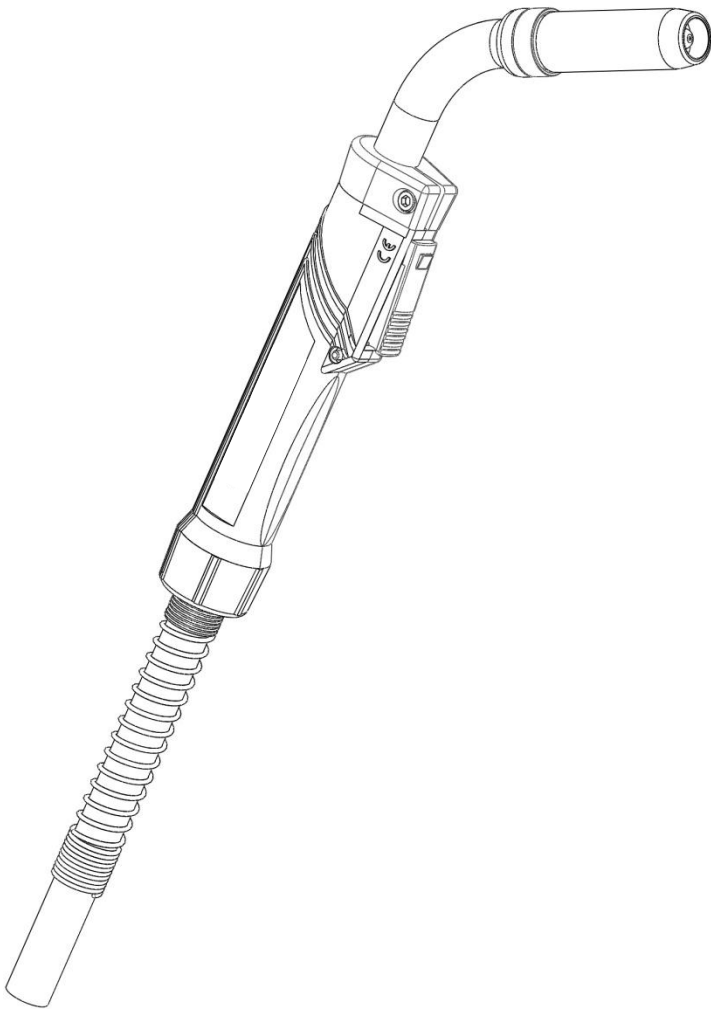




## **TECHNICAL GUIDE**

### **For T-Gun™ Semi-Automatic Air-Cooled MIG Guns 350 amp Compact Series**



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

*Please read instructions prior to use.  
Save this manual for future reference.*

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## WARRANTY

Product is warranted to be free from defects in material and workmanship for the period specified below after the sale by an authorized Buyer. Should there be a defect please refer to our Return Merchandise Policy.

<b>PRODUCT</b>	<b>WARRANTY PERIOD</b>
T-GUN™ MIG Guns and Components	180 days
TGX™ Chassis and TGX Ready To Weld MIG Guns	90 days

Bernard reserves the right to repair, replace or refund the purchase price of non-conforming product. Product found not defective will be returned to the Buyer after notification by Customer Service.

Bernard makes no other warranty of any kind, expressed or implied, including, but not limited to the warranties of merchantability or fitness for any purpose. Bernard shall not be liable under any circumstances to Buyer, or to any person who shall purchase from Buyer, for damages of any kind, including, but not limited to any, direct, indirect incidental or consequential damages or loss of production or loss of profits resulting from any cause whatsoever, including, but not limited to, any delay, act, error or omission of Bernard.

Genuine Bernard™ and Tregaskiss™ parts must be used for safety and performance reasons or the warranty becomes invalid. Warranty shall not apply if accident, abuse, or misuse damages a product, or if a product is modified in any way except by authorized Bernard personnel.

## GENERAL SAFETY

Before installation or operation of T-Gun 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.
  - Operator and his 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.

### **CALIFORNIA PROPOSITION 65 WARNING**

This product, when used for welding or cutting, produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer.

This product contains chemicals, including lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. *Wash hands after use.*

(California Health & Safety Code Section 25249.5 at seq.)



## THANK YOU...

...for selecting a Bernard T-Gun™ Water-Cooled Robotic MIG Gun. Manufacturing operations demand extremely dependable robotic equipment. With this in mind, the T-Gun was designed and engineered to be a reliable tool to support high production within a robotic cell. The T-Gun MIG Gun is made from durable materials and components engineered to perform in a rugged, welding environment.

The instructions and illustrations in this technical guide make it easy for you to maintain your T-Gun 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 customer support and special applications, please call the Bernard Customer Service Department at 1-800-946-2281 (USA and Canada) or +1-708-946-2281 (International).** Our trained Customer Service Team is available between 8:00 a.m. and 4:30 p.m. CST, and will answer your product application or repair questions.

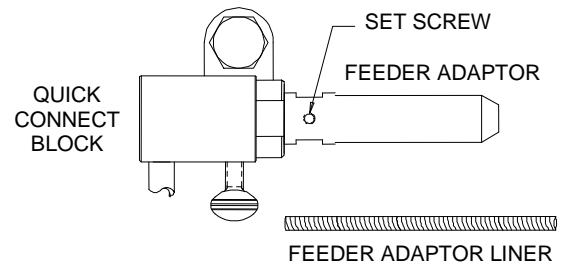
Bernard employees are always striving to improve our products and services, and would appreciate receiving your suggestions or comments. Please contact us immediately if you experience any safety or operating problems.

# 1.0 – INSTALLATION

## 1.1 INSTALLING QUICK CONNECT BLOCK TO FEEDER

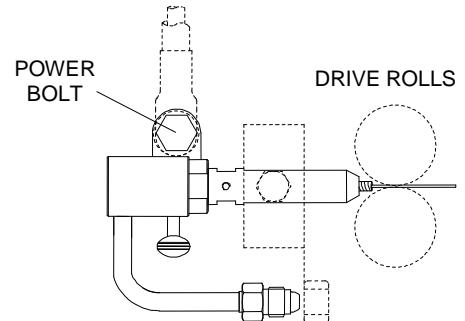
### STEP #1

- Insert the correct feeder adaptor liner for desired wire diameter (2 provided) flush with the thread end of the feeder adaptor.
- Tighten set screw (20 in.-lbs.).
- 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 (15 ft.-lb.).
- **Tighten all connections.**
- Feed welding wire through assembly by hand and tighten drive rolls.

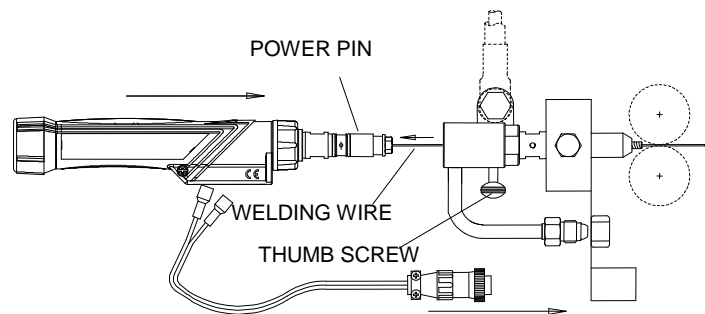


## 1.2 INSTALLING GUN TO QUICK CONNECT BLOCK

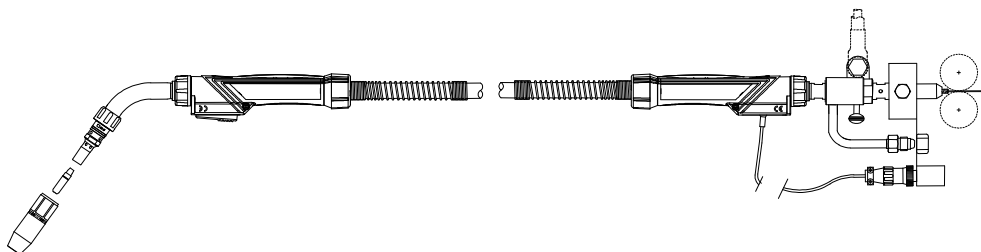
Ensure correct liner and contact tip are utilized. Examine and replace power pin o-rings if necessary.

### STEP #1

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

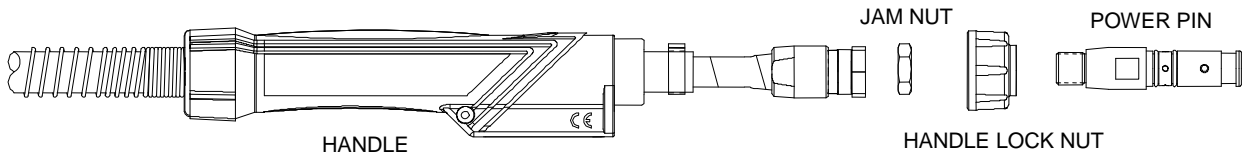


### STEP #2



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

### 1.3 INSTALLING POWER PIN TO GUN



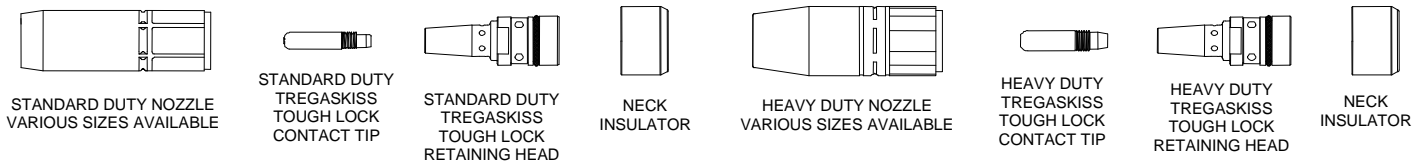
- Remove handle screw, front / rear handle lock nuts and separate handle halves.
- Thread jam nut onto power pin.
- Thread power pin into the rear connector cone.
- Tighten the power pin into the rear connector cone using a 3/4" (19 mm) wrench on the rear connector cone.
- Tighten jam nut.
- Power Pin Insulator.
- Install liner (See **Section 2.2 Liner Replacement**).
- Install gun to feeder (See below):

#### Most Pins (Note that Bernard, Euro and OXO™ are not direct connect 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.

## 2.0 – MAINTENANCE

### 2.1 TREGASKISS™ NOZZLE AND TOUGH LOCK™ CONSUMABLES



#### **IMPORTANT:**

- Neck insulator **MUST** be in place before welding to properly insulate neck armor.
- Check all parts to ensure that connections are tight before welding.
- The retaining head **MUST** be tightened with a 5/8" (16 mm) wrench to prevent the contact tip from overheating.
- **DO NOT** use pliers to remove or tighten the retaining head or scoring may result.

#### Removal and Replacement

##### Nozzle

- Pull slip-on nozzles off with a twisting motion.
- When installing the nozzle, ensure that it is fully seated.

##### Contact Tip

- Thread the contact tip into the retaining head.
- Torque to 30 in.-lbs. (3.5 Nm).
- The Tregaskiss Tip Tool for heavy-duty tips (Part #450-18) or a pair of weld pliers are the optimal tools for contact tip installation.

## Retaining Head

- Thread retaining head onto neck with a 5/8" (16 mm) wrench.
- Torque to 80 in.-lbs. (9 Nm).
- DO NOT use pliers to remove or tighten the heavy-duty retaining head or scoring may result.

## Neck Insulator

- The neck insulator is pressed onto the neck by hand.

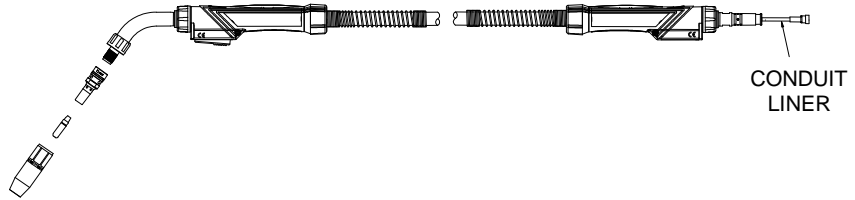
## 2.2 LINER REPLACEMENT

**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 guide cap, which must be removed and replaced when changing liner.

### STEP #1

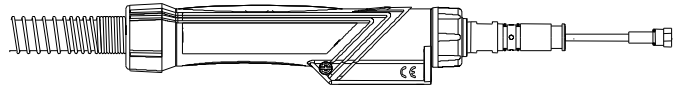
**WARNING:** Ensure power supply is off and gun is removed from feeder before proceeding.

- Remove nozzle, tip and gas diffuser/retaining head.
- With gun straightened, unscrew conduit liner with 10 mm wrench and remove.



### STEP #2

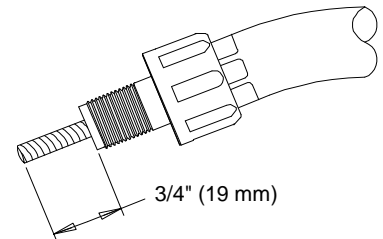
- Feed replacement liner through gun using short strokes to avoid kinking.
- Twist liner clockwise if necessary and with a 10 mm wrench, tighten liner (30 in.-lbs.).



### STEP #3

**NOTE:** Compress liner back into torch before cutting.

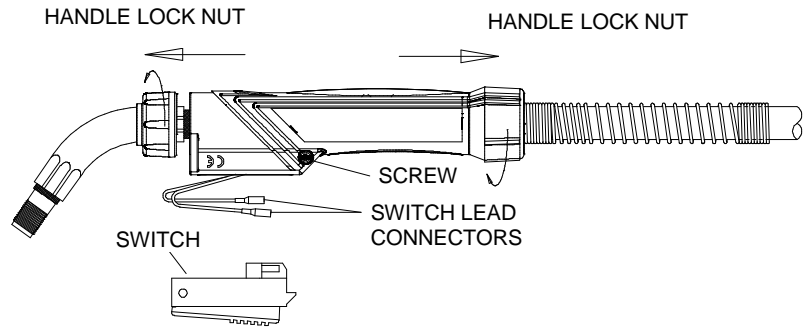
- Trim conduit liner with 3/4" (20 mm) stick out.
- Remove any burr that may obstruct wire feed, especially on flat wire type conduit liner.
- Replace nozzle, tip and gas diffuser/retaining head onto gooseneck.



## 2.3 SWITCH REPLACEMENT

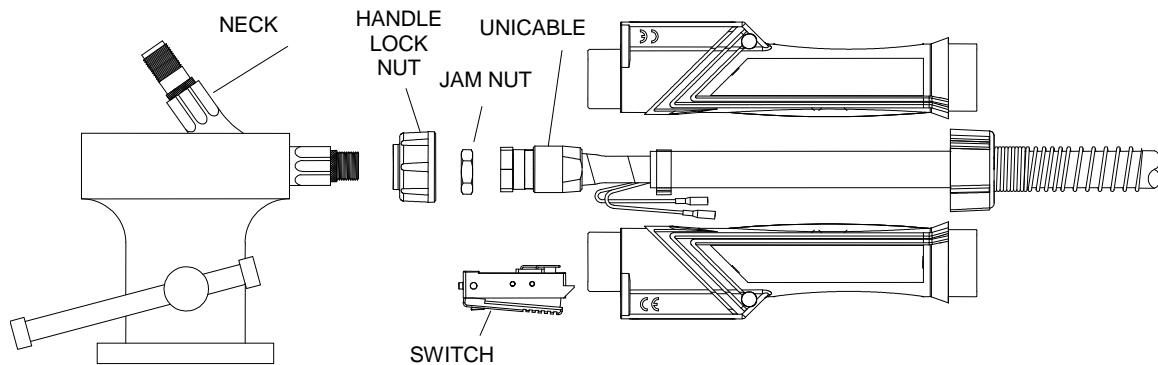
### STEP #1

- Twist front and rear handle lock nut in direction of arrows.
- Pull handle locks away from handle.
- Remove handle screw from handle and separate handle halves.
- Remove switch from nest in handle.
- Remove switch from switch lead connectors with needle nose pliers.
- Push switch lead connectors firmly onto new switch terminals with needle nose pliers.
- Fit switch into nest of handle; switch leads must lie parallel.
- Reinstall handle making sure that handle is positioned correctly. Jam nut and cone should sit in handle grooves. Neck will spin freely if handle is not positioned correctly.
- Install handle screw and tighten handle lock nuts.



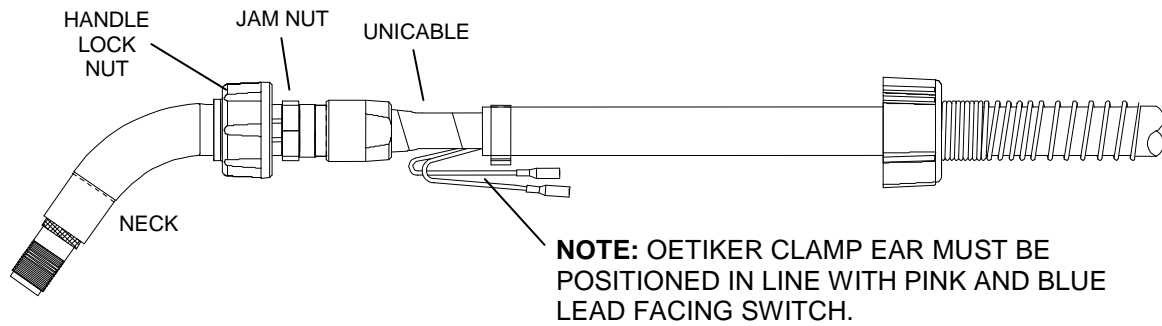
## 2.4 NECK REPLACEMENT

### STEP #1



- Place neck in vise.
- Twist front handle lock nut counterclockwise and pull away from handle.
- Twist rear handle lock nut counterclockwise and pull away from handle.
- Remove handle screw and separate halves.
- To remove switch, see **Section 2.3 SWITCH REPLACEMENT**.
- Loosen jam nut using two 3/4" wrenches and unthread neck.
- Remove from vise and unthread neck by hand.

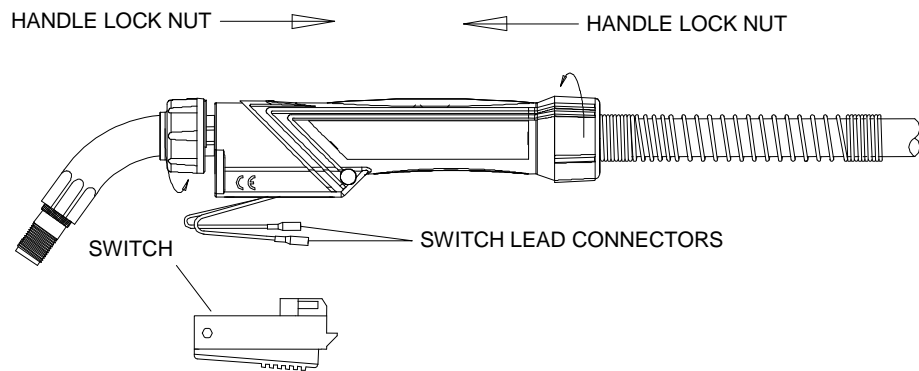
## STEP #2



- Install handle lock nut on new neck.
- Thread jam nut onto new neck.
- Thread neck into uncable (hand tighten) to desired orientation. Align flats on connector cone 90° to gooseneck.
- Place neck in vise and tighten uncable and jam nut (14 in.-lbs.).

## STEP #3

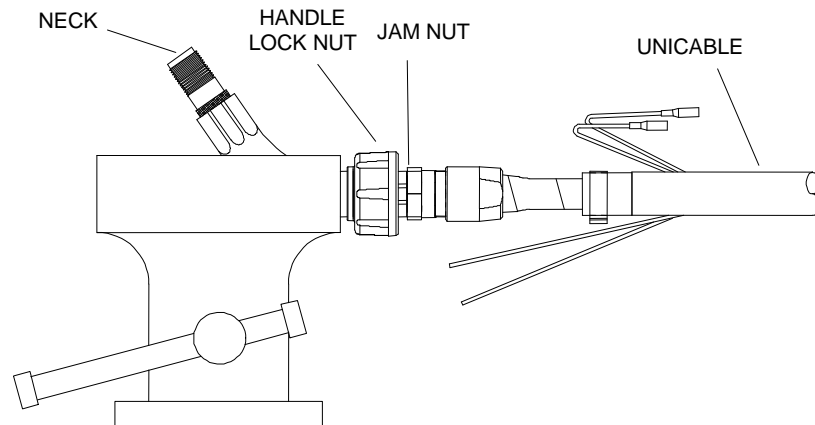
- Reposition handle and switch.
- Tighten handle screw.
- Reinstall handle lock nuts.



## 2.5 UNICABLE REPLACEMENT

### STEP #1

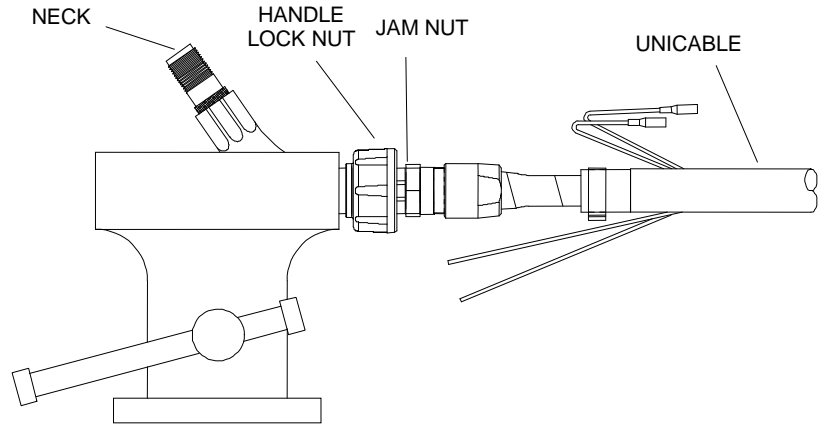
- Remove liner from gun (See **Section 2.2 LINER REPLACEMENT**)
- Mount neck in vise.
- Remove switch from leads and remove handle (See **Section 2.3 SWITCH REPLACEMENT**).
- Hold jam nut in place with a 3/4" wrench and loosen uncable with a 3/4" wrench until threads are disengaged.





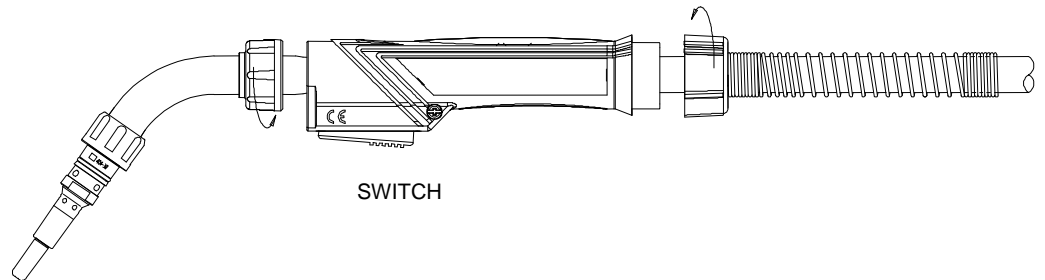
## STEP #2

- Hold jam nut in place with a 3/4" wrench and tighten replacement cable with a 3/4" wrench (14 ft.-lbs.).



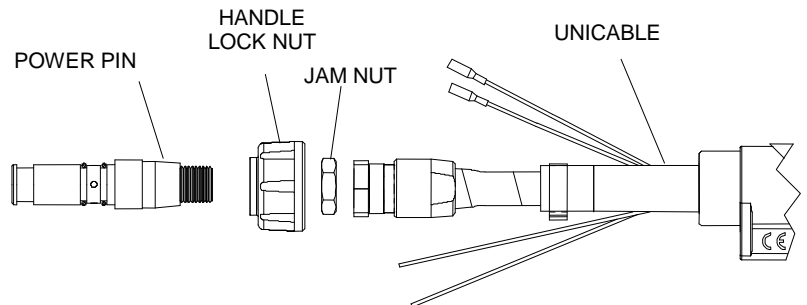
## STEP #3

- Reinstall switch (See **Section 2.3 SWITCH REPLACEMENT**).



## STEP #4

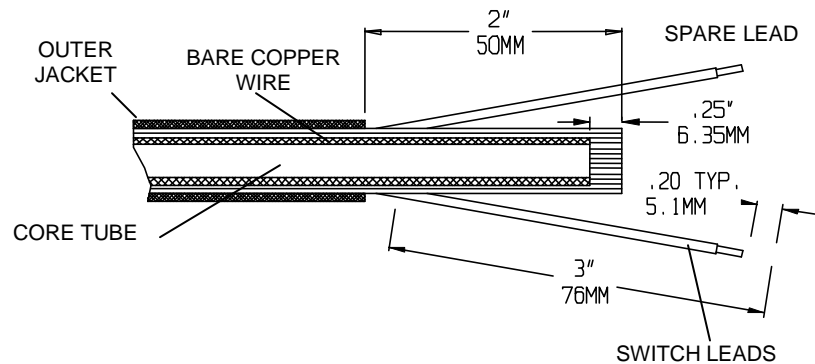
- Follow identical procedure on rear of gun.
- Wrench for power pin may be 3/4" or 5/8".



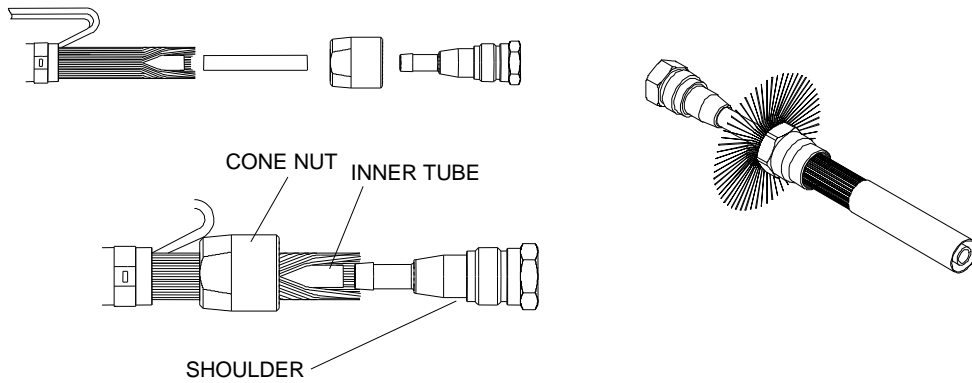
## 2.6 UNICABLE REPAIR

### STEP #1

- Cut cable to length.
- Cut outer casing 2.0" (50 mm) from end.



## STEP #2

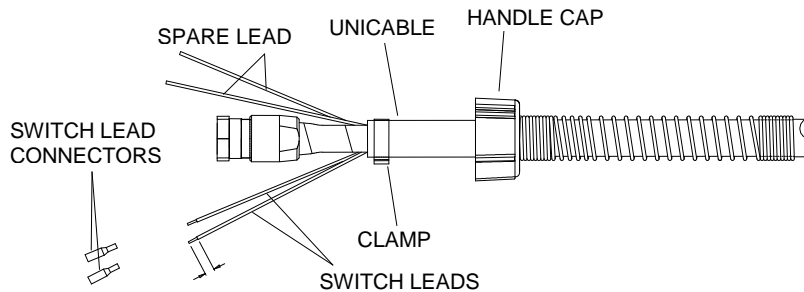


Position the inner tube clamp on inner tube. Do not crimp yet. Slide outer jacket clamps into their proper positions. Do not crimp yet.

- Insert support tube into inner tube (lube if necessary) and push with connector cone until core tube shoulders on connector cone (inner tube may shift – reposition if necessary). Double check that all components are in correct positions and crimp both clamps with Oetiker pincers. Remove connector cone from end of Unicable.
- Strip off 3/16" (5 mm) of insulation from switch leads and crimp on switch lead connectors (Part #412-1) and tug to ensure good connection. **As there are two spare switch leads, be sure to use the same 2 wires throughout, note color-coding.**

**NOTE:** Spray the copper out in an even and consistent pattern as shown. Then move the cone nut up onto the cone capturing the copper. Screw the cone nut into the cone.

## STEP #3



- Trim and strip control leads.
- Assemble control lead connectors.
- Position and clamp outer hose clamp.

### **IMPORTANT:**

**Place the ear of the clamp near switch leads (pink & blue). Pinch the outer jacket ear.**

### UNICABLE CLAMP KIT

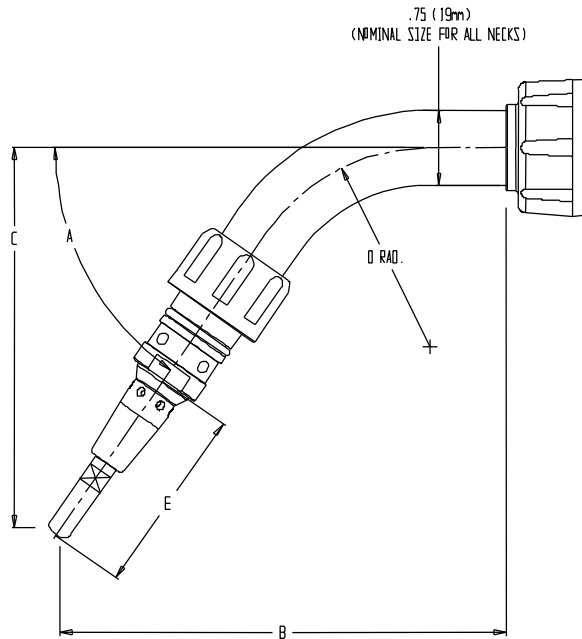
PART #	DESCRIPTION
313-9	UNICABLE CLAMP KIT (COMPLETE)
<b>INDIVIDUAL PARTS</b>	
313-3	OUTER JACKET CLAMPS (1 REQUIRED)
318	CONNECTOR CONE
319	CONE NUT
412-1	SWITCH LEAD CONNECTORS (2)
413-3	INNER SUPPORT TUBE CLAMP

### REPAIR TOOL KIT

PART #	DESCRIPTION
450	REPAIR TOOL KIT (COMPLETE)
<b>INDIVIDUAL TOOLS</b>	
450-1	CABLE CUTTER
450-2	CLAMP PLIERS - FOR CRIMPING OUTER JACKET AND INNER TUBE CLAMP
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

## 3.0 – TECHNICAL DATA

### 3.1 NECK DIMENSIONS



NECK	ANGLE	B		C		D		E	
		INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm
205-60	60°	4.5	114	3.8	96.5	2.0	51	1.9	48

### 3.2 GUN AMPERAGE RATINGS

MODEL	100% DUTY CYCLE		60% DUTY CYCLE	
	CO <sub>2</sub>	MIXED	CO <sub>2</sub>	MIXED
350 amp	350	250	450	350

**NOTE:** Ratings are based on tests that comply with IEC 60974-7 standards.

## 4.0 – OPTIONS

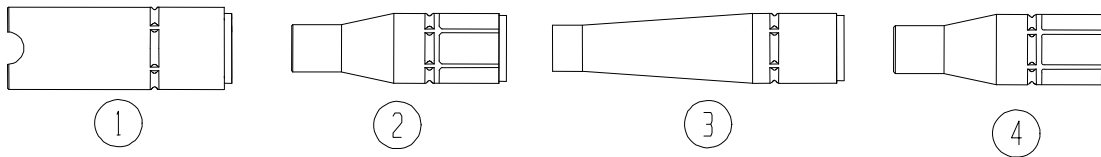
### 4.1 DIRECT PLUG-INS

For a complete listing of all direct plug-ins, please call Customer Service at 1-708-946-2281.

PART #	DESCRIPTION	USE ON FEEDERS
214	TREGASKISS™ POWER PIN	TREGASKISS QUICK CONNECT BLOCK HOBART 2000 SERIES FEEDERS, TWECO® #4 RECEPTACLE BODY PART #TAK-1
214-1	MILLER® POWER PIN - FOR .035" - 1/16" WIRE	MILLERMATIC 200 & 250, S22 SERIES, HOBART IRONMAN 210
214-2	LINCOLN® POWER PIN	LINCOLN LN7, 8, 90 LN 25, NA2, A-10
214-12	TWECO® #5 STYLE & MILLER® POWER PINS	TWECO #5 QUICK CONENCT BLOCK & HOBART FEEDERS
414-11-2	O-RING FOR MILLER POWER PINS	
414-12-2	O-RING FOR TWECO #5 STYLE AND MILLER® POWER PINS	RECEPTACLE BODY PART #6TAK-1
214-116	GUIDE CAP ONLY FOR 414-11-116 (NEW STYLE)	
414-116	GUIDE CAP ONLY FOR 414-11-116 (OLD STYLE)	

## 4.2 SPECIALTY AND OPTIONAL ITEMS

For a complete listing of all specialty and optional items, please call Customer Service at 1-708-946-2281.



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	401-42-50	HIGH ACCESS NOZZLE (BOTTLENECK)

## 4.3 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), HOBART BETA MIG
418-4	HOBART® 27
418-5	LINCOLN LN4, LN5, LINDE SWM-31, 3A, 32A
418-6	LINCOLN LN7, 8, 9, LN25 SUITCASE, LN22
418-7	LINDE® SWM-23
418-8	LINDE 35SWM-23
418-9	MILLER 10A, 30A (MILLERMATIC 35S FEEDER)
418-10	MILLER 52E, 54E, S21, S22 SERIES, MILLERMATIC 200, 250, 60 SERIES
418-14	OTC®
418-21	GILLILAND®
418-26	LINCOLN NA2
418-27	PANASONIC®
418-28	TWECO® #4
418-29	TWECO #5
418-35	KOBELCO®

## 4.4 CONTROL PLUGS

Complete with plug lead and female connectors.

PART #	DESCRIPTION
419-1	AIRCO
419-2	HOBART
419-3	LINDE (SEM-14, 25)
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

For a complete listing of all control plugs, please call Customer Service at 1-708-946-2281

## 5.0 – TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE
POOR WIRE FEED	<ul style="list-style-type: none"> <li>• CONDUIT LINER CLOGGED OR KINKED</li> <li>• INCORRECT LINER SIZE OR CONTACT TIP</li> <li>• LINER CUT TOO SHORT AND NOT SEATING PROPERLY IN GAS DIFFUSER</li> <li>• DRIVE ROLLS TOO TIGHT RESULTING IN SCORING OR WELDING WIRE</li> <li>• WELDING WIRE DIRTY, RUSTY, OR TOO MUCH CAST</li> </ul>
SHORT TIP LIFE	<ul style="list-style-type: none"> <li>• DRIVE ROLLS TOO TIGHT, RESULTING IN SCORING OF WELDING WIRE</li> <li>• WELDING WIRE DIRTY, RUSTY, OR TOO MUCH CAST</li> <li>• UNCOATED WIRE BEING USED, INCREASING USAGE</li> <li>• WRONG WIRE SIZE</li> <li>• GUN BEING RUN BEYOND ITS AMPERAGE RANGE</li> <li>• TIPS LOOSE / RETAINING HEAD LOOSE</li> </ul>
GUN OVERHEATING	<ul style="list-style-type: none"> <li>• LOOSE RETAINING SCREW ON QUICK CONNECT BLOCK</li> <li>• INSUFFICIENT GAUGE POWER CABLE AND / OR GROUND CABLE</li> <li>• LOOSE CONNECTOR CONES AND / OR CONE NUTS</li> <li>• GUN BEING RUN BEYOND ITS AMPERAGE</li> <li>• ELECTRICAL MALFUNCTION IN POWER SOURCE</li> <li>• TIPS LOOSE / RETAINING HEAD LOOSE</li> </ul>
SWITCH MALFUNCTIONING	<ul style="list-style-type: none"> <li>• BAD CONNECTION OF LEADS TO SWITCH TERMINALS</li> <li>• SPATTER BUILT UP BETWEEN LEVER AND SWITCH HOUSING</li> <li>• CONTACTS DIRTY IN SWITCH</li> <li>• BROKEN OR WORN SWITCH LEAD</li> </ul>
WELD POROSITY	<ul style="list-style-type: none"> <li>• SPATTER BUILT UP IN NOZZLE BLOCKING GAS</li> <li>• LEAKS IN GAS HOSE OR IMPROPER CONNECTION</li> <li>• O-RINGS ON POWER PIN ARE CUT OR DAMAGED</li> <li>• INNER TUBE LOOSE FROM CONNECTOR CONE</li> <li>• POOR WIRE FEED (SEE ABOVE)</li> <li>• IMPROPER SHIELDING GAS OR WELDING WIRE</li> <li>• RUSTY OR POOR QUALITY WELDING WIRE</li> <li>• GAS FLOW IMPROPERLY SET</li> </ul>

## 6.0 – DAILY WELDING GUN INSPECTION

Performing the following checks on your T-Gun MIG Gun will help decrease weld problems, making your job easier and safer. It will also minimize downtime for maintenance and increase consumable life.

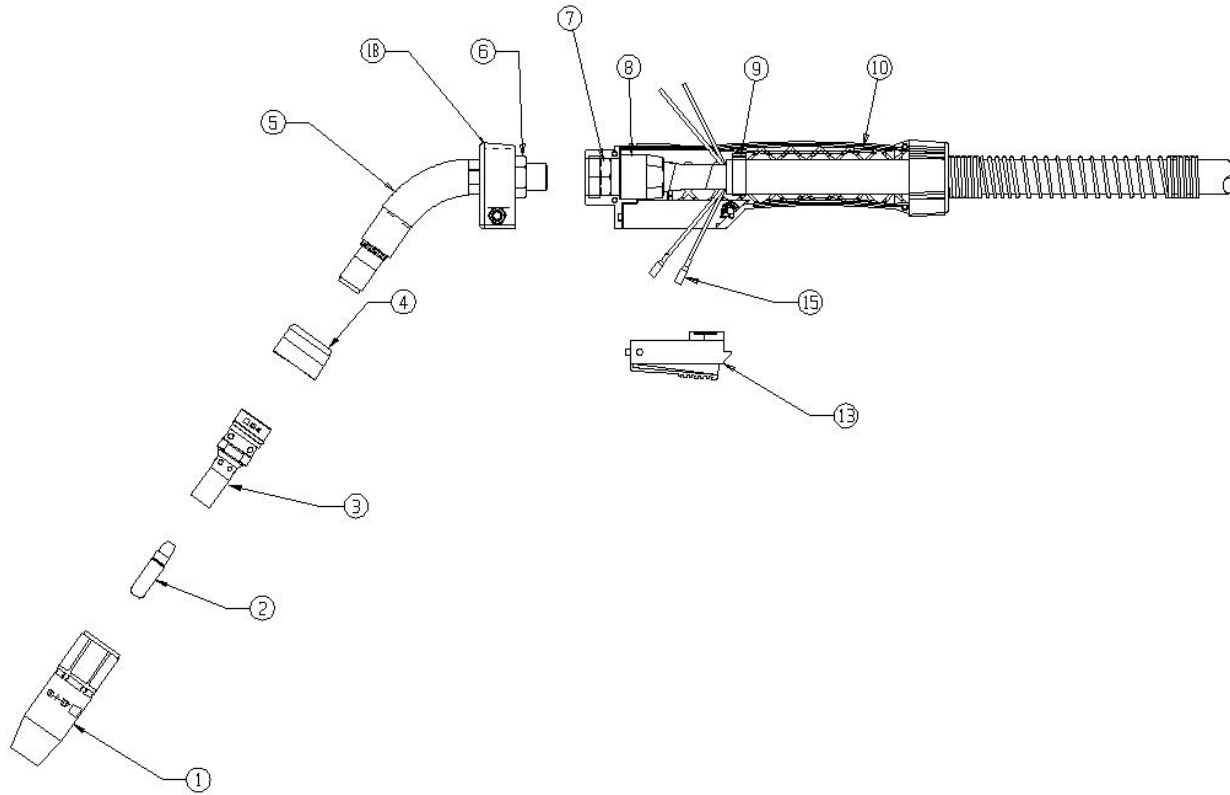
### BEGINNING OF SHIFT

- Inspect the Unicable for deep cuts or nicks. If bare copper is visible, repair with electrical tape or replace.
- Check the **Power Cable** from the power source to the wire feeder for loose connections. Tighten if necessary. A loose connection can cause poor electrical contact which will result in overheated cables can the loss of electrical output.
- Check for tight connection of welding gun to feeder adaptor. Tighten if necessary.
- Check for tight connection of welding feeder adaptor into wire feeder. Tighten if necessary.
- Inspect **Nozzle**. Clean weld spatter and inspect insulation in nozzle. If nozzle insulation is damaged, replace nozzle.
- Inspect **Neck Insulator** on neck. If damaged, replace.
- Tighten **Nozzle Retaining Head / Gas Diffuser** on neck.
- Check gas holes in gas diffuser and clean if necessary.
- Tighten **Contact Tip**.

### WHEN CLEANING NOZZLE

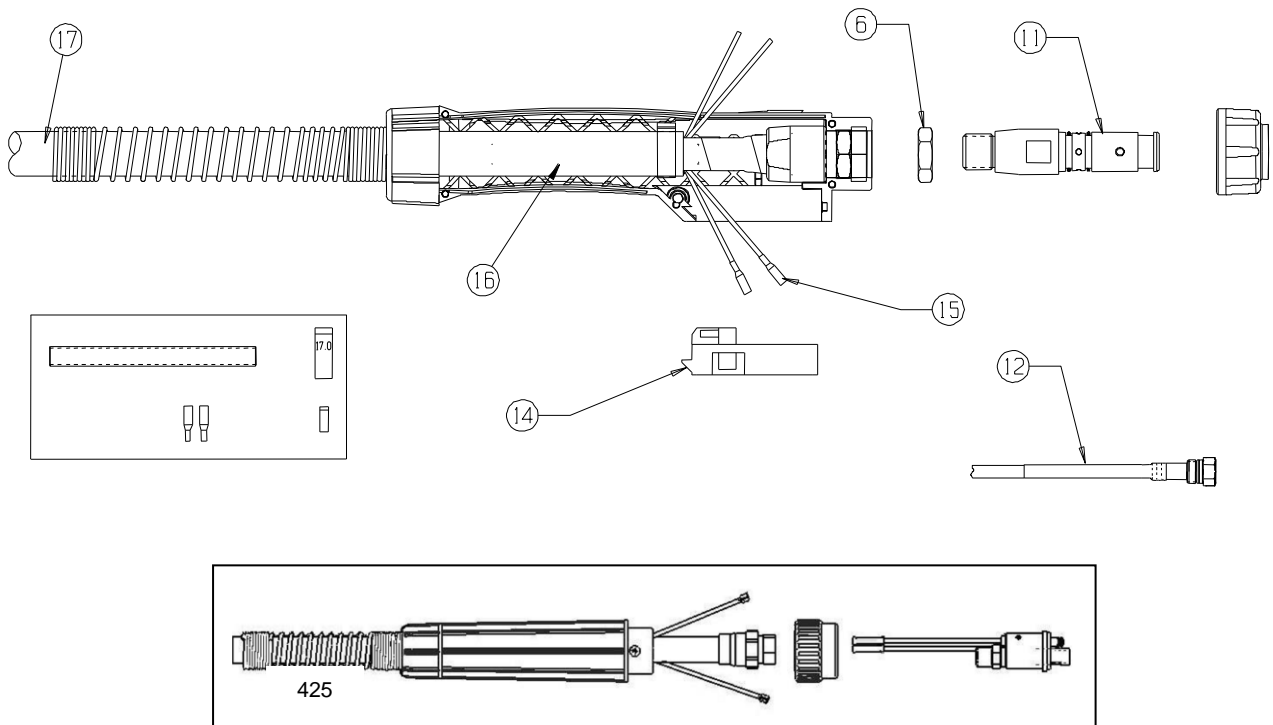
- Inspect insulation in nozzle. If damaged, replace.
- Inspect and clean gas holes in diffuser.
- Tighten nozzle retainer / gas diffuser to neck.
- Tighten contact tip.

## 7.0 – EXPLODED VIEW AND PARTS LIST



PART #	DESCRIPTION
<b>1</b>	<b>STANDARD NOZZLES</b>
401-4-38	3/8" (10 mm) BORE - FLUSH
401-4-50	1/2" (13 mm) BORE - 1/2" (3 mm) TIP RECESS
401-4-62	5/8" (16 mm) BORE - 1/8" (3 mm) TIP RECESS (STANDARD)
401-4-75	3/4" (19 mm) BORE - 1/8" (3 mm) TIP RECESS
	<b>HEAVY DUTY NOZZLES</b>
401-5-62	5/8" (16 mm) BORE - 1/4" TIP RECESS
401-5-75	3/4" (19 mm) BORE - 1/4" TIP RECESS
401-6-50	1/2" (13 mm) BORE - 1/8" TIP RECESS
401-6-62	5/8" (16 mm) BORE - 1/8" TIP RECESS
401-6-75	3/4" (19 mm) BORE - 1/8" TIP RECESS
<b>2</b>	<b>HEAVY DUTY TREGASKISS™ TOUGH LOCK CONTACT TIPS</b>
403-20-30	FOR .030" (0.8 mm) WIRE
403-20-35	FOR .035" (0.9 mm) WIRE
403-20-1.0	FOR 1.0 mm WIRE
403-20-45	FOR .045" (1.2 mm) WIRE
403-20-364	FOR 3/64" (1.2 mm) WIRE

PART #	DESCRIPTION
<b>3</b>	404-26 TREGASKISS™ TOUGH LOCK RETAINING HEAD
	454-1-2 RETAINING RING ONLY
<b>4</b>	402-11 NECK INSULATOR
<b>5</b>	205-60 STANDARD NECK - 60°
	205-45 OPTIONAL NECK - 45°
<b>6</b>	208-2 JAM NUT
<b>7</b>	CONNECTOR CONE (INC. IN 313-9 REPAIR KIT)
<b>8</b>	CONE NUT (INC. IN 313-9 REPAIR KIT)
<b>9</b>	OETIKER CLAMP - 17 mm (INC. IN 313-9 REPAIR KIT)
<b>10</b>	320 2-PIECE HANDLE (INC. CAPS AND SCREW)
	320 - 2 FRONT LOCKING CAP
	320 - 3 REAR LOCKING CAP
	310-1-6 (10) SCREW FOR 2-PIECE HANDLE (6-32 X 5/8" BLACK)



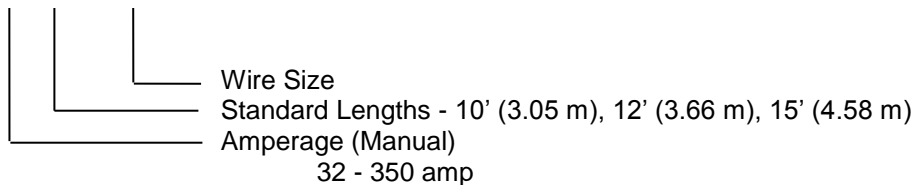
PART #	DESCRIPTION
<b>11</b>	<b>214</b> POWER PIN #4
	414-1 O-RING - TWECO
	414-2 LINER SET SCREW
	214-1 MILLER POWER PIN (ALL MODELS EXCEPT 10 & 30 FEEDERS)
	214-2 LINCOLN POWER PIN
	214-4 L-TEC
	214-13 PANASONIC
	214-12 #5 PANASONIC PIN *214-400 ADAPTOR NEEDED WITH THIS PIN
<b>12</b>	<b>TREGASKISS QUICK LOAD™ LINERS (LINER RETAINER NOT INCLUDED)</b>
	415-24 <b>TREGASKISS QUICK LOAD LINER RETAINER (3/32" ONLY)</b>
	415-26 <b>TREGASKISS QUICK LOAD LINER RETAINER</b>
	415-30-15Q FOR .030" (0.7 mm) WIRE, 15' (5 m)
	415-35-10Q FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE, 10' (3 m)
	415-35-15Q FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE, 15' (5 m)
	415-35-25Q FOR .035" - .045" (0.9 mm - 1.2 mm) WIRE, 25' (8 m)
	415-116-10Q FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE, 10' (3 m)
	415-116-15Q FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE, 15' (5 m)
	415-116-25Q FOR .045" - 1/16" (1.2 mm - 1.6 mm) WIRE, 25' (8 m)
	415-564-15Q FOR 1/16" - 5/64" (1.6 mm - 1.9 mm) WIRE, 15' (5 m)
	415-332-15Q FOR .078" - 3/32" (1.9 mm - 2.3 mm) WIRE, 15' (5 m)
	415-332-25Q FOR .078" - 3/32" (1.9 mm - 2.3 mm) WIRE, 25' (8 m)

PART #	DESCRIPTION
<b>13</b>	<b>211-5</b> SWITCH ASSEMBLY
	211-5-8 EXTENDED LEVER USED WITH 211-5 SWITCH
<b>14</b>	<b>216-1</b> CONTROL PLUG TERMINAL BLOCK
<b>15</b>	<b>SWITCH LEAD CONNECTOR (INC. IN 313-9 REPAIR KIT)</b>
<b>16</b>	<b>SUPPORT TUBE (INC. IN 313-9 REPAIR KIT)</b>
<b>17</b>	<b>UNICABLE ASSEMBLY</b>
	321-10 10' (3.1 m)
	321-12 12' (3.7 m)
	321-15 15' (4.6 m)
<b>18</b>	<b>320-6</b> LOCKING CAP
<b>NOT SHOWN</b>	<b>417</b> QUICK CONNECT BLOCK ASSEMBLY
<b>NOT SHOWN</b>	<b>FEEDER ADAPTORS (TO BE USED WITH 417 QUICK CONNECT BLOCK)</b>
	EURO-CONNECTOR OPTION
	313-9 UNICABLE REPAIR KIT

## 8.0 – ORDERING INFORMATION

### 8.1 EXAMPLE OF STANDARD MODEL NO.

#### 3215-45



#### M-3215-45-60-9-FL

Use these codes to order special gun features.

- B** - Bernard Style
- M** - Miller Power Pin
- LN** - Lincoln Power Pin
- TW** - Tweco #5 Power Pin
- E** - Euro
- PA** - Panasonic
- LT** - L-Tec

Option numbers should be added only if desired option is not included on standard gun model

**FL** - Flex Neck

**9** - Liner for Aluminum wire

**60** - Angle of neck 60°

Wire Size

### 8.2 GUN STANDARDS CHART

Standard models are shipped with the following components:

GUN MODEL	NECK	NOZZLE	RETAINING HEAD	NECK INSULATOR	CONTACT TIPS
350 amp	205-60	401-4-62	404-26	402-11	403-20-xx



For Customer Support:

U.S.A 800-946-2281  
International 708-946-2281  
BernardWelds.com

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