

OM-952

June 2004

Processes

Flux

Flux Cored (FCAW) Welding

MIG (GMAW) Welding (Optional)



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

H-9A Gun



OWNER'S MANUAL



Visit our website at www.HobartWelders.com

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.



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.**



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



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SECTION 1 – SAFETY PRECAUTIONS FOR FCAW AND **GMAW WELDING GUNS – READ BEFORE USING**

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.

SR7 8/03

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 $\widehat{}$

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.

¥.	ELECTRIC SHOCK can kill. 1. Always wear dry insulating gloves. 2. Insulate yourself from work and ground.	 ARC RAYS can burn eyes and skin. 1. Wear welding helmet with correct shade of filter. 2. Wear correct eye and body protection.
オ	 Do not touch live electrode or electrical parts. Repair or replace worn, damaged, or cracked gun or cable insulation. Turn off welding power source before changing contact tip or gun parts. Keep all covers and handle securely in place. 	 Cover exposed skin with spatter-resistant clothing. HOT SURFACES can burn skin. Allow gun to cool before touching. Do not touch hot metal. Protect hot metal from contact by others.
<u><u>N</u></u>	 FUMES AND GASES can be hazardous to your health. 1. Keep your head out of the fumes. 2. Ventilate area, or use breathing device. 3. Read Material Safety Data Sheets (MSDSs) and manufacturer's instructions for material used. 	 NOISE can damage hearing; SOME APPLICATIONS, SUCH AS PULSING, are noisy. 1. 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.1. 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 use. 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.
- 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

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.



- 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.

SECTION 3 – INSTALLATION

3-1. Specifications



3-2. Duty Cycle And Overheating



3-3. Installing Gun Into Welding Power Source



3-4. Threading Welding Wire



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





5-4. Replacing Liner O-Ring



5-3. Replacing Liner O-Ring (Continued)



5-5. Replacing Switch And/Or Head Tube





5-6. Removing Gun From Welding Power Source



5-8. Troubleshooting

Trouble	Remedy		
Wire does not feed; wire is not ener-	Check contact tip. Check for kinks in gun cable.		
gized; wire feeds unevenly.	Check contact tip. Check for kinks in gun cable. Blow out gun liner (see Section 5-2).		
	Check for secure gun trigger lead connections at PC1 (see Section 3-3).		
	Check, and if necessary, replace gun trigger switch (see Section 5-5).		
Weld porosity.	Remove weld spatter buildup in nozzle.		
	Make sure inner head tube is tight in cable connector.		
	Check shielding gas flow/supply.		
	Replace liner O-ring (see Section 5-4).		
Wire feeding stops or does not feed properly during welding.	Straighten gun cable and/or replace damaged parts (see Section 5-2 or 5-3).		
	Adjust drive roll pressure (see Section 3-4).		
	Change to proper drive roll groove (see welding power source manual).		
	Readjust hub tension (see weld power source manual).		
	Clean or replace liner if dirty or plugged (see Section 5-2 or 5-3).		
	Replace drive roll or pressure bearing if worn or slipping (see welding power source manual).		

SECTION 6 – PARTS LIST



Figure 6-1. H-9A Gun

803 840-A

Item	Part		
No.	No.	Description	Quantity

195 343 Figure 6-1. H-9A Gun

	NOZZLE, slip type .500 orf flush 1
2	ADAPTER, contact tip 1
3	TUBE, head 1
4	HANDLE, top/bottom/cap 1
5	0-RING
6	SWITCH, trigger 1
7	LINER, monocoil .023/.035 wire x 8ft 1
8	TIP, contact scr .023 wire x 1.125
8	TIP, contact scr .030 wire x 1.125 1
8	
9 220 362	NUT, liner retainer 1

♦ OPTIONAL

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.

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

Table 6-1. Contact Tip Options

Notes



Notes



Notes



Warranty Questions?

Call 1-877-HOBART1 for your local 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.



Effective January 1, 2004

5/3/1 WARRANTY applies to all Handler 125, 135 and 175 models, Airforce 250, 250A, 375, 400 and 625 models, and Champion 4500 and 10,000 models, Beta-Mig 1800, Champ 1435, 2060, 8500 models, Ironman 210 and 250 models, Stickmate models, Tigmate models, and HSW-15 and HSW-25 spot welder models effective with Serial No. KK200262 and 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.

Hobart's 5/3/1 Limited Warranty shall not apply to:

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
- 3. 1 Year Parts and Labor Unless Specified (90 days for industrial use)
 - * Motor-Driven Guns
 - * MIG Guns/TIG Torches
 - Relavs
 - * 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.

- 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.



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:		
	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)	Hobart Welding Products An Illinois Tool Works Company 600 West Main Street Troy, OH 45373 USA	
	Technical Manuals (Servicing Information and Parts)		
	Circuit Diagrams	For Technical Assistance: Call1-800-332-3281	
	Welding Process Handbooks	For Literature Or Nearest Dealer: Call 1-877-Hobart1	
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.		

