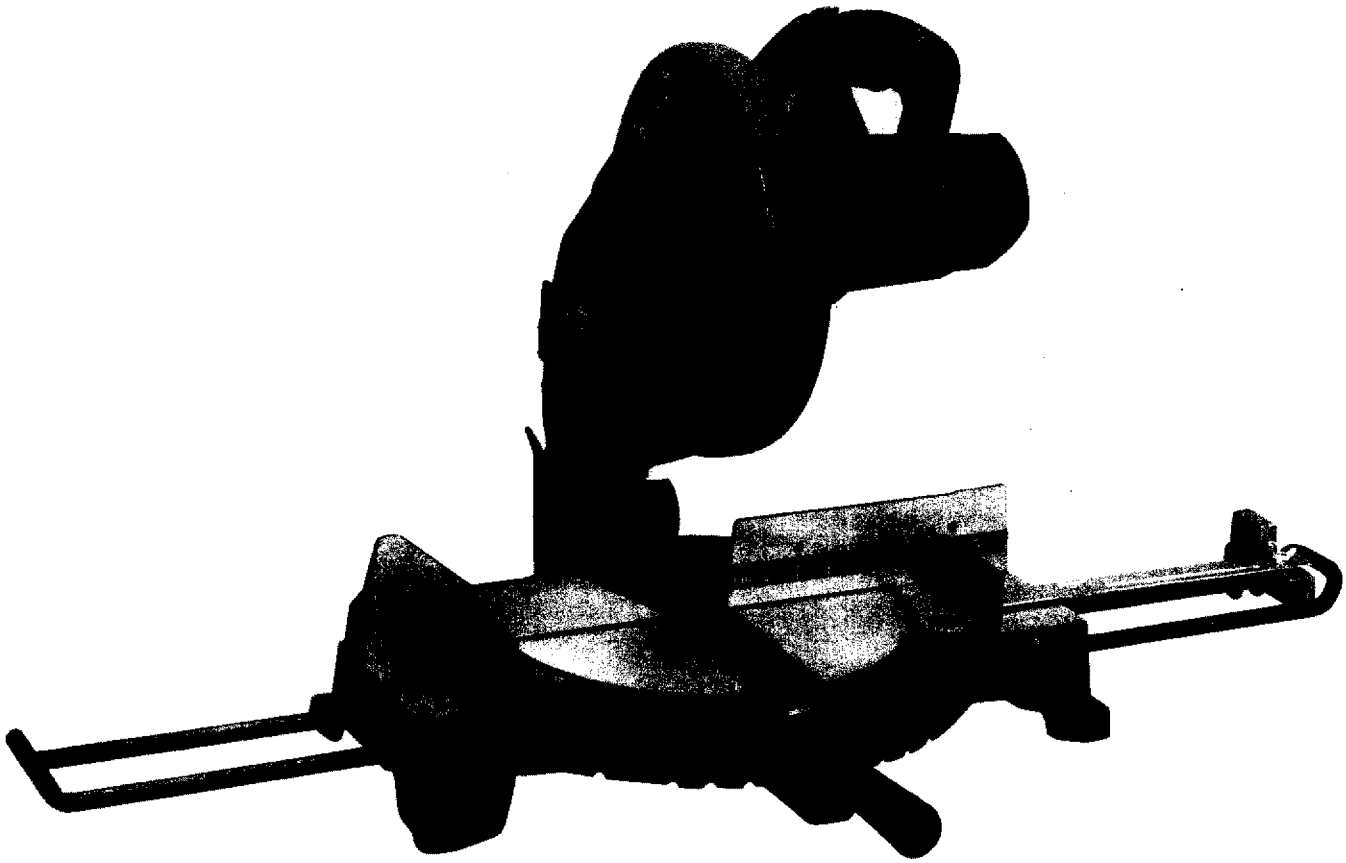
INSTRUCTION MANUAL

MODEL:7208 Type II

OM-7208II

10" Compound Miter Saw

For Your Own Safety, Read Instruction Manual
Before Starting Operations.



Record the Model No. and Serial No. and date of purchase in your manual for future reference.

Model No._____

Serial No._____

Date of Purchase_____

72082-140

Contents

General Safety Rules

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
This tool is DOUBLE INSULATED to give you added protection. Double insulation does not take the place of normal safety precautions when operating this tool. When servicing this double insulated tool, use only identical parts.

3.Keep Guards in Place
In working order, and in proper adjustment and alignment.

4.Remove Adjusting Keys and Wrenches
Form a 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 tools 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) which may 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
Wear safety goggles (must comply with ANSIZ 87.1) at all times. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses. Also, use face or dust mask if cutting operation is dusty, and ear protectors (plugs or muffs) during extended periods or operation.

13.Secure Work
Use clamps or a vise to hold work when practical. It's safer than using your hands and frees both hands to operate tool.

14.Don't Overreach
Keep proper footing and balance at all times.

15.Maintain Tools with Care
Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing blades, bits, cutters, etc.

16.Disconnect Tools
Before servicing, when changing accessories such as blades, bits, cutters, etc.

17.Avoid Accidental Starting
Make sure switch is in "OFF" position before plugging in.

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

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

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

21.Never Leave Tool Running Unattended
Turn power off. Don't leave tool until it comes to a complete stop.

Special Safety Rules for Miter Saw

WARNING: For your own safety, do not operate your miter saw until it is completely assembled and installed according to the instructions...and until you have read and understood the following.

BEFORE USING THE SAW:

1. Assembly and alignment.
2. Learn the function and proper use of:
   A. The on-off switch.
   B. The upper and lower blade guards.
   C. The arbor lock and handle latch.
   D. The bevel clamp, fence clamps, and miter lock handle.
3. Read and understand all safety instructions and operating procedures throughout the manual.
4. Read the warning label on the miter saw.

WHEN INSTALLING OR MOVING THE SAW:

1. To avoid injury from unexpected saw movement:
   A. Place the saw on a firm level surface where there is plenty of room for handling and properly supporting the workpiece.
   B. Support the saw so the table is level and the saw does not rock.
   C. Bolt or clamp the saw to its support.
2. Before moving the saw, lock the miter, bevel and power-head positions. Unplug electric cord.
3. To avoid back injury, get help when you need to lift the saw more than 10 inches. Hold the tool close to your body. Bend your knees so you can lift with your legs, not your back. Lift by using the hand-hold areas at the bottom of the base. Never carry the tool by the cord or power head handle. Damage to insulation could cause an electric shock. Damage to wire connections could cause a fire.

BEFORE EACH USE:

1. Inspect your saw. If any part of this miter saw is missing, or bent, or has failed in any way, or any electrical parts don't work properly, turn the saw off and unplug the saw. Replace damaged, missing, or failed parts before using the saw again.
2. Plan Your Work to protect your eyes, hands, face, and ears.
   A. Wear safety goggles (not glasses) that comply with ANSIZ87.1(shown on package). Using any power tool can result in foreign objects being thrown into the eyes, which can result in permanent eye damage. Safety goggles are available at stores. Use of glasses or use of goggles not in compliance with ANSIZ87.1 could result in severe injury from breakage of the eye protection.

   B. For dusty operations, wear a face shield along with safety goggles.
   C. To avoid injury from jams, slips or thrown pieces:
   - Choose the right 10-inch diameter blade for the material and the type of cutting you plan to do. Use this miter saw to cut only wood, wood-like products or soft metals like aluminum. Other materials may shatter, grab at the blade, or create other dangers.
   - Make sure the direction of rotation arrow on the blade matches the direction arrow on the saw. The blade teeth should always point downward at the front of the saw.
   - Make sure the blade is sharp, undamaged and properly aligned. With the saw unplugged, push the power-head all the way down. Hand spin the blade and check for clearance. Tilt the power-head to 45 degree bevel and repeat the check. If the blade hits anything, make the adjustments shown in the Maintaining Maximum Cutting Capacity section.
   - Make sure the blade and arbor collars are clean.
   - Make sure the collars' recessed sides are facing toward the blade.
   - Make sure the recessed side of the blade washer (just under the arbor screw head) faces the collar.
   - Using 1/2-inch box end wrench, make sure the arbor cap screw retaining the blade collars is firmly hand tightened.
   - Make sure all clamps and locks are tight and there is no excessive play in any parts.
   - Never cut **FREEHAND:**
     a. Brace your workpiece solidly against the fence and table top so it will not rock or twist during the cut. Make sure no debris is caught beneath the workpiece.
     b. Make sure no gaps between the workpiece, fence and table will let the workpiece shift after it is cut in two.
     c. Use jigs, fixtures or a different tool for unstable workpieces.

- Never cut more than one workpiece at a time.
- Make sure the cut off piece can move sideways after it's cut off. Otherwise, it could get wedged against the blade and thrown violently.
- **Use extra caution with large, very small or awkward workpieces:**
  a. **Use extra supports (tables, saw horses, blocks, etc.)for any workpieces large enough to tip when not held down to the table top.**
  b. Do not use this saw to cut pieces too small to let you easily hold the work while you keep the thumb side of your index (pointer) finger against the outside edge of the fence.
  c. When cutting irregularly shaped workpieces, plan your work so it will not slip and pinch the blade. A piece of molding, for example, must lie flat or be held by a fixture or jig that will not let it twist, rock or slip while being cut.
  d. Properly support round material such as dowel rods, or tubing. They have a tendency to roll while being cut, causing the blade to "bite." To avoid this, always use a fixture designed to properly hold your work piece.
- Make sure there are no nails or foreign objects in the part of the workpiece to be cut.
- Make sure bystanders are clear of the tool and workpiece. Keep them clear of the area behind the saw where debris will be thrown.
- Never turn your miter saw "ON" before clearing everything except the workpiece and related support devices off the table.

D. To avoid risk of hearing damage, wear ear plugs or muffs during extended periods of operation.

E. To avoid being suddenly pulled into the blade:
  1. Do not wear gloves.
  2. Remove all jewelry and loose clothing.
  3. Tie back long hair.
  4. Roll long sleeves above the elbow.

F. **To avoid injury from accidental starting, always unplug saw before disconnecting the guard, installing or removing any blade, accessory or attachment, or making any adjustments.**

G. To avoid an electrical shock, make sure your fingers do not touch the metal prongs on the plug when inserting or removing the plug to or from a live outlet.

H. Never put lubricants on the blade while it's spinning.

I. To avoid burns or other fire damage, never use the saw near flammable liquids, vapors or gases.

J. To avoid injury from unsafe accessories, use only accessories shown on the recommended accessories list in this manual.

WHENEVER SAW IS RUNNING:

WARNING: Don't allow familiarity (gained from frequent use of your miter saw) to cause a careless mistake. Always remember that a careless fraction of a second is enough to cause a severe injury.

1. Before actually cutting with the saw, let it run for a while. If your saw makes an unfamiliar noise or if it vibrates excessively, stop immediately. Turn the saw off. Unplug the saw. Do not restart until finding and correcting the problem.
2. Never confine the piece being cut off. Never hold it, clamp it, touch it, or use length stops against it. It must be free to move sideways. If confined, it could get wedged against the blade and thrown violently.
3. Avoid awkward hand positions where a sudden slip could cause a hand to move into the blade.
4. Let the blade reach full speed before cutting.
5. Feed the saw into the workpiece only fast enough to let the blade cut without bogging down or binding.
6. Before freeing jammed material, release switch and unplug the saw. Wait for all moving parts to stop.
7. After finishing a cut, keep holding the powerhead down, release the switch, and wait for all moving parts to stop before moving your hands.

Motor Specifications and Electrical Requirements

POWER SUPPLY

Motor Specifications

The AC motor used in this saw is a universal, nonreversible type having the following specifications:

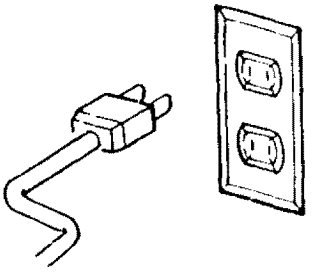
Maximum Developed H.P.	3
Voltage	120
Amperes	15
Hertz (Cycles)	60
Phase	Single
RPM	**4500**
Rotation of Shaft	Clock wise
Brake	Automatic

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. To avoid shock or fire, if power cord is worn or cut, or damaged in any way, have it replaced immediately.

DOUBLE INSULATED

The miter saw is double insulated to provide a double thickness of insulation between you and the tool's electrical system. All exposed metal parts are isolated from the internal metal motor components with protective insulation.

Your unit has a plug that looks like the one shown below.



This power tool is equipped with a 2-conductor cord listed by Underwriters Laboratories (UL). The plug permits you to use any conventional 120-volt electrical outlet without necessity for maintaining a ground connection.

CAUTION: Double insulation does not take the place of normal safety precautions when operating this tool.

DANGER: To avoid electrocution:

1. Use only identical replacement parts when servicing a tool with double insulation. Servicing should be performed by a qualified service technician.
2. Do not use in rain or where floor is wet. This tool is intended for indoor residential use only.

MOTOR SAFETY PROTECTION

CAUTION: To avoid motor damage, this motor should be blown out or vacuumed frequently to keep sawdust from interfering with normal motor ventilation.

1. Connect this tool to a 120V, 15-amp branch circuit with a 15-amp time delay fuse or circuit breaker.Using the wrong size fuse can damage the motor.
2. If the motor won't start, release the trigger switch immediately. UNPLUG THE TOOL. Check the saw blade to make sure it turns freely. If the blade is free, try to start the motor again. If the motor still does not start, refer to the "Motor Trouble-Shooting Chart."
3. If the motor suddenly stalls while cutting wood, release the trigger switch, unplug the tool, and free the blade from the wood. Then you may restart the motor and finish the cut.
4. Fuses may "blow"or circuit breakers may trip frequently if:
   a. MOTOR IS OVERLOADED-Overloading can occur if you feed too rapidly or make too many start/stops in a short time.
   b. Voltages not more than 10% above or below the nameplate voltage can handle normal loads. For heavy loads, however, the voltage at motor terminals must equal the voltage specified on nameplate.
5. Most motor troubles may be traced to loose or incorrect connections, overload, low voltage (such as small size wire in the supply circuit) or to overly long supply circuit wire. Always check the connections, the load and the supply circuit whenever motor doesn't work well. Check wire sizes and length with the Wire Size Chart below.

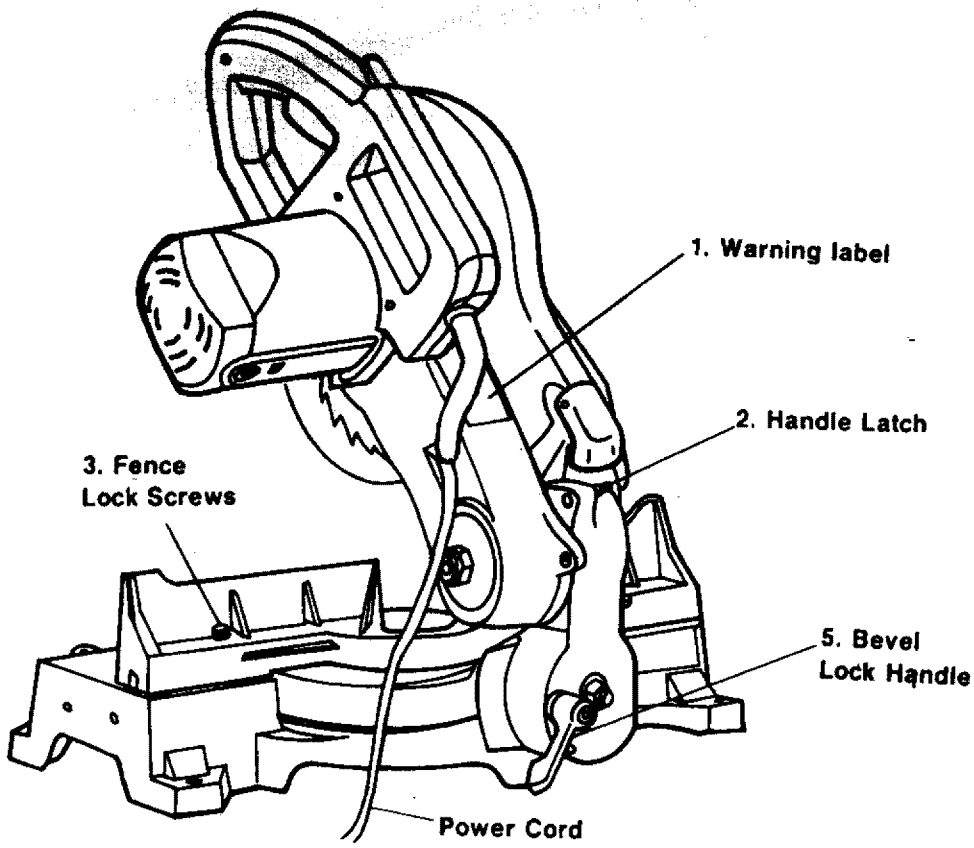
WIRE SIZES

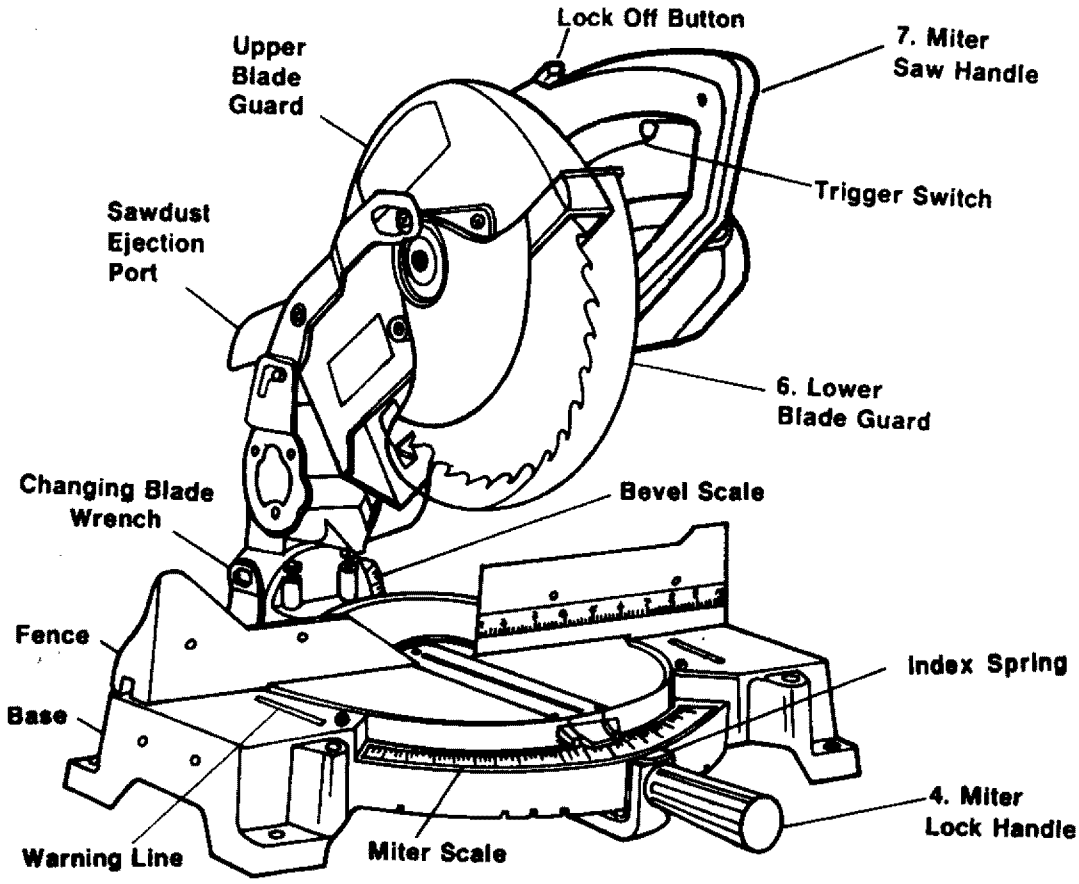
The use of any extension cord will cause some loss of power. To keep this to a minimum and to prevent overheating and motor burn-out, use the table below to determine the minimum wire size (A.W.G.) extension cord.

For circuits that are farther than 100 feet 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 For 120V (American Wire Gage Number)
0-25Ft	No.16
26-50Ft	No.14
51-100Ft	No.12

Getting To Know Your Miter Saw





Getting To Know Your Miter Saw

1. **Warning label**
2. **Handle Latch**

   The miter saw can be locked in the lowered position for compact storage
3. **Fence Lock Screws**

   The fence has two positions for increased crosscut capacity. The lock screws secure the fence to the base. The saw is shipped with the fence in the rear position.
4. **Miter Lock Handle**

   The miter lock handle securely locks the miter saw at a desired miter angle. Index points have been provided at 0°,15°R/L, 22.5°R/L,30°R/L,and 45°R/L.
5. **Bevel Lock Handle**

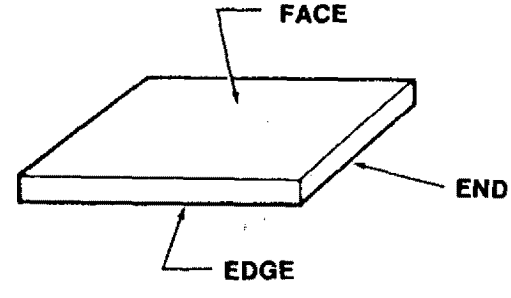
   The bevel lock handle locks the miter saw at a desired bevel angle.
6. **Lower Blade Guard**

   The blade guard helps protect your hands from the blade in the raised position. To avoid binding on the workpiece, it retracts as the blade is lowered.
7. **Miter Saw Handle**

   The saw handle contains the trigger switch with a lock-off button. The blade is lowered into the workpiece by pushing down on the handle. The saw will return to it's upright position when the handle is released.

Glossary of Terms

Arbor
The shaft on which a cutting tool is mounted.
Bevel Cut
An angle cutting operation made through the face of the workpiece.
Compound Cut
A simultaneous bevel and miter cutting operation.
Grosscut
A cutting operation made across the width of the workpiece.
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.
Revolutions Per Minute (RPM)
The number of turns completed by a spinning object in one minute.
Sawblade Path
The area of the workpiece or table top 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.
Gum
A sticky, sap based residue from wood products.
Heel
Misalignment of the blade.
Kerf
The amount of material removed by the blade in a through cut or the slot produced by the blade in a nonthrough or partial cut.
Miter Cut
An angle cutting operation made across the width of the workpiece.
Resin
A sticky, sap based substance that has hardened.
Workpiece
The item on which the cutting operation is being performed. The surfaces of a workpiece are commonly referred to as faces, ends, and edges.

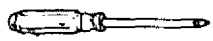


Unpacking and Checking Contents

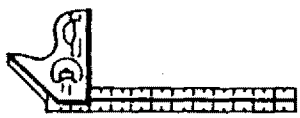
TOOLS NEEDED FOR ASSEMBLY

MEDIUM SCREWDRIVER

ADJUSTABLE WRENCH



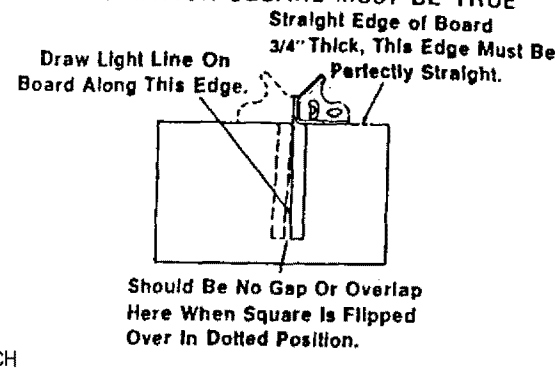
#2 PHILLIPS SCREWDRIVER

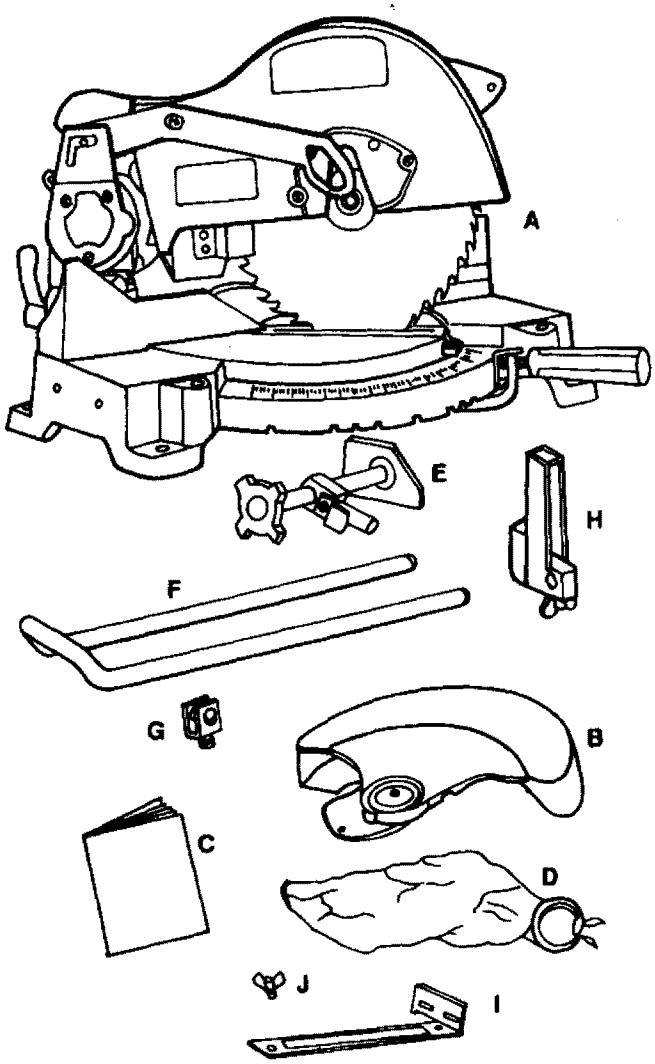


COMBINATION SQUARE

6mm HEX. "L" WRENCH

COMBINATION SQUARE MUST BE TRUE





The Miter Saw is shipped complete in one carton.

Separate all parts from packing materials and check each item with illustration and "Table of Loose Parts." Make certain all items are accounted for, before discarding any packing material.

WARNING: If any parts are missing, do not try to assemble the miter saw, plug in the power cord or turn the switch on until the missing parts are obtained and installed correctly.

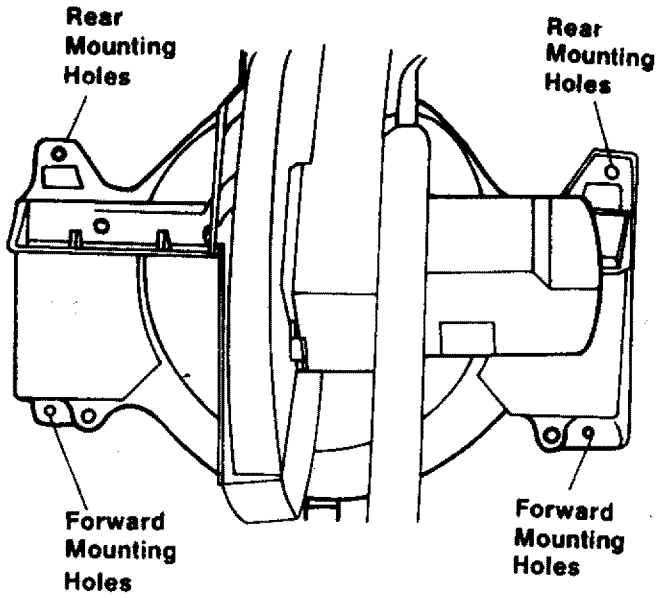
ITEM	TABLE OF LOOSE PARTS	QTY.
A	Basic Saw Assembly	1
B	Lower Guard Assembly	1
C	Instruction Manual	1
D	Dust Bag	1
E	Clamp Assembly	1
F	Slide Extension Arm	2
G	"U" Bracket/screw	2
H	Stop Block/Wing Screw	1
I	Stop Fence Plate	1
J	Wing Screw	1

MOUNTING THE SAW

WARNING: To avoid injury from unexpected saw movement, you must read and uderstand the following:

1. Before moving the saw, lock the miter, bevel and power-head positions. Unplug electric cord.
2. To avoid back injury, get help when you need to lift the saw more than 10 inches. Hold the tool close to your body. Bend your knees so you can lift with your legs, not your back. Lift by using the hand-hold areas at the bottom of the base
3. Never carry the miter saw by the power cord or the plastic handle. Carrying the tool by the power cord could cause damage to the insulation or the wire connections resulting in electric shock or fire.
4. Place the saw so other people cannot stand behind it. Thrown debris could injure people in its path.
5. Place the saw on a firm, level surface where there is plenty of room for handling and properly supporting the workpiece.
6. Support the saw so the table is level and the saw does not rock.
7. Bolt or clamp the saw to its support

Place the saw in the desired location either on a work bench or the recommended leg set. The base of the saw has four holes to mount the miter saw (see illustration). If the saw is to be used in one location, fasten it to the work bench or leg set.

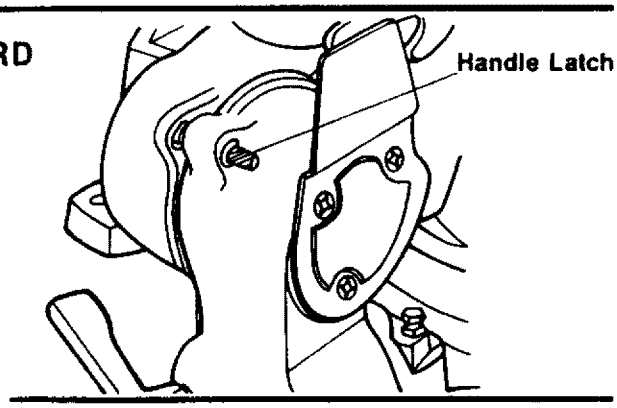


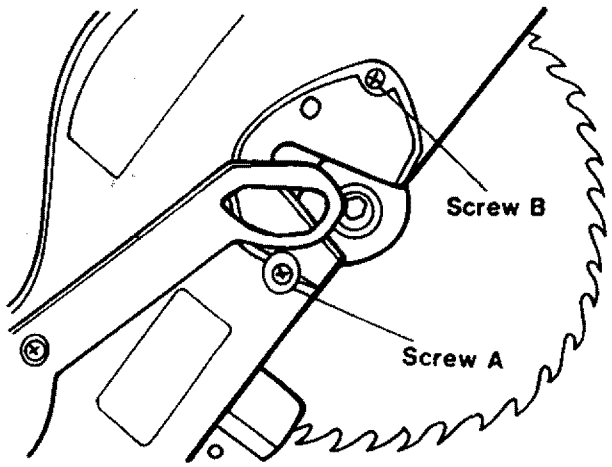
ASSEMBLING THE LOWER BLADE GUARD

WARNING: To avoid injury from unexpected starting or electrical shock, do not plug the saw in until all assembly and alignment steps are complete. The power cord must remain unplugged whenever you are working on the saw.

NOTE: For compact shipment the lower blade guard has been disconnected.

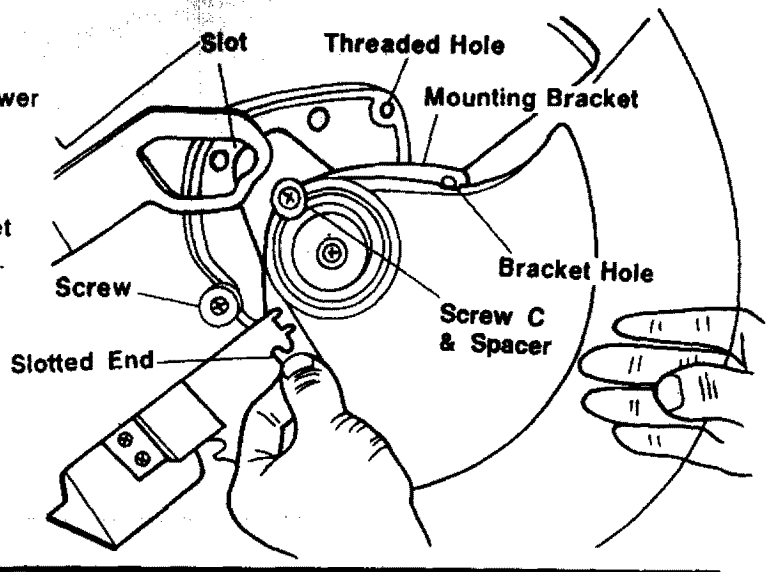
1. The miter saw is equipped with a handle latch used to lock the miter saw in the lowered position. To release, push the handle down slightly and pull the handle latch to the other side.
2. Release the handle latch and raise the saw to its up position.
3. Loosen screw A and remove screw B.





4.Remove the screw C and spacer in the lower guard.

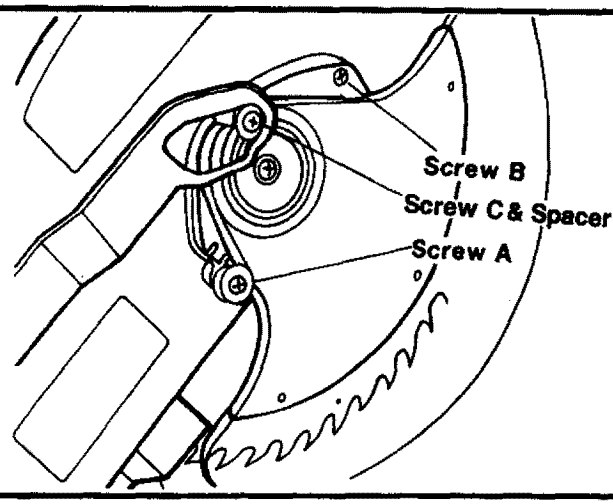
5.Slide slotted end of lower guard mounting bracket under screw head and rotate lower guard mounting bracket until hole in bracket lines up with threaded hole in upper guard.



6.Replace screw B, that was removed in step 3. Tighten screw A and screw B.

7. Replace screw C and spacer, that were removed in step 4. Tighten the screw C and spacer through the slot.

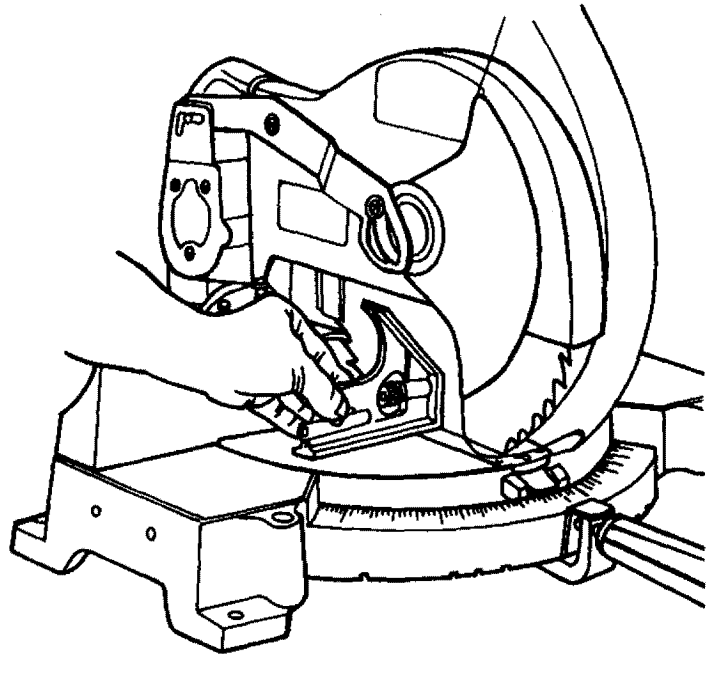
NOTE: With the blade guard attached, the guard should raise as the blade is lowered towards the work table and drop to cover the blade as the power head is raised.



BLADE SQUARE TO TABLE

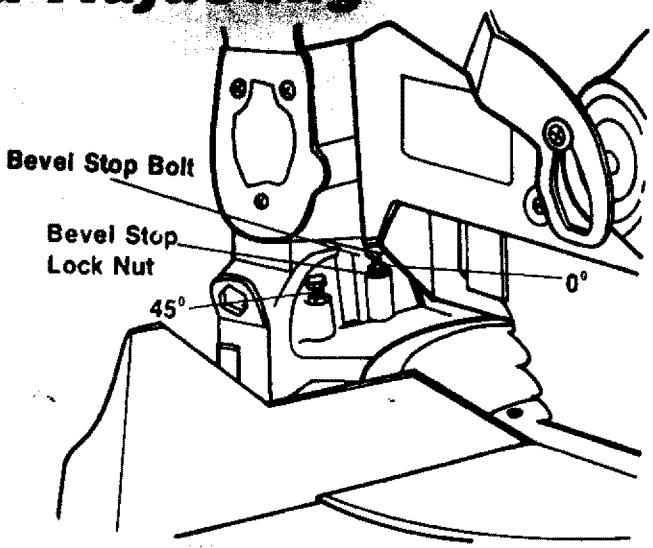
NOTE: The miter saw was assembled aligned and inspected before shipment. Alignment should be checked and any adjustments made to insure accurate cuts.

1. Check miter lock handle setting. The miter lock handle should be at the 0° position. To reset the miter angle, turn the miter lock handle counter clockwise and press down the index spring.
2. Lower the blade and lock the handle latch. Use the combination square to check blade squareness to table. If the blade does not contact the full length of the square, follow the alignment procedure.
   a. Loosen the bevel lock handle.
   b. Grasp the metal upper guard and move the cutting head to the left as far as it will go.



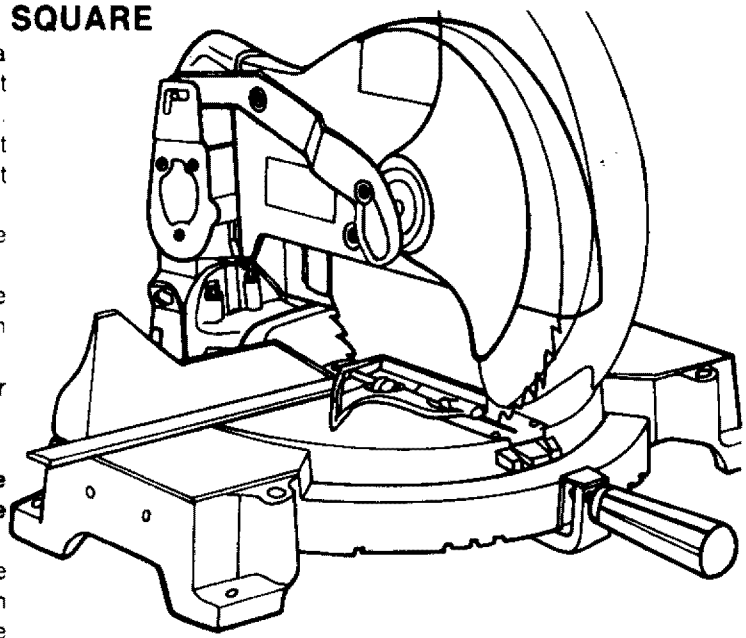
c. Loosen the right side bevel stop lock nut. Lower the bevel stop bolt down as far as it will go.
d. Grasp the metal upper guard again and position the cutting head until the blade makes contact with the full length of the square.
e. Tighten the bevel lock handle.
f. Use 10mm wrench end to hold the bevel stop lock nut in place.
g. Use another wrench to turn the bevel stop bolt until it hits the bottom of the bevel stop.
h. Lock the bevel stop nut.

3. Check the bevel indicator. If indicator needs adjustment use a phillips screwdriver and slide the indicator to the 0° on the scale.



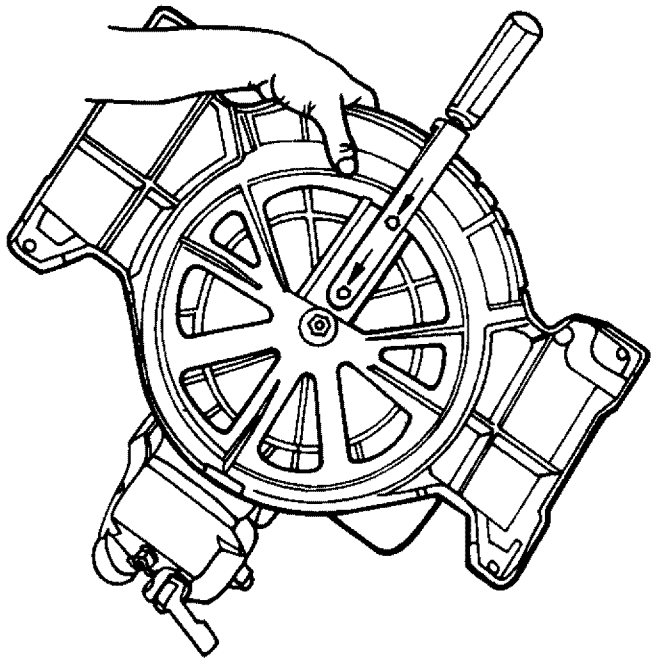
CHECKING AND ADJUSTING BLADE SQUARE

1. To check blade squareness to fence, use a combination square. Place the square against the fence and next to the blade as illustrated. Place the square so the set in the teeth won't hold it from the blade. The blade should contact the full length of the square.
2. If blade is not square to the fence, follow the alignment procedure.
   a. Loosen miter lock handle a half turn. The latch handle should still be secured with blade in lowered position.
   NOTE: Take the saw off its stand, bench or plywood base if readjustment is necessary.



CAUTION: To keep from losing control of the unit, steady the base with one hand while loosening the two bolts with the other hand.

   b. With the unit securely resting on a large stable surface, tilt the unit by lifting up on one side or the other of the base. Loosen the two miter arm bolts on the underside of the turn table with a 6mm hex. "L" wrench. Tilt the unit by lifting up on one side or the other side of the base.
   c. Return the saw to its normal resting position. Make sure the miter lock handle is loose but do not release the index spring.
   d. Use the miter saw handle to turn the turn table and saw so that the blade contacts the full length of the square. Watch out for tooth set. Turn the miter lock handle clockwise to lock saw square to fence.
   e. Tilt saw as in Step b and tighten bolts.
   f. Recheck blade squareness to fence and readjust if necessary.



Adjustment of Miter Scale Indicator

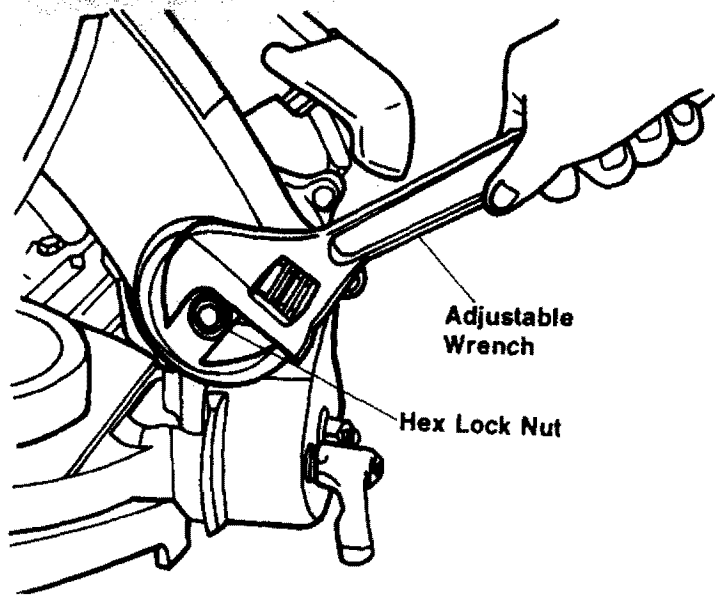
1. Loosen the phillips screws that hold the indicator in place. Reposition the indicator and retighten screw.

Assembly & Adjusting

TRAVEL PIVOT ADJUSTMENT

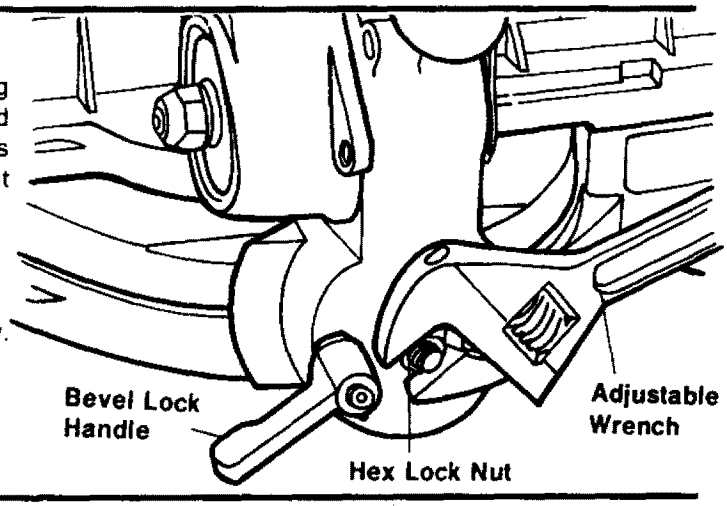
NOTE: These adjustments were made at the factory and normally do not require readjustment.

1. The miter saw should rise completely to the up position by itself. If the saw will not raise by itself or if there is play in the pivot joints the following adjustments are necessary.
   a. Loosen the hex lock nut with an adjustable or 24mm wrench.
   b. Recheck the saw travel. Saw should rise freely to its up travel stop. Check to see that the saw will raise from all positions and there is no looseness in the pivot. If saw still won't fully rise, have service check and repair it.



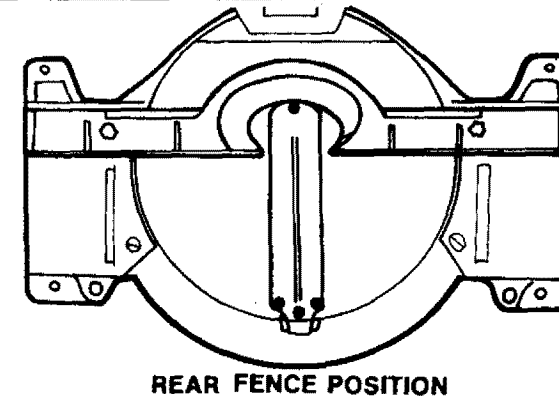
BEVEL PIVOT ADJUSTMENT

1. The miter saw should bevel easily by loosening the bevel lock handle and tilting the power head to the left. If movement is tight or if there is looseness in the pivot follow the adjustment procedure.
   a. Loosen the bevel lock handle.
   b. Turn the hex lock nut with an adjustable or 3/4" wrench.
   c. Recheck bevel movement of the miter saw. Readjust if necessary.

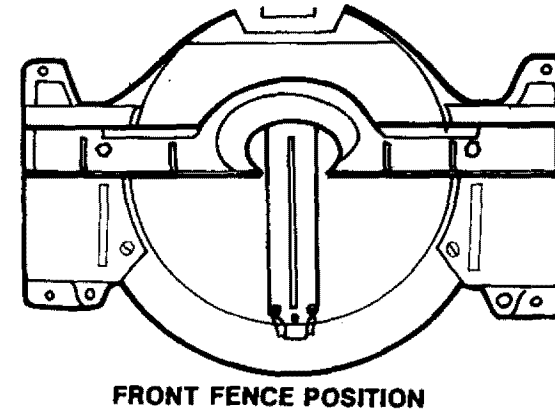


FENCE POSITIONS

The miter saw has two fence positions.The front fence position is used for workpieces up to standard 2×4 for cut off and bevel operation, floor and ceiling moldings, and door casings. The rear fence position is used for cut off and bevel operation for a standard 2×6 workpiece.
Standard 2×4 measures 1 1/2"×3 1/2"
Standard 2×6 measures 1 1/2"×5 1/2"
The base on either side of the work table has two sets of holes for locating the fence. To change the fence position, remove the two fence lock screws. Put the fence in the other fence position and install the fence lock screws.



REAR FENCE POSITION



FRONT FENCE POSITION

On/Off Trigger Switch

To prevent the trigger from being accidentally engaged, a lock-off button is provided. To start the tool, press in the lock-off button and squeeze the trigger. Release the trigger to stop the miter saw.

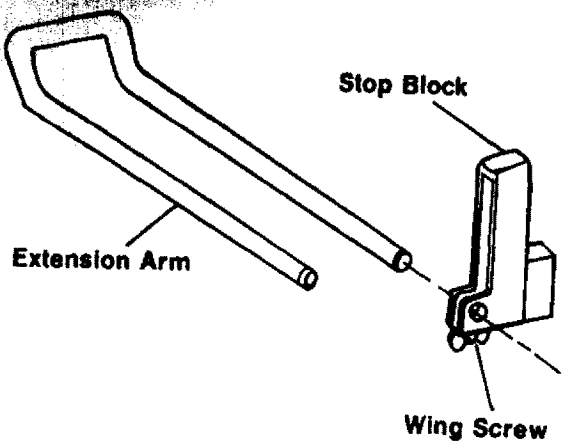
Assembly & Adjusting

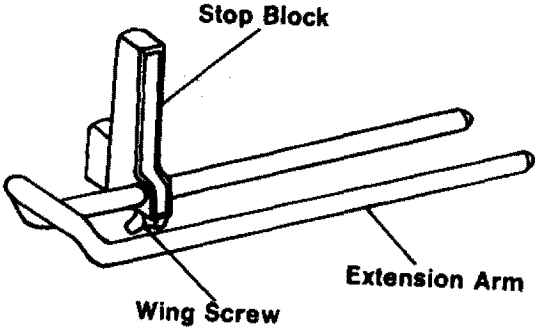
ASSEMBLING EXTENSION ARM AND CLAMP

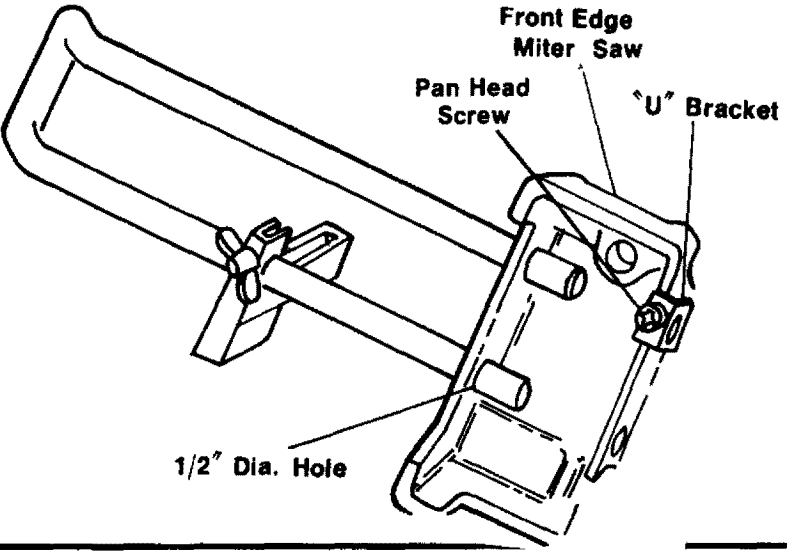
1. **Place saw in the 0° degree miter position.**
2. **Lock the miter saw in the lowered position.**

NOTE: The extension arm with attached stop block can be mounted on the left or right side of saw to suit your operation.

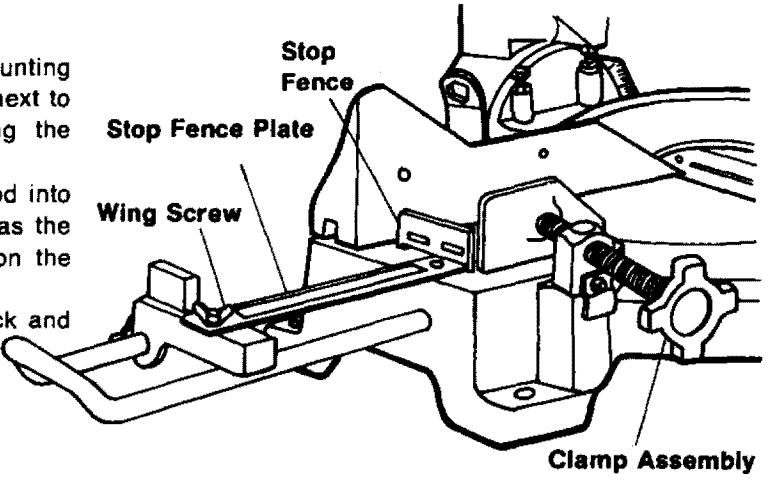
3. Tilt saw back on its rear legs to expose underneath of base.
4. Slide adjustable stop block over back rail of side extension arm.
5. Slide extension arm through first pair of 1/2″ diameter holes on outside of miter saw base.
6. Find the second pair of holes underneath miter saw base. Put "U" bracket over hole nearest to the front edge of the miter saw.
7. Slide extension arm through both the second pair of holes and "U" bracket. Make sure the extension arm passes completely through the second pair of holes.
8. Tighten Screw on "U" bracket with screwdriver to hold extension arm in place.
9. Repeat steps 1-8 for other side of miter saw Omitting step 4-installation of stop block.







10. Set the saw back down.
11. Find the two 3/8″ diameter forward mounting holes. Find the two 5/8″ diameter holes next to them. Use the 5/8″ holes for mounting the clamp assembly.
12. Put the clamp assembly 5/8″ diameter rod into the hole on the same side of the blade as the stop block. Make sure clamp guide is on the outside of the saw base.
13. Put the stop fence plate on the stop block and tighten wing screw to set it in place.



Assembly & Adjusting

REMOVING OR INSTALLING THE BLADE

WARNING: To avoid injury from a thrown workpiece or thrown pieces of blade, do not use a blade larger or smaller than 10" diameter.

NOTE: To avoid injury from unexpected starting, unplug the saw whenever you are removing or installing the blade.

1. Unplug the saw from the outlet.
2. Loosen the screw A and remove the screw B holding the lower guard mounting plate to the upper guard with phillips screwdriver.
3. Lift the lower guard up and tilt the lower guard assembly back so the arbor screw is exposed.
4. Find the arbor lock between the upper guard and the miter saw handle. Place changing blade wrench over arbor screw.
5. Press the arbor lock and hold it in firmly while turning the wrench clockwise. The arbor lock will engage after some turning of the wrench.
6. Remove the arbor screw, arbor washer, outer blade collar, and the blade.

NOTE: Pay attention to pieces removed, noting their position and direction they face (see illustration). Wipe the blade collars clean of any saw dust before installing the new blades.

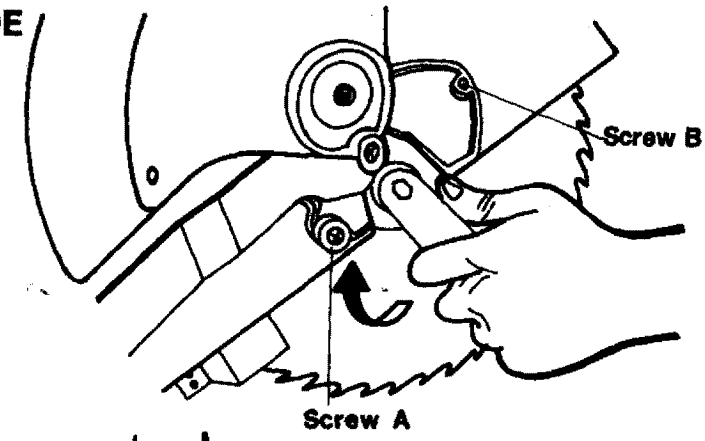
7. Install the new 10" blade. Make sure the rotation arrow on the blade matches the clockwise rotation arrow on the upper guard.
8. Install the outer blade collar, arbor washer and arbor screw. Press the arbor lock and turn the 1/2" wrench counter clockwise to secure the blade. Tighten arbor screw securely.
9. Lower the lower blade guard. Tighten the screw A and B with a phillips screwdriver.

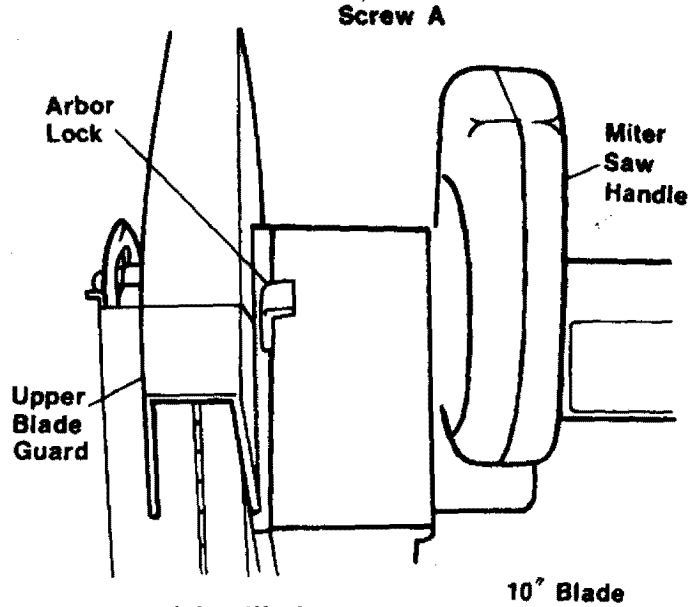
DANGER: Never use saw without mounting plate securely in place. It keeps the arbor screw from falling out if it accidentally loosens, and prevents the spinning blade from coming off the machine.

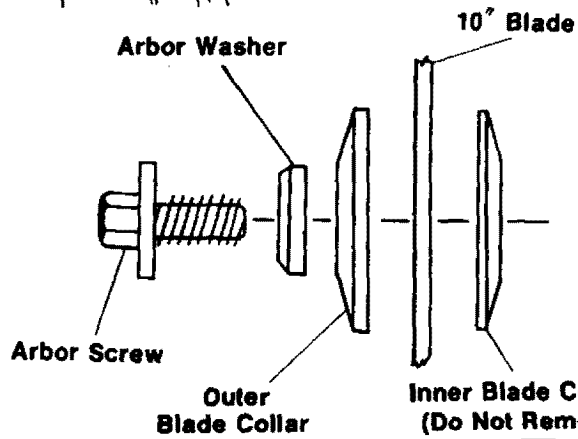
10. Be sure the arbor lock is released so the blade turns freely.

NOTE: The arbor lock can be damaged by improper use. If the arbor lock will not hold, lower the blade down on to a scrap piece of wood positioned against the fence. This will serve as an alternate locking means.

11. If blade contacts turn table, refer to assembly and alignment, for adjustment.







WARNING: After installing a new blade, make sure the blade clears the table slot at the 0° and 45° bevel positions. Lower the blade into the lower table and check for any contact with the base or turn table structure.

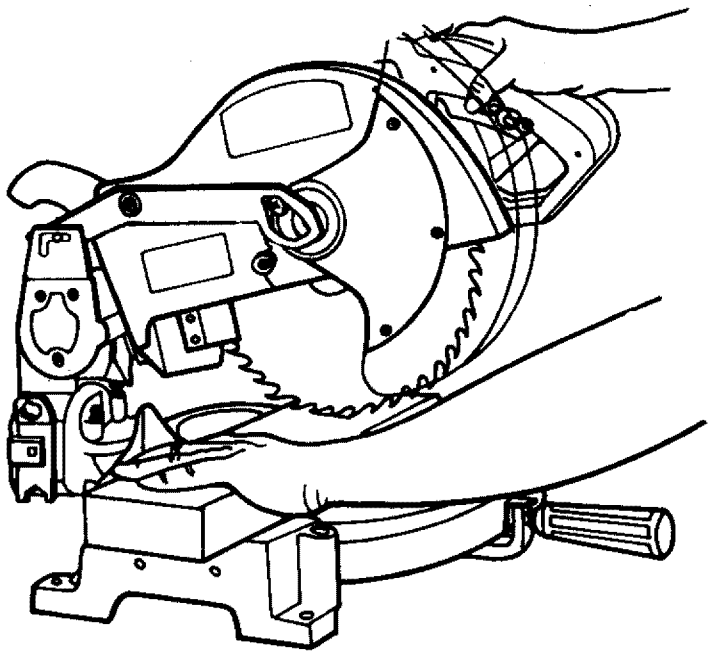
Basic Miter Saw Operation

1. Inspect your saw. Replace damaged missing or failed parts before using the saw.
2. Wear safety goggles (not glasses) that comply with ANSI Z87.1 (shown on package).
3. For dusty operations, wear a face shield along with safety goggles.
4. To avoid injury from jams, slips or thrown pieces:
   a. Choose the right 10-inch diameter blade for the material and the type of cutting you plan to do. Use this miter saw to cut only wood, woodlike products or soft metals like aluminum. Other materials may shatter, grab at the blade or create other dangers.
   b. Make sure the direction of rotation arrow on the blade matches the direction arrow on the saw. The teeth of the blade should always point downward at the front of the saw.
   c. Make sure the blade is sharp, undamaged and properly aligned.
   d. Make sure the blade and arbor collars are clean.
   e. Make sure the collars' recessed sides are facing toward the blade.
   f. Make sure the recessed side of the blade washer (just under the arbor screw head) faces the collar.
   g. Using a 1/2" box end wrench, make sure the arbor screw retaining the blade collars is firmly hand tightened.
   h. Make sure all clamps and locks are tight and there is no excessive play in any parts.
5. Never cut more than one workpiece at a time.
6. Make sure the cut off piece can move sideways after it's cut off. Otherwise, it could get wedged against the blade and thrown violently.
7. Never cut FREEHAND:
   a. Brace your workpiece solidly against the fence and table top so it will not rock or twist during the cut. Make sure there is no debris caught beneath the workpiece.
   b. Make sure no gaps between the workpiece, fence and table will cause shifting after the workpiece is cut in two.
   c. Use jigs, fixtures or a different tool for unstable workpieces.
8. Use extra caution with large, very small or awkward workpieces:
   a. Use extra supports (tables, saw horses, blocks, etc.) for any workpieces large enough to tip when not held down to the table top.
   b. Do not use this saw to cut pieces too small to let you easily hold the work while you keep the thumb side of your index (pointer) finger against the cutside edge of the fence.
   c. When cutting irregularly shaped workpieces, plan your work so it will not slip and pinch the blade. A piece of molding, for example, must lie flat or be held by a fixture or jig that will not let it twist, rock or slip while being cut.
   d. Properly support round material such as dowel rods, or tubing. They have a tendency to roll while being cut, causing the blade to "bite." To avoid this, use a fixture designed to properly hold your workpiece.

BODY AND HAND POSITION

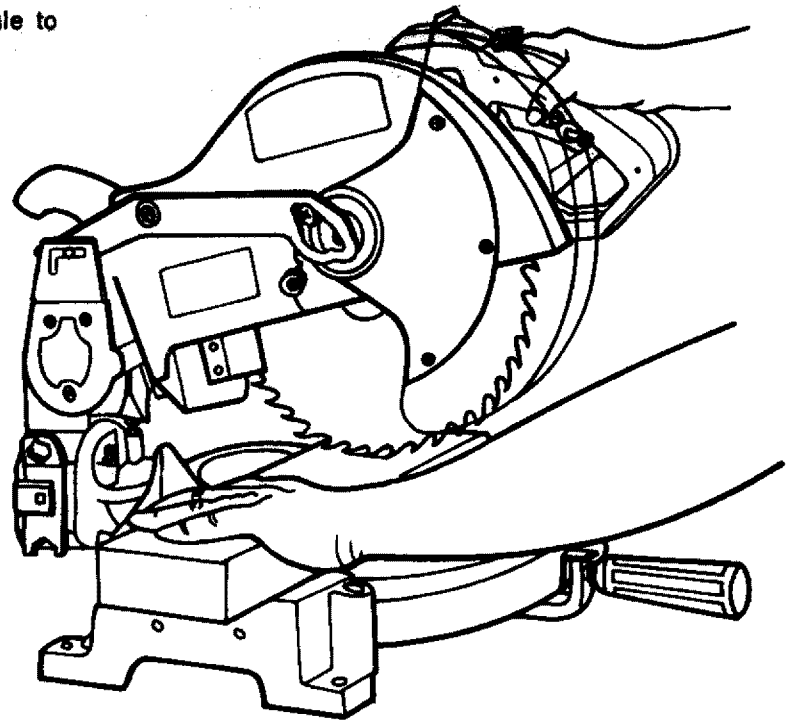
Proper positioning of your body and hands when operating the miter saw will make cutting easier and safer. Never place hands near cutting area. Place hand at least 4" from path of blade. Hold workpiece firmly to the fence to prevent movement toward the blade. Keep hands in position until trigger has been released and the blade has completely stopped. Before making a cut, make a "dry run "with the power off so you can see the path of the blade.

WARNING: Do not try to cut short pieces. You cannot properly support the workpiece and keep your hold down hand the required distance from the blade.



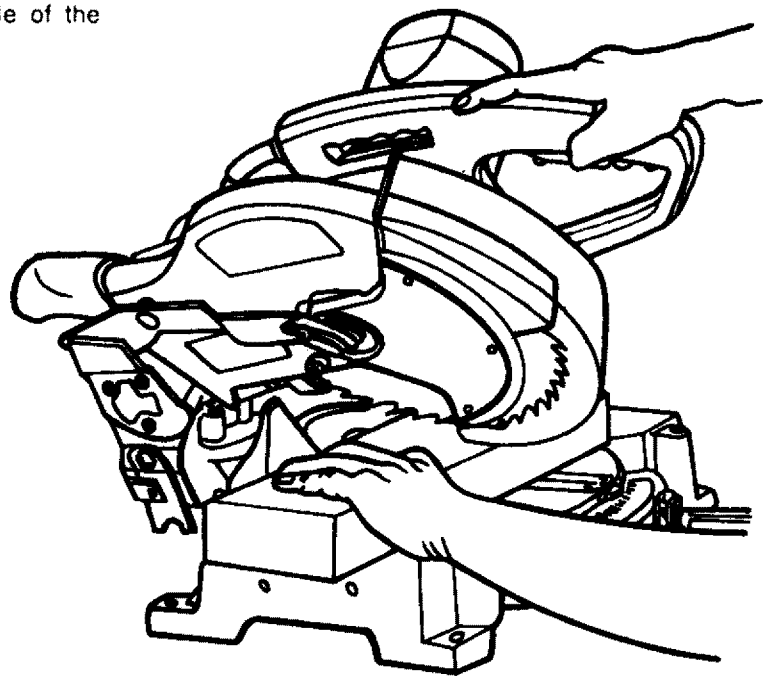
MITER CUT

When a miter cut is required, move the saw to the desired angle. Do not stand in front of the saw table. Move with the handle to the miter angle to make the cut.



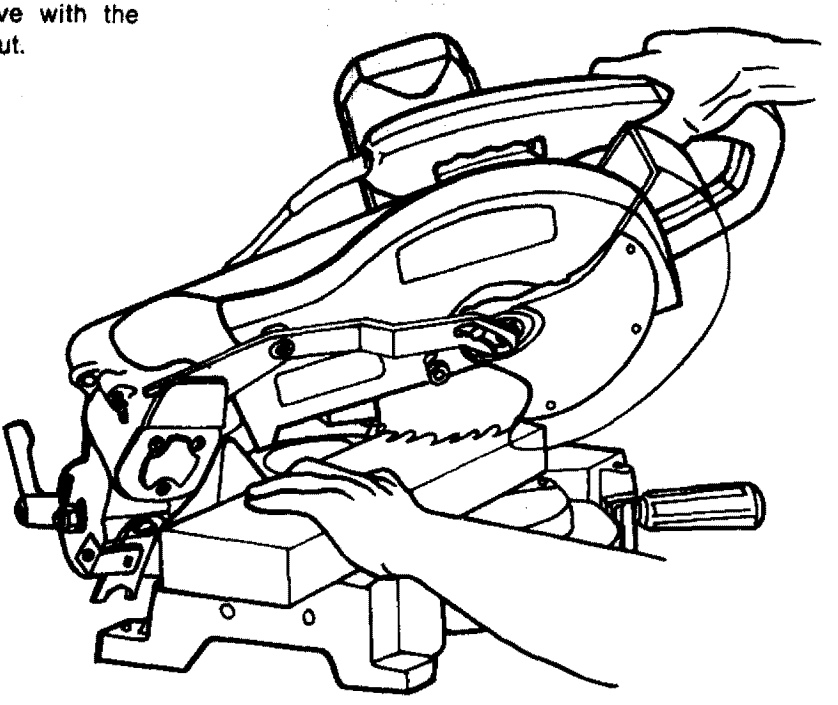
BEVEL CUT

When a bevel cut is required, tilt the blade to the desired bevel angle. Stand to the left side of the handle to make the cut.



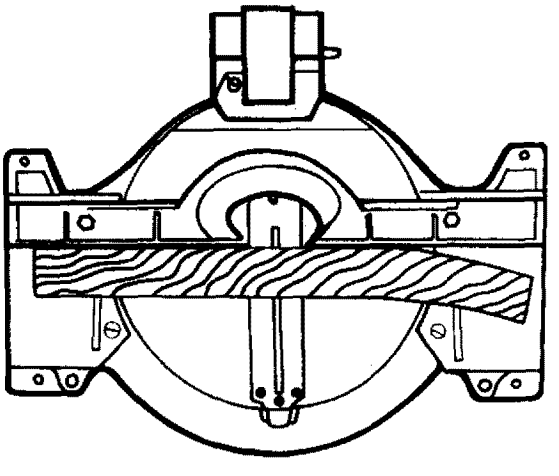
COMPOUND CUT

When a compound cut is required, select the correct bevel and miter position. Move with the handle to the miter angle to make the cut.

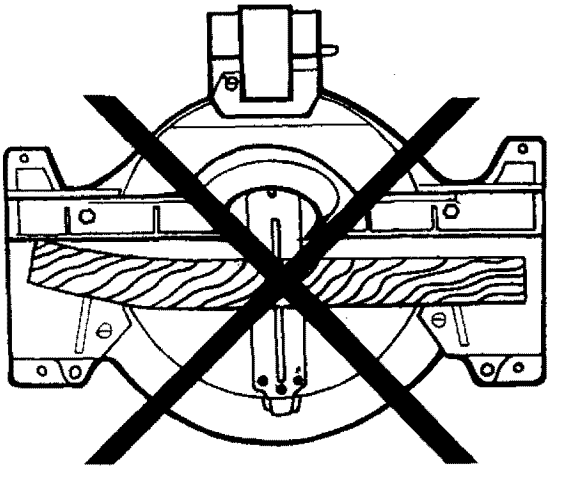


CUTTING BOWED MATERIAL

Before cutting a workpiece, check to make sure it is not bowed. If it is bowed the workpiece must be positioned and cut as illustrated. Do not position workpiece incorrectly or try to cut the workpiece without the support of the fence. This will cause pinching of the workpiece on the blade. The workpiece could suddenly jump or move and your hand could hit the blade.



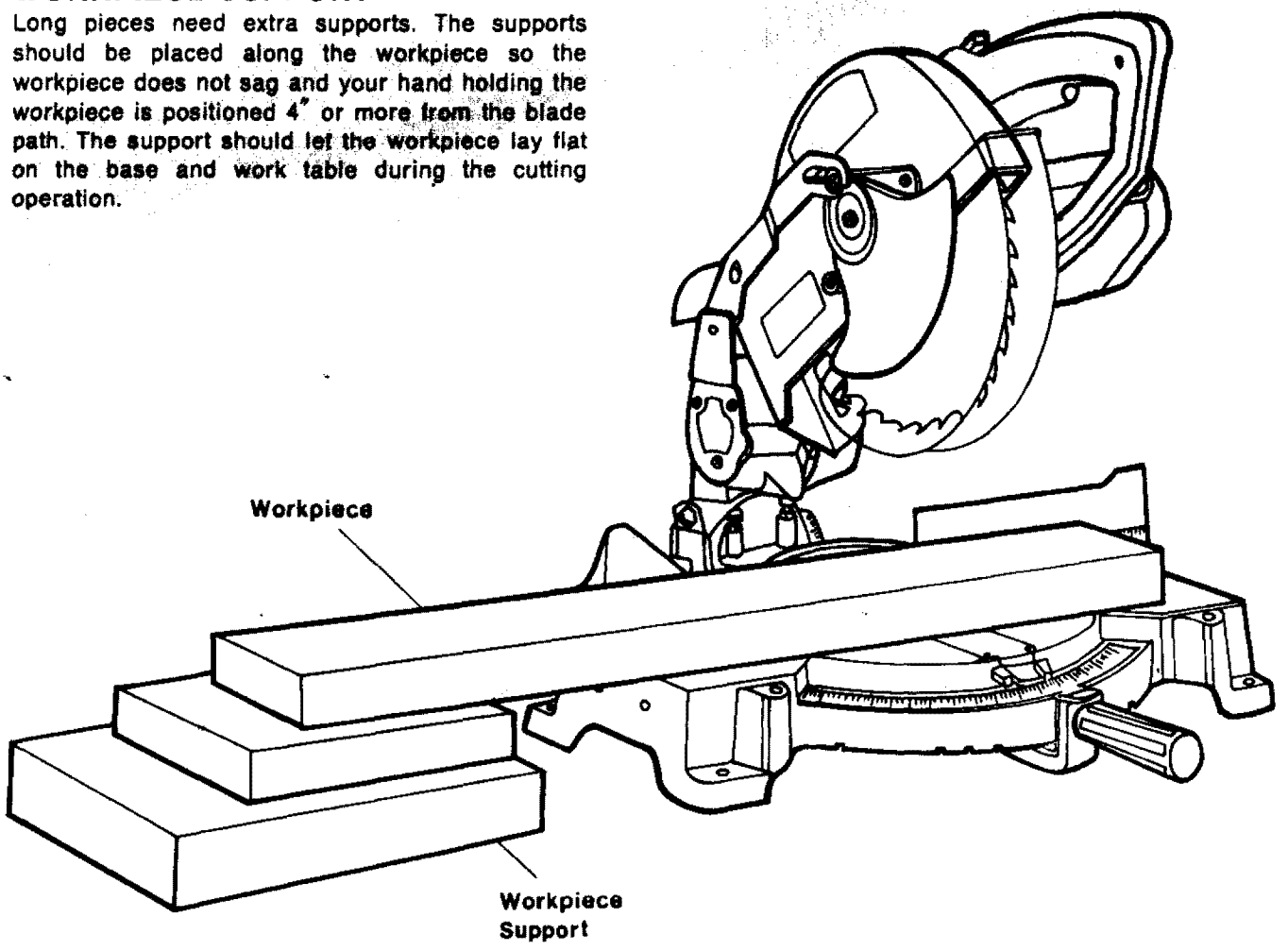
CORRECT



INCORRECT

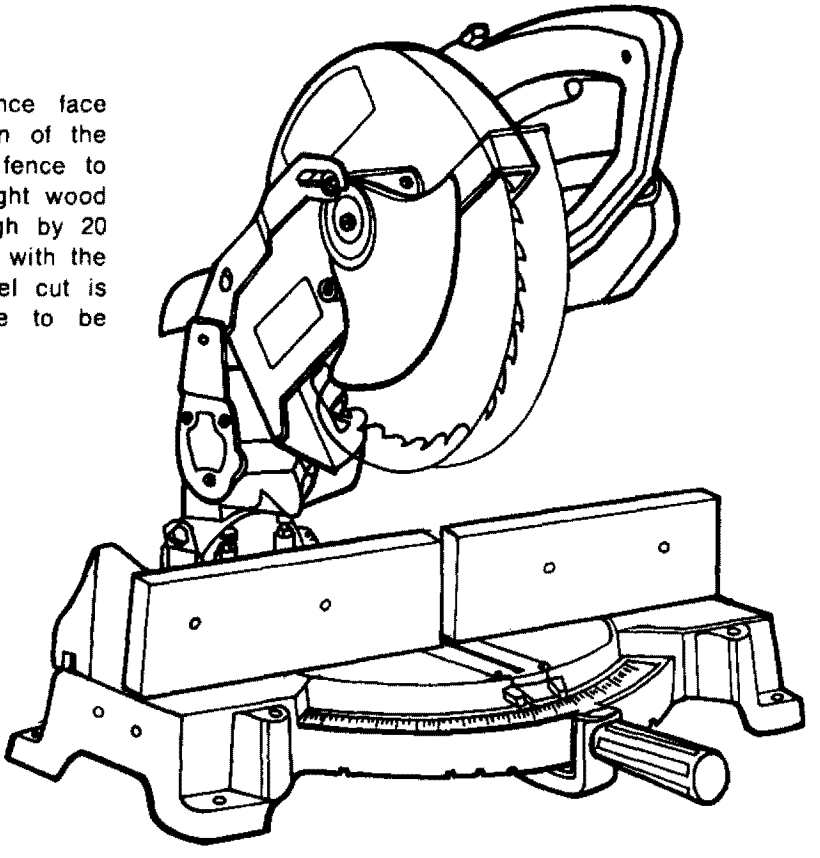
WORKPIECE SUPPORT

Long pieces need extra supports. The supports should be placed along the workpiece so the workpiece does not sag and your hand holding the workpiece is positioned 4" or more from the blade path. The support should let the workpiece lay flat on the base and work table during the cutting operation.



AUXILIARY FENCE

Certain types of molding need a fence face extension due to the size and position of the workpiece. Holes are provided in the fence to attach an auxiliary fence made of straight wood typically 1/2 inch thick by 3 inches high by 20 inches long. The auxilary fence is used with the saw in the 0° bevel position. If a bevel cut is desired, the auxiliary fence will have to be removed.



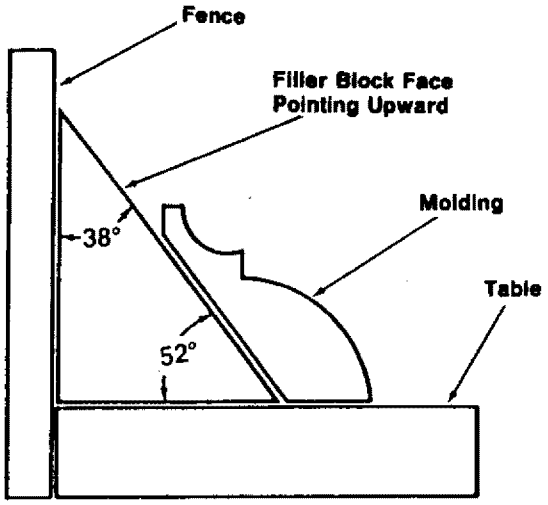
FILLER BLOCKS FOR CUTTING CROWN MOLDINGS

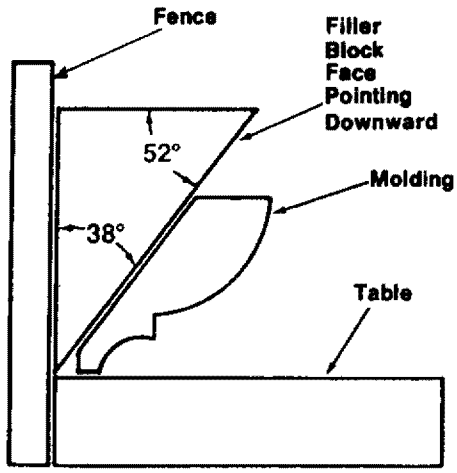
The majority of crown moldings have contact surfaces of 52° and 38° to the rear surface of the molding. When joining the face of the filler block these angles must be maintained. The following illustrations show two methods that can be used when cutting crown moldings depending on how the filler block is attached to the fence.

When the filler blocks are attached with the face of the filler blocks pointing upwards, the molding must be placed on the table upside down.

When the filler blocks are attached to the fence with the face of the filler blocks pointing downwards, the molding must be placed on the table right side up. This is the same position as it would be when nailed between the ceiling and wall.

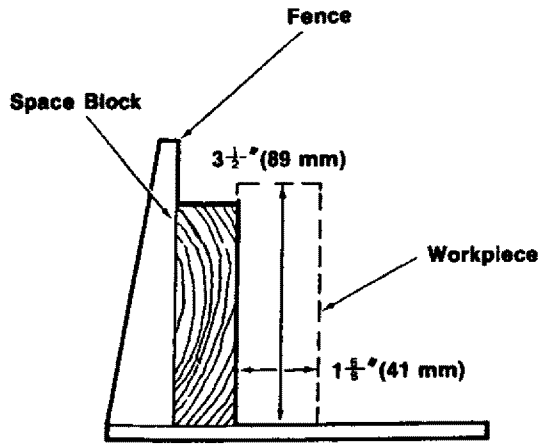
Make 2 filler blocks 10 inches long. Fasten blocks securely to fence. For block face pointing downward, you may need to drill new fastener holes in the fence.





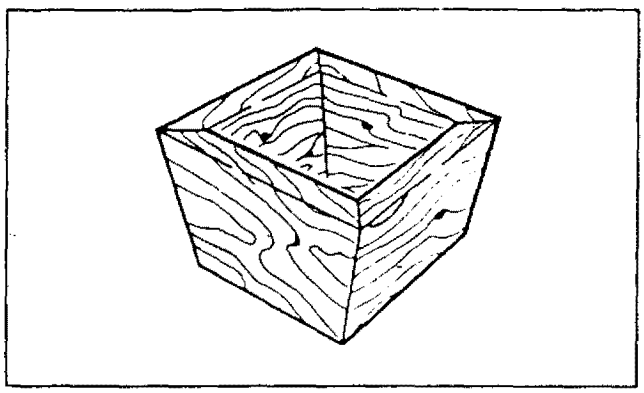
VERTICAL BEVEL CUTTING

To make a miter cut in a 2×4 workpiece (actual 1 5/8″×3 1/2″) in the vertical position (on edge) a spacer, such as the auxiliary fence described on the previous page is required. Fence is located in the front fence position.



TIPS FOR CUTTING COMPOUND MITERS

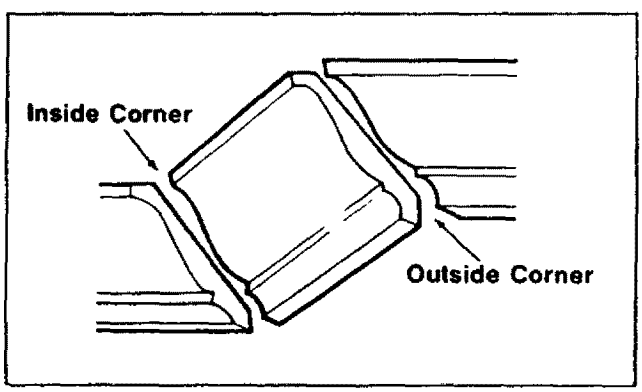
A compound miter is a cut requiring both a miter setting and bevel setting. A compound miter is used for making frames or boxes that have sloping sides and are wide at one end and narrow at the opposite end. Compound miters are "tricky" to make because the miter setting and bevel setting are directly related to each other. Every time the miter setting is changed the bevel setting must also be adjusted, likewise every adjustment to bevel requires a corresponding adjustment to miter. Because it may take several tries to obtain the desired angle it is advisable to make test cuts in a scrap piece of material.



TIPS FOR CUTTING CROWN MOLDING

A compound miter saw is excellent for cutting crown molding. Crown molding is difficult to cut because in order to fit correctly it must be precisely mitered.

All Standard (U.S.) crown molding has a top rear angle (fits next to ceiling) of 52° and a bottom rear angle (fits against wall) of 38°.



Miter and Bevel Setting for Standard Crown Molding

Bevel Setting	Miter Setting	Type of Cut
33.8°	31.6° RIGHT	LEFT SIDE, INSIDE CORNER: 1.Position top of molding against fence. 2.Left side is finished piece.
33.8°	31.6° LEFT	RIGHT SIDE, INSIDE CORNER: 1.Position bottom of molding against fence. 2.Left side is finished piece.
33.8°	31.6° LEFT	LEFT SIDE, OUTSIDE CORNER: 1.Position bottom of molding against fence. 2.Right side is finished piece.
33.8°	31.6° RIGHT	RIGHT SIDE, OUTSIDE CORNER: 1.Position top of molding against fence. 2.Right side is finished piece.

NOTE: On all above cuts lay molding with broad back surface flat on table.

Pre-testing Compound Settings on Scrap Material Is Extremely Important!

Maintaining Your Miter Saw

MAINTENANCE

Always unplug the power cord before any maintenance check on this saw.

DANGER: Never put lubricants on the blade while it's spinning.

WARNING: To avoid injury from unexpected starting or electrical shock, unplug the power cord before working on the saw.

WARNING: For your safety, this saw is double insulated. To avoid electrical shock, fire or injury, use only parts identical to those identified in the parts list. Reassemble exactly as original assembly to avoid electrical hazards.

REPLACING CARBON BRUSHES

The carbon brushes furnished will last approximately 50 hours of running time or 10,000 on/off cycles. Replace both carbon brushes when either has less than 1/4″ length of carbon remaining. To inspect or replace, first unplug the saw, then remove the black plastic cap on the side of the motor (caution, this cap is spring loaded by the brush assembly). Then pull out the brush. Repeat for the other side. To reassemble reverse the procedure. The ears on the metal end of the brush assembly go in the same hole the carbon part fits into. Tighten the cap snugly but do not overtighten.

NOTE: To reinstall the same brushes, first make sure the brushes go back in the way they came out. This will avoid a break in period that reduced performance and increases wear.

LOWER BLADE GUARD

Do not use the saw without the lower guard. The lower blade guard is attached to the saw for protection. Should the lower guard become damaged, do not use the saw until damaged guard has been replaced. Develop a regular check to make sure the lower guard is working properly. Clean the lower guard of any dust or build up with a damp cloth.

CAUTION: Do not use solvents on the guard. They could make the plastic "cloudy" and brittle.

WARNING: When cleaning lower guard unplug the saw from the outlet to avoid unexpected start-up.

SAW DUST

Periodically, sawdust will accumulate under the work table and base. This could cause difficulty in the movement of the work table when setting up a miter cut. Frequently blow out or vacuum up the sawdust

WARNING: If blowing sawdust, wear proper eye protection to keep debris from blowing into eyes.

BASIC BLADE REQUIREMENTS

10″ Diameter
Blades marked for 5,500 RPM or higher.
5/8″ Arbor Hole

LUBRICATION

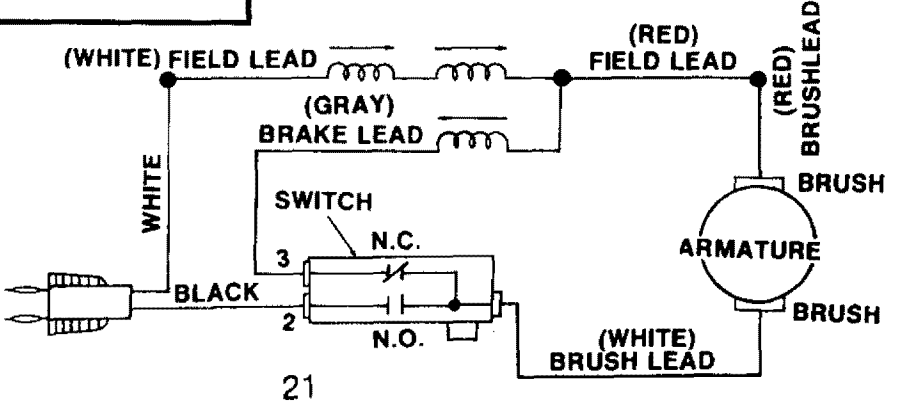
All the motor bearings in this tool are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions, therefore, no further lubrication is required. (See below.)

Infrequent Lubrication As Required:

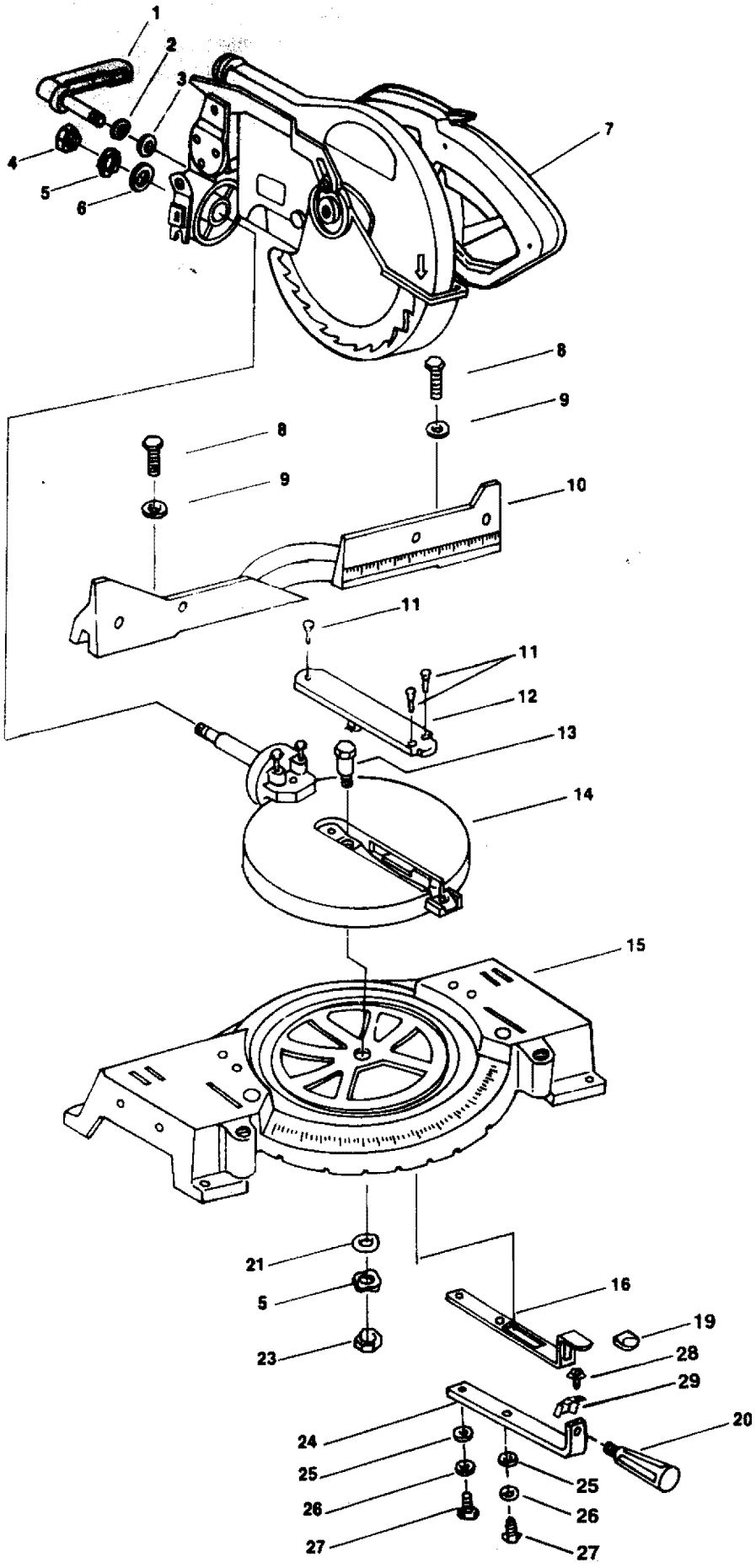
1. Lubrication of arm pivot for free movement.
   a. By loosening nut and applying oil to washer and to contact face (minor).
   b. Disassembly means required to grease pivot bolt and contact faces (major).

   NOTE: Disassembly should be done by an authorized service technician. Removal of the upper guard and the bolt stop is necessary before pivot can be disassembled. Pay close attention to the spring-end positions in the castings. Mark with chalk to avoid later confusion.
2. Lubrication of mechanism which pivots lower guard. Use light household oil (sewing machine oil) on metal-to-metal or metal-to-plastic guard contact areas as required for smooth, quiet operation. Avoid excess oil, to which sawdust will cling.

Wiring Diagram

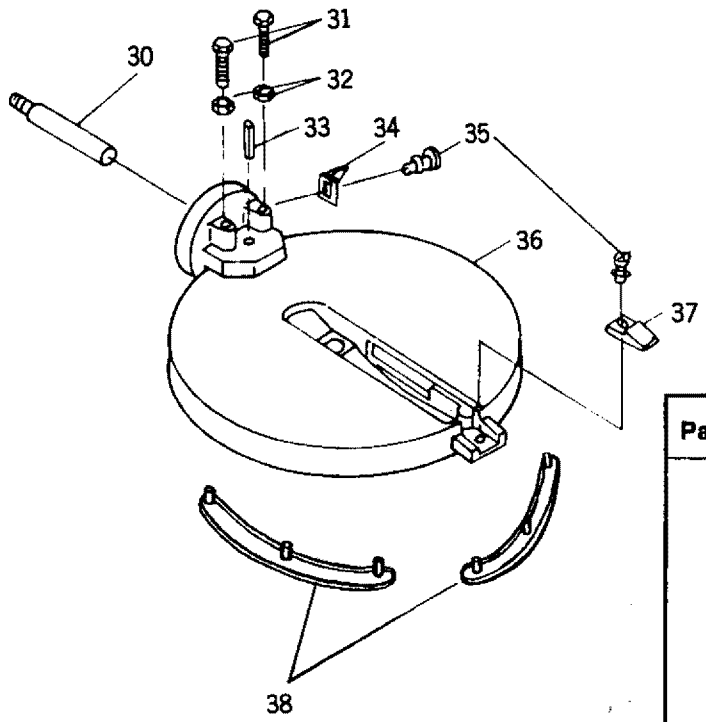


Content Parts



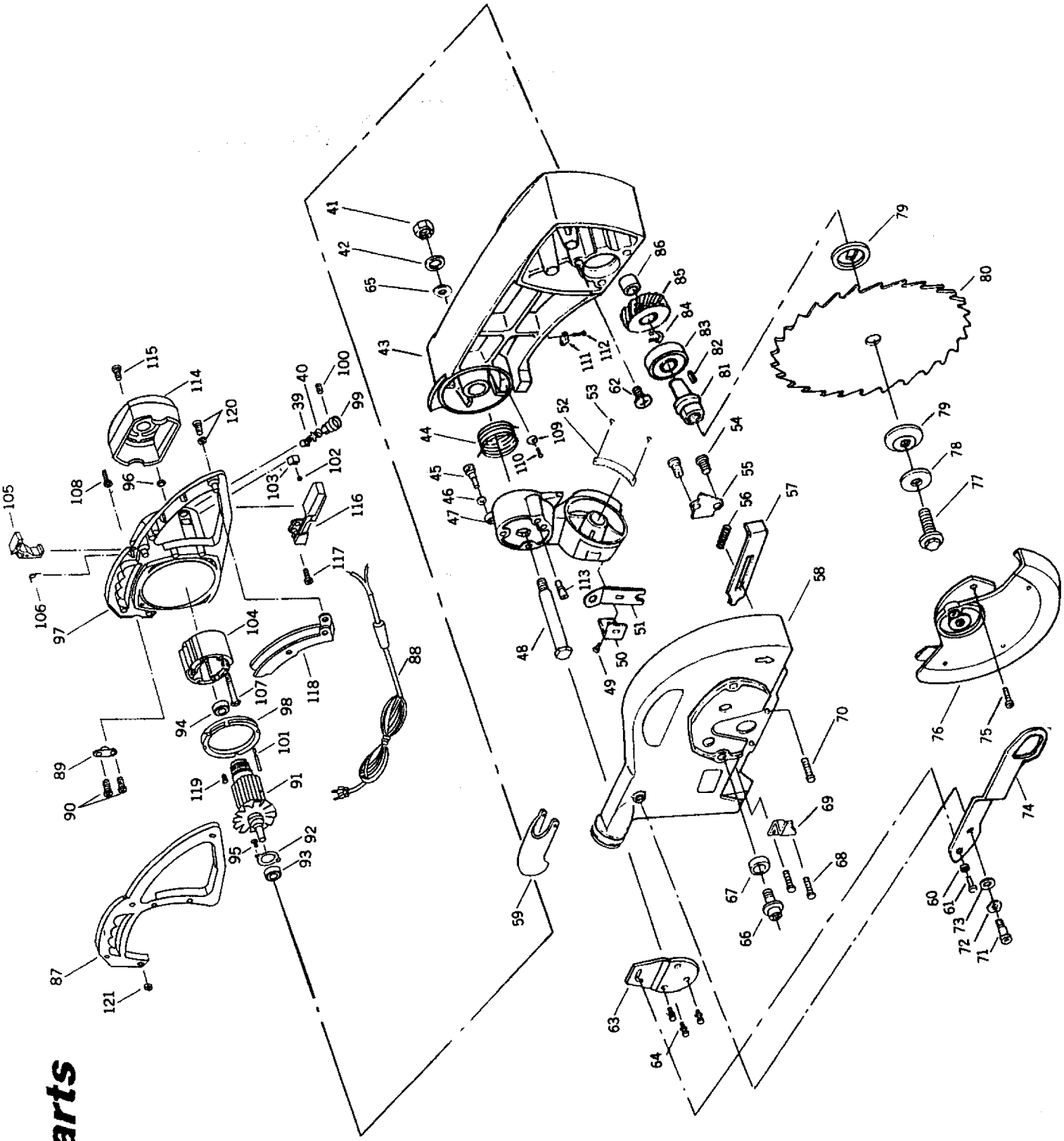
Content Parts

Part No.	Ref. No.	Description	Part No.	Ref. No.	Description
1	900206-001	Bevel Lock Knob	15	221013-000	Base
2	021203-001	Spring Washer	16	270305-000	Spring Index
3	021109-001	Flat Washer	19	303229-000	Grip Miter Index
4	022300-001	Nut	20	303018-004	Handle-Miter
5	021611-000	Wave Washer (2)	21	021117-001	Washer
6	021117-001	Flat Washer	23	022300-001	Nut
7	900430-000	Blade Guard Asm.	24	224050-000	Arm-Miter
8	020314-005	Screw (2)	25	021120-003	Washer (2)
9	021120-003	Washer (2)	26	021204-003	Spring Washer (2)
10	224037-000	Fence	27	020314-009	Hex HD. Screw (2)
11	020804-000	Screw (3)	28	020701-009	Screw/Washer
12	303188-000	Table Insert	29	270316-000	Plate-Clamp
13	028304-003	Bolt. Shoulder			
14	900475-000	Table Assembly			



Part No.	Ref. No.	Description
30	028302-003	Shaft, Bevel
31	020301-009	Hex HD. Screw (2)
32	022111-001	Nut (2)
33	026105-007	Pin
34	270246-000	Pointer-Bevel
35	020716-001	Screw/Washer (2)
36	224038-000	Table
37	303198-000	Pointer-Miter
38	303243-000	Shoe

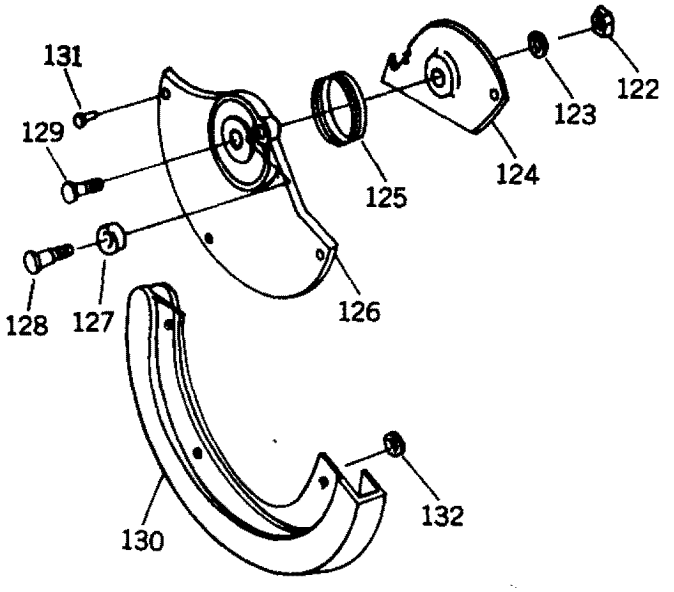
Content Parts



Content Parts

Part No.	Ref. No.	Description	Part No.	Ref. No.	Description	Part No.	Ref. No.	Description
39	375001-000	Brush (2)	68	020704-001	Washer/Screw (2)	97	900466-001	Motor Housing
40	303004-000	Cover-Brush (2)	69	270224-000	Blade Guard	98	303019-000	Ring
41	022302-001	Nut	70	020725-001	Screw (4)	99	303003-001	Brush Housing (2)
42	021110-001	Washer	71	028914-001	Screw	100	020502-001	Locking Screw (2)
43	224064-000	Gear Housing	72	021403-007	Wave Washer	101	080331-001	Armature Cord
44	029209-001	Spring-Torsion	73	021103-011	Washer	102	022301-001	Nut (2)
45	026305-001	Pin-Latch	74	270331-000	Lever	103	303002-001	Nut Housing (2)
46	025100-001	"O" Ring	75	020106-011	Screw	104	170012-001	Stator
47	225064-000	Pivot	76	900479-000	Guard-Lower Asm.	105	303248-001	Button Lock
48	028919-001	Bolt-Pivot	77	020300-005	Blade Set Screw	106	029715-001	Spring
49	020704-001	Screw	78	021600-001	Washer	107	028600-001	Screw/Washer (2)
50	270262-000	Clip, Wrench	79	270179-000	Collar-Blade Set (2)	108	020703-003	Screw/Washer (4)
51	270181-000	Wrench	80	350026-000	Blade	109	303024-000	Cushion
52	870017-000	Bevel label	81	131037-000	Spindle	110	020106-009	Screw
53	024400-000	Nail (2)	82	027201-001	Key	111	303006-000	Clamp-Cord
54	020102-003	Screw (2)	83	050005-100	Bearing	112	020103-007	Screw (2)
55	270146-000	Plate-Retainer	84	023101-001	External Retaining Ring	113	028305-001	Bolt
56	029102-001	Spring	85	110002-000	Gear	114	303257-000	Motor Cover
57	270130-000	Lock-Spindle	86	052002-000	Needle Bearing	115	020106-007	Screw (2)
58	224040-000	Guard	87	303272-000	Left Handle	116	303223-000	Switch
59	303199-000	Dust Cover	88	900377-003	Cord / Plug	117	020200-003	Screw (2)
60	024300-001	Screw	89	303006-000	Clamp-Cord	118	303228-002	Actuator Switch
61	130001-000	Spacer	90	020200-003	Screw (2)	119	364011-002	Cord Connector
62	028930-001	Screw	91	160003-001	Armature	120	020701-017	Screw/Washer (6)
63	270289-000	Support Plate	92	270026-000	Bearing Retainer	121	022100-001	Nut (6)
64	020724-001	Washer/Screw (3)	93	050001-100	Bearing			
65	021403-005	Wave Washer	94	050004-300	Bearing			
66	290073-000	Screw	95	020702-005	Screw / Washer			
67	330024-000	Sleeve-Rubber	96	021404-001	Wave Washer			

Content Parts



Part No.	Ref. No.	Description
122	022306-000	Nut
123	021101-004	Washer
124	270226-000	Plate
125	029301-003	Spring-Guard
126	225067-000	Lower Guard Plate
127	303266-000	Spacer
128	028912-003	Bolt
129	020906-000	Bolt
130	302037-000	Lower Guard
131	024101-000	Pull Nail (3)
132	021108-000	Flat Washer (3)

MEMO:

Trouble Shooting

TROUBLE	PROBLEM	REMEDY
Brake does not stop blade within 2-5 seconds.	1. Brushes not seated or lightly sticking.	—Inspect/clean/replace brushes (see maintenance section).
	2. Motor brake winding—overheated from use of not recommended accessory or rapid on/off cycling.	—Use a recommended blade. —Let cool down.
	3. Arbor screw loose.	—Retighten
	4. Other.	—Authorized service. Check motor brake winding, switch, condition of commutator.
Motor does not start.	1. Fuse.	—15-Amp time delay fuse, or CKT. breaker.
	2. Brushes worn.	—See "Maintenance."
	3. Other.	—Authorized service.
Brush sparking when switch released.	1. Normal—automatic brake working properly.	
Blade hits table.	1. Misalignment.	—See Assembly and Alignment.
	2. Damaged depth stop.	—Get authorized Service.
Angle of cut not accurate.	1. Misalignment.	—See Assembly and Alignment.
Can't move miter adjustment.	1. Sawdust under table.	—Vacuum or blow out dust. WEAR EYE PROTECTION
Power-head wobbles.	1. Loose pivot points.	—See Assembly and Alignment.
Power-head won't fully rise.	1. Pivot misadjustment.	—See Assembly and Alignment.
	2. Part failure.	—Get authorized Service.
	3. Pivot spring not replaced properly after service.	—Get authorized Service.
Blade binds, jams, burns wood.	1. Improper operation.	—See Basic Saw Operation.
	2. Dull blade.	—Replace or sharpen blade.
	3. Improper blade.	—Replace with 10″ diameter blade designed for the material being cut.
	4. Warped blade.	—Replace blade.
Tool vibrates or shakes.	1. Saw blade not round.	—Replace blade.
	2. Saw blade damaged.	—Replace blade.
	3. Saw blade loose.	—Tighten arbor screw.
	4. Other.	—Get authorized Service.

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