TM 5-3431-229-13

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, AND DIRECT SUPPORT

MAINTENANCE MANUAL,

INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS

WELDING SHOP, TRAILER MOUNTED

LIBBY MODEL UNASSIGNED

FSN 3431-935-7821

HEADQUARTERS, DEPARTMENT OF THE ARMY

10 FEBRUARY 1972

WARNING

Inert-gas, metal-arc welding processes produce intense ultra-violet radiation which can be harmful to the eyes and skin. Therefore certain precautions must be observed to protect the operator from injury.

Eye and face protection should be accomplished with a welding helmet which has a # 10 or # 12 shade welding plate. In addition, the operator should wear # 2 shade flash goggles beneath the helmet. Skin must be completely covered. Leather gloves are recommended for hand protection. Heavy, dark colored clothing should be worn to prevent the radiation penetrating to the skin or reflecting onto the neck under the helmet. Light-weight leather clothing is recommended because of its durability and resistance to deterioration from radiation. Cotton clothing will deteriorate rapidly when subjected to ultra-violet radiation.

Adequate ventilation should be provided to remove fumes which are produced by this welding process. American standard Z-49.1 on welding safety covers such ventilation procedures. Highly toxic gases are formed when the vapors from halogenated solvents are subjected to ultra-violet radiation. Therefore, it is recommended that degreasers and other sources of these vapors should be located so that the vapors cannot reach the welding operation.

TECHNICAL MANUAL

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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., *10 February 1972*

OPERATOR, ORGANIZATIONAL, AND DIRECT SUPPORT MAINTENANCE MANUAL, INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

WELDING SHOP, TRAILER MOUNTED (LIBBY MODEL UNASSIGNED)

FSN 3431-935-7821

Current as of 28 January 1972

LIST OF ILLUSTRATIONS

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual is for your use in operating and maintaining the welding shop, trailer mounted (Libby Model Unassigned). Chapter 1 provides a complete description of the welding shop. The manual is intended for use by the operator, organizational and direct support maintenance personnel.

1-2. Maintenance Forms and Records

Maintenance forms and records that you are required to use are explained in TM 38-750.

1-3. Reporting of Errors

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

1-4. Equipment Serviceability Criterial (ESC)

This equipment is not covered by an ESC.

1-5. Destruction of Army Material to Prevent Enemy Use

Instructions for destruction of material to prevent enemy use will be in accordance with TM 750-244-3 (Procedures for Destruction of Equipment to Prevent Enemy use).

1-6. Administrative Storage

Preparation, care and removal of equipment in administrative storage will be in accordance with the applicable requirements of TM 740-90-1 (Administrative Storage of Equipment.)

Section II. DESCRIPTION AND DATA

1-7. Description

a. General. The welding shop (fig. 1-1 and 1-2) covered by this manual is basically a 300 amp welding machine mounted on a two-wheel trailer chassis. Included in the shop is an inert gas welding gun and control used in welding either ferrous or non-ferrous metals. Also included are the bottles oxygen and acetylene necessary for oxyacetylene cutting torches. Tools and other equipment needed to perform cutting and welding operations are included and are stored in the shop's tool boxes.

b. Welding Machine. The welding machine is a Libby Model LT0300. For a complete description, refer to TM 5-3431-221-15.

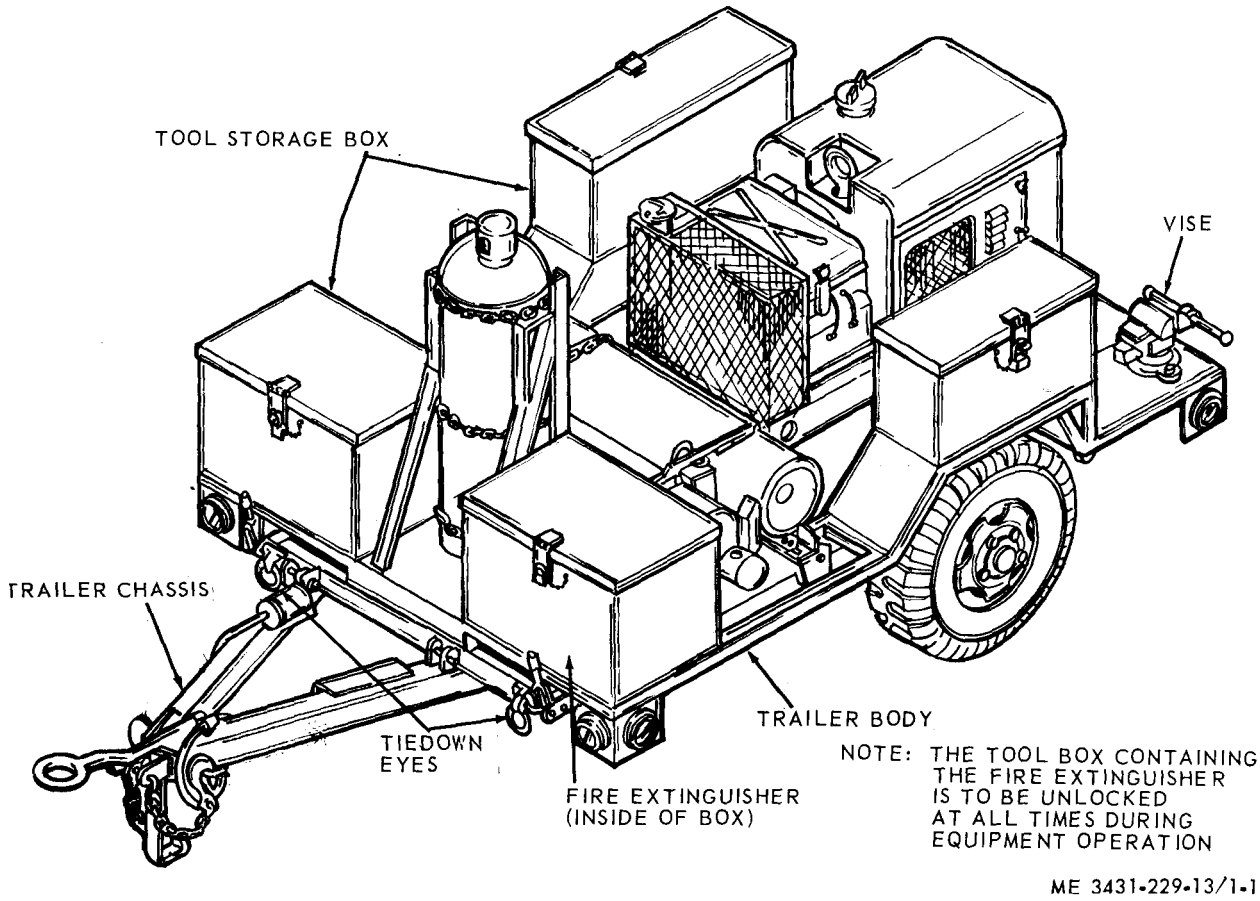

Figure 1-1. Welding shop, trailer mounted, left front.

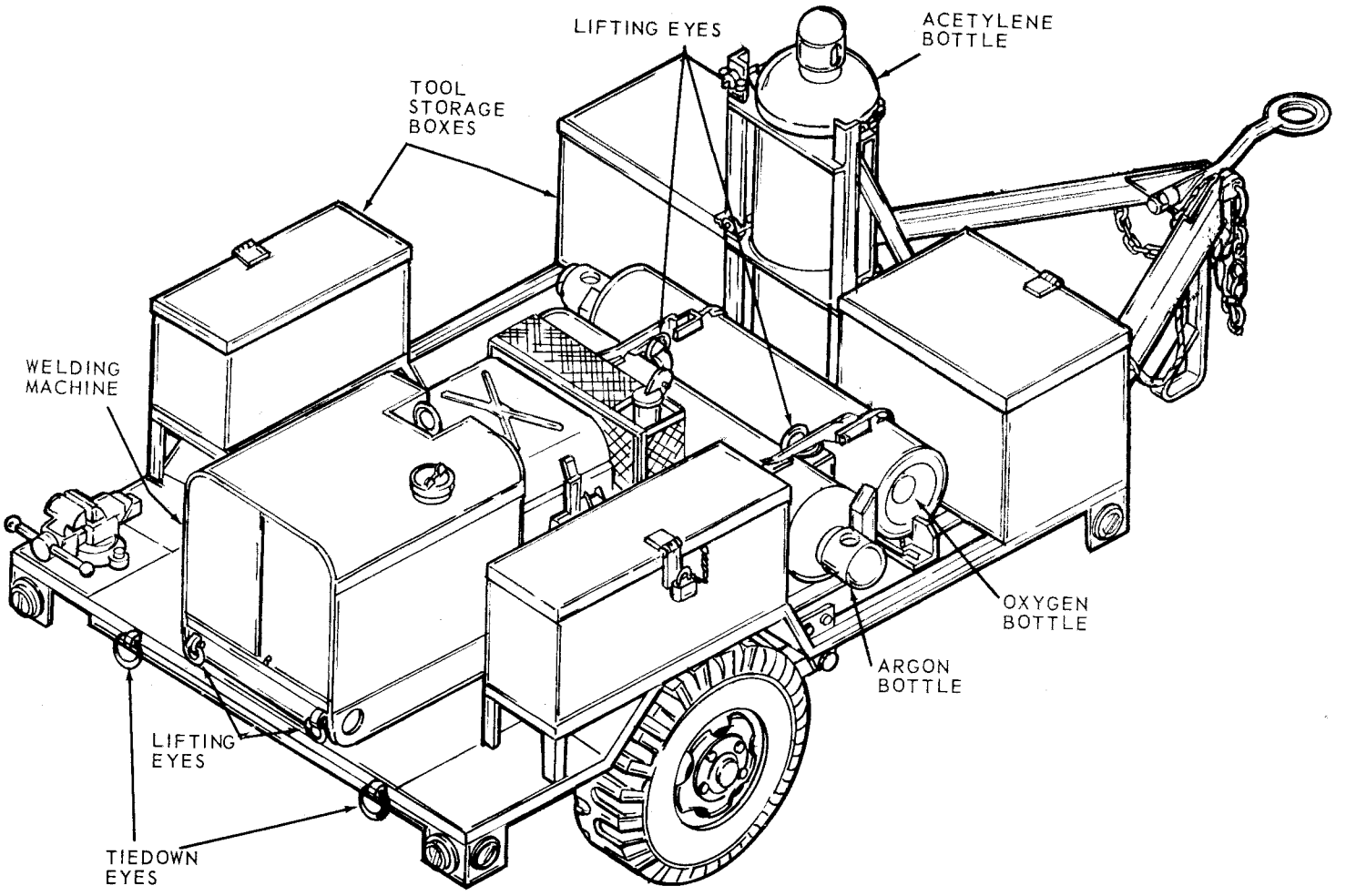

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Figure 1-2. Welding shop, trailer mounted, right rear.

c. Trailer Chassis. The trailer chassis is the government furnished Model M116A1. For complete description, refer to TM 9-2330-202-14P.

d. Welding Gun. The Westinghouse Metal Inert Gas (MIG) welding gun, Type SP-10, is designed for use on all materials for which there is a compatible filler wire. Steel, stainless steel, aluminum, magnesium, bronze, and nickel alloys are easily welded with this gun. The gun is designed for use where portability is a strict requirement.

e. Control Monitor. The control monitor is designed to power the wire drive motor independent of the arc. This is a true constant voltage unit. The wire speed directly controls welding current. The arc voltage is adjusted by means of the output voltage control on the welding power sup ply. With this control, the arc voltage or wire speed can be varied without need to recompensate the other.

f. Welding Shop Sets, Kits and Outfits Components List. All components required in welding shop, trailer mounted are contained in SC 3431-97-CL-E03.

1-8. Differences Between Models

This publication provides instructions for the welding shop, trailer mounted, Libby Model Unassigned serial number range 001 thru 476. There are no differences between models.

1-9. Identification and Tabulated Data

a. Identification. The welding shop has three data plates.

(1) Designation plate. Located on the back of the right rear tool box. It gives the overall length, height, width, cubage, weight and tonage.

(2) Instruction plate. Located on the back of the left rear tool box. It gives welding requirements for welding shop frame repair.

(3) Identification plate. Located on the back of the left rear tool box. It gives manufacturer, part no., serial no., and weight data.

b. Tabulated Data.

(1) Welding shop:

Manufacturer. . . . . Libby Welding Co., Inc.
Contract no . . . . . DSA 400-70-C-4626
FSN. 3431-935-7821
Model . . . . . Unassigned
Serial no. range . . . . . .001 thru 476

(2) Welding Machine: See TM 5-3431-221-15.

(3) Trailer: See TM 9-2330-202-14P.

(4) MIG Gun:

Manufacturer. . . . . .Westinghouse Electric Co.
Model SP-10
Type . . . . . SA100 Series

(5) Control monitor:

Manufacturer . . . . . Westinghouse Electric Co.
Model CVS-2
Type . . . . . SAl00 Series

(6) Dimensions and weight:

Overall length . . . . . 147 Inches
Overall height . . . . . .60 Inches
Overall width. . . . . 75.4 Inches
Weight . . . .3115 Plus Pounds

CHAPTER 2

OPERATING INSTRUCTIONS

WARNING

If equipment fails to operate refer to troubleshooting procedures in Chapter 3.

Section I. OPERATING PROCEDURES

2-1. Controls and Instruments

a. General. This paragraph describes the various controls and instruments and provides the operator/crew sufficient information to insure proper operation of the welding shop.

b. Controls and Instruments.

(1) Refer to TM 5-3431-221-15 for the controls and instruments pertaining to the welding machine.

(2) The controls and instruments pertaining to the welding gun and control monitor are illustrated in figure 2-1.

(3) The controls and instruments pertaining to the cutting and welding torches, and the oxygen and acetylene regulators and gauges are illustrated in figure 2-2.

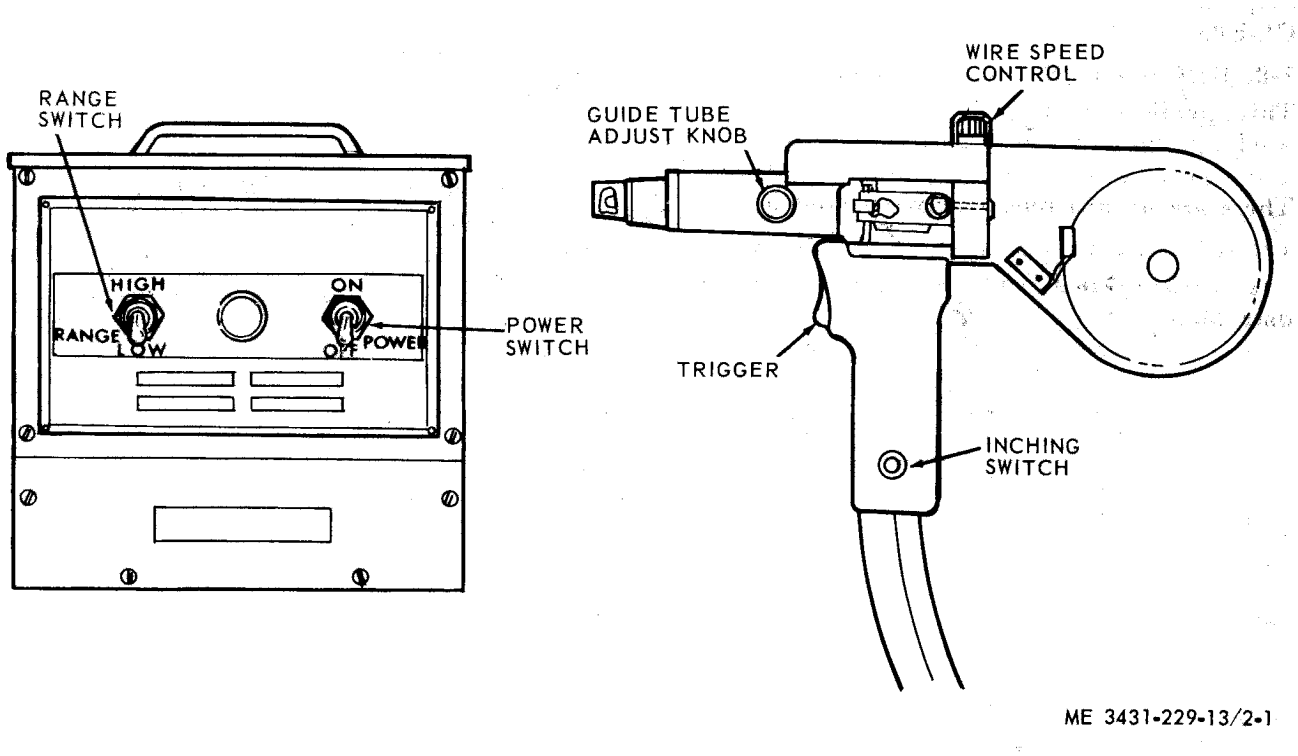


Figure 2-1. Welding gun and control monitor controls and instruments.

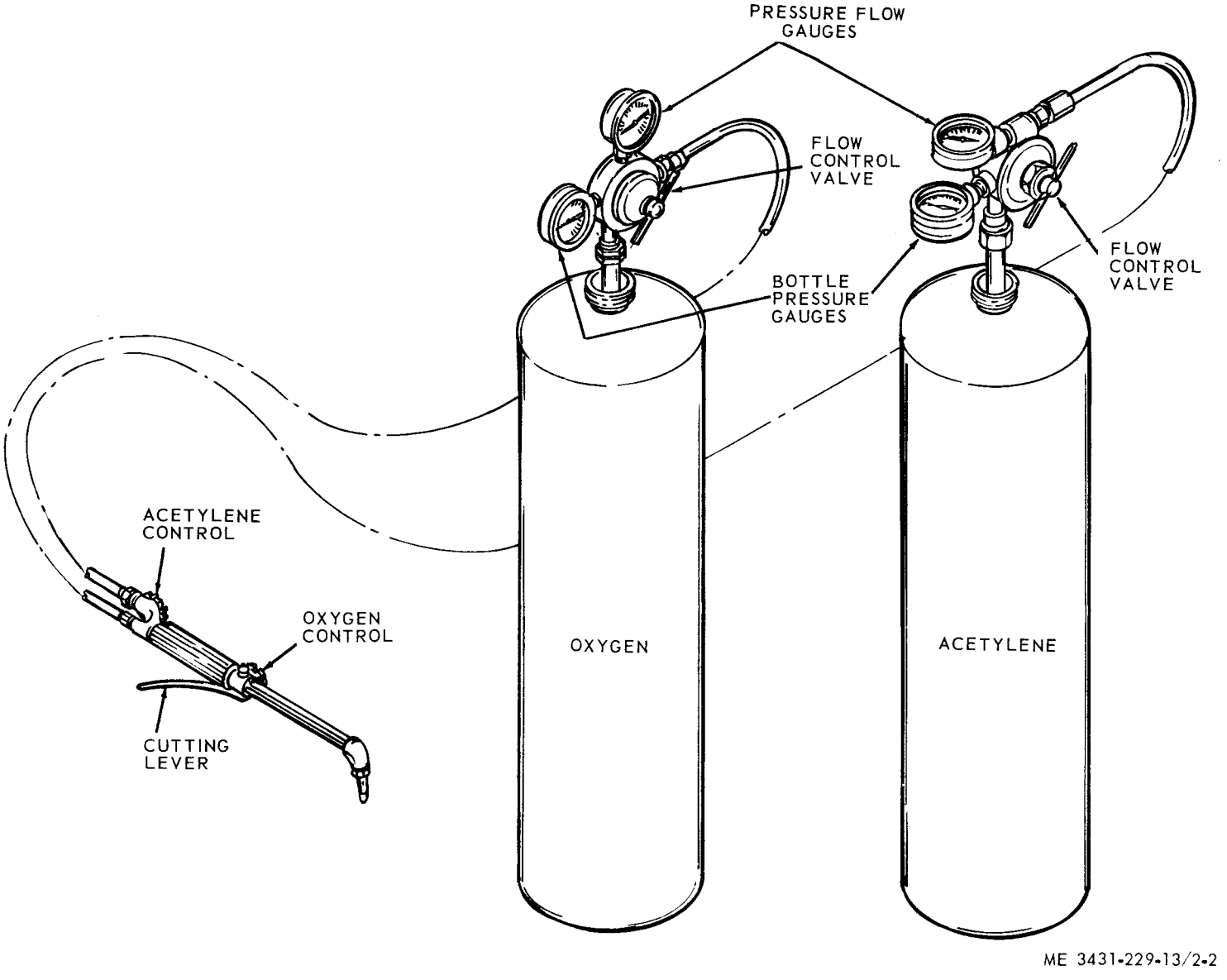


Figure 2-2. Oxygen and acetylene controls and instruments.

2-2. Operation of Equipment

a. General.

(1) The instructions in this paragraph are for the information and guidance of personnel responsible for operation of the welding shop.

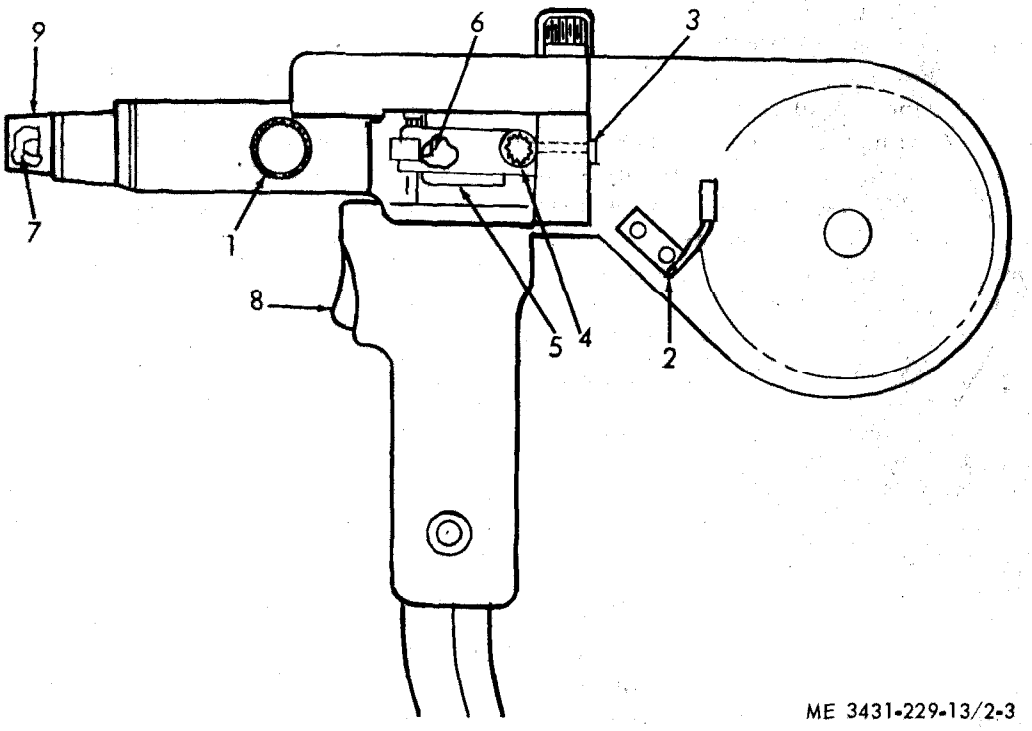
(2) The operator must know how to perform every operation of which the welding shop is capable. This paragraph contains instructions on starting and stopping the welding shop, on operation of the welding shop, and on coordinating the basic motions to perform the specific tasks for which the equipment is designed. Since nearly every job presents a different problem, the operator may have to vary given procedures to fit the individual job.

b. Starting. Refer to TM 5-3431-221-15 for starting instructions.

c. Stopping. Refer to TM 5-3431-221-15 for stopping instructions.

d. Operation of "MIG" Welding Gun (fig. 2-3).

(1) *Guide tube position.* Loosen the thumbscrew (1) and adjust the position of the guide tube until the end of the guide tube is 1/8 in. behind the edge of the nozzle (9). When using 0.030 and 0.047 inch wires, the rear end of the guide tube must be back against the front guide tube bushing to prevent the wire from buckling, with the rear end of an 0.030 or 0.047 inch guide tube (in the SP-10 gun) positioned against the guide bushing, the front end will be just even or slightly in front of the nozzle.



1 Thumbscrew
2 Adjustable brake
3 Rear guide bushing
4 Wire pressure screw
5 Swing arm
6 Front guide bushing
7 Wire guide tube
8 Trigger
9 Nozzle

Figure 2-3. (Operation of "MIG" welding gun.

(2) *Wire threading.* Unscrew the knurled spool cover bolt, and remove the plastic cover. Pull back the adjustable brake (2) and place the desired spool of welding wire on the spool shaft so that the free end of the wire will pay-off from the top of the spool into the rear guide bushing (3). Loosen the wire pressure screw (4) and open the swing arm (5). Thread the free end of the wire into the rear guide bushing, through the front guide bushing (6) and into the wire guide tube (7). Close the swing arm (5) and adjust the pressure screw until there is just sufficient pressure to prevent the wire from slipping. Excessive pressure will overload the motor and cause erratic welding action. Too little pressure will allow slippage and cause "burn backs". Switch the welder on and pull the gun trigger (8). Since welding power will be on when the trigger is pulled make sure the electrode does not touch the worn ground as an arc will result. If the wire has been. threaded properly and the pressure screw is adjusted for the correct pressure, the wire will feed freely from the guide tube.

(3) *Brake adjustment.* Loosen the two screws which hold the brake support. Adjust the position

of the brake support by moving the screw in the slotted hole until just enough pressure is applied to the wire spool to prevent the wire from uncoiling.

(4) Welding set-up. The following data is intended as a starting point in arriving at the proper adjustment of the system for welding an aluminum joint. It is important to understand that final adjustment for a particular joint may vary considerably from this data depending on the weld position, fit up material thickness, fillet size, etc.

(a) Set the voltage control on the welder to 20 volts.

NOTE

The open circuit voltage is usually about one to two volts higher per 100 amperes of welding current than the arc voltage.

(b) Loosen the pressure screw (4) and release the swing arm (5) to move the idler roll out of position. Taking care not to touch the worn piece with the wire, squeeze and hold the weld trigger; at the same time, adjust the gas regulator to give the required gas flow. As a starting point, adjust the gas flow to 35 cubic feet/hour. An increase or decrease may be required after welding conditions have been established. Reclose the swing arm and readjust the pressure screw.

(c) Adjust the position of wire so that the free end protrudes ½ inch to ¾ inch beyond the end of the nozzle.

(d) Turn the electrode feed speed control to the maximum setting.

(e) With the electrode near the work, but not touching, lower the head shield, squeeze the trigger, and bring the electrode into contact with the work piece to strike an arc.

(f) Reduce the electrode feed speed control setting until the stabbing ceases and the "crackling" sound of the arc just disappears. When the setting of the electrode feed speed control is reduced, the weld current is reduced.

(g) To stop the weld, release the trigger and draw the welding gun away from the work.

CAUTION

Do not whip the gun away from the work without first releasing the trigger to break the arc. Failure to observe this precaution may result in: (1) Loss of the gas shield before the weld pool freezes, causing porosity; (2) Too much wire will extend from the nozzle at the end of the weld requiring a clipping operation before the next weld; (3) Extremely high transiet voltages can develop which may damage the motor.

(5) Welding techniques. After the operator has found the desired current, voltage, and electrode feed speed settings for a particular application, it is still necessary to observe some elementary principles of technique.

(a) Nozzle spacing. In general, the gas nozzle should be held as close to the work as is practical. In most cases, a distance of ⅜ inch to ⅝ inch is satisfactory.

(b) Gun angle. The best cleaning action is obtained, and excellent porosity-free welds are made by using a forehand technique. For example, a horizontal fillet is best made by the welding gun at an angle of 40° to 50° to the horizontal and using a forehand angle of 20° to 25° . A right-handed operator would then weld from right to left on a horizontal weld.

(c) Cleanness of material. It is essential that aluminum be absolutely clean when it is welded. To ensure porosity-free welds, a cleaning operation should immediately precede the welding operation. Use solvent Fed Spec O-T-634 (Trichloroethylene, Technical) and then wire brush area to be welded with stainless steel brush. Final clean with acetone and let dry.

(d) Wire cleanness. Wire should be clean and free from oxide, grease, and other foreign material. Do not try to use wire that is not clean. Wire which is not in use should be kept in a container which will protect it from all forms of contamination.

e. Welding With Stick Electrode. Refer to TM 5-3431-221-15 for instructions on welding with stick electrode.

Section II. OPERATION OF AUXILIARY MATERIAL USED IN CONJUNCTION WITH THE WELDING SHOP

2-3. Fire Extinguisher

a. Description. The fire extinguisher is the dry chemical type charged with enert gas under pressure. It is useful for all classes of fires and is safe to use on electrical fires. The chemical is non-toxic to humans and when used on a fire, emits no toxic by-product. The fire extinguisher is located in the left front tool box, mounted to the under side of the cover.

b. Operation.

(1) Open clamp securing fire extinguisher in bracket.

(2) Remove extinguisher from bracket and lift bottom lever, breaking the parer seal.

(3) Aim extinguisher nozzle at base of flames and press down the top handle.

(4) For general fires or burning liquids, discharge chemical at base of flame with a sweeping motion while advancing.

(5) For electrical fires, turn off current if possible. Aim stream directly into burning part.

c. Maintenance.

(1) Observe pressure indicator at bottom of shell: if pointer is in open area, extinguisher is ready for service and needs no further checking. This inspection should be made every 30 days, at least.

(2) If pointer is under the red band, pull bottom lever, invert extinguisher and press top handle until extinguisher is empty. Unscrew valve assembly and remove from cylinder.

(3) The cylinder is non-refillable. When cylinder is empty, remove valve head from old cylinder by unscrewing and screw valve head onto new cylinder.

(4) Apply air pressure or nitrogen pressure to valve through opening, holding down on handle, to remove any powder remaining in valve.

(5) Reseal lever with new paper seal.

(6) Attach tag stating data and name of person replacing extinguisher shell.

Section III. OPERATION UNDER UNUSUAL CONDITIONS

2-4. General

Extreme cold and heat, dusty or sandy areas, salt water or high humidity areas and other unusual conditions require special care and additional maintenance to prevent damage to equipment and to insure unfailing operation.

2-5. Operation Under Unusual Conditions

a. Welding Machine. Refer to TM 5-3431-221-15.

b. Trailer Chassis. See TM 9-2330-202-14P.

c. Trailer Body and Tools. No special instructions are necessary other than keeping tools and trailer as free from dirt, moisture, and other foreign matter as possible.

CHAPTER 3

OPERATOR/CREW MAINTENANCE INSTRUCTIONS

Section I. LUBRICATION INSTRUCTIONS

3-1. Lubrication Information

a. Welding Machine. Refer to TM 5-3431-221-15

b. Trailer Chassis. Refer to TM 9-2330-202-14P.

c. Care of Lubricants. Store all lubricants in covered containers and keep in a protected place. Clean all containers before they are opened to prevent entry of dirt. Clean lubricating equipment before and after use.

Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

3-2. General

To insure that the welding shop is ready for operation at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance checks and services to be performed are listed as described in paragraph 3-3. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the unit will be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is 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 at the earliest possible opportunity,

3-3. Preventive Maintenance Checks and Services

a. Refer to TM 5-3431-221-15 for preventive maintenance checks and services to the welding machine.

b. Refer to TM 9-2330-202-14 for preventive maintenance checks and services to the trailer chassis.

c. Refer to table 3-1 for preventive maintenance checks and services to other than the trailer chassis and the welding machine.

Section III. TROUBLESHOOTING

3-4. General

a. This section contains troubleshooting information for locating and correcting most of the operating troubles which may develop in the welding shop. Each malfunction for an individual component, unit, or system is followed by a list of tests or inspections which will help you to determine probable causes and corrective actions to take. You should perform the tests / inspections and corrective actions in the order listed. Refer to table 3-2 for troubleshooting.

b. This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.

Table 3-1. Preventive Maintenance Checks and Services

B — Before Operation A — After Operation M — Monthly
D — During Operation W — Weekly Q — Quarterly

Item number	Interval: Operator: Daily B	Daily D	Daily A	Operator: W	Org.: M	Org.: Q	Item to be Inspected	Procedure	Reference
1	1						Welding gun	Check for sufficient amount of welding wire; replenish as needed.	See paragraph 2-2d
2	2						Oxygen bottle	Check pressure of bottle; replace as necessary.	See paragraph 3-8
3	3						Acetylene bottle	Check pressure of bottle; replace as necessary.	See paragraph 3-8
4	4						Argon bottle	Check pressure of bottle; replace as necessary.	See paragraph 3-8
5	5						Control monitor	Check fuses: Two on left side of box are 4 AMP, 250 V. One on right side of box is 1 AMP, 250 V.	See paragraph 3-5
6				1			Cables, welding gun	Inspect cables for broken insulation.	See paragraph 3-5
7				2			Hose, welding gun	Check for damaged gas hose.	See paragraph 3-5
8				3			Nozzle / adapter, welding gun	Check nozzle and adapter for signs of wear or build up. Clean as necessary.	See paragraph 3-5
9				4			Barrel, welding gun	Inspect barrel for wear or build up. Clean gas passages thoroughly.	See paragraph 3-5
10				5			Guide tube, welding gun	Check guide tube for damage. Remove burrs from edges near hole. If wire jams up or does not feed easily, replace tube.	See paragraph 3-5
11				6			Drive roll, welding gun	Check drive roll for accumulation of dirt or other foreign matter. Clean out all matter in the serrations of the drive roll.	See paragraph 3-5

c. Refer to TM 5-3431-221-15 for troubleshooting that concerns the welding machine.

d. Refer to TM 9-2330-202-14P for troubleshooting that concerns the trailer chassis.

NOTE

Before you use this table, be sure you have performed all applicable operating checks.

Section IV. MAINTENANCE OF WELDING GUN AND CONTROL MONITOR

3-5. Welding Gun and Control Monitor

a. General. Maintenance at this level is restricted in that virtually no disassembly is attempted. Primarily the maintenance will consist only on inspecting, servicing, and adjusting the equipment.

b. Adjustment for Welding Gun.

(1) *Wire brake.* Refer to paragraph 2-2 d (3) of this manual.

(2) *Rheostat.* Turn the rheostat knob clockwise to reduce speed.

(3) *Guide tube.* Refer to paragraph 2-2 *d* (1) of this manual.

c. Maintenance of Welding Gun and Control Monitor.

(1) As the gun is used, a small amount of spatter will collect on the end of the guide tube and on the nozzle. This spatter can be removed easily with a knife or some other similar implement. Periodically, remove the nozzle by pulling it from the nozzle holder and inspect the nozzle and gun barrel for spatter which may have collected inside. Excessive spatter can cause a short between the nozzle and the guide tube. Such a short will create an arc between the nozzle and the work piece if accidental contact is made.

Table 3-2. Troubleshooting

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
WELDING GUN
1. WELDING GUN WILL NOT WELD.
Step 1. Check to see if the control monitor power switch is in "OFF" position. If prover switch is in "OFF" position, turn it to "ON" position (para 2-1 *b*).
Step 2. Check connector at control monitor to see if it is making contact. Disconnect receptacle and inspect for corrosion. Clean contacts as necessary and connect it back up, making certain the receptacle is tight.
Step 3. Check connector at welding machine to see if it is making contact. Perform same corrective action given in step 2 above.
Step 4. Check to see if argon valve is off. Turn valve on and adjust to desired pressure (para 2-1 *b* (2)).
Step 5. Check to see if argon bottle is empty. Replace bottle if necessary (para 3-8).
Step 6. Check to see if wire is feeding, if not it is probably kinked. Open swing arm and manually feed the bent wire through the tube until straight wire is properly aligned with drive wheel.
2. CUTTING TORCH WILL NOT OPERATE PROPERLY.
Step 1. Check to see if cutting tip is clogged. Remove tip and clean obstruction from it (para 3-8).
Step 2. Check to see if oxygen or acetyline is off or not set properly. Turn valves on and/or reset to proper pressure for the job at hand (para 2-1 *b* (3)).

(2) If the guide tube becomes bent, replace it with a new guide tube. If a burn-back occurs, do not inch the wire. "Attempts to inch the wire under these circumstances will blow the fuse in the control circuit. When a burn-back occurs, loosen the thumbscrew which secures the guide tube, and inch both the wire and the guide tube out of the gun. Cut the wire about 1/16 inch from the rear of the guide tube. Hold the guide tube perpendicular to a hard, flat surface, and strike the end of the wire against the flat surface. If this does not free the wire, cut or grind off the melted portion of the guide tube and remove the wire. The burr caused by cutting should be removed from the guide tube hole

with a small drill. Failure to remove the burr can result in another burn-back. Reinstall the guide tube in the gun, ensuring that the end of the guide tube is the correct distance from the nozzle. The 1/16 to 0.035 inch tubes may be trimmed with a maximum of ⅜ inch, and the 0.020 to 0.030 inch tubes may be trimmed a maximum of⅛ inch before discarding.

(3) The gas holes in the gun barrel may become clogged with a residue of white powder which will obstruct the flow of gas. The gun should be dismantled every 100 hours, and the gas holes blown out with high pressure air.

(4) The fuses in the control monitor need not be inspected except in the event of a failure of equipment. At this time, check the fuses and if burned out, replace. If when operation continues, fuses continue to burn out, refer the trouble to organizational maintenance.

Section V. MAINTENANCE OF WELDING MACHINE AND TRAILER CHASSIS

3-6. Welding Machine

Refer to TM 5-3431-221-15 for instructions on operators maintenance.

3-7. Trailer Chassis

Refer to TM 9-2330-202-14P for instructions on operators maintenance.

Section VI. MAINTENANCE OF TOOLS, OXYGEN AND GAS BOTTLES, AND ACCESSORIES

3-8. Oxygen, Acetylene, and Argon Bottles

Check the bottles weekly for proper fill. Replace empty bottles. When use of these bottles is abnormal, the checks on the bottles should be made more frequently.

3-9. Tools and Accessories

To maintain maximum efficiency, it is necessary to keep all welding tools, as well as other tools, as clean as is possible. Use Fed Spec P-D-680 (Dry Cleaning Solvent) or other equivalent solvents to keep all non-electrical tools clean.

CHAPTER 4

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIAL

4-1. Inspecting and Servicing the Equipment

a. Make a complete visual inspection of the entire welding shop to see that all items that are listed in Appendix C (Basic Issue Items List) have been shipped with the unit.

b. Make a complete visual inspection for parts damaged or last during shipment. Report all damaged or missing parts to organizational maintenance.

c. Perform the preventive maintenance checks and services given in the table 3-1 and table 3-2.

4-2. Installation

The welding shop is shipped completely assembled with the tools stored in the tool boxes. Although the welding shop is not ready for operation, no installation instructions are necessary until the actual operation of the unit is begun.

Section II. MOVEMENT TO A NEW WORK SITE

4-3. Dismantling for Movement

a. The welding shop is a mobile vehicle and may be towed to the new work site.

b. Connect the welding shop to the prime mover.

c. Retract the landing leg and secure it in the "UP" position (TM 9-2330-202-14P).

d. Connect the intervehicular wiring to the prime mover (TM 9-2330-202-14P).

e. Make sure all the tools have been disconnected from the welding machine and pressurized bottles and stored in the proper tool boxes.

f. Release the trailer parking brakes (TM 9-2330-202-14P).

4-4. Reinstallation After Movement

a. Make sure the welding shop is parked on a level surface.

b. Set the park brakes on the trailer (TM 9-2330-202-14P).

c. Disconnect the intervehicular wiring (TM 9-2330-202-14P).

d. Lower the landing leg (TM 9-2330-202-14P).

e. Disconnect the welding shop from the prime mover.

Section III. REPAIR PARTS, SPECIAL TOOLS AND EQUIPMENT

4-5. Tools and Equipment

Tools, equipment, and repair parts issued with or authorized for the welding shop are listed in appendix C.

4.6. Special Tools and Equipment

No special tools or equipment are authorized or issued with the welding shop.

4-7. Maintenance Repair Parts

a. Refer to TM 5-3431-221-25P for organizational maintenance, repair parts for the welding machine.

b. Refer to TM 9-2330-202-14P which includes organizational maintenance repair parts for the trailer chassis.

c. Refer to Appendix C of this manual for organizational maintenance repair parts for the welding shop, trailer mounted.

Section IV. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

4-8. General

To insure that the welding shop is ready for operation at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance checks and services to be performed are listed as described in paragraph 4-9. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the unit will be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is 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 at the earliest possible opportunity.

4-9. Preventive Maintenance Checks and Services

a. Refer to TM 5-3431-221-15 for preventive maintenance checks and services to the welding machine.

b. Refer to TM 9-2330-202-14P for preventive maintenance checks and services to the trailer chassis.

c. Refer to table 4-1 for preventive maintenance checks and services to other than the trailer chassis and the welding machine.

Section V. TROUBLESHOOTING

4-10. General

a. This section contains troubleshooting information for locating and correcting most of the operating troubles which may develop in the welding shop. Each malfunction for an individual component, unit, or system is followed by a list of tests or inspections which will help you to determine probable cause and corrective actions to take. You should perform the tests / inspections and corrective actions in the order listed.

b. This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.

c. Refer to TM 5-3431-221-15 for troubleshooting that concerns the welding machine.

d. Refer to TM 9-2330-202-14P for troubleshooting that concerns the trailer chassis.

NOTE

Before you use this table, be sure you have performed all applicable operating checks.

Table 4-1. Preventive Maintenance Checks and Services

B — Before Operation D — During Operation A — After Operation W — Weekly M — Monthly Q — Quarterly

Item number	Interval: Operator: Daily B	Daily D	Daily A	Operator: W	Org.: M	Org.: Q	Item to be Inspected	Procedure	Reference
1					1		Brake, welding gun	Check brake tension; if brake is worn, replace.	See paragraph 4-18
2					2		Handle assembly, welding gun	Check for proper operation of trigger and switches. Refer faulty or inoperative parts to direct support.	See paragraph 4-18
3					3		Barrel assembly, welding gun	Check for clogged jets and, if clogged remove and clean jets.	See paragraph 4-18
4					4		Terminal strip, control monitor	Check strip, making sure all contacts are secure.	See paragraph 4-19

Table 4-2. Troubleshooting

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
WELDING GUN
1. WELDING GUN WILL NOT FEED WIRE
Step 1. Check to see if motor is burned out.
If motor is burned out, refer to direct support maintenance.
Step 2. Check to see if inching switch is inoperative.
If inching switch is inoperative, refer to direct support maintenance.
Step 3. Check to see if wiring is faulty.
If wiring is faulty, refer to direct support maintenance.
Step 4. Check to see if swing arm assembly is inoperative.
If swing arm assembly is inoperative, check tension spring and if broken, replace. Check drive roll for ease of rotation (para. 4-18).
2. WELDING GUN SPATTERS; ERRATIC WELDS
Step 1. Check to see if gas jets in barrel are clogged.
If gas jets are clogged, remove barrel and clean jets thoroughly (para 4-18).
Step 2. Check to see if nozzle is damaged.
If nozzle is damaged, replace (para 4-18).
3. WELDING GUN WILL NOT OPERATE.
Step 1. Check to see if control monitor circuit is damaged.
Check capacitors, resistor, and wiring for proper operation (para 4-19).
Step 2. Check to see if the power and/or range switches in the control monitor are damaged or inoperative.
Replace switches as necessary (para 4-19).
Step 3. Check to see if there is a broken wire in the handle assembly of the welding gun.
If there are any broken wires in the handle, refer to direct support maintenance.

Section V I. RADIO INTERFERENCE SUPPRESSION

4-11. General Methods Used to Obtain Proper Suppression

Essentially, suppression is attained by providing a low resistance path to ground for stray currents. The methods used include shielding the ignition and high-frequency wires, grounding the frame with bonding straps, and using capacitors and resistors.

4-12. Interference Suppression Components

a. Primary Suppression Components. The primary suppression components are those whose primary function is to suppress radio interference. These components are described and located in TM 5-3431-221-15.

b. Secondary Suppression Components. These components have radio interference suppression functions which are incidental or secondary to their primary function.

4-13. Replacement of Suppression Components

Refer to TM 5-3431-221-15 and replace defective radio interference suppression components.

4-14. Testing of Radio Interference Suppression Components

If test equipment is not available and interference is indicated, isolate the cause of interference by the trial and error method of replacing components in turn until the cause of interference is located and eliminated.

Section VII. MAINTENANCE OF BODY AND HULL COMPONENTS

4-15. Tool Boxes

a. Removal.

(1) Remove the padlocks (1, fig. 4-l).

(2) Remove all the tools from the tool boxes.

(3) Remove the twenty-six nuts (2, 7 and 12), flatwashers (4, 9 and 14) and capscrews (4, 9 and 14). Remove the tool box floors (5, 10 and 15) and remove the tool boxes (6, 11 and 16).

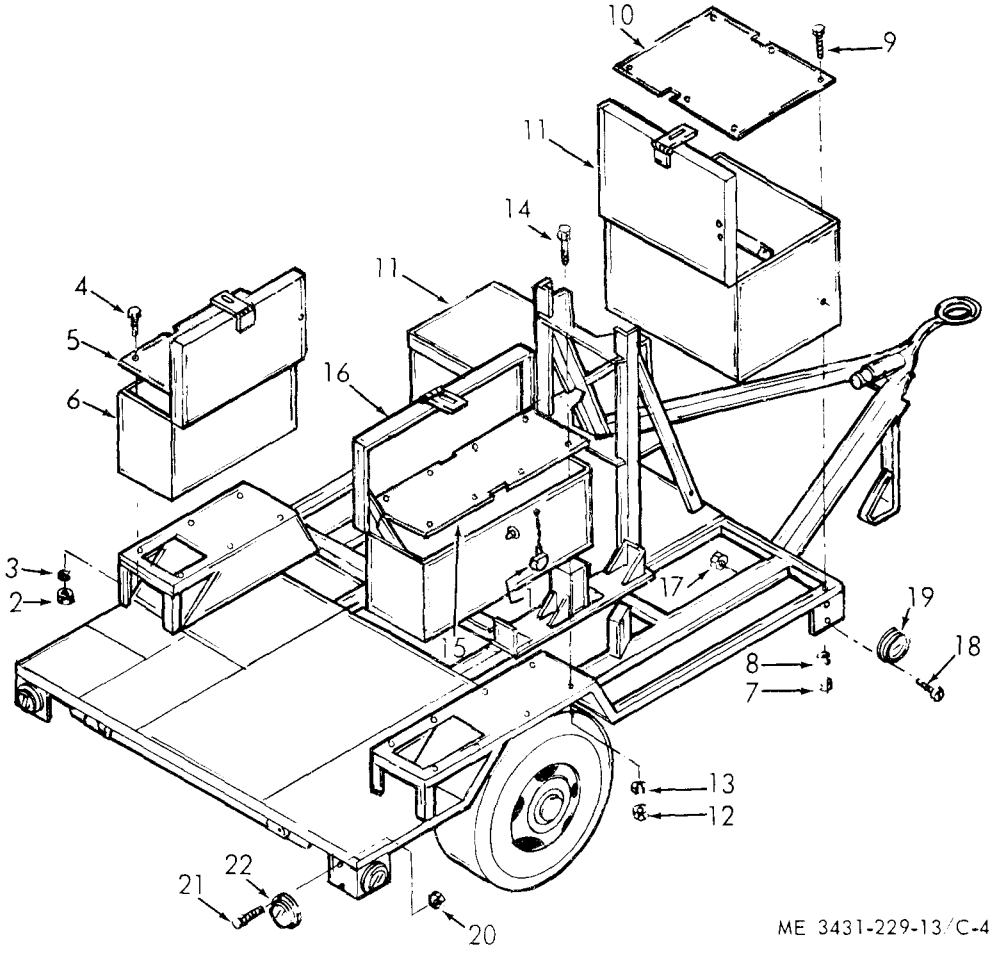


Figure 4-1. Tool Boxes, reflectors, removal and installation.

Key to figure 4-1:

1 Padlock set
2 Nut
3 Flatwasher
4 Capscrew
5 Tool box floor
6 Tool box
7 Nut
8 Flatwasher
9 Capscrew
10 Tool box floor
11 Tool box
12 Nut
13 Flatwasher
14 Capscrew
15 Tool box floor
16 Tool box
17 Nut
18 Capscrew
19 Amber reflector
20 Nut
21 Capscrew
22 Red reflector

b. Cleaning and Inspection.

(1) Clean all metal parts and hardware using cleaning solvent (Fed Spec P-D-860).

(2) Inspect the hardware for stripped or crossed threads.

(3) Inspect the tool boxes and floors for dents, cracks, rust, or other damage.

c. Repair and replacement.

(1) Replace any damaged hardware.

(2) Straighten any smaller dents using a hammer.

(3) Torque dents, that may render the tool box lid inoperative' or retard the proper storage of tools in the box, will constitute the replacement of the tool box.

(4) Weld any cracks in the metal and file or sand down any rough edges at the rim of the boxes.

d. Reinstallation. Position the boxes and floors on the body and secure using the hardware removed in paragraph a. above.

4-16. Reflectors

a. Removal. Remove the two nuts (17 and 20, fig. 4-1) and capscrews (18 and 21) which hold each of the four amber reflectors (19) and each of the four reel reflecors (22).

b. Cleaning, Inspection, Repair, and Replacement.

(1) Clean all parts using cleaning solvent (Fed Spec P-D-680).

(2) Inspect hardware for stripped or otherwise damaged threads and replace as necessary.

(3) Replace broken, bent or otherwise damaged reflectors.

c. Reinstallation. Refer to paragraph a above and reinstall reflectors in reverse order.

4-17. Trailer Body

a. General. The trailer body will not be removed by organizational maintenance. However, repairs will be made on the body while installed.

b. Repair. Straighten all smaller dents with a hammer. Any larger dents may require heating and straightening by using lever action where possible. If damage is in the form of metal breakage it will be welded, If the body is damaged to an extent beyond these repairs, refer it to direct support maintenance for repairs.

4-18. Welding Gun

a. Disassembly. Refer to figure 4-2 and disassemble in sequence indicated by callouts.

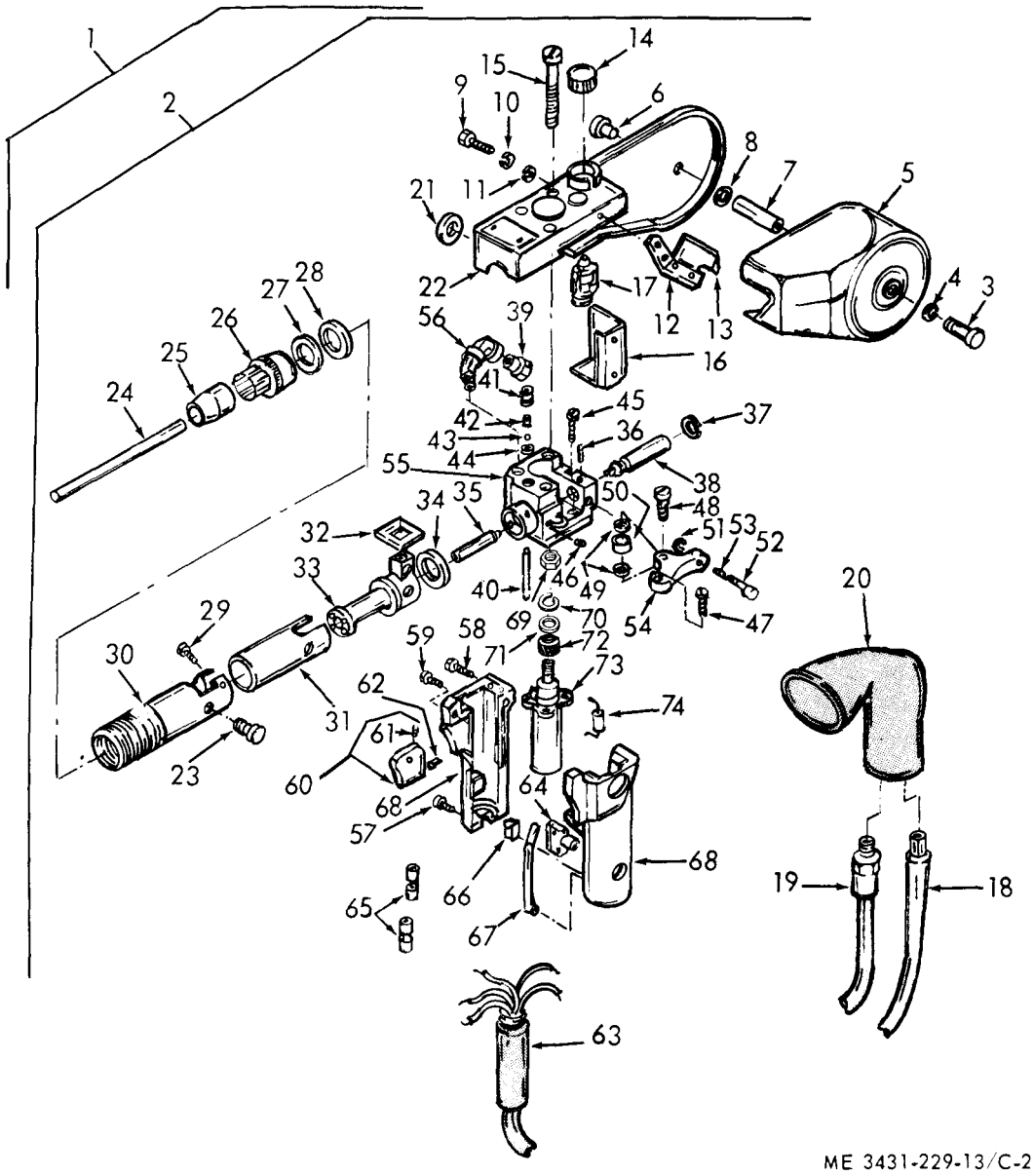


Figure 4-2. Welding gun, disassembly and reassembly.

Key to figure 4-2:

1 Welding set
2 Welding gun
3 Reel cover bolt
4 Preformed packing
5 Reel cover
6 Machine screw
7 Reel shaft
8 Flatwasher
9 Thread cutting tapping screw
10 Lockwasher
11 Flatwasher
12 Brake support
13 Brake
14 Rheostat knob
15 Machine screw
16 Potentiometer shield
17 Dual potentiometer assembly
18 Current cable assembly
19 Gas hose assembly
20 Boot
21 Rubber bushing
22 Shield assembly
23 Guide tube lock screw
24 Wire guide tube
25 Gas nozzle
26 Adaptor
27 Insulating washer
28 Insulating washer
29 Machine screw
30 Gun barrel housing
31 Gun barrel insulation
32 Insulation
33 Gun barrel assembly
34 Insulating washer
35 Front guide bushing
36 Setscrew
37 Retaining ring
38 Rear guide bushing
39 Fitting
40 Pin
41 Pipe plug
42 Spring
43 Ball bearing
44 Preformed packing
45 Machine screw"
40 Setscrew
47 Machine screw
48 Nylon screw
49 lnsulation washer
50 Insulated idler roll
51 Preformed packing
52 Bearing arm bolt
53 Spring
54 Bearing arm
53 Bracket and fitting assembly
56 Fitting assembly
57 Machine screw
58 Machine screw
59 Machine screw
60 Trigger assembly
61 Setscrew
62 Spring
63 Power supply cable assembly
64 Inching switch
65 Disconnect knife
66 Trigger switch
67 Flat spring
68 Handle assembly
69 Plain hexagon nut
70 Lockwasher
71 Flatwasher
72 Drive roll
73 Electric motor
74 Capacitor

NOTE

If any of the items in the welding gun handle (60-74, fig. 4-2) appear to be broken, burned out or otherwise damaged, refer to direct support maintenance.

b. Cleaning and Inspection.

(1) Clean all non-electrical welding gun parts with dry cleaning solvent (Fed Spec P-D-680).

(2) Blow out all jets and air passages using compressed air.

(3) Clean any weld spatters off the nozzle and guide tube using a knife or similar implement.

(4) Inspect all hardware for stripped or damaged threads.

(5) Check guide bushings and guide tube for evidence of wear, breaks, bends, or other damage.

(6) Check all welding gun parts for evidence of wear, cracking, rusting or other damages.

c. Repair and Replacentent.

(1) Replace any parts that are broken, split, or are worn down in such a way that it would impede proper operation.

(2) Replace any damaged hardware.

d. Reassembly. The welding gun may be reassembled by referring to figure 4-2 and reversing the sequence of disassembly.

4-19. Control Monitor

a. Disassembly. Refer to figure 4-3 and disassemble the control monitor.

b. Cleaning and Inspection.

(1) Clean all non-electrical parts with dry cleaning solvent (Fed Spec P-D-680).

(2) Inspect all parts for physical damage such as cracks, corrosion, rust or other damage.

(3) If a component is suspected to be faulty, such as resistors, rectifiers, etc., refer these problems to direct support maintenance.

(4) Inspect hardware for stripped or damaged threads.

(5) Inspect plates and covers for rusting, dents or other damage.

c. Repair and Replacement.

(1) Replace parts that have been physically damaged.

(2) Replace damaged hardware.

(3) Replace inoperative or faulty electrical components.

(4) Replace plates, covers, and other such parts that cannot be repaired by straightening, cleaning or other simple means of repair.

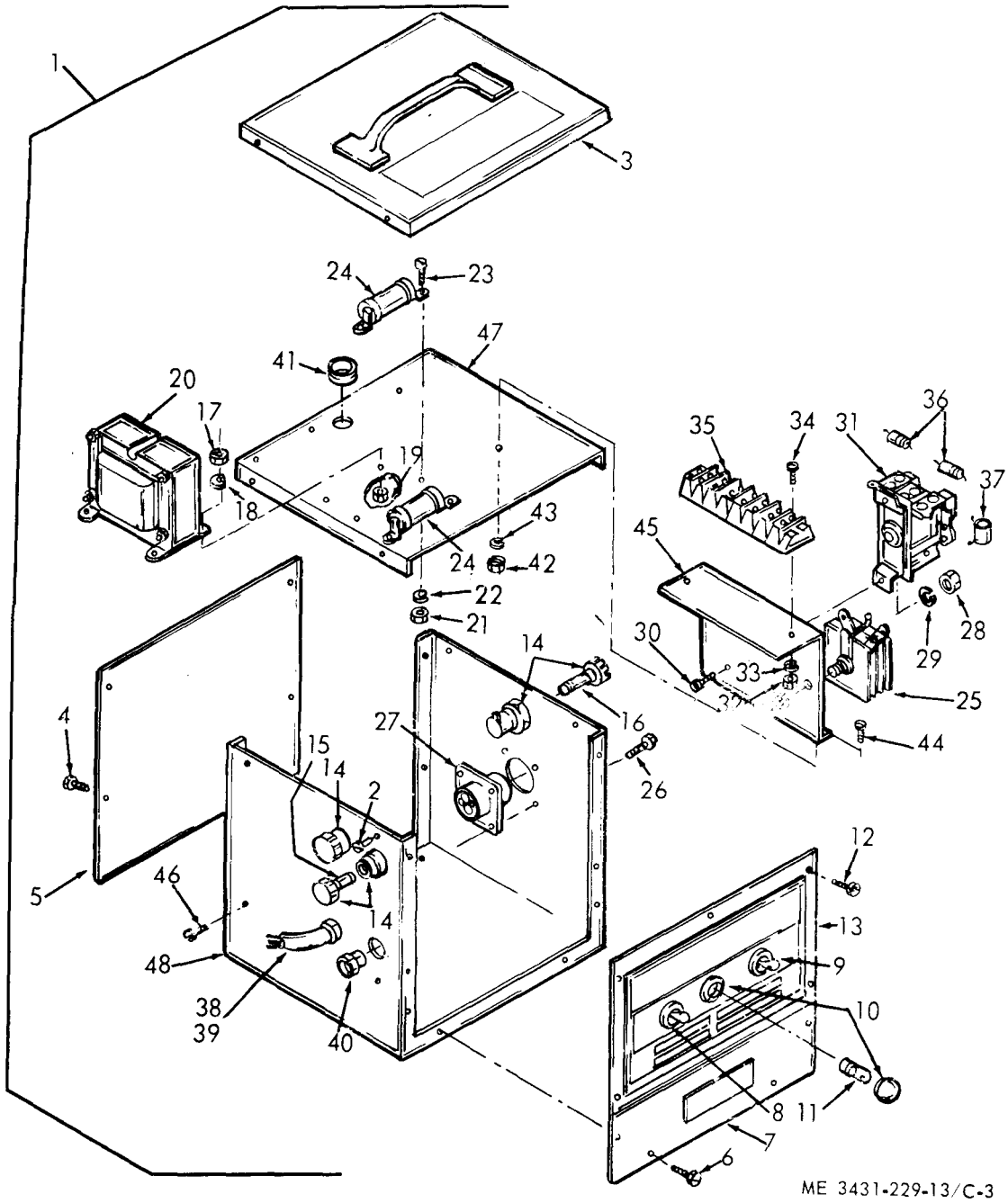


Figure 4-3. Control monitor, disassembly and reassembly.

Key to fig. 4-3:

1 Welding control
2 Thread cutting self-tapping screw
3 Top plate
4 Thread cutting self-tapping screw
5 Back plate
6 Thread cutting self-tapping screw
7 Front bottom plate
8 Range switch
9 Power switch
10 Lamp assembly
11 Incandescent lamp
12 Thread cutting self-tapping screw
13 Front top plate
14 Fuse holder
15 Fuse
16 Fuse
17 Plain hexagon nut
18 Lockwasher
19 Machine screw
20 Transformer
21 Plain hexagon nut
22 Lockwasher
23 Machine screw
24 Resistor
25 Rectifier
26 Thread cutting self-tapping screw
27 Receptacle
28 Plain hexagon nut
29 Lockwasher
30 Machine screw
31 Relay
32 Plain hexagon nut
33 Lockwasher
34 Machine screw
35 Terminal block
36 Resistor
37 Resistor
38 Cable assembly
39 Cable assembly
40 Bushing
41 Bushing
42 Plain hexagon nut
43 Lockwasher
44 Machine screw
45 Bracket
46 Thread forming self-tapping screw
47 Bracket
48 U-shaped base

d. Reassembly. Refer to figure 4-3 and reassemble the control monitor by reversing the order of disassembly.

CHAPTER 5

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS AND EQUIPMENT

5-1. Special Tools and Equipment

No special tools or equipment are needed for the welding shop.

5-2. Direct Support Maintenance Repair Parts

Direct support maintenance repair parts are listed and illustrated in Appendix C of this manual.

5-3. Special Designed (Fabricated) Tools and Equipment

No specially designed tools and equipment are needed by maintenance personnel.

Section II. TROUBLESHOOTING

5-4. General

a. This section contains troubleshooting inform at ion for locating and correcting most of the operating troubles which may develop in the welding shop. Each malfunction for an individual component, unit, or system is followed by a list of tests on inspections which will help you to determine probable causes and corrective actions to take. You should perform the tests / inspections and corrective actions in the order listed. Refer to table 5-1 for troubleshooting.

b. This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify your supervisor.

c. Refer to TM 5-3431-221-15 for troubleshooting that concerns the welding machine.

d. Refer to TM 9-2330-202-14P for troubleshooting that concerns the trailer chassis.

NOTE

Before you use this table, be sure you have performed all applicable operating checks.

Section III. GENERAL MAINTENANCE

5-5. General

This section contains maintenance instructions for maintenance to be performed at direct support level as allocated by the Maintenance Allocation Chart. Refer to appendix B.

5-6. Forms and Records

Refer to paragraph 1-2.

5-7. Description

For a complete description of the welding shop, refer to paragraph 1-7.

5-8. Tabulated Data

a. Refer to paragraph 1-9 for tabulated data.

b. See figure 5-1 for control monitor wiring, diagram.

c. See figure 5-2 for welding gun wiring diagram.

Table 5-1. Troubleshooting

MALFUNCTIO!N TEST OR INSPECTION CORRECTIVE ACTION
WELDING GUN
1. WELDING GUN WILL NOT FEED WIRE. Step 1. Check to see if motor is burned out. Replace motor if burned out Step 2. Check to see if inching switch is inoperative. Replace inching switch if necessary. Step 3. Check to see if wiring in handle is faulty. Repair or replace wiring as necessary.
2. WELDING GUN WILL NOT OPERATE. Step 1. Check for faulty components in control monitor. Replace faulty components as necessary. Step 2. Check for faulty components in welding gun handle. Replace faulty components as necessary. Step 3. Welding machine will not function properly. Repair welding machine per TM 5-3431-221-15.

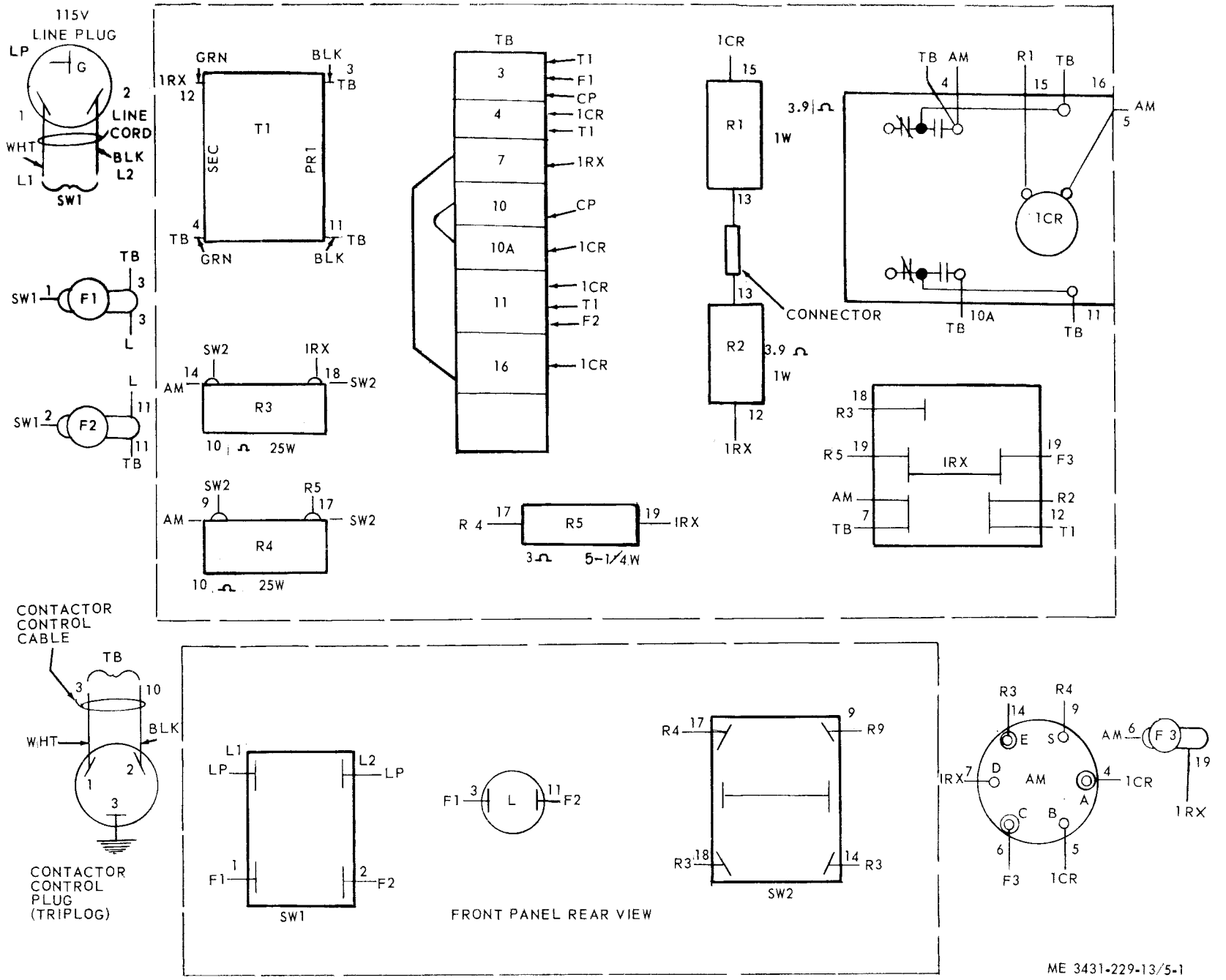


Figure 5-1. Control monitor wiring diagram

ME 3431-229-13/5-1

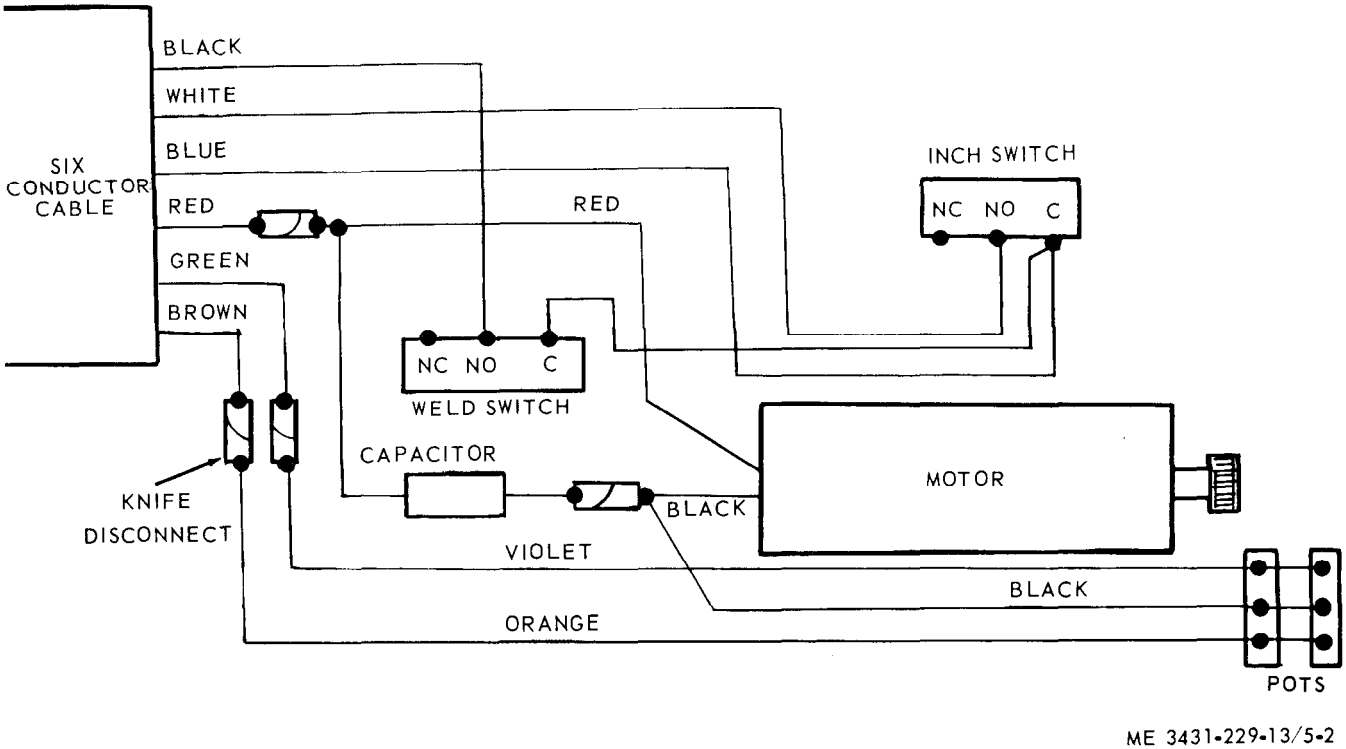


Figure 5-2. Welding gun wiring diagram

5-9. Welding Machine

Refer to TM 5-3431-221-15 for maintenance instructions to be used at direct support level on the welding machine.

5-10. Trailer Chassis

Refer to TM 9-2330-202-14P for maintenance instructions to be used at direct support level on the trailer chassis.

5-11. Welding Gun

Refer to paragraph 6-4 of this manual for maintenance instructions to be used at direct support level on the welding gun.

5-12. Control Monitor

Refer to paragraph 6-5 of this manual for maintenance instructions to be used at direct support level on the control monitor.

Section IV. REMOVAL AND INSTALLATION OF MAJOR COMPENENTS

5-13. Welding Machine

WARNING

Do not attempt to raise the welding machine off the trailer using a lifting device with a lifting capacity of less than 1000 pounds. Do not allow the welding machine to swing while suspended. Do not stand under the welding machine while suspended. Failure to observe this warning can result in serious injury or death to personnel.

a. Removal. Remove the four bolts (8, fig. 5-3), lockwashers (9) and flatwashers (10). Attach a lifting device with a lifting capacity of not less than 1000 pounds and raise the welding machine (11) off the trailer body.

b. Installation. Lower the welding machine (11) onto the trailer body and align it with the mounting holes. Secure the welding machine using the four bolts (8), lockwashers (9) and flatwashers (10).

5-14. Trailer Body

a. Removal.

(1) Remove the tool boxes (para 4-15).

(2) Release the load binders (32 and 41, fig. 5-3) and remove the acetylene bottle (44), oxygen bottle (45), and argon bottle (46). Remove the vise (47).

(3) Remove the welding machine (para 5-13).

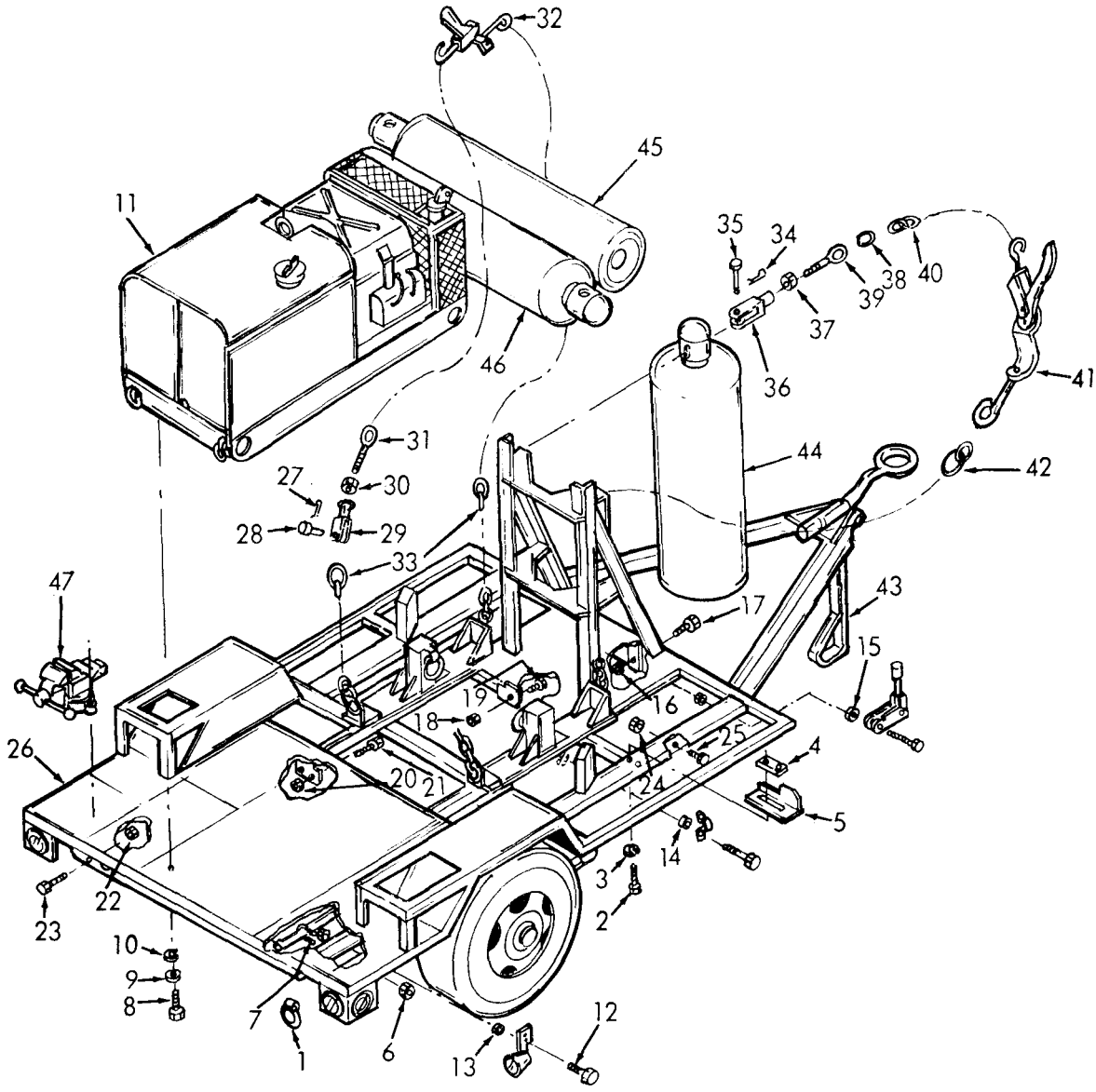
(4) Remove the two nuts and bolts (12) that hold each taillight to the body and trailer. Remove the two taillights and spacers (13). Remove the two nuts and bolts which bold each of the two hand-brake clamps and remove the spacers (14). Remove the two nuts and bolts which hold each of the two handbrake levers and remove the two spacers (15). Remove the four nuts (6) and two U-bolts (7) and remove the ground rod.

(5) Remove the fourteen nuts (24) and bolts (25) along the side of the body. Remove the two nuts (16) and capscrews (17) at the front of the body. Remove the twelve nuts (18) and capscrews (19) attaching the body to the trailer cross beams. Remove the four nuts (20) and capscrews (21) from the brackets near the shock absorbers. Remove the six nuts (22) and capscrews (23) attaching the body to the trailer rear cross beam. Attach a lifting device to the body (26) and raise it off the trailer.

b. Reinstallation. Refer to paragraph a. above and reinstall by reversing removal instructions.

5-15. Trailer Chassis, Removal and Installation

The trailer chassis (43, fig. 5-3) is the bottom-most part, removal and installation is accomplished by the removal and installation of the trailer body. See paragraph 5-14 for these instructions.



1 Anchor shackle	17 Capscrew	33 Chain
2 Capscrew	18 Nut	34 Cotter pin
3 Lockwasher	19 Capscrew	35 Headed straight pin
4 Plate nut	20 Nut	36 Rod end clevis
5 Cylinder stop	21 Capscrew	37 Nut
6 Nut	22 Nut	38 Lap end link
7 U-bolt	23 Capscrew	39 Turnbuckle eye bolt
8 Capscrew	24 Nut	40 Chain
9 Lockwasher	25 Bolt	41 Loadbinder
10 Flatwasher	26 Trailer body	42 Chain
11 Welding machine	27 Cotter pin	43 Trailer chassis
12 Capscrew	28 Headed straight pin	44 Acetylene bottle
13 Spacer	29 Rod end clevis	45 Oxygen bottle
14 Spacer	30 Nut	46 Argon bottle
15 Spacer	31 Turnbuckle eye bolt	47 Vise
16 Nut	32 Loadbinder	

Figure 5-3. Welding trailer body, removal and installation.

CHAPTER 6

REPAIR INSTRUCTIONS

6-1. General

This chapter provides instructions for the repair of the welding shop. It includes the repair of those items that are the responsibility of direct support maintenance as allocated by the Maintenance Allocation Chart.

6-2. Trailer Chassis

Refer to TM 9-2330-202-14 for trailer repair instructions.

6-3. Welding Machine

Refer to TM 5-3431-221-15 for welding machine repair instructions.

6-4. Welding Gun

a. Disassembly. Refer to paragraph 4-18 of this manual and disassemble the welding gun.

b. Overhaul.

(1) Refer to paragraph 4-18 for repair accomplished by the replacement of parts. Items 60 through 74 of figure 4-2 are the responsibility of direct support maintenance.

(2) The welding gun handle, which consists of the motor inching switch, capacitor, rheostat, and control cable, contains the electrical system as far as the gun is concerned. Repairs shall consist of the replacement of damaged or inoperative parts. Broken wiring shall be repaired by splicing the cable back to obtain suitable wiring. Check the capacitor for leakage and replace as necessary.

(3) Refer to figure 5-2 for the wiring diagram. Use this as a guide in repairing the unit.

c. Reassembly. Refer to paragraph 4-18 and reassemble the welding gun.

6-5. Control Monitor

a. Disassembly. Refer to paragraph 4-19 and disassemble the control monitor.

b. Overhaul.

(1) The control monitor may be completely overhauled by organizational maintenance in as much as the replacement of parts is concerned. It is the responsibility of direct support maintenance to test the unit to make sure that it is performing its normal duties.

(2) The control monitor requires little or no maintenance, other than changing fuses occasionally. The consistent failure of the control monitor to function properly will warrant overhaul. A check of the capacitor, resistors, and rectifier should first be made. Refer to the wiring diagram (fig. 5-1) for proper wiring and values of components.

c. Reassembly. Refer to paragraph 4-19 and reassemble the control monitor.

APPENDIX A

REFERENCES

A-1. Fire Protection

TB 5-4200-200-10	Hand Portable Fire Extinguisher Approved for Army Users

A-2. Lubrication

C9100-1L	Identification List for Fuels, Lubrication, Oils and Waxes
LO 5-2805-259-12	Department of the Army, Lubrication Order

A-3. Painting

TM 9-213	Painting Instructions for Field Use

A-4. Radio Suppression

TM 11-483	Radio Interference Suppression

A-5. Maintenance

TM 9-1870-1	Care and Maintenance of Pneumatic Tires
TM 38-750	The Army Maintenance Management Systems
TM 5-3431-221-15	Department of the Army, Operator, Organizational, Direct and General Support, and Depot Maintenance Manual, for Welding Machine
TM 5-2805-259-14	Department of the Army, Operator Organizational, Direct and General Support Maintenance Manual, for Engine, Gasoline
TM 9-2330-202-14P	Department of the Army, Operator, Organizational and Field Maintenance Instructions, Repair Parts and Special Tools Lists, for Chassis, Trailer
TM 5-2805-259-24P	Department of the Army, Organizational, Direct and General Support Maintenance Repair Parts and Special Tools Lists, for Engine, Gasoline
TM 5-3431-221-25P	Department of the Army, Organizational, Direct and General Support and Depot Maintenance Repair Parts and Special Tools Lists, for Welding Machine
SC 3431-97-CL-E03	Sets, Kits and Outfits Components List, for Welding Shop, Trailer Mounted
TM 9-6140-200-15	Operation and Organizational, Field, and Depot Maintenance: Storage Batteries, Lead Acid Type
TM 5-764	Electric Motor and Generator Repair

A-6. Shipment and Storage

TB 740-97-2	Preservation of USAMEC Mechanical Equipment for Shipment and Storage
TM 740-90-1	Administrative Storage of Equipment

A-7. Destruction to Prevent Enemy Use

TM 750-244-3	Procedures for Destruction of Equipment to Prevent Enemy Use

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. General

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

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

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

d. Section IV contains supplemental instructions or explanatory notes required for a particular maintenance function.

B-2. Explanation of Columns in Section II

a. Group Number, Column (1). The assembly group number is a numerical group assigned to each assembly. The assembly groups are listed on the MAC in disassembly sequence beginning with the first assembly removed in a top down disassembly sequence.

b. Assembly Group, Column (2). This column contains a brief description of the components of each assembly group.

c. Maintenance Functions, Column (3). This column lists the maintenance functions (A through K). The upper case letter placed in the appropriate column indicates the lowest maintenance level authorized to perform these functions. The symbol designations for the various maintenance levels are as follows:

C-Operator or crew
O-Organizational maintenance
F-Direct support maintenance

The maintenance functions are defined as follows:

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

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

C-Service. To clean, to preserve, to charge, and to add fuel, lubricants, cooling agents, and air. (If it is desired that elements, such as painting and lubricating, be defined separately, they may be so listed.)

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

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

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

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

H-Replace. To replace unserviceable items with serviceable like items.

I-Repair. Those maintenance operations necessary to restore an item to serviceable condition through correction of material damage or a specific failure. Repair may be accomplished at each level of maintenance.

J-Overhaul. Normally, the highest degree of maintenance performed by the Army in order to minimize time work is in process consistent with quality and economy of operation. It consists of that maintenance necessary to restore an item to completely serviceable condition as prescribed by maintenance standards in technical publications for each item of equipment. Overhaul normally does not return an item to like new, zero mileage, or zero hour condition.

K-Rebuild. The highest degree of materiel maintenance. It consists of restoring equipment as nearly as possible to new condition in accordance with original manufacturing standards. Rebuild is performed only when required by operational considerations or other paramount factors and then onIy at the depot maintenance level. Rebuild reduces to zero the hours or miles the equipment, or component thereof, has been in use.

d. Tools and Equipment, Column (4). This column is provided for referencing by code the

special tools and test equipment (sec. III), required to perform the maintenance functions (sec. II).

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

B-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 listed in section II. The letter represents the specific maintenance function the item is to be used with in columns A through K of section II.

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 tool or test equipment.

B-4. Explanation of Columns in Section IV

a. Reference Code. This column consists of two letters separated by a dash (entered from col. (5) of sec. II). The first letter references alpha sequence in column (5) and the second letter references a maintenance function, column (3), A through K.

b. Remarks. This column lists information pertinent to the maintenance function to be performed (as indicated in sec. II).

Section II. MAINTENANCE ALLOCATION CHART

(1) Group No.	(2) Assembly group	(3) Maintenance functions											(4) Tools and equipment	(5) Remarks
		A Inspect	B Test	C Service	D Adjust	E Align	F Calibrate	G Install	H Replace	I Repair	J Overhaul	K Rebuild		
01	WELDING SHOP													
	Welding Machine, Arc	C							F					
	Body, Trailer	C							F	O				
	Chassis, Trailer	C							F					
02	WELDING SET, INERT GAS SHIELDED													
	Welding Gun		O	C					O	O	F			
	Motor								F	F				
	Switch, Trigger and inching	C							F					
	Cable assembly, control	C	O						F					
	Cable assembly, current	C	O						O					
	Hose assembly, gas	C							O	O				
	Nozzle and adapter	C		C					O					A-C
	Barrel assembly	C		O					O					B-C
	Brake	O							O					
	Capacitor		F						F					
	Swing arm assembly				C				O					
	Handle assembly	O							F	F				
	Tube, guide	C		C	C				C					C-C
	Roll, drive	C		C					O					D-C
	Control Monitor		F	O	O				O	O	F			E-C
	Capacitor		O						O					
	Receptacles		O						O					
	Terminal strip	O							O					
	Resistors, fixed		O						O					
	Resistors, adjustable		O		O				O					
	Rheostat		O		C				O					
	Rectifier		O						O					
	Fuses	C							C					
	Relays		O						O					
	Switch, line		O						O					
03	MISCELLANEOUS COMPONENTS													
	Boxes, Tool	C							O	O				
	Reflectors, Clearance	C							O					

Section III. SPECIAL TOOL AND SPECIAL TEST EQUIPMENT REQUIREMENTS

Reference code	Maintenance Category	Nomenclature	Tool number
		No special tools or test equipment required.	

Section IV. REMARKS

Reference Code	Remarks
A-C	Remove weld spatter and other obstructions with pen knife or similar instrument.
B-C	Remove white residue from gas holes by direct spray of high pressure air stream.
C-C	Remove burrs and obstructions.
D-C	Clean serrated surface with stiff bristle brush.
E-C	Remove dust and dirt with clean, dry air stream.

APPENDIX C

BASIC ISSUE ITEMS AND TROOP INSTALLED OR AUTHORIZED LIST AND ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-I. Scope

a. This appendix lists basic issue items, items troop installed or authorized, repair parts, and special tools required by the crew / operator for operation and required for the performance of organizational, and direct support maintenance of the welding shop.

b. Repair parts listed represent those authorized for use at indicated maintenance levels and will be requisitioned (on an "as required" basis until stock age is justified by demand in accordance with AR 735-35 or AR 710-2).

C-2. General

This basic issue items, items troop installed or authorized. repair parts, and special tools list is divided into the following sections:

a. Basic Issue Item List - Section II. (Not Applicable)

b. Items Troop installed or Authorized List - Section III. A list, in alphabetical sequence, of items which, at the discretion of the unit commander, may accompany the end item, but are not subject to be turned in with the end item.

c. Prescribed Load Allowance-Section IV. (Not Applicable)

d. Repair Parts - Section V. A list, in figure and item number sequence, of repair parts authorized at the organizational level for the performance of maintenance, including those items which must be removed for replacement of the authorized item. Items, except kits and sets, are listed by assembly group in top down breakdown sequence. There are no repair parts kits or sets listed in this appendix.

e. Special tools List - Section VI. (Not Applicable)

f. Repair Parts List - Section VII. A list, in figure and item number sequence, of the repair parts authorized for the performance of maintenance at the direct support level, including those items which must be removed for replacement of the authorized item. Items. except kits and sets, are listed by assembly group in top down breakdown sequence. There are no repair parts kits or sets in this appendix.

g. Special Tools List—Section VIII. (Not Applicable)

h. Federal Stock Number and Reference Number Index - Section IX. A list of Federal Stock Numbers in ascending numerical sequence, followed by a list of reference numbers appearing in all listings, in ascending alpha-numeric sequence, cross-referenced to the illustration figure and item number.

NOTE

Items not illustrated are cross-referenced to assembly group number.

C-3. Explanation of Columns

The following provides an explanation of columns found in the tabular listings.

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

(1) Source code indicates the source for the listed items. Source Codes are:

Code	Explanation
P	Repair parts, Special Tools and Test Equipment supplied from the GSA/DSA, or Army supply system and authorized for use at indicated maintenance categories.
P2	Repair parts, Special Tools and Test Equipment which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.
M	Repair parts, Special Tools and Test Equipment which are not procured or stocked, as such, in the supply system but are to be manufactured at indicated maintenance levels.
A	Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.

Code	Explanation
X	Parts and assemblies that are not procured or stocked because tile failure rate is normally below that of the applicable end item or component. The failure of such part of assembly should result in retirement of the end item from the supplv system.
X1	Repair parts which are not procured or stocked. The requirement for such items will be filled by use of the next higher assembly or component.
X2	Repair parts, Special Tools and Test Equipment which are not stocked and have no foreseen mortality. The indicated maintenance category requiring such repair parts will attempt to obtain the parts through cannibalization or salvage, if not obtainable through cannibalization or salvage, the item may be requisitioned with exception data, from the end item manager, for immediate use.
	Major assemblies that are procured with PEMA funds for initial issue only as exchange assemblies at DSU and GSU level. These assemblies will not be stocked above DS and GS level or returned to depot supply level.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded X1 and aircraft support items as restricted by AR 700-42.

(2) Maintenance code indicates the lowest level of maintenance authorized to install the listed item. Repair parts and special tools assigned Maintenance Code "C" may be stocked at the operator level of maintenance when authorized by the Unit Commander. The maintenance level codes are:

Code	*Explanation*
C	Crew or Operator maintenance
O	Organizational maintenance
F	Direct Support maintenance

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

Code	*Explanation*
R	Applied to Repair parts, (assemblies and components) Special Tools and Test Equipment which are considered economically reparable at direct and general support maintenance levels. When the item is no longer economically repairable, it is normally disposed of at the GS level. When supply considerations dictate, some If these repair parts may be listed for automatic return to supply for depot level repair as set forth in AR 710.50. When so listed, they will be replaced by supply on an exchange basis.
S	Repart parts. Special Tools, Test Equipment and asscmblies which are economically reparable at DSU and GSU activities and which normally are furnished by supply on an exchange basis. When items are determined by a GSU to be uneconomically reparable. they will be evacuated to a depot for evaluation and analysis before final disposition.
T	High dollar value recoverable Repair parts. Special Tools and Test Equipment which are subject to special handling and are issued on an cxchange basis. Such items will be evacuated to the depot for overhaul or final disposition. Communication-Electronics and Mlissile Support items will be repaired / overhauled only at depots.
U	Repair parts, Special Tools and Test Equipment specifically selected for salvage by reclamation units because of precious metal content, critical materials. high dollar value or reusable casings or castings.

b. Federal Stock Number. 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 a minimum characteristic description required to describe the item. Assembly components and subassemblies are indented under major assemblies. The abbreviation "w / e" when used as part of the nomenclature, indicates the Federal stock number, includes all armament, equipment, accessories, and repair parts issued with the item. A part number or other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parenthesis. Repair parts quantities included in kits and sets are shown in front of the repair part name. Material required for manufacture or fabrication is identified.

d. Unit of Measure (U / M). A two-character alphabetic abbreviation indicating the amount or quantity of the item, as used, upon which the allowances are based, e.g., ft., ea., pr., etc.

e. Quantity Furnished with Equipment (Basic Issue Items Only). Indicates the quantity of the item furnished with the equipment.

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

g. Quantity Incorporated in Unit. Indicates the quantity of the item used in the assembly group. A "V" appearing in this column in lieu of a quantity indicates that a definite quantity cannot be indicated, (e.g., shims, spacers, etc.).

h. Fifteen-Day Organizational Maintenance.

(1) Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The allowance columns are divided into four subcolumns. Indicated in each subcolumn is the total quantity of special tools authorized for the number of equipments supported.

i. Thirty-Day DS Maintenance Allowance.

(1) Items authorized for use as required but

not for initial stockage are identified with an asterisk in the allowance column.

(2) The allowance columns are divided into three subcolumns. The quantitative allowance of special tools for DS level of maintenance will represent initial stockage for a 30-day period for the number of equipments supported. When special tools are not required, enter statement "Not Applicable".

j. One-Year Allowances Per 100 Equipment/Contingency Planning Purposes.

(1) Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) This column indicates the total quantity of special tools required for distribution and contingency planning purposes.

k. Depot Maintenance Allowance Per 100 Equipment. (Not Applicable)

l. Illustration. This column is divided as follows:

(1) Figure number. Indicates the figure nomber of the illustration on which the item is shown.

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

C-4. Special Information

a. Parts which require manufacture or assembly of a maintenance level higher than that authorized for installation will indicate column the higher maintenance level.

b. The same illustrations are used to illustrate the repair parts and special tools listed in both organizational maintenance section and direct support maintenance section.

C-5. How to Locate Repair Parts

a. When the Federal Stock Number or Reference Number is Unknown:

(1) *First.* Using the table of contents, determine the assembly group within which the repair part belongs. This is necessary since illustrations are prepared for assembly groups, and listings are divided into the same groups.

(2) *Second.* Find the illustration covering the assembly group to which the repair part belongs.

(3) *Third.* Identify the repair part on the illustration and note the illustration' figure and item number of the repair part.

(4) *Fourth.* Using the Repair Parts Listing, find the assembly group to which the repair part belongs and locate the illustration figure and item number noted on the illustration.

b. When the Federal Stock Number or Reference Number is Known:

(1) *First.* Using the Index of Federal Stock Numbers and Reference Numbers find the pertinent Federal stock number or reference number. This index is in ascending FSN sequence followed by a list of reference numbers in alpha-numeric sequence, cross-referenced to the illustration figure number and item number.

(2) *Second.* Using the Repair parts listing, find the assembly group of the repair part and the illustration figure number and item number referenced in the index of Federal Stock Numbers and Reference Numbers.

c. When the Federal Stock Number or Reference Number is Known and the Repair Part is Not Illustrated:

(1) *First.* Using the index of Federal Stock Numbers and Reference Numbers find the pertinent Federal stock number or reference number in the section titled "Items Not Illustrated" and note the group number. This section is in ascending FSN sequence followed by a list of reference numbers in alpha-numeric sequence cross-referenced to assembly group number.

(2) *Second.* Using the Table of Contents, locate the assembly group number and page number.

(3) *Third.* Using the applicable group number and page number, locate the pertinent stock number or reference number in the Repair Parts Listing.

C-6. Abbreviations

dia	diameter
ea	each
FSN	Federal Stock Number
hd	head
id	inside diameter
in.	inch(es)
lg	long (length)
mtg	mounting
no.	number
od	outside diameter
thd	thread (es) (ed)
thk	thick (ness)
V	volts

C-7. Recommendations for Maintenance Publications Improvements

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

Section II. BASIC ISSUE ITEMS

(1) SMR code	(2) Federal stock number	(3) Description Ref No. & Mfr Code / Usable on code	(4) Unit of meas	(5) Qty inc in unit	(6) Qty furn with equip	(7) Illustration (A) Fig No.	(7) Illustration (B) Item No.
		(NOT APPLICABLE)					

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) Unit of meas	(5) Qty auth
PC	7520-559-9618	Case, Maintenance and Operational Manual	EA	1 /

Section IV. PRESCRIBED LOAD ALLOWANCE

(1) Federal stock number	(2) Description Usable on code	(3) 15-Day organizational maintenance alw (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100
	(NOT APPLICABLE)				

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
		SECTION V - REPAIR PARTS FOR ORGANIZATIONAL MAINTENANCE								
		GROUP 01 - WELDING SHOP								
X20		SHACKLE, ANCHOR: LIFTING AND TIE DOWN RRC271TYPE IVCLASS4 (36024)	EA	4					C1	1
P O	5305-269-3214	SCREW, CAP, HEXAGON HEAD: CYLINDER STOP MTG, 3/8-16 THD SIZE, 1 1/2 IN. LG MS90725-64 (96906)	EA	4	*	*	*	*	C1	2
P O	5310-184-8971	WASHER, LOCK: CYLINDER STOP MTG, 3/8 IN. SCREW SIZE MS35338-103 (96906)	EA	4	*	*	*	*	C1	3
X20		PLATE, NUT: CYLINDER STOP MTG 13217E3316 (97403)	EA	2					C1	4
X20		STOP, CYLINDER 13217E3315 (97403)	EA	2					C1	5
P O	5310-959-7600	NUT, SELF-LOCKING, HEXAGON: U-BOLT MTG, 1/4-18 THD SIZE MS51922-5 (96906)	EA	4	*	*	*	*	C1	6
P O		BOLT, U, GROUND ROD MTG, 1/4-28 THD SIZE NAS3104-6-10 (24062)	EA	2	*	*	*	*	C1	7
P O	5315-839-5821	PIN, COTTER: GAS BOTTLE HOLD-DOWN CLEVIS PIN, 1/8 IN. DIA. 3/4 IN. LG MS24665-351 (96906)	EA	2	*	*	*	*	C1	27
X20		PIN, STRAIGHT, HEADED: GAS BOTTLE HOLD-DOWN CLEVIS, 1/2 IN. DIA, 1 27/64 IN. LG MS35810-36 (96906)	EA	2					C1	28
X20		CLEVIS, ROD END: GAS BOTTLE HOLD-DOWN 13217E3324 (97403)	EA	2					C1	29
P O	5310-768-0318	NUT, PLAIN, HEXAGON: GAS BOTTLE HOLD-DOWN LOAD BINDER EYE BOLT, 1/2-13THD SIZE MS51967-14 (96906)	EA	2	*	*	*	*	C1	30
X20		BOLT, EYE, TURNBUCKLE: GAS BOTTLE HOLD-DOWN LOAD BINDER 13216E7335 (97403)	EA	2					C1	31
X20		LOAD BINDER: GAS BOTTLE HOLD-DOWN 13216E7326 (97403)	EA	2					C1	32
M O	4010-160-8563	CHAIN: GAS BOTTLE HOLD-DOWN MANUFACTURE FROM:	EA	4					C1	33
P O	4010-161-8563	CHAIN, 12 LINKS REQUIRED			*	*	*	*	C1	33
P O	5315-839-5821	PIN, COTTER: GAS BOTTLE HOLD-DOWN CLEVIS PIN, 1/8 IN. DIA, 3/4 IN. LG MS24665-351 (96906)	EA	3	*	*	*	*	C1	34
		PIN, STRAIGHT, HEADED: GAS BOTTLE HOLD-DOWN CLEVIS, 1/2 IN. DIA, 1 27/64 IN. LG MS35810-36 (96906)	EA	3					C1	35
X20		CLEVIS, ROD, END: GAS BOTTLE HOLD-DOWN 13217E3324 (97403)	EA	3					C1	36
P O	5310-768-0318	NUT, PLAIN, HEXAGON: GAS BOTTLE HOLD-DOWN LOAD BINDER EYE BOLT, 1/2-13 THD SIZE MS51967-14 (96906)	EA	3	*	*	*	*	C1	37

(1) SM COI	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USA C C	(4) UNI OF IEA	(6) 15-DAY ORGANIZATIO MAINTENANCE ALW (a) 1	(b) 6-20	(c) 21-50	51	(7) ILLUS-TRATIO (a) FIG. NO	(b) ITE NO
X20		LINK, END, LAP: GAS BOTTLE HOLD-DOWN, 1/4 IN. RRC271TYPE III (97403)		EA					C1	38
X20		BOLT, EYE, TURNBUCKLE: GAS BOTTLE HOLD-DOWN LOAD BINDER 13216E7335 (97403)		EA					C1	39
M O	4010-161-856	CHAIN: GAS BOTTLE HOLD-D(MANUFACTURE FROM:		EA					C1	40
P O	4010-161-856	CHAIN, 22 LINKS REQUIRED				*	*		C1	40
X20		LOAD BINDER: GAS BOTTLE HOLD-DOWN 13216E7326 (97403)		EA					C1	41
M O		CHAIN: GAS BOTTLE HOLD-DOWN MANUFACTURE FROM:		EA					C1	42
P O	010-161-856	CHAIN, 3 LINKS REQUIRED					*		C1	42
		GROUP 02. WELDING SET, INERT GAS SHIELDED								
P20	4131-935-782	WELDING SET, INERT GAS SHIELDED SP10 (88725)		EA			*		C	1
P20	4131-160-78	GUN, WELDING: METAL INERT GAS 321B107G08 (08452)		EA			*		C	2
P20		BOLT, REEL COVER 419A029H01 (08452)		EA			*		C	3
P20	5330-762-225	PACKING, PREFORMED: REEL COVER BOLT MS29513-008 (96906)		EA			*		C	4
P O	31-875-765	COVER, REEL 637C247H01 (08452)		A		*	*	*	2	5
P O	05-984-567	SCREW, MACHINE: REEL SHAFT MTG, PAN HEAD, CROSS RECESS, 5/16-18 THD SIZE, 3/4 IN. LG MS35206-296 (96906)		A		*	*	*	2	6
P O	3431-164-266	SHAFT, REEL 448A024H01 (08452)		A		*	*	*	2	7
P O	5310-167-082	WASHER, FLAT: REEL SHAFT MTG, 0.0328 IN. ID, 0.562 IN. OD, 0.064 IN. THK AN960-516 (88044)		A		*	*	*	2	8
P O	5305-958-305	SCREW, TAPPING, THREAD CUTTING: BRAKE SUPPORT MTG, NO. 6-32 THD SIZE, 3/8 IN. LG MS24649-24 (96906)		A		*	*	*	C2	9
P O	5310-045-4007	WASHER, LOCK: BRAKE SUPPORT MTG, NO. 6 SCREW SIZE MS35338-41 (96906)		A		*	*	*	C2	10
P O	5310-167-0816	WASHER, FLAT: BRAKE SUPPORT MTG. NO. 6 SCREW SIZE AN960-6 (88044)		EA		*	*	*	C2	11
O	4431-875-7651	SUPPORT, BRAKE 419A008H01 (08452)		EA	1	*	*	*	2	12
O	4431-446-2643	BRAKE 419A011H01 (08452)		EA	1	*	*	*	2	13
O		KNOB, RHEOSTAT 451A240H01 (08452)		EA	1	*	*	*	2	14
O	5305-958-0670	SCREW, MACHINE: WELDING GUN SHIELD MTG, PAN HEAD SLOTTED, NO. 8-36 THD SIZE, 2 3/4 IN. LG MS35224-56 (96906)		A	3	*	*	*	2	15

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
X20		SHIELD, POTENTIOMETER 483A753H01 (08452)		EA	1					C2	16
P O O	3431-162-3978	CABLE ASSEMBLY, CURRENT 310B142G06 (08452)		EA	1	*	*	*	*	C2	18
P O		HOSE ASSEMBLY, GAS 432C506G06 (08452)		EA	1	*	*	*	*	C2	19
X20		BOOT: CURRENT CABLE AND GAS HOSE 419A046H01 (08452)		EA	1					C2	20
P O	5325-281-3536	BUSHING, RUBBER: CURRENT CABLE THROUGH WELDING GUN SHIELD 282498 (08452)		EA	1	*	*	*	*	C2	21
X20		SHIELD ASSEMBLY: WELDING GUN 867D652G01 (08452)		EA	1					C2	22
X20		SCREW, LOCK, GUIDE TUBE 422A505G01 (08452)		EA	1					C2	23
P O	3431-997-2291	TUBE, GUIDE, WIRE: 0.030 IN. WIRE DIA 306B172H03 (08452)		EA	1	*	*	*	*	C2	24
P O	3431-446-2644	TUBE, GUIDE, WIRE: 0.047 IN. WIRE DIA 306B172H09 (08452)		EA	1	*	*	*	*	C2	24
P O	3431-928-2519	NOZZLE, GAS 311B703H03 (08452)		EA	1	*	*	*	*	C2	25
P20	3431-875-7930	ADAPTOR: GUN TUBE TO NOZZLE 419A003H01 (08452)		EA	1	*	*	*	*	C2	26
P O	3431-875-7638	WASHER, INSULATING: BARREL TO ADAPTOR 419A006H02 (08452)		EA	1	*	*	*	*	C2	27
P O	3431-875-7637	WASHER, INSULATING: BARREL TO ADAPTOR 419A006H01 (08452)		EA	1	*	*	*	*	C2	28
P O	5305-582-5807	SCREW, MACHINE: GUN BARREL HOUSING MTG, NO. 6-32 THD SIZE, 3/8 IN. LG MS35265-28 (96906)		EA	4	*	*	*	*	C2	29
X20		HOUSING, GUN BARREL 453A483H01 (08452)		EA	1					C2	30
X20		INSULATION, GUN BARREL 419A005H02 (08452)		EA	1					C2	31
X20		INSULATION: GUN BARREL 419A010H01 (08452)		EA	1					C2	32
X20		GUN BARREL ASSEMBLY 419A002G02 (08452)		EA	1					C2	33
P O	3431-875-7637	WASHER, INSULATING: BARREL TO BRACKET ASSEMBLY 419A006H01 (08452)		EA	1	*	*	*	*	C2	34
P O	3431-162-3977	BUSHING, FRONT GUIDE 2209A70H01 (08452)		EA	1	*	*	*	*	C2	35
P O	5305-719-5336	SETSCREW: REAR GUIDE BUSHING MTG, HEADLESS SOCKET DRIVE, CUP POINT, NO. 8-32 THD SIZE, 1/8 IN. LG MS51963-33 (96906)		EA	1	*	*	*	*	C2	36
P20		RING, RETAINING: REAR GUIDE BUSHING 52D9290H01 (08452)		EA	1	*	*	*	*	C2	37

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
P20		BUSHING, REAR GUIDE 488A441H01 (08452)		EA	1	*	*	*	*	C2	38
X20		FITTING: GAS HOSE MTG 419A043H01 (08452)		EA	1					C2	39
P20		PIN: BRACKET AND FITTING ASSEMBLY 452A107H01 (08452)		EA	1	*	*	*	*	C2	40
X20		PLUG, PIPE: BRACKET AND FITTING ASSEMBLY 453A757H01 (08452)		EA	1					C2	41
P 0		SPRING: BRACKET AND FITTING ASSEMBLY 452 A106H01 (08452)		EA	1	*	*	*	*	C2	42
P20		BEARING, BALL: BRACKET AND FITTING ASSEMBLY 452A108H01 (08452)		EA	1	*	*	*	*	C2	43
P 0	5330-641-0693	PACKING, PREFORMED: BRACKET AND FITTING ASSEMBLY 442A161H04 (08452)		EA	1	*	*	*	*	C2	44
P 0	5305-958-4361	SCREW, MACHINE: BRACKET AND FITTING ASSEMBLY MTG, NO. 8-36 THD SIZE, 1 1/2 IN. LG MS35207-251 (96906)		EA	1	*	*	*	*	C2	45
P 0	5305-719-5336	SETSCREW: BRACKET AND FITTING ASSEMBLY, HEADLESS, SOCKET DRIVE, CUP POINT, NO. 8-32 THD SIZE, 1/8 IN. LG MS51963-33 (96906)		EA	1	*	*	*	*	C2	46
P 0	5305-989-7435	SCREW, MACHINE: BEARING ARM MTG, PAN HEAD, CROSS RECESS, NO. 10-32 THD SIZE, 5/8 IN. LG MS35207-264 (96906)		EA	1	*	*	*	*	C2	47
P20	3431-875-7646	SCREW, NYLON: BEARING ARM IDLER ROLL MTG 442A169H01 (08452)		EA	1	*	*	*	*	C2	48
C20		WASHER, INSULATION: BEARING ARM IDLER ROLL MTG 310B141H04 (08452)		EA	2					C2	49
P 0	3431-875-7645	ROLL, IDLER, INSULATED: BEARING ARM 557D415H39 (08452)		EA	1	*	*	*	*	C2	50
P20	5330-762-2299	PACKING, PREFORMED: BEARING ARM BOLT MS29513-008 (96906)		EA	1	*	*	*	*	C2	51
C20		BOLT, BEARING ARM 419A025H01 (08452)		EA	1					C2	52
P 0	4935-875-7648	SPRING: BEARING ARM BOLT 419A027H01 (08452)		EA	1	*	*	*	*	C2	53
P20	3431-164-2665	ARM, BEARING 419A026H02 (08452)		EA	1	*	*	*	*	C2	54
C20		BRACKET AND FITTING ASSEMBLY 427C605G08 (08452)		EA	1					C2	55
C20		FITTING ASSEMBLY 427C605G04 (08452)		EA	1					C2	56
P 0	5305-582-5807	SCREW, MACHINE: WELDING GUN HANDLE MTG, NO. 6-32 THD SIZE, 3/8 IN. LG MS35265-28 (96906)		EA	1	*	*	*	*	C2	57
P 0	5305-582-5808	SCREW, MACHINE: WELDING GUN HANDLE MTG, NO. 6-32 THD SIZE, 5/8 IN. LG MS35265-31 (96906)		EA	1	*	*	*	*	C2	58

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) T S	(5) QTY INC IN UNIT	(6) 3-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 5	(b) 20	(c) 1-50	(d) 1-100	(7) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
0	305-514-7506	SCREW, MACHINE: WELDING GUN HANDLE MTG, NO. 6-32 THD SIZE, 1/4 IN. LG MS35265-26 (96906)		A	1	*	*	*	*	C2	59
20		CONTROL, WELDING 479B043G01 (08452)		A	1					C3	1
0	5305-855-0971	SCREW, SELF-TAPPING, THREAD CUTTING: TOP PLATE TO WELDING CONTROL MTG, NO. 6-32 THD SIZE, 3/16 IN. LG MS24649-21 (96906)		A	4	*	*	*	*	3	2
20		PLATE, TOP: WELDING CONTROL 867D749G04 (08452)		A	1					3	3
0	5305-855-0971	SCREW, SELF-TAPPING, THREAD CUTTING: BACK PLATE TO WELDING CONTROL MTG, NO. 6-32 THD SIZE, 3/16 IN. LG MS24649-21 (96906)		A	6	*	*	*	*	3	4
20		PLATE, BACK 867D749H05 (08452)		A	1					3	5
0	5305-855-0971	SCREW, SELF-TAPPING, THREAD CUTTING: FRONT BOTTOM PLATE TO WELDING CONTROL MTG, NO. 6-32 THD SIZE, 3/16 IN. LG MS24649-21 (96906)		A	4	*	*	*	*	3	6
20		PLATE, FRONT, BOTTOM 867D749H06 (08452)		A	1					3	7
P 0	5930-577-2285	SWITCH, RANGE MS35059-23 (96906)		A	1	*	*	*	*	3	8
P 0	5930-655-1575	SWITCH, POWER MS35059-22 (96906)		A	1	*	*	*	*	3	9
P 0	6210-165-1486	LAMP ASSEMBLY: WELDING CONTROL 422A547H05 (08452)		A		*	*	*	*	3	10
P 0	6240-223-9100	LAMP, INCANDESCENT GE81A (08805)		A		*	*	*	*	3	11
P 0	5305-855-0958	SCREW, SELF-TAPPING, THREAD CUTTING: FRONT TOP PLATE TO WELDING CONTROL MTG, NO. 10-24 THD SIZE, 3/8 IN. LG MS24629-45 (96906)		A			*		*	C	12
X20		PLATE, FRONT, TOP 867D749H07 (08452)		A						C	13
X20	5920-556-0144	HOLDER, FUSE 342004 (75915)		A						C	14
P 0	5920-843-8077	FUSE: 4 AMP, 250V MS15249-4 (96906)		A					*	C	15
P 0		FUSE: 1 AMP, 250V MS15249-1 (96906)		A					*	C	16
P 0		NUT, PLAIN, HEXAGON: TRANSFORMER MTG, NO. 10-32 THD SIZE MS35650-102 (96906)		A					*	C	17
P 0	5310-045-3295	WASHER, LOCK: TRANSFORMER MTG, NO. 10 SCREW SIZE MS35338-43 (96906)		A					*	C	18
P 0		SCREW, MACHINE: TRANSFORMER MTG, NO. 10-32 THD SIZE, 1/2 IN. LG MS35224-63 (96906)		A					*	C	19
P 0	5950-156-0699	TRANSFORMER: WELDING CONTROL 488A250H01 (08452)		A					*	C	20

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF EA	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-10	(7) ILLUSTRATION (a) FIG NO	(b) ITEM NO.
P O	5310-013-4530	NUT, PLAIN, HEXAGON: WELDING CONTROL RESISTOR MTG, NO. 6-32 THD SIZE MS35649-62 (96906)		EA	4	*	*	*	*	C	21
P O	5310-045-4007	WASHER, LOCK: WELDING CONTROL RESISTOR MTG, NO. 6 SCREW SIZE MS35338-41 (96906)		EA	4	*	*	*	*	C	22
P O		SCREW, MACHINE: WELDING CONTROL RESISTOR MTG, NO. 6-32 THD SIZE, 3/8 IN. LG MS35223-28 (96906)		EA	4	*	*	*	*	C	23
P O	5905-161-3446	RESISTOR: WELDING CONTROL 463A462H06 (08452)		EA	2	*	*	*	*	C	24
X20		RECTIFIER: WELDING CONTROL 429A062H01 (08452)		EA	1					C	25
P O	5305-855-0971	SCREW, SELF-TAPPING, THREAD CUTTING: WELDING CONTROL RECEPTACLE MTG, NO. 6-32 THD SIZE, 3/16 IN. LG MS24649-21 (96906)		EA	4	*	*	*	*	C	26
X20		RECEPTACLE: WELDING CONTROL 483A891H01 (08452)		EA	1					C	27
P O	5310-013-4530	NUT, PLAIN, HEXAGON: WELDING CONTROL RELAY MTG, NO. 6-32 THD SIZE MS35649-62 (96906)		EA	2	*	*	*	*	C	28
P O	5310-045-4007	WASHER, LOCK: WELDING CONTROL RELAY MTG, NO. 6 SCREW SIZE MS35338-41 (96906)		EA	2	*	*	*	*	C	29
P O		SCREW, MACHINE: WELDING CONTROL RELAY MTG, NO. 6-32 THD SIZE, 3/8 IN. LG MS35223-28 (96906)		EA	2	*	*	*	*	C	30
P20		RELAY: WELDING CONTROL 480B09H03 (08452)		EA	1	*	*	*	*	C	31
P O	5310-013-4530	NUT, PLAIN, HEXAGON: WELDING CONTROL TERMINAL BLOCK MTG, NO. 6-32 THD SIZE MS35649-62 (96906)		EA	2	*	*	*	*	C	32
P O	5310-045-4007	WASHER, LOCK: WELDING CONTROL TERMINAL BLOCK MTG, NO. 6 SCREW SIZE MS35338-41 (96906)		EA	2	*	*	*	*	C	33
P O	5305-543-2188	SCREW, MACHINE: WELDING CONTROL TERMINAL BLOCK MTG, NO. 6-32 THD SIZE, 3/4 IN. LG MS35223-32 (96906)		EA	2	*	*	*	*	C	34
C20		BLOCK, TERMINAL: WELDING CONTROL 32B1029H13 (08452)		EA	1					C	35
P O	5905-163-3599	RESISTOR: WELDING CONTROL 450A297H06 (08452)		EA	2	*	*	*	*	C	36
P O	5905-161-3445	RESISTOR: WELDING CONTROL 463A462H07 (08452)		EA	1	*	*	*	*	C	37
P O	5431-162-3974	CABLE ASSEMBLY: WELDING CONTROL 435C512G01 (08452)		EA	1	*	*	*	*	C	38
P O	5431-162-3975	CABLE ASSEMBLY: WELDING CONTROL 21C8339G07 (08452)		EA	1	*	*	*	*	C	39
C20		BUSHING: WELDING CONTROL CABLE 427C613H04 (08452)		EA	2					C	40

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF EA	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
20		BUSHING: WELDING CONTROL BRACKET 282498 (08452)	EA	1					C3	41
0		NUT, PLAIN, HEXAGON: BRACKET MTG, NO. 10-32 THD MS35650-102 (96906) SIZE	EA	2	*	*	*	*	C3	42
0	5310-045-3296	WASHER, LOCK: BRACKET MTG, NO. 10 SCREW SIZE MS35338-43 (96906)	EA	2	*	*	*	*	C3	43
0		SCREW, MACHINE: BRACKET MTG, NO. 10-32 THD SIZE, 1/2 IN. LG MS35224-63 (96906)	EA	2	*	*	*	*	C3	44
20		BRACKET: RECTIFIER, RELAY AND TERMINAL BLOCK MTG 867D749H02 (08452)	EA	1					C3	45
0	5305-855-0958	SCREW, SELF-TAPPING, THREAD FORMING: BRACKET TO WELDING CONTROL BASE MTG, NO. 10-24 THD SIZE, 3/8 IN. LG MS24629-45 (96906)	EA	4	*	*	*	*	C3	46
20		BRACKET: WELDING CONTROL BASE 867D749H03 (08452)	EA	1					C3	47
		GROUP 03 - MISCELLANEOUS COMPONENTS								
20	5340-912-4088	PADLOCK SET: TOOL BOX MS21313-162 (96906)	EA	1	*	*	*	*	C4	1
0	5310-088-1251	NUT, SELF-LOCKING, HEXAGON: TOOL BOX MTG, 1/4-20 THD SIZE MS51922-1 (96906)	EA	6	*	*	*	*	C4	2
0	5310-809-4058	WASHER, FLAT: TOOL BOX MTG, 1/4 IN. SCREW SIZE MS27183-10 (96906)	EA	6	*	*	*	*	C4	3
0	5305-071-2241	SCREW, CAP, HEXAGON HEAD: TOOL BOX MTG, 1/4-20 THD SIZE, 1 1/4 IN. LG MS90725-10 (96906)	EA	6	*	*	*	*	C4	4
20		DOOR, BOX: TOOL BOX, LH FENDER 13217E3322 (97403)	EA	1					C4	5
0		BOX, TOOL: LH FENDER 13217E3313 (97403)	EA	1					C4	6
0	5310-088-1251	NUT, SELF-LOCKING, HEXAGON: TOOL BOX MTG, 1/4-20 THD SIZE MS51922-1 (96906)	EA	12	*	*	*	*	C4	7
0	5310-809-4058	WASHER, FLAT: TOOL BOX MTG, 1/4 IN. SCREW SIZE MS27183-10 (96906)	EA	12	*	*	*	*	C4	8
0	5305-071-2241	SCREW, CAP, HEXAGON HEAD: TOOL BOX MTG, 1/4-20 THD SIZE, 1 1/4 IN. LG MS90725-10 (96906)	EA	12	*	*	*	*	C4	9
0		DOOR, BOX: TOOL BOX, FRONT 13217E3321 (97403)	EA	2					C4	10
20		BOX, TOOL: FRONT 13217E3312 (97403)	EA	2					C4	11
0	5310-088-1251	NUT, SELF-LOCKING, HEXAGON: TOOL BOX MTG, 1/4-20 THD SIZE MS51922-1 (96906)	EA	8	*	*	*	*	C4	12
0	5310-809-4058	WASHER, FLAT: TOOL BOX MTG, 1/4 IN. SCREW SIZE MS27183-10 (96906)	EA	8	*	*	*	*	C4	13

(1) SMR COD.	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) INI OI IE.	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-5	(d) 51-10	(7) US- TION T (a) FIG NO	(b) ITEM NO.
' 0	5305-071-224	SCREW, CAP, HEXAGON HEAD: TOOL BOX MTG, 1/4-20 THD S I ZE, 1 1/4 IN. LG MS90725-10 (96906)		E	8	*	*		*	C	14
20		FLOOR , BOX: TOOL BOX, RH FENDER 13217E3323 (97403)		E	1					C	15
20		BOX, TOOL: RH FENDER 13217E3314 (97403)		E	1					C	16
' 0	5310-088-125	NUT, SELF-LOCK I NG. HEXAGON: REFLECTOR MTG, 1/4-20 THD SIZE MS51 922-1 (96906)		E	8	*	*	*	*	C	17
' 0	5305-068-050	SCREW, CAP, HEXAGON HEAD: REFLECTOR MTG, 1/4-20 THD SIZE, 5/8 IN. LG MS90725-5 (96906)		E	8	*	*	*	*	C	18
20	5905-202-363	REFLECTOR, AMBER MS35387-2 (96906)		E	4	*	*	*	*	C	19
0	5310-088-1251	NUT, SELF-LOCKING, HEXAGON: REFLECTOR MTG, 1/4-20 THD SIZE MS51 922-1 (96906)		E	8	*	*	*	*	C	20
0	5305-068-0501	SCREW, CAP, HEXAGON HEAD: REFLECTOR MTG, 1/4-20 THD SIZE, 5/8 IN. LG MS90725-5 (96906)		E	8	*	*	*	*	C	21
20	5905-205-2795	REFLECTOR, RED MS35387-1 (96906)		E	4	*	*	*	*	C	22

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
		SECTION VII - REPAIR PARTS FOR DS MAINTENANCE												
		GROUP 01 - WELDING SHOP												
X20		SHACKLE, ANCHOR: LIFTING AND TIE DOWN RRC271TYPEIVCLASS4 (36024)	EA	4									C1	1
P O	5305-269-3214	SCREW, CAP, HEXAGON HEAD: CYLINDER STOP MTG, 3/8-16 THD SIZE, 1 1/2 IN. LG MS90725-64 (96906)	EA	4	*	*	*				*	*	C1	2
P O	5310-184-8971	WASHER, LOCK: CYLINDER STOP MTG, 3/8 IN. SCREW SIZE MS35338-103 (96906)	EA	4	*	*	*				*	*	C1	3
X20		PLATE, NUT: CYLINDER STOP MTG 13217E3316 (97403)	EA	2									C1	4
X20		STOP, CYLINDER 13217E3315 (97403)	EA	2									C1	5
P O	5310-959-7600	NUT, SELF-LOCKING, HEXAGON: U-BOLT MTG, 1/4-18 THD SIZE MS51922-5 (96906)	EA	4	*	*	*				*	*	C1	6
P O		BOLT, U, GROUND ROD MTG, 1/4-28 THD SIZE NAS3104-6-10 (24062)	EA	2	*	*	*				*	*	C1	7
P F	5305-068-0511	SCREW, CAP, HEXAGON HEAD: WELDING MACHINE MTG, 3/8-16 THD SIZE, 1 1/4 IN. LG MS90728-62 (96906)	EA	4	*	*	*				*	*	C1	8
P F	5310-107-0671	WASHER, LOCK: WELDING MACHINE MTG, 3/8 IN. SCREW SIZE MS35338-102 (96906)	EA	4	*	*	*				*	*	C1	9
P F	5310-080-6004	WASHER, FLAT: WELDING MACHINE MTG, 3/8 IN. SCREW SIZE MS27183-14 (96906)	EA	4	*	*	*				*	*	C1	10
K2F R	3431-253-0558	WELDING, MACHINE: ARC, 300 AMP LTO-300 (36024)	EA	1									C1	11
P F	5305-068-0511	SCREW, CAP, HEXAGON HEAD: TAILLIGHT TO TRAILER BODY MTG, 3/8-16 THD SIZE, 1 1/4 IN. LG MS90728-62 (96906)	EA	4	*	*	*				*	*	C1	12
K2F		SPACER: TAILLIGHT TO TRAILER BODY MTG 13217E3320-1 (97403)	EA	2									C1	13
K2F		SPACER: TRAILER BRAKE CABLE CLAMP MTG 13217E3320-1 (97403)	EA	2									C1	14
K2F		SPACER: TRAILER BRAKE LEVER MTG 13217E3320-2 (97403)	EA	2									C1	15
P F	5310-087-4652	NUT, SELF-LOCKING, HEXAGON: TRAILER BODY TO TRAILER MTG, 3/8-16 THD SIZE MS51922-17 (96906)	EA	2	*	*	*				*	*	C1	16
P F	5305-068-0511	SCREW, CAP, HEXAGON HEAD: TRAILER BODY TO TRAILER MTG, 3/8-16 THD SIZE, 1 1/4 IN. LG MS90728-62 (96906)	EA	2	*	*	*				*	*	C1	17
P F	5310-087-4652	NUT, SELF-LOCKING, HEXAGON: TRAILER BODY TO TRAILER MTG, 3/8-16 THD SIZE MS51922-17 (96906)	EA	12	*	*	*				*	*	C1	18

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30- (a) 1-20	(6) DS OW (b) 21-5(	(6) INT E (c) 1-100	(7) 30- (a) 1-20	(7) YGS OWA (b) 21-50	(7) INT E (c) 51-10(	(8) 1-YR ALW PER 100 QUIP NTGY	(9) EPO AINT ALW PER 100 QUIP	(10) ILL TR (a) FIG NO	(10) ON (b) TEM NO
F	5305-068-0511	CREW, CAP, HEXAGON HEAD: TRAILER BODY TO TRAILER MTG, 3/8-16 THE SIZE, 1 1/4 IN. LG MS90728-62 (96906)		EA	12	*	*	*				*	*	C1	19
F	5310-087-4652	JT, SELF-LOCK ING. HEXAGON: TRAILER BODY TO TRAILER MTG, 3/8-16 THD SIZE MS51922-17 (96906)		EA	4	*	*	*				*	*	C1	20
F	5305-782-9489	CREW, CAP, HEXAGON HEAD: TRAILER BODY TO TRAILER MTG, 3/8-16 THD SIZE, 2 IN. LG MS90728-66 (96906)		EA	4	*	*	*				*	*	C1	21
F	5310-087-4652	UT, SELF-LOCKING, HEXAGON: TRAILER BODY TO TRAILER MTG, 3/8-16 THD SIZE MS51922-17 (96906)		EA	6	*	*	*				*	*	C1	22
F	5305-068-0511	CREW, CAP, HEXAGON HEAD: TRAILER BODY TO TRAILER MTG, 3/8-16 THD SIZE, 1 1/4 IN. LG MS90728-62 (96906)		EA	6	*	*	*				*	*	C1	23
F	5310-984-3806	JT, SELF-LOCKING, HEXAGON: TRAILER BODY TO TRAILER MTG, 5/16-18 THD SIZE MS51922-9 (96906)		EA	14	*	*	*				*	*	C1	24
F	5306-226-4827	OLT, MACHINE: TRAILER BODY TO TRAILER MTG, 5/16-18 THD SIZE, 1 IN. LG MS90728-34 (96906)		EA	14	*	*	*				*	*	C1	25
2F R		ODY, TRAILER 13217E3311 (97403)		EA	1									C1	26
0	5315-839-5821	PIN, COTTER: GAS BOTTLE HOLD-DOWN CLEVIS PIN, 1/8 IN. DIA, 3/4 IN. LG MS24665-351 (96906)		EA	2	*	*	*				*	*	C1	27
20		PIN, STRAIGHT, HEADED: GAS BOTTLE HOLD-DOWN CLEVIS, 1/2 IN. DIA, 1 27/64 IN. LG MS35810-36 (96906)		EA	2									C1	28
20		CLEVIS, ROD END: GAS BOTTLE HOLD-DOWN 13217E3324 (97403)		EA	2									C1	29
0	5310-768-0318	NUT, PLAIN, HEXAGON: GAS BOTTLE HOLD-DOWN LOAD BINDER EYE BOLT, 1/2-13 THD SIZE MS51967-14 (96906)		EA	2	*	*	*				*	*	C1	30
20		BOLT, EYE, TURNBUCKLE: GAS BOTTLE HOLD-DOWN LOAD BINDER 13216E7335 (97403)		EA	2									C1	31
20		LOAD BINDER: GAS BOTTLE HOLD-DOWN 13216E7326 (97403)		EA	2									C1	32
0	4010-160-8563	CHAIN: GAS BOTTLE HOLD-DOWN MANUFACTURE FROM:		EA	4									C1	33
0	4010-161-8563	CHAIN, 12 LINKS REQUIRED				*	*	*						C1	33
0	5315-839-5821	PIN, COTTER: GAS BOTTLE HOLD-DOWN CLEVIS PIN, 1/8 IN. DIA, 3/4 IN. LG MS24665-351 (96906)		EA	3	*	*	*				*	*	C1	34
20		PIN, STRAIGHT, HEADED: GAS BOTTLE HOLD-DOWN CLEVIS, 1/2 IN. DIA, 1 27/64 IN. LG MS35810-36 (96906)		EA	3									C1	35

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
K20		CLEVIS, ROD, END: GAS BOTTLE HOLD-DOWN 13217E3324 (97403)	EA	3									C1	36
P O	5310-768-0318	NUT, PLAIN, HEXAGON: GAS BOTTLE HOLD-DOWN LOAD BINDER EYE BOLT, 1/2-13 THD SIZE MS51967-14 (96906)	EA	3	*	*	*				*	*	C1	37
C20		L INK, END, LAP: GAS BOTTLE HOLD-DOWN, 1/4 IN. RRC271 TYPE III (97403)	EA	6									C1	38
C20		BOLT, EYE, TURNBUCKLE: GAS BOTTLE HOLD-DOWN LOAD BINDER 13216E7335 (97403)	EA	3									C1	39
H O	4010-161-8563	CHAIN: GAS BOTTLE HOLD-DOWN MANUFACTURE FROM:	EA	3									C1	40
P O	4010-161-8563	CHAIN, 22 LINKS REQUIRED			*	*	*						C1	40
C20		LOAD B INDER: GAS BOTTLE HOLD-DOWN 13216E7326 (97403)	EA	3									C1	41
H O		CHAI N: GAS BOTTLE HOLD-DOWN MANUFACTURE FROM:	EA	3									C1	42
P O	4010-161-8563	CHAIN, 3 LINKS REQUIRED			*	*	*				*	*	C1	42
2F R	2330-898-6780	CHASSIS, TRAILER MS53028-1 (96906)	EA	1									C1	43
		GROUP 02 - WELDING SET, INERT GAS SHIELDED												
20	3431-935-7822	WELDI NG SET, INERT GAS SHI ELDED SP10 (88725)	EA	1	*	*	*				*	*	C2	1
20	3431-160-7880	GUN, WELDING: METAL INERT GAS 321B107G08 (08452)	EA	1	*	*	*				*	*	C2	2
20		BOLT, REEL COVER 419A029H01 (08452)	EA	1	*	*	*				*	*	C2	3
20	5330-762-2299	PACK I NG, PREFORMED: REEL COVER BOLT MS29513-008 (96906)	EA	1	*	*	*				*	*	C2	4
P O	3431-875-7652	COVER, REEL 637C247H01 (08452)	EA	1	*	*	*				*	*	C2	5
P O	5305-984-5676	SCREW, MACH I NE : REEL SHAFT MTG, PAN HEAD, CROSS RECESS, 5/16-18 THD SIZE, 3/4 IN. LG MS35206-296 (96906)	EA	1	*	*	*				*	*	C2	6
P O	3431-164-2666	SHAFT, REEL 448A024H01 (08452)	EA	1	*	*	*				*	*	C2	7
P O	5310-167-0820	WASHER, FLAT: REEL SHAFT MTG, 0.0328 IN. ID, 0.562 IN. OD, 0.064 IN. THK AN960-516 (88044)	EA	1	*	*	*				*	*	C2	8
P O	5305-958-3050	SCREW, TAPPING, THREAD CUTT I NG: BRAKE SUPPORT MTG, NO. 6-32 THD SIZE, 3/8 IN. LG MS24649-24 (96906)	EA	2	*	*	*				*	*	C2	9
P O	5310-045-4007	WASHER, LOCK: BRAKE SUPPORT MTG, NO. 6 SCREW SIZE MS35338-41 (96906)	EA	2	*	*	*				*	*	C2	10
P O	5310-167-0816	WASHER, FLAT: BRAKE SUPPORT MTG, NO. 6 SCREW SIZE AN960-6 (88044)	EA	2	*	*	*				*	*	C2	11

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0	3431-875-7651	SUPPORT, BRAKE 419A008H01 (08452)	EA	1	*	*	*				*	*	C2	12
0	3431-446-2643	BRAKE 419A011H01 (08452)	EA	1	*	*	*				*	*	C2	13
0		KNOB, RHEOSTAT 451A240H01 (08452)	EA	1	*	*	*				*	*	C2	14
0	5305-958-0670	SCREW, MACHINE: WELDING GUN SHIELD MTG, PAN HEAD SLOTTED, NO. 8-36 THD SIZE, 2 3/4 IN. LG MS35224-56 (96906)	EA	3	*	*	*				*	*	C2	15
20		SHIELD, POTENTIOMETER 483A753H01 (08452)	EA	1									C2	16
F	5905-161-3447	POTENTIOMETER ASSEMBLY, DUAL 483A752H01 (08452)	EA	1	*	*	*				*	*	C2	17
0	3431-162-3978	CABLE ASSEMBLY, CURRENT 310B142G06 (08452)	EA	1	*	*	*				*	*	C2	18
0		HOSE ASSEMBLY, GAS 432C506G06 (08452)	EA	1	*	*	*				*	*	C2	19
20		BOOT: CURRENT CABLE AND GAS HOSE 419A046H01 (08452)	EA	1									C2	20
0	5325-281-3536	BUSHING, RUBBER: CURRENT CABLE THROUGH WELDING GUN SHIELD 282498 (08452)	EA	1	*	*	*				*	*	C2	21
20		SHIELD ASSEMBLY: WELDING GUN 867D652G01 (08452)	EA	1									C2	22
20		SCREW, LOCK, GUIDE TUBE 422A505G01 (08452)	EA	1									C2	23
0	3431-997-2291	TUBE, GUIDE, WIRE: 0.030 IN. WIRE DIA 306B172H03 (08452)	EA	1	*	*	*				*	*	C2	24
0	3431-446-2644	TUBE, GUIDE, WIRE: 0.047 IN. WIRE DIA 306B172H09 (08452)	EA	1	*	*	*				*	*	C2	24
0	3431-928-2519	NOZZLE, GAS 311B703H03 (08452)	EA	1	*	*	*				*	*	C2	25
20	3431-875-7930	ADAPTOR: GUN TUBE TO NOZZLE 419A003H01 (08452)	EA	1	*	*	*				*	*	C2	26
0	3431-875-7638	WASHER, INSULATING: BARREL TO ADAPTOR 419A006H02 (08452)	EA	1	*	*	*				*	*	C2	27
0	3431-875-7637	WASHER, INSULATING: BARREL TO ADAPTOR 419A006H01 (08452)	EA	1	*	*	*				*	*	C2	28
0	5305-582-5807	SCREW, MACHINE: GUN BARREL HOUSING MTG, NO. 6-32 THD SIZE, 3/8 IN. LG MS35265-28 (96906)	EA	4	*	*	*				*	*	C2	29
20		HOUSING, GUN BARREL 453A483H01 (08452)	EA	1									C2	30
20		INSULATION, GUN BARREL 419A005H02 (08452)	EA	1									C2	31
20		INSULATION: GUN BARREL 419A010H01 (08452)	EA	1									C2	32
20		GUN BARREL ASSEMBLY 419A002G02 (08452)	EA	1									C2	33

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
PO	3431-875-7637	WASHER, INSULATING: BARREL TO BRACKET ASSEMBLY 419A006H01 (08452)	EA	1	*	*	*				*	*	C2	34
PO	3431-162-3977	BUSHING, FRONT GUIDE 2209A70H01 (08452)	EA	1	*	*	*				*	*	C2	35
PO	5305-719-5336	SETSCREW: REAR GUIDE BUSHING MTG, HEADLESS SOCKET DRIVE, CUP POINT, NO. 8-32 THD SIZE, 1/8 IN. LG MS51963-33 (96906)	EA	1	*	*	*				*	*	C2	36
20		RING, RETAINING: REAR GUIDE BUSHING 52D9290H01 (08452)	EA	1	*	*	*				*	*	C2	37
20		BUSHING, REAR GUIDE 488A441H01 (08452)	EA	1	*	*	*				*	*	C2	38
20		FITTING: GAS HOSE MTG 419A043H01 (08452)	EA	1									C2	39
20		PIN: BRACKET AND FITTING ASSEMBLY 452A107H01 (08452)	EA	1	*	*	*				*	*	C2	40
20		PLUG, PIPE: BRACKET AND FITTING ASSEMBLY 453A757H01 (08452)	EA	1									C2	41
PO		SPRING: BRACKET AND FITTING ASSEMBLY 452A106H01 (08452)	EA	1	*	*	*				*	*	C2	42
20		BEARING, BALL: BRACKET AND FITTING ASSEMBLY 452A108H01 (08452)	EA	1	*	*	*				*	*	C2	43
0	5330-641-0693	PACKING, PREFORMED: BRACKET AND FITTING ASSEMBLY 442A161H04 (08452)	EA	1	*	*	*				*	*	C2	44
0	5305-958-4361	SCREW, MACHINE: BRACKET AND FITTING ASSEMBLY MTG, NO. 8-36 THD SIZE, 1 1/2 IN. LG MS35207-251 (96906)	EA	1	*	*	*				*	*	C2	45
0	5305-719-5336	SETSCREW: BRACKET AND FITTING ASSEMBLY, HEADLESS, SOCKET DRIVE, CUP POINT, NO. 8-32 THD SIZE, 1/8 IN. LG MS51963-33 (96906)	EA	1	*	*	*				*	*	C2	46
0	5305-989-7435	SCREW, MACHINE: BEARING ARM MTG, PAN HEAD, CROSS RECESS, NO. 10-32 THD SIZE, 5/8 IN. LG MS35207-264 (96906)	EA	1	*	*	*				*	*	C2	47
20	3431-875-7646	SCREW, NYLON: BEARING ARM IDLER ROLL MTG 442A169H01 (08452)	EA	1	*	*	*				*	*	C2	48
20		WASHER, INSULATION: BEARING ARM IDLER ROLL MTG 310B141H04 (08452)	EA	2									C2	49
PO	3431-875-7645	ROLL, IDLER, INSULATED: BEARING ARM 557D415H39 (08452)	EA	1	*	*	*				*	*	C2	50
20	5330-762-2299	PACKING, PREFORMED: BEARING ARM BOLT MS29513-008 (96906)	EA	1	*	*	*				*	*	C2	51
20		BOLT, BEARING ARM 419A025H01 (08452)	EA	1									C2	52
PO	4935-875-7648	SPRING: BEARING ARM BOLT 419A027H01 (08452)	EA	1	*	*	*				*	*	C2	53

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20	3431-1664-2665	ARM, BEARING 419A026H02 (08452)		EA	1	*	*	*				*	*	C2	54
20		BRACKET AND FITTING ASSEMBLY 427C605G08 (08452)		EA	1									C2	55
20		FITTING ASSEMBLY 427C605G04 (08452)		EA	1									C2	56
0	5305-582-5807	SCREW, MACHINE: WELDING GUN HANDLE MTG, NO. 6-32 THD SIZE, 3/8 IN. LG MS35265-28 (96906)		EA	1	*	*	*				*	*	C2	57
0	5305-582-5808	SCREW, MACHINE: WELDING GUN HANDLE MTG, NO. 6-32 THD SIZE, 5/8 IN. LG MS35265-31 (96906)		EA	1	*	*	*				*	*	C2	58
0	5305-514-7506	SCREW, MACHINE: WELDING GUN HANDLE MTG, NO. 6-32 THD SIZE, 1/4 IN. LG MS35265-26 (96906)		EA	1	*	*	*				*	*	C2	59
2F		TRIGGER ASSEMBLY: WELDING GUN 451A241G01 (08452)		EA	1									C2	60
F	5305-282-8904	SETSCREW: TRIGGER ASSEMBLY, NO. 6-32 THD SIZE, 3/8 IN. LG, HEXAGON SOCKET HEAD, CUP POINT MS51021-25 (96906)		EA	1	*	*	*				*	*	C2	61
2F	3431-446-2638	SPRING: TRIGGER ASSEMBLY 31D4432H01 (08452)		EA	1	*	*	*				*	*	C2	62
F	3431-162-3976	CABLE ASSEMBLY, POWER SUPPLY 311B796G05 (08452)		EA	1	*	*	*				*	*	C2	63
F	5930-646-4619	SWITCH, INCHING: WELDING GUN HANDLE MS25085-1 (96906)		EA	1	*	*	*				*	*	C2	64
2F		KNIFE, DISCONNECT: WELDING GUN HANDLE WIRE CONNECTOR 429C550H10 (08452)		EA	6									C2	65
F	5930-646-4619	SWITCH, TRIGGER: WELDING GUN HANDLE MS25085-1 (96906)		EA	1	*	*	*				*	*	C2	66
2F		SPRING, FLAT: WELDING GUN HANDLE 205 A091H01 (08452)		EA	1									C2	67
F	3431-163-0180	HANDLE ASSEMBLY: WELDING GUN 827D099G03 (08452)		EA	1	*	*	*				*	*	C2	68
F	5310-550-0777	NUT, PLAIN, HEXAGON: DRIVE RAIL TO WELDING GUN MOTOR MTG, 1/4-20 THD SIZE MS35690-402 (96906)		EA	1	*	*	*				*	*	C2	69
F	5310-582-5965	WASHER, LOCK: DRIVE ROLL TO WELDING GUN MOTOR MTG, 1/4 IN. SCREW SIZE MS35338-44 (96906)		EA	1	*	*	*				*	*	C2	70
F	5310-141-1795	WASHER, FLAT: DRIVE ROLL TO WELDING GUN MOTOR MTG, 1/4 IN. SCREW SIZE AN960-416 (88044)		EA	1	*	*	*				*	*	C2	71
F	3431-160-7879	ROLL, DRIVE: WELDING GUN MOTOR 419A009G03 (08452)		EA	1	*	*	*				*	*	C2	72
F	3431-875-7632	MOTOR, ELECTRIC: WELDING GUN 429C550G02 (08452)		EA	1	*	*	*				*	*	C2	73
F	5910-968-7330	CAPACITOR: WELDING GUN MOTOR 121P47392S4 (56289)		EA	1	*	*	*				*	*	C2	74

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
X20		CONTROL, WELDING 479B043G01 (08452)		EA	1									C3	1
P 0	5305-855-0971	SCREW, SELF-TAPPING, THREAD CUTTING: TOP PLATE TO WELDING CONTROL MTG, NO. 6-32 THD SIZE, 3/16 IN. LG MS24649-21 (96906)		EA	4	*	*	*				*	*	C3	2
X20		PLATE,TOP: WELDING CONTROL 867D749G04 (08452)		EA	1									C3	3
P 0	5305-855-0971	SCREW, SELF-TAPPING, THREAD CUTTING: BACK PLATE TO WELDING CONTROL MTG, NO. 6-32 THD SIZE, 3/16 IN. LG MS24649-21 (96906)		EA	6	*	*	*				*	*	C3	4
X20		PLATE, BACK 867D749H05 (08452)		EA	1									C3	5
P 0	5305-855-0971	SCREW, SELF-TAPPING, THREAD CUTTING: FRONT BOTTOM PLATE TO WELDING CONTROL MTG, NO. 6-32 THD SIZE, 3/16 IN. LG MS24649-21 (96906)		EA	4	*	*	*				*	*	C3	6
X20		PLATE, FRONT, BOTTOM 867D749H06 (08452)		EA	1									C3	7
P 0	5930-577-2285	SWITCH, RANGE MS35059-23 (96906)		EA	1	*	*	*				*	*	C3	8
P 0	5930-655-1575	SWITCH, POWER MS35059-22 (96906)		EA	1	*	*	*				*	*	C3	9
P 0	6210-165-1486	LAMP ASSEMBLY: WELDING CONTROL 422A547H05 (08452)		EA	1	*	*	*				*	*	C3	10
P 0	6240-223-9100	LAMP, INCANDESCENT GEB1A (08805)		EA	1	*	*	*				*	*	C3	11
P 0	5305-855-0958	SCREW, SELF-TAPPING, THREAD CUTTING: FRONT TOP PLATE TO WELDING CONTROL MTG, NO. 10-24 THD SIZE, 3/8 IN. LG MS24629-45 (96906)		EA	4	*	*	*				*	*	C3	12
X20		PLATE, FRONT, TOP 867D749H07 (08452)		EA	1									C3	13
X20	5920-556-0144	HOLDER, FUSE 342004 (75915)		EA	3									C3	14
P 0	5920-843-8072	FUSE: 4 AMP, 250V MS15249-4 (96906)		EA	2	*	*	*				*	*	C3	15
P 0		FUSE: 1 AMP, 250V MS15249-1 (96906)		EA	1	*	*	*				*	*	C3	16
P 0		NUT, PLAIN, HEXAGON: TRANSFORMER MTG, NO. 10-32 THD SIZE MS35650-102 (96906)		EA	4	*	*	*				*	*	C3	17
P 0	5310-045-3296	WASHER, LOCK: TRANSFORMER MTG, NO. 10 SCREW SIZE MS35338-43 (96906)		EA	4	*	*	*				*	*	C3	18
P 0		SCREW, MACHINE: TRANSFORMER MTG, NO. 10-32 THD SIZE, 1/2 IN. LG MS35224-63 (96906)		EA	4	*	*	*				*	*	C3	19
P 0	5950-156-0691	TRANSFORMER: WELDING CONTROL 488A250H01 (08452)		EA	1	*	*	*				*	*	C3	20
P 0	5310-013-4530	NUT, PLAIN, HEXAGON: WELDING CONTROL RESISTOR MTG, NO. 6-32 THD SIZE MS35649-62 (96906)		EA	4	*	*	*				*	*	C3	21

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAYDS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAYGS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
' 0	5310-045-4007	WASHER, LOCK: WELDING CONTROL RESISTOR MTG, NO. 6 SCREW SIZE MS35338-41 (96906)		EA	4	*	*	*				*	*	C3	22
0		SCREW, MACHINE: WELDING CONTROL RESISTOR MTG, NO. 6-32 THD SIZE, 3/8 IN. LG MS35223-28 (96906)		EA	4	*	*	*				*	*	C3	23
0	5905-161-3446	RESISTOR: WELDING CONTROL 463A462H06 (08452)		EA	2	*	*	*				*	*	C3	24
20		RECTIFIER: WELDING CONTROL 429A062H01 (08452)		EA	1									C3	25
0	5305-855-0971	SCREW, SELF-TAPPING, THREAD CUTTING: WELDING CONTROL RECEPTACLE MTG, NO. 6-32 THD SIZE, 3/16 IN. LG MS24649-21 (96906)		EA	4	*	*	*				*	*	C3	26
20		RECEPTACLE: WELDING CONTROL 483A891H01 (08452)		EA	1									C3	27
0	5310-013-4530	NUT, PLAIN, HEXAGON: WELDING CONTROL RELAY MTG, NO. 6-32 THD SIZE MS35649-62 (96906)		EA	2	*	*	*				*	*	C3	28
0	5310-045-4007	WASHER, LOCK: WELDING CONTROL RELAY MTG, NO. 6 SCREW SIZE MS35338-41 (96906)		EA	2	*	*	*				*	*	C3	29
0		SCREW, MACHINE: WELDING CONTROL RELAY MTG, NO. 6-32 THD SIZE, 3/8 IN. LG MS35223-28 (96906)		EA	2	*	*	*				*	*	C3	30
'20		RELAY: WELDING CONTROL 480B09H03 (08452)		EA	1	*	*	*				*	*	C3	31
0	5310-013-4530	NUT, PLAIN, HEXAGON: WELDING CONTROL TERMINAL BLOCK MTG, NO. 6-32 THD SIZE MS35649-62 (96906)		EA	2	*	*	*				*	*	C3	32
' 0	5310-045-4007	WASHER, LOCK: WE LDING CONTROL TERMINAL BLOCK MTG, NO. 6 SCREW SIZE MS35338-41 (96906)		EA	2	*	*	*				*	*	C3	33
0	5305-543-2188	SCREW, MACHINE: WELDING CONTROL TERMINAL BLOCK MTG. NO. 6-32 THD SIZE, 3/4 IN. LG MS35223-32 (96906)		EA	2	*	*	*				*	*	C3	34
20		BLOCK, TERMINAL: WELDING CONTROL 32B1029H13 (08452)		EA	1									C3	35
0	5905-163-3599	RESISTOR: WELDING CONTROL 450A297H06 (08452)		EA	2	*	*	*				*	*	C3	36
' 0	5905-161-3445	RESISTOR: WELDING CONTROL 463A462H07 (08452)		EA	1	*	*	*				*	*	C3	37
' 0	3431-162-3974	CABLE ASSEMBLY: WELDING CONTROL 435C512G01 (08452)		EA	1	*	*	*				*	*	C3	38
' 0	3431-162-3975	CABLE ASSEMBLY: WELDING CONTROL 21C8339G07 (08452)		EA	1	*	*	*				*	*	C3	39
'20		BUSHING: WELDING CONTROL CABLE 427C613H04 (08452)		EA	2									C3	40
'20		BUSHING: WELDING CONTROL BRACKET 282498 (08452)		EA	1									C3	41
' 0		NUT, PLAIN, HEXAGON: BRACKET MTG, NO. 10-32 THD SIZE MS35650-102 (96906)		EA	2	*	*	*				*	*	C3	42

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P O	5310-045-3296	WASHER, LOCK: BRACKET MTG, NO. 10 SCREW SIZE MS35338-43 (96906)	EA	2	*	*	*				*	*	C3	43
P O		SCREW, MACHINE: BRACKET MTG, NO. 10-32 THD SIZE, 1/2 IN. LG MS35224-63 (96906)	EA	2	*	*	*				*	*	C3	44
K20		BRACKET: RECTIFIER, RELAY AND TERMINAL BLOCK MTG 8670749H02 (08452)	EA	1									C3	45
P O	5305-855-0958	SCREW, SELF-TAPPING, THREAD FORMING: BRACKET TO WELDING CONTROL BASE MTG, NO. 10-24 THD SIZE, 3/8 IN. LG MS24629-45 (96906)	EA	4	*	*	*				*	*	C3	46
K20		BRACKET: WELDING CONTROL BASE 8670749H03 (08452)	EA	1									C3	47
K2F		BASE, U-SHAPED 8670749H01 (08452)	EA	1									C3	48
		GROUP 03 - MISCELLANEOUS COMPONENTS												
P20	5340-912-4088	PADLOCK SET: TOOL BOX MS21313-162 (96906)	EA	1	*	*	*				*	*	C4	1
P O	5310-088-1251	NUT, SELF-LOCKING, HEXAGON: TOOL BOX MTG, 1/4-20 THD SIZE MS51922-1 (96906)	EA	6	*	*	*				*	*	C4	2
P O	5310-809-4058	WASHER, FLAT: TOOL BOX MTG, 1/4 IN. SCREW SIZE MS27183-10 (96906)	EA	6	*	*	*				*	*	C4	3
P O	5305-071-2241	SCREW, CAP, HEXAGON HEAD: TOOL BOX MTG, 1/4-20 THD SIZE, 1 1/4 IN. LG MS90725-10 (96906)	EA	6	*	*	*				*	*	C4	4
K20		FLOOR, BOX: TOOL BOX, LH FENDER 13217E3322 (97403)	EA	1									C4	5
K20		BOX, TOOL: LH FENDER 13217E3313 (97403)	EA	1									C4	6
P O	5310-088-1251	NUT, SELF-LOCKING, HEXAGON: TOOL BOX MTG, 1/4-20 THD SIZE MS51922-1 (96906)	EA	12	*	*	*				*	*	C4	7
P O	5310-809-4058	WASHER, FLAT: TOOL BOX MTG, 1/4 IN. SCREW SIZE MS27183-10 (96906)	EA	12	*	*	*				*	*	C4	8
P O	5305-071-2241	SCREW, CAP, HEXAGON HEAD: TOOL BOX MTG, 1/4-20 THD SIZE, 1 1/4 IN. LG MS90725-10 (96906)	EA	12	*	*	*				*	*	C4	9
K20		FLOOR, BOX: TOOL BOX, FRONT 13217E3321 (97403)	EA	2									C4	10
K20		BOX, TOOL: FRONT 13217E3312 (97403)	EA	2									C4	11
P O	5310-088-1251	NUT, SELF-LOCKING, HEXAGON: TOOL BOX MTG, 1/4-20 THD SIZE MS51922-1 (96906)	EA	8	*	*	*				*	*	C4	12
P O	5310-809-4058	WASHER, FLAT: TOOL BOX MTG, 1/4 IN. SCREW SIZE MS27183-10 (96906)	EA	8	*	*	*				*	*	C4	13
P O	5305-071-2241	SCREW, CAP, HEXAGON HEAD: TOOL BOX MTG, 1/4-20 THD SIZE, 1 1/4 IN. LG MS90725-10 (96906)	EA	8	*	*	*				*	*	C4	14

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIG. NO	(b) ITEM NO
(20		FLOOR, BOX: TOOL BOX, RH FENDER 13217E3323 (97403)	EA	1									C4	15
(20		BOX, TOOL: RH FENDER 13217E3314 (97403)	EA	1									C4	16
' 0	5310-088-1251	NUT, SELF-LOCKING, HEXAGON: REFLECTOR MTG, 1/4-20 THD SIZE MS51922-1 (96906)	EA	8	*	*	*				*	*	C4	17
' 0	5305-068-0501	SCREW, CAP, HEXAGON HEAD: REFLECTOR MTG, 1/4-20 THD SIZE, 5/8 IN. LG MS90725-5 (96906)	EA	8	*	*	*				*	*	C4	18
'20	9905-202-3639	REFLECTOR, AMBER MS35387-2 (96906)	EA	4	*	*	*				*	*	C4	19
' 0	5310-088-1251	NUT, SELF-LOCKING, HEXAGON: REFLECTOR MTG, 1/4-20 THD SIZE MS51922-1 (96906)	EA	8	*	*	*				*	*	C4	20
' 0	5305-068-0501	SCREW, CAP, HEXAGON HEAD: REFLECTOR MTG, 1/4-20 THD SIZE, 5/8 IN. LG MS90725-5 (96906)	EA	8	*	*	*				*	*	C4	21
'20	9905-205-2795	REFLECTOR, RED MS35387-1 (96906)	EA	4	*	*	*				*	*	C4	22

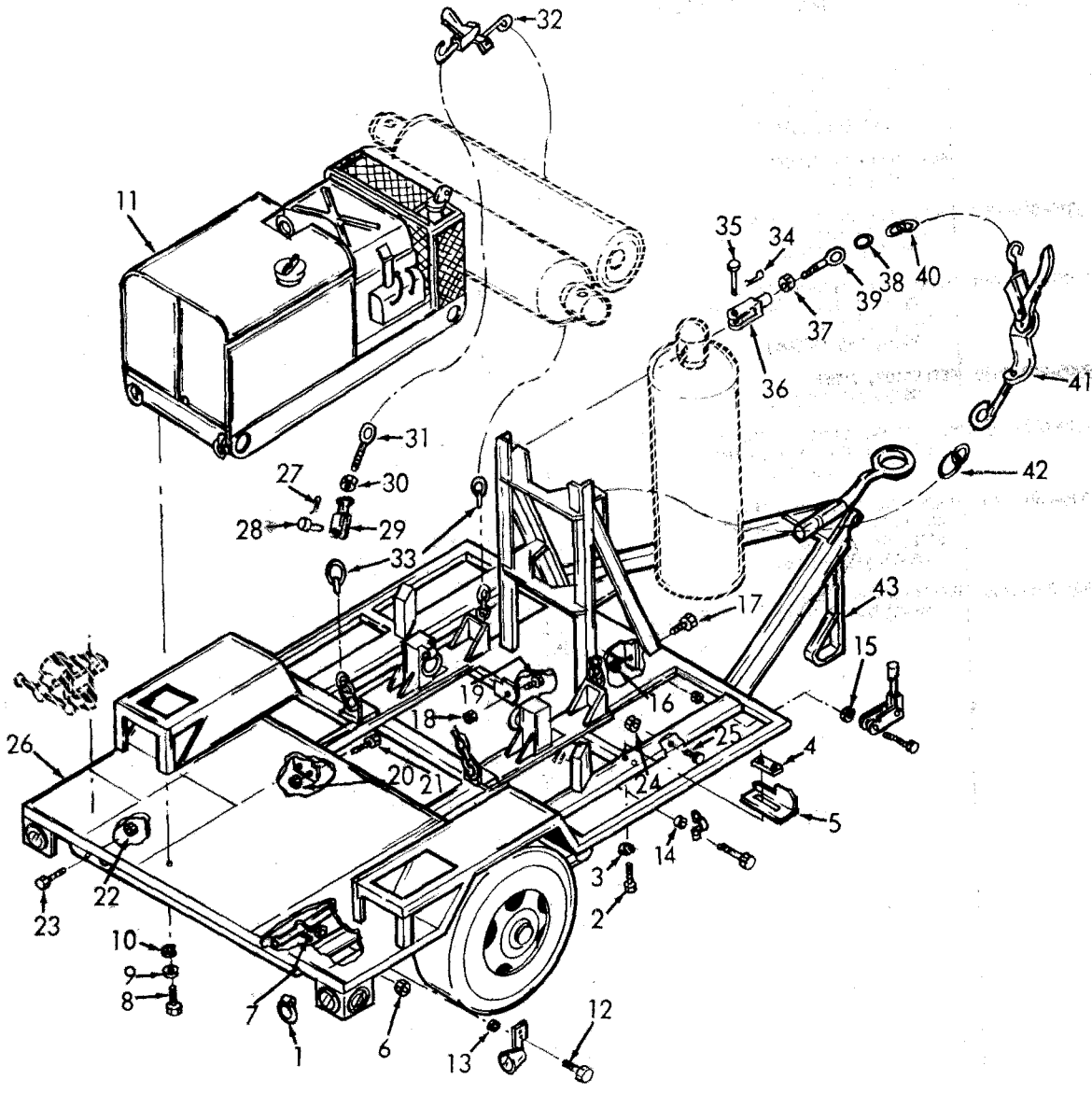
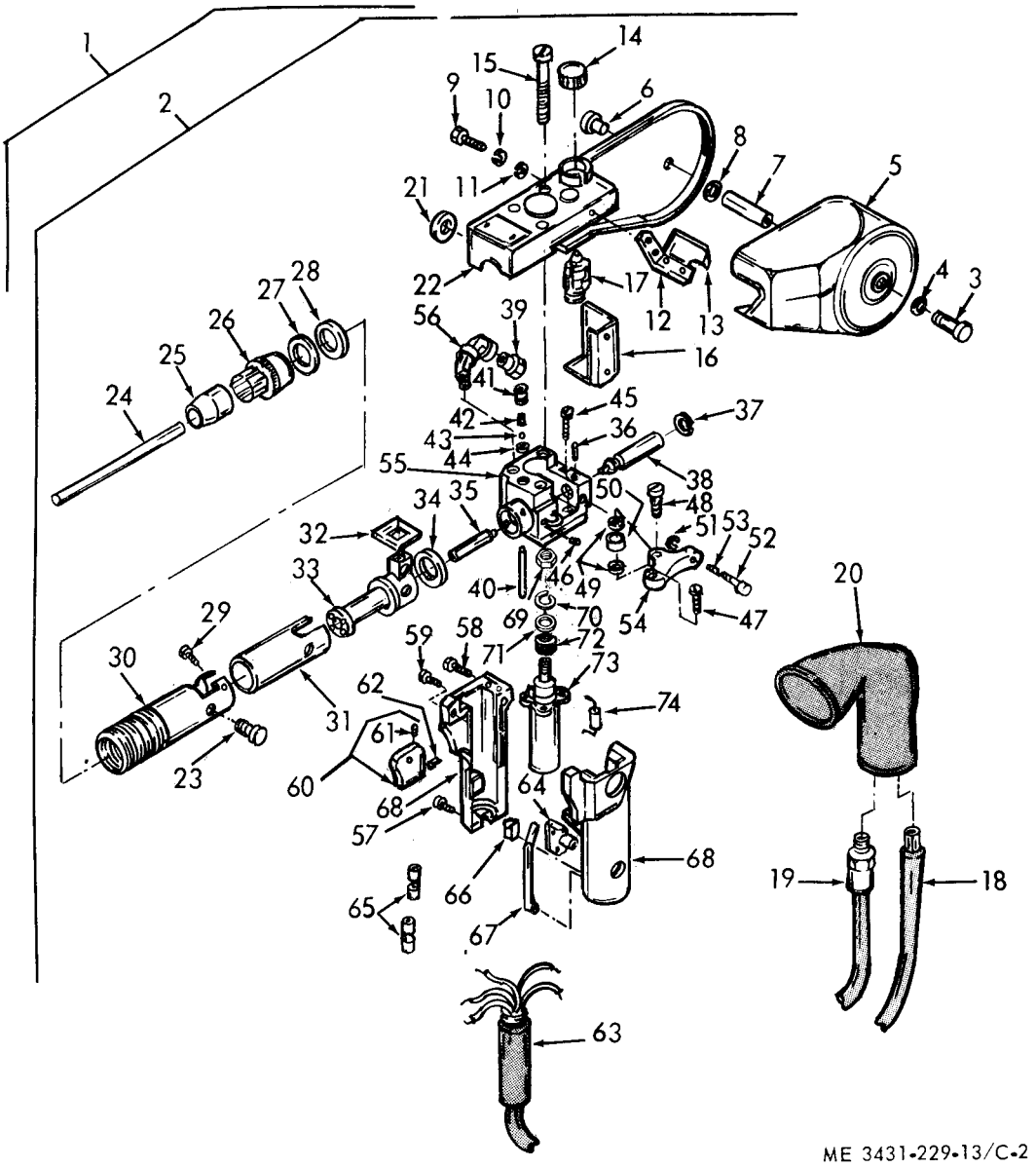


Figure C-1. Tool Boxes and Reflectors



ME 3431-229-13/C-2

Figure C-2. Welding Gun

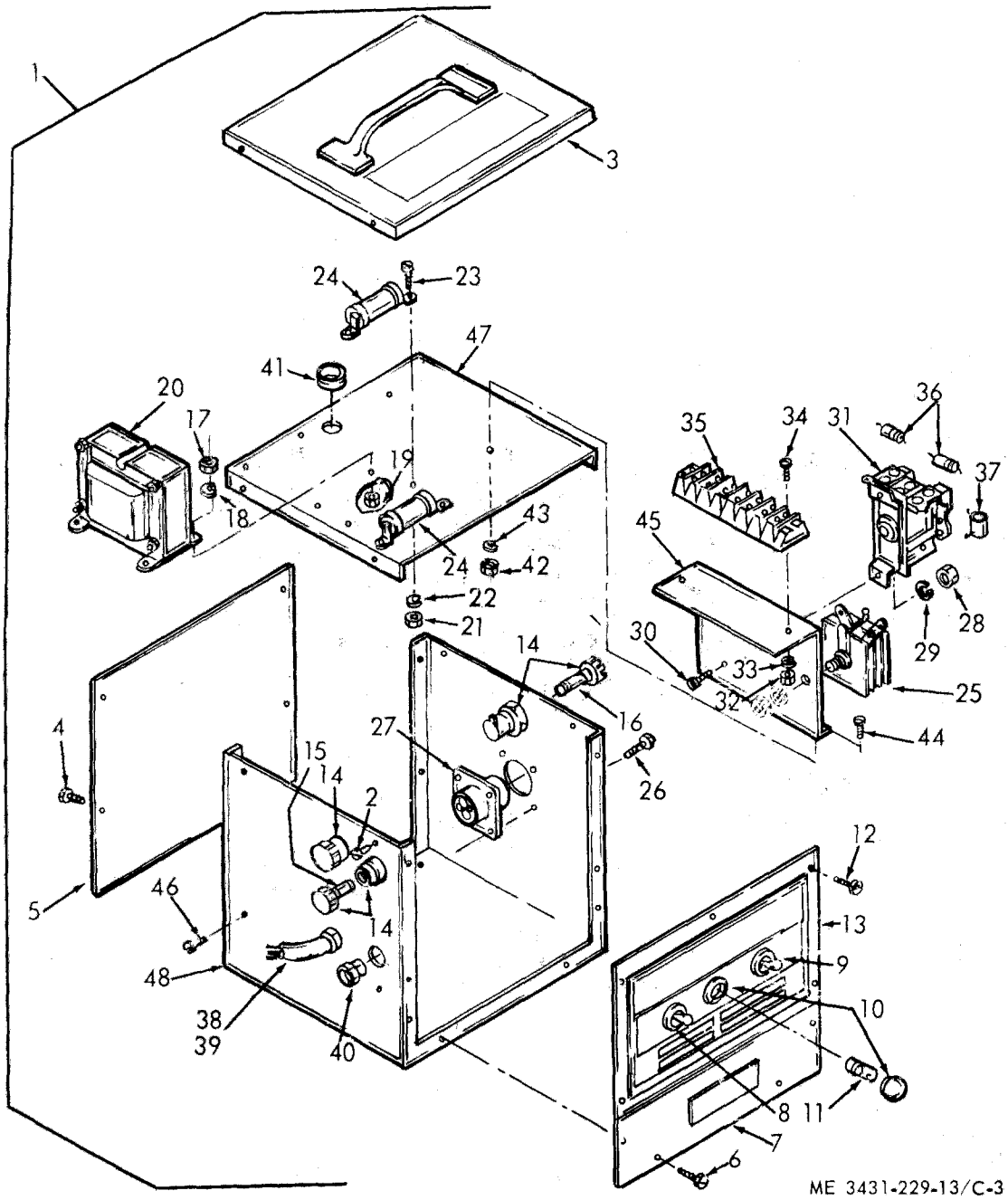


Figure C-3. Control Monitor

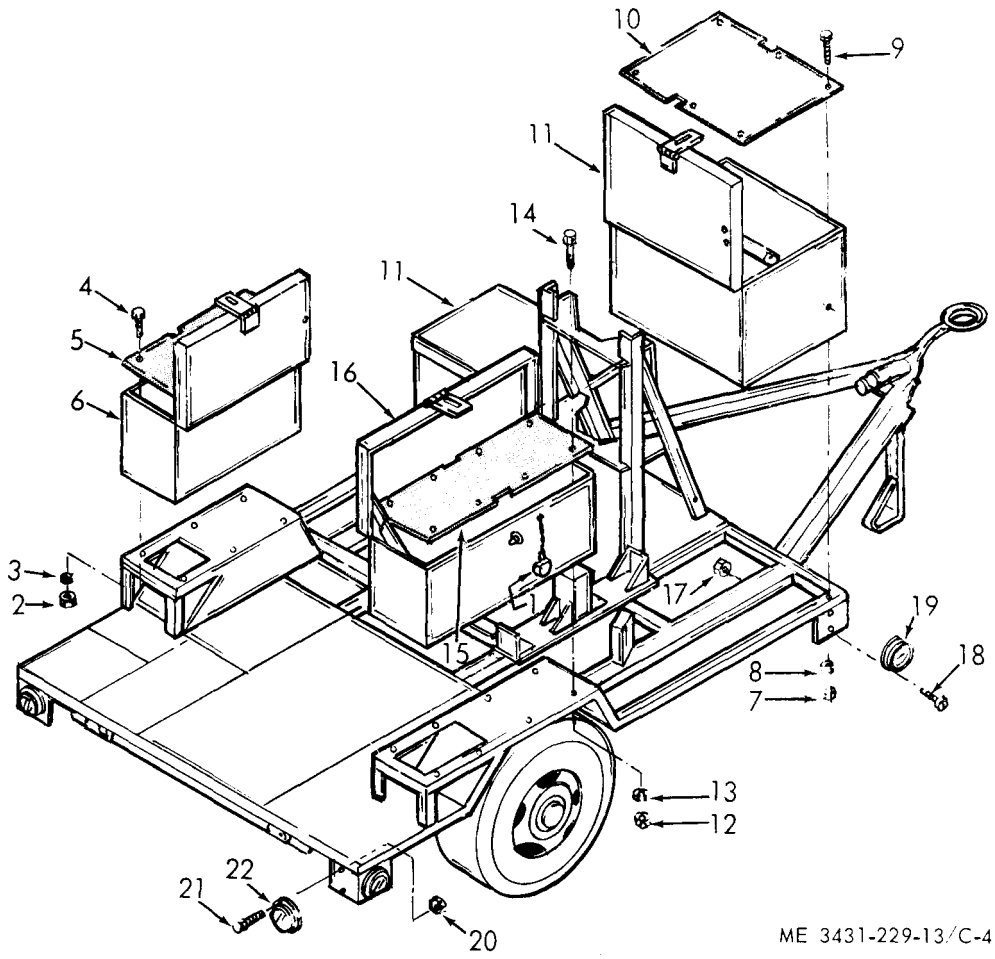


Figure C-4. Welding Machine and Trailer Body

Section IX. INDEX-FEDERAL STOCK NUMBER AND REFERENCE NUMBER CROSS-REFERENCE TO FIGURE AND ITEM NUMBER

Stock Number	Figure No.	Item No.
2330-898-6780	C1	43
305-071-2241	C4	14
3431-160-7879	C2	72
3431-160-7880	C2	2
3431-162-3974	C3	38
3431-162-3975	C3	39
3431-162-3976	C2	63
3431-162-3977	C2	35
3431-162-3978	C2	18
3431-163-0180	C2	68
3431-164-2665	C2	54
3431-164-2666	C2	7
3431-253-0558	C1	11
3431-446-2638	C2	62
3431-446-2643	C2	13
3431-446-2644	C2	24
3431-875-7632	C2	73
3431-875-7637	C2	28
	C2	34
3431-875-7638	C2	27
3431-875-7645	C2	50
3431-875-7646	C2	48
3431-875-7651	C2	12
3431-875-7652	C2	5
3431-875-7930	C2	26
3431-928-2519	C2	25
3431-935-7822	C2	1
3431-997-2291	C2	24
4010-160-8553	C1	33
4010-161-8563	C1	33
	C1	40
	C1	40
	C1	42
4935-875-7648	C2	53
5305-068-0501	C4	18
	C4	21
5305 - 068 - 0511	C1	8
	C1	12
	C1	17
5310-088-1251	C4	17
	C4	20
5310-107-0671	C1	9
5310-141-1795	C2	71
5310-167-0816	C2	11
5310-167-0820	C2	8
5310-184-8971	C1	3
5310-550-0777	C2	69
5310-582-5965	C2	70
5310-768-0318	C1	30
	C1	37
5310-909-4058	C4	3
	C4	8
	C4	13
5310-959-7600	C1	6
5310-984-3806	C1	24
5315-839-5821	C1	27
	C1	34
5325-281-3536	C2	21
5330-641-0693	C2	44
5330-762-2299	C2	4
	C2	51
5340-912-4088	C4	1
5905-161-3445	C3	37
5905-161-3446	C3	24
5905-161-3447	C2	17
5905-163-3599	C3	36
5910-968-7330	C2	74
5920-556-0144	C3	14
5920-943-8072	C3	15
5930-577-2295	C3	8
5930-646-4619	C2	64
	C2	66
5930-655-1575	C3	9
5950-156-0691	C3	20
6210-165-1486	C3	10
6240-223-9100	C3	11
9905-202-3639	C4	19
9905-205-2795	C4	22

CROSS-REFERENCE TO FIGURE AND ITEM NUMBER

REFERENCE No.	MFG CODE	FIG No.	ITEM No.
AN960-416	88044	C2	71
AN960-516	88044	C2	8
AN960-6	88044	C2	11
GE81A	08805	C3	11
LTO-300	36024	C1	11
MS15249-1	96906	C3	16
MS15249-4	96906	C3	15
MS21313-162	96906	C4	1
MS24629-45	96906	C3	12
	96906	C3	46
MS24649-21	96906	C3	2
	96906	C3	4
	96906	C3	5
	96906	C3	26
MS24649-24	96906	C2	9
MS24665-351	96906	C1	27
	96906	C1	34
MS25085-1	96906	C2	64
	96906	C2	66
MS27183-10	96906	C4	3
	96906	C4	8
	96906	C4	13
MS27183-14	96906	C1	10
MS29513-008	96906	C2	4
	96906	C2	51
MS35059-22	96906	C3	9
MS35059-23	96906	C3	8
MS35206-296	96906	C2	6
MS35207-261	96906	C2	45
MS35207-264	96906	C2	47
MS35223-28	96906	C3	23
	96906	C3	30
MS35223-32	96906	C3	34
MS35224-56	96906	C2	15
MS35224-63	96906	C3	19
	96906	C3	44
MS35265-26	96906	C2	59
MS35265-28	96906	C2	29
	96906	C2	57
MS35265-31	96906	C2	58
MS35338-102	96906	C1	9
MS35338-103	96906	C1	3
MS35338-41	96906	C2	10
	96906	C3	22
	96906	C3	29
	96906	C3	33
MS35338-43	96906	C3	18
	96906	C3	43
MS35338-44	96906	C2	70
MS35387-1	96906	C4	22
MS35387-2	96906	C4	16
MS35649-62	96906	C3	21
	96906	C3	28
	96906	C3	32
MS35690-102	96906	C3	17
	96906	C3	42
MS35690-402	96906	C2	69
MS35810-36	96906	C1	28
	96906	C1	35
MS51021-25	96906	C2	61
MS51922-1	96906	C4	2
	96906	C4	7
	96906	C4	12
	96906	C4	17
	96906	C4	20
MS51922-17	96906	C1	16
	96906	C1	18
	96906	C1	20
	96906	C1	22
MS51922-5	96906	C1	6
MS51922-9	96906	C1	24
MS51963-33	96906	C2	36
	96906	C2	46
MS51967-14	96906	C1	30
	96906	C1	37
MS53028-1	96906	C1	43
MS90725-10	96906	C4	4
	96906	C4	9
	96906	C4	14
MS90725-5	96906	C4	18
	96906	C4	21
MS90725-64	96906	C1	2
MS90728-34	96906	C1	25
MS90728-62	96906	C1	8
	96906	C1	12
	96906	C1	17
	96906	C1	19
	96906	C1	23
MS90728-66	96906	C1	21
NAS3104-6-10	24162	C1	7
RRC271TYPEIII	97403	C1	38
RRC271TYPEIVCL6SS4	36024	C1	1
SP10	88725	C2	1
121P47392S4	56289	C2	74
13215E7326	97403	C1	32
	97403	C1	41
13216E7335	97403	C1	31
	97403	C1	39
13217E3311	97403	C1	26
13217E3312	97403	C4	11
13217E3313	97403	C4	5
13217E3314	97403	C4	10
13217E3315	97403	C1	5
13217E3316	97403	C1	4
13217E3320-1	97403	C1	13
	97403	C1	14
13217E3320-2	97403	C1	15
13217E3321	97403	C4	10
13217E3322	97403	C4	6
13217E3323	97403	C4	16
13217E3324	97403	C1	20
	97403	C1	36
203A091H01	08452	C2	67
21CR339G07	08452	C3	39
2209A70H01	08452	C2	35
282498	08452	C2	21
	08452	C3	41
3068172H03	08452	C2	24
3068172H09	08452	C2	24
3104432H01	08452	C2	62
3108141H04	08452	C2	40
3108142G06	08452	C2	18
3118703H03	08452	C2	25
3118796G05	08452	C2	63
3291029H13	08452	C3	35
3218107G08	08452	C2	2
342004	75915	C3	14
419A002G02	08452	C2	33
419A003H01	08452	C2	24
419A005H02	08452	C2	31
419A006H01	08452	C2	28
	08452	C2	34
419A006H02	08452	C2	27
419A008H01	08452	C2	12
419A009G03	08452	C2	72
419A010H01	08452	C2	32
419A011H01	08452	C2	13
419A025H01	08452	C2	52
419A026H02	08452	C2	54
419A027H01	08452	C2	53
419A029H01	08452	C2	3
419A042H01	08452	C2	39
419A046H01	08452	C2	20
422A505G01	08452	C2	23
422A547H05	08452	C3	10
427C605G04	08452	C2	56
427C605G09	08452	C2	55
427C613H04	08452	C3	40
429A062H01	08452	C3	25
429C550G02	08452	C2	73
429C550H10	08452	C2	45
432C506G06	08452	C2	19
435C512G01	08452	C3	38
442A161H04	08452	C2	44
442A169H01	08452	C2	48
448A024H01	08452	C2	7
450A297H06	08452	C3	36
451A240H01	08452	C2	14
451A241G01	08452	C2	60
452A106H01	08452	C2	42
452A107H01	08452	C2	40
452A109H01	08452	C2	43
453A483H01	08452	C2	30
453A757H01	08452	C2	41

Section IX. INDEX-FEDERAL STOCK NUMBER AND REFERENCE NUMBER CROSS-REFERENCE TO FIGURE AND ITEM NUMBER

REFERENCE No.	MFG CODE	FIG No.	ITEM No.	REFERENCE No.	MFG CODE	FIG No.	ITEM No.
463A462H06	08452	C3	24				
463A462H07	08452	C3	37				
479B043G01	08452	C3	1				
480B09H03	08452	C3	31				
483A752H01	08452	C2	17				
483A753H01	08452	C2	16				
483A891H01	08452	C3	27				
488A250H01	08452	C3	20				
488A441H01	08452	C2	38				
52D9290H01	08452	C2	37				
557D415H39	08452	C2	50				
637C247H01	08452	C2	5				
827D099G03	08452	C2	68				
867D652G01	08452	C2	22				
867D749G04	08452	C3	3				
867D749H01	08452	C3	48				
867D749H02	08452	C3	45				
867D749H03	08452	C3	47				
867D749H05	08452	C3	5				
867D749H06	08452	C3	7				
867D749H07	08452	C3	13				

INDEX

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The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 dekagram = 10 grams = .35 ounce
1 hectogram = 10 dekagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

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