

#### **Processes**



Flux Cored (FCAW) Welding

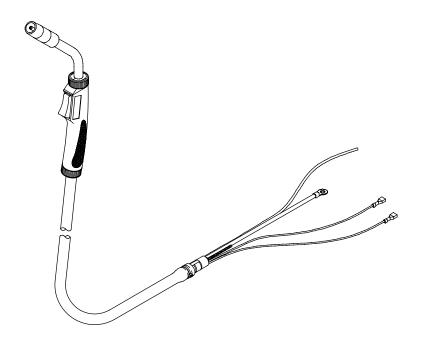
MIG (GMAW) Welding (Optional)

#### **Description**



Semi-Automatic, Air-Cooled Flux Cored (FCAW) And MIG (GMAW) Welding Gun

## H-9B Gun





www.HobartWelders.com



## **OWNER'S MANUAL**

File: Flux Cored (FCAW)



# 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.



Hobart is registered to the ISO 9001:2000 Quality System Standard.

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 the exact part you may need to fix the problem. Warranty and service information for your particular model are also provided.



Working as hard as you do – every power source from Hobart is backed by the best warranty in the business.



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 specification sheets. To locate your nearest distributor or service agency call 1-877-Hobart1 or visit our website at www.HobartWelders.com.

For Technical Help call 1-800-332-3281.

#### **Protect Your Investment!**



Register your product at: HobartWelders.com



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# SECTION 1 -SAFETY PRECAUTIONS FOR FCAW AND GMAW WELDING GUNS - READ BEFORE USING

SR7 8/03

#### 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.

IF Means NOTE; not safety related.





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

#### 1-2. FCAW And GMAW Gun Hazards

## WARNING

GMAW 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 found in the wire feeder and welding power source Owner's Manuals. Read and follow all safety precautions.

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

# A PARTIES AND A

#### **ELECTRIC SHOCK can kill.**

- 1. Always wear dry insulating gloves.
- 2. Insulate yourself from work and ground.
- 3. Do not touch live electrode or electrical parts.
- Repair or replace worn, damaged, or cracked gun or cable insulation.
- 5. Turn off welding power source before changing contact tip or gun parts.
- 6. Keep all covers and handle securely in place.



#### ARC RAYS can burn eyes and skin.

- 1. Wear welding helmet with correct shade of filter.
- 2. Wear correct eye and body protection.
- 3. Cover exposed skin with spatter-resistant clothing.



#### HOT SURFACES can burn skin.

- 1. Allow gun to cool before touching.
- 2. Do not touch hot metal.
- 3. Protect hot metal from contact by others.



## FUMES AND GASES can be hazardous to your health.

- 1. Keep your head out of the fumes.
- 2. Ventilate area, or use breathing device.
- Read Material Safety Data Sheets (MSDSs) and manufacturer's instructions for material used.



# NOISE can damage hearing; SOME APPLICATIONS, SUCH AS PULSING, are noisy.

- Check for noise level limits exceeding those specified by OSHA.
- 2. Use approved ear plugs or ear muffs if noise level is high.
- 3. Warn others nearby about noise hazard.



#### WELDING can cause fire or explosion.

- 1. Do not weld near flammable material.
- 2. Do not weld on closed containers.
- 3. Watch for fire; keep extinguisher nearby.



## WELDING WIRE can cause puncture wounds.

 Keep hands and body away from gun tip when trigger is pressed.



## **BUILD UP OF GAS can injure or kill**

- 1. Shut off shielding gas supply when not in
- 2. Always ventilate confined spaces or use approved air-supplied respirator.

## **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.
- Connect work clamp to workpiece as close to the weld as possible.

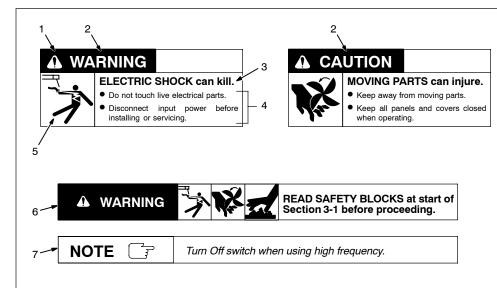
#### **About Pacemakers:**

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

## **SECTION 2 – SAFETY INFORMATION**



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



- Safety Alert Symbol
- Signal Word

WARNING means possible death or serious injury can happen.

CAUTION means possible minor injury or equipment damage can happen.

- Statement Of Hazard And Result
- Safety Instructions To Avoid Hazard
- Hazard Symbol (If Available)
- Safety Banner

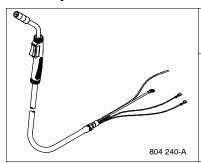
Read safety blocks for each symbol shown.

NOTE

Special instructions for best operation - not related to safety.

## **SECTION 3 - INSTALLATION**

#### **Specifications** 3-1.



Air-Cooled Welding Gun For FCAW And GMAW Welding

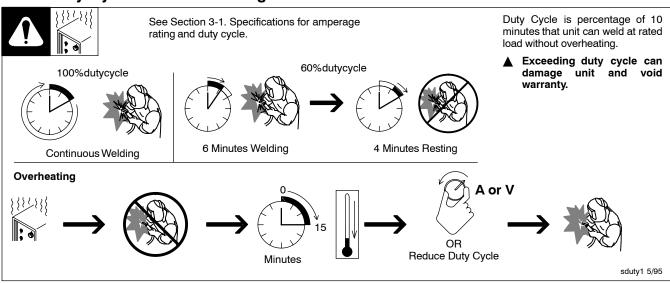
H-9B Feeds .030 - .035 in (0.8 - 0.9 mm) Flux Cored Wire Or .023 - .030 in (0.6 - 0.8 mm) Solid Wire **Duty Cycle Rating:** 

60%: 70 A With Flux Cored Wire 60%: 90 A With CO<sub>2</sub> Shielding Gas

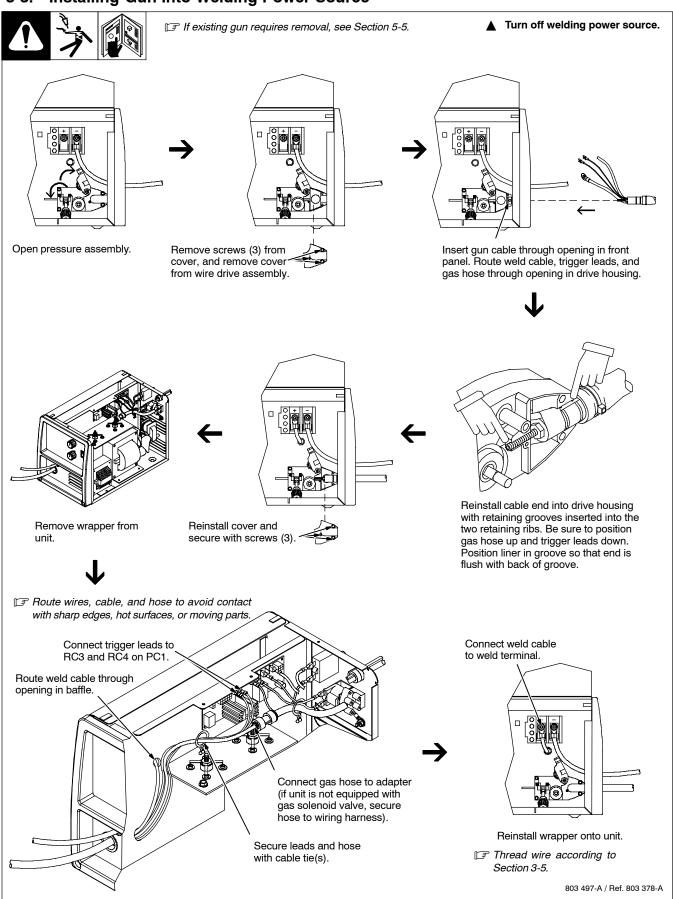
60%: 70 A With Mixed Gases

Weight With 8 ft (2.4 m) Power Cable: 2.2 lb (1.0 kg)

#### **Duty Cycle And Overheating**

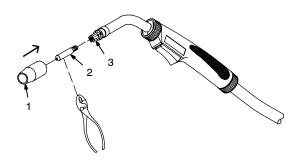


#### 3-3. Installing Gun Into Welding Power Source



#### 3-4. Installing Contact Tip And Nozzle





#### ▲ Turn off welding power source.

1 Nozzle

Remove nozzle.

- 2 Contact Tip
- 3 Tip Adapter

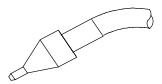
Thread welding wire through gun (see Section 3-5).

Slide contact tip over wire and tighten tip into tip adapter.

Install nozzle.

#### Flux Nozzle

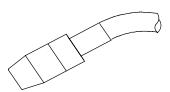
Use with flux cored wire only. Narrow design allows access in tight spaces and provides better visibility of puddle during welding.



Push nozzle over contact tip and adapter until it is seated onto adapter. Contact tip will be exposed approximately 7/16 in (11.3 mm) when installed properly.

#### **MIG Nozzle**

Use with solid or flux cored wire.



Push nozzle over contact tip and adapter until it is seated onto adapter. End of contact tip will be flush with end of nozzle when installed properly.

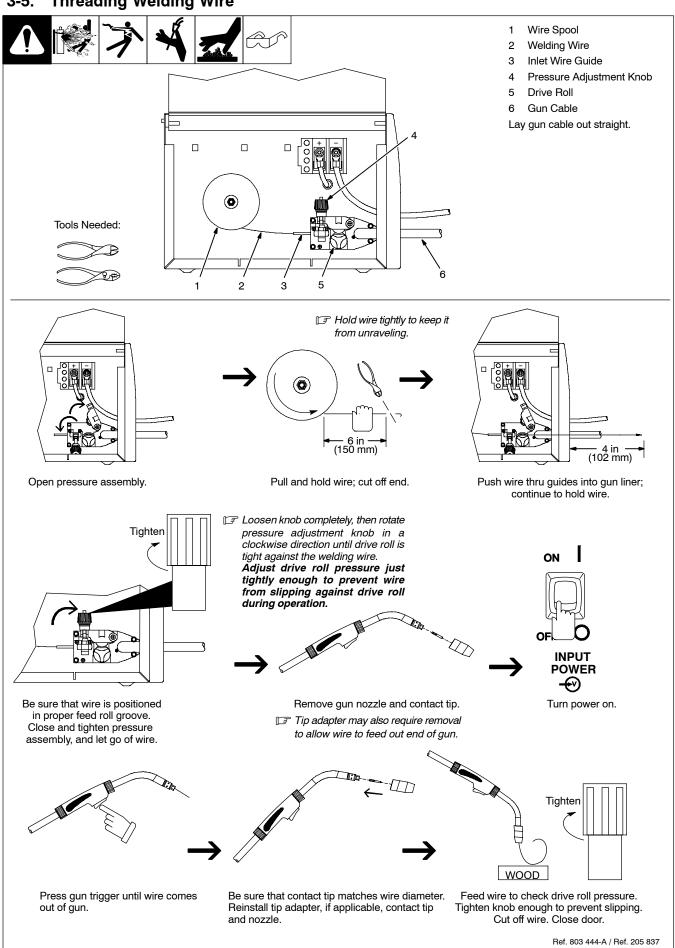
WIIG NOZZIE

Tools Needed:



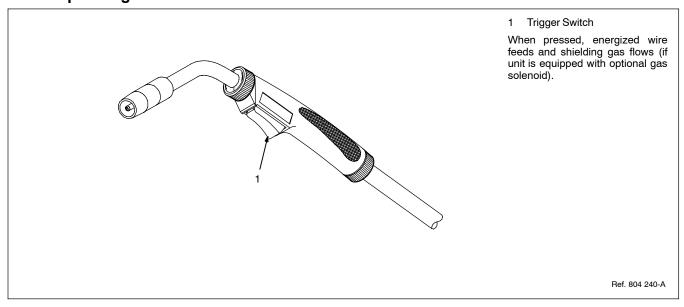
Ref. 804 241-A

#### **Threading Welding Wire**



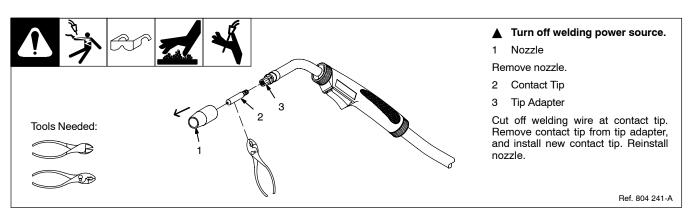
## **SECTION 4 - OPERATION**

## 4-1. Operating The Gun

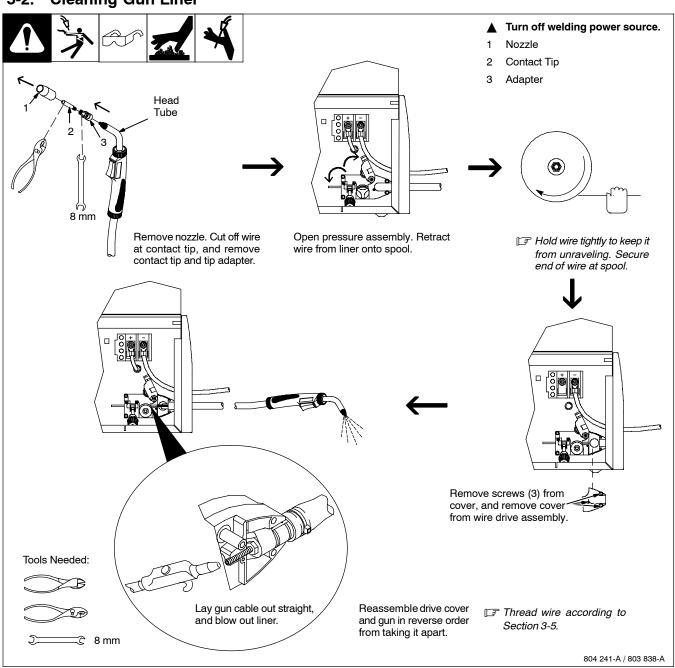


## **SECTION 5 - MAINTENANCE & TROUBLESHOOTING**

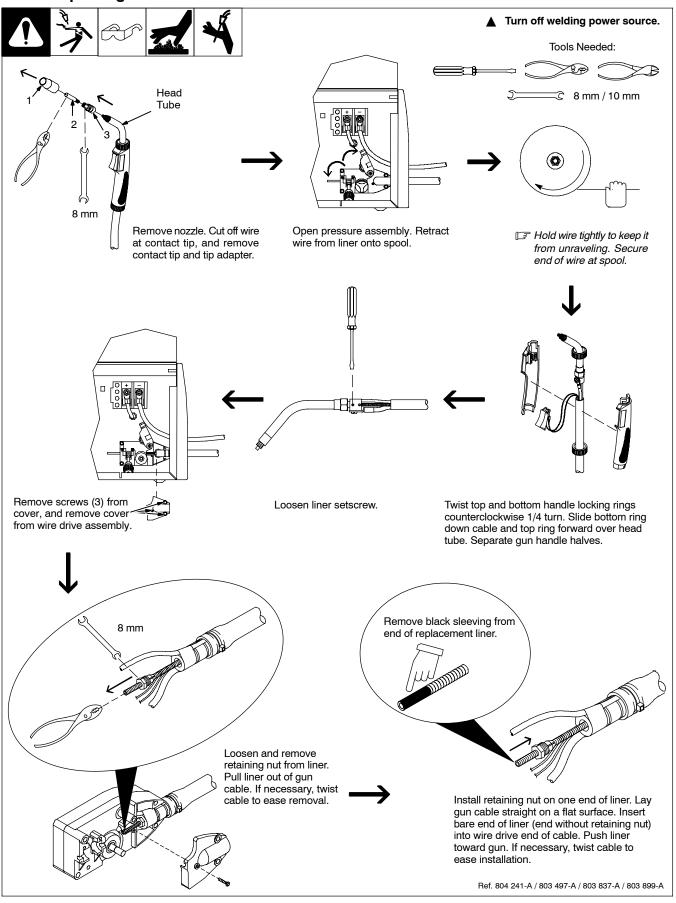
#### 5-1. Replacing Gun Contact Tip



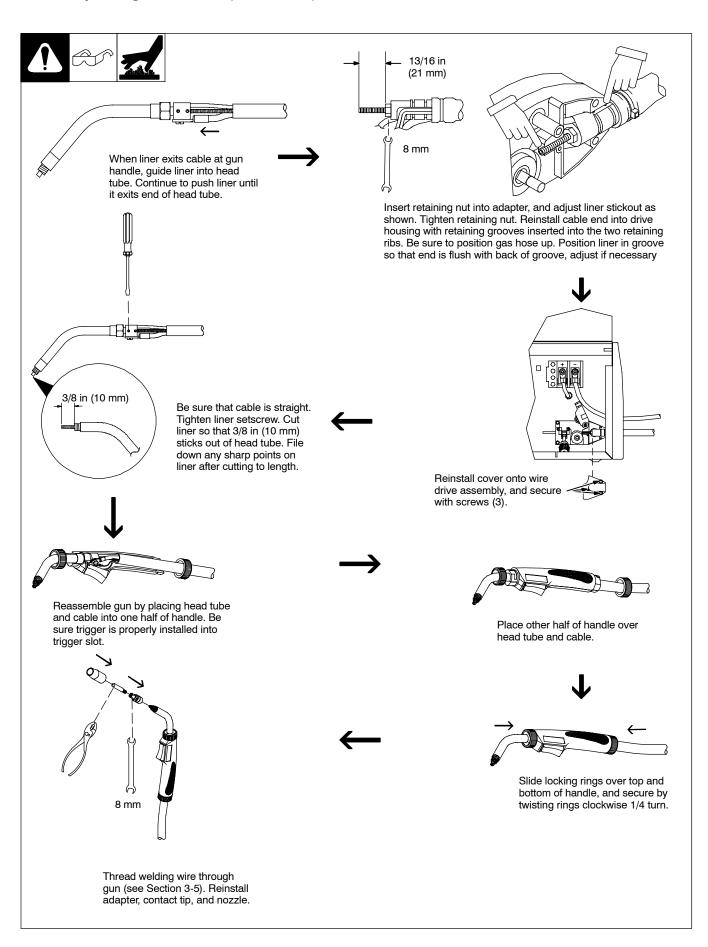
#### 5-2. Cleaning Gun Liner



#### 5-3. Replacing Gun Liner



#### 5-3. Replacing Gun Liner (Continued)



#### 5-4. Replacing Switch/Handle





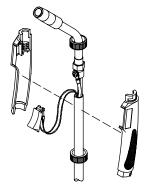


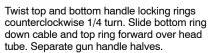


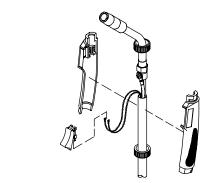








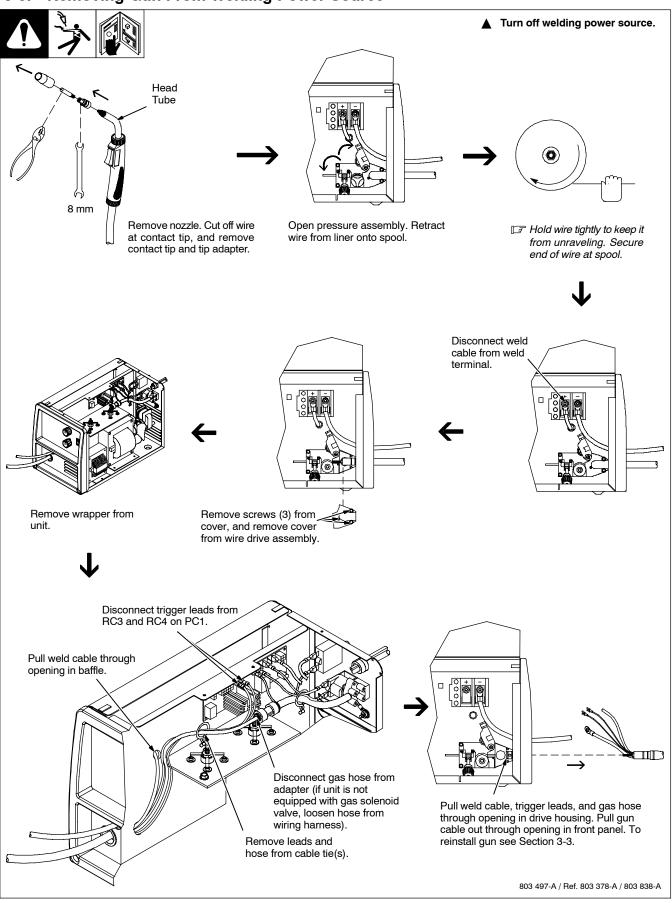




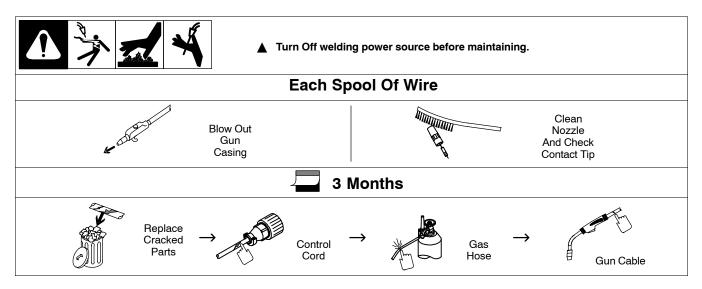
Disconnect switch leads and remove switch. Connect leads to new switch (polarity is not important). Be sure trigger is properly installed into trigger slot. Reassemble in reverse order.

Ref. 804 241-A / 804 242-A

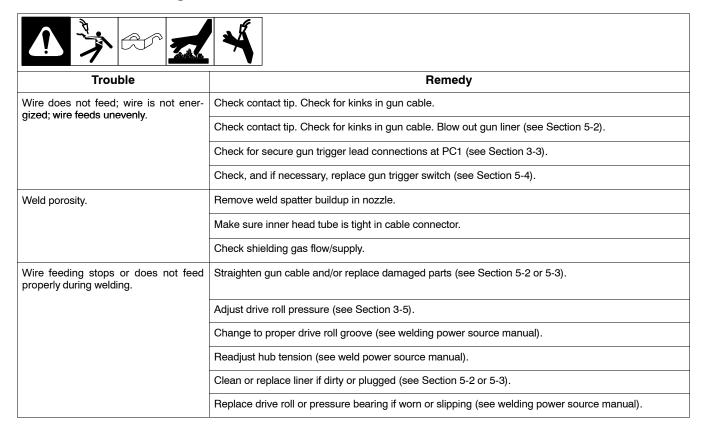
#### 5-5. Removing Gun From Welding Power Source



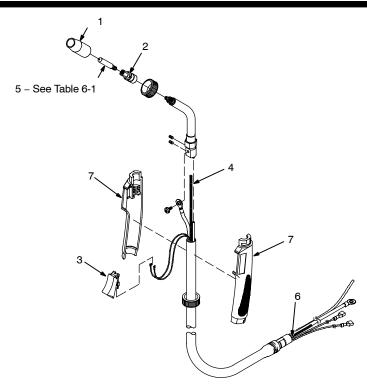
#### 5-6. Routine Maintenance



#### 5-7. Troubleshooting



## **SECTION 6 - PARTS LIST**



804 243-A

Figure 6-1. H-9B Gun

No.	No.	Description	Quantity
	225 397 Figure	6-1. H-9B Gun	
1 .	169 715	. NOZZLE, slip type .500 orf flush	1
1 .	♦226 190	. NOZZLE, flux cored slip type	
2 .		. ADAPTER, contact tip	
3 .	225 410	. SWITCH, trigger	
4 .	210 970	. LINER, monocoil .023/.035 wire x 8ft	
5 .	♦087 299	. TIP, contact scr .023 wire x 1.125	
5 .	000 067	. TIP, contact scr .030 wire x 1.125	
5	<b>♦</b> 000 068	TIP contact scr .035 wire x 1.125	

Item

Part

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.

7 ...... 226 080 .. HANDLE ASSY ...... 1

**Table 6-1. Contact Tip Options** 

HOBART PART NO.	DESCRIPTION	REMARKS
196 134	Tip, contact scr .023 wire	Pkg of 5
196 131	Tip, contact scr .030 wire	Pkg of 5
196 132	Tip, contact scr .035 wire	Pkg of 5
196 137	Nozzle, slip type .500 orf flush	Qty 1
196 135	Adapter, contact tip	Qty 1

WELD-IT PART NO.	DESCRIPTION	REMARKS
770 174	Tip, contact scr .023 wire	Pkg of 5
770 177	Tip, contact scr .030 wire	Pkg of 5
770 180	Tip, contact scr .035 wire	Pkg of 5

# HOBART 5/3/1 WARRANTY

#### Effective January 1, 2005

5/3/1 WARRANTY applies to all Hobart welding equipment, plasma cutters and spot welders with a serial number preface LF or newer.

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

Hobart products are serviced by Hobart or Miller Authorized Service Agencies.

LIMITED WARRANTY – Subject to the terms and conditions below, Hobart/Miller Electric Mfg. Co., Appleton, Wisconsin, 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/Miller will repair or replace any warranted parts or components that fail due to such defects in material or workmanship. Hobart/Miller must be notified in writing within thirty (30) days of such defect or failure, at which time Hobart/Miller will provide instructions on the warranty claim procedures to be followed.

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

- 1. 5 Years Parts and Labor
  - \* Original Main Power Rectifiers
  - \* Transformers
  - \* Stabilizers
  - \* Reactors
- 2. 3 Years Parts and Labor
  - \* Drive Systems
  - \* PC Boards
  - \* Rotors, Stators and Brushes
  - \* Idle Module
  - \* Solenoid Valves
  - \* Switches and Controls
  - Spot Welder Transformer
- 1 Year Parts and Labor Unless Specified (90 days for industrial use)
  - \* Motor-Driven Guns
  - \* MIG Guns/TIG Torches
  - \* Relays
  - Contactors
  - \* Regulators
  - \* Water Coolant Systems
  - \* Flowgauge and Flowmeter Regulators (No Labor)
  - \* HF Units
  - \* Running Gear/Trailers
  - \* Plasma Cutting Torches
  - \* Remote Controls
  - \* Replacement Parts (No labor)
  - \* Accessories
  - \* Field Options

(NOTE: Field options are covered for the remaining warranty period of the product they are installed in, or for a minimum of one year — whichever is greater.)

 Engines, batteries and tires are warranted separately by the manufacturer. Hobart's 5/3/1 Limited Warranty shall not apply to:

- Consumable components such as contact tips, cutting nozzles, slip rings, drive rolls, gas diffusers, plasma torch tips and electrodes, weld cables, and tongs and tips, or parts that fail due to normal wear. (Exception: brushes, slip rings, and relays are covered on Hobart Engine-Driven models.)
- Items furnished by Hobart/Miller, 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/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.

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/Miller's option: (1) repair; or (2) replacement; or, where authorized in writing by Hobart/Miller in appropriate cases, (3) the reasonable cost of repair or replacement at an authorized Hobart/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. Hobart's/Miller's option of repair or replacement will be F.O.B., Factory at Appleton, Wisconsin, or F.O.B. at a Hobart/Miller authorized service facility as determined by Hobart/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 HOBART/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 HOBART/MILLER IS EXCLUDED AND DISCLAIMED BY HOBART/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.



Warranty Questions?

1-800-332-3281

Service

Support

the way.

**Assistance** 

7 AM - 6 PM EST

You always get the fast,

need. Most replacement

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

Visit the Hobart website:

www.HobartWelders.com

reliable response you

parts can be in your

hands in 24 hours.



# 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.

To locate a Distributor, retail or service location:	Contact your Distributor for:		
0.000	Welding Supplies and Consumables		
Call 1-877-Hobart1 or visit our website at www.HobartWelders.com	Options and Accessories		
	Personal Safety Equipment		
For technical assistance:	Service and Repair		
Call 1-800-332-3281	Replacement Parts		
	Training (Schools, Videos, Books)		
	Technical Manuals (Servicing Information and Parts)		
	Circuit Diagrams		
	Welding Process Handbooks		
Contact the Delivering Carrier to:	File a claim for loss or damage during shipment.		
	For assistance in filing or settling claims, contact your distributor and/or equipment manufacturer's Transportation Department.		

#### **Protect Your Investment!**



#### **Hobart Welding Products**

An Illinois Tool Works Company 600 West Main Street Troy, OH 45373 USA

#### For Technical Assistance:

Call 1-800-332-3281 For Literature Or Nearest Dealer: Call 1-877-Hobart1

