HOBART®
WELDING PRODUCTS

OM-185 480B
March 1999

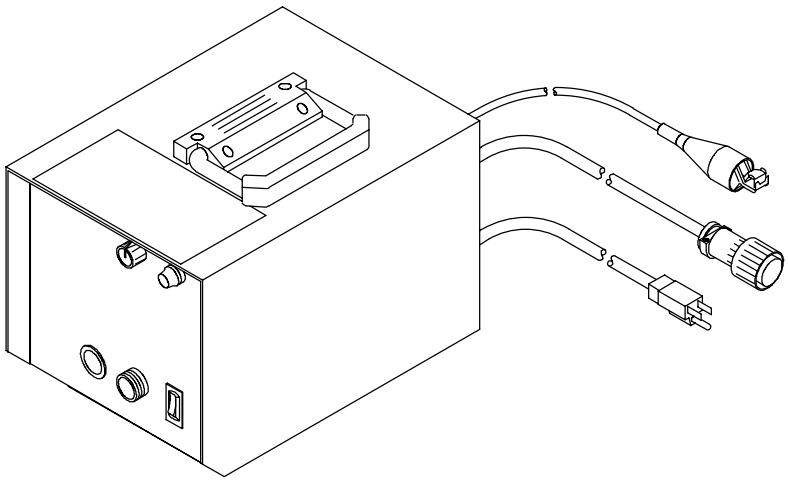
Processes

MIG (GMAW) Welding

Description

Weld Control For Spoolmatic Gun

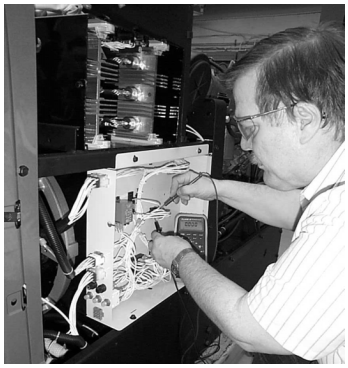
HWC-115A



OWNER'S MANUAL

From Hobart to You

Thank you and *congratulations* on choosing Hobart. Now you can get the job done and get it done right. We know you don't have time to do it any other way.



This Owner's Manual is designed to help you get the most out of your Hobart products. Please take time to read the Safety precautions. They will help you protect yourself against potential hazards on the worksite. We've made installation and operation quick and easy. With Hobart you can count on years of reliable service with proper maintenance. And if for some reason the unit needs repair, there's a Troubleshooting section that will help you figure out what the problem is. The parts list will then help you to decide which exact part you may need to fix the problem. Warranty and service information for your particular model are also provided.

ISO 9001 REGISTERED QUALITY SYSTEM

Hobart is registered to the ISO 9001 Quality System Standard.

Hobart Welders manufactures a full line of welders and welding related equipment. For information on other quality Hobart products, contact your local Hobart distributor to receive the latest full line catalog or individual catalog sheets. **To locate your nearest distributor or service agency call 1-877-Hobart1.**

Hobart offers a Technical Manual which provides more detailed service and parts information for your unit. To obtain a Technical Manual, contact your local distributor. Your distributor can also supply you with Welding Process Manuals such as SMAW, GTAW, GMAW, and GMAW-P.

HOBART®
WELDING PRODUCTS

SECTION 1 – SAFETY PRECAUTIONS FOR ARC WELDING

1-1. Symbol Usage

Means Warning! Watch Out! There are possible hazards with this procedure! The possible hazards are shown in the adjoining symbols.

▲ **Marks a special safety message.**

Means NOTE; not safety related.

This group of symbols means Warning! Watch Out! possible ELECTRIC SHOCK, MOVING PARTS, and HOT PARTS hazards. Consult symbols and related instructions below for necessary actions to avoid the hazards.

1-2. Arc Welding Hazards

⚠ WARNING

The symbols shown below are used throughout this manual to call attention to and identify possible hazards. When you see the symbol, watch out, and follow the related instructions to avoid the hazard. The safety information given below is only a summary of the more complete safety information found in the Safety Standards listed in Section 1-4. Read and follow all Safety Standards.

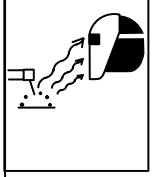
Only qualified persons should install, operate, maintain, and repair this unit.

During operation, keep everybody, especially children, away.

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 big enough to prevent any physical contact with the work or ground.
4. Disconnect input power or stop engine before installing or servicing this equipment. Lockout/tagout input power according to OSHA 29 CFR 1910.147 (see Safety Standards).
5. Properly install and ground this equipment according to its Owner's Manual and national, state, and local codes.
6. Always verify the supply ground – check and be sure that input power cord ground wire is properly connected to ground terminal in disconnect box or that cord plug is connected to a properly grounded receptacle outlet.
7. When making input connections, attach proper grounding conductor first – double-check connections.
8. Frequently inspect input power cord for damage or bare wiring – replace cord immediately if damaged – bare wiring can kill.
9. Turn off all equipment when not in use.
10. Do not use worn, damaged, undersized, or poorly spliced cables.
11. Do not drape cables over your body.
12. If earth grounding of the workpiece is required, ground it directly with a separate cable – do not use work clamp or work cable.
13. Do not touch electrode if you are in contact with the work, ground, or another electrode from a different machine.
14. Use only well-maintained equipment. Repair or replace damaged parts at once. Maintain unit according to manual.
15. Wear a safety harness if working above floor level.
16. Keep all panels and covers securely in place.
17. Clamp work cable with good metal-to-metal contact to workpiece or worktable as near the weld as practical.



ARC RAYS can burn eyes and skin; NOISE can damage hearing; FLYING SLAG OR SPARKS can injure eyes.

Arc rays from the welding process produce intense visible and invisible (ultraviolet and infrared) rays that can burn eyes and skin. Noise from some processes can damage hearing. Chipping, grinding, and welds cooling throw off pieces of metal or slag.

NOISE

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

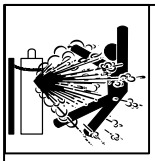
ARC RAYS

2. Wear a welding helmet fitted with a proper shade of filter to protect your face and eyes when welding or watching (see ANSI Z49.1 and Z87.1 listed in Safety Standards).
3. Wear approved safety glasses with side shields.
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, cleaners, and degreasers.
5. Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Always have a trained watchperson nearby. Welding fumes and gases can displace air and lower the oxygen level 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.



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, slag, open flames, sparks, and arcs.
2. Install cylinders in an upright position by securing to a stationary support or cylinder rack to prevent falling or tipping.
3. Keep cylinders away from any welding or other electrical circuits.
4. Never drape a welding torch over a gas cylinder.
5. Never allow a welding electrode to touch any cylinder.
6. Never weld on a pressurized cylinder – explosion will result.
7. Use only correct shielding gas cylinders, regulators, hoses, and fittings designed for the specific application; maintain them and associated parts in good condition.
8. Turn face away from valve outlet when opening cylinder valve.
9. Keep protective cap in place over valve except when cylinder is in use or connected for use.
10. Read and follow instructions on compressed gas cylinders, associated equipment, and CGA publication P-1 listed in Safety Standards.

WELDING can cause fire or explosion.

Welding on closed containers, such as tanks, drums, or pipes, can cause them to blow up. Sparks can fly off from the welding arc. The flying sparks, hot workpiece, and hot equipment can cause fires and burns. Accidental contact of electrode to metal objects can cause sparks, explosion, overheating, or fire. Check and be sure the area is safe before doing any welding.

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, drums, or pipes, unless they are properly prepared according to AWS F4.1 (see Safety Standards).
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.
12. Remove any combustibles, such as a butane lighter or matches, from your person before doing any welding.

1-3. Additional Installation, Operation, And Maintenance Hazards

FIRE OR EXPLOSION can result from placing unit on, over, or near combustible surfaces.

1. Do not locate unit on, over, or near combustible surfaces.
2. Do not install unit near flammables.

FALLING EQUIPMENT can cause serious personal injury and equipment damage.

1. Use lifting eye to lift unit only, NOT running gear, gas cylinders, or any other accessories.
2. Use equipment of adequate capacity to lift unit.
3. If using lift forks to move unit, be sure forks are long enough to extend beyond opposite side of unit.

HOT PARTS can cause severe burns.

1. Do not touch hot parts bare handed.
2. Allow cooling period before working on gun or torch.

MOVING PARTS can cause injury.

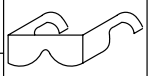
1. Keep away from moving parts such as fans.
2. Keep all doors, panels, covers, and guards closed and securely in place.

MAGNETIC FIELDS FROM HIGH CURRENTS can affect pacemaker operation.

1. Pacemaker wearers keep away.
2. Wearers should consult their doctor before going near arc welding, gouging, or spot welding operations.

MOVING PARTS can cause injury.

1. Keep away from moving parts.
2. Keep away from pinch points such as drive rolls.

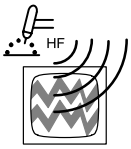


FLYING PIECES OF METAL or DIRT can injure eyes.

1. Wear safety glasses with side shields or face shield.

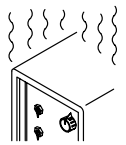
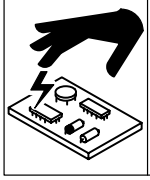
WELDING WIRE can cause puncture wounds.

1. Do not press gun trigger until instructed to do so.
2. Do not point gun toward any part of the body, other people, or any metal when threading welding wire.



HIGH-FREQUENCY RADIATION can interfere with radio navigation, safety services, computers, and communications equipment.

1. Have only qualified persons familiar with electronic equipment perform this installation.
2. The user is responsible for having a qualified electrician promptly correct any interference problem resulting from the installation.
3. If notified by the FCC about interference, stop using the equipment at once.
4. Have the installation regularly checked and maintained.
5. Keep high-frequency source doors and panels tightly shut, keep spark gaps at correct setting, and use grounding and shielding to minimize the possibility of interference.

	**OVERUSE can cause OVERHEATED EQUIPMENT.** 1. Allow cooling period. 2. Reduce current or reduce duty cycle before starting to weld again. 3. Follow rated duty cycle.		**SIGNIFICANT DC VOLTAGE exists after removal of input power on inverters.** 1. Turn Off inverter, disconnect input power, and discharge input capacitors according to instructions in Maintenance Section before touching any parts.
	**STATIC ELECTRICITY can damage parts on circuit boards.** 1. Put on grounded wrist strap BEFORE handling boards or parts. 2. Use proper static-proof bags and boxes to store, move, or ship PC boards.		**BUILDUP OF SHIELDING GAS can harm health or kill.** 1. Shut off shielding gas supply when not in use.

1-4. 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.

1-5. EMF Information

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.

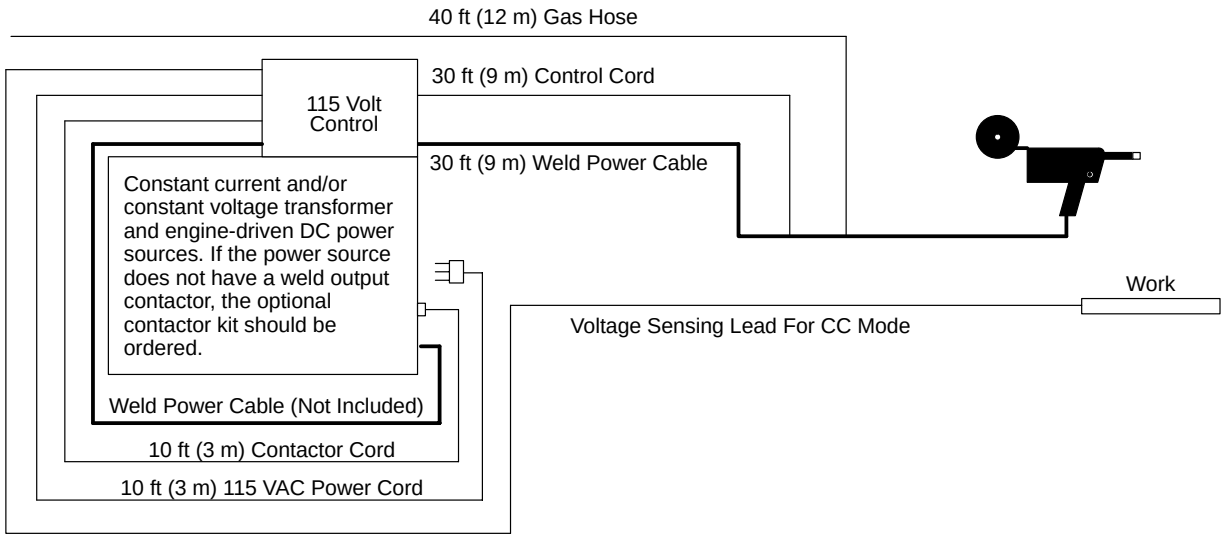
About Pacemakers:

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

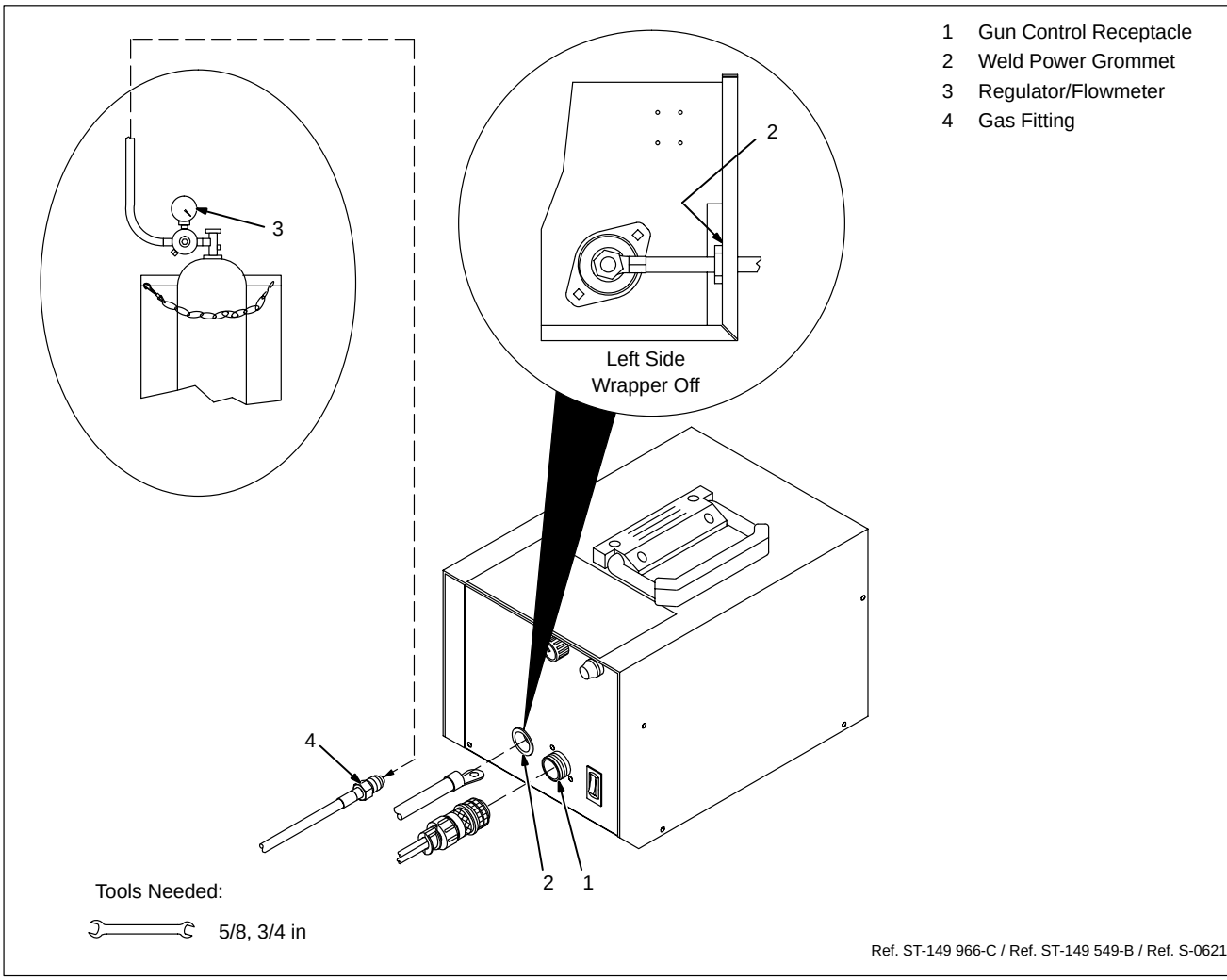
SECTION 2 – INSTALLATION

2-1. Typical Process Connections

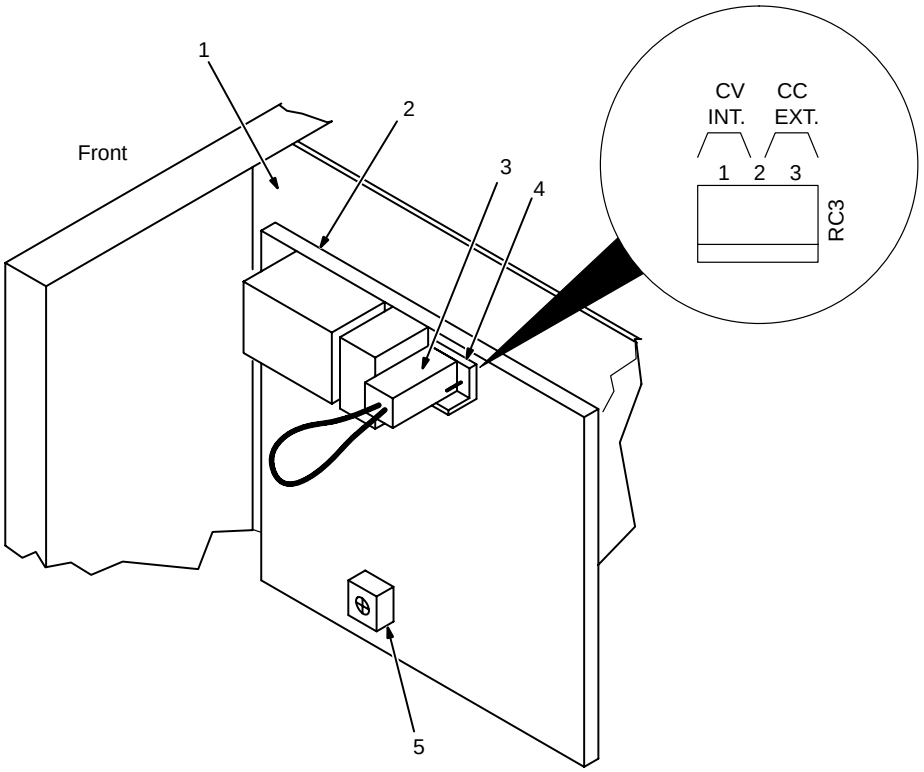
NOTE ☞	*Use gun Owner's Manual when making connections.*



2-2. Gun/Feeder Connections



2-3. Voltage Sensing Lead Connections And Motor Start Control Adjustment



1 Center Baffle

2 Circuit Board PC1

3 Jumper Plug

4 Receptacle RC3

Internal (INT) and external (EXT) are stamped on PC1 just above RC3. Unit is shipped with jumper plug in internal (INT) position.

5 Potentiometer R70

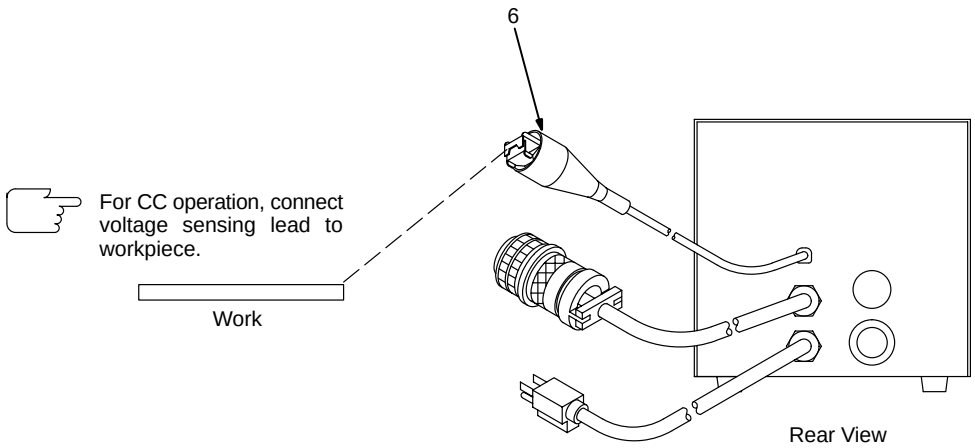
6 Voltage Sensing Lead

For constant current welding (CC), place jumper plug in the EXT position. Connect voltage sensing lead to workpiece.

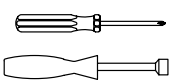
For constant voltage welding (CV), place jumper plug in the INT position. Do not connect voltage sensing lead.

To adjust motor ramp speed, remove protective cap (if present), and adjust potentiometer R70 using a small nonconductive screwdriver. Rotating R70 clockwise increases the time it takes the motor to ramp up to speed.

Reinstall wrapper.



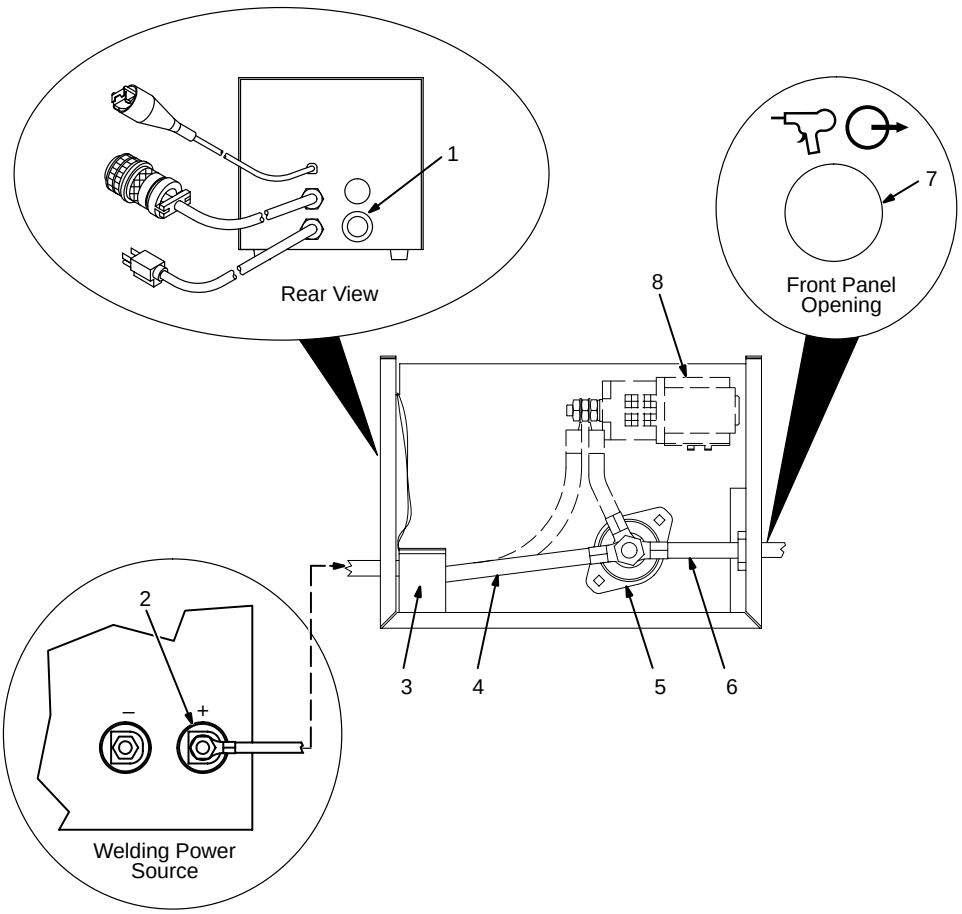
Tools Needed:



1/4 in

ST-801 840 / ST-150 035

2-4. Weld Cable Connections



1 Lower Left Grommet

2 Positive (+) Weld Output Terminal On Welding Power Source

3 Reed Switch

4 Weld Cable (Customer Supplied)

5 Weld Cable Terminal

6 Weld Power Cable From Gun/Feeder

7 Weld Power Grommet

Route weld cable and weld power cable as shown. Be sure lug on weld cable terminal and lug on gun/feeder weld power cable make contact with each other.

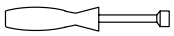
8 Contactor W1 (Optional)

Connect weld cable from welding power source to unused W1 terminal.

Connect weld cable from W1 to weld cable terminal.

Reinstall wrapper.

Tools Needed:



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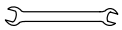

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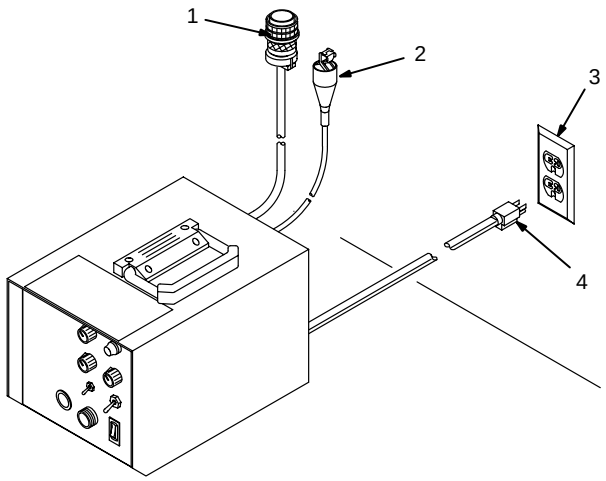
ST-801 840 / ST-151 113 / ST-801 487-A / Ref. SC-139 439-B

2-5. Input Power Connection



1 Contact Closure Interconnecting Cord And Plug PLG5

2 Voltage Sensing Lead

Connect to workpiece for CC operation (see Section 2-3).

3 Grounded Receptacle

A 15 ampere branch circuit protected by time-delay fuses or circuit breakers is required.

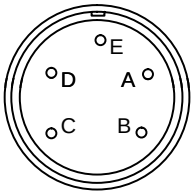
4 Input Power Cord And Plug PLG4

Connect input power plug to a proper receptacle.

ST-801 839

2-6. Contact Closure Connections

A. 5-Pin Plug Information For Standard Contact Closure Connections

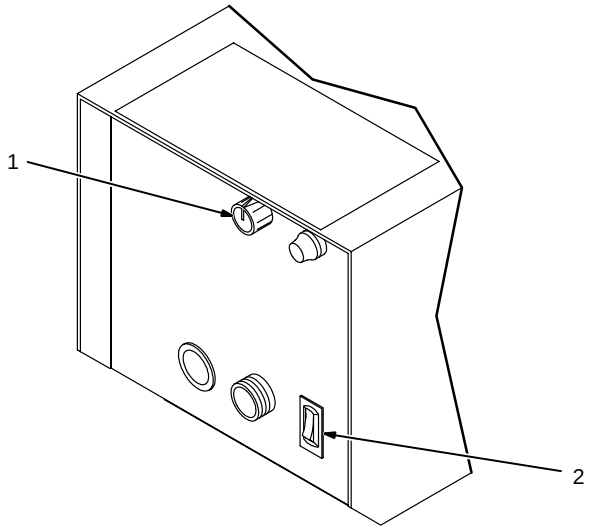
REMOTE 14	Pin*	Pin Information
	A	Contact output signal.
	B	Input control to energize weld contactor. Contact closure to A completes 24 volts ac contactor control circuit.

*The remaining pins are not used.

Ref. S-0005-A

SECTION 3 – OPERATION

3-1. 115 Volt Model Controls



1 Run-In Speed Control

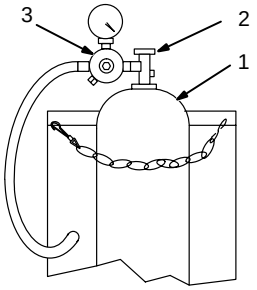
Use control to select welding wire speed before arc initiation. After arc initiation, the wire feed speed is controlled by the Wire Speed control on the gun/feeder.

2 Power Switch

Use switch to turn unit On and Off.

wfcontrols_1 1/96 / Ref. ST-144 451-D

3-2. Shielding Gas



1 Shielding Gas Cylinder

2 Valve

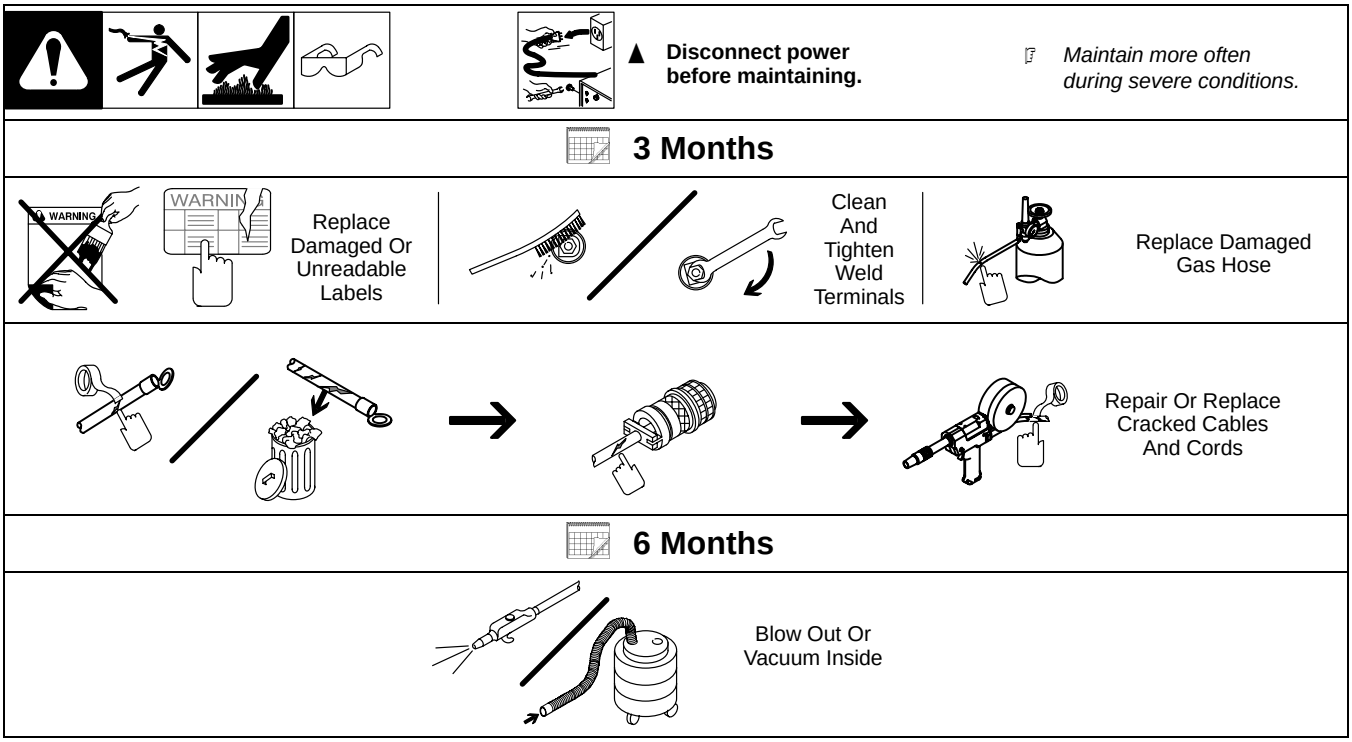
Open valve on cylinder just before welding.

Close valve on cylinder when finished welding.

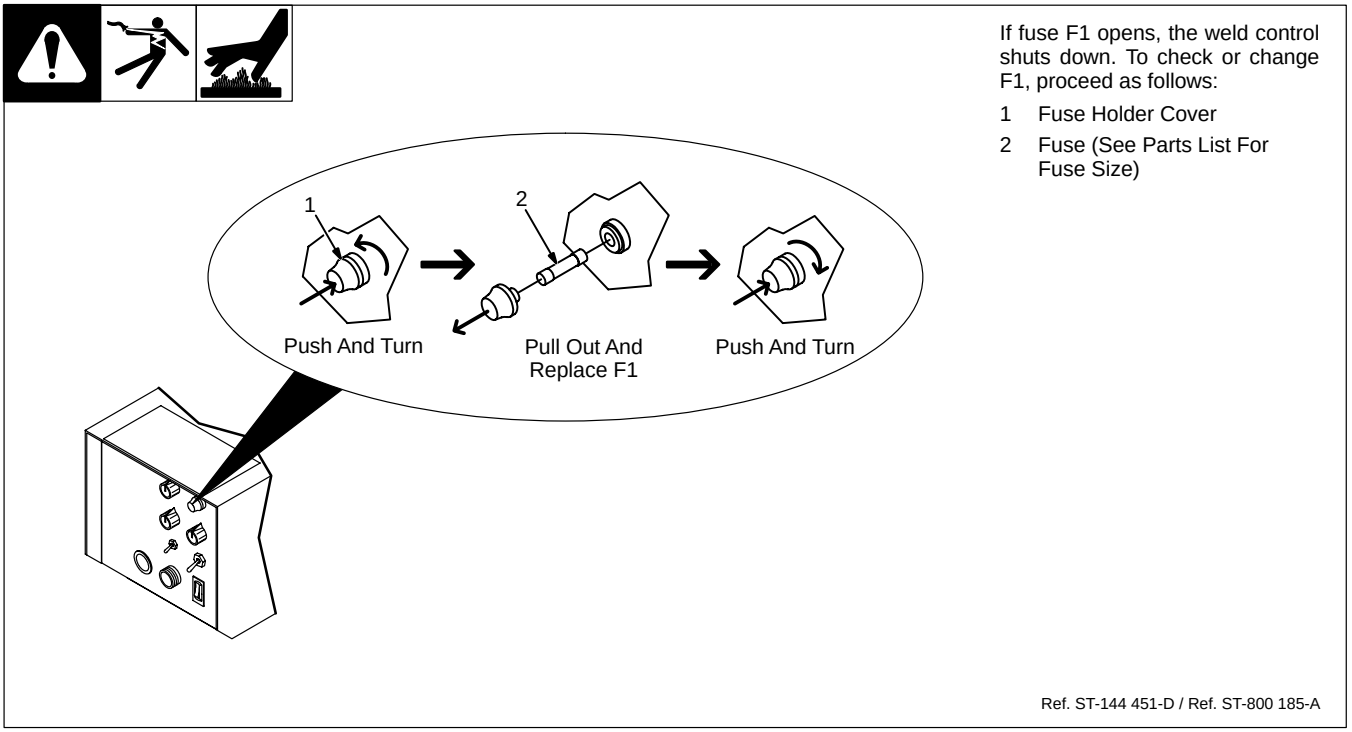
3 Regulator/Flowmeter

sb5.1* 6/92 – S-0621-C

SECTION 4 – MAINTENANCE & TROUBLESHOOTING



4-1. Overload Protection



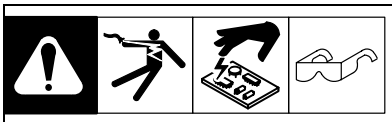
If fuse F1 opens, the weld control shuts down. To check or change F1, proceed as follows:

1 Fuse Holder Cover

2 Fuse (See Parts List For Fuse Size)

Ref. ST-144 451-D / Ref. ST-800 185-A

4-2. Troubleshooting



Trouble	Remedy
Pressing gun trigger does not energize weld control or welding wire.	Secure plug PLG4 in 115 volts ac receptacle (see Sections 2-5).
	Secure gun plug in Gun Control receptacle RC3 on weld control (see Section 2-2).
	Check fuse F1 and replace if necessary (see Section 4-1).
	See Troubleshooting Section of gun and/or welding power source Owner's Manual.
For models without optional contactor control: Pressing gun trigger feeds wire but does not energize welding wire.	Secure plug PLG5 in 5 pin receptacle on welding power source (see Section 2-6).
	See Troubleshooting Section of welding power source Owner's Manual.
For models with optional contactor control: Pressing gun trigger feeds wire but does not energize welding wire.	See Troubleshooting Section of welding power source Owner's Manual.
Pressing gun trigger energizes wire, but wire does not feed.	See Troubleshooting Section of gun Owner's Manual.
Erratic weld output.	Secure plug PLG4 in 115 volts ac receptacle (see Sections 2-5).
	Secure gun plug in Gun Control receptacle RC3 on weld control (see Section 2-2).
	Secure plug PLG5 in 5 pin receptacle on welding power source (see Section 2-6).
	See Troubleshooting Section of gun and/or welding power source Owner's Manual.
Wire feeds erratically.	See Troubleshooting Section of gun Owner's Manual.
Wire feed speed does not switch from run-in speed to weld wire feed speed.	Check reed relay, and replace if necessary.
Wire feeds, but burns back.	Readjust ramp-up speed potentiometer R70 on motor control board PC1 (see Section 2-3).
No gas flow.	Check gas hose and connections, and replace if necessary (see Section 2-2).
Wire does not feed, and is not energized.	Connect voltage sensing lead to workpiece (see Section 2-3).

SECTION 5 – ELECTRICAL DIAGRAM

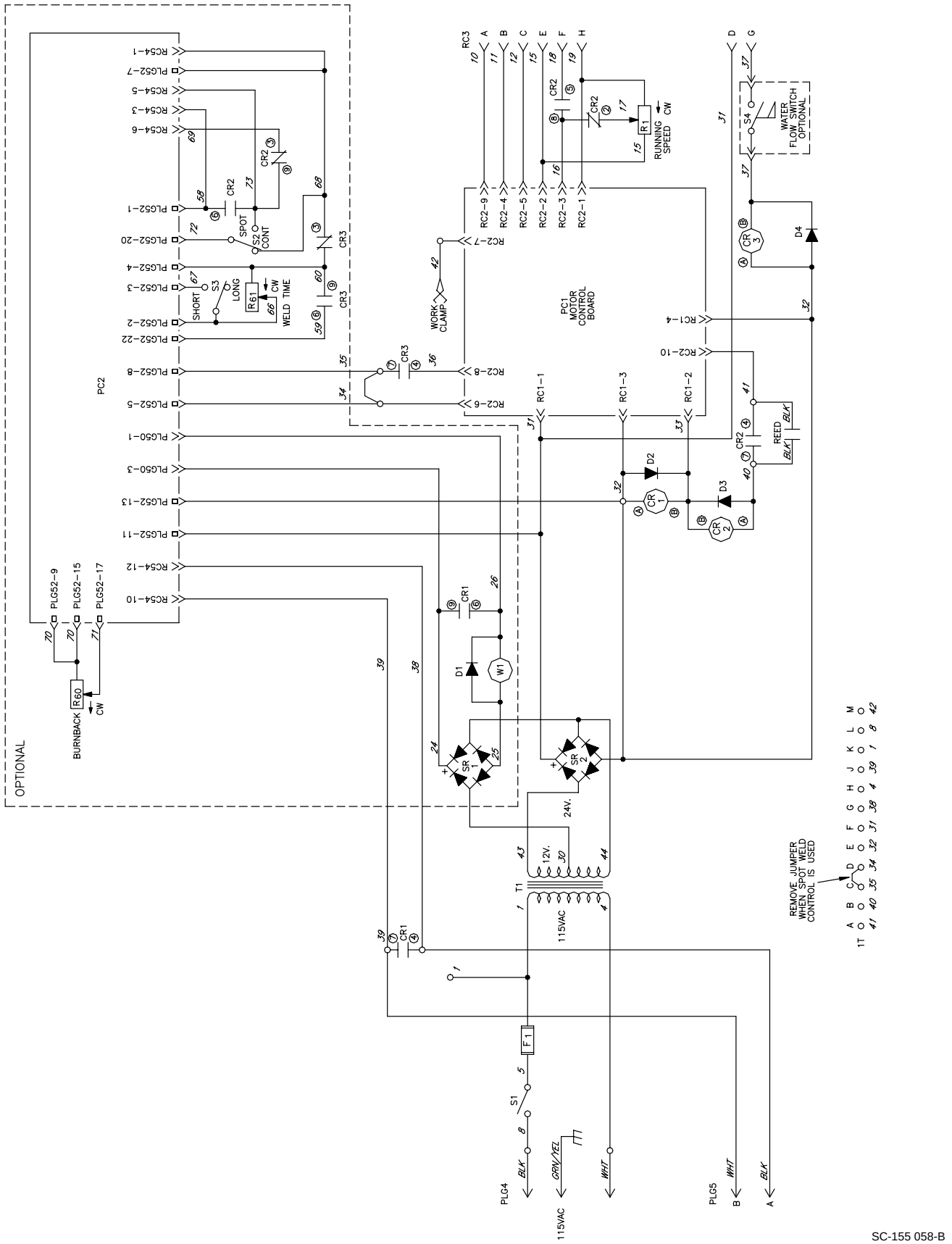


Figure 5-1. Circuit Diagram

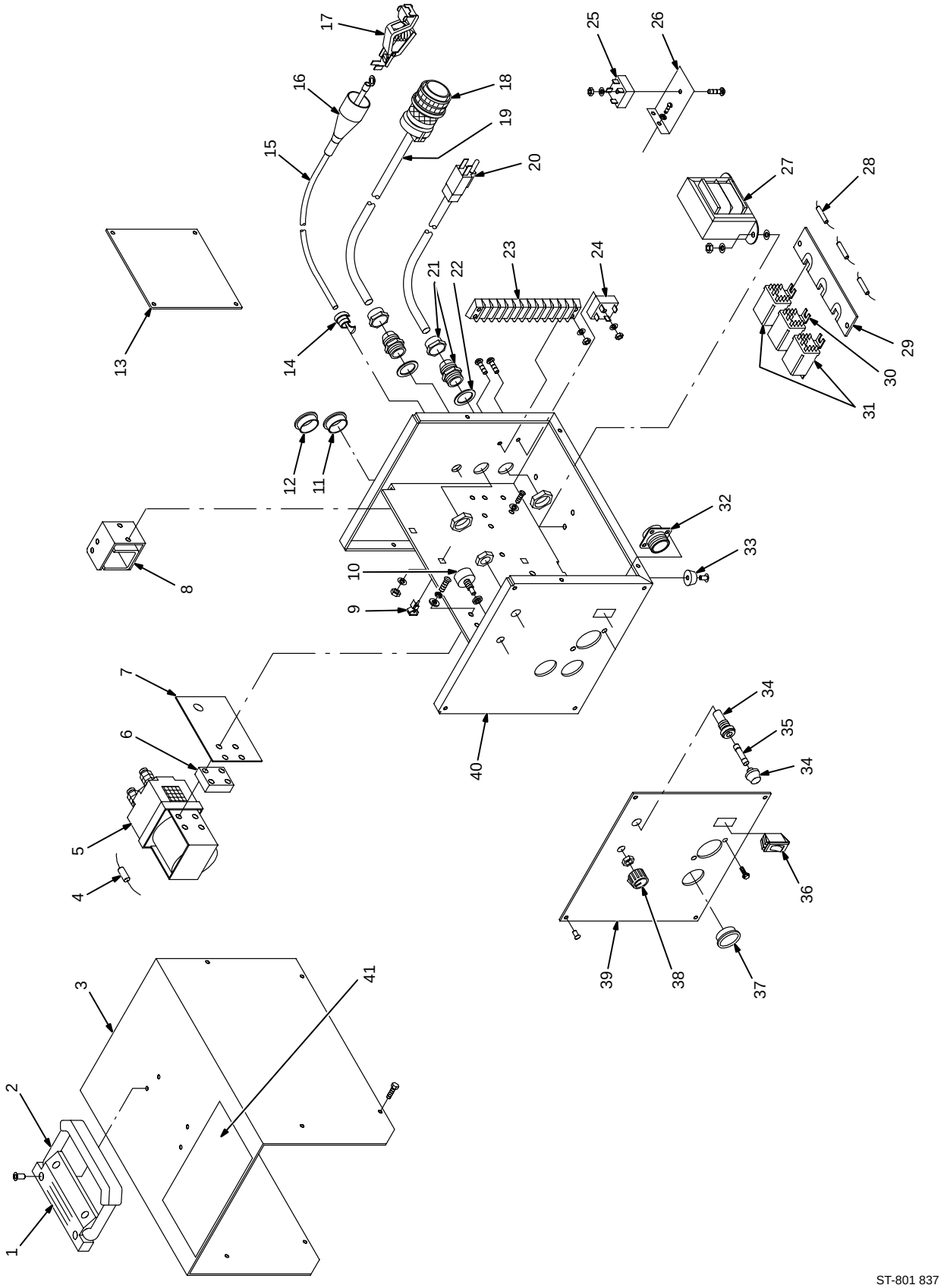


Figure 6-1. Complete Assembly Of HWC-115A

Item No.	Dia. Mkgs.	Part No.	Description	Quantity

Figure 6-1. Complete Assembly Of HWC-115A

1		126 415	CLAMP, saddle	1
2		126 416	HANDLE	1
3		+137 834	COVER, control box	1
4	D1	♦142 266	DIODE	1
5	W1	♦192 809	CONTACTOR, 12VDC 1PST	1
6		♦111 153	SPACER, contactor	1
7		♦142 257	INSULATOR, contactor	1
8	REED	140 786	SWITCH, reed	1
9		134 201	STAND-OFF SUPPORT, PC card .312/.375	4
10	R1	073 562	POTENTIOMETER, C std slot 1/T 2W 10K ohm	1
11		070 371	BLANK, snap-in nyl 1.093/1.125mtg hole	1
12		057 358	BUSHING, snap-in nyl 1.000 ID x 1.375mtg hole	1
13	PC1	137 492	CIRCUIT CARD, WC voltage sensing motor	1
	PLG1	115 094	CONNECTOR & SOCKETS (RC1)	1
	PLG2	115 091	CONNECTOR & SOCKETS (RC2)	1
	PLG50	♦135 788	CONNECTOR & SOCKETS	1
14		138 044	BUSHING, strain relief .120/.150 ID x .500mtg hole	1
15		600 848	WIRE, strd 12ga (order by ft)	35ft
16		601 226	INSULATOR, vinyl clamp univ 25A black	1
17		601 228	CLAMP, univ 25A	1
18	PLG5	185 858	CONNECTOR, circ 5 pin sz 18	1
19		600 340	CABLE, port No. 16 2/c (order by ft)	11ft
20	PLG4	139 627	CORD SET, pwr 125V 16ga 3/c 10ft 6 in	1
21		139 042	BUSHING, strain relief .270/.480 ID x .804mtg hole	2
22		135 736	WASHER, flat rbr .812 ID x 1.125 OD x .031thk	2
23	1T	038 783	BLOCK, term 20A 12P	1
		601 219	LINK, jumper term blk 20A	2
24	SR2	035 704	RECTIFIER, integ 40A 800V	1
25	SR1	♦035 704	RECTIFIER, integ 40A 800V	1
26		♦155 183	BRACKET, mtg cmpnt	1
27	T1	090 465	TRANSFORMER, signal 115V 24VCT 4A	1
28	D2-4	155 057	DIODE	3
29		139 408	STRIP, mtg relay	1
30	CR1	052 964	RELAY, encl 24VDC DPDT	1
31	CR2,3	116 592	RELAY, encl 24VDC 3PDT	2
		120 304	BLANK, snap-in nyl .250mtg hole	1
		057 359	BLANK, snap-in nyl .375mtg hole	2
		107 983	BLANK, snap-in nyl .500mtg hole	1
32	RC3	139 268	CONNECTOR, circ 10skt rcpt	1
33		025 590	MOUNT, resilient	4
34		046 432	HOLDER, fuse mintr	1
35	F1	*012 658	FUSE, mintr gl slo-blo 2A 125V	1
36	S1	111 997	SWITCH, rocker SPST 10A 250VAC	1
37		057 357	BUSHING, snap-in nyl .937 ID x 1.125mtg hole	1
38		097 922	KNOB, pointer	1
39			NAMEPLATE, (order by model and serial number)	1
		039 041	TERMINAL, pwr output red (consisting of)	1
		039 049	TERMINAL BOARD, red	1
		147 880	SCREW, cap stl hexhd .500-13 x 1.500	1
		602 247	WASHER, flat stl SAE .500	1
		601 880	NUT, stl hex jam .500-13	1
		601 879	NUT, stl hex full fnsh .500-13	1
40		177 131	CHASSIS, control box	1
41		176 254	LABEL, warning general precautionary CE	1
		134 327	LABEL, warning general precautionary static	1

+When ordering a component originally displaying a precautionary label, the label should also be ordered.
♦Part of 137 547 Contactor Kit Option.
*Recommended Spare Parts.
BE SURE TO PROVIDE MODEL AND SERIAL NUMBER WHEN ORDERING REPLACEMENT PARTS.

Notes

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Notes

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Notes

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Call
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Hobart distributor.

Service
You always get the fast, reliable response you need. Most replacement parts can be in your hands in 24 hours.

Support
Need fast answers to the tough welding questions? Contact your distributor or call 1-800-332-3281. The expertise of the distributor and Hobart is there to help you, every step of the way.

HOBART WELDERS

HOBART WARRANTY

Effective January 1, 2000
(Equipment with a serial number preface of "LA" or newer)

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

LIMITED WARRANTY – Subject to the terms and conditions below, Hobart Welding Products., Troy, Ohio, warrants to its original retail purchaser that new Hobart 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 Hobart. 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, Hobart will repair or replace any warranted parts or components that fail due to such defects in material or workmanship. Hobart must be notified in writing within thirty (30) days of such defect or failure, at which time Hobart will provide instructions on the warranty claim procedures to be followed.

Hobart 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 a North American distributor or eighteen months after the equipment is sent to an International distributor.

1. 5 Years Parts – 3 Years Labor
   * Original main power rectifiers
   * Inverters (input and output rectifiers only)
2. 3 Years — Parts and Labor
   * Transformer/Rectifier Power Sources
   * Plasma Arc Cutting Power Sources
   * Semi-Automatic and Automatic Wire Feeders
   * Inverter Power Supplies
   * Intellitig
   * Engine Driven Welding Generators **(NOTE: Engines are warranted separately by the engine manufacturer.)**
3. 1 Year — Parts and Labor
   * DS-2 Wire Feeder
   * Motor Driven Guns (w/exception of Spoolmate 185 & Spoolmate 250)
   * Process Controllers
   * Positioners and Controllers
   * Automatic Motion Devices
   * RFCS Foot Controls
   * Induction Heating Power Sources
   * Water Coolant Systems
   * HF Units
   * Grids
   * Maxstar 140
   * Spot Welders
   * Load Banks
   * Hobart Cyclomatic Equipment
   * Running Gear/Trailers
   * Plasma Cutting Torches (except APT & SAF Models)
   * 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.)
4. 6 Months — Batteries
5. 90 Days — Parts
   * MIG Guns/TIG Torches
   * Induction Heating Coils and Blankets
   * APT, ZIPCUT & PLAZCUT Model Plasma Cutting Torches
   * Remote Controls
   * Accessory Kits
   * Replacement Parts (No labor)
   * Spoolmate 185 & Spoolmate 250
   * Canvas Covers

HOBART's Limited Warranty shall not apply to:

1. **Consumable components; such as contact tips, cutting nozzles, contactors, brushes, slip rings, relays or parts that fail due to normal wear.**
2. Items furnished by Hobart, but manufactured by others, such as engines or trade accessories. These items are covered by the manufacturer's warranty, if any.
3. Equipment that has been modified by any party other than Hobart, 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.

HOBART 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 Hobart's option: (1) repair; or (2) replacement; or, where authorized in writing by Hobart in appropriate cases, (3) the reasonable cost of repair or replacement at an authorized Hobart 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. Hobart's option of repair or replacement will be F.O.B., Factory at Appleton, Wisconsin, or F.O.B. at a Hobart authorized service facility as determined by Hobart. 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 HOBART BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT), WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY.

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Owner's Record

Please complete and retain with your personal records.

Model Name Serial/Style Number

Purchase Date (Date which equipment was delivered to original customer.)

Distributor

Address

City

State Zip

Resources Available

Always provide Model Name and Serial/Style Number.

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Call 1-877-Hobart1 or visit our website at www.HobartWelders.com

For technical assistance:

Call 1-800-332-3281

Contact your Distributor for:

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- Options and Accessories
- Personal Safety Equipment
- Service and Repair
- Replacement Parts
- Training (Schools, Videos, Books)
- Technical Manuals (Servicing Information and Parts)
- Circuit Diagrams
- Welding Process Handbooks

Contact the Delivering Carrier for:

For assistance in filing or settling claims, contact your distributor and/or equipment manufacturer's Transportation Department.

File a claim for loss or damage during shipment.

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