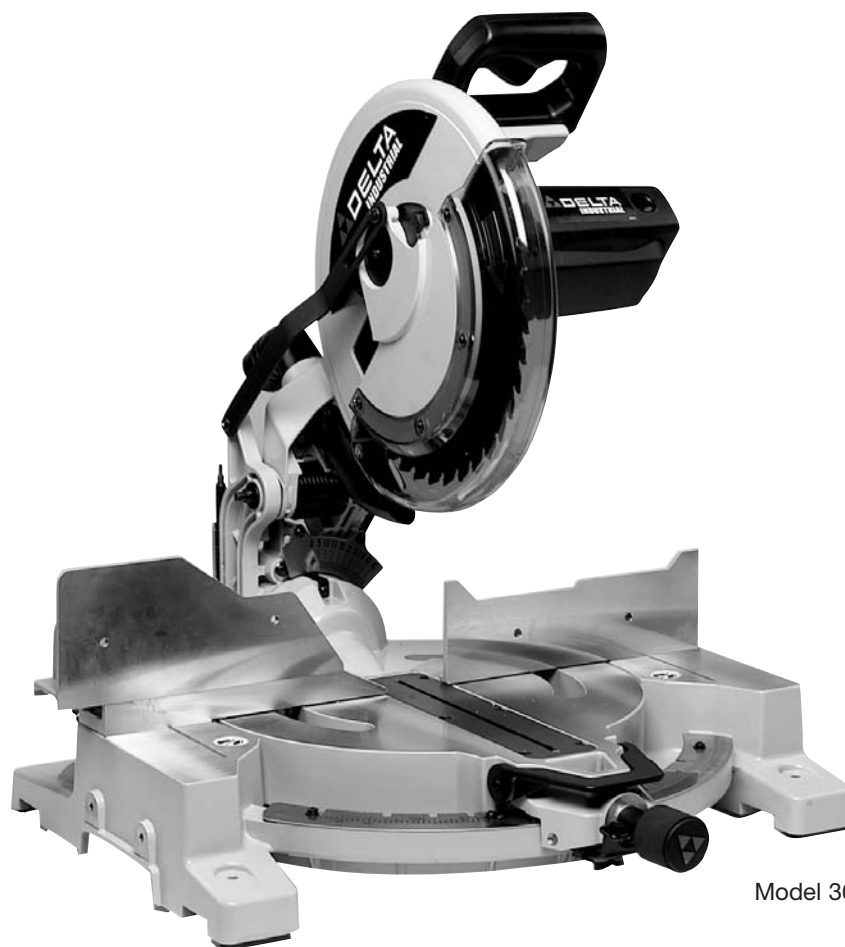


12" Single-Bevel Compound Miter Saw (Model 36-312)

Patents Pending



Model 36-312

PART NO. 910706 - 10-10-03
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To learn more about DELTA MACHINERY
visit our website at: www.deltamachinery.com.

For Parts, Service, Warranty or other Assistance,

please call **1-800-223-7278** (In Canada call **1-800-463-3582**).

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 to the right. 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.

▲ 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.

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- KEEP THE WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
- KEEP CHILDREN AND VISITORS AWAY.** Your shop is a potentially dangerous environment. Children and visitors can be injured.
- 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.
- USE THE GUARDS.** Check to see that all guards are in place, secured, and working correctly to prevent injury.
- REMOVE ADJUSTING KEYS AND WRENCHES BEFORE STARTING THE MACHINE.** Tools, scrap pieces, and other debris can be thrown at high speed, causing injury.
- 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.
- USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause damage to the machine or injury to the user.
- 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.
- SECURE THE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. Loss of control of a workpiece can cause injury.
- 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.
- DON'T FORCE THE WORKPIECE ON THE MACHINE.** Damage to the machine and/or injury may result.
- DON'T OVERREACH.** Loss of balance can make you fall into a working machine, causing injury.
- NEVER STAND ON THE MACHINE.** Injury could occur if the tool tips, or if you accidentally contact the cutting tool.
- 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.
- 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.
- 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.
- 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.
- 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.

- DO NOT OPERATE THIS MACHINE** until it is completely assembled and installed according to the instructions. A machine incorrectly assembled can cause serious injury.
- 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.
- FOLLOW ALL WIRING CODES** and recommended electrical connections to prevent shock or electrocution.
- SECURE THE MACHINE TO A SUPPORTING SURFACE.** Vibration can possibly cause the machine to slide, walk, or tip over, causing serious injury.
- 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.
- USE ONLY BLADES OF THE CORRECT SIZE AND TYPE** specified for this tool to prevent damage to the machine and/or serious injury.
- 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.
- 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.
- 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.
- USE ONLY BLADE FLANGES** specified for this tool to prevent damage to the machine and/or serious injury.
- 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.
- 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.
- 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.
- NEVER START THE TOOL** with the blade against the workpiece. The workpiece can be thrown, causing serious injury.
- 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).
- 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.
- 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.
- 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.
- NEVER REACH AROUND** or behind the saw blade. A moving blade can cause serious injury.
- 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.
- NEVER CUT SMALL PIECES.** Cutting small pieces can cause your hand to move into the blade, resulting in serious injury.
- 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.
- NEVER APPLY LUBRICANT** to a running blade. Applying lubricant could cause your hand to move into the blade, resulting in serious injury.
- 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.
- PROPERLY SUPPORT LONG OR WIDE WORKPIECES.** Loss of control of the workpiece can cause serious injury.
- 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.
- 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.
- 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.
- PROPERLY SUPPORT LONG OR WIDE WORKPIECES.** Loss of control of the workpiece can cause injury.
- 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.
- 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.
- BEFORE OPERATING THE SAW,** check and securely lock the bevel, miter, and sliding fence adjustments.
- 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). 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

Your new Compound Miter Saw is **DOUBLE-INSULATED** to give you added safety. As a result, this saw is equipped with a two-prong plug which permits you to use any conventional 120 volt electrical outlet with concern for maintaining a ground connection.

Before connecting the motor to the power source, confirm that the electric current is 120 volts, and that all connections are making good contact. **NOTE:** Running the saw on low voltage will damage the motor.

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

Many Delta tools will operate on either D.C., or single phase 25 to 60 cycle A.C. current and voltage within plus or minus 5 percent of that shown on the specification plate of the tool. Several models, however, are designed for A.C. current only. Refer to the specification plate on your tool for proper voltage and current rating.

MOTOR SPECIFICATIONS

Your miter saw is wired for 110-120 volt, 60 HZ alternating current. Before connecting the miter saw to the power source, make sure the switch is in the "OFF" position.

REPLACEMENT PARTS

When servicing, use only identical replacement parts.

POLARIZED PLUGS: To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

EXTENSION CORDS

CAUTION Use proper extension cords. 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 of the saw. 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

UNPACKING

⚠ WARNING Do not operate this machine until you read and understand the entire instruction manual.

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.
3. The **36-312** is shipped with the cuttinghead at 90° and the table rotated 45° right. To release the head and move it to the operating position, see "**MOVING CUTTINGHEAD TO THE UP POSITION**" and "**MOVING TABLE TO THE 0° CUT-OFF POSITION**" sections in this manual.

FUNCTIONAL DESCRIPTION

FOREWORD

Delta Model 36-312 is a high capacity 12" single-bevel compound miter saw designed to cut wood and non-ferrous metals. This machine is supplied with new design features that increase the cutting capacity. This machine can cut 6" base moulding mounted vertically, crosscut 2" x 8" dimensional lumber, miter 2" x 6" dimensional lumber at 45° both left and right, and bevel 2" x 8" dimensional lumber left at 45°. It has positive miter stops at 0°, 15°, 22.5°, 31.6, and 45° both left and right, and bevel stops at 0°, 33.9°, and 45° left.

CARTON CONTENTS

- 1 - Miter Saw
- 2 - Dust bag
- 3 - Dust Spout
- 4 - Wrench
- 5 - 2mm hex wrench
- 6 - Open end 7/16" wrench

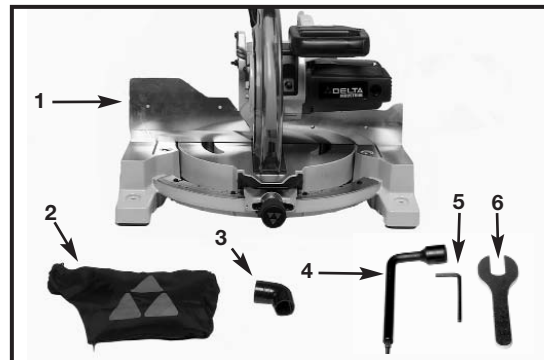


Fig. 2

ASSEMBLY AND OPERATION

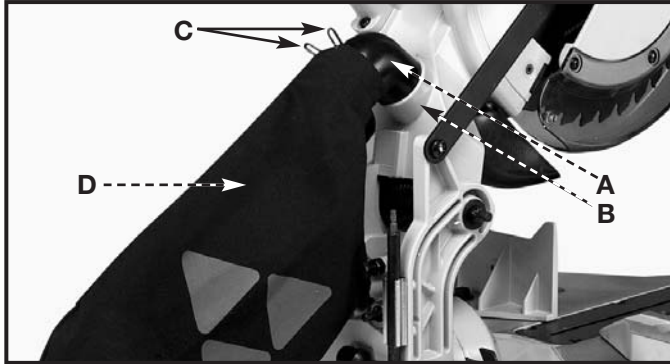


Fig. 3

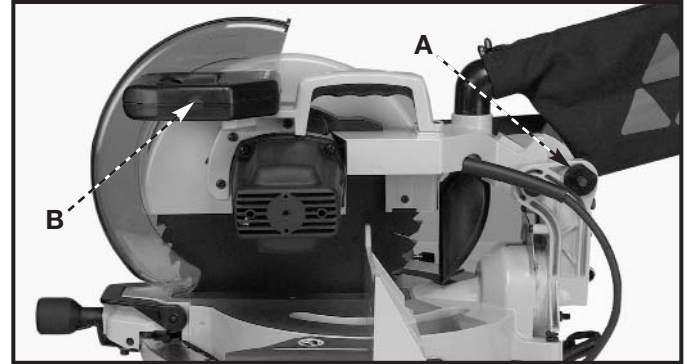


Fig. 3A

ATTACHING DUST BAG

1. Attach dust spout (A) Fig. 3 to port (B).
2. Depress spring clips (C) Fig. 3 of dust bag (D) and clip dust bag (D) over rib of dust spout (A).

MOVING CUTTINGHEAD TO THE UP POSITION

Push down on the handle (B) Fig. 3A, pull out cutting-head lockpin and move the cuttinghead (B) to the up position (Fig. 4).

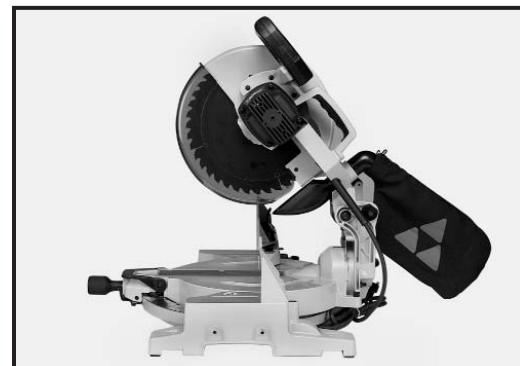


Fig. 4

MOVING TABLE TO THE 0° CUT-OFF POSITION

1. Rotate the locking knob (A) Fig. 5 counter-clockwise as far as it will go. Depress the lever (B) and rotate the table (C) to the 0° straight cut-off position, release the lever (B), and tighten the locking knob (A).

NOTE: This saw incorporates a new slotted plate design feature (D) Fig. 6 with location adjustment screws (E) for fine-adjusting the cutting angle.

2. For proper operation and adjustment of the table, refer to sections, “ROTATING TABLE FOR MITER CUTTING”, and “ADJUSTING SLIDING FIT BETWEEN MOVABLE TABLE AND BASE.



Fig. 5

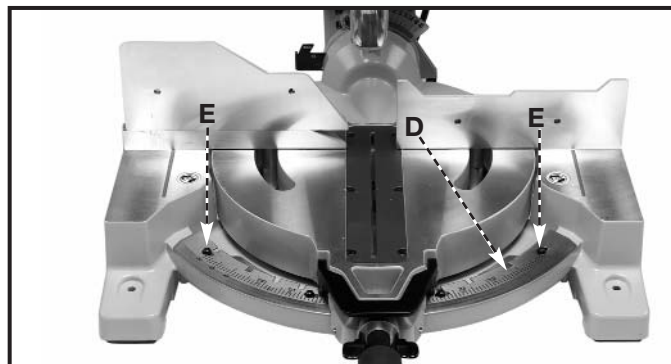


Fig.6

FENCE OPERATION

The saw is supplied with left fence segment (A) Fig. 7 that incorporates a squeeze clamp feature. To operate the fence segment or to slide to another location, squeeze the clamp (A) Fig. 7 to disengage the lock. Slide the fence to desired location and release to lock the fence. To remove the fence, depress lever (B) and slide it off the fence base.

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



Fig. 7

OPERATION AND ADJUSTMENTS

FASTENING MACHINE TO SUPPORTING SURFACE

Before operating your compound miter saw, firmly mount it to a workbench or other supporting surface. Four holes (A) Fig. 9 are provided for fastening the saw to a supporting surface.

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

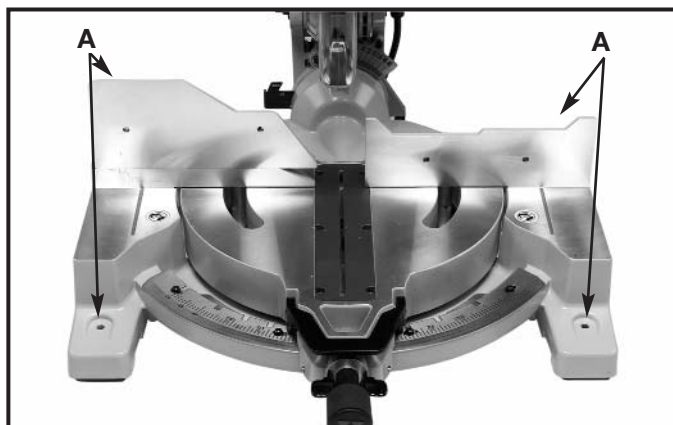


Fig. 9

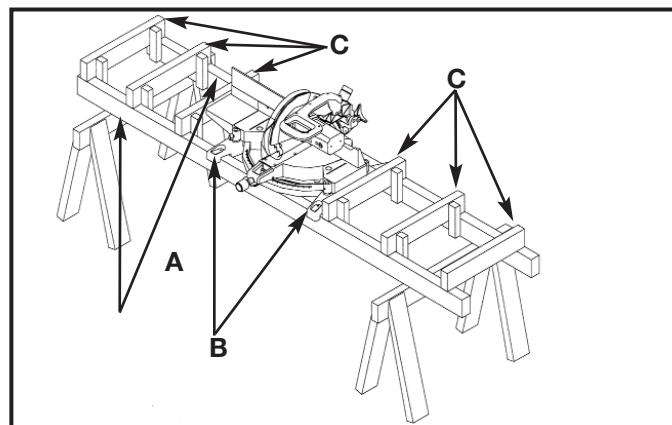


Fig. 10

CONSTRUCTING WORK SUPPORT EXTENSIONS

Work supports can be made easily for the miter saw. Fig. 10 illustrates the miter saw mounted to two standard 2 x 4's (A). Fasten the grooves in the two mounting legs (B), to the 2 x 4's, using four screws through the four holes in the mounting legs. The length of the 2 x 4's (A) can vary, depending on preference. The distance from the top of the 2 x 4's (A) to the compound miter saw table is 3 1/2". Standard 2 x 4's (C) can then be fastened to the top of the 2 x 4's (A). The top of the 2 x 4's (C) will then be the same height as the miter saw table, or minor adjustments can easily be made depending on the height of the 2 x 4's. This method will provide support for long workpieces using standard 2 x 4's instead of constructing an expensive, complicated work support.

STARTING AND STOPPING MACHINE

To start the machine, depress switch trigger (A) Fig. 11. To stop the machine, release the switch trigger.

This saw is equipped with an automatic electric blade brake. As soon as the switch trigger (A) Fig. 11 is released, the electric brake is activated and stops the blade.

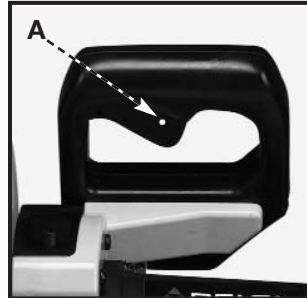


Fig. 11

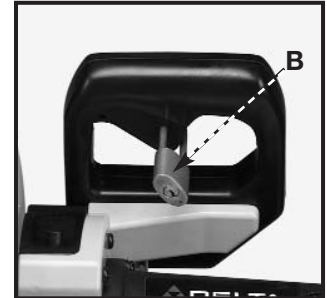


Fig. 12

⚠ WARNING A turning saw blade can be dangerous. After completing the cut, release the switch trigger (A) Fig. 11 to activate blade brake. Keep cuttinghead down until the blade has come to a complete stop.

⚠ WARNING The torque developed during braking may loosen the arbor screw. The arbor screw should be checked periodically and tightened if necessary.

LOCKING SWITCH IN THE "OFF" POSITION

⚠ WARNING When the miter saw is not in use, the switch should be locked in the "OFF" position using a padlock (B) Fig. 12 with a 3/16" diameter shackle to prevent unauthorized use of the saw.

⚠ WARNING In the event of a power outage, always lock switch in "OFF" position until the main power is restored.

ROTATING TABLE FOR MITER CUTTING



Fig. 13

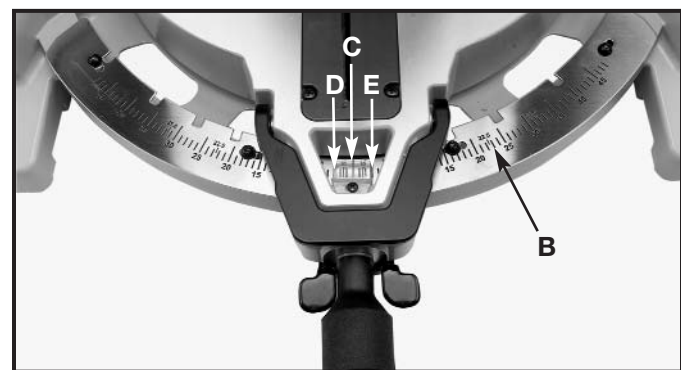


Fig. 14

1. The compound miter saw will cut any angle from a straight 0° cut to 48° right and left. Turn the locking knob (A) Fig. 13 counterclockwise, depress the lock lever (B), and rotate the table to the desired position.
2. This machine is equipped with positive stops at the 0° cut-off position and at the 15°, 22.5°, 31.6°, and 45° left and right positions.
3. The center line (C) Fig. 14 on the cursor indicates the actual angle of cut. Each scale line (B) represents 1°. When the center line (C) is moved from one line to the next on the scale, the angle of the cut is changed by 1°.
4. The pointer is provided with two additional lines (D) and (E) Fig. 14. This allows movement of the control arm by exactly 1/2°. For example, assume that the center line (C) is pointing to the 10° mark on the scale, as indicated, and the desired angle of cut is 1/2° to the right. Move the control arm until the right line (E) lines up with the next line on the scale. The angle of cut will then be changed 1/2° to the right. If you change the angle of cut 1/2° to the left, use the left line (D) in the same manner.

ADJUSTING SLIDING FIT BETWEEN MOVABLE TABLE AND BASE

⚠ WARNING DISCONNECT THE MACHINE FROM THE POWER SOURCE.

To adjust the sliding fit between the movable table and the base, turn the nut (A) Fig. 15 clockwise to tighten the fit (counter-clockwise to loosen the fit). This adjustment should not be so tight that it restricts the rotating movement of the table, or so loose that it affects the accuracy of the saw.

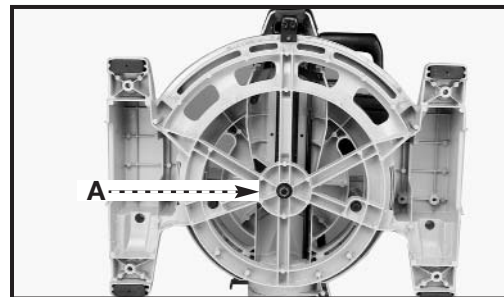


Fig. 15

ADJUSTING FENCE 90° TO BLADE

IMPORTANT: Before making this adjustment, set the blade at 0° to the table. See section "Adjusting 0°, 33.9° and 45° bevel positive stops."



Fig. 16

⚠ WARNING DISCONNECT THE MACHINE FROM THE POWER SOURCE.

1. Place a framing square (E) Fig. 16 on the table against the right fence (D). Rotate the movable table (A) Fig. 16 until the blade (C) is 90° to the right fence.
2. Adjust the front miter scale (B) Fig. 16 so that 0° detent notch is engaged.
3. Adjust the miter cursor (F) Fig. 17 so that the pointer is aligned with the 0° mark on the scale by loosening the screw (G), adjusting the cursor (F), and tightening the screw (G).
4. Place one end of a framing square (A) Fig. 18 against the front of the right fence (B) and the other end against the left fence base (C). Use the supplied wrench to loosen left fence base mounting screws (D) and adjust the left fence base parallel to the right fence.



Fig. 17

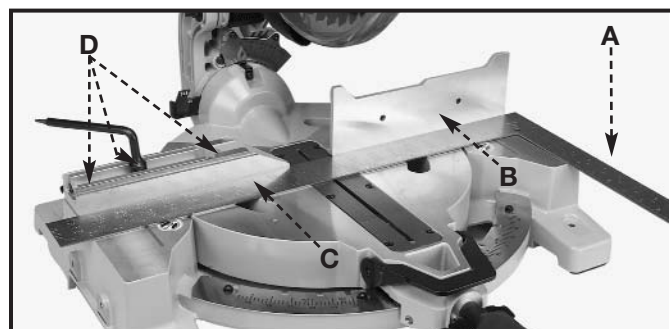


Fig. 18

TABLE HAZARD ZONE

⚠ WARNING The area inside the two red lines (A) Fig. 21 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. 21

TILTING CUTTINGHEAD FOR BEVEL CUTTING

⚠ WARNING DISCONNECT MACHINE FROM POWER SOURCE.



Fig. 22

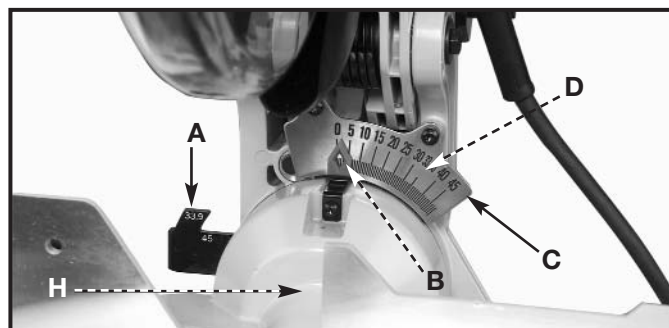


Fig. 23

IMPORTANT: Move the sliding fence to the left or right to provide clearance for the blade and guard. The DEGREE of tilt determines how far to move the sliding fence. Refer to the section “ADJUSTING SLIDING FENCE.”

1. The cuttinghead of your compound miter saw can be tilted to cut any bevel angle from a 90° straight cut-off to a 48° bevel angle left. Raise bevel lock lever (A) Fig. 22.
2. Positive stops (A) Fig. 23 are provided to rapidly position the saw blade at 0°, 33.9° and 45°. Refer to the section of this manual titled “ADJUSTING 0°, 33.9° AND 45° BEVEL POSITIVE STOPS.” The bevel angle of the cuttinghead is determined by the position of the pointer (B) on the scale (C).
3. In addition, a marked indicator (D) is provided on the bevel scale (33.9°) for cutting crown moulding. Refer to the “CUTTING CROWN MOULDING” section of this manual.

SELECTING 0°, 33.9°, AND 45° BEVEL POSITIVE STOPS

The bevel setting feature utilizes a sliding plate (A) Fig. 24, pin (B), and bushing (C) design that is used to select the bevel angle. The position of the pin (B) and the sliding plate (A) determine the bevel angle.

⚠ WARNING DISCONNECT THE MACHINE FROM THE POWER SOURCE.

1. Position the bevel detent plate so that the desired angle (A) Fig. 23 is exposed immediately to the left of the housing (H) Fig. 23.
2. Lift the front handle (A) Fig. 22 to disengage bevel lock.
3. Tilt the cuttinghead left as desired until it stops on plate (A) Fig. 23. **NOTE:** Fig. 25 illustrates the sliding plate positioned for 45° left.
4. Lower the front handle to engage the bevel lock.

NOTE: To perform a bevel cut of more than 45°, pull the bevel pin (B) out to bypass the bevel detent plate. 48° is possible.

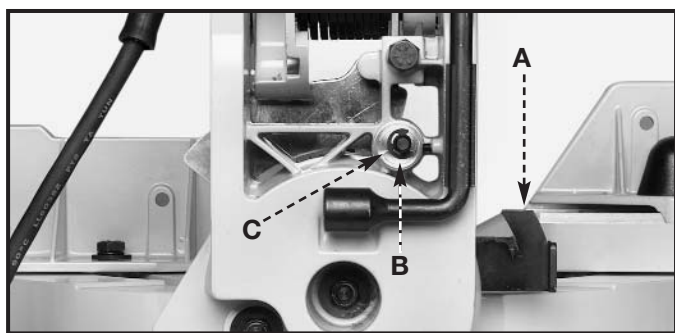


Fig. 24

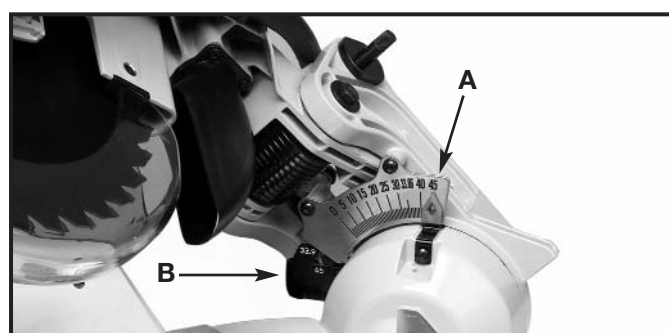


Fig. 25

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

ADJUSTING 0°, 33.9°, AND 45° BEVEL POSITIVE STOPS

The bevel adjustment utilizes a sliding plate (A) Fig. 24, pin (B), and bushing (C) design feature that can be adjusted to fine-adjust the bevel angle. The position of the pin within the bushing is adjustable and, when set, determines the bevel angle. To adjust, loosen the pin locking screws, move to desired location, and tighten securely.

⚠ WARNING DISCONNECT THE MACHINE FROM THE POWER SOURCE.

1. Position the bevel detent plate so that the desired angle (A) Fig. 25 is exposed.
2. Lift the front handle (A) Fig. 26 to disengage the bevel lock.
3. Tilt the cuttinghead left until it stops on the plate (B) Fig. 25.
4. To adjust, loosen the pin locking set screw (C) Fig. 27 (shown from the rear), located on the side of the trunnion and rotate the bushing (B) to the desired location. Rotate the bushing clockwise to decrease and counterclockwise to increase the bevel angle. Tighten screw (C) securely.

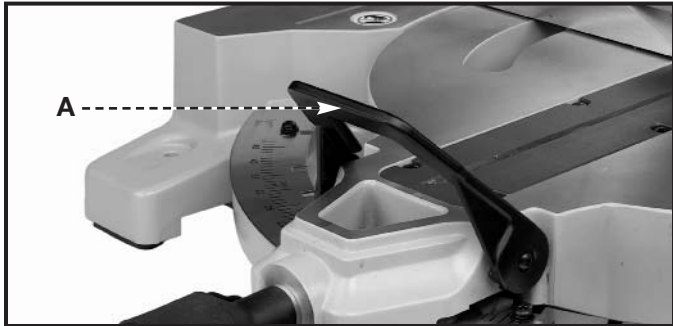


Fig. 26

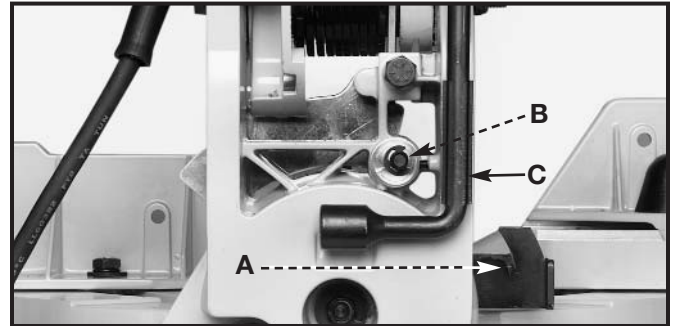


Fig. 27

NOTE: To perform a bevel cut more than 45°, pull bevel pin (B) Fig. 28 out to bypass the bevel detent plate. 48° is possible.

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



Fig. 28

ADJUSTING THE BEVEL LOCK

The bevel-locking force has been set at the factory. After a period of time, you may need to adjust the locking mechanism. To adjust, place the bevel-locking handle (A) Fig. 26 in the “UP” position and tighten the nut (A) Fig. 29.

ADJUSTING SLIDING FIT BETWEEN TRUNNION AND BEVEL BRACKET

After a period of time, it may become necessary to adjust the sliding fit between the trunnion and the bevel bracket by tightening the adjusting nut (C) Fig. 29 at the rear of the tool.

Correct adjustment provides a snug sliding fit between these two parts. This adjustment should not be so tight that it restricts the tilting movement of the trunnion when bevel cutting, or so loose that it affects the accuracy of the saw cut.

ADJUSTING THE TENSION OF CUTTINGHEAD RETURN SPRING

The tension of the cuttinghead return spring has been adjusted at the factory so that the cuttinghead returns to the “up” position after a cut has been made. To re-adjust the spring tension, loosen the nut (A) Fig. 30 and turn the adjusting screw (B) Fig. 30 clockwise to increase, or counterclockwise to decrease the spring tension. Tighten nut (A) securely.

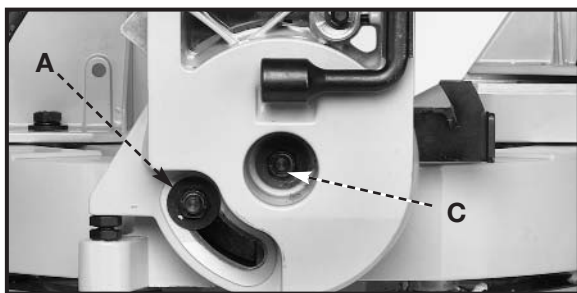


Fig. 29

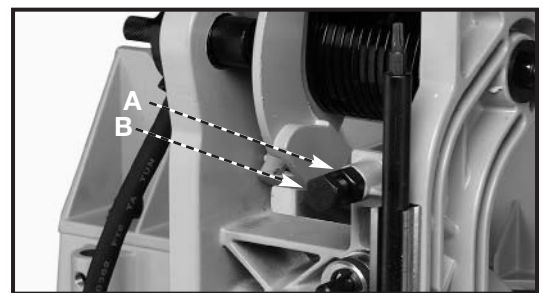


Fig. 30

ADJUSTING SLIDING FIT BETWEEN CUTTINGHEAD ARM AND TRUNNION

After a period of time, an adjustment of the sliding fit between the cuttinghead arm (B) Fig. 31, and the trunnion (C) may be necessary. To adjust, tighten or loosen the nut (D). Correct adjustment provides a snug sliding fit between these two parts. This adjustment should not be so tight that it restricts the sliding movement of the cuttinghead arm (B) or so loose that it affects the accuracy of the saw cut.

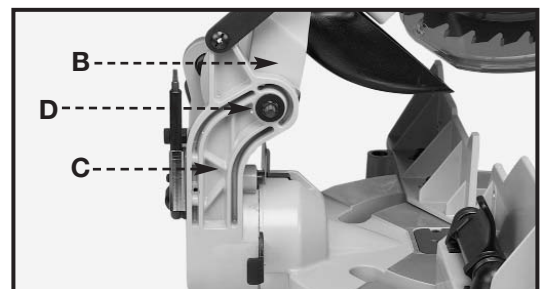


Fig. 31

ADJUSTING LOWER BLADE GUARD

This machine incorporates a blade guard (A) Fig. 32A to cover the rear section of the blade. After an extended period of use, the movable lower blade guard may not operate smoothly when the cuttinghead is lowered. This can be corrected by adjusting nut (B) until the lower blade guard moves freely.

⚠ WARNING Overtightening the nut could impair guard movement.

NOTE: This unit has been designed with an articulating rear guard. Before contacting the workpiece, the rear guard will rotate upward to expose more of the blade as the cuttinghead is lowered.

⚠ WARNING Do not remove any of the blade guards.

⚠ WARNING Make sure that all guards are in place and functioning properly before operating the saw.

⚠ WARNING Make sure that the fences are clear of the guard and blade before operating the saw.



Fig. 32A

TYPICAL OPERATIONS AND HELPFUL HINTS

⚠ WARNING If the size of the workpiece causes your hand to be inside the table hazard zone (see section “TABLE HAZARD ZONE” SEE FIG. 21), use a clamp to secure the workpiece.

1. Before cutting, make certain that the cutting arm and table area are at their correct settings and firmly locked in place.
2. Before cutting, determine that the workpiece is the right size for the saw.
3. Place the workpiece on the table and hold or clamp it firmly against the fence.
4. For best results, cut at a slow, even cutting rate.
5. Never attempt freehand cutting (cutting a workpiece that is not held firmly against the fence and table).

AUXILIARY WOOD FENCE

⚠ WARNING When performing multiple or repetitive cut-off operations that result in small cut-off pieces (one inch or less), the saw blade can catch the cut-off pieces and project them out of the machine or into the blade guard and housing, possibly causing damage and/or injury. In order to limit the possibility of personal injury or blade guard damage, mount an auxiliary wood fence to your saw.

Holes are provided in the fence to attach an auxiliary fence (A) and (B) (Fig. 32B). This auxiliary fence is constructed of straight wood approximately 1/2" thick. Side A should be approximately 5.25" high by 10.5" long and side B should be approximately 3" high by 10.5" long.

NOTE: The auxiliary fence (A) is used **only** with the saw blade in the 0° bevel position (90°) to the table. The auxiliary fence must be removed for all bevel cuts (blade tilted).

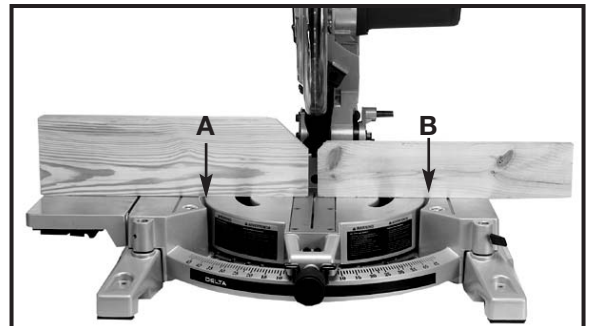


Fig. 32B

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

CUTTING ALUMINUM

⚠ WARNING To reduce the risk of injury, use the proper blade when cutting this type of material.

Aluminum extrusions (aluminum screens and storm windows) can easily be cut with your 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 that the blade is cutting through the smallest cross-section, as shown in Fig. 34. The wrong way to cut aluminum angles is illustrated in Fig. 35. Be sure to apply a stick wax (similar to Johnson's stick wax #140) 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 saw is running.

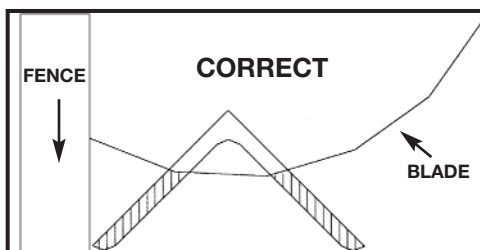


Fig. 34

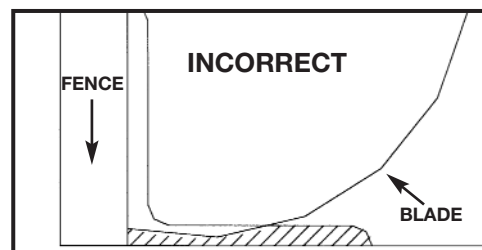


Fig. 35

CUTTING BOWED MATERIAL

1. Check the workpiece. If it is bowed, position the workpiece on the table as shown in Fig. 36.
2. When the workpiece is positioned the wrong way (Fig. 37), it will pinch the blade near the completion of the cut.

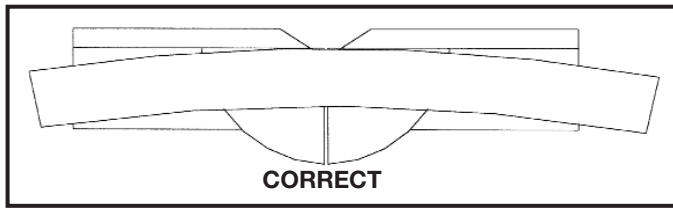


Fig. 36

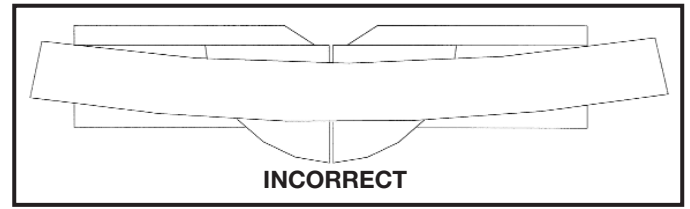


Fig. 37

CUTTING CROWN MOULDING

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

CUTTING CROWN MOULDING

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 moulding 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 diamond 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. 38.

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. 38. 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. 38.

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. 39. 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. 39.

6. Fig. 40 illustrates the two outside corner pieces; the piece cut at (A) Fig. 38 and the piece cut at (C) Fig. 39.

7. Fig. 41 illustrates the two inside corner pieces; the piece cut at (B) Fig. 38, and the piece cut at (D) Fig. 39.

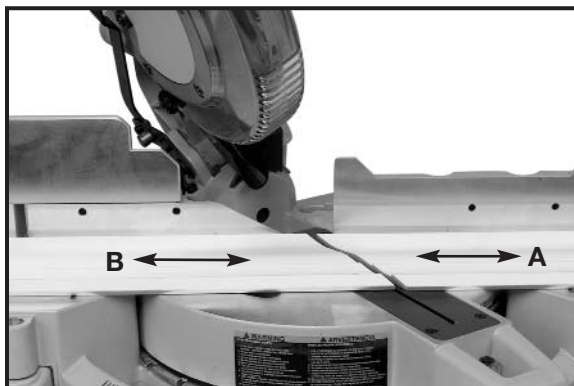


Fig. 38

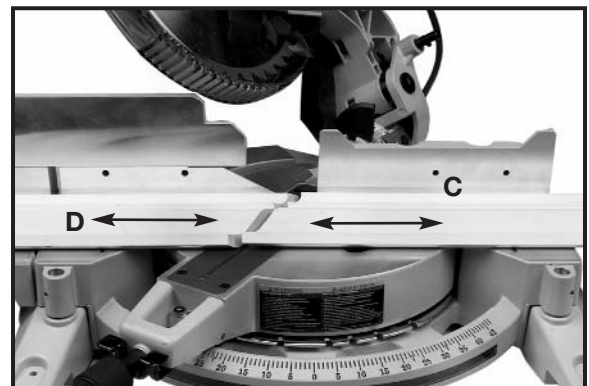


Fig. 39

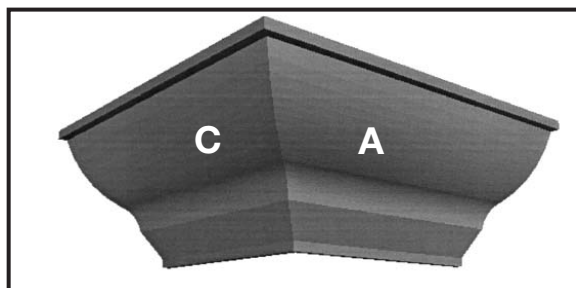


Fig. 40

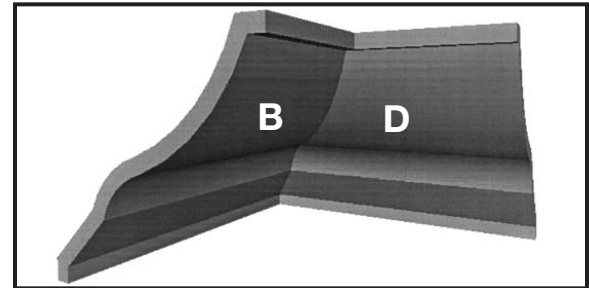


Fig. 41

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

MAINTENANCE

⚠ WARNING Disconnect the machine from the power source.

CHANGING THE BLADE

1. Use only 12" diameter blades (with 1" arbor holes) that are rated for **5000 RPM** or higher.
2. Use the supplied wrench to loosen screws (A) Fig. 42. **NOTE:** One screw is located under the arbor cover arm.
3. Rotate the arbor cover (C) Fig. 43, and move the guard (D) Fig. 43 to the rear, exposing the arbor screw (E).
4. Remove the arbor screw (E) Fig. 43, by turning screw clockwise with wrench (supplied), while pressing in on arbor lock (F) Fig. 44. Remove the outside blade flange (G) Fig. 43, and saw blade (H) Fig. 43. **Do not remove the inside blade flange.**
5. Attach the new saw blade. Ensure that the **teeth of saw blade are pointing down at the front**, and attach the outside blade flange (G) Fig. 43. Check to see that the flats on the outside blade flange are engaged with the flats on the arbor shaft.
6. Thread the arbor screw (E) Fig. 43, into the saw arbor by turning the screw (E) counterclockwise as far as possible by hand. Tighten the arbor screw (E) Fig. 43 with the supplied wrench (J) Fig. 44 while pressing in on the arbor lock (F) Fig. 44.
7. Rotate the arbor cover (C) Fig. 43, and move the guard (D) to the front. Tighten the screws (A) that were loosened in **STEP 2**.

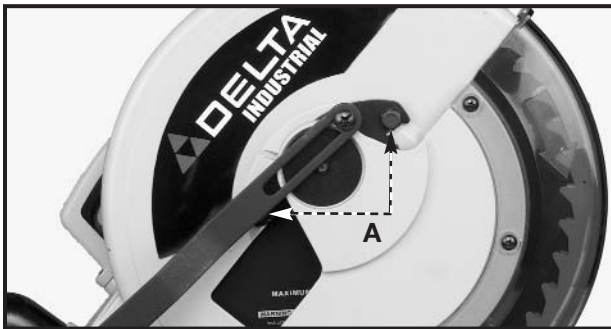


Fig. 42

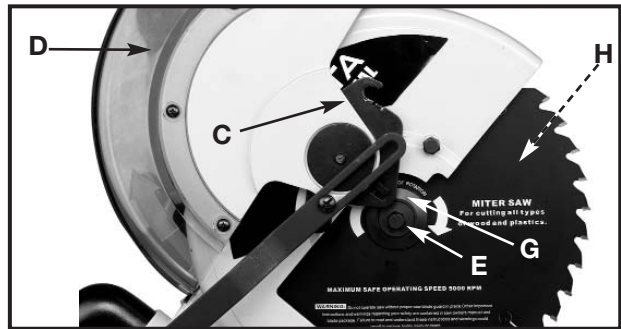


Fig. 43

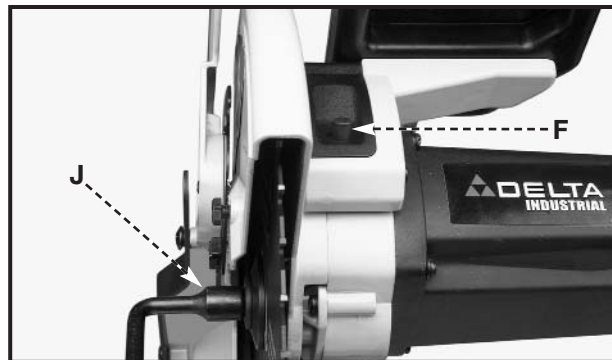


Fig. 44

KEEP TOOL CLEAN

Periodically blow out all air passages with dry compressed air. Clean all plastic parts with a soft damp cloth. NEVER use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.

CAUTION Wear ANSI Z87.1 safety glasses while using compressed air.

FAILURE TO START

Should your tool fail to start, check to make sure the prongs on the cord plug are making good contact with the outlet. Also, check for blown fuses or open circuit breakers in the line.

BRUSH INSPECTION AND REPLACEMENT

▲WARNING Before inspecting brushes, disconnect the machine from the power source.

Brush life varies, depending on the load on the motor. Check the brushes after the first 50 hours, or after a new set of brushes has been installed.

After the first check, examine them about every 10 hours.

The brush holders (A) Fig. 45 are located on the motor housing opposite each other. Remove the brush holder cap (A) Figs. 45 and 46, and remove the brushes for inspection. When the carbon on either brush (B) Fig. 46 is worn to 3/16" or less, or if either spring or shunt wire (C) is burned or damaged, replace both brushes. If the brushes are found serviceable after removing, reinstall them in the same position.



Fig. 45

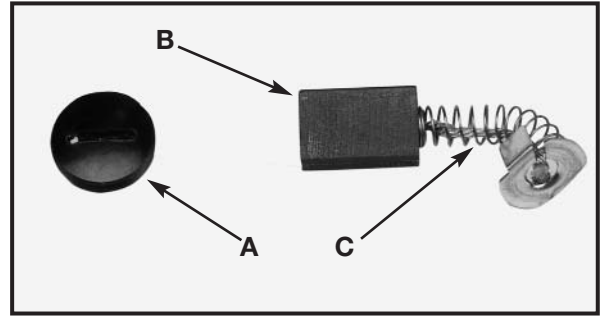


Fig.46

ACCESSORIES

A complete line of accessories is available from your Delta Supplier, Porter-Cable • Delta Factory Service Centers, and Delta Authorized Service Stations. Please visit our Web Site www.deltamachinery.com for a catalog or for the name of your nearest supplier.

▲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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