DEPARTMENT OF THE ARMY TECHNICAL MANUAL

ORGANIZATIONAL, DS, GS,

AND DEPOT MAINTENANCE MANUAL

INCLUDING REPAIR PARTS

WELDING MACHINE, ARC:

GENERATOR; ELECTRIC MOTOR DRIVEN,

300-AMP DC ARC, 220 / 440-V, 60-CYCLE,

3-PHASE, WHEEL MOUNTED

(HARNISCHFEGER MODEL W300 MG)

FSN 3431-226-1569

This reprint includes all changes in effect at the time of publication; changes 1 and 2.

HEADQUARTERS, DEPARTMENT OF THE ARMY

APRIL 1965

AGO 8244A

SAFETY PRECAUTIONS

BEFORE OPERATION

Provide adequate ventilation for removal and dilution of fumes and gases.

When connecting to outside power source, make sure main disconnect switch is in OFF position.

Always check voltage rating of welding machine against power line voltage before making any connections.

The welder frame must be grounded by connecting to a good electrical ground, such as a water pipe.

Always disconnect welder from power line before inspecting it.

DURING OPERATION

Provide adequate ventilation for removal and dilution of fumes and gases.

When connecting to outside power source, make sure main disconnect switch is in OFF position.

Always check voltage rating of welding machine against power line voltage before making any connections.

On initial start of the machine, immediately check direction of rotation as indicated by arrow on the nameplate. Direction of rotation may be changed by interchanging any two input leads on the three-phase motors.

The welder frame must be grounded by connecting to a good electrical ground such as a water pipe.

Do not perform any welding operation without a welder's helmet. The flash of the welding arc can cause injury to the eye.

Do not adjust welding controls while maintaining arc.

Always disconnect welder from power line before inspecting it.

AFTER OPERATION

Always disconnect welder from power line before inspecting it.

CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *24 January 1969*

Organizational, DS, OS, and Depot Maintenance Manual

Including Repair Parts and Special Tools List

WELDING MACHINE, ARC: GENERATOR: ELECTRIC MOTOR

DRIVEN, 300-AMP DC ARC, 220/440-V, 60-CYCLE, 3-PHASE, WHEEL

MOUNTED (HARNISCHFEGER MODEL W300 MG) FSN 3431-226-1569

TM 5-3431-217-15, 9 April 1965, is changed as follows:

Page 2, section I. Paragraph 1*d* is superseded as follows:

d. Reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding General, U. S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Boulevard, St. Louis, Mo. 63120.

Page 45. Appendix I is superseded as follows:

APPENDIX I

REFERENCES

1. Fire Protection	
TM -687	Repairs and Utilities: Fire Protection Equipment and Appliances Inspections, Operations and Preventive Maintenance.
2. Painting	
TM 9-213	Painting Instructions for Field Use.
3. Maintenance	
TB ENG 347	Winterization Techniques for Engineer Equipment.
TM 5-764	Electric Motor and Generator Repair.
TM 9-207	Operation and Maintenance of Ordnance Material in Extreme Cold (° to -65°F.)
TM 38-750	Army Equipment Record Procedures.
4. Shipment and Limited Storage	
TM 38-230	Preservation, Packaging, and Packing of Military Supplies and Equipment.

Page 47 through 49. Appendix II is superseded as follows:

APPENDIX II
MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

1. General

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. Section II designates overall responsibility for the performance of maintenance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions.

c. Section III. Special Tool and Special Test Equipment Requirements. Not applicable.

d. Section IV. Remarks. Not applicable.

2. Explanation of Columns in Section II

a. Group Number, Column (1). The functional group is a numerical group set up on a functional basis. The applicable functional grouping indexes (obtained from TB 750-93-1, Functional Grouping Codes) are listed on the MAC (Maintenance Allocation Chart) in the appropriate numerical sequence. These indexes normally are set up in accordance with their function and proximity to each other.

b. Functional Group, Column (2). This column contains a brief description of the component of each functional group.

c. Maintenance Functions, Column (3). This column lists the various maintenance functions (A through K) and indicates the lowest maintenance category authorized to perform these functions. The symbol designations for the various maintenance categories are as follows:

C - Operator or crew
O - Organizational maintenance
F - Direct support maintenance
H - General support maintenance
D - Depot maintenance

The maintenance functions are defined as follows:

A - Inspect: To determine serviceability of an item by comparing its physical, mechanical, and electrical characteristics with established standards.

B- Test: To verify serviceability and to detect electrical or mechanical failure by use of test equipment.

C - Service: To clean, to preserve, to charge, to paint, and to add fuel, lubricants, cooling agents, and air.

D - Adjust: To rectify to the extent necessary to bring into proper operating range.

E- Aline: To adjust specified variable elements of an item to bring to optimum performance.

F - Calibrate: To determine the corrections to be made in the readings of instruments or test equipment used in precise measurement. Consists of the comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared with the certified standard.

G - Install: To set up for use in an operational environment such as an emplacement, site, or vehicle.

H - Replace: To replace unserviceable items with serviceable assemblies, subassemblies, or parts.

I - Repair: To restore an item to serviceable condition. This includes, but is not limited to, inspection, cleaning, preserving, adjusting, replacing, welding, riveting, and strengthening.

J - Overhaul: To restore an item to a completely serviceable condition as prescribed by maintenance serviceability standards using the Inspect and Repair Only as Necessary (IROAN) technique.

K - Rebuild: To restore an item to a standard as nearly as possible to original or new condition in appearance, performance, and life expectancy. This is accomplished through complete disassembly of the item, inspection of all parts or components, repair or replacement of worn or unserviceable elements (items) using original manufacturing tolerances and specifications, and subsequent reassembly of the item.

d. Tools and Equipment, Column (4). This column is provided for referencing by code the special tools and test equipment, (sec. III) required to perform the maintenance function (sec. II).

e. Remarks, Column (5). This column is provided for referencing by code the remarks (sec. IV) pertinent to the maintenance functions.

3. Explanation of Columns in Section III

a. Reference Code. This column consists of a number and a letter separated by a dash. The number references the T&TE requirements column on the MAC. The letter represents the specific maintenance function the item is to be used with. The letter is representative of columns A through K on the MAC.

b. Maintenance Category. This column shows the lowest level of maintenance authorized to use the special tool or test equipment.

c. Nomenclature. This column lists the name or identification of the tool or test equipment.

d. Tool Number. This column lists the manufacturer's code and part number, or Federal stock number of tools and test equipment.

4. Explanation of Columns in Section IV

a. Reference Code. This column consists of two letters separated by a dash, both of which are references to section II. The first letter references column 5 and the second letter references a maintenance function, column 3, A through K.

b. Remarks. This column lists information pertinent to the maintenance function being performed, as indicated on the Maintenance Allocation Chart, section II.

Section II. MAINTENANCE ALLOCATION CHART

(1) Group No.	(2) Functional Group	(3) Maintenance functions A Inspect	B Test	C Service	D Adjust	E Align	F Calibrate	G Install	H Replace	I Repair	J Overhaul	K Rebuild	(4) Tools and equipment	(5) Remarks
10	FRONT AXLE													
1000	Front Axle Assembly													
	Tongue								O	O				
11	REAR AXLE													
1100	Rear Axle Assembly								O					
13	WHEELS AND TRACKS													
1311	Wheel Assembly								O					
15	FRONT TOWING ATTACHMENT, AND DRAWBARS													
1501	Frame Assembly								O	H				
22	ACCESSORY ITEMS													
2202	Accessory Items													
	Remote control assembly								O	F				
	Cables								O	O				
2210	Data Plates								O					
44	WELDING EQUIPMENT													
4400	Arc Welders													
	Welder assembly		O	O						F	D			
4401	Rotor Assembly													
	Armature assembly		H						H		D			
	Armature exciter		F						F					
4402	Stator Assembly													
	Stator assembly, motor		H						F	D				
	Coil set, exciter field		F						F					
	Coils, generator stator		H						H					
	Cable and wiring								H	O				
4403	Brush Holder Assembly													
	Brushes	O							O					
	Brush holder assemblies								F	F				
4405	Frame Support, Housing Carrier													
	Bearings, ball			O					H					
4406	Ventilating, Cooling System													
	Fan, cooling.								F					
4407	Control Panels, Housing													
	Control box assembly								F					
	Wiring								F					
	Meter, shunt, receptacle								F					
4408	Connecting Devices													
	Terminal assemblies								O					
	Cable assembly								O	O				
	Bus bars								F					
4409	Protective Devices, Electrical													
	Thermostat								F					
4410	Switching Control													
	Switches								F					
	Starter assembly									F				
4411	Resistor Components													
	Resistor		F						F					
	Rheostat								F					

Page 50 through 53. Appendix III is superseded as follows:

APPENDIX III
BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

1. Scope

This appendix lists items which accompany the welding machine or are required for installation, operation, or operator's maintenance.

2. General

This basic issue items list is divided into the following sections:

a. Basic Issue Items - Section II. A list of items which accompany the welding machine or are required for the installation, operation, or operator's maintenance.

b. Maintenance and Operating Supplies - Section III. A listing of maintenance and operating supplies required for initial operation.

3. Explanation of Columns

The following provides an explanation of columns in the tabular list of basic issue items, section II.

a. Source, Maintenance, and Recoverability Codes (SMR), Column (1).

(1) Source Code, indicates the selection status and source for the listed item. Source codes are -

Code	***Explanation***
P	Applied to repair parts which are stocked in or supplied from GSA/DSA or Army supply system, and authorized for use at indicated maintenance categories.
M	Applied to repair parts which are not procured or stocked but are to be manufactured at indicated maintenance categories.
A	Applied to assemblies which are not procured or stocked as such, but made up of two or more units, each, of which carry individual stock numbers and descriptions and are procured and stocked and can be assembled by units at indicated maintenance categories.
X	Applied to parts and assemblies which are not procured or stocked, the mortality of which normally is below that of the applicable end item, and the failure of which should result in retirement of the end item from the supply system.
X1	Applied to repair parts which are not procured or stocked. the requirement for which will be supplied by use of the next higher assembly or components.
X2	Applied to repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.
C	Applied to repair parts authorized for local procurements. If not obtainable from local procurement, such repair parts will be requisitioned through normal supply channels with a supporting statement of nonavailability from local procurement.
G	Applied to major assemblies that are procured with PEMA (Procurement Equipment Missile Army) funds for initial issue only to be used as exchange assemblies at DSU and GSU level or returned to depot supply level.

***Note*. Source code and level of maintenance are not shown on common hardware items known to be readily available in Army supply channels and through local procurement.**

(2) Maintenance code, indicates the lowest category of maintenance authorized to install the listed item.The maintenance level code is -

Code	***Explanation***
C	Operator/crew
O	Organizational maintenance

(3) Recoverability code, indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable. Recoverability codes -

Code	***Explanation***
R	Applied to repair parts and assemblies which are economically repairable at DSU and GSU activities and are normally furnished by supply on an exchange basis.
T	Applied to high-dollar value recoverable repair parts which are subject to special handling and are issued on an exchange basis. Such repair parts normally are repaired or overhauled at depot maintenance activities.
U	Applied to repair parts specifically selected for salvage by. reclamation units because of precious metal content, critical materials, high-dollar value reusable casing and castings.

b. Federal Stock Number, Column (2). This column indicates the Federal stock number for the item.

c. Description, Column (3). This column indicates the Federal item name and any additional description of the item required. A part number or other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parentheses. Repair parts quantities included in kits, sets, and assemblies are shown in front of the repair part name.

d. Unit of Issue, Column (4). This column indicates the unit used as a basis for issue, e.g., ea, pr, ft, yd, etc.

e. Quantity Incorporated in Unit Pack, Column (5). This column indicates the actual quantity contained in the unit pack.

f. Quantity Incorporated in Unit, Column (6). This column indicates the quantity of the item used in the functional group.

g. Quantity Furnished with Equipment Column (7). This column indicates the quantity of an item furnished with the equipment.

h. Quantity Authorized Column (8). This column indicates the quantity of an item authorized the operator/crew to have on hand or to obtain as required. As required items are indicated with an asterisk.

i. Illustration Column (9). This column is divided as follows:

(1) *Figure number, column (9)(a)*. Indicates the figure number of the illustration in which the item is shown.

(2) *Item number* column (9)(b). Indicates the callout number used to reference the item in the illustration.

4. Explanation of Columns in the Tabular List of Maintenance and Operating Supplies - Section III

a. Component Application Column (1). This column identifies the component application of each maintenance or operating supply item.

b. Federal Stock Number Column (2). This column indicates the Federal stock number for the item and will be used for requisitioning purposes.

c. Description Column (3). This column indicates the item and brief description.

d. Quantity Required for Initial Operation Column (4). This column indicates the quantity of each maintenance or operating supply item required for initial operation of the equipment.

e. Quantity Required for 8 Hours Operation Column (5). This column indicates the estimated quantities required for an average eight hours of operation.

f. Notes Column (6). This column indicates informative notes keyed to data appearing in a preceding column.

Section II. BASIC ISSUE ITEMS

(1) SMR Code	(2) Federal Stock Number	(3) Description Ref no. & mfr Code / Usable on code	(4) Unit of Issue	(5) Qty inc in unit pack	(6) Qty inc in unit	(7) Qty furn with equip	(8) Qty auth	(9) Illustration (A) Fig no.	(9) Illustration (B) Item No.
		31- BASIC ISSUE ITEMS, MANUFACTURER INSTALLED							
		3100 - BASIC ISSUE ITEMS MANUFACTURER OR DEPOT INSTALLED							
P C	7520-559-9618	CASE: maintenance and operational manuals, cotton, duck, water repellent, mildew-resistant, MIL-B-117438.	ea			1	1		
		DEPARTMENT OF THE ARMY, OPERATOR, ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT AND DEPOT MANUAL, INCLUDING REPAIR PARTS TM 5-3431-217-15.	ea			1	1		
P C	7510-889-3494	BINDER: loose leaf, U.S. Army Equipment Log Book	ea			1	1		
		32- BASIC ISSUE ITEMS, TROOP INSTALLED							
		3200 - BASIC ISSUE ITEMS, TROOP INSTALLED OR AUTHORIZED							
P C	4210-555-8837	EXTINGUISHER. Fire, dry chemical, charged hand, pressurized w/dry air or nitrogen gas, Clam 4-B, C, 2½ lb. w/universal bracket (Repair Part Manual Group 7608).	ea			*	1		

Page 54 through 64. Appendix IV is superseded as follows:

APPENDIX IV
REPAIR PARTS LIST

Section I. INTRODUCTION

1. Scope

This manual lists repair parts required for the performance of organizational, direct support, general support, and depot maintenance of the welding machine.

2. General

a. The repair parts list is arranged as follows:

(1) Individual parts and major assemblies are listed by item name within the numbered functional groups.

(2) Assembly components and subassemblies are indented and listed by item name under major assemblies.

b. This repair parts list is divided into the following sections:

(1) *Prescribed Load Allowance (PLA) - Section II.* A consolidated listing of repair parts quantitatively allocated for initial stockage at the organizational level. This is a mandatory minimum stockage allowance.

(2) *Repair Parts - Section III*. A list of repair parts authorized for the performance of maintenance at the organizational level.

(3) *Repair Parts - Section IV*. A list of repair parts authorized for the performance of maintenance at the direct support, general support, and depot level.

3. Explanation of Columns

The following provides an explanation of columns in the tabular lists in sections II through IV.

a. Source, Maintenance, and Recoverability Codes (SMR).

Note. **Common hardware items known to be readily available in Army supply channels will be assigned Maintenance codes only. Source codes, recoverability codes, and Maintenance Allowance will not be assigned to this category.**

(2) Source code. Indicates the selection status and source for the listed item. Source codes used are-

Code	***Explanation***
P	Applied to repair parts which are stocked in or supplied from DSA/GSA or Army supply system, and authorized for use at indicated categories.
M	Applied to repair parts which are not procured or stocked but are to be manufactured at indicated maintenance categories.
A	Applied to assemblies which are not procured or stocked as such but made up of two or more units, each of which carry individual stock numbers and descriptions and are procured and stocked and can be assembled by units at indicated maintenance categories.
X	Applied to parts and assemblies which are not procured or stocked, the mortality of which normally is below that of the applicable end item, and the failure of which should result in retirement of the end item from the supply system.
X1	Applied to repair parts which are not procured or stocked, the requirement for which will be supplied by use of the next higher assembly or components.
X2	Applied to repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.
C	Applied to repair parts authorized for local procurements. If not obtainable from local procurement, such repair parts will be requisitioned through normal supply channels with a supporting statement of nonavailability from local procurement.
G	Applied to major assemblies that are procured with PEMA (Procurement Equipment Missile Army) funds for initial issue only to be used as exchange assemblies at DSU and GSU maintenance level. These assemblies will not be stocked above DSU and GSU level or returned to depot supply level.

(2) *Maintenance code*. Indicates the lowest category of maintenance authorized to install the listed item. The maintenance level codes are-

Code	***Explanation***
O	Organizational maintenance
F	Direct support maintenance
H	General support maintenance
D	Depot maintenance

(3) *Recoverability code*. Indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable. Recoverability codes are-

Code	***Explanation***
R	Applied to repair parts and assemblies which are economically repairable at DSU and GSU activities and normally are furnished by supply on an exchange basis.
T	Applied to high-dollar value recoverable repair parts which are subject to special handling and are issued on an exchange basis. Such repair parts normally are repaired or overhauled at depot maintenance activities.
U	Applied to repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, high-dollar value reusable casings or castings.

b. Federal Stock Number. Indicates the Federal stock number for the item.

c. Description. Indicates the Federal item name and any additional description of the item required. A part number or other reference number is preceded by the applicable five-digit Federal supply code for manufacturers in parentheses. Repair parts quantities included in the kits, sets, and assemblies are shown in front of the repair part name.

d. Unit of Issue. Indicates the unit used as a basis for issue, e.g., ea, pr, ft, yd, etc.

e. Quantity Incorporated in Unit Pack. Indicates the actual quantity contained ;!,, the unit pack.

f. Quantity Incorporated in Unit. Indicates the quantity of the item used in the functional group.

g. Fifteen-Day Organizational Maintenance Allowances.

(1) The allowance columns are divided into four subcolumns. Indicated in each subcolumn opposite the first appearance or each item is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have no entry in the allowance columns but will have in the description column a reference to the first appearance of the item. Items authorized for used as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The quantitative allowances for organizational level of maintenance represents one initial prescribed load for a 15-day period for the number of equipments supported. Units and organizations authorized additional prescribed loads will multiply the number of prescribed loads authorized by the quantity of repair parts reflected in the appropriate density column to obtain the total quantity of repair parts authorized.

(3) Organizational units providing maintenance for more than 100 of these equipments shall determine the total quantity of parts required by converting the equipment quantity to a decimal factor by placing a decimal point before the next to last digit of the number to indicate hundredths, and multiplying the decimal factor by the parts quantity in the 51-100 allowance column.

Example authorized allowance for 51-100 equipments is 12; for 140 equipments multiply 12 by 1.

or 16.80 rounded off to 17 parts required.

(4) Subsequent changes to allowances will be limited as follows: No change in the range of items is authorized. If additional items are considered necessary, recommendation should be forwarded to U.S. Army Mobility Equipment Command for exception or revision to the allowance list. Revisions to the range of items authorized will be made by this Command based upon engineering experience, demand data, or TAERS information.

h. *Thirty-Day* DS/GS Maintenance Allowances.

(1) The allowance columns are divided into three subcolumns. Indicated in each subcolumn, opposite the first appearance of each item, is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have no entry in the allowance column, but will have in the description column a reference to the first appearance of the item. Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The quantitative allowances for DS/GS levels of maintenance will represent initial stockage for a 30-day period for the number of equipments supported.

(3) Determination of the total quantity of parts required for maintenance of more than 100 of these equipments can be accomplished by converting the equipment quantity to a decimal factor by placing a decimal point before the next to last digit of the number to indicated hundredths, and multiplying the decimal factor by the parts quantity authorized in the 51-100 allowance column.

Example: authorized allowance for 51-100 equipments is 40; for 150 equipments multiply 40 by 1. or 60 parts required.

i. *One-Year Allowances Per 100 Equipments/Contingency Planning Purposes*. Indicates opposite the first appearance of each item the total quantity required for distribution and contingency planning purposes. The range of items indicates total quantities of all authorized items required to provide for adequate support of 100 equipments for 1 year.

j. *Depot Maintenance Allowance Per 100 Equipments*. Indicates opposite the first appearance of each item the total quantity authorized for depot maintenance of 100 equipments. Subsequent appearances of the same item will have no entry in this column, but will have in the description column a reference to the first appearance of the item. Items authorized for use but not for initial stockage are identified with an asterisk in the allowance column.

k. *Illustration.*

(1) Figure Number. Indicates the figure number of the illustration in which the item is shown.

(2) *Item number*. Indicates the callout number used to reference the item in the illustration.

4. Special Information

a. Repair parts mortality has been based on 1,500 hours of operation per year.

b. Parts which require manufacture or assembly at a category higher than that authorized for installation will indicate in the source column the higher category

5. Abbreviations

ar ..... as required
ft ..... feet (foot)
d ..... inside diameter
n ..... inch (es)
lg ..... long (length)
lg..... mounting
N..... number (s)
d ..... outside diameter
rl ..... roll
thd ..... thread (ed) (s)

6. Federal Supply Codes for Manufacturers

Code	*Manufacturer*
00761	Burndy Midwest, Inc.
00779	Aircraft Marine Products, Inc.
02295	General Electric Co., General Purpose Control Department of Switch-gear and Control Division.
04009	Hart and Hegeman Mfg. Co.
08288	Military Supply Standards
12946	Neilson Wheel Co.
15605	Cutler-Hammer, Inc.
21335	Fafnir Bearing Co., The
27315	Pawling and Harnischfeger Co.
28250	Heyan Mfg. Co.
44655	Ohmite Mfg. Co.
55026	Simpson Electric Co.
59730	Thomas and Betts Co.
66289	Wisconsin Motor Corp.
70485	Atlantic India Rubber Works, Inc.
72962	Elastic Stop Nut Corp. Of America
79497	Western Rubber Co.
80756	Ramsey Corp.
81349	Military Specifications
82214	National Carbon Co.
83315	Hubbel Corp.
96906	Military Standard Promulgated By Standardization Div. Directorate of Logistic Services DSA.
98124	Hunt Wilde Corp.

Section II. PRESCRIBED LOAD ALLOWANCE

(1) Federal Stock Number	(2) Description	Qty inc in unit pack	(3) 15-Day Org Maint. Alw (A) 1-5	(B) 6-20	(C) 21-50	(D) 51-100
	4403---BRUSH HOLDER ASSEMBLY					
5977-423-5329	BRUSH, ELECTRICAL: main (82214) 549	6	2	7	12	25
5977-588-4301	BRUSH, ELECTRICAL: exciter (27315) 273H3D1	1	*	2	2	4

Section III. REPAIR PARTS FOR ORGANIZATIONAL MAINTENANCE

(1) Source	Maint.	Recover-	(2) Federal Stock Number	(3) Description	(4) Unit of issue	(5) Qty inc in unit pack	(6) Qty. inc. in unit	(7) 15-Day organizational maint. allowances (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(8) Illustrations (a) Fig. No.	(b) Item or Symbol No.
				GROUP 10- FRONT AXLE									
				1000- FRONT AXLE ASSEMBLY									
X2	0			AXLE, FRONT			1					14	3
				(27315) 210H18D1									
X2	0			FORK, SWIVEL: front axle			1					14	9
				(12946) 8-11X									
	0			SCREW, CAP, HEXAGON: fork mounting			1					14	8
				(27315) 082V079									
	0		5310-761-6882	NUT, PLAIN, HEXAGON: fork mtg screw			1					14	6
				(27315) 2145V005									
	0			WASHER, LOCK: fork mtg screw			1					14	7
				(27315) 3616V011									
X2	0			HANDLE, TOWING			1					14	5
				(27315) 206F8D1									
X2	0			GRIP, HANDLE			2					14	18
				(98124) 1443R									
X2	0			BAG, CLOTH			1					14	21
				(27315) 32264									
X2			5340-598-1357	RING, RETAINING: front axle			2					14	1

(1) Source Maint. and recov. code			(2)	(3)	(4)	(5)	(6)	(7) 15-Day organizational maint. allowances				(8) Illustrations	
Source	Maint-enance	Recover-ability	Federal Stock Number	Description	Unit of issue	Qty inc in unit pack	Qty. inc. in unit	(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig. No.	(b) Item or Symbol No.
X2	O		.....	WASHER, FLAT front :axle	.....	.....	4	.....	.....	.....	.....	14	2
			.....	(27315) 3682V008									
M	O		.....	CHAIN:handle retaining	.....	.....	1	.....	.....	.....	.....	14	20
			.....	MANUFACTURE FROM:									
P	O		.....	CHAIN, WELDLESS	FT.....	.....	(SEE GROUP 9501)						
			.....	(12 in. required)									
			.....	(00000) 42C15120-205									
M	O		.....	HOOKS: handle retaining chain	.....	.....	1	.....	.....	.....	.....	14	19
			.....	MANUFACTURE FROM:									
P	O		9505-186-9137	WIRE, STEEL, CARBON	RL.....	.....	(SEE GROUP 9501)						
			.....	(08288) MSS9505-1									
			.....	GROUP 11- REAR AXLE									
			.....	1100 - REAR AXLE.ASSEMBLY									
X2	O		.....	AXLE, REAR	.....	 1		.....	.....	.....	 14	16	
			.....	(27315) 210H18D2									
X2	O		5340-598-1357	RING, RETAINING: rear axle	.....	.....	4	.....	.....	.....	.....	14	1
			.....	(80756) RR675									
X2	O		.....	WASHER, FLAT: rear axle	.....	.....	8	.....	.....	.....	.....	14	2
			.....	(27315) 3682V008									
			.....	GROUP 13- WHEELS AND TRACKS									
			.....	1311-- WHEEL ASSEMBLY									
X2	O		.....	WHEEL, RUBBER TIRE: portable mount	.....	.....	4	.....	.....	.....	.....	14	4
			.....	(12946) A118N									
			.....	GROUP 15- FRAME, TOWING									
			.....	ATTACHMENTS, AND DRAWBARS									
			.....	1501 - FRAME ASSEMBLY									
X2	O		.....	PORTABLE MOUNT ASSEMBLY	.....	.....	1	.....	.....	.....	.....	14	
			.....	(27315) 2100E147F26									
X2	O		.....	FRAME: portable mount	.....	.....	1	.....	.....	.....	.....	14	17
			.....	(27315) 216E93D5									
X2	O		.....	PLATE, INSTRUCTION : portable mount	.....	.....	1	(SEE GROUP 2210)					
			.....	(27315) 232H96									
X2	O		2990-310-7664	CLIP, SPRING: towing handle retaining	.....	.....	1	.....	.....	.....	.....	14	13
				(66289) PK87									
	O		5305-988-1723	SCREW, MACHINE: clip mountin g	.....	.....	1	.....	.....	.....	.....	14	12
	O		5310-619-3555	NUT, PLAIN, HEXAGON: clip mtg screw	.....	.....	1	.....	.....	.....	.....	14	10
	O		5310-010-3319	WASHER, LOCK: clip mtg screw	.....	.....	1	.....	.....	.....	.....	14	11
			.....	GROUP 22- ACCESSORY ITEMS									
			.....	2202 - ACCESSORY ITEMS									
M	O		.....	CABLE ASSEMBLY: ground with clamp	.....	.....	1	.....	.....	.....	.....	20	1
			.....	(27315) 9279F295-1									
			.....	MANUFACTURE FROM:									
P	O		6145-174-1123	WIRE ELECTRICAL	FT.....	.....	AR	(SEE GROUP 9501)					
			.....	(50 ft required)									
X2	O		.....	CLAMP, GUARD: ground cable	.....	.....	1						
			.....	(27315) 295Z2D3									
X2	O		.....	TERMINAL LUG: ground cable .	.....	.....	2						
			.....	(00779) 325405									
M	O		.....	CABLE ASSEMBLY: electrode, with holder	.....	.....	1	.....	.....	.....	.....	20	3
			.....	(27315) 9279F296-2									
			.....	MANUFACTURE FROM:									
P	O		6145-174-1123.....	WIRE, ELECTRICAL	FT.....	.....	(SEE GROUP 9501)						
			.....	(50 it required)									
X2	O		.....	HOLDER, ELECTRODE: cable	.....	.....	1	.....	.....	.....	.....	20	4
			.....	(00779) A38									
X2	O		.....	TERMINAL, LUG: cable	.....	.....	2						
			.....	(00779) 325405									
X2	O	R	3431-930-6003.....	RHEOSTAT ASSEMBLY: remote control	.....	.....	1	.....	.....	.....	.....	20	2
				(27315) 9279E150									

(1) Source Maint. and recov. code			(2)	(3)	(4)	(5)	(6)	(7) 15-Day organizational maint. allowances				(8) Illustrations	
Source	Maint-enance	Recover-ability	Federal Stock Number	Description	Unit of issue	Qty inc in unit pack	Qty. inc. in unit	(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig. No.	(b) Item or Symbol No.
X2	O		.....	PLATE, INSTRUCTION: rheostat remote control (27315) 232H95	.....	.....	1	(SEE GROUP 2210)					
	O		5310-286-1495	SCREW, MACHINE: rheostat instruction plate mtg	.....	.....	2	(SEE GROUP 2210)					
	O		5310-010-3319	WASHER, LOCK: rheostat instruction plate mtg screw	.....	.....	2	(SEE GROUP 2210)					
X2	O		.....	BRACKET: remote control cable tiedown (27315) 216H599	.....	.....	1	.....	.....	.....	.....	10	22
X2	O		.....	HANGER, PLASTIC: remote control cable (00761) HPI0N	.....	.....	1	.....	.....	.....	.....	10	23
X2	O		.....	STRAP: remote control cable (27315) 232H407	.....	.....	1	.....	.....	.....	.....	10	24
	O		5310-889-2606, ...	NUT, PLAIN, WING: remote control cable tie-down. 2210- DATA PLATES	.....	.....	1	.....	.....	.....	.....	10	25
X2	O		.....	PLATE, INSTRUCTION: rheostat remote control (27315) 232H95	.....	.....	1	.....	.....	.....	.....	17(2)	5
	O		5305-286-1495	SCREW, MACHINE: rheostat instruction plate mtg	.....	.....	2	.....	.....	.....	.....	17(2)	3
	O		5310-010-3319	WASHER, LOCK: rheostat instruction plate mtg screw.	.....	.....	2	.....	.....	.....	.....	17(2)	4
X2	O		.....	PLATE, IDENTIFICATION: control panel (27315) 232E116	.....	.....	1	.....	.....	.....	.....	17(1)	65
X2	O		.....	PLATE, IDENTIFICATION: remote control (27315) 232E397	.....	.....	1	.....	.....	.....	.....	17(1)	16
X2	O		.....	PLATE, INSTRUCTION: terminal block (27315) 232H396	.....	.....	1	.....	.....	.....	.....	10	17
X2	O		.....	PLATE, INSTRUCTION: portable mount assembly. (27315) 232H96	.....	.....	1	.....	.....	.....	.....	14	15
X2	O		.....	PLATE, INSTRUCTION: welding operation (27315) 210SF70	.....	.....	1						
X2	O		.....	PLATE, INSTRUCTION: wiring diagram (27315) 2101E501	.....	.....	1						
X2	O		9905-807-3712	PLATE, IDENTIFICATION: corps of engineers.	.....	.....	1						
	O		5305-207-5512	SCREW, MACHINE: plate mtg, round head . type A, No. 6 X 3/8 in. lg.	.....	.....	18						
	O		5305-286-1495	SCREW, MACHINE: control panel nameplate	.....	.....	6						
	O		5310-275-1706	NUT, PLAIN, HEXAGON: control panel nameplate.	.....	.....	6						
	O		5310-010-6495	WASHER, LOCK: control panel nameplate (96906) MS35338-3	.....	.....	6						
	O		5305-253-5620	SCREW, DRIVE: portable mount instruction plate.	.....	.....	2	.....	.....	.....	.....	14	14
			.....	GROUP 44 - WELDING EQUIPMENT 4403 -- BRUSI IHOLDER ASSEMBLY									
P	O		5977-423-5329	BRUSH, ELECTRICAL: main (minimum stockage of 6 is authorized). (82214) 549	.....	.....	6	2	7	12	25	19	52
P	O		5977-588-4301	BRUSH, ELECTRICAL: exciter (27315) 273H3D1	.....	.....	1	*	2	2	4	19	46
	O		5977-588-4301	brush mtg screw (96906) MS35338-6	.....	.....	8	.....	.....	.....	.....	19	29
	O		5305-988-1723	SCREW, MACHINE: brush holder mtg (08288) MSS5305-14	.....	.....	8	.....	.....	.....	.....	19	44

(1) Source Maint. and recov. code			(2)	(3)	(4)	(5)	(6)	(7) 15-Day organizational maint. allowances				(8) Illustrations	
Source	Maint-enance	Recover-ability	Federal Stock Number	Description	Unit of issue	Qty inc in unit pack	Qty. inc. in unit	(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig. No.	(b) Item or Symbol No.
				4405- FRAME SUPPORT, HOUSING, CARIRER									
X2	O			COVER ASSEMBLY: housing top			1					10	3
				(27315) 227F423									
X2	O			INSULATION			4					10	7
				(27315) 275H92D2									
X2	O			DOOR, ACCESS: generator inspection			1					10	19
				(27316) 227H51									
X2	O			TIE ROD: bearing housing			4					19	41
				(27315) 220H57									
X2	O			SPACER: housing tie rod								19	39
				(27315) 218H129									
X2	O			COUPLING: tie rod spacer			4					19	40
				(27316) 0928V004									
X2	O			NUT, LOCK: tie rod spacer			4					19	42
				(27315) 0944V003									
X2	O			WASHER, "C": tie rod								19	38
				(27315) 218H97									
X2	O			WASHER, SPECIAL: air tube to tie rod screw			8					19	7
				(27316) 218H98D1									
X2	O			DOOR ASSEMBLY: cable terminal			1					10	
				(27315) 279H255D2									
X1				DOOR			1					10	12
				(27315) 279F160									
X1				BUMPER, RUBBER			2					10	18
				(70486) 829									
M	O			BRACKET: mounting			2					19	86
				MANUFACTURE FROM:									
P	O		9520-517-0534	ANGLE STEEL	FT			(SEE GROUP 90D1)					
				(24 in. required for each BRACKET)									
	O		5305-068-0502	SCREW, CAP, HEXAGON HEAD: housing			6					19	87
				to mtg angle.									
	O		5310-010-3319	WASHER, LOCK: housing to mtg angle screw			6					19	88
				(96906) MS36338-6									
	O		5310-619-3556	NUT, PLAIN, HEXAGON: housing to mtg			6					19	89
				angle screw.									
				(08288) MSS5310-9									
	O		5305-068-0502	SCREW, CAP, HEXAGON HEAD: angle to			2					19	90
				base plate.									
	O		5310-010-3323	WASHER, LOCK: angle to be plate screw			2					19	91
	O		5310-202-8552	NUT, PLAIN, HEXAGON: angle to base			2					19	92
				plate screw.									
	O		5306-988-1723	SCREW, MACHINE: cover to panel			13					10	1
	O		5310-010-3319	WASHER, LOCK: cover to panel screw			13					10	2
				(96906) MS35338-6									
				4407 - CONTROL PANELS, HOUSING									
X2	O			SHUNT			1					19	84
				(27315) 86223D3 19 84									
X2	O			GUARD, CABLE			1					10	16
				(27315) 2164614									
	O		5310-877-5797	NUT, SELF-LOCKING: cable guard			8					10	14
				(72962) 22NM02									
				4408- CONNECTING DEVICES									
X2	O			RECEPTACLE, ELECTRICAL: remote			1					17(1)	14
				control.									
				(83315) 7410GT									
	O		5305-010-0737	SCREW, MACHINE: receptacle mtg			2					17(1)	12
	O		5310-010-6495	WASHER, LOCK: receptacle mtg screw			2					17(1)	13
	O		5305-988-1727	SCREW, MACHINE: junction block			2					17(1)	19
				(08288) MSS5305-14									

(1) Source Maint. and recov. code			(2)	(3)	(4)	(5)	(6)	(7) 15-Day organizational maint. allowances				(8) Illustrations	
Source	Maint-enance	Recover-ability	Federal Stock Number	Description	Unit of issue	Qty inc in unit pack	Qty. inc. in unit	(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig. No.	(b) Item or Symbol No.
	O		5310-619-3555	NUT PLAIN,HEXAGON: junction block screw			2					17(1)	20
				(08288) MSS5310-9									
X2	O		5604-983-6115	TERMINAL BOARD			1					17(1)	18
				(08288) MSS6940-1									
X2	O			TERMINAL ASSEMBLY: welding cables			1					17(1)	22
				(27315) 9279H25F2									
X2	O			TERMINAL			1					17(1)	27
				(27315) 279H230									
	O		5305-637-7782	SCREW, MACHINE: cable connecting			2					17(1)	24
	O		5310-816-1030	NUT, PLAIN, HEXAGON: cable screw			2					17(1)	23
	O		5310-010-3131	NUT, PLAIN, WING:-cable connecting			2					17(1)	22
M	O			CABLE ASSEMBLY: jumper			1					17(1)	25
				(27315) 279F239D151									
				MANUFACTURE FROM:									
P	O		6145-174-1123	WIRE, ELECTRICAL	FT			(SEE GROUP 9501)					
				(16 in. required)									
X2	O		5940-976-0904	TERMINAL, LUG: jumper cable			1						
				(00761) YAV276									
X2	O		5940-976-0903	TERMINAL, LUG: jumper-cable			1						
				(00761) YAV2761									
				GROUP 95- GENERAL USE									
				STANDARDIZED PARTS									
				9501 - BULK MATERIAL									
P	O			CHAIN, WELDLESS	FT			*	*	*	*		
				(00000) 42C165120=206									
P	O		9505-186-9137	WIRE, STEEL, CARBON	RL			*	*	*	*		
				(08288) MSS9506-1									
P	O		6145-174-1123	WIRE, ELECTRICAL	FT			*	*	*	*		
P	O		9520-517-0534	ANGLE. STEEL	FT			*	*	*	*		

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / Manufacturer's Code / Part No.	(4) UNIT OF ISSUE	(5) QTY INC. IN UNIT PACK	(6) QTY. INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
					1000- FRONT AXLE ASSEMBLY													
	X2	O			AXLE, FRONT (27315) 210H18D1			1									14	3
	X2	O			FORK, SWIVEL: front axle (12946) 8-llX			1									4	9
		O			SCREW, CAP, HEXAGON: fork mounting (27315) 0826V079			1									14	8
		O		5310-761-6882	NUT, PLAIN, HEXAGON: fork mtg. Screw (27315) 2145V005			1									14	6
		O			WASHER, LOCK: fork mtg. Screw (27315) 3616V011			1									14	7
	X2	O			HANDLE, TOWING (27315) 206F8D1			1									14	5
	X2	O			GRIP, HANDLE (98124) 1443R			2									14	18
	X2	O			BAG, CLOTH (27315) 32264			1									14	21
	X2	O		5340-598-1357	RING, RETAINING: front axle (80756) RR675			2									14	1
	X2	O			WASHER, FLAT: front axle (27315) 3632V008			4									14	2
	M	O			CHAIN: handle retaining			1									14	20
					MANUFACTURE FROM: CHAIN, WELDLESS (12 in. required). (00000) 42C1512o0-205	FT			(SEE GROUP 9501)									
	M	O			HOOKS: handle retaining chain			1									14	19
	P	O		9505-186-9137	MANUFACTURE FROM: WIRE, STEEL, CARBON (6 in. required). (08288) MSS9505-1	RL			(SEE GROUP 9501)									
					GROUP 11 -REAR AXLE													
					1100 -REAR AXLE ASSEMBLY													
X2	O				AXLE, REAR (27315) 210H18D2			1									14	16
X2	O			5340-598-1357	RING, RETAINING: rear axle (80756) RR676			4									14	1
X2	O				WASHER, FLAT: rear axle (27315) 363V008			8									14	2

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / Manufacturer's Code	Part No.	(4) UNIT OF ISSUE	(5) QTY INC. IN UNIT PACK	(6) QTY. INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
					GROUP 13- WHEELS AND TRACKS														
					1311 - WHEEL ASSEMBLY														
	X2	O			WHEEL, RUBBER TIRE: portable mount				4									14	4
					(12946) A118N														
					GROUP 15--FRAME, TOWING ATTACHMENTS, AND DRAWBARS														
					1501 -- FRAME ASSEMBLY														
	X2	O			PORTABLE MOUNT ASSEMBLY				1									14	
					(27315) 2100E147F26														
	X2	O			FRAME: portable mount				1									14	17
					(27315) 216E93D5														
	X2	O			PLATE, INSTRUCTION: portable mount assembly				1	(SEE GROUP 2210)									
					(27315) 232H96														
	X2	O		2990-310-7664	CIP, SPRING: towing handle retaining				1									14	13
					(66289) PK87														
		O		5305-988-1723	SCREW, MACHINE: clip mounting				1									14	12
		O		5310-619-3555	NUT, PLAIN, HEXAGON: clip mtg. Screw				1									14	10
		O		5310-010-3319	WASHER, LOCK: clip mtg screw				1									14	11
					GROUP 22 -- ACCESSORY ITEMS														
					2202 - ACCESSORY ITEMS														
	M	O			CABLE ASSEMBLY: ground with clamp				1									20	1
					(27315) 9279F295-1														
					MANUFACTURE FROM														
	P	O		61456-174-1123	WIRE, ELECTRICAL		FT			(SEE GROUP 9501)									
					(50 ft. required).														
	X2	O			CLAMP, GUARD: ground cable				1										
					(27315) 29522D3														
	X2	O			TERMINAL, LUG: ground cable				2									20	
					(00779) 325405														
	M	O			CABLE ASSEMBLY: Electrode, with holder			1										20	3
					(27315) 9279F296-2														
					MANUFACTURE FROM:														
	P	O		6145-174-1123	WIRE, ELECTRICAL		FT			(SEE GROUP 9501)									
					(50 ft required).														
	X2	O			HOLDER, ELECTRODE: cable				1									20	4
					(00779) A38														
	X2	O			TERMINAL, LUG: cable				2										
					(00779) 325405														
	X2	OR		3431-930-6003	RHEOSTAT ASSEMBLY: remote control				1									20	2
					(27315) 9279E150														
	X2	F		5905-646-7687	RHEOSTAT: remote control				1									17 (2)	18
					(44655) 40513														

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Manufacturer's Code	Part No.	(4) UNIT OF ISSUE	(5) QTY INC. IN UNIT PACK	(6) QTY. INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
	X2	F			CABLE ASSEMBLY: remote control (27315) 279H421				1										
	X1			6145-734-4554	WIRE, ELECTRICAL: No. 14-3 (51 ft required) (81349) MILC3432B		FT											17 (2)	24
	X1				TERMINAL, LUB: remote control cable (00779) 41332				1									17 (2)	22
	X1				TERMINAL, LUG: remote control cable (00779) 41333				1									17 (2)	23
	X1				PLUG, ELECTRICAL: remote control cable (04009) 7411				1									17 (2)	21
	X2	F		5935-062-6124	CLAMP, CABLE, ELECTRICAL: remote control (59730) 3303				1									17 (2)	19
	X2	F			HANDLE: rheostat control (27315) 206H15D1				1									17 (2)	2
	X2	F			PIN, ROLL: handle mtg (72962) 59-028-125-625				1									17 (2)	1
	X2	F			PLATE, JUMPER: rheostat (27315) 279H251D1				1									17 (2)	17
	X2	O			PLATE, INSTRUCTION: rheostat remote control (27315) 232H95				1	(SEE GROUP 2210)									
	X2	F			COVER: rheostat (27315) 214F250D01				1									17 (2)	12
	X2	F			HOUSING: rheostat (27315) 214H89				1									17 (2)	20
	X2	F			COVER, BOTTOM: rheostat (27315) 214H90				1									17 (2)	13
		O		5310-286-1495	SCREW, MACHINE: rheostat instruction plate mtg				2	(SEE GROUP 2210)									
		O		5310-010-3319	WASHER, LOCK: rheostat instruction plate mtg screw				2	(SEE GROUP 2210)									
		F		5310-202-8549	SPEEDNUT: housing cover screw				8									17(2)	11
		F		5305-879-7941	SCREW, THREAD FORMING: housing cover				8									17(2)	10
		F		3815--425-7821	WASHER, FLAT: rheostat housing cover.				9									17(2)	7
		F		5305-984-6193	SCREW, MACHINE: plate mtg				3									17	1
		F		5310-050-3568	NUT, PLAIN, HEXAGON: plate mtg				3									17(2)	15
		F		5310-010-6496	WASHER, LOCK: plate mtg screw				3									17(2)	16
		F		5305-989-7434	SCREW, MACHINE: rheostat cover mtg				1									17(2)	6
		F		3815-425-7821	WASHER, LOCK: rheostat assembly.				1									17(2)	9
		F		5310-012-0614	NUT, PLAIN, HEXAGON: rheostat assembly.				1									17(2)	8
	X2	O			BRACKET: remote control cable tie-down (27315) 216H599				1									10	22
	X2	O			HANGER, PLASTIC: remote control cable (00761) HP1ON				1									10	23

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION	Manufacturer's Code	Manufacturer's Part No.	(4) UNIT OF ISSUE	(5) QTY INC. IN UNIT PACK	(6) QTY. INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
	X2	O			STRAP: remote control cable					1									10	24
					(27315) 232H407															
		O		5310-889-2606	NUT, PLAIN, WING: remote control cable tie-down					1									10	25
					2210 - DATA PLATES															
	X2	O			PLATE, INSTRUCTION: rheostat remote control					1									17	5
					(27315) 232H95														(2)	
		O		5305-286-1495	SCREW, MACHINE: rheostat instruction plate mtg					2									17(2)	3
		O		5310-010-3319	WASHER, LOCK: rheostat instruction plate mtg, screw					2									17(2)	4
	X2	O			PLATE, IDENTIFICATION: Control panel					1									17	65
					(27315) 232E116														(1)	
	X2	O			PLATE, IDENTIFICATION: remote control														17	16
					(27315) 232E397														(1)	
	X2	O			PLATE, INSTRUCTION: terminal block					1									10	17
					(27315) 232H396															
	X2	O			PLATE, INSTRUCTION: portable mount assembly					1									14	15
					(27315) 232H96															
	X2	O			PLATE, INSTRUCTION: welding operation					1										
					(27315) 2105F70															
	X2	O			PLATE, INSTRUCTION: wiring diagram					1										
					(27315) 2101E501															
	X2	O		9905-807-3712	PLATE, IDENTIFICATION: Corps of Engineers					1										
		O		5305-207-5512	SCREW, MACHINE: plate mtg, round head, Type A					18										
					No. 6 x 3/8 in. lg.															
		O		5305-286-1495	SCREW, MACHINE: control panel nameplate					6										
		O		5310-275-1706	NUT, PLAIN, HEXAGON: control panel nameplate					6										
		O		5310-010-6495	WASHER, LOCK: control panel nameplate					6										
					(96906) MS35338-3															
		O		5305-253-5620	SCREW, DRIVE: portable mount instruction plate					2									14	14
					GROUP 44 - WELDING EQIJIPMENT															
					4401 - ROTOR ASSEMBLY															
	X2	H			ROTOR ASSEMBLY					1									19	17
					(27315) 274H7D2															
	X1				CASTING, ROTOR					1										
					(27315) 274E3D2															
		H		5310-164-8848	WASHER, FLAT: rotor					AR										
	X2	H	U		ARMATURE ASSEMBLY: rotor					1									19	43
					(27315) 2100F43															
	X2	F			FAN: armature cooling					1									19	23
					(27315) 274E2															
	X2	F			COVER, DUST: bearing housing					1									19	33
					(27315) 214H39															

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Manufacturer's Code	Part No.	(4) UNIT OF ISSUE	(5) QTY UNIT OF MEAS	(6) INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
	X2	H			WASHER, FLAT: armature shaft drive end (27315) 218H98D3				1									19	13
	X2	H			SPACER: armature shaft drive end (27315) 218H108D2				1									19	14
	X2	H			KEY, MACHINE: rotor to armature shaft (27315) 20H138D15				1									19	24
		H		5306-299-2366	BOLT, MACHINE, HEXAGON HEAD: armature shaft drive end				1									19	11
	X2	H			KEY, SQUARE: fan mounting, .246 in. to .252 in., 1 1/8 in. Lg (27315) 20H138D13				1									19	25
		H		5310-261-734	WASHER:, LOCK: armature shaft, drive end (96906) MS36338-8				1									19	12
	X2	F			HOUSING: armature shaft bearing, commutator end (27315) 272E5				1									19	37
					4402- STATOR ASSEMBLY														
	X2	H			STATOR, ASSEMBLY (27315) 9271H1				1									19	16
	X2	H	R		FRAME AND FIELD: magnet (27315) 9271E4F3				1									19	83
					X1 FRAME: magnet 1 19 83 (27315) 271A3D4														
	X1	H			COIL, COMMUTATOR (27315) 9275F103F4				2									19	79
	X2	H			POLE PIECE: main, No. (27316) 271F7D2				1									19	66
	X2	H			POLE PIECE: main, No.2 (27316) 271F7D1				1									19	75
	X2	H			POLE PIECE: cross, No. (27315) 271F7D3				1									19	80
	X2	H			POLE PIECE: cross, No. (27315) 271F7D4				1									19	74
	X2	H			INSULATION: magnet frame (27315) 275H72D1				4									19	60
	X2	H			INSULATION: magnet frame (27315) 275H72D2				4									19	81
	X2	H			INSULATION: magnet frame (27315) 275H71D1				8									19	61
	X2	F			COIL ASSEMBLY, MAIN (27315) 9275F96				1									19	65
	X2	F			TERMINAL LUG: coil lead (00761) YAV14T4				1									19	64

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION	Manufacturer's Code	Manufacturer's Part No.	(4) UNIT OF ISSUE	(5) QTY UNIT OF MEAS	(6) INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
	X2	F			COIL: cross field, No. 1 (27315) 9275E134					1									19	82
	X2	F		5940-243-0404	TERMINAL, LUG: coil lead (00761) YAV14					1									19	56
	X2	F			COIL: cross field, No. 2 (27315) 9275E140					1									19	73
	X2	F		5940-155-7630	TERMINAL, LUG: coil lead (00761) YAV14					1									19	72
	X2	F			CLAMP: coil retaining (27315) 275H76					4									19	76
	X2	F			COLLAR: commutator coil (27315) 9275H7F1					4									19	78
	X2	F			CLAMP: reactor core and coil lead (27315) 232H248					1									19	59
	X2	F			SCREW, MACHINE: clamp mtg (27315) 202325D88					6									19	58
	X2	F			COIL, REACTOR (27315) 9280F2F3					1									19	57
	X2	F		5940-243-0404	TERMINAL, LUG: reactor coil lead (00761) YAV14					1									19	56
	X2	F		5940-230-9911	CONNECTOR, ELECTRICAL WIRING (00779) 34138					3									19	63
	X2	F			SLEEVE, INSULATION: electrical wiring (27315) 851					3									19	62
	X2	F		6150-603-1567	BUS BAR: commutator coil (27315) 27911253D33					4									19	77
	X2	F			BUS BAR: magnet frame and field (27315) 279H254D1					1									19	71
	X2	F			SLEEVE, INSULATION: bus bar (27315) 275H86D15					1									19	70
		F		5310-010-3323	WASHER, LOCK: reactor coil mtg screw (96906) MS35338-10					1									19	55
		F		5305-071-1774	SCREW, CAP, HEXAGON HEAD: reactor coil mtg (96906) MS35295-121					1									19	54
		F		5305-275-9123	SCREW, MACHINE: bus bar and lead mtg (08288) MSS5305-15					12									19	67
		F		5310-021-9431	NUT, PLAIN. HEXAGON: bus bar and lead screw (08288) MSS5310-9					12									19	68
		F		5310-010-3320	WASHER: LOCK: bus bar and lead screw (96906) MS35338-7					12									19	69

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION	Manufacturer's Code	Part No.	(4) UNIT OF ISSUE	(5) QTY UNIT OF MEAS	(6) INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
					4403 -BRUSH HOLDER ASSEMBLY															
X2	F				HOLDER, BRUSH: main					2									19	53
					(27315) 273F4D2															
X2	F				HOLDER, BRUSH: exciter					1									19	47
					(27315) 273F5															
P	F			5977-227-6503	SPRING, TENSION: main brush					6	2	2	3	2	2	3		30	19	51
					(27315) 17ZI22															
P	F			5977-227-6501	SPRING, TENSION: exciter brush					1	*	2	2	*	2	2		20	19	45
					(27315) 17Z123															
P	O			5977-423-5329	BRUSH, ELECTRICAL: main (minimum stockage of 6 is authorized)					6	12	26	50	12	26	50		600	19	52
					(82214) 549															
P	O			5977-588-4301	BRUSH, ELECTRICAL: exciter					1	2	4	8	2	4	8		100	19	46
					(27315) 273H3D1															
	O			5310-010-3319	WASHER, LOCK: Brush holder mtg screw					8									19	29
					(96906) MS35338-6															
	O			5305-988-1723	SCREW, MACHINE: brush holder mtg					8									19	44
					(08288) MSS5305-14															
					4405--FRAME SUPPORT, HOUSING, CARRIER															
X2	H				GIRDLE, BEARING: generator end					1									19	36
					(27315) 232H235															
X2	H				SLEEVE, BEARING: generator end					1									19	35
					(27315) 225H2D2															
P	H			3110-198-1975	BEARING, BALL: generator end					1				*	*	2		10	19	34
					(21335) W305PP															
P	H			3110-227-4110	BEARING, BALL: motor end					1				*	*	2		10	19	20
					(21335) W309PP															
X2	H				SLEEVE, BEARING: motor end					1									19	21
					(27315) 225H3															
X2	H				GIRDLE, BEARING: motor end					1									19	22
					(27315) 232H237															
X2	H				BASEPLATE: welding unit mounting					1									19	85
					(27315) 216H326D1															
X2	H				PLATE ASSEMBLY: lifting					1									10	6
					(27315) 229H98															
X2	H				SEAL, RUBBER: lifting plate					1									10	11
					(27315) 218H174D3															
X2	F				PANEL ASSEMBLY: housing back cover					1									10	
					(26315) 9227F19F4															
X2	F				PANEL: housing back cover					1									10	8
					(27315) 227F159D8															

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION	Manufacturer's Code	Part No.	(4) UNIT OF ISSUE	(5) QTY UNIT OF MEAS	(6) INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
	X2	F			INSULATION: rear panel					1									10	9
					(27315) 275H92D1															
	X2	F			PLATE ASSEMBLY: housing end cover					2									10	
					(27316) 227H53F1															
	X2	F			PLATE: housing end cover					1									10	10
					(27315) 227H54D1															
	X2	F			SEAL, RUBBER: housing end cover					4									10	21
					(27315) 218H107D1															
	X2	O			COVER ASSEMBLY: housing top					1									10	3
					(27315) 227F423															
	X2	O			INSULATION 4					4									10	7
					(27315) 275H92D2															
	X2	O			DOOR, ACCESS: generator inspection					1									10	19
					(27315) 227H51															
	X2	O			TIE ROD: bearing housing					4									19	41
					(27315) 220H57															
	X2	O			SPACER: housing tie rod					4									19	39
					(27315) 218H129															
	X2	O			COUPLING: tie rod spacer					4									19	40
					(27315) 0928V004															
	X2	O			NUT, LOCK: tie rod spacer					4									19	42
					(27315) 0944V003															
	X2	O			WASHER "C": Tie rod					8									19	38
					(27315) 218H197															
	X2	F			SPACER: stator to air tube					4									19	15
					(27315) 218H108D1															
	X2	O			WASHER, SPECIAL: air tube to tie rod screws					8									19	7
					(27315) 218H98D1															
		F		5306-722-8450	BOLT, MACHINE: stator to air tube					4									19	5
		F		5305-044-4153	BOLT, MACHINE: bearing housing to air tube					4									19	26
		F		5310-010-3323	WASHER, LOCK: air tube bolt					8									19	6
					(96906) MS35338-10															
		F		5306-021-3665	BOLT, MACHINE: generator					6									19	28
		F		5310-164-8848	WASHER, FLAT: generator bolt					6									10	2
		F		5305-013-2723	SCREW, MACHINE					2									17	66
		F		5310-275-1706	NUT, PLAIN, HEXAGON					2									17(1)	66
		F		5310-275-1706	NUT, PLAIN, HEXAGON					2									17(1)	67
		F		5310-010-3320	WASHER, LOCK					15									10	5
	X2	F			SCREW, THREAD CUTTING: 5/16-18thd size.					7									10	4
					¾ in. Lg (27315) 20Z632D2															
	X2	F			SCREW, TIIREAD CUTTING: 5-/16-18thd size.					2										
					11/8l in. lg (27315) 20Z630D5															

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		F		5305-276-9123	SCREW, CAP, HEXAGON HEAD				6									17(1)	71
		F		5310-021-9431	NUT, PLAIN, HEXAGON				6									17(1)	69
	X2	O			DOOR ASSEMBLY: cable terminal				1									10	
					(27315) 279H255D2														
	X1				DOOR				1									10	12
					(27315) 279F160														
	X1			5340-684-6566	BUMPER, RUBBER				2									10	13
					(70485) 829														
	M	O			BRACKET: mounting				2									19	86
					MANUFACTURE FROM:														
	P	O		9520-517-0534	ANGLE, STEEL		FT			(SEE GROUP 9501)									
					(24 in. required for each BRACKET)														
		O		5305-068-0502	SCREW, CAP, HEXAGON HEAD: housing to mtg angle				6									19	87
		O		5310-010-3319	WASHER, LOCK: housing to mtg angle screw				6									19	88
					(96906) MS35338-6														
		O		5310-619-3555	NUT, PLAIN HEXAGON: housing to mtg angle screw				6									19	89
					(08288) MSS5310-9														
		O		5305-068-0502	SCREW, CAP, HEXAGON HEAD: angle to base plate				2									19	90
		O		5310-010-3323	WASHER, LOCK: angle to base plate screw				2									19	91
		O		5310-202-8552	NUT, PLAIN, HEXAGON: angle to base plate screw				2									19	92
		O		5305-988-1723	SCREW, MACHINE: cover to panel				13									10	1
		O		5310-010-3319	WASHER, LOCK: cover to panel screw				13									10	2
					(96906) MS35338-6														
					4406- VENTILATING, COOLING SYSTEM														
	X2	F			BAFFLE: air tube, meter end				1									19	10
					(27315) 227H58														
		F		5320-528-3304	RIVET: air tube baffle				10										
					(08288) MSS5320-1														
	X2	F			HOUSING: ventilating fan				1									19	18
					(27315) 272A3D1														
	X2	F			SEAL: fan housing				1									19	19
					(27315) 218H103D2														
	X2	F			TUBE, AIR: generator end				1									19	27
					(27315) 227H55														
	X2	F			TUBE ASSEMBLY, AIR: meter end				1									19	8
					(27315) 9227H2F6														
					4407- CONTROL PANELS, HOUSING														
	X2	O			SHUNT				1									19	84
					(27315) 86223D3														
	X2	F	R		PANEL ASSEMBLY, CONTROL				1										
					(27315) 9279F296														

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Manufacturer's Code	Part No.	(4) UNIT OF ISSUE	(5) QTY UNIT OF MEAS	(6) INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
	X2	F			PANEL: front, housing and control (27315) 279F159D1C				1									10	20
		F		5305-013-2900	SCREW, MACHINE: panel mtg				2									17(1)	53
	X2	F		3815-425-7821	WASHER, LOCK: panel mtg				2									17(1)	54
		F		5305-988-1721	SCREW, MACHINE: panel mtg (08288) MSS5305-14				4									17 (1)	52
		F		5310-010-3319	WASHER, LOCK: panel mtg				6									17(1)	21
	X2	F			BUSHING: control panel (28520) S8875-6				1									17 (1)	17
	X2	O			GUARD, CABLE (27315) 2164614				1									10	16
		O		5310-877-5797	NUT, SELF-LOCKING: cable guard (72962) 22NM02				8									10	14
	X2	F			MOUNT ASSEMBLY: meter (27315) 9279H376				1										
	X2	F			PLATE: meter mounting (27315) 279H422				1									17 (1)	6
	X1				WASHER, "C"				1									17(1)	10
	X1				RIVET				1									17(1)	15
	P	F		6625-736-8586	VOLTMETER (55026) 125-10OVDC				1	*	*	*	*	*	2		6	17 (1)	8
	P	F		6625-736-8585	AMMETER (55026) 125-400ADC				1	*	*	*	*	*	2		6	17 (1)	9
	X2	F			GROMMET: mtg plate (79497) G1006				4									17 (1)	5
		F		5325-174-9035	SCREW, MACHINE: meter to panel				6									17(1)	7
		F		5310-010-6495	WASHER, LOCK: meter mtg screw (96906) MS35338-3				6										
		F		5310-275-1706	NUT, PLAIN, HEXAGON: meter mtg screw (96906) MS35649-61				6										
		F		5310-877 5797	NUT, SELF-LOCKING: meter plate screw (96906) MS23365-1032A				4									17 (1)	4
		F		5305-993-1848	SCREW. MACHINE: meter plate mtg (0828.8) M.SS5305-33				4									17 (1)	1
	X2	F		3815 425-7821	WASHER, LOCK: plate mtg screw				8									17(1)	2
	X2	F			SPACER: meter plate (27315) 218H166				4									17 (1)	3
	X2	F			RECEPTACLE ELECTRICAL: remote control (83315) 7410GT				1	(SEE GROUP 4408)								17 (1)	14
		F		5310-786-3999	WASHER, LOCK: cable guard				2									10	15

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION	Manufacturer's Code	Manufacturer's Part No.	(4) UNIT OF ISSUE	(5) QTY UNIT OF MEAS	(6) INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
					4408 -CONNECTING DEVICES															
X2	O				RECEPTACLE, ELECTRICAL: remote control					1									17	14
					(83315) 7410GT														(1)	
	O			5305-010-0737	SCREW, MACHINE: receptacle mtg					2									17(1)	12
	O			5310-010-6495	WASHER, LOCK: receptacle mtg screw					2									17(1)	13
	O			5305-988-1727	SCREW, MACHINE: junction block					2									17	19
					(08288) MSS5305-14														(1)	
	O			5310-619-3555	NUT, PLAIN, HEXAGON: junction block screw					2									17	20
					(08288) MSS5310-9														(1)	
	F			5305-275-9123	SCREW, MACHINE: bus bar mtg					3									17	50
					(08288) MSS5305-15														(1)	
	F			5310-021-9431	NUT, PLAIN, HEXAGON: bus bar mtg crew					3									17	48
					(08288) MSS6310-9														(1)	
	F			5310-010-3320	WASHER, LOCK: bus bar mtg screw					3									17	49
					(96906) MS35338-7														(1)	
X2	O			5940-983-6116	TERMINAL BOARD					1									17	18
					(08288) MSS5940-1														(1)	
X2	O				TERMINAL ASSEMBLY: welding cables					1									17	22
					(27315) 9279H25F2														(1)	
X2	O				TERMINAL					1									17	27
					(27315) 279H230														(1)	
X2	F				BUS BAR					1									17	26
					(27316) 279H239														(1)	
	O			5305-637-7782	SCREW, MACHINE: cable connecting					2									17(1)	24
	O			5210-816-1030	NUT, PLAIN, HEXAGON: cable screw					2									17(1)	23
	O			5310-010-3131	NUT, PLAIN, WING: cable connecting					2									17(1)	22
M	O				CABLE ASSEMBLY: jumper					1									17	25
					(27315) 279F239D151														(1)	
					MANUFACTURE FROM:															
P	O			6145-174-1123	WIRE ELECTRICAL (16 in. required)			FT			(SEE GROUP 9501)									
X2	O			5940-976-0904	TERMINAL LUG: jumper cable					1										
					(00761) YAV276															
X2	O			5940-976-0903	TERMINAL LUG: jumper cable					1										
					(00761) YAV27LI															
X2	F				BUS BAR: selector switch					1									17	51
					(27315) 279H256														(1)	
X2	F				BUS BAR: rheostat					1									17	58
					(27315) 279H251DI														(1)	
	F			5310-208-4072	NUT, PLAIN, IIEXAGON: rheostat bus bar screw					2									17(1)	56
	F			5305-275-9123	SCREW, MACHINE: rheostat bus bar mtg					2									17(1)	55
	F			5310-010-6496	WASHER, LOCK: rheostat bus bar screw					2									17	57
					(96306) MS35338-4														(1)	

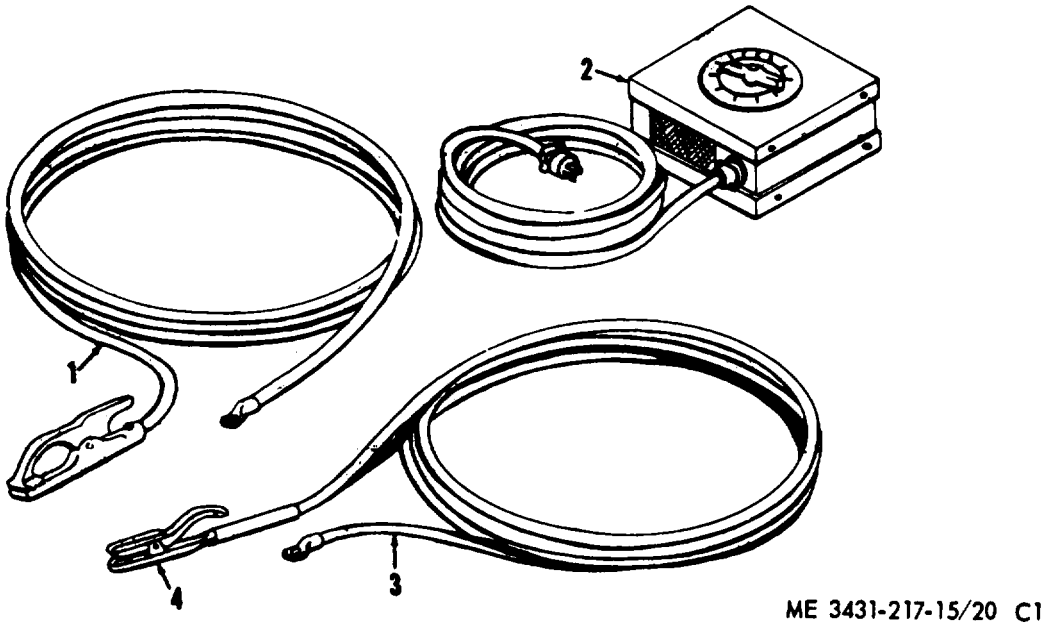
Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION	Manufacturer's Code	Manufacturer's Part No.	(4) UNIT OF ISSUE	(5) QTY UNIT OF MEAS	(6) INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
	X2	F			BUS BAR: generator 2					2									19	50
					(27315) 279H253D24															
		F		5306-225-9497	BOLT, MACHINE: bus bar mtg					4									19	48
					(27315) 20T5439D1															
		F		5310-010-3320	WASHER, LOCK: bus bar mtg					4									19	49
	X2	F			BUS BAR: selector switch					1									17	72
					(27315) 279H258														(1)	
		F		5305-275-9123	SCREW, CAP, HEXAGON HEAD: bus bar mtg					1									17(1)	7
		F		5310-21-9431	NUT, PLAIN, HEXAGON: bur bar mtg screw					1									17(1)	69
		F		5310-010-3320	WASHER, LOCK: bus bar mtg screw					1									17(1)	70
					4409 - PROTECTIVE DEVICES, ELECTRICAL															
	X2	F			PLATE, INSULATION: brush holder					3									19	32
					(27315) 275H84															
	X2	F			INSULATION: control panel					1									10	9
					(27315) 275H92D1															
	X2	F			BUSHING, INSULATION: control panel					1									10	18
					(27315) 275H83															
					4410 - SWITCHING CONTROL															
	X2	F			HANDLE, TAP SWITCH					1									17	62
					(27315) 206F3D3														(1)	
	X2	F			HANDLE, REVERSING SWITCH					1									17	29
					(27315) 206F4D2														(1)	
	X2	F		5315-814-3531	PIN, SPRING: handle retaining					1									17	28
					(08288) MSS5315-9														(1)	
	P	F		5930-227-6507	SWITCH ASSEMBLY, REVERSING SELECTOR					1	*	*	*	*	*	*		5	17	
					(27315) 2100F46														(1)	
					(Same as Switch Assembly, stock No. 5930-227 -6508, except where individual components are annotated)															
	P	F		5930-227-6508	SWITCH ASSEMBLY SELECTOR					1	*	*	*	*	*	*		5	17	
					(27315) 2100F48														(1)	
	X1				PLATE: back, reversing switch					1									17	44
					(27315) 279H242D1														(1)	
					(Used on Switch Assembly, stock No. 5930-227-6507 only)															
	X1				PLATE: front selector switch					1									17	38
					(27315) 279H241														(1)	
	X1				PLATE: back selector switch					1									17	63
					(27315) 279H242D2														(1)	
					(Used on Switch Assembly, stock No. 593-227-6508 only).															
	X1				INSULATOR: switch shaft					5									17	41
					(27315) 279H243														(1)	

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION	Manufacturer's Code	Manufacturer's Part No.	(4) UNIT OF ISSUE	(5) QTY UNIT OF MEAS	(6) INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
X1					SHAFT: selector switch (27315) 279H294D5 (Used on Switch Assembly, stock No. 5930-227-6508 only).					1									17 (1)	64
X1					WASHER, SPRING: selector switch 0.18 in. id. x 1.18 in. od. (27316) 220H45 (Used on Switch Assembly, stock No. 5930-227-6508 only).					2									17 (1)	39
'X1					SPACER: selector switch (27315) 279H248D3					1									17 (1)	40
X1					INSULATOR: select switch spacer (27316) 279H244					8									17 (1)	45
X1					BLADE, MOVABLE: selector switch (27316) 279H247					6									17 (1)	42
X1					CONTACT: selector switch (27315) 279H245					3									17 (1)	46
X1					CONTACT: selector switch (27315) 279H246					4									17 (1)	47
X1				5305-215-3909	SCREW, MACHINE: selector switch binding (08288) MSS5305-14 (Used on Switch Assembly, stock No. 5930-227-6508 only).					2									17 (1)	32
X1				5310-010-3319	WASHER, LOCK: switch binding screw (96906) MS35338-6 (Used on Switch Assembly, stock No. 5930-227-6508 only)					3									17 (1)	31
X1				5310-164-8848	WASHER, FLAT: switch binding screw (08288) MSS5310-8 (Used on Switch Assembly, stock No. 5930-227-6508 only)					2									17 (1)	34
X1				5305-468-3703	SCREW, MACHINE selector switch back plate (08288) MSS6306-2 (Used on Switch Assembly, stock No. 5930-227-6508 only).					2									17 (1)	30
X1					SHAFT: reversing switch . (27315) 279H294D3 (Used on Switch Assembly, stock No. 5930-227-607 only)					1									17 (1)	43
X1				5305-017-5170	SCREW, MACHINE: reversing switch blinding (08288) MSS630-14 (Used on Switch Assembly, stock No. 5930-227-6507 only)					2									17 (1)	32

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION	Manufacturer's Code	Manufacturer's Part No.	(4) UNIT OF ISSUE	(5) QTY UNIT OF MEAS	(6) INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
	X1			5306-226-8503	BOLT, MACHINE: reversing switch .					1									17	36
					(08288) MS306-16														(1)	
					(Used on Switch Assembly, stock No. 5930-227-6607 only)															
	X1			5310-021-9431	NUT, PLAIN, HEXAGON: reversing switch					1									17	35
					(08288) MSS6310-9														(1)	
					(Used on Switch Assembly, stock No. 5930-2274607 only)															
	X1			5310-010-3320	WASHER, LOCK: reversing switch					1									17	33
					(96906) MS36338-7														(1)	
					(Used on Switch Assembly, stock No. 5930-227-6507 only)															
	X1				SPACER: reversing switch					1									17	37
					(27316) 218H104D3														(1)	
					(Used on Switch Assembly, stock No. 598S0-227-6607 only)															
	X2	F			STARTER ASSEMBLY, MOTOR					1									19	4
					(27315) 9279H237F6															
	P	F		2920-227-6604	STARTER ASSEMBLY					1	*	*	*	*	*	*		3	19	4
					(04009) 51345															
	X1				COIL					1									18	4
					(04009) 32620-513															
	X1				CONTACT					1									18	6
					(04009) 51364-15															
	X1				BLOCK, OVERLOAD					2									18	2
					(04009) 33209-8															
	X2	F			BUSHING, INSULATION: starter mtg					6									10	18
					(27316) 275H83															
	P	F		5930-548-7850	SWITCH, TOGGLE					1	*	*	*	*	*	2		6	17	11
					(15606) 8690K1														(1)	
		F		5306989-7435	SCREW, MACHINE: starter assembly					3									19	2
					(08288) MSS5306-33															
		F		5310-786-3999	WASHER, FLAT: starter assembly					3									19	3
					(08288) MSS5310-29															
		F		5310-877-5797	NUT, SELF-LOCKING, HEXAGON					3									19	1
					(96906) MS20365-1032A															
	X2	F			SWITCH, PUSH: starter					1									17	68
					(02295) M4982698														(1)	
					4411 - RESISTOR COMPONENTS															
	P	F		5905-227-6506	RHEOSTAT					1	*	*	2	*	2	2		20	17	59
					(44655) 41876														(1)	
	X2	F			HANDLE: rheostat					1									17	61
					(27315) 206H15D2														(1)	
	X2	F			PIN, SPRING: rheostat handle attaching					1									17	60
					(72962) 59-022-094-625														(1)	

Line No.	(1) Source, maint. and Recov. code (a) S	(b) M	(c) R	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / Manufacturer's Code / Part No.	(4) UNIT OF ISSUE	(5) QTY UNIT OF MEAS	(6) INC IN UNIT	(7) 30 DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30 DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1-YR ALW PER 100 EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	(11) ILLUSTRATION (a) FIGURE NO.	(b) ITEM NO/
					GROUP 95 -GENREAL USE STANDARDIZED PARTS													
					9501 - BULK MATERIAL													
	P	O			CHAIN, WELDLESS	FT			*	*	*	*	*	*		*		
					(00000) 42C15120-205													
	P	O		9505-186-9137	WIRE, STEEL, CARBON	RI			*	*	*	*	*	*		*		
					(08288) MSS9505-1													
	P	O		6145-174-1123	WIRE, ELECTRICAL	FT			*	*	*	*	*	*		*		
	P	O		9520-517-0534	ANGLE, STEEL	FT			*	*	*	*	*	*		*		

Page 64.1. Add figure 20 as follows:



1. Ground cable assembly
2. Rheostat assembly
3. Electrode cable and holder
4. Electrode holder

Figure 20. Accessory items

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

Distribution:

To be distributed in accordance with DA Form 12-25, Sec I (qty rqr Block No 182), Organizational maintenance requirements for Welding

Changes in force: C 1 and C 2

TM 5-3431-217-15
C2

Change No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., *26 June 1973*

Organizational, DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tools List

WELDING MACHINE, ARC: GENERATOR ELECTRIC MOTOR DRIVEN, 300-AMP DC ARC, 220/440-V, 60-CYCLE, 3-PHASE, WHEEL MOUNTED (HARNISCHFEGER MODEL W300 MG) FSN 3431-2261569

TM 5-3431-217-15, 9 April 1965, is changed as follows:
Page 50. APPENDIX III is superseded as follows:

APPENDIX III
BASIC ISSUE-ITEMS-LIST-AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST

Section I. INTRODUCTION

1. Scope

This appendix lists items required by the operator for operation of the welding machine.

2. General

This list is divided into the following sections:

a. *Basic Issue Items List-Section II.* Not applicable.

b. *Items Troop Installed or Authorized List-Section III.* A list of items in alphabetical sequence, which at the discretion of the unit commander may accompany the welding machine. These items are NOT SUBJECT TO TURN-IN with the welding machine when evacuated.

3. Explanation of Columns

The following provides an explanation of columns in the tabular list of Basic Issue Items List, Section II, and Items Troop Installed or Authorized List, Section III.

a. Source, Maintenance and Recoverability Code(s) (SMR): (Not applicable).

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column indicates the Federal item name and any additional description of the item required.

d. Unit of Measure (UIM). A two character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc. *e. Quantity Furnished with Equipment (BIIL*).(Not applicable).

f. Quantity Authorized (Items Troop Installed or Authorized). This column indicates the quantity of the item authorized to be used with the equipment.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

(1) SMR Code	(2) Federal Stock Number	(3) Description	(4) Unit of Meas.	(5) Qty Auth
	752559-9618	Case, Manual	EA	1

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS,
Major General, United States Army,
The Adjutant General.

Distribution:

To be distributed in accordance with DA Form 12-25A (qty rqr block No. 182) organizational maintenance requirements for Welding.

TECHNICAL MANUAL
No. 5-3431-217-15

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *9 April 1965*

ORGANIZATIONAL, DS, GS, AND DEPOT MAINTENANCE MANUAL INCLUDING REPAIR PARTS

WELDING MACHINE, ARC: GENERATOR: ELECTRIC MOTOR DRIVEN, 300-AMP DC ARC, 220/440-V, 60.CYCLE, 3-PHASE, WHEEL MOUNTED (HARNISCHFEGER MODEL W300 MG) FSN 3431-2261569

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1. Scope

a. These instructions are published for the use of the personnel to whom the arc welding machine Model W300 MG is issued. Chapters 1 through 4 provide information on the operation, preventive maintenance services, and organizational maintenance of the equipment, accessories, components, and attachments. Chapters 5 and 6 provide information for direct and general support and depot maintenance. Also included are descriptions of main units and their functions in relationship to other components.

b. Appendix I contains a list of publications applicable to this manual. Appendix II contains the maintenance allocation chart. Appendix III contains the list of basic issue items authorized the operator of this equipment. The organizational, direct and general support, and depot maintenance repair parts and special tools are listed in appendix IV.

c. Numbers in parentheses on illustrations indicate quantity. Numbers preceding nomenclature callouts on illustrations indicate the preferred maintenance sequence.

d the direct reporting by the individual user, of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting these improvements. This form will be completed in triplicate using pencil, pen, or typewriter. The original and one copy will be forwarded direct to Commanding General, U.S. Army Mobility Equipment Center, ATTN: SMOME-MMP, P.O. Drawer 58, St. Louis, Mo. 63166. One information copy will be provided the individual's immediate supervisor.

e. Report all equipment improvement recommendations as prescribed by TM 38-750.

2. Record and Report Forms

a. DA Form 2258 (Depreservation Guide of Engineer Equipment).

b. For record and report forms, applicable to operator, crew, and organizational maintenance, refer to TM 38-750.

Note. Applicable forms, excluding Standard Form 46 which is carried by the operator, will be kept in a canvas bag mounted on the equipment.

Figure 1. Arc welder rear, three-quarter view with shipping dimensions.

Section II. DESCRIPTION AND DATA

3. Description

a. General. The Harnischfeger Model W300 MG arc welding machine (figs. 1 and 2) is a self-contained, wheel-mounted, semi-enclosed unit. The welding machine is equipped with the necessary controls, instruments, and accessories for operation. All accessories and controls are mounted at the top of the machine and are readily accessible. The welding machine is equipped with a lifting eye located at top center of the machine. A tongue or handle is provided for maneuvering the machine from place to place.

b. Motor-Generator. The motor-generator is an electric ac (alternating current) unit with a dc (direct current) output. The unit is rated at

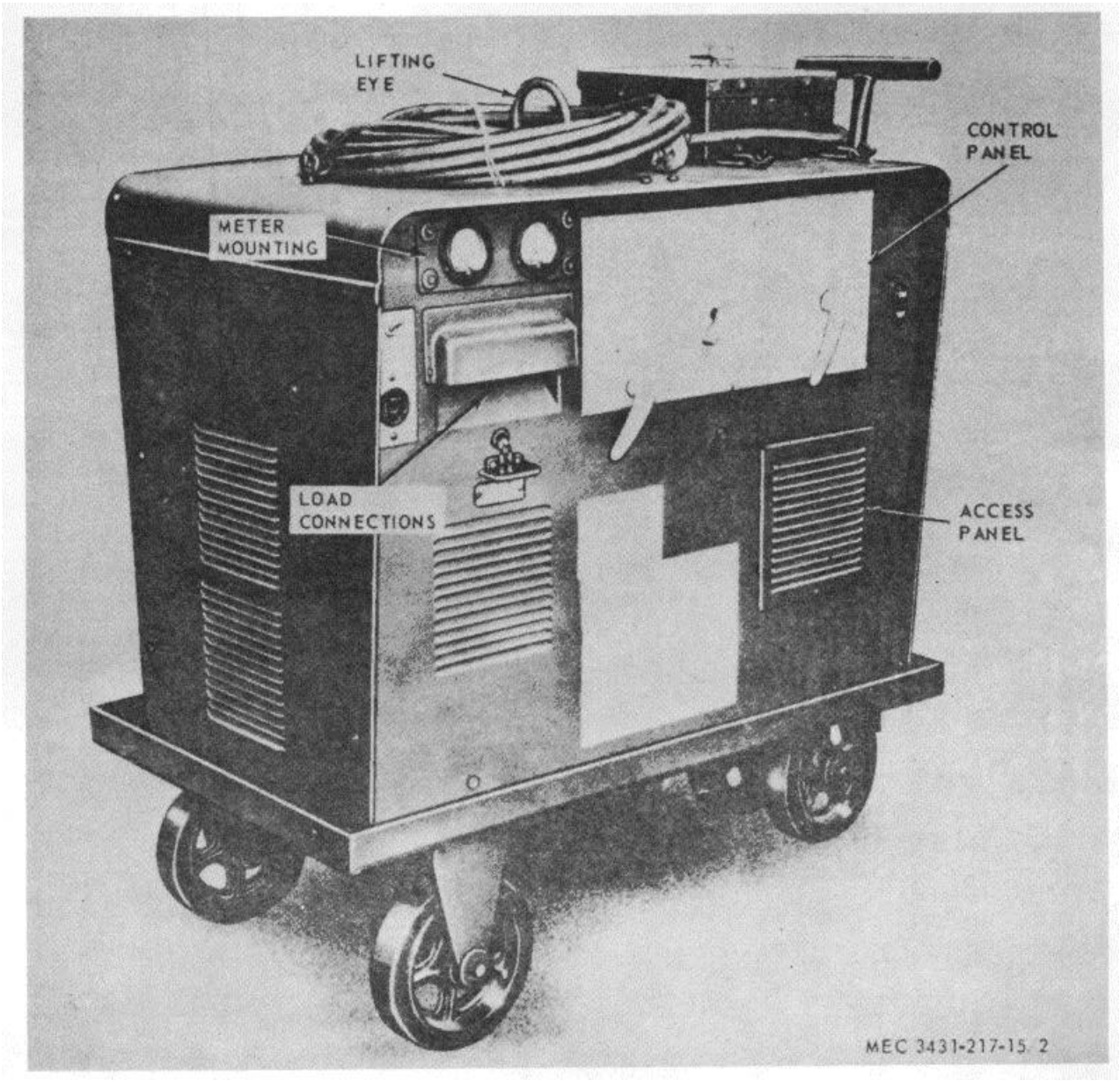


Figure 2. Arc welder front, three-quarter view.

a nominal 300 amperes at 32 volts while operating at 60 percent duty cycle. The ac motor is controlled and protected by a magnetic across the-line contactor that is operated by a pushbutton on the control panel. This starter incorporates an automatic reset thermal-overload relay. This relay protects the welding machine against severe and continuous overloads, low line voltage, stalled single-phase conditions, and locked rotor conditions. The thermal-overload relay automatically resets when the motor returns to a safe temperature and no manual operations are required to restart the machine except pushing the start button.

c. Control Panel. The control panel (fig. 3) contains all the switches and indicators necessary for the operation of the unit. Included in this group are the reversing switch, rheostat current selector, electrode selector, stop-start switch, current voltmeter and ammeter indicators.

4. Identification and Tabulated Data

a. Identification. The welding machine has four major identification plates. The information contained on these plates is listed below.

(1) The Corps of Engineers identification plate specifies the name of the manufacturer, make, model number, date of manufacture, serial number, and the Federal stock number of the welding machine. It is located on the welder housing.

(2) The main name plate specifies the name of the manufacturer, serial number, model number, manufacturer's specification number, ampere rating, volts, duty cycle, rpm (revolutions per minute) and control instructions. It is located on the control panel.

(3) The instruction nameplate specifies detail operating instructions and is located on the machine housing near the control panel.

(4) The wiring diagram plate is a reproduction of the electrical wiring diagram of the welding machine and is located on the underside of the front cover.

b. Tabulated Data.

(1) *Motor-generator*.

Manufacturer	Harnischfeger-P & H
Model.....	W300MG
Type	ac with dc Output
Speed	3,500 rpm

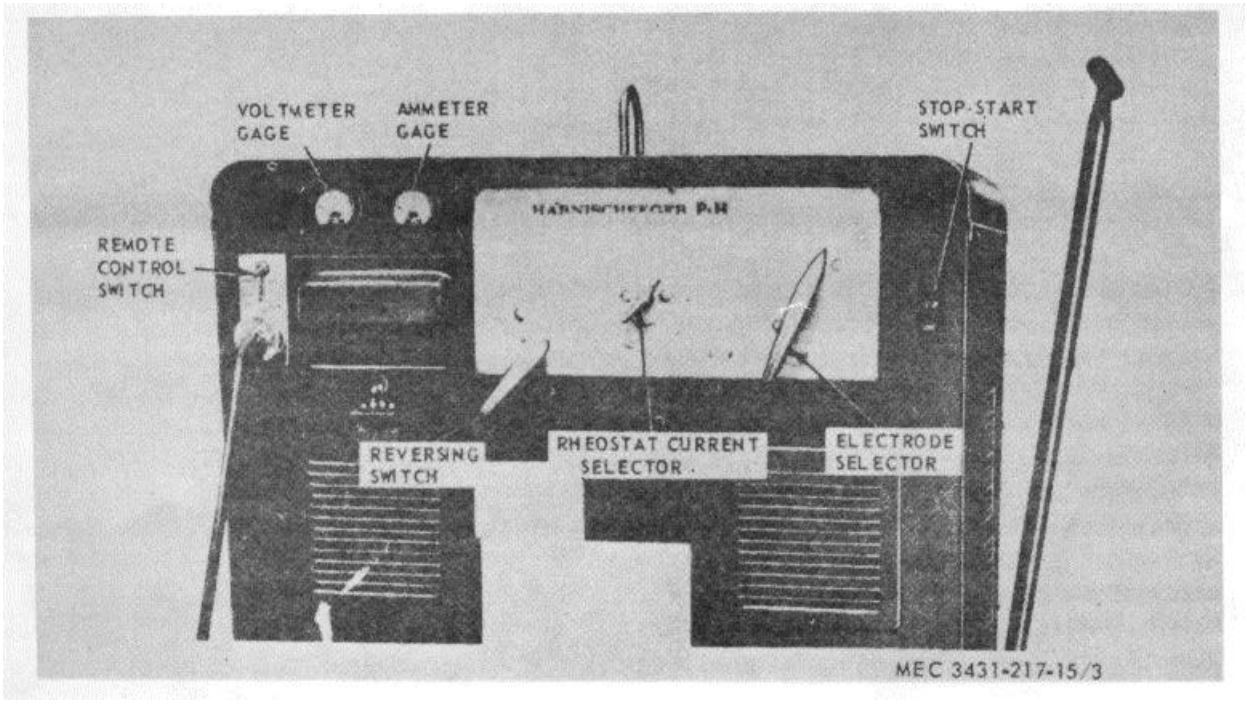


Figure 3. Control panel.

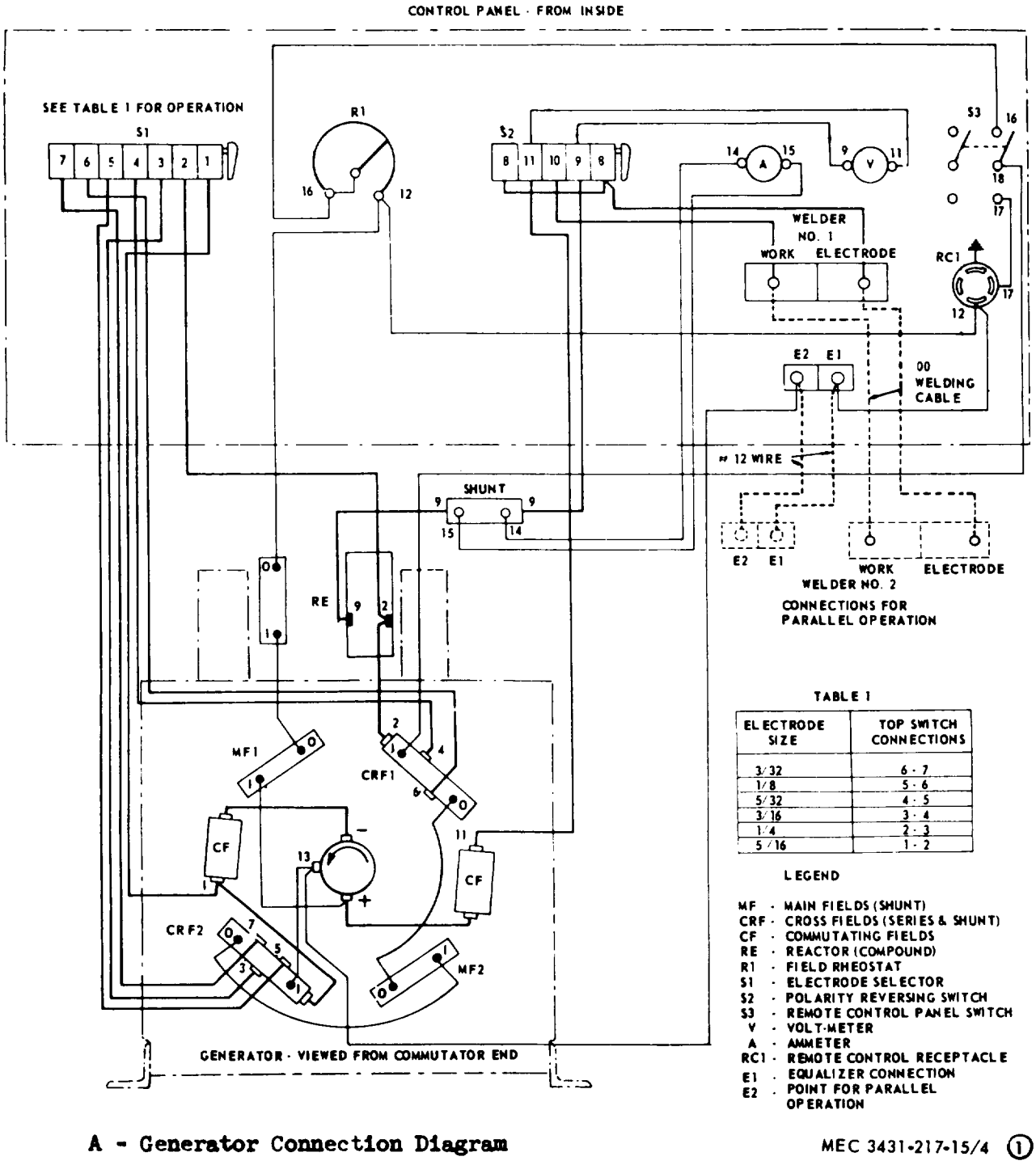


Figure 4. Electrical wiring diagrams.

(2) Welder.

Manufacturer ..... Harnischfeger-P & H
Rating ..... 300 amperes at 32 volts
Duty cycle ..... 60%(percent)
Voltage ..... 220 or 440 volts
Type ..... 3 phase

(3) Dimensions and weight (fig. 1).

Length ..... 37 inches*

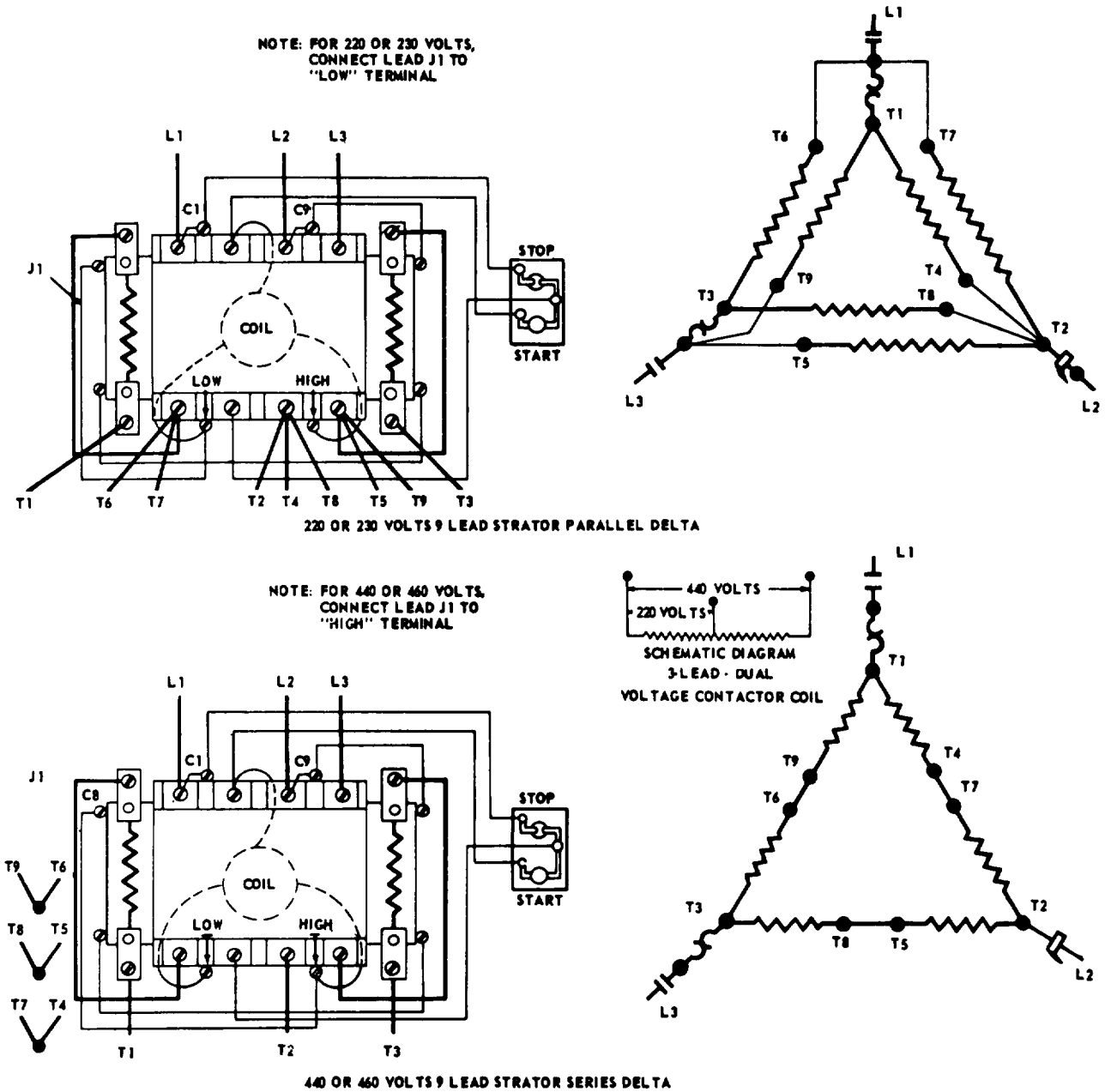


Figure 4 Continued

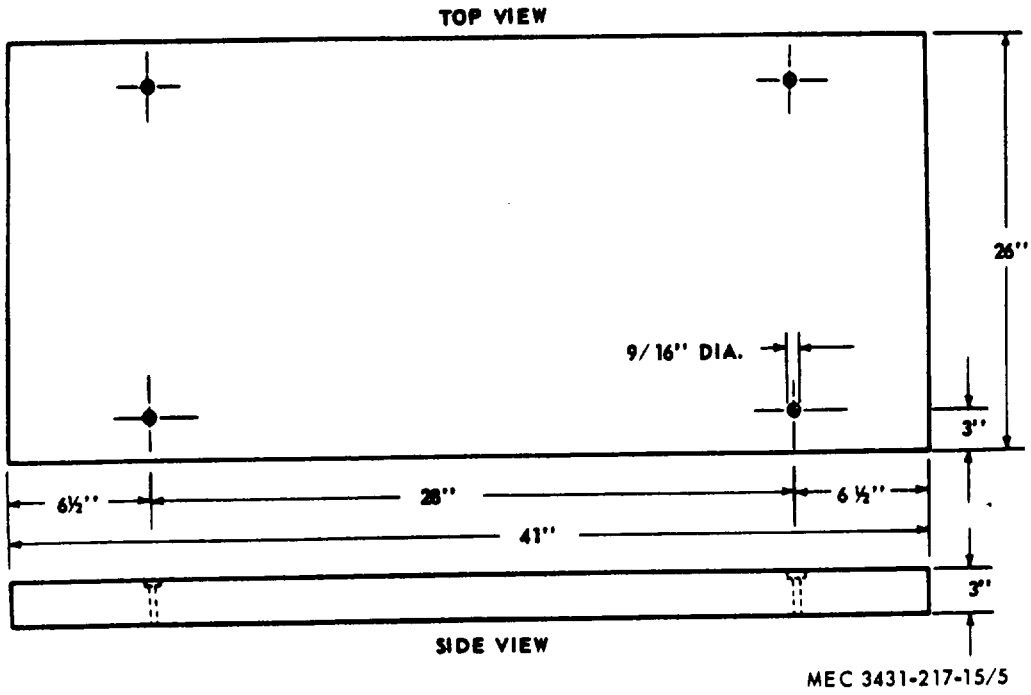


Figure 5. Base plan.

Width ..... 22 inches*
Height ..... 43 inches*
Weight ..... 920 pounds*

*Welder on portable truck less wheel, plus remote control. welding cable, O-kit, and wheels.

(4) *Wiring diagram*. The electrical wiring diagrams (fig. 4) show generator connection diagram and motor starter connection diagram.

(5) *Base plan*. The base plan is shown in figure 5.

5. Differences in Models

This manual covers only the Harnischfeger Model WU300 MG welding machine. No known unit differences exist for the model covered by this manual.

CHAPTER 2

INSTALLATION AND OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

6. Unloading Equipment

a. Remove all tiedowns and blocking that secure the crate to the carrier.

b. A forklift truck or suitable hoist must be used when removing the crate from the carrier.

> **Warning: Make certain any lifting device used has a capacity to handle weight being lifted. Failure to observe this precaution could result in injury to personnel and damage to the equipment.**

7. Unpacking the Equipment

a. Place the welding machine as close to the point of installation as possible. Remove the box containing remote rheostat current selector assembly, electrode cable with holder, and ground cable with clamp. A publications case and copies of this manual are also included.

b. Remove the tape and protective material from the instruments and controls.

c. Remove the tiedowns and blocking that secure the welding machine to the bottom of the crate and remove the welding machine.

8. Inspection and Servicing

a. Make a complete visual inspection of the welding machine for any loss or damage that may have occurred during shipment. Prior to inspection of operation of the welding machine, accomplish depreservation of the welding machine as outlined on DA Form 2258.

b. Refer to paragraph 36 for daily preventive maintenance services.

c. Correct all deficiencies or report them to the proper authority.

9. Installation of Separately Packed Components

a. The welding machine is delivered with the remote rheostat current selector assembly, electrode cable with holder, and ground cable with clamp packed separately.

b. Install the remote rheostat current selector assembly in its correct position on the welding machine and secure with the fasteners provided.
When in use, the unit is removed from its mounting, plugged into the remote control plug and set at the desired setting.

c. Connect the ground and electrode cable assemblies to the terminal block provided as shown in figure 6.

10. Installation or Setting-Up Instructions

a. Location. The welding machine should be located in a clean, dry, well ventilated area. The machine should be set on a foundation as free from vibration as practical. If the unit is to be located on soft or muddy footing a suitable platform of planks or similar material should be provided. The machine should be maintained as level as possible at all times. Position the welding machine as close and as convenient to the work as possible. The welding machine is of a drip-proof construction. If the machine is to be left out in the rain or snow, protection should be provided that will shield the entire unit from the weather, and provide ready access to the controls. The canopy should not interfere with ventilation.

b. *Indoor Installation*. When the welding machine is installed in an enclosed area it should be well ventilated with a maximum supply of fresh air. When a vapor degreaser using trichloroethylene or other chlorinated

hydrocarbons is being employed or such solvents are used in any manner, the welding operation should be located in an area sufficiently remote so that there is no possibility of these vapors entering the area covered by the light from the welding arc. The ultra-violet light can decompose these vapors at considerable distance from the arc into toxic gases even though the concentration is low enough to be undetectable by odor.

11. Inspection of Used Equipment

Inspect the welding machine, following the instructions in paragraph 8. Correct or report all deficiencies to the proper authority.

12. Servicing Used Equipment

Perform the procedures described in paragraph 8. Clean the exterior of the unit thoroughly. Coat the exposed metal surfaces with a film of oil or grease. Correct all deficiencies or report them to the proper authority.

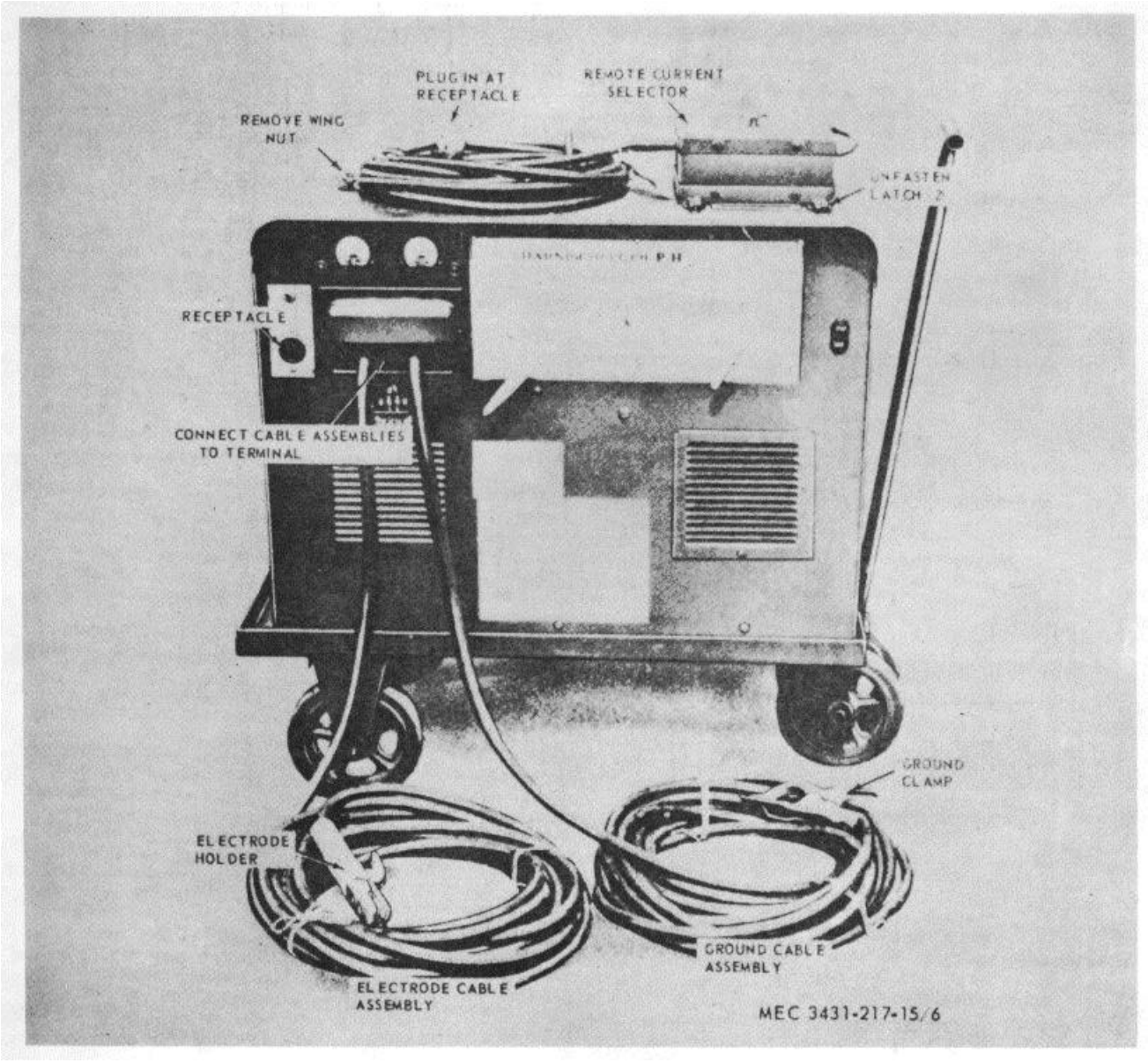


Figure 6. Welding cables and remote rheostat current selector assembly connection., removal and installation.

Section II. MOVEMENT TO A NEW WORKSITE

13. Dismantling for Movement

a. Preparation for Movement.

(1) Disconnect all electrical power leading to the welding machine.

(2) Disconnect welding cables and remote rheostat control if used (fig. 6).

(3) Refer to the basic issue items list and make sure all items listed are on or with the equipment.

b. Short Distance Movement. The welding machine may be pulled by hand, or towed relatively short distances. Secure a suitable towing device to the tongue and proceed slowly to a new worksite.

c. Long Distance Movement. The welding machine should be recrated and transported by a suitable carrier to a new long distance workingsite.

14. Reinstallation After Movement

The welding machine should be installed or set up after movement in accordance with procedures outlined in paragraph 10.

Section III. CONTROLS AND INSTRUMENTS

15. General

This section describes, locates, illustrates and furnishes the operator, crew, or organizational maintenance personnel sufficient information pertaining to the various controls and instruments provided for the proper operation of the welding machine.

16. Controls and Instruments

The controls and instruments and the normal and maximum reading of the instruments are illustrated in figure 7.

17. Stop-Start Switch

The stop-start switch (fig. 7) is used to start or stop the current flow directed to the motor generator of the welding machine causing the machine to run or stop running.

18. Magnetic Starter

The motor starter is a magnetic across-the line contactor that is operated by the stop-start switch on the control panel. This starter incorporates an automatic reset thermal-overloading relay. This relay protects the welding machine against severe and continuous overloads, low line voltages, stalled single-phase conditions and locked rotor conditions. Do not attempt to change the overload setting. This has been set at the factory to insure accurate tripping characteristics. If the overload relay should trip it is an indication that one of the above-mentioned malfunctions exists. Find the cause and remedy it before attempting further operation. It may be necessary to allow the welding machine to cool a few minutes before it can be restarted.

19. Reversing Switch

The reversing switch (fig. 7) provides a means of reversing the polarity by setting the lever at "straight" or "reverse" polarity.

20. Rheostat Current Selector

The rheostat current selector (fig. 7) varies the current output of the welding machine and has a range of 0 to 10 amperes.

21. Electrode Selector

The electrode selector (fig. 7) varies the voltage of the welding current suitable to the size (diameter) of the welding electrode being used.
It has a range of 3/32 to 5/16 inch.

22. Remote Control Switch

The remote control switch (fig. 7) switches the control of the open circuit voltage of the welding machine from the rheostat current selector on the control panel to the remote control rheostat assembly.

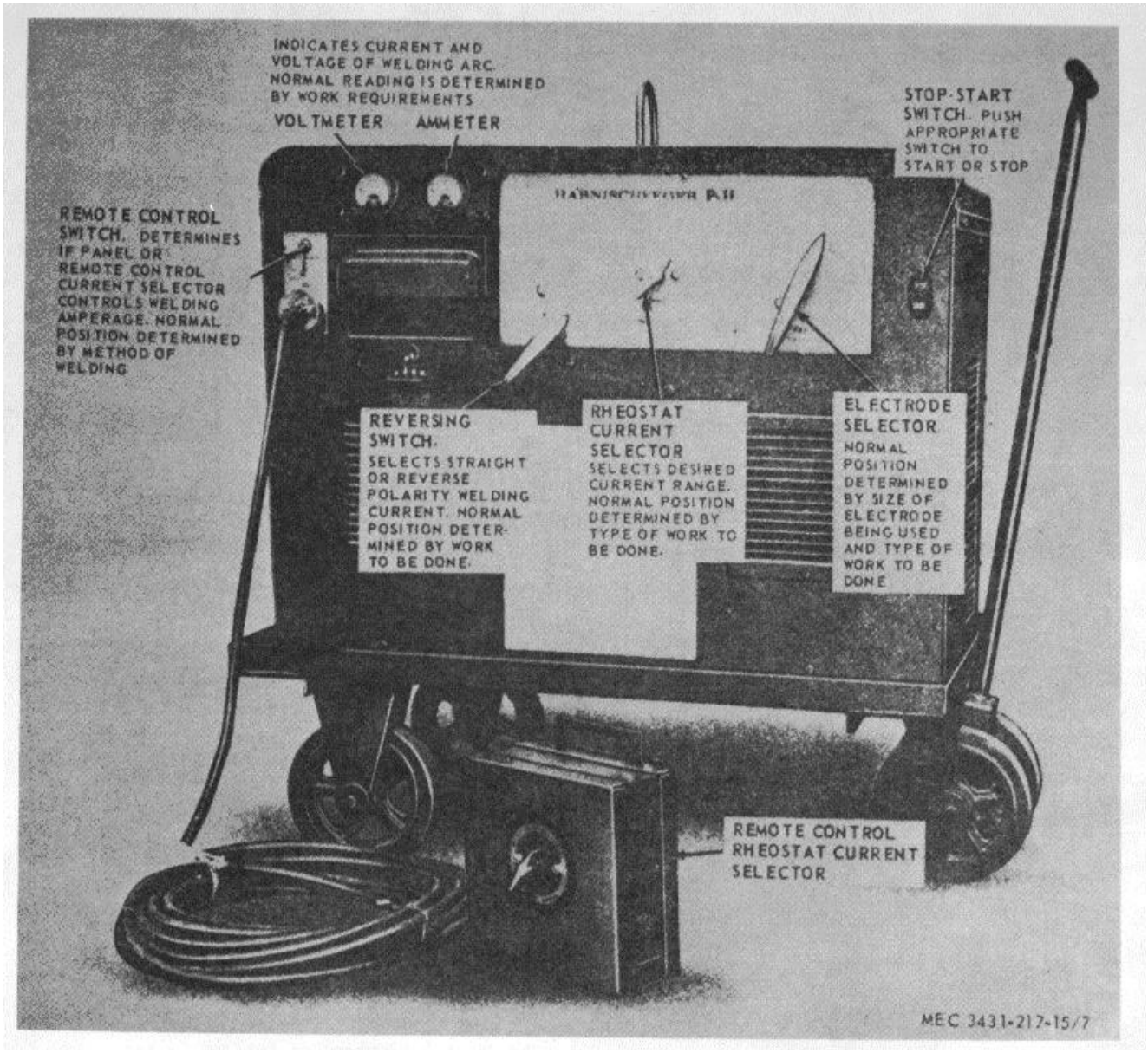


Figure 7. Control and instruments.

23. Voltmeter Gage The voltmeter gage (fig. 7) indicates the output direct current voltage of the welding machine. It has a range of 0 to 100.

24. Ammeter Gage The ammeter gage (fig. 7) indicates the output amperage of the welding machine. It has a range of 0 to 400.

Section IV. OPERATION OF EQUIPMENT

25. General

a. The instructions in this section are published for the information and guidance of the personnel responsible for the operation of the welding machine.

b. The operator must know how to perform every operation of which the welding machine is capable.

This section gives instructions on starting and stopping the welding machine, basic motions of the welding machine, and on co-ordinating the basic motions, to perform the specific tasks for which the equipment is designed. Since nearly every job presents a different problem, the operator may have to vary given procedures to fit an individual job.

26. Starting

a. *Preparation for Starting.*

(1) Perform the necessary daily preventive maintenance services (para 36).

(2) Connect welding machine to power supply as follows:

(a) Approximate full load amperes, and recommended fuse and power cable sizes are listed in table 1.

Table 1. Wiring Data

Three-phase, 60 cycle, ac

Rating	Input voltage	Full load line amperes	Power lead size B and S	Min. Fuse size in amperes
300 Ampere	230	57.5	4	125
300 Ampere	460	28.8	8	75

(b) A tag on the welding machine indicates the line voltage for which the unit is connected at the factory. Be sure it corresponds with the power supply voltage to be used. If connection changes are required, change motor leads and contactor coil leads and jumpers as described in the wiring diagram (fig. 4).

Warning: Make sure the main power supply disconnect switch is shut off before making any connections.

(c) Remove the top cover (para 54), run power supply leads through the hole in the back panel and connect to the motor starter terminals in accordance with the wiring diagram (fig. 4). Make certain all connections are secure, make good contact, and have ample clearance.

(d) Attach supply ground wire to welder housing and replace the top cover. This cover must be in place when operating the welding machine.

(e) Check for proper direction of rotation on the initial start as described below.

b. Starting.

(1) Push START button (fig. 7).

(2) On the initial start check the direction of rotation as indicated by the arrow on the name plate. If rotation is incorrect, press STOP button, shut off main power supply disconnect switch, and interchange any two line leads (fig. 4).

27. Stopping

Push STOP button (fig. 7) to stop welding machine operation.

28. Operation Under Usual Conditions

a. Connect electrode and ground cable (para 9).

b. Attach clamp of ground cable to work metal making sure it is at a clean, paint and rust free spot for good contact.

c. Set reversing switch at "straight" or "reverse" position and check the polarity of the electrode.

d. Set electrode selector for the size of electrode to be used (para 21). If unusually high or low currents are required for a particular electrode, it may be necessary to turn the electrode selector to the next higher or lower setting.

e. Set rheostat current selector to the desired current in amperes (para 20). The remote rheostat current selector controls the welding machine for remote work.

Warning: Do not perform any welding operation without a welder's helmet. The flash of the welding arc can cause injury to the eyes.

f. The approximate current range for bare

and lightly coated electrodes is shown in table 2. Table 3 gives similar information for gaseous and slag types of electrodes.

Table 2. Current Setting Range for Bare or Lightly Coated Electrodes

Electrode diameter (in.)	Current minimum (Amps.)	Electrode maximum (Amps.)	Lengths (in.)
3/32	70	90	11 1/2
1/8	110	135	14 or 18
5/32	150	180	14 or 18
3/16	150	220	14 or 18
1/4	250	300	14 or 18
5/16	300	425	14 or 18
3/8	450	550	14 or 18

Table 3. Comparison of Current Used with Gaseous and Slag Types of Electrodes

Electrode diameter (in.)	Gaseous types		Slag type flat position (amperes)
	Flat position (amperes)	Vertical and overhead position (amperes)	
3/32	60	60	
1/8	120	110	130
5/32	150	140	160
3/16	175	160	200
1/4	200		300
5/16	325		400
3/8	425		500

g. Strike an arc.

h. If the arc is weak, turn the electrode selector one setting higher. If the arc is too cold turn the rheostat current selector up and turn the electrode selector down.

Warning: **Do not adjust welding controls while maintaining arc.**

i. Parallel Operation.

(1) Two welding sets of the same type and rating can be operated in parallel to obtain twice the capacity of one set. When connecting welders together for parallel operation, it is necessary to use two paralleling and two equalizer connections (B, fig. 3). Existing connections should not be changed.

(2) All connections must be made before starting either set and they should not be broken until both sets are shut down.

(3) Reversing switches must indicate the same polarity at ail times, and must never be changed if either set is running.

(4) Electrode selectors should indicate the same electrode size so as to divide the load equally between the two generators.

(5) Current selector dials should always indicate the same current, otherwise it will be difficult to adjust for the desired current, and one rheostat might become overloaded.

Warning: **Do not attempt to weld with two welding sets in parallel unless both are running. Both must be started and stopped simultaneously, both driving motors must be on the line, or both off. Do not make or break any connections while either set is running.**

29. Operation Under Unusual Conditions

a. Operation in Extreme Cold (Below 0^{o}F.).

(1) Before starting the welding machine, disconnect its source of power and wipe the electrical components free of ice and moisture. Do not disturb the wiring as it becomes brittle with extreme cold.

(2) Connect the power source.

(3) Start welding machine (para 26).

(4) Begin usual welding operations (para 28).

b. Operation in Extreme Heat.

(1) Erect a shelter to shade the machine and provide as much ventilation as possible to keep operating temperature of the welding machine as low as possible.

(2) Connect the power source.

(3) Start the welding machine (para 26).

(4) Begin usual welding operations (para 28).

c. Operation in Dusty or Sandy Areas.

(1) If the installation is to be permanent, provide protective cover to keep the unit as clean as possible paying special

attention to the control panel. The covering should not interfere with ventilation.

(2) Connect the welding machine to the power source.

(3) Start welding machine (para 26).

(4) Begin usual welding operations (para 28).

d. Operation Under Rainy or Humid Conditions.

(1) When the welding machine is operated outside, erect a shelter or protective covering when possible. If the erection of a shelter is not practical, protect the machine with a canvas. The covering should not interfere with ventilation. Remove the covering during dry periods and allow the unit to dry thoroughly.

(2) Connect the welding machine to power source.

(3) Start the welding machine (para 26).

(4) Begin usual welding operations (para 28).

e. Operation in Salt Water Areas.

(1) Salt water causes corrosive action on metal. Care must be taken to avoid contact of equipment with salt water. If contact is made, or if the unit is exposed to salt spray, wash the unit with clean, fresh water.

Warning: **The welder must be disconnected from the power source before washing and must be thoroughly dry before reconnecting to power source.**

(2) Coat all exposed surfaces with an approved rust proofing material or cover parts with a thin coat of grease.

(3) Connect the welding machine to the power source.

(4) Start welding machine (para 26).

(5) Begin usual welding operations (para 28).

Section V. OPERATION OF MATERIEL USED IN CONJUNCTION WITH THE EQUIPMENT

30. Fire Extinguisher

(dry chemical type)

a. Description. The dry, chemical type fire extinguisher is suitable for use on all types of fire and is effective in areas where ambient temperature is -25^{0}F. The fire extinguisher is a 2 1/2-pound, stored pressure, lever-operated extinguisher.

b. Operation. Remove the fire extinguisher from its location, lift the handle, press lever, and direct the powder at the base of the flame using a side-to-side sweeping motion.

c. Maintenance. Weigh the fire extinguisher every 6 months and replace the extinguisher if weight is less than 4 1/2 pounds, or if pressure is below 125 pounds. Refer to SB 5-111. The dry chemical fire extinguishers will be serviced at installation level through repair and utilities facilities, with the filling agent supplied by local procurement through troop supply channels.

CHAPTER 3

OPERATOR AND ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. SPECIAL TOOLS AND LUBRICANTS

31. Special Tools and Equipment

No special tools or equipment are required by the operator or organizational maintenance personnel for the maintenance of the welding machine.

32. Basic Issue Tools and Equipment

Tools and repair parts issued with or authorized for the welding machine are listed in the basic issue items list, appendix III of this manual.

33. Organizational Maintenance Repair Parts

Organizational maintenance repair parts are listed in appendix IV.

34. Lubrication

There are no lubricants or lubrication necessary for initial operation of the welding machine.

Section II. PREVENTIVE MAINTENANCE SERVICES

35. General

To insure that the welding machine is ready for operation at all times, it must be inspected systematically, so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance services to be performed are listed and described in paragraphs 36 and 37. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the unit will be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noticed during operation which would damage the equipment if operation were continued. All deficiencies and shortcomings will be recorded together with the corrective action taken on DA. Form 2404 (Equipment Inspection and Maintenance Worksheet) at the earliest possible opportunity.

36. Daily Preventive Maintenance Services

This paragraph contains an illustrated tabulated listing of preventive maintenance services which must be performed by the operator. The item numbers are listed consecutively and indicate the sequence of minimum requirements. Refer to figure 8 for the daily preventive maintenance services.

37. Quarterly Preventive Maintenance Services

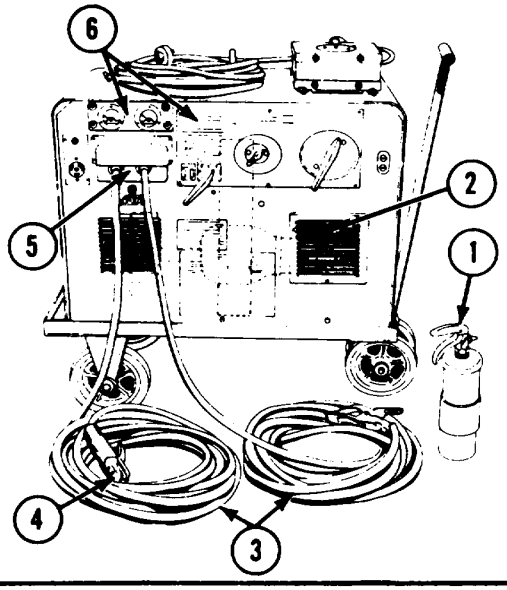
a. This paragraph contains an illustrated tabulated listing of preventive maintenance services which must be performed by organizational maintenance personnel at quarterly intervals. A quarterly interval is equal to 3 calendar months, or 250 hours of operation, whichever occurs first.

b. The item numbers are listed consecutively and indicate the sequence of minimum requirements. Refer to figure 9 for the quarterly preventive maintenance services.

PREVENTIVE MAINTENANCE SERVICES

DAILY

TM5-3431-217-15 HARNISCHFEGER - P&H MODEL W300 MG WELDING MACHINE, ARC



ITEM		PAR REF
1	FIRE EXTINGUISHER. Inspect for broken seal (Weekly).	30
2	BRUSHES. Inspect to see that brushes move freely in brush holder and make firm contact.	56
3	CABLE ASSEMBLIES. Inspect cable assemblies. If damage is apparent repair or replace immediately.	
4	ELECTRODE HOLDER ASSEMBLY. Inspect electrode for general condition. Replace if defective.	
5	TERMINAL BOARD CONNECTIONS. Tighten loose cables or mountings.	63
6	CONTROLS AND INSTRUMENTS. Inspect for damage and loose mountings. With unit operating check for proper operation. Replace defective instruments.	60
	NOTE 1: OPERATION. During operation observe for any unusual noise or vibration.	

MEC 3431-217-15/8

Figure 8. Daily preventive maintenance services..

Section III. OPERATOR MAINTENANCE

38. General

The instructions in this section are published for the information and guidance of the operator to maintain the welding machine.

39. Correcting Polarity

The welding generator terminals have been marked for straight polarity (electrode terminal negative). If the polarity should become reversed, it may be corrected after the motor has stopped.

a. Adjust the current selector for maximum current with electrode selector on any setting.

b. Remove the generator end cover (para 53).

c. Raise the excitation brush from the commutator (para 56).

d. Connect the negative terminal of a 6- to 12-volt battery to the excitation brush stud.

e. Touch the positive terminal of the battery to the bottom main brush stud for approximately 2 seconds.

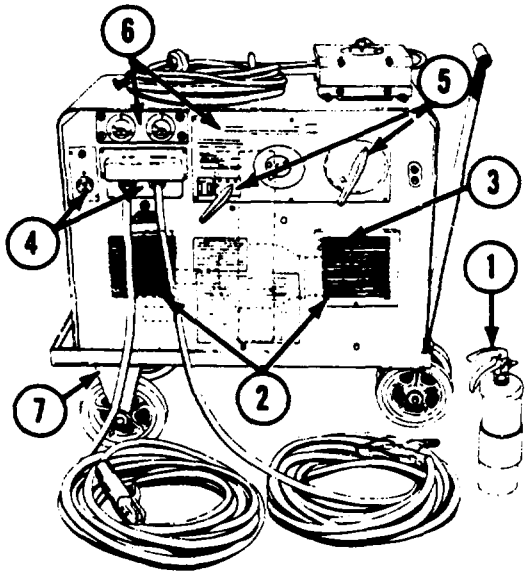
f. Lower the excitation brush and replace the generator end cover. The polarity will be correct when the welding machine is next used.

g. Remove the cause of reversal in polarity. (Refer to Troubleshooting para 40).

PREVENTIVE MAINTENANCE SERVICES

QUARTERLY

TM5-3431-217-15 | HARNISCHFEGER - P&H MODEL W300 MG | WELDING MACHINE, ARC



ITEM		PAR REF
1	FIRE EXTINGUISHER. Inspect for broken seal. Inspect for full charge by weight and/or proper pressure.	30
2	ARC WELDER. Inspect and clean by blowing out dust with air.	
3	COMMUTATOR AND BRUSHES. Inspect brush rigging and commutator. Brush holders should be tight and clear commutator by 1/16 inch. Brushes should ride freely in holders. Inspect brush springs for proper tension. Tighten all loose electrical connections or mounting hardware. Brushes worn under 1 inch, discard and replace. Replace worn or damaged brushes and springs as necessary.	56-59
4	WIRING, SWITCHES, RECEPTACLE. Inspect switches and receptacle for proper operation. Inspect wiring for frayed, broken, deteriorated insulation, and loose or damaged connections. Clean corroded and tighten loose connections. Replace defective switch or receptacle.	61

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Figure 9. Quarterly preventive maintenance services.

ITEM		PAR REF
5	SELECTOR AND POLARITY SWITCH. Inspect the mounting, wiring and operation. Keep switch blades clean and free of dirt and corrosion. Lubricate blades with a light coating of Molykote or vaseline. Inspect for defective wiring, broken, or loose connections. Replace defective parts as necessary.	64
6	CONTROL PANEL AND INSTRUMENTS. Inspect instruments for cracked or broken glass. Inspect for insecure mountings, loose connections, and improper operation. Inspect control handles for cracks, breaks, or other damage. Tighten all loose mountings and electrical connections. Replace defective or damaged parts as necessary.	61-62
7	TRUCK FRAME AND WHEELS. Inspect wheels and tires for general condition. Inspect frame and handle for cracks, breaks or loose mounting hardware. Replace or repair parts as necessary.	67
	NOTE 1: OPERATION. During operation observe for any unusual noise or vibration.	

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Figure 9-Continued.

Section IV. TROUBLESHOOTING

40. General

This section provides information useful in diagnosing and correcting unsatisfactory operature or failure of the welding machine and its components. Each trouble symptom stated is followed by a list of probable causes of trouble. The possible remedy recommended is described opposite the probable cause. Any trouble beyond the scope of organizational maintenance shall be reported to direct support maintenance.

41. Welder Will Not Start (Starter Not Operating)

Probable cause	*Possible remedy*
Power circuit dead	Check voltage.
Broken power lead	Replace or repair.
Wrong voltage	Check nameplate against power supply.
Incorrect connections to starter	Check connections against wiring diagram (fig. 4).
Open power switch	Close switch.
Blown power source fuses	Replace (refer to wiring data table 1).
Overload relay tripped	Allow welding machine to cool. Remove cause of overload.
Open circuit to starter button	Check connections against wiring diagram (fig. 4).
Mechanical obstruction on starter	Remove obstructions.

42. Starter Chatters

Probable cause	*Possible remedy*
Line leads too small	Install larger leads (refer to wiring data table 1).
Power supply inadequate	Report to proper authority.
Low line voltage	Report to proper authority.
Sticky operation	Replace starter (para 66).

43. Welder Will Not Start

Probable cause	*Possible remedy*
Wrong motor connections to starter	Check connections against wiring diagram (fig. 4).
Wrong supply voltage	Check nameplate and connections against power supply. Report to proper authority.
Rotor stuck	Try turning by hand.
Power source line circuit single-phased	Replace fuse. Report open line to proper authority.
Poor motor connections to starter	Tighten connections.

44. Starter Operates and Blows Fuse

Probable cause	*Possible remedy*
Power source fuse size too small	Refer to wiring data table 1 for recommended fuse size.
Short circuit in motor connections	Check starter and motor leads insulation for ground.

45. Welder Starts but Will Not Deliver Welding Current

Probable cause	*Possible remedy*
Wrong direction of rotation	Refer to paragraph 26.
Brushes worn or missing; brush springs broken or missing.	Check that all brushes bear on commutator with sufficient pressure (para 56).
Brush connections loose	Tighten connections (para 56).
Open field circuit	Check connection to rheostat and to excitation brush studs (fig. 56).
Welding terminal shorted	Electrode holder or welding cable may be grounded.
Brushes binding in holder	Remove obstruction (para 57).

46. Welder Generating but Current Falls Off

Probable cause	*Possible remedy*
Electrode or ground connections loose	Clean and tighten all connections.
Poor ground	Check ground-return circuit.
Brushes worn off	Replace brushes (para 56).
Weak brush spring pressure	Replace brush springs (para 57).
Brush not properly fitted	Sand brushes to fit (para 56).
Brushes in backwards	Reverse, sand to fit (para 56).
Wrong brushes used	Replace with correct brushes (para 56).
Brush pigtails damaged	Replace brushes (para 56).
Motor connection single phased	Check all connections against wiring diagram (fig. 4).
Insufficient cooling air	Remove obstructions that may block ventilating air or cause the exhaust air to recirculate.

47. Welder Runs but Soon Stops

Probable cause	*Possible remedy*
Wrong overload relay	Check rating of starter overload relay (para 92).
Welder overloaded	Check control settings (para 28).
Duty cycle too high	Do not operate continuously at overload currents.
Line leads too long or too small in cross section	Lines should be large enough to carry welding current requirement without excessive voltage drop. Report to proper authority.
Power circuit single phased	Check for one dead fuse at power source or line.
Ambient temperature too high	Operate at reduced loads when temperatures exceed 100°F.
Ventilation blocked	Check air inlet and exhaust openings.

48. Welding Arc Is Loud and Spatters Excessively

Probable cause	*Possible remedy*
Polarity wrong	Check polarity, try reversing, or using an electrode of opposite polarity (para 39).

49. Welding Arc Sluggish

Probable cause	*Possible remedy*
Current too low	Check output and current recommended for electrode being used (para 28).
Poor connections	Check electrode holder, cable, and ground connections para 28).
Cable too long or too small	Check cable voltage drop and change cable (paras 26 and 28).

50. Touching Machine Gives Shock

Probable cause	*Possible remedy*
Frame not grounded	Ground solidly.
Internal components grounded	Report to proper authority.

51. Generator Control Fails To Vary Current

Probable cause	*Possible remedy*
Any part of field circuit may be short circuited	Report to proper authority.
Faulty rheostat	Replace rheostat (para 65).

52. Excessive Brush Sparking

Probable cause	*Possible remedy*
Faulty brush spring (broken or worn)	Replace springs (para 57).
Incorrect, broken or chipped brushes	Replace brushes (para 56).
Contaminated atmosphere, such as carbontetrachloride fumes.	Remove contaminant and improve ventilation.

Section V. HOUSING ASSEMBLY

53. General

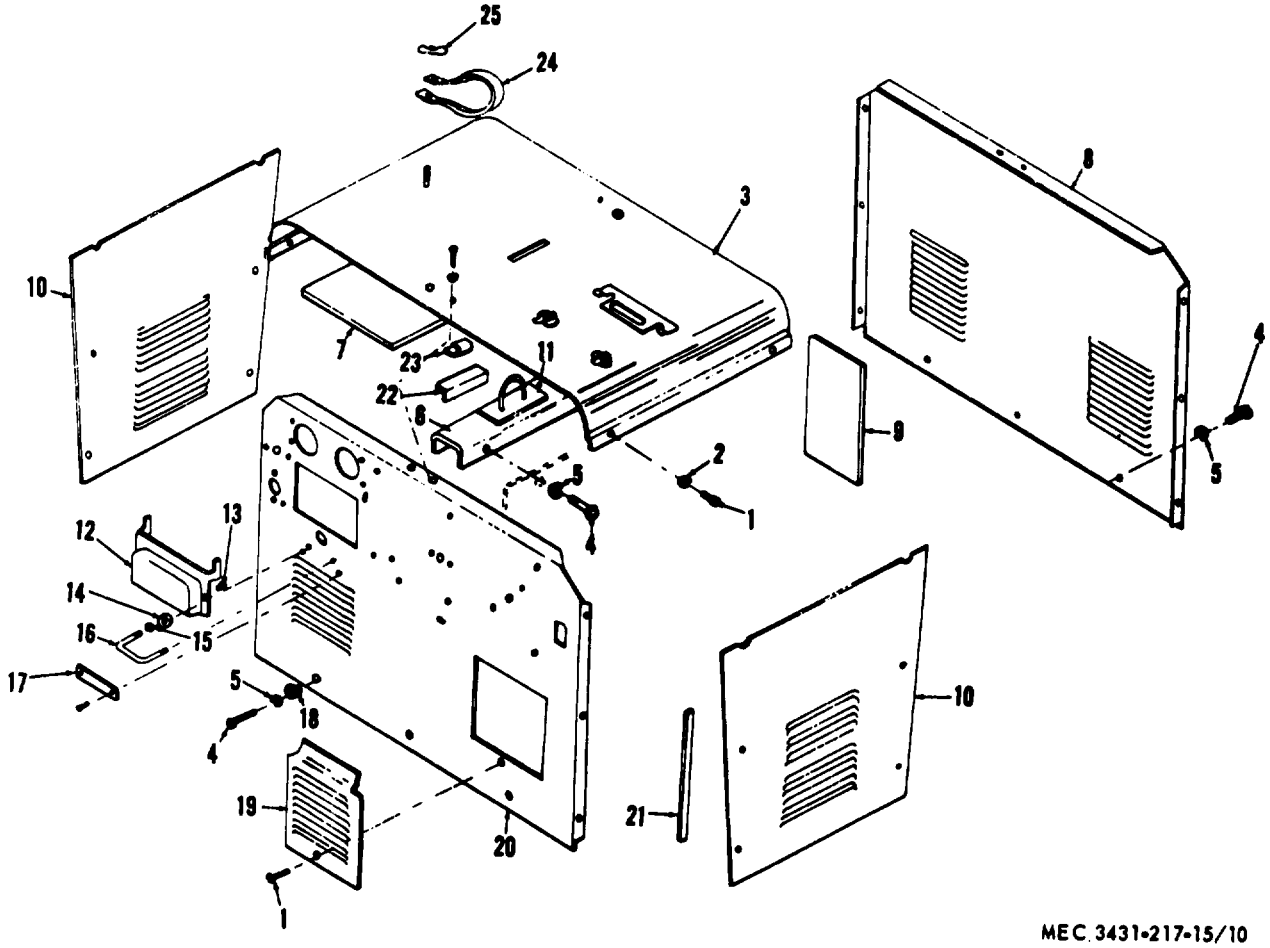
The welding machine is enclosed in a sheet metal housing. Removable louvered doors and end panels provide access to the motor-generator and components. Sheet metal panels and a top cover complete the housing assembly.

54. Housing, Doors, Cover, and Panels

a. Removal.

(1) Remove remote control assembly (para 9).
(2) Disconnect ground and electrode cables (para 9).
(3) Remove and disassemble the housing, doors, cover, and panels as illustrated in figure 10.

b. Cleaning, Inspection, and Repair.



1	Machine screw	9	Insulation	17	Nameplate
2	Lockwasher	10	End plate	18	Grommet
3	Top cover	11	Rubber seal	19	Access door
4	Self-tapping screw	12	Door	20	Panel
5	Lockwasher	13	Bumper	21	Rubber seal
6	Lifting bail	14	Hex nut	22	Mounting bracket
7	Insulation	15	Lockwasher	23	Plastic hanger
8	Back panel	16	Guard	24	Cable strap
				25	Wingnut

Figure 10. Housing, cover and panels, removal, disassembly, and installation.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.
(2) Inspect for cracks, breaks, or other damage.
(3) Repair or replace defective parts as necessary.

c. Installation.

(1) Reassemble and install housing, doors, cover and panels as shown in figure 10.
(2) Connect ground and electrode cables (para 9).
(3) Replace remote control assembly (para 9).

Section VI. MOTOR-GENERATOR

55. General

In normal use the motor-generator brushes wear and the spring tension is lessened causing arcing of the brushes and may cause pitting of the commutator bars.

56. Brushes

a. Removal. The worn brushes are removed by disconnecting the leads and removing them from the brush holders as shown in figure 11.

b. Installation.

(1) Brushes should be discarded and replaced

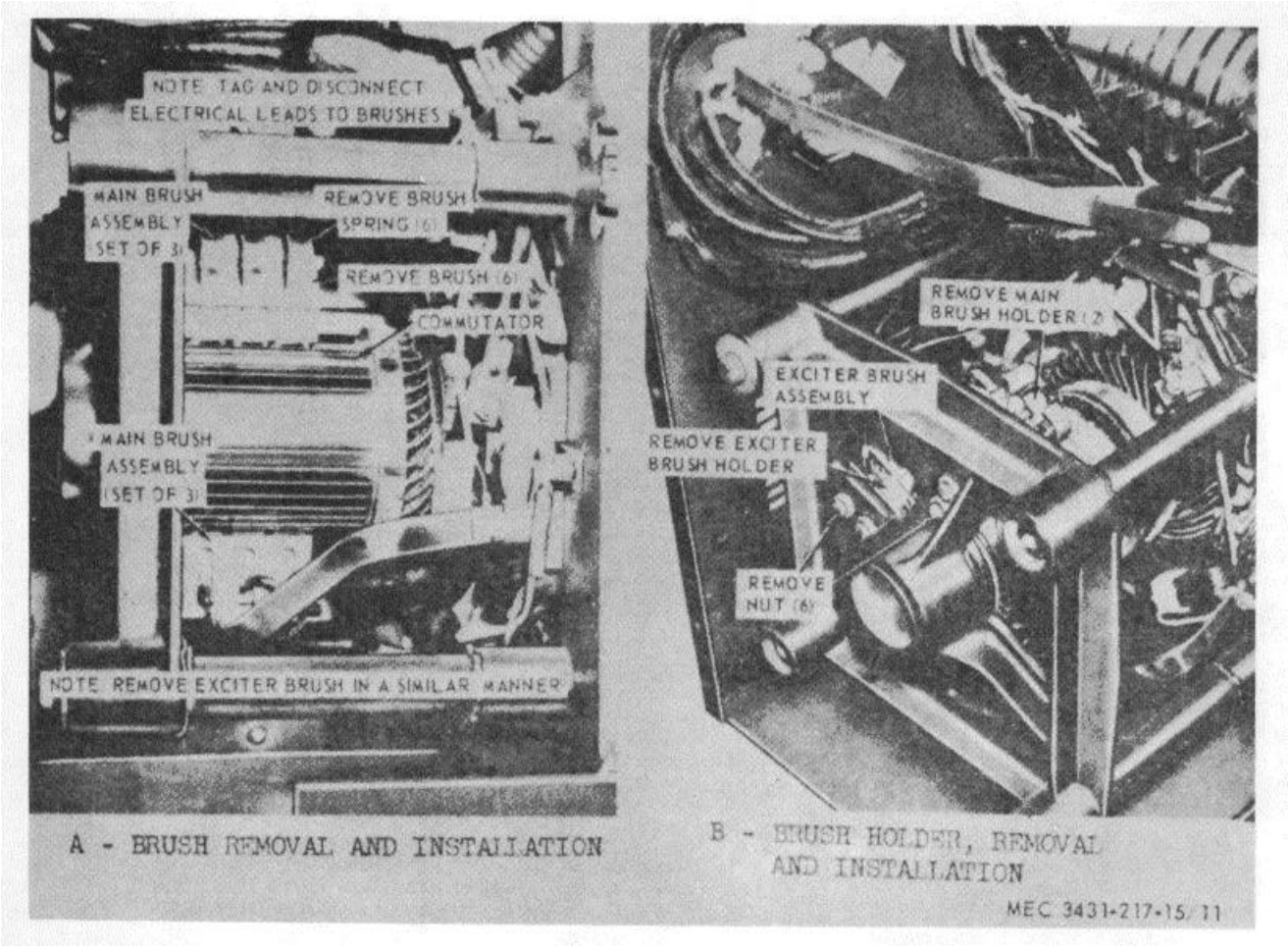


Figure 11. Brushes, brush springs, and holders, removal and installation.

when worn under 1 inch or before the limit of spring travel is reached. New brushes must be seated before they can be used.

(2) Place new brushes in position with a piece of medium grade sandpaper under the brush toe on the commutator.

(3) Hold the brush in its normal position and draw the sandpaper back and forth under the brush with the back (smooth side) of the sandpaper held closely in contact with the curve of the commutator. This will sand the brush down to the curve of the commutator.

(4) Blow out all carbon dust from commutator. Position brush springs and connect leads as shown in figure 11.

57. Brush Springs

a. Inspection.

(1) Check the brush springs to make sure they are holding brushes on the commutator with a firm, even pressure. Brush spring tension pressure should be approximately 32 ounces (plus or minus 2 ounces).

(2) Tension readings are taken with a spring-scale gauge at the instant the brush spring releases contact on the brush. Replace defective or weak springs as necessary.

b. Removal and Installation. Remove and install brush springs as shown in figure 11.

58. Brush Holders

a. Removal.

(1) Remove brushes and springs (paras 56 and 57).

(2) Remove brush holders as shown in figure 11.

b. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect for cracks, breaks, or other damage. Replace damaged or defective parts as necessary.

c. Installation.

(1) Install brush holders as shown in figure 11.

(2) Install brushes and brush springs (paras 56 and 57).

59. Cleaning Commutator

Clean commutator with a clean rag or, while running with a piece of fine grade sandpaper.

Important: **Never use emery cloth or emery paper to clean commutator.**

Warning: **Care should be exercised in cleaning commutator awhile running to prevent injury to personnel.**

Section VII. CONTROLS, INSTRUMENTS, WIRING AND COMPONENTS

60. General

All controls and instruments necessary for operation of the Model W300 MG welding machine are mounted on the front panel with the exception of the remote control assembly which is a separately contained unit.

61. Receptacle and Switch

a. General. The receptacle and switch (fig. 12) are used in conjunction with the remote control assembly. Both are mounted in a common mounting plate and are removed and installed in a similar manner. If either is found to be damaged or defective it should be replaced.

b. Removal and Installation.

(1) Remove mounting screws which attach receptacle and switch mounting plate to front panel.

(2) Tag and disconnect electrical lead.

(3) Remove attaching hardware and remove switch or receptacle.

(4) Install by reversing above procedure.

62. Voltmeter and Ammeter

a. General. The voltmeter and ammeter (fig. 12) are mounted in a common mounting and

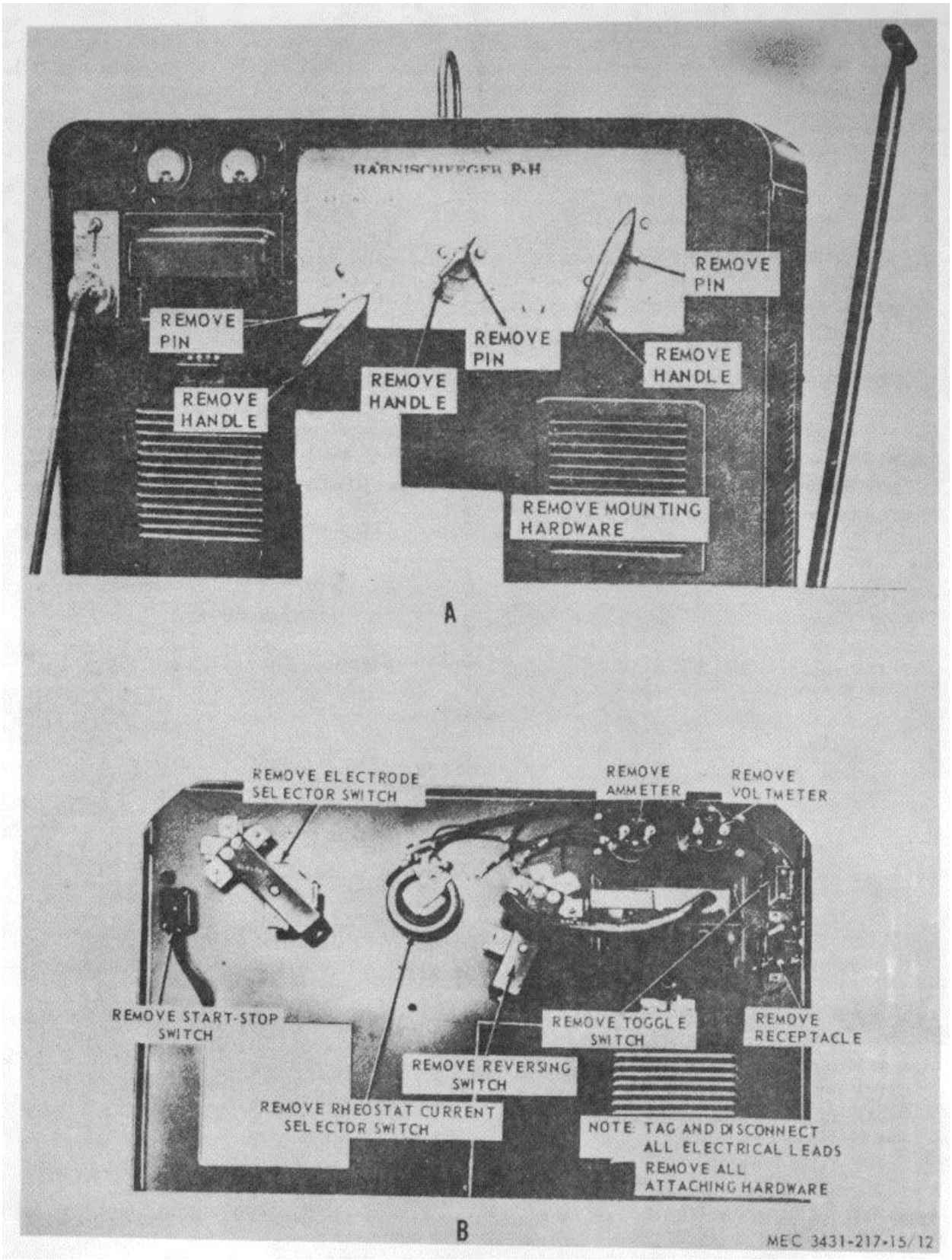


Figure 12. Controls and instruments, removal and installation.

are removed and installed in a similar manner. If either is found to be damaged or defective it should be replaced.

b. Removal and Installation.

(1) Remove screws which attach meter mounting assembly to front panel.

(2) Tag and disconnect electrical leads.

(3) Remove attaching hardware and remove meter.

(4) Install by reversing above procedure.

63. Terminal Blocks

a. Removal and Disassembly.

(1) Disconnect electrode and ground cables (para 9).

(2) Tag and disconnect all remaining electrical leads from terminal blocks.

(3) Remove attaching hardware and remove terminal block assemblies.

b. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved solvent and dry thoroughly.

(2) Inspect all insulation material for cracks or breaks. Replace any part found defective.

(3) Inspect all electrical terminals for corrosion, damaged threads, or any condition preventing good electrical contact. Replace damaged or defective parts as necessary.

c. Reassembly and Installation.

(1) Attach terminal block assemblies in position with attaching hardware.

(2) Attach electrical leads to proper terminals.

(3) Connect electrode and ground cables (para 9).

64. Electrode Selector and Polarity Reversing Switches

a. General. The electrode selector and polarity reversing switch are quite similar in construction and are removed and installed in the same manner.

b. Removal and Installation.

(1) Tag and disconnect electrical leads.

(2) Remove control handles from switches as shown in figure 12.

(3) Remove attaching screws and remove switches as shown in figure 12.

(4) Install by reversing above procedure.

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect contact blades for burnt or corroded condition.

(3) Replace a damaged or defective switch.

65. Current Selector

a. Removal and Installation.

(1) Tag and disconnect electrical leads.

(2) Remove control handle from current selector switch as shown in figure 12.

(3) Remove attaching screws and remove switch as shown in figure 12.

(4) Install by reversing above procedure.

b. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

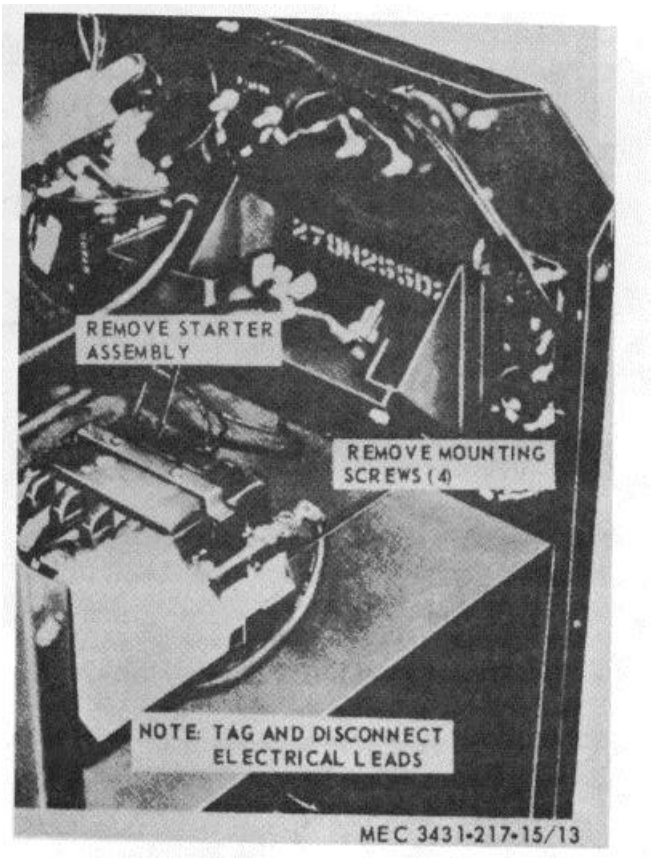


Figure 13. Magnetic starter, removal and installation

(2) Replace a damaged or defective current selector.

66. Magnetic Starter

a. Removal and Installation.

(1) Tag and disconnect electrical leads.

(2) Remove and install magnetic starter shown in figure 13.

b. Cleaning, Inspection, and Repair.

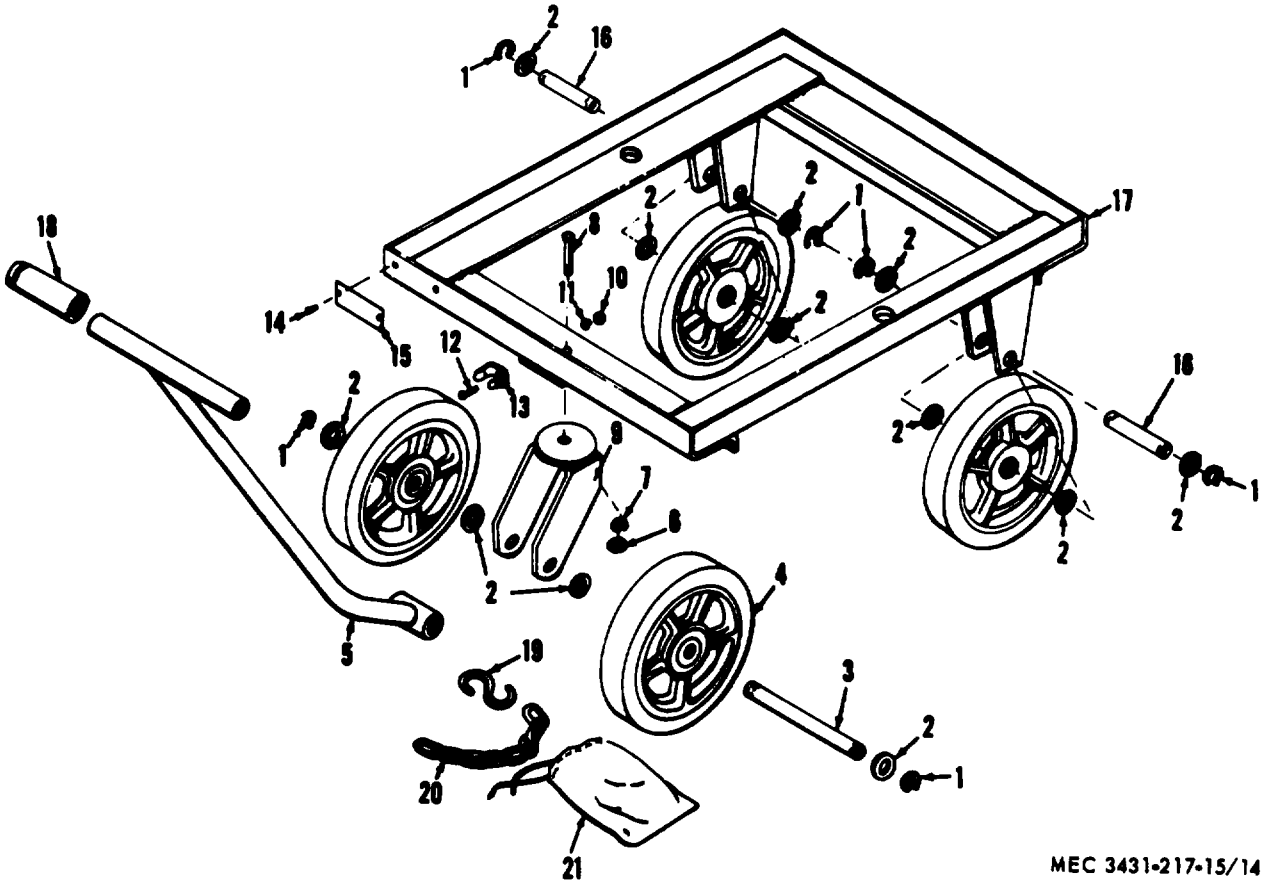
(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect all parts for cracks, breaks, and other damage. Replace a defective or damaged starter.

Section VIII. HANDTRUCK ASSEMBLY

67. General

The handtruck carrier should be inspected for cracks, breaks, or other damage. If a wheel is damaged it should be replaced. Cracks or breaks found in the frame, axles, or tongue may be welded, or, if necessary may be replaced.



1	Snap ring	8	Capscrew	15	Nameplate
2	Washer	9	Swivel fork	16	Axle, rear
3	Axle, front	10	Hex nut	17	Frame
4	Wheel	11	Lockwasher	18	Handle grip
5	Handle	12	Machine screw	19	S-hook
6	Hex nut	13	Spring clip	20	Chain
7	Lockwasher	14	Drive screw	21	Cloth bag

Figure 14. Handtruck assembly, exploded view.

68. Wheels and Tongue

a. Removal and Installation. Remove and install truck wheels and tongue as shown in figure 14.

b. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Replace damaged or defective parts as necessary.

CHAPTER 4

DEMOLITION, SHIPMENT, AND LIMITED STORAGE

Section I. DEMOLITION OF THE EQUIPMENT TO PREVENT ENEMY USE

69. General

When capture or abandonment of the welding machine to an enemy is imminent, the responsible unit commander must make the decision either to destroy the equipment or to render it inoperative. Based on this decision, orders are issued which cover the desired extent of destruction. Whatever method of demolition is employed, it is essential to destroy the same vital parts of all welding machines and all corresponding repair parts.

70. Demolition by Mechanical Means to Render the Equipment Inoperative

Use sledge hammers, crowbars, picks, axes, or other heavy tools which may be available to destroy the following:

a. Motor-generator.
b. Starter.
c. All Controls and Instruments.

71. Demolition by Explosives or Weapon's Fire

a. Explosives. Place as many of the following charges (fig. 15) as the situation permits and detonate them simultaneously with a detonating cord and a suitable detonator.

(1) One 1/2-pound charge below the generator assembly.
(2) One 1/2-pound charge behind the control panel.
(3) One 1/2-pound charge below the electric motor.

b. Weapon's Fire. Fire on the welding machine with the heaviest practical weapons available.

72. Other Demolition Methods

a. Scattering and Concealment. Remove all easily accessible parts such as brushes, starter, electrode and ground cables. Scatter them through dense foliage.

b. Burning. Pack rags, clothing, or canvas under, around and inside the welding machine. Saturate this packing with gasoline, oil, or diesel fuel and ignite.

c. Submersion. Totally submerge the welding machine in a body of water to provide water damage and concealment. Salt water will damage metal parts more than fresh water.

73. Training

All operators should receive thorough training in the destruction of the welding machine. Refer to FM 5-25. Simulated destruction, using all of the methods listed above, should be included in the operator training program. It must be emphasized in training that demolition operations are usually necessitated by critical situations when time available for carrying out destruction is limited. For this reason it is necessary that operators be thoroughly familiar with all methods of destruction of equipment, and be able to carry out demolition instructions without reference to this or any other manual.

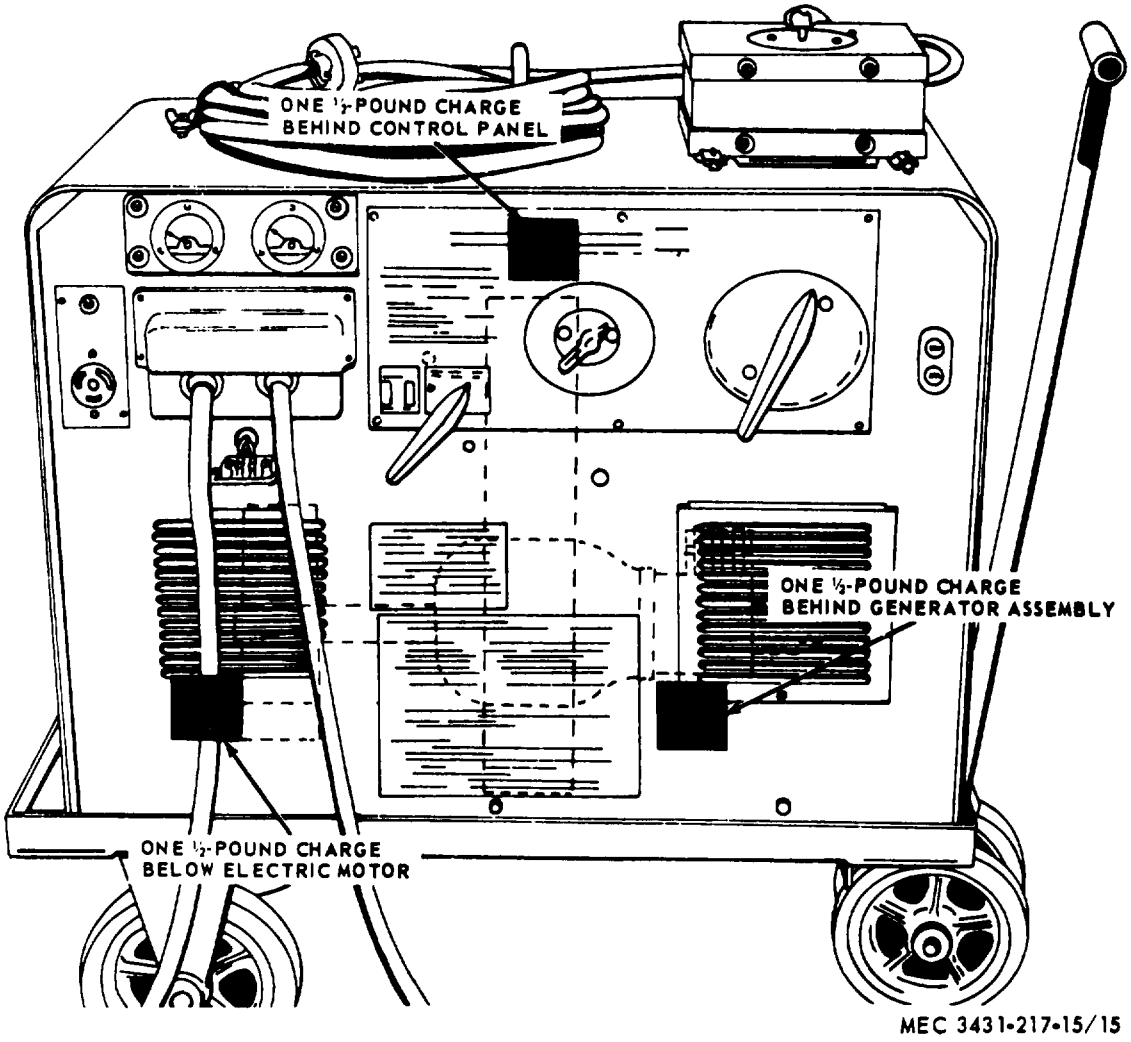


Figure 15. Placement of demolition charges

Section II. SHIPMENT AND LIMITED STORAGE

74. Preparation of Equipment for Shipment

a. General. Detailed instructions for the preparation of the welding machine for domestic shipment are outlined within this paragraph. Preservation will be accomplished in sequence that will not require the operation of previously preserved components.

b. Inspection. The welding machine will be inspected for any unusual conditions such as damage, rusting, accumulation of water, and pilferage. Inspection of individual components and assemblies will be as outlined on the "Preventive Maintenance Service, Quarterly, " paragraph 37.

c. Cleaning and Drying. All contamination will be removed from the welding machine by an approved method. Approved methods of cleaning, drying, types of preservatives, and methods of application are described in TM 38-230.

d. Painting. Paint all surfaces where the paint has been removed or damaged. Refer to TM 9-213 for detailed cleaning and painting instructions.

e. Depreservation Guide. DA Form 2258 (Depreservation Guide of Engineer Equipment).

(1) A properly annotated depreservation guide will be completed concurrently with preservation for each item of mechanical equipment. Any peculiar requirements will be outlined in the blank spaces on the form. The completed depreservation guide will be placed with the equipment in a water-proof envelope marked "Depreservation Guide, " and fastened in a conspicuous location on or near the operator's controls.

(2) Prior to placing equipment in operation or to the extent necessary for inspection depreservation of the item shall be performed as outlined on the depreservation guide.

f. Sealing of Openings. Openings that will permit the direct entry of water into the interior or the welding machine will be sealed with pressure-sensitive tape conforming to specification PPP-T-60, type III, class 1.

g. Exterior Surface. Coat exposed machined ferrous metal surfaces with type P-6 preservative conforming to Specification MIL-C-11796, class 3. If preservative is not available, cup grease may be used.

h. Marking. Will conform to MIL-STD-129.

i. Electrode and Ground Cables. Cables will be disconnected, vent holes sealed and all terminals wrapped and secured with type III, class I, pressure-sensitive tape conforming to Specification PPP-T-60.

j. Disassembly, Disassembled Parts and Basic Issue Items.

(1) Disassembly will be limited to the removal of parts and projecting components that tend to increase the overall profile of the welding machine and that which is subject to pilferage.

(2) Disassembled items will be packed with the publications in a suitable container and secured to the welding machine to prevent loss or pilferage.

Note. If packing is required to provide adequate protection against damage during shipment, refer to TM 38-230 for guidance in crate fabrication.

75. Loading Equipment for Shipment

Use appropriate materials handling equipment of sufficient capacity to lift the welding machine onto the carrier. Block and tie the unit to the carrier to assure that it will not move during transit.

76. Preparation of Equipment for Storage

a. Detailed instructions for preparation of the welding machine for limited storage are provided in paragraph 74. Limited storage is defined as storage not to exceed 6 months. Refer to AR 743-505.

b. Every effort should be made to provide covered storage for the welding machine. If this is impossible, select a firm, level, well-drained storage location, protected from prevailing winds. Position the welding machine on heavy planking. Cover the welding machine with a tarpaulin or other suitable waterproof covering and secure in a manner that will provide the welding machine maximum protection from the elements.

77. Inspection and Maintenance of Equipment in Storage

Every 90 days, the welding machine will be inspected as outlined in "Preventive Maintenance Services, Quarterly" (para 37) and operated long enough to assure complete lubrication of bearings. After each inspection period, the welding machine will be represerved as outlined in paragraph 76.

CHAPTER 5

DIRECT AND GENERAL SUPPORT AND DEPOT MAINTENANCE INSTRUCTIONS

Section I. GENERAL

78. Scope

a. These instructions are published for the use of direct and general support and depot maintenance personnel maintaining the P&H Model W300 MG Welding machine. They provide information on the maintenance of the equipment which is beyond the scope of the tools, equipment, personnel, or supplies normally available to using organizations.

b. The direct reporting of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting these improvements. This form will be completed in triplicate, using pencil, pen, or typewriter. The original and one copy will be forwarded direct to the Commanding General, U.S. Army Mobility Equipment Center, ATTN: SMOME-MMP, P. O. Drawer 58, St. Louis, Mo. 63166. One information copy will be provided to the individual's immediate supervisor.

c. Report all equipment improvement recommendations as prescribed by TM 38-750.

79. Record and Report Forms

For record and report forms .applicable to field and depot maintenance, refer to TM 38-750.

Note. Applicable forms, excluding Standard Form 46 which is carried by the operator, will be kept in a canvas bag mounted on the equipment.

Section II. DESCRIPTION AND DATA

80. Description

A general description of the welding machine, the location and description of the identification and instruction plates are contained in chapter 1.

81. Tabulated Data

a. General. This paragraph contains all the overhaul data pertinent to direct and general support and depot maintenance personnel. A wiring diagram (fig. 16) is also included.

b. Generator Classification and Rating.

Rating ..... 300 amperes
Voltage 220/440
Phase..... 3 phase
Frequency ..... 60 cycle
Cooling ..... Fan
Lubrication ..... Sealed bearings
Duty classification 60%
Degree of enclosure ..... Full
Drive ..... Direct
Type..... Induction motor
Temperature rise..... 50°C. (Centigrade)

c. Exciter Classification and Rating.

Type..... Self-excited
Rated speed..... 3,500 rpm (revolutions per minute)
Field winding..... Shunt
Cooling ..... Fan
Duty classification 60%
Degree of enclosure..... Full
Temperature rise ..... 50°C
Mounting..... Integral

d. Generator Repair and Replacement Standard.

(1) Type of winding--armature.

Number of poles	2
Shots per core	38
No.	(160 pieces
Lamination	(0.025 inches thick
Diameter	7.5
Bars	38
Coils	38-2 Cond/coil
Turns	1
Wire	No. 61/2
Wedge form	Rectangular
Span	18 and 20 slots

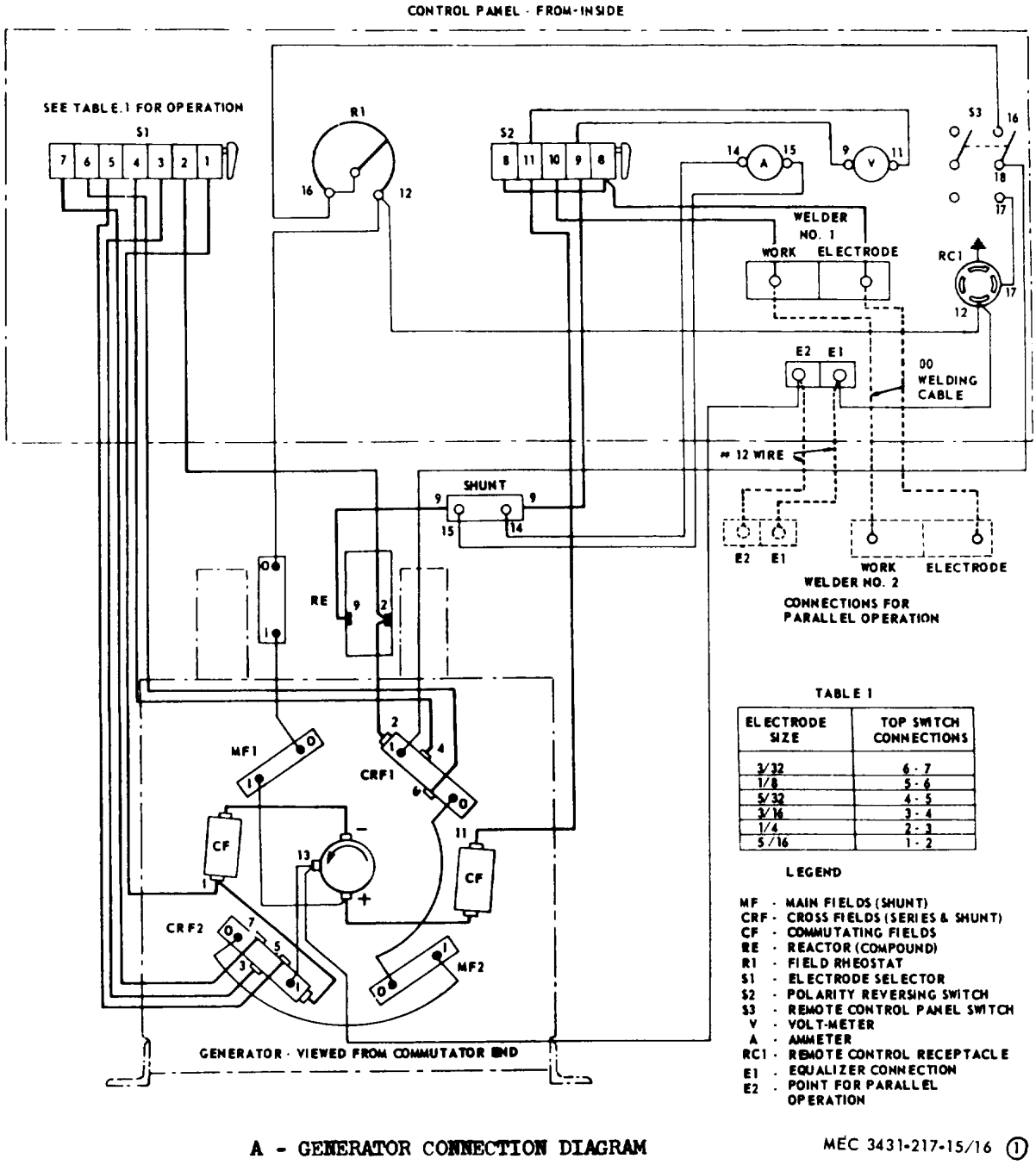
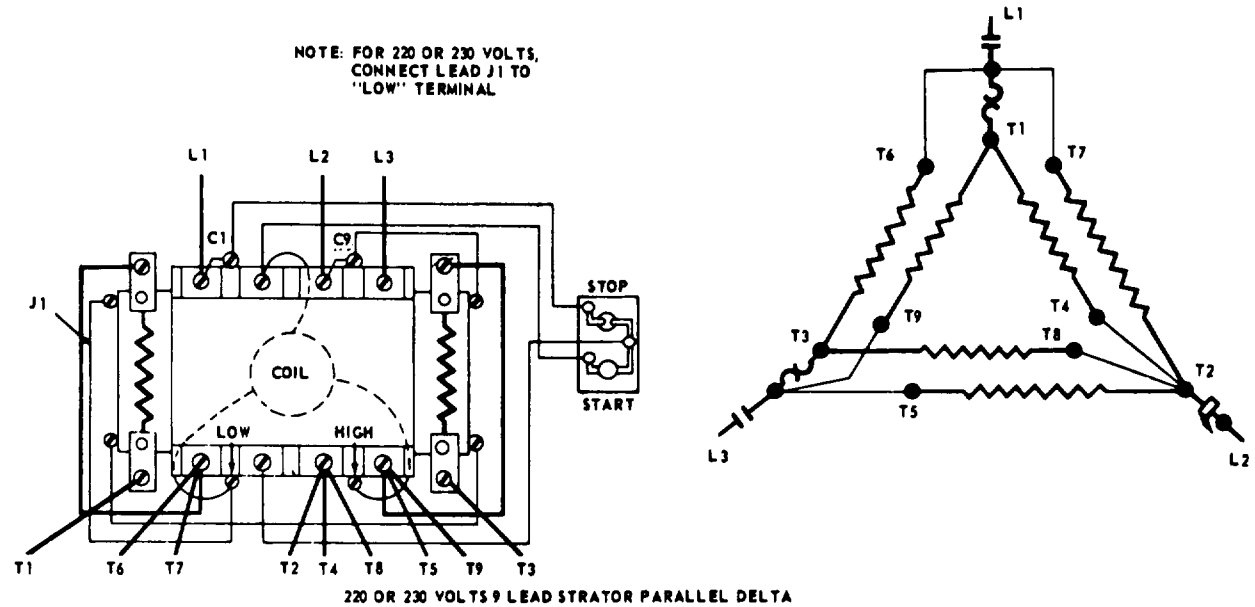
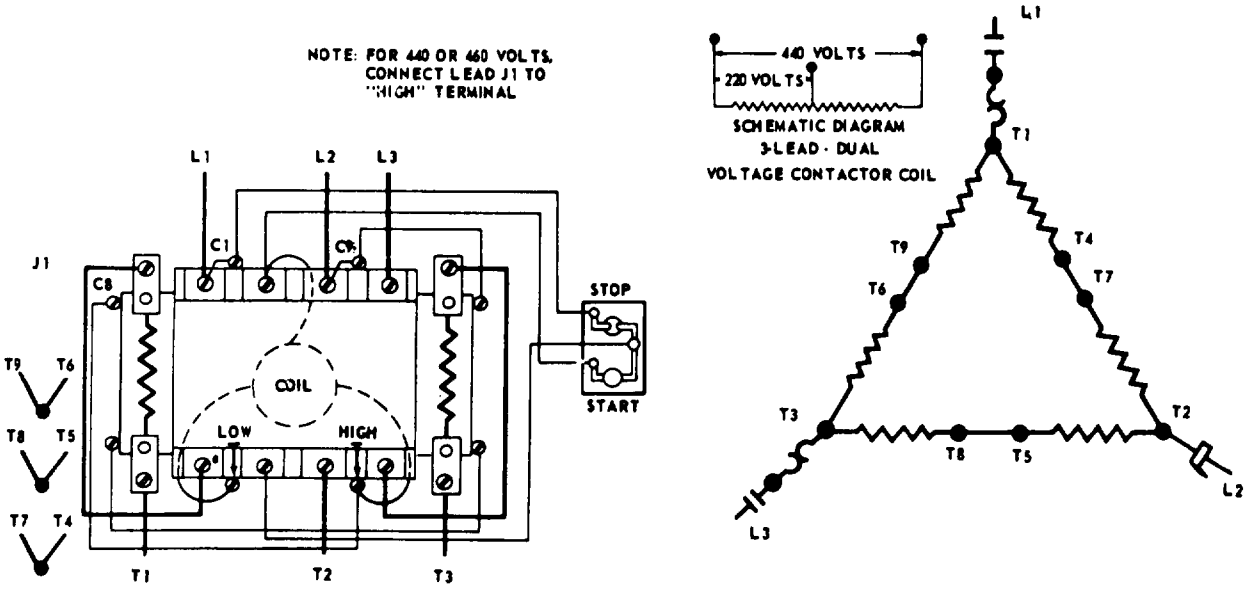


Figure 16. Electrical wiring diagrams.



220 OR 230 VOLTS 9 LEAD STRATOR PARALLEL DELTA



440 OR 460 VOLTS 9 LEAD STRATOR SERIES DELTA

L1
L2 3 PHASE POWER INPUT
L3

C1 - CONTACTOR CONTROL

J1 - JUMPER LEAD FOR 220/440 OPERATION CONTACTOR COIL

C9 - CIRCUIT TERMINAL

T1 - THRU T9 - INDUCTION MOTOR STATOR WINDING LEADS

OL - CONTACTOR OVERLEAD RELAY CONTACT

B - MOTOR AND STARTER DIAGRAM MEC 3431-217-15/16 (2)

Figure 16-Continued.

Groups 38
Pounds..... 13.5 lb. (coils)

(2) Type of winding-shunt.

Poles.....2 main, 2 cross
Used with arm 2100F43
Volts.....7 min 14 max 2.5 min 6 max
Amps 6.8 13.5 6.8 13.5
Turns 250 112
Wire.....No. 13 1/2 rd No. 13 1/3 rd
Pounds ..... 4.72 lb. 2.05 lb.

(3) Type of winding-Stator.

Volts.....220/440
Phase..... 3
Cycles..... 60
Poles..... 2
RPM.....3500
Slots..... 48
Turns ..... 12 per coil

Wire.....No. 17 1/2 heavy
Coils.....48 total
Pounds..... 14.8 lb. (coils)

e. Nut and Bolt Torque Data.

Table 4. Torque Wrench Tensions

Diameter	Foot-pounds
3/8 in.	60-70
7/16 in.	75-85
1/2 in.	95-105
9/16 in.	125-135
5/8 in	150-160
11/16 in.	195-200
¾ in.	210-230
3/16 in.	230-250
7/8	245-275
1 in	285-315
1 1/8	325-250

f. Repair and Replacement Standards. Table 5 lists manufacturer's sizes, tolerances, desired clearances, and maximum allowable wear and clearances.

Table 5. Repair and Replacement, Standards

Component	Manufacturer's dimensions and tolerances in inches		Desired clearance		Maximum allowable wear and clearance
	Minimum	Maximum	Minimum	Maximum	
Bearing (motor end)	I.D. 1.7717 in.-.0005 in. O.D. 3.9370 in.-.0006 in.	+ .0000 in. + .0000 in.			
Bearing (generator end)	I.D. 1.1811 in.-.0004 in. O.D. 2.8346 in.-.0005 in.	+ .0000 in. + .0000 in.	N/A-Because bearings are cushion mounted		
Shaft seats (motor end) for (generator)	1.7718 in.	1.7721 in.			
Bearing (end)	1.1812 in.	1.1815 in.			

CHAPTER 6

GENERAL MAINTENANCE INSTRUCTIONS

Section I. SPECIAL TOOLS AND EQUIPMENT

82. Special Tools and Equipment

No special equipment is required by direct and general support and depot maintenance personnel for performing maintenance on the welding machine.

83. Direct and General Support and Depot Maintenance Repair Parts

Direct and general support and depot maintenance repair parts are listed in appendix IV.

84. Specially Designed Tools and Equipment

No specially designed tools or equipment are required by direct and general support and depot maintenance personnel performing maintenance on the welding machine.

Section II. TROUBLESHOOTING

85. General

This section provides information useful in diagnosing and correcting unsatisfactory operation or failure of the welding machine or its components.

Each trouble symptom stated is followed by a list of probable causes of trouble. The possible remedy recommended is described opposite the probable cause.

86. Weldering Will Not Start (Starter Not Operating)

Probable cause	*Possible remedy*
Defective operating coil	Replace (para 92).

87. Starter Chatters

Probable cause	*Possible remedy*
Power supply inadequate	Provide power supply which will provide adequate voltage under load.
Low line voltage	Check power source and increase voltage.

88. Welder Will Not Start

Probable cause	*Possible remedy*
Power source line circuit single-phased	Replace fuse; repair open line.
Starter single-phased	Check motor phase voltages.
Open circuit in windings	Repair or replace stator (para 93).

89. Welder Starts but Will Not Deliver Welding Current

Probable cause	*Possible remedy*
Series field and armature circuit open	Check with test lamp or bell ringer.
Wrong driving speed	Check generator nameplate against speed of motor.
Dirt grounding field coils	Clean and re-insulate (para 93).

CHAPTER 7

REPAIR INSTRUCTIONS

Section I. CONTROL PANEL AND COMPONENTS

90. Control Panel Assembly

a. General. The control panel assembly is a part of the machine housing and contains all controls, switches, and gauges of the welding machine.

b. Removal. Remove control panel (para 54).

c. Disassembly. Disassemble control panel in numerical sequence shown in figure 17.

d. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Clean switches with compressed air. Inspect panel for dents and cracks. Straighten panel if dented or warped. Replace a damaged or defective panel as necessary.

(3) Inspect meters and gauges for cracked or defaced dials. Replace damaged or defective parts.

(4) Inspect electrical terminals and wiring for corrosion and general condition. Replace any defective parts.

(5) Inspect rheostat and switches for pitted or corroded contacts and general condition. Replace damaged or defective parts as necessary.

e. Reassembly. Reassemble control panel assembly in reverse order of numerical sequence as shown in figure 18.

f. Installation. Install control panel (para 54).

91. Electrode Selector and Polarity Reversing Switches

a. Disassembly. Disassemble the electrode selector and polarity reversing switches as shown in figure 17.

b. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect contact blades for burnt or corroded condition. Replace damaged or defective parts as necessary.

c. Reassembly. Reassemble the electrode and polarity reversing switches in reverse order as shown in figure 17.

92. Starter Assembly

a. Disassembly. Disassemble the starter in numerical sequence as shown in figure 18.

b. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect all parts for defects and damage. Replace or repair defective or damaged parts.

c. Reassembly. Reassemble starter in reverse order of the numerical sequence shown in figure 18.

Section II. MOTOR-GENERATOR

93. General

The motor-generator is an electric alternating current unit with a direct current output. The unit is rated at a nominal 300 amperes at a 60 percent duty cycle. The motor-generator set should be placed on a sturdy bench, at a convenient height for disassembly, and located so a suitable lifting device can be operated over the unit. Vertical assembly is recommended for the convenience it provides, and minimizes the danger of bearing damage.

94. Removal

a. Remove the welding machine housing (para 54).
b. Remove attaching hardware and remove motor-generator from truck frame.

95. Disassembly

Disassemble the motor-generator in numerical sequence as shown in figure 19.

Note. The rubber air seals between the fan housing and the magnet frame must be placed when reassembling to assure proper air flow. The reactor air baffle must be replaced to provide proper cooling of the coils.
Remove the armature and fan assembly as a unit, taking special care to avoid damaging the commutator end bearing. If bearings need replacing a bearing puller that presses against the inner race should be used. If it is necessary to remove a bearing by pulling on the outer race, it is imperative that a new bearing be replaced. If it is necessary to replace a coil, preheating the magnet frame to 1500 F. maximum, will help to loosen the varnish and make disassembly easier. The coil and pole piece assembly can be pushed directly out of the magnet frame. It will be necessary, before reassembly, to clean all varnish off the pole piece and off the internal dovetail of the magnet frame.

96. Cleaning, Inspection, and Repair

a. Clean all parts in an approved cleaning solvent and dry thoroughly. Loose dirt can be removed from the windings with compressed air or vacuum. Oil or grease mixed with dirt can be dissolved with an approved cleaning solvent and then blown out. After cleaning, dry by heating at 900 to 1000 C. for 2 hours.

b. The commutator should be cleaned and, if worn in grooves, it should be turned down smooth, and the mica undercut.

c. Inspect brushes and brush holders. Inspect bearings for wear and general condition. Inspect studs and terminals for burned or otherwise damaged threads. Repair or replace defective parts as necessary.

97. Reassembly

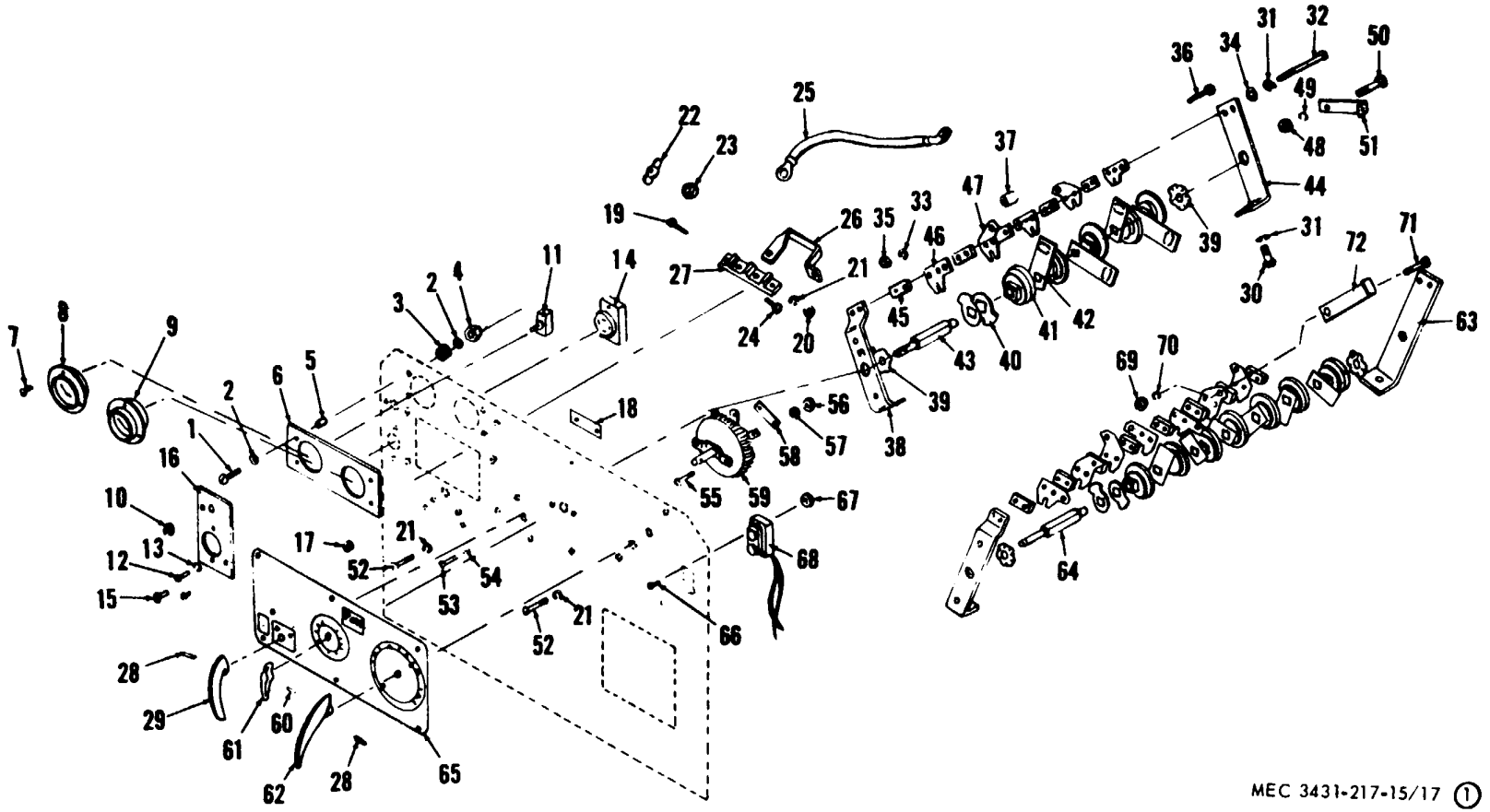
Reassemble the motor-generator in reverse order of the numerical sequence shown in figure 19.

Note. An arbor press should be used when replacing bearings. Always press on the inner race. Always replace rubber bearing girdle when replacing bearings.

When replacing brush holders, make certain the insulated bushings are in their correct location. Reseat all brushes after assembly.

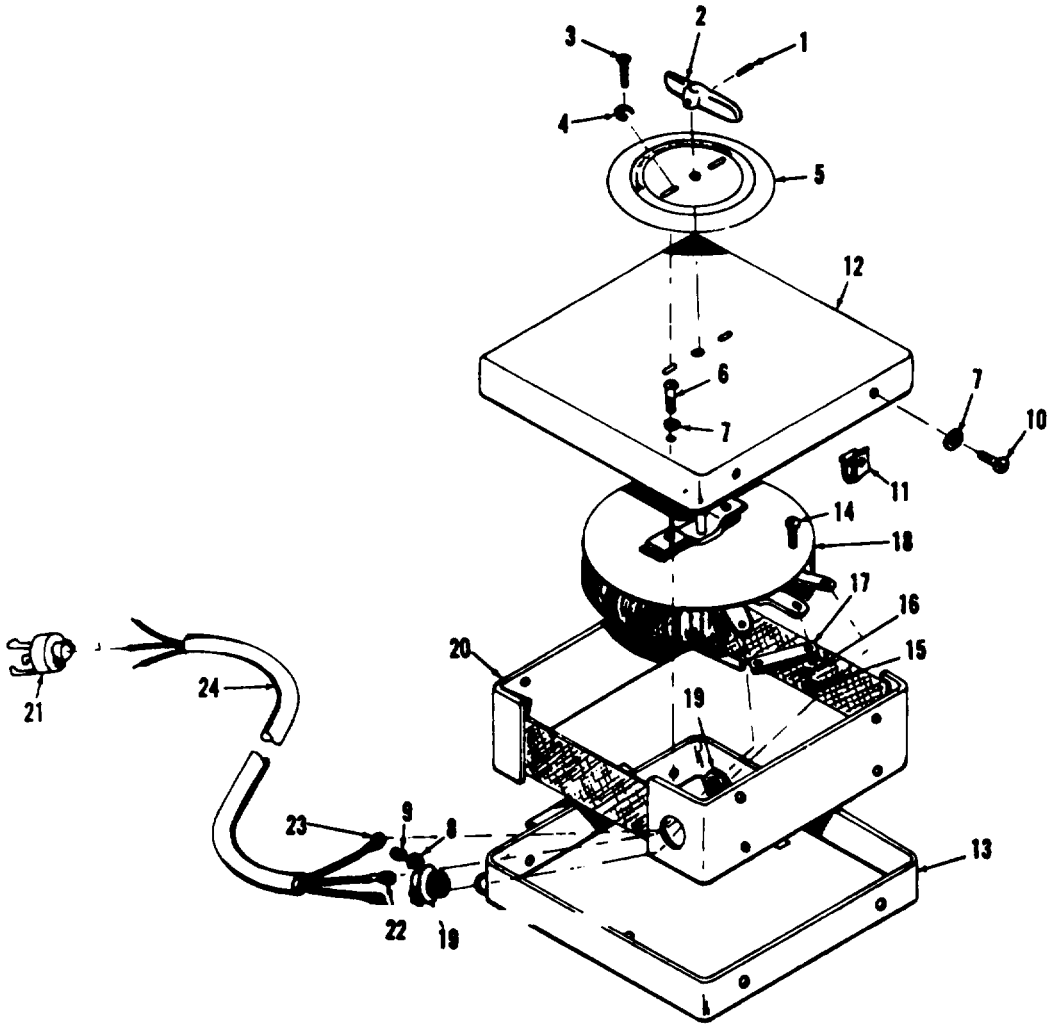
98. Installation

a. Install motor-generator on truck with attaching hardware.
b. Install welding machine housing (para 54).
c. Re-check all wiring before starting welding machine.



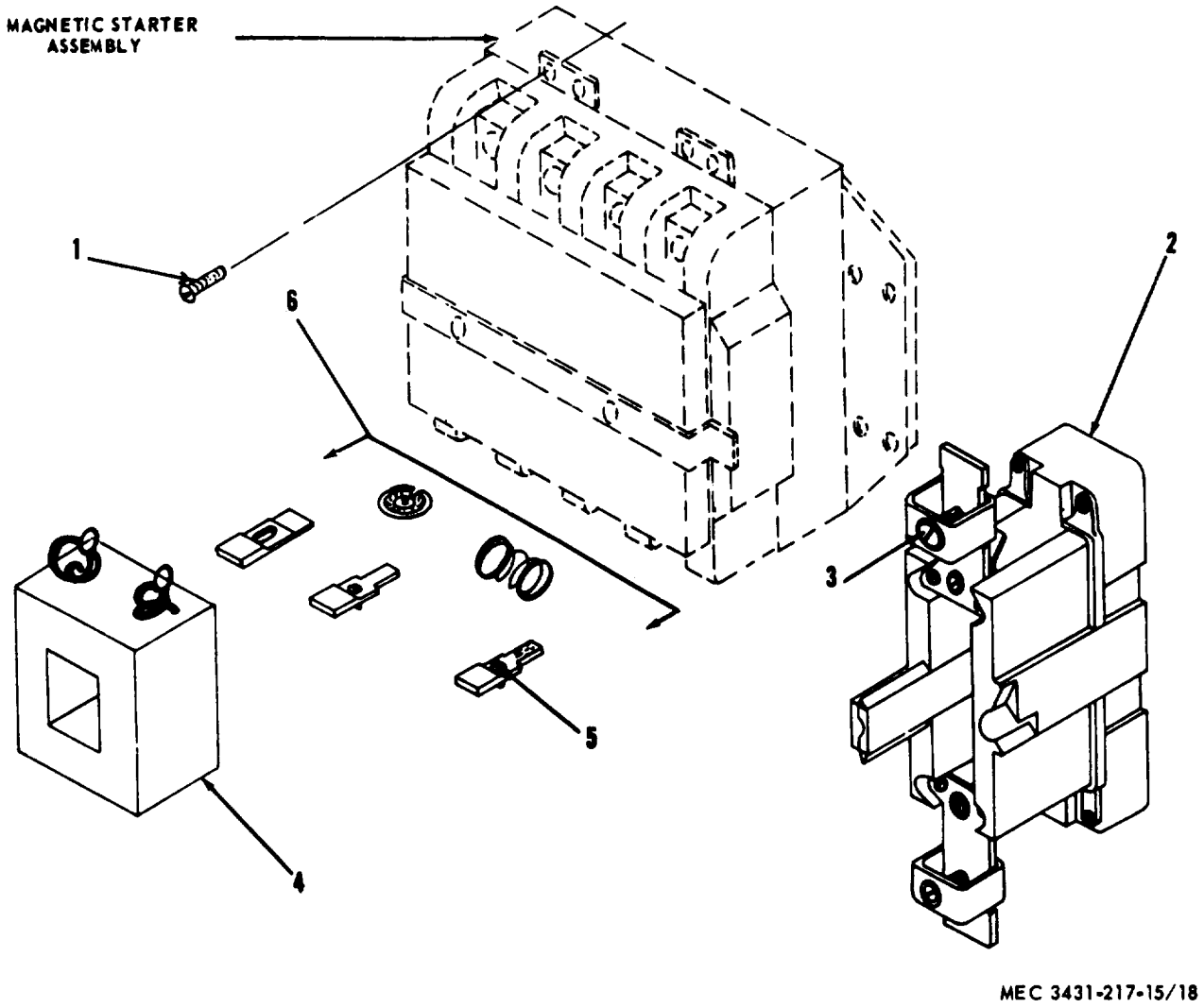
1	Machine screw	13	Lockwasher	25	Cable	37	Spacer	49	Lockwasher	61	Handle
2	Plain washer	14	Receptacle	26	Bus bar	38	Front plate	50	Capscrew	62	Handle
3	Spacer	15	Rivet	27	Terminal block	39	Spring washer	51	Bus bar	63	Back plate
4	Stop nut	16	Nameplate	28	Pin	40	Spacer	52	Phillips head screw	64	Shaft
5	Grommet	17	Bushing	29	Handle	41	Shaft insulation	53	Machine screw	65	Nameplate
6	Mounting plate	18	Junction block	30	Capscrew	42	Movable blade	54	Lockwasher	66	Machine screw
7	Machine screw	19	Machine screw	31	Lockwasher	43	Shaft	55	Machine screw	67	Hex nut
8	Voltmeter	20	Hex nut	32	Capscrew	44	Back plate	56	Hex nut	68	Stop-start-switch
9	Ammeter	21	Lockwasher	33	Lockwasher	45	Insulation spacer	57	Lockwasher	69	Hex nut
10	"C" washer	22	Wingnut	34	Plain washer	46	Contact blade	58	Bus bar	70	Lockwasher
11	Switch	23	Jamnut	35	Hex nut	47	Contact blade	59	Rheostat	71	Capscrew
12	Machine screw	24	Capscrew	36	Capscrew	48	Hex nut	60	Pin	72	Bus bar

Figure 17. Control panel assembly, exploded view.



1	Pin	9	Lockwasher	17	Jumper
2	Handle	10	Self-tapping screw	18	Rheostat
3	Machine screw	11	Speednut	19	Connector
4	Lockwasher	12	Cover	20	Housing
5	Data plate	13	Bottom cover	21	Plug
6	Machine screw	14	Machine screw	22	Terminal
7	Plain washer	15	Hex nut	23	Terminal
8	Hex nut	16	Lockwasher	24	Cable

Figure 17.-Continued.



1	Machine screw	4	Coil
2	Overload block	5	Machine screw
3	Machine screw	6	Contacts

Figure 18. Magnetic starter, exploded view.

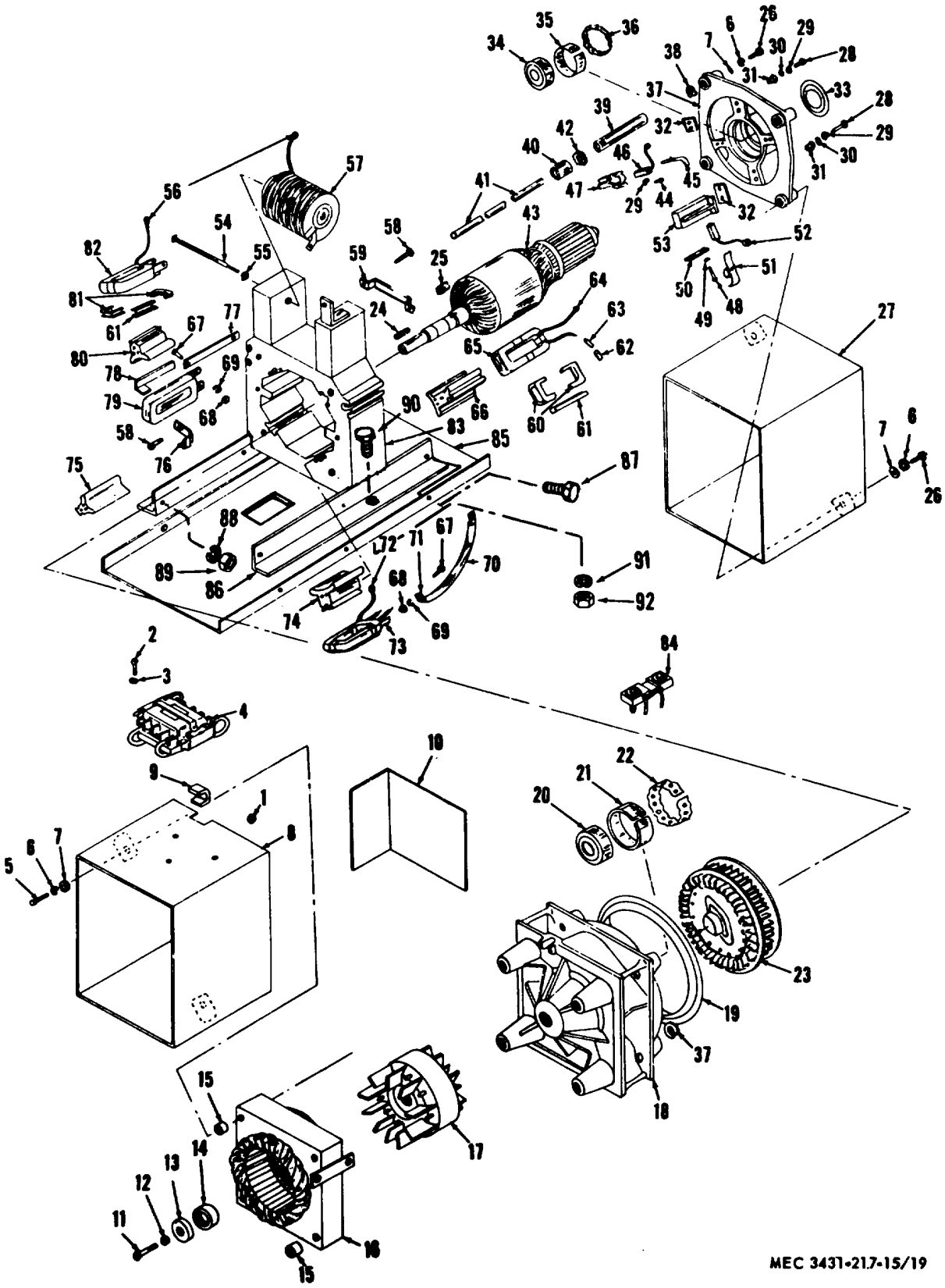


Figure 19. Motor-generator, exploded view.

1 Stop nut
2 Machine screw
3 Shakeproof washer
4 Starter assembly
5 Bolt
6 Lockwasher
7 Washer
8 Air tube
9 Grommet
10 Baffle
11 Bolt
12 Lockwasher
13 Washer
14 Spacer
15 Spacer
16 Stator assembly
17 Rotor assembly
18 Fan housing
19 Air seal
20 Bearing, motor end
21 Bearing sleeve
22 Bearing griddle
23 Fan
24 Key
25 Key
26 Bolt
27 Air tube
28 Bolt
29 Lockwasher
30 Plain washer
31 Insulation bushing
32 Insulation plate
33 Dust cover
34 Bearing, generator end
35 Bearing, sleeve
36 Bearing, griddle
37 Bearing housing
38 "C" washer
39 Pipe spacer
40 Pipe coupling
41 Tie rod
42 Locknut
43 Armature assembly
44 Machine screw
45 Brush spring
46 Exciter brush
47 Brush holder
48 Bolt
49 Lockwasher
50 Bus bar
51 Brush spring
52 Main brush
53 Brush holder
54 Capscrew
55 Iockwasher
56 Terminal
57 Reactor core and coil assembly
58 Screw
59 Lead clamp
60 Field coil insulation
61 Side insulation
62 Sleeving
63 Connector
64 Terminal
65 Main coil assembly
66 Pole piece (main No. 1)
67 Machine screw
68 Hex nut
69 Lockwasher
70 Sleeving
71 Bus bar
72 Terminal
73 Cross field coil No. 2
74 Pole piece (cross No. 2)
75 Pole piece (main No. 2)
76 Clamp
77 Bus bar
78 Collar assembly
79 Commutator coil
80 Pole piece (cross No. 1)
81 Field coil insulation
82 Cross field coil No. 1
83 Magnet frame
84 Shunt
85 Base plate
86 Angle (2)
87 Bolt (6)
88 Lockwasher (6)
89 Nut (6)
90 Bolt (2)
91 Lockwasher (2)
92 Nut (2)

Figure 19-Continued.

APPENDIX I

REFERENCES

1. Dictionaries of Terms and Abbreviations

AR 320-5	Dictionary of United States Army Terms.
AR 320-50	Authorized Abbreviations and Brevity Codes.

2. Fire Protection

SB 5-111	Extinguisher, Fire, Monobromotrifluormethane (CB:Br) Charged.
TM 5-687	Repair and Utilities: Fire Protection Equipment and Appliances: Inspections, Operations, and Preventive Maintenance.

3. Operating Instructions

4. Painting

TM 9-213	Painting Instructions for Field Use.

5. Preventive Maintenance

AR 750-5	Organization, Policies and Responsibilities for Maintenance Operation.
TB ENG 347	Winterization Techniques for Engineer Equipment.
TM 5-764	Electric Motor and Generator Repair.
TM -207	Operation and Maintenance of Ordnance Material in Extreme Cold (0° to -65°F.).
TM 9-6140-200-15	Operation and Organizational, Field and Depot Maintenance: Storage Batteries, Lead-Acid Type.
TM 38-750	Army Equipment Record Procedures.

6. Publication Indexes

DA Pam 108-1	Index of Army Motion Pictures, Film, Strips, Slides, Phono-Recordings.
DA Pam 310-1	Index of Administrative Publications.
DA Pam 310-2	Index of Blank Forms.
DA Pam 310-3	Index of Doctrinal, Training, and Organizational Publications.
DA-Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 4, 6, 7, 8, and 9), Supply Bulletins, Lubrication Orders, and Modification Work Orders.
DA Pam 310-5	Index of Graphic Training Aids and Devices.
DA Pam 310-25	Index of Supply Manuals-Engineer Type Items.

7. Shipment and Limited Storage

AR 743-505	Limited Storage of Engineers' Mechanical Equipment.
TM 38-230	Preservation, Packaging, and Packing of Military Supplies and Equipment.

8. Supply Publications

FSC C9100-IL	FSC Group 91; Fuels, Lubricants, Oils, and Waxes.

9. Training Aids

FM 5-25	Explosives and Demolitions.
FM 215	Military Training Management.
FM 21-6	Techniques of Military Instruction.
FM 21-30	Military Symbols.

APPENDIX II

MAINTENANCE ALLOCATION. CHART

Section I. INTRODUCTION

1. General

This appendix contains the explanations of all the maintenance and repair functions authorized the various maintenance levels. Section II MAC (maintenance allocation chart) designates overall responsibility for the performance of maintenance operations. The implementation of maintenance tasks upon the end item or component will be consistent with the assigned maintenance operations.

2. Maintenance Operations

Maintenance is any section taken to keep material in a serviceable condition or to restore it to serviceability when it is unserviceable. Maintenance of material includes the following:

a. Service. Operations required periodically to keep the item in proper operating condition, i.e., to clean, preserve, drain, paint, and replenish fuel, lubricants, hydraulic, and deicing fluids or compressed air supplies.

b. Adjust. Regulate periodically to prevent malfunction. Adjustments will be made commensurate with adjustment procedures and associated equipment specifications.

c. Aline. Adjust two or more components of an electrical or mechanical system so that their functions are properly synchronized or adjusted.

d. Calibrate. Determine, check, or rectify the graduation of an instrument, weapon, or weapons system or components of a weapons system.

e. Inspect. Verify serviceability and detect incipient electrical or mechanical failure by close visual examination.

f. Test. Verify serviceability and detect incipient electrical or mechanical failure by measuring the mechanical or electrical characteristics of the item and comparing those characteristics with authorized standards. Test will be made commensurate with test procedures and with calibrated tools and/or test equipment referenced on the MAC.

g. Replace. Substitute serviceable components, assemblies, and subassemblies for unserviceable counter parts or remove and install the same item when required for the performance of other maintenance operations.

h. Repair. Restore to a serviceable condition by replacing unserviceable parts or by any other action required using available tools, equipment, and skills to include welding, grinding, riveting, straightening, adjusting, and facing.

i. Overhaul. Restore an end item to completely serviceable condition as prescribed by serviceability standards developed and published by national maintenance points having maintenance responsibility for the item. This is accomplished through employment of the technique of "Inspection and repair only as necessary" (IROAN). Maximum use combined with minimum disassembly during overhaul, "overhaul" may be assigned to any level of maintenance except organizational, provided the time, tools, equipment, repair parts authorization, and technical skills are available at that level. Normally, overhaul as applied to end items, is limited to depot maintenance level.

j. Rebuild. Restore to a condition comparable to new, by disassembling to determine the condition of each component part and reassembly using serviceable, rebuilt, or new assemblies, subassemblies, and parts.

3. Explanation of Columns
(Sec II)

a. Functional Group Number. The functional group is a numerical group set up on a functional basis. The applicable functional grouping indexes (obtained from TB 750-93-1 Functional Grouping Codes) are listed on the MAC in the appropriate numerical sequence. These indexes normally are set up in accordance with their function and proximity to each other.

b. Component Assembly Nomenclature. This column contains the functional grouping index heading, subgroups heading, and a brief description of the part.

c. Essentiality. The essentiality. column reflects whether or not an assembly, or repair part, is combat essential to the tactical use of the end item. The letter E in this column indicates the Items are combat essential.

d. Maintenance Operations and Maintenance Levels. This column contains the various maintenance operations A through J service, adjust, etc. A symbol indicating the maintenance level placed in the appropriate column in lines with an indicated maintenance operation authorizes that level to perform the function. The symbol indicates the lowest level of maintenance responsible for performing the function, but does not necessarily indicate repair parts stockage at that level. Higher levels of maintenance are authorized to perform the indicated functions of lower levels. The symbol designation for. The various maintenance levels are as follows:

O/C-Operator or Crew

O -Organizational

DS -Direct Support

GS -General Support

D -Depot

Section II. MAINTENANCE ALLOCATION CHART

Functional group No.	Component assembly nomenclature	Essentiality	Maintenance operations and Maintenance levels										Note ref	
			A	B	C	D	E	F	G	H	I	J	K	L
			Service	Adjust	Align	Calibrate	Inspect	Test	Replace	Repair	Overhaul	Rebuild	T&TE rqmt	Remarks
10	FRONT AXLE													
1000	Front Axle Assembly								O					
	Tongue								O	O				
11	REAR AXLE													
1100	Rear Axle Assembly								O					
13	WHEELS AND TRACKS													
1311	Wheel Assembly								O					
15	FRAME, TOWING ATTACHMENTS, AND DRAWBARS													
1501	Frame Assembly								O	GS				
22	ACCESSORY ITEMS													
2202	Accessory Items													
	Remote control assembly								O	O				
	Cables								O	O				
	Holder, publication								O					
2210	Data Plates													
	Plate, data								DS					
	Plate, identification								O					
	Diagram, wiring: instruction sheet								O/C					

Functional group No.	Component assembly nomenclature	Essentiality	Maintenance operations and Maintenance levels										Note ref	
			A	B	C	D	E	F	G	H	I	J	K	L
			Service	Adjust	Align	Calibrate	Inspect	Test	Replace	Repair	Overhaul	Rebuild	T&TE rqmt	Remarks
26	ACCESSORIES, PUBLICATIONS													
2605	Publications													
	Publications								O/C					
44	WELDING EQUIPMENT													
4400	Arc Welders													
	Welder assembly		O/C					O		O	D			
4401	Rotor Assembly													
	Armature assembly							GS	GS	D				
	Armature, exciter							DS	DS					
4402	Stator Assembly													
	Stator assembly, motor							GS	GS	D				
	Coil set, exciter field							DS	DS					
	Coils, generator stator							GS	GS					
	Poles, generator								GS					
	Poles, exciter field								DS					
	Cable and wiring								GS	O				
4403	Brush Holder Assembly													
	Brushes								O					
	Bracket, main brush holder								GS					
	Brush holder assembles								O	O				
4405	Frame Support, Housing Carrier													
	Bearings, ball		O						GS					
	Frame assembly, generator								D					
	Covers								O					
4406	Ventilating, Cooling System													
	Fan, cooling								DS					
4407	Control Panels, Housing													
	Control box assembly								DS					
	Wiring								O					
	Meter; shunt; receptacle								O					
4408	Connecting Devices													
	Terminal assembly								O					
	Cable assembly								O	O				
	Bus bars								O					
4409	Protective Devices, Electrical													
	Thermostat								GS					
4410	Switching Control													
	Circuit 'breaker; switches		O											
	Starter, assembly									DS				
	Selector switch assembly								DS					
	Push button switch								DS					
4411	Resistor Components													
	Resistor							O	O					
	Rheostat								O					
76	FIRE FIGHTING EQUIPMENT COMPONENTS													
7603	Extinguisher, fire								O					

APPENDIX III
BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

1. General

Section II lists the accessories, tools, and publications required for maintenance and operation by the operator, initially issued with, or authorized for the Harnischfeger Model W300 MG Welding Machine.

2. Explanation of Columns Contained in Section II

a. Source Codes. The information provided in each column is as follows:

(1) *Materiel.* This column lists the basic materiel code number of the supply service assigned responsibility for the part. Blank spaces denote supply responsibility of the preparing agency. General Engineer Supply parts are identified by the letters GE in parentheses, following the nomenclature in the description column. Other basic materiel code numbers are -

9-Ordnance Materiel
10-Quartermaster Materiel

(2) *Source.* The selection status and source of supply for each part are indicated by one of the following code symbols:

(a) P-applied to high-mortality repair parts which are stocked in or supplied from the supply service depot system, and authorized for use at indicated maintenance level.

(b) PI-applied to repair parts which are low-mortality parts, stocked in or supplied from supply service depots, and authorized for installation at indicated maintenance level.

(c) X2-applied to repair parts which 50 are not stocked. The indicated maintenance echelon requiring such repair parts will attempt obtain them through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.

(3) *Maintenance.* The lowest maintenance level authorized to use, stock, install, or manufacture the part is indicated by the following code symbol:

O-Organizational Maintenance

(4) *Recoverability.* When no code is shown in the recoverability column the part is considered expendable.

b. Federal Stock Number. The Federal stock number will be shown in this column, and will be used for requisitioning purposes.

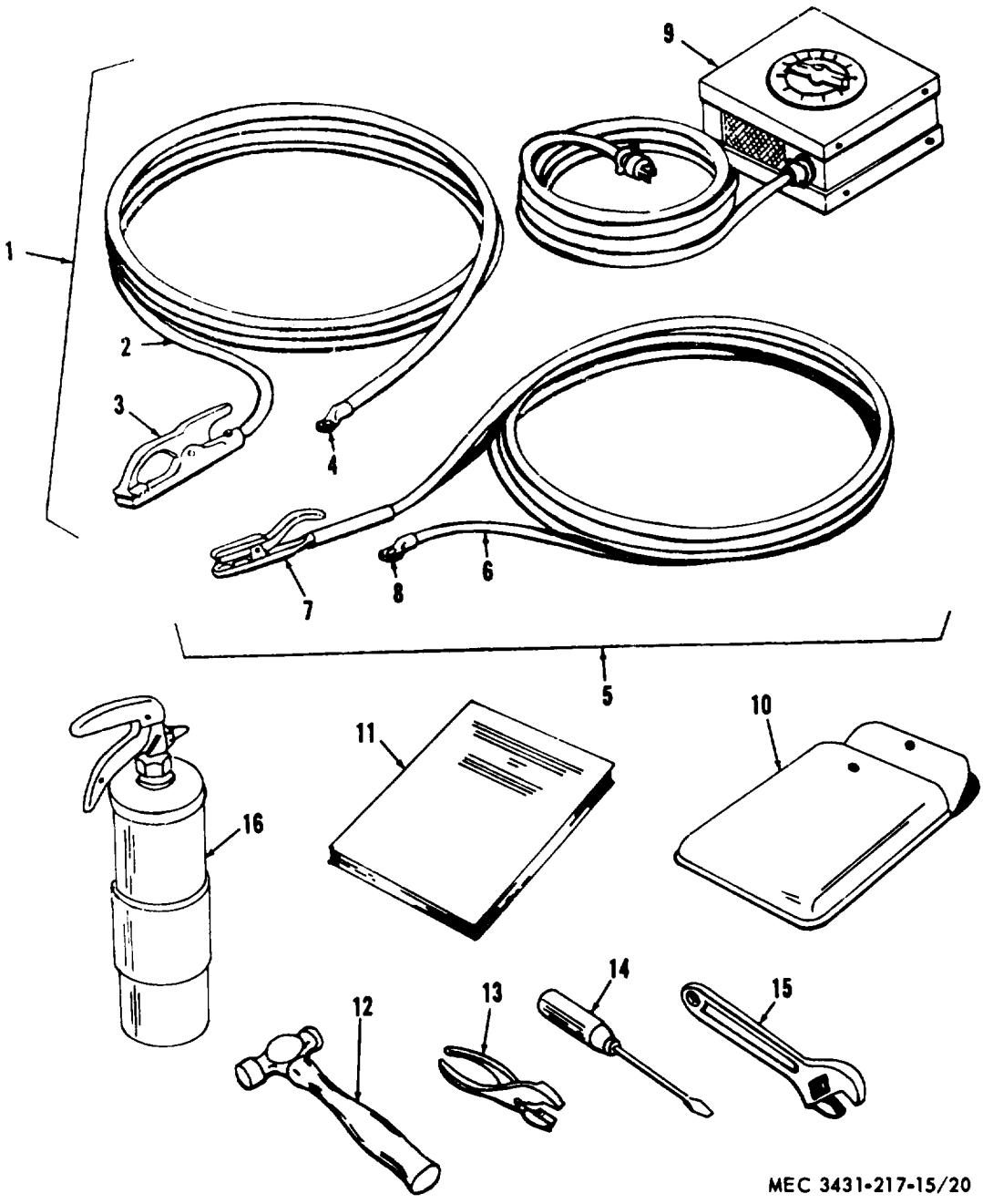
c. Description.

(1) The item name and a brief description of the part are shown.

(2) A five-digit Federal supply code for manufacturers and/or other supply services is shown in parentheses followed by the manufacturer's part number. This number will be used for requisitioning purposes when no Federal stock number is indicated in the Federal stock number column.
Example: (08645) 86543.

(3) The letters GE, shown in parentheses immediately following the description, indicates General Engineer supply responsibility for the part.

d. Unit of Issue. If no abbreviation is shown in this column, the unit of issue is "each."



1	Ground cable assembly	9	Rheostat assembly
2	Cable	10	Publications case
3	Clamp	11	Manual
4	Lug	12	Hammer
5	Electrode cable and holder	13	Pliers
6	Cable	14	Screwdriver
7	Electrode holder	15	Adjustable wrench
8	Lug	16	Fire extinguisher

Figure 20. Basic issue items.

e. Quantity Authorized. This column lists the quantities of repair parts, accessories, tools, or publications authorized for issue to the equipment operator or crew as required.

f. Quantity Issued with Equipment. This column lists the quantities of repair parts, accessories, tools, or publications that are initially issued with each item of equipment. Those indicated by an asterisk are to be requisitioned through normal supply channels as required.

g. Illustrations. This column is subdivided into two columns which provide the following information:

(1) *Figure number.* Provides the identifying number of the illustration.

(2) *Item number.* Provides the referenced number for the parts shown in the illustration.

3. Index to Federal Supply Code for Manufacturers

00779 Amp Inc., Harrisburg, Pa.
27315 Harnischfeger Corporation, Milwaukee, Wis.

Section II. BASIC ISSUE ITEMS LIST

Source codes				Federal stock No.	Description	Unit of Issue	Quantity authorized	Quantity issued with equipment	Illustration	
Materiel	Source	Maintenance	Recover-ability						Figure	Item
					31-BASIC ISSUE ITEMS, MANUFACTURER INSTALLED 3100-BASIC ISSUE ITEMS MANUFACTURER OR DEPOT INSTALLED					
	P1	0		3439-603-4780	CABLE ASSEMBLY: ground (Repair Parts Manual Group 2202).		1	1	20	1
	P1	0		3439-603-4781	CABLE ASSEMBLY: electrode (Repair Parts Manual Group 2202).		1	1	20	5
9	X2	0			ELECTRODE HOLDER: (00779) A-38 (Repair Parts Manual Group 2202).		1	1	20	7
	X2	0			REMOTE CONTROL ASSEMBLY: 9279 E150 (27315) (Repair Parts Manual Group 2202).		1	1	20	9
10	P	0		7520-559-9618	CASE: maintenance and operational manuals, cotton duck, water-repellent, mil-dew-resistant, MIL-B-117438.		1	1	20	10
12					DEPARTMENT OF THE ARMY, OPERATOR, ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT AND DEPOT MANUAL, INCLUDING REPAIR PARTS, TM 5-3431-217-15, 32-BASIC ISSUE ITEMS, TROOP INSTALLED 3200-BASIC ISSUE ITEMS, TROOP INSTALLED OR AUTHORIZED		2	2		
10	P	0		5120-252-3917	HAMMER: machinist, l-lb ball peen		1	(*)	20	12
10	P	0		5120-223-7390	PLIERS: combination, slip joint w/cutter		1	(*)	20	13
10	P	0		5120-278-1283	SCREWDRIVER: 6-in. blade, ¼ in. tip.		1	(*)	20	14

Section II. BASIC ISSUE ITEMS LIST-Continued

Source codes				Federal stock No.	Description	Unit of Issue	Quantity authorized	Quantity issued with equipment	Illustration	
Materiel	Source	Maintenance	Recover-ability						Figure	Item
10	P	0		5120-264-3795	WRENCH, ADJUSTABLE: open end, 6 in.	1		(*)	20	15
10	P1	0		4210-893-1092	EXTINGUISHER: fire, dry chemical, charged, hand, pressurized w/dry air or nitrogen gas; w/pressure gauge; squeeze grip control; steel cylinder; enameled red; factory mutual or UL approved, class 4-B, C; 21/2 lb; w/ universal bracket (Repair Parts Manual Group 7603).					

* Requisition as required.

APPENDIX IV
REPAIR PARTS LIST

Section I. INTRODUCTION

1. General

a. This manual lists repair parts for organizational, direct and general support, and depot maintenance. It indicates the quantity of repair parts required to be stocked by organizational maintenance as their prescribed load. It indicates the guide quantity factors to be used for initial repair parts stockage by direct and general support, and recommends quantities of repair parts for depot maintenance. Information and data contained herein serve as requisitioning reference material, and as a guide to determine stockage quantities of repair parts.

b. Price information for stock-type repair parts may be obtained from applicable Department of the Army type 2-series supply manuals and/or Supply Management Data and Price List (ML) of the Department of Defense Section of the Federal Supply Catalog.

c. Repair parts lists are arranged as follows:

(1) Individual parts and major assemblies are listed alphabetically by item name within the functional groups.
(2) Assembly components and subassemblies are indented and listed alphabetically by item name under major assemblies.
(3) Bulk material is listed in functional group 9501.

d. Allowances are bases on 1,500 hours operational per year.

2. Explanation of Repair Parts and Prescribed Load Listing (Table 1)

a. Source Codes. This column is subdivided into four columns. The titles and information provided in each column are as follows:

(1) *Materiel*. This column lists the basic materiel code number of the supply service assigned responsibility for the part. Blank spaces denote supply responsibility of the preparing agency.
Other basic materiel code numbers are -

9-Ordnance Materiel
11-Signal Materiel

(2) *Source*. The selection status and source of supply for each part are indicated by one of the following code symbols:

(a) P-applied to high-mortality repair parts which are stocked in or supplied from the supply service depot system and authorized for use at indicated maintenance levels.
(b) P1-applied to repair parts which are low-mortality parts, stocked in or supplied from supply service depots, and authorized for installation at indicated maintenance levels.
(c) M-applied to repair parts which are not procured or stocked but are to be manufactured at indicated maintenance levels.
(d) X1-applied to repair parts which are not procured or stocked, the requirement for which will be supplied by use of next higher assembly or components.
(e) X2-applied to repair parts which are not stocked. The indicated maintenance level requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization,

such repair parts will be requisitioned with supporting justification through normal supply channels.

(3) Maintenance.

(a) The lowest maintenance level authorized to manufacture, assemble, and/or install the part is indicated by one of the following code symbols:

O-Organizational Maintenance
F-Direct Support Maintenance (DS)
H-General Support Maintenance (GS)
D-Depot Maintenance

(b) This column is blank when components of kits or sets are listed that are not applicable to the item of equipment, or when an item is source coded X1.

(4) Recoverability. Repair parts and/or tool and equipment items that are recoverable are indicated by one of the following code symbols:

(a) R-applied to repair parts and assemblies which are economically repairable at direct and general support maintenance activities and normally are furnished by supply on an exchange basis.

(b) U-applied to repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, high-dollar value reusable casings, castings, and the like.

***Note*. When no code is shown in the recoverability column the part is considered expendable.**

b. Federal Stock Number. The Federal stock number will be shown in this column and will be used for requisitioning purposes.

c. Description.

(1) The item name and a brief description of the part are shown.

(2) A five-digit Federal supply code for manufacturers and/or other supply service is shown in parentheses, followed by the manufacturer's part number. This number will be used for requisitioning purposes when no Federal stock number is indicated in the Federal stock number column.
Example: (08645) 86453.

(3) Repair part quantities included in kits, sets, and assemblies, that differ from the actual quantity used in this specific end item, are listed in parentheses.

***Note*. When a minimum stockage sufficient to repair one item and/or assembly is authorized, this quantity will be indicated in the Description column with the notation "minimum stockage of ------- is authorized."**

d. Unit of Issue. If no abbreviation is shown in this column, the unit of issue is "each."

e. Quantity Incorporated in Unit. The actual number of parts used in the application indicated is shown in this column. A zero (0) is shown when components of kits or sets are listed that are not applicable to this specific end item.

f. 15-Day Organizational Maintenance Allowance. Shown for each repair part is either a quantity or an asterisk allocation which indicates the following:

(1) A guide quantity factor is shown for each repair part authorized to be stocked by organizational maintenance. This quantity is based on past experience with similar items and the latest mortality data for 1,500 hours operation per year. It is the average quantity required to provide one prescribed load for 1-5 and/or 6-10 items of equipment for a 15-day period under average combat conditions.

(2) The quantity of repair parts authorized for stockage in accordance with the number of prescribed loads authorized by the major commander are determined by using table 1.

(3) Table 1 is a consolidation of items quantitatively allocated in this manual. Quantities listed are for one prescribed load for a 15-day period. A minimum stockage sufficient to repair one item and/or assembly is authorized (e.g., if 3 belts are required, then

Table 1. Prescribed Load Listing

Federal stock No.	Description	Functional Group	Minimum stockage authorization	Unit of issue	15-day organizational maintenance allowances 1-5	6-10
5977-227-6500	BRUSH, ELECTRICAL: main (82214) 549	4403	6		6	12

3 belts are allocated as the min stockage). This quantity will be indicated in the minimum stockage authorization column.

(4) Units and organizations authorized more than one prescribed load will multiply the quantity listed in the appropriate end item density spread column of 1-5 or 6-10 by the number of prescribed loads.

(5) When more than 10 equipments require support, multiply the quantity listed in the 6-10 column by the number of equipments and the number of authorized prescribed loads, divide by 10, and round to the nearest whole number.

Example: If the quantity listed in the 6-10 column is 4, the number of equipments is 17, and the number of authorized prescribed loads is 1, the following formula would be used:

$$4 \times 17 \times 1 \div 10 = 6.8$$

The resulting fraction is .08; therefore the authorized stockage is 7.

Example: If the quantity listed in the 6-10 column is 4, the number of equipments is 17, and the number of authorized prescribed loads is 3, the following formula would be used:

$$4 \times 17 \times 3 \div 10 = 20.4$$

The resulting fraction is 0.4; therefore the authorized stockage is 20.

Note. An exception is made for those units and organizations required to have on hand, boxed or packaged prescribed load(s) pursuant to a special mission assignment. Such prescribed load(s) will be computed or selected separately from quantities authorized for stockage at permanent station.

(6) Repair parts required to perform or organizational maintenance, which are not authorized for stockage are identified by an asterisk, and are to be requisitioned for immediate use only.

(7) Subsequent changes to allowances will be limited as follows:

(a) No change in the range of items is authorized. If exception to the prescribed load listing or revision to allowances is considered necessary, a recommendation should be forwarded to the U.S. Army Mobility Equipment Center (para 6).

(b) Decreases in the stated quantity of items are authorized to a minimum quantity sufficient to repair one item and/or assembly and increases in the stated quantity are authorized for all items when justified by demand and usage experience. Detailed procedures for performing these adjustments are prescribed in AR 735-35.

g. Guide Quantities Per 100 Equipments. Shown for each repair part applicable direct and general support, and/or depot maintenance is either an allowance factor or an asterisk allocation which indicates the following:

(1) A guide quantity factor is shown for each part authorized to be stocked by direct and general support maintenance and supply support activities, and the number of repair parts recommended for depot maintenance. This factor is based on the latest mortality data for 1,500 hours operation per year and is the average quantity required by the various maintenance activities to provide maintenance and supply support for 100 items of equipment for a 15-day period under average combat conditions.

(2) The quantities of repair parts authorized for stockage are determined using the following mathematical formula

Quantity of equipment to be supported, multiplied by the listed allowance factor divided by 100.

Fractions derived from the use of the above formula will be rounded to whole numbers as follows: If the result is 1 or more and includes a fraction that is 0.5 or more, the quantity is rounded to the next higher number.

Example: If the number of equipment supported is 30 and the allowance factor for 100 equipments is 5, the following formula would be used:

30 X 5 ÷ 100 = 1.5

The resulting fraction is 0.5; therefore, the stockage is 2. If the result is 1 or more and includes a fraction of less than 0.5, the quantity is rounded to the next lower number. When the computed result is less than 0.5, no quantity is authorized for direct and general support, and depot maintenance.

Example: If the number of equipment supported is 30 and the allowance factor for 100 equipments is 28, the following formula would be used:

30 X 28 ÷100 = 8.4

The resulting fraction is less than 0.5; therefore, the stockage is 8.

(3) In the guide quantity columns for direct and general support maintenance, additional repair parts authorized for use but not for initial stockage, are listed without a guide quantity factor. These items are identified by an asterisk and may be added to or deleted from stock when recorded demand experience justifies a change in stockage objective.

(4) Parts that may be required for depot maintenance, in addition to those allocated, are identified by an asterisk. These parts are to be requisitioned, when required, if not obtainable from reclamation, fabrication, or local procurement.

h. Direct and General Support Maintenance 15-Day Level.

(1) *Direct Support (DS).* This column lists the initial guide quantity allowance factors of repair parts authorized for initial stockage by direct support maintenance activities to provide direct support maintenance for Mobility Command equipment and to provide organizational maintenance repair parts for supported units for a 15-day period. Additional repair parts identified by an asterisk are explained in g above. Upon establishment of supply records, recorded demand experience will be used to compute stockage objectives on authorized repair parts. Review of stockage objectives will be performed in the time cycle prescribed by major commanders.

(2) *General Support (GS).* This column lists initial guide quantity allocation factors of repair parts authorized for initial stockage by general support maintenance activities to provide general support maintenance for Mobility Command equipment for a 15-day period. Additional repair parts identified by an asterisk are explained in g above. Upon establishment of supply records, recorded demand experience will be used to compute stockage objectives on authorized repair parts. Review of the stockage objectives will be performed in the time cycle prescribed by major commanders.

(3) *Units with TOE capability of performing partial or complete Direct and General Support maintenance for organic Mobility Command equipment.* Units with the TOE capability of performing partial or complete direct and general support maintenance for organic Mobility Command equipment will be authorized to stock direct and/or general support repair parts only when specific agreements are made between the commander of the designated parts supply activity, normally Direct Support Units (DSU) and using unit. Parts so furnished are in addition to the prescribed load and will be adjusted as demands indicate.

(4) *Units with TOE Mis8ion to provide maintenance for Mobility Command equipment of supported units*. Units organized under TOE's with the assigned mission to provide direct and general support maintenance for Mobility Command equipment of supported units are authorized to stock direct and general support repair parts. These repair parts will be issued from the appropriate parts supply activity (parts depot and/or DSU). Such stockage is in addition to the prescribed load and will be adjusted as demand indicate.

i. *Depot Maintenance*. This column lists the quantity of repair parts recommended for depot maintenance shops (non-TOE) to provide depot maintenance for 100 equipments. Additional repair parts are allocated by an asterisk, for immediate use only. Explanation of the asterisk allowance is contained in g above.

j. *Illustrations*. This column is subdivided into two columns as follows:

(1) *Figure number*. Indicates the number of the illustration in which the part is shown.
(2) *Item number*. Indicates the reference number used to point out the part in the illustration.

3. Abbreviations

ar---------- as required
ft ---------- feet (foot)
id---------- inside diameter
in---------- inches (es)
lg---------- long (length)
mtg ---------- mounting
No---------- number (s)
od ---------- outside diameter
rl---------- roll
thd ---------- thread (ed) (s)

4. Federal Supply Code for Manufacturers

00761 ---------- Burndy Midwest Inc.
00779 ---------- Aircraft Marine Products, Inc.
02295 ---------- General Electric Co. General Purpose Control Department of Switch-gear and Control Division.
04009 ---------- Hart and Hegeman Mfg. Co.
07707 ---------- United Shoe Machinery Corp.
12946 ---------- Neilson Wheel Co.
15605 ---------- Cutler-Hammer Inc.
21335 ---------- Fafnir Bearing Co. The
27315 ---------- Pawling and Harnischfeger Co.
28250 ---------- Heyman Mfg. Co.
44655 ---------- Ohmite Mfg. Co.
55026 ---------- Simpson Electric Co.
59730 ---------- Thomas and Betts Co.
66289 ---------- Wisconsin Motor Corp.
70485 ---------- Atlantic India Rubber Works, Inc.
71785 ---------- Cinch Mfg. Co., Division of United Carr Fastener Corp.
72962 ---------- Elastic Stop Nut Corp. of America.
78553 ---------- Tinnerman Products Inc.
79497 ---------- Western Rubber Co.
80756 ---------- Ramsey Corp.
81349 ---------- Military Specifications
82214 ---------- National Carbon Co.
83315 ---------- Hubbell Corp.
98124 ---------- Hunt Wilde Corp.

CODES MATERIEL	CODES SOURCE	CODES MAINT	CODES RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJOR EQUIPS: 1B DAYS MAINT. ORGANIZATIONAL 1-5	1B DAYS MAINT. ORGANIZATIONAL 6-10	1B DAYS MAINT. DS	1B DAYS MAINT. GS	DEPOT MAINT. 100 EQUIPMENTS	ILLUST FIGURE NO.	ILLUST ITEM NO.
					SECTION II - REPAIR PARTS LIST											
					GROUP 10-FRONT AXLE 1000- FRONT AXLE ASSEMBLY											
X20					AXLE, FRONT	(27315)	210H18D1		1	*	*	*	*	*	14	3
X20					FORK, SWIVEL: front axle	(12946)	8-11X		1	*	*	*	*	*	14	9
0				5305-017-9885	SCREW, CAP, HEXAGON HEAD: fork mounting	(27315)	0826V079		1	*	*	*	*	*	14	8
0				5310-202-8552	NUT, PLAIN, HEXAGON: fork mtg. screw	(27315)	2145V005		1	*	*	*	*	*	14	6
0				5310-010-3323	WASHER, LOCK: fork mtg. screw	(27315)	3616V011		1	*	*	*	*	*	14	7
X20					HANDLE, TOWING	(27315)	206F3D1		1	*	*	*	*	*	14	5
X20					GRIP, HANDLE	(398124)	1443R		2	*	*	*	*	*	14	18
X20					BAG, CLOTH	(227315)	32Z64		1	*	*	*	*	*	14	21
X20				5340-598-1357	RING, RETAINING: front axle	(80756)	RR675		2	*	*	*	*	*	14	1
X20					WASHER, FLAT: front axle	(27315)	3632v008		4	*	*	*	*	*	14	2
0					CHAIN: handle retaining				1							
					MANUFACTURE FROM:											
P 0				4010-257-0772	CHAIN, WELDLESS (12 in. required)			FT		(SEE GROUP 9501)					14	20
M 0					HOOKS: handle retaining chain				1							
					MANUFACTURE FROM:											
P 0				950,-1C6-9137	WIRE, STEEL, CARBON (6 in. required)			RL		(SEE GROUP 9501)					14	19
					GROUP 11 - REAR AXLE 1100 - REAR AXLE ASSEMBLY											
X20					AXLE, REAR	(27315)	21011LD2		1	*	*	*	*	*	14	16
X20				5340-598-1357	RING, RETAINING: rear axle	(80756)	RR675		4	*	*	*	*	*	14	1
X20					WASHER, FLAT: rear axle	(27315)	3632V008		8	*	*	*	*	*	14	2
					GROUP 13 - WHEELS AND TRACKS 1311 - WHEEL ASSEMBLY											
X20					WHEEL, RUBBER TIRE: portable mount	(12946)	A116N		4	*	*		*	*	14	4
					GROUP 15 - FRAME, TOWING ATTACHMENTS, AND DRAWBARS 1501 - FRAME ASSEMBLY											
X20					PORTABLE MOUNT ASSEMBLY	(27315)	2100.14't?26		1	*	*	*	*	*	14	
X20					FRAME: portable mount	(27315)	216793D5		1	*	*	*	*	*	14	17
X20					PLATE, INSTRUCTION: portable mount assembly	(27315)	2321		1	(SEE GROUP 9501)					14	15
X20					CLIP, SPRING: towing handle retraining	(66289)	PK87		1	*	*	*	*	*	14	13
0				5305-275-9838	SCREW, MACHINE: clip mounting	(27315)			1	*	*	*	*	*	1	12
0				5310-010-9084	NUT, PLAIN, HEXAGON: clip mtg. screw	(27315)			1	*	*	*	*	*	14	10
0				5310-010-3319	WASHER, LOCK: clip mtg. Screw	(27315)			1	*	*	*	*	*	14	11
					GROUP 22 - ACCESSORY ITEMS 2202 - ACCESSORY ITEMS											
M 0					CABLE ASSEMBLY: ground, with clamp	(27315)	9Z79F295-1		1						20	1
					MANUFACTURE FROM:											
P 0				6145-174-1123	WIRE, ELECTRICAL (50 ft required)			FT	AM	(SEE GROUP 9501)					20	2
X20					CLAMP, GUARD: ground cable	(27315)	2952D3		1	*	*	*	*	*	20	3
X20					TERMINAL, LUG: ground cable	(00779)	325405		2	*	*	*	*	*	20	4
M 0					CABLE ASSEMBLY: electrode, with holder	(27315)	9279296-2		1						20	5
					MANUFACTURE FROM:											
P 0				6145-174-1123	WIRE, ELECTRICAL (50 ft required)			FT		(SEE GROUP 9501)					20	6
X20					HOLDER, ELECTRODE: cable	(00779)	A38		1	*	*	*	*	*	20	7
X20					TERMINAL, LUG: cable	(00779)	325405		2	*	*	*	*	*	20	8
X20					RHEOSTAT ASSEMBLY: remote control	(27315)	92793150		1	*	*	*	*	*	20	9
X20				5905-646-7687	RHEOSTAT: remote control	(44655)	40513		1	*	*	*	*	*	17	18
X20					CABLE ASSEMBLY: remote control	(27315)	279421		1	**	*	*			17B	
X1					WIRE ELECTRICAL: no. 14-3 (51 ft 6 in. required)	(81349)	MIIC3432B		1						17B	24
X1					TERMINAL, LUG: remote control cable	(00779)	41332		2	*	*	*	*	*	17B	22
X1					TERMINAL, LUG: remote control cable	(00779)	41333		1	*	*	*	*	*	17B	23
X1					PLUG, ELECTRICAL: remote control cable	(04009)	7411		1	*	*	*	*	*	17B	21
X20				5935-062-5124	CLAMP, CABLE, ELECTRICAL:	(59730)	3303		1	*	*	*	*	*	17B	19
X20					HANDLE: rheostat control	(27315)	206X5DI		1	*	*	*	*	*	17B	2
X20					PIN, ROLL: handle mtg.	(72962)	59-028-125-625		1	*	*	*	*	*	17B	1
X 20					PLATE, JUMPER: rheostat	(27315)	279H251D1		1	*	*	*	*	*	17B	17
X20					PLATE, INSTRUCTION: rheostat remote control	(27315)	232H95		1	(SEE GROUP 2210)					17B	5

CODES MATERIEL	SOURCE	MAINT	RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJOR EQUIPS 15 DAYS MAINT. ORGANIZATIONAL 1-5	ORGANIZATIONAL 6-10	DS	GS	DEPOT MAINT. 100 EQUIPMENTS	ILLUST FIGURE NO.	ILLUST ITEM NO.
					2202 - ACCESSORY ITEMS (cont)											
X20					COVER: rheostat	(27315)	214F2501		1	*	*	*	*	*	17B	12
X20					HOUSING: rheostat	(27315)	214H89		1	*	*	*	*	*	17B	20
X20					COVER BOTTOM: rheostat	(27315)	2l4H90		1	*	*	*	*	*	17B	13
0	5310-286-1495				SCREW, MACHINE: rheostat instruction plate mtg				2	(SEE GROUP 2210)					17B	3
0	5310-010-3319				WASHER, LOCK: rheostat instruction plate mgt. screw				2	(SEE GROUP 2210)					17B	4
0	5310-202-8549				SPEEDNUT: housing cover screw	(27553)	01793-10Z4		8	*	*	*	*	*	17B	11
0	5305-282-1063				SCREW, THREAD FORMING: housing cover	(27315)	20Z4OD14		8	*	*	*	*	*	17B	10
X20	3815-425-7821				WASHER, FLAT: rheostat housing cover				9	*	*	*	*	*	17B	7
0	5305-010-0751				SCREW, MACHINE: plate mtg				3	*	*	*	*	*	17B	14
0	5310-050-3568				NUT, PLAIN, HEXAGON: plate mtg				3	*	*	*	*	*	17B	15
0	5310-010-6496				WASHER LOCK: plate mtg screw				3	*	*	*	*	*	17B	16
0	5305-86-1934				SCREW, MACHINE,: rheostat cover mtg.				1	*	*	*	*	*	17B	6
X20	3815-425-7821				WASHER, LOCK: rheostat assembly				1	*	*	*	*	*	17B	9
0	5310-012-0614				NUT, PLAIN, HEXAGON: rheostat assembly				1	*	*	*	*		17B	8
X20					BRACKET: remote control cable tie-down	(27315)	216H599		1	*	*	*	*	*	10	22
X20					HANGER, PLASTIC: remote control cable	(00761)	HP1ON		1	*	*	*	*	*	10	23
X20					STRAP: remote control cable	(27315)	232H407		1	*	*	*	*	*	10	24
0	5310-050-3456				NUT, PLAIN, WING: remote control cable tie-down	(27315)	20H168D10		1	*	*	*	*	*	10	25
					2210 - DATA PLATES											
X20					PLATE INSTRUCTION: rheostat remote control	(27315)	232H95		1	*	*	*	*	*	17B	5
0	5310-286-1495				SCREW, MACHINE: rheostat instruction plate mtg.				2	*	*	*	*	*	17B	3
0	5310-010-3319				WASHER, LOCK: rheostat instruction plate mtg. screw				2	*	*	*	*	*	17B	4
X20					PLATE, IDENTIFICATION: control panel	(27315)	232E116		1	*	*	*	*	*	17A	65
X20					PLATE IDENTIFICATION: remote control	(27315)	232H397		1	*	*	*	*	*	17A	16
X20					PLATE, INSTRUCTION: terminal block	(27315)	232H396		1	*	*	*	*	*	10	17
X20					PLATE, INSTRUCTION: portable mount assembly	(27315	232H96		1	*	*	*	*	*	14	15
X20					PLATE, INSTRUCTION: welding operation	(27315)	2105F70		1	*	*	*	*	*		
X20					PLATE, INSTRUCTION: wiring diagram	(27315)	2101E501		1	*	*	*	*	*	16	
X2F	9905-807-3712				PLATE, IDENTIFICATION: corps of engineers				1			*	*	*		
X20					SCREW, MACHINE: plate mtg, round head, Type A, no. 6 x3/8 in. lg.				18	*	*	*	*	*		
0	5305-010-0737				SCREW, MACHINE: control panel name plate				6	*	*	*	*	*		
0	5310-275-1706				NUT, PLAIN, HEXAGON: control panel name plate				6	*	*	*	*	*		
0	5310-010-6495				WASHER LOCK: control panel name plate				6	*	*	*	*	*		
0	5305-010-7637				SCREW, DRIVE: portable mount instruction plate	(27315)	20ZH0D7		2	*	*	*	*	*	14	14
					GROUP 44 - WELDING EQUIPMENT 4401 - ROTOR ASSEMBLY											
X2H					ROTOR ASSEMBLY	(27315)	274702		1				*	*	19	17
X1					CASTING, ROTOR	(27315)	274E3D2		1							
9 H	5310-l64-8848				WASHER, FLAT	(27315)	218H145D1		AR				*	*		
X2H U					ARMATURE ASSEMBLY: rotor	(27315)	2100F43		1				*	*	19	43
X2F					FAN: armature cooling	(27315)	274E2		1			*	*	*	19	23
X2F					COVER, DUST: bearing housing	(27315)	214H39		1			*	*	*	19	33
X2H					WASHER, FLAT: armature shaft, drive end	(27315)	218H98D3		1				*	*	19	13
X2H					SPACER: armature shaft, drive end	(27315)	218H108D2		1				*	*	19	14
X2H					KEY, MACHINE: rotor to armature shaft	(27315)	20H138H15		1				*	*	19	24
H	5306-042-7929				BOLT, MACHINE, HEXAGON HEAD: armature shaft, drive end				1				*	*	19	11
X2H					KEY, SQUARE: fan mounting, .246 in. to .252 in., 1-1/8 in. lg.	(37315)	20H1380D13		1				*	*	20	25
H	5310-261-7340				WASHER, LOCK: armature shaft, drive end				1				*	*	19	12
X2F					HOUSING: armature shaft bearing, commutator end	(27315)	272E5		1			*	*	*	19	37
					4402 - STATOR ASSEMBLY											
X2H					STATOR ASSEMBLY	(27315)	9271H1		1				*	*	19	16
X2H R					FRAME AND FIELD: magnet	(27315)	9271E4F3		1				*	*	19	83
X1					FRAME: magnet	(27315)	271A3D4		1				*	*	19	83
X2H					COIL, COMMUTATOR	(27315)	9275F103F4		2				*	*	19	79
X2H					POLE PIECE: main, no. 1	(27315)	271F7D2		1				*	*	19	66
X2H					POLE PIECE: main, no. 2	(27315)	271F7D1		1				*	*	19	75

CODES				FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJOR EQUIPS					ILLUST	
MATERIEL	SOURCE	MAINT	RECOVERABILITY							15 DAYS MAINT.				DEPOT MAINT.	FIGURE NO.	ITEM NO.
										ORGANIZATIONAL		DS	GS			
										1-5	6-10	100 EQUIPMENTS				
					4402 - STATOR ASSEMBLY (cont)											
X2H					POLE PIECE: cross, no. 1	(27315)	271F7D3		1				*	*	19	80
X2H					POLE PIECE: cross, no. 2	(27315)	271F7D4		1				*	*	19	74
X2H					INSULATION: magnet frame	(27315)	275H72D1		4				*	*	19	60
X2H					INSULATION: magnet frame	(27315)	275H72D2		4				*	*	19	81
X2H					INSULATION: magnet frame	(27315)	275H71D1		8				*	*	19	61
X2F					COIL ASSEMBLY, MAIN	(27315)	9275F96		1			*	*	*	19	65
X20					TERMINAL, LUG: coil lead	(00761)	YAV14T4		1	*	*	*	*	*	19	64
X2F					COIL: cross field, no. 1	(27315)	9275E134		1			*	*	*	19	82
X20		5940-243-0404			TERMINAL, LUG: coil lead	(00761)	YAV14		1	*	*	*	*	*	19	56
X2F					COIL: cross field, no. 2	(27315)	9275E140		1			*	*	*	19	73
X20		5940-155-7630			TERMINAL, LUG: coil lead	(00761)	YAV14T2		1	*	*	*	*	*	19	72
X2F					CLAMP: coil retaining	(27315)	275H76		4			*	*	*	19	76
X2F					COLLAR: commutator coil	(27315)	9275H7F1		4			*	*	*	19	78
X2F					CLAMP: reactor core and coil lead	(27315)	232H248		1			*	*	*	19	59
X2F					SCREW, MACHINE: clamp mtg.	(27315)	20Z325D88		6			*	*	*	19	58
X2F					COIL, REACTOR	(27315)	9280F2F3		1			*	*	*	19	57
X20		5940-243-0404			TERMINAL, LUG: reactor coil leadYAV14	(00761)	YAV14		1	*	*	*	*	*	19	56
X20		5940-230-9911			CONNECTOR, ELECTRICAL WIRING	(00779)	34138		3	*	*	*	*	*	19	63
X20					SLEEVE, INSULATION: electrical wiring	(27315)	851		3	*	*	*	*	*	19	62
X20					BUS BAR: Commutator coil	(27315)	279H253D33		4	*	*	*	*	*	19	77
X20					BUS BAR magnet frame and field	(27315)	279H254D1		1	*	*	*	*	*	19	71
X20					SLEEVE, INSULATION: bus bar	(27315)	275H86D15		1	*	*	*	*	*	19	70
F		5310-010-3323			WASHER, LOCK: reactor coil mtg screw				1			*	*	*	19	55
9 F		5305-017-9895			SCREW, CAP, HEXAGON HEAD: reactor coil mtg				1			*	*	*	19	54
9 O		5305-275-9123			SCREW, MACHINE: bus bar and lead mtg				12	*	*	*	*	*	19	67
O		5310-021-9431			NUT, PLAIN, HEXAGON: bus bar and lead screw				12	*	*	*	*	*	19	68
O		5310-010-3320			WASHER, LOCK: bus bar and lead screw				12	*	*	*	*	*	19	69
					4403 - BRUSH HOLDER ASSEMBLY											
X20					HOLDER, BRUSH: main	(27315)	273F4D2		2	*	*	*	*	*	19	53
X20					HOLDER, BRUSH: exciter	(27315)	273F5		1	*	*	*	*	*	19	47
P F		5977-227-6503			SPRING, TENSION: main brush	(27315)	17Z122		6			2	*	30	19	51
P1F		5977-227-6501			SPRING, TENSION: exciter brush	(27315)	17Z123		1			*	*	20	19	45
P O		5977-227-6500			BRUSH, ELECTRICAL: main (minimum stockage of 6 is authorized)	(82214)	549		6	6	12	19	*	600	19	52
P O		5977-227-6499			BRUSH, ELECTRICAL: exciter	(27315)	273H3D1		1	*	*	3	*	100	19	46
O		5310-010-3319			WASHER, LOCK: brush holder mtg. Screw				8	*	*	*	*	*	19	29
9 O		5305-275-9838			SCREW, MACHINE: brush holder mtg.				8	*	*	*	*	*	19	44
					4405 - FRAME SUPPORT, HOUSING, CARRIER											
X2H					GIRDLE, BEARING: generator end	(27315)	232H235		1				*	*	19	36
X2H					SLEEVE, BEARING: generator end	(27315)	225H2D2		1				*	*	19	35
P1H		3110-198-1975			BEARING, BALL: generator end	(27335)	W306PP		1				*	10	19	34
P1H		3110-227-4110			BEARING, BALL: motor end	(27335)	W309PP		1	*			*	10	19	20
X2H					SLEEVE, BEARING: motor end	(27315)	225H3		1	*			*	*	19	21
X2H					GIRDLE, BEARING: motor end	(27315)	232H237		1	*			*	*	19	22
X20					BASEPLATE: welding unit mounting	(27315)	216H326D1		1	*	*	*	*	*	19	85
X20					PLATE ASSEMBLY: lifting	(27315)	229H98		1	*	*	*	*	*	10	6
X20					SEAL, RUBBER: lifting plate	(27315)	218H174D3		1	*	*	*	*	*	10	11
X2F					PANEL ASSEMBLY: housing back cover	(27315)	9227F19F4		1			*	*	*	10	
X2F					PANEL: housing back cover	(27315)	227F159D8		1	*		*	*	*	10	8
X20					INSULATION: rear panel	(27315)	275H92D1		1	*	*	*	*	*	10	9
X2F					PLATE ASSEMBLY: housing end cover	(27315)	227H53F1		2			*	*	*	10	
X2F					PLATE: housing end cover	(27315)	227H54D1		1			*	*	*	10	10
X20					SEAL, RUBBER: housing end cover	(27315)	218H107D1		4	*	*	*	*	*	10	21
X20					COVER ASSEMBLY: housing top	(27315)	227F423		1	*	*	*	*	*	10	3,7
X20					INSULATION	(27315)	275H92D2		4	*	*	*	*	*	10	7
X20					DOOR, ACCESS: generator inspection	(27315)	227H51		1	*	*	*	*	*	10	19
X20					TIE ROD: bearing housing	(27315)	220H57		4	*	*	*	*	*	19	41
X20					SPACER: housing tie rod	(27315)	218H129		4	*	*	*	*	*	19	39
X20					COUPLING: tie rod spacer	(27315)	0928V004		4	*	*	*	*	*	19	40
X20					NUT, LOCK: tie rod spacer	(27315)	0944V003		4	*	*	*	*	*	19	42
X20					WASHER, "C": tie rod	(27315)	218H97		8	*					19	38
X2F					SPACER: stator to air tube	(27315)	218H108D1		4			*	*	*	19	15
X20					WASHER, SPECIAL: air tube to tie rod screws	(27315)	218H98D1		8	*	*	*	*	*	19	7
F		5306-722-8450			BOLT, MACHINE: stator to air tube	(27315)	207544202		4			*	*	*	19	5
9 F		5306-617-4131			BOLT, MACHINE: bearing housing to air tube	(27315)	20T5442D1		4	*		*	*	*	19	26
F		5310-010-3323			WASHER, LOCK: air tube bolt				8	*		*	*	*	19	6
9 F		5306-021-3665			BOLT, MACHINE: generator	(27315)	20Z630D1		6	*		*	*	*	19	28

CODES	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJOR EQUIPS 15 DAYS MAINT. ORGANIZATIONAL 1-5	ORGANIZATIONAL 6-10	DS	GS	DEPOT MAINT. 100 EQUIPMENTS	ILLUST FIGURE NO.	ILLUST ITEM NO.
		4405 - FRAME SUPPORT, HOUSING, CARRIER (cont)											
9 F	5310-164-8848	WASHER, FLAT: generator bolt				6			*	*	*	10	2
9 F	5305-013-2723	SCREW, MACHINE				2			*	*	*	17A	66
9 F	5310-275-1706	NUT, PLAIN, HEXAGON				2			*	*	*	17A	67
F	5310-010-3320	WASHER, LOCK				15			*	*	*	10	5
X2F		SCREW, THREAD CUTTING: 5/16-18 thd size, ¾ in. lg.(27315)	20Z632D2			7			*	*	*	10	4
X2F		SCREW, THREAD CUTTING: 5/16-18 thd size, 1-1/8 in. lg.	(27315)	20Z630D5		2			*	*	*		
Z2F		SCREW, THREAD CUTTING: 5/16-18 thd size,											
F	5305-275-9123	SCREW, CAP, HEXAGON HEAD				6			*	*	*	17A	71
F	5310-021-9431	NUT, PLAIN, HEXAGON				6			*	*	*	17A	69
X20		DOOR ASSEMBLY: cable terminal	(27315)	279H255D2		1	*	*	*	*	*	10	
X1		DOOR	(27315)	279F160		1						10	12
X1	5340-266-0759	BUMPER, RUBBER	(70485)	829		2						10	13
M 0		BRACKET: mounting				2						19	86
		MANUFACTURE FROM:											
P 0	9520-517-0534	ANGLE, STEEL (24 in.. required for each BRACKET)			FT	(SEE GROUP 9501)							
0	5305-010-0109	SCREW, CAP, HEXAGON HEAD: housing to mtg angle				6	*	*	*	*	*	19	87
0	5310-010-3319	WASHER, LOCK: housing to mtg angle screw				6	*	*	*	*	*	19	88
0	5310-010-9084	NUT, PLAIN, HEXAGON: housing to mtg angle screw				6	*	*	*	*	*	19	89
0	5305-017-9885	BOLT, MACHINE: angle to base plate				2	*	*	*	*	*	19	90
0	5310-010-3323	WASHER, LOCK: angle to base plate screw				2	*	*	*	*	*	19	91
0	5310-202-8552	NUT, PLAIN, HEXAGON: angle to base plate screw				2	*	*	*	*	*	19	92
0	5305-275-9838	SCREW, MACHINE: cover to panel				13	*	*	*	*	*	10	1
0	5310-010-3319	WASHER, LOCK: cover to panel screw				13	*	*	*	*	*	10	2
		4406 - VENTILATING, COOLING SYSTEM											
X2F		BAFFLE: air tube, meter end	(27315)	227H58		1			*	*	*	19	10
F	5320-270-2781	RIVET: air tube baffle	(07707)	AD42BS		10			*	*	*		
X2F		HOUSING: ventilating fan	(27315)	272A3D1		1			*	*	*	19	18
X2F		SEAL: fan housing	(27315)	218H103D2		1			*	*	*	19	19
X2F		TUBE, AIR: generator end	(27315)	227H55		1			*	*	*	19	27
X2F		TUBE ASSEMBLY, AIR: meter end	(27315)	9227H2F6		1			*	*	*	19	8
		4407 - CONTROL PANELS, HOUSING											
X20		SHUNT	(27315)	86Z23D3		1	*	*	*	*	*	19	84
X2F R		PANEL ASSEMBLY, CONTROL	(27315)	9279F296		1			*	*	*	17A	
X2F		PANEL: front, housing and control	(27315)	279F159D10		1			*	*	*	10	20
9 F	5305-013-2900	SCREW, MACHINE: panel mtg				2			*	*	*	17A	53
X2F	38815-425-7821	WASHER, LOCK: panel mtg				2			*	*	*	17A	54
9 F	5305-016-0505	SCREW, MACHINE: panel mtg	(27315)	0856V107		4			*	*	*	17A	52
F	5310-010-3319	WASHER, LOCK: panel mtg				6			*	*	*	17A	
X2F		BUSHING: control panel	(28520)	SB875-6		1			*	*	*	17A	17
X20		GUARD, CABLE	(27315)	2164614		1	*	*	*	*	*	10	16
0	5310-174-7400	NUT, SELF-LOCKING: cable guard	(72962)	22NM02		8	*	*	*	*	*	10	14
X20		MOUNT ASSEMBLY: meter	(27315)	9279H376		1	*	*	*	*	*	17A	
X1		WASHER, "C"				1						17A	10
X1		RIVET				1						17A	15
X20		PLATE: meter mounting	(27315)	279H422		1	*	*	*	*	*	17A	6
P10	6625-736-8586	VOLTMETER	(55026)	125-100VDC		1	*	*	*	*	6	17A	8
P10	6625-736-8585	AMMETER	(55026)	125-400ADC		1	*	*	*	*	6	17A	9
X20		GROMMET: mtg plate	(79497)	G1006		4	*	*	*	*	*	17A	5
0	5305-010-0737	SCREW, MACHINE: meter to panel				6	*	*	*	*	*	17A	7
0	5310-010-6495	WASHER, LOCK: meter mtg screw				6	*	*	*	*	*		
0	5310-275-1706	NUT, PLAIN, HEXAGON: meter mtg screw				6	*	*	*	*	*		
0	5310-174-7400	NUT, SELF-LOCKING: meter plate screw	(72962)	22NM02		4	*	*	*	*	*	17A	4
0	5305-151-2769	SCREW, MACHINE: meter plate mtg.				4	*	*	*	*	*	17A	1
X20	3815-425-7821	WASHER, LOCK: plate mtg screw				8	*	*	*	*	*	17A	2
X20		SPACER: meter plate	(27315)	218H166		4	*	*	*	*	*	17A	3
X20		RECEPTACLE, ELECTRICAL: remote control	(83315)	7410GT		1	(SEE GROUP 4408)					17A	14
0	5310-050-2231	WASHER, LOCK: cable guard				2	*	*	*	*	*	10	15
		4408 - CONNECTING DEVICES											
X20		RECEPTACLE, ELECTRICAL: remote control	(83315)	7410GT		1	*	*	*		*	17A	14
9 0	5305-010-0737	SCREW, MACHINE: receptacle mtg				2	*	*	*	*	*	17A	12
0	5310-010-6495	WASHER, LOCK: receptacle mtg screw				2	*	*	*	*	*	17A	13
9 0	5305-011-3959	SCREW, MACHINE: junction block				2	*	*	*	*	*	17A	19

CODES: MATERIEL	SOURCE	MAINT	RECOVERABILITY	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJOR EQUIPS: 15 DAYS MAINT. ORGANIZATIONAL 1-5	ORGANIZATIONAL 6-10	DS	GS	DEPOT MAINT. 100 EQUIPMENTS	ILLUST FIGURE NO.	ILLUST ITEM NO.
					4408 - CONNECTING DEVICES (cont)											
0				5310-010-9084	NUT, PLAIN, HEXAGON: junction block screw				2	*	*	*	*	*	17A	20
0				5305-275-9123	SCREW, MACHINE: bus bar mtg				3	*	*	*	*	*	17A	50
0				5310-021-9431	NUT, PLAIN, HEXAGON: bus bar mtg screw				3	*	*	*	*	*	17A	48
0				5310-010-3320	WASHER, LOCK: bus bar mtg screw				3	*	*	*	*	*	17A	49
X20					TERMINAL BOARD	(71785)	2-141		1	*	*	*	*	*	17A	18
X20					TERMINAL ASSEMBLY: welding cables	(27315)	9279H25F2		1	*	*	*	*	*	17A	22
																27
X20					TERMINAL	(27315)	279H230		1	*	*	*	*	*	17A	27
X20					BUS BAR	(27315)	279H239		1	*	*	*	*	*	17A	26
9 0				5305-637-7782	SCREW, MACHINE: cable connecting				2	*	*	*	*	*	17a	24
9 0				5310-011-4505	NUT, PLAIN, HEXAGON: cable screw				2	*	*	*	*	*	17A	23
0				5310-010-3131	NUT, PLAIN, WING: cable connecting				2	*	*	*	*	*	17A	22
M 0					CABLE ASSEMBLY: JUMPER	(27315)	279F239D151		1						17A	25
					MANUFACTURE FROM:											
P 0				6145-174-1123	WIRE, ELECTRICAL			FT	(SEE GROUP 9501)							
					(16 in. required)											
X20				5940-976-0904	TERMINAL, LUG: jumper cable	(00761)	YAV276		1	*	*	*	*	*		
X20				5940-976-0903	TERMINAL, LUG: jumper cable	(00761)	YAV27l1		1	*	*	*	*	*		
X20					BUS BAR: selector switch	(27315)	279H256		1	*	*	*	*	*	17A	51
X20					BUS BAR: rheostat	(27315)	279H251D1		1	*	*	*	*	*	17A	58
0				5310-208-4072	NUT, PLAIN, HEXAGON: rheostat bus bar screw				2	*	*	*	*	*	17A	55
0				5310-010-6496	WASHER, LOCK: rheostat bus bar screw				2	*	*	*	*	*	17A	57
X20					BUS BAR: generator	(27315)	279H253D24		2	*	*	*	*	*	19	50
0				5306-021-6920	BOLT, MACHINE: bus bar mtg	(27315)	20T5439D1		4	*	*	*	*	*	19	48
0				5310-010-3320	WASHER, LOCK: bus bar mtg				4	*	*	*	*	*	19	49
X20					BUS BAR: selector switch	(27315)	279H258		1	*	*	*	*	*	17A	72
0				5305-275-9123	SCREW, CAP, HEXAGON HEAD: bus bar mtg				1	*	*	*	*	*	17A	71
0				5310-021-9431	NUT, PLAIN, HEXAGON: bus bar mtg screw				1	*	*	*	*	*	17A	69
0				5310-010-3320	WASHER, LOCK: bus bar mtg screw				1	*	*	*	*	*	17A	70
					4409 - PROTECTIVE DEVICES, ELECTRICAL											
X20					PLATE, INSULATION: brush holder	(27315)	275H84		3	*	*	*	*	*	19	32
X20					INSULATION: control panel	(27315)	275H92D1		1	*	*	*	*	*	10	9
X2F					BUSHING, INSULATION: control panel	(27315)	275H83		1			*	*	*	10	18
					4410 - SWITCHING CONTROL											
X20					HANDLE, TAP SWITCH	(27315)	206f3d3		1	*	*	*	*	*	17A	62
X20					HANDLE, REVERSING SWITCH	(27315)	206F4D2		1	*	*	*	*	*	17A	29
9X20				5315-058-5968	PIN, SPRING: handle retaining	(72962)	59-040-187-1000		1	*	*	*	*	*	17A	28
P1F				5930-227-6507	SWITCH ASSEMBLY, REVERSING SELECTOR	(27315)	2100F46		1			*	*	5	17A	
					(Same as SWITCH ASSEMBLY, stock no. 5930227-6508, except where individual components are annotated.)											
P1F				5930-227-6508	SWITCH ASSEMBLY, SELECTOR	(27315)	2100F48		1			*	*	5	17A	
X1					PLATE: back, reversing switch	(27315)	279H24D1		1						17A	44
					(Used on SWITCH ASSEMBLY, stock no. 5930-227-6507 only.)											
X1					PLATE: front, selector switch	(27315)	279H241		1						17A	38
X1					PLATE: back, selector switch	(27315)	279H242D2		1						17A	63
					(used on SWITCH ASSEMBLY, stock no. 5930-227-6508 only.)											
X1					INSULATOR: switch shaft	(27315)	279H243		5						17A	41
X1					SHAFT: selector switch	(27315)	279H274D5		1						17A	64
					(Used on SWITCH ASSEMBLY, stock no. 5930-227-6508 only.)											
X1					WASHER, SPRING: selector switch 0.18 in. id x 1.18 in. od	(27315)	220H45		2						17A	39
					(Used on SWITCH ASSEMBLY, stock no. 5930-227-6508 only.)											
X1					SPACER: selector switch	(27315)	279H248D3		2						17A	40
x1					INSULATOR: selector switch spacer	(27315)	279H244		8						17A	45
X1					BLADE, MOVEABLE: selector switch	(27315)	279H247		6						17A	42
X1					CONTACT: selector switch	(27315)	279H245		3						17A	46
X1					CONTACT: selector switch	(27315)	279H246		4						17A	47
9X1				5305-215-3909	SCREW, MACHINE: selector switch binding				2						17A	32
					(Used on SWITCH ASSEMBLY, stock no. 5930-227-6508 only.)											
X1				5310-010-3319	WASHER, LOCK: switch binding screw				3						17A	31
					(Used on SWITCH ASSEMBLE, stock no. 5930-227-6508 only.)											

CODES	FEDERAL STOCK NUMBER	DESCRIPTION	MANUFACTURER'S CODE	MANUFACTURER'S PART NO.	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJOR EQUIPS: 15 DAYS MAINT. ORGANIZATIONAL 1-5	ORGANIZATIONAL 6-10	DS	GS	DEPOT MAINT. 100 EQUIPMENTS	ILLUST FIGURE NO.	ILLUST ITEM NO.
		4410 - SWITCHING CONTROL (cont)											
X1	5310-164-8848	WASHER, FLAT: switch binding screw (Used on SWITCH ASSEMBLY, stock no. 5930-227-6508 only.)				2						17A	34
9X1	5305-468-3703	SCREW, MACHINE: selector switch back plate (Used on SWITCH ASSEMBLY, stock no. 5930-227-6508 only.)				2						17A	30
X1		SHAFT: reversing switch (Used on SWITCH ASSEMBLY, stock no. 5930-227-6507 only.)	(27315)	279H294D3		1						17A	43
9X1	5305-017-5170	SCREW, MACHINE: reversing switch binding (Used on SWITCH ASSEMBLY, stock no. 5930-227-6507 only.)				2						17A	32
X1	5306-017-9824	BOLT, MACHINE: reversing switch (Used on SWITCH ASSEMBLY, stock no. 5930-227-6507 only.)	(27315)	0826V026		1						17A	36
X1	5310-021-9431	NUT, PLAIN, HEXAGON: reversing switch (Used on SWITCH ASSEMBLY, stock no. 5930-227-6507 only.)				1						17A	35
X1	5310-010-3320	WASHER, LOCK: reversing switch (Used on SWITCH ASSEMBLY, stock no. 5930-227-6507 only.)				1						17A	33
X1		SPACER: reversing switch (Used on SWITCH ASSEMBLE, stock no. 5930-227-6507 only.)	(27315)	218H104D3		1						17A	37
X2F		STARTER ASSEMBLY, MOTOR	(37315)	9279h237f5		1			*	*	*	19	4
P1F	5950-224-6504	STARTER ASSEMBLY	(04009)	51354		1			*	*	3	19	4
X1		COIL	(04009)	32620-513		1						18	4
X1		CONTACT	(04009)	51351-15		1						18	6
X1		BLOCK, OVERLOAD	(04009)	33209-8		2						18	2
X2F		BUSHING, INSULATION: starter mtg	(27315)	275H83		6			*	*	*	10	1
11P10	5930-112-5203	SWITCH, TOGGLE	(15605)	8690K1		1	*	*	*	*	6	17A	11
9 F	5305-010-0765	SCREW, MACHINE: starter assembly				3			*	*	*	19	2
F	5310-050-2231	WASHER, FLAT: starter assembly				3			*	*	*	19	3
9 F	5310-174-7400	NUT, SELF-LOCKING, HEXAGON	(72962)	22NM02		3			*	*	*	19	1
X2F		SWITCH, PUSH: starter	(02295)	M4982698		1			*	*	*	17A	68
		4411 - RESISTOR COMPONENTS											
P10	5905-227-6506	RHEOSTAT	(44655)	41876		1	*	*	*	*	20	17A	59
X20		HANDLE: rheostat	(27315)	206H15D2		1	*	*	*	*	*	17A	61
X20		PIN, SPRING: rheostat handle attaching	(72692)	59-022-094-625		1	*	*	*	*	*	17A	60
		GROUP 76 - FIRE FIGHTING EQUIPMENT COMPONENTS 9501 - BULK MATERIAL											
P0	4010-257-0772	CHAIN, WELDLESS			FT		*	*	*	*	*		
P0	9505-186-9137	WIRE, STEEL, CARBON			RL		*	*	*	*	*		
P0	6145-174-1123	WIRE, ELECTRICAL			FT		*	*	*	*	*		
P0	9520-517-0534	ANGLE, STEEL			FT		*	*	*	*	*		

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