

10" Dual Bevel Compound Power Miter Saw (Model 36-085)



PART NO. 901694 - 08-31-01
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INSTRUCTION MANUAL



To learn more about DELTA MACHINERY
visit our website at: www.deltamachinery.com.

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ESPAÑOL: PÁGINA 19

GENERAL SAFETY RULES

Woodworking can be dangerous if safe and proper operating procedures are not followed. As with all machinery, certain hazards are 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 the potential for injury, but even the best safety measures, will not 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. Select an alternate procedure that is safer. **REMEMBER:** Your personal safety is your responsibility.

This machine was designed for certain applications only. **DO NOT** modify and/or use it for any application other than that for which it was designed. If you have 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
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(IN CANADA: 505 SOUTHGATE DRIVE, GUELPH, ONTARIO N1H 6M7)



WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY!

1. **FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE TOOL.** Learn the tool's application and limitations as well as the specific hazards peculiar to it.

2. **KEEP GUARDS IN PLACE** and in working order.

3. **ALWAYS WEAR EYE PROTECTION.** Wear safety glasses. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses. Also use face or dust mask if cutting operation is dusty. These safety glasses must conform to ANSI Z87.1 requirements. Note: Approved glasses have Z87 printed or stamped on them.

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.

6. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

7. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.

8. **MAKE WORKSHOP CHILDPROOF** – with padlocks, master switches, or by removing starter keys.

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

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

11. **WEAR PROPER APPAREL.** No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

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

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

14. **MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. **DISCONNECT TOOLS** before servicing and when changing accessories such as blades, bits, cutters, etc.

16. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause hazards or risk of injury to persons.

17. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in "OFF" position before plugging in power cord. In the event of a power failure, move switch to the "OFF" position.

18. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

19. **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.

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

21. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.

22. **STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE WHEN OPERATING A POWER TOOL. DO NOT USE TOOL WHILE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.** A moment of inattention while operating power tools may result in serious personal injury.

23. **MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY** while motor is being mounted, connected or re-connected.

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.



25. **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, such as those dust masks that are specially designed to filter out microscopic particles.

ADDITIONAL SAFETY RULES FOR MITER SAWS

1. **USE ONLY CROSS-CUTTING SAW BLADES.** When using carbide tipped blades, be certain that they have a negative hook angle. Do not use blades with deep gullets. These can deflect and contact the guard.
2. **DO NOT OPERATE** the miter saw until it is completely assembled and installed according to the instructions.
3. **IF YOU ARE NOT** thoroughly familiar with the operation of compound miter saws, obtain advice from your supervisor, instructor or other qualified person.
4. **DO NOT** perform any operation freehand. Secure or clamp workpiece firmly against fence.
5. **KEEP HANDS OUT OF PATH** of saw blade. If the workpiece you are cutting would cause your hand to be within hazard zone of the saw blade, the workpiece should be clamped in place before making cut.
6. **BE SURE** blade is sharp, runs freely and is free of vibration.
7. **ALLOW** the motor to come up to full speed before starting cut.
8. **KEEP** motor air slots clean and free of chips.
9. **ALWAYS MAKE SURE** all clamp handles are tight before cutting, even if the table is positioned in one of the positive stops.
10. **BE SURE** blade and flanges are clean and that arbor screw is tightened securely.
11. **USE** only blade flanges specified for your saw.
12. **NEVER** use blades larger or smaller in diameter than ten inches.
13. **NEVER** apply lubricants to the blade when it is running.
14. **ALWAYS** check the blade for cracks or damage prior to operating the tool. Replace cracked or damaged blades immediately.
15. **NEVER** use blades recommended for operation at less than 6000 RPM.
16. **DO NOT** operate the saw without guards in place.
17. **ALWAYS** keep the lower blade guard in place and operating properly.
18. **NEVER** reach around or behind saw blade.
19. **MAKE SURE** blade is not contacting workpiece before switch is turned on.
20. **NEVER** lock the switch in the "ON" position.
21. **AFTER COMPLETING CUT**, release power switch and wait for coasting blade to stop before returning saw to raised position.
22. **TURN OFF** tool and wait for saw blade to stop before moving workpiece or changing settings.
23. **DO NOT** remove jammed or cut-off pieces until blade has stopped.
24. **NEVER** cut ferrous metals or masonry.
25. **NEVER** recut small pieces.
26. **PROVIDE** adequate support to the sides of the saw table for long workpieces.
27. **NEVER** use the miter saw in an area with flammable liquids or gases.
28. **NEVER** use solvents to clean plastic parts. Solvents could possibly dissolve or otherwise damage the material. Only a soft damp cloth should be used to clean plastic parts.
29. **DISCONNECT** power before changing blades or servicing.
30. **DISCONNECT** saw from power source and clean the machine before leaving it.
31. **MAKE SURE** the work area is clean before leaving the machine.
32. **USING** attachments and accessories other than those recommended by Delta may result in the risk of injuries.
33. **MAKE SURE** that the stabilizer bar is fully extended before operating the tool.
34. **IMPORTANT: When the tool is not in use, the switch should be locked in the "OFF" position to prevent unauthorized use.**
35. **IF ANY PART** of this tool is missing, damaged, or fails in any way, or if any electrical component fails to perform properly, shut off the switch and remove the plug from the power supply outlet. Replace missing, damaged or failed parts before resuming operation.
36. **ADDITIONAL INFORMATION** regarding the safe and proper operation of this product is available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201, in the Accident Prevention Manual for Industrial Operation and also in the Safety Data Sheets provided by the NSC. Please also refer to the American National Standard Institute ANSI O1.1 Safety Requirements for Woodworking Machinery and the U.S. Department of Labor OSHA 1910.213 Regulations.

SAVE THESE INSTRUCTIONS.

Refer to them often and use them to instruct others.

CONNECTING TOOL TO POWER SOURCE

POWER CONNECTIONS

A separate electrical circuit should be used for your tools. 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 tool's plug. Before connecting the motor 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 tool. All line connections should make good contact. Running on low voltage will damage the motor.



WARNING: DO NOT EXPOSE THE TOOL TO RAIN OR OPERATE THE TOOL IN DAMP LOCATIONS.

MOTOR SPECIFICATIONS

Your tool is wired for 120 volt, 60 HZ alternating current. Before connecting the tool to the power source, make sure the switch is in the "OFF" position. The no-load speed of the motor is 5200 RPM.

GROUNDING INSTRUCTIONS



WARNING: THIS TOOL MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

1. All grounded, cord-connected tools:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding type plugs and matching 3-conductor receptacles that accept the tool's plug, as shown in Fig. 1

Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating less than 150 volts:

If the tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig. 1, the tool will have a grounding plug that looks like the plug illustrated in Fig. 1. A temporary adapter, which looks like the adapter illustrated in Fig. 2, may be used to connect this plug to a matching 2-conductor receptacle as shown in Fig. 2 if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box. Whenever the adapter is used, it must be held in place with a metal screw.

NOTE: In Canada, the use of a temporary adapter is not permitted by the Canadian Electric Code.

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WARNING: IN ALL CASES, MAKE CERTAIN THAT THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT CERTAIN, HAVE A QUALIFIED ELECTRICIAN CHECK THE RECEPTACLE.

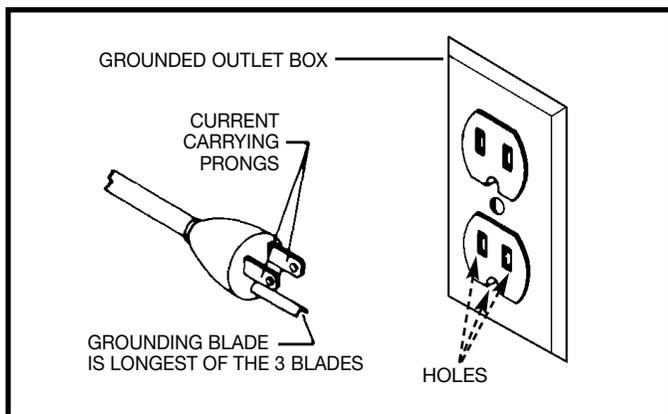


Fig. 1

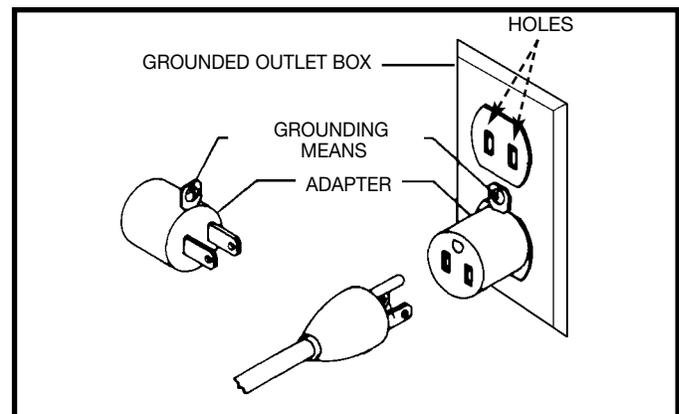


Fig. 2

EXTENSION CORDS

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 tool's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the tool. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Fig. 3, 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 TOOLS			
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. 3

OPERATING INSTRUCTIONS

FOREWORD

Delta Model 36-085 is a 10" compound, dual-bevel miter saw designed to cut wood, plastics, and aluminum. This saw can bevel cut both right and left Compound angle and bevel cutting are both easy and accurate. This saw can cross-cut up to 5-3/4" x 2-3/8", miter at 45 degrees both left and right 4-1/8" x 2-3/8", bevel at 45 degrees both left and right 5-7/8" x 1-9/16", and compound 45 degrees x 45 degrees, 4-1/8" x 1-9/16". Positive miter stops are located at 0, 22.5, 31.62, and 45 degrees both left and right, and the tool will bevel between 0 and 45 degrees, both left and right.

UNPACKING AND CLEANING

Carefully unpack the tool and all loose items from the shipping container(s). Remove the protective coating from all unpainted surfaces. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover the unpainted surfaces with a good quality household floor paste wax.

CARTON CONTENTS

IMPORTANT: DO NOT LIFT THE MITER SAW BY THE SWITCH HANDLE. THIS ACTION CAN CAUSE MISALIGNMENT. ALWAYS LIFT THE MACHINE BY THE BASE OR CARRYING HANDLE.

- | | |
|----------------|---------------------------|
| 1 - Miter Saw | 5 - Table Lock Handle |
| 2 - Dust Bag | 6 - Extension (2) |
| 3 - Work Clamp | 7 - Stock Stop |
| 4 - Wrench | 8 - Retaining Bracket (2) |



Fig. 4

ASSEMBLY INSTRUCTIONS



WARNING: FOR YOUR OWN SAFETY, DO NOT CONNECT THE TOOL TO THE POWER SOURCE UNTIL THE MACHINE IS COMPLETELY ASSEMBLED AND YOU READ AND UNDERSTAND THE ENTIRE OWNER'S MANUAL.

ATTACHING TABLE LOCK HANDLE

1. Thread the table lock handle (A) Fig. 5, into the hole (B) in the arm bracket (C).
2. Figure 6 illustrates the table lock handle (A) attached to the saw.

ROTATING TABLE TO 0 DEGREE POSITION

1. Loosen the table lock handle (A) Fig 6 one or two turns and depress the index lever (B).
2. Rotate the table to the left until the index stop engages with the 0 degree positive stop (Fig. 7). Tighten table lock handle (A).

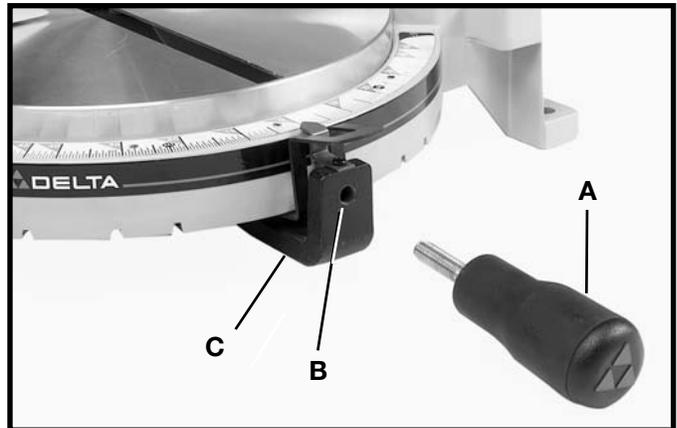


Fig. 5

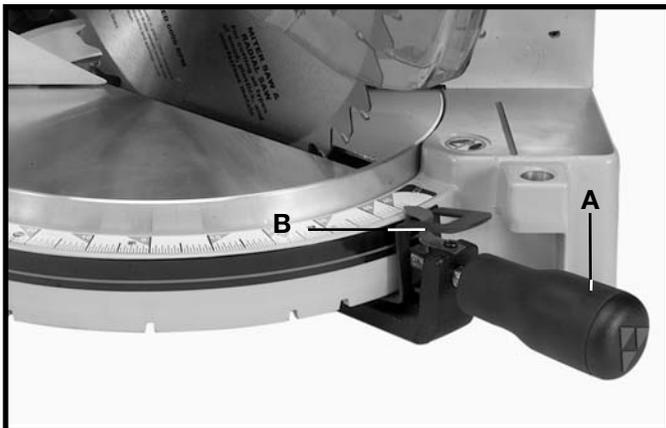


Fig. 6

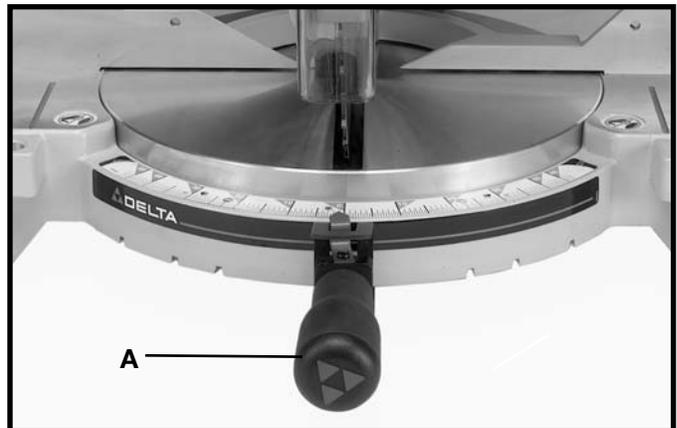


Fig. 7

ATTACHING STOCK STOP AND TABLE EXTENSIONS

1. Decide on which side of the saw table you want the stock stop (A) Fig. 8, and attach the stock stop (A) on the table extension (B).

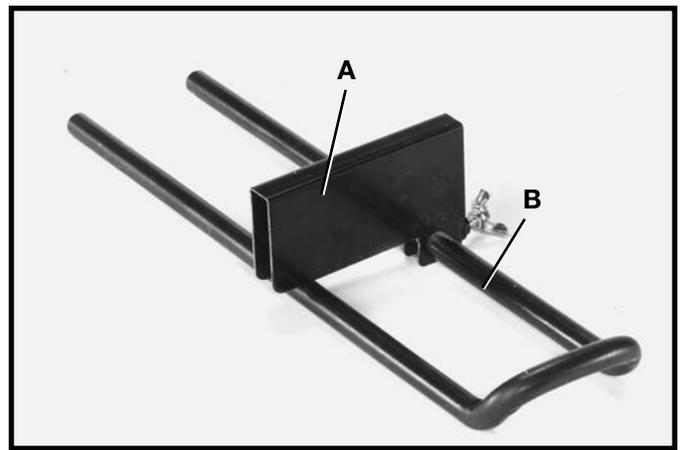


Fig. 8

2. Insert the ends of table extension (B) Fig. 9 into the two holes on the end of the saw base and into the two holes of retaining bracket (C). Tighten the screw (D) to hold the table extension in place.

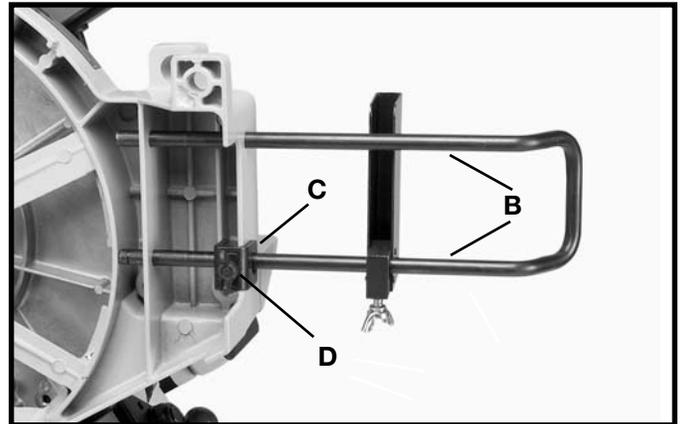


Fig. 9

3. Attach the left hand table extension (E) Fig. 10 in the same manner.

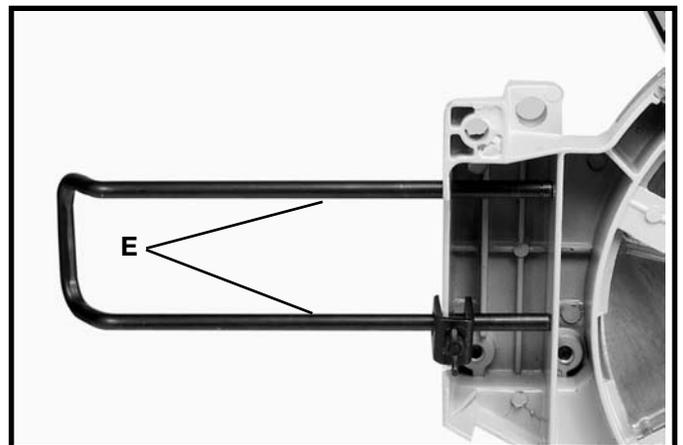


Fig. 10

MOVING CUTTINGHEAD TO THE UP POSITION

1. Push down on the switch handle, and pull out the cuttinghead lock knob (B) Fig. 11.

2. Move the cutting head to the up position (Fig. 12).

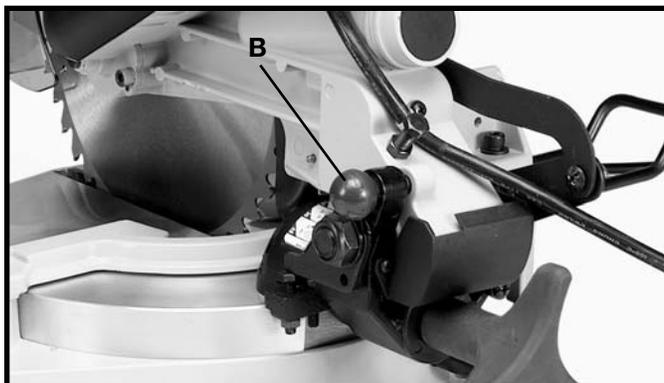


Fig. 11



Fig. 12

ATTACHING DUST BAG

1. Attach the dust bag (A) Fig. 13, to the dust spout (B). Be certain that the wire ring (C) is engaged in the spout groove.



Fig. 13

FASTENING MACHINE TO SUPPORTING SURFACE

Before operating this tool, firmly mount it to a sturdy workbench or other supporting surface. Four holes are provided, two of which are shown at (A) Fig. 14, for this purpose.

If the tool is to be moved frequently, mount it to a 3/4" piece of plywood. Clamp the plywood to a supporting surface using "C" clamps.

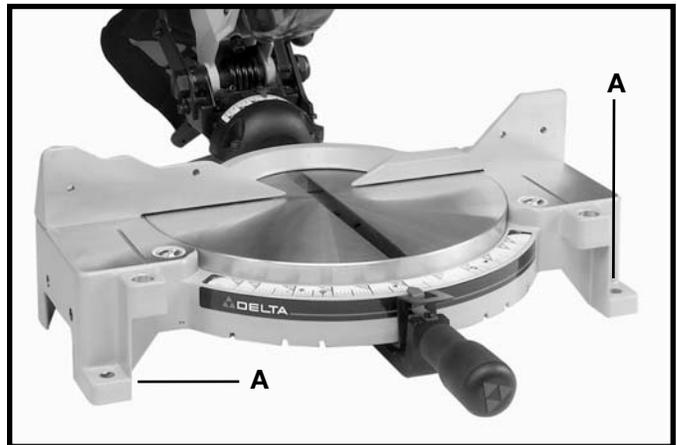


Fig. 14

OPERATING CONTROLS AND ADJUSTMENTS

TABLE HAZARD AREA



WARNING: THE AREA INSIDE THE TWO RED LINES (A) FIG. 15 ON THE TABLE IS DESIGNATED AS A HAZARD ZONE. NEVER PLACE YOUR HANDS INSIDE THIS AREA WHILE OPERATING THE TOOL.

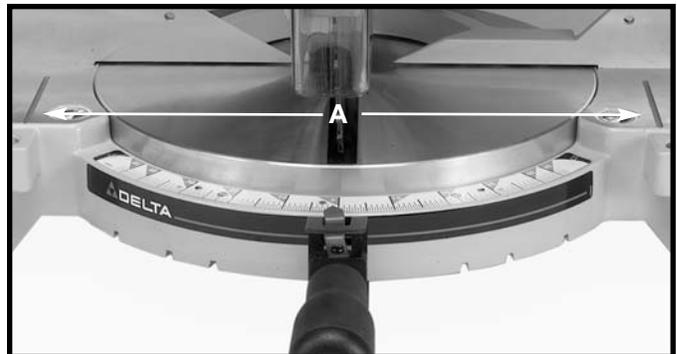


Fig. 15

STARTING AND STOPPING THE MACHINE

To start the machine, squeeze the trigger (A) Fig. 16. To stop the machine, release the trigger.

This miter saw is equipped with an automatic electric blade brake. As soon as the trigger (A) Fig. 16, is released, the electric brake will be activated and will stop the blade in seconds.



WARNING: A TURNING SAW BLADE CAN BE HAZARDOUS. AFTER COMPLETING THE CUT, RELEASE THE TRIGGER (A) FIG. 16 TO ACTIVATE THE BLADE BRAKE. KEEP THE CUTTINGHEAD DOWN UNTIL THE BLADE HAS COME TO A COMPLETE STOP.



WARNING: THE TORQUE DEVELOPED DURING BRAKING MAY LOOSEN THE ARBOR SCREW THAT HOLDS THE BLADE. CHECK THIS ARBOR SCREW OFTEN.

CAUTION: Prior to each operation, clean the blade area and underneath the table for chips and other debris. Such items can cause kickbacks and personal injury. **Be certain that the machine is unplugged before making this inspection.**

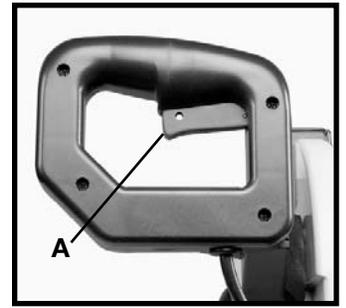


Fig. 16



Fig. 17

LOCKING SWITCH IN THE “OFF” POSITION

IMPORTANT: When the tool is not in use, the switch should be locked in the “OFF” position, using a padlock (B) Fig. 17 with a 3/16" diameter shackle to prevent unauthorized use of the saw.

ROTATING TABLE FOR MITER CUTTING

The miter saw will cut any angle from a straight 0 degree cut to 47 degrees right and left. Loosen the lock handle (A) Fig. 18 one or two turns. Depress the index lever (B), and move the control arm. Tighten the lock handle at the desired angle.

This tool is equipped with positive stops at the 0, 22.5, 31.62, and 45 degree right and left positions. Simply loosen lock handle (A) Fig. 18, and move the control arm until the bottom of the index lever (B) engages into one of the positive stops (C). **Tighten the lock handle (A).** To disengage the positive stop, depress index lever (B) and move the handle.

The 31.62 positive stops aid in the cutting of crown molding. Refer to the “**CUTTING CROWN MOLDING**” section of this manual.

IMPORTANT: ALWAYS TIGHTEN LOCK HANDLE (A) FIG. 18 BEFORE CUTTING.

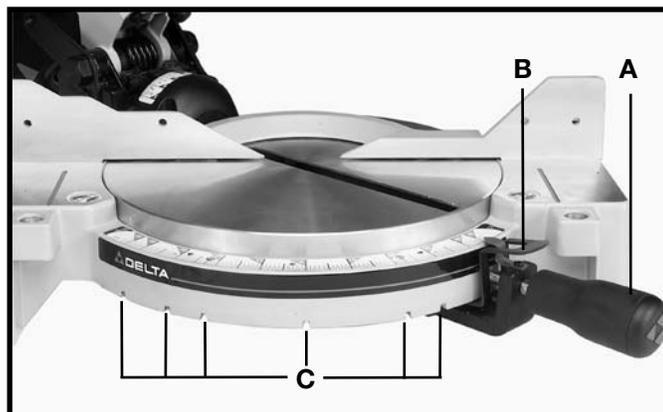


Fig. 18

POINTER AND SCALE

A pointer (B) Fig. 19 indicates the actual angle of cut. Each line on the scale (C) represents 1 degree. When the pointer is rotated from one line to the next on the scale, the angle of cut is changed by 1 degree.

ADJUSTING POINTER

To adjust, loosen screw (D) Fig. 19, adjust the pointer, and tighten the screw (D).

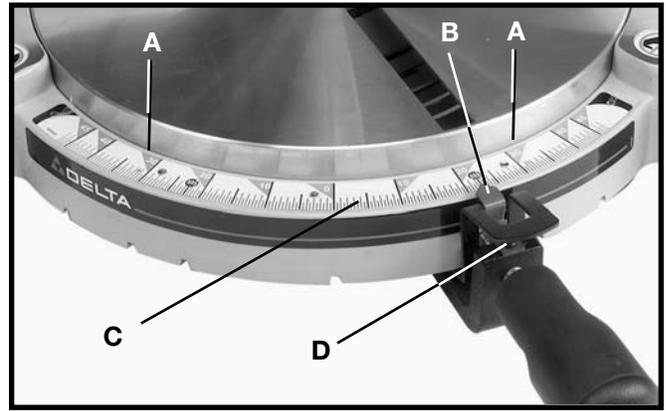


Fig. 19

TILTING CUTTINGHEAD FOR BEVEL CUTTING

The cuttinghead of the saw can be tilted to cut any bevel angle from 0 degrees to 45 degrees, left or right. Loosen the bevel lock handle (A) Fig. 20, tilt the cutting arm to the desired angle, and tighten the lock handle.

Positive stops are provided to rapidly position the saw blade at 0 and 45 degrees to the table. Refer to the section of this manual titled “**ADJUSTING 0 AND 45 DEGREE BEVEL STOPS.**” The bevel angle of the cutting arm is determined by the position of the pointer (A) Fig. 21, on the scale (B). **NOTE: Engage the 0 degree positive stop when making all cuts other than bevel cuts.**

A triangle indicator is also provided on the bevel scale at the 33.85 degree bevel angle for cutting crown moulding. Refer to the “**CUTTING CROWN MOULDING**” section of this manual.

IMPORTANT: Engage 0 degree stop when not making bevel cuts.

IMPORTANT: See figs. 21A and 21B for correct hand position when bevel cutting. Be certain to always keep the hands outside of the table hazard area marked in red on the table. (See “**Table Hazard Area**” in “**OPERATING CONTROLS AND ADJUSTMENTS**” in this manual.

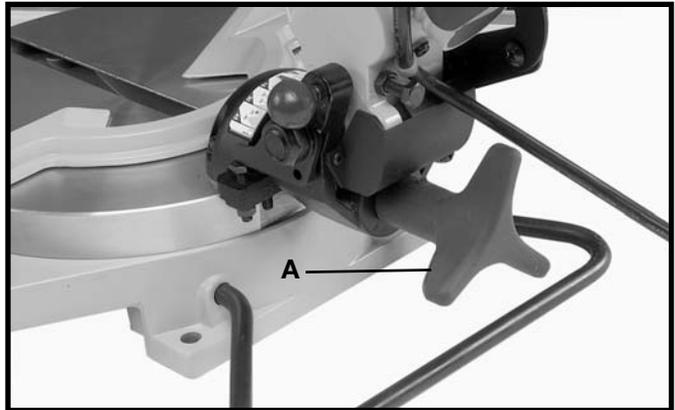


Fig. 20

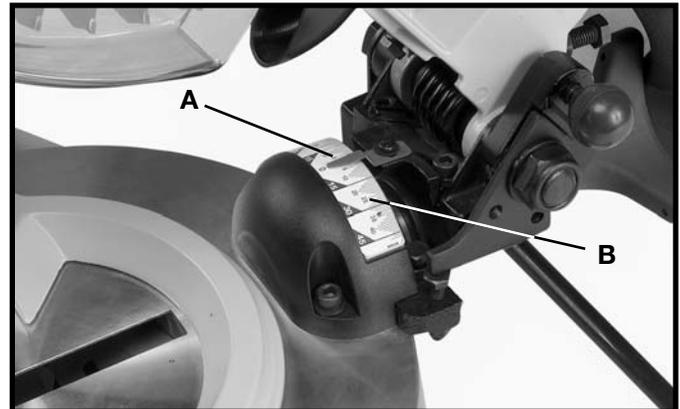


Fig. 21

 **Warning:** Never cross the arms to bevel cut. Use Figs. 21A and 21B as examples when making bevel cuts.



Fig. 21A



Fig. 21B

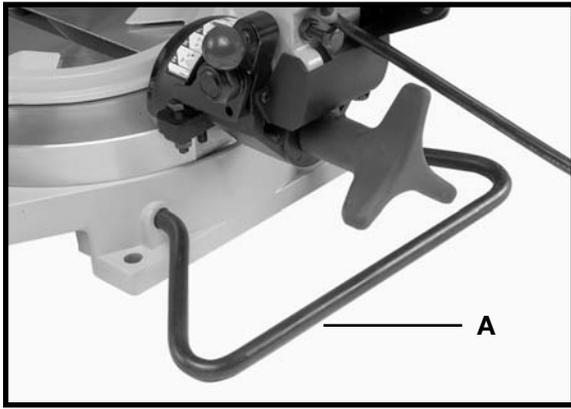


Fig. 22

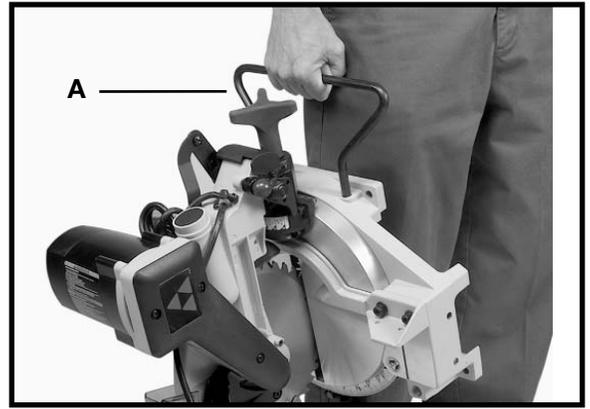


Fig. 23

REAR SUPPORT/CARRYING HANDLE

A rear stabilizer bar (A) Fig. 22, is provided to prevent the miter saw from tipping to the rear when the cuttinghead is returned to the up position after a cut has been made. For maximum support the bar (A) should be pulled out as far as possible.



WARNING: BE CERTAIN THAT THE STABILIZER BAR IS FULLY EXTENDED WHEN MAKING CUTS.

The support bar (A) (Fig. 23) also acts as a carrying handle when transporting the saw.

ADJUSTING THE BLADE PARALLEL TO TABLE SLOT

1. **DISCONNECT TOOL FROM POWER SOURCE.**
2. Lower the cutting arm. The saw blade (A) Fig. 24 should be parallel to the left edge (B) of the table opening.
3. Loosen the two socket head screws (B) Fig. 25, and remove the bevel cover (A) Fig. 25.
4. To adjust, loosen the three screws (A) Fig. 26, and move the cutting arm until the blade is parallel with the left edge (B) Fig. 24 of the table opening. Tighten the three screws (A) Fig. 26.
5. Re-attach bevel cover.



Fig. 24

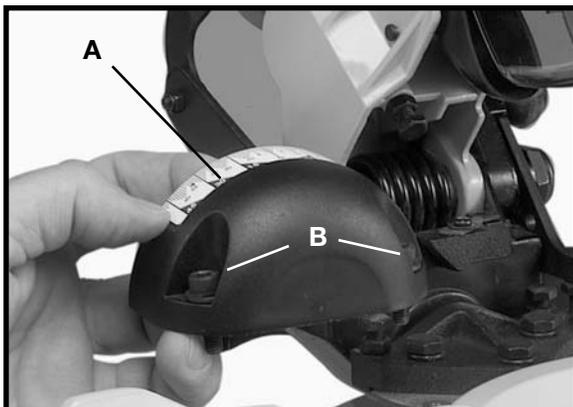


Fig. 25

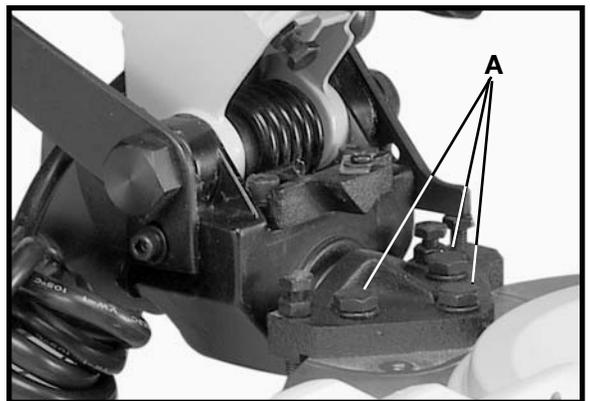


Fig. 26

ADJUSTING THE FENCE 90 DEGREES TO THE BLADE

The fence (A) Fig. 27 should be adjusted so that it is 90 degrees to the blade. To adjust:

1. **DISCONNECT TOOL FROM POWER SOURCE.**
2. First, adjust the blade so that it is parallel to the table slot.
3. Use a square (B) Fig. 27 with one end against the fence (A) and the other end against the slot in the table.
4. Loosen the four screws (C) Fig. 27, adjust the fence 90 degrees to the table opening, and tighten the four screws (C).

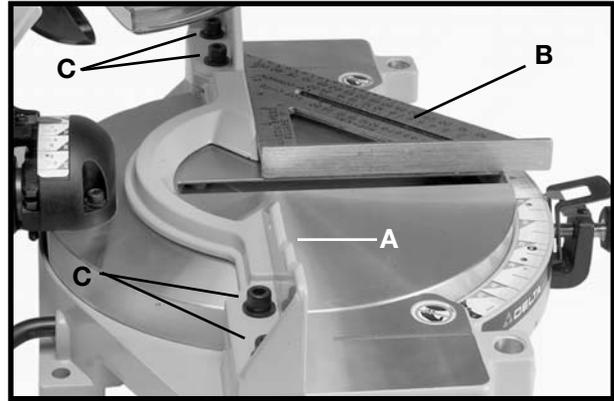


Fig. 27

ADJUSTING DOWNWARD TRAVEL OF SAW BLADE

1. **DISCONNECT TOOL FROM POWER SOURCE.**
2. The downward travel of the saw blade should be limited to prevent the saw blade from contacting metal surfaces on the machine. Make this adjustment by loosening the locknut (A) Fig. 28 and turning the adjusting screw (B) in or out. **NOTE: The bevel cover has been removed in Fig. 28 for clarity.**
3. Lower the blade as far as possible. **Check again to see that the saw is disconnected from the power source.** Rotate the blade by hand to make certain the teeth do not contact any metal surfaces.
4. After the downward travel of the saw blade has been adjusted, tighten locknut (A) Fig. 28.

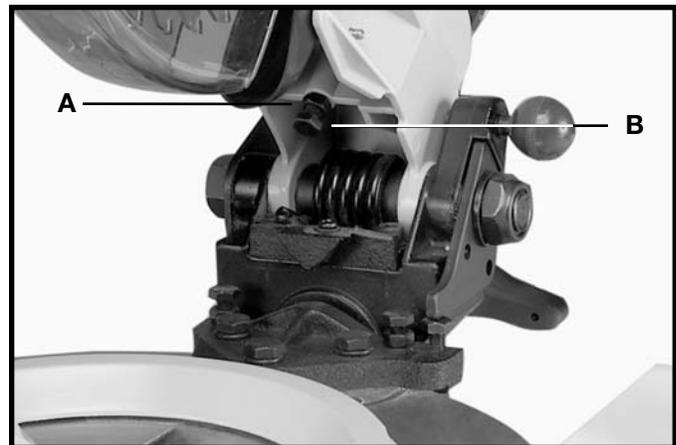


Fig. 28

ADJUSTING 0 AND 45 DEGREE BEVEL STOPS

1. **DISCONNECT TOOL FROM POWER SOURCE.**



Fig. 29

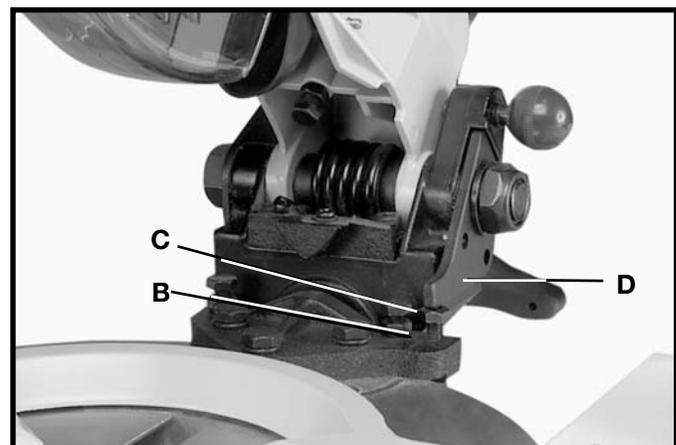


Fig. 30

2. Set the saw blade on the "0" degree positive miter stop.
3. Use one end of a square (A) Fig. 29 on the table and the other end against the blade. Check to see if the blade is 0 degrees to the table (Fig. 29).
4. If an adjustment is necessary, loosen the locknut (B) Fig. 30, and turn the screw (C) until head of the screw (C) contacts the 0 degree bevel stop (D) when the blade is 90 degrees to the table. Tighten locknut (B). **NOTE: The bevel cover has been removed in Fig. 30 for clarity.**
5. Loosen the bevel lock handle and move the cutting arm all the way to the left bevel position and tighten bevel lock handle.
6. Use a square (A) Fig. 31, to see if the blade is at 45 degrees to the table.
7. If not, loosen locknut (E) Fig. 32, and turn the screw (F) until the screw (F) contacts the 0 degree bevel stop when blade is 45 degrees to the table. Tighten locknut (E).
8. Repeat steps 6-7 for the right bevel.

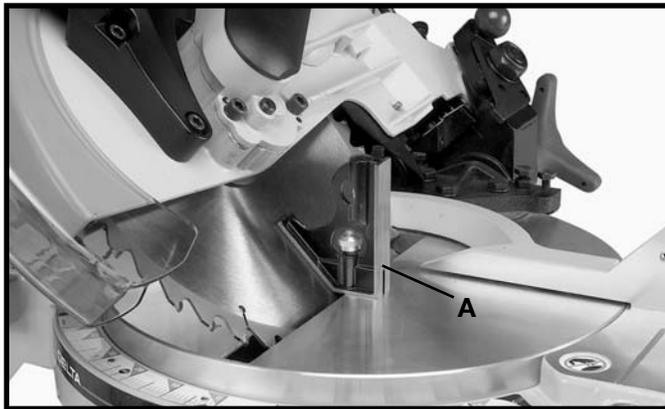


Fig. 31

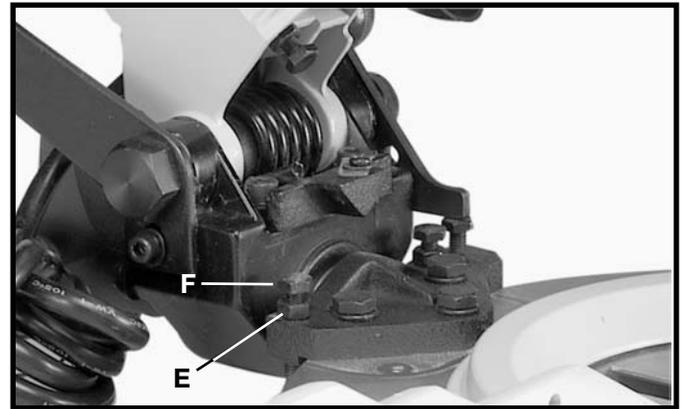


Fig. 32

ADJUSTING TENSION OF THE 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. However, to re-adjust the spring tension:

1. DISCONNECT TOOL FROM POWER SOURCE.

Loosen the locknut (A) Fig. 33, and turn the screw (B) clockwise to increase or counterclockwise to decrease the spring tension. After the spring tension has been adjusted, tighten locknut (A).

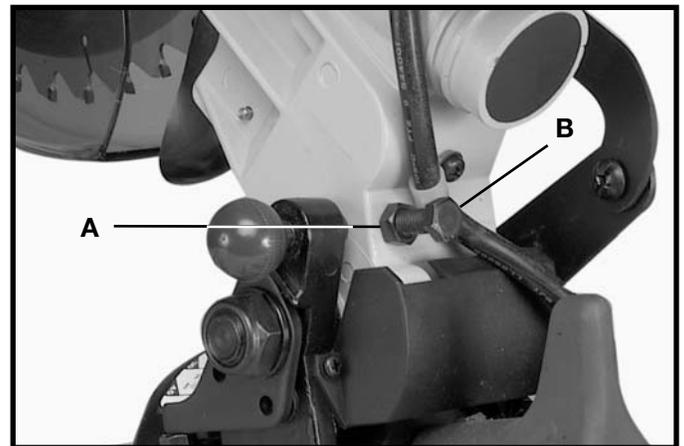


Fig. 33

LOCKING CUTTINGHEAD IN THE DOWN POSITION

When transporting the saw, the cuttinghead should always be locked in the down position. This can be accomplished by lowering the cutting arm (A) Fig. 34, and pushing in cutting head lock knob (B) until it engages with hole in cutting arm. **IMPORTANT: NEVER CARRY THE TOOL BY THE SWITCH HANDLE. THIS ACTION MAY CAUSE MISALIGNMENT. ALWAYS LIFT THE TOOL BY THE BASE OR THE CARRYING HANDLE.**

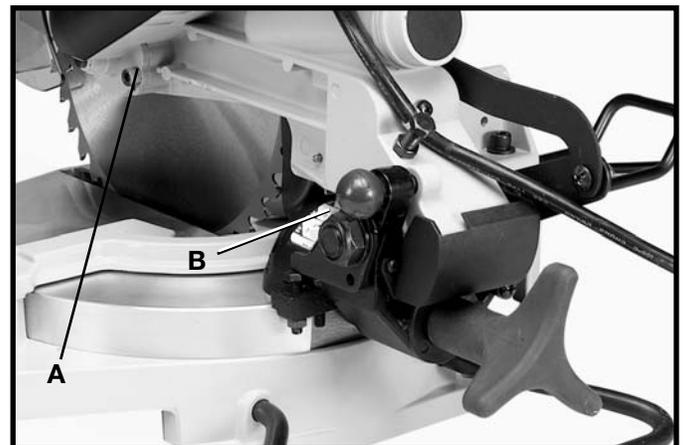


Fig. 34

TYPICAL OPERATIONS AND HELPFUL HINTS

1. Before cutting, be certain that the cutting arm and table are at their correct settings and are firmly locked in place. Also, determine that the workpiece is the right size for the saw.

2. Firmly clamp the workpiece to the table against the fence. Fig. 35 illustrates the work clamp (A) used to clamp the workpiece to the fence. The clamp (A) can also be used on the right side of the machine.

3. For best results, cut at a slow, even cutting rate.

 **4. WARNING: If the workpiece causes your hand to be within the hazard zone of the saw blade, clamp the workpiece in place before making the cut (Fig. 35.)**

5. Never attempt freehand cutting (wood that is not held firmly against the fence and table).

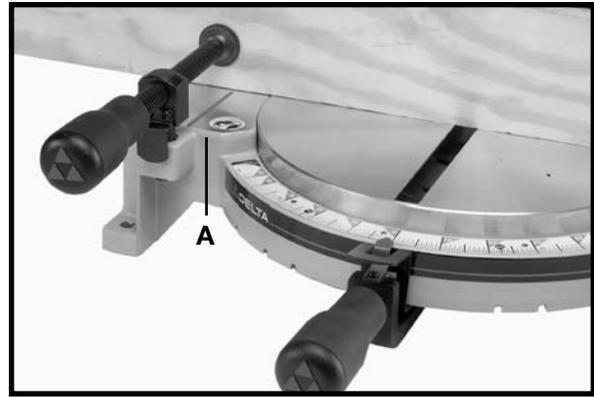


Fig. 35

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 possibly 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. An auxiliary wood fence can help minimize the danger.**

Holes are provided in the fence (A) Fig. 36 to attach an auxiliary fence. This auxiliary fence is constructed of straight wood approximately 1/2 inch thick by 3 inches high by 20 inches long. **NOTE:** The auxiliary fence (A) is used **ONLY** with the saw blade in the 0 degree bevel position (90 degrees to the table). When bevel cutting (blade tilted) the auxiliary fence will have to be removed.

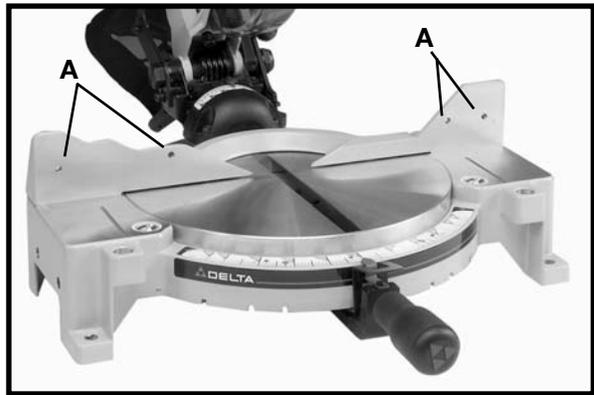


Fig. 36

CUTTING ALUMINUM

Aluminum extrusions such as used for making aluminum screens and storm windows can be cut with the compound miter saw. Position the material so the blade is cutting through the smallest cross-section, as shown in Fig. 37. The wrong way to cut aluminum angles is illustrated in Fig. 38. Apply a stick wax to the blade before cutting aluminum stock. 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 TOOL IS RUNNING.**

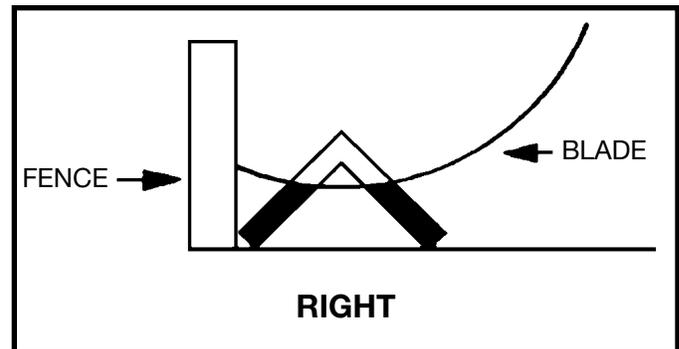


Fig. 37

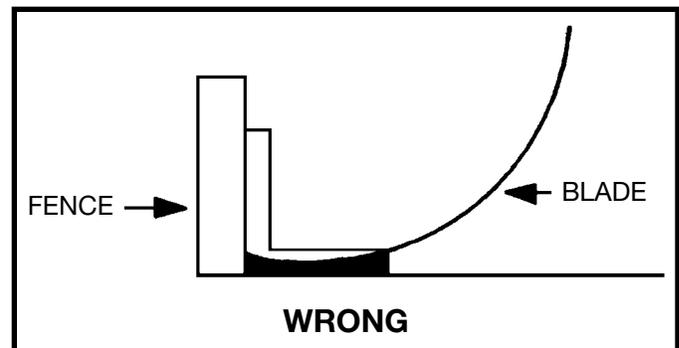


Fig. 38

CUTTING BOWED MATERIAL

If the workpiece is bowed, position it on the table with the bowed part up and against the fence (Fig. 39).

If the material is positioned the wrong way (Fig. 40), the workpiece will pinch the blade near the completion of the cut.

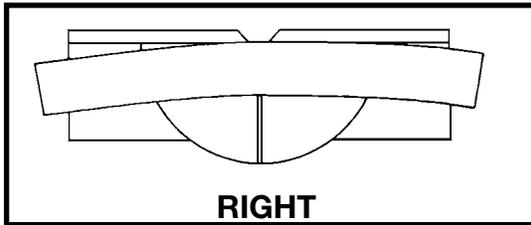


Fig. 39

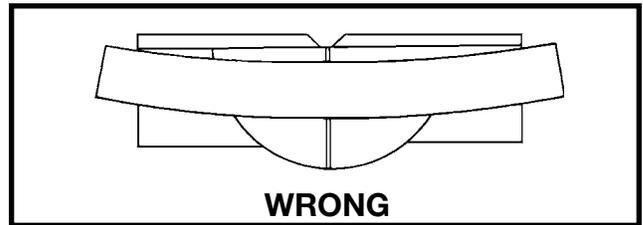


Fig. 40

CUTTING CROWN MOLDING

One of the many features of a compound miter saw is the ease of cutting crown molding. The following is an example of cutting both inside and outside corners on 52/38 degree wall angle crown molding. **NOTE:** When cutting 45 degree wall angle crown molding, follow the same procedure for both inside and outside corners. The only difference will be that the bevel position will always be at 30 degrees but the miter position will be 35.25 degrees to the right or left.

1. Move the table to the 31.62 degree 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 33.85 degree 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 molding on the table with the **CEILING EDGE** of the molding against the fence, and make the cut (Fig. 41). **NOTE:** The piece of crown molding used for the outside corner will always be on the right hand side of the blade, (A) Fig. 41. The piece of crown molding used for the inside corner will always be on the left hand side of the blade, (B) Fig. 41.
4. To make the matching halves of the inside and outside corners, rotate the table to the 31.62 degree left miter position and tighten table lock handle. **NOTE:** A positive stop is provided to find this angle quickly.
5. Place the crown molding on the table with the **WALL EDGE** of the crown molding against the fence and make the cut. Again, the piece of crown molding used for the outside corner will always be on the right side of the blade, (C) Fig. 42. The piece of crown molding used for the inside corner will always be on the left side of the blade (D) Fig. 42
6. Fig. 43 illustrates the two outside corner pieces.
7. Fig. 44 illustrates the two inside corner pieces.

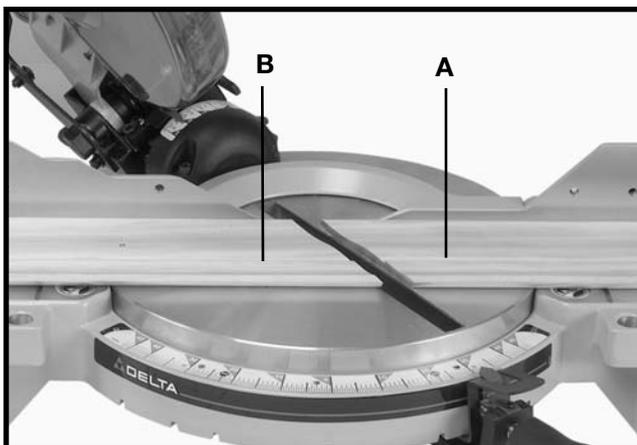


Fig. 41

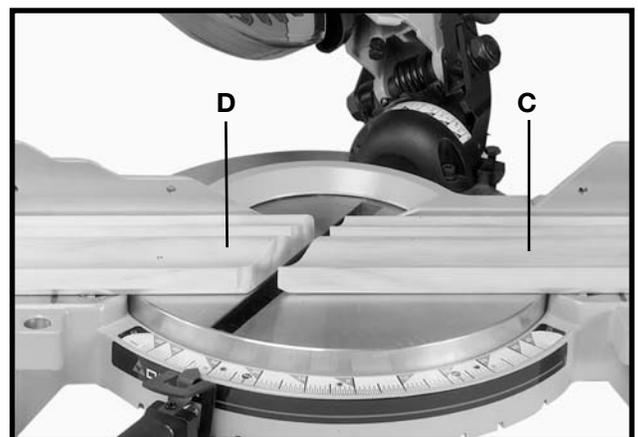


Fig. 42

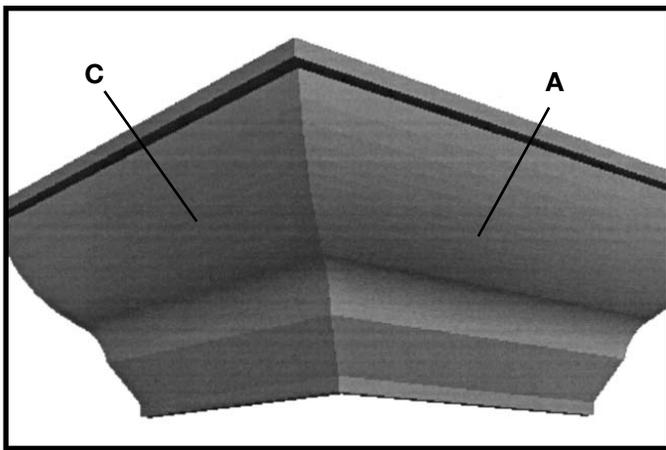


Fig. 43

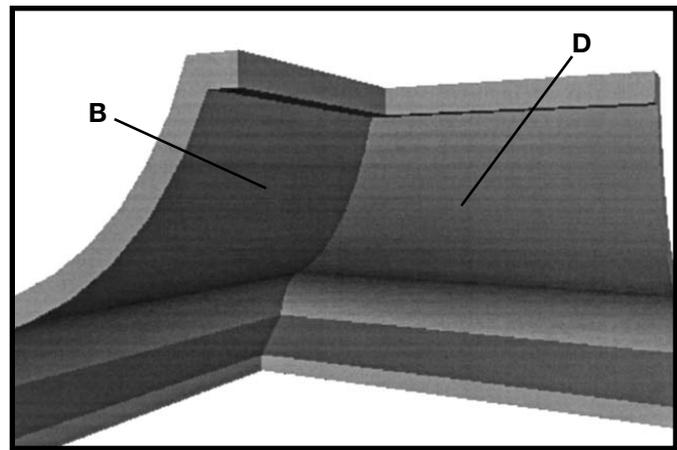


Fig. 44

MAINTENANCE

CHANGING THE BLADE

 **WARNING: USE ONLY CROSS-CUTTING BLADES. WHEN USING CARBIDE TIPPED BLADES, BE CERTAIN THAT THEY HAVE A NEGATIVE HOOK ANGLE. USE ONLY 10" DIAMETER SAW BLADES RATED FOR 6000 RPM OR HIGHER AND HAVE 5/8" DIAMETER ARBOR HOLES.**

1. **DISCONNECT TOOL FROM POWER SOURCE.**
2. Remove the screw (A) Fig. 45, and rotate the cover (B) to the rear (Fig. 46).
3. Depress the arbor lock (A) Fig. 47, to keep the blade from turning.
4. Use the supplied wrench (D) Fig. 48 to loosen the arbor screw (E). Turn it clockwise.
5. Remove the arbor screw (E), outside blade flange (F), and saw blade (G) from the saw arbor.
6. Attach the new blade. **BE CERTAIN THAT THE TEETH OF THE SAW BLADE ARE POINTING DOWN AT THE FRONT.** Use the supplied wrench to attach the outside blade flange (F) Fig. 48, and the arbor screw (E). At the same time, depress the arbor lock to keep the blade from turning.
7. Replace the screw and cover (moved to the rear in STEP 2).

 **WARNING: REMOVE THE WRENCH BEFORE TURNING THE POWER ON.**

ADJUSTING BLADE GUARD

1. After an extended period of time, the movable blade guard (B) Fig. 45 might move erratically when the cuttinghead is lowered. This can be easily corrected by slightly tightening the nut (C) Fig. 45 until the lower blade guard moves smoothly.
2. As soon as the cuttinghead begins to lower, the lower blade guard (B) Fig. 45 should begin to move. If it does not, loosen the nut (C) slightly until the blade guard (B) moves smoothly.

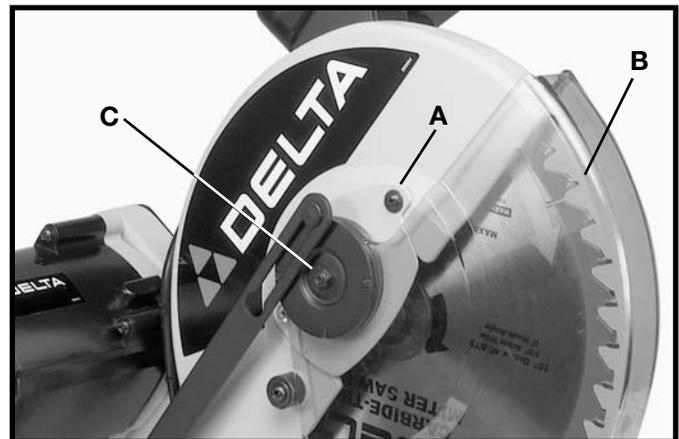


Fig. 45

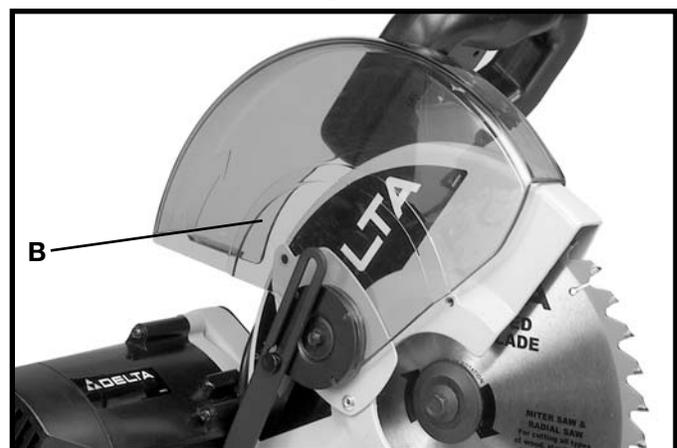


Fig. 46

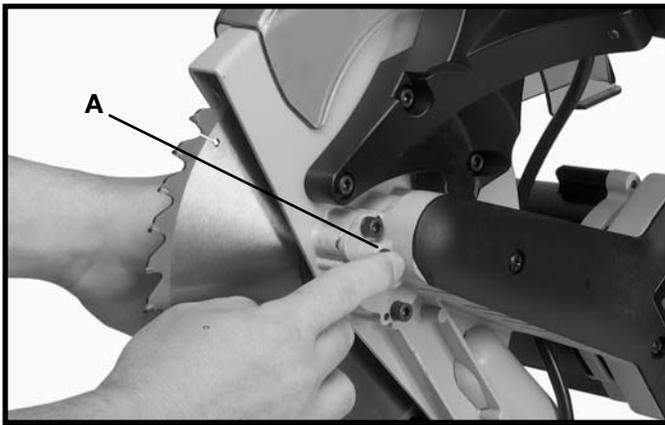


Fig. 47

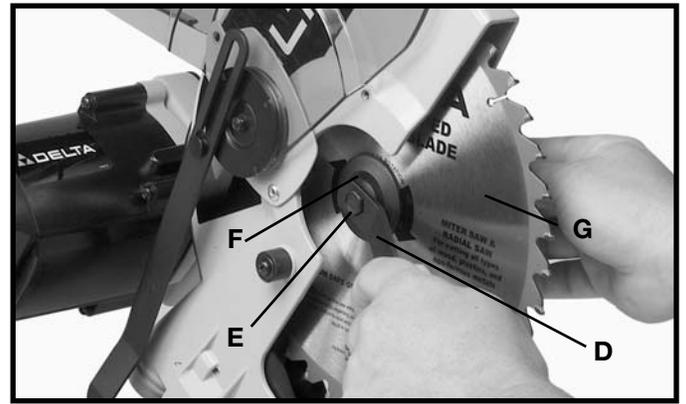


Fig. 48

BRUSH INSPECTION AND REPLACEMENT

CAUTION: BEFORE INSPECTING THE BRUSHES, DISCONNECT THE TOOL FROM THE POWER SOURCE.

Brush life varies, depending 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 every 10 hours of use until replacement is necessary. To inspect the brushes:

1. Remove three screws (A) Fig. 49, and remove motor cover (B).
2. The brushes are located in the two holders (C) Fig. 50. Remove spade type terminal connectors (D) and pull out brush holders (C).
3. Fig. 51 illustrates one of the brushes (E) removed from the holder (C). When the carbon on either brush (E) is worn to 3/16" in length or if either spring (F) or shunt wire (G) (beneath spring) 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.

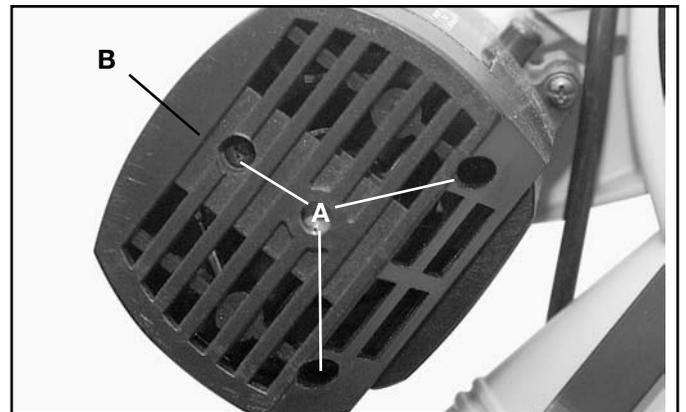


Fig. 49

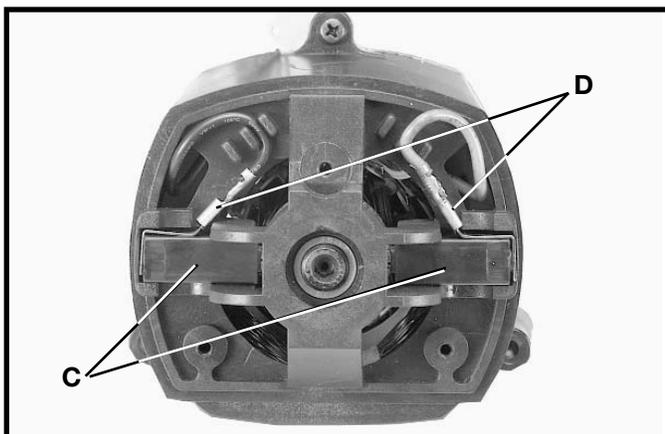


Fig. 50

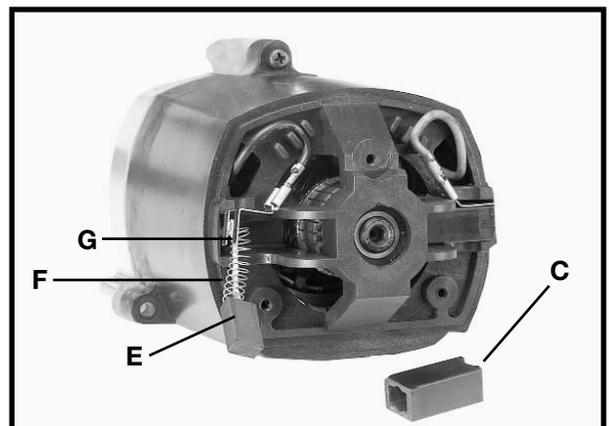


Fig. 51

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