



Product Description	#3 Positioner
M.K. Manual Part Number	091-0133
M.K. Form Number	PO/OM-3
NWSA Form Number	1060
Effective with Serial Number	
Voltage Ratings	110 VAC
Printing/Rev. Date	6/98
This manual applies to the following Model Numbers	127-003

## *#3 Positioner Turntable*

# OWNERS MANUAL



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# SAFETY CONSIDERATIONS

## ELECTRIC ARC WELDING EQUIPMENT

**CAUTION : READ BEFORE ATTEMPTING INSTALLATION,  
OPERATION OR MAINTENANCE OF THIS EQUIPMENT**

### 1-1 INTRODUCTION

This equipment is intended for ultimate application by commercial/industrial users and for operation by persons trained and experienced in the use and maintenance of welding equipment. Operation should not be undertaken without adequate training in the use of such equipment. Training is available from many public and private schools or similar facilities.

Safe practices in the installation, operation and maintenance of this equipment requires proper training in the art, a careful study of the information provided with the equipment, and the use of common sense. Rules for safe use are generally provided by suppliers of welding power sources, compressed gas suppliers, and electrode suppliers. Careful compliance with these rules will promote safe use of this equipment.

The following Safety Rules cover some of the more generally found situations. **READ THEM CAREFULLY.** In case of any doubt, obtain qualified help before proceeding.

### 1-2 GENERAL PRECAUTIONS

#### A. Burn Prevention

ELECTRIC ARC WELDING PRODUCES HIGH INTENSITY HEAT AND ULTRAVIOLET RADIANT ENERGY WHICH MAY CAUSE SERIOUS AND PERMANENT EYE DAMAGE AND WHICH MAY DAMAGE ANY EXPOSED SKIN AREAS.

Wear helmet with safety goggles or glasses with side shields underneath, appropriate filter lenses or plates (protected by clear cover glass). This is a must for welding or cutting (and chipping) to protect the eyes from radiant energy and flying metal. Replace cover glass when broken, pitted, or spattered.

Medical first aid and eye treatment. First aid facilities and a qualified first aid person should be available for each shift unless medical facilities are close by for immediate treatment of flash burns of the eyes and skin burns.

Wear protective clothing - leather (or asbestos) gauntlet gloves, hat, and high safety-toe shoes. Button shirt collar and pocket flaps, and wear cuffless trousers to avoid entry of sparks and slag.

Avoid oily or greasy clothing. A spark may ignite them.

Flammable hair preparations should not be used by persons intending to weld or cut.

Hot metal such as electrode stubs and work pieces should never be handled without gloves.

Ear plugs should be worn when working on overhead or in a confined space. A hard hat should be worn when others work overhead.

#### B. Toxic Fume Prevention

Adequate ventilation. Severe discomfort, illness or death can result from fumes, vapors, heat, or oxygen enrichment or depletion that welding (or cutting) may produce. Prevent them with adequate ventilation. NEVER ventilate with oxygen.

Lead-, cadmium-, zinc-, mercury-, beryllium-bearing and similar materials, when welded or cut, may produce harmful concentrations of toxic fumes. Adequate local exhaust ventilation must be used, or each person in the area, as well as the operator, must wear an air-supplied respirator. For beryllium, both must be used.

Metals coated with or containing materials that emit toxic fumes should not be heated unless coating is removed from the work surface, the area is well ventilated, or the operator wears an air-supplied respirator.

Work in a confined space only while it is being ventilated and, if necessary, while wearing an air-supplied respirator.

rails, electrical wires, or welding circuits. They can produce short circuit arcs that may lead to a serious accident. (See 1-3C)

ICC or DOT marking must be on each cylinder. It is an assurance of safety when the cylinder is properly handled.

Identifying gas content. Use only cylinders with name of gas marked on them; do not rely on color to identify gas content. Notify supplier if unmarked. NEVER DEFACE or alter name, number, or other markings on a cylinder. It is illegal and hazardous.

Empties: Keep valves closed, replace caps securely; mark MT; keep them separate from FULLS, and return promptly.

Prohibited use. Never use a cylinder or its contents for other than its intended use, NEVER as a support or roller.

Locate or secure cylinders so they cannot be knocked over.

Passageways and work areas. Keep cylinders clear of areas where they may be stuck.

Transporting cylinders. With a crane, use a secure support such as a platform or cradle. Do NOT lift cylinders off the ground by their valves or caps, or by chains, slings, or magnets.

Do NOT expose cylinders to excessive heat, sparks, slag, and flame, etc. that may cause rupture. Do not allow contents to exceed 55 degrees C (130 degrees F.) Cool with water spray where such exposure exists.

Protect cylinders, particularly valves from bumps, falls, falling objects, and weather. Replace caps securely when moving cylinders.

Stuck valve. Do NOT use a hammer or wrench to open a cylinder valve that cannot be opened by hand. Notify your supplier.

Mixing gases. NEVER try to mix any gases in a cylinder.

NEVER refill any cylinder.

Cylinder fittings should never be modified or exchanged.

### **3. Hose**

Prohibited use. Never use hose other than that designed for the specified gas. A general hose identification rule is: red for fuel gas, green for oxygen, and black for inert gases.

Use ferrules or clamps designed for the hose (not ordinary wire or other substitute) as a binding to connect hoses to fittings.

No copper tubing splices. Use only standard brass fittings to splice hose.

Avoid long runs to prevent kinks and abuse. Suspend hose off ground to keep it from being run over, stepped on, or otherwise damaged.

Coil excess hose to prevent kinks and tangles.

Protect hose from damage by sharp edges, and by sparks, slag, and open flame.

Examine hose regularly for leaks, wear, and loose connections. Immerse pressured hose in water; bubbles indicate leaks

Repair leaky or worn hose by cutting area out and splicing. Do NOT use tape.

### **4. Proper Connections**

Clean cylinder valve outlet of impurities that may clog orifices and damage seats before connecting regulator. Except for hydrogen, crack valve momentarily, pointing outlet away from people and sources of ignition. Wipe with a clean, lintless cloth.

Match regulator to cylinder. Before connecting, check that the regulator label and cylinder marking agree, and that the regulator inlet and cylinder outlet match. NEVER Connect a regulator designed for a particular gas or gases to a cylinder containing any other gas.

Tighten connections. When assembling threaded connections, clean and smooth seats where necessary. Tighten. If connection leaks, disassemble, clean, and retighten, using properly fitting wrench.

equipment can fatally shock a person whose body becomes a conductor. DO NOT STAND, SIT, LIE, LEAN ON, OR TOUCH a wet surface when welding without suitable protection.

To protect against shock:

Keep body and clothing dry. Never work in damp area without adequate insulation against electrical shock. Stay on a dry duckboard, or rubber mat when dampness or sweat cannot be avoided. Sweat, sea water, or moisture between body and an electrically HOT part - or grounded metal - reduces the body surface electrical resistance, enabling dangerous and possibly lethal currents to flow through the body.

### **1. Grounding the Equipment**

When installing, connect the frames of each unit such as welding power source, control, work table, and water circulator to the building ground. Conductors must be adequate to carry ground currents safely. Equipment made electrically HOT by stray currents may shock, possibly fatally. Do NOT GROUND to electrical conduit, or to a pipe carrying ANY gas or a flammable liquid such as oil or fuel.

Three-phase connection. Check phase requirement of equipment before installing. If only three-phase power is available, connect single-phase equipment to only two wires of the three-phase line. Do NOT connect the equipment ground lead to the third (live) wire, or the equipment will become electrically HOT - a dangerous condition that can shock, possibly fatally.

Before welding, check ground for continuity. Be sure conductors are touching bare metal of equipment frames at connections.

If a line cord with a ground lead is provided with the equipment for connection to a switch box, connect the ground lead to the grounded switch box. If a three-prong plug is added for connection to a grounded mating receptacle, the ground lead must be connected to the ground prong only. If the line cord comes with a three-prong plug, connect to a grounded mating receptacle. Never remove the ground prong from a plug, or use a plug with a broken ground prong.

### **2. Connectors**

Fully insulated lock-type connectors should be used to join welding cable lengths.

### **3. Cables**

Frequently inspect cables for wear, cracks, and damage. IMMEDIATELY REPLACE those with excessively worn or damaged insulation to avoid possibly lethal shock from bared cable. Cables with damaged areas may be taped to give resistance equivalent to original cable.

Keep cable dry, free of oil and grease, and protected from hot metal and sparks.

### **4. Terminals and Other Exposed Parts**

Terminals and other exposed parts of electrical units should have insulating covers secured before operation.

### **5. Electrode Wire**

Electrode wire becomes electrically HOT when the power switch of gas metal-arc welding equipment is ON and welding gun trigger is pressed. Keep hands and body clear of wire and other HOT parts.

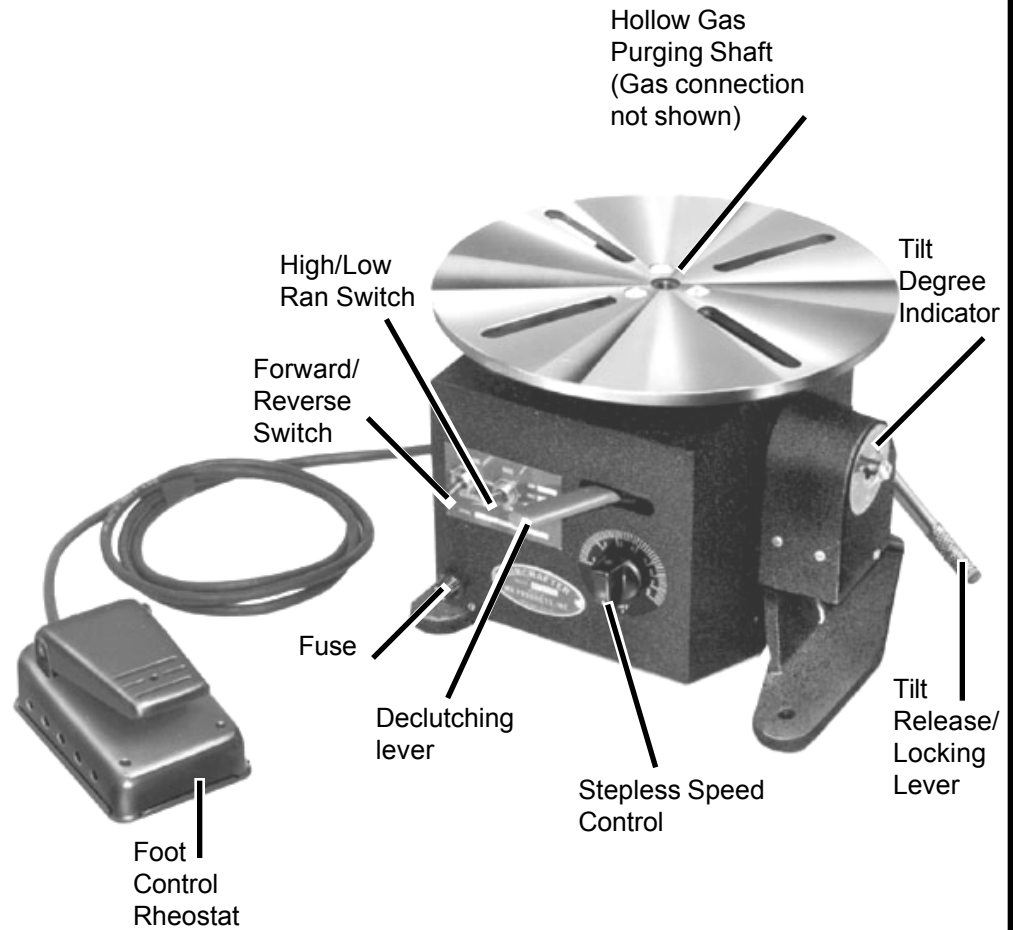
### **6. Safety Devices**

Safety devices such as interlocks and circuit breakers should not be disconnected or shunted out. Before installation, inspection, or service of equipment, shut OFF all power, and remove line fuses (or lock or red-tag switches) to prevent accidental turning ON of power. Disconnect all cables from welding power source, and pull all 115 volts line-cord plugs.

Do not open power circuit or change polarity while welding. If, in an emergency, it must be disconnected, guard against shock burns or flash from switch arcing. Leaving equipment unattended. Always shut OFF, and disconnect all power to equipment.

Power disconnect switch must be available near the welding power source.

## FEATURES



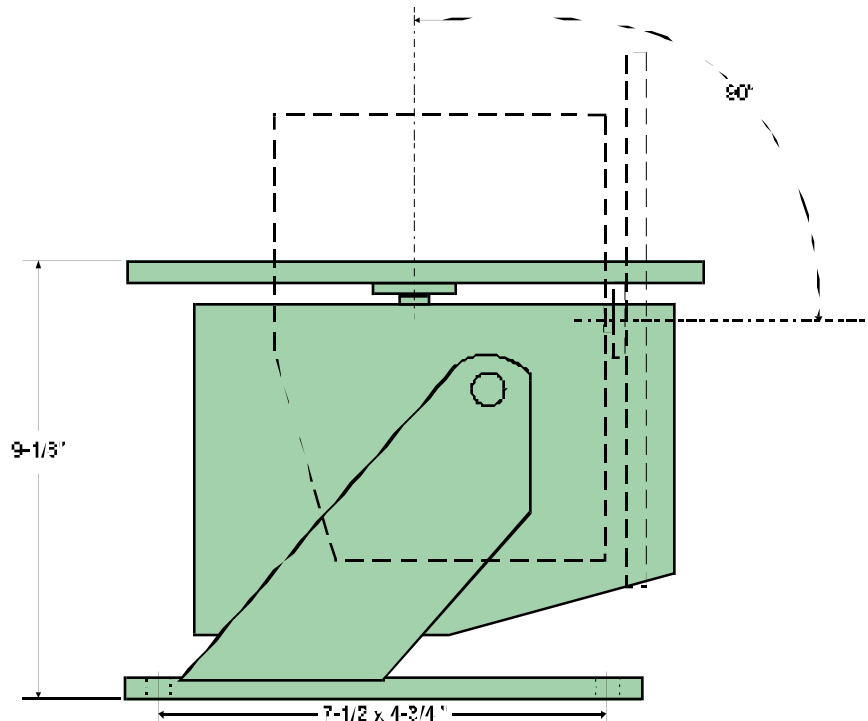
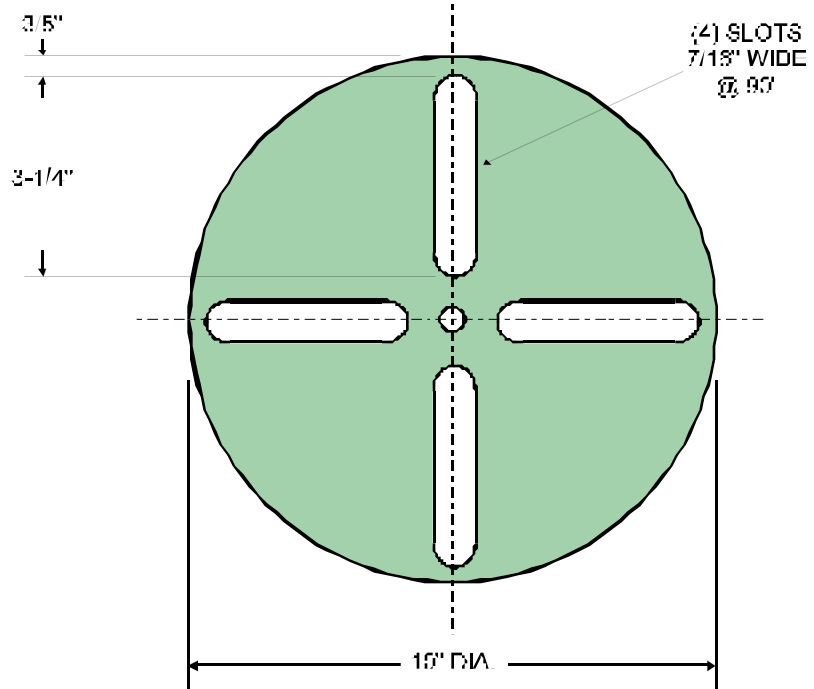
## OPERATING PROCEDURE

1. Connect positioner to 115 VAC power source.
2. Connect welding ground cable to grounding lug assembly on positioner.
3. Set high/low range switch to proper position.
4. Set forward/reverse switch to proper position.
5. Establish desired speed setting using the rheostat on the positioner.
6. Depress foot control to activate positioner.

*NOTE: Failure to attach the welding ground cable to the grounding lug assembly will result in damage to the positioner electrical circuit.*

# SPECIFICATIONS

Mode	Standard Turntable Diameter	Turntable Capabilities with Balanced Load		Degree Tilt	Speed Range R.P.M.		Ground Capacity AMPS	Motor	Shipping Weight	Transmission
		Turntable: Horizontal	Turntable: Vertical		Low	High				
3	10"	200 lbs.	50 lbs.	-15° to 130°	0.5-4	2-5	350	115VAC 50/60 Hz	45 lbs.	Gear



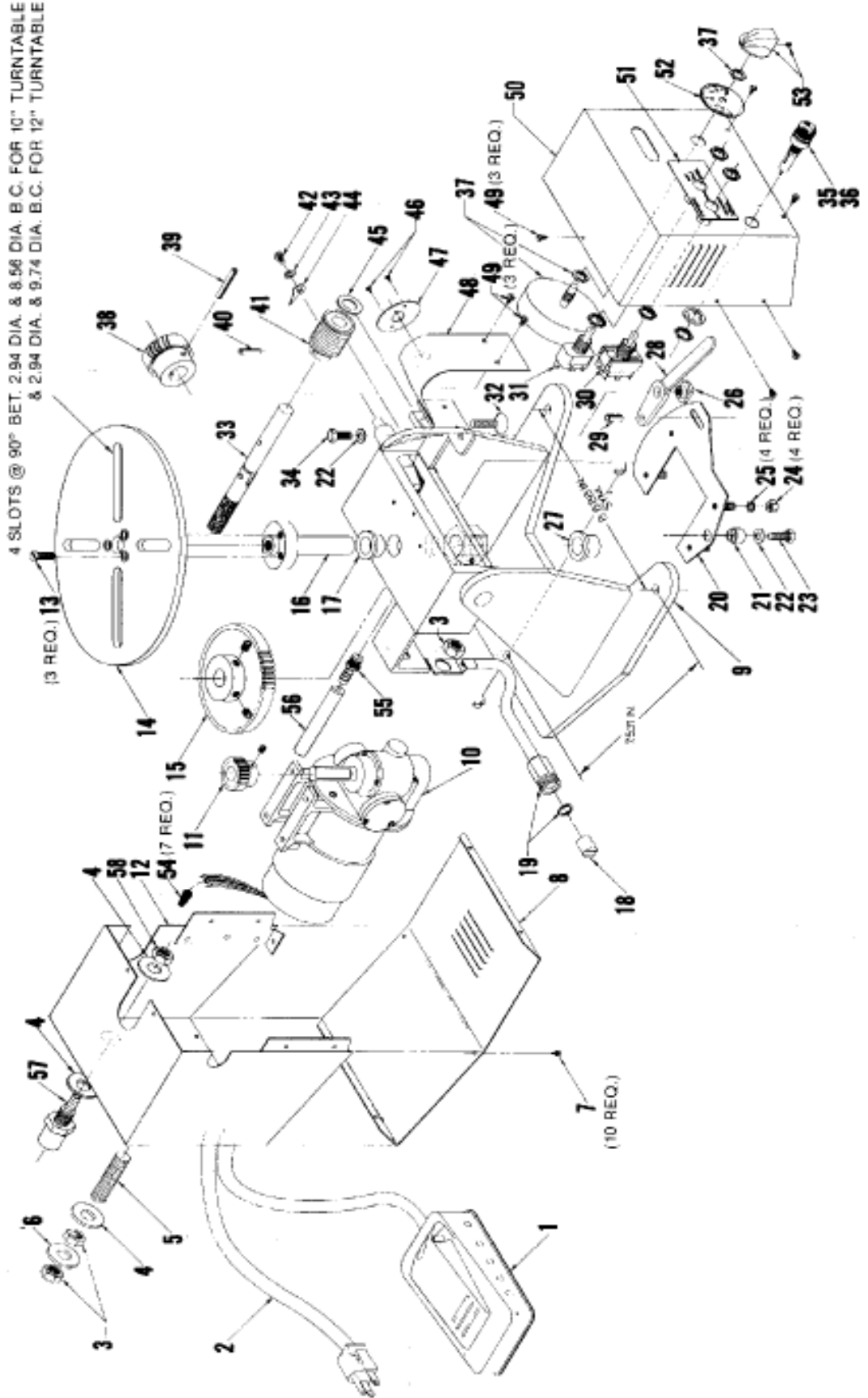
## PARTS LIST

<u>ITEM</u>	<u>PART NO.</u>	<u>QTY</u>	<u>DESCRIPTION</u>
1	117-0016	1	Rheostat Foot Ctrl. 100 Ohm.
2	843-0001	1	Cord Set 18/3 8 Ft.
3	342-0039	3	Nut Jam 1/2-13 Brass
4	331-0009	3	Washer Flat 1/2 Stl.
5	445-0005	1	Stud. Thrd'd Brass
6	331-0176	1	Washer Flat 1/2 Brass
7	327-0007	10	Scr. Self Taping Slot #4-40 x 1/4
8	435-0271	1	Cover-Bottom
9	002-0086	1	Welded Assy. Base-Gear Hsg.
10	213-0011	1	Gearmotor 115V. Ser. 480:1
11	507-0108	1	Spur Gear-20 P.-20 T. x 1.0 P.D.
12	002-0070	1	Welded Assy. Rear Cover
13	324-0283	3	Flat Hd. Scr. #1/4-20 x 1/2
14	431-0542	1	Turntable Mach'd 10" Dia.
15	507-0110	1	Spur Gear-Bored 5" P.D.
16	002-0071	1	Welded Assy. Shaft-Flange
17	501-0024	1	Bearing-O/F Bushing 5/8 x 3/4 x 1/2
18	176-0004	1	Brush, Cu, Concaved
19	002-0084	1	Welded Assy. Ground Cable
20	002-0082	1	Welded Assy. Motor Base-Stud
21	431-0583	1	Pivot Spacer-Hand Adapter
22	331-0005	2	Washer Fl. Std. #1/4 Stl.
23	329-0003	1	Cap Scr. Hex. Hd. 1/4-20 x 3/4
24	341-0010	4	Hex. Nut Plain 1/4-20
25	333-0047	4	Lock Washer-Internal 1/4
26	431-0582	1	Pivot Nut-Quick Disc't.
27	501-0020	1	Bearing-O/F Bushing
28	002-0083	1	Welded Assy. Hand Lever
29	421-0252	1	Spring Pin 1/4 x 5/8 Lg.
30	159-0013	1	Tog. Switch Dpdt.
31	159-0001	1	Switch Ring Spst.
32	322-0050	1	Screw-Thumb 5/16-18 x 1
33	415-0019	1	Tilt Flex Handle
34	329-0002	1	Cap Scr. Hex. Hd. #14-20 x 5/8
35	152-0058	1	Fuseholder
36	151-0001	1	Fuse 2 Amp. 3 Ag.
37	117-0009	1	Pot Rheost. 250 Ohm. 50W
38	507-0112	1	Worm Gear

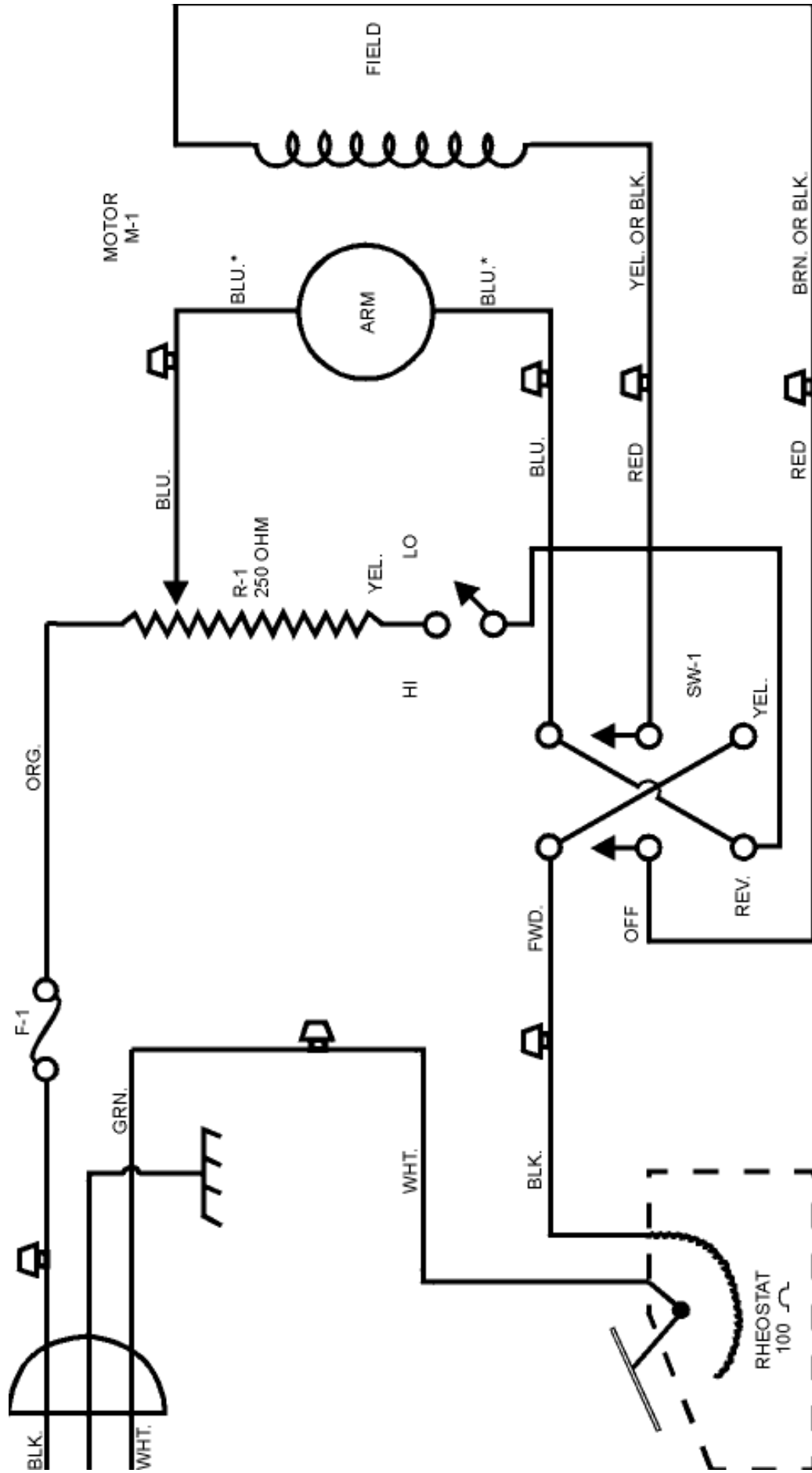


39	421-0223	1	Spring Pin 3/16 x 1-1/4 Lg.
40	421-0217	1	Spring pin 3/16 x 3/4 Lg.
41	507-0114	1	Worm-Bored
42	325-0204	1	Pan Hd. Scr. #10-24 x 1/4
43	333-0045	1	Lock Washer #10 Internal
44	435-0241	1	Pointer-Tilt Indicator
45	331-0009	1	Washer Fit. Std. 1/2 Stl.
46	327-0070	2	Scr. Selt Tap. #2 x 3/16 Typ. B
47	403-0007	1	Dial-Tilt Angle
48	002-0079	1	Welded Assy. Pin & Gear Cvr.
49	327-0012	6	Scr. Selt Tap. #6-32 x 1/4
50	002-0081	1	Welded Assy. Front Cover
51	405-0043	1	Plate-Model No.
52	403-0006	1	Dial 1 to 8 Blk.
53	401-0013	1	Rheostat Knob 1.2 O.D.
54	153-0147	7	Wire Nut-71B
55	757-0009	1	Hose Fitting
56	551-0016	29ft.	Tubing, Plastic, 1/4 I.D. x 3.5
57	431-0568	1	Gas Fitting
58	342-0055	1	Nut Jam 1/2-20 Brass

# #3 POSITIONER PARTS DIAGRAM



# WIRING SCHEMATIC



**OPTIONAL  
ACCESSORIES**

005-0040  
3-jaw chuck



005-0075  
T-racking kit for fixture positioning

# LIMITED WARRANTY

Effective April 1, 1998

**This warranty supersedes all previous MK Products warranties and is exclusive, with no other guarantees or warranties expressed or implied.**

**LIMITED WARRANTY** - MK Products, Inc., Irvine, California warrants that all new and unused equipment furnished by MK Products is free from defect in workmanship and material as of the time and place of delivery by MK Products. No warranty is made by MK Products with respect to trade accessories or other items manufactured by others. Such trade accessories and other items are sold subject to the warranties of their respective manufacturers, if any.

MK Products' warranty does not apply to components having normal useful life of less than one (1) year, such as relay points, wire conduit, tungsten, and welding torch parts that come in contact with the welding wire, including nozzles, nozzle insulators, and contact tips where failure does not result from defect in workmanship or material.

In the case of MK Products' breach of warranty or any other duty with respect to the quality of any goods, the exclusive remedies therefore shall be at MK Products' option: (1) repair; (2) replacement; (3) where authorized in writing by MK Products, the reasonable cost of repair or replacement at our Irvine, California plant; or (4) payment of or credit for the purchase price (less reasonable depreciation based upon actual use) upon return of the goods at customer's risk and expense. Upon receipt of notice of apparent defect or failure, MK Products shall instruct the claimant on the warranty claim procedures to be followed.

As a matter of general policy only, MK Products may honor an original user's warranty claims on warranted equipment in the event of failure resulting from a defect within the following periods from the date of delivery of equipment to the original user:

1. **Torches and Weldheads** ..... 1 year
2. **All Other Equipment** ..... 3 years
3. **Repairs** ..... 90 days

Classification of any item into the foregoing categories shall be at the sole discretion of MK Products. Notification of any failure must be made in writing within 30 days of such failure.

A copy of the invoice showing the date of sale must accompany products returned for warranty repair or replacement.

All equipment returned to MK Products for service must be properly packaged to guard against damage from shipping. MK Products will not be responsible for any damages resulting from shipping.

Normal surface transportation charges (both ways) for products returned for warranty repair or replacement will be borne by MK Products, except for products sold to foreign markets.

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FORM : LW-8  
DATE : April 1, 1998



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