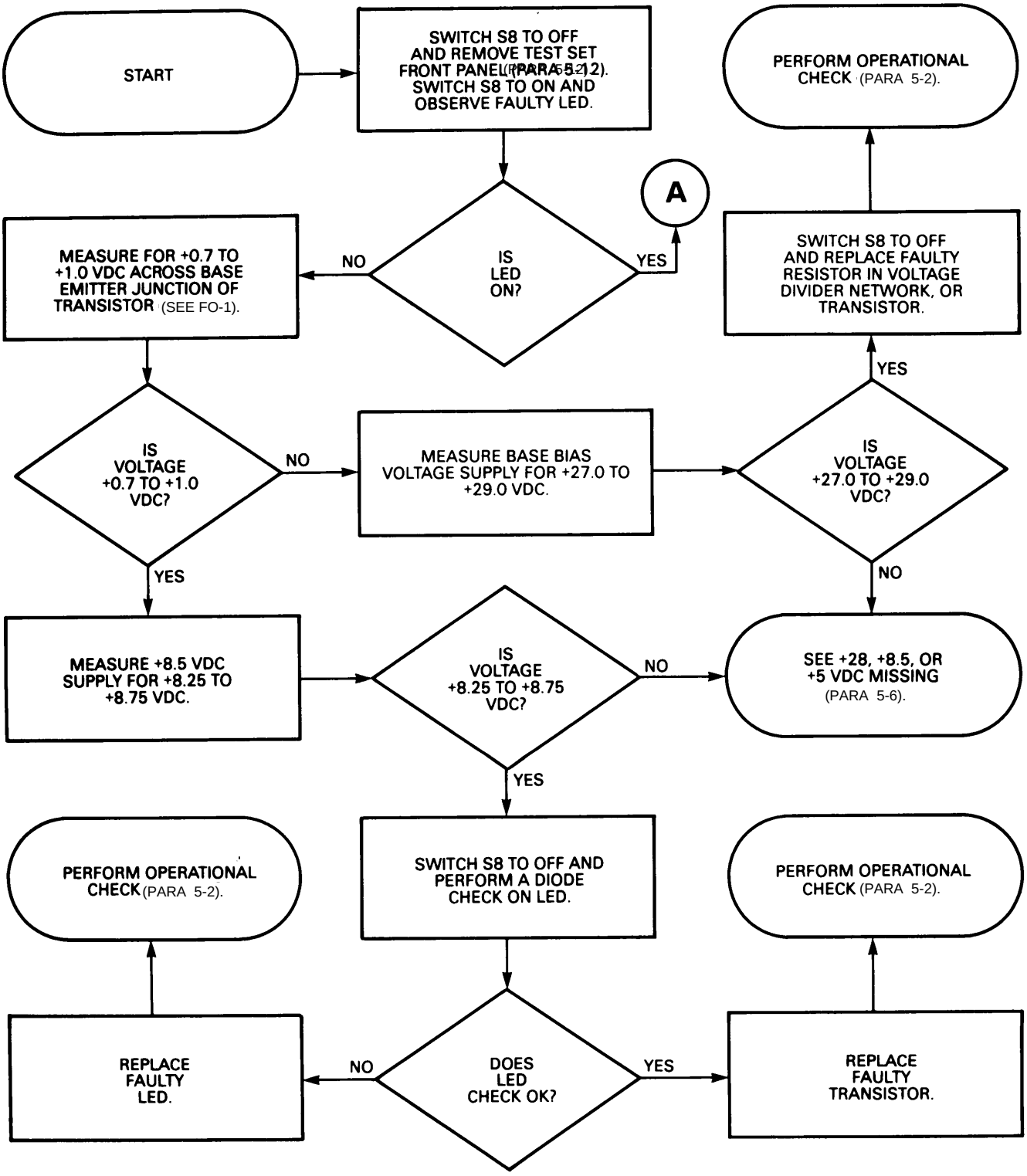


**5-7. FRONT PANEL LED DS1, DS2, DS3, DS4, DS5, DS6, DS7, DS8, DS9, DS11, DS12, DS13, DS14, OR DS18 FAULTY (Cont.)**

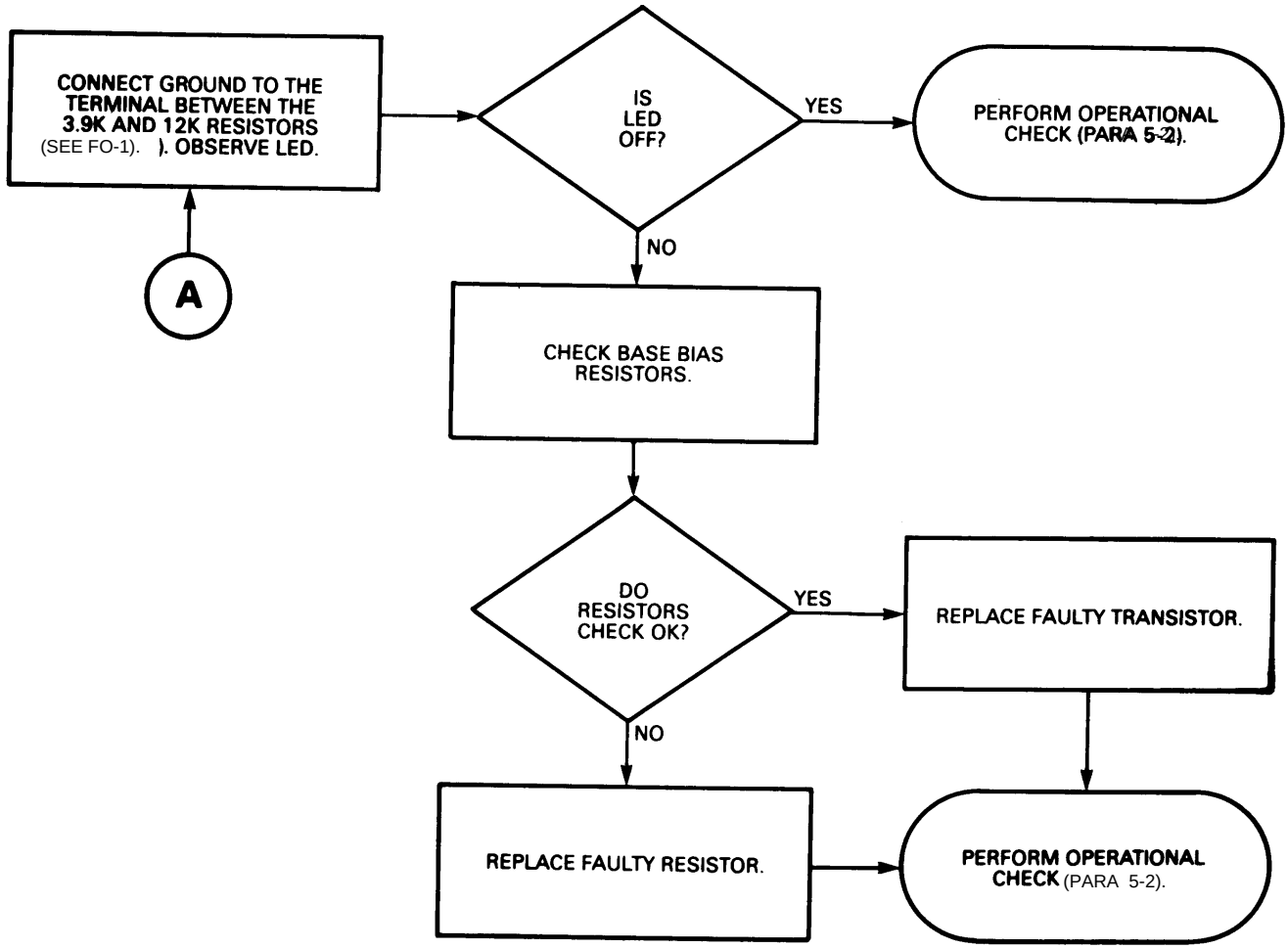


## 5-8. FRONT PANEL LED DS10 OR DS15 FAULTY

Refer to paragraph 5-5 for initial setup illustration and test equipment listing.

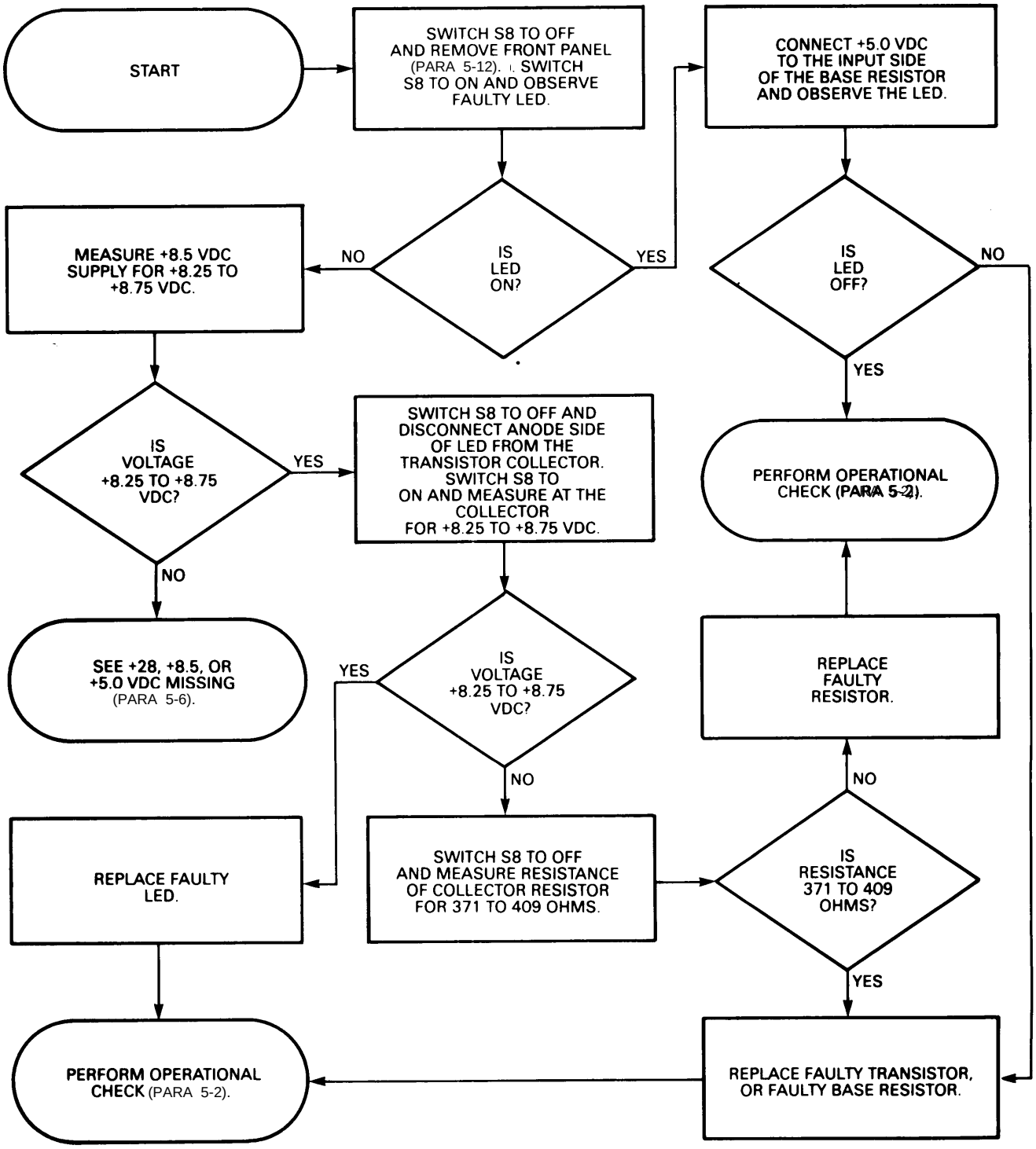


**5-8. FRONT PANEL LED DS10 OR DS15 FAULTY (Cont.)**



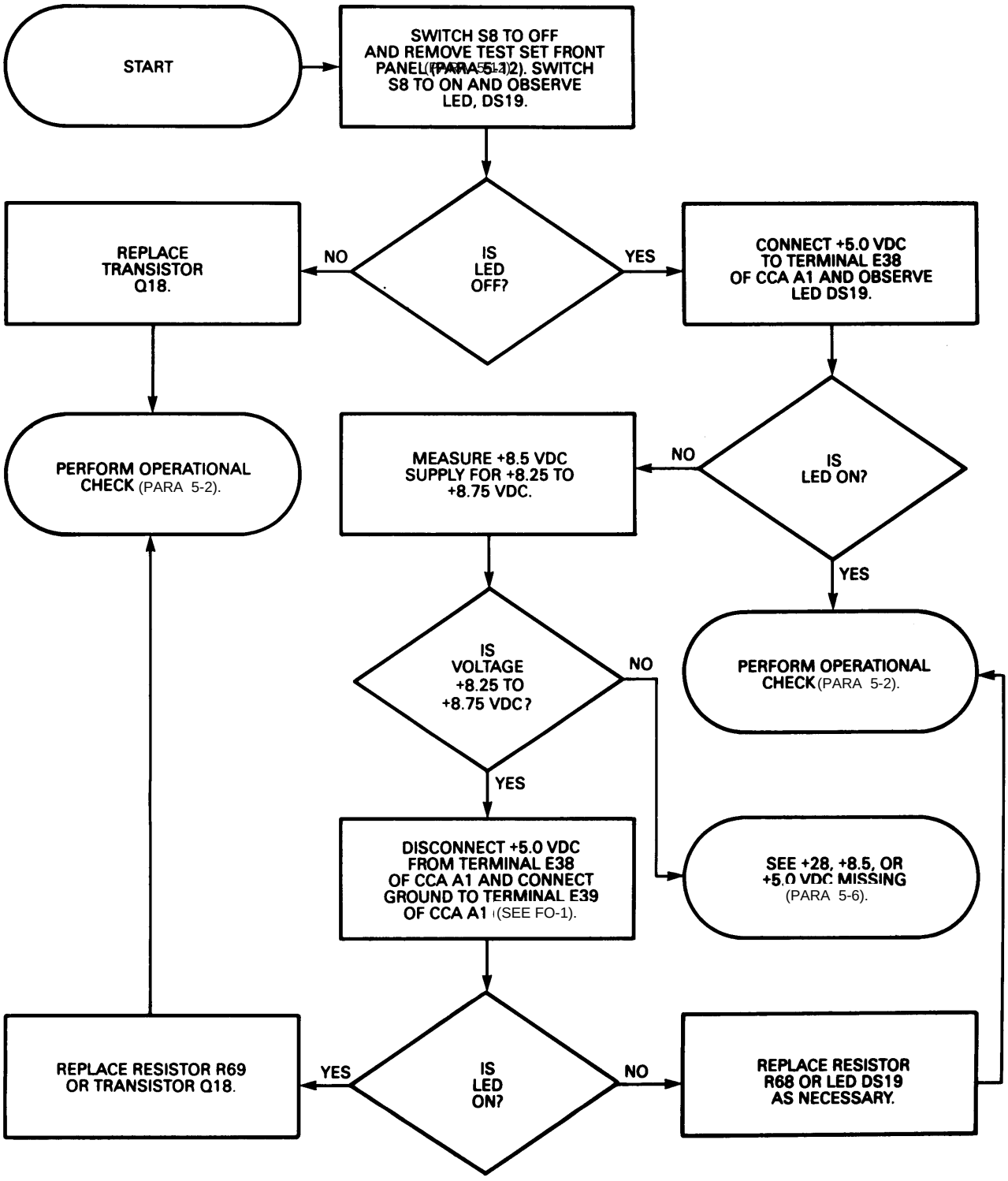
## 5-9. FRONT PANEL LED DS16 OR DS17 FAULTY

Refer to paragraph 5-5 for initial setup illustration and test equipment listing.



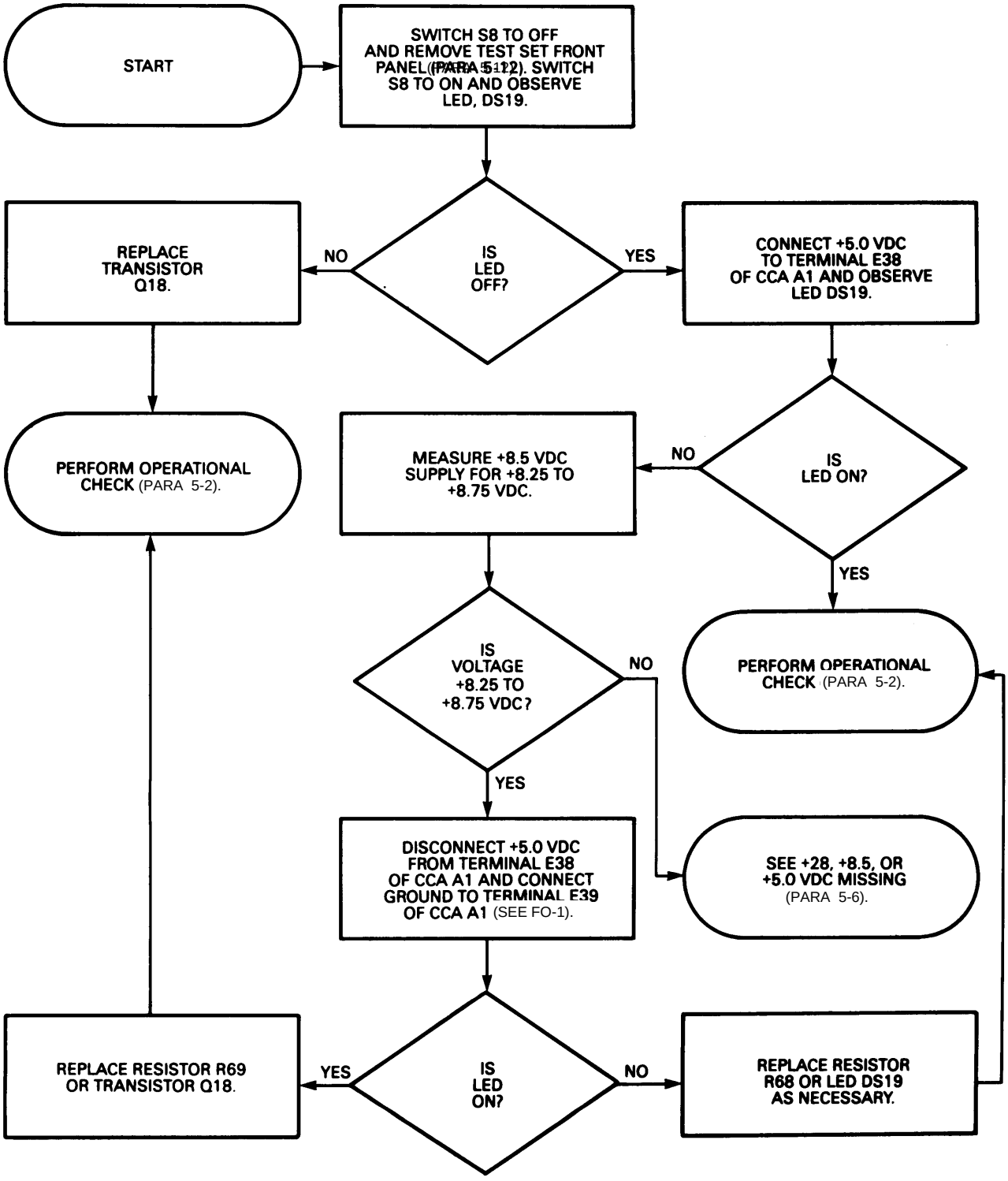
## 5-10. FRONT PANEL LED DS19 FAULTY

Refer to paragraph 5-5 for initial setup illustration and test equipment listing.



## 5-11. FRONT PANEL LED DS20 FAULTY

Refer to paragraph 5-5 for initial setup illustration and test equipment listing.



## SECTION VI
## PREPARATION FOR STORAGE OR SHIPMENT

### 6-1. GENERAL

a. Army. Administrative storage of equipment issued to and used by Army activities will have preventive maintenance performed in accordance with the PMCS charts before storing. When removing the equipment from administrative storage the PMCS should be performed to assure operational readiness.

b. Navy. Refer to NAVSUP PUB 503.

c. Air Force. Refer to AFM 66-267 (storage) and AFR 67-31 (shipment).

### 6-2. MARKING

The marking on the exterior of the container shall be in accordance with MIL-STD-129H.

**6-1/(6-2 Blank)**

# APPENDIX A
# REFERENCES

## A-1. SCOPE

This appendix lists publications that are referenced in this manual that contain information applicable to the maintenance of the Vehicular Adapter Test Set TS-4252/GRC-215.

## A-2. PUBLICATIONS

Air Force Suggestion Program ..... AFR 900-4

Consolidated Index of Army
Publications and Blank Forms ..... DA Pam 25-30

First Aid for Soldiers ..... FM 21-11

Maintenance Management Policy ..... AFR 66-1

Marking for Shipment and Storage ..... MIL-STD-129H

Procedures for Destruction of Electronics
Materiel to Prevent Enemy Use
(Electronics Command) ..... TM 750-224-2

Product Quality Deficiency Report ..... SF 368

Report of Discrepancy (ROD) ..... SF 364

Reporting of Item and Packaging
Discrepancies ..... SECNAVINST 4355.18

Reporting of Transportation Discrepancies
in Shipment ..... NAVSUPINST 4610.33C

Ships Maintenance and Material Management (3-M)
Manual, Promulgation of ..... OPNAVINST 4790.2A

The Army Maintenance Management System (TAMMS) ..... DA Pam 738-750

Transportation Discrepancy Report (TDR) ..... SF 361

Unit, Intermediate Direct Support, and
General Support Maintenance Manual For
Mounting Base, Electrical Equipment MT-6452/GRC-215
(NSN 5895-01-207-8991) ..... TM 11-5895-1321-24
..... Navy EE005-LC-MMI-010/W110-MT6452
..... Air Force TO 31R2-2GRC215-52

Unsatisfactory Equipment Reporting ..... TO-00-35D54

# APPENDIX B
# MAINTENANCE ALLOCATION CHART

## B-1. GENERAL

This appendix provides a summary of the maintenance operations for the Vehicular Adapter Test Set TS-4252/GRC-215. It authorizes levels of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

## B-2. MAINTENANCE FUNCTION

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/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 of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. Adjust. To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to the specified parameters.

e. Aline. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipment's used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install. The act of emplacing, seating, or fixing into position an item, part, module (component or assembly) in a manner to allow the proper functioning of the equipment or system.

h. Replace. The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. Repair. The application of maintenance services (inspect, test, service, adjust, aline, calibrate, replace) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing) to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e., DMWR) in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours, miles, etc.) considered in classifying Army equipment's/components.

**B-3. COLUMN ENTRIES**

a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with 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 purpose of having the group numbers in the MAC and RPSTL coincide.

d. Column 4, Maintenance Level. Column 4 specifies, by the listing of a work time 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 that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate work time figures will be shown for each category. The number of task-hours specified by the work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. 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:

## 5-12. REMOVAL/REPLACEMENT OF FRONT PANEL AND COMPONENTS (SEE APPENDIX C)

**WARNING**

**All Removal/Replacement procedures are performed with power removed. For safety purposes disconnect power cables before beginning procedures.**

**REMOVAL:**

1. Remove 14 cross-tip screws (1) and flatwashers (2 ) securing front panel (3) to case (4).
2. Lift front panel (3) away from case (4).
3. Position front panel so component to be replaced is accessible.
4. Tag and unsolder wires from components being replaced.
5. Loosen and remove any hardware securing component. Remove component.

**REPLACEMENT:**

1. Position component.
2. Replace and tighten any hardware that secures component.
3. Solder wires to replacement component and remove tags.
4. Position front panel (3) in case (4).
5. Tighten 14 cross-tip screws (1) and flatwashers (2) that attach front panel (3) to case(4).
6. Perform Operational Check (para. 5-2).

**5-12. REMOVAL/REPLACEMENT OF FRONT PANEL AND COMPONENTS (SEE APPENDIX C) (Cont.)**

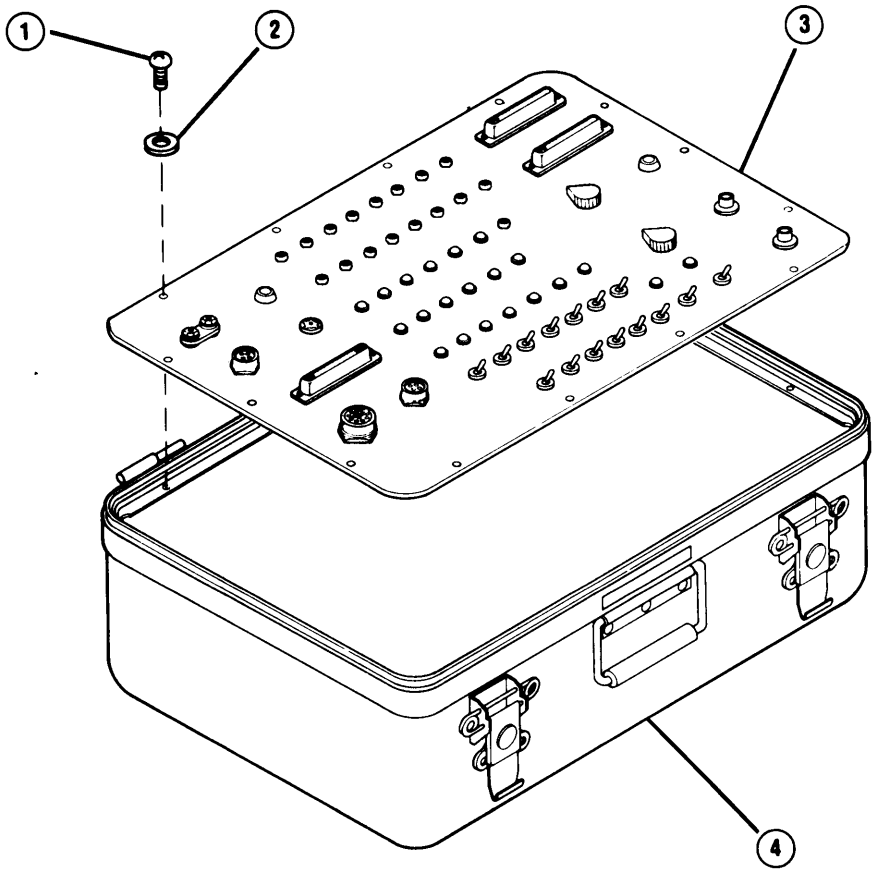



*Figure 5-3. Front Panel Removal/Replacement*

**UNIT**

C - Operator/Crew
O - Organizational/Unit

**INTERMEDIATE**

F - Direct Support
H - General Support
L - Special Repair Activity (SRA)

**DEPOT**

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. TOOL AND TEST EQUIPMENT REQUIREMENTS (SECT. III)**

a. 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 or test equipment for the maintenance functions.

b. Maintenance Level. The codes in this column indicate the maintenance level allocated to tool or test equipment.

c. Nomenclature. This column lists the noun name and nomenclature of the tools and test equipment required to perform the maintenance functions.

d. National/NATO Stock Number. This column lists the National/ NATO stock number of the specific tool or test equipment.

e. Tool Number. This column lists the manufacturer's part number of the tool followed by the Federal Supply Code for manufacturers (5-digit) in parentheses.

**B-5. REMARKS (SECT. IV)**

a. Reference Code. This code refers to the appropriate item in section II, column 6.

b. Remarks. This column provides the required explanatory information necessary to clarify items appearing in section II.

## SECTION II MAINTENANCE ALLOCATION CHART
## FOR
## TEST SET, VEHICULAR ADAPTER TS-4252/GRC-215

| (1) GROUP NUMBER | (2) COMPONENT ASSEMBLY | (3) MAINTENANCE FUNCTION | (4) MAINTENANCE LEVEL C | O | F | H | D | (5) TOOLS AND EQUIPMENT | (6) REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 00 | Test Set, Vehicular Adapter TS-4252/GRC-215 (950576-801) | Replace | | | | 0.01 | | | |
| | | Test | | | | 1.0 | | 1,2,4,5,6 | A |
| | | Repair | | | | 1.0 | | 3 | A,D |
| 01 | Case, Test Set (10647) | Repair | | | | 0.5 | | 3 | |
| 02 | Front Panel Assembly (1-94281.0000//A) | Repair | | | | 1.0 | | 3 | |
| | | Test | | | | 1.0 | | 1,2,4,5,6 | |
| 0201 | CCA A1 (3-A2167.0000//B) | Repair | | | | 1.0 | | 3 | B |
| | | Test | | | | 0.5 | | 1 | |
| 03 | Cable Assembly W52 (3-94295.0000//B) | Test | | | | 0.3 | | 1 | C |
| | | Repair | | | | 0.5 | | 3,7,10,13 | |
| 04 | Cable Assembly W53 (3-94296.0000//B) | Test | | | | 0.3 | | 1 | C |
| | | Repair | | | | 0.5 | | 3,8,11,14 | |
| 05 | Cable Assembly W54 (3-94297.0000//B) | Test | | | | 0.3 | | 1 | C |
| | | Repair | | | | 0.5 | | 3,7,12,15 | |
| 06 | Cable Assembly W55 (3-94298.0000//B) | Test | | | | 0.3 | | 1 | C |
| | | Repair | | | | 0.5 | | 3,8,11,14 | |
| 07 | Cable Assembly W56 (3-94299.0000//B) | Test | | | | 0.3 | 1 | C | |
| | | Repair | | | | 0.5 | | 3,9,11,14 | |

## SECTION III TOOL AND TEST EQUIPMENT REQUIREMENTS FOR TEST SET, VEHICULAR ADAPTER TS-4252/GRC-215

| REF. CODE | MAINT. LEVEL | NOMENCLATURE | NATIONAL/NATO STOCK NUMBER | TOOL NUMBER |
|---|---|---|---|---|
| 1 | H | Multimeter, Digital AN/USM-486 | 6625-01-145-2430 | FLUKE 8050A-01 |
| 2 | H | Power Supply PP-8202/G * | 6130-00-160-0827 | HP 6274B |
| 3 | H | Tool Kit, Elect. TK-17 (Incl. Metric) | 5180-01-195-0855 | JENSEN JTK-17RM |
| 4 | H | Power Supply PP-3940B | 6130-01-164-0548 | POWER-10 4006 |
| 5 | H | Cable Assembly, DC Power W1 ** | | ELMER 569712.801//B |
| 6 | H | Dual Banana Cable | | |
| 7 | H | Crimp Tool | 5120-00-165-3912 | M22520/1-01 |
| 8 | H | Crimp Tool | | M22520/2-0 |
| 9 | H | Crimp Tool | | M22520/1-0 |
| 10 | H | Insertion Tool | 5120-01-113-3901 | ITT CIT-12 |
| 11 | H | Insertion Tool | 5120-00-132-0396 | ITT CIET-20HD |
| 12 | H | Insertion Tool | 5120-01-131-0140 | ITT CIT-16 |
| 13 | H | Extractor Tool | 5120-00-406-6548 | ITT CET-12-2 |
| 14 | H | Extractor Tool | 5120-00-931-2788 | ITT CET-20-11 |
| 15 | H | Extractor Tool | 5120-00-941-5470 | ITT CET-16-4 |
| | | * PP-8214/G(NSN6130-00-150-0028) provides identical capability when source power is 230V, 50 cycle. Air Force use only. | | |
| | | ** It is part of test set. | | |

## SECTION IV REMARKS
## FOR
## TEST SET, VEHICULAR ADAPTER TS-4252/GRC-215

| REFERENCE CODE | REMARKS |
|---|---|
| A | Consists of test/repair to Front Panel Assembly or cable assemblies. Includes performance check. |
| B | Test/repair as part of the next higher assembly. |
| C | Consists of point-to-point continuity checks. |
| D | Cable Assembly W1 (569712.801//B) is not repairable. |

# APPENDIX C

# OPERATOR'S, UNIT,

# DIRECT SUPPORT AND GENERAL SUPPORT

# MAINTENANCE MANUAL INCLUDING

# REPAIR PARTS AND SPECIAL TOOLS LIST

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## TABLE OF CONTENTS

# APPENDIX C

# UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

## INTRODUCTION

### C-1. Scope

This appendix lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of general support maintenance of the TS-4252/GRC-215. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

### C-2. General

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts 'which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending numeric sequence, with the parts in each group listed in ascending item number sequence. Figure numbers are listed directly beneath the group header.

b. Section III. Special Tools List. Not applicable.

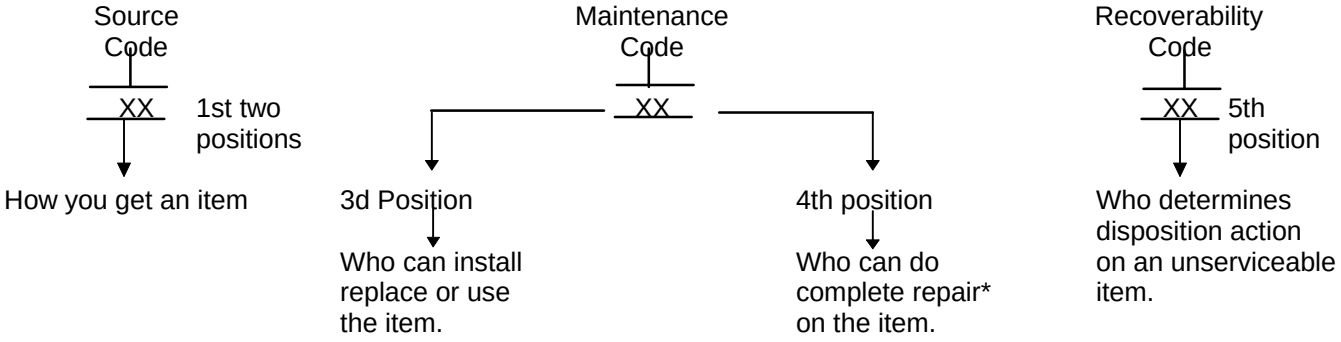
c. Section IV. Cross-Reference Indexes. A list, in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphameric sequence of all part numbers appearing in the listings.

National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. The figure number and item number index lists figure and item numbers in numeric sequence and cross-references National stock number, Commercial and Government Entity Code and part numbers.

### C-3. Explanation of Columns (Section II and III)

a. Item No. (Column (1)). Indicates the number used to identify items called out in the illustration.

b. SMR Code (Column (2)). The source, maintenance, and recoverability (SMR) code is a five-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:




**NOTE**

**Complete repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "repair" function in a use/user environment in order to restore serviceability to a failed item.**

(1) Source code. The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follows:

| ***Code*** | ***Explanation*** |
|---|---|
| PA<br>PB<br>PC<br>PD<br>PE<br>PF<br>PG | Stocked items: use applicable NSN to request and/or requisition items with these source codes. They are authorized to the category indication by the code entered in the third position of the SMR code<br><br>**NOTE**<br>**Items coded PC are subject to deterioration.** |
| KB<br>KD<br>KF | Items with these codes are not to be requested and/or requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the third position of the SMR code. The complete kit must be requisitioned and applied. |

| ***Code*** | ***Explanation*** |
|---|---|
| MO - Made at Org/AVUM category<br>MF - Made at DS/AVIM category<br>MH - Made at GS category<br>ML - Made at Specialized Repair Activity (SRA)<br>MD - Made at Depot | Items with these codes are not to be requested and/or requisitioned individually. They must be made from bulk material which is identified by the part number in the description and usable on code (UOC) column and listed in the Bulk Material group of the repair parts list. If the item is authorized to you by the third position code of the SMR code, but the source code indicates it is made at a higher category, order the item from the higher category of maintenance. |
| AO - Assembled by Org/AVUM category<br>AF - Assembled by DS/AVIM category<br>AH - Assembled by GS category<br>AL - Assembled by SRA<br>AD - Assembled by Depot | Items with these codes are not to be requested and/or requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the category of maintenance indicated by the source code. If the third position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher category, order the item from the higher category of maintenance. |

| Code | | Explanation |
|---|---|---|
| XA | - | Do not requisition an "XA" coded item. Order its next higher assembly. |
| XB | - | If an "XB" item is not available from salvage, order it using the CAGEC and part number given |
| XC | - | Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number. |
| XD | - | Item is not stocked. Order an "XD" coded item through normal supply channels using the CAGEC and part number given, if no NSN is available. |

**NOTE**

**Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.**

(2) Maintenance code. Maintenance codes tell you the category of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

(a) The maintenance code entered in the third position tells you the lowest maintenance category authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following categories of maintenance.

| Code | | Application/Explanation |
|---|---|---|
| C | - | Crew or operator maintenance done within organizational or aviation maintenance. |
| O | - | Organizational or aviation unit category can remove, replace, and use the item. |
| F | - | Direct support or aviation intermediate category can remove, replace, and use the item. |
| H | - | General support category can remove, replace, and use the item. |
| L | - | Specialized repair activity can remove, replace, and use the item. |
| D | - | Depot category can remove, replace, and use the item. |

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance category with the capability to do complete repair (i.e., perform all authorized repair functions). This position will contain one of the following maintenance codes.

**NOTE**

**Some limited repair may be done on the item at a lower category of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.**

| Code | | Application/Explanation |
|---|---|---|
| O | - | Organizational or aviation unit is the lowest category that can do complete repair of the item. |
| F | - | Direct support or aviation intermediate is the lowest category that can do complete repair of the item. |
| H | - | General support is the lowest category that can do complete repair of the item. |
| L | - | Specialized repair activity (designate the specialized repair activity) is the lowest category that can do complete repair of the item. |
| D | - | Depot is the lowest category that can do complete repair of the item. |

| Code | Application/Explanation |
|---|---|
| Z | Nonreparable. No repair is authorized. |
| B | No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user category. |

(3) Recoverability code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

| Recoverability Code | Application/Explanation |
|---|---|
| Z | Nonreparable item. When unserviceable, condemn and dispose of the item at the category of maintenance shown in the third position of SMR code. |
| O | Reparable item. When uneconomically reparable, condemn and dispose of the item at organizational or aviation unit category. |
| F | Reparable item. When uneconomically reparable, condemn and dispose of the item at direct support or aviation intermediate category. |
| H | Reparable item. When uneconomically reparable, condemn and dispose of the item at general support category. |
| D | Reparable item. When beyond lower category repair capability, return to depot. Condemnation and disposal of item not authorized below depot category. |
| L | Reparable item. Condemnation and disposal not authorized below specialized repair activity (SRA). |
| A | Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer appropriate manuals/directives for specific instructions. |

c. CAGEC (Column (3)). The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

d. Part Number (Column (4)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

**NOTE**

**When you use an NSN to requisition an item, the item you receive may have a different part number from the part ordered.**

e. Description and Usable on Code (UOC) (Column (5)). This column includes the following information.

(1) The Federal item name and, when required, a minimum description to identify the item.

(2) The statement "END OF FIGURE" appears just below the last item description in Column (5) for a given figure in both section II and section III.

f. Qty (Column (6)). Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

**C-4. Explanation of Columns (Section IV)**

a. National Stock Number (NSN) Index.

(1) Stock number column. This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN. When using this column to locate an item, ignore the first four digits of the NSN. When requisitioning items use the complete NSN (13 digits).

(2) Fig. column. This column lists the number of the figure where the item is identified/located. The illustrations are in numerical sequence in sections II and III.

(3) Item column. The item number identifies the item associated with the figure listed in the adjacent Fig. column. This item is also identified by the NSN listed on the same line.

b. Part Number Index. Part numbers in this index are listed by part number in ascending alphameric sequence.

(1) CAGEC column. This column lists the Commercial and Government Entity Code (CAGEC).

(2) Part number column. This column indicates the part number assigned to the item.

(3) Stock number column. This column lists the National stock number for the associated part number and manufacturer identified in the part number and CAGEC columns to the left.

(4) Fig. column. This column lists the number of the figure where the item is identified/located in sections II and III.

(5) Item column. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

c. Figure and Item Number Index.

(1) Fig. column. This column lists the number of the figure where the item is identified/located in sections II and III.

(2) Item column. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

(3) Stock number column. This column lists the National stock number for the item.

(4) CAGEC column. The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(5) Part number column. Indicates the primary number used by the manufacturer (individual, 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 item.

**C-5. Special Information**

National stock numbers (NSN's) that are missing from P source coded items have been applied for and will be added to this TM by future change/revision when they are entered in the Army Master Data File (AMDF). Until the NSN's are established and published, submit exception requisitions to: Commander, US Army Communications Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-MM, Fort Monmouth, NJ 07703-5000 for the part required to support your equipment.

**NOTE**

**An item SMR coded "H" in the third, fourth, and fifth position is interpreted as intermediate for Air Force Repair.**

**C-6. How to Locate Repair Parts**

a. When National stock number or part number is not known.

(1) First. Using the table of contents, determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

(2) Second. Find the figure covering the assembly group or subassembly group to which the item belongs.

(3) Third. Identify the item on the figure and note the item number.

(4) Fourth. Refer to the Repair Parts List for the figure to find the part number for the item number noted on the figure.

(5) Fifth. Refer to the Part Number Index to find the NSN, if assigned.

b. When National stock number or part number is known.

(1) First. Using the index of National stock numbers and part numbers, find the pertinent National stock number or part number. The NSN index is in National item identification number (NIIN) sequence (para C-4a(1)). The part numbers in the part number index are listed in ascending alphameric sequence (para C-4b). Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

(2) Second. After finding the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

**C-7. Abbreviations**

Not applicable.

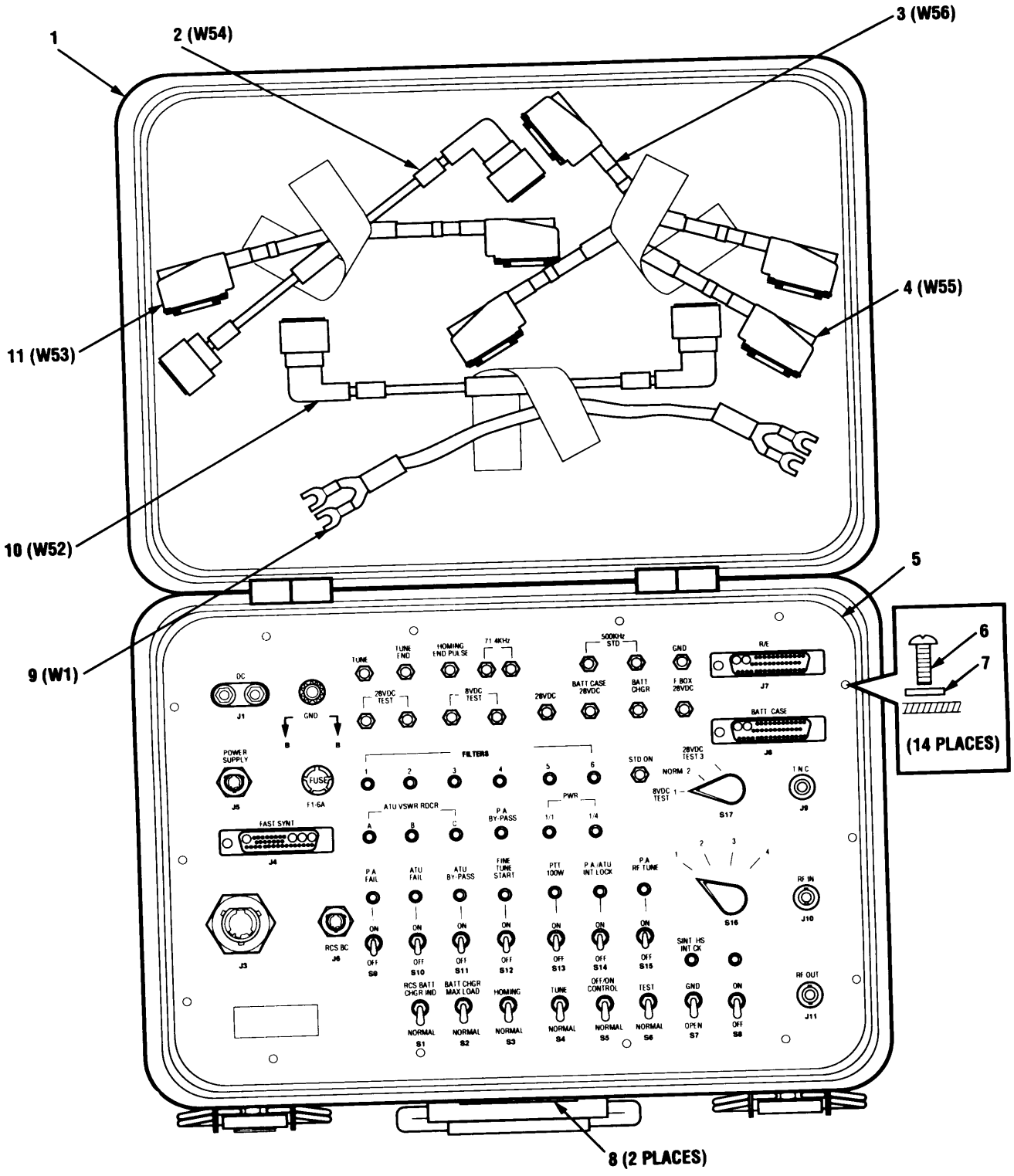



*Figure C-1. Test Set, Vehicular Adapter TS-4252/GRC-215 (950576-801*

| (1) ITEM NO | (2) SMR CODE | (3) CAGEC | (4) PART NUMBER | (5) DESCRIPTION AND USABLE ON CODES (UOC) | (6) QTY |
|---|---|---|---|---|---|
| | | | | GROUP 00 TEST SET, VEHICULAR ADAPTER TS-4252/GRC-215 (950576-801) | |
| | | | | FIG. 1 | |
| 1 | XBHHH | 24995 | 10647 | CASE, TEST SET (SEE FIG. 2 FOR PARTS BREAKDOWN) | 1 |
| 2 | PAHHH | A3026 | 3-94297.0000//B | CABLE ASSEMBLY, POWE (SEE FIG. 7 FOR PARTS BREAKDOWN) | 1 |
| 3 | PAHHH | A3026 | 3-94299.0000//B | CABLE ASSEMBLY, POWE (SEE FIG. 9 FOR PARTS BREAKDOWN) | 1 |
| 4 | PAHHH | A3026 | 3-94298.0000//B | CABLE ASSEMBLY, POWE (SEE FIG. 8 FOR PARTS BREAKDOWN) | 1 |
| 5 | XBHHH | A3026 | 1-94281.0000//A | PANEL ASSEMBLY, VEHI (SEE FIG. 3 FOR PARTS BREAKDOWN) | 1 |
| 6 | PAHZZ | 96906 | MS51957-45 | SCREW, MACHINE | 14 |
| 7 | PAHZZ | 88044 | AN960-C8L | WASHER, FLAT | 14 |
| 8 | XBHZZ | A3026 | 4-A2155.0006//D | PLATE, IDENTIFICATIO | 2 |
| 9 | PAHZZ | A3026 | 569712.801//B | CABLE, DC PO WER | 1 |
| 10 | PAHHH | A3026 | 3-94295.0000//B | CABLE ASSEMBLY, POWE (SEE FIG. 5 FOR PARTS BREAKDOWN) | 1 |
| 11 | PAHHH | A3026 | 3-94296.0000//B | CABLE ASSEMBLY, POWE (SEE FIG. 6 FOR PARTS BREAKDOWN) | 1 |
| | | | | END OF FIGURE | |

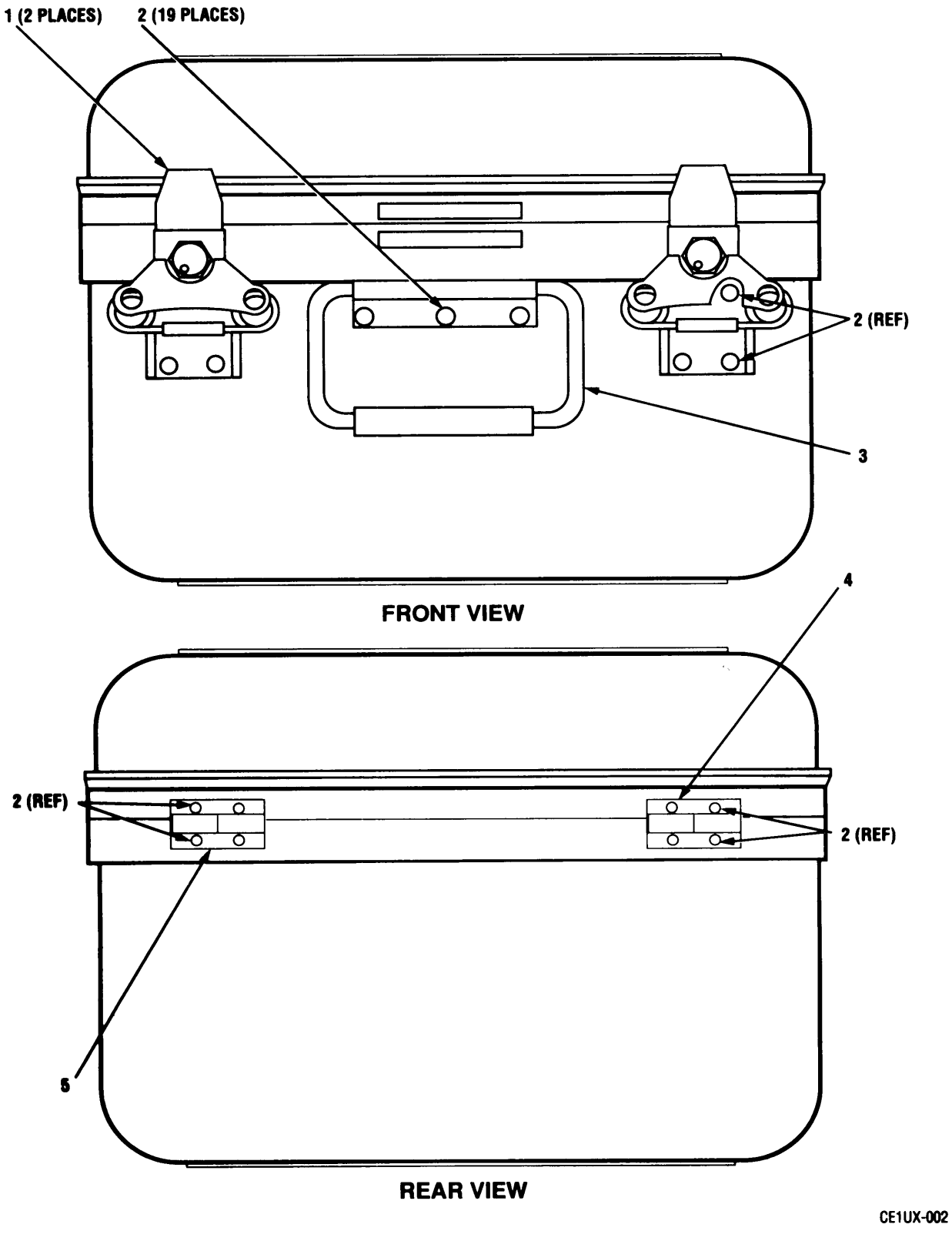
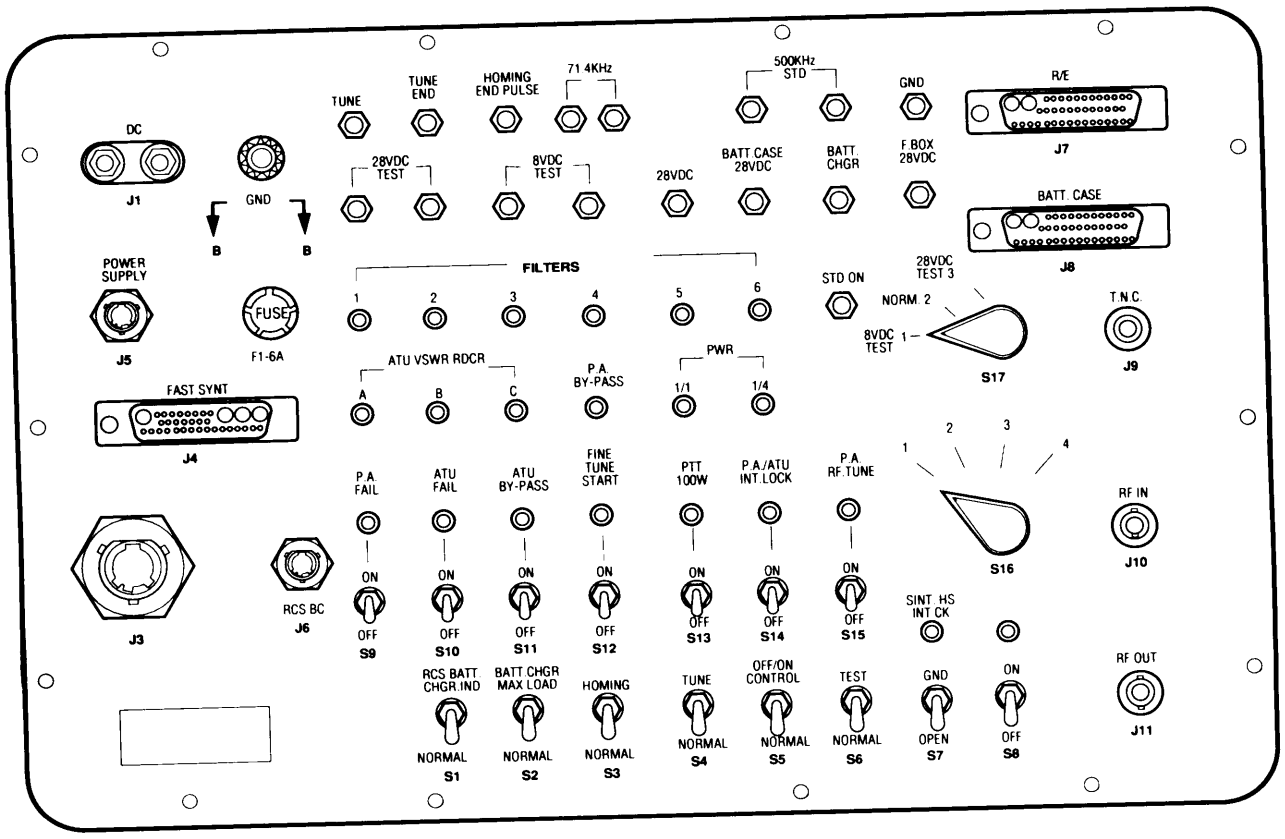



*Figure C-2. Case Assembly (10647)*

| (1) ITEM NO | (2) SMR CODE | (3) CAGEC | (4) PART NUMBER | (5) DESCRIPTION AND USABLE ON CODES (UOC) | (6) QTY |
|---|---|---|---|---|---|
| | | | | GROUP 01 CASE ASSEMBLY | |
| | | | | (10647) | |
| | | | | FIG. 2 | |
| 1 | XBHZZ | 24995 | 22002022 | LATCH | 2 |
| 2 | XBHZZ | 24995 | 33500035 | RIVET ASSEMBLY | 19 |
| 3 | XBHZZ | 24995 | 31000691 | HANDLE, BOW | 1 |
| 4 | XBHZZ | 24995 | 24000450 | HINGE | 1 |
| 5 | XBHZZ | 24995 | 24000460 | HINGE | 1 |

END OF FIGURE




CE1UX-003

*Figure C-3. Front Panel Assembly (1-94281.0000//A) (Sheet 1 of 5)*

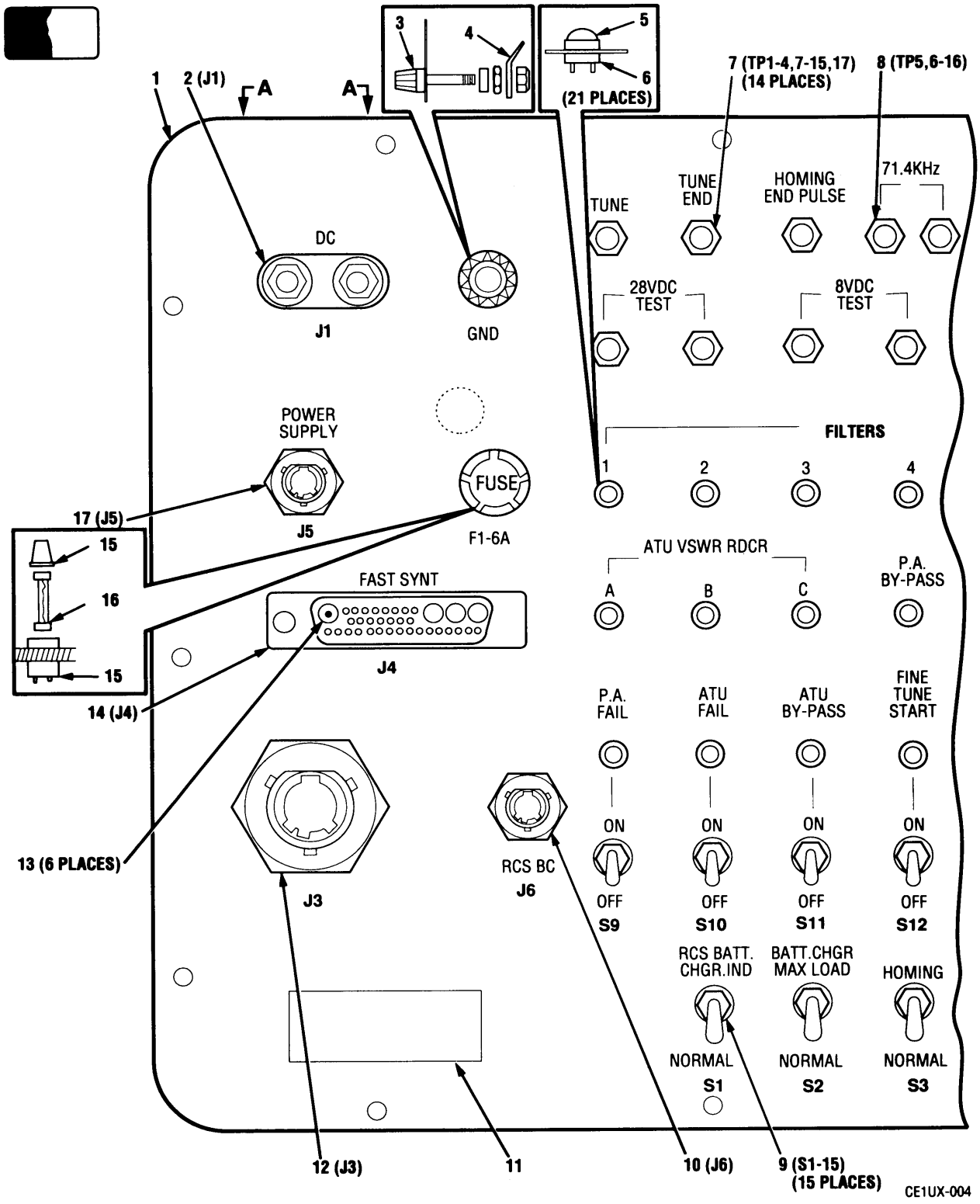



*Figure C-3. Front Panel Assembly (1-94281.0000//A) (Sheet 2 of 5)*

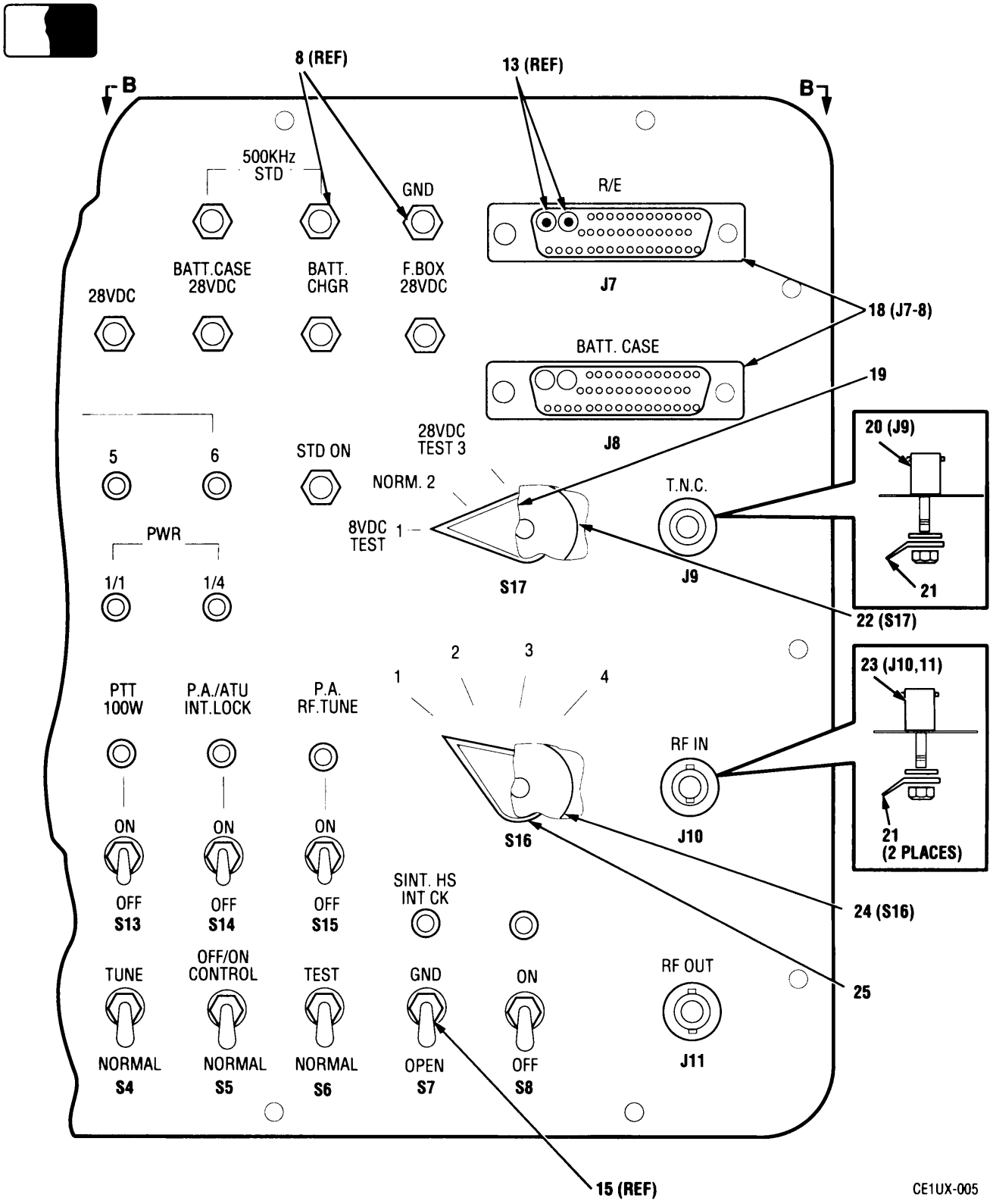
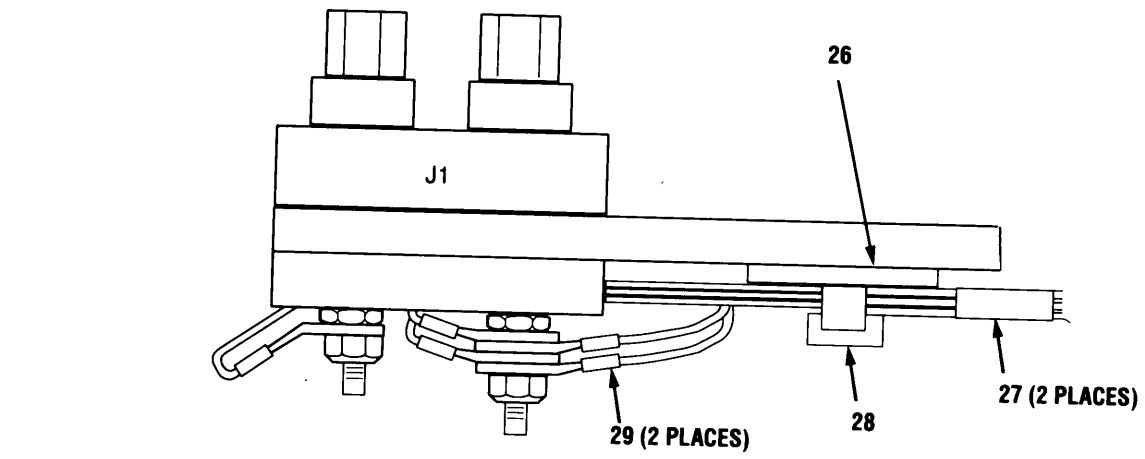
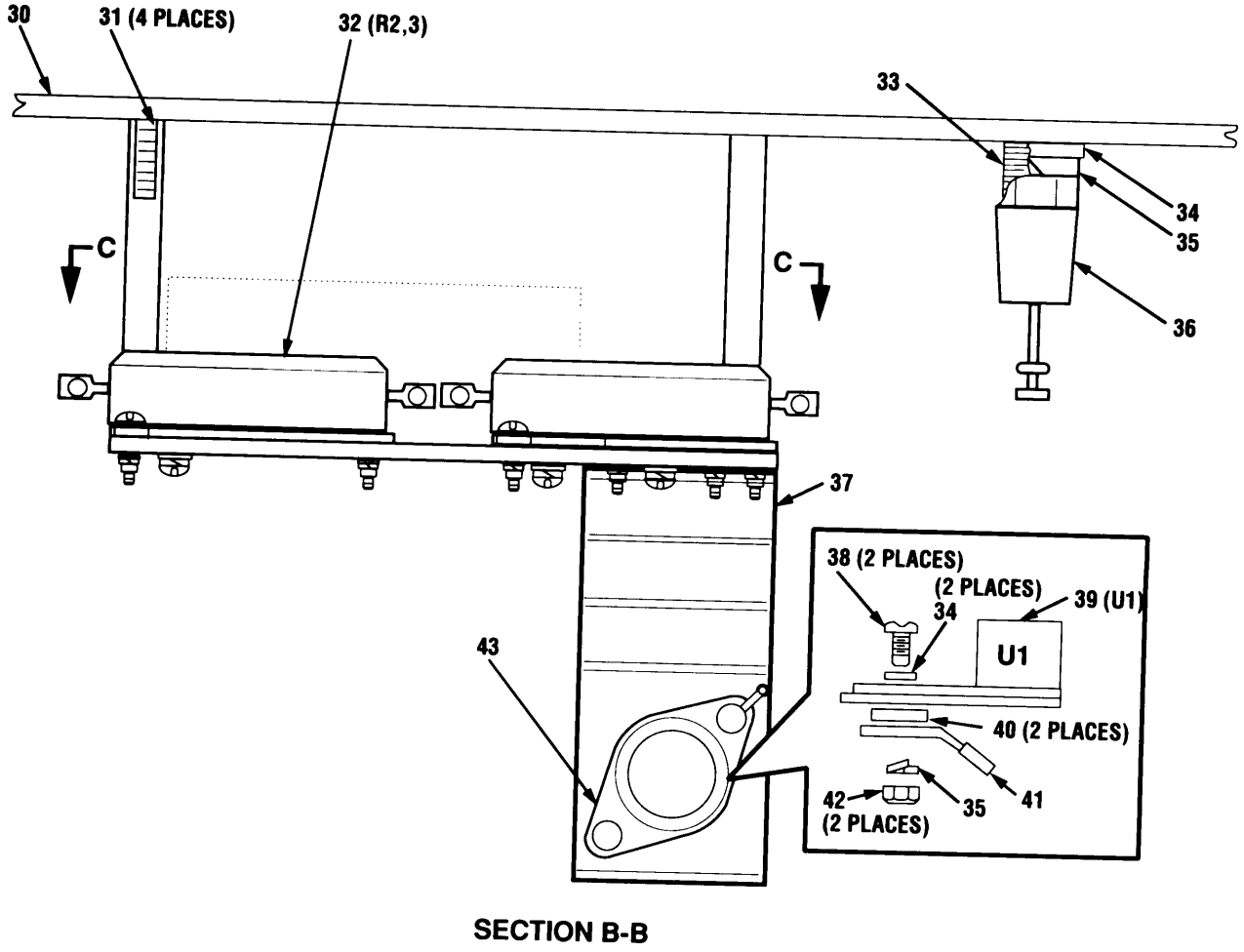



*Figure C-3. Front Panel Assembly (1-94281.0000//A) (Sheet 3 of 5)*



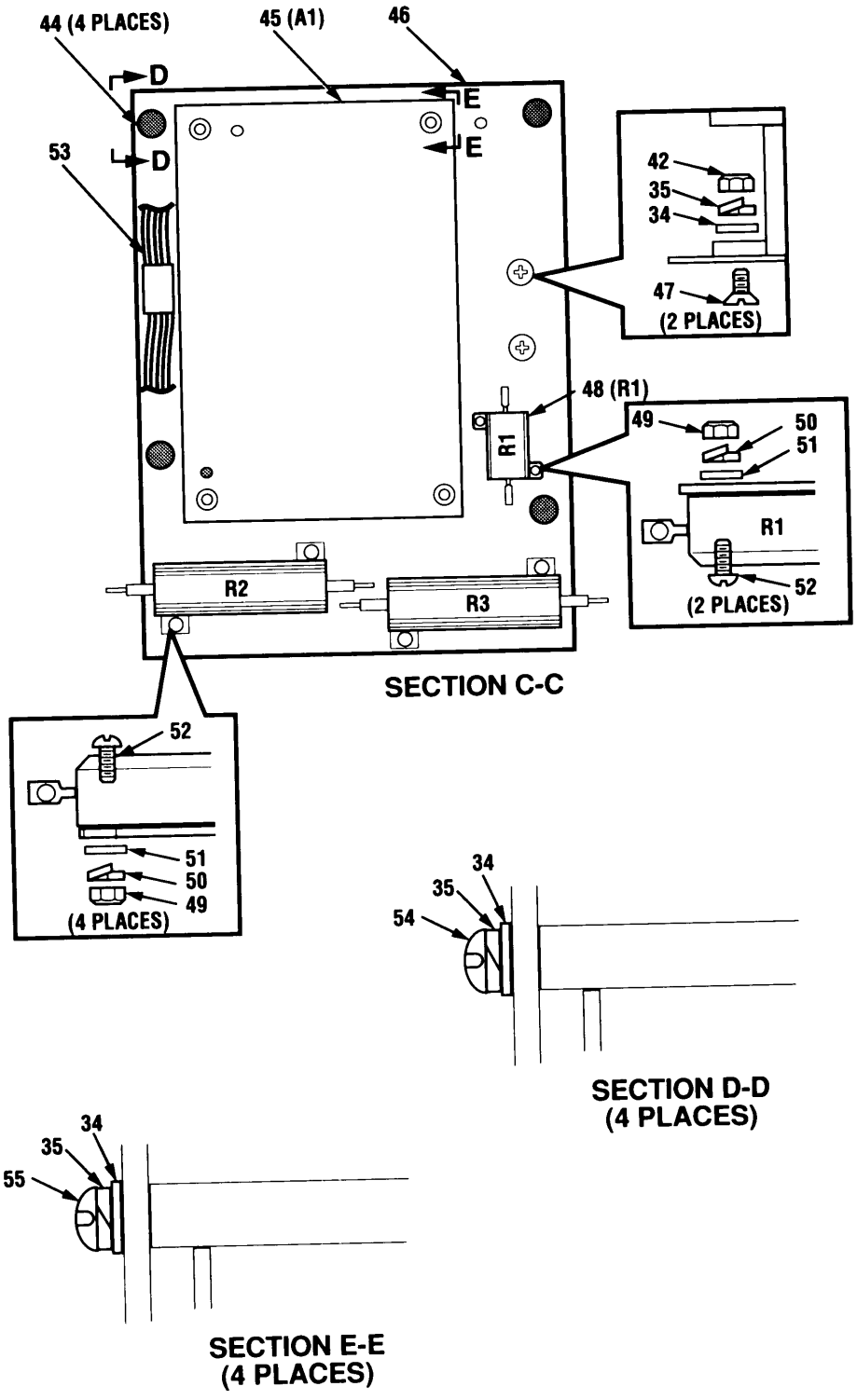

SECTION A-A




SECTION B-B

CE1UX-006

*Figure C-3. Front Panel Assembly (1-94281.0000//A) (Sheet 4 of 5)*



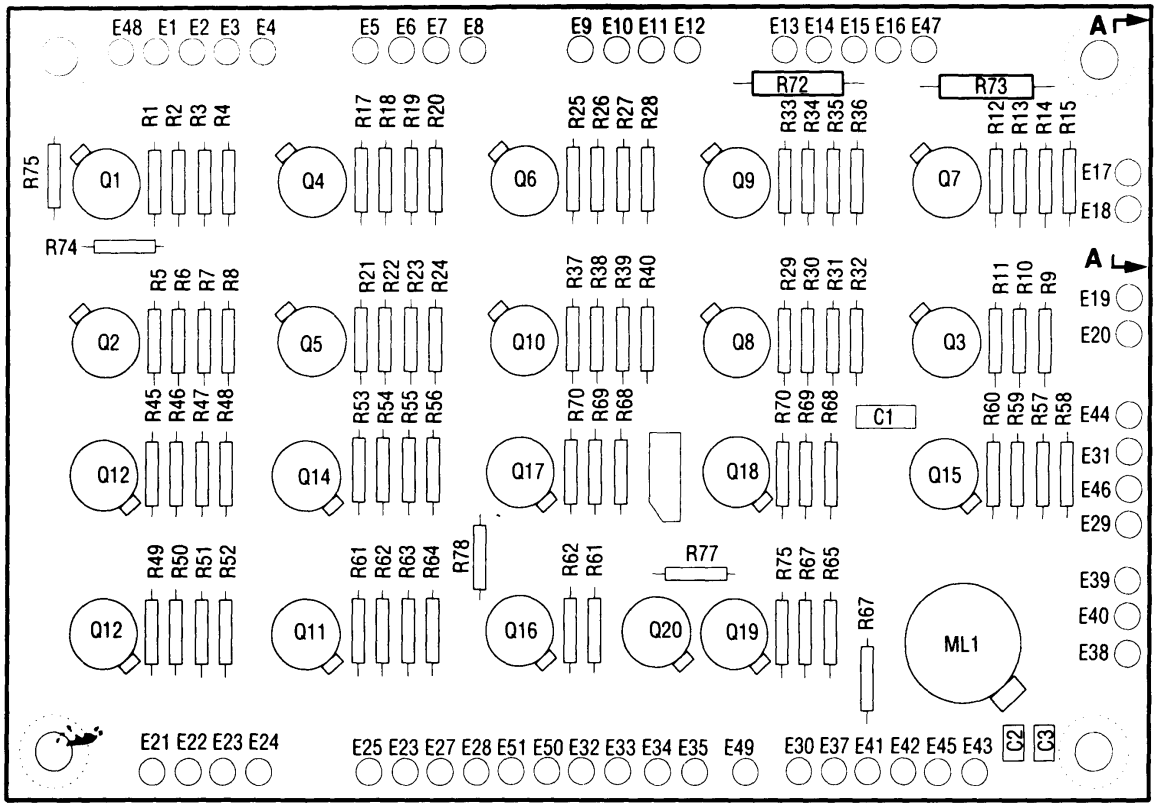

CE1 UX-007

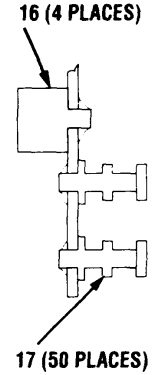
*Figure C-3. Front Panel Assembly (1-94281.0000//A) (Sheet 5 of 5)*

| (1) ITEM NO | (2) SMR CODE | (3) CAGEC | (4) PART NUMBER | (5) DESCRIPTION AND USABLE ON CODES (UOC) | (6) QTY |
|---|---|---|---|---|---|
| | | | | GROUP 02 FRONT PANEL ASSEMBLY (1-94281.0000//A) FIG. 3 | |
| 1 | XBHZZ | A3026 | 1-A2134.0000//A | FRONT PANEL | 1 |
| 2 | PAHZZ | 18323 | 990C758H03 | POST, BINDING, ELECTR | 1 |
| 3 | PAHZZ | A3026 | 4-36509.0001//C | BINDING POST, ELECTR | 1 |
| 4 | PAHZZ | 80063 | A3026908-6 | TERMINAL, LUG | 1 |
| 5 | PAHZZ | 37695 | 615539-6 | LIGHT EMITTING DIOD | 21 |
| 6 | PAHZZ | A3026 | 4-34260.0000//M | HOLDER, LAMP | 21 |
| 7 | PAHZZ | A3026 | 4-36246.0000//N | JACK, TIP | 14 |
| 8 | PAHZZ | A3026 | 4-06746.0000//N | JACK, TIP | 3 |
| 9 | PAHZZ | A3026 | 4-32151.0004//M | SWITCH, TOGGLE | 15 |
| 10 | PAHZZ | 77820 | PT07A-8-45SN | CONNECTOR, RECEPTACL | 1 |
| 11 | XBHZZ | A3026 | 4-A2155.0006//D | PLATE, IDENTIFICATIO | 1 |
| 12 | PAHZZ | 77820 | PT07-A-18-26S | CONNECTOR, PLUG, ELECT | 1 |
| 13 | PAHZZ | 80063 | A3026757-43 | CONTACT, ELECTRICAL | 6 |
| 14 | PAHZZ | 71468 | DDM36W4SA156 | CONNECTOR, RECEPTACL | 1 |
| 15 | PAHZZ | 81349 | FHN20G | FUSEHOLDER, EXTRACTO | 1 |
| 16 | PAHZZ | A3026 | 4-05861.0020//Q | FUSE, CARTRIDGE | 1 |
| 17 | PAHZA | 96906 | MS3474W8-4S | CONNECTOR, RECEPTACL | 1 |
| 18 | PAHZA | 71468 | DDMY-43W2S | CONTACT, ELECTRICAL | 2 |
| 19 | PAHZZ | 94144 | 70-4-2G | KNOB | 1 |
| 20 | PAHZZ | A3026 | 503.10.0445.000//N | CONNECTOR, RECEPTACL | 1 |
| 21 | PAHZZ | 80063 | A3027823 | TERMINAL, LUG | 3 |
| 22 | PAHZZ | A3026 | 4-22015.0001//M | SWITCH, ROTARY | 1 |
| 23 | PAHZZ | 81349 | M39012/24-0002 | CONNECTOR, RECEPTACL | 2 |
| 24 | PAHZZ | 81073 | 50MY24167 | SWITCH, ROTARY | 1 |
| 25 | PAHZZ | 49956 | 70-4-1G | KNOB | 1 |
| 26 | PAHZZ | A3026 | 4-A2161.0000//D | MOUNTING BASE, TIEDO | |
| 27 | XBHZZ | A3026 | 4-A2158.0000//D | BAND, MARKER | 2 |
| 28 | PAHZZ | 59730 | TY23M(MS3367-4) | STRAP, ELECTRICAL, TI | 1 |
| 29 | PAHZZ | 96906 | MS25036-103 | TERMINAL, LUG | 5 |
| 30 | XBHZZ | A3026 | 1-A2139.0000//D | PANEL, FRONT | 1 |
| 31 | PAHZZ | 81349 | M63540/1-9C | STUD, SELF-LOCKING | 4 |
| 32 | PAHZZ | 81349 | RER75F15ROR | RESISTOR, FIXED, WIRE | 2 |
| 33 | PAHZZ | 81349 | M63540/1-6C | STUD, SELF-LOCKING | 1 |
| 34 | PAHZZ | 96906 | MS15795-803 | WASHER, FLAT | 13 |
| 35 | PAHZZ | A3026 | 3-10311-003 | WASHER, LOCK | 13 |
| 36 | PAHZZ | 80063 | A3026906-3 | POST, ELECTRICAL, MEC | 1 |
| 37 | XBHZZ | A3026 | 3-A2160.0000//D | HEATSINK | 1 |
| 38 | PAHZZ | 96906 | MS51957-17 | SCREW, MACHINE | 2 |
| 39 | PAHZZ | 27014 | LM138K | MICROCIRCUIT, LINEAR | 1 |
| 40 | PAHZZ | A3026 | 4-51249.0000//C | BUSHING | 2 |
| 41 | PAHZZ | 80063 | A3026908-4 | TERMINAL, LUG | 1 |
| 42 | PAHZZ | A3026 | 3-75883-001 | NUT, PLAIN, HEXAGON | 4 |
| 43 | PAHZZ | 80063 | A3027095-1 | HEAT SINK-INSULATOR | 1 |
| 44 | PAHZZ | A3026 | 3-A2131.0000//D | SPACER | 4 |
| 45 | PAHHH | A3026 | 3-A2167.0000//B | CIRCUIT CARD ASSEMB (SEE FIG. 4 FOR PARTS BREAKDOWN) | 1 |

| (1) ITEM NO | (2) SMR CODE | (3) CAGEC | (4) PART NUMBER | (5) DESCRIPTION AND USABLE ON CODES (UOC) | (6) QTY |
|---|---|---|---|---|---|
| 46 | XBHZZ | A3026 | 2-A2140.0000//D | PLATE, VEHICULAR ADA | 1 |
| 47 | PAHZZ | 96906 | MS51957-14 | SCREW, MACHINE | 2 |
| 48 | PAHZZ | 81349 | RE65G140R | RESISTOR, FIXED, COMP | 1 |
| 49 | PAHZZ | 96906 | MS35649-224 | NUT, PLAIN, HEXAGON | 6 |
| 50 | PAHZZ | A3026 | 3-10311-001 | WASHER, LOCK | 6 |
| 51 | PAHZZ | A3026 | 3-10285.006//C | WASHER, FLAT | 6 |
| 52 | PAHZZ | 96906 | MS51957-5 | SCREW, MACHINE | 6 |
| 53 | PAHHH | A3026 | 4-94485.0000//B | WIRING HARNESS | 1 |
| 54 | PAHZZ | 96906 | MS51957-13 | SCREW, MACHINE | 4 |
| 55 | PAHZZ | 96906 | MS51957-15 | SCREW, MACHINE | 4 |

END OF FIGURE




**SECTION A-A**

NOTE: ALL REFERENCE DESIGNATORS SHOULD BE PRECEDED BY AN A1

**LEGEND**

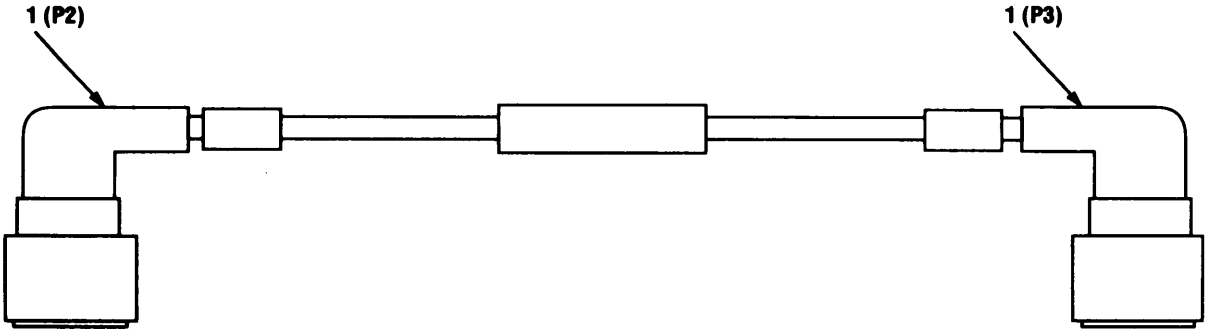
| REF. DES. | ITEM NO. | REF. DES. | ITEM NO. | REF. DES. | ITEM NO. | REF. DES. | ITEM NO. | REF. DES. | ITEM NO. | REF. DES. | ITEM NO. | REF. DES. | ITEM NO. | REF. DES. | ITEM NO. | REF. DES. | ITEM NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C1 | 1 | Q9 | 4 | R1 | 5 | R13 | 6 | R26 | 6 | R38 | 6 | R50 | 6 | R62 | 10 | R74 | 14 |
| C2 | 2 | Q10 | 4 | R2 | 6 | R14 | 8 | R27 | 7 | R39 | 7 | R51 | 7 | R63 | 7 | R75 | 14 |
| C3 | 1 | Q11 | 4 | R3 | 7 | R15 | 7 | R28 | 8 | R40 | 8 | R52 | 8 | R64 | 10 | R76 | 7 |
| ML1 | 3 | Q12 | 4 | R4 | 8 | R17 | 5 | R29 | 5 | R41 | 5 | R53 | 5 | R65 | 7 | R77 | 6 |
| Q1 | 4 | Q13 | 4 | R5 | 5 | R18 | 6 | R30 | 6 | R42 | 6 | R54 | 6 | R66 | 5 | R78 | 15 |
| Q2 | 4 | Q14 | 4 | R6 | 6 | R19 | 7 | R31 | 7 | R43 | 7 | R55 | 7 | R67 | 8 | | |
| Q3 | 4 | Q15 | 4 | R7 | 7 | R20 | 8 | R32 | 8 | R44 | 8 | R56 | 8 | R68 | 7 | | |
| Q4 | 4 | Q16 | 4 | R8 | 8 | R21 | 5 | R33 | 5 | R45 | 5 | R57 | 7 | R69 | 10 | | |
| Q5 | 4 | Q17 | 4 | R9 | 6 | R22 | 6 | R34 | 6 | R46 | 6 | R58 | 8 | R70 | 5 | | |
| Q6 | 4 | Q18 | 4 | R10 | 8 | R23 | 7 | R35 | 7 | R47 | 7 | R59 | 6 | R71 | 11 | | |
| Q7 | 4 | Q19 | 4 | R11 | 7 | R24 | 8 | R36 | 8 | R48 | 8 | R60 | 5 | R72 | 12 | | |
| Q8 | 4 | Q20 | 4 | R12 | 9 | R25 | 5 | R37 | 5 | R49 | 5 | R61 | 7 | R73 | 13 | | |

CE1UX-008

*Figure C-4. CCA A1 (3-A2167.0000//B)*

| (1) ITEM NO | (2) SMR CODE | (3) CAGEC | (4) PART NUMBER | (5) DESCRIPTION AND USABLE ON CODES (UOC) | (6) QTY |
|---|---|---|---|---|---|
| | | | | GROUP 0201 CIRCUIT CARD ASSEMBLY A1 (1-A2167.0000//B) FIG. 4 | |
| 1 | PAHZZ | 81349 | M39014/01-1593 | CAPACITOR, FIXED, CER | 2 |
| 2 | PAHZZ | 17554 | Y334R-20 | CAPACITOR, FIXED, CER | 1 |
| 3 | PAHZZ | 81349 | M38510/10702BXC | MICROCIRCUIT, LINEAR | 1 |
| 4 | PAHZZ | 81349 | JAN2N2222A | TRANSISTOR | 20 |
| 5 | PAHZZ | 81349 | RCR05G123JS | RESISTOR, FIXED, COMP | 15 |
| 6 | PAHZZ | 81349 | RCR05G392JS | RESISTOR, FIXED, COMP | 16 |
| 7 | PAHZZ | 81349 | RCR05G391JS | RESISTOR, FIXED, COM1P | 20 |
| 8 | PAHZZ | 81349 | RCR05G511JS | RESISTOR, FIXED, COMP | 16 |
| 9 | PAHZZ | 81349 | RCR05G622JS | RESISTOR, FIXED, COMP | 1 |
| 10 | PAHZZ | 81349 | RCR05G222JS | RESISTOR, FIXED, COMP | 3 |
| 11 | PAHZZ | 81349 | RCR05G152JS | RESISTOR, FIXED, COMP | 1 |
| 12 | PAHZZ | 81349 | RNC55K1071FS | RESISTOR, FIXED, FILM | 1 |
| 13 | PAHZZ | 81349 | RNC55K6191FS | RESISTOR, FIXED, FILM | 1 |
| 14 | PAHZZ | 81349 | RCR07G102JS | RESISTOR, FIXED, COMP | 2 |
| 15 | PAHZZ | 81349 | RCR05G122JS | RESISTOR, FIXED, COMP | 1 |
| 16 | PAHZZ | A3026 | 4-54733.0000//C | BUSHING | 4 |
| 17 | PAHZZ | 58189 | 666273-074 | TERMINAL, LUG | 50 |

END OF FIGURE

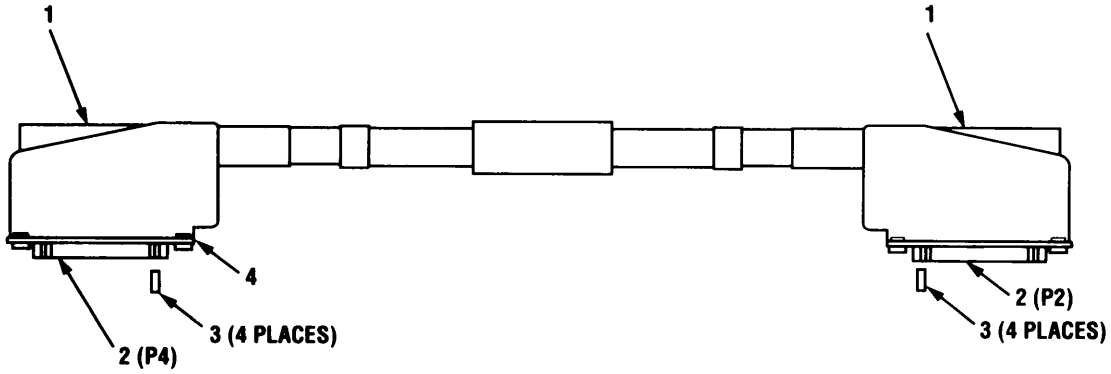



NOTE: ALL REFERENCE DESIGNATORS SHOULD BE PRECEDED BY A W52

CE1UX-009

*Figure C-5. Cable Assembly, W52(3-94295.0000//B)*

| (1) ITEM NO | (2) SMR CODE | (3) CAGEC | (4) PART NUMBER | (5) DESCRIPTION AND USABLE ON CODES (UOC) | (6) QTY |
|---|---|---|---|---|---|
| | | | | GROUP 03 CABLE ASSEMBLY, W52 (3-94295.0000//B) FIG. 5 | |
| 1 | PAHZZ | 59610 | 851-08EC16-26SN | CONNECTOR, RECEPTACL ..... ..... | 2 |
| | | | | END OF FIGURE | |



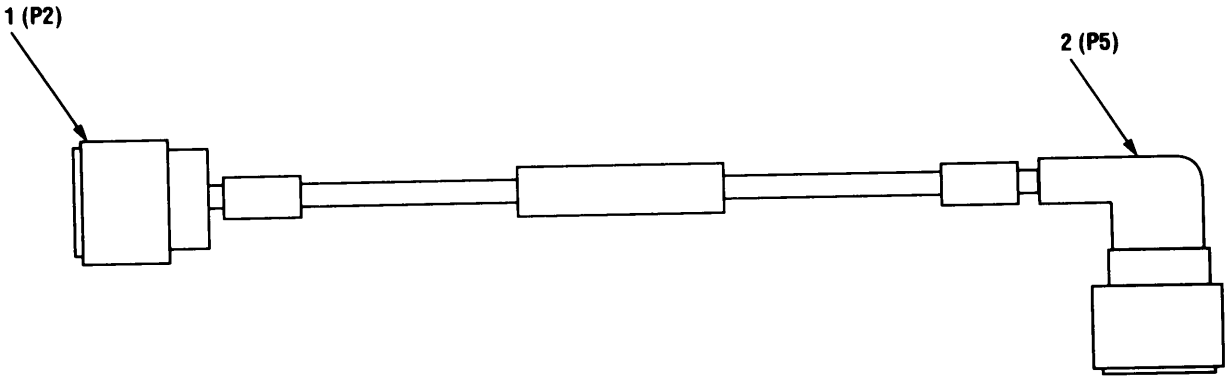

NOTE: ALL REFERENCE DESIGNATORS SHOULD BE PRECEDED BY A W53

CE1UX-010

*Figure C-6. Cable Assembly, W53 (1-94296.0000//B)*

| (1) ITEM NO | (2) SMR CODE | (3) CAGEC | (4) PART NUMBER | (5) DESCRIPTION AND USABLE ON CODES (UOC) | (6) QTY |
|---|---|---|---|---|---|
| | | | | GROUP 04 CABLE ASSEMBLY, W53 (3-94296.0000//B) FIG. 6 | |
| 1 | PAHZZ | 71468 | DD51217 | SHIELD, ELECTRICAL C | 2 |
| 2 | PAHZZ | 28009 | 16600688-045 | CONNECTOR, RECEPTACL | 2 |
| 3 | PAHZZ | 18876 | 9073891-3 | CONTACT, ELECTRICAL | 8 |
| 4 | PAHZZ | 71468 | DD51223-1 | RETAINER, ELECTRICAL | 1 |

END OF FIGURE



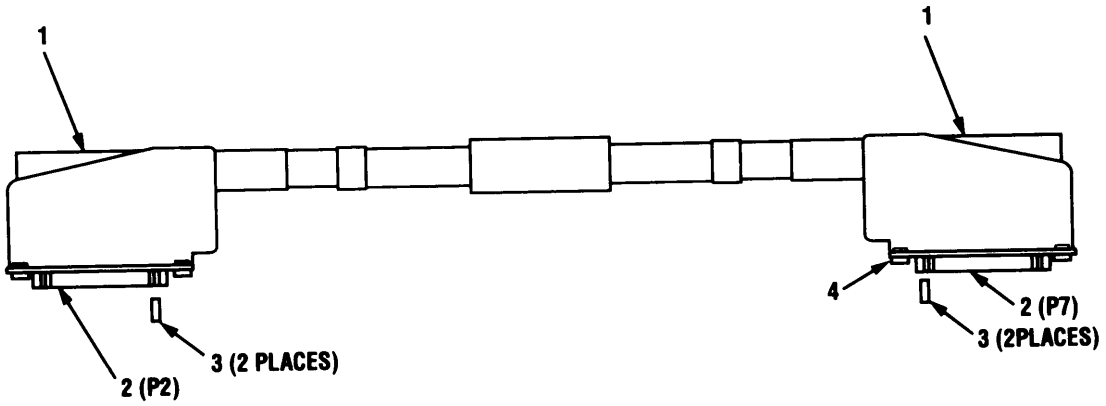

NOTE: ALL REFERENCE DESIGNATORS SHOULD BE PRECEDED BY A W54

CE1UX-011

*Figure C-7. Cable Assembly, W54 (1-94297.0000//B)*

| (1) ITEM NO | (2) SMR CODE | (3) CAGEC | (4) PART NUMBER | (5) DESCRIPTION AND USABLE ON CODES (UOC) | (6) QTY |
|---|---|---|---|---|---|
| | | | | GROUP 05 CABLE ASSEMBLY, W54 (3-94297.0000//B) FIG. 7 | |
| 1 | PAHZZ | 96906 | MS3116F8-4PN | CONNECTOR, RECEPTACL | 1 |
| 2 | PAHZZ | 59610 | 851-08EC8-4SN | CONNECTOR, RECEPTACL | 1 |

END OF FIGURE

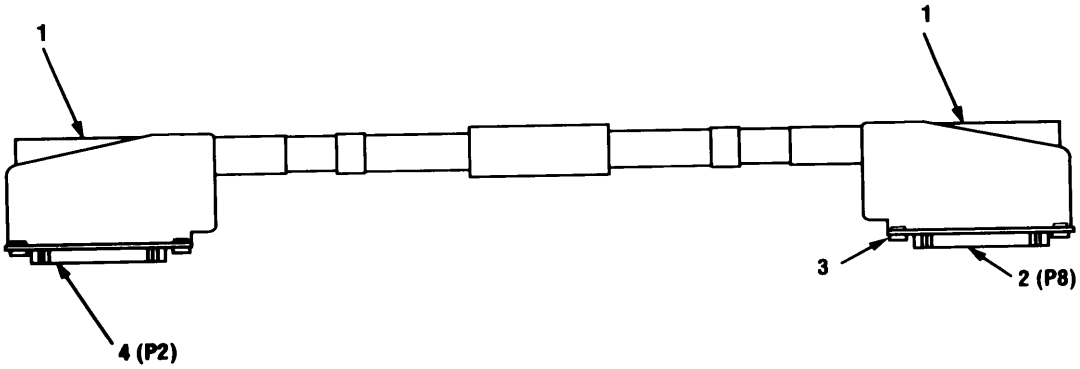



NOTE: ALL REFERENCE DESIGNATORS SHOULD BE PRECEDED BY A W55

CE1UX-012

*Figure C-8. Cable Assembly, W55 (3-94298.0000//B)*

| (1) ITEM NO | (2) SMR CODE | (3) CAGEC | (4) PART NUMBER | (5) DESCRIPTION AND USABLE ON CODES (UOC) | (6) QTY |
|---|---|---|---|---|---|
| | | | | GROUP 06 CABLE ASSEMBLY, W55 (3-94298.0000//B) | |
| | | | | FIG. 8 | |
| 1 | PAHZZ | 71468 | DD51217 | SHIELD, ELECTRICAL C | 2 |
| 2 | PAHZZ | 28009 | 16600688-045 | CONNECTOR, RECEPTACL | 2 |
| 3 | PAHZZ | 18876 | 9073891-3 | CONTACT, ELECTRICAL | 4 |
| 4 | PAHZZ | 71468 | DD51223-1 | RETAINER, ELECTRICAL | 1 |
| | | | | END OF FIGURE | |




NOTE: ALL REFERENCE DESIGNATORS SHOULD BE PRECEDED BY A W56

CE1UX-013

*Figure C-9. Cable Assembly, W56 (3-94299.0000//B)*

| (1) ITEM NO | (2) SMR CODE | (3) CAGEC | (4) PART NUMBER | (5) DESCRIPTION AND USABLE ON CODES (UOC) | (6) QTY |
|---|---|---|---|---|---|
| | | | | GROUP 07 CABLE ASSEMBLY, W56 (3-94299.0000//B) | |
| | | | | FIG. 9 | |
| 1 | PAHZZ | 71468 | DD51217 | SHIELD, ELECTRICAL C | 2 |
| 2 | PAHZZ | 96214 | 531740-1 | CONNECTOR, RECEPTACL | 1 |
| 3 | PAHZZ | 71468 | DD51223-1 | RETAINER, ELECTRICAL | 1 |
| 4 | PAHZA | 71468 | DDMY-43W2S | CONTACT, ELECTRICAL | 1 |
| | | | | END OF FIGURE | |

## CROSS- REFERENCE-INDEXES

### NATIONAL STOCK NUMBER INDEX

| STOCK NUMBER | FIG. | ITEM |
|---|---|---|
| 5910-00-010-8717 | C-4 | 1 |
| 5999-00-021-2119 | C-6 | 3 |
| | C-8 | 3 |
| 5940-00-045-6399 | C-3 | 2 |
| 5305-00-054-5639 | C-3 | 52 |
| 5305-00-054-5647 | C-3 | 54 |
| 5305-00-054-5648 | C-3 | 47 |
| 5305-00-054-5649 | C-3 | 55 |
| 5305-00-054-5651 | C-3 | 38 |
| 5305-00-054-6670 | C-1 | 6 |
| 5905-00-110-7620 | C-4 | 14 |
| 5940-00-143-4771 | C-3 | 29 |
| 5905-00-180-8303 | C-4 | 11 |
| 5905-00-197-0224 | C-4 | 8 |
| 5905-00-243-1847 | C-3 | 32 |
| 5905-00-261-6914 | C-4 | 12 |
| 5905-00-401-7424 | C-4 | 10 |
| 5935-00-402-1519 | C-9 | 2 |
| 5905-00-407-0081 | C-4 | 15 |
| 5905-00-407-0085 | C-4 | 7 |
| 5905-00-432-6388 | C-4 | 13 |
| 5905-00-433-6483 | C-4 | 6 |
| 5905-00-466-1215 | C-4 | 5 |
| 5905-00-470-9163 | C-4 | 9 |
| 5935-00-485-5018 | C-6 | 2 |
| | C-8 | 2 |
| 5935-00-488-4719 | C-3 | 14 |
| 5920-00-556-0144 | C-3 | 15 |
| 53r0-00-558-6207 | C-1 | 7 |
| 5310-00-595-6211 | C-3 | 34 |
| 5355-00-656-1458 | C-3 | 25 |
| 5935-00-905-2740 | C-6 | 4 |
| | C-8 | 4 |
| | C-9 | 3 |
| 5310-00-938-2013 | C-3 | 49 |
| 5935-00-948-2792 | C-6 | 1 |
| | C-8 | 1 |
| | C-9 | 1 |
| 5935-00-997-8026 | C-3 | 23 |
| 5962-01-084-9458 | C-4 | 3 |
| 5307-01-188-5229 | C-3 | 31 |
| 5962-01-192-8603 | C-3 | 39 |
| 5307-01-194-3198 | C-3 | 33 |
| 5935-01-202-7714 | C-3 | 17 |
| 5980-01-243-8475 | C-3 | 5 |
| 5940-01-274-2430 | C-3 | 41 |
| 5999-01-276-5655 | C-3 | 43 |
| 5940-01-276-7162 | C-3 | 4 |

## CROSS-REFERENCE INDEXES

### PART NUMBER INDEX

| CAGEC | PART NUMBER | STOCK NUMBER | FIG. | ITEM |
|---|---|---|---|---|
| 88044 | AN960-C8L | 5310-00-558-6207 | C-1 | 7 |
| 80063 | A3026757-43 | | C-3 | 13 |
| 80063 | A3026906-3 | | C-3 | 36 |
| 80063 | A3026908-4 | 5940-01-274-2430 | C-3 | 41 |
| 80063 | A3026908-6 | 5940-01-276-7162 | C-3 | 4 |
| 80063 | A3027095-1 | 5999-01-276-5655 | C-3 | 43 |
| 80063 | A3027823 | | C-3 | 21 |
| 71468 | DDMY-43W2S | | C-3 | 18 |
| | | | C-9 | 4 |
| 71468 | DDM36W4SA156 | 5935-00-488-4719 | C-3 | 14 |
| 71468 | DD51217 | 5935-00-948-2792 | C-6 | 1 |
| | | | C-8 | 1 |
| | | | C-9 | 1 |
| 71468 | DD51223-1 | 5935-00-905-2740 | C-6 | 4 |
| | | | C-8 | 4 |
| | | | C-9 | 3 |
| 81349 | FHN20G | 5920-00-556-0144 | C-3 | 15 |
| 81349 | JAN2N2222A | | C-4 | 4 |
| 27014 | LM138K | 5962-01-192-8603 | C-3 | 39 |
| 96906 | MS15795-803 | 5310-00-595-6211 | C-3 | 34 |
| 96906 | MS25036-103 | 5940-00-143-4771 | C-3 | 29 |
| 96906 | MS3116F8-4PN | | C-7 | 1 |
| 96906 | MS3474W8-4S | 5935-01-202-7714 | C-3 | 17 |
| 96906 | MS35649-224 | 5310-00-938-2013 | C-3 | 49 |
| 96906 | M551957-13 | 5305-00-054-5647 | C-3 | 54 |
| 96906 | MS51957-14 | 5305-00-054-5648 | C-3 | 47 |
| 96906 | M551957-15 | 5305-00-054-5649 | C-3 | 55 |
| 96906 | MS51957-17 | 5305-00-054-5651 | C-3 | 38 |
| 96906 | MS51957-45 | 5305-00-054-6670 | C-1 | 6 |
| 96906 | MS51957-5 | 5305-00-054-5639 | C-3 | 52 |
| 81349 | M38510/10702BXC | 5962-01-084-9458 | C-4 | 3 |
| 81349 | M39012/24-0002 | 5935-00-997-8026 | C-3 | 23 |
| 81349 | M39014/01-1593 | 5910-00-010-8717 | C-4 | 1 |
| 81349 | M63540/1-6C | 5307-01-194-3198 | C-3 | 33 |
| 81349 | M63540/1-9C | 5307-01-188-5229 | C-3 | 31 |
| 77820 | PT07-A-18-26S | | C-3 | 12 |
| 77820 | PT07A-8-4SN | | C-3 | 10 |
| 81349 | RCR05G122JS | 5905-00-407-0081 | C-4 | 15 |
| 81349 | RCR05G123JS | 5905-00-466-1215 | C-4 | 5 |
| 81349 | RCR05G152JS | 5905-00-180-8303 | C-4 | 11 |
| 81349 | RCR05G222JS | 5905-00-401-7424 | C-4 | 10 |
| 81349 | RCR05G391JS | 5905-00-407-0085 | C-4 | 7 |
| 81349 | RCR05G392JS | 5905-00-433-6483 | C-4 | 6 |
| 81349 | RCRO05G511JS | 5905-00-197-0224 | C-4 | 8 |
| 81349 | RCR05G622JS | 5905-00-470-9163 | C-4 | 9 |
| 81349 | RCR07G102JS | 5905-00-110-7620 | C-4 | 14 |
| 81349 | RER75F15R0R | 5905-00-243-1847 | C-3 | 32 |
| 81349 | RE65G140R | | C-3 | 48 |
| 81349 | RNC55K1071FS | 5905-00-261-6914 | C-4 | 12 |
| 81349 | RNC55K6191FS | 5905-00-432-6388 | C-4 | 13 |
| 59730 | TY23M(MS3367-4) | | C-3 | 28 |

## CROSS-REFERENCE INDEXES

### PART NUMBER INDEX

| CAGEC | PART NUMBER | STOCK NUMBER | FIG. | ITEM |
|---|---|---|---|---|
| 17554 | Y334R-20 | | C-4 | 2 |
| A3026 | 1-A2134.0000//A | | C-3 | 1 |
| A3026 | 1-A2139.0000//D | | C-3 | 30 |
| A3026 | 1-94281.0000//A | | C-1 | 5 |
| 24995 | 10647 | | C-1 | 1 |
| 28009 | 16600688-045 | 5935-00-485-5018 | C-6 | 2 |
| | | | C-8 | 2 |
| A3026 | 2-A2140.0000//D | | C-3 | 46 |
| 24995 | 22002022 | | C-2 | 1 |
| 24995 | 24000450 | | C-2 | 4 |
| 24995 | 24000460 | | C-2 | 5 |
| A3026 | 3-A2131.0000//D | | C-3 | 44 |
| A3026 | 3-A2160.0000//D | | C-3 | 37 |
| A3026 | 3-A2167.0000//B | | C-3 | 45 |
| A3026 | 3-10285.006//C | | C-3 | 51 |
| A3026 | 3-10311-001 | | C-3 | 50 |
| A3026 | 3-10311-003 | | C-3 | 35 |
| A3026 | 3-75883-001 | | C-3 | 42 |
| A3026 | 3-94295.0000//B | | C-1 | 10 |
| A3026 | 3-94296.0000//B | | C-1 | 11 |
| A3026 | 3-94297.0000//B | | C-1 | 2 |
| A3026 | 3-94298.0000//B | | C-1 | 4 |
| A3026 | 3-94299.0000//B | | C-1 | 3 |
| 24995 | 31000691 | | C-2 | 3 |
| 24995 | 33500035 | | C-2 | 2 |
| A3026 | 4-A2155.0006//D | | C-1 | 8 |
| | | | C-3 | 11 |
| A3026 | 4-A2158.0000//D | | C-3 | 27 |
| A3026 | 4-A2161.0000//D | | C-3 | 26 |
| A3026 | 4-05861.0020//Q | | C-3 | 16 |
| A3026 | 4-06746.0000//N | | C-3 | 8 |
| A3026 | 4-22015.0001//M | | C-3 | 22 |
| A3026 | 4-32151.0004//M | | C-3 | 9 |
| A3026 | 4-34260.0000//M | | C-3 | 6 |
| A3026 | 4-36246.0000//N | | C-3 | 7 |
| A3026 | 4-36509.0001//C | | C-3 | 3 |
| A3026 | 4-51249.0000//C | | C-3 | 40 |
| A3026 | 4-54733.0000//C | | C-4 | 16 |
| A3026 | 4-94485.0000//B | | C-3 | 53 |
| 81073 | 50MY24167 | | C-3 | 24 |
| A3026 | 503.10.0445.000/ /N | | 3 | 20 |
| 96214 | 531740-1 | 5935-00-402-1519 | C-9 | 2 |
| A3026 | 569712.801//B | | C-1 | 9 |
| 37695 | 615539-6 | 5980-01-243-8475 | C-3 | 5 |
| 58189 | 666273-074 | | C-4 | 17 |
| 49956 | 70-4-1G | 5355-00-656-1458 | C-3 | 25 |
| 94144 | 70-4-2G | | C-3 | 19 |
| 59610 | 851-08EC16-265N | | C-5 | 1 |
| 59610 | 851-08EC8-4SN | | C-7 | 2 |
| 18876 | 9073891-3 | 5999-00-021-2119 | C-6 | 3 |

## CROSS-REFERENCE INDEXES

### PART NUMBER INDEX

| CAGEC | PART NUMBER | STOCK NUMBER | FIG. | ITEM |
|---|---|---|---|---|
| 18876 | 9073891-3 | 5999-00-021-2119 | C-8 | 3 |
| 18323 | 990C758H03 | 5940-00-045-6399 | C-3 | 2 |

## CROSS REFERENCE INDEXES

### FIGURE AND ITEM NUMBER INDEX

| FIG. | ITEM | STOCK NUMBER | CAGEC | PART NUMBER |
|---|---|---|---|---|
| C-1 | 1 | | 24995 | 10647 |
| C-1 | 2 | | A3026 | 3-94297.0000//B |
| C-1 | 3 | | A3026 | 3-94299.0000//B |
| C-1 | 4 | | A3026 | 3-94298.0000//B |
| C-1 | 5 | | A3026 | 1-94281.0000//A |
| C-1 | 6 | 5305-00-054-6670 | 96906 | MS51957-45 |
| C-1 | 7 | 5310-00-558-6207 | 88044 | AN960-C8L |
| C-1 | 8 | | A3026 | 4-A2155.0006//D |
| C-1 | 9 | | A3026 | 569712.801//B |
| C-1 | 10 | | A3026 | 3-94295.0000//B |
| C-1 | 11 | | A3026 | 3-94296.0000//B |
| C-2 | 1 | | 24995 | 22002022 |
| C-2 | 2 | | 24995 | 33500035 |
| C-2 | 3 | | 24995 | 31000691 |
| C-2 | 4 | | 24995 | 24000450 |
| C-2 | 5 | | 24995 | 24000460 |
| C-3 | 1 | | A3026 | 1-A2134.0000//A |
| C-3 | 2 | 5940-00-045-6399 | 18323 | 990C758H03 |
| C-3 | 3 | | A3026 | 4-36509.0001//C |
| C-3 | 4 | 5940-01-276-7162 | 80063 | A3026908-6 |
| C-3 | 5 | 5980-01-243-8475 | 37695 | 615539-6 |
| C-3 | 6 | | A3026 | 4-34260.0000//M |
| C-3 | 7 | | A3026 | 4-36246.0000//N |
| C-3 | 8 | | A3026 | 4-06746.0000//N |
| C-3 | 9 | | A3026 | 4-32151.0004//M |
| C-3 | 10 | | 77820 | PT07A-8-4SN |
| C-3 | 11 | | A3026 | 4-A2155.0006//D |
| C-3 | 12 | | 77820 | PT07-A-18-26S |
| C-3 | 13 | | 80063 | A3026757-43 |
| C-3 | 14 | 5935-00-488-4719 | 71468 | DDM36W4SA156 |
| C-3 | 15 | 5920-00-556-0144 | 81349 | FHN20G |
| C-3 | 16 | | A3026 | 4-05861.0020//Q |
| C-3 | 17 | 5935-01-202-7714 | 96906 | MS3474W8-4S |
| C-3 | 18 | | 71468 | DDMY-43W2S |
| C-3 | 19 | | 94144 | 70-4-2G |
| C-3 | 21 | | 80063 | A3027823 |
| C-3 | 22 | | A3026 | 4-22015.0001//M |
| C-3 | 23 | 5935-00-997-8026 | 81349 | M39012/24-0002 |
| C-3 | 24 | | 81073 | 50MY24167 |
| C-3 | 25 | 5355-00-656-1458 | 49956 | 70-4-1G |
| C-3 | 26 | | A3026 | 4-A2161.0000//D |
| C-3 | 27 | | A3026 | 4-A2158.0000//D |
| C-3 | 28 | | 59730 | TY23M(MS3367-4) |
| C-3 | 29 | 5940-00-143-4771 | 96906 | MS25036-103 |
| C-3 | 30 | | A3026 | 1-A2139.0000//D |
| C-3 | 31 | 5307-01-188-5229 | 81349 | M63540/1-9C |
| C-3 | 32 | 5905-00-243-1847 | 81349 | RER75F15ROR |
| C-3 | 33 | 5307-01-194-3198 | 81349 | M63540/1-6C |
| C-3 | 34 | 5310-00-595-6211 | 96906 | MS15795-803 |
| C-3 | 35 | | A3026 | 3-10311-003 |
| C-3 | 36 | | 80063 | A3026906-3 |

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| FIG. | ITEM | STOCK NUMBER | CAGEC | PART NUMBER |
|---|---|---|---|---|
| C-3 | 37 | | A3026 | 3-A2160.0000//D |
| C-3 | 38 | 5305-00-054-5651 | 96906 | MS51957-17 |
| C-3 | 39 | 5962-01-192-8603 | 27014 | LM138K |
| C-3 | 40 | | A3026 | 4-51249.0000//C |
| C-3 | 41 | 5940-01-274-2430 | 80063 | A3026908-4 |
| C-3 | 42 | | A3026 | 3-75883-001 |
| C-3 | 43 | 5999-01-276-5655 | 80063 | A3027095-1 |
| C-3 | 44 | | A3026 | 3-A2131.0000//D |
| C-3 | 45 | | A3026 | 3-A2167.0000//B |
| C-3 | 46 | | A3026 | 2-A2140.0000//D |
| C-3 | 47 | 5305-00-054-5648 | 96906 | MS51957-14 |
| C-3 | 48 | | 81349 | RE65G140R |
| C-3 | 49 | 5310-00-938-2013 | 96906 | MS35649-224 |
| C-3 | 50 | | A3026 | 3-10311-001 |
| C-3 | 51 | | A3026 | 3-10285.006//C |
| C-3 | 52 | 5305-00-054-5639 | 96906 | MS51957-5 |
| C-3 | 53 | | A3026 | 4-94485.0000//B |
| C-3 | 54 | 5305-00-054-5647 | 96906 | MS51957-13 |
| C-3 | 55 | 5305-00-054-5649 | 96906 | MS51957-15 |
| C-4 | 1 | 5910-00-010-8717 | 81349 | M39014/01-1593 |
| C-4 | 2 | | 17554 | Y334R-20 |
| C-4 | 3 | 5962-01-084-9458 | 81349 | M38510/10702BXC |
| C-4 | 4 | | 81349 | JAN2N2222A |
| C-4 | 5 | 5905-00-466-1215 | 81349 | RCR05G123JS |
| C-4 | 6 | 5905-00-433-6483 | 81349 | RCR05G392JS |
| C-4 | 7 | 5905-00-407-0085 | 81349 | RCR05G391JS |
| C-4 | 8 | 5905-00-197-0224 | 81349 | RCR05G511JS |
| C-4 | 9 | 5905-00-470-9163 | 81349 | RCR05G622JS |
| C-4 | 10 | 5905-00-401-7424 | 81349 | RCR05G222JS |
| C-4 | 11 | 5905-00-180-8303 | 81349 | RCR05G152JS |
| C-4 | 12 | 5905-00-261-6914 | 81349 | RNC55K1071FS |
| C-4 | 13 | 5905-00-432-6388 | 81349 | RNC55K6191FS |
| C-4 | 14 | 5905-00-110-7620 | 81349 | RCR07G102JS |
| C-4 | 15 | 5905-00-407-0081 | 81349 | RCR05G122JS |
| C-4 | 16 | | A3026 | 4-54733.0000//C |
| C-4 | 17 | | 58189 | 666273-074 |
| C-5 | 1 | | 59610 | 851-08EC16-26SN |
| C-6 | 1 | 5935-00-948-2792 | 71468 | DD51217 |
| C-6 | 2 | 5935-00-485-5018 | 28009 | 16600688-045 |
| C-6 | 3 | 5999-00-021-2119 | 18876 | 9073891-3 |
| C-6 | 4 | 5935-00-905-2740 | 71468 | DD51223-1 |
| C-7 | 1 | | 96906 | MS3116F8-4PN |
| C-7 | 2 | | 59610 | 851-08EC8-4SN |
| C-8 | 1 | 5935-00-948-2792 | 71468 | DD51217 |
| C-8 | 2 | 5935-00-485-5018 | 28009 | 16600688-045 |
| C-8 | 3 | 5999-00-021-2119 | 18876 | 9073891-3 |
| C-8 | 4 | 5935-00-905-2740 | 71468 | DD51223-1 |
| C-9 | 1 | 5935-00-948-2792 | 71468 | DD51217 |
| C-9 | 2 | 5935-00-402-1519 | 96214 | 531740-1 |
| C-9 | 3 | 5935-00-905-2740 | 71468 | DD51223-1 |
| C-9 | 4 | | 71468 | DDMY-43W2S |

## CROSS REFERENCE INDEXES

### FIGURE AND ITEM NUMBER INDEX

| FIG. | ITEM | STOCK NUMBER | CAGEC | PART NUMBER |
|---|---|---|---|---|
| 3 | 20 | | A3026 | 503.10.0445.000/ |

# GLOSSARY

## Section I. ABBREVIATIONS AND ACRONYMS

ATU ..... Antenna Tuning Unit

CCA ..... Circuit Card Assembly

DMM ..... Digital Multimeter

EIR ..... Equipment Improvement Recommendations

GND ..... Ground

IAW ..... In Accordance With

KHz ..... Kilohertz

LED ..... Light-emitting Diode

MAC ..... Maintenance Allocation Chart
MDCS ..... Maintenance Data Collection Subsystem
MHz ..... Megahertz
MIL STD ..... Military Standard
MWO ..... Modification Work Order

NSN ..... National Stock Number

PA ..... Power Amplifier
PTT ..... Push-To-Talk
PWR ..... Power

RCS ..... Remote Control Set
RDCR ..... Reducer
RF ..... Radio Frequency
ROD ..... Report of Discrepancy
RPSTL ..... Repair Parts and Special Tools List

SRA ..... Special Repair Activity

TDR ..... Transportation Discrepancy Report
TP ..... Test Point

UUT ..... Unit-Under-Test

VA ..... Vehicular Adapter
VDC ..... Volts Direct Current
VSWR ..... Voltage Standing Wave Ratio

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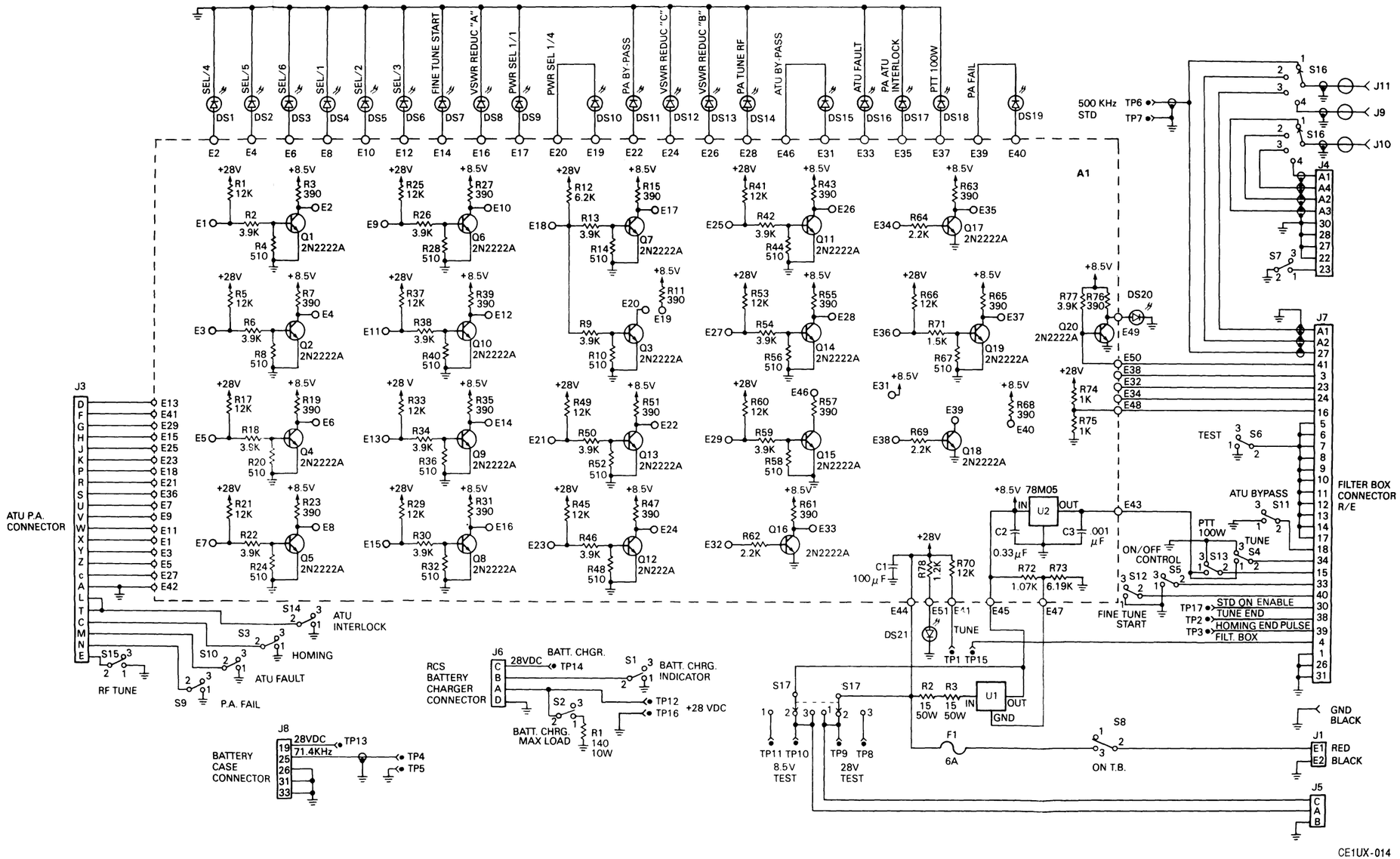


*Figure FO-1. SCHEMATIC DIAGRAM, TS-4252/GRC-215*

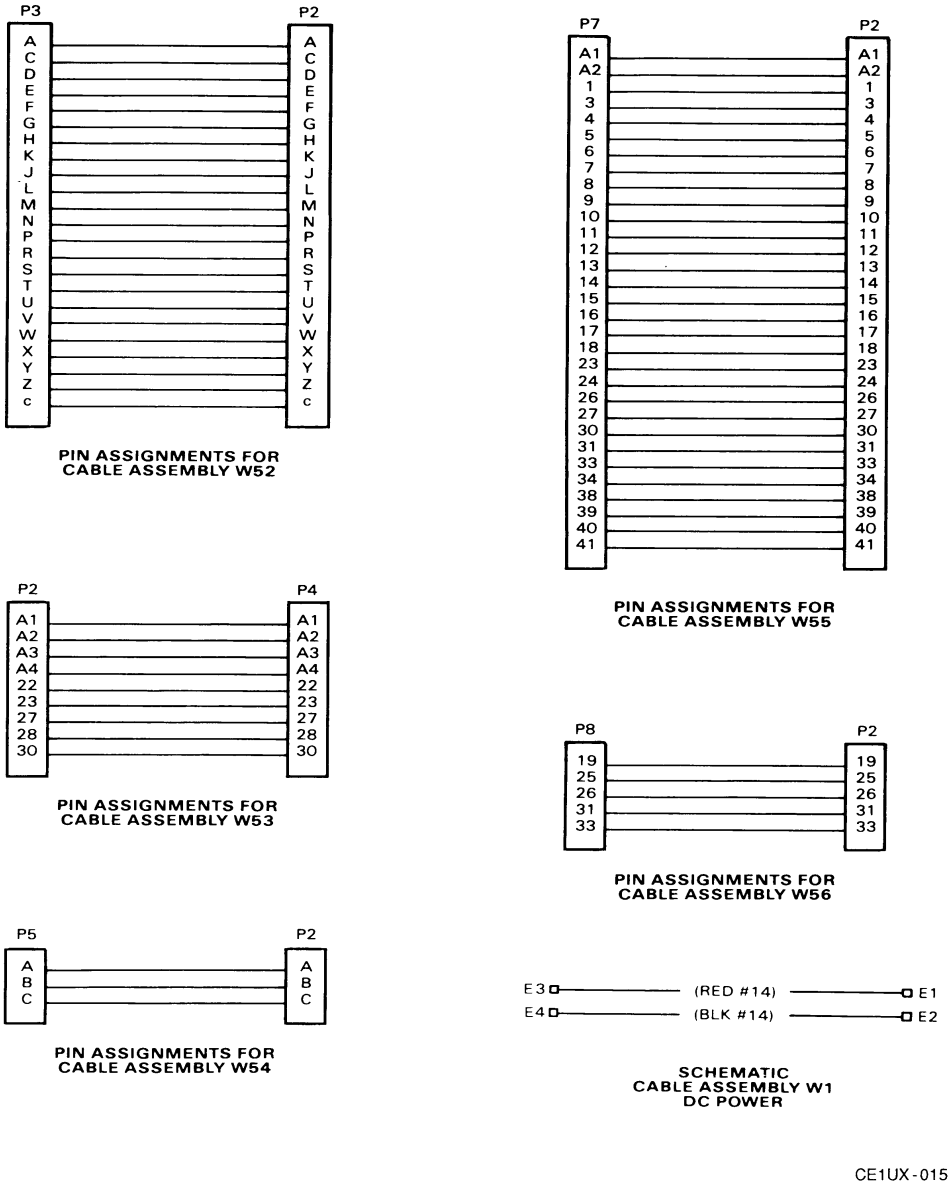


*Figure FO-2 PIN ASSIGNMENTS, CABLE ASSY W1, W52, W53, W54, W55, AND W56*

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