

Save This Manual
For Future Reference

SEARS

owner's manual

MODEL NO.

113.197111

or

113.197151

or

113.197181

**10-INCH RADIAL SAW
WITH LEG SET**

or

113.197211

**10-INCH ELECTRONIC
RADIAL SAW
23-INCH CABINET AND
1 DOOR**

or

113.197251

or

113.197280

**10-INCH ELECTRONIC
RADIAL SAW WITH
LEG SET**

Serial

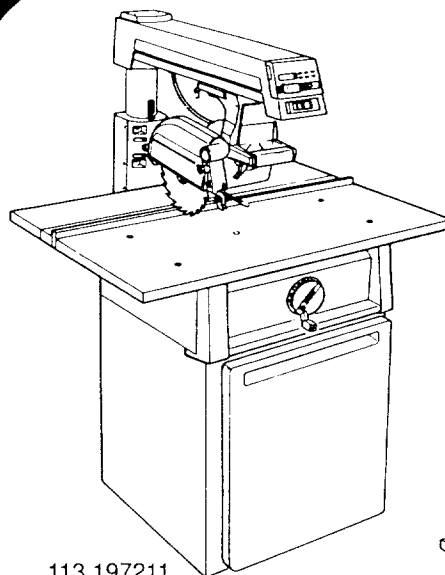
Number

Model and serial numbers
may be found on the
handle.

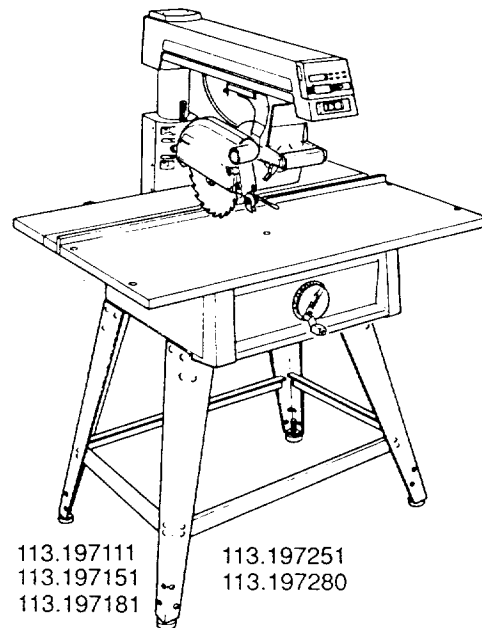
You should record both
model and serial number in
a safe place for future use.

FOR YOUR SAFETY:

**READ ALL
INSTRUCTIONS
CAREFULLY**



113.197211



113.197111
113.197151
113.197181

113.197251
113.197280

SEARS / CRAFTSMAN

10-INCH RADIAL SAW

- assembly
- operating
- repair parts

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

No. SP5538

Printed in U.S.A.

Table of Contents

Section Title	Page
Safety	3
Assembly	10
Controls	24
Alignment and Adjustment	27
Digital Display	41
Electrical Connections	47
Crosscutting	50
Ripping	54
Cutting Aides	62
Accessories	65
Maintenance	68
Troubleshooting	72
Repair Parts	76
Index	91

FULL ONE YEAR WARRANTY ON CRAFTSMAN RADIAL ARM 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 SERVICE CENTER/DEPARTMENT THROUGHOUT THE
UNITED STATES.**

This warranty applies only while this product is used in the United States.

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

**SEARS, ROEBUCK AND CO. DEPT. 698/731A SEARS TOWER,
CHICAGO, IL 60684**

This manual has safety information and instructions to help users eliminate or reduce the risk of accidents and injuries, including:

1. Severe cuts, and loss of fingers or other body parts due to contact with the blade
2. Eye impact injuries, and blindness, from being hit by a thrown workpiece, workpiece chips or pieces of blade
3. Bodily impact injuries, broken bones, and internal organ damage from being hit by a thrown workpiece
4. Shock or electrocution
5. Burns.

Safety Symbol and Signal Words

An exclamation mark inside a triangle is the safety alert symbol.

It is used to draw attention to safety information in the manual and on the saw. It is followed by a signal word, DANGER, WARNING, or CAUTION, which tells the level of risk:

⚠ DANGER: means if the safety information is not followed someone **will** be seriously injured or killed.

⚠ WARNING: means if the safety information is not followed someone **could** be seriously injured or killed.

⚠ CAUTION: means if the safety information is not followed someone **might** be injured.

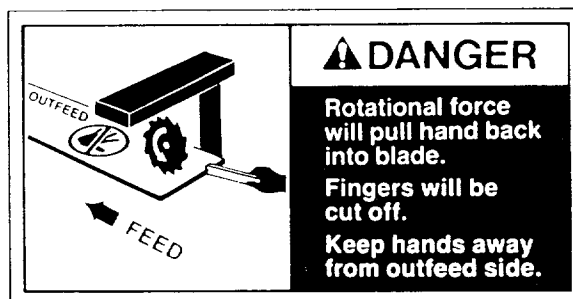
Read and follow all safety information and instructions.

Major Hazards

Three major hazards are associated with using the radial arm saw for ripping. They are outfeed zone hazard, kickback, and wrong way feed.

This section only briefly explains these hazards. Read the ripping and crosscutting safety sections for more detailed explanations of these and other hazards.

Outfeed Zone Hazard



If you reach around the blade to the outfeed side when ripping, and try to hold down or pull the workpiece through to complete a cut, the rotational force of the blade will pull your hand back into the blade.

Fingers will be cut off.

Read and follow the information and instructions under ripping safety.

Safety

Kickback Hazard

Kickback is the uncontrolled propelling of the workpiece back toward the user during ripping.

The cause of kickback is the binding or pinching of the blade in the workpiece. Several conditions can cause the blade to bind or pinch.

When a workpiece kicks back, it could hit hard enough to cause internal organ injury, broken bones, or death.

Read and follow the information and instructions under ripping safety.



Wrong Way Feed Hazard

Wrong way feed is ripping by feeding the workpiece into the outfeed side of the blade.

The rotational force of the blade can grab and pull the workpiece.

Before you can let go or pull back, the force could pull your hand along with the workpiece into the blade. Fingers or hand could be cut off.

The propelled workpiece could hit a bystander, causing severe impact injury or death.

Read and follow the information and instructions under ripping safety.

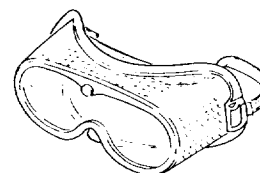


Safety Instructions

Read and follow all safety instructions.

Personal Safety Instructions

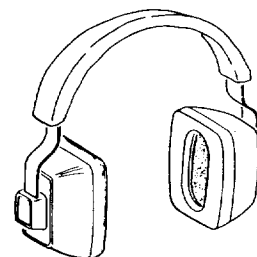
1. Wear safety goggles labeled "ANSI Z87.1" on the package. It means the goggles meet impact standards set by the American National Standards Institute. Regular eyeglasses are not safety goggles.
2. Wear close fitting clothes, short sleeved shirts, and non-slip shoes. Tie up long hair. Do not wear gloves, ties, jewelry, loose clothing, or long sleeves. These can get caught in the spinning blade and pull body parts into the blade.
3. Wear dust mask to keep from inhaling fine particles.
4. Wear ear protectors, plugs or muffs if you use saw daily.
5. Keep good footing and balance; do not over-reach.



Safety Goggles



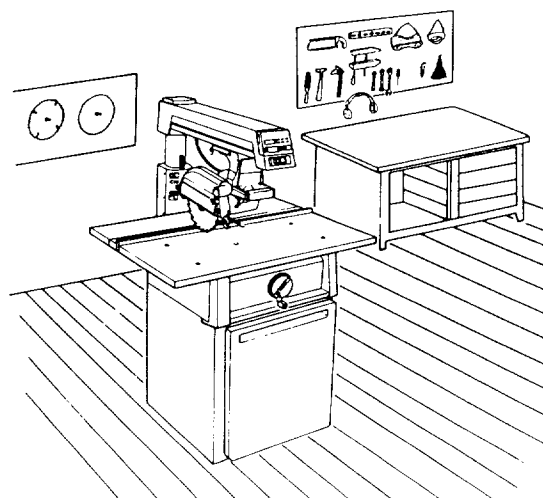
Dust Mask



Ear Protectors

Work Area Safety Instructions

1. Keep children, pets, and visitors out of work area; they could be hit by a thrown workpiece, workpiece chips or pieces of blade.
2. Turn saw off, remove yellow key, and unplug before leaving work area. Do not leave until blade has stopped spinning.
3. Make work area child-proof: remove yellow key to prevent accidental start-up; store key out of sight and reach; lock work area.
4. Keep floors clean and free of sawdust, wax and other slippery materials.
5. Keep work area well lighted and uncluttered.
6. Use saw only in dry area. Do not use in wet or damp areas.



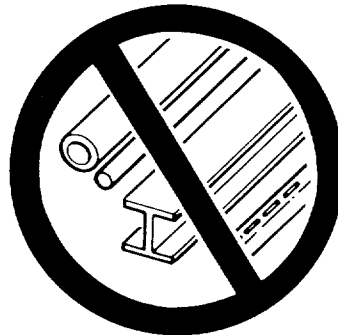
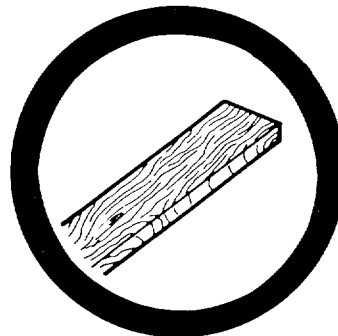
Safety

Saw Safety Instructions

1. Use guard, pawls and spreader according to instructions. Keep them in working order.
2. Routinely check saw for broken or damaged parts. Repair or replace damaged parts before using saw. Check new or repaired parts for alignment, binding, and correct installation.
3. Unplug saw before doing maintenance, making adjustments, correcting alignment, or changing blades.
4. Do not force saw. Use saw, blades and accessories only as intended.
5. Have yellow key out and saw switched off before plugging in power cord.
6. Before turning on saw, clear table of all objects except workpiece to be cut and necessary fixtures, clamps, or featherboards.
7. If blade jams, turn saw off immediately, remove yellow key, then free blade. Do not try to free blade with saw on.
8. Turn saw off if it vibrates too much or makes an odd sound. Correct any problem before restarting saw.
9. Do not layout, assemble, or setup work with saw on, or while blade is spinning.
10. Keep saw table clean.
11. Store items away from saw. Do not climb on saw or stand on saw table to reach items because saw can tip over.

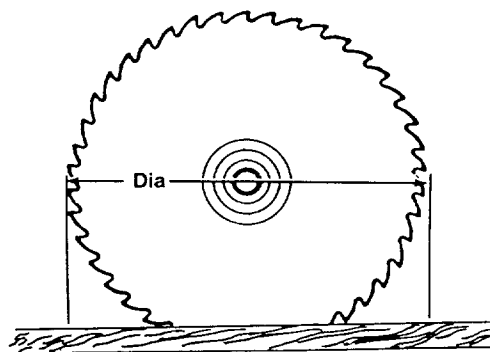
Workpiece Safety Instructions

1. Cut only wood, woodlike or plastic materials. Do not cut metal.



2. Cut only one workpiece at a time. Stacking or placing workpieces edge to edge can cause user to lose control of workpiece.

3. Rip only workpieces longer than the diameter of the blade. Do not rip workpieces that are shorter than the diameter of the blade being used.

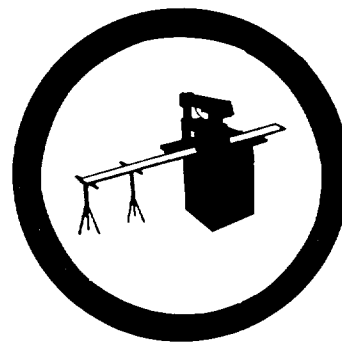


4. Workpieces that extend beyond the saw table can shift, twist, rise up from the table, or fall as they are cut. Support workpiece with table extensions the same height as the saw table.

5. To prevent tipping, support outer ends of extensions with sturdy legs or an outrigger.

6. Do not use another person to help support workpieces or to aid by pushing or pulling on workpieces, because these actions can cause kickback. Use table extensions.

7. Use clamps or vice to hold workpiece. It's safer than using your hands.



Blade Safety Instructions

1. Use only blades marked for at least 3450 rpm.
2. Use only 10" or smaller diameter blades.
3. Use blades for their recommended cutting procedures.
4. Keep blade sharp and clean.

5. Do not overtighten blade nut because blade collar could warp.

6. Do not turn saw on and off in rapid sequence because blade can loosen.

7. Blade should stop within 15 seconds after saw is switched off. If blade takes longer, the saw needs repair. Contact Sears Service Center.

Safety

On-Product Safety Labels

There are several safety labels on the saw. They alert the user to hazards explained in the manual and remind the user how to avoid the hazard.

Note where they are located on the saw. Read and follow the safety information and instructions in these labels. Refer to the manual for detailed explanations and instructions.

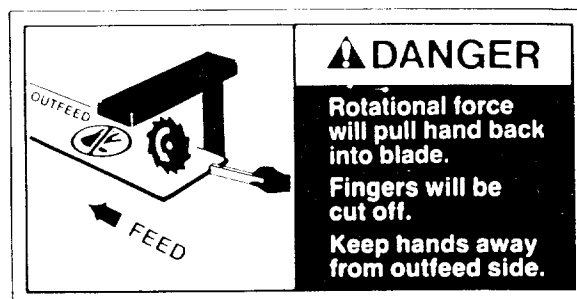
On the outfeed side of the guard is this safety label to alert you to **wrong way feed**:



On the infeed side of the guard is this safety label to alert you to **kickback**, and to remind you to lower the guard nose (hold down) for ripping:



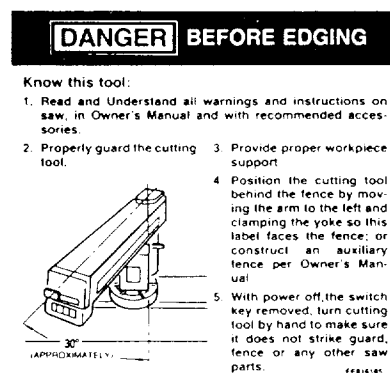
On the **side surface of the motor**, visible from the infeed side when the saw is in a rip position, is this safety label to alert you to **outfeed zone hazard**:



Near the saw handle is this safety label to alert you to **thrown objects** and to remind you to **wear safety goggles**:



On the **bottom surface of the motor**, visible when the cutting tool is horizontal, is this safety label to alert you **use a guard when edge molding**, and to **position cutting tool behind fence**: (see Accessories Section)



On the **front panel** is this **general safety instruction label**:

SAFETY INSTRUCTIONS

1. Read manual before using saw.
2. Wear safety goggles that meet ANSI Z87.1 standards.
3. Do not do freehand cuts.
4. Push carriage to full rear position after each cross cut.
5. Know how to reduce the risk of kickback. See instructions for ripping.
6. When ripping use push stick when blade is set 2 inches or more from fence.

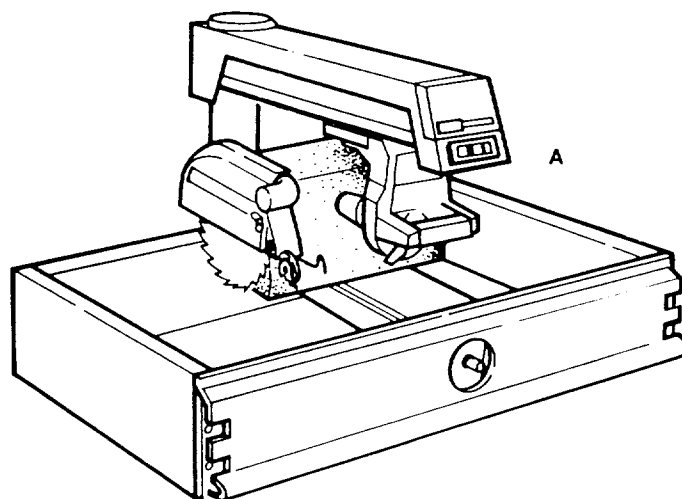
7. When ripping use push block and auxiliary fence when blade is set between 1/2 and 2 inches from fence. Do not make rip cuts narrower than 1/2 inch.
8. Keep hands out of path of blade.
9. Do not reach around saw blade.
10. Turn power off and wait for blade to stop before adjusting or servicing.

Assembly

Identify Parts

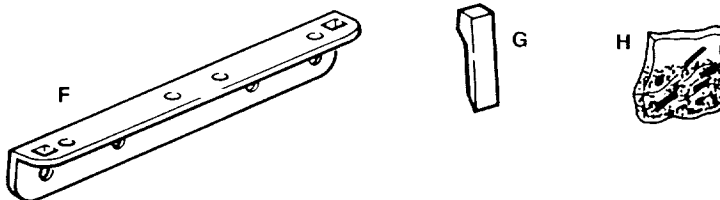
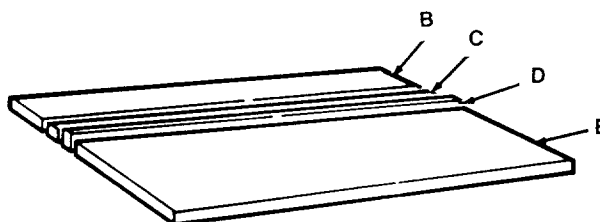
The following parts are included:

Note: Before beginning assembly, check that all parts are included. If you are missing any part, do not assemble saw. Contact your Sears Service Center to get the missing part. Sometimes small parts can get lost in packaging material. Do not throw away any packaging until saw is put together. Check packaging for missing parts before contacting Sears. A complete parts list (Repair Parts) is at the end of the manual. Use the list to identify the number of the missing part.



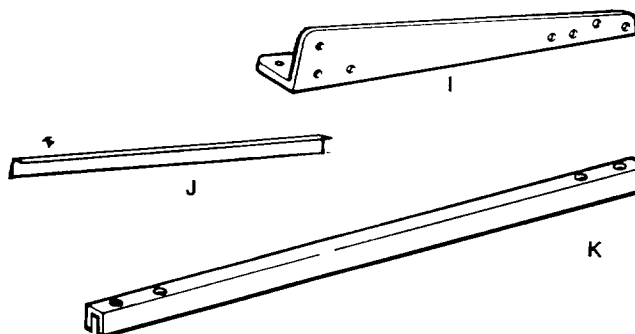
All models include:

- A. Basic Saw Assembly 1
- B. Rear Table 1
- C. Spacer Table 1
- D. Fence (wooden) 1
- E. Front Table 1
- F. Table Support 2
- G. Trim Cap 2
- H. Loose Parts Bags *



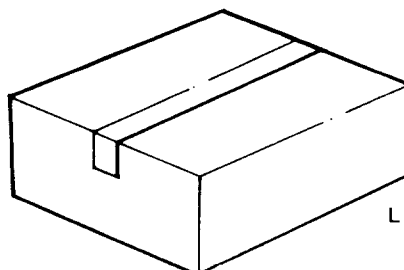
Only models with leg set include:

- I. Leg 4
- J. Lower Stiffener 4
- K. U-Channel 1



Only cabinet model includes:

- L. Cabinet Box 1



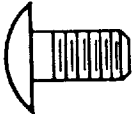
*Number varies; bags can contain other smaller bags. **Note:** To make assembly easier keep contents of each bag together and separate from contents of other bags.

Assembly

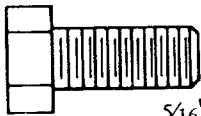
All models include: (When two numbers are given, the first is for leg set models, the second is for the cabinet model.)



#10 x 1/2" long
pan head screw (1)



1/4" diam x 1/2" long
truss head screw (32/42)



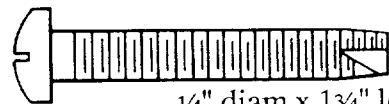
5/16" diam x 3/4" long
hex head screw (4)



1/4" diam x 7/8" long
cup point set screw (1)



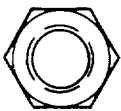
1/4" diam x 1" long
pan head screw (4)



1/4" diam x 1 3/4" long
pan head screw (1)



1/4" diam hex nut (36/46)



5/16" diam hex nut (4)



3/8" diam hex nut (8)



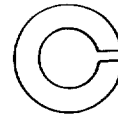
#10 lock washer (1)



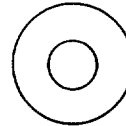
1/4" ext. lock washer (32/42)



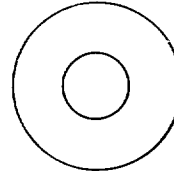
1/4" lock washer (4)



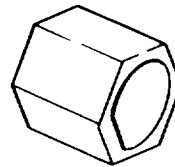
5/16" lock washer (4)



1 7/64" in. diam x 5/8" out. diam
flat washer (5)



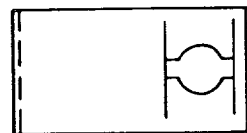
1 1/32" in. diam x 7/8" out. diam
flat washer (4)



hex bushing (1)



tee nut (1)



1/4" U-clip (1)

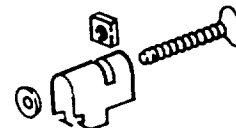
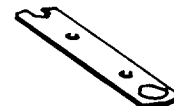
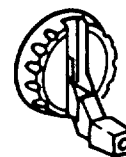


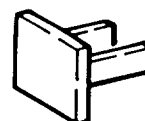
table clamp assembly (2)
- thumbscrew
- square nut
- clamp bracket
- cup washer



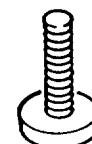
blade wrench (2)



handwheel (1)



yellow key (1)



leveling foot (4)

Assembly

Only models with leg set include:



leg bracket (4)

Only non-electronic models include:



rip scale indicator (2)



bevel scale indicator (1)

Only electronic models include:



battery (1)



battery cover (1)



yoke plug (1)

Only cabinet model includes:



#6 x 1/2" long
pan head plastite screw (2)



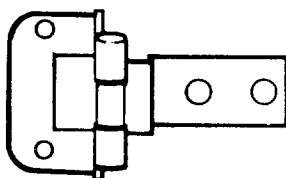
#6 x 3/8" long
pan head screw (2)



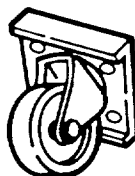
#10 x 1/2" long
pan head plastite screw (4)



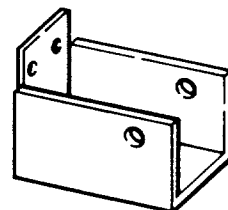
magnetic catch with
stop plate (1)



hinge (2)



caster (2)

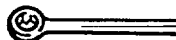


spacer (2)

Tools Needed for Assembly and Alignment



7/16" Wrench



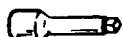
1/2" Wrench



9/16" Wrench



5/8" Wrench



Socket Extension



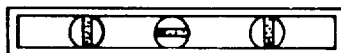
Socket Wrench



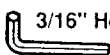
9/16" Socket



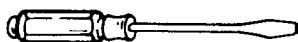
3/4" Socket



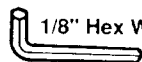
Level



3/16" Hex Wrench



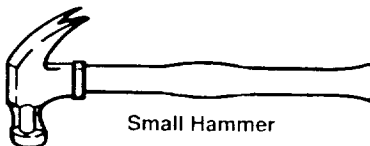
Medium Screwdriver



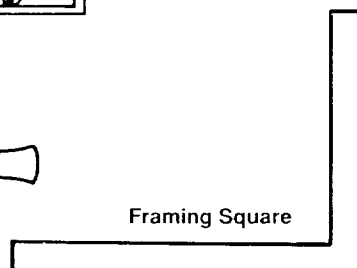
1/8" Hex Wrench



Phillips Screwdriver



Small Hammer



Framing Square

Assembly Steps

It is important for your safety and to get accurate cuts that you put the saw together according to these instructions.

Note: *This manual covers six models.*

Depending on the model saw, you will be instructed to skip some steps, or do extra steps. The differences have to do with whether you have a leg set or a cabinet, and whether the saw is electronic or not.

Follow these steps in order.

Attach Handwheel

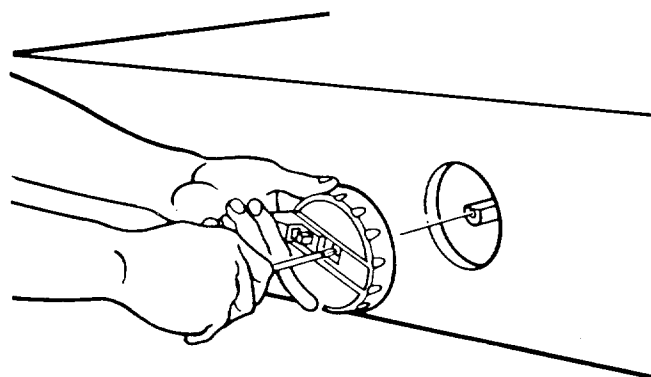
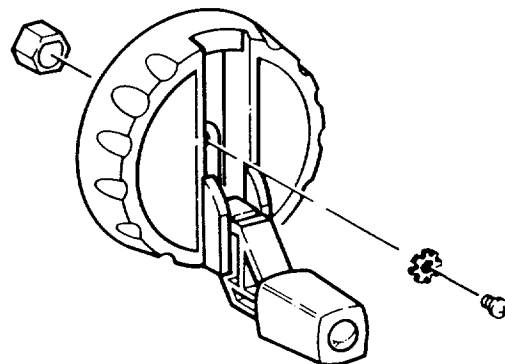
1. Set out:
 - handwheel
 - hex bushing
 - #10 x 1/2" long pan head screw
 - #10 lock washer.
2. Put hex bushing into opening in back of handwheel.
3. Align hex bushing on elevation shaft.
4. Put washer on screw; put screw into hole in center of handwheel and tighten with screwdriver.

WARNING

Plugging in saw during assembly could result in electrical shock, or severe cuts from contact with spinning blade.

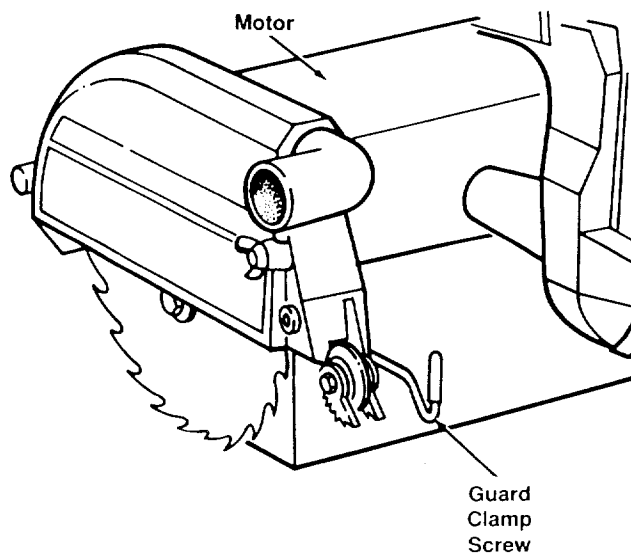
Do not plug in saw at any time during assembly.

Plug in saw only when it is to be used.



Mount Motor

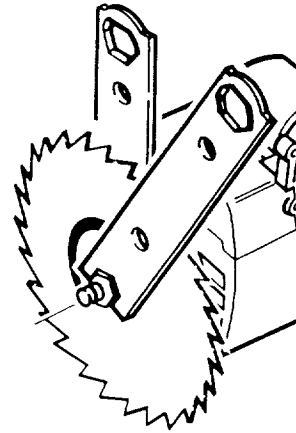
1. Loosen guard clamp screw and lift guard off blade.



Assembly

2. Use both blade wrenches in scissor action to loosen blade nut. **Note:** Arbor shaft has left-hand threads. Turn nut clockwise to loosen.

3. Remove and set aside nut, blade colars and blade. They will be re-installed later during alignment and adjustment.



4. Lock rip lock. Turn handwheel clockwise to raise radial arm about 3".

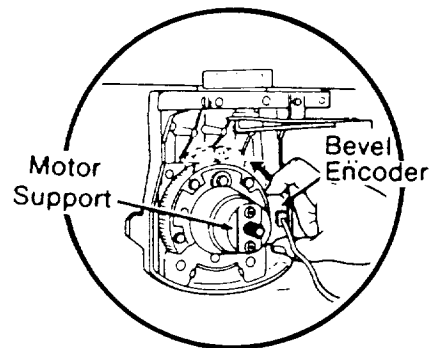
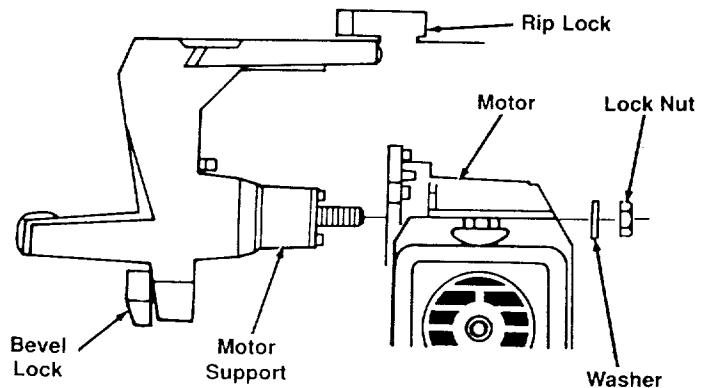
5. Remove styrofoam packing blocks, and clean small pieces of styrofoam off saw. Lift motor out of styrofoam base and set on center channel of saw.

6. Remove lock nut and flat washer from motor support.

7. **Electronic models only:** slide bevel encoder to top position so it fits into notch in motor support bracket.

8. Slide motor onto motor support. Make sure motor is firmly in place.

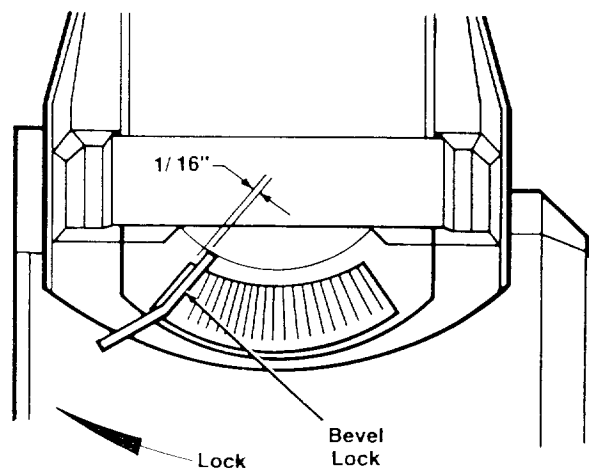
9. Re-install flat washer and lock nut. Tighten lock nut and at same time move bevel lock (located near saw handle) back and forth. Do not over tighten nut.



10. Push bevel lock to left (locking direction) as far as it will go. Space between casting and bevel lock should be about $\frac{1}{16}$ ":

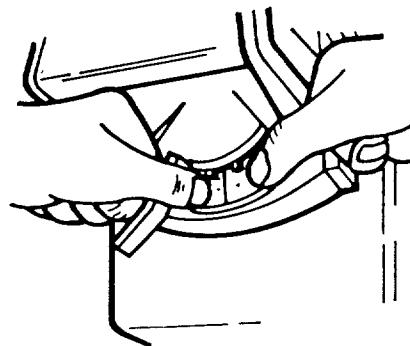
to increase space, unlock bevel lock then tighten lock nut on motor support;

to decrease space, unlock bevel lock then loosen lock nut on motor support.



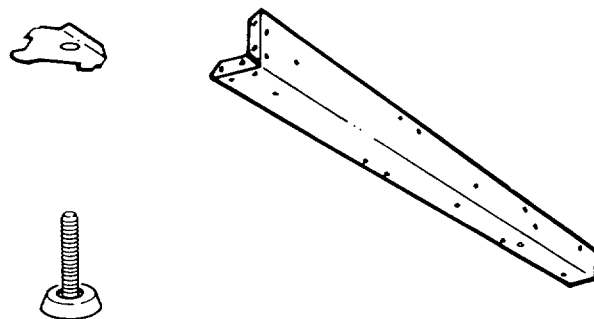
Install Bevel Scale Indicator (Electronic Models: Install Yoke Plug)

1. Lock bevel lock.
2. With tabs on outside, insert one end of indicator (yoke plug) into opening in blade carriage, just behind bevel lock. Push until indicator (yoke plug) snaps in place.
3. **Non-electronic models only:** align red line on indicator with 0°.

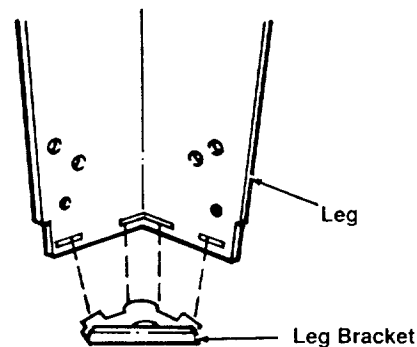


Attach Leveling Feet to Legs (Cabinet Model: Go To "Build Cabinet")

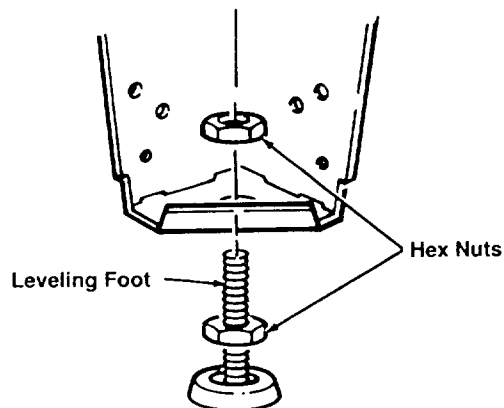
1. Set out:
 - four legs
 - four leg brackets
 - four leveling feet
 - eight 3/8" diam hex nuts.



2. Position leg bracket so lip points up and tabs fit into leg slots. Hammer leg bracket into each leg.



3. Screw nut to within 1/2" from bottom of leveling foot. Put leveling foot through leg bracket hole; put another nut on leveling foot, and finger tighten until nut meets bracket. Repeat for other leveling feet.



Assembly

Attach Legs to Saw Frame

1. Set out:

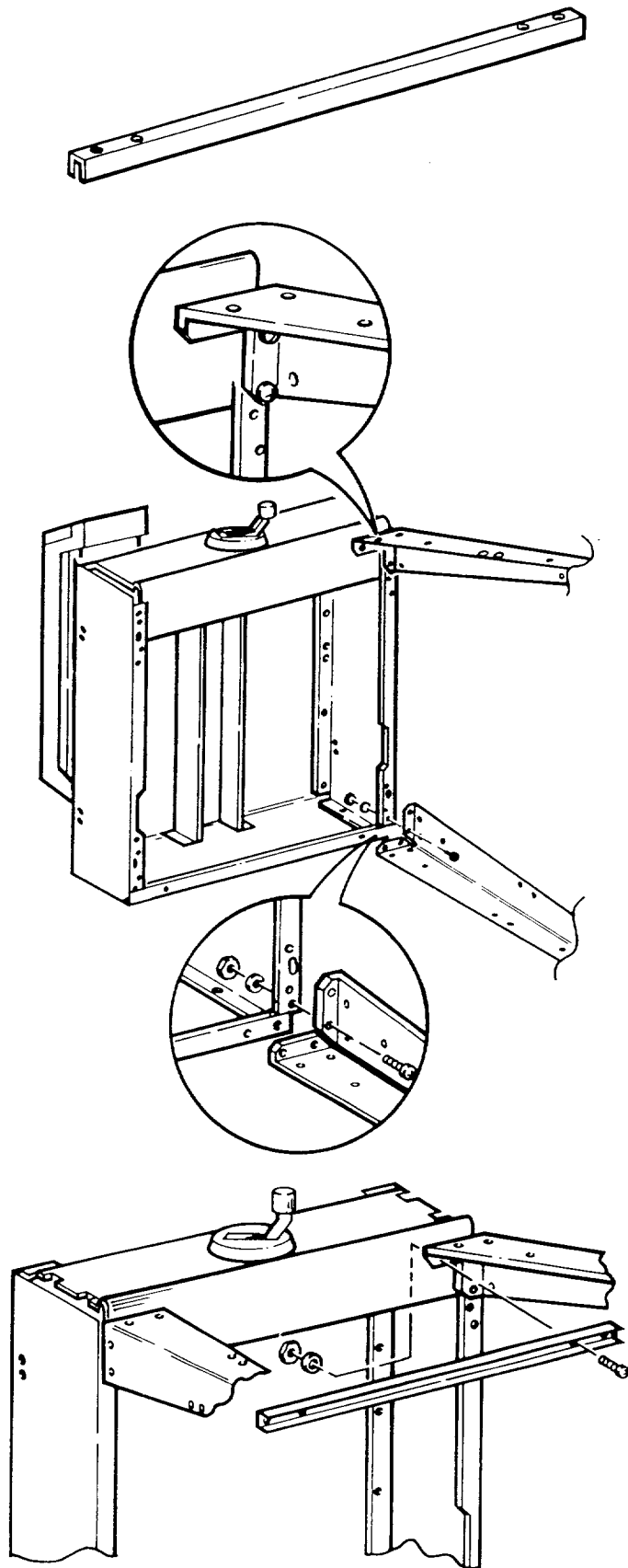
- U-channel
- sixteen $\frac{1}{4}$ " diam x $\frac{1}{2}$ " long truss head screws
- sixteen $\frac{1}{4}$ " ext. lock washers
- sixteen $\frac{1}{4}$ " diam hex nuts.

2. Set basic saw assembly on floor so radial arm points up.

3. Attach two legs to bottom and side frame: use **four** screws per leg (*insert screws through leg*); on end of each screw put washer, then nut, and finger tighten.

4. Attach two legs, at top, to **side** frame only: use **two** screws per leg (*insert screws through leg*); on end of each screw put washer, then nut and finger tighten.

5. Attach U-channel to upper legs and top frame: use four screws (*insert screws through U-channel*); on end of each screw put washer, then nut, and finger tighten.



Attach Lower Stiffeners to Legs

1. Set out:

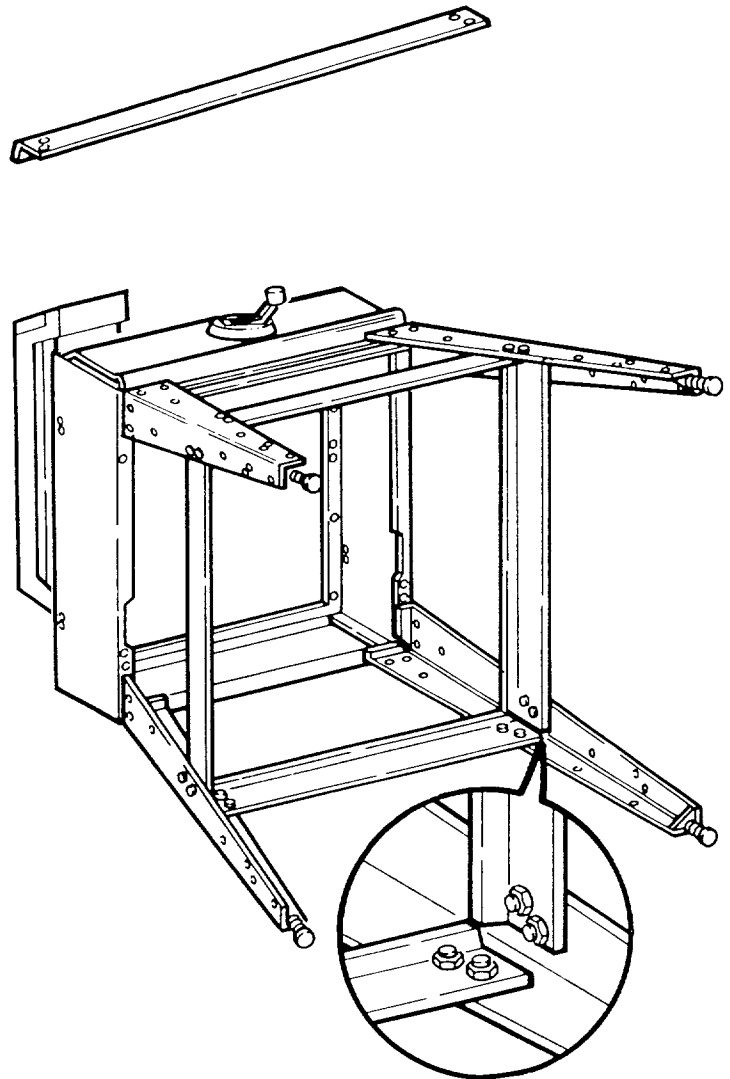
- four lower stiffeners
- sixteen $\frac{1}{4}$ " diam x $\frac{1}{2}$ " long truss head screws
- sixteen $\frac{1}{4}$ " diam ext. lock washers
- sixteen $\frac{1}{4}$ " diam hex nuts.

2. Attach lower stiffeners **inside** and between legs: use four screws per stiffener (*insert screws through legs*); on end of each screw put washer, then nut, and finger tighten.

3. Wrench tighten **all** leg assembly nuts.

4. Raise saw to normal position and put in location where it will be used.

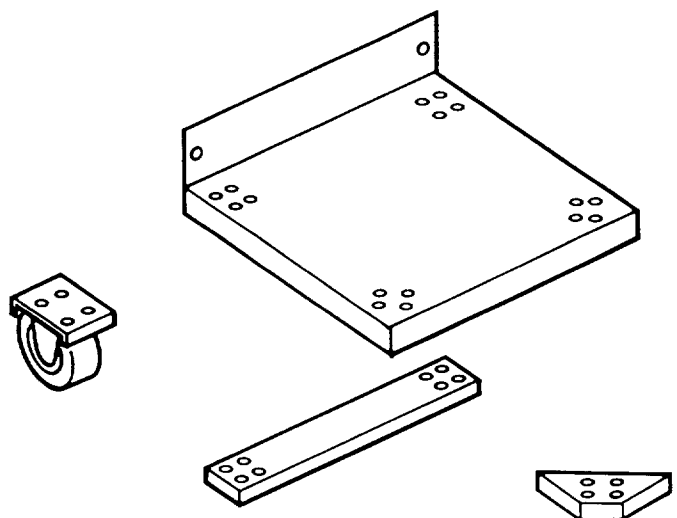
5. Go to "Adjust Leveling Feet".



Build Cabinet

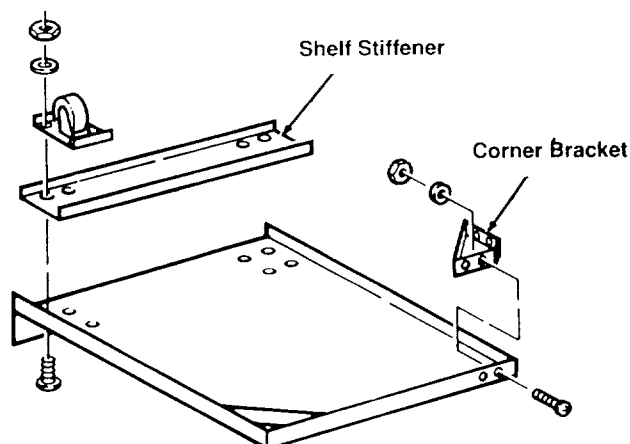
1. Set out:

- bottom shelf
- bottom shelf stiffener
- two corner brackets
- two casters
- twelve $\frac{1}{4}$ " diam x $\frac{1}{2}$ " long truss head screws
- twelve $\frac{1}{4}$ " diam ext. lock washers
- twelve $\frac{1}{4}$ " diam hex nuts.



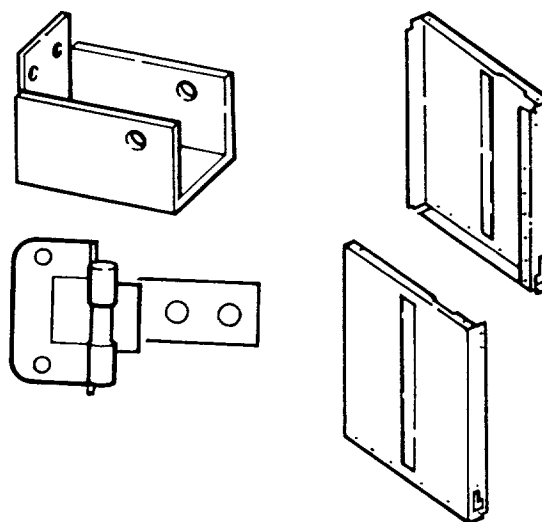
Assembly

2. Put bottom shelf upside down on floor so long edge of raised (rear) side points down.
3. Attach corner brackets to **front** of shelf: use **two** screws per bracket (*insert screws through shelf*); on end of each screw put washer, then nut and wrench tighten.
4. Put bottom shelf stiffener across rear of shelf. Put casters on top of shelf stiffener.
5. Attach casters to stiffener and shelf: use four screws per caster (*insert screws through shelf*); on end of each screw put washer, then nut, and wrench tighten.



Assemble Side Panels

1. Set out:
 - right side panel
 - left side panel
 - two spacers
 - two hinges
 - eight 1/4" diam x 1/2" long truss head screws
 - eight 1/4" diam ext. lock washers
 - eight 1/4" diam hex nuts.

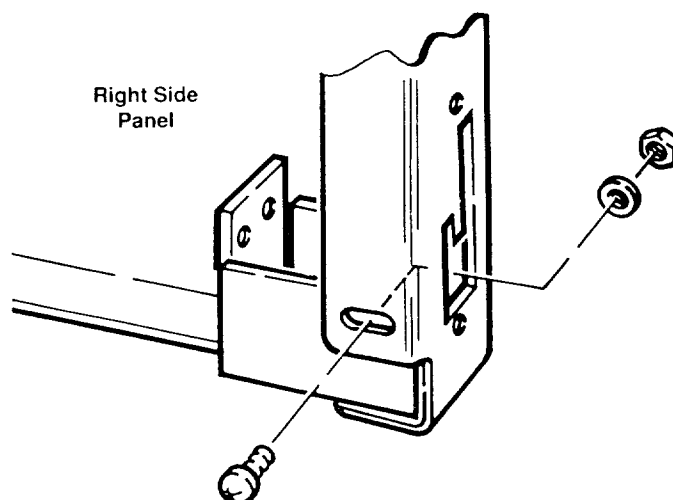


2. Identify right side panel by locating letter "R" stamped near center of rear edge. Position right side panel upright, so "J" slot is at bottom and facing you.

3. Put spacer inside front bottom edge of side panel, so two holes face "J" slot and large hole rests on bottom edge.

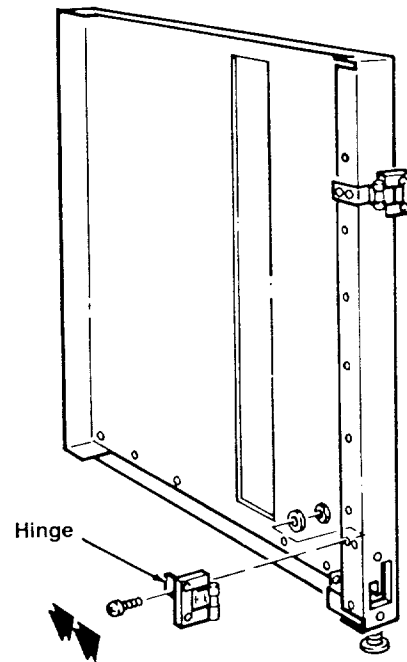
4. Attach spacer to side panel: use two screws (*insert screws through side panel*); on end of each screw put washer, then nut, and wrench tighten.

5. In similar way, attach spacer to left side panel.



6. Attach two hinges to right side panel: use two screws per hinge (*insert screws through hinge*); on end of each screw put washer, then nut, and wrench tighten.

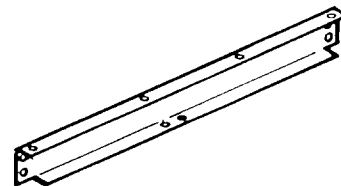
Note: Attachment this way makes door open left to right; to make door open right to left, attach hinges to left side panel.



Attach Side Panels to Bottom Shelf

1. Set out:

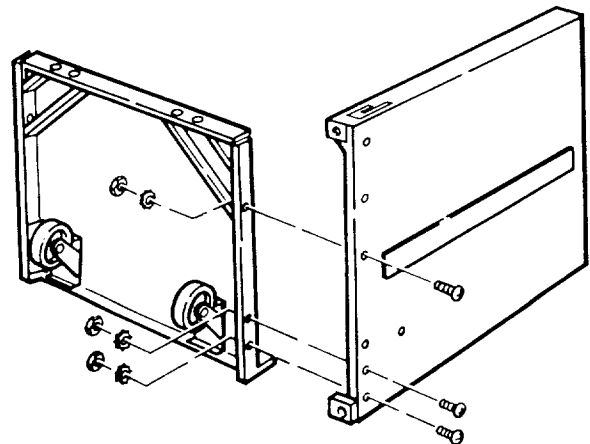
- four leveling feet
- two skirts
- eighteen $\frac{1}{4}$ " diam x $\frac{1}{2}$ " long truss head screws
- eighteen $\frac{1}{4}$ " diam ext. lock washers
- eighteen $\frac{1}{4}$ " diam hex nuts
- eight $\frac{3}{8}$ " diam hex nuts.



2. Put bottom shelf on floor so under side faces you and raised (rear) side is flat on floor. Slide right side panel into place so holes in side panel line up with holes in bottom shelf. **Note:** Make sure J-slot is at top.

3. Attach panel to shelf: use three screws (*insert screws through panel*); on end of each screw put washer, then $\frac{1}{4}$ " nut, and wrench tighten.

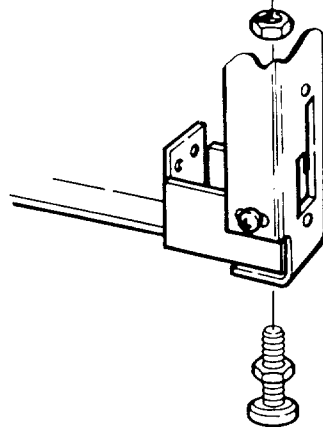
4. In similar way, attach left side panel.



Assembly

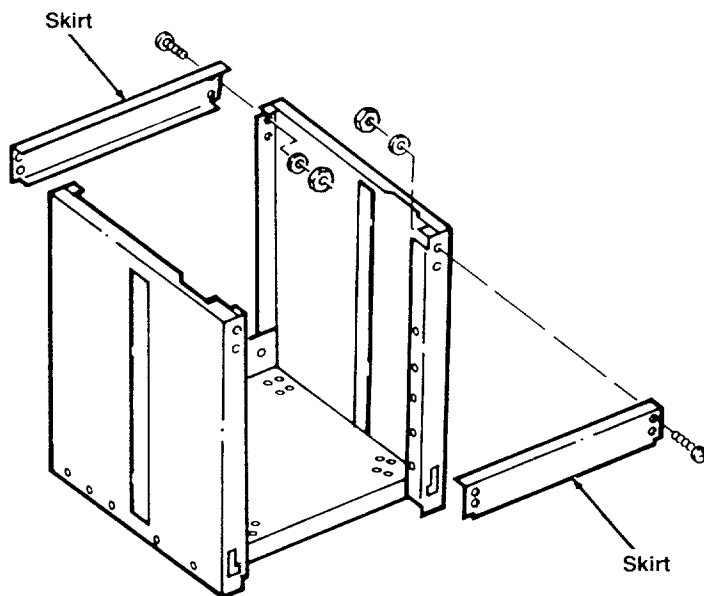
5. Screw $\frac{3}{8}$ " nut to within $\frac{1}{2}$ " of bottom of each leveling foot.

6. Insert leveling feet through holes at four bottom corners of side panels. On end of each leveling foot put another $\frac{3}{8}$ " nut and finger tighten until nut meets surface.



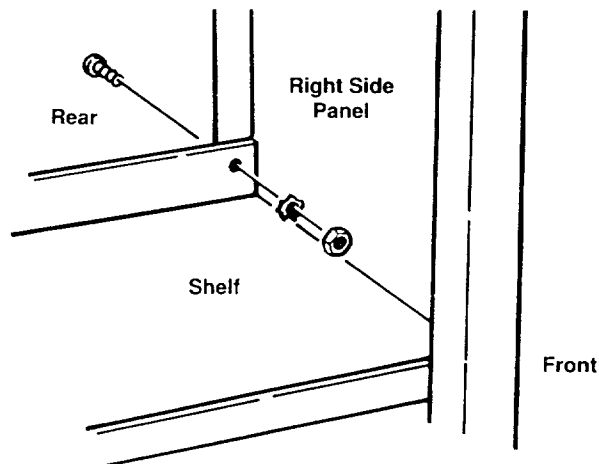
7. Turn cabinet right side up.

8. Attach skirts, across front and rear of cabinet, to side panels: use four screws per skirt (*insert screws through skirt*); on end of each screw put washer, then $\frac{1}{4}$ " nut, and finger tighten.



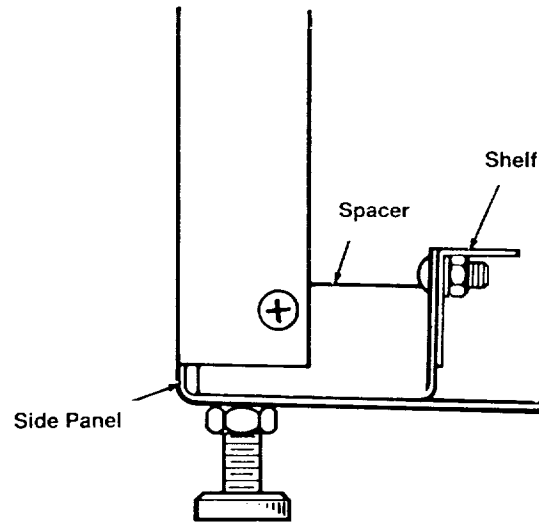
9. Put screw through hole at bottom rear of right side panel and through raised edge of bottom shelf. On end of screw put washer, then $\frac{1}{4}$ " nut, and wrench tighten.

10. Repeat for left side panel.



Assembly

11. Put screw through hole at back of spacer, then through front edge of shelf. On end of screw put washer, then $\frac{1}{4}$ " nut, and wrench tighten.
12. Repeat for other spacer.



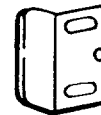
Attach Door

1. Set out:
 - door
 - magnetic catch with stop plate
 - two #6 x $\frac{1}{2}$ " long pan head plastite screws
 - two #6 x $\frac{3}{8}$ " long pan head screws
 - four #10 x $\frac{1}{2}$ " long pan head plastite screws.

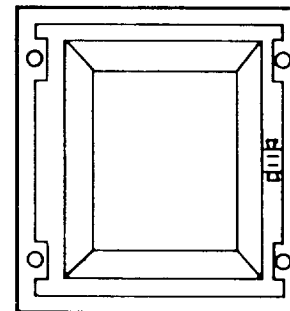
Magnetic Catch



Magnetic Stop Plate



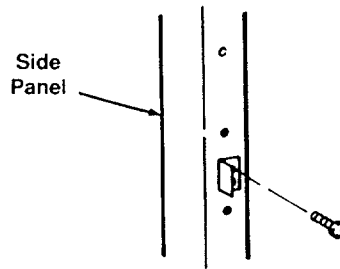
2. Put door face down on floor. Attach magnetic catch to inside surface of door: use two #6 x $\frac{1}{2}$ " long screws. **Note:** Illustration shown is for door that opens left to right; put catch on opposite side for door that opens right to left.



Assembly

3. Attach magnetic stop plate to inside edge of left side panel: line up with small holes in panel; use two #6 x $\frac{3}{8}$ " long screws. **Note:** *Attach to right side panel for door that opens right to left.*

4. Attach door to hinges on side panel: use four #10 x $\frac{1}{2}$ " long screws.



Mount Basic Saw Assembly

1. Set out:

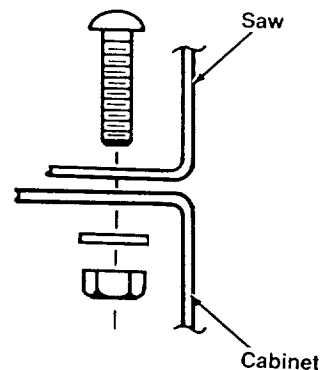
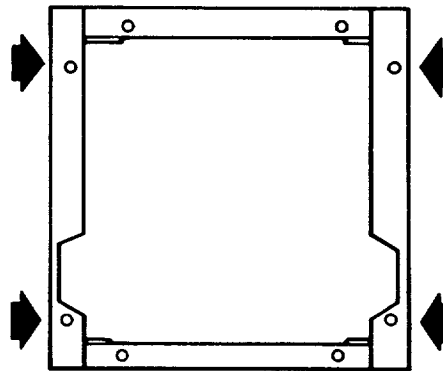
- basic saw assembly
- four $\frac{1}{4}$ " diam x $\frac{1}{2}$ " long truss head screws
- four $\frac{1}{4}$ " diam ext. lock washers
- four $\frac{1}{4}$ " diam hex nuts.

2. Lift saw assembly by front edge and column and place on cabinet so four holes line up.

3. Attach saw to cabinet: use four screws (*insert screws through saw frame*); on end of each screw put washer, then nut and wrench tighten.

4. Check and wrench tighten **all** nuts in cabinet.

5. Put saw in location where it will be used.



Adjust Leveling Feet

Note: *Cabinet model: lengthen rear leveling feet so casters are just off floor, then proceed.*

1. If cabinet or leg set rocks, adjust leveling feet so all four rest on floor.
2. Rest a level on radial arm. If arm is level or slants forward, adjust leveling feet so arm slants slightly towards rear.
3. Wrench tighten top nuts on each leveling foot.

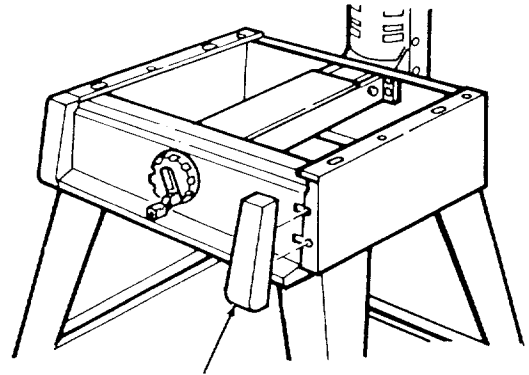
WARNING

Saw must slant slightly towards rear to keep blade carriage from rolling forward. Workpiece or saw can move unexpectedly if cabinet or leg set rocks. Fingers, hand or arm could be cut off by blade contact. Adjust leveling feet before using saw.

Assembly

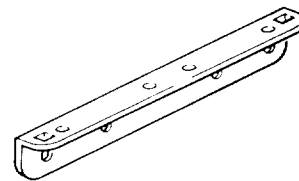
Attach Trim Caps

1. Line up plastic stubs on back of trim caps with holes on front corners of frame and snap into place.

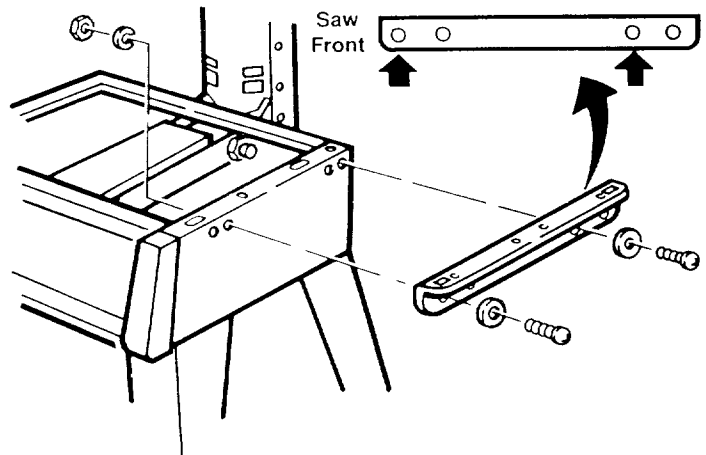


Attach Table Supports

1. Set out:
 - two table supports
 - four $\frac{5}{16}$ " diam x $\frac{3}{4}$ " long hex head screws
 - four $\frac{11}{32}$ " in. diam x $\frac{7}{8}$ " out. diam flat washers
 - four $\frac{5}{16}$ " diam lock washers
 - four $\frac{5}{16}$ " diam hex nuts.



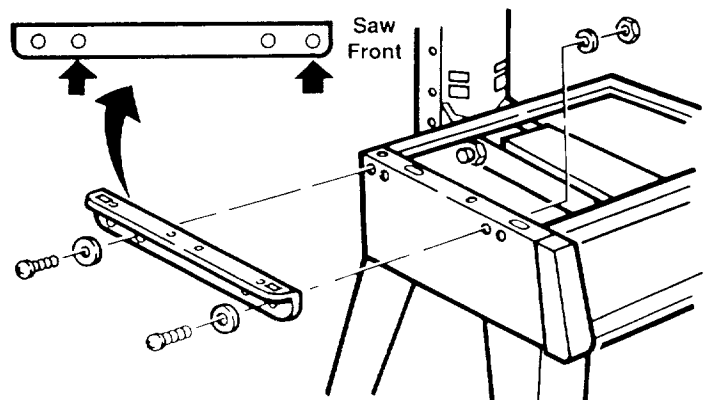
2. Put flat washer on each screw.
3. Attach supports to side frame, **making sure to use correct holes in table supports and side frame**: use two screws per support (*insert screws through support*); on end of each screw put lock washer, then nut and finger tighten so **table supports rest in lowest position**.



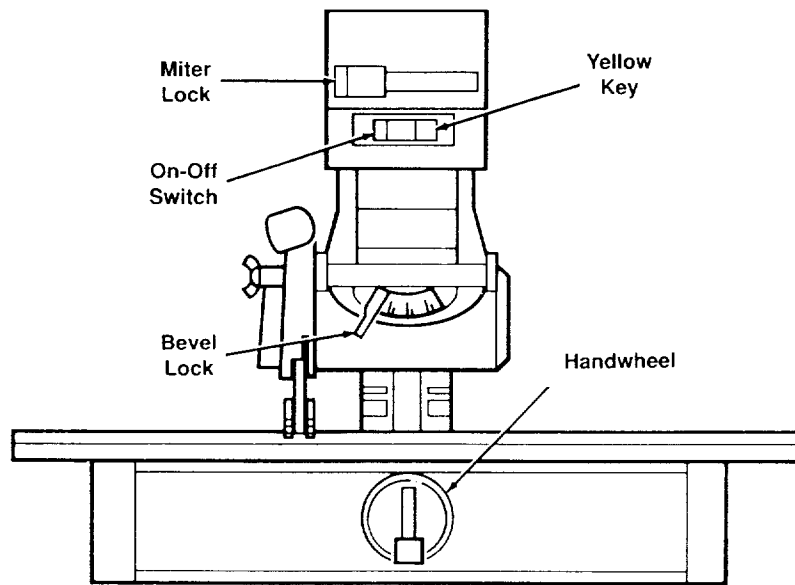
Install Remaining Hardware

Go to Alignment and Adjustment Section and follow instructions to install remaining parts and hardware. You cannot use the saw until it is aligned and adjusted.

It may be helpful to read the Controls Section before proceeding with alignment and adjustment.

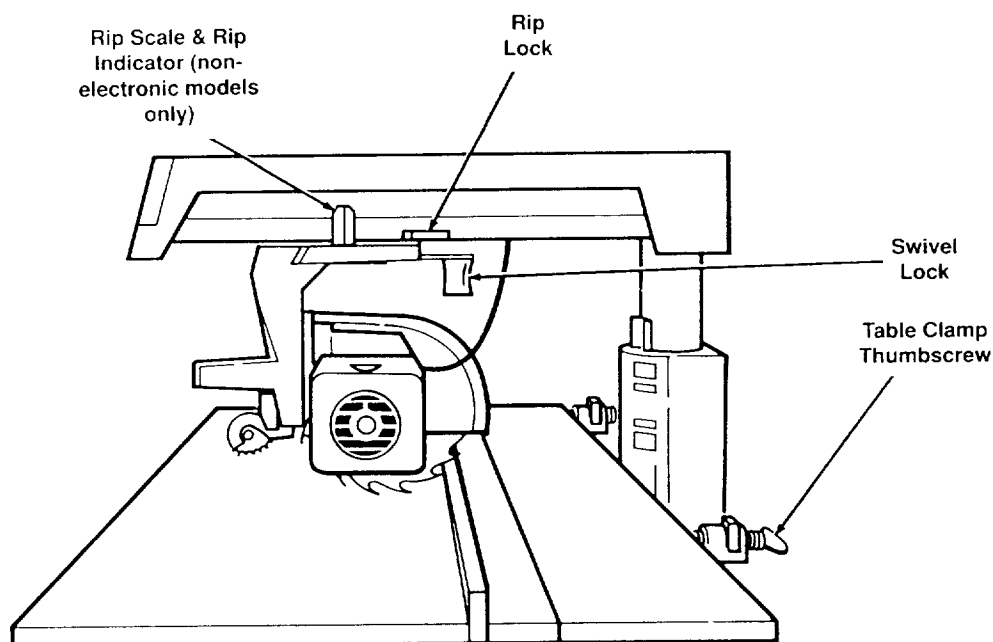


Controls



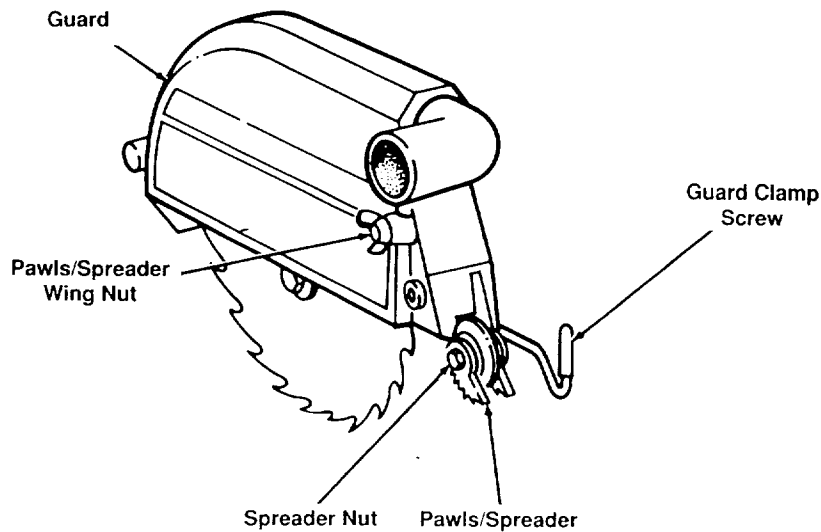
<u>Control</u>	<u>Function</u>	<u>Operation/Comments</u>
Miter Lock	Frees radial arm to move; locks in any desired position; pre-set indexed positions at 0°, 45°, -45°	Pull out and towards right to unlock, push to lock <i>Hold in unlocked position while moving arm</i>
On-off Switch	Turns motor on/off	Pull on, push off <i>Requires yellow key</i>
Yellow Key	Allows saw to be switched on	Insert into on-off switch <i>Remove after turning saw off</i>
Bevel Lock	Frees motor to rotate; locks in any desired position; pre-set indexed positions at 0°, 45°, -45°, 90°, -90°	Move towards right to unlock, towards left to lock <i>Support motor before unlocking because it can swing down quickly. Hold in unlocked position while moving motor</i>
Handwheel	Raises/lowers radial arm	Turn clockwise to raise, counterclockwise to lower <i>To fold handle into wheel, squeeze red plastic ears and push handle; pull handle out until ears click into place</i>

Controls



<u>Control</u>	<u>Function</u>	<u>Operation/Comments</u>
Rip Lock	Frees carriage to move along radial arm; locks in position	Pull to unlock, push to lock <i>Lock before ripping</i>
Rip Scale & Rip Indicators (<u>non-electronic models only</u>)	Tell distance between blade and fence when saw is in in-rip or out-rip position	Move blade carriage along arm to align line on indicator with desired number on scale
Swivel Lock	Frees blade carriage to rotate between rip and crosscut positions; locks in position	Pull to unlock; push to lock <i>Hold in unlocked position while moving blade carriage</i>
Table Clamp Thumbscrew	Frees table sections to allow fence changing	Turn clockwise to tighten, counterclockwise to loosen

Controls



<u>Control</u>	<u>Function</u>	<u>Operation/Comments</u>
Guard	Partially protects against blade contact; keeps workpiece from fluttering during ripping; acts as saw-dust deflector	Lock in level position for crosscut; for ripping, rotate until guard nose just clears top surface of workpiece, then lock in place <i>See Ripping Set-Up for details and illustrations</i>
Guard Clamp Screw	Frees guard to rotate about blade	Turn counterclockwise to loosen, clockwise to tighten
Pawls/Spreader Wing Nut	Frees pawls/spreader to move up and down	Turn counterclockwise to loosen, clockwise to tighten
Spreader Nut	Frees pawls/spreader to move side to side	Loosen to make adjustment, then tighten <i>For safety reasons spreader must be in line with blade. See Alignment: Spreader to Blade</i>
Pawls/Spreader	Reduce kickback by keeping kerf open (spreader function); slow or stop kickback by digging into workpiece (pawls function)	Set as unit, so pawl is level on workpiece and spreader rides in kerf. <i>For safety reasons set pawls/spreader before ripping. See Ripping Set-Up for details and illustrations</i>

Alignment and Adjustment

This section applies to all six models covered by this manual. The saw and blade must be aligned correctly for two reasons:

- 1) to prevent binding of the blade and workpiece, which can cause jams, kick-backs, or thrown workpieces;
- 2) to make accurate cuts.

Alignment and Adjustment Steps

The following alignments and adjustments **must be made in order**. If you miss an adjustment, you must go back, make the missed adjustment, and repeat all steps from that point on.

These adjustments are like fine tuning a piece of equipment. Often, a series of steps must be repeated more than once in order to get the adjustment right.

There are many adjustments to make. Because some adjustments may be awkward, you may want to ask someone to help you.

Before you start, make sure the framing square is true.

Adjust Column Support

The combined goal of this adjustment is:

- a) to eliminate looseness between the column and column support, and
- b) to make raising and lowering the radial arm a smooth and firm action.

1. Lock radial arm at 0° miter.
2. Raise and lower radial arm a few turns in each direction. Movement should be smooth but firm.

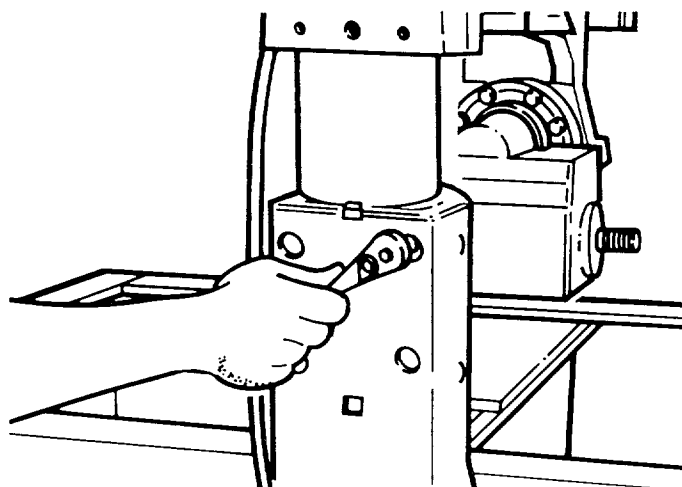
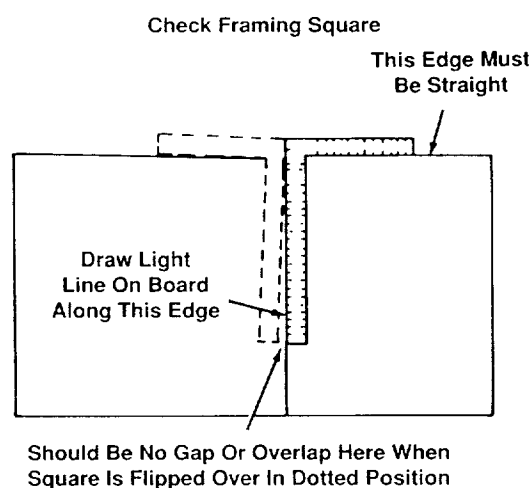
If movement seems difficult, slightly loosen (less than $\frac{1}{8}$ turn) four bolts at rear of column support.

WARNING

Plugging in saw during alignment could result in accidental start-up and severe cuts from contact with spinning blade.

Do not plug in saw at any time during alignment or adjustment.

Plug in saw only when it is to be used.

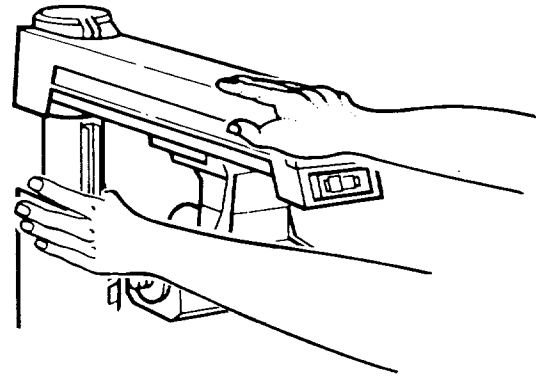


Alignment and Adjustment

3. Feel for movement between column and column support: place index finger of one hand against column and column support; use other hand to push end of radial arm side to side and up and down.

If there is no movement, no further adjustment is needed.

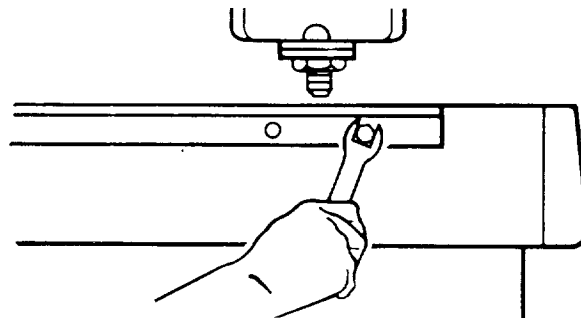
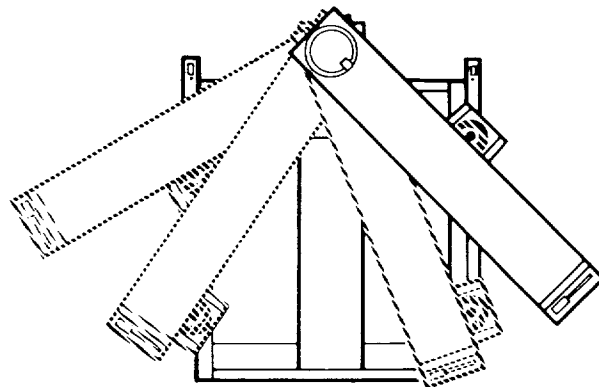
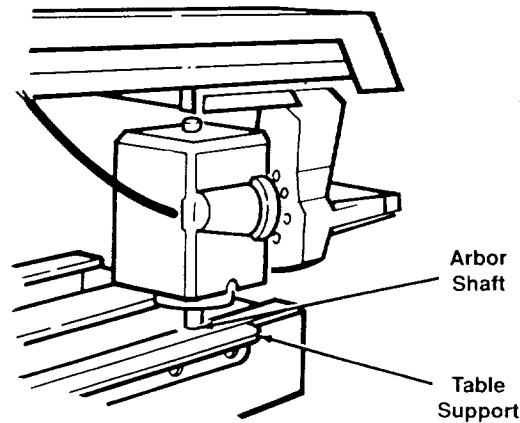
If there is movement, slightly tighten (less than $\frac{1}{8}$ turn) four bolts at rear of column support.



Adjust Table Supports

The goal in adjusting the table supports is to make sure that each support is the same distance from the radial arm at all points. This ensures that when the table and blade are installed, the clearance between them will be equal at all points.

1. Lock motor at 90° bevel (arbor shaft points down). Unlock rip and miter locks.
2. Check clearance between arbor shaft and table supports at front and rear of each support to find highest area (smallest clearance). Start with arbor shaft just touching table support at one area, then check remaining areas, raising radial arm as needed. **Note: Make sure arbor shaft is over table support and not saw frame.**
3. Position arbor shaft so it just touches highest area found in step 2, and tighten nearest table support screw.
4. **Without changing radial arm elevation**, adjust clearance between arbor shaft and table supports at three remaining areas: at each area, **raise table support** to just meet arbor shaft, then tighten nearest table support screw.
5. Re-check front and rear of each table support, making sure that without changing radial arm elevation, clearance between arbor shaft and supports is equal.

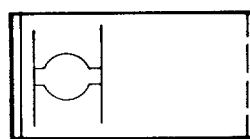


Alignment and Adjustment

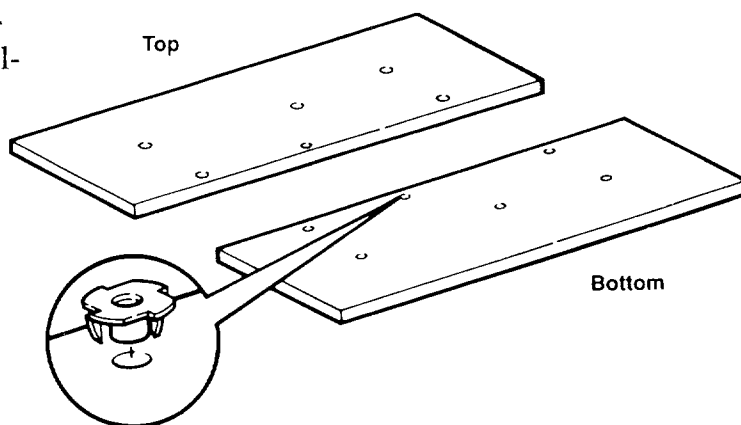
Install Front Table

1. Set out:

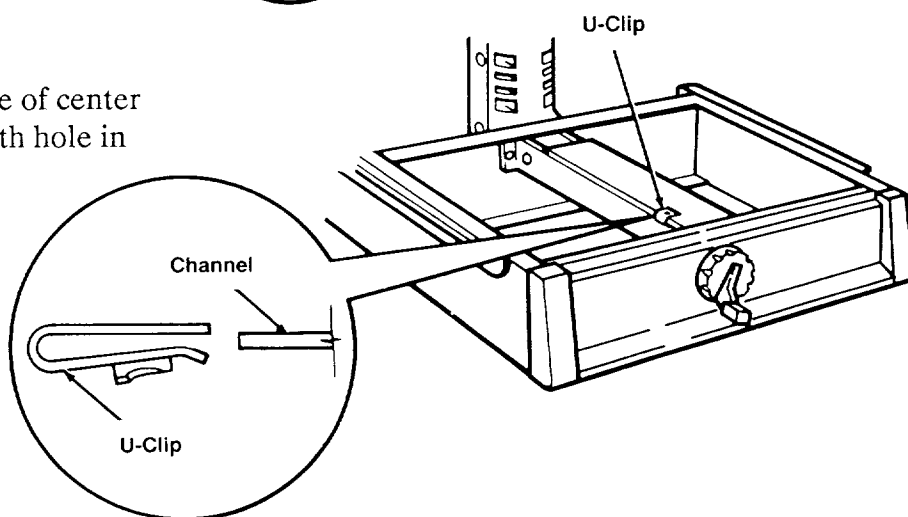
- front table
- tee nut
- $\frac{1}{4}$ " U-clip
- $\frac{1}{4}$ " diam x $\frac{7}{8}$ " long cup point set screw
- four $\frac{1}{4}$ " diam x 1" long pan head screws
- $\frac{1}{4}$ " diam x $1\frac{3}{4}$ " long pan head screw
- five $1\frac{7}{64}$ " in. diam x $\frac{5}{8}$ " out. diam flat washers
- four $\frac{1}{4}$ " lock washers
- four $\frac{1}{4}$ " diam hex nuts.



2. Identify top and bottom of table: top has countersunk holes. Place table **bottom side up**. Hammer tee nut into leveling hole.



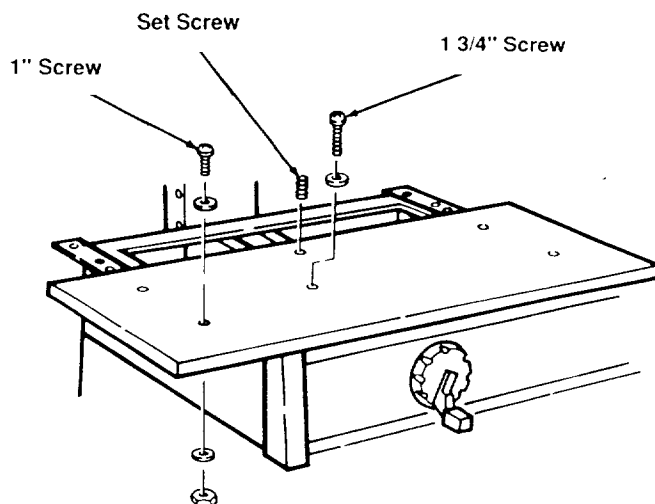
3. Snap U-clip onto left side of center channel so hole lines up with hole in channel.



4. Place table, **top side up**, on saw so center countersunk hole lines up with hole in U-clip. *Note: Table will extend over front edge of saw frame.*

Alignment and Adjustment

5. Drop flat washer into each counter-sunk hole.
6. Start $1\frac{3}{4}$ " long pan head screw through center hole and into U-clip, but do not fully tighten.
7. Start cup point set screw through leveling hole and into tee nut, but do not fully tighten.
8. Put 1" long pan head screw in each of four remaining holes. On end of each screw, put lock washer then nut and tighten with screwdriver.



Make Front Table Flat

1. Place rear table on its edge, across center of front table. Check for gap between surfaces.

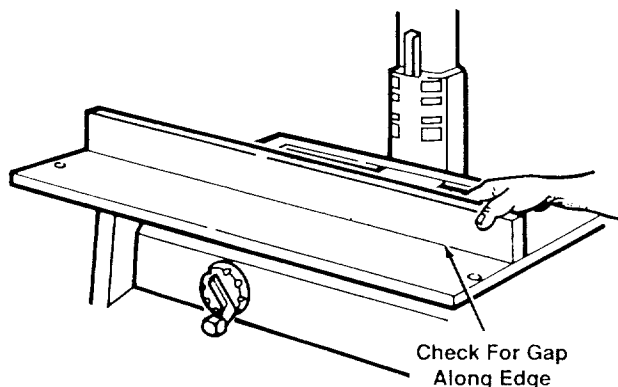
If there is no or less than $\frac{1}{32}$ " gap, tighten cup point set screw until it touches frame (look underneath table), then tighten center ($1\frac{3}{4}$ " long) pan head screw.

If there is more than $\frac{1}{32}$ " gap, close gap by raising or lowering center of front table:

to raise center, tighten cup point set screw;

to lower center, tighten center ($1\frac{3}{4}$ " long) pan head screw.

2. When gap is closed, make sure cup point set screw touches frame (look underneath table), and center ($1\frac{3}{4}$ " long) pan head screw is tightened.



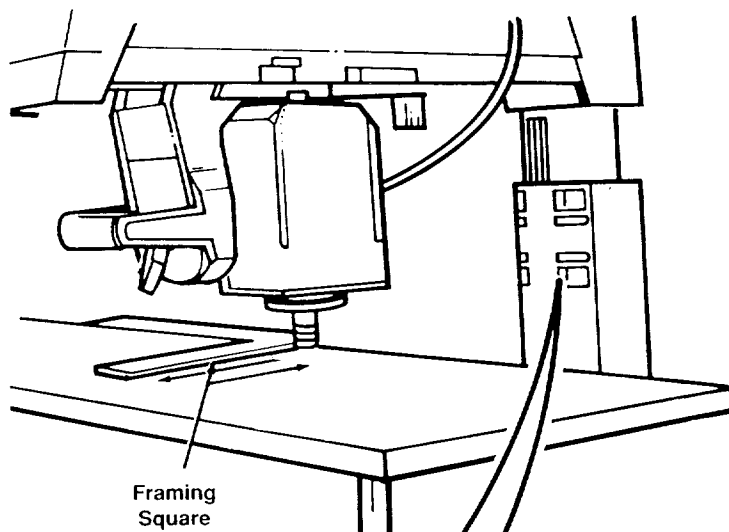
Square Crosscut Travel

The goal of this adjustment is to make accurate crosscuts. To do so, the radial arm must be perpendicular to the fence, otherwise, there will be a slight miter angle in all crosscuts.

1. Lock radial arm at 0° miter.
2. Lock motor at 90° bevel (arbor shaft points down).

Alignment and Adjustment

3. Lower radial arm until arbor shaft is slightly above table.
4. Unlock rip lock. Move blade carriage until arbor shaft is at rear edge of front table.
5. Place framing square so long side is off rear edge of table, and short side just touches arbor shaft. Hold square in place, grasp saw handle and pull blade carriage forward. Arbor shaft should just touch square at all points. If it does, no adjustment is needed.

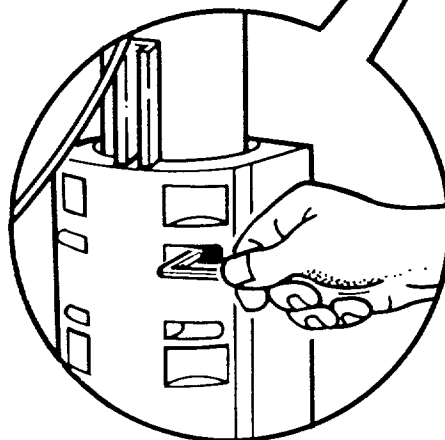


6. If arbor shaft moves into or away from square, adjust radial arm:

to move radial arm toward right, loosen two socket head screws on right, then tighten two screws on left. **Note:** *Loosen and tighten screws equally.*

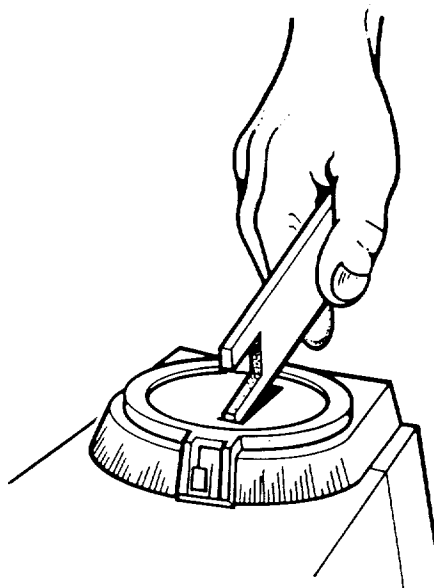
to move radial arm toward left, loosen two socket head screws on left, then tighten two screws on right. **Note:** *Loosen and tighten screws equally.*

7. When arbor shaft just touches square at all points, raise and lower radial arm a few times. If movement is difficult, slightly and equally loosen all four socket head screws.



Set Miter Indicator (Non-Electronic Models Only)

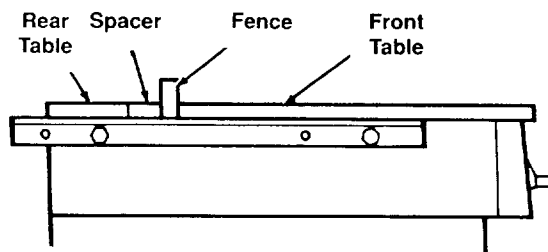
1. Use edge of blade wrench to set miter indicator, on top of radial arm, to 0°.



Alignment and Adjustment

Install Table Clamps

1. Insert fence, then spacer table, then rear table.

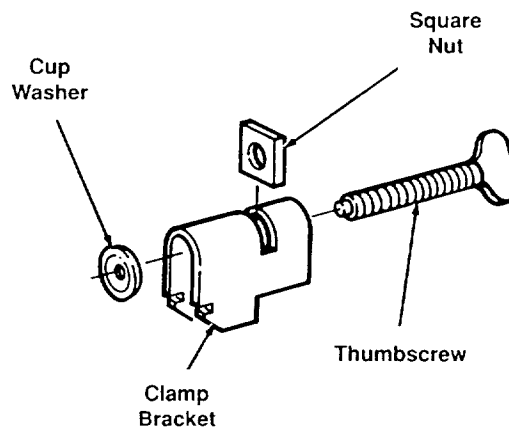


2. Set out two unassembled table clamps:

- two cup washers
- two clamp brackets
- two square nuts
- two thumbscrews.

3. Drop square nut into slot at top of clamp bracket.

4. Insert thumbscrew through **rear** opening, and turn clockwise until it comes out other side about $\frac{1}{2}$ ". **Note:** If you put screw in front opening, clamp will not work.

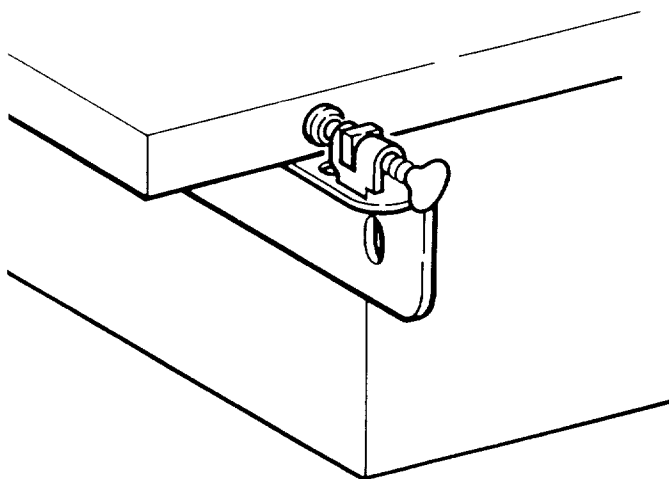


5. Tilt clamp bracket forward and snap into place in opening at rear of table support.

6. Hold cup washer with concave side against rear table. Turn thumbscrew clockwise until it snaps into washer.

7. Repeat steps for other table clamp.

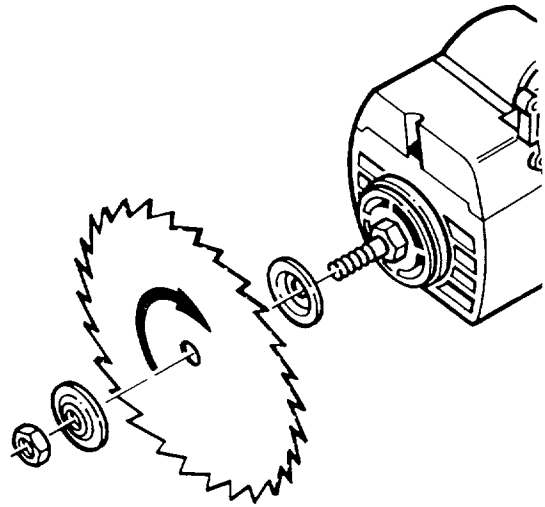
8. Tighten thumbscrews to clamp table sections in place.



Alignment and Adjustment

Install Blade

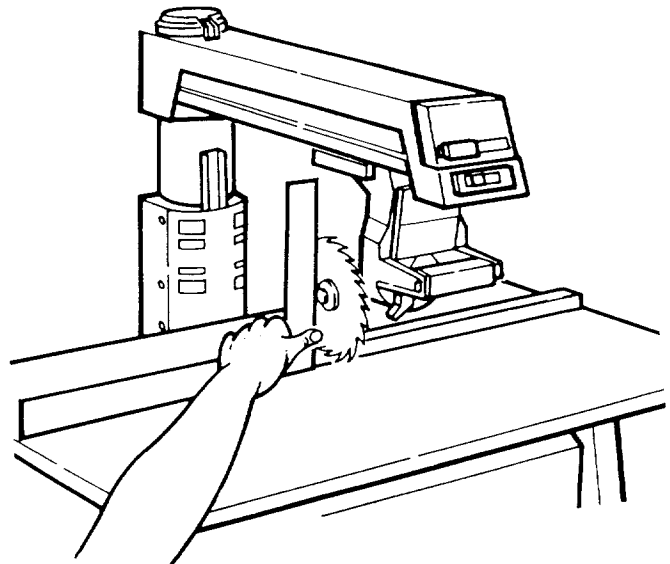
1. Lock rip lock.
2. Raise radial arm. Lock motor at 0° bevel (arbor shaft horizontal).
3. On arbor shaft put blade collar, then blade, then second blade collar, then blade nut. **Note:** *Concave surfaces of blade collars rest against blade. Make sure directional arrow on blade is on outside and points clockwise.*
4. Use blade wrenches in scissor action to tighten nut. **Note:** *Arbor shaft has left-hand threads. Turn nut counterclockwise to tighten. Do not overtighten nut because this can cause blade collar to warp and blade to wobble during cutting.*



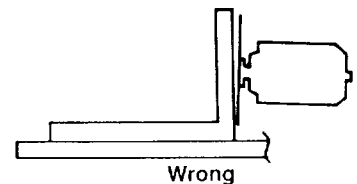
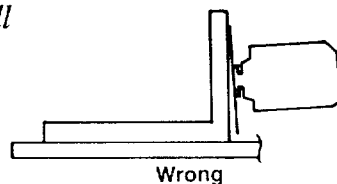
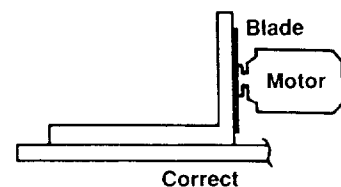
Square Blade to Table for Crosscutting

The goal of this adjustment is to make the blade perpendicular to the table so that crosscuts will be accurate; otherwise all crosscuts will have a slight bevel angle.

1. Lower blade until it just clears table. Lock bevel, miter, rip, and swivel locks.
2. Place square so long edge rests on table and short edge rests against blade surface, not on a tooth.



3. There should be no gap between blade and square. **Note:** *Not all blades are perfectly flat. Check different points along blade surface by making quarter turns and looking for gap each time. Consider overall fit of blade. If there is no gap, no adjustment is needed.*

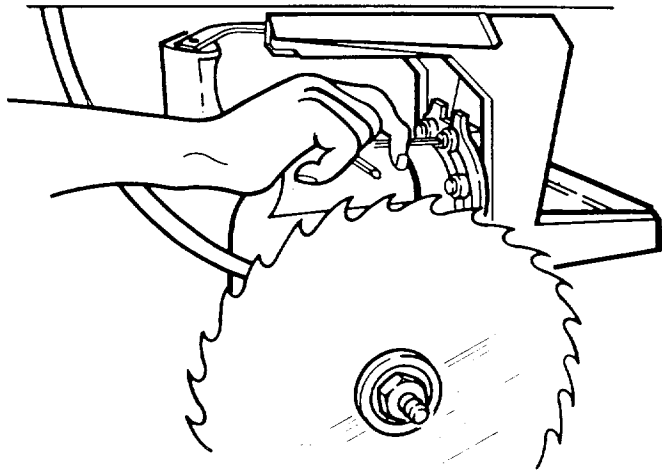


Alignment and Adjustment

4. If there is a gap, adjust motor:
 - i) unlock bevel lock
 - ii) loosen four socket head screws behind blade carriage
 - iii) move motor until blade rests flush against square
 - iv) lock bevel lock.

5. Re-check alignment and adjust as needed.

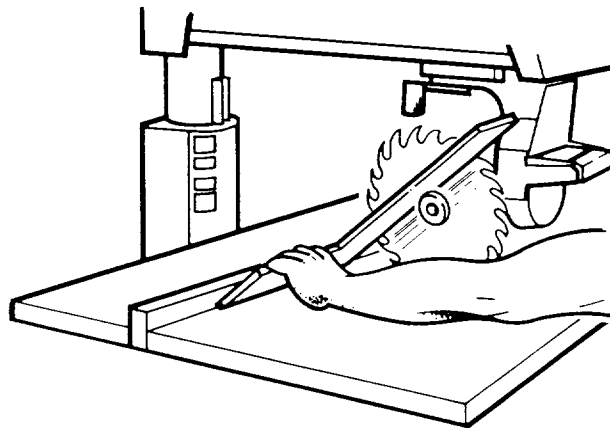
6. Tighten four socket head screws behind blade carriage.



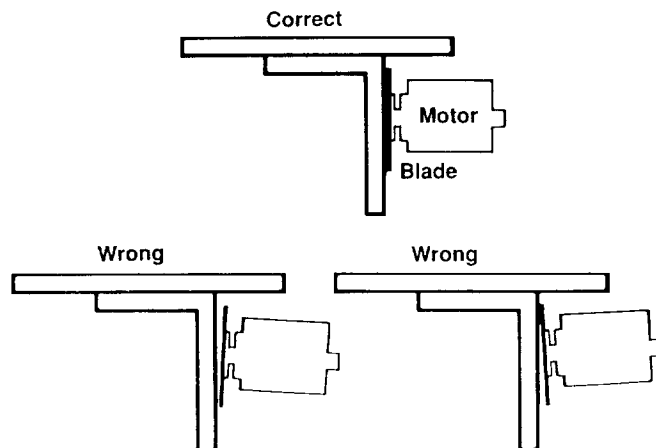
Square Blade to Fence

The goal in setting the blade perpendicular to the fence is to reduce the risk of kickback when ripping. This adjustment will also reduce splintering of the workpiece and burning of the kerf during ripping and crosscutting.

1. Lower blade until it just clears table.
2. Place square so short edge is against fence and long edge is against flat surface of blade (not on a tooth), just above blade collar.
3. Unlock rip lock. Pull blade forward as far as you can, yet still have framing square against fence and blade. Lock rip lock.

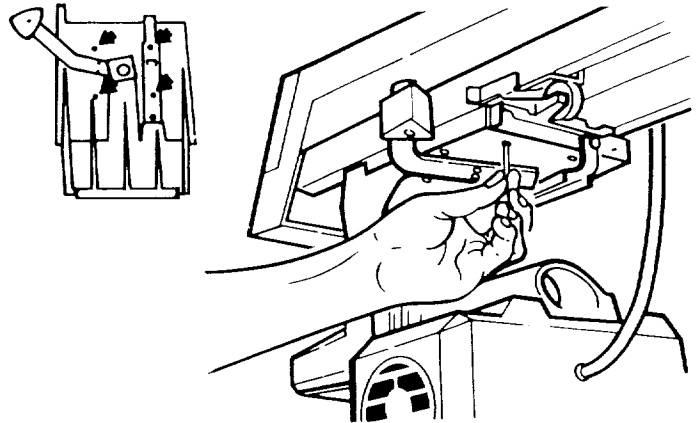


4. There should be no gap between blade and square. **Note:** *Not all blades are perfectly flat. Check different points along blade surface by making quarter turns and looking for gap each time. Consider overall fit of blade.* If there is no gap, no adjustment is needed.



Alignment and Adjustment

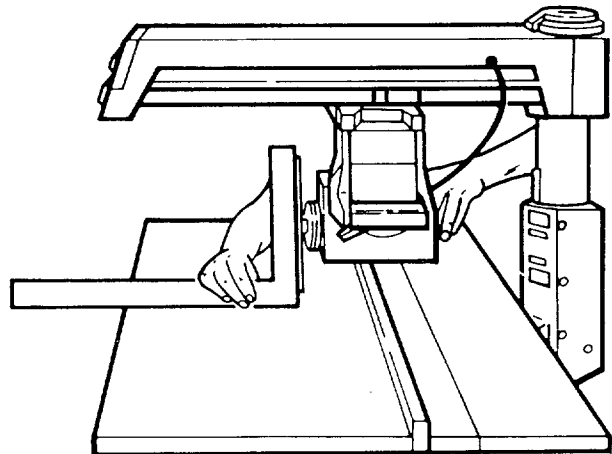
5. If there is a gap, adjust blade carriage:
 - i) unlock swivel lock
 - ii) loosen four adjusting screws under blade carriage
 - iii) grasp saw handle and move blade carriage until blade rests flush against square
 - iv) lock swivel lock.
6. Re-check alignment and adjust as needed.
7. Tighten four adjusting screws under blade carriage.



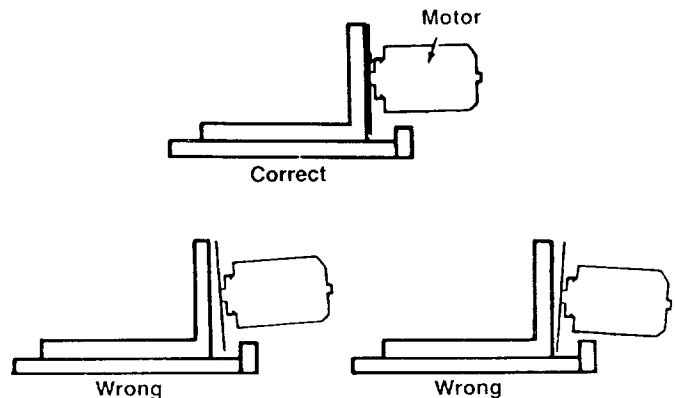
Square Blade to Table for Ripping

The goal of this adjustment is to make the blade perpendicular to the table so that rip cuts will be accurate; otherwise all rip cuts will have a slight bevel angle.

1. Lock blade in out-rip position (blade towards table front, motor towards column). Lock rip lock.
2. Raise radial arm to allow clearance for square.
3. Place square so long edge is on table and short edge is against blade (not on a tooth), beside blade collar.



4. There should be no gap between blade and square. **Note:** *Not all blades are perfectly flat. Check different points along blade surface by making quarter turns and looking for gap each time. Consider overall fit of blade.* If there is no gap, no adjustment is needed.

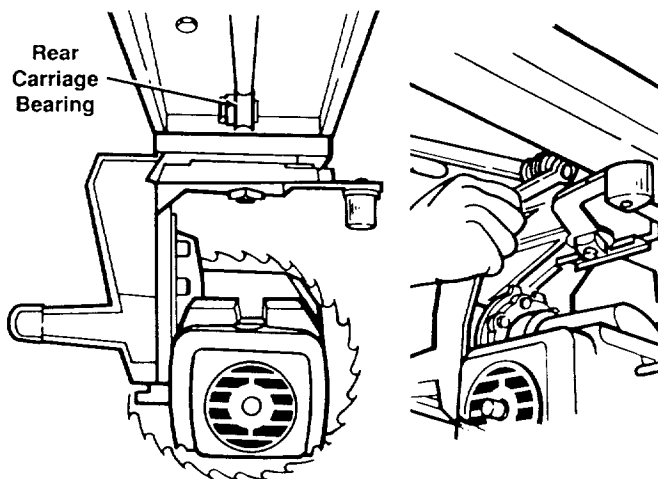


Alignment and Adjustment

5. If there is a gap, adjust rear carriage bearing (which is visible when you go to rear of saw and look up under radial arm--carriage bearing rides on central track):

- i) hold bolt in place and loosen nut on bearing
- ii) rotate bolt until gap closes
- iii) hold bolt in place and tighten nut.

6. Re-check alignment and adjust as needed.

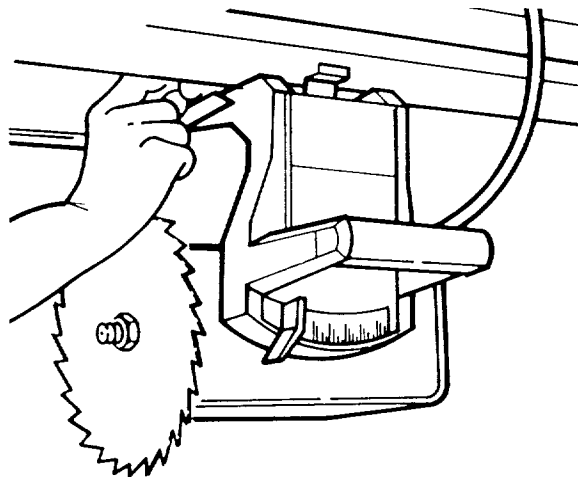


Adjust Carriage Bearings

The goal of this adjustment is to eliminate looseness between the carriage bearings and the radial arm. The blade carriage should roll freely along the entire length of the radial arm, but with some resistance.

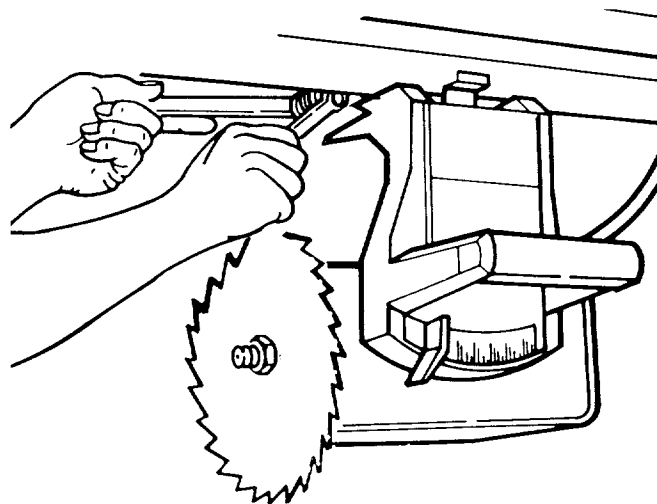
1. With blade still locked in out-rip position, unlock rip lock and move blade carriage to rear as far as it will go.

2. From front of saw, look up under radial arm to identify front carriage bearing. With thumb and index finger, get pinch-hold inside groove of bearing. Apply force to bearing and at same time, pull blade carriage forward. Force should **not** stop bearing from turning while carriage is moving.



3. If you can stop bearing from turning while carriage is moving, adjust bearings:

- i) position blade carriage for good access to front and rear bearings
- ii) lock rip lock
- iii) hold front bearing bolt in place and loosen nut
- iv) rotate bolt a few degrees, then tighten nut.



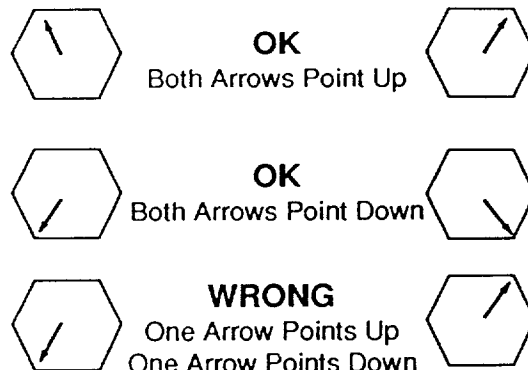
Note: Carriage bearings have eccentric bolts. High side of each bolt is marked by

Alignment and Adjustment

an arrow. Adjust rear carriage bearing same amount, but in opposite direction, as you adjust front carriage bearing.

Note: Do not overtighten. Overtightening can cause blade carriage to move with difficulty and will reduce life of track and bearings.

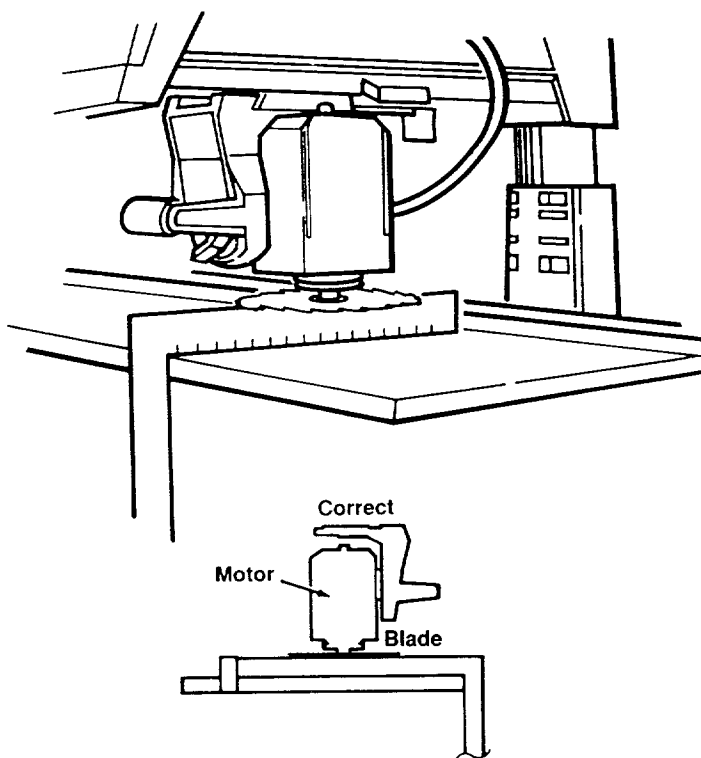
4. Before proceeding to next section, repeat steps to Square Blade to Table for Ripping, because adjusting carriage bearings affects that alignment.



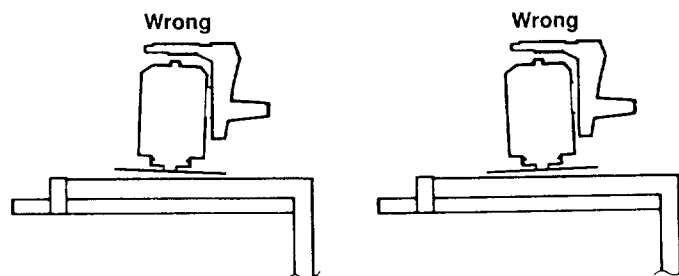
Make Blade Parallel to Table

The goal of this adjustment is to keep the workpiece from being thrown or damaged. This adjustment will also reduce splintering of the workpiece and burning of the kerf during ripping and crosscutting.

1. Lock blade in straight crosscut position.
2. Pull blade forward and lock rip lock.
3. Raise blade at least 2" above table.
4. Lock motor at 90° bevel (blade horizontal).
5. Place square so long side is on table under right side of blade, and short side hangs down vertically at front of saw. Push edge of square against fence.
6. Lower radial arm until blade surface, not a tooth, just rests on square.



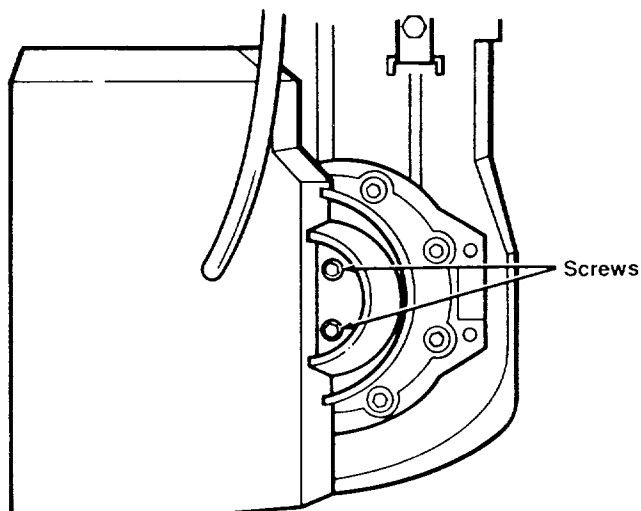
7. There should be no gap between blade and square. **Note:** Not all blades are perfectly flat. Check different points along blade surface by making quarter turns and looking for gap each time. Consider overall fit of blade. If there is no gap, no adjustment is needed.



Alignment and Adjustment

8. If there is a gap, adjust motor support:
 - i) unlock bevel lock
 - ii) loosen two screws on back of motor support
 - iii) move motor support until blade rests flush against square
 - iv) lock bevel lock.
9. Re-check alignment and adjust as needed.
10. Tighten motor support screws.

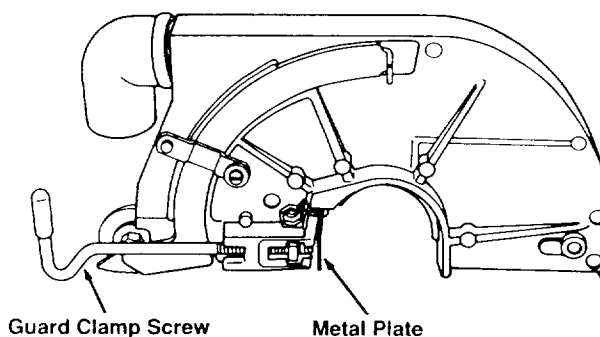
Blade alignment and adjustment are complete. *Note: It is important that you periodically check alignment and adjustment to insure accurate cuts and improve the safety of cutting procedures. Be aware that alignment in one plane necessarily affects alignment in other planes. Thus, the blade may be perfectly aligned for one type of cut but not another.*



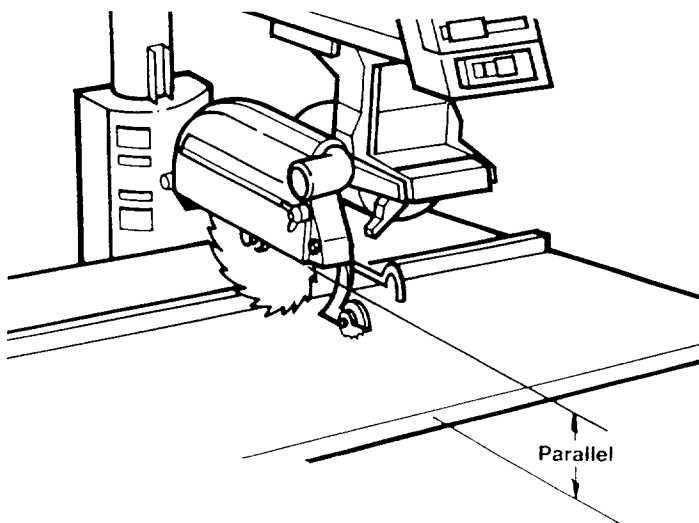
Install Guard

The guard is a very important safety feature. It covers a large part of the blade and helps protect against severe cuts. Always use the guard and adjust it according to instructions for the type of cut.

1. Raise blade at least 5" from table.
2. Lock motor at 0° bevel (blade vertical).
3. Loosen guard clamp screw until it no longer touches metal plate.



4. Place guard over blade so guard clamp screw is towards table front. Guard will fall into place when ridge on inside of guard slides into slot on motor.
5. Adjust guard to make sure bottom edge is parallel to table. Tighten guard clamp screw.

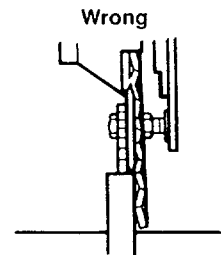
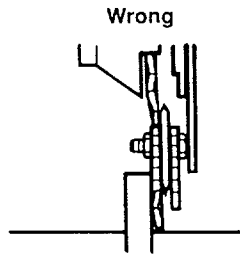
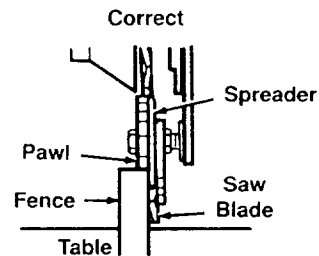


Alignment and Adjustment

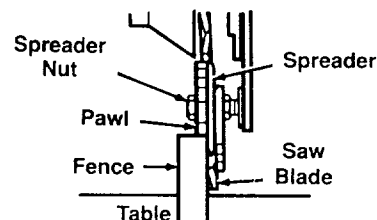
Align Spreader to Blade

The goal of this adjustment is to make the spreader directly in line with the blade. Spreader alignment is an important safety factor. The spreader rides in the kerf of the cut workpiece during ripping to help keep the two sides of the workpiece from pinching on the blade. Blade pinching is a cause of kickback.

1. Lock blade in in-rip position (blade towards column, motor towards table front).
2. Lower blade until it just clears table.
3. Unlock rip lock, move blade back until it touches fence, and lock rip lock.
4. Loosen pawls/spreader wing nut and lower pawls/spreader to fence. Spreader should rest flat against fence, and one set of pawls should rest on top of fence.



5. If adjustment is needed:
 - i) loosen both spreader nuts
 - ii) slide spreader against fence and rest pawls on fence
 - iii) tighten spreader nuts.
6. Raise pawls/spreader unit up to guard and tighten wing nut.



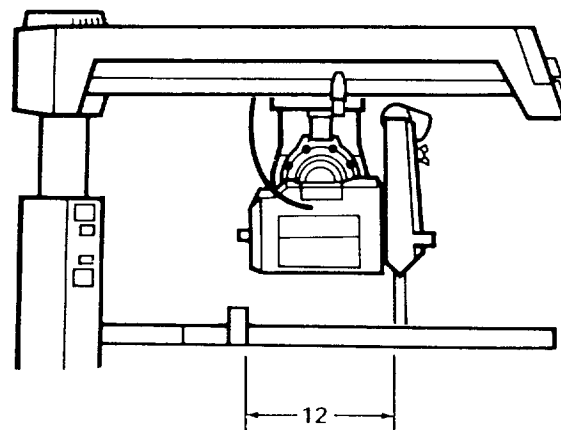
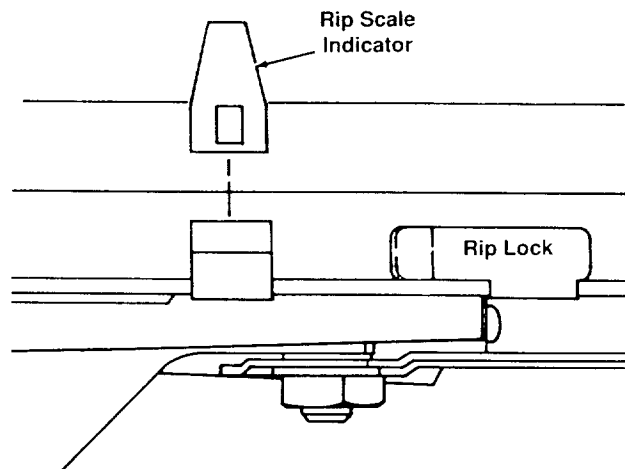
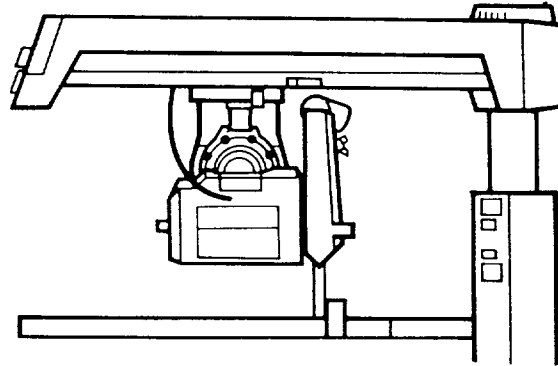
Alignment and Adjustment

Electronic Models Only: Go to "Digital Display" and Follow All Instructions

Install Rip Scale Indicators (Non-Electronic Models Only)

Rip scale indicators are intended for approximate settings. Adjustments will be necessary to compensate for different blade thicknesses. For greater accuracy measure directly.

1. Lock blade in in-rip position (blade towards column, motor towards table front).
2. Position blade flush against fence, and lock rip lock.
3. Slide rip scale indicator onto mounting bracket on right side of radial arm and align with "0" on in-rip scale.
4. Unlock rip lock and pull blade forward. Lock blade in out-rip position (blade towards table front, motor towards column).
5. Position blade 12" from fence, as measured to nearest tooth. Lock rip lock.
6. Slide indicator onto mounting bracket on left side of radial arm and align with "12" on upper out-rip scale.



Digital Display

The digital display runs on battery power. It tells the position of the blade and radial arm at the touch of a button. The display automatically turns itself off approximately three minutes after a change in blade or arm position has been made. The system continues to track the position of the blade and arm even when the display is turned off.

Button Functions

ON/OFF Turns display on and off.

REF SET Used to set "zero" reference points.

BEVEL Displays bevel angle. Display is positive when motor has been moved counterclockwise from zero reference point; negative when motor has been moved clockwise from zero reference point.

ELEV Displays distance between table and blade. Display is positive when blade is above zero reference point; negative when blade is below zero reference point.

MITER Displays miter angle. Display is positive when blade is to right of zero reference point; negative when blade is to left of zero reference point.

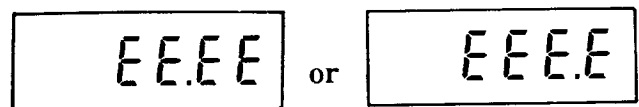
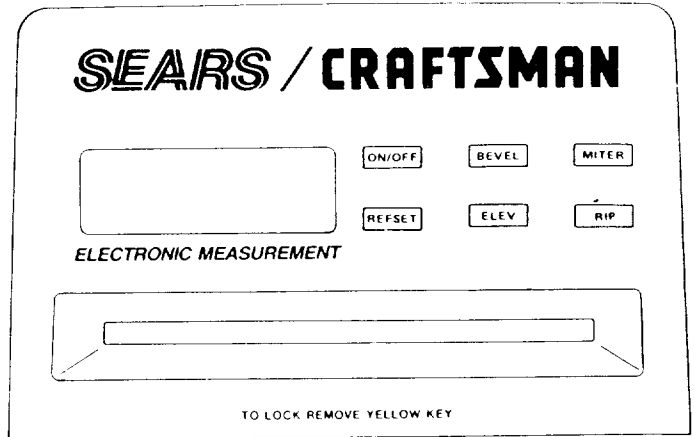
RIP Displays distance between blade and fence in in-rip or out-rip positions.

Error Messages

The zero reference points you set according to the instructions later in this section will be stored in memory at all times, whether the display is on or off. If an error occurs, you will see either of these messages displayed.

An error can be caused by sudden movement of the radial arm or blade carriage when the electronic display is off. When this happens, reset the zero reference point for the function showing the error.

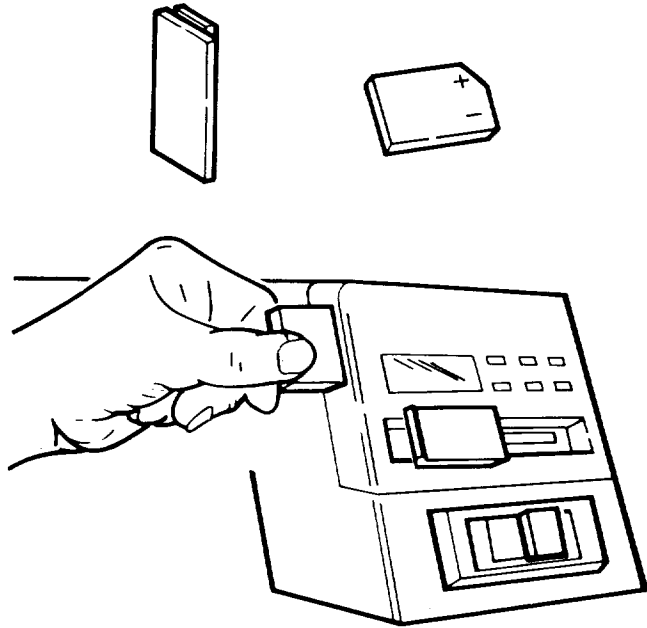
When the display is faded or hard to read, replace the battery and reset all the zero reference points.



Digital Display

Install Battery

1. Set out
-battery
-battery cover.
2. Position battery with angled corner on top right and slide battery all the way into opening behind digital display, pushing slightly downward until it snaps into place.



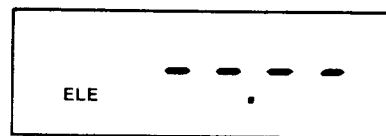
3. Look at display. It should look like this:

If it shows nothing, push in and slightly upwards on battery to remove it, then re-install.

If there still is no display, remove battery, wipe off contacts, then re-install.

If there is still no display, try a new 6V alkaline battery or contact Sears.

4. When display shows correctly, snap battery cover into place.
5. Follow steps to align encoders and set zero reference points.




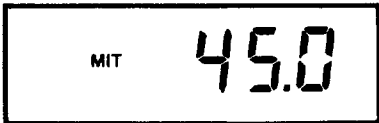
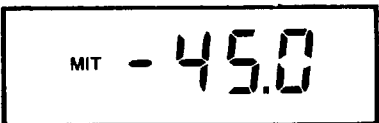
To Replace Battery

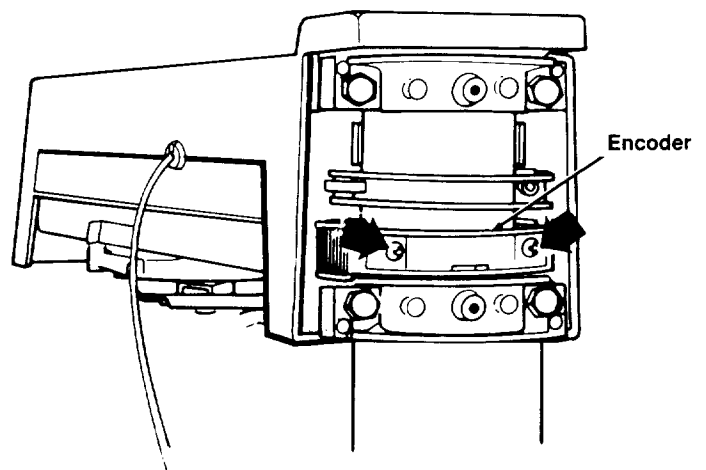
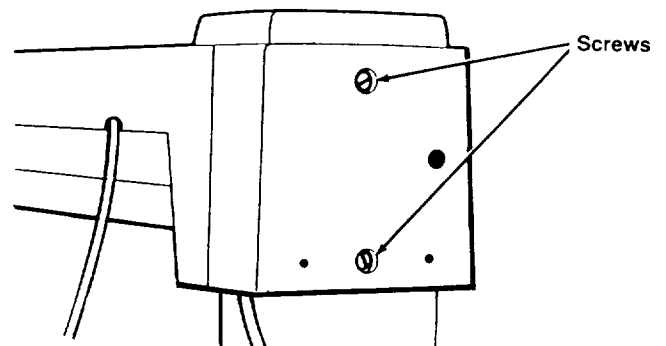
1. Use screwdriver to pry off battery cover.
2. Push in and slightly upwards on battery to remove it. Install new 6V alkaline battery.
3. Follow steps to set zero reference points.

Digital Display

Align Encoders

Miter Encoder

1. Turn display on.
 2. Lock radial arm at 0° miter.
 3. Push MITER button.
 4. Push REF SET button. Display will read:
- 
5. Unlock miter lock, move radial arm to right until it snaps into pre-set indexed position and lock miter lock. Display should read:
- 
6. Unlock miter lock, move radial arm to left until it snaps into pre-set indexed position, and lock miter lock. Display should read:
- 
7. If display reads as it should, miter encoder is aligned correctly---no adjustment is needed.
 8. If display does not read as it should:
 - i) unscrew two screws from back cover of radial arm, and remove cover
 - ii) unlock miter lock, move arm to right until it snaps into pre-set indexed position, and lock miter lock
 - iii) loosen miter encoder mounting screws inside rear of radial arm to allow encoder to slide side to side
 - iv) slide or slightly tap encoder until display reads 45°
 - v) tighten miter encoder mounting screws.
 9. Repeat steps to align miter encoder. When display reads as it should, re-install back cover.



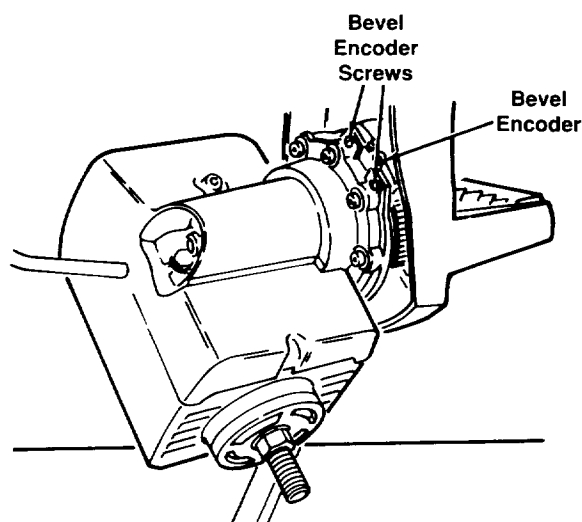
Digital Display

Bevel Encoder

1. Turn display on.
 2. Lock radial arm at 0° miter. Lock motor at 0° bevel.
 3. Push BEVEL button.
 4. Push REF SET button. Display will read:
-
5. Support motor, unlock bevel lock, move motor counterclockwise until it snaps into pre-set indexed position and lock bevel lock. Display should read:
-
6. Support motor, unlock bevel lock, move motor counterclockwise until it snaps into next pre-set indexed position (blade horizontal) and lock bevel lock. Display should read:
-
7. If display reads as it should, bevel encoder is aligned correctly--no adjustment is needed.
 8. If display does not read as it should:
 - i) unlock bevel lock, move motor clockwise until it snaps into pre-set indexed position, and lock bevel lock
 - ii) loosen bevel encoder screws on backside of blade carriage to allow encoder to slide side to side
 - iii) slide or slightly tap encoder until display reads 45°
 - iv) tighten bevel encoder screws.
 9. Repeat steps to align bevel encoder.

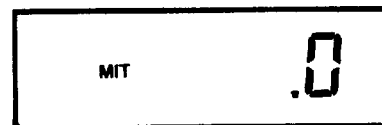
Set Zero Reference Points For Bevel, Miter, and Elevation

1. Set blade in straight crosscut position (0° miter) (0° bevel). Lower blade until it just touches table. *Note: This is the usual blade position for setting these zero reference points.*



Digital Display

2. Turn display on.
3. Push MITER button, then push REF SET button. Display will read:



4. Push BEVEL button, then push REF SET button. Display will read:



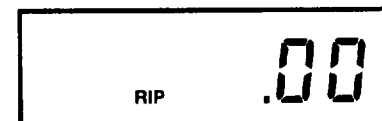
5. Push ELEV button, then push REF SET button. Display will read:



Set Zero Reference Point For In-Rip

1. Put fence in front position and tighten table clamps.
2. Lock blade in in-rip position (blade towards column, motor towards table front).
3. Unlock rip lock, push blade against fence, and lock rip lock.
4. Push RIP button, then push REF SET button. Display should read:

If it reads O-RIP instead of RIP, push RIP button then push REF SET button.
If display reads 10.00 instead of .00, push REF SET button.

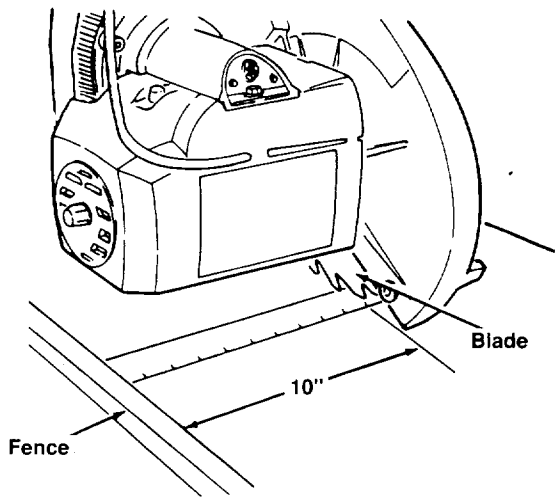


Set Zero Reference Point For Out-Rip

1. Unlock rip lock and pull blade away from fence.
2. Loosen table clamps, move fence to rear position, and tighten table clamps.
3. Lock blade in out-rip position (motor towards column, blade towards table front).

Digital Display

4. Position blade 10" from fence, as measured to nearest tooth, and lock rip lock.



5. Push RIP button, then push REF SET button. Display should read:
If it reads RIP instead of O-RIP, push RIP button, then push REF SET button.
If it reads .00 instead of 10.00, push REF SET button.



Conversion Table

Decimal equivalents of fractions, rounded to nearest hundredth inch:

$\frac{1}{32}$	.03	$\frac{17}{32}$	.53
$\frac{1}{16}$	.06	$\frac{9}{16}$	.56
$\frac{3}{32}$	.09	$\frac{19}{32}$	.60
$\frac{1}{8}$	.12	$\frac{5}{8}$	.63
$\frac{5}{32}$	.16	$\frac{21}{32}$	.66
$\frac{3}{16}$	.19	$\frac{11}{16}$	.69
$\frac{7}{32}$	.22	$\frac{23}{32}$	.72
$\frac{1}{4}$	.25	$\frac{3}{4}$	.75
$\frac{9}{32}$	.28	$\frac{25}{32}$	.78
$\frac{5}{16}$	.31	$\frac{13}{16}$	.81
$\frac{11}{32}$	.34	$\frac{27}{32}$	.85
$\frac{3}{8}$	.38	$\frac{7}{8}$	.88
$\frac{13}{32}$	.41	$\frac{29}{32}$	.91
$\frac{7}{16}$	.44	$\frac{15}{16}$	.94
$\frac{15}{32}$	.47	$\frac{31}{32}$	.97
$\frac{1}{2}$	.50	1	1.00

Electrical Connections

Motor Specifications

The AC motor used in the saw is a capacitor-start, non-reversible type. The models covered in this manual have the following specifications:

Specification:	Models	Models	Model
	113.197111	113.197151	113.197181
	113.197211	113.197280	
	113.197251		
Rated H.P	1.5	1.5	1.5
Max Developed H.P	2.5	2.75	3.0
Voltage	120	120/240	120/240
Amperes	11	12/6	13/6.5
Hertz (cycles)	60	60	60
Phase	single	single	single
RPM	3450	3450	3450
Arbor Shaft Rotation	clockwise	clockwise	clockwise

Note: If saw does not start when switched on, immediately turn saw off and refer to *Troubleshooting*. Leaving the switch on will destroy the motor.

Power Supply

WARNING

Saw is factory wired for 120V operation. Connect to 120V, 15-AMP branch circuit and use 15-AMP time delay fuse or circuit breaker. Failure to connect in this way could result in injury from shock or fire.

The saw must be properly grounded. Not all outlets are properly grounded. If you are not sure that your outlet is properly grounded, have it checked by a qualified electrician.

WARNING

If not properly grounded, this power tool could cause electrical shock, particularly when used in damp locations.

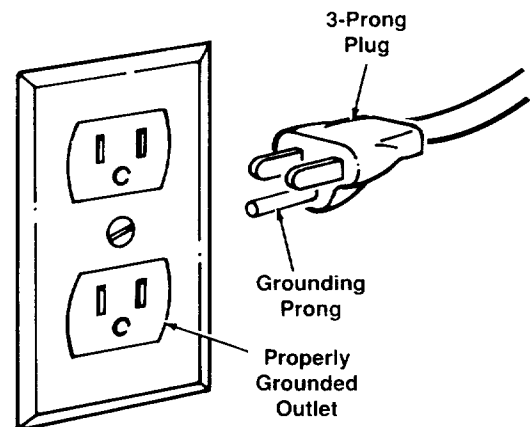
WARNING

If electrical shock occurs, your reaction to shock could bring hands into contact with blade.

WARNING

To avoid electric shock or fire, immediately replace worn, cut, or damaged power cord.

The unit is wired for 120V and has a plug that looks like this:



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

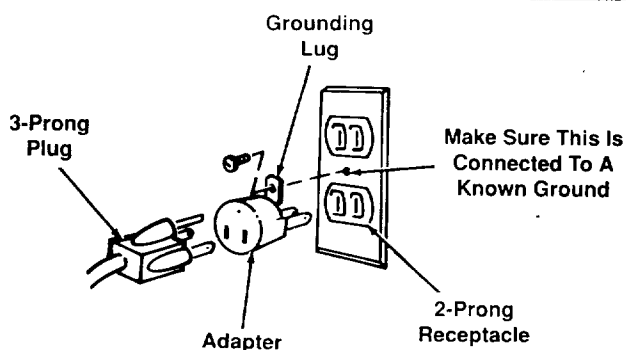
The plug requires a mating 3-conductor grounded type outlet as shown above. If you have an outlet that is of the 2-prong type, it is recommended that you have a qualified electrician replace it with a properly grounded 3-prong outlet.

Electrical Connections

⚠ WARNING

To maintain proper tool grounding, whenever outlet you are planning to use for this power tool is of 2-prong type do not remove or alter grounding prong in any manner.

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



⚠ WARNING

Adapter illustrated is for use only if you already have a properly grounded 2-prong receptacle.

Extension Cords

The use of any extension cord will cause some loss of power. Determine the minimum wire size (American Wire Gauge No. (AWG #)) extension cord per table. Use only 3-wire extension cords with 3-prong grounding type plug and 3-pole receptacles which accept the tool's plug.

Wire Sizes Required (AWG #)

Cord Length	120V	240V
0-25 ft	No. 14	No. 16
26-50ft	No. 12	No. 14
51-100ft	No. 10	No. 12

Note: The smaller the gauge number, the heavier the cord. For circuits farther away from the electrical circuit box, wire size must be increased proportionately to deliver ample voltage to the motor.

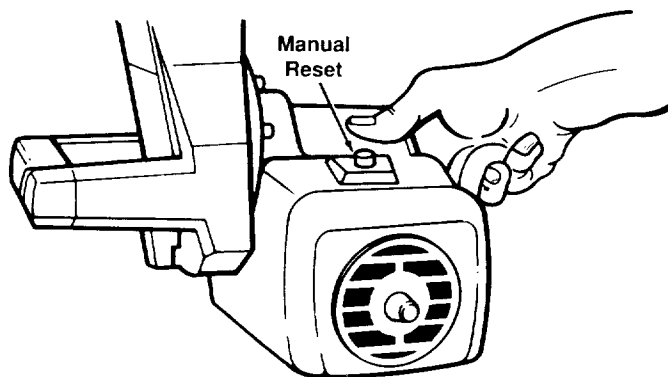
Dual Voltage Models

The rest of the information in this section applies only to models 113.197151, 113.197181, and 113.197280.

Motor Protection & Reset Button

The motor protector opens the power line circuit and stops the motor when the motor temperature exceeds a safe level, the motor is overloaded, or a low voltage condition exists.

When the protector activates, immediately turn saw off, remove yellow key and wait for motor to cool. Push red re-set button and listen/feel for click to indicate protector is re-set. If you do not hear/feel a click, motor is still too hot. Wait a while longer and repeat.



Electrical Connections

To Change Motor Voltage to 240 A.C.

Under normal home workshop conditions, if full voltage is supplied to the motor, the models 113.197151, 113.197181 and 113.197280 saws will operate efficiently on 120V. If any of the following conditions exist, it will be advisable to have a qualified electrician reconnect the motor for 240V operation:

- heavy duty operation
- either undersized or overloaded branch circuit serves the saw
- power company cannot correct a low voltage situation.

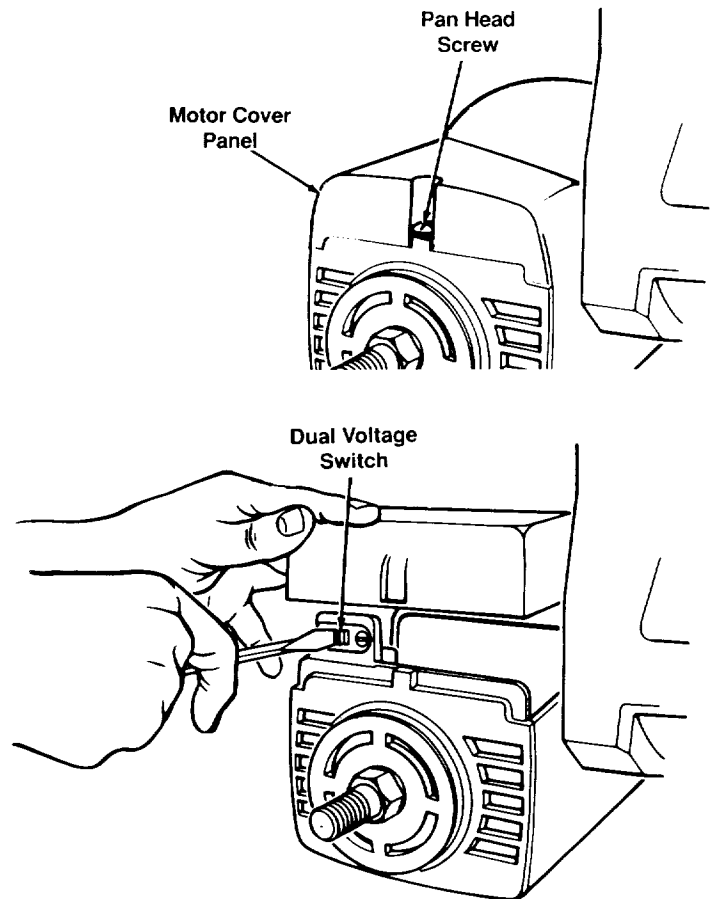
The following procedure to change motor voltage should be followed only by a qualified electrician. **Note:** *Whenever changing the switch position from 120 to 240V, make certain that all necessary steps (including proper fusing of the branch circuit) are completed.*

1. Unplug saw.
2. Remove pan head screw from top of motor cover. Remove motor cover panel at blade end of motor.
3. Use small screwdriver to slide dual voltage switch to 240V position.
4. Re-install motor cover panel.
5. Replace 120V power cord plug with 240V, 15 amp, 3-prong plug.
6. Connect power cord white and black leads to two "hot" plug blades; connect power cord grounding wire to plug ground prong.
7. Plug cord into 240V, 15 amp, 3-blade receptacle. Make sure receptacle is connected to a 240V A.C. power supply through a 240V branch circuit having at least a 15 amp time delay fuse or circuit breaker. **Note:** *No adapter is available for this type plug.*



DANGER

To avoid electric shock, unplug saw before changing motor voltage.



Crosscutting

Crosscutting Defined

Crosscutting is cutting a workpiece to length. The workpiece is held firmly against the fence, and the blade is pulled through the workpiece to make the cut. Straight, bevel, miter, and compound cuts can be made.

Crosscutting Safety

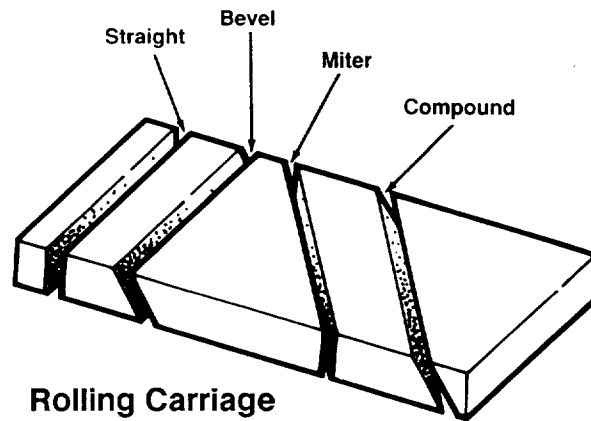
The hazards associated with crosscutting include: exposed blade teeth, rolling carriage, and thrown workpiece. This section explains these hazards and tells how to avoid them or reduce the risk of their happening. **Read this section before making any type of crosscut. Follow these steps every time you make a crosscut.**

Exposed Blade Teeth

⚠ WARNING

During crosscutting, blade teeth can be exposed. To reduce risk of having fingers, hand or arm cut off:

- ✓ Set bottom edge of guard parallel to table to cover upper half of blade.
- ✓ Lower pawls to clear fence or workpiece, whichever is higher, by $\frac{1}{4}$ ". Lowered pawls act as partial barrier to front of blade.
- ✓ Keep hands away from blade and out of blade path. Keep hand holding down workpiece at least 8" from blade.
- ✓ Blade can come off table edge beyond 30° left miter position. Use right miter position whenever possible.
- ✓ Do not cut freehand. You will not be able to control workpiece.
- ✓ If blade jams, turn off saw, remove yellow key, then free blade.



Rolling Carriage

⚠ WARNING

When saw is turned on, blade can suddenly come forward. To reduce risk of this happening:

- ✓ Keep one hand on saw handle when turning saw on.
- ✓ Adjust leveling feet to make sure radial arm slants slightly toward rear.

Thrown Workpiece

⚠ CAUTION

Workpiece could be picked up by spinning blade and thrown. You might be hit by thrown workpiece. To reduce risk of thrown workpiece:

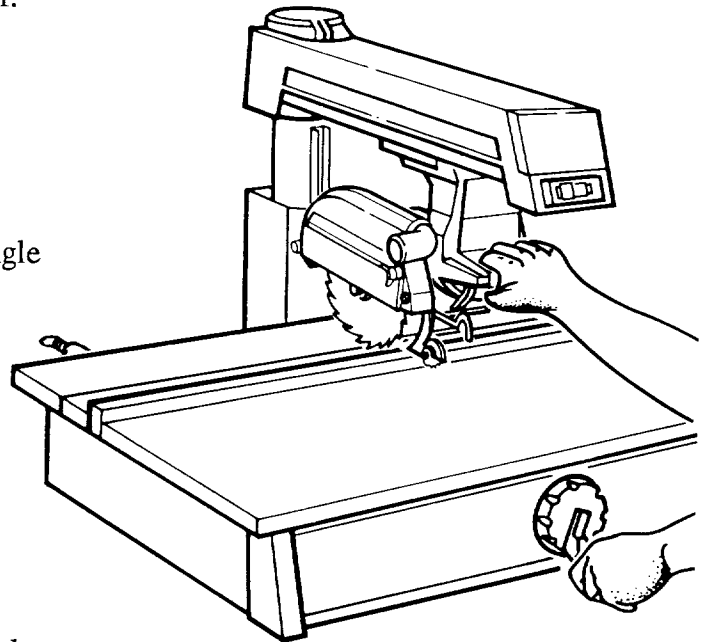
- ✓ Make sure installed fence is at least half as high as the workpiece, and never less than $\frac{3}{4}$ ".
- ✓ Start and finish cut with blade in rear-most position, behind fence.
- ✓ Firmly hold workpiece flat on table and up against fence. Cut only one workpiece at a time.
- ✓ Pull blade through workpiece only distance needed to complete cut, and never more than half diameter of blade.
- ✓ Do not touch or move workpieces until blade has stopped spinning.
- ✓ Use length stop only on end of workpiece which is held down.
- ✓ Use table extensions to support workpieces that extend beyond table.

Crosscut Kerfs

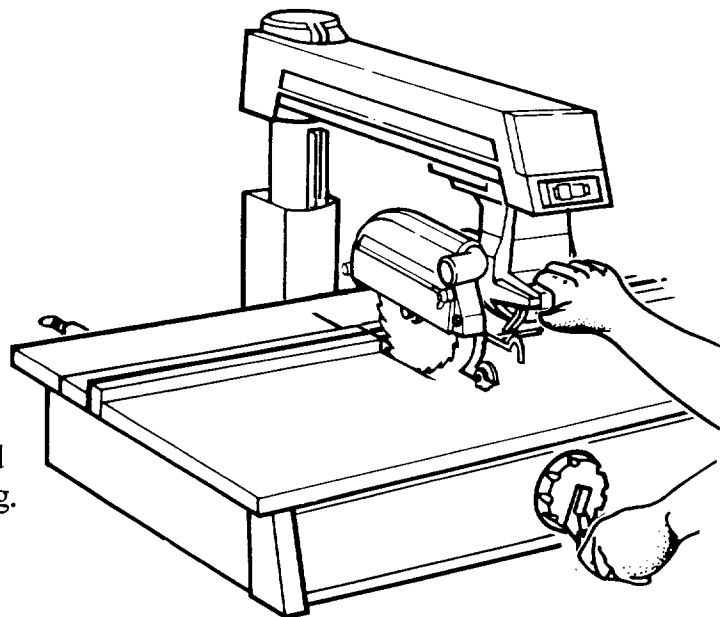
A kerf or shallow cut is needed in the table and fence to serve as a path for the blade and to ensure that the blade cuts all the way through the workpiece. **A kerf is needed for each different cutting path.**

To make an approximately $\frac{1}{16}$ " deep kerf:

1. Prepare table:
 - put fence in front position
 - tighten table clamps.
2. Prepare blade:
 - lock blade in crosscut position
 - lock radial arm at desired miter angle
 - lock motor at desired bevel angle
 - unlock rip lock and push blade to rearmost position, behind fence
 - lower blade to just clear table
 - lower pawls to clear fence by $\frac{1}{4}$ ".
3. Grasp saw handle, then turn saw on. **Keep one hand on saw handle through step 6.**
4. Slowly lower blade until it touches table, then lower by another turn of hand-wheel.



5. Pull blade through fence and across table as far as it will go.
6. Push blade to rearmost position, behind fence, and turn saw off. Keep hand on saw handle until blade stops spinning.



Crosscutting

Making Crosscuts

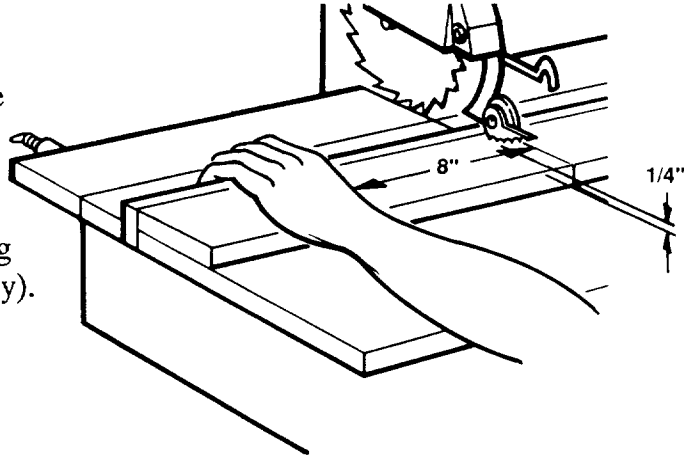
Follow these steps to make crosscuts.

1. Prepare table:

- put fence in front position
- tighten table clamps.

2. Prepare blade:

- lock blade in crosscut position
- lock radial arm at desired miter angle
- lock motor at desired bevel angle
- unlock rip lock and push blade to rearmost position, behind fence
- lower blade into kerf but not touching kerf bottom (blade should move freely).



3. Position workpiece against fence, and lower pawls to clear fence or workpiece, whichever is higher, by 1/4".

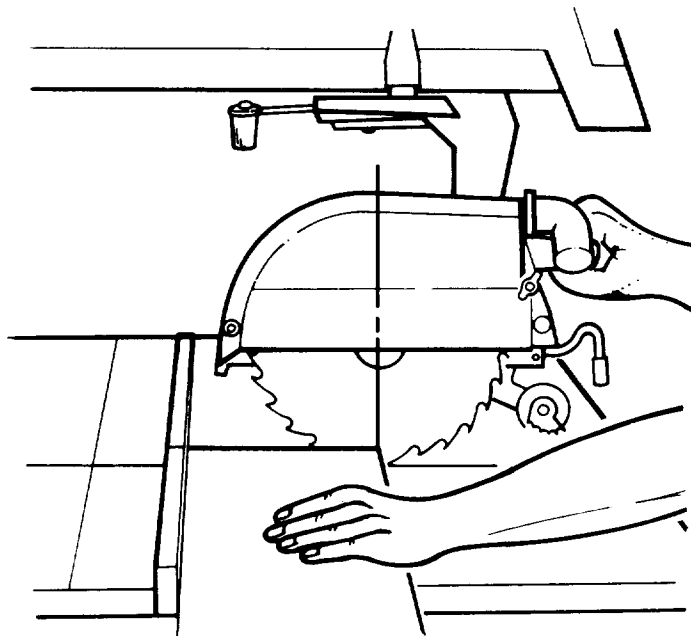
4. Grasp saw handle, then turn saw on.

Keep one hand on saw handle through step 7.

5. Hold workpiece down and against fence. Keep hand at least 8" away from blade.

6. Pull blade through fence and workpiece **only far enough to complete cut, and never more than half diameter of blade.**

7. Push blade carriage to rearmost position, behind fence, and turn saw off. Keep hand on saw handle until blade stops spinning.



Repetitive Crosscutting

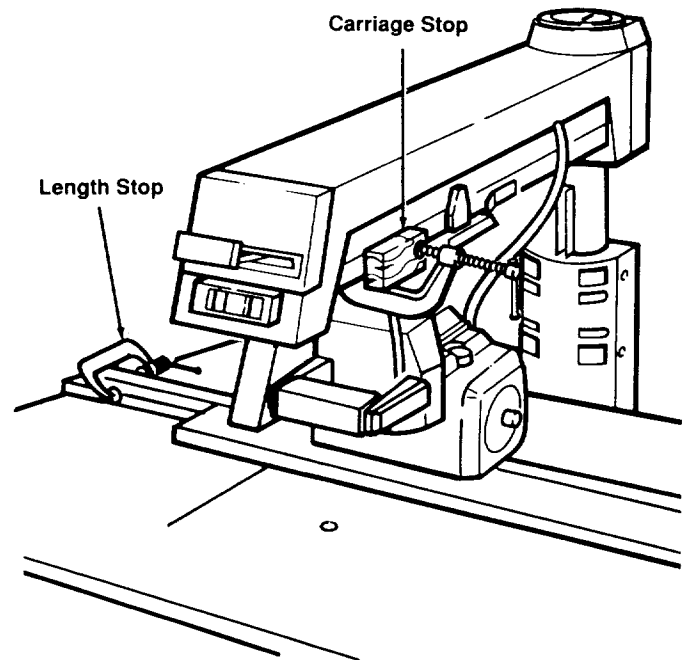
Repetitive crosscutting is the repeated and continuous cutting of many pieces of lumber to the same length. Carriage and length stops can help make this type of crosscutting more efficient. A lower blade guard offers protection against the side of the blade (See Accessories).

A carriage stop defines the distance needed to pull the blade through to complete each cut. This will prevent pulling the blade through more than the recommended distance.

To make a carriage stop use 1x2 lumber:

- i) cut two pieces, each 2" long
- ii) clamp a piece on each side of radial arm, so blade carriage stops at distance needed to complete cut
- iii) check that clamps do not interfere with hand grip on saw handle.

A length stop defines the cut length and ensures that all pieces will be cut to the same size. Clamp a piece of 1x2 lumber on the fence to define the cut length. Use **a length stop only on the end of the workpiece which is held down.**



Crosscutting Hints

1. To extend life of table top, buy auxiliary table cover (see Accessories) or make one out of 1/4" plywood or fiber-board. Clamp or nail to original table top, section by section. If you use nails, nail in the four corners to make sure blade will not contact nails.
2. Make several fences, so each will have only a few kerfs (See Cutting Aides). Too many kerfs in a fence weaken it.
3. When making miter or bevel cuts, use extra force to hold workpiece down be-

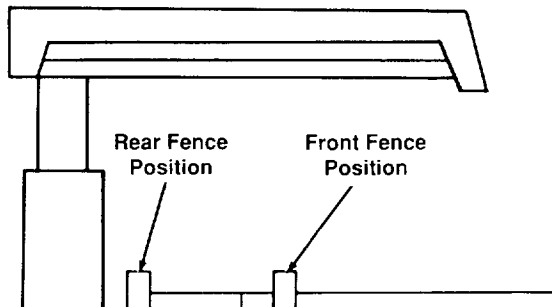
cause it tends to move during these types of cuts.

4. When cutting hard woods, like oak, or making compound cuts, keep arm holding saw handle rigid and pull blade through slowly.
5. Keep table clean of chips and sawdust.
6. Use the right blade for each job.
7. Use sharp blades.
8. To keep cut line accurate, periodically check blade alignment.
9. Do not cut severely warped or crooked workpieces.

Ripping

Ripping Defined

Ripping is changing the width of a workpiece by cutting along its length. The workpiece is fed into the blade, which rotates in a fixed position, parallel to the fence, a set distance from the fence. A solid fence (no kerfs) serves as a guide for the workpiece. Place the fence in the front position for narrower workpieces, and in the rear for wider ones.

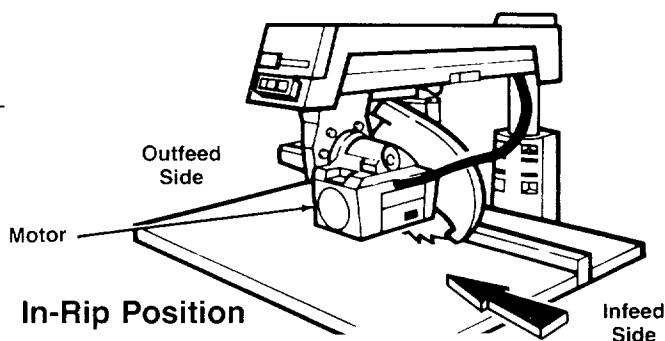


In-Rip and Out-Rip Positions

In-rip and out-rip refer to blade position.

In-rip: the blade is toward the column, and the motor is toward the table front. In-rip is recommended because this position allows better visibility of the workpiece and your hands. Use in-rip when you set the blade $\frac{1}{2}$ to 16" from the fence.

Out-rip: the blade is toward the table front, and the motor is toward the column. Use out-rip **only** when you set the blade 12" or more from the fence.

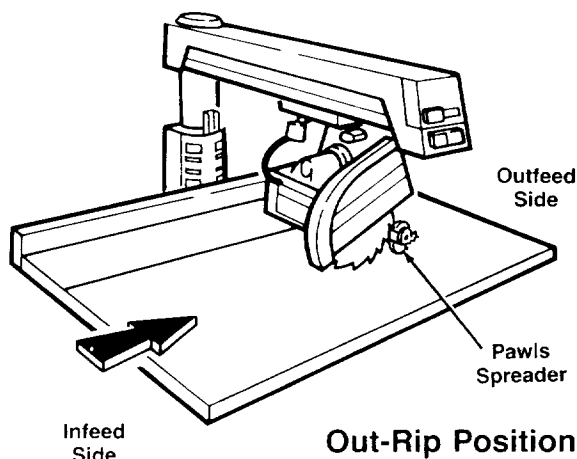


Infeed and Outfeed Directions

Infeed and outfeed refer to sides of the blade.

Infeed: the side of the blade where the guard nose is. **Always start a rip cut at the infeed side and push the workpiece through to the outfeed side.**

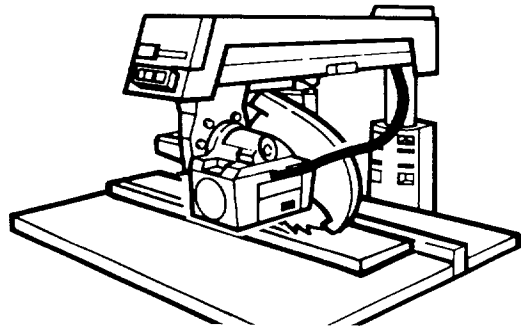
Outfeed: the side of the blade where the pawls and spreader are. **Never start a rip cut at the outfeed side. This is wrong way feed. Never put hands on the outfeed side of the blade when ripping because they can be pulled back into the spinning blade.**



Ripping

Workpiece Positioning

Always set up so that the widest part of the workpiece is between the blade and fence. This gives you greater clearance for push sticks, and allows better stability for feeding the workpiece.



Example: to rip 1" off a 10" wide workpiece, set blade in in-rip position, 9" from fence.

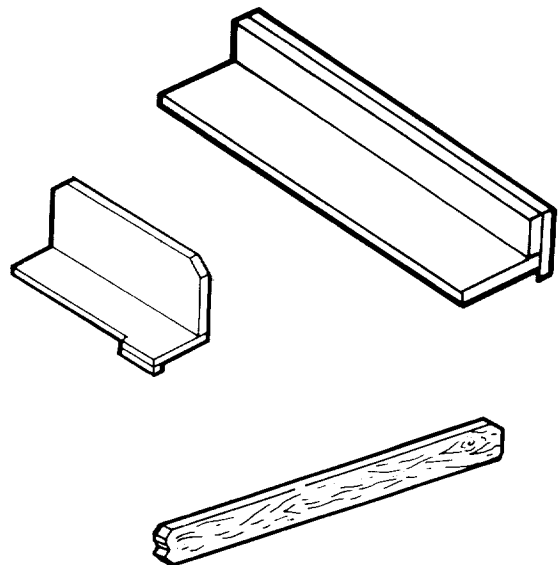
Push Sticks and Push Blocks

Use push sticks and push blocks instead of the hands to push the workpiece through to complete cuts. They help keep hands away from the blade. A push block is used with an auxiliary fence (see Cutting Aides).

Use a push block and auxiliary fence when the blade is set $\frac{1}{2}$ to 2" from the fence.

Use a push stick when the blade is set 2" or more from the fence.

Do not set the blade closer than $\frac{1}{2}$ " to the fence. The radial saw is the wrong tool for such a narrow a cut. A band saw would be more appropriate for this type of cut.



Ripping Safety

The hazards associated with ripping include: outfeed zone hazard, kickback, and wrong way feed. This section explains these hazards and tells how to avoid them or reduce the risk of their happening.

Read this section before making any type of rip cut. Follow these steps every time you make a rip cut.

Ripping

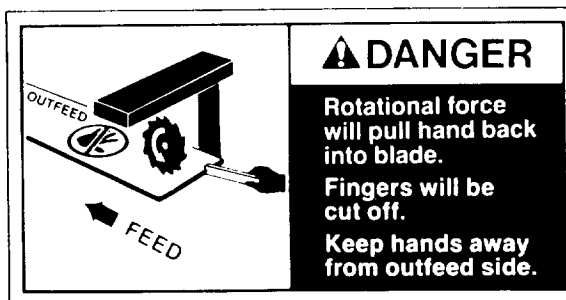
Outfeed Zone Hazard

DANGER

Rotational force of blade can pull hands and fingers back into blade. Touching, holding, or pulling on outfeed side of workpiece while blade is still spinning will result in fingers, hand or arm being cut off.

To reduce risk of outfeed hazard:

- ✓ Set pawls and spreader; they act as partial barrier to outfeed side.
- ✓ Start and finish cut from **infeed** side.
- ✓ Keep both hands on infeed side.
- ✓ Keep hands away from outfeed side.
- ✓ Push workpiece through to complete cut. Do not reach around to pull it.
- ✓ If blade jams, turn saw off, remove yellow key, then free blade.



Kickback

Kickback is the uncontrolled propelling of the workpiece back toward the user.

WARNING

Kickback can happen when blade is pinched or bound by workpiece. Pinching or binding can happen when:

- pawls and spreader are not used or not set correctly
- spreader is not aligned with blade
- blade is not parallel to fence
- workpiece is twisted or warped and rocks on table top
- pressure is put on outfeed side of workpiece
- workpiece is released before being pushed past pawls and spreader
- user touches or tries to pull workpiece through outfeed side before blade has stopped spinning.



To reduce risk of kickback:

- ✓ Set pawls and spreader according to ripping set-up procedure. Correctly set spreader is more likely to prevent workpiece from binding or pinching blade; correctly set pawls are more likely to grab into workpiece to stop or slow kickback if one happens.
- ✓ Check that spreader is in line with blade (see Alignment: Spreader to Blade).
- ✓ Cut only straight workpieces so surface will lie flat on table and edge will stay tight against fence. If you must cut an irregular workpiece, attach a straight edge (see Cutting Aides).
- ✓ Push workpiece through from infeed to outfeed side until it is completely past pawls and spreader.
- ✓ Use featherboard (see Cutting Aides).
- ✓ Keep hands away from outfeed side.
- ✓ If blade jams, turn saw off, remove yellow key, then free blade.
- ✓ When cutting composition materials, or other materials with one smooth and one rough side, put rough side up so pawls will be more likely to grab.

Wrong Way Feed

Wrong way feed is ripping by feeding the workpiece into the outfeed side of the blade.

WARNING

Rotational force of blade will pull workpiece through violently if workpiece is fed in same direction as blade rotates (wrong way feed). Hands and fingers could be pulled along with workpiece into spinning blade before you can let go or pull back. Fingers, hand or arm could be cut off. Propelled workpiece could hit bystander.

To eliminate risk of wrong way feed:

- ✓ Feed workpiece against blade rotation.
- ✓ Set pawls and spreader; they act as partial barrier to outfeed side.

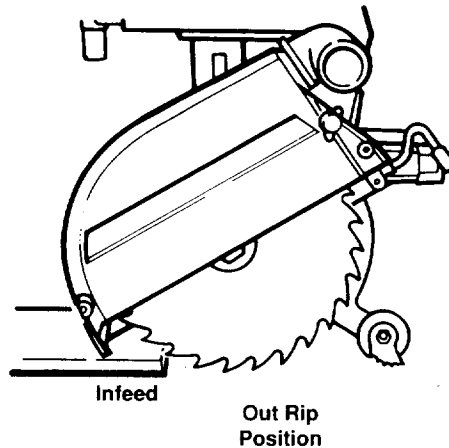


Ripping

Guard Nose Function

The guard nose (hold down) must be set correctly during ripping to act as a partial barrier against the infeed side of the blade, to help keep the workpiece flat on the table, and to deflect workpiece chips. It must be lowered to just clear the workpiece.

The guard nose must be re-set each time a different thickness workpiece is cut. Follow the Ripping Set-Up Procedure to correctly set the guard nose. Set guard nose first, then set pawls and spreader.



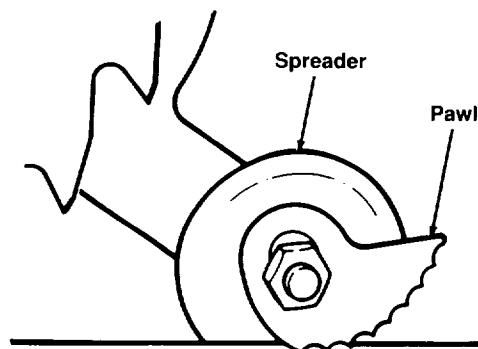
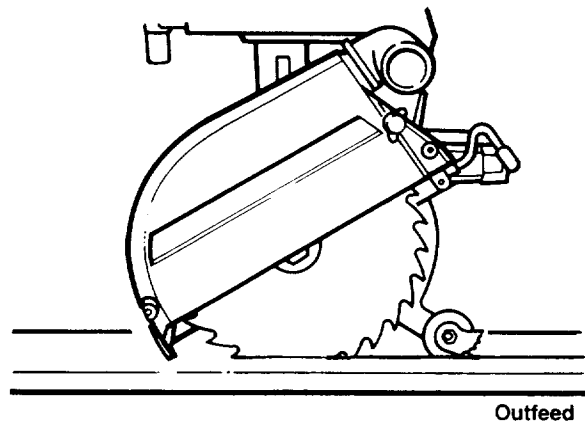
Pawls and Spreader Function

The pawls and spreader must be set correctly during ripping to reduce the risk of kickback, to prevent wrong way feed, and to act as a partial barrier to the hazardous outfeed side of the blade.

The spreader rides in the workpiece kerf to keep it open. This reduces the chances that the cut workpiece will spring closed and pinch the blade. Pinching the blade is a cause of kickback.

The pawls rest level on the upper surface of the workpiece. During cutting they allow the workpiece to pass freely from the infeed to the outfeed side, but help stop the kickback motion from outfeed to infeed side by grabbing into the workpiece surface.

The spreader and pawls must be re-set each time a different thickness workpiece is cut. Follow the Ripping Set-Up Procedure to correctly set the pawls and spreader.



Ripping Set-up Procedure

Follow these steps **before** ripping. These steps **must** be repeated each time a different thickness workpiece is ripped. A kerf must be made for each different width cut.

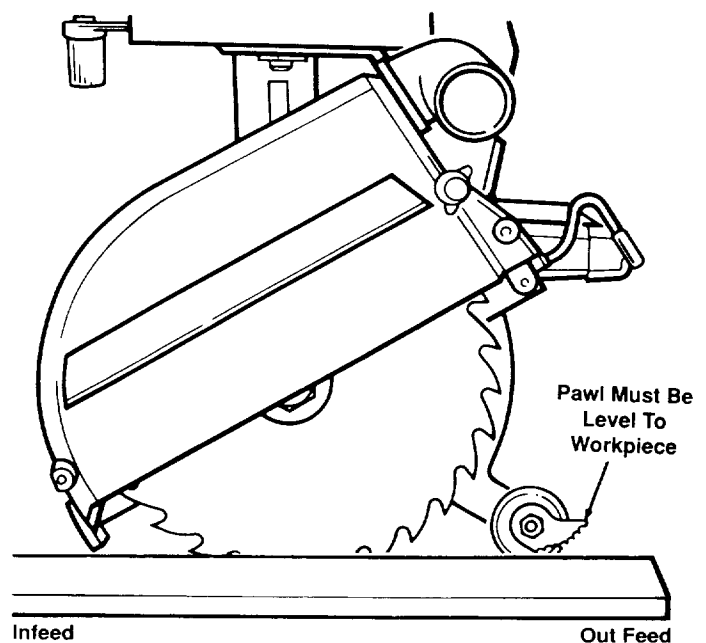
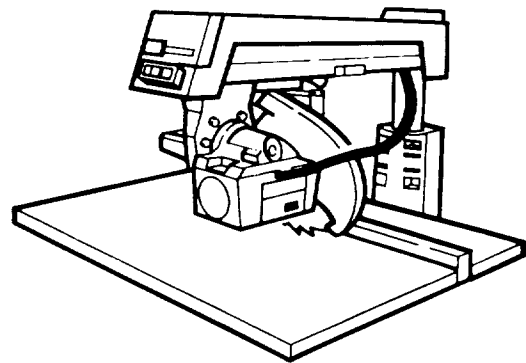
1. Prepare table:
 - insert solid (no kerfs) fence (Note: Use auxiliary fence when blade is set $\frac{1}{2}$ to 2" from fence)
 - tighten table clamps.
2. Prepare blade:
 - lock radial arm at 0° miter
 - lock motor at desired bevel angle
 - lock blade in in-rip position*
 - lower blade to just clear table
 - lock blade carriage desired distance from fence. *Make sure widest part of workpiece will be between blade and fence.*

*use out-rip position **only** when blade is set 12" or more from fence

3. Make kerf:
 - i) turn saw on
 - ii) lower blade about $\frac{1}{16}$ " into table
 - iii) turn saw off and remove yellow key.
4. Place workpiece parallel to and up against blade. **Note:** *Workpiece will be between blade and table front.*
5. Lower guard nose until it just clears top surface of workpiece, then tighten guard clamp screw.
6. Lower pawls and spreader so spreader hangs along side of workpiece, in line with blade, and one set of pawls rests level on workpiece surface, then tighten pawls/spreader wing nut.
7. Test setting: push workpiece toward outfeed side to see that workpiece moves freely; push workpiece toward infeed side to see that pawls grab. **If these conditions are not met, re-set pawls until they are.**

WARNING

If workpiece is pushed along fence with kerfs, workpiece could get caught on kerf, pinch blade and cause kickback. Do not use crosscutting fence for ripping.



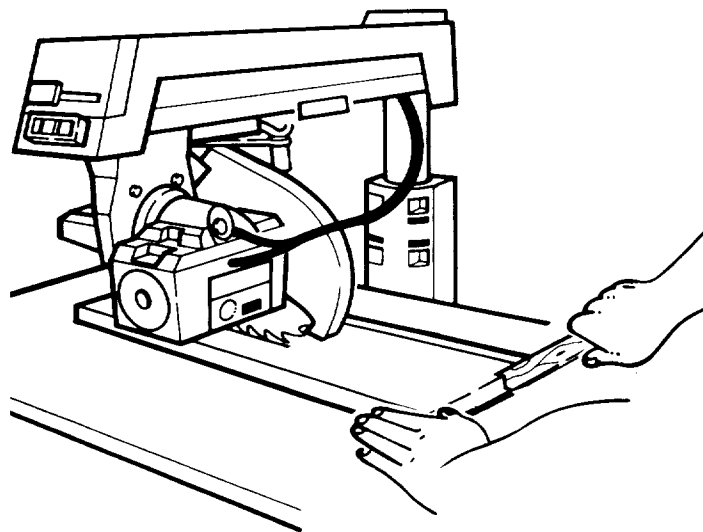
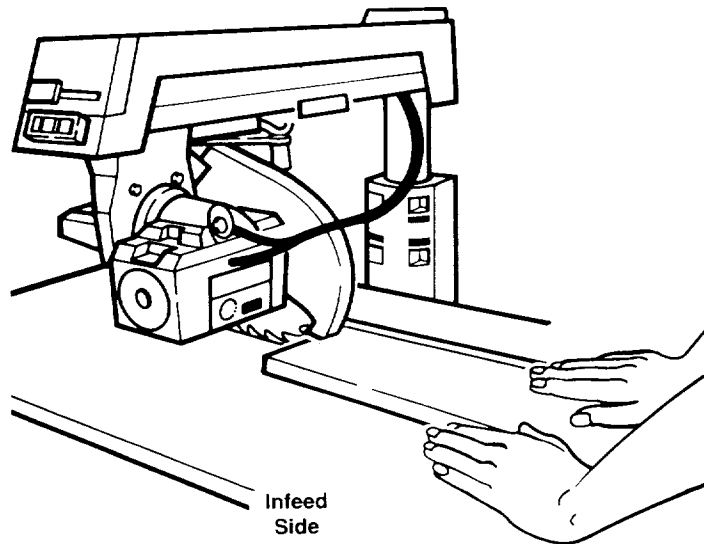
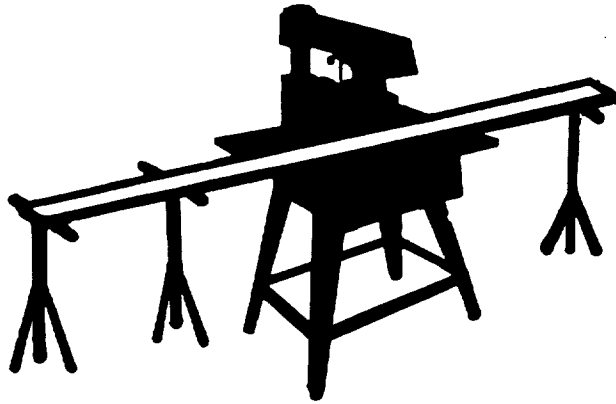
Ripping

8. Remove workpiece from table.
9. Ready push stick (push block if using auxiliary fence).
10. Set up table extension(s) and support their outer ends. **Do not use another person to support workpieces because this can cause kickback and it exposes helper to potential hazards at outfeed side.**

Making Rip Cuts

Follow these steps to make in-rip cuts. For out-rip cuts, reverse hand functions; that is, put right hand on table and use left hand to support and push workpiece.

1. Follow ripping set-up procedure.
2. Insert yellow key and turn saw on.
3. Stand at infeed side and out of line of workpiece, in case of kickback. **Start and finish cut from infeed side.**
4. Put workpiece on table, in front of guard nose, and tight against fence. To hold workpiece in position, put left hand on table, at least 8" in front of guard nose, and lightly press fingers against workpiece. Support workpiece with table extension or right hand.
5. With right hand, push workpiece under guard nose and into blade. Keep left hand fixed on table, applying slight pressure to keep workpiece against fence.
6. Use right hand to continue to apply feed pressure to part of workpiece close to fence. Keep hand at least 8" in front of guard nose.
7. When end of workpiece gets to table, use push stick or block, instead of hand, on part of workpiece between blade and fence to push until workpiece is completely past pawls and spreader.
8. Turn saw off and wait for blade to stop spinning before touching workpiece.



Dado Blades, Molding Heads

See Accessories for information on safety, installation and use of dado blades and molding heads.

Edging

Edging is the use of a dado blade or molding head in the horizontal position. It is an advanced technique that requires a molding head guard and a special fence. See Accessories for information on safety, installation and use of dado blades and molding heads for edging. See Cutting Aides for information on making the special fence.

DANGER

Edging without a guard could bring hands and fingers too close to cutting tool.

Hands, fingers, and arm could be cut off.

- buy, install, and follow instructions for molding head guard
- use only dado or molding head for edging
- do not use blade because blade cannot be guarded when horizontal
- read and follow instructions in Accessories section of manual.

Ripping Hints

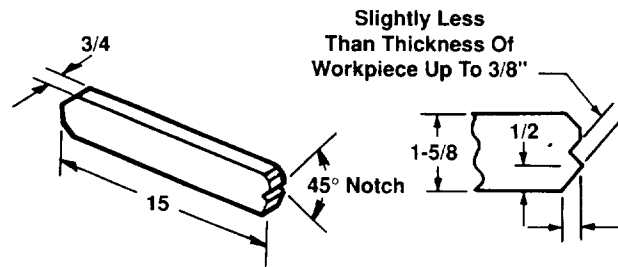
1. To extend life of table top, buy an auxiliary table cover (see Accessories), or make one out of 1/4" plywood or fiberboard. Clamp or nail to original table top, section by section. If you use nails, nail in the four corners to make sure blade will not contact nails.
2. Keep table clean of chips and sawdust.
3. Use sharp blades.
4. Use the right blade for each job.
5. For workpiece with one smooth and one rough surface, such as paneling or finished fiberboard, cut with rough surface up so pawls will be more likely to grab in case of kickback.
6. To keep cut line accurate, periodically check blade alignment.
7. If you must cut an irregular workpiece, attach a straight edge (see Cutting Aides).

Cutting Aides

Cutting aides include push sticks, fences, auxiliary fences, push blocks, featherboards, and straight edges.

Push Sticks

To make a push stick, use $\frac{3}{4}$ " knot-free lumber, or a standard 1x2. Cut to dimensions shown (inches).



Fences

Fences are required for all saw operations.

To make a fence, use $\frac{3}{4}$ " knot-free lumber cut to table length. Do not use particle board or other composite materials because they are not strong enough. **Note:** *Installed fence must be at least half as high as the workpiece, and never less than $\frac{3}{4}$ ". The fence can be as high or higher than the workpiece.*

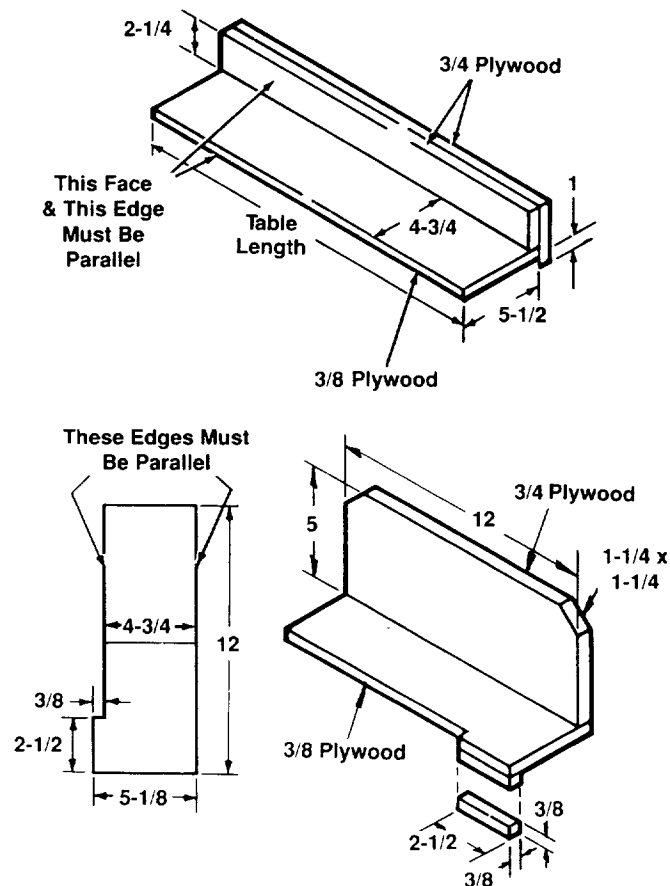
Auxiliary Fence and Push Block for Ripping

An auxiliary fence must be used when making very narrow rip cuts that don't allow enough room for a push stick without bringing it too close to the blade. An auxiliary fence must always be used with a push block.

To make an auxiliary fence, use one piece of $\frac{3}{8}$ " plywood and two pieces of $\frac{3}{4}$ " plywood. Cut to dimensions shown (inches). Glue pieces together, and reinforce with nails.

To make a push block, use one piece of $\frac{3}{4}$ " plywood and one piece of $\frac{3}{8}$ " plywood. Cut to dimensions shown (inches). Glue pieces together and reinforce with nails.

Lay the push block on top of the auxiliary fence to make sure their widths match exactly, and are each $4\frac{3}{4}$ ".



Cutting Aides

Auxiliary Fence for Edging

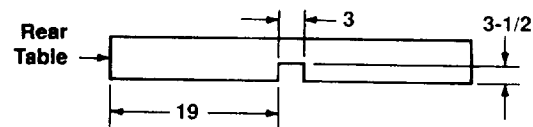
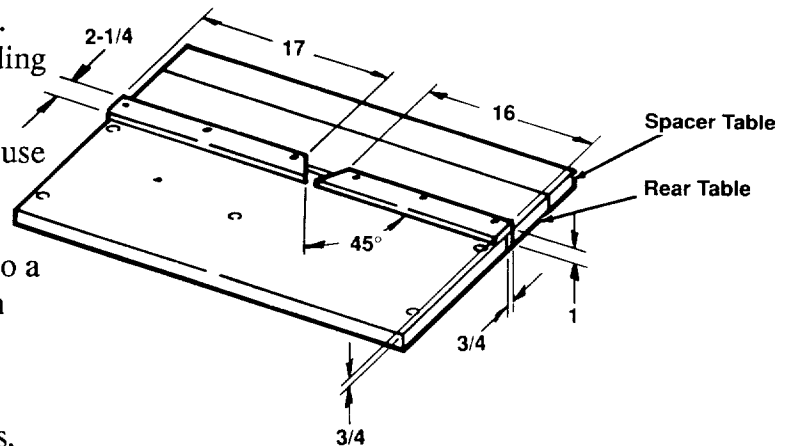
You must use an auxiliary fence for edging because you cannot completely locate the cutting tool behind a rip fence. Also, edging requires the use of a molding head guard (see Accessories).

To make an auxiliary fence for edging, use $\frac{3}{4}$ " knot-free lumber. Cut two pieces to dimensions shown (inches). To form fence, glue both pieces at right angles to a piece of lumber $\frac{3}{4}$ " x 1". Reinforce with nails.

Install the fence in the front position. Reverse order of rear and spacer tables, because to use molding head or drum sander with arbor vertical, you may have to make a 3" x 3½" opening in rear table for arbor clearance in order to get cutting tool closer to table. (Spacer table is too narrow for such an opening.)

Note: Initial edge cut will round angled edges of fence.

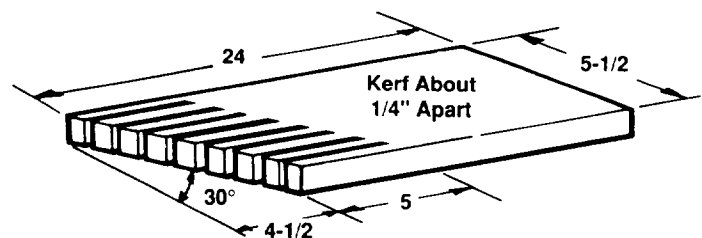
Note: When using drum sander, vacuum motor often to prevent sawdust/powder build-up, because powder interferes with motor ventilation and can clog starter switch.



Featherboard

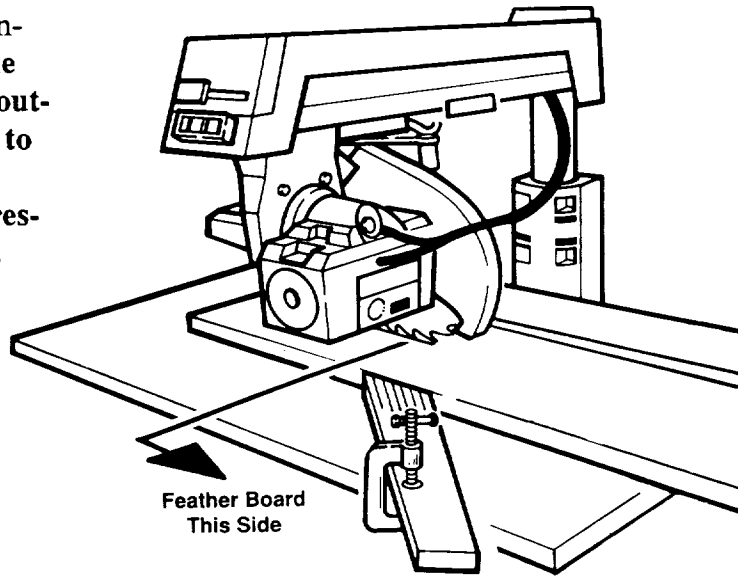
Use a featherboard on the infeed side during ripping to help keep the workpiece against the fence.

To make a featherboard, use knot-free $\frac{3}{4}$ " lumber 5½" wide. Miter crosscut lumber at a 30° angle to 24". Rip to make 5" long cuts about ¼" apart.



Cutting Aides

Clamp the featherboard to the front table, so that the angled edge of the featherboard is against the workpiece on the in-feed side of the blade. **Do not clamp the featherboard against the cut off part (out-feed side) of the workpiece.** If clamped to the outfeed side, the featherboard can squeeze the kerf closed, put binding pressure on the blade, and cause kickback.



Straight Edge for Irregular Workpiece

WARNING

If you try to rip an irregular workpiece, it could bind blade and cause kickback.

If the workpiece you want to rip does not have a straight edge, attach a straight-edged board to the workpiece:

- i) place irregular side of workpiece against fence
- ii) put straight-edged board on top of workpiece and against fence
- iii) tack straight edged board to workpiece.

Note: *Straight-edged board must not extend beyond leading end of workpiece and should cover workpiece width only enough to pass between blade and fence.*

Note: *Use fence at least as high as combined heights of workpiece and straight-edged board.*

Accessories Safety

1. Use only accessories listed in this section. Use of any other accessory or attachment might increase the risk of injury to you or others.
2. Read and follow instructions that come with accessory.
3. Do not install accessories on both ends of arbor shaft at same time.
4. Do not use twist drill bits longer than 7" because they can bend and break.
5. Use a spade type drill 1" or smaller in diameter for drilling only wood or plastic.
6. Do not use reduced shank drills.
7. Remove blade wrenches before turning saw on.

DANGER

Grinding wheels, abrasive or cut off wheels, or wire wheels can break explosively and throw pieces. You can be blinded or receive a life threatening puncture wound. Do not use grinding wheels, abrasive or cut off wheels, or wire wheels.

WARNING

When using accessory shaft, exposed arbor shaft can pull in clothing, hair or jewelry as it rotates. Broken bones and severe cuts could occur.

Follow personal safety instructions. Locate arbor shaft under radial arm: lock blade carriage in out-rip position, then bevel motor to -90°.

Information for Dado

1. Put inside loose collar on arbor shaft first, then install dado. Tighten blade nut directly against outside surface of dado.

2. Saw arbor is designed for dado up to $1\frac{3}{16}$ " wide. Use of wider dado could cause dado and blade nut to spin off. To make larger than $1\frac{3}{16}$ " wide cut, take several passes with dado.
3. To avoid excessive load on motor when making a $1\frac{3}{16}$ " wide cut, limit depth of cut to $\frac{1}{8}$ " in one pass.

Information for Edging

Edging is the use of a dado or molding head in the horizontal position. Edging requires the use of a molding head guard (see Accessories List) and an auxiliary fence (see Cutting Aides).

1. Use molding head guard for edging with molding head and dado blade. Follow instructions that come with guard. Do not edge with a blade.

DANGER

Edging without a guard can bring hands and fingers too close to blade. Hands, fingers and arm could be cut off. Buy, install, and follow instructions for molding head guard.

DANGER

Blade cannot be guarded in horizontal position. Edge with guarded molding head or dado. Do not edge with blade.

2. Install auxiliary fence (see Cutting Aides) to allow positioning of cutting tool behind fence.
3. Whenever possible, edge with arm locked at indexed 0° miter, so blade carriage is more likely to lock firmly.

Accessories

DANGER

Edging without an auxiliary fence when arm is at 0° miter position prevents complete location of cutting tool behind fence. Make and use auxiliary fence to edge with arm locked at 0° miter.

4. If saw handle gets in way with radial arm locked at 0° miter, edging can be done at 30° left miter. In this position, cutting tool can be located behind either a regular or auxiliary fence.

- i) lock arm at 30° left miter
- ii) unlock swivel lock, move saw handle 90° towards left, so motor surface squarely faces front
- iii) lock swivel lock.

Note: This is not a pre-set indexed blade carriage position. Saw forces may affect swivel lock's ability to hold carriage firmly in place.

5. Before edging, with saw unplugged and yellow key out, turn cutting tool by hand to make sure it does not strike guard or any other part of saw.

Lower Blade Guard

The following safety information and instructions apply to all blades and accessories.

The lower blade guard is required by the Occupational Safety and Health Administration (OSHA) if the radial saw is used commercially. The lower blade guard is intended for use only in repetitive 90° crosscutting.

Repetitive 90° crosscutting is the repeated and continuous cutting of many pieces of lumber to the same length with the saw placed in the 90° crosscut position.

In repetitive 90° crosscutting, the guard may reduce the chance of accidentally touching the blade from the side. This protection is possible **ONLY** when:

- the blade is in its rearmost position and
- the guard is resting on the table so the leading and trailing teeth of the blade are not exposed from the sides.

The lower guard **ONLY** provides protection against minor lacerations and bruises that occur from contact with the flat sides of the spinning blade.

WARNING

Lower blade guard will not provide any protection if blade is pulled over your hand, or your hand enters blade path from front or rear of blade. Fingers or hand can be cut or cut off.

WARNING

Remove lower blade guard for ALL other types of cuts except repetitive 90° crosscutting. Using lower guard other than for repetitive 90° crosscutting will increase risk of certain hazards:

- During rip and bevel cuts, the workpiece or narrow cut-off pieces can be pinched between the guard and the blade. Workpiece or cut-off pieces can kickback.
- In the bevel position the blade teeth are fully exposed. Fingers or hand can be cut off.
- Cut off pieces can jam between the guard and blade. Turn saw off and wait for blade to stop before freeing a jammed guard or blade.

- Workpiece or cut-off pieces can be violently thrown by the blade. Wear safety goggles.



CAUTION

Lower blade guard can get caught or jam in fence or table kerfs.

Read and follow the warning on the lower outer guard:

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

Accessories for this Saw

These accessories are designed to fit this saw. Read and follow instructions that come with accessory.

ItemCatalog No.

Auxiliary Table Coversee catalog

Blades (10" with 5/8" hole)see catalog

Dado Blades

Adjustable Dado

7"-24 tooth carbidesee catalog

7"-32 tooth carbidesee catalog

7"-16 tooth carbidesee catalog

8"-48 tooth carbidesee catalog

Satin Cut Dado

7"see catalog

8"see catalog

8" carbidesee catalog

Standard Cut Dado

8"see catalog

Drill Chuck & Keysee catalog

Dust Collector9-29978

Extension Tablesee catalog

Leg Set Caster9-22221 or 9-22222

Molding Heads

7" bits not includedsee catalog

7"-27 piece setsee catalog

7"-15 piece setsee catalog

Sanding Wheel -10"see catalog

Sanding Drum9-25246

Taper Jigsee catalog

Guards

Lower Retractable Guard For 90° Repetitive

Crosscut Only9-29009

Molding Head Guard -8"see catalog

Books

Power Tool Know How Handbook9-29117

Maintenance

General Information

When new, the saw requires no lubrication. The saw has been partially aligned and all bearings are lubricated and sealed for life. In time, in order to keep the saw in good working order, it will be necessary to clean, lubricate and re-align.

WARNING

To avoid shock, burns, or lacerations from accidental start up of saw, turn power switch off and unplug saw before doing maintenance or servicing saw.

Cleaning

Periodically remove any heavy build-up of sawdust that may accumulate on the saw. The absorbing tendency of sawdust will draw lubricants away from the areas where they are needed. Wipe the carriage bearings and track surfaces with a dry or lightly oiled cloth. If packed sawdust and grease build up repeatedly on the carriage bearings, inspect the track wipers for wear and replace if necessary.

To avoid motor damage due to sawdust build-up, which interferes with normal motor ventilation, vacuum the motor often.

Lubrication

Do not lubricate motor bearings, carriage bearings, or the area between the miter locking rings and the column tube. Motor and carriage bearings are sealed and do not need added lubrication.

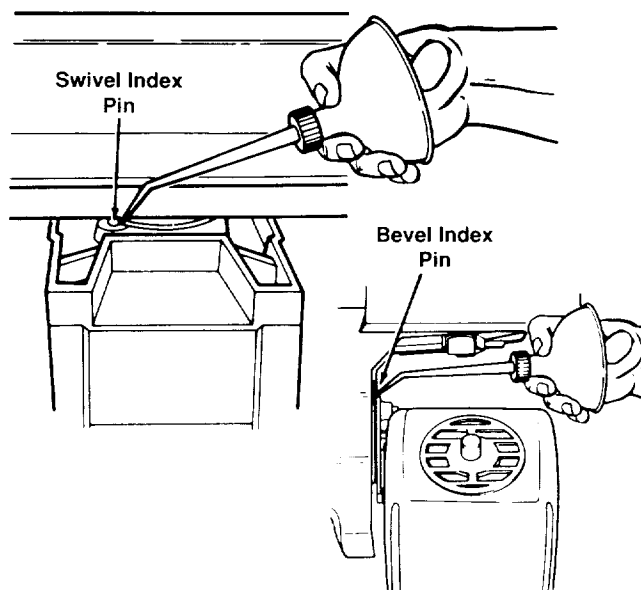
You can lubricate other points if necessary, but only when sticking or binding occurs. Use a small amount of SAE No 10W-30 automotive engine oil. Excess oil attracts airborne dust and sawdust.

To lubricate swivel index pin:

1. Rotate blade to either rip position.
2. Apply a few drops of oil along index pin, as shown below.

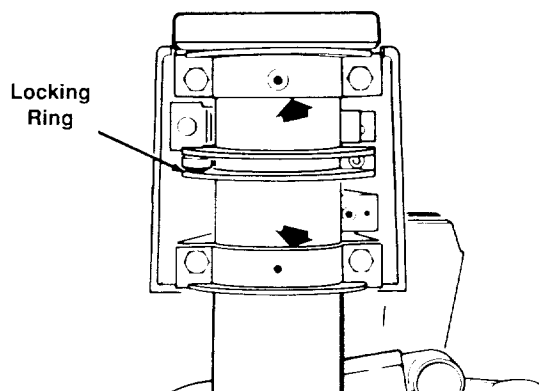
To lubricate bevel index pin:

1. Bevel motor to 45°.
2. Apply a few drops of oil along index pin, as shown below.



To lubricate the bearing points where the radial arm attaches to the column tube:

1. Remove rear arm cover.
2. Apply oil to two areas indicated by arrows. **Note:** Do not get oil on locking ring; oil will make it slippery and unable to lock securely in non-indexed miter positions.



Other areas to lubricate include:

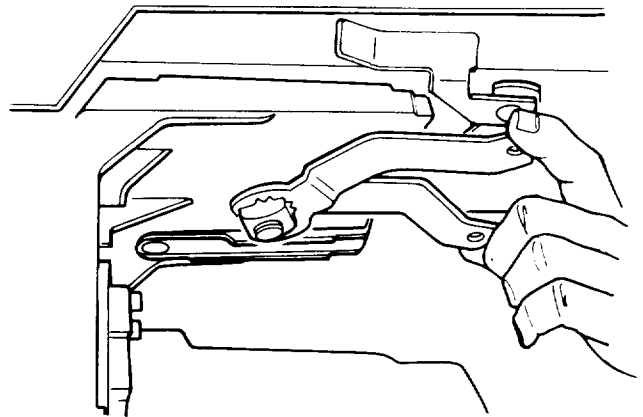
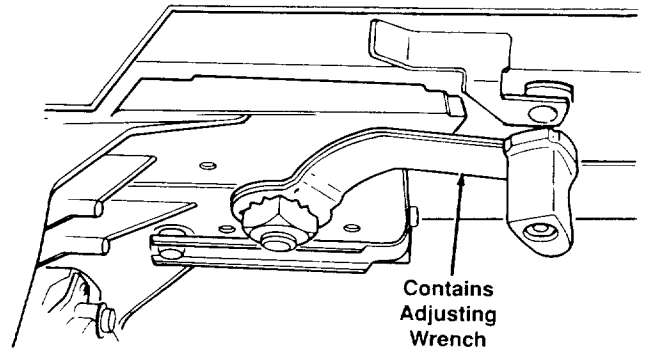
- cam surfaces of the rip lock assembly
- between column tube and column support (*Elevate radial arm to highest point, then wipe face of column tube with light film of oil.*)

Adjustments for Wear

Swivel Lock

The swivel lock is a friction lock that prevents play between the casting and blade carriage. If the carriage can be moved by hand when the lock is locked, adjust:

1. Unlock swivel lock.
2. Remove screw and nut from swivel lock knob.
3. **Note:** *Lever portion of swivel lock contains wrench used to make this adjustment.* Separate wrench from lever by turning wrench a few degrees counter-clockwise to release tab.
4. Position wrench across corners of square nut and move wrench to line up with lever.
5. Test adjustment: hold wrench in place, move blade carriage to a non-indexed position, and lock swivel lock. Try to move blade carriage by hand. If you can, further tighten square nut.
6. Unlock swivel lock and move blade to rip position. If carriage does not "snap" securely into pre-set position, loosen square nut one quarter turn.
7. Re-install wrench and knob.



Bevel Lock

If the motor can be moved by hand when the bevel lock is locked, if the lock offers little resistance when being locked, or if

Maintenance

the space between the lock lever and casting is different from approximately $\frac{1}{16}$ ", adjust according to step 10 in Mount Motor section of Assembly.

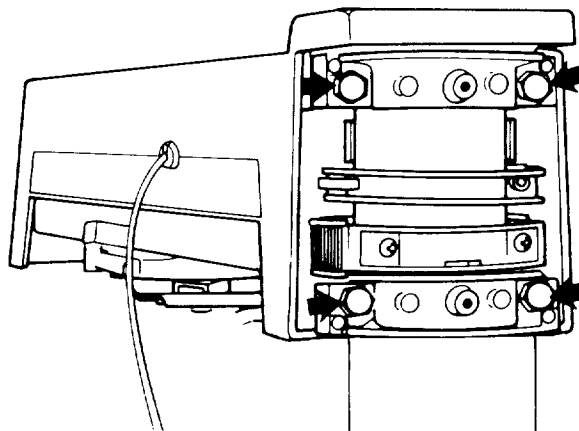
Carriage Bearings

The carriage should roll freely but with some resistance for the entire length of travel. If the carriage moves too freely or with too much resistance, adjust the bearings according to the instructions in Alignment and Adjustment.

Arm and Column

If you can move the end of the radial arm up and down when the arm is **unlocked** between 0 and 45° miter, adjust:

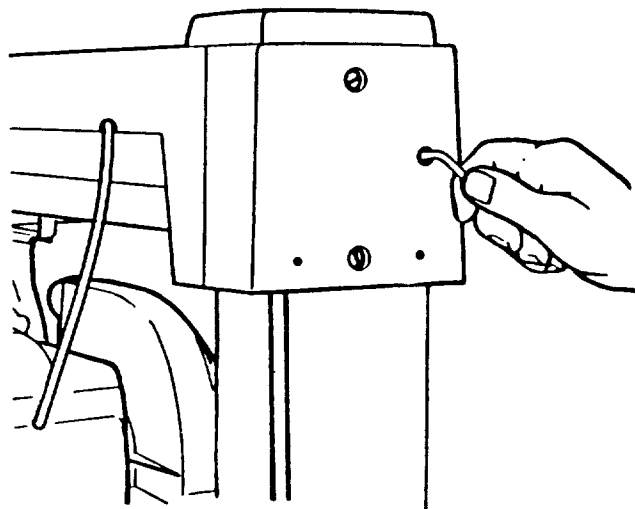
1. Remove rear arm cover.
2. Evenly tighten top two hex head tapping screws, then tighten bottom two hex head screws, but not as tightly as the top ones.
3. Re-install rear arm cover.



Miter Lock

If the radial arm can be moved side to side by hand when locked between 0 and 45° miter, adjust:

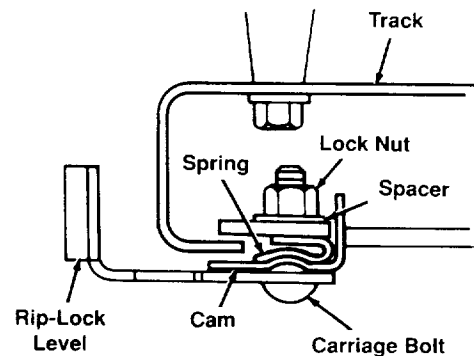
1. Unlock miter lock and move radial arm to any non-indexed position.
2. Tighten socket cap screw, in rear of arm cover, one quarter turn.
3. Lock miter lock and try to move radial arm. If arm still moves, slightly tighten socket cap screw. If lock is too difficult to lock, slightly loosen socket cap screw.



Rip Lock

If the blade carriage can be moved by pushing/pulling on the saw handle when the rip lock is locked, adjust:

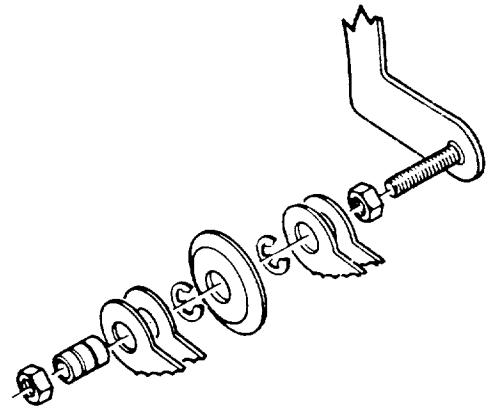
1. Hold rip lock in unlocked position and tighten locknut one quarter turn.
2. Test adjustment: if carriage moves with difficulty, slightly loosen locknut; if carriage moves easily, lock rip lock and try to move carriage along arm.



Replacing Pawls

Make sure the teeth of the pawls are always sharp. If they become dull the pawls must be replaced:

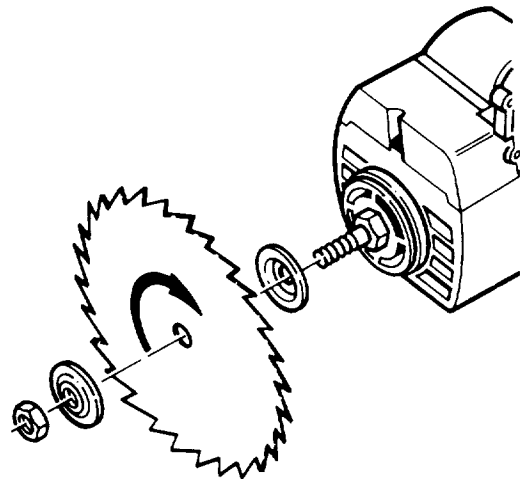
1. Remove hex nut and old pawls.
2. Install new pawls and spreader.
3. Align spreader to blade according to instructions in Alignment and Adjustment.



Blade Changing

To change the saw blade:

1. Turn switch off, remove yellow key, and unplug saw.
2. Use both blade wrenches in scissor action to loosen blade nut. **Note:** Arbor shaft has left-hand threads. Turn nut clockwise to loosen.
3. Remove nut, blade collar, and blade. Insert new blade, making sure that arrow is on outside and points clockwise.
4. Re-install blade collar and nut. **Note:** Do not overtighten nut because this can cause blade collar to warp and blade to wobble during cutting.



Troubleshooting

Motor Problem	Possible Cause(s)	What to Do
Motor overheats or stalls	Overloaded power line	Reduce line load by removing other lights, appliances
	Feeding rate too fast	Slow rate of feed
	Improper motor cooling	Vacuum sawdust from motor to allow normal air circulation
	Saw blade has heel	Check alignment
While motor is running, fuses blow	Need 15 amp circuit	Call your electrician
	Need 15 amp slow-blow fuse	Install correct fuses
	Low voltage	Check voltage. Normal loads can be safely handled at 10% above or below nameplate voltage; heavy loads need same voltage at motor terminal as on nameplate
Motor starts slowly or fails to come to full power	Incorrect gauge extension cord	Refer to table in Electrical Connections
	Overloaded power line	Reduce line load by removing other lights, appliances
	Undersize wires or circuit too long	Increase wire size or shorten length of wiring
	Sawdust build-up	Vacuum motor
Motor will not run	Protector circuit open (models 113.197151, ...181, and ...280 only)	Push re-set button; listen and feel for click
	Low voltage	Check power line for correct voltage
	Sawdust build-up	Vacuum motor
	Bent or bound-up arbor shaft	Check that shaft turns freely by hand; if it doesn't, return to Sears
Fuses blow when motor is turned on	Internal damage	Take saw to Sears for service
Frequent opening of fuses or circuit breakers	Motor overloaded	Slow feed rate
	Fuses or circuit breakers do not have enough capacity	Replace with 15 amp slow-blow fuse or circuit breaker

Troubleshooting

Cutting Problem	Possible Cause(s)	What to Do
Inaccurate cut	Loose locks	Check miter, rip, bevel, and swivel locks. See Adjustments for Wear
	Saw blade out of alignment	Check alignment
Crosscuts not accurate at indexed miter positions	Sawdust between workpiece and fence	Keep front table clean
	Fence not straight	Replace fence
	Swivel lock loose or not locked	Adjust swivel lock for wear
	Crosscut travel not square with fence	Square blade crosscut travel
	Carriage assembly loose on arm	Adjust carriage bearings, then re-align saw
	Arm not indexing properly	Adjust miter lock for wear
	Looseness between column tube and column support	Adjust column support
Depth of crosscut varies from one side of workpiece to other	Table not parallel with radial arm	Adjust table supports
Saw cuts at slight bevel	Blade not square to table	Square blade to table for crosscutting and ripping
	Table not parallel to radial arm	Adjust table supports
	Bevel lock loose	Adjust bevel lock for wear
	Work table not flat	Replace table
	Carriage bearings loose	Adjust carriage bearings, then re-align saw
Workpiece kerf rough with tooth marks from blade	Blade not square to fence	Square blade to fence
	Using improper blade for desired finish cut	Use proper smooth-cutting blade
Blade tends to advance through workpiece too fast during crosscutting	Blade dull	Sharpen or replace blade
	User pulls blade through workpiece too fast	Pull blade slowly and steadily through workpiece

Troubleshooting

Cutting Problem	Possible Cause(s)	What to Do
Workpiece strikes spreader during ripping	Spreader not in line with blade	Align spreader to blade
Workpiece binds, smokes, and motor slows or stops when ripping	Saw blade out of alignment	Re-align
	Warped workpiece	Do not cut severely warped pieces
	Feed rate too fast	Slow feed rate
	Carriage assembly loose	Adjust carriage bearings, then re-align saw
	Fence not straight	Replace fence
	Dull or incorrect blade	Sharpen or replace blade
Board pulls away from fence during ripping	Blade out of alignment	Re-align
	May occur as normal result of applying feed pressure	Use featherboard on infeed side
Saw Problem		
Radial arm moves when locked in a non-indexed miter position	Miter not locked firmly	Adjust miter lock for wear
Motor moves when bevel lock is locked	Bevel not locked firmly	Adjust bevel lock for wear
Blade carriage moves when rip lock is locked	Rip lock not locked firmly	Adjust rip lock for wear
Blade carriage does not travel smoothly on arm	Dirty track	Clean and lubricate track
	Carriage bearing set too tight	Adjust carriage bearings, then re-align saw
	Rip lock too tight	Adjust rip lock
	Worn arm track	Have Sears replace arm track
	Bad carriage bearing	Replace carriage bearing
Blade does not stop spinning within 15 seconds after saw is turned off	Blade nut loose	Tighten blade nut
	Internal damage	Take saw back to Sears for service

Troubleshooting

Electronics Problem	Possible Cause(s)	What to Do
No display when ON/OFF button pushed	Battery incorrectly installed	Install battery correctly
	Battery contacts dirty	Clean battery contacts
	Dead battery	Replace with 6V, size J battery
	Display failure	Have electronics checked by Sears
Display shows: ele ---	Normal at battery installation	No action
	Reference points not set	Set "0" reference points
	Poor battery contact	Clean battery contacts
	Display failure	Have electronics checked by Sears
Display dim	Low battery voltage	Replace with 6V, size J battery
	Saw very cold	Allow saw to warm above 32°F
Display dark	Saw very warm	Allow saw to cool below 120°F
Display blanks after a few minutes	Normal	Push ON/OFF to see display
Display blanks when moving carriage, then re-appears when motion stops	Normal when position is changed rapidly	No action
Display shows: EEE.E or EE.EE	Arm or carriage moved abruptly or too rapidly when display is off	Re-set "0" reference point(s)
Display resets but immediately shows EEE.E or EE.EE when carriage is moved	Defective encoder or display indicator	Have electronics checked by Sears
Display does not change when arm or carriage is moved	Wrong function selected	Select correct function
	Defective encoder or display indicator	Have electronics checked by Sears
Display does not read 0° or 45° at bevel or miter indexes	"0" reference points not set at indexed points	Set "0" reference points
	Miter and bevel encoders not aligned	Align encoders

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

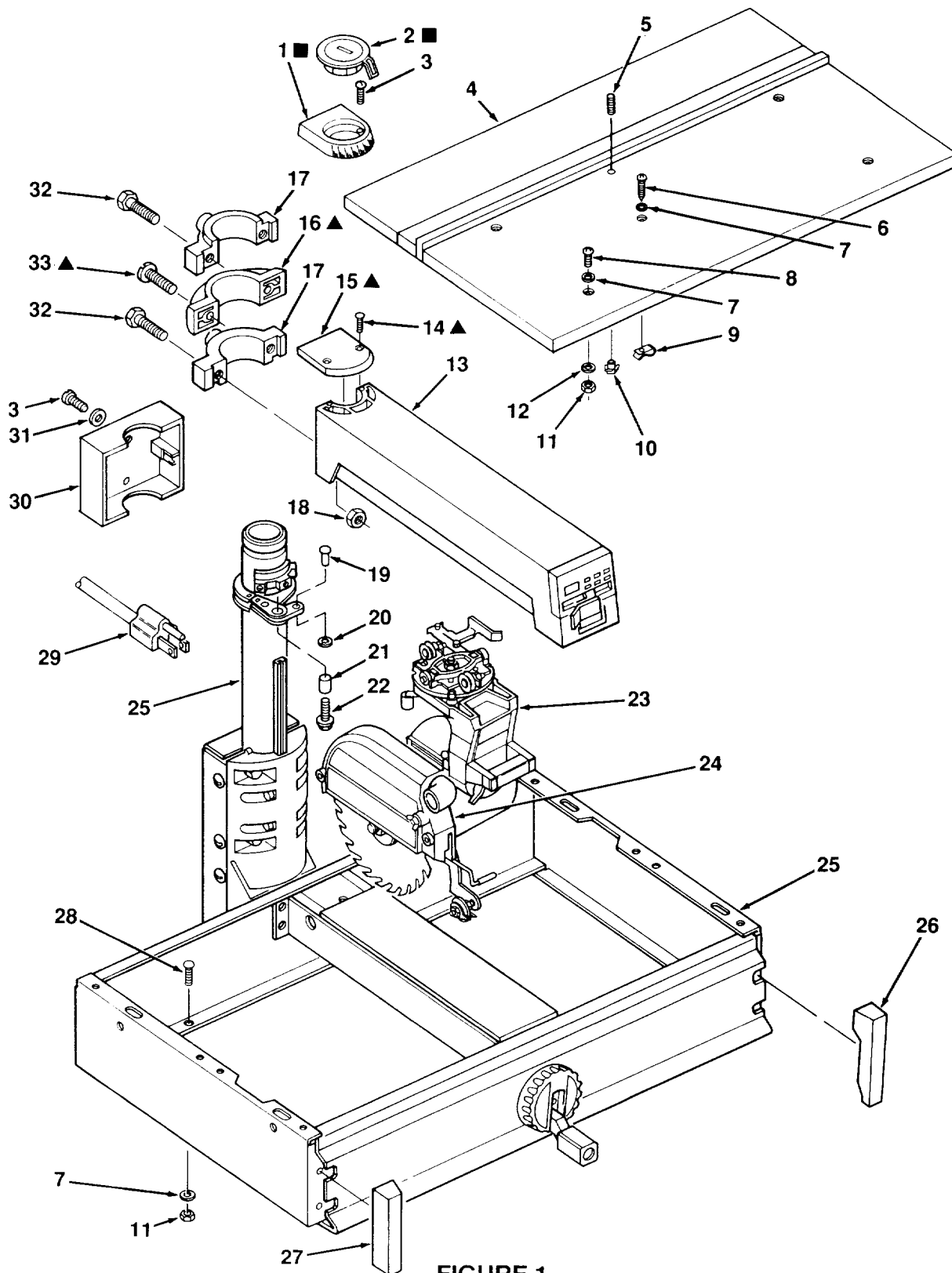


FIGURE 1

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

Always order by Part Number - Not by Key Number

FIGURE 1

Key No	Part No.	Description	Key No	Part No.	Description
1	815777	■ Scale, Miter	19	815774	Rivet, 1/4 x 1/2
2	815778	■ Indicator, Miter	20	60208	Nut, Push
3	STD601105	*Screw, Pan Hd TY "TT" 10-32 x 1/2	21	815980	Bushing
4	—	Table Board Set (See Fig. 8)	22	815856-1	Screw, Hex Washer Hd 5/16-18 x 1-1/4
5	60074	Screw, Hex Soc. Set 1/4-20 x 7/8	23	—	Yoke & Motor Assembly (See Fig. 3 & 4)
6	806828-4	Screw, Pan Hd TY "T" 1/4-20 x 1-3/4	24	—	Guard Assembly (See Fig. 7)
7	STD551025	* Washer, 17/64 x 5/8 x 1/32	25	—	Base & Column Assembly (See Fig. 2)
8	STD512510	* Screw, Pan Hd 1/4-20 x 1	26	818192	Cap, Trim R.H.
9	815989	Clip "U" 1/4-20	27	818193	Cap, Trim L.H.
10	37384	Nut, Tee	28	60314	Screw, Truss Hd 1/4-20 x 1/2
11	STD541025	* Nut, Hex 1/4-20	29	816114	Cord, W/Plug
12	STD551225	* Lockwasher 1/4	30	815773	Cover, Rear Arm
13	—	Arm Assembly (See Fig. 5)	31	STD551010	* Washer, Flat 13/64 x 7/16 x 1/16
14	STD511107	▲* Screw, Pan Hd TY "TT" 10-32 x 7/8	32	60339	Bolt Hex Hd 3/8-16x2-1/8
15	815820	▲ Cap, Arm	33	808380-6	▲ Screw, Pan Hd Plastite #8 x 1
16	815710	▲ Strap	—	SP5538	Owners Manual (Not Illustrated)
17	815649	Bearing, Arm			
18	STD541037	* Nut, Hex 3/8-16			

■ Models 113.197111; 113.197151 & 113.197181 Only

▲ Models 113.197211; 113.197251 & 113.197280 Only

* Standard Hardware Item May Be Purchased Locally.

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

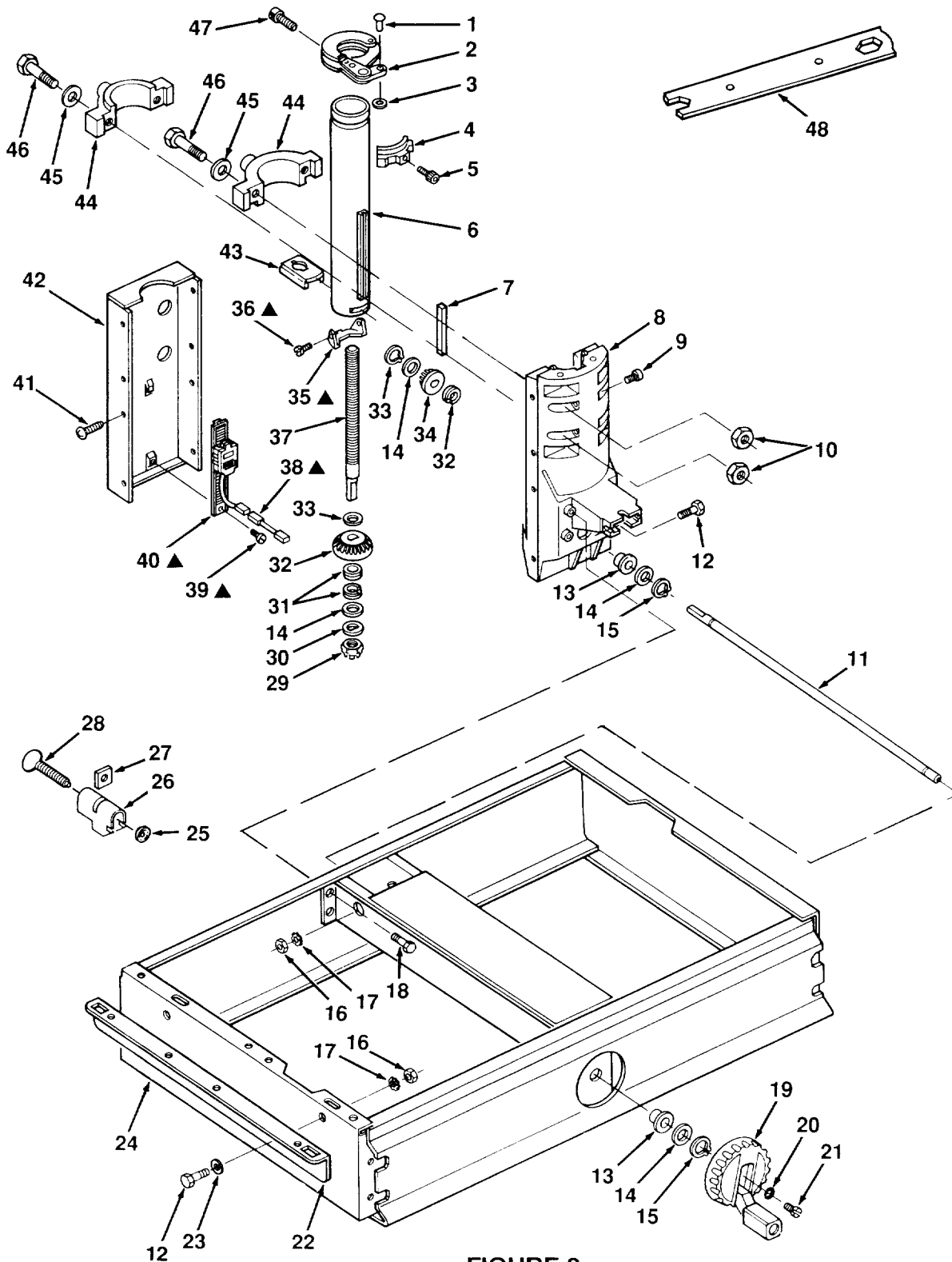


FIGURE 2

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

Always order by Part Number - Not by Key Number

FIGURE 2

Key No	Part No.	Description	Key No	Part No.	Description
1	815774	Rivet, 1/4 x 1/2	25	818161	Shoe, Table Clamp
2	818198	Lock Assembly	26	818166	Bracket, Clamp
3	60208	Nut, Push 1/4	27	120399	Nut, Square 5/16-18
4	815763	Latch, Arm	28	818162	Screw, Clamp
5	815992-1	Screw, Soc. Hd TY "T" 1/4-20 x 3/4	29	STD541450	* Nut, Lock 1/2-13
6	818226	Tube	30	817106	Washer, Keyed
7	815770	Gib, Column Tube	31	63614	Bearing, Lift Shaft
8	818212	Support, Column Tube	32	818164	Gear, Bevel
9	817398-1	Screw, Locking Cap 1/4-20 x 5/8	33	STD581043	* Ring, Retaining 7/16
10	STD541037	* Nut, Hex 3/8-16	34	818165	Gear, Pinion
11	818177	Shaft, Elevating Crank	35	815826	▲ Actuator, Elevation
12	STD523107	* Screw, Hex Hd 5/16-18 x 3/4	36	STD601103	▲ * Screw, Pan Hd TY "T" 10-32 x 3/8
13	815772	Bushing, Elevation	37	818167	Shaft, Elevating
14	63500	Washer, Thrust .502 x .927 x .031	38	817022	▲ Cord, Elevation
15	STD582050	* Ring, Retaining 1/2	39	STD610803	▲ * Screw, Pan Hd TY "AB" #8 x 3/8
16	STD541031	* Nut, Hex 5/16-18	40	815749-1	▲ Encoder, Elevation
17	STD551131	* Lockwasher, External 5/16	41	815865	Screw, Hex Washer Hd TY "T" 1/4-20 x 1/2
18	9416187	Screw, Hex Hd TY "T" 5/16-18 x 3/4	42	815864	Cover, Column Support
19	816499	Handwheel	43	818224	Nut, Elevation
20	STD551210	* Lockwasher, External #10	44	815649	Bearing, Arm
21	STD511105	* Screw, Pan Hd 10-32 x 1/2	45	60353	Washer, .380 x 47/64 x 1/8
22	818199	Channel, Table Mtg.	46	60339	Bolt, Hex Hd 3/8-16 x 2-1/8
23	60013	Washer, 11/32 x 7/8 x 1/16	47	817398-2	* Screw, Socket Hd Cap 1/4-20 x 1-1/4
24	507654	Base Assembly	48	3540	Wrench

▲ Models 113.197211; 113.197251 and 113.197280 Only

* Standard Hardware Item May Be Purchased Locally.

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

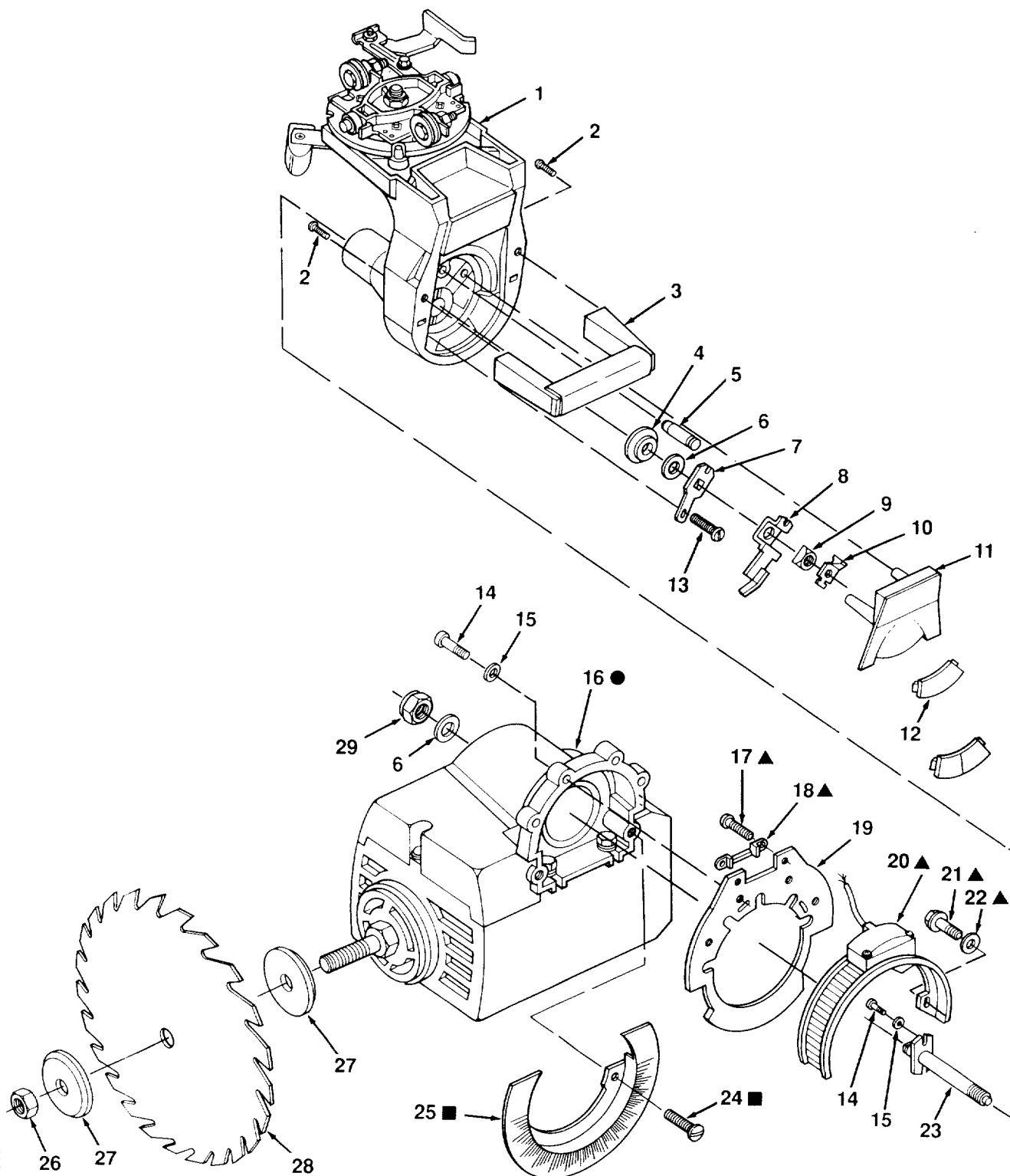


FIGURE 3

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

Always order by Part Number - Not by Key Number

FIGURE 3

Key No	Part No.	Description	Key No	Part No.	Description
1	—	Yoke Assembly (See Fig. 4)	16	818888	● Motor Complete (See Fig. 6)
2	818922	Screw, Flat Hd Plastite #8 x 1		820883	● Motor Complete (Model 113.197181 Only)
3	818202	Handle, Yoke	17	STD510802	▲ * Screw, Pan Hd TY "T" 8-32 x 5/16
4	815678	Washer, Shaft	18	815802	▲ Guide, Bevel Reader
5	815679-1	Pin, Index	19	818197	Plate, Index
6	STD551043	Washer, .505 x 7/8 x 1/16	20	815751	▲ Encoder, Bevel
7	815791	Spring, Bevel	21	STD601103	▲ * Screw, Hex Washer Hd TY "T" 10-32 x 1/2
8	818154	Lever, Bevel Lock	22	STD551010	▲ * Washer, 3/16 x 3/8 x 1/32
9	815813	Nut, Square 1/2-13	23	508153	Shaft, Support w/Plate
10	815836	Wedge, Bevel Spring	24	STD600803	■ * Screw, Pan Hd 8-32 x 3/8
11	818204	Cover, Yoke	25	815800	■ Scale, Bevel
12	815799	▲ Plug, Yoke	26	30495	Nut, Shaft
	815788	■ Indicator, Bevel	27	62498	Collar, Blade
13	806828	Screw, Pan Hd TY "T" 1/4-20 x 1/2	28	9-32668	† Blade, Saw
14	815992-1	Screw, Soc Hd TY "T" 1/4-20 x 5/8	29	805839-1	Nut, Lock
15	STD551012	* Washer, 17/64 x 9/16 x 1/16			

■ Models 113.197111; 113.197151 and 113.197181 Only

▲ Models 113.197211; 113.197251 and 113.197280 Only

* Standard Hardware Item may be Purchased Locally.

† Stock Item may be Secured through the Hardware Department of most Sears Retail or Catalog Order Houses.

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

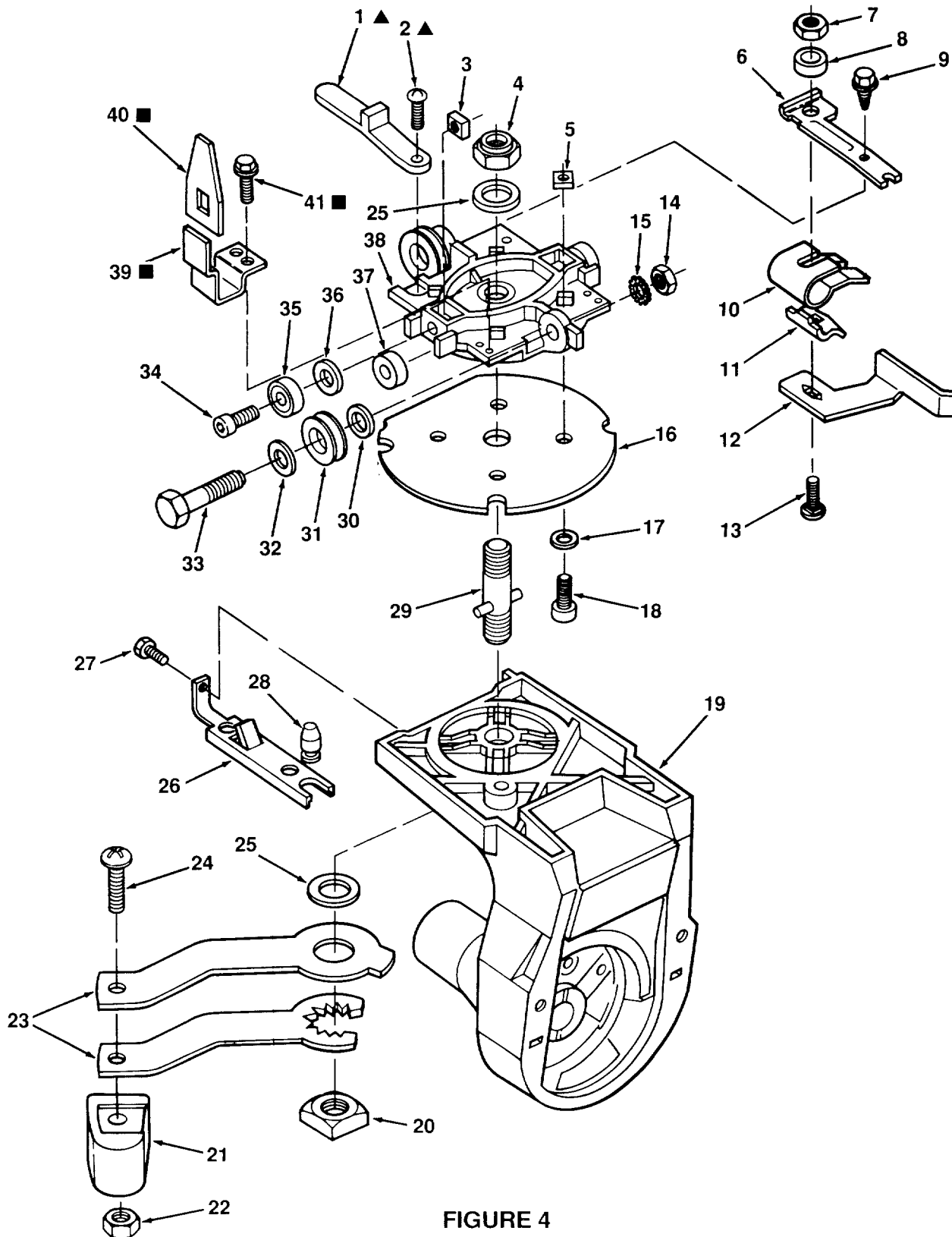


FIGURE 4

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

Always order by Part Number - Not by Key Number

FIGURE 4

Key No	Part No.	Description	Key No	Part No.	Description
1	815827	▲ Actuator, Rip	23	508155	Wrench, Adjustment W/Actuator
2	STD600803	▲ * Screw, Pan Hd TY "T" 8-32 x 3/8	24	STD512515	* Screw, Pan Hd 1/4-20 x 1-1/2
3	815817	Nut, Square Lock	25	STD551062	* Washer, .630 x 1-1/8 x 3/32
4	STD541462	* Nut, Lock 5/8-11	26	815680	Spring, Swivel
5	62636	Nut, Square 1/4-20	27	806828	Screw, Pan Hd TY "T" 1/4-20 x 1/2
6	815693	Bracket, Rip Lock	28	815679-1	Pin, Index
7	STD541425	* Nut, Lock 1/4-20	29	815694	Stud, Yoke Clamp
8	62520	Spacer	30	STD551031	* Washer, 21/64 x 3/4 x 1/16
9	273229	Screw Hex, Hd TY "T" 1/4-20 x 1/2	31	63777	Bearing, Carriage
10	816497	Spring, Rip Lock	32	60438	Washer, No. 2 Carriage Bearing
11	815671	Cam, Rip Lock	33	815807	Screw, Eccentric
12	818155	Lever, Rip Lock	34	810214-3	Screw, Low Hd Cap 5/16-18 x 7/8
13	STD532510	* Bolt, Carriage 1/4-20 x 1	35	STD315485	* Bearing, Ball .3150 I.D.
14	STD541231	* Nut, Hex Jam 5/16-18	36	STD551031	* Washer, 21/64 x 5/8 x 1/32
15	STD551131	* Lockwasher, External 5/16	37	817181	Wiper, Track
16	815691	Ring, Yoke Index	38	815689	Carriage
17	STD551012	* Washer, 17/64 x 7/16 x 1/32	39	815805	■ Support, Indicator
18	817398-1	Screw, Cap Locking, 1/4-20 x 5/8	40	815806	■ Indicator, Rip
19	818207	Yoke	41	159572-98	■ Screw, Hex Washer Hd TY "T" 8-32 x 1/4
20	109529	Nut, Square 5/8-11			
21	816988	Knob, Swivel			
22	STD541025	* Nut, Hex 1/4-20			

▲ Models 113.197211; 113.197251 and 113.197280 Only

■ Models 113.197111, 113.197151 and 113.197181 Only

* Standard Hardware Item may be Purchased Locally.

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

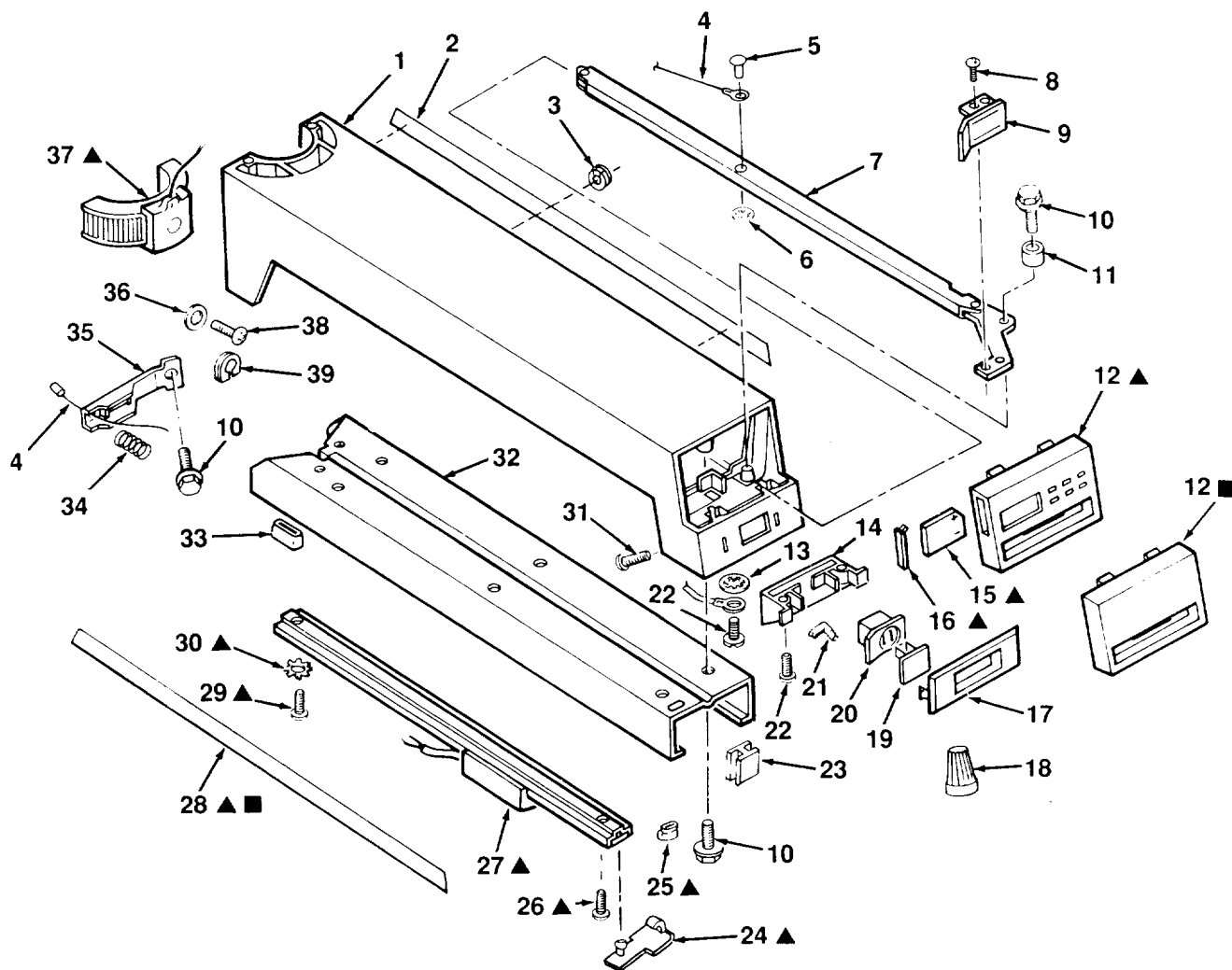


FIGURE 5

**PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW
MODEL NUMBERS
113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280**

Always order by Part Number - Not by Key Number

FIGURE 5

Key No	Part No.	Description	Key No	Part No.	Description
1	818239	Arm, Radial	21	63467	Cap, Flag Terminal
2	818536	▲ Label, Trim R.H.	22	STD600803	* Screw, Pan Hd TY "T" 8-32 x 3/8
	818238	■ Label, Trim R.H.	23	818521	Bumper, Rubber
3	169123-2	Relief, Strain	24	816492	▲ Clip, Wire
4	815809	Cable	25	815789	▲ Relief, Strain
5	815774	Rivet, 1/4 x 1/2	26	STD601103	▲ *Screw, Pan Hd TY "T" 10-32 x 3/8
6	60208	Nut, Push 1/4	27	816490	▲ Encoder, Rip (Includes Key #24)
7	818182	Actuator Assembly	28	815786	Label, Trim L.H.
8	STD601103	* Screw Pan Hd TY "T" 10-32 x 3/8	29	816333-3	▲ Screw, Pan Hd TY "T" 10-32 x 5/8
9	815703	Knob, Miter Lock	30	STD551210	▲ * Lockwasher, Ext #10
10	9416187	Screw, Hex Washer Hd 5/16-18 x 3/4	31	STD610805	*Screw, Pan Hd 8-10 x 1/2
11	815779	Bushing	32	818088-1	Track, Arm
12	815741	▲ Controls, R.S.	33	816178	Sleeve, Rubber
	815716	■ Trim, Arm	34	815867	Spring, Compression
13	STD551208	* Lockwasher, Internal #8	35	815708	Spring, Miter Lock
14	815704	Housing, Switch	36	STD551010	* Washer, 13/64 x 5/8 x 1/32
15	STD363539	▲ ○ * Battery	37	815752	▲ Encoder, Miter
16	815735	▲ Lid, Battery Access	38	808380-10	Screw, Pan Hd Plasite #10-14 x 3/8
17	815976	Bezel, Switch	39	815868	Relief, Strain
18	STD375006	* Connector, Wire (Models 113.197111; 113.197211 & 113.197251)			
19	9-22256	† Key, Switch			
20	816113	Switch, Locking (Models 113.197111; 113.197211 & 113.197251)			
	815775	Switch, Locking (Models 113.197151; 113.197181 & 113.197280)			

■ Models 113.197111, 113.197151 and 113.197181 Only

▲ Models 113.197211; 113.197251 and 113.197280 Only

* Standard Hardware Item may be Purchased Locally.

○ Can also use these Battery Numbers:

Eveready #539, Rayovac #867, Duracel #7K67

† Stock Item may be Secured through the Hardware Department of most Sears Retail or Catalog Order Houses.

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

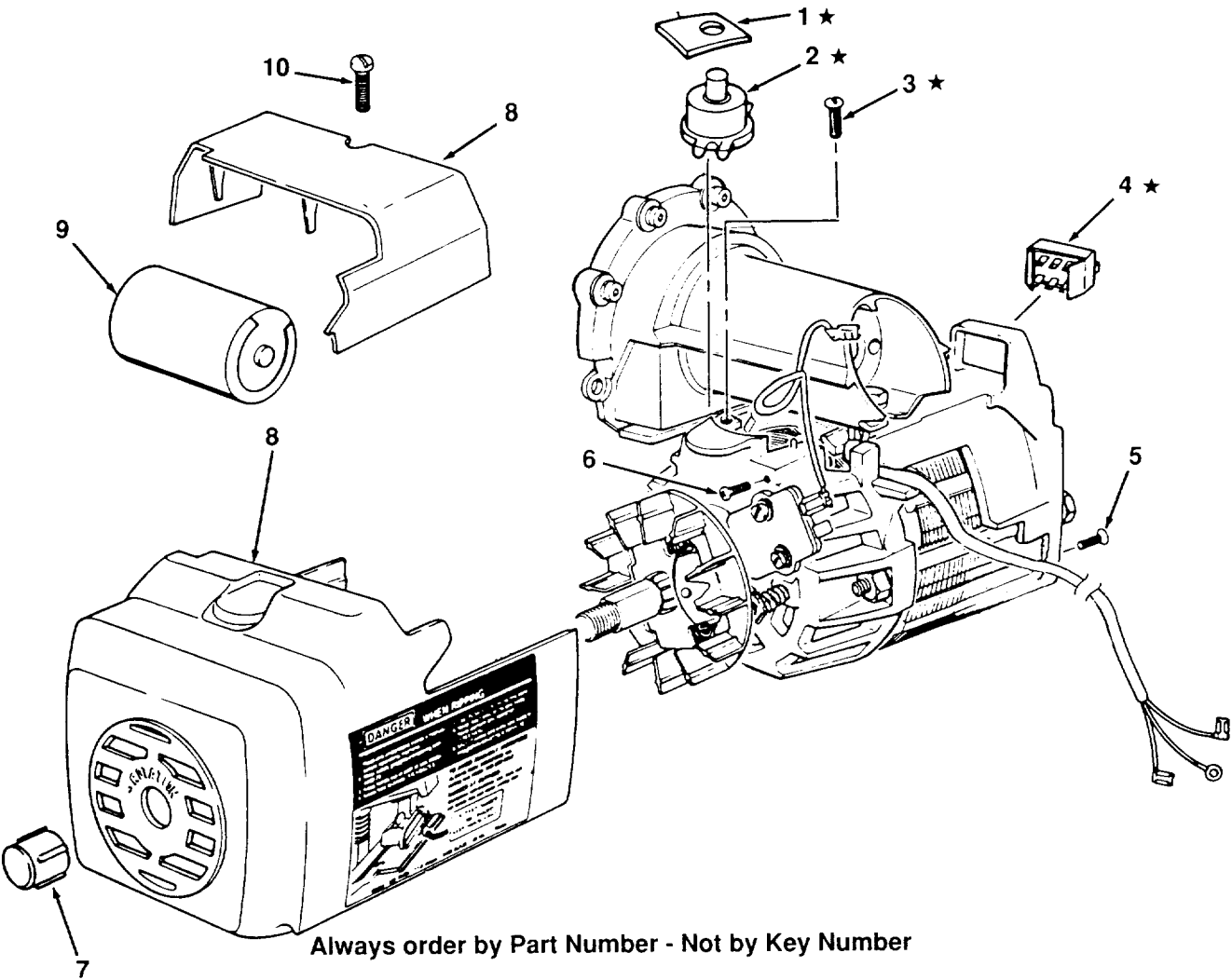


FIGURE 6 - MOTOR ASSEMBLY

Key No	Part No.	Description
1	64922	★ Gasket
2	64921	★ Protector
3	STD600603	★ * Screw, Ty 23 Pan Hd 6-32 x 3/8
4	64909	★ Switch, Slide
5	64951	Screw, Flat Head
6	64948	Screw, Ground
7	30582	Cap, Shaft
8	507744	Housing, Motor
9	STD376116	* Capacitor
10	64950	Screw, Type "T"

★ Models 113.197151, 113.197280 & 113.197181 Only

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280

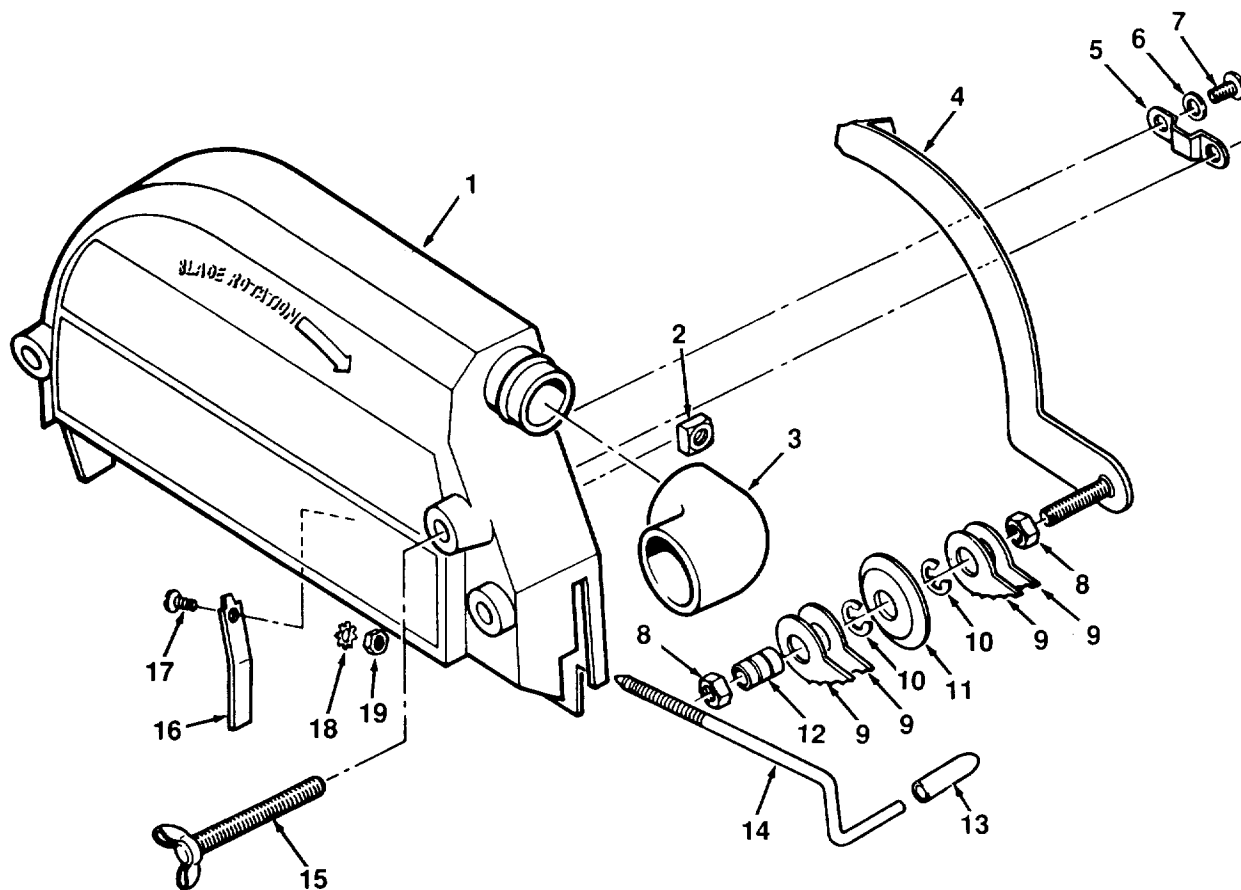


FIGURE 7 - GUARD ASSEMBLY

Always order by Part Number - Not by Key Number

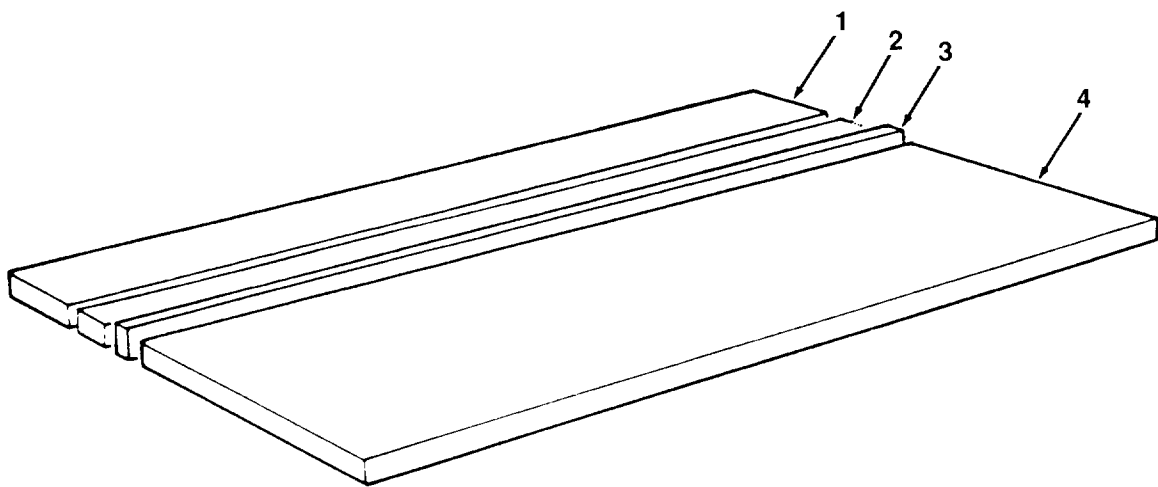
Key No	Part No.	Description
1	816264-1	Guard
2	120399	* Nut, Square 5/16-18
3	63258	Elbow, Dust
4	63541	Bar, Anti-Kickback
5	815816	Guide, Anti-Kickback
6	STD551010	* Washer, 13/64 x 5/8 x 1/32
7	STD601103	* Screw, Pan Hd Type "T" 10-32 x 3/8
8	STD541231	* Nut, Hex Jam 5/6-18
9	815815	Pawl

Key No	Part No.	Description
10	STD581050	* Ring, Retaining
11	63270	Spreader
12	816341	Bearing (Includes Key #10)
13	60435	Grip
14	816070	Screw, Guard Clamp
15	166785-3	Screw, Wing 5/16-18 x 2-3/4
16	63538	Clamp, Guard
17	STD510805	* Screw, Pan Hd 8-32 x 1/2
18	STD551208	* Lockwasher, External No. 8
19	STD541008	* Nut, Hex 8-32

* Standard Hardware Item may be Purchased Locally.

Repair Parts

**PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW
MODEL NUMBERS
113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280**



Always order by Part Number - Not by Key Number

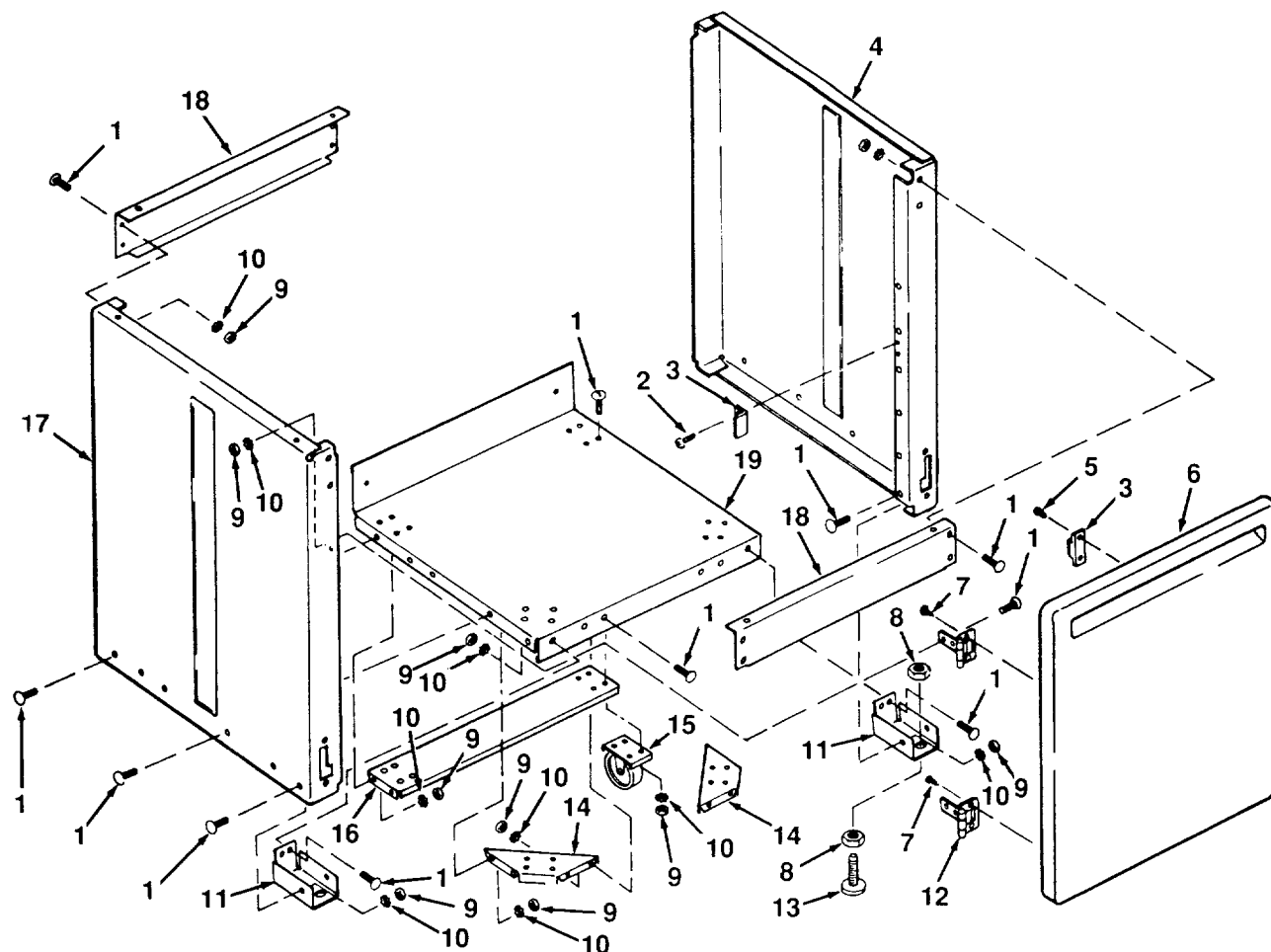
FIGURE 8 - TABLE ASSEMBLY

Key No	Part No.	Description
1	818169	Table, Rear
2	818168	Table Spacer
3	815758	Fence, Rip
4	818191	Table, Front

* Standard Hardware Item may be Purchased Locally.

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW MODEL NUMBERS

113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280



Always order by Part Number - Not by Key Number

FIGURE 9 —PARTS LIST 23" CABINET (MODEL 113.197211 ONLY)

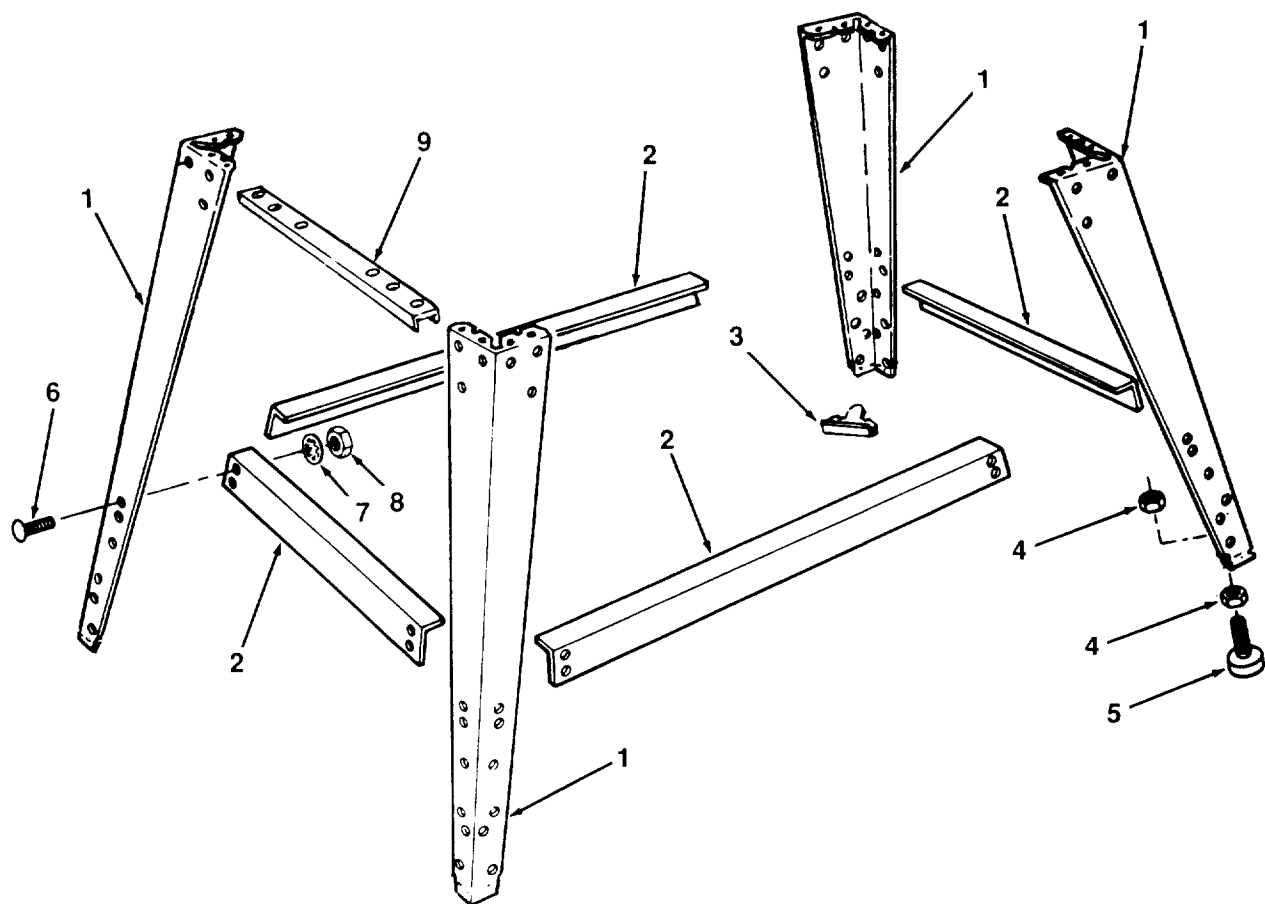
Key No	Part No.	Description
1	60314	Screw, Truss Hd 1/4-20 x 1/2
2	STD600603	* Screw, Pan Hd Type "T" 6-32 x 3/8
3	815933	Catch, Magnetic
4	817151	Panel, Side R.H.
5	816274	Screw, Pan Hd Plastite 6-10 x 1/2
6	815882	Door, Cabinet
7	816274-1	Screw, Pan Hd Plastite 10-10 x 1/2
8	STD541237	* Nut, Hex Jam 3/8-16

Key No	Part No.	Description
9	STD541025	* Nut, Hex 1/4-20
10	STD551225	* Lockwasher, Ext. 1/4
11	817108	Spacer
12	815934	Hinge, Door
13	803835-1	Foot, Leveling
14	815993	Bracket, Corner
15	816004	Caster, Stationary
16	816063	Stiffener, Shelf
17	817150	Panel, Side L.H.
18	815900	Skirt 23"
19	815887	Shelf, Lower 23"

* Standard Hardware Item may be Purchased Locally.

Repair Parts

PARTS LIST FOR CRAFTSMAN 10" RADIAL SAW
MODEL NUMBERS
113.197111; 113.197151; 113.197181; 113.197211; 113.197251 & 113.197280



Always order by Part Number - Not by Key Number

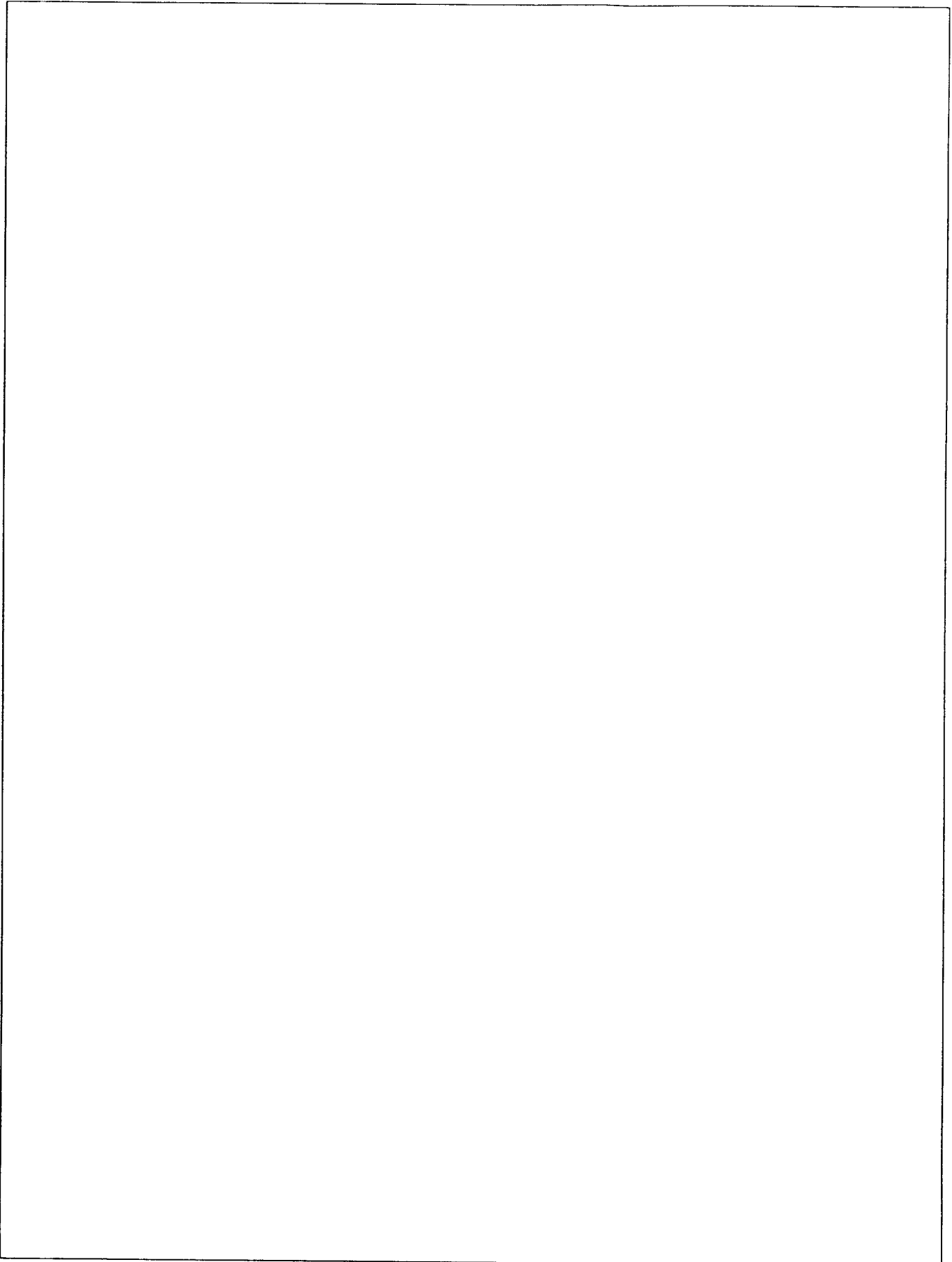
FIGURE 10 - LEG SET

Key No	Part No.	Description
1	817105	Leg
2	815909	Stiffener, Lower
3	818170	Bracket, Leg
4	STD541237	* Nut, Hex Jam 3/8-16
5	803835-1	Foot, Leveling
6	60314	Screw, Truss Hd 1/4-20 x 1/2
7	STD551225	* Lockwasher, Int. 1/4
8	STD541025	* Nut, 1/4-20
9	818163	Channel, Leg

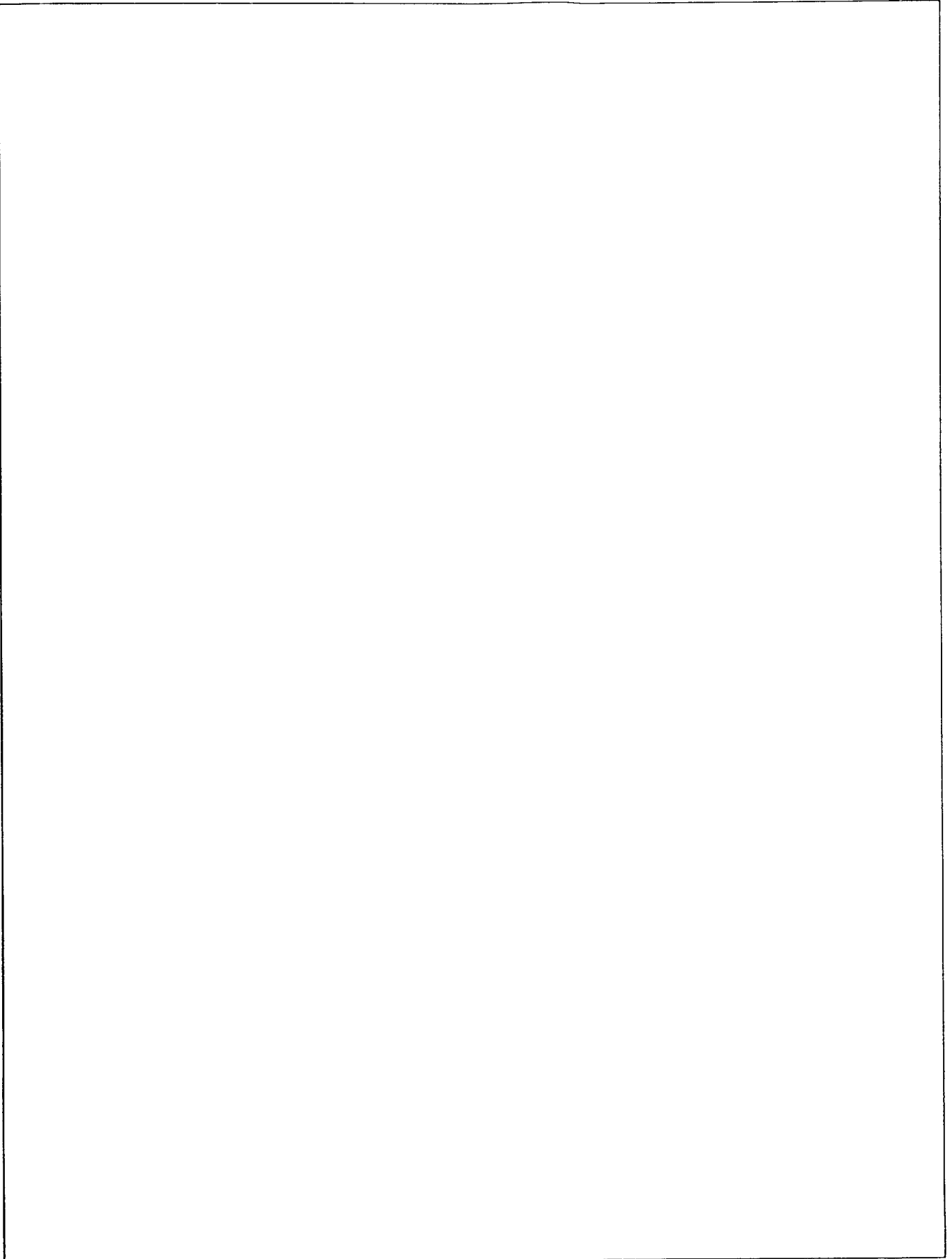
* Standard Hardware Item may be Purchased Locally.

- Accessories 65
 - Item List 67
- Adjustment
 - Arm & Column 70
 - Bevel Lock 14, 69
 - Carriage Bearings 36, 70
 - Column Support 27
 - Leveling Feet 22
 - Make Table Flat 30
 - Miter Lock 70
 - Rip Lock 71
 - Swivel Lock 69
 - Table Supports 28
- Alignment
 - Blade to Fence 34
 - Blade to Table (Parallel) 37
 - Blade to Table for Crosscut 33
 - Blade to Table for Rip 35
 - Crosscut Travel 30
 - Spreader to Blade 39
- Blade
 - Change 71
 - Install 33
 - Safety 7
- Carriage Bearings 36, 70
- Carriage Stop 53
- Cleaning 68
- Controls 24
- Conversion Table
 - Decimal/Fraction 46
- Crosscutting
 - Definition 50
 - Hints 53
 - Kerfs 51
 - Making Crosscuts 52
 - Repetitive 53
 - Safety 50
- Cutting Aides 62
- Dado 61, 65
- Digital Display
 - Align Encoders 43
 - Battery 42
 - Error Messages 41
 - Function 41
 - Set "0" Reference Points 44
- Edging 65
- Electrical Connections 47
- Extension Cords 48
- Featherboard 63
- Fences
 - Auxiliary for Edging 63
 - Auxiliary for Ripping 62
 - Crosscut/Rip 62
- Guard
 - Function/Operation 26, 58
 - Guard Clamp Screw 26
 - Install 38
 - Lower Blade Guard 66
 - Molding Head Guard 61, 65
- Hints
 - Crosscutting 53
 - Ripping 61
- In-rip 54
- Infeed 54
- Kerfs
 - Crosscut 51
 - Ripping 59
- Kickback 4, 56
- Length Stop 53
- Leveling Feet 22
- Locks
 - Bevel 14, 24, 69
 - Miter 24, 70
 - Rip 25, 71
 - Swivel 25, 69
- Lower Blade Guard 66
- Lubrication 68
- Maintenance
 - Adjustments for Wear 69
 - Cleaning 68
 - General 68
 - Lubrication 68
- Miter Indicator 31
- Molding Head 61
- Molding Head Guard 61, 65
- Motor
 - Changing Voltage 49
 - Reset Button 48
 - Specifications 47
- Out-rip 54
- Outfeed 54
- Outfeed Zone Hazard 3, 56
- Pawls/Spreader
 - Function/Operation 26, 58
 - Replace Pawls 71
 - Setting for Crosscut 50
 - Setting for Rip 58
- Push Blocks
 - Making 62
 - Using 55
- Push Sticks
 - Making 62
 - Using 55
- Rip Scale Indicator
 - Function/Operation 25
 - Install & Align 40
- Ripping
 - Definition 54
 - Fence Position 54
 - Hints 61
 - In-rip 54
 - Kerfs 59
 - Making Rip Cuts 60
 - Out-rip 54
 - Safety 55
 - Set-Up Procedure 59
 - Workpiece Position 55
- Safety
 - Accessories 65
 - Blade 7
 - Crosscutting 50
 - General 3
 - Personal 5
 - Ripping 3, 55
 - Saw 6
 - Work Area 5
 - Workpiece 6
- Spreader
 - Alignment 39
 - Function/Operation 26, 58
- Straight Edge 64
- Table Clamp
 - Function/Operation 25
 - Install 32
- Wrong Way Feed 4, 57

NOTES



NOTES





owner's manual

SERVICE

MODEL NO.

113.197111

or

113.197151

or

113.197181

10-INCH RADIAL SAW
WITH LEG SET

or

113.197211

10-INCH ELECTRONIC
RADIAL SAW WITH
23-INCH CABINET AND
1 DOOR

or

113.197251

or

113.197280

10-INCH ELECTRONIC
RADIAL SAW WITH
LEG SET

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 plate attached to your saw, at the left-hand side of the base.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

PART NUMBER		PART DESCRIPTION
MODEL NUMBER		NAME OF ITEM
113.197111	113.197151	10-INCH RADIAL SAW
113.197181	113.197211	
113.197251	113.197280	

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.