

TECHNICAL GUIDE

For Air-Cooled MIG Guns –
XL300 and XL400 amp

- **SAFETY & WARRANTY INFORMATION**
- **ASSEMBLY**
- **INSTALLATION**
- **MAINTENANCE GUIDE**
- **TECHNICAL DATA**
- **OPTIONS**
- **EXPLODED VIEW & PARTS LIST**
- **TROUBLESHOOTING**
- **ORDERING INFORMATION**

*Certified ISO 9001 :2000.
Please read instructions prior to use.
Save this manual for future reference.*

TABLE OF CONTENTS

THANK YOU	2
WARRANTY	3
GENERAL SAFETY	3
SUPERIOR ERGONOMIC DESIGN	3
1.0 ASSEMBLY	4
1.1 ASSEMBLING A TGX	4
2.0 - INSTALLATION	6
2.1 INSTALLING QUICK CONNECT BLOCK TO FEEDER	6
2.2 INSTALLING GUN TO QUICK CONNECT BLOCK.....	6
2.3 INSTALLING TOUGH GUNS EQUIPPED WITH “DIRECT POWER PINS”	7
3.0 - MAINTENANCE	7
3.1 NOZZLE AND CONTACT TIP SYSTEMS.....	7
3.2 LINER REPLACEMENT	8
3.3 SWITCH REPLACEMENT	8
3.4 GOOSENECK REPLACEMENT	9
3.5 UNICABLE REPAIR	10
4.0 - TECHNICAL DATA	11
4.1 GOOSENECK DIMENSIONS	11
4.2 GUN AMPERAGE RATINGS	11
5.0 OPTIONS	12
5.1 - SPECIALTY AND OPTIONAL ITEMS	12
5.2 FEEDER ADAPTORS.....	12
5.3 DIRECT PLUG-INS	12
5.4 CONNECTOR OPTIONS	13
5.5 CONTROL PLUGS	13
5.6 DUAL SCHEDULE GUN	13
6.0 - ACCESSORIES	14
7.0 - TROUBLESHOOTING	14
8.0 - EXPLODED VIEW AND PARTS LIST	15
9.0 – ORDERING INFORMATION	17
9.1 TGX RETAIL PACKAGING	17
9.2 EXAMPLE OF STANDARD MODEL NO.....	18
9.3 GUN STANDARDS CHART	18

THANK YOU

For selecting a **TGX™ MIG Gun**. TGX MIG Guns have undergone numerous quality checks to ensure high performance.

The instructions and illustrations in this technical guide make it easy for you to maintain your TGX MIG Gun. **Please read, understand, and follow all safety procedures.** Keep this Technical Guide booklet as a handy reference when ordering complete guns, parts and special options.

For technical support and special applications, please call the Tregaskiss Technical Service Department at 1-877-737-3111 or fax 1-877-737-2111. Our trained technicians are available between 8:30 AM and 4:30 PM EST, and will answer your application or repair questions.

We are always striving to improve our products and services, and would appreciate receiving your suggestions or comments. Please contact us immediately if you experience any safety or operating problems.

WARRANTY

Tregaskiss MIG guns and parts are warranted to be free of defects in material and/or workmanship as stated below. If within that period, any Tregaskiss gun or part thereof is found to be defective under normal and recommended use, Tregaskiss will at their option, repair, replace or issue credit for the value of the defective unit. All claims against this warranty must be submitted through a factory-authorized distributor. Use of non-Tregaskiss parts and/or consumables with these guns may damage or severely limit performance of the TOUGH GUN and may limit or void any warranties. Tregaskiss will not assume responsibility for incidental damages or expenses by any defect whatsoever.

TGX MIG guns and components - 120 days

TGX handles and trigger switches - LIFETIME

Customer Returns

- Returned boxes must have a RA # and return address on boxes when received.
- Torches returned under warranty must be complete including consumables.
- Returned Trials must have bottom portion of Trial form completed and sent here before RA # is issued.
- Products returned that were previously installed on torches cannot be put back into inventory (i.e. water-cooled goosenecks).
- No credit on returned specials.
- Any product left here for more than 30 days after contact with the customer will be shipped back at their expense.

If product is being returned for Warranty Repair or Replacement, a Return Authorization Number must be obtained from the factory. No charge replacements or repaired products will be sent out once returned product has been evaluated and warranty has been determined. If a replacement needs to be sent immediately, a purchase order number is required and the goods will be billed until warranty is determined.

GENERAL SAFETY

Before installation or operation of TGX MIG guns, please read the safety precautions listed below.

1. Always wear a properly fitted welding helmet with the proper grade of filter plate and suitable welding gloves.
2. All exposed skin should be covered with flame resistant, protective clothing. **DO NOT WEAR CLOTHING MADE FROM FLAMMABLE SYNTHETIC FIBERS.**
3. Protective screens or barriers should be used to protect others from spatter, flash and glare while welding.
4. Prevent fires by ensuring that hot slag or sparks do not contact combustible solids, liquids or gases.
5. Ensure that operator's head is not too close to the arc and that adequate ventilation is available.
6. Constant repetitive motion may lead to cumulative trauma disorders.
7. Do not touch live electrical parts. The following should be checked to prevent electrical shock.
 - Equipment is adequate for the job, properly grounded and installed according to code.
 - Faulty or damaged equipment is repaired or replaced.
 - Proper operator maintenance is performed to prevent excess spatter accumulation in the nozzle, or the contact tip or other areas of the gun.
 - Electrical insulating components are in place and not damaged. Repair or replace if necessary.
 - Operator and surroundings are not wet
 - Cables are not wrapped around operator's body
 - Equipment is off when not in use
8. CSA Standard W117.2 CODE FOR SAFETY IN WELDING AND CUTTING obtainable from the Canadian Standards Association, Standards Sales, 178 Rexdale Boulevard, Rexdale, Ontario, Canada M9W 1R3.
9. ANSI Standard Z49.1 CODE FOR SAFETY IN WELDING AND CUTTING obtainable from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

SUPERIOR ERGONOMIC DESIGN

Ergonomics, as defined by some MIG gun manufacturers, appears to start and finish with only the shape of the gun handles. Tregaskiss has gone far beyond this to investigate ways in which welding professionals can operate more effectively with greater comfort and safety.

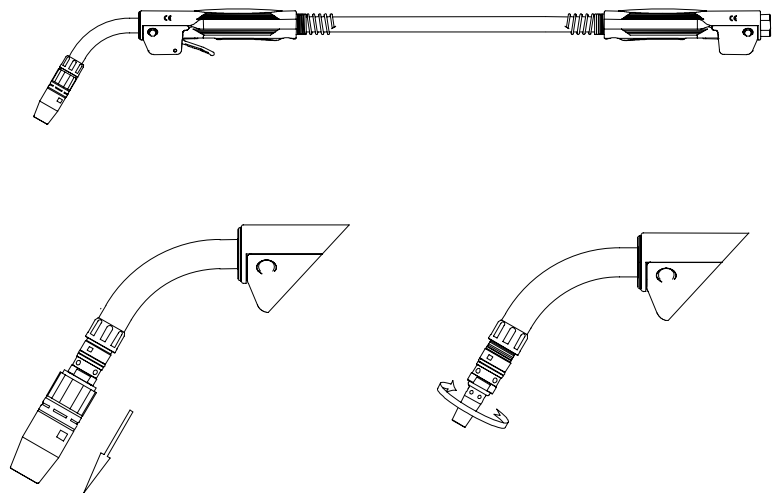
To approach the ergonomic concerns of the MIG welding industry in an effective and responsible manner, our engineering design team considered factors such as hand/arm positioning, vibration absorption and static muscle loading (tool weight, shape and balance, rotational torque, switch configuration, actuation pressure, and gripping force). We built in extra comfort features to encourage proper hand placement. These features include a light-touch, lever-style switch that can be positioned for multi-finger or thumb actuation, and a smaller diameter, one-piece handle, for optimum fit in a gloved hand. Consultants with ergonomics professionals and medical doctors, and ongoing research studies indicate that the TGX design can help mitigate possible occupational health hazards such as Carpal Tunnel Syndrome.

1.0 ASSEMBLY

1.1 ASSEMBLING A TGX

STEP #1

- Remove gun from box and extend to full length.
- Slide nozzle off of front end of gun.
- Thread retaining head off of front end of gun.



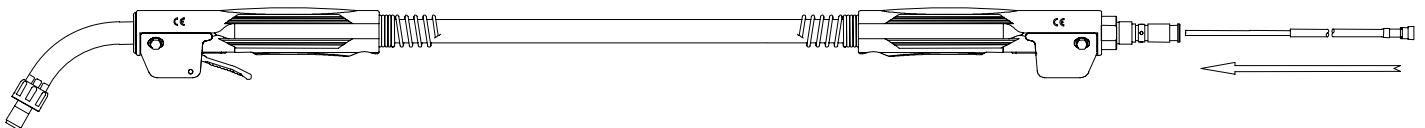
STEP #2

- Remove proper power pin from package and thread on to rear of gun using a $\frac{3}{4}$ " (19 mm) wrench on the rear block and a $\frac{5}{8}$ " (16 mm) wrench on power pin. Install power pin/block insulator.



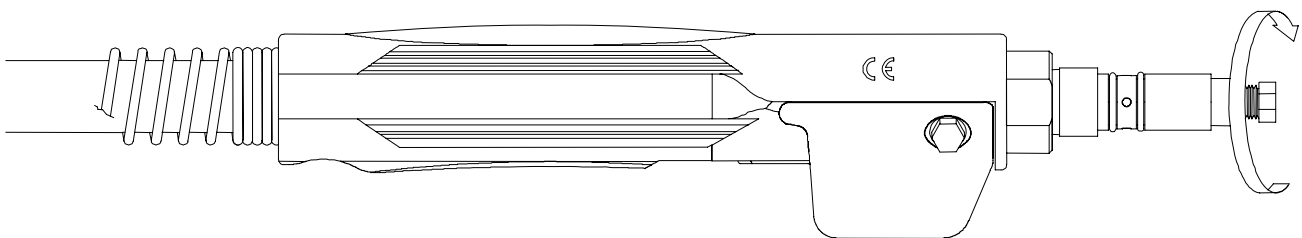
STEP #3

- Remove liner from package end extend to full length. Feed liner into the back end of the gun using short strokes to avoid kinking. Twist liner clockwise if necessary.



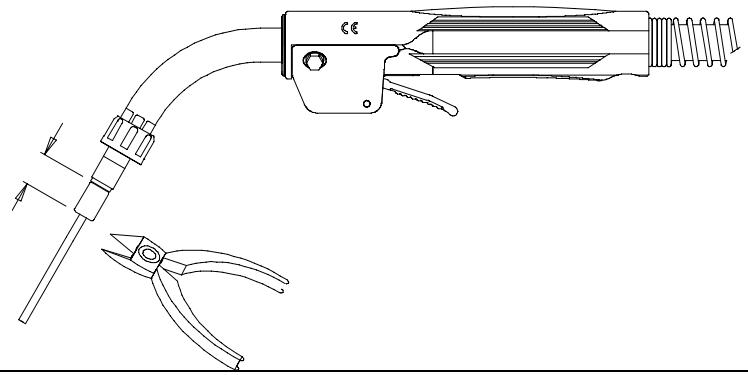
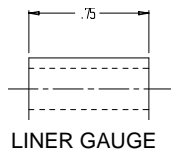
STEP #4

- Seat liner retainer to end of power pin and using a 10 mm wrench, turn retainer in a clockwise direction and tighten in power pin.



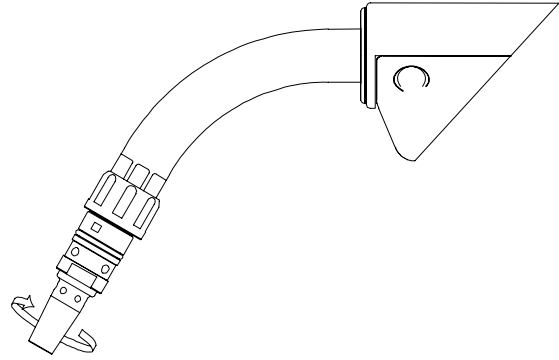
STEP #5

- Measure the proper liner stick-out at the front end of the gun by pushing in on liner to make sure there is no slack and then using liner gauge (provided). Cut the liner to $\frac{3}{4}$ " and remove any burrs that may obstruct wire feed.



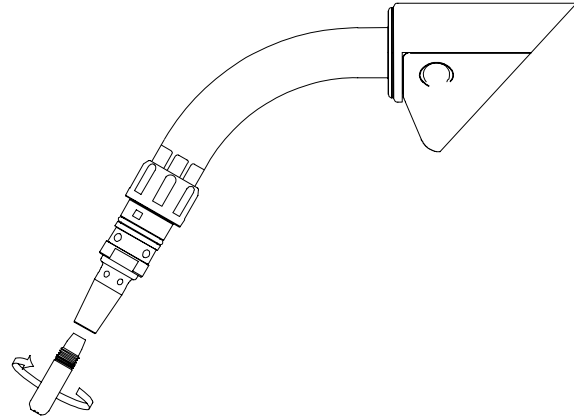
STEP #6

- Thread retaining head onto neck and securely tighten using a wrench.



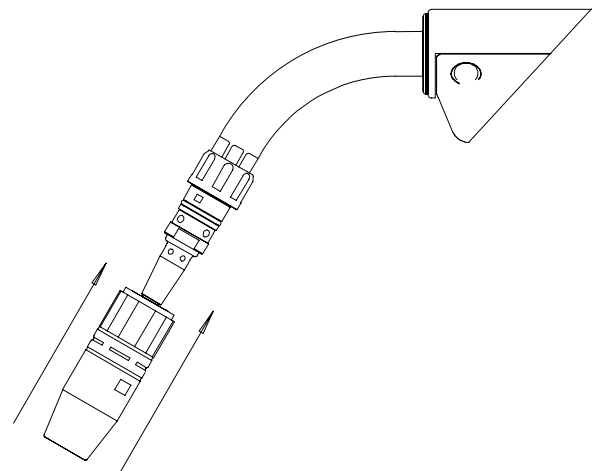
STEP #7

- Remove contact tip from package and thread securely into head.



STEP #8

- Slip nozzle fully onto head.

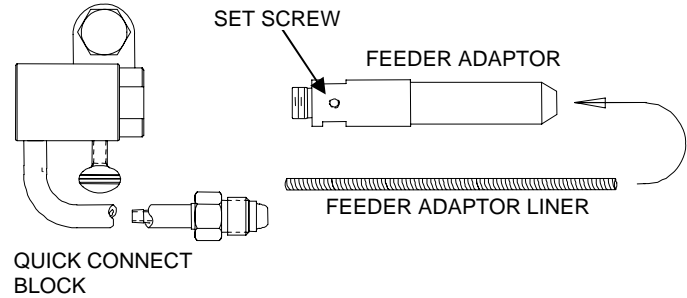


2.0 - INSTALLATION

2.1 INSTALLING QUICK CONNECT BLOCK TO FEEDER

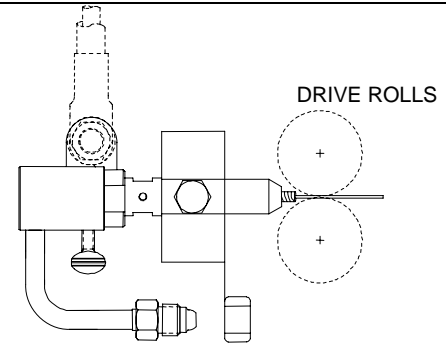
STEP #1

- Insert the correct feeder adaptor liner for desired wire diameter (2 provided) flush with the threaded end of the feeder adaptor.
- Tighten setscrew.
- Thread feeder adaptor into Quick Connect block and tighten.



STEP #2

- Position assembly into feeder adaptor and trim liner within $1/16$ » (1.6 MM) of the drive rolls and remove burrs if necessary.
- Secure assembly into feeder.
- Thread gas hose nipple into feeder gas fitting.
- Connect power cable to $1/2$ » (13 MM) power bolt with appropriate lug.
- **Tighten all connections.**
- Feed welding wire through assembly by hand and tighten drive rolls.

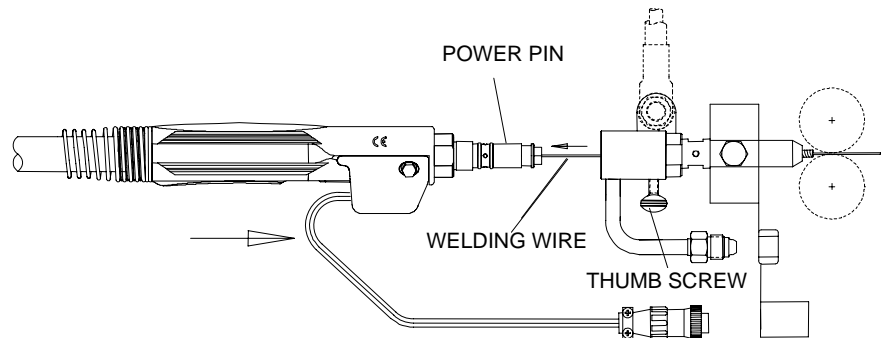


2.2 INSTALLING GUN TO QUICK CONNECT BLOCK

Ensure correct liner and contact tip are utilized. Examine and replace power pin o-rings if necessary.

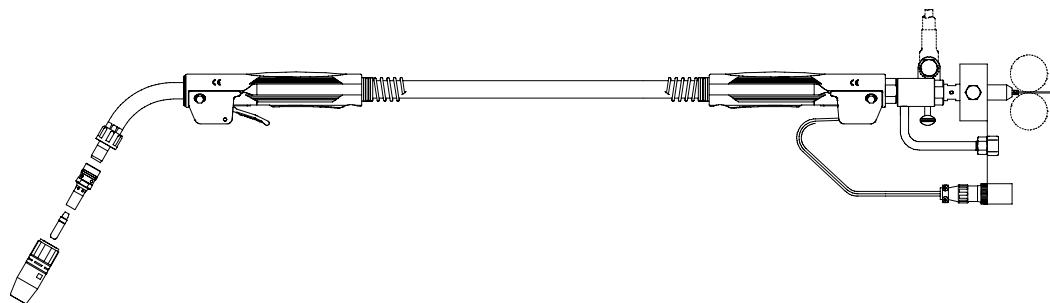
STEP #1

- Guide welding wire into power pin.
- Insert power pin to shoulder.
- Tighten thumbscrew securely.
- Connect control plug lead to control housing on gun.
- Insert control plug into feeder.

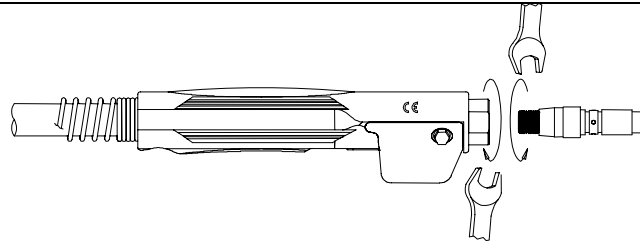


STEP #2

- With gun lying straightened, pull trigger and feed wire through gun. It may be necessary to remove contact tip when feeding small wire sizes).
- Recheck:
 - proper gas flow
 - drive roll pressure
 - voltage and wire feed speed



2.3 INSTALLING TOUGH GUNS EQUIPPED WITH "DIRECT POWER PINS"



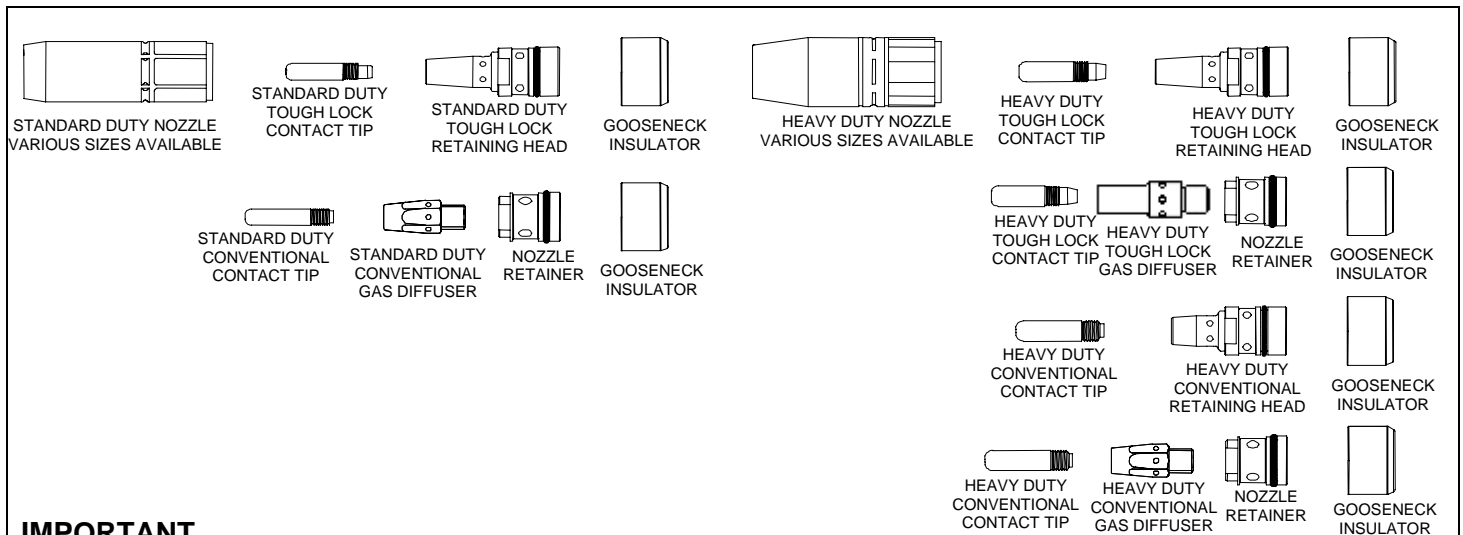
IMPORTANT: The thread-in two-piece power pin incorporates a taper to seat and lock in the power pin to the rear handle block. Make sure power pin is tightened in the block with a wrench to insure pin is secure and will not come loose.

NOTE: The rear handle and screws do not have to be removed when installing the two-piece power pins.

- Thread power pin into the rear handle block.
- Tighten the power pin into the rear block using a 3/4" (19mm) or 1" (25mm) wrench on the rear block and a 5/8" (16mm) wrench on the power pin.
- Install liner. See Section 2.2 Liner Replacement
- Install gun to feeder. – See Below
- **Most Pins**
 - Insert power pin to shoulder and secure.
 - Insert control plug to control housing of gun.
 - Insert control plug into feeder.
 - Feed welding wire into power pin by hand and tighten drive rolls.
 - On Lincoln® it is necessary to connect gas hose to barbed fitting on power pin.
- **Note that Bernard, Euro and Oxo are not direct connect pins**

3.0 - MAINTENANCE

3.1 NOZZLE AND CONTACT TIP SYSTEMS



IMPORTANT

- Gooseneck insulator must be in place before welding to maintain insulation of gooseneck armor.
- Be sure all parts are tightened well before welding.
- When using the heavy duty retaining head make sure it is tightened with a 5/8" (16mm) wrench to prevent over-heating of contact tip.
- To prevent scoring on heavy duty retaining head do not use pliers.

Removal and Replacement

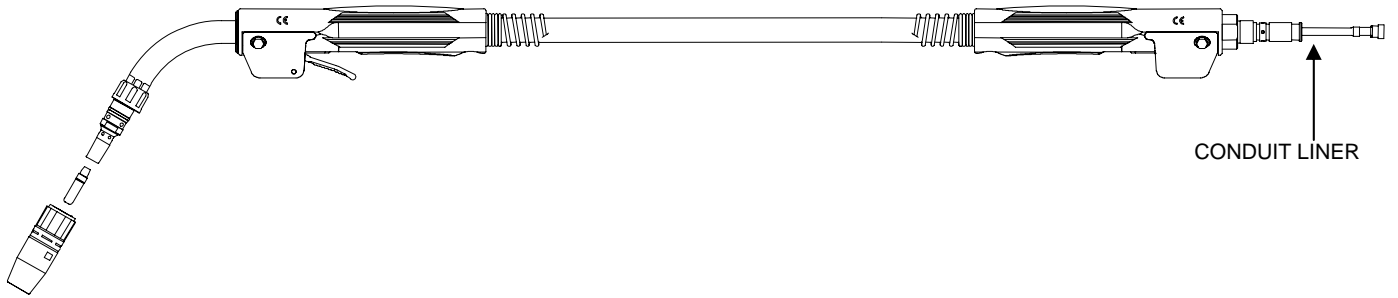
- Pull slip-on nozzles off with a clockwise twisting motion.
- When installing nozzle, exposed insulator should nest inside gooseneck insulator to assure concentricity.
- Gooseneck insulators are positioned on the end of the gooseneck with the large insulated counterbore facing the nozzle.
- Replace nozzle retainer with deep counterbore toward the gooseneck. Tighten until retainer and shock washer are secure.
- External gooseneck thread can be cleaned with a 9/16" - 18 die.

NOTE: Any of the above nozzle and contact tip systems can be used on TOUGH GUN™ 350, 450, 550 & 650 amp MIG Guns.

3.2 LINER REPLACEMENT

NOTE: For guns equipped with “Direct Plug-Ins”, Bernard, or Euro-connector, the procedure is the same. On Miller style guns, liner is held captive by a guide cap, which must be removed and replaced when changing liner.

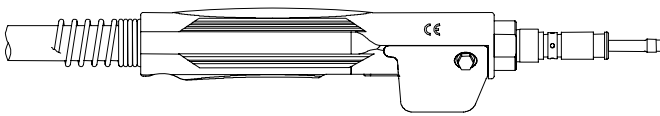
STEP #1



NOTE: Ensure power supply is off and gun is removed from feeder before proceeding.

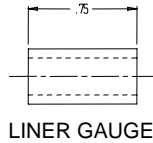
- Remove nozzle, tip and gas diffuser.
- If power pin is thread-in liner type, using a 10 mm wrench, turn thread-in liner retainer counter-clockwise until liner is free from the power pin.
- With gun straightened, grip conduit liner with pliers and remove.

STEP #2

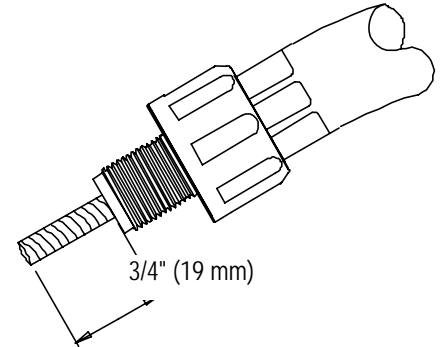


- Feed replacement liner through gun using short strokes to avoid kinking. Twist liner clockwise if necessary.
- Using a 10 mm wrench, turn thread-in liner retainer in a clockwise direction and tighten in power pin.

STEP #3



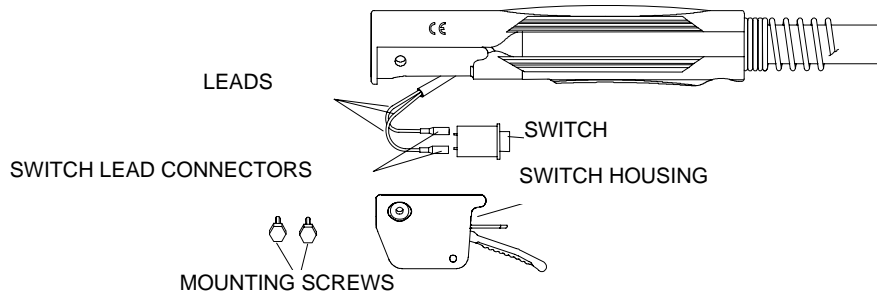
LINER GAUGE



- Push liner back into gun and hold in place.
- Using liner gauge, trim conduit liner with $\frac{3}{4}$ " (20 mm) stick out.
- Remove any burr that may obstruct wire feed, especially on flat wire type conduit liner.
- Replace nozzle, tip and gas diffuser onto gooseneck.

3.3 SWITCH REPLACEMENT

STEP #1

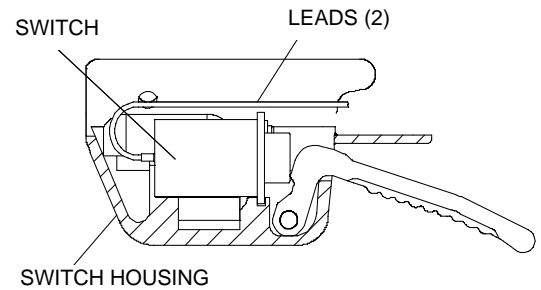


- Remove both mounting screws with an 5/16" nut driver.
- Ease switch out of switch housing by gently pulling up on leads.
- Remove switch from switch lead connectors with needle nose pliers.

STEP #2

Push switch lead connectors firmly onto switch terminals with needle nose pliers.

- Depress switch plunger and nest back into housing.
- Fit switch housing into nest on handle (switch leads must lie parallel).
- Align housing holes with threaded holes in body and insert mounting screws.
- Start both screws first before tightening with 5/16" nut driver to even alignment.



IMPORTANT:

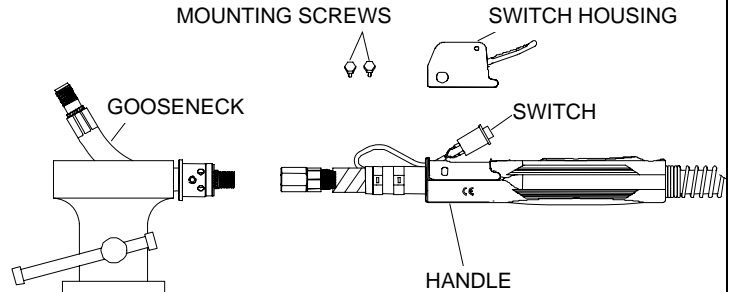
Use manufacturers screws (part # 411-3 or 411-3M) to ensure proper length, hardness and tolerance.

3.4 GOOSENECK REPLACEMENT

STEP #1

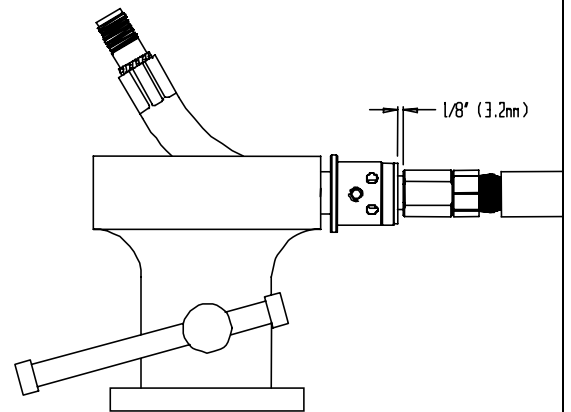
- Place gooseneck in vise.
- Remove both switch housing mounting screws.
- Slide handle back exposing the cable connection.
- Loosen the cable / gooseneck connection using an 11/16" (17mm) wrench.
- Remove from vise and unthread gooseneck by hand.

NOTE: The body is now an integral part of the gooseneck and the handle mounting holes are metric (M5). Use the screws supplied with the new neck to avoid stripping of threads. Old style 407 bodies used Imperial (U.S.) threads.



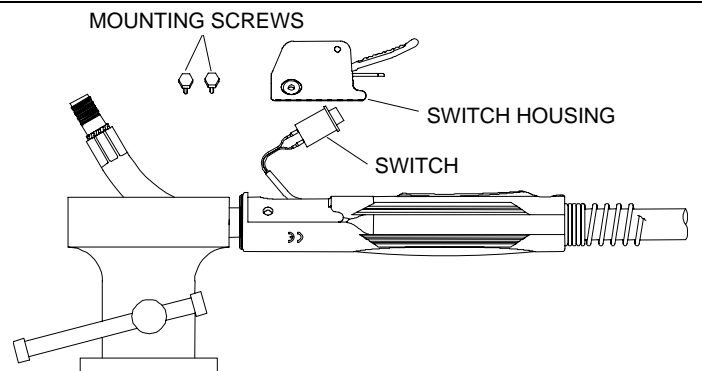
STEP #2

- Thread the gooseneck into the cable connection (hand tighten).
- Place gooseneck in vise and tighten with a wrench to within 1/8" (3.2 mm) spacing between the cable connection and gooseneck body.



STEP #3

- Install the switch and reposition handle and switch housing.
- Reinstall switch housing mounting screws



3.5 UNICABLE REPAIR

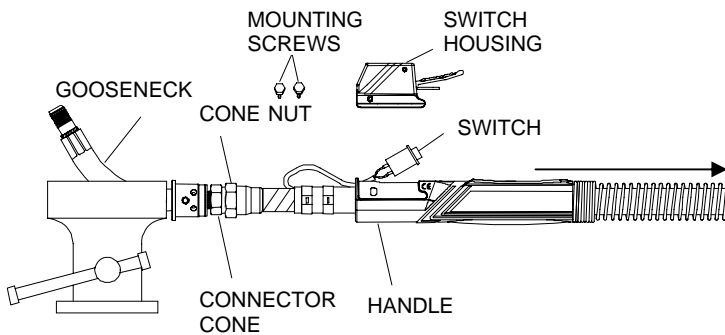
Remove consumables (Nozzle, Retaining Head, Contact Tip)

Remove the liner from the gun

Mount Gooseneck in the vice

Remove switch housing and switch from leads

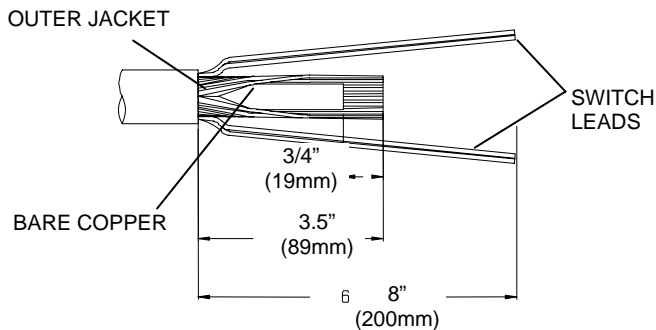
Move the handle back



Bend uncable behind connector cone, cut uncable at bend

Slide two large "oetiker" clamps 1.5ft down the uncable (required for crimping later)

From your cut, (end of cable) measure 8" back, and cut away the outer jacket of the cable. ****Be careful not to cut the copper wiring and leads****



Slide outer jacket forward to expose the copper wiring and leads

Pull out the lead wires

From the 8" cut, measure 3 1/2" towards the front of the torch, and cut off the excess cable

Fan back copper, and remove 3/4" of the inner gas tube

Take the old liner you just removed, and cut it to approximately 2ft long.

Thread cone onto vice mounted gooseneck

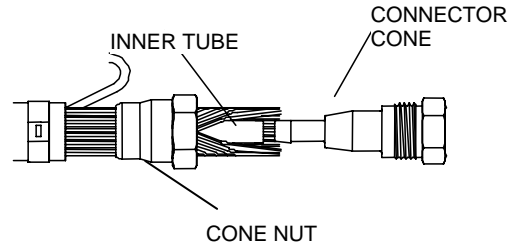
Insert the 2ft. of old liner into the gooseneck from the front end of the gooseneck, then slide on the support tube

Slide small oetiker clamp over top of inner gas tube.

Using the 2ft old liner as a guide, slide the inner gas tube over the support tube and up to the cone shoulder

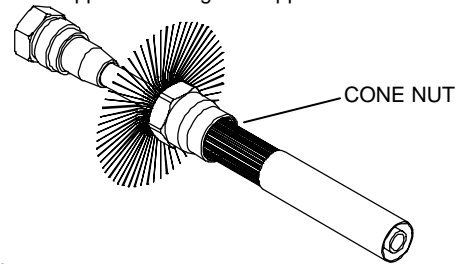
Crimp the support tube clamp. Crimp between the black and white switch leads.

Position copper wires between roll marked numbers on cone and first step before threads. Crimp the large oetiker clamps 1/4" and 1" behind the outer jacket at the front of the torch



Remove the inner gas tube from the cone.

Fan out the copper and bring the copper around the inner gas tube



evenly.

Slide the inner gas tube on the Cone up to the shoulder

Fan the copper evenly around the inner gas tube, up to the shoulder of the Cone Connector. Thread on the Cone Nut onto Connector Cone. Torque the Cone Nut to 30ft lbs (There should be about a 1/8" gap between the cone and cone nut.)

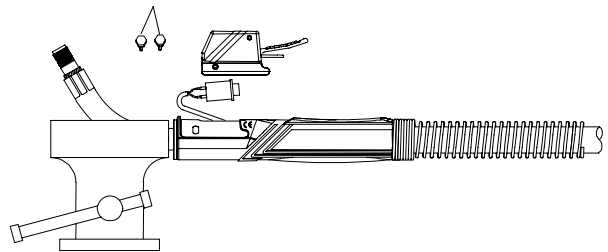
Using 3/4" Teflon electrical tape, wrap up the copper and spare switch leads neatly. Loop the 2 switch leads that will be used, this is to ensure that there is enough slack in the wire for gun articulation. Make sure that the control wire sheath is over switch leads where the cone and cone nut are to prevent any wear.

Pull up the handle, and feed switch leads through handle

Strip leads about 1/8" back and crimp switch terminals to open leads.

Connect the leads to the switch, and lay the switch back into the housing

Screw the switch housing back onto the handle



If assistance is required, please contact your authorized Tregaskiss Distributor or the Technical Service Department at Tregaskiss at 1-877-737-3111.

UNICABLE REPAIR KIT

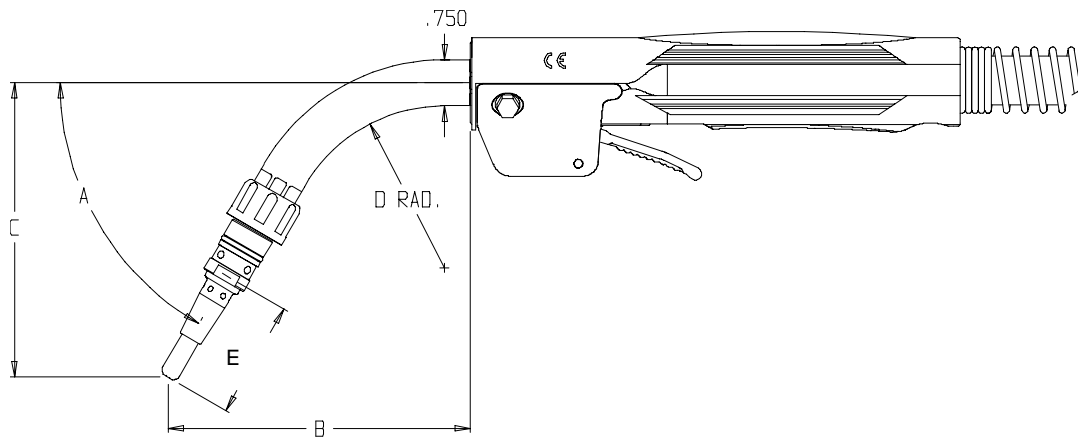
PART #		DESCRIPTION
300 amp	400 amp	
313-8	413-7	UNICABLE CLAMP KIT (COMPLETE)
INDIVIDUAL PARTS		
308	408	Connector Cone
409	409	Cone Nut
413-1	513-1	Outer Jacket Clamps (2)
413-5	413-5	Support Tube Clamp
413-4	413-4	Support Tube
412-1	412-1	Switch Lead Connectors(2)
412-3	412-3	Control Wire Sheath

REPAIR TOOL KIT

PART #	DESCRIPTION
450	REPAIR TOOL KIT (COMPLETE)
INDIVIDUAL TOOLS	
450-1	Cable Cutter
450-2	Clamp Pliers - for crimping of outer jacket and inner tube clamps
450-3	Connector Crimping Tool - for switch lead terminals
450-4	5/16" Nut Driver - for removal of switch housing
450-5	Knife - for trimming of outer jacket
450-6	5/64" Allen Key - for liner removal
450-7	1/8" Allen Key - for body set screws
450-13-2	Support Tube Installation Pin – 300/400 Amp

4.0 - TECHNICAL DATA

4.1 GOOSENECK DIMENSIONS



GOOSENECK	A	B		C		D		E	
		INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
305-60	60°	4.10	105	4.00	103	2.00	51	1.90	48
405-45	45°	5.19	132	3.55	90	3.00	76	1.90	48
405-60	60°	4.98	127	4.78	121	3.00	76	1.90	48
405-180	180°	7.35	187	---	---	---	---	1.90	48
505-45	45°	7.23	184	3.87	98	4.00	102	1.90	48
505-60	60°	6.04	153	5.30	135	4.00	102	1.90	48

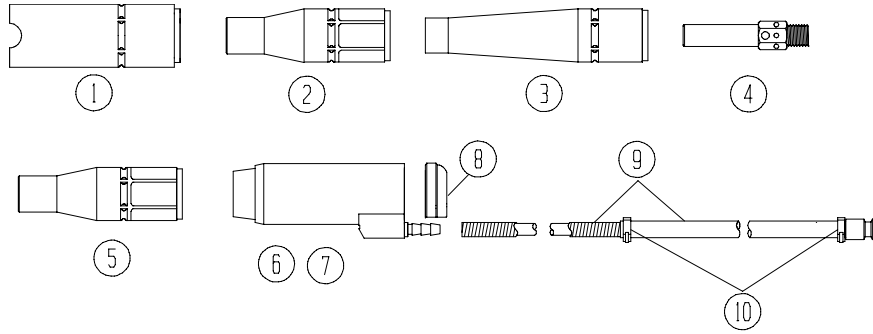
4.2 GUN AMPERAGE RATINGS

TGX	100% DUTY CYCLE		60% DUTY CYCLE	
	CO2	MIXED	CO2	MIXED
300 amp	300	200	400	300
400 amp	400	275	525	400

NOTE: Ratings are based on tests that comply with NEMA ARC Welding Section Standard 11-6-1975 for Duty Cycle. "The time period of one complete cycle shall be 10 minutes" (60% = 6 minutes). National Electrical Manufacturers Association, 2101 L Street N.W. Washington D.C. 20037.

5.0 OPTIONS

5.1 - SPECIALTY AND OPTIONAL ITEMS



ITEM	PART #	DESCRIPTION
1	401-10-87	Spot Nozzle (Brass)
2	401-21	Flux Core Nozzle (Gasless)
3	401-41-50	Extended Reach Nozzle - 3.5" (88.9 mm)
4	404-41	Extended Reach Gas Diffuser
5	401-42-50	High Access Nozzle (Bottle-necked)
6	401-26-62	Water-Cooled Nozzle - fixed hose system 5/8" (15.9 mm) for 5/16" (7.9 mm) tip recess
7	401-26-75	Water-Cooled Nozzle - fixed hose system 3/4" (19 mm) for 5/16" (7.9 mm) tip recess
8	402-26	Shock Washer used with 401-26-62 & 401-26-75
9	430-3	Water Hose only - 15' (4.6 m)
10	656-1	Hose Clamp

5.2 FEEDER ADAPTORS

To be used with 417 (Tweco #4), 417-50 (Euro) & 417-60 (Tweco #5) Quick-Connect Block

PART #	USE ON FEEDERS
418-1	Airco
418-3	ESAB (non Euro style) and Hobart BETA MIG
418-4	Hobart 27
418-5	Lincoln LN4, LN5, Linde SWM 31, 3A & 32A
418-6	Lincoln LN7, 8 & 9, LN 25 Suitcase, LN22
418-7	Linde SWM-14
418-8	Linde 35 SWM-23
418-9	Miller 10A, 30A (Millermatic 35S Feeder)
418-10	Miller 52E, 54E, S21, S22 Series and Millermatic 200 & 250, 60 Series
418-14	OTC
418-21	Gilliland
418-27	Panasonic
418-29	#5 Pin
418-35	Kobelco

5.3 DIRECT PLUG-INS

PART #	DESCRIPTION	USE ON FEEDERS
214	Tregaskiss Standard Power Pin	Tregaskiss Quick Connect Block, Hobart® 2000 Series Feeders, Tweco® #4 Receptacle Body Part #TAK-1, Lincoln Power Mig 300
414-11-2	O-Ring - for Miller® Power Pins	Millermatic® 200 & 250, S21e & S22 Series, 52 & 54 Series, 60 Series
214-6-116	Miller® Power Pin - for .035" - 1/16" wire	Millermatic® 200 & 250, S21e & S22 Series, 52 & 54 Series, 60 Series
214-6-332	Miller® Power Pin - for 5/64" - 3/32" wire	Millermatic® 200 & 250, S21e & S22 Series, 52 & 54 Series, 60 Series
214-116	Guide Cap Only - for 414-11-116 (New Style)	
214-332	Guide Cap Only - for 414-11-332 (New Style)	
414-116	Guide Cap Only - for 414-11-116 (Old Style)	
414-332	Guide Cap Only - for 414-11-332 (Old Style)	
214-12	Tweco® #5 Style Power Pin	All Feeders set up with Tweco® #5
414-12-2	O-Ring - for Tweco® #5 Style Power Pin	Receptacle Body Part #6TAK-1
214-2	Lincoln® Power Pin	Lincoln® LN7, 8 & 9, LN25 Suitcase, LN22,NA2
414-21	ESAB® (Non Euro)	A-10
214-13	Panasonic	

5.4 CONNECTOR OPTIONS

Euro Connector option - for European style feeders and feeder adaptors for XL300 & XL400 amp TGX MIG Guns.

PART #	DESCRIPTION
425	Euro Connector Assembly
425-10	Euro Connector Body
425-11	Hand Nut
425-7	Euro Housing
425-3	Mounting Screw
425-8	Control Pin
425-9	O-ring

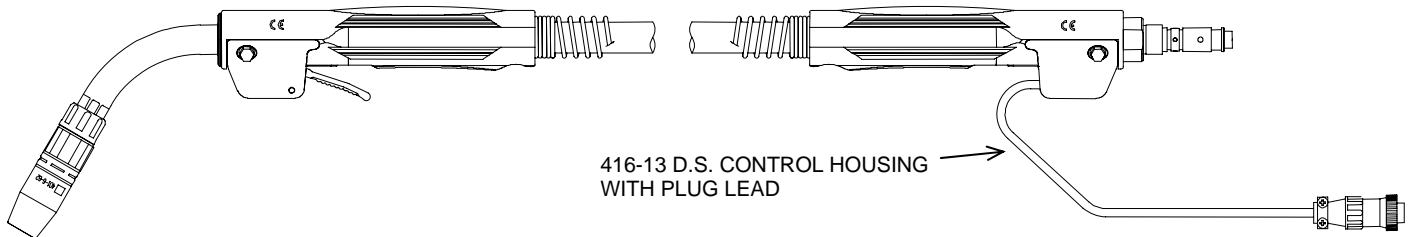
Bernard Style Connector Option - for Quick Connect feeder adaptors for XL300 & XL400 amp TGX MIG Guns.

PART #	DESCRIPTION
426	Bernard Style Connector Assy.
426-1	Connector Body
426-2	Locking Collar
426-3	Lock Spring
426-4	Connector Housing
426-5	Control Pins
426-6	O-rings
425-5	Mounting Screw

5.5 CONTROL PLUGS

PART #	DESCRIPTION
419-1	Airco
419-2	Hobart
419-4	Miller (52E, 54E)
419-5	Westinghouse
419-6	Lincoln (LN7, 8, 9) NA2
419-7	Miller (10E, 30E) & Linde (SWM-35)
419-8	Dipstick 160,200, Hobart Handler, Lincoln SP-100
419-10	Dual Schedule Miller
419-11	Lincoln Dual Schedule
419-12	Oxomatic

5.6 DUAL SCHEDULE GUN



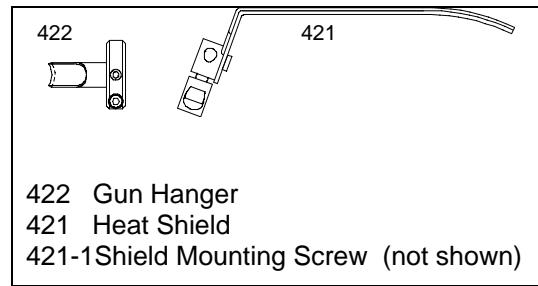
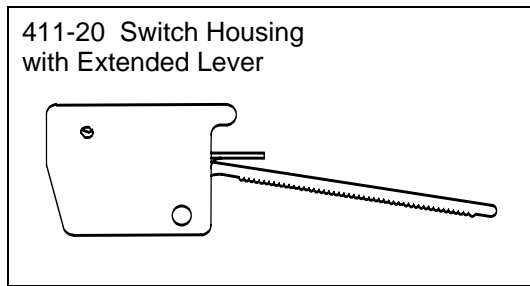
TWO POSITION SWITCH STYLE

PART #	DESCRIPTION
411-11	D.S. Two-Position Switch Housing Only

TOGGLE SWITCH STYLE

PART #	DESCRIPTION
411-12	D.S. Switch Housing - complete w/toggle switch
411-13	D.S. Lock-On Trigger Housing

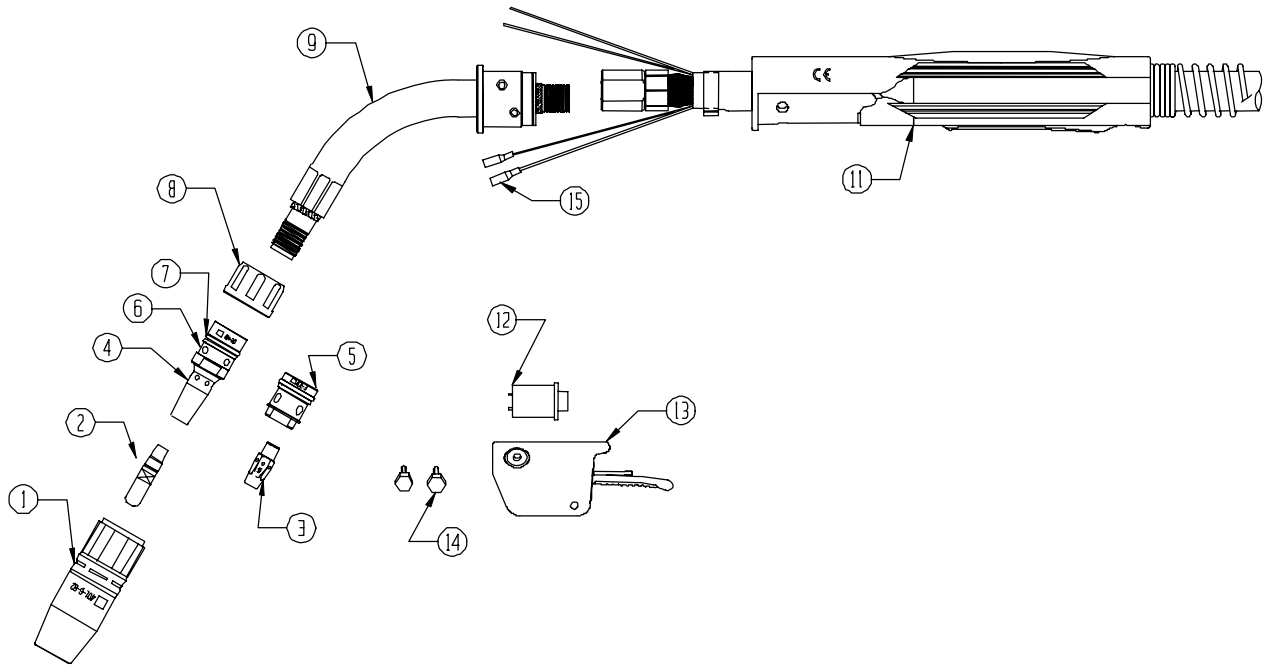
6.0 - ACCESSORIES



7.0 - TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE
Poor Wire Feed	<ul style="list-style-type: none"> • conduit liner clogged or kinked • incorrect liner size or contact tip • liner cut too short and not seating properly in gas diffuser • drive rolls too tight resulting in scoring of welding wire • welding wire dirty, rusty or too much cast
Short Tip Life	<ul style="list-style-type: none"> • drive rolls too tight resulting in scoring of welding wire • welding wire dirty, rusty or too much cast • uncoated wire being used, increasing usage • wrong tip size • over torch rated duty cycle • loose consumables
Gun Overheating	<ul style="list-style-type: none"> • loose retaining screw on quick connect block • insufficient gauge power cable and/or ground cable • loose connector cones and/or cone nuts • gun being run beyond its amperage range • electrical malfunction in power source • loose consumables
Switch Malfunctioning	<ul style="list-style-type: none"> • bad connection of leads to switch terminals • spatter built up between lever and switch housing • contacts dirty in switch • switch housing screws loose • broken or worn switch lead
Weld Porosity	<ul style="list-style-type: none"> • spatter built up in nozzle blocking gas • leaks in gas hose or improper connection • o-rings on power pin are cut or damaged • inner tube loose from connector cone • poor wire feed (see above) • improper shielding gas or welding wire • rusty or poor quality welding wire • parent metal rusty or contaminated or high in sulphur content • flow improperly set

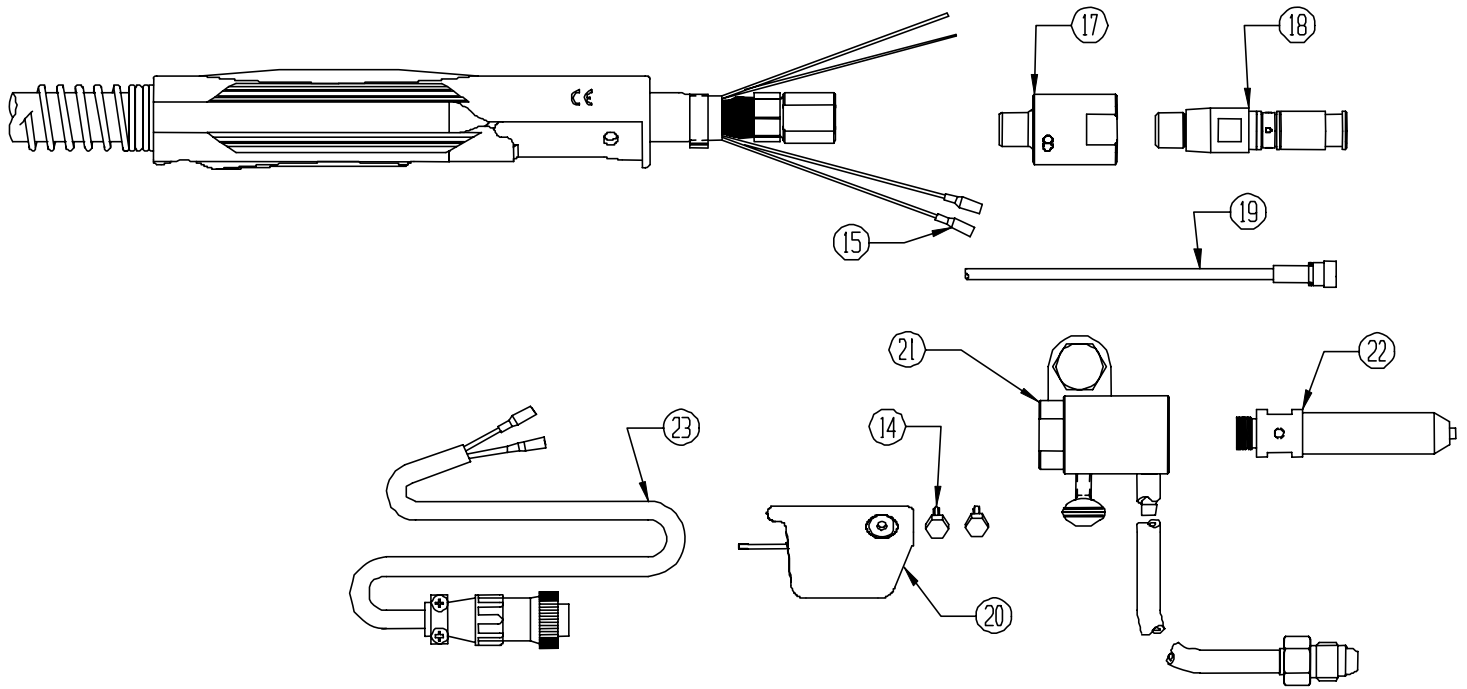
8.0 - EXPLODED VIEW AND PARTS LIST



Numbers in this column correspond to the exploded view images above.

PART #	DESCRIPTION
1	STANDARD NOZZLES (SELF-INSULATED)
401-40-38	SUPER TAPERED NOZZLE - 3/8" BORE (BRASS)
401-4-38	3/8" (10 mm) BORE - FLUSH TIP
401-4-50	1/2" (13 mm) BORE - 1/8" (3 mm) TIP RECESS
401-4-62	5/8" (16 mm) BORE - 1/8" (3 mm) TIP RECESS
401-4-75	3/4" (19 mm) BORE - 1/8" (3 mm) TIP RECESS
	SHORT ARC NOZZLE
401-8-62	1/8" (3 mm) TIP STICKOUT
	HEAVY DUTY NOZZLES (SELF-INSULATED)
401-5-62	5/8" (16 mm) BORE - 1/4" (6 mm) TIP RECESS
401-5-75	3/4" (19 mm) BORE - 1/4" (6 mm) TIP RECESS
401-6-50	1/2" (13 mm) BORE - 1/8" (3 mm) TIP RECESS
401-6-62	5/8" (16 mm) BORE - 1/8" (3 mm) TIP RECESS
401-6-75	3/4" (19 mm) BORE - 1/8" (3 mm) TIP RECESS
401-7-62	5/8" (16 mm) BORE - 1/4" (6 mm) TIP RECESS (BRASS)
401-7-87	7/8" (22 mm) BORE - 1/4" (6 mm) TIP RECESS (BRASS)
2	STANDARD TOUGH LOCK CONTACT TIP 1/4" (6.4 mm) O.D.
403-14-23	FOR .023" (0.6 mm) WIRE
403-14-30	FOR .030" (0.8 mm) WIRE
403-14-35	FOR .035" (0.9 mm) WIRE
403-14-1.0	FOR 1 mm WIRE
403-14-45	FOR .045" (1.2 mm) WIRE

PART #	DESCRIPTION
	HEAVY DUTY TOUGH LOCK CONTACT TIPS - 5/16" (7.9 mm) O.D. (STD)
403-20-30	FOR .030" (0.8 mm) WIRE
403-20-35	FOR .035" (0.9 mm) WIRE
403-20-1.0	FOR 1 mm WIRE
403-20-45	FOR .045" (1.2 mm) WIRE
403-20-364	FOR 3/64" (1.2 mm) WIRE
403-20-1.4	FOR 1.4 mm WIRE
403-20-52	FOR .052" (1.3 mm) WIRE
403-20-116	FOR 1/16" (1.6 mm) WIRE
403-20-564	FOR 5/64" (2.0 mm) WIRE
403-20-332	FOR 3/32" (2.4 mm) WIRE
	HEAVY DUTY TOUGH LOCK TAPERED TIPS - 5/16" (7.9 mm) O.D.
403-21-30	FOR .030" (0.8 mm) WIRE
403-21-35	FOR .035" (0.9 mm) WIRE
403-21-1.0	FOR 1 mm WIRE
403-21-45	FOR .045" (1.2 mm) WIRE
3	404-15 HEAVY DUTY TOUGH LOCK GAS DIFFUSER
4	404-14 STANDARD DUTY TOUGH LOCK RETAINING HEAD -
	404-20 HEAVY DUTY TOUGH LOCK RETAINING HEAD -(STD)
	404-23 GASLESS RETAINING HEAD - TOUGH LOCK®- NO GAS HOLES
5	402-3 NOZZLE RETAINER
6	454-1-2 RETAINING RING ONLY
7	402-6 O-RING ONLY
8	402-7 GOOSENECK INSULATOR



ITEM	PART #	DESCRIPTION
9		GOOSENECKS (Interchangeable between both amperages)
	405-45	45 DEGREE 400 AMP
	405-60	60 DEGREE 400 AMP
	406-1	SPRING THERMO GUARD - 45° (not shown)
	406-2	SPRING THERMO GUARD - 60° (not shown)
11	410X	HANDLE/SPRING GUARD ASSEMBLY - FRONT AND REAR
12	411-1	SWITCH ONLY
13	411-2X	SWITCH HOUSING WITH SCREWS
14	411-3M	MOUNTING SCREW (Metric M5)
15	412-1	SWITCH LEAD CONNECTOR
	412-3	CONTROL WIRE SHEATH (not shown)
17	414-400	POWER PIN BLOCK
18	214	TWECO #4
	214-6-116	MILLER® 1/16
	214-6-332	MILLER® 3/32
	214-2	LINCOLN®
	214-4	L-TEC - MT SERIES®
	214-12	TWECO® #5
	214-13	PANASONIC®

ITEM	PART #	DESCRIPTION
19		CONDUIT LINERS
	415-23-15	FOR .023" (0.6 mm) WIRE - 15' (5 m)
	415-30-15	FOR .030" (0.8 mm) WIRE - 15' (5 m)
	415-35-10	FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE - 10' (3 m)
	415-35-15	FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE - 15' (5 m)
	415-35-25	FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE - 25' (8 m)
	415-35-2	FOR .035" (0.9 mm) ALUMINUM WIRE - 15' (5 m)
	415-116-10	FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE - 10' (3 m)
	415-116-15	FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE - 15' (5 m)
	415-116-25	FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE - 25' (8 m)
	415-116-2	FOR 3/64" - 1/16" (1.2 mm - 1.6 mm) ALUM. WIRE - 15' (5 m)
	415-332-15	FOR 5/64" - 3/32" (2 mm - 2.4 mm) WIRE - 15' (5 m) flat wound
	415-332-153	FOR 5/64" - 3/32" (2 mm - 2.4 mm) WIRE-15' (5 m) round wound
	415-332-251	FOR 5/64" - 3/32" (2 mm - 2.4 mm) WIRE-15' (5 m) round wound
	415-332-25	FOR 5/64" - 3/32" (2 mm - 2.4 mm) WIRE - 25' (8 m) flat wound
415-564-15	FOR all 5/64" (2 mm) WIRE & 1/16" (1.6 mm) FLUX CORE WIRE	
415-1	LINER O-RING (not shown)	
20	416-5X	CONTROL HOUSING WITH SCREWS
21		FEEDER ADAPTOR REQUIREMENTS (sold separately)
	417	QUICK CONNECT BLOCK ASSEMBLY (Tweco #4)
	417-60	QUICK CONNECT BLOCK ASSEMBLY (Tweco #5)
22	418	FEEDER ADAPTOR
23	419	CONTROL PLUG

9.0 – ORDERING INFORMATION

9.1 TGX RETAIL PACKAGING

TGX XL SERIES

MODEL NO.	AMP RATING	LENGTH
300 AMP		
XL3010	300	10'
XL3012	300	12'
XL3015	300	15'
400 AMP		
XL4010	400	10'
XL4012	400	12'
XL4015	400	15'

TGX LINER/TIP KITS

PART NO.	WIRE SIZE	KIT CONTENTS
XS23	.023"	415-23-15 Liner / 403-14-23 Tip, Liner Gauge
XS30	.030"	415-30-15 Liner / 403-14-30 Tip, Liner Gauge
XS35	.035"	415-35-15 Liner / 403-14-35 Tip, Liner Gauge
XS45	.045"	415-35-15 Liner / 403-14-45 Tip, Liner Gauge
XL35	.035"	415-35-15 Liner / 403-20-35 Tip, Liner Gauge
XL45	.045"	415-35-15 Liner / 403-20-45 Tip, Liner Gauge
XL52	.052"	415-116-15 Liner / 403-20-52 Tip, Liner Gauge
XL16	1/16"	415-116-15 Liner / 403-20-116 Tip, Liner Gauge
XL116	1/16"	415-564-15 Liner / 403-20-116 Tip, Liner Gauge

TGX RETAINING HEADS

PART NO.	RETAINING HEAD – 2 PER PACK
X154-14-2	RETAINING HEAD – 180 AMP ONLY Standard Duty TOUGH LOCK (same as X154-14)
X404-14-2	RETAINING HEAD – Standard Duty TOUGH LOCK (same as X404-14)
X404-20-2	RETAINING HEAD – Heavy Duty TOUGH LOCK (same as X404-20)

TGX POWER PINS

PART NO.	FEEDER TYPE
X214 (Tweco #4 Style)	HOBART: Beta-Mig (New Style); Beta-Mig 250 and 251; Dual Feeder; Digital 2000; Dual Digital; Porta Feed 17; Ultra Feed 1000, 2000, 2400; Handler; Oscawa; Hefty CV/CC; Handler 135 and 175. LINCOLN: Wirematic 250, 255; SP-86; SP-100; SP100T; SP-130; SP-130T; SP-170; SP-250; Idealarc SP-255; Mig Pak 10; Mig Pak 55; Weld Pak 100, Power Mig 300.
X214-1	HOBART: Beta-Mig 261 (Part #903533); Olympic 22-P, Olympic VS, IronMan 210. MILLER (XS Guns): Cricket; Intellimatic; Sidekick; D-51A; Millermatic 130, 150, 200, 250; MM-35 (new); New Automatic 1; Portomig; S32P, S-42GL, S-52A, S-54A; Swing Arc-Dualswing; Arc-Single; S-32S, 52D; 54D, 52E, 54E; Shop Master 300; 22 Series; All 60 Series; Millermatic 130XP; Challenger 172, 185, Vintage, 250X.
X214-2	LINCOLN: LN4, LN7, LN8, LN9, LN22, LN25, Suitcase, SP-150, SP-200, LN742, NA5R
X214-4	ESAB: Feeders with "MT" style Quick Connect Block HOBART: Handler 120 and 150; Beta-Mig 170; Porta-wire CC/CV 2200 Feeder, 2210 Feeder
X214-5	CENTURY: Powcon Power Drive #1
X214-6	MILLER (XL Guns): Cricket, Intellimatic, Sidekick, D-51A, Millermatic 130, 150, 200, 250, MM-35 (New); New Automatic 1; Portomig; S32P; S-42GL; S-52A; S-54A; Swing Arc-Dualswing; Arc-Single, S-32S; 52D; 54D; 52E, 54E; Shop Master 300; 22 Series; All 60 Series; Millermatic 130 XP; Challenger 172, 185, Vintage 250X.
X214-12 (Tweco #5 Style)	HOBART: 2000, 2400
X214-13	PANASONIC: Gun Slinger 260
X214-29	HOBART: Handler 120, BetaMig 135

TGX CONTACT TIPS

PART NO.	STANDARD DUTY TOUGH LOCK – 5 / PACK
X403-14-23-5	FOR .023" OR .6 mm WIRE (same as X14-23)
X403-14-30-5	FOR .030" OR .8 mm WIRE (same as X14-30)
X403-14-35-5	FOR .035" OR .9 mm WIRE (same as X14-35)
X403-14-45-5	FOR .045" OR 1.2 mm WIRE (same as X14-45)
HEAVY DUTY TOUGH LOCK – 5 PER PACK	
X403-20-35-5	FOR .035" OR .9 mm WIRE (same as X20-35)
X403-20-45-5	FOR .045" OR 1.2 mm WIRE (same as X20-45)
X403-20-52-5	FOR .052" OR 1.3 mm WIRE (same as X20-52)
X403-20-116-5	FOR 1/16" OR 1.6 mm WIRE (same as X20-116)

TGX NOZZLES

PART NO.	NOZZLE – 1 / PACK
X151-1-38	3/8" BORE – 1/8" TIP RECESS FOR 180 AMP (same as X38)
X151-1-50	1/2" BORE – 1/8" TIP RECESS FOR 180 AMP (same as X1-50)
X151-50	1/2" BORE FLUSH TIP FOR 180 AMP (same as X50)
X401-4-38	3/8" BORE FLUSH TIP (same as X4-38)
X401-4-50	1/2" BORE 1/8" TIP RECESS (same as X4-50)
X401-4-62	5/8" BORE – 1/8" TIP RECESS (same as X4-62)
X401-5-62	5/8" BORE – 1/4" TIP RECESS (same as X5-62)
X401-6-62	5/8" BORE – 1/8" TIP RECESS (same as X6-62)

TGX GOOSENECK INSULATORS

PART NO.	GOOSENECK INSULATORS – 2 PER PACK
X152-2	GOOSENECK INSULATOR - FOR 180 AMP ONLY (same as X152)
X402-7-2	GOOSENECK INSULATOR (same as X402-7)

TGX CONTROL PLUGS (1 PER PACK)

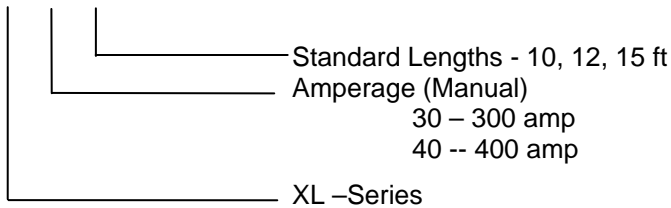
PART NO.	CONTROL PLUG – 1 PER PACK
X419-2	HOBART: Beta Mig (old style)
X419-4	MILLER: Cricket, Intellimatic, Sidekick, D-51A, Millermatic 130, 150, 200, 250 and 300, MM-35 (New), New Automatic 1, Portomig, S32P, S-42GL, S-52A, S-54A, Swing Arc Dualswing, Swing Arc-Single, S-32S, 52D, 54D, 52E, 54E, Shop Master 300, All 22 and 60 Series, Millermatic 130 XP, Challenger 172, 185, Vintage and 250X HOBART: Beta-Mig 261 (Part # 903533), Olympic 22-P, Olympic VS LINCOLN: Wirematic 250, 255, SO-86, SP-100, SP-100T, SP-130, SP-130T, SP-170, SP-250, Idalarc SP-255, Mig Pak 10, Mig Pak 55, Weld Pak 100, Lincoln 255 PANASONIC: Gunslinger 260
X419-6	LINCOLN: Power Feed 10, Powermig 255, DH-10, LN-10 (new style), STT 10, LN7, LN8, LN9, LN22, LN25, SUITCASE, SP-150, SP-200, LN742
X419-7	MILLER: 10A, 10E, 30A, 30B, 30E, 70A, 80A, Spoolmatic 150, Millermatic 35 (old style)
X419-8	HOBART: Beta-Mig (new style), Beta-Mig 250 and 251, Dual Feeder, Digital 2000, Dual Digital, Porta Feed 17, Ultra Feed 1000, 2000, 2400, Handler, Oscawa, Hefty CV/CC, Handler 135 and 175, 2000, 2400 (large pin) POWCON: PD1, PD2
X419-17	CENTURY

TGX MERCHANDISING AIDS

PART NO.	DESCRIPTION
XZ103	PEG HOOKS (60 PACK)
XZ105	BROCHURE HOLDER
XZ107	EASY AS 1-2-3 FLIP CHART
XZ107FR	FRENCH EASY AS 1-2-3 FLIP CHART
XZ108	HEADER CARD – 36"
XZ112	RE-ORDER TAGS
XZ115	EASY AS 1-2-3 REFERENCE BROCHURE
XZ115FR	FRENCH EASY AS 1-2-3 REFERENCE BROCHURE

9.2 EXAMPLE OF STANDARD MODEL NO.

XL4010



9.3 GUN STANDARDS CHART

CHASSIS MODEL	NOZZLE	RETAINING HEAD	GOOSENECK INSULATOR	GOOSE NECK	SWITCH	SWITCH HOUSING	HANDLE	TERMINAL HOUSING
300 amp (XL)	X401-4-50	X404-20-2	X402-7-2	305-60	411-1	411-2X	410X	416-5X
400 amp (XL)	X401-6-62	X404-20-2	X402-7-2	405-60	411-1	411-2X	410X	416-5X



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