



Air-Cooled Smoke Extraction Semi-Automatic MIG Torches

For Models
347SM, 407SM, 500SM



INSTALLATION, OPERATIONS AND REPLACEMENT PARTS MANUAL

SERVICE QUALITY SOLUTIONS

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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

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

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.

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

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 or email us at 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.

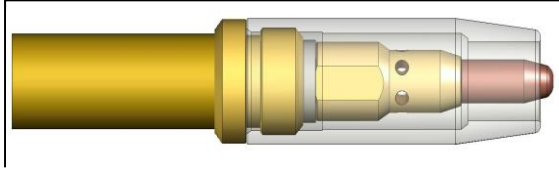
TORCH SPECIFICATIONS

MODEL	AMPERAGE	100% Duty Cycle		60% Duty Cycle	
		CO2	Mixed Gas	CO2	Mixed Gas
347SM	300	325A	275A	350A	325A
407SM	400	400A	325A	450A	400A
500SM	500	500A	400A	575A	500A

Duty Cycle is based on a complete cycle time of 10 minutes. (60% Duty Cycle = 6 minutes weld time, 4 minutes off time).

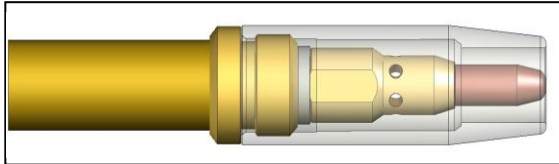
NOZZLE/TIP RELATIONSHIPS

Shown below are typical relationship between the contact tip and nozzle in GMAW Semi-Automatic applications. Nozzles to tip relationships are usually dictated by the process and application but not necessarily the standard. Keep in mind that decreased tip life, increased spatter cleaning cycles may be required if the tip relationship is changed to achieve other objectives.



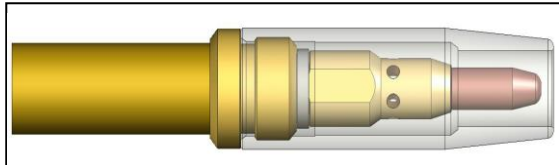
Extended Tip – Short Circuit (Short Arc, Dip Transfer) Welding Applications

The tip stick out is usually 1/8" or 1/4" from the nozzle. Keep in mind that the further the stick out the more susceptible to gas porosity issues. Typically is used in short circuit, lower amperage applications, and/or where you may need to reach in to a corner.



Flush Tip – Higher current Short Circuit (Short Arc, Dip Transfer) Welding Applications

The tip is flush with the end of the nozzle. Typically used in higher current and voltage short circuit applications.



Recessed Tip – Spray Arc, Pulsed, Flux Core Welding Applications

The tip is usually recessed in the nozzle 1/8" or 1/4". Usually, the higher the heat and/or current the further the recess. However, this is also dependant on the wire used and the arc length requirement.

INSTALLATION

Depending on how your torch was ordered your American Weldquip torch has been supplied with either a EURO type feeder connection or a DIRECT wire feeder connection. The American Weldquip torch can be installed to the wire feed unit in two ways.

Euro Connection – Feeder Adaptor Kit may be required

Direct Connection

Direct Connect

The direct connect torch system is designed for installation to the wire feeder without the need for any adaptor system. The torch is supplied (depending on the torch configuration ordered) with a feeder connection plug at the rear of the torch, gas connection, feeder control cable.

- 1) Fully insert the torch Direct Connection into wire feeder. Tighten screw or other method on wire feeder to secure torch
- 2) Connect the gas hose to barbed fitting on the direct connect pin if required.
- 3) Connect feeder control cable/plug to torch.
- 4) Connect feeder control cable/plug to the feeder.
- 5) Connect exhaust hose to rear adaptor support.
- 6) Feed welding wire into the torch and tighten drive rolls.

WARNING: WHEN FEEDING WELD WIRE THROUGHT 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.

Using Feeder Adaptor Kit

In some cases it may be desirable to use a feeder adaptor kit such as when using different manufactures wire feed units to commonize on a torch configuration.

- 1) Thread feeder adaptor plug into the adaptor block and tighten.

- 2) Insert the adaptor guide tube into the adaptor plug.
- 3) Fully insert the feeder adaptor assembly into the wire feeder. Tighten screw or other method on wire feeder to secure the adaptor assembly.
- 4) If required, connect the feeder control cable/plug to the wiring on the adaptor assembly.
- 5) Connect feeder control cable/plug to the feeder.
- 6) Connect the torch to the feeder adaptor assembly.
- 7) Connect exhaust hose to rear adaptor support.
- 8) 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.

MAINTENANCE

Liner Replacement

The standard liner requires the torch be removed from the feeder in order to be changed.

Standard Liner Maintenance

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

- 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 fume nozzle, nozzle, contact tip, and diffuser.
- 4) Loosen the set screw at the torch feeder connection using a 5/64" Allen wrench.
- 5) Making sure the torch cable is straight, grasp the liner at the rear of the torch with a pair of pliers and remove.
- 6) Carefully feed the new liner into the torch using short strokes to avoid kinking. You may need to twist the liner for easier insertion.
- 7) Tighten the set screw to secure the liner in the torch.
- 8) Reinstall the torch to the wire feed unit.
- 9) **IMPORTANT:** at the front end of the torch push the liner back into the gun and hold in place.
- 10) Trim the liner to 3/4" stick out from the end of the gooseneck.
- 11) Replace the diffuser, contact tip, nozzle, and fume nozzle.
- 12) 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 Replacement

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

- 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) Loosen the set screw at the torch feeder connection using a 5/64" Allen wrench.
- 4) Making sure the torch cable is straight, grasp the liner at the rear of the torch with a pair of pliers and retract into cable assembly.
- 5) Remove fume nozzle, fume controller, and front end consumables (i.e nozzle, contact tip, gas diffuser, and insulating washer).
- 6) Remove the five handle screws and separate the handle assembly. **CAUTION: Trigger spring is under compression and can be easily lost.**
- 7) Remove aluminum outer neck tube (**407 & 507 models only**).
- 8) Secure gooseneck in a vice.
- 9) Using a wrench, loosen the gooseneck remove from the cable assembly.
- 10) Thread the new gooseneck on to the cable assembly and tighten.
- 11) Reassemble the two handle sides onto the gooseneck/cable assembly. Be sure to watch for the following, they all have to be aligned for handle to be assembled correctly;
 - a. Align neck wings with grooves in handle body.
 - b. Align trigger assembly (this includes; trigger, micro-switch with pins, and spring) in place into their mating sockets. **IMPORTANT: Insure the trigger wires are directed correctly to avoid pinching of wires.**
 - c. At the rear of the handle align exhaust hose coupler with mating grooves.
 - d. At the front, align aluminum outer neck tube with mating pins in handle (**407 & 507 models only**).
- 12) Reinstall five handle screws. **IMPORTANT: Insure the trigger wires are not pinched between the handle halves.**
- 13) Carefully feed the liner back into the torch using short strokes to avoid kinking. You may need to twist the liner for easier insertion.
- 14) Tighten the set screw to secure the liner in the torch.
- 15) Reinstall the torch to the wire feed unit.
- 16) Reinstall the consumables as well as the fume nozzle, and suction control slide.
- 17) Feed welding wire into the torch and tighten drive rolls.

Trigger Micro-Switch Replacement

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

SM SERIES TORCHES

Trigger Switch Assembly consists of – (all components sold separately with the exception of the micro-switch pins which come with the handle assembly)

1ea. Trigger Paddle

1ea. Spring

1ea. Micro-switch with wires

2ea. Micro-switch pins (included with purchase of handle)

- 1) Remove fume nozzle and fume controller from the torch assembly.
- 2) Remove the five handle screws and separate the handle assembly. **CAUTION: Trigger spring is under compression and can be easily lost.**
- 3) Remove aluminum outer neck tube (**407 & 507 models only**).
- 4) Remove the trigger paddle and spring.
- 5) Disconnect micro-switch and install new one.
- 6) Reassemble the two handle sides onto the gooseneck/cable assembly. Be sure to watch for the following, they all have to be aligned for handle to be assembled correctly;
 - a. Align neck wings with grooves in handle body.
 - b. Align trigger assembly (this includes; trigger, micro-switch with pins, and spring) in place into their mating sockets. **IMPORTANT: Insure the trigger wires are directed correctly to avoid pinching of wires.**
 - c. At the rear of the handle align exhaust hose coupler with mating grooves.
 - d. At the front, align aluminum outer neck tube with mating pins in handle (**407 & 507 models only**).
- 7) Reinstall five handle screws. **IMPORTANT: Insure the trigger wires are not pinched between the handle halves.**
- 8) Reinstall the fume nozzle and suction control slide.

Unicable Replacement

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

- 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) Loosen the set screw at the torch feeder connection using a 5/64" Allen wrench.
- 4) Making sure the torch cable is straight, grasp the liner at the rear of the torch with a pair of pliers and remove from cable assembly.
- 5) Remove fume nozzle, fume controller, and front end consumables (i.e nozzle, contact tip, gas diffuser, and insulating washer).
- 6) Remove the five handle screws and separate the handle assembly. **CAUTION: Trigger spring is under compression and can be easily lost.**
- 7) Remove aluminum outer neck tube *(407 & 507 models only)*.
- 8) Remove trigger paddle, spring, and disconnect micro-switch.
- 9) Secure Gooseneck in a vice.
- 10) Using a wrench, loosen the gooseneck and remove from the cable assembly.
- 11) At rear of gun assembly, remove adaptor support screw and slide adaptor support up cable to expose trigger control wires and disconnect them.
- 12) Secure rear adaptor block in vice.
- 13) Using a wrench, loosen the power cable assembly from the adaptor block.
- 14) Remove used power cable assembly from exhaust hose and replace with new one. Be sure that the new power cable is inserted into the existing vacuum hose correctly. The rear threads are M12 x 1 and the front is M10 x 1.
- 15) Thread the rear adaptor block onto new cable assembly and tighten.
- 16) Re-connect rear trigger control wires to new power cable assembly using butt splices.
- 17) Slide rear adaptor support onto adaptor block and secure with adaptor support screw.
- 18) At front of assembly thread neck onto new power cable and tighten.
- 19) Reattach micro-switch to new power cable control leads using bullet connectors.
- 20) Reassemble the two handle sides onto the gooseneck/cable assembly. Be sure to watch for the following, they all have to be aligned for handle to be assembled correctly;
 - a. Align neck wings with grooves in handle body.
 - b. Align trigger assembly (this includes; trigger, micro-switch with pins, and spring) in place into their mating sockets. **IMPORTANT: Insure the trigger wires are directed correctly to avoid pinching of wires.**
 - c. At the rear of the handle align exhaust hose coupler with mating grooves.
 - d. At the front, align aluminum outer neck tube with mating pins in handle *(407 & 507 models only)*.
- 21) Reinstall five handle screws. **IMPORTANT: Insure the trigger wires are not pinched between the handle halves.**
- 22) Carefully feed the liner back into the torch using short strokes to avoid kinking. You may need to twist the liner for easier insertion.
- 23) Tighten the set screw to secure the liner in the torch.
- 24) Reinstall the torch to the wire feed unit.
- 25) **IMPORTANT:** at the front end of the torch push the liner back into the gun and hold in place.
- 26) Trim the liner to ¾" stick out from the end of the gooseneck.
- 27) Reinstall the consumables as well as the fume nozzle and suction control slide.
- 28) Feed welding wire into the torch and tighten drive rolls.

DAILY MAINTENANCE

A few minutes per day performing a quick check of your mig torch will help to decrease weld problems, minimize downtime, and help increase consumable life.

At Beginning of Shift

- Inspect the cable for cuts, nicks or tears. If you can see bare copper return for maintenance.
- Inspect the front end consumables. Clean weld spatter and inspect the nozzle insulator. If nozzle insulation is damaged is should be replaced.
- Check that the gas diffuser is tight on the gooseneck.
- Check the gas holes on the diffuser and clean if necessary.
- Check and tighten the contact tip.
- Check all electrical connections including the power cable from the power supply, torch/feeder connections, and control cables for loose connections. Tighten if necessary. Loose connections can cause overheating of cables and/or loss of electrical power.

NOZZLE DETAIL SHEET

300 SERIES NOZZLES

PART #	DESCRIPTION	TYPE	BORE SIZE	MATERIAL	BORE ID DIMENSION	O.A.L.	INSULATOR REQUIRED
75133801	NOZZLE - CONICAL	A	3/8" (9.5mm)	NI PLATED BRASS	.375" (9.5mm)	2.820" (71.6mm)	NONE REQ.
75133802	NOZZLE - BOTTLE NOSE	C	3/8" (9.5mm)	NI PLATED BRASS	.375" (9.5mm)	2.820" (71.6mm)	NONE REQ.
75135601-I	NOZZLE - CONICAL	A	9/16" (14.2mm)	NI PLATED BRASS	.593"(15.1mm)	2.820" (71.6mm)	INSTALLED
75135002-I	NOZZLE - TAPERED	B	1/2" (12.7mm)	NI PLATED BRASS	.500"(12.7mm)	2.820" (71.6mm)	INSTALLED
75135003-I	NOZZLE - TAPERED	C	1/2" (12.7mm)	NI PLATED BRASS	.500"(12.7mm)	2.672" (67.96mm)	INSTALLED
75135602-I	NOZZLE - CONICAL	A	9/16" (14.2mm)	NI PLATED BRASS	.593"(15.1mm)	2.545" (64.6mm)	INSTALLED
75135004	NOZZLE - CONICAL SHORT	G	1/2" (12.7mm)	NI PLATED BRASS	.500"(12.7mm)	1.937" (49.2mm)	NONE REQ.

400 SERIES/500 SERIES NOZZLES

PART #	DESCRIPTION	TYPE	BORE SIZE	MATERIAL	BORE ID DIMENSION	O.A.L.	INSULATOR REQUIRED
75146201-I	NOZZLE - BOTTLE NOSE	E	5/8" (15.9mm)	NI PLATED BRASS	.625"(15.9mm)	3.125" (79.4mm)	INSTALLED
75145001	NOZZLE - BOTTLE NOSE	C	1/2" (12.7mm)	NI PLATED BRASS	.500"(12.7mm)	3.031" (77.0mm)	75001733
75146202	NOZZLE - CONICAL	A	5/8" (15.9mm)	NI PLATED BRASS	.625"(15.9mm)	3.125" (79.4mm)	75001738
75146202C	NOZZLE - CONICAL	A	5/8" (15.9mm)	NI PLATED COPPER	.625"(15.9mm)	3.125" (79.4mm)	75001738
75146202CU	NOZZLE - CONICAL	A	5/8" (15.9mm)	BARE COPPER	.625"(15.9mm)	3.125" (79.4mm)	75001738
75145601-I	NOZZLE - TAPERED	B	9/16" (14.2mm)	NI PLATED BRASS	.563"(14.2mm)	3.125" (79.4mm)	INSTALLED
75145002C	NOZZLE - TAPERED	B	1/2" (12.7mm)	NI PLATED COPPER	.531"(13.5mm)	3.125" (79.4mm)	75001738
75145002CU	NOZZLE - TAPERED	B	1/2" (12.7mm)	BARE COPPER	.531"(13.5mm)	3.125" (79.4mm)	75001738
75145003	NOZZLE - TAPERED (LONG)	B	1/2" (12.7mm)	NI PLATED BRASS	.500"(12.7mm)	3.915" (99.4mm)	NONE REQ.
75146501S	NOZZLE - SPOT	H	5/8" (15.9mm)	NI PLATED BRASS	.656"(16.7mm)	3.437" (87.3mm)	75001738
75146204-I	NOZZLE - CONICAL	A	5/8" (15.9mm)	NI PLATED BRASS	.625"(15.9mm)	2.820" (71.6mm)	INSTALLED
75146204CU	NOZZLE - CONICAL	A	5/8" (15.9mm)	BARE COPPER	.625"(15.9mm)	2.820" (71.6mm)	75001738
75145602-I	NOZZLE - SMALL CONICAL	D	9/16" (14.2mm)	NI PLATED BRASS	.593"(15.1mm)	2.820" (71.6mm)	INSTALLED
75144301-I	NOZZLE - TAPERED	D	7/16" (11.1mm)	NI PLATED BRASS	.438"(11.1mm)	2.820" (71.6mm)	INSTALLED
75145004	NOZZLE - BOTTLE NOSE	C	1/2" (12.7mm)	NI PLATED BRASS	.500"(12.7mm)	3.125" (79.4mm)	75001733
75146205-I	NOZZLE - CONICAL	A	5/8" (15.9mm)	NI PLATED BRASS	.625"(15.9mm)	3.031" (77.0mm)	INSTALLED
75146205CU	NOZZLE - TAPERED	B	5/8" (15.9mm)	BARE COPPER	.625"(15.9mm)	3.031" (77.0mm)	75001738
75146206-I	NOZZLE - SHORT CONICAL	G	5/8" (15.9mm)	NI PLATED BRASS	.625"(15.9mm)	1.875" (47.6mm)	INSTALLED
75146207-I	NOZZLE - SHORT CONICAL	G	5/8" (15.9mm)	NI PLATED BRASS	.625"(15.9mm)	2.187" (55.6mm)	INSTALLED
75147501	NOZZLE - CYLINDRICAL	F	3/4" (19.0mm)	NI PLATED BRASS	.703" (17.9mm)	3.125" (79.4mm)	75001738
75147501CU	NOZZLE - CYLINDRICAL	F	3/4" (19.0mm)	BARE COPPER	.703" (17.9mm)	3.125" (79.4mm)	75001738
75145603-I	NOZZLE - SHORT TAPERED	G	9/16" (14.2mm)	NI PLATED BRASS	.563"(14.2mm)	2.375" (60.3mm)	INSTALLED
75145005	NOZZLE - BOTTLE NOSE	C	1/2" (12.7mm)	NI PLATED BRASS	.500"(12.7mm)	2.820" (71.6mm)	75001733
75144302-I	NOZZLE - TAPERED	D	7/16" (11.1mm)	NI PLATED BRASS	.438"(11.1mm)	3.125" (79.4mm)	INSTALLED

CONTACT TIP SELECTION CHART

M6 CONTACT TIPS

<u>PART #</u>	<u>WIRE SIZE</u>	<u>NOMINAL I.D.</u>	<u>DESCRIPTION</u>
<u>COPPER (CU)</u>			
75023511	.023" (.6mm)	.034"	CONTACT TIP (STANDARD)
75030511	.030" (.8mm)	.038"	CONTACT TIP (STANDARD)
75035511	.035" (.9mm)	.044"	CONTACT TIP (STANDARD)
75035512	.040" (1mm)	.048"	CONTACT TIP (STANDARD)
75045511	.045" (3/64") (1.2mm)	.053"	CONTACT TIP (STANDARD)
75045512	.045" (3/64") (1.2mm)	.059"	CONTACT TIP (STANDARD)

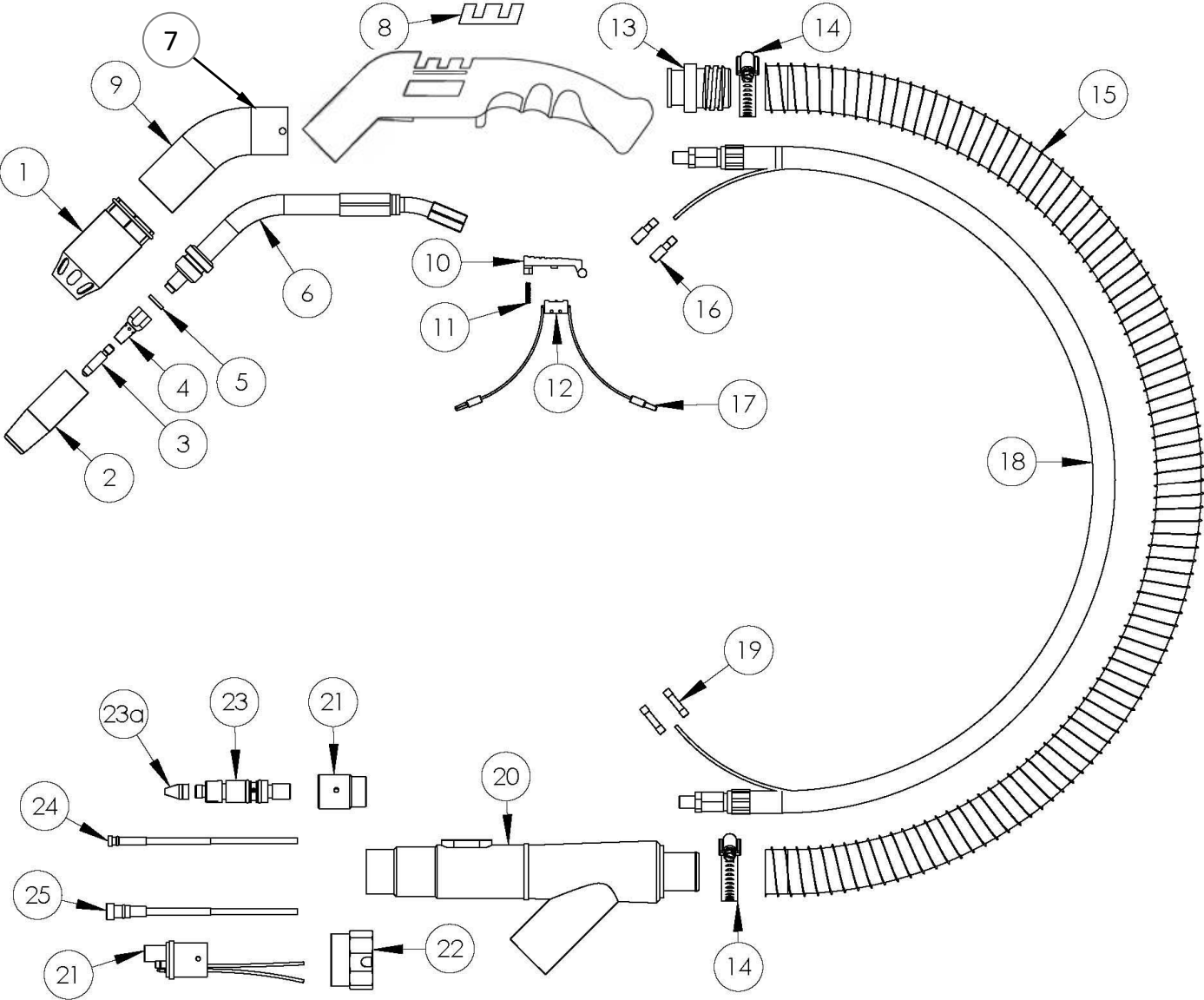
M8 CONTACT TIPS

<u>PART #</u>	<u>WIRE SIZE</u>	<u>NOMINAL I.D.</u>	<u>DESCRIPTION</u>
<u>COPPER (CU)</u>			
75030014	.030" (.8mm)	.038"	CONTACT TIP (STANDARD)
75035014	.035" (.9mm)	.044"	CONTACT TIP (STANDARD)
75040014	.040" (1.0mm)	.048"	CONTACT TIP (STANDARD)
75045014	.045" (3/64") (1.2mm)	.054"	CONTACT TIP (STANDARD)
75052014	.052" (1.3mm)	.061"	CONTACT TIP (STANDARD)
75062014	.062" (1/16") (1.6mm)	.073"	CONTACT TIP (STANDARD)
75062015	.062" (1/16") (1.6mm)	.076"	CONTACT TIP (STANDARD)
75078014	.078" (5/64") (2.0 mm)	.087"	CONTACT TIP (STANDARD)
75093014	.093" (3/32") (2.4mm)	.106"	CONTACT TIP (STANDARD)

M8 HRT – EXTENDED LIFE CONTACT TIPS

<u>PART #</u>	<u>WIRE SIZE</u>	<u>NOMINAL I.D.</u>	<u>DESCRIPTION</u>
20040400	.040" (1.0mm)	.050"	.315 OD CONTACT TIP
20045400	.045" (3/64") (1.2mm)	.054"	.315 OD CONTACT TIP
20035500	.035" (.9mm)	.044"	.395 OD CONTACT TIP
20040500	.040" (1.0mm)	.050"	.395 OD CONTACT TIP
20045500	.045" (3/64") (1.2mm)	.054"	.395 OD CONTACT TIP
20052500	.052" (1.3mm)	.061"	.395 OD CONTACT TIP
20062500	.062" (1/16") (1.6mm)	.073"	.395 OD CONTACT TIP

PARTS BREAKDOWN – 347SM, 407SM, 500SM



NO.	DESCRIPTION	347SM	407SM	500SM
1	FUME NOZZLE	SEE NOZZLE DETAIL SHEET PAGE 8		
2	CONICAL NOZZLE	SEE NOZZLE DETAIL SHEET PAGE 8		
NS	NOZZLE INSULATOR	SEE NOZZLE DETAIL SHEET PAGE 8		
3	CONTACT TIP	SEE CONTACT TIP SELECTION SHEET PAGE 9		
4	GAS DIFFUSER, STANDARD	75002007	75004033	75004033
	GAS DIFFUSER, SHORT	75002007S	75004033S	75004033S
	GAS DIFFUSER, LONG	75002007L	75004033L	75004033L
	GAS DIFFUSER, X-LONG	75002007XL	75004033XL	75004033XL
5	INSULATING WASHER	75001005	75001004	75001004
6	GOOSENECK	75057003	75057004	75057018
7	HANDLE ASSEMBLY	75057002	75057025	75057025
8	FUME CONTROLLER	75057010	75057010	75057010
9	OUTER NECK TUBE	N/A	75057052	75057052
10	TRIGGER	75057011	75057011	75057011
11	TRIGGER SPRING	75057013	75057013	75057013
12	MICRO-SWITCH	75057012	75057012	75057012
NS	HANDLE ASSEMBLY SCREW, 5 REQD.	75057016	75057016	75057016
NS	HANDLE THREAD INSERT, 5 REQD.	75057015	75057015	75057015
13	EXHAUST HOSE CONNECTOR	75057007	75057021	75057021
14	EXHAUST HOSE CLAMP	75057014	75057014	75057014
15	EXHAUST HOSE PER FOOT	75099657	75099700	75099700
NS	3' LEATHER COVER	75099656	75099664	75099664
16	BULLET CONNECTOR, FEMALE	38077003	38077003	38077003
17	BULLET CONNECTOR, MALE	75006030	75006030	75006030
18	10' POWER CABLE	75010307	75010407	75010507
	12' POWER CABLE	75012307	75012407	75012507
	15' POWER CABLE	75015307	75015407	75015507
	20' POWER CABLE	75020307	75020407	75020507
	25' POWER CABLE	75025307	75025407	75025507
19	BUTT SPLICE	75077066	75077066	75077066
20	ADAPTOR SUPPORT	75057009	75057019	75057019
NS	ADAPTOR SCREW	75077011	75077011	75077011
21	DIR CON ADAPT BLK	37077000	37077000	37077000-C
	EURO ADAPT BLOCK	75001148	75001148	75001149
22	EURO ADAPT NUT	75077014	75077014	75077014

NO.	DESCRIPTION	347SM	407SM	500SM
23	DIR CON FEEDER PLUG			
	MILLER	37577705	37577705	37577705
	OTC / DAIHEN	37577700	37577700	37577700
	OTC DP SERIES	37577701	37577701	37577701
	LINCOLN LN7	37577832	37577832	37577832
	PANASONIC	37577999	37577999	37577999
	TWECO #4	37577699	37577699	37577699
	TWECO #5	37577930	37577930	37577930
23a	CAP - MILLER FEEDER PIN	37577705-N	37577705-N	37577705-N
	CAP - OTC FEEDER PIN	38277001-N078	38277001-N078	38277001-N078
	CAP - EURO	37077005	37077005	37077005
NS	O-RING - MILLER PIN	37577102	37577102	37577102
NS	O-RING - TWECO #4 PIN	37677102	37677102	37677102
NS	O-RING - TWECO #5 PIN	75000021	75000021	75000021
NS	ORING - EURO BLOCK	28500002	28500002	28500002
NS	CONTROL CABLE, MILLER	37577201	37577201	37577201
NS	CONTROL CABLE, LINCOLN	37777200	37777200	37777200
NS	CONTROL CABLE, OTC	37777250	37777250	37777250
NS	CONTROL CABLE, TWECO	37677200	37677200	37677200
NS	7/16 HOSE CLAMP	38577108	38577108	38577108
NS	GAS HOSE PER FOOT	38577087	38577087	38577087
NS	TYPE B GAS NUT	38677145	38677145	38677145
NS	TYPE B GAS NIPPLE	38677144	38677144	38677144
NS	INERT GAS NUT	38677141	38677141	38677141
NS	INERT GAS NIPPLE	38677142	38677142	38677142
24	.023-.030 LINER, 10FT - T STYLE	75010215T	75010215T	75010215T
	.023-.030 LINER, 15FT - T STYLE	75015215T	75015215T	75015215T
	.035-.045 LINER, 10FT - T STYLE	75010222T	75010222T	75010222T
	.035-.045 LINER, 15FT - T STYLE	75015222T	75015222T	75015222T
	.035-.045 LINER, 25FT - T STYLE	75025222T	75025222T	75025222T
	.045-1/16 LINER, 10FT - T STYLE	75010228T	75010228T	75010228T
	.045-1/16 LINER, 15FT - T STYLE	75015228T	75015228T	75015228T
	.045-1/16 LINER, 25FT - T STYLE	75025228T	75025228T	75025228T
	5/64-3/32 LINER, 10FT - T STYLE	75010229T	75010229T	75010229T
	5/64-3/32 LINER, 15FT - T STYLE	75015229T	75015229T	75015229T
	5/64-3/32 LINER, 25FT - T STYLE	75025229T	75025229T	75025229T

NOTES:



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OM003 – 05/14