#### TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT

AND GENERAL SUPPORT MAINTENANCE

MANUAL INCLUDING REPAIR PARTS LIST

FOR

SHOP EQUIPMENT,

ELECTRICAL REPAIR, SEMITRAILER MOUNTED,

PART NUMBER 85236

(4940-01-150-3113)

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

OCTOBER 1987

**CHANGE** 

### HEADQUARTERS DEPARTMENT OF THE ARMY

No. 1

Washington, DC

19 January 1993

Operator, Organizational, Direct Support andGeneral Support Maintenance Manual Including Repair Parts List for SHOP EQUIPMENT, ELECTRICAL REPAIR, SEMITRAILER MOUNTED

PART NUMBER 85236 (4940-01-150-3113)

TM 9-4940-551-14&P, 7 October 1987, is changed as indicated below:

#### **NOTE**

New or changed text is indicated by a change bar at the outer margin of the page and the designation "Change 1" at the bottom of the page next to the page number. On pages with this designation but without the change bar, the entire page is new or changed.

Insert Pages

1. Remove old pages and insert new pages as follows:

Remove Pages

itemove i ages	moort i ageo		
i and ii	i and ii		
2-1/(2-2 blank)	2-1 thru 2-13/(2-14 blank)		

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

By Order of the Secretary of the Army:

GORDON R. SULLIVAN General, United States Army Chief of Staff

Official:

Mitto H. Hamilion
MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army

#### DISTRIBUTION:

To be distributed in accordance with DA Form 12-25-E, Block 2608, requirements for TM 9-4940-551-14&P.

TECHNICAL MANUAL

No. 9-4940-551-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C. 7 October 1987

#### TECHNICAL MANUAL

#### OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS LIST FOR

## SHOP EQUIPMENT, ELECTRICAL REPAIR, SEMITRAILER MOUNTED

#### PART NUMBER 85236 (4940-01-150-3113)

#### REPORTING OF ERRORS

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 the back of this manual direct to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000. A reply will be furnished directly to you.

Approved for public release; distribution is unlimited.

#### TABLE OF CONTENTS

			Page
CHAPTER	1.	INTRODUCTION	1-1
Section	I.	General	1-1
	II.	Description and Data	1-4
CHAPTER	2.	OPERATING INSTRUCTIONS	2-1
Section	I.	General	2-1
	II.	Operator/Crew Preventive Maintenance Checks and Services (PMCS)	2-1
CHAPTER	3.	MAINTENANCE INSTRUCTIONS	3-1
Section	I.	General	
	II.	Maintenance of Shop Set Contents	3-2
	III.	Workbenches	3-19
	IV.	Equipment Installation	3-22
	V.	Panel Stowage Assembly	3-30
	VI.	Front Workbench and Data Plates	3-32
	VII.	Electrical Installation	3-36
CHAPTER	4.	CONTENTS OF SHOP EQUIPMENT	4-1
APPENDIX	A	REFERENCES	A-1
		INDEX Ind	e x 1

### INSTRUCTIONS FOR REQUISITIONING PARTS

NOT IDENTIFIED BY NATIONAL STOCK NUMBER (NSN)

When requisitioning parts not identified by NSN, the following information must be furnished to your supply officer:

- Manufacturer's/vendor's CAGE code (formerly FSCM) as listed herein.
- Manufacturer's/vendor's part number as listed herein.
- Nomenclature as listed herein.
- Manufacturer's/vendor' s company name (if available).
- Model number (if available) and/or serial number (if available) of end item.
- Any descriptive information such as type, frame number, dimensions, electrical characteristics, etc.

If DD Form 1348-6 is being used, fill in all applicable blocks including the following:

- CAGE code in card columns 8-12.
- Part number in card columns 13-22.
- The part manufacturer's/vendor's name (if available) in block 2.
- TM number (if applicable) in block 6 TM 9-4940-551-14&P.
- Nomenclature in block 7.
- Descriptive information (if available) in block 8.
- End item manufacturer's name (if available) in block 9b.

Davey Compressor Company 11060 Kenwood Road Cincinnati, OH 45242

- End item model number (if available) in block 9c PN 85236.
- End item serial number (if available) in block 9e.
- Any additional information in block 11.

# CHAPTER 1 INTRODUCTION

#### Section I. GENERAL

#### 1-1. SCOPE.

- a. This manual is published for the use of the personnel to whom Shop Equipment, Electrical Repair, Semitrailer Mounted, Part Number 85236 is issued.
- b. The manual provides information related to the contents of the shop equipment and the wiring diagrams (fig 1-1 and 1-2). For operating and maintenance instructions pertaining to the trailer and components other than the shop set contents covered in this publication, refer to appendix A.
- 1-2. MAINTENANCE FORMS AND RECORDS. Equipment maintenance forms and procedures for their use are contained in DA Pam 738-750, The Army Maintenance Management System (TAMMS).
- **1-3. ADMINISTRATIVE STORAGE.** For information necessary to meet administrative storage requirements, refer to TM 9-2330-238-14&P.
- **1-4. EQUIPMENT SERVICEABILITY CRITERIA(ESC).** There are no Equipment ServiceabilityCriteria (ESC) technical manuals in existence pertinent to the end item of equipment being covered in this publication.
- **1-5. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.** For procedures required to render this end item unusable by the enemy, refer to TM 750-244-3.

#### 1-6. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC).

- a. Refer to MIL-STD-109 and MIL-M-38784 for QA/QC terms and definitions.
- b. Refer to TM 9-2330-238-14&P for the applicable QA/QC requirements.
- 1-7. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs). If your shop 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 (Quality Deficiency Report). Mail it to us at Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD, Rock Island, IL 61299-6000. We'll send you a reply.

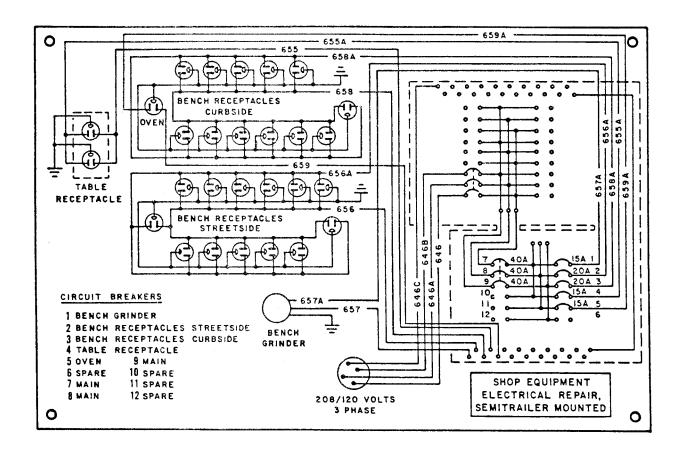


Figure 1-1. Workbench Wiring Diagram.



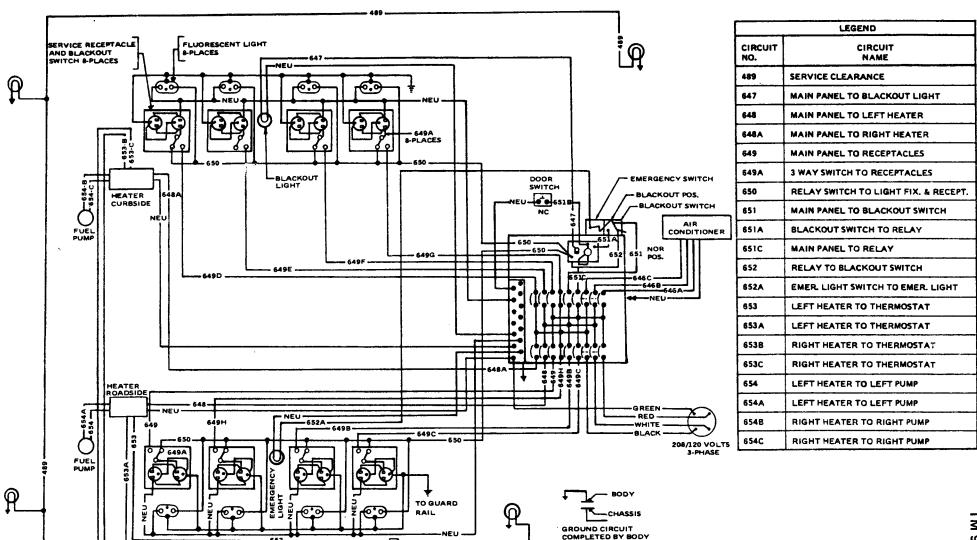


Figure 1-2. Wiring Diagram.

THERMOSTATS

CLEARANCE LIGHTS

TO CHASSIS CONTACT

INPUT FROM CHASSIS

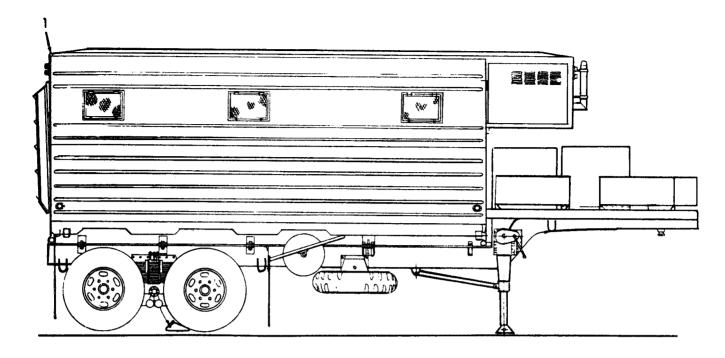
WIRING DIAGRAM

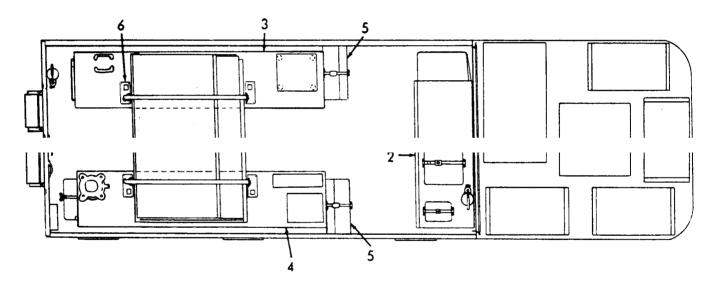
#### Section II. DESCRIPTION AND DATA

#### 1-8. DESCRIPTION.

- a. For description of the semitrailer van, refer to TM 9-2330-238-14&P.
- b. For major component location on shop set van, refer to figure 1-3.
- c. Identification Plate. The U.S. Army Identification Plate is located on the right rear panel of the van body. It contains information listed below:

Stock No	4940-01-150-3113
Ser. No	
Mfg	Davey Compressor Company
Part No	85236
Contract No	DAAA09-82-C-5356
Length	323
Width	94.5
Height	134
G. V. W	
Ship Wt	
Cube	2,367 ft.





ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Semitrailer	1	13217E8100	(19204)
2	Workbench, Front	1	13217E8118	(19204)
3	Workbench, Left Side	1	13217E8106-2	(19204)
4	Workbench, Right Side	1	13217E8106-1	(19204)
5	Equipment Installation	2	11021011	(19204)
6	Stowage Assembly	1	11021003	(19204)

Figure 1-3. Major Component Location.

#### CHAPTER 2

#### **OPERATING INSTRUCTIONS**

#### Section I. GENERAL

**2-1. SCOPE.** TM 9-4940-551-14&P covers the operating and maintenance instruction for Shop Equipment, Electrical Repair, Semitrailer Mounted, Part Number 85236, manufactured by the Davey Compressor Company. Lubrication, preventive maintenance, and troubleshooting instructions for the trailer chassis are contained in TM 9-2330-238-14&P. For instructions on operation and maintenance of the equipment packed with the shop set, refer to the manufacturer's commercial manuals (listed in appendix A) which are supplied with the shop set.

## Section II. OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

#### 2-2. OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS).

#### a. General.

- (1) Before You Operate. Always keep in mind the CAUTIONS and WARNINGS. Perform your "Before" PMCS prior to the equipment leaving its containment area or performing its intended mission.
- **(2) While You Operate.** Always keep in mind the CAUTIONS and WARNINGS. Perform your "During" PMCS when the equipment is being used in its intended mission.
- (3) After You Operate. Be sure to perform your "After" PMCS after the equipment has been taken out of its mission mode or returned to its containment area.
- (4) If Your Equipment Fails to Operate. Troubleshoot with proper equipment. Report any deficiencies using the proper forms and procedures. See DA Pam 738–750.

#### b. PMCS Procedures.

- (1) Table 2–1 below lists the inspections and care of your equipment required to keep it in good operating condition.
  - (2) The "internal" column tells you when to do a certain check or service.
  - (3) The "location" column tells you where in the shop set the check or service is performed.
- (4) The "procedure" column tells you how to do the required checks and services. Carefully follow these instructions. If you do not have the tools, or if the procedure tells you to, have organizational maintenance do the work.

#### NOTE

## The term "mission capable" means that the equipment is on hand and ready to perform its combat missions (see AR 700-138).

- (5) The "Not Fully Mission Capable If:" column tells you when the shop set is non-mission capable and why.
- **(6)** If your equipment does not perform as required, refer to Chapter 3, MAINTENANCE INSTRUCTIONS. Report any malfunctions or failures on DA form 2404, or refer to DA Pam 738-750.
- (7) The "Item No." column shall be used as a source of item numbers for the TM Number column on DA Form 2404, Equipment Inspection and Maintenance Worksheet, in recording results of PMCS.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services.

ITEM NO.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
1	Before	Chassis, Semi- trailer	Refer to TM 9–2330–238– 14&P for PMCS procedures.	Any stated PMCS procedures are not followed.
2	Before	Test Set, Electri- cal	Refer to TM 5-6625-2691– 13&P for PMCS procedures.	Any stated PMCS procedures are not followed.
3	Before	Other Installed Equipment (Space Heaters, Air Conditioner, and Generator)	Refer to applicable TMs for PMCS procedures.	Any stated PMCS procedures are not followed.
			WARNING	
			Injury or death from electric shock could result if the shop set is not properly grounded before starting generator or connecting to facility power.	
4	Before	Ground Rod and Wire Installation	Check that ground rod (p. 3-7) is properly installed and connected to trailer grounding terminal before starting generator or connecting to facility power.	Ground rod is missing or if trailer chassis is not properly grounded before starting generator or connecting to facility power.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
5	Before	Utility Grinding Machine	Check utility grinding machine (p. 3-1) grinding wheels for visible cracks. If either grinding wheel is visibly cracked or broken, notify Organizational Maintenance to replace it before using utility grinding machine.	Either grinding wheel is visibly cracked or broken.
6	During	Chassis, Semi- trailer	Refer to TM 9-2330-238-14&P for PMCS procedures.	Any stated PMCS procedures are not followed.
7	During	Test Set, Electri- cal	Refer to TM 5-6625-2691- 13&P for PMCS procedures.	Any stated PMCS procedures are not followed.
8	During	Other Installed Equipment (Space Heaters, Air Conditioner, and Generator)	Refer to applicable TMs for PMCS procedures.	Any stated PMCS procedures are not followed.
9	During	Utility Grinding Machine	Note whether or not utility grinding machine (p. 3-1) operates normally and listen for unusual noise and vibration. Report unusual noises/vibration to Organizational Maintenance.	Utility grinding machine is not operating normally or makes unusual noise or vibration.
10	During	Oven (When installed)	Check that oven (p. 3-10) outlet, plug, and power cord are not excessively hot to the touch. Report any safety hazard to Organizational Maintenance.	Oven outlet, plug, or cord are a burn or fire hazard during oven operation.
11	During	Generator Exhaust Installation	Listen for any noises from generator exhaust installation (p. 3-18) which can indicate leakage from exhaust pipe and for any rattling sounds which can indicate loose exhaust installation hangers or clamps. Tighten loose hangers and clamps and report any leaks to Organizational Maintenance.	Generator exhaust installation is leaking exhaust gases or is making unusual noise or vibration during operation.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
12	During	Tool and Test Equipment Items	<ul> <li>a. True RMS Amplifier (p. A-4).</li> <li>b. Power Supply Amplifier and Oscillator (p. 3-8).</li> <li>c. Impedance Bridge (p. A-4).</li> <li>d. Battery Charger (p. 3-1).</li> <li>e. Frequency Converter (p. A-4).</li> <li>f. Frequency Meter (p. A-4).</li> <li>g. Multimeters (p. A-5).</li> <li>h. Ohmmeter (p. A-5).</li> <li>i. Oscilloscope (p. A-5).</li> <li>j. Power Supply (p. 3-23).</li> <li>k. Pen Recorder (p. 3-11).</li> <li>l. Stroboscope (p. A-6).</li> <li>m. Tachometer (p. A-6).</li> <li>n. Semiconductor Tester (p. A-6).</li> <li>o. Test Set, Armature (p. A-6).</li> <li>p. Test Set, Low Voltage Circuit (p. 3-11).</li> <li>q. Rotary Actuator Test Stand (p. 3-12).</li> <li>r. Oven (p. 3-10).</li> <li>s. Undercutter, Armature (p. 3-11).</li> </ul>	
			Note whether or not the above tool or test equipment items are fully operable at all times.	Any tool or test equipment item is not operating as designed or is operating intermittently.
13	After	Chassis, Semi- trailer	Refer to TM 9-2330-238-14&P for PMCS procedures.	Any stated PMCS procedures are not followed.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
14	After	Test Set, Electri- cal	Refer to TM 5-6625-2691- 13&P for PMCS procedures.	Any stated PMCS procedures are not folowed.
15	After	Other Installed Equipment (Space Heaters, Air Conditioner, and Generator)	Refer to applicable TMs for PMCS procedures.	Any stated PMCS procedures are not folowed.
16	After	Shop Van and Tool and Test Equipment items	Perform any needed Operator/ Crew level maintenance and/or report any needed higher level maintenance to Organizational Maintenance level.	Needed repairs are not done or reported to Organizational Maintenance.
17	Monthly	Test Equipment Items	<ul> <li>a. True RMS Ampiifier</li> <li>(p. A-4).</li> <li>b. Power Supply Ampiifier</li> <li>and Oscillator (p. 3-8).</li> <li>c. impedance Bridge</li> <li>(p. A-4).</li> <li>d. Battery Charger (p. 3-1).</li> <li>e. Frequency Converter</li> <li>(p. A-4).</li> <li>f. Frequency Meter (p. A-4).</li> <li>g. Muitimeters (p. A-5).</li> <li>h. Ohmmeter (p. A-5).</li> <li>i. Oscillioscope (p. A-5).</li> <li>j. Power Supply (p. 3-23).</li> <li>k. Pyrometer, indicating</li> <li>(p. A-6).</li> <li>i. Pen Recorder (p.3-11).</li> <li>m. Tachometer (p. A-6).</li> <li>n. Semiconductor Tester</li> <li>(p. A-6).</li> <li>o. Test Set, Low Voltage Circuit (p. 3-11).</li> <li>p. Rotary Actuator Test</li> <li>Stand (p. 3-12).</li> </ul>	

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
17 Cont	Monthly	Test Equipment Items (Cont)	Check calibration label for each item of test equipment requiring calibration. Notify Organizational Maintenance if calibration label has expired.	Calibration label for any test equipment item has expired.
18	Monthly	AC Electrical System	a. Overhead Lights. Check operation of all overhead fluorescent lights. Replace any burned out or flickering tubes and/or defective starters.	Any fluorescent tubes are burned out or flickering, if any starters are defective, or if there are no spare fluorescent tubes or starters on board the shop van.
			b. Distribution Panel and Circuit Breakers. Check that distribution panel (p. 3–30) is intact and that all circuit breakers show proper on/off operation. Tighten any loose mounting hardware. Notify Organizational Maintenance of any missing mounting hardware or defective circuit breakers.	Distribution panel is not secure or if any circuit breakers are broken, hard to operate, will not stay on, or cut off when there is no short/overload.
			c. Blackout Light. Check operation of blackout light and blackout switch. Replace bulb if burned out. Notify Organizational Maintenance if blackout light is defective.	Blackout light is burned out or inoperative, if there is no spare light bulb for the blackout light on board the shop van, or if overhead lights will not go off when rear door is opened during blackout mode.
į			d. Emergency Light. Check operation of emergency light. Replace bulb if burned out. Notify Organizational Maintenance if emergency light is inoperative.	Emergency light is burned out or inoperative, or if there is no spare light bulb for the emergency light on board the shop van.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

ITEM No.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
19	Quarterly	Platform Assembly and Modification	Inspect platform assembly (p. 3-18) components and mounting hardware. Tighten any loose mounting hardware. Notify Organizational Maintenance to replace any missing mounting hardware or damaged components.	Platform assembly mounting is loose or damaged such that it is unsafe to use electrical test sets or that they cannot be secured for movement.
20	Quarterly	Generator Installation	Check generator installation (p. 3-18) for secure mounting and tighten mounting hardware and exhaust pipe hangers as necessary. Check around exhaust pipe for carbon deposits which would indicate leaks. Notify Organizational Maintenance to replace any leaking sections of exhaust pipe and to replace any missing mounting hardware.	Generator is loose on its mountings, if ex- haust system hardware is loose, or if there is evidence of leaks in exhaust pipe.
21	Quarterly	AC Electrical System	a. Service Receptacles. Check all service receptacles with an outlet tester to see that they are live and properly wired. Check for any cracked or broken receptacles. Tighten any loose receptacles or cover plates. Notify Organizational Mainte- nance to repair improperly wired receptacles and to replace any cracked, broken, dead, or inter- mittent receptacles.	Any service receptacle(s) is dead, intermittent, or improperly wired or grounded; is cracked, broken, or a shock hazard; if receptacle(s) or cover plate(s) are loose; or if any mounting hardware is missing.
			b. Switches. Check that switches are not cracked or broken and have proper on/off operation. Tighten any loose switches and their cover plates. Report any defective switches or missing mounting hardware to Organizational Maintenance.	Switches are cracked, broken, inoperative, or a shock hazard; or if switches or their cover plates are loose; or if mounting hardware is missing.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
22	Quarterly	Bolt Cutter	Check bolt cutter (p. 3-13) for dirt, grease, orgrime. Cleanas necessarywitha cloth dampened with solvent (P-D-680, NSN 6850-00-110-4498). Lubricate pivots and sliding surfaces with grease (MIL-G-10924, NSN 9150-00-190-0904). Wipe off any excess grease with a clean cloth. Tighten any loose bracket and clamp mounting hardware. Notify Organizational Maintenance to replace any missing mounting hardware.	Bolt cutter is missing or broken, if bracket and/ or clamps are missing, or if hardware is loose or missing such that bolt cutter cannot be secured for movement.
23	Quarterly	Fire Extinguisher	Check that fire extinguisher (p. 3-13) is present, that seals are not broken, that gage reads within the normal range, and that the fire extinguisher is not corroded or leaking. Tighten any loose mounting hardware on fire extinguisher bracket. Notify Organizational Maintenance to replace fire extinguisher if it is missing, if gage reads below normal, or if there is corrosion or evidence of leakage. Notify Organizational Maintenance to replace any missing mounting hardware.	Fire extinguisher is missing, if seals are broken, if gage does not read within normal range, if fire extinguisher is corroded or leaking, if mounting bracket is loose, or if mounting hardware is missing.
24	Quarterly	First Aid Kit	Check that first aid kit (p. 3-13) is present and contains the proper kind and amount of supplies. Tighten any loose mounting hardware and replace any missing or deteriorated supplies. Notify organizational maintenance to replace any missing hardware.	First aid kit is missing or loose, if supplies are missing or deteriorated, or if mounting hardware is missing.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

ITEM No.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
25	Quarterly	Stools and Retaining Straps	Check that stools (p. 3-4) are securely held by the retaining straps. Remove stools and check them for loose or missing hardware. Tighten hardware as necessary. Check strap mounting brackets for loose or missing hardware. Tighten hardware as necessary. Notify Organizational Maintenance to replace broken or worn retaining straps and to replace any missing mounting hardware.	Stool hardware is loose or missing such that stool is unsafe to sit on, or if retaining straps are broken or worn such that stools cannot be secured for movement.
26	Quarterly	Small Parts Storage Cabinet	Check that small parts storage cabinet (p. 3-5) is securely mounted, that drawers open fully and operate freely, and that drawer stops function properly. Tighten any loose drawer handles or other mounting hardware. Notify Organizational Maintenance to replace any missing handles or hardware and to repair or replace any stuc/binding drawers or defective stops. Lubticate drawer sliding surfaces with grease (MIL-G-10924, NSN 9150-00-190-0904) as needed. Wipe off any excess grease with a wiping cloth.	Small parts cabinet is loose, if drawers do not open and close freely or will not open fully, if drawer stops don't work, if there is any loose or missing mounting hardware, or if drawers cannot be secured for travel using the clip and retainer.
27	Quarterly	Front Workbench	Check that front workbench (p. 3-26) is secure, that drawers open fully and operate freely, and that drawer stops function properly. Tighten any loose mounting hardware. Notify Organizational Maintenance to replace any missing mounting hardware and repair or replace any stuck/binding drawers or defective stops. Lubricate drawer sliding surfaces with grease (MIL-G-10924, NSN 9150-00-1 90-0940) as needed. Wipe off excess grease with a wiping rag.	Front workbench is loose, if drawers do not open and close freely or will not open fully, if drawer stops don't work, or if there is any loose or missing mounting hardware.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
28	Quarterly	Machinist Vise	Check that machinist vise (p. 3-1) is securely mounted to work bench. Tighten mounting hardware as needed. Notify Organizational Maintenance to replace any missing mounting hardware. Clean vise with a clean cloth dampened with solvent (P-D-680, NSN 6850-00-110-4498) as needed. Lubricate drive screw and sliding surfaces of vise with grease (MIL-G-10924, NSN 9150-00-190-0404) as needed. Wipe off any excess grease with a wiping rag.	Machinist vise is loose, if there is loose or missing hardware, or if vise does not operate freely.
			NOTE	
			It is convenient to per- form items 29 and 30 concurrently.	
29	Quarterly	Left and Right Side Work- benches	Check workbench (p. 3-16) tops for damage. Notify Organizational Maintenance to replace bench top if it is unserviceable. Check that workbenches and workbench tops are securely mounted. Tighten any loose mounting hardware. Notify Organizational Maintenance to replace any missing hardware. Check that drawers open fully and operate freely and that drawer stops function properly. Notify Organizational Maintenance to replace any missing handles, label holders, or drawer dividers and to repair or replace any defective stops. Lubricate drawer sliding surfaces with grease (MIL-G-10924, NSN 9150-00-190-0940) as needed. Wipe off excess grease with a wiping rag.	Workbench top(s) is unserviceable, if workbench or its top is not securely mounted, if there is loose or missing hardware, if drawers do not operate freely or will not open fully, or if drawer stops don't work.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

	1	•	-	
ITEM NO.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
30	Quarterly	Common Tool and Components Inventory	Make a general survey of common tools and components (p. 4-1) in the workbench drawers, the portable tool box, and the general mechanics tool kit. Replenish any missing common tools or any components that are exhausted or in short supply.	The total amount of common tools and components present (based on a general estimate) is less than 90% of that authorized for the shop, or if any mission-critical comonents are exhausted or in short supply.
31	Quarterly	Test Set, Low Voltage Circuit and Pen Record- er	Unfasten test set and pen recorder (p. 3-11) storage case retaining straps. Inspect retaining straps for cuts, breaks, and wear. Notify Organizational Maintenance to replace broken or badly worn retaining straps. Tighten any loose loop mounting hardware and notify Organizational Maintenance to replace any missing hardware. Wipe off case with clean cloth dampened with water. Spot paint (TM 43-0139) as required. Open case and check that all accessories supplied with the test set and pen recorder are present. Notify Organizational Maintenance to replace any missing accessories. Clean out storage case interior as needed.	Retaining straps are badly worn or broken such that equipment cannot be secured for movement, or if any supplied accessories are missing.
32	Quarterly	Battery Charger	Unfasten battery charger (p. 3-1) retaining straps. Inspect retaining straps for cuts, breaks, and wear. Notify Organizational Maintenance to replace broken or badly worn straps. Tighten any loose loop mounting hardware, and notify Organizational Maintenance to replace any missing mounting hardware. Wipe off battery charger with clean cloth dampened with water. Spot paint (TM 43-0139) as required. Check that all cables are present. Remove any corrosion from clamps or terminals using a stiff wire brush. Notify Organizational Maintenance to replace any missing or unserviceable cables.	Retaining straps are badly worn or broken such that battery charger cannot be secured for movement, or if cables are missing, coroded or unservice-

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
33	Quarterly	Power Supply Amplifier and Os- cillator and Instal- lation Compo- nents	Wipe off power supply amplifier and oscillator (p. 3-9) with clean cloth dampened with water. Spot paint (TM 43-0139) as required. check that all components supplied with the equipment are present. Notify Organizational Maintenance to replace any missing components. Check power supply amplifier and oscillator installation components (p. 3-23). Tighten any loose mounting hardware. Check resiliency of shock mounts. Notify Organizational Maintenance to replace any missing or damaged components	Any components supplied with the equipment are missing or unserviceable, if equipment is loose on its mountings, or if shock mounts are broken or jammed such that power supply amplifier and oscillator could be damaged by shock or vibration during movement.
34	Quarterly	Oven (When Installed)	Check that oven (p. 3-10) is securely mounted. Tighten any loose mounting hardware, and notify Organizational Maintenance to replace any missing hardware. Unplug oven and check plug for cracks and breaks. Check cord for fraying or cracks in insulation. Notify Organizational Maintenance to replace cord and plug if they are unsafe.	Oven mounting hard- ware is loose or miss- ing or if plug or cord is a shock or fire hazard.
35	Quarterly	Panel Assemblies	Check straps that secure panel assemblies (p. 3-12) for cuts, creaks, and wear. Notify Organizational Maintenance to replace cut, broken or badly worn straps. Tighten any loose loop mounting hardware, and notify Organizational Maintenance to replace any missing mounting hardware. Check that all panels are present. Notify Organizational Maintenance to replace any missing or unserviceable panels.	Retaining straps are badly worn or broken such that panel assemblies cannot be secured for movement, or if panels are unserviceable.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services (Cont).

ITEM NO.	INTERVAL	LOCATION ITEM TO CHECK/SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
36	Quarterly	Rotary Actuator Test Stand	Check rotary actuator test stand (p. 3–12) retaining straps for cuts, breaks, and wear. Notify Organizational Maintenance to replace any cut, broken, or badly worn retaining straps. Tighten any loose loop mounting hardware and notify Organizational Maintenance to replace any missing mounting hardware.	If retaining straps are cut, broken, or worn such that rotary actuator test stand cannot be secured for movement.
37	Quarterly	Portable Hoist Trestle	Check portable hoist trestle (p. 3–15) bracket and mounting hardware. Notify Organizational Maintenance to replace any damaged or missing components.	Portable hoist trestle bracket and mounting hardware are damaged or missing such that equipment cannot be secured for movement.
38	Quarterly	Battery Powered Test Equipment Items	For each battery—powered test equipment item, open battery compartment and check for leakage or corrosion. Clean any corrosion from battery compartment contacts. Test batteries and replace with fresh ones if they are leaking or spent.	If batteries are leaking, corroded, or spent; or if there are no spare batteries on board the shop van.

# CHAPTER 3 MAINTENANCE INSTRUCTIONS

#### Section I. GENERAL

**3-1. REFERENCE INSTRUCTIONS.** Refer to TM 9-2330-238-14&P for instructions pertaining to service upon receipt of equipment, movement to a new worksite, repair parts (special tools and equipment) and lubrication instructions for the shop sets. Refer to appendix A or instruction manuals.

#### Section II. MAINTENANCE OF SHOP SET CONTENTS

#### 3-2. BATTERY CHARGER.

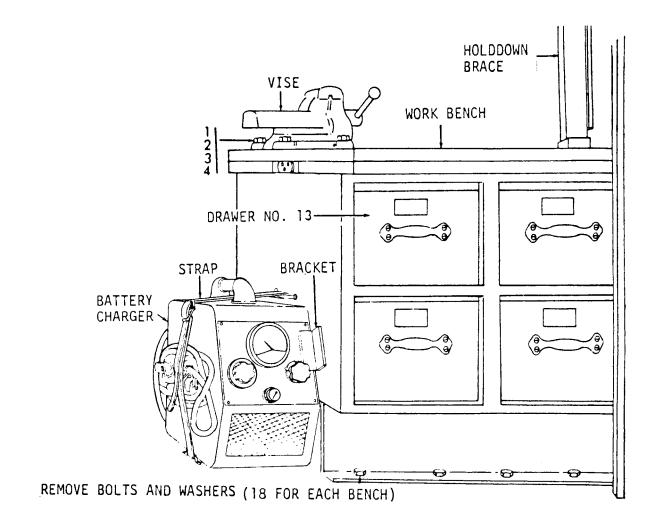
- a. General. The charger is located at the rear of the right side workbench (on the floor).
  - b. Removal. Refer to figure 3-1 and unfasten straps and remove battery charger.
  - c. Installation. Refer to figure 3-1 and install battery charger and secure straps.

#### 3-3. MACHINIST VISE.

- a. General. The vise is located on top of the right side workbench above the battery charger.
  - b. Removal (fig. 3-1).
    - (1) Remove drawer number 13.
    - (2) Remove four nuts (1), four flatwashers (2), four lockwashers (3), and four screws (4).
    - (3) Remove vise.
  - c. Installation. Install in reverse order of para b. above.

#### 3-4. UTILITY GRINDING MACHINE.

- a. General. The grinding machine is located on the rear of the left side workbench.
- b. Removal.
  - (1) Remove drawer number 15 (fig. 3-2).
  - (2) Disconect electrical connection at conduit box (fig. 3-3).
  - (3) Remove two nuts (1), two lockwashers (2), two flatwashers (3), and two screws (4).
  - (4) Remove grinding machine.
- c. Installation. Install in reverse order of removal, para b. above.



ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Screw	4	MS90725-171	(96906)
2	Washer, Flat	4	MS27187-21	(96906)
3	Washer, Lock	4	MS35338-50	(96906)
4	Nut	4	MS51967-20	(96906)

Figure 3-1. Battery Charger and Machinist Vise.

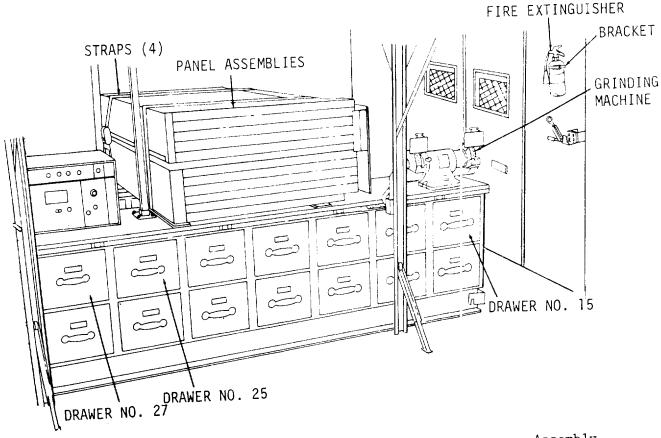


Figure 3-2. Utility Grinding Machine, Workbench and Panel Assembly.

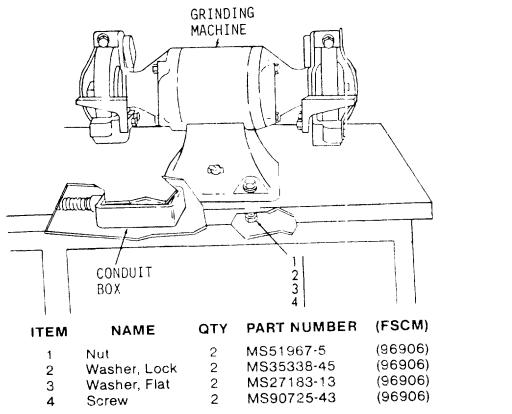
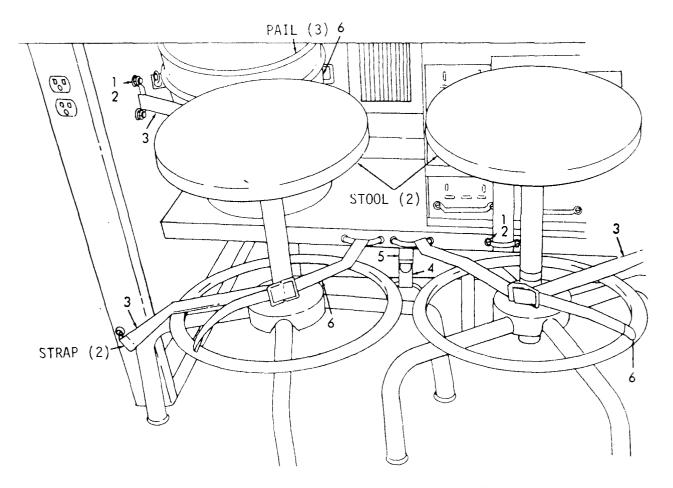


Figure 3-3. Disconnecting Conduit Box and Removing Utility Grinding Machine.

#### TM 9-4940-551-14&P

#### 3-5. STOOLS AND PAILS.

- a. General. The two stools and three pails are located under the front workbench.
- b. Removal. Unfasten the four straps (3 and 6, fig. 3-4) and remove the two stools; unfasten two straps (3 and 6) and remove the three pails.
  - c. Installation. Install in reverse order of removal, para. b. above.



ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Screw	12	MS51861-46	(96906)
2	Loop	6	MS51939-1	(96906)
3	Strap	3	11020949-5	(19204)
4	Strap	2	11020949-2	(19204)
5	Strap	2	11020948-5	(19204)
6	Strap	3	11020948-8	(19204)

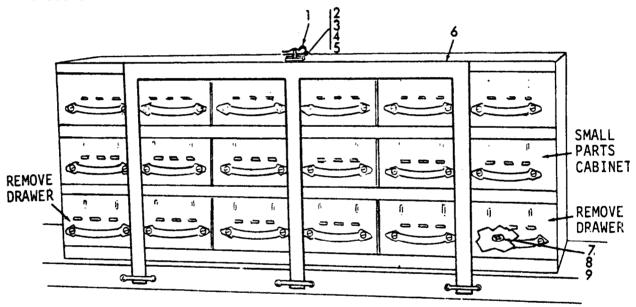
Figure 3-4. Stools and Pails.

#### 3-6. SMALL PARTS STORAGE CABINET.

a. General. The small parts cabinet is located under the front workbench in back of the revolving stools.

#### b. Removal.

- (1) Remove the two stools (para. 3-5).
- (2) Remove the clip (1, fig.3-5); then slide the retainer (6) from front of cabinet.
- (3) Remove two bottom drawers (far left and far right).
- (4) Remove four nuts (9), four washers (8), and four screws (7) securing the small parts cabinet to the front workbench.
- (5) Remove the cabinet.
- c. *Installation.* Install the small parts cabinet in reverse order of removal, para. b. above.



ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Clip, Hitchpin	1	11021039	(19204)
2	Plate, Staple	1	11021053	(19204)
3	Screw	4	MS35190-236	(96906)
4	Washer, Lock	4	MS35338-41	(96906)
5	Nut	4	MS35649-262	(96906)
6	Retainer	1	13217E8119	(19204)
7	Screw	4	MS35190-293	(96906)
8	Washer	4	MS35338-44	(96906)
9	Nut	4	MS51967-2	(96906)

Figure 3-5. Small Parts Cabinet.

#### 3-7. ELECTRICAL POWER TEST SETS.

- a. General. The five test sets are mounted on the front of the trailer.
- b. Removal.
  - (1) Unscrew the four Chain and bolt assemblies (1, fig. 3-6) and remove two washers (2) on four test sets.
  - (2) Remove two screws (3), two washers (2), and a retainer plate (4) from the rear of each test set.
  - (3) Using a suitable lifting device, slide power test set from frame mounts and off the trailer.
  - (4) Remove eight nuts (5), eight washers (6) eight screws (4), and remove 60 KW power test set.
- c. Installation. Install the five electrical power test sets in reverse order of removal, para b. above.

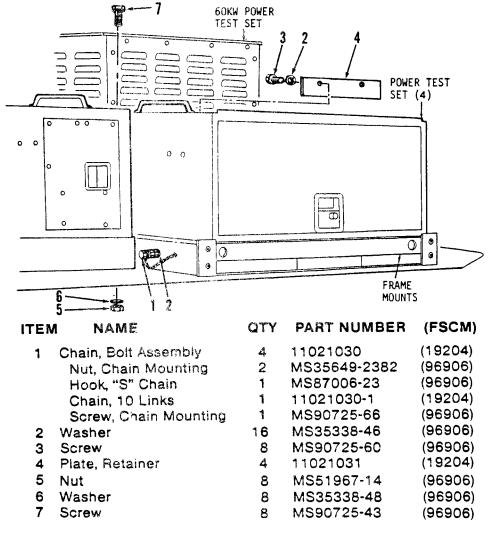


Figure 3-6. Electrical Power Test Sets.

# 3-8. THREAD CUTTING TAP SET, ELECTRICAL INSULATION SHEETS, GENERATOR EXHAUST KIT, OVEN MOUNTING HARDWARE, AND GENERATOR MOUNTING HARDWARE.

- a. General. The five components are located under the small parts cabinet (under the front workbench).
  - b. Removal.
    - (1) Remove the two stools (para 3-5).
    - (2) Unfasten four straps (4 and 5, fig. 3-4) and remove the five components.
- c. Installation. Install the components under the workbench and secure with four straps (4 & 5).

### 3-9. PORTABLE TOOL BOX, TORQUE WRENCH, SOCKET WRENCH SET, AND GENERAL MECHANIC'S TOOL KIT.

- a. General. The components in this paragraph are located in front of the left and right side workbench.
  - b. Removal.
    - (1) Unfasten straps (6 and 7, fig. 3-7) and remove torque wrench and portable
    - (2) Unfasten straps (6 and 8) and remove socket wrench set and general mechanic's tool kit.
  - c. Installation. Install in the reverse order of removal, para b. above.

#### 3-10. CROWBAR, GROUND ROD, AND WRECKING BAR.

- a. General. The three components are mounted near the bottom, on the inside, of the workbench. They are secured with mounting straps (one for each).
  - b. Removal. Unfasten the three straps (fig. 3-7) and remove the three components.
- c. Installation. Install the three components in reverse order of removal, paragraph b. above.

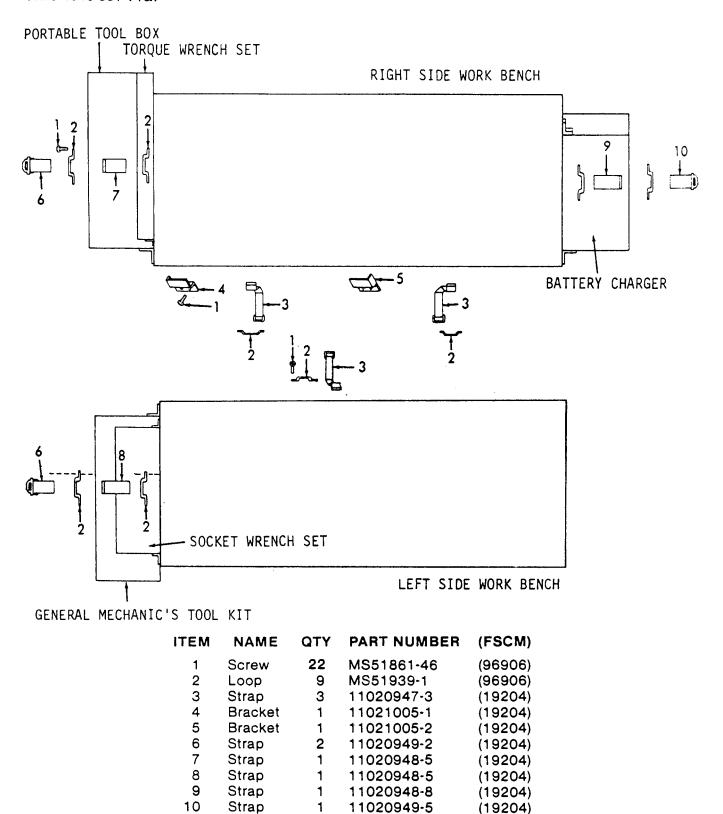


Figure 3-7. Workbench Equipment Stowage.

#### 3-11. POWER SUPPLY AMPLIFIER AND OSCILLATOR.

- a. General. The amplifier assembly is located on top of the left side workbench.
- b. Removal.
  - (1) Remove drawers 25 and 27 from left side workbench (fig. 3-2).
  - (2) Remove four screws (1, fig 3-8), four washers (2), and four washers (3) mounting the amplifier to the workbench and remove the amplifier and oscillator assembly.
- c. Installation. Install the assembly in the reverse order of removal, para b. above.

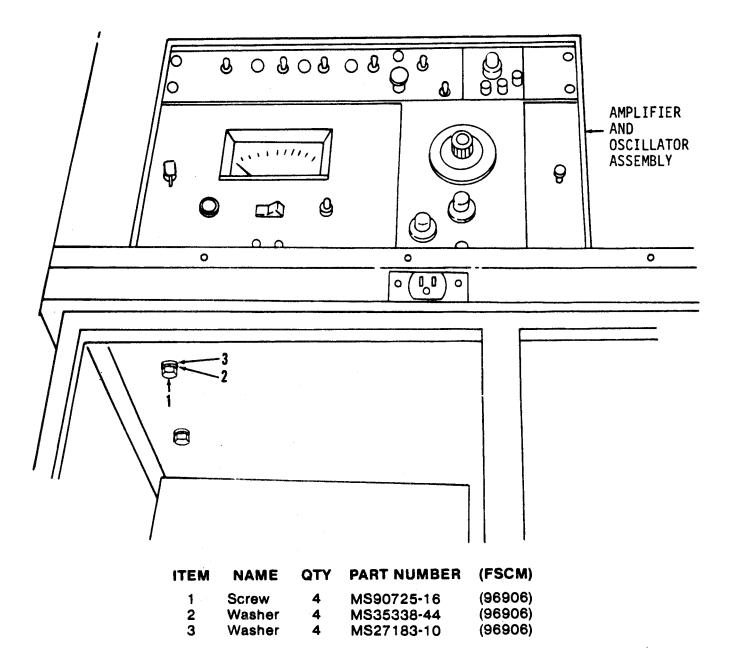


Figure 3-8. Power Supply Amplifier and Oscillator.

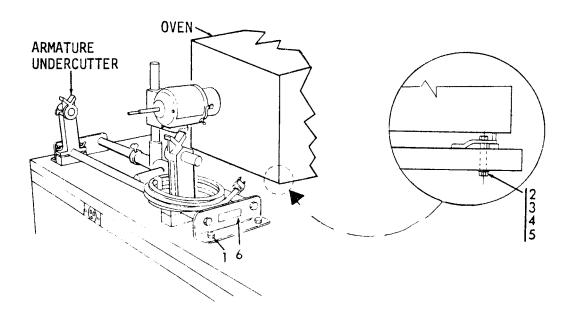
#### 3-12. OVEN. (When oven is required).

- a. General. The oven is located on the front top of the right side workbench. Hardware for mounting the oven is located under front workbench.
- b. Removal. Remove four screws (2, fig. 3-9), four nuts (3), four washers (4) and four clamps (5).
  - c. Installation. Install oven in reverse order of removal, para .b. above.

#### NOTE

Use only the receptacle on the front of the right side workbench marked:

#### INDIVIDUALLY PROTECTED 115 AMP CIRCUIT FOR OVEN



ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Screw	4	MS51861-70	(96906)
2	Screw	4	MS90725-43	(96906)
3	Washer	4	MS27187-11	(96906)
4	Clamp	4	11021067	(19204)
5	Nut	4	MS51922-9	(96906)
6	Decal, Instruction	1	11021068	(19204)

Figure 3-9. Armature Undercutter.

#### 3-13. ARMATURE UNDERCUTTER.

- a. General. The armature undercutter is located on the front top of the right side workbench.
- b. Removal. Remove four screws (1, fig. 3-9) securing the armature undercutter to the workbench and remove undercutter.
  - c. Installation. Install the armature undercutter in reverse order of removal, para .b. above.

# 3-14. TEST SET, LOW VOLTAGE CIRCUIT, AND PEN RECORDER.

- a. General. The recorder and the test set are located on the front workbench.
- b. Removal. Unfasten the straps (1, 6, and 7, fig. 3-10) and remove the pen recorder and the test set, low voltage circuit, with guard (8) attached. Remove 12 nuts (5), 12 washers (4), 12 screws (2), and 6 loops (3)
- c. Installation. Install the two electrical power test sets in reverse order of removal, para b. above.

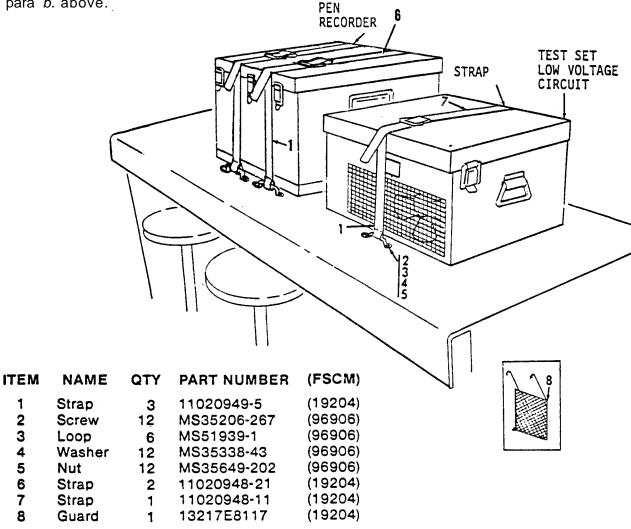


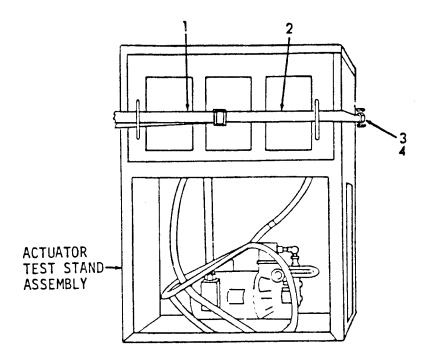
Figure 3-10. Test Set, Low Voltage Circuit and Pen Recorder.

# 3-15. PANEL ASSEMBLIES.

- a. General. The panel assemblies (fig. 3-2) are stacked on top of the left and right side workbench.
  - b. Removal. Unfasten four straps and remove the panel assemblies.
  - c. Installation. Reverse the procedures in para b. above.

#### 3-16. ACTUATOR TEST STAND ASSEMBLY.

- a. General. The test stand is located to the left of the front workbench.
- b. Removal. Unfasten straps (1 and 2, fig. 3-11) to remove the actuator test stand assembly.
  - c. Installation. Install the test stand in reverse order of removal, para b. above.



ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Strap	1	11020949-5	(19204)
2	Strap	1	11020948-15	(19204)
3	Screw	4	MS51861-46	(96906)
4	Loop	2	MS51939-1	(96906)

Figure 3-11. Actuator Test Stand.

#### 3-17. UPRIGHT BROOM.

- a. General. The upright broom is mounted on the rear wall in back of the left side workbench.
  - b. Removal. Pull broom from spring clamp (5, fig. 3-12).
  - c. Installation Install broom in reverse order of removal, para b. above.

#### 3-18. BOLT CUTTER.

- a. General. The bolt cutter is mounted on the rear wall in back of the left side workbench.
- b. Removal. Pull bolt cutter from two spring clamps (5, fig. 3-12) and lift bolt cutter from its mounting bracket (7).
  - c. Installation. Install bolt cutter in reverse order of removal, para b. above.

#### 3-19. FIRE EXTINGUISHER AND BRACKET.

- a General. The fire extinguisher is mounted on the wall at the rear of the van.
- b. Removal.
  - (1) Release the latch (fig. 3-12) and remove the fire extinguisher.
  - (2) Remove mounting hardware and bracket.
- c. Installation. Install the first extinguisher and bracket in reverse order of removal, para b. above.

#### 3-20. FIRST AID KIT.

- a. General. The first aid kit is mounted on the wall in back of the left side workbench.
- b. Removal. Release latches (fig. 3-12) and remove the first aid kit.
- c. Installation. Install kit in the reverse order of removal, para b. above.

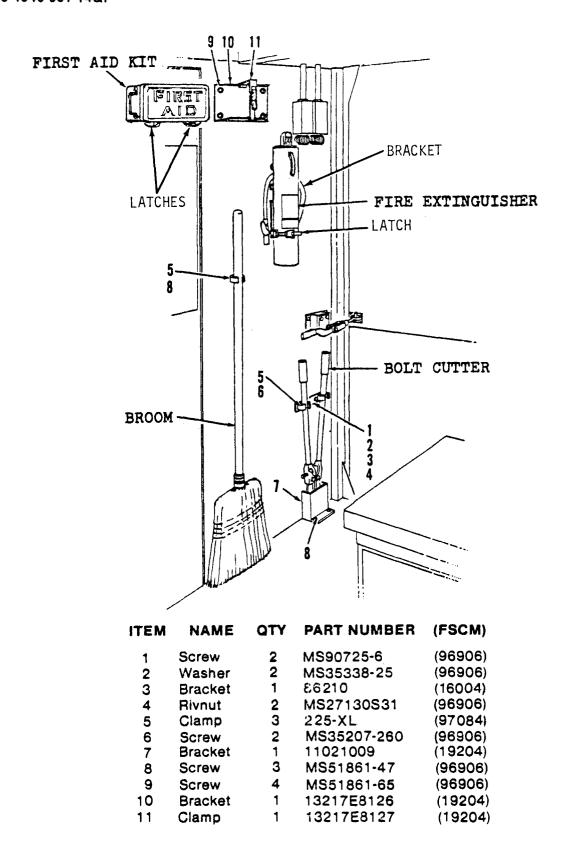
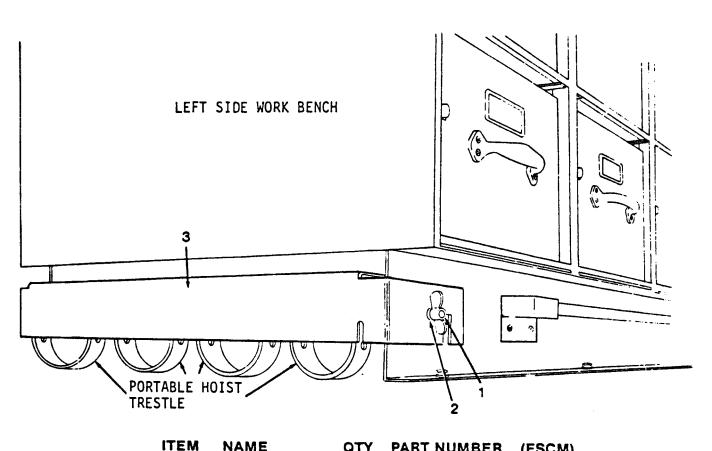


Figure 3-12. Bolt Cutter, Broom, First Aid Kit and Fire Extinguisher.

#### 3-21. PORTABLE HOIST TRESTLE.

- a. General. The portable hoist trestle is located on the floor under the left side workbench.
- b. Removal. Remove two thumb screws (1, fig. 3-13) and two washers (2) securing the bracket (3) (over the hoist to the rear of the left side workbench. Remove bracket and hoist.
  - c. Installation. Install portable hoist trestle in reverse order of removal, para b. above.



TEM	NAME	QTY	PART NUMBER	(FSCM)
1	Screw, Thumb	2	MS21316-56	(96906)
2	Washer	2	MS27183-15	(96906)
3	Bracket	1	13217E8101	(19204)

Figure 3-13. Portable Hoist Trestle.

#### Section III. WORKBENCHES

#### 3-22. LEFT AND RIGHT SIDE WORKBENCH.

a. General. The two workbenches are located in the center of the trailer and are mounted to the van floor.

#### b. Removal.

- (1) Remove battery charger (para. 3-2).
- (2) Remove machinist vise (para. 3-3).
- (3) Remove utility grinding machine (para. 3-4).
- (4) Remove portable tool box, socket wrench set, torque wrench, and general mechanic's tool kit (para. 3-9).
- (5) Remove panel assemblies (para. 3-15).
- (6) Remove power supply amplifier and oscillator (para. 3-11).
- (7) Remove armature undercutter (para. 3-13).
- (8) Remove oven (para. 3-12).
- (9) Remove portable hoist trestle (para. 3-21).
- (10) Remove crowbar, ground rod, and wrecking bar (para. 3-10).
- (11) Disconnect electrical connections from both workbenches.
- (12) Remove 36 bolts (15, fig. 3-14) and 36 washers (16)(18 for each workbench) securing workbenches to van floor, and remove the two benches.
- c. Disassembly Refer to figure 3-14 and disassemble the workbenches and related parts.
  - d. Cleaning, Inspection, and Repair.
    - (1) Clean all metal parts with cleaning solvent (P-D-680, NSN 6850-00-110-4498) and dry thoroughly. Clean other parts with a clean cloth.
    - (2) Inspect items for cracks, breaks, bends, dents, and other damage.
    - (3) Check mounting hardware for damaged threads and distortion. Replace damaged and missing hardware.
    - (4) Straighten bends and dents. Remove nicks, burrs, and distortions.
    - (5) Replace all items that are beyond repair.
  - e. Assembly. Refer to figure 3-14 and reassemble the workbenches and related parts.
- f. Installation. Install the ieft and right side workbench in the reverse order of removal, para. b. above.

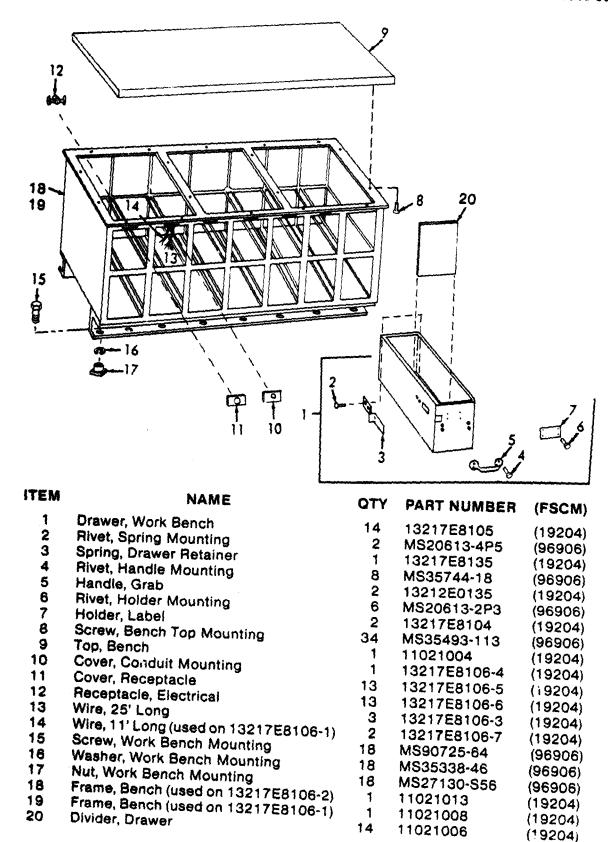


Figure 3-14. Left and Right Side Workbench.

# Section IV. EQUIPMENT INSTALUTIC)N

#### 3-23. PLATFORM ASSEMBLY INSTALLATION.

- a. Removal and Disassembly. Refer to figures 3-15 and 3-16 and disassemble.
- b. Cleaning, /nspection, and Repair.
  - (1) Clean parts with cleaning solvent (P-D-680, NSN 6850-00-110-4498) and dry thoroughly.
  - (2) Inspect parts for cracks, breaks, and other damage.
  - (3) Inspect for missing or damaged hardware.
  - (4) Replace all damaged parts beyond that are beyond repair.
    Replace missing hardware.
- c. Assembly and Installation. Refer to figures 3-15 and 3-16 and reassemble.

#### 3-24. GENERATOR EXHAUST INSTALLATION.

- a. General. Generator exhaust kit and mounting hardware for generator are stowed under the front workbench
- b. Removal and Disassembly. Refer to figure 3-17 to remove and disassemble the eight generator exhaust items.
  - c. Cleaning, Inspection, and Repair.
    - (1) Clean parts with cleaning solvent (P-D-680, NSN 6850-00-110-4498) and dry thoroughly.
    - (2) Inspect parts for dents, cracks, breaks, and other damage.
    - (3) Replace damaged items.
    - (4) Replace missing or damaged hardware.
- d. Assembly and Installation. Refer to figure 3-17, and reinstall the eight generator exhaust components.

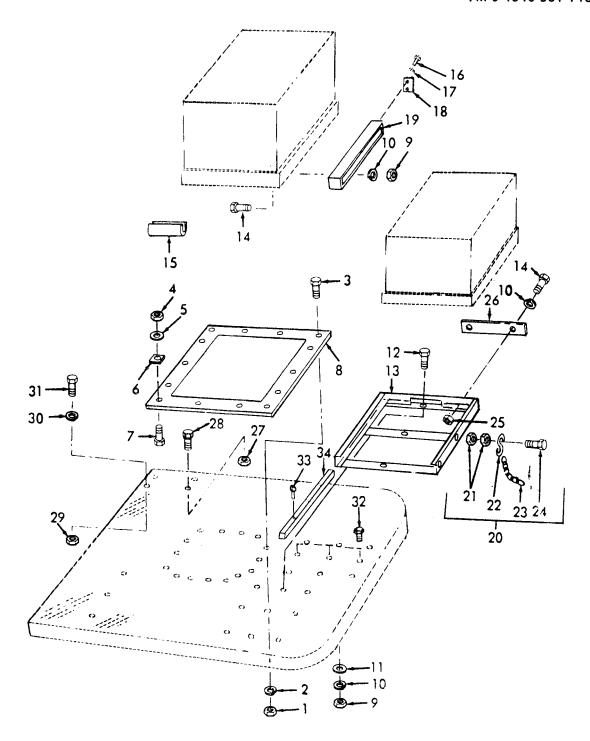
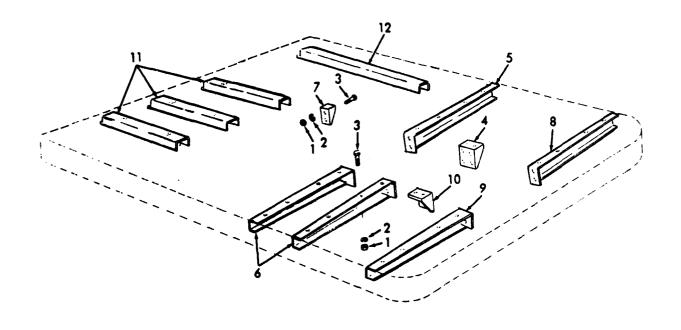


Figure 3-15. Platform Assembly Installation.

ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	NUT, PLAIN, POWER TEST SET	8	MS51967-14	(96906)
2	WASHER, LOCK, POWER TEST SET	8	MS35338-48	(96906)
3	SCREW, POWER TEST SET	8	MS90725-43	(96906)
4	NUT, PLAIN, POWER TEST SET TO PLATE	6	MS51967-20	(96906)
5	WASHER, POWER TEST SET TO PLATE	6	MS35338-50	(96906)
6	WASHER, BEVELED, POWER TEST SET TO PLATE	6	11021062	(19204)
7	SCREW, CAP, POWER TEST SET TO PLATE	6	MS24667-86	(96906)
8	MOUNT ASSEMBLY, POWER TEST SET	1	11021028	(19204)
9	NUT, PLAIN, FRAME MOUNTING	68	MS51967-8	(96906)
10	WASHER, FRAME MOUNTING	72	MS35338-46	(96906)
11	WASHER, FRAME MOUNTING	12	MS27183-13	(96906)
12	SCREW, FRAME MOUNTING	36	MS90725-62	(96906)
13	FRAME ASSEMBLEY, POWER TEST SET	4	11021027	(19204)
14	SCREW	40	MS90725-60	(96906)
15	FINGER PULL	4	11021049	(19204)
16	SCREW, SEAL MOUNTING	16	MS24629-47	(96906)
17	WASHER, SEAL MOUNTING	16	AN970-3	(88044)
18	SEAL, CARRIER	8	11021002	(19204)
19	CARRIER ASSEMBLY	8	11021048	(19204)
20	CHAIN, BOLT ASSEMBLY	4	11021030	(19204)
21	NUT, CHAIN MOUNTING	16	MS35649-2382	(96906)
22	HOOK, "S" CHAIN	8	MS87006-23	(96906)
23	CHAIN, 10 LINKS	8	11021030-1	(19204)
24	SCREW, CHAIN MOUNTING	8	MS90725-66	(96906)
25	NUT, RETAINER PLATE	8	MS27130S56	(96906)
26	PLATE, RETAINER	4	11021031	(19204)
27	NUT, GENERATOR MOUNTING	1	MS51922-49	(96906)
28	SCREW, GENERATOR MOUNTING	1	MS90725-168	(96906)
29	NUT, GENERATOR MOUNTING	3	MS51967-20	(96906)
30	WASHER, GENERATOR MOUNTING	3	MS35338-50	(96906)
31	SCREW, GENERATOR MOUNTING	3	MS90725-162	(96906)
32	SCREW	3	171108	(19204)
33	RIVET FRAME GLIDE MOUNTING	8	MS24662-226	(96906)
34	GLIDE, FRAME ASSEMBLY	2	11021050	(19204)



ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Nut, Bracket Mounting	20	MS51967-8	(96906)
2	Washer, Bracket Mounting	20	MS35338-46	(96906)
3	Screw, Bracket Mounting	20	MS90725-62	(96906)
4	Bracket Assembly	1	11021026-1	(19204)
5	Outrigger	1	11021025-1	(19204)
6	Outrigger	2	11021025-2	(19204)
7	Bracket Assembly	1	11021024	(19204)
8	Outrigger	1	1102123-1	(19204)
9	Outrigger	1	1102123-2	(19204)
10	Bracket Assembly	1	11021026-2	(19204)
11	Channel	3	11021021	(19204)
12	Channel	1	11021022	(19204)

Figure 3-16. Platform Assembly Modification.

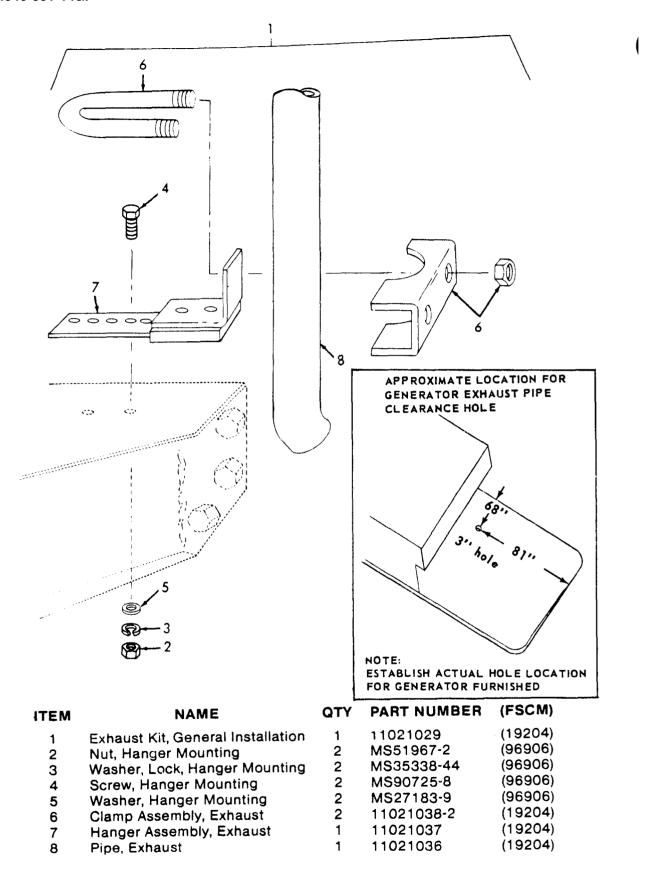


Figure 3-17. Generator Exhaust Installation.

# 3-25. POWER SUPPLY INSTALUTION.

- a. Removal and Disassembly. Refer to figure 3-18 to remove and disassemble.
- b. Cleaning, Inspection, and Repair.
  - (1) Clean metal parts with cleaning solvent (P-D-680, NSN 6850-00-110-4498) and dry thoroughly.
  - (2) Inspect all parts for cracks, breaks, and wear.
  - (3) Replace damaged items.
- c. Assembly and Installation. Refer to figure 3-18 to reassemble and install.

# Section V. PANEL STOWAGE ASSEMBLY

#### 3-26. PANEL STOWAGE ASSEMBLY.

- a. Removal and Disassembly. Refer to figure 3-19 to remove and disassemble the panel stowage assembly.
  - b. Cleaning, Inspection, and Repair.
    - (1) Clean metal parts with cleaning solvent (P-D-680, NSN 6850-00-110-4498) and dry thoroughly. Clean other parts with a clean dry cloth.
    - (2) Inspect all parts for damage and repair and replace as necessary.
- c. Assembly and Installation. Refer to figure 3-19 and install the panel stowage assembly.

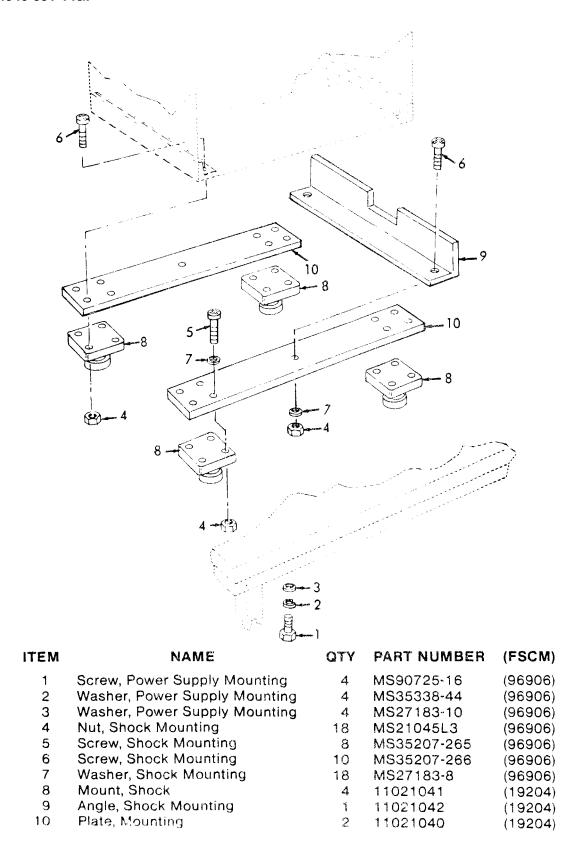


Figure 3-18. Power Supply Installation.

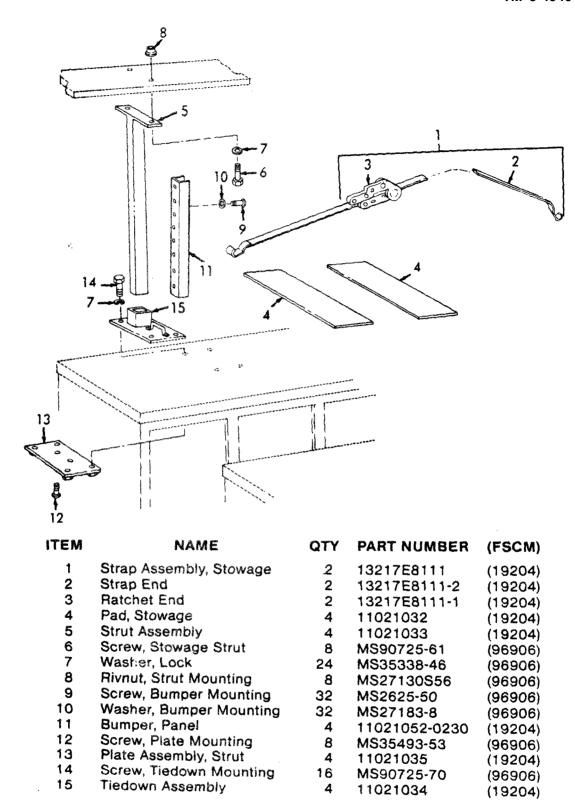


Figure 3-19. Panel Stowage Assembly.

#### Section VI. FRONT WORKBENCH AND DATA PLATES

#### 3-27. FRONT WORKBENCH.

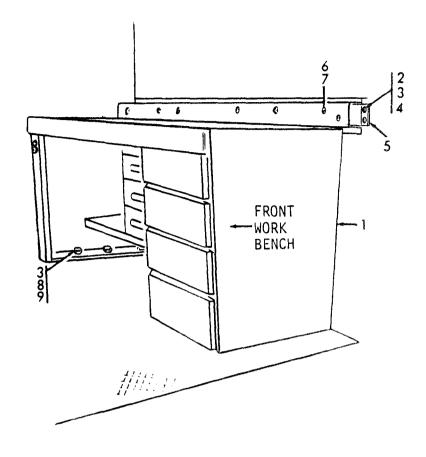
a. General. The front workbench (fig. 3-20) is located in front of the two center workbenches.

#### b. RernovaL.

- (1) Remove two stools and three pails (para. 3-5) and one small parts stowage cabinet (para. 3-6).
- (2) Remove the test set, low voltage circuit, and pen recorder (para. 3-14).
- (3) Remove the actuator test stand assembly (para. 3-16).
- (4) Remove the thread cutting tap set and electrical insulation sheets (para. 3-8).
- (5) Disconnect electrical receptacle and conduit from workbench (fig. 3-21).
- (6) Refer to figure 3-20 and remove six screws (8) and six washers(3).
- (7) Remove eight screws (6), and eight washers (7), and remove workbench (1).
- (8) Remove four nuts (4), four washers (3), four screws (2), and channel (5).
- c. Cleaning, Inspection, and Repair.
  - (1) Clean all metal parts with cleaning solvent (P-D-680, NSN 6850-00-110-4498) and dry thoroughly. Clean other parts with a clean, dry cloth.
  - (2) Inspect for dents, nicks, burrs, cracks, breaks, and other damage.
  - (3) Remove distortions or repiace damaged items. Replace missing hardware.
- d. Installation. Install the front workbench in the reverse order of removal, para b. above.

#### 3-28. DATA PLATES.

- a. General. The data plates are located on the rear door and wall.
- b. Removal. Refer to figure 3-22 and remove data plates.
- c. C/eaning, Inspection, and Repair.
  - (1) Clean data plates with cleaning solvent (P-D-680, NSN 6850-00-110-4498) and dry thoroughly.
  - (2) Inspect for dents and other damage.
  - (3) Replace damaged data plates.
- d. Installation. Refer to figure 3-22 and install data plates.



ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Work Bench	1	13217E8118	(19204)
2	Screw	4	MS90725-60	(96906)
3	Washer	10	MS35338-46	(96906)
4	Nut	4	MS51967-8	(96906)
5	Channel	1	1121018	(19204)
6	Screw .	8	MS51851-85	(96906)
7	Washer	8	MS35338-40	(96906)
8	Screw	6	MS90725-64	(96906)
9	Nut	6	MS27130S56	(96906)

Figure 3-20. Front Workbench.

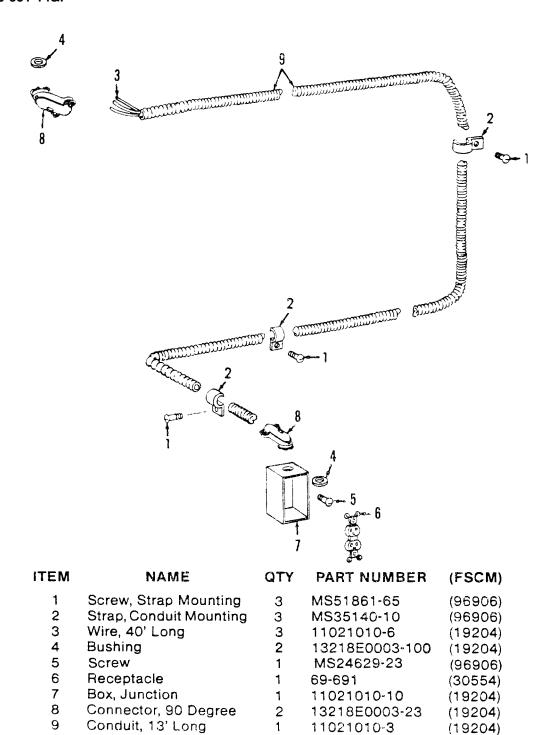
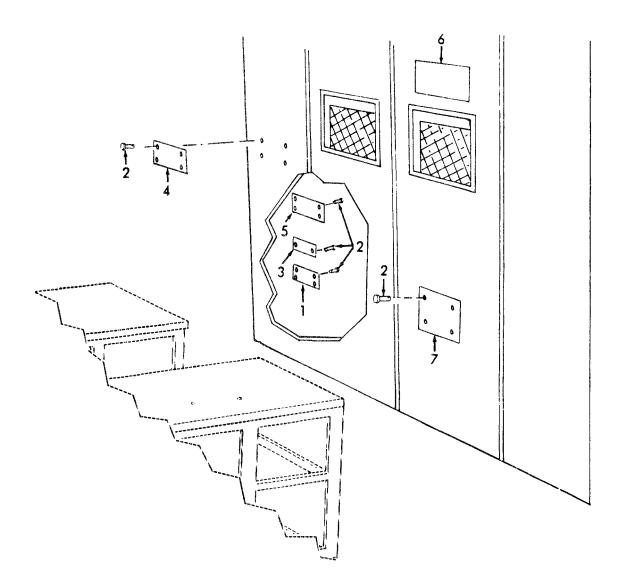


Figure 3-21. Front Workbench Conduit and Receptacle.



ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Plate, Information	1	13217E8303	(19204)
2	Rivet	18	MS24243/6A402H	(81349)
3	Plate, Instruction	1	13217E8110	(19204)
4	Plate, Instruction	1	13217E8133	(19204)
5	Plate, Information	1	13217E8100-1	(19204)
6	Decal	1	11021012	(19204)
7	Plate, Information	1	11021047	(19204)

Figure 3-22. Data Plates.

## Section VII. ELECTRICAL INSTALLATION

**3-29. GENERAL.** Refer to TM 9-2330-238-14&P for repair instructions. In addition, shop set components not covered in above manual are contained in the following paragraph.

#### 3-30. LOAD CENTERS AND RELATED COMPONENTS.

#### NOTE

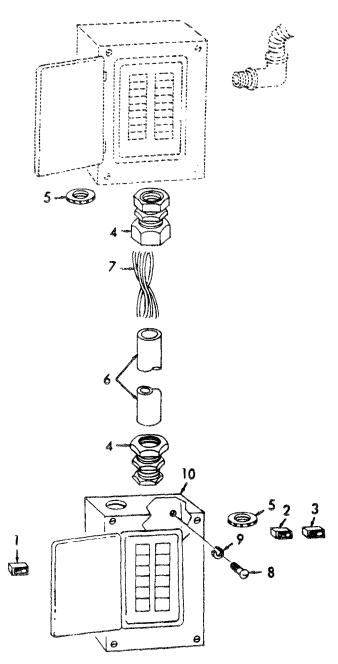
After installation, test the wiring, para. b (6), below.

- a. Removal and Disassembly. Refer to figures 3-21 and 3-23 thru 3-26 to disconnect, remove, and disassemble the electrical installation.
  - b. Cleaning, Inspection, and Repair.
    - (1) Clean electrical parts with a clean, dry cloth.
    - (2) Clean metal parts with cleaning solvent (P-D-680, NSN 6850-00-110-4498) and dry thoroughly.
    - (3) Inspect all parts of load centers for damage and replace as necessary.
    - (4) Inspect the wiring covers and mounting brackets for dents, cracks, breaks, loose or missing hardware, and other defects.
    - (5) Tighten or replace losses or missing mounting hardware. Straighten minor bends. Replace damaged or defective mounting brackets, wiring covers, and flexible conduit.
    - (6) Test the wires for continuity. Disconnect each end of the wire from the components to which it is attached as shown by the wiring diagram (fig. 1-1 and 1-2). Touch the test probes of a multi meter to each end of the wire. If the rnultirneter does not indicate continuity, replace the wire.

#### NOTE

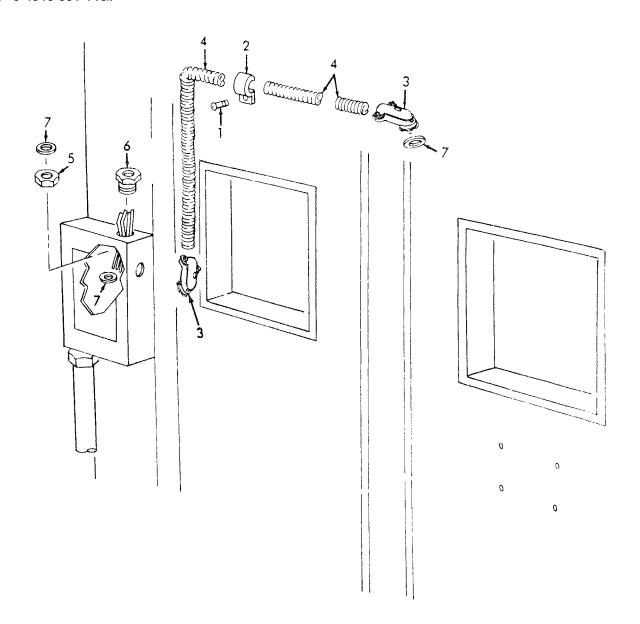
The ceiling lights, bench grinder, and workbench receptacles are supplied with power by 120-volt, single-phase circuit. Wiring for each circuit in this system must be replaced individually. Refer to the wiring diagrams (fig. 1-1 and 1-2) when testing and replacing wiring in the individual circuits.

c. Assembly and Installation. Refer to figures 3-21 and 3-23 thru 3-26 to reassemble, install, and reconnect electrical components.



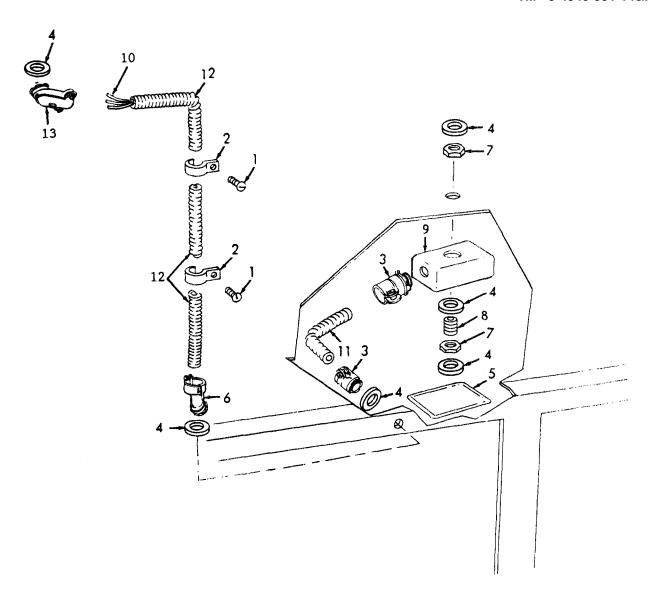
ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Breaker, Circuit, 240V 40 AMP	1	11021043-23	(19204)
2	Breaker, Circuit, 120V 15 AMP	2	11021043-02	(19204)
3	Breaker, Circuit, 120V 20 AMP	3	11021043-03	(19204)
4	Connector, Box	2	11021010-12	(19204)
5	Bushing, Connector	2	13218E0003-105	(19204)
6	Conduit, Rigid, 14" Long	1	11021010-11	(19204)
7	Wire, 3' Long	4	11021010-13	(19204)
8	Screw, Panel Mounting	4	MS24629-61	(96906)
9	Washer, Panel Mounting	4	MS35338-44	(96906)
10	Panel, Distribution	1	11021044	(19204)

Figure 3-23. Distribution Panel.



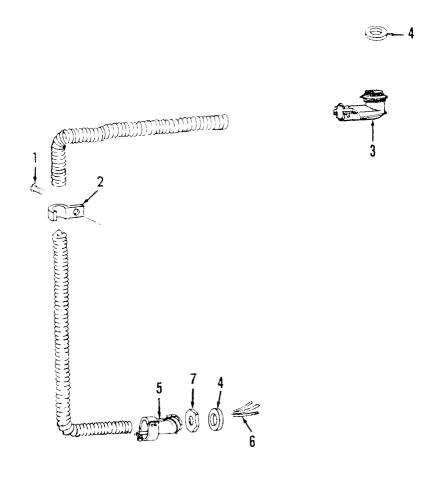
ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Screw, Strap Mounting	1	MS51861-65	(96906)
2	Strap, Conduit Mounting	1	MS35140-10	(96906)
3	Connector, Box, 90 Degree	2	13218E0003-23	(19204)
4	Conduit, Flexible, 5' Long	1	11021010-1	(19204)
5	Locknut, Nipple Mounting	1	11021010-8	(19204)
6	Nipple, Chase	1	11021010-7	(19204)
7	Bushing, Connector	3	13218E0003-100	(19204)

Figure 3-24. Distribution Panel Conduit.



ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Screw, Conduit Strap Mounting	3	MS51861-65	(96906)
2	Strap, Conduit Mounting	3	MS35410-10	(96906)
3	Connector, Box	2	13218E0003-2	(19204)
4	Bushing, Connector	6	13218E0003-100	(19204)
5	Cover, Box	1	11021010-9	(19204)
6	Connector, Work Bench Mounting	1	13218E0003-16	(19204)
7	Locknut, Nipple Mounting	2	11021010-8	(19204)
8	Nipple	1,	MS51953-78	(96906)
9	Box, Junction	1	11021010-10	(19204)
10	Wire, 16' Long	6	11021010-5	(19204)
11	Conduit, 18" Long	1	11021010-2	(19204)
12	Conduit, 5' Long	1	11021010-1	(19204)
13	Connector, 90 Degree	1	13218E0003-23	(19204)

Figure 3-25. Left Side Workbench Conduit.



ITEM	NAME	QTY	PART NUMBER	(FSCM)
1	Screw, Conduit Strap Mounting	1	MS51861-65	(96906)
2	Strap, Conduit Mounting	1	MS35410-10	(96906)
3	Connector, Box, 90 Degree	1	13218E0003-23	(19204)
4	Bushing, Connector	2	13218E0003-100	(19204)
5	Connector, Work Bench Mounting	1	13218E0003-16	(19204)
6	Wire, 11' Long	5	11021010-4	(19204)
7	Locknut, Nipple Mounting	1	11021010-8	(19204)

Figure 3-26. Right Side Workbench Conduit.

# CHAPTER 4 CONTENTS OF SHOP EQUIPMENT

#### Section I. GENERAL

The tools and equipment of the shop equipment are listed in alphabetical sequence and provides National Stock Number, Nomenclature, Quantity, and Location Legend Symbol. The numbers that appear in the shop location column indicate the drawer number where the item is located. Refer to figure 4-1 for the location of the shop equipment contents.

#### LOCATION LEGEND

A - Tool Box E - Floor Mounted
B - Table Mounted F - Platform Mounted
C - Small Parts Cabinet H - Wall Mounted
D- Drawer (Followed by the drawer number)

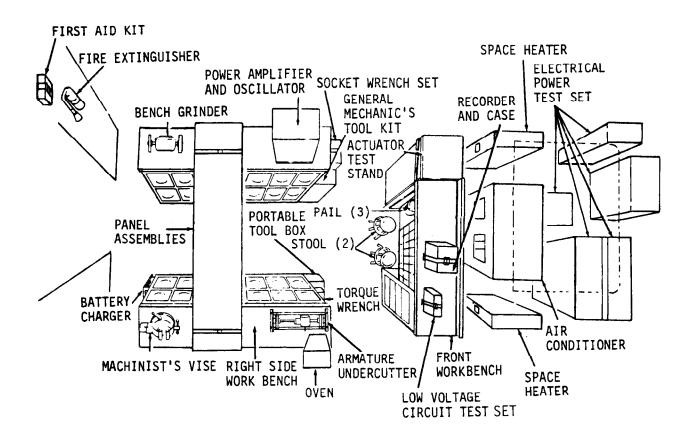


Figure 4-1. Contents Location Diagram.

#### CONTENTS OF SHOP EQUIPMENT

# ELECTRICAL REPAIR, SEMITRAILER MOUNTE

NSN	NOMENCLATURE	QUANTITY	LOCATION
5120-00-034-7626	ADAPTER, MECHANICAL PULLER:	1EA	D1
5120-00-240-8703	ADAPTER, SOCKET WRENCH: 3/8 INT., 1/2 EXT.	1EA	D1
5120-00-240-8702	ADAPTER, SOCKET WRENCH: 3/8 EXT., 1/2 INT.	1EA	D1
8040-00-270-8150	ADHESIVE:	6TU	D1
6625-01-102-2104	AMPLIFIER, TRUE RMS	1EA	В
5895-01-099-8220	AMPLIFIER, POWER SUPPLY:	1EA	В
5120-00-224-1389	BAR, PRY:	1EA	D1
5120-00-293-0665	BAR, WRECKING:	1EA	E
6135-00-120-1020	BATTERY, DRY: BA-30	1PG	D1
6135-00-120-1019	BATTERY, DRY:BA-31	6EA	D1
6135-00-160-7159	BATTERY, DRY: BA261/U	2EA	D1
6135-00-120-1030	BATTERY, DRY:BA-58	4EA	D1
6140-00-752-2184	BATTERY FILLER:	1EA	D2
5120-00-293-0019	BENDER SET, TUBE, HAND:	1SE	D1
5110-00-243-0901	BLADE, HAND HACKSAW: 24 TPI, 10 BUNDLE	5BN	A
5110-00-277-4592	BLADE, HAND HACKSAW: 32 TPI	3BN	A
5306-00-530-9240	BOLT, TOGGLE	30EA	D1
7610-00-233-9600	BOOK, ELECTRICIANS:	1EA	D1
6625-00-404-1592	BRIDGE, IMPEDANCE:	1EA	D2
7920-00-291-8305	BROOM, UPRIGHT:	1EA	H
5977-00-036-5221	BRUSH ASST, ELEC. CONT:	1SE	D2
7920-00-240-6358	BRUSH, DUSTING, BENCH:	2EA	D1
7920-00-224-7987	BRUSH, FILE CLEANER:	1EA	D15
8020-00-260-1304	BRUSH, VARNISH:	2EA	A
5130-00-596-0673	BRUSH, ROT.WHEEL: 0.011 WIRE	2EA	D1
5130-00-277-9487	BRUSH, ROT, WHEEL: 0.016 WIRE	2EA	D1
7920-00-282-9246	BRUSH, WIRE SCRATCH:	1EA	A
5350-00-184-5826	BUFFING COMPOUND:	1BR	D2
5975-NSN	CABINET, ELEC. EQUIPMENT:	1EA	В
7125-00-633-8721	CABINET, SMALL PARTS:	1EA	В
6150-NSN	CABLE ASSEMBLY, INPUT	2EA	В
6150-00-866-2358	CABLE, POWER, ELEC:	2EA	D13
5210-00-540-2973	CALIPER, MIC.OUTSIDE: 0-1 IN.	1EA	A
5210-00-243-2933	CALIPER, MIC.OUTSIDE: 1-2 IN.	1EA	A
5210-00-221-2091	CALIPER, SLIDE:	1EA	A
5120-00-221-1506	CAPS, VISE JAW:	1PR	D2
7510-00-223-6706	CHALK, MARKING:	1BX	D2
8330-00-965-1722	CHAMOIS, SHEEPSKIN:	1EA	D2
6130-00-669-6659	CHARGER, BATTERY:	1EA	E

NSN	NOMENCLATURE	QUANTITY	LOCATION
5110-00-554-7345	CHISEL, CAPE:	1EA	A
5110-00-223-1079	CHISEL, DIAMOND POINT:	1EA	A
5180-00-698-7965	CHISEL AND PUNCH KIT:	1EA	A
5120-00-180-0905	CLAMP, C:2 IN.	5EA	A
5120-00-222-1612	CLAMP, C: 4 IN.	5EA	D4
5999-00-913-0883	CLAMP, ELECTRICAL: BRONZE	1EA	A
5999-00-247-4857	CLAMP, ELECTRICAL: COPPER	4EA	A
5999-00-263-1051	CLIP ELEC.	6EA	A
5999-00-950-7233	CLIP, ELEC: ALLIGATOR	10EA	A
5999-00-204-5206	CLIP, ELEC: TEST	10EA	A
5999-00-204-8350	CLIP, ELEC: BATTERY	5EA	A
5350-00-192-5047	CLOTH, ABRASIVE:GRIT 80	1sv	D3
5350-00-192-5050	CLOTH, ABRASIVE: GRIT 150	1SV	D3
5350-00-221-0872	CLOTH, ABRASIVE: CROCUS	1sv	D3
3935-01-005-3579	CONNECTOR, PLUG, ELEC:	6EA	A
8145-NSN	CONTAINER, RECORDER	1EA	В
6625-NSN	CONVERTER, FREQ, DEV.	1EA	В
9535-00-232-2293	COPPER STRIP:	1SP	D16
5315-00-753-3981	COTTER PIN ASST:	1AT	D3
7510-00-264-4102	CRAYON, MARKING:	1DZ	D2
5120-00-596-9313	CRIMPING TOOL, TERMINAL: 0.102 AWG	1EA	A
5120-00-165-3910	CRIMPING TOOL, TERMINAL: 0.032 AWG	1EA	A
5120-00-240-6040	CROWBAR:	1EA	E
5110-00-224-7057	CUTTER, BOLT:	1EA	H
5180-00-596-1038	CUTTER AND FLARING TOOL KIT:	1EA	D3
9150-00-231-6699	CUTTING FLUID	2PT	D3
5120-00-223-9952	DRESSER, ABRASIVE WHEEL:	1EA	D14
5130-00-293-0960	DRILL, ELECTRIC, PORTABLE: 1/2 IN.	1EA	D3
5130-00-142-5325	DRILL, ELECTRIC, PORTABLE: 3/8 IN.	1EA	D4
5133-00-293-0983	DRILL SET, TWIST: 1/16 THRU 1/2IN.BY 64THS	1SE	D3
5133-00-449-6775	DRILL SET, TWIST:NO. 1 THRU 60	1SE	D3
5120-00-357-5853	EXTRACTOR SET, SCREW:	1SE	A
5120-00-540-4273	FACE, HAMMER, INSERTED: HARD	1EA	D3
5120-00-357-5864	FACE, HAMMER, INSERTED: MEDIUM HARD	1EA	D3
5120-00-293-2997	FACE, HAMMER, INSERTED: TOUGH	2EA	D3
4240-00-202-9473	FACESHIELD, INDUSTRIAL:	2EA	D4
5110-00-234-6539	FILE, HAND: FLAT, BASTARD, 12 IN.	2EA	4
5110-00-203-4855	FILE, HAND: FLAT, 2ND CUT, 12 IN.	2EA	A
5110-00-203-4935	FILE, HAND: FLAT, SMOOTH, 8 IN.	2EA	A
5110-00-203-4936	FILE, HAND: FLAT, SMOOTH, 12 IN.	2EA	A
5110-00-203-4941	FILE, HAND: 2ND CUT, 12 IN.	2EA	A
5110-00-234-6529	FILE, HAND: SLIM TAPER, 8 IN.	2EA	A
5110-00-203-9804	FILE, HAND: SQUARE, 2ND CUT, 10 IN.	2 EA	A
5110-00-595-8295	FILE, HAND: SWISS PATTERN, 5 1/4 IN.	10 EA	A

NSN	NOMENCLATURE	QUANTITY	LOCATION
5120-00-180-2951	FINGER MECHANICAL:	1 EA	D4
6545-00-922-1200	FIRST AID KIT, GENERAL PURPOSE:	1 EA	Н
6230-00-264-8261	FLASHLIGHT:	2EA	D4
3439-00-255-4566	FLUX, SOLDERING:	4CN	D3
6625-00-893-0021	FREQUENCY METER SET:	1 SE	D27
7240-00-527-9868	FUNNEL:	1 EA	D4
5210-00-221-2072	GAGE, DRILL POINT:	1 EA	A
5210-01-024-7770	GAGE, MIC.STD TEST: 1 IN.	1 EA	A
5210-01-024-7771	GAGE, MIC.STD TEST:2 IN.	1 EA	A
5210-00-293-1872	GAGE, SCREW PITCH:	1 EA	A
5210-00-517-8097	GAGE, THICKNESS	1 EA	D4
5210-00-221-1894	GAGE, TWIST DRILL AND TAP:	1 EA	A
5210-00-238-3106	GAGE, WIRE:	1 EA	A
4240-00-269-7912	GOGGLES, INDUSTRIAL:	2 PR	D4
9620-00-204-2643	GRAPHITE, DRY:	1CN	D5
3415-00-517-7754	GRINDING MACHINE, UTILITY:	1 EA	В
5120-00-892-5485	HAMMER, HAND: CARPENTER'S, 1 LB.	1 EA	D5
5120-00-900-6111	HAMMER, HAND: MACHINIST'S, 3 LB.	1 EA	D5
5110-00-595-8325	HANDLE, FILE:	4 EA	D2
3950-00-889-8728	HOIST, CHAIN:	1 EA	D5
5120-00-554-7757	HOLDER, INSERTED HAMMER FACE:	1 EA	D5
5970-00-296-1915	INSULATING COMPOUND ELEC:	4 JR	D5
5970-00-161-7232	INSULATING VARNISH, ELEC: CLEAR	3 EA	D16
5970-00-284-5448	INSULATING VARNISH, ELEC: RED	2CN	D5
5970-00-198-8399	INSULATION SHEET, ELEC: 0.010 IN.	5 SH	E
5970-00-198-8398	INSULATION SHEET, ELEC: 0.015 IN.	5 SH	E
5970-00-519-9678	INSULATION SHEET, ELEC: 0.012 IN.	5 SH	E
5970-00-519-9680	INSULATION SHEET, ELEC: 0.018 IN.	5 SH	E
5970-00-189-5873	INSULATION SLEEVING, ELEC: 0.066 IN.	1 SL	D15
5970-01-026-4980	INSULATION SLEEVING, ELEC: 0.133 IN.	1 SL	D15
5970-00-843-1263	INSULATION SLEEVING, ELEC: 0.263 IN.	1 SL	D15
5970-00-222-6383	INSULATION TAPE, ELEC: 3/4 IN. YELLOW	3 RO	D5
5970-00-222-6384	INSULATION TAPE, ELEC: 1 IN. YELLOW	4 RO	D5
5970-00-284-8410	INSULATION TAPE, ELEC: PVC, 3/4 IN.	12 RO	D6
5180-NSN	KIT, TERMINAL SERVICING:	1 KT	D6
5110-00-240-5943	KNIFE, POCKET:	2 EA	A
6240-00-995-9900	LAMP, INCANDESCENT:60W	4 EA	D15
6240-00-898-6601	LAMP, INCANDESCENT: 24VDC	4 EA	D15
6240-00-155-8651	LAMP, INCANDESCENT: 25 W	4 EA	D15

NSN	NOMENCLATURE	QUANTITY	LOCATION
6625-00-079-1426	LEAD SET, TEST:	2 EA	D6
6625-00-444-4041	LEAD SET, TEST:	2 EA	D10
6230-00-268-9436	LIGHT, EXTENSION: 2 COND.	1 EA	D6
6230-00-729-9259	LIGHT, EXTENSION: 3 COND.	2 EA	D13
4930-00-253-2478	LUBRICATING GUN. HAND:	1 EA	D6
7240-00-255-8113	MEASURE, LIQUID:	1 EA	D6
6625-00-553-0142	MULTIMETER:TS-352B/U	2 EA	D7
6625-00-495-3513	MULTIMETER:	2 EA	D18
6625-00-999-6282	MULTIMETER:AN/USM 1056	2 EA	D8
6625-00-284-0855	MULTIMETER: HOOK-ON	1 EA	D7
5310-00-934-9738	NUT, PLAIN, HEX: NO. 2-56	2 GR	C
5310-00-934-9739	NUT, PLAIN, HEX: NO. 4-40	3 HD	C
5310-00-934-9747	NUT, PLAIN, HEX: NO. 6-32	2 GR	C
5310-00-934-9757	NUT, PLAIN, HEX: NO. 8-32	3 HD	C
5310-00-934-9758	NUT, PLAIN, HEX: NO. 10-24	3 HD	C
5310-00-997-1888	NUT, PLAIN, HEX: 1/4-20	25 EA	C
5310-00-732-0558	NUT, PLAIN, HEX: 3/8-16	1 HD	C
5310-00-768-0318	NUT, PLAIN, HEX: 1/2-13	25 EA	C
6625-00-141-3558	OHMMETER:	1 EA	D8
4930-00-554-6778	OILER, HAND:	2 EA	D15
5895-01-085-6671	OSCILLATOR:	1 EA	В
6625-01-086-7005	OSCILLOSCOPE:	2 EA	D20,21
7240-00-160-0455	PAIL,METAL:	3 EA	В
5350-00-598-5537	PAPER, ABRASIVE: FINE	1 HD	D8
5350-00-598-6105	PAPER, ABRASIVE: MEDIUM	1 HD	D8
5120-00-227-7097	PLIERS: COMB.UTILITY	2 EA	D8
5120-00-247-5177	PLIERS:LG RD NOSE	2 EA	A
5120-00-239-8251	PLIERS:LINEMAN'S	1 EA	A
5120-00-013-7992	PLIERS, RETAINING: RING	1 SE	A
5120-00-624-8065	PLIERS, SLIP JOINT:	2 EA	A
6625-NSN	POWER SUPPLY:	1 EA	D17
5120-00-224-9456	PULLER, FUSE:	2 EA	A
5120-00-516-3120	PULLER, MECHANICAL: SINGLE END GRIP	1 EA	D9
5120-00-293-1429	PULLER, MECHANICAL: SLIDE HAMMER	1 EA	D10
5120-00-490-4283	PULLER, MECHANICAL: DOUBLE END GRIP	1 EA	D9
5120-00-288-7713	PULLER, MECHANICAL: PUSH-PULL	1 EA	D14
5120-00-089-3660	PULLER, KIT, MECHANICAL:	1 SE	D8
5120-00-293-0448	PUNCH, ALIGNING:	1 EA	A
5120-00-883-3003	PUNCH SET, DRIVE PIN:	1 SE	D8
6685-00-975-4544	PYROMETER, INDICATING	2 EA	D23
5110-00-233-9711	RASP, HAND:	1 EA	D8
5110-00-505-9283	REAMER SET HAND: ADJUSTABLE	1 SE	D9
5110-00-596-1151	REAMER SET HAND: TAPER PIN; SPIRAL FLUTE	1 SE	D9

NSN	NOMENCLATURE	QUANTITY	LOCATION
5110-00-289-0010	REAMER SET HAND: TAPER PINS; STRAIGHT FLUTE	1 SE	D9
6625-NSN	RECORDER, PEN	1 EA	В
5905-NSN	RESISTOR, FIXED:100K	2 EA	D9
5905-NSN	RESISTOR, FIXED: 50K	2 EA	D9
5120-00-545-4268	RETRIEVING TOOL, MAGNETIC:	1 EA	A
5975-00-878-3791	ROD, GROUND:	1 EA	E
5350-00-195-2562	ROUGE, ABRASIVE:	3 CK	D9
5110-00-293-0090	SAWS, NESTED:	1 SE	D9
5110-00-255-0420	SCISSORS, ELECTRICIAN'S:	1 EA	A
5305-00-071-2235	SCREW, CAP HEX: 1/4-20, 2 1/2IN.	25 EA	C
5305-00-269-3216	SCREW, CAP HEX: 3/8-16, 2 IN.	1 HD	C
5305-00-071-1769	SCREW, CAP HEX: 1/2-13,2 IN.	25 EA	C
5305-00-958-0999	SCREW, MACH: BRASS, FLAT, 6-32, 1/2 IN.	2 HD	C
5305-00-531-0202	SCREW, MACH: BRASS, PAN, 1/4-20,1 IN.	1 GR	C
5305-00-057-9587	SCREW, MACH: BRASS, FLAT, 4-48, 1/2 IN.	1 GR	C
5305-00-052-5915	SCREW, MACH: BRASS, FLAT, 10-24, 1 IN.	1 GR	C
5305-00-059-4568	SCREW, MACH: STEEL, FLAT, 8-32, 1/2 IN.	20 EA	C
5305-00-958-5462	SCREW, MACH: STEEL, FLAT, 2-56, 1/2 IN.	50 EA	C
5305-00-959-2345	SCREW, MACH: STEEL, FLAT, 2-56, 1/4 IN.	50 EA	C
5305-00-958-5483	SCREW, MACH: STEEL, FLAT, 4-40, 1/4 IN.	50 EA	C
5305-00-957-6264	SCREW, MACH: STEEL, FLAT, 4-40, 1/2 IN.	50 EA	C
5305-00-059-4544	SCREW, MACH: STEEL, FLAT, 4-40, 3/4 IN.	40 EA	C
5305-00-059-4553	SCREW, MACH: STEEL, FLAT, 6-32, 1/2 IN.	15 EA	C
5305-00-958-5450	SCREW, MACH: STEEL, FLAT, 6-32, 3/4 IN.	15 EA	C
5305-00-958-5460	SCREW, MACH: STEEL, FLAT, 6-32, 1 IN.	15 EA	C
5305-00-958-5458	SCREW, MACH: STEEL, FLAT, 6-32, 1 1/2 IN.	20 EA	C
5305-00-957-6265	SCREW, MACH: STEEL, FLAT, 6-32, 1/4 IN.	15 EA	C
5305-00-088-8358	SCREW, MACH: STEEL, FLAT, 6-32, 2 IN.	20 EA	C
5305-00-954-2728	SCREW, MACH: STEEL, FLAT, 8-32, 3/4 IN.	20 EA	C
5305-00-958-5481	SCREW, MACH: STEEL, FLAT, 8-32, 1 IN.	20 EA	C
5305-00-957-6640	SCREW, MACH: STEEL, FLAT, 8-32, 1 1/2 IN.	20 EA	C
5305-00-957-6646	SCREW, MACH: STEEL, FLAT, 8-32, 2 IN.	20 EA	C
5305-00-958-5471	SCREW, MACH: STEEL, FLAT, 10-24, 3/4 IN.	20 EA	C
5305-00-954-3487	SCREW, MACH: STEEL, FLAT, 10-24, 1/2 IN.	20 EA	C
5305-00-957-6269	SCREW, MACH: STEEL, FLAT, 10-24, 1 IN.	20 EA	C
5305-00-957-6270	SCREW, MACH: STEEL, FLAT, 10-24, 1 1/2	20 EA	C

NSN	NOMENCLATURE	QUANTITY	LOCATION
5305-00-952-7756	SCREW, MACH: STEEL, FLAT, 10-24, 2 IN.	20 EA	С
5305-00-954-4295	SCREW, MACH: STEEL, FLAT, 1/4-20, 1/2 IN.	15 EA	C
5305-00-954-4295	SCREW, MACH: STEEL, FLAT, 1/4-20, 3/4 IN.	15 EA	C
5305-00-958-5247	SCREW, MACH: STEEL, FLAT 1/4-20,1 IN.	15 EA	C
5305-00-958-5247	SCREW, MACH: STEEL, FLAT, 1/4-20,1 1/2 IN.	15 EA	C
5305-00-958-5249	SCREW, MACH: STEEL, FLAT, 1/4-20, 2 1/2 IN.	20 EA	C
5305-00-958-5482	SCREW, MACH: STEEL, FLAT, 1/4-20, 2 IN.	20 EA	C
5305-00-889-3118	SCREW, MACH: STEEL, FLAT, 2-56, 1/4 IN.	20 EA	C
5305-00-954-3938	SCREW, MACH: STEEL, FLAT, 2-56, 1/2 IN.	20 EA	C
5305-00-889-3116	SCREW, MACH: STEEL, FLAT, 4-40, 1/4 IN.	10 EA	C
5305-00-889-2999	SCREW, MACH: STEEL, PAN, 4-40, 1/2 IN.	15 EA	C
5305-00-889-2999	SCREW, MACH: STEEL, PAN, 4-40, 3/4 IN.	15 EA	C
5305-00-984-4983	SCREW, MACH: STEEL, PAN, 6-32, 1/4 IN.	5 EA	C
5305-00-904-4903	SCREW, MACH: STEEL, PAN, 6-32, 1/2 IN.	5 EA	C
5305-00-889-3000	SCREW, MACH: STEEL, PAN, 6-32, 3/4 IN.	5 EA	C
5305-00-984-4992	SCREW, MACH: STEEL, PAN, 6-32, 1 IN.	5 EA	C
5305-00-984-6221	SCREW, MACH: STEEL, PAN, 6-32, 1 1/2 IN.	10 EA	C
5305-00-984-6225	SCREW, MACH: STEEL, PAN, 6-32, 1 1/2 IN. SCREW, MACH: STEEL, PAN, 6-32, 2 IN.	10 EA 10 EA	C
	SCREW, MACH: STEEL, PAN, 8-32, 1/2 IN.	5 EA	C
5305-00-984-6193 5305-00-984-6195		5 EA 8 EA	C
	SCREW, MACH: STEEL, PAN, 8-32, 3/4 IN.		
5305-00-984-6197	SCREW, MACH: STEEL, PAN, 8-32, 1 IN.	8 EA	C
5305-00-984-6199	SCREW, MACH: STEEL, PAN, 8-32, 1 1/2 IN.	8 EA	C
5305-00-984-6201	SCREW, MACH: STEEL, PAN, 8-32, 2 IN.	8 EA	C
5305-00-984-6210	SCREW, MACH: STEEL, PAN, 10-24, 1/2 IN.	8 EA	C
5305-00-984-6212	SCREW, MACH: STEEL, PAN, 10-24 3/4 IN.	8 EA	C
5305-00-984-6214	SCREW, MACH: STEEL, PAN, 10-24, 1 IN.	8 EA	C
5305-00-984-6216	SCREW, MACH: STEEL, PAN, 10-24, 1 1/2 IN.	8 EA	C
5305-00-984-6218	SCREW, MACH: STEEL, PAN, 10-24, 2 IN.	8 EA	C
5305-00-988-1723	SCREW, MACH: STEEL, PAN, 1/4-20, 1/2 IN.	5 EA	C C
5305-00-988-1725	SCREW, MACH: STEEL, PAN, 1/4-20, 3/4 IN.	5 EA	
5305-00-988-1727	SCREW, MACH: STEEL, PAN, 1/4-20, 1 IN.	5 EA	C
5305-00-988-1171	SCREW, MACH: STEEL, PAN, 1/4-20, 1 1/2 IN.	5 EA	C
5305-00-988-1728	SCREW, MACH: STEEL, PAN, 1/4-20, 2 IN.	10 EA	C
5305-00-988-1730	SCREW, MACH: STEEL, PAN, 1/4-20, 2 1/2 IN.	10 EA	C
5120-00-278-0326	SCREW STARTER, HAND:	3 EA	D9
5120-00-288-8728	SCREW STARTER, HAND:	1 EA	D9
5120-00-293-0315	SCREWDRIVER, FLAT: 3/8 IN. W, 6 IN.	3 EA	A
5120-00-278-1280	SCREWDRIVER, FLAT: 3/8 IN. W, 8 IN.	2 EA	A
5120-00-227-7362	SCREWDRIVER, FLAT: 3/8 IN.W TIP; 12 IN.	1 EA	D9
5120-00-287-2505	SCREWDRIVER, FLAT: 9/64 IN. W TIP, 5 IN.	2 EA	A
5120-00-278-1270	SCREWDRIVER, FLAT: 3/16 IN. W TIP, 5 IN.	2 EA	A
5120-00-293-0314	SCREWDRIVER, FLAT: 1/4 IN. W TIP, 10 IN.	2 EA	D10
5120-00-580-0334	SCREWDRIVER SET, CROSS TIP:	1 SE	A
5120-00-288-8739	SCREWDRIVER SET, JEWELER'S:	1 SE	D9
5120-00-222-8837	SCREWDRIVER, SPARK TESTING:	1 EA	A
5120-00-244-9728	SCRIBER, MACHINIST'S:	1 EA	A

NSN	NOMENCLATURE	QUANTITY	LOCATION
8030-00-252-3391	SEALING COMPOUND:GASKET	1 TU	D9
8040-00-828-7385	SEALING, COMPOUND: BLACK	8 TU	D9
5305-00-724-5882	SETSCREW: HEX.SOC.3/8-16,3/4 IN.	5 EA	C
5305-00-724-5833	SETSCREW: HEX.SOC.5/16-18,5/8 IN.	5 EA	C
5305-00-724-0102	SETSCREW: HEX.SOC.8-32,1/2 IN.	5 EA	C
5305-00-725-0105	SETSCREW: HEX.SOC.4-40,3/8 IN.	20 EA	C
5305-00-719-5353	SETSCREW: HEX.SOC. 6-32,1/2 IN.	20 EA	C
5305-00-206-9475	SETSCREW: HEX.SOC.5-40,1/2 IN.	20 EA	C
5305-00-723-9394	SETSCREW: HEX.SOC.10-24,1/2 IN.	20 EA	С
5305-00-723-9383	SETSCREW: HEX.SOC.1/4-20,1/2 IN.	5 EA	C
5110-00-293-0089	SHEARS, METAL CUTTING:	1 EA	D9
5110-00-161-6912	SHEARS, STRAIGHT TRIMMERS:	1 EA	D9
3439-00-273-2536	SOLDER, TIN, ALLOY: ROSIN-CORED	2 LB.	D10
3439-00-289-8648	SOLDER, TIN, ALLOY: SOLID	5 SL	D10
3439-00-618-6624	SOLDERING GUN: COPPER TIPS	1 EA	D9
3439-00-542-0396	SOLDERING GUN:LOOP TIPS	1 EA	D9
3439-00-930-1638	SOLDERING GUN KIT:	1 EA	D10
3439-00-204-3855	SOLDERING IRON, ELEC: 25 W.	1 EA	D10
3439-00-585-6057	SOLDERING IRON, ELEC: 1 1/8 LB.	1 EA	D9
3439-00-223-2528	SOLDERING IRON, ELEC: 2 5/8 LB.	1 EA	D10
3439-00-542-0531	SOLDERING TORCH KIT	1 EA	D10
5940-00-665-9568	SPLICE, CONDUCTOR: SPIRAL SPRING	100 EA	D10
5940-00-228-7912	SPLICE, CONDUCTOR: SPLIT BOLT	10 EA	A
5210-00-078-8949	SQUARE, COMBINATION:	1 EA	D9
6625-NSN	STARTER KIT, RECORDER	1 EA	В
5350-00-242-4404	STEEL WOOL:	1 PG	D10
5345-00-174-0446	STONE, COMMUNTATOR SURFACING:	1 EA	D16
5345-00-161-9695	STONE, SHARPENING:	2 EA	D9
7110-00-634-8596	STOOL, REVOLVING:	2 EA	E
5110-00-238-7696	STRIPPER, CABLE, HAND:	1 EA	D17
5110-00-268-4224	STRIPPER, WIRE, HAND:	2 EA	D10
6625-00-752-7992	STROBOSCOPE:	1 EA	D11
6880-00-530-0952	TACHOMETER: ELEC.	1 EA	D24
5136-00-596-1205	TAP SET, THREAD CUTTING:	1 EA	E
8315-00-292-4401	TAPE, TEXTILE: 1/2 IN. W.	3 RL	D10
8315-00-292-4402	TAPE, TEXTILE: 3/4 IN. W.	3 RL	D10
5940-00-549-8075	TERMINAL LUG: 9/32 HOLE; 14 TO 4 AWG	10 EA	D10
5940-00-283-5281	TERMINAL LUG:5/16;16 TO 14 AWG	50 EA	D10
5940-00-549-8073	TERMINAL LUG:11/32 HOLE;6 TO 0 AWG	4 EA	D10
5940-00-113-8179	TERMINAL LUG:NO. 6 HOLE; 16 TO 14 AWG	25 EA	D10
5940-00-143-4771	TERMINAL LUG:NO. 10 HOLE:22 TO 18 AWG	25 EA	D10
5940-00-504-4703	TERMINAL LUG:5/16 HOLE; 22 TO 18 AWG	50 EA	D10

NSN	NOMENCLATURE	QUANTITY	LOCATION
5940-00-204-8966	TERMINAL LUG: NO. 6 HOLE; 22 TO 18 AWG	25 EA	D10
5940-00-143-4780	TERMINAL LUG: NO. 10 HOLE; 16 TO 14 AWG	25 EA	D10
4910-00-774-9343	TEST GAGE AND HOSE ASSEMBLY:	2 EA	D17
6625-00-238-1460	TEST SET, ARMATURE: 6 TO 12 IN.	1 EA	D11
6625-00-238-1459	TEST SET, ARMATURE: 2 1/2 TO 6 IN.	1 EA	D11
6625-00-730-4368	TEST SET, ELEC. POWER: RESISTIVE	4 EA	F
6625-NSN	TEST SET, ELEC. POWER: 0 TO 60 KVAR	1 EA	F
4910-00-092-9136	TEST SET, LOW VOLTAGE CIRCUIT:	1 EA	В
6625-01-086-9639	TEST SET, SEMICONDUCTOR DEVICE:	1 EA	D23
4940-00-152-2107	TEST STAND ASSEMBLY, ROTARY ACTUATOR:	1 EA	E
6630-00-105-1418	TESTER, ANTIFREEZE AND BATTERY	1 EA	D15
6635-00-918-2788	TESTER, SPRING RESILIENCY:	1 EA	D10
5180-00-317-8263	THREADING SET, SCREW: NC-NF; 1/4 TO 1/2 IN.	1 SE	D26
5180-00-293-2896	THREADING SET, SCREW: NC-NF; NO.4 TO 12	1 SE	D26
5180-00-345-1349	THREADING SET, SCREW:NS	1 SE	D26
3439-00-895-0051	TIP, ELEC. SOLDER.GUN: CUTTING	1 EA	D10
3439-00-994-7444	TIP, ELEC. SOLDER.GUN: SMOOTHING	1 EA	D10
5140-00-388-3416	TOOL BOX, PORTABLE: 26 X 13 X 15	1 EA	E
5180-00-212-4731	TOOL KIT, BATTERY SERVICE:	1 SE	D10
5180-01-076-6928	TOOL KIT, ELECTRONIC:	1 EA	D10
5180-00-699-5273	TOOL KIT, GENERAL MECHANIC'S:	1 SE	E
5950-00-987-5601	TRANSFORMER, VARIABLE POWER:	1 EA	D12
4940-00-528-9145	TRAY, SHOP MAINTENANCE:	4 EA	D12
3950-00-807-0671	TRESTLE, HOIST, PORTABLE:	1 EA	D24,25
4020-00-270-5469	TWINE, LINEN:	1 TU	D12
4940-00-270-1594	UNDERCUTTER, ARMATURE, MICA:	1 EA	В
3460-00-725-5076	V-BLOCKS, MATCHED PAIR:	1 PR	D15
5120-00-293-1439	VISE, MACHINIST'S:	1 EA	В
5310-00-514-6524	WASHER ASSORTMENT:	1 AT	D14
5310-00-582-8769	WASHER, FLAT, BR, 1/4 IN.	1 LB.	C
5310-00-045-5211	WASHER, FLAT: COPPER, 1/4 IN.	1 LB.	C
5310-00-045-5213	WASHER, FLAT: COPPER, 5/16 IN.	200 EA	C
5310-00-045-5215	WASHER, FLAT: COPPER, 3/8 IN.	200EA	C
5310-00-045-5217	WASHER, FLAT: COPPER, 7/16 IN.	100 EA	C
5310-00-087-0057	WASHER, FLAT: STEEL, NO. 2	3 HD	C
5310-00-951-4679	WASHER, FLAT: STEEL, NO. 4	3 HD	C
5310-00-983-8483	WASHER, FLAT: STEEL, NO. 6,5/16 IN. OD.	2 HD	C
5310-00-082-1404	WASHER, FLAT: STEEL, NO.6,3/8 OD.	3 HD	C
5310-00-809-8546	WASHER, FLAT: STEEL, NO. 10	275 EA	C
5310-00-950-1310	WASHER, FLAT: STEEL, NO. 5	3 HD	C
5310-00-823-8804	WASHER, FLAT: STEEL, 1/4 ID.	362 EA	C
5310-00-515-8205	WASHER, FLAT, STEEL 5/16 IN.	1 HD	C

NSN	NOMENCLATURE	QUANTITY	LOCATION
5310-00-014-5850	WASHER, FLAT: STEEL, NO. 10, 1/2 OD.	275 EA	С
5310-00-809-3078	WASHER, FLAT: STEEL, 1/4 IN., 3/4 OD.	1 HD	C
5310-00-809-4058	WASHER, FLAT: STEEL, 1/4 IN., 5/8 OD.	275 EA	C
5310-00-087-7493	WASHER, FLAT: STEEL, 5/16 IN.	1 HD	С
5310-00-809-4061	WASHER, FLAT: STEEL, 3/8 IN.	75 EA	C
5310-00-809-5997	WASHER, FLAT: STEEL, 7/16 IN.	100 EA	С
5310-00-809-3079	WASHER, FLAT: STEEL, 1/2 IN.	1 LB	C
5310-00-209-0786	WASHER, LOCK: EXT. TEETH, 1/4	5HD	C
5310-00-514-6674	WASHER, LOCK: EXT. TEETH, 5/16	500 EA	С
5310-00-627-6128	WASHER, LOCK: EXT. TEETH, 3/8	6 HD	С
5310-00-559-0070	WASHER, LOCK: INT. TEETH, NO.8	1 LB	С
5310-00-167-0721	WASHER, LOCK: INT. TEETH, 5/16	20 HD	С
5310-00-596-7693	WASHER, LOCK: EXT. TEETH, NO.8	20 HD	С
3460-00-516-3053	WHEEL, BUFFING:	2 EA	D12
6145-00-643-0956	WIRE, ELEC: BARE	2 LB	D13
6145-00-939-4951	WIRE, ELEC: BUILDING	100 FT	D22
6145-00-823-2625	WIRE, ELEC: NO. 18 AWG	100 FT	D22
6145-00-643-1023	WIRE, ELEC: NO. 14 AWG	100 FT	D22
6145-00-164-8624	WIRE, ELEC: NO. 12 AWG	100 FT	D22
6145-00-635-9459	WIRE, ELEC: NO. 6 AWG	100 FT	D13
6145-00-542-6271	WIRE, ELEC: NO.8 AWG	100 FT	D13
6145-00-299-4403	WIRE, ELEC: MOTOR LEAD.	100 FT	D13
6145-00-772-2204	WIRE, ELEC: PRIMARY AUTOMOTIVE	100 FT	D13
9505-00-198-9104	WIRE, STEEL, CARBON:	1 CL	D17
5120-00-240-5328	WRENCH, ADJUSTABLE: 8 IN.	2 EA	D14
5120-00-264-3796	WRENCH, ADJUSTABLE: 12 IN.	1 EA	D14
5120-00-224-3156	WRENCH, OPEN END BOX: FLARE NUT, 7/16	1 EA	D14
5120-00-224-3155	WRENCH, OPEN END BOX: FLARE NUT, 3/8	1 EA	D14
5120-00-224-3157	WRENCH, OPEN END BOX: FLARE NUT, 1/2	1 EA	D14
5120-00-224-3158	WRENCH, OPEN END BOX: FLARE NUT, 9/16	1 EA	D14
5120-00-224-3159	WRENCH, OPEN END BOX: FLARE NUT, 5/8	1 EA	D14
5120-00-277-2694	WRENCH, OPEN END: 1 1/8 AND 1 1/4	1 EA	D10
5120-00-277-2323	WRENCH, OPEN END: 1 5/16 AND 1 1/2	1 EA	D14
5120-00-277-1461	WRENCH, PIPE: JAW STYLE	1 EA	D14
5120-00-262-8491	WRENCH, PIPE: STRAP STYLE	1 EA	D14
5120-00-148-7917	WRENCH SET, COMB. BOX AND OPEN END:	1 SE	D14
5120-00-148-7918	WRENCH SET, OPEN END, FIXED:	1 SE	D10
5120-00-204-1999	WRENCH SET, SOCKET:	1 SE	E
5120-00-277-9075	WRENCH, SPANNER: 1.25 TO 3.00	1 EA	D15
5120-00-277-9076	WRENCH, SPANNER: 2.00 TO 4.75	1 EA	D15
5120-00-277-4063	WRENCH, TAP AND REAMER:	1 EA	D16
5120-00-221-7983	WRENCH, TORQUE: 3/4 IN. SQ DRIVE	1 EA	E
5120-00-640-6364	WRENCH, TOGGLE: 1/2 IN. SQ DRIVE	1 EA	D14
5120-00-821-3441	WRENCH, TORQUE: 3/8 IN. SQ DRIVE	1 EA	D14

# APPENDIX A REFERENCES

# A-1. DICTIONARIES OF TERMS AND ABBREVIATIONS: POLICIES FOR MAIN-TENANCE OPERATIONS AND LIMITED STORAGE REQUIREMENTS.

Dictionary of United States Army Terms AR 310-25 Authorized Abbreviations and Brevity Codes AR 310-50

Organization, Policies and Responsibilities AR 750-5

for Maintenance Operation

Limited Storage of Corps of Engineers' Mech-AR 743-505

anical Equipment

## A-2. FIRE PROTECTION

Supply of DA Approved Fire Extinguishers to SB 5-111

Army Troop Users

#### A-3. MAINTENANCE

Quality Assurance. Terms and Definitions MIL STD 109

TM 5-4520-209-15 Operator, Organizational, Field, and Depot

Maintenance Manual, Heater, Space: Gasoline; 60,000 BTU; Floor Instl; Van Type; 120 V, Single Phase, 60 Cycle (Hunter Model

UH-68-2) FSN 4520-898-3995

TM 9-2330-238-14&P Operator's, Organizational Direct Support

and General Support Maintenance Manual (Including Repair Parts and Special Tools List) For 6-Ton, 4-Wheel Chassis. Semitrailer; M295A1 (NSN 2330-00-649-8124): Semitrailer, Van: Expansible M313 (2330-00-772 -5273); Semitrailer, Van; Shop, Folding Sides M447 (2330-00-542-5709) and M447C (2330-00-472-9999) Semitrailer, Van: Repair Parts Shop M749 (2330-00-587-2454) and

M750 (2330-00-925-7035)

# **APPENDIX A-Continued**

#### A-4. RADIO INTERFERENCE SUPPRESSION.

TM 11-483 Radio Interference Suppression

#### A-5. SHIPMENT AND LIMITED STORAGE.

TM 38-230 Preservation, Packaging, and Packing of

Military Supplies and Equipment

#### A-6. DESTRUCTION OF EQUIPMENT.

TM 750-244-3 Procedures for Destruction of Equipment to

Prevent Enemy Use (Mobility Equipment

Command)

#### A-7. SUPPLY PUBLICATIONS.

SC 4940-95-CL-B05 Sets, Kits, Outfits Componets List Shop

Equipment, Electrical Repair Semitrailer

Mounted

SC 4940-95-CL-B05-HR Hand Receipt Catalog Covering Content of Sets,

Kits, and Outfits, Components List Shop Equipment, Electrical Repair, Semitrailer Mounted.

TM 5-4520-209-25P Organizational, Field, and Depot Mainte-

nance Repair Parts and Special Tool Lists; Heater, Space; Fuel Oil and Gasoline; 60,000 BTU; Floor Instl; Van Type; 120 V, Single Phase, 60 Cycle (Hunter Model UH-68-2)

FSN 4520-898-3995

TM 9-4940-451-24P Operator, Organizational, Direct Support and

General Support Repair Parts and Special Tools List for Shop Equipment, Electrical

Repair Semitrailer Mounted

# A-8. PREVENTIVE MAINTENANCE.

FED SPEC P-D-680 Dry Cleaning Solvent NSN 6850-00-110-4498

TM 5-505 Maintenance of Engineer Equipment

DA PAM 738-750 The Army Maintenance Management System

(TAMMS)

### A-9. PAINTING AND PRESERVATION.

TM ENG 60 Preservation and Painting of Serviceable

Corps of Engineers Equipment

# A-10. PUBLICATION INDEXES.

DA Pam 108-1 Index of Army Motion Pictures, Film Strips,

Slides and Phono-Recordings

DA Pam 31 0-1 Consolidated Index Army Pubs and Forms

DA Pam 310-5 Index of Graphic Training Aids and Devices

DA Pam 310-25 Index of Supply Manuals - Corps of Engi-

neers

# A-11. LIST OF COMMERCIAL MANUALS.

NOMENCLATU	JRE
------------	-----

### DESCRIPTION & NSN

AMPLIFIER, TRUE RMS 13-4618-10 MANUAL P/N 13-804618-10 DATED

5/81 FSCM 96795, GOULD INC., INSTRUMENT

DIV. CLEVELAND, OH. NSN 6625-01-102-2104

AMPLIFIER, 250VA MODEL PA-250AB & AC, OPTIMATION FSCM 23405,

JULIE RESEARCH LABORATORIES INC. OPTIMATION

DI V. NEW YORK, NY NSN 5895-01-099-8220

BRIDGE, UNIVERSAL MODEL 250DE, FSCM 11837, ELECTRO SCIENTIFIC

IMPEDANCE INDUSTRIES INC. PORLAND, OR.

NSN 6625-00-404-1592

CHARGER, BATTERY MODEL 5190, FSCM 15309, A&M INSTRUMENT INC.,

NEW HYDE PARK, NY NSN 6130-00-669-6659

CONVERTER, FREQ. DEV. 13-4618-00, MANUAL P/N 13-804618-00-1 DATED

1/80, FSCM 96795, GOULD INC., INSTRUMENT DIV.,

CLEVELAND, OH

NSN

CRIMPING TOOL CTM DIE TYPE, cAT. No. 11707-1, FSCM 89020,

CONTROL PRODUCTS DIV., AMERACE CORP. UNION,

NJ

NSN 5120-00-596-9313

CRIMPING TOOL INSTRUCTION SHEET, MODEL 22,000 (M-2550/2-01),

FSCM 54475, BALMAR CRIMP TOOL CORP., ORLANDO, FL

DRILL ELECTRIC CAT. NO. 1320-90, FSCM 07429, BLACK AND DECKER

(US) INC. TOWS ON, MD NSN 5130-00-293-0960

DRILL ELECTRIC CAT. NO. 1575-10, FSCM 07429, BLACK AND DECKER

(US) INC. TOWSON, MD NSN 5130-00-142-5325

FREQUENCY METER SET TB9-6625-1943-50 CALIBRATION PROCEDURE FOR

FREQUENCY, PFM 604B, FSCM 03927, SAFETRAN

SYSTEMS CO., CUCAMONGA, CA

NSN 6625-00-893-0021

# NOMENCLATURE

# DESCRIPTION & NSN

GRIND MACHINE MODEL E-7 P/N E7M, FSCM 95952, WISSOTA MFG.

CO. NORTH MINNEAPOLIS, MN

NSN 3415-00-517-7754

HOIST, CHAIN SERIES 646, 1 TON, FSCM 12128, COLUMBUS

McKINNON CORP., HOIST DIV., AMHERST, NY

LEAD SET, TEST P/N 11002A, FSCM 28480, HEWLETT-PACKARD CO.,

CORPORATE HQ., PALTO, CA

MULTI METER AN/URM-105C, TM11-6625-203-12, TM11-6625-203-

24P-2, FSCM 12510, BARNETT INSTRUMENT CO.,

CLARKSVI LLE, . TN. NSN 6625-00-999-6282

MULTI METER P/N 50-190411AAAA1, FSCM 29834, GENERAL

ELECTRIC CO., METER AND INSTRUMENT BUSINESS DEPT. INSTRUMENT PRODUCTS, WEST LYNN, MA

NSN 6625-00-284-0855

MULTIMETER INSTRUCTION MANUAL, PL1004, FSCM 77221,

PHAOSTRON INSTRUMENT AND ELECTRONIC CO. .

SOUTH PASADENA, CA

MULTIMETER, INTERGRATING,

DIGITAL

INSTRUCTION MANUAL, MODEL 360, FSCM 14506, DATA TECH DIVISION OF PENRIL CORP., SANTA

ANA, CA.

NSN 6625-00-495-3513

OHMMETER INSTRUCTION MANUAL, MODEL 1602, FSCM 25778,

AUL INSTRUMENT INC., NEW HYDE PARK, NY

NSN 6625-00-141-3558

OSCILLATOR MODELS RCD-10 & RCD-10B, FSCM 23405, JULIE

RESEARCH LABORATORIES INC. OPTIMATION DIV.

NEW YORK, NY

NSN 5895-01-085-6671

OSCILLOSCOPE MODEL 305 Dmm, FSCM 80009, TEKTRONIK INC.

BEAVERTON, OR

NSN6625-01-086-7005

POWER SUPPLY MODEL PVC50-2-E-TBC, FSCM 98380, NJE DIV.

OF TECHNOLOGY DEVELOPMENT CORP. DAYTON, NJ

PULLER KIT FSCM 55719, SNAP-ON-TOOL CORP, KENOSHA, WI

NSN 5120-00-089-3660

### NOMENCLATURE

### DESCRIPTION & NSN

PYROMETER, INDICATING OPERATION MANUAL 1-110224, P/N 388-3L

FSCM 55026, AMERICAN GAGE AND MACHINE CO.

DIV. ELGIN, IL

RECORDER PEN P/N 2107-2202-00, MANUAL P/N 2107-802xxx-

OXU DATED SEP 81, FSCM 96795, GOULD INC.,

NSN 6625

SOLDERING GUN MODEL 450, P/N 450K4, FSCM 11103, WEN PRODUCTS

INC. CHI CAGO, IL NSN 3439-00-930-1638

SOLDERING GUN P/N D440, FSCM 97049, WELLER DIV., COOPER

INDUSTRIES INC., CHERAW, SC

NSN 3439-00-542-0396

STRIPPER, CABLE GGG-S-665 TYPE ONE, CLASS ONE, FSCM 81348,

FEDERAL SPECIFICATIONS PROMULGATED BY

GENERAL SERVICES ADMINISTRATION, WASHINGTON, DC

STROBOSCOPE INSTRUCTION MANUAL FORM 1531-0100-0, MODEL

GR1531-AB, FSCM 24655, GENRAD INC., 300 BAKER

AVENUE, CONCORD: MAO1742 NSN 6680-00-799-7616

TACHOMETER, PORTABLE ELECTRIC, P/N 101B, FSCM 80300, ELECTRO

MECHANO CO., 241 E. ERIE MILWAUKEE, WI 53202

NSN 6680-00-530-0952

TESTER IN-CIRCUIT SEMICONDUCTOR, MODEL 259c, FSCM-

93346. AMERICAN ELECTRONIC LABORATORIES INC...

P. O. BOX 552, LANSDALE, PA 19446

NSN 6625-01-086-9639

TEST GAGE & HOLE

ASSEMBLY

FOR HYDRAULIC GOVERNOR, FSCM 09096, ELECTRO-

STEAM GENERATOR CORP. 842 BERNARD STREET.

ALEXANDRIA, VA 22314 NSN 4910-00-774-9343

TEST SET, ARMATURE GROWLERS TYPES U2, B-I, B-1-M, I-X, AND

M-2, FSCM 11634, CHAPMAN PE ELECTRICAL WORKS INC., 1820 CHOUTEAU AVE. ST. LOUIS,

MO 63103

NSN 6625-00-238-1460

### NOMENCLATURE

### DESCRIPTION & NSN

TEST SET ELECTRICAL TM5-6625-2691-138P, MODEL B216-3 FSCM

21269, ESSEX ENGINEERS, INC., 729 THOMAS

DRIVE, BENSENVILLE, IL 60106

NSN 6625-00-730-4368

TEST SET, ELECTRICAL

POWER

A698 (LOAD BANK), FSCM 21269, ESSEX ELECTRO

ENGINEERS, INC., 729 THOMAS DRIVE, BENSEN-

VILLE IL 60106

NSN 6625-

TEST SET, LOW VOLTAGE CIRCUIT AUTOMOTIVE MILITARY TYPE, MODEL 5192, FSCM

15309, A & M INSTRUMENT INC. 5 NASSAU ST.

ROCKVILLE CENTER, LI NY 11571

NSN 4910 00 092 9136

TEST STAND ASSEMBLY ROTARY ACTUATOR, MODELL BDL-812121-60HZ,

FSCM 83685, BARKLEY & DEXTER LABORATORIES

INC., FITCHBURG, MA 01420

NSN 4940-00-152-2107

TRESTLE, HOIST, PORTABLE FSCM 08136, B.E. WALLACE PRODUCTS, P.O.

DRAWER 70, EXTON, PA 19341

NSN 3950-00-807-0671

WRENCH, TORQUE MODEL TE 602L, FSCM 55719, SNAP-ON TOOL

CORP. , KENOSHA, WI. NSN 5120-00-221-7983

WRENCH, TORQUE MODEL TE175L, FSCM 55719, SNAP-ON TOOL

CORP. , KENOSHA, WI NSN 5120-00-640-6364

WRENCH, TORQUE MODEL QJR284D, FSCM 55719, SNAP-ON TOOL

CORP. , KENOSHA, WI NSN 5120-00-821-3441

# INDEX

	Paragraph	Page
Actuator test stand assembly	3-16	3-12
Administrative storage	1-3	1-1
Armature undercutter	3-13	3-11
Battery charger	3-2	3-1
Bench grinder	3-4	3-1
Bolt cutter	3-18	3-13
Broom	3-17	3-13
Cabinet, small parts storage	3-5	3-4
Commercial manuals, list of		A - 4
Components, load centers & related	3-29	3-30
Contents of shop equipment		4-1
Crowbar	3-10	3-7
Data plates	3-28	3-26
Description	1-8	1-4
Destruction of army materiel to prevent enemy use	1-5	1-1
Destruction of equipment	1-5	1-1
Electrical insulation sheets	3-8	3-7
Electrical power test sets	3-7	3-6
Equipment Improvement Recommendations	1-7	1-1
Exhaust installation, general	3-24	3-18
Exhaust kit, generator	3-24	3-18
Fire extinguisher and bracket	3-19	3-13
First aid kit	3-20	3-13
Forms & records, maintenance	1-2	1-1
Front workbench	3-28	3-26
General mechanic's tool kit	3-9	3-7
Generator exhaust installation	3-24	3-18
Generator exhaust kit	3-8	3-7
Generator mounting hardware	3-8	3-7
Ground rod	3-10	3-7
Identification plate	1 -8c	1-4
Left and right side workbench	3-22	3-16
List of commercial manuals	A-11	A - 4
Load centers and related components	3-30	3-30
Lubrication instructions	2-2	3-30

# INDEX - Continued

	Paragraph	Page
Machinist vise Maintenance forms and records	3-3 1-2	3-1 1-1
Oven Oven mounting hardware	3-12 3-8	3-10 3-7
Panel assemblies Panel stowage assembly Platform assembly installation Portable hoist trestle Portable tool box Power supply amplifier and oscillator Power supply installation Preventive maintenance and troubleshooting Publication indexes	3-15 3-26 3-23 3-21 3-9 3-11 3-25 2-2 A-10	3-12 3-23 3-18 3-15 3-7 3-9 3-23 2-1 A-3
Quality Assurance/Quality Control (QA/QC)	1-6	1-1
Recorder References Rod, ground	3-14 A-1 3-10	3-11 A-1 3-7
Scope Small parts storage cabinet Socket wrench set Stools and pails Stowage straps and workbench	1-1 3-6 3-9 3-5 3-8	1-1 3-5 3-7 3-4 3-7
Test set, low voltage circuit and pen recorder Thread cutting tap set Torque wrench	3-14 3-8 3-9	3-11 3-7 3-7
Upright broom Utility grinding machine	3-17 3-4	3-13 3-1
Workbench, front Workbench, left and right side Wrecking bar Wrench set, socket Wrench, torque	3-27 3-22 3-10 3-9 3-9	3-26 3-16 3-7 3-7 3-7

By Order of the Secretary of the Army:

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

Official:

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

DISTRIBUTION:



SOMETHING WRONG WITH THIS PUBLICATION?

THEN. JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL! FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

PUBLICATION DATE
7 Oct 87

PUBLICATION TITLE Shop Equipment, Electrical Repair, Semitrailer Mounted.Part Number 85236

TM 9-	-4940-5	51 <b>-</b> 14&I	þ		7 Oct	87	Electrical Repair, Semitrailer Mounted, Part Number 85236		
BE EXA	CT. PIN-P	POINT WHE	RE IT IS	IN THIS	SPACE TE	LL WHAT	والمستقل والمستوال والمستوال والمستوال والمستوال والمستوال والمستوار والمستوار والمستوار والمستوار والمستوار والمستوار		
PAGE NO.	PARA- GRAPH	FIGURE NO	TABLE NO	AND W	IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:				
3-13	3-19a.			Change	e "right	side" t	o "left side"		
							MOLE		
			٠		(		MPLE		
							المراوا الأناف والمنصور والأناف المنصاب المراوا والمنافع والمنافع والمنافع والمنافع والمنافع والمنافع والمنافع		
PRINTED N	NAME, GRADI	E OR TITLE.	AND TELEP	HONE NUMB	ER	SIGN HEI	RE		



# SOMETHING WRONG WITH THIS PUBLICATION?

THEN. JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT. FOLD IT AND DROP IT IN THE MAIL!

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

**PUBLICATION NUMBER** 

TEAR ALONG PERFORATED LINE

PUBLICATION DATE

PUBLICATION TITLE Shop Equipment, Electrical Repair, Semitrailer

L		_	51-14&F			7 Oct	87	Electrical Repair, Ser Mounted, Part Number 8	nitrailer 85236				
_	EXAC		OINT WHE	RE IT IS	IN THIS	SPACE TELL	L WHAT IS WRONG						
N	0	PARA- GRAPH	FIGURE NO	NO	AND W	HAI SHOULD	BE DOM	BE DONE ABOUT IT:					
ľ													
İ			İ										
	İ												
	l												
	1												
	ł												
	ļ												
	i												
	İ												
			i										
PRIN	TED N	AME, GRADI	E OR TITLE.	AND TELEPH	ONE NUMB	ER	SIGN HE	RE					

DA 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

&U.S. G.P.O. 1983-381-646/8515

FILL IN YOUR UNIT'S ADDRESS

**FOLD BACK** 

DEPARTMENT OF THE ARMY



OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

**BUSINESS REPLY MAIL** 

FIRST CLASS

PERMIT NO. 12062

WASHINGTON, DC

POSTAGE WILL BE PAID BY DEPARTMENT OF THE ARMY

COMMANDER
US ARMY ARMAMENT, MUNITIONS
AND CHEMICAL COMMAND
ATTN: AMSMC-MAS
ROCK ISLAND, IL 61201-9990

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

TEAR ALONG PERFORATED LINE



# SOMETHING WRONG WITH THIS PUBLICATION?

THEN. JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT. FOLD IT AND DROP IT IN THE MAIL!

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

**PUBLICATION NUMBER** 

TEAR ALONG PERFORATED UNF

TM 9-4940-551-14&P

**PUBLICATION DATE** 7 Oct 87

PUBLICATION TITLE Shop Equipment, Electrical Repair, Semitrailer

Mounted. Part Number 85236

1						/ 000		Mounted,	Part	Number	85236	
	BE EXAC		OINT WHE	RE IT IS	IN THIS	S SPACE TELL HAT SHOULD	WHAT I	S WRONG				
	NO NO	PARA- GRAPH	NO	NO NO	AND W	HAI SHOULD	BE DON	E ABOUT II:				
ı												
1												
	1											
ı												
1		:										
		,										
												:
Į							F 0. 0					
	PRINTED	NAME, GRAD	E OR TITLE	AND TELEP	HONE NUMI	BEA	SIGN HE	ERE:				
1	-											

DA 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

₩ U.S. G.P.O. :1983-381-646/8515

FILL IN YOUR UNIT'S ADDRESS

FOLD BACK

**DEPARTMENT OF THE ARMY** 



OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

**BUSINESS REPLY MAIL** 

FIRST CLASS

PERMIT NO. 12062

WASHINGTON, DC

POSTAGE WILL BE PAID BY DEPARTMENT OF THE ARMY

COMMANDER
US ARMY ARMAMENT, MUNITIONS
AND CHEMICAL COMMAND
ATTN: AMSMC-MAS
ROCK ISLAND, IL 61201-9990

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

TEAR ALONG PERFORATED LINE



# SOMETHING WRONG WITH THIS PUBLICATION?

THEN. . JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT. FOLD IT AND DROP IT IN THE MAIL! FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

TEAR ALONG PERFORATED LINE

TM 9-4940-551-14&P

PUBLICATION DATE

7 Oct 87

PUBLICATION TITLE Shop Equipment, Electrical Repair, Semitrailer Mounted, Part Number 85236

					Mounted, rart Number 05236	
BE EXA	T	POINT WHE		IN THIS SPACE TEL	LL WHAT IS WRONG	
PAGE NO	PARA- GRAPH	FIGURE NO	TABLE NO	AND WHAT SHOULD	D BE DONE ABOUT IT:	
	<b>1</b>	1	1 '			
		<b>i</b>	'			
		1	'			
		1	'	ļ		
		1	1 '			
		1		ļ		
		<u> </u>	1			
		!				
		1	1 1			
			1 1			
	:			·		
		1				
				<u>.</u>		
			1 1			
			1 !			
COUNTED				HONE NUMBER	Total vene	
PRINTED	VAME, GHAU	E OR TITLE.	AND TELEPT	HONE NUMBER	SIGN HERE	
~						

DA 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

**☆**U.S. G.P.O. 1983-381-646/8515

FILL IN YOUR UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY



OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

# **BUSINESS REPLY MAIL**

FIRST CLASS

**PERMIT NO. 12062** 

WASHINGTON, DC

POSTAGE WILL BE PAID BY DEPARTMENT OF THE ARMY

COMMANDER
US ARMY ARMAMENT, MUNITIONS
AND CHEMICAL COMMAND
ATTN: AMSMC-MAS
ROCK ISLAND, IL 61201-9990

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

TEAR ALONG PERFORATED

### THE METRIC SYSTEM AND EQUIVALENTS

#### LINEAR MEASURE

- 1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches 1 Meter= 100 Centimeters = 1000 Millimeters = 39.37 Inches
- 1 Kilometer = 1000 Meters = 0.621 Miles

### WEIGHTS

- 1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
- 1 Kilogram =1000 Grams =2.2 Lb
- 1 Metric Ton=1000 Kilograms=1 Megagram=1.1 Short Tons

### LIQUID MEASURE

1 Milliliter=0.001 Liters=0.0338 Fluid Ounces 1 Liter=1000 Milliliters=33.82 Fluid Ounces

SQUARE MEASURE

- 1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet 1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

### CUBIC MEASURE

1 Cu Centimeter = 1000 Cu M Illimeters = 0.06 Cu Inches 1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

### TEMPERATURE

 $5/9 ({}^{0}F - 32) = {}^{0}C$ 

212° Fahrenheit is equivalent to 100° Celsius 90° Fahrenheit is equivalent to 32.2° Celsius 32° Fahrenheit is equivalent to 0° Celsius 9/5 C° + 32 = F°

### **APPROXIMATE CONVERSION FACTORS**

TO CHANGE	то	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	
	Square Centimeters	
_ *	Square Meters	
	Square Meters	
	Square Kilometers.	
	Square Hectometers	
	Cubic Meters	
	Cubic Meters	
	Milliliters	
	Liters	
	Liters	
	Liters	
	Grams	
	Kilograms	
	Metric Tons	
	Newton-Meters	
	Inch. Kilopascals	
	Kilometers per Lite	

TO CHANGE TO		MULTI	PLY BY
Centimeters Inches			0.394
Meters Feet			
Meters Yards			
Kilometers Miles			
Square Centimeters Square Inche	·		0.155
Square Meters Square Feet.			10.764
Square Meters Square Yards			
Square Kilometers Square Miles			0.386
Square Hectometers Acres			2.471
Cubic Meters Cubic Feet .			
Cubic Meters Cubic Yards.			1.308
Milliliters Fluid Ounces			
Liters Pints			2.113
Liters Quarts			1.057
Liters Gallons			0.264
Grams Ounces			0.035
Kilograms Pounds			2.205
Metric Tons Short Tons .			1.102
Newton-Meters Pound-Feet .			0.738
Kilopascals Pounds per S	quare 1	nch .	0.145
Kilometers per Liter Miles per Ga	llon .		2.354
Kilometers per Hour Hiles per Ho			



TA089991

PIN: 062566-000

# This fine document...

Was brought to you by me:



# <u>Liberated Manuals -- free army and government manuals</u>

Why do I do it? I am tired of sleazy CD-ROM sellers, who take publicly available information, slap "watermarks" and other junk on it, and sell it. Those masters of search engine manipulation make sure that their sites that sell free information, come up first in search engines. They did not create it... They did not even scan it... Why should they get your money? Why are not letting you give those free manuals to your friends?

I am setting this document FREE. This document was made by the US Government and is NOT protected by Copyright. Feel free to share, republish, sell and so on.

I am not asking you for donations, fees or handouts. If you can, please provide a link to liberatedmanuals.com, so that free manuals come up first in search engines:

<A HREF=http://www.liberatedmanuals.com/>Free Military and Government Manuals</A>

- SincerelyIgor Chudov<a href="http://igor.chudov.com/">http://igor.chudov.com/</a>
- Chicago Machinery Movers