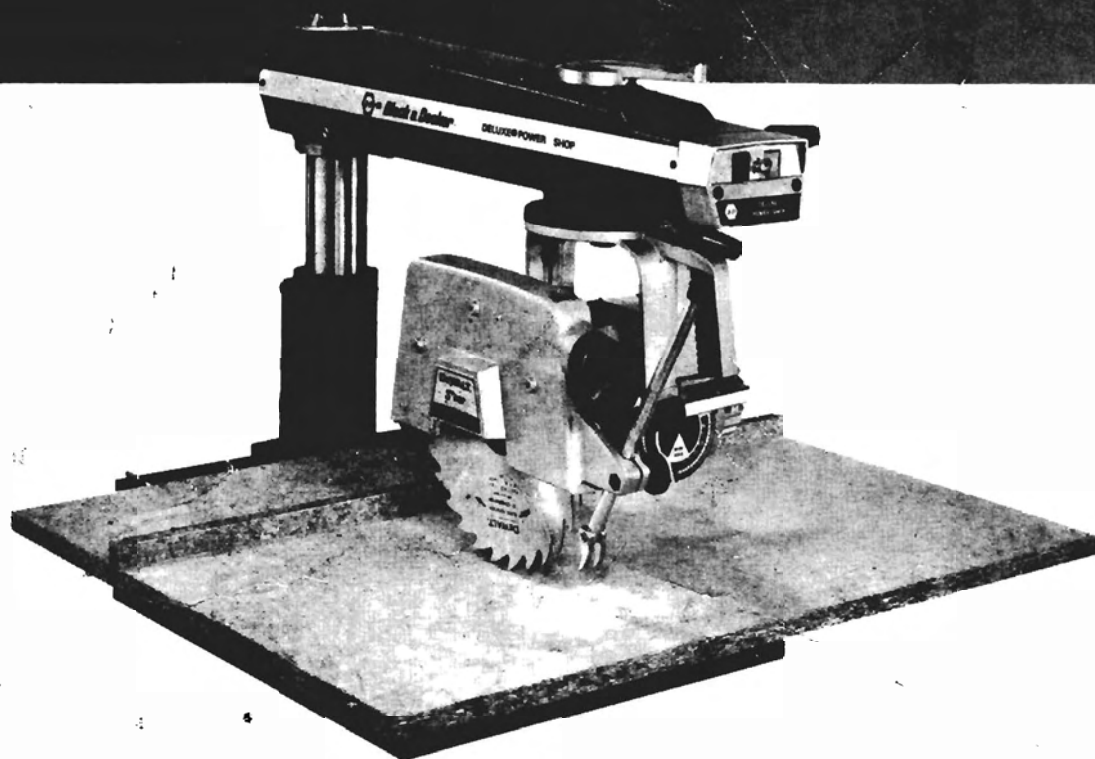


# DEWALT



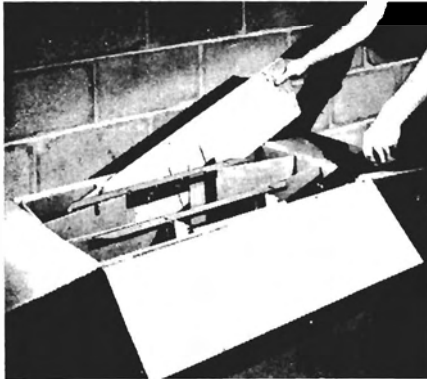
**10" RADIAL ARM SAW**  
No. 7740/7770

**SCIE RADIALE 10"**  
No. 7740/7770

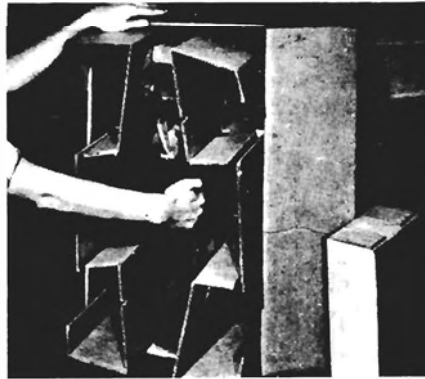
# UNPACKING AND SET-UP INSTRUCTIONS

... you can easily set up your DeWalt "Power Shop," America's most popular power tool. Handling is minimized because every machine is assembled and job-tested at the factory, then partially knocked down for shipment to you. The only tools required are the wrenches furnished with the machine and screwdrivers from your tool box.

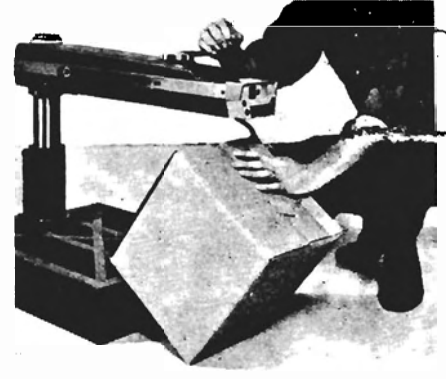
So that your new "Power Shop" may be placed in operation just as soon as assembled, all electrical connections have been made at the factory to operate on 120V single phase power supply. Model 7770 has a motor which can be reconnected for 240 volt operation.



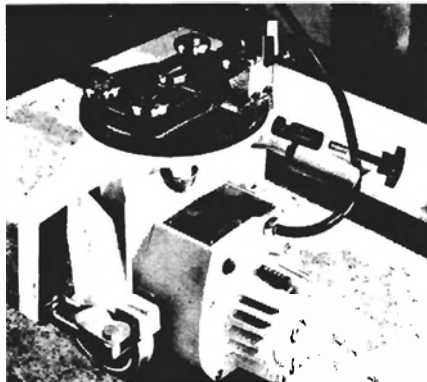
1. Remove table boards, metal cleats and legs, if provided, from carton.



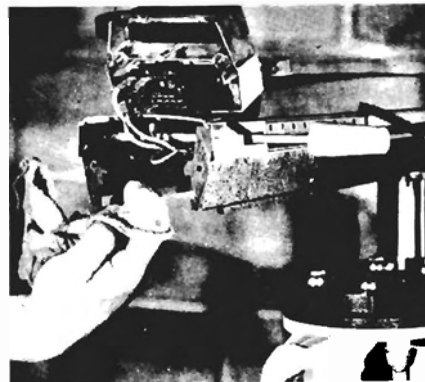
2. Remove guard box, tip carton on end and remove machine. Set machine upright.



3. Raise arm assembly to free carton containing motor by turning elevating handle counter-clockwise. Remove motor from box. Uppack guard box and hardware bag.



4. Insert slug and short threaded knob into Rip Lock and install into Roller Head as shown.



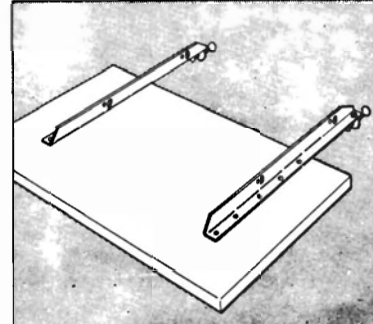
5. Remove two screws from arm end-cap, wipe arm tracks with clean cloth.



6. Carefully slide the motor assembly into the arm. Replace the endcap and tighten screws securely.



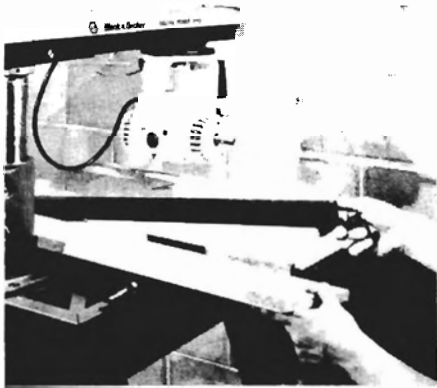
7. Install tip pointers with No. 6-32 x 1/4" long screws provided. Adjust both pointers to upright position and tighten screws.



8. Assemble cleats on fixed board with the six (6) screws provided in the hardware bag. **DO NOT TIGHTEN SCREWS ALL THE WAY DOWN.**



9. Insert 4 square bolts from inside of frame through table cleats. Attach flat washers, lockwashers and nuts and tighten finger tight. Tighten the 10 screws securely.



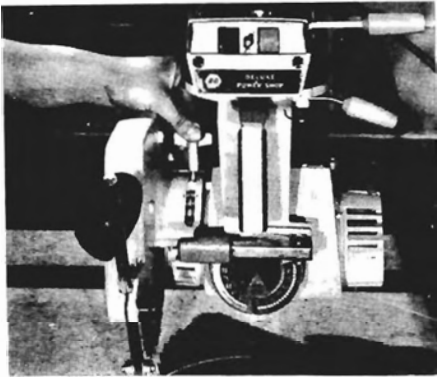
10. Assemble guide fence and spacer boards, thread thumb screw into bracket. Insert bracket into the slot provided in rear of cleats. Hold the eyelet in place and turn the thumb screw until it "pops" into place.



11. Place saw blade (with direction arrow as shown) between collars (recessed side against blade). Tighten arbor nut securely with both wrenches (left-hand threads).



12. Assemble anti-kickback, locking knob and dust spout per the Parts List diagram.



13. Place guard over blade tilting guard slightly to clear the arbor shaft. Seat guard on motor so that the guard rides in the circular slot in the motor and the motor stud goes through the hole in the guard. Secure with the wingnut. Note that this step must be repeated in reverse order to gain access to the blade for removing it. Place the key in the endcap but do not press the ON button. Your machine has been partially adjusted and aligned at the factory; before operating the saw perform the adjustments and alignments marked with an asterisk (\*).

## CAUTION

1. Securely fasten the table frame to the Accessory Cabinet, Leg Stand or a sturdy work bench using the holes provided.
2. Shim under the legs to get the table top approximately level in both directions.
3. Read, understand and always practice the cautions and operating instructions contained within this manual.

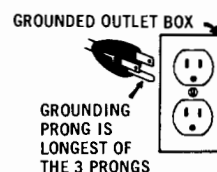
## CONNECTING TO POWER AND GROUNDING

Your tool has a grounding system to protect you from electric shock if some damage should occur to the wiring of the tool. This system utilizes the tool's approved 3-conductor power cord and 3-prong grounding type attachment plug, which should be used with the proper grounding type receptacle, in accordance with the National Electric Code, Canadian Electrical Code, and Underwriters' Laboratories specifications.

**If your unit requires less than 150 volts, it has a plug that looks like Fig. "A"; if over 150 volts, it has a plug that looks like figure "B".** It will fit directly into the proper type of 3-wire grounding receptacle. The unit is then grounded automatically each time it is plugged in.

We recommend that you NEVER disassemble the tool or try to do any rewiring in the electrical system. Any such repairs should be performed only by B & D Service Centres or other qualified service organizations. Should you be determined to make a repair yourself, remember that the green colored wire is the "grounding" wire. Never connect this green wire to a "live" terminal. If you replace the plug on the power cord, be sure to connect the green wire only to the grounding (longest) prong on a 3-prong plug.

The use of a separate 15 ampere circuit is recommended.



A



B

### ACCESSORIES

Recommended Blades and Accessories for your Radial Arm Saw are stocked by your B & D Dealer. These accessories are listed and described in the B & D DeWalt Catalog. CAUTION — The use of any other accessory might be hazardous.

## RULES FOR SAFER OPERATION OF STATIONARY POWER TOOLS

1. Keep guards in place and in working order.
2. Remove adjusting keys and wrenches. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. Keep work area clean. Cluttered areas and benches invite accidents.
4. Avoid dangerous environment. Don't use power tools in damp or wet locations. Keep work area well lit.
5. Keep children away. All visitors should be kept safe distance from work area.
6. Make workshop kid proof — with padlocks, master switches, or by removing starter keys.
7. Don't force tool. It will do the job better and safer at the rate for which it was designed.
8. Use right tool. Don't force tool or attachment to do a job it was not designed for.
9. Wear proper apparel. No loose clothing or jewelry to get caught in moving parts. Rubber-soled footwear is recommended for best footing.
10. Use safety glasses. Also use face or dust mask if cutting operation is dusty.
11. Secure work. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
12. Don't overreach. Keep proper footing and balance at all times.
13. Maintain tools with care. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
14. Disconnect tools before servicing when changing accessories such as blades, bits, cutters, etc.
15. Avoid accidental starting. Make sure switch is in "Off" position before plugging in.
16. Use recommended accessories. The use of improper accessories may cause hazards.
17. Check damaged parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to assure that it will operate properly and perform its intended function — check for alignment of moving parts, any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
18. Never stand on tool. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
19. Direction of feed. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

20. Saws with manual braking — CAUTION — A coasting cutting tool can be dangerous. Apply brake immediately to stop cutting tool when the switch is turned off.

### MAINTENANCE & OPERATION

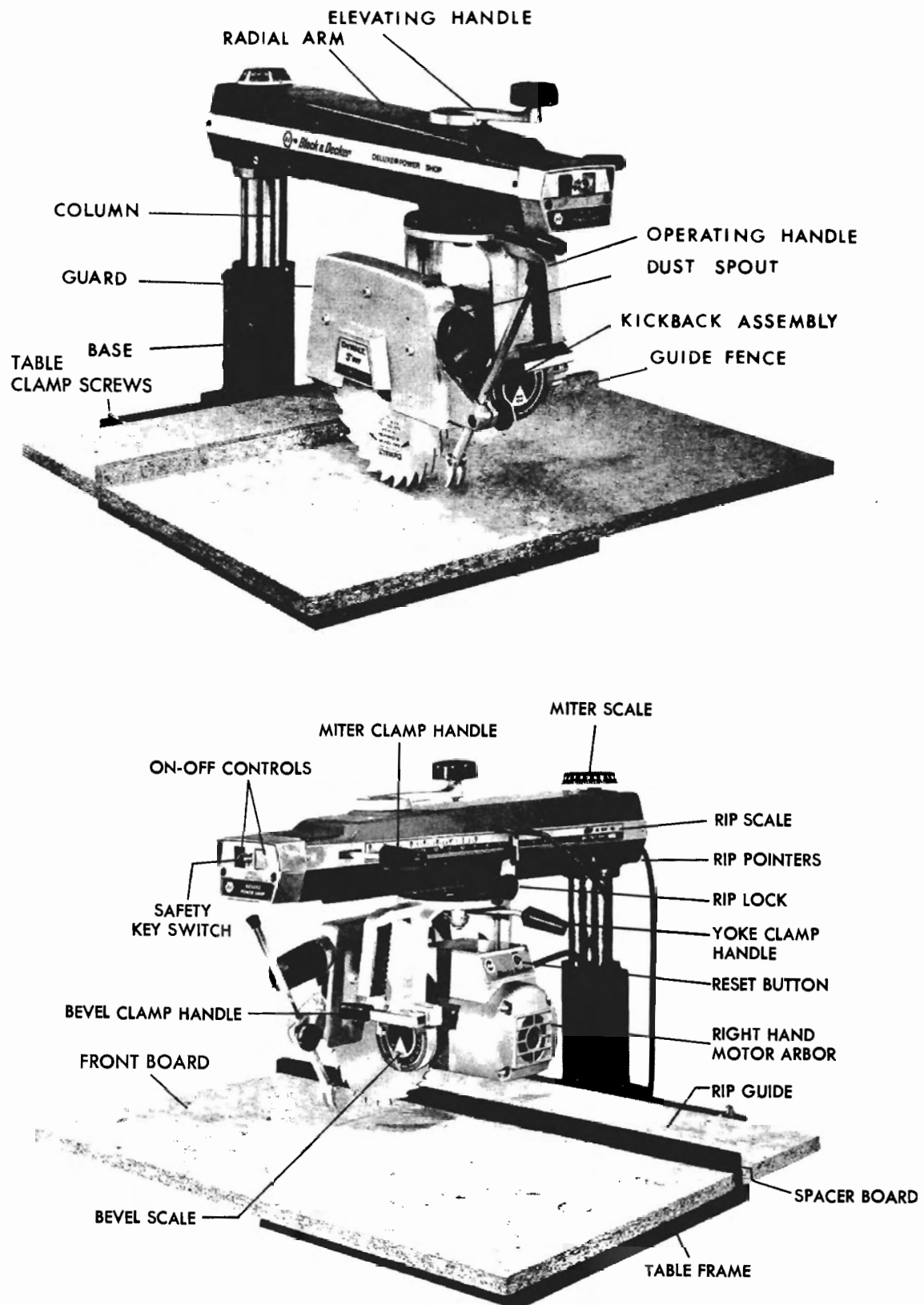
1. DO—Protect line with a least a 15 ampere time delay fuse.
  2. DO—Be sure blade rotates clockwise when facing arbor.
  3. DO—Be sure all clamp handles and thumb screws are tight before starting any operation. Push handles back to tighten. Pull to loosen.
  4. DO—Be sure blade and arbor collars are clean and recessed side of collars are against blade. Tighten arbor nut securely, using both wrenches provided.
  5. DO—Keep saw blade sharp and properly set.
  6. DO—Use anti-kickback attachment on guard.
  7. DO—Keep arm tracks and bearing surfaces clean and dry. Periodic cleaning with dry cleaner is recommended.
  8. DO—Periodically recheck alignment.
  9. DO—Remove blade but not arbor collars and nut when using rear shaft. Tighten nut securely.
  10. DO—Keep motor air slots clean and free of chips.
  11. DO—Remove switch key and store in a safe place to prevent unauthorized operation.
- 
1. DON'T—Attempt to operate on anything but designated voltage.
  2. DON'T—Operate unless all clamp handles are tight.
  3. DON'T—Use blades of larger diameter than recommended.
  4. DON'T—Remove anti-kickback from guard. Adjust it to just clear the workpiece when crosscutting.
  5. DON'T—Rip from wrong direction—observe caution tag on guard.
  6. DON'T—Oil or grease arm tracks or motor.
  7. DON'T—Wedge anything against fan to hold motor shaft.
  8. DON'T—Subject table top to variable humidity conditions (keep away from dampness.)
  9. DON'T—Force cutting action. Stalling or partial stalling of motor can cause major damage to motor winding.
  10. DON'T—Remove saw blade guard when boring.
  11. DON'T—Remove arbor collars and cut when using rear shaft. Tighten nut securely.
  12. DON'T—Remove ground prong from plug. Never operate saw unless it is properly grounded.

### MOTOR OVERLOAD PROTECTION

Your Saw Motor is equipped with a manual-reset type overload protector. If the protector "trips" and stops the motor, take the following steps:

1. Press the saw "STOP" switch button and allow the motor to cool.
2. After motor has cooled, the overload protector may be reset by firmly pressing the red reset button. If you do not hear an audible "click", the motor must be allowed to cool further before attempting the reset.
3. After the reset is accomplished, the saw may be started by pushing the "START" button.

**RADIAL-ARM MACHINE CONTROLS.** The versatility of the radial-arm machine is due, in part, to its controls, and these are the keys to its successful operation. Learn to use them by adjusting the machine for all operations before actually starting to operate it. All controls, as well as the major parts of the radial-arm machine, are shown and identified here.



# ALIGNMENT

MAKE CERTAIN SAW IS NOT CONNECTED TO POWER SOURCE. NOW BEFORE GOING ANY FARTHER TAKE TIME OUT TO READ THE FOLLOWING IMPORTANT INSTRUCTIONS. THE ALIGNMENT OF YOUR NEW SAW IS MOST IMPORTANT NOT ONLY FOR MAKING ACCURATE CUTS, BUT ALSO FOR OPERATING SAFETY. THE TIME SPENT HERE WILL ADD CONSIDERABLY TO YOUR OVERALL ENJOYMENT OF THIS FINE PRODUCT. NOTE: SECURE TABLE FRAME OF UNIT TO A STURDY WORK BENCH, APPROPRIATE TABLE, OR LEG STAND, WITH SCREWS OR BOLTS BEFORE MAKING ALIGNMENTS OR OPERATING. THIS UNIT WILL FIT A NO. R-1201 LEG STAND.

All DeWalt Machines are thoroughly tested and inspected and partially adjusted before leaving the factory. Adjustments marked (\*) are to be made by you. All others have been completed at the factory, however rough handling in shipment can, at times, affect adjustments. Because of this we recommend alignment check before operation. You will also find that because of overload and various excessive stresses and strains realignment and minor adjustments may periodically become necessary to maintain complete accuracy. Provisions are made for complete adjustment of all positions so that your DeWalt Machine can be kept accurate for its entire life. A description of each of these adjustments follows and should be performed in the sequence listed.

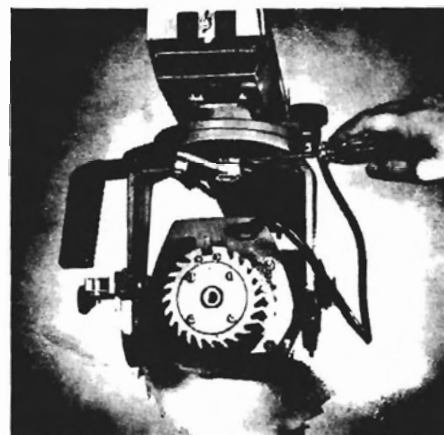
## YOKE CLAMP HANDLE ADJUSTMENT

The purpose of this handle is to provide a friction lock between the upper face of the yoke and the bottom face of the rollerhead. It should also eliminate any play between these two parts. In operating position the yoke clamp handle is pushed back from the hand grip of the yoke. If, at any time, it is possible to move this handle so that it strikes the rear leg of the yoke, it is not in proper adjustment. Its proper position for machine operation is approximately 90° or less to the hand grip of the yoke.

To readjust:

- (a) Pull yoke clamp handle forward to release friction locking action.
- (b) Insert screw driver between the yoke and the notched clamp adjustor. Flex the adjustor downward just enough to pass over the lug stop on the yoke.
- (c) Rotate clamp adjustor as necessary (to loosen, clockwise; to tighten, counter-clockwise). Be sure the notch in the adjustor is positioned properly over the yoke lug stop at final setting.

NOTE: If difficulty is encountered in making the above adjustments we suggest that you remove the arm end cap and slide the entire motor, yoke and rollerhead assemblies from the arm. This will provide access to the king bolt and by turning this with a wrench it will assist in the above adjustment procedure.

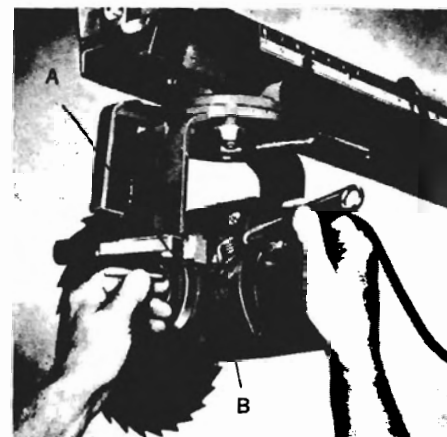


## ADJUSTING BEVEL CLAMP HANDLE

The purpose of the bevel clamp handle is to hold the motor at any angle. This is accomplished by the cam action of the clamp pulling the clamp pad against the dial plate.

To adjust:

Loosen set screw (A), tighten clamp bolt (B), then retighten set screw.





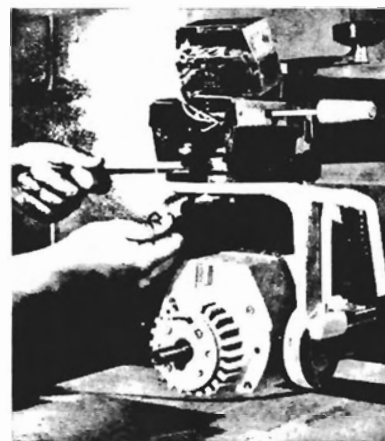
## ADJUSTING ROLLERHEAD BEARINGS TO ARM TRACKS

The rollerhead is suspended by four special tolerance, greased-packed, double shield ball bearings. These bearings are mounted on two straight bearing shafts and two eccentric bearing shafts. In proper adjustment the top and bottom radii of all four bearings should be in contact with the arm tracks for their entire length and head should roll freely.

- Bring motor, yoke, and rollerhead assemblies to the end of arm.
- Set in "out rip" position.
- Loosen hex nuts on left side, front and rear.
- Insert  $\frac{1}{8}$ " Allen wrench in recess at bottom of shafts and turn bearing shaft until the ball bearing touches the arm track on both top and bottom radii. Repeat for both eccentric shafts.

**CAUTION:** Do not tighten too much. Bearings should only be sufficiently tightened so that they roll and do not slide. Be sure tracks are clean.

- While holding each shaft in adjusted position, re-tighten the hex nuts.

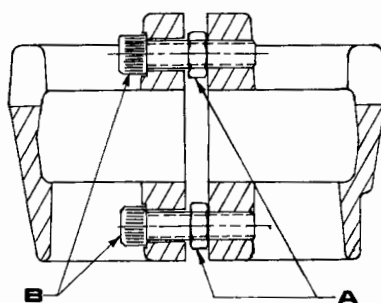


## ARM TO COLUMN

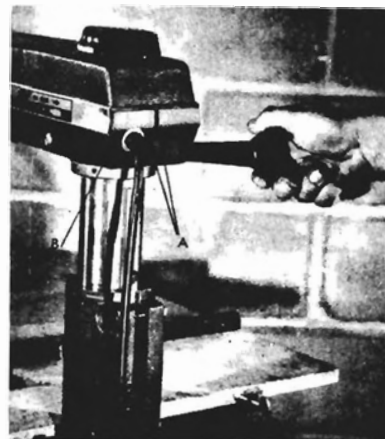
Prior to readjusting the arm clamp cam check adjustment of the arm to column. With the arm clamp released there should be no vertical play in the arm, and the arm should fit snugly on the column.

To adjust:

- Loosen two jam nuts (A) in slot at rear of arm, turning them clockwise.
- Adjust bolts (B) for proper fit and re-tighten jam nuts (A).



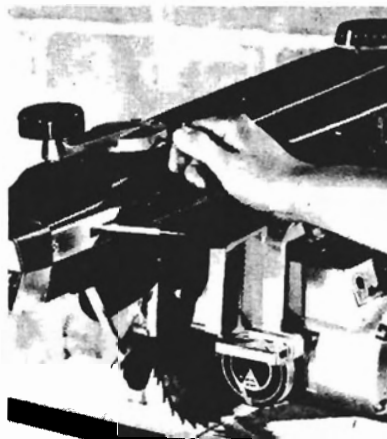
Cross section of back of arm with shroud removed



## REMOVING SHROUD

To make adjustments in the arm it is necessary to remove the arm cover, as follows:

- Unscrew arm clamp handle grip.
- Remove elevating handle. Handle is held on by a set screw. With a locking set screw on top of it.
- Remove miter scale by loosening and removing screws.
- Remove four screws holding plates on each side of arm.
- Remove plates and arm cover.

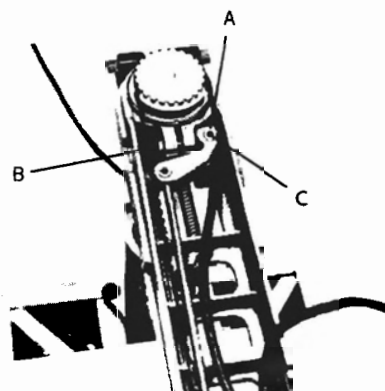


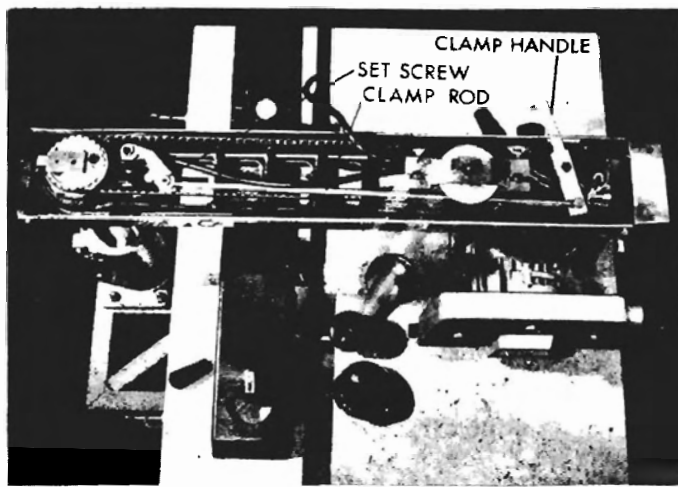
## ADJUSTING ARM CLAMP

The arm clamp handle operates a cam that clamps and releases the arm, and lifts the miter latch from the 0 and 45° slots.

To adjust:

- Loosen set screw (A) on clamp bolt (B) in clamp cam pivot pin (C).
- To tighten clamp turn clamp bolt clockwise. (Very little adjustment should be made prior to trying the clamp.)
- Retighten set screw (A) in clamp cam pivot pin (C) on the clamp bolt (B).





### MITER CLAMP HANDLE POSITION

Position of the clamp handle may need adjusting after the clamp cam has been adjusted.

To adjust:

- (a) Loosen set screw in pivot pin on the clamp rod.
- (b) Turn the clamp rod so that the handle does not contact casting when clamped or released.
- (c) Re-tighten set screw in pivot pin on the clamp rod.

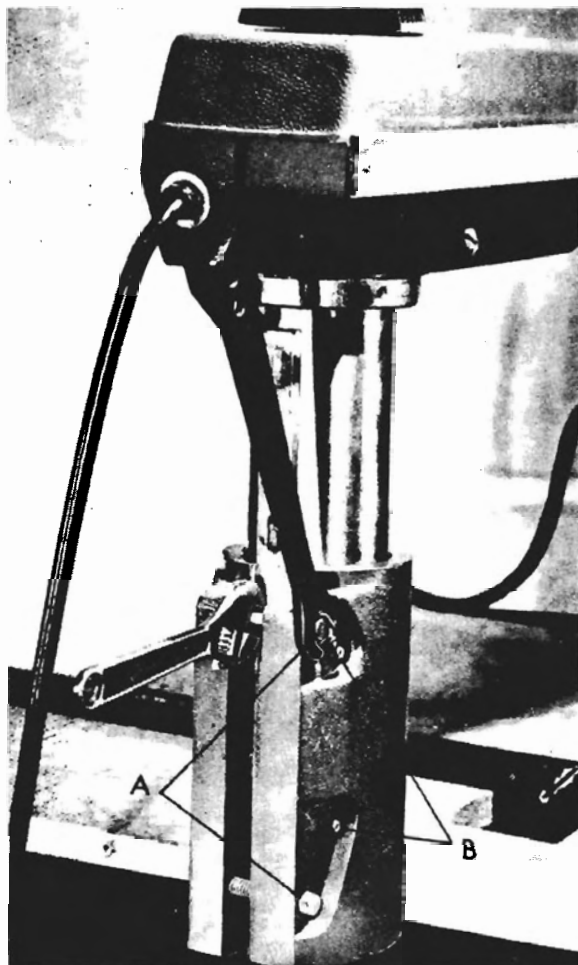


### ADJUSTING BELT TENSION

It is necessary to remove the arm cover to adjust the timing belt tension.

To adjust:

- (a) Loosen two screws marked (A) and (B).
- (b) Pull and hold sprocket bracket (C) to apply belt tension.
- (c) Tighten screws (A) and (B).



### ADJUSTING BASE TO COLUMN

If noticeable play exists between the base and the column or if the saw is hard to elevate, then the base requires adjustment.

To adjust: (Face rear of machine)

- (a) Loosen locknuts and brass set screws (B). Loosen jam nuts and clamp bolts (A). Adjust lower bolt first.
- (b) Elevate and lower the arm. If the column binds and elevation is difficult, tighten the jam nuts (A) against the right side of the slot until there is no play but elevation is moderately easy. Then tighten bolts (A) holding the jam nuts in place.
- (c) If the column is loose in the base, tighten bolts (A) until the proper adjustment is achieved. Holding each bolt tighten its jam nut against the left side of the slot.
- (d) Push the arm to the right. Bring the setscrews (B) lightly against the column key to remove all rotary play. Tighten their locknuts lightly. Caution: excessive torque on the set-screws or locknuts may cause setscrews damage.



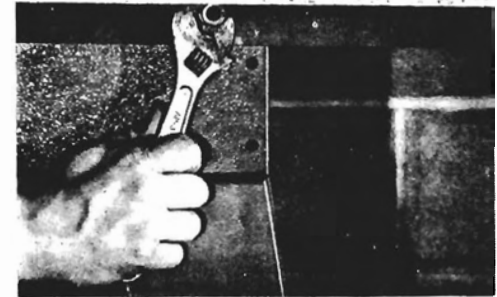
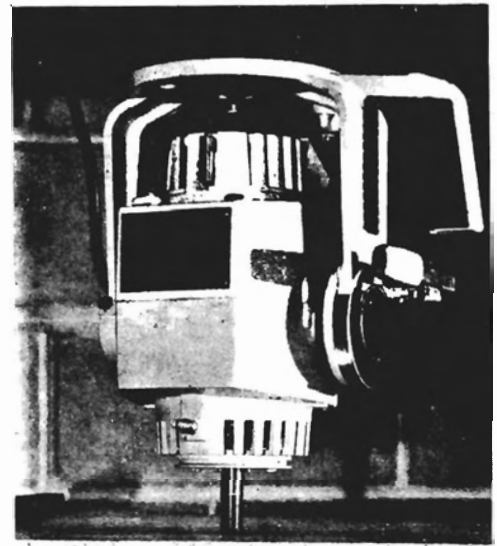
## \* ADJUSTING TABLE TOP PARALLEL WITH ARM

The table top surface must be parallel with the horizontal plane of the arm tracks.

To align proceed as follows:

1. Remove the guard, the blade and the washers from the motor.
2. Elevate the saw about 20 turns.
3. Release the bevel lock lever and pull the bevel locating pin.
4. Revolve the motor until the arbor is 90° to the table.
5. Release the miter lock and locator so you can move the arm to the right and left.
6. Lower the arm until the end of the arbor is just over the table.
7. Bend down so that your eye is even with the table top.
8. Move the arm to the right and left and push the roller head back and forth and notice if there is any change in the distance between the end of the arbor and the top of the table.
9. If the clearance (distance) is the same over the entire surface the table is parallel to the arm.
10. If there is a difference in the clearance adjust it as follows:

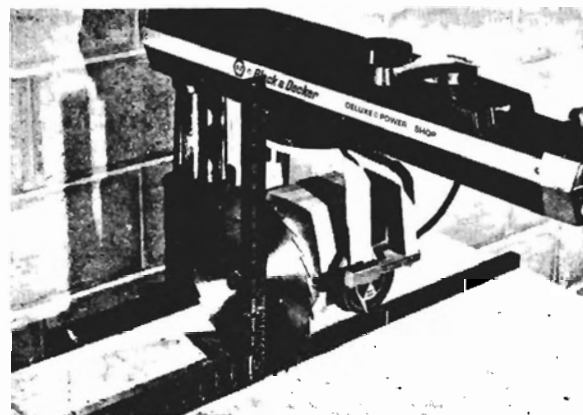
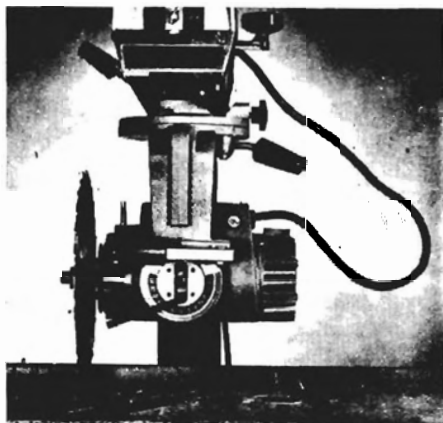
Position the end of the arbor directly over the highest point on the table. Look under the table and you will notice four (4) locking nuts that hold the cleats to the frame. Now position the end of the arbor directly over the nearest locking nut to this high point. Lower the arbor until it touches the table. You may have to adjust one, two, or three nuts to get the table parallel. Now move the arbor directly over the lower locking nut. Loosen the locking nut and push the table up until it touches the end of the arbor. *Tighten* the locking nut. If required, adjust the other locking nuts in the same manner.



The table top assembly and guide strip are checked for straightness with a master straight edge before leaving the factory. As all wood products must "breathe" and are affected by various humidity conditions, a slight change from factory conditions may sometimes be found. Straightness of top and Guide Strip, with Clamp Screws (at rear of table) tight, should be checked with a square or straight edge. Correction can be made only by sanding. A slight variation from perfect straightness of table top will not normally affect the average woodworking requirements.

Do not use a level except as a straight edge. (This check is for straightness, not levelness with the floor.)

NOTE: You may desire to place a 1/4" plywood protective top on the section of table top in front of the guide fence until you are more familiar with the operation of your machine. This procedure will eliminate excessive cutting into permanent top and, like the guide fence, is easily replaced when necessary. Be sure you countersink finishing nails and place them so as not to be in line with cutting tools.



## \* ADJUSTING BLADE PERPENDICULAR TO WORK TOP

With the arm in cross-cut position, all latches engaged and all clamp handles locked place a steel square with one edge on the table top parallel to guide strip and the other edge against the flat of the saw blade (place in saw blade gullets and not against teeth because of tooth set). If blade is not flat against square, adjust as follows:

- (a) Remove bevel pointer by removing two screws.
- (b) Loosen two outside socket head screws.
- (c) Tilt motor until blade is flat against the square and again lock (very firmly) socket head screws. Replace bevel pointer.

NOTE: In some cases it will be found necessary to also loosen centre cap screw in order to adjust motor.

## BEVEL SCALE

The bevel scale is located at the front of the motor. When the motor is positioned for vertical cutting the pointer should be at 0 on the scale. To adjust loosen the two screws, move the pointer to 0 and tighten.

## ADJUSTING CROSS CUT TRAVEL WITH GUIDE FENCE

With the miter latch engaged and arm clamp handle locked, place a wide board (1" x 12" if available) against the guide strip. Cross-cut this board with a set tooth blade. Check cut with a steel square. If cut is not square, the arm is out of alignment with the guide fence.

To readjust:

- (a) Loosen arm clamp handle (B).
- (b) Loosen two set screws under the miter adjusting screws.
- (c) Lay steel square on table top with one edge against guide fence and the other edge at 0° cross-cut as shown in picture.
- (d) Move saw carriage and blade forward along steel square to determine which way arm must be adjusted.
- (e) If saw blade moves toward square as it comes forward, disengage miter latch. With screw driver loosen left adjusting screw and tighten right adjusting screw, re-engage miter latch. Check and repeat if necessary.
- (f) If saw blade moves away from square as it comes forward, disengage miter latch. Loosen right adjusting screw and tighten left adjusting screw, re-engage miter latch. Check and repeat if necessary.
- (g) When saw travel is parallel to square for entire length, lock adjustment screws in place by retightening set screws.

NOTE: Do not tighten adjusting screws enough to retard the operation of the miter latch.

## MITER POINTER

The miter pointer is located at the top on the back of the arm. When the arm is positioned for straight cross-cut the pointer should be at 0° on the scale. To adjust pointer loosen screw in top of scale and turn scale until the pointer is at 0°, then tighten screw.

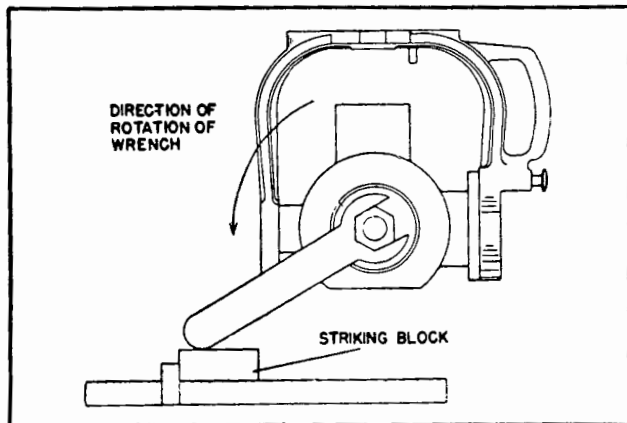
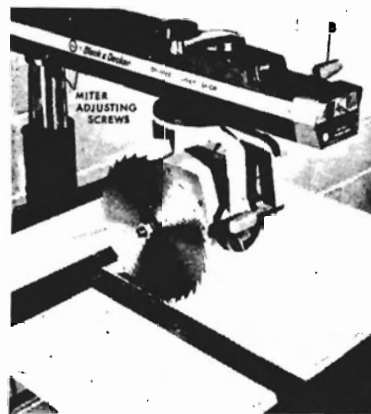
## DIRECTIONS FOR REMOVING ARBOR NUT

1. Fit 5/16" Allen wrench into front end of motor shaft. (This is a holding wrench only.)
2. Fit large wrench on arbor nut as nearly parallel to first wrench as possible.
3. While holding Allen wrench stationary with left hand, use downward pressure of right hand on second wrench and nut will loosen.

In cases of extreme tightness use the following method:

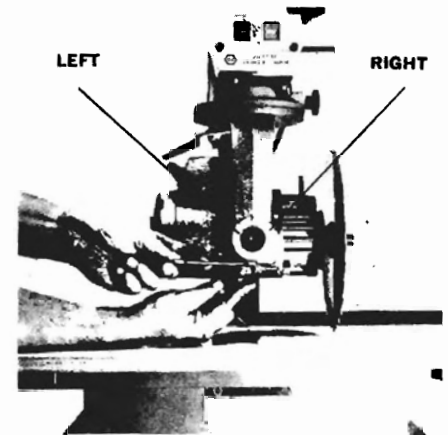
1. Lock rollerhead to arm with rip lock assembly.
2. Fit wrench to arbor nut only.
3. Place striking block of wood as shown in figure below.
4. While holding wrench on arbor nut strike end of wrench on wood block in counter-clockwise direction as shown in figure at left.

(Caution—Never wedge anything against fan.)



## ADJUSTING CROSS-CUT TRAVEL PARALLEL TO ARM TRACKS (HEEL ADJUSTMENT)

Both the leading and trailing teeth of the saw blade should travel in the same plane parallel to the arm tracks. To check, place a board 4" x 1" or larger against the right side of the guide fence. With the machine in 0° cross-cut position and all locks and latches engaged, end trim this stock by allowing only the front teeth of the blade to clear the stock and the rear teeth remaining in the cut. Now remove the stock by sliding to the right before returning the cutting head to the back of the arm. Examine the cut edge of the stock. If blade marks of the rear teeth are prominent on the cut stock the rear teeth are not exactly following the front teeth and adjustment is necessary. (The arcs of the rear teeth start at the bottom front of the stock and travel up and back.) Repeat this same operation with the stock against the left side of the guide fence.



Saw swivelled 180° for clarity

### To adjust when marks are on stock cut on right side:

- Disengage bevel clamp handle. Do not pull bevel pin.
- Loosen right and left lock nuts at rear of yoke.
- Loosen right set screw about 1/6 turn and tighten left set screw.
- Retighten lock nuts and bevel clamp handle.
- Recheck as above by cutting.

### To adjust when marks are on stock cut on left side:

- Disengage bevel clamp handle. Do not pull bevel pin.
- Loosen right and left lock nuts.
- Loosen left set screw about 1/6 turn and tighten right set screw.
- Retighten lock nuts and bevel clamp handle.
- Recheck as above by cutting.

After left and right adjustments have been made, tilt the motor to 45° bevel cross-cut position and again make cuts on 2" x 4" stock as was done in cross-cut

position. If tooth marks again appear the motor is too high or low in the rear of the yoke.

### To adjust when marks appear on bottom side of cut (left-hand piece of stock):

- Disengage bevel clamp handle. Do not pull bevel pin.
- Loosen all lock nuts.
- Loosen by equal amounts right and left set screws about 1/6 turn and tighten bottom set screw.
- Retighten lock nuts and bevel clamp handle and recheck as above by cutting.

### To adjust when marks appear on upper side of cut:

- Disengage bevel clamp handle. Do not pull bevel pin.
- Loosen all lock nuts.
- Loosen bottom set screw about 1/6 turn and tighten right set screws.
- Retighten lock nuts and bevel clamp handle and recheck as above by cutting.

### Now Go Back And Check Cross Cut Adjustments

## \*RIP SCALE

The rip scale is located on the right side of the radial arm. When the motor is positioned with motor arbor toward the column it is called "in rip" position, and material should be fed from right to left. When the motor arbor is positioned toward the operator it is called "out rip" and material is fed from left to right. When "in ripping" width dimensions are located on the top of the scale and when "out ripping" on the bottom of the scale by use of the reference pointers. The pointers are adjustable and must be readjusted only when gauge (thickness) of blade is changed.

To adjust:

To set the "in rip and "out rip" pointers, first set the saw in an "out rip" position and then set the saw blade at a predetermined distance from the fence. After you have done this loosen the two screws holding the pointer. Adjust the "out rip" pointer equal to the distance between the saw blade and the fence, and tighten the screws. Then turn the saw to an "in rip" position and push the blade against the fence. Adjust the "in rip" pointer to zero (0) on the scale.



## CUTTING KERF MARKS

OPTIONAL: Prior to cutting kerf marks you may elect to place a protective material over your table top. This material can easily be replaced as required without disturbing the saws alignment. Cut a piece of  $\frac{1}{4}$ " plywood the same size as the front board and secure it to the front board with countersink  $\frac{3}{4}$ " brads. Do not nail where the saw kerfs will be located. It is not necessary to cover the spacer or back boards.

After all your adjustments are made you should now cut into the table top the most common kerf marks. This will allow you to move the saw into different positions without changing the elevation. To do so proceed as follows:

- (a) Locate and lock the arm  $90^\circ$  to the fence. Locate the blade  $90^\circ$  to the table.
- (b) Draw the saw out to about the middle of the track and lower the blade until it just grazes the ply top.
- (c) Turn the saw on and push the roller head all the way back. This will cut the fence and lightly score the ply top.
- (d) Lower the arm (saw still running)  $\frac{1}{4}$  turn. Pull the saw forward to the end of the arm with your *left hand*. This will cut a groove in the table top  $1/32$ " deep. **Tighten Rip Lock.** (Refer to figure 1)
- (e) With the saw still running and your left hand still on the handle release the yoke lock with your right hand and pull it with sufficient strength so the yoke clamp handle presses against the yoke locator pin bell pulling the yoke locator pin out of the hole in the roller head. You can now rotate the saw blade in a clockwise direction. Release the pressure on the bell and continue rotating the blade until the spring mounted yoke locator pin falls into the next hole. You have now cut in the table top a  $\frac{1}{4}$  turn groove known as the swing line. The saw is now in the "in-rip" position. (Refer to figure 2) **Loosen Rip Lock.**
- (f) Once the  $\frac{1}{4}$  turn out is complete lock the yoke lock with your right hand and with the blade still revolving push the yoke back on the track until the blade reaches the fence. This will cut the rip through in the center of the table. **Stop Motor.** (Refer to fig. 3)
- (g) Return saw to position shown in figure 1. **Lock Rip Lock** and start motor. Using the yoke clamp handle, release the pressure on the bell and rotate saw counterclockwise, to the outtrip position. This cuts the swing line for outtripping. **Loosen rip lock.**
- (h) **Lock the yoke lock** (clamp handle), and with your right hand and blade still revolving, push the saw back until the new trough matches the trough cut in (f). **Stop Motor.**
- (j) Return saw to position shown in figure 1 and move to the rear position behind the fence.
- (k) **Lock Rip Lock** and start motor. With motor running release the miter handle with your right hand and move arm to the  $45^\circ$  right hand miter position. This will cut a trough for mitering. (Optional step) Repeat above for  $45^\circ$  left hand miter. **Stop Motor.**



FIGURE 1

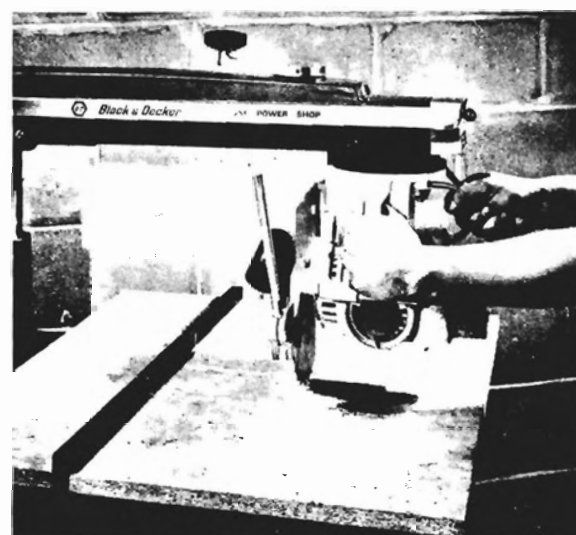


FIGURE 2

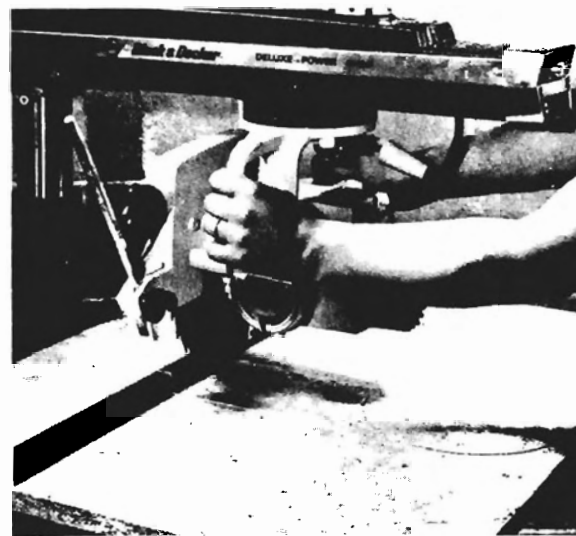


FIGURE 3

# • OPERATING INSTRUCTIONS •

## NOW YOU ARE READY TO USE YOUR NEW DE WALT

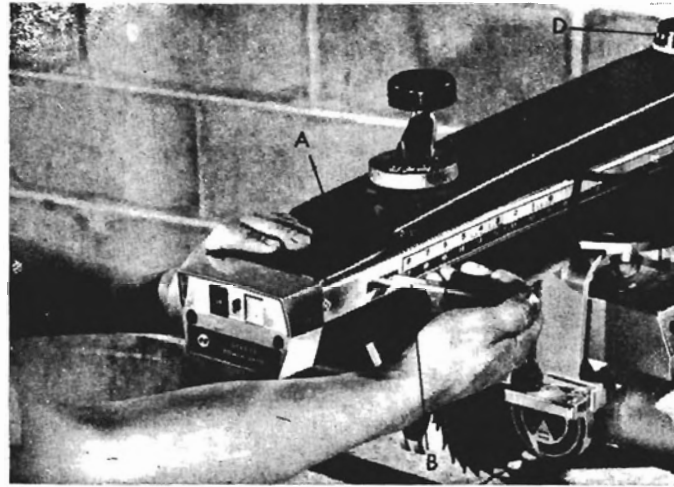


FIG. A

### ARM ROTATES RIGHT OR LEFT FOR MITER CUTS

Pull clamp (B) then swing the arm (A) right or left to the desired angle. The calibrated miter scale (D) is at eye level and shows the precise angle you want. With the handle released, the miter latch will automatically locate 0° and 45° angle. After positioning arm (A) in the desired angle, push clamp (B) to lock the arm.

FIG. B



### Elevation

Each full turn on the elevating handle (C) lifts or lowers the arm (A) exactly 1/8 inch.

FIG. C



### Saw Swivels 360° for Rip Cuts

Pull yoke clamp handle (E) against pin lifter (F) and swing yoke right or left. With lifter released, the yoke automatically stops at four 90° positions.

FIG. D



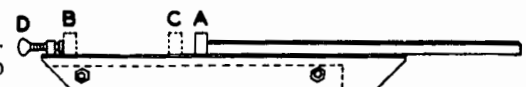
### Saw Tilts for Bevel Cuts

Elevate the arm 2 1/2 inches (18 turns). Pull handle (G) and tilt to the desired angle. With the handle released, the bevel locating pin automatically locates popular 0°, 45°, and 90° bevel positions. When desired bevel angle is obtained, push clamp handle (G) and lock bevel.

NOTE: Always leave the kickback assembly in place. Adjust it to just clear the work piece in crosscutting operations and about 1/8" below the top of the workpiece during all ripping operations. Observe caution tag on guard — do not rip from kickback end.

### FENCE LOCATIONS

Position (A) is used for most cutoff and narrow ripping operations. Position (B) is used for maximum width ripping. Position (C) is used to achieve extra cutoff capacity in thin work. To achieve this position on Model 7740 rip a 1 3/8" wide strip off the spacer board and place this piece between guide fence and front board.





# TYPICAL CUTS WITH A RADIAL ARM SAW

(SEE PAGE 24 FOR FIGURES A, B, C, D)

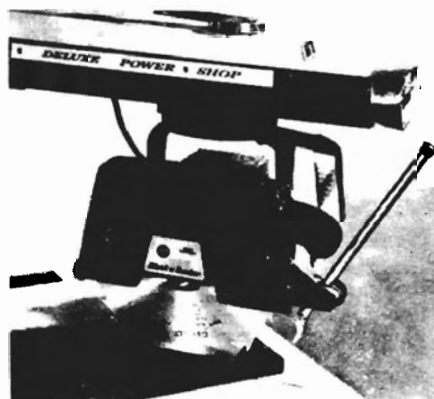
## NOTE

ALWAYS WEAR SAFETY GOGGLES. WEAR DUST MASK IF OPERATION IS DUSTY.



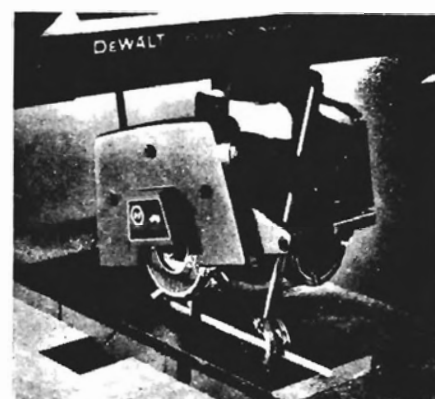
### CROSS CUT

Read Fig. A. Set Arm at right angle to the guide fence, at 0° on the miter scale. With the miter latch in column slot at 0° position, securely lock arm with arm clamp handle. Place material on work table, against guide fence, draw saw blade across for the cut just far enough to sever wood. Do not bring saw blade completely through the wood. After completing cut, return saw blade behind guide fence.



### MITER

Pull arm clamp handle and swing into desired angle shown on miter scale. The miter latch locates the popular left hand and right hand angles automatically. Push clamp handle to lock the arm. Cutting action same as cross cut.



### PLOUGH

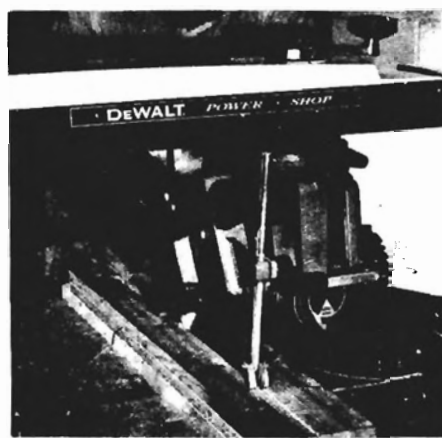
This operation is done with dado head in RIP position. Lower dado head for depth of cut desired, then lock carriage securely against machine arm. Be sure to adjust safety guard on in-feed side, lower kickback assembly to hold material. When starting cut, hold material firmly down on table and back against guide. Feed evenly. Never feed material from side on which anti-kickback device is located!



### BEVEL CUT OFF

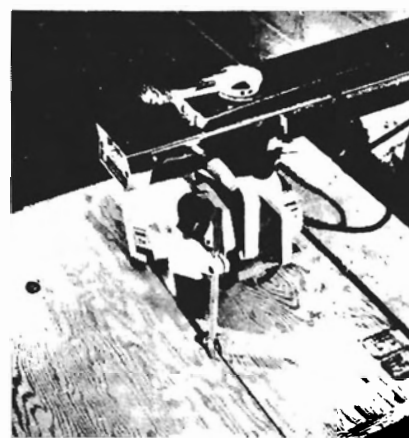
Read Figs. B and D. Start in cross cut position. Elevate the saw by rotating crank. Release bevel clamp handle and tilt motor in yoke to angle desired on bevel scale. Locating pin quickly locates 0°, 45°, and 90° positions. If any other angle is desired, bevel clamp will hold motor in position.

**CAUTION:** To bevel cut an angle of 50° or greater, a temporary stop must be attached to prevent blade from hitting base of column.

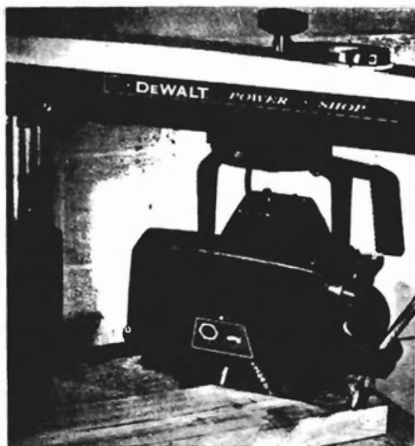


### IN-RIP AND OUT-RIP

Read Fig. C. Start with arm locked in cross cut position. Pull out motor to end of arm. Pull yoke clamp handle against pin lifter. Revolve motor 90°, right or left, for out-rip or in-rip position, and lock yoke clamp handle. Locate saw for desired width of rip, using rip scale, and lock saw carriage by tightening rip lock against side of arm. Adjust safety guard so that infeed end almost touches material. Lower kickback assembly so that fingers are approximately 1/8 inch lower than material. Slide the piece of material to be cut under kickback fingers. Try pulling material in opposite direction. The kickback fingers should grab it, if they do not readjust kickback assembly. With material against guide strip, feed evenly into saw blade; give it a chance to cut. **DO NOT FORCE. DO NOT FEED FROM KICKBACK SIDE OF GUARD. FOLLOW INSTRUCTIONS ON CAUTION TAG.**

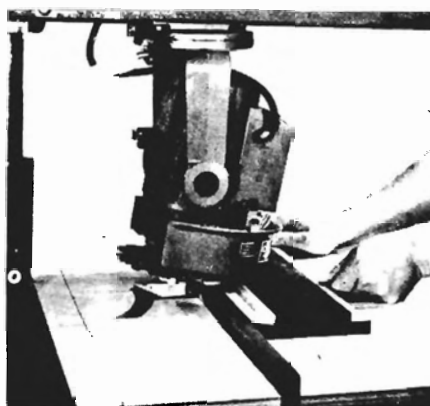






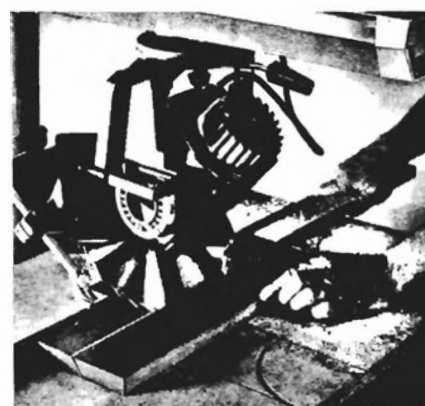
### COMPOUND MITER

Read Figs. A, B, and D. Start in bevel cut-off position. Pull arm clamp handle. Swing the arm into desired miter position, usually 45° or inbetween angles, then relock arm clamp handle. Pull saw across for miter cuts. The compound miter cut is simply a combination bevel and miter cut.



### RABBET

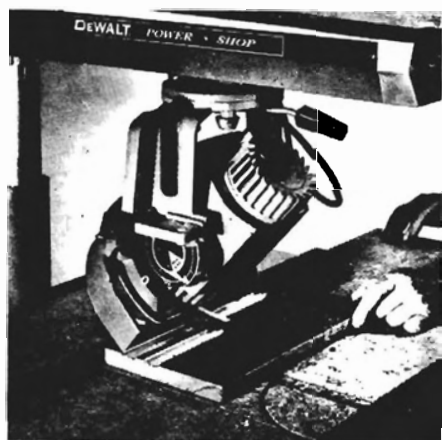
Re-read Figs. B, C, and D. First, elevate arm until motor locates in 90° vertical position. Place shaper guard over dado head. Swivel motor into rip position so that guard sets above material. Use column crank, also rip lock to set dado for cut desired. Feed material evenly, firmly against guide. Tilt motor for bevel rabbet cuts.



### BEVEL RIP

Read Figs. B, C, and D. Start in bevel cross-cut position as described above. Now, place the saw into rip position and (using rip lock) lock securely against arm at desired point. Be sure to lower guard at in-feed position, adjust the kickback device and then use a wood "pusher" stick to further prevent kickback.

**NOTE**  
ALWAYS WEAR SAFETY  
GOGGLES. WEAR DUST  
MASK IF OPERATION IS  
DUSTY.



### SHAPE

Place shaper cutter on motor arbor; cover with shaper guard. Now, set up the machine in the same position as RABBET. Set shaper cutter for the profile desired. Lock saw carriage securely, adjust shaper guard so that it just clears the material. Feed the material firmly and evenly into the shaper cutters. Maintain positive pressure.



### DADO

Replace saw blade with dado head. Use for across or angle dado cuts same as saw blade. When determining depth of cut; simply lower dado until it just touches top of material. Then lower dado head as desired. Each full turn equals 1/8 inch, one-half turn 1/16 inch, etc. Wide dado cuts can be made by making successive passes across the material, cutting in either direction.



### DISC SANDER

Place disc sander directly on motor spindle. Locate disc sander wherever desired on machine. For bevel and surface sanding only, place shaper guard over the disc sander. For finish work on angles, use work support fixture. For surface sanding tilt the disc sander into vertical position. Feed the material evenly for best results. Use finer paper for final finish.

## ALIGNMENT GUIDE FOR ACCURATE CUTTING

It is important to realize that an improperly adjusted saw just will not yield the accurate cuts desired. If the machine seems to cut inaccurately, its adjustments and alignments should be checked.

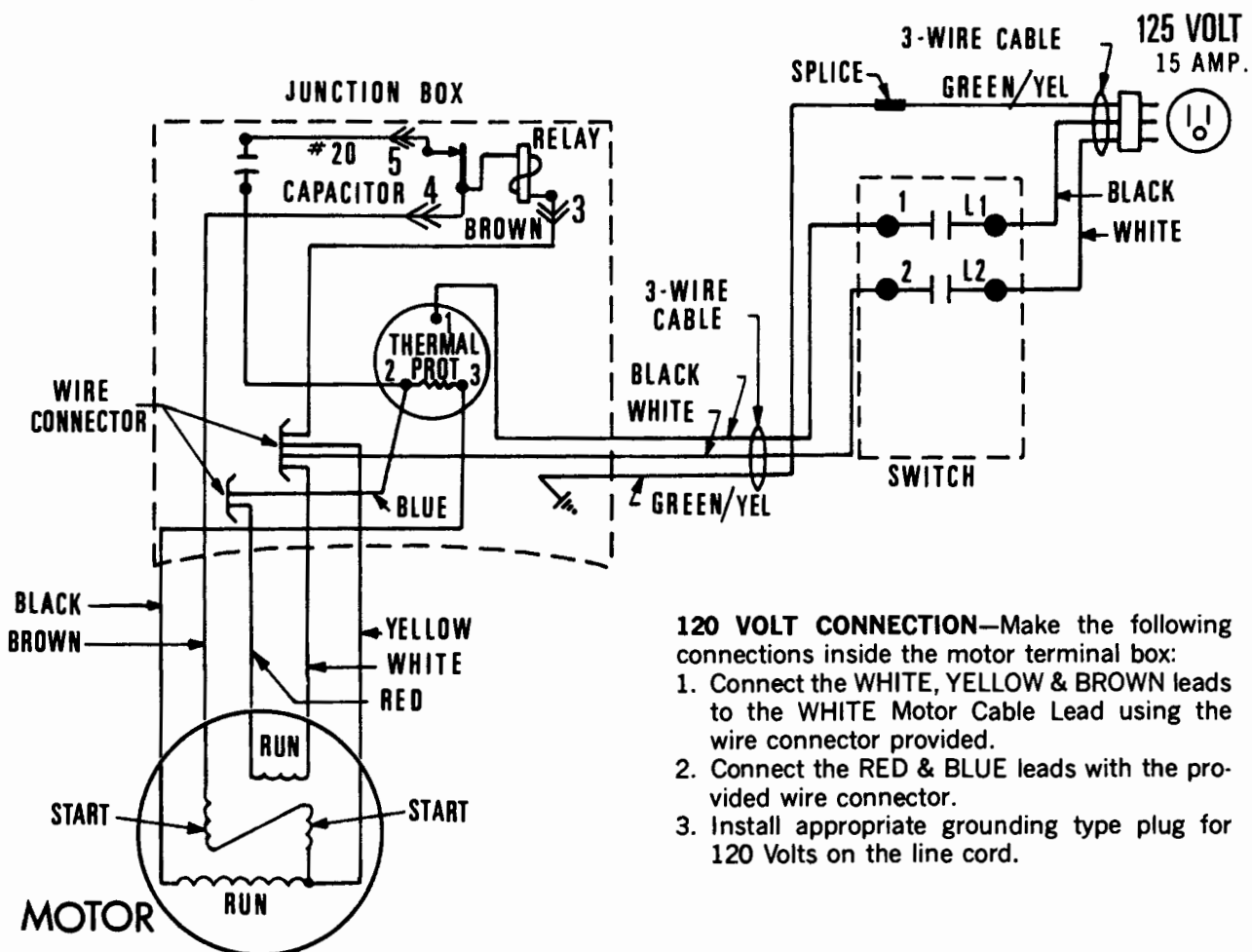
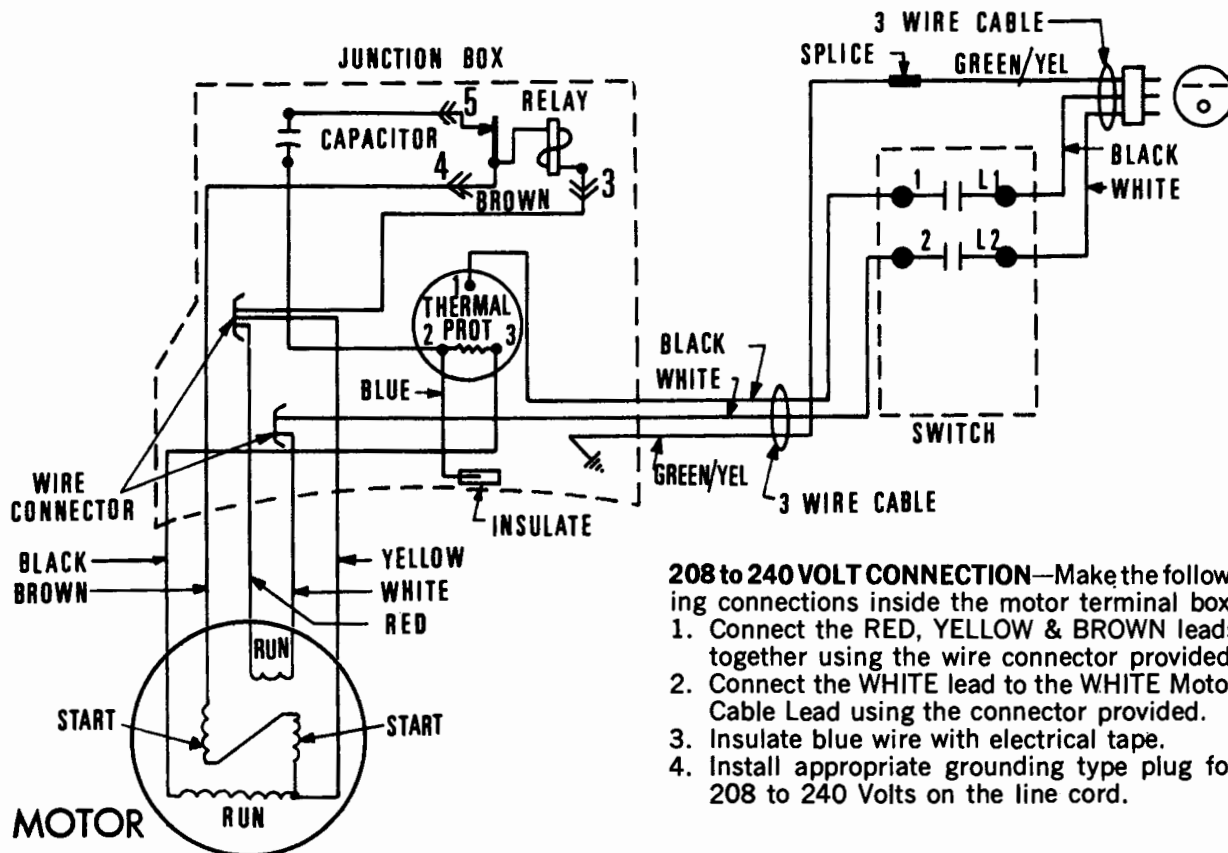
The following guide is listed for your convenience. However, *changing one adjustment will affect another, so it is best to perform all of the alignment procedures when correcting any one problem.*

### ALIGNMENT GUIDE FOR ACCURATE CUTTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
1. Saw will not make a square cross cut or a good 45° miter cut.	Arm is not perpendicular to guide fence.	Adjust cross cut travel with guide fence.
	Arm has excessive play at end.	Tighten adjusting screws.
	Column is loose in base.	Make proper adjustment.
	Too much play between arm and column.	Make proper adjustment.
	Roller head too loose in arm.	Adjust roller head correctly.
	Yoke too loose when clamped to roller head.	Adjust yoke clamp handle.
	Saw dust between lumber and guide fence.	Keep table top clean.
	Table not parallel with arm.	Make proper adjustment.
	Guide fence not straight.	Replace fence.
	Rear edge of fixed board not straight.	Sand or replace.
2. Lumber has a tendency to walk away from fence when ripping or ploughing.	Saw blade is not parallel with fence.	Make heel adjustment.
3. Saw stalls when ripping or ploughing.	Arm not perpendicular to guide fence.	Adjust cross cut travel with guide fence.
	Dull blade or cutters.	Sharpen or replace blade.
	Fence not straight.	Replace Fence.
	Feed rate too fast.	Slow feed rate.
	Wrong blade.	Use correct blade.
	Column too loose in base.	Make proper adjustments.
	Too much play between arm and column.	
	Roller head too loose in arm.	
	Yoke loose when clamped to roller head.	
	Saw dust between lumber and fence.	Keep table top clean.
4. Saw blade scores lumber, not giving a good finished cut.	Saw blade is heeling.	Make heel adjustment.
	Column too loose in base.	Make proper adjustments.
	Too much play between arm and column.	
	Roller head loose in arm.	
	Yoke too loose when clamped to roller head.	
	Bent blade or dull.	Replace blade.
	Not feeding saw properly.	Draw saw blade across lumber with a slow and steady pull.
	Using improper blade for finish cut desired.	Change blade.

PROBLEM	POSSIBLE CAUSE	SOLUTION
5. Saw blade or Dado blades tend to push lumber to one side when cross cutting.	Saw blade is heeling.	Make heel adjustment.
	Column too loose in base.	Make proper adjustments
	Too much play between arm and column.	
	Roller head too loose in arm.	
	Yoke too loose when clamped to roller head.	
	Fence not straight.	Replace.
	Dull blade or cutters.	Replace or sharpen.
6. Cut depth varies from one end of stock to the other.	Table top not parallel with arm.	Adjust table top parallel with arm.
	Column too loose in base.	Make proper adjustments.
	Too much play between arm and column.	
7. 45° bevel cut not accurate.	Saw blade not perpendicular to table top.	Make saw blade adjustment.
	Column too loose in base.	Make proper adjustments.
	Too much play between arm and column.	
	Roller head too loose in arm.	
	Yoke too loose when clamped to roller head.	
	Bevel clamp handle loose.	
	Table top not parallel with arm.	
8. Saw tends to advance over lumber too fast.	Roller head bearings not properly adjusted.	Adjust roller head bearing to arm.
	Dull blade.	Replace or sharpen.
	Not feeding saw properly.	Draw saw blade across lumber with a slow and steady pull.
9. Saw does not traverse smoothly in tracks.	Dirty tracks.	Clean.
	Bad bearing.	Replace bearing.
10. Miter scale not accurate at various miter angles.	Scale pointer not properly adjusted.	Adjust scale pointer.
11. Elevating handle slips when elevating or lowering saw.	Belt tension not sufficient.	Adjust belt tension.
	Set screw in elevating arm loose.	Tighten set screw.
	Base not adjusted properly.	Adjust base to column.
12. Clamping force not sufficient at miter angles other than 45°.	Arm clamp out of adjustment.	Adjust arm clamp.
13. Clamping force not sufficient at bevel angles other than 45°.	Bevel clamp handle too loose.	Adjust bevel clamp handle.

## Motor Control Connection Diagrams (7770 only)



# MOTOR OVERLOAD PROTECTION

Your Saw Motor is equipped with a manual-reset overload protector. If the protector "trips" and stops the motor, take the following steps:

1. Press the STOP button on the front of the arm.
2. Allow motor to cool, and then press the red RESET button. If you do not hear a "click", allow the motor to cool further until you do hear a "click" when the button is pressed.
3. After the reset is accomplished, the saw may be started by pressing the START button.

## TROUBLE SHOOTING CHART—MOTOR

TROUBLE	PROBABLE CAUSE	REMEDY
Motor will not run.	<ol style="list-style-type: none"> <li>1. Protector open; circuit broken.</li> <li>2. Low voltage</li> <li>3. Bad capacitor or starting relay.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reset protector by pushing on red button (indicated by audible click).</li> <li>2. Check power line for proper voltage.</li> <li>3. Replace capacitor or starting relay.</li> </ol>
Motor will not run and fuses "BLOW."	<ol style="list-style-type: none"> <li>1. Short circuit in line cord or plug.</li> <li>2. Short circuit in junction box, or loose connections.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect line cord and plug for damaged insulation and shorted wires</li> <li>2. Inspect all terminals in motor junction box for loose or shorted connections.</li> </ol>
Motor fails to develop full power. (Power output of motor decreases rapidly with decrease in voltage at motor terminals.)	<ol style="list-style-type: none"> <li>1. Power line overloaded with lights, appliances and other motors.</li> <li>2. Undersize wires or circuit too long.</li> <li>3. General overloading of power company's facilities. (In many sections of the country, demand for electrical power exceeds the capacity of existing generating and distribution systems.)</li> <li>4. Incorrect fuses in power line.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce line load.</li> <li>2. Increase wire sizes, or reduce length of wiring.</li> <li>3. Request a voltage check from the power company.</li> <li>4. Install correct fuses.</li> </ol>
Motor starts slowly or fails to come up to full speed.	<ol style="list-style-type: none"> <li>1. Low Voltage — will not trip starting relay.</li> <li>2. Starting relay not operating.</li> <li>3. Bad capacitor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Correct low voltage condition.</li> <li>2. Replace relay.</li> <li>3. Replace capacitor.</li> </ol>
Motor overheats.	<ol style="list-style-type: none"> <li>1. Motor overloaded.</li> <li>2. Improper cooling. (Air circulation restricted through motor due to sawdust, etc.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Correct overload condition.</li> <li>2. Clean out sawdust to provide normal air circulation through motor.</li> </ol>
Starting relay in motor will not operate.	<ol style="list-style-type: none"> <li>1. Burned relay contacts (due to extended hold-in periods caused by low line voltage, etc.)</li> <li>2. Open relay coil.</li> <li>3. Loose or broken connections in motor terminal box.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace relay and check line voltage.</li> <li>2. Replace relay.</li> <li>3. Check and repair wiring.</li> </ol>
Motor stalls (resulting in blown fuses or tripped circuit breakers).	<ol style="list-style-type: none"> <li>1. Starting relay not operating.</li> <li>2. Voltage too low to permit motor to reach operating speed.</li> <li>3. Fuses or circuit breakers do not have sufficient capacity.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace relay.</li> <li>2. Correct the low line voltage condition.</li> <li>3. Replace fuses or circuit breakers with proper capacity units.</li> </ol>
Frequent opening of fuses or circuit breakers.	<ol style="list-style-type: none"> <li>1. Motor overloaded.</li> <li>2. Fuses or circuit breakers do not have sufficient capacity.</li> <li>3. Starting relay not operating (motor does not reach normal speed.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce motor load.</li> <li>2. Replace fuses or circuit breakers.</li> <li>3. Replace relay.</li> </ol>

# GETTING THE MOST OUT OF YOUR BLACK & DECKER RADIAL ARM SAW

SAW BLADE REFERENCE CHART

	COMBINATION SET TOOTH	RIP	CROSS CUT PLY	HOLLOW-GROUND PLANER	CARBIDE 8-12 TEETH	CARBIDE MULTI-TOOTH	TOOL STEEL H.G. CROSS-CUT	CUT-OFF WHEEL
Wood— Natural	Fast Rough	Fast Rough	Slower Smooth Can't Rip	Slower Very Smooth	Fast Rough	Fast Smooth	Smooth Slow Cross-Cut Won't Rip	Will Not Cut
Wood— Artificial (Plywood, Masonite, Novaply, etc.)	Fast Rough Dulls Blade Quickly	Fast Splinters Dulls Fast	Slower Smooth Dulls Slowly	Fast Smooth Dulls Instantly	Fast Splinters Stays Sharp	Fast Smooth Stays Sharp Best	Fast Smooth Holds Edge Quite Long	Will Not Cut
Metals— Non-Ferrous Alum., Copper, etc.	O.K. On Soft Aluminum Dulls	Will Destroy Blade	Better O.K. on Aluminum Brass, Copper	Will Destroy Blade	Will Pull Out Teeth If Cut Too Fast	Very Good If Used Slowly	Very Good If Used w/ Tallow or Spray	Slow Used With Spray
Metals— Ferrous Iron and Steel	Will Not Cut	Will Not Cut	Will Burn Through After Teeth Are Dull	Will Not Cut	Will Destroy Blade	Will Burn Through	Will Slowly Use Coolant	Will Slowly Use Coolant
Plastics— Soft	Will Chip	Will Shatter	Better May Melt Material Use Spray	Will Not Cut	Will Chip	Very Good	Good But May Bind or Melt Material	Slow May Clog, Bind and Melt Material
Plastics— Hard	Will Chip and Dull Fast	Will Shatter	Cuts Well Dulls Fast	Will Bind	Will Chip	Very Good Smooth	Good Smooth	Good Slow Use Lube
Paper Cardboard	Will Dull Very Fast	Will Tear and Dull Blade	Good Will Dull Very Fast	Will Bind and Dull Blade	Rough Cut Use Slowly	Good Will Dull Very Fast	Good Sometimes Binds	Will Burn
Bone Ivory etc.	Will Shatter	Will Shatter	Good Cut Slowly	Good Will Dull Fast	Will Shatter	Good	Good	Some Are Good Must Try

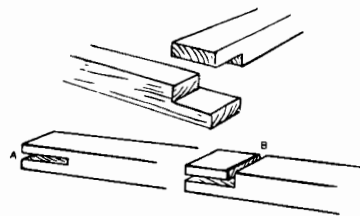
Figure 1

## Joints

Most joints can be made in many positions of the saw blade or by using different accessories. Some of the following possibilities are shown with the simple 1/2 lap joint but remember all others can be done in the same or similar manner. The following illustrations will show how the first and simplest joint can be made.

### 1st Joint — 1/2 Lap

#### 1st method — Saw Blade



- A — Cut the horizontal cut first.  
B — Cut the vertical cut next.

Figure 2

### 2nd method — Dado in vertical position. (See Figures 3, 4 and 5.)

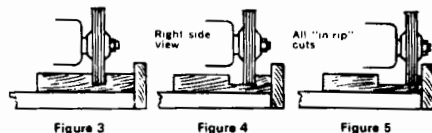


Figure 3

Figure 4

Figure 5



Figure 6

With cutter set properly jointing is possible on your DeWalt. Shaper guard has been removed for photographic purposes only.

## Attachments

Dado sets must have all parts sharpened at the same time even if some have never been used.

Most dados have two (2) 1/8" thick blades: four (4) 1/8" thick chippers and one (1) 1/16" chipper.

The Tapered Washer Dado Set:

The blade, or fixed steel tool bits, are cocked at an angle depending on the setting of the tapered washers.

The advantages of this type of dado are:

It cuts a clean flat bottom.

The width of the dado can be changed easily.

Sharpening costs are slightly less.

What the Dado can do:

Basically they cut grooves — each type of groove has a different name. (See Figure 7.)

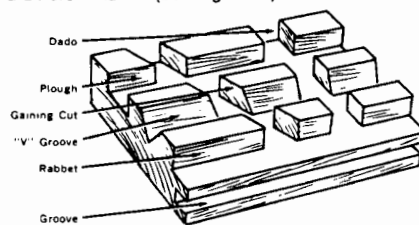


Figure 7

### SHAPING

Shaper-Jointer Fence: Before attempting to install this accessory, refer to instructions

Shaper Tools. Basically the Shaper operates the same as the Dado except that the groove it makes will have the shape of the cutters instead of the flatness of the Dado. The Shaper we recommend has removable blades and the large selection of blades enable the operator to perform a large variety of cuts.

Never shape without the guard in place.

This is the recommended shaper and the one that performs the operations discussed in this chapter.



Figure 8

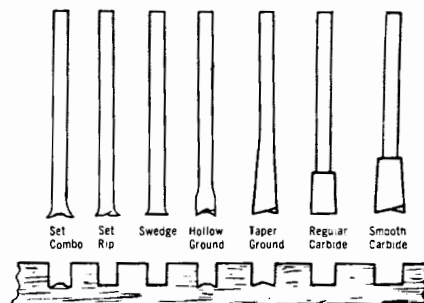


Figure 9

The type of blade you use has a great deal to do with the power required to make the cut. Volumes of books have been written on the different types of saw blades in existence. Here we will discuss only a few that generally apply to radial arm saws.

Wood cutting blades fall into three basic categories:

Rip Cross-cut Combination

Each of these can have different types of clearance:

Set Hollow Ground Swedge

Each type can also have a different shaped tooth

Basic Rip Basic Cross-Cut Basic Combination

## DADO

The first and most important attachment is the dado head. There are basically two types of dado heads. 1 — Blades and Chippers; 2 — Tapered Washer Dado Sets (Quick Set).

Blades and Chippers — this type is most popular:

They can be set from 1/8" to 13/16" (larger by adding more chippers).

Minute changes can be made by inserting paper washers between any of its components.

When the dado gets very wide the outside collar washer can be eliminated

The teeth of the blades cut slightly deeper than the chippers. (See Figure 10.)



Figure 10

Groove from flat-ground dado

Groove from hollow-ground dado

When using two flat-ground set-tooth blades to cut 1/8", the set on the teeth must point in the same direction.



Figure 11

Flat Dado — the groove is large than the total set-up

Hollow Dado — the groove is exactly the same as the dado set-up

With a hollow-ground dado it does not matter how the blades are placed.

Flat-ground set tooth blades cut slightly wider, than 1/8" due to the set.

The chippers are swedged to overlap one another's cut. When a chipper is against a blade (or blades) the swedge must go into the blade's gullet. (See Figure 12.)

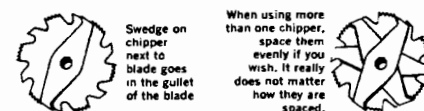


Figure 12

When using more than one chipper, space them evenly if you wish. It really does not matter how they are spaced.



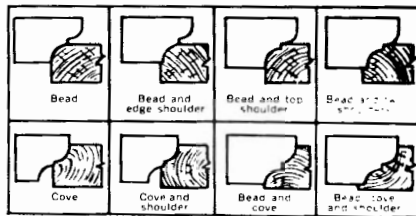


Figure 13

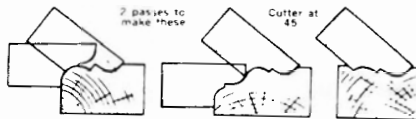


Figure 14

Other designs can be made by positioning the cutters as you desire.



Figure 15

The bead and cove knives shaping the edge of the lumber forming a bead with two shoulders. The upper cut was made with the bead and cove knives set at 45° bevel position using the regular saw blade guard.

Glue-Joint Knives (See Figure 16.)

These cutters are used the same way as, and sometimes in place of, the Jointing Knives.



One advantage is a longer glue line. Figure 16

The boards you use must be flat and the cutters adjusted so the center of the knives is in the center of the boards.

The male and female are both the same except one is upside down. (See Figure 17.)



Correct Incorrect

Figure 17

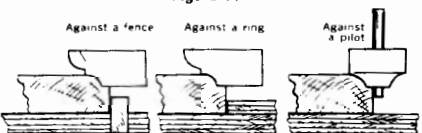


Figure 18

In Moulding the lumber moves between the revolving cutter and a fixed fence or table. The distance between the shape and its opposite side is always the same for each individual set up. (See Figure 19.)

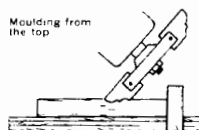


Figure 19

Moulding operations must always be done under a guard and precaution must be taken to be sure the lumber does not work its way away from its fence or table and into the cutter. When performing moulding operations note the following:

Hold-downs, a firm grip, clamps and pushers with lips on them, are necessary.

Thin, flexible stock should not be moulded unless straddle boards are placed on one or both sides of the cutter. Remember, all feed cuts have a tendency to lift the lumber into the cutter.

All moulding operations are executed the same way as if you were operating a Dado Head.



Figure 20

In order to lower the sanding disc below the front table surface, miter the arm to the right (as shown) or to the left so that the motor does not hit the post. Position and lock the yoke so the sanding disc is parallel to the fence.

The Sanding Disc.

The sanding disc is 8" in diameter and has a slight bevel on its edge to make surface sanding a little easier.

The paper can be adhered to the disc in one of four practical ways.

Self-adhering paper—easy to use.

Disc Stick—a tacky substance, very widely used. Safe as long as you don't get the disc too hot. The paper will fly off when the disc sticks melts. It is very reasonable in price. Quick and easy to use.

Special Tape that adheres on both sides. Safe, not too available. Easy to use.

Special rubber cement (glop by Carborundum).

Only use Cabinet-Back Paper (heavy). Do not use Finishing Paper (too thin).

Remember, never shape or mould without a guard.

The fine wood dust from the sander is explosive when it is about 70% dust and 30% air. Do not smoke or work near open flame with the sanding disc.

The dust from most woods when inhaled will cause choking. Wear a dust-mask or a surgical mask while sanding.

Do not strike the sanding disc with your hand while it is revolving. Hold small pieces firmly when free-hand sanding them.

You can sand by passing the lumber past the sander or by pulling or pushing the sander past the lumber. (See Figure 20)

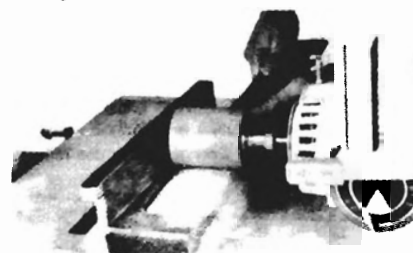


Figure 21

Sanding curved edges with the drum sander.



Figure 22

Sanding surface of lumber with drum sander and elevating jig

Drum Sander. This sander is designed to sand inside curves; however, it is very good for sanding any edge inside, straight or outside.

It can be used for straight edge sanding in the same manner that the Jointer is used except we do not use a Jointer Fence.

It can be used for surface sanding on lumber up to 3" wide or on lumber up to 6" wide if you turn the lumber around and take a second pass (See Figure 22.)

## Special Cuts

Kerfing or Bending Wood:

If you rip a piece of wood thin enough it will bend quite easily.

Wet this piece and it will bend even more easily and have less tendency to crack.

By cutting a slit cross-grain and leaving a thin piece of wood on the bottom you can bend the wood at this cut until the slit or kerf is closed at the top. (See Figure 23.)

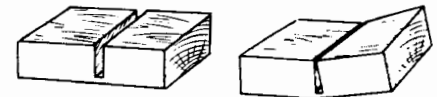


Figure 23

By cutting several slits, one alongside the other, the piece will appear to bend. (See Figure 24.)

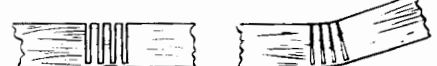


Figure 24

You can determine the number of slits it takes to bend the lumber 90° by measuring the angle of the first bend and dividing this angle into 90°. An easier method is by trial and error on a piece of scrap of the same thickness.

Once you determine the number of cuts you will always get a bend of 90° regardless of the distance between the cuts. The wider the cuts are spaced, the bigger the arc. (See Figure 25.)

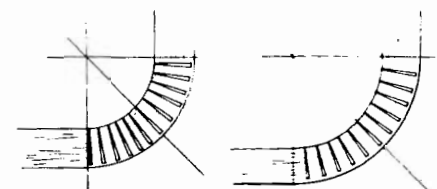


Figure 25

When the kerf cuts get wider than 1/4" apart the effect of the curve changes to straight sections at an angle to each other. (See Figure 25 above.)

If wide arcs are desired the number of kerf cuts needed can be increased by one of two methods or by a combination of both.

Grinding, Buffing and Wire Wheels. All these operations are excellent and easy to perform on your radial arm saw. The precautions you must take are as follows:

Wear safety glasses.

Be sure the stone, brush of buffer is rated to revolve at 3400 rpm without flying apart.

When grinding or sharpening iron or steel watch out for sparks. They can start fires.

Jig-Saw.



Figure 26

The saber saw on the DeWalt will cut 2" deep. Lower the saber saw until the spring rests firmly on the surface of the material to be cut. There are blades available for cutting metals as well as wood. Be sure to follow the instructions that come with the saber saw.

# Black & Decker POWER SHOPS ACCESSORIES

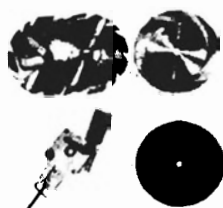


**R-1445** How to get the most out of your Radial Arm Saw. A complete guide to power tool techniques. 64 pages. Designed to lie flat when open for easy reference.



## ACCESSORY GROUP R-1428

Includes: R-119826 Shaper Guard, R-6500 Head, R-6505 Glue Joint Knives, R-6512 Universal Bead Knives, R-6515 Cabinet Door Lip Knives, R-6517 5/16" Bead and Cove Knives.



## ACCESSORY GROUP R-1429

Includes: R-6024 6" Dado Head Set, R-7470 Disc Sander, 8" Taper Ground Plywood Blade, R-1254 Sabre Saw Attachment.



**R-1254 Sabre Saw.** Complete with 3 blades  
**Sabre Saw Blades**  
R-8028 Set of R-8024, R-8025, R-8027



**R-2860 6" Quick-Set\* Dado**, easily adjustable in width from 1/4" to 13/16" without removing the head from the saw arbor. Cuts smooth clean grooves without vibration, wobble, chatter, burning or chewing.



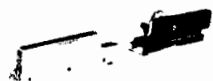
**R-6024 6" Dado Head Set**, Flat Ground (2 Blades, 4 Chippers 1/8", 1 Chipper 1/16") No. 3 3/8" bore

**R-6001 6" Dado Head Set**, Hollow Ground (2 Blades, 4 Chippers 1/8", 1 Chipper 1/16") No. 3. 3/8" bore

**R-6025 8" Dado Head Set**, Flat Ground (2 Blades, 4 Chippers 1/8", 1 Chipper 1/16") No. 3. 3/8" bore



**R-119826 Tool Guard.** For all horizontal shaping, dadoling, disc sanding and sawing operations. Will accommodate tools up to 8" dia.



**R-9220 Shaper-Jointer Fence.** For shaping and jointing operations. Feed fence has micrometer adjustments from 0 to 1/2".



**R-1438 Saf-T-Bak.** Fastens to rear of machine arm. Automatically returns saw blade to rear of guide fence after cut. A must for extra safety.



**Jointer Cutter Head**, solid 4-wing, includes special 3/4" L.H. thread arbor nut.  
**R-3472 2" dia. x 2" long Jointer Cutter.**



**R-9362 Deluxe Utility Cabinet.** For Power Shop models.

**R-9361 Utility Drawer.** For R-9362 net, complete with mounting hardware.

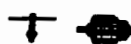
**R-9363 Caster Set (4).** For R-9362 Cabinet and R-1105 Leg Stand. Includes toe-locking type casters.



**R-1102 Home Shop Leg Stand** For R-1105 and R-7700



**R-1201 Leg Stand** for all Power Shop models



**R-1208 3/4" Drill Chuck w/key** for models R-1250, R-1350, 7740, 7770



**Disc Sanders, 3/8" L.H. 18 thread hole.**  
**R-7470 8" dia. Sander Disc Set** (includes bevel edge disc, one 8" dia. pressure sensitive sandpaper disc No. 60 grit)

**R-467 (6 assorted 8" pressure sensitive sandpaper discs** 1 No. 50, 2 No. 60, 3 No. 80 grits)



**Drum Sanders**, no adaptor necessary.  
**R-7468 2 1/2" dia., 3" long, Drum Sander, 3/8" L.H. thread.** Fits arbor shaft of all models.



**R-7473 1" Drum Sander, 3" long, 3/8" L.H. thread.** Fits arbor shaft of all models.

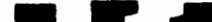
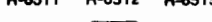
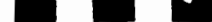
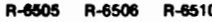


## R-6501 3-Knife Shaper Head Set:

- 1 R-6500 Head
- 1 R-6505 Knives Glue Joint
- 1 R-6512 Knives Universal Bead
- 1 R-6515 Knives Cabinet Door Lip
- 1 R-6517 Knives 5/16" Bead and Cove



**R-6500 3-Knife Shaper Head for Bench and Radial Saws, 1/2", 3/8" or 3/4" arbor hole.**



## Set of 3 Knives:

- R-6505 Glue Joint
- R-6506 "OG" Casing Cutter
- R-6510 1" Rd. Flute
- R-6511 Drop Leaf Table
- R-6512 Universal Bead
- R-6515 Cabinet Door Lip
- R-6518 1" Straight Cutter
- R-6519 Tongue Cutter
- R-6520 Groove Cutter



## R1205 ADJUSTABLE FENCE STOP

Clamps to fence for repeated accurate length cutting. Fine adjustment screw gives 1/16" for each full turn.



## R1444 SAW DUST CATCHER

Sturdy wire frame with translucent vinyl cover. Fits R1250, R1450, 7740, 7770, 5800 machines and fits other models if modified.

## IMPORTANT

To ensure product safety and reliability, repairs, maintenance and adjustment should be performed by Black & Decker Service Centres or other qualified service organizations, always using Black & Decker replacement parts.



### RAPID EXCHANGE CONSUMER SATISFACTION GUARANTEE

**BLACK & DECKER CONSUMER POWER TOOLS FOR LAWN AND GARDEN POWER TOOLS ARE GUARANTEED FOR ONE YEAR FROM DATE OF PURCHASE. IF YOU ARE NOT COMPLETELY SATISFIED WITH ONE OF THESE PRODUCTS, YOU WILL RECEIVE FREE OF CHARGE A REPLACEMENT TOOL UPON RETURN OF THE ORIGINAL TOOL TO THE SELLER (IF A PARTICIPATING RETAILER) OR TO A BLACK & DECKER SERVICE CENTRE.**

In returning the tool for replacement, proof of purchase is required and all original standard equipment must also be returned (for example, chuck, chuck key, auxiliary handles, circular saw blades). Expendable original equipment such as sanding sheets, belts and discs and jig blades need not be returned. For kits and assortments only the base power tool will be replaced.

This Satisfaction Guarantee Rapid Exchange does not cover Professional or Heavy Duty tools, Home Workshop tools used in Commercial Service, Professional Stationary tools, Air tools, or tools used in rental service or accessories. On these products a one year guarantee on defects only apply, excluding accessories.

#### ONE YEAR GUARANTEE

**BLACK & DECKER GUARANTEES FOR ONE YEAR FROM DATE OF PURCHASE TO CORRECT BY REPAIR OR PARTS REPLACEMENT WITHOUT CHARGE, ANY PRODUCT DEFECT DUE TO FAULTY MATERIAL OR WORKMANSHIP IN PROFESSIONAL, HEAVY DUTY AIR TOOLS, HOME WORKSHOP TOOLS USED IN COMMERCIAL SERVICE, PROFESSIONAL STATIONARY TOOLS, OR TOOLS USED IN RENTAL SERVICE. SIMPLY RETURN THE COMPLETE UNIT, TRANSPORTATION PREPAID TO ANY BLACK & DECKER SERVICE CENTRE OR AUTHORIZED SERVICE STATION. BLACK & DECKER ASSUMES NO RESPONSIBILITY FOR DAMAGE OR FAULTY PERFORMANCE CAUSED BY MISUSE, CARELESS HANDLING OR WHEN REPAIRS HAVE BEEN MADE OR ATTEMPTED BY OTHERS. NO OTHER GUARANTEES, WRITTEN OR VERBAL, ARE AUTHORIZED.**

#### BLACK & DECKER SALES AND SERVICE CENTRES

HALIFAX, N.S.: 3695 Barrington St. Barrington Comm. Ctr., B3K 2Y3  
 QUEBEC, P.Q.: 1375 Charest Blvd. W., G1N 2E7  
 MONTREAL, QUE.: 7865 St. Lawrence Blvd., H2R 1X1  
 LONGUEUIL, QUE.: 1568 Chemin de Chambly, J4J 3X5  
 LAVAL, QUE.: 1930 St. Martin Blvd., H7S 1M9  
 DOLLARD DES ORMEAUX, QUE.: 3669 St. John's Rd., Blue Haven Shop. Ctr., H9G 1X2  
 OTTAWA, ONT.: 285 Richmond rd., K1Z 6X3  
 BROCKVILLE, ONT.: 100 Central Avenue, K6V 4N8  
 SCARBOROUGH, ONT.: 729 Kennedy Rd., M1K 2C6  
 DOWNSVIEW, ONT.: 592 Champagne Drive, M3J 2T9  
 TORONTO, ONT.: 1180 The Queensway, M8Z 1R5  
 HAMILTON, ONT.: 180 Parkdale Avenue N., L8H 5X2  
 KITCHENER, ONT.: 671 Belmont Avenue W., N2M 1N8  
 LONDON, ONT.: 631 Commissioners Rd. E., N6C 2V1  
 SUDBURY, ONT.: 1496 Fairburn Avenue, P3A 1N7  
 WINNIPEG, ST. JAMES, MAN.: 934 St. James Street, R3H 0K3  
 REGINA, SASK.: 1076 Albert Street, S4R 2P8  
 SASKATOON, SASK.: No. 4-1622 Ontario Avenue, S7K 1S8  
 CALGARY, ALTA.: 1003, 11th Avenue S.W., T2P 0G2  
 EDMONTON, ALTA.: 11440 Avenue 142nd Street, T5M 1V1  
 VANCOUVER, B.C.: 24 West Second Avenue, V5Y 1B5  
 NEW WESTMINSTER, B.C.: 301 Columbia Avenue, V3L 1A7

## IMPORTANT

Afin d'assurer la protection et le bon fonctionnement de cet appareil, les réparations, l'entretien et l'ajustement doivent être effectués par un Centre de Service Black & Decker, ou par tout autre organisme de service qualifié, toujours des pièces de rechange de marque Black & Decker.



### SERVICE D'ÉCHANGE RAPIDE GARANTIE DE SATISFACTION

**Les outils électriques domestiques et de jardinage Black & Decker sont protégés par une garantie d'un an à compter de la date d'achat. Si vous n'obtenez entière satisfaction de l'un de ces produits, l'outil sera remplacé par un autre du même modèle, sans frais, en retour de l'outil au détaillant (s'il s'agit d'un détaillant agréé) ou à l'un des Centres de service Black & Decker.**

Lorsque vous retournez l'outil pour le faire remplacer, la preuve d'achat est nécessaire, et tout l'équipement de base d'origine doit aussi être retourné (par exemple, le mandrin, le cef du mandrin, les mandrins auxiliaires et les lames circulaires). Il n'est pas nécessaire de retourner l'équipement d'origine périssable, tel que les feuilles de papier abrasif, les cordoils, les manchons et les lames de scie à chantourner. Dans le cas de trousse et de jeux d'outils, seul l'outil électrique de base sera remplacé.

Cette garantie de satisfaction et d'échange rapide ne s'applique pas dans le cas d'outils professionnels ou de grande puissance, aux outils d'établissement utilisés dans les entreprises commerciales, aux outils de fixation et aux outils pneumatiques; il en est de même pour les outils utilisés dans les services de location et pour les accessoires. Ces outils sont protégés par une garantie d'un an contre les défauts; elle ne s'applique pas aux accessoires.

#### GARANTIE D'UN AN

**BLACK & DECKER S'ENGAGE POUR UN AN, À COMPTER DE LA DATE D'ACHAT, À EFFECTUER GRATUITEMENT LES RÉPARATIONS OU LE REMPLACEMENT DE PIÈCES NÉCESSAIRES POUR SUPPRIMER TOUTES DÉFECTUOSITÉS ATTRIBUABLES AUX MATIÈRES PREMIÈRES OU À LA FABRICATION DES OUTILS PROFESSIONNELS OU POUR DE TRAVAUX, ROBUSTES DES OUTILS PNEUMATIQUES, DES OUTILS DE COLAGE UTILISÉS À DES FINS COMMERCIALES, DES OUTILS STATIONNAIRES PROFESSIONNELS OU DES OUTILS UTILISÉS POUR LA LOCATION. RETOURNEZ TOUT SIMPLEMENT L'OUTIL AU COMPLET, FRAIS DE PORT PAYÉS D'AVANCE, À N'IMPORTER QUEL CENTRE DE SERVICE BLACK & DECKER OU CENTRE DE SERVICE AUTORISÉ. BLACK & DECKER N'ASSUME AUCUNE RESPONSABILITÉ QUANT AUX DOMMAGES DU AU MAUVAIS FONCTIONNEMENT DUE À LA NÉGLIGENCE.**

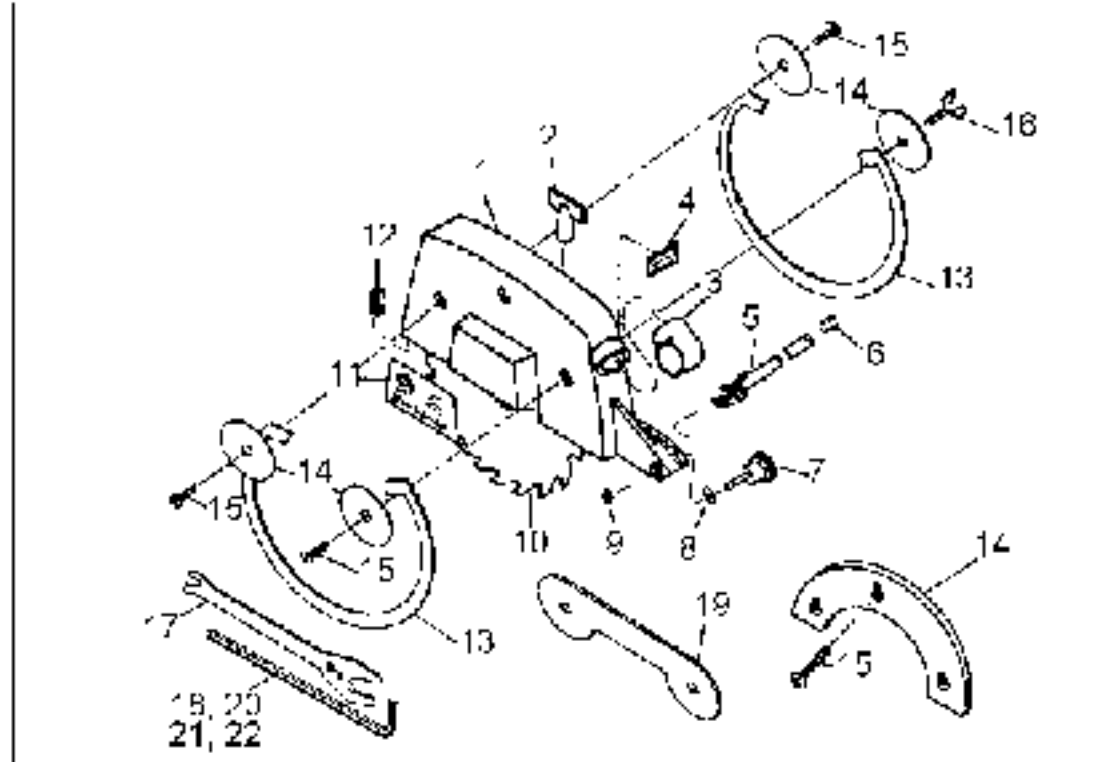
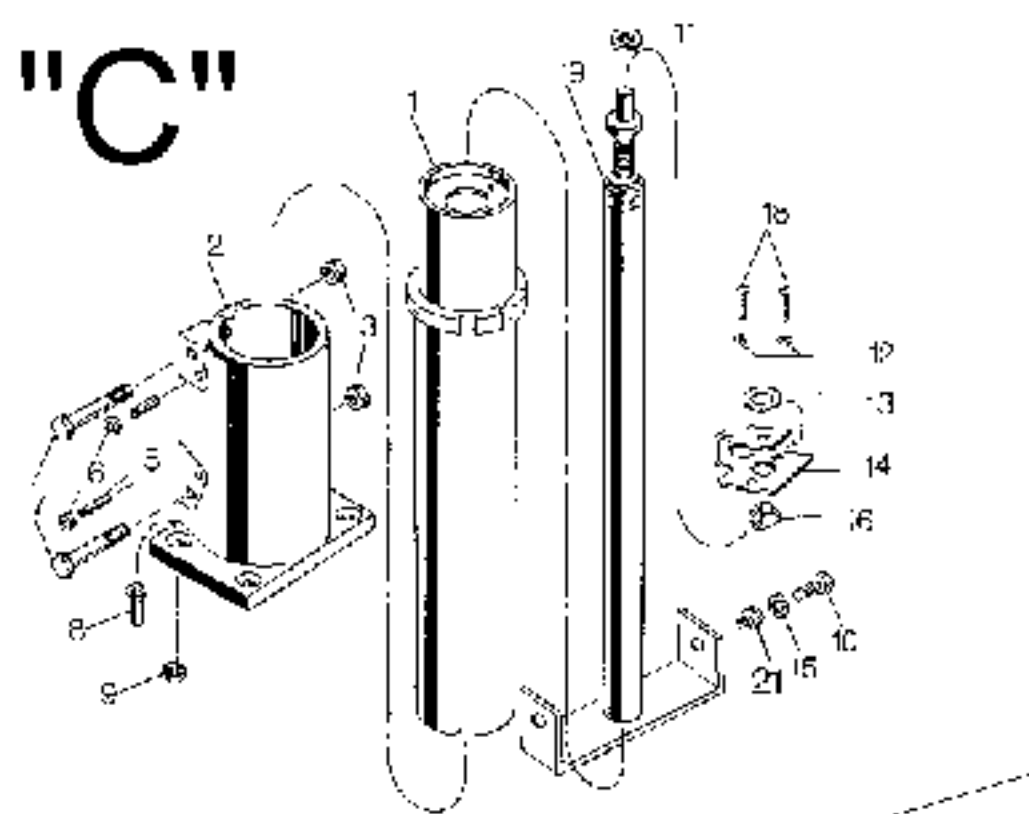
**FAIRE LA RÉPARATION: AUCUNE RESPONSABILITÉ N'EST ASSUMÉE. LA GARANTIE ÉCRITE, N'EST AUTORISÉE.**

#### CENTRES DE VENTE ET DE SERVICE BLACK & DECKER

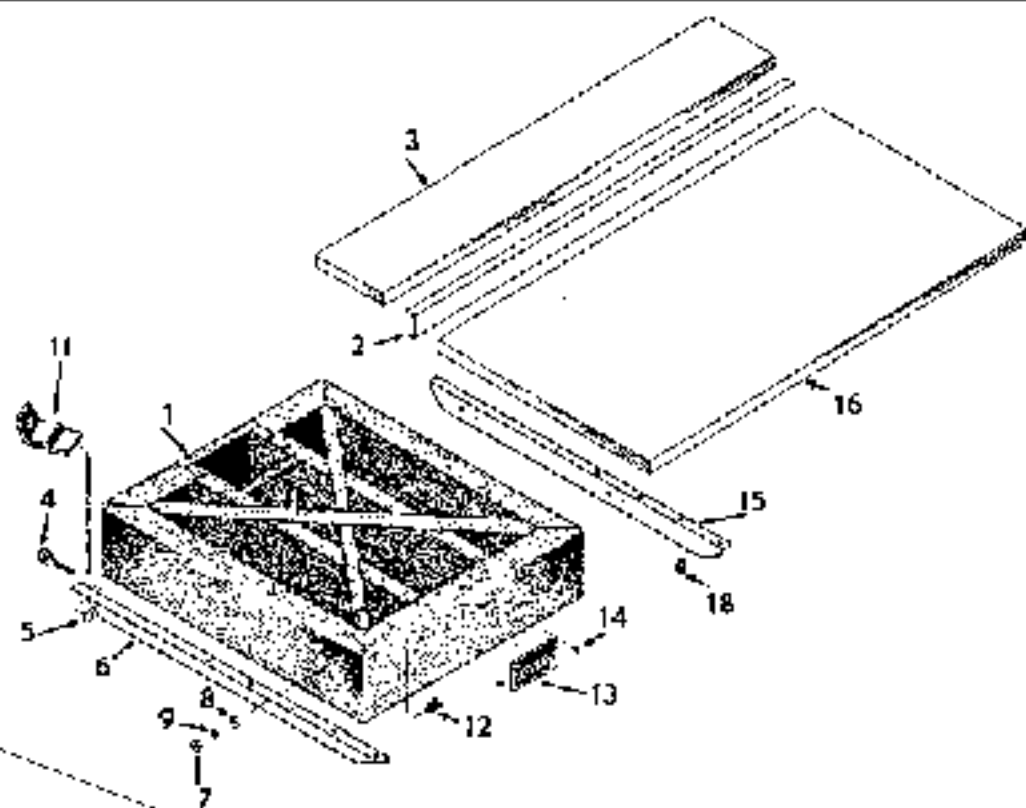
HALIFAX, N.-E. 3695 rue Barrington, Barrington Comm. Ctr., B3K 2Y3  
 QUEBEC, QUE.: 1375 boul. Charest O., G1N 2E7  
 MONTREAL, QUE.: 7865 boul. St. Laurent, H2R 1X1  
 LONGUEUIL, QUE.: 1568 Chemin de Chambly, J4J 3X5  
 VILLE DE LAVAL, QUE.: 1930 boul. St. Martin, H7S 1M9  
 DOLLARD DES ORMEAUX, QUE.: Centre d'achats Blue Haven, 3669 Chemin St-Jean, H9G 1X2  
 OTTAWA, ONT.: 285 Chemin Richmond, K1Z 6X3  
 BROCKVILLE, ONT.: 100 Avenue Central, K6V 4N8  
 SCARBOROUGH, ONT.: 729 Chemin Kennedy, M1K 2C6  
 DOWNSVIEW, ONT.: 592 Avenue Champagne, M3J 2T9  
 TORONTO, ONT.: 1180, The Queensway, M8Z 1R5  
 HAMILTON, ONT.: 180 Avenue Parkdale Nord, L8H 5X2  
 KITCHENER, ONT.: 671 Avenue Belmont Ouest, N2M 1N8  
 LONDON, ONT.: 631 Chemin Commissioners Est, N6C 2V1  
 SUDBURY, ONT.: 1496 Avenue Fairburn, P3A 1N7  
 WINNIPEG/ST. JAMES, MAN.: 934 rue St. James, R3H 0K3  
 REGINA, SASK.: 1076 rue Albert, S4R 2P8  
 SASKATOON, SASK.: N° 4-1622 Avenue Ontario, S7K 1S8  
 CALGARY, ALB.: 1003-11<sup>e</sup> Avenue S.O., T2P 0G2  
 EDMONTON, ALB.: 11440 Avenue 142<sup>e</sup> Rue, T5M 1V1  
 VANCOUVER, C.B.: 24 Ouest, Deuxième Avenue, V5Y 1B5  
 NEW WESTMINSTER, C.B.: 301 Avenue Columbia, V3L 1A7

BLACK & DECKER MFG. CO. LTD. BROCKVILLE, ONTARIO

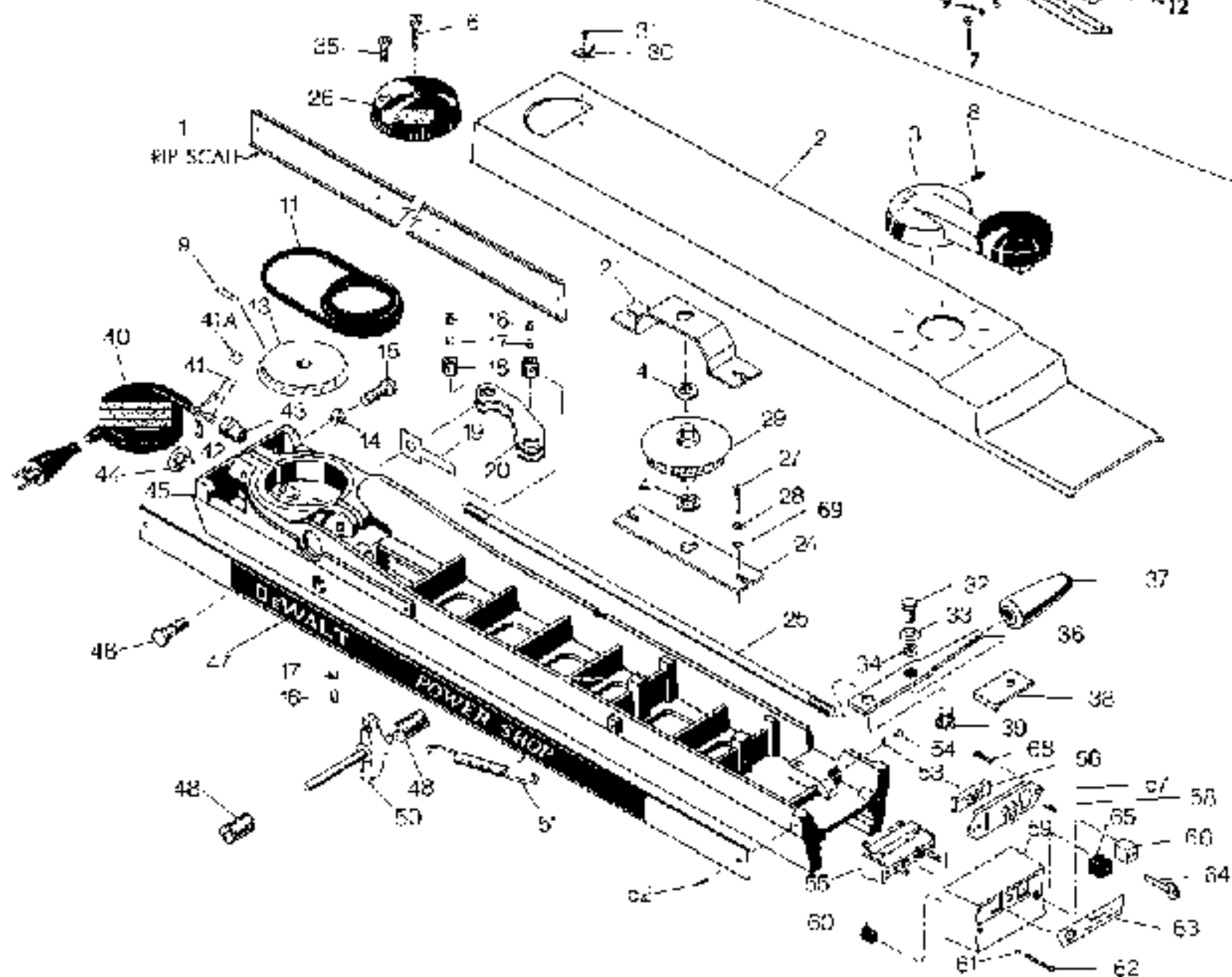
# "C"



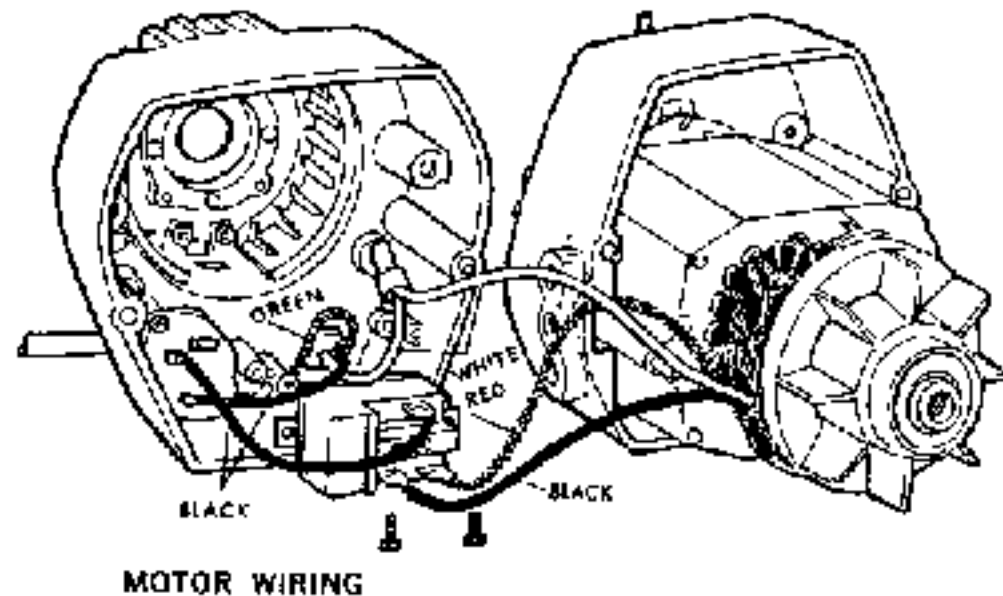
# "T"



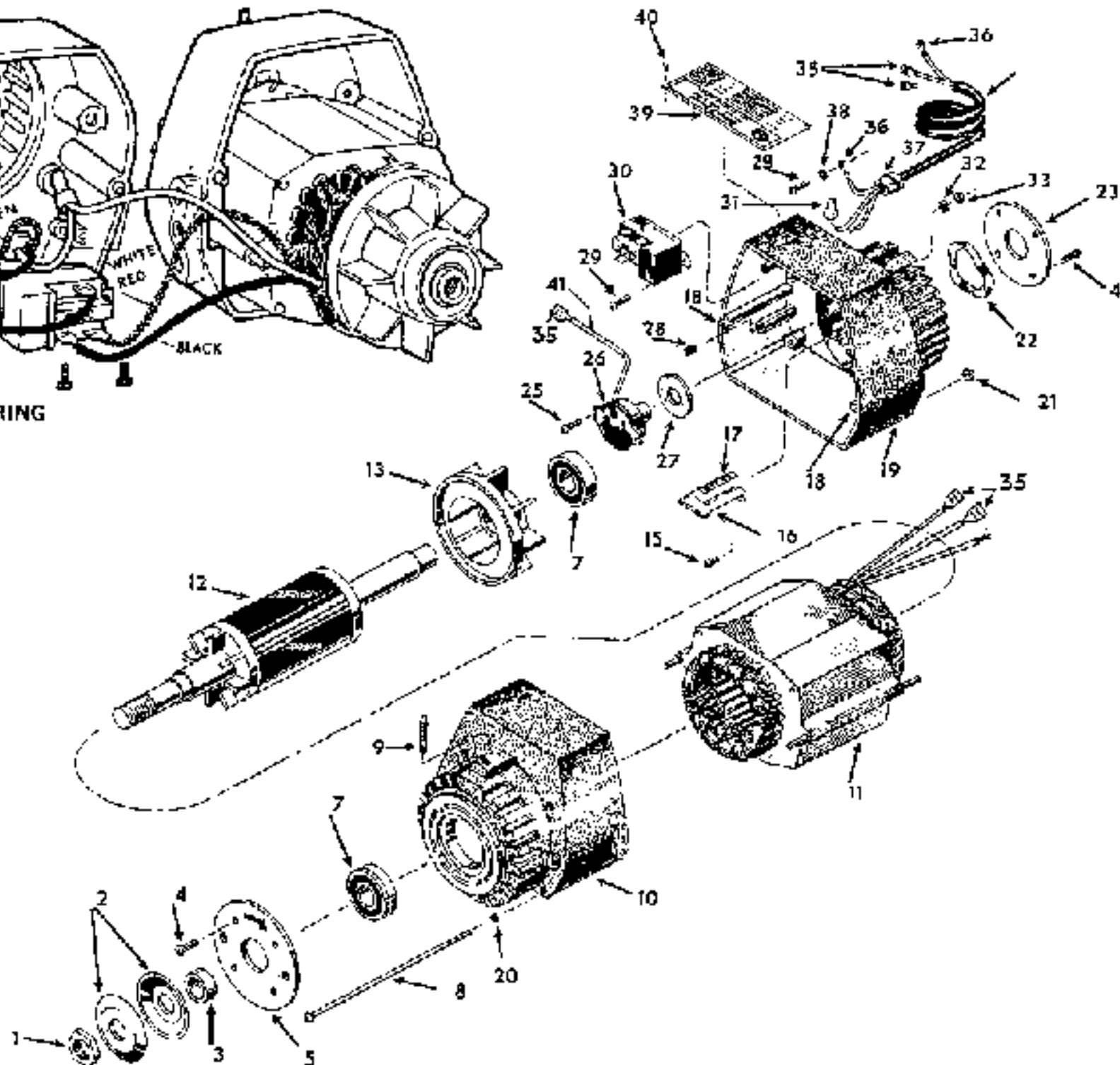
# "A"



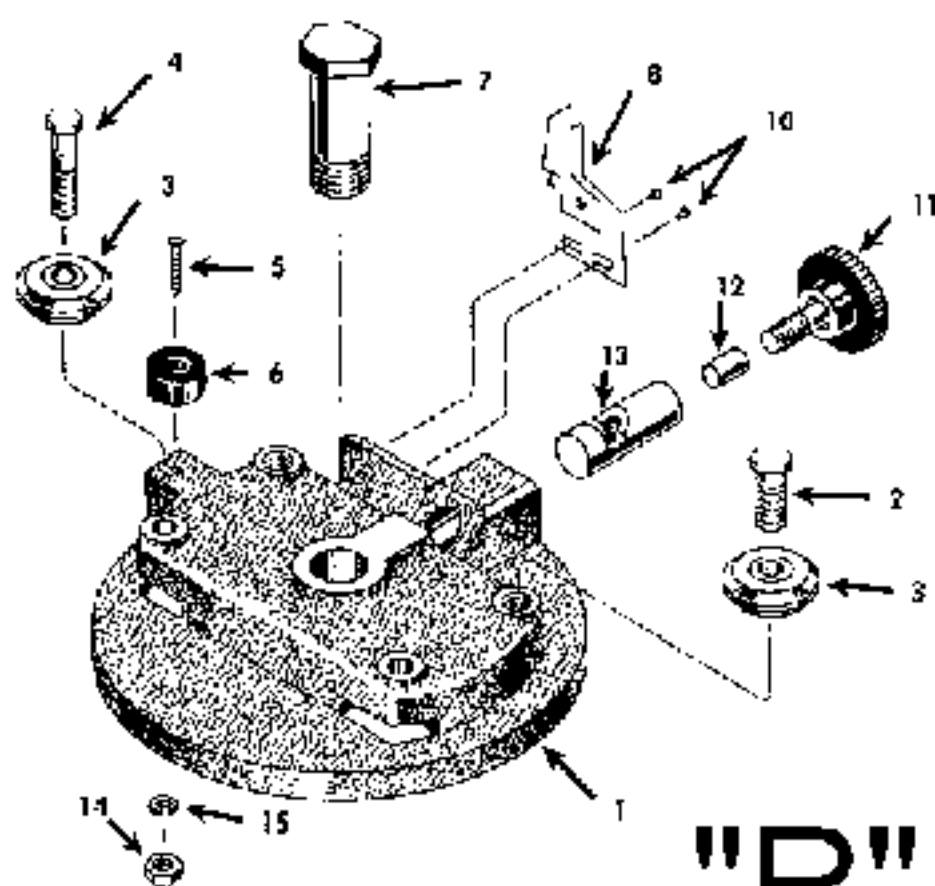
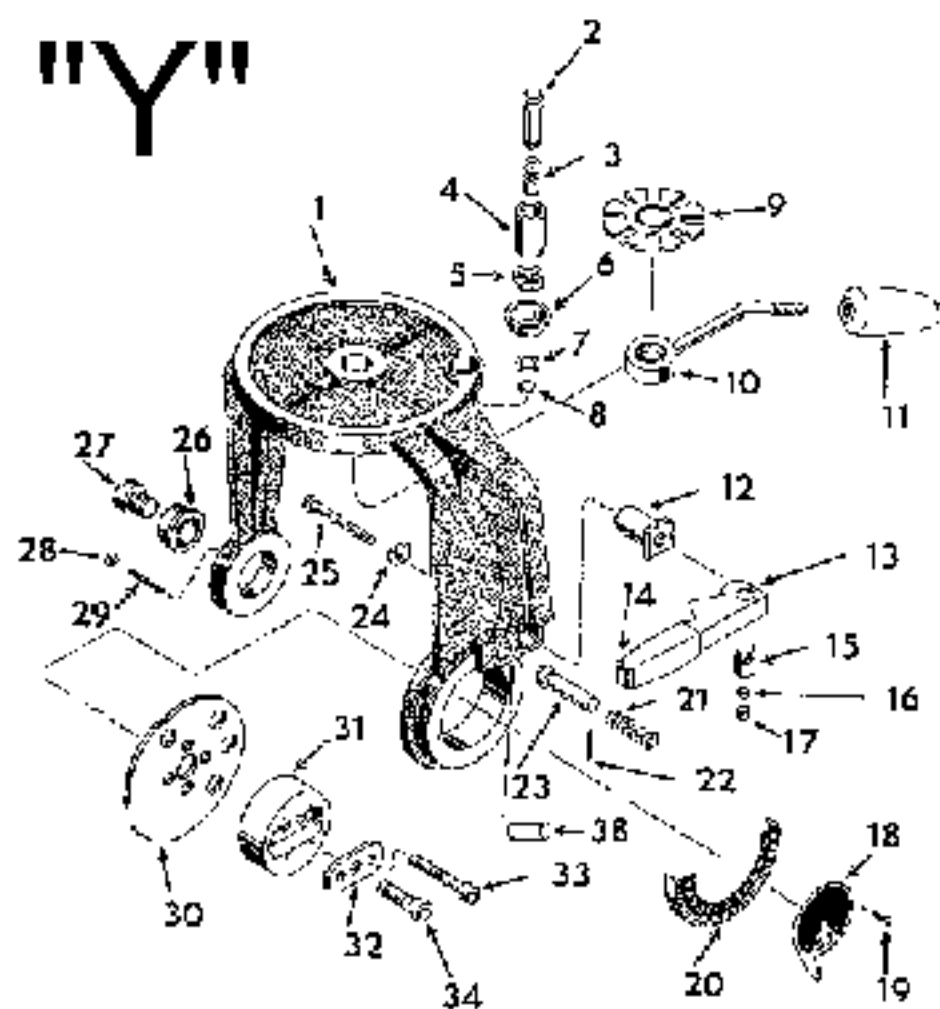




"M"



"Y"



"R"