

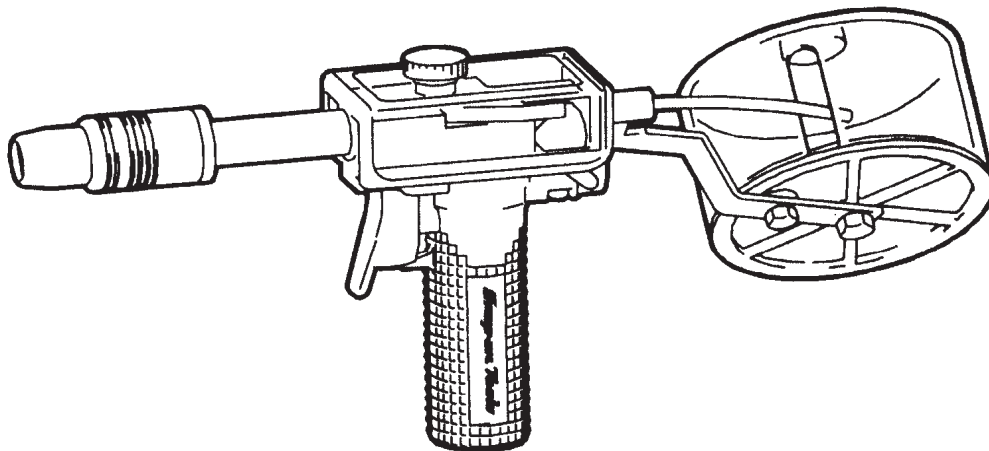
**Snap-on**

*Muscle Mig System*



# OWNER'S MANUAL

## MHG5-B MIG GUN SYSTEM



THE MHG5-B  
"MOTORIZED HAND GUN" SYSTEM  
WITH THE SPEED CONTROL IN THE GUN HANDLE,  
REPRESENTS THE LATEST STATE OF THE ART  
IN MIG EQUIPMENT FOR ALUMINUM WELDING.

MODEL NUMBER      **MHG5-B**



FOR TECH. SERVICE, CALL TOLL-FREE 1-800-232-9353

**INSTALLATION  
OPERATION  
REPLACEMENT PARTS**

## MANUFACTURER'S LIMITED WARRANTY

This equipment is warranted against defects in materials and workmanship for a period of **ninety (90) days** from the date of purchase. Should it become defective for such reason, the Manufacturer will repair it without charge, if it is returned to the Manufacturer's factory, freight prepaid. This warranty does not cover: (1) failure due to normal wear and tear; (2) consumable parts, such as, but not limited to, torch contact tips, gas cups and insulating bushings; (3) damage by accident, force majeure, improper use, neglect, unauthorized repair or alteration; (4) anyone other than the original purchaser.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. THE MANUFACTURER SHALL NOT BE LIABLE FOR ANY INJURY TO PERSONS, INCLUDING DEATH; OR LOSS OR DAMAGE TO ANY PROPERTY, DIRECT OR CONSEQUENTIAL, INCLUDING, BUT NOT LIMITED TO, LOSS OF USE, ARISING OUT OF THE USE, OR THE INABILITY TO USE, THE PRODUCT. THE USER ASSUMES ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION WITH THE USE OF THE PRODUCT, AND BEFORE DOING SO, SHALL DETERMINE ITS SUITABILITY FOR HIS INTENDED USE, AND SHALL ASCERTAIN THE PROPER METHOD OF USING IT.

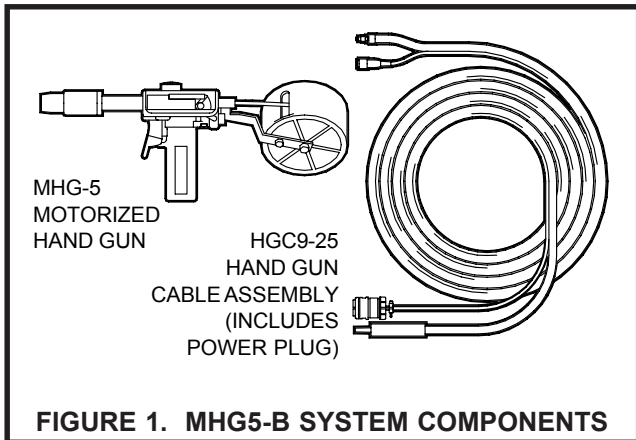
SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, OR THE EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

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## INTRODUCTION

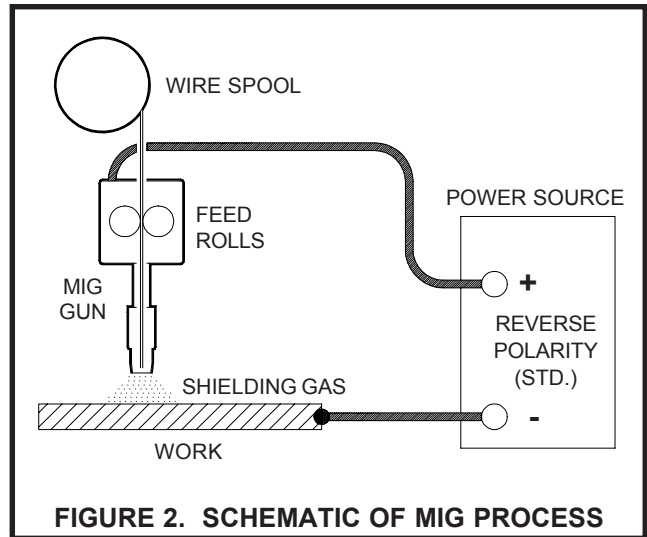
The Snap-On Tools **MHG5-B** is the latest "State of the Art" in MIG spool guns for aluminum welding. The **MHG5-B** System is designed for Gas Metal Arc Welding (GMAW or MIG) of aluminum material using .023", .030", .035" or 3/64" aluminum wire packaged on 4 inch diameter spools. To weld steel, optional equipment is required (see pages 4 and 5 - use .030" or .035" steel wire). Wire speed is controlled by a dial located in the gun handle.



The **MHG5-B** System is designed specifically for operation with Snap-On Tools MM140SL and MM250SL Muscle Mig Systems.

### THE MIG PROCESS AS APPLIED TO THE MHG5-B

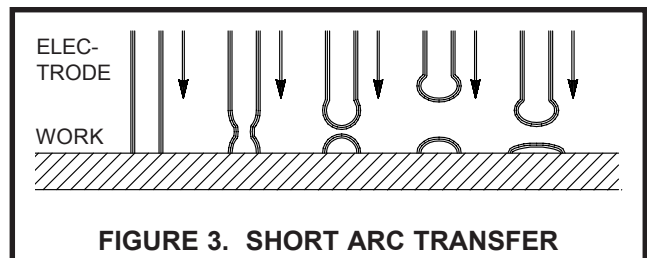
The MIG process uses a bare, consumable electrode in the form of spooled wire, which is fed by a controllable speed feed unit through the gun barrel to the weld. The emerging wire and the weld are shielded by a stream of Argon gas which prevents oxidation of the molten weld puddle. Aluminum is MIG welded with reverse polarity [electrode positive (+)]. In this mode, the electrons move from the work to the electrode (welding wire) causing a cathode cleaning effect of the weld area.



The consumable electrode wire is melted and transferred to the weld puddle by any of three arc modes; short arc transfer, globular transfer, or spray arc transfer. The **MHG5-B** is capable of performing all modes, depending on the power source being used.

### SHORT ARC OR DIP TRANSFER

Short arc transfer occurs at 12 to 22 arc volts (voltage while welding), depending on wire size. Welding commences as the arc is struck and a weld pool is formed. The tip of the electrode wire dips into the pool and causes a short circuit. The short circuit current flow causes a rapid temperature rise in the electrode wire and the end of the wire is melted off. An arc is immediately formed between the tip of the wire and the weld pool, maintaining the electrical circuit and producing sufficient heat to keep the weld pool fluid. The electrode continues to feed and again dips into the pool.



In short arc transfer, the sequence of events is repeated up to 200 times per second. Short arc is suitable for positional welding. The heat input to the workpiece is kept to a minimum which limits distortion and makes possible the welding of thin sheet material.

### GLOBULAR TRANSFER

Globular transfer occurs at the intermediate range of 22 to 24 arc volts, depending on wire size. As the name implies, the transfer takes place in the form of irregularly shaped globules. Globular transfer is useful in cases where a lower heat input than that of true spray is required.

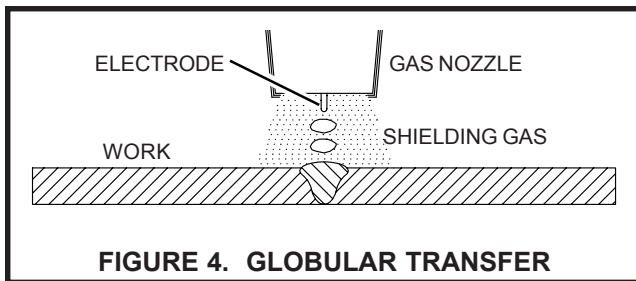


FIGURE 4. GLOBULAR TRANSFER

### SPRAY TRANSFER

Spray transfer occurs at 22 to 28 arc volts, depending on wire size. The length of the arc is held constant by the voltage available. The higher voltage and current causes the electrode wire to melt off before touching the workpiece. The molten metal crosses the gap to the workpiece in a spray form. Spray transfer is used in the down-hand position and provides higher deposition rates than short arc transfer or globular transfer.

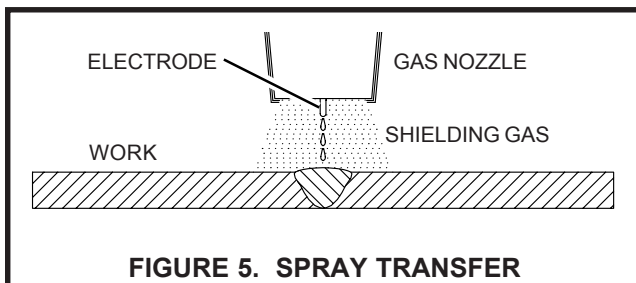


FIGURE 5. SPRAY TRANSFER

## DESCRIPTION

The **MHG5-B** consists of the gun and the gun cable assembly.

The Motorized Hand Gun (MHG-5) used on the **MHG5-B** System is the latest model. It incorporates the following features.

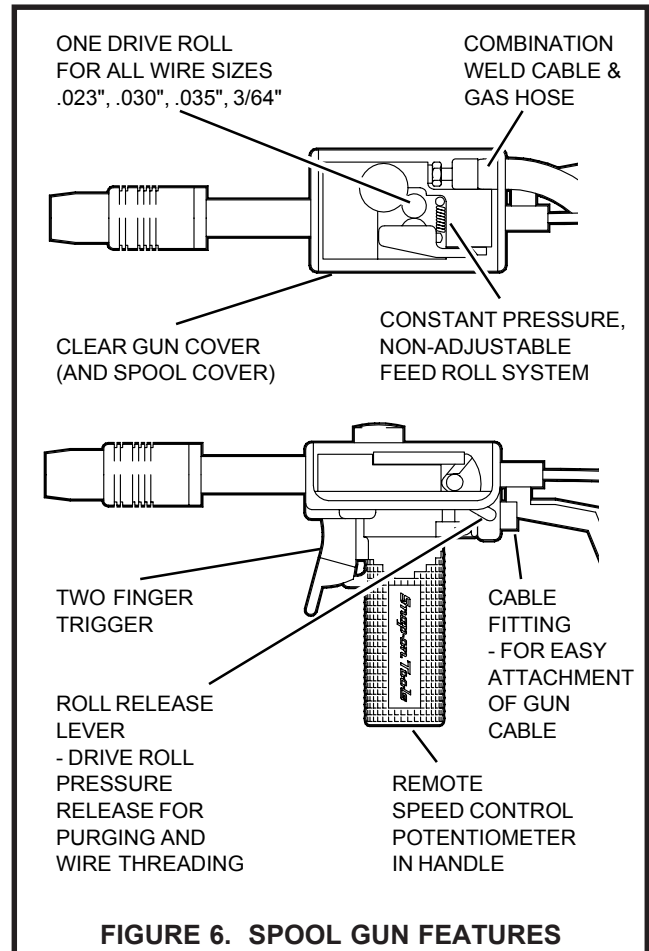


FIGURE 6. SPOOL GUN FEATURES

THE TIP END IS NOTCHED AND OFFSET FOR MAXIMUM ELECTRICAL TRANSFER. IF THE WIRE BURNS BACK TO THE TIP, THE "BALL" FORMED CAN BE PEELED AWAY AND GENERALLY, THE TIP CAN STILL BE USED.

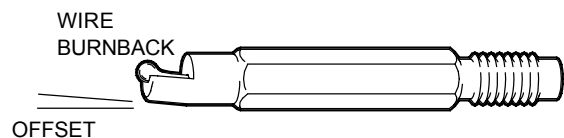
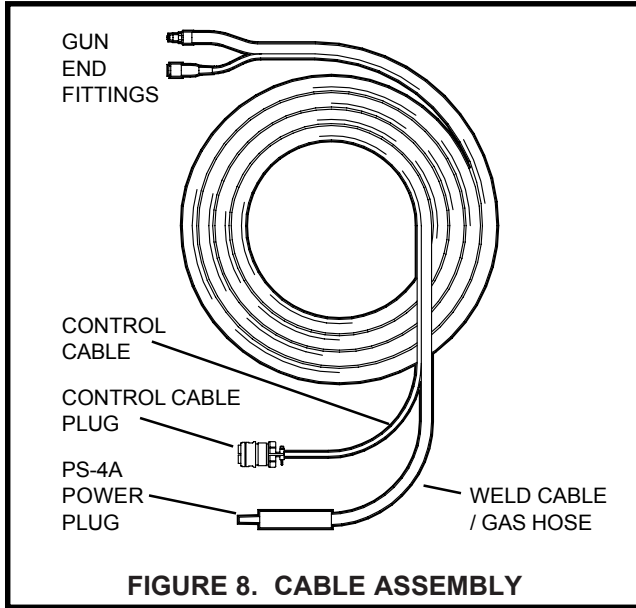


FIGURE 7. SPECIAL FEATURES OF MG-T25, MG-T30, MG-T35 & MG-T364 NOTCHED END CONTACT TIPS

## DESCRIPTION (Continued)

The Hand Gun Cable Assembly (HGC9-25) consists of (1) a concentric Weld Cable/Gas Hose with fittings and Power Plug, and (2) a Control Cable with fittings. The standard cable assembly is 25 feet long. 35 foot (HGC9-35) and 50 foot (HGC9-50) assemblies are extra cost options.



The Power Plug (PS-4A) (installed on the Weld Cable/Gas Hose) plugs directly into the "Positive (+)terminal" on the front panel of the welding machine. The Weld Cable/Gas Hose carries the welding current and shielding gas. Gas flow is controlled by the gas solenoid in the welding machine.

The Control Cable plugs into the control receptacle (OUTPUT) on the welding machine. It carries power to the gun motor, returns the contactor actuation signal to the welding machine, and allows wire speed adjustment at the spool gun.

## SPECIFICATIONS

**PART NUMBER:** MHG5-B

### AMPERAGE RATING:

- 60% Duty Cycle 250 Amps  
- 100% Duty Cycle 200 Amps

## SPECIFICATIONS (Continued)

### DUTY CYCLE TIME PERIOD:

10 minutes

### WIRE TYPE:

aluminum, steel

### WIRE SIZES:

.023", .025",  
.030", .035", 3/64" aluminum  
.030" - .035" steel

### WIRE FEED SPEED RANGE:

50 - 650 inches per minute

### SHIELDING GAS:

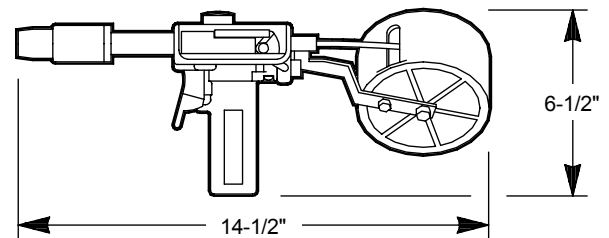
For Aluminum 100% Argon  
For Steel 75% Argon + 25% CO<sub>2</sub>

### WEIGHT:

- Gun 2-3/4 pounds  
- Gun and Cable 14 pounds

### DIMENSIONS:

See Illustration



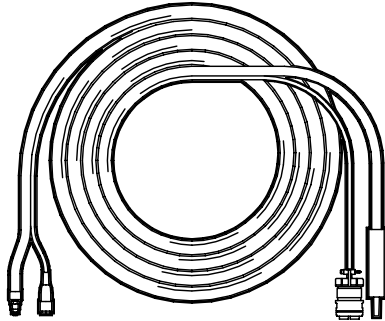
## CHECK LIST

### THE SNAP-ON TOOLS MHG5-B SYSTEM INCLUDES THE FOLLOWING:

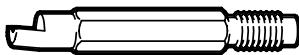
- 1- MHG-5 Spool Gun
- 1- HGC9-25 Hand Gun Cable Assembly - 25 foot
- 1- PS-4A Power Plug (installed on gun cable assembly)
- 7- MG-TXX Contact Tip (one installed in gun)
- 1- M35-NA62 Nozzle Assembly (installed on gun)
- 1- M35-D Gas Diffuser (installed in gun)
- 1- 4043-XX Spool of Aluminum Wire

**OPTIONAL EXTRAS**  
**(designate when ordering spool gun)**  
**Example: MHG5-B w/HGC9-50**

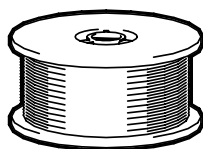
- HGC9-35** 35 foot Gun Cable Assembly
- HGC9-50** 50 foot Gun Cable Assembly



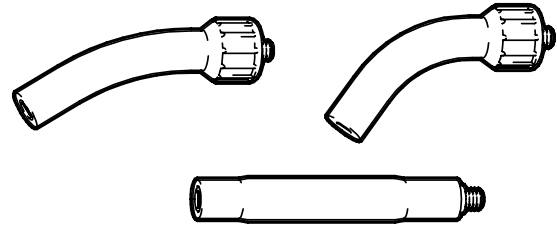
- MG-T25** .023" - .025" Notched End Contact Tip - for aluminum welding.
- MG-T30** .030" Notched End Contact Tip - for aluminum welding.
- MG-T35** .035" Notched End Contact Tip - for aluminum welding.
- MG-T364** 3/64" Notched End Contact Tip - for aluminum welding.



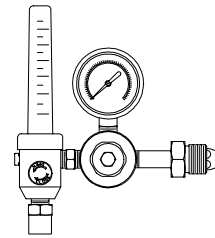
- 4043-23** .023" type 4043 Aluminum Welding Wire on 4 inch spool
- 4043-30** .030" type 4043 Aluminum Welding Wire on 4 inch spool
- 4043-35** .035" type 4043 Aluminum Welding Wire on 4 inch spool
- 4043-364** 3/64" type 4043 Aluminum Welding Wire on 4 inch spool



- MG-CBA-60** 60 degree Curved Barrel Assembly
- MG-CBA-45** 45 degree Curved Barrel Assembly
- MG-FBA** Flexible Barrel Assembly



- GR-FM** Argon Gas Regulator and Flowmeter

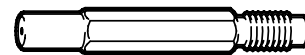


**OPTIONS FOR WELDING STEEL (AND OTHER HARD WIRES - STAINLESS STEEL, BRONZE, ETC.)**

- SN-2160K** Knurled Drive Roll - for feeding steel wire.



- M5-T25** .023" - .025" Contact Tip - for steel welding.
- M5-T30** .030" Contact Tip - for steel welding.
- M5-T35** .035" Contact Tip - for steel welding.

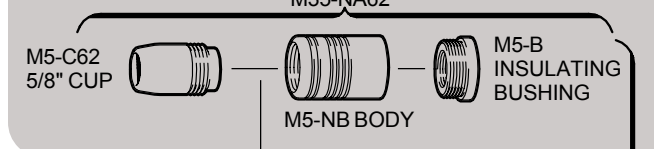
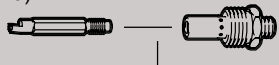
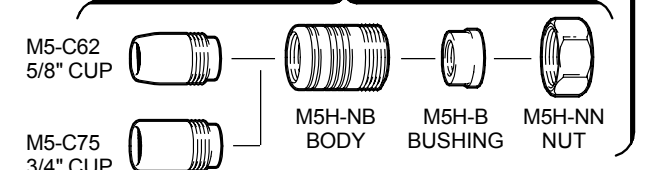

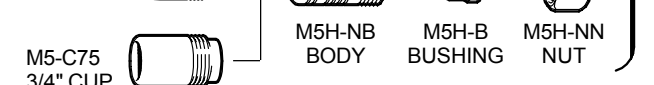
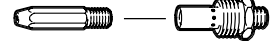


See the "FRONT END CONSUMABLE PARTS" chart on the following page for a complete listing of available nozzles, contact tips, etc. for aluminum welding and for steel welding.

# FRONT END CONSUMABLE PARTS

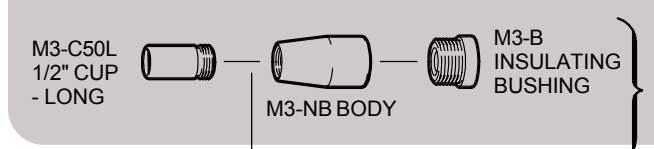
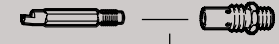
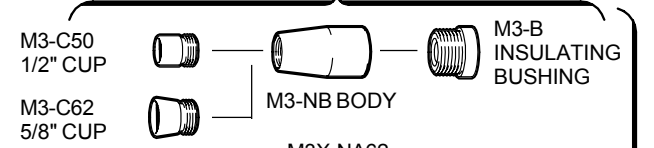

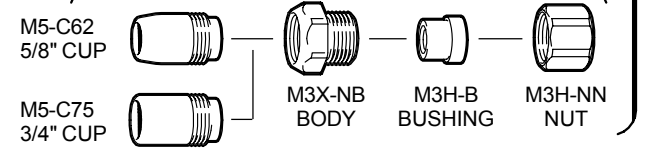


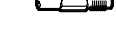
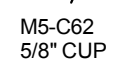

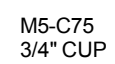
<b>HEAVY DUTY FIXED NOZZLE FRONT END</b>			
APPL.	NOZZLE, NOZZLE ASSEMBLY	CONTACT TIP	GAS DIFFUSER

### STANDARD EQUIPMENT FRONT END

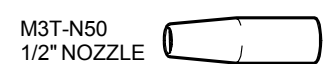

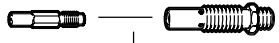



<b>ALUMINUM WELDING</b>	 <p style="text-align: center;">M35-NA62</p>	<p>MG-T25 (.023-.025) MG-T30 (.030) MG-T35 (.035) MG-T364 (3/64)</p>  <p style="text-align: right;">M35-D</p>
<b>STEEL * WELDING</b>	 <p style="text-align: center;">M35H-NA62</p>	<p>M5-T25 (.025)* M5-T30 (.030)* M5-T35 (.035)*</p> 
	 <p style="text-align: center;">M5H-NB BODY    M5H-B BUSHING    M5H-NN NUT</p>	<p>M5-HT45 (.045)</p>  <p style="text-align: right;">M35-HD - FOR M5-HT SERIES TIP</p>

<b>FIXED NOZZLE FRONT END</b>			
APPL.	NOZZLE, NOZZLE ASSEMBLY	CONTACT TIP	GAS DIFFUSER

### PREFERRED ALTERNATE FRONT END

<b>ALUMINUM WELDING</b>	 <p style="text-align: center;">M3-NB BODY</p>	<p>MG-T25 (.023-.025) MG-T30 (.030) MG-T35 (.035) MG-T364 (3/64)</p>  <p style="text-align: right;">M3-D</p>
<b>STEEL * WELDING</b>	<p>M3-C50XL 1/2" CUP - EXTRA LONG</p> <p style="text-align: center;">USE M3-C50XL CUP WITH M5-LT SERIES CONTACT TIPS</p>  <p style="text-align: center;">M3-NA50</p>	<p>M5-T25 (.025) M5-T30 (.030) M5-T35 (.035) M5-T45 (.045)</p> 
	 <p style="text-align: center;">M3X-NA62</p>	<p>M5-LT25 (.025) M5-LT30 (.030) M5-LT35 (.035) M5-LT45 (.045)</p> 
	 <p style="text-align: center;">M3X-NB BODY    M3H-B BUSHING    M3H-NN NUT</p>	<p>M3-T25 (.025) M3-T30 (.030) M3-T35 (.035) M3-T45 (.045)</p> 
	 <p style="text-align: center;">M5-C62 5/8" CUP</p>	<p>M3-ST25 (.025) M3-ST30 (.030) M3-ST35 (.035) M3-ST45 (.045)</p> 
	 <p style="text-align: center;">M5-C75 3/4" CUP</p>	

<b>ADJUSTABLE NOZZLE FRONT END</b>				
APPL.	NOZZLE	INSULATOR	CONTACT TIP	GAS DIFFUSER

<b>STEEL * WELDING</b>	 <p style="text-align: center;">M3T-N50 1/2" NOZZLE</p>	 <p style="text-align: center;">M3T-B (INCLUDES O-RINGS)</p>	<p>M3-T25 (.025) M3-T30 (.030) M3-T35 (.035) M3-T45 (.045)</p>  <p style="text-align: right;">M3T-D</p>	
	 <p style="text-align: center;">M3T-N75 3/4" NOZZLE</p>	 <p style="text-align: center;">M3T-BR O-RING (3 REQD.)</p>	<p>M3-ST25 (.025) M3-ST30 (.030) M3-ST35 (.035) M3-ST45 (.045)</p> 	

\*SN-2160K-KNURLED DRIVE ROLL IS REQUIRED FOR STEEL WELDING

**ITEMS REQUIRED FOR MIG WELDING WHICH ARE NOT PROVIDED WITH THE MHG5-B SYSTEM**

1. DC welding machine

**NOTE**

The **MHG5-B** System operates with the Snap-On Tools MM140SL and MM250SL Muscle Mig Systems only.

2. Full cover welding helmet with proper colored lens (shade 10 or darker).
3. Pure Argon gas and cylinder (or 75% Argon + 25% CO<sub>2</sub> for welding steel).
4. Argon gas regulator (available as an optional extra).
5. Leather welding gloves.
6. Ground cable and clamp.
7. For welding steel - contact tip and knurled drive roll must be used (see pgs. 4 and 5).

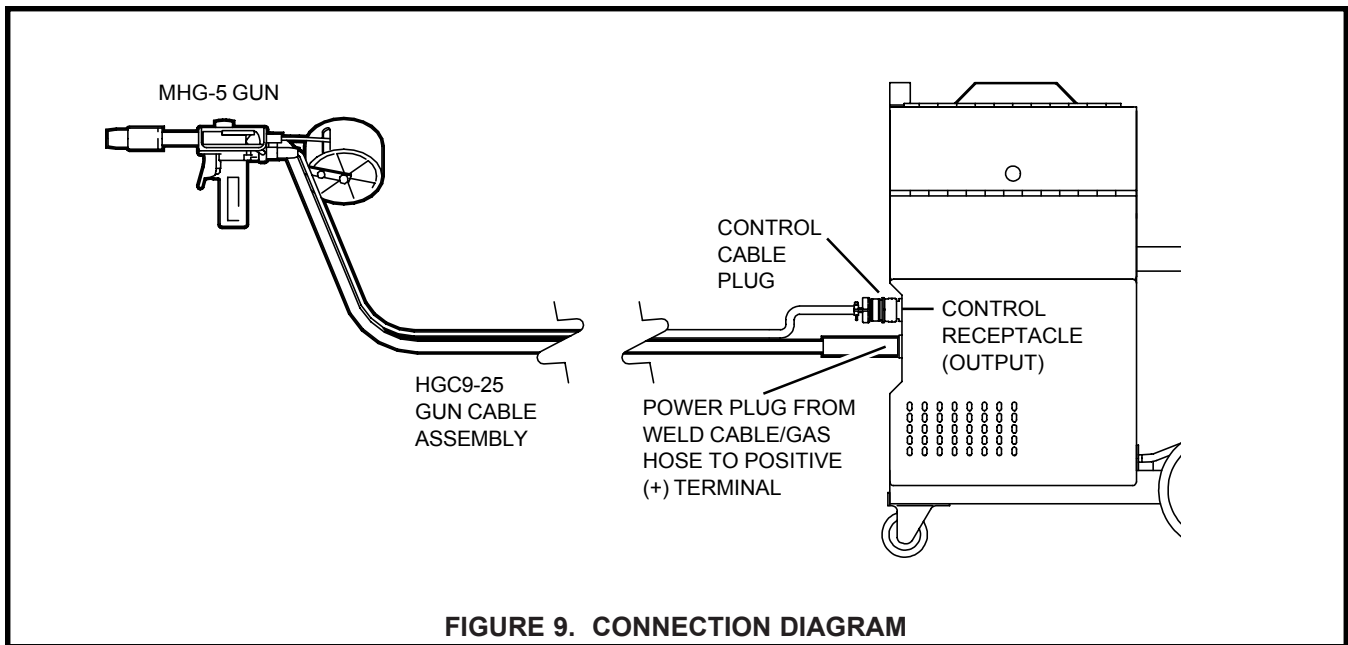
# INSTALLATION

## CONNECTING THE SPOOL GUN TO THE WELDING MACHINE

1. Disconnect the feeder cable assembly from the front of the welding machine.
2. Plug the spool gun control cable plug into the control receptacle (OUTPUT).
3. Make sure the WORK (ground) cable is plugged into the negative (-) terminal.
4. Plug the spool gun power plug (on the end of the welding cable / gas hose) into the positive (+) terminal.

**NOTE**

To change back to standard MIG torch operation, reverse the procedure and change the shielding gas.



**FIGURE 9. CONNECTION DIAGRAM**



## SHIELDING GAS CONNECTIONS

1. Place a cylinder of the appropriate shielding gas in the rack at the rear of the welding machine and secure it with the chain provided.

### NOTE

Make sure the welder primary gas hose and regulator/flowmeter are connected to a cylinder of the proper shielding gas - 100% Argon for aluminum and 98% Argon + 2% O<sub>2</sub> for stainless steel and 75% Argon + 25% CO<sub>2</sub> for steel welding.

2. Rapidly open and close the cylinder valve. This will purge dust and foreign matter from the valve.

### CAUTION

Take care to point the valve outlet away from yourself or other people, as escaping high pressure gas may be dangerous.

3. Attach a gas regulator - flowmeter to the cylinder valve using a suitable wrench.
4. Fit the gas hose from the welder to the regulator outlet fitting and tighten it with a wrench. Open the cylinder valve.
5. Check that the gas regulator is properly adjusted. When welding aluminum, the gas flow rate is 40 CFH. When welding steel, the gas flow rate is 30 CFH.

### NOTE

The **Welding machine** must be turned "ON" and the MHG5-B trigger depressed, before the gas flow rate can be adjusted.

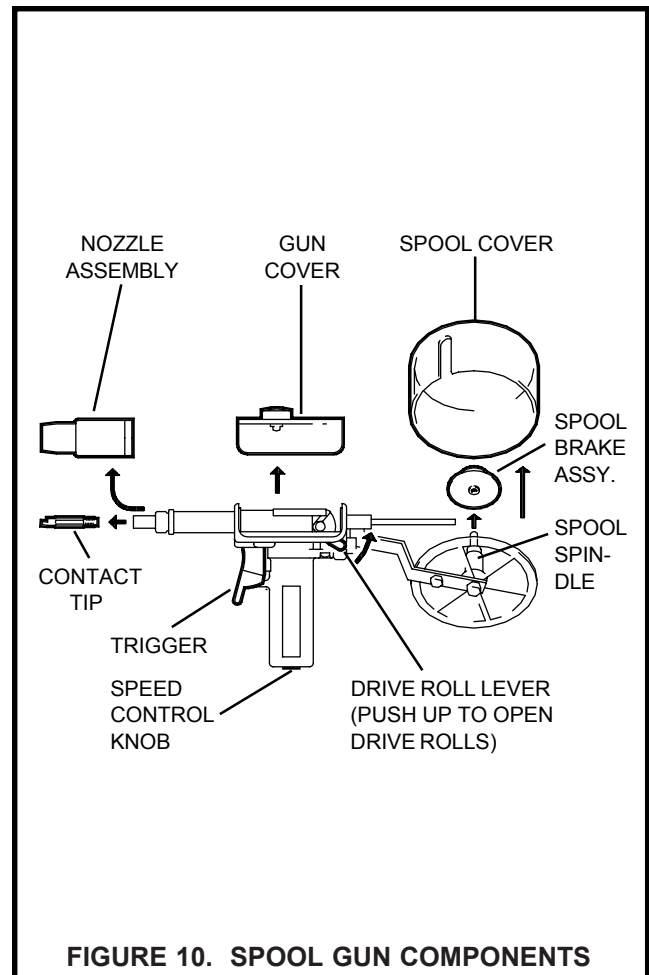


FIGURE 10. SPOOL GUN COMPONENTS

## FITTING THE ELECTRODE WIRE

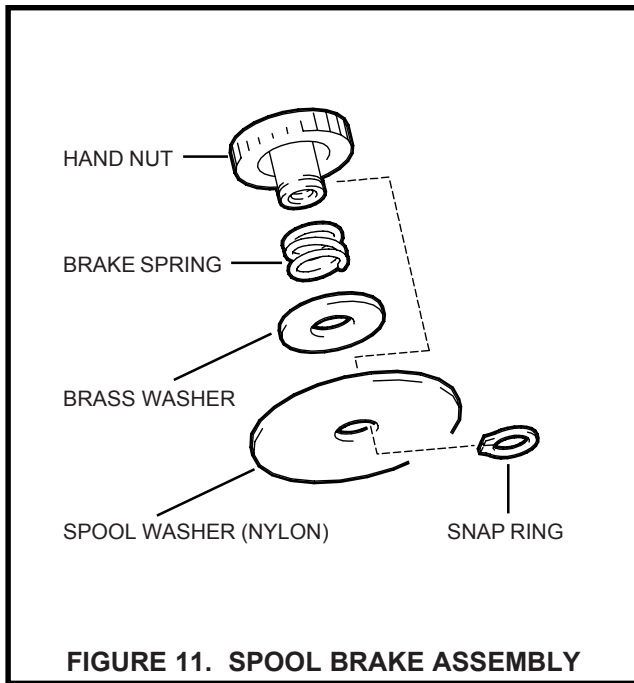
1. Remove the gun cover, spool cover, nozzle assembly and contact tip. Remove the spool brake assembly from the spool spindle and place a 4 inch spool of welding wire on the spindle.
2. Replace the spool brake assembly.

### NOTE

The spool brake assembly must bottom out against the spool hub nut when installed. The spring in the spool brake assembly provides the proper tension on the wire spool.

(continued on following page)

## FITTING THE ELECTRODE WIRE (Cont.)

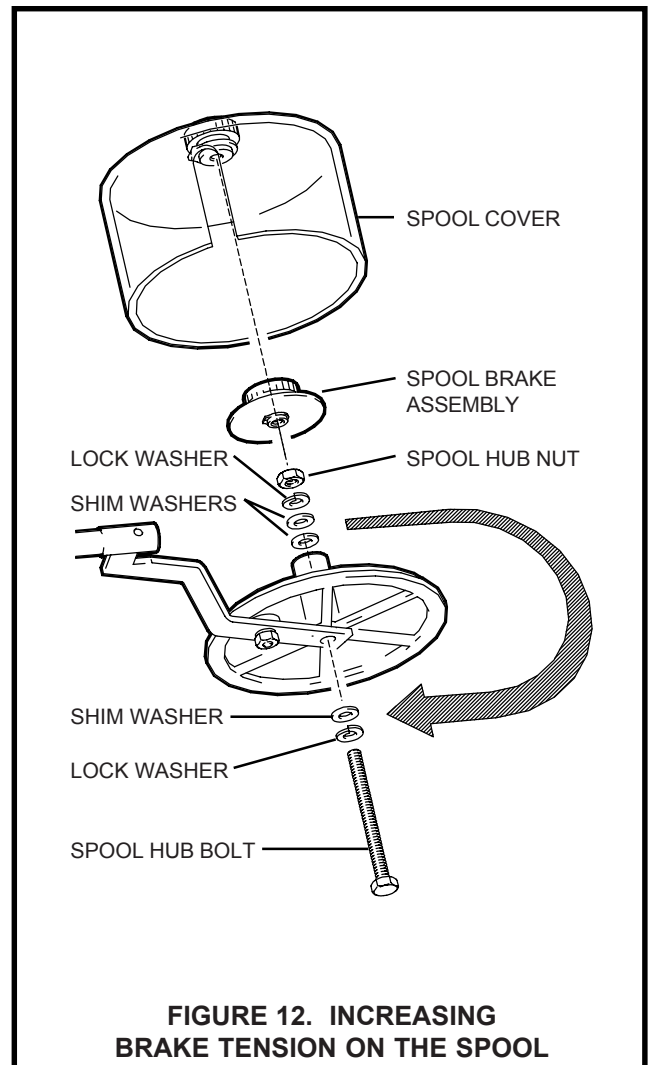


### SPOOL BRAKE ADJUSTMENT

The specifications for the 4 inch spool allow a variation in the width of the spool of up to 1/16 inch ( $\pm 1/32$  inch tolerance). The spool brake spring will handle most spool width variations. The following adjustments can be made if required.

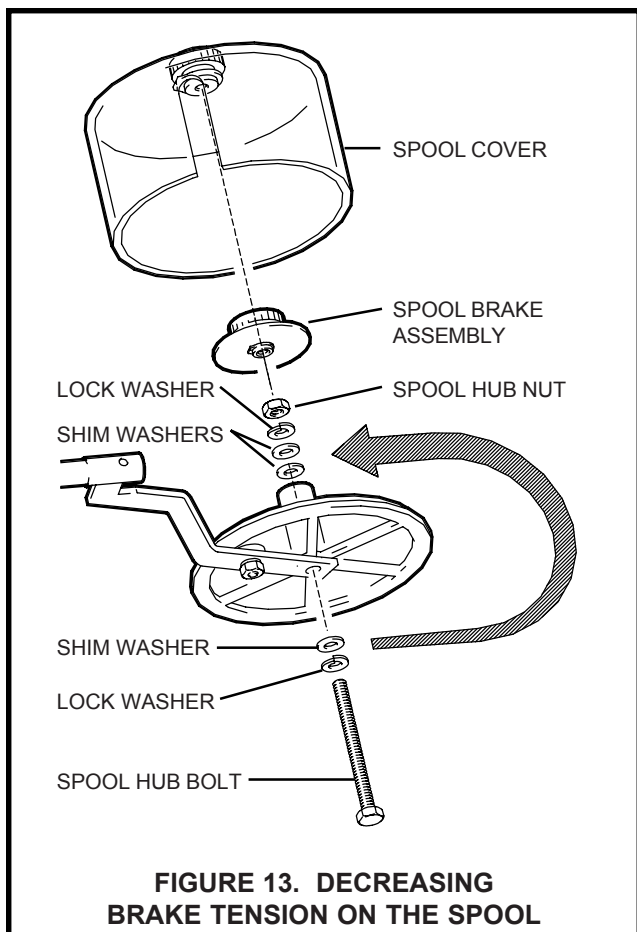
If the spool brake is not applying enough tension on the spool:

1. Remove the spool brake assembly and the spool of wire.
2. Remove the spool hub nut and the lock washer.
3. Remove shim washer(s) as needed.
4. Remove the spool hub bolt and place the removed shim washer(s) under the bolt head.
5. Reassemble all components except for the spool cover.



If the spool brake is applying too much tension on the spool:

1. Remove the spool brake assembly and the spool of wire.
2. Remove the spool hub nut and the lock washer.
3. Remove the spool hub bolt.
4. Remove shim washer(s) as needed from under the bolt head.
5. Place the removed shim washer(s) under the spool hub nut.
6. Reassemble all components except for the spool cover.



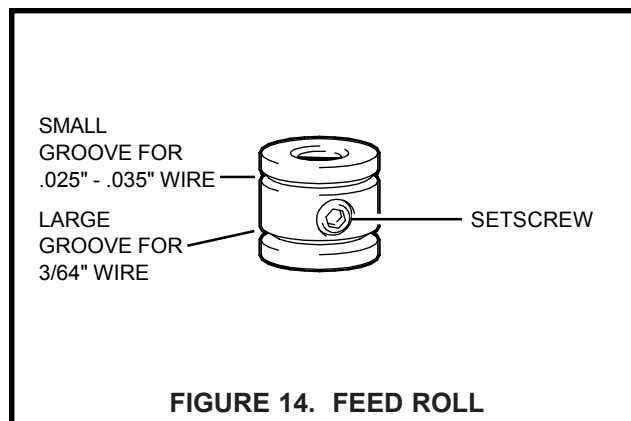
**FIGURE 13. DECREASING BRAKE TENSION ON THE SPOOL**

**THREADING THE ELECTRODE WIRE**

1. Make sure the feed roll is properly installed to match the wire size.

To change the feed roll setting:

- a. Loosen but do not remove the setscrew.
- b. Slide the feed roll off the motor shaft.
- c. Turn the feed roll over and reinstall it on the motor shaft.
- d. Tighten the setscrew securely.



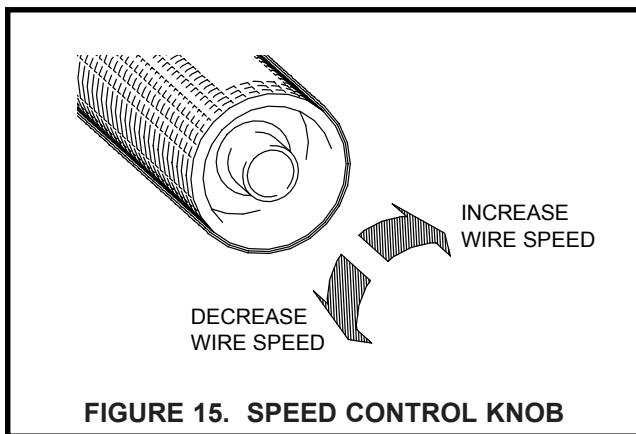
**FIGURE 14. FEED ROLL**

2. Turn the wire feed control in the spool gun handle clockwise to the maximum setting.
3. Turn on the welding machine to supply power to the gun. Open the rolls on the gun by pushing the Drive Roll Lever up.
4. Thread the wire through the inlet guide, between the feed and pressure rolls and into the barrel liner. The wire must be straight when it is threaded.
5. Release the drive roll lever and pull the gun trigger. Wire will be pushed out the front of the gun. Run out approximately 6 inches of wire. Reinstall the contact tip, nozzle assembly, gun cover and spool cover.
6. Cut off the electrode wire even with the front of the nozzle assembly.
7. Actuate the drive roll lever to open the rolls and pull the gun trigger to purge the system of gas contaminants. Purge for two minutes. Release the trigger and the drive roll lever.

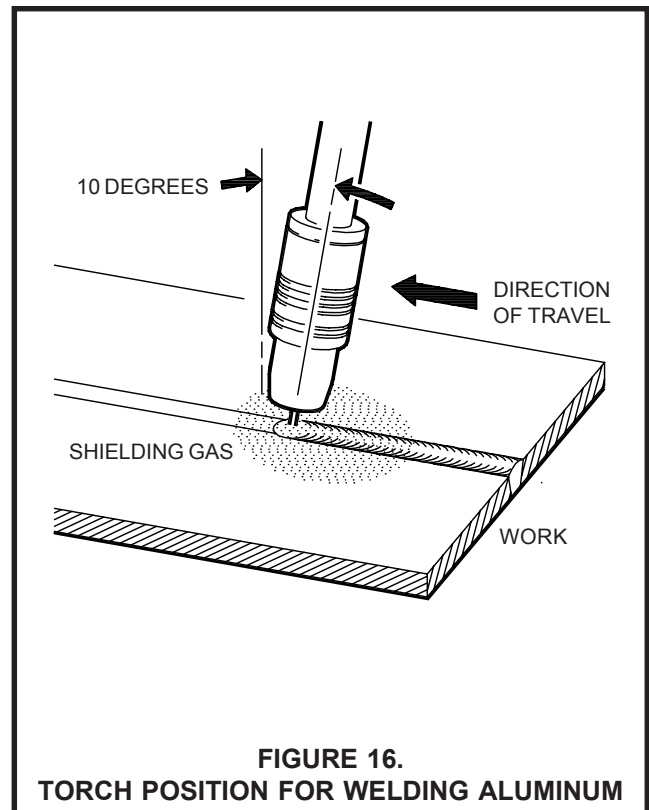
**YOU ARE NOW READY TO WELD**

# OPERATION

1. Attach the WORK (ground) cable from the negative (-) terminal on the welding machine to a CLEAN spot on the material to be welded.
2. Set the MIG/TIG voltage control on the welding machine to the desired setting.
3. Turn the Speed Control Knob in the bottom of the gun handle clockwise to the maximum setting.



4. Open the gas cylinder valve.
5. With the proper hood, gloves and other protective equipment in place, locate the gun over the joint to be welded and bring the nozzle to 1/2 to 5/8 inch from the workpiece. The recommended position of the gun and direction of travel for welding aluminum are shown in Figure 16.



6. Actuate the gun trigger. The shielding gas will flow, the welding wire will advance and an arc will be formed. Adjust the Speed Control Knob in the gun handle to obtain the correct arc characteristics. As the weld is deposited, move the gun slowly along the weld seam at a constant speed, while maintaining a constant arc length and a constant tip-to-work distance.
7. Refer to the "RECOMMENDED WELDING VALUES" charts on the following pages for recommended arc voltage, wire speed, etc.

## RECOMMENDED WELDING VALUES

### SHORT ARC TRANSFER

METAL THICKNESS	AMPS (DCRP)	WIRE SIZE	WIRE SPEED	WELD SPEED
.040"	40	.030"	240 IPM	20 IPM
.050"	50	.030"	290 IPM	15 IPM
.063"	60	.030"	340 IPM	15 IPM
.093"	90	.030"	410 IPM	15 IPM
.040"	40	.035"	200 IPM	24 IPM
.050"	50	.035"	240 IPM	18 IPM
.063"	60	.035"	290 IPM	18 IPM
.093"	90	.035"	350 IPM	18 IPM

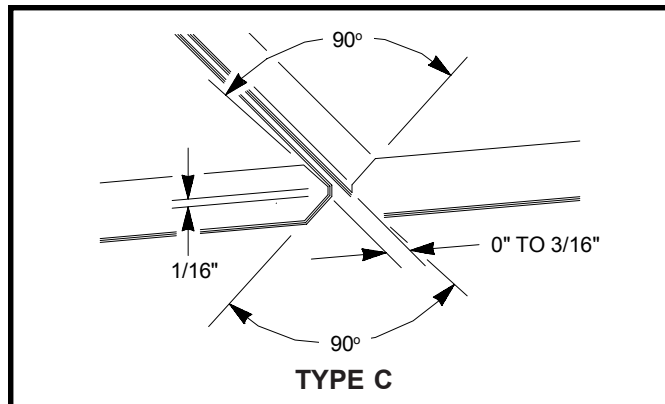
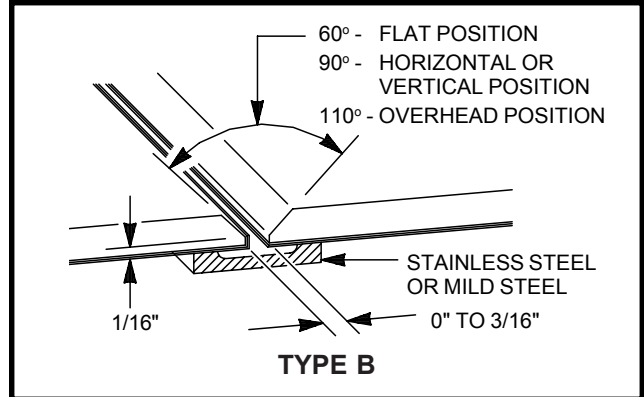
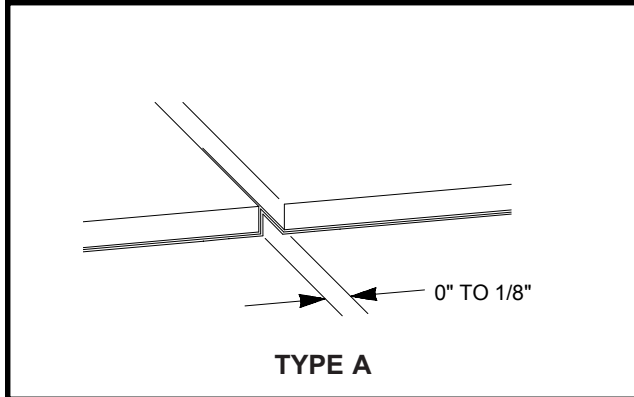
### SPRAY ARC TRANSFER

METAL THICK.	JOINT PREP.	AMPS (DCRP)	WIRE SIZE	ARC VOLTS	WIRE SPEED
1/8"	Type A	100	.030"	24-26	450 IPM
3/16"	Type B	150	.030"	24-26	500 IPM
1/4"	Type B	180	.030"	28-29	560 IPM
3/8"	Type C	200	.030"	28-30	600 IPM
1/8"	Type A	100	.035"	24-26	400 IPM
3/16"	Type B	150	.035"	24-26	450 IPM
1/4"	Type B	180	.035"	28-29	530 IPM
3/8"	Type C	200	.035"	26-30	560 IPM
1/2"	Type C	220	.035"	26-30	600 IPM
1/8"	Type A	110	3/64"	20-21*	175 IPM
3/16"	Type B	160	3/64"	20-21*	220 IPM
1/4"	Type B	180	3/64"	27-28	250 IPM
3/8"	Type C	200	3/64"	25-30	260 IPM
1/2"	Type C	220	3/64"	25-31	270 IPM
3/4"	Type C	250	3/64"	25-31	290 IPM

\* SHORT ARC TRANSFER

### DETAILS OF JOINT PREPARATION

(see "Spray Arc Transfer" chart above)



## RECOMMENDED WELDING VALUES (Continued)

### SHIELDING GAS PERFORMANCE

PROCESS	SHIELDING GAS	PERFORMANCE
Gas Metal Arc Welding (GMAW or MIG)	Argon	Best Metal Transfer Excellent Arc Stability Excellent Cleaning Action Low Spatter
	Helium	Deep Penetration - for heavy plate

### SHIELDING GAS FLOW RATES

MATERIAL THICKNESS	WELDING POSITION	FLOW RATES
1/16 in.	Flat	25 CFH
3/32 - 1/8 in.	Flat, Vertical, Horizontal, Overhead	30 CFH
3/16 in.	Flat, Vertical, Horizontal, Overhead	30 CFH
1/4 in.	Flat	30 CFH
	Vertical, Horizontal	35 CFH
	Overhead	40 CFH
3/8 in.	Flat	30 CFH
	Vertical, Horizontal	35 CFH
	Overhead	40 CFH
3/4 in.	Flat	35 CFH
	Vertical, Horizontal, Overhead	40 CFH

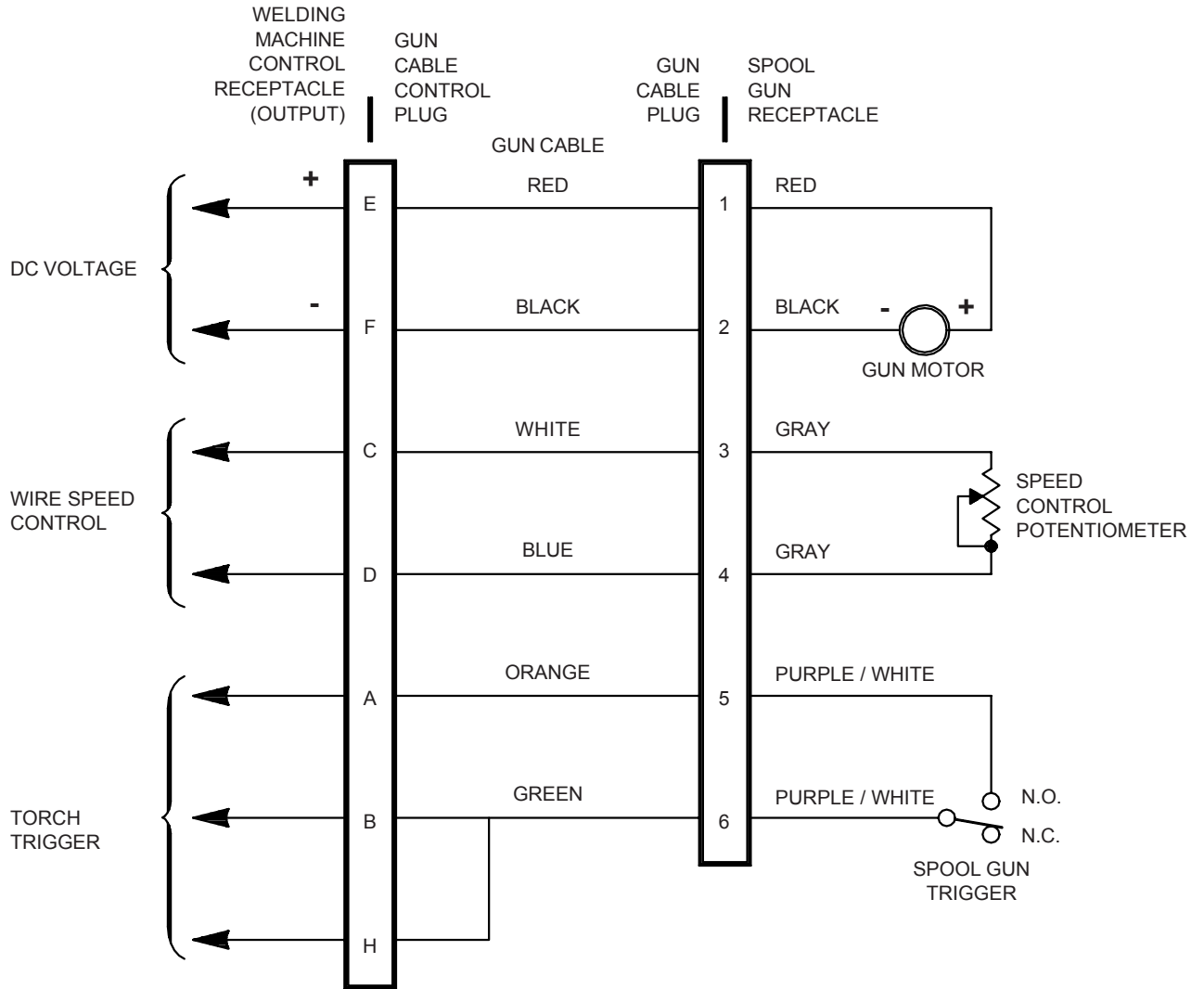
### RECOMMENDED FILLER METALS CHART

Base Metal \ Base Metal	6061, 6063, 6101, 6151, 6201, 6351	5083, 5456	5454	5154	5086	5052	5005, 5050	3004 & Alclad 3004	2219	1100, 3003 & Alclad 3003	1060, 1350
1060, 1350	4043	5356	4043	4043	5356	4043	1100 4043	4043	4145	1100 4043	1100 4043
1100, 3003, Alclad 3003	4043	5356	4043 5356	4043	4043 5356	4043 5356	4043 5356	4043 5356	4145	1100 4043	
2219	4043	4043	4043	4043	4043	4043	4043	4043	2319 4043		
3004, Alclad 3004	4043 5356	5356	5356 5654	5356 5654	5356	4043 5356	4043 5356	4043 5356			
5005, 5050	4043 5356	5356	5356 5654	5356 5654	5356	4043 5356	4043 5356				
5052	4043 5356	5356	5356 5654	5356 5654	5356	4043 5654					
5086	5356	5356	5356 5654	5356 5654	5356						
5154	4043 5356	5356 5654	5356 5654	5356 5654							
5454	4043 5356	5356 5654	5554								
5083, 5456	5356	5556									
6061, 6063, 6101, 6151, 6201, 6351	4043 5356										

**RECOMMENDED FILLER WIRE**

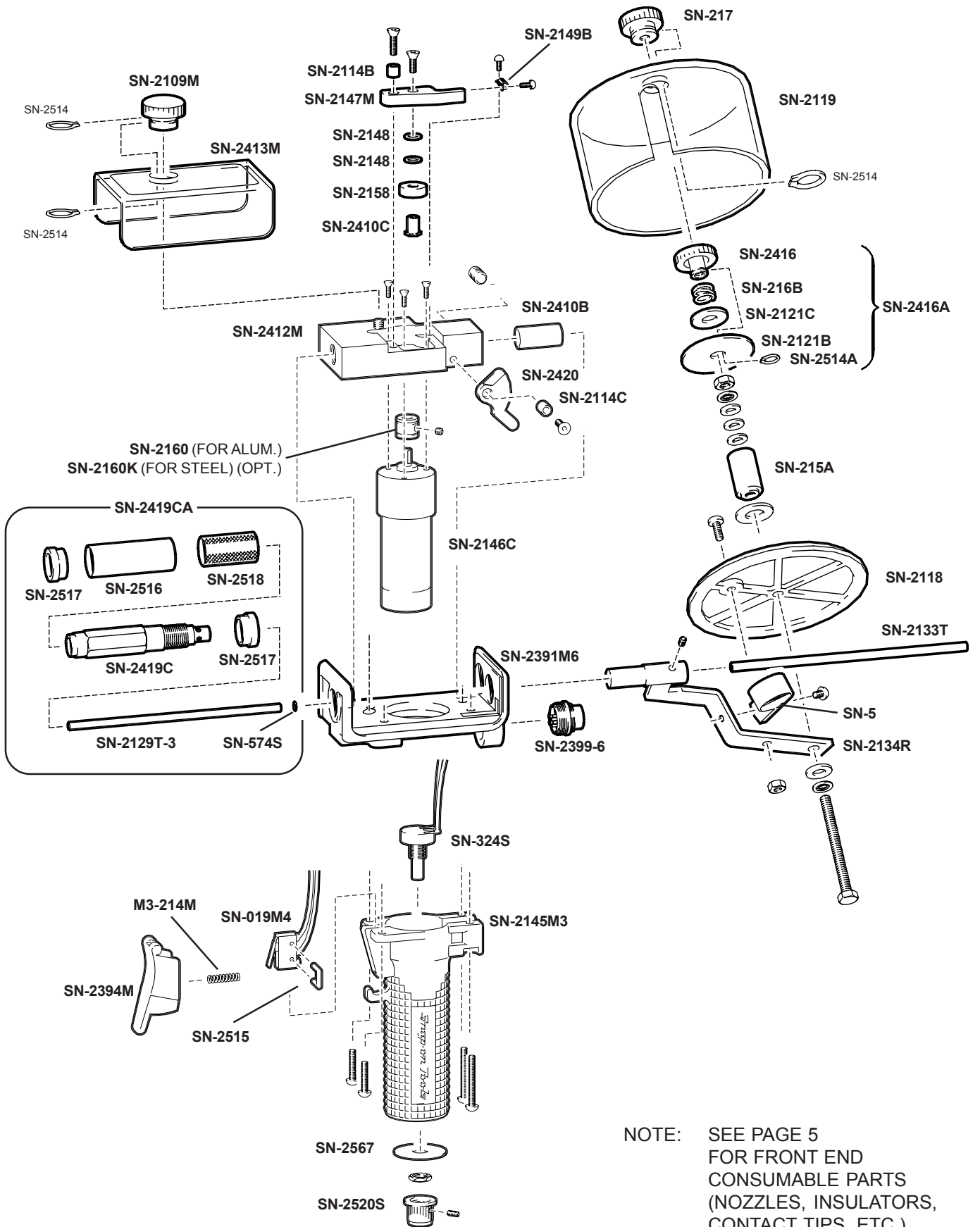
- NOTES:**
1. 5183 or 5356 may be used in place of 5556.
  2. 5183, 5356, 5554 or 5556 may be used in place of 5654.
  3. 5183 or 5556 may be used in place of 5356.

# ELECTRICAL DIAGRAM



**MHG5-B SPOOL GUN SYSTEM**

# REPLACEMENT PARTS - MHG-5 GUN



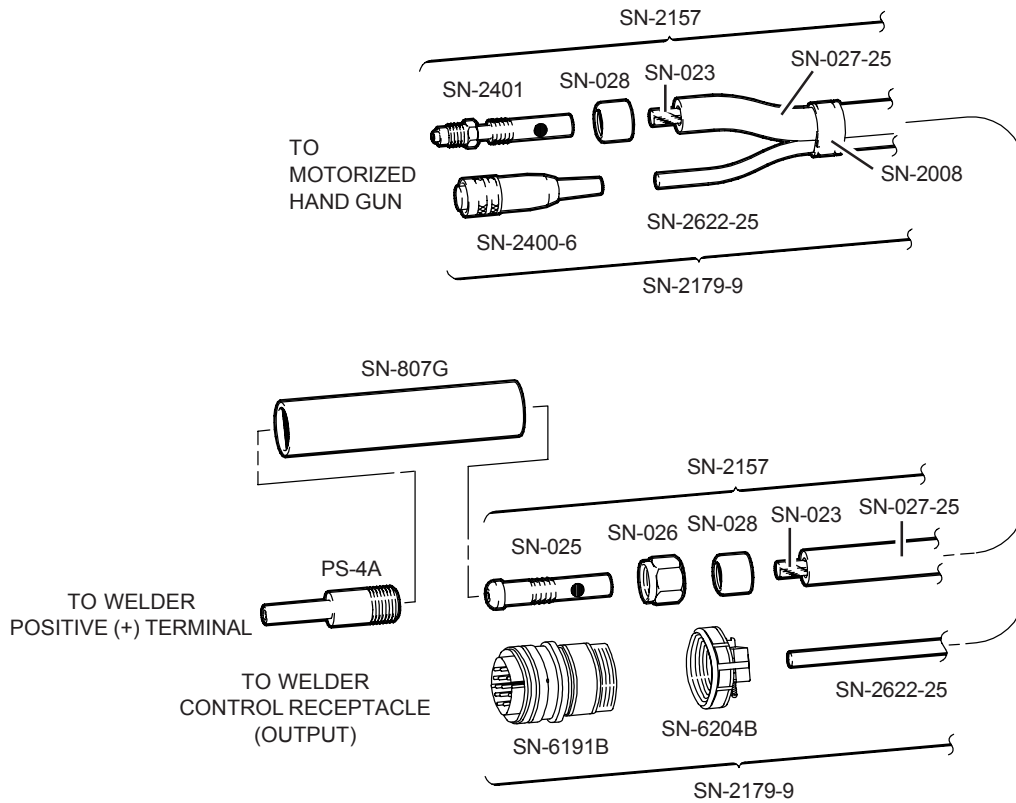
NOTE: SEE PAGE 5 FOR FRONT END CONSUMABLE PARTS (NOZZLES, INSULATORS, CONTACT TIPS, ETC.)



## REPLACEMENT PARTS - MHG-5 GUN (Cont.)

PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
M3-214M	TRIGGER SPRING	SN-2149B	SPRING - ROLL PRESSURE
SN-5	CABLE CLIP - H. H. SMITH 780 *ATTACHING HARDWARE* 8-32 X 3/8" RND. HD. SCREW (1)		*ATTACHING HARDWARE* 4-40 X 1/4" RND. HD. SCREW (2)
SN-019M4	SWITCH - WIRED	SN-2158	PRESSURE ROLL
SN-215A	SPOOL SPINDLE *ATTACHING HARDWARE* 1/4-20 X 3" HEX HD. BOLT (1) 1/4" INTERNAL TOOTH LOCK WASHER (2) 1/4" FLAT WASHER (1) 1/4" SPRING (SHIM) WASHER (3) 7/16" STEEL WASHER (1) 1/4-20 JAM NUT (1)	SN-2160	FEED ROLL (FOR ALUMINIUM) *ATTACHING HARDWARE* 8-32 X 1/8" SET SCREW (1)
SN-217	HAND NUT - SPOOL COVER	SN-2160K	KNURLED FEED ROLL (FOR STEEL) (OPTIONAL) *ATTACHING HARDWARE* 8-32 X 1/8" SET SCREW (1)
SN-324S	POTENTIOMETER - 100K - WITH ATTACHING NUT	SN-2399-6	6 PIN RECEPTACLE
SN-2109M	HAND NUT - TOP COVER	SN-2391M6	MOULDED BASE
SN-2114B	ROLL BLOCK BUSHING	SN-2394M	TRIGGER
SN-2114C	ROLL LEVER BUSHING	SN-2410B	SPOOL INSULATOR BUSHING
SN-2118	SPOOL DISC *ATTACHING HARDWARE* 8-32 X 1/2" RND. HD. SCREW (1) 8-32 KEP NUT (1)	SN-2410C	PRESSURE ROLL BUSHING *ATTACHING HARDWARE* 8-32 X 3/8" FLAT HD. SCREW (1)
SN-2119	SPOOL COVER	SN-2412M	BODY BLOCK
SN-2133T	INLET GUIDE TUBE *ATTACHING HARDWARE* 8-32 X 1/4" NYLOC SET SCREW(1)	SN-2413M	TOP COVER
SN-2134R	REEL SUPPORT *ATTACHING HARDWARE* 1/4-20 X 1/4" SET SCREW (1)	<b>SN-2416A</b>	SPOOL BRAKE ASSEMBLY <b>CONSISTING OF:</b>
SN-2145M3	HANDLE *ATTACHING HARDWARE* (HANDLE AND BASE TO BODY BLOCK) 8-32 X 3/4" RND. HD. SCREW (2) 8-32 X 1-1/4" RND. HD. SCREW (2)	SN-2416	• HAND NUT
SN-2146C	MOTOR (BOTTOM TERMINALS) *ATTACHING HARDWARE* (MOTOR TO BODY BLOCK) 4-40 X 3/8" FLAT HD. SCREW (3)	SN-216B	• SPRING BRAKE
SN-2147M	ROLL BLOCK *ATTACHING HARDWARE* 8-32 X 1/2" FLAT HD. SCREW (1)	SN-2121C	• BRASS WASHER - 3/8"
SN-2148	PRESSURE ROLL SPACER (2 REQD.)	SN-2121B	• SPOOL WASHER
		SN-2514A	• SNAP RING - 3/8"
		<b>SN-2419CA</b>	BARREL ASSEMBLY <b>CONSISTING OF:</b>
		SN-574S	• O-RING - BARREL LINER
		SN-2129T-3	• BARREL LINER - TEFLON
		SN-2419C	• BARREL
		SN-2516	• BARREL OUTER SLEEVE
		SN-2517	• SPACER/SEAL (2 REQUIRED)
		SN-2518	• BARREL INSULATOR SHEATH
		SN-2420	LEVER - ROLL RELEASE *ATTACHING HARDWARE* 8-32 X 3/8" FLAT HD. SCREW (1)
		SN-2514	SNAP RING - 5/8" (3 REQUIRED)
		SN-2515	RETAINING CLIP - SWITCH
		SN-2520S	CONTROL KNOB
		SN-2567	SPEED INDICATOR DIAL

## REPLACEMENT PARTS - HGC9-25 GUN CABLE ASSEMBLY



PART NO.	DESCRIPTION
PS-4A	POWER PLUG
SN-807G	BOOT/CABLE COVER
SN-2008	CABLE TIE (AS REQUIRED)
<b>SN-2157</b>	CABLE AND HOSE ASSEMBLY WITH FITTINGS - 25 FOOT <b>CONSISTING OF:</b>
SN-023	• WELD CABLE (ONLY) (24'-10")
SN-025	• CABLE FITTING
SN-026	• GAS HOSE NUT
SN-027-25	• GAS HOSE (ONLY) SAE100R6FW-27W (3/8" I.D. X 25')

PART NO.	DESCRIPTION
SN-028	• HOSE FERRULE (2 REQUIRED)
SN-2401	• CABLE FITTING
<b>SN-2179-9</b>	CONTROL CABLE ASSEMBLY WITH FITTINGS - 25 FOOT <b>CONSISTING OF:</b>
SN-2400-6	• 6 SOCKET PLUG
SN-2622-25	• POWER CORD (ONLY) 20-6 ALPHA (25'-6")
SN-6191B	• PLUG, 14 PIN (MALE PINS)
SN-6204B	• CLAMP, AMPHENOL

NOTES:

