

Save This Manual
For Future Reference

Sears

***owners
manual***

**MODEL NO.
113.199100**

**SAW ONLY
113.199150**

SAW WITH LEGS

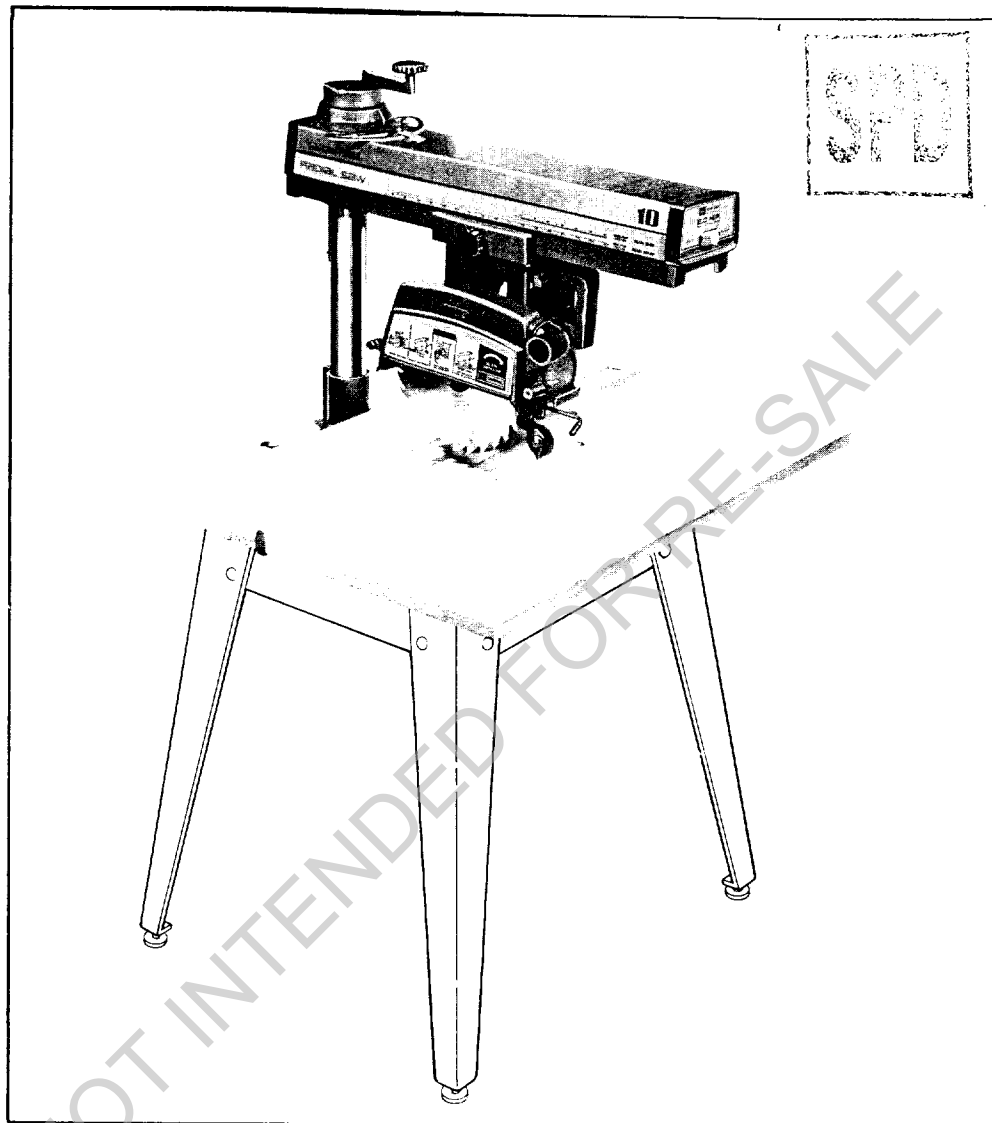
Serial
Number _____

Model and serial
number may be found
at the rear of the left
base channel.

You should record both
model and serial number
in a safe place for
future use.

CAUTION:

**Read GENERAL
and ADDITIONAL
SAFETY
INSTRUCTIONS
carefully**



Sears

CRAFTSMAN®

**10-INCH
RADIAL SAW**

- *assembly*
- *operating*
- *repair parts*

Sold by SEARS, ROEBUCK AND CO., Chicago, IL. 60684 U.S.A.

FULL ONE YEAR WARRANTY ON CRAFTSMAN RADIAL SAW

If within one year from the date of purchase, this Craftsman Radial Saw fails due to a defect in material or workmanship, Sears will repair it, free of charge.

WARRANTY SERVICE IS AVAILABLE BY SIMPLY CONTACTING THE NEAREST SEARS STORE OR SERVICE CENTER THROUGHOUT THE UNITED STATES.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

SEARS, ROEBUCK AND CO. DEPT., 698/731A Sears Tower, Chicago, IL 60684

general safety instructions for power tools

1. KNOW YOUR POWER TOOL

Read and understand the owner's manual and labels affixed to the tool. Learn its applications and limitations as well as the specific potential hazards peculiar to this tool.

2. GROUND ALL TOOLS

This tool is equipped with an approved 3-conductor cord and a 3-prong grounding type plug to fit the proper grounding type receptacle. The green conductor in the cord is the grounding wire. Never connect the green wire to a live terminal.

3. KEEP GUARDS IN PLACE

in working order, and in proper adjustment and alignment.

4. REMOVE ADJUSTING KEYS AND WRENCHES

Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

5. KEEP WORK AREA CLEAN

Cluttered areas and benches invite accidents. Floor must not be slippery due to wax or sawdust.

6. AVOID DANGEROUS ENVIRONMENT

Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lighted. Provide adequate surrounding work space.

7. KEEP CHILDREN AWAY

All visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP KID-PROOF

— with padlocks, master switches, or by removing starter keys.

9. DON'T FORCE TOOL

It will do the job better and safer at the rate for which it was designed.

10. USE RIGHT TOOL

Don't force tool or attachment to do a job it was not designed for.

11. WEAR PROPER APPAREL

Do not wear loose clothing, gloves, neckties or jewelry (rings, wrist watches) to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair. Roll long sleeves above the elbow.

12. USE SAFETY GOGGLES (Head Protection)

Wear Safety goggles (must comply with ANSI Z87.1) at all times. Everyday eyeglasses only have impact resistant lenses, they are **NOT** safety glasses. Also, use face or dust mask if cutting operation is dusty, and ear

protectors (plugs or muffs) during extended periods of operation.

13. SECURE WORK

Use clamps or a vise to hold work when practical. It's safer than using your hand, frees both hands to operate tool.

14. DON'T OVERREACH

Keep proper footing and balance at all times.

15. MAINTAIN TOOLS WITH CARE

Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16. DISCONNECT TOOLS

before servicing; when changing accessories such as blades, bits, cutters, etc.

17. AVOID ACCIDENTAL STARTING

Make sure switch is in "OFF" position before plugging in.

18. USE RECOMMENDED ACCESSORIES

Consult the owner's manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

19. NEVER STAND ON TOOL

Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

Do not store materials above or near the tool such that it is necessary to stand on the tool to reach them.

20. CHECK DAMAGED PARTS

Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

21. DIRECTION OF FEED

Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

22. NEVER LEAVE TOOL RUNNING UNATTENDED

Turn power off. Don't leave tool until it comes to a complete stop.

additional safety instructions for radial saws

CAUTION: Always disconnect the power cord before removing the guard, changing the cutting tool, changing the set-up or making adjustments. Shut off motor before performing layout work on the saw table.

WARNING: DO NOT CONNECT POWER CORD UNTIL THE FOLLOWING STEPS HAVE BEEN SATISFACTORILY COMPLETED:

- I. Assembly and alignment.
- II. Examination and operating familiarity with ON-OFF switch, elevation control, yoke index and lock, bevel index and lock, carriage lock, guard clamp screw, spreader and antikickback device, and miter index and lock.
- III. Review and understanding of all Safety Instructions and Operating Procedures thru-out manual.

INSTALLATION

1. Set carriage lock before moving the saw.
2. Bolt the saw to the floor if it tends to slip, walk, or slide during normal operation.
3. Mount the saw so the table is approximately 39" above the floor.
4. Mount the saw so the arm slopes slightly downward to the rear so the carriage will not roll forward due to gravity.
5. If you attach any kind of table extensions over 24" wide to either end of the saw, make sure you either bolt the saw to the bench or floor as appropriate, or support the outer end of the extension from the bench or floor, as appropriate.

MINIMIZE ACCIDENT POTENTIAL

Most accidents are caused by FAILURE TO FOLLOW setup and operating instructions:

(A) GENERAL

- Avoid awkward hand positions, where a sudden slip could cause a hand to move into a sawblade or other cutting tool. Never reach in back of or around the cutting tool with either hand to hold down the workpiece, or for any other reason; DO NOT place fingers or hands in the path of the sawblade.
- Never saw, dado, mold, or rabbet unless the proper guard is installed and set up as instructed.
- NOTE THE FOLLOWING DANGER LABELS WHICH APPEAR ON THE FRONT OF THE YOKE AND GUARD:

DANGER
FOR YOUR
OWN SAFETY:

1. READ AND UNDERSTAND OWNER'S MANUAL BEFORE OPERATING MACHINE.
2. WEAR SAFETY GOGGLES.
3. KEEP HANDS OUT OF PATH OF SAW BLADE.
4. KNOW HOW TO AVOID "KICKBACKS".
5. USE "PUSH STICK" FOR NARROW WORK.
6. NEVER REACH AROUND THE SAW BLADE.
7. NEVER PERFORM ANY OPERATION "FREEHAND".
8. RETURN CARRIAGE TO THE FULL REAR POSITION AFTER EACH CROSS-CUT OPERATION.
9. SHUT OFF POWER AND ALLOW SAW BLADE TO STOP BEFORE ADJUSTING OR SERVICING.

DANGER
TO AVOID
INJURY DO
NOT FEED
MATERIAL
INTO
CUTTING
TOOL FROM
THIS END

- **DEPRESS MOTOR BRAKE** until sawblade or other cutting tool has come to a complete stop before removing workpiece, scrap, or taking any other action. Never operate the saw when using the saw arbor (sawblade, dado or molding head, or other accessory) with the accessory shaft guard removed.
- If any part of this radial saw is missing or should break, bend or fail in any way, or any electrical component fail to perform properly, shut off power switch, remove cord from power supply and

replace damaged, missing and/or failed parts before resuming operation.

- IF YOUR SAW MAKES AN UNFAMILIAR NOISE OR IF IT VIBRATES EXCESSIVELY CEASE OPERATING IMMEDIATELY UNTIL THE SOURCE HAS BEEN LOCATED AND THE PROBLEM CORRECTED.
- **WARNING: ALWAYS KEEP ALERT. DO NOT ALLOW FAMILIARITY (GAINED FROM FREQUENT USE OF YOUR SAW) TO CAUSE A CARELESS MISTAKE. ALWAYS REMEMBER THAT A CARELESS FRACTION OF A SECOND IS SUFFICIENT TO INFLICT SEVERE INJURY.**
- Before starting work, verify that no play exists between the column & column support, or in the carriage, and that arm, yoke, and bevel locks/clamps are tight.
- A large proportion of saw accidents are caused by use of the wrong type blade, dull, badly set, improperly sharpened cutting tools, by gum or resin adhering to cutting tools, and by sawblade misalignment out of parallel with the fence. Such conditions can cause the material to stick, jam (stall the saw) or "KICKBACK" at the operator. NEVER ATTEMPT TO FREE A STALLED SAW BLADE WITHOUT FIRST TURNING THE SAW "OFF". If the sawblade is stalled or jammed, shut saw "OFF", remove workpiece, and check sawblade squareness to table surface and to the fence, and check for heel. Adjust as indicated.
- **CAUTION: DO NOT cycle the motor switch "ON" and "OFF" rapidly, as this might cause the sawblade to loosen. In the event this should ever occur, allow the saw blade to come to a complete stop and re-tighten the arbor nut normally, not excessively.**
- Do not leave a long board unsupported so the spring of the board causes it to shift on the table. Provide proper support for the workpiece, based on its size and the type of operation to be performed. Hold the work firmly against the fence.
- Never use a length stop on the free end or edge of the workpiece whether crosscutting or ripping. Never hang onto or touch the free-end of workpiece when crosscutting, or a free piece that is cut off while power is "ON"-and/or the sawblade is rotating. In short, the cut-off piece in any "thru-sawing" operation must never be confined -- it must be allowed to move laterally. "Thru-sawing" is any operation when the saw blade cuts entirely through the thickness of the workpiece.
- Make sure your fingers do not contact the terminals when installing or removing the plug to or from a live power source.
- Never climb on the saw, or climb near the saw when power is "ON". Never leave the saw with power "ON", or before the cutting tool has come to a complete stop. Lock the motor switch and put away the key when leaving the saw.
- Do not use any blade or other cutting tool marked for an operating speed lower than 3450 RPM. Never use a cutting tool larger in diameter than the diameter for which the saw was designed. For greatest safety and efficiency when ripping, use the maximum diameter blade for which the saw is designed, since under these conditions the spreader is nearest the blade.

additional safety instructions for radial saws

- Never turn your saw "ON" before clearing the table or work surface of all objects (tools, scraps of wood, etc.) except the workpiece and related feed or support devices for the operation planned.
- Do not perform layout, assembly, or setup work on the table while the cutting tool is rotating.
- Never perform any operation "FREE HAND". This term means feeding the sawblade into the workpiece or feeding the workpiece into the sawblade or other cutting tool without using the fence or some other device which prevents rotating or twisting of the workpiece during the operation. **Never "RIP" in the crosscut position. Never make a miter cut with the arm in the 90° crosscut position.**
- Never lower a revolving cutting tool into the table or a workpiece without first locking the Carriage Lock Knob. Release the knob only after grasping the Yoke Handle. Otherwise the cutting tool may grab the table or the workpiece and be propelled toward you.
- The sawblade, dado, or other cutting tool must be removed from the saw arbor before using the accessory shaft (rear end of the saw motor). NEVER operate the saw with cutting tools (including sanding accessories) installed on both ends of the saw arbor. Replace accessory shaft guard immediately upon removal of accessory from accessory shaft.
- Do not use fences made of chipboard — use 3/4" virgin lumber only, extending in one piece from end to end of the saw table. The fence should extend above the table surface approximately two-thirds the thickness of the workpiece (for a 1-1/2 in. thick workpiece, the fence should be 1 in. high), but never less than 3/4 in. If a thin facing is added to the top of the table (to preserve the original table), fabricate and install a new fence complying with above height instructions.

(B) RIPPING

Ripping is cutting with the grain or the long way of the board — it is performed by pushing the workpiece along the fence and thru the sawblade (sawblade parallel to the fence).

1. Never apply the feed force to the section of the workpiece that will become the cut-off (free) piece. Feed force when ripping must always be applied between the saw blade and the fence... use a "PUSH STICK" or "WORK HELPERS" (see pg. 25) for rip cuts less than 6 in. wide. Do not rip any workpiece that is shorter than 12 in.
2. Whenever possible, use the in-rip position — this provides minimum obstruction for feeding by hand or push stick as appropriate.
3. Do not release the workpiece before operation is complete — push the workpiece all the way past the rear (outfeed or exit) of the sawblade.
4. Make sure by trial before starting the cut that the antikickback pawls will stop a kickback once it has started. Keep points of pawls SHARP!
5. **CAUTION: Never reposition the Guard or antikickback with power "ON".**
6. A "KICKBACK" occurs during a rip-type operation when a part or all of the workpiece is thrown back violently toward the operator. It can occur when the workpiece closes in on the rear

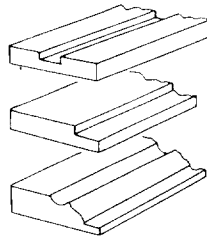
(outfeed side) of the sawblade (pinching), binds between the fence and the sawblade (heel), or is grabbed by the sawblade teeth (wrong-way feed) at the outfeed side. "PINCHING" is generally avoided by utilization of the spreader, and a sharp sawblade of the correct type for the workpiece being cut. "HEEL" can be avoided by maintaining the sawblade exactly parallel to the fence. Grabbing by the sawblade teeth can be caused by heel or by feeding from the wrong direction (see "DANGER" warning on guard) — it can be avoided by maintaining parallelism of sawblade to fence, feeding into the sawblade from the nose of the guard only, by positioning the spreader and antikickback properly, and keeping the workpiece down on the table and against the fence.

7. Position the nose of the guard to just clear the workpiece, and position/adjust the antikickback and spreader devices as instructed.
8. NEVER cut more than one piece at a time by stacking workpieces vertically.
9. NEVER feed a workpiece thru the saw with another piece (butting second piece against trailing edge of piece being cut), even if of the same thickness. Feed each workpiece individually thru the sawblade, and completely beyond the sawblade, before ripping the next workpiece. Use push stick if the rip cut is less than 6" wide.
10. DO NOT pull the workpiece thru the sawblade.
 - position your body at the nose (in-feed) side of the guard: start and complete the cut from that same side. This will require added table support for long pieces.
11. Plastic and composition (like hardboard) materials may be cut on your saw. However, since these are usually quite hard and slippery, the antikickback pawls may not stop a kickback. Therefore, rip with the finished side down (next to the table) and be especially attentive to following proper set-up and cutting procedures. Do not stand, or permit anyone else to stand, in line with a potential kickback.
12. When sawing 1/4" or thinner materials, follow all normal ripping procedures except set sawblade into table top at least 1/8". DO NOT let go of or stop feeding the workpiece between the blade and fence until you have pushed it completely past the antikickback pawls. Otherwise the workpiece could get into the back of the sawblade and be thrown violently from the saw in the direction opposite to the feed direction. This is the same action that would occur if the instructions of the DANGER warning on the guard is aborted. Do not stand, or permit anyone else to stand, in line with the path of a workpiece that may be thrown from the saw in this manner.
13. Position the saw so neither you, a helper, or a casual observer is forced to stand in line with the sawblade.
14. Use extra care when ripping wood that has a twisted grain or is twisted or bowed — it may rock on the table and/or pinch the sawblade.
15. Shaping of wood with a dado head or a molding head can be performed "top-side" (cutting tool basically vertical and employing sawblade guard) or "edge" (saw arbor vertical — cutting tool horizontal — and employing the Accessory molding head guard).

Ploughing
(Grooving with the grain)

Top side rabbeting

Top side molding
(shaping)...

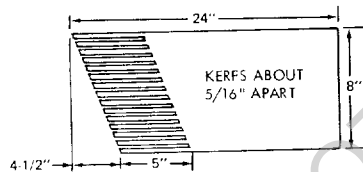


Resawing, gaining, coving with the grain are examples of rip-type cuts. The same basic setup procedures including rotation of the guard and adjusting and positioning of the AKB/Spreader device as for in-rip or out-rip cutting, apply.

However, since none of these operations involve thru-sawing (sawing through the workpiece), there is no kerf. Therefore the spreader and AKB pawls can only be lowered to a position where the spreader just clears the workpiece.

CAUTION: The AKB/Spreader device will not stop a kickback in this position, but will act as a holddown and as a guard of the out-feed side of the sawblade.

- For rip or rip-type cuts, the end of a workpiece to which a push stick or push board is applied must be square (perpendicular) to the fence in order that feed pressure applied to the workpiece by the push stick or block does not cause the workpiece to come away from the fence, and possibly cause a kickback.
- During rip and rip type cuts, the workpiece must be held down on the table and against the fence with a push stick, push block, or featherboards. A featherboard is made of solid lumber per sketch.



(C) CROSSCUTTING

- ALWAYS RETURN THE CARRIAGE TO THE FULL REARWARD POSITION AT CONCLUSION OF EACH CROSSCUT TYPE OPERATION. Never remove your hand from the Yoke Handle unless the carriage is in this position. Otherwise the cutting tool may climb up on the workpiece and be propelled toward you.
- Place guard in horizontal position and adjust antikickback pawls to just clear the top of the fence or workpiece, whichever is higher. This provides additional guarding.
- NEVER gang crosscut — lining up more than one workpiece in front of the fence — stacked vertically, or horizontally outward on the table — and then pulling saw thru: the blade could pick up

one or more pieces and cause a binding or loss of control and possible injury.

- Do not position the Arm so the operation you are performing permits the cutting tool to extend beyond the edges of the Table.
- Top-side dadoing or molding across the grain are examples of crosscut-type cuts. The same basic procedures including positioning of the AKB/Spreader device as for crosscutting apply.

(D) ACCESSORIES

- Use only recommended accessories as listed on page 33. Follow instructions supplied with the accessory.
- Never operate this saw when equipped with a rotary planer or dado head or molding head unless the molding head guard is installed — see listing of recommended accessories. The only exception is when "top-side" dadoing or molding, when the sawblade guard must be used. See detailed instructions that accompany the rotary planer, dado head, molding head, and molding head guard.
- The use of grinding wheels, abrasive or cut-off wheels, or wire wheels, can be dangerous and is not recommended. (Abrasive or cut-off wheels are used to saw many different materials including metals, stone, and glass.)
- Drill Chuck: Do not install or use any twist drill larger than 1/2-inch in dia., or longer than 7 inches in length or extending more than 6 inches beyond the chuck jaws. Do not install or use any reduced shank drill except of the spade type (1 inch dia. or smaller). Use for drilling **WOOD** and **PLASTIC** only.
- Replace accessory shaft guard immediately upon removal of accessory from accessory shaft.

NOTE: Do not overtighten arbor nut. Use the arbor wrench to just "snug" it.



The operation of any power tool can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety goggles complying with ANSI Z87.1 (shown on Package) before commencing power tool operation. Safety Goggles are available at Sears retail or catalog stores.

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electrical connections

POWER SUPPLY

1. Motor Specifications

The A-C motor used in this saw is a non-reversible type having the following specifications:

Voltage	120
Amperes	11.5
Hertz (cycles)	60
Phase	Single
RPM	3450
Rotation as viewed from saw blade end	Clockwise

CAUTION: Your saw is wired for 120 Volt operation. Connect to a 120 Volt, 15-Amp. branch circuit breaker.

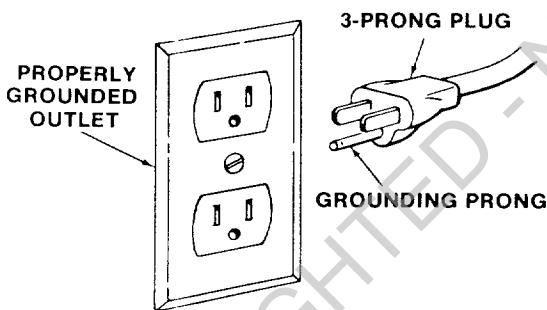
This machine must be grounded while in use to protect the operator from electrical shock.

IF YOU ARE NOT SURE THAT YOUR OUTLET IS PROPERLY GROUNDED, HAVE IT CHECKED BY A QUALIFIED ELECTRICIAN.

WARNING: DO NOT PERMIT FINGERS TO TOUCH THE TERMINALS OF PLUGS WHEN INSTALLING OR REMOVING THE PLUG TO OR FROM THE OUTLET.

WARNING: IF NOT PROPERLY GROUNDED THIS POWER TOOL CAN HAVE THE POTENTIAL HAZARD OF ELECTRICAL SHOCK, PARTICULARLY WHEN USED IN DAMP LOCATIONS OR CLOSE TO PLUMBING. IF AN ELECTRICAL SHOCK OCCURS THERE IS THE CHANCE OF A SECONDARY HAZARD SUCH AS YOUR HANDS CONTACTING THE SAWBLADE.

IF POWER CORD IS WORN OR CUT, OR DAMAGED IN ANY WAY, HAVE IT REPLACED IMMEDIATELY.



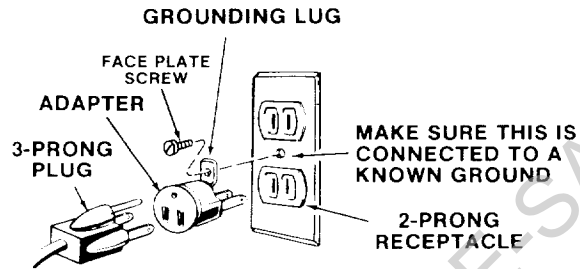
This power tool is equipped with a 3-conductor cord and grounding type plug which has a grounding prong, listed by Underwriters' Laboratories. The ground conductor has a green jacket and is attached to the tool housing at one end and to the grounding prong in the plug at the other end.

This plug requires a mating 3-conductor grounding type outlet as shown.

If the outlet you are planning to use for this power tool is of the two prong type DO NOT REMOVE OR ALTER THE GROUNDING PRONG IN ANY MANNER. Use an adapter as shown and always connect the grounding lug to a known ground.

It is recommended that you have a qualified electrician replace the TWO prong outlet with a properly grounded THREE prong outlet.

An adapter as shown below is available for connecting plugs to 2-prong receptacles. The green grounding lug extending from the adapter must be connected to a permanent ground such as to a properly grounded outlet box.



NOTE: The adapter illustrated is for use only if you already have a properly grounded 2-prong receptacle.

MOTOR SAFETY PROTECTION

NOTE: This motor should be blown out, or "vacuumed", frequently to prevent sawdust interference with normal motor ventilation.

CAUTION: Let motor come up to full speed prior to starting cut.

1. This tool should be connected to a 120 volt, 15 amp branch circuit with a 15 amp dual element time delay fuse or circuit breaker. Failure to use the proper size fuse can result in damage to the motor.
2. If the motor fails to start, turn the power switch to the off position immediately. **UNPLUG THE TOOL.** Check the saw blade to insure that it turns freely and that its teeth are not wedged into the table top. After the blade has been freed, try to start the motor again. If, at this point, the motor still fails to start, refer to the "Motor Trouble-Shooting Chart."
3. If the motor should suddenly stall while cutting, the power switch should be turned off, the tool unplugged and the blade freed. The motor may now be restarted and the cut finished.
4. Frequent opening of fuses or circuit breakers may result if motor is overloaded, or if the motor circuit is fused differently from recommendations. Overloading can occur if you feed too rapidly or if your saw is misaligned so that the blade heels. Do **not** use a fuse of greater capacity without consulting a qualified electrician.
5. Although the motor is designed for operation on the voltage and frequency specified on the motor nameplate, normal loads will be handled safely on voltages not more than 10% above or below the nameplate voltage. Heavy loads, however, require that voltage at motor terminals equals the voltage specified on motor nameplate.
6. Most motor troubles may be traced to loose or incorrect connections, overloading, reduced input voltage (such as small size wires in the supply circuit) or to an overly-long supply circuit. Always check the connections, the load and the supply circuit whenever the motor fails to perform satisfactorily. Check wire sizes and lengths with the table following.

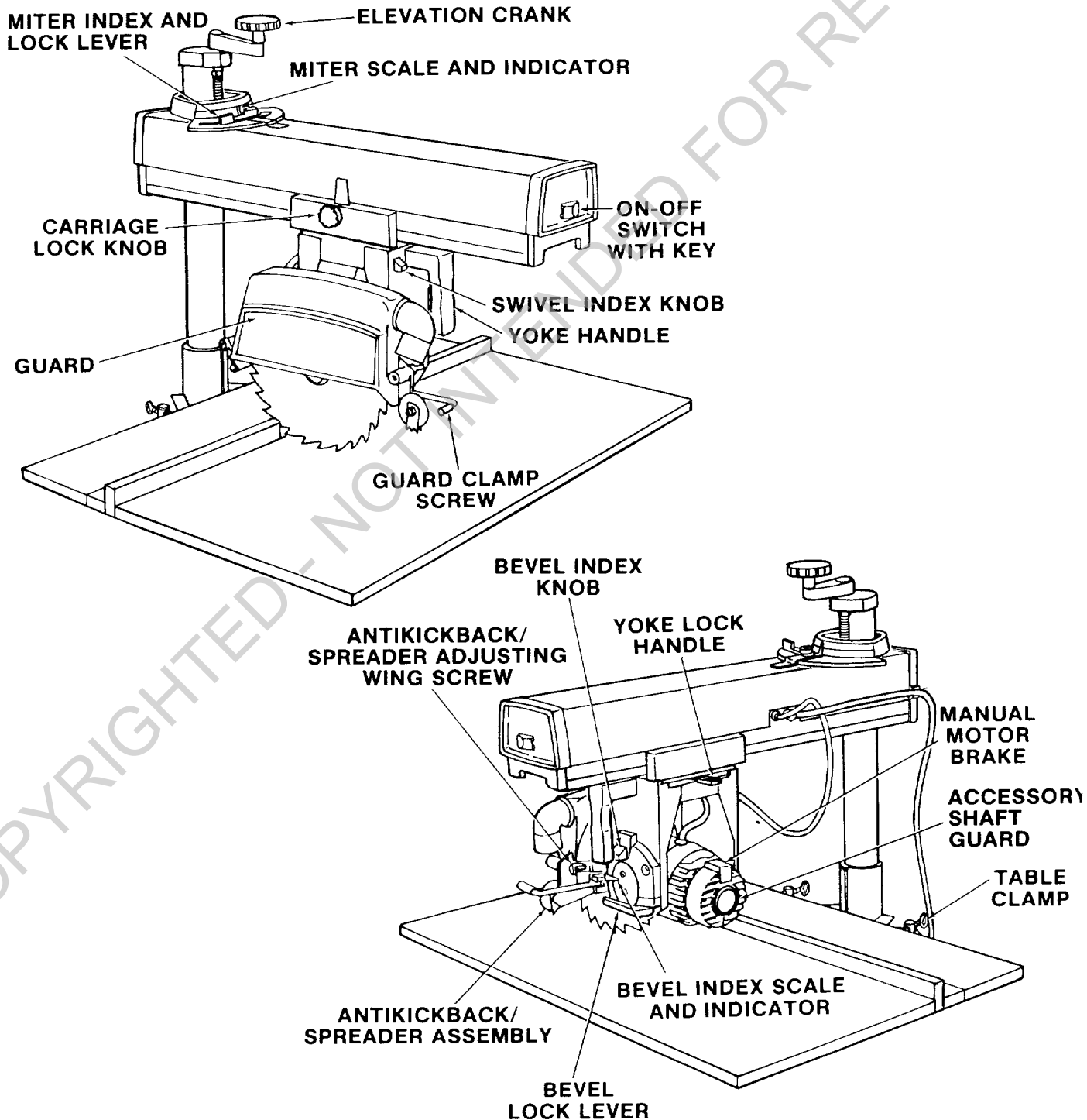
WIRE SIZES

The use of any extension cord will cause some loss of power. To keep this to a minimum and to prevent over-heating and motor burn-out, use the table below to determine the minimum wire size (A.W.G.) extension cord. Use only 3 wire extension cords which have 3 prong grounding type plugs and 3-pole receptacles which accept the tools plug.

NOTE: For circuits of greater length, the wire size must be increased proportionately in order to deliver ample voltage to the saw motor.

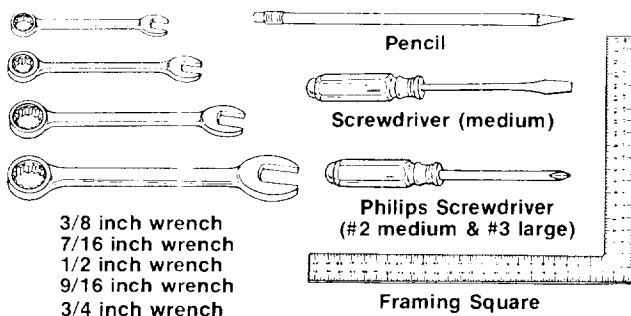
Length of the Conductor	Wire Size Required (American Wire Gauge Number) 120 Volt Lines
Up to 100 feet	No. 12
100 feet to 200 feet	No. 8
200 feet to 400 feet	No. 6

location and function of controls

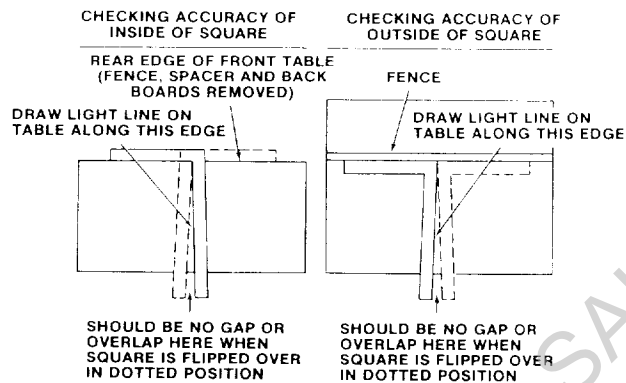


assembly and alignment

TOOLS NEEDED



FRAMING SQUARE MUST BE TRUE



UNPACKING AND PREASSEMBLY

WARNING: DO NOT CONNECT THE POWER CORD TO A SOURCE OF POWER. THIS CORD MUST REMAIN UNPLUGGED WHENEVER YOU ARE WORKING ON THE SAW.

Model 113.199100 Radial Saw is shipped complete in one carton but DOES NOT INCLUDE Steel Legs.

Model 113.199150 Radial Saw is shipped complete in one carton but INCLUDES Steel Legs.

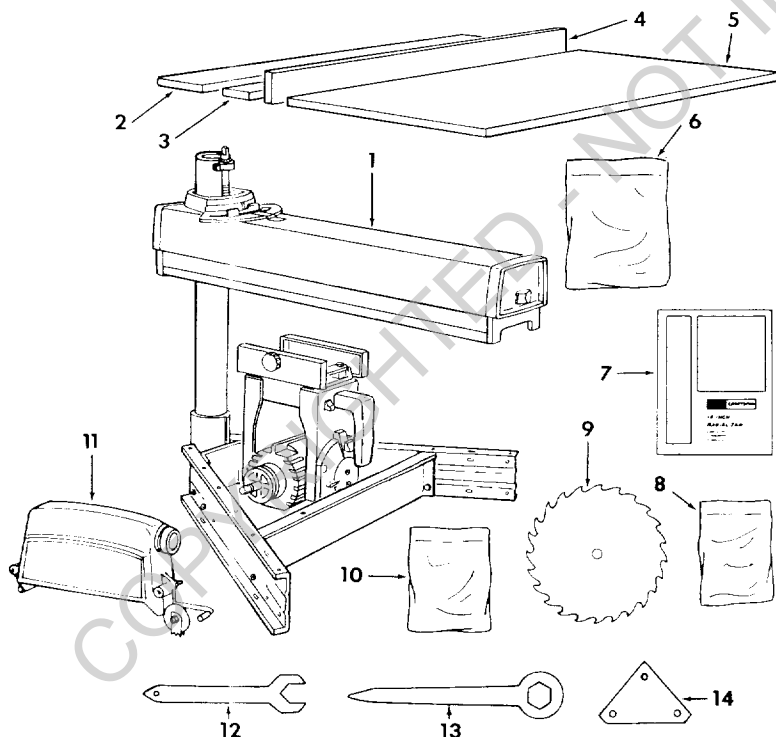
Unpacking and Checking Contents

Separate all "loose" parts from packaging materials and check each item with "Table of Loose Parts" to make sure all items are accounted for, before discarding any packing material.

If any parts are missing, do not attempt to assemble radial saw, plug in the power cord, or turn the switch on until the missing parts are obtained and are

TABLE OF LOOSE PARTS

KEY NO.		QTY.
1	Basic Saw Assembly	1
2	Rear Table	1
3	Spacer Table	1
4	Fence	1
5	Front Table	1
6	Bag Asm.	1
7	Owners Manual	1
8	Bag Asm.	1
9	Saw Blade	1
10	Bag Asm.	1
11	Guard	1
12	Wrench, Shaft	1
13	Wrench, Arbor	1
14	Bracket, Clamp	2
	Loose Parts Bag Part No. 75066	
	Screw, Pan Hd. Rec. 1/4-20 x 1-1/4"	6
	Nut, Shaft	1
	Collar, Blade	2
	Clamp, Table	2
	Hex "L" Wrench 1/4	1
	Hex "L" Wrench 5/32	1
	Hex "L" Wrench 3/16	1
	Washer, Flat 21/64 x 1 x 1/16	2
	Loose Parts Bag Part No. 75067	
	Screw, Pan Hd. Rec. 1/4-20 x 3/4"	4
	Washer, Flat 17/64 x 5/8 x 1/32"	6
	Nut, Hex 1/4-20	10
	Lockwasher, 1/4"	10
	Switch Key	1
	Hex "L" Wrench, 1/8	1
	Nut, Lock 5/16-18	2
	Washer, Neoprene	6
	Loose Parts Bag Part No. 75068	
	Crank Assembly	1
	Washer, Flat 13/64 x 5/8 x 1/32"	1
	Screw, Pan Rec. 10-32 x 1/2	1
	Indicator, Rip	1
	Spacer, Motor	1
	Dust Elbow	1
	Rubber Strips	2

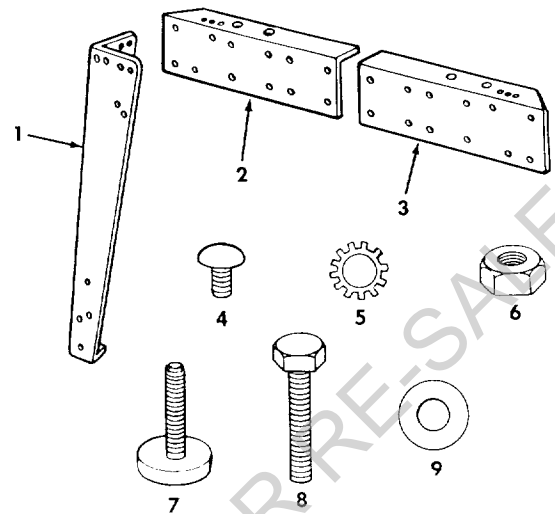


MOUNT SAW TO CRAFTSMAN STAND, STEEL LEGS, OR FLAT BENCH

The saw must be bolted down. Position your saw to slope slightly rearward, so when the carriage is installed it will not move forward due to gravity.

The following parts are included with Model 113.199150.

Key No.	Table of Loose Parts	Qty.
1	Leg	4
2	Stiffener, L.H.	4
3	Stiffener, R.H.	4
Loose Parts Bag No. 63752 (containing the following items):		
4	— Screw, Truss Hd. 1/4-20 x 5/8	40
5	— Lockwasher, 1/4 External	40
5	— Lockwasher, 5/16 External	4
6	— Nut, Hex 1/4-20	40
6	— Nut, Hex Jam 5/16-18	4
6	— Nut, Hex 1/2-13	8
7	— Foot, Leveling	4
8	— Screw, Hex Hd. 5/16-18 x 4	4
9	— Washer, 11/32 x 11/16 x 1/16	8



ASSEMBLING STEEL LEGS

NOTE: Steel Legs are furnished with Model 113.199150. From among the loose parts, find the following Hardware:

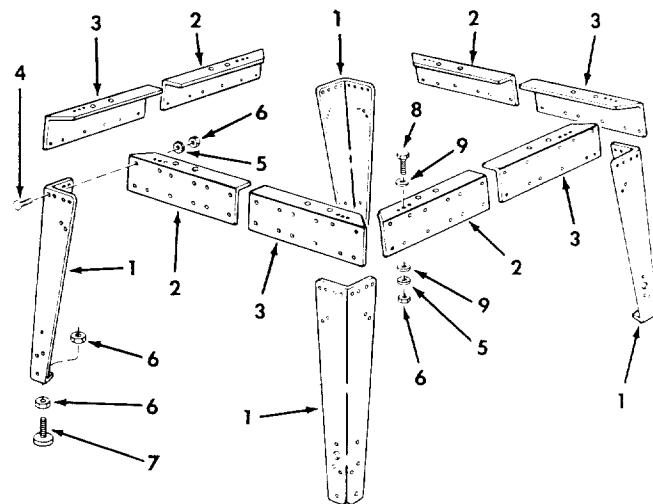
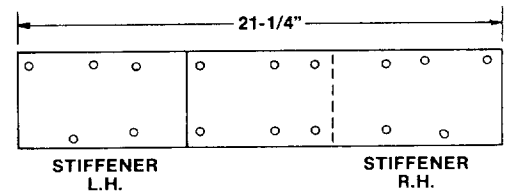
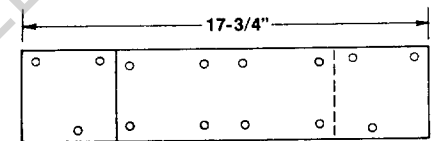
- 40 Truss Head Screws, 1/4-20 x 5/8
- 40 Lockwasher, 1/4-External
- 40 Hex Nuts, 1/4-20
- 8 Hex Nuts, 1/2-13
- 8 Leveling Feet

Assemble the Legs as shown.

1. Assemble Two (2) each of right and left hand Stiffeners to the length shown using 1/4-20 x 5/8" truss head screws, lockwashers and hex nuts.
2. Attach the four (4) legs to the Stiffeners using 1/4-20 screws, lockwashers and nuts.
3. Install leveling feet as shown. To level steel legs, loosen nut on inside of leg and turn nut on outside to raise or lower feet. Adjust all four levelers if necessary, and then tighten nuts on inside of leg.

NOTE: These levelers are not intended for height adjustment.

CAUTION: Leveling feet must be adjusted so the saw does not rock AND so that the arm slopes slightly downward to the rear so the carriage will not move forward due to gravity.

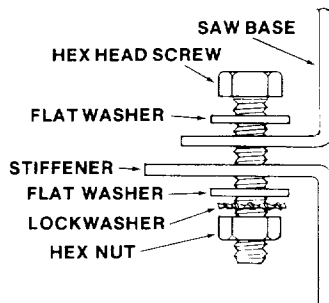
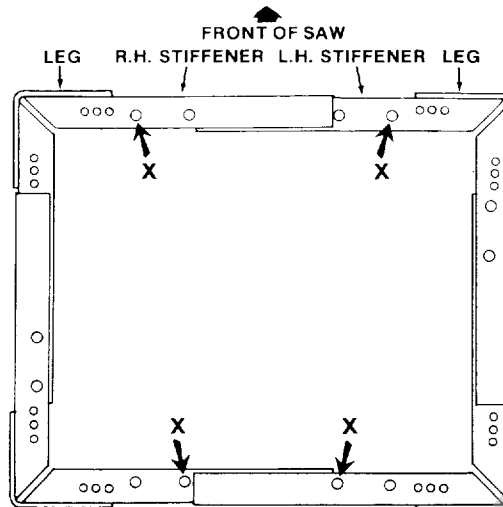


assembly and alignment

REMOVE SKIDS FROM BASE

MOUNTING SAW

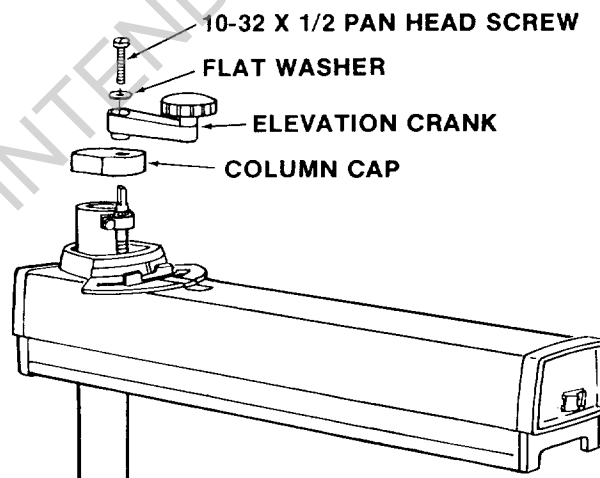
1. From among the loose parts, find the following hardware:
 - 4 Hex Head Screws, 5/16-18 x 5/8
 - 4 Lockwasher, 5/16 in. External Type
 - 8 Washers, 11/32 ID
 - 4 Hex Jam Nuts, 5/16-18
2. Place saw on legs so that holes in bottom of saw line up with holes marked X in top of legs.
3. Install screws, washers and nuts as shown.
The saw must be bolted down. Position saw to slope slightly rearward, so when the carriage is installed it will not roll forward due to gravity.



Be positive switch is "OFF" and power cord is unplugged before proceeding.

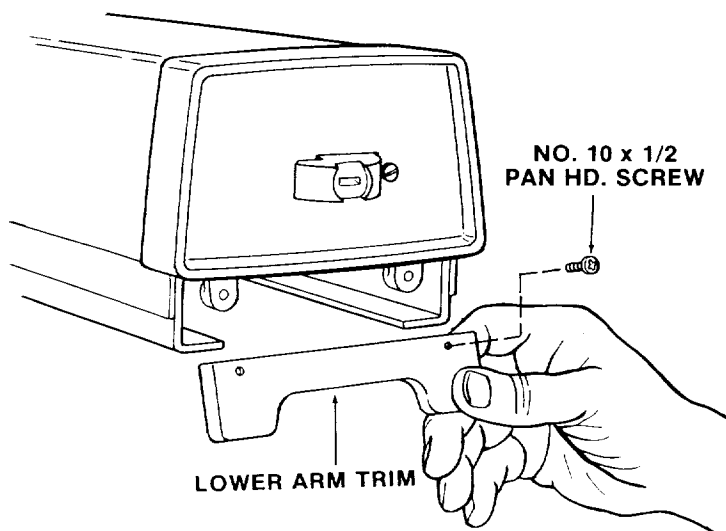
INSTALL COLUMN CAP AND ELEVATION CRANK

1. Install column cap as illustrated.
2. Among the loose parts locate the elevation crank, 13/64 x 5/8 flat washer, and 10-32 x 1/2 pan head screw.
3. Install elevation crank onto the elevation shaft being careful to line up flat surfaces on the shaft with flat surfaces inside the crank.
4. Install the 13/64 x 5/8 flat washer and 10-32 x 1/2 pan head screw and tighten securely.



REMOVE LOWER ARM TRIM

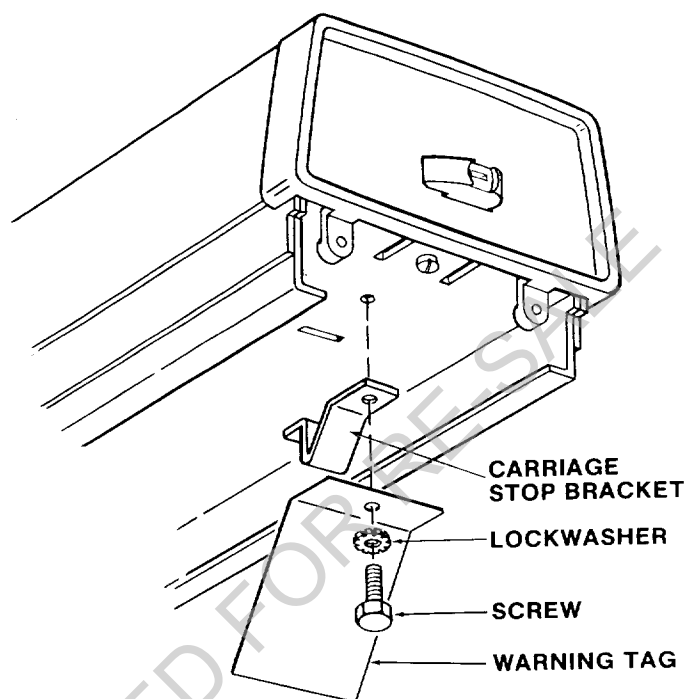
Remove the (2), 10 x 1/2 Pan Hd. screws as shown.



REMOVE CARRIAGE STOP BRACKET

1. Using a 3/8 inch wrench loosen the screw used to hold the carriage stop bracket underneath the arm.
2. Remove screw, lockwasher, warning tag, and bracket.

Read and understand warning tag. Discard tag after installing carriage assembly and reinstalling carriage stop bracket, lockwasher and screw.

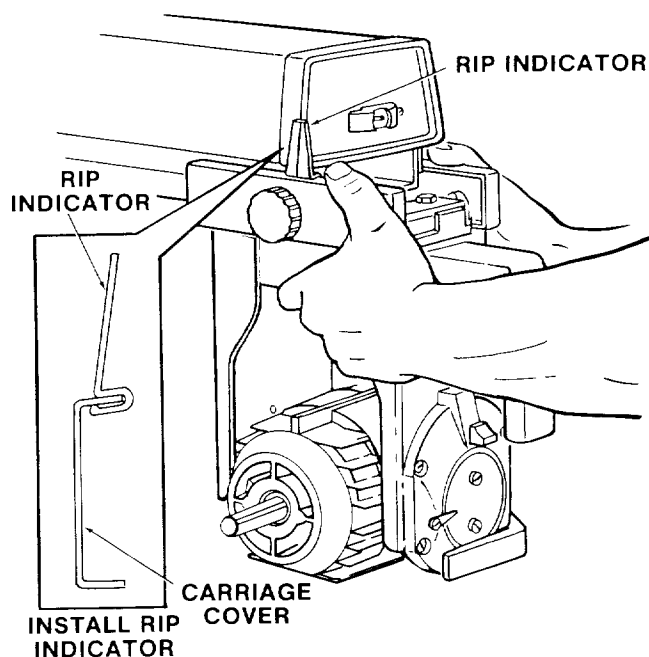


INSTALL CARRIAGE ASSEMBLY

1. Elevate the arm by turning the elevation crank clockwise until the carriage assembly can be removed from the packing. Find rip indicator in loose parts and snap onto left carriage cover as shown.
2. Holding carriage assembly with both hands, carefully start and slide the carriage onto the track. The assembly must be held parallel with the arm so that all glides slide smoothly onto the arm, preventing any excessive strain on glides and track.
3. Check for looseness of carriage glides. Refer to "Adjusting Carriage Glides" in "Adjustments to Compensate for Wear" Section.
4. Reinstall carriage stop bracket, lockwasher and screw.
5. Reinstall lower arm trim with the two 10 x 1/2 pan head screws.

WARNING: REINSTALL CARRIAGE STOP BRACKET WITH SCREW AND LOCKWASHER TO PREVENT CARRIAGE FROM COMING OFF ARM.

NOTE: Keep motor cord wrapped around power cord as shown in illustration on page 7.



assembly and alignment

ASSEMBLY AND ALIGNMENT PROCEDURE IMPORTANT:

IN ORDER TO OBTAIN MAXIMUM CUTTING ACCURACY, THE FOLLOWING SIX STEPS MUST BE CAREFULLY FOLLOWED. BECOME THOROUGHLY FAMILIAR WITH THESE STEPS SO THAT YOU CAN ALWAYS MAINTAIN YOUR SAW IN PROPER ALIGNMENT. THE ACCURACY

OF EACH ADJUSTMENT IS ALWAYS DEPENDENT UPON THE ACCURACY OF THE PRECEDING ADJUSTMENT.

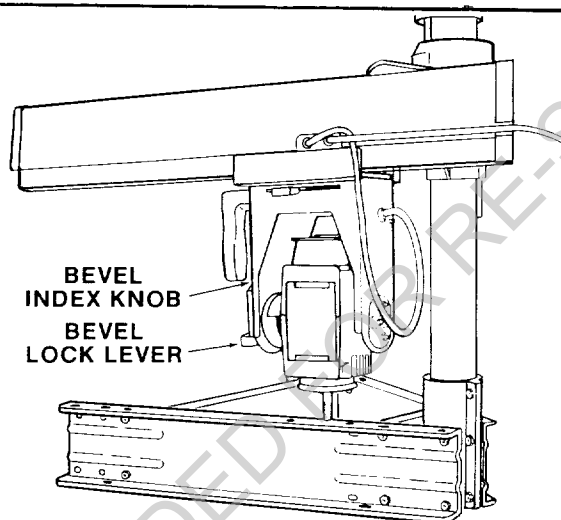
After following the 6 step assembly and alignment procedure and the Basic Saw operation section refer to Trouble Shooting section if any difficulty is experienced when performing any sawing operation.

STEP ONE

LEVELING ARM TO BASE

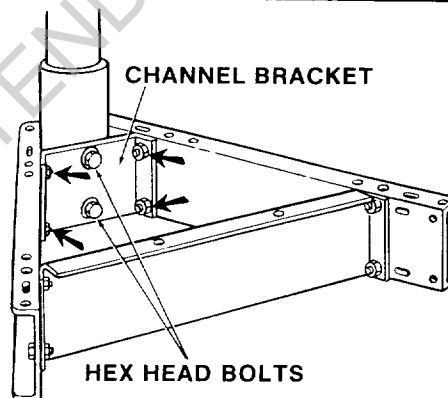
NOTE: Bolt or c-clamp base to stand, cabinet, or workbench before proceeding.

1. Release bevel lock lever. Lift up on bevel index knob and rotate the motor to position the end of motor shaft down. Lock bevel lock.
2. Elevate the arm by turning the elevation crank clockwise until the end of motor shaft is slightly above the table mounting channels. Push the motor to its most rearward position.
3. Loosen miter index lever 1/2 turn and pull forward to disengage index slot. Rotate arm to the right until motor shaft is above the right table mounting channel.



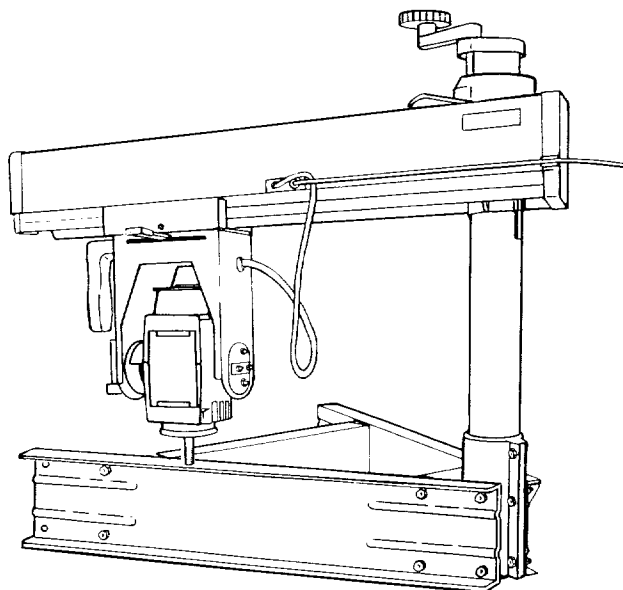
4. Slightly loosen (no more than 1 turn) the (4) four bolts that mount the channel bracket to the right and left table mounting channels using a 1/2 inch wrench.

NOTE: Check to make certain that the (2) two center bolts are tight.



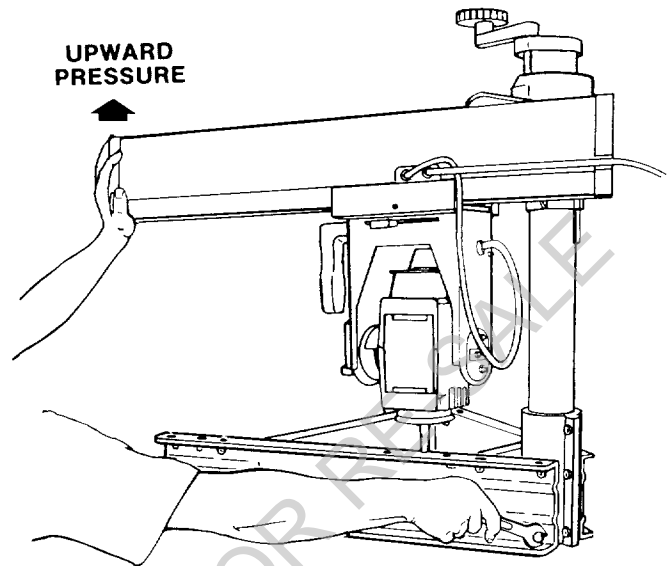
5. Carefully lower the motor with the elevation crank until motor shaft just touches the table mounting channel.
6. Pull the motor forward to the front stop. Rotate the arm to the right until the motor shaft is above the table mounting channel.

NOTE: If motor shaft hits table mounting channel and cannot be positioned above it further adjustment is required. Proceed with steps 6a through 6h.



Proceed with 6a only if motor shaft does not clear table mounting channel when pulled forward.

- a. Push motor to the rear position.
- b. Loosen the two rear nuts on the right table mounting channel that support the column.
- c. While applying upward pressure on the front of the arm tighten the two nuts securely.
- d. Rotate the arm to the left until motor shaft is above the left table mounting channel.
- e. Loosen the two rear nuts on the left table mounting channel that support the column.
- f. While applying upward pressure on the front of the arm tighten the two nuts securely.
- g. Return the arm to the right and adjust elevation to where motor shaft just touches table mounting channel at the rear.
- h. Repeat step 6.



7. Slowly loosen the top rear nut on the right table mounting channel while watching the motor shaft.

The motor shaft should lower to the top of the channel as the nut is loosened. When the motor shaft just touches the channel tighten the nut.

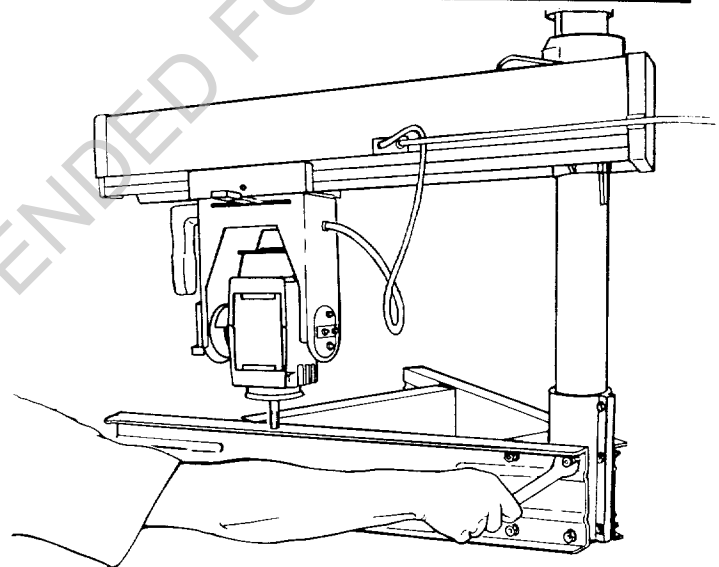
8. Push the motor to the rear of the arm and check the motor shaft position. If the shaft is not at the same level as the channel, adjust the elevation and recheck at the front of the arm. Repeat steps 6 and 7 until the motor shaft travels evenly along the table mounting channel.

9. Pull motor out to the forward stop on the arm and position motor shaft above the left table mounting channel.

Slowly loosen the top rear nut on the left table mounting channel while watching the motor shaft.

The motor shaft should lower to the top of the channel as the nut is loosened. When the motor shaft just touches the channel tighten the nut.

10. Recheck alignment with the motor at the rear stop. If motor shaft is not in line with the top of the channel repeat steps 5, 6 and 7 until motor shaft travels evenly along the top of the channels.

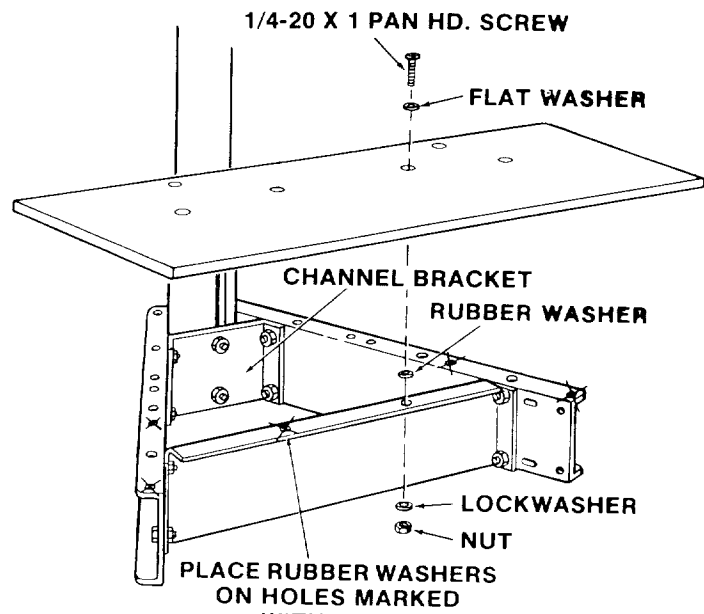


11. Tighten the (4) four bolts that mount the channel bracket to right and left table mounting channels.

Check all other bolts and nuts on the base to be certain that they are tight.

12. INSTALLING FRONT (WORK) TABLE

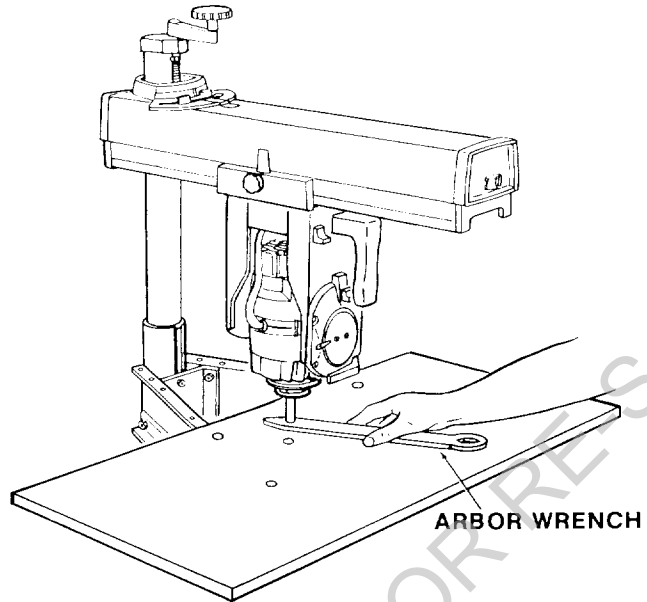
- a. Next you will install the Front Table. First move the Motor to the rear stop on the Arm.
- b. Now place one of the six (6) flat rubber washers over each of the Table mounting holes in the base as shown.
- c. Carefully position the Front Table over the washers, lining up the holes with the Rubber Washers as you set it in place.
- d. Install the six (6) 17/64" flat washers and the six (6) 1/4-20 x 1 inch pan-head machine screws through the Table, Rubber washer, and Channel.
- e. Install one 1/4 inch Lockwasher and 1/4 inch Hex Nut on each of the six (6) screws. Tighten 1/2 turn beyond finger tight to begin compressing the Rubber Washers. These Washers will serve in the final alignment of the Arm to the Table.



assembly and alignment

13. Elevate Arm, by rotating the Elevation Crank clockwise, until the end of the Motor Shaft clears the Table. Using the handle of the arbor wrench as a "feeler-gage", position the Motor Shaft near one of the six mounting screws and adjust the arm elevation up or down until the arbor wrench just slips between the table and the motor shaft. Move the motor shaft to another screw location. This time adjust the table mounting screw until the arbor wrench slips under the motor shaft. Repeat this operation for the remaining four screws.

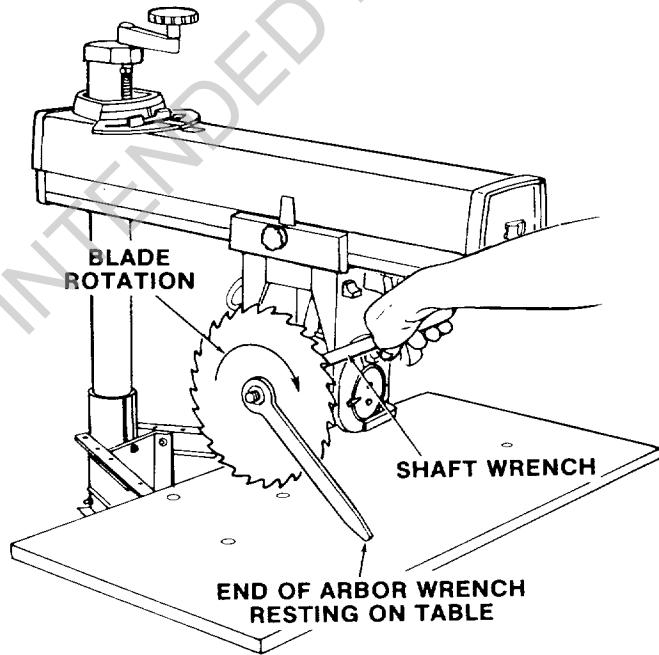
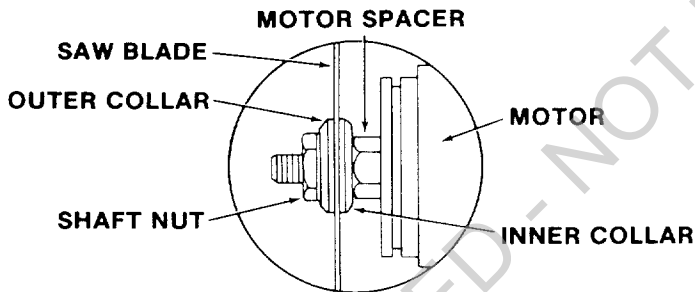
NOTE: Be certain that all six (6) screws are at least 1/2 turn tightened beyond hand tight. If necessary adjust all screws down an equal amount and recheck alignment.



INSTALL SAW BLADE

Reposition motor and install saw blade as shown. MOTOR SHAFT HAS LEFT HAND THREADS.

NOTE: Do not overtighten arbor nut. Use the arbor wrench to just "snug" it.



BEFORE STARTING STEP TWO

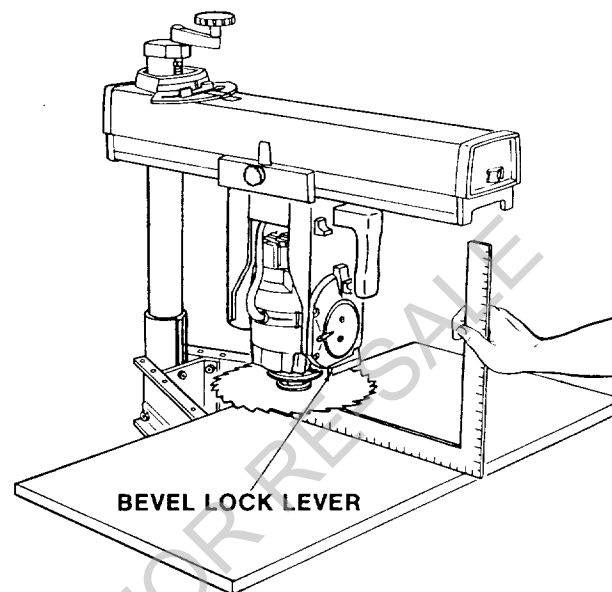
Please observe the following suggestions to achieve the greatest possible accuracy from your saw.

Always index your saw to the same side of the index positions for both the arm and the motor. For instance, once the miter index pin is engaged fully into the 0° miter position, push arm to the left while locking the lever. Similarly, once the bevel index knob is indexed into the 0° bevel position, push down on the rear of the motor while locking the bevel lock lever. If the indexing is done in this way for all alignment adjustments, you will be able to index repeatably. The same procedure should be followed for all index positions.

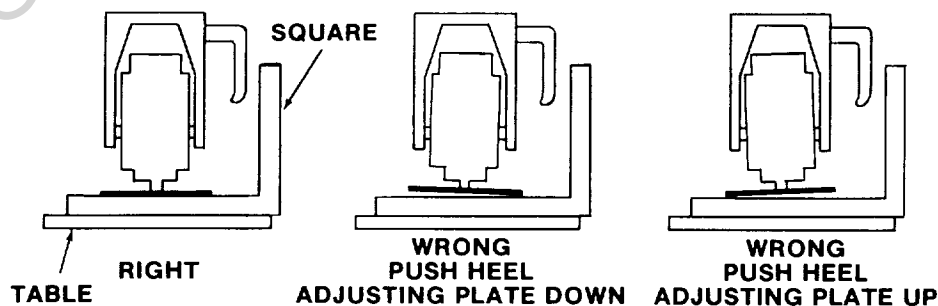
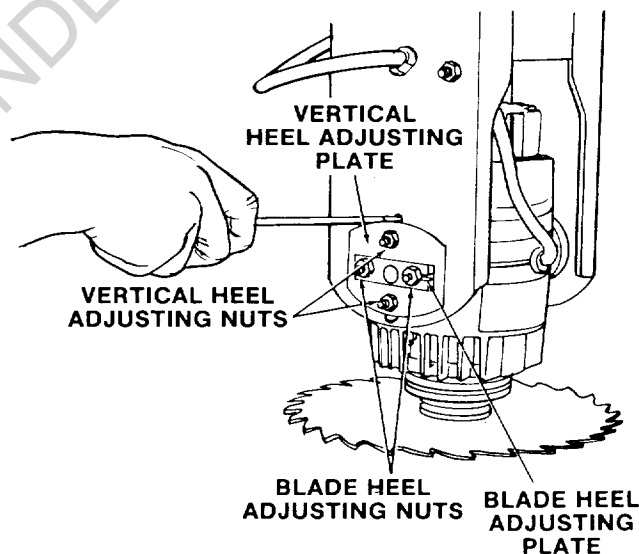
STEP TWO

VERTICAL HEEL ADJUSTMENT

1. With arm in 0° miter position, elevate saw and rotate motor arbor to a vertical position (Blade Horizontal) and check for heel. Make sure bevel lock lever is locked.
2. Position square between the blade and table as shown. Lower the arm to where the blade just rests against the square. Do not allow the square to rest against a "set-out" tooth, it must rest flat against the blade side.
3. If the saw blade is parallel with the table top (no visible gap appears between the saw blade and square), no adjustment is required.



4. If there is a visible gap between the sawblade and square, a bevel heel condition exists and adjustment is required.
 - a. To correct, loosen the two vertical heel adjusting nuts and the two blade heel adjusting nuts until you can move the vertical heel adjusting plate to remove the gap between sawblade and square.
 - b. Tighten the two blade heel adjusting nuts and recheck.
 - c. Push the Vertical Heel Adjusting Plate up against the bottom of the Blade Heel Adjusting Plate and then tighten the two vertical heel adjusting nuts.
 - d. Elevate arm and position motor to the 90° crosscut position.



assembly and alignment

STEP THREE

SQUARING CROSSCUT TRAVEL (CARRIAGE TRAVELS IN STRAIGHT LINE)

1. Check that arm is indexed and locked at 0°.
2. Lower the arm until saw blade just clears the front table. Lock the yoke clamp handle and bevel lock lever. Place a framing square on the table as shown with one leg behind the table and position the blade and square until the leg of the square just contacts a tooth of the blade. Mark this tooth.

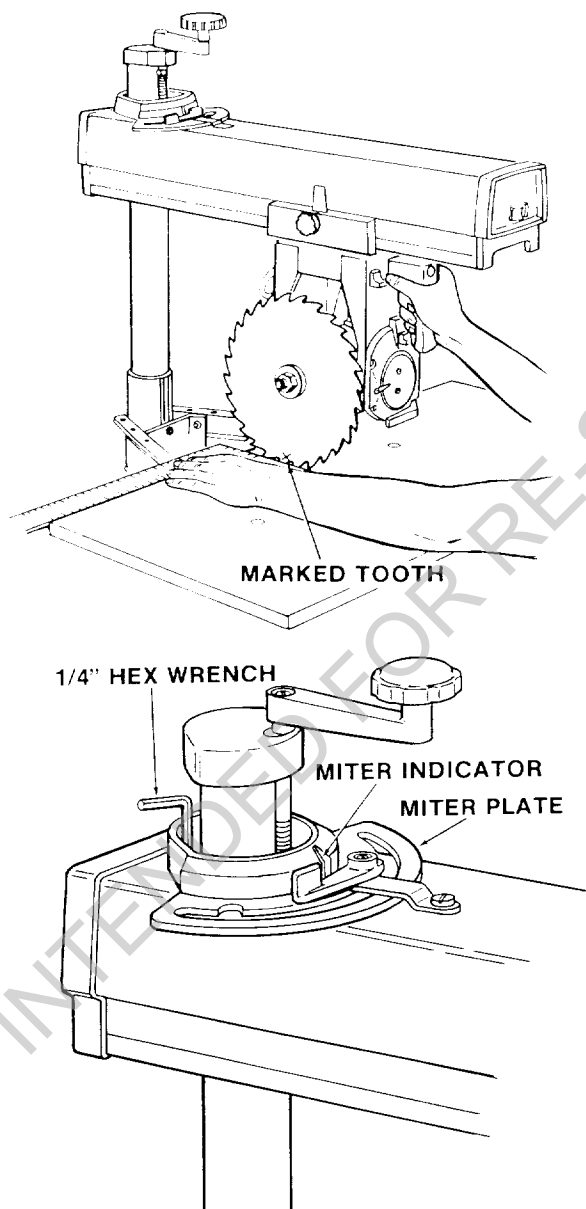
NOTE: The framing (or combination) square must be "true" — see start of "Assembly and Alignment" section for checking method.

3. When the carriage is moved back and forth on the arm, the marked tooth should just touch the square at all points. If marked tooth moves into square or away from square the following adjustments are required.

- a. Loosen (3) 5/16-18 Socket Head Cap Screws on top of miter plate using the 1/4" hex wrench. Leave Miter Lock Lever tightened.
- b. Move the end of the arm in the proper direction to make marked tooth follow edge of square when the saw blade is moved along arm in a "crosscut" manner.
- c. **RETIGHTEN** (3) Socket Head Cap Screws and recheck "crosscut" travel.

NOTE: This squaring of the crosscut travel is the only adjustment required for all indexed miter positions.

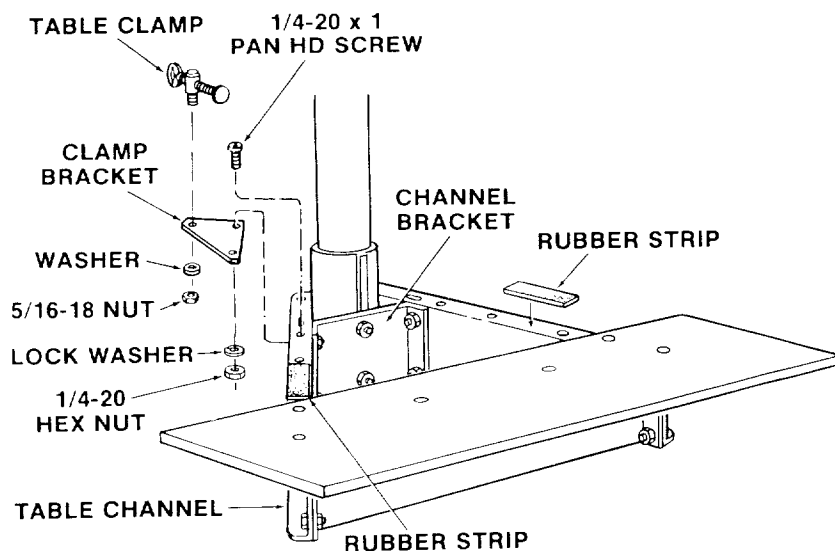
- d. Set miter indicator by loosening both the screw holding the pointer and the miter lock lever, and adjusting the pointer to line up with 0°. Tighten the screw and then the lever.



INSTALLING TABLE CLAMPS

1. Install the Clamp Bracket under the top edge of the Table Channel using two 1/4-20 x 3/4 Pan Head Screws, Lockwashers and 1/4-20 hex nuts. Use the two holes in the Table Channel that are in front of the Channel Bracket. Repeat on other side.
2. Install the Table Clamp through the larger hole in the Clamp Bracket using the 1" washer and 5/16-18 locknut. Repeat on other side.
3. Add two (2) Rubber Strips behind front table on top of table channels as illustrated.
4. Place the fence, spacer and rear table in place behind the front table board and clamp in place using Table Clamps.

NOTE: The life of the saw table will be lengthened considerably if you will cover the front table with a fitted piece of 1/4 inch plywood or hardboard. This should be tacked in place for easy replacement. Use of such a cover will allow you to do all cutting into the cover, rather than your table top. Make and Install a new wider fence so it extends 3/4 inch above the top surface of the cover.

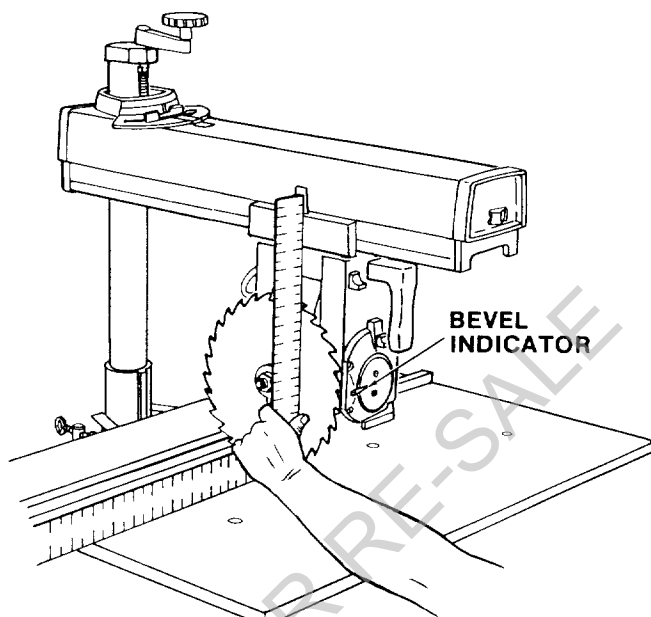


NOTE: Before checking the blade squareness, be sure that the bevel index pin is completely seated into the 0° index notch and the bevel lever is in the clamped position.

STEP FOUR SQUARING SAW BLADE TO (WORK) TABLE

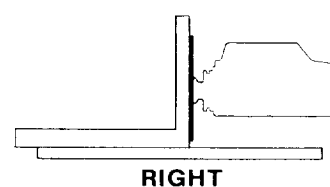
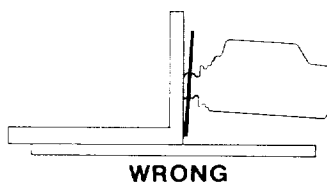
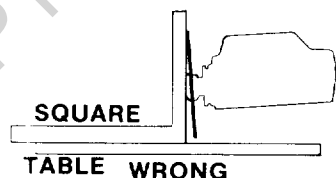
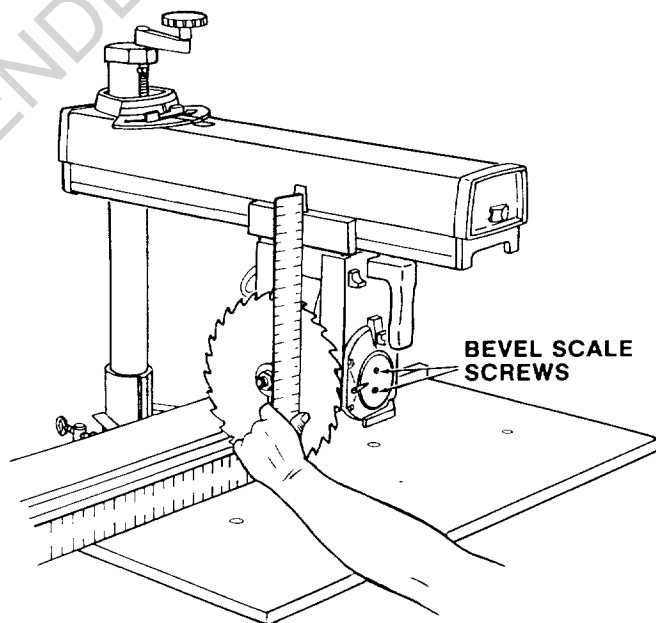
NOTE: If alignment procedure step one was not performed, this adjustment can not be accomplished.

1. Place a framing square on the table with the short leg against the saw blade. Do not allow the square to rest against a "set-out" tooth; it must rest flat against the blade side. The square should be parallel to the fence and square to the table.
2. If the saw is square with the table top, such that there is no visible gap between the side of the square and the saw blade as shown below, no adjustment is necessary. Set the bevel indicator to the 0° mark.



3. If there is a gap, perform the following adjustment.

- a. Carefully remove the two screws holding the bevel scale. There are two spacers on these screws behind the bevel scale.
- b. Loosen the four (4) socket head cap screws using the 5/32" hex wrench provided.
- c. Rotate the motor until the blade is flat against the square while holding the square firmly against the table.
- d. Snug up each of the four bolts and recheck squareness. If square, tighten the four bolts.
- e. Reassemble the bevel scale, being sure to place the spacers between the scale and the motor.
- f. Set bevel indicator to the 0° mark.



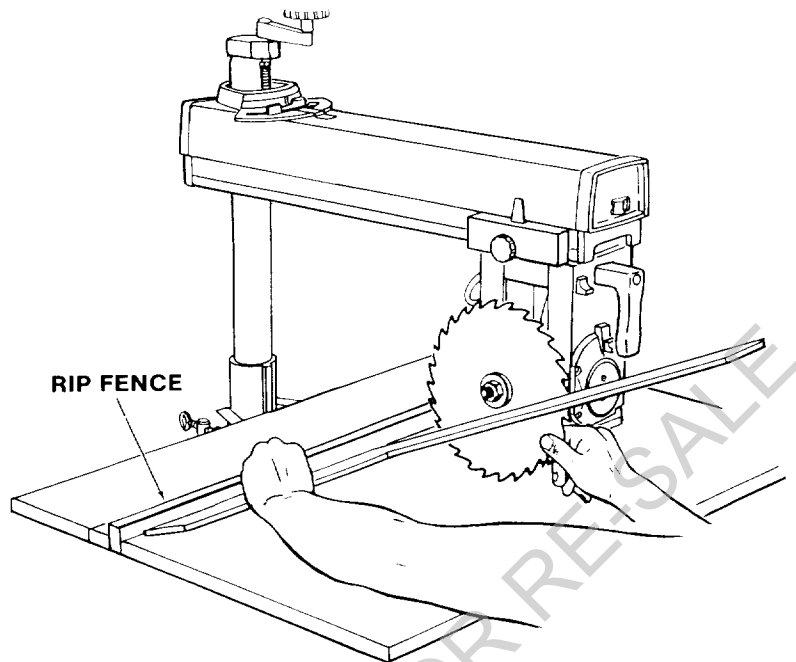
assembly and alignment

STEP FIVE

SQUARING BLADE TO RIP FENCE — HORIZONTAL HEEL ADJUSTMET

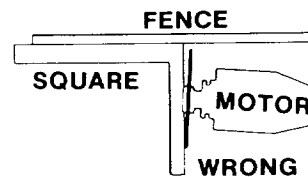
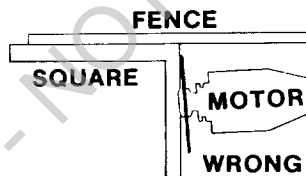
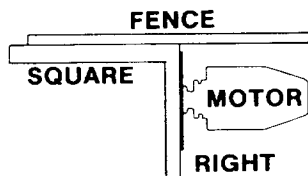
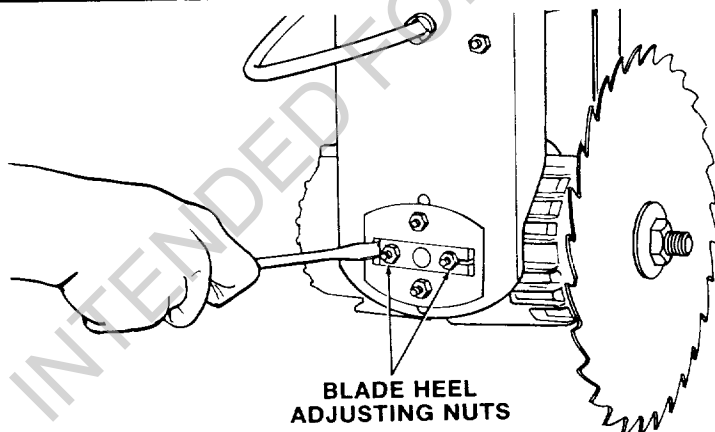
NOTE: If alignment procedure steps two, three and four were not performed, this alignment step cannot be accomplished.

1. Position carriage to the full forward position with the Arm elevated so that the saw blade just clears the table board. Place a framing square against the fence and saw blade, as shown. The short leg of the square must be held firmly against both the fence and the table top, and the long leg must rest against the side of the blade without touching any saw teeth.
2. If there is no gap between the sawblade and the square as shown below, no further adjustment is necessary.



3. If there is a gap, a heel condition exists and is corrected as follows:
 - a. Loosen the two (2) blade heel adjusting nuts.
 - b. Move the adjusting plate with a medium screwdriver as shown, until gap between sawblade and square is eliminated.
 - c. Tighten the two nuts.
 - d. Recheck for "heel".

NOTE: This alignment procedure will simultaneously set the yoke indexing positions for blade in and out rip.

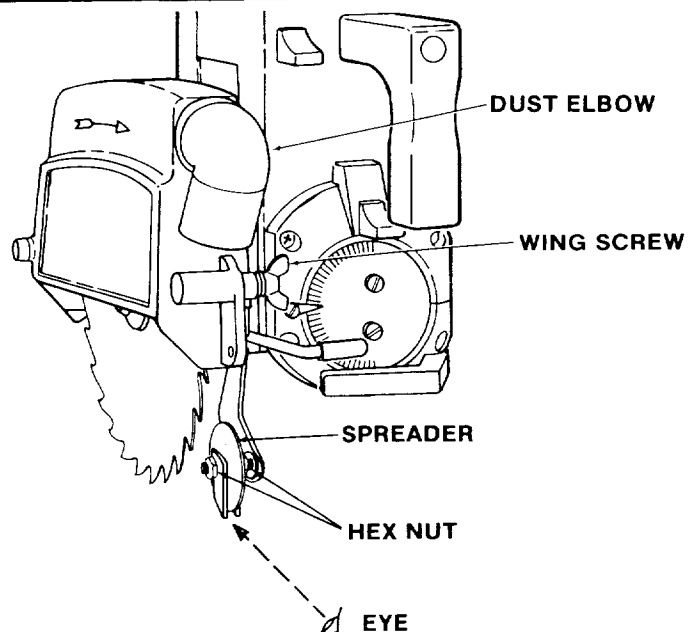


STEP SIX

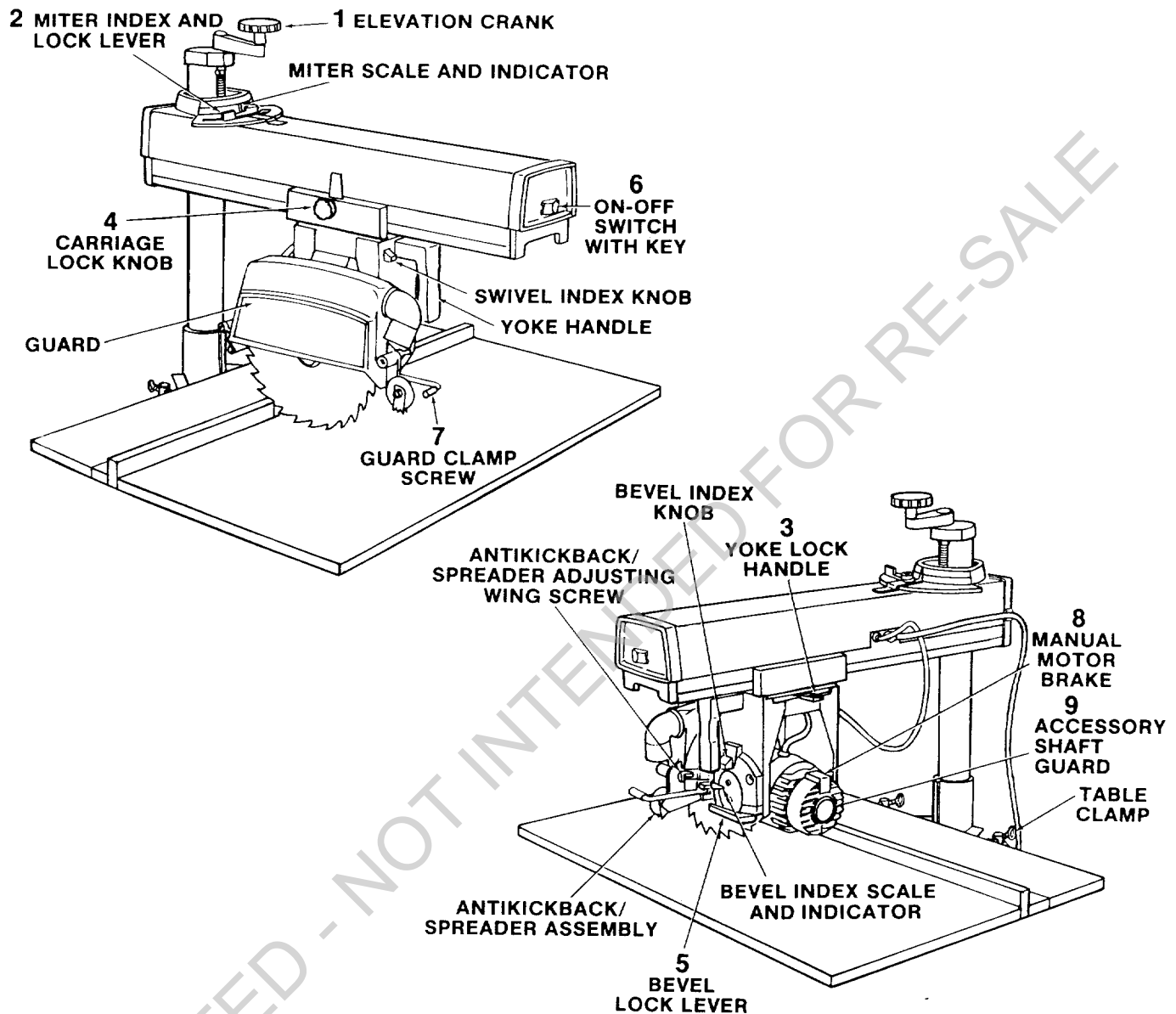
ALIGNMENT OF SPREADER FOR RIPPING

WARNING: NEVER POSITION THE GUARD OR ANTIKICKBACK ASSEMBLY WITH POWER ON; NOR POSITION ANTIKICKBACK PAWLS BY GRASPING PAWLS OR SPREADER.

1. Install Blade Guard and Dust Elbow.
2. Lower the spreader assembly by loosening the wing screw and sight (visually) to check for proper alignment of spreader with the sawblade as shown. If the spreader is not aligned, adjust it as follows:
 - (a) Loosen two hex nuts, one on each side of spreader.
 - (b) Rotate hex nuts with 1/2" wrench until the spreader is directly in line with sawblade.
 - (c) Retighten the assembly by holding one nut and tightening the other.



location and function of controls



The versatility of the Radial Saw is due, in part, to its controls, and these are the keys to its successful operation. Learn to use the controls for all operations before actually starting to saw.

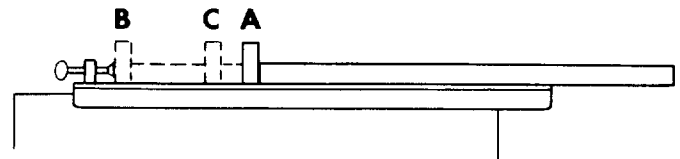
You should become familiar with the controls and the operating instructions that follow before operating your saw.

FENCE LOCATIONS

Position (A) is used for crosscut type and narrow ripping operations.

Position (B) is used for maximum width ripping with saw in "out-rip" position and width of rip greater than 16.

Position (C) is used for maximum width crosscutting material less than 1" thick.



1. Depth of cut (Elevation)

- The diagram shows the elevation crank which is used to raise and lower the saw blade.
- Clockwise rotation raises the blade . . . counterclockwise rotation lowers it.

location and function of controls

2. Angle of Cut (Miter)

- The miter index-lock lever, unlocks and indexes the arm for Left and Right Miter cuts.
- The arm is rotated by loosening the miter index lock lever, pushing lever forward, out of index slot, and setting Arm to desired miter angle **NOTE:** After positioning arm to the desired miter angle, lock miter index lock lever.

3. Yoke Pivot (Ripping)

- Two controls are used in this operation. They are: The swivel index knob and the yoke lock handle.
- The swivel index pin indexes the yoke at 90° clockwise and counterclockwise from the crosscut position. Push down on spring-loaded swivel index knob to release this pin.
- The yoke lock handle locks the yoke to the carriage in any position. Pull the handle forward to release the yoke; push the handle rearward to lock the yoke.

4. Carriage Lock

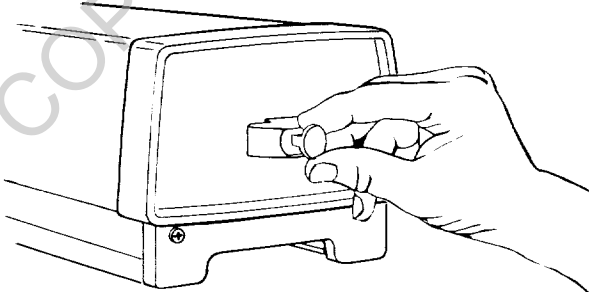
- The carriage lock knob is rotated clockwise to lock the carriage on the radial arm, and counterclockwise to release it.
- When performing crosscutting operations the carriage lock knob must be rotated counterclockwise until the carriage is free to travel along the arm. This knob should be tightened until the operator is ready to grasp the yoke handle and make a cut.

5. Blade Angle (Bevel)

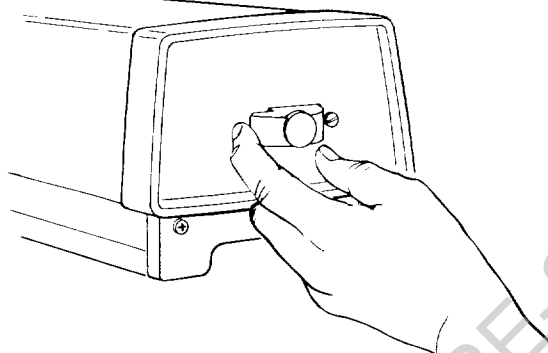
- The two controls used in angular positioning and indexing of the motor, to provide the desired saw-blade (bevel) angle, are: bevel lock lever and bevel-index knob.
- The bevel-index scale indicates the angular position of the motor with respect to horizontal, from 0° to 90° in either vertical position.
- The bevel index knob automatically indexes the motor at 0°, 45° and 90°. Move bevel index knob up while positioning the blade, then release it. At any other position it does not engage.
- The bevel lock lever locks the motor to the yoke when the motor is in any position. Pull lever to release and push to lock.

6. Power Switch and Key

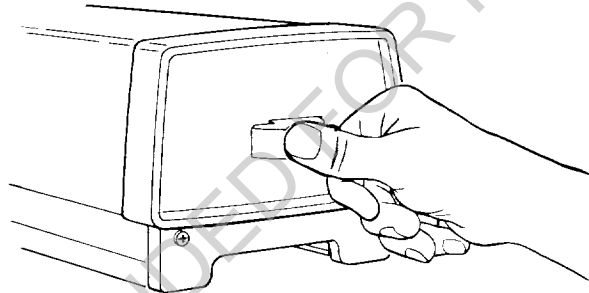
- Insert key into switch lock.



- Insert finger under end of switch lever and pull end out, to turn switch on.

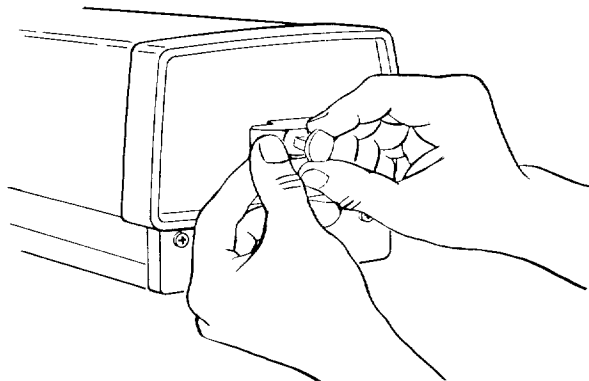


- Push lever in to turn switch off.



- Pull key out to lock switch.

WARNING: THIS LOCKING FEATURE IS PROVIDED TO PREVENT UNAUTHORIZED USE OF YOUR SAW. ALWAYS REMOVE THE KEY AND KEEP IT IN A SAFE PLACE. TO REMOVE KEY, HOLD THUMB ON END OF LEVER TO KEEP SWITCH IN "OFF" POSITION AND PULL KEY STRAIGHT OUT.



WARNING: FOR YOUR OWN SAFETY ALWAYS LOCK THE SWITCH "OFF" WHEN SAW IS NOT IN USE. REMOVE KEY AND KEEP IT IN A SAFE PLACE... ALSO IN THE EVENT OF A POWER FAILURE (ALL YOUR LIGHTS GO OUT) TURN SWITCH OFF. LOCK IT AND REMOVE THE KEY. THIS WILL PREVENT THE SAW FROM STARTING UP AGAIN WHEN THE POWER COMES BACK ON.

7. Blade Guard & Antikickback/Spreader Assembly — Positioning for Ripping

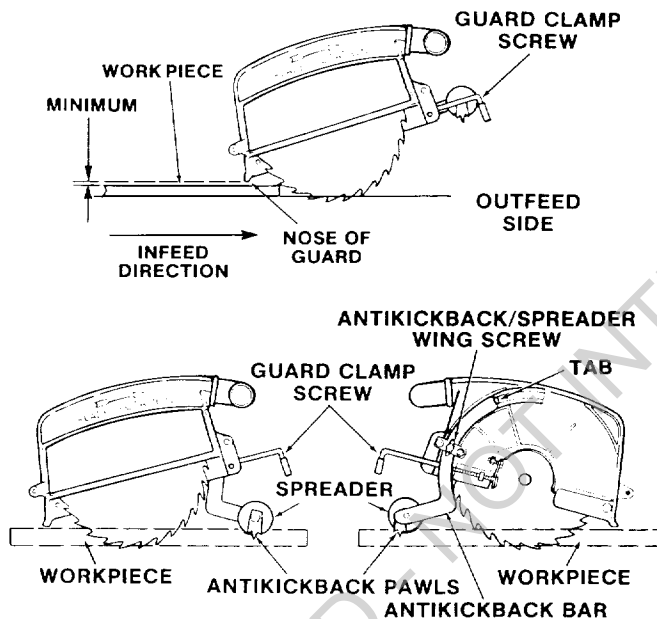
WARNING: NEVER POSITION THE GUARD OR ANTIKICKBACK/SPREADER ASSEMBLY WITH THE SAW RUNNING. NEVER POSITION THE ANTIKICKBACK/SPREADER ASSEMBLY

**BY GRASPING THE PAWLS OR SPREADER;
USE THE TAB LOCATED ON THE
ANTIKICKBACK BAR.**

- A. The Blade Guard is positioned by loosening the guard clamp screw and rotating the guard so that the "nose" just clears the workpiece as shown.

This adjustment is necessary to:

- 1) Protect the operator from accidentally contacting the sawblade from the "infeed" direction.
- 2) Prevent the workpiece from being lifted from the table by the sawblade thus minimizing lifting or fluttering (particularly with thin and /or light workpieces).
- 3) Minimize sawdust from being thrown toward the operator.
- 4) Minimize the possibility of a thin pusher board from riding up on top of the workpiece leading to loss of control of the workpiece.



- B. The antikickback and spreader assembly is used during ripping operations and is adjustable to accommodate the thickness of the board being ripped.

The antikickback and spreader assembly is positioned by loosening the wing screw and with the tab provided, positioning the antikickback and spreader assembly until the pawl assumes approximately the position shown above. Tighten the wing screw.

Make sure by trial — **without saw running** — before starting the cut that the antikickback pawls will stop a kickback once it has started. Insert workpiece alongside spreader under outer set of pawls by approaching pawls in the feed direction. Push workpiece sharply in the direction of a kickback (opposite to direction of feed). Readjust Pawls if they do not stop the kickback motion by biting into the workpiece.

These adjustments are necessary for:

Antikickback Pawls

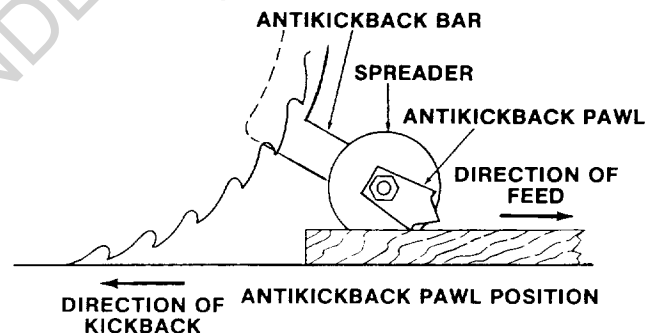
1. Stop a kickback if generated

Spreader

1. Prevent kerf from closing in on sawblade and possible kickback;
2. Prevent "wrong-way feed". "Wrong-way feed" is feeding the workpiece — when sawblade is in a rip position — into the outfeed side of the cutting tool (sawblade, dado, molding head, etc.), the side containing the antikickback/spreader. This can be extremely hazardous because the sawblade may grab the workpiece and throw it violently toward the nose of the guard (infeed side of the tool). See **Danger** label on the outfeed side of the guard just below the dust elbow.

"Wrong-way feed" occurs when the teeth themselves cut, or attempt to cut, a kerf in the workpiece. This differs from a "kickback" which is generated by the **sides** (one or both) of the teeth, because of binding between the fence (heel), pinching of the sides of the sawblade (failure to use spreader), and/or inadequate set of teeth of sawblade.

3. Act as a partial guard regarding accidental contact with the sawblade at the outfeed side when ripping, and leading edge when crosscutting.



8. The Manual Motor Brake

- a. The manual brake is located on the motor shaft at the right hand end of the motor.
- b. "Coasting cutting tool can be dangerous." Apply brake immediately to stop cutting tool when switch is turned off. Keep pressure on brake until sawblade or other cutting tool has come to a complete stop before removing workpiece or scrap, or taking any other action.

9. Accessory Shaft

NOTE: When using an accessory such as a drill chuck attached to end of motor shaft, it will be necessary to remove the accessory shaft cover.

CAUTION: Motor spacer, both blade collars and shaft nut must be installed when using accessory shaft. Be sure to re-install the accessory shaft cover after removing the accessory.

Use only the following recommended accessories:

Drill chuck, Sanding drum, and Router adapter.

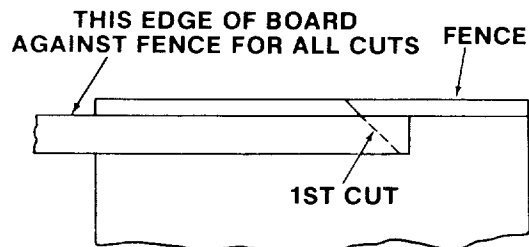
CAUTION: The sawblade, dado, or cutting tool must be removed from the saw arbor before using the accessory shaft. **NEVER** operate the saw with cutting tools (including sanding accessories) installed on both ends of the saw arbor.

location and function of controls

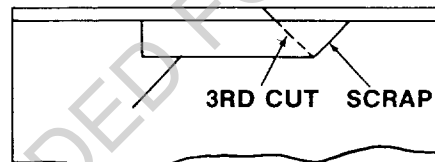
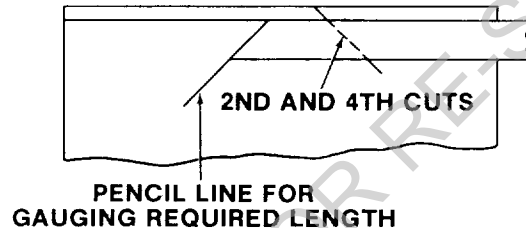
HAVE YOU FOLLOWED ALL SIX STEPS OF THE ALIGNMENT PROCEDURE? IF YOU HAVE NOT FOLLOWED THEM IN THEIR PROPER SEQUENCE, YOU CANNOT EXPECT ACCURATE CUTTING RESULTS.

In addition to the proper alignment of your saw, you must also become familiar with the following practices in order to expect the best results.

1. Edge of workpiece which is placed against fence must be as straight as the long side of your framing square.
2. Workpiece must be as flat as the front table board on your saw.
3. There must be no sawdust or other wood chips between the fence and front table board.
4. There must be no sawdust or other wood chips underneath workpiece or between workpiece and fence.
5. Workpiece must be held tightly against fence and down against the table . . . this is especially important when making angle cuts because the workpiece has a tendency to move.
6. Always use the correct sawblade for the Job . . . Always keep it sharp.
7. When making a four sided frame:
 - a. The two side pieces must be exactly the same length.
 - b. The top and bottom pieces must be exactly the same length.
 - c. Always place the same edge of the workpiece against, the fence . . . turn the workpiece end



Turn workpiece over end for end . . . keep same edge against fence when making successive cuts.



for end for the successive cuts and mark a pencil line on the table for gauging the required length.

Deviation from any of the above practices will have an effect on the accuracy of the cuts that you make.

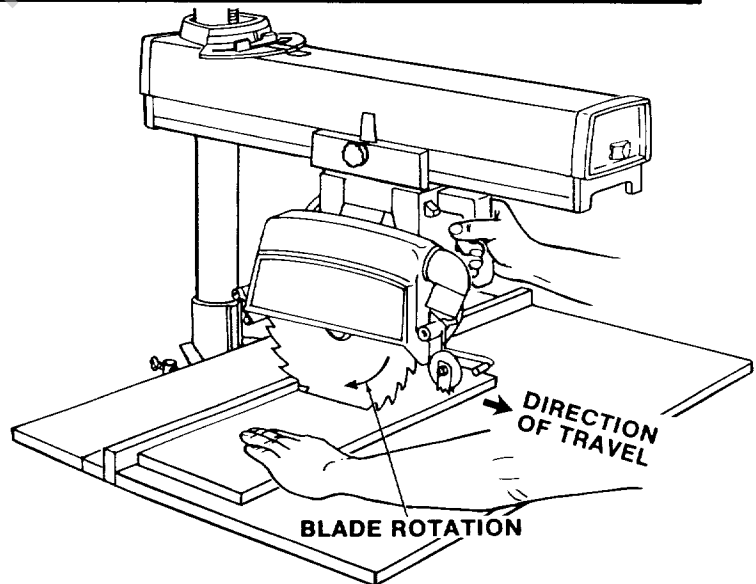
basic saw operation

Basic saw operations are summarized into six categories, explained and illustrated in the following paragraphs. A book entitled "Power Tool Know How Radial Saw" is available at your nearest Sears Retail Store or Catalog Store. This book contains considerable data applicable to the radial saw.

NOTE: Refer to paragraphs under "LOCATION AND FUNCTION OF CONTROLS" for illustrations and descriptions of controls.

Cutting a kerf in the table boards and fence.

1. Elevate arm so that the blade clears the top of the fence and then push the motor to its most rearward position.
2. Lower the arm so that the blade just clears the rear table. Note: the rear table should be at the same level as the front table.
3. Lock the carriage lock knob. Plug saw into a grounded outlet. (See section titled "electrical connections").
4. Insert the yellow key into switch and, while holding the Yoke handle, turn the switch on.
5. With the motor on, lower the sawblade to where it just cuts into the table approximately 1/32 to 1/16 inch deep. While holding the Yoke handle and with motor still on loosen the carriage lock knob and then pull the motor forward and out to



the front stop on the arm. This will allow the blade to cut through the fence and to cut a shallow kerf in the table 1/32" to 1/16 inch deep to provide for the blade cutting completely through the workpiece.

NOTE: A kerf will have to be cut into the table prior to making miter, bevel, or rip cuts using this procedure.

REQUIREMENTS FOR CROSSCUT

Board positioned (stationary) against fence and laying flat on table top.

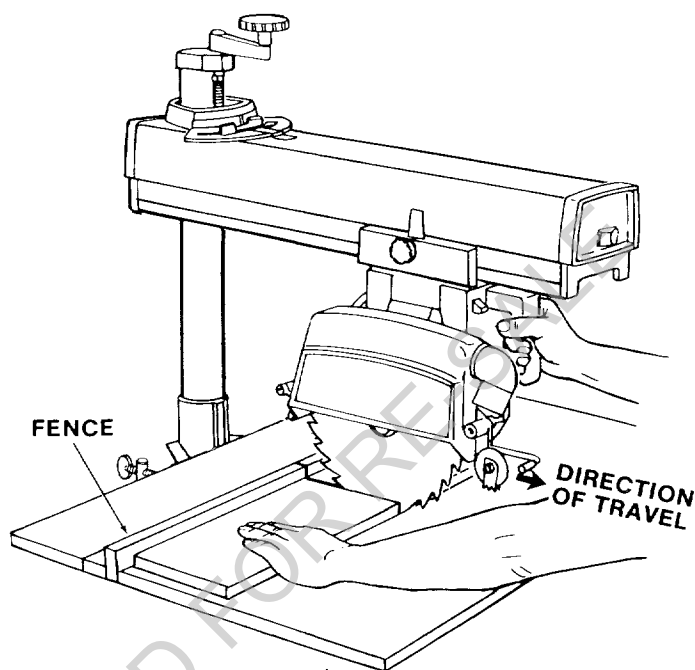
(OPERATIONS 1 THROUGH 4)

1. Arbor nut must be tight and saw blade guard installed in horizontal position.
2. Miter lock lever must be in locked position.
3. Adjust the antikickback assembly so the pawls just clear the workpiece or the fence, whichever is higher.
4. Work must be held firmly against the table and fence. For workpieces thicker than the fence is high, install a higher fence (at least workpiece thickness). Always place the fence in the most forward position (farthest from the column support) compatible with the workpiece being processed and the operation being performed. With the carriage fully retracted, the blade must not contact the workpiece when placed against the fence, within the stated capacities of your saw.
5. Blade should be sharp and correctly set.
6. Hands must be kept well away from saw blade.
7. Yoke lock handle must be in locked position.
8. Bevel index lever must be locked.
9. Blade should cut into the table or plywood cover 1/32 to 1/16 inch.
10. **Pull the saw forward just far enough to sever the lumber and then return it to behind the fence.** It is dangerous if the blade has been pulled too far out beyond the piece being cut. When it is returned it can pick up the right hand piece and throw it over the fence.
11. Return carriage to the full rear position and brake blade to a complete stop before removing workpiece.
12. For operations No. 3 and No. 4 observe additional instructions under paragraph "Location and Function of Controls" "Blade Angle"

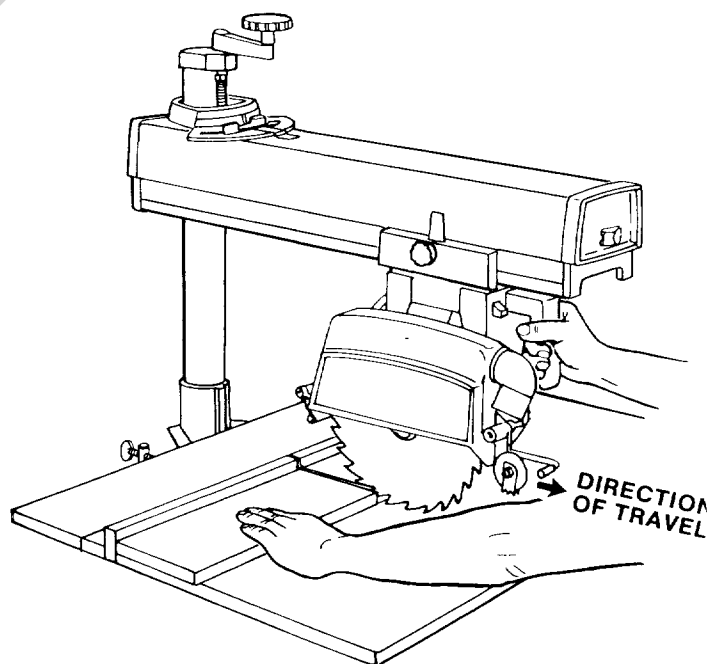
OPERATION No. 1 — CROSSCUT

Crosscutting is the process of sawing the workpiece by pulling the saw blade through it and using the fence as a support for the edge of the workpiece. **Never crosscut free-hand, (without, workpiece against the fence).** Always return carriage to the full rear position after each cut.

WARNING: BEFORE CROSSCUTTING; MAKE SURE THE ARM MITER LOCK LEVER, BEVEL LOCK LEVER AND YOKE ARE ALL LOCKED. NEVER USE A LENGTH STOP OR A FIXED GUIDE ON THE FREE END OR EDGE OF A WORKPIECE. DO NOT CROSSCUT WORKPIECE THAT PLACES YOUR HANDS CLOSE TO THE PATH OF THE SAWBLADE. WHEN PULLING THE SAW TOWARD YOU DURING CROSSCUTTING, THE BLADE TENDS TO FEED ITSELF THROUGH THE WORK DUE TO THE ROTATION OF THE BLADE AND THE DIRECTION OF THE FEED. THEREFORE, YOU SHOULD DEVELOP THE HABIT OF HOLDING YOUR RIGHT FOREARM IN LINE WITH THE SAW ARM DURING PULL THROUGH AND RETURN.



PROPER
(SEE ITEM "10" AT LEFT)

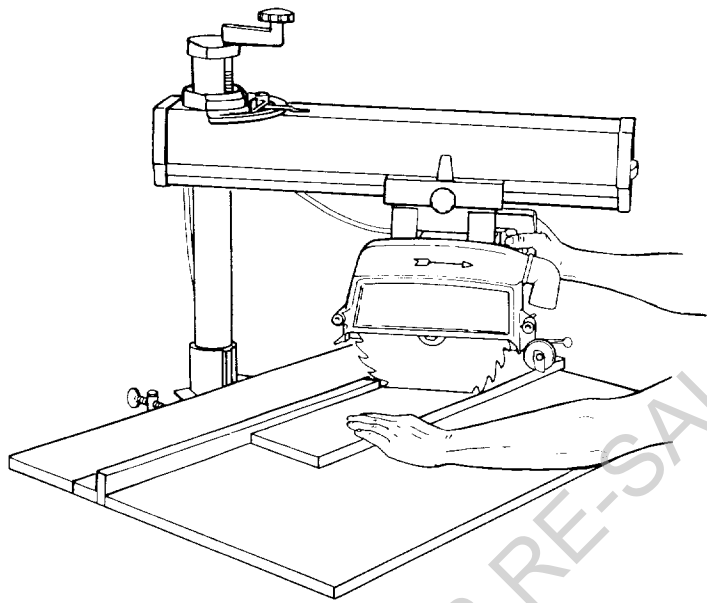


IMPROPER
(SEE ITEM "10" AT LEFT)

basic saw operation

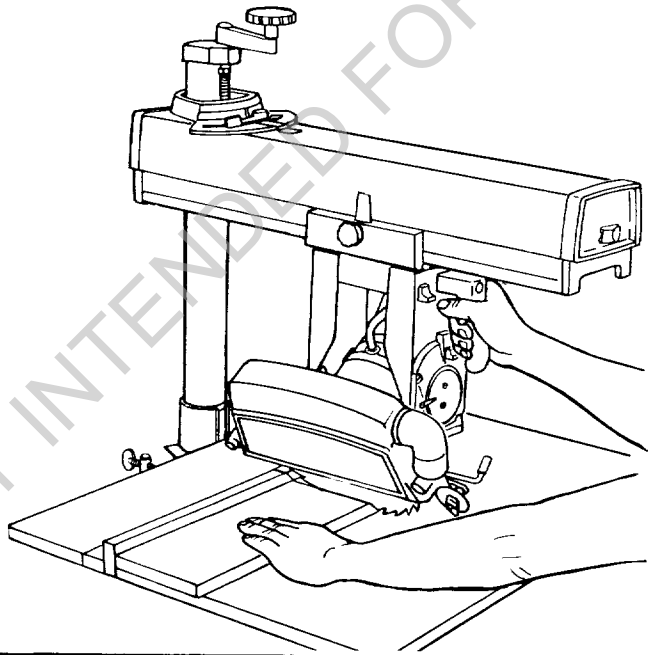
OPERATION No. 2 — MITER CROSSCUT

Miter crosscutting is the process of sawing a board at any angle other than a 90° (square) cut. The 45° miter angle is a popular one, since two boards cut to 45° can be assembled to form a 90° corner for producing a square or rectangular frame. The radial arm is set to the desired angle of cut; yoke and bevel settings indexed at 0° (and locked) as in square crosscutting. The board being cut is held firmly against the fence (guide) and the carriage pulled forward along the radial arm to perform the desired cut. As in "Operation No. 1", the carriage must be returned to full rear position and the saw blade braked to a complete stop before removing the boards from saw table.



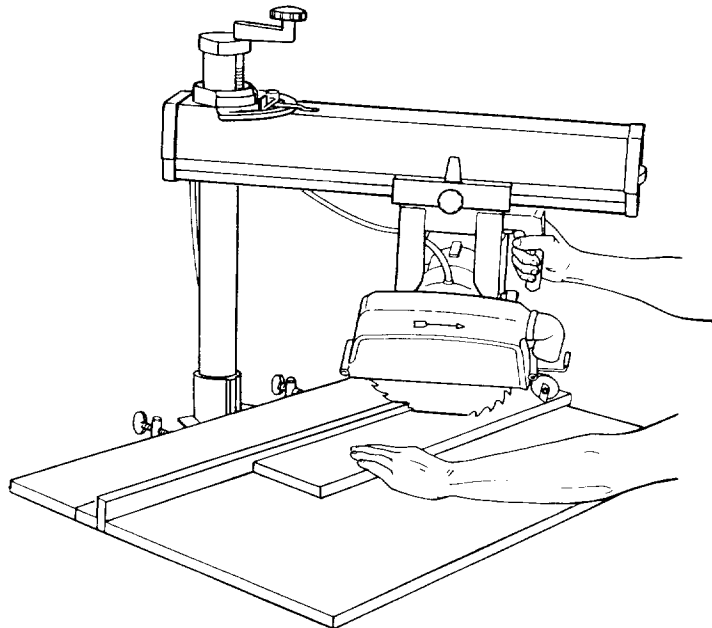
OPERATION NO. 3 — BEVEL CROSSCUT

Bevel crosscutting is the process of sawing at 90° (square) across the board with the sawblade set at an angle other than 90° to the saw table. The radial arm and yoke are indexed at 0° and locked, but the bevel is set to the desired angle of cut. The board is held firmly against the fence and the carriage pulled forward along the radial arm to produce the cut. The carriage must be returned to full rearward position and the saw blade braked to a complete stop before removing the boards from saw table.



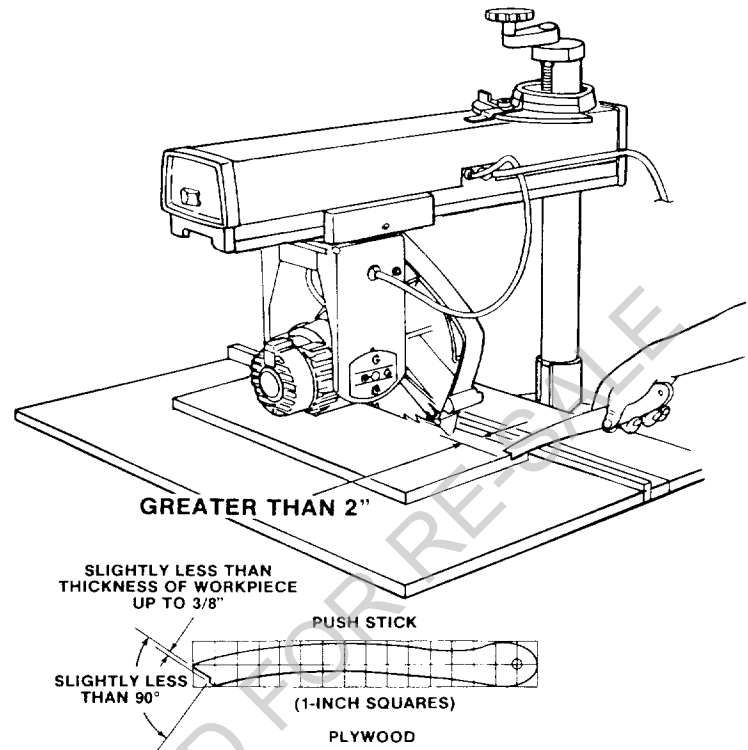
OPERATION No. 4 — COMPOUND CROSSCUT

Compound crosscutting is the combination of miter and bevel crosscuts. The radial arm and bevel are set to produce the desired cut; the yoke is indexed at 0° and locked. The board is held firmly against the fence and the carriage pulled forward along the radial arm to produce the cut. Again, the carriage must be returned to full rearward position and the saw blade braked to a complete stop before removing boards from saw table.



REQUIREMENTS WHEN RIPPING (OPERATIONS 5 AND 6)

1. Carriage lock knob must be locked.
2. Radial arm must be locked in 0° position.
3. Work must be held firmly against table and fence while feeding through.
4. **Guard spreader and antikickback (AKB) assembly must be properly set.** OBSERVE INSTRUCTIONS IN PARAGRAPH, "POSITIONING GUARD, AND ANTIKICKBACK AND SPREADER ASSEMBLY FOR RIPPING" UNDER "LOCATION AND FUNCTION OF CONTROLS".
5. Blade should be sharp and correctly set.
6. When ripping narrow stock, less than 6 inches but more than 2 inches between the guard and the fence (guide), use a "Push Stick" at least 1/4" thick and at least 16" long so the workpiece is clear of the blade before your hand contacts the guard. **NOTE:** do not attempt to make the "push stick" on the radial saw — use hand tools, band saw, or saber saw.



7. When ripping stock 2 inches or less between the blade and fence (guide) use an Auxiliary Fence and Push Block. Make these "work helpers" to the dimensions shown.

Make the **Auxiliary Fence** using a piece of 3/8 in. and 3/4 in. plywood. Fasten together with glue and nails.

Make the **Push Block** using a piece of 3/8 in. and 3/4 in. plywood.

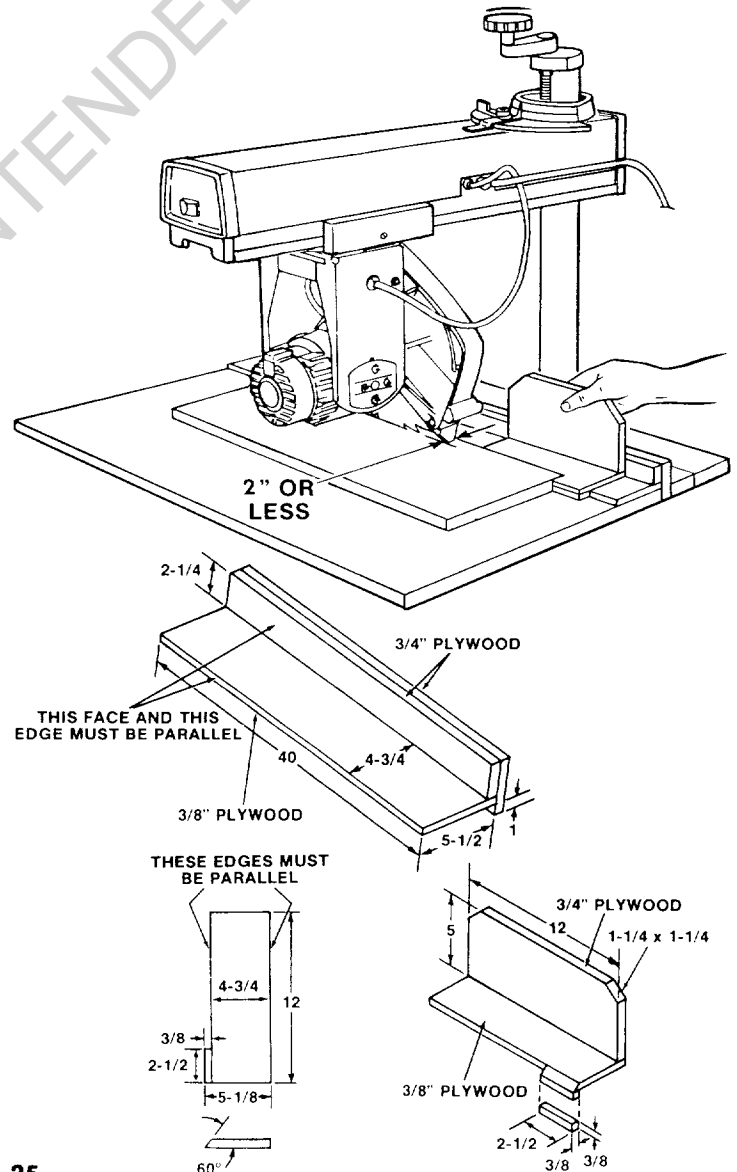
NOTE: Since the Push Block is used with the Auxiliary Fence, the 4-3/4 in. dimensions must be held identical on both the pieces.

The small piece of wood 3/8 in. x 3/8 in. x 2-1/2 in. should be GLUED to the plywood . . . DO NOT USE NAILS. This is to prevent dulling the sawblade in the event you mistakenly cut into the push block.

Position the handle in the center of the plywood and fasten together with glue and woodscrews.

The push block should feed the stock being ripped until the stock is clear of the rear of the blade, and then pulled back with use of the grip.

8. Hands must be kept well away from saw blade.
9. Saw blade **MUST** be parallel to fence, to minimize possibility of kickbacks.



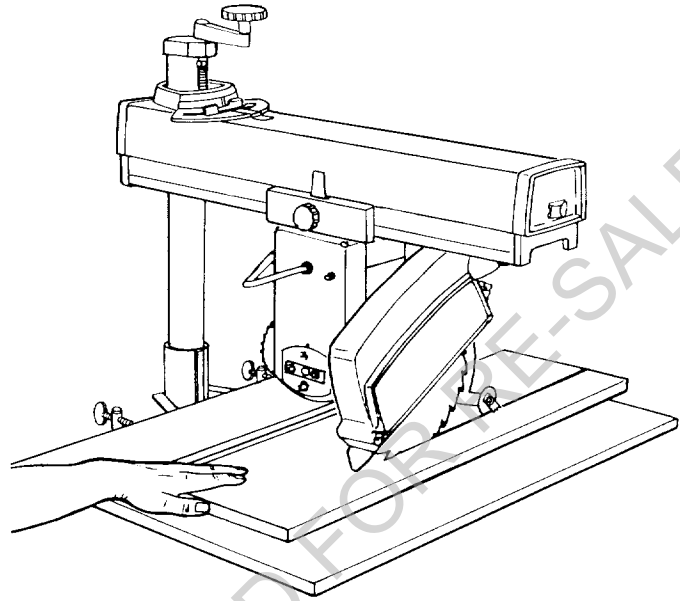
OPERATION No. 5 — OUT-RIPPING AND IN-RIPPING

WARNING: NEVER RIP FREE-HAND (WITHOUT USING THE FENCE). BEFORE RIPPING, MAKE SURE THE GUARD, ANTIKICKBACK AND SPREADER ASSEMBLY ARE SET UP PROPERLY. MAKE SURE THE SAWBLADE IS PARALLEL TO THE FENCE. NEVER RIP WORKPIECES SHORTER THAN TWELVE INCHES.

basic saw operation

1. Ripping is the process of sawing the workpiece by feeding it into the saw blade when using the fence as a guide and as a positioning device to obtain the desired width of cut. The sawblade is parallel to the fence.
2. Since the work is pushed along the fence, it must have a straight edge in order to make sliding contact with the fence. Also, the work must make solid contact with the table, so that it will not wobble. Provide a straight edge, even if this means temporarily nailing of an auxiliary straight-edge board to the work. If the workpiece is warped, turn the hollow side down.
3. Always use the saw guard and make sure the spreader is correctly aligned with the saw kerf and antikickback pawls properly adjusted. Wood cut with the grain tends to spring the kerf closed and bind the blade and a kickback could occur.
4. Stand a little to one side of center to be clear of work in case of kickback.
5. When ripping narrow work, always use a push stick applied to the section of the workpiece between the blade and fence . . . push the work past the blade so it is clear of the blade. This procedure will minimize the possibility of kickbacks.

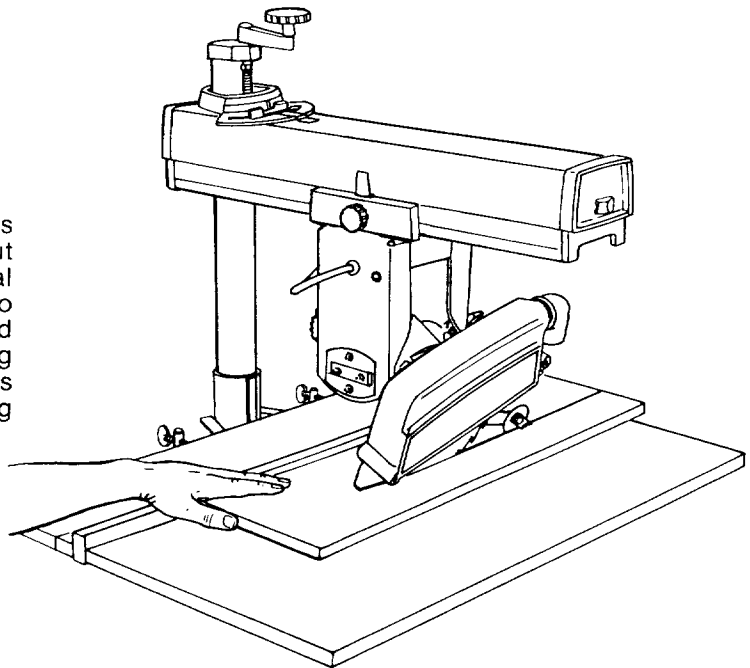
In-Ripping. The radial arm and bevel are indexed at 0° and locked, but the yoke is turned 90 degrees in a clockwise direction (viewed from above) from the crosscut position. Thus, when standing in front of the saw, the blade would be rotating counterclockwise. After positioning the guard and antikickback assembly the workpiece is fed from the right-hand side of the saw.



Out-Ripping. The radial arm and bevel are indexed at 0° and locked, but the yoke is turned 90 degrees in a counterclockwise direction (viewed from above), from the crosscut position. When standing in front of the saw, the blade would be rotating clockwise. After positioning the guard and antikickback assembly the workpiece is fed from the left-hand side of the saw.

OPERATION No. 6 — BEVEL RIPPING

Bevel ripping is either in-ripping or out-ripping as described above, except the saw blade is tilted out of perpendicular to the saw table surface. The radial arm is indexed at 0° and locked, the bevel is set to the desired bevel angle and the yoke is positioned for in-ripping (saw blade at rear) or out-ripping (saw blade at front), as required. All requirements and observations applicable to normal ripping operations also apply to bevel ripping.



DADOING

Instructions for operating the Dado Head are furnished with the Dado Head.

The saw arbor is designed for dado heads up to 13/16 inches wide. Do not install a wider dado head on the arbor. Take several passes if required dado cut exceeds 13/16 inch.

When installing the dado head on the arbor, ALWAYS install the inside "loose collar" first. Be

sure the teeth of the chippers are placed to fall in blade gullets, and chippers are approximately equally spaced around the arbor.

DO NOT install the outside loose collar. Make sure the arbor nut is tight. Install the arbor nut directly against the outer blade of dado head.

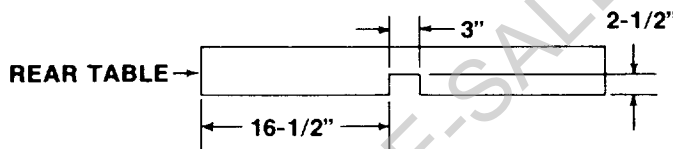
For best results and to avoid excessive load on the motor, NEVER CUT A 13/16" WIDE DADO, DEEPER THAN 1/4" IN ONE PASS.

MOLDING

Instructions for operating the Molding Head are furnished with the Molding Head.

For use of the Molding Head with saw arbor vertical, the rear table requires an opening (next to rear face of fence) for clearance. Cut this opening as shown. For top-side rabbeting or molding in the in-rip position, "c" — clamp or tack an auxiliary fence in front of the regular fence. This auxiliary fence must

NEVER USE A DADO HEAD OR MOLDING HEAD WHEN THE SAW ARBOR IS VERTICAL WITHOUT INSTALLING AND ADJUSTING AN ACCESSORY MOLDING HEAD/DADO GUARD. FOR TOP-SIDE DADOING OR MOLDING, INSTALL AND ADJUST THE SAWBLADE GUARD AND ANTICKICKBACK ASSEMBLY FOR RIPPING OR CROSSCUTTING AS APPROPRIATE.



be the same height above the table surface as the workpiece itself, and sufficiently wide to permit proper setup of the guard and the antikickback spreader for rip type operations.

adjustments to compensate for wear

WARNING: Remove Power Cord from power source before making any adjustments.

ADJUSTING CARRIAGE GUIDES

When properly adjusted, the carriage should slide freely on the arm, with no movement either up-and-down or side-to-side. If the carriage is hard to pull or has looseness between the glides and the arm, the glides should be adjusted.

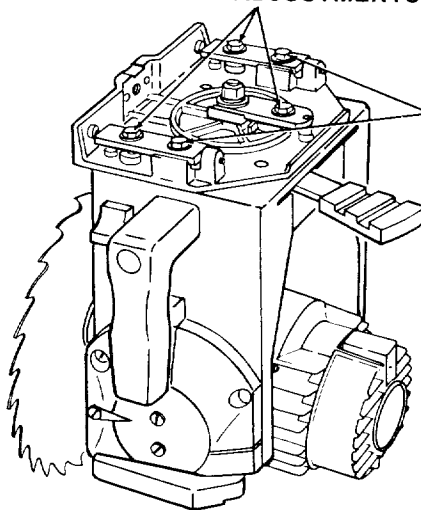
Adjustment for up-down movement.

1. All three sets of glides can be adjusted for up-down movement.
2. Remove front, lower arm trim. DO NOT REMOVE CARRIAGE FROM ARM.
3. Adjust the screws shown in the illustration for any set of glides that require adjustment.

Adjustment for side-to-side movement.

1. The two sets of glides on the left side of the arm can be adjusted for side-to-side movement.
2. Remove front, lower arm trim. DO NOT REMOVE CARRIAGE FROM ARM.
3. Loosen the screws shown in the illustration.
NOTE: These screws have lock nuts which give a feeling of tightness even when the screw is loosened.
4. Sighting through the hole in the right side of the arm, line up the set screw for adjusting the side-to-side movement with this hole.
5. Using the 1/8" Hex "L" Wrench, adjust all side-to-side movement from glide being careful not to overtighten. Retighten the screws loosened in step 3. Check sliding action of carriage.
6. Repeat on other set of glides if necessary.

ADJUST SCREWS
AS REQUIRED FOR
UP/DOWN ADJUSTMENTS

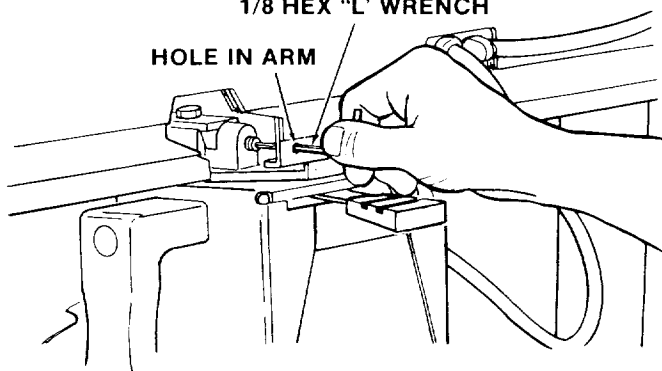


LOOSEN THESE
SCREWS
THEN ADJUST
SET SCREWS FOR
SIDE TO SIDE
ADJUSTMENT

ARM NOT SHOWN FOR CLARITY

1/8 HEX "L" WRENCH

HOLE IN ARM



YOKE LOCK HANDLE ADJUSTMENT

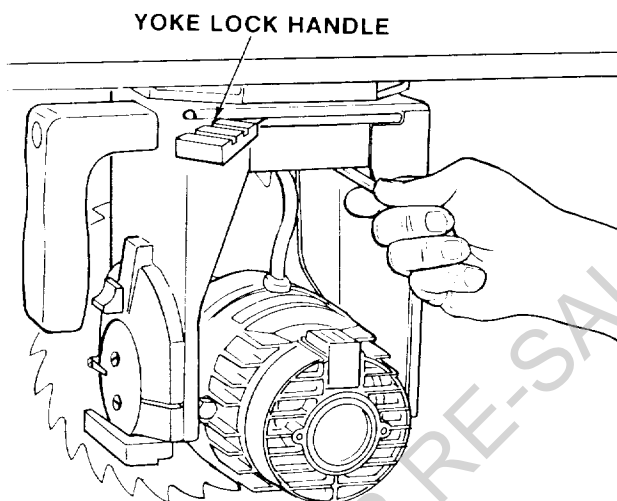
1. This handle provides a friction lock between the upper face of the yoke and the bottom face of the carriage.

It should eliminate any play or rotation between these two parts when locked. Its proper position for saw operation is approximately midway between the front and back of the yoke.

When sufficient wear has occurred to permit the handle to move to the rear, or strike the yoke before locking, the handle must be adjusted as follows.

To Readjust

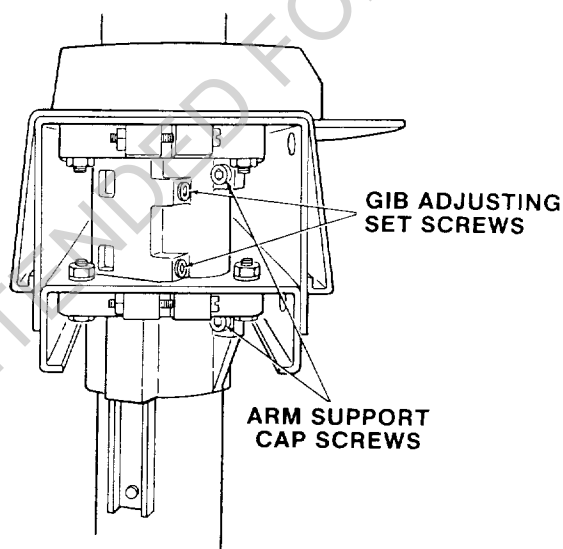
1. Set yoke lock handle at unlocked position. Tighten nut with 9/16 wrench, until lock handle locks mid-way between the front and back of the yoke.



ARM TO COLUMN TUBE

1. With the miter index-lock lever indexed and locked there should be no up-down or side to side movement between the Arm and the Column. If there is any movement then it will be necessary to adjust the Gib and/or the Arm Support.

- a. Remove rear cover.
- b. Unlock miter index-lock knob and rotate arm to about 30° R. Miter. This will permit access to the adjusting screws at the rear of the Arm.
- c. If there is side to side movement tighten the two gib adjusting set screws as shown using the 5/32" hex wrench.
- d. If there is up-down movement tighten the two arm adjusting cap screws as shown using the 3/16" hex wrench.
- e. Check that the Arm can still be elevated smoothly. If elevation is tight, loosen the cap screws 1/8 turn and recheck elevation.



COLUMN CLAMPS TO ARM SUPPORT

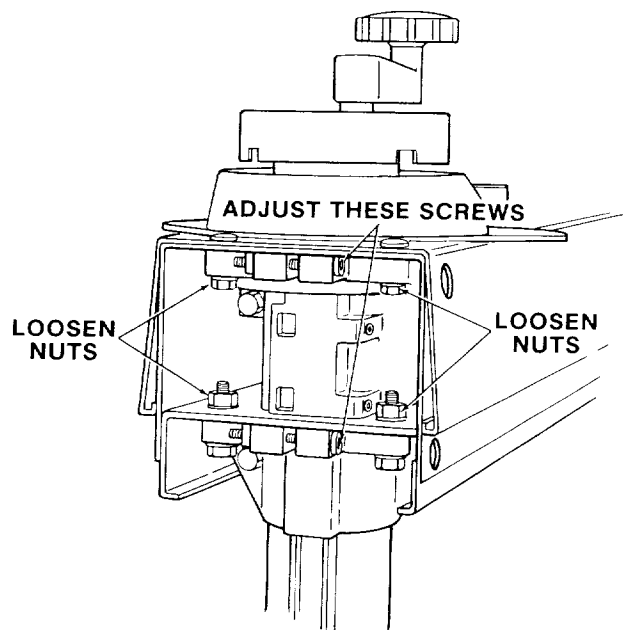
1. With the miter index-lock lever unlocked and not in an indexed position, the arm should move firmly.

The arm should fit snugly on the column. If it does not, then it should be adjusted.

- a. Remove rear cover (snap fit) and loosen evenly the top two nuts and bottom two nuts at the rear of the saw as shown.

NOTE: Do not loosen the bolts at the front of the Column Clamps. The factory set alignment of the Arm to the column will be upset if these bolts are loosened.

- b. Using a large Philips screwdriver, (#3) adjust both top and bottom screws evenly until arm moves firmly. Retighten nuts & bolts loosened above.
- c. Re-install rear cover.



trouble shooting

WARNING: REMOVE POWER CORD FROM POWER SOURCE BEFORE MAKING ANY ADJUSTMENTS.

NOTE: Changing one adjustment will effect another. It is best to perform all of the alignment procedures when correcting any one problem. The usual operating "troubles" are listed in the following paragraphs with the necessary corrections listed.

1. RADIAL SAW DOES NOT MAKE ACCURATE 0° or 45° MITER CROSSCUTS.

a. Looseness between column tube and arm.

Refer to ARM TO COLUMN adjustment in adjustments to compensate for Wear Section.

b. Crosscut travel not properly adjusted.

Refer to Step Three in Alignment Procedure Section Squaring Crosscut Travel.

c. Arm not indexing properly.

Make sure arm is indexed properly — Move arm off index and re-index making sure miter index pin is positioned all the way into slot.

d. Carriage Assembly Loose on Arm.

Refer to Carriage Glide Adjustment in "Adjustments to Compensate for Wear" section.

e. Looseness between Yoke and Carriage Assembly.

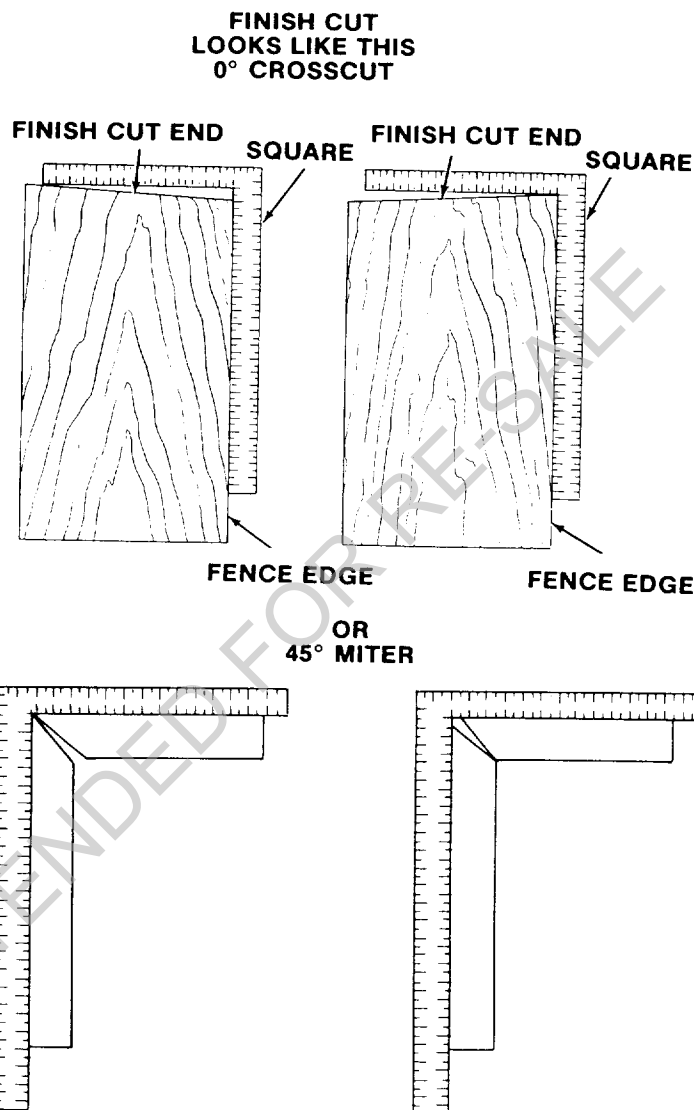
Refer to "Yoke Lock Handle" adjustment in "Adjustments to Compensate for Wear" section.

f. Sawdust between Work Piece and Fence.

Keep Front Work Table Clean

g. Rip Fence Not Straight.

Replace Fence.



2. SAW CUTS AT ANGLE — NOT 90° TO TABLE TOP.

a. Table not properly leveled.

Refer to step one of "Alignment Procedure" in the "Assembly and Alignment" section.

b. Blade not square to work table top.

Refer to Step Four of "Alignment Procedure" in "Assembly and Alignment" section.

3. BLADE ANGLE (BEVEL) CUTS NOT ACCURATE.

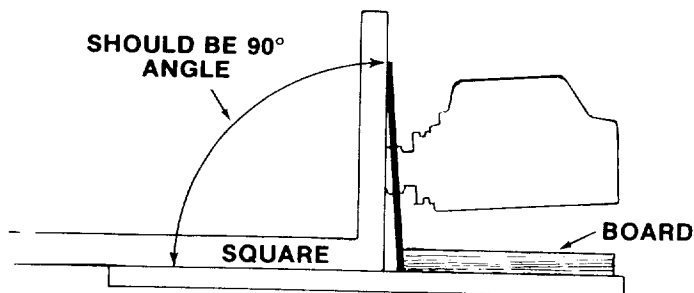
a. Corrective Action is the same as paragraph 2a and b above.

b. Carriage Glides Loose.

Refer to "Adjusting Carriage Glides" in "Adjustments to Compensate for Wear" section.

c. Blade has "heel".

Check alignment per Step Two through Step Five of "Alignment Procedure" in "Assembly and Alignment" section.



trouble shooting

4. Cut edge of workpiece is rough, with tooth marks left on the edge of saw kerf.

- a. Sawblade has "Heel".

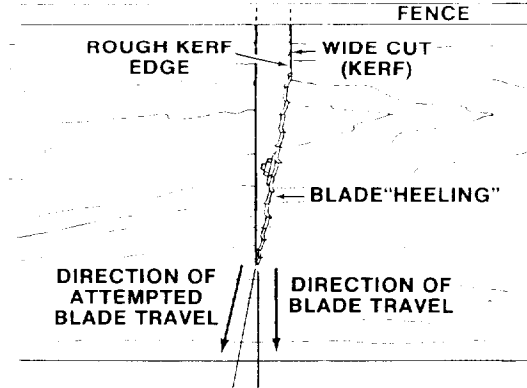
Refer to Step Two through Step Five of the "Alignment Procedure" in the "Assembly and Alignment" section.

- b. Use of the wrong sawblade for the desired cut finish.

Use a smooth cutting blade or a blade with little or no set in the teeth.

NOTE: A useful way to check the travel of the sawblade to the fence and to check for "heel" is to crosscut an 11" wide x 18" long (Min.) piece of 1/2" plywood.

1. Be sure the edge of the plywood that is against the fence is straight and free of splinters.
2. Place the plywood firmly against the fence and crosscut off a 2" wide piece.
3. If there is heel in the blade it will show up by splintering up the top layer of plywood on the side to which the blade is heeling. Adjust the heel out by moving the heel adjustment plate in the direction away from the side that splintered.



For example, if the right edge of the cut was splintered then you would want to move the adjustment plate to the left.

4. After the cut is complete and the Motor returned to the rear of the Arm, remove the remaining piece of plywood and check for a square cut by placing one edge of a framing square against the "fence" edge of the board and the other edge along the "cut" edge. If there is a gap at the end of the leg of the square then the arm needs to be adjusted to the right. If the gap is at the corner of the square, then the arm needs to be adjusted to the left.

5. WOOD BINDS, SMOKES AND MOTOR SLOWS DOWN OR STOPS WHEN RIPPING.

- a. Dull blade or warped board.

Sharpen or replace the saw blade. Avoid the attempted use of severely warped material.

- b. Feed rate too fast.

Slow Feed Rate.

- c. Saw blade heels.

Check and align as described in Step Two through Step Five in the "Alignment Procedure" of the "Assembly and Alignment" section.

- d. Fence not straight.

Replace fence.

- e. Carriage Glides Loose.

Refer to adjusting carriage glides in Adjustments to Compensate for Wear section.

6. BOARD PULLS AWAY FROM FENCE WHEN RIPPING.

- a. Saw Blade has heel.

Corrective action is the same as preceding instructions explained in paragraph 5c.

7. WORKPIECE STRIKES SPREADER WHEN RIPPING.

- a. Adjust spreader per instructions in Step Six of "Alignment Procedure" in the "Assembly and Alignment" section.

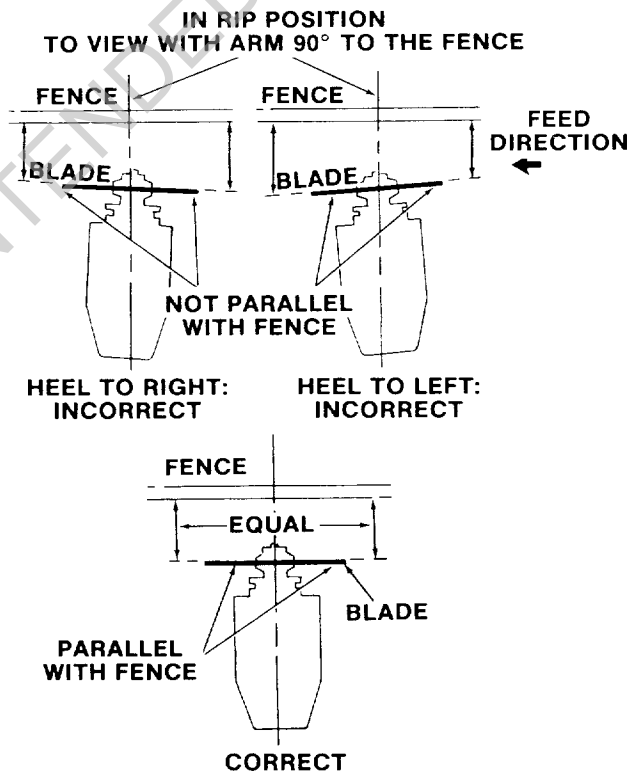
8. CARRIAGE DOES NOT TRAVEL SMOOTHLY ON ARM TRACK.

- a. Refer to adjusting carriage glides in "Adjustments to Compensate for Wear" section.

9. DEPTH OF CUT VARIES FROM ONE END OF WORK PIECE TO THE OTHER.

- a. Table Top not parallel with Arm.

Refer to Step One of "Alignment Procedure"



in the "Assembly and Alignment" section.

10. BLADE TENDS TO ADVANCE THRU LUMBER TOO FAST.

- a. Dull Blade.

Replace or sharpen blade.

- b. Not advancing Saw Blade properly.

Draw Saw Blade across lumber with a slow and steady pull. Keep right forearm in line with the saw arm during pull through and return.

MOTOR TROUBLE-SHOOTING CHART

NOTE: Motors used on wood-working tools are particularly susceptible to the accumulation of sawdust and wood chips and should be blown out or "vacuumed" frequently to prevent interference with normal ventilation.

TROUBLE	PROBABLE CAUSE	SUGGESTED REMEDY
Motor will not run.	1. Low voltage	1. Check power line for proper voltage.
Motor will not run and fuses "BLOW".	1. Short circuit in line, cord or plug. 2. Incorrect fuse in power line.	1. Inspect line, cord and plug for damage insulation and shorted wires. 2. Install 15 amp Time Delay Fuse.
Motor fails to develop full power. Note: Low Voltage (Power output of motor decreases rapidly with decrease in voltage at motor terminals. For example: a reduction of 10% in voltage causes a reduction of 19% in maximum power output of which the motor is capable, while a reduction of 20% in voltage causes a reduction of 36% in maximum power output.)	1. Power line overloaded with lights, appliances and other motors. 2. Undersize wires or circuit too long. 3. General overloading of power company's facilities.	1. Reduce the line load. 2. Increase wire sizes, or reduce length of wiring. 3. Request a voltage check from the power company.
Motor overheats.	1. Excessive feed rate when crosscutting or ripping. 2. Improper cooling. (Air circulation restricted through motor due to sawdust, etc.) 3. Saw blade has "heel".	1. Slow down rate of feed. 2. Clean out sawdust to provide normal air circulation through motor. 3. Refer to Step Two to Step Five of the Alignment Procedure in the "Assembly and Alignment" Section.
Motor starts slowly or fails to come up to full speed.	1. Low Voltage — will not trip starting switch. 2. Blade teeth wedge into table.	1. Correct low voltage condition. 2. Free blade from table.
Motor stalls (resulting in blown fuses or tripped circuit breakers).	1. Voltage too low to permit motor to reach operating speed. 2. Fuse or circuit breaker do not have sufficient capacity.	1. Correct the low line voltage condition. 2. Replace fuse with 15 amp Time Delay Fuse.
Frequent opening of fuses or circuit breakers.	1. Motor overloaded. 2. Fuse does not have sufficient capacity.	1. Reduce motor load. 2. Replace fuse with 15 amp Time Delay Fuse.

maintenance and lubrication

MAINTENANCE

WARNING: FOR YOUR OWN SAFETY, TURN SWITCH "OFF" AND REMOVE PLUG FROM POWER SOURCE OUTLET BEFORE MAINTAINING OR LUBRICATING YOUR SAW.

When you receive your new Craftsman radial saw, it requires no lubrication. In time, however, in order to keep your saw in perfect working order and accurate, it will be necessary to lubricate and realign. In fact, your radial saw needs more of a cleaning than a lubrication.

Make sure the teeth of the ANTIKICKBACK pawls are always sharp. Replace if not sharp.

LUBRICATION

PERIODICALLY LUBRICATE THESE POINTS

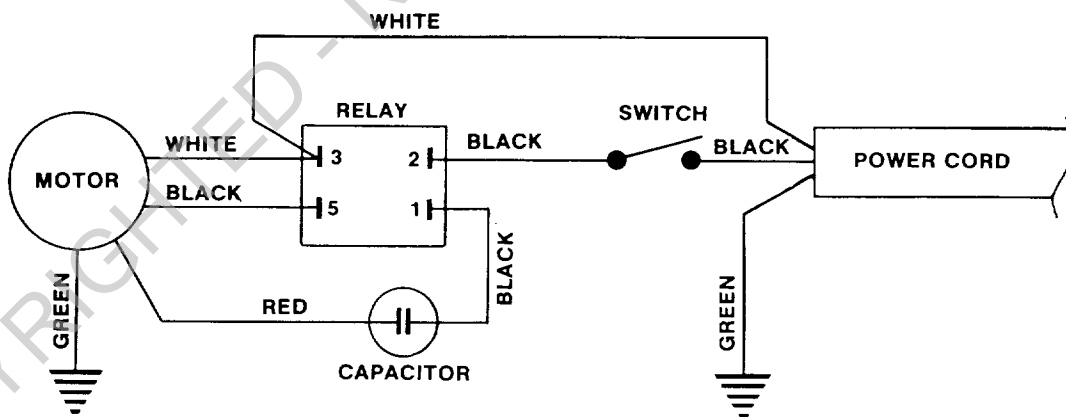
Use SAE No. 10W-30 automotive engine oil.

A light film of oil should be wiped on the face of the column tube to lubricate the fit between the column tube, and arm.

Lubricate the threads on the elevation shaft and the washers on either side of the elevation bracket.

CAUTION: Excessive oil at any location will attract airborne dust particles and sawdust.

WIRING DIAGRAM



recommended accessories

ITEM	CAT. NO.
Sawblades (10 inch Diameter w/5/8 inch bore)	
Stand	9-22205
Steel Legs	9-22238
Casters	9-22221, 9-22222
Drill Chuck & Key	9-2980
*Molding Head Guard — 7-inch	9-29524
*Molding Head Guard — 8-inch	9-29523
Rotary Surface Planer — Carbide Tip ..	9-29513
Sanding Wheel — 8-inch	9-2274
Sanding Wheel — 10-inch	9-22723
Taper Jig	9-3233
*Satin Cut Dado — 7-inch	9-3257
*Satin Cut Dado — 8-inch	9-3253
*Molding Head Three Cutter	9-3218
Sanding Drum — 3-Inch	9-25246
• Lower Retractable Guard	9-29009
"Power Tool Know How Handbook"	
Radial Saw	9-2917

*Before purchasing or using any of these accessories, read and comply with additional safety instructions No. "(D)2" on p. 5 of this manual.

The above recommended accessories are current and were available at the time this manual was printed.

- Meets OSHA Requirements as of 8-73.

NOTE: This lower retractable guard is designed to provide additional protection to the operator in an axial direction to the sawblade (perpendicular to the plane of the sawblade), under the following set of conditions ONLY:

- When NOT cutting.
- When lower guards are fully down touching the table.
- When the carriage is in the full rear position behind the fence, and
- When the saw is set up to perform 90° crosscut operations (Arm 90° to fence and sawblade 90° to table).

The lower retractable guard will NOT provide protection to the operator, either crosscutting or ripping:

- Axially when in the cut, because the inner and outer guards ride on top of the fence or workpiece during the cutting operation, exposing the teeth of the sawblade;

(b) Radially (in a direction in line with the cutting teeth);

(c) Obliquely (at an angle to the guard and sawblade), between the axial and radial directions.

Potential risks of injury may be introduced if the lower retractable guard is used for other than 90° crosscut operations, including:

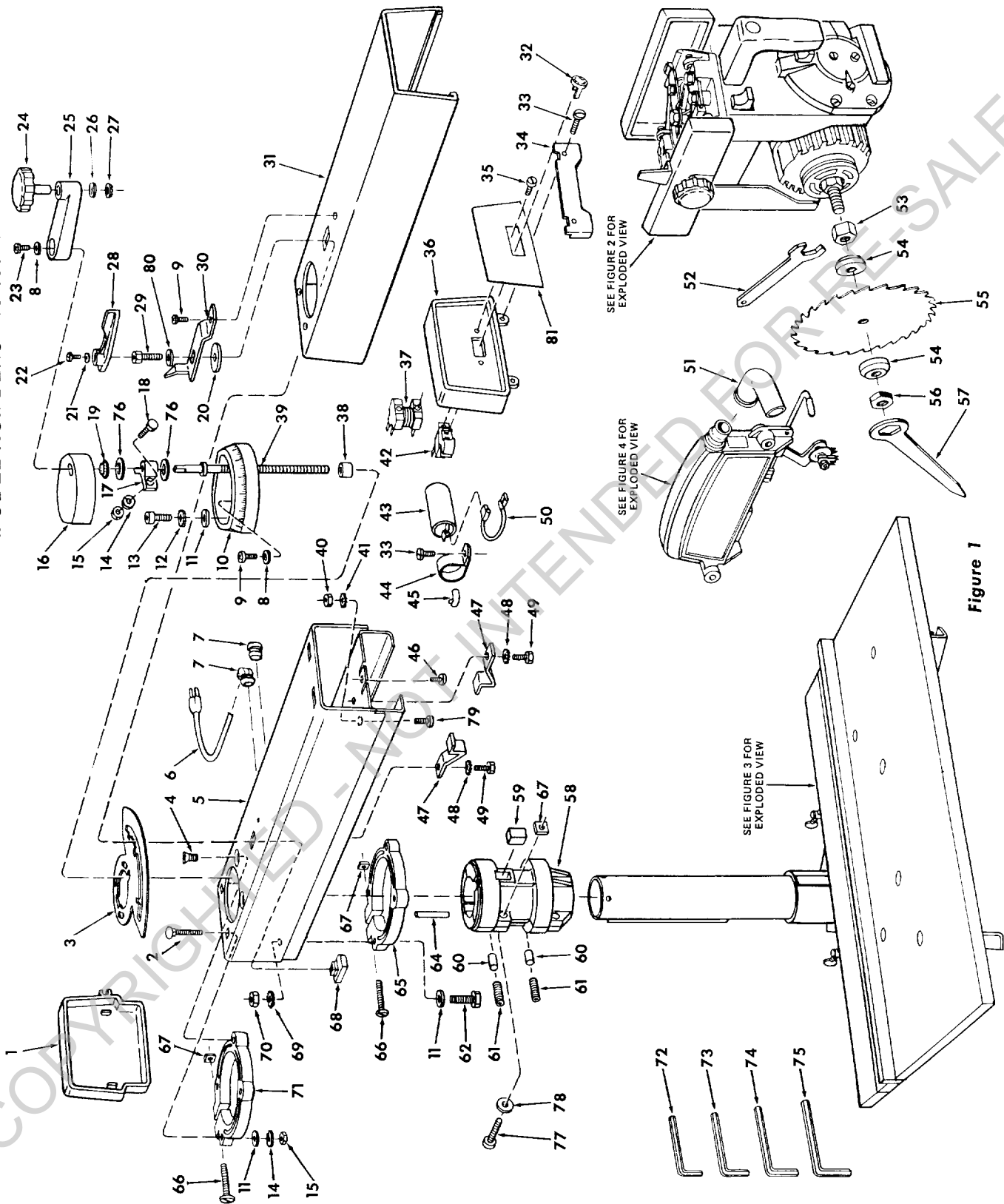
- Becoming caught or jammed in prior kerfs in the fence or table;
- Giving the operator a false sense of security when performing miter, bevel, and rip cuts;
- Jamming when setting up, and while operating, for bevel and compound miter cuts.
- Jamming for certain in-rip cuts.

NOTE: The following warning which appears on the Lower Outer Guard:

WARNING:
TO AVOID INJURY
SHUT OFF POWER
BEFORE CLEARING A
JAMMED LOWER GUARD

repair parts

PARTS LIST FOR CRAFTSMAN 10-INCH RADIAL ARM SAWS
MODEL NUMBERS 113.199100 AND 113.199150



**PARTS LIST FOR CRAFTSMAN 10-INCH RADIAL ARM SAWS
MODEL NUMBERS 113.199100 AND 113.199150**

Always order by Part Number — Not by Key Number

FIGURE 1

Key No.	Part No.	Description	Key No.	Part No.	Description
1	63962	Cover, Rear Arm	45	63467	Cap. Flag Terminal
2	60406	Bolt, Carriage Hi-Strength 1/4-20 x 1	46	STD601103	*Screw, Pan Rec. Type "T" 10-32 x 3/8
3	63964	Lock, Miter	47	63952	Bracket, Stop
4	60424	Screw, Flat Hd. 5/16-18 x 3/4	48	STD551225	*Lockwasher, External 1/4
5	75048	Arm Assembly	49	273229	Screw, Hex Type "T" 1/4-20 x 3/8
6	63960	Cord with Plug	50	63837	Lead Assembly
7	37818	Relief, Strain	51	63258	Elbow, Dust
8	STD551010	*Washer, 13/64 x 5/8 x 1/32	52	63062	Wrench, Shaft
9	STD600805	*Screw, Pan Cross Type "T" 8-32 x 1/2	53	63711	Spacer, Motor
10	63967	Scale, Miter	54	62498	Collar, Blade
11	STD551031	*Washer, 11/32 x 11/16 x 1/16	55	60175	+ Blade, Saw "10"
12	STD551131	*Lockwasher, External 5/16	56	30495	Nut, Shaft
13	9421622	Screw, Soc. Cap 5/16-18 x 3/4	57	3540	Wrench, Arbor
14	STD551125	*Lockwasher, 1/4	58	75046	Arm Support Assembly
15	STD541025	*Nut, Hex 1/4-20	59	63965	Nut, Lift
16	63955	Cap, Column	60	63858	Gib
17	63953	Bracket, Elevation	61	222460	Screw, Soc. Set 5/16-18 x 3/8
18	9431566	Bolt, Hi-Strength 1/4-20 x 7/8	62	STD523112	*Screw, Hex 5/16-18 x 1-1/4
19	60301	Ring, Retaining Push	64	75050	Guide, Key
20	60454	Washer, 17/64 x 1-13/32 x 1/16	65	63957	Clamp, Column
21	STD551208	*Lockwasher, External No. 8	66	STD512520	*Screw, Pan Cross 1/4-20 x 2
22	STD551805	*Screw, Pan Cross 8-32 x 1/2	67	62636	Nut, Square 1/4-20
23	STD511105	*Screw, Pan Cross 10-32 x 1/2	68	63855	Nut, Index
24	75052	Knob 2-3/8	69	STD551231	*Lockwasher, External 5/16
25	75051	Crank	70	STD541031	*Nut, Hex 5/16-18
27	60455	Nut, Push 5/16	71	63958	Clamp, Column
28	63963	Lever, Miter Lock	72	37887	Wrench, Hex L 1/8
29	63951	Bolt, Miter Lock	73	37837	Wrench, Hex L 5/32
30	63966	Pointer, Miter	74	60096	Wrench, Hex L 3/16
31	63973	Trim, Arm	75	37435	Wrench, Hex L 1/4
32	60256	Key, Switch	76	60408	Washer, 25/64 x 11/16 x 1/16
33	60419	Screw, Pan Hd. Plastite No. 8 x 1/2	77	60102	Screw, Soc Cap 1/4-20 x 1
34	63972	Trim, Arm Lower	78	STD551012	*Washer, 17/64 x 7/16 x 1/16
35	60287	Screw, Nylon 6-32 x 5/16	79	STD601105	*Screw, Pan Cross Type "T" 10-32 x 1/2
36	63971	Trim, Arm Upper	80	STD551025	*Washer, 17/64 x 5/8 x 1/32
37	63725	Relay	81	63961	Cover, Switch Plate
38	60447	Spacer		63978	Owner's Manual (Not Illustrated)
39	63968	Screw, Elevation		75066	Bag of Loose Parts (Not Illustrated)
40	STD541110	*Nut, Hex 10-32		75067	Bag of Loose Parts (Not Illustrated)
41	STD551210	*Lockwasher, External No. 10		75068	Bag of Loose Parts (Not Illustrated)
42	62442	Switch			
43	63997	Capacitor			
44	63959	Clamp, 1-3/8			

* Standard Hardware Item — May be Purchased Locally

† Stock Item — May be secured through the hardware department of most Sears Retail Stores or Catalog Order Houses.

**PARTS LIST FOR CRAFTSMAN 10-INCH RADIAL ARM SAWS
MODEL NUMBERS 113.199100 AND 113.199150**

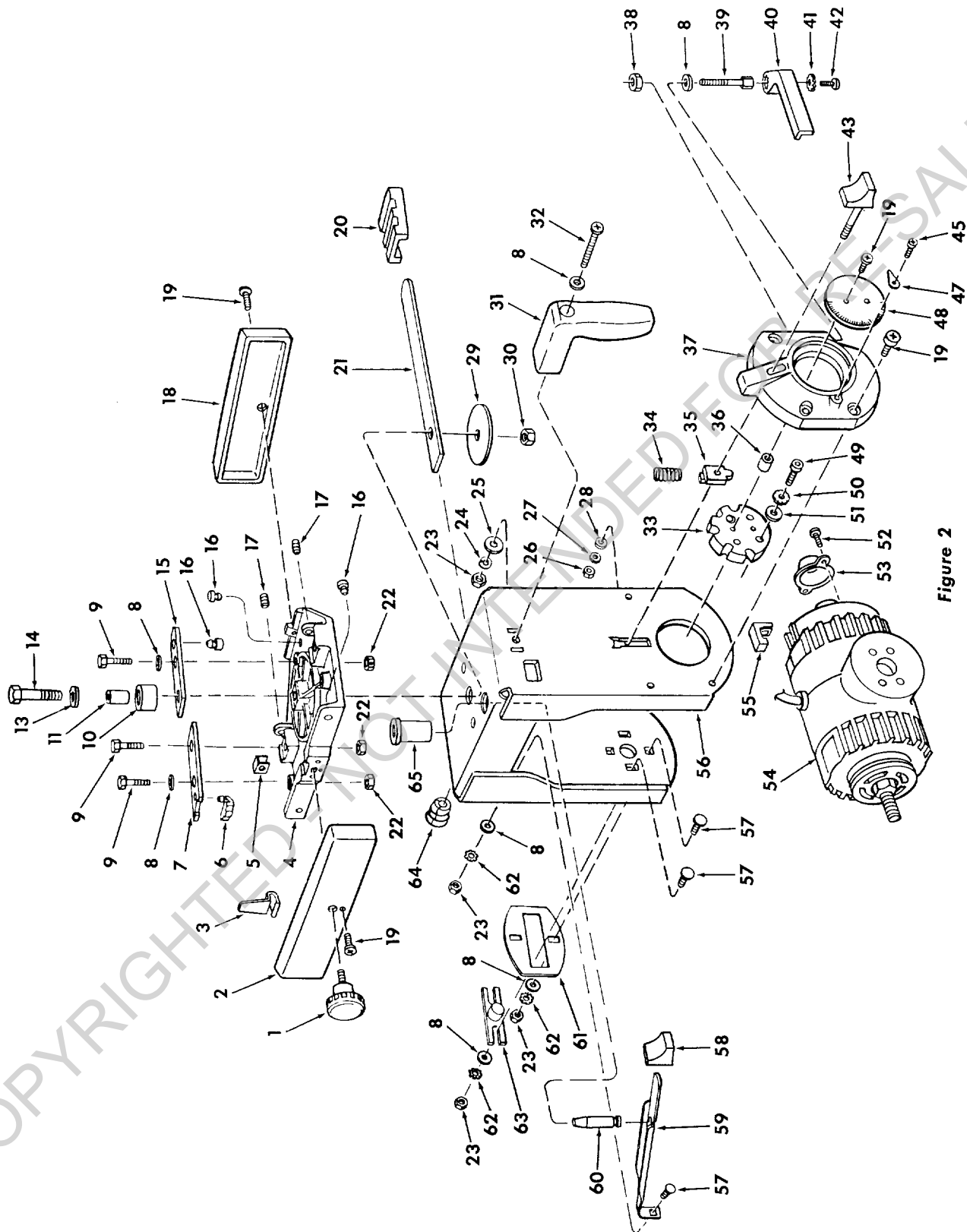


Figure 2

**PARTS LIST FOR CRAFTSMAN 10-INCH RADIAL ARM SAWS
MODEL NUMBERS 113.199100 AND 113.199150**

FIGURE 2

Key No.	Part No.	Description	Key No.	Part No.	Description
1	63984	Knob	34	63658	Spring, Swivel Latch
2	63976	Cover, Carriage L.H.	35	63986	Pin, Bevel Index
3	63982	Indicator, Rip	36	60453	Spacer, 10 x 5/16 Split
4	63975	Carriage	37	75053	Casting, Bevel Lock
5	63988	Shoe, Carriage Lock	38	60450	Nut, Hex 1/4-20 L.H.
6	63815	Bearing	39	60448	Bolt, Lock 1/4-20 x 2 L.H.
7	63816	Support, Bearing	40	63979	Handle
8	STD551012	*Washer, 17/64 x 9/16 x 3/64	41	STD551208	*Lockwasher, External No. 8
9	9431566	Bolt, High Strength 1/4-20 x 7/8	42	STD510803	*Screw, Pan Cross 8-32 x 3/8
10	60449	Bushing 1/2 x 1 x 1/2	43	75054	Knob Assembly
11	60452	Spacer 3/8 x 1/2 x 1/2	45	STD600602	*Screw, Pan Cross Type "T" 6-32 x 1/4
13	STD551137	*Lockwasher, 3/8	47	63981	Indicator, Bevel
14	179850	Screw, Hex Hd. 3/8-16 x 2-1/2	48	63987	Plate, Bevel
15	63817	Support, Bearing	49	60451	Screw, Low Hd. Cap 5/16-18 x 1
16	63814	Bearing, Carriage	50	STD551231	*Lockwasher, Internal 5/16
17	60329	Screw, Locking Set 1/4-20 x 3/8	51	STD551031	*Washer, 21/64 x 5/8 x 1/32
18	63977	Cover, Carriage R.H.	52	STD600802	*Screw, Pan Cross Type "T" 8-32 x 1/4
19	9416390	*Screw, Pan Cross Type "T" 10-32 x 5/8	53	64563	Guard, Shaft
20	63983	Knob, Swivel Lock	54	63876	•Motor
21	63985	Lever, Swivel Lock	55	64561	Brake Shoe Assembly
22	STD541425	*Nut, Lock 1/4-20	56	75049	Yoke Assembly
23	STD541025	*Nut, Hex 1/4-20	57	60407	Bolt, Carriage 1/4-20 x 5/8
24	STD551125	*Lockwasher, 1/4	58	63999	Knob, Swivel Index
25	60410	Washer, 17/64 x 1-1/4 x 7/64	59	63989	Spring, Swivel Index
26	STD541110	*Nut, Hex 10-32	60	63825	Pin, Swivel Index
27	STD551210	*Lockwasher, External No. 10	61	63822	Plate, Heel Adjusting
28	STD551010	*Washer, 13/64 x 5/8 x 1/32	62	STD551225	*Lockwasher, External 1/4
29	60409	Washer, 3/8 x 2 x 9/64	63	63862	Support Asm., Motor
30	STD541437	*Nut, Lock 3/8-16	64	37818	Relief, Strain
31	63980	Handle, Yoke	65	63820	Bushing
32	STD512520	*Screw, Pan Cross 1/4-20 x 2			
33	63991	Support, Motor			

* Standard Hardware Item — May be Purchased Locally.

- Any attempt to repair this motor may create a HAZARD unless repair is done by a qualified service technician. Repair service is available at your nearest Sears store.

**PARTS LIST FOR CRAFTSMAN 10-INCH RADIAL ARM SAWS
MODEL NUMBERS 113.199100 AND 113.199150**

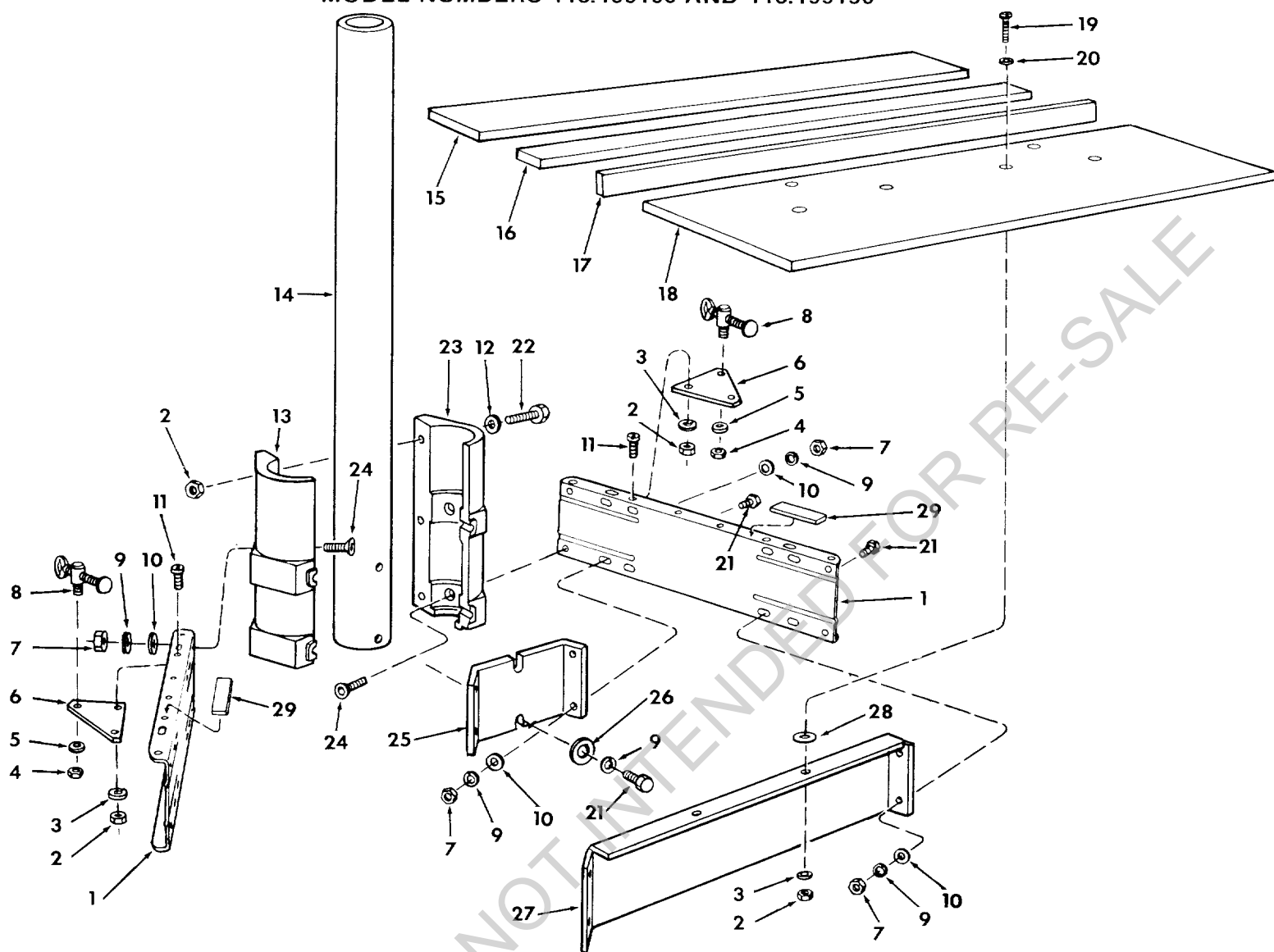


FIGURE 3

Key No.	Part No.	Description
1	63956	Channel, Table Mounting
2	STD541025	*Nut, Hex 1/4-20
3	STD551125	*Lockwasher, 1/4
4	STD541431	*Nut, Lock 5/16
5	60024	Washer, 21/64 x 1 x 1/16
6	63864	Bracket, Clamp
7	STD541031	*Nut, Hex 5/16-18
8	63536	Clamp, Table
9	STD551131	*Lockwasher, 5/16
10	STD551031	*Washer, 21/64 x 5/8 x 1/16
11	STD512507	*Screw, Pan Cross 1/4-20 x 3/4
12	STD551012	*Washer, 17/64 x 7/16 x 1/32
13	63970	Support, Column L.H.
14	75047	Tube Assembly
15	75043	Table, Rear
16	75044	Table, Spacer

Key No.	Part No.	Description
17	63998	Fence, Rip
18	75045	Table, Front
19	STD512510	*Screw, Pan Cross 1/4-20 x 1-1/4
20	STD551025	*Washer, 17/64 x 5/8 x 1/32
21	60033	Bolt, Hi-Strength 5/16-18 x 3/4
22	STD522507	*Bolt, Hi-Strength 1/4-20 x 3/4
23	63969	Support, Column R.H.
24	60424	Screw, Socket Flat Hd. 5/16-18 x 3/4
25	63954	Bracket, Channel
26	60332	Washer, 21/64 x 1 x 1/8
27	63845	Channel, Front
28	63869	Washer, Neoprene
29	75057	Rubber Strip

* Standard Hardware Item — May be Purchased Locally.

**PARTS LIST FOR CRAFTSMAN 10-INCH RADIAL ARM SAWS
MODEL NUMBERS 113.199100 AND 113.199150**

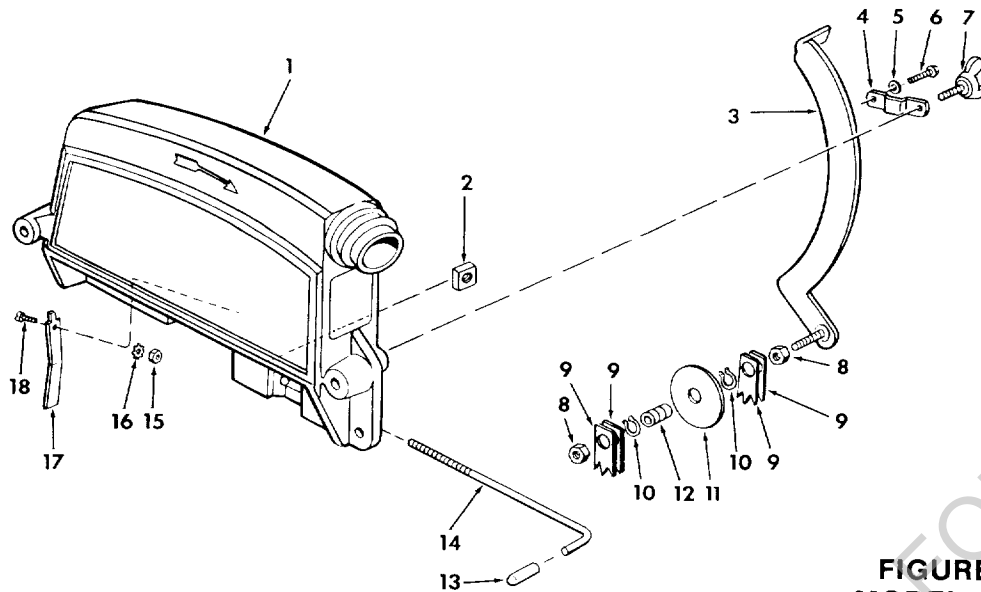
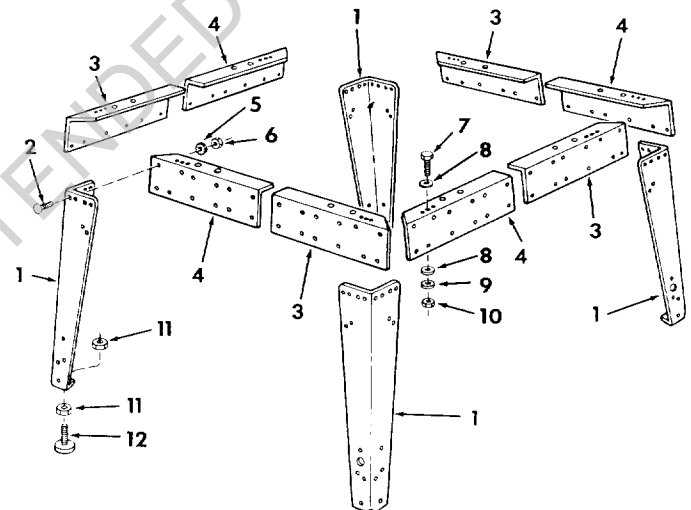


FIGURE 4 — GUARD ASSEMBLY

Key No.	Part No.	Description
1	63853	Guard
2	120399	*Nut, Square, 5/16-18
3	63541	Bar, Antikickback
4	63540	Guide, Antikickback
5	STD551010	*Washer, 13/64 x 5/8 x 1/32
6	STD601103	*Screw, Type "T" Pan Hd. 10-32 x 3/8
7	60219	Screw, Wing 5/16-18 x 1/2
8	STD541231	*Nut, Hex 5/16-18
9	63271	Pawl, Antikickback
10	STD 582043	*Ring, Retaining 7/16
11	63270	Spreader
12	63269	Bearing
13	60435	Grip
14	63539	Screw, Guard Clamp (Includes Key #13)
15	STD541008	*Nut, Hex 8-32
16	STD551108	*Lockwasher, External Tooth No. 8
17	63538	Clamp, Guard
18	STD510805	*Screw, Pan Hd. 8-32 x 1/2

**FIGURE 5 — LEG SET
MODEL 113.199150 ONLY**



Key No.	Part No.	Description
1	63749	Leg
2	60314	Screw, Truss Hd. 1/4-20 x 5/8
3	63751	Stiffener, R.H.
4	63750	Stiffener, L.H.
5	STD551225	*Lockwasher, External 1/4
6	STD541025	*Nut, Hex 1/4-20
7	STD523106	*Screw, Hex Hd. 5/16-18 x 5/8
8	STD551031	*Washer, 11/32 x 11/16 x 1/16
9	STD551131	*Lockwasher, External 5/16
10	STD541231	*Nut, Hex Jam 5/16-18
11	STD541250	*Nut, Hex Jam 1/2-13
12	803835	Foot, Leveling
—	63752	Bag of Loose Parts (Not Illustrated)

* Standard Hardware Item — May be Purchased Locally.

Sears

owners manual

SERVICE

MODEL NO.

113.199100

SAW ONLY

113.199150

SAW WITH LEGS

HOW TO ORDER REPAIR PARTS

10-INCH RADIAL SAW

Now that you have purchased your 10-inch radial saw, should a need ever exist for repair parts or service, simply contact any Sears Service Center and most Sears, Roebuck and Co. stores. Be sure to provide all pertinent facts when you call or visit.

The model number of your 10-inch radial saw will be found on a label attached to your saw, at the rear of the left base channel.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

PART NUMBER	PART DESCRIPTION
MODEL NUMBER	NAME OF ITEM
113.199100	10-INCH RADIAL SAW
113.199150	

All parts listed may be ordered from any Sears Service Center and most Sears stores. If the parts you need are not stocked locally, your order will be electronically transmitted to a Sears Repair Parts Distribution Center for handling.

Sold by SEARS, ROEBUCK AND CO., Chicago, IL. 60684 U.S.A.