

KLUTCH®

Quick Draw Spool Gun

OWNER'S MANUAL



WARNING:

Read carefully and understand all **ASSEMBLY AND OPERATION INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item# 44453

Thank you very much for choosing a KLUTCH product! For future reference, please complete the owner's record below:

Model: _____ Purchase Date: _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This machine is designed for certain applications only. The distributor cannot be responsible for issues arising from modification. We strongly recommend this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted the distributor to determine if it can or should be performed on the product.

For technical questions please call the Northern Tool Welder Help Line at **1-877-304-0294**.

INTENDED USE

The KLUTCH Quick Draw Spool Gun is exclusively designed to connect to the KLUTCH MIG 140Si, KLUTCH MIG/Stick 220Si and KLUTCH MIG 250S only.

Welding with a MIG wire does require the use a bottle of shielding gas. See the Set-Up guide inside the wire compartment door for recommendations on shielding gas based on the material you are welding. MIG welding is limited to indoor applications, or applications where the influence of wind can be controlled to prevent shielding gas from blowing away. MIG welding allows you to weld thinner materials without burn through. It also creates a much cleaner weld with less spatter and no slag. This results in little post-weld cleaning of the weld joint.

Although most MIG welders can MIG weld aluminum, often a spool gun is needed to be successful. With the Quick Draw Spool Gun, the 4 inch roll of aluminum wire is mounted right on the MIG torch. The spool gun has its own wire drive system and can easily feed the soft aluminum wire the short distance to the arc. A spoolgun prevents feeding problems associated with feeding this soft wire through a lone MIG torch.

GENERAL SAFETY RULES



WARNING: Read and understand all instructions. Failure to follow all instructions listed below may result in serious injury.



CAUTION: Do not allow persons to operate or assemble this Quick Draw Spool Gun until they have read this manual and have developed a thorough understanding of how the Quick Draw Spool Gun works.



WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY CONSIDERATIONS

1.1 Your Welding Environment

- Keep the environment you will be welding in free from flammable materials.
- Always keep a fire extinguisher accessible to your welding environment.
- Always have a qualified person install and operate this equipment.
- Make sure the area is clean, dry and ventilated. Do not operate the welder in humid, wet or poorly ventilated areas.
- Always have your welder maintained by a qualified technician in accordance with local, state and national codes.
- Always be aware of your work environment. Be sure to keep other people, especially children, away from you while welding.
- Keep harmful arc rays shielded from the view of others.
- Mount the welder on a secure bench or cart that will keep the welder secure and prevent it from tipping over or falling.

1.2 Your Welder's Condition

- Check ground cable, power cord and welding cable to be sure the insulation is not damaged. Always replace or repair damaged components before using the welder.
- Check all components to ensure they are clean and in good operating condition before use.

1.3 Use of Your Welder

CAUTION

Do not operate the welder if the output cable, electrode, torch, wire or wire feed system is wet. Do not immerse them in water. These components and the welder must be completely dry before attempting to use them.

- Follow the instructions in this manual.
- Keep welder in the off position when not in use.

- Connect ground lead as close to the area being welded as possible to ensure a good ground.
- Do not allow any body part to come in contact with the welding wire if you are in contact with the material being welded, ground or electrode from another welder.
- Do not weld if you are in an awkward position. Always have a secure stance while welding to prevent accidents. Wear a safety harness if working above ground.
- Do not drape cables over or around your body.
- Wear a full coverage helmet with appropriate shade (see ANSI Z87.1 safety standard) and safety glasses while welding.
- Wear proper gloves and protective clothing to prevent your skin from being exposed to hot metals, UV and IR rays.
- Do not overuse or overheat your welder. Allow proper cooling time between duty cycles.
- Keep hands and fingers away from moving parts and stay away from the drive rolls.
- Do not point torch at any body part of yourself or anyone else.
- Always use this welder in the rated duty cycle to prevent excessive heat and failure.

1.4 Specific Areas of Danger, Caution or Warning



Electrical Shock

⚠ WARNING

Electric arc welders can produce a shock that can cause injury or death. Touching electrically live parts can cause fatal shocks and severe burns. While welding, all metal components connected to the wire are electrically hot. Poor ground connections are a hazard, so secure the ground lead before welding.

- Wear dry protective apparel: coat, shirt, gloves and insulated footwear.
- Insulate yourself from the work piece. Avoid contacting the work piece or ground.
- Do not attempt to repair or maintain the welder while the power is on.
- Inspect all cables and cords for any exposed wire and replace immediately if found.
- Use only recommended replacement cables and cords.
- Always attach ground clamp to the work piece or work table as close to the weld area as possible.
- Do not touch the welding wire and the ground or grounded work piece at the same time.
- Do not use a welder to thaw frozen pipes.



Fumes and Gases

⚠ WARNING

- Fumes emitted from the welding process displace clean air and can result in injury or death.
- Do not breathe in fumes emitted by the welding process. Make sure your breathing air is clean and safe.
- Work only in a well-ventilated area or use a ventilation device to remove welding fumes from the environment where you will be working.
- Do not weld on coated materials (galvanized, cadmium plated or containing zinc, mercury or barium). They will emit harmful fumes that are dangerous to breathe. If necessary use a ventilator, respirator with air supply or remove the coating from the material in the weld area.
- The fumes emitted from some metals when heated are extremely toxic. Refer to the material safety data sheet for the manufacturer's instructions.
- Do not weld near materials that will emit toxic fumes when heated. Vapors from cleaners, sprays and degreasers can be highly toxic when heated.



UV and IR Arc Rays

⚠ DANGER

The welding arc produces ultraviolet (UV) and infrared (IR) rays that can cause injury to your eyes and skin. Do not look at the welding arc without proper eye protection.

-Always use a helmet that covers your full face from the neck to top of head and to the back of each ear.

-Use a lens that meets ANSI standards and safety glasses. For welders under 160 Amps output, use a shade 10 lens; for above 160 Amps, use a shade 12. Refer to the ANSI standard Z87.1 for more information.

-Cover all bare skin areas exposed to the arc with protective clothing and shoes. Flame-retardant cloth or leather shirts, coats, pants or coveralls are available for protection.

-Use screens or other barriers to protect other people from the arc rays emitted from your welding.

-Warn people in your welding area when you are going to strike an arc so they can protect themselves.



Fire Hazards

▲ WARNING

Do not weld on containers or pipes that contain or have had flammable, gaseous or liquid combustibles in them. Welding creates sparks and heat that can ignite flammable and explosive materials.

-Do not operate any electric arc welder in areas where flammable or explosive materials are present.

-Remove all flammable materials within 35 feet of the welding arc. If removal is not possible, tightly cover them with fireproof covers.

-Take precautions to ensure that flying sparks do not cause fires or explosions in hidden areas, cracks or areas you cannot see.

-Keep a fire extinguisher close in the case of fire.

-Wear garments that are oil-free with no pockets or cuffs that will collect sparks.

-Do not have on your person any items that are combustible, such as lighters or matches.

-Keep work lead connected as close to the weld area as possible to prevent any unknown, unintended paths of electrical current from causing electrical shock and fire hazards.

-To prevent any unintended arcs, cut wire back to ¼" stick out after welding.



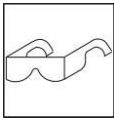
Hot Materials

▲ CAUTION

Welded materials are hot and can cause severe burns if handled improperly.

-Do not touch welded materials with bare hands.

-Do not touch torch nozzle after welding until it has had time to cool down.



Sparks/Flying Debris

⚠ CAUTION

Welding creates hot sparks that can cause injury. Chipping slag off welds creates flying debris.

-Wear protective apparel at all times: ANSI-approved safety glasses or shield, welder's hat and ear plugs to keep sparks out of ears and hair.



Electromagnetic Field

⚠ CAUTION

-Electromagnetic fields can interfere with various electrical and electronic devices such as pacemakers.

- Consult your doctor before using any electric arc welder or cutting device
- Keep people with pacemakers away from your welding area when welding.
- Do not wrap cable around your body while welding.
- Wrap MIG gun and ground cable together whenever possible.
- Keep MIG gun and ground cables on the same side of your body.



Shielding Gas Cylinders Can Explode

⚠ WARNING

High pressure cylinders can explode if damaged, so treat them carefully.

- Never expose cylinders to high heat, sparks, open flames, mechanical shocks or arcs.
- Do not touch cylinder with MIG gun.
- Do not weld on the cylinder
- Always secure cylinder upright to a cart or stationary object.
- Keep cylinders away from welding or electrical circuits.
- Use the proper regulators, gas hose and fittings for the specific application.
- Do not look into the valve when opening it.
- Use protective cylinder cap whenever possible

1.5 Proper Care, Maintenance and Repair

⚠ DANGER

- Always have power disconnected when working on internal components.
- Do not touch or handle PC board without being properly grounded with a wrist strap. Put PC board in static proof bag to move or ship.
- Do not put hands or fingers near moving parts such as drive rolls of fan

QUICK DRAW SPOOL GUN USE AND CARE

- **Do not modify the Quick Draw Spool Gun in any way.** Unauthorized modification may impair the function and/or safety and could affect the life of the equipment. There are specific applications for which the **Quick Draw Spool Gun** was designed.
- **Always check of damaged or worn out parts before using the Quick Draw Spool Gun.** Broken parts will affect the **Quick Draw Spool Gun** operation. Replace or repair damaged or worn parts immediately.
- **Store idle Quick Draw Spool Gun.** When the **Quick Draw Spool Gun** is not in use, store it in a secure place out of the reach of children. Inspect it for good working condition prior to storage and before re-use.

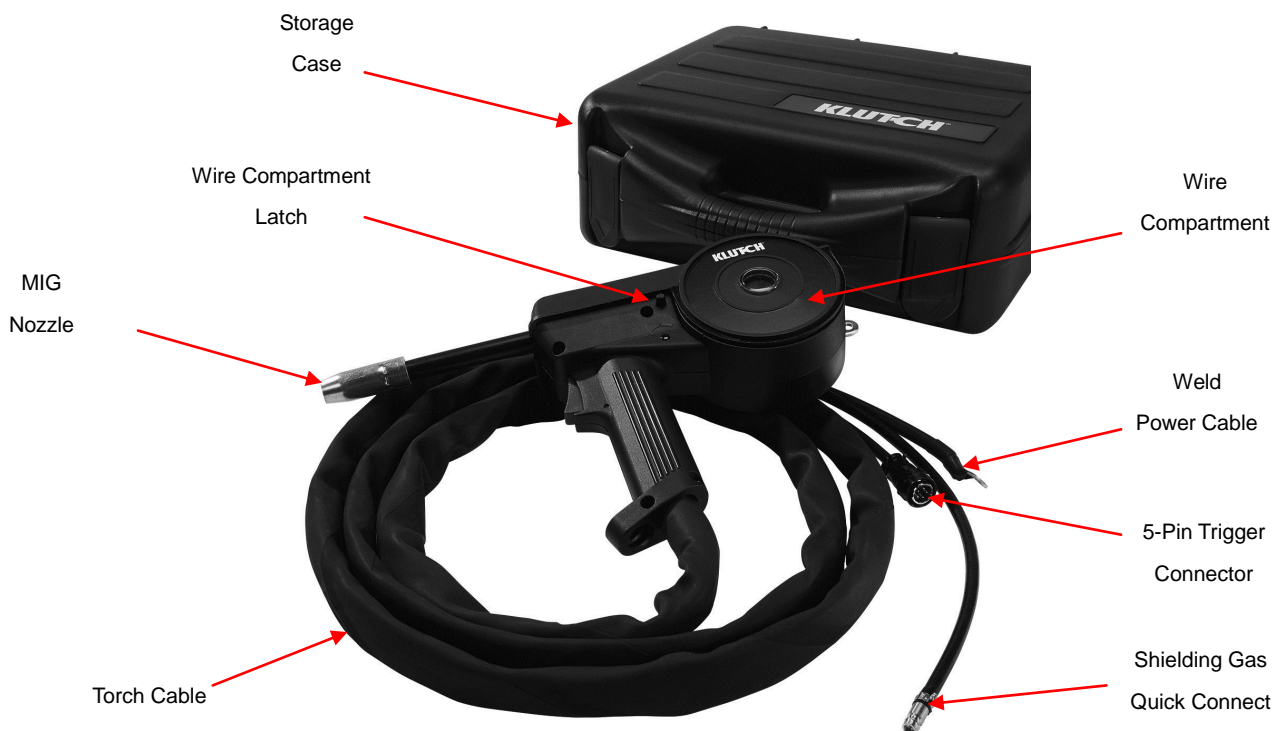
TECHNICAL SPECIFICATIONS

Item	Description
Max Amperage	200 Amps w/CO2 gas, 160 Amps w/Argon Gas
Cooling Method	Air-Cooled
Duty Cycle	35% @ 160 Amps
Suggested Wire Size	.030, .035
Wire Spool Diameter	4 inch
Wire Speed	0 to 630 IPM
Torch Cable Length	10 ft.
Weight	6 lbs.

KNOW YOUR SPOOL GUN

Description

The KLUTCH Quick Draw Spool Gun is exclusively designed to connect to the KLUTCH MIG140Si, KLUTCH MIG/Stick 220Si and the KLUTCH MIG 250S only. It is used to feed wires that are difficult to feed through the standard MIG Torch. Most often this is used for aluminum wires, but any type of wire can be used on 4 inch spools. With the 4 inch spool mounted right on the Quick Draw Spool Gun, the distance the wire has to travel is greatly reduced, resulting in less feeding problems and better overall welds. The Quick Draw Spool gun is rated at a 35% Duty Cycle @ 200 Amps when using CO2 gas and is rated at a 35% Duty Cycle @ 160 Amps when using Argon gas. This spool gun is capable of running .030 and .035 wires and is ideal for light fabrication and welding repair. A rugged storage case is included for portability and safe storage.



STORAGE CASE

This supplied case gives you an easy way to store and protect your Quick Draw Spool Gun when not in use.

WIRE COMPARTMENT LATCH

Press this latch in to unlock the wire compartment door.

MIG NOZZLE

The MIG nozzle directs the welding shielding gas to the arc.

TORCH Cable

This 18ft cable contains the weld cable, trigger control cable and shielding gas hose and is protected with an outer protective cover.

SHIELDING GAS QUICK CONNECT

This exclusive quick connect system for shielding gas allows for quick and easy installation on the KLUTCH welders.

5-PIN TRIGGER CONNECTION

This single snap-on 5 pin trigger connection supplies the spool gun with communication and control circuits for operation of the spool gun.

WELD POWER CABLE

The weld power cable delivers the welding power from the welder to the arc.

ASSEMBLY

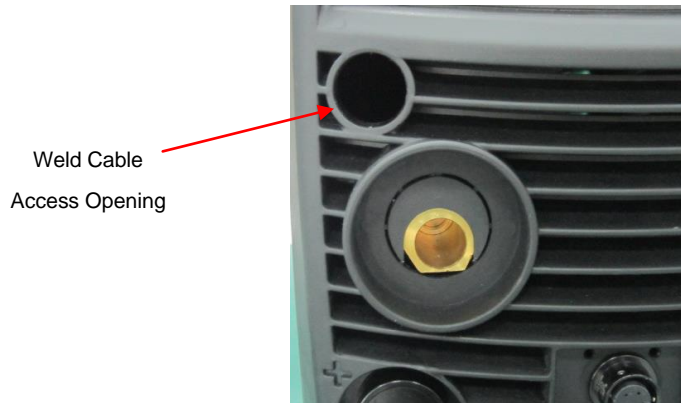
1. ASSEMBLY FOR KLUTCH MIG 140Si AND MIG/STICK 220Si

1.1 The Quick Draw Spool Gun has three connection points at the back of the spool gun. (1) The gas connection is a slide on quick connector. (2) The weld power connection has a round ring connection. (3) The trigger connection is the 5-Pin snap on connector.

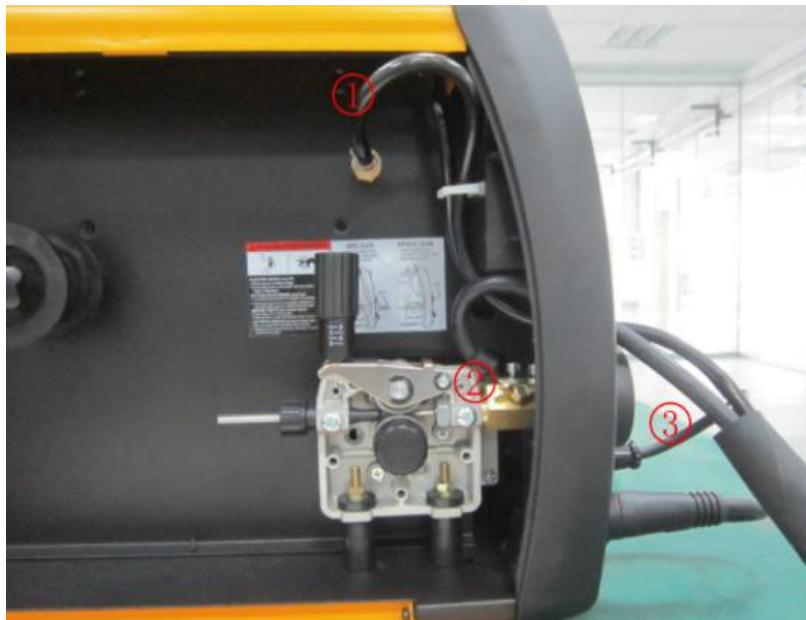


1.2 We recommend removing the MIG torch when the Spool Gun is connected to avoid accidental arcing. Loosen the wing nut retaining bolt and slide the MIG torch out of the front of the machine. Disconnect the 5-Pin trigger connection on the front of the machine.

1.3 Carefully slide the gas connector and the weld power connection through the weld cable access opening in the front of the machine.



1.4 Open the wire compartment door.



1.5 Connect the gas connection quick connector to the gas connector (1) on the back panel of the wire compartment.

1.6 Connect the weld power connection to the bolt on the top of the MIG connector (2).

1.7 Connect the 5-Pin trigger connector to the 5-Pin receptacle on the front of the machine (3).

1.8 Make certain the SPOOL GUN/MIG TORCH SELECTOR on the front panel is switched into the SPOOL GUN position.

2. ASSEMBLY FOR KLUTCH MIG 250S

2.1 The Quick Draw Spool Gun has three connection points at the back of the spool gun. (1) The gas connection is a slide on quick connector. (2) The weld power connection has a round ring connection. (3) The trigger connection is the 5-Pin snap on connector.



2.2 We recommend removing the MIG torch when the Spool Gun is connected to avoid accidental arcing. Loosen the retaining bolt and slide the MIG torch out of the front of the machine. Disconnect the 5-Pin trigger connection on the front of the machine.

2.3 Carefully slide the gas connector and the weld power connection through the weld cable access opening in the front of the machine.

2.4 Open the wire compartment door.

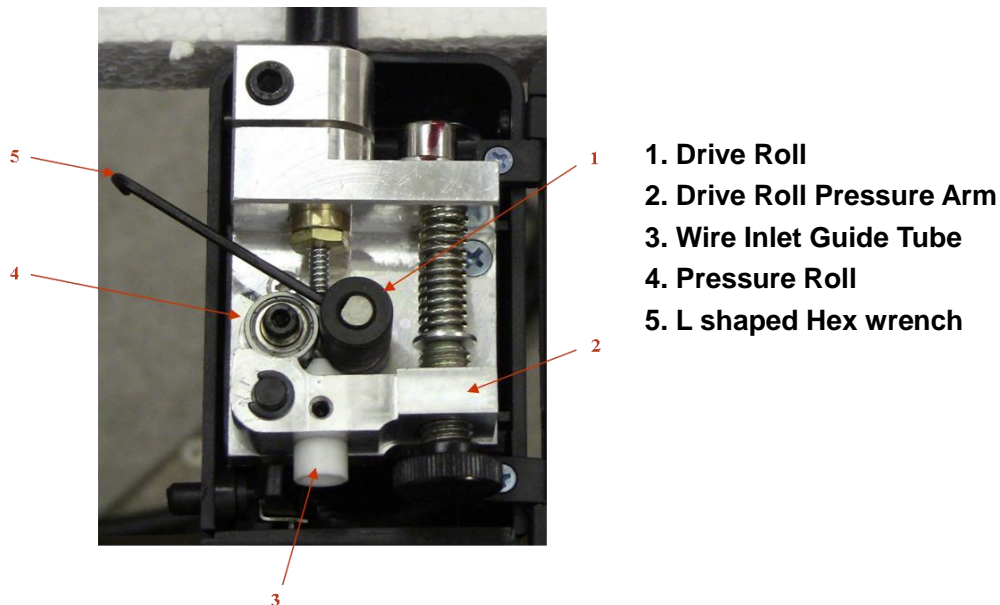


- 2.5 Connect the gas connection quick connector to the gas connector (1) on the back panel of the wire compartment.
- 2.6 Connect the weld power connection to the bolt on the side of the MIG connector (2).
- 2.7 Connect the 5-Pin trigger connector to the 5-Pin receptacle on the front of the machine.
- 2.8 Make certain the SPOOL GUN SELECTOR SWITCH on the front panel is switched into the SPOOL GUN position.

INSTALLATION

1. DRIVE ROLL INSTALLATION

Before installing any welding wire into the unit, the groove must be placed into position on the wire drive mechanism. Adjust the drive roller according to the following steps, see following picture about the wire feeder structure:



- 1.1 Open the spool cover to the spool gun drive compartment.
- 1.2 Remove the drive roller.

Use a “L” shaped hex wrench in the accessory package. And insert the tool into the set screw in the drive roller and turn counter-clockwise to loosen the set screw and remove the drive roller from the drive roller shaft.

The drive roller has two grooves in it. The grooves are the same size and the drive roll can be reversed if the groove wears. Push the drive roll onto the drive roller shaft, align the groove with the wire, and use the “L” shaped hex wrench to tighten the drive roller to the shaft. To tighten turn set screw clockwise.

- 1.3 Close the spool cover.

2. INSTALLING WIRE

2.1 MIG wire can be either mild steel, stainless steel or aluminum solid wire. Flux core wire may also be used for mild steel. For use with 4" spools of wire.

NOTE:

- Metal thinner than 22 gauge should not be welded with this spool gun. Attempting to do so will cause burn through in the metal you are intending to weld.
- Remove any wire that is rusty, if the whole spool is rusty discard it.

2.2 Install the wire

▲WARNING

Electric shock can kill! Always turn the POWER OFF and unplug the power cord from the ac power source before installing wire.

NOTE:

- Before installing, make sure that you have removed any wire from the spool gun assembly. This will help to prevent the possibility of the wire jamming inside the spool gun liner.
- Be careful when removing the welding nozzle. The contact tip on this welder is electrically live when the torch trigger is pulled. Make certain POWER is turned OFF.

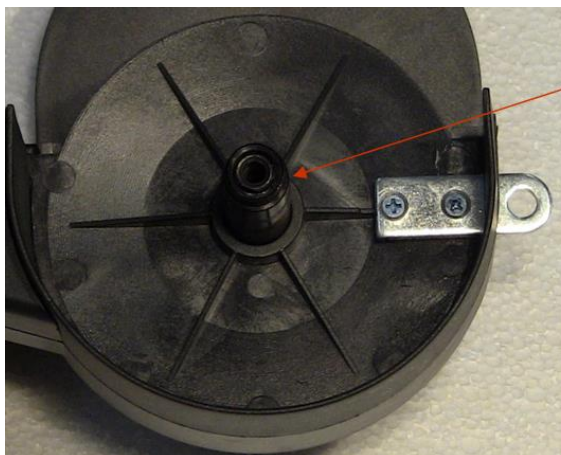
2.3 Remove the nozzle and contact tip from the end of the spool gun assembly.

2.4 Remove any wrapping from the outside of the spool of wire. DO NOT UNHOOK THE WIRE AT THIS TIME.

2.5 Remove the Spool Securement Screw by turning it clockwise.

2.6 Place the spool on the spool hub so that the wire comes off the top of the spool. The welding wire should always come off the top of the spool into the drive mechanism.

2.7 This spool gun can use 4in spools. The thumb screw on the center post is designed to adjust the pressure tension on the spool. Turn clockwise to increase spool tension.



**Center Post
And Tension
Adjustment**

Turn the spool while tightening the tension adjustment until the spool slows down and operator feels a slight drag. The operator may need to repeat these steps until proper spool tension is achieved.

NOTE: If TOO MUCH tension is applied to the wire spool, the wire will slip on the drive roller or will not be able to feed at all. If TOO LITTLE tension is applied, the spool of wire will want to unspool itself when the gun trigger is released. Readjust the spool hub tension as necessary to correct for either problem.

2.8. After checking to make sure that your welder is disconnected from the ac power source, remove the leading end of the wire from the spool, DO NOT LET GO OF THE WIRE until told to do so, or the wire will unspool itself.

2.9. Using a wire cutter, cut the bent end off the leading end of the wire so that only a straight leading end remains.

2.10 Squeeze the tension arm toward the front of the gun to open up a gap between the drive roll and the pressure roll.

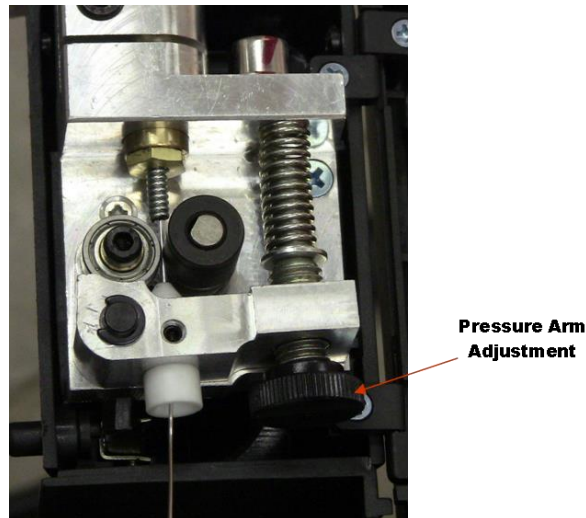
2.11. Insert the leading end of the wire into the inlet guide tube. Then push it across the drive roller and into the liner about 2 inches.

▲ CAUTION

• ***Make certain that the welding wire is actually going into the torch liner. If not, the wire can jam or keep the wire from feeding correctly.***

2.12 Check to see if the wire is in the drive roller groove, then release the tension arm into place on the drive roller.

2.13 Tighten (turn clockwise) the pressure arm adjustment knob (if needed) until the tension roller is applying enough force on the wire to prevent it from slipping out of the drive assembly. DO NOT OVERTIGHTEN.



2.14. NOW YOU CAN RELEASE THE WIRE.

2.15. Plug in the welder, turn power switch to the ON position. Set the VOLTAGE and wire speed on the front of the welder.

NOTE: Due to wire swelling that may occur when aluminum wire gets hot, it may be necessary to use a contact tip one size larger than your wire if wire jams occur.

2.16. Slide the contact tip over the wire (protruding from the end of the torch). Thread the contact tip into the end of the torch and hand-tighten securely with a pliers

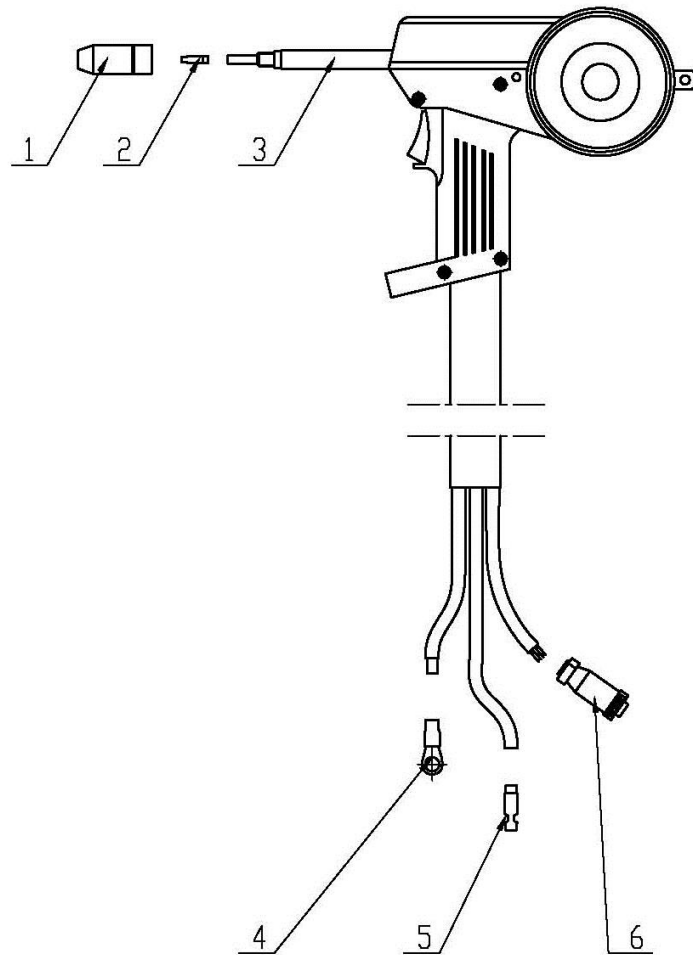
2.17. Install the nozzle on the gun assembly.

2.18 Cut off the excess wire that extends past the end of the nozzle. Leave ¼" stick out.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Wire Drive Motor Does Not Turn	Wire Feed Speed Control at Zero	Increase Wire Feed Speed Control
	Spool Gun/MIG Torch Selector Switch Is Not In Spool gun position	Change the Spool Gun/MIG Torch Selector Switch to Spool Gun.
	Trigger Is Not Mashed	Wire Will Feed Only When Trigger Is Mashed
	Wire Drive Motor Is Damaged	Replace Wire Drive Motor
	Feed Roller Is Not Correctly Installed	See Installation section to correctly install the drive roller.
Wire Feeds Inconsistently	Torch Liner is plugged	Clear or replace torch liner
	Wire Diameter may vary on spool of wire causing the wire to catch in the contact tip.	Increase the contact tip one size.
	Too Much or Too Little Wire Tension	See Installing The Wire Section
	Too Much or Too Little Drive Roll Tension	See Setting Drive Roll Tension Section
	Drive Roll is Worn	Replace Drive Roll
Can Not Create An Arc	Work Piece is Painted Or Rusty	Remove All Paint And Rust
	Ground Clamp Is Connected Where There Is Paint Or Rust	Remove All Paint And Rust So Ground Clamp Is Connected To Bare Metal
	Ground Clamp Is Not Electrically Connected To The Work Piece	Make Certain The Ground Clamp Is Connected To The Work Piece
	Trigger Is Not Mashed	This Unit Is Not Electrically Hot Until You Mash The Torch Trigger
Welding Arc is unstable, excessive spatter.	The contact tip is too large.	Make certain the correct contact tip is installed.
	Torch Liner is plugged	Clear or replace torch liner
	No Shielding Gas	Connect Shielding Gas Supply And Turn Shielding Gas On.
	Wire Speed Setting Is Incorrect.	Refer To The Label Inside The Wire Compartment Door For Wire Speed Setting Recommendations.
	Voltage Setting Is Incorrect.	Refer To The Label Inside The Wire Compartment Door For Voltage Setting Recommendations.
For Assistance, Contact The Welder Help Line At 877-304-0294		

DIAGRAM & PARTS LIST



Reference #	Part#	Description	Qty.
1	2.20.04.701	Nozzle	1
2	2.20.03.711	Contact tip	1
3	2.20.08.876	Spool gun	1
4	2.02.20.051	Copper connector	1
5	2.02.02.044	Gas connector	1
6	2.07.54.019	5 pin plug	1

For replacement parts please call **1-800-222-5381**.
 For technical questions contact our welder help line at 1-877-304-0294

WARRANTY

EFFECTIVE JULY 1, 2014

LIMITED WARRANTY

This warranty applies to the original purchaser and is subject to the terms and conditions listed below. This Limited Warranty is for new equipment sold after the above date, providing coverage for defects in material and workmanship at the time it is shipped from the factory.

Limited to the warranty periods below, Northern Tool + Equipment will repair or replace the item under warranty that fails due to defects in material and workmanship. Northern Tool + Equipment must be notified within 30 days of the failure, so as to provide instructions on how to proceed with the repair of your welder and warranty claim processing. Warranty period begins at the time the welder is purchased from Northern Tool + Equipment. **Keep your receipt as proof of purchase.**

Warranty Periods

Limited Warranty is divided into four categories. No Warranty, 90 days, 1 year and 3 year.

No Warranty

Normal wear items, MIG gun parts (contact tips, nozzle, contact tip adapter, MIG gun liner), drive roll, electrode holder, ground clamps, Plasma torch parts (nozzle, electrode, diffuser, cover) are considered consumable items and are not covered under warranty.

90 days

Parts for Northern Tool + Equipment welding carts and welding cabinets. This warranty covers the absence of or defective parts.

1 year

Parts and Labor on MIG gun parts (except those listed under normal wear items), cables, regulator, plasma torch (except those listed under normal wear items). Any shipping related to warranty repair is the responsibility of the customer.

1 year/3 year

Please see your product information to determine if your product has a 1 year or 3 year warranty. This warranty covers parts and Labor on items such as: transformer, reactor, rectifier, solenoid valve, PC Board, switches, controls, gas valve, drive motor, drive system other than drive roll and any other component that requires the removal of the sheet metal to access. Any shipping related to warranty repair is the responsibility of the customer.

Voiding Warranty

Warranty does not apply to: Shipping Damage, Misuse and abuse of the unit, alteration of the unit in any way.

Warranty Claim

This is a parts and labor warranty. **Do not return your unit.** Retain your receipt in the case a warranty claim is needed. No warranty will be provided without the original receipt from Northern Tool + Equipment. To make a warranty claim, call our welder help line at 877-304-0294, M-F 8:00 am to 5:00 PM Central time or email help@ntwelderhelp.com.

KLUTCH®

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