Save This Manual
For Future Reference

SEARS

owners manual

MODEL NO. 113.198510

10 RADIAL SAW
WITH 44" CABINET
3 DRAWERS AND
1 DOOR

Serial
Number
Model and serial numbers may be found on the backside of the base. You should record both model and serial number in a place for future use.

CAUTION:

READ ALL
INSTRUCTIONS
CAREFULLY

CRAFTSMAN

10-INCH RADIAL SAW

- assembly
- operating
- repair parts

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

Part No. SP6033

Printed in U.S.A.

FULL ONE YEAR WARRANTY ON CRAFTSMAN RADIAL SAW

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

WARRANTY SERVICE IS AVAILABLE BY SIMPLY CONTACTING THE NEAREST SEARS 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

GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS

1 KNOW YOUR POWER TOOL
Read and understand the owner's manual and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.

2 GROUND ALL TOOLS
If tool is equipped with an approved three conductor cord and grounding type plug, it should be plugged into a properly grounded receptacle. The green conductor in the cord is the grounding wire. Never connect the green wire to a live terminal.

3 KEEP GUARDS IN PLACE
In working order, and in proper adjustment and alignment.

4 REMOVE ADJUSTING KEYS AND WRENCHES
Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

5 KEEP WORK AREA CLEAN
Cluttered areas and benches invite accidents. Floor must not be slippery due to wax or sawdust.

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

7 KEEP CHILDREN AWAY
All visitors should be kept a safe distance from work area.

8 MAKE WORKSHOP CHILD-PROOF
with padlocks, master switches, or by removing starter keys.

9 DON'T FORCE TOOL
It will do the job better and safer at the rate for which it was designed.

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

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

12 USE SAFETY GOGGLES (Head Protection)
Wear Safety goggles (must comply with ANSI Z87.1, at all times. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses. Also use face or dust mask if cutting operation is dusty, and ear protection (plugs or muffs) during extended periods of operation.

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

14 DON'T OVERREACH
Keep proper footing and balance at all times.

15 MAINTAIN TOOLS WITH CARE
Keep tools sharp and clean for best and safest performances. Follow instructions for lubricating and changing accessories.

16 DISCONNECT TOOLS
Before servicing, when changing accessories such as blades, bits, cutters, etc.

17 AVOID ACCIDENTAL STARTING
Make sure switch is in OFF position before plugging in.

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

19 NEVER STAND ON TOOL
Serious injury could occur if the tool is tipped or the cutting tool is accidentally contacted. Do not store materials above or near the tool such that it is necessary to stand on the tool to reach them.

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

21 DIRECTION OF FEED
Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

22 NEVER LEAVE TOOL RUNNING UNATTENDED
Turn power off. Don't leave tool until it comes to a complete stop.

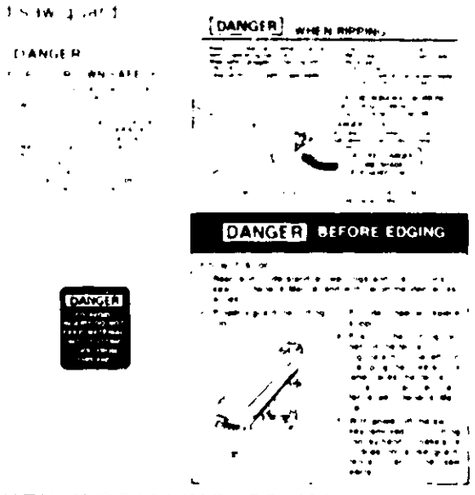
additional instructions for radial arm saws

BEFORE USING THE SAW

WARNING TO AVOID MISTAKES THAT COULD RESULT IN SERIOUS, PERMANENT INJURY DO NOT CONNECT POWER CORD UNTIL THE FOLLOWING STEPS HAVE BEEN SATISFACTORILY COMPLETED

- Assembly and alignment. (See pages 4-22)
- Examination and operating familiarity with the OFF switch, elevation handwheel, saw [illegible] spreader and anti-kickback device, and motor [illegible] (See pages 28-38)
- Review and understanding of safety instructions and practices presented throughout this manual.

Read the following danger decals which appear on the frame of the radial arm saw base assembly and on the saw guard.



WHEN INSTALLING OR MOVING THE SAW

1. To avoid injury from unexpected carriage travel, lock the carriage lock handle before moving the saw.
2. To avoid injury from unexpected saw movement:
   (a) Bolt the saw to the floor if it tends to slip, walk, or slide during normal operation.
   (b) When table extensions over 24" wide are added to either side of the saw, make sure you either bolt the saw to the floor or support the outer end of the extension from the floor as appropriate.
3. To avoid injury from unexpected carriage travel, adjust leveling feet so the arm tilts slightly downward to the rear so that the carriage will not roll forward due to gravity. Forward drift of the carriage on an improperly leveled saw could cause the blade to lunge forward due to unexpected contact with the workpiece, fence, table or part of your body.

BEFORE EACH USE

Plan your work

- [illegible] always [illegible] the plug from the outlet, turn the switch off and remove the switch key before removing the guard, changing the cutting tool or doing any other maintenance and adjustments.
- [illegible] rotating tools, block the saw [illegible] parts are in [illegible] way [illegible] properly. Shut off power switch, pull plug from outlet, [illegible] and damaged [illegible] operation.
- Avoid injury from electric shock, make sure your fingers do not touch the terminal when installing or removing the plug from the outlet.

Check the fence for proper workpiece support. To avoid piece breakage which could result in thrown workpieces and blade contact, do not use fences made of particle board or other composite materials. Use 3/4" thick lumber long enough to extend in one piece from end to end of the saw table and tall enough to be at least even with the top of the workpiece. Replace any fence where existing slots in the fence have weakened the fence or can snag the workpiece during ripping operations. Always check table locks to make sure any new fence is held securely (see page 22).

Choose your cutting tool carefully. Many saw accidents are caused by use of the wrong type blade, dull, badly set, improperly sharpened cutting tools, gum or resin adhering to the cutting tools, and by blade misalignment with the saw fence. Such conditions can cause the material to stick, jam, stall the saw, throw or kickback the workpiece at the operator.

To avoid cutting tool failure and thrown shrapnel (broken pieces of blade): use only blades or other cutting tools marked for operating speeds 3450 rpm or higher. Never use a cutting tool larger in diameter than the diameter for which the saw was designed.

To avoid jamming of the blade, thrown workpieces, and damage to the blade collars, never use a broken, warped, or unbalanced blade. Do not overtighten arbor nut. Use arbor wrenches to snug it securely.

To avoid injury from accidental blade contact by the workpiece or the operator, do not perform layout, assembly, or setup work on the table while the cutting tool is rotating. The rotating tool could cut and throw anything hitting the blade, causing the saw to unexpectedly crash forward.

Use the right guard. To avoid losing control of the workpiece hitting the cutting tool or being struck by thrown pieces, never do any cutting unless the proper guard with all its parts in place is installed and adjusted properly.

To avoid injury from thrown pieces, stops, blade contact or jamming of the workpiece, make sure no play exists between the column and column support or in the carriage and that the arm, yoke, bevel locks, clamps are tight.

To avoid injury from thrown objects, stops or jamming of the blade due to pinching of the blade by shifting boards:

(a) Do not leave a long board unsupported as the sag of the board causes it to twist or rise from the table.

(b) Check to be sure that pieces will not fall off the table once they have been cut.

(c) Provide support for the workpiece based on its size and the type of operation to be performed.

(d) Never use another person as a substitute for a table extension or as an added form of support for a workpiece to assist in feeding, supporting or pulling the workpiece.

(e) Never cut workpieces placed side by side or stacked on top of each other. The pieces can jam side on each other.

The operation of any power tool can result in foreign objects being thrown into the eyes, which can result in permanent eye damage. Always wear safety goggles complying with ANSI Z87.1 (shown on package). Safety goggles are available at Sears retail catalog stores. Use of goggles or glasses not in compliance with ANSI Z87.1 could result in severe injury from breakage of the eye protection.

To avoid injury from uncontrollable reaction or thrown objects, never turn the saw "ON" before clearing the table or work surface of all objects (tools, scraps of wood, etc.) except the properly supported workpiece and related feed or support devices for the operation planned.

WHENEVER THE SAW IS RUNNING

Always keep alert. Do not allow familiarity (gained from frequent use of your saw) to cause a careless mistake. Always remember that a careless fraction of a second is sufficient to inflict severe, permanent injury.

If your saw makes an unfamiliar noise or if it vibrates excessively, stop the operation immediately. Do not restart until the source has been located and the problem corrected.

Do not cycle the motor switch "ON" and "OFF" rapidly, as this might cause the sawblade to loosen. In the event this should ever occur, turn the switch off, allow the sawblade to come to a complete stop, and remove the switch key. To avoid damage to the blade and flange, retighten the arbor nut firmly, but not excessively.

Never perform any operation freehand. Injury can occur from blade contact or thrown pieces when the workpiece is free from the hands. "Freehand" means feeding the sawblade into a workpiece or feeding the workpiece into the sawblade or other cutting tool without using the fence or some other proper device to prevent the workpiece from twisting and binding on the cutting tool during the cutting operation.

- Avoid accidental blade contact. Have sawblade hand positions where a slip or slipping would not result in hand being thrown toward the sawblade or other cutting tool. Do not place fingers or hands in the workpiece or table that is in the path of the sawblade.
- Avoid being pulled into the blade. Do not place hands before you, or behind you, or reach back of or around the cutting tool while the blade is rotating. Do not pull the workpiece back for any reason.

To avoid injury from unexpected starting, never attempt to free a stalled sawblade without first turning the saw "OFF" and removing the switch key. If the sawblade is stalled or jammed, shut the saw "OFF", remove the switch key, remove the workpiece, check for looseness in clamps, arm and carriage, check the sawblade squareness to the table surface and to the fence, and check for heel (see page 23). Adjust as indicated.

To avoid injury from falling parts or from falling into the saw, never climb on or near the saw when its power is "ON". Never leave the saw near a "power is ON" or before the cutting tool has come to a complete stop.

To avoid unauthorized saw use, remove the switch key and put the key away before leaving the saw area.

BEFORE STARTING A RIPPING TYPE CUT

To avoid injury from being struck by a thrown workpiece, position the saw so neither you, a helper or a casual observer is forced to stand in line with the sawblade or workpiece.

Whenever possible, use the "in rip" position. (See page 34.) This provides maximum clearance for feeding by hand, push stick, or push block as appropriate.

To avoid thrown workpieces or being pulled into the saw before you can react, push the workpiece from the nose side (opposite the sawdust exhaust chute) of the guard. Note the warning on the guard.

from the rear side to push the saw [illegible] the guard. Note the warning [illegible] guard.

To avoid injury from thrown pieces, slips or [illegible] the workpiece must be held down on the table and against the fence. Plan your hand placements so safely feed the workpiece past the cutting tool. Featherboards are ideal to help keep the work against the fence. A featherboard is made of [illegible] pieces of lumber [illegible]

[illegible]

To avoid kickback, use extra care when ripping wood that has a twisted grain or is twisted or bowed. It may rock on the table and impact the sawblade. If the workpiece cannot be made stable against the fence and table top, [illegible] radial arm saw.

To avoid blade contact and or kickback, use a push stick when ripping short (10 to 12 inches long) or narrow (2 to 6 1/2 inches wide) workpieces. Use a push block as illustrated on page 37 for pieces 3/8 to 2 inches wide or, wherever possible, place the wider section of the board between the fence and the blade.

To avoid kickbacks, never feed a workpiece through the saw with either piece (cutting piece or second piece against trailing end of piece being cut) narrower than the same thickness.

To keep control of your workpiece, never [illegible] shorter than the blade diameter.

For rip or rip type cuts, the trailing end of the workpiece to which a push stick or push board is applied must be square (perpendicular) to the fence and table top so that feed pressure applied to the workpiece by the push stick or push block will not cause the workpiece to come away from the fence or rise from the table and pass by causing kickback.

Position and [illegible] the blade may be [illegible] saw. Never [illegible] the blade [illegible] the table and [illegible] the sawblade. Anti kickback pawls must [illegible] the table [illegible] the table top at least [illegible] the [illegible] radial arm saw.

To avoid blade contact and or kickback, use a push stick when ripping short (10 to 12 inches long) or narrow (2 to 6 1/2 inches wide) workpieces. Use a push block as illustrated on page 37 for pieces 3/8 to 2 inches wide or, wherever possible, place the wider section of the board between the fence and the blade.

WHILE DOING A RIP TYPE OPERATION

Never reach around the blade to the outfeed side to push the portion of workpiece beyond the blade until the whole workpiece has been pushed beyond and clear of the blade. Your touch could cause a kickback which could strike someone. Put your hand on the rear outfeed side of the blade before you can safely react.

Position your body at the rear or feed side of the guard. Start and complete the cut from that same side. This will require added table support for long or wide workpieces that extend beyond the length or width of the saw table to prevent workpiece from being thrown as it falls from the table.

Never apply the feed force to the section of the workpiece that will become the cutoff (free piece). Feed force when ripping must always be applied between the sawblade and the fence so that the slot cut by the blade (kerf) will not be pinched shut on the blade causing a kickback. Never touch the piece that has been cut off until the blade has come to a complete stop.

Keep pushing the section of the workpiece between the blade and the fence until the piece has been pushed completely past the blade, so the blade will not grab the piece and throw it back at the operator.

BEFORE DOING A CROSSCUT TYPE CUT

To avoid blade contact, do not perform any operation that requires the cutting tool to extend beyond the edges of the table used for supporting the workpiece.

To maximize protection from accidental blade contact and reduce risk of jamming objects into the guard, place guard in a horizontal position and adjust anti kickback pawls to just clear the top of the fence or the workpiece, whichever is higher. The anti kickback pawl assembly will provide additional guarding from contact with the front of the blade.

To prevent the cutting tool from grabbing the table or workpiece and being propelled toward you, never lower a revolving cutting tool into the table or a workpiece without first locking the rip lock handle and clamping the workpiece in place. Release the handle only after having firmly grasped the carriage handle.

To avoid blade contact or injury from a thrown cut off piece, never use a length stop on the cut off end or edge of the workpiece. Never hang onto or touch the cut off piece of the workpiece while the power is ON and/or the sawblade is rotating. To prevent pinching that could cause the piece to be thrown, the cut off piece must never be confined, pushed or grabbed while the blade is spinning.

INSPECT YOUR WORKPIECE

To avoid injury from thrown objects, slips or jamming of the blade, make sure the workpiece and/or the supports (fence, table, fixtures or clamps) will not twist, rock or otherwise bind on the cutting tool. Make sure there is no loose or other foreign material between the workpiece and its support.

WHILE DOING A CROSSCUT TYPE CUT

Always start with the carriage in the full rear position behind the fence before turning the saw on.

Never push the carriage and blade backwards into the work for a crosscutting type operation. The cutting tool can throw the work over the fence, striking someone or causing you to fall into the blade.

Always return the carriage to the full rearward position behind the fence at the completion of each crosscut type operation. Never remove your hand from the yoke handle unless the carriage is in this position. Otherwise, the cutting tool may climb up on the workpiece and be propelled toward you.

BEFORE USING ACCESSORIES

To avoid injury from unanticipated hazards, use only recommended accessories as listed on page 48.

The use of grinding wheels, abrasive or cut off wheels or wire wheels, can be dangerous and are not recommended. Such devices can break explosively and throw shrapnel, causing severe injury.

The sawblade, dado, or other cutting tool must be removed from the saw arbor before using the accessory shaft. Never operate the saw with cutting tools, sanding discs, or buffing or polishing pads attached to both ends of the saw arbor to avoid being pulled into moving parts by hair, threads, [illegible]. Make sure the unused arbor end is covered by the arbor cover cap.

Use a chuck key. To avoid injury from sudden chucking force, break off a [illegible] twist drill or larger that is the length [illegible] extending more than 6 beyond the chuck jaws. Do not install or use any reduced shank drill except the spade type. 1/4" diameter or smaller, use for drilling wood or plastic only, but speed can be properly adjusted for other materials. Do not use twist drills larger than 1/2" diameter.

glossary of terms for woodworking

Anti-Kickback Pawls (AKB)
Device which, when properly adjusted, is designed to stop the workpiece from being kicked back at the operator during ripping operations. See illustrations on pages 26 & 31.

Arbor
The shaft on which a cutting tool is mounted.

Crosscut
A cutting or shaping operation made across the width of the workpiece. See illustrations on pages 32 & 33.

Dado
A non through cut which produces a square sided notch or trough in the workpiece.

Featherboard
A device which can assist in guiding workpieces during rip type operations.

Freehand
Performing a cut without the use of fence (guide), hold down or other proper device to prevent the workpiece from twisting during the cutting operation. Twisting of the workpiece can cause it to be thrown or kicked back by a radial saw.

Gum
A sticky, sap based residue from wood products.

Heel
Misalignment of the blade. See pages 25 & 26.

In-Rip
Positioning the blade parallel to the fence with the motor toward the front of the saw. See illustration on page 35.

Kerf
The amount of material removed by the blade in a through cut or the slot produced by the blade in a non through or partial cut.

Kickback
An uncontrolled grabbing and throwing of the workpiece back toward the operator during a rip type operation.

Leading End
The end of the workpiece which, during a rip type operation, is pushed into the cutting tool first.

Molding
A non through cut which produces a special shape in the workpiece used for joining or decoration.

Outrip

Positioning the blade parallel to the fence with the motor toward the rear of the saw producing maximum ripping capacity. See illustration on page 36

Push Stick

A device used to feed the workpiece through the saw during narrow ripping type operations so the operator's hands are kept well away from the blade. See page 38

Push Block

A device used for ripping type operations to move the workpiece with a push stick. See page 38

Rabbet

A notch on the edge of a workpiece

Resin

A sticky substance found in most hardwood species

Ripping

A cutting operation along the length of the workpiece

Revolutions Per Minute (RPM)

The number of revolutions completed by a rotating part in one minute

Sawblade Path

The area of the workpiece or tabletop directly in line with either the travel of the blade or the part of the workpiece which will be or has been cut by the blade

Set

The distance that the tip of the sawblade tooth is bent or set outward from the face of the blade

Throw Back

The throwing of material pieces in a manner similar to a kickback

Thru-Sawing

Any cutting operation where the blade extends completely through the thickness of the workpiece

Trailing End

The workpiece end last cut by the blade in a cutting operation

Workpiece

The item on which the cutting operation is being performed. The surfaces of a workpiece are commonly referred to as faces, edges and ends

electrical connections

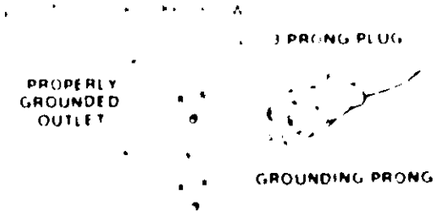
POWER SUPPLY

1 Motor Specifications

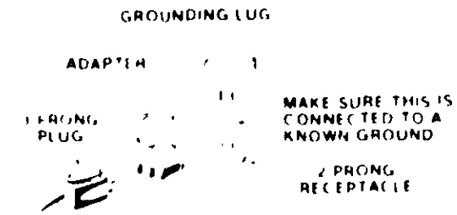
Rabbet	[illegible]
Maximum Depth of Cut	[illegible]
Voltage	120/240
Amperes	[illegible]
Hertz (cycles)	60
Phase	Single
RPM	3450
Rotation of Blade Arbor	Clockwise

WARNING TO AVOID ELECTRICAL HAZARDS FIRE HAZARDS OR DAMAGE TO THE TOOL USE PROPER CIRCUIT PROTECTION YOUR SAW IS WIRED AT THE FACTORY FOR 120V OPERATION CONNECT TO A 120V 15-AMP. BRANCH CIRCUIT AND USE A 15 AMP TIME DELAY FUSE OR CIRCUIT BREAKER IF THE MOTOR IS REWIRED FOR 240V OPERATION CONNECT TO A CIRCUIT PROTECTED BY 15-AMP DUAL ELEMENT TIME DELAY FUSE OR CIRCUIT BREAKER

IF NOT PROPERLY GROUNDED THIS POWER TOOL CAN CAUSE ELECTRICAL SHOCK PARTICULARLY WHEN USED IN DAMP LOCATIONS IN PROXIMITY TO PLUMBING IF AN ELECTRICAL SHOCK OCCURS THERE IS ALSO THE POTENTIAL OF A SECONDARY HAZARD SUCH AS YOUR HANDS CONTACTING THE SAWBLADE NOT ALL OUTLETS ARE PROPERLY GROUNDED TO AVOID SHOCK OR FIRE. IF POWER CORD IS WORN OR CUT OR DAMAGED IN ANY WAY HAVE IT REPLACED IMMEDIATELY



WARNING TO MAINTAIN PROPER TOOL GROUNDING WHENEVER THE OUTLET YOU ARE PLANNING TO USE FOR THIS POWER TOOL IS OF THE TWO PRONG TYPE DO NOT REMOVE OR ALTER THE GROUNDING PRONG IN ANY MANNER USE AN ADAPTER AS SHOWN AND ALWAYS CONNECT THE GROUNDING PRONG TO KNOWN GROUND



WARNING THE ADAPTER ILLUSTRATED IS FOR USE ONLY IF YOU ALREADY HAVE A PROPERLY GROUNDED 2-PRONG RECEPTACLE

ELECTRICAL CONNECTIONS

WARNING CHANGES IN ELECTRICAL CONNECTIONS SHOULD BE MADE BY A QUALIFIED ELECTRICIAN

1 Changing Motor Voltage

[illegible]

a The procedures for changing the motor voltage factory set for 120V are described below. Whenever changing the switch position from 120V to 240V or vice versa make certain that all necessary steps including proper fusing of the branch circuit are completed

2 Connections for 120V A C

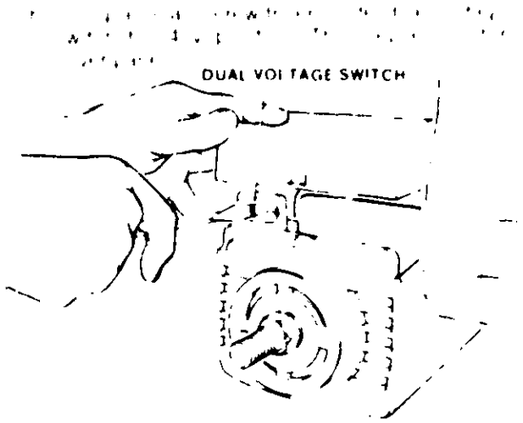
a Remove motor cover plate at back end of motor

b Using small screwdriver set dual voltage switch to 120V position. Then replace motor cover plate

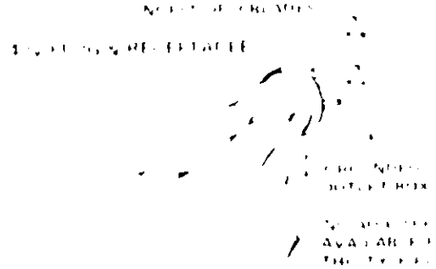
c Use 120V power cord furnished with your saw

3 Connection for 240V A C

a Remove motor cover plate at back end of motor



[illegible]

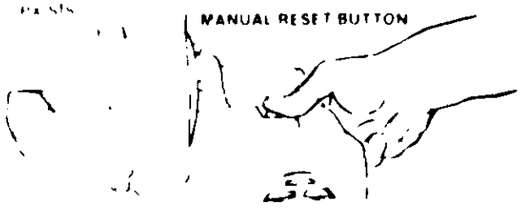


[illegible]

MOTOR SAFETY PROTECTION

CAUTION TO AVOID MOTOR DAMAGE THIS MOTOR SHOULD BE BLOWN OUT OR VACUUMED FREQUENTLY TO PREVENT SAWDUST BUILDUP WHICH WILL INTERFERE WITH NORMAL MOTOR VENTILATION

[illegible]



Electrical Connections

WIRE SIZES

CAUTION For circuits that are farther away from electrical service box the wire size must be increased proportionately in order to deliver ample voltage to the saw motor

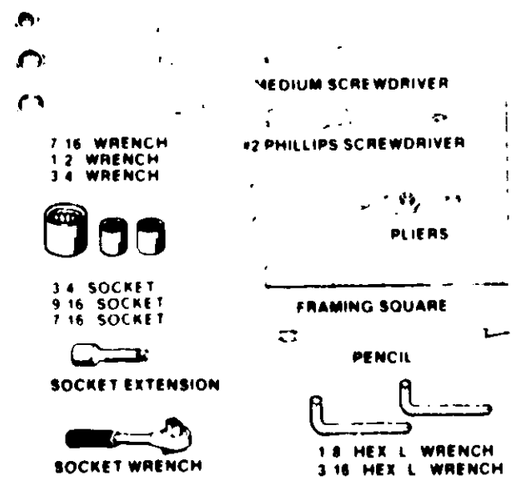
Length of the conductor	Wire Sizes Required (American Wire Gage Numbers) 240V Lines	120V Lines

location and function of controls

contents

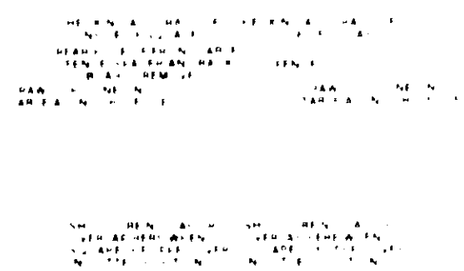
assembly and alignment

TOOLS NEEDED



FRAMING SQUARE MUST BE TRUE

Check its accuracy as illustrated below



unpacking and preassembly

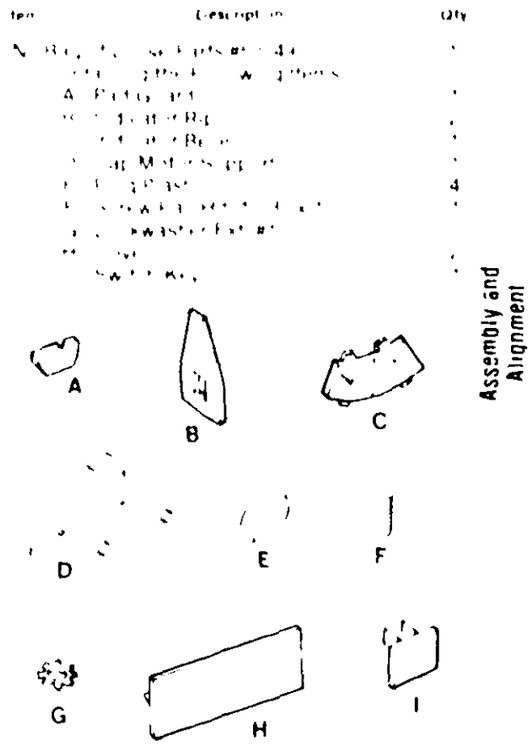
WARNING TO AVOID INJURY FROM UNEXPECTED STARTING OR ELECTRICAL SHOCK DO NOT PLUG THE POWER CORD INTO A SOURCE OF POWER UNTIL ALL ASSEMBLY AND ALIGNMENT STEPS ARE COMPLETE THIS CORD MUST REMAIN UNPLUGGED WHENEVER YOU ARE WORKING ON THE SAW

1 Unpacking and Checking Contents

WARNING IF ANY PARTS ARE MISSING DO NOT ATTEMPT TO ASSEMBLE RADIAL ARM SAW PLUG IN THE POWER CORD OR TURN THE SWITCH ON UNTIL THE MISSING PARTS ARE OBTAINED AND ARE INSTALLED CORRECTLY

LOOSE PARTS LIST FOR MODEL 113 198510

Item	Description	Qty

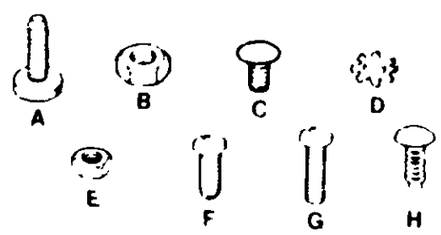


Assembly and Alignment

Item	Description	Qty
		4

Bag of Loose Parts #507564 — 1
Containing the following items

A	Foot Leveling	4
B	Nut Hex Jam 1 2 13	8
C	Screw Truss Hd 1 4 20 x 1 2	28
D	Lockwasher Ext 1 4	28
E	Nut Hex 1 4 20	28
F	Screw Pan Hd Ty BT 1 4 x 1 2	8
G	Screw Pan Hd Ty B 10 x 1	6
H	Fastener Shelf	4



NOTE Loose Parts Bag and Assembly Numbers refer to three digits or defined in example below or the I.D. Number printed on each bag or carton

X04507488H000

44" CABINET ASSEMBLY FOR MODEL NO. 113.198510

ASSEMBLE CABINET BEFORE MOUNTING SAW

1 Separate all loose parts from packaging materials and check each item with Parts List to make sure all items are accounted for before discarding any packaging material

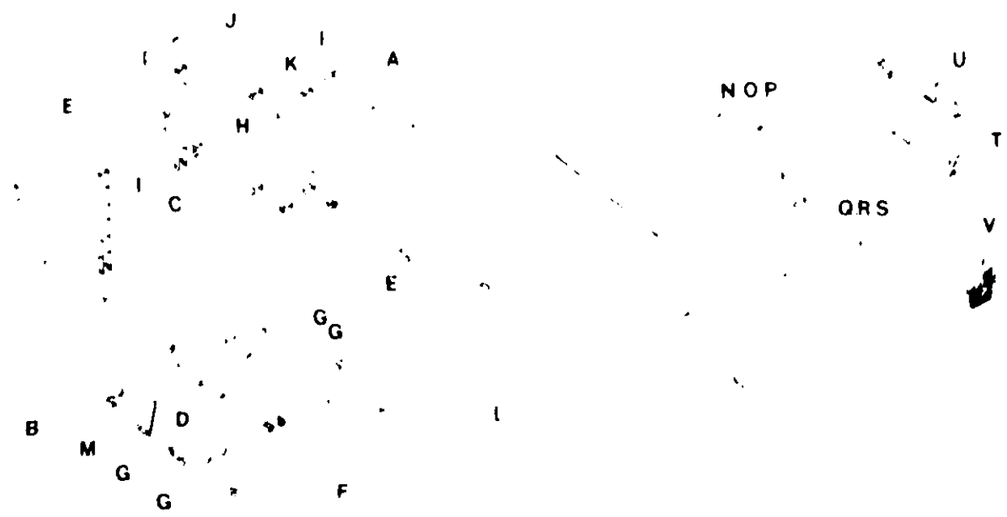
44" CABINET ASSEMBLY NO. 507561 FOR MODEL NO. 113.198510

A Right Side Panel	1
B Left Side Panel	1
C Lower Shelf	1
D Door Support	1
E Skirt	1
F Shelf Stiffener	1
G Corner Bracket	4
H Lower Support	1
I Rear Support	1
J Upper Support	1
K Front Support	1
L Door	1
M Shelf Stiffener Rear	1

WARNING IF ANY PARTS ARE MISSING, DO NOT ATTEMPT TO ASSEMBLE RADIAL ARM SAW, PLUG IN HTE POWER CORD, OR TURN THE SWITCH ON UNTIL THE MISSING PARTS ARE OBTAINED AND ARE INSTALLED CORRECTLY

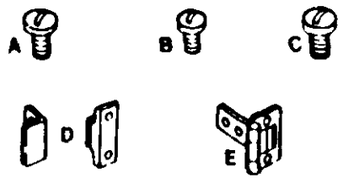
DRAWER ASSEMBLY NO. 507565 FOR MODEL NO. 113.198510

N Drawer 10	1
O Drawer 6	1
P Drawer 3	1
Q Drawer Front 10	1
R Drawer Front 6	1
S Drawer Front 3	1
T Center Side Bracket	1
U Start Side Bracket	1
V Cube Catch Bracket	1

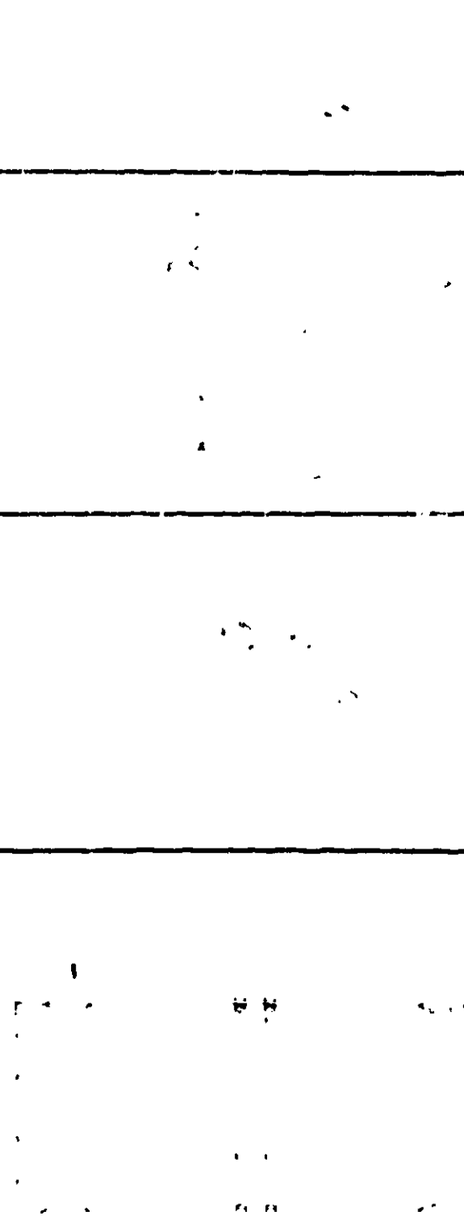


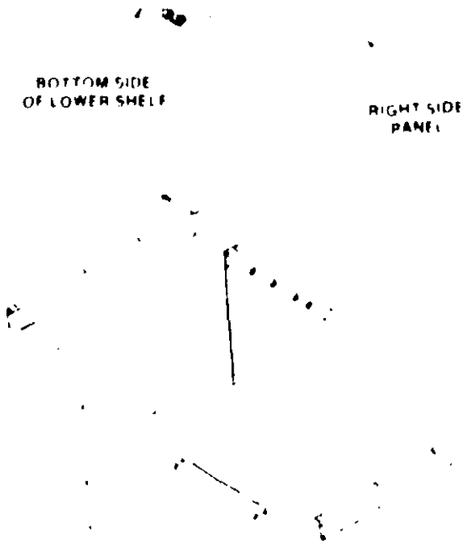
Bag of Loose Parts #507530
(In Cabinet Assembly)
Containing Following Items

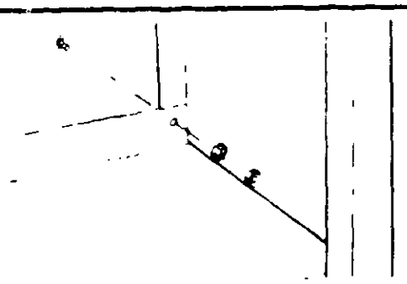
A Screw Pan Hd #6 10 x 1 2	3
B Screw Pan Hd Ty T 6 32 x 3 8	2
C Screw Pan Hd #10 10 x 1 2	4
D Catch Magnetic	1
E Hinge Door	2



7. Locate the four (4) corner brackets and (8) 1/4-20 x 1-1/2 truss head bolts, lockwashers and hex nuts. Mount the corner brackets to the shelf AS ILLUSTRATED. Tighten the nuts with a 7/16" wrench or socket.

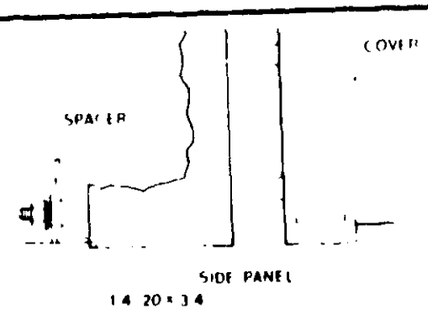




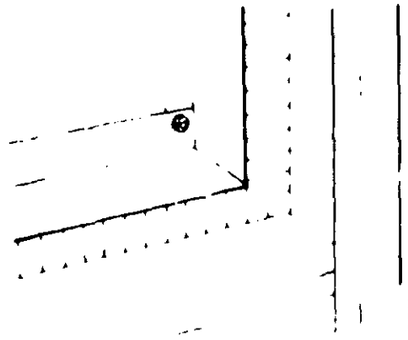


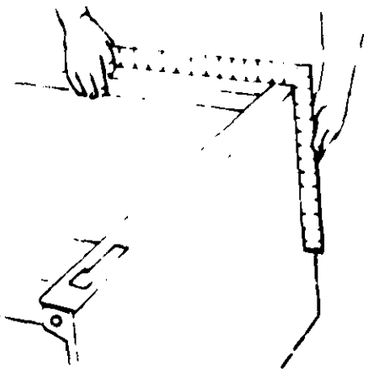
11. Locate the right and left side spacers, the six (6) 1/4-20 x 1-1/2 truss head bolts, lockwashers and hex nuts. Position the spacer inside the right and left side panels and fasten in the three holes as illustrated. Hand tighten nuts.

12. Locate the two (2) covers and attach to openings in the right and left side panels as illustrated.



CHECKING CABINET FOR SQUARENESS

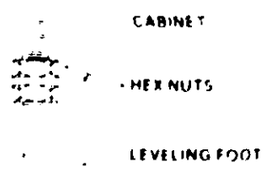




3. Install four (4) leveling and eight (8) 1/2-13 hex nuts. Attach the leveling feet to bottom of side panels in front and rear as illustrated. Hand tighten hex nuts.

WARNING TO AVOID INJURY FROM UNEXPECTED SAW OR WORK MOVEMENT, LEVELING FEET MUST BE ADJUSTED SO THAT SAW DOES NOT ROCK TO AVOID UNEXPECTED CARRIAGE MOVEMENT. ADJUST LEVELING FEET SO THAT THE ARM SLOPES SLIGHTLY DOWNWARD TO THE REAR.

4. To adjust leveling feet so the saw will set properly:
   a. Move saw to desired location.
   b. With 3/4" wrench loosen bottom nut.
   c. Back off top nut by hand.
   d. Raise or lower foot by adjusting bottom nut using 3/4" wrench.
   e. Snug top nut against inside of leg by hand.
   f. Adjust all four feet as necessary, then tighten all four bottom nuts using a 3/4" wrench.



Assembly and Alignment

INSTALLING DRAWERS

NOTE It may be necessary to lift the cabinet backward to tighten the bolts on the upper support and the lower support.

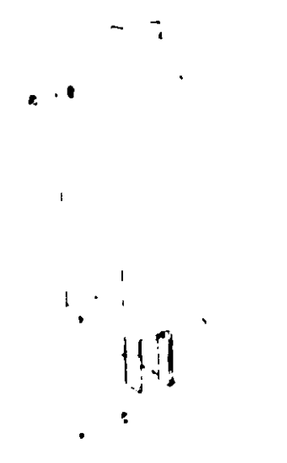
4. Assemble the rear support to the lower support with two (2) 1/4-20 x 1/2 truss head bolts, lockwashers and hex nuts. Tighten nuts securely.

   Do not assemble the rear support to the upper support at this time. These holes are used for step #6 attach the stand slide bracket.

NOTE Determine which side of cabinet is to be drawers. The drawers and the door can be mounted on either side.

5. Assemble a rear support to the side panel with two (2) 1/4-20 x 1/2 truss head bolts, lockwashers and hex nuts. Tighten nuts securely.

   Rear support must touch lower shelf for holes to line up with front holes.



NOTE

CABINET SIDE BRACKETS STOP TO THIS SIDE

REAR STOP

FRONT STOP

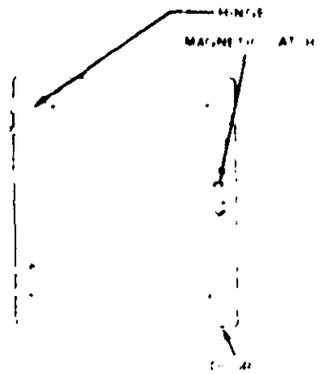
DRAWER STOP TO THIS SIDE

2. Locate the metal drawer, drawer fronts and the bag. If drawer front push type fasteners, slide drawer fronts into appropriate size drawer. Make sure the drawer front tabs engage the metal drawer edges. Align holes and install push type fasteners. Assemble front to metal drawer. Be sure all fasteners clamp the drawer front firmly to the metal drawer.
3. Set drawer assemblies as described on page 19.

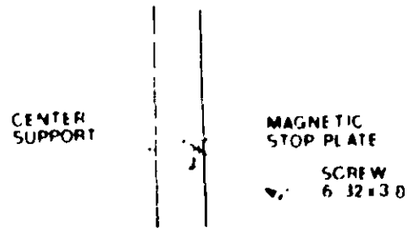
MOUNTING DOOR

1. Locate the two (2) door hinges and four (4) plastite screws 10-14 x 1/2. Mount hinges on outside edge with phillips screwdriver.

   NOTE Before mounting hinges check to make sure the hinges are positioned on the outside edge of the door on the side of the cabinet opposite the drawers. The door can be mounted on either side by moving the hinges.



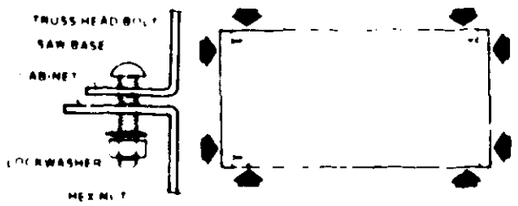
2. Locate the magnetic catch, the magnetic stop plate, two (2) pan head screws 6-19 x 1/2 and two (2) pan head screws 6-32 x 3/8. Attach a magnetic catch to the door with two (2) pan head screws 6-19 x 1/2 using a Phillips screwdriver. Then, on the side of the center support, attach a magnetic stop plate with two (2) 6-32 x 3/8 pan head screws using a Phillips screwdriver.
3. Locate four (4) truss head bolts, lockwashers and hex nuts to attach door hinges to the side panels. Tighten hex nuts with a 7/16" wrench or socket. Adjust stop plate if necessary with phillips screwdriver for desired closure.



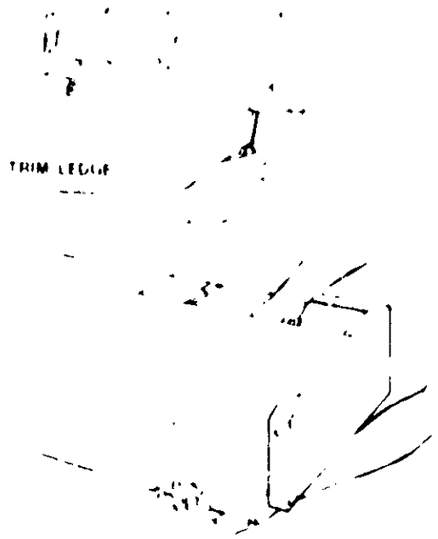
MOUNTING SAW

1. From loose parts bag #564 find the following hardware:
   - 8 Truss Head Bolts 1/4-20 x 1/2
   - 8 Lockwashers External 1/4
   - 8 Hex Nuts 1/4-20
2. Place saw on cabinet so that holes in bottom of saw line up with holes in top of cabinet.
3. Install bolts, lockwashers and nuts as shown. Tighten securely using a 7/16" wrench or socket.

NOTE. It may be necessary to loosen the bolts holding the skirt to the side panel of the cabinet if the holes do not line up. Once mounting bolt is in place retighten cabinet bolts securely.

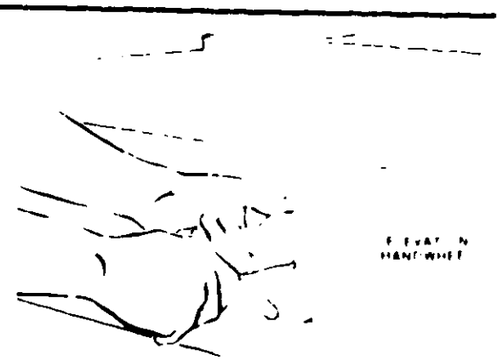


ATTACHING TRIM CAPS & TRIM LEDGE



ATTACH ELEVATION HANDWHEEL

1 From loose parts bag #497 find one (1) screw 10-32 x 1/2 and one (1) external lockwasher Install handwheel to front of base as illustrated



INSTALLING DRAWERS

1 Slide center slide brackets so they extend about 6" beyond front of stand Position the 10" drawer on bottom slides and engage center slide brackets Push drawer closed to engage drawer slide catches

2 Repeat assembly for 6 inch and 3 inch drawers

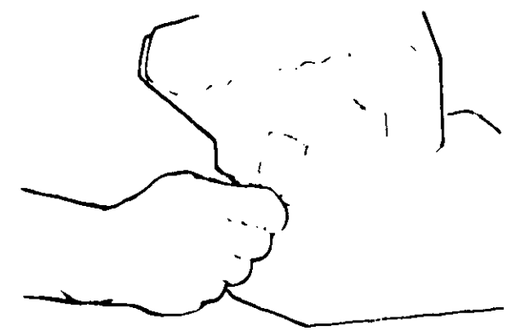
3 Open each drawer to check drawer stops If drawer slides past stop use a screwdriver to bend the stop tab further out on drawer slide Recheck drawer to insure drawer stop works Do not over bend drawer stop

NOTE To remove a drawer use a screwdriver through the side of the slide to push the drawer slide stop tab back to free the drawer

MOUNTING MOTOR

CAUTION Do not attempt to mount the motor until the blade guard and blade have been removed

NOTE



ALIGNMENT PROCEDURE

IMPORTANT In order to obtain maximum cutting accuracy and safety the following six steps must be carefully followed Become thoroughly familiar with these steps so that you can always maintain your saw in proper alignment The accuracy of each adjustment is always dependent upon the accuracy of the preceeding adjustment

Be sure to align the saw in the exact sequence described to insure proper alignment and cutting accuracy

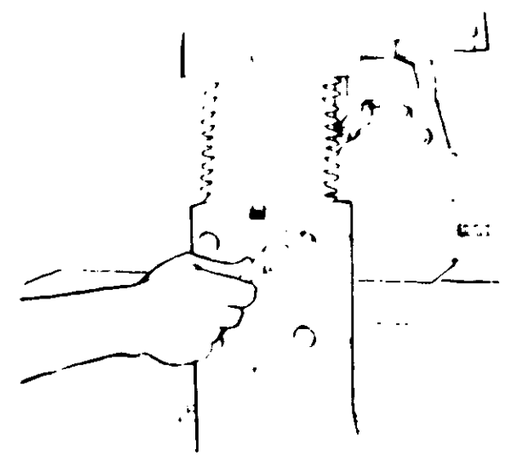
After [illegible] the 6 step assembly [illegible] procedure and the Basic Saw operation [illegible] Troubleshooting section [illegible] any difficulty experienced when performing any sawing operation [illegible]

STEP ONE

Adjusting Column Tube in Column Support

1 Elevate and then lower the arm

(a) If the column binds and elevation is difficult loosen the four (4) bolts with 9/16 socket and extention located through the holes in the rear column support cover until movement is smooth but firm



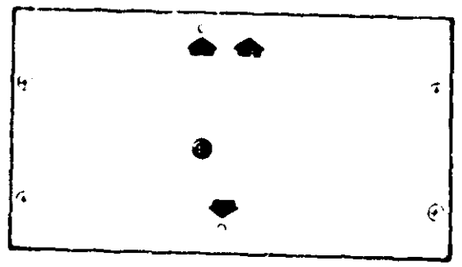
Assembly and Alignment

STEP TWO

NOTE

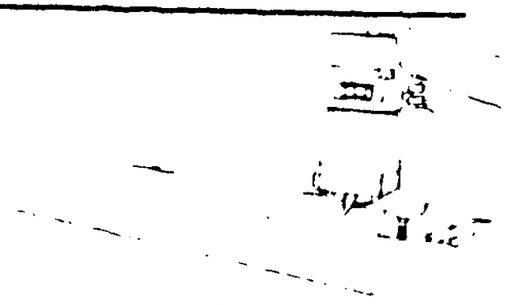
LEVELING FRONT WORK TABLE

snug

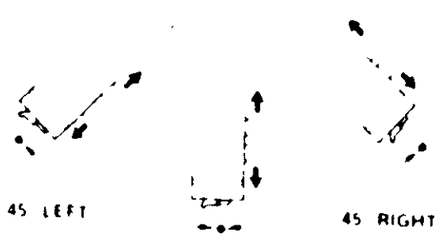


Assembly and Alignment

NOTE



RADIAL ARM



8. Push for the arm over the lowest spot in the table and repeat Step 6.

9. Tighten the mounting screws located at the high spots in the table with a Phillips screwdriver. Then recheck the entire table. Make sure center leveling hold-downs are loose.

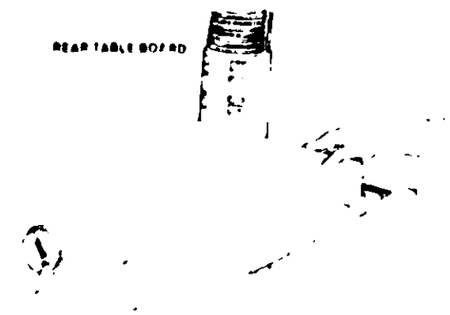
NOTE Do not change this elevation setting until the entire work table has been adjusted.

10. Lay the rear table board on edge across the front table to serve as a straightedge to determine whether the front table board is high or low at its center.

11. If the front table is high at center, first tighten the center hold-down screw until table is level; then tighten the three (3) leveling screws until those screws are tight. If table is low at center, first loosen the center hold-down screw, then tighten the three (3) leveling screws until table is level. Retighten the center hold-down screw. Recheck table to make sure it is level.

12. Position the rip guide, fence, spacer board and rear table board behind the front table board and push front table lock handles down as shown.

13. Return motor to vertical position.



Adjusting front table lock handles

WARNING TO AVOID SUDDEN SLIPPAGE BREAKAGE OR THROWING OF PARTS FRONT TABLE BOARD LOCK HANDLE MUST LOCK TABLE BOARDS AND RIP FENCE SECURELY IN PLACE

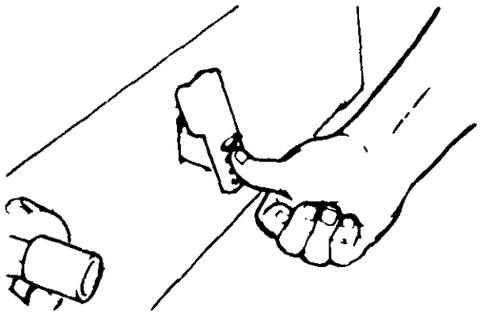
1. To adjust the table board clamps, check by pulling up on rip fence. There should be enough pressure to keep the rip fence from moving, but adjust the pressure in the clamp.

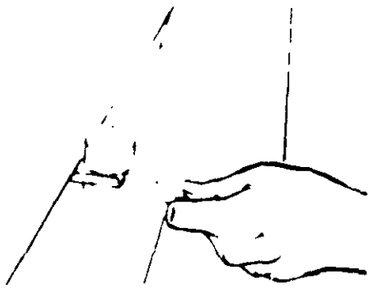
   a. Lift front table lock handles up to release pressure on boards.

   b. Loosen the two eccentric spacer clamps located at the rear of the table top with a 7/16" wrench or socket.

   c. Rotate the spacer toward the rear table board. Tighten spacer with 7/16" wrench or socket. Repeat procedure for clamp on other side.

   d. Push down on front lock handles and recheck pressure by pulling up on rip fence. If rip fence is too loose, repeat adjustment.





STEP THREE

Squaring Crosscut Travel

NOTE [illegible]

[illegible]

[illegible]

CAUTION Do not overtighten arbor nut Use arbor wrench to snug nut in place Overtightening could distort the blade collars and cause blade to wobble

[illegible]

Assembly and Alignment

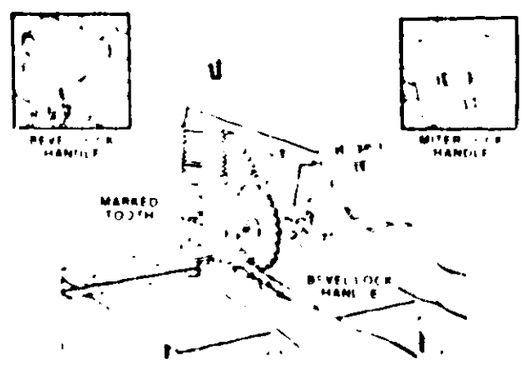
[illegible]

NOTE [illegible]

[illegible]

[illegible]

[illegible]



[illegible]

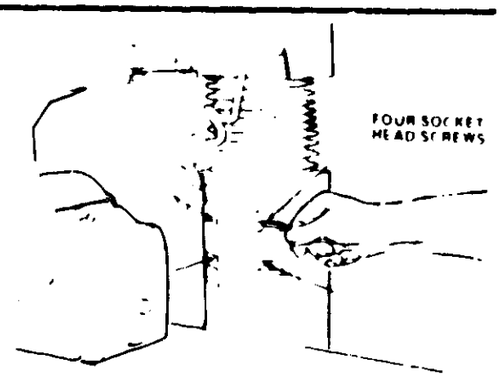
[illegible]

(c) Carefully retighten upper two (2) 1/4-20 socket set screws alternating from left side to right side so as not to force arm out of adjustment

(d) Recheck blade travel Adjust arm position as needed by readjusting upper screws only

(e) Once arm position is good tighten lower 1/4-20 socket set screws Do not overtighten Check elevating handwheel for ease of rotation If rotating handwheel is difficult re-adjust socket set screw tightness as needed

NOTE The life of your saw table will be lengthened considerably if you will cover the front table with a fitted piece of 1/4 inch plywood This should be tacked in place for easy replacement Use of such a cover will allow you to do all cutting on the cover rather than your table top This will help prevent dulling of the saw blade and striking table mounting hardware Place tacks out of the path of the saw blade

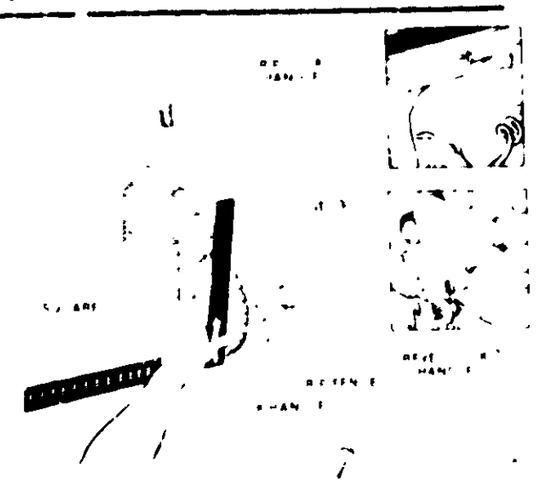


STEP FOUR

Squaring Saw Blade to (Work) Table

NOTE [illegible]

[illegible] Do not [illegible]

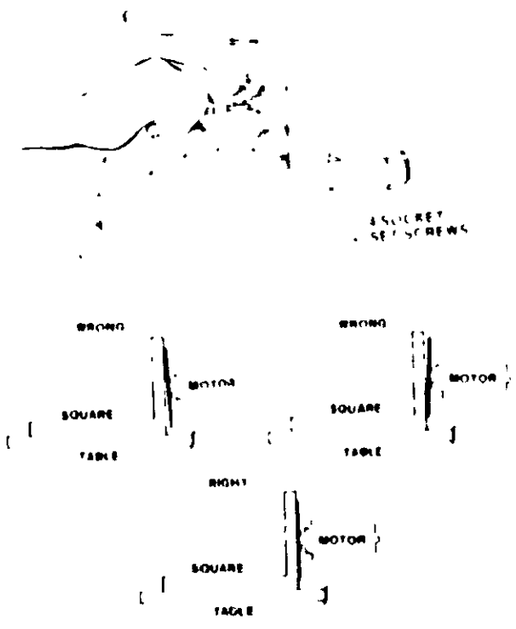


[illegible]

[illegible]

(e) Tighten the four socket set screws Unlock bevel lock handle [illegible] the motor [illegible] flex and relock the bevel lock handle Recheck alignment again If blade is not square to table return to step (c) and repeat

(f) To assure the blade is square to the table elevate the motor [illegible] right bevel the motor 45° [illegible] step Then return bolt [illegible] lower the arm and lock bevel lock handle Recheck alignment



STEP FIVE

Squaring Blade to Rip Fence

NOTE

NOTE

NOTE

NOTE

Bevel Heel Adjustment

This adjustment the tips saw and the gear box together will the [illegible] bevel cutting/dado operation.

1. With the saw blade at 90° [illegible] rotate the swivel lock handle and [illegible] the swivel lock handle.
2. [illegible] and between blade and table [illegible] lower arm and face of blade rest [illegible] square [illegible] resting [illegible] and [illegible] set [illegible] measurement.
3. [illegible] a visible gap between saw blade face and the edge of the square [illegible]
   a. [illegible] the bevel lock handle and loosen the two cap screws located on the rear of the motor support (see illustration). A 1/8" hex wrench is needed to loosen these screws.
   b. [illegible] the rear of the motor support [illegible] the gap between the blade and square as appears [illegible] the bevel lock handles.
   c. Tighten the two cap screws and recheck alignment between the face of the blade and the square. If a gap condition exists repeat the above adjustment.
   d. For more loose parts bag #497 find the motor support cap and install at rear of motor support.

NOTE It may be necessary to use pliers [illegible] the short end of the Hex wrench to loosen or tighten the socket cap screws. Remember to wear eye protection when performing this procedure.

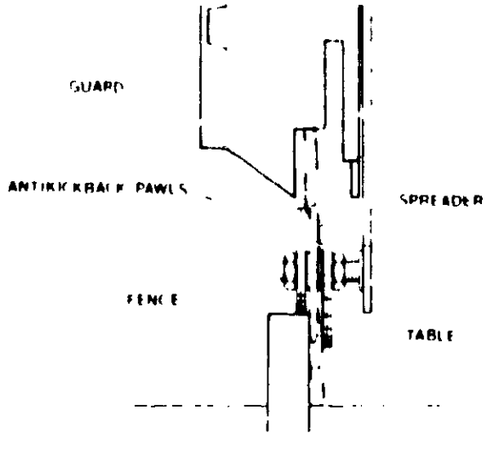
STEP SIX

Installing Blade Guard and Adjusting Anti-Kickback Pawls and Spreader

1. Install blade guard on motor.
2. Unlock the swivel lock handle and rotate the blade into the IN RIP position. Lock the swivel lock handle.
3. Position blade against fence and lock the [illegible] lock handle. Loosen wing screw and lower the anti kickback bar assembly until side of the spreader is flush against the fence and the anti kickback pawls resting on top of the fence (as illustrated).

NOTE If the spreader is not flush against the fence or will not easily clear the top of the fence when lowered, the following adjustment is required.

a. Loosen the [illegible] hex nuts, one on each side of the spreader, with 1/2" open end wrench.



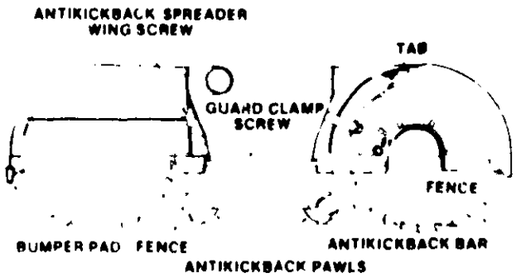
b. Slide the spreader with fingers until the side of the spreader rests flush with the rip fence.

c. Snug both nuts against the spreader and recheck alignment.

d. If spreader aligns with fence and blade, tighten with wrench and raise anti-kickback spreader up. Lower guard and retighten wing screw.

4. Release rip lock handle, move blade away from fence and rotate to crosscut position.

5. From loose parts bag #497, locate the blade guard rear bumper pad and install.



Assembly and Alignment

STEP SEVEN

Installing and Adjusting Rip Scale Indicators

NOTE The rip scale and pointers are intended to be used for quick settings. Adjustments will be necessary for blades of different thicknesses. For greater accuracy take direct measurements between blade and fence with ruler or measuring tape.

1. Locate rip scale indicators in loose parts bag #497 and slide indicators onto mounting brackets.

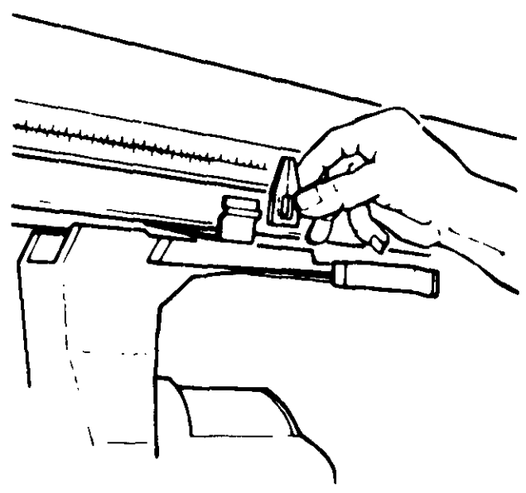
2. Unlock swivel lock handle and move the blade into the OUT RIP position. Lock the swivel lock handle.

3. Measure 2" from rip fence to nearest tooth of the blade and lock rip lock handle.

4. Adjust "out rip" scale indicator by sliding until indicator line reads 2 inches on the upper of the two "out rip" scales as illustrated. Out rip scales are located on left side of arm.

5. Unlock rip lock handle and move blade away from fence. Unlock the swivel handle and rotate the motor to the IN RIP position. Lock the swivel lock handle.

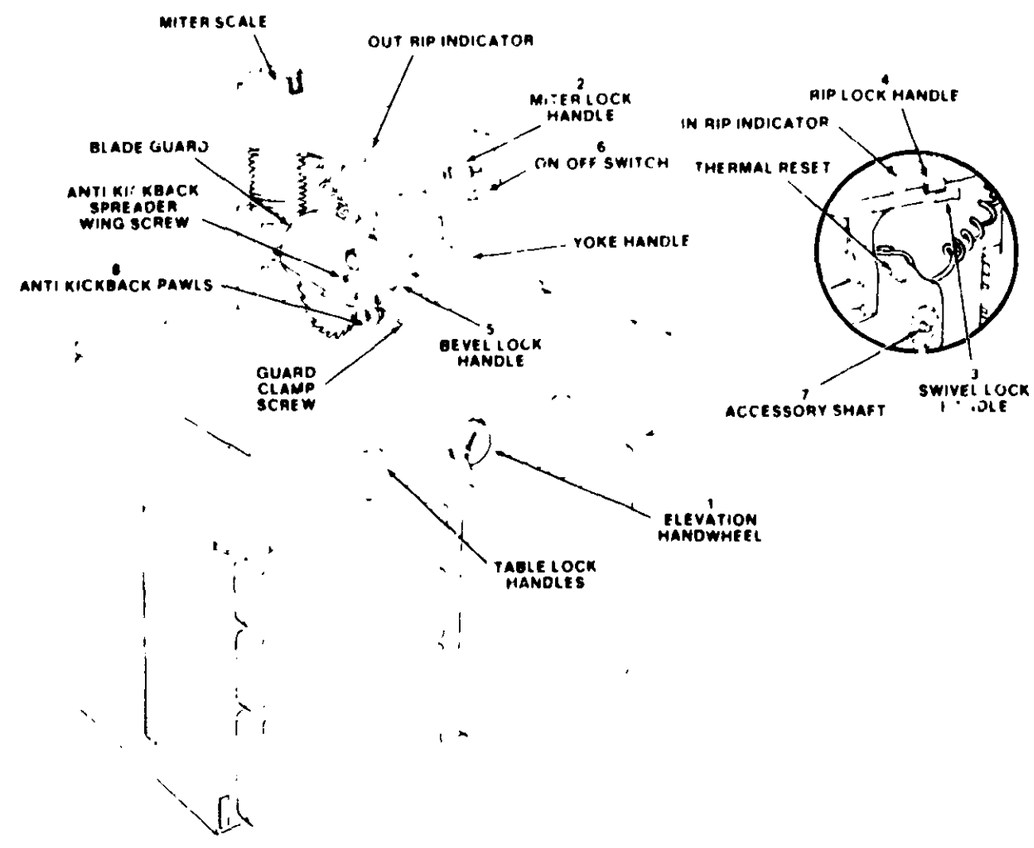
6. Adjust "in rip" scale indicator located on right side of arm by sliding until indicator line reads 0 inches.



location and function of controls

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

WARNING THE SAWBLADE DADO OR CUTTING TOOL MUST BE REMOVED FROM THE SAW ARBOR BEFORE USING THE ACCESSORY SHAFT. NEVER OPERATE THE SAW WITH CUTTING TOOLS (INCLUDING SANDING ACCESSORIES) INSTALLED ON BOTH ENDS OF THE SAW ARBOR MAKE SURE THE UNUSED ARBOR IS ALWAYS COVERED BY A GUARD A CAP, OR THE ARM



Location and Function of Controls

1 Depth of Cut (Elevation)

a [illegible] is used to raise and lower the saw blade

b Clockwise rotation raises the blade, counterclockwise rotation lowers it. One complete turn of the handle will raise or lower the saw blade [illegible]

Handle can be folded in when not in use

2 Angle of Cut (Miter)

[illegible] Method [illegible] Experienced operators [illegible] woodworking equipment such as this Craftsman Radial Saw [illegible] the habit [illegible] whenever a new setting is made [illegible] preparation for a different operation

Example [illegible]

a [illegible]

NOTE [illegible] stops have been provided [illegible] rotation of the radial arm

[illegible]

3 Yoke Swivel (Ripping)

a [illegible] the yoke swivel adjustment

b The yoke swivel [illegible] automatically indexes the yoke at 90° position. [illegible] the yoke [illegible] released

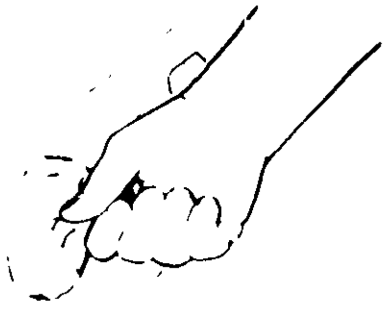
The swivel lock handle locks the yoke [illegible] the handle forward to release the yoke, push the handle rearward to secure the yoke

4 Rip Position Lock

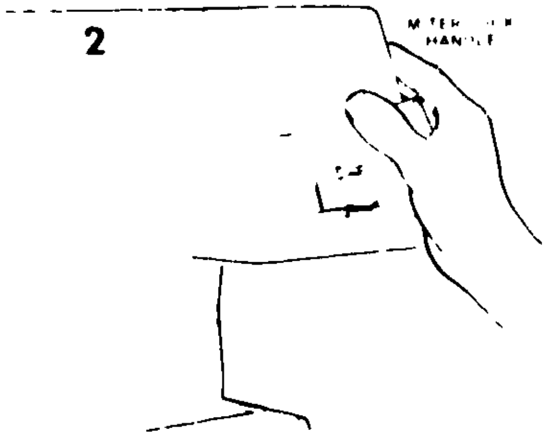
a [illegible] the carriage [illegible] the radial arm [illegible]

b When performing [illegible] should be tightened [illegible] the yoke handle [illegible]

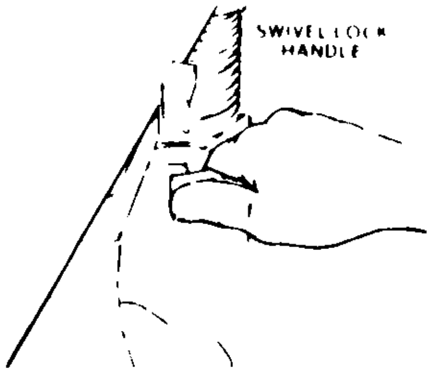
1



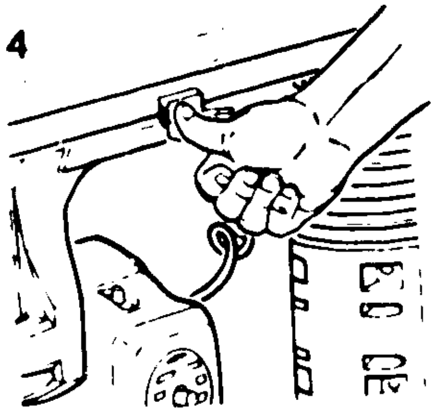
2



3



4



5 Blade Angle (Bevel)

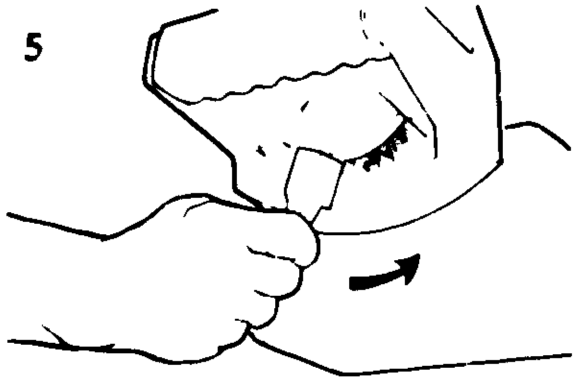
a A single bevel lock handle is used in angular positioning and indexing of the motor to provide the desired saw blade (bevel) angle

b The bevel lock handle controls the angular position of the motor with respect to horizontal

c The bevel lock handle automatically indexes the motor at 0 45 and 90 Slide the bevel lock handle to the far right while positioning the blade then release it At any other position it does not engage

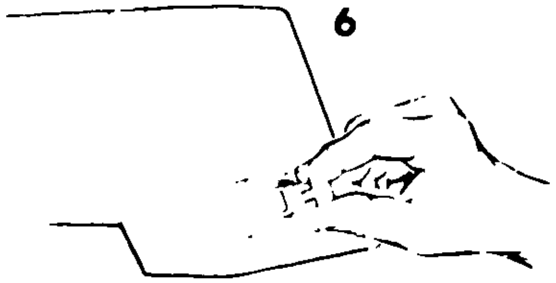
d The bevel lock handle also locks the motor to the yoke when the motor is in any position Pull lever to right to release and push to left to lock

5

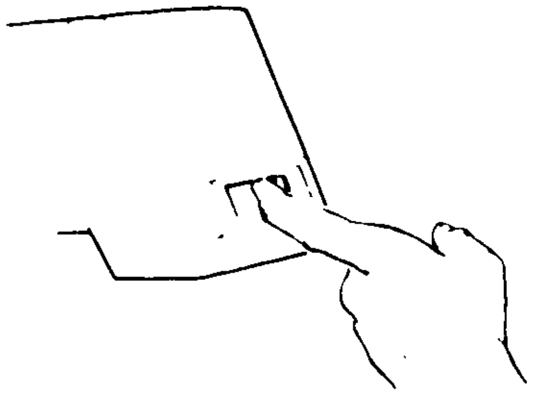


6 Power Switch and Key

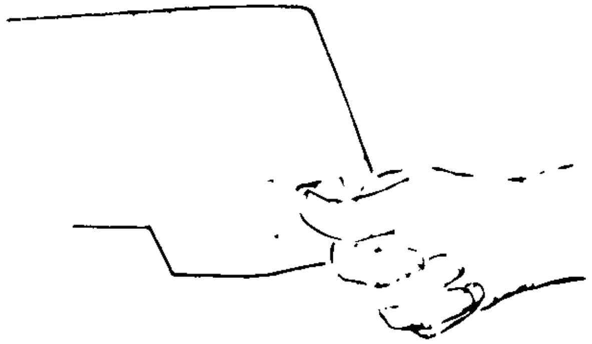
a To turn switch on insert key into switch lock



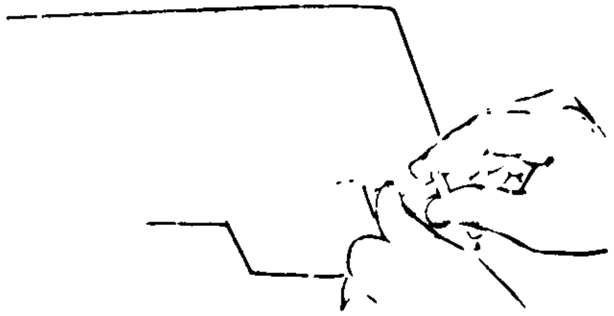
b To turn switch on insert finger under end of switch lever and pull end out



c Push lever in to turn switch off



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

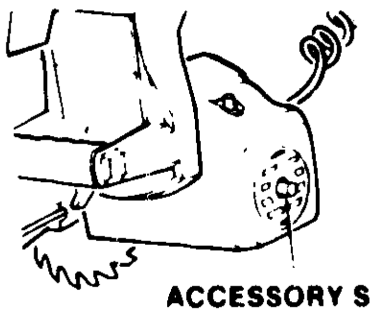


7 Accessory Shaft

Use only the following recommended accessories Drill chuck Sanding drum and Router adapter

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

7



8 Blade Guard and Anti-Kickback/Spreader Assembly - Positioning for Ripping

WARNING NEVER POSITION THE GUARD OR ANTI-KICKBACK/SPREADER ASSEMBLY WITH THE SAW RUNNING NEVER POSITION THE ANTI-KICKBACK/SPREADER ASSEMBLY BY GRASPING THE PAWLS OR SPREADER TO MAINTAIN SPREADER ALIGNMENT, USE THE TAB LOCATED ON THE ANTI-KICKBACK BAR

a The blade guard is positioned by loosening the guard clamp screw and rotating the guard so that the nose just clears the workpiece as shown

This adjustment is necessary to

1) Protect the operator from accidentally contacting the sawblade from the infeed direction

2) Prevent the workpiece from being lifted from the table by the sawblade thus minimizing lifting or fluttering (particularly with thin and/or light workpieces)

3) Minimize sawdust from being thrown toward the operator

b The anti-kickback and spreader assembly is adjustable to accommodate the thickness of the board being ripped

For ripping the anti-kickback and spreader assembly is positioned by loosening the wing screw and, with the tab provided, positioning the anti-kickback and spreader assembly until the pawls assume approximately the position shown. Tighten the wing screw

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

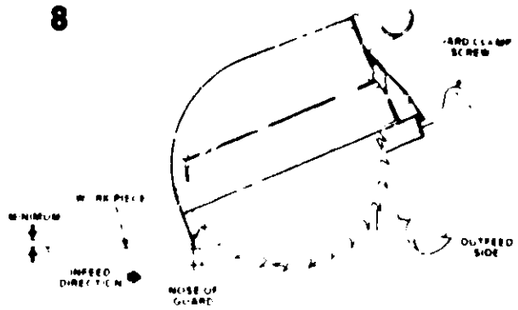
If the leading edge of the workpiece does not feed smoothly under the pawls the spreader may be set too deeply. Loosen the wing screw raise the spreader slightly retighten the screw recheck workpiece in-feed and kickback pawl function

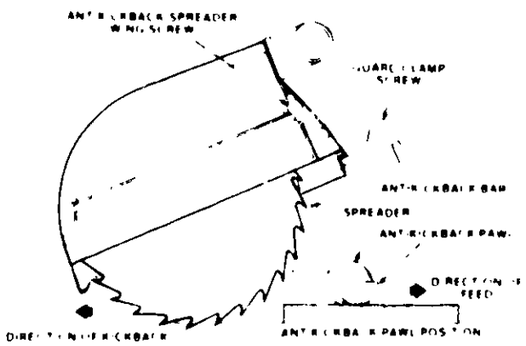
These adjustments when properly made will

1) **Reduce possibility of kickbacks** by preventing the kerf from closing on the sawblade

2) **Prevent "wrong-way feed"** "**Wrong-way feed**" is feeding the workpiece when the sawblade is in a rip position into the out feed side of the cutting tool (sawblade dado molding head etc) the side containing the anti-kickback pawls-spreader. This can be extremely hazardous because the sawblade may grab the workpiece and throw

8





Location and Function of Controls

it violently toward the nose of the guard (infeed side of the tool) possibly pulling your hand with it before you can react. See Danger label on outfeed side of the guard just below the dust elbow

"Wrong-way feed" differs from kickback' A "**kickback**" is generated by the sides (one or both) of the teeth because of binding between the fence (heel) pinching of the sides of the sawblade (failure to use spreader) a dull blade and/or inadequate set of teeth of sawblade

3) **Act as a partial guard** regarding accidental contact with the sawblade at the outfeed side when ripping

For crosscutting the anti-kickback and spreader assembly is positioned by loosening wing screw With the tab provided position the anti-kickback spreaders assembly until the pawls just clear the workpiece or fence which ever is higher

basic saw operation

WARNING TO AVOID MISTAKES THAT COULD CAUSE SERIOUS PERMANENT INJURY, OBSERVE ALL THE FOLLOWING INSTRUCTIONS IN ADDITION TO THOSE ON PAGES 2-6.

Basic saw operations are summarized in six categories explained and illustrated in the following paragraphs

NOTE Refer to paragraphs under "Location and Function of Controls" for illustrations and description of controls Page 28

CUTTING A KERF IN THE WORK TABLE AND FENCE

NOTE The front of your saw table will be reinforced [illegible] Preferably if you will cover the front table with a [illegible] 1/4 inch plywood. This should be [illegible] for quick and easy replacement. Use [illegible] [illegible] rather than your table top. The [illegible] the sawblade and damage the [illegible] hardware. Place tacks out of the path of the sawblade

1 Lower the arm so that the blade clears the top of the fence and then [illegible] the [illegible] position

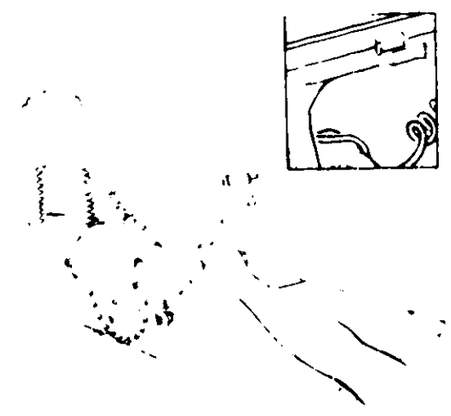
2 Lower the arm so that the blade just clears the rear table Note The rear table should be at the same level as the front table see "Leveling Front Work Table" page 21 If front table cover is used set blade so that it just clears the front table board cover

3 Lock the rip lock handle and check to make sure carriage is locked in place Plug saw into a grounded outlet (See section titled "Electrical Connections" page 7)

4 Insert the yellow key into switch and while holding the yoke handle turn the switch on

5 With the motor on turn the elevation handle counterclockwise to lower the sawblade to where it just cuts into the table approximately 1/32 to 1/16 inch deep While holding the yoke handle and with motor still on unlock the rip lock handle and then pull the motor forward and out to the front stop on the arm This will allow the blade to cut through the fence and to cut a shallow kerf in the table 1/32 to 1/16 inch deep to provide for the blade cutting completely through the workpiece

NOTE A kerf will have to be cut into the table prior to making any thru cutting operation using this procedure



REQUIREMENTS FOR CROSSCUTTING TYPE OPERATIONS

(Operations 1 through 4)

Always position the workpiece firmly against rip fence (guide) and lay flat on work table surface

NOTE To maintain table strength workpiece stability control forward motion of carriage and avoid accidents always

1 Use only blades that are sharp correctly set and undamaged

Make sure the arbor nut is secure.

3. Clamp the guard in a horizontal position.

4. Lock the swivel lock handle. Make sure it is firmly locked. (See page 29.)

5. Hold work firmly against table and fence. To avoid tipping or throwing of workpieces thicker than the fence is high, install a higher fence at least workpiece thickness. Always place the fence in the most forward position (farthest from the column support) compatible with the workpiece being processed and the operation being performed. With the carriage fully retracted the blade must not contact the workpiece when placed against the fence with the stationary guard [illegible] saw. Do not [illegible] the blade [illegible] with your hand. [illegible] length stop [illegible] The blade [illegible] the workpiece [illegible]

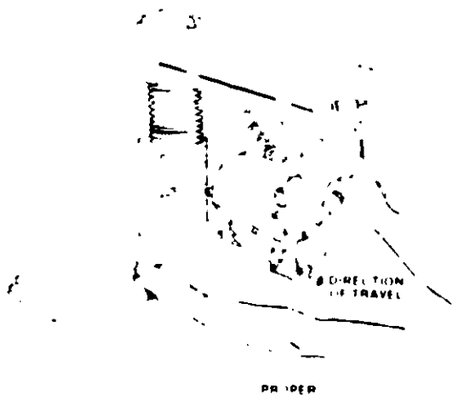
6. Keep hands well away from saw blade. [illegible] hands when [illegible] workpiece [illegible] Always keep the [illegible] workpiece [illegible]

[illegible] (See page 3)

8. At [illegible] the revolving saw blade [illegible]

9. [illegible] the saw blade [illegible] boys, the saw [illegible] workpiece [illegible] fence. (See page 3)

10. Push saw forward [illegible] the saw [illegible] beyond the piece being cut. When [illegible] the board and the [illegible] the fence.



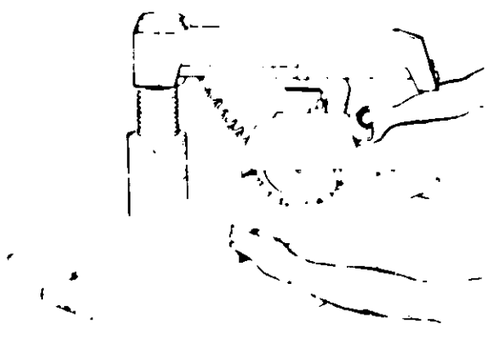
(SEE ITEM 10 AT LEFT)

(SEE ITEM 10 AT LEFT)

OPERATION NO. 1 - CROSSCUT

Crosscutting is the process of sawing across the width of the workpiece by pulling the saw blade through it and using the fence as a support for the edge of the workpiece. Never crosscut free hand.

WARNING: YOU WILL NOTICE THAT WHEN PULLING THE SAW BLADE TOWARD YOU DURING CROSSCUTTING THE BLADE TENDS TO FEED ITSELF THROUGH THE WORKPIECE. THIS IS DUE TO THE ROTATION OF THE BLADE. TO CONTROL THIS YOU SHOULD DEVELOP THE HABIT HOLDING YOUR RIGHT FOREARM IN LINE WITH THE ARM OF THE SAW THROUGHOUT THE CUT. ALSO MAKE SURE THE CARRIAGE BEARINGS ARE ADJUSTED PROPERLY SO CARRIAGE DOESN'T TRAVEL TOO FREELY.



OPERATION NO. 2 - MITER CROSSCUT

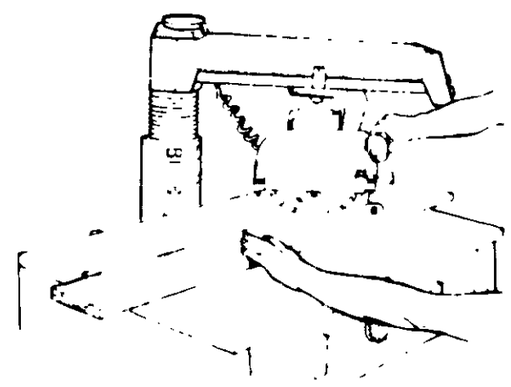
Miter crosscutting is the process of sawing across the width of a workpiece at any angle other than a 90° (square) cut. The 45° miter angle is a popular one since two boards cut to 45° can be assembled to form a 90° corner for producing a square or rectangular frame. The radial arm is set to a desired angle of cut, swivel and bevel settings at 0° and locked. The workpiece being cut is positioned and held firmly against the fence and the carriage pulled forward along the radial arm just far enough to complete the cut. Carriage should then be returned to the full rear position and locked. Allow the saw blade to come to a stop before removing the work piece from the saw table.

OPERATION NO. 3 - BEVEL CROSSCUT

Bevel crosscutting is the process of sawing at 90° (square) across the width of a workpiece with the saw blade set to an angle other than 90° to the table. The radial arm and yoke are indexed at 0° and locked securely in place. The bevel is set to the desired angle of cut and locked. The workpiece being cut is positioned and held firmly against the fence and the carriage is pulled forward along the radial arm just far enough to complete the cut. The carriage should then be returned to the full rear position and locked. Allow the saw blade to come to a stop before removing the workpieces from the saw table.

OPERATION NO. 4 - COMPOUND CROSSCUT

Compound crosscut is the combination of miter and bevel crosscut. The radial arm and the angle of the blade are set to produce the desired cut, the yoke is indexed at 0° and locked. The workpiece is positioned and held firmly against the fence and the carriage is pulled forward along the radial arm just far enough to complete the cut. The carriage should then be returned to the full rear position and locked. Allow the blade to come to a stop before removing the workpieces from the saw table.

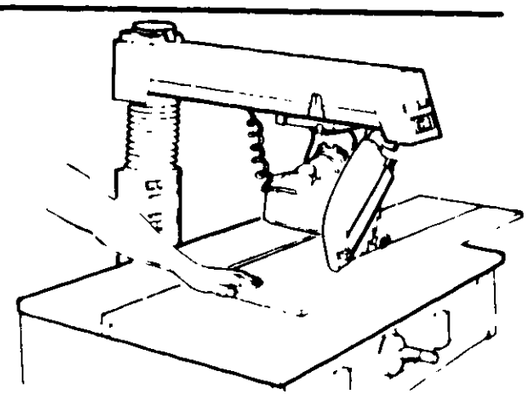


REQUIREMENT WHEN RIPPING

(Operations 5 and 6)

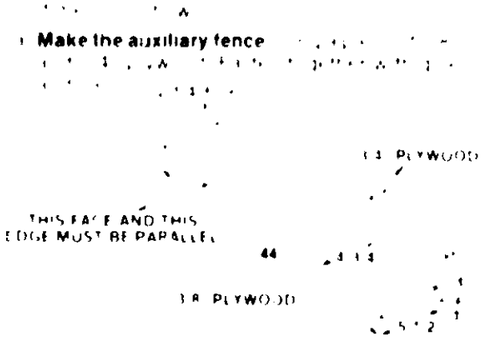
WARNING: TO AVOID MISTAKES THAT COULD CAUSE SERIOUS PERMANENT INJURY, OBSERVE ALL THE FOLLOWING INSTRUCTIONS IN ADDITION TO THOSE ON PAGES 2-6.

1. Make sure that the blade is sharp, correctly set and undamaged.
2. Lock the rip lock handle. (See page 29.)
3. Lock the radial arm at the 0° position.
4. Make sure the workpiece is kept in firm contact with the fence and the table. The edge of the board against the fence must be straight and will not catch on kerfs in the fence. NEVER RIP FREEHAND (without aid of fence).

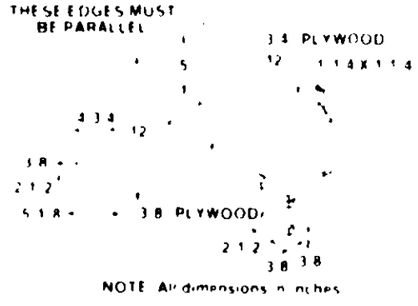


5 Properly set the anti-kickback and spreader assembly Observe INSTRUCTIONS in paragraph Positioning guard and anti kickback and spreader assembly for ripping under Location and Function of Controls page 28

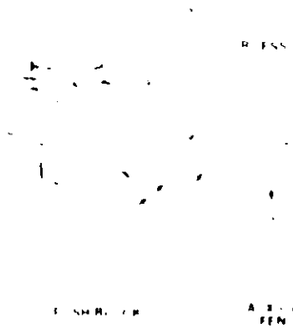
Make the auxiliary fence



Make the push block

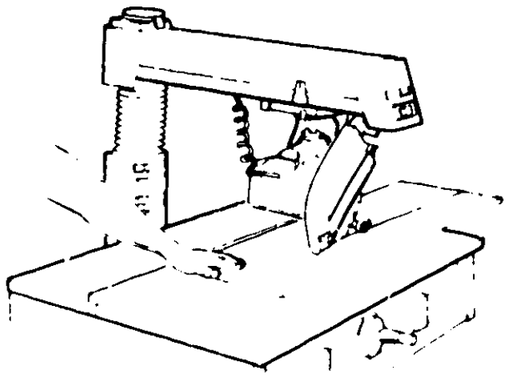


NOTE



NOTE

OPERATION NO. 5 - OUT-RIPPING AND IN-RIPPING



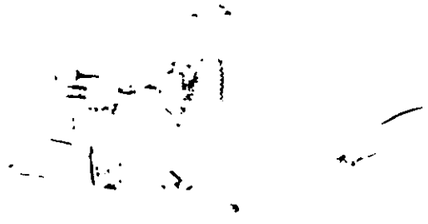
WARNING IF THE WORKPIECE IS WARPED DO NOT ATTEMPT TO MAKE A CUT IF THE WORK PIECE WOBBLES OR ROTATES ON THE TABLE IT COULD BIND AND KICKBACK

IN RIPPING

The radial arm and bevel are indexed at 0 and 90 but the yoke is turned 90 degrees in a counterclockwise direction viewed from above from the crosscut position. Thus when standing in front of the saw the blade would be rotating counterclockwise. After positioning the guard and anti kickback mechanism the workpiece is fed from the right hand side of the saw

OUT RIPPING

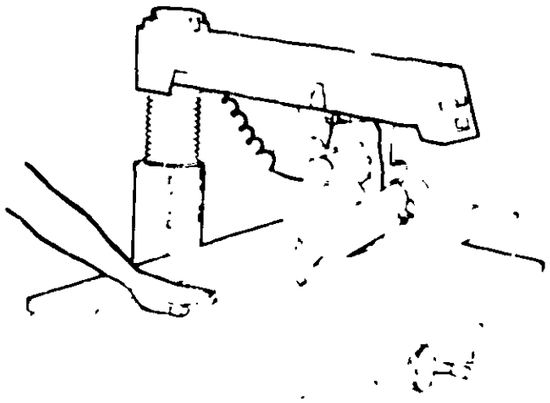
The radial arm and bevel are indexed at 0 and 90 but the yoke is turned 90 degrees in a counterclockwise direction viewed from above from the crosscut position When standing in front of the saw blade would be rotating clockwise After positioning the guard and anti kickback mechanism the workpiece is fed from the left hand side of the saw



IN RIPPING

OPERATION NO. 6 - BEVEL RIPPING

[illegible] as described above except the saw table is tilted out of perpendicular to the saw table surface. The rip fence and table are [illegible] the bevel is set. [illegible] angle. [illegible] sawblade [illegible] sawblade [illegible] sawblade [illegible] as required. A [illegible] observe [illegible] as [illegible] bevel ripping.



DADOING

[illegible] the [illegible] Owners Manual [illegible] saw [illegible] dado.

[illegible] is designed [illegible] wider than [illegible] the arbor [illegible] cause the dado [illegible] arbor [illegible] Take several passes [illegible] dado [illegible] than [illegible] wide.

For [illegible] dado [illegible] the molding [illegible] dado [illegible] wide dado [illegible] deeper than [illegible] pass.

[illegible]

MOLDING

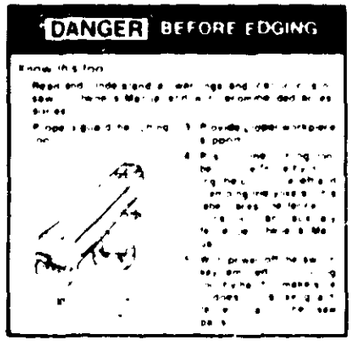
Instructions for operating the molding head are contained in an Owners Manual furnished with the molding head.

EDGING

Use of the dado or molding head in the vertical position for parallel to table requires the proper accessory guard be used. (See recommended accessories page 48.)

Use of the dado or molding head in the vertical position requires an auxiliary fence (see page 45) so that the radial arm be positioned as follows:

1. Miter the arm to the left approximately 30°.
2. Swivel the motor until bottom of motor is parallel to and facing the rip fence and operating instructions label is visible.
3. Follow all steps outlined on motor label.
4. A copy of the label reads as follows:



DANGER BEFORE EDGING

Read this label.

Read and understand all warnings and instructions in the saw owner's manual before attempting to operate this tool.

[illegible]

For use of the molding head or drum sander with saw arbor vertical the rear table requires an opening (next to rear face of fence) for arbor clearance. Cut opening directly below arbor in vertical position. Opening should be:

REAR TABLE - 21" - - 3" 3 1/2"

For top side use of the dado (**rabbeting**) or molding head in the in rip position locate the desired position on the area and lock the rip lock handle. Lower the arm into the fence very slowly, remove only as much material from the fence as is necessary. This will provide maximum support for the workpiece.

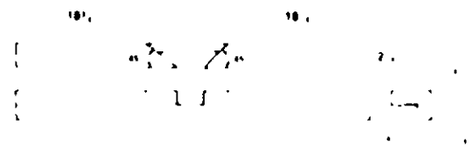
WARNING NEVER USE A DADO HEAD OR MOLDING HEAD WITH THE SAW ARBOR VERTICAL WITHOUT INSTALLING AND ADJUSTING A MOLDING HEAD/DADO GUARD. FOR TOP-SIDE DADOING OR MOLDING INSTALL AND ADJUST THE SAWBLADE GUARD AND ANTI-KICKBACK ASSEMBLY FOR RIPPING OR CROSSCUTTING AS APPROPRIATE.

AUXILIARY FENCE FOR MOLDING

To use the molding head with the arm in the 0° crosscut position an auxiliary fence must be used.

WARNING: IF THE AUXILIARY FENCE IS NOT USED WHEN THE SAW ARM IS IN THE 0° CROSS-CUT POSITION, THE MOLDING HEAD CANNOT BE LOCATED BEHIND THE FENCE FOR SAFE AND PROPER OPERATION.

Make the auxiliary fence from a piece of knot free pine. Cut to the following dimensions:



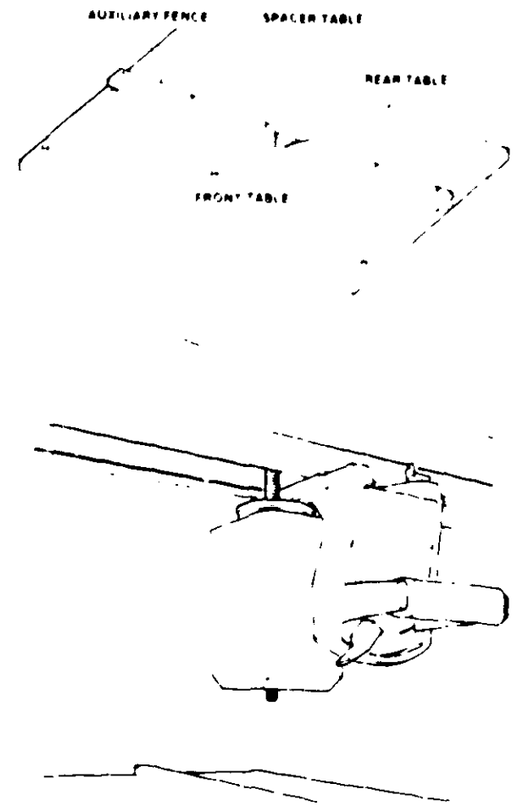
Follow the instructions that are contained in an Owner's Manual furnished with the molding head.

For use of the molding head or drum sander with saw arbor vertical the rear table requires an opening (next to rear face of fence) for arbor clearance. Cut opening directly below arbor in vertical position. Opening should be:

REAR TABLE - 21" - - 3" 3 1/2"

When using the accessory shaft, the guard, saw blade, dado, mold head or other cutting tool must be removed from the saw arbor before using the accessory shaft. Never operate the saw with cutting tools (including sanding accessories, buffing wheels and drill chuck) installed on both ends of the saw arbor.

To use the accessory shaft in the vertical position it is necessry to swivel the motor 90° before beveling the motor so the accessory shaft is in vertical position. This is done so the blade arbor will be positioned under the arm for maximum protection to the operator. As illustrated:

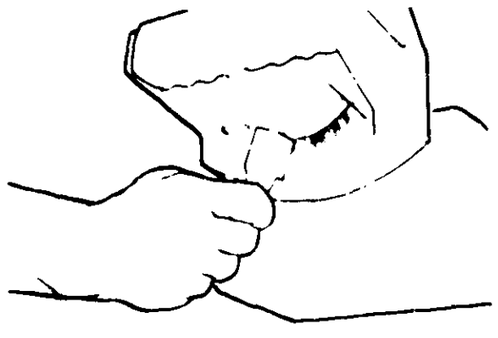


adjustments to compensate for wear

ADJUSTING BEVEL LOCK LEVER

The purpose of this lever is to lock the motor at any bevel angle. An adjustment is required if the motor can be easily moved by hand when lever is locked or bevel lock lever offers minimal resistance when moving lever to the locked position. To make this adjustment:

1. Remove motor support cover.
2. Position motor at approximately 30° bevel angle and lock bevel lock lever.
3. With a 3/4 socket tighten the 1/2-13 hex nut located at the back of the motor support casting until the motor can no longer be easily moved by hand. Do not overtighten.
4. Unlock bevel lock lever and move motor to any of the five index positions. If the motor does not index securely the adjustment is too tight. Loosen 1/2-13 hex nut until bevel index pin seats properly.

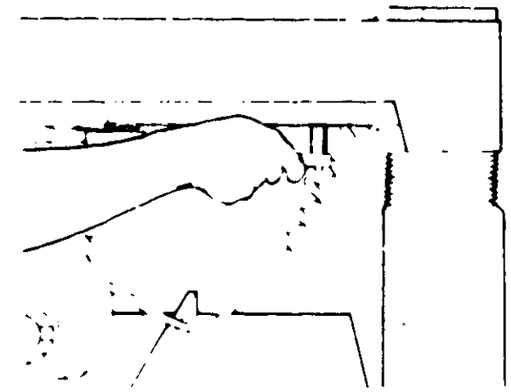


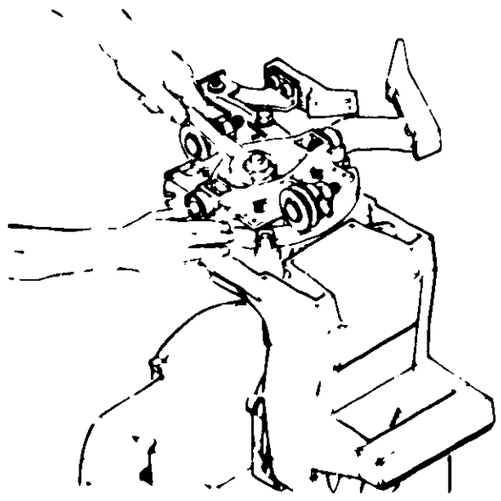
5. Adjustment is complete when both locking and indexing functions are working properly. Replace motor support cover.

ADJUSTING SWIVEL LOCK HANDLE

This handle provides a friction lock between the upper face of the yoke and the bottom face of the carriage. It should eliminate any play or rotation between these two parts when locked. An adjustment is required if the yoke can be easily rotated by hand when handle is locked or yoke lock handle offers minimal resistance when moving handle to the locked position. To make this adjustment:

1. With a 1/2 wrench or socket remove six (6) 5/16-18 hex head tapping screws and separate track from arm as illustrated.
2. Slide yoke assembly from track. Keep carriage in line with track until rip lock mechanism clears end of track.
3. With a 15/16 wrench or socket tighten the 5/8-11 hex nut until maximum effort is required to place yoke lock handle in the locked position.
4. Unlock yoke lock handle and swivel yoke to an unindexed position. Return yoke to an indexed position. If the yoke does not index securely the adjustment is too tight. Loosen 5/8-11 hex nut until swivel index pin seats properly.
5. Adjustment is complete when both locking and indexing functions are working properly.
6. Slide carriage onto track starting with rip lock mechanism. Keep carriage in line with track until all of the bearings are on the track. Be careful not to catch the wipers on the edge of the track.
7. Re-attach track to arm using six (6) 5/16-18 hex head tapping screws.

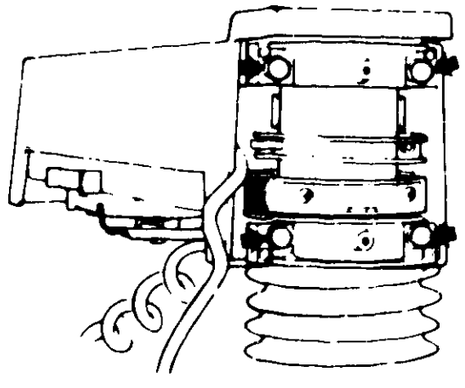




ADJUSTING ARM TO COLUMN

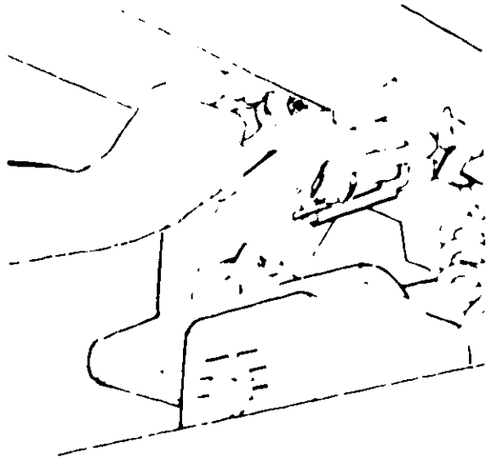
With the miter lock handle unlocked and in the unindexed position the arm should fit snugly to the column tube and not allow any vertical movement. If you can move the end of the arm up and down and adjustment is needed:

1. With a #2 phillips screwdriver remove two screws and the rear arm cover as illustrated.
2. With a 9/16 inch wrench or socket tighten evenly the top two 3/8-16 hex head tapping screws. The bottom two screws should also be tightened evenly but not as tight as the top screws.
3. This adjustment is correct when the arm moves firmly without vertical movement.
4. Re-install the rear arm cover.



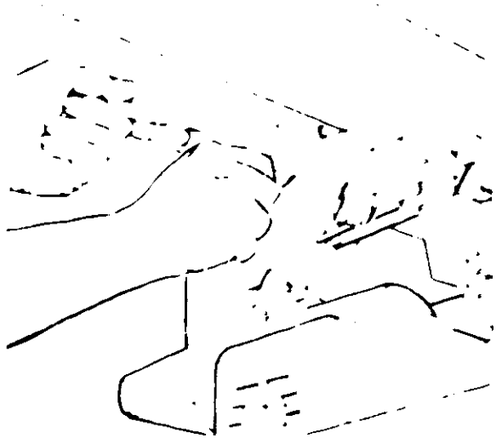
ADJUSTING CARRIAGE BEARINGS

[illegible]



[illegible]

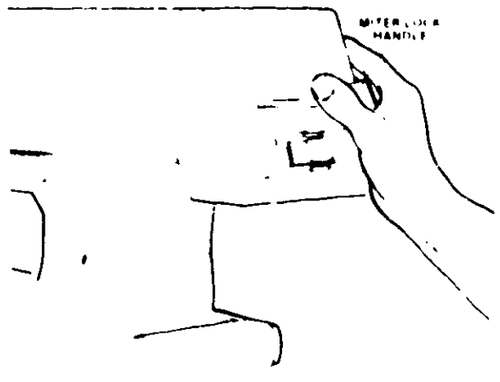
2. [illegible] the bearing races [illegible] they ride [illegible] and [illegible]
3. With a 9/16 inch wrench [illegible] the 5/16-18 hex nuts [illegible] point [illegible] screw [illegible]
4. Rotate the [illegible] screws [illegible] as required [illegible] take up [illegible] **Both screws should be adjusted an equal amount to maintain blade squareness table in the rip positions.**
5. Hold the head of the eccentric screws [illegible] new position and retighten the nuts.
6. Repeat the test procedure described above and re-adjust if necessary. NOTE: Over tightening the bearings will cause difficult operation and severely reduce the life of the track and bearings.

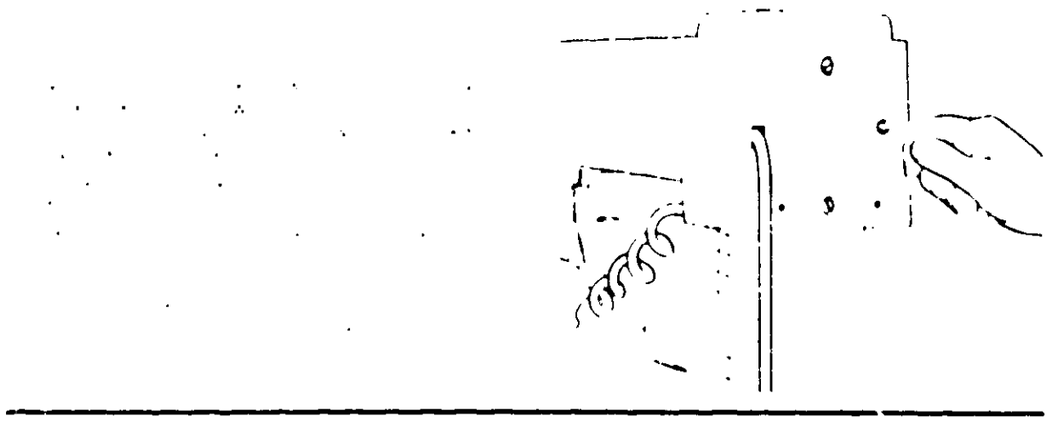


MITER LOCK ADJUSTMENT

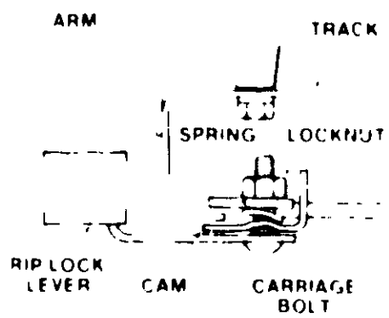
The miter lock handle operates adjustable bands which lock the arm [illegible] indexed and unindexed positions. If the arm can be easy moved by hand when locked [illegible] the following adjustment must be made:

1. Move the arm to an unindexed position and leave the miter lock handle in the unlocked position.





RIP LOCK ADJUSTMENT



Adjustments to Compensate for wear

trouble-shooting

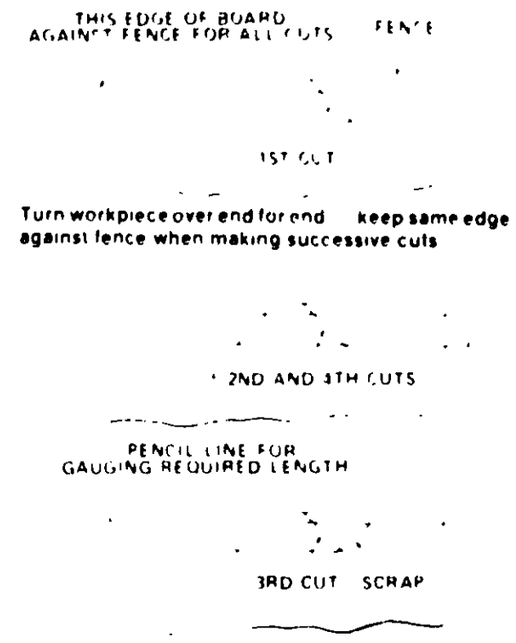
HAVE YOU FOLLOWED ALL SIX STEPS OF THE ALIGNMENT PROCEDURE? IF YOU HAVE NOT FOLLOWED THEM IN THEIR PROPER SEQUENCE, YOU CANNOT EXPECT ACCURATE CUTTING RESULTS.

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- Always [illegible] Always keep it sharp
- When making [illegible]
  - a. The two sides [illegible] length
  - b. The opposite [illegible] same length

    Always place the same edge of the workpiece against the fence [illegible] for the workpiece [illegible] for the successive cuts and make a pencil line at the tail end to gauge the required length

    Deviations from any of these alignment steps will have an effect on the accuracy of the cuts that you make



WARNING REMOVE POWER CORD FROM POWER SOURCE BEFORE TROUBLE SHOOTING

NOTE Changing one adjustment will affect all other sides. Best performance of the alignment procedures when correctly followed will eliminate most problems.

The usual operating troubles are listed in the following paragraphs with the necessary corrections listed.

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

a Looseness between column tube and column support

Align as described in Alignment Procedure Section Step One

b Crosscut travel not properly adjusted

Refer to Step Three in Alignment Procedure Section Squaring Crosscut Travel

c Column is Loose in Support

Refer to Step One in Alignment Procedure

d Arm Not Indexing Properly

Refer to Adjusting Miter Lock Handle in Adjustments to Compensate for Wear section

e Carriage Assembly Loose on Arm

Refer to Carriage Bearing Adjustment in adjustment to Compensate for Wear Sections

f Looseness between Yoke and Carriage Assembly

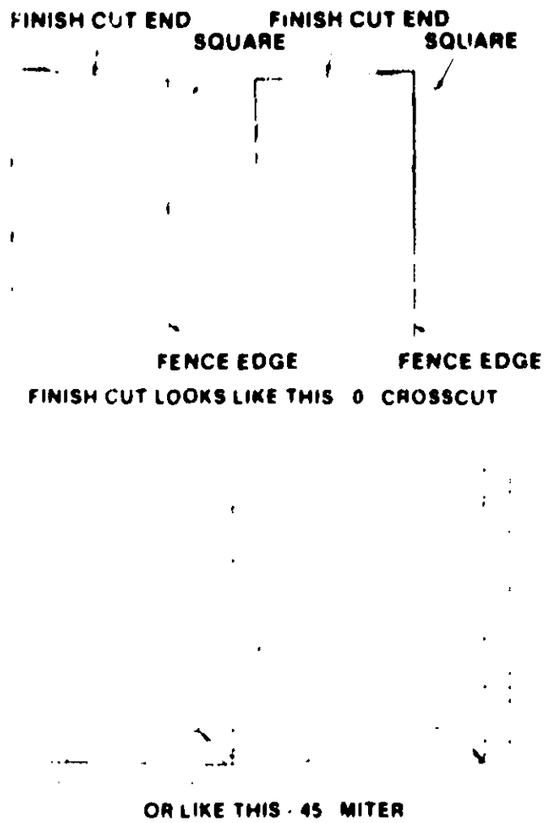
Refer to Swivel Lock Handle adjustment in adjustment to Compensate for Wear Section

g Sawdust between Work Piece and Fence

Keep Front Work Table Clean

h Rip Fence Not Straight

Replace Fence



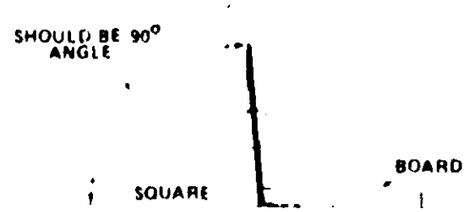
2 SAW CUTS AT ANGLE · NOT 90 TO TABLE TOP

a Work table is not properly leveled

Refer to Step Two under Alignment Procedure Section

b Blade not square to work table top

Refer to Step Four in Alignment Procedure Section



3 BLADE ANGLE (BEVEL) CUTS NOT ACCURATE

a Corrective Action is the same as paragraph 2A and B above

b Carriage Bearings Loose

Refer to adjusting carriage bearing in adjustments to compensate for wear section

c Bevel Lock Handle Loose

Refer to Adjustment Bevel Lock Handle in Adjustment to Compensate for Wear Section

4 SAW KERF (CUT EDGE) OF STOCK ROUGH TOOTH MARKS LEFT ON EDGE OF SAW KERF

NOTE [illegible]

a Crosscutting or Miter Cutting

[illegible]

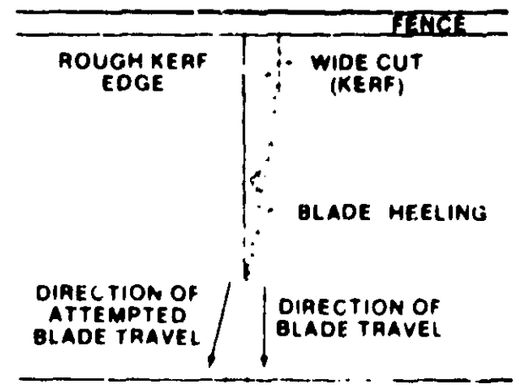
Refer to Step Four in Alignment Procedure Section Squaring Blade to Fence

b Bevel Crosscutting Or Bevel Ripping

Refer to Step Four in Alignment Procedure Section Squaring Blade to Fence

c Using Improper Blade for Finish Cut Desired

Use Proper Blade



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

a Dull blade or warped board

Sharpen or replace the saw blade. Do not use severely warped material

b Feed rate too fast

Slow Feed Rate

c Saw blade heels

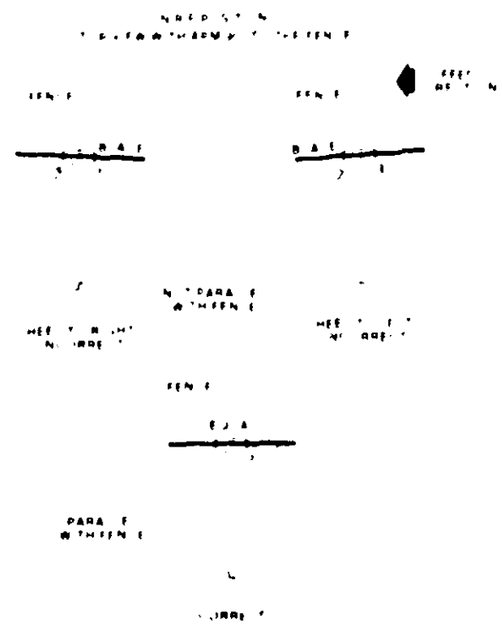
Check and align as described in Alignment Procedure Section Step Five

d Fence not straight

Replace fence

e Carriage Assembly Loose on Arm

Refer to adjusting carriage bearings in adjustments to compensate for wear section



6 BOARD PULLS AWAY FROM FENCE WHEN RIPPING

a Saw Blade has heel

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

7 WORKPIECE STRIKES SPREADER WHEN RIPPING

a Adjust spreader per instructions in Step Six under "Adjusting Anti-Kickback Pawls and Spreader"

8 SAW DOES NOT TRAVEL SMOOTHLY ON ARM TRACK

a Dirty Track

Clean Track and Lubricate with Light Grease

b Bad Bearing

Replace Bearing

c Worn Track

Replace Track

9 CLAMPING FORCE NOT SUFFICIENT AT MITER ANGLES OTHER THAN 45

a Miter Lock Handle requires Adjustment

10 CLAMPING FORCE NOT SUFFICIENT AT BEVEL ANGLES OTHER THAN 45

a Bevel Lock Handle Requires adjusting

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

a Table Top not parallel with Arm

12 BLADE TENDS TO ADVANCE THROUGH LUMBER TOO FAST

a Dull Blade

b Not advancing Saw Blade properly

MOTOR TROUBLE-SHOOTING CHART

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

TROUBLE	PROBABLE CAUSE	SUGGESTED REMEDY
Motor will not run	1 Protector open circuit broken	1 Reset protector by pushing on red button located on top of motor (indicated by audible check)
	2 Low voltage	2 Check power line for proper voltage
Motor will not run and fuses BLOW	1 Short circuit in line cord or plug	1 Inspect line cord and plug for damaged insulation and shorted wires
	2 Short circuit in motor or loose connections	2 Inspect all terminals in motor for loose or shorted terminals or worn insulation on wires
	3 Incorrect fuses in power line	3 Install correct fuses
Motor fails to develop full power (Power output of motor decreases rapidly with decrease in voltage at motor terminals For example a reduction of 10% in voltage causes a reduction of 19% in maximum power output of which the motor is capable while a reduction of 20% in voltage causes a reduction of 36% in maximum power output)	1 Power line overloaded with lights appliances and other motors	1 Reduce the line load
	2 Undersize wires or circuit too long	2 Increase wire sizes or reduce length of wiring
	3 General overloading of power company s facilities (in many sections of the country demand for electrical power exceeds the capacity of existing generating and distribution systems)	3 Request a voltage check from power company
Motor overheats	1 Excessive feed rate when crosscutting or ripping	1 Slow down rate of feed
	2 Improper cooling (Air circulation restricted through motor due to sawdust etc)	2 Clean out sawdust to provide normal air circulation through motor
	3 Saw blade has heel	3 Refer to Alignment Procedure Section of manual Step Five
Motor starts slowly or fails to come up to full speed	1 Low Voltage will not trip starting switch	1 Correct low voltage condition
Motor stalls (resulting in blown fuses or tripped circuit breakers)	1 Voltage too low to permit motor to reach operating speed	1 Correct the low line voltage condition
	2 Fuses or circuit breakers do not have sufficient capacity	2 Replace fuses or circuit breakers with proper capacity units
Frequent opening of fuses or circuit breakers	1 Motor overloaded	1 Reduce motor load
	2 Fuses or circuit breakers do not have sufficient capacity	2 Replace fuses or circuit breakers

maintenance and lubrication

MAINTENANCE

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

[illegible] Craftsman [illegible] saw [illegible] The [illegible] saw has [illegible] bearings [illegible] [illegible] saw [illegible] [illegible] saw [illegible]

Make sure the teeth of the ANTIKICKBACK pawls (key #9 on p. 59) are always sharp. If they become [illegible] they must be replaced. With a 1/2-inch wrench or socket remove the 5/16 hex nut and old pawls. Reassemble new pawls and spreader to anti kickback bar. Check spreader for proper alignment and correct if necessary. Follow procedure on page 26.

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. Clean the carriage bearings and tracking surfaces. If packed sawdust and grease accumulate repeatedly on carriage bearings and tracks inspect the wipers (key #4, p. 57) for wear and replace if necessary. (For access to wipers see "Swivel lock adjustment" p. 39.)

CAUTION To avoid motor damage the motor should be blown out or vacuumed frequently to prevent sawdust build-up which will interfere with normal motor ventilation

LUBRICATION

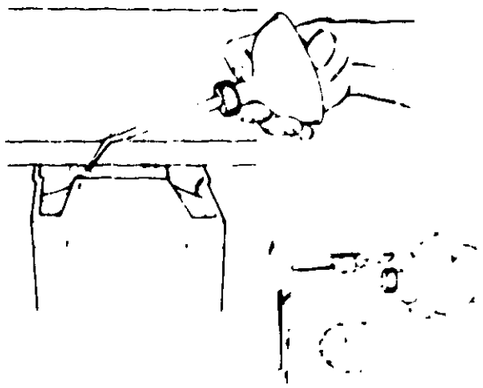
Your saw is precision built and should be kept properly lubricated. Before describing the various points which may periodically require lubrication IT IS MORE IMPORTANT TO FIRST MENTION THE POINTS WHICH SHOULD NOT BE LUBRICATED.

NO LUBRICATION REQUIRED

Do not lubricate the carriage ball bearings or motor bearings as these are sealed ball bearings and require no added lubrication. Do not lubricate between the miter locking rings and the column tube (keys #5 & 9 p. 53).

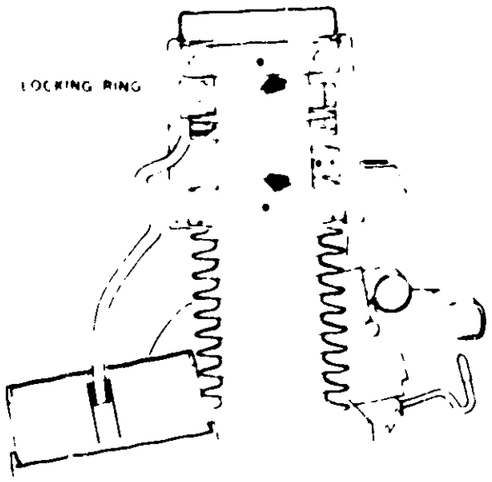
PERIODICALLY LUBRICATE THESE POINTS

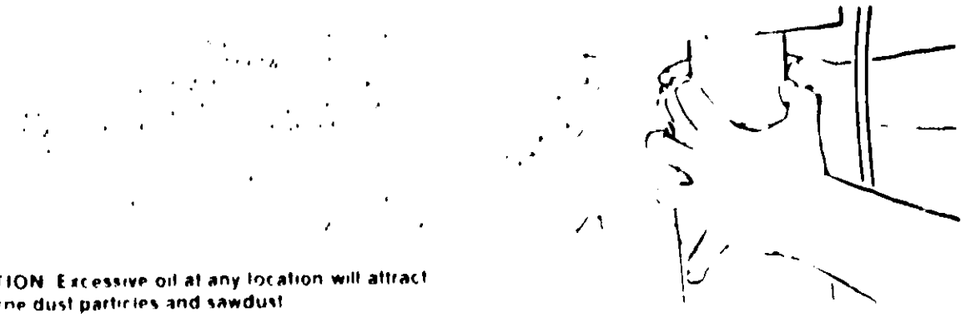
Use SAE No. 10W 30 automotive engine oil and refer to parts list for locations. Apply a few drops of oil along the swivel index pin and the bevel index pin. If the pins have a tendency to stick, swivel to [illegible] for easy access to the swivel index pin. Be sure saw is 45° and bevel index pin can be easily accessed behind the yoke as illustrated.



[illegible] the carriage [illegible] where the arm attaches [illegible] column tube. With a #2 phillips screwdriver [illegible] screws and the rear arm cover for access to these points. Be careful not to get lubricant on the [illegible] rings as this will adversely affect the miter [illegible] function.

Lubricate the [illegible] surfaces of the rip lock assembly.





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

recommended accessories

ITEM	CAT NO	ITEM	CAT NO
		Adjustable Dado	
		Molding Heads	
Satin Cut Dado		Cabinet Accessories	
Standard Cut Dado			

NOTE [illegible]

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

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