

# Robotic WIRE BRAKE

For Models

300 Amp, 500 Amp Air-Cooled & 550 Amp Water-Cooled



**INSTALLATION, OPERATIONS AND REPLACEMENT PARTS MANUAL**

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## **INTRODUCTION**

Thank you for purchasing an American Weldquip product. The American Weldquip product you have purchased has been carefully manufactured, assembled, and fully tested. This manual contains information on the installation, operation, maintenance, and replacement part breakdown. Please read, understand, and follow all safety instructions, warnings and procedures. Keep this manual handy for referencing installation, operation, maintenance, and part ordering information. While every precaution has been taken as to the accuracy in this manual, American Weldquip, Inc. assumes no responsibility for errors or omissions. American Weldquip, Inc. assumes no liability for damages resulting from the use of the information contained in this manual. American Weldquip, Inc. shall have no liability to the buyer for consequential damages or expenses by any defect whatsoever.

## **WARRANTY**

AMERICAN WELDQUIP MIG guns and parts are warranted to be free of defects in material and/or workmanship for the period of time listed below. For any product found to be defective under normal use, AMERICAN WELDQUIP, INC. at our option, will repair, replace or issue a credit for the value of the defective product. All warranty claims must be submitted by the original purchaser. Use of non-genuine AMERICAN WELDQUIP parts and/or consumables may damage and/or severely limit the performance of the equipment which may limit or void any warranties. AMERICAN WELDQUIP, INC. will not assume responsibility for incidental damages or expenses related to any defect.

This warranty does not cover damage caused by misuse or abuse, accident, alteration of product, improper installation, misapplication,

lack of reasonable care and maintenance, unauthorized repairs or modifications, loss of use while at a repair facility or other conditions that are beyond the control of American Weldquip, Inc.

A Return Authorization Number (RA#) must be attained from the factory for any product being returned for Warranty Repair or Replacement. All returned product must be shipped freight prepaid by the sender. No- charge replacements, repaired products, or credit will be issued, once the returned product has been evaluated and warranty condition has been verified. If an immediate replacement is required before proper warranty evaluation, a purchase order number is required and the goods will be invoiced. A credit will be issued once it is determined that a warranty condition exists.

### **STANDARD WARRANTY**

<b>All Semi-Automatic, Automatic, Robotic MIG TORCHES and Components</b>	<b>= 120 Days</b>
<b>MIG Torch Trigger Switches (Contacts only) -Excludes Smoke Extraction</b>	<b>= LIFETIME</b>
<b>Robotic Nozzle Cleaning Stations, Wire Cutter</b>	<b>= 90 Days</b>
<b>Robotic Peripherals, ArcSafe, Gun Mounts</b>	<b>= 90 Days</b>
<b>TIG POINT Tungsten Electrode Grinders</b>	<b>= 90 Days</b>

### **LIMITED EXTENDED WARRANTY PROTECTION**

This limited extended warranty protection expands coverage to loyal customers who use all GENUINE American Weldquip consumables. Customers filing a claim under the extended warranty will need to prove, by providing past invoices, that they have been purchasing and using Genuine American Weldquip consumables.

<b>All Semi-Automatic, Automatic, Robotic MIG TORCHES and Components</b>	<b>= 1 YEAR</b>
<b>MIG Torch Trigger Switches (Contacts only) -Excludes Smoke Extraction</b>	<b>= LIFETIME</b>
<b>MIG Torch Handles</b>	<b>= LIFETIME</b>
<b>Robotic Nozzle Cleaning Stations, Wire Cutter</b>	<b>= 90 Days</b>
<b>Robotic Peripherals, ArcSafe, Gun Mounts</b>	<b>= 90 Days</b>

## **ROHS COMPLIANT**

RoHS (Restriction of Hazardous Substances) is an environmental law which addresses the European Union directive 2002/95/EC known as the RoHS Directive. The RoHS directive restricts the use of hazardous substances listed below in electrical and electronic equipment. While it is not a requirement to meet the directive in the United States, at this time, American Weldquip Inc. feels this is an important part of our "Go Green initiative. We have taken all reasonable steps to try to insure the supporting evidence regarding the absence of the restricted substances to support RoHS compliance.

For reference, the maximum concentration values of the restricted substances by weight in homogenous materials are:

Lead/Lead Components	- 0.1%
Mercury	- 0.1%
Hexavalent Chromium	- 0.1%
Polybrominated Biphenyls (PBBs)	- 0.1%
Polybrominated Diphenyl Ethers (PBDEs)	- 0.1%
Cadmium	-0.01%

For RoHS Certification of Compliance Letter on a particular product please visit our website – [www.weldquip.com](http://www.weldquip.com) or email us at [technical@weldquip.com](mailto:technical@weldquip.com) or call 330-239-0317.



## **GENERAL SAFETY PRECAUTIONS**

**Before installing, operating or performing maintenance please read the safety precautions below. Failure to observe safety precautions can result in injury or death.**

**WARNING – A welding arc emits ultraviolet (UV) and other radiation and can cause serious injury to unprotected skin and eyes.**

**WARNING – Hot metal produced by welding can cause severe burns. Heat from arcs and hot weld spatter and sparks can start fires and cause explosions of flammable gases.**

**WARNING – Fumes and gases generated from welding can cause severe injury to respiratory system and even death. DO NOT weld in confined spaces and make sure there is plenty of ventilation. Do not breathe fumes and gases as can cause asphyxiation.**

**WARNING – Electrical shock can kill. Do not touch live electrical parts and/or use in damp locations.**

1. Always wear a welding helmet with the correct filter and cover plate.
2. Always wear safety Glasses with side shields in any work area even if a welding helmet is also required.
3. All exposed skin should be covered with flameproof protective clothing. This includes leather gloves, heavy long sleeve shirt, cuff less pants and high topped shoes. DO NOT WEAR CLOTHING MADE FROM FLAMMABLE SYNTHETIC FIBERS.
4. Protective screens or barriers should be used to protect others from spatter, flash and glare while welding.
5. Make sure work area is free of all combustible materials or cover with a protective non-flammable cover.
6. Remove all flammable gas cylinders as welding sparks can cause explosion in the event of a leak. Take serious precautions if welding in area of flammable gas lines and/or tanks.
7. Know where a fire extinguisher is at all times. The best practice is to have an extinguisher, water pail, fire hose and/or sand bucket available for immediate use.
8. Poorly maintained equipment can cause injury or death
9. Inspect, repair or replace worn or damaged welding cables and torch leads.
10. Insure equipment is properly grounded and installed according to code.
11. Never wrap the weld cable or torch leads around your body.
12. Make sure equipment is turned off when not in use.

### **ADDITIONAL SOURCES FOR SAFETY INFORMATION**

ANSI Standard Z49.1 CODE FOR SAFETY IN WELDING AND CUTTING - American National Standards Institute, 1430 Broadway, New York, NY 10018

NFPA Standard 51B, "Fire Prevention in the Use of Cutting and Welding Processes – National Fire Protection Association, Batterymarch Park, Quincy, MA 02269

CSA Standard W117.2 CODE FOR SAFETY IN WELDING AND CUTTING - Canadian Standards Association, Standards Sales, 178 Rexdale Boulevard, Rexdale, Ontario, Canada M9W 1R3.

## **MAINTENANCE**

### ***Complete Liner Replacement***

**Warnings – To avoid accidental injury ensure power supply and wire feed unit is turned off.**

**The Wire Brake Robotic Torch utilizes a two-piece liner system. After completing Step #1 the additional trimmed liner piece will be used for the gooseneck jump liner.**

#### **LINER REMOVAL**

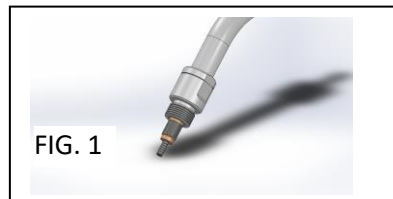
- 1) Trim the end of the weld wire at contact tip.
- 2) Retract or completely remove weld wire so torch can be removed from the wire feeder.
- 3) Remove the nozzle, contact tip and diffuser.

- 4) Remove the gooseneck jump liner by pulling out of the front of the torch.
- 5) Remove the torch cable from the wire feed unit.
- 6) Loosen the set screw at the torch feeder connection using a 5/64" Allen wrench or remove the feeder pin liner cap.
- 7) Making sure the torch cable is straight, grasp the liner at the rear of the torch with a pair of pliers and remove.

#### **INSTALLATION**

- 8) Carefully feed the new liner into the torch using short strokes to avoid kinking.
- 9) Continue feeding the liner until you feel it stop at the rear of the wire brake.
- 10) Measure the length of liner that is sticking out of the rear of the torch feeder pin.
- 11) Remove the liner from the torch and cut the liner shorter from the measurement just taken.
- 12) Reinstall the liner into the torch and secure with setscrew or the retainer cap.
- 13) Reinstall the torch to the wire feed unit.
- 14) Using the previous trimmed liner piece or a new gooseneck liner install into the front of the gooseneck making sure it is seated into the front of the wire brake.
- 15) Trim the liner to  $\frac{3}{4}$ " stick out from the end of the gooseneck. (FIG 1)
- 16) Replace the diffuser, contact tip and nozzle.
- 17) Feed welding wire into the torch and tighten drive rolls.

**WARNING: WHEN FEEDING WELD WIRE THROUGH THE TORCH KEEP THE FRONT END OF THE TORCH POINTED AWAY FROM ANY PERSON OR OBJECT. DO NOT POINT AT FACE, HANDS ETC. FAILURE TO DO SO WILL RESULT IN BODILY INJURY AND POSSIBLY DEATH.**

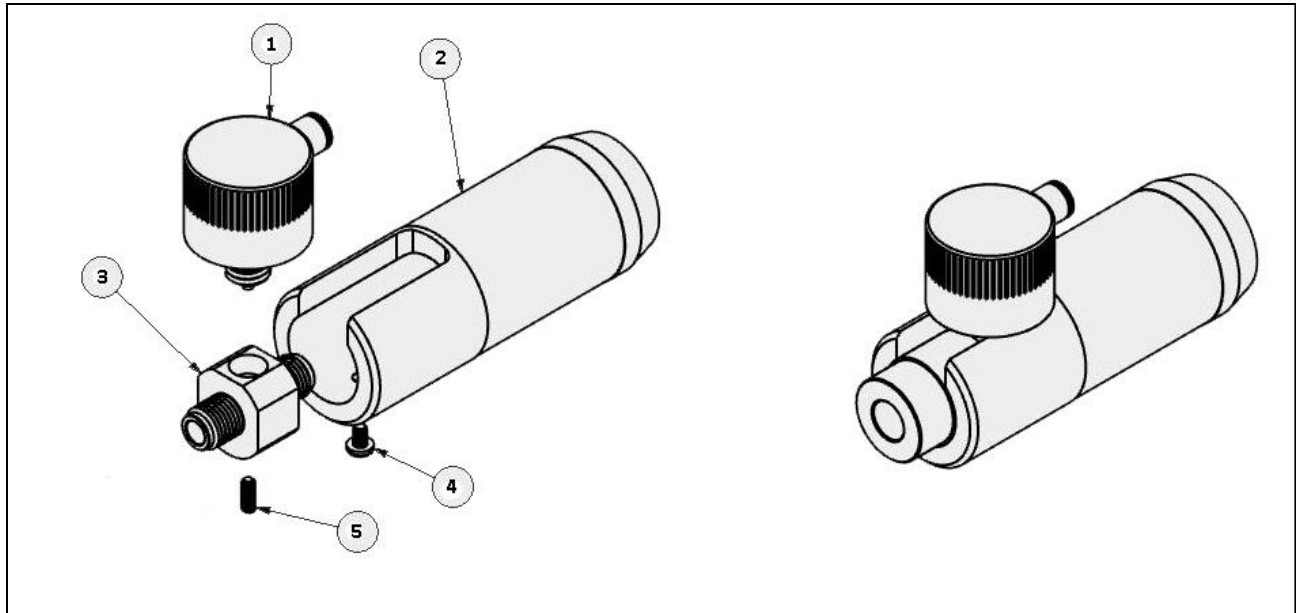


### ***Gooseneck Jump Liner Replacement***

- 1) Trim the end of the weld wire at contact tip.
- 2) Remove the nozzle, contact tip and diffuser.
- 3) DO NOT retract the weld wire as it is used to guide the gooseneck jump liner into position.
- 4) Remove the jump liner from the front of the torch using a pair of pliers.
- 5) Insert the weld wire into the new gooseneck jump liner and then push the liner into the front of the gooseneck making sure it is seated into the liner collet.
- 6) Trim the liner to  $\frac{3}{4}$ " stick out from the end of the gooseneck. (FIG 1)
- 7) Replace the diffuser, contact tip and nozzle.

## **PART BREAKDOWN**

### **Air-Cooled/Water-Cooled**



- #1 - WB-1000 Wire Brake Unit
- #2 - WB-0108 Front Handle – Air-Cooled Version  
WB-0111 Front Handle - Water-Cooled Version
- #3 - WB-0110 Wire Brake Power Block
- #4 - 75077011 Screw
- #5 - AST-139 Set Screw

NOTES:



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