



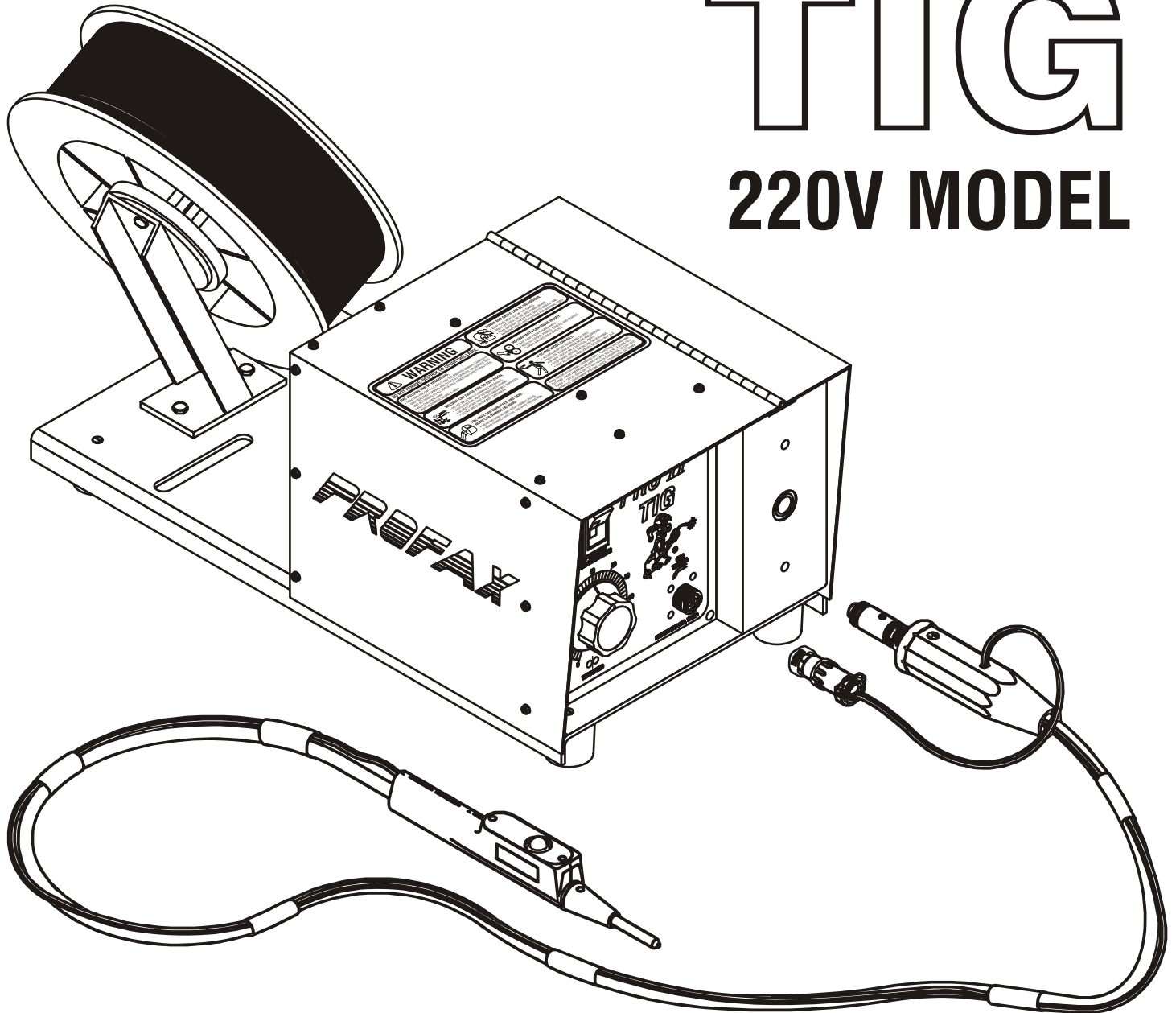
# PROFAV<sup>®</sup>

# PRO II

JUNE 2003  
EFFECTIVE WITH SERIAL NUMBER  
PRO II TIG A-1001

# TIG

## 220V MODEL



# Owner's Manual



P.O. BOX 898 • PEARLAND, TX 77588-0898 • (281) 485-6258

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***Available Through Your  
Welding Supply Distributor***

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# Safety Section 1



<b>ALERT</b>		- Read carefully - used with warning and caution words
<b>WARNING</b>		- Serious injury or death can happen
<b>CAUTION</b>		- Minor injury or equipment damage can happen
<b>NOTE</b>		- Gives instructions for proper operation of equipment.



**Electrical Shock can kill**



**Moving Parts can maim**



**Hot Parts can burn**



**Smoke, Fumes, and Gases**



**Falling Equipment can injure**



**Flying Debris can injure eyes**



**Arc Rays, Molten Material, & Sparks**



**Electromagnetic Fields**



**Welding Wire can puncture skin**



**Welding can cause fires**



**Cylinders can explode**

## IMPORTANT - PROTECT YOURSELF AND OTHERS! REMEMBER THAT SAFETY DEPENDS ON YOU.

The operator, supervisor, and helper must read and understand all warning and safety information provided in these instructions.  **Serious injury or death**  could result if welding and cutting equipment is not properly installed, used, and maintained. Training and proper supervision are most important for a safe work place. Installation, operation, repair work, and maintenance must be performed by qualified personnel. Retain these instructions for future use. Additional recommended safety and operating information is referenced in each section.



### ELECTRICAL SHOCK CAN CAUSE INJURY OR DEATH

Electrical equipment must be installed and maintained in accordance with the National Electrical Code, NFPA 70, and all local codes. Maintain Mig-Guns, Electrode Holders, Tig Torches, Plasma Torches, Work Clamp, Welding Cable, and Welding Machines in good, safe operating condition. Replace worn or damaged insulation. Do not try to repair or service equipment while the power is still on. Do not service or repair equipment unless you are trained and qualified to do so. The Electrode and Work (or Ground) circuits are electrically "HOT" when equipment power is on. At no time should you touch the Electrode and Electrical Ground at the same time with bare skin or wet clothing while the power is on. Insulate yourself from work and ground using dry insulation. When welding in damp locations make certain the insulation is large enough to cover your full area of physical contact with work and ground. Ground the work (metal to be welded) to a good electrical earth ground. Keep gas cylinders, chains, wire ropes, hoists, cranes, and elevators away from any part of the electrical path. Always be sure the work cable makes a good electrical connection with the metal being welded. Occasionally check all ground connections to determine if they are mechanically strong and electrically adequate for the current required. The ground connection should be as close as possible to the area being welded. Never touch electrically "HOT" parts of electrode holders connected to two welding power sources at the same time. The voltage between the two can be the total of the open circuit voltage of both power sources. When the welding or cutting process requires values of open circuit voltages in alternating current machines higher than 80 volts, and direct current machines higher than 100 volts, adequate insulation or other means must be provided to prevent the operator from making accidental contact with the high voltage. The use of reliable automatic controls for reducing no load voltage is recommended to reduce shock hazard. When not welding for any substantial period of time, make certain that no part of the electrode circuit will accidentally make contact with the work or ground. Never immerse Mig-Guns, Electrode Holders, Tig Torches, Plasma Torches, or Electrodes in water for cooling.

REFERENCES: See Safety and Operating References A,F,H, and I.



# Safety



## SMOKE, FUMES, AND GASES CAN BE DANGEROUS TO YOUR HEALTH

Keep smoke, fumes, and gases from your breathing zone and the general area. Smoke, fumes, and gases from the welding or cutting process are of various types and strengths, depending on the kind of base metal being welded on. To ensure your safety, do not breathe these fumes or gases. Ventilation must be adequate to remove smoke, fumes, and gases during the welding procedure to protect operators and others in the immediate area. Do not weld in locations where chlorinated hydrocarbon vapors are coming from degreasing, cleaning, or spraying operations. Vapors of chlorinated solvents can form the toxic gas "phosgene" when exposed to ultraviolet radiation from an electric arc. All solvents, degreasers, and potential sources of these vapors must be removed from the welding area. Shielding gases used for arc welding can displace air and cause injury or death. Fumes produced by welding or cutting, especially in confined areas, can cause discomfort and physical harm if inhaled over an extended period of time.

Always provide adequate ventilation in the welding and cutting area to insure breathing air is safe. Use air-supplied respirators if ventilation is not adequate to remove all fumes and gases. **Never Ventilate with Oxygen**, because oxygen supports and vigorously accelerates fire.

REFERENCES: See Safety and Operating References A,B,C,H, and I.



## ARC RAYS, MOLTEN MATERIAL, AND SPARKS CAN CAUSE EYE AND SKIN INJURY

Always wear approved eye, ear, and body protection. Remove any and all combustible material from the work area. Never attempt to weld or cut without a proper head shield, and lens, that conforms to federal guidelines. A number 12 to 14 shade filter lens provides the best protection from arc radiation. A cover plate protects your eyes from sparks. Protect other nearby personnel from arc rays, sparks, or molten material. Use approved shielding curtains and appropriate goggles. Warn them not to watch the arc or expose themselves to arc rays, sparks, or molten material.

Always wear protective clothing and gloves which will not allow skin to become exposed to arc rays, heat, or molten material. Wear ear plugs to protect ears from sparks. Flammable hair preparations should not be used when welding or cutting. If possible, welding should be done in a booth that has been painted with an ultraviolet absorbing material such as zinc oxide and a low reflective finish such as lamp black, or shall be enclosed by similarly painted and noncombustible screens.

REFERENCES: See Safety and Operating References A,B,H, and I.



## WELDING SPARKS CAN CAUSE FIRES AND EXPLOSIONS

Remove any and all combustible materials from the work area. If this is not possible, cover them to prevent the welding sparks from starting a fire. Fires & explosions are caused by any combustibles reached by the arc, flame, flying sparks, hot slag, or heated materials. Do not wear any gloves or clothing that has oil or a fuel type material on it. Always have a properly working and OSHA approved Fire Extinguisher near and be sure everyone has proper training in its use. Do not weld, heat, or cut drums or containers that have held combustibles. All hollow spaces, cavities, and containers should be vented prior to cutting, welding, or heating for they may explode. Make sure proper steps have been taken to insure that venting procedures will not form flammable or toxic vapors from substances inside containers. Purging with inert gas is recommended. Use only inert gases or inert gas mixes as required by the process.

Special precautions should be used to prevent hazardous situations when using compressed gas. Use of combustible compressed gases can cause explosions resulting in personal injury or death. **Never Use Oxygen for Cleaning or Purging**. Arcing against any compressed gas cylinder can cause cylinder damage or explosion. Read and follow the instructions on compressed gas cylinders, Associated Equipment, and CEA Publication P-1, "Precautions for safe handling of compressed gases in Cylinders" available from the Compressed Gas Association, 1235 Jefferson Davis Hwy, Arlington, Va. 22202.

REFERENCES: See Safety and Operating References A,D,E,F,G, and H.



## FALLING EQUIPMENT

Lift only the unit to be moved without any running gear, accessories or gas cylinders that may be attached to it. Use equipment of a proper size to lift and move the unit. Falling equipment can cause personal injury and equipment damage.



## MOVING PARTS MAY CAUSE INJURY

Have only qualified people remove guards or covers for performing maintenance and troubleshooting. Moving parts such as cooling fans can maim fingers or hands and catch loose clothing. Keep tools, hands, hair and clothing away from moving parts. Be sure to reinstall all panels and guards before operating equipment.



## "EMF" ELECTRO MAGNETIC FIELDS

The study of the biological effects of low frequency electric and magnetic fields does not yet let us interpret the results in a single coherent context. However, there now seems to be an extremely large amount of scientific analysis based on experimentation, at the cellular level and from studies on animals and humans, that clearly show low frequency magnetic fields interacting with and producing changes in biological systems. Current scientific understanding of the evidence does not allow definite conclusions concerning advise on avoiding risks. Therefore, the current procedures recommended for \*pacemaker users are also recommended for all humans and other biological systems. To reduce the effects of low frequency electric and magnetic fields, use the following recommendations:

1. Welding cables should be kept close together by twisting or taping together.
2. Draping or coiling welding cables around the body should be avoided.
3. Welding cables should be kept away from the operator to one side.
4. Work clamp should be connected as close as possible to the area being welded.
5. Operator should not be between the work clamp and the location of the weld being made.
6. Welding power source and cables should be kept as far away as practically possible.

\*Note: Pacemaker Wearers - Consult your doctor for complete information.

REFERENCES: See Safety and Operating Reference J.



# Safety



## CYLINDERS

Shielding gas cylinders are under high pressure and if damaged can explode. Protect from welding and electrical arcs, excessive heat and mechanical shocks. Secure cylinders in an upright position by changing to a cylinder rack or stationary support. Use only the correct shielding gas for the process. Never use unmarked cylinders or rely on color markings to denote contents. Keep cylinder caps securely on cylinders unless in use. Turn face away when opening a cylinder valve. Open cylinder valves slowly then backseat or fully open valve to prevent valve body leaks. Use regulators and hose of a sufficient type for the compressed gas used. Never connect a regulator to a cylinder with a gas it is not compatible with. Do not transfill cylinders and keep valves closed and cylinder caps installed on empty cylinders. Never use a cylinder for other than its intended use.

REFERENCES: See Safety and Operating Reference G.



## HOT PARTS

Hot parts can cause serious burns. The area at and near the work being welded should be handled with proper gloves. Proper clothing should be worn to prevent spatter or chipped slag from causing burns. Never pick up welded material until it has properly cooled.

REFERENCES: See Safety and Operating References A, B, H, & I.



## FLYING DEBRIS CAN INJURE EYES

Wearing proper eye protective lenses can prevent debris from damaging the eye. Wear safety glasses with side shields or face shields.

REFERENCES: See Safety and Operating References B.



## WELDING WIRE CAN PUNCTURE SKIN

Position the unit away from any part of the body, other people, and metal when threading.

REFERENCES: See Safety and Operating References A.

## Safety and Operating References

- A) ANSI Z49.1, "Safety in Welding and Cutting"
- B) ANSI Z87.1, "Practice for Occupational and Educational Eye and Face Protection"
- C) ANSI Z88.2, "Standard Practice for Respiratory Protection"  
ANSI: American National Standard Institute, 1430 Broadway, New York, NY 10018
- D) AWS F4.1, "Recommended Safe Practices for Welding and Cutting Containers"  
AWS: The American Welding Society, P.O. Box 351040, 550 NW Lejeune Rd., Miami, FL 33135
- E) NFPA 51B, "Fire Prevention in Cutting and Welding Processes"
- F) NFPA-70, "National Electrical Code"  
NFPA: National Fire Protection Association, Batterymarch Park, Quincy, MA 02269
- G) CGA P-1, "Precautions for Safe Handling of Compressed Gases in Cylinders"  
CGA: Compressed Gas Association, 1235 Jefferson Davis Hwy., Arlington, Va 22202
- H) Code of Federal Regulations (OSHA) 29 CFR 1910  
US: U.S. Government Printing Office, Washington, DC 20402
- I) CSA Standard W117.2, "Safety in Welding, Cutting and Allied Processes"  
CSA: Canadian Standards Association, 178 Rexdale Blvd., Rexdale, Ontario, Canada M9W 1R3
- J) OTA-BP-E-53 Biological Effects of Power Frequency Electric & Magnetic Fields - Background Paper US Congress,  
Office of Technology Assessment, General Conclusions Section, Washington D.C: US Government Printing Office, May 1989.



## Section 2 Specifications & Warranty



# SPECIFICATIONS

<b>Type of input power required from power source.</b>	Single-Phase 220 VAC, 3 Amperes, 50/60 Hertz.	
<b>Duty Cycle.</b>	100%	
<b>Wire feed speed</b>	10 to 250 IPM	
<b>Wire size range</b>	.023 (.6mm) to 1/16 in. (1.6mm)	
<b>Dimensions</b>	Length: 20 in. (508mm) x Width: 10 in. (254mm) x Height 11 in. (279mm)	
<b>Weight</b>	PRO // TIG Net: 32 lbs. (14.5 Kg.)	Ship: 34 lbs. (15.4 Kg.)

# WARRANTY

**LIMITED WARRANTY** - Subject to the terms and conditions hereof, **PROFAX**, Pearland, TX warrants its products to be free from defects in workmanship and material at the time of delivery by **PROFAX**.

**PROFAX** will honor warranty claims on products as a result of failure from a defect for a time period as listed below for the particular product line, from date of sale to the original user.

Consumable products manufactured by **PROFAX** — 1 year

Resale consumable products — Original Manufacturer's Warranty

Feed Pen, Mig Guns, Flux Cored Guns, Spool Guns, Arc Gouging Torches, CO. Heaters — 90 days

Spool Gun Control Boxes and Wire Feeders — 3 year

Welding Machines — 3 year

Upon the return of the merchandise at user's expense, **PROFAX** reserves the right to either repair or replace as necessary.

This is the only warranty either expressed or implied covering our products.

### MAILING

P.O. Box 898  
Pearland, TX 77588-0898

### SHIPPING

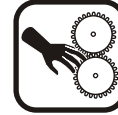
1603 North Main  
Pearland, TX 77581-2803



## Section 3 Installation

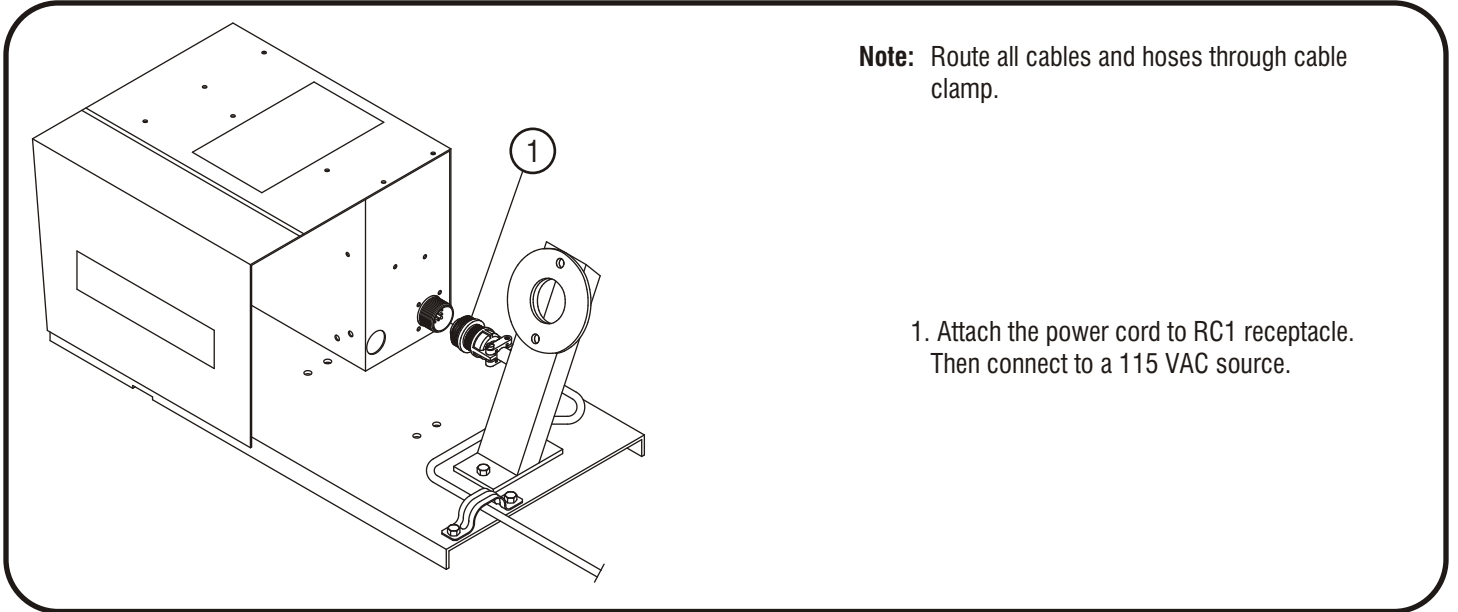


**! CAUTION!**



**NOTE:** → Read and understand the safety information in Section 1 before attempting installation.

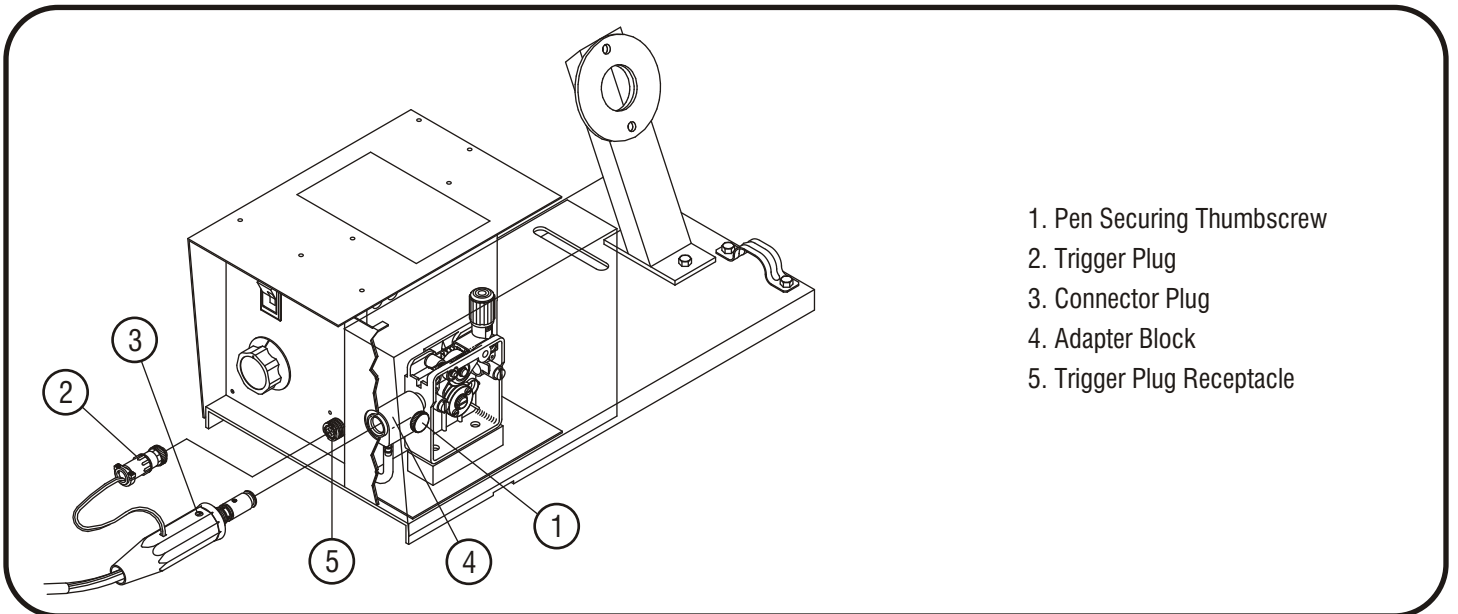
### CONNECTING THE WIRE FEEDER



**Note:** Route all cables and hoses through cable clamp.

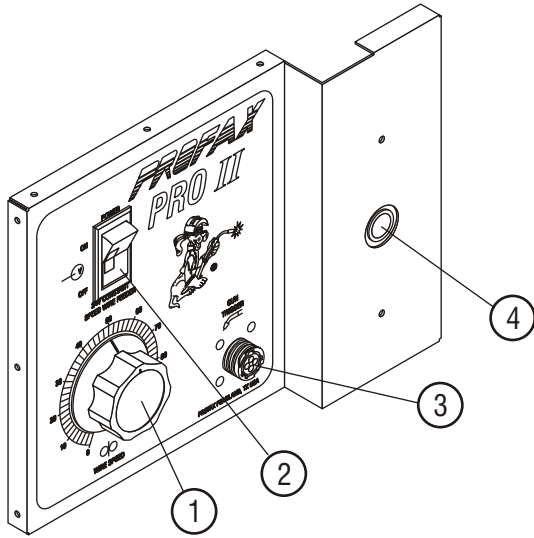
1. Attach the power cord to RC1 receptacle. Then connect to a 115 VAC source.

### CONNECTING THE FEED PEN ASSEMBLY



1. Pen Securing Thumbscrew
2. Trigger Plug
3. Connector Plug
4. Adapter Block
5. Trigger Plug Receptacle

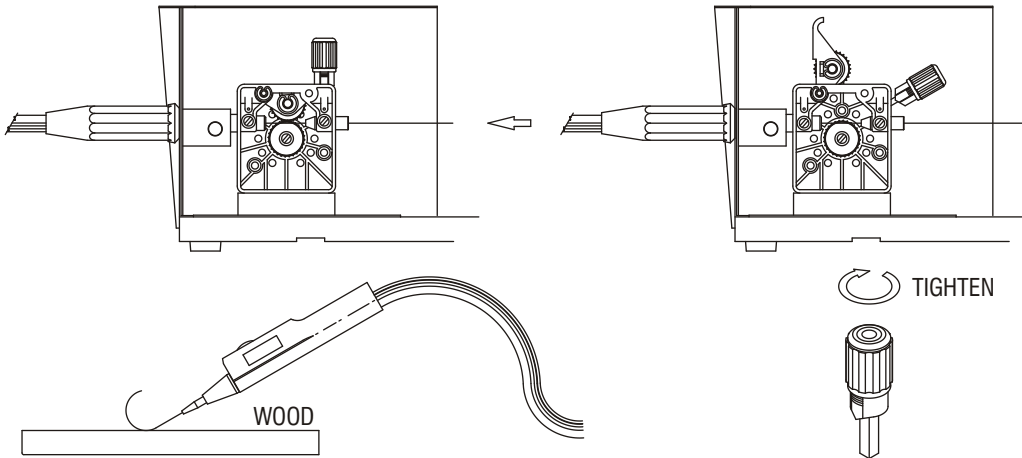
Loosen the feed pen securing thumbscrew on the side of the adapter block. Insert the feed pen connector plug fully into the adapter block. Secure by tightening the feed pen securing thumbscrew. Connect the trigger plug to the trigger plug receptacle by aligning the plug until it inserts into the receptacle then turning the plug collar to the right to lock in place.



## CONTROL PANEL

1. Wire Speed Control
2. Power Switch and Power "ON" Light
3. Trigger Receptacle
4. Feed Pen Receptacle

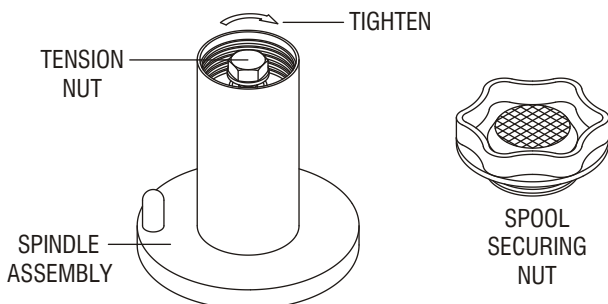
## THREADING WELDING WIRE AND ADJUSTING TENSION



1. Release pressure arm(s) by sliding the tension adjustment lever(s) down.
2. Route the welding wire through the inlet guide across the feed roll(s) and into the outlet guide. Slide at least six inches of wire into the outlet guide.
3. Close pressure arm(s) and secure by sliding the tension adjustment lever(s) up until locked in place.
4. Remove the feed pen contact tip.
5. Holding the feed pen out straight, feed the welding wire through the feed pen by using the gun trigger.
6. Reinstall the contact tip.
7. To adjust feed roll pressure - hold the feed pen no less than four inches up from a wood surface. Press the gun trigger to feed wire and tighten the wire tension adjustment knob to the point where the wire does not slip.
8. Cut off wire and close cover.

**NOTE:** ⇒ Too much wire tension will **damage motor, cause erratic feeding and excessively wear feed rolls**

## SPOOL BRAKE ADJUSTMENT



1. Tension should be adjusted with wire spool on feeder.
2. Remove wire spool securing nut.
3. Turn the tension adjustment nut to the right to increase braking tension.
4. Adjust until a slight force is felt as you turn the spool by hand.
5. Install wire spool securing nut.

**NOTE:** ⇒ Too much brake tension will cause **erratic** feeding.





## Section 4 Charts & Tables



### FEED ROLL , KIT AND GUIDE CHART

WIRE DIAMETER	FEED ROLL	TYPE	KIT No.	INLET GUIDE	OUTLET GUIDE
<b>V - GROOVE</b>					
.023/.025 (.6mm)	9054	V	9095	9070	9080
.030 (.8mm)	9054	V	9095	9070	9080
.035 (.9mm)	9055	V	9096	9071	9081
.045 (1.2mm)	9056	V	9097	9071	9081
<b>V - KNURLED</b>					
.030 (.8mm)	9057	VK	9098	9070	9080
.035 (.9mm)	9057	VK	9099	9071	9081
.045 (1.2mm)	9058	VK	9100	9071	9081
.052 (1.4mm)	9059	VK	9101	9072	9082
1/16 (1.6mm)	9059	VK	9101	9072	9082
<b>U - GROOVE</b>					
.030 (.8mm) + .035 (.9mm)	9060	U	9102	9070	9080
.035 (.9mm) + 3/64 (1.19mm)	9061	U	9103	9071	9081
.040 (1.0mm) + .045 (1.2mm)	9062	U	9104	9071	9081
.045 (1.2mm) + 1/16 (1.6mm)	9063	U	9105	9072	9082
<b>PRESSURE ROLLS</b>					
FLAT      SMOOTH	9052	STANDARD - FURNISHED WITH WIRE FEEDER - CAN BE USED WITH UV AND V-KNURLED FEED ROLLS			
FLAT      KNURLED	9053	OPTIONAL - USED WHEN EXTRA DRIVE IS NEEDED			

Note: "V" & "VK" feed rolls handle the same size wire in both grooves.  
 "U" groove feed rolls handle a second wire size by turning roll over.



# Section 5 Maintenance



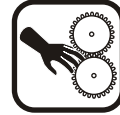
**WARNING!**



**ELECTRIC SHOCK CAN KILL**  
A. DO NOT TOUCH LIVE electrical parts.  
B. Disconnect input power before servicing.



**HOT PARTS CAN BURN**  
Allow for cooling periods



**MOVING PARTS CAN MAIM**  
Disconnect input power before servicing.

**CAUTION**

Read and understand the safety information in Section 1 of this manual.  
Maintenance should be performed by qualified personnel only.

### DAILY

1. Clean drive rolls.
  - A. Clean with a towel and wire brush.
  - B. If a solvent is required use one that will leave **NO** residue.
  - C. **DO NOT USE** - penetrating oils or anti-spatter spray on feed rolls.
2. Inspect all connections to make sure that they are clean and tight.
3. Inspect all cables and hose for cracks, tears and frayed wires. Repair as necessary.

### MONTHLY

1. Inspect and repair any cables or hoses that are cracked or frayed.
2. Replace any cables or hoses that have been overheated or that have more than one repair in any six foot section.
3. Blow out or vacuum any particles from the wire drive area.
4. Clean any buildup of metal particles on or around the feed roll shafts.
5. Replace any terminal connections that show to have arced out or cannot be tightened.

### 3 MONTHS

1. Remove hinged cover and blow out or vacuum component area
2. Inspect for wear and replace if necessary, feed and pressure rolls, roll axles, gears and gear bushings.
3. Disassemble, inspect and repair or replace if necessary all control cord multi-pin plugs with frayed wire or deteriorated wire insulation.
4. Replace inlet, intermediate and outlet guides.
5. Replace feed pen liner.
6. Replace unreadable labels.

## **OVERLOAD PROTECTION**

**Disconnect all electrical power before checking fuses.**

**F1**

**F2**

**F3**



### **FUSES:**

**F1** - 7A - Fast Acting  
24 VAC circuit overload protection

**F2** - 7A - Slo-Blo  
MOTOR overload protection

**F3** - 3A -Fast Acting  
220 VAC circuit overload protection

7A FAST ACT.	7A SLO - BLO	3A FAST ACT.
-----------------	-----------------	-----------------

**LOCATED BEHIND WIRE DRIVE**



# Section 6 Troubleshooting



**! WARNING!**



Troubleshooting should only be done by qualified personnel with a working knowledge of electrical circuits.

TROUBLE	REMEDY
Unit completely inoperative.	<ol style="list-style-type: none"> <li>1. Turn power switch on.</li> <li>2. Check F3 fuse.</li> <li>3. Check control cord plugs and connections.</li> <li>4. Check input power to feeder.</li> </ol>
Wire does not feed.	<ol style="list-style-type: none"> <li>1. Check for proper feed roll size and proper feed roll tension.</li> <li>2. Check for feed roll obstructions.</li> <li>3. Check feed pen trigger, trigger leads, cord and plug.</li> <li>4. Check fuse F2</li> <li>5. Have an authorized service station check motor and PC board.</li> </ol>
Wire feeds as soon as power is turned on.	<ol style="list-style-type: none"> <li>1. Check feed pen trigger, trigger leads, cord and plug for shorted wires.</li> <li>2. Check for shorted or frayed wires touching in RC2 receptacle.</li> </ol>
Wire feeds erratically.	<ol style="list-style-type: none"> <li>1. Readjust feed roll tension.</li> <li>2. Spool brake too tight.</li> <li>3. Wrong size feed rolls and or wire guides.</li> <li>4. Worn feed rolls and or guides.</li> <li>5. Inlet or outlet guide touching feed rolls preventing proper tension adjustment.</li> <li>6. Improperly installed feed pen liner.</li> <li>7. Worn contact tube.</li> <li>8. Worn feed roll axles and or drive gear bushings.</li> <li>9. Have an authorized service station check motor and PC board.</li> </ol>
Motor runs slowly.	<ol style="list-style-type: none"> <li>1. Check for correct input voltage.</li> <li>2. Check for correct voltage to motor.</li> <li>3. Have an authorized service station check the motor and PC board.</li> </ol>

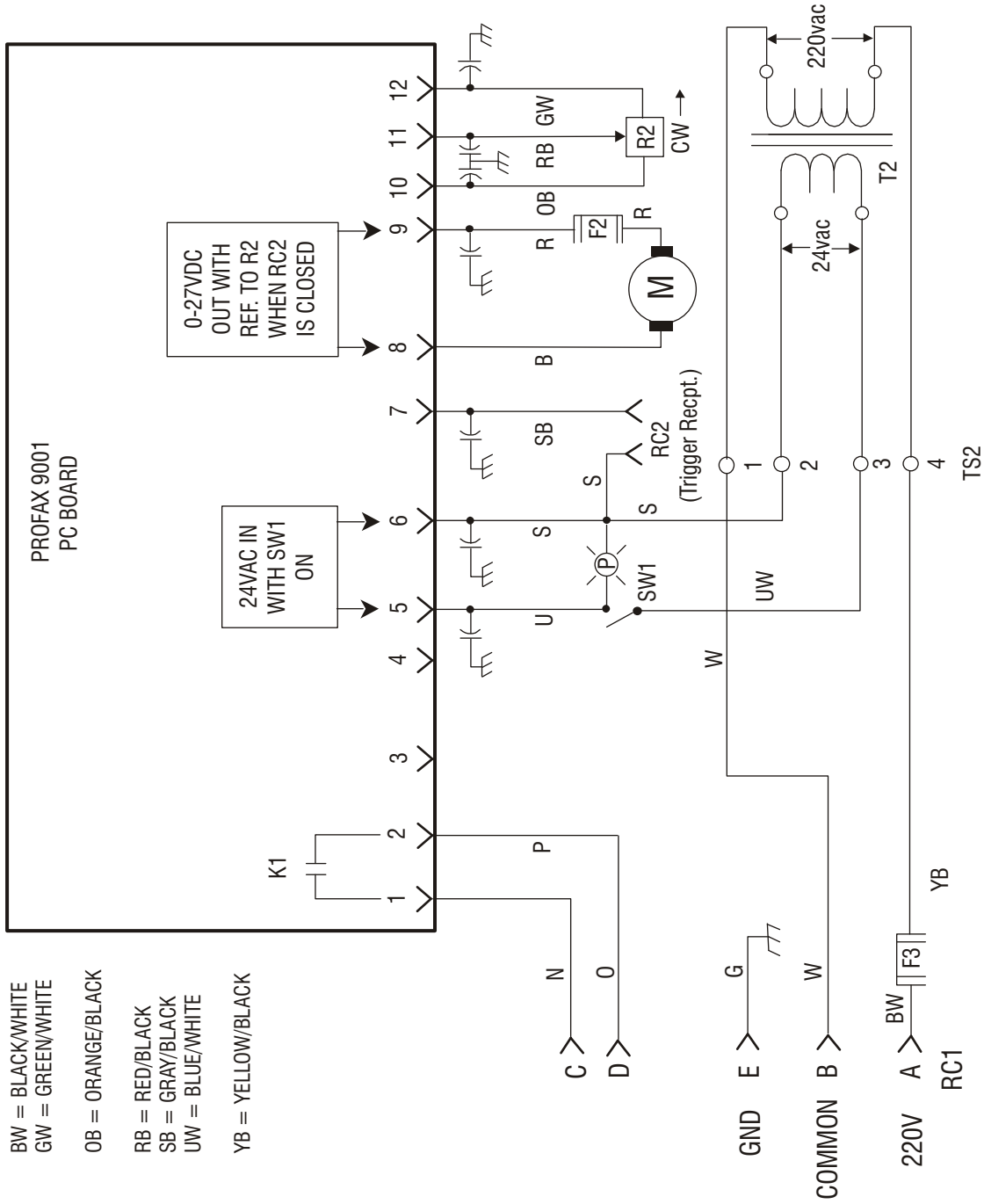


## PRO II TIG - 220V

### WIRE COLOR CODE

B = BLACK  
 G = GREEN  
 N = BROWN  
 O = ORANGE  
 P = PURPLE  
 R = RED  
 S = GRAY  
 U = BLUE  
 W = WHITE  
 Y = YELLOW

BW = BLACK/WHITE  
 GW = GREEN/WHITE  
 OB = ORANGE/BLACK  
 RB = RED/BLACK  
 SB = GRAY/BLACK  
 UW = BLUE/WHITE  
 YB = YELLOW/BLACK





**Section 7**  
**Parts**

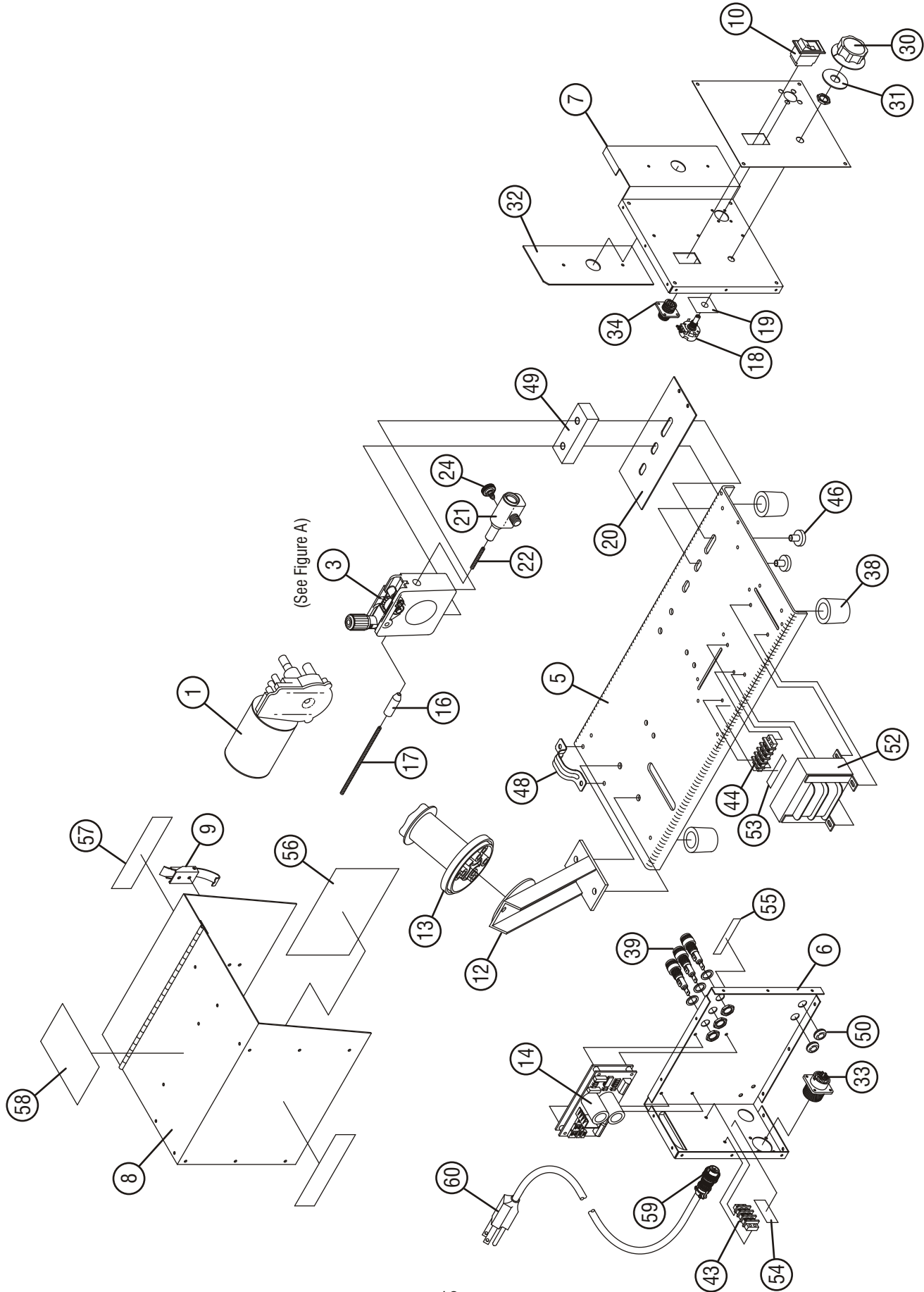


# **PARTS**

# **MANUAL**



# Parts





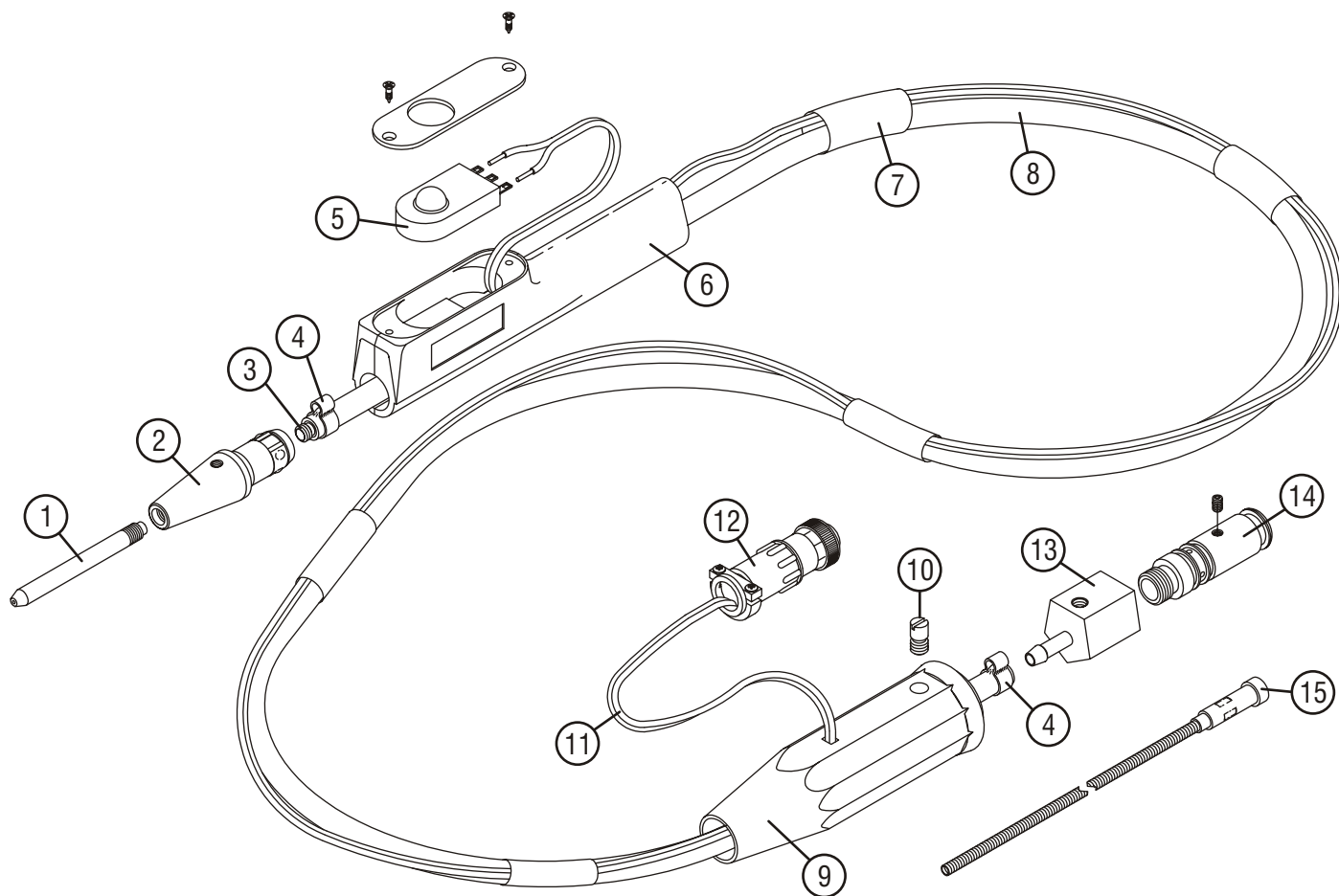
# Parts



ITEM	PART NO.	ELEC. MKGS.	DESCRIPTION	QTY.
				PRO II
1	9185	M	MOTOR, 24VDC 160 RPM	1
3	9004		WIRE DRIVE ASSY. 2 ROLL (see figure A)	1
5	9012		BASE	1
6	9014		DIVIDER PANEL	1
7	9016		FRONT PANEL	1
8	9013		HINGED COVER	1
9	9015		COVER HASP	1
10	9160		FACEPLATE	1
12	9018		SPOOL SUPPORT	1
13	9017		SPINDLE ASSY.	1
14	9162		PC BOARD	1
15	8999		TERMINAL TOOL, PC Board (Not Shown)	1
16	9007		INLET GUIDE HOLDER	1
17			INLET GUIDE LINER (see DRIVE ROLL, KIT and GUIDE chart)	1
18	9028	R2	POTENTIOMETER, 10K, 1T, 2W	1
19	9029		INSULATOR, potentiometer	1
20	9008		DRIVE MOUNT INSULATOR	1
21	9006		ADAPTER BLOCK	1
22			LINER, adapter block (see DRIVE ROLL, KIT and GUIDE chart)	1
24	9171		THUMB SCREW, adapter block	1
29	9022	SW1	POWER SWITCH	1
30	9030		KNOB, potentiometer	1
31	9031		BRAKE, felt	1
32	9032		OUTLET INSULATOR	1
33	7123	RC1	POWER RECEPTACLE, amphenol S12021-3	1
34	9034	RC2	TRIGGER RECEPTACLE, amp	1
35	9035		TERMINAL, trigger receptacle (Not Shown)	2
38	9024		FOOT, rubber	4
39	6100		FUSE HOLDER	3
40	9038	F1	FUSE, 7 amp, 250V fast acting (Not Shown)	1
41	9039	F2	FUSE, 7 amp, 250V Slo-Blo (Not Shown)	1
42	9040	F3	FUSE, 3 amp, 250V Slo-Blo (Not Shown)	1
43	9041	TS1	TERMINAL STRIP, 3 pole	1
44	9042	TS2	TERMINAL STRIP, 4 pole	1
45	9043		JUMPER, terminal strip (Not Shown)	3
46	9025		SCREW INSULATOR, wire drive	2
48	9009		CLAMP, cable	1
49	9023		SPACER BLOCK	1
50	9027		GROMMET, rubber	2
52	7121	T2	TRANSFORMER, 220/24VAC 100VA	1
53	9047		LABEL, TS2	1
54	9048		LABEL, TS1	1
55	9049		LABEL, fuses	1
56	9161		LABEL, schematic	1
57	9142		LABEL, PROFAX	2
58	9036		LABEL, safety	1
59	9443		5 PIN PLUG, only S12020-7	1
60	7104		5' POWER CORD, complete	1



# Parts



ITEM NO.	PARTS LIST PART NO.	PRO II TIG WIRE FEED PEN ASSEMBLY P/N FP-8 DESCRIPTION	QTY.
1	407839-3	Tip Tapered, .030	1
	407839-6	Tip Tapered, .035	
	407839-9	Tip Tapered, .045	
	407839-12	Tip Tapered, 3/64"-1/16"	
2	9486	Tip Adapter	1
3	9489	Nipple	1
4	9158	Clamp	2
5	SW1	Bulb Switch	1
6	9493	One Piece Switch Handle	1
7	EPS20-1/2	2" x 1/2" Heat Shrink Tubing	6
8	9490	Jacket 8'	1
9	05252	Adapter Block Insulator	1
10	1R-P	Plug	1
11	9492	18/2 Flat Cord 9'	1
12	079878	Trigger Plug	1
13	9487	Adapter Block	1
14	9488	Feeder Adapter	1
15	9491	Liner .052	1



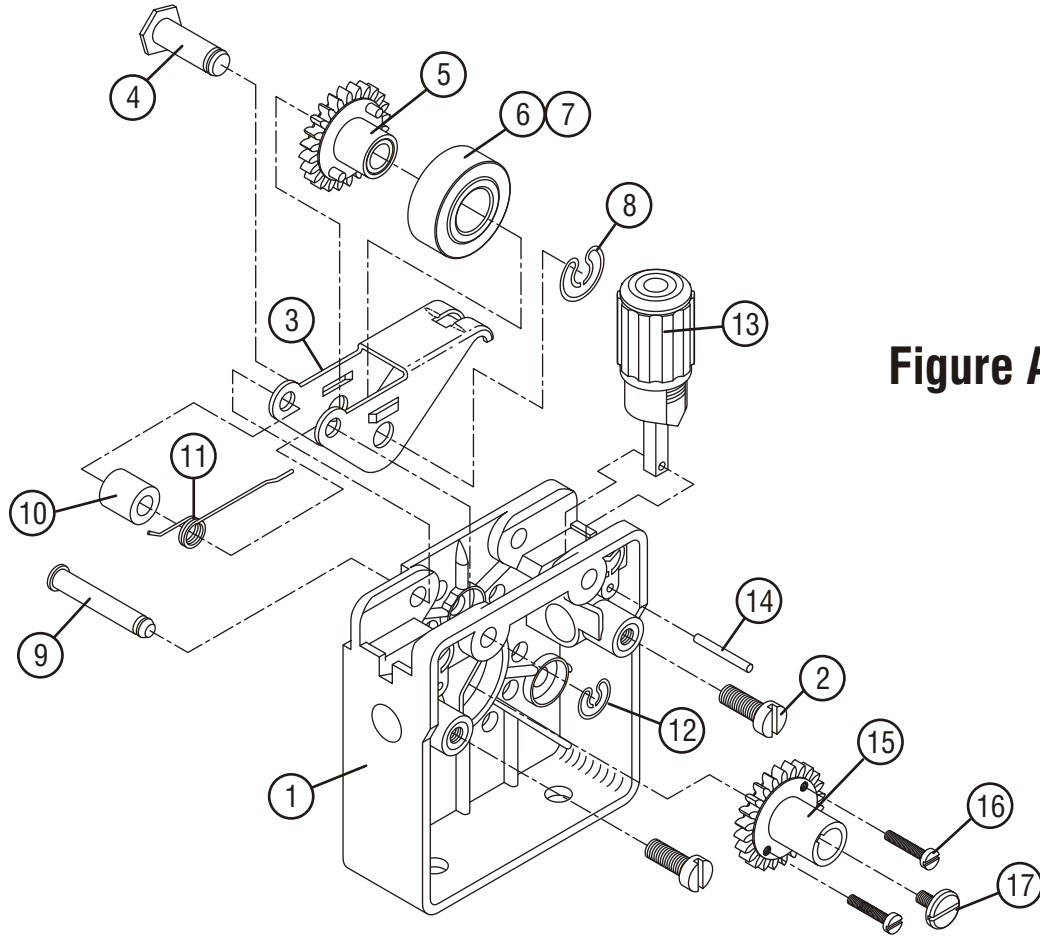


Figure A

FIGURE A ITEM	PARTS LIST PART NO.	PRO // WIRE DRIVE 2 ROLL ASSEMBLY P/N 9004 DESCRIPTION	QTY.
1	9143	WIRE DRIVE HOUSING	1
2	9144	SCREW, guide retention, and motor mounting	5
3	9145	PRESSURE ARM	1
4	9134	AXLE, pressure roll	1
5	9136	GEAR, pressure roll	1
6	9052	PRESSURE ROLL, flat smooth	1
7	9053	PRESSURE ROLL, knurled ( optional )	1
8	9135	CIRCLE CLIP, pressure roll axle	1
9	9146	PIVOT PIN, pressure arm	1
10	9147	SPACER	1
11	9148	SPRING, lift	1
12	9149	CIRCLE CLIP, pressure arm pivot pin	1
13	9150	TENSION AJUSTER	1
14	9151	RETAINING PIN, tension adjuster	1
15	9129	GEAR, drive	1
16	9130	SCREW, drive roll retention	2
17	9126	SCREW, drive gear retention	1
18	9128	KEY, motor shaft (Not Shown)	1
19	9152	SNAP RING, motor shaft (Not Shown)	1





