

TECHNICAL MANUAL

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 1 October 1982

DIRECT SUPPORT MAINTENANCE MANUAL  
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST  
MONITOR ASSEMBLY TEST SET  
NSN 6115-01-118-5542

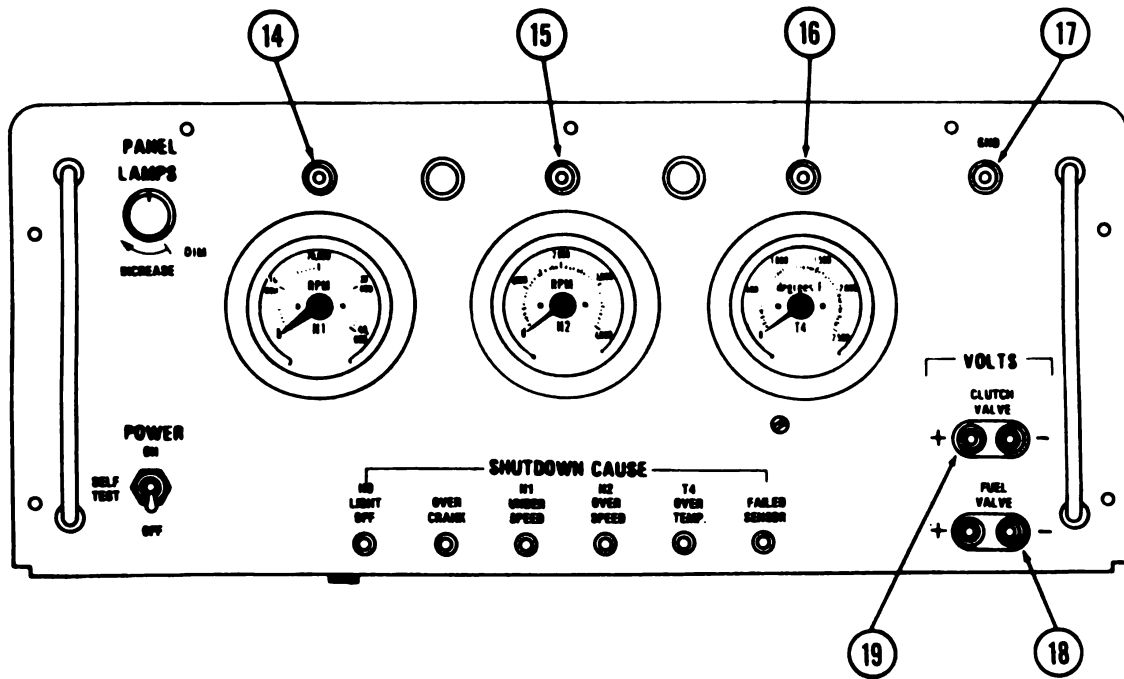
REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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, U. S. Army Troop Support Command, ATTN: AMSTR-MCTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. A reply will be furnished to you.

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## 2-6. BINDING POSTS

Binding posts are provided to check clutch valve current, fuel valve current, and calibration and recording of meters.

- a. N1 METER BINDING POST (14). Binding post is used if adjustment or recording of meter (N1) is required.
- b. N2 METER BINDING POST (15). Binding post is used if adjustment or recording of meter (N2) is required.
- c. T4 METER BINDING POST (16). Binding post is used if adjustment or recording of meter (T4) is required.
- d. GROUND BINDING POST (17). Binding post is used as a ground (-) when calibrating or recording individual meters N1 (14), N2 (15), or T4 (16).
- e. FUEL VALVE (18). A millivolt meter plugged into these binding posts measures a signal (in millivolts) that represents fuel valve current.
- f. CLUTCH VALVE (19). A millivolt meter plugged into these binding posts measures a signal (in millivolts) that represents clutch valve current.

## SECTION II PREVENTIVE MAINTENANCE CHECKS AND SERVICES

### 2-7. GENERAL

- a. The monitor assembly test set is a self contained unit which needs little or no maintenance other than testing that the test set is ready for operation.
- b. Before you operate. Always keep in mind the CAUTIONS and WARNINGS. Perform your before (B) PMCS.
- c. After you operate. Be sure to perform your after (A) PMCS.
- d. If your equipment fails to operate. Troubleshoot with proper equipment. Report any problems using the proper forms. See TM 38-750.

**TABLE 2-1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES**  
B — BEFORE OPERATION    A — AFTER OPERATION

ITEM NO.	INTERVAL		ITEM TO BE INSPECTED	PROCEDURES: Check for and have reported or adjusted as necessary.	Equipment is not Ready/Available if:
	B	A			
1	•		<u>CABLE ASSEMBLY</u>	Broken pin, damaged or loose attachment to cable	Pin or pins broken
			Connector		
2	•		Cable	Damaged covering or broken wires at connector and control panel	Broken wire or wires at connector or control panel
3	•		<u>CONTROL PANEL</u>	Current calibration sticker	Expired calibration date. Meters are broken, lenses cracked, indicators do not return to zero.
			Meters N1, N2, T4		
4	•	•	Clutch Valve and Fuel Valve Binding Posts	Damaged or loose mounting	Damaged or bent binding post

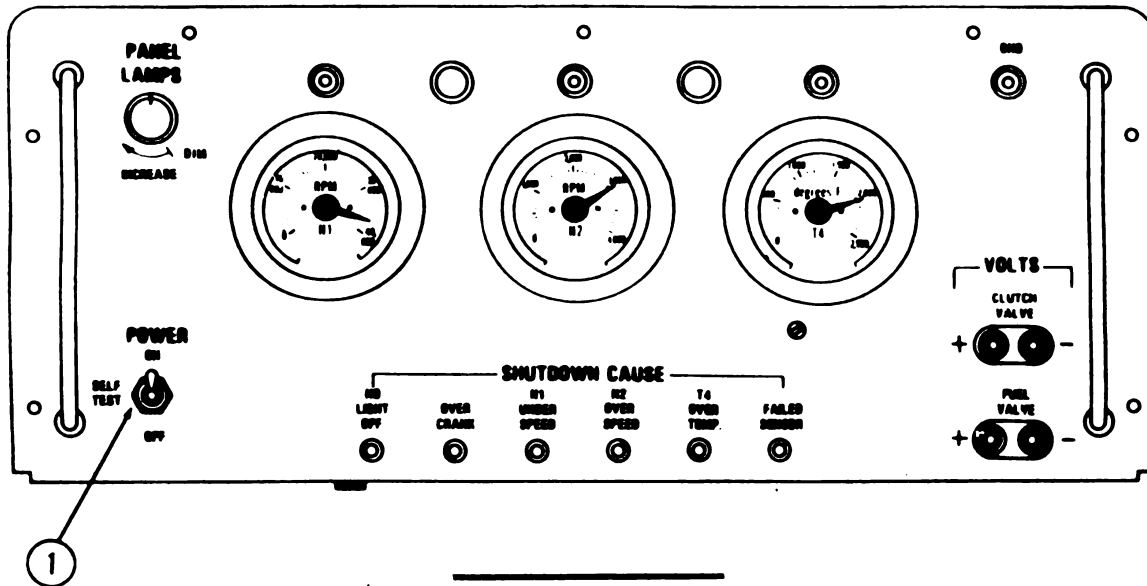
(2) Connect digital multimeter to FUEL VALVE binding posts (dual assemblies); meter reading shall be  $300 \pm 15$  mv.

h. If conditions in paragraphs 2-9e thru 2-9g are not met, shut down the set and troubleshoot. See Table 3-1.

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**2-10. OPERATING PROCEDURE**

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**WARNING**

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Hearing protection is required when operating Generator Set with this piece of equipment. High noise level of Generator Set can cause hearing loss.

- a. Place test set power switch (1), at POWER ON position.
- b. Run tests according to instructions in TM 5-6115-598-34.

**NOTE**

Shutdown cause indicator lights may be difficult to read in bright sunlight. If necessary, use a shield to keep direct sunlight from indicator lights.

## CHAPTER 3 DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

### SECTION I REPAIR PARTS, SPECIAL TOOLS, TMDE AND SUPPORT EQUIPMENT

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#### 3-1. COMMON TOOLS AND EQUIPMENT

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

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#### 3-2. SPECIAL TOOLS, TMDE AND SUPPORT EQUIPMENT

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Refer to Repair Parts and Special Tools List, Appendix C, Section III for these items.

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#### 3-3. REPAIR PARTS

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Repair parts are listed in Appendix C of this manual.

### SECTION II TROUBLESHOOTING

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#### 3-4. TROUBLE SHOOTING

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- a. This section consists of a troubleshooting Table 3-1, and a troubleshooting index. The index lists malfunctions in alphabetical order and the item number of each malfunction. Table 3-1 lists the malfunctions by malfunction number. Troubles observed during operation of the generator set may be found by locating malfunction symptoms in the alphabetical index.
- b. This table lists the common malfunctions which you may find during the operation or maintenance of the test set, or its components. You should perform the tests/inspections and corrective actions in the order listed.
- c. This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by the listed corrective action, notify your supervisor.

**SYMPTOM INDEX**

**WARNING**

Remove watches, rings and all other jewelry while working on or near this equipment. These items could result in injury or death to personnel, or damage to equipment if contact is made with electrical components.

**WARNING**

Hearing protection is required when operating Generator Set with this piece of equipment. High noise level of Generator Set can cause hearing loss.

**WARNING**

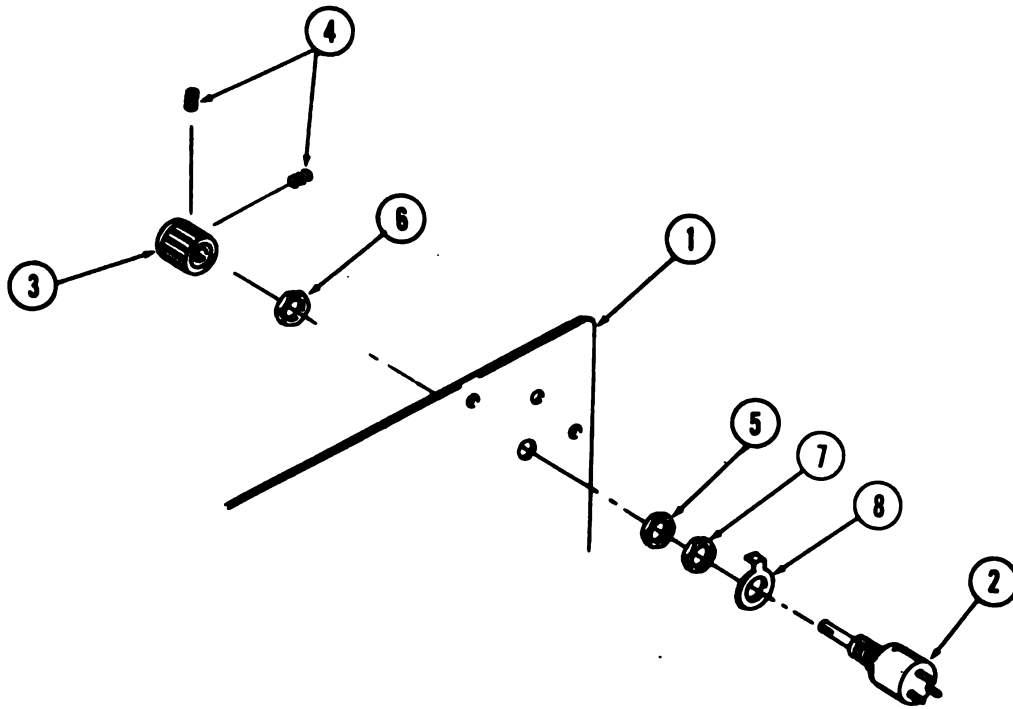
Use care when using soldering equipment. Severe flesh burns could result from improper or careless use of this equipment.

**NOTE**

Verify that fault exists before using this table. Ensure that corrective action has corrected fault after troubleshooting the test set.

Symptom	Item
Circuit Breaker (CB1) Opens When Power Is Applied. . . . .	3
Failed Sensor Indicator Does Not Light During Self Test. . . . .	11
N1 Meter Does Not Operate in ON Position . . . . .	33
N1 Meter Does Not Respond In Self Test Or ON Position. . . . .	21
N1 Underspeed Indicator Does Not Light During Self Test. . . . .	8
N1 And N2 Meters Do Not Respond In Self Test Or ON Position. . . . .	20
N2 Meter Does Not Operate In ON Position . . . . .	34
N2 Overspeed Indicator Does Not Light During Self Test . . . . .	9
No Clutch Valve Volts Response During Self Test. . . . .	16
No Fuel Valve, Clutch Valve, T4, N2 or N1 Measurements In ON Position . . . . .	25
No Fuel Valve Volts Response During Self Test. . . . .	15
No Indication Of Failed Sensor In ON Position. . . . .	26
No Indication Of N1 Underspeed In ON Position. . . . .	29
No Indication Of N2 Overspeed In ON Position . . . . .	28
No Indication Of No Light Off In ON Position . . . . .	31





**Rheostat Assembly**

LOCATION	ITEM	ACTION	REMARKS
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TEST

**WARNING**

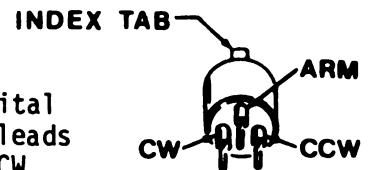
Use care when using soldering equipment. Severe flesh burns could result from improper or careless use of this equipment.

**CAUTION**

Use heat sink when removing and installing wires on rheostat.

- 2. Rheostat (2)
  - a. Wire 9
  - b. Terminals

Unsolder.  
  
Connect digital multimeter leads to arm and CW terminal.



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**3-15. RHEOSTAT (Cont)**

LOCATION	ITEM	ACTION	REMARKS
	c. Knob (3)	Rotate slowly to full CCW (DIM). Resistance should increase gradually from 0 to 200 ohms.	Sudden change in resistance, or incorrect resistance indicates failed rheostat.

REMOVAL

3. Knob (3)	Two setscrews (4)	Loosen.
4. Rheostat (2)	a. Knob (3)	Remove.

**WARNING**

Use care when using soldering equipment. Severe flesh burns could result from improper or careless use of this equipment.

	b. Wires 8 and 9	Unsolder.	Use heat sink as required.
	c. Hex nut (5)	Loosen.	Tag and identify wires.
	d. Hex nut (6)	Remove.	
5. Control panel assembly (1)	Rheostat (2)	Remove.	
6. Rheostat (2)	Hex nut (7) and index tab (8)	Remove.	

INSTALLATION

7. Rheostat (2)	Index tab (8) and hex nut (7)	Install on rheostat and tighten nut.	Do not over-tighten.
8. Control panel assembly (1)	Rheostat (2)	Install.	Engage index tab in panel index.
9. Rheostat (2)	a. Hex nut (6)	Install flush with rheostat stud.	

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TM 5-6115-608-30&P  
C 1

CHANGE

NO. 1

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C. 2 November 1986

Direct Support Maintenance Manual  
Including Repair Parts and Special Tools List

MONITOR ASSEMBLY TEST SET  
NSN 6115-01-118-5542

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