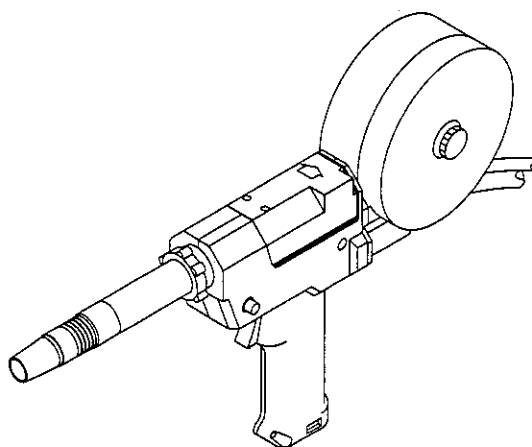




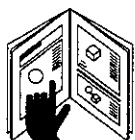
December 1993 Form: OM-1213E
Effective With Serial No. KD464350

OWNER'S MANUAL



Spoolmatic® 30A And 30W

- Combination Wire Feeder And Welding Gun
- For GMAW Welding
- For Use With CC Or CV Welding Power Source
- Uses 30 Volts DC Input Power
- Light, Well-Balanced, And Portable
- Includes Cable Assembly, Drive Roll, Contact Tubes, And Liner
- 1 lb, 4 in Diameter Wire Spool Needed



- Read and follow these instructions and all safety blocks carefully.
- Have only trained and qualified persons install, operate, or service this unit.
- Call your distributor if you do not understand the directions.



- Give this manual to the operator.



- For help, call your distributor
- or: MILLER Electric Mfg. Co., P.O. Box 1079, Appleton, WI 54912 414-734-9821

MILLER'S TRUE BLUE™ LIMITED WARRANTY

Effective January 1, 1992
(Equipment with a serial number preface of "KC" or newer)

This limited warranty supersedes all previous MILLER warranties and is exclusive with no other guarantees or warranties expressed or implied.

LIMITED WARRANTY - Subject to the terms and conditions below, MILLER Electric Mfg. Co., Appleton, Wisconsin, warrants to its original retail purchaser that new MILLER equipment sold after the effective date of this limited warranty is free of defects in material and workmanship at the time it is shipped by MILLER. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

Within the warranty periods listed below, MILLER will repair or replace any warranted parts or components that fail due to such defects in material or workmanship. MILLER must be notified in writing within thirty (30) days of such defect or failure, at which time MILLER will provide instructions on the warranty claim procedures to be followed.

MILLER shall honor warranty claims on warranted equipment listed below in the event of such a failure within the warranty time periods. All warranty time periods start on the date that the equipment was delivered to the original retail purchaser, or one year after the equipment is sent to the distributor.

1. 5 Years Parts 3 Years Labor
 - * Original main power rectifiers
2. 3 Years — Parts and Labor
 - * Transformer/Rectifier Power Sources
 - * Plasma Arc Cutting Power Sources
 - * Semi-Automatic and Automatic Wire Feeders
 - * Robots
3. 2 Years — Parts and Labor
 - * Engine Driven Welding Generators
(NOTE: Engines are warranted separately by the engine manufacturer for a period of two years.)
 - * Air Compressors
4. 1 Year — Parts and Labor
 - * Motor Driven Guns
 - * Process Controllers
 - * Water Coolant Systems
 - * HF Units
 - * Grids
 - * Spot Welders
 - * Load Banks
 - * SDX Transformers
 - * Running Gear/Trailers
 - * Field Options

(NOTE: Field options are covered under True Blue™ for the remaining warranty period of the product they are installed in, or for a minimum of one year — whichever is greater.)
5. 6 Months — Batteries
6. 90 Days — Parts and Labor
 - * MIG Guns/TIG Torches
 - * Plasma Cutting Torches

- * Remote Controls
- * Accessory Kits
- * Replacement Parts

MILLER'S True Blue™ Limited Warranty shall not apply to:

1. Items furnished by MILLER, but manufactured by others, such as engines or trade accessories. These items are covered by the manufacturer's warranty, if any.
2. Consumable components, such as contact tips, cutting nozzles, contactors and relays or parts that fail due to normal wear.
3. Equipment that has been modified by any party other than MILLER, or equipment that has been improperly installed, improperly operated or misused based upon industry standards, or equipment which has not had reasonable and necessary maintenance, or equipment which has been used for operation outside of the specifications for the equipment.

MILLER PRODUCTS ARE INTENDED FOR PURCHASE AND USE BY COMMERCIAL/INDUSTRIAL USERS AND PERSONS TRAINED AND EXPERIENCED IN THE USE AND MAINTENANCE OF WELDING EQUIPMENT.

In the event of a warranty claim covered by this warranty, the exclusive remedies shall be at MILLER'S option: (1) repair; or (2) replacement; or, where authorized in writing by MILLER in appropriate cases, (3) the reasonable cost of repair or replacement at an authorized MILLER service station; or (4) payment of or credit for the purchase price (less reasonable depreciation based upon actual use) upon return of the goods at customer's risk and expense. MILLER'S option of repair or replacement will be F.O.B. Factory at Appleton, Wisconsin, or F.O.B. at a MILLER authorized service facility as determined by MILLER. Therefore no compensation or reimbursement for transportation costs of any kind will be allowed.

TO THE EXTENT PERMITTED BY LAW, THE REMEDIES PROVIDED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES. IN NO EVENT SHALL MILLER BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT), WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY.

ANY EXPRESS WARRANTY NOT PROVIDED HEREIN AND ANY IMPLIED WARRANTY, GUARANTY OR REPRESENTATION AS TO PERFORMANCE, AND ANY REMEDY FOR BREACH OF CONTRACT TORT OR ANY OTHER LEGAL THEORY WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE OR COURSE OF DEALING, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, WITH RESPECT TO ANY AND ALL EQUIPMENT FURNISHED BY MILLER IS EXCLUDED AND DISCLAIMED BY MILLER.

Some states in the U.S.A. do not allow limitations of how long an implied warranty lasts, or the exclusion of incidental, indirect, special or consequential damages, so the above limitation or exclusion may not apply to you. This warranty provides specific legal rights, and other rights may be available, but may vary from state to state.

In Canada, legislation in some provinces provides for certain additional warranties or remedies other than as stated herein, and to the extent that they may not be waived, the limitations and exclusions set out above may not apply. This Limited Warranty provides specific legal rights, and other rights may be available, but may vary from province to province.

RECEIVING-HANDLING

Before unpacking equipment, check carton for any damage that may have occurred during shipment. File any claims for loss or damage with the delivering carrier. Assistance for filing or settling claims may be obtained from distributor and/or equipment manufacturer's Transportation Department.

When requesting information about this equipment, always provide Model Designation and Serial or Style Number.

Use the following spaces to record Model Designation and Serial or Style Number of your unit. The information is located on the rating label or nameplate.

Model _____

Serial or Style No. _____

Date of Purchase _____

ERRATA SHEET

April 1, 1994 FORM: 1213E
Use above FORM number when ordering extra manuals.

After this manual was printed, refinements in equipment design occurred. This sheet lists exceptions to data appearing later in this manual.

CHANGES TO SECTION 7 – PARTS LIST

Change Parts List as follows:

**	Part No.	Replaced With	Description	Quantity
... 19-14	604 612	+604 612 ..	SCREW, set	2

**First digit represents page no – digits following dash represent item no.
+These set screws are now included with Item 15 Drive Rolls.
BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.

ARC WELDING SAFETY PRECAUTIONS



WARNING

ARC WELDING can be hazardous.

PROTECT YOURSELF AND OTHERS FROM POSSIBLE SERIOUS INJURY OR DEATH. KEEP CHILDREN AWAY. PACEMAKER WEARERS KEEP AWAY UNTIL CONSULTING YOUR DOCTOR.

In welding, as in most jobs, exposure to certain hazards occurs. Welding is safe when precautions are taken. The safety information given below is only a summary of the more complete safety information that will be found in the Safety Standards listed on the next page. Read and follow all Safety Standards.

HAVE ALL INSTALLATION, OPERATION, MAINTENANCE, AND REPAIR WORK PERFORMED ONLY BY QUALIFIED PEOPLE.



ELECTRIC SHOCK can kill.

Touching live electrical parts can cause fatal shocks or severe burns. The electrode and work circuit is electrically live whenever the output is on. The input power circuit and machine internal circuits are also live when power is on. In semiautomatic or automatic wire welding, the wire, wire reel, drive roll housing, and all metal parts touching the welding wire are electrically live. Incorrectly installed or improperly grounded equipment is a hazard.

1. Do not touch live electrical parts.
2. Wear dry, hole-free insulating gloves and body protection.
3. Insulate yourself from work and ground using dry insulating mats or covers.
4. Disconnect input power or stop engine before installing or servicing this equipment.

5. Properly install and ground this equipment according to its Owner's Manual and national, state, and local codes.
6. When making input connections, attach proper grounding conductor first.
7. Turn off all equipment when not in use.
8. Do not use worn, damaged, undersized, or poorly spliced cables.
9. Do not wrap cables around your body.
10. Ground the workpiece to a good electrical (earth) ground.
11. Do not touch electrode if in contact with the work or ground.
12. Use only well-maintained equipment. Repair or replace damaged parts at once.
13. Wear a safety harness if working above floor level.
14. Keep all panels and covers securely in place.



ARC RAYS can burn eyes and skin; NOISE can damage hearing.

Arc rays from the welding process produce intense heat and strong ultraviolet rays that can burn eyes and skin. Noise from some processes can damage hearing.

NOISE

1. Use approved ear plugs or ear muffs if noise level is high.

ARC RAYS

2. Wear a welding helmet fitted with a proper shade of filter (see ANSI Z49.1 listed in Safety Standards) to protect your face and eyes when welding or watching.
3. Wear approved safety glasses. Side shields recommended.
4. Use protective screens or barriers to protect others from flash and glare; warn others not to watch the arc.
5. Wear protective clothing made from durable, flame-resistant material (wool and leather) and foot protection.



FUMES AND GASES can be hazardous to your health.

Welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.

1. Keep your head out of the fumes. Do not breathe the fumes.
2. If inside, ventilate the area and/or use exhaust at the arc to remove welding fumes and gases.
3. If ventilation is poor, use an approved air-supplied respirator.
4. Read the Material Safety Data Sheets (MSDSs) and the manufacturer's instruction for metals, consumables, coatings, and cleaners.

5. Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Shielding gases used for welding can displace air causing injury or death. Be sure the breathing air is safe.
6. Do not weld in locations near degreasing, cleaning, or spraying operations. The heat and rays of the arc can react with vapors to form highly toxic and irritating gases.
7. Do not weld on coated metals, such as galvanized, lead, or cadmium plated steel, unless the coating is removed from the weld area, the area is well ventilated, and if necessary, while wearing an air-supplied respirator. The coatings and any metals containing these elements can give off toxic fumes if welded.



WELDING can cause fire or explosion.

Sparks and spatter fly off from the welding arc. The flying sparks and hot metal, weld spatter, hot workpiece, and hot equipment can cause fires and burns. Accidental contact of electrode or welding wire to metal objects can cause sparks, overheating, or fire.

1. Protect yourself and others from flying sparks and hot metal.
2. Do not weld where flying sparks can strike flammable material.
3. Remove all flammables within 35 ft (10.7 m) of the welding arc. If this is not possible, tightly cover them with approved covers.
4. Be alert that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas.

5. Watch for fire, and keep a fire extinguisher nearby.
6. Be aware that welding on a ceiling, floor, bulkhead, or partition can cause fire on the hidden side.
7. Do not weld on closed containers such as tanks or drums.
8. Connect work cable to the work as close to the welding area as practical to prevent welding current from traveling long, possibly unknown paths and causing electric shock and fire hazards.
9. Do not use welder to thaw frozen pipes.
10. Remove stick electrode from holder or cut off welding wire at contact tip when not in use.
11. Wear oil-free protective garments such as leather gloves, heavy shirt, cuffless trousers, high shoes, and a cap.



FLYING SPARKS AND HOT METAL can cause injury.

Chipping and grinding cause flying metal. As welds cool, they can throw off slag.

1. Wear approved face shield or safety goggles. Side shields recommended.
2. Wear proper body protection to protect skin.

**CYLINDERS can explode if damaged.**

Shielding gas cylinders contain gas under high pressure. If damaged, a cylinder can explode. Since gas cylinders are normally part of the welding process, be sure to treat them carefully.

1. Protect compressed gas cylinders from excessive heat, mechanical shocks, and arcs.
2. Install and secure cylinders in an upright position by chaining them to a stationary support or equipment cylinder rack to prevent falling or tipping.

3. Keep cylinders away from any welding or other electrical circuits.
4. Never allow a welding electrode to touch any cylinder.
5. Use only correct shielding gas cylinders, regulators, hoses, and fittings designed for the specific application; maintain them and associated parts in good condition.
6. Turn face away from valve outlet when opening cylinder valve.
7. Keep protective cap in place over valve except when cylinder is in use or connected for use.
8. Read and follow instructions on compressed gas cylinders, associated equipment, and CGA publication P-1 listed in Safety Standards.

**WARNING****ENGINES can be hazardous.****ENGINE EXHAUST GASES can kill.**

Engines produce harmful exhaust gases.

1. Use equipment outside in open, well-ventilated areas.
2. If used in a closed area, vent engine exhaust outside and away from any building air intakes.

**ENGINE FUEL can cause fire or explosion.**

Engine fuel is highly flammable.

1. Stop engine before checking or adding fuel.
2. Do not add fuel while smoking or if unit is near any sparks or open flames.
3. Allow engine to cool before fueling. If possible, check and add fuel to cold engine before beginning job.
4. Do not overfill tank – allow room for fuel to expand.
5. Do not spill fuel. If fuel is spilled, clean up before starting engine.

**MOVING PARTS can cause injury.**

Moving parts, such as fans, rotors, and belts can cut fingers and hands and catch loose clothing.

1. Keep all doors, panels, covers, and guards closed and securely in place.
2. Stop engine before installing or connecting unit.

3. Have only qualified people remove guards or covers for maintenance and troubleshooting as necessary.
4. To prevent accidental starting during servicing, disconnect negative (-) battery cable from battery.
5. Keep hands, hair, loose clothing, and tools away from moving parts.
6. Reinstall panels or guards and close doors when servicing is finished and before starting engine.

**SPARKS can cause BATTERY GASES TO EXPLODE; BATTERY ACID can burn eyes and skin.**

Batteries contain acid and generate explosive gases.

1. Always wear a face shield when working on a battery.
2. Stop engine before disconnecting or connecting battery cables.
3. Do not allow tools to cause sparks when working on a battery.
4. Do not use welder to charge batteries or jump start vehicles.
5. Observe correct polarity (+ and -) on batteries.

**STEAM AND PRESSURIZED HOT COOLANT can burn face, eyes, and skin.**

The coolant in the radiator can be very hot and under pressure.

1. Do not remove radiator cap when engine is hot. Allow engine to cool.
2. Wear gloves and put a rag over cap area when removing cap.
3. Allow pressure to escape before completely removing cap.

PRINCIPAL SAFETY STANDARDS

Safety in Welding and Cutting, ANSI Standard Z49.1, from American Welding Society, 550 N.W. LeJeune Rd, Miami FL 33126

Safety and Health Standards, OSHA 29 CFR 1910, from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Recommended Safe Practices for the Preparation for Welding and Cutting of Containers That Have Held Hazardous Substances, American Welding Society Standard AWS F4.1, from American Welding Society, 550 N.W. LeJeune Rd, Miami, FL 33126

National Electrical Code, NFPA Standard 70, from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

Safe Handling of Compressed Gases in Cylinders, CGA Pamphlet P-1, from Compressed Gas Association, 1235 Jefferson Davis Highway, Suite 501, Arlington, VA 22202.

Code for Safety in Welding and Cutting, CSA Standard W117.2, from Canadian Standards Association, Standards Sales, 178 Rexdale Boulevard, Rexdale, Ontario, Canada M9W 1R3.

Safe Practices For Occupation And Educational Eye And Face Protection, ANSI Standard Z87.1, from American National Standards Institute, 1430 Broadway, New York, NY 10018.

Cutting And Welding Processes, NFPA Standard 51B, from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

EMF INFORMATION

NOTE

Considerations About Welding And The Effects Of Low Frequency Electric And Magnetic Fields

The following is a quotation from the General Conclusions Section of the U.S. Congress, Office of Technology Assessment, *Biological Effects of Power Frequency Electric & Magnetic Fields – Background Paper*, OTA-BP-E-53 (Washington, DC: U.S. Government Printing Office, May 1989): "... there is now a very large volume of scientific findings based on experiments at the cellular level and from studies with animals and people which clearly establish that low frequency magnetic fields can interact with, and produce changes in, biological systems. While most of this work is of very high quality, the results are complex. Current scientific understanding does not yet allow us to interpret the evidence in a single coherent framework. Even more frustrating, it does not yet allow us to draw definite conclusions about questions of possible risk or to offer clear science-based advice on strategies to minimize or avoid potential risks."

To reduce magnetic fields in the workplace, use the following procedures:

1. Keep cables close together by twisting or taping them.
2. Arrange cables to one side and away from the operator.
3. Do not coil or drape cables around the body.
4. Keep welding power source and cables as far away as practical.
5. Connect work clamp to workpiece as close to the weld as possible.

About Pacemakers:

The above procedures are among those also normally recommended for pacemaker wearers. Consult your doctor for complete information.

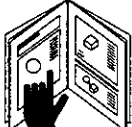
mod10.1 4/93

TABLE OF CONTENTS

SECTION 1 – SAFETY INFORMATION	1
SECTION 2 – SPECIFICATIONS	
2-1. Duty Cycle	2
SECTION 3 – INSTALLATION	
3-1. Removing Top Cover	2
3-2. Installing Wire Spool And Threading Welding Wire	3
3-3. Rotating Canister	3
3-4. Adjusting Shielding Gas Nozzle	4
3-5. Connecting Air-Cooled Model To Weld Control	4
3-6. Connecting Water-Cooled Model To Weld Control	5
3-7. Installing Gas Supply	6
3-8. Coolant Guidelines	7
3-9. Adjusting Drive Roll And Spool Brake Pressure	8
SECTION 4 – OPERATION	8
SECTION 5 – MAINTENANCE & TROUBLESHOOTING	
5-1. Routine Maintenance	11
5-2. Changing Contact Tube And Liner	11
5-3. Changing Or Cleaning Drive Roll	12
5-4. Replacing Or Cleaning Drive Roll Bearing	12
5-5. Replacing Canister Inlet Guide	13
5-6. Replacing Spool Canister	13
5-7. Replacing Contact Tube Adapter	14
5-8. Troubleshooting	15
SECTION 6 – ELECTRICAL DIAGRAMS	16
SECTION 7 – PARTS LIST	
Figure 7-1 Main Assembly	18
Figure 7-2. Barrel Assembly	21

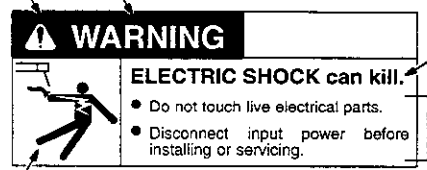
SECTION 1 – SAFETY INFORMATION

mod1.1 8/92



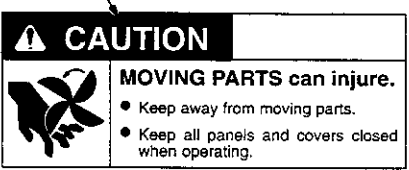
- Read all safety messages throughout this manual.
- Obey all safety messages to avoid injury.
- Learn the meaning of WARNING and CAUTION.

1 2



3 4 5

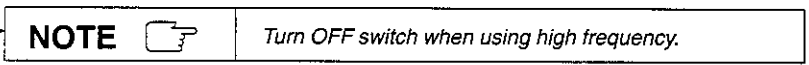
2



6



7



1 Safety Alert Symbol

2 Signal Word

WARNING means possible death or serious injury can happen.

CAUTION means possible minor injury or equipment damage can happen.

3 Statement Of Hazard And Result

4 Safety Instructions To Avoid Hazard

5 Hazard Symbol (If Available)

6 Safety Banner

Read safety blocks for each symbol shown.

7 NOTE

Special instructions for best operation – not related to safety.

Figure 1-1. Safety Information

SECTION 2 – SPECIFICATIONS

Table 2-1. Gun/Feeder

Specification	Description
Input Power	30 Volts DC
Ampere Rating	Air-Cooled Models: 200 Amperes; Water-Cooled Models: 400 Amperes
Duty Cycle	100% Using Argon Shielding Gas (see Section 2-1)
Approximate Wire Feed Range	70 To 875 ipm (1.7 to 22.2 mpm)
Wire Diameter Range	.025 Thru 1/16 in (0.6 Thru 1.6 mm) Aluminum Wire .025 Thru .045 in (0.6 Thru 1.1 mm) Hard Or Cored Wire
Maximum Spool Size	4 in (102 mm) Diameter
Cooling Method	Air Cooled (A Models) Or Water Cooled (W Models)
Coolant Requirements (Water-Cooled Models)	1 qt/min Minimum Flowrate Use Only 50% Distilled Water And 50% High Quality Automotive Antifreeze (see Section 3-8)
Cable Length	30 ft (9.1 mm)
Overall Dimensions	Length: 15-3/8 in (390 mm); Width: 2-1/2 in (64 mm); Height: 10-3/4 in (273 mm)
Weight	Air-Cooled Models: Gun Only 2.9 lb (1.3 kg); Gun With Cable Assembly 14 lb (6.4 kg) Water-Cooled Models: Gun Only 3.4 lb (1.5 kg); Gun With Cable Assembly 14.5 lb (6.6 kg)

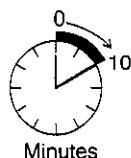
2-1. Duty Cycle

CAUTION

WELDING LONGER THAN RATED DUTY CYCLE can damage unit and void warranty.

- Do not weld at rated load longer than shown below.

warn7.1 8/93



Definition

Duty Cycle is percentage of 10 minutes that unit can weld at rated load without overheating.

100% Duty Cycle Using Argon Gas:



Continuous Welding

sb1.1* 8/93

Figure 2-1. Duty Cycle

SECTION 3 – INSTALLATION

NOTE

Use weld control or welding power source Owner's Manual during installation of gun.

Table 3-1. Items Included With Gun/Feeder

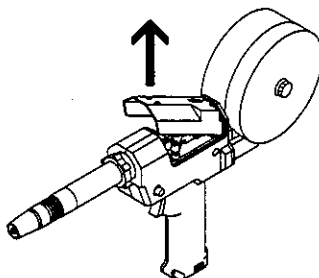
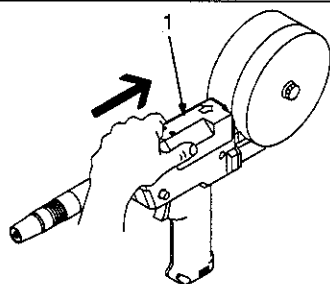
Item	Quantity
Drive Roll (Small Groove For .025 To .035 in Wire, Large Groove For .047 To .062 in Wire) Shipped With Large Groove In Feed Position	1
Contact Tubes* (1 For Each Wire Size – .023/.025, .030, .035, .045/.047, And .062 in) Shipped With .045/.047 Installed	5
Liner (1 – .023-.035 And 1 – .047-.062 in) Shipped With .045-.062 Installed	2
10 ft (3 m) Gas Hose With Adapter Fitting	1
10 ft (3 m) Water Hose With Adapter Fitting (Water-Cooled Models Only)	1
10 ft (3 m) Water Hose (Water-Cooled Models Only)	1
Contact Tube Wrench	1

*Contact tubes are marked with wire size and inside diameter (I.D.) of tube. For example, a .035/52 contact tube is used with .035 wire, and the tube has an I.D. of 0.052 in (1.3 mm).

NOTE

If contact tube, liner, and drive roll groove are not correct for wire size and type, see Section 5 to change parts as needed. See Section 7 for list of other available contact tubes.

3-1. Removing Top Cover



1 Top Cover

Push back and lift off as shown.

To reinstall cover, set rear of cover in gun/feeder, and push cover back and down until it clicks into position.

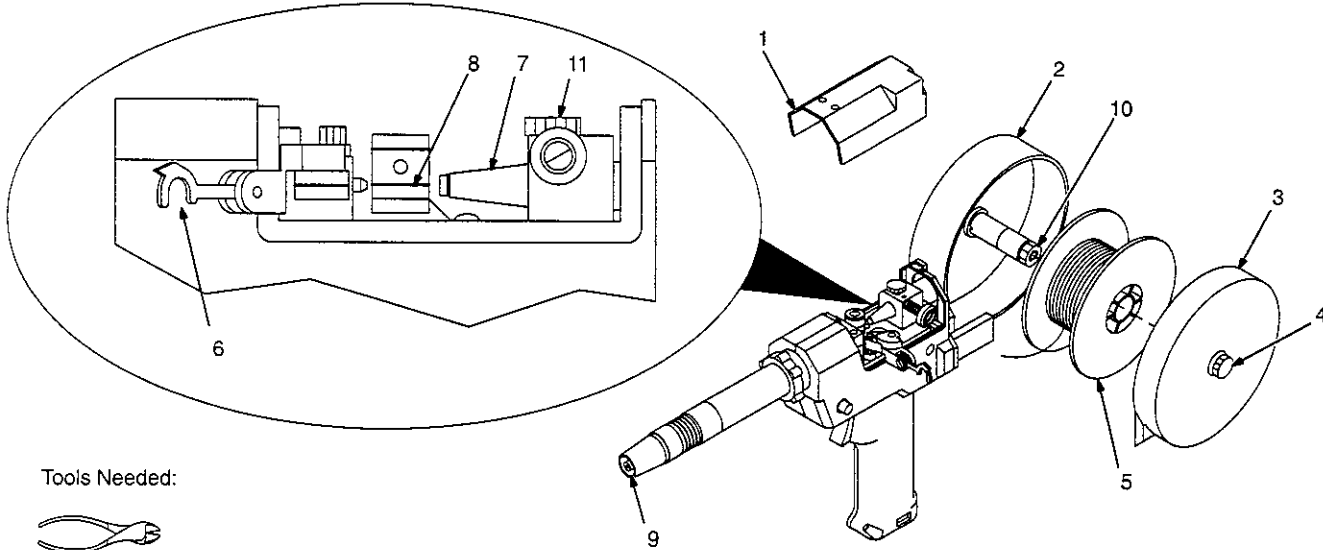
Ref. ST-150 882-A

Figure 3-1. Top Cover

3-2. Installing Wire Spool And Threading Welding Wire

 WARNING	
 CYLINDERS can explode if damaged. • Keep cylinders away from welding and other electrical circuits. • Never touch cylinder with welding electrode. • Always secure cylinder to running gear, wall, or other stationary support.	 ELECTRIC SHOCK can kill. • Do not touch live electrical parts. The welding wire, drive rolls, drive assembly, and all metal parts touching the welding wire are electrically live when welding or feeding wire using gun trigger.
 WELDING WIRE can cause puncture wounds. • Do not press gun trigger until instructed to do so. • Do not point gun toward any part of the body, other people, or any metal when threading welding wire.	 HOT SURFACES can burn skin. • Allow gun to cool before touching.

wfwam2.1 / wfwam7.1 9/91



Tools Needed:



1 Top Cover

2 Canister

3 Canister Cover

4 Thumbscrew (Canister Cover)

Loosen thumbscrew and remove cover.

5 Wire Spool

Loosen wire from spool, cut off bent wire, and pull 6 in (150 mm) of wire off spool.

6 Pressure Roll Assembly

Lift arm and open pressure roll assembly.

7 Canister Inlet Guide

8 Drive Roll Groove

9 Contact Tube

Thread wire through canister inlet guide, along drive roll groove, and out contact tube.

Install spool so wire feeds off bottom.

10 Spool Brake Thumbnut

If necessary, turn thumbnut counterclockwise slightly to install spool.

11 Thumbscrew (Canister Rotation)

Loosen thumbscrew to rotate canister (see Figure 3-3).

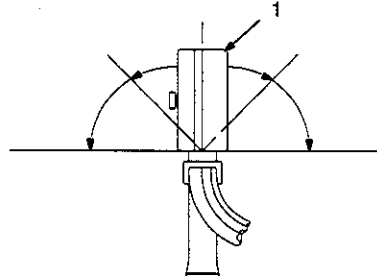
Close and secure pressure roll assembly.

Reinstall top cover and canister cover.

ST-150 436

Figure 3-2. Installing Spool And Threading Wire

3-3. Rotating Canister



1 Canister

Loosen canister rotation thumbscrew (see Figure 3-2). Move canister to desired position. Tighten thumbscrew.

Rear View

ST-150 433-A

Figure 3-3. Rotating Canister

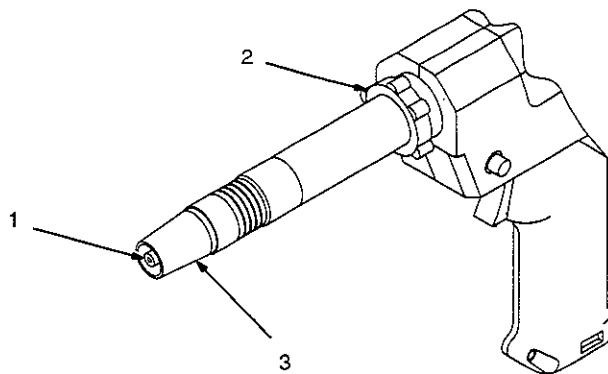
3-4. Adjusting Shielding Gas Nozzle



WARNING



READ SAFETY BLOCKS at start of Section 3-2 before proceeding.



1 Contact Tube

Adjusting nozzle changes contact tube location from 1/16 in (1.6 mm) out end of nozzle to 1/4 in (6.3 mm) inside nozzle.

For aluminum welding, contact tube should be at least 1/8 in (3.2 mm) inside nozzle. For steel welding, contact tube should be flush with end of nozzle.

2 Jam Nut

3 Shielding Gas Nozzle

To change contact tube location, loosen jam nut, and turn nozzle. Tighten jam nut.

ST-150 434

Figure 3-4. Adjusting Gas Nozzle

3-5. Connecting Air-Cooled Model To Weld Control



WARNING

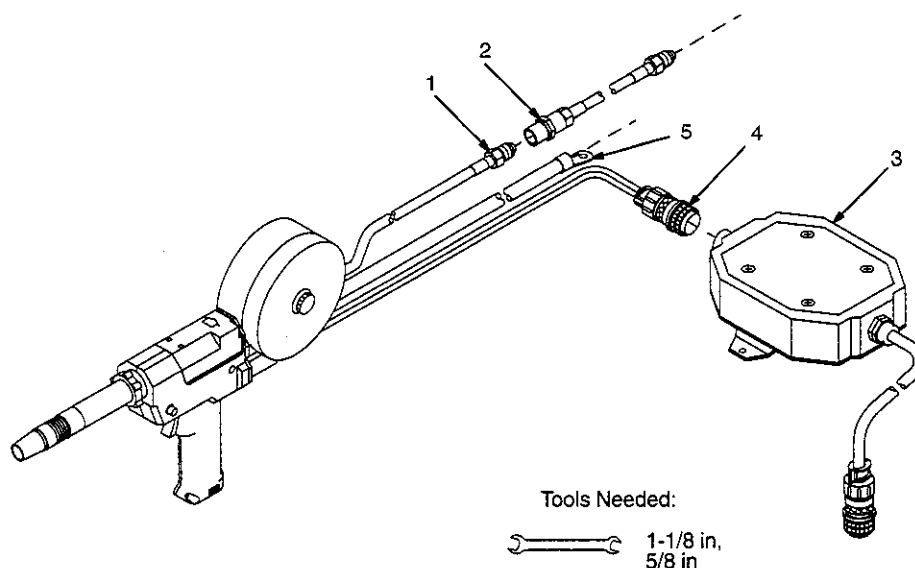


ELECTRIC SHOCK can kill.

- Do not touch live electrical parts.
- Turn Off welding power source, and disconnect input power before inspecting or installing. Stop engine on welding generators.

swarn1.1* 2/93

A. Connections To 24 Volt Weld Control



1 Gas Hose

2 10 ft (3 m) Gas Hose With 5/8 in Adapter Fitting

Connect fitting to gun/feeder gas hose and remaining end to regulator/flowmeter (see Section 3-7).

3 24 Volt Weld Control

4 Trigger Control Cord

Insert plug into receptacle, and tighten threaded collar.

5 Weld Cable

Connect to positive (+) weld output terminal on welding power source according to its Owner's Manual.

Tools Needed:

1-1/8 in,
5/8 in

ST-150 917-A

Figure 3-5. Connections To 24 Volt Weld Control

B. Connections To 115 Volt Weld Control

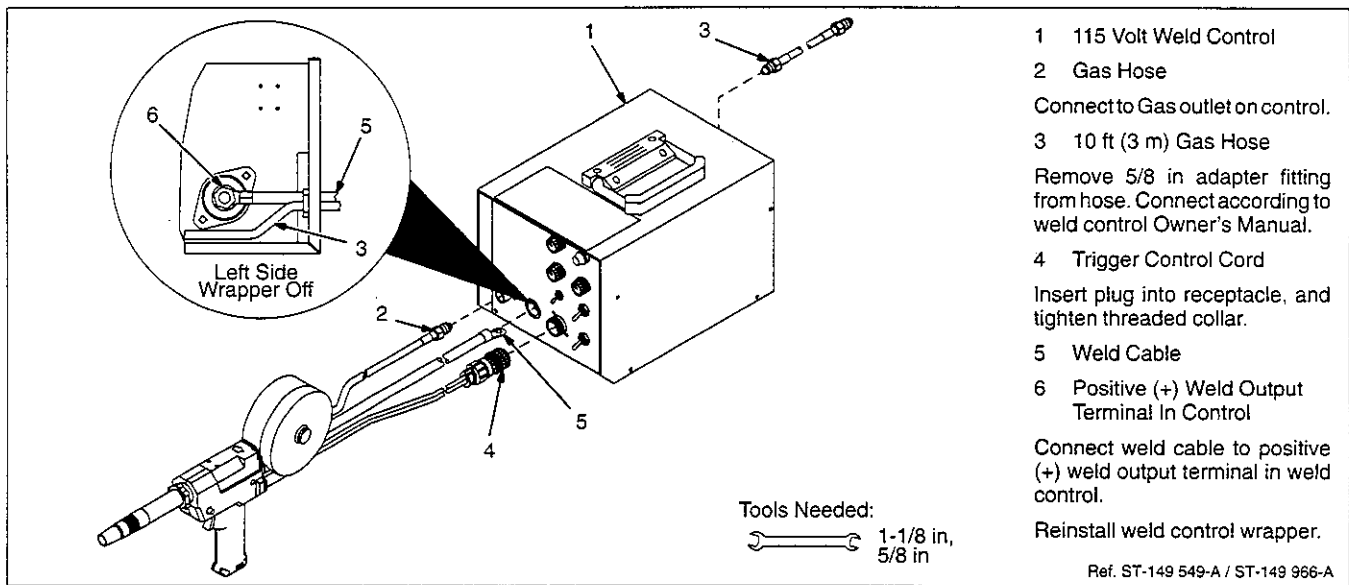


Figure 3-6. Connections To 115 Volt Weld Control

3-6. Connecting Water-Cooled Model To Weld Control

⚠ WARNING ELECTRIC SHOCK can kill. - Do not touch live electrical parts. - Turn Off welding power source, and disconnect input power before inspecting or installing. Stop engine on welding generators.		OVERHEATING can damage gun parts. If using recirculating coolant system, do not make connections from coolant system to water valve; instead make connections directly from coolant system to gun hoses.
		INCORRECT COOLANT FLOWRATE can damage gun parts. Maintain minimum 1qt/min flowrate at all times.

swarn 1.1" 2/93

A. Connections To 24 Volt Weld Control

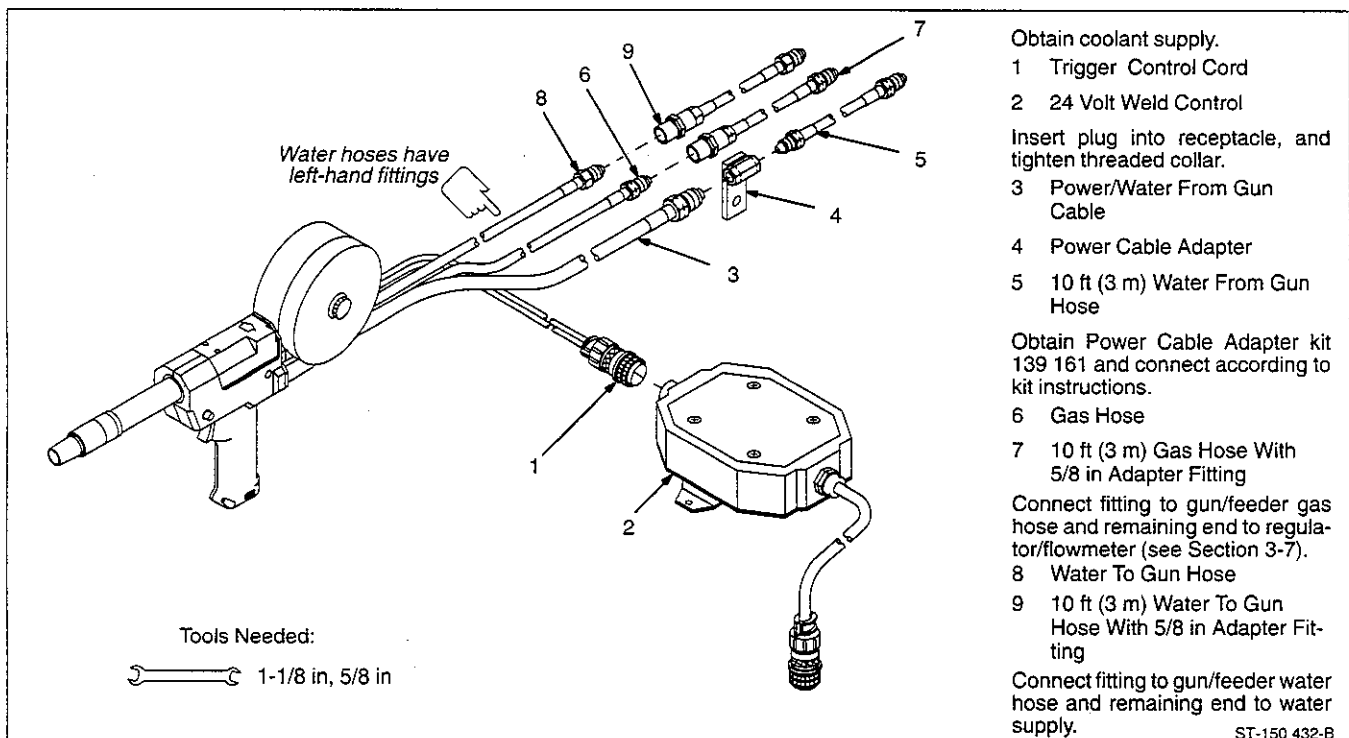


Figure 3-7. Connections To 24 Volt Weld Control

B. Connections To 115 Volt Weld Control

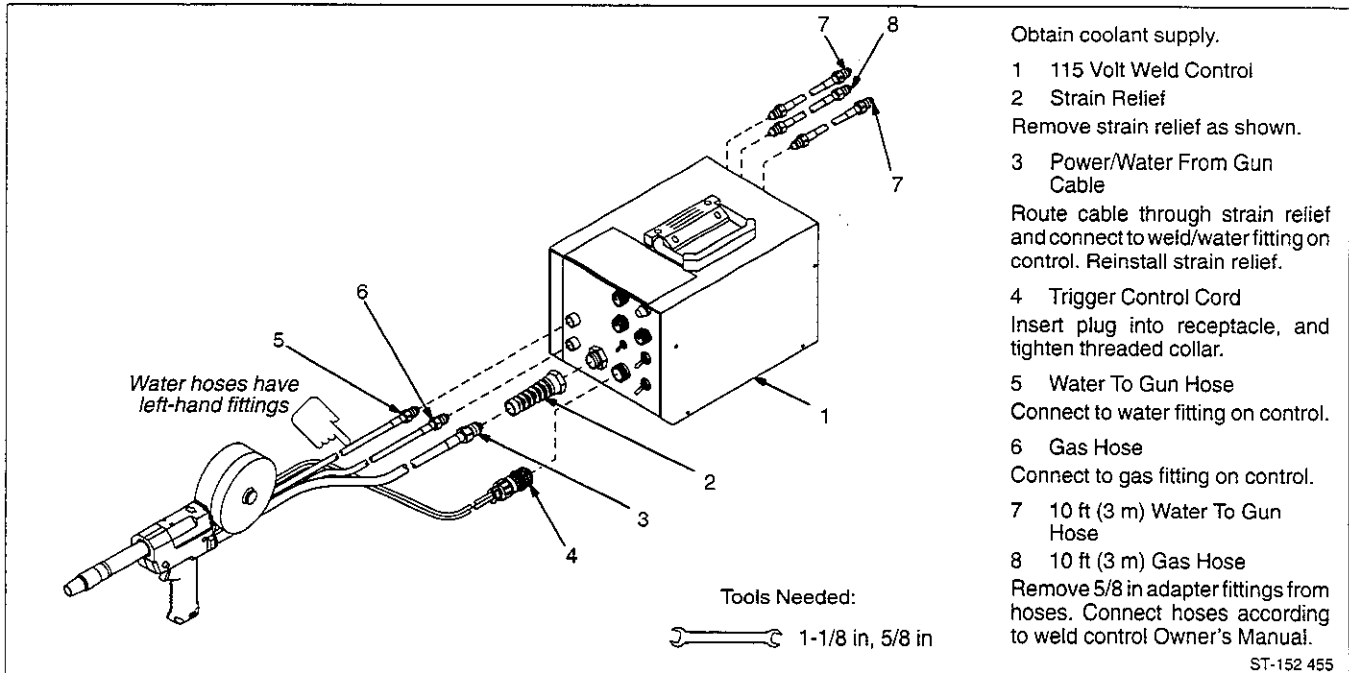


Figure 3-8. Connections To 115 Volt Weld Control

3-7. Installing Gas Supply

 WARNING	
 CYLINDERS can explode if damaged. - Keep cylinders away from welding and other electrical circuits. - Never touch cylinder with welding electrode. - Always secure cylinder to running gear, wall, or other stationary support.	 BUILDUP OF SHIELDING GAS can harm health or kill. Shut off shielding gas supply when not in use.

wam4.1 9/91

A. Shielding Gas Connection To Typical Argon Or Mixed Gas Regulator/Flowgauge

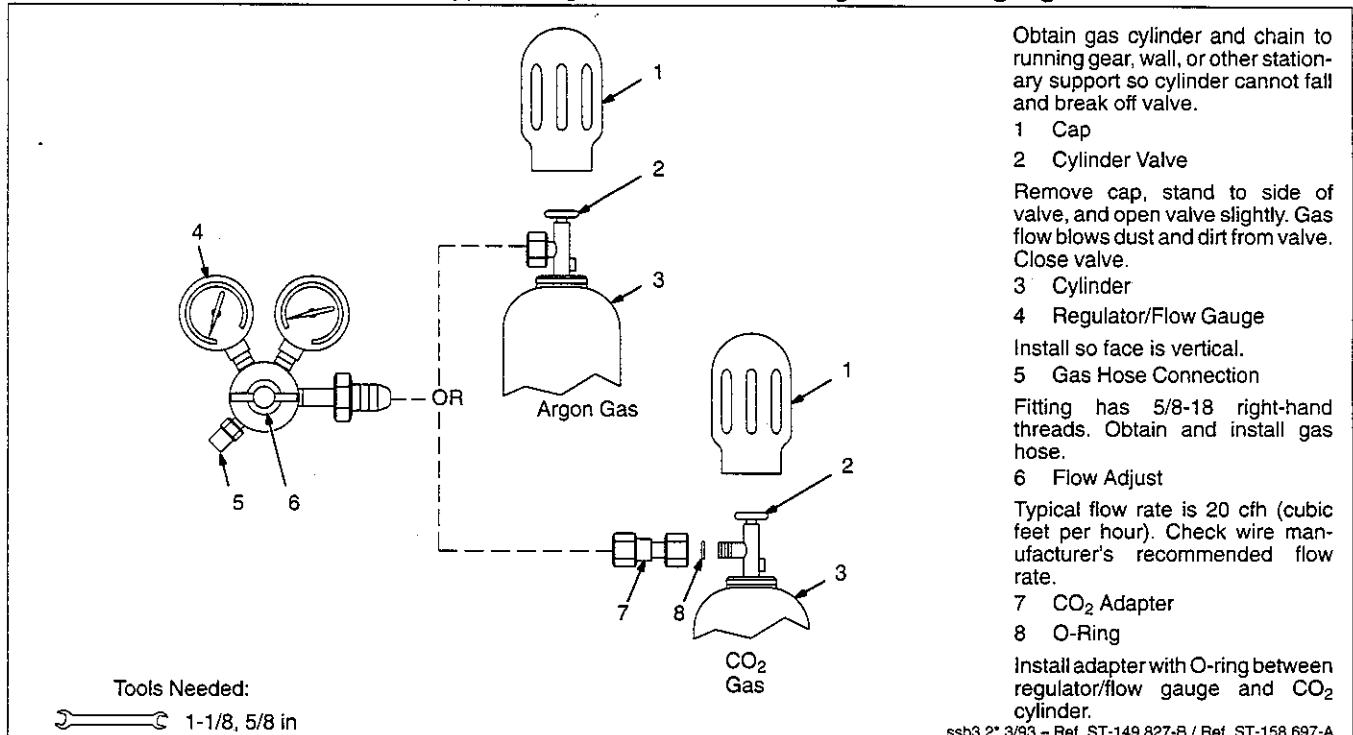


Figure 3-9. Typical Regulator/Flow Gauge Installation

B. Shielding Gas Connections To Typical CO₂ Regulator/Flowmeter

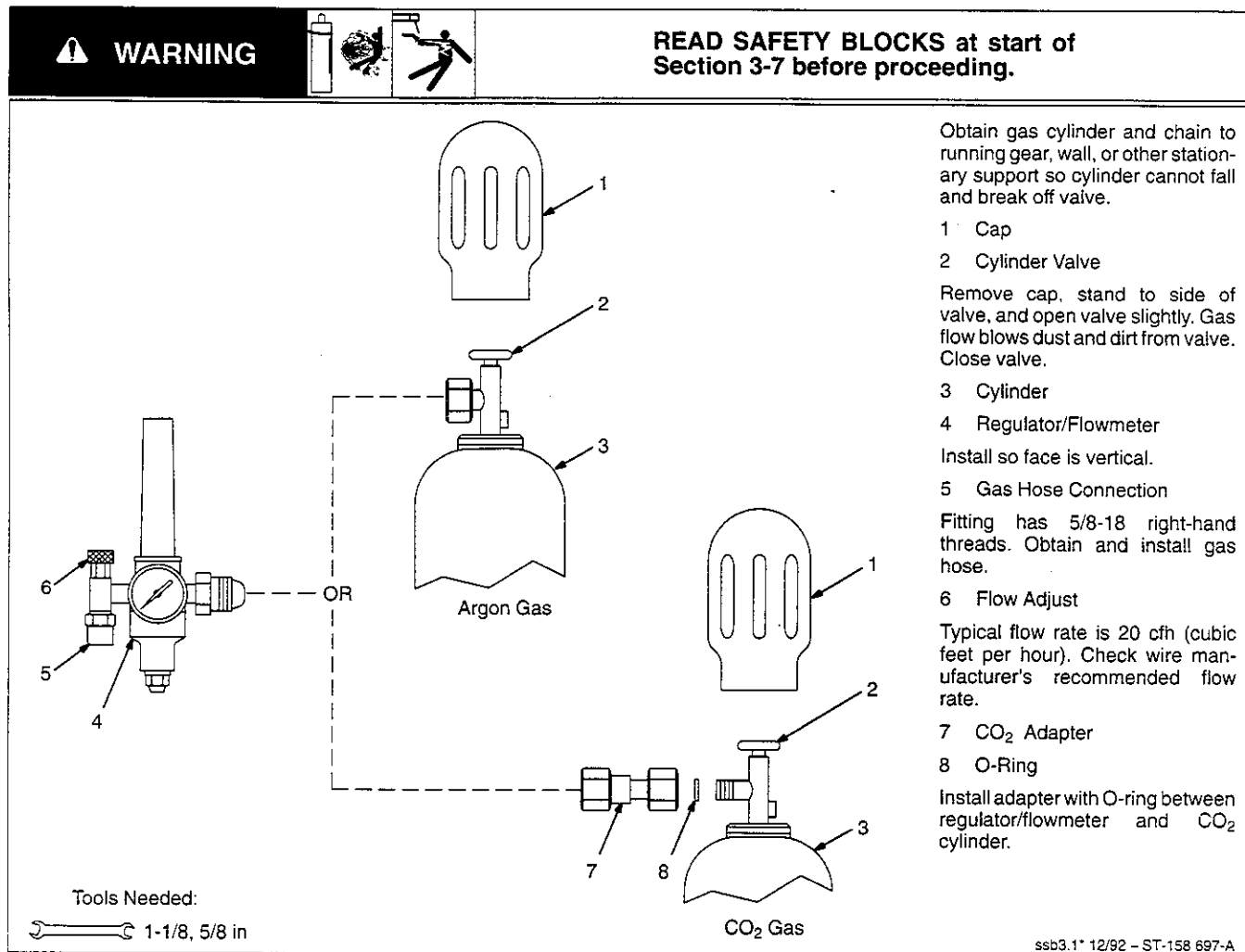


Figure 3-10. Typical CO₂ Regulator/Flowmeter Installation

3-8. Coolant Guidelines

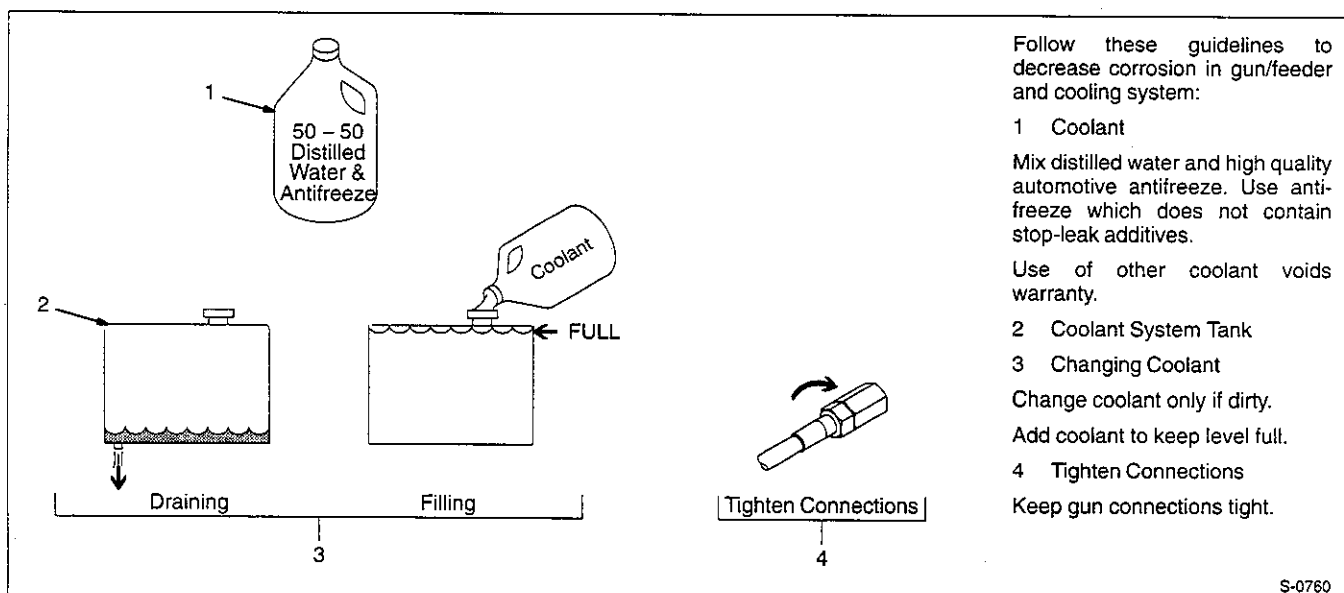


Figure 3-11. Coolant Guidelines

3-9. Adjusting Drive Roll And Spool Brake Pressure

CAUTION	
WELDING WIRE can cause puncture wounds. - Do not press gun trigger until instructed to do so. - Do not point gun toward any part of the body, other people, or any metal when threading welding wire.	HOT SURFACES can burn skin. Allow gun to cool before touching.
wfwarn2.1 9/91	

1 Top Cover
2 Canister Cover
3 Thumbscrew
Loosen thumbscrew and remove cover.
4 Spool
Cut welding wire off at contact tube. Retract wire onto spool and secure.
5 Spool Brake Thumbnut
Grasp spool in one hand and turn while adjusting spool brake thumbnut. When a slight force is needed to turn spool, tension is set. Do not overtighten.
Reinstall canister cover. Thread welding wire (see Section 3-2).
6 Drive Roll Tension Thumbnut
7 Adjusting Pressure
Turn On unit and check drive roll pressure by feeding wire against a wood board or concrete surface; wire should feed steadily without slipping.
Adjust drive roll tension thumbnut if necessary. Do not overtighten.
Turn Off unit. Reinstall top cover.

Tools Needed:

Ref. ST-151 112 / S-0651

Figure 3-12. Adjusting Drive Roll And Spool Brake Pressure

SECTION 4 – OPERATION

WARNING	
ELECTRIC SHOCK can kill. - Do not touch live electrical parts. - Always wear dry insulating gloves. - Insulate yourself from work and ground. - Keep all panels and covers securely in place.	ARC RAYS can burn eyes and skin; NOISE can damage hearing. - Wear welding helmet with correct shade of filter. - Wear correct eye, ear, and body protection.
FUMES AND GASES can be hazardous to your health. - Keep your head out of the fumes. - Ventilate area, or use breathing device. - Read Material Safety Data Sheets (MSDSs) and manufacturer's instructions for material used.	MOVING PARTS can cause injury. - Keep away from pinch points such as drive rolls. - Keep all doors, panels, covers, and guards closed and securely in place.
WELDING can cause fire or explosion. - Do not weld near flammable material. - Watch for fire; keep extinguisher nearby. - Do not locate unit over combustible surfaces. - Do not weld on closed containers. - Allow work and equipment to cool before handling.	MAGNETIC FIELDS FROM HIGH CURRENTS can affect pacemaker operation. - Pacemaker wearers keep away. - Wearers should consult their doctor before going near any welding operations.
See Safety Precautions at beginning of manual for basic welding safety information.	
wfwarn3.1 8/92	

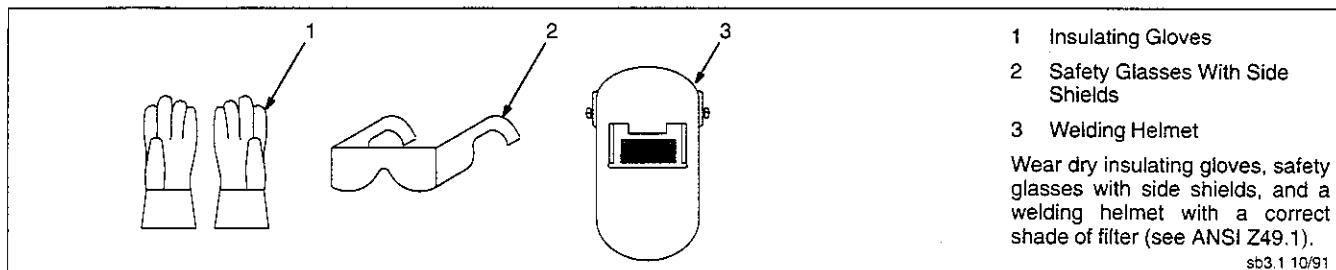


Figure 4-1. Safety Equipment

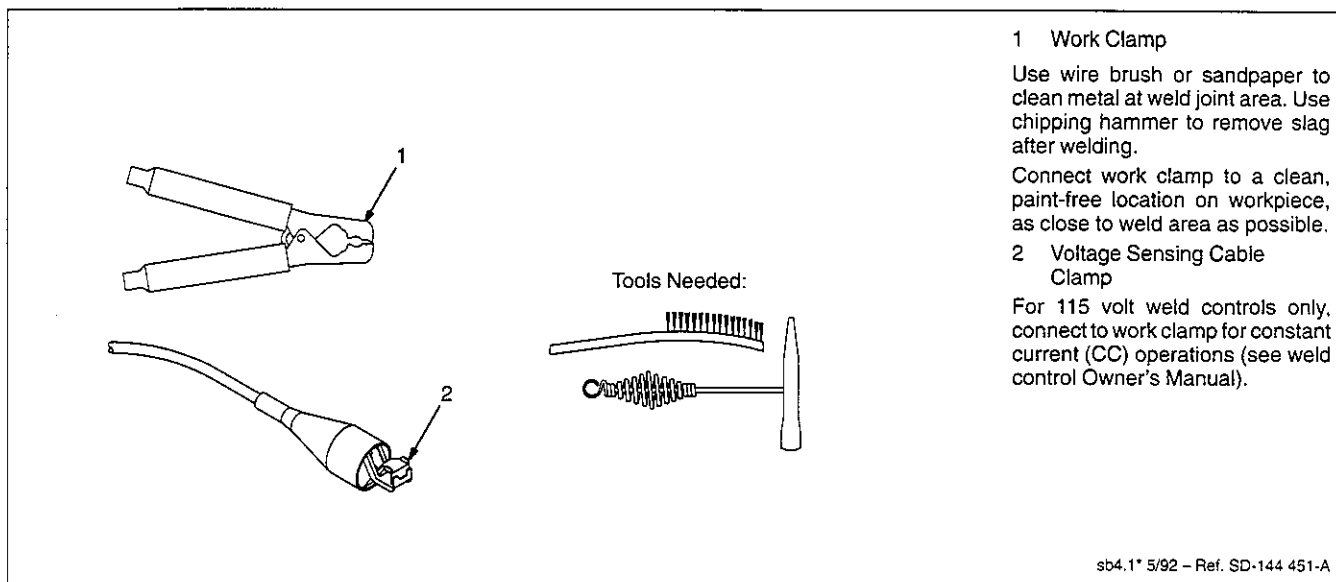


Figure 4-2. Work And Voltage Sensing Cable Clamps

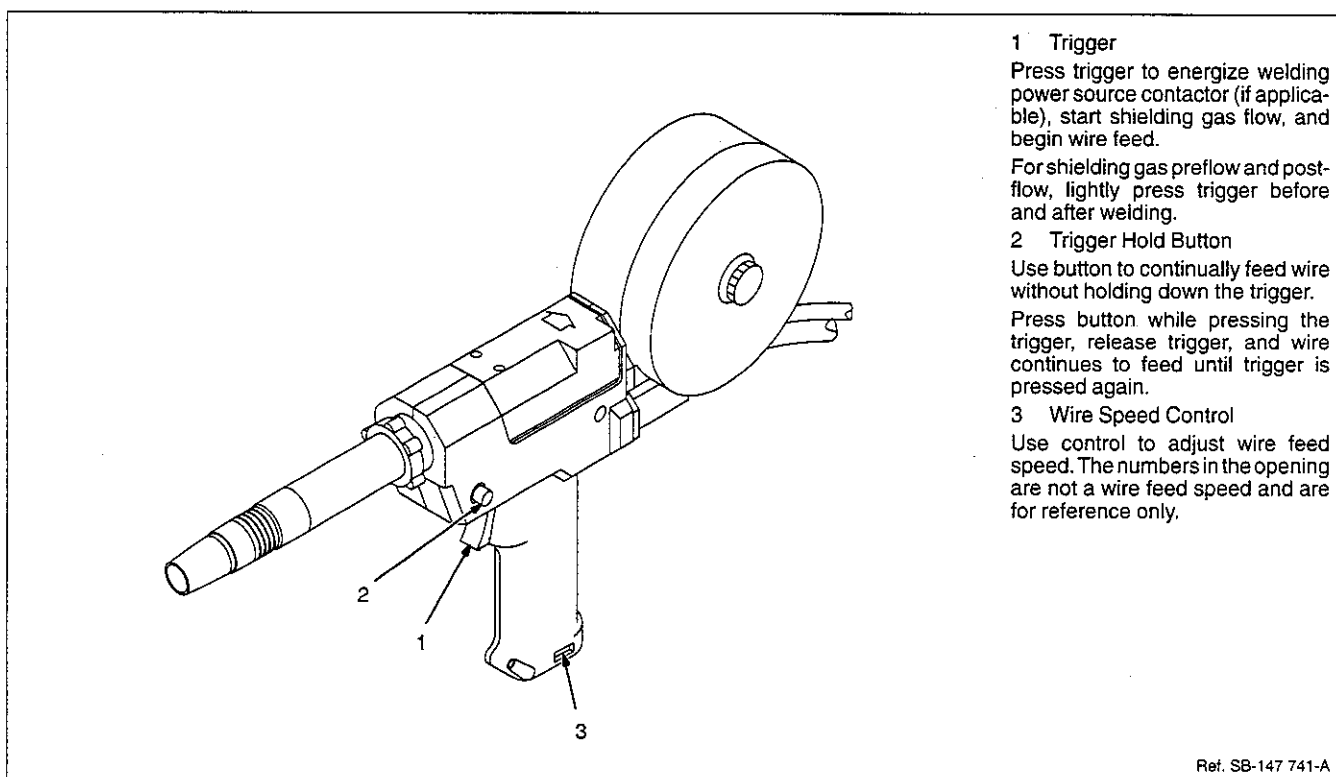


Figure 4-3. Controls

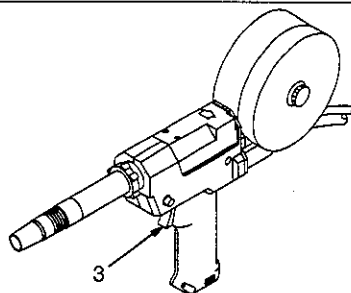
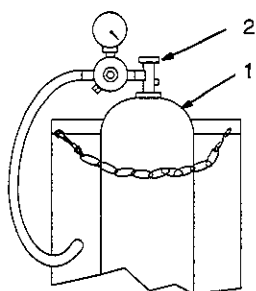
⚠ WARNING



BUILDUP OF SHIELDING GAS can harm health or kill.

- Shut off shielding gas supply when not in use.

warn1.1 9/91



- 1 Shielding Gas Cylinder
- 2 Valve
- 3 Gun Trigger

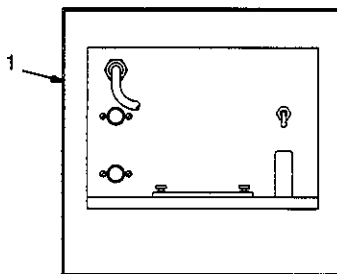
Open valve on cylinder just before welding.

Gun trigger turns weld output and gas flow on and off. For shielding gas preflow and postflow, lightly press trigger before and after welding.

Close valve on cylinder when finished welding.

sb5.1* 6/92 - S-0621-C / Ref. SB-147 741-A

Figure 4-4. Shielding Gas



- 1 Coolant Supply

Turn on coolant supply before welding.

Turn off coolant supply when finished welding.

Ref. ST-150 755-A

Figure 4-5. Coolant Supply For Water-Cooled Models Only

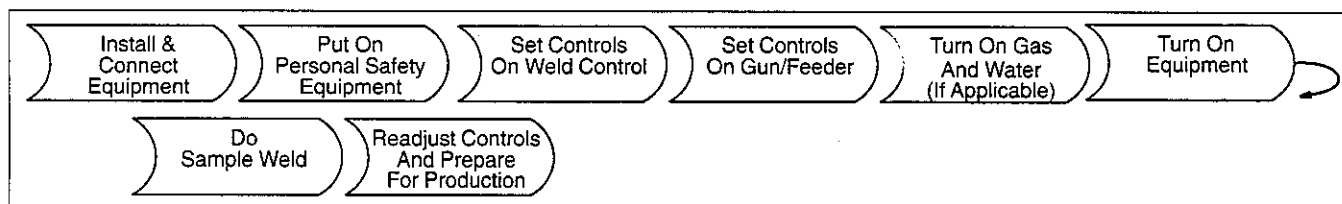


Figure 4-6. Sequence Of Gas Metal Arc Welding (GMAW) - Continuous Or Spot

SECTION 5 – MAINTENANCE & TROUBLESHOOTING

⚠ WARNING			
	ELECTRIC SHOCK can kill. - Do not touch live electrical parts. - Turn Off wire feeder and welding power source, and disconnect input power before inspecting, maintaining, or servicing. Stop engine on welding generators.		HOT PARTS can cause severe burns. Allow cooling period before servicing gun or unit.
	MOVING PARTS can cause injury. - Keep away from moving parts. - Keep away from pinch points such as drive rolls.		Maintenance to be performed only by qualified persons. wfwarn4.1* 2/93

5-1. Routine Maintenance

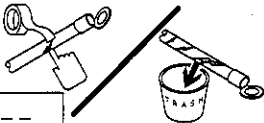
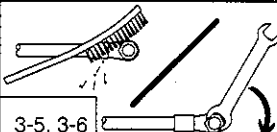
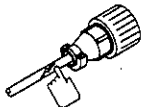
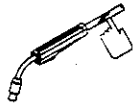
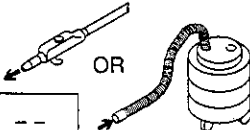
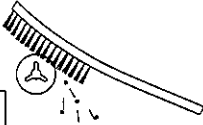
 Turn Off all power before maintaining.			
 3 Months		 3 Months	
 See Section 7	 Replace Unreadable Labels	 --	 Tape Or Replace Cracked Weld Cable
 Clean And Tighten Weld Terminals		 --	 14-Pin Cord
3-5, 3-6		 Gas Hose	 Gun Cable
		 6 Months	
		 Blow Out Or Vacuum Inside	
		 Clean Drive Rolls	
		5-3	

Figure 5-1. Maintenance

5-2. Changing Contact Tube And Liner

⚠ WARNING		READ SAFETY BLOCKS at start of Section 5 before proceeding.	
Tools Needed:		Turn Off weld control and welding power source. Remove top cover and open pressure roll assembly as shown in Figure 5-3. 1 Contact Tube Wrench Insert wrench into nozzle over contact tube. 2 Compression Nut Loosen nut. Pull out contact tube. 3 Contact Tube 4 Nozzle Pull wire out nozzle and liner should slide out. If necessary, tilt nozzle down to remove liner. Close pressure roll assembly. Re-install top cover. Install new liner and contact tube over wire. Cut off wire at end of contact tube. Tighten nut just until contact tube is secure. Overtightening nut will damage adapter. ST-150 437	

Figure 5-2. Changing Contact Tube And Liner

5-3. Changing Or Cleaning Drive Roll

WARNING



READ SAFETY BLOCKS at start of Section 5 before proceeding.

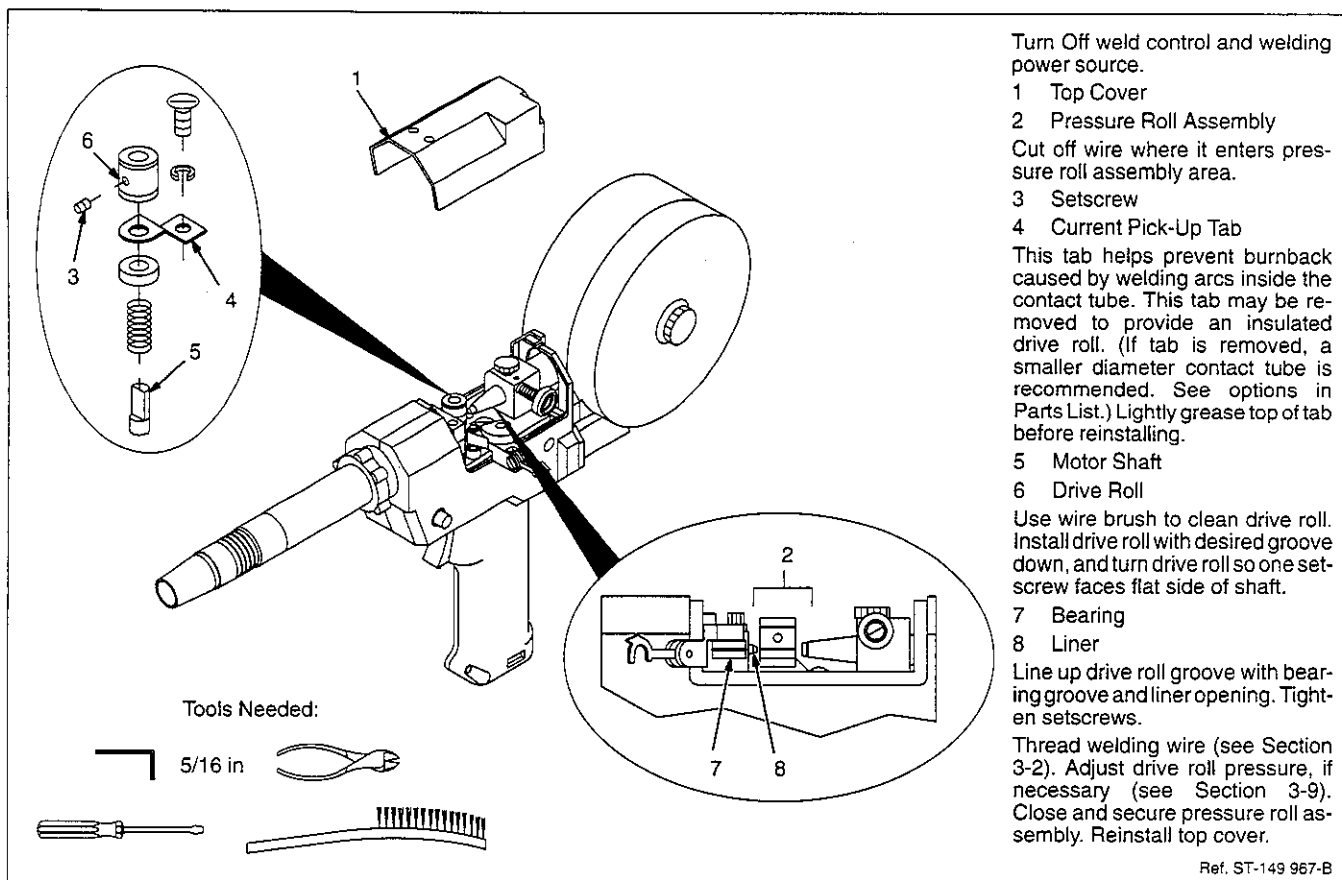


Figure 5-3. Removing Drive Roll

5-4. Replacing Or Cleaning Drive Roll Bearing

WARNING



READ SAFETY BLOCKS at start of Section 5 before proceeding.

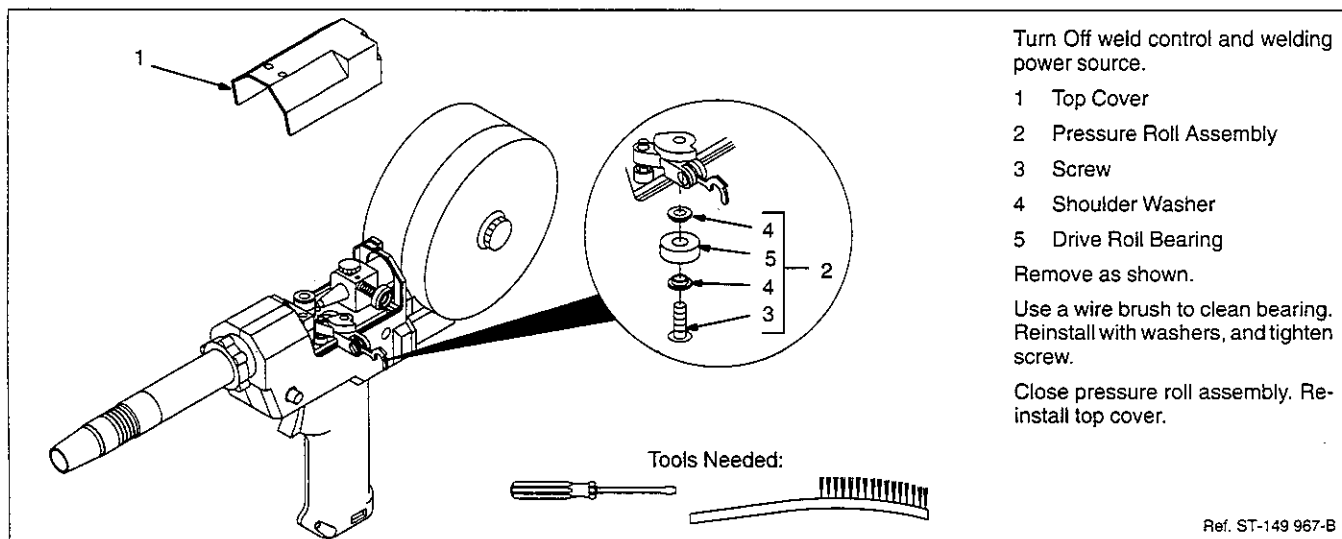


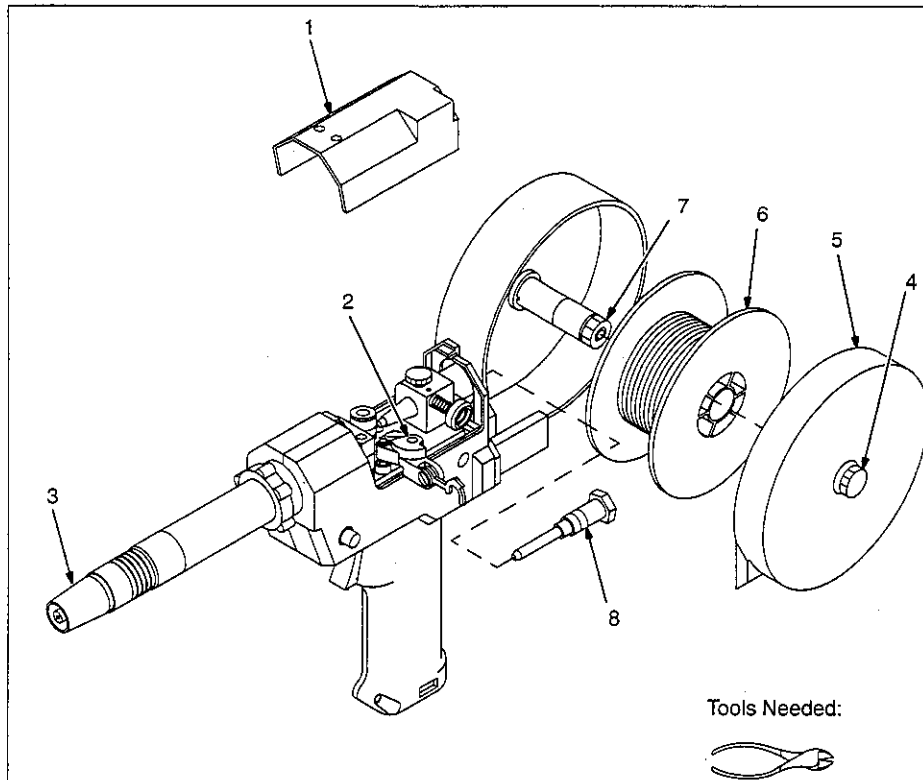
Figure 5-4. Removing Drive Roll Bearing

5-5. Replacing Canister Inlet Guide

WARNING



READ SAFETY BLOCKS at start of Section 5 before proceeding.



Turn Off weld control and welding power source.

1 Top Cover

2 Pressure Roll Assembly

Cut off welding wire where it enters pressure roll assembly area.

3 Nozzle

Pull wire out nozzle.

4 Thumbscrew

5 Canister Cover

Loosen thumbscrew and remove cover.

6 Wire Spool

7 Spool Brake Thumbnut

Loosen thumbnut, retract wire onto spool, secure, and remove spool.

8 Canister Inlet Guide

Turn counterclockwise to remove. Install new guide.

Reinstall spool and thread welding wire (see Section 3-2).

Adjust spool brake pressure and drive roll pressure if necessary (see Section 3-9).

Close pressure roll assembly. Reinstall canister cover and top cover.

Tools Needed:



Ref. ST-150 436 / Ref. ST-149 967-B

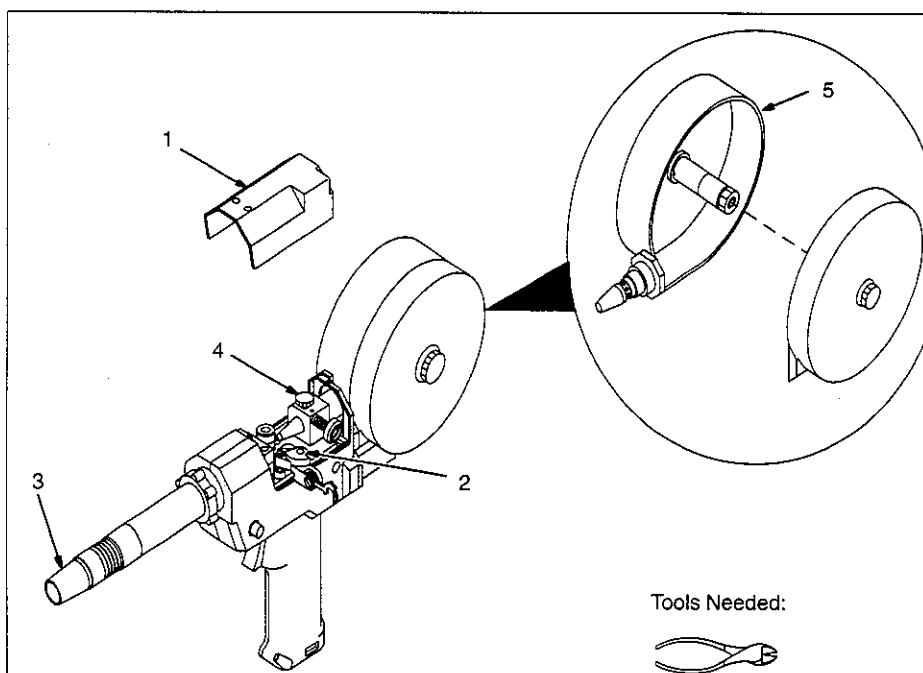
Figure 5-5. Removing Canister Inlet Guide

5-6. Replacing Spool Canister

WARNING



READ SAFETY BLOCKS at start of Section 5 before proceeding.



Turn Off weld control and welding power source.

1 Top Cover

2 Pressure Roll Assembly

Cut off welding wire where it enters pressure roll assembly area.

3 Nozzle

Pull wire out nozzle.

4 Thumbscrew (Canister Rotation)

Turn thumbscrew counterclockwise three full turns.

5 Spool Canister

Remove as shown. Push new canister into wire drive housing until fully seated. Tighten thumbscrew. Install spool and thread welding wire (see Section 3-2).

Adjust spool brake pressure and drive roll pressure as necessary (see Section 3-9).

Close pressure roll assembly. Reinstall top cover and canister cover.

Tools Needed:



Ref. ST-149 967-B

Figure 5-6. Removing Canister

5-7. Replacing Contact Tube Adapter

A. Air-Cooled Models



WARNING



READ SAFETY BLOCKS at start of Section 5 before proceeding.

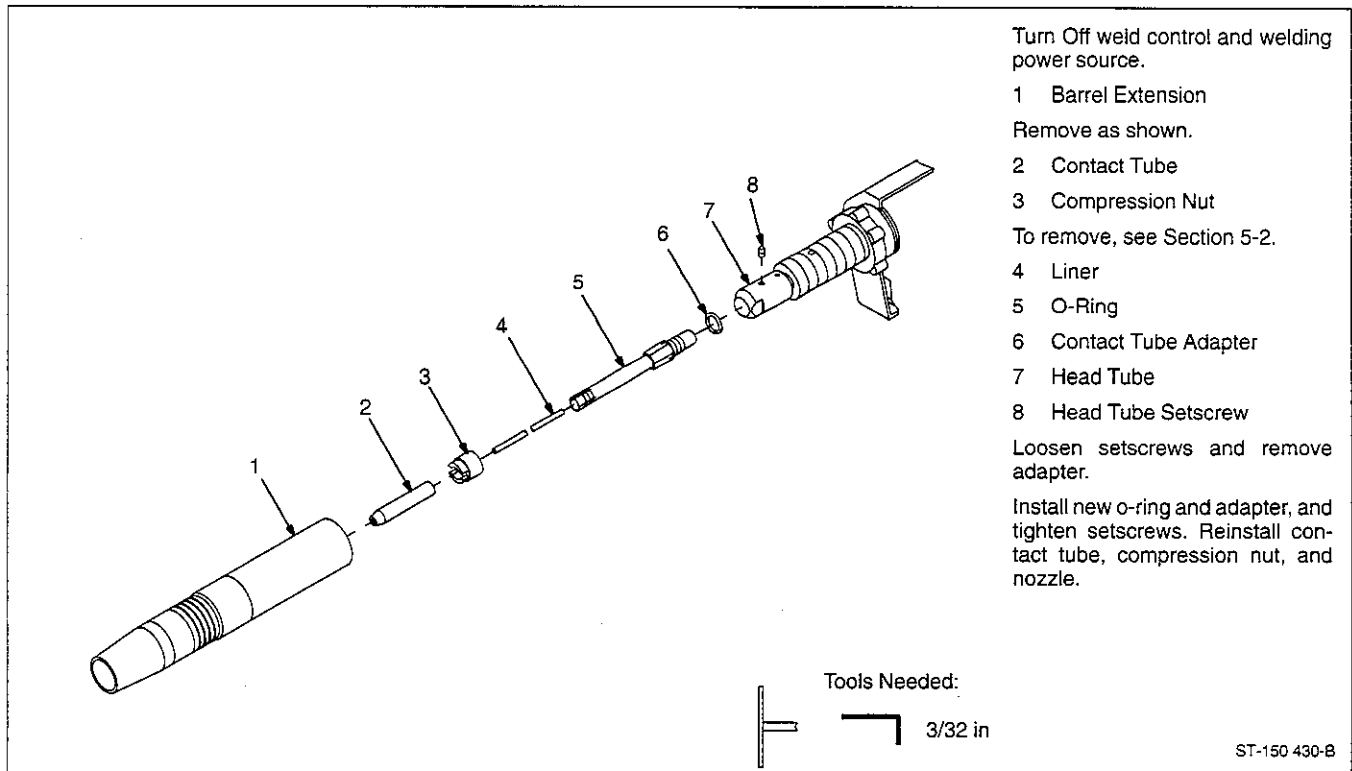


Figure 5-7. Removing Contact Tube Adapter

B. Water-Cooled Models



WARNING

WATER IN GUN PARTS can cause ELECTRIC SHOCK and can lower weld quality.

- Turn Off welding power source and water supply before working on gun. Stop engine on welding generators.
- Always point gun downward when removing water-cooled barrel to keep water out of gun parts.
- Wipe gun dry before putting it back together.

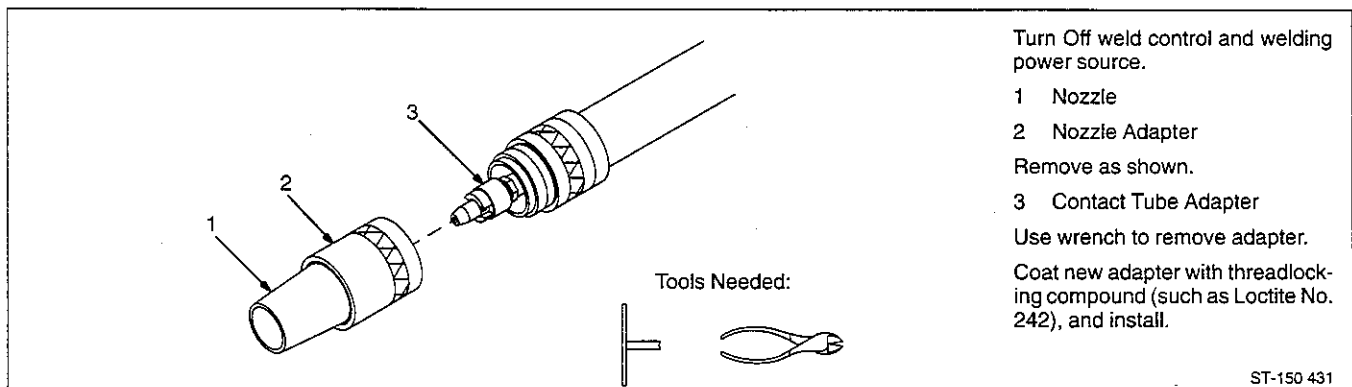


Figure 5-8. Removing Contact Tube Adapter

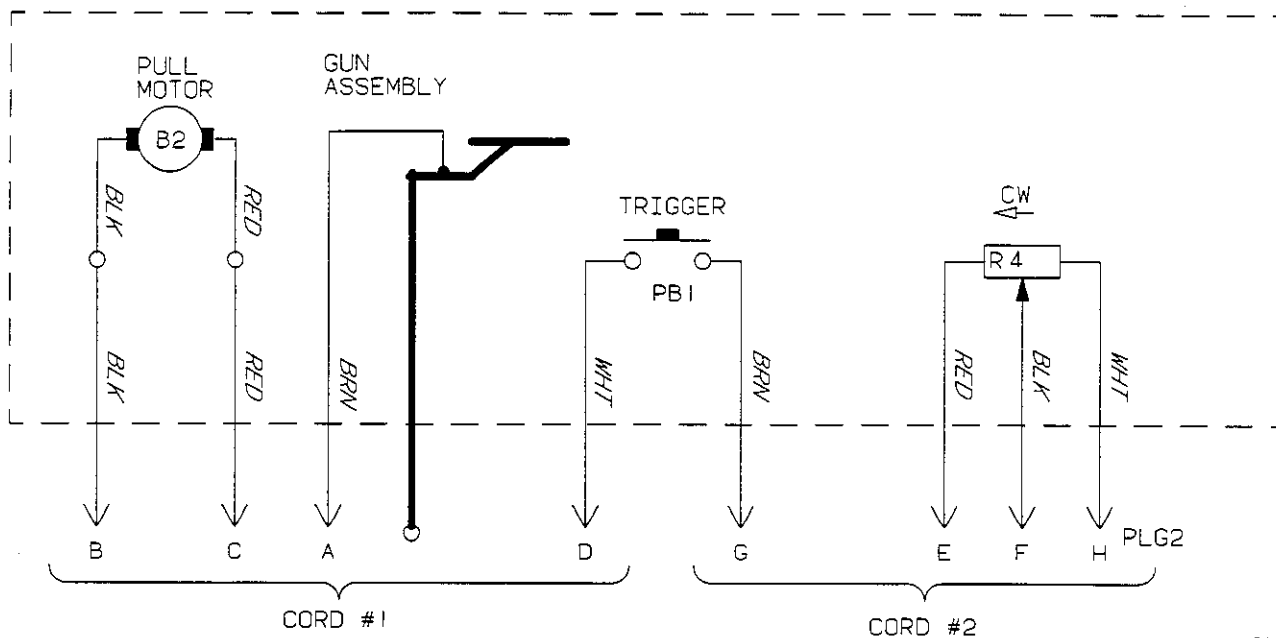
5-8. Troubleshooting

 WARNING	
 ELECTRIC SHOCK can kill. - Do not touch live electrical parts. - Turn Off welding power source, and disconnect input power before inspecting, maintaining, or servicing. Stop engine on welding generators.	 MOVING PARTS can cause injury. - Keep away from moving parts. - Keep away from pinch points such as drive rolls.
 HOT PARTS can cause severe burns. Allow cooling period before servicing gun or unit.	 Troubleshooting to be performed only by qualified persons. swarn9.2* 2/93

Table 5-1. Welding Trouble

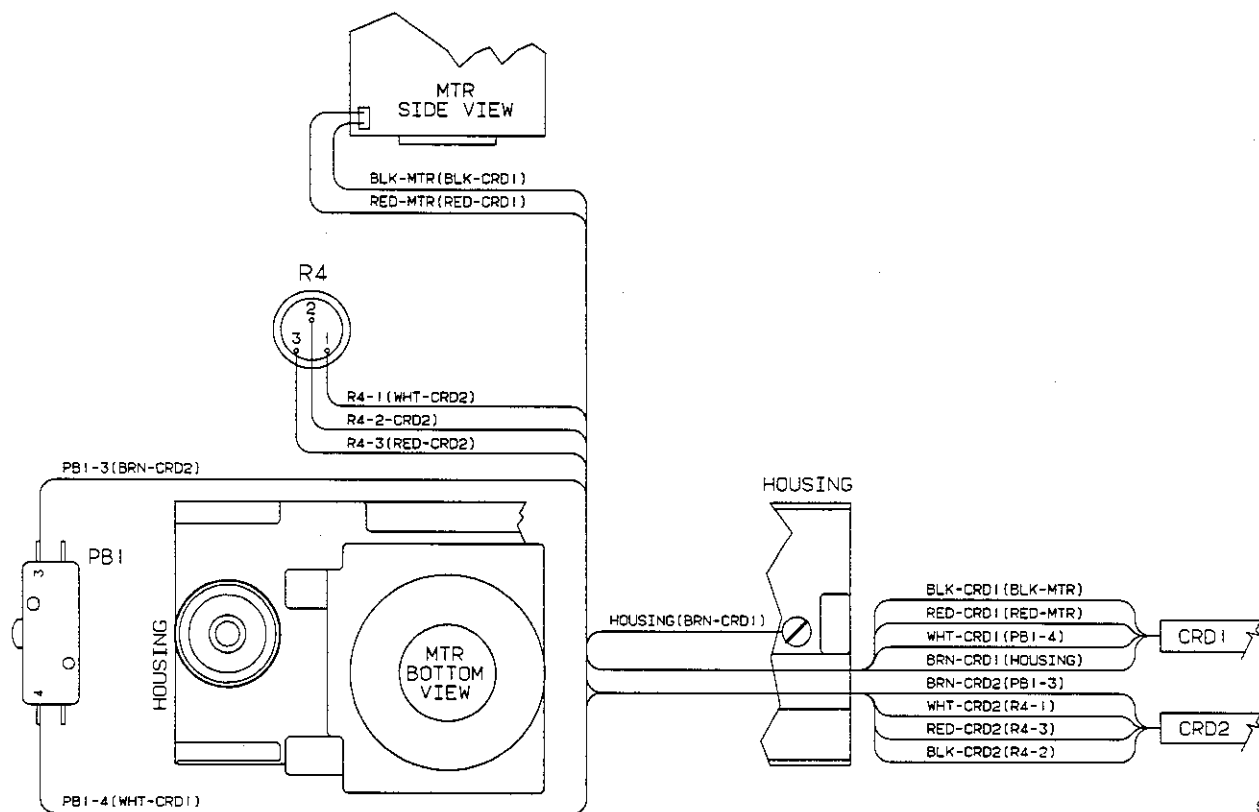
Trouble	Remedy	Section
No weld output; gun/feeder does not work.	Secure weld control plug in 115 volts ac receptacle. Place Power switch on welding power source in the On position.	-- --
Erratic weld output.	Tighten and clean all connections.	--
Pressing gun/feeder trigger does not energize weld control; welding wire is not energized; shielding gas does not flow.	Secure plug from gun/feeder trigger cord into 10-socket receptacle on weld control.	3-5
Wire does not feed; burnback in contact tube.	Reinstall current pick-up tab if applicable.	5-3
Wire feeds, shielding gas flows, but welding wire is not energized.	Secure contact control cable leads in weld control (see weld control Owner's Manual). See Troubleshooting section in welding power source Owner's Manual.	-- --
Wire feeds erratically.	Check and correct drive roll pressure. Clean drive roll or replace drive roll. Decrease spool brake pressure.	3-9 5-3 3-9
Gun overheating (Water-Cooled Models).	Be sure coolant flowrate is at least 1 qt/min. Corrosion buildup in gun/feeder decreasing coolant flowrate. Backflush coolant system, clean coolant system filter, and clean fittings.	-- 3-8

SECTION 6 – ELECTRICAL DIAGRAMS



SA-138 956-A

Figure 6-1. Circuit Diagram For Gun/Feeder

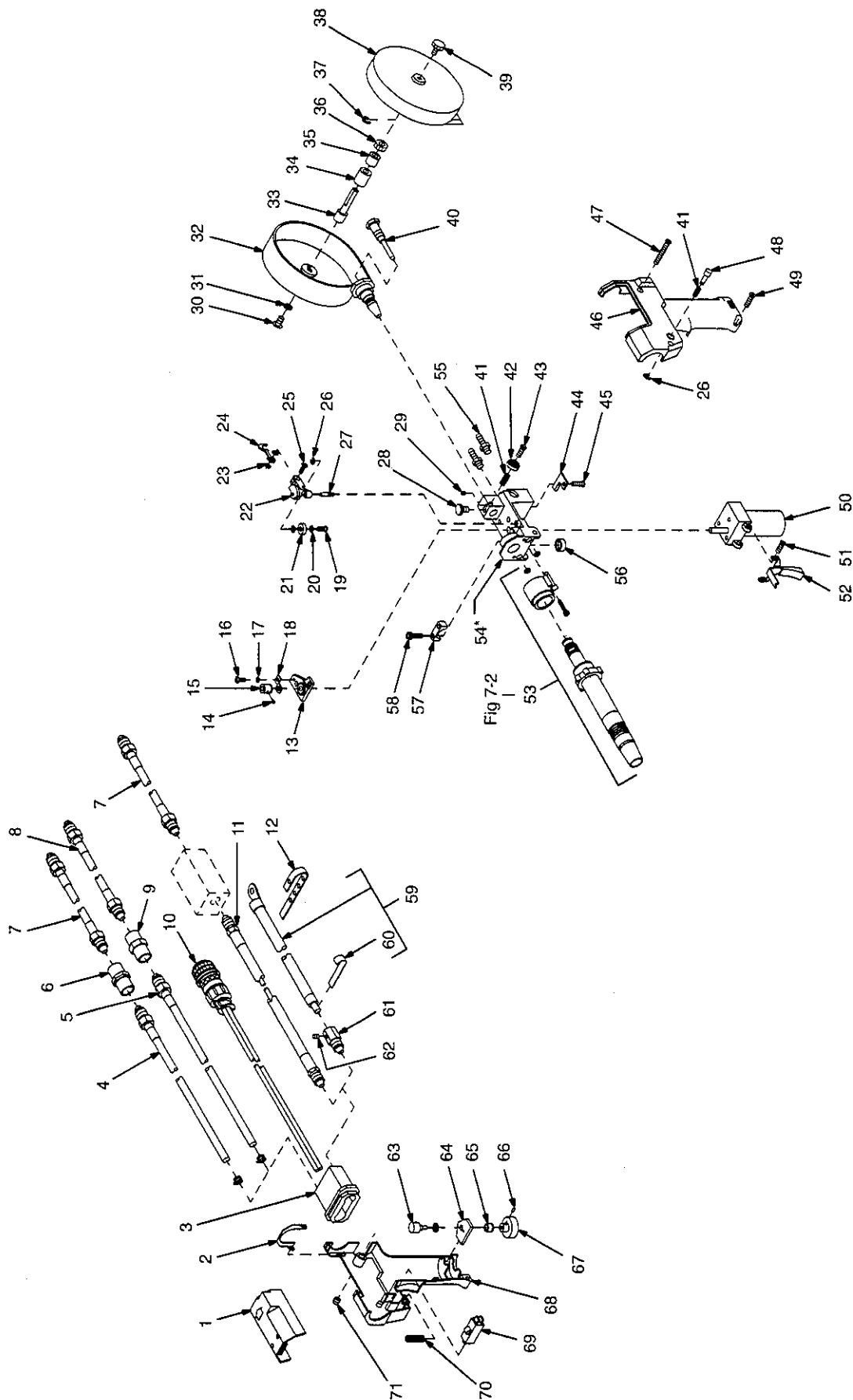


SB-139 060-A

Figure 6-2. Wiring Diagram For Gun/Feeder

NOTES

SECTION 7 – PARTS LIST



ST-143 116-D

Figure 7-1. Main Assembly

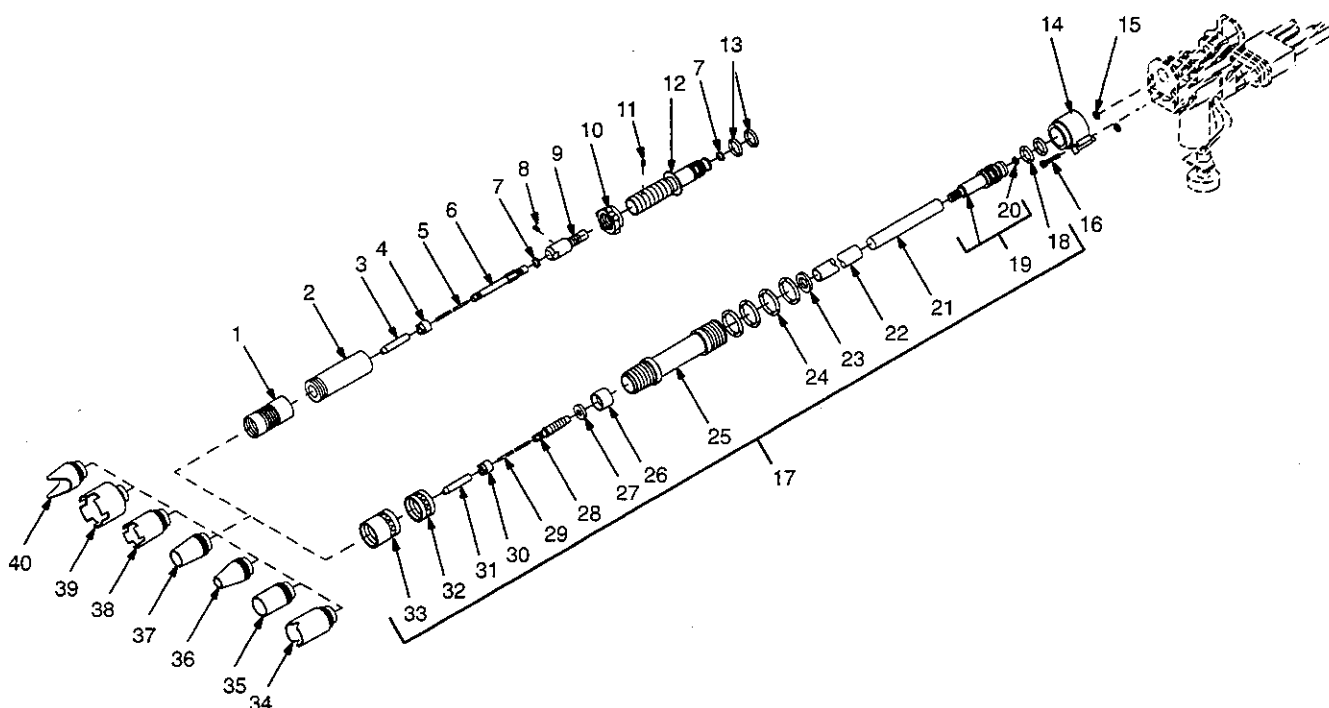
*Includes Items 55 & 56

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Figure 7-1. Main Assembly				
1		133 479	COVER	1
2		135 196	SPRING, closure cover	1
3		133 362	STRAIN RELIEF, cable	1
4		137 475	HOSE, water in (30W model only) (consisting of)	1
5		137 472	HOSE, gas in (consisting of)	1
		056 851	FITTING, hose brs barbed nipple 3/16tbg	1
		010 607	FITTING, hose brs nut .625-18LH (water hose)	1
		010 606	FITTING, hose brs nut .625-18RH (gas hose)	1
		056 108	FITTING, hose brs ferrule .425 ID x .718 lg	1
		134 834	HOSE, SAE .187 ID x .410 OD (order by ft)	31ft
		089 120	CLAMP, hose .375-.450clp dia slftng	1
6		057 020	FITTING, hose brs coupler .625-18LH/.625-18LH (30W model only)	1
7		000 571	HOSE, water (30W model only) (consisting of)	2
		056 851	FITTING, hose brs barbed nipple 3/16tbg	2
		010 607	FITTING, hose brs nut .625-18LH	2
		056 108	FITTING, hose brs ferrule .425 ID x .718 lg	2
		134 834	HOSE, SAE .187 ID x .410 OD (order by ft)	10ft
8		048 837	HOSE, gas (consisting of)	1
		010 603	FITTING, hose brs barbed nipple 1/4tbg	2
		010 606	FITTING, hose brs nut .625-18RH	2
		056 112	FITTING, hose brs ferrule .475 ID x .718 lg	2
		603 106	HOSE, nprn brd No. 1 x .250 ID (order by ft)	10ft
9		000 950	FITTING, hose brs coupler .625-18RH/.625-18RH	1
10		138 459	CABLE, control (consisting of)	1
	PLG2	146 212	PLUG, 10 pin MS-3106A-18-1PX	1
		138 033	CLAMP, cable 97-3057-1010	1
		053 212	CABLE, port No. 18 4/c (order by ft)	63ft
11		137 477	CABLE, power/water out 30ft (30W model only)	1
12		073 476	CLAMP, strap rbr 5 holes .375 wide x 4.625 lg	13
13		162 041	BEARING BLOCK ASSEMBLY	1
		604 638	SCREW, cap stl sch 6-32 x .375	3
		143 480	SCREW, 6-32 x .625 soc hd-hex stl	1
14		604 612	SCREW, set stl sch 8-32 x .125 cup point	2
15		136 135	ROLL, drive VK groove .023-1/16 wire	1
16		602 070	SCREW, 6-32 x .375 trushd slt stl	1
17		602 198	WASHER, lock stl split No. 6	1
18		162 042	CONTACT, current pick-up	1
19		132 270	SCREW, mach stl rdhph 6-32 x .500	1
20		134 624	BEARING, flg nyl .140 ID x .187 OD x .375flg x .031thk	2
21		134 623	BEARING	1
22		132 852	ARM, pressure	1
23		605 798	WASHER, shldr nyl .375 OD x .168 ID x .080	2
24		154 307	SPRING, tension adj drive roll	1
25		144 860	SCREW, mach stl flh 8-32 x .437	1
26		058 968	RING, retainer E	2
27		135 474	PIN, hinge	1
28		155 565	SCREW, thumb	1
		134 799	O-RING, .176 ID x .070 CS (used w/thumbscrew)	1
29		135 126	SCREW, set stl sch 6-32 x .125 cup point	1
30		132 530	SCREW, mach stl phtrh .250-20 x .500	1
31		602 209	WASHER, lock stl intl tooth .250	1
32		132 527	CANISTER, spool	1
33		148 488	POST, support spool	1
34		132 529	PAD, brake	1
35		148 489	WASHER, anti-turn	1
36		132 524	NUT, thumb brake	1
37		000 364	RING, retainer ext .188 shaft x .025thk	1
38		132 526	COVER, spool	1

Item No.	Dia. Mkgs.	Part No.	Description	Quantity
Figure 7-1. Main Assembly (Continued)				
.. 39		132 528 ..	SCREW, thumb canister	1
.. 40		132 521 ..	GUIDE, inlet canister	1
.. 41		112 896 ..	SPRING, cprsn .240 OD x .020 wire x .437	2
.. 42		135 773 ..	NUT, thumb tension adjusting 8-32	1
.. 43		143 360 ..	SCREW, mach stl rdh 8-32 x .500	1
.. 44		136 679 ..	CLAMP, strain relief	1
.. 45		132 269 ..	SCREW, mach stl rdhph 8-32 x .375	1
.. 46		164 591 ..	CASE, gun LH	1
.. 47		135 646 ..	SCREW, mach stl rdhph 8-32 x 1.500	2
.. 48		135 896 ..	PLUNGER, trigger hold	1
.. 49		135 645 ..	SCREW, mach stl rdhph 8-32 x .875	1
.. 50	B2	161 813 ..	MOTOR, gear PM 24VDC 420RPM 10.2:1 ratio	1
.. 51		602 066 ..	SCREW, mach stl trh 6-32 x .250	2
.. 52		164 592 ..	TRIGGER	1
.. 53		Fig 7-2	BARREL ASSEMBLY	1
.. 54		164 582 ..	HOUSING, wire drive (30A models only) (consisting of)	1
.. 55		135 580 ..	FITTING, gas	1
.. 56		058 262 ..	CAP, valve	1
..		146 555 ..	SCREW, set 8-32 x .125 cup sch	2
.. 54		164 581 ..	HOUSING, wire drive (30W models only) (consisting of)	1
.. 55		135 580 ..	FITTING, gas	2
.. 56		058 262 ..	CAP, value	1
..		146 555 ..	SCREW, set 8-32 x .125 cup sch	2
..		151 661 ..	SCREW, set 10-32 x .125 cup sch	2
.. 57		133 365 ..	CLAMP, head tube	1
.. 58		000 417 ..	SCREW, cap stl sch 10-24 x1.000	2
.. 59		137 479 ..	CABLE, power (30A model only) (consisting of)	1
..		600 722 ..	TERMINAL, ring tng .500 stud No. 4 cable	1
..		600 318 ..	CABLE, weld cop strd No. 3 (order by ft)	31ft
..		127 893 ..	RING, crimp cable	1
.. 60		152 577 ..	STRIP, cop .010 x 2.000 x .750	1
.. 61		137 495 ..	FITTING, connection power weld (30A model only)	1
.. 62		141 694 ..	SCREW, set stl sch .312-18 x .375 cone point (30A model only)	1
.. 63	R4	137 854 ..	POTENTIOMETER, C sltd sft 1/T .5W 10K ohm	1
.. 64		144 861 ..	WASHER, anti-turn	1
.. 65		135 127 ..	LOCK, shaft pot .250-32 x .125dia shaft	1
.. 66		602 169 ..	SCREW, set stl sch 8-32 x .187 cup pt	1
.. 67		134 856 ..	KNOB, speed control 1-10 .140 shaft x 1.125 OD	1
.. 68		164 590 ..	CASE, gun RH	1
.. 69	PB1	000 369 ..	SWITCH, lim 10A 125/250VAC DPST plgr	1
.. 70		057 544 ..	SPRING, cprsn .240 OD x .026 wire x 1.000	1
.. 71		135 647 ..	NUT, stl 8-32	3

BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.

Item No.	Part No.	Description	Quantity
Figure 7-2. Barrel Assembly (Fig 7-1 Item 53)			
1	144 862	EXTENSION, nozzle (30A model only)	1
2	156 821	EXTENSION, barrel 2.875 lg (30A model only)	1
3	136 171	TUBE, contact .025/31 wire	1
3	♦135 427	TUBE, contact .030/36 wire	1
3	135 428	TUBE, contact .030/41 wire	1
3	♦147 314	TUBE, contact .035/41 wire	1
3	135 430	TUBE, contact .035/52 wire	1
3	♦135 429	TUBE, contact .047/52 wire	1
3	135 424	TUBE, contact .047/61 wire	1
3	♦135 426	TUBE, contact .062/73 wire	1
3	135 425	TUBE, contact .062/81 wire	1
	136 821	WRENCH, nut tube contact	1
	010 287	WRENCH, hex .093 across the flat	1
4	136 748	NUT, compression .375-24	1
5	136 683	LINER, teflon .045-1/16 wire x 6.875 lg	1
5	136 682	LINER, teflon .023-.035 wire x 6.875 lg	1
6	164 421	ADAPTER, contact tube (30A model only)	1
7	164 485	O-RING .176 ID x .070CS (30A model only)	2
8	604 612	SCREW, set stl sch 8-32 x .125 (30A model only)	1
9	164 422	TUBE, head (30A model only)	1
10	058 685	NUT, jam nozzle extension (30A model only)	1
11	602 172	SCREW, set stl sch 10-32 x .187 cup point (30A model only)	1
12	164 423	ADAPTER, tube head (30A model only)	1
13	134 800	O-RING, .614 ID x .070CS	2
14	132 985	MANIFOLD, water (30W model only)	1
15	134 799	O-RING, .176 ID x .070CS (30W model only)	2
16	135 128	SCREW, cap stl sch 6-32 x 1.000 (30W model only)	2



ST-900 434

Figure 7-2. Barrel Assembly

Item No.	Part No.	Description	Quantity
Figure 7-2. Barrel Assembly (Fig 7-1 Item 53) (Continued)			
.. 17	137 042 ..	BARREL ASSEMBLY, water cooled (30W model only) (consisting of) ..	1
.. 18	134 800	O-RING, .614 ID x .070CS	2
.. 19	136 955	FITTING, end tube head (consisting of)	1
.. 20	134 799	O-RING, .176 ID x .070CS	1
.. 21	136 956	TUBE, head	1
.. 22	136 943	TUBING, teflon	1
.. 23	136 834	WASHER, fbr .594 ID x .875 OD x .125thk	1
.. 24	134 801	O-RING, .926 ID x .070CS	4
.. 25	137 041	BARREL, outer	1
.. 26	136 836	INSULATOR, head tube from adapter	1
.. 27	136 835	WASHER, flat brs .390 ID x .687 OD x .125thk	1
.. 28	136 680	ADAPTER, contact tube	1
.. 29	136 683	LINER, teflon .045-1/6 wire x 6.875 lg	1
.. 30	136 748	NUT, compression .375-24	1
.. 31	135 424	TUBE, contact .047-.061 wire	1
.. 32	136 833	NUT, jam adapter 1.000-8	1
.. 33	136 832	ADAPTER, nozzle	1
..	050 622	NOZZLE, 5/8 orf x 1-5/8 lg	1
.. 34	♦009 925 ..	NOZZLE, spot outside corner .937 ID x 2.375	1
.. 35	♦050 116 ..	NOZZLE, 13/16 orf x 1-5/8 lg	1
.. 36	♦050 115 ..	NOZZLE, 1/2 orf x 1-5/8 lg	1
.. 37	050 622 ..	NOZZLE, 5/8 orf x 1-5/8 lg	1
.. 38	♦000 442 ..	NOZZLE, spot	1
.. 39	♦004 466 ..	NOZZLE, spot	1
.. 40	♦000 443 ..	NOZZLE, spot inside corner	1

♦OPTIONAL

BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.

OPTIONS AND ACCESSORIES

FOR AIR-COOLED MODELS

SX FLEX HEAD KIT (#131 104)

For .030 in. through 1/16 in. (0.8 mm through 1.6 mm) wire.

Used in place of the standard straight barrel. Flexible head tube bends 60 degrees in any direction for easier joint access and improved operator comfort. Supplied with two Teflon liners and one contact tip for each wire size listed.

REPLACEMENT LINERS FOR FLEX HEAD

(#138 255) .030 and .035 in. (0.8 and 0.9 mm) wire

(#132 682) 3/64 and 1/16 in. (1.2 and 1.6 mm) wire

Note: The flex head uses standard XR and Spoolmatic contact tips.

SX-A 50 DEGREE CURVED BARRELS

(#147 175) 6 in. (152 mm)

(#147 176) 10 in. (254 mm)

Used with .030 through 1/16 in. (0.8 through 1.6 mm) wire. Kits supplied with two liners that accommodate all wire sizes. Uses standard contact tips.

REPLACEMENT TEFLON LINERS FOR CURVED BARRELS

For 6 in. Barrel

(#144 858) .030 and .035 in. (0.8 and 0.9 mm) wire

(#144 859) .047 and 1/16 in. (1.2 and 1.6 mm) wire

For 10 in. Barrel

(#144 854) .030 and .035 in. (0.8 and 0.9 mm) wire

(#144 855) .047 and 1/16 in. (1.2 and 1.6 mm) wire

SX-A50 DEGREE CURVED NOZZLE KIT (#147 174)

Attaches to standard gun barrel assembly and is ideal for access to confined weld joint areas. Used with .030 through 1/16 in. (0.8 through 1/6 mm) wire.

Kit includes two of each size contact tips to accommodate all wire sizes. Uses standard straight barrel head tube liner.

REPLACEMENT CONTACT TIPS FOR CURVED NOZZLE

(#148 155) .030 and .035 in. (0.8 and 0.9 mm) wire

(#148 154) .047 in. (1.2 mm) wire

(#148 156) 1/16 in. (1.6 mm) wire

3 IN. HEAD TUBE EXTENSION (#137 787)

Extends the standard gun barrel 3 in. (72 mm) when a longer reach is required. The head tube extension is supplied with two liners to accommodate all wire sizes.

REPLACEMENT LINERS FOR HEAD TUBE EXTENSION

(#138 223) .030 and .035 in. (0.8 and 0.9 mm) wire

(#138 224) 3/64 and 1/16 in. (1.2 and 1.6 mm) wire

Note: The 3 in. head tube uses standard XR and Spoolmatic contact tips.

FOR WATER-COOLED MODELS

SX-W 50 DEGREE CURVED BARRELS

(#130 843) 6 in. (152 mm)

(#130 842) 10 in. (254 mm)

Used with .030 through 1/16 in. (0.8 through 1.6 mm) wire. Kits supplied with two liners that accommodate all wire sizes. Uses standard contact tips.

SX-W 10 IN. STRAIGHT BARREL (#130 841)

Used with .030 through 1/16 in. (0.8 through 1.6 mm) wire. Kits supplied with two liners that accommodate all wire sizes. Uses standard contact tips.

REPLACEMENT TEFLON LINERS FOR OPTIONAL WATER BARRELS

For 6 in. Curved Barrel

(#144 858) .030 and .035 in. (0.8 and 0.9 mm) wire

(#144 859) .047 and 1/16 in. (1.2 and 1.6 mm) wire

For 10 in. Curved Barrel

(#144 854) .030 and .035 in. (0.8 and 0.9 mm) wire

(#144 855) .047 and 1/16 in. (1.2 and 1.6 mm) wire

For 10 in. Straight Barrel

(#144 857) .030 and .035 in. (0.8 and 0.9 mm) wire

(#144 856) .047 and 1/16 in. (1.2 and 1.6 mm) wire

CABLE COVER (#118 678)

Protects gun hose and cable assembly from wear and abrasion. Features a full-length zipper.

SX HEAT SHIELD (#131 103)

Helps protect operator's hand from spatter and reflected heat.

OPTIONAL FEED CABLE WITH STEEL LINER

(#121 001) 15 ft. (4.6 m)

(#121 002) 30 ft. (9 m)

Recommended when using .030 through .045 in. (0.8 to 1.2 mm) mild steel, flux-cored, or stainless steel electrode wire.

SPOOLMATIC HOSE AND CABLE EXTENSION KITS

For Spoolmatic-30A, Air-Cooled Model

(#132 228) 25 ft. (7.6 m)

(#132 229) 50 ft. (15 m)

For Spoolmatic-30W, Water-Cooled Model

(#132 226) 25 ft. (7.6 m)

(#132 227) 50 ft. (15 m)

Extends the standard 30 ft. (9 m) hose and cable assembly. Convenient plug-in connections. Includes gas hose, control cord, and weld power cable with International style insulated connector. (Kits for water-cooled guns include water in/out hoses.)