

# 8 1/4" Compound Miter Saw (Model MS150)



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**DELTA**® *ShopMaster*™

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**ESPAÑOL: PÁGINA 17**

## SAFETY GUIDELINES - DEFINITIONS

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the symbols listed below. Please read the manual and pay attention to these sections.

- ⚠ DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
- ⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ⚠ CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
- CAUTION** Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

### **⚠ WARNING** SOME DUST CREATED BY POWER SANDING, SAWING, GRINDING, DRILLING, AND OTHER CONSTRUCTION ACTIVITIES

contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, always wear **MSHA/NIOSH** approved, properly fitting face mask or respirator when using such tools.

## GENERAL SAFETY RULES



**⚠ WARNING** READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT. Failure to follow all instructions listed below, may result in electric shock, fire, and/or serious personal injury or property damage.

### IMPORTANT SAFETY INSTRUCTIONS

Woodworking can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. Safety equipment such as guards, push sticks, hold-downs, featherboards, goggles, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention. Always use common sense and exercise caution in the workshop. If a procedure feels dangerous, don't try it. Figure out an alternative procedure that feels safer. **REMEMBER:** Your personal safety is your responsibility. For additional information please visit our website [www.deltamachinery.com](http://www.deltamachinery.com).

**⚠ WARNING** This machine was designed for certain applications only. Delta Machinery strongly recommends that this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, **DO NOT** use the machine until you have first contacted Delta to determine if it can or should be performed on the product.

**Technical Service Manager**  
**Delta Machinery**  
**4825 Highway 45 North**  
**Jackson, TN 38305**  
(IN CANADA: 505 SOUTHGATE DRIVE, GUELPH, ONTARIO N1H 6M7)

# GENERAL SAFETY RULES

**▲ WARNING** FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS INJURY.

1. **FOR YOUR OWN SAFETY, READ THE INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learning the machine's application, limitations, and specific hazards will greatly minimize the possibility of accidents and injury.
2. **USE CERTIFIED SAFETY EQUIPMENT.** Eye protection equipment should comply with ANSI Z87.1 standards, hearing equipment should comply with ANSI S3.19 standards, and dust mask protection should comply with MSHA/NIOSH certified respirator standards. Splinters, air-borne debris, and dust can cause irritation, injury, and/or illness.
3. **DRESS PROPERLY.** Do not wear tie, gloves, or loose clothing. Remove watch, rings, and other jewelry. Roll up your sleeves. Clothing or jewelry caught in moving parts can cause injury.
4. **DO NOT USE THE MACHINE IN A DANGEROUS ENVIRONMENT.** The use of power tools in damp or wet locations or in rain can cause shock or electrocution. Keep your work area well-lit to prevent tripping or placing arms, hands, and fingers in danger.
5. **MAINTAIN ALL TOOLS AND MACHINES IN PEAK CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories. Poorly maintained tools and machines can further damage the tool or machine and/or cause injury.
6. **CHECK FOR DAMAGED PARTS.** Before using the machine, check for any damaged parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, and any other conditions that may affect its operation. A guard or any other part that is damaged **should be properly repaired or replaced.** Damaged parts can cause further damage to the machine and/or injury.
7. **KEEP THE WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
8. **KEEP CHILDREN AND VISITORS AWAY.** Your shop is a potentially dangerous environment. Children and visitors can be injured.
9. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure that the switch is in the "OFF" position before plugging in the power cord. In the event of a power failure, move the switch to the "OFF" position. An accidental start-up can cause injury.
10. **USE THE GUARDS.** Check to see that all guards are in place, secured, and working correctly to prevent injury.
11. **REMOVE ADJUSTING KEYS AND WRENCHES BEFORE STARTING THE MACHINE.** Tools, scrap pieces, and other debris can be thrown at high speed, causing injury.
12. **USE THE RIGHT MACHINE.** Don't force a machine or an attachment to do a job for which it was not designed. Damage to the machine and/or injury may result.
13. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause damage to the machine or injury to the user.
14. **USE THE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. See the Extension Cord Chart for the correct size depending on the cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
15. **SECURE THE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. Loss of control of a workpiece can cause injury.
16. **FEED THE WORKPIECE AGAINST THE DIRECTION OF THE ROTATION OF THE BLADE, CUTTER, OR ABRASIVE SURFACE.** Feeding it from the other direction will cause the workpiece to be thrown out at high speed.
17. **DON'T FORCE THE WORKPIECE ON THE MACHINE.** Damage to the machine and/or injury may result.
18. **DON'T OVERREACH.** Loss of balance can make you fall into a working machine, causing injury.
19. **NEVER STAND ON THE MACHINE.** Injury could occur if the tool tips, or if you accidentally contact the cutting tool.
20. **NEVER LEAVE THE MACHINE RUNNING UNATTENDED. TURN THE POWER OFF.** Don't leave the machine until it comes to a complete stop. A child or visitor could be injured.
21. **TURN THE MACHINE "OFF", AND DISCONNECT THE MACHINE FROM THE POWER SOURCE** before installing or removing accessories, before adjusting or changing set-ups, or when making repairs. An accidental start-up can cause injury.
22. **MAKE YOUR WORKSHOP CHILDPROOF WITH PADLOCKS, MASTER SWITCHES, OR BY REMOVING STARTER KEYS.** The accidental start-up of a machine by a child or visitor could cause injury.
23. **STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE. DO NOT USE THE MACHINE WHEN YOU ARE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.** A moment of inattention while operating power tools may result in injury.
24. **THE DUST GENERATED** by certain woods and wood products can be injurious to your health. Always operate machinery in well-ventilated areas, and provide for proper dust removal. Use wood dust collection systems whenever possible.

# ADDITIONAL SAFETY RULES FOR MITER SAWS

## **⚠ WARNING**

**FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS INJURY.**

1. **DO NOT OPERATE THIS MACHINE** until it is completely assembled and installed according to the instructions. A machine incorrectly assembled can cause serious injury.
2. **OBTAIN ADVICE** from your supervisor, instructor, or another qualified person if you are not thoroughly familiar with the operation of this machine. Knowledge is safety.
3. **FOLLOW ALL WIRING CODES** and recommended electrical connections to prevent shock or electrocution.
4. **SECURE THE MACHINE TO A SUPPORTING SURFACE.** Vibration can possibly cause the machine to slide, walk, or tip over, causing serious injury.
5. **USE ONLY CROSSCUT SAW BLADES.** Use only zero-degree or negative hook angles when using carbide-tipped blades. Do not use blades with deep gullets. These can deflect and contact the guard, and can cause damage to the machine and/or serious injury.
6. **USE ONLY BLADES OF THE CORRECT SIZE AND TYPE** specified for this tool to prevent damage to the machine and/or serious injury.
7. **USE A SHARP BLADE.** Check the blade to see if it runs true and is free from vibration. A dull blade or a vibrating blade can cause damage to the machine and/or serious injury.
8. **INSPECT BLADE FOR CRACKS** or other damage prior to operation. A cracked or damaged blade can come apart and pieces can be thrown at high speeds, causing serious injury. Replace cracked or damaged blades immediately.
9. **CLEAN THE BLADE AND BLADE FLANGES** prior to operation. Cleaning the blade and flanges allows you to check for any damage to the blade or flanges. A cracked or damaged blade or flange can come apart and pieces can be thrown at high speeds, causing serious injury.
10. **USE ONLY BLADE FLANGES** specified for this tool to prevent damage to the machine and/or serious injury.
11. **CLEAR THE AREA OF FLAMMABLE LIQUIDS** and/or gas prior to operation. Sparks can occur that would ignite the liquids and cause a fire or an explosion.
12. **CLEAN THE MOTOR AIR SLOTS** of chips and sawdust. Clogged motor air slots can cause the machine to overheat, damaging the machine and possibly causing a short which could cause serious injury.
13. **TIGHTEN THE TABLE CLAMP HANDLE** and any other clamps prior to operation. Loose clamps can cause parts or the workpiece to be thrown at high speeds.
14. **NEVER START THE TOOL** with the blade against the workpiece. The workpiece can be thrown, causing serious injury.
15. **KEEP ARMS, HANDS, AND FINGERS** away from the blade to prevent severe cuts. Clamp all workpieces that would cause your hand to be in the "Table Hazard Zone" (within the red lines).
16. **WHEN CUTTING WITH A COMPOUND SLIDING MITER SAW, PUSH THE SAW FORWARD (AWAY FROM YOU)** and toward the fence. Pulling the saw toward you can cause the saw to kick upward and toward you.
17. **WHEN USING A SLIDING MITER SAW AS A REGULAR MITER SAW, LOCK THE SLIDE MECHANISM IN PLACE.** If the slide mechanism is not locked, the saw can kick back toward you.
18. **ALLOW THE MOTOR TO COME TO FULL SPEED** prior to starting cut. Starting the cut too soon can cause damage to the machine or blade and/or serious injury.
19. **NEVER REACH AROUND** or behind the saw blade. A moving blade can cause serious injury.
20. **NEVER CUT FERROUS METALS** or masonry. Either of these can cause the carbide tips to fly off the blade at high speeds causing serious injury.
21. **NEVER CUT SMALL PIECES.** Cutting small pieces can cause your hand to move into the blade, resulting in serious injury.
22. **NEVER LOCK THE SWITCH** in the "ON" position. Setting up the next cut could cause your hand to move into the blade, resulting in severe injury.
23. **NEVER APPLY LUBRICANT** to a running blade. Applying lubricant could cause your hand to move into the blade, resulting in serious injury.
24. **DO NOT PERFORM FREE-HAND OPERATIONS.** Hold the work firmly against the fence and table. Free-hand operations on a miter saw could cause the workpiece to be thrown at high speeds, causing serious injury. Use clamps to hold the work when possible.
25. **PROPERLY SUPPORT LONG OR WIDE WORKPIECES.** Loss of control of the workpiece can cause serious injury.
26. **AFTER COMPLETING CUT,** release power switch and wait for coasting blade to come to a complete stop before returning saw to raised position. A moving blade can cause serious injury.
27. **TURN OFF THE MACHINE** and allow the blade to come to a complete stop prior to cleaning the blade area or removing debris in the path of the blade. A moving blade can cause serious injury.
28. **TURN OFF MACHINE** and allow the blade to come to a complete stop before removing or securing workpiece, changing workpiece angle, or changing the angle of the blade. A moving blade can cause serious injury.
29. **PROPERLY SUPPORT LONG OR WIDE WORKPIECES.** Loss of control of the workpiece can cause injury.
30. **NEVER PERFORM LAYOUT, ASSEMBLY, OR SET-UP WORK** on the table/work area when the machine is running. A sudden slip could cause a hand to move into the blade. Severe injury can result.
31. **TURN THE MACHINE "OFF",** disconnect the machine from the power source, and clean the table/work area before leaving the machine. **LOCK THE SWITCH IN THE "OFF" POSITION** to prevent unauthorized use. Someone else might accidentally start the machine and cause injury to themselves.
32. **BEFORE OPERATING THE SAW,** check and securely lock the bevel, miter, and sliding fence adjustments.
33. **ADDITIONAL INFORMATION** regarding the safe and proper operation of power tools (i.e. a safety video) is available from the Power Tool Institute, 1300 Sumner Avenue, Cleveland, OH 44115-2851 ([www.powertoolinstitute.com](http://www.powertoolinstitute.com)). Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please refer to the American National Standards Institute ANSI O1.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor regulations.

## **SAVE THESE INSTRUCTIONS.**

**Refer to them often  
and use them to instruct others.**

04-24-03

## POWER CONNECTIONS

A separate electrical circuit should be used for your machines. This circuit should not be less than #12 wire and should be protected with a 20 Amp time lag fuse. If an extension cord is used, use only 3-wire extension cords which have 3-prong grounding type plugs and matching receptacle which will accept the machine's plug. Before connecting the machine to the power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the machine. All line connections should make good contact. Running on low voltage will damage the machine.

**⚠ DANGER** DO NOT EXPOSE THE MACHINE TO RAIN OR OPERATE THE MACHINE IN DAMP LOCATIONS.

## MOTOR SPECIFICATIONS

Your machine is wired for 120 volt, 60 HZ alternating current. Before connecting the machine to the power source, make sure the switch is in the "OFF" position.

## EXTENSION CORDS

**CAUTION** Use proper extension cords. Make sure your extension cord is in good condition and is a 3-wire extension cord which has a 3-prong grounding type plug and matching receptacle which will accept the machine's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the machine. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Fig.C shows the correct gauge to use depending on the cord length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

MINIMUM GAUGE EXTENSION CORD			
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC MACHINES			
Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	120	up to 25	18 AWG
0-6	120	25-50	16 AWG
0-6	120	50-100	16 AWG
0-6	120	100-150	14 AWG
6-10	120	up to 25	18 AWG
6-10	120	25-50	16 AWG
6-10	120	50-100	14 AWG
6-10	120	100-150	12 AWG
10-12	120	up to 25	16 AWG
10-12	120	25-50	16 AWG
10-12	120	50-100	14 AWG
10-12	120	100-150	12 AWG
12-16	120	up to 25	14 AWG
12-16	120	25-50	12 AWG
12-16	120	GREATER THAN 50 FEET NOT RECOMMENDED	

Fig. C

## FUNCTIONAL DESCRIPTION

### FOREWORD

Delta Model MS150 is a 8-1/4" compound miter saw designed to cut wood, aluminum, and plastic. Compound angle and bevel cutting are easy and accurate. It can crosscut up to 2-1/8" x 5-1/8", miter at 45° both left and right 2-1/8" x 3-1/2", bevel at 45° left 1-1/2" x 5-1/8", and compound 45° x 45° 1-1/2" x 3-1/2". It has positive miter ball detent stops at 0, 15, 22.5, 30, and 45 degrees both left and right, and bevel stops at 0 and 45 degrees left.

## UNPACKING

**NOTICE:** The photo on the manual cover illustrates the current production model. All other illustrations contained in the manual are representative only and may not depict the actual color, labeling or accessories and are intended to illustrate technique only.

1. Carefully remove the machine from the carton. Retain all packing materials until you have inspected and satisfactorily operated the machine.
2. Place the machine on a firm, level surface with proper support of the workpiece.



# CARTON CONTENTS

## ⚠ WARNING

For your own safety, do not connect the miter saw to the power source until the machine is completely assembled and you read and understand the entire owner's manual.

Your new Miter Saw is shipped complete in one container. Carefully unpack all items from the container, which include:

1. - Miter Saw
2. - Lower Guard Assembly
3. - Dust Bag

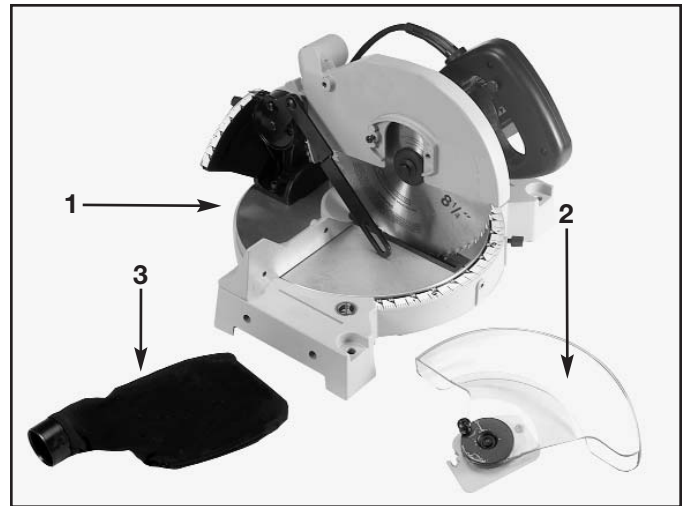


Fig. 4

# ASSEMBLY

## ATTACHING LOWER BLADE GUARD

1. Loosen screw (D) Fig. 5 and remove screw (C).
2. Slide slotted end (E) Fig. 6 of lower guard mounting bracket under screw head (D). Engage slot (L) of the guard lifting lever over screw and spacer (K). Rotate lower guard mounting bracket (F) until hole (G) in bracket lines up with threaded hole (H) in upper guard.
3. Replace screw (C) Fig. 7 that was removed in **STEP 2**. Tighten screws (D) and (C).

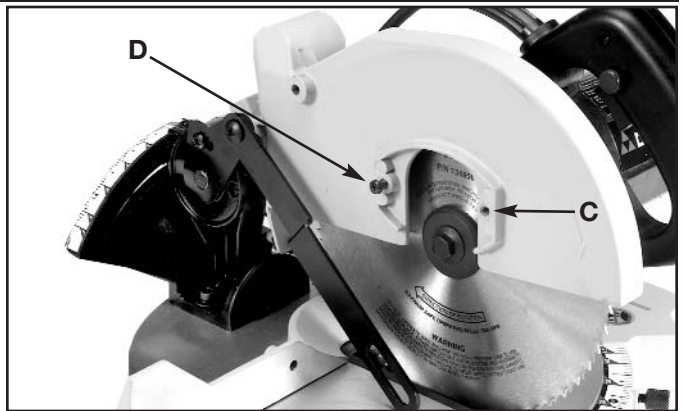


Fig. 5

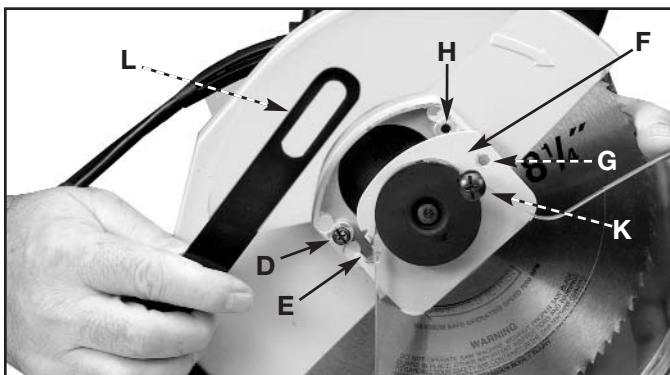


Fig. 6

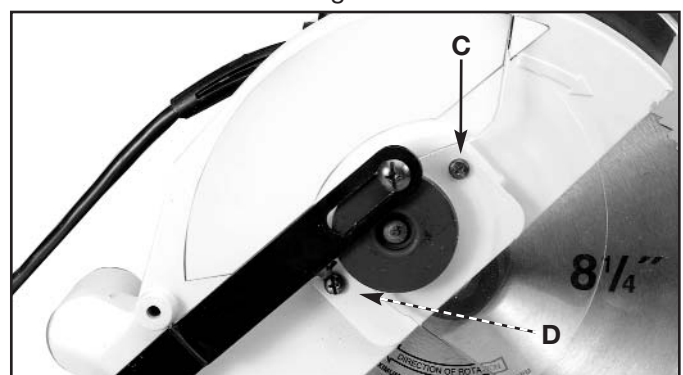


Fig. 7

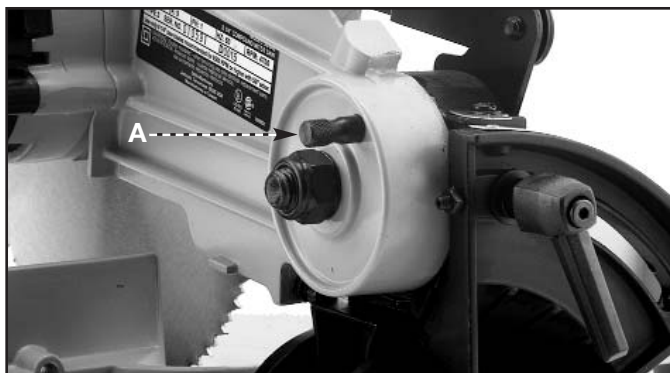


Fig. 8



Fig. 9

## MOVING CUTTINGHEAD TO THE UP POSITION

Push down on the handle, pull out cutting-head lockpin (A) Fig. 8 and move the cuttinghead (B) Fig. 9 to the up position.

## ATTACHING DUST BAG

Attach dust bag assembly (A) Fig. 10 to dust spout (B) on rear of upper guard assembly.

## FASTENING MACHINE TO SUPPORTING SURFACE

**⚠ CAUTION** Before operating your compound miter saw, firmly mount it to a sturdy work bench or other supporting surface. Four holes are provided, two of which are shown at (A) Fig. 11 for fastening the saw to a supporting surface.

When frequently moving the machine from place to place, mount it to a 3/4" piece of plywood. The machine can then be easily moved and the plywood can be clamped to the supporting surface using "C" clamps.

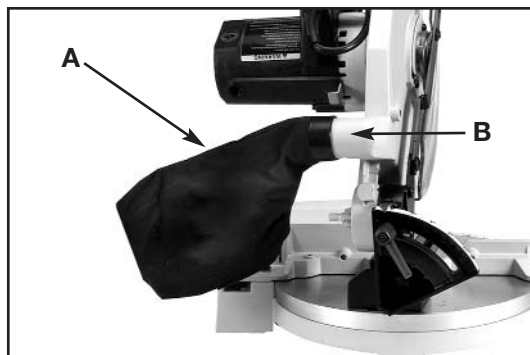


Fig. 10

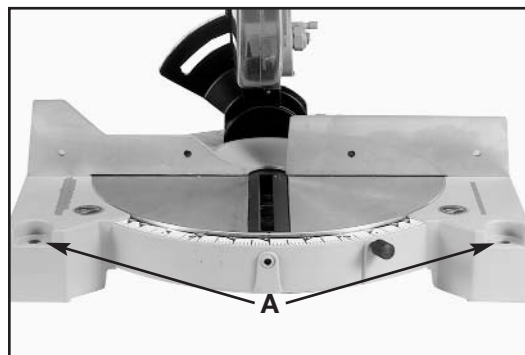


Fig. 11

## OPERATING CONTROLS AND ADJUSTMENTS

### TABLE HAZARD AREA

**⚠ WARNING** The area inside the two red lines (A) Fig. 12 on the table is designated as a hazard zone. **Never** place your hand(s) inside the "Table Hazard Zone" (within the red lines) **WHILE THE TOOL IS BEING OPERATED**. Clamp all workpieces which would cause your hand(s) to be within the red lines.



Fig. 12

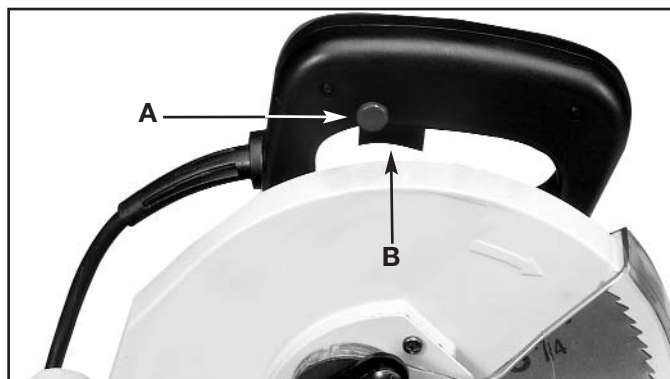


Fig. 13

### STARTING AND STOPPING THE SAW

**IMPORTANT:** Before starting the saw, lower the cutting arm and make certain the saw blade does not come in contact with the table insert on its downward travel. The travel of the cuttinghead has been set at the factory. However, sometimes due to rough handling during shipment or extended use, a minor adjustment to the setting may become necessary. If the saw blade contacts the table insert, refer to section **"ADJUSTING DOWNWARD TRAVEL OF SAW BLADE."**

To turn the saw "ON" push in on switch lock key (A) Fig. 13, and depress switch trigger (B). To turn the saw "OFF" release switch trigger (B).

## LOCKING SWITCH IN THE “OFF” POSITION

**IMPORTANT:** When the machine is not in use, the switch should be locked in the “OFF” position to prevent unauthorized use. To lock the switch (B) Fig. 13 in the “OFF” position, pull out switch lock key (A) from saw handle. To activate the switch (B) Fig. 13, insert switch lock key (A) back into handle.

**⚠ WARNING** Make certain the machine is disconnected from the power source before removing and re-attaching switch lock key.

## ROTATING TABLE FOR MITER CUTTING

Your compound miter saw will cut any miter angle from a straight 90 degree cut to 45 degrees right and left. Loosen table lock knob (A) Fig. 14, and use the switch handle as a grip to rotate the cutting arm until the pointer (B) aligns with the desired setting on the miter scale (C). Tighten table lock knob (A).

**⚠ WARNING** Lock knob (A) Fig. 14 must be tightened for **ALL** cutting operations.

Your compound miter saw contains positive stops for the table at the 0, 22-1/2, 30, and 45 degree right and left positions. Two triangle indicators (D) Fig. 15 are also provided to rapidly set the table at the 31-5/8 degree right and left miter angle for cutting crown moulding.

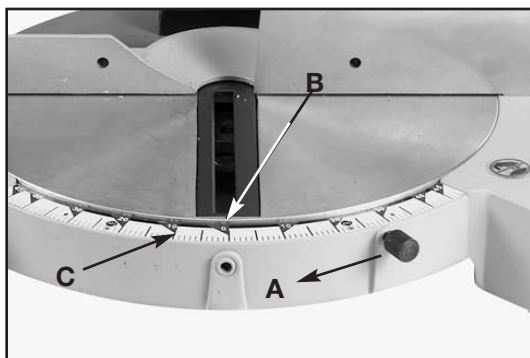


Fig. 14

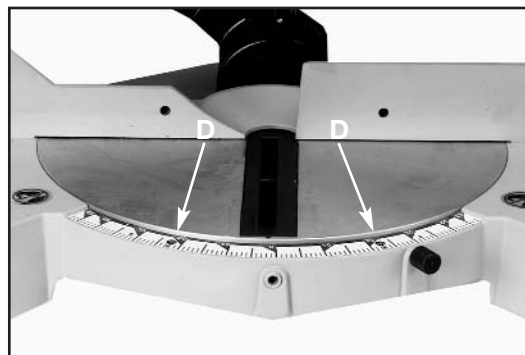


Fig. 15

## LOCKING CUTTERHEAD IN DOWN POSITION

When transporting the miter saw, lock the cutting arm in the down position by lowering the cutting arm and pushing in on arm locking pin (A) Fig. 16.

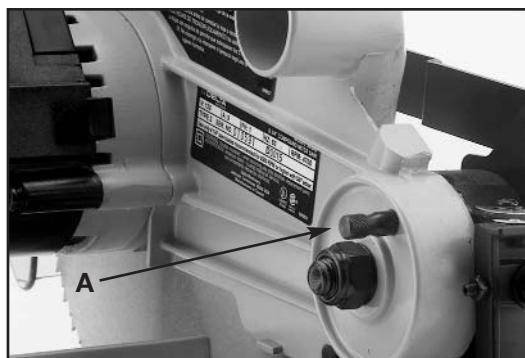


Fig. 16

## TILTING CUTTINGHEAD FOR BEVEL CUTTING

Loosen the bevel cutting lock handle (A) Fig. 15. Tilt cutting head to the desired bevel angle, and tighten the lock handle (A). **NOTE:** Lock handle (A) is spring-loaded and can be repositioned by pulling out on the handle and turning it on the serrated stud located underneath the handle.

**⚠ WARNING** Lock knob (A) Fig. 14 must be tightened for **ALL** cutting operations.

The bevel angle of the cutterhead is determined by the position of the pointer (B) Fig. 17 on the large scale (C). A triangle indicator (D) is provided to rapidly position the cutting arm at the 33-7/8 degree left bevel angle which is used for cutting crown moulding.

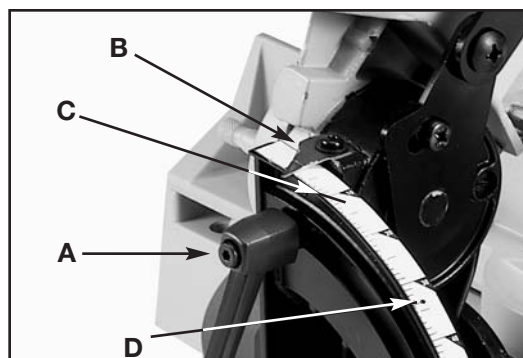


Fig. 17



# ADJUSTMENTS

## ADJUSTING FENCE 90 DEGREES TO BLADE

**⚠ WARNING** DISCONNECT MACHINE FROM POWER SOURCE.

1. Place the cutting arm in the 90 degree straight cut-off position and tighten the table lock knob (A).
2. Lower the saw blade (Fig. 18) and lock cuttinghead in down position.
3. Place one end of a square (B) Fig. 18 against the fence and the other end against the blade.
4. Check to see that the blade is at 90 degrees to the fence.
5. To adjust, loosen the two screws (C) Fig. 19, and adjust the fence until it is 90 degrees to the blade. Tighten two screws (C).

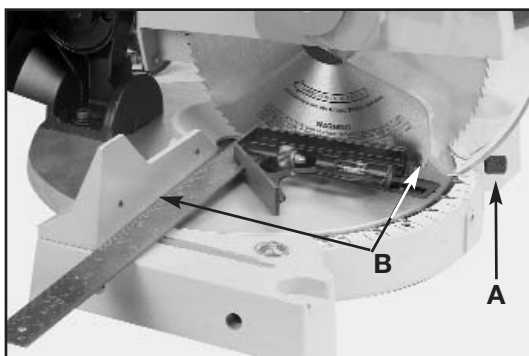


Fig. 18

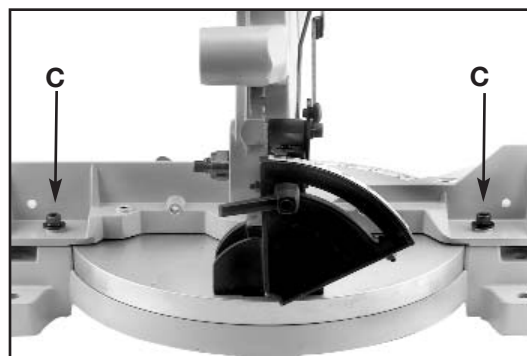


Fig. 19

## ADJUSTING DOWNWARD TRAVEL OF SAW BLADE

Lower the saw blade arm as far as it will go. If the saw blade (A) Fig. 20 contacts the front edge or the rear edge of table insert (B) on its downward travel, proceed with the following adjustment:

**⚠ WARNING** DISCONNECT MACHINE FROM POWER SOURCE.

1. Loosen lock nut (C) Fig. 21 and turn adjustment knob (D) right or left.
2. Lower the saw blade arm and check the adjustment. **NOTE:** There should be a slight clearance between the saw blade (A) Fig. 20, and table insert (B). Repeat **STEP 2**, if necessary.
3. Tighten lock nut (C) Fig. 21 after adjustment is made.

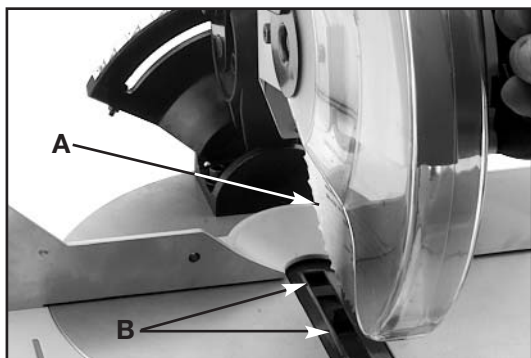


Fig. 20

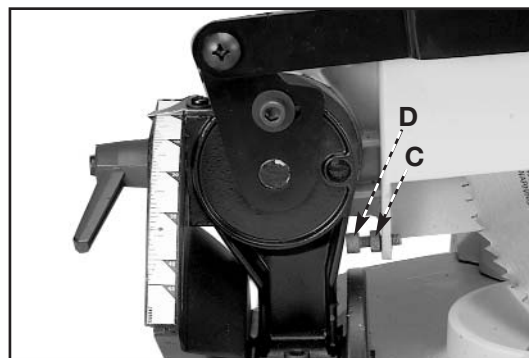


Fig. 21

## ADJUSTING 90 AND 45 DEGREE BEVEL STOPS

**⚠ WARNING** DISCONNECT MACHINE FROM POWER SOURCE.

1. Move the cuttinghead to the 90 degree bevel stop position (Fig. 22), and tighten the bevel lock handle (B) Fig. 23.
2. Place one end of a square (A) Fig. 22 on the table and the other end against the blade. See if the blade is 90 degrees to the table.
3. To adjust, loosen bevel lock handle (B) Fig. 23 and tilt cutting arm until the blade is 90 degrees to the table. **NOTE:** It may be necessary to loosen locknut (C) and set screw (D) to accomplish this. Tighten bevel lock handle (B).

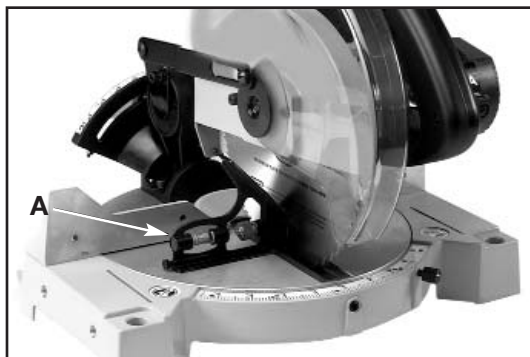


Fig. 22

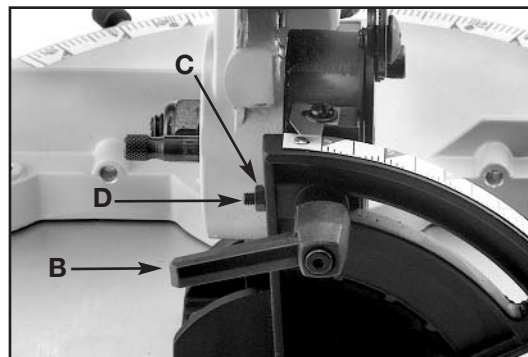


Fig. 23

4. Loosen nut (C) Fig. 23 and tighten set screw (D) until it bottoms. Tighten locknut (C).
  5. Tilt the cutting arm all the way to the left miter position and tighten the bevel lock handle.
  6. Use a combination square (A) Fig. 24 to see if the blade is at 45 degrees to the table.
  7. To adjust, loosen bevel lock handle (B) Fig. 25, and tilt the cutting arm until the blade is at 45 degrees to the table.
- NOTE:** It may be necessary to loosen locknut (E) and set screw (F) to accomplish this. Tighten bevel lock handle (B).
8. Loosen locknut (E) Fig. 25, and tighten set screw (F) until it bottoms. Tighten locknut (E).
  9. The positive stops enable you to rapidly position the blade at the 90 and 45 degree bevel positions.



Fig. 24

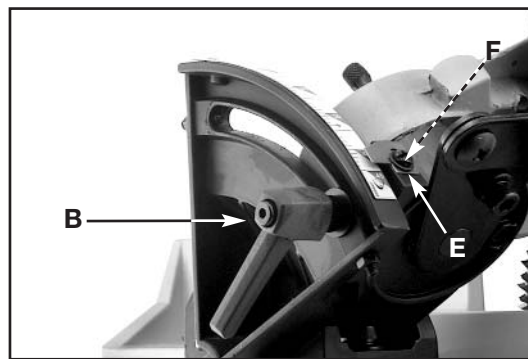


Fig. 25

## ADJUSTING SPRING PRESSURE OF TABLE POSITIVE STOP

The rotating table has positive stops at the 90 degree straight cut-off position and 22-1/2, 30, and 45 degree right and left miter positions. To adjust the spring pressure of the positive stops, tighten or loosen screw (A) Fig. 26.

**NOTE:** Do not over-tighten the screw. (A) so that the table becomes difficult to rotate.

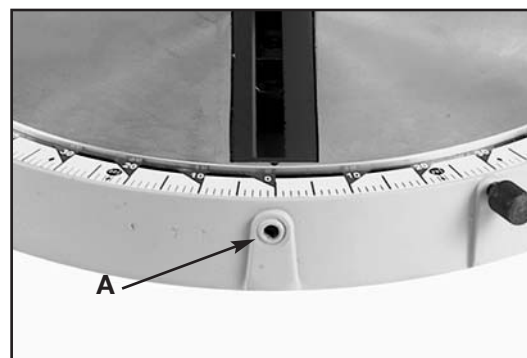


Fig. 26

## TYPICAL OPERATIONS AND HELPFUL HINTS

1. Before cutting, make certain the cuttinghead and table are at the correct settings and are firmly locked in place.
  2. Place the workpiece on the table and hold or clamp it firmly against the fence.
- ⚠WARNING** If the workpiece causes your hand to be within the hazard zone of the saw blade, clamp the workpiece in place before making cut.
3. For best results, cut at a slow, even cutting rate.
  4. Never attempt freehand cutting (wood that is not held firmly against the fence and table).

# GENERAL CUTTING OPERATIONS

1. Your machine has the capacity to cut standard 2 x 4's lying flat or on edge, at the 45 degree right and left miter angles (Fig. 27A).
2. A standard 2 x 6 can be cut in the 90 degree straight cut-off position in one pass or at 45 degree right or left miter angles (Fig. 27B).
3. This machine has the capacity to accurately cut crown moldings and other bevel-type cuts (Fig. 27C).
4. Cutting various sizes of plastic pipe is an easy job with this machine (Fig. 27D).

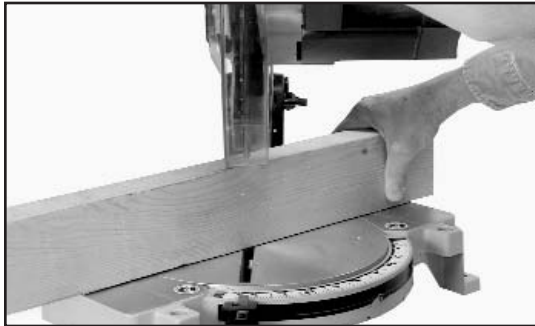


Fig. 27A



Fig. 27B

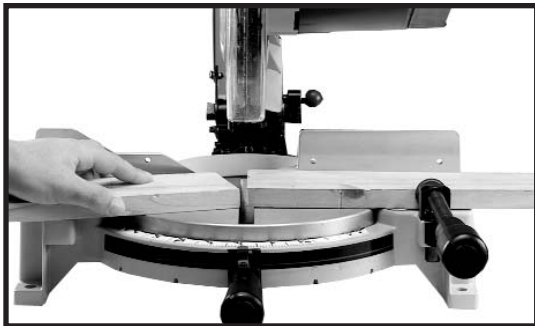


Fig. 27C



Fig. 27D

## CUTTING ALUMINUM

Aluminum extrusions such as used for making aluminum screens and storm windows can be cut with your compound miter saw. When cutting aluminum extrusions, or other sections that can be cut with a saw blade and are within the capacity of the machine, position the material so the blade is cutting through the smallest cross-section (Fig. 28).

The wrong way to cut aluminum angles is illustrated in Fig. 29. Be sure to apply a stick wax to the blade before cutting any aluminum stock. This stick wax is available at most industrial mill supply houses. The stick wax provides proper lubrication and keeps chips from adhering to the blade.

**⚠ WARNING** Never apply lubricant to the blade while the machine is running.

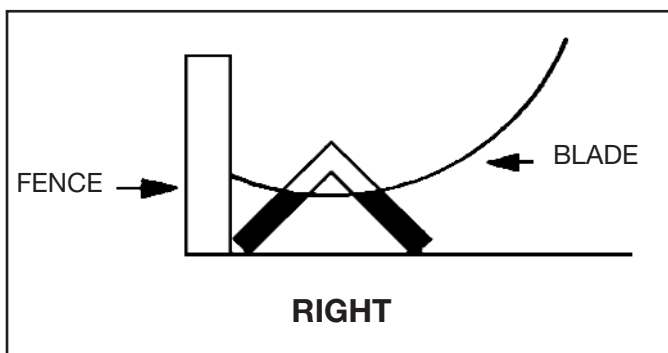


Fig. 28

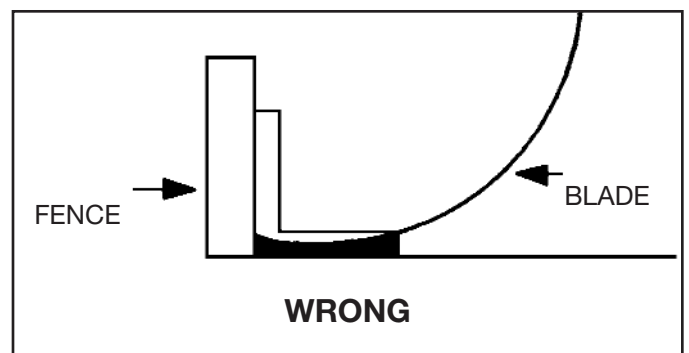


Fig. 29

## CUTTING BOWED MATERIAL

Before cutting flat pieces, check to see if the material is bowed. If it is, make sure the material is positioned on the table as shown in Fig. 30.

If the material is positioned the wrong way, as shown in Fig. 31, the workpiece will pinch the blade near the completion of the cut.

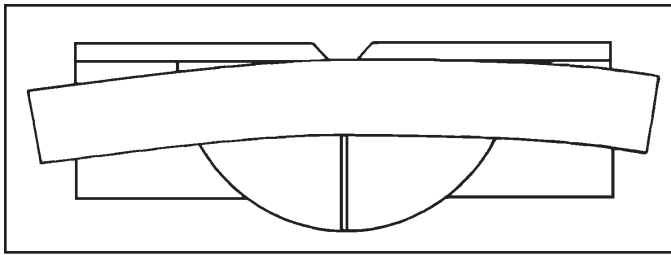


Fig. 30

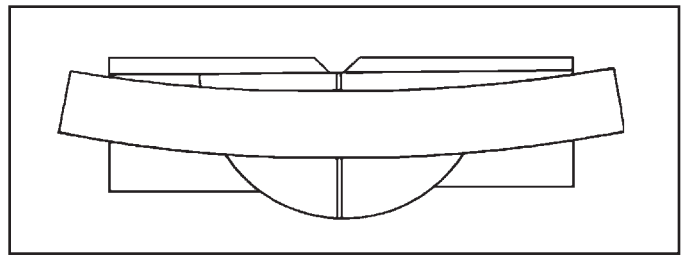


Fig. 31

## CUTTING CROWN MOULDING

**⚠ WARNING** Make sure that the fence is clear of the guard and blade before operating the saw.

One of the many features of the saw is the ease of cutting crown moulding. The following is an example of cutting both inside and outside corners on 52/38° wall angle crown moulding.

**NOTE:** The following procedure for inside or outside crown molding corners is the same with the exception that the bevel position will always be at 30° and the miter position will be 35-1/4° to the right or left.

1. Move the table to the 31-5/8° right miter position and lock the table in position. **NOTE:** A positive stop is provided to find this angle quickly.
2. Tilt the saw blade to the 33-7/8° left bevel position and tighten bevel lock handle. **NOTE:** A triangle indicator is provided on the bevel scale to find this angle quickly.
3. Place the crown moulding on the table with the **CEILING EDGE** of the moulding against the fence, and make the cut, as shown in Fig. 32.

**NOTE:** The piece of crown moulding used for the outside corner will always be on the right hand side of the blade, as shown at (A) Fig. 32. The piece of crown moulding used for the inside corner will always be on the left hand side of the blade, as shown at (B) Fig. 32.

4. To make the matching halves of the inside and outside corners, simply rotate the table to the 31-5/8° left miter position.

**NOTE:** A positive stop is provided to find this angle quickly. The saw blade is already tilted to the 33-7/8° bevel position from the previous cut.

5. Place the crown moulding on the table with the **WALL EDGE** of the crown moulding against the fence and make the cut. Again, the piece of crown moulding used for the outside corner will always be on the right side of the blade, as shown at (C) Fig. 33. The piece of crown moulding used for the inside corner will always be on the left side of the blade, as shown at (D) Fig. 33.
6. Fig. 34 illustrates the two outside corner pieces; the piece cut at (A) Fig. 32 and the piece cut at (C) Fig. 33.
7. Fig. 35 illustrates the two inside corner pieces; the piece cut at (B) Fig. 32, and the piece cut at (D) Fig. 33.



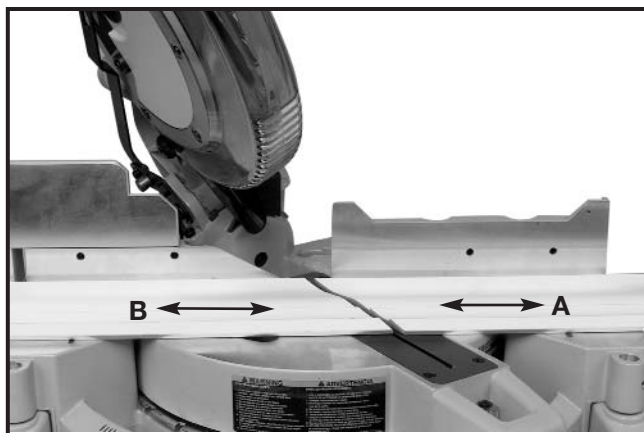


Fig. 32

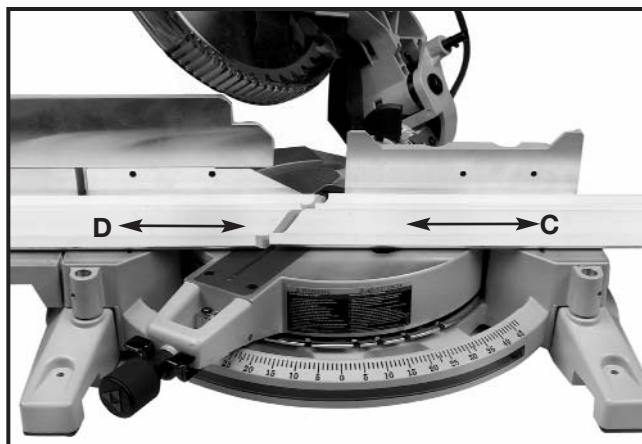


Fig. 33

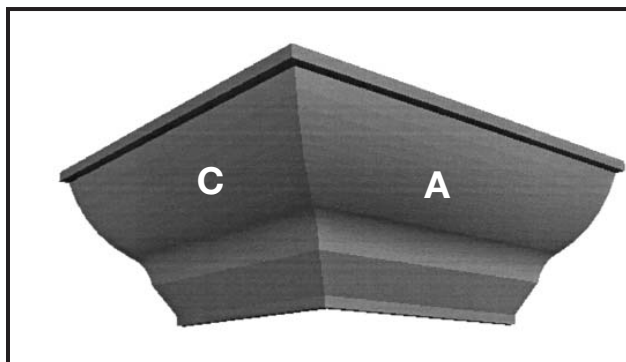


Fig. 34

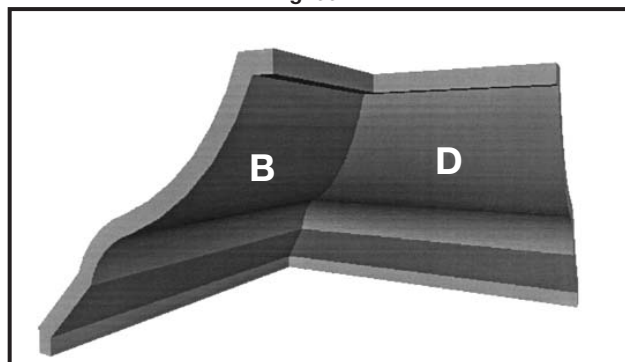


Fig. 35

**⚠ WARNING** Make sure that the fence is clear of the guard and blade before operating the saw.

## MAINTENANCE

### CHANGING THE BLADE

**⚠ WARNING** Use only cross-cut saw blades. Use carbide-tipped blades with a negative hook angle. Do not use blades with deep gullets that can deflect and contact the guard. Use only 8-1/4" diameter saw blades which are rated for 4700 RPM or higher and have 5/8" diameter arbor holes.

**⚠ WARNING** DISCONNECT MACHINE FROM POWER SOURCE.

1. Remove screws (B) and (C) Fig. 36, and rotate lower blade guard assembly to the up position. Slide the guard lift lever (A) forward to release the screw from the slot. Remove blade guard assembly.
2. Press in on arbor lock (D) Fig. 37 to keep the arbor from turning. Remove arbor screw (E). **NOTE:** Turn arbor screw (E) clockwise to remove.

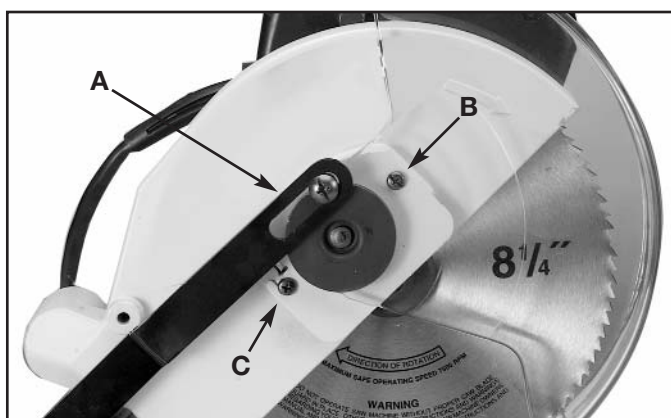


Fig. 36



Fig. 37

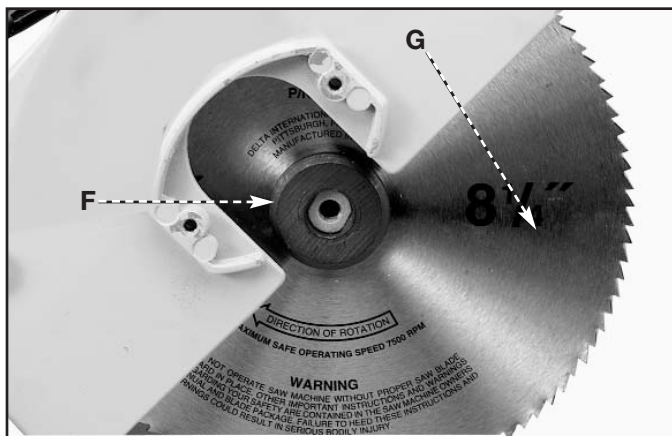


Fig. 38

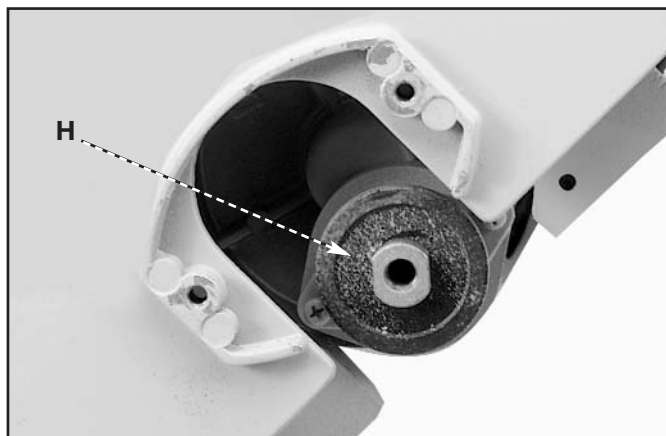


Fig. 39

4. Remove the outside blade flange (F) Fig. 38 and saw blade (G).
5. To install a new blade, make sure that the inside blade flange (H) Fig. 39 is on the arbor with the flats in the flange engaged with the flats on the arbor.
6. Install new blade (J) Fig. 40, outside blade flange (F), and arbor screw (E). Turn the arbor screw counter-clockwise to tighten while pressing in on the arbor lock to keep the arbor from turning. **IMPORTANT:** Make sure flats in outside blade flange are engaged with flats on the arbor shaft and that the teeth of saw blade are pointing down at the front (Fig. 38).

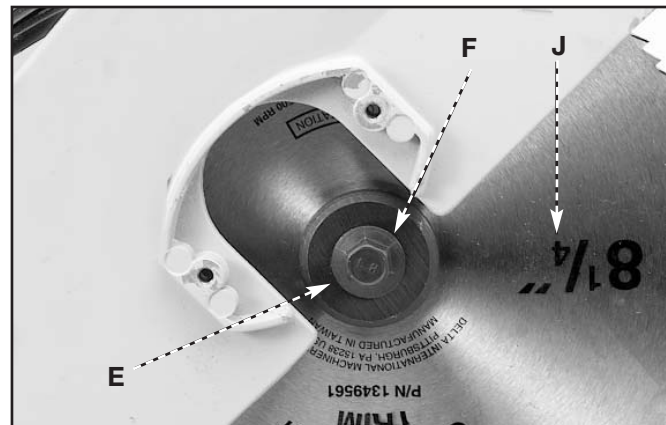


Fig. 40



Fig. 41



Fig. 42

## BRUSH INSPECTION AND REPLACEMENT

**⚠ WARNING** DISCONNECT MACHINE FROM POWER SOURCE.

Brush life varies. It depends on the load on the motor. Check the brushes after the first 50 hours of use for a new machine or after a new set of brushes has been installed.

After the first check, examine them after about 10 hours of use until such time that replacement is necessary.

The brush holders (A) Fig. 41 are located on the motor housing opposite each other. Fig. 42 illustrates one of the brushes removed for inspection. When the carbon on either brush (A) Fig. 42 is worn to 3/16" in length or if either spring or shunt wire is burned or damaged in any way, replace both brushes. If the brushes are found serviceable after removing, reinstall them in the same position as removed.

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**⚠ WARNING**

Since accessories other than those offered by Delta have not been tested with this product, use of such accessories could be hazardous. For safest operation, only Delta recommended accessories should be used with this product.



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