

# Tregaskiss® MA1 Fixed Automatic Air-Cooled MIG Gun

## OWNER'S MANUAL

September 2023

OM-MA1-1.5

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



**Tregaskiss.com/TechnicalSupport**  
1-855-MIGWELD (644-9353) (US & Canada)  
+1-519-737-3000 (International)

# Thank You for Choosing Tregaskiss

Thank you for selecting a Tregaskiss product. Before installing, compare the equipment received against the invoice to verify that the shipment is complete and undamaged. It is the responsibility of the purchaser to file all claims of damage or loss that may have occurred during transit with the carrier.

The owner's manual contains general information, instructions and maintenance to help better maintain your MIG gun or peripheral. Please read, understand and follow all safety precautions.

While every precaution has been taken to assure the accuracy of this owner's manual, Tregaskiss assumes no responsibility for errors or omissions. Tregaskiss assumes no liability for damages resulting from the use of information contained herein. The information presented in this owner's manual is accurate to the best of our knowledge at the time of printing. Please reference [Tregaskiss.com](http://Tregaskiss.com) for updated material.

For customer support and special applications, please call the Tregaskiss Customer Service Department at 1-855-MIGWELD (644-9353) (US & Canada) or +1-519-737-3000 (International), fax 1-519-737-1530, or email at [cs@itwmig.com](mailto:cs@itwmig.com). Our trained Customer Service Team is available between 8:00 a.m. and 5:30 p.m. EST, and will answer your product application or repair questions.

Tregaskiss manufactures premium robotic MIG (GMAW) welding guns, peripherals and consumables. For more information on other premium Tregaskiss products, contact your local Tregaskiss distributor or visit us on the web at [Tregaskiss.com](http://Tregaskiss.com).

# TABLE OF CONTENTS

---

<b>DECLARATION OF CONFORMITY</b> .....	<b>V</b>
<b>SECTION 1 — SAFETY PRECAUTIONS — READ BEFORE USING</b> .....	<b>1</b>
1-1 Symbol Usage .....	1
1-2 Arc Welding Hazards .....	1
1-3 California Proposition 65 Warnings .....	3
1-4 Principal Safety Standards .....	3
1-5 EMF Information .....	3
<b>SECTION 2 — CONSIGNES DE SÉCURITÉ — LIRE AVANT UTILISATION</b> .....	<b>4</b>
2-1 Symboles utilisés .....	4
2-2 Dangers relatifs au soudage à l'arc .....	4
2-3 Proposition californienne 65 avertissements .....	6
2-4 Principales normes de sécurité .....	6
2-5 Informations relatives aux CEM .....	6
<b>SECTION 3 — PRECAUCIONES DE SEGURIDAD — LEA ANTES DE USAR</b> .....	<b>7</b>
3-1 Uso de símbolos .....	7
3-2 Peligros en soldadura de arco .....	7
3-3 Advertencias de la Proposición 65 del estado de California .....	9
3-4 Estándares principales de seguridad .....	9
3-5 Información sobre los campos electromagnéticos (EMF) .....	9
<b>SECTION 4 — PRODUCT WARRANTY</b> .....	<b>10</b>
4-1 Product Warranty .....	10
<b>SECTION 5 — SPECIFICATIONS</b> .....	<b>11</b>
5-1 System Components .....	11
<b>SECTION 6 — INSTALLATION</b> .....	<b>12</b>
6-1 Installing Mounting Options .....	12
6-2 Installing Gun to Wire Feeder .....	12
<b>SECTION 7 — REPLACEMENT</b> .....	<b>13</b>
7-1 Changing Consumables .....	13
7-2 Neck Replacement .....	14
7-3 Changing the Liner .....	15
7-4 Changing the Power Pin or AutoLength™ Pin .....	17
7-5 Unicable Replacement .....	18

<b>SECTION 8 — TECHNICAL DATA</b> .....	<b>19</b>
8-1 Neck Dimensions .....	19
<b>SECTION 9 — PARTS LIST</b> .....	<b>20</b>
<b>SECTION 10 — TROUBLESHOOTING</b> .....	<b>21</b>
10-1 Troubleshooting Table .....	21
<b>ADDITIONAL SUPPORT MATERIALS</b> .....	<b>23</b>

# DECLARATION OF CONFORMITY

for European Community (CE marked) products



Tregaskiss, 2570 North Talbot Rd., Oldcastle, Ontario NOR 1L0 Canada declares that the product(s) identified in this declaration conform to the essential requirements and provisions of the stated Council Directive(s) and Standard(s).

Product/Apparatus Identification:

Product	Stock Number
Tregaskiss MA1 Fixed Automatic Air-Cooled MIG Guns	MA1XXXXXXXX (Configurable #)

Council Directives:

- 2006/95/EC Low Voltage
- 2011/65/EU Restriction of the use of certain hazardous substances in electrical and

Electronic equipment standards:

- IEC 60974-7:2013 Arc welding equipment – Part 7: Torches

Signatory:

January 7, 2021

**David A. Werba**  
MANAGER, PRODUCT DESIGN COMPLIANCE

\_\_\_\_\_  
Date of Declaration

# SECTION 1 — SAFETY PRECAUTIONS — READ BEFORE USING



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 section 1-4 Principal Safety Standards on page 3, and in welding power source Owner's Manual. Read and follow all Safety Standards.



Only qualified persons should install, operate, maintain, and repair this equipment. A qualified person is defined as one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated ability to solve or resolve problems relating to the subject matter, the work, or the project and has received safety training to recognize and avoid the hazards involved.



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.



- Replace worn, damaged, or cracked guns or cables.
- 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. The recommended way to determine adequate ventilation is to sample for the composition and quantity of fumes and gases to which personnel are exposed.
- Read and understand the Safety Data Sheets (SDSs) and the manufacturer's instructions for adhesives, coatings, cleaners, consumables, coolants, degreasers, fluxes, and metals.



### MOVING PARTS can injure.

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



### 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.
- Read and understand the Safety Data Sheets (SDSs) and the manufacturer's instructions for adhesives, coatings, cleaners, consumables, coolants, degreasers, fluxes, and metals.



### 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.



### ARC RAYS can burn eyes and skin.

Arc rays from the welding process produce intense visible and invisible (ultraviolet and infrared) rays that can burn eyes and skin. Sparks fly off from the weld.



- Wear an approved welding helmet fitted with a proper shade of filter lenses to protect your face and eyes from arc rays and sparks when welding or watching (see ANSI Z49.1 and Z87.1 listed in Safety Standards).
- Wear approved safety glasses with side shields under your helmet.
- Use protective screens or barriers to protect others from flash, glare and sparks; warn others not to watch the arc.
- Wear body protection made from leather or flame-resistant clothing (FRC). Body protection includes oil-free clothing such as leather gloves, heavy shirt, cuffless trousers, high shoes, and a cap.

### 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.

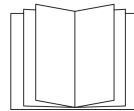
### WELDING WIRE can injure.

- 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 installation, maintenance, and service according to the Owner's Manuals, industry standards, and national, state, and local codes.



## 1-3 California Proposition 65 Warnings



**WARNING:** This product can expose you to chemicals including lead, which are known to the state of California to cause cancer and birth defects or other reproductive harm.

For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## 1-4 Principal Safety Standards

*Safety in Welding, Cutting, and Allied Processes*, American Welding Society standard ANSI Standard Z49.1. Website: [www.aws.org](http://www.aws.org).

*Safe Practice For Occupational And Educational Eye And Face Protection*, ANSI Standard Z87.1, from American National Standards Institute. Website: [www.ansi.org](http://www.ansi.org).

*Safe Practices for the Preparation of Containers and Piping for Welding and Cutting*, American Welding Society Standard AWS F4.1. Website: [www.aws.org](http://www.aws.org).

*National Electrical Code*, NFPA Standard 70 from National Fire Protection Association. Website: [www.nfpa.org](http://www.nfpa.org).

*Safe Handling of Compressed Gases in Cylinders*, CGA Pamphlet P-1 from Compressed Gas Association. Website: [www.cganet.com](http://www.cganet.com).

*Safety in Welding, Cutting, and Allied Processes*, CSA Standard W117.2 from Canadian Standards Association. Website: [www.csagroup.org](http://www.csagroup.org).

*Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*, NFPA Standard 51B from National Fire Protection Association. Website: [www.nfpa.org](http://www.nfpa.org).

OSHA, Occupational Safety and Health Standards for General Industry, Title 29, Code of Federal Regulations (CFR), Part 1910.177 Subpart N, Part 1910 Subpart Q, and Part 1926, Subpart J. Website: [www.osha.gov](http://www.osha.gov).

SR7 2022-01

## 1-5 EMF Information

Electric current flowing through any conductor causes localized electric and magnetic fields (EMF). The current from arc welding (and allied processes including spot welding, gouging, plasma arc cutting, and induction heating operations) creates an EMF field around the welding circuit. 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 passersby 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 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 — CONSIGNES DE SÉCURITÉ — LIRE AVANT UTILISATION

 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 Symboles utilisés

 **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.


*AVIS* – 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. Reportez-vous aux symboles et aux directives cidessous afin de connaître les mesures à prendre pour éviter tout danger.

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

 Les symboles donnés ci-après sont utilisés dans tout le manuel pour attirer l'attention sur les dangers possibles et pour indiquer le type de danger dont il s'agit. Quand on voit le symbole, prendre garde et suivre les directives correspondantes pour éviter le danger. Les consignes de sécurité présentées ci-après ne font que résumer l'information contenue dans les Normes de sécurité principales, et dans le Guide d'utilisation de la source de courant de soudage. Lire et suivre toutes les Normes de sécurité.

 L'installation, l'utilisation, l'entretien et les réparations ne doivent être confiés qu'à des personnes qualifiées. Une personne qualifiée est définie comme celle qui, par la possession d'un diplôme reconnu, d'un certificat ou d'un statut professionnel, ou qui, par une connaissance, une formation et une expérience approfondies, a démontré avec succès sa capacité à résoudre les problèmes liés à la tâche, le travail ou le projet et a reçu une formation en sécurité afin de reconnaître et d'éviter les risques inhérents.

 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.
- Remplacer les pistolets ou câbles de soudage qui sont endommagés, usés ou craquelés.
- 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 FUMÉES ET LES GAZ peuvent être dangereux.



- Garder la tête hors des fumées.
- Aérer la zone de travail ou porter un appareil respiratoire. Pour déterminer la bonne ventilation, il est recommandé de procéder à un prélèvement pour la composition et la quantité de fumées et de gaz auxquels est exposé le personnel.
- Lire et comprendre les fiches de données de sécurité et les instructions du fabricant concernant les adhésifs, les revêtements, les nettoyants, les consommables, les produits de refroidissement, les dégraissants, les flux et les métaux.

## 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 SOUDAGE peut provoquer un incendie ou une explosion.



- Ne pas souder à proximité de matériaux inflammables
- Ne pas effectuer le soudage sur des conteneurs 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.

- Lire et comprendre les fiches de données de sécurité et les instructions du fabricant concernant les adhésifs, les revêtements, les nettoyants, les consommables, les produits de refroidissement, les dégraissateurs, les flux et les métaux.

### L'ACCUMULATION DE GAZ risquent de provoquer des blessures ou même la mort.



- Fermer l'alimentation du gaz comprimé en cas de non utilisation.
- Veiller toujours à bien aérer les espaces confinés ou se servir d'un respirateur d'adduction d'air homologué.

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



Le rayonnement de l'arc du procédé de soudage génère des rayons visibles et invisibles intenses (ultraviolets et infrarouges) susceptibles de provoquer des brûlures dans les yeux et sur la peau. Des étincelles sont projetées pendant le soudage.

- Porter un casque de soudage approuvé muni de verres filtrants approprié pour protéger visage et yeux pendant le soudage (voir ANSI Z49.1 et Z87.1 énuméré dans les normes de sécurité).
- Porter des lunettes de sécurité avec écrans latéraux même sous votre casque.
- Avoir recours à des écrans protecteurs ou à des rideaux pour protéger les autres contre les rayonnements les éblouissements et les étincelles ; prévenir toute personne sur les lieux de ne pas regarder l'arc.
- Porter une protection corporelle en cuir ou des vêtements ignifuges (FRC). La protection du corps comporte des vêtements sans huile, comme des gants de cuir, une chemise solide, des pantalons sans revers, des chaussures hautes et une casquette.

### 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.

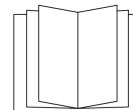
- Avertir les personnes à proximité au sujet du danger inhérent au bruit.

### 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 remplacement provenant du fabricant.
- Effectuer l'installation, l'entretien et toute intervention selon les manuels d'utilisateurs, les normes nationales, provinciales et de l'industrie, ainsi que les codes municipaux.

## 2-3 Proposition californienne 65 avertissements



**AVERTISSEMENT** – Ce produit peut vous exposer à des produits chimiques tels que le plomb, reconnus par l'État de Californie comme cancérigènes et sources de malformations ou d'autres troubles de la reproduction

Pour plus d'informations, consulter [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## 2-4 Principales normes de sécurité

*Safety in Welding, Cutting, and Allied Processes*, American Welding Society standard ANSI Standard Z49.1. Website: [www.aws.org](http://www.aws.org).

*Safe Practice For Occupational And Educational Eye And Face Protection*, ANSI Standard Z87.1, from American National Standards Institute. Website: [www.ansi.org](http://www.ansi.org).

*Safe Practices for the Preparation of Containers and Piping for Welding and Cutting*, American Welding Society Standard AWS F4.1 from Global Engineering Documents. Website: [www.aws.org](http://www.aws.org).

*National Electrical Code*, NFPA Standard 70 from National Fire Protection Association. Website: [www.nfpa.org](http://www.nfpa.org).

*Safe Handling of Compressed Gases in Cylinders*, CGA Pamphlet P-1 from Compressed Gas Association. Website: [www.cganet.com](http://www.cganet.com).

*Safety in Welding, Cutting, and Allied Processes*, CSA Standard W117.2 from Canadian Standards Association. Website: [www.csagroup.org](http://www.csagroup.org).

*Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*, NFPA Standard 51B from National Fire Protection Association. Website: [www.nfpa.org](http://www.nfpa.org).

OSHA, Occupational Safety and Health Standards for General Industry, Title 29, Code of Federal Regulations (CFR), Part 1910.177 Subpart N, Part 1910 Subpart Q, and Part 1926, Subpart J. Website: [www.osha.gov](http://www.osha.gov).

SR7\_fre 2022-01

## 2-5 Informations relatives aux CEM

Le courant électrique qui traverse tout conducteur génère des champs électromagnétiques (CEM) à certains endroits. Le courant issu d'un soudage à l'arc (et de procédés connexes, y compris le soudage par points, le gougeage, le découpage plasma et les opérations de chauffage par induction) crée un champ électromagnétique (CEM) autour du circuit de soudage. Les champs électromagnétiques produits peuvent causer interférence à certains implants médicaux, p. ex. les stimulateurs cardiaques. Des mesures de protection pour les porteurs d'implants médicaux doivent être prises: par exemple, des restrictions d'accès pour les passants ou une évaluation individuelle des risques 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 — PRECAUCIONES DE SEGURIDAD — LEA ANTES DE USAR

 Protéjase usted mismo y a otros contra lesiones — lea, cumpla y conserve estas importantes precauciones de seguridad e instrucciones de utilización.

### 3-1 Uso de símbolos

 **PELIGRO!** — Indica una situación peligrosa que, si no se la evita, resultará en muerte o lesión grave. Los peligros posibles se muestran en los símbolos adjuntos o se explican en el texto.

 Indica una situación peligrosa que, si no se la evita, podría resultar en muerte o lesión grave. Los peligros posibles se muestran en los símbolos adjuntos, o se explican en el texto.


*AVISO* — Indica precauciones no relacionadas a lesiones personales.


 — Indica instrucciones especiales.




Este grupo de símbolos significa ¡Advertencia!, ¡Cuidado! CHOQUE O DESCARGA ELÉCTRICA, PIEZAS QUE SE MUEVEN, y peligros de PARTES CALIENTES. Consulte los símbolos y las instrucciones relacionadas que aparecen a continuación para ver las acciones necesarias para evitar estos peligros.

### 3-2 Peligros en soldadura de arco

 Los símbolos mostrados abajo se usan en todo este manual para llamar la atención a e identificar los posibles peligros. Cuando vea el símbolo, preste atención y siga las instrucciones relacionadas para evitar el peligro. La información de seguridad dada abajo es solamente un resumen de la información más completa de seguridad que se encuentra en los estándares de seguridad, y la fuente de alimentación para soldadura del Manual del usuario. Lea y siga todas las normas de seguridad.

 Solamente personal cualificado debe instalar, utilizar, mantener y reparar este equipo. La definición de personal cualificado es cualquier persona que, debido a que posee un título, un certificado o una posición profesional reconocida, o gracias a su gran conocimiento, capacitación y experiencia, haya demostrado con éxito la capacidad para solucionar o resolver problemas relacionados con el trabajo, el proyecto o el tema en cuestión, además de haber asistido a una capacitación en seguridad para reconocer y evitar los peligros que implica el proceso.

 Durante su operación mantenga lejos a todos, especialmente a los niños.

**UNA DESCARGA ELÉCTRICA puede matarlo.**



- Siempre use guantes aislantes secos.
- Aíslese usted mismo del trabajo y la tierra.
- No toque electrodo eléctricamente vivo o partes eléctricamente vivas.
- Reemplace antorchas o cables desgastados, dañados o rotos.
- Repare o reemplace aislamiento de la pistola o del cable que esté desgastado, dañado o agrietado.
- Apague la máquina de soldar antes de cambiar los tubos de contacto o piezas de la antorcha.
- Mantenga todas las tapas y asa bien seguras en sitio.

**HUMO y GASES pueden ser peligrosos.**



- Mantenga su cabeza fuera del humo.
- Ventile el lugar o use un aparato para respirar. El método recomendado para determinar la ventilación adecuada es tomar muestras de la composición y cantidad de humos y gases a los que está expuesto el personal.
- Lea y entienda las Hojas de datos del material (SDS) y las instrucciones del fabricante relacionadas con los adhesivos, metales, consumibles, recubrimientos, limpiadores, refrigerantes, desengrasadores, fundentes y metales.

**Las PIEZAS MÓVILES pueden provocar lesiones.**



- Aléjese de toda parte en movimiento.
- Aléjese de todo punto que pellizque, tal como rodillos impulsados.

**EL SOLDAR puede causar fuego o explosión.**



- No suelde cerca de material inflamable
- No suelde en recipientes que han contenido combustibles, ni en recipientes cerrados como tanques, tambores o tuberías, a menos que estén preparados correctamente de acuerdo con la norma AWS F4.1 y AWS A6.0 (vea las normas de seguridad).
- Siempre mire que no haya fuego y mantenga un extinguidor de fuego cerca.
- Lea y entienda las Hojas de datos del material (SDS) y las instrucciones del fabricante relacionadas con los adhesivos, metales, consumibles, recubrimientos, limpiadores, refrigerantes, desengrasadores, fundentes y metales.

## EL AMONTONAMIENTO DE GAS puede enfermarle o matarle.



- Cierre el suministro de gas comprimido cuando no lo use.
- Siempre dé ventilación a espacios cerrados o use un respirador aprobado que reemplaza el aire.

## LOS RAYOS DEL ARCO pueden quemar sus ojos y piel.



Los rayos del arco de un proceso de suelda producen un calor intenso y rayos ultravioletas fuertes que pueden quemar los ojos y la piel. Las chispas se escapan de la soldadura.

- Use una careta para soldar aprobada equipada con un filtro de protección apropiado para proteger su cara y ojos de los rayos del arco y de las chispas mientras esté soldando o mirando. (véase los estándares de seguridad ANSI Z49.1 y Z87.1).
- Use anteojos de seguridad aprobados que tengan protección lateral.
- Use pantallas de protección o barreras para proteger a otros del destello, reflejos y chispas, alerte a otros que no miren el arco.
- Use protección para el cuerpo hecha de cuero o de prendas resistentes a las llamas (FRC). Entre la protección para el cuerpo se incluye la ropa sin aceite, como guantes de cuero, una camisa gruesa, pantalones sin vuelta, calzado alto y una gorra.

## PARTES CALIENTES pueden causar quemaduras severas.



- Permita que la antorcha se enfríe antes de tocarla.
- No toque metal caliente.
- Proteja a otros del contacto con el metal caliente.

## EL RUIDO puede trastornar su oído.



Ruido proveniente de algunos procesos o equipo puede dañar el oído.

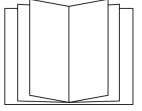
- Chequee los límites del nivel del ruido si exceden aquellos especificados por OSHA.
- Use tapas para los oídos o cubiertas para los oídos si el nivel del ruido es demasiado alto.
- Advierta a otros que estén cerca acerca del peligro del ruido.

## EL ALAMBRE de SOLDAR puede causarle heridas.



- Mantenga las manos y el cuerpo lejos del tubo de contacto de la antorcha cuando se haya presionado el gatillo.

## LEER INSTRUCCIONES.



- Lea y siga cuidadosamente las instrucciones contenidas en todas las etiquetas y en el Manual del usuario antes de instalar, utilizar o realizar tareas de mantenimiento en la unidad. Lea la información de seguridad incluida en la primera parte del manual y en cada sección.
- Utilice únicamente piezas de reemplazo legítimas del fabricante.
- Los trabajos de instalación y mantenimiento deben ser ejecutados de acuerdo con las instrucciones del manual del usuario, las normas del sector y los códigos nacionales, estatales y locales.

### 3-3 Advertencias de la Proposición 65 del estado de California



**ADVERTENCIA:** Este producto puede exponerlo a químicos, incluso plomo, que el estado de California conoce como causantes de cáncer, defectos de nacimiento u otros daños reproductivos.

Para obtener más información, acceda a [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### 3-4 Estándares principales de seguridad

*Safety in Welding, Cutting, and Allied Processes*, American Welding Society standard ANSI Standard Z49.1. Website: [www.aws.org](http://www.aws.org).

*Safe Practice For Occupational And Educational Eye And Face Protection*, ANSI Standard Z87.1, from American National Standards Institute. Website: [www.ansi.org](http://www.ansi.org).

*Safe Practices for the Preparation of Containers and Piping for Welding and Cutting*, American Welding Society Standard AWS F4.1 from Global Engineering Documents. Website: [www.aws.org](http://www.aws.org).

*National Electrical Code*, NFPA Standard 70 from National Fire Protection Association. Website: [www.nfpa.org](http://www.nfpa.org).

*Safe Handling of Compressed Gases in Cylinders*, CGA Pamphlet P-1 from Compressed Gas Association. Website: [www.cganet.com](http://www.cganet.com).

*Safety in Welding, Cutting, and Allied Processes*, CSA Standard W117.2 from Canadian Standards Association. Website: [www.csagroup.org](http://www.csagroup.org).

*Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*, NFPA Standard 51B from National Fire Protection Association. Website: [www.nfpa.org](http://www.nfpa.org).

OSHA, Occupational Safety and Health Standards for General Industry, Title 29, Code of Federal Regulations (CFR), Part 1910.177 Subpart N, Part 1910 Subpart Q, and Part 1926, Subpart J. Website: [www.osha.gov](http://www.osha.gov).

SR7\_spa 2022-01

### 3-5 Información sobre los campos electromagnéticos (EMF)

La corriente que fluye a través de un conductor genera campos eléctricos y magnéticos (EMF) localizados. La corriente del arco de soldadura (y otras técnicas afines como la soldadura por puntos, el ranurado, el corte por plasma y el calentamiento por inducción) genera un campo EMF alrededor del circuito de soldadura. Los campos EMF pueden interferir con algunos dispositivos médicos implantados como, por ejemplo, los marcapasos. Por lo tanto, se deben tomar medidas de protección para las personas que utilizan estos implantes médicos. Por ejemplo, aplique restricciones al acceso de personas que pasan por las cercanías o realice evaluaciones de riesgo individuales para los soldadores. Todos los soldadores deben seguir los procedimientos que se indican a continuación con el objeto de minimizar la exposición a los campos EMF generados por el circuito de soldadura:

1. Mantenga los cables juntos retorciéndolos entre sí o uniéndolos mediante cintas o una cubierta para cables.
2. No ubique su cuerpo entre los cables de soldadura. Disponga los cables a un lado y apartelos del operario.

3. No enrolle ni cuelgue los cables sobre su cuerpo.
4. Mantenga la cabeza y el tronco tan apartados del equipo del circuito de soldadura como le sea posible.
5. Conecte la pinza de masa en la pieza lo más cerca posible de la soldadura.
6. No trabaje cerca de la fuente de alimentación para soldadura, ni se siente o recueste sobre ella.
7. No suelde mientras transporta la fuente de alimentación o el alimentador de alambre.

#### **Acerca de los aparatos médicos implantados:**

Las personas que usen aparatos médico implantados deben consultar con su médico y el fabricante del aparato antes de llevar a cabo o acercarse a soldadura de arco, soldadura de punto, ranurar, hacer corte por plasma, u operaciones de calentamiento por inducción. Si su doctor lo permite, entonces siga los procedimientos de arriba.

# SECTION 4 — PRODUCT WARRANTY

## 4-1 Product Warranty

### Limited Warranty

Tregaskiss' Products shall, from the date of original purchase (or, solely with respect to Low Stress Robotic Unicables packaged with any Tregaskiss® Robotic MIG Gun, from the date the product goes into production for its intended use) and for the period set forth below, be free from defects in material and workmanship. To obtain repair or replacement of any Product, the covered Product must be delivered, transportation pre-paid by Purchaser, to the address specified by Tregaskiss on its Returned Materials Authorization, with: (i) written proof of warranty coverage (e.g., Purchaser dated purchase order); (ii) serial number on product (if any); (iii) the Product's installed location within Purchaser's facility and usage of the Product; and (iv) written specification of any alleged defect(s). In the event the foregoing materials are not timely provided to Tregaskiss by claimant, warranty coverage will be determined by Tregaskiss, in its sole discretion. For the avoidance of doubt, the warranty period for any Product or part/component of any Product that is replaced or repaired by Tregaskiss under the foregoing warranty is not extended or renewed at the time of such replacement or repair. **The Warranty against defects does not apply to: (1) consumable components or ordinary wear items; (2) products which are improperly altered, modified, stored, installed, operated, handled, used or neglected or use of the Products with equipment, components or parts not specified or supplied by Tregaskiss or contemplated under the Product documentation; or (3) Products which have not been operated, maintained, and repaired pursuant to Product documentation provided by Tregaskiss. Purchaser shall pay Tregaskiss for all warranty claim costs incurred by Tregaskiss (including inspection, labor, parts, testing, scrap and freight) due to warranty claims submitted by Purchaser which are not covered by Tregaskiss' warranty.**

- Bernard® BTB Semi-Automatic Air-Cooled MIG Guns: **1 year**; *Lifetime warranty on straight handles, straight handle switches, and rear strain relief*
- Bernard® W-Gun™ and T-Gun™ Semi-Automatic Water-Cooled MIG Guns: **180 days**
- Bernard® TGX® Chassis and Bernard TGX Ready To Weld MIG Guns: **90 days**
- Tregaskiss® Robotic MIG Guns and Components: **1 year**
- Tregaskiss® Automatic MIG Guns: **1 year**
- Tregaskiss® TOUGH GUN® Reamer:
  - When factory-equipped with lubricator: **2 years** when factory-equipped with lubricator
  - When (i) factory-equipped with lubricator and (ii) used exclusively with Tregaskiss® TOUGH GARD® Anti-Spatter Liquid: **3 years** when both (i) and (ii)
- Tregaskiss® TOUGH GUN® Robotic Peripheral (Clutch, Sprayer, Wire Cutter, Arms): **1 year**
- Tregaskiss® Low-Stress Robotic Unicables (LSR+ Unicables): **6 months**

### Service Warranty

Tregaskiss warrants the Services shall conform to any mutually agreed upon specifications or statements of work. Purchaser's sole remedy, and Tregaskiss's sole liability, for a breach of the foregoing warranty is for Tregaskiss, at its option, to re-perform the Services or credit Purchaser's account for such Services.

### Limitation of Liability and Remedies

TREGASKISS WILL NOT BE LIABLE, AND PURCHASER WAIVES ALL CLAIMS AGAINST TREGASKISS FOR INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, DOWN TIME, LOST PROFITS OR COMMERCIAL LOSSES, WHETHER OR NOT BASED UPON TREGASKISS' NEGLIGENCE OR BREACH OF WARRANTY OR STRICT LIABILITY IN TORT OR ANY OTHER CAUSE OF ACTION. IN NO EVENT WILL TREGASKISS' LIABILITY IN CONNECTION WITH THE AGREEMENT OR SALE OF TREGASKISS' PRODUCTS OR SERVICES EXCEED THE PURCHASE PRICE OF THE SPECIFIC PRODUCTS OR SERVICES AS TO WHICH THE CLAIM IS MADE.

# SECTION 5 — SPECIFICATIONS

## 5-1 System Components

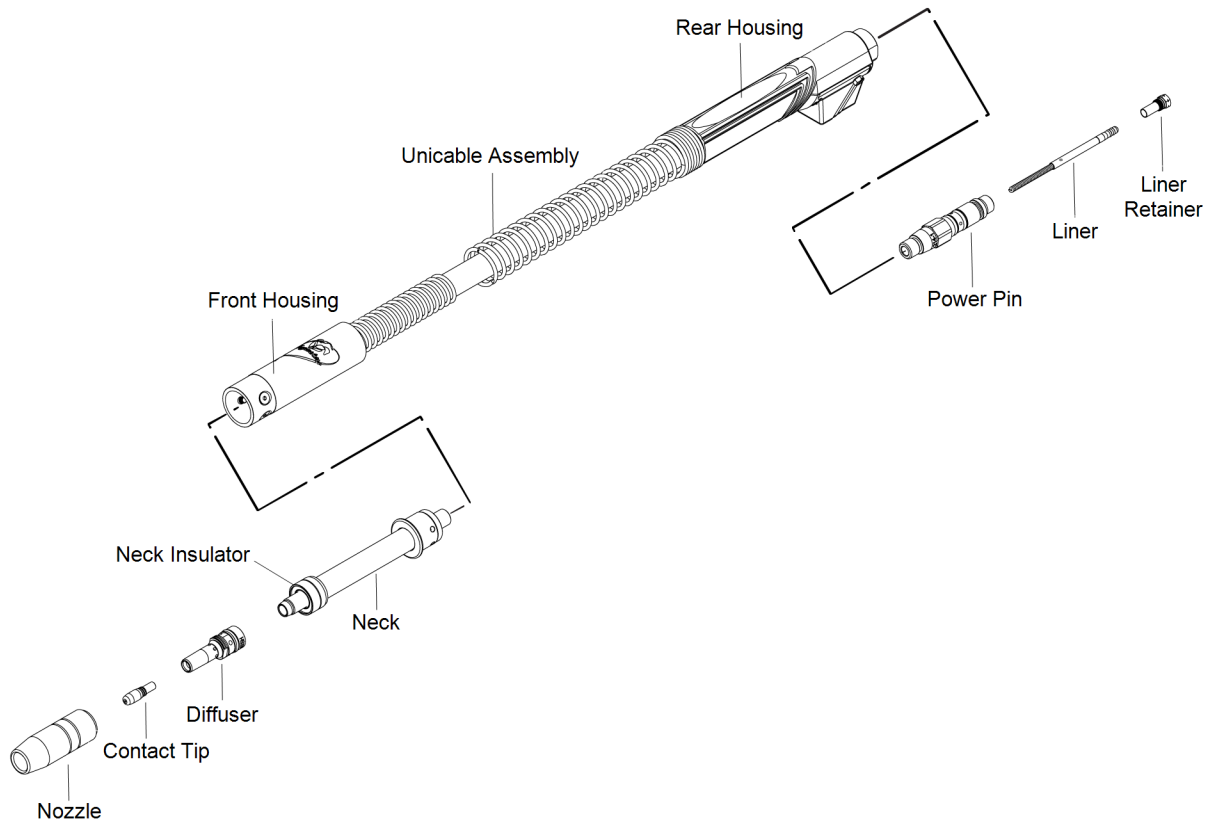
Fixed Automatic MIG Gun for GMAW Welding

### Duty Cycle Rating:

100%: 385 amp CO<sub>2</sub> gas and mixed gases

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

For complete parts list, please see Section 9 — Parts List on page 20.





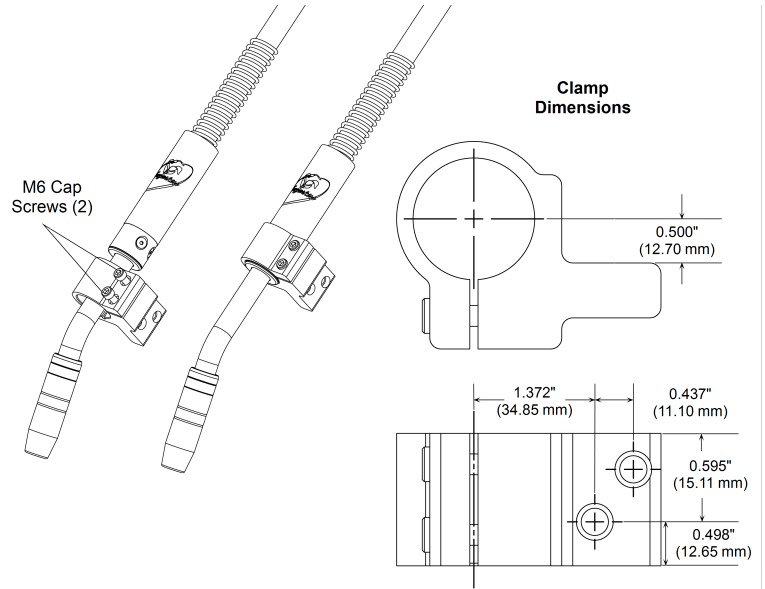
# SECTION 6 — INSTALLATION

## 6-1 Installing Mounting Options



1. Loosen (do not remove) M6 cap screws (2) to open mounting arm clamp for gun insertion.
2. Insert the gun through the clamp.
3. Position the gun to the desired orientation and CTWD (contact tip to work distance).
4. Tighten the clamp screws to secure the gun in place.

**NOTE:** Clamp ONLY is part # AS-306-2C

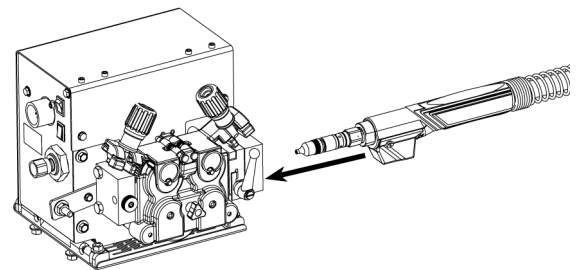


## 6-2 Installing Gun to Wire Feeder



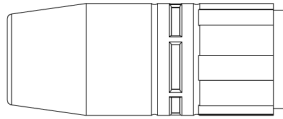
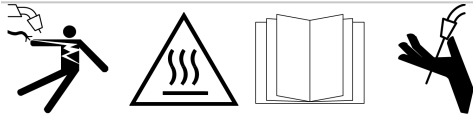
1. Guide welding wire into power pin.
2. Insert power pin to shoulder.
3. Secure power pin into the feeder.
4. Connect external gas if required.

**NOTE:** Be sure to align any features to allow for proper installation.

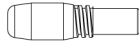


# SECTION 7 — REPLACEMENT

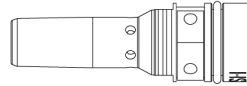
## 7-1 Changing Consumables



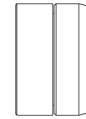
Nozzle



Contact Tip



Retaining Head / Diffuser



Neck Insulator

### IMPORTANT NOTES:

- Contact tip must be properly tightened before welding to prevent overheating or premature failure.
- Neck insulator **MUST** be in place before welding to properly insulate gun.
- Check all parts to ensure that connections are tight before welding.
- The retaining head / diffuser **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 / diffuser or scoring may result.

### A. Changing the Nozzle

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

### B. Changing the Contact Tip

1. Remove the worn contact tip with welpers and discard.
2. Thread the new contact tip into the retaining head / diffuser.
3. Torque to 30 in-lbs (3.5 Nm).

**NOTE:** The Tregaskiss Tip Tool (part# T-ALTOOL; for AccuLock™ contact tips) or a pair of welpers are the optimal tools for AccuLock contact tip installation.

### C. Changing the Retaining Head / Diffuser

1. Remove the worn retaining head / diffuser and discard.
2. Thread the new retaining head / diffuser onto the neck by hand. Tighten with a 5/8" (16 mm) wrench.
3. Torque to 80 in-lbs (9 Nm).

**IMPORTANT:** DO NOT use pliers to remove or tighten the retaining head / diffuser or scoring may result.

### D. Changing the Neck Insulator

1. Remove front-end consumables.
2. Press the new neck insulator onto the neck by hand with the aluminum side towards the neck and the black insulation towards the nozzle.
3. Reinstall front-end consumables.

## 7-2 Neck Replacement



### A. Step #1

**NOTE:** Cable connection between the connector cone and crimp ring should not be disturbed.

1. Remove consumables from neck, if liner is installed.
2. Place neck in vise.
3. Remove all four housing screws with 3mm Allen wrench.
4. Slide handle back exposing connector cone and crimp ring.
5. Loosen connector cone from neck using a 1" (25 mm) wrench.
6. Remove from vise and thread out neck by hand.

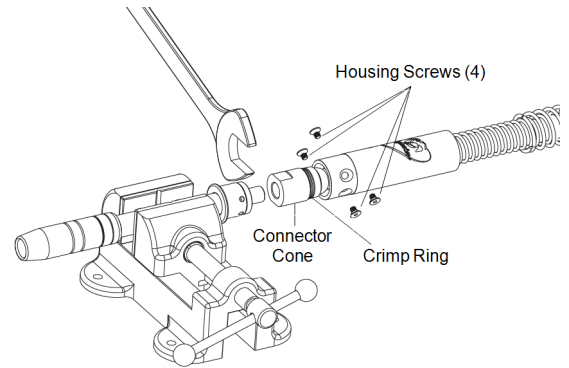


Figure 7-A

### B. Step #2

1. Remove consumables from neck, if liner is installed.
2. Thread neck into connector cone (hand-tighten)
3. Place the new neck in a vise and tighten with 1" (25 mm) wrench Figure 7-B to within 1/8" (3.2 mm) spacing between the connector cone and body of neck (Figure 7-C).
4. Torque cable onto new neck at 18 ft-lbs (24Nm).
5. Slide housing forward and align screw holes with those in the neck body.
6. Reinstall all four housing screws using 3mm Allen wrench.

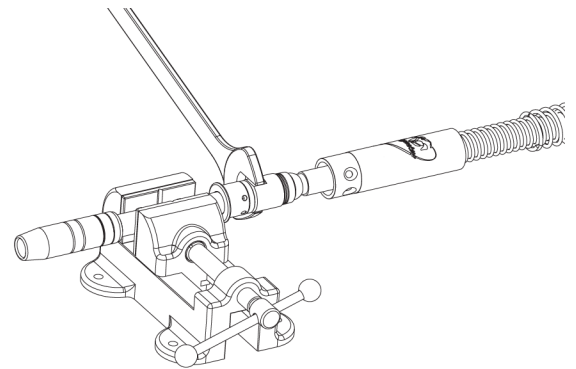


Figure 7-B

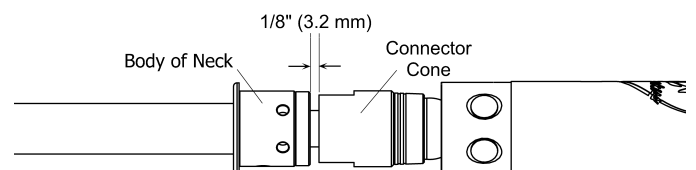
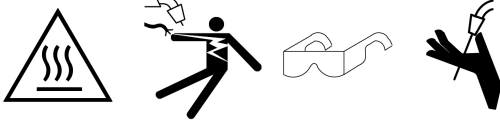


Figure 7-C

## 7-3 Changing the Liner

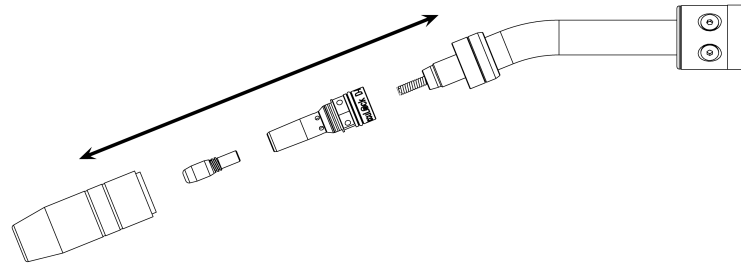


### A. Changing QUICK LOAD® Liner

Figure 7-D

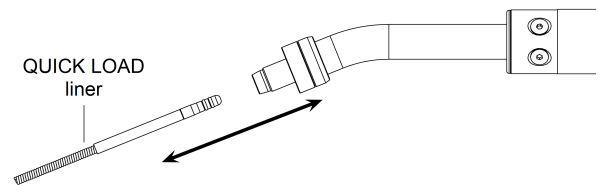
**NOTE:** Ensure power supply is off before proceeding.

1. Remove consumables (nozzle, contact tip and retaining head / diffuser) (see Figure 7-D)



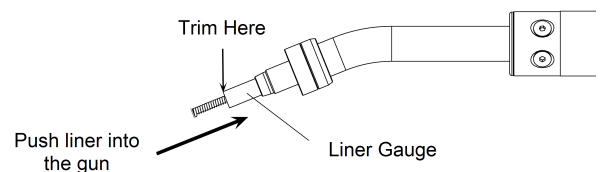
2. Remove existing QUICK LOAD liner by pulling it out from the neck. (See Figure 7-E)
3. Insert the new QUICK LOAD liner through the neck using the welding wire as a guide (short strokes will prevent kinking). (See Figure 7-E)
4. Once liner stops feeding, give it an extra push until it bottoms out in the liner retainer in the power pin to ensure it is inserted completely.

Figure 7-E



5. Push liner back into gun and hold in place. Using liner gauge, trim liner to appropriate stick-out as per instructions included with the liner. (Gauge length: ½" for liners under 6 ft and ¾" for liners over 6 ft)  
**HELPFUL HINT:** Before cutting liner, make a mark after the gauge and pull it back out past the end of the welding wire; then cut it and push the liner back into place securely. This will help with feeding the wire through the contact tip afterward. (See Figure 7-F)
6. Remove any burrs that may obstruct wire feed.
7. Reinstall consumables onto neck. (See Figure 7-D)

Figure 7-F



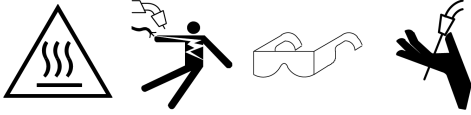
---

## B. Changing QUICK LOAD Liner with the AutoLength System

**NOTE:** Ensure power supply is off before proceeding.

1. Remove consumables (nozzle, contact tip and retaining head / diffuser) (see Section 4-1 Changing Consumables on page 10).
2. Remove existing QUICK LOAD liner by pulling it out from the neck.
3. Insert the new QUICK LOAD liner through the neck using the welding wire as a guide (short strokes will prevent kinking).
4. Feed liner into the gun until it engages with the retainer inside the AutoLength Pin. Place the liner gauge onto the end of the QUICK LOAD liner and press flush with the end of the neck.
5. Push the QUICK LOAD liner into the gun until the liner will not go forward any further. **NOTE:** Liner will be pushed in by approximately one additional inch.
6. Using the liner gauge, trim the liner with 3/4" (20 mm) stick out. **NOTE:** After trimming, the liner will stick out of the neck by approximately 1-3/4". This is normal, as the liner will be pushed back into the neck when the consumables are installed.
7. Feed wire through the MIG gun.
8. Reinstall consumables.

## 7-4 Changing the Power Pin or AutoLength™ Pin

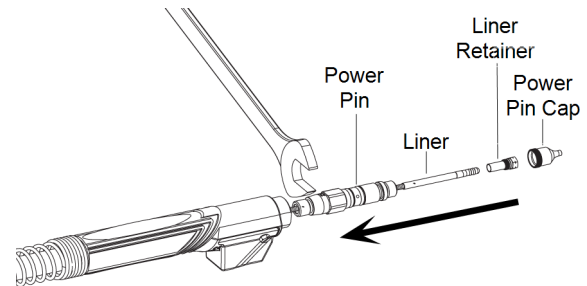


**IMPORTANT:** The thread-in power pin incorporates a taper to seat and lock the power pin in the rear handle block. Make sure power pin is torqued into the block with a wrench to ensure proper function.

**NOTE:** The rear handle and screws do not have to be removed when installing the power pin.

1. Thread power pin into rear handle block.
2. Torque the power pin into the rear block to 18 ft-lbs (24 Nm) using a wrench on the rear block and a wrench on the power pin.
3. Install liner (see Section 4-3 Changing the Liner on page 12).
4. Install gun to feeder (see below):

Figure 7-G



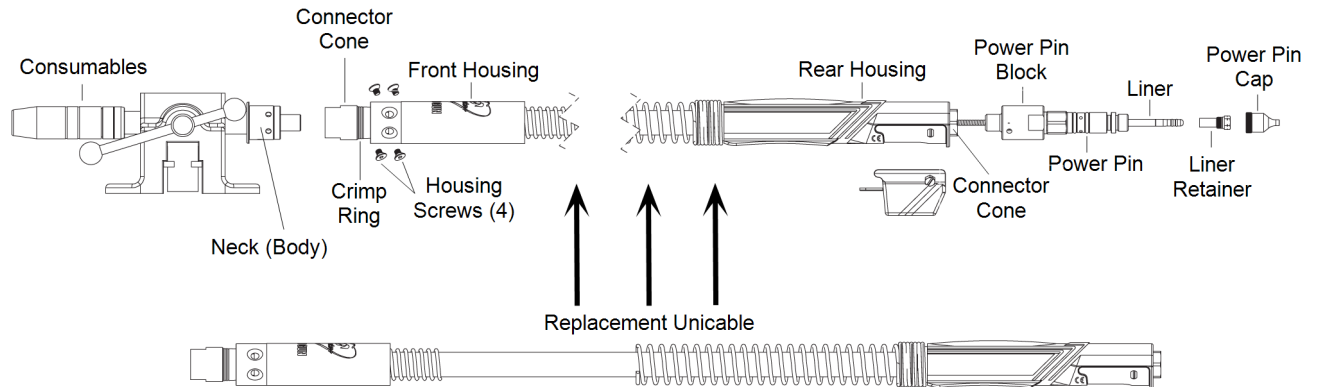
### Miller®, Lincoln® and ESAB® (Non-Euro) Power Pin

- Insert power pin to shoulder and secure.
- Feed welding wire into power pin by hand and tighten drive rolls.
- On Lincoln, it is necessary to connect gas hose to gas fitting on power pin.

### Euro or Bernard Connector

- Feed welding wire through female adaptor by hand and tighten drive rolls.
- Guide welding wire into connector on the gun, carefully insert connector into female adaptor and tighten Euro hand nut or Bernard style locking collar.

## 7-5 Unicable Replacement

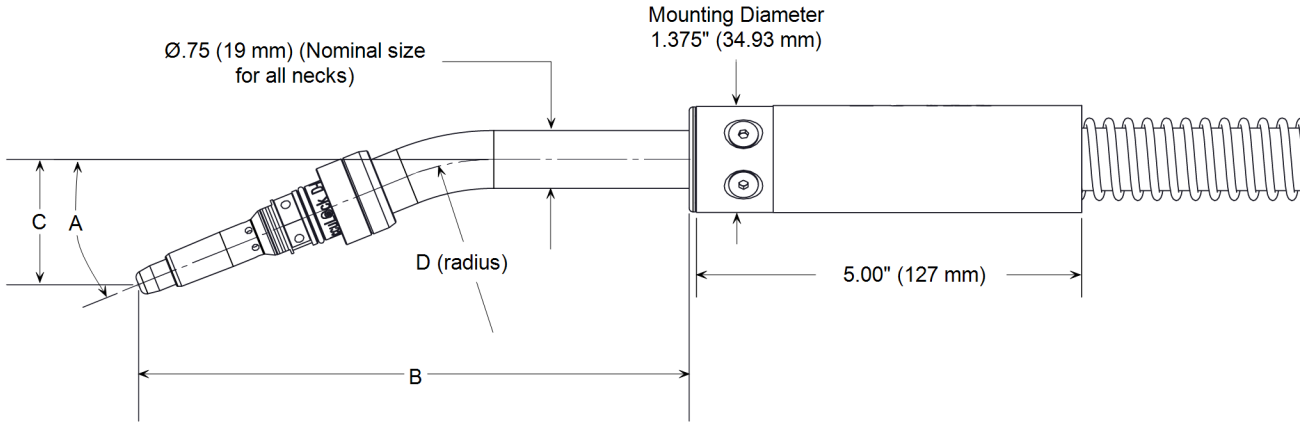


**NOTE:** Cable connection between connector cone and crimp ring should not be disturbed.

1. Remove liner from gun (see section 7-3 Changing the Liner on page 15).
2. Mount neck in vise.
3. Remove four housing screws and slide housing back (front and back).
4. Loosen connector cone from neck using 1" (25 mm) wrench.
5. Remove from vise and thread out neck by hand.
6. Unthread power pin and remove using 1" (25 mm) on connector cone and a 5/8" (16 mm) or 3/4" (19 mm) wrench on power pin. Install new power pin. (see section 7-4 Changing the Power Pin or AutoLength™ Pin on page 17).
7. Reinstall neck (see section 7-2 Neck Replacement on page 14).
8. Reinstall consumables (see section 7-1 Changing Consumables on page 13).
9. Reinstall power pin (see section 7-4 Changing the Power Pin or AutoLength™ Pin on page 17).
10. Reinstall the housing screws.

# SECTION 8 — TECHNICAL DATA

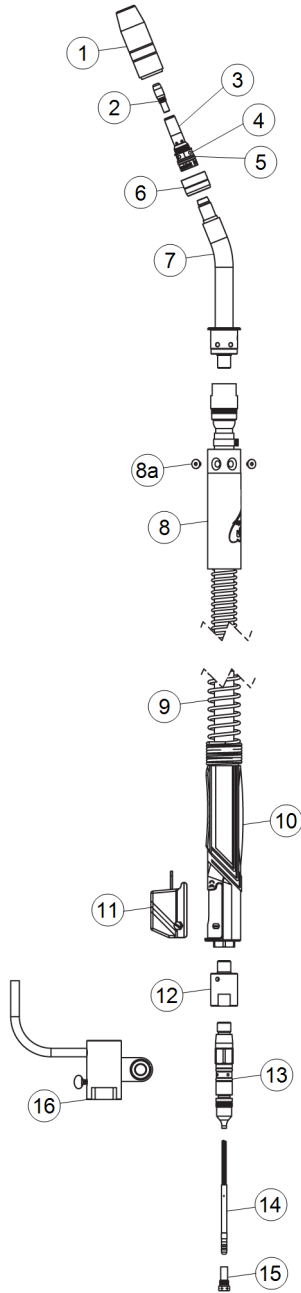
## 8-1 Neck Dimensions



Neck Part #	Angle	B		C		D	
405-22	22°	7.10"	180 mm	1.63"	41 mm	3.00"	76 mm
405-45	45°	5.19"	132 mm	3.55"	90 mm	3.00"	76 mm
305-60	60°	4.10"	105 mm	4.00"	103 mm	2.00"	51 mm
405-60	60°	4.98"	127 mm	4.78"	121 mm	3.00"	76 mm
405-180	180°	7.38"	187 mm	---	---	---	---
505-22	22°	8.29"	211 mm	1.72"	44 mm	4.00"	102 mm
505-45	45°	7.23"	184 mm	3.87"	98 mm	4.00"	102 mm
505-60	60°	6.04"	153 mm	5.30"	135 mm	4.00"	102 mm
505-180	180°	8.63"	219 mm	---	---	---	---
405-45LL	45°	8.69"	221 mm	7.78"	121 mm	3.00"	76 mm
405-60LL	60°	8.48"	216 mm	7.78"	121 mm	3.00"	76 mm



# SECTION 9 — PARTS LIST



ITEM	PART #	DESCRIPTION
1	See SP-MA1	Nozzle
2	See SP-MA1	Contact Tip
3	See SP-MA1	Retaining Head / Diffuser
4	454-1-2	Retaining Ring Only
5	402-21	O-Ring Only
6	402-11	Neck Insulator
7	See Section 8-1	Neck
8	610-10	Front Housing
8a	410-12 m	Housing Screw - Countersink - M5 x 0.8 x 7 mm
9	See SP-MA1	Unicable Assembly
10	666-10	Handle Assembly
11	416-15	Housing
12	414-400	Power Pin Block
13	See SP-MA1	Power Pin
14	See SP-MA1	Liner
15	See SP-MA1	Liner Retainer
16	417	Feeder Adaptor (Sold Separately) Quick Connect Block Assembly

## SECTION 10 — TROUBLESHOOTING

### 10-1 Troubleshooting Table

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Electrode does not feed.	<ol style="list-style-type: none"> <li>1. Feeder relay.</li> <li>2. Poor cable management.</li> <li>3. Poor adaptor connection.</li> <li>4. Improper / worn drive roll.</li> <li>5. Drive roll tension misadjusted.</li> <li>6. Burn back to contact tip.</li> <li>7. Wrong size liner.</li> <li>8. Buildup inside of liner.</li> </ol>	<ol style="list-style-type: none"> <li>1. Consult feeder manufacturer.</li> <li>2. Utilize counter balances or obtain a shorter unicable assembly to ensure a smooth wire feeding path.</li> <li>3. Test and replace leads and/or contact pins.</li> <li>4. Replace drive roll.</li> <li>5. Adjust tension at feeder.</li> <li>6. See '<b>Contact tip burn back</b>'.</li> <li>7. Replace with correct size.</li> <li>8. Replace liner or clean out with compressed air, check condition of electrode.</li> </ol>
2. Contact tip burn back.	<ol style="list-style-type: none"> <li>1. Improper voltage and/or wire feed speed.</li> <li>2. Erratic wire feeding.</li> <li>3. Improper tip stickout.</li> <li>4. Improper electrode stickout.</li> <li>5. Faulty ground.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust parameters.</li> <li>2. See '<b>Erratic wire feeding</b>'.</li> <li>3. Adjust nozzle / tip relationship.</li> <li>4. Adjust wire stickout.</li> <li>5. Replace cables and/or connections.</li> </ol>
3. Tip disengages from the gas diffuser.	<ol style="list-style-type: none"> <li>1. Worn retaining head / diffuser.</li> <li>2. Improper tip installation.</li> <li>3. Extreme heat or duty cycle.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace tip and/or gas diffuser / retaining head / diffuser.</li> <li>2. Install as per section 7-1 Changing Consumables on page 13.</li> <li>3. Replace with heavy duty consumables. See appropriate Spec Sheet for details.</li> </ol>
4. Short contact tip life.	<ol style="list-style-type: none"> <li>1. Contact tip size</li> <li>2. Electrode eroding contact tip.</li> <li>3. Exceeding duty cycle.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with proper size.</li> <li>2. Inspect and/or change drive rolls.</li> <li>3. Replace with properly rated Tregaskiss fixed automatic MIG gun.</li> </ol>
5. Erratic arc.	<ol style="list-style-type: none"> <li>1. Worn contact tip.</li> <li>2. Buildup inside of liner.</li> <li>3. Wrong tip size.</li> <li>4. Not enough bend in neck.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace contact tip.</li> <li>2. Replace liner, check condition of electrode.</li> <li>3. Replace with correct tip size.</li> <li>4. Replace with 45° neck.</li> </ol>
6. Erratic wire feeding.	<ol style="list-style-type: none"> <li>1. Buildup inside of liner.</li> <li>2. Wrong size liner.</li> <li>3. Improper drive roll size.</li> <li>4. Worn drive roll.</li> <li>5. Improper guide tube relationship.</li> <li>6. Improper wire guide diameter.</li> <li>7. Gaps at liner junctions.</li> <li>8. Feeder malfunction.</li> <li>9. Worn contact tip.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace liner, check condition of electrode.</li> <li>2. Replace with new liner of proper size.</li> <li>3. Replace with proper size drive roll.</li> <li>4. <b>a.</b> Replace with new drive roll. <b>b.</b> Repair worn drive roll.</li> <li>5. <b>a.</b> Adjust / replace guide as close to drive rolls as possible. <b>b.</b> Eliminate all gaps in electrode path.</li> <li>6. Replace with proper guide diameter.</li> <li>7. <b>a.</b> Replace with new liner trimmed as per section 7-3 Changing the Liner on page 15. <b>b.</b> Replace guide tube / liner trimming as close to mating component as possible.</li> <li>8. Consult feeder manufacturer.</li> <li>9. Inspect and replace.*</li> </ol>
7. Extreme spatter.	<ol style="list-style-type: none"> <li>1. Improper machine parameters.</li> <li>2. Improper tip installation.</li> <li>3. Improper shielding gas coverage.</li> <li>4. Contaminated wire or workpiece.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust parameters.</li> <li>2. Adjust nozzle / tip relationship.</li> <li>3. <b>a.</b> Verify shielding gas coverage. <b>b.</b> Verify gas mixture.</li> <li>4. Clean wire and workpiece.</li> </ol>

8. Porosity in weld.	<ol style="list-style-type: none"> <li>1. Nozzle insulator is worn.</li> <li>2. Gas diffuser damaged</li> <li>3. Extreme heat or duty cycle.</li> <li>4. Solenoid faulty.</li> <li>5. No gas.</li> <li>6. Gas flow improperly set.</li> <li>7. Gas ports plugged.</li> <li>8. Punctured or leaking gas hose.</li> <li>9. Worn, cut or missing o-rings.</li> <li>10. Loose fittings.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace nozzle.</li> <li>2. Replace gas diffuser or o-rings.</li> <li>3. Replace with heavy duty consumables.</li> <li>4. Replace solenoid.</li> <li>5. <b>a.</b> Check supply. <b>b.</b> Check for hose leaks.</li> <li>6. Adjust flow.</li> <li>7. <b>a.</b> Clean or replace gas diffuser. <b>b.</b> Clean nozzle.</li> <li>8. Repair or replace gas line and fittings.</li> <li>9. Replace o-rings.</li> <li>10. Tighten gun and cable connections to specified torque. See section 7-5 Unicable Replacement on page 18.</li> </ol>
9. Gun running hot.	<ol style="list-style-type: none"> <li>1. Exceeding duty cycle.</li> <li>2. Loose or poor power connection.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>a.</b> Replace with properly rated Tregaskiss fixed automatic MIG gun. <b>b.</b> Decrease parameters to within gun rating.</li> <li>2. <b>a.</b> Clean, tighten or replace cable grounding connection. <b>b.</b> Tighten gun and cable connections to specified torque. See section 7-5 Unicable Replacement on page 18.</li> </ol>
10. Liner is discolored.	<ol style="list-style-type: none"> <li>1. Short circuit to electrode.</li> <li>2. Broken copper stranding in power cable.</li> </ol>	<ol style="list-style-type: none"> <li>1. Isolate electrode reel from feeder and drive block. Consult feeder manufacturer's manual.</li> <li>2. Replace unicable.</li> </ol>
11. Sporadic feeding of aluminum electrode.	<ol style="list-style-type: none"> <li>1. Tip galling.</li> <li>2. Synthetic liner melting.</li> <li>3. Wire deformed by feeder rolls.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect and replace the contact tip.*</li> <li>2. <b>a.</b> Replace liner. <b>b.</b> Replace the jump liner.</li> <li>3. Adjust drive rolls as per feeder manufacturer's manual.</li> </ol>

*\*In some aluminum applications, it may be necessary to use a tip 1 size LARGER than the welding electrode. In some mild steel applications (using >500 lb (227 kg) spools) it may be necessary to use a contact 1 size SMALLER than the welding electrode.*

# ADDITIONAL SUPPORT MATERIALS

---

For additional support materials such as Spec Sheets, troubleshooting information, how-to guides and videos, animations, online configurators and much more, please visit Tregaskiss. Scan the QR Code with your smart phone for immediate access to [Tregaskiss.com/TechnicalSupport](http://Tregaskiss.com/TechnicalSupport).



Scan to view the Tregaskiss® MA1 Air-Cooled Fixed Automatic MIG Gun Owner's Manual



Scan to view the Tregaskiss® MA1 Air-Cooled Fixed Automatic MIG Gun Spec Sheet



Scan to view the AccuLock™ R Consumables Spec Sheet



Scan to view the TOUGH LOCK® Consumables Spec Sheet



Scan to view the QUICK LOAD® Liners & AutoLength™ Pins Spec Sheet



Scan to view Tregaskiss® Owner's Manuals and Spec Sheets



---

**Tregaskiss**  
2570 North Talbot Road  
Windsor, Ontario NOR 1L0  
Canada

Phone: 1-855-MIGWELD (644-9353) (US & Canada)  
+1-519-737-3000 (International)  
Fax: 1-519-737-1530



For more information, visit us at [Tregaskiss.com](http://Tregaskiss.com)

---