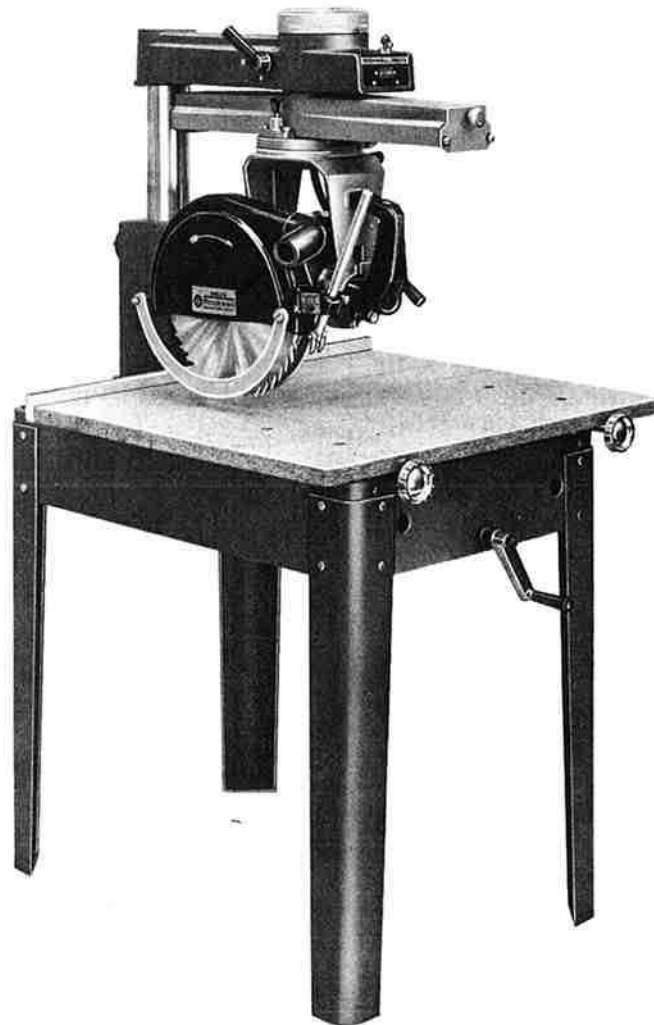


Rockwell

424-02-651-0003

DATED 6-15-72

**ROCKWELL DELTA
12" RADIAL SAW
BEGINNING WITH SERIAL NO. EX-700
AND WITH 24 VOLT SINGLE OR THREE PHASE MAGNETIC CONTROL**



**12" Model
Shown with
Accessory
No. 50-104
Steel Legs for
Permanent
Installation**

INTRODUCTION

When you bought your Delta Radial Saw you bought the best and paid nothing more for the extra features of quality construction and manufacturing know-how which are a part of every machine produced by Rockwell. The Delta Radial Saw with its exclusive turret-arm construction and simple operating controls will enable you to perform an almost endless variety of operations more easily, more efficiently than on any other radial saw. The basic operations of cross-cutting, ripping, mitering, etc., require no knowledge other than the function of controls. And with versatile accessories you'll be performing extra jobs you never thought possible...limited only by your own ingenuity.

SAFETY SUGGESTIONS FOR ROCKWELL DELTA RADIAL SAWS



10" Deluxe Radial Saw



12" Radial Saw



14" Radial Saw



16" Radial Saw



18" Radial Saw

- 1.** READ the instruction manual before operating your machine.
- 2.** IF YOU ARE NOT thoroughly familiar with the operation of Radial Saws, obtain advice from your supervisor, instructor or other qualified person.
- 3.** REMOVE tie, rings, watch and other jewelry, and roll up sleeves.
- 4.** ALWAYS wear safety glasses or a face shield.
- 5.** KEEP saw blade sharp and free of all rust and pitch.
- 6.** KEEP blade and arbor flanges free from dirt and grease.
- 7.** BE SURE end plates are securely fastened to track arm before using saw.
- 8.** MAKE SURE wiring codes and recommended electrical connections are followed and that machine is properly grounded.
- 9.** BE SURE that all clamp handles are properly tightened before operating machine.
- 10.** GUARDS should be in place and used at all times.
- 11.** MAKE SURE material being cut is against the fence.
- 12.** FOR NORMAL CUTTING, pull the blade through the material being cross-cut. HOWEVER, if the material is extremely thick or hard, such as 3" to 4" lumber, or when cutting aluminum, it is often safer to hold the work against the fence and push the blade through the material.
- 13.** WHEN FINISHED cross-cutting, ALWAYS return the cuttinghead to the rear of the track arm.
- 14.** ALWAYS follow warning on saw guard for instructions on ripping to be absolutely certain of not ripping from the wrong end.
- 15.** ALWAYS use anti-kickback fingers when ripping. The guard should be lowered on the infeed end and the anti-kickback attachment adjusted accordingly.
- 16.** NEVER feed work into the anti-kickback end of the machine.
- 17.** ALWAYS turn off power and wait until saw blade stops turning before adjusting or changing set-ups.
- 18.** SHUT OFF the power and do not leave until the blade has come to a complete stop.
- 19.** BEFORE LEAVING the saw, make sure the work area is clean.
- 20.** DISCONNECT machine from power source when making repairs or adjustments.

INSTALLATION

SELECTING FLOOR SPACE

1. Select a suitable location for the machine. It is desirable to locate the machine against the wall where it will be out of the way and will actually facilitate materials handling through the shop. Fig. 2 shows hole dimensions when the #50-104 legs are used.

2. You can mount the saw on a bench of suitable height or if you have purchased the Cat. No. 50-104 set of four legs, attach them to the frame using the nuts and bolts supplied.

ASSEMBLING 50-104 STEEL LEGS

1. The saw can be mounted on a bench of suitable height or if you purchased the Catalog No. 50-104 set of four steel legs, attach them to the frame of the saw using the sixteen $5/16-18 \times 3/4$ " hexagon head screws (A), washers (B), lockwashers (C) and hexagon nuts (D), as shown in Fig. 2.

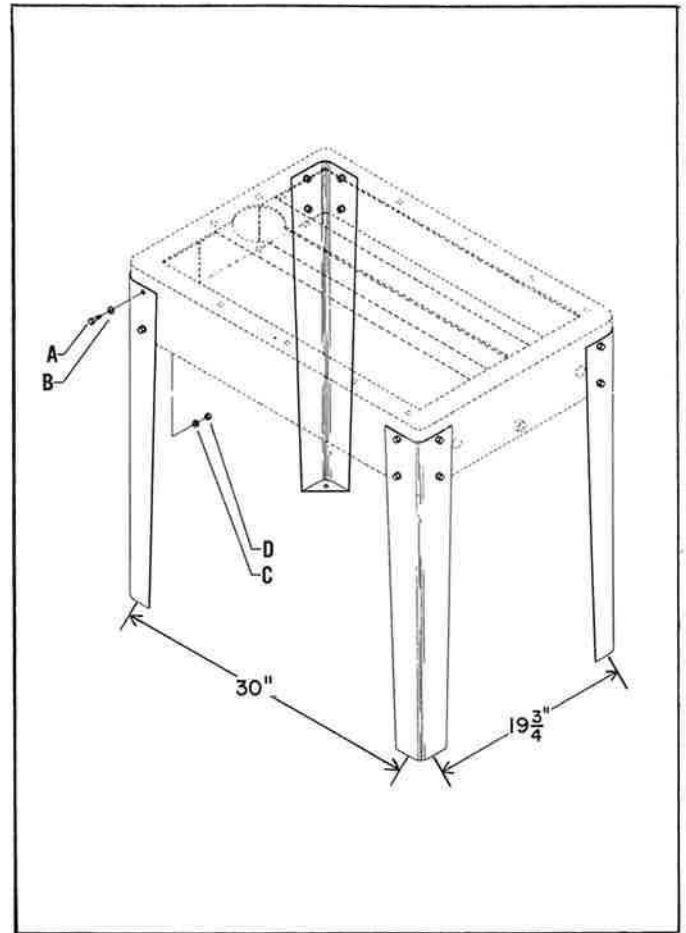


Fig. 2

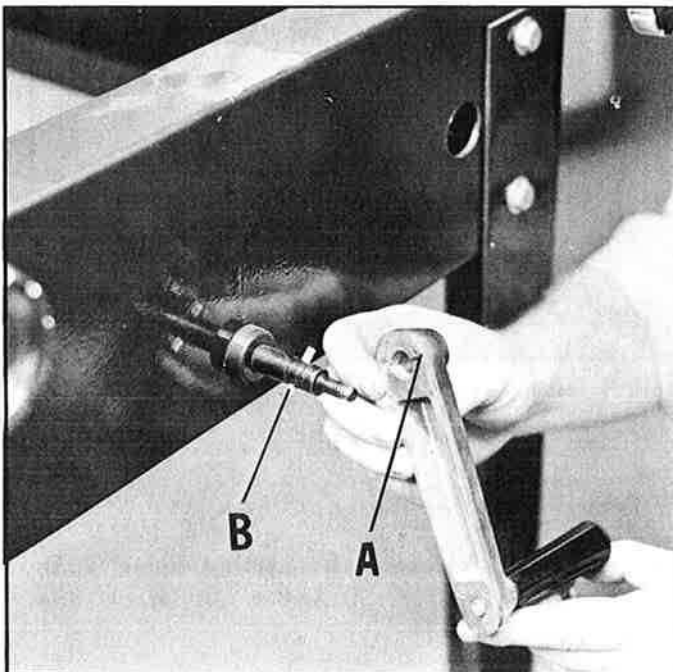


Fig. 3

INSTALLING CRANK HANDLE

1. Using one of the shear pins, which is packed in the cloth bag, insert it in the hole in the end of the elevating shaft.

NOTE: The shear pin will protect the bevel gears in the raising mechanism, e. g., should you continue cranking the handle after elevating to the top position, the shear pin will break, preventing damage to the gears. A spare shear pin is furnished with your machine.

2. Place the crank handle on the end of the elevating shaft, lining up the grooves (A) in the handle with the shear pin (B) as shown in Fig. 3. Then assemble the nut to the end of the elevating shaft.

ADJUSTING AND LEVELING TRACK-ARM

We recommend that the track-arm is adjusted and leveled as follows. These instructions should be followed when the machine is used with the 50-104 Steel Legs and also when it is used as a bench model.

1. With the cutting head still removed from the track-arm, place a spirit level, against the lower edge of the track, as shown in Fig. 4.

2. The spirit level should indicate that the front end of the track-arm will be slightly higher than the rear, so as to cause the cutting head to return gently to the starting position when released by the operator. Place metal or hardwood shims underneath front legs as required.

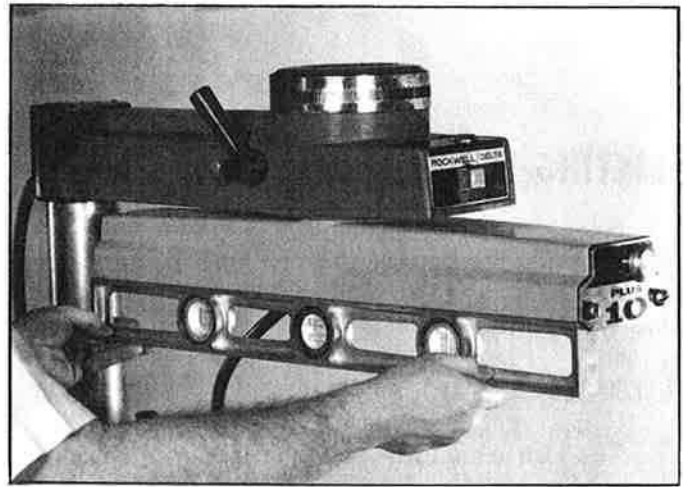


Fig. 4

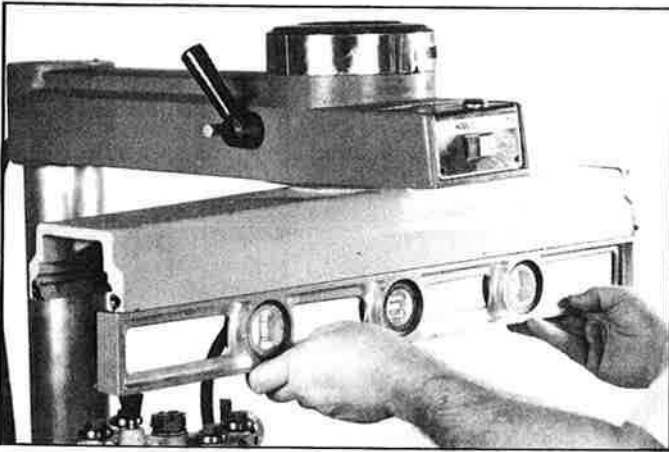


Fig. 5

3. Swing the track-arm 90 degrees and check to make sure the arm is level, as shown in Fig. 5. Add additional shims if necessary. **IMPORTANT:** After the cutting head is installed to the track-arm, recheck these instructions to make sure the track-arm is properly adjusted, as explained in STEPS 1, 2, and 3.

INSTALLING CUTTINGHEAD TO TRACK-ARM

1. Remove the packing material from around the motor, and place the motor on a board as shown in Fig. 6.

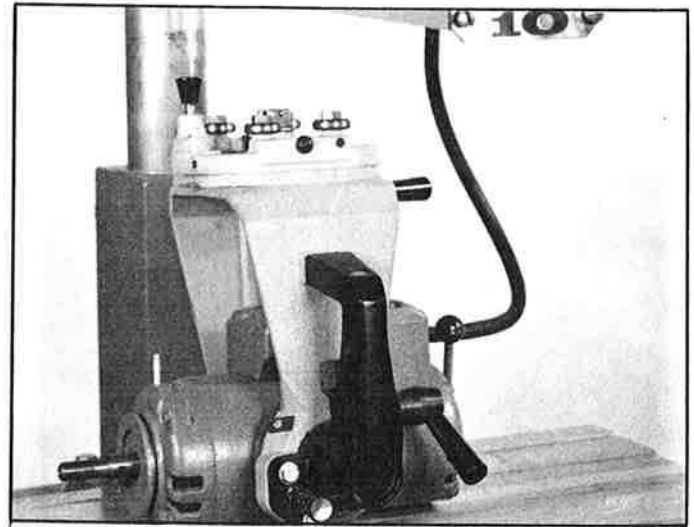


Fig. 6

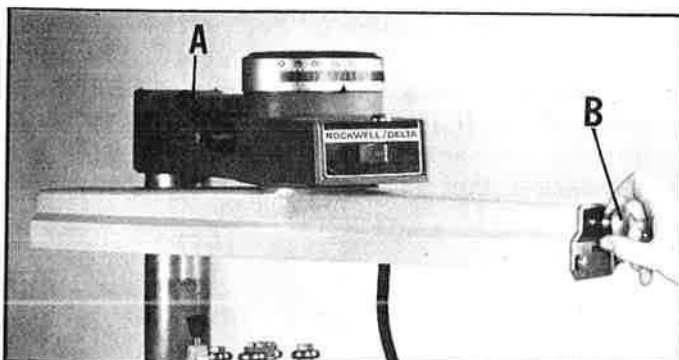


Fig. 7

2. Loosen track lock (A), pull out index knob (B), as shown in Fig. 7, and rotate track arm 90 degrees.

3. Place rip lock in slot in cuttinghead as shown in Fig. 8 with jaws (A) open.

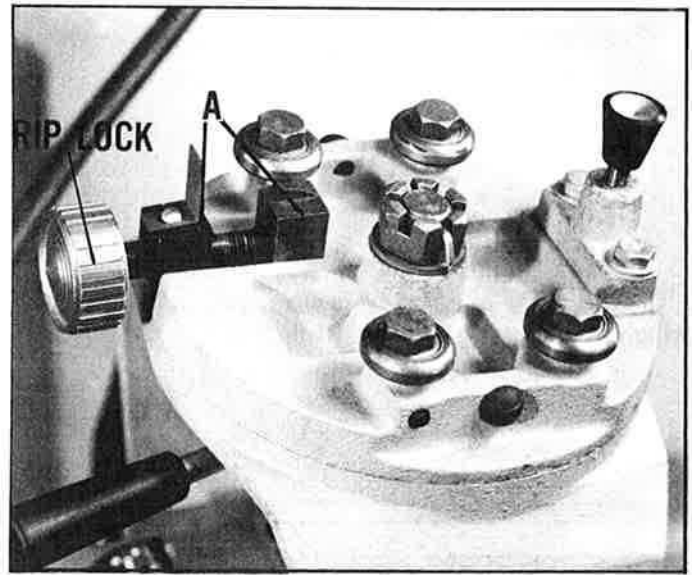


Fig. 8

4. Slip the cuttinghead in the track arm as shown in Fig. 9, and attach rear plate to the track-arm with screws and rubber washers provided.

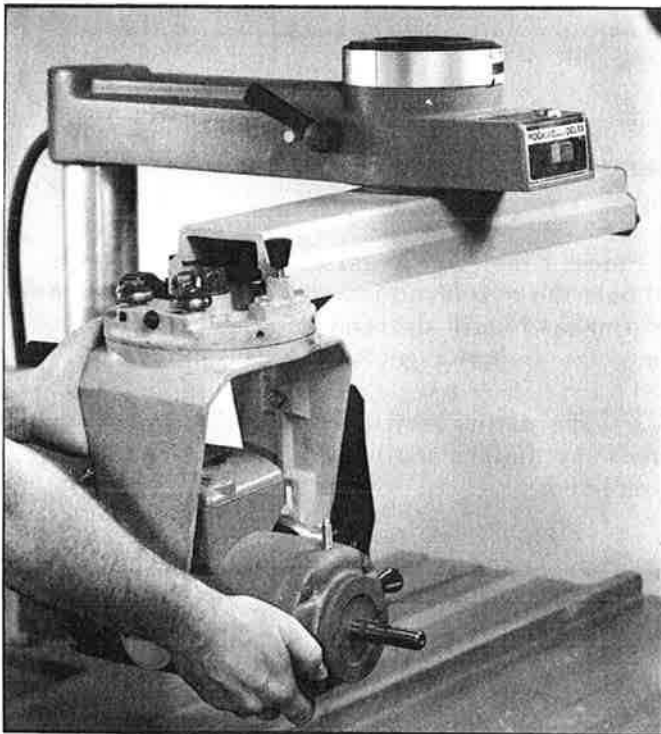


Fig. 9

ADJUSTING LEVELING STRIPS

1. Two wrenches are supplied with your radial saw. Lock the wrench with the large opening, between the two arbor collars, as shown in Fig. 10.

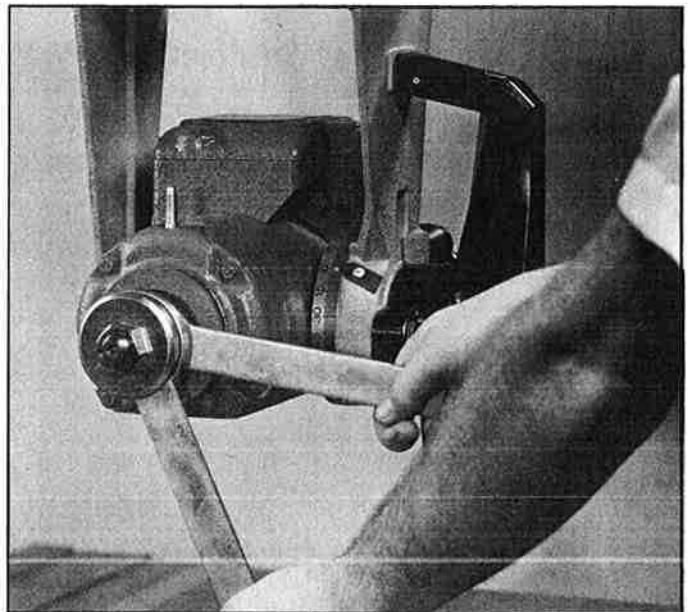


Fig. 10

2. Loosen "yoke swivel lock", pull out "swivel index" (A), as shown in Fig. 11, and place cuttinghead in the rip position.

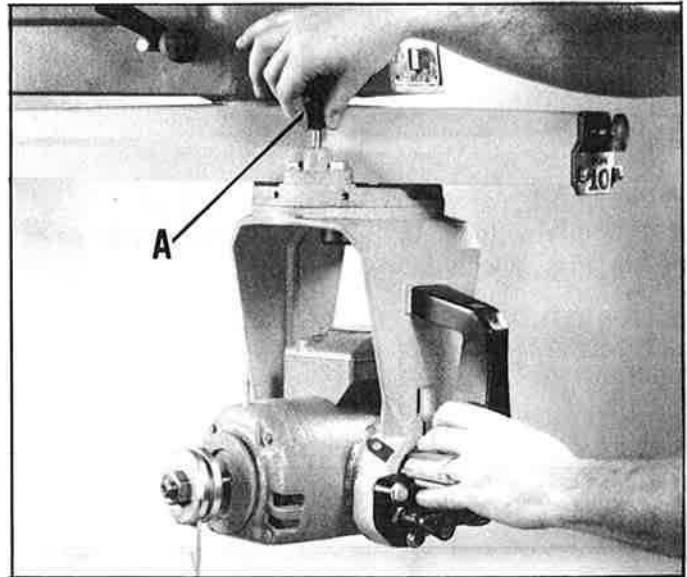


Fig. 11

3. Rotate track arm, loosen rip lock and move cuttinghead to the rear of the track, as shown in Fig. 12.

4. Place a feeler gage (block of metal or hardwood) over the rear leveling screw. Raise or lower the cuttinghead until the end of the wrench just touches the feeler gage, as shown in Fig. 12.

NOTE: The cuttinghead should not be raised or lowered any further until the leveling operation is completed.

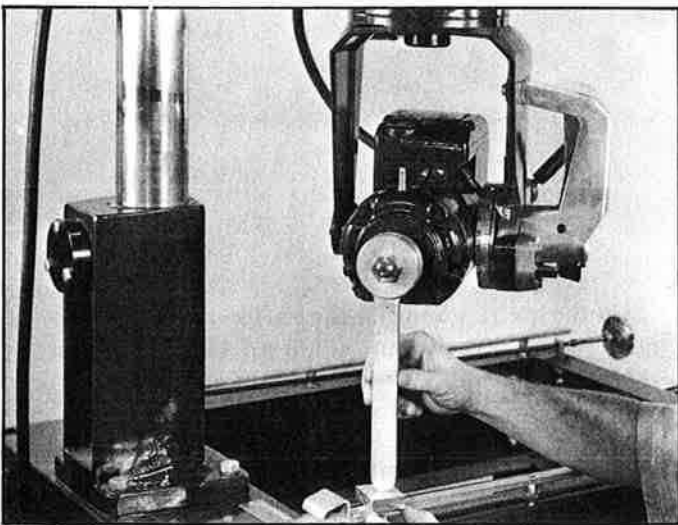


Fig. 12

5. Rotate the track-arm and using the feeler gage, check the leveling strip at opposite rear corner.

6. If an adjustment is necessary, remove screw (A) and loosen locknut (B), Fig. 13.

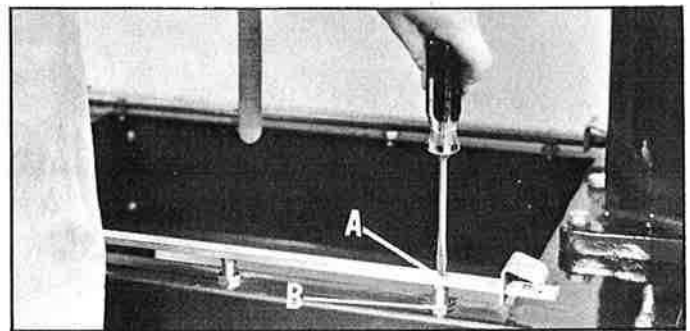


Fig. 13

7. Raise or lower the leveling strip by turning the leveling screw (A) until the wrench just touches the feeler gage, as shown in Fig. 14.

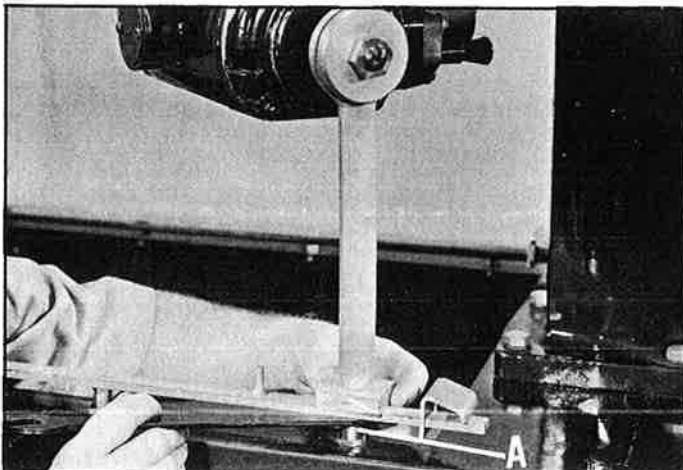


Fig. 14

8. When the correct setting is obtained, hold the leveling screw (A) with a wrench, to prevent it from turning and tighten the locknut (B) Fig. 15. Then replace the flat head screw (C).

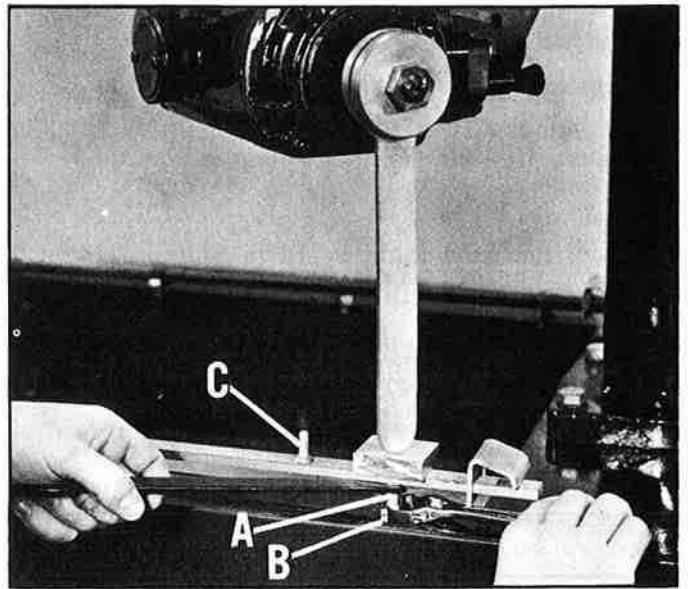


Fig. 15

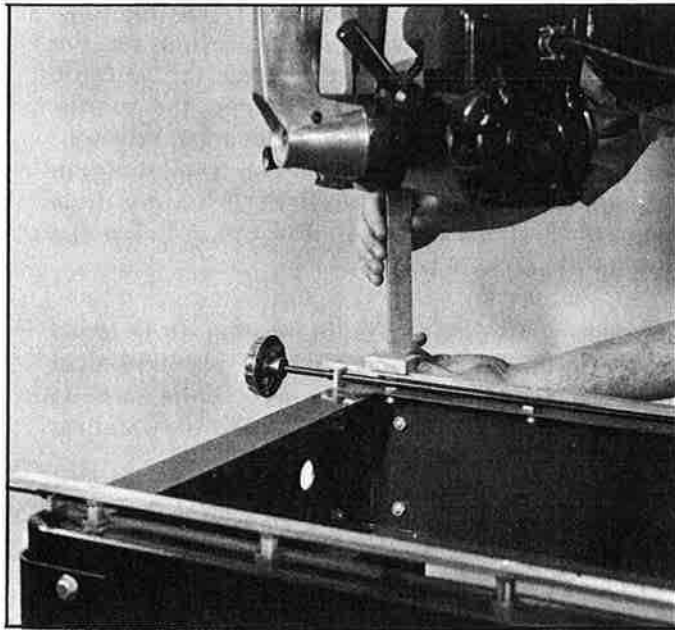


Fig. 16

9. Check the leveling strip at the front corners, as shown in Fig. 16, and adjust if necessary.

10. Lay a straight edge on the leveling strips and adjust the center two screws (A) Fig. 17, if necessary.

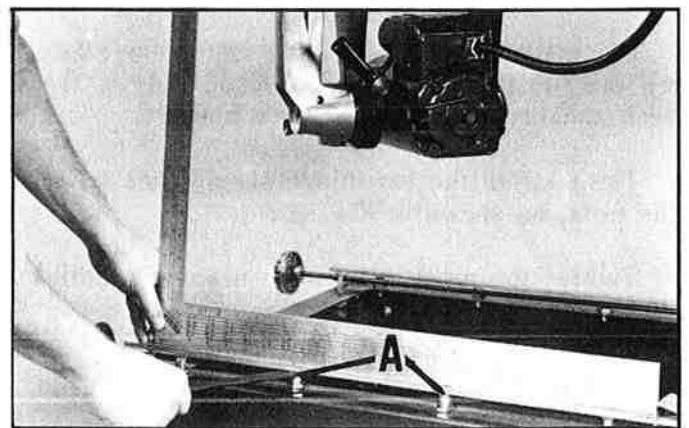


Fig. 17

INSTALLING TABLE BOARDS

1. Place the main table board on the leveling strips making sure that the two roll pins in the leveling strip fit into the two holes in the table board.
2. Fasten the main table board in place, using screws and washers provided, see Fig. 18.
3. Place the remaining loose boards and fence on the leveling strips and tighten the lock knobs.

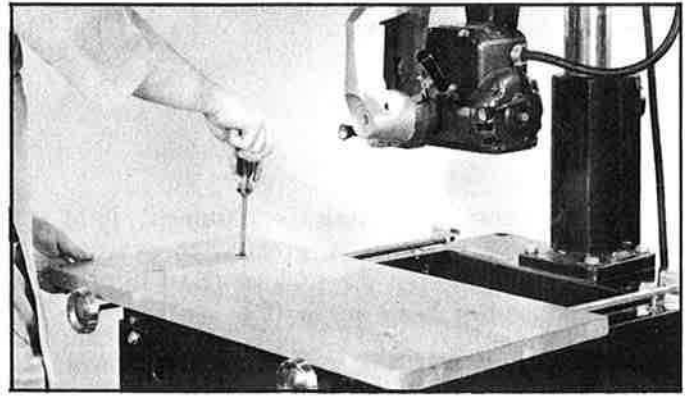


Fig. 18

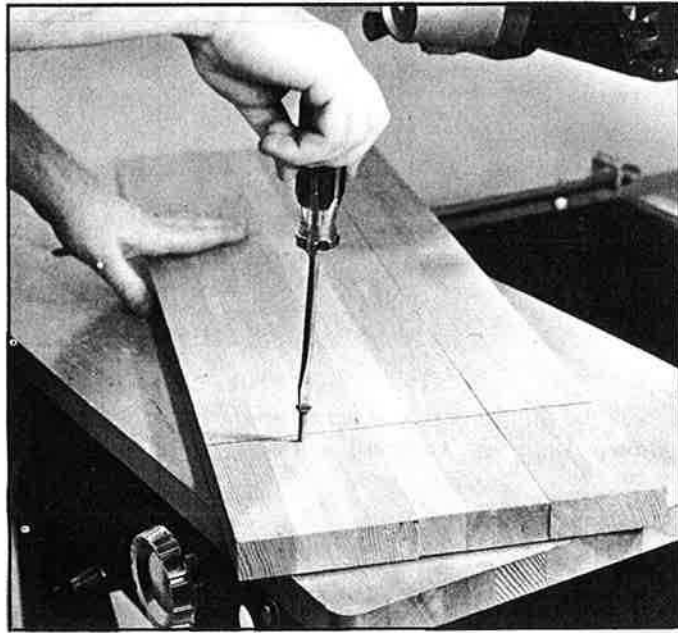


Fig. 19

NOTE: The loose table boards vary in width so that the fence can be placed between them in the best position for various miter cuts. When repositioning the fence and boards they should always be lined up before tightening the clamp knobs. To do this quickly, the following suggestion is offered. Draw a pencil line on the underside of the loose boards along the outside edge of the leveling strips. Remove the boards and lay them on the machine or your workbench. Insert a small wood screw, 1/2" or 3/4" long, in the center of each board about 1/8" away from the pencil line, as shown in Fig. 19. Drive the screws in about half way.

To protect your original table boards, it is good practice to fasten a piece of 1/4" plywood over them using small screws or brads. Make sure to countersink the screws or brads in the plywood, at least 1/8" below the surface.

INSTALLING BLADE TO CUTTINGHEAD

1. Place the saw blade on the motor shaft between the two flanges. The recessed side of the flanges should be against the saw blade.
2. The teeth of the saw blade should face down at the front, as shown in Fig. 20.
3. Tighten the arbor nut with one wrench while holding shaft steady with other wrench, as shown in Fig. 20.

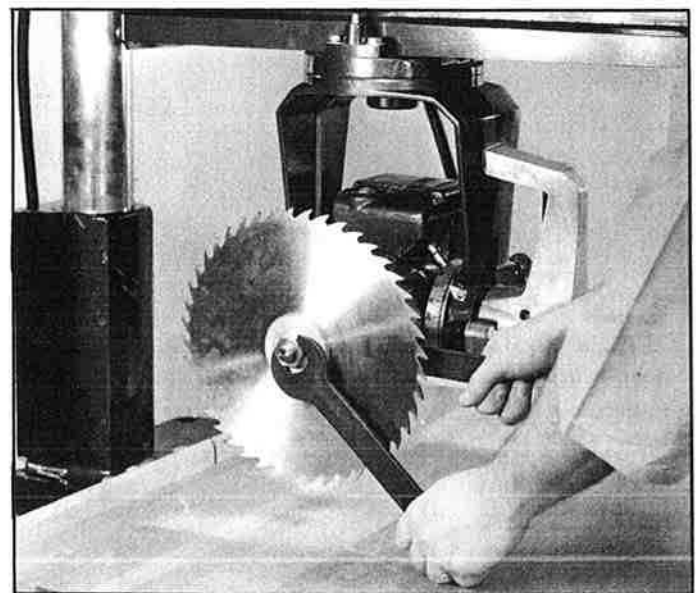


Fig. 20

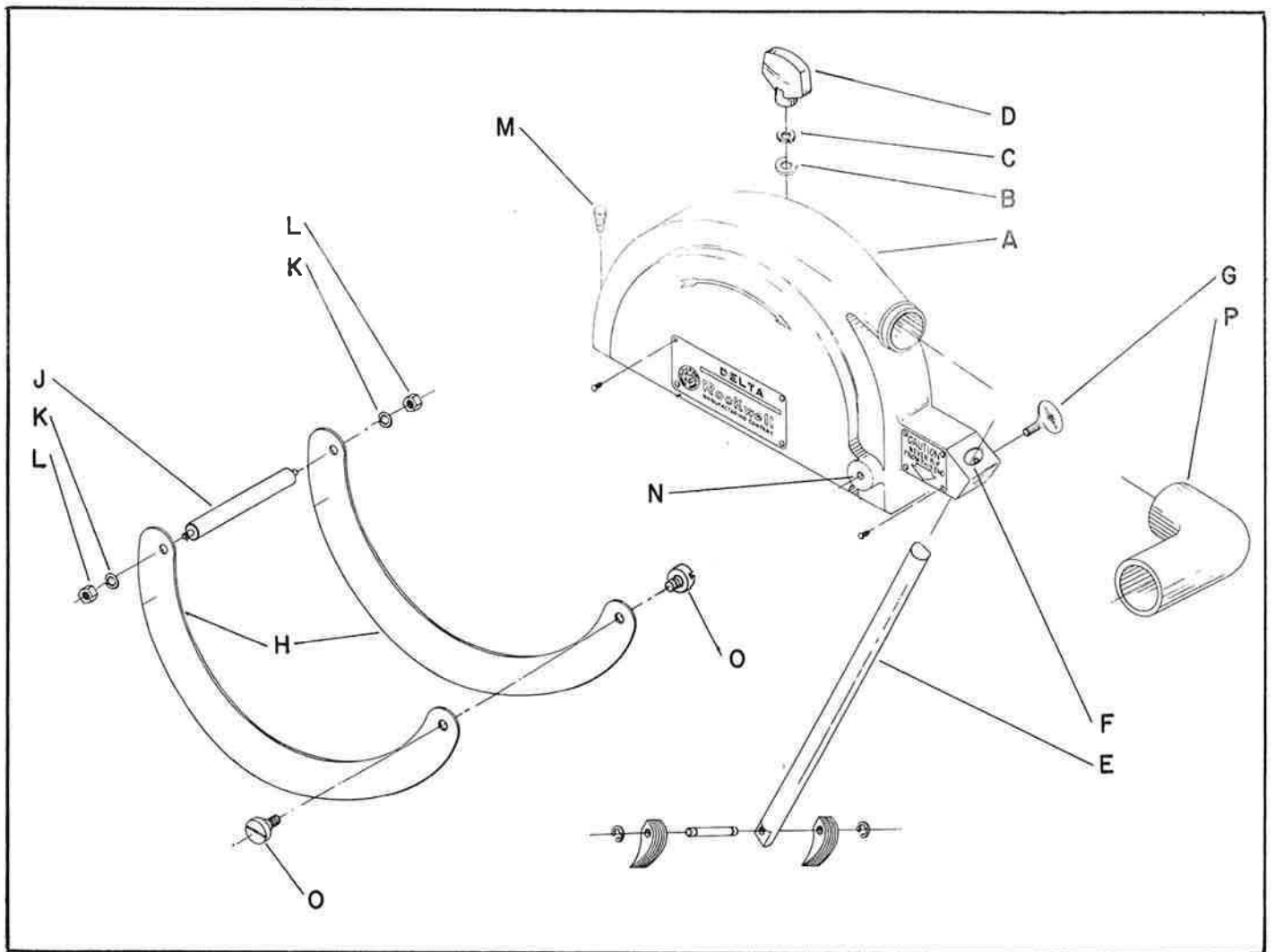


Fig. 20 A

INSTALLING BLADE GUARD AND ANTI-KICKBACK ROD TO CUTTINGHEAD

1. Assemble blade guard (A) to the stud on the motor and fasten in place using washers (B), lockwasher (C) and handknob (D), Fig. 20-A.
2. Insert the anti-kickback rod (E) through hole (F) in front of blade guard, and fasten in place using thumb screw (G), Fig. 20-A.

ASSEMBLING RETRACTABLE LEAF GUARD AND DUST CHUTE TO BLADE GUARD

1. Assemble the two leaf guards (H) Fig. 20-A, to the stud (J) using lockwasher (K) and nut (L).
2. Place the stud (J) over the blade guard (A) so that the stud (J) rest on top of the bumper (M), Fig. 20-A.
3. Fasten the front of the two leaf guards (H) to the two holes, one of which is shown at (N), using the two extension screws (O), Fig. 20-A.
4. Place the dust chute (P) Fig. 20-A, in place over the hole in the front of the saw guard.

ELECTRICAL CONNECTIONS

The motor on your machine has been wired for 230V single phase, the power cord is equipped with a plug that has two flat, current-carrying prongs in tandem, and one round or "U"-shapped longer ground prong. This is used only with the proper mating 3-conductor grounding type receptacle, as shown in Fig. 20-B. When the three-prong plug on your machine is plugged into a grounded, 3-conductor receptacle, the long ground prong on the plug contacts first so the machine is properly grounded before electricity reaches it.

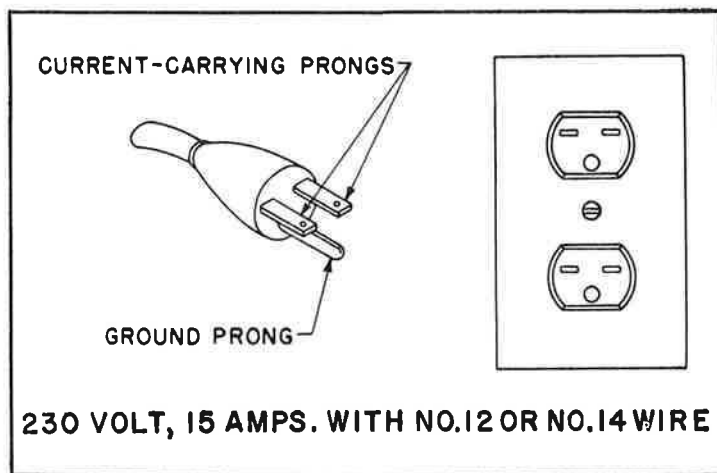


Fig. 20 B

If you have to use this machine on 115 Volt, the motor must be rewired in accordance with the wiring diagram on page 20. The wire and fuse noted in Fig. 20-E, must be used, with a 115 Volt, 15 amp plug and receptacle as shown in Fig. 20-C.

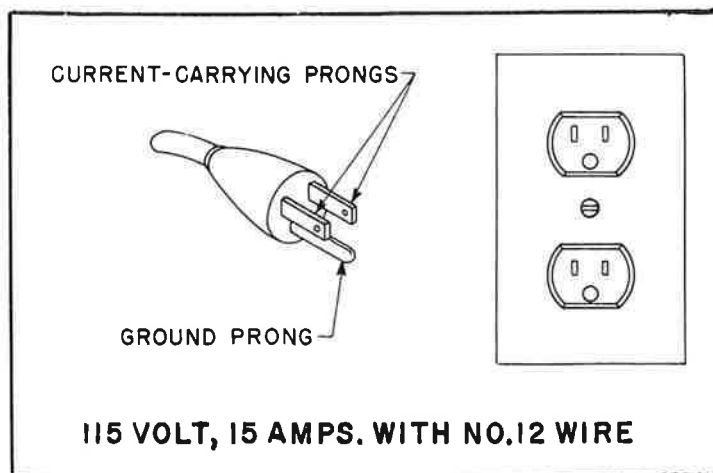


Fig. 20 C

IN ALL CASES, MAKE SURE THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED.

If the motor on your machine is wired for 200V, 230V or 460V three phase, the necessary wiring from the starter to the power source should be completed by a competent electrician.

IMPORTANT: Make sure the electrical characteristics are the same between the motor nameplate and the power source and make sure the power circuit the radial saw will be used on is properly fused and that the wire size is correct, as shown in Fig. 20-E. **MAKE SURE THE RADIAL SAW IS PROPERLY GROUNDED.**

WIRE AND FUSE SIZE

HP	SINGLE PHASE				THREE PHASE			
	115 VOLTS		230 VOLTS		200 - 230 VOLTS		460 VOLTS	
	WIRE SIZE	TIME LAG FUSE*	WIRE SIZE	TIME LAG FUSE*	WIRE SIZE	TIME LAG FUSE*	WIRE SIZE	TIME LAG FUSE*
1½	12	20	14	15	—	—	—	—
2	—	—	—	—	14	15	14	15

Fig. 20 E
10

*Size fuse selected for branch circuit protection.

Every Delta Radial Saw is thoroughly tested, inspected and accurately aligned before leaving the factory and when delivered is ready for operation after the cutting head and table is installed. However, regardless of the care with which this or any piece of fine machinery is manufactured, inspected and shipped, it is possible that rough handling in shipment may make minor adjustment necessary.

Therefore, we offer you these instructions to help you keep your saw in perfect working order for its entire life. We suggest that you check its alignment before use and again at periodic intervals since through the years the abrasive action of dust and dirt may cause some parts to wear.

OPERATING ADJUSTMENTS

CAUTION

ALWAYS DISCONNECT SAW FROM POWER SOURCE BEFORE MAKING ANY ADJUSTMENTS

ADJUSTING BLADE SQUARE WITH TABLE TOP

1. Remove the blade guard, place cuttinghead in cut-off position over fixed portion of table, as shown in Fig. 21.
2. Place a steel square against saw blade, as shown in Fig. 21. Be sure square is between the teeth of the blade.

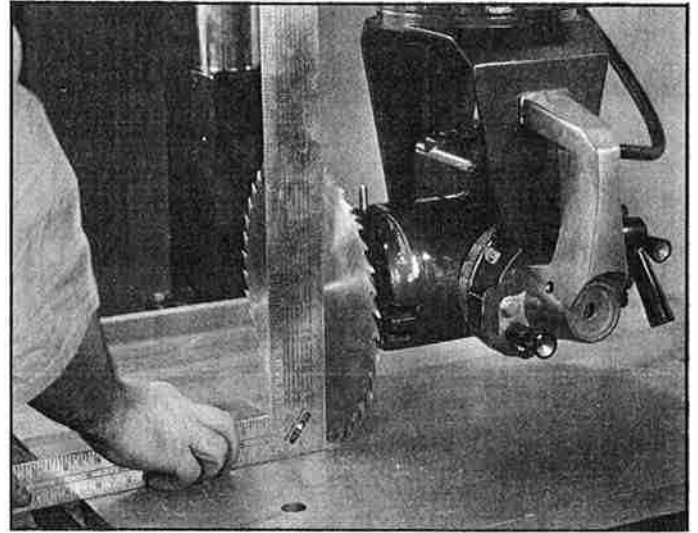


Fig. 21

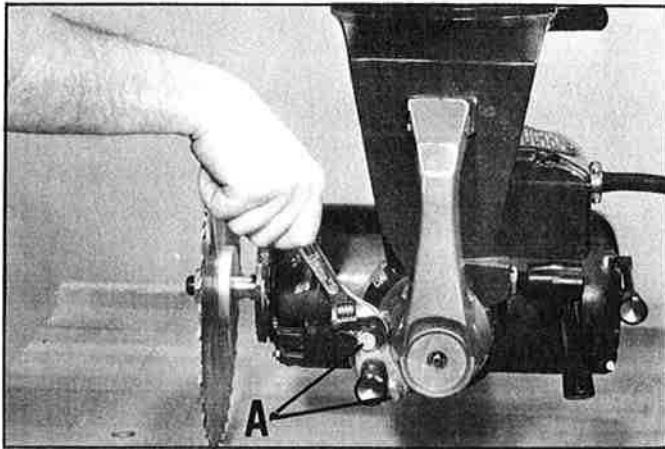


Fig. 22

3. If the blade is not square with the table, an adjustment is necessary. Loosen the two bolts (A) Fig. 22.

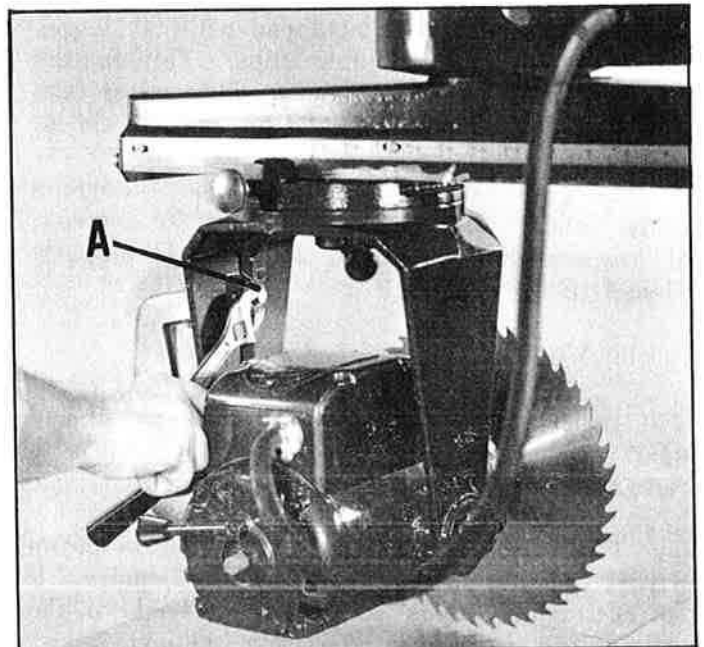


Fig. 23

4. Loosen bolt (A) Fig. 23, located on inside of yoke.

5. Hold the cuttinghead with your left hand, loosen the bevel clamp handle (A) Fig. 24 and tilt the motor until the square is flush against the saw blade.

6. When the adjustment is completed tighten the bevel clamp handle (A) Fig. 24, and the two bolts (A) Fig. 22 and bolt (A) Fig. 23.

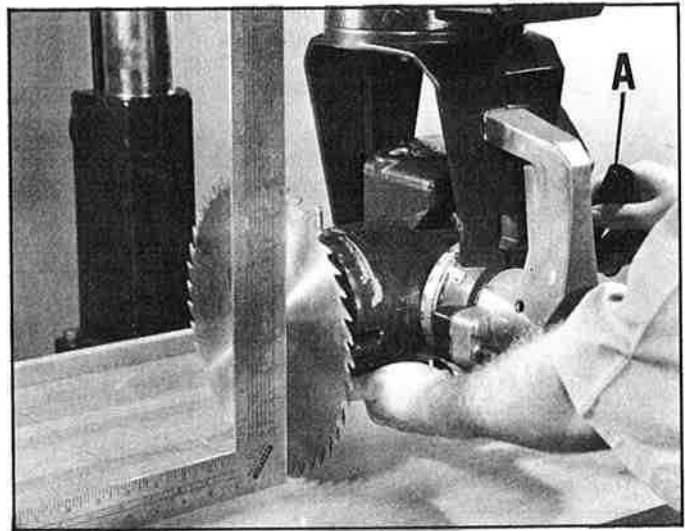


Fig. 24.

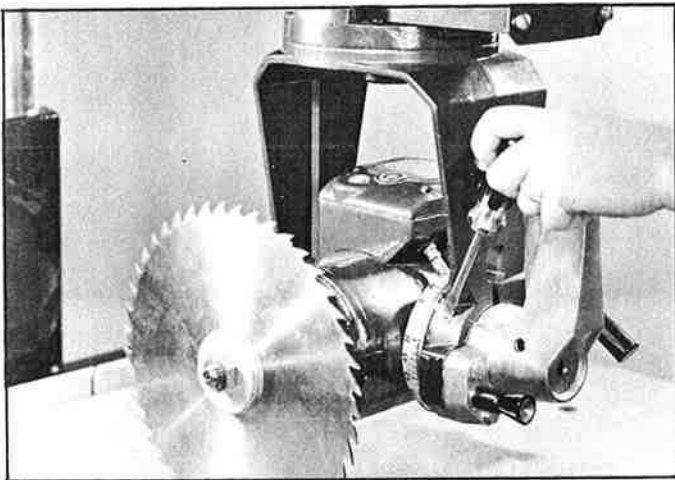


Fig. 25.

7. Set the pointer to the zero mark on the bevel scale, as shown in Fig. 25, and replace the blade guard.

ADJUSTING SAW TRAVEL SQUARE WITH FENCE

The 10" Radial Saw is equipped with 90 degree and 45 degree positive miter stops. This feature makes it possible to produce accurate miter cuts and perfectly square cross cuts at all times.

To do accurate work, saw travel must be 90 degrees to the fence. If saw travel is not 90 degrees, this means that the track arm is not properly aligned to the fence.

To check and adjust, proceed as follows:

1. Remove saw blade from the cuttinghead and insert wrench in place of blade, as shown in Fig. 26.
2. Place a steel square against fence, as shown in Fig. 26, and pull cuttinghead along square. If the cuttinghead does not travel parallel to the square, the following adjustment is necessary.

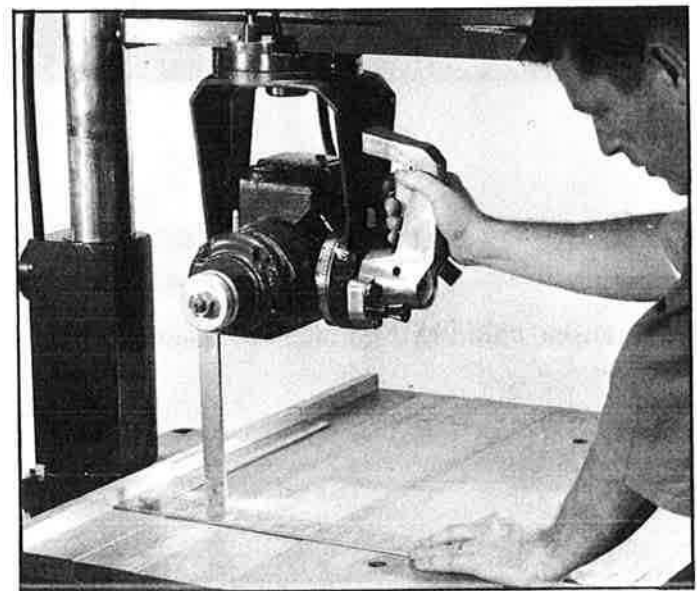


Fig. 26.

3. Remove three screws (A) and miter scale (B) Fig. 27.

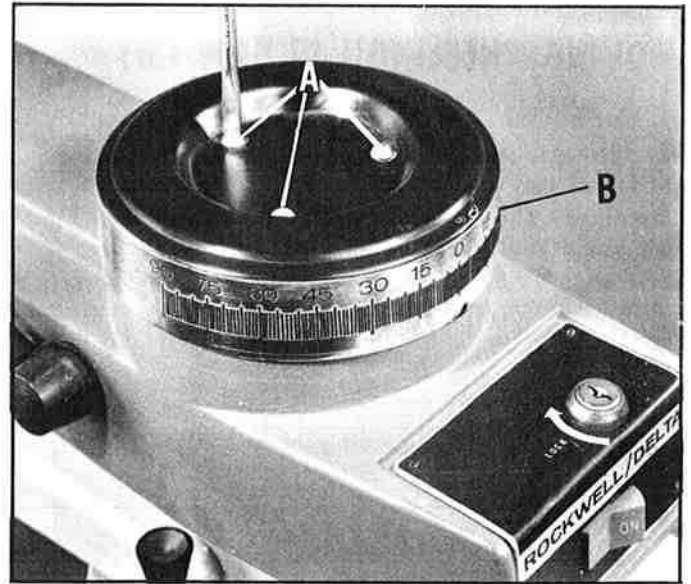


Fig. 27

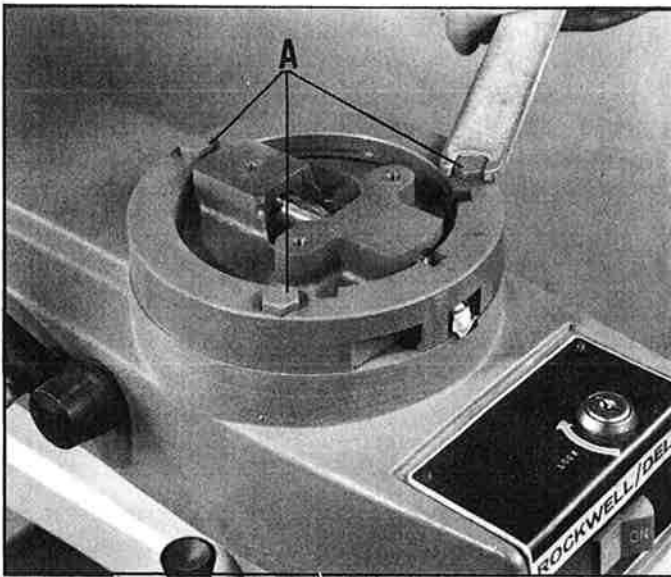


Fig. 28

4. Loosen three screws (A) Fig. 28, and loosen track-arm clamp handle.

5. To move front end of track to the right, loosen set screw (A) and tighten set screw (B) Fig. 29. To move front end of track to the left, reverse this procedure.

6. When the cuttinghead travels parallel to the square, tighten three screws (A) Fig. 28. Replace bevel scale (B) and three screws (A) Fig. 27, with the zero graduation mark on the scale lining up with the pointer.

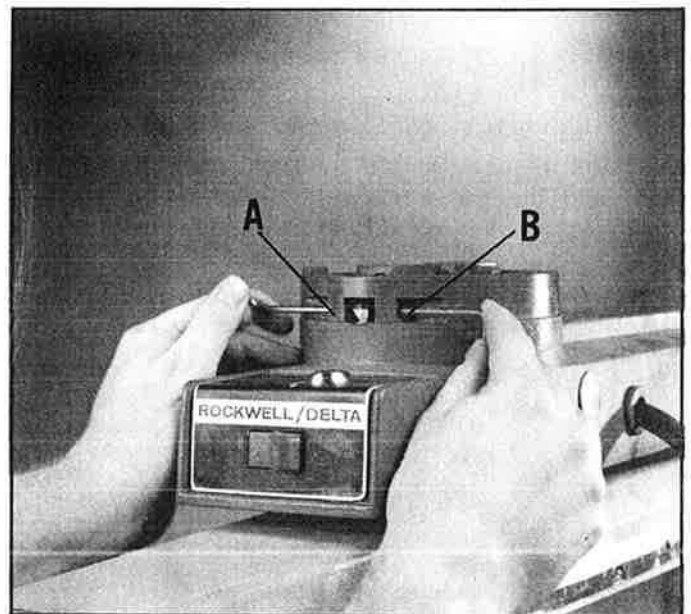


Fig. 29

REMOVING "HEELING" IN SAW CUT

Even though the cuttinghead travel may be perfectly aligned at 90 degrees to the fence, the blade itself may not be 90 degrees or square with the fence, as shown in Fig. 30. This condition is known as "heeling."

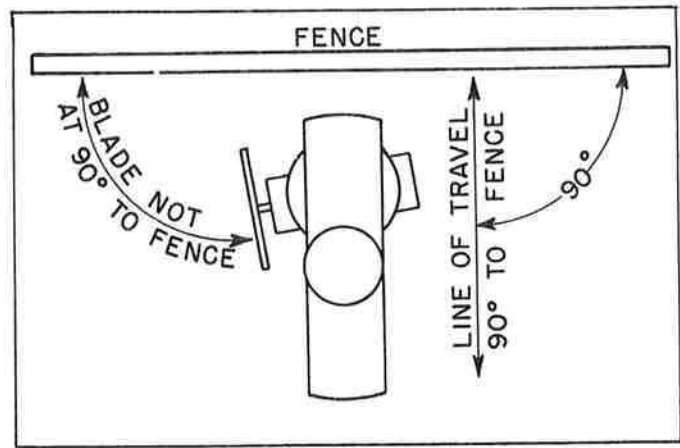


Fig. 30

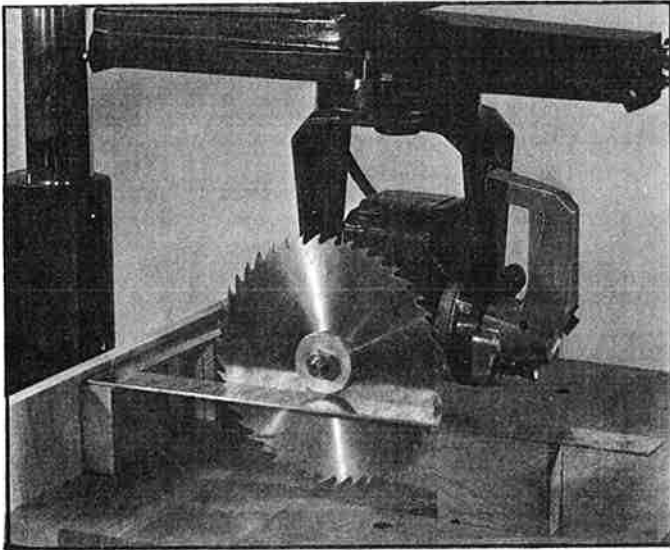


Fig. 31

To check and adjust, proceed as follows:

1. Take a piece of 3/4" plywood, at least 5" wide, and clamp it between the table boards in place of the fence, as shown in Fig. 31.
2. Using three 2x4's, place them on the table, as shown. Lay the square on the 2x4's with one end of the square against the plywood and the other end against the saw blade, as shown in Fig. 31.

3. If the blade is not parallel to the square, an adjustment is necessary. Loosen yoke clamping handle and the two screws (A) Fig. 32. Swivel the yoke until the saw blade is parallel with the square. Then tighten yoke clamping handle and the two screws (A) Fig. 32.

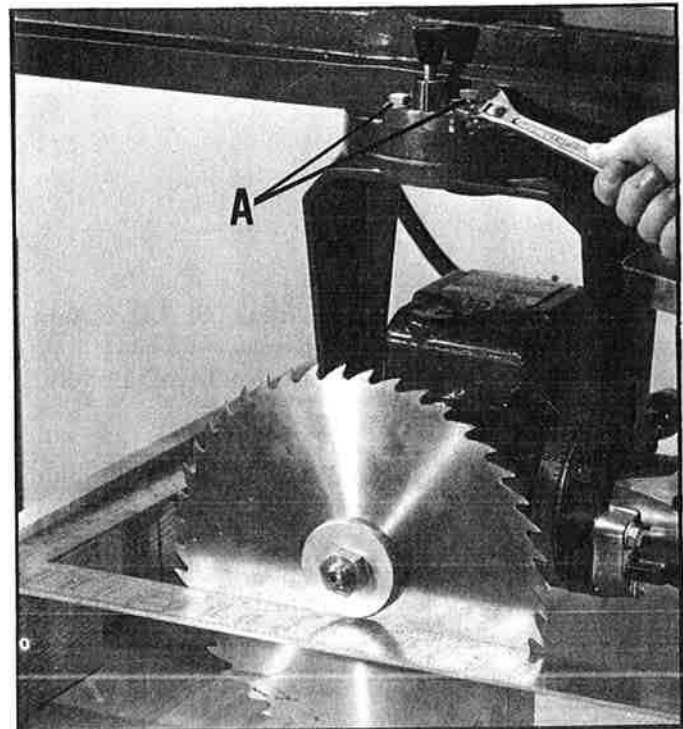


Fig. 32

MAINTENANCE

CHANGING POSITION OF YOKE CLAMPING HANDLE

When the yoke clamping handle does not lock in a convenient position, it may be repositioned as follows:

1. Swing the track to the rip position, remove rear end plate from the track-arm, and remove the cuttinghead, as shown in Fig. 33.
2. Loosen yoke clamp handle (A) and remove cotter pin (B) Fig. 33.
3. Turn the nut (C) Fig. 33, clockwise 60 degrees and replace cotter pin.
4. Replace the cuttinghead to the track-arm.

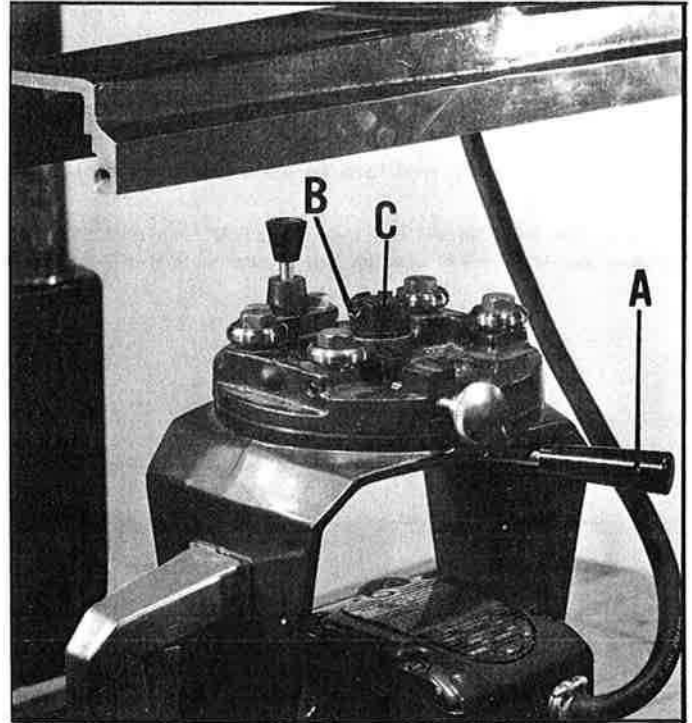


Fig. 33

ADJUSTMENT OF BALL BEARINGS AGAINST TRACK

The carriage is mounted on four pre-loaded, pre-lubricated, shielded ball bearings. Two on fixed shafts (on saw blade side of track-arm), the other two on adjustable eccentric shafts.

After years of operation wear may develop in the track-arm causing "play" between the ball bearings and the track. Check the ball bearings against the track for any "play". The ball bearings must ride smoothly and evenly in track to do accurate work.

To check and adjust the bearings on the eccentric shafts, proceed as follows:

1. Move the cuttinghead to the center of the track, and check to see if any play is present.
2. To adjust, place special wrench (A) Fig. 34 over hexagon nut (located underneath the carriage) and loosen.
3. Loosen set screw (B) Fig. 34 to release lock action on eccentric shaft.

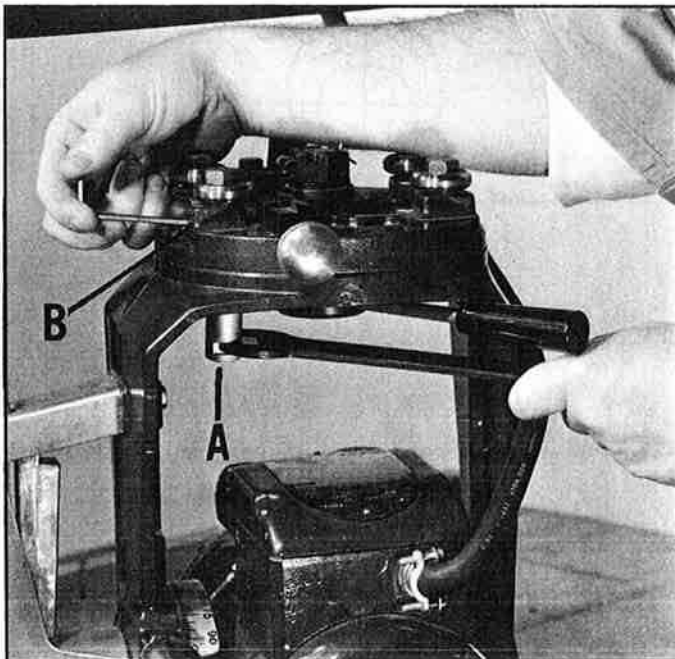


Fig. 34

(For clarity Fig. 34 is shown with the cuttinghead removed. The adjustment should be made with the cuttinghead at the center of the track.)

4. Using a small screw driver (A) Fig. 35, turn screw slightly until all play is removed.
5. Lock set screw (B) Fig. 34, and tighten hex jam nut with special wrench (A).
6. Use the same procedure to adjust rear bearing.

(For clarity Fig. 35 is shown with the cuttinghead removed. The adjustment should be made with the cuttinghead at the center of the track.)

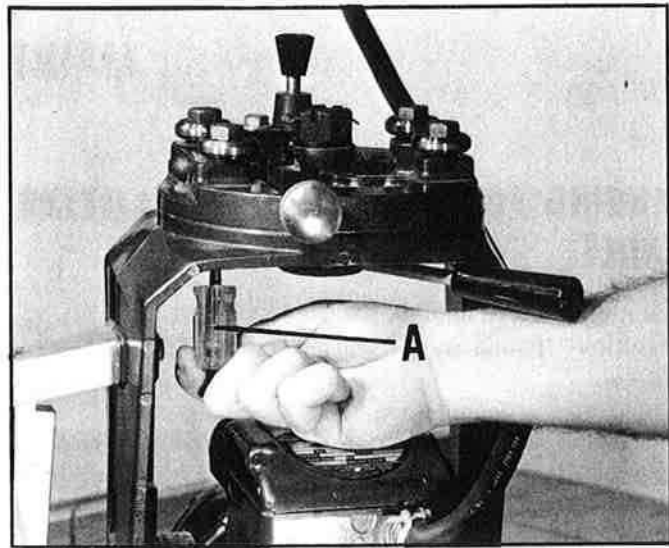


Fig. 35

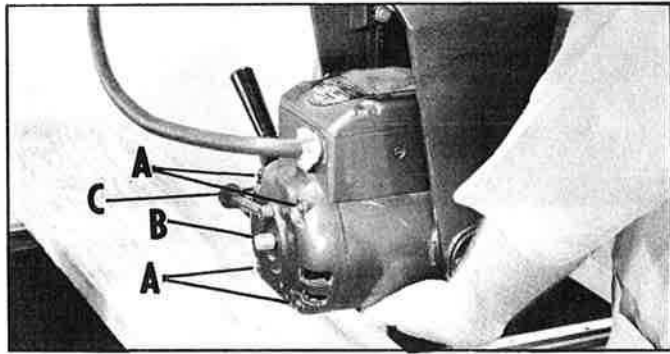


Fig. 36 A

REPLACING MANUAL BRAKE ASSEMBLY

1. Remove four screws (A) Fig. 36-A, and protective shaft covering (B). Remove the motor end bell from the motor.
2. Remove the small roll pin that holds the brake handle (C) Fig. 36-A, to the stud and remove the handle.

3. Remove the brake shoe assembly with the stud and spring from inside of the motor end bell.
4. Slide the new spring (A) Fig. 36-B, onto the stud with the arms of the spring spanning the roll pin in the brake shoe assembly, as shown.

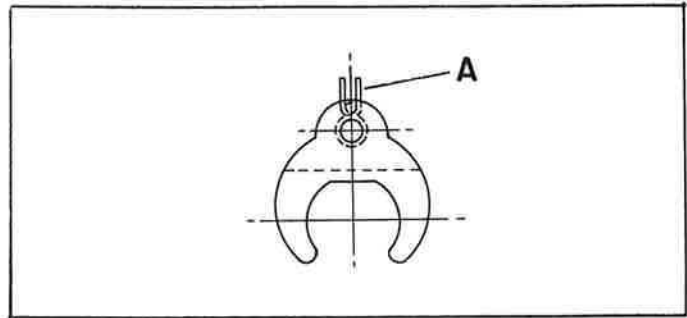


Fig. 36 B

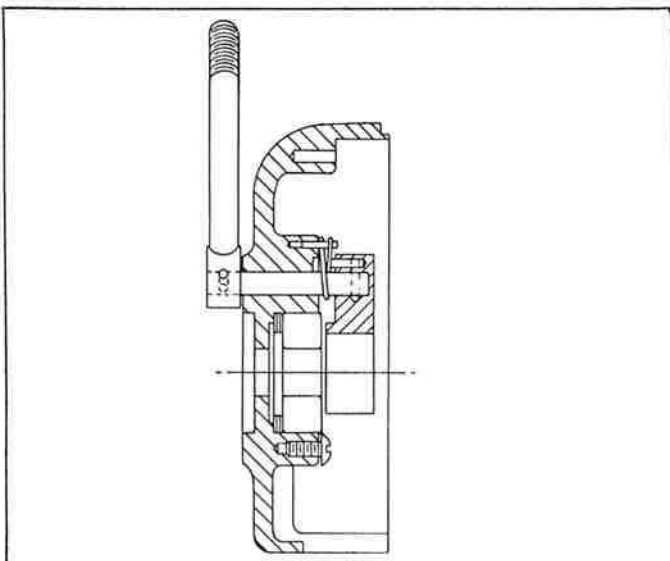


Fig. 36 C

5. Assemble the brake shoe assembly to the inside of the motor end bell with the spring spanning the roll pin located on the inside of the end bell, as shown in Fig. 36-C.
6. Replace the brake handle and assemble the motor end bell to the motor.

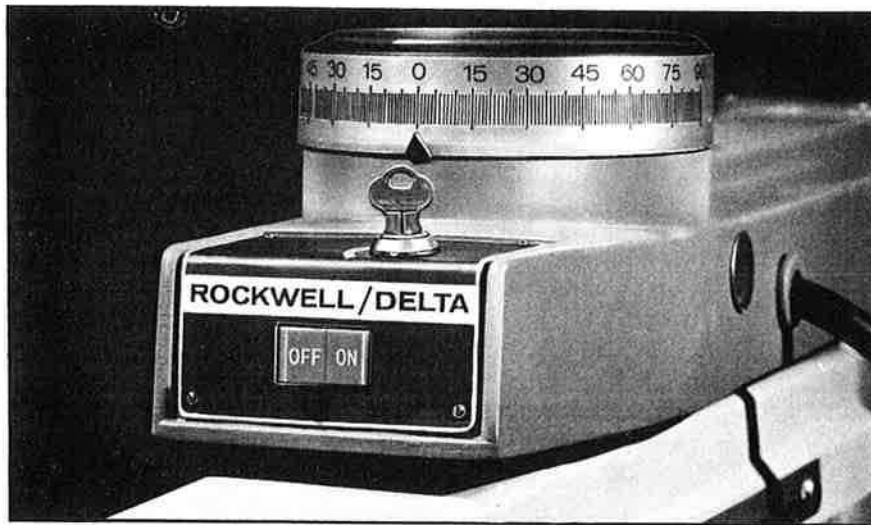


Fig. 37

SWITCH

Your Rockwell/Delta Radial Saw is equipped with a convenient, up front, On and Off Switch. The switch is placed at eye level, as shown in Fig. 37, and can be turned on or off in an instant for added operator protection. The saw is equipped with a lock-out feature which permits the switch to be locked so it cannot be turned on without the key. When the switch is in the On position the key cannot be removed.

OPERATION

Figures 38, 39, and 40, are shown with the leaf guard removed for clarity.

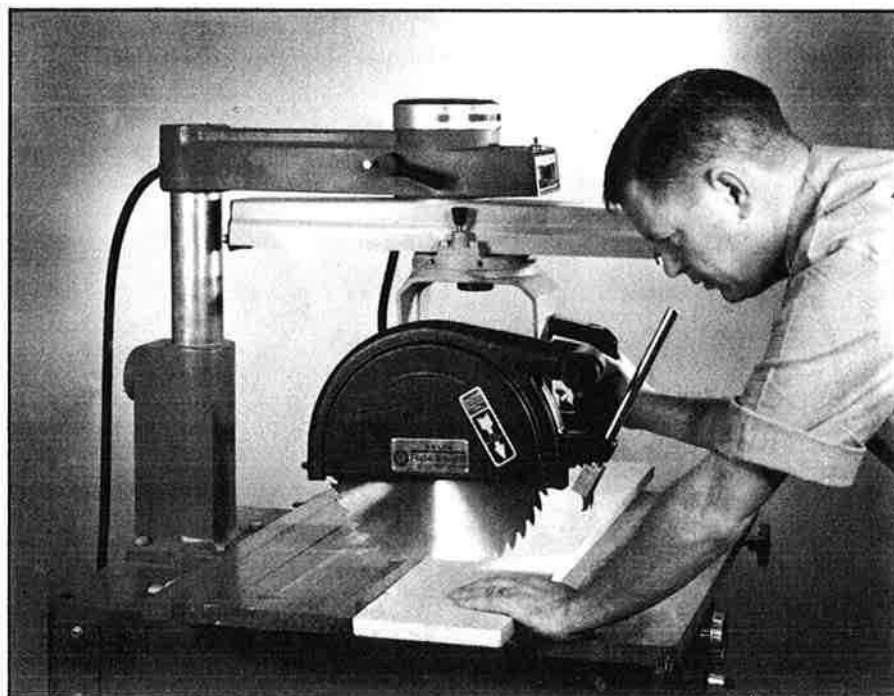


Fig. 38

CROSS-CUTTING

The first operation you should learn to perform on the radial saw is cross-cutting. In cross-cutting the track-arm is set parallel with the over-arm and locked in position. The saw blade is to the left and behind the fence. The material is placed on the table against the fence and the saw blade is pulled across the work and returned to its starting position. The operator should position himself a little to the left of the machine for better visibility while cutting. Fig. 38 shows cross-cutting on the radial saw.

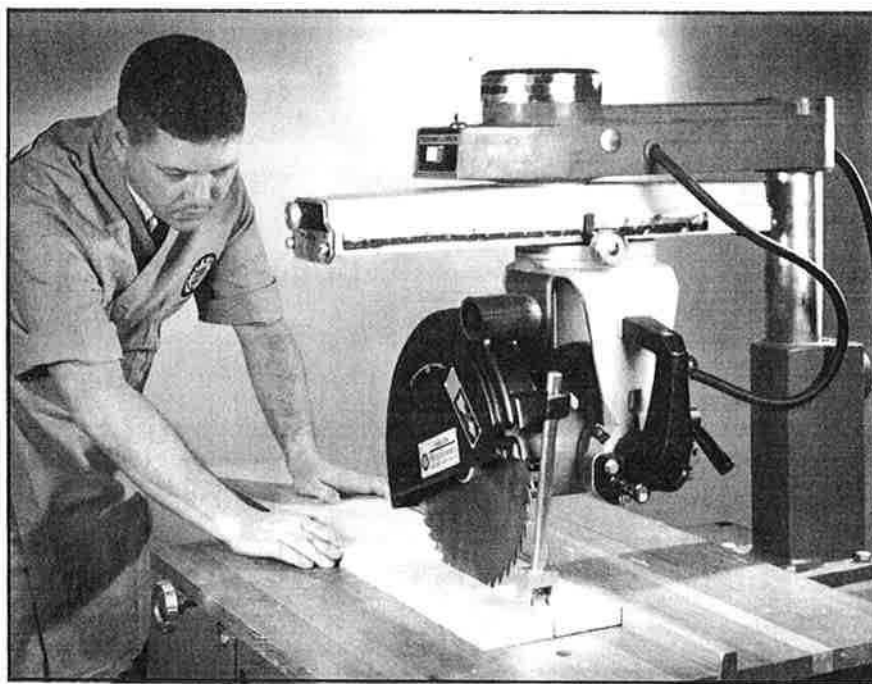


Fig. 39

RIPPING

Ripping involves making a length-wise cut through a board along the grain. In ripping the track-arm is set parallel with the over-arm. The yoke is then positioned so that the blade is parallel to the fence. The blade can be located in either the inboard or outboard position when ripping. In feeding the material, one edge rides against the fence while the flat side of the board rests on the table. The guard should be lowered on the infeed end and the anti-kickback attachment adjusted accordingly. The feed hand should always be well away from the blade and should be positioned on the material so that it will pass the saw blade on the outboard side of the cut. The material between the blade and the fence should not be touched with the hand until the saw is stopped. Fig. 39 shows outboard ripping on the radial saw.

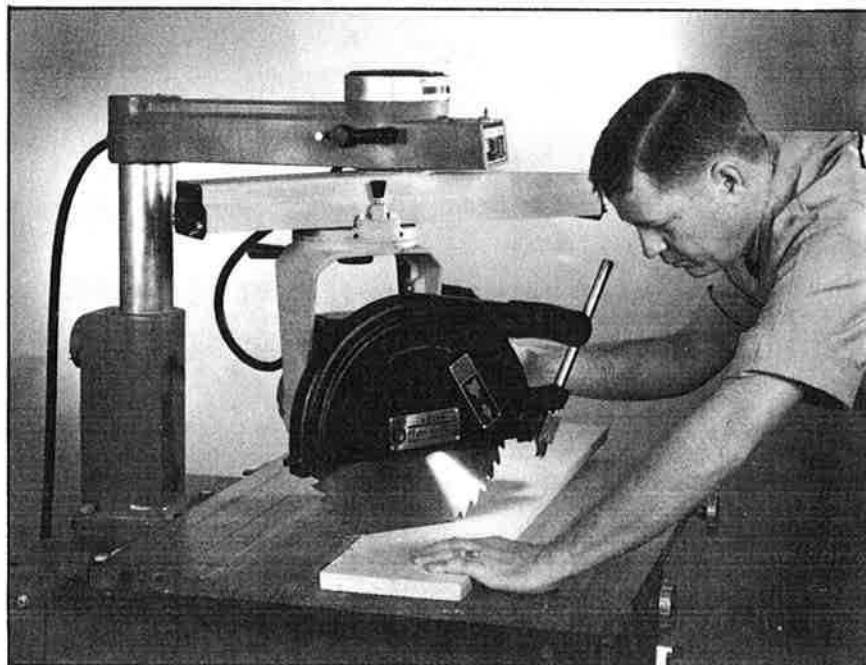


Fig. 40

MITERING

Mitering is performed in the same manner as cross-cutting with the exception that the track-arm is first positioned to the desired angle on the miter scale before it is clamped in place. Fig. 40 shows a typical mitering operation on the radial saw.

Rockwell

AUTHORIZED DELTA PARTS DISTRIBUTORS

CALIFORNIA

LOS ANGELES, 90007
Rockwell Manufacturing Company
2400 South Grand Avenue
Phone: 213 749-0386

OAKLAND, 94601
Rockwell Manufacturing Company
4621 Malat Street
Post Office Box 7327
Phone: 415 535-2424

COLORADO

DENVER, 80207
Rockwell Manufacturing Company
4900 East 39th Avenue
Phone: 303 388-5803

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ATLANTA (Doraville), 30340
3500 McCall Place
Phone: 404 458-2263

HAWAII

HONOLULU, 96819
Rockwell Manufacturing Company
3209 Koapaka Street
Phone: 808 872-048

ILLINOIS

CHICAGO, (Melrose Park), 60160
Rockwell Manufacturing Company
4533 North Avenue
Phone: 312 921-2650

MASSACHUSETTS

BOSTON, (Allston), 02134
Rockwell Manufacturing Company
414 Cambridge Street
Phone: 617 782-1700

MICHIGAN

DETROIT (Southfield), 48075
Rockwell Manufacturing Company
18650 West Eight Mile Road
Phone: 313 358-1000

MISSOURI

N. KANSAS CITY, 64116
Rockwell Manufacturing Company
1141 Swift Avenue
Phone: 816 221-2070

NEW YORK

NEW YORK, 10013
Rudolf Bass, Incorporated
175 Lafayette Street, Cor. Grand Street
Phone: 212 CA 6-4000

BUFFALO, 14204
Karle Saw Company, Incorporated
138-150 Chicago Street, Cor. So. Park Avenue
Phone: 716 853-8053 or 853-8054

OHIO

CINCINNATI, 45203
Rockwell Manufacturing Company
906 Dalton Street
Phone: 513 241-2737

PENNSYLVANIA

PHILADELPHIA, 19120
Rockwell Manufacturing Company
4433-37 Whitaker Avenue
Phone: 215 455-7907

PITTSBURGH, 15208
Rockwell Manufacturing Company
400 North Lexington Avenue
Phone: 412 241-8400

TEXAS

DALLAS, 75247
Rockwell Manufacturing Company
2934 Iron Ridge Street
Post Office Box 47767
Phone: 214 631-1890

WASHINGTON

SEATTLE, 98101
Rockwell Manufacturing Company
1918 Minor Avenue
Phone: 206 622-4576

WISCONSIN

MILWAUKEE, 53222
Rockwell Manufacturing Company
10700 West Burleigh Street
Phone: 414 774-3650

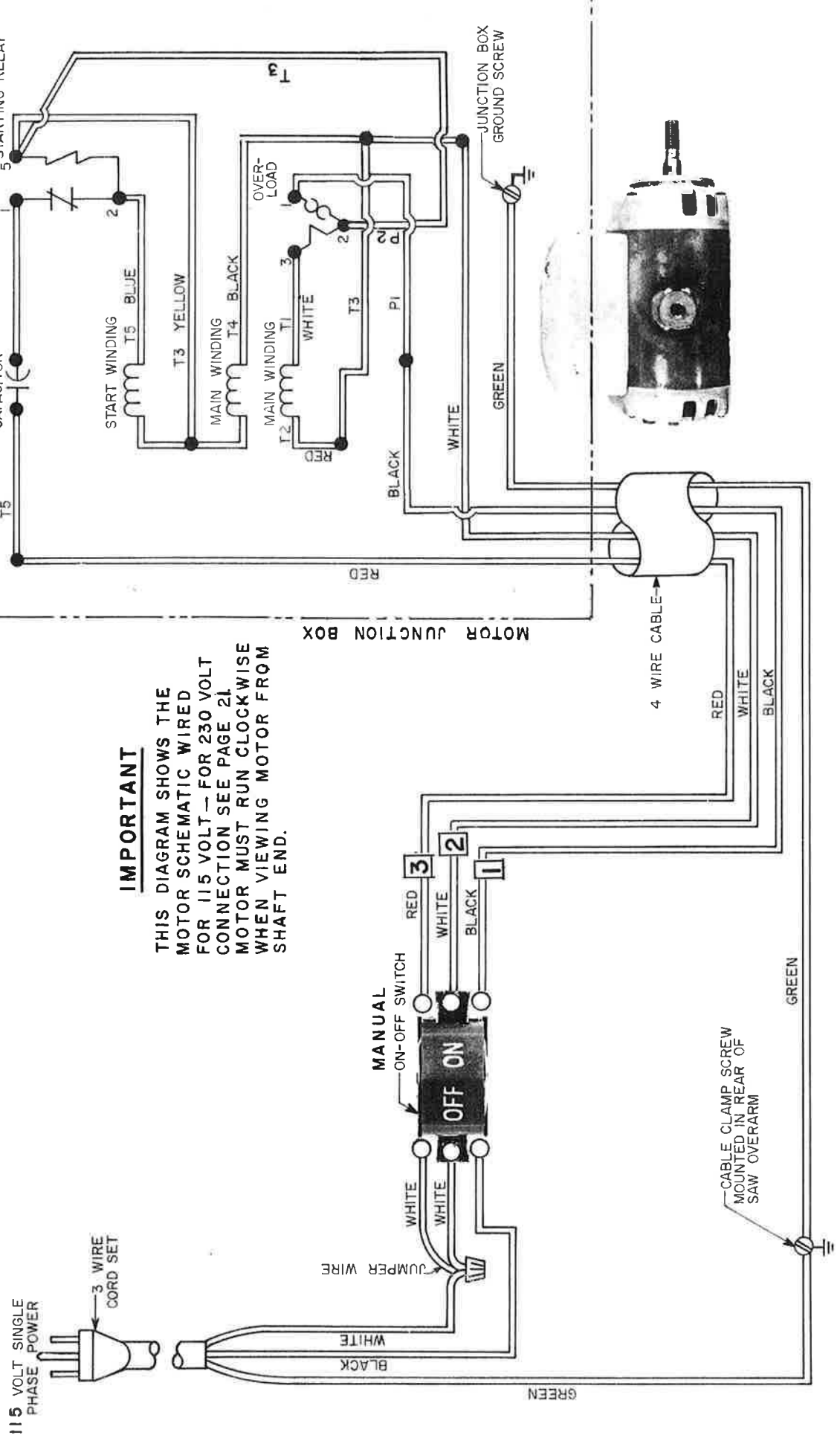
CANADA

GUELPH, ONTARIO
Rockwell Manufacturing Company
of Canada Limited
40 Wellington Street
Post Office Box 84R
Phone: 519 822-2840

Authorized Delta Parts Distributors stock a complete line of replacement parts. To save time and shipping cost send your parts orders to your nearest distributor and in most cases they will be filled and shipped within 48 hours. We do not fill any parts orders direct from the factory.

ON-OFF MANUAL SWITCH CONTROL WITH INTEGRAL OVERLOAD PROTECTOR FOR 115 VOLT SINGLE PHASE MOTORS

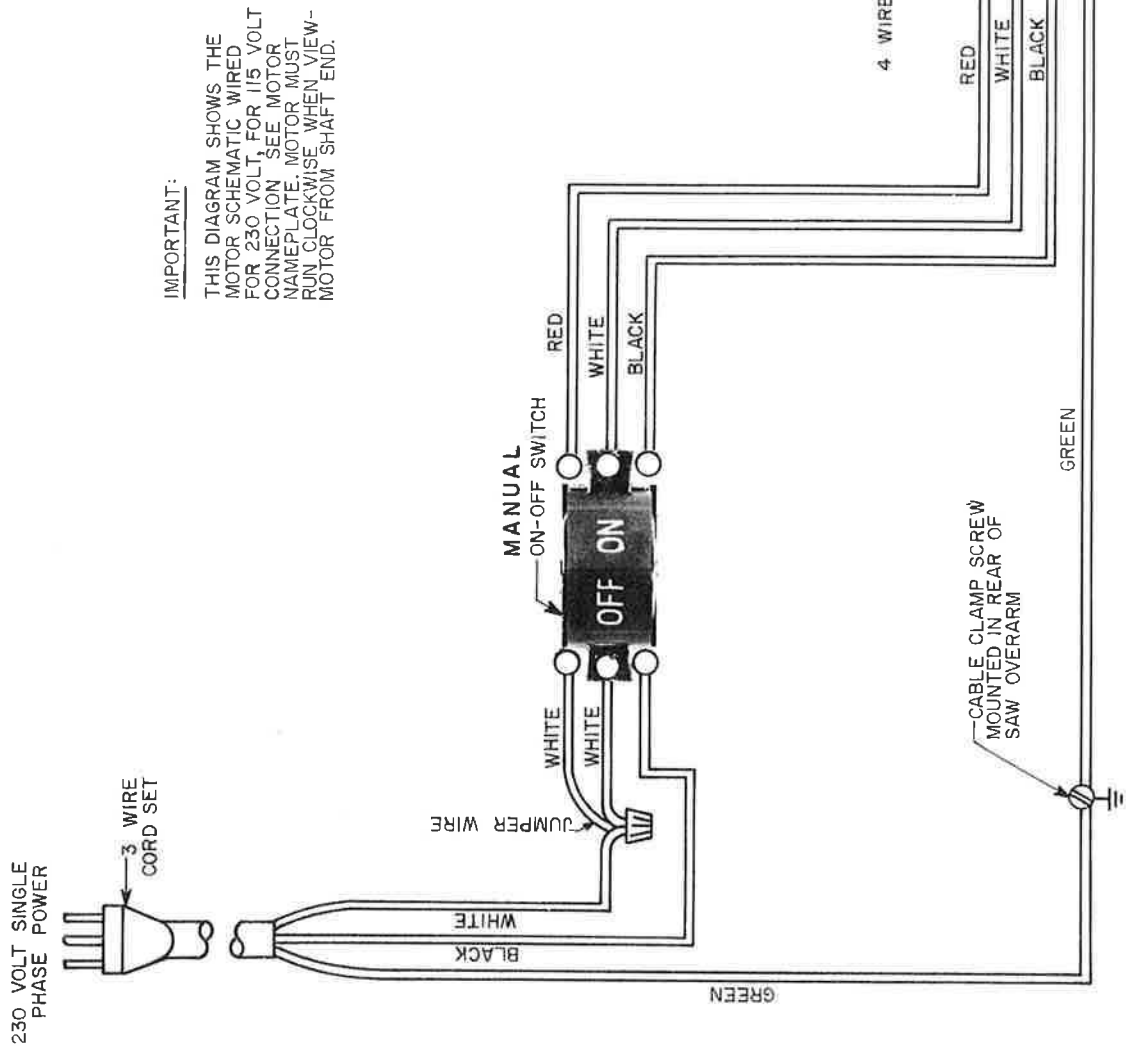
NOTE: 115 VOLT OPERATION OF THIS TOOL IS NOT RECOMMENDED!



IMPORTANT

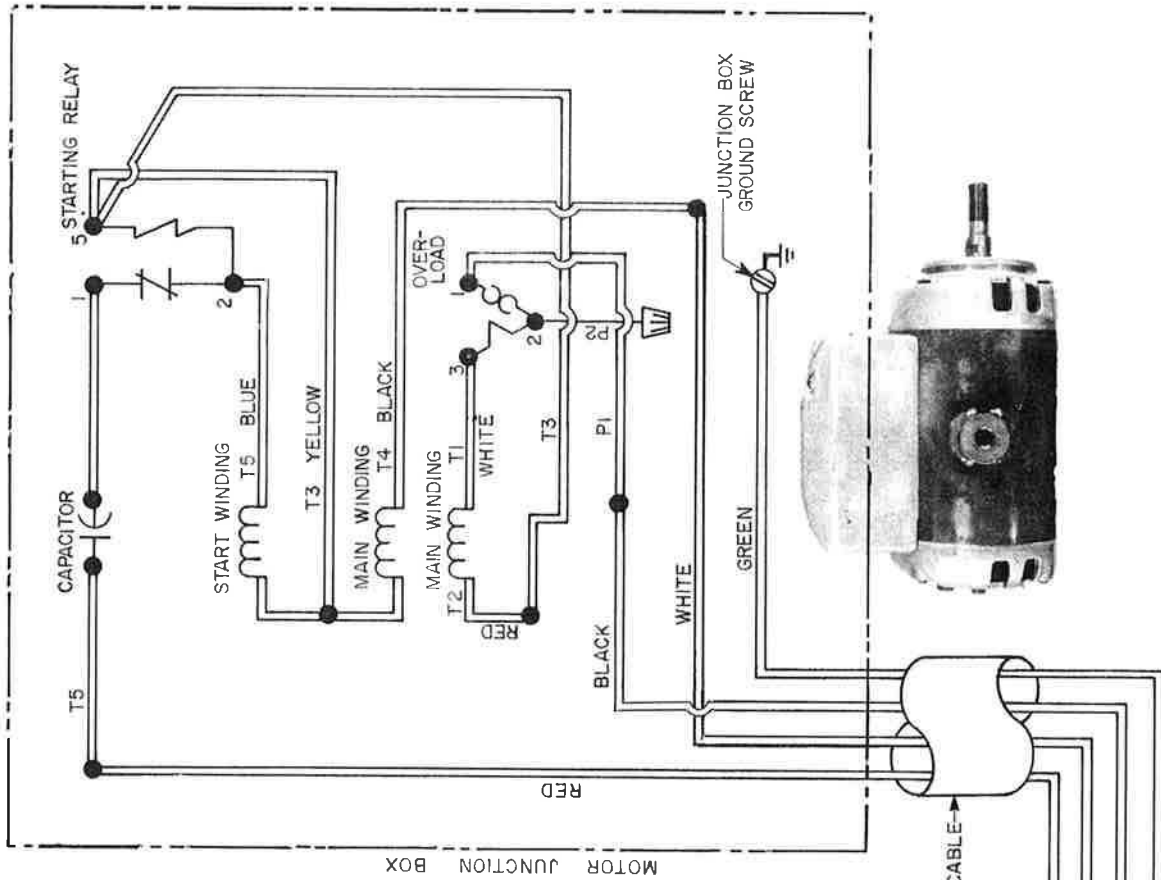
THIS DIAGRAM SHOWS THE MOTOR SCHEMATIC WIRED FOR 115 VOLT - FOR 230 VOLT CONNECTION SEE PAGE 21. MOTOR MUST RUN CLOCKWISE WHEN VIEWING MOTOR FROM SHAFT END.

ON-OFF MANUAL SWITCH CONTROL WITH INTEGRAL OVERLOAD PROTECTOR FOR 230 VOLT SINGLE PHASE MOTORS

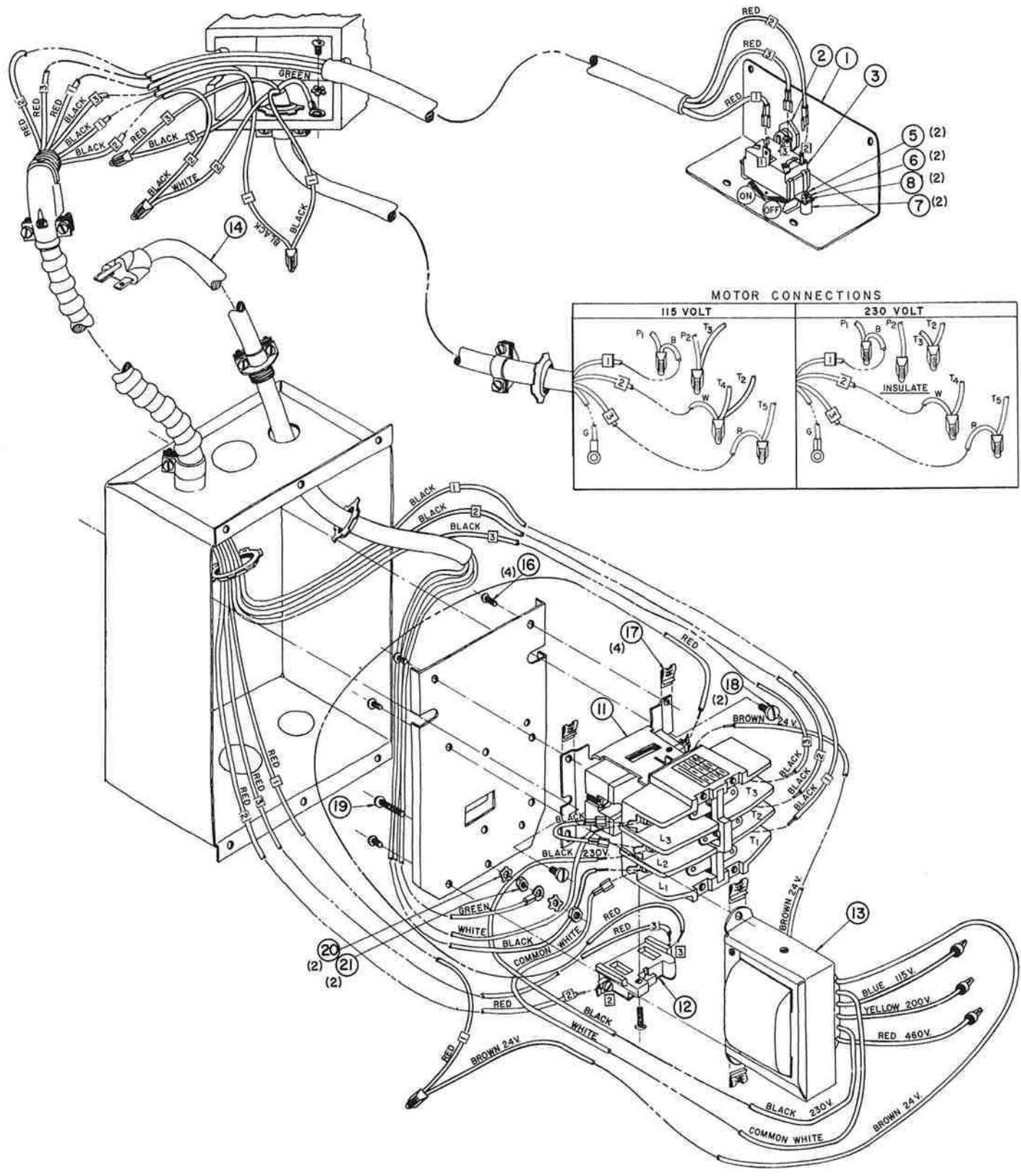


IMPORTANT:

THIS DIAGRAM SHOWS THE MOTOR SCHEMATIC WIRED FOR 230 VOLT, FOR 115 VOLT CONNECTION, SEE MOTOR NAMEPLATE. MOTOR MUST RUN CLOCKWISE WHEN VIEWED FROM SHAFT END.

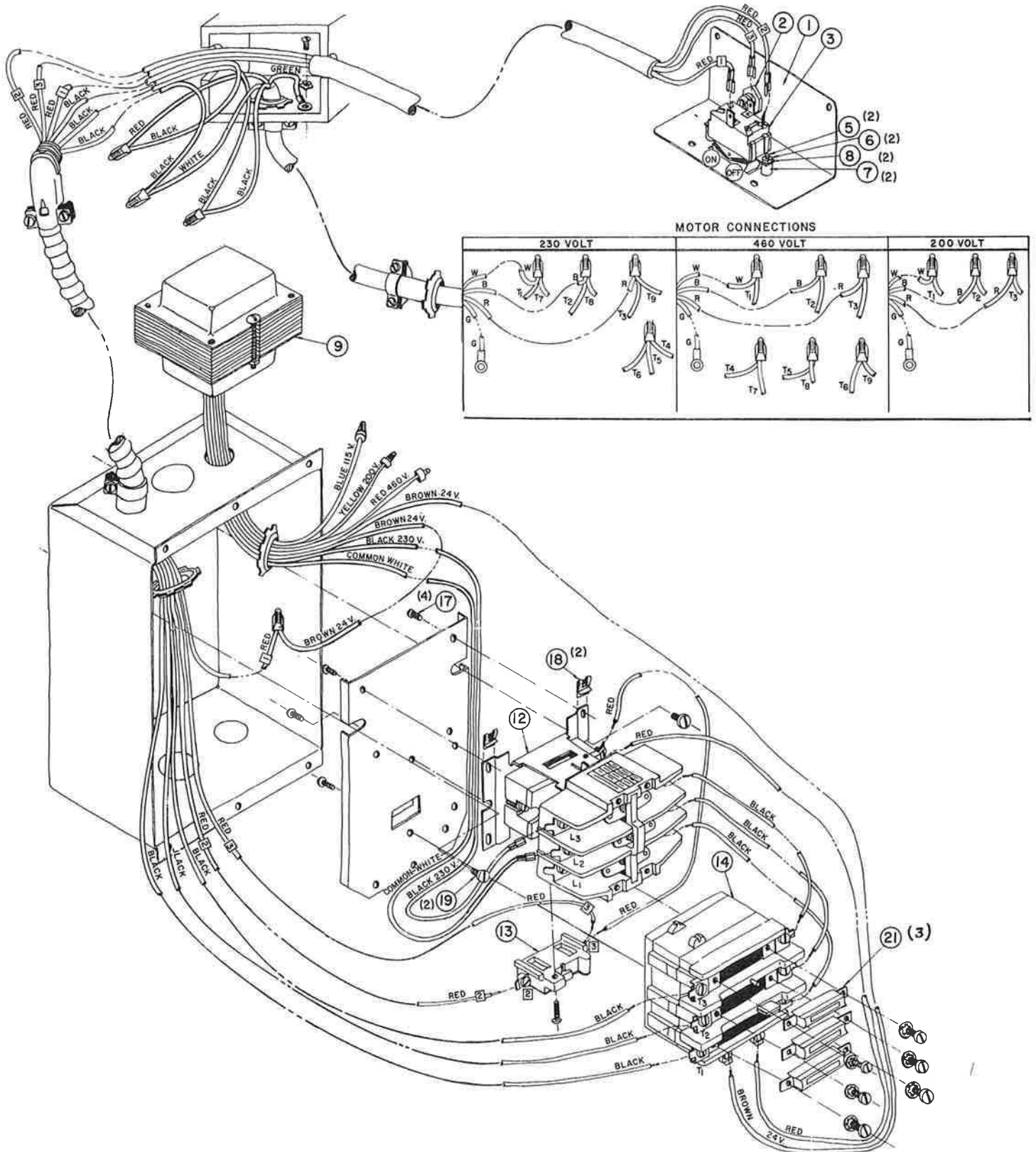


FOR 230 VOLT SINGLE PHASE MOTORS



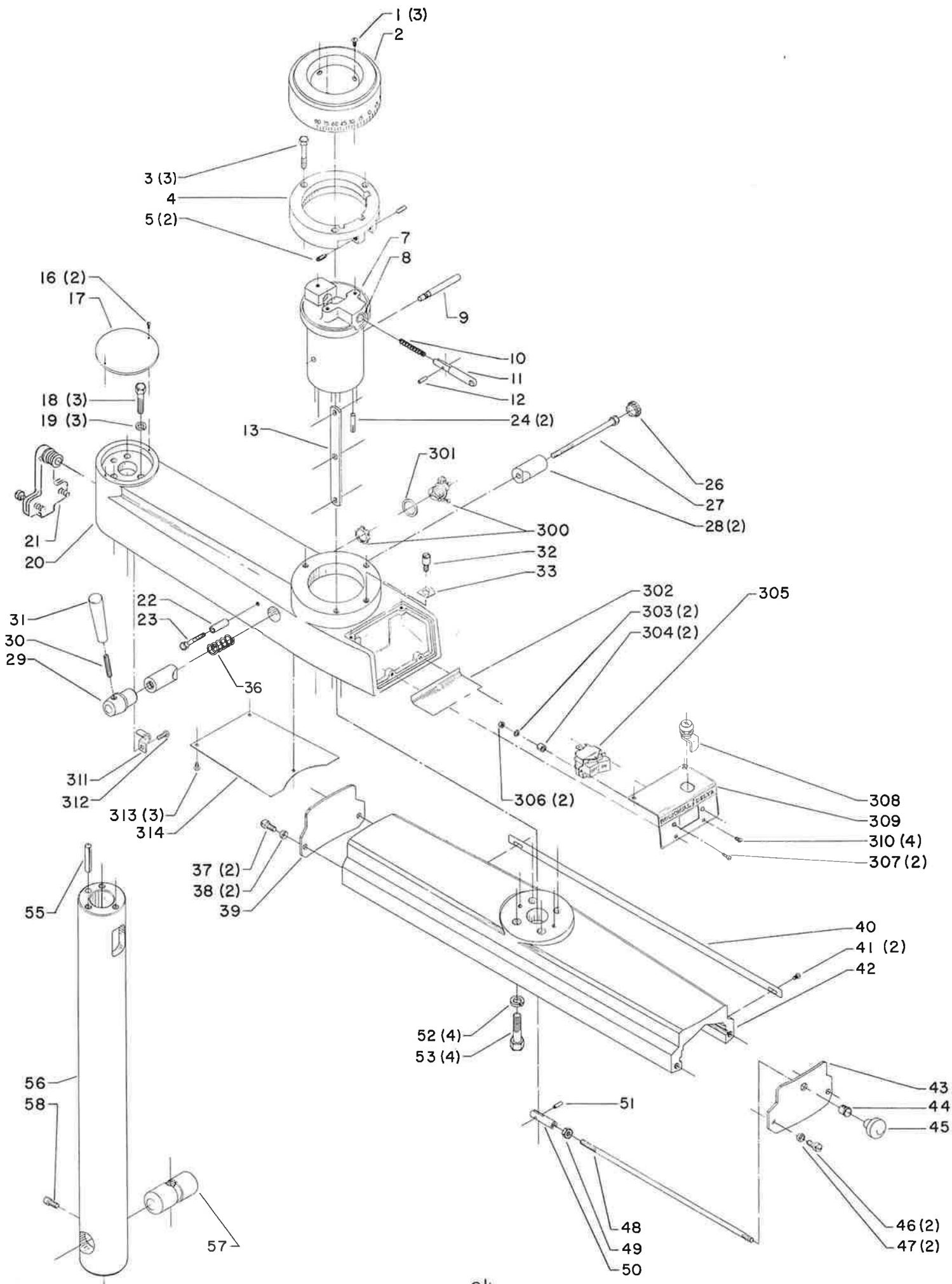
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
*	424-02-331-0020	Switch Plate Assembly, consisting of:	.13	1086720	Transformer (Primary Lead must match Voltage)
1	424-02-031-0031	Cover	14	Cat. #49-514	230 V. Cable
2	424-02-368-0002	Lock w/Two Keys	14	Cat. #49-513	115 V. Cable
3	438-01-017-0085	Switch	16	1086756	Special Screw
5	SP-588	#6-32 x 3/4" Rd. Hd. Scr.	17	1086757	Speed Nut
6	SP-1215	#6-32 Hex. Nut	18	0908460	#8-32 x 3/4" Pan Hd. Thread Forming Scr.
7	424-02-109-0001	Spacer	19	1086822	Special Screw
8	SP-1788	#6 External Tooth Lock Washer	20	SP-1795	#10 External Tooth Lock Washer
11	1225237	Contactor	21	SP-1203	#10-32 Hex. Nut
12	1225236	Interlock			

ON-OFF SWITCH AND MAGNETIC STARTER WITH 24 VOLT CONTROL FOR THREE PHASE MOTORS



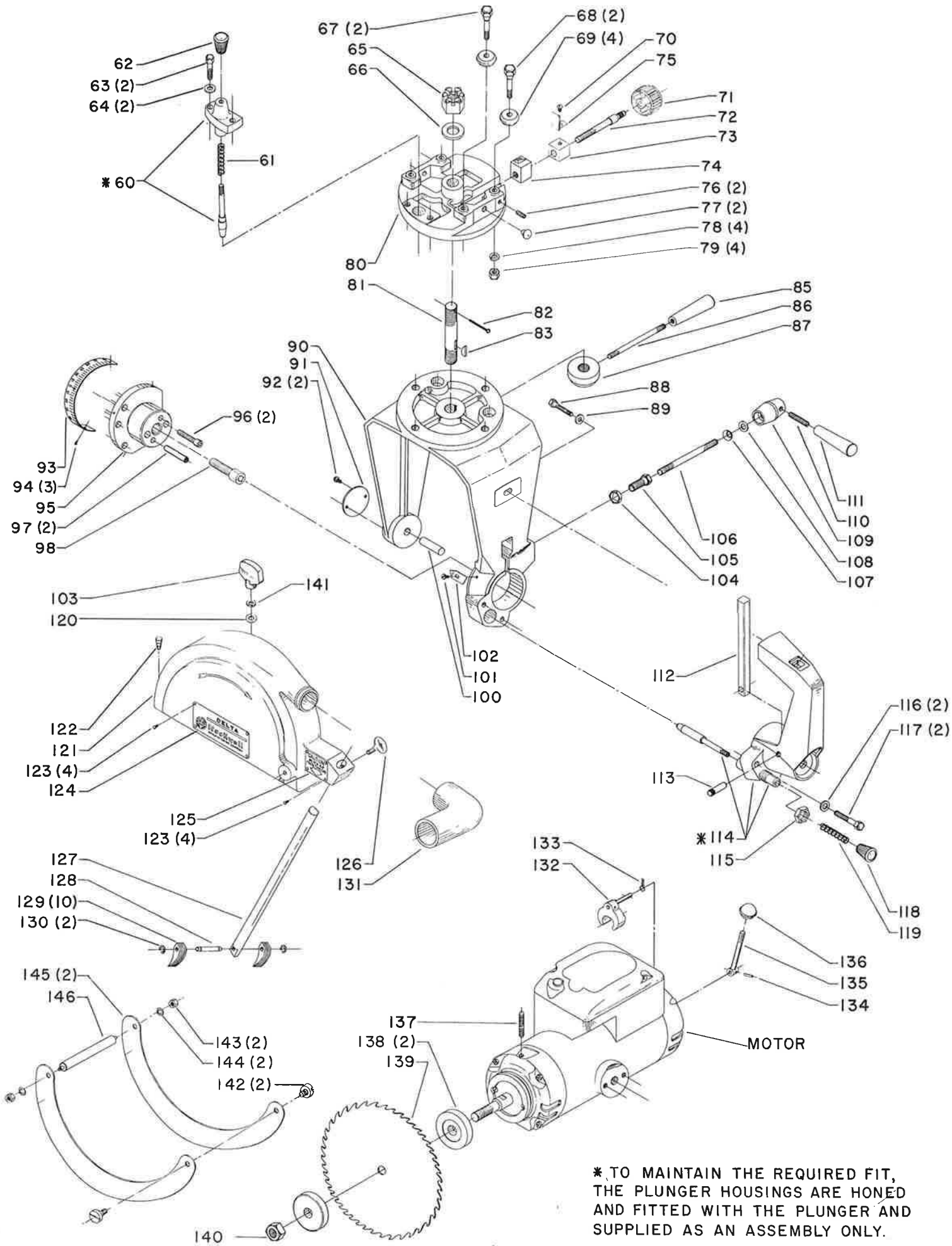
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
*	424-02-331-0020	Switch Plate Assembly, Consisting of:	9	1086758	Transformer
1	424-02-031-0031	Cover	12	1225237	Contactors
2	424-02-368-0002	Lock w/2 Keys	13	1225236	Interlock
3	438-01-017-0085	Switch	14	1225235	Overload Block
5	SP-588	#6-32 x 3/4" Rd. Hd. Scr.	17	1086756	Special Screw
6	SP-1215	#6-32 Hex. Nut	18	1086757	Speed Nut
7	424-02-109-0001	Spacer	19	0908460	#8-32 x 3/4" Pan Hd. Thread Forming Scr.
8	SP-1788	#6 External Tooth Lock Washer	** 21	1225215	Heater Coil

** Heater Coil must be selected based on motor amp rating at selected voltage
 NOTE: For other voltage connections, change transformer primary lead to proper voltage.



Replacement Parts

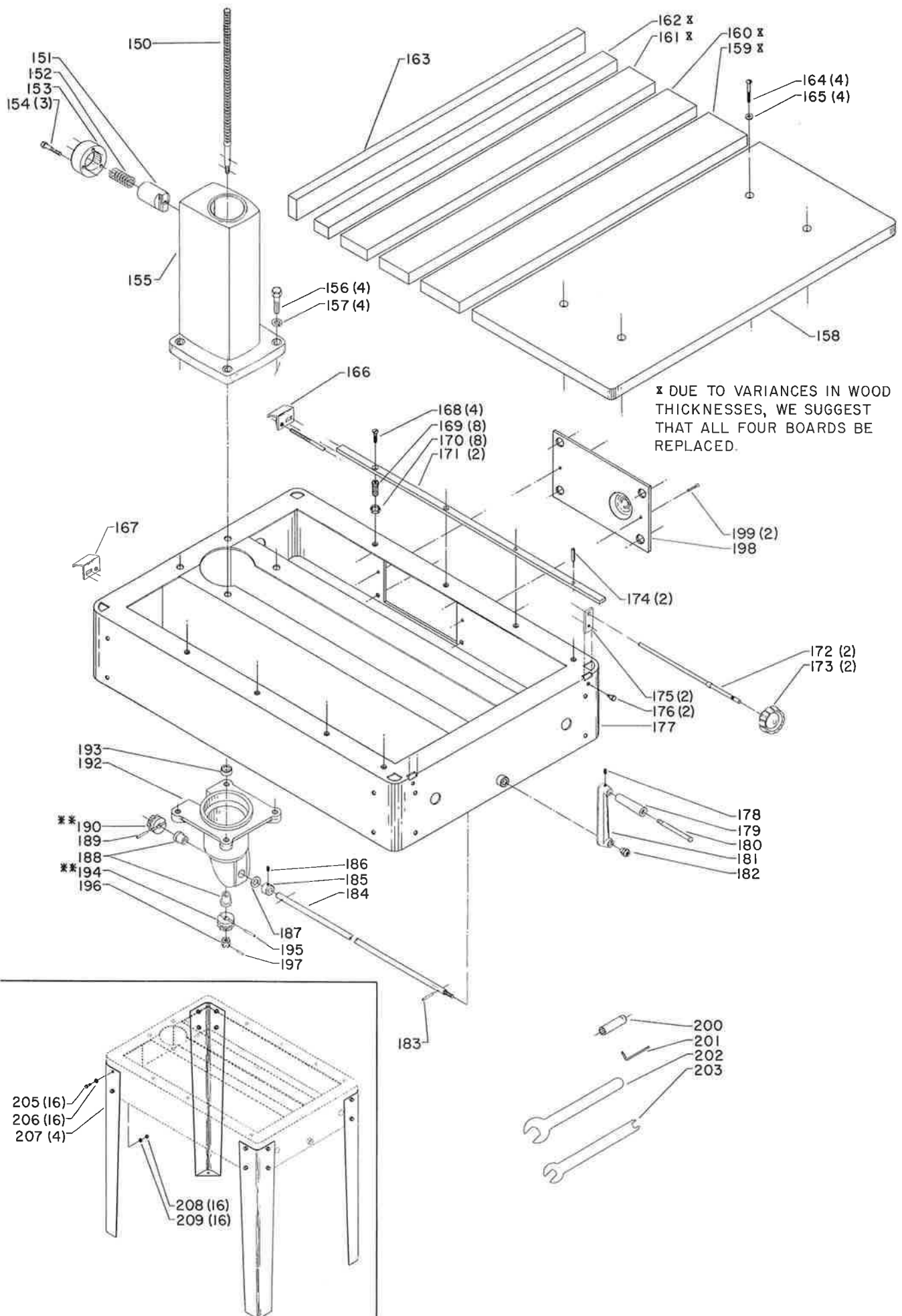
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	901-02-010-7562	#10-32 x 5/16" Rd. Hd. Screw	46	SP-718	5/16-18 x 1/2" Fil. Hd. Screw
2	424-02-031-0030	Index Cover	47	904-07-081-6237	Rubber Washer
3	424-02-112-0013	Special Screw	48	424-02-108-0012	Rod
4	424-02-088-0005	Stop	49	SP-5435	5/16-18 Hex. Jam Nut
5	901-04-161-9252	1/4-28 x 1/2" Nylok Soc. Set Scr.	50	424-02-105-0002	Sleeve
7	424-02-030-0004	Index Column	51	SP-2729	3/16 x 1/2" Roll Pin
8	424-02-017-0002	Bushing	52	SP-1705	1/2" Split Lock Washer
9	424-02-071-0009	Pin	53	SP-616	1/2-13 x 1-1/2" Hex. Hd. Screw
10	928-01-251-8372	Spring	55	905-02-011-8145	3/8 x 1-1/2" Groove Pin
11	424-02-071-0016	Pin	56	424-02-030-0003	Column
12	SP-2729	3/16 x 1/2" Roll Pin	57	424-02-035-0001	Cylinder
13	424-02-004-0014	Bar	58	SP-3350	5/16-18 x 1/2" Soc. Hd. Screw
16	SP-558	#8-32 x 1/4" Rd. Hd. Screw	300	SP-2480	Box Connector
17	MK-5916	Support Cover	301-	904-07-011-8401	7/8 L.D. x 1-1/8 O.D. x 1/16"
18	SP-648	3/8-16 x 1-1/4" Hex. Hd. Screw			Fiber Washer
19	SP-1704	3/8" Split Lockwasher	302	438-01-011-0036	Insulating Paper
20	424-02-089-0014	Support	*	424-02-331-0021	Cover - Manual Control
21	438-01-009-0040	Fitting	303	SP-1788	#6 External Tooth Lock Washer
22	HBS-843	Spacer	304	424-02-109-0001	Spacer
23	SP-614	1/4-20 x 1-1/4" Hex. Hd. Screw	305	438-01-017-0084	Switch - Manual Control
24	SP-6846	1/4 x 1" Groove Pin	306	SP-1215	#6-32 Hex. Nut
26	961-01-010-7494	Plug	307	SP-588	#6-32 x 3/4" Rd. Hd. Screw
27	901-01-101-9846	5/16-18 x 4-1/4" Hd. Screw	308	424-02-368-0002	Lock w/Two Keys
28	424-02-027-0010	Clamp	309	424-02-031-0031	Switch Cover
29	424-02-107-0001	Hub	*	424-02-331-0020	Cover - Magnetic Control
30	SP-115	5/16-18 x 1-1/4" Hdless Set Screw	303	SP-1788	#6 External Tooth Lock Washer
31	931-01-072-0453	Handle	304	424-02-109-0001	Spacer
32	424-02-071-0017	Pin	305	438-01-017-0085	Switch - Magnetic Control
33	951-01-021-7019	Pointer	306	SP-1215	#6-32 Hex. Nut
36	928-01-601-8873	Spring	307	SP-588	#6-32 x 3/4" Rd. Hd. Screw
37	SP-718	5/16-18 x 1/2" Fil. Hd. Screw	308	424-02-368-0002	Lock w/Two Keys
38	904-07-081-6237	Rubber Washer	309	424-02-031-0031	Switch Cover
39	424-02-031-0027	Rear Cover	310	SP-558	#8-32 x 1/4" Rd. Hd. Screw
40	951-02-011-8282	Rip Scale	311	438-01-004-0030	Clamp (use with 1 Phase Motor)
41	901-02-160-3729	#8-32 x 1/4" Pan Hd. Screw	311	438-01-009-0045	Clamp (use with 3 Phase Motor)
42	424-02-055-0010	Guide	312	SP-509	1/4-20 x 1/2" Rd. Hd. Screw
43	424-02-331-0013	Front Cover, Including:	313	SP-558	#8-32 x 1/4" Rd. Hd. Screw
44	910-01-071-0132	Heyco Bushing	314	424-02-031-0032	Bottom Cover
45	931-01-042-0455	Knob			



* TO MAINTAIN THE REQUIRED FIT,
 THE PLUNGER HOUSINGS ARE HONED
 AND FITTED WITH THE PLUNGER AND
 SUPPLIED AS AN ASSEMBLY ONLY.

Replacement Parts

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
60	424-02-388-0019	Stop Assembly, Including:	106	424-02-111-0008	Stud
61	MK-5516	Spring	107	904-03-010-6676	Spring Washer
62	931-01-062-0454	Knob	108	SBS-55	Washer
63	SP-649	5/16-18 x 1" Hex. Hd. Screw	109	424-02-107-0002	Hub
64	SP-1620	11/32 x 11/16 x 1/16" Washer	110	SP-115	5/16-18 x 1-1/4" Headless Set Scr.
65	902-01-161-7838	3/4" - 16 Slotted Nut	111	931-01-072-0453	Handle
66	904-01-031-5749	Special Washer	*	424-02-355-0015	Guide Assembly, Consisting of:
67	MG-127	Stud	112	424-02-004-0015	Lever
68	424-02-111-0010	Stud	113	424-02-071-0012	Pin
69	920-04-011-8088	Bearing	114	424-02-355-0013	Guide Assembly, Including
70	SP-569	#8-32 x 5/16" Rd. Hd. Screw	115	BM-23	Special Hex Nut
71	MG-180	Knob	116	SP-1620	11/32 x 11/16 x 1/16" Washer
72	424-02-112-0011	Screw	117	SP-609	5/16-18 x 1-1/2" Hex. Hd. Screw
73	424-02-027-0014	Outer Clamp	118	931-01-062-0454	Knob
74	424-02-027-0011	Inner Clamp	119	MH-3493	Spring
75	951-01-021-7018	Rip Scale Pointer	120	SP-1620	11/32 x 11/16 x 1/16" Washer
76	SP-202	1/4-20 x 1/2" Soc. Set Screw	121	Cat. #33-593	Complete Guard, Including:
77	MJ-4232	Rubber Bumper	122	TAB-175	Bumper
78	SP-1703	5/16" Split Lockwasher	123	SP-2250	#4 x 3/16" Drive Screw
79	SP-1206	5/16" -24 Hex. Nut	124	960-02-012-0038	Nameplate
80	424-02-057-0003	Roller Head	125	960-04-012-0031	Caution Plate
81	424-02-111-0009	Stud	126	SP-1505	1/4-20 x 1/2" Thumb Screw
82	SP-2106	1/8 x 1-1/4" Cotter Pin	127	424-02-408-0015	Anti-Kick Back Rod, Including
83	SP-2606	Hi-Pro Key	128	424-01-071-0015	Pin
85	931-01-072-0453	Handle	129	MK-5904	Finger
86	424-02-111-0012	Stud	130	904-15-062-0269	Retaining Ring
87	MH-3187	Clamp	131	MH-3169	Dust Chute
88	901-01-060-5784	1/4-20 x 1-1/2" Hex. Hd. Screw	132	424-01-371-0016	Brake Shoe w/Stud
89	SP-1614	9/32 x 5/8 x 1/16" Washer	133	928-01-101-8899	Spring
90	424-02-102-0004	Yoke	134	905-01-010-2717	Pin
91	MG-117	Trunnion Cover	135	424-01-111-0004	Handle
92	901-02-160-3729	#8-32 x 1/4" Pan Hd. Screw	136	SP-3606	Knob
93	951-02-011-8281	Dial	137	MH-3446	Stud for Guard
94	SP-2252	#2 x 3/16" Drive Screw	138	MH-3452	Flange
95	424-02-095-0005	Front Trunnion	139	Cat. #33-197	12" Blade
96	SP-770	5/16 x 18 x 1-1/4" Soc. Hd. Screw	140	MH-3317	Arbor Nut
97	424-02-071-0018	Pin	141	SP-1752	5/16 Int. Tooth Lockwasher
98	SP-753	1/2-13 x 1-1/4" Soc. Hd. Screw	*	Cat. #33-594	Leaf Guard, Consisting of:
100	424-02-071-0013	Pin	142	MH-3803	Extension Screw
101	901-02-160-3729	#8-32 x 1/4" Pan Hd. Screw	143	SP-1029	1/4"-20 Hex. Nut
102	951-01-021-7017	Pointer	144	SP-1702	1/4" Split Lockwasher
103	931-01-132-0475	Knob	145	MH-3483	Leaf Guard
104	SP-2956	Pal Nut	146	MH-3484	Stud
105	424-02-017-0008	Threaded Bushing	*	Not shown assembled.	



CAT. No. 50-104 LEG ASSEMBLY

Replacement Parts

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
150	424-02-112-0010	Screw	180	424-02-071-0015	Pin
151	424-02-074-0002	Plug	181	424-02-033-0004	Crank
152	928-01-201-8869	Spring	182	424-02-079-0007	Special Retainer
153	424-02-031-0025	Column Base Cover	183	905-04-091-7956	Shear Pin
154	SP-609	5/16-18 x 1-1/2" Hex. Hd. Screw	184	424-02-108-0013	Rod
155	424-02-005-0008	Column Base	185	SDP-34-S	Collar, Including:
156	SP-616	1/2-13 x 1-1/2" Hex. Hd. Screw	186	SP-208	1/4-20 x 1/4" Soc. Set Screw
157	SP-1705	1/2" Split Lock Washer	187	DSS-36	Fiber Washer
*	424-02-311-0002	Table Board Assembly, Consisting of:	188	424-02-017-0003	Bushing
158	424-02-011-0018	Front Board	189	SP-2732	5/32 x 1" Roll Pin
159	MH-3049	Board	** 190	424-02-051-0008	Gear
160	MH-3050	Board	192	424-02-013-0001	Gear Box
161	MH-3051	Board	193	SP-5323	Bearing
162	MH-3052	Board	** 194	424-02-051-0008	Gear
163	MH-3053	Fence	195	SP-2732	5/32 x 1" Roll Pin
164	SP-536	1/4-20 x 1-3/4" Rd. Hd. Screw	196	902-01-161-7837	Slotted Nut
165	SP-1614	9/32 x 5/8 x 1/16" Washer	197	SP-5073	3/32 x 9/16" Roll Pin
166	MG-187-S	Clamp Pad- R. H.	198	1086740	Starter Box Cover
167	MG-188-S	Clamp Pad- L. H.	199	0908460	#8-32 x 3/4" Pan Hd. Th'd, Forming Scr.
168	SP-406	1/4-20 x 3/4" Flat Hd. Screw	200	424-02-012-0006	Wrench
169	MG-162	Leveling Screw	201	Cat. #1534	1/8" Hex. Soc. Wrench
170	SP-2956	Pal Nut	202	MH-3318	Arbor Nut Wrench
171	424-02-004-0013	Bar	203	MG-164	1/2" Hex. Wrench
172	424-02-408-0009	Rod Assembly		Cat. #50-104	Leg Assembly, Consisting of:
173	931-02-011-9037	Handle	205	SP-607	5/16-18 x 3/4" Hex. Hd. Screw
174	SP-2720	1/4 x 1" Roll Pin	206	SP-1620	11/32 x 11/16 x 1/16" Washer
175	424-02-089-0009	Support	207	424-02-366-0005	Leg Assembly
176	SP-601	1/4-20 x 3/8" Hex. Hd. Scr.	208	SP-1300	5/16"-18 Hex. Nut
177	424-02-305-0016	Base	209	SP-1703	5/16" Split Lock Washer
178	SP-208	1/4-20 x 1/4" Soc. Set Screw			
179	931-01-051-6381	Handle			

* Not Shown Assembled

** When replacing either one of the old style metal elevating gears it will be necessary to replace both gears, Ref. No. 190 and Ref. No. 194 now made of Delrin Plastic, as both gears must be of the same material.

RECOMMENDED SAFETY ENGINEERED GUARDS FOR ALL ROCKWELL INDUSTRIAL MACHINES

TOOLS	GUARDS	
BAND SAWS		
28-200, 28-300 14" Band Saws	28-883	Belt Guard
CIRCULAR SAWS		
34-395 12" - 14" Tilting Arbor Saw	34-937	Uniguard
34-395 12" - 14" Tilting Arbor Saw	34-936	Supersafe Guard
34-466 10" Unisaw	34-885	Uniguard
34-466 10" Unisaw	34-639	Splitter Mounted Blade Guard
34-426 10" Tilting Arbor Saw	34-886	Belt Guard
34-426 10" Tilting Arbor Saw	34-641	Blade Guard
34-643 9" Tilting Arbor Saw	34-965	Belt and Pulley Guard
34-643 9" Tilting Arbor Saw	34-636	Blade Guard
34-300 10" Motorized Saw	34-638	Blade Guard
34-625 9" Motorized Saw	34-638	Blade Guard
DRILL PRESSES		
15-470 15" Variable Speed Drill Press	15-846	Belt Guard - Top Cover Plate
15-490 15" Step Pulley Drill Press	15-825	Full Belt and Pulley Guard
FINISHING MACHINES		
31-520 6" Belt Grinder	31-141	Belt Guard for Open Stand
GRINDERS		
24-151 TG-3 Toolmaker Grinder	24-819	Dust Collector Attachment
23-200 & 23-136 7" & 10" Grinder	23-025	Safety Shields
23-200 7" Grinder	23-802	Dust Collector Attachment
23-136 10" Grinder	23-803	Dust Collector Attachment
23-612 6" Grinder	23-800	Eye Shields
31-350 1" Sander Grinder	31-361	Arbor Pulley Guard
31-350 1" Sander Grinder	31-366	V-Pulley and Belt Guard
JOINTER		
37-220 6" Deluxe Jointer	37-807	Rear Safety Knife Guard
37-220 6" Deluxe Jointer	37-661	Belt Guard
PLANERS		
22-503 24" x 9" Planer	22-501	Shaving Hood
22-212 18" x 6" Planer	22-801	Shaving Hood
22-401 13" x 6" Planer	22-422	Shaving Hood
RADIAL SAWS		
33-345 18" Radial Saw	33-471	Retractable Leaf Guard
33-345 18" Radial Saw	33-543	Blade Guard
33-345 18" Radial Saw	33-550	Safety Return Attachment
33-345 18" Radial Saw	33-446	Retractable Leaf Guard for 20" Blade Guard
33-345 18" Radial Saw	33-543	20" Blade Guard
33-729 16" Radial Saw	33-450	Retractable Leaf Guard
33-729 16" Radial Saw	MK-5592S	Blade Guard
33-729 16" Radial Saw	33-549	Safety Return Attachment

TOOLS	GUARDS
<p>RADIAL SAWS - Continued</p> <p>33-728 14" Radial Saw 33-728 14" Radial Saw 33-728 14" Radial Saw 33-487 12" Radial Saw 33-487 12" Radial Saw 33-267 10" Radial Saw 33-267 10" Radial Saw 33-267 10" Radial Saw 33-285 9" Radial Saw 33-285 9" Radial Saw</p> <p>SCROLL SAWS</p> <p>40-440 24" Scroll Saw 40-440 24" Scroll Saw</p> <p>SHAPERS</p> <p>43-205 Heavy Duty Wood Shaper 43-205 Heavy Duty Wood Shaper 43-110 Light Duty Wood Shaper 43-110 Light Duty Wood Shaper 43-502 Overarm Router Shaper 43-502 Overarm Router Shaper</p>	<p>33-449 Retractable Leaf Guard 424-03-354-0010 Blade Guard 33-549 Safety Return Attachment 33-594 Retractable Leaf Guard 33-593 Blade Guard 33-448 Retractable Leaf Guard 33-941 Blade Guard 33-942 Shaping Guard 33-448 Retractable Leaf Guard 33-941 Blade Guard</p> <p>40-442 Belt and Pulley Guard 40-203 Belt and Pulley Guard</p> <p>43-830 Fence Guard Assembly 43-348 Safety Ring Guard 432-01-354-0001 Pulley and Belt Guard 43-817 Ring Guard 43-517 Spindle Nose Guard 43-817 Ring Guard</p>



YOUR ROCKWELL WARRANTY

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