



OM-254 286C

2013-01

Processes



MIG (GMAW) Welding

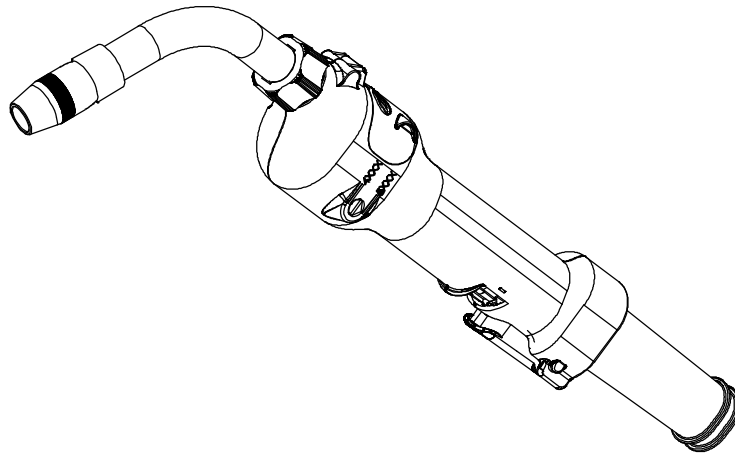
Description



Semi-Automatic, Air-Cooled,
MIG (GMAW) Welding Gun

XRTM Aluma-Pro Lite

(Air-Cooled Gun)



175 Ampere (Air) Push-Pull Welding Gun

OWNER'S MANUAL



Visit our website at
www.MillerWelds.com

File: MIG (GMAW)



From Miller to You

Thank you and congratulations on choosing Miller. Now you can get the job done and get it done right. We know you don't have time to do it any other way.

That's why when Niels Miller first started building arc welders in 1929, he made sure his products offered long-lasting value and superior quality. Like you, his customers couldn't afford anything less. Miller products had to be more than the best they could be. They had to be the best you could buy.

Today, the people that build and sell Miller products continue the tradition. They're just as committed to providing equipment and service that meets the high standards of quality and value established in 1929.

This Owner's Manual is designed to help you get the most out of your Miller products. Please take time to read the Safety precautions. They will help you protect yourself against potential hazards on the worksite.

We've made installation and operation quick and easy. With Miller you can count on years of reliable service with proper maintenance. And if for some reason the unit needs repair, there's a Troubleshooting section that will help you figure out what the problem is. The parts list will then help you to decide the exact part you may need to fix the problem. Warranty and service information for your particular model are also provided.



Miller is the first welding equipment manufacturer in the U.S.A. to be registered to the ISO 9001 Quality System Standard.



Miller Electric manufactures a full line of welders and welding related equipment. For information on other quality Miller products, contact your local Miller distributor to receive the latest full line catalog or individual specification sheets. **To locate your nearest distributor or service agency call 1-800-4-A-Miller, or visit us at www.MillerWelds.com on the web.**



Working as hard as you do – every power source from Miller is backed by the most hassle-free warranty in the business.



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

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 Protect yourself and others from injury — read, follow, and save these important safety precautions and operating instructions.

1-1. Symbol Usage




DANGER! – Indicates a hazardous situation which, if not avoided, will result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.

NOTICE – Indicates statements not related to personal injury.

 Indicates special instructions.



This group of symbols means Warning! Watch Out! ELECTRIC SHOCK, MOVING PARTS, and HOT PARTS hazards. Consult symbols and related instructions below for necessary actions to avoid the hazards.

1-2. Arc Welding Hazards



The symbols shown below are used throughout this manual to call attention to and identify possible hazards. When you see the symbol, watch out, and follow the related instructions to avoid the hazard. The safety information given below is only a summary of the more complete safety information found in the welding power source Owner's Manual. Read and follow all Safety Standards.



Only qualified persons should install, operate, maintain, and repair this unit.

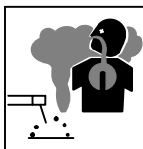


During operation, keep everybody, especially children, away.



ELECTRIC SHOCK can kill.

- Always wear dry insulating gloves.
- Insulate yourself from work and ground.
- Do not touch live electrode or electrical parts.
- Repair or replace worn, damaged, or cracked gun or cable insulation.
- Turn off welding power source before changing contact tip or gun parts.
- Keep all covers and handle securely in place.



FUMES AND GASES can be hazardous.

- Keep your head out of the fumes.
- Ventilate area, or use breathing device.
- Read Material Safety Data Sheets (MSDSs) and manufacturer's instructions for material used.



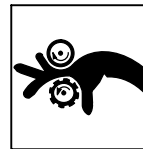
WELDING can cause fire or explosion.

- Do not weld near flammable material.
- Do not weld on containers that have held combustibles, or on closed containers such as tanks, drums, or pipes unless they are properly prepared according to AWS F4.1 and AWS A6.0 (see Safety Standards).
- Watch for fire; keep extinguisher nearby.



BUILDUP OF GAS can injure or kill.

- Shut off compressed gas supply when not in use.
- Always ventilate confined spaces or use approved air-supplied respirator.



MOVING PARTS can injure.

- Keep away from moving parts.
- Keep away from pinch points such as drive rolls.



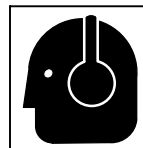
ARC RAYS can burn eyes and skin.

- Wear welding helmet with correct shade of filter.
- Wear correct eye and body protection.
- Cover exposed skin with spatter-resistant clothing.



HOT PARTS can burn.

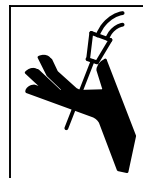
- Allow gun to cool before touching.
- Do not touch hot metal.
- Protect hot metal from contact by others.



NOISE can damage hearing.

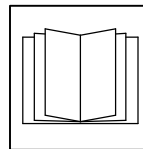
Noise from some processes or equipment can damage hearing.

- Check for noise level limits exceeding those specified by OSHA.
- Use approved ear plugs or ear muffs if noise level is high.
- Warn others nearby about noise hazard.



WELDING WIRE can injure.


- Keep hands and body away from gun tip when trigger is pressed.




READ INSTRUCTIONS.

- Read and follow all labels and the Owner's Manual carefully before installing, operating, or servicing unit. Read the safety information at the beginning of the manual and in each section.
- Use only genuine replacement parts from the manufacturer.
- Perform maintenance and service according to the Owner's Manuals, industry standards, and national, state, and local codes.

1-3. Proposition 65 Warnings

 **Welding or cutting equipment produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)**

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

1-4. Principal Safety Standards

Safety in Welding, Cutting, and Allied Processes, ANSI Standard Z49.1, is available as a free download from the American Welding Society at <http://www.aws.org> or purchased from Global Engineering Documents (phone: 1-877-413-5184, website: www.global.ihs.com).

Safe Practice For Occupational And Educational Eye And Face Protection, ANSI Standard Z87.1, from American National Standards Institute, 25 West 43rd Street, New York, NY 10036 (phone: 212-642-4900, website: www.ansi.org).

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National Electrical Code, NFPA Standard 70, from National Fire Protection Association, Quincy, MA 02269 (phone: 1-800-344-3555, website: www.nfpa.org and www.sparky.org).

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Standard for Fire Prevention During Welding, Cutting, and Other Hot Work, NFPA Standard 51B, from National Fire Protection Association, Quincy, MA 02269 (phone: 1-800-344-3555, website: www.nfpa.org).

OSHA, Occupational Safety and Health Standards for General Industry, Title 29, Code of Federal Regulations (CFR), Part 1910, Subpart Q, and Part 1926, Subpart J, from U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 (phone: 1-866-512-1800) (there are 10 OSHA Regional Offices—phone for Region 5, Chicago, is 312-353-2220, website: www.osha.gov).

1-5. EMF Information

Electric current flowing through any conductor causes localized electric and magnetic fields (EMF). Welding current creates an EMF field around the welding circuit and welding equipment. EMF fields may interfere with some medical implants, e.g. pacemakers. Protective measures for persons wearing medical implants have to be taken. For example, restrict access for passers-by or conduct individual risk assessment for welders. All welders should use the following procedures in order to minimize exposure to EMF fields from the welding circuit:

1. Keep cables close together by twisting or taping them, or using a cable cover.
2. Do not place your body between welding cables. Arrange cables to one side and away from the operator.
3. Do not coil or drape cables around your body.

4. Keep head and trunk as far away from the equipment in the welding circuit as possible.
5. Connect work clamp to workpiece as close to the weld as possible.
6. Do not work next to, sit or lean on the welding power source.
7. Do not weld whilst carrying the welding power source or wire feeder.

About Implanted Medical Devices:

Implanted Medical Device wearers should consult their doctor and the device manufacturer before performing or going near arc welding, spot welding, gouging, plasma arc cutting, or induction heating operations. If cleared by your doctor, then following the above procedures is recommended.

SECTION 2 – MESURES DE SÉCURITÉ VISANT LES PISTOLETS DE SOUDAGE GMAW – À LIRE AVANT UTILISATION

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! Pour écarter les risques de blessure pour vous-même et pour autrui — lire, appliquer et ranger en lieu sûr ces consignes relatives aux précautions de sécurité et au mode opératoire.

2-1. Signification des symboles



DANGER! – Indique une situation dangereuse qui si on l'évite pas peut donner la mort ou des blessures graves. Les dangers possibles sont montrés par les symboles joints ou sont expliqués dans le texte.



Indique une situation dangereuse qui si on l'évite pas peut donner la mort ou des blessures graves. Les dangers possibles sont montrés par les symboles joints ou sont expliqués dans le texte.

NOTE – Indique des déclarations pas en relation avec des blessures personnelles.

Indique des instructions spécifiques.



Ce groupe de symboles veut dire Avertissement! Attention! DANGER DE CHOC ELECTRIQUE, PIECES EN MOUVEMENT, et PIECES CHAUDES. Consulter les symboles et les instructions ci-dessous y afférant pour les actions nécessaires afin d'éviter le danger.

2-2. Dangers relatifs au soudage à l'arc



Les symboles présentés ci-après sont utilisés tout au long du présent manuel pour attirer votre attention et identifier les risques de danger. Lorsque vous voyez un symbole, soyez vigilant et suivez les directives mentionnées afin d'éviter tout danger. Les consignes de sécurité présentées ci-après ne font que résumer l'information contenue dans les normes de sécurité énumérées dans le manuel d'utilisation du poste de soudage. Veuillez lire et respecter toutes ces normes de sécurité.



L'installation, l'utilisation, l'entretien et les réparations ne doivent être confiés qu'à des personnes qualifiées.



Au cours de l'utilisation, tenir toute personne à l'écart et plus particulièrement les enfants.



UN CHOC ÉLECTRIQUE peut tuer.

- Porter toujours des gants secs et isolants.
- S'isoler de la pièce et de la terre.
- Ne jamais toucher une électrode ou des pièces électriques sous tension.
- Réparer ou remplacer un pistolet ou la gaine d'isolement d'un câble usée, endommagée ou fissurée.
- Mettre la soudeuse hors tension avant de remplacer un bec contact ou des pièces de pistolet.
- S'assurer que tous les couvercles et poignées sont fermement assujettis.



LES VAPEURS ET LES FUMÉES peuvent être nocives.

- Éloigner sa tête des endroits renfermant des vapeurs.
- Aérer la zone de travail ou porter un appareil respiratoire.
- Consulter les fiches toxicologiques (MSDS) et les notices du fabricant de chaque matériel utilisé.



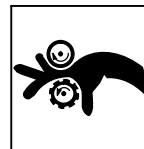
LE SOUDAGE peut causer un incendie ou une explosion.

- Ne pas souder à proximité de matériaux inflammables.
- Ne pas effectuer le soudage sur des contenants fermés tels que des réservoirs, tambours, ou conduites, à moins qu'ils n'aient été préparés correctement conformément à AWS F4.1 et AWS A6.0 (voir les Normes de Sécurité).
- Prendre garde aux incendies et toujours avoir un extincteur à proximité.



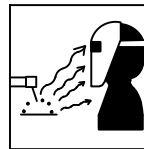
L'ACCUMULATION DE VAPEURS peut causer des lésions ou la mort.

- Quand on n'utilise pas le gaz comprimé de protection, fermer le robinet de la bouteille.
- Assurer toujours la ventilation des zones fermées ou utiliser un appareil respiratoire avec alimentation en air.



Les PIÈCES MOBILES peuvent causer des blessures.

- Ne pas s'approcher des organes mobiles.
- Ne pas s'approcher des points de coincement tels que des rouleaux de commande.



LE RAYONNEMENT DE L'ARC peut brûler les yeux et la peau.

- Porter un casque de soudage muni d'un filtre de protection oculaire approprié.
- Porter une protection oculaire et des vêtements de protection appropriés.
- Protéger la peau nue en portant des vêtements anti-éclaboussures.



LES PIÈCES CHAUDES peuvent provoquer des brûlures.

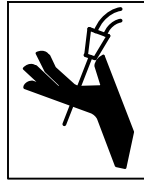
- Laisser refroidir le pistolet avant de le toucher.
- Ne pas toucher d'objets métalliques chauds.
- Abrisser les objets métalliques contre tout contact par les personnes à proximité.



Le BRUIT peut endommager l'ouïe.

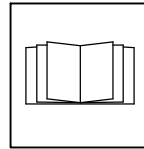
Le bruit des processus et des équipements peut affecter l'ouïe.

- Vérifier si les niveaux de bruit excèdent les limites spécifiées par l'OSHA.
- Utiliser des bouches-oreilles ou des serre-tête antibruit approuvés si le niveau de bruit est élevé.
- Avertir les personnes à proximité au sujet du danger inhérent au bruit.



LES FILS DE SOUDAGE peuvent provoquer des blessures.

- Éloigner les mains et le corps de la buse du pistolet après avoir appuyé sur la gâchette.



LIRE LES INSTRUCTIONS.

- Lire et appliquer les instructions sur les étiquettes et le Mode d'emploi avant l'installation, l'utilisation ou l'entretien de l'appareil. Lire les informations de sécurité au début du manuel et dans chaque section.
- N'utiliser que les pièces de rechange recommandées par le constructeur.
- Effectuer l'entretien en respectant les manuels d'utilisation, les normes industrielles et les codes nationaux, d'état et locaux.

2-3. Proposition californienne 65 Avertissements



Les équipements de soudage et de coupage produisent des fumées et des gaz qui contiennent des produits chimiques dont l'État de Californie reconnaît qu'ils provoquent des malformations congénitales et, dans certains cas, des cancers. (Code de santé et de sécurité de Californie, chapitre 25249.5 et suivants)



Ce produit contient des éléments chimiques, dont le plomb, reconnu par l'État de Californie pour leur caractère cancérigène ainsi que provoquant des malformations congénitales ou autres problèmes de procréation. **Se laver les mains après toute manipulation.**

2-4. Principales normes de sécurité

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2-5. Informations relatives aux CEM

Le courant électrique qui traverse tout conducteur génère des champs électromagnétiques (CEM) à certains endroits. Le courant de soudage crée un CEM autour du circuit et du matériel de soudage. Les CEM peuvent créer des interférences avec certains implants médicaux comme des stimulateurs cardiaques. Des mesures de protection pour les porteurs d'implants médicaux doivent être prises: Limiter par exemple tout accès aux passants ou procéder à une évaluation des risques individuels pour les soudeurs. Tous les soudeurs doivent appliquer les procédures suivantes pour minimiser l'exposition aux CEM provenant du circuit de soudage:

- 1 Rassembler les câbles en les torsadant ou en les attachant avec du ruban adhésif ou avec une housse.
- 2 Ne pas se tenir au milieu des câbles de soudage. Disposer les câbles d'un côté et à distance de l'opérateur.
- 3 Ne pas courber et ne pas entourer les câbles autour de votre corps.


- 4 Maintenir la tête et le torse aussi loin que possible du matériel du circuit de soudage.
- 5 Connecter la pince sur la pièce aussi près que possible de la soudure.
- 6 Ne pas travailler à proximité d'une source de soudage, ni s'asseoir ou se pencher dessus.
- 7 Ne pas souder tout en portant la source de soudage ou le dévidoir.

En ce qui concerne les implants médicaux :

Les porteurs d'implants doivent d'abord consulter leur médecin avant de s'approcher des opérations de soudage à l'arc, de soudage par points, de gougeage, du coupage plasma ou de chauffage par induction. Si le médecin approuve, il est recommandé de suivre les procédures précédentes.

SECTION 3 – DEFINITIONS

3-1. Symbols And Definitions



A	Amperes	V	Volts		Output	X	Duty Cycle
U₁	Primary Voltage	U₂	Load Voltage	I₁	Primary Current	I₂	Rated Welding Current

SECTION 4 – INTRODUCTION

4-1. Specifications

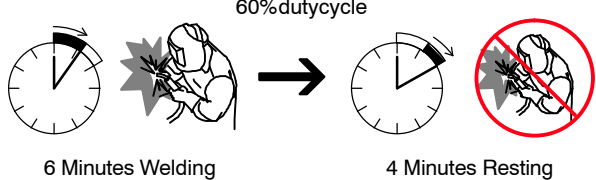
Model	Welding Output Range	Electrode Wire Diameter Capacity	Wire Feed Speed Range	Net Weight (Torch Only)
XR Aluma-Pro Lite Gun	175 A at 60% Duty Cycle	.035 – 3/64 in (0.9 – 1.2 mm)	70 – 900 IPM (1.8 – 23.0 mpm)	2.1 lbs (1.0 kg) (less cables)

4-2. Duty Cycle And Overheating

60% Duty Cycle At 175 Peak Amperage

60% duty cycle



6 Minutes Welding 4 Minutes Resting

Duty Cycle is percentage of 10 minutes that unit can weld at rated load without overheating.

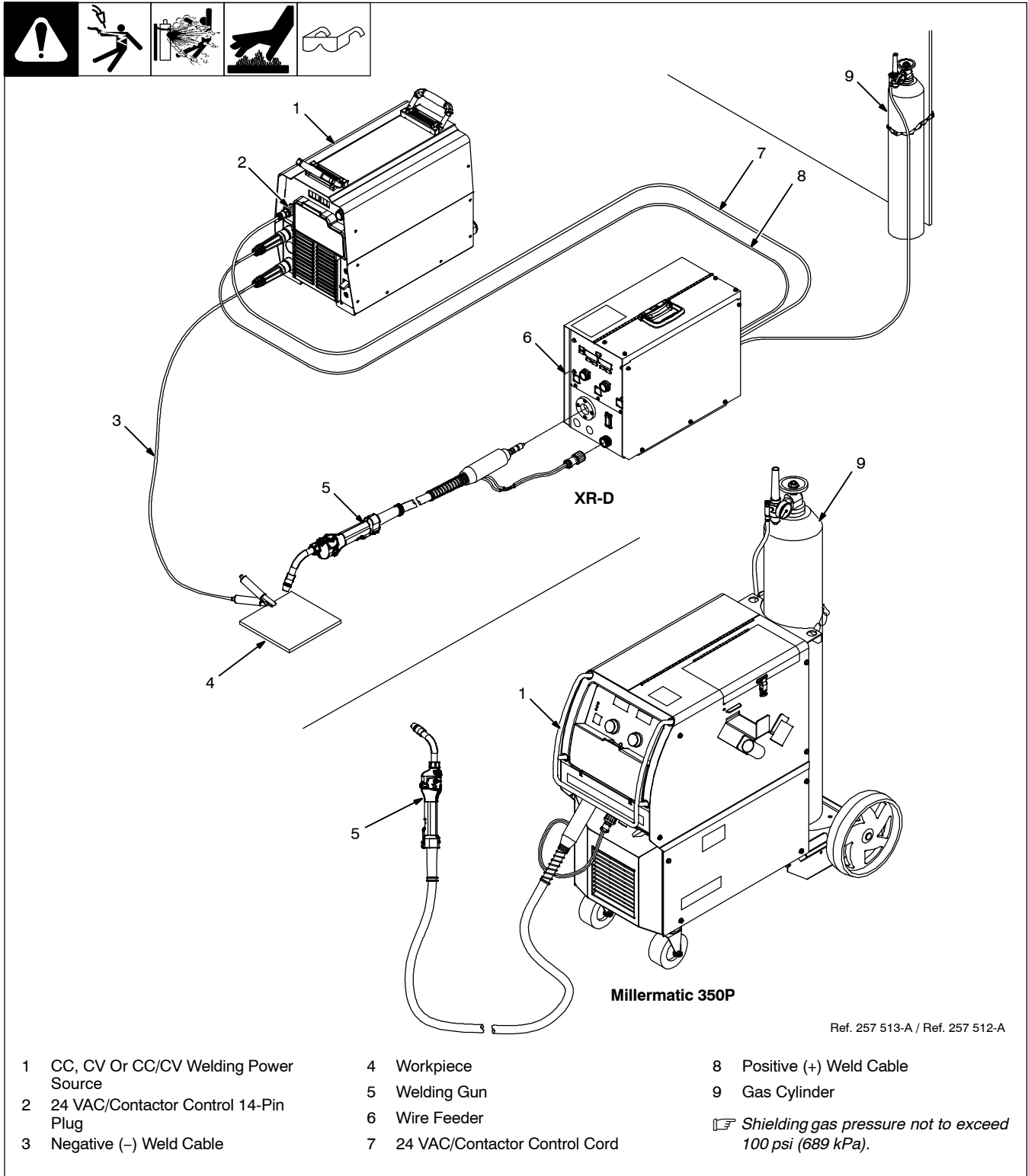
NOTICE – Exceeding duty cycle can damage unit and void warranty.

sduty1 5/95

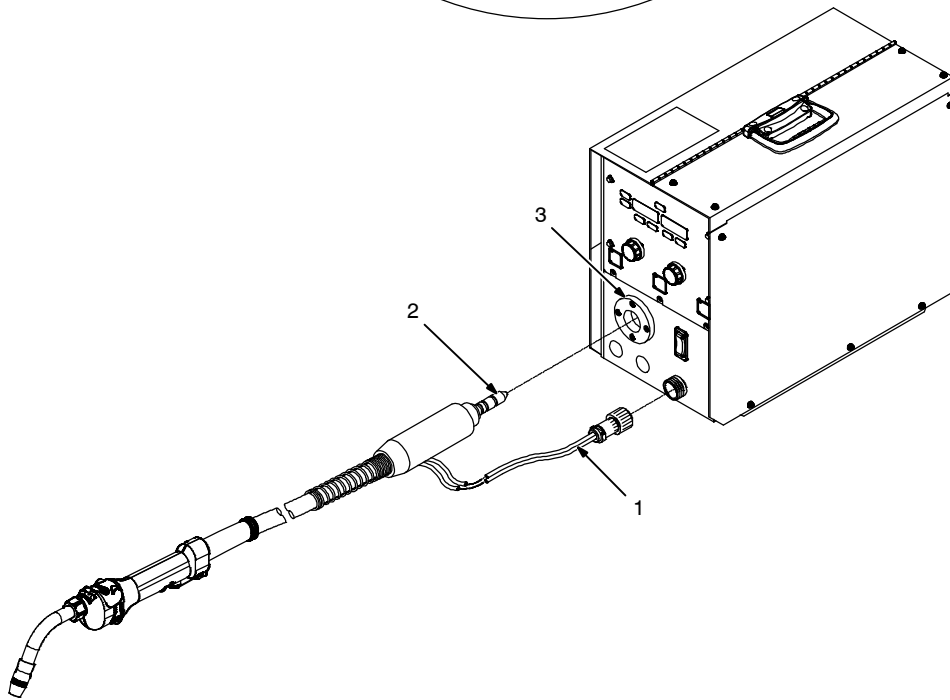
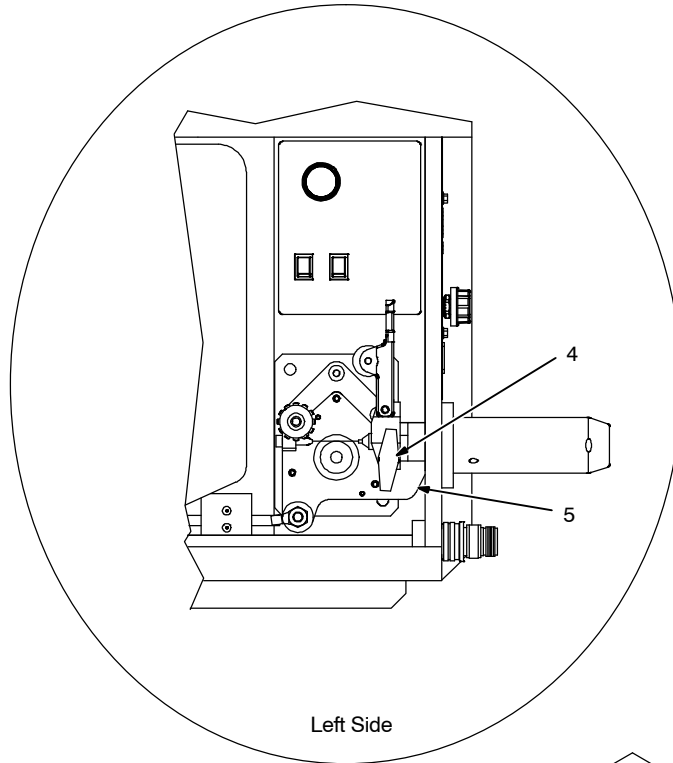
SECTION 5 – INSTALLATION

☞ Be sure that contact tip, liner, and drive rolls are correct for wire size and type. See Parts List to change parts as needed.

5-1. Connections With A Constant Current (CC), Constant Voltage (CV) Or Constant Current/Constant Voltage (CC/CV) Welding Power Source



5-2. Gun Connections



Ref. 257 513-A

- 1 Gun Control Cable
Insert plug into Gun Control receptacle, and tighten threaded collar.
- 2 Gun Power Pin

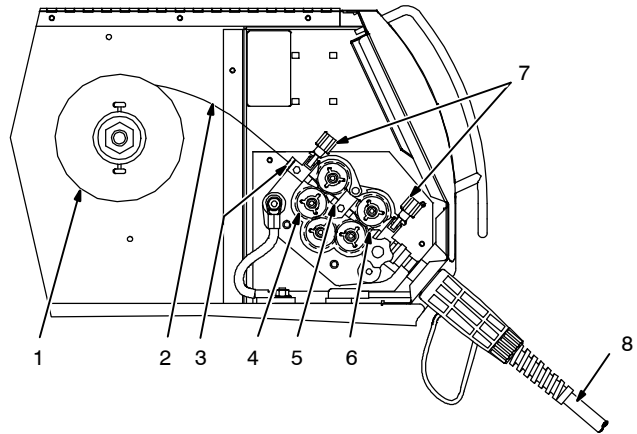
- 3 Gun Bushing
- 4 Gun Securing Knob
- 5 Drive Casting

Loosen gun securing knob and insert gun power pin through gun bushing until it bottoms against drive casting. Tighten knob.

5-3. Threading Welding Wire For XR Aluma-Pro Lite Gun And Millermatic 350P/Millermatic 252

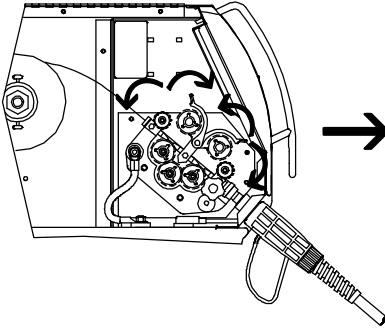


- 1 Wire Spool
 - 2 Welding Wire
 - 3 Inlet Wire Guide
 - 4 Drive Roll
 - 5 Intermediate Wire Guide
 - 6 Outlet Wire Guide
 - 7 Pressure Adjustment Knob
 - 8 Gun Conduit Cable
- Lay gun cable out straight.



☞ Millermatic 252 is only a two drive roll system.

Tools Needed:

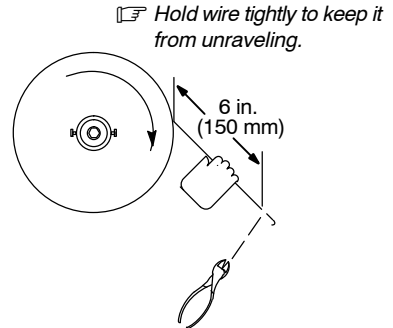


Open pressure assembly.

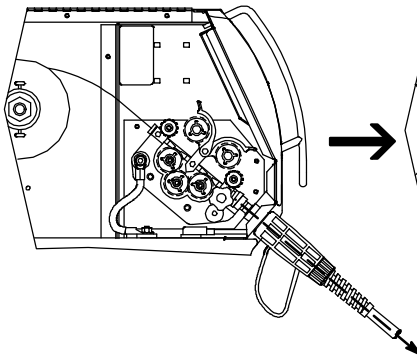
IMPORTANT!
 For Aluminum Push-Pull welding.
 Thread hub tension nut loosely

218243-A

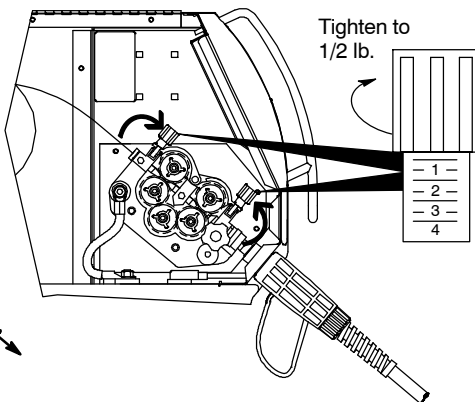
3/4 in.



Pull and hold wire; cut off end.

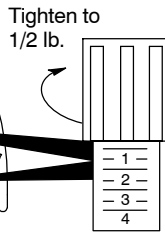


Push wire thru guides into gun; continue to hold wire.



Close and tighten pressure assembly, and let go of wire.

☞ Set pressure indicator scale to 1/2 lb.



Pressure Indicator Scale

IMPORTANT!
 For Aluminum Push-Pull welding.

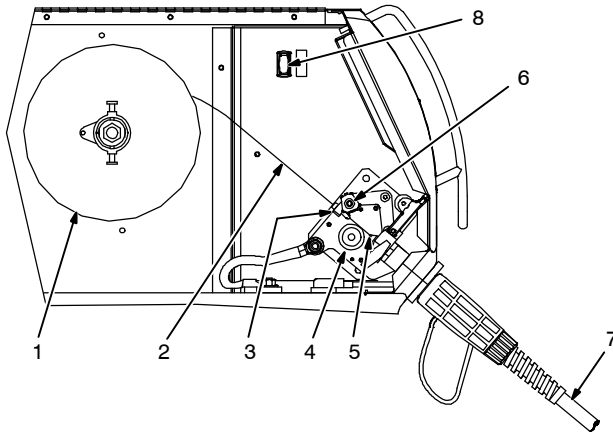
218244-A

➔ See Section 5-8 for threading welding wire through XR Aluma-Pro Lite gun.

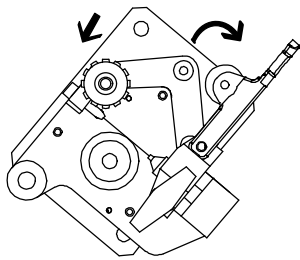
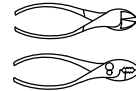
5-4. Threading Welding Wire For XR Aluma-Pro Lite Gun And Millermatic 350P Aluminum



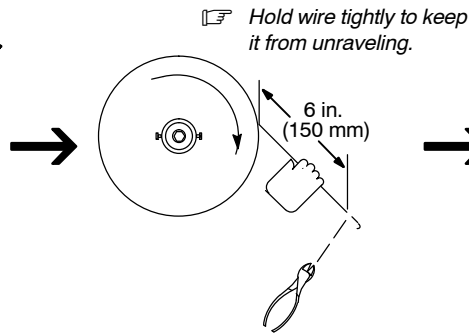
- 1 Wire Spool
 - 2 Welding Wire
 - 3 Inlet Wire Guide
 - 4 Drive Roll
 - 5 Wire Conduit
 - 6 Pressure Adjustment Knob
 - 7 Gun Conduit Cable
 - 8 Jog/Purge Switch
- Lay gun cable out straight.



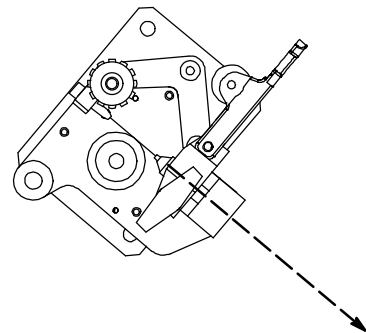
Tools Needed:



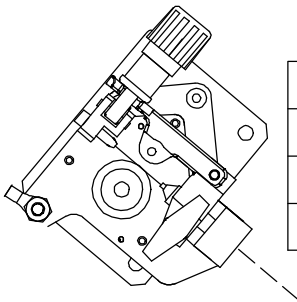
Open pressure assembly.
Install proper size drive rolls.



Pull and hold wire; cut off end.



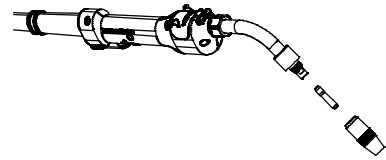
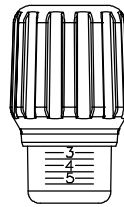
Push wire thru inlet guide, along drive roll groove, and into wire conduit; continue to hold wire.



Close and tighten pressure assembly according to Tension Setting chart, and let go of wire.

Tension Settings

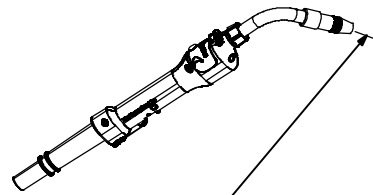
Wire Size	Setting
0.035 in.	1-2
0.040 in.	3-4
3/64 in.	



Remove gun nozzle and contact tip.



Turn On.

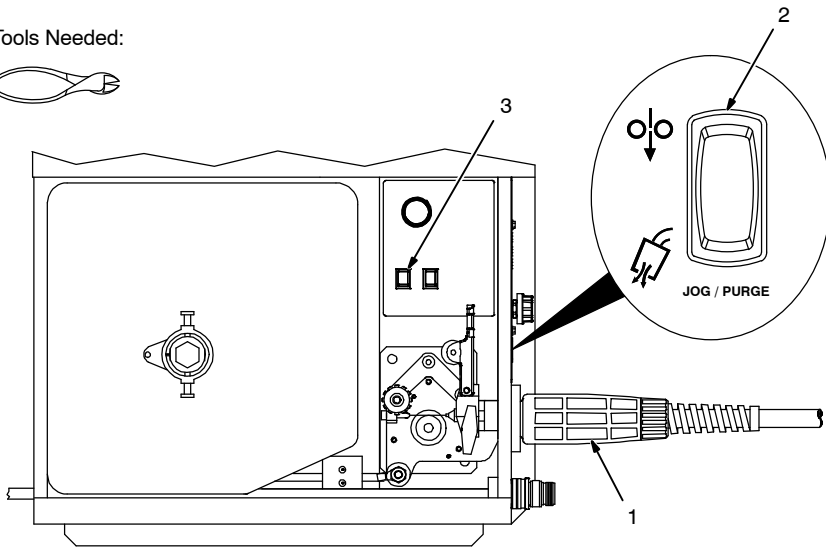


Press gun trigger or jog switch until wire comes out of gun. Reinstall contact tip and nozzle. Close and latch door on power source.

5-5. Threading Welding Wire Through XR-Control Feeder



Tools Needed:



1 Cable Assembly

Lay cable assembly out straight.

2 Jog Switch

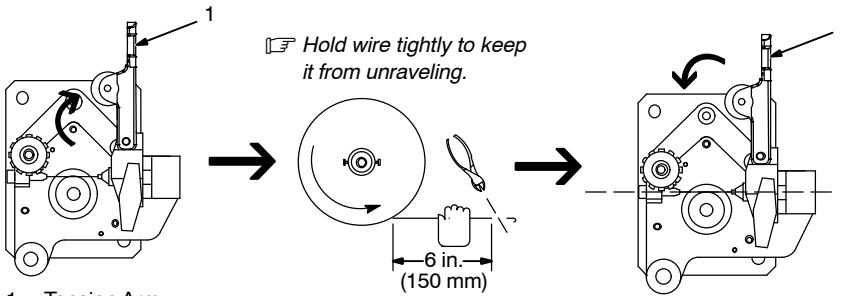
Push Jog switch up to feed wire through cable assembly.

3 Torque Switch

☞ Select proper push feeder torque setting for wire size being used. Use low torque for .030 in. (0.8mm) wire. Use high torque for all other wire sizes.

☞ XR-AlumaFeed torque setting is automatically set internally for wire sizes.

Adjusting Tension At Feeder



☞ Hold wire tightly to keep it from unraveling.

1 Tension Arm
Open tension arm.

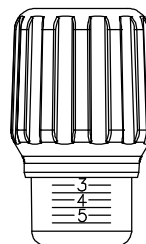
Pull and hold wire; cut off end.

Install proper size drive rolls.


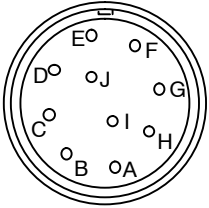
Thread wire thru inlet guide, along drive roll groove, and into wire conduit. Close tension arm. **Adjust tension as follows:**

Tension Settings



Wire Size	Welding	Gun Calibration
0.035 in.	1-2	3-4
0.040 in.	3-4	
3/64 in.		



5-6. 10-Pin Plug Information

 REMOTE 10	Pin*	Pin Information
	A	Not used
	B	Motor Common
	G	Trigger
	C	Motor 0 to +24 volts DC with respect to pin B
	D	Trigger
	E	Wire speed Ref. +9 volts DC
	H	Wire speed com
	F	Wire speed 0 to +9 volts DC with respect to pin H
	J	Gun sensing resistor with respect to pin H
	I	Not used

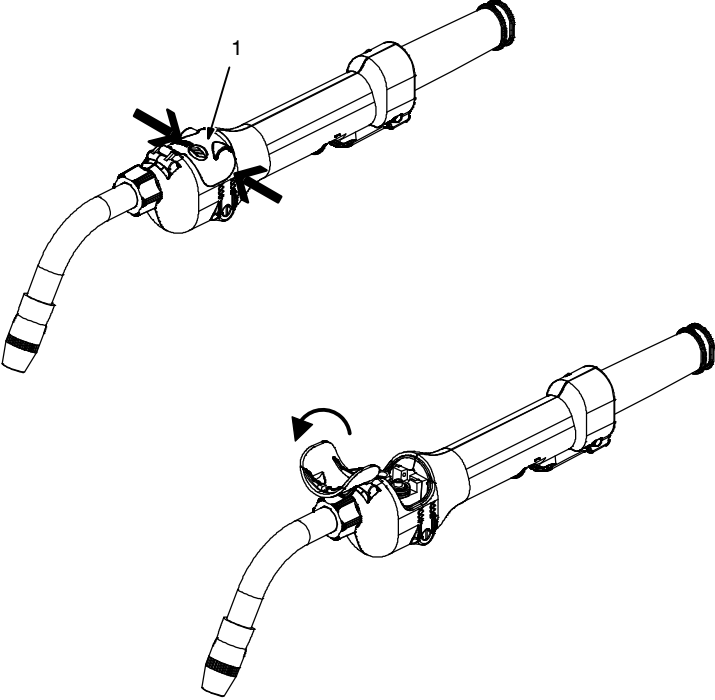
5-7. Opening Top Cover Of XR Aluma-Pro Lite Gun

1 Top Cover

Squeeze sides of cover and lift up as shown.

To close cover, pivot cover closed on gun, and push cover down until cover locks tight.



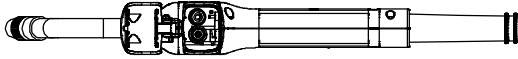
257 516-A / 257 517-A

5-8. Threading Welding Wire Through Gun

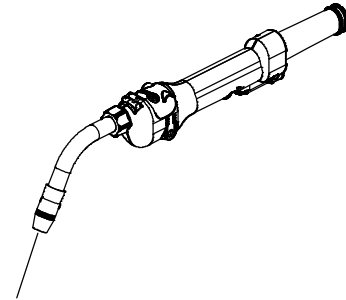
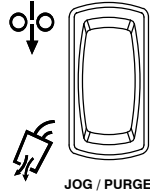


☞ Refer to Section 5-3 for instructions on feeding wire through feeder.

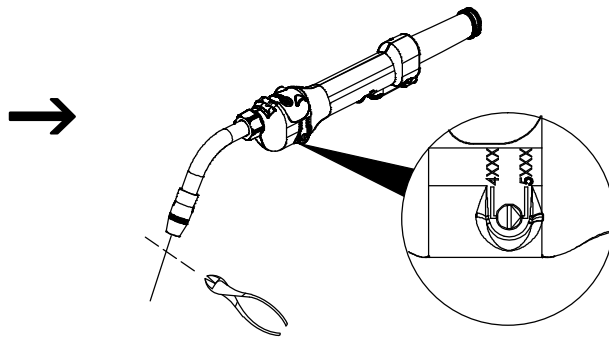
For XR Aluma-Pro Lite Gun:



⚠ Welding wire is electrically live when gun trigger is used to jog wire.



Lay gun cable out straight. Press Jog switch until about 6 in. (152 mm) of wire is sticking out end of contact tip.



☞ Verify pressure adjustment on handle matches the wire type. See Section 6-2.

Cut off wire. Close and latch wire feeder door.

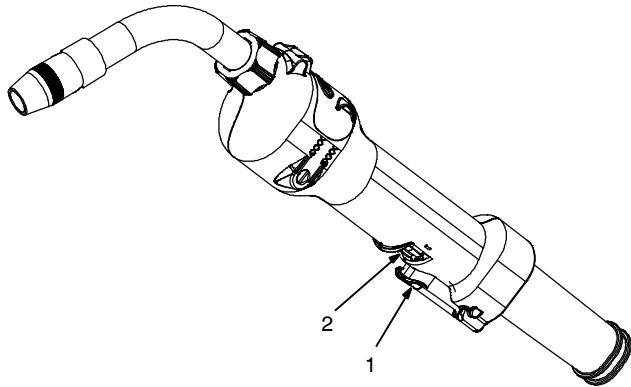
Tools Needed:



257 518-A / 257 516-A / 257 519-A

SECTION 6 – OPERATION

6-1. Gun Controls



1 Trigger

Press trigger to energize welding power source contactor (if applicable), start shielding gas flow, and begin wire feed.

Switches inside the wire feeder can be set to provide timed shielding gas preflow and postflow when trigger is pressed and released. When this feature is turned Off, no preflow or postflow is provided for the welding operation.

2 Gun Wire Speed Control

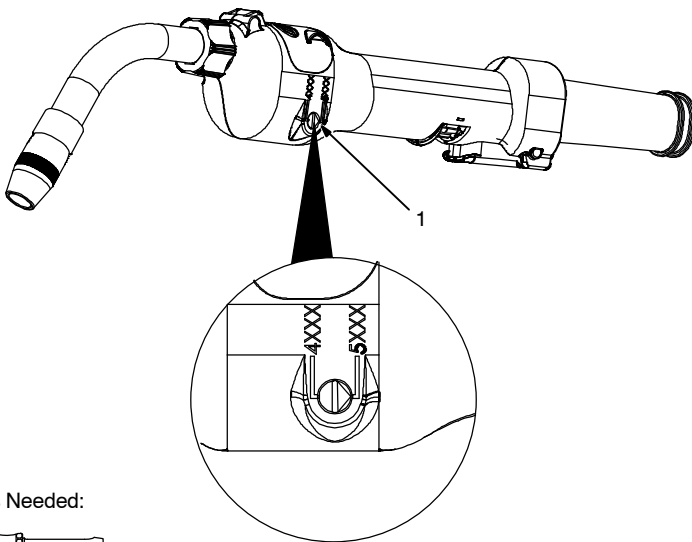
Use control to fine adjust wire feed speed set on XR-Control. Gun Wire Speed Control has 3-3/4 turns of adjustment from minimum to maximum.

Rotate control clockwise to increase wire speed and counterclockwise to decrease wire speed.

Speed control can be rotated more than 3-3/4 turns in both directions without being damaged.

257 489-A

6-2. Gun Pressure Roll Tension Setting



Tools Needed:



Aluminum series specific - Pressure roll tension setting ensures smooth wire feeding action.

Gun Pressure Roll Tension is factory set to 4XXX.

1 Pressure Roll Adjustment Screw

Wire tension should be set to 4XXX for 4000 series aluminum wire.

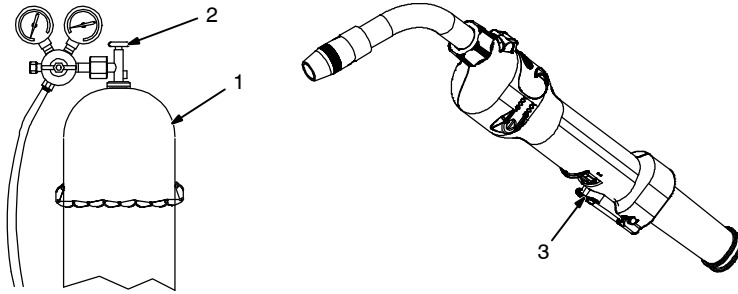
Rotate Pressure Roll Adjustment Screw fully counterclockwise until indicator line on adjustment knob lines up with indicator line on handle in the 4XXX position.

Wire tension should be set to 5XXX for 5000 series aluminum and stainless wire.

Rotate Pressure Roll Adjustment Screw fully clockwise until indicator line on adjustment knob lines up with indicator line on handle in the 5XXX position.

257 516-A / 257 519-A

6-3. Shielding Gas



- 1 Shielding Gas Cylinder
- 2 Valve
- 3 Gun Trigger

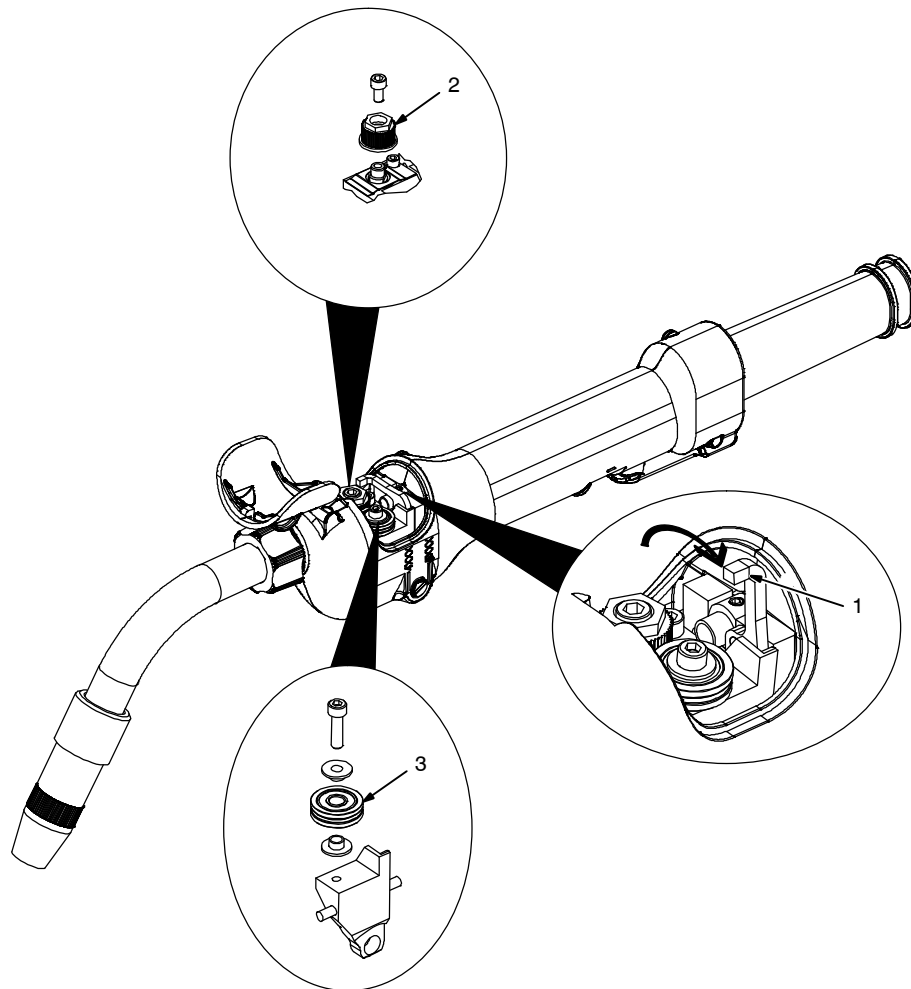
Open valve on cylinder just before welding.

Gun trigger turns weld output and gas flow on and off (see Section 6-1).

Close valve on cylinder when finished welding.

257 520-A

6-4. Gun Drive Assembly Maintenance For An XR Aluma-Pro Lite Gun



- 1 Lever Arm

Using lever arm open pressure roll with bearing as shown.

Retract wire onto spool.

- 2 Drive Roll

Use wire brush to clean drive roll. Install drive roll with hex opening down toward shaft hex, and secure with screw.

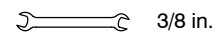
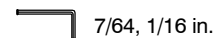
- 3 Pressure Roll

Thread welding wire through gun. Close pressure roll assembly and idler roll (located in XR control box). Press jog switch until wire is sticking out end of contact tip.

ⓘ When changing wire size you should change the drive rolls in the XR control box or Millermatic. See XR or Millermatic Owner's Manual for details.

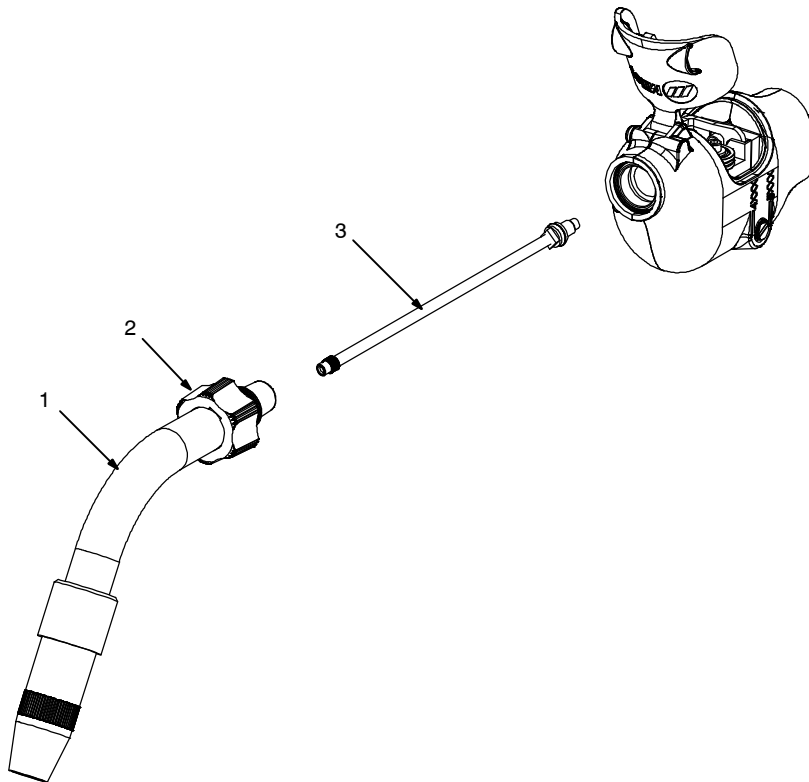
Close top cover.

Tools Needed:



257 523-A

6-5. Replacing Head Tube Liner In XR Aluma-Pro Lite Gun



The standard head tube liner (yellow) will accommodate 3/64 in. wire size.

When changing wire size, change control box drive roll, idler and head tube liner with appropriate sized liner.


- 1 Head Tube
- 2 Head Tube Nut

Loosen head tube nut and remove head tube from gun.

- 3 Head Tube Liner

Pull liner out of head tube.

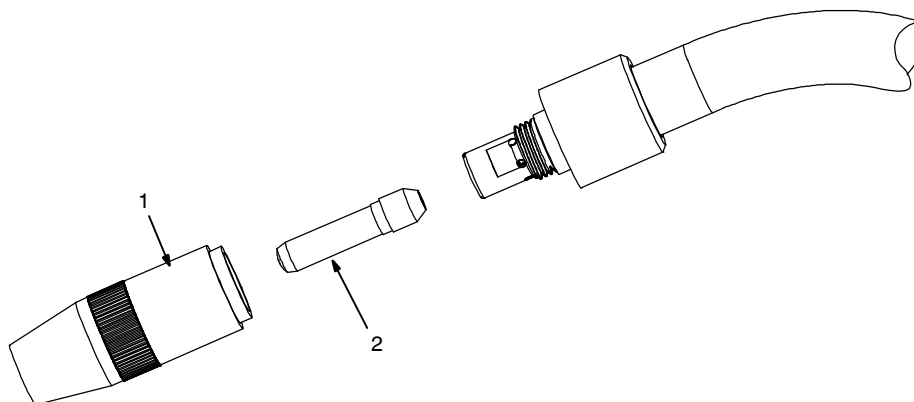
Insert new liner into head tube and reinstall head tube onto gun.

 A twisting motion may be needed to feed liner thru head tube.

NOTICE – Be sure head tube is seated and head tube nut is securely tightened before operating gun. If head tube nut is not adequately tightened, unwanted arcing may occur between head tube and gun housing.

257 474-A

6-6. Changing Gun Contact Tip



Remove nozzle

- 1 Nozzle
- 2 Contact Tip

Remove contact tip.

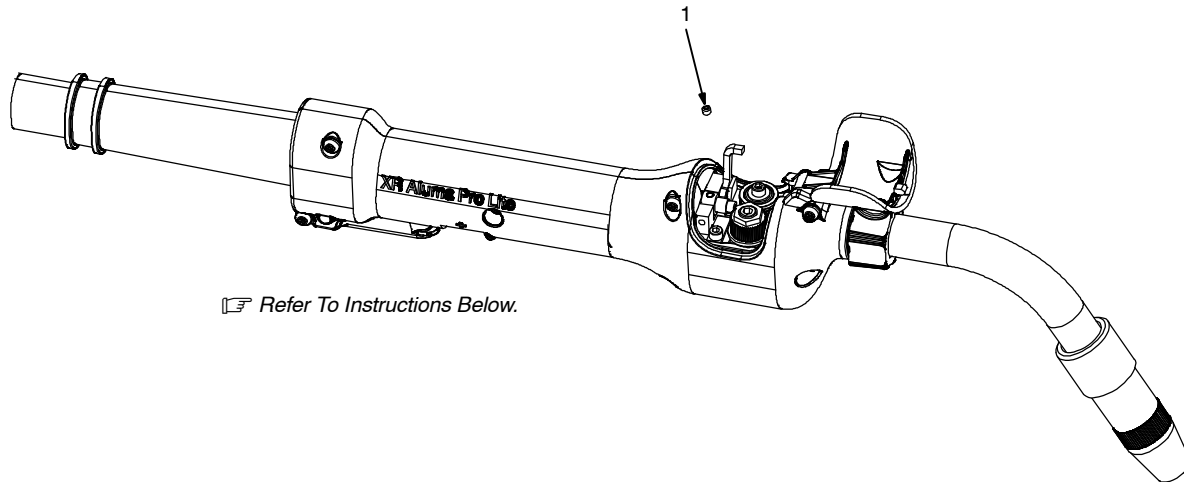
Install new contact tip.

NOTICE – Make sure correct size contact tip is being used. Incorrect size may cause arcing inside tip, poor feedability and poor arc starting characteristics (see Section 7-2).

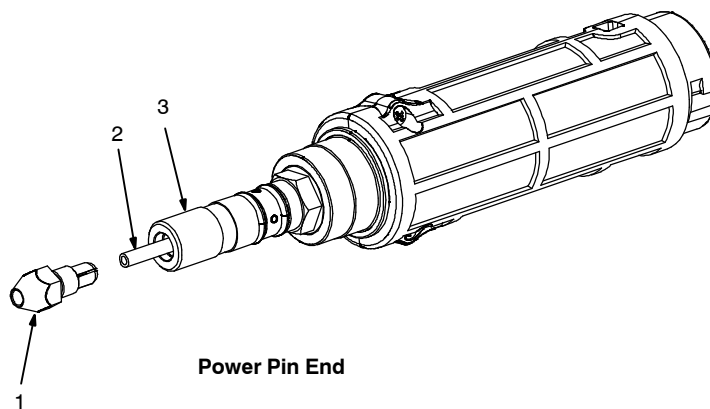
Reinstall nozzle.

257 478-A

6-7. Replacing The Gun Liner On XR Aluma-Pro Lite Gun



☞ Refer To Instructions Below.



Power Pin End

257 472-B

⚠ Turn Off welding power source and wire feeder.

- 1 Liner Guide Nut
- 2 Liner
- 3 Power Pin

Lay gun cable out straight and remove wire from the gun.

Remove the gun from the power supply.

Remove the liner setscrew in the head of the gun.

Loosen the liner guide nut from power pin end of gun.

Remove used liner.


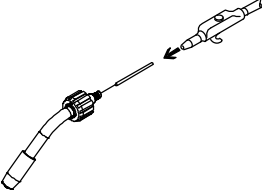

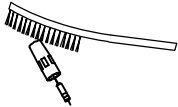
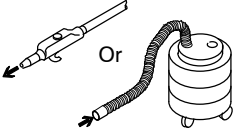
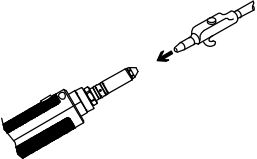
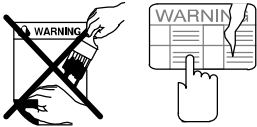
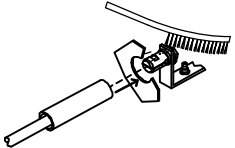
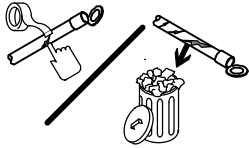
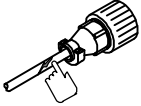


Slide new liner as close as possible to gun drive rolls without touching.

Gently tighten setscrew in gun handle until you can feel setscrew contacting liner, then tighten another 1/2 turn.

NOTICE – Overtightening setscrew may cause damage to new liner.

Tighten liner guide nut. Liner guide nut will hold liner securely in place. Cut off liner leaving 1/4 in. sticking out from liner guide.

SECTION 7 – MAINTENANCE & TROUBLESHOOTING

	✓ = Check ● = Clean ☆ = Replace				
Daily	 <p> ✓ ● Head Tube Liner and Drive Casting (see Section 6-5) </p>				
Weekly	 <p> ✓ ● Drive Roll </p>				
Every Spool of Wire	 <p> ✓ ● Nozzle / Contact Tip </p>	 <p> ● Gun Casing </p>	 <p> ✓ ● Gun Liner (see Section 7-1) </p>		
Every 3 Months	 <p> ☆ Unreadable Labels </p>	 <p> ● Weld Terminals </p>	 <p> ✓ ☆ Weld Cable </p>		
	 <p> ✓ 10-Pin Cord </p>	 <p> ✓ Gas Hose and Fittings </p>	 <p> ✓ Gun Cable </p>		

7-1. Cleaning The Gun Liner On XR Aluma-Pro Lite Gun



⚠ Turn Off welding power source and wire feeder.

Lay gun cable out straight.

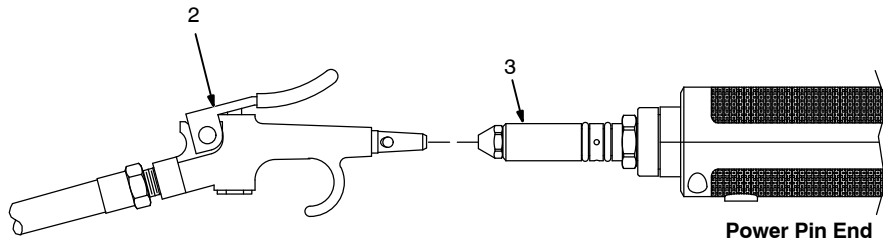
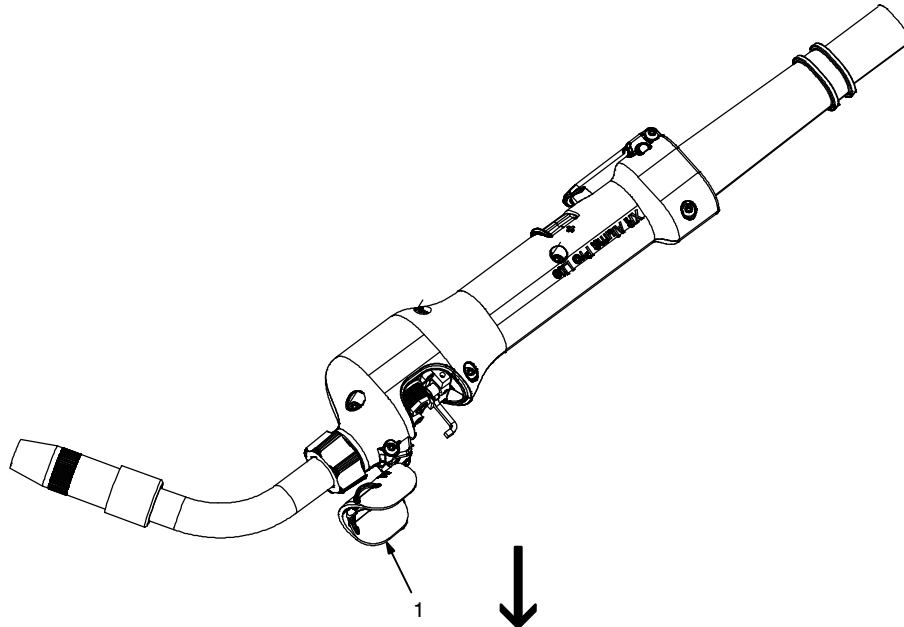
1 Top Cover

Open top cover and turn gun upside down.

2 Air Nozzle

3 Power Pin

Blow air from power pin end through liner until clean of debris. Verify drive assembly is clear of debris.



257 473-A

7-2. Troubleshooting Table



Trouble	Remedy
No wire feed at gun, feeder not operating. Check motor or brake solenoid.	Reset circuit breaker in feeder/control box. See feeder/control owner's manual.
	Replace trigger-switch and test operation.
	Check trigger-switch wires for continuity.
No wire feed at gun, feeder operating properly.	Reset circuit breaker in feeder/control box and check for short in motor leads. See feeder/control owner's manual.
	Check potentiometer with meter and replace if necessary.
	Check motor and potentiometer wires for continuity.
	See feeder/control owner's manual.
Wire feeds, but welding wire is not energized.	Clean and tighten all power connections.
	See feeder/control owner's manual.
	Check operation of welding power source.
Wire feeds erratically.	Check conduit for wear and obstruction and replace if necessary.
	Check contact tip for correct size and replace if necessary.
	Check pressure roll tension setting (see Section 6-2).
	Check for proper head tube liner (see Table 9-7).
Wire feeds one speed only.	Check potentiometer with meter and replace if necessary.
	Check continuity of welding gun wire feed speed potentiometer and replace if necessary.
	See feeder/control owner's manual.
Pressing gun trigger does not energize feeder. Welding wire is not energized. Shielding gas does not flow.	Secure plug from gun control cable into gun control receptacle on feeder.
Wire feeds, shielding gas flows, but welding wire is not energized.	See Troubleshooting section in welding power source manual.
Arc varies and welding wire is kinked when feeding out gun.	Place Motor Torque switch in low torque position if welding with .030 (0.8 mm) aluminum welding wire on an XR control box.

SECTION 9- PARTS LIST

☞ Hardware is common and not available unless listed.

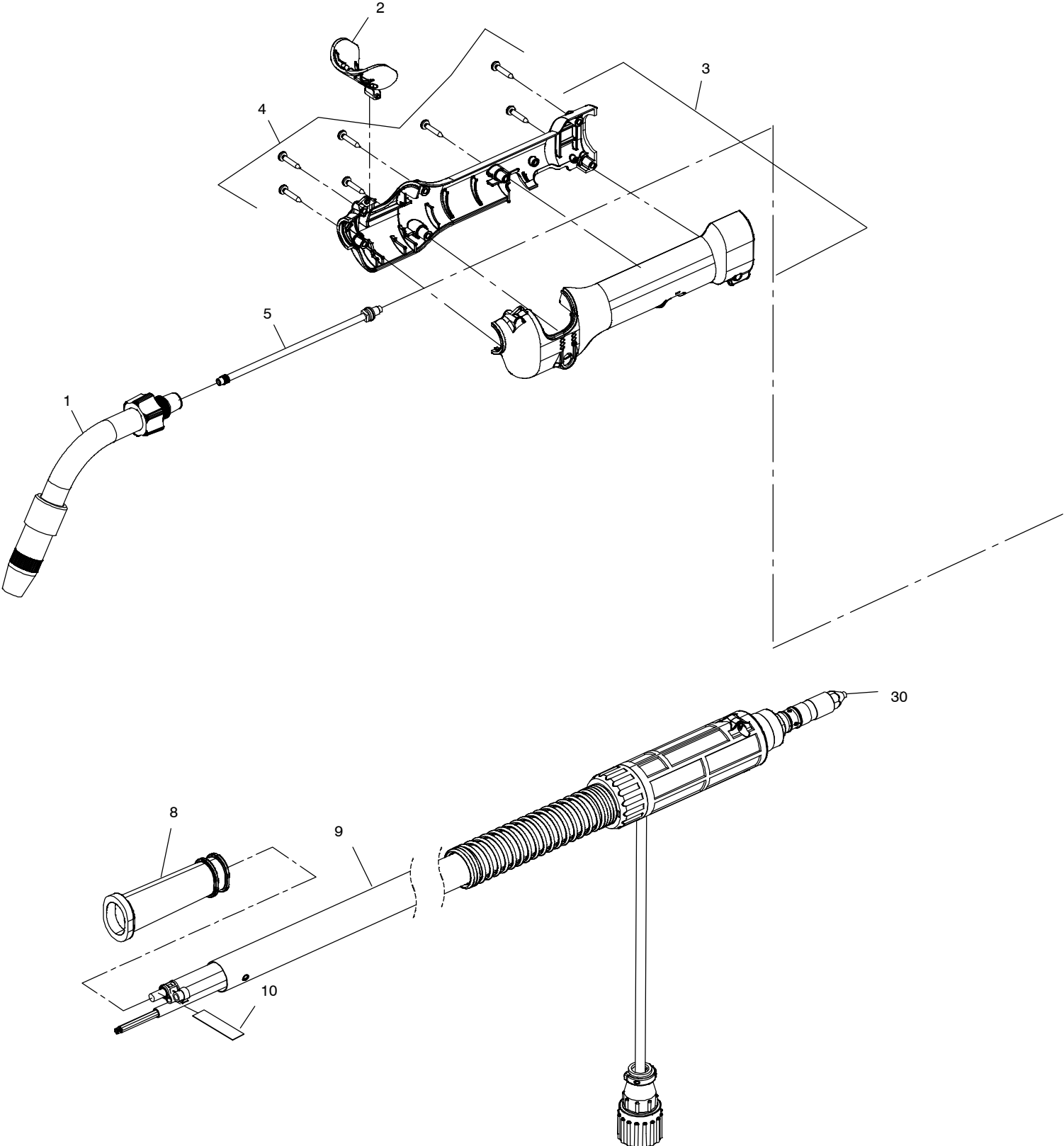
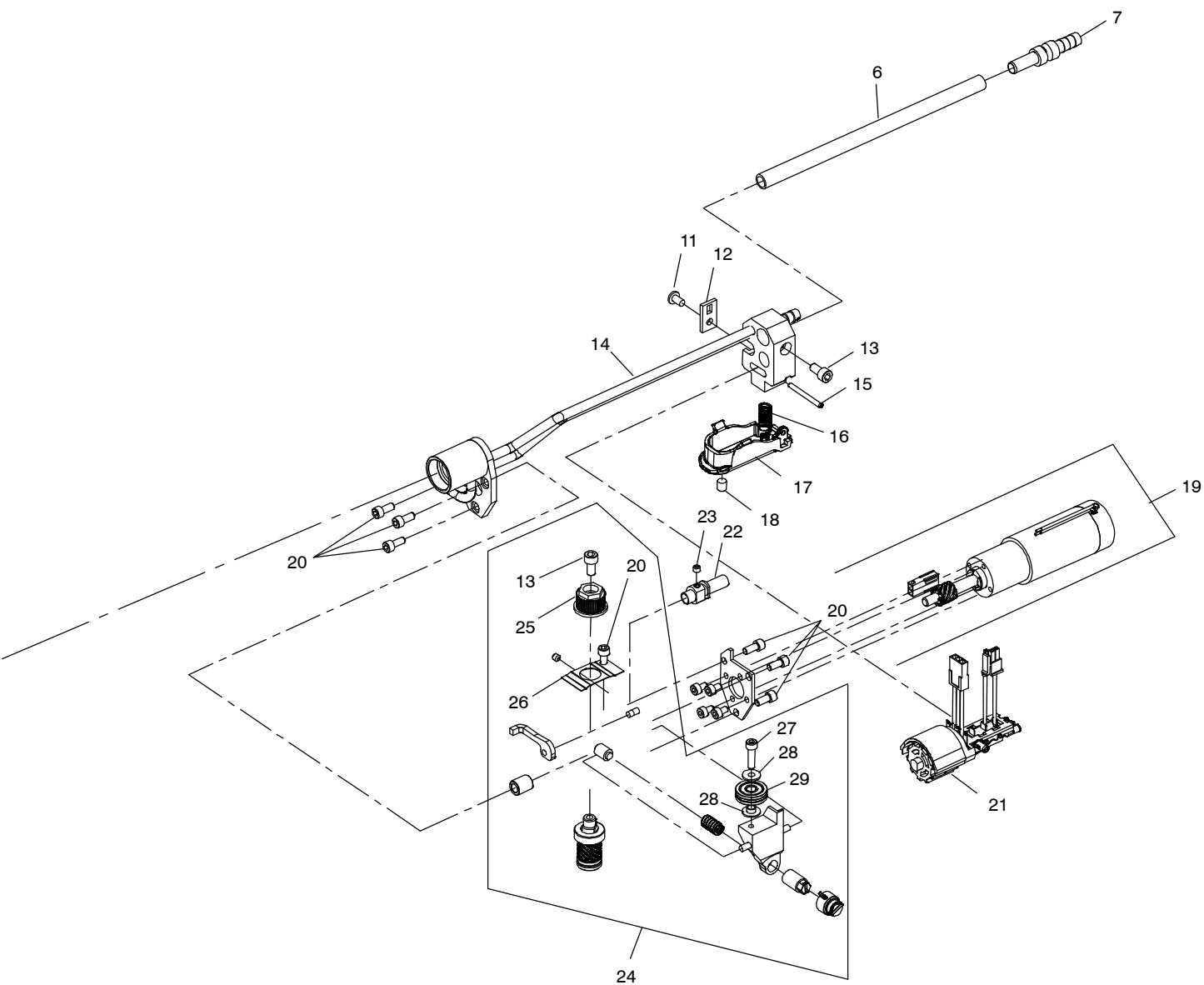


Figure 9-1. Exploded View Of XR Aluma-Pro Lite Gun



Item No.	Part No.	Description	Quantity
----------	----------	-------------	----------

Figure 9-1. Exploded View Of XR Aluma-Pro Lite Gun

...	1	See Fig. 9-2	Head Tube Assy	1
...	2	+254620	Cover	1
...		187316	Label, Pinch Wordless WF	1
...	3	258060	Handle Assy, Left/Right	1
...	4	217934	Screw, K40 x 20 Pan Hd-Trx Stl Pld Pt Thread Forming	7
...	5	◆258541	Kit, Jump Liner Assy .030-.035 (5 pk)	1
...	5	◆258542	Kit, Jump Liner Assy .047-.062 (5 pk)	1
...	5	◆258726	Kit, Jump Liner Assy .030-.035 14 in. Long (5 pk)	1
...	5	◆258727	Kit Jump Liner Assy .047-.062 14 in. Long (5 pk)	1
...	6	254788	Guide, Liner	1
...	7	254786	Mount, Wire Guide Rear	1
...	8	254789	Strain Relief, Cable Control	1
...	9	254476	Cable, Combination 25 ft w/Power Connector	1
...	10	254690	Strip, Cop .010 x 1.000 x .500	1
...	11	242638	Screw, 006-32 x .25 Pan Hd-Phi Stl Pld Lkg Patch	1
...	12	254701	Clamp, Cable Stl	1
...	13	254760	Screw, 008-32 x .31 Soc Hd Cap	2
...	14	254698	Torch Body, Brazed	1
...	15	254782	Pin, Dowel Stl .094 Dia x 1.000 Lg	1
...	16	254781	Spring, Cprsn .250 OD x .026 Wire x .625 Free St	1
...	17	254657	Paddle, Trigger	1
...	18	254784	Screw, Set #10-24 x .25 Ovlpt Stl Blk	1
...	19	258192	Drive Motor Assy, Replacement	1
...	20	254705	Screw, 006-32 x .31 Soc Hd Cap w/Nylon Patch	7
...	21	254647	Potentiometer & Switch Assy	1
...	22	254787	Mount, Wire Guide Front	1
...	23	135126	Screw, Set # 6-32 x .12 Cup Pt Sch Stl Pln	1
...	24	258190	Wire Drive Assy, Replacement	1
...	25	254756	Roll, Drive Knurled	1
...	26	254715	Contact, Current Pick-Up	1
...	27	231443	Screw, 006-32 x .44 Soc Hd-Hex Gr8 Pld Lkg Patch	1
...	28	134624	Washer, Shldr.140id 0.187 OD x.094T .375 OD x.031T Nyl	2
...	29	227439	Drive Roll Assy, Idler .645 OD	1
...	30	M1440	Liner, Replacement	1

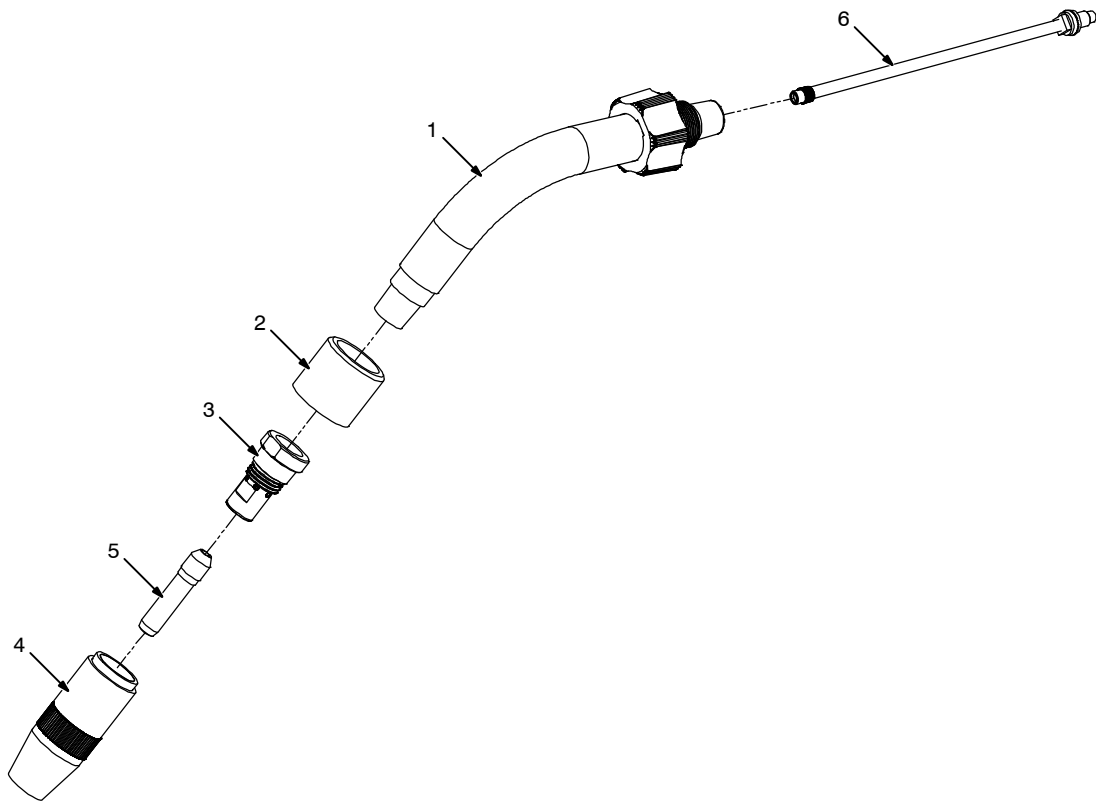
☞ *Liner Kits 258726 and 258727 are for use with optional Bernard Head Tubes, and must be cut to fit.*

◆OPTIONAL

+ When ordering a component originally displaying a precautionary label, the label should also be ordered.

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number are required when ordering parts from your local distributor.

☞ Hardware is common and not available unless listed.



257 872-A

Figure 9-2. Head Tube Assembly Of XR Aluma-Pro Lite Gun

Item No.	Part No.	Description	Quantity
Figure 9-2. Head Tube Assembly Of XR Aluma-Pro Lite Gun (Figure 9-1 Item 24)			
1	254477	Head Tube Assy, Aluma Pro Lite (Including)	1
	QT2-45	Tube, Body 45 Degree x 2.69 Lg	1
	1840057	Clip-on Q-Nut Cover	1
	1840031	Body Tube Insulating Sleeve	2
2	4323R	Insulator, Nozzle (Small)	1
3	DS-1	Diffuser, C-Fire (Small Nozzle)	1
4	NS-1218C	Nozzle, C-Fire Small Copper 1/2 in. Recess 1/8 in.	1
5	T-047AL	Centerfire Contact Tip, Aluminum 3/64 in.	1
5	T-035AL	Centerfire Contact Tip, Aluminum .035	1
	M1362	Kit, Liner/Tip XR Aluma-Pro Lite (Including)	1
5	T-047AL	Centerfire Contact Tip, Aluminum 3/64 in.	1
5	◆ T-035AL	Centerfire Contact Tip, Aluminum .035 in.	2
6	◆ 258541	Kit, Jump Liner Assy .030-.035 (5 pk)	1
6	◆ 258542	Kit, Jump Liner Assy .047-.062 (5 pk)	1
6	◆ 258726	Kit, Jump Liner Assy .030-.035 14 in. Long (5 pk)	1
6	◆ 258727	Kit Jump Liner Assy .047-.062 14 in. Long (5 pk)	1

☞ Liner Kits 258726 and 258727 are for use with optional Bernard Head Tubes, and must be cut to fit.

◆ OPTIONAL

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number are required when ordering parts from your local distributor.

SECTION 10- PARTS LIST OF CONSUMABLES

Standard Centerfire™ Series Consumables

T Series Contact Tips For Aluminum Wire

T-035AL* .035 in. (0.9 mm)

T-047AL* .047 in. (1.2 mm)

T Series Contact Tips For Hard Or Cored Wires 1.5 in. (38 mm)

T-030 .030 in. (0.8 mm)

T-035 .035 in. (0.9 mm)

T-039 .039 in. (1.0 mm)

T-045 .045 in. (1.2 mm)

TT Series Contact Tips For Hard Or Cored Wires 2 in. (51 mm)

TT-030 .030 in. (0.8 mm)

TT-035 .035 in. (0.9 mm)

TT-045 .045 in. (1.2 mm)

Gas Diffusers

DS-1AP* Small

D-1AP Large

Small Nozzles

NS-5818B

Brass, 5/8 in. I.D., 1/8 in. tip recess

NS-1218B

Brass, 1/2 in. I.D., 1/8 in. tip recess

NS-1218C*

Copper, 1/2 in. I.D., 1/8 in. tip recess

NS-1200B

Brass, 1/2 in. I.D., flush tip

NST-3818B

Brass, 3/8 in. I.D., 1/8 in. tip recess

Large Nozzles

N-3414C

Copper, 3/4 in. I.D., 1/4 in. tip recess

N-3418B

Brass, 3/4 in. I.D., 1/8 in. tip recess

N-3414B

Brass, 3/4 in. I.D., 1/4 in. tip recess

N-3414C

Copper, 5/8 in. I.D., 1/4 in. tip recess

N-5818B

Brass, 5/8 in. I.D., 1/8 in. tip recess

N-5814B

Brass, 5/8 in. I.D., 1/4 in. tip recess

*Comes standard with XR Aluma-Pro Lite.

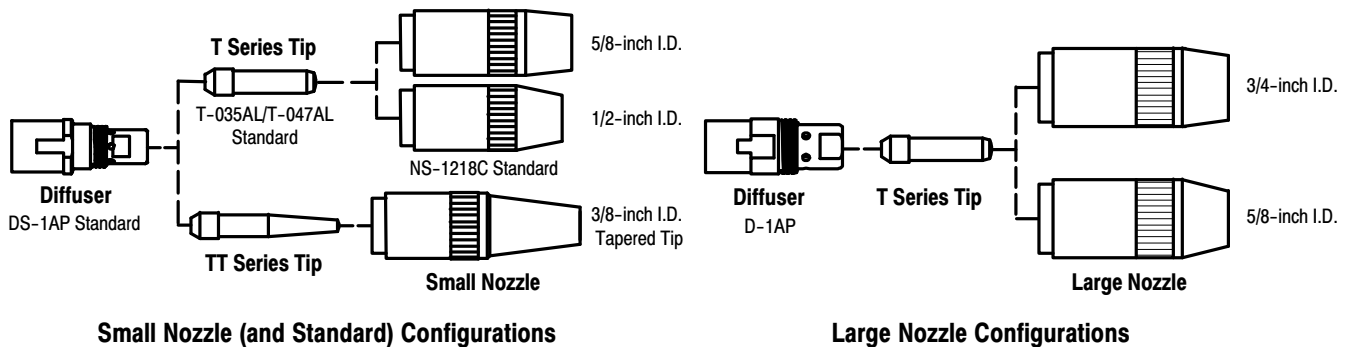


Figure 10-1. Standard Centerfire™ Series Consumables Flowchart

Ref. M/1.75 2012-02

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number are required when ordering parts from your local distributor.

Optional FasTip™ Consumables

The use of FasTip Consumables requires the use of long head tube liners. Order long head tube liners from the standard replacement consumables in Table 10-6.

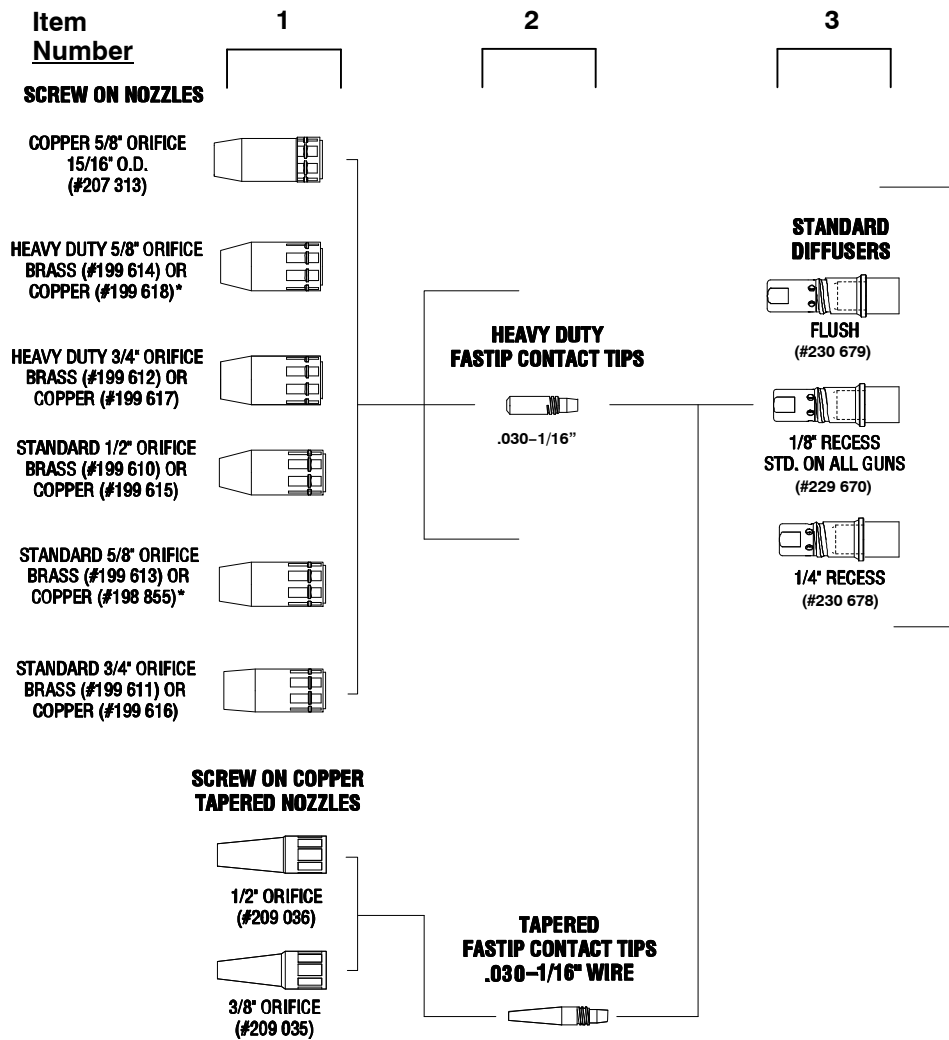


Figure 10-2. Optional FasTip™ Consumables Flowchart

Item No.	Part No.	Description	Quantity
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Figure 10-2. Optional FasTip™ Consumables Flowchart

Table 10-1. Screw-On Brass Nozzles

Item No.	Part No.	Description	Quantity
... 1	◆199 610	.. Nozzle, Screw On Brass 1/2 in Orifice	1
... 1	◆199 611	.. Nozzle, Screw On Brass 3/4 in Orifice Straight	1
... 1	◆199 612	.. Nozzle, Screw On Brass 3/4 in Orifice Straight Heavy Duty	1
... 1	◆199 613	.. Nozzle, Screw On Brass 5/8 in Orifice	1
... 1	◆199 614	.. Nozzle, Screw On Brass 5/8 in Orifice Heavy Duty	1

◆OPTIONAL

To maintain the factory original performance of your equipment, use only Manufacturer's Suggested Replacement Parts. Model and serial number are required when ordering parts from your local distributor.

Table 10-2. Screw-On Copper Nozzles

Item No.	Part No.	Description	Quantity
... 1	◆199 615	.. Nozzle, Screw On Copper 1/2 in Orifice	1
... 1	◆199 616	.. Nozzle, Screw On Copper 3/4 in Orifice	1
... 1	◆199 617	.. Nozzle, Screw On Copper 3/4 in Orifice Heavy Duty	1
... 1	◆198 855	.. Nozzle, Screw On Copper 5/8 in Orifice	1
... 1	◆199 618	.. Nozzle, Screw On Copper 5/8 in Orifice Heavy Duty	1
... 1	◆207 313	.. Nozzle, Screw On Copper 5/8 in Orifice 15/16 OD	1
... 1	◆209 035	.. Nozzle, Screw On Copper 3/8 in Orifice Tapered (Requires Diffuser 229 670, 230 678, 230 679 Used With Any Tapered FasTip™ Contact Tip)	1
... 1	◆209 036	.. Nozzle, Screw On Copper 1/2 in Orifice Tapered (Requires Diffuser 229 670, 230 678, 230 679 Used With Any Tapered FasTip™ Contact Tip)	1

Table 10-3. Heavy Duty FasTip™ Contact Tips*

Item No.	Part No.	Description	Quantity
... 2	◆206 186	.. .030 in (0.8 mm) Aluminum Wire	1
... 2	◆206 187	.. .035 in (0.9 mm) Aluminum Wire	1
... 2	◆206 188	.. .040 in (1.0 mm) Aluminum Wire	1
... 2	◆206 189	.. 3/64 in (1.2 mm) Aluminum Wire	1
... 2	◆206 191	.. 1/16 in (1.6 mm) Aluminum Wire	1

Table 10-4. Tapered FasTip™ Contact Tips*

Item No.	Part No.	Description	Quantity
... 2	◆209025	.. .030 in (0.8 mm)	1
... 2	◆209026	.. .035 in (0.9 mm)	1
... 2	◆209027	.. .045 in (1.2 mm)	1
... 2	◆209028	.. 3/64 in (1.2 mm)	1
... 2	◆209029	.. .052 in (1.3 mm)	1
... 2	◆209030	.. 1/16 in (1.6 mm)	1

Table 10-5. Tapered FasTip™ Contact Tips*

Item No.	Part No.	Description	Quantity
... 3	◆229 670	.. 1/8 in Tip Recess – For Heavy Duty FasTip Contact Tips	1
... 3	◆230 678	.. 1/4 in Tip Recess – For Heavy Duty FasTip Contact Tips	1
... 3	◆230 679	.. Flush Tip – For Heavy Duty FasTip Contact Tips	1

Table 10-6. Standard Replacement Consumables

Aluminum Wire Size	Drive Rolls	Idler Rolls	Inlet Guides	Head Tube Liner: Standard Barrel With Centerfire Consumables (5 pk)	Long Head Tube Liner: Optional Barrels Or FasTip Consumables (5 pk)	Cable Liner 25 ft (7.6 m)
.030 in. (0.8 mm)	227 434	230 439	227 408	258541 (.030 and .035 in. Wire)	258 726	M1440
.035 in. (0.9 mm)	227 434	230 439	227 408		258 726	
.040 in. (1.0 mm)	227 434	230 439	227 408	258542 (.040 and 3/64 in. Wire)	258 727	
3/64 in. (1.2 mm)	227 434	230 439	227 408		258 727	

◆OPTIONAL

*All contact tips are packaged in bags of 25.

To maintain the factory original performance of your equipment, use only Manufacturer’s Suggested Replacement Parts. Model and serial number are required when ordering parts from your local distributor.

TRUE BLUE[®]

WARRANTY

Effective January 1, 2013

(Equipment with a serial number preface of MD or newer)

This limited warranty supersedes all previous Miller warranties and is exclusive with no other guarantees or warranties expressed or implied.

Warranty Questions?

Call
1-800-4-A-MILLER
for your local
Miller distributor.

Your distributor also gives
you ...

Service

You always get the fast,
reliable response you
need. Most replacement
parts can be in your
hands in 24 hours.

Support

Need fast answers to the
tough welding questions?
Contact your distributor.
The expertise of the
distributor and Miller is
there to help you, every
step of the way.

LIMITED WARRANTY – Subject to the terms and conditions below, Miller Electric Mfg. Co., Appleton, Wisconsin, warrants to its original retail purchaser that new Miller equipment sold after the effective date of this limited warranty is free of defects in material and workmanship at the time it is shipped by Miller. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

Within the warranty periods listed below, Miller will repair or replace any warranted parts or components that fail due to such defects in material or workmanship. Miller must be notified in writing within thirty (30) days of such defect or failure, at which time Miller will provide instructions on the warranty claim procedures to be followed.

Miller shall honor warranty claims on warranted equipment listed below in the event of such a failure within the warranty time periods. All warranty time periods start on the delivery date of the equipment to the original end-user purchaser, and not to exceed one year after the equipment is shipped to a North American distributor or eighteen months after the equipment is shipped to an International distributor.

1. 5 Years Parts — 3 Years Labor
 - * Original Main Power Rectifiers Only to Include SCRs, Diodes, and Discrete Rectifier Modules
2. 3 Years — Parts and Labor
 - * Auto-Darkening Helmet Lenses (Except Classic Series) (No Labor)
 - * Engine Driven Welding Generators
(NOTE: Engines are Warranted Separately by the Engine Manufacturer.)
 - * Inverter Power Sources (Unless Otherwise Stated)
 - * Oxy-Fuel Cutting Torches (No Labor)
 - * Plasma Arc Cutting Power Sources
 - * Process Controllers
 - * Semi-Automatic and Automatic Wire Feeders
 - * Smith Series 30 Flowgauge, Flowmeter, and Pressure Regulators (No Labor)
 - * Transformer/Rectifier Power Sources
 - * Water Coolant Systems (Integrated)
3. 2 Years — Parts and Labor
 - * Auto-Darkening Helmet Lenses – Classic Series Only (No Labor)
 - * Fume Extractors – Filtair 400 and Industrial Collector Series
4. 1 Year — Parts and Labor Unless Specified
 - * Automatic Motion Devices
 - * CoolBelt and CoolBand Blower Unit (No Labor)
 - * External Monitoring Equipment and Sensors
 - * Field Options
(NOTE: Field options are covered for the remaining warranty period of the product they are installed in, or for a minimum of one year — whichever is greater.)
 - * Flowgauge and Flowmeter Regulators (No Labor)
 - * RFCS Foot Controls (Except RFCS-RJ45)
 - * Fume Extractors – Filtair 130, MWX and SWX Series
 - * HF Units
 - * ICE/XT Plasma Cutting Torches (No Labor)
 - * Induction Heating Power Sources, Coolers
(NOTE: Digital Recorders are Warranted Separately by the Manufacturer.)
 - * Load Banks
 - * Motor Driven Guns (except Spoolmate Spoolguns)
 - * PAPR Blower Unit (No Labor)
 - * Positioners and Controllers
 - * Racks
 - * Running Gear/Trailers
 - * Spot Welders
 - * Subarc Wire Drive Assemblies
 - * Water Coolant Systems (Non-Integrated)
 - * Weldcraft-Branded TIG Torches (No Labor)
 - * Wireless Remote Foot/Hand Controls and Receivers
 - * Work Stations/Weld Tables (No Labor)

5. 6 Months — Parts
 - * Batteries
 - * Bernard Guns (No Labor)
 - * Tregaskiss Guns (No Labor)
6. 90 Days — Parts
 - * Accessory (Kits)
 - * Canvas Covers
 - * Induction Heating Coils and Blankets, Cables, and Non-Electronic Controls
 - * M-Guns
 - * MIG Guns and Subarc (SAW) Guns
 - * Remote Controls and RFCS-RJ45
 - * Replacement Parts (No labor)
 - * Roughneck Guns
 - * Spoolmate Spoolguns

Miller's True Blue[®] Limited Warranty shall not apply to:

1. **Consumable components; such as contact tips, cutting nozzles, contactors, brushes, relays, work station table tops and welding curtains, or parts that fail due to normal wear. (Exception: brushes and relays are covered on all engine-driven products.)**
2. Items furnished by Miller, but manufactured by others, such as engines or trade accessories. These items are covered by the manufacturer's warranty, if any.
3. Equipment that has been modified by any party other than Miller, or equipment that has been improperly installed, improperly operated or misused based upon industry standards, or equipment which has not had reasonable and necessary maintenance, or equipment which has been used for operation outside of the specifications for the equipment.

MILLER PRODUCTS ARE INTENDED FOR PURCHASE AND USE BY COMMERCIAL/INDUSTRIAL USERS AND PERSONS TRAINED AND EXPERIENCED IN THE USE AND MAINTENANCE OF WELDING EQUIPMENT.

In the event of a warranty claim covered by this warranty, the exclusive remedies shall be, at Miller's option: (1) repair; or (2) replacement; or, where authorized in writing by Miller in appropriate cases, (3) the reasonable cost of repair or replacement at an authorized Miller service station; or (4) payment of or credit for the purchase price (less reasonable depreciation based upon actual use) upon return of the goods at customer's risk and expense. Miller's option of repair or replacement will be F.O.B., Factory at Appleton, Wisconsin, or F.O.B. at a Miller authorized service facility as determined by Miller. Therefore no compensation or reimbursement for transportation costs of any kind will be allowed.

TO THE EXTENT PERMITTED BY LAW, THE REMEDIES PROVIDED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES. IN NO EVENT SHALL MILLER BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT), WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY.

ANY EXPRESS WARRANTY NOT PROVIDED HEREIN AND ANY IMPLIED WARRANTY, GUARANTY OR REPRESENTATION AS TO PERFORMANCE, AND ANY REMEDY FOR BREACH OF CONTRACT TORT OR ANY OTHER LEGAL THEORY WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE OR COURSE OF DEALING, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, WITH RESPECT TO ANY AND ALL EQUIPMENT FURNISHED BY MILLER IS EXCLUDED AND DISCLAIMED BY MILLER.

Some states in the U.S.A. do not allow limitations of how long an implied warranty lasts, or the exclusion of incidental, indirect, special or consequential damages, so the above limitation or exclusion may not apply to you. This warranty provides specific legal rights, and other rights may be available, but may vary from state to state.

In Canada, legislation in some provinces provides for certain additional warranties or remedies other than as stated herein, and to the extent that they may not be waived, the limitations and exclusions set out above may not apply. This Limited Warranty provides specific legal rights, and other rights may be available, but may vary from province to province.

miller_warr 2013-01





Owner's Record

Please complete and retain with your personal records.

Model Name	Serial/Style Number
Purchase Date	(Date which equipment was delivered to original customer.)
Distributor	
Address	
City	
State	Zip



For Service

Contact a DISTRIBUTOR or SERVICE AGENCY near you.

Always provide Model Name and Serial/Style Number.

Contact your Distributor for:	Welding Supplies and Consumables Options and Accessories Personal Safety Equipment Service and Repair Replacement Parts Training (Schools, Videos, Books) Technical Manuals (Servicing Information and Parts) Circuit Diagrams Welding Process Handbooks To locate a Distributor or Service Agency visit www.millerwelds.com or call 1-800-4-A-Miller
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Contact the Delivering Carrier to:	File a claim for loss or damage during shipment. For assistance in filing or settling claims, contact your distributor and/or equipment manufacturer's Transportation Department.
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