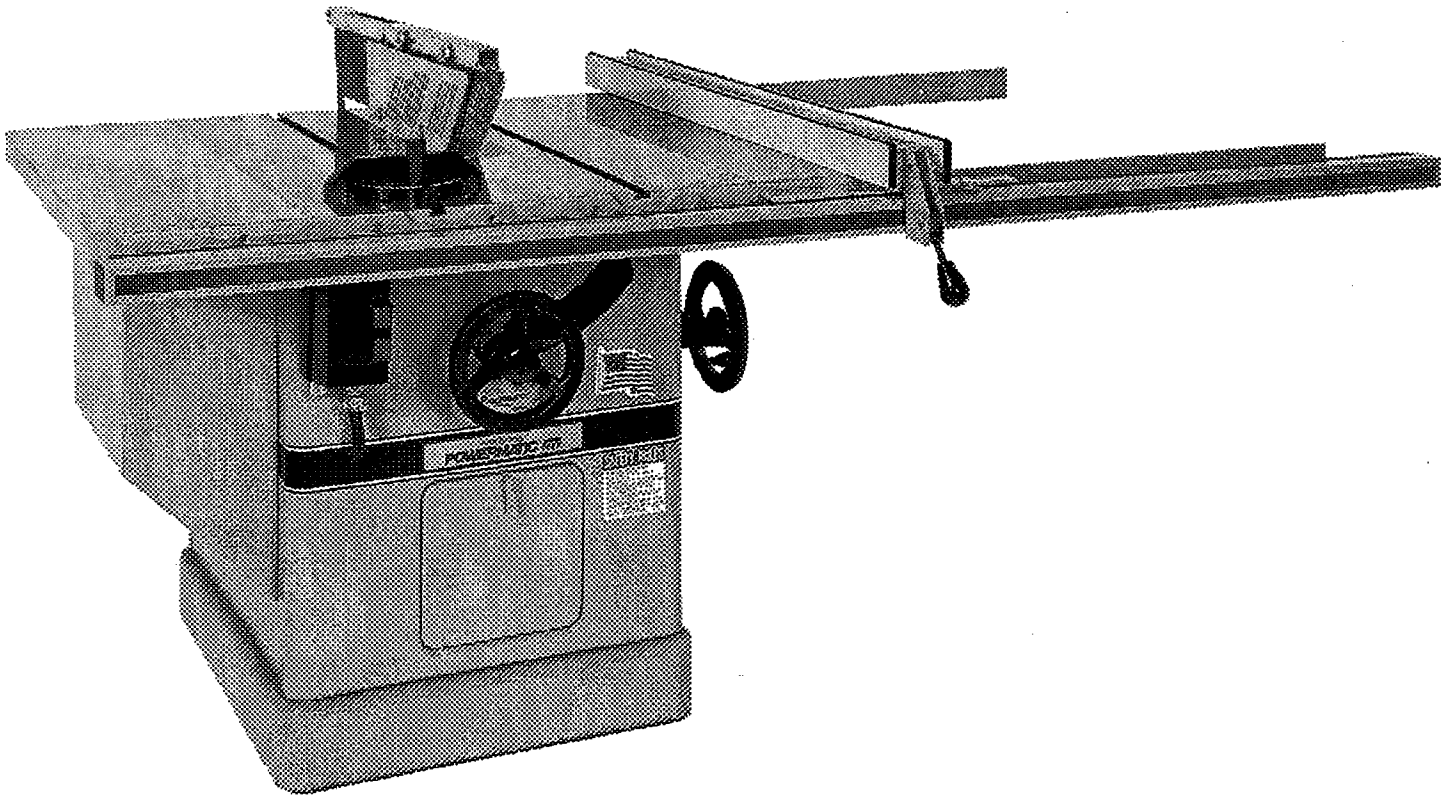
MAINTENANCE INSTRUCTION AND PARTS LIST

Model

72-A

TILTING ARBOR SAW



Better By Design™

POWERMATIC®

McMINNVILLE, TENNESSEE 37110 (931) 473-5551

FOREWORD

This manual has been prepared for the owner and those responsible for the operation of the Powermatic Model 72A, 12" and 14" Tilting Arbor Saw. Its purpose, aside from machine operation, is to promote safety through the use of accepted correct operating and maintenance procedures. Read the safety and maintenance instructions thoroughly before operating or servicing the tool. In order to obtain maximum life and efficiency from your Powermatic saw and to aid in operating and maintaining the fence with safety, read this manual thoroughly and follow all instructions carefully.

WARRANTY

Powermatic Corporation, 619 Morrison Street, McMinnville, Tennessee 37110
("Powermatic") warrants to its authorized distributors of Powermatic products and the original purchasers from such distributors, all products manufactured by Powermatic to be free of defects in material and workmanship for a period of twelve (12) months from the date of delivery from its authorized distributors or 2000 hours of use, whichever occurs first. During said warranty period Powermatic will, at its option, repair or replace any product (or component part thereof) proving defective during said period. This warranty applies only to products which are used in accordance with all instructions as to operation, maintenance and safety set forth in the catalogs, manuals, and/or instruction sets furnished by Powermatic. This warranty becomes effective only if the accompanying card is fully and properly completed and returned to Powermatic within ten (10) days from date of delivery to the original purchaser.

This warranty does not apply to items that would normally be consumed or require replacement due to normal wear (blades, lubricants, etc.); to electrical motors and components which are warranted by their manufacturer; or the costs of removal, shipment for service and reinstallation. Claims relating to electrical components must be taken to the component manufacturer's local authorized repair station for service.

This warranty is null and void if the product has been subjected to (1) misuse, abuse or improper service or storage; (2) accident, neglect, damage or other circumstances beyond Powermatic's control; (3) modifications, disassembly tampering, alterations or repairs outside of Powermatic's factory not authorized by Powermatic; or to any product not bearing its original serial number plate. This warranty does not apply to normal wear and tear, corrosion, abrasion, or repairs required due to natural causes or acts of God.

To obtain the fastest possible warranty service you must first notify in writing the authorized Powermatic distributor from whom you purchased the product specifying (1) the product by catalog number and serial number, (2) the date the product was delivered to you, (3) a description of the problem for which you seek warranty service, and (4) evidence of proof of purchase. Should circumstances prohibit you contacting the distributor then contact the Powermatic factory directly. If your claim is covered by this warranty, your Powermatic distributor will provide you with instructions as to how and where service will be provided. On simple warranty replacement or repairs, installations instructions will be provided to allow correction by customer personnel. Powermatic assumes no responsibility for products which are returned without its prior written authorization. Powermatic's obligation under this warranty shall be exclusively limited to repairing or replacing (at Powermatic's option) products which are determined by Powermatic to be defective upon delivery, F.O.B. (return freight paid by customer) Powermatic's factory, and on inspection by Powermatic. In no event shall Powermatic's liability under this warranty exceed the purchase price paid for the product.

THIS IS POWERMATIC'S SOLE WRITTEN WARRANTY. ANY AND ALL OTHER WARRANTIES WHICH MAY BE IMPLIED BY LAW, INCLUDING ANY WARRANTIES FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. POWERMATIC SHALL NOT BE LIABLE FOR ANY LOSS, DAMAGE, OR EXPENSE DIRECTLY OR INDIRECTLY RELATED TO THE USE OF ITS PRODUCTS OR FROM ANY OTHER CAUSE OR FOR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION, LOSS OF TIME, INCONVENIENCE, AND LOSS OF PRODUCTION). THE WARRANTY CONTAINED HEREIN MAY NOT BE MODIFIED AND NO OTHER WARRANTY, EXPRESSED OR IMPLIED, SHALL BE MADE BY OR ON BEHALF OF POWERMATIC.

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SPECIFICATIONS

Table with Standard Extensions	38" x 48"
Arbor Diameter	1"
Saw Diameter	12" and 14"
Blade Tilt, Maximum	45 degrees
Maximum Depth of Cut with 14" Saw Blade	90° - 5-1/8", 45° - 3-5/8"
Maximum Cut with Standard Extensions to Right of Saw Blade	50"
Maximum Width of Cutoff in front of Saw in 1" Stock	21"
Maximum Width of Cutoff in front of Saw in 5-1/8" Stock with 14" Blade	17"
Maximum Width of Dado Cut	13/16"
Maximum Motor	7-1/2 HP - 3600 RPM
Maximum Speed of 14" Blade	12,600 SFM
Shipping Weight, less fence & rails	870 lbs.

⚠ GENERAL SAFETY RULES

READ, UNDERSTAND AND FOLLOW the safety and operating instructions found in this manual. Know the limitations and hazards associated with this table saw. A Safety Rules decal is installed on each machine to serve as a reminder of basic safety practice.

GROUNDING OF THE TABLE SAW: Make certain the machine frame is electrically grounded and a ground lead is included in the incoming electrical service. In cases where a cord and plug are used, make certain that the grounding plug connects to a suitable ground. Follow the grounding procedure indicated in the National Electrical Code.

EYE SAFETY: Wear an approved safety shield, goggles, or glasses to protect eyes when operating the table saw.

PERSONAL PROTECTION: Before operating the machine, remove tie, rings, watch and other jewelry and roll up sleeves above the elbows. Remove all loose clothing and confine long hair. Protective type footwear should be used. Where the noise exceeds the level of exposure allowed in Section 1910.95 of the OSHA Regulations use hearing protective devices. Do not wear gloves.

GUARDS: Keep the machine guards in place for every operation on which they can be used. If any guards are removed for maintenance, DO NOT OPERATE the machine until the guards are reinstalled.

WORK AREA: Keep the floor around the machine clean and free of scrap material, saw dust, oil and grease to minimize the danger of tripping or slipping. Be sure the table is free of all scrap, foreign material and tools before starting to cut. Powermatic recommends the use of anti-skid floor strips on the floor area where the operator normally stands and that each machine's work area be marked off. Make certain the work area is used to minimize dust. Provide adequate work space around the machine.

DO NOT OVERREACH: Maintain a balanced stance and keep your body under control at all times. Do not overreach. Use a support table or have a helper or "tailman" take stock away from the back side of the blade.

HOUSEKEEPING: Before turning on machine, remove all extra equipment such as keys, wrenches, scrap, and cleaning rags away from the saw.

CARELESS ACTS: Give the work you are doing your undivided attention. Looking around, carrying on a conversation, and "horseplay" are careless acts that can result in serious injury.

DISCONNECT MACHINE before performing any service or maintenance or when changing blades. NOTE: A machine under repair should be RED TAGGED to show it should not be used until the maintenance is complete.

ALIGNMENT: Check the alignment of the splitter, fence and miter slot to the blade. NOTE: A caution decal is installed on each guard and splitter to warn against the hazards of misalignment. See page 6 for instructions on alignment.

MAINTAIN TOOLS IN TOP CONDITION: Check the saw blade or cutter for cracks or missing teeth. Do not use a cracked or dull blade or one with missing teeth or improper set. Make sure the blade or cutter is securely locked on the arbor.

OPERATOR POSITION: Do not stand in line with the saw blade or work piece and do not allow anyone else to do so. Never climb on or near the saw.

HAND SAFETY: Keep hands clear of the blade area. Do not reach past the blade to clear parts or scrap with the saw blade running. Never saw free hand. Avoid akward operations and hand positions where a sudden slip could cause your hand to contact the blade.

SAFETY DEVICES: Always use the splitter, blade guard, push stick and other safety devices for all operations where they can be used. On operations such as dadoing or molding where such devices may not be used, use feather boards (see pg. 15), fixtures and other safety devices and use extreme caution. Re-install the splitter and blade guard immediately after completing the operation that required their removal.

SAW BLADE ROTATION: Be sure the saw blade rotates clockwise when viewed from the motor side (left side) of the machine.

ADJUSTMENTS: Make all adjustments to the machine and operational set-up with the power off. Never remove the insert with the blade running.

MATERIAL CONDITION: Do not attempt to saw boards with loose knots or with nails or other foreign material on its surface. Do not attempt to saw twisted, warped, bowed or "in wind" stock unless one edge has been jointed for guiding purposes prior to sawing.

LARGE STOCK: Do not attempt to saw long or wide boards unsupported where spring or weight could cause the board to shift position.

MACHINE STABILITY: Bolt the machine to the floor through the lag holes provided to avoid any tendency of the saw to tip or shift position.

JOB COMPLETION: If the operator leaves the machine area for any reason, he should turn "off" the power to the table saw motor and wait until the saw blade comes to a complete stop before his departure. In addition, if the operation is complete, he should clean the table saw and the work area. NEVER clean off the table saw with power "on" and NEVER use the hands to clear sawdust and debris; use a brush.

REPLACEMENT PARTS: Use only Powermatic or factory authorized replacement parts and accessories, otherwise the table saw warranty and guarantee is null and void.

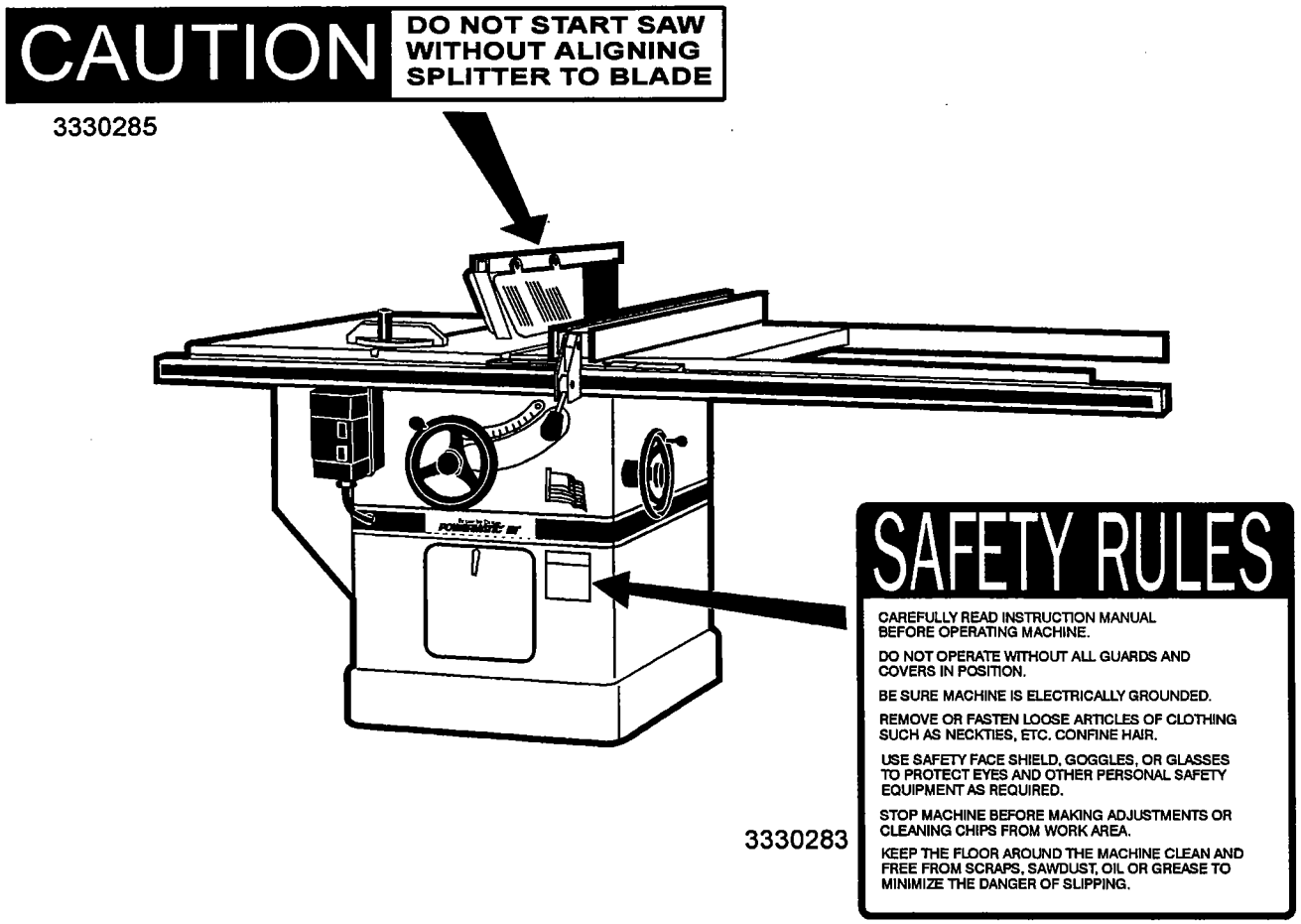
MISUSE: Do not use this Powermatic table saw for other than its intended use. If used for other purposes, Powermatic disclaims any real or implied warranty and holds itself harmless for any damage which may result from that use. Do not equip this table saw with a motor larger than 7-1/2 horsepower at 3600 RPM. Doing so voids the warranty and Powermatic holds itself harmless from any damage which may result.

IF YOU ARE NOT thoroughly familiar with the operation of Circular Saws, obtain advice from your supervisor, instructor or other qualified person.

DRUGS, ALCOHOL, MEDICATION: Do not operate tool while under the influence of drugs, alcohol, or any medication.

WARNING: The dust generated by certain woods and wood products can be dangerous to your health. Always operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.

SAFETY DECALS



RECEIVING

Remove the saw from shipping carton and check for damage. Report any damage to your distributor immediately. Accessories and rails were shipped in separate cartons. Read the instruction manual thoroughly for assembly, alignment, maintenance and safety instructions. NOTE: Exposed metal parts such as the top and extension wings have been given a protective coating at the factory. This should be removed with a solvent (such as mineral spirits) once the machine has been assembled.

INSTALLATION & ASSEMBLY

If you are mounting the machine to the floor, use high quality anchor bolts. Bolts are attached to the floor through the four lag screw holes provided in the machine's base. If you are using a mobile base, make sure the wheels are locked before operating or making adjustments to the saw.

CAST IRON EXTENSIONS

1. Mount the cast iron extensions using the (6) 1/2 x 1-1/4" hex. hd. cap screws and lock washers. Holding the wing in upright position to the saw table, insert the middle screw and lock washer first but do not tighten completely.
2. Pivot the wing to level position and insert the outside screws. Do not tighten completely.
3. Level the extension with the table, using a straight edge so that they form a flat plane with the table top.
4. Tighten all screws.

MOUNTING BLADE

If your blade came uninstalled, refer to "Changing Saw Blades," page 9. NOTE: Blade must be mounted before making rail and fence adjustments.

RAILS & ACCU-FENCE®

(Refer to the manual that accompanies the Accu-Fence® to assemble rails and fence at this point.)

SPLITTER & GUARD ASSEMBLY

1. Insert the grooved end of the splitter support shaft through slot in rear of saw and into hole in trunnion, Figure 1. Make sure the square head setscrew is backed out enough to allow easy insertion.
2. With a wrench, tighten sq. hd. setscrew into the groove of the shaft as shown in Figure 1. (NOTE: The groove will be in the proper position if the end of the shaft is made flush with the opposite side of the trunnion hole.) Tighten the locknut. The upright member of the rear splitter support must be on the *left* side of the saw (observed from the saw's front).

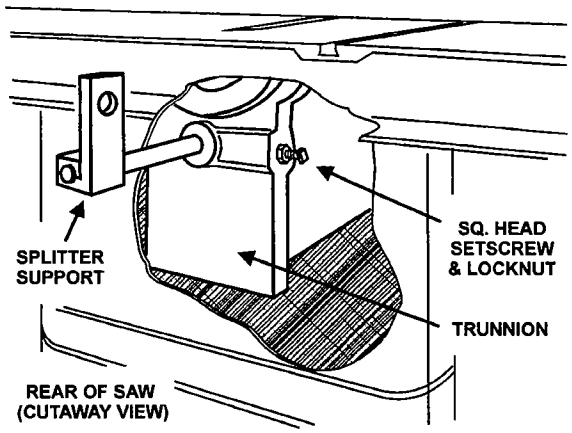


FIGURE 1

3. Mount the splitter assembly to the two adjusting screws, Figure 2. Place the two flanges of the splitter assembly onto the screws as shown.
4. The splitter and guard assembly must be aligned with the blade. Adjust the splitter according to the directions on page 8, "Splitter Alignment."

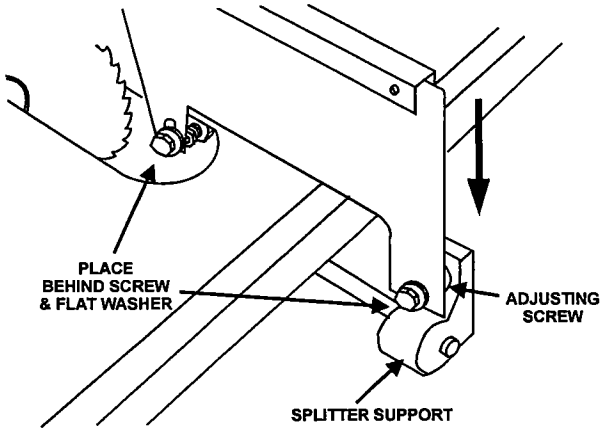


FIGURE 2

MITER GAUGE

Attach washer to the miter gauge handle. Insert the handle bolt through the gauge slot and screw handle to the gauge bar. Install the miter gauge in its left hand slot on the table.

ADJUSTMENTS

MITER SLOT ALIGNMENT

To check the alignment of the miter slot to the blade, raise the blade to its 0 (90 deg.) position and its maximum height. Mark one tooth with a

grease pencil and position the tooth slightly above the top edge of the table at the front. Raise the miter gauge bar slightly out of its slot to serve as a shoulder. Using a combination square against the side of the bar, slide the scale over until it touches the tip of the blade and lock scale in position, Figure 4.

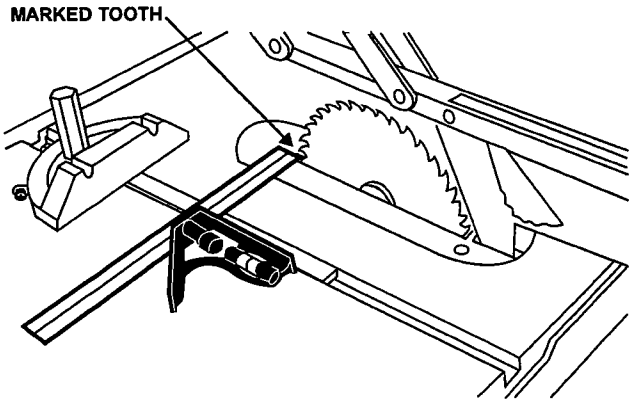


FIGURE 4

Rotate the marked tooth so that it is slightly above the table top at the rear and using the square as in front, check whether the distance to the blade is the same. If it is not, loosen the three (3) mounting screws that lock the table to the cabinet and move the table to bring the miter slot in line with the blade. The blade should be kept centered with the slot in the table insert to ensure clearance at both the 90 deg. and 45 deg. positions. After aligning, lock the table to the cabinet by retightening the three mounting screws.

TILT STOP ADJUSTMENT

Using a combination square, check the 90 deg. (0) and 45 deg. stops as shown in Figure 5. Adjust stop positions if required, using the stop screws as shown. Check the pointer at 90 deg. and readjust if required.

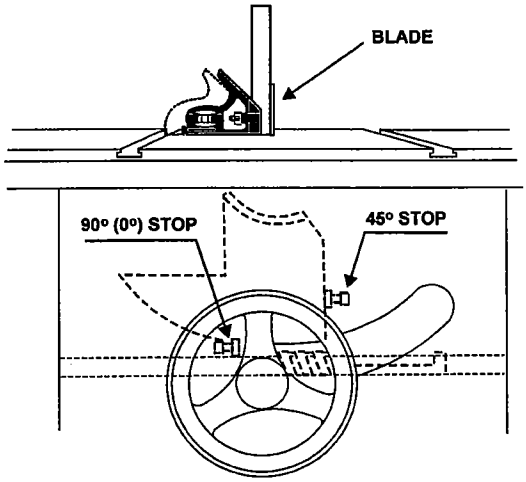


FIGURE 5

FENCE ALIGNMENT

See Accu-Fence® manual.

MITER GAUGE ADJUSTMENT

The miter gauge is equipped with individually adjustable index stops at 90 degrees and 45 degrees right and left. The index stops can be adjusted by tightening or loosening the three adjusting screws (A), Figure 6.

To operate the miter gauge, loosen lock handle (B), and move the body of the miter gauge (C) to the desired angle. The miter gauge body is set to stop at 0 degrees and 45 degrees left or right. To move the gauge beyond these points, the stop link (D) must be flipped out of the way.

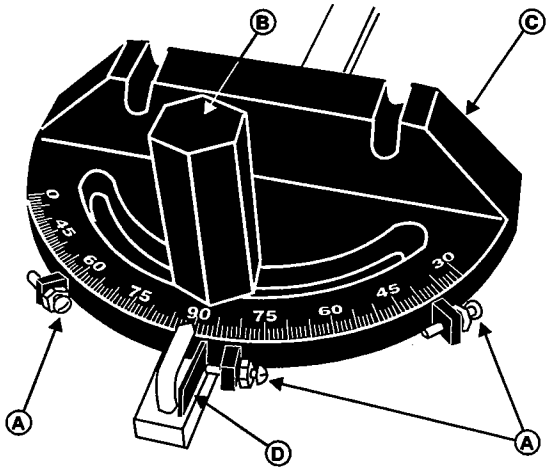


FIGURE 6

If accurate crosscutting work is to be done using the miter gauge, check its squareness to the slot with a combination square and readjust the stop position if required, Figure 7.

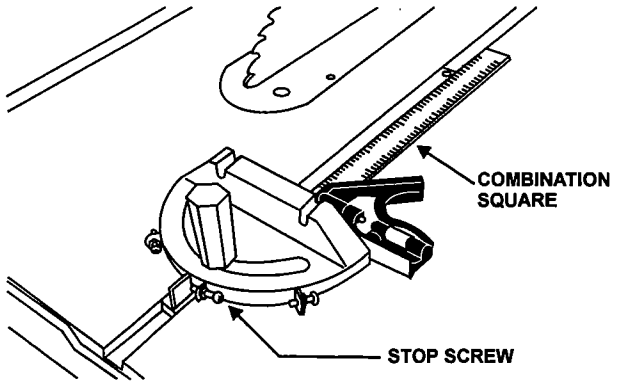


FIGURE 7

BELT TENSIONING

The saw is equipped with a set of three matched belts and on replacement, replace the complete set. To re-tension the belts, loosen the cap screws on either side of the motor bracket as shown in Figure 8, and pivot the motor and bracket to the right. Retighten the mounting screws.

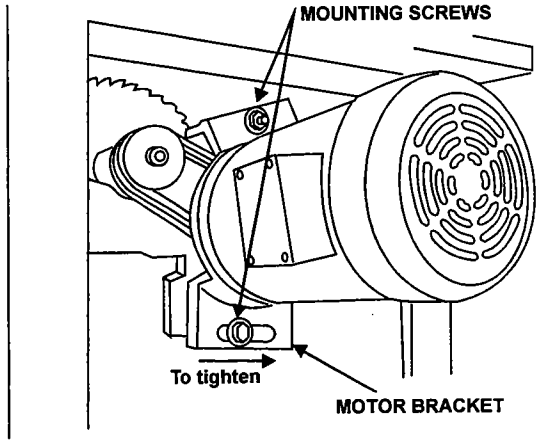


FIGURE 8

ARBOR AND ARBOR BEARING REMOVAL

To remove the saw arbor, remove the table top. Remove the lock nut, pulley and key. Use a wrench on the end of the arbor to hold it while loosening the nut. Loosen the setscrew in the saw raising arm and the arbor; bearings and spacer will then slide out of the arm housing, Figure 9.

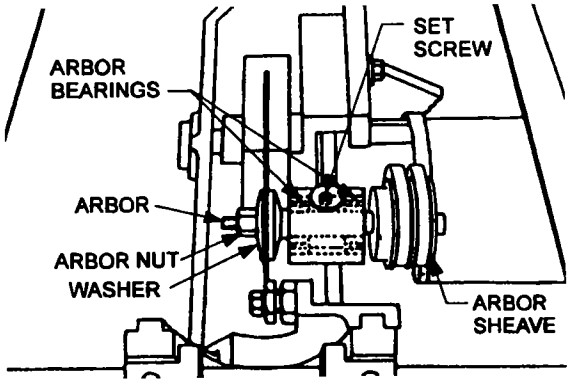


FIGURE 9

BLADE RAISING MECHANISM ADJUSTMENT

If binding occurs, clean off all sawdust and pitch build-up and lubricate with a good non-hardening grease such as Fisk Company Lubriplate. If binding continues, check the fit-up of the worm and worm gear segment. The worm must be centered with the worm gear segment. It if is not centered, loosen the saw raising arm setscrews and move the arm as required, Figure 10, and re-lock.

If saw arm has been relocated, the table may have to be realigned so as to provide clearance between the saw blade and the table insert slot, and the splitter will have to be realigned.

NOTE: The saw arm setscrew must be tight to avoid the possibility of movement which could cause the blade to hit the insert.

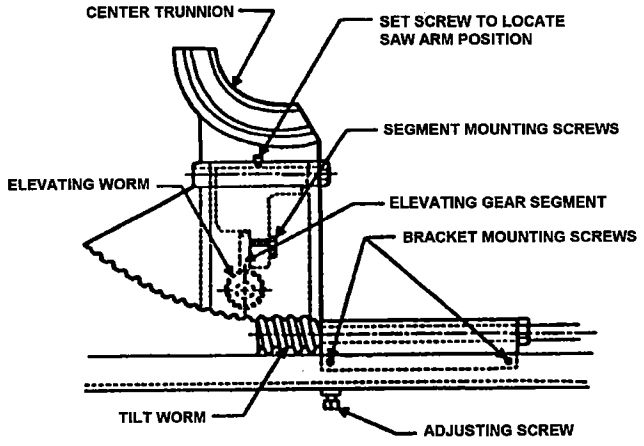


FIGURE 10

SPLITTER ALIGNMENT

One of the most critical adjustments to help avoid kickbacks is the splitter alignment. It should be checked and readjusted if necessary after each blade change. To align the splitter to the blade, use a combination square against the side of the raised up miter gauge bar and slide the scale against the top of the tooth as shown in Figure 11. Check the splitter for parallelism to the miter slot and readjust if required. Check for clearance.

Move the miter gauge to the opposite side of the blade and using the combination square, slide the scale against the top of the tooth. Check for clearance. Clearance should be approximately equal on both sides of the blade.

The insert will have to be removed to get at the adjustment jack screw mounted in the center trunnion.

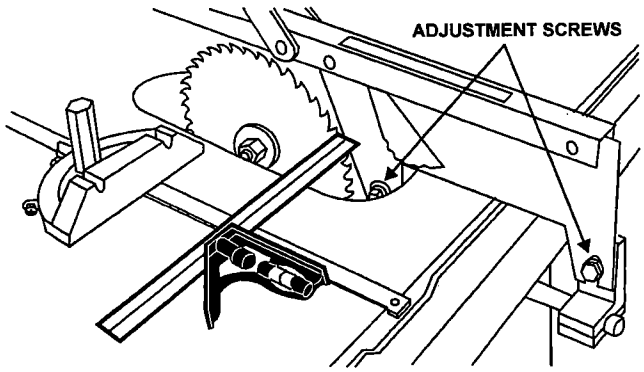


FIGURE 11

INSERT ADJUSTMENT

Adjust the set screws as required in the insert, Figure 12, to ensure that the insert is stable and flush with, or slightly below, the table top.

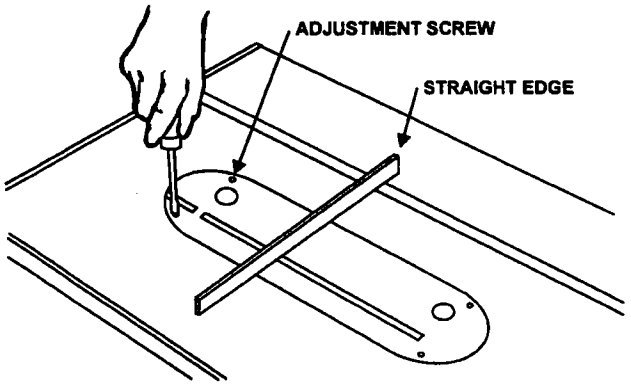


FIGURE 12

CHANGING SAW BLADES

To change a saw blade, disconnect machine from the power source. Remove the table insert. Place the arbor wrench on the arbor nut and use a block of wood wedged between the saw blade and table as shown in Figure 13. Remove the arbor nut and collar and saw blade. Install new blade making sure the cutting edge of the teeth at the top face toward the front of the saw. Slide the collar on the arbor and start the arbor nut on the threads. Snug the arbor nut against the collar and saw blade using the wrench while holding the saw blade with the thumb and finger tips. Wedge a block of wood between the saw blade and table and tighten the arbor nut securely. Replace the table insert and reconnect the machine to power source.

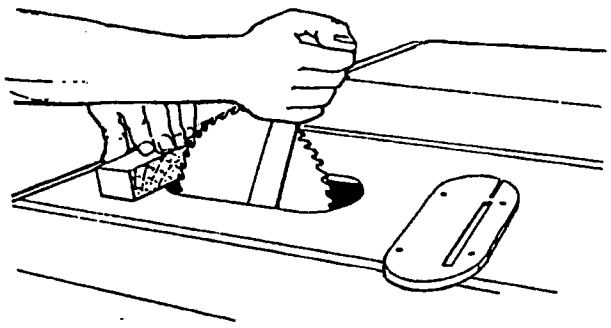


FIGURE 13

TILTING MECHANISM ADJUSTMENT

If binding occurs in the tilting mechanism, clean off the sawdust and pitch accumulation and re-grease. If binding continues, check the alignment and readust as required to center the worm with the worm gear segment on the trunnion. If there is excessive play, loosen cap screws and adjust jackscrews clockwise to raise pinion, Figure 14. A tight mesh without binding is ideal. Retighten mounting screws and check over the 90 deg. to 45 deg. range of tilt for excessive play or binding. Readjust if required.

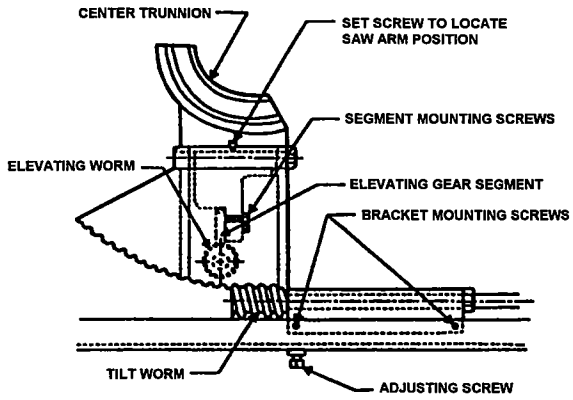


FIGURE 14

MAINTENANCE

Good saw operation requires periodic preventive maintenance. Keep the inside of the cabinet and trunnion area clean. A stiff brush will remove sawdust before it cakes and pitch or gum is easily removed with a commercial solvent or with a good oven cleaner. To accomplish this, remove the table by removing the three mounting screws and exposing the working mechanisms of the saw. After cleaning the tilting and raising worm and worm gear segments and the trunnions, grease these three areas with a good grade non-hardening grease such as Fiske Company "Lubriplate."

Check periodically for excessive end play in the tilting and raising mechanism and in the saw arbor and readjust as required.

Check periodically for belt tension and wear. Readjust or replace belt as required.

For best results, the table surface must be kept clean and free of rust. Although some users prefer a wax coating, white talcum powder applied with a blackboard eraser rubbed in vigorously once a week will fill casting pores and form a moisture barrier. This method provides a table top that is slick and allows rust rings to be easily wiped from the surface. Also, unlike wax pickup, talcum powder will not stain wood or mar finishings.

INSTRUCTIONS & PROCEDURES FOR CIRCULAR SAW OPERATIONS

GENERAL INSTRUCTIONS

1. Familiarize yourself with the location and operation of all controls and adjustments and the use of accessories such as the miter gauge and rip fence.

2. Serious injury can result from kickbacks which occur when a work piece binds on the saw blade or binds between the saw blade and rip fence or other fixed object. This binding can cause the work piece to lift up and be thrown toward the operator. Listed below are the conditions which can cause kickbacks:

a. Confining the cutoff piece when crosscutting or ripping.

b. Releasing the work piece before completing the operation or not pushing the work piece all the way past the saw blade.

c. Not using the splitter when ripping or not maintaining alignment of the splitter with the saw blade.

d. Using a dull saw blade.

e. Not maintaining alignment of the rip fence so that it tends to angle toward rather than away from the saw blade front to back. NOTE: Caution decal on guard and splitter assembly.

f. Applying feed force when ripping to the cutoff (free) section of the work piece instead of the section between the saw blade and fence. Use push sticks or push blocks, Figure 13, for narrow, thin, or short work.

g. Ripping wood that is twisted (not flat), or does not have a straight edge, or a twisted grain.

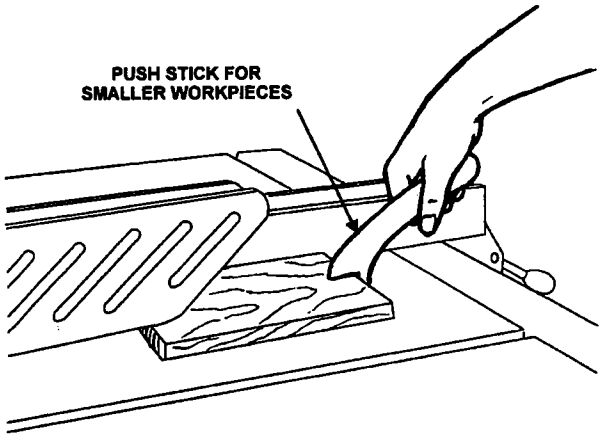


FIGURE 13

3. To minimize or prevent injury from kickbacks:

a. Avoid conditions listed above.

b. Wear a safety face shield, goggles, or glasses.

c. Do not use the miter gauge and rip fence in the same operation unless provision is made by use of a facing board on the fence so as to allow the cutoff section of the workpiece to come free before the next cut is started (See pg. 12 for instruction on crosscutting).

d. Check the operation of the anti-kickback pawls before starting a cut. If the pawls do not stop the reverse motion of a workpiece, resharpen all the points.

e. Where possible, keep your face and body out of line with potential kickbacks including when starting or stopping the machine.

4. Dull, badly set, improper, or improperly filed cutting tools and cutting tools with gum or resin adhering to them cause many of the tilting arbor saw accidents. Never use a cracked saw blade. The use of a sharp, well maintained, and correct cutting tool for the operation will help to avoid injuries.

5. Support the work properly and hold it firmly against the gauge or fence. Use a push stick or push block when ripping short, narrow (6" width or less), or thin work. Use a push block or miter gauge hold-down when dadoing or molding.

6. For increased safety in crosscutting, use an auxiliary wood facing attached to the miter gauge using the holes provided, Figure 14.

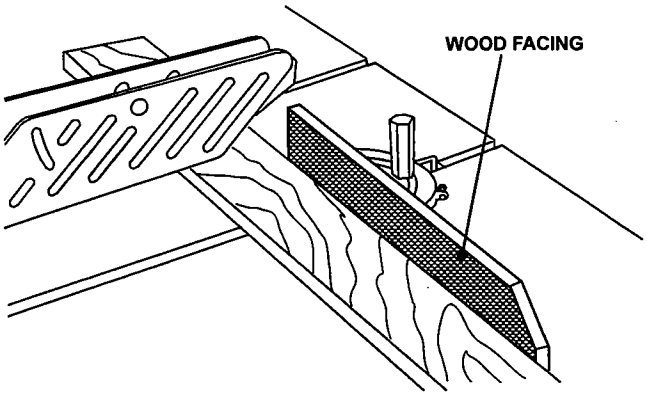


FIGURE 14

7. Never use the fence as a length stop when crosscutting. Do not hold on to, or touch, the free end or cutoff section of a workpiece. On thru sawing operations, the cutoff section must NOT be confined.

8. Always keep your hands out of the line of the saw blade and NEVER reach back of the cutting blade with either hand to hold the workpiece.
9. Bevel ripping cuts should always be made with the fence on the right side of the saw blade so that the the blade tilts away from the fence and minimizes the possibility of the work binding and the resulting kickback.
10. Use the miter gauge on the right-hand side of the saw blade when doing miter or compound miter cuts to provide more hand clearance and safety.

RIP SAWING

1. Ripping is a sawing process where the work piece is fed with the grain into the saw blade using the fence as a guide and a positioning device to ensure the desired width of cut, Figure 15.

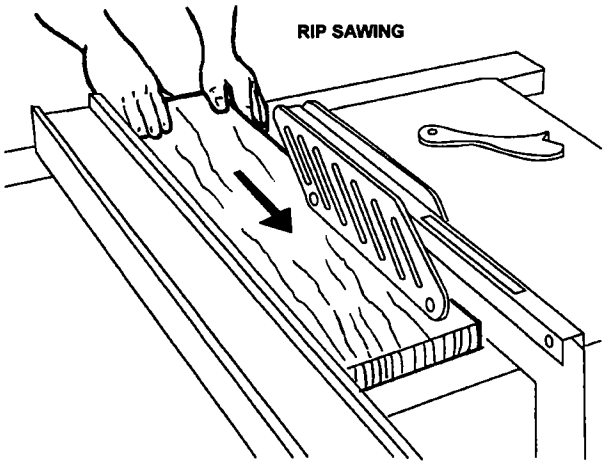


FIGURE 15

⚠ **CAUTION:** Before starting a ripping cut, be sure the fence is clamped securely and aligned properly.

Never rip freehand or use the miter gauge in combination with the fence.

Never rip workpieces shorter than the saw blade diameter.

Never reach behind the blade with either hand to hold down or remove the cutoff piece with the saw blade rotating.

2. Always use the saw guard, splitter and kickback pawls. Make sure the splitter is properly aligned. When wood is cut along the grain, the kerf tends to close and bind on the blade and kickbacks can occur.

NOTE: A caution decal is installed on the guard and splitter assembly warning of the hazard of misalignment (see pg. 8 for alignment instructions).

3. The rip fence should be set for the width of the cut by using the scale on the front rail or by measuring the distance between the blade and fence. Stand out of line with the saw blade and workpiece to avoid sawdust and splinters coming off the blade and a kickback, if one should occur.

4. If the work piece does not have a straight edge, nail an auxiliary straight edged board on it to provide one against the fence. To cut properly, the board must make good contact with the table. If it is warped, turn the hollow side down.

5. In ripping, use one hand to hold the board down against the fence or fixture, and the other to push it into the blade between the blade and the fence. If the workpiece is narrow (less than 6") use a push stick or push block. Never push in a location such that the pushing hand is in line with the blade. Move the hand serving as a holddown a safe distance from the blade as the cut nears completion. For very narrow ripping where a push stick cannot be used, use a push block or auxiliary fence. Always push the workpiece completely past the blade at the end of a cut to minimize the possibility of a kickback.

6. When ripping long boards, use a support at the front of the table and a support or "tailman" at the rear as shown in Figure 16.

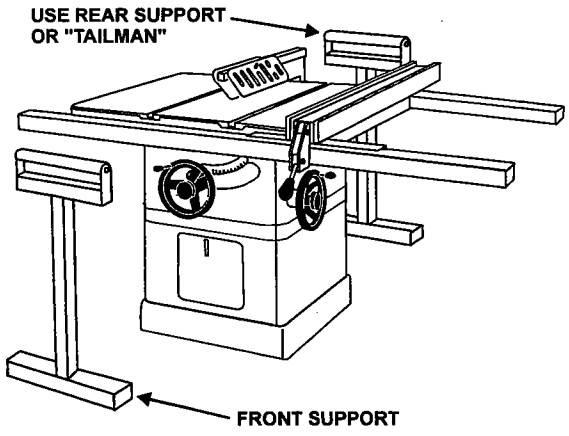


FIGURE 16

7. For work shorter than 12" or narrower than 6", use a push stick or block to push it through between the fence and the saw blade.

8. Never use the rip fence beyond the point where the carriage is flush with the end of the rails.

9. Have the blade extend about 1/8" above the top of the workpiece. Exposing the blade above this point can be hazardous.

RESAWING

1. Resawing is a ripping operation in which thick boards are cut into thinner ones. Narrow boards up to 3" can be resawed in one pass. Wider boards up to 6" must be resawed in two passes.

2. In resawing wider boards, adjust the blade height so as to overlap the two cuts by 1/2" as shown in Figure 17. Too deep a first cut can result in binding and possible kickbacks on the second cut. Always use the same side of the board against the fence for both cuts.

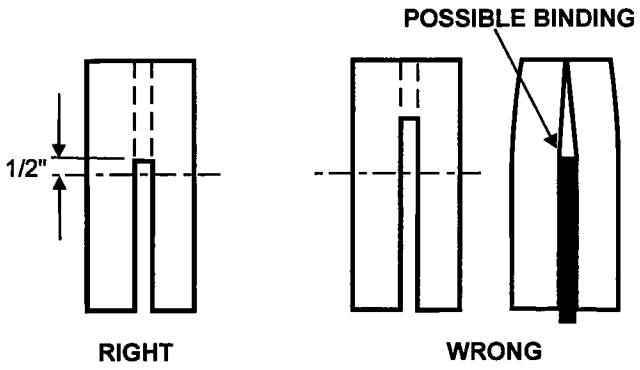


FIGURE 17

CROSSCUTTING

1. The sawing process where the workpiece is fed cross grain into the saw blade using the miter gauge to support and position the workpiece is called crosscutting, Figure 18. Crosscutting should never be done freehand nor should the fence be used as an end stop unless an auxiliary block is clamped to the front of the blade area such that the cutoff piece comes free of the block before cutting starts. Length stops should not be used on the free end of the workpiece in the cutoff area. Do not crosscut workpieces shorter than 6". Before starting a cut, be sure the miter gauge is securely clamped at the desired angle. Hold the workpiece firmly against the table and back against the miter gauge. Always use the saw guard and splitter and make sure the splitter is properly aligned.

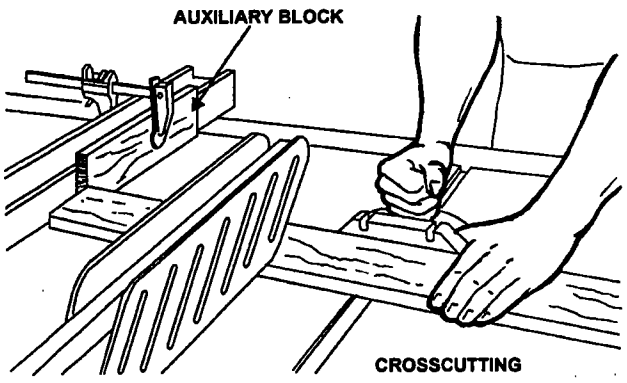


FIGURE 18

2. For 90 degree crosscutting, most operators prefer to use the left-hand miter gauge slot as shown in Figure 18. When using it in this position, hold the workpiece against the gauge with the left hand and use the right hand to advance the workpiece. When using the right hand slot for miter and compound crosscutting so that the blade tilts away from the gauge, the hand positions are reversed.

3. When using the miter gauge, the workpiece must be held firmly and advanced smoothly at a slow rate. If the workpiece is not held firmly, it can vibrate causing it to bind on the blade and dull the saw teeth.

4. To improve the effectiveness of the miter gauge in crosscutting, some users mount an auxiliary wooden extension face (with a glued-on strip of sandpaper) to the miter gauge as shown in Figure 19.

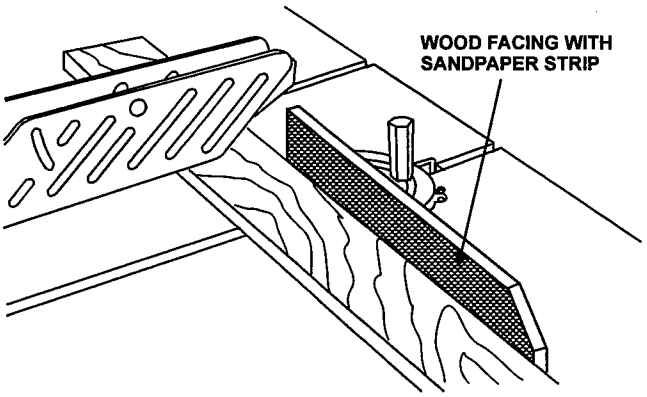


FIGURE 19

5. Provide auxiliary support for any workpiece extending beyond the table top with a tendency to sag and lift up off the table.

6. Stop rods can be used in the holes provided in the miter gauge for repetitive work of equal length. Do not use a stop rod on the free end of a workpiece. It should be used on the side of the miter gauge opposite the saw blade.

7. Have the blade extend about 1/8" above the top of the workpiece. Exposing the blade above this point can be hazardous.

BEVEL & MITER OPERATIONS

1. A bevel cut is a special type of operation where the saw blade is tilted at an angle less than 90 degrees to the table top. Operations are performed in the same manner as ripping or crosscutting except the fence or miter gauge should be used on the right-hand side of the saw blade to provide added safety in avoiding a binding action between the saw blade and the table top. when beveling with the miter gauge, the workpiece must be held firmly to prevent creeping.

2. Crosscuts made at an angle to the edge of the workpiece are called miters. Set the miter gauge at the required angle, lock the miter gauge, and make the cut the same as a normal crosscut except the workpiece must be held extra firmly to prevent creeping.

3. Have the blade extend only 1/8" above the top of the workpiece. Exposing the blade above this point can be hazardous.

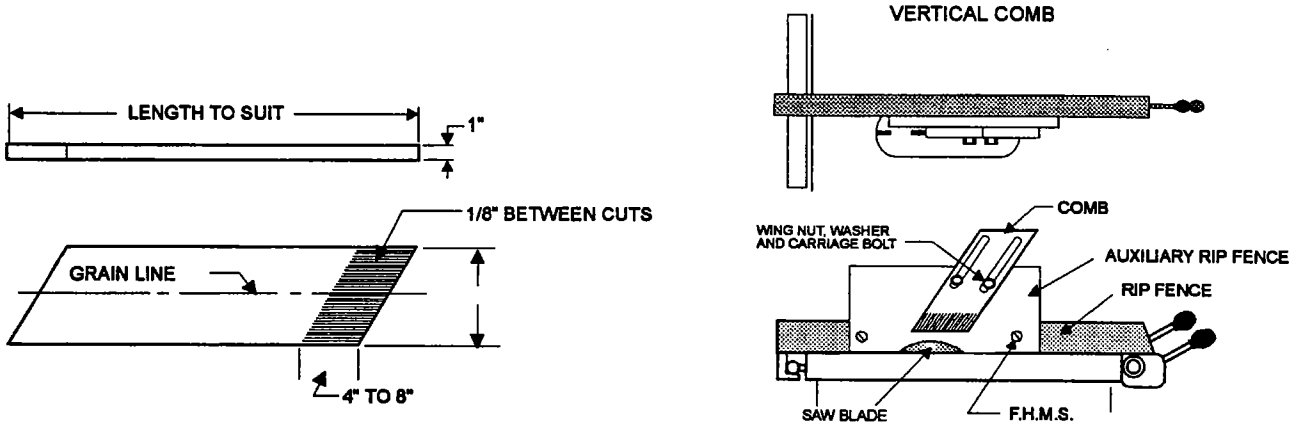
TROUBLE SHOOTING HINTS

TROUBLE	POSSIBLE CAUSE	SOLUTION
Excessive vibration	1. Tilt or raising clamp knobs not tightened. 2. Blade out of balance. 3. Bad motor.	1. Tighten knobs. 2. Change blade. 3. Replace motor.
Cut out-of-square when crosscutting	1. Miter gauge out of adjustment. 2. Miter slot misaligned.	1. Reset stops and pointer. 2. Realign tabs.
Motor stalls or workpiece binds or burns.	1. Excessive feed. 2. Bad motor. 3. Dull or incorrect blade. 4. Miter slot misaligned. 5. Fence misalignment.	1. Reduce feed. 2. Replace motor. 3. Replace blade. 4. Realign motor slot. 5. Realign fence.
Cuts not true at 90 or 45 deg.	1. Stop screws not set properly.	1. Readjust stop screws.
Tilt or saw raising handwheels difficult to turn.	1. Clamp knobs not released. 2. Worm and worm gear segment caked with sawdust and pitch. 3. Worm and worm gear segment out of alignment.	1. Unclamp. 2. Clean and regrease. 3. Realign worm and worm gear segment.
Motor overheats.	1. Motor overloaded. 2. Improper cooling of motor.	1. Correct overload condition such as reducing the feed rate. 2. Clean sawdust from fan and duct areas of motor.
Motor starts slowly or fails to come up to full speed.	1. Low voltage. 2. Centrifugal switch not operating. 3. Bad motor.	1. Request voltage check from power company and correct low voltage condition. 2. Replace switch. 3. Replace motor.
Motor fails to develop full power.	1. Power line overloaded. 2. Undersize wires in supply system. 3. Low voltage. 4. Bad motor.	1. Correct overload condition. 2. Increase supply wire size. 3. Request voltage check from power company and correct condition. 4. Replace motor.

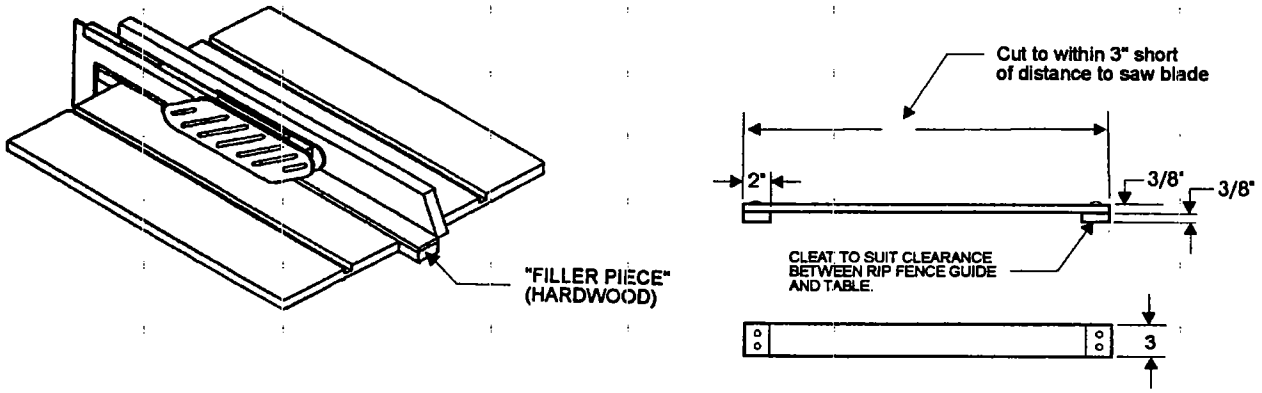
FEATHER BOARD CONSTRUCTION

The Feather Board is to be made of straight grain hardwood approximately 1" thick and 4" to 8" wide according to the size of the machine. The length should be developed in accordance with its intended use. Feather Boards can be fastened to the table or rip fence by the use of "C" clamps. Drilled and tapped holes in the table top allow for the use of wing nuts and washers as a method of clamping. Provide slots in the Feather Board for adjustments if this method of clamping is used. Figure 18 shows a method of attaching and use of Feather Boards as a vertical comb. The horizontal application is essentially the same except the attachment is to the table top.

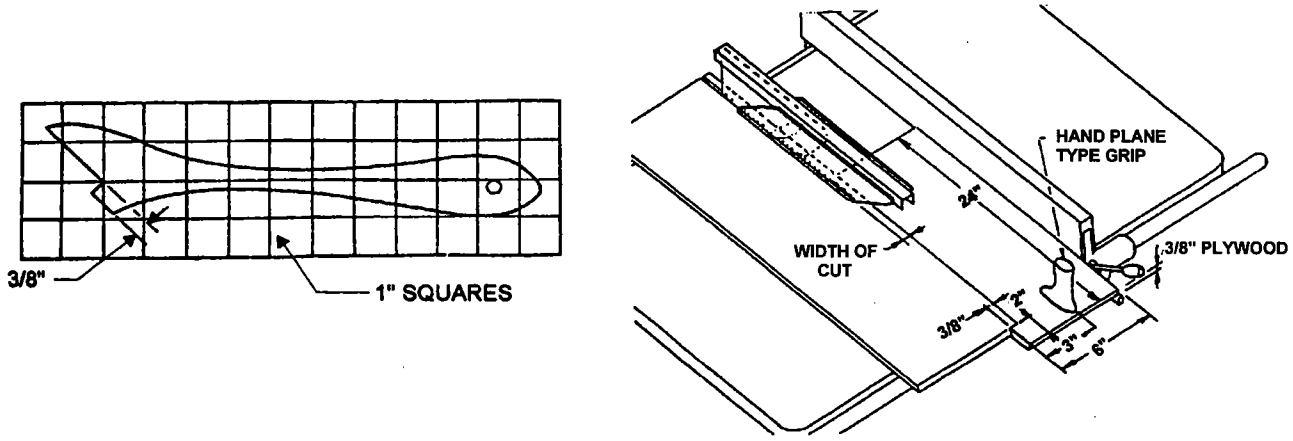
FIGURE 18



FILLER PIECE CONSTRUCTION

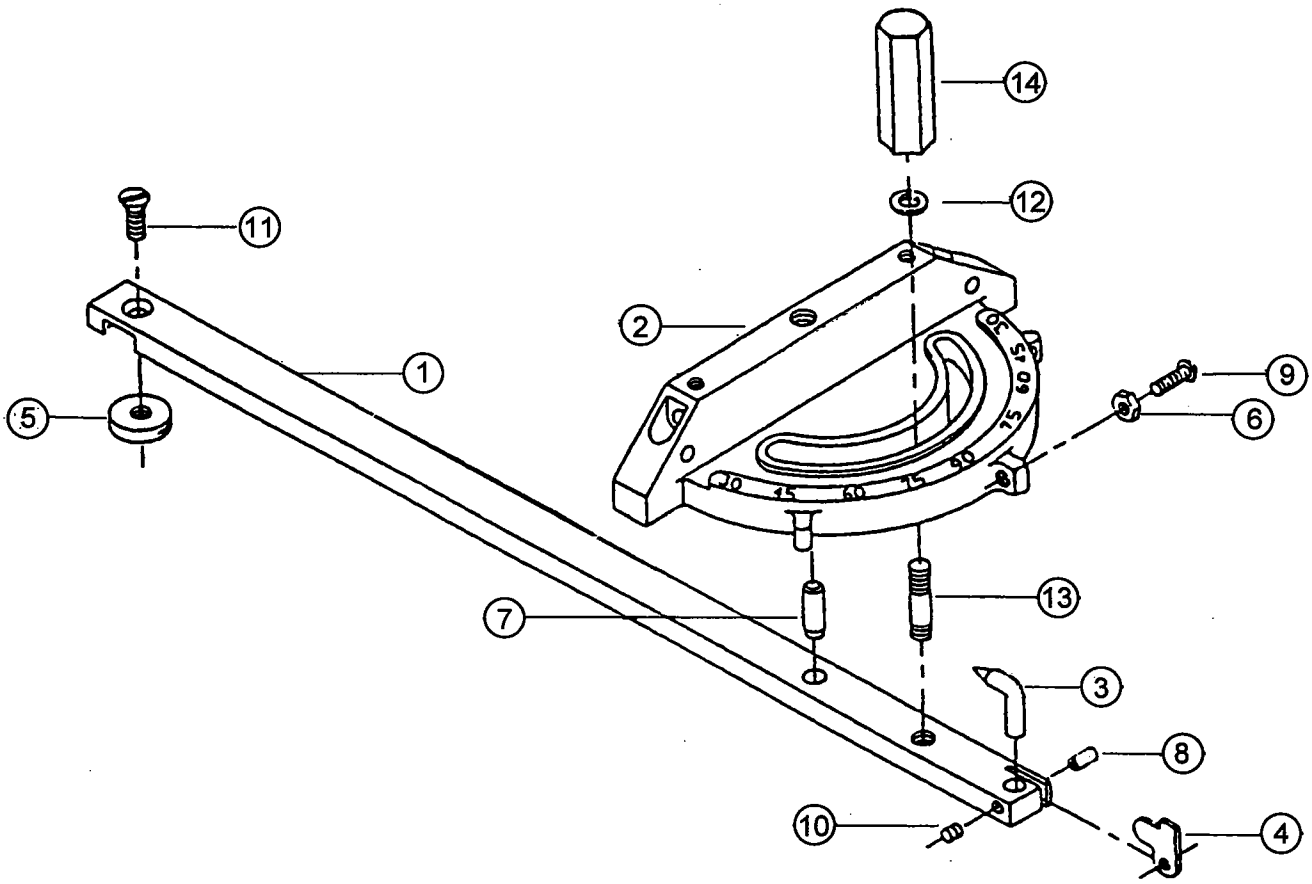


PUSH STICK & PUSH BLOCK CONSTRUCTION



PARTS LIST: MITER GAUGE ASSEMBLY 2471015

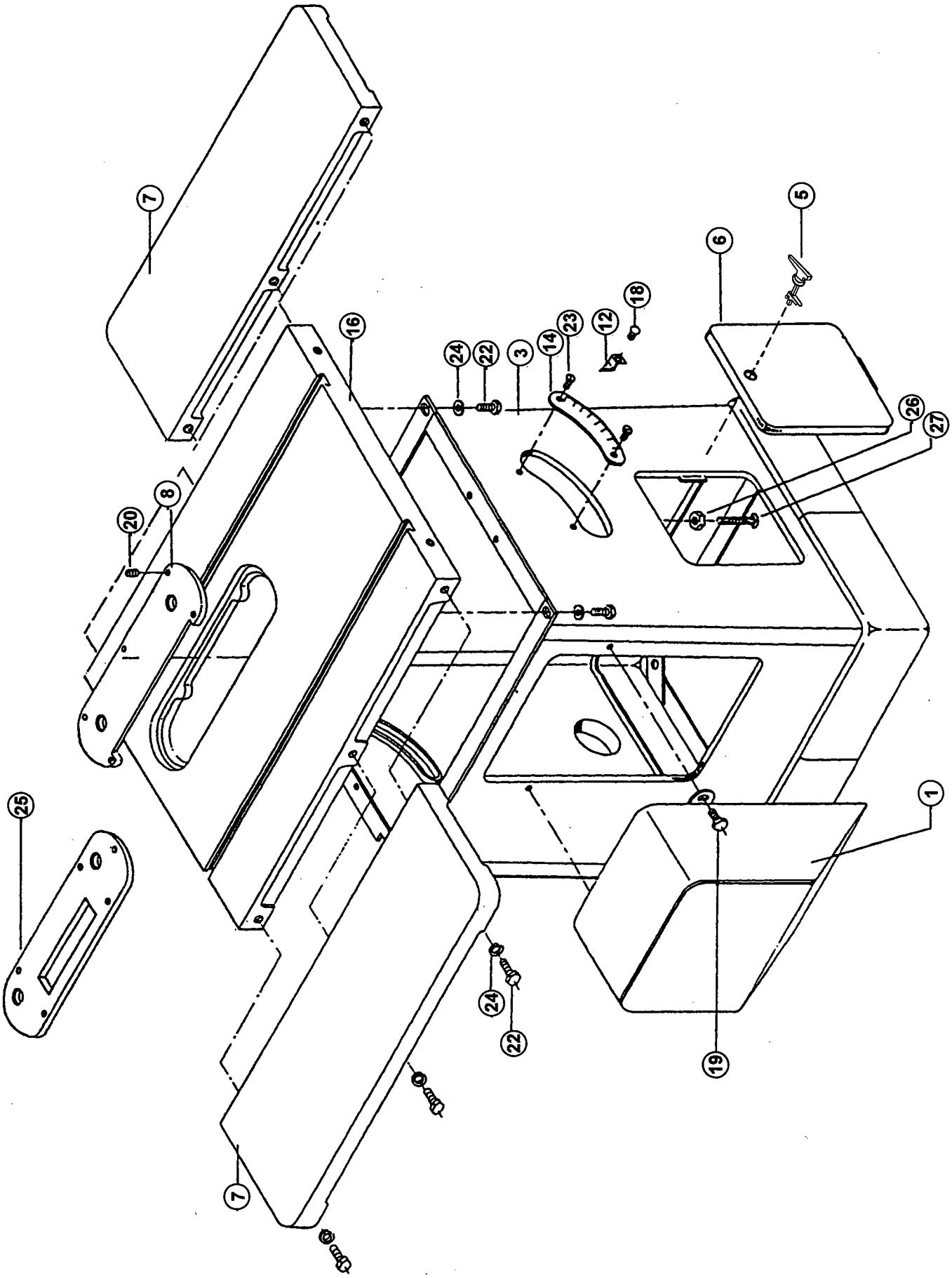
NO.	PART NO.	DESCRIPTION
1	3044053	BAR, MITER GAUGE
2	3230038	GAUGE, MITER
3	3604012	POINTER, MITER GAUGE
4	3761001	STOP, MITER GAUGE
5	3841202	WASHER, MITER GAUGE BAR
6	6506001	NUT, HEX. 6-32
7	6623012	PIN, DOWEL 1/4" X 1"
8	6626055	PIN, SPRING 1/8" X 1/4"
9	676040	SCREW, FILLISTER HD. MACHINE 6-32 X 5/8"
10	6708001	SCREW, SOC. SET, 8-32 X 3/8"
11	6714053	CAP SCREW, FLAT HD. 1/4"-20 X 3/8"
12	6861101	WASHER, FLAT PLAIN 1/4"
13	3695221	SCREW, LOCKING 1/4" X 3-3/8"
14	3268050	KNOB, MITER GAUGE HANDLE



PARTS LIST: STAND ASSEMBLY

NO.	PART NO.	DESCRIPTION
1	2104031	MOTOR COVER
2	2759040	STAND ASSEMBLY, WELDMENT
5	6440003	LATCH, DOOR
6	3136018	DOOR, DUST REMOVAL
7	3186005	EXTENSION, 11" ROUND
8	3328073	INSERT, TABLE
12	3604003	POINTER, SAW TILTING
14	3684217	SCALE
15	3703003	SHAFT, 3/8" DIAMETER
16	3797424	TABLE, T.A. SAW
18	6708012	SCREW, ROUND HD. MACHINE 8-32 X 1/4"
19	6714049	SCREW, HEX. HD. 1/4-20 X 3/4"
20	6714081	SETSCREW, SLOT HD. STEEL 1/4-20 X 3/8"
22	6718009	SCREW, HEX. HD. CAP 1/2-13 X 1-1/4"
23	6746001	SCREW, PAN HD. SELF-TAPPING 6 X 1/4"
24	6861500	WASHER, HELICAL SPRING LOCK 1/2"
25	3328075	INSERT, DADO
26	6515001	NUT, HEX. 5/16"-18
27	6715101	SCREW, SQUARE HD.
	2136002	DOOR ASSEMBLY

EXPLODED VIEW: STAND ASSEMBLY

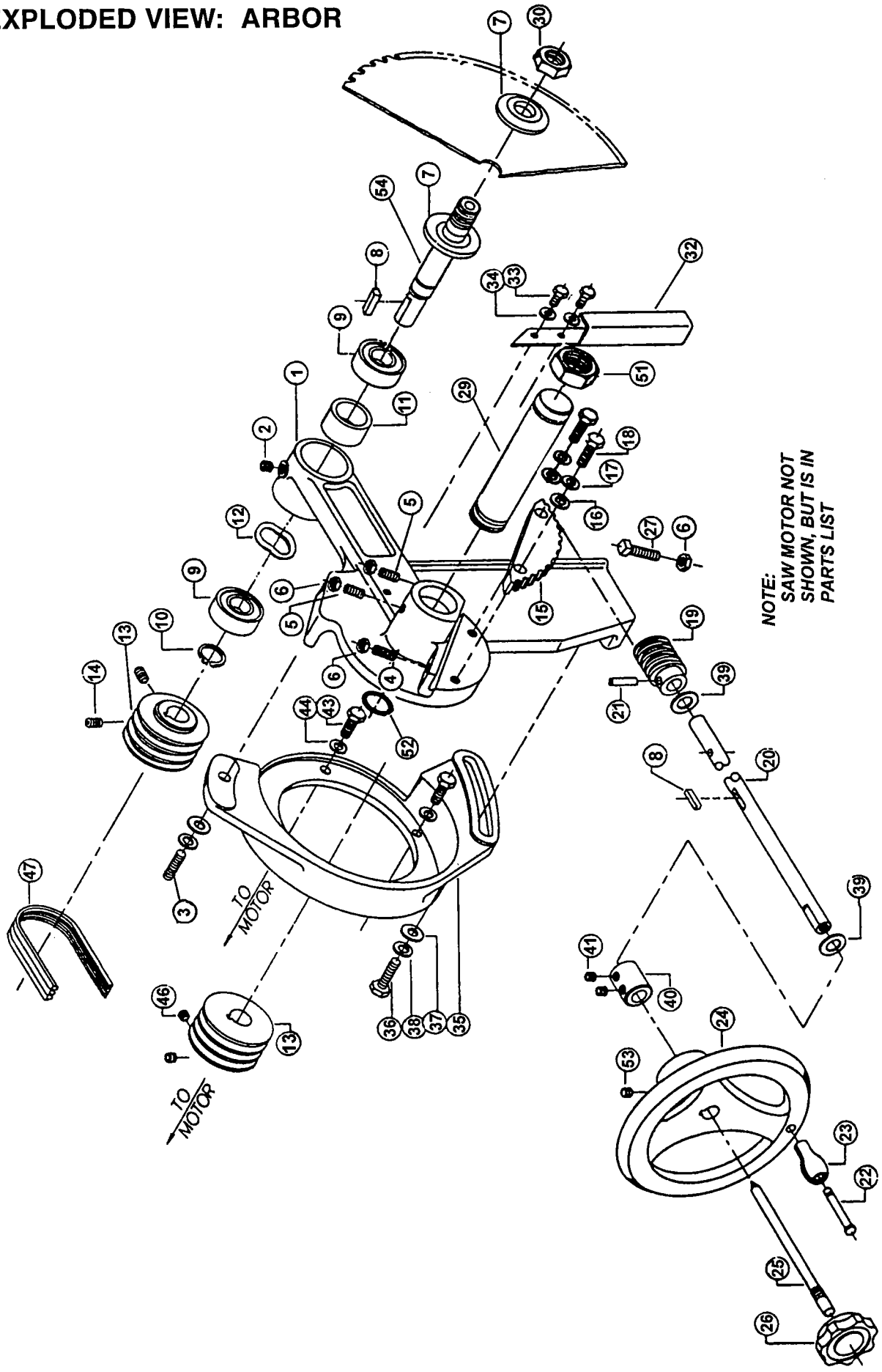


PARTS LIST: ARBOR

NO.	PART NO.	DESCRIPTION
1	3025265	ARM, BEARING
2	6716003	SCREW, SOC. SET 3/8-16 X 3/8"
3	3773325	STUD, 1/2-13 X 2-5/8 DB. END
4	6716006	SCREW, SOC. SET 3/8-16 X 1-1/4
5	6716081	SCREW, SQ. HD. SET
6	6516009	NUT, JAM 3/8-16
	2024020	ARBOR ASSY. (Items 7 and 9 thru 12 & 54)
	2024019	ARBOR ASSY. (Items 7 thru 54)
7	3838007	COLLAR, SAW ARBOR
8	6420002	KEY, #608 WOODRUFF #13
9	6060010	BEARING, BALL DOUBLE SEAL 205NPP
10	6670005	RING, RETAINING #5100-100
11	3737215	SPACER, BEARING
12	6863005	WASHER
13	3717167	SHEAVE, ARBOR
14	6715013	SCREW, SET, STEEL 5/16-18 X 3/8"
15	3237034	GEAR, SEGMENT WORM
16	6861301	WASHER, FLAT 3/8"
17	6861300	WASHER, SPRING LOCK HELICAL 3/8"
18	6716032	SCREW, HEX. HD. 3/8-16 X 1-1/2"
	2865004	WORM, SAW RAISING ASSY. (Items 19, 20 & 21)
19	3865001	WORM, SAW RAISING & TILTING
20	3701027	SHAFT,SAW RAISING WORM
21	6626031	PIN, SPRING 3/16 X 1-1/8"
	2271008	HANDWHEEL ASSY. (Items 22, 23 24 & 41)
22	6624006	PIN GROOVE 1/4 X 3" (Headed)
23	3268201	HANDLE, NYLON MACHINE, BLACK
24	3271039	HANDWHEEL, 8" X 3/4"
	2440009	LOCK ASSY., RAISE & TILT (Items 25 & 26)

NO.	PART NO.	DESCRIPTION
25	3583011	LOCATING PIN, SAW RAISING & TILT
26	3406018	KNOB, .382, #801 BLACK PHENOLIC
27	6710682	SCREW, SET. SQ. HD. 3/8-16 X 2-1/2"
29	3711005	SHAFT, SAW ARM PIVOT
30	6526005	NUT, JAM 1"-8 R.H.
32	3090012	CHUTE, DUST
33	6714127	SCREW, HEX. HD. 1/4-20 X 1/2"
34	6861100	WASHER, SPRING LOCK HELICAL 1/4"
35	3480015	MOUNT, MOTOR
36	6718017	SCREW, GAP HEX. HD. 1/2-13 X 1-3/4"
37	6861501	WASHER, FLAT 1/2"
38	6861500	WASHER, SPRING LOCK HELICAL 1/2"
39	6861901	WASHER, FLAT 3/4"
40	3096004	COLLAR, SAW RAISING
41	6716031	SCREW, CUP POINT SOC. HD. 5/16-18 X 1/4"
43	6716031	SCREW, HEX. HD. 3/8-16 X 1"
44	6861300	WASHER, SPRING LOCK HELICAL 3/8"
46	6715016	SCREW, SET. SOC. HD. CUP POINT 5/16-18 X 5/16"
47	6077169	BELT, VEE 3VX250 (matched 3 required)
	6472327	MOTOR, 5HP, 3 PHASE 200V
	6472335	MOTOR, 5HP, SINGLE PHASE
	6472307	MOTOR, 5HP, 3 PHASE
	6472504	MOTOR, 7.5HP, 3 PHASE
51	6578003	NUT, HEX. 3/8-16"
52	6670092	RETAIN. RING, EXT. 5107-112
53	6715013	SCREW, SET. SOC. HD.
54	3700124	SHAFT, SAW ARBOR

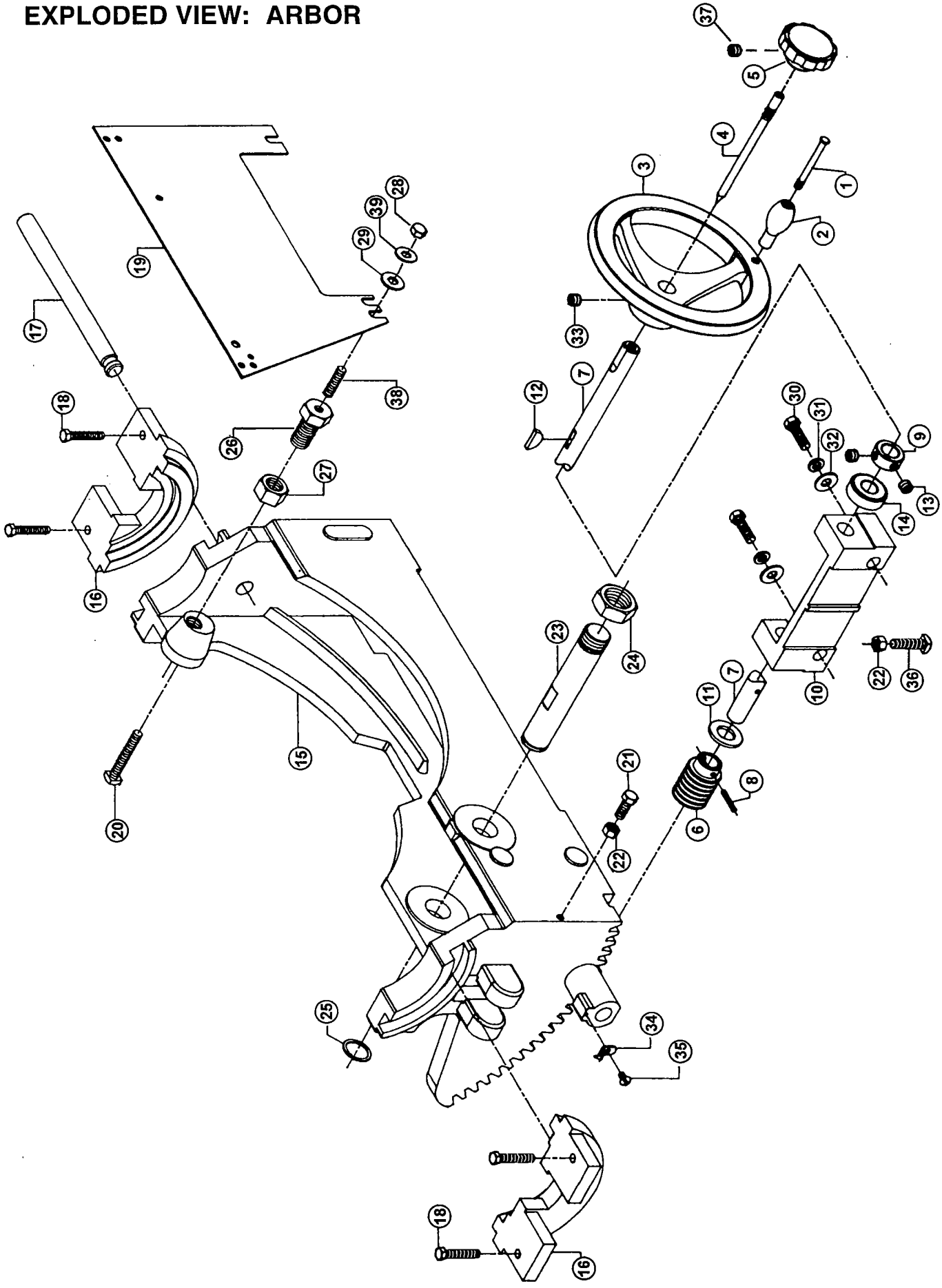
EXPLODED VIEW: ARBOR



PARTS LIST: ARBOR

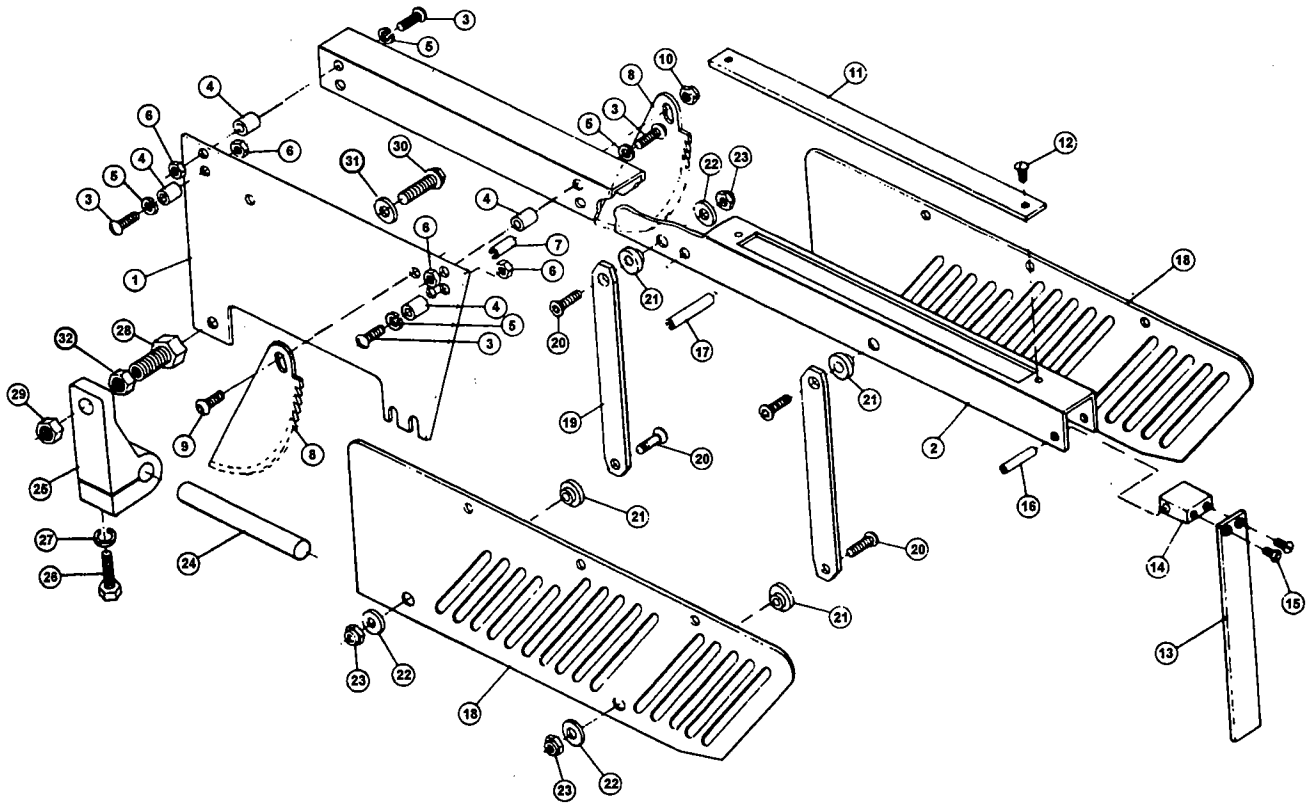
NO.	PART NO.	DESCRIPTION
	2271008	HANDWHEEL ASSY., 8" DIA.
1	6624006	PIN, GROOVE 1/4" DIA. X 2-3/4" KNURLED RIVET
2	3268201	HANDLE, NYLON
3	3271039	HANDWHEEL 8" DIA.
	2440009	CUP PT. LOCK ASSY., SAW RAISING & TILTING (Items 4 & 5)
4	3583011	PIN, LOCKING
5	3406018	KNOB
	2063017	BRACKET ASSY., SAW TILTING (Items 6 thru 14)
	2865006	WORM ASSY., SAW TILTING (Items 6 thru 8)
6	3865001	WORM, SAW RAISING & TILTING
7	3701026	SHAFT, SAW TILTING
8	6626031	PIN, SPRING 3/16 X 1-1/8"
9	3096244	COLLAR
10	3065006	BRACKET, SAW TILTING PIVOT
11	6861901	WASHER, FLAT NYLATRON E12, 3/4 I.D.
12	6420002	KEY, WOOD. #607 (LOCKING)
13	6715016	SCREW, SOC. SET, CUP PT. 5/16-18 X 1/4" (COLLAR)
14	6064002	BEARING, THRUST, NICE #607
15	3810038	TRUNNION, HOUSING
16	3810023	TRUNNION, FRONT AND REAR
17	3700090	SHAFT, SPLITTER SUPPORT 1"
18	6715039	SCREW, HEX. HD. CAP, 5/16-18 X 1-3/4"
19	3750010	SPLITTER
20	6716082	SCREW, SQ. HD. SET, 3/8-16 X 2-1/2" (SPLITTER)
21	6716031	SCREW, HEX. HD. CAP 3/8-16 X 1" (45 deg. STOP)
22	6516009	NUT, HEX. JAM 3/8-16
23	3711005	SAW ARM PIVOT SHAFT
24	6578003	NUT, HEX. FLEXLOC SELF LOCKING, 1-1/8 - 12
25	6670092	RETAINING RING, EXTERNAL
26	3690232	SCREW, ADJUSTING, 3/4-16 X 1-1/2
27	6572005	NUT, HEX. JAM, 3/4-16
28	6516001	NUT, HEX. 3/8-16
29	6861309	WASHER, 3/8" FLAT, PLATED
30	6716039	SCREW, HEX. HD. CAP, 3/8-16 X 1-1/4"
31	6861300	WASHER, 3/8" LOCK
32	6861301	WASHER, 3/8" FLAT
33	6715013	SCREW, SOC. SET KNURLED 5/16-18 X 3/8"
34	3604029	POINTER
35	6708012	SCREW, ROUND HD. MACH., #8-32 X 1/4"
36	6716081	SCREW, SQ. HD. SET 3/8-16 X 1-1/2"
37	6760078	SCREW, SOC. SET 10-32 X 3/8"
38	6716195	SCREW, SOC. SET 3/8-16 X 1-1/2
39	6861300	WASHER, LOCK 3/8"

EXPLODED VIEW: ARBOR



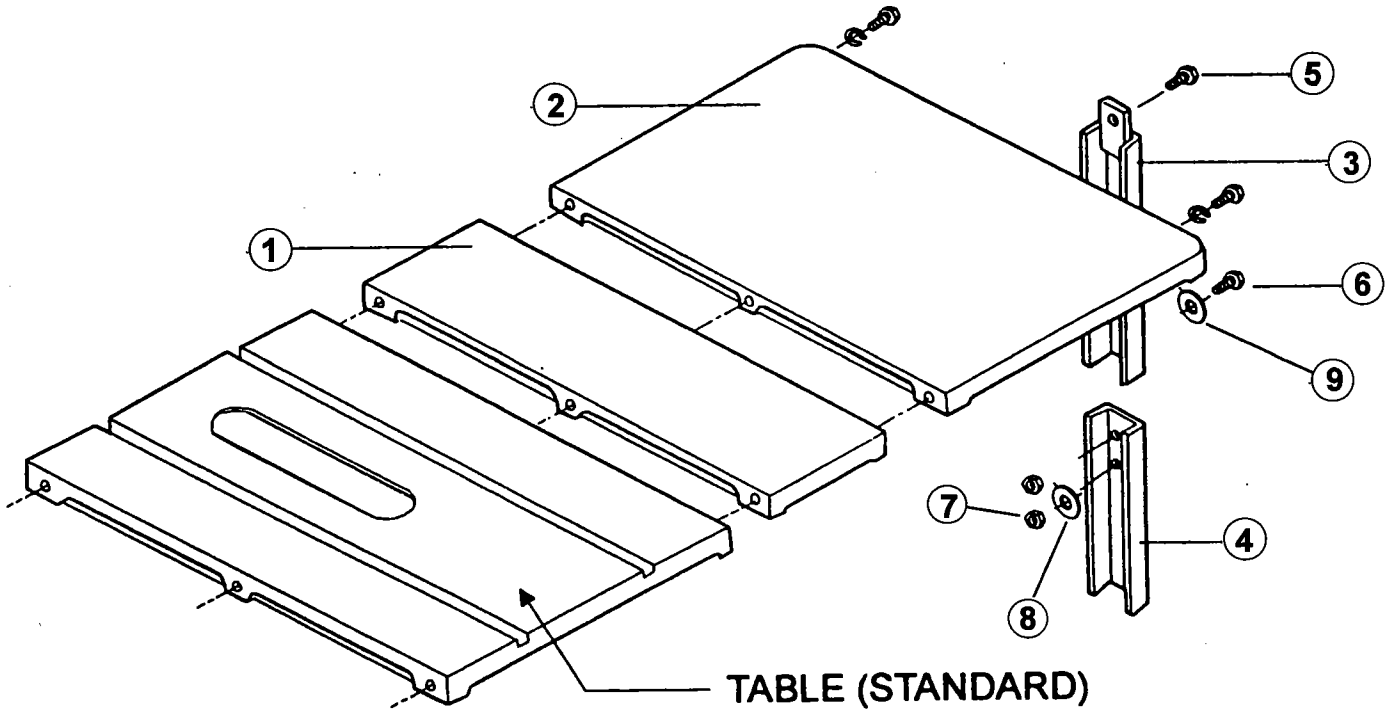
PARTS LIST: SPLITTER & GUARD ASSEMBLY

NO.	PART NO.	DESCRIPTION
	2250154	SPLITTER & GUARD ASSY. (Items 1 thru 23)
1	3750010	SPLITTER
2	3044341	BAR, SPLITTER
3	6714113	SCREW, ROUND HD. MACHINE 1/4-20 X 1"
4	3736012	SPACER
5	6861100	WASHER, LOCK PIN 1/4"
6	6514001	NUT, HEX. 1/4-20
7	6626039	PIN, SPRING 1/4" X 5/8"
8	3581005	PAWL, ANTI-KICKBACK
9	6716138	SCREW, BUT. HD. CAP 3/8-16 X 5/8"
10	6516020	NUT, FLEX LOCK (SH.) 3/8-16
11	3720209	SHIELD, GUARD
12	6710032	SCREW, RD. HD. MACHINE 10-24 X 1/4"
13	3720208	SHIELD, FRONT
14	3055094	BLOCK, PIVOT
15	6710030	SCREW, FLAT HD. MACHINE 10-24 X 1/4"
16	6626032	PIN, SPRING 3/16" X 1-1/4"
17	6626049	PIN, SPRING 3/8" X 2"
18	3250111	GUARD, BLADE
19	3025073	ARM, PIVOT
20	6714192	SCREW, FLAT HD. SOC. 1/4-20 X 7/8"
21	3070108	BUSHING, PIVOT
22	3838015	WASHER, PIVOT
23	6514012	NUT, FLEX LOCK (SH.)1/4-20
	2787008	10" REAR SPLITTER SUPPORT ASSY. (Items 24 thru 32)
24	3700090	SHAFT, UNTHREAD SPLITTER SUPPORT
25	3776050	SUPPORT, REAR SPLITTER
26	6715034	SCREW, HEX. HD. CAP 5/16-18 X 1-1/2"
27	6861200	WASHER, LOCK 5/16"
28	3690232	SCREW, ADJUSTING
29	6572005	NUT, HEX. 3/4-16
30	6716136	SCREW, HEX. HD. CAP 3/8-16 X 3/4"
31	6861301	WASHER, FLAT 3/8"
32	6572005	NUT, JAM 3/4-16



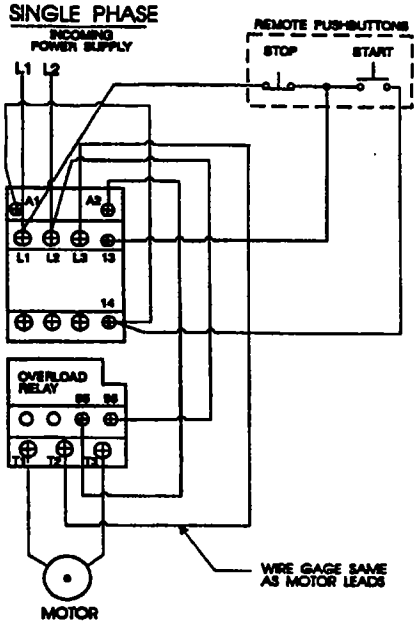
PARTS LIST: OPTIONAL TABLE EXTENSIONS 2389002

NO.	PART NO.	DESCRIPTION
1	3186004	EXTENSION TABLE, 11" SQUARE END
2	3186006	EXTENSION TABLE, 25" ROUND END
3	2423006	LEG ASSY., INNER WELDMENT
4	3186009	EXTENSIONS, LEG OUTER
5	6716031	SCREW, HEX. HD. 3/8-16 X 1"
6	6715036	SCREW, HEX. HD. 5/16-18 X 5/8"
7	6515001	NUT, HEX. STEEL 5/16-18
8	6861200	WASHER, LOCK 5/16"
9	6861201	WASHER, FLAT



ELECTRICAL SCHEMATIC

SINGLE PHASE



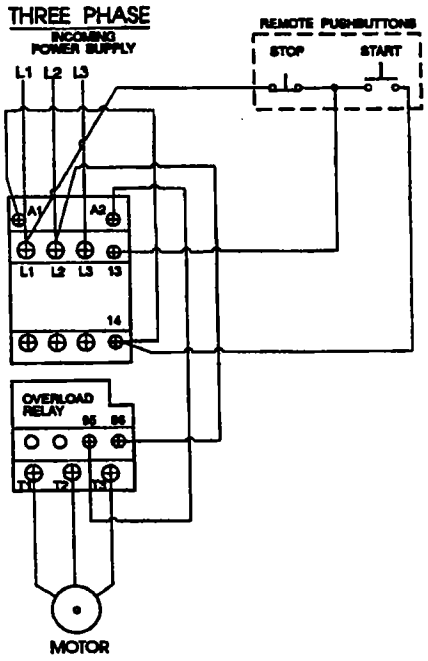
MAGNETIC STARTERS
Single Phase Controls

motor size	starter contactor	overload relay
3HP- 230V	6816266	6659052
5HP- 230V	6816269	6659053

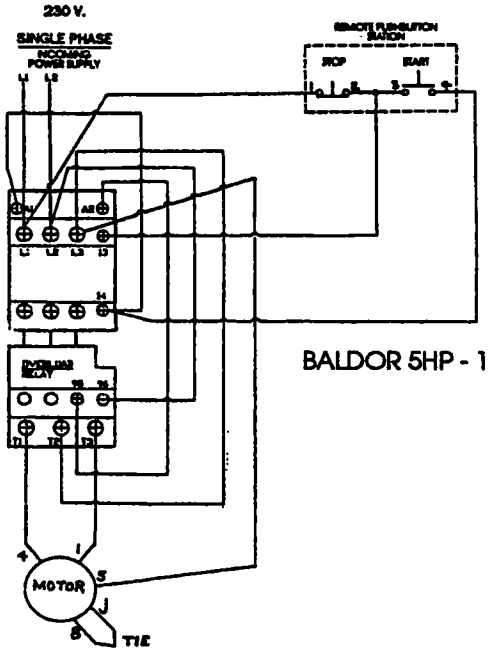
Three Phase Controls

5HP - 230V	6816266	6659051
5HP - 460V	6816262	6659049
7.5 - 230V	6816268	6659053
7.5 - 460V	6816265	6659050

THREE PHASE



SPECIAL CONNECTION TO PREVENT REGENERATION



BALDOR 5HP - 1 PHASE

NOTES

NOTES

To order parts or reach our service department, please call our toll-free number between 8:00 a.m. and 4:30 p.m. (CST), Monday through Friday. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately. Locating the EDP number of the part(s) required from your parts manual will also expedite your order.

Phone No.: 800-248-0144
Fax No. 615-473-7819
If you are calling from Canada, please call 800-238-4746

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