

# SERVICE & INSTRUCTION MANUAL

MODEL NO. MN - 100,200,300

101,201,301

SERIAL NO. \_\_\_\_\_



**PISTORIUS MACHINE CO., INC.**

(516) 582-6000

1785 EXPRESS DRIVE NORTH (RT. 495) ■ HAUPPAUGE, NEW YORK 11787

# FOR HIGH SPEED, SEMI-AUTOMATIC PRODUCTION.

- Designed for the production oriented operation where compressed air is available.
- Compressed air does all the work and allows for high speed cycling on a continuous basis.
- Ideal for all types of flat and compound miter cutting.

Adjustable height guard door for maximum operator safety. Guard slides up to change blades.

Optional infeed work support. Standard length 8' long with outboard adjustable support leg

Push button magnetic motor starters provide overcurrent protection for both motors.

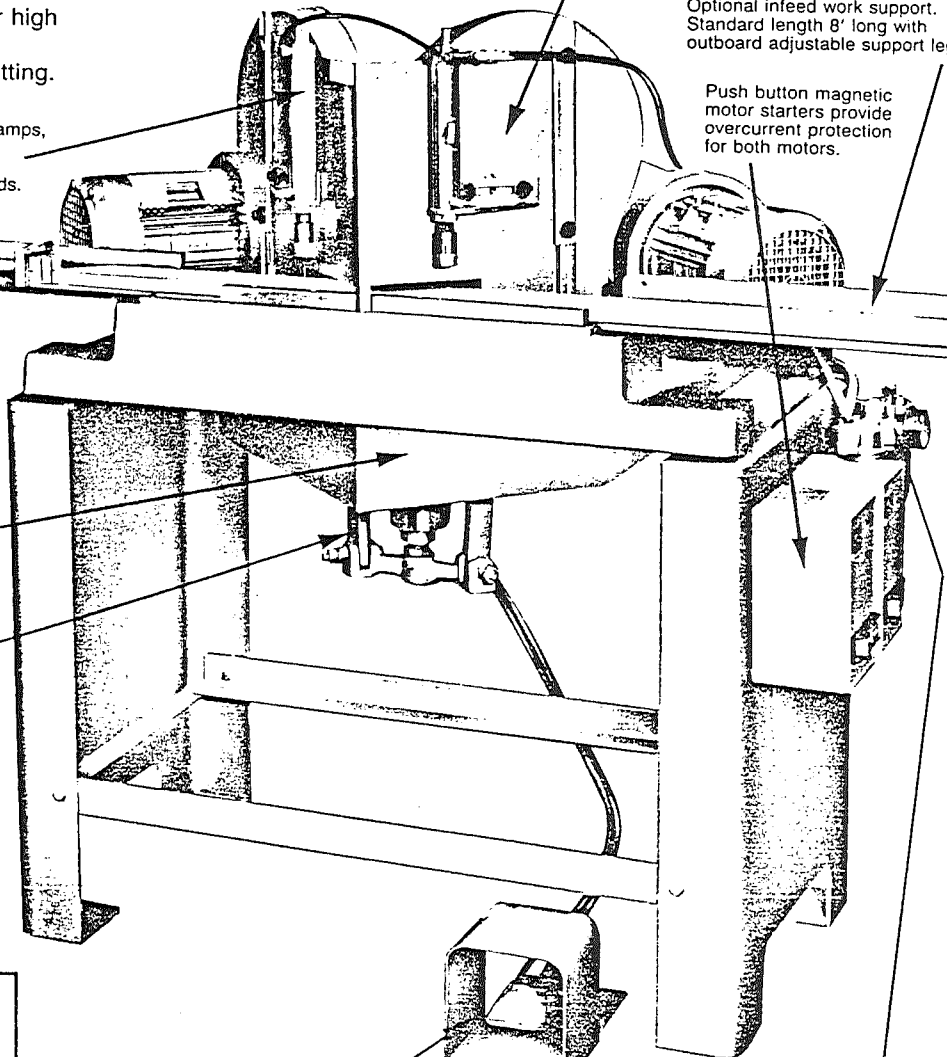
Optional pneumatic hold down clamps, adjustable from front to back and supplied with shut-off cocks and replaceable rubber clamp pads.

Model MN-200 shown with optional #2G accurcut gage mounted on the left hand side.

Optional sawdust exhaust ducts for connection to suitable suction systems. See Bulletins V & TC.

Linkage arms fitted with oilite bushing at each end. Both sawheads move simultaneously by interconnected linkage.

Optional "foot" for adjustable support leg, allows bolting to floor if desired.



Safety air system. Blades only come down while operator holds his foot on the pedal. To return heads to normal position operator just releases foot pedal.

Optional air line filter, pressure regulator and automatic lubricator for best protection of air components.

## MITER CUTTING CAPACITY

- Model MN-100 — 2 5/8" (66.7 mm) wide × 2 5/8" (66.7 mm) high
- Model MN-200 — 3 5/16" (84 mm) wide × 2 5/8" (66.7 mm) high
- Model MN-300 — 4" (101.6 mm) wide × 2 5/8" (66.7 mm) high

Note: When cutting narrow material that is higher than the capacities listed above, additional capacity is available. When cutting to the full width capacity listed, some height cutting capacity is lost. For actual cutting charts and specifications please contact the factory.

## SPECIFICATIONS

**Motor** — 1 1/2 horsepower, 230/460 volt, 3 phase, 60 Hz, 3600 RPM totally enclosed fan cooled, constant torque. When run at 50 Hz RPM is reduced to 2950. Note: Standard motors will run at 208 volts or up to a 10% variation from rated voltage.

Total

- Amps** — 1 1/2 HP — 208 volts, 3 phase, 60 Hz — 10.0
- 1 1/2 HP — 230 volts, 3 phase, 60 Hz — 8.7
- 1 1/2 HP — 460 volts, 3 phase, 60 Hz — 4.4
- 1 1/2 HP — 240 volts, 3 phase, 50 Hz — 11.0
- 1 1/2 HP — 230 volts, 1 phase, 60 Hz — 20.0
- 1 1/2 HP — 220 volts, 1 phase, 50 Hz — 22.0
- 1 1/2 HP — 380 volts, 3 phase, 50 Hz — 5.3
- 1 1/2 HP — 575 volts, 3 phase, 60 Hz — 3.5

\*Standard motor supplied with machine.

**Switch** — Two Nema 1, size 00, magnetic starter, full voltage across the line, overload relays

**Arbor** — 3/8" (15.88 mm) standard.

**Blade Capacity (sawblade not included)** — MN-100—10" OD (254 mm) MN-200—12" OD (304.8 mm) MN-300—14" OD (355.6 mm)

**Sawdust Exhaust (optional accessory)** — Two 4" OD. Requires approx. 400 CFM per outlet. (101.6 mm) (11.33 cm<sup>3</sup>)

**Air Consumption "air line minimum"** — 1.5 CFM at 65 PSI based on 15 cycles per minute. (.043 cubic meters per minute at 4.4 kg/cm<sup>2</sup>)

**Air Pressure** — 65 PSI (4.4 kg/cm<sup>2</sup>)

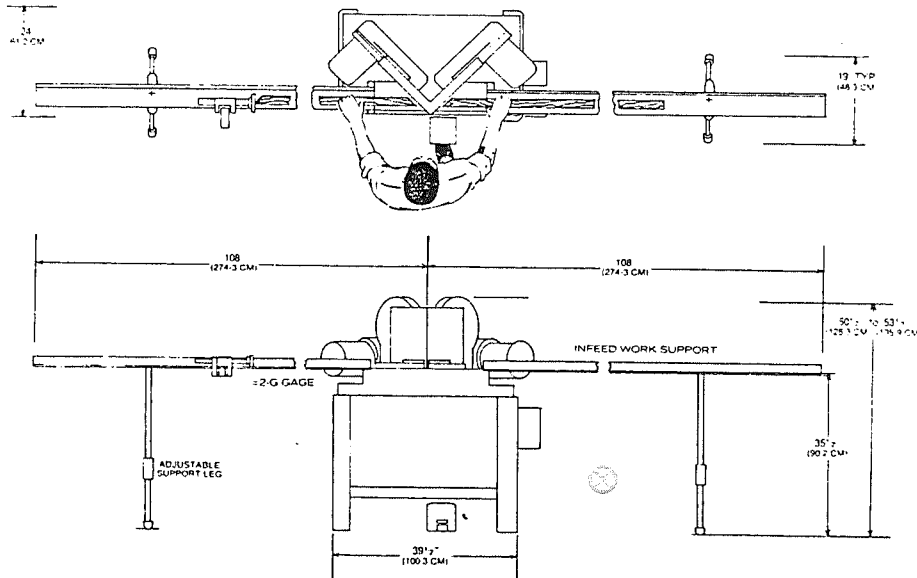
**Weight** — Without accessories or gages  
 crated (domestic) 651 lbs. — (295.55 kg)  
 crated (export) 676 lbs. — (306.90 kg)  
 uncrated 551 lbs. — (250.15 kg)

**Table Height** — 35 1/2" (from floor) (901.7 mm)

**Actuation** — Air valve, fully guarded, foot operated, spring return.

**Production Rate** — Up to 60 cycles per minute with infinite feed control. Actual production rate varies with requirements of specific application.

**Cutting Capacity** — See cutting capacity chart.



WARRANTY

Seller guarantees all machines and parts of its own manufacture against defects in material and workmanship for a period of six months from date of shipment under normal use and service by buyer. No other warranties are to be implied with respect thereto. The liability of Seller under its warranty is limited to adjustment, in accordance with the Warranty Adjustment Terms set forth below, for products which are found to be defective by Seller in the form in which they were originally shipped. In no event will Seller be liable for collateral, consequential or other damages of any kind or nature.

WARRANTY ADJUSTMENT TERMS

- (a) Adjustments will be limited to claims which are presented promptly after the product is found to be defective, and within the aforesaid warranty period.
- (b) All products claimed to be defective will be subject to inspection and test by Seller. Normally, Seller will request return of products for inspection and test, however, Seller reserves the right to make inspection and test on Buyer's premises. Returns are to be made only as and if authorized in writing by Seller.
- (c) Buyer will pay all packing, inspection, labor, and transportation costs involved. Credit for the transportation costs only will be issued by Seller provided adjustment subsequently is allowed.
- (d) No adjustment will be allowed for products which have been subjected to abuse, improper installation or application, alteration, accident or negligence in use, storage, transportation or handling; nor for products on which original identification markings have been removed, defaced or altered.
- (e) Final determination as to whether any adjustment is allowable, and as to the extent thereof, rests with the Seller. Full adjustment if allowed, normally will be replacement in kind on an exchange basis. Pro rata adjustment if allowed normally will be made by the issuance of credit. In all cases, however, Seller reserves the right to make adjustment by repair, replacement or credit.
- (f) Replacements for products found subject to adjustment, whether new or repaired, will be shipped FOB city of destination with transportation charges prepaid by Seller.

INSTALLATION

Buyer shall install machinery purchased from Seller at Buyer's cost and expense, unless otherwise expressly stipulated, in writing. At the request of Buyer, Seller will recommend competent engineers to supervise the installation, and to instruct the Buyer in the proper operation, of the machinery and equipment. During such period of supervision and instruction, such personnel shall be deemed to be employees of the Buyer who shall pay the wages, remuneration, board and traveling expenses of such personnel shall not make Seller liable, directly or indirectly, in any manner whatsoever, for any damages resulting from any act of commission or omission or any misfeasance or malfeasance, on the part of any said personnel.

CANCELLATIONS OR RETURNS

Buyer shall not cancel any order nor return any equipment without first procuring the written consent of Seller. In any event, in case of refusal or inability of Buyer to accept a delivery, the Buyer shall nevertheless be liable for freight, express, storage, handling, restocking and any other expense resulting. In no event are orders for machines or parts built to customer specifications subject to cancellation and Buyer shall be liable for work done and materials used.

**ORDER REPAIR PARTS  
BY:**

**MACHINE MODEL NUMBER**

**MACHINE SERIAL NUMBER**

**PART NUMBER**

**PART NAME**

**QUANTITY**

**SAFETY RULES****READ BEFORE OPERATING OR MAINTAINING MACHINE**

1. Make sure the area is hazard free of contaminated air, chips, debris, grease, oil, anything slippery, obstructions, etc.
2. Do not operate until properly instructed in the safe use of the machine.
3. Do not operate without all guards, shields, covers, etc. securely in place.
4. Make sure the machine is electrically grounded.
5. Remove or confine all loose clothing, hair, jewelry, bracelets, necklaces, etc.
6. Use all applicable safety equipment, goggles, face masks, gloves, etc.
7. Check the machine to be used for improper functioning, worn parts, wrong parts, wrong rotation, secure and correct tooling installed, damaged, etc.
8. Do not alter the machine, operate outside of design limits or use, etc.
9. During use do not put hands, or anything else, under guards, shields, covers, etc.
10. When not using the machine, leaving the area or cleaning the area, turn the machine off.
11. Do not clean, adjust, maintain or service the machine unless it is turned off and all power sources disconnected.
12. Keep the machine in good, safe repair and cleanliness.



## INSTRUCTION SHEET

FOR

MODEL SERIES

MN-100, 200, 300

MN-101, 201, 301

### DELIVERY

Upon receipt of machine, check for a full complement of parts and damage, if any, reporting same to common carrier and Pistorius Machine Company. Carrier is solely responsible for the intact delivery of shipment.

### CAUTION

DO NOT MOUNT SAWBLADES UNTIL SPECIFICALLY INSTRUCTED TO DO SO.

### INSTALLATION

1. Select a suitable location for the machine allowing enough working room for the longest material and as close to the source of supply as possible.
2. Shim machine under legs to compensate for wobbling due to an uneven floor.
3. Route electrical wiring to switches on machine. Check tag on switch for electrical characteristics. If tag is missing, contact Pistorius Machine Company. After wiring starter, jog switches to sample direction of spindle rotation. Right hand spindle should move in a counterclockwise direction and the left hand spindle should move in a clockwise direction when facing arbor end.
4. Route air line to machine. Air supply and incoming air line should be large enough to prevent any drop in pressure during operation. Generally a 3/8" incoming line is sufficient. On machines without filter-oiler-regulator, connect the incoming air line directly to the tagged fitting on the foot pedal. On models equipped with the filter-oiler-regulator accessory, connect incoming air line to tagged fitting located on incoming side of filter-oiler-regulator. Regulate air pressure between 60 and 70 pounds. When connecting air line use caution as heads will immediately move up into their normal position.

## ADJUSTMENTS

1. Adjust the oiler on so equipped machines. Regulate to use one drop of oil in approximately four to eight cycles. Use #10 machine oil for lubrication.

2. The cycle speed of the machine is regulated by the speed control located on the main drive cylinder under the table. Adjust by loosening the lock nut and turning the valve clockwise for slower movement, and counterclockwise for faster movement. Normal cycle time is 1-1/2 seconds on the MN-100 and 101, 2 seconds on the MN-200 and 201, 2-1/2 seconds on the MN-300 and 301. An additional adjustment is located at the top of the cylinder, this is the cylinder cushion control. By adjusting the cushion, the uncontrolled head return movement will de-accelerate the last 1/2" of stroke to a stop without jarring.

## OPERATION

1. Open air lines and regulate at approximately 65 pounds pressure. Before installing sawblades, cycle machine by depressing footswitch. On models with the quick exhaust system, the pedal must be depressed until the heads reach the bottom of their stroke then the pedal must be released to return the heads. Cycle the machine to become familiar to its operation.

2. Install sawblades by first inserting taper pin in the hole located at the rear (pulley end) of each spindle. Place the spindle wrench pins into the corresponding holes in spindle flange, and with a slight jerking motion in the direction of blade rotation, loosen and remove spindle outer flange. Place blade on spindle and tighten spindle nut. Do not tighten nut excessively. After blades are installed be sure that the teeth are pointing in the direction of blade rotation. On the series MN-100, 200 and 300 the blades must not be over size. Be sure that the blades are exactly the size specified for the machine. On the series MN-101, 201 and 301 the blades may be oversized as there is adjustment to allow for this condition. WITHOUT TURNING MOTORS ON and leaving the guard door open, depress foot pedal and hold it down, the heads will remain down as long as the footpedal is depressed. By hand rotate the blades to insure that the teeth on the blades do not touch each other. If the sawblades clear each other by a minimum of 1/32" remove foot from pedal and allow heads to return to normal position. Close guard door and secure. Start motors and cycle machine to become accustomed to operation of machine.

HEAD ADJUSTMENT ON MODELS MN-101, 201 and 301 USING THE SQUARE CUT OUT FIXTURE.

1. Loosen the two head bolts under the table and the one head bolt on the rear of the motor base.
2. To move head forward or backward to compensate for blade wear or new blades adjust via threaded rod with nuts at the rear of each head to push head in or to pull head out. Check for sharp corner by making test cut out.
3. After retightening head check to see that blades do not touch by using method described earlier.

ANGULAR ADJUSTMENT ON MODELS MN-100, 200, 300

1. Loosen the two motor base bolts under the table and the one bolt on the rear of the motor base.
2. To adjust head for angles greater than 45° or smaller than 45°, adjust threaded rods with nuts located on the inside of each head.
3. After retightening head check to see that blades do not touch by using method described earlier.

MAINTENANCE

1. Grease spindle bearings spproximately every 200 hours of operation.
2. Grease motors once each year.
3. Blow out both heads once each month and inspect belts for wear or breakage.
4. Adjust wear in pivot bearings by removing head cover and hand tightening the three socket head bolts in the retaining ring in each head. Only tighten until all side play in head is removed. Normally this adjustment is required once a year. Care should be taken to keep the spindle flanges clean and to use blades with a minimum of wobble.





1785 EXPRESS DRIVE NORTH (RT. 495) ■ HAUPPAUGE, NEW YORK 11787

## PARTS LIST

**MACHINE**

MITER NOTCHER

**MODEL NO.**

MN-100, 200, 300

101, 201, 301

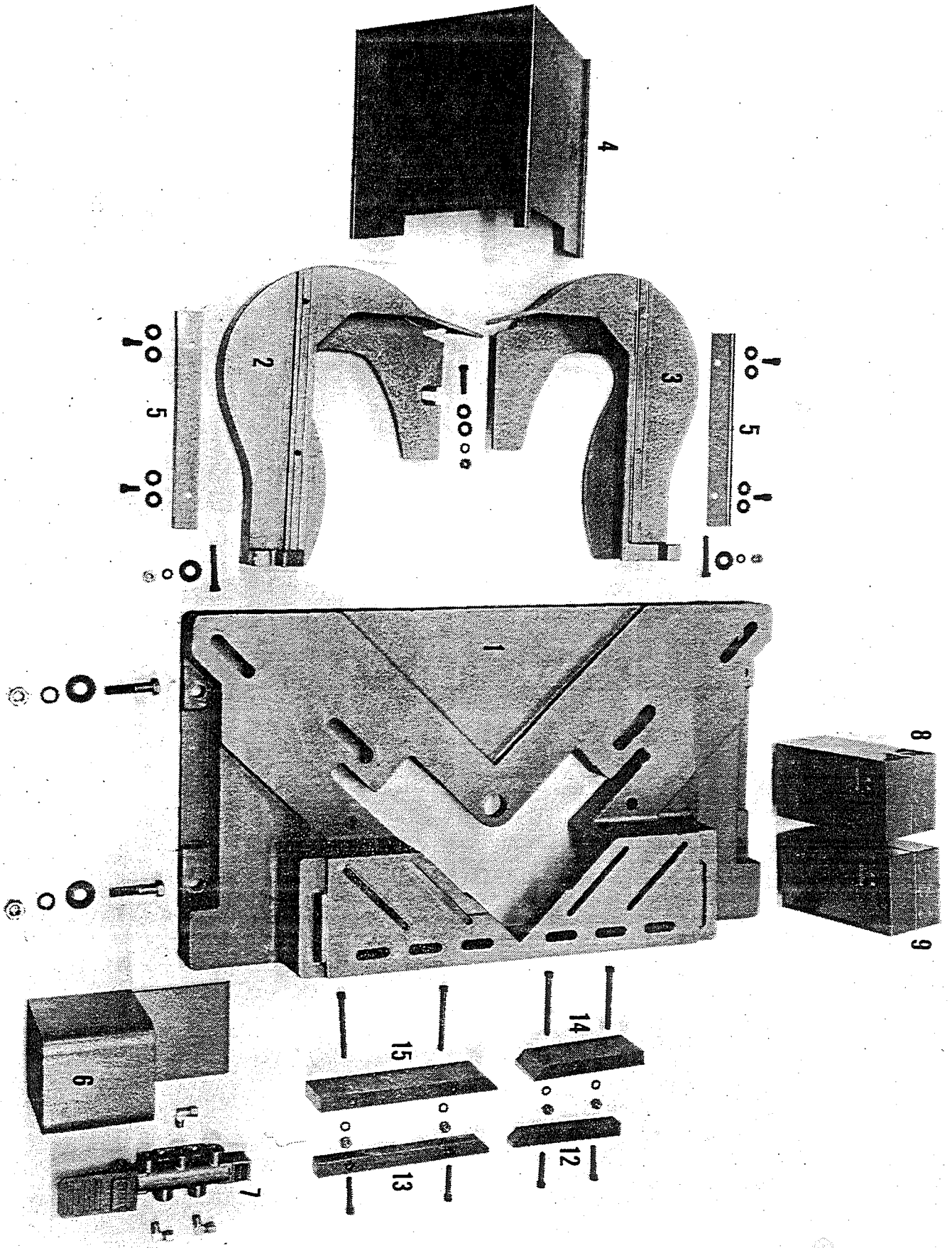
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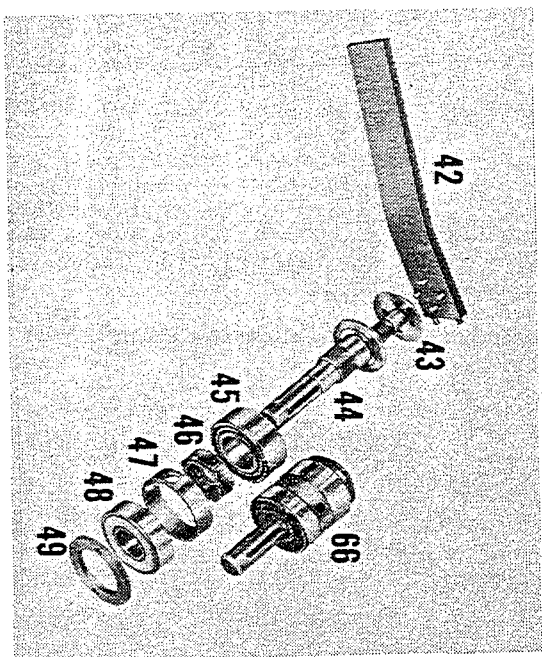
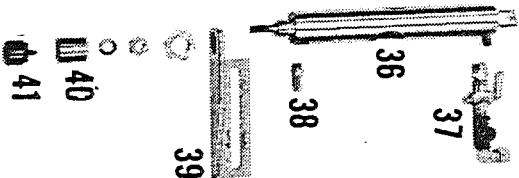
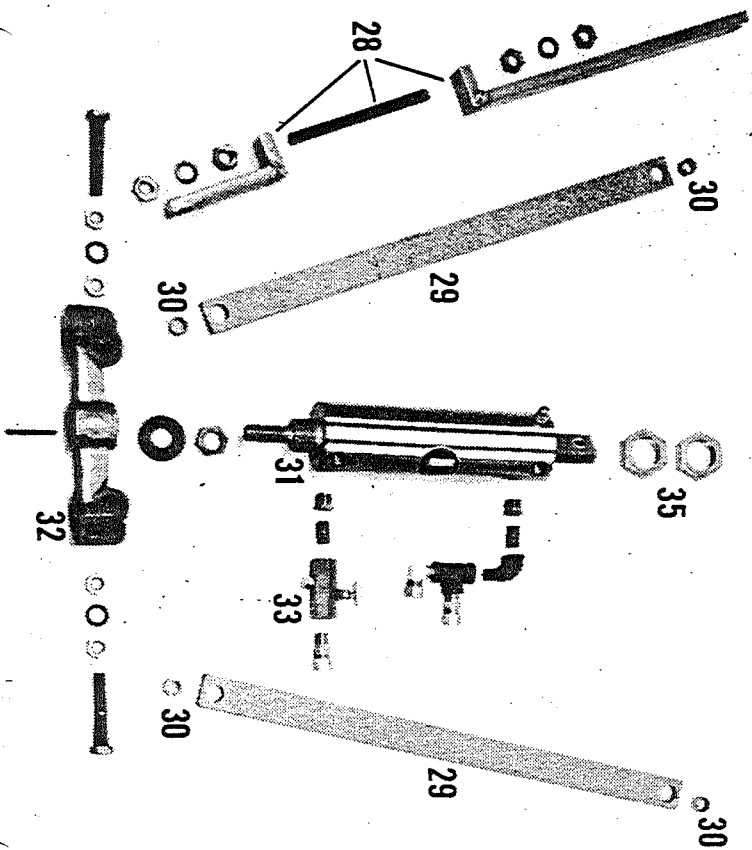
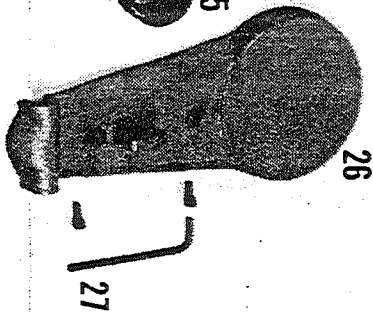
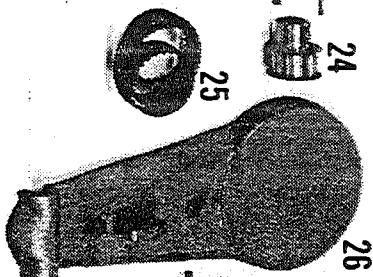
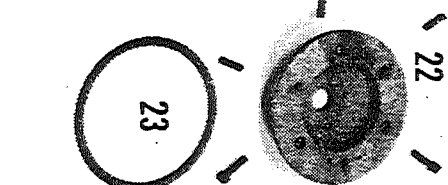
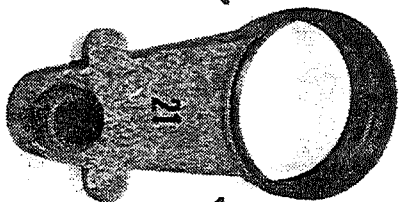
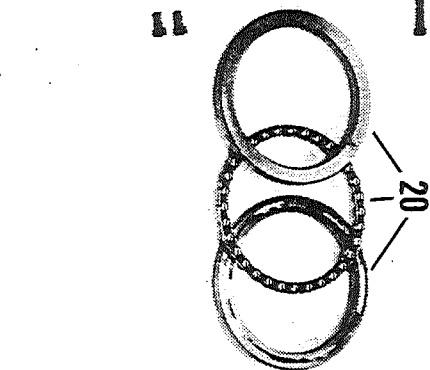
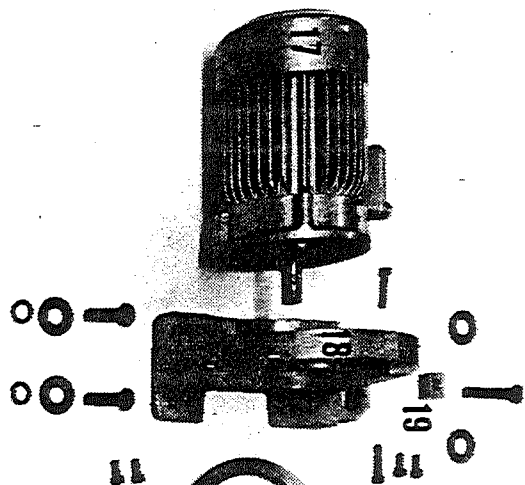
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DATE: 10/82

REF	NUMBER	DESCRIPTION	NO ON MACHINE
1	CI-4244-MN	Table	1
2	CA-4311-MN	LH hood	1
3	CA-4312-MN	RH hood	1
4	S-4313-1-MN	Blade guard	1
5	S-4313-2-MN	Blade guard clamp	2
6	S-5290	Foot pedal guard	1
7	VSF-4302	Foot pedal	1
8	A10AG1B	Magnetic starter with pushbutton controls	1
9	A10AG0B	Magnetic starter	1
10	1945-2-3-4	230/460/575 volt coil (not shown)	2
11	H-1000	230/460/575 volt heaters (not shown)	6
12	S-4249-1-MN	RH outfeed fence 1-1/2" high with screws	1
13	S-4249-2-MN	LH infeed fence 1-1/2" high with screws	1
14	S-4249-3-MN	RH outfeed fence 2-3/4" high (optional)	0
15	S-4249-4-MN	LH infeed fence 2-3/4" high (optional)	0
16	S-4019-MN	Leg (not shown)	2
17	143TC	1-1/2 HP motor, 230/460V, 3PH, 60HZ	2
17	143TC	1-1/2 HP motor, 115/230V, 1PH, 60HZ	2
18	CI-4253-2-MN	LH motor base (for 100, 200, 300)	1
18	CI-4253-1-MN	RH motor base (not shown) (for 100, 200, 300)	1
18	CI-4698-1-MN	RH motor base (for 101, 201, 301)	1
18	CI-4698-2-MN	LH motor base (for 101, 201, 301)	1
19	S-4250-1-MN	Motor base adjusting block	2
20	51132	Thrust bearing	2
21	CI-1272-1-MN	RH saw head	1
21	CI-1272-2-MN	LH saw head (not shown)	1
22	CI-4227-MN	Retaining ring with wear ring	2
23	P-3339-2-MN	Wear ring	2
24	18LM100-7/8	Motor pulley	2
25	322L100	Timing belt	2
25	9357x1-B11N1	Timing belt - heavy duty (300 only)	2
26	CI-1273-MN	Head cover	2
27	5/16	Hex key wrench	1
28	S-5343-2-MN	Adjustable pull arm	1
29	S-4285-5-MN	Pull arm (100 only)	2
29	S-4285-5-MN	Pull arm (200 only)	2
29	S-4285-5-MN	Pull arm (300 only)	2
30	101222	Pull arm bearing	4
31	2-1/2 x 7ARC	Drive cylinder MN-300	1
31	2-1/2 x 6ARC	Drive cylinder MN-100, MN-200	1
32	CI-1286-1-MN	Cylinder yoke	1

REF	NUMBER	DESCRIPTION	NO ON MACHINE
33	F-20-BK	Flow control	1
34	EB-64	Set plastic hose (not shown)	1
35	A-314	Cylinder lock nut	2
36	1-1/8 x 3ASRF	Clamp cylinder (optional)	0
37	V402P-2-2	Shut-off cock (optional)	0
38	S-1/8-NPT	Exhaust filter (optional)	0
39	S-1291-1-MN	RH clamp bracket (optional)	0
39	S-1291-4-MN	LH clamp bracket (optional-not shown)	0
40	S-5344-1-MN	Clamp pad adaptor (optional)	0
41	R-5344-2-MN	Rubber clamp pad (optional)	0
42	S-1153-5-MN	Spindle wrench (C- <del>39.85</del> ) (70.00)	1
43	S-1150-2-MN	LH spindle nut	1
43	S-1150-6-MN	RH spindle nut (not shown)	1
44	S-5288-1-MN	LH spindle shaft	1
44	S-5288-2-MN	RH spindle shaft (not shown)	1
45	5205-S	Double row bearing	2
46	S-1153-6-MN	Bearing lock nut (for RH spindle)	1
46	S-1153-7-MN	Bearing lock nut (for LH spindle)	1
47	S-1150-7-MN	Bearing spacer	2
48	6304-S	Single row bearing	2
49	S-1150-8-MN	Outer bearing lock nut	2
50	798	Taper pin (not shown) (C- <del>12.85</del> ) (A 25.00)	1
51	TL18L100	Spindle pulley	2
52	1008-3/4	Taper lock bushing	2
53	12/4-S	Set electric wire (not shown)	1
		<u>SPRAY MIST</u>	
54	B-1163-3	Spray mist body with nut	1
55	B-1163-2	Spray mist needle with lock nut	1
56	215PNL-2-12	Brass nipple	1
57	NV108P-2	Brass needle valve	1
58	1202P-2-2	Brass street elbow	2
59	28-6-2	Brass hose connector	2
60	CP-10B	Brass check valve	1
61		Tank five gallon	1
62	22BH-6-6	Brass tank connector	1
63	EB-64-11.5	Tank hose	1
64	224-6	Brass hose tee	1
65	EB-64-SET	Set of five hoses	1
		<u>ASSEMBLIES</u>	
66		LH spindle assembly (43,44,45,46,47,48)	
66		RH spindle assembly (43,44,45,46,47,48)	
67		Saw head assembly (21,20,66,49)	
68		Spray mist (54,55)	
69		Spray mist assembly (54,55,56,57,58,59,60)	
70		Saw assembly (17,18,20,21,22,23,24,25,26,49,66)	
		<u>REPAIR KITS</u>	
71	V-4302 P	Foot valve	
72	ARC-2-1/2-311	Drive cylinder	
73	A-1 1/8	Clamp cylinder	
74	A-101-2x3	Return spring for clamp cylinder	
75	A-221	Drive cylinder return cushion assembly	
76	SA-4302-65	Foot valve spring cap assembly	
77	4302-06	Foot valve return spring	
78	SA-4302-64	Foot valve pilot cap assembly	
79	53-1290-3A	C-H pushbutton cover operator	
	2-1/2 x 6ARC	Rebuilt drive cylinder	



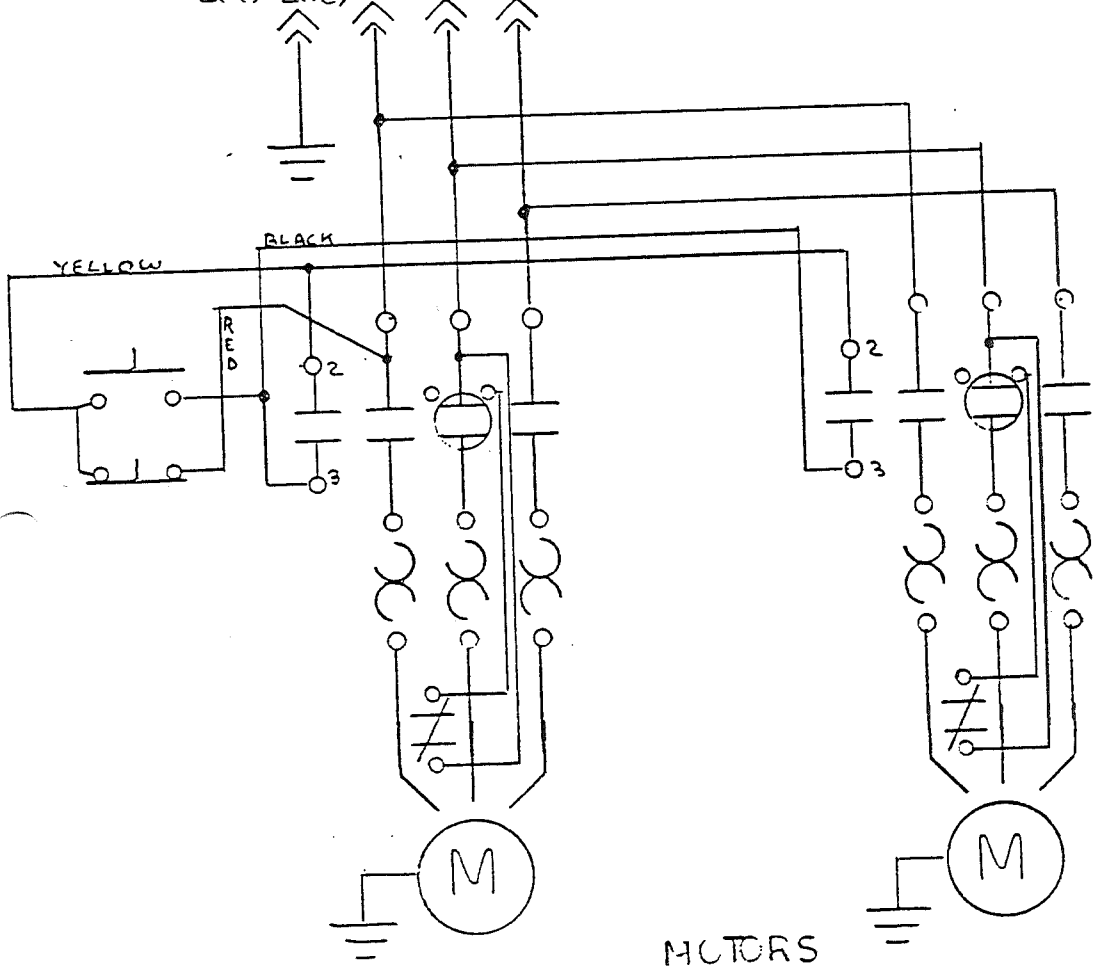




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## MN WIRING DIAGRAM

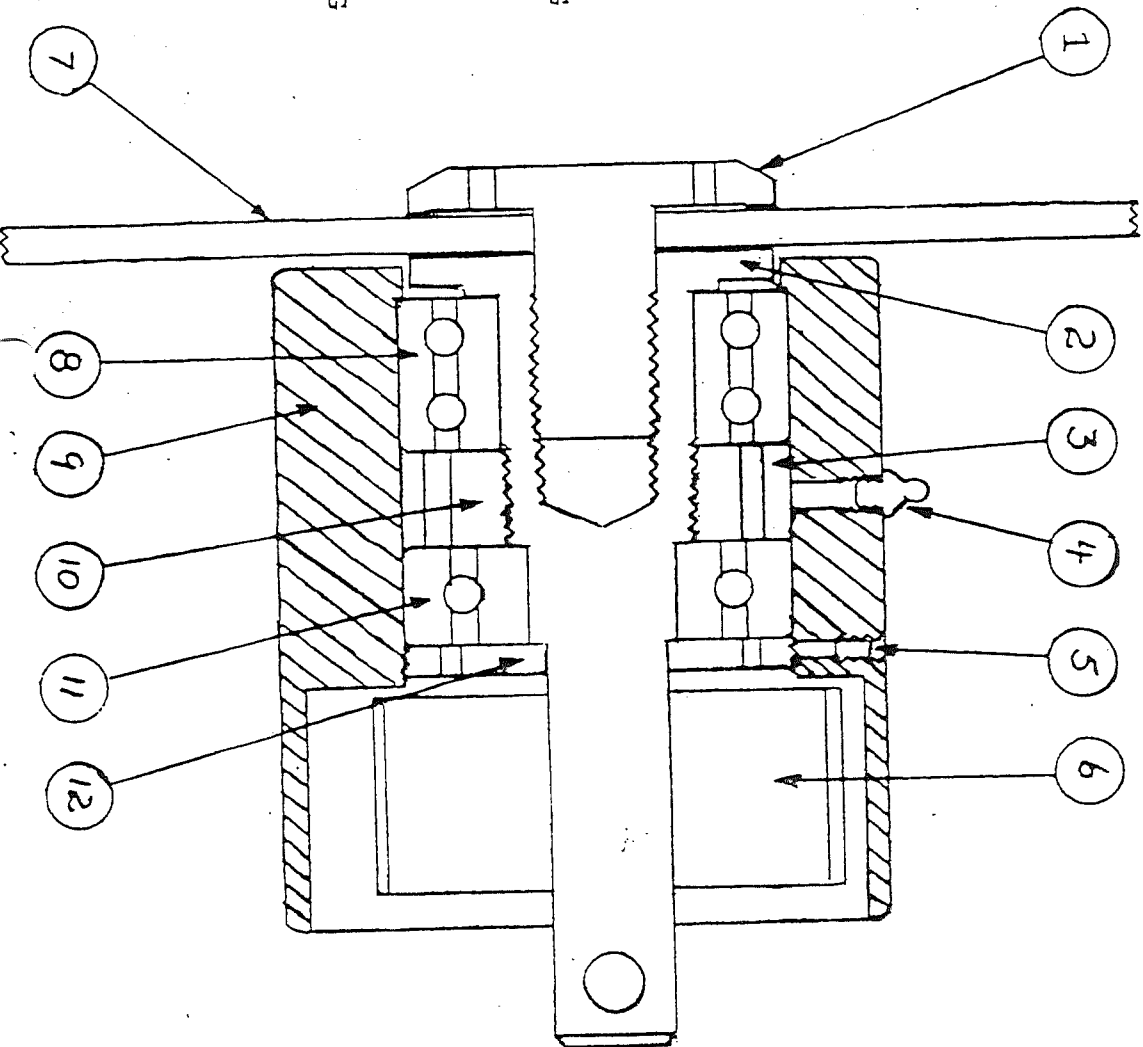
208-230/460 VOLT 3 PH



MITER NOTCHER SPINDLE ASSEMBLY FOR ALL MODELS

Note: Specify hand of spindle required when ordering.

1. SPINDLE NUT
2. SPINDLE
3. BEARING SPACER
4. GREASE FITTING
5. RETAINING NUT LOCK
6. PULLEY
7. CUTTING BLADE
8. DOUBLE ROW BALL BEARING
9. HEAD CASTING
10. BEARING NUT
11. SINGLE ROW BALL BEARING
12. BEARING RETAINING NUT



## INSTRUCTIONS

### FOR

### REMOVING SPINDLE ASSEMBLY

1. Spindle assembly is removed thru pulley end of head.  
(CI-1272-1 (2) - MN) (TS-1306 - MN)
2. First remove two screws (out of three holes) of taper lock pulley, and screw one of same into third hole, which acts as jackscrew to separate taper lock bushing from pulley.
3. Next, unloosen set screw which locks ring nut S-1150-8-MN. Set screw is located at spindle end of head casting.
4. Remove ring nut with drift-pin by tapping it around. Ring nut has RH thread in both heads.
5. Spindle assembly can then be tapped out of head casting.
6. Spindle cartridge assembly consists of spindle; double row bearing (at flange end); bearing spacer (with bearing lock nut S-1153-6-MN under same); and single row bearing.
7. Single row bearing (TS-1301-MN) must first be removed with bearing separator or other method. Bearing spacer S-1150-7-MN then will drop off, revealing bearing lock nut.
8. Bearing lock nut (S-1150-6-MN) then must be removed. On right hand spindle this has a right hand thread, and on left hand spindle it has a left hand thread.
9. Double row bearing (TS-1300-MN) now can be pressed off.
10. When installing new (or repaired) spindle assembly be sure to tighten up the ring nut (S-1150-8-MN) to eliminate all end-play, and then lock with set screw.

## ADJUSTABLE SUPPORT LEG ASSEMBLY

The assembly consists of the following parts:

- (1) C1-4816, cast iron leg union.
- (2) 1" diameter x 17" round rod
- (1) 1-1/8" diameter x 24" round rod
- (1) Bag of bolts and rubber leg tips

Take four (4) 3/8" x 3/4" socket head cap screws and insert into tapped holes on cast iron leg union. The two 1" diameter round rods are pushed into the two holes and socket heads are tightened. Secure the rubber leg tips onto these round rods. The 1-1/8" round rod with the tapped and countersunk hole facing upwards is inserted into the center through hole. Adjust height of center rod to proper gage height and tighten the two socket head cap screws.

Of the remaining three screws, only one will be used per gage. Remaining two screws should be discarded.

When installing leg onto gage, adjust center rod to level gage to machine.