# TM 5-3431-203-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

# OPERATOR, ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT, AND DEPOT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS)

# WELDING MACHINE, ARC, INERT SHIELDED: TRANSFORMER; 300 AMP; 10 TO 400 AMP AC STRAIGHT POLARITY; 10 TO 00 AMP DC REVERSE POLARITY (MIDSTATES MODEL MAG 00 AC/DC T 14) FSN 3431-862-6670



HEADQUARTERS, DEPARTMENT OF THE ARMY

**FEBRUARY 1967** 

#### SAFETY PRECAUTIONS

#### **BEFORE OPERATION**

See that the ground terminal lug is connected through the input cable or by separate con. ductor to the power system ground. An ungrounded machine can cause death by electrocution to personnel coming in contact with it.

Do not reposition the voltage bars while power source is connected to the machine. To do so could cause a serious electrical shock and possible death.

#### DURING OPERATION

Do not make or break any connections or perform any maintenance while the welding machine is in operation. The high voltage created by this machine can cause death by electrocution.

Do not come in contact with the electrode while the machine is in operation. The high voltage generated by the machine can cause death by electrocution.

Be very careful when the unit or surrounding area is wet or damp. Coming in contact with a wet or damp unit an cause a serious electrical shock and possible death.

When malfunction of the selenium rectifier occurs, thoroughly ventilate the area to prevent inhalation of poisonous fumes. Do not handle the damaged reatifier while it is warm so as not to absorb poisonous selenium oxide compound through the skin. Failure to observe this warning can result in serious injury or possible death.

#### AFTER OPERATION

When making a test on the high-frequency transformer, make sure that the transformer is on an insulated bench. Do not touch an activated transformer or the wires leading from it. To do so may cause a serious electrical shock or possible death to personnel performing the test.

Short the capacitor connections to ground before removal. Failure to do this may result in a serious electrical shock.

HEADQUARTERS DEPARTMENT OF THE ARMY Washington, D. C., 11 December 1972

#### OPERATOR, ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT AND DEPOT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS)

#### WELDING MACHINE, ARC; INERT SHIELDED; TRANSFORMER, 300 AMP; 10 TO 400 AMP AC, STRAIGHT POLARITY; 10 TO 300 AMP DC, REVERSE POLARITY (MIDSTATES MODEL MAG300 AC/DC T134) FSN 3431-862-6670

TM 5-3431-203-15, 14 Feburary 1967, is changed as follows: *Page B-1*. Appendix B is superseded as follows:

# APPENDIX B BASIC ISSUE ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED

#### Section I. INTRODUCTION

#### B-1. Scope

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

#### **B-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.

#### **B-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, section III. a. Source, Maintenance and Recoverability Code (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 (U/M). A two character alphabetic abbreviation indication 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.

Change No. 1

## Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

(1 SMR code	(2) Federal stock number	(3) Description Ref No. & Mfr code	Usable on code	(4) Uni of meas	(5) Qty auth
	7520-559-9618 5975-243-5866 5120-642-8937 6145-189-6695	CASE, Maintenance and Operation manual CLAMP, Electrical ROD, GROUND WIRE, Electrical, 10 Ft.		EA EA EA EA	1 1 1 1

By Order of the Secretary of the Army:

Official:

VERNE L. BOWERS Major General, United States Army The Adjutant General CREIGHTON W. ABRAMS General, United States Army Chief of Staff

Distribution:

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

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TECHNICAL MANUAL

No. 5-3431-203-15

HEADQUARTERS DEPARTMENT OF THE ARMY WASHINGTON, D. C., 14 February 1967

Operator, Organizational, Direct and General Support and Depot Maintenance Manual (Including Repair Parts)

# WELDING MACHINE, ARC, INERT GAS SHIELDED: TRANSFORMER; 300 AMP; 10 TO 400 AMP AC STRAIGHT POLARITY; 10 TO 300 AMP DC REVERSE POLARITY (MIDSTATES MODEL MAG 300 AC/DC T134) FSN 3431-862-6670

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\*This manual supersedes TM 5-3431-203-15, 5 December 1962, including C1, 16 August 1963.

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#### CHAPTER 1

#### INTRODUCTION

#### Section I. GENERAL

1-1. Scope

a. These instructions are published for the use of the personnel to whom the Midstates Model MAG 300 AC/DC T134 Welding Machine is issued. Chapters 1 through 3 provide information on the operation, daily preventive maintenance services, and organizational maintenance of the equipment, accessories, components, and attachments. Chapter 4 provides information for direct and general support and depot maintenance, This manual also provides descriptions of the main units and their functions in relationship to other components.

*b.* Appendix A contains a list of publications applicable to this manual. Appendix B contains the list of basic issue items authorized for the initial operation. Appendix C contains the maintenance allocation chart. The organizational, direct and general support and depot maintenance repair parts lists are found in Appendix D.

*c.* Numbers in parentheses on illustrations indicate quantity.

d. DA Form 2028 (Recommended Changes

to DA Publication) will be used for reporting discrepancies and recommendations for improving this equipment manual. This form will be completed by the individual using the manual and forwarded direct to Commanding General, U.S. Army Mobility Equipment Command, ATTN: AMSME-MPD, 4300 Goodfellow Blvd. St. Louis, Mo. 63120.

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

#### 1-2. Record and Report Forms

*a.* DA Form 2258 (Depreservation Guide for Vehicles and Equipment).

*b.* DA Form 1397 (processing and Deprocessing Record for Shipment, Storage, and Issue of Vehicle and Spare Engines).

*c.* For other record and report forms applicable to the operator and organizational maintenance, refer to TM 38-750.

*Note.* Applicable forms, excluding Standard Form 46 (United States Government Motor Vehicles Operator's Identification Card) which is carried by the operator shall be kept in a canvas bag mounted on the equipment.

#### Section II. DESCRIPTION AND DATA

#### 1-3. Description

The Midstates Model MAG 300 AC/DC inert welding machine (figs. 1-1 and, 1-2) is operated from an external power source of either 230- or 460-volt, alternating current, and by single phase or three phase connections. This welder provides an electrically controlled current output for use in either shielded inert gas welding or metallic arc welding. The entire control section is located in a drawer-type frame at the top of the welding machine. The panel permits the entire section to be disconnected and removed for ease of servicing.



Figure 1-1. Welding machine, tight front, three-quarter view with shipping dimensions.



Figure 1-2. Welding machine, left rear, three-quarter view.

#### 1-4. Identificaticm and Tabulated Data

a. Identification. The welding machine has two identification plates, which are the Corps of Engineers' plate, and the manufacturer's identification and data plate. The Corps of Engineers' plate is located on the upper right side of the housing near the front of the welding machine. It specifies the nomenclature, make, model, serial number, and, contract number. The manufacturer's identification and data plate is located on the upper front panel. It specifies the nomenclature, manufacturer, model, serial number, secondary rated output amperage, load voltage, duty cycle percent, open circuit voltage, primary input voltage, input amperage, rated kilo-volt amperage, power factor percent, and cycles.

b. Tabulated Data.

(1) Corps of engineers' plate.

Nomenclature	Welding	Machine	ARC;
	300 a	mp (amp	eres)
Make	Midstate	s	
Model	MAG 300	AC/DC	T134
Serial Number			
Contract Number	- DA-11-1	99-ORD-	297 S
	427		

#### (2) Manufacturer's identification and data plate.

Manufacturer	Midst	ates	Welder	Mfg.
	с	0		
Model	MAG	300	AC/DC	T134
Secondary	A C		DC	
Rated output amps	300		300	
Load volts	- 40		40	
Duty cycle (percent)	60		60	
open circuit volts	80		72	
Primary				
Input	230	/460		
Input amps	90/-	45		
Rated kva (kilovolt	21			
amperes)				

Power	factor	(percent)	80		
Cycles			50/60	single	phase

(3) Solenoid valve.

Manufacturer	Automatic Switch	i Co
Part number	82623	
Voltage	230 v (volts)	
Psi (pounds per	square	
inch)	110	
Wattage	10.5 W (watts)	

#### (4) Fan motor.

Manufacturer	<ul> <li>Universal Electric Co</li> </ul>
Model number	-16-166
Rpm (Revolutions per	1550
minute)	
Voltage230	) v
Cycles	60
Amperage1.2	5 amp

#### (5) Contactor.

Manufacturer ----- Cutler-Hammer Inc. Model number ----- 6-3-2 Voltage ------208/220 v, 60 cycles Amperage (open air) -----30 amp Amperage (enclosed) ----27 amp

(6) Dimensions and weight.

Height	41	1/2	in.	(inches)
Width	24	3/8	in.	
Length	22	1/4	in.	
Weight	7	700 lb	(pot	inds)

#### (7) Adjustments.

Spark gap adjuster -----0.005 in.

- (8) Base plan. Refer to figure 1-3.
- (9) Wiring diagram. Refer to figure 1-4.

#### 1-5. Difference in Models

This manual covers only the Midstates Model 300 AC/DC T134 welding machine. No known unit differences exist for the model covered by this manual.



Figure 1-3. Base plan.

Figure 1-4. Practical wiring diagram. (Located in back of manual)

#### CHAPTER 2

#### INSTALLATION AND OPERATION INSTRUCTIONS

#### Section I. SERVICE UPON RECEIPT OF EQUIPMENT

#### 2-1. Unloading the Equipment

a. Shipment by Tractor. When the welding machine is received, by tractor, remove all securing devices and, with a forklift or other suitable lifting device, remove it from the truck.

*Warning:* When using a lifting device to move the welding machine, make sure it has a lifting capacity of no less than 1,000 pounds. Do not allow the welding machine to swing or sway while suspended. Failure to observe this warning may result in damage to the equipment or serious injury to personnel.

b. Shipment by Rail. When the welding machine is received by rail, remove all securing devices and with a forklift or other suitable lifting device, remove it from the freight car.

#### 2-2. Unpacking the Equipment

*a. Unpacking.* The welding machine has heavy paper or cardboard around it to protect it from damage. This is packed in a wooden box.

- (1) Remove all metal banding with a suitable tool.
- (2) Remove the wooden box with a claw hammer, pry bar, nail puller, or other suitable tools.

*Note.* Be careful not to damage the welding machine while removing the wooden box

*b. Descripition.* Prepare the welding machine for inspection and operation as outlined on DA Form 2258, attached on or near the control panel.

2-3. Inspecting and Servicing Equipment

a. Check packing list for missing parts.

*b.* Inspect for damaged parts. Check welding machine for dents, scratches, and damaged housing.

*c.* Inspect for damaged or broken controls and switches.

*d.* Inspect for loose and missing hardware, lifting eyes, panels and fittings.

*e.* Perform the daily preventive maintenance services (para 3-7).

#### 2-4. Installation or Setting-Up Instructions

a. Ground and Electrode Cable Connections. Refer to figure 2-1 and connect the work cables to the ground terminal stud and electrode terminal stud located on the front of the welder.

b. External Power and Ground Connections. The welding machine must be grounded prior to operation. The ground can be, in order of preference, an underground metallic water piping system, a driven metal rod, or a buried metal plate. The ground rod must have a minimum diameter of 5/8 inch if solid, or 3/4 inch if pipe, and, must be driven to a minimum depth of 8 feet. A ground plate must have a minimum area of 9 square feet and be buried to a minimum depth of 4 feet. The ground lead must be a No. 6 AWG (American Wire Gage) copper wire or larger, and be bolted or clamped, to the rod, plate, or piping system. Refer to figure 2-1B and connect the external power and ground wire.



Figure 2-1. Load, ground, external power source, gas, and water connections.

*Warning:* Before operating the unit, see that the ground terminal lug is properly connected by one of the methods referenced in paragraph 2-4b. An ungrounded machine can cause death by electrocution of personnel coming in contact with it.

*c. Water Connections.* Refer to figure 2-1C and connect suitable pipe and fittings to the welding machine.

*d. Gas Connections.* Refer to figure 2-1 and connect suitable pipe and fittings to the welding machine.

*Note.* When installing the welding machine, allow at least 18 inches clearance on all sides for proper ventilation.

#### 2-5. Equipment Conversion

*a. General.* The welding machine can operate on either 230 or 460 volts by the correct positioning of the voltage change bars.

- b. Voltage Change Bar Positioning.
  - (1) Remove the screws on the contractor and voltage change bar access panel and open door.
  - (2) Refer to figure 2-2 and place the voltage change bars in the desired position.

*Warning:* Do not reposition voltage change bars while power source is connected to the machine. To do so could cause a serious electrical shock and possible death.

CHANGE BAR (4) Ο CONTACTOR Ο GND. LUG θ  $\cap$ 0 230 V A. 230 AC CONNECTIONS. CHANGE BAR (4) O)  $(\bigcirc$  $\bigcirc$  $\bigcirc$ O Ο CONTACTOR е O GND. LUG 460V 0  $\cap$ 0  $\cap$ B. 460 AC CONNECTIONS MEC 3431-203-15/2-2

Figure 2-2. Voltage change bars for 230 or 460 volts.

#### Section II. MOVEMENT TO A NEW WORKSITE

#### 2-6. Dismantling for Movement

*a.* Disconnect cables from load connection, external power source ground connections, and hoses and/or piping from gas and water connections (para 2-4).

*b.* If the welding machine is to be moved within a building, it can be skidded or moved with a forklift. If the welding machine is to be moved other than a short distance, cover the water and gas connection fittings and load it on a truck or other suitable carrier with a suitable lifting device. *Warning:* When using a lifting device to lift the welding machine, make sure it has a safe lifting capacity of at least 1,000 pounds. Do not allow the welding machine to swing freely when being lifted. Failure to observe this warning may cause damage to the equipment or serious injury to personnel.

#### 2-7. Reinstallation After Movement

Refer to paragraph 2-4 for reinstallation instructions after movement to a new worksite.

#### Section III. CONTROLS AND INSTRUMENTS

#### 2-8. General

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

2-9. Controls and Instruments

Refer to figure 2-3 for the purpose, use, and normal position of the controls and instruments.



Figure 2-3. Controls and instruments.

#### Section IV. OPERATION OF EQUIPMENT

#### 2-10. 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, and various settings of controls to enable the welding machine to perform different types of welding for which it is designed,. Since nearly every job presents a different problem, the operator may have to vary given procedures to fit the individual job.

Caution: When using the machine for high frequency welding, high frequency emission may result in communication interference if the machine is not properly grounded.

#### 2-11. Starting

a. Preparation for Starting.

- (1) Perform the daily preventive maintenance Services (para 3-7).
- (2) Clean area on item to be welded to insure a good connection.
- (3) Connect the ground clamp of the load (work) cable to the work table or item to be welded.

b. Starting. Refer to figure 2-4 for starting instructions.

#### 2-12. Stopping

a. Refer to figure 2-5 for stopping instructions.

b. Remove the ground clamp from the item being welded.

#### 2-13. Welding Machine Operation

a. Start the welding machine (para 2-11).

b. Refer to table 1-1 and select the proper electrode for inert gas welding.



- STARTING. STEP 1. MAKE SURE THAT EXTERNAL POWER IS CONNECTED TO THE WELDING MACHINE.
- STEP 2. MAKE SURE THAT GAS AND WATER ARE CONNECTED TO THE WELDING MACHINE IF HIGH FREQUENCY WELDING IS TO BE DONE
- STEP 3. PLACE POWER SWITCH TO ON POSITION TO START THE WELDING MACHINE.

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Table 1-1. Electrode Size for Applied Current

Tungsten electrode	Welding current
size (diameter)	(amperes)
0.040 in. 3/32 1/16 1/8 5/32 3/16 1/4	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$



Figure 2-5. Stopping the welding mchine.

*Note.* Refer to TM 9-237 for metallic are welding theory and application.

*c.* Use a sample piece of metal, like the metal to be welded and adjust the welding amperage to produce the correct arc necessary for the welding to be done.

*Warning:* Do not come in contact with the electrode while the welding machine is operating. The high voltage generated by the machine can cause death by electrocution.

*d.* Refer to figure 2-6 and operate the welding machine.

*Warning:* Before operating the welding machine, see that the ground terminal lug is connected through the input cable or by separate conductor to the power system ground. An ungrounded welding machine can cause death by electrocution to personnel coming in contact with it.

*Note.* The welding machine is equipped with a remote receptacle and can be operated by remote control. When using the remote control, the contactor and amperage switches must be in the remote position. When the remote amperage control is used, the maximum current available will be limited by the sitting of the panel rheostat. If full range is necessary, the panel rheostat control must be set wide open.

#### 2-14. Operation in Extreme Cold (Below 0° F)

*a.* Frequently inspect for frozen water pipes or lines.

*b.* If freezing is evident, disconnect the water system from the welding machine and use only for regular are welding.

#### 2-15. Operation in Extreme Heat

*a.* Frequently inspect the fan motor and lubricate as necessary in accordance with the current lubrication order.

*b.* Make sure the welding machine has adequate ventilation.

#### 2-16. Operation in Dusty or Sandy Areas

*a.* Keep dust and sand cleaned from welding machine as much as possible,

*b.* If dust or sand is blowing, provide a panel or shelter to give as much protection as possible to the welding machine.

*c.* Keep welding machine covered when not in use.

#### 2-17. Operation Under Rainy or Humid Conditions

*a.* Provide as mush protection as possible to keep rain from welding machine.

*b.* Keep the welding machine covered when not in use.

*c.* If water comes in contact with the high frequency panel, remove the panel and dry thoroughly before installing it in the welding machine.

*Warning:* Be extremely careful when the unit or surrounding area is damp or wet. Coming in contact with a wet or damp unit can cause a serious electrical shock or death.



STEP 1. PLACE POWER SWITCH IN ON POSITION.

- STEP 2. TURN ON SOURCES OF GAS AND WATER.
- STEP 3. PLACE GAS-WATER AND HIGH-FREQUENCY SWITCH IN <u>ON</u> POSITION. THE INDICATOR LIGHTS ASSOCIATED WITH THESE SWITCHES WILL NOT GLOW UNTIL GAS AND WATER BEGIN TO FLOW AND HIGH-FREQUENCY OSCILLATION BEGINS.
- NOTE: WHEN TURNING GAS-WATER SWITCH ON, THERE IS A MOMENTARY FLOW OF GAS AND WATER.
- STEP 4. DETERMINE WELDING RANGE BY SIZE OF WORK TO BE DONE AND SELECT THE PROPER ELECTRODE SIZE . ADJUST RANGE CONTROL TO PROPER POSITION.
- STEP 5. SET POLARITY SWITCH IN ACCORDANCE WITH TYPE OF WELDING TO BE DONE AND TYPE OF ELECTRODE USED.
- NOTE: FOR METALLIC ARC WELDING, FOLLOW STEPS 1,4, AND 5 ONLY AND SET THE CONTACTOR AND AMPERAGE SWITCHES IN THE <u>CONTROL PANEL</u> POSITION.
- A. PANEL CONTROLS.
- NOTE: IF EITHER HIGH-FREQUENCY DROPOUT TIMER OR SPOT ARC TIMER ARE NOT REQUIRED, TURN THE ASSOCIATED SWITCH TO THE OFF POSITION.



STEP 6. SET POST FLOW TIMER TO THE DESIRED POSITION.

- STEP 7. SET HIGH-FREQUENCY DROPOUT TIMER TO DESIRED POSITION AND PLACE THE HIGH-FREQUENCY DROPOUT SWITCH TO ON POSITION.
- STEP 8. CLOSE PANEL DOOR AND OPERATE THE WELDING MACHINE.
- NOTE: FOR SPOT ARC WELDING, FOLLOW STEPS 1,4,5, AND 8, ONLY. PLACE THE HIGH-FREQUENCY AND SPOT ARC SWITCHES IN THE ON POSITION AND SET THE SPOT ARC TIMER TO THE DESIRED SETTING (O TO 3 SECONDS).
- NOTE: TO SET TIMERS, ROTATE THE COLORED DIAL (MARKED 0-A-B-C-D-E) TO THE DESIRED POSITION, DEPENDING ON THE JOB TO BE PERFORMED.
- B. HIGH-FREQUENCY CONTROLS.

Figure 2-6. Welding machine operation.

EMC 3431-203-15/10

#### 2-18. Operation in Saltwater Areas

*a.* Keep the welding machine protected as much as possible but do not block ventilation.

*b.* Inspect all connections, terminals, and fittings for corrosion.

c. Keep welding machine covered when not in use.

#### CHAPTER 3

# OPERATOR AND ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

# Section I. OPERATOR AND ORGANIZATIONAL MAINTENANCE TOOLS AND EQUIPMENT

3-1. 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.

#### 3-2. Basic Issue Tools and Equipment

Tools and repair parts issued with or au-

thorized, for the welding machine are listed in the basic issue items list, Appendix B of this manual.

3-3. Organizational Maintenance Repair Parts

Organizational maintenance repair parts are listed and illustrated in Appendix D of this manual.

#### Section II. LUBRICATION

#### 3-4. General Lubrication Information

The only lubrication required for the welding machine is the lubrication of the fan motor. This section contains instructions for the lubrication of the fan motor.

#### 3-5. Fan Motor Lubrication

Refer to figure 3-1 and lubricate the fan motor.

*Note.* Use engine oil MIL-L-2104 for lubricating the fan motor.



Figure 3-1. Fan motor, lubrication points.

#### Section III. PREVENTIVE MAINTENANCE SERVICES

#### 3-6. 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 sericus damage and failure. The necessary preventive maintenance services to be performed are listed and described in paragraphs 3-7 and 3-8. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the unit shall be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noted 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.

#### 3-7. 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 inspection requirements. Refer to figure 3-2 for the daily preventive maintenance services.

#### 3-8. 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 inspection requirements. Refer to figure 3-3 for the quarterly preventive maintenance services.

# **PREVENTIVE MAINTENANCE SERVICES** DAILY TM5-3431-203-15 WELDING MACHINE (MIDSTATES MODEL MAG 300 AC/DC T134) Q 1 3 2 ITEM PAR REF 1 SCREEN. Clean a dirty screen. 2 GROUND TERMINAL. Check for proper ground. A proper ground will consist of a 3/4-inch-dia. hollow rod or 5/8-inch-dia. solid rod, 9 feet long. The cable will be No. 6 AWG copper wire, bolted or clamped to the rod and attached to the ground terminal of the welder set. 3 CONTROLS. Inspect for damage and loose mounting. With unit operating, 14 check for proper operation. NOTE 1. OPERATION. During operation observe for any unusual noise or vibration.

MEC 3431-203-15/3-2

Figure 3-2. Daily preventive maintenance services.



HEC 3431-203-15/3-3



#### Section IV. OPERATOR'S MAINTENANCE

#### 3-9. General

The instructions in this section are published for the information and guidance of personnel responsible for the operator's maintenance of the welding machine and are in addition to those listed in paragraph 3-7.

#### 3–10. Pilot Lamps

Refer to figure 3-4 and remove and install the pilot lamps.



Figure 3-4. Pilot lamps, removal and installation.

#### Section V. TROUBLESHOOTING

#### 3-11. General

This section provides information useful in diagnosing and correcting unsatisfactory operation or failure of the welding machine and its components. Each trouble symptom stated is followed by a list of probable causes of the 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.

#### 3-12. Welding Machine Fails to Start

Probable cause	Possible remedy
Contractor open	Reset contractor.
Power switch defectiv	eReplace switch (para
	3 - 3 1 ) .

Probable cause Possible remedy Interlock switch defective ---- Replace switch (para 3-35).

#### 3-13. Cooling Fan Does Not Operate

Lead broken or terminal loose. (para 4-36). Fan motor defective ------ Replace motor (para 3-52).

Possible remedy

#### 3-14. Fan Assembly Noisy

Probable cause

Probable cause Possible remedy Mounting hardware loose ---- Tighten hardware (para 3-52).

Fan blade loose -----Tighten fan blade eetscrew (para 3-52).

#### 3-15. Gas Insufficient

Probable cause	Possible remedy	Erratically
Lines or fittings	Clean lines and/or fittings	Probable cause
Solenoid defective	(para 3-49). Replace solenoid (para	Spark gap improperly adjusted.
	3-49).	

#### 3-16. Water Insufficient

Probable cause	Possible remedy
Lines or fittings	Clean lines and/or fittings
obstructed.	(para 3-50).
Solenoid defective	Replace solenoid (para
	3-50).

#### 2 17 Dilat Lianata I ...

3-17. Pilot Lights Inoperative		Remote contactor switch defective.	Replace switch (para 3-39).	
Probable cause	Possible remedy	Remote amperage switch	tch Replace switch (para	
Lamp burned out Replace lamp (para 3-10).		defective.	3-40).	
Lead broken or con- Repair lead or tighten connection (para		3-20. Contactor Breaks Circuit		
neetion loose.	3-30).	Probable cause	Possible remedy	
Socket defective	Replace socket (para 3-30).	Thermostatic switch defective.	Replace switch (para 3-42)	

#### Section VI. FIELD EXPEDIENT REPAIRS

#### 3-21. General

Operator and organizational maintenance troubles may occur while the welding machine is operating in the field where supplies and repair parts are not available and normal corrective action cannot be performed. When this condition exists, the following expedient repairs may be used in emergencies, upon the decision of the unit commander. Equipment so repaired must be removed, from operation as won as possible and properly repaired before being placed in operation again.

3-22. Loss of Water	
Trouble	Expedient remedy
Pipe or fitting cracked	Tape cracked pipe or
	fitting until defective
	pipe or fittings can be
	replaced.

#### 3-23. High Frequency Inoperative

3-18. Welding Machine Operates

3-19. Remote Control Does Not Function

Wires loose at receptacle ---- Tighten wires (para 3-38). Receptacle defective ----- Replace receptacle (para

3-38).

Possible remedy

Clean adjusting screws

Possible remedy

and adjust spark gap (para 3-45).

Erratically

Properly

Probable cause

Trouble		Expedient remedy				
Timer	defective	 Exchange	ti	mers	unti	il
		defectiv	ve	timer	can	be
		replace	ed	(para	3-3	4).

#### 3-24. Power Failure

Trouble	Expedient remedy
Interlock switch defective.	Use jumper wire to bypass interlock switch until it can be replaced (para 3-35).
Contactor broken or defective.	Provide jumper wire around contactor until it can be replaced (para 3-41).

# Section VII. WELDING MACHINE TOP, HOUSING, DOORS, **AND PANELS**

#### 3-25. General

The welding machine housing is constructed

of a heavy metal top, sides, back section and front section. This section contains information on the maintenance of these components.

- 3-26. Welding Machine Top and Housing
  - a. Removal.
    - (1) Refer to figure 3-5 and remove the welding machine top.
    - (2) Remove the fan, motor, and guard assembly (para 3-52).
    - (3) Remove the gas and water solenoid valves (para 3-49 and 3-50).
    - (4) Refer to figure 3-5 and remove the housing.
  - b. Installation.
    - (1) Refer to figure 3-5 and install the housing.
    - (2) Install the gas and water solenoid valves (para 3-49).
    - (3) Install the fan, motor, and guard assembly (para 3-52).
    - (4) Refer to figure 3-5 and install the welding machine top.
- 3-27. High Frequency Panel Assembly
  - a. Removal.
    - (1) Unlock and open panel door.

- (2) Disconnect jack tip terminals and panel wiring harness quick-disconnect plug.
- (3) Refer to figure 3-6 and remove the high frequency panel assembly.
- b. Installation.
  - (1) Refer to figure 3-6 and install the high frequency panel assembly.
  - (2) Connect the jack tip terminals and the wiring harness quick-disconnect lug.
  - (3) Close and lock the panel door.
- 3-28. Panel Door Lock
  - a. Removal.
    - (1) Unlock and open the high frequency panel door.
    - (2) Refer to figure 3-7 and remove the panel door lock.
  - b. Installation.
    - (1) Refer to figure 3-7 and install the panel door lock.
    - (2) Close and lock the high frequency panel door.



Figure 3-5. Welding machine top and housing, removal and installation.



Figure 3-6. High frequency panel assembly, removal and installation.



Figure 3-7. Panel door lock, removal and installation.

# Section VIII. PILOT LIGHTS, SWITCHES, TIMERS, REMOTE RECEPTACLES, AND DUMMY PLUG

#### 3-29. General

The pilot lights indicate the phase of operation that the machine is performing. The switches control the power, gas, water, and high frequency. The timers have plug-in type sockets for easy removal and maintenance; they control the postflow of gas and water, the preflow of gas and water, shut off high frequency oscillation at a predetermined time, and control the length of time the welding power is on. The dummy plugs are used when timers are not in the socket.

#### 3-30. Pilot Lights

#### a. Removal.

- (1) Remove the pilot lamps (para 3-10).
- (2) Remove the high frequency panel assembly (para 3-27).
- (3) Refer to figure 3-8 and remove the pilot lights.



Figure 3-8. Pilot lights and gas, water, power, and high frequency switches, removal and installation.

#### b. Installation.

- (1) Refer to figure 3-8 and, install the pilot lights.
- (2) Install the high frequency panel assembly (para 3-27).
- (3) Install the pilot lamps (para 3-10).

#### 3-31. Power Switch

- a. Removal.
  - (1) Remove the high frequency panel assembly (para 3-27).
  - (2) Refer to figure 3-8 and remove the power switch.
- b. Installation.
  - (1) Refer to figure 3-8 and install the power switch.
  - (2) Install the high frequency panel assembly (para 3-27).

#### 3-32. Gas-Water Switch

- a. Removal.
  - (1) Remove the high frequency panel assembly (para 3-27).
  - (2) Refer to figure 3-8 and remove the gas-water switch.
- b. Installation.
  - (1) Refer to figure 3-8 and install the gas-water switch.
  - (2) Install the high frequency panel assembly (para 3-27).

#### 3-33. High Frequency Switch

- a. Removal.
  - (1) Remove the high frequency panel assembly (para 3-27).
  - (2) Refer to figure 3-8 and remove the high frequency switch.
- b. Installation.
  - (1) Refer to figure 3-8 and install the high frequency switch.
  - (2) Install the high frequency panel assembly (para 3-27).

#### 3-34. Timers

- a. Removal.
  - (1) Unlock and lower the high frequency panel door.
  - (2) Refer to figure 3-9 and remove the timers.



Figure 3-9. Timers and dummy plug, removal and installation.

#### b. Installation

Refer to figure 3-9 and, install the timers.

Close and lock the high frequency panel door.

#### **3-35. Interlock Switch**

- a. Removal.
  - (1) Remove the high frequency panel assembly (para 3-27).
  - (2) Refer to figure 3-10 and remove the interlock switch.
- b. Installation.
  - (1) Refer to figure 3-10 and install the interlock switch.
  - (2) Install the high frequency panel assembly (para 3-27).

*c. Field Expdient Repair.* If. the interlock switch is defective, place a jumper wire across the terminals and bypass the switch.

*Warning:* Performances of any field expedient repair creates a condition possibly dangerous to the equipment or personnel. A welding machine so repaired should be taken out of service as soon as possible for replacement of the defective part.

- 3-36. High Frequency Spot ARC Switch
  - a. Removal.
    - (1) Remove the high frequency panel assembly (para 3-27).
    - (2) Refer to figure 3-10 and remove the high frequency spot arc switch.
  - b. Installaion.
    - (1) Refer to figure 3-10 and install the high frequency spot arc switch.
    - (2) Install the high frequency panel assembly (para 3-27).



Figure 3-10. Interlock, spot arc, and drop out switch, removal and installation.

- 3-37. High Frequency Dropout Switch
  - a. Removal.
    - (1) Remove the high frequency panel assembly (para 3-27).
    - (2) Refer to figure 3-10 and remove the high frequency dropout switch.
  - b. Installation.
    - (1) Refer to figure 3-10 and install the high frequency dropout switch.
    - (2) Install the high frequency panel assembly (para 3-27).

#### 3-38. Remote Receptacle

- a. Removal.
  - (1) Remove the high frequency panel assembly (para 3-27).
  - (2) Refer to figure 3-11 and remove the remote receptacle.
- b. Installation.
  - (1) Refer to figure 3-11 and install the remote receptacle.
  - (2) Install the high frequency panel assembly (para 3-27).



Figure 3-11. Remote contactor switch, amperage switch, and receptacle, removal and installation.

- 3-39. Remote Contractor Switch
  - a. Removal.
    - (1) Remove the high frequency panel assembly (para 3-27).
    - (2) Refer to figure 3-11 and remove the remote contactor switch.
  - b. Installation.
    - (1) Refer to figure 3-11 and install the remote contactor switch.
    - (2) Install the high frequency panel assembly (para 3-27).

#### 3-40. Remote Amperage Switch

- a. Removal.
  - (1) Remove the high frequency panel assembly ( para 3-27).
  - (2) Refer to figure 3-11 and remove the remote amperage switch.
- b. Installation.
  - (1) Refer to figure 3-11 and, install the remote amperage switch.
  - (2) Install the high frequency panel assembly (para 3-27).

#### 3-41. Contactor

- a. Removal.
  - (1) Remove the welder top housing (para 3-26).

- (2) Refer to figure 3-12 and remove the contactor.
- b. Installation.
  - (1) Refer to figure 3-12 and install the contactor.
  - (2) Install the welder top and housing (para 3-26).

*c. Field Expedient Repair.* If the contactor becomes defective, place a jumper wire across the terminals and bypass the contactor.

*Caution:* Performance of any field expedient repair creates a condition possibly dangerous to equipment and personnel. A welding machine so repaired must be taken out of service as soon as possible for replacement of the defective part.

#### 3-42. Thermostatic Switch

- a. Removald.
  - (1) Remove the welder top and housing (para 3-26).
  - (2) Refer to figure 3-13 and remove the thermostatic switch.



Figure 3-12. Contactor, removal and installation.



Figure 3-13. Thermostatic switch, removal and installation.

- b. Installation.
  - (1) Refer to figure 3-13 and install the thermostatic switch.
  - (2) Install the welder top and housing (para 3-26).
- 3-43. Dummy Plug
  - a. Removal.
    - (1) Unlock and lower the high frequency panel door.
    - (2) Refer to figure 3-9 and remove the dummy plug.
  - b. Installation.
    - (1) Refer to figure 3-9 and install the dummy plug.
    - (2) Close and lock the high frequency panel door.

#### Section IX. SPARK GAP ADJUSTER, VOLTAGE CHANGE BARS, AND GROUND AND ELECTRODE TERMINAL BOARD

#### 3-44. General

The primary purpose of the spark gap adjuster is to control the stability of the high frequency arc. The purpose of the voltage change bars is to allow the welding machine to operate from either 230 or 460 volts by the correct changing of the bars. The ground, and electrode cable terminal lugs are connected by brass nuts to the studs on the ground and electrode terminal board.

#### 3-45. Spark Gap Adjuster

- a. Removal.
  - (1) Remove the high frequency panel assembly ( para 3-27).
  - (2) Refer to figure 3-14 and remove the spark gap adjuster.

#### b. Installation.

- (1) Refer to figure 3-14 and install the spark gap adjuster.
- (2) Install the high frequency panel assembly (para 3-27).

*c. Adjustment.* Refer to figure 3-14 and adjust the spark gap.

#### 3-46. Voltage Change Bars

- a. Removal.
  - (1) Remove the two securing screws and raise the voltage change bar access door on the rear of the welding machine.
  - (2) Refer to figure 3-15 and remove the voltage change bars.
- b. Installation.
  - (1) Refer to figure 3-15 and install the voltage change bars.


STEP 4. ADJUST SCREW POINTS UNTIL A SLIGHT DRAG IS FELT AS FEELER GAGE IS REMOVED. TIGHTEN LOCKSCREW. EMC 3431-203-15/23

Figure 3-14. Spark gap adjuster, removal, installation, and adjustment.

- (2) Close the access door and replace the two securing screws.
- 3-47. Ground and Electrode Terminal Board

# a. Removal.

- (1) Remove the welder top and housing (para 3-26).
- (2) Refer to figure 3-16 and remove the ground and electrode terminal board.
- b. Installation.
  - (1) Refer to figure 3-16 and install the ground and electrode terminal board.
  - (2) Install the welder top and housing (para 3-26).



Figure 3-15. Voltage change bars, removal and installation.



Figure 3-16. Ground and electrode terminal board, removal and installation.

# Section X. GAS AND WATER SOLENOID VALVES

#### 3-48. General

The gas solenoid valve is used when the operator is performing inert-gas welding. The solenoid valve is operated electrically through the timer control. The waker solenoid valve is used when a water-cooled torch is used. The water solenoid valve is operated electrically through the timer control.

#### 3-49. Gas Solenoid Valve

Refer to figure 3-17 and remove and install the gas solenoid valve.

#### 3-50. Water Solenoid Valve

Refer to figure 3-17 and remove and install the water solenoid valve.



- STEP 3. TURN FITTING (4) COUNTERCLOCKWISE AND REMOVE.
- STEP 4. REMOVE SOLENOID VALVES FROM REAR OF PANEL. EMC 3431-203-15/26

Figure 3-17. Gas and water solenoid valves, removal and installation.

# Section XI. VENTILATING-COOLING SYSTEM

#### 3-51. General

The welding machine is cooled by a fan motor assembly which operates from the accessory power transformer. It has four aluminum blades which pull the air through the welder and out the back, The ballast resistors are mounted on the fan guard so that they can be cooled by the air as it passes through them. To make any repairs on the motor fan blade, or guard, the complete assembly must be removed.

#### 3-52. Fan, Motor, and Guard Assembly

a. Removal.

- (1) Remove the welding machine top and housing (para 3-26).
- (2) Disconnect the motor leads from the top and bottom terminals of the accessory transformer.
- (3) Refer to figure 3-1 and remove the fan, mater, and guard as a complete unit.



Figure 3-18. Fan, motor, and guard assembly, removal and installation.

*b. Disassembly and Reassembly.* Refer to figure 3-19 and disassemble and reassemble the fan, motor, and guard assembly.

- c. Installation.
  - (1) Refer to figure 3-18 and install the fan, motor, and guard assembly.
  - (2) Connect the motor leads to the top and bottom terminal of the accessory transformer.
  - (3) Install the welder top and housing (para 3-26).

## 3-53. Motor

- a. Removal.
  - (1) Refer to figure 3-18 and remove the fan, motor, and guard assembly.
  - (2) Refer to figure 3-19 and remove the fan motor.
- b. Installation.
  - (1) Refer to figure 3-19 and install the fan motor.

(2) Refer to figure 3-18 and install the fan, motor, and guard assembly.

#### 3-54. Fan

- a. Removal.
  - (1) Refer to figure 3-18 and remove the fan motor, aind guard assembly
  - (2) Refer to figure 3-19 and remove the fan.
- b. Installation.
  - (1) Refer to figure 3-19 and install the fan.
  - (2) Refer to figure 3-18 and install the fan, motor, and guard assembly.
- 3-55. Guard
  - a. Removal.
    - (1) Refer to figure 3-18 and remove the fan, motor, and guard assembly,



Figure 3-19. Fan, motor, and guard assembly, disassembly and reassembly.

- (2) Refer to figure 3-19 and remove the guard.
- (2) Refer to figure 3-18 and install the fan, motor, and guard assembly.

- b. Installation.
  - (1) Refer to figure 3-19 and install the guard.

# CHAPTER 4

# DIRECT AND GENERAL SUPPORT AND DEPOT MAINTENANCE INSTRUCTIONS

# Section I. GENERAL

#### 4-1. Scope

a. The following instructions are for direct and general support and depot maintenance personnel. They contain information on equipment maintenance that is beyond the scope of the tools, equipment, personnel, or supplies normally available to organizational maintenance.

*b.* Appendix A includes the list of publications applicable to direct and general support and depot maintenance. Appendix C contains the maintenance allocation chart. The direct and general support and depot maintenance repair parts and special tool lists are in Appendix D.

#### 4-2. Record and Report Forms

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

*Note.* Applicable forms, excluding Standard Form 46 (United States Government Motor Vehicles Operator's Identification Card) which is carried by the operator, shall be kept in a canaas bag mounted on the equipment.

# Section II. DESCRIPTION AND DATA

#### 4-3. Description

For a complete description of the welding machine, refer to paragraph 1-3.

#### 4-4. 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. 4-1) is also included.

# Figure 4-1. Schematic wiring diagram. (Located in back of manual)

b. Accessory Transformer.

Primary ----- 230/460V Cycles -----60

c. Nut and Bolt Torque Data.

Diodes ------35-70 ft-lbs (foot- pounds).

*d. Time Standards.* Table 2-1 lists the number of man-hours required under normal conditions to perform the indicated maintenance and repair for the welding machine. Un-

der adverse conditions, the operations will take longer; but under ideal conditions, with highly-skilled mechanics, most of the operations can be accomplished in considerably less time.

#### Table 4-1. Time Standards

Lubrication and Service.	
40 ELECTRIC MOTORS	
4000 Electric Motors	
Motor, fan 0.	1
(lubricate.)	
Remove and Replace	
22 ACCESSORY ITEMS	
2210 Data Plates and Instruction Holders	
Plates, Instruction 0.	3
40 ELECTRIC MOTORS	
4000 Electric Motors	
Motor, fan 1.	3
(Includes removal and	
installation of top cover	
and guard)	

Man-hours

44

Table 4-1. Time Standards-Continued

Man-hours	Man-hours
WELDING EQUIPMENT	Valve, solenoid 0.4
4400 Arc Welder	Plug dummy 0.4
Welder, arc 0.5	Switch range 1.0
4405 Frame Support and Housing	Capacitor 1.8
Lifting eye 0.2	Switch, polarity 0.7
Cover, top 0.3	4411 Resistor Components
Door rear terminal 0.3	Resistor 0.6
Housing welder 0.5	Rheostat 0.8
Plate, Valve 0.4	(includes R & I of top cover)
4406 Ventilating Cooling System	4412 Transformer Components
Blade. fan1.0	Transformer. main 1.6
Guard. fan 1.4	(includes complete disassembly
(includes R & I of motor and fan)	of unit)
1107 Control Panels	Capacitor, power 1.2
Light pilot 0.4	(Includes R & I of top cover
Lamp 0.2	and housing)
Switch control 0.5	Reactor assembly 2.0
4409 Connecting Devices Becontrols	(includes R & I of top cover
4408 Connecting Devices Receptacie	and housing)
Remote control 0.6	Coil assembly, filter reactor 2.0
Panel 0.3	(includes R & I of top cover
Stud, terminal 0.6	and housing)
Remote control 0.7	Transformer 1.0
4409 Protective Devices	(includes removal and instal-
Switch, interlock 0.6	lation of top cover and housing)
Switch, thermostatic 0.6	Coil, tesla 1.0
4410 Switching and Timing Speed	Transformer, control 2.6
Switch, control 0.6	4413 Rectifier Components
Timer, plug-in 0.4	Rectifier, main 1.5
Relay, timer 0.4	(includes R & I of top cover
Spark gap assembly 1.4	and housing)
Contactor 0.6	Rectifier. control 1.0

# Section III. SPECIAL TOOLS AND EQUIPMENT

#### 4-5. Special Tools and Equipment

No special tools or equipment are required by direct and general support and depot maintenance for the maintenance of the welding machine.

#### 4-6. Direct and General Support and Depot Maintenance Repair Parts

Direct and general support and depot main-

tenance repair parts are listed and illustrated in Appendix D of this manual.

# 4-7. Specially Designed Tools and Equipment

No specially designed tools and equipment are required by direct and general support and depot maintenance for the maintenance of the welding machine.

# Section IV. TROUBLESHOOTING

# 4-8. General

This section provides information useful in diagnosing and correcting unsatisfactory operation or failure of the welding machine or any of its components. Each trouble symptom stated is fallowed by a list of probable causes of the trouble. The possible remedy recommended is described opposite the probable cause.

#### 4-9. Welding Machine Smokes Excessively

Probable cause	Possible remedy
Main transformer	Replace transformer (para
defective.	4-34).
Accessory transformer	Replace transformer (para
defective.	4-32).

#### 4-10. Polarity Cannot be Selected

	Probable cause		Possible remedy			
Polarity	switch	defective		Replace	switch	(para
				4-19).		

#### 4-11. Range Cannot be Selected

	Probab	le cause	F	ossible	remedy
Range	switch	defective	 Replace	switch	(para
			4-18).		

#### 4-12. Welding Machine has Internal Arcing

	Probable ca	use		Possible	remedy
Diode	connections	loose	Tighten	diode	connections
			(para	4-24)	

#### 4-13. Welding Machine Fails to Start

Probable cause	Possible remedy
Main transformer	Replace transformer
defective.	(para 4-34).
Wiring defective	Repair or replace wiring
-	(para 4-34).

#### 4-14. Welding Machine Operates Erratically

	Probable c	ause		Possible	remedy
Diodes	defective		Replace	diodes	(para
			4-24)		

Control rheostat	Replace rheostat (para
defective,	4-20).

Range switch contacts Clean or straighten contacts dirty, greasy, or bent. or replace switch (para 4-18) .

#### 4-15. Contactor Breaks Circuit

	Probable	cause	Possible remedy	
Wiring	shorted	Repair	or replace wiring	
		(para 4-36).		

Main transformerReplace transformer (para<br/>4-34).

# Section V. CONTROL PANEL AND TIMER RECEPTACLES

#### 4-16. Control Panel

#### a. Removal.

- (1) Remove the welder top and housing (para 3-26).
- (2) Remove the high frequency panel assembly (para 3-27).
- (3) Remove the control rheostat (para 4-20).
- (4) Remove the range switch (para 4-18).
- (5) Remove the polarity switch (para 4-19).
- (6) Remove the ground and electrode terminal board (para 3-47).
- (7) Remove the remote receptacle ( para 3-38).
- (8) Remove the contactor switch (para 3-41).
- (9) Remove the amperage switch (para 3-40).
- (10) Refer to figure *4-2* and remove the control panel.

## b. Installation.

(1) Refer to figure 4-2 and install the control panel.

- (2) Install the amperage switch (para 3-40).
- (3) Install the contactor switch (para 3-41).
- (4) Install the remote receptacle (para 3-38).
- (5) Install the ground and electrode terminal board (para 3-7).
- (6) Install the polarity switch (para 4-19).
- (7) Install the range switch (para 4-18).
- (8) Install the control rheostat (para 4-20).
- (9) Install the high frequency panel assembly ( para 3-27 ).
- (10) Install the welder top and housing (para 3-26).
- 4-17. Timer Receptacles
  - a. Removal.
    - (1) Remove the high frequency panel assembly (para 3-27).

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Figure 4-2. Control panel, removal and installation.



Figure 4-3. Timer receptacles, removal and installation.

(2) Refer to figure 4-3 and remove the timer receptacles

#### b. Installation.

- (1) Refer to figure 4-3 and install the timer receptacles.
- (2) Install the high frequency panel assembly (para 3-27).

# Section VI. RANGE SWITCH, POLARITY SWITCH, CONTROL RHEOSTAT, AND INTENSITY SELECTOR

# 4-18. Range Switch

- a. Removal.
  - (1) Remove the welding machine top and housing (para 3-26).
  - (2) Remove the high frequency panel assembly (para 3-27).
  - (3) Loosen control panel from frame (para 4-16).
- (4) Refer to figure 4-4 and remove the range switch.
- b. Installation.
  - (1) Refer to figure 4-4 and install the range switch.
  - (2) Secure the control panel to the frame (para 4-16).
  - (3) Install the high frequency panel assembly (para 3-27).



NOTE: REMOVE CONTROL RHEOSTAT, RANGE SWITCH, AND POLARITY SWITCH FROM REAR OF PANEL.

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Figure 4-4. Range switch, polarity switch, and control rheostat, removal and installation.

(4) Install the welding machine top and housing (para 3-26).

### 4-19. Polarity Switch

- a. Removal.
  - (1) Remove the welding machine top and housing (para 3-26).
  - (2) Remove the high frequency panel assembly (para 3-27).
  - (3) Loosen the control panel from the frame (para 4-16).
  - (4) Refer to figure 4-4 and remove the polarity switch.
- b. Instillation.
  - (1) Refer to figure 4-4 and install the polarity switch.

- (2) Secure the control panel to the frame (para 4-16).
- (3) Install the high frequency panel assembly (para 3-27).
- (4) Install the welder top and housing (para 3-26).

# 4-20. Control Rheostat

- a. Removal.
  - (1) Remove the welding machine top and housing (para 3-26).
  - (2) Remove the high frequency panel assembly ( para 3-27).
  - (3) Loosen the control panel from the frame (para 4-16).
  - (4) Refer to figure 4-4 and remove the control rheostat.
- b. Testing.
  - (1) Connect an ohmmeter to the two outer terminals of the rheostat and set the meter on RXI scale. The reading should be 32 ohms. If the reading is more or less than 32 ohms, replace the rheostat.
  - (2) Connect an ohmmeter to the center terminal and either outside terminal of the rheostat. Set the meter on the RX1 scale. Turn the rheostat in either direction until it stops, then turn it in the opposite direction slowly and evenly until it stops again. The indicator on the meter should increase or decrease evenly according to the speed in which the rheostat is turned. If the meter indicator does not function as described, replace the rheostat.

*Note.* Make sure the ohmmeter used for the above tests is in proper working condition.

- c. Installation.
  - (1) Refer to figure 4-4 and install the control rheostat.
  - (2) Secure the control panel to the frame (para 4-16).
  - (3) Install the high frequency panel assembly (para 3-27).
  - (4) Install the welding machine top and housing (para 3-26).

# 4-21. Intensity Selector

## a. Removal.

- (1) Unlock the lower panel door.
- (2) Refer to figure 4-5 and remove the intensity selector.
- b. Testing.
  - (1) Connect an ohmmeter to the outside terminals of the selector, and set the meter on the RX1 scale. The reading should be 2 ohms. If the reading is more or less than 2 ohms replace the intensity selector.
  - (2) Connect the ohmmeter to the center terminal and either outside terminal. Set the meter on the RX1 scale. Turn the intensity selector in a clockwise direction until it stops; the meter should have a zero reading. Then turn the intensity selector in a counterclockwise direction until it stops. The reading should be 2 ohms. If the readings are not as described, replace the intensity selector.

*Note.* Make sure that the ohmmeter used for the above tests is in proper working condition.

- c. Installation.
  - (1) Refer to figure 4-5 and install the intensity selector.
  - (2) Close and lock the panel door.



Figure 4-5. Intensity selector, removal and installation.

# Section VII. CONTROL RECTIFIER, RECTIFIER ASSEMBLY, DIODES, CAPACITORS, AND RESISTORS

- 4-22. Control Rectifier
  - a. Removal.
    - (1) Remove the welding machine top and housing (para 3-26),
    - (2) Refer to figure 4-6 and remove the control rectifier.

*Warning:* When malfunction of the selenium rectifier occurs, thoroughly ventilate the area to prevent inhalation of poisonous fumes. Do not handle the damaged rectifier while it is warm, to avoid absorption of the poisonous selenium oxide compound through the skin. Failure to observe this warning can result in serious injury or death.

- b. Installation.
  - (1) Refer to figure 4-6 and install the control rectifier.
  - (2) Install the welding machine top and housing (para 3-26).
- 4-23. Rectifier Assembly
  - a. Removal.
    - (1) Remove the welding machine top and housing (para 3-26).
    - (2) Refer to figure 4-7 and remove the rectifier assembly.

*b.* Disassembly and Reassembly. Refer to figure 4-8 and disassemble and reassemble the rectifier assembly.

- c. Installation.
  - (1) Refer to figure 4-7 and install the rectifier assembly.



Figure 4-6. Control rectifier, removal and installation.

(2) Install the welding machine top and housing (para 3-26).

## 4-24. Diodes

# a. Removal.

- (1) Remove the welding machine top and housing (para 3-26).
- (2) Refer to figure 4-7 and remove the diodes.

### b. Installation.

- (1) Refer to figure 4-7 and install the diodes.
- (2) Install the welding machine top and housing (para 3-26).

# 4-25. Capacitors

# a. Removal.

(1) Remove and welding machine top and housing (para 3-26).



Figure 4-7. Rectifier assembly and diodes, removal and installation.

- (2) Remove the high frequency panel assembly (para 3-27).
- (3) Refer to figure 4-9 and remove the capacitors.

*b. Testing.* Connect a suitable capacitor tester to the wire leads and check the capacitors for open oir shorted circuit.

- c. Installation.
  - (1) Refer to figure 4-9 and install the capacitors.
  - (2) Install the high frequency panel assembly (para 3-27).
  - (3) Install the welding machine top and housing (para 3-26).

# 4-26. Resistors

#### a. Removal.

(1) Remove the welding machine top and housing (para 3-26).

- (2) Remove the high frequency panel assembly (para 3-27).
- (3) Refer to figure 4-10 and remove the resistors.

b. Testing. Connect an ohmmeter to the resistor leads and check the resistance. The meter reading must conform with the resistor values shown on the wiring diagram (fig. 4-1).

- c. Installation.
  - (1) Refer to figure 4-10 and install the resistors.
  - (2) Install the high frequency panel assembly (para 3-27).
  - (3) Install the welding machine top and housing (para 3-26).



Figure 4-8. Rectifier assembly, disassembly and reassembly.

1 Nut, hex 3/8-16 (12)

- 2 Washer, flat 7/16 in. (8)
- 3 Washer, insulating, 9/16 in. (6)
- 4 Rectifier plate (4)

5 Spacer 9/16 x 2 3/4 in. (4)

- 6 Spacer 3/4 x 2 1/4 in. (4)
- 7 Rod, threaded, 3/8 x 21 in. (2)
- 8 Capscrew, hex-hd, 1/4-20 x 5/8 in. (2)
  - Figure 4-8-Continued

- 9 Nut, hex, 1/4-20 (2)
- 10 Washer, lock, 1/4 in. (2)
- 11 Copper bar
- 12 Washer, lock 3/8 in.



Figure 4-9 (1). Capacitors, removal and installation.



Figure 4-9 (2). - Continued.





C. BYPASS RESISTOR.

EMC 3431-203-15/39

Figure 4-10. Resistors, removal and installation.

# Section VIII. TIMER RELAY, SWITCHING PANEL, FILTER REACTOR, REACTOR COIL AND TESLA COIL

- 4-27. Timer Relay
  - a. Removal.
    - (1) Remove the high frequency panel assembly (para 3-27).
    - (2) Refer to figure 4-11 and remove the timer relay.
  - b. Installation.
    - (1) Refer to figure 4-11 and install the timer relay.
    - (2) Install the high frequency panel assembly (para 3-27).
- 4-28. Switching Panel
  - a. Removal.
    - (1) Remove the welding machine top and housing (para 3-26).
    - (2) Remove the contactor screws (para 3-41).
    - (3) Refer to figure 4-12 and remove the switching panel.



Figure 4-11. Timer relay, removal and installation.

- b. Installation.
  - (1) Refer to figure 4-12 and install the switching panel.
  - (2) Install the contactor screws (para 3-41).
  - (3) Install the welding machine top and housing (para 3-26).
- 4-29. Filter Reactor
  - a. Removal.
    - (1) Remove the welding machine top and housing (para 3-26).
    - (2) Remove the rectifier assembly (para 4-23) .
    - (3) Disconnect the filter reactor lead from the polarity switch (para 4-19).
    - (4) Refer to figuue 4-13 and remove the filter reacher.

*b. Testing.* Connect an ohmmeter to the filter reactor leads and check from an open circuit.

- c. Installation.
  - (1) Refer to figure 4-13 and install the filter reactor.
  - (2) Connect the filter reactor lead to the polarity switch (para 4-19).
  - (3) Install the rectifier assembly (para 4-23).
  - (4) Install the welding machine top and housing (para 3-26).
- 4-30. Reactor Coil
  - a. Removal.
    - (1) Remove the welding machine top and housing (para 3-26).
    - (2) Remove the rectifier assembly (para 4-23).
    - (3) Disconnect the coil lead from the polarity switch (para 4-19).
    - (4) Refer to figure 4-13 and remove the reactor coil.

*b. Testing.* Connect a multiimeter to the tail leads and set the meter on ohms. If the indicator gives no reading, the coil has an open circuit and must be replaced.



Figure 4-12. Switching panel, removal and installation.

#### c. Installation.

- (1) Refer to figure 4-13 and install the reactor coil.
- (2) Connect the coil lead to the polarity switch (para 4-19).
- (3) Install the rectifier assembly (para 4-23).
- (4) Install the welding machine top and housing (para 3-26).

# 4-31. Tesla Coil

- a. Removal.
  - (1) Remove the welding machine top and housing (para 3-26).

(2) Refer to figure 4-14 and remove the tesla coil.

# b. Testing.

- (1) Connect a multimeter to the coil leads and test for continuity.
- (2) If there is no reading on the multimeter, replace the coil.
- (3) Connect a megohimmeter to the coil and best the insulation breakdown.

# c. Installation.

- (1) Refer to figure 4-14 and install the tesla coil.
- (2) Install the welding machine top and housing (para 3-26).



Figure 4-13. Main transformer reactor coil and filter reactor, removal and installation.



Figure 4-14. Tesla coil and bracket, removal and installation.

# Section IX. ACCESSORY TRANSFORMER, HIGH FREQUENCY CONTROL TRANSFORMER, AND MAIN TRANSFORMER

# 4-32. Accessory Transformer

- a. Removal.
  - (1) Remove the welding machine top and housing (para 3-26).
  - (2) Refer to figure 4-15 and remove the accessory transformer.
- h. Testing.
  - (1) Connect a 230-volt power source to the yellow input lead and black center tap lead, as indicated on the lead.
  - (2) Connect a voltmeter to the common terminal and the renter tap. The meter reading should be 24 volts.
  - (3) Connect the voltmeter to the common terminal and the 230-volt terminal. The reading should be 230 volts.

- (4) If the meter reading is other than that specified above, the transformer must be replaced.
- c. Installation.
  - (1) Refer to figure 4-15 and install the accessory transformer.
  - (2) Install the welding machine top and housing (para 3-26).
- 4-33. High Frequency Control Transformer
  - a. Removal.
    - (1) Remove the high frequency panel assembly (para 3-27).
    - (2) Refer to figure 4-16 and remove the high frequency control transformer.
  - b. Testing.
    - (1) Connect a voltmeter to the secondary leads.



Figure 4-15. Accessory transformer, removal and installation.

- (2) Connect a 230-volt power source to the primary winding of the transformer.
- (3) The meter should read 3,500 volts. If the indicated reading is not obtained, the transformer must be replaced.

*Warning:* When making a test on the high frequency control transformer, make sure the transformer is on an insulated bench. Do not touch the transformer or wires leading from it. To do so may cause serious electrical shock or possible death to personnel performing the test.



Figure 4-16. High frequency control transformer, removal and installation.

- c. Installation.
  - (1) Refer to figure 4-16 and install the high frequency control transformer.
  - (2) Install the high frequency panel assembly (para 3-27).
- 4-34. Main Transformer
  - a. Removal.
    - (1) Remove the welding machine top and housing (para 3-26).
    - (2) Remove the control panel (para 4-16).
    - (3) Remove the control rectifier (para 4-22).
    - (4) Remove the rectifier assembly (para 4-23).
    - (5) Remove the filter reactor (para 4-29).
    - (6) Remove the tesla coil (para 4-31).
    - (7) Remove the. accessory transformer (para 4-32).
    - (8) Remove the switching panel (para 4-28).

(9) Refer to figure 4-13 and remove the main transformer.

## b. Installation.

- (1) Refer to figure 4-13 and install the main transformer.
- (2) Install the switching panel (para 4-28).
- (3) Install the accessory transformer (para 4-32).
- (4) Install the tiesla coil (para 4-31).

- (5) Install the filter reactor (para 4-29).
- (6) Install the rectifier assembly (para 4-23).
- (7) Install the control rectifier (para 4-22).
- (8) Install the control panel (para 4-16).
- (9) Install the welding machine top and housing (para 3-26).

# Section X. WIRING HARNESS AND HIGH FREQUENCY PANEL WIRING HARNESS

# 4-35. General

The welding machine has a wiring harness separate from the high frequency panel. The two separate wire groups are connected through a quick-disconnect type plug, to complete the electrical circuits.

# 4-36. Wiring and Wiring Harness

- a. Removal.
  - (1) Remove the welding machine top and housing (para 3-26).
  - (2) Remove the high frequency panel assembly (para 3-27).
  - (3) Remove the harness wires from the polarity switch (para 4-19).
  - (4) Remove the wires from the control rhelostat (para 4-20).
  - (5) Remove the wines from the remote receptacle (para 3-38).
  - (6) Remove the thermostatic switch (para 3-42).
  - (7) Remove the wires from the control rectifier (para 4-22).
  - (8) Remove the harness wires from the accessory transformer (para 4-32).
  - (9) Remove the wires from the contactor (para 3-41).
  - (10) Remove the red and purple wires from the switching panel (para 4-28).
- (11) Remove the quick-disconnect receptacle from the control panel (para 4-16).
- (12) Remove the tape which secures the harness to the frame and remove the harness.

b. Testing. To test a wire for continuity, disconnect each end of the wire from the component or components to which it is connected. Touch the test probes of a multimeter to each end of the wire. If continuity is not indicated, the wire is defective and must be repaired or replaced (c and d below).

*c. Repair.* Shave the insulation on the wire to expose one-half inch of bare wire at both ends of the break. Twist the bare wire together and solder the connection. Cover the repaired break with electrical tape. Do not leave any bare wire exposed. If a terminal lug is damaged, or breaks off a wire, replace it using an exact duplicate terminal lug.

*d. Replacement.* Replace a wire by discon,necting it from the component or components to which it is connected and remove the wire. Install a new wipe and connect it to the component or components. If a broken wire is part of a wiring harness, disconnect the wire at both ends and tape the ends with electrical tape. Install a new wire and attach it to the' exterior of the wiring harness.

e. Installation.

- (1) Place the wiring harness in the welding machine and tape it to the frame.
- (2) Install the quick-disconnect receptacle on the control panel (para 4-16).
- (3) Connect the red and purple wires to the switching panel (para 4-28).
- (4) Connect the wines to the contactor (para 3-41).
- (5) Connect harness wires to the accessory transformer (para 4-32).

- (6) Connect the wires to the control rectifier (para 4-22).
- (7) Install the thermostatic switch (para 3-42)
- (8) Connect the wires to the remote receptacle (para 3-38).
- (9) Connect the wires to the control rheostat (para 4-20).
- (10) Connect the wires to the polarity switch ( para 4-19).
- (11) Install the high frequency panel assembly (para 3-27).
- (12) Install the welding machine top and housing (para 3-26).

- 4-37. High Frequency Panel Wiring and Wiring Harness
  - a. Removal.
    - (1) Remove the high frequency panel assembly (para 3-27).
    - (2) Refer to figure 4-17 and remove the high frequency panel wiring harness.
  - b. Installation.
    - (1) Refer to figure 4-17 and install the high frequency panel wiring harness.
    - (2) Install the high frequency panel assembly (para 3-27).



Figure 4-17. High frequency panel wiring harness, removal and installation.

# Section XI. FRAME AND MAIN TRANSFORMER SUPPORT ASSEMBLY

## 4-38. General

The welding machine frame and main transformer support assembly is of one piece and constructed of heavy metal. It has two skids which are welded to the bottom and are designed for bolting the welding machine to the floor. The skids also hold the welding machine approximately four inches above the floor to allow for circulation of air through the welding machine for cooling. The main transformer is mounted to the frame with four TM 5-3431-203-15

bolts; the vertical bars are used for mounting of component parts and the top.

# 4-39. Frame and Main Transformer Support Assembly

- a. Removal.
  - (1) Remove the main transformer (para 3-34).
- (2) After the main transformer is removed, the frame and transformer support assembly (fig. 4-16) is free.

*b. Installation.* Install the main transformmer on the frame and transformer support assembly (para 4-39).

# APPENDIX A

# REFERENCES

A-1. Fire P	rotection				
TB 5-4200-	200-10 Har	nd Portable, Fi	re Extinguishers	for Army	Users.
A-2. Painti	ng				
TM 9-213	Pai	nting Instruction	ns for Field Use.		
A-3. Prever	ntive Maintena	nce			
TM 38-750	Arn	ny Equipment I	Record Procedures		

# APPENDIX B

# BASIC ISSUE ITEMS LIST

# AND OPERATING SUPPLIES

# Section I. INTRODUCTION

#### B-1. Scope

This appendix lists items which accompany the Welding Machine or are required for installation, operation, or operator's maintenance. Section II lists the accessories, tools, and publications required for the maintenance and operation by the operator, initially issued or authorized with the equipment.

#### B-2. Explanation of Columns

The following provides an explanation of columns in the tabular list in Section II.

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

(1) Source code, column la, 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 the GSA/DSA 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.
- 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
  - (2) Maintenance code. column 1b, indicates the lowest category of mainte-

nance authorized to install the listed item. The maintenance level code is:

- Code Explanation
  - 0 Organizational maintenance (operator/ crew).
  - (3) Recoverability code, column 1c, indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable.

*b.* Federal Stock Number, column 2, indicates the Federal stock number for the item.

*c.* Description, column 3 indicates the Federal item name and any additional description required. A fivedigit manufacturer's code or other service code and part number is included in parentheses for reference. Repair parts quantities included in kits, sets, and assemblies are shown in front of the repair part name.

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

*e.* Quantity Incorporated in Unit Pack, column 5, indicates the actual quantity contained in the unit pack.

*f.* Quantity Incorporated in Unit, column 6, indicates the total quantity of the item used on the equipment.

g. Quantity authorized, column 7, indicates the total quantity of an item required to be on hand and necessary for operation and maintenance of the equipment. Items to be requisitioned as required are indicated by an asterisk.

- h. Illustration, column 8.
  - (1) Figure Number, column 8a indicates the figure number of the illustration in which the item is shown.
- (2) Item or Symbol Number, column 8bindicates the callout number used to reference the item in the illustration.

Source	(1) e maint cov code	and	(2)	(3)		(5) Qty	(6) Qty	(7)	(8) Illustration (a) (b)		
Source (a)	Maint (	Recov o	stock number	Description	of issu	in uni pacl	inc in unit	Qty auth	Fig no.	Item or sym no.	
				GROUP 31 — BASICISSUEITEMS, MANUFACTURER INSTALLED							
				3100 — BASIC ISSUE ITEMS MANU- FACTURER OR DEPOT INSTALLED							
Р	0		'520–559–9618	CASE, MAINTENANCE AND OPERATIONAL MANUALS: cotton duck, water repellent, mildew resistant			1	1			
X2	0		5975-243-5861	CLAMP, ELECTRICAL: ground rod, 1/2 in. to 1 in. id.	EA		1	1			
				DEPARTMENT OF THE ARMY OPERATOR, ORGANIZATIONAL, FIELD AND DEPOT MAINTE- NANCE MANUAL (Including Repair parts and Special Tool List)			1	1			
X2	0		5120-642-8937	TM 5-3431-203-15 ROD, GROUND: 9 ft lg, 5/8 in. dia	EA		1	1			
Р	0			SWITCH AND CABLE ASSEMBLY, REMOTE CONTROL (96073) (29			1	1			
М	0			WIRE, ELECTRICAL: ground MANUFACTURE FROM :	EA		1	1			
Р	0		6145-189-6695	WIRE, ELECTRICAL: No. 6 AWG (10 ft required)	FТ						

# Section II. BASIC ISSUE ITEMS LIST

# APPENDIX C

MAINTENANCE ALLOCATION CHART

# Section I. INTRODUCTION

#### C-1. General

*a.* Section I 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 operations on the identified end item or component. The implementation of the maintenance tasks upon the end item or component will be consistent with the assigned maintenance operations.

*c.* Section III lists the special tools and test equipment required for each maintenance operation as referenced from Section II.

*d.* Section IV contains supplemental instructions, explanatory notes and/or illustrations required for a particular maintenance function.

C-2. Explanation of Columns in Section 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 (Maintenance Allocation Chart) in the appropriate numerical sequence. These indexes are normally set up in accordance with their function and proximity to each other.

b. Component Assembly Nomenclature.

This column contains a brief description of the components of each functional group.

c. Maintenance Operations and Maintenance Levels. This column lists the various maintenance operations (A through J) and indicates the lowest maintenance level authorized to perform these operations. The symbol designations for the various maintenance levels are as fallows:

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

The maintenance operations are defined as follows:

- 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. Tests will be made commensurate with test procedures and with calibrated tools and/or test equipment referenced in the MAC.
- G REPLACE: Substitute serviceable components, assemblies and subassemblies for unserviceable counterparts 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 skillsto include welding, grinding, riveting, straightening, adjusting and facing.
- I OVERHAUL: Restore an item to a completely serviceable condition (as prescribed by serviceability standards and published developed by the commodity commands) by employing "Inspect techniques of and Repair Only as Nec-(IROAN). essary" Maximum use of diagnostic and test equipment is combined with minimum disassembly during "OVERoverhaul. HAUL" may be assigned to any level of mainte-

nance except organizational, provided the time, tools, equipment, repair parts authorization, and technical skills are available at that level. Norreally, 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 reassembling using serviceable, rebuilt, or new assemblies, subassemblies, and parts.

*d. Reference Note.* This column, subdivided into columns K and L, is provided for referencing the SPECIAL TOOLS AND TEST EQUIPMENT REQUIREMENTS (Sec. III) and REMARKS (Sec. IV) that may be associated with maintenance operations (Sec. II).

# C-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 operation the item is to be used with. The letter is representative of columns A through J on the MAC.

*b. Maintenance Level.* 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.

# C-4. Explanation of Columns in Section IV

a. Reference Code. This column consists of two letters separated by a dash, both of which per are references to Section II. The first letter per references Column L and the second letter refer- II.

ences a maintenance operation, Column A through J.

*b. Remarks.* This column lists information pertinent to the Maintenance Operation being performed, as indicated on the MAC Section II.

			Maintenance operations						Maintenance levels			Note ref		
onal D er	Component assembly nomenclature		A	В	C	D	Е	F	G	н	Ι	J	ĸ	L
Functi grou numb	8 Trou			Adjust	Aline	Calibrate	Inspect	Test	Replace	Repair	Overhaul	Rebuild	T&TE ramt	Remarks
22 2210	ACCESSORY ITEMS Data Plates, and Instruction Holders: Plates, data Plates, instruction								F O					
44 4400 4405	WELDING EQUIPMENT Arc Welder Frame Support, Housing: Lifting eve: cover. top: panel							F		Ö	н			
4408	housing, front Connecting Devices: Receptacle, remote control								O F	i				
	Panel, stud, terminal Stud, terminal Switch and cable assembly, remote								0 0					
4409	control Protective Devices: Switches, interlock and thermostatic								0 0					
4410 4410	Switching and Timing Speed: Switch control; cable assembly, change- over board; receptacle plug in timer Switching and Timing Speed-Continued								0					
	Relay, timer; switch, range; switch, polarity Spark gap assembly Contactor; valve, solenoid; plug, dummy Capacitor			 0 	 			  F	F O O F					
4411	Resistor Components: Resistor Rheostat							F 	F					
4412	Transformer Components: Transformer, Main Reactor assembly, filter; transformer,								н					
	control Coil assembly, filter reactor; transformer 230 volts; coil tesla; capacitor, power							 F	F F					
4413	Rectifier Components: Rectifier, main Rectifier, control				 				F F	F				

# Section II. MAINTENANCE ALLOCATION CHART

# Section III. SPECIAL TOOL AND SPECIAL TEST EQUIPMENT

# REQUIREMENTS

Reference	rence Maintenance		Tool
code	de level Nomenclature		number
		NONE REQUIRED	

# Section IV. REMARKS

Reference Code	Remarks
	None

# APPENDIX D

# ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT AND

## DEPOT MAINTENANCE REPAIR PARTS

# Section I. INTRODUCTION

Code

Μ

#### D-1. Scope

This appendix contains a list of repair parts required for the performance of organizational, direct support general support, and depot maintenance of the welding machine.

#### D-2. General

This repair parts list is divided into the following principal sections.

*a.* Section 2, Prescribed Load Allowance List (PLA), is a consolidated listing of repair parts quantitatively allocated for initial stockage at the organizational level. This is a mandatory minimum stockage allowance.

*b.* Section 3, Repair Parts List, is a list of repair parts authorized for the performance of maintenance at the organizational level.

*c.* Section 4, Repair Parts List, is a list of repair parts authorized for the performance of maintenance at the direct support, general support, and depot level.

#### D-3. Explanation of Columns

The following provides an explanation of columns in the tabular lists.

*a.* Source, Maintenance, and Recoverability Codes.

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

Explanation

Code

P Applied to repair parts which are stocked in or supplied from DSA/GSA or Army supply system, and authorized for use at indicated maintenance categories. Explanation

- Applied to repair parts which are not procured or stocked but are to be manufactured at indicated maintenance categories
- 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 cab gory 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.

*Note.* Source code is 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 codes are:

Code

0 Organizational maintenance

Explanation

- F Direct support maintenance
- H General support maintenance

*b.* Federal Stock Number indicates the Federal stock number for the item.

*c.* Description column indicates the Federal item name and brief description of the item. A five-digit manufacturer's or other service code is shown in parentheses followed by the manufacturer's part number. Repair parts quantities included in kits, sets, and assemblies that differ from the actual quantity used TM 5-3431-203-15

in the specific item, are listed in parentheses following the repair part name.

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

*e.* Quantity Incorporated in Unit Pack indicates the actual quantity contained in the unit pack.

f. Quantity Incorporated in Unit indicates the actual number of parts used in the application. A zero is shown when components of kits or sets are listed that are not applicable to the specific end item.

g. Fifteen-Day Organizational Maintenance Allowance.

- (1) The allowance columns are divided into four subcolumns. Indicated in each subcolumn is the quantity of items authorized for the number of equipments supported. 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 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) Items identified by an asterisk may be requisitioned as required. Subsequent changes and/or addictions to allowances will be limited to the provisions of AR 735-35. The range of items authorized will be made by this Command based upon engineering experience, demand data, or TAERS information.
- (4) Allowances are based on 1500 hours of operation per year.

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

> (1) The allowance columns are divided into three subcolumns, Indicated in each subcolumn is the quantity of

items authorized for a number of equipments supported. 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.

*i.* One-Year Allowance Per 100 Equipments/Contingency Planning Purposes indicates the quantity of items required for distribution and contingency planning purposes.

*j.* Depot Maintenance Allowance Per 100 Equipments indicates the total quantity of items recommended for depot maintenance of 100 equipments. Items recommended for immediate use only 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 or Symbol Number indicates the callout number used to reference the item in the illustration.

# **D-4.** Abbreviations
## Section 2. PRESCRIBED LOAD ALLOWANCE

(1) Federal	(2) Deterintion	15	(3) _day org ma	int alw	
stock number		(A) 1-5	(B) 6–20	(C) 21–50	(D) 51–100
3431-083-2652	CONTRACTOR: model (96073) 18	*	*	*	2
5949-061-69 <b>64</b>	RELAY, ARMATURE: (96073) 18	*	*	*	2
3431-061-5940	VALVE, SOLENOID: gas and water (96073) 23	*	*	2	2
9535-231-8256	COPPER SHEET	*	*	*	2
9535-232-2293	COPPER STRIP	*	*	*	2
5970-644-2629	INSULATION SLEEVING, ELECTRICAL	*	2	2	3
61455482350	WIRE, ELECTRICAL: copper	*	*	*	2
6145-284-0659	WIRE, ELECTRICAL: copper	*	*	*	2
6145-660-8933	WIRE, ELECTRICAL: copper	*	2	3	5
6145-263-6982	WIRE, ELECTRICAL: copper	2	4	7	15
5930-655-1515	SWITCH, TOGGLE	*	*	2	2

		(1)		(2)	(3)		·	(4)	(5)	(6)		(	7)		(1	8)
LINE	SOURC AND	CE, M REC	AINT. OV.	FEDERAL								15 DA Y	ORG.		TRA	US- TION
NO.	(a) Щ	(b)⊢ Z	(c) >	STOCK NUMBER	DESCRIPTION			ы Чо	Y INC	NLT NIT	(2)	MAINT	. AL W,	(4)	(a)	NO.(9)
	sour	MAII	REC			CODE	PART NUMBER	UNIT ISSU	T Q T	°T Y N⊔	1-5	6-20	21-50	51-100	FIG. NO.	ITEN SYM.
0001					SECTION 3 - REPAIR PARTS FOR ORGANIZATIONAL MAINTENANCE			· ·	-							
0002					GROUP 22 - BODY, CHASSIS OR HULL, AND ACCESSORY ITEMS											
0003					2210 - DATA PLATES AND INSTRUCTION HOLDERS											
0005	х2	0			PLATE, INSTRUCTION: HIGH FREQUENCY	96073	1/101507	EA		,	<b>*</b>	*	*	   +		
0006 0007	X2 X2	0 0			PLATE, INSTRUCTION: PLUG IN TIMERS PLATE, INSTRUCTION: WELDER FRONT HOUSING	96073 96073	14R1150 14R1597	EA		1	*	*	*	*		
0009					GROUP 40 - ELECTRIC MOTORS AND GENERATORS											
0009A					4000 - ELECTRIC MOTOR											
0010 0011 0012	X2	0		5310-298-9261 5310-010-6497	MOTOR, FAN: VENTILATING 230V, 1550 RPM Model 16-166, 60 cycle, 1.25 amp Serial No. 1029978 NUT, PLAIN, HEXAGON: motor mtg WASHER, LOCK: motor mtg	62119	1029978	EA EA EA		1 4 4	* *	* *	*	*	D5 D5 D5	12 3 4
0013					GROUP 44 - WELDING, METALIZING, METAL HEATING AND PLATING EQUIPMENT											
0014					4405 - FRAME SUPPORT, HOUSING				i .							
0016 0017 0018	X2 X2 X2	0 0		5935-818-1126	COVER, TOP HOUSING, WELDER JACK. TIP: NYION TIP FOR 1/4 IN. HOLF.	96073 96073	861817 361829	EA EA		1 1	*	*	*	*	D4 D4	1 4
0019	м	0		<i>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</i>	1/8 IN. JACK LEAD ASSEMBLY, ELECTRICAL: MOUNTED REAR			EA		2	*	*	*	*	D10	4
					OF FRONT HOUSING PANEL MANUFACTURE FROM:			EA		2					D10	5
0019A	X2	0		5940 <b>-0</b> 50-6208	TERMINAL, LUG: COPPER, TINNED FINISH, No. 16 TO 14 AWG, FOR											
00198	Р	0		6145-660-8933	No. 10 screw WIRE, ELECTRICAL			EA FT		1	SEE	GRP 95	01	*		
0020	x2	0		5310-262-6169	LIFTING EYE NUT. PLAIN. HEXAGON: LEAD ASSEMBLY MTG	71843	2404L	EA FA		2	*	*	*	*	D4	2
0022		00		5310-685-1429 5310-685-1429	NUT, PLAIN, HEXAGON: LIFTING EYE NUT, PLAIN, HEXAGON: SUPPORT AND			ĒA		2	*	*	*	*	D4	3
					LIFTING EYE MTG			EA		2	*	*	*	*	D1	8

		(1)		(2)	(3)			(4)	(5)	(6)	r		71		<u> </u>	(8)
LINE	SOUR	CE, M REC CODE	aint, ov.	FEDERAL STOCK					×	,		15 DA'	Y ORG.		ILI TRA	LUS-
NO.	(a) H	(P) <sup>T</sup>	(c) >	NUMBER	DESCRIPTION			- to	U Ü V Z A	꽃트		MAINT	. ALW.	<b>.</b>	(0)	(b) (b)
	SOUF	MAIN	RECO		· · · · · · · · · · · · · · · · · · ·	MA CODE	PART NUMBER	UNIT	217 UNIT	ידע אט או	(0) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	FIG. NO.	ITEM ( SYM. D
0024 0025 0026 0027	X2 X2	0000		5305-271-2566 5305-840-6694	PANEL, HOUSING FRONT PLATE, VALVE MOUNTING SCREW, MACHINE: LEAD ASSEMBLY MTG SCREW, TAPPING, THREAD FORMING: ACCESS	96073 96073	3 361818 3 361831	EA EA EA		1 1 2	*	* * *	*	* * *	D10 D4 D10	1 8 3
0028		0		5305 <b>-</b> 067-9896	DOOR, VALVE, PLATE AND COVER TO HOUSING SCREW, TAPPING, THREAD FORMING:			EA		24	*	*	*	*	D4	9
0029 0030	X2	0 0		5310 <b>-</b> 013-1044	WELDER HOUSING TO FRAME SUPPORT: base and cover WASHER, LOCK: lead assembly mtg	96073	3 1361817	EA EA EA		8 1 2	* *	* *	*	*	D4 D1 D10	12 7 5
0031					4406 - VENTILATING, COOLING SYSTEM											
0032	X2	0			BLADE, FAN, TORRINGTION: 4 BLADE, 3/8 IN. ID HUB, 15/16 IN. OD HUB, 1 IN. LG	96073	11R1837	EA		1	*	*	*	×	D5	2
0033 0034 0035 0036 0037		00000		5310-619-3555 5305-988-1725 5305-013-9009 5310-010-3319	GUARD, FAN NUT, PLAIN, HEXAGON: Fan guard mtg SCREW, MACHINE: Fan guard mtg SETSCREW: Fan blade mtg WASHER, LOCK: Fan guard mtg	96073	3 1361800	EA EA EA EA EA		1 4 4 1 4	* * * *	* * * *	* *	* * *	05 05 05 05	5 11 14 1 10
0038					4407 - CONTROL PANELS											
0039 0040 0041 0044 0045 0047 0048 0049	¥2 X X X X X X X X X X X X X X X X X X X	000000000		5340-200-8503 6240-682-3411 6210-840-1057 5310-262-6169 5310-207-9272	CLAMP, LOOP: WIRE MTG, PLASTIC DRAWER, HIGH FREQUENCY PANEL GLOW LAMP: PILOT LIGHT LIGHT, PILOT LOCK, DRAWER: W/KEY NUT, PLAIN, HEXAGON: CLAMP MTG NUT, PLAIN, HEXAGON: PANEL TO DRAWER MTG PANEL, HIGH FREQUENCY DRAWER MANUEACTURE FROM:	96073 24446 72169 96073	3G1823 5 NE51H 9 52408991 3R2147	EA EA EA EA EA EA EA		41001441	* * * * * *	* * * * *	* * * * *	* * * * *	D7 D7 D8 D8 D8 D7 D7 D7 D7	25 27 13 7 9 20 18
0049	A P	0		5970 <b>-2</b> 54-4038	INSULATION, SHEET, ELECTRICAL (7 1/4 IN. x 14 IN. REQUIRED)			ѕн			SEE	GRP 95	01			
0052 0053 0054 0055 0056		00000		5305-271-2566 5305-282-9458 5305-206-3339 5310-167-0816 5310-011-4986	SCREW, MACHINE: CLAMP MTG SCREW, MACHINE: DRAWER MTG SCREW, MACHINE: PANEL TO DRAWER MTG WASHER, FLAT: CLAMP MTG WASHER, FLAT: PANEL TO DRAWER MTG			EA EA EA EA EA		46448	* * * *	* * * *	* * * *	* * *	D7 D7 D7 D7 D7 D7	12 28 24 10 19
0057					4408 - CONNECTING DEVICES											
0058 0058	M P	0		5970-644 <b>-</b> 2629	INSULATION, PLASTIC TUBING: LEAD INSULATING MANUFACTURE FROM: INSULATION SLEEVING, ELECTRICAL (20 IN. REQUIRED)			EA FT		1	SEE	GRP 95	01		D10	9

ľ																
	SOUR	(1) CE, M	AINT. OV.	(2)	(3)			(4)	(5)	(6)		(	7)		ILI TRA	(8) .US- .T10N
NO.		CODE	(0) 2	FEDERAL STOCK NUMBER	DESCRIPTION			L L	A CK	ΥĻ		15 DA MAINT	Y ORG. . AL W.		(a)	(b) 8 0
	SOURC	MAIN	RECOV			MA CODE	PART NUMBER	UNIT O			(a) 1-5	(b) 6-20	(c) 21-50	(d) 5 I - 100	FIG. NO.	ITEM C
0059	м	0			INSULATION, PLASTIC TUBING: LEAD			ΕA		1					010	15
00594	Р	0		5970-644-2629	MANUFACTURE FROM: INSULATION SLEEVING, ELECTRICAL			FT			SEE	GRP 95	01			
0060	м	0			LEAD, COPPER: TERMINAL STUD, FLAT COPPER			EA		3		}			010	10
00604	Р	0		9535 <b>-232-22</b> 93	MANUFACTURE FROM: COPPER STRIP (20 in. x 1 in. required for			SP			SEE	GRP 95	<b>1</b> 01			
0061	м	0			EACH LEAD) LEAD, COPPER: TERMINAL STUD FLAT COPPER			EA		3					D10	14
00614	Р	0		9535 <b>-232-22</b> 93	MANUFACTURE FROM: COPPER STRIP (17 IN. X 1 IN. REQUIRED FOR (17 IN. X 1 IN. REQUIRED FOR			SP			SEE	GRP 95	<b>D</b> 1			
0062 0063	x2	0 0		5310-020-5186	EACH LEAD) NUT, PLAIN, HEXAGON: TERMINAL STUD PANEL, BAKELITE: GROUND AND ELECTRODE		Patal	EA		4	*	*	*	*	D10	19
0064	x2	0		5305-954-9543	STUD MTG RECEPTACLE, REMOTE CONTROL SCREW, CAP, HEXAGON HEAD: LEAD TO	96073 96073	9R1552	EA		1	*	*	*	*	D10	2
0066		0		5305 <b>-</b> 271 <b>-</b> 2566	TERMINAL STUD SCREW, MACHINE: REMOTE CONTROL			EA		2	*	*	*	*	D10	13
0067		0		5305-017-0471	RECEPTACLE MTG SCREW, TAPPING, THREAD FORMING: BAKELITE PANEL TO CONTROL PANEL MTG			EA		2   4	*	×	*	*	D10	3 20
0069	X2	0			STUD, TERMINAL: GROUND AND ELECTRODE, BRASS (SPECIAL)	96073	11G1705	EA	}	2	*	*	*	*	D10	11
0070 0071 0072 0073	X2	0000		5310-044-6221 5310-637-9541 5310-584-5272	SWITCH AND CABLE ASSEMBLY, REMOTE CONTROL WASHER, FLAT: TERMINAL STUD INSULATING WASHER, LOCK: LEAD TO TERMINAL STUD WASHER, LOCK: TERMINAL STUD	96073	29G1935	EA EA EA EA		1 4 2 2	* *	* *	*	*	D10 D10 D10 D10	23 17 12 18
0074					4409 - PROTECTIVE DEVICES											
<b>0</b> 075	м	0						EA		1		ļ			D7	30
00754	Р	0		5970-284-7201	INSULATION, SHEET, ELECTRICAL: FIBER 1 IN. W, 0.125 IN. THK, 5.562											
0076	м	0			IN. LG LEAD, ELECTRICAL: INTERLOCK SWITCH TO POWER SWITCH			FT		1	SEE	GRP 95	3 <b>D1</b>		D7	32
00764	P	0		6145-263-6982	MANUFACTURE FROM: WIRE, ELECTRICAL (8 IN. REQUIRED) NUT. PLAIN. HEXAGON: INTERLOCK SWITCH			FT			SEE	GRP 95	<b>p</b> 1			-
					MOUNTING			EA		2	*	*	*	*	D7	9

		(1)		(2)	(3)			(4)	(5)	(6)	[	(	7)		(	(8)
1	SOURC	сЕ, М	AINT												FLE	U\$-
LINE	AND C	REC CODE	ov.	FEDERAL								15 DAY	086		TRA	TION
NO.	(a) W	1.5 -	(-) +	STOCK NUMBER	DESCRIPTION			<u> </u>	D A O A	U.L.		MAINT	ALW.		(a)	(b) ကိုက်
		E Z	8			MAN	WFACTURER'S	<b>1</b> ₽ ÿ	$\sum_{i=1}^{n} z_{i} a_{i}$	Z z	(o)	(b)	(c)	(d)		ož ≆
	soc	¥ ₩	ш а	1		CODE	PART NUMBER		D N	δ≚	1+5	6-20	21-50	51-100	FIG. NO.	IT E SY N
						•		1			1					
0078 0079 0080 0081 0082	P	000000		5305-013-2719 5930-259-8619 5930-083-2718 5310-167-0816 5310-013-1044	SCREW, MACHINE: INTERLOCK SWITCH MTG SWITCH, INTERLOCK: MICRO SWITCH, SPST SWITCH, THERMOSTATIC WASHER, FLAT: INTERLOCK SWITCH MTG WASHER, LOCK: INTERLOCK SWITCH MTG	96073 96073	24R1141 24R1594	EA EA EA EA EA		2 1 1 2 2	* * *	*	* * *	* *	D7 D7 D6 D7 D7	29 31 7 10 11
0083	i				4410 - SWITCHING, TIMING AND SPEED CONTROL											
0084	X2	0			ADAPTER, STRAIGHT, PIPE TO TUBE: GAS TO TORCH, PIPE TO SOLENGID, ONE END MALE, 1/4-18 THO SIZE OTHER END FEMALE											
0085	x2	0			5/8-18 THO SIZE, LH THO (SPECIAL) ADAPTER, STRAIGHT, PIPE TO TUBE: WATER TO TORCH, PIPE TO SOLENOID, ONE END MALE,	08081	15AWL	EA		2	*	*	*	*	04	10
0088	м	0			1/4-10 thd size, other end Female, 5/8-18 thd size, rh thd (Special) BOARD. FIBER: contactor to change	08081	15AR	EA		2	×	*	*	*	D <sup>3</sup> 4	11
					OVER BOARD			ΕA		1					D2	20
00884				5070 281 7201	MANUFACTURE FROM:			eu			SET.		<b>n</b> 1	ļ		
0000		0		J9{0=201={201	(3 IN. X 3 1/2 IN. REQUIRED)			51			JEE	GRF 95				
ww.	M	Ů			MANUFACTURE FROM:			LA		•	1	1			ן זט ן	6
<b>00</b> 89a	Ρ	0		95 <b>20-</b> 517 <b>-05</b> 31	STEEL, ANGLE			FT			SEE	GRP 95	01			
0090	м	0			CABLE ASSEMBLY, ELECTRICAL: CHANGE OVER BOARD			ΕA		1	ĺ				D2	19
					MANUFACTURE FROM:		<sup>0</sup> . 0.1			_	Í					
0090A 0090B	X2 P	0		6145 <b>-284-0</b> 659	VIRE, ELECTRICAL	00000	ano-23	EA FT		2	SEE	GRP 95	01	*		
0091	м	0			CABLE ASSEMBLY, ELECTRICAL: CONTACTOR MANUEACTURE FROM			EA		1					D2	15
0091A 0091B	X2 P	0 0		6145-284-0659	TERMINAL, LUG WIRE, ELECTRICAL (6 IN. REQUIRED)	00000	an8-23	EA FT		2	* SEE	GRP 95	01 *	*		
0096 0097	P X2 X2	000		3431-083-2652 4730-253-4412	CONTACTOR: MODEL 6-3-2 (No. 804) ELBOW, PIPE: SOLENOID TO ADAPTER HANDE CONTROL POLENDITY SUISCH AND	96073	18R1719	EA EA		1 4	*	*	*	2 *	D2 D4	13
0000	~~ M				RANGE SWITCH	96073	1G1983	EA		2	*	+	*	*	D9	2
6660	Γ¶ Ι				POLARITY AND RANGE SWITCHES			EA		2					D9	15
0099A	Ρ	0		5970-644-2629	MANUFACTURE FROM: INSULATION SLEEVING, ELECTRICAL (4 1/2 in. required for each INSULATION)			FT			SEE	GRP 95	01			-

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		(1)	ļ	(2)	(3)			(4)	(5)	(6)		(	7)			8)
	SOUR	CE, M	AINT.					1							ILL	US-
LINE	AND (	CODE	0v.	FEDERAL				ļ	~			15 DAY	ORG.		TRA	TION
NO.	(a) <u>2</u>	њĿ	(c) <	NUMBER	DESCRIPTION			L.	U U V	Uн		MAINT	ALW.		(a)	(b) 44 0
	URC.	N N	0			AM	NUFACTURER'S			N N	(a)	(b)	(c)	(b)		ož ×∵
	so	ž	 Ш	·······		CODE	PART NUMBER	IN SS	σ×	έz	1-5	6-20	21-50	51-100	FIG. NO.	ITE SY N
0101	м	0	ł		INSULATION, PLASTIC: RANGE AND POLARITY											
					SWITCH TO TRANSFORMER LEAD			EA		2		1		Í	D9	6
01014	P			5070-644-2629	MANUFACTURE FROM: INSULATION SEEVING FLECTRICA			FT			SEE	CRP 05	) D1			
	•	Ň		)) <b>10-011-202</b> )	(10 IN. REQUIRED FOR EACH			1.	İ		022	ŗ ,,		9	ļļ	
					INSULATION)				1							- )-
0102	м	0			INSULATION, PLASTIC: RANGE SWITCH LEAD			ĘΑ		1		1		Í	09	14
0102A	Р	0		597 <b>0-</b> 644-2629	INSULATION SLEEVING, ELECTRICAL			FT			SEE	GRP 95	<b>b</b> 1			
					(24 IN. REQUIRED)											
0103	м	0			INSULATION, PLASTIC: RANGE SWITCH TO			-				]				12
	i				MANUFACTURE FROM:			EA.		1					09	14
0103A	Р	0		5970-644-2629	INSULATION SLEEVING, ELECTRICAL			FT			SEE	GRP 95	21		1	
					(15 IN. REQUIRED)											
0105	M		Í	Ì	LEAD, COPPERS RANGE AND POLARITY SWITCH			FA		6						8
					MANUFACTURE FROM:					Ū						Ŭ,
0105A	Р	0		9535 <b>-</b> 232 <b>-</b> 2293	COPPER STRIP			SP			SEE	GRP 95	21		1 1	
					(1 IN. X ]] IN. REQUIRED FOR EACH											
0106	м	0			LEAD, COPPER: RANGE SWITCH			EA		3	1				D9	13
					MANUFACTURE FROM:					5			_			_
0106A	P	0		9535-232-2293	COPPER STRIP			SP			SEE	GRP 95	01			
	ļ				LEAD)				(							
0107	м	0			LEAD, COPPER: RANGE SWITCH TO POLARITY											
1 1	Ì				SWITCH			EA		3					D9	9
0107A	Р	0	1	9535-232-2293	COPPER STRIP			SP			SEE	GRP 95	21			1
	]				(1 IN. X 17 IN. REQUIRED FOR							1			1	
				Į	EACH LEAD)											
0110		ľ			CAPACITOR			EA		1					D7	4
			1		MANUFACTURE FROM:										[ '	
01 10A	Ρ	0		5940-681-9713	TERMINAL, LUG: COPPER, TINNED					[					1	
					STRANDED CONDUCTOR			EA		2	*	*	*	*		
0110B	P	0		6145-660-8933	WIRE, ELECTRICAL			FT			SEE	GRP 95	01			
			ĺ	1	(6 IN. REQUIRED)				ļ							
	M				RHEOSTAT			EA		1					D7	3
					MANUFACTURE FROM:					.					-	
0111A	_X2	0		5940-681-9713	TERMINAL, LUG			EA	ł	1	*		*	¥		ļ
INT IN	P	0	- 1	0145-000-0933	WIKL, ELECIKICAL (12 in. required)			r i	ļ		SEL	ыкт 95	7			
1															┶━┻	

Image: Control of the contro				(1)		(2)	(3)		· · · · · · · · · · · · · · · · · · ·	(4)	(5)	(6)	1		(7)	<u> </u>	<u> </u>	
LINE MUCCUCY PERCENT OF ALL PLANT ALL ALL ALL ALL ALL ALL ALL ALL ALL AL			SOUR	CE, N	AINT.					17	(-)	(0)		,	/)			.8) 115-
NO.         DECENTION         DECE	L	ÍNE	AND	REC	ον.	FEDERAL											TRA	TION
MANUFACTURER'S         MANUFACTURER'S         MANUFACTURER'S         Manufactor	h	10.				STOCK	DESCRIPTION				0 ð			15 DAY	r ORG.		(a)	(Б)
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			(o) 🖁	(b) <u>-</u>	(c) S	NUMBER		<b></b>		<u>ا</u> "ة "	Z Z A	월 는	<u> </u>		· AL. #.	<del></del>		89
L         L			οΩ	(IAI)	Ğ			MAN	NUFACTURER'S	1 Ξ Š	È E	- Z	(a)	(Ь)	(c)	(d)	510	× .
0112       M       0       JUPER, COPPER: POLARITY       EA       6       SEE       GRP 5(0)       9         0112A       P       0       9535-232-2283       COPPER STRIP       SP       SEE       GRP 5(0)       9         0113       M       0       COPPER STRIP       COPPER STRIP       F       2       9       9         0113       M       0       SEE       GRP 9(0)       SEE       GRP 9(0)       9         0113       M       0       STIC-174-NOPER STRIP       F       EA       2       9         0113       M       0       STIC-174-NOPER STRIP       F       F       17       5       10         0113       M       0       STIC-174-NOPER STRIP       F       F       17       5       10         0116       0       STIC-174-NOPER STRIP       F       NUT, FNM, MEXAGON: CHANGE OVER       EA       12       10       10         0116       0       STIC-174-NOPER NOPER STRIP       NUT, FNM, MEXAGON: CHANGE OVER       EA       12       10       10         0117       0       STIC-174-NOPER NOPER STRIP       F       NUT, FNM, MEXAGON: CHANGE OVER       EA       12       10       10	⊢	$\rightarrow$	s		Ϋ́			CODE	PART NUMBER	l ₹ ≈	5	brz	1-5	6-20	21-50	51-100	NO.	SY I
0112         M         0         LEAD, JUMPER, COPERT FOLARITY         EA         6           0112A         P         0         933-232-2233         COPERT FOLARITY         FAD         55																		i –
AND RANCE SWITCH         AND RANCE SWITCH         AND RANCE SWITCH         AND RANCE SWITCH         FAOL         G         D9         16           0112A         P         0         9935-232-2829         COPPR STRIP         COPPR STRIP         SP         SEE         GRP 9:01         B           0113         M         0         LEAD, JMPER POLARITY AND RANGE         SP         SEE         GRP 9:01         B         G         99         17           0113A         P         0         9535-231-2256         COPPR SHET         FAOL         SH         SEE         GRP 9:01         G         91         G	01	112	м	0			LEAD, JUMPER, COPPER: POLARITY							1				
O112A         P         O         9535-232-2293         COPER STRIP         SEE         GRP 901         SEE         GRP 901         O           0113         M         O         LEAD TO MERCH LEAD TO BARGE         SEE         CPER STRIP         COPER STRIP							AND RANGE SWITCH			EA		6		1			D9	16
OTER         P         O         9737-232-242         COMPLEX         SIRTP         SP         SEE         GRP 9(0)           0113         M         O         FORMER TO COLATITY AND RANGE         EA         2         D         D9         17           0113         M         O         9535-231-8256         COMPER SHELT         SH         SEE         GRP 9501         D9         17           0113         M         O         9535-231-8256         COMPER SHELT         SH         SEE         GRP 9501         D9         17           0116         O         5310-012-062         RUT, PLAIN, HEXAGON: CONTACTOR NTG         EA         17         •         •         02         10           0117         O         5310-267-3272         NUT, PLAIN, HEXAGON: SPARE APE APE         EA         12         •         •         02         17           0120         X2         0         5310-267-3272         NUT, PLAIN, HEXAGON: SPARE APE APE         EA         12         •         •         02         17         8           0120         X2         O         5315-664-6339         PH, NG, DOMY: ADD RANGE         EA         12         •         •         08         1		1124				0505 000 0000	MANUFACTURE FROM:							1			-	
0113         H         0         LDB FR. LD M. AUDIRED         EA         2         0         10           0113         H         0         LEAD, JMPERT POLARITY AND RANGE         EA         2         0         0           0113         H         0         9535-231-2656         LCPA NATACTURE FORMS         SH         SEE GRP 9501         0           0116         0         5310-734-429         NUT, PLAIN, HEXACON: convace over         EA         17         •         •         0.02         17           0116         0         5310-734-429         NUT, PLAIN, HEXACON: convace over         EA         17         •         •         0.02         10           0117         0         5310-734-429         NUT, PLAIN, HEXACON: convace over         EA         12         •         •         0.02         17           0117         0         5310-734-429         NUT, PLAIN, HEXACON: convace over         EA         12         •         •         0.02         17         •         •         0.02         17         •         •         0.02         17         •         •         •         0.02         17         •         •         •         0.02         17         •         • </td <td>10</td> <td>TZA</td> <td>٢</td> <td></td> <td></td> <td>9737-636-6293</td> <td>(1/2) + (1/2</td> <td></td> <td></td> <td>SP</td> <td></td> <td></td> <td>SEE</td> <td>GRP 95</td> <td>01</td> <td></td> <td></td> <td>1</td>	10	TZA	٢			9737-636-6293	(1/2) + (1/2			SP			SEE	GRP 95	01			1
0113       M       0       IEAO, JUPER IN LEO, JUPER IN COMPARINGE       EA       2       0       0         0113A       P       0       9535-231-8256       COOPER SHEET       SH       SEE GRP 9501       0         0113A       P       0       9310-734-829       NUT, PLAIN, HEXAGONI CONTACTOR HTG       SH       SEE GRP 9501       0         0116       0       5310-020-2022       Dono       NUT, PLAIN, HEXAGONI CONTACTOR HTG       SEE       12       •       •       0       0         0117       0       5310-020-2022       DONO       NUT, PLAIN, HEXAGONI CONTACTOR HTG       EA       12       •       •       0	1						(1/2 IN. X O IN. REQUIRED							1		ł		I
Oliga         P         O         9535-231-8256         COPER SHET         CANTON         Contract         CANTON         Contract         Contr         Contr         Contr	01	113	м	0			LEAD, JUMPER: POLARITY AND RANGE					1		ĺ				I
O113A         P         O         9535-231-8256         COPER SHET         CA         Z         SEE         GRP 9501         GR         CA         D         SEE         GRP 9501         GR         CA         D         SEE         GRP 9501         GR         CA         C	1°	··•					SWITCH			FA		2		1				17
0113       P       0       9535-621-6256       COPPER SHEET       SH       SEE GRP 9501         0116       0       5310-754-8299       (1/2 in. x 2 1/2 in. neourecoments)       EA       17       • • • • • • • • • • • • • • • • • • •						_	MANUFACTURE FROM:					-	ļ	1			<b>1 1 1</b>	1 14
0116       0       5310-754-8299       NUT, PLAIN, HEXAGON: CHANGE OVER         0117       0       5310-012-062       NUT, PLAIN, HEXAGON: CONTACTOR MTO       EA       17       •       •       02       17         0118       0       5310-207-5212       NUT, PLAIN, HEXAGON: CONTACTOR MTO       EA       12       •       •       0.02       17         0119       0       5310-207-5212       NUT, PLAIN, HEXAGON: CONTACTOR MTO       EA       12       •       •       0.05       12       •       •       0.05       12       •       •       0.05       12       •       •       0.05       12       •       •       0.05       12       •       •       0.05       12       •       •       0.07       8         0120       X2       0       5315-661-6542       PLUG, DUMMT: RIC PRE-LOW AMPRENAL,       PLUG, DUMT: RIC PRE-LOW AMPRENAL,       PLUG, DUMT: RIC PRE-LOW AMPRENAL,       PLUG, DUMT: RIC PRE-LOW AMPRENAL,	01	13A	Р	0		9535 <b>-231-825</b> 6	COPPER SHEET			SH			SEE	GRP 95	101			ļ
0116       0       5310-754-4299       NUT, PLAIN, HEXAGON: CANAGE OVER       EA       17       *       *       *       02       10         0117       0       5310-012-0622       NUT, PLAIN, HEXAGON: CANAGE OVER       EA       17       *       *       *       *       02       10         0119       0       5310-027-927       NUT, PLAIN, HEXAGON: CANAGE OVER       EA       12       *							(1/2 IN. X 2 1/2 IN. REQUIRED			1								
OTIS       O $330-7/9-4297$ NUT, PLAIN, HEXAGONI CHANGE OVER       CA       17       EA       17       *       *       *       02       10         0117       0 $5310-012-0622$ NUT, PLAIN, HEXAGONI CONTACTOR HTG       EA       12       *       *       *       02       17         0118       0 $5310-207-9272$ NUT, PLAIN, HEXAGONI CONTACTOR HTG       EA       12       *       *       *       02       17       8         0119       0 $5310-207-9272$ NUT, PLAIN, HEXAGONI CONTACTOR HTG       EA       12       *       *       07       8         0120       X2       0 $5310-566-6439$ PIN, SPRING: POLATITY AND RANGE       EA       1       *       *       07       8         0124       0 $5945-061-6965$ RELAY, ARMATURE: TYPE DEG-12       96073 16G1718       EA       1       *       *       063       2         0126       0 $5305-50647837$ SCREW, CAP, HEXAGON HEAD: CHANGE       96073 16G1715       EA       1       *       *       062       7         0126       0 $5305-50647837$ SCREW, CAP, HEXAGON HEAD: CHANGE       SCREW, CAP, HEXAGON HEAD: CHANGE <td></td> <td></td> <td></td> <td></td> <td></td> <td>FALL TEL LOOD</td> <td>FOR EACH LEAD)</td> <td></td>						FALL TEL LOOD	FOR EACH LEAD)											
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	10	10		0		5310-754-4299	NUT, PLAIN, HEXAGON: CHANGE OVER							ľ				l
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	01	17		0		5210-012-0622				EA		17	*	*	*	*	D2	10
0119       0       5310-207-9272       NUT, PLAIN, HEXAGON IS PLAS OF SHICHS       EA       12       *       *       D9       4         0120       X2       0       5315-664-6439       Fill, SRIRG POLARITY AND RANGE       EA       2       *       *       D9       3         0121       X2       0       5315-664-6439       Fill, SRIRG POLARITY AND RANGE       EA       2       *       *       D9       3         0121       X2       0       5945-661-6965       FRELAY, ARMETURE: TYPE DEG-12       96073 961593       EA       1       *       *       D6       2       *       D6       2       *       *       D6       2       *       D7       D6       D7       D6 <td< td=""><td>lõi</td><td>181</td><td></td><td>ŏ</td><td></td><td>5310-584-5005</td><td>NUT. PLAIN, HEXAGON: LEADS TO SHITCHES</td><td></td><td></td><td>LA</td><td></td><td>3</td><td>*</td><td>*</td><td>*</td><td>*</td><td>D2</td><td>17</td></td<>	lõi	181		ŏ		5310-584-5005	NUT. PLAIN, HEXAGON: LEADS TO SHITCHES			LA		3	*	*	*	*	D2	17
120       X2       0       5315-664-6439       PIN, SPRIG: PLARITY AND RANGE SUTCH HANDLE       EA       2       *       *       D7       8         0121       X2       0       5315-664-6439       PIN, SPRIG: PLARITY AND RANGE SUTCH HANDLE       FIN, SPRIG: PLARITY AND RANGE SUTCH HANDLE       EA       2       *       *       D7       8         0121       X2       0       5945-061-6965       RELAT, ANATURE: TYPE DEG-12       96073 961793       EA       1       *       *       D8       1         0122       Y       0       5945-061-6964       RELAT, ANATURE: TYPE DEG-12       96073 1861715       EA       2       *       *       2       8       2       *       *       2       8       2       8       3       3       3       3       3       3       3       3       3       3       3       5       3       3       3       5       3       5       9       *       *       0       9       1       *       9       1       *       9       1       1       *       *       0       7       3       3       3       3       3       3       3       3       3       3       3	01	19		Ō		5310-207-9272	NUT. PLAIN. HEXAGON: SPARK GAP AND			LA		12	*	- T		<b>•</b>	109	4
0120       X2       0       5315-664-6439       PIN, SPRING: POLARITY AND RANGE       EA       2       *       *       *       07       0         0121       X2       0       SMITCH PANDLE       PLO, SPRINC: POLARITY AND RANGE       EA       2       *       *       *       00       3         0121       X2       0       SMITCH PANDLE       PLO, DUMMY: RED PRE-FLOW AMPHENAL, 6PRE-FLOW AMP							BRACKET MTG			FA		2	*	*	<b>+</b>	*	07	8
0121       X2       0       switch Handle       switch Handle       pluG, DUMY: RCD PRE-FLOW AMPHENAL, 6 073 9G13 9G1593       EA       1       ************************************	01	20	X2	0		5315-664-6439	PIN, SPRING: POLARITY AND RANGE					-						U
0121       X2       0       0 $6$ $7$							SWITCH HANDLE			EA		2	*	- <b>*</b>	*	*	09	3
0122       X2       0       0 POINT       96073       96073       96173       EA       1       *       *       *       0 D8       1         0124       P       0       5945-061-6965       RELAY, ARMATURE: TYPE DEG-12       96073       96073       1661713       EA       1       *	101	21	×2	0			PLUG, DUMMY: RED PRE-FLOW AMPHENAL,	- (							1			2
AL       O       5945-061-6965       RELLY, ARWATURE: TYPE DEG-12       96073 18G1715       EA       4       *       *       *       008       4         0125       P       0       5945-061-6964       RELAY, ARWATURE: TYPE DEG-12       96073 18G1715       EA       1       *       *       *       2       *       *       2       08       3         0126       0       5305-050-3937       SCREW, CAP, HEXAGON HEAD: CHANGE       96073 18G1715       EA       2       *       *       *       2       08       3         0127       0       5305-068-7837       SCREW, CAP, HEXAGON HEAD: CHANGE       SCREW, CAP, HEXAGON HEAD: CHANGE       EA       12       *       *       *       02       7         0128       0       5305-068-7637       SCREW, MACHINE: CONTACTOR MTG       EA       12       *       *       *       02       11         0132       0       5305-013-2768       SCREW, MACHINE: CONTACTOR MTG       EA       12       *       *       *       02       12         0133       0       5305-013-2768       SCREW, MACHINE: SPARK GAP AND BRACKET       MOUNTING       SCREW, MACHINE: SPARK GAP AND BRACKET       MOUNTING       SCREW, MACHINE: SPARK GAP AND BRACKET	01	22	¥2	0				96073	9G1593	EA		1	*	*	*	*	Dg	1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	lõi	24	P	ŏ		5945-061-6965	RELAY, ARMATURE, Type DEG-12	96073	1801718	EA		4	*	*	*	*	DQ	2
01260 $3305-550-3934$ SCREW, CAP, HEXAGON HEAD: CHANGE OVER BOARD90013 InditionIAR200301270 $5305-068-7837$ SCREW, CAP, HEXAGON HEAD: LEADS TO SWITCHESEA9**** $022$ 701280 $5305-068-0500$ SCREW, CAP, HEXAGON HEAD: POLARITY SUITCH AND RANGE SWITCH MTGEA12****D91101320 $5305-013-2768$ SCREW, MACHINE: POLARITY SCREW, MACHINE: PLUG IN TIMER MTGEA4***D91201330 $5305-013-2768$ SCREW, MACHINE: PLUG IN TIMER MTGEA6***D21201350 $5305-013-22159$ SCREW, MACHINE: PLUG IN TIMER MTGEA6***D01201360 $5305-0226-9268$ SCREW, MACHINE: SPARK GAP AND BRACKET MOUNTINGEA2**D7501360 $5930-519-4544$ SWITCH, AGA, WATER, HIGH FREQUENCY, SWITCH, GAS, WATER, HIGH FREQUENCY, SWITCH, PAREN HIGH FREQUENCY DROP OUT TIMER (ST40A)SWITCH, POWER (ST40A)EA2**D750137P0 $5930-519-4544$ SWITCH, POWER (ST50K)EA1**D750137P0 $5930-657-1542$ SWITCH, POWER (ST50A)EA2**D750137P0 $331-061-5944$ SWITCH, POWER (ST50A)EA2* </td <td>01</td> <td>25</td> <td>P</td> <td>õ</td> <td></td> <td>5949-061-6964</td> <td>RELAY. ARMATURE: TYPE DEG-12</td> <td>96073</td> <td>1861715</td> <td>EA</td> <td></td> <td>2</td> <td>*</td> <td></td> <td></td> <td></td> <td></td> <td>4</td>	01	25	P	õ		5949-061-6964	RELAY. ARMATURE: TYPE DEG-12	96073	1861715	EA		2	*					4
01270 $5305-068-7837$ SCREW, CAP, HEXAGON HEAD: LEADS TO SCREW, CAP, HEXAGON HEAD: POLARITY SWITCH AND RANGE SWITCH HEDEA9***D2701280 $5305-068-0500$ SCREW, CAP, HEXAGON HEAD: POLARITY SWITCH AND RANGE SWITCH HEGEA12****D91101320 $5305-013-2768$ SCREW, MACHINE: contactor HTG SOF-012-2159EA12****D91101330 $5305-012-2768$ SCREW, MACHINE: contactor HTG SCREW, MACHINE: spark GAP AND BRACKET MONTINGEA3***D21201360 $5305-226-9268$ SCREW, MACHINE: Spark GAP AND BRACKET MONTINGEA2***D7101360 $5305-519-4544$ SWITCH, GAS, WATER, HIGH FREQUENCY, SPOT ARC, HIGH FREQUENCY DROP OUT TIMER (ST40A)96073 11G129EA1***D710139P0 $5930-519-4544$ SWITCH, POWER (ST50A)EA2SEE GRP 9901D860139P0 $5930-655-19-4244$ SWITCH, POWER (ST50A)EA2SEE GRP 9901D690139P0 $5930-655-19-424$ SWITCH, POWER (ST50A)EA2**D750143P0 $3431-061-5940$ VALVE, SOLENOIDIE GAS AND WATER96073 22R1711EA2**D8801470 $5310-041-6234$ WAS	01	26		0		5305-550-3934	SCREW, CAP, HEXAGON HEAD: CHANGE	10013		1-1		2			"	2		ک
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01280 $5305-068-0500$ SourcesSourcesSourcesEA12******091101320 $5305-013-2768$ SCREW, CAP, HEXAGON HEAD: POLARITY SWITCH AND RANGE SWITCH MTGEA4******09101330 $5305-013-2768$ SCREW, MACHINE: contactor MTGEA4******09101330 $5305-013-2768$ SCREW, MACHINE: contactor MTGEA6******08501350 $5305-013-2915$ SCREW, MACHINE: spark gap and BRacketEA6******08501360 $5305-022-9268$ SCREW, MACHINE: spark gap and BRacketEA2******0710137X20 $5305-013-2915$ SSW, MACHINE: spark gap LEADSSPARK GAP ASSEMBLY96073 11G129EA1******0750138P0 $5930-519-4544$ Switch, PANEL, REMOTE (ST40A)EA2******0750139P0 $5930-519-4544$ Switch, PANEL, REMOTE (ST40A)EA2\$\$2\$\$0143P0 $5305-013-29454$ Switch, PANEL, REMOTE (ST40A)EA2\$\$2\$\$801440 $5310-044-6234$ WASHER, FLAT: ADAPTER TO ELEOWYALVE, SOLENOID: GAS AND WATER96073 22R1711EA2\$\$ <td>01</td> <td>27</td> <td></td> <td>0</td> <td></td> <td>5305-068-7837</td> <td>SCREW, CAP, HEXAGON HEAD: LEADS TO</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>, I</td> <td>   </td> <td>1</td> <td></td> <td>1</td>	01	27		0		5305-068-7837	SCREW, CAP, HEXAGON HEAD: LEADS TO							, I		1		1
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	101	20		۷ I		5305-060-0500	SCREW, CAP, HEXAGON HEAD: POLARITY					、				1		
0133 $0$ $305-012-2159$ Soften, incline control for the r fug $12$ $12$ $0135$ $0$ $5305-012-2159$ SCREW, MACHINE: Plug in timer Htg $EA$ $6$ $*$ $*$ $*$ $*$ $02$ $12$ $0135$ $0$ $5305-012-2159$ SCREW, MACHINE: Plug in timer Htg $SCREW, MACHINE: Plug in timer HtgEA6**$	01	32		പ		5205-012-2768	SCREW MACHINE CONTACTOR NTO			LA		4	*	*	*	*	D9	1
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	01	37	X2	0			SPARK GAP ASSEMBLY	96073	11G129	EA		1	*	*	*	*	D7	5
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	101	3°	"	0		5930-519-4544	SWITCH, GAS, WATER, HIGH FREQUENCY,									1	1 1	-
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$							SPOI ARC, HIGH FREQUENCY DROP					· · ·			1	1		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	01	20	Р	<u>م</u> ا		5020-510-4544	SUITCH PANEL PENOTE (STICA)			EA	1	4	SEE	GRP 99	01		DØ	6
0143       P       0       3431-061-5940       VALVE, SOLENOID: GAS AND WATER       96073 22R1711       EA       1       *       *       2       0       5         0144       0       5310-044-6234       WASHER, FLAT: ADAPTER TO ELBOW       96073 22R1711       EA       2       *       *       2       0       5         0147       0       5310-043-6234       WASHER, FLAT: LEADS TO SWITCHES       EA       14       *       *       *       D4       7         0147       0       5310-010-3319       WASHER, FLAT: LEADS TO SWITCHES       EA       14       *       *       *       D9       10         0150       0       5310-010-3319       WASHER, LOCK: CHANGE OVER BOARD SCREW       EA       9       *       *       *       D2       9	01	41	P	ŏ		5930-655-1582	SWITCH, POWER (ST50K)			LA		2	SEE	GRP 99	01	ا. ا	D6	8
0144       0       5310-044-6234       WASHER, FLAT: ADAPTER TO ELBOW       EA       4       *       *       D4       7         0147       0       5310-0623-8804       WASHER, FLAT: LEADS TO SWITCHES       EA       14       *       *       D4       7         0150       0       5310-010-3319       WASHER, LOCK: CHANGE OVER BOARD SCREW       EA       9       *       *       *       D2       9	01	43	Ρ	ō		3431-061-5940	VALVE. SOLENOID: GAS AND WATER	96073	22R1711	FA		2						0
0147       0       5310-823-8864       WASHER, FLAT: LEADS TO SWITCHES         0150       0       5310-010-3319       WASHER, LOCK: CHANGE OVER BOARD SCREW	01	44		0		5310-044-6234	WASHER, FLAT: ADAPTER TO ELBOW	20013		EA		14	*	*	- 4	<u>د</u> ا	2	2
0150 0 5310-010-3319 WASHER, LOCK: CHANGE OVER BOARD SCREW EA 9 * * * D2 9	01	47 í		0		5310-823-8804	WASHER, FLAT: LEADS TO SWITCHES			EA		14	*	*	*	*	09	16
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	SOUR	CE, N D REC	AINT.												ILL TRA	US-
NO.		CODE		FEDERAL STOCK	DESCRIPTION				υų			15 DAY MAINT.	ORG. ALW.		(a)	(ь)
	(a) LRCE	(p) (p) (f)	(c) > 00 00	NUMBER		MAN	UFACTURER'S	– b <sub>H</sub>	× π N − ⊢	L INC	(a)	(b)	(c)	(b)		M OR
	soi	ž	В Ш			CODE	PART NUMBER		α z	Ęz	1-5	6-20	21-50	51-100	FIG. NO.	IT E SY N
0151 0152 0153 0154	м	0 0 0 0		5310-012-1841 5310-582-5965 5310-043-2226	WASHER, LOCK: CONTACTOR MTG WASHER, LOCK: LEADS TO SWITCHES WASHER, LOCK: SPARK GAP AND BRACKET MTG WIRE, COPPER, SOLID: CONTACTOR MANNEACTUBE EPOM			EA EA EA EA		3 12 2 2	* *	* * *	* *	* * *	02 D9 D7 D2	16 5 7 14
0154 <b>A</b>	P	0		6145 <b>-</b> 548 <b>-23</b> 50	WIRE, ELECTRICAL (8 in. required for each WIRE)			FT			SEE	GRP 95	01			
0155					4411 - RESISTOR COMPONENTS											
0157 0173	X2	0 0		5305-014-0854	KNOB, RHEOSTAT SETSCREW: RHEOSTAT KNOB	96073	19R387	EA EA		1 1	*	*	*	*	08 08	12 11
0228					GROUP 95 - GENERAL USE STANDARDIZED PARTS											
0229					9501 - BULK MATERIAL											
0230	Ρ	0		95 <b>35-231-82</b> 56	COPPER SHEET: 0.1250 IN. TH, 24 IN. W. 48 IN. LG			ян			*	*	*	2		
0231	Ρ	0		95 <b>35-232-22</b> 93	COPPER STRIP: 0.032 IN. TH, 12 IN			SP			*		_	2		
0231A 0232	Р Р	0		5970 <b>-2</b> 54-4038 5970 <b>-2</b> 84 <b>-7201</b>	INSULATION, SHEET, ELECTRICAL INSULATION SHEET, ELECTRICAL: FIBER			SH			*	*	*	*		
0233	₽	0		59 <b>70-2</b> 84 <b>-7201</b>	40 IN. W, /2 IN. LG, 0.12) IN. THK INSULATION SHEET, ELECTRICAL: FIBER			SH			*	*	*	*		
0234	Ρ	0		597 <b>0-</b> 644 <b>-262</b> 9	INSULATION SLEEVING, ELECTRICAL: 1.125 IN. DIA. 0.032 IN. THK			FT			*	2	2	- 		
0239	₽	0		9520-517-0531	STEEL ANGLE: 1/8 IN. THK, 1 1/2 IN. LEGS			FT			*	*	*	*		
0241	Р	0		6145-548-2350	WIRE, ELECTRICAL: COPPER, No. 10 AWG, solid conductor			FT			*	*	*	2		
0242	Ρ	0		6145 <b>-</b> 284 <b>-</b> 0659	WIRE, ELECTRICAL: COPPER, TINNED FINISH, No. 8 AWG. STRANDED CONDUCTOR			FT			*	*	*	2		
0243	Ρ	0		6145-660 <b>-</b> 8933	WIRE, ELECTRICAL: COPPER, TINNED FINISH,			ET				2	_	-		
0244	Ρ	0		6145-263-6982	WIRE, ELECTRICAL: COPPER, TINNED FINISH, No. 18 stranded conductor			FT			2	2 4	د 7	2 15		
<b>02</b> 45					GROUP 99 - PARTS PECULIAR											
0245 <b>A</b>					9901 - PARTS PECULIAR WITH MORE THAN ONE APPLICATION											
0247	Ρ	0		59 <b>30-</b> 655 <b>-</b> 1515	SWITCH, TOGGLE			EA		6	*	*	2	2		

		(1)		(2)	(3)		· · · · · · · · · ·	(4)	(5)	(6)		(7)		(8)	(9)		10)
LINE	SOUR AND	CE,M REC CODE	AINT. OV.	FEDERAL					×	(0)	30 M	-DAY DS/ AINT. AL	GS W.	B B B C C C C C C C C C C C C C C C C C	AINT.	TR	LUS- ATION
NO.	(a) Ш	(b) -	(c) >	NUMBER	DESCRIPTION				PAC PAC	SF Z	(-)	<b>1</b> // )	<u> </u>		N L	(a)	(b) Жо
		A AL N	ECC			CODE	PART NUMBER			- N N U V	(a) 1.00	(0)	(c)	PLA 100.	ALV 100	FIG.	Ш.X.
0001	<u> </u>				SECTION 4 - REPAIR PARTS FOR DS, GS, AND DEPOT MAINTENANCE	CODE				<u> </u>	1-20	21-50	51-100	· ·			1 2 3
0002					GROUP 22 - BODY, CHASSIS OR HULL, AND ACCESSORY ITEMS												
0003					2210 - DATA PLATES AND INSTRUCTION HOLDERS							-					
0004 0005	X2 X2	F O		9905-807-3712	PLATE, IDENTIFICATION: U.S. ARMY PLATE, INSTRUCTION: HIGH FREQUENCY	0(07)		EA		1	*	*	*	*	*		
0006 0007 0008	X2 X2	0 0 F		5305 <b>-</b> 017 <b>-</b> 3185	DRAWER PLATE, INSTRUCTION: PLUG IN TIMERS PLATE, INSTRUCTION: WELDER FRONT HOUSING SCREW DRIVE: U.S. ARMY PLATE MTG	96073 96073 96073	14R1597 14R1150 14R1597	EA EA EA EA		1 1 1 4	*	* *	* *	*	* *		
0009					GROUP 40 - ELECTRIC MOTORS AND GENERATOR	s											1
00094		• •			4000 - ELECTRIC MOTOR												
0010 0011 0012	X2	0 00		5310-298-9261 5310-010-6497	MOTOR, FAN: VENTILATING 230V, 1550 RPM Model 16-166, 60 cycle, 1.25 amp Serial No. 1029978 NUT, PLAIN, HEXAGON: MOTOR MTG WASHER, LOCK: MOTOR MTG	62119	1 <b>U299</b> T8	EA EA EA	1	1 4 4	* *	*	*	*	* *	05 05 05	12 3
0013					GROUP 44 - WELDING, METALIZING, METAL HEATING AND PLATING EQUIPMENT												
0014					4405 - FRAME SUPPORT, HOUSING												
0015 0016 0017 0018	X X X X X X	H 0 0 0		5935-818-1126	BASE, WELDER COVER, TOP HOUSING, WELDER JACK, TIP: NYLON TIP FOR 1/4 IN. HOLE,	96073 96073 96073	13G1811 8G1817 3G1829	EA EA EA		1 1 1	* *	* * *	* * *	*	* *	D1 D4 D4	12 1 4
0019	м	0			I/O IN. JACK LEAD ASSEMBLY, ELECTRICAL: MOUNTED REAR OF FRONT HOUSING PANEL			EA		2	*	*	*	*	*	D10	4
0019A	X2	٥		594 <b>0-050-620</b> 8	MANUFACTURE FROM: TERMINAL, LUG: COPPER, TINNED FINISH, No. 16 to 14 AWG, FOR					2						010	5
0019B	Р	0		6145-660-8933	NO. 10 SCREW WIRE, ELECTRICAL (15 IN BEOWERD FOR FACH (54D)			EA FT		1	* SEE G	* RP 950	1	*	*		
0020 0021 0022	X2	0 0 0		5310-262-6169 5310-685-1429	LIFTING EYE NUT, PLAIN, HEXAGON: LEAD ASSEMBLY MTG NUT, PLAIN, HEXAGON: LIFTING EYE	71843 :	2404L	EA EA EA		2	* *	* * *	* * *	* * *	* * *	04 D10 D4	2 7 3

7		
2		

		(1)		(2)	(3)			(4)	(5)	(6)		(7)	~	(8)	(9)	(1	0)
LINE	SOURC AND C	CE, M RECO ODE	AINT. DV.	FEDE RAL					<del>č</del>		30- M	•DAY DS/ AINT. AL	GS W.	W. PER. UIP. CY. ING	AINT. ER. UIP.	IL TR (a)	LUS- ATION
NO.	(a) Ш	(b),	(c) <u>&gt;</u>	NUMBER	DESCRIPTION	MAN		- 6 <u>-</u>	PAC N	U⊢ ₹₹	(0)	(6)	(c)	ANN ANN			Ron
	OUR	NIN	с С С С			CODE	PART NUMBER			N UI	1-20	21-50	51-100	1-YR. 100 CT	DE PC	FIG. NO.	TEM YM.
0023		0		5310-685-1429	NUT, PLAIN, HEXAGON: SUPPORT AND	L	<u> </u>							 -			
0024 0025	X2 X2	0 0			PANEL, HOUSING FRONT PLATE, VALVE MOUNTING	96073 96073	361818 361831	EA EA		2 1 1	*	*	*	*	*	D10 D4	0 1 8
0026 0027		0 0		5305 <b>-271-2</b> 566 5305-840-6694	SCREW, MACHINE: LEAD ASSEMBLY MTG SCREW, TAPPING, THREAD FORMING: Access			EA		2	*	*	*	*	*	D10	3
<b>002</b> 8		0		53 <b>05-067-</b> 9896	DOOR, VALVE, PLATE AND COVER TO HOUSING SCREW, TAPPING, THREAD FORMING: WELDER HOUSING TO FRAME			ŁA FA		24 8	*	*	*	*	*	D4	9
0029 0030	X2	0 0		5310-013-1044	SUPPORT: BASE AND COVER WASHER, LOCK: LEAD ASSEMBLY MTG	96073	1361817	EA EA		1 2	*	*	*	*	*	D1 D10	7
0031					4406 - VENTILATING, COOLING SYSTEM												
0032	x2	0			BLADE, FAN, TORRINGTION: 4 BLADE, 3/8 IN. 10 HUB, 15/16 IN. OD HUB, 1 IN. LG	96073	11R1837	EA		1	*	*	*	*	*	D5	2
0033 0034	X2	000		5310-619-3555	GUARD, FAN NUT, PLAIN, HEXAGON: FAN GUARD MTG	96073	1361800	EA EA		1	*	*	*	*	*	D5 D5	5 11
0035 0036 0037		000		5305-900-1725 5305-013-9009 5310-010-3319	SCREW, MACHINE: FAN GUARD MTG SETSCREW: FAN BLADE MTG WASHER, LOCK: FAN GUARD MTG			EA EA EA		4 1 4	* * *	*	* *	* *	* *	D5 D5 D5	14 1 10
<b>00</b> 38			{		4407 - CONTROL PANELS												
0039 0040	X2 X2	0 0	ł	5340-200-8503	CLAMP, LOOP: WIRE MTG, PLASTIC DRAWER, HIGH FREQUENCY PANEL	96073	361823	EA EA		4 1	* *	*	*	*	* *	D7 D7	25 27
0041 0042	Х2 М	0 F		6240-682-3411	GLOW LAMP: PILOT LIGHT HARNESS ASSEMBLY, WIRING: CONTROL PANEL	24446 96073	NE51H 29G1941	EA EA		3	*	*	*	*	¥	D8 D6	13 8
00424	x2	F		5940-050-6209	TERMINAL, LUG: COPPER, TINNED FINISH, No. 16 to 14 AWG, For 1/4 IN. BOLT			EA		2	*	*	*	*	*		
00428	×2	F		5940-230-8117	TERMINAL, LUG: COPPER, TINNED FINISH, No. 16 to 22 AWG, 0.281 IN. DIA,												
00420	X2	F	ĺ	594 <b>0-201-2</b> 849	4//64 IN, LG TERMINAL, LUG: COPPER, TINNED FINISH, No. 22 TO 18 AWG.			EA		2	*	*	*	*	*		
00420	Р	F	ļ	6145-263-6982	FOR NO. 10 SCREW WIRE, ELECTRICAL (62 FT REQUIRED)			EA FT	-	10	* SEE G	* RP 950	*	*	*		
00428	P Y2	F		6145-660-8933	WIRE, ELECTRICAL (11 FT 8 IN, REQUIRED)			FT			SEE C	RP 950	1	ļ			
~~3	~~	F			18 WIRE, FOR 3/8 IN. HOLE, SOLENOID VALVE	96072	9R1163	ΕΑ		2	*	*	*	*	*	D6	12
0044 0045	X2 X2	0		6210-840-1057	LIGHT, PILOT LOCK, DRAWER: W/KEY	72169 96073	52408991 3R2147	EA EA		3	*	*	*	*	* *	D8 D8	7
0047 0048		0 0		5310-262-6169 5310-207-9272	NUT, PLAIN, HEXAGON: CLAMP MTG NUT, PLAIN, HEXAGON: PANEL TO DRAWER MTG			EA EA		4	*	*	*	*	* *	D7 D7	9 20

1	ſ	(1)		(2)	(3)			(4)	(5)	(6)		(7)	_	(8)	(9)	0	(0)
LINE	SOUR AND C	CE,M REC CODE	OV.	FEDERAL					×		30 M	-DAY DS	GS W.		P. N.T.	JL TR	LUS- ATION
NO.	(a) Ш	(b);	(c) >	NUMBER	DESCRIPTION	r		- <u>"</u> "	PAC PAC	웃는	_ <u> </u>	-	<b>.</b>		N H O	(a)	(b) ¢o
	URC	z I	S.			MANU	JFACTURER'S		_≍Ę	×n	(a)	· (b)	(c)	CTY 8.		FIG.	oz ₹×
	8	ž	Ř			CODE	PART NUMBER	5°	αŚ	δž	1-20	21-50	51-100	12- 1	<u> </u>	NO.	SYN
0049 0049/	M	0 0		59 <b>70-25</b> 4-4038	PANEL, HIGH FREQUENCY DRAWER MANUFACTURE FROM: INSULATION, SHEET, ELECTRICAL			EA SH		1	SEE G	RP 950	n			D7	18
0050 0051 0052 0053 0054 0055 0056	X2 X2	F F 0 0 0 0 0		5305-271-2566 5305-282-9458 5305-206-3339 5310-167-0816 5310-011-4986	(71/4 IN. x 14 IN. REQUIRED) PLUG, 12 PIN RECEPTACLE, 12 PIN: W/CLIPS SCREW, MACHINE: CLAMP MTG SCREW, MACHINE: DRAWER MTG SCREW, MACHINE: PANEL TO DRAWER MTG WASHER, FLAT: CLAMP MTG WASHER, FLAT: PANEL TO DRAWER MTG	96073 96073	9R1652 9R1553	EA EA EA EA EA EA EA		1 1 4 6 4 4 8	* * * * * *	* * * * *	* * * * * *	* *	* * * * * *	D7 D6 D7 D7 D7 D7 D7 D7	26 10 12 28 24 10 19
0057					4408 - CONNECTING DEVICES												
0058	м	0			INSULATION, PLASTIC TUBING: LEAD INSULATING MANUFACTURF FROM:			EA		1						D10	9
0058/	Р	0		5970-644-2629	INSULATION SLEEVING, ELECTRICAL (20 IN. REQUIRED)			FT			SEE G	RP 950					
0059 0050	м	0		5070 ())) 0(00	INSULATION, PLASTIC TUBING: LEAD INSULATION MANUFACTURE FROM:			EA		1						D10	15
00594	м	0		5970-644-2629	INSULATION SLEEVING, ELECTRICAL (17 in. required) LEAD, COPPER: terminal stud, flat			FT			SEE G	RP 950					
00604	Р	0		9535 <b>-232-22</b> 93	COPPER MANUFACTURE FROM: COPPER STRIP (20 IN. X 1 IN. REQUIRED FOR			EA SP		3	SEE G	RP 950	1			D10	10
<b>00</b> 61	м	0			EACH LEAD) LEAD, COPPER: TERMINAL STUD FLAT COPPER MANUEATURE FROM			EA		3						D10	14
<b>00</b> 61A	Ρ	0		9535 <b>-232-2</b> 293	COPPER STRIP (17 IN. X 1 IN. REQUIRED FOR FOCH (50)			SP			SEE G	RP 950					
0062 0063	x2	0 0		<u>5310-020-5186</u>	NUT, PLAIN, HEXAGON: TERMINAL STUD PANEL, BAKELITE: GROUND AND ELECTRODE	96072	801286	EA		4	*	*	*	*	*	D10	19
0064 0065	X2	0 0		5305-954-9543	RECEPTACLE, REMOTE CONTROL SCREW, CAP, HEXAGON HEAD: LEAD TO	96073 9	R1552	EA		1	*	*	*	*	*	D10 D10	16 2
<b>00</b> 66		0		5305-271-2566	SCREW, MACHINE: REMOTE CONTROL			LA		2	*	*	*	*	*	D10	13
0067		0		5305-017-0471	RECEPTACLE MTG SCREW, TAPPING, THREAD FORMING: BAKELITE PANEL TO CONTROL PANEL MTG			EA		2 )	*	*	*	*	*	D10	3
								<u></u>		'	-	-	-			010	20

		(1)		(2)	(3)			(4)	(5)	(6)		(7)		(8)	(9)	(1	0)
LINE	SOURC AND	E, MA RECO	AINT.								30-	DAY DS/	GS	ຜ່ ພ	ъ. Р.	TR/	LUS- ATION
NO.		JUE		STOCK	DESCRIPTION			_ <u> </u>	NC	⊻⊢	м,	AINT. AL	w.	ALW.	PE	(a) 1	(6) ∝o
	(a) H	(ь) <u>г</u>	(c) > O	NUMBER		MANI	UFACTURER'S			UNI V	(a)	(b)	(c)	YR. 1 100 E CTY PLAI	EP01 AL₩ 100	FIG.	ΟZ. W.W.
	<u></u>	A M	а Ш			CODE	PART NUMBER	5=	σź	G≚	1-20	21-50	51-100	-	ā	NO,	ΞŻ
0069 0070	X2 X2	0		5210 010 (221	STUD, TERMINAL: GROUND AND ELECTRODE, Brass (Special) Switch and cable assembly, remote control	96 <b>073</b> 96073	11G1705 29G1935	EA EA		2	*	*	*.	*	*	D10 D10	11 23
0072 0073		000		5310-637-9541 5310-584-5272	WASHER, LOCK: LEAD TO TERMINAL STUD WASHER, LOCK: LEAD TO TERMINAL STUD WASHER, LOCK: TERMINAL STUD			EA EA		2 2	*	*	*	*	*	D10 D10 D10	17 12 18
0074 007ć					4409 - PROTECTIVE DEVICES												i I
00754 00754	м Р	0		5970-284-7201	MANUFACTURE FROM: INSULATION, SHEET, ELECTRICAL: FIBER			EA	ļ							DŢ	30
<b>00</b> 76	м	0	Ì	İ	IN. LG IN. LG LEAD, ELECTRICAL: INTERLOCK SWITCH TO POWER SWITCH			FT EA		1	SEE G	RP 950				D7	32
00764 0077	Р	0 0		6145-263-6982 5310-262-6169	MANUFACTURE FROM: WIRE, ELECTRICAL (8 in. required) NUT, PLAIN, HEXAGON: INTERLOCK SWITCH			FT	,		SEE O	RP 950					
0078 0079 0080 0081 0082	P P	000000		5305-013-2719 5930-259-8619 5930-083-2718 5310-167-0816 5310-013-1044	MOUNTING SCREW, MACHINE: INTERLOCK SWITCH MTG SWITCH, INTERLOCK: MICRO SWITCH, SPST SWITCH, THERMOSTATIC WASHER, FLAT: INTERLOCK SWITCH MTG WASHER, LOCK: INTERLOCK SWITCH MTG	96073 96073	24R1141 24R1594	EA EA EA EA EA		2 2 1 2 2 2	* * * *	* * * * *	* 2 2 *	* 7 7 *	* * * * * * *	D7 D7 D7 D7 D6 D7 D7	9 29 31 7 10 11
0083					4410 - SWITCHING, TIMING AND SPEED CONTROL												
0084	x2	0			ADAPTER, STRAIGHT, PIPE TO TUBE: GAS TO Torch, Pipe to solenoid, one end male, 1/4-10 thd size, other end female,				1								
0085	X2	0			5/8-18 THO SIZE, LH THD (SPECIAL) ADAPTER, STRAIGHT, PIPE TO TUBE: WATER TO TORCH, PIPE TO SOLENGID, ONE END MALE, 1/4-18 THO SIZE OTHER END FEMALE	08081	15AWL	EA		2	*	*	*	*	*	D4	10
<b>00</b> 86	м	F			5/8-18 THO SIZE, RH THO (SPECIAL) BAR, VOLTAGE CHANGE MANUFACTURE FROM:	08081 96073	15ar 1161281	EA EA		2 4	*	*	*	*	*	بلار 20	11 11
00864	P	F		9535 <b>-231-82</b> 56	COPPER SHEET (3/4 in. x 2 1/4 in. required for each BAR)			SH			SEE G	RP 950					
0087	X2	F			BOARD, CHANGE COVER: BAKELITE, 3 IN. WIDE, 9 IN. LG, 1/4 IN. THK	96073	861285	EA		1	*	*	*	*	*	D2	8

	1	(1)		(2)	(3)			(4)	(5)	(6)	<u> </u>	(7)		(8)	(9)	<u> </u>	10)
	SOUR	CE, N	AINT	•				1	(0)	(4)		(7)		ač	(9)	· JL	LUS-
NO.		CODE		FEDERAL STOCK							30 M	HDAY DS	GS ₩.	a d	ER. U.P.		
	(a) U	(b): <sub>Н</sub>	(c) >	NUMBER	DESCRIPTION	MAN	UFACTURER'S	卢빌	N Z Z	N N N N	(0)	(b)	(c)	ANN	× do t × u t × u	(-)	a de la
		N A	REC			CODE	PART NUMBER		L N	ΣΩ Σ	1-20	21-50	51-100	100 100 100	AL 100	FIG. NO.	Ϋ́,Ϋ́,Ϋ́,Ϋ́,Ϋ́,Ϋ́,Ϋ́,Ϋ́,Ϋ́,Ϋ́,
	1					<u> </u>		+		<u> </u>			1.100		<u> </u>		50
																1	
<b>b0</b> 88	м	0	1		BOARD, FIBER: CONTACTOR TO CHANGE												
					OVER BOARD MANUFACTURE FROM:			EA		1						02	20
0088,	P	0		5970-284-7201	INSULATION, SHEET, ELECTRICAL			SH			SEE	GRP 950	31				
0089	м	0			(3 IN. X 3 1/2 IN. REQUIRED)					Ι.							
		Ŭ			MANUFACTURE FROM:												6
0089/	Р	0		9520-517-0531	STEEL, ANGLE			FT			SEE	GRP 950	1				
0090	м	0			CABLE ASSEMBLY, ELECTRICAL: CHANGE OVER												
					BOARD MANUEACTURE EROMA			EA		1			ĺ			D2	19
0090/	x2	0			TERMINAL, LUG	00000	AN8-23	EA		2	*	*	*	*	*		
0090E	P	0		6145 <b>-284-0</b> 659	WIRE, ELECTRICAL			FT			SEE	GRP 950	1	1			
0091	м	0			(12 IN. REQUIRED) CABLE ASSEMBLY, ELECTRICAL: CONTACTOR			FA		1						5	15
	~				MANUFACTURE FROM:										1		
0091E	P P	0		6145-284-0659	WIRE, ELECTRICAL	00000	AN8-23	EA		2	* SEE		*	*	*		
		_			(6 IN. REQUIRED)			`'			JLL	אל האים	(*			Í	
0092	Р	ł		5910-581-8494	CAPACITOR, FIXED, CERAMIC DIELECTRIC:	14655	RYA6S1	5		, I	err				ſ		
0093	Р	F		59 <b>10-</b> 581-8494	CAPACITOR, FIXED, CERAMIC DIELECTRIC:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	014031			'	JEE	ыкг 99	"			50	17
0004	Р	F		5910-280-6222	ON POLARITY SWITCH, WAFFER	14655	BYA6S1	EA		1	SEE	GRP 99	)1			D9	25
		•		))10=200=0555	CAN, HIGH FREQUENCY DRAWER	96073	4R120	EA		1	2	2	3	30	10	D7	21
0095	Р	F		5910-083-2712	CAPACITOR: MICA, TYPE F28, 5.1 AMPS,	04070	)(01180				0		5	,			
0096	Р	0		3431-083-2652	CONTACTOR: MODEL 6-3-2 (No. 804)	96073	18R1719	EA			2	2	3	30 15	10	07 02	15
0097	X2	0		4730-253-4412	ELBOW, PIPE: SOLENOID TO ADAPTER	- 13		EA		4	*	*	*		*	D4	6
0090	~~	Ŭ			RANGE SWITCH	96073	161983	EA		2	*	*	*		*	nd	2
0099	м	0			INSULATION, PLASTIC: JUMPER LEAD,	2115										1	-
					MANUFACTURE FROM:			EA		2						D9	15
0099/	Р	0		5970-644-2629	INSULATION SLEEVING, ELECTRICAL			FT		[	SEE	GRP 95	1				
					(4 1/2 IN. REQUIRED FOR EACH INSULATION)									ł			
0101	м	0			INSULATION, PLASTIC: RANGE AND POLARITY												
			- 1		SWITCH TO TRANSFORMER LEAD MANUFACTURF FROM:			EA		2						DS	6
01014	P	0		5970-644-2629	INSULATION SLEEVING, ELECTRICAL			FT			SEE	GRP 950	n				
	ĺ				(10 IN. REQUIRED FOR EACH (NSULATION)												
										. [							

P\_15

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6																	
[		(1)		(2)	(3)			(4)	(5)	(6)		(7)		(8)	(9)	(1)	))
[	SOUR	CE, MA	AINT								30-	DAY DS/GS		ай Ш	Ė.,	TRA	LUS+ VTION
LINE	C	ODE	···	FEDERAL					., č		M,	AINT, ALW.			PER	(a)	(6)
NO.	(a) Ш	(b) _	(c) >	NUMBER	DESCRIPTION			<u>–</u> ۳	N A		(a)	(b)	(c)	ANN ANN	0 E 0 T		NOR NO.
	URC.	A N I	0 U			MAN	DART NUMBER	ISSU	, Ta La	λΩ	1 20	21 60 5	1.100	R 0 0 1	AL	FIG. NO.	TΕM YM.
L	8	ź	μ			L CODE	PART NUMBER			0-	1-20	21-50 5	-100				
0102	M	0			INSULATION, PLASTIC: RANGE SWITCH LEAD			EA		1						D9	14
0102	A P	0		5970-644-2629	INSULATION SLEEVING. ELECTRICAL			FT			SEE 0	RP 9501					
	[ ''			<i>JJI</i> <sup>1</sup> <i>J</i>	(24 IN. REQUIRED)												
0103	М	0			INSULATION, PLASTIC: RANGE SWITCH TO												
ſ					MANUFACTURE FROM:			EA								09	12
0103.	A P	0		597 <b>0-</b> 644 <b>-262</b> 9	INSULATION SLEEVING, ELECTRICAL			FT			SEE G	RP 950					
0.0				5005 050 (7(F	(15 IN. REQUIRED)												
0104	<u>м</u>			5935-259-0/05	JACK, MALLE 1/O IN. PIN LEAD, COPPER: BANGE AND POLABITY SWITCH			LA		1			*	*	*	יזט	17
1	1	Ŭ		i	TO TRANSFORMER			EA		6						D9	8
0.05					MANUFACTURE FROM:												
10105.		0		9535-232-2293	(1 IN. Y 11 IN. REQUIRED FOR EACH			SP			SEE G	RP 950					
					LEAD)												
0106	M	0			LEAD, COPPER: RANGE SWITCH			EA		3						D9	13
0106	A P			0525-222-2202	COPPER STRIP			GD		1	SEE C						
	7 ·	Ň		<i>7)</i> , <b>7-2)</b> 2-2275	(1 IN.X 27 IN. REQUIRED FOR EACH			5			566 0	ar 990					
					LEAD)												
10107	м	0			LEAD, COPPER: RANGE SWITCH TO POLARITY			1.								<b>D</b> 0	
					MANUFACTURE FROM:			LA		3						09	9
0107	¢ Ρ	0		9535 <b>-232-22</b> 93	COPPER STRIP			SP		}	SEE G	RP 950					
				1	(1 IN. X 17 IN. REQUIRED FOR					1							
0108	м	F			LEAD, COPPER STRAP: CHANGE OVER					1							
					BOARD			EA		2			[			D2	18
0108		-		0525-222 2202	MANUFACTURE FROM:			CU CU		ļ							
10100	ן ו	ſſ		9737-232-2293	(1/2 IN. X 4 IN. REQUIRED FOR			1 SH			SEL G	RP 950	1				
					EACH LEAD)				ļ								
0109	м	ודי			LEAD, ELECTRICAL: CAPACITOR TO MALE						[		1			07	16
					MANUFACTURE FROM:			LA		1						10	10
0109	4 X2	F		5940-681-9713	TERMINAL, LUG			EA		1	*	*	*	*	*		, i
0109	9 P	F		6145-660-8933	WIRE, ELECTRICAL			FT			SEE G	RP 950					
0110	м	0			LEAD. ELECTRICAL: SPARK GAP TO				1	1							
					CAPACITOR			EA	ļ	1	l	1				D7	4
6110				5010 (81 0712	MANUFACTURE FROM:			ſ	[	[	1						
	1	1		5940-001-9/13	FINISH. NO. 16 TO 14 AWG.												
ļ	Ì	1			STRANDED CONDUCTOR			EA		2	*	*	*	*	*		
0110	B P	0		6145-660-8933	WIRE, ELECTRICAL			FT			SEE G	RP 950					
					(O IN. REQUIRED)			1	1	1	ĺ	1					

Interaction         Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>		{	(1)	2	(2)	(3)			(4)	(5)	(6)	T	(7)		(8)	(9)	T 7	101
Under No.         Construction (1)		SOUR	CE, M	AINT.	•								,		aż 🔍	l ."	, n	LLUS-
HO         DESCRIPTION         MANUFACTURE (%)         B </td <td>LINE</td> <td>AND</td> <td>JODE</td> <td>эv. 1</td> <td>FEDERAL</td> <td></td> <td></td> <td></td> <td> </td> <td></td> <td></td> <td>30</td> <td>-DAY DS/</td> <td>GS</td> <td>ີ<u>ພ</u>ູ. ບ</td> <td>Z a d</td> <td>TR</td> <td>ATION</td>	LINE	AND	JODE	эv. 1	FEDERAL							30	-DAY DS/	GS	ີ <u>ພ</u> ູ. ບ	Z a d	TR	ATION
MANUFACTURER'S         Table / State         Manufacturer's         Table / State         Table	NO.	(a): Ш	(Б)	<b>1</b> (c) 5	STOCK NUMBER	DESCRIPTION	<u> </u>		_ <u>"</u> "	ACI NC	UL-		Alor: ac	<b>.</b>	NIN COL	A B O	(a)	
SI         SI<		l S	, z	j í			MANI	JFACTURER'S	Sur C		N N	( a)	(b)	(c)	LAND A	S_S	FIG	ι S S
0111       M       0       LEAD, FLECTRICAL: SPARE GAP TO mecentri mecentri temminut, LGG       EA       1       0         0111       Y       0       5940-681-9713 6149-660-931       URE POWE TERMINUL, LGG       EA       1       SEE GAP 950       0         0112       M       0       MERE, COPPER JERLY MAREE, COPPER POLARITY MAREE, COPPER STRIP (1/2 IN: x 6 IN: REQUIRED IF 00       EA       6       6         0113       M       0       9535-232-2233       COPPER STRIP (1/2 IN: x 6 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (1/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, COPPER STRIP (2/2 IN: x 2 I/2 IN: REQUIRED IF 00 AMEE, C		<u>Š</u>	ž	а В	· · · · · · · · · · · · · · · · · · ·		CODE	PART NUMBER	Ľ≧	La N	Ê≚	1-20	21-50	51-100	120 °	DE ►	NO.	SYM
0111         M         0         LEAD, ELECTRICAL: SPARK GAP TO         EA         1         0         0         07         3           01114         P         0         6145-660-933         GH2-681-9713         TERMINAL, LOG         FT         1         SEE GRP 950         •         •         0         0         9           0112         M         0         9935-232-223         22         0         6         6         6         6         0         9         16         0         1         SEE GRP 950         •         •         0         9         16           0112         M         0         9935-231-225         COPPER STRIP         EA         2         SEE GRP 950         •         •         0         9         17           0113         M         0         9535-231-2256         FT         0         9         17         •         •         •         0         9         17           0113         F         5310-262-6169         NUT, PLAIN, HEXGOR: cancertor HTG         EA         1         •         •         •         0         9         19         19         19         19         19         19         19 <t< td=""><td></td><td>  '</td><td>   </td><td>1 1</td><td></td><td></td><td></td><td></td><td></td><td>[</td><td></td><td></td><td></td><td>1</td><td>1</td><td></td><td></td><td></td></t<>		'		1 1						[				1	1			
Image: Second	0111	l m'	01	1 1	1	IFAD. FLECTRICAL SPARK GAP TO				1 '	'	1						
OIT 14         X2         O         Sph-G81-Syll         MARFACTURE FROM: TRINIAL, LG         EA         T         I         SEE GRP 950         I         I         I         I         SEE GRP 950         I         <		1 1	$( \uparrow)$	1 1	1	RHEOSTAT			EA	1 '	1	1			]		70	,
U111 A         Z         0         P304-601-2/13         IEMMINAL, LGG         EA         I         I         SEE GRP 950         I	0111/	ا <sub>د</sub> ر ا	1,1	1 1	-aka (81 0712	MANUFACTURE FROM:				1 /	1 ''	1					1	2
0112       M       0       017200000000000000000000000000000000000	01116	P	l öl	'	6145-660-8933	TERMINAL, LUG WIRE FLECTRICAL			EA	1 /	1'	*'	*	*	<b>*</b> ,	*		
0112       M       0       ICAD, JUMEER, COPPER, FOLARITY       EA       6       0			i 1			(12 IN. REQUIRED)				1 '	1 '	SEE 9	RP 950		ļ			
Image: And manual sector required products product and	01 12	M	0	( )	1 /	LEAD, JUMPER, COPPER: POLARITY				1 '	'	1 '			1			
OI12         P         0         935-232-2293         PARD R-INCLE INDUCE (1/2 IN . X & G IN. REQUIRED (1/2 IN . X & 1/2 IN. REQUIRED COPPER SHEET (1/2 IN . X & 1/2 IN. REQUIRED FOR EACH LEAD)         SEE GRP 950         SEE GRP 950           0113         M         0         9535-231-8256         COPPER SHEET COPPER SHEET         SH         SEE GRP 950         09         17           0113         F         5310-262-6169         NUT, PLAIN, HEXAGON: CAPACITOR HTG 0115         SH         SEE GRP 950         00         5310-262-6169         NUT, PLAIN, HEXAGON: CAPACITOR HTG 0117         SH         SEE GRP 950         02         17           0114         F         5310-262-6169         NUT, PLAIN, HEXAGON: CAPACITOR HTG 0117         SH         SEE GRP 950         02         10           0115         0         5310-254-500         NUT, PLAIN, HEXAGON: CAPACITOR HTG 0117         SH         SEE GRP 950         SEE GRP 950         10           0113         0         5310-254-500         NUT, PLAIN, HEXAGON: CAPACITOR HTG NUT, PLAIN, HEXAGON: CAPACITOR HTG NUT, PLAIN, HEXAGON: SAPACITOR HTG         SEE GRP 950         SEE GRP 950         10           0121         X2         0         5310-254-500         NUT, PLAIN, HEXAGON: SAPACITOR HTG         SEE		1 1	i	( )	1 1	AND RANGE SWITCH			EA	1 '	6	1 '					09	16
OI13         M         O         (1/2 IN. x 6 (IN. REQUIRED FOR EACH LEAD) ULEAD, UNPERS POLARITY AND RANGE SWITCH         EA         2           O1134         P         0         9535-231-6256         COPER SHET (1/2 IN. x 2 1/2 IN. REQUIRED FOR EACH LEAD)         EA         2         0         09         17           O1134         F         5310-262-6169         NUT, PLAIN, HEXGONI CAPACITOR HTG FOR EACH LEAD)         EA         4         *         *         *         07         9           0114         F         5310-262-6169         NUT, PLAIN, HEXGONI CAPACITOR HTG FOR EACH LEAD)         EA         1         *         *         *         07         9           0115         F         5310-262-6169         NUT, PLAIN, HEXGONI CAPACITOR HTG BOARD         EA         1         *         *         *         07         9           0116         0         5310-012-0522         NUT, PLAIN, HEXGONI CONTACTOR HTG BOARD         EA         12         *         *         *         02         10           0119         0         5310-027-9272         NUT, PLAIN, HEXGONI CONTACTOR HTG BOARD         EA         12         *         *         *         07         8           0121         X2         0         5315-664-6439	01 124	i pl	101	1 1	9535-232-2293	COPPER STRIP			SP	1 '	1 '	SEE	DP 050	1				
0113       M       0		1 1	1			(1/2 IN. X 6 IN. REQUIRED			ا " ا	1 1	1 '		על א	1	1			
0113       P       0       9535-231-6256       COPERT POLATITY AND RANGE       EA       2       0       09       17         01134       P       0       9535-231-6256       COPERT POLATITY AND RANGE       EA       4       *       *       *       *       *       *       09       17         01134       F       5310-262-6169       NUT, PLAIN, MEXAGONI CAPACITOR HTG       EA       1       *	0112	I M		1	ı – – – – – – – – – – – – – – – – – – –	FOR EACH LEAD)				1 '	1 1	( '						
OI 13         P         0         9535-231-8256         MMTFACTURE FRMit COPPER SHET (1/2 in. x 2 1/2 in. REQUIRED POR EACH LEAD)         SH         2         SEE GRP 950         07         9           0113         F         5310-262-6169         NUT, PLAIN, HEXAGON: CAPACITOR HTG 1/2 in. x 2 1/2 in. REQUIRED         SH         SEE GRP 950         I	, J	"	ιĬΙ	i	1 1	LEAD, JUMTER: POLARITY AND RANGE			EA	1 1	1 ,	1 '						
0113       P       0       9535-231-2626       COPPER SHET       SH       SEE       GRP 950       I		ı _				MANUFACTURE FROM:			<b>~</b>	1 '	''	1 '					1 19	17
0114       F       5310-262-6169       NUT, PLAIN, HEXAGON: CAPACITOR HTG       EA       4       *	01 134	P	0	1	9535-231-0256	COPPER SHEET			SH	1 1	1 1	SEE C	RP 950	1			'	
0114 0115 0116       F       5310-262-6169 5310-262-6169       NUT, PLAIN, HEXAGON: CAPACITOR HT0 NUT, PLAIN, HEXAGON: CAPACITOR HT0 NUT, PLAIN, HEXAGON: CAPACITOR HT0 5310-262-6169       EA       1       * <td></td> <td>i  </td> <td></td> <td>1  </td> <td>1</td> <td>(1/2 IN. X 2 1/2 IN. REQUIRED FOR EACH   FAD)</td> <td></td> <td></td> <td></td> <td>i 1</td> <td>1 1</td> <td>1 '</td> <td>1 1</td> <td>1</td> <td></td> <td>ĺ</td> <td>  '</td> <td>1</td>		i		1	1	(1/2 IN. X 2 1/2 IN. REQUIRED FOR EACH   FAD)				i 1	1 1	1 '	1 1	1		ĺ	'	1
0115       F       5310-262-6169       NUT, PLAIN, HEXAGON: CRANCE OVER       EA       1       *	0114	i	, F	1	5310-262-6169	NUT, PLAIN, HEXAGON: CAPACITOR MTG			EA	, I	1 4	1 *'	*	*	_	۱.	1 07	
0116       0       5310-(54-429)       NUT, PLAIN, HEXAGON: CHANGE OVER       0       17       *       *       *       0       10         0117       0       5310-020-2062       NUT, PLAIN, HEXAGON: CONTACTOR MTG       EA       17       *       *       *       0       02       10         0119       0       5310-207-2972       NUT, PLAIN, HEXAGON: SPARK GAP AND       EA       12       *       *       *       02       17         0119       0       5315-664-6439       PLIN, SPRING: POLARITY AND RANGE       EA       2       *       *       *       09       4         0120       X2       0       5315-664-6439       PLIN, SPRING: POLARITY AND RANGE       EA       1       *       *       *       07       8         0121       X2       0       5315-664-6439       PLUG, DUMMY: RED PRE-FLOW AMPHENAL,       66073 961593       EA       1       *       *       *       08       1         0122       X2       0       3431-083-2653       RELAY, AMATURE: TYPE DEG-12       96073 1861718       EA       1       *       *       *       08       3       07       3         0122       P       5305-550-3934       SC	0115	1	F	1	5310-262-6169	NUT, PLAIN, HEXAGON: CAPACITOR MTG			EA	, J	il	*!	*	*	*	*	B	19
0117       0       5310-012-0622       NUT, PLAIN, HEXAGON: CONTACTOR HTG       LA       1/       *       *       *       0       0       17         0118       0       5310-207-9272       NUT, PLAIN, HEXAGON: LEADS TO SWITCHES       EA       12       *       *       *       0       0       14         0119       0       5310-207-9272       NUT, PLAIN, HEXAGON: SPARK GAP AND       EA       12       *       *       *       0       0       14         0120       X2       0       5315-664-6439       PIN, SPRING: POLARITY AND RANGE       EA       2       *       *       *       0       0       3         0121       X2       0       5315-664-6439       PIN, SPRING: POLARITY AND RANGE       EA       1       *       *       *       0       0       3         0121       X2       0       5315-664-6439       PIN, SPRING: POLARITY AND RANGE       EA       1       *       *       *       0       0       0       0       0       0       3       *       *       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0	010	,			5310-754-4299	NUT, PLAIN, HEXAGON: CHANGE OVER				, <i>1</i>	1.1	1 _1	_					
0118 01190 $5310-594-5005$ $3310-207-9272$ $0017$ NUT, PLAIN, HEXAGON: LEADS TO SWITCHES TOUT, PLAIN, HEXAGON: SPARK GAP AND BRACKET HTG $0120$ EA12*** $002$ $12$ $14$ ** $002$ $14$ $11$ *** $002$ $14$ $11$ *** $002$ $14$ $11$ *** $002$ $14$ $11$ **** $002$ $14$ $11$ **** $002$ $14$ $11$ **** $002$ $14$ *** $002$ $14$ **** $002$ $14$ **** $002$ $14$ ***** $002$ $14$ **** $002$ $14$ ***** $002$ $14$ **** $002$ $14$ ***** $002$ $14$ ***** $002$ $14$ ***** $002$ $14$ ***** $002$ $14$ **** $002$ $14$ **** $002$ $13$ **** $002$ $13$ *** $002$ $14$ **** $002$ $14$ **** $002$ $14$ *** $002$ $14$ *** $002$ $14$ *** $002$ $14$ *	0117	,	0	i	5310-012-0622	NUT. PLAIN, HEXAGON: CONTACTOR MTG			FA	1 1	141	1	*		<u>*</u>	*		10
0119       0       5310-207-9272       NUT, PLAIN, HEXAGON: SPARK GAP AND         0120       X2       0       5315-664-6439       PIN, SPRING: POLARITY AND RANGE       EA       2       *       *       *       D7       8         0120       X2       0       5315-664-6439       PIN, SPRING: POLARITY AND RANGE       EA       2       * <t< td=""><td>0118</td><td>.  </td><td>0</td><td>i  </td><td>5310-584-5005</td><td>NUT, PLAIN, HEXAGON: LEADS TO SWITCHES</td><td></td><td></td><td>EA</td><td>, I</td><td>1 12</td><td>1 👘</td><td>*</td><td>- ÷</td><td>[]</td><td>*</td><td>D9</td><td>1 4</td></t<>	0118	.	0	i	5310-584-5005	NUT, PLAIN, HEXAGON: LEADS TO SWITCHES			EA	, I	1 12	1 👘	*	- ÷	[]	*	D9	1 4
0120X205315-664-6439PIN SPRINCE HIS SPRINCH HANDLE PLUG, DUMMY: RED PRE-FLOW AMPHENAL, 6 POINTEA2****D780121X206FOINTPRE-FLOW AMPHENAL, 6 POINT96073 9G1593EA1****D930122X206FOINT96073 9G1593EA1****D810122X2073431-083-2653RELAYPRE-FLOW AMPHENAL, 96073 9R159896073 9R1598EA1****D820124P05945-061-6965RELAY, ARMATURE: TYPE DEG-1296073 18G1600EA1**283D7340125P05945-061-6965RELAY, ARMATURE: TYPE DEG-1296073 18G1715EA1**283D734012605305-068-7837SCREW, CAP, HEXAGON HEAD: CHANGE96073 18G1715EA2*22156D83012705305-068-0500SCREW, CAP, HEXAGON HEAD: CHANGEEA12****D9110129F5305-272-5306SCREW, ACHINE: CAPACITOR HTGEA1****D3160131F5305-013-2715SCREW, MACHINE: CAPACITOR HTGEA2****D31601	10119		0	1	5310-207-9272	NUT, PLAIN, HEXAGON: SPARK GAP AND				1 1	1 ]	1 ]			[ ]		1 - 1	
N1121X20SWITCH HANDLE PLUG, DUMMY: RED PRE-FLOW AMPHENAL, 6 POINT RECEPTACLE, PLUG IN TIMER96073 9G1593 96073 9G1593 REAEA1****D030122X20RECEPTACLE, PLUG IN TIMER96073 9G1593 96073 9R1598EA1******D030123PF $3^{4}31-083-2653$ 5945-061-6964RELAY, APMATURE: TYPE DEG-1296073 18R1600 96073 18G1718EA1**283D7340125P05949-061-6964 5945-061-6964RELAY, APMATURE: TYPE DEG-1296073 18G1718 96073 18G1715EA2*22156D83012605305-550-3934 505-550-3934SCREW, CAP, HEXAGON HEAD: CHANGE OVER BOARDOVER BOARDEA2****D911012705305-068-0500SCREW, CAP, HEXAGON HEAD: LEADS TO SWITCH AD RANGE SWITCH MTG O128EA12****D9110129F5305-272-5366 5305-271-2566SCREW, MACHINE: CAPACITOR MTG O131EA2****D91013205305-013-2718 5305-013-2716SCREW, MACHINE: CAPACITOR MTG O132EA2***D712013205305-013-2768 5305-013-2768SCREW, MACHINE: CAPACITOR MTG O132EA2***D712	0120	x2	0	1	5315-664-6439	PIN. SPRING: POLARITY AND RANGE			EA	, I	2	*	*	*	*	*	07	8
0121       X2       0       PLUG, DUMMY: RED PRE-FLOW AMPHENAL, 6 POINT       96073 9G1593       EA       1       *<		امر ا		(		SWITCH HANDLE			EA	, I	2	*	*	*	• •	*	09	1 3
0122       X2       0 <td>0121</td> <td>X2</td> <td>°</td> <td>i  </td> <td></td> <td>PLUG, DUMMY: RED PRE-FLOW AMPHENAL,</td> <td>0(070</td> <td></td> <td></td> <td>, I</td> <td>1 ]</td> <td>1 1</td> <td></td> <td></td> <td></td> <td></td> <td>[ ]]</td> <td></td>	0121	X2	°	i		PLUG, DUMMY: RED PRE-FLOW AMPHENAL,	0(070			, I	1 ]	1 1					[ ]]	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	0122	x2	0	i		RECEPTACLE. PLUG IN TIMER	96073 9	-)G1593 0P1508	EA	, I		*	*	*	*	*	D8	11
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	0123	Р	F	.	3431-083-2653	RELAY	96073	18R1600	EA	( I	11	-	×	2	8	2	D7	24
0123       F       0       5305-050-3934       SCREW, CAP, HEXAGON HEAD: CHANGE OVER BOARD       960/3 10G1715       EA       2       *       2       2       15       6       D8       3         0126       0       5305-058-7837       SCREW, CAP, HEXAGON HEAD: CHANGE OVER BOARD       EA       9       *       *       *       #       D2       7         0128       0       5305-068-0500       SCREW, CAP, HEXAGON HEAD: POLARITY SWITCH AND RANGE SWITCH MTG       EA       12       *       *       *       D9       11         0128       0       5305-272-5306       SCREW, CAP, HEXAGON HEAD: POLARITY SWITCH AND RANGE SWITCH MTG       EA       12       *       *       *       D9       11         0129       F       5305-271-2566       SCREW, MACHINE: CAPACITOR MTG       EA       1       *       *       *       D9       1         0130       F       5305-271-2566       SCREW, MACHINE: CAPACITOR MTG       EA       2       *       *       *       D9       1         0131       F       5305-013-2715       SCREW, MACHINE: CONTACTOR MTG       EA       2       *       *       *       D7       12         0131       F       5305-013-27168	0124	P		. 1	5945-061-6965	RELAY, ARMATURE: Type DEG-12	96073 1	18G1718	EA	, P	11	*	*	2	Ř	3	08	1 4
0127       0       5305-068-7837       SCREW, CAP, HEXAGON HEAD: LEADS TO         0128       0       5305-068-0500       SCREW, CAP, HEXAGON HEAD: POLARITY         0129       F       5305-272-5306       SCREW, CAP, HEXAGON HEAD: POLARITY         0129       F       5305-272-5306       SCREW, MACHINE: CAPACITOR MTG         0130       F       5305-271-2566       SCREW, MACHINE: CAPACITOR MTG         0131       F       5305-013-2715       SCREW, MACHINE: CAPACITOR MTG         0132       0       5305-013-2768       SCREW, MACHINE: CONTACTOR MTG         0133       0       5305-012-2159       SCREW, MACHINE: MTG         0134       F       5305-012-2159       SCREW, MACHINE: MTG	0126	_ r	ŏ	,	5205-550-2924	RELAY, ARMAIURE: TYPE DEG-12 SCREW, CAP, HEXAGON HEAD: CHANGE	96073 1	18G1715	EA	, I	2	*	2	2	15	6	D8	3
0127       0       5305-068-7837       SCREW, CAP, HEXAGON HEAD: LEADS TO         0128       0       5305-068-0500       SCREW, CAP, HEXAGON HEAD: POLARITY       EA       12       *       *       *       *       D9       11         0128       0       5305-068-0500       SCREW, CAP, HEXAGON HEAD: POLARITY       EA       12       *       *       *       *       D9       11         0129       F       5305-272-5306       SCREW, MACHINE: CAPACITOR MTG       EA       1       *       *       *       D9       1         0130       F       5305-271-2566       SCREW, MACHINE: CAPACITOR MTG       EA       1       *       *       *       D9       1         0130       F       5305-013-2715       SCREW, MACHINE: CAPACITOR MTG       EA       2       *       *       *       D7       12         0131       F       5305-013-2715       SCREW, MACHINE: CONTACTOR MTG       EA       2       *       *       *       D7       14         0132       0       5305-012-2159       SCREW, MACHINE: CONTACTOR MTG       EA       3       *       *       *       D2       12         0133       0       5305-012-2159       SCREW,				. 1		OVER BOARD			EA	, I	9	· *	*	*		*		1 7
0128       0       5305-068-0500       SCREW, CAP, HEXAGON HEAD: POLARITY       EA       12       *	0127		0		5305-068-7837	SCREW, CAP, HEXAGON HEAD: LEADS TO				, I	1	i					1 ~ 1	1 '
0129       F       5305-272-5306       SCREW, MACHINE: CAPACITOR MTG       EA       4       * <td< td=""><td>0128</td><td></td><td>0</td><td></td><td>5305-068-0500</td><td>SWITCHES SCREW, CAP, HEXAGON HEAD . BOLARITY</td><td></td><td></td><td>EA</td><td>, I</td><td>12</td><td>i *I</td><td>*</td><td>*</td><td>*</td><td>*</td><td>D9</td><td>  11  </td></td<>	0128		0		5305-068-0500	SWITCHES SCREW, CAP, HEXAGON HEAD . BOLARITY			EA	, I	12	i *I	*	*	*	*	D9	11
0129       F       5305-272-5306       SCREW, MACHINE: CAPACITOR MTG       EA       1       *       *       *       D3       16         0130       F       5305-271-2566       SCREW, MACHINE: CAPACITOR MTG       EA       2       *       *       *       *       D3       16         0130       F       5305-271-2566       SCREW, MACHINE: CAPACITOR MTG       EA       2       *       *       *       *       D7       12         0131       F       5305-013-2715       SCREW, MACHINE: CAPACITOR MTG       EA       2       *       *       *       *       D7       14         0132       0       5305-013-2768       SCREW, MACHINE: CONTACTOR MTG       EA       3       *       *       *       D7       14         0132       0       5305-012-2159       SCREW, MACHINE: CONTACTOR MTG       EA       3       *       *       *       D2       12         0133       0       5305-012-2159       SCREW, MACHINE: PLUG IN TIMER MTG       EA       6       *       *       *       D8       5         0134       F       5305-543-5763       SCREW, MACHINE: PLUG IN TIMER MTG       EA       6       *       *       *			Ĩ		)),,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	SWITCH AND RANGE SWITCH MTG			EA	, 1	1 24	i *	*	*		*		1 1
0130       F       5305=271=2566       SCREW, MACHINE: CAPACITOR MTG       EA       2       *       *       *       *       D7       12         0131       F       5305=013=2715       SCREW, MACHINE: CAPACITOR MTG       EA       2       *       *       *       *       *       *       *       D7       14         0132       0       5305=013=2768       SCREW, MACHINE: CONTACTOR MTG       EA       3       *       *       *       *       D7       14         0133       0       5305=012=2159       SCREW, MACHINE: PLUG IN TIMER MTG       EA       3       *       *       *       *       D2       12         0134       F       5305=542=5763       SCREW, MACHINE: PLUG IN TIMER MTG       EA       6       *       *       *       D8       5	0129		<u>۲</u>		5305-272-5306	SCREW, MACHINE: CAPACITOR MTG			EA	, )	$ \mathbf{i} $	*	*	*	*	*	03	16
0132       0       5305-013-2768       SCREW, MACHINE: CAPACITOR MTG       EA       2       #       #       #       D7       14         0132       0       5305-013-2768       SCREW, MACHINE: CONTACTOR MTG       EA       3       #       #       #       #       D2       12         0133       0       5305-012-2159       SCREW, MACHINE: PLUG IN TIMER MTG       EA       6       #       #       #       D8       5         0134       F       5205-543-5763       SCREW, MACHINE: PLUG IN TIMER MTG       EA       6       #       #       #       D8       5	0130		F		5305-271-2566	SCREW, MACHINE: CAPACITOR MTG			EA	, I	2	*	*	*	*	*	D7	12
0133 0 5305-012-2159 SCREW, MACHINE: PLUG IN TIMER MTG 0134 F 5305-542-5763 SCREW, MACHINE: PLUG IN TIMER MTG	0132		0		5305-013-2768	SCREW, MACHINE: CAPACITOR MTG			EA	, I	2		<u> </u>		*	*	27	14
01341 FELL5305-543-5763 I SCREW, MACHINE+ BELAV MYO	0133		0		5305-012-2159	SCREW, MACHINE: PLUG IN TIMER MTG			ĒÂ	.	6	. ÷			*			12
	0134		F		5305-543-5763	SCREW, MACHINE: RELAY MTG			EA	.	2	*	*	*	*	*	07	33

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		(1)		(2)	(3)			(	4)	(5)	(6)		(7)		(8)	(9)	(1	0)
LINE	SOURC AND C	CE, M RECI DDE	AINT. DV.	FEDERAL						, ¥		30 M	DAY DS/ AINT. AL	GS W.	W.PER UIP. CY.	AAINT. PER. DUIP.		TION (b)
NO.	a) Ш	(b) -	(c) >	NUMBER	DESCRIPTION	MAN	UFACTURER'S		щ	IN NO	N I	( a)	(b)	(c)	ANN-	с. 	[	R N N
	SOUR	MAIN	RECO			CODE	PART NUMBER		ISSI	UNI UNI	°1√ N U	1-20	21-50	51-100	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	DEP 10	FIG. NO.	ITEN SYM.
0135		0		5305-013-2915	SCREW, MACHINE: SPARK GAP AND BRACKET MOUNTING				EA	_	2		*		<b>,</b>	,	- D7	1
0136 0137	x2	0		5305-226-9268	SCREW, MACHINE: SPARK GAP LEADS SPARK GAP ASSEMBLY	96073	116129		EA EA		2	•	*	*	, ,		D7 D7	2 5
0130	٢	0		5930-519-4544	SPOT ARC, HIGH FREQUENCY DROP OUT TIMER (ST40A)				EA		<u>)</u> 4	SEE	GRP 99	01			80	6
0139	P	0		5930-519-4544	SWITCH, PANEL, REMOTE (ST40A)	96072	21101505		EA		2	SEE	GRP 99	¢1	5		DG	9
0141	P	0	11	5930-655-1582	SWITCH, POWER (ST50K)	30013	2411,99		ĒA	i	i		}	2			08	20
0142	P	F		3431-083-2651	SWITCH, RANGE	96073	24R1596		EA		1	*	*	2			D9	1
0144	·	ŏ		5310-044-6234	WASHER, FLAT: ADAPTER TO ELBOW	90013	2281/11		EA		4	4	*	3			04	2 7
0145		F	ļļ	5310-167-0816	WASHER, FLAT: CAPACITOR MTG				EA		2	4	*	*		•	- D3	18
0146		0		5310-823-8804	WASHER, FLAT: CAPACITOR MTG WASHER, FLAT: LEADS TO SWITCHES				EA		2 14	*	*	*				19 10
0148		F		5310-167-0816	WASHER, FLAT: RELAY MTG AND CAPACITOR						),							10
0149		F		5310-013-1044	WASHER, LOCK: CAPACITOR MTG				EA		2		*	*			DT	11
0150		0	{ {	5310-010-3319	WASHER, LOCK: CHANGE OVER BOARD SCREW			1	EA		9		*	*			DZ	9
0152		0		5310-582-5965	WASHER, LUCK: CONTACTOR MTG WASHER, LOCK: LEADS TO SWITCHES				EAL		12	*	*	*			02	16
0153 0154	м	0		5310-043-2226	WASHER, LOCK: SPARK GAP AND BRACKET MTG WIRE, COPPER, SOLID: CONTACTOR				EA		2	4	*	*	•	•	07	7 14
	_			( .)) O	MANUFACTURE FROM:													
0154A	Ρ	0		6145-548-2350	WIRE, ELECTRICAL (8 in. required for each WIRE)			[	FT			SEE	GRP 95	<b>0</b> 1	[			
0155					4411 - RESISTOR COMPONENTS													
0156	X2	F	1 1		HANDLE, CONTROL, RHEOSTAT	96073	19R1551		EA		1	: - <b>1</b>	*	*		•	D10	22
0158	M	F			LEAD, COPPER: RESISTOR TO RECTIFIER	90013	198301		EA		3	1		- T			D5	8
01584				0505 000 0000	MANUFACTURE FROM:				~			055	000.05	<b>.</b>	1	1		
01504	F	<b>.</b>		9737-232-2293	(1 IN. X 6 IN. REQUIRED FOR EACH LEAD)				SP			SEE	GRP 95			ł		
0159	м	F			LEAD, COPPER: RESISTOR TO RESISTOR				EA		4							
0159 <b>A</b>	Ρ	F		9535-232-2293	COPPER STRIP			[.	SP		[ [	SEE	GRP 95	<b>6</b> 1		1	<sup>D5</sup>	9
					(1/2 IN. X 9 IN. REQUIRED FOR						1			ļ		]		
0160	м	F			LEAD, ELECTRICAL: RESISTOR TO RECTIFIER MANUFACTURE FROM:				EA		4			ł			D3	14
0160A	X2	F		5940-050-6204	TERMINAL, LUG: COPPER, TINNED FINISH,				_		, I			_				Ì
016 <b>0</b> 8	Ρ	F		6145-263-6982	NO. 22 TO 10 AWG, FOR 1/4 IN. BOLT WIRE, ELECTRICAL			].	EA FT		4	SEE	GRP 95	<b>þ</b> 1 *	*	] '		
		L	L		(5 IN. REQUIRED FOR EACH LEAD)								L	L	l	<u> </u>		

		(1)		(2)	(3)			(4)	(5)	(6)	1	(7)		(8)	(9)	1 7	10)
LINE	SOUR	CE,N REC CODE	OV.	FEDERAL					×		30 M	-DAY DS/ AINT, AL	GS W.	е а. 	R. T.	IL TR	LUS- ATION
NO.	(a). Ш	(b);	(c) >	NUMBER	DESCRIPTION			b	D N C	¥₽					N H O	(a)	(b) ~~;
		N N	: <u> </u>			MANI	JFACTURER'S		È <sup>z</sup> E	r 2 Z ⊃	(a)	- (Ъ)	(c)	4807	64 28	FIG.	ož ₹.
<b>_</b>	- 8	2	α		·····	CODE	PART NUMBER	5~	° Ś	ΒΞ	J-20	21-50	51-100	<u> </u>	ŭ.	NO.	S 4 E
0161 0162 0163 0164	P	F F F		5310-619-3555 5310-262-6169 5310-298-9261 5905-280-1597	NUT, PLAIN, HEXAGON: LEAD TO RESISTOR NUT, PLAIN, HEXAGON: RESISTOR MTG NUT, PLAIN, HEXAGON: RESISTOR MTG RESISTOR, ADJUSTABLE: 1000 OHMS RECTIFIER			EA EA EA		5 2 4	* * *	*	*	*	*	D5 D7 D5	11 9 3
0165 0166 0167	P X2 X2	F F F		5905-081-2898 5905-755-2432 5905-083-2713	PLATE RESISTOR, FIXED: NON~INDUCTIVE RESISTOR, VARIABLE RESISTOR ASSEMBLY: RECTIFIER, MOUNTED	96073 44655	19R1746 0310	EA EA EA		2 1 1	2 2 *	3 2 *	5 3 *	60 30 *	20 10 *	D3 D7 D8	15 13 10
0168 0169	P	F F		5905-083-8225 5305-021-3616	on fan bracket RHEOSTAT SCREW, CAP, HEXAGON HEAD: lead mtg,	96073 96073	19R1764 19R1550	EA EA		2 1	* 2	* 2	* 3	* 30	* 10	D5 D10	13 8
0170 0171 0172 0173 0174	м	F F O F		5305-271-2566 5305-988-9265 5305-010-2571 5305-014-0854	RESISTOR TO RESISTOR SCREW, MACHINE: RESISTOR MTG SCREW, MACHINE: RHEOSTAT MTG SETSCREW: RHEOSTAT HANDLE SETSCREW: RHEOSTAT KNOB SPACER, RHEOSTAT MANUFACTURE FROM-			EA EA EA EA EA		522212	* * *	* *	* * *	* * * *	* * *	D5 D7 D10 D10 D8 D10	6 12 21 24 11 25
01744 0175 0176 0177 0178	Ρ	F F F F		4710-278-5380 5310-014-7577 5310-167-0816 5310-010-3319 5310-010-6497	PIPE, STEEL (1 IN. REQUIRED FOR EACH SPACER) WASHER, FLAT: LEAD TO RESISTOR WASHER, FLAT: RESISTOR MTG WASHER, LOCK: LEAD TO RESISTOR WASHER, LOCK: DECISTOR MTG			FT EA EA		10 2 5	SEE G * *	RP 950' * *	* *	* *	*	D5 D7 D5	7 10 10
0179					4412 - TRANSFORMER, COMPONENTS					*	-				*	5	4
0180 0181	x2	F H		5306-680-6004 5306-680-6004	BOLT, MACHINE: LEAD TO COIL BOLT, MACHINE: MAIN TRANSFORMER TO			EA		2	*	<b>#</b> .	*	*	*	D9	20
0182	Ρ	F		5910 <b>-083-2</b> 715	FRAME CAPACITOR, POWER: 1555547 kgt 4300-4, 30 uf. 440v. ac	96072		EA		4	*	*	*	*	*	D1	13
0183 0184 0185	Х2 Р М	F F		3 <b>431-083-2</b> 654	CLAMP, HOLD DOWN: CAPACITOR COIL, TESLA INSULATION, PLASTIC: TESLA COIL LEAD MANUFACTURE FROM:	96073 4 96073 2	179 179 1748	EA EA EA	1	2 4 1 1	2 * *	3 * *	5 * 2	60 * 8	20 * 2	D2 D2 D9 D9	6 1 18 24
0185A	Р	F		5970-644-2629	INSULATION SLEEVING, ELECTRICAL (8 in. required)			FT			SEE G	RP 950					
0106 0186a	M P	F		9535 <b>-232-22</b> 93	LEAD, COPPER: TESLA COIL MANUFACTURE FROM: COPPER STRIP (1 IN. X 9 IN. REQUIRED FOR			EA SP		3	SEE G	RP 950				D9	21
<b>01</b> 87		н		5310-545-2629	EACH LEAD) NUT, PLAIN, HEXAGON: MAIN TRANSFORMER TO FRAME			EA		4	*	*	*	*	*	D1	10

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		(1)	_	(2)	(3)			(4)	(5)	(6)		(7)		(8)	(9)	(1	0)
LINE NO-	SOUR AND C	CE, M RECO ODE	AINT. OV.	FEDERAL STOCK	DESCRIPTION				ACK		30-DAY DS/GS MAINT. ALW.			LW. PER QUIP. SCY.	MAINT. PER. QUIP.	TR.	LUS- ATION
	SOURCE	MAINT (9)	RECOV.	NUMBER		CODE	JFACTURER'S PART NUMBER	UNIT O	01Y IN IN UNIT P.	DTY INC	(a) 1-20	(b) 21-50	(c) 51-100	1-YR. A 100 E0 CTY 0	DEPOT ALW. 100 E	FIG. NO.	TEM OR SYM. NO
0188 0189 0190		F F F		5310-619-3555 5310-012-0376 5310-207-9272 5310-012-0622	NUT, PLAIN, HEXAGON: REACTOR MTG NUT, PLAIN, HEXAGON: TESLA COLL LEAD MTG NUT, PLAIN, HEXAGON: TRANSFORMER MTG NUT, PLAIN, HEXAGON: TRANSFORMER TO	<u> </u>	<u> </u>	EA EA EA		4 2 4	* * *	* * *	* * *	* * *	* * *	D1 D9 D7	2 23 20
0192 0193 0194 0195 0196	X2 X1	F F F		5305-206-3339 5305-071-2229 5305-276-7951	FRAME MTG SCREW, MACHINE: TRANSFORMER MTG REACTOR ASSEMBLY, FILTER COIL ASSEMBLY, FILTER REACTOR SCREW, CAP, HEXAGON HEAD: REACTOR MTG SCREW, MACHINE: TRANSFORMER TO FRAME	96 <b>073</b> 96 <b>073</b>	27G1581 26G1849	EA EA EA EA		4 4 1 1 4	* * *	* *	* * *	*	* *	D6 D7 D1 D1 D1 D1	1 24 4 1 6
0197		F		5305-840-6694	MOUNTING SCREW, TAPPING, THREAD FORMING:			EA	1	4	*	*	*	*	*	D6	11
0198 0199 0200 0201 0202 0203 0204 0205 0206 0207	X2 X2 X2 X2 X2	ж		3 <sup>4</sup> 31-083-2655 5950-083-2714 5310-209-0709 5310-209-0710 5310-044-6179 5310-012-0214 5310-012-0214 5310-012-0214	CAPACITOR CLAMP MTG TERMINAL, GROUND: CAPACITOR CLAMP TRANSFORMER ASSEMBLY TRANSFORMER (230V) TRANSFORMER, CONTROL WASHER, FLAT: LEAD TO COIL WASHER, FLAT: REACTOR MTG WASHER, FLAT: TRANSFORMER MTG WASHER, LOCK: TRANSFORMER TO FRAME MTG WASHER, LOCK: MAIN TRANSFORMER TO	54978 96073 96073 96073	KPA4C 27G1580 27R1289 27R1548	EA EA EA EA EA EA EA EA		8 1 1 1 2 4 8 2 4	* * * * * * * *	* * * * * * *	* * * * * * * *	* * * * * *	* * * * * * *	D2 D2 D1 D7 D6 D9 D1 D7 D9 D6	32 926 195 232 2
0208 0209	м	F F		5310-261-7340	FRAME WASHER, LOCK: REACTOR MTG WIRE, COPPER, STRANDED CONDUCTOR:			EA EA		4	*	*	*	*	*	D1 D1	11 3
02094	x2	F		5940-050-6209	CAPACITOR MANUFACTURE FROM: TERMINAL, LUG: CAPACITOR WIRE, COPPER, TINNED FINISH, No. 16			EA		2						D2	4
0209B	Р	F		6145-660-8933	TO 14 AMG, FOR 1/4 IN. BOLT WIRE, ELECTRICAL (12 IN. FROUDED FOR FACH WIRE)			FT		2	SEE G	* RP 950	•	-	*		
0210 02104	м . Р	F		6145-660-8933	WIRE, COPPER, STRANDED CONDUCTOR: CAPACITOR TO CAPACITOR MANUFACTURE FROM: WIRE, ELECTRICAL (12 IN BEOWIDED FOR EACH WIRE)			EA FT		2	SEE G	RP 950				D2	5
0211					4413 - RECTIFIER, COMPONENT												
0212	м	F			BAR, COPPER: RECTIFIER TO RECTIFIER MANUFACTURE FROM:			EA		1						D3	13
02124	Р	F		9535-231-8256	COPPER, SHEET (1/2 in. x 16 in. required)			SH			SEE G	RP 950	1				
~					DIODE TERMINAL MTG			EA		5	*	*	*	*	*	03	10

1						1											
1 1		(1)		(2)	(i.)			(4)	(5)	(6)		(7)		(8)	(9)	(1	0)
LINE	SOUR AND	CE, M RECO CODE	AINT. DV.	FEDERAL					×		30- M	DAY DS/ AINT, AL	GS ₩.	¥. PER. SIP.	AINT. UP.	н. ткл Тар	LUS- ATION
NO.	(a) <u>Ш</u>	(b): 1	$(c) \ge$	STOCK NUMBER	DESCRIPTION	<b></b>			PAC NC	SF Z	(1)	(6)	(5)	A GOL	I X L O L x Ш		807
4	a Da	Z Z	Ϋ́ό	1		MAN		SSUL		- <u>-</u>	(0)	(0)		3525	AL.	FIG.	Т. Ж.
	รี	× ₩	ш Ж			CODE	PART NUMBER	5-	0 5	σ÷	1-20	21-50	51-100	<u></u>	<u> </u>	- NO,	15
0214 0215		F. F		5310-012-0377 5310-012-0377	NUT, PLAIN, HEXAGON: RECTIFIER MTG NUT, PLAIN, HEXAGON: RECTIFIER TO			EA		16	*	*	. *	*	+	D3	1
0216	X2 P	F		6130-553-6218	FRAME MTG RECTIFIER ASSEMBLY SEMI CONDUCTOR DEVICE DIODE:	81483	JD510G	EA EA		1	*	*	*	*	*	D6 D3	35
0217	•	'		JJ00-003-2710	300 AMP	96073	17R1588	EA		4	2	2	3	30	12	D3	2
0218 0219	P M	F		6130-553-6218	RECTIFIER, METALLIC ROD, RECTIFIER	96073	17R1549	EA EA		1 2	*	2	ž	15	5	D6 D3	5 11
02194	P	F		9510-288-6059	STEEL BAR, ALLOY, COLD FINISHED (23 IN. REQUIRED FOR EACH ROD)			FT			SEE G	RP 950	4				
0220		F		5305-068-0505	SCREW, CAP, HEXAGON HEAD: BAR TO RECTIFIER, DIODE TERMINAL MTG			EA		-5	*	*	+	+	*	D3	8
0221	м				SPACER, PLASIIC: RECTIFIER MTG (LARGE) MANUFACTURE FROM:			EA		4			l		ļ	D3	6
02214	P	F		4710-838-9382	PLASTIC, TUBING (2 1/4 IN. REQUIRED FOR			FT			SEE G	RP 950	1			ļ	
0222	м	F		i	EACH SPACER) SPACER, PLASTIC: RECTIFIER MTG (SMALL)					<u>ц</u>							7
02224	P	F		4710-599-9479	MANUFACTURE FROM: PLASTIC, TUBING			FT			SEE G	RP 950		ļ		03	
		_			(2 3/4 IN. REQUIRED FOR EACH SPACER)												
0223 0224		F		5310-209-0711 5310-582-5965	WASHER, FLAT: RECTIFIER MTG WASHER, LOCK: BAR TO RECTIFIER AND			EA		5	*					03	3
0225		F		5310-637-9541	WASHER, LOCK: RECTIFIER MTG			EA	1	ĺź	*	) ÷	*	*	*	3	12
0226 0227	x2	F		5310-637-9541	WASHER, LOCK: RECTIFIER TO FRAME MTG WASHER, INSULATING MANUFACTURE EDOM:			EA EA		18	*	*	*	*	*	D6 D3	4 4
0227A	P	F		5970-284-7201	INSULATION, SHEET, ELECTRICAL: FIBER 1/2 IN. 10, 7/8 IN. 00,							ļ					
					1/8 ім. тик			FT		l	SEE G	RP 950	1				1
<b>022</b> 8					GROUP 95 - GENERAL USE STANDARDIZED PARTS									Ì			
0229					9501 - BULK MATERIAL												
0230	P	0		9535 <b>-231-82</b> 56	COPPER SHEET: 0.1250 IN. THK, 24 IN. W, 48 IN. LG			ян			+	2	2	15	3		
0231	Р	0		9535 <b>-2</b> 32 <b>-</b> 2293	COPPER STRIP: 0.032 IN. THK, 12 IN.				ł		_					1	1
0231A	Р	0		5970-254-4038	W, 30 IN. LG INSULATION, SHEET, ELECTRICAL			SP SH			*	2	2	15	2		
L	L	L		l	L				1	1		11	I	I	L	1	I

1		(1)		(2)	(3)				(5)	(6)		(7)		(8)	(9)	(1	))
	SOUR	CE, M												n ká Lu	. ·	ILI TRA	
LINE		CODE	٥ <b>γ</b> .	FEDERAL					×		30- M.	AINT. AL	GS W.	N	A N P N P N	(a)	
NO.	(a) Ш	(b)	(c) >	NUMBER	DESCRIPTION				PAC	UL N	(0)	(b)	(c)	A COL	x ≞ ō L x "	(-)	R OF
ĺ		A N	EC 0			CODE	DADT NUMPER		N T T		(0)	21.50	E1 100	CT 100.	AL 00	FIG.	Ш. М.
┣—		2	_ ≃			CODE				<u> </u>	1-20	21-50	51-100	<u> </u>	<u> </u>		<u> </u>
0232	P	0		597 <b>0-2</b> 84-7201	INSULATION SHEET, ELECTRICAL: FIBER				]					10			
0233	P	0		597 <b>0-2</b> 84 <b>-7201</b>	INSULATION SHEET, ELECTRICAL: FIBER			5	]				2	10	2		1
0234	P	0		59 <b>70-</b> 644 <b>-262</b> 9	INSULATION SLEEVING, ELECTRICAL:	F			2	2	6	75	15				
0236 0237 0238 0239	P P P	F F F 0		4710-278-5380 4710-599-9479 4710-838-9382 9520-517-0531	PIPE, STEEL: 3/8 IN. ID PLASTIC, TUBING: 0.563 IN. DIA PLASTIC, TUBING: 0.875 IN. DIA STEEL ANGLE: 1/8 IN. THK, 1 1/2 IN.			F			*	) * 2 2	222	10 20 20	24		
0240	P	F		95 <b>10-2</b> 88-6059	STEEL BAR, ALLOY, COLD FINISHED:				.]				2	10	2		
0241	P	0		6145-548-2350	WIRE, ELECTRICAL: COPPER, No. 10 AWG,				-		*	2	3	30 15	0		[
0242	P	0		6145 <b>-2</b> 84 <b>-0</b> 659	WIRE, ELECTRICAL: COPPER, TINNED FINISH, No. 8 AWG. STRANDED CONDUCTOR			F	-		*	2	2	עי 15			4
0243	P	0		6145 <b>-</b> 66 <b>0-</b> 8933	WIRE, ELECTRICAL: COPPER, TINNED FINISH, No. 14 AWG, STRANDED CONDUCTOR			F			2	5	10	125	د 25		
0244	Р	0		6145-263-6982	WIRE, ELECTRICAL: COPPER, TINNED FINISH, No. 18 stranded conductor			F	·		ן ד	15	<b>2</b> 9	350	 70		
0245					GROUP 99 - PARTS PECULIAR												
0245/					9901 - PARTS PECULIAR WITH MORE THAN ONE APPLICATION				-								
0246 0247	P P	F O		5910-581-8494 5930-655-1515	CAPACITOR, FIXED CERAMIC DIELECTRIC SWITCH, TOGGLE	14655	BYA6S1	E,		<b>2</b> 6	2	32	5	60 45	20 18		

\_\_\_\_

	3 2		4	5 - 6	7
4-[	1			63	
INDEX TO	D PARTS,	FIGURE D1		ر ه+8	
REF NO.	GROUP	NAME			
<u>1</u>	4412	COIL AY			
2	4412	NUT	° T	<b>8-10</b>	
3	4412	WASHER			
4	4412	REACTOR AY			
5	4412	WASHER			-12
6	4412	SCREW			
7	4405	SUPPORT			
8	4405	NUI			
9	4412	TRANSFORMER AY			
10	4412	NUT			13
11	4412	WASHER			EMC 3431-203-15/47
12	4405	BASE			
13	4412	BOLT			

Figure D1. Main Transformer and Base.



EMC 3431-203-15/48



REF No.	FUNCT GROUP	I TEM NAME	REF No.	FUNCT GROUP	I TEM NAME
1	4412	CLAMP	11	4410	BAR
2	4412	TERMI NAL	12	4410	SCREW
3	4412	SCREW	13	4410	CONTACTOR
4	4412	WI RE	14	4410	WI RE
5	4412	WI RE	15	4410	CABLE AY
6	4412	CAPACI TOR	16	4410	WASHER
7	4410	SCREW	17	4410	NUT
8	4410	BOARD	18	4410	LEAD
9	4410	WASHER	19	4410	CABLE AY
10	4410	NUT	20	4410	BOARD

INDEX TO PARTS, FIGURE D2



EMC 3431-203-15/49

Figure D3. Rectifier.



EMC 3431-203-15/50

## Figure D4. Housing and Solenoid Valve.

REF	FUNCT	I TEM	REF	FUNCT	I TEM
NO.	GROUP	NAME	NO.	GROUP	NAME
1 2 3	4405 4405 4405 4405	COVER LIFTING EYE NUT HOUSING	7 8 9 10	4410 4405 4405 4410	WASHER PLATE SCREW ADAPTER
5	4410	VALVE	11	4410	AOAPTER
6	4410	ELBOW	12	4405	SCREW



Figure D5. Fan and Motor.



EMC 3431-203-15/52

Figure D6. Transformer, Rectifier, and Wiring Harness.



EMC 3431-203-1:

Figure D7. High Frequency Drawer.

			I NDEX	TO PARTS	, FIGURE D7			
R EF No.	FUNCT GROUP	I TEM NAME	R EF NO.	FUNCT GROUP	I TEM NAME	REF NO.	FUNCT GROUP	I TEM NAME
1	4410	SCREW	11	4409	WASHER	21	44.0	CAPACI TOR
2	4410	SCREW	11	4410	WASHER	22	441.2	TRANSFORMER
3	4410	LEAO	12	4407	SCREW	23	441.2	WASHER
4	4410	LEAO	12	4410	SCREW	24	4407	SCREW
5	4410	SPARK GAP AY	12	4411	SCREW	24	441. 2	SCREW
6	4410	BRACKET	13	4411	RESI STOR	25	4407	CLAMP
7	4410	WASHER	14	4410	SCREW	76	4407	PLUG
8	44′ O	NUT	15	4410	CAPACI TOR	27	4407	DRAWER
9	4407	NUT	16	4410	LEAO	28	4407	SCREW
9	4409	NuT	17	4410	JACK	29	4409	SCREW
9	4410	NuT	18	4407	PANEL	30	4409	I NSULATOR
9	4411	NUT	19	4407	WASHER	31	4409	SWI TCH
10	4407	WASHER	19	4407	WASHER	32	4409	LEAD
10	4409	WASHER	20	4407	NUT	33	4410	SCREW
10	4410	WASHER	20	4412	NUT	34	4410	RELAY

10 4411 WASHER



Figure D8. High Frequency Panel and Related Dr.

## INDEX, TO PARTS, FIGURE D8

REF No.	FUNCT GROUP	I TEM NAME	REF NO.	FUNCT GROUP	I TEM NAME
1	4410	PLUG	8	4410	SWI TCH
2	4410	RECEPTACLE	9	4407	LOCK
3	4410	RELAY	10	4411	RESI STOR
4	4410	RELAY	11	4411	SETSCREW
5	4410	SCREW	12	4411	KNOB
6	4410	SWI TCH	13	4407	GLOW LAMP

7 4407 LI GHT



Figure D9. tches an

8

			INDEX	TO PARTS,	FIGURE D9			
REF No.	FUNCT GROUP	I TEM NAME	REF No.	FUNCT GROUP	I TEM NAME	REF No.	FUNCT GROUP	I TEM NAMF
	4410	SCREW	10	4410	WASHER	19	4412	WASHER
2	4410	HANDLE	11	4410	SCREW	20	4412	BOLT
3	4410	PIN	12	4410	I NSULATI ON	21	4417	LEAD
ų	44′ O	NUT	13	4410	LEAO	22	4412	WASHER
5	4410	WASHER	14	4410	I NSULATI ON	23	4412	NUT
6	4410	I NSULATI ON	15	4410	I NSULATI ON	24	4412	I NSULATI ON
7	4410	SWI TCH	16	4410	LEAD	25	4410	CAPACI TOR
8	4410	LEAD	17	4410	LEAD	26	4410	SWI TCH
9	44' 0	LEAO	18	4412	COI L			



EMC 3431-203-15/56

Figure D10. Front Housing Panel and Rheostat.

			I NDEX	TO PARTS,	FIGURE D10			
REF No.	FUNCT GROUP	I TEM NAME	REF No.	FUNCT GROUP	I TEM NAME	REF No.	FUNCT GROUP	I TEM NAME
1	4405	PANEL	9	4408	I NSULATI ON	18	4408	WASHER
2	4408	RECEPTACLE	10	4408	LEAO	19	4408	NUT
3	4405	SCREW	11	4408	STUD	20	4408	SCREW
3	4408	SCREW	12	4408	WASHER	21	4411	SCREW
4	4405	JACKTI P	13	4408	SCREW	22	4411	HANDLE
5	4405	LEAD AY	14	4408	LEAD	23	4408	SWI TCH-CABLE AY
6	4405	WASHER	15	4408	I NSULATI ON	24	4411	SETSCREW
7	4405	NuT	16	4408	PANEL	25	4411	SPACER
8	4411	RHEOSTAT	17	4408	WASHER			
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For explanation of abbreviations used, see AR 320-50

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57-100





DEVICE LEGEND

MAIN CONTACTOR

MAIN CONTACTOR COIL

C2 CAPACITOR (30 UF, 440 YOL TS)

POWER INDICATING LAMP

SPOT ARC TIMER SOCKET

P3 PRE FLOW TIMER SOCKET

P4 POST FLOW TIMER SOCKET

RI RESISTOR, 1000 OHMS 10 WATT

\$1 PANEL AND REMOTE AMPERAGE SWITCH

S2 PANEL AND REMOTE CONTACTOR SWITCH

c

E

н

12

**1**3

P1

SECONDARY COILS (MAIN TRANSFORMER)

CONTROL COILS (MAIN TRANSFORMER)

PRIMARY COILS (MAIN TRANSFORMER)

BOOSTER COILS (MAIN TRANSFORMER)

C1 CAPACITOR, (.01 UF, 1,000 WORKING VOLTS DC)

MIGH FREQUENCY INDICATING LAMP

P2 HIGH FREQUENCY DROP OUT TIMER SOCKET

GAS AND WATER INDICATING LAMP

	SYMBOL LEGEND		
v	YOLT		
AC	, ALTERNATING CU	RRENT	
90	DIRSCT CURRENT		
+	POSITIVE		
	NEGATIVE		
	WIRE CODE		
R	(RED)	BLU	(81,U£)
θ	(BLACK)	88	(BROWN)
¥	(YELLOW)	G	(GREEN)
۳	(WHITE)	o	(ORANGE)

## EMC 3431-203-15/4



	SYMBOL LEGEND						
	I PIN PLUG CONNECTION		SILICON DIODE RECTIFIER		DEVICE LEGEND		
		1.4		CI	CAPACITOR (.01 UF/1000 WORKING VOLTS DC)	R3	FIXED RESISTOR (25 OHMS 25 WATTS NON INDUCTIVE)
	SINGLE PLUG CONNECTION	76	CAPACITOR	TOR C2			BALLAST RESISTOR
-00000-	COIL OR WINDING	COM	COMMON	C3	CAPACITOR (.0015 UF/5000 VOLTS/5.5 AMPS.)	R5	AMPERAGE CONTROL RHEOSTAT (32 OHMS 300 WATTS)
				C4	CAPACITOR (4 UF/600 VOLTS)	R6	INTENSITY SELECTOR RHEOSTAT (2 OHMS 50 WATTS 5
-++-	NORMALLY CLOSED CONTACTS	AC	ALTERNATING CURRENT	CS	CAPACITOR (30 UF/440 VOLTS/AC)	RTI	SPOT ARC TIMER
		DC	DIRECT CURRENT	C0		073	HIGH EPERHENCY DROD OUT TIMED
$\neg \vdash$	NORMALLY OPEN CONTACTS			п	HIGH FREQUENCY ON INDICATING LAMP		
		\$	START OF WINDING	12	GAS AND WATER ON INDICATING LAMP	RT3	PREFLOW TIMER
-~~~-	RESISTOR	E	END OF WINDING	13	POWER ON INDICATING LAMP	RT4	POST FLOW TIMER
		,		KI	RELAY (24 V/AC)	51	PANEL INTERLOCK SWITCH
0 0	O SINGLE POLE, SINGLE THROW SWITCH	+	POSITIVE	L	SMOOTHING REACTOR	\$2	POWER SWITCH
010			NEGATIVE	LI		\$3	MAIN TRANSFORMER
~ <u>!</u> ~	DOUBLE POLE, SINGLE THROW SWITCH			L2	AC POWER INPUT CONNECTIONS	54	HIGH FREQUENCY SWITCH
0, 0		UF	MICROFARAD	M1	FAN MOTOR (230 VOLTS AC, 1.25 AMPERE, 1550 RPM)	\$5	GAS AND WATER SWITCH
<b>—</b>	RELAY CONTACTS			RI		<b>\$6</b>	HIGH FREQUENCY DROP OUT TIMER SWITCH
₹				R2	ADJUSTABLE TAP RESISTOR (1000 OHMS 10 WATTS)	57	SPOT ARC TIMER SWITCH

Figure 4-1. Schematic wiring diagram.

# OUT TIMER SWITCH

EMC 3431-203-15/30

#### RMOSTATIC SWITCH

- OUT TIMER
- EOSTAT (2 OHMS 50 WATTS 5 AMPERE)

RT3

13

- 25 WATTS NON INDUCTIVE)

TI MAIN TRANSFORMER

T2 CONTROL TRANSFORMER T3 HIGH FREQUENCY TRANSFORMER

TB VOLTAGE CHANGE BOARD VI GAS SOLENOID VALVE

V2 WATER SOLENOID VALVE

- S8 AMPERAGE PANEL OR REMOTE SWITCH

59 MAIN CONTACTOR PANEL OR REMOTE SWITCH

- RT2 TESLA COIL a(- Drawer -) a 6 R6 👔 RECONNECTION FOR TB 0 0 0 460 VOLTS 0 0
- NOTE: PLUG WITH JUMPER USED

- RT4

TM 5-3431-203-15 WELDING MACHINE, ARC, INERT SHIELDED-1967