

Sidekick™  
12 Compound Miter Saw  
(Model 36-235)



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 **DELTA**  
**MACHINERY**

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# SAFETY RULES

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.

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.

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## 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.**
4. **GROUND ALL TOOLS.** If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter lug must be attached to a known ground. Never remove the third prong.
5. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
6. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
7. **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.
8. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.
9. **MAKE WORKSHOP CHILD PROOF** with padlocks, master switches, or by removing starter keys.
10. **DON'T FORCE TOOL.** It will do the job better and be safer at the rate for which it was designed.
11. **USE RIGHT TOOL.** Don't force tool or attachment to do a job for which it was not designed.
12. **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.
13. **ALWAYS USE SAFETY GLASSES.** 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.
14. **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.
15. **DON'T OVERREACH.** Keep proper footing and balance at all times.
16. **MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
17. **DISCONNECT TOOLS** before servicing and when changing accessories such as blades, bits, cutters, etc.
18. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause hazards or risk of injury to persons.
19. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in OFF position before plugging in power cord.
20. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
21. **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.
22. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
23. **NEVER LEAVE TOOL RUNNING UNATTENDED.** TURN POWER OFF. Don't leave tool until it comes to a complete stop.
24. **DRUGS, ALCOHOL, MEDICATION.** Do not operate tool while under the influence of drugs, alcohol or any medication.
25. **MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY** while motor is being mounted, connected or reconnected.
26. **WARNING:** 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.
27. **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.

SAVE THESE INSTRUCTIONS.

# ADDITIONAL SAFETY RULES FOR COMPOUND MITER SAWS

1. WARNING: USE ONLY CROSS-CUTTING SAW BLADES. DO NOT USE BLADES WITH DEEP GULLS AS THEY CAN DEFLECT AND CONTACT GUARD.

2. WARNING: 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. ALWAYS hold the work firmly against the fence and table. DO NOT perform any operation freehand.

5. WARNING: ALWAYS keep hands out of path of saw blade. If the workpiece you are cutting would cause your hand to be inside the table hazard area (see section TABLE HAZARD AREA), 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 rotating table is 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 recommended. Recommended size of blade is 12 in diameter.

13. NEVER apply lubricants to the blade when it is running.

14. ALWAYS check the blade for cracks or damage before operation. Replace cracked or damaged blade immediately.

15. NEVER use blades recommended for operation at less than 4800 RPM.

16. USE the blade guard at all times.

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. IMPORTANT: After completing cut, release power switch and wait for coasting blade to stop before returning saw to raised position.

22. TURN OFF SAW and MAKE SURE blade has come to a complete stop before removing or securing workpiece, changing workpiece angle or changing the angle of the blade.

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 saw from power source before servicing or changing blades.

30. DISCONNECT saw from power source and clean the machine before leaving it.

31. MAKE SURE the work area is cleaned before leaving the machine.

32. SHOULD any part of your miter saw be missing, damaged or fail in any way, or any electrical component fail to perform properly, shut off switch and remove plug from power supply outlet. Replace missing, damaged or failed parts before resuming operation.

33. 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.

34. SAVE THESE INSTRUCTIONS. Refer to them frequently and use them to instruct others.

# UNPACKING AND CLEANING

Your new compound miter saw is shipped complete in one carton. Carefully unpack the machine and all loose items from the carton. IMPORTANT: DO NOT LIFT THE MITER SAW BY THE SWITCH HANDLE OR TABLE CONTROL HANDLE AS THIS MAY CAUSE MISALIGNMENT. ALWAYS LIFT THE MACHINE BY THE BASE. Remove the protective coating from all unpainted parts. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline, or lacquer thinner for this purpose). Figure 2 illustrates the saw removed from the carton. Note that the machine is shipped with the cutting head locked in the down position and the table rotated to the 45 degree left miter position. Figure 3 illustrates the loose items supplied with your machine.



Fig. 2

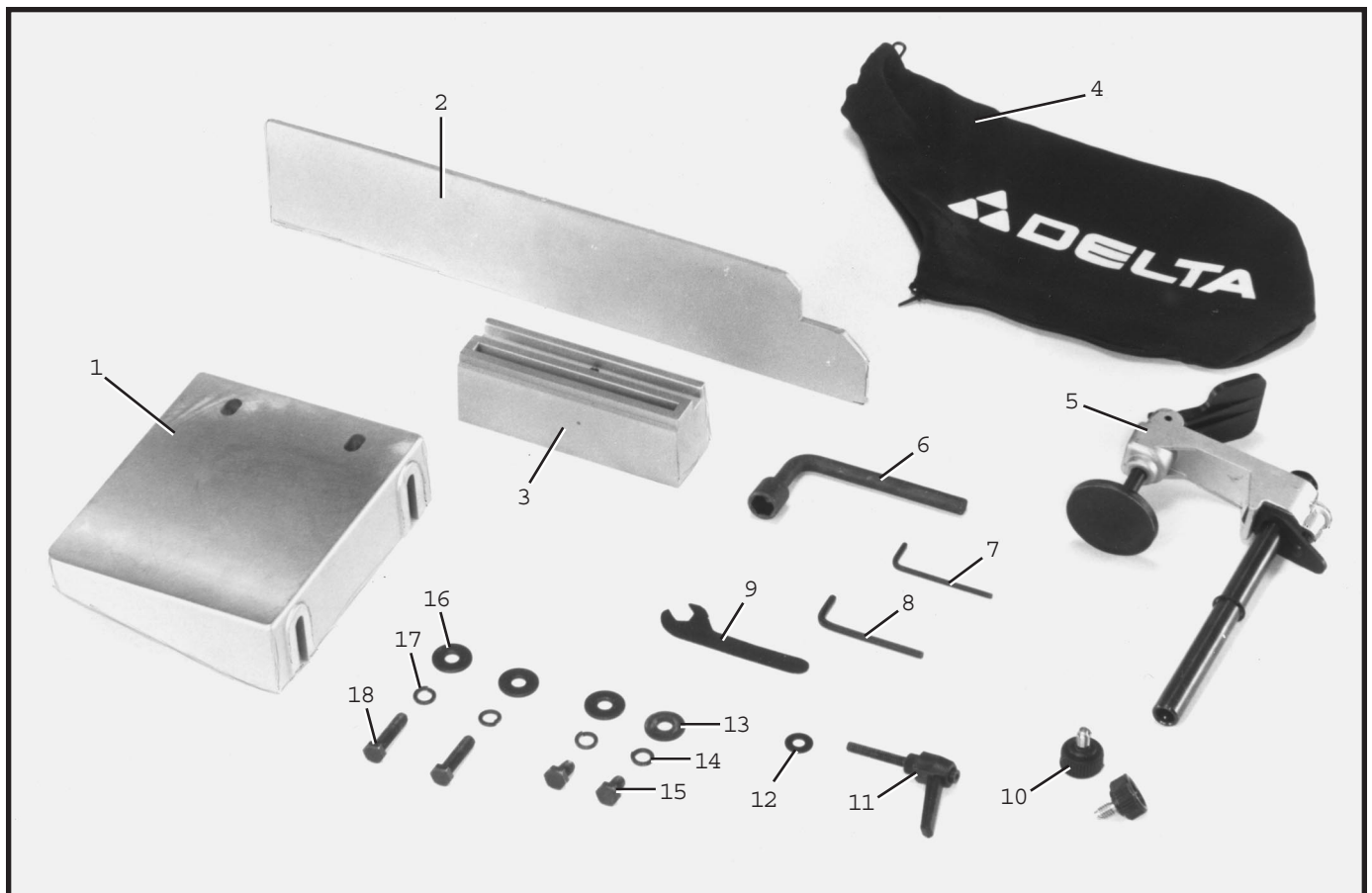


Fig. 3

- |                           |                                   |  |
|---------------------------|-----------------------------------|--|
| 1 -Extension table        | 7 -1/8 hex wrench                 | 13 -5/16 flat washer (2)                     |
| 2 -Fence slide            | 8 -5/32 hex wrench                | 14 -5/16 lock washer (2)                     |
| 3 -Fence slide support    | 9 -Open end wrench                | 15 -5/16-18 x 1/2 long hex head screw (2)    |
| 4 -Dust bag               | 10 -Lock knobs for work clamp (2) | 16 -5/16 flat washer (2)                     |
| 5 -Work clamp             | 11 -Lock handle for slide fence   | 17 -5/16 lock washer (2)                     |
| 6 -Arbor and fence wrench | 12 -1/4 flat washer               | 18 -5/16-18 x 1-1/4 long hex head screws (2) |



# ASSEMBLY INSTRUCTIONS

WARNING: FOR YOUR OWN SAFETY, DO NOT CONNECT THE MITER SAW TO THE POWER SOURCE UNTIL THE MACHINE IS COMPLETELY ASSEMBLED AND YOU HAVE READ AND UNDERSTOOD THE ENTIRE OWNERS MANUAL.

## MOVING CUTTINGHEAD TO THE UP POSITION

1 Pull out cuttinghead lockpin (A) Fig. 4, and move the cuttinghead (B) to the up position.

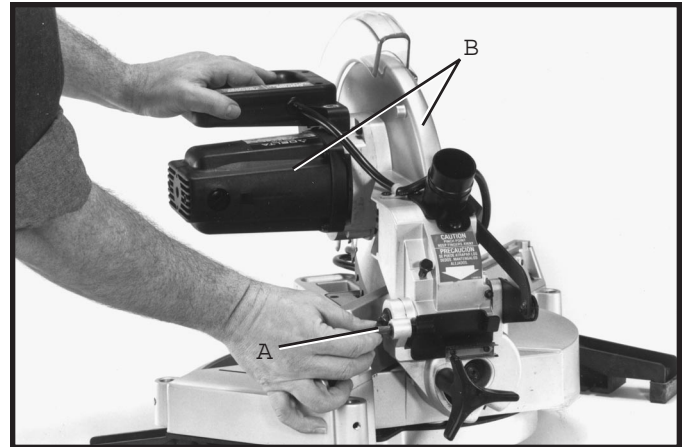


Fig. 4

2 Fig. 5, illustrates the lockpin (A) pulled out and the cuttinghead (B) in the up position.

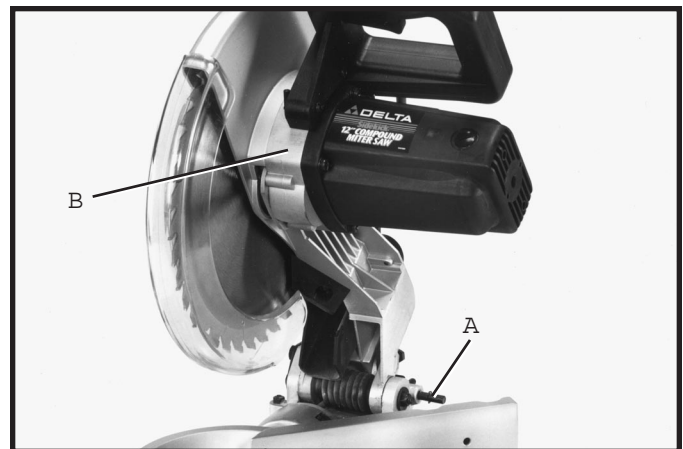


Fig. 5

## MOVING TABLE TO THE 90 DEGREE CUT-OFF POSITION

1 Depress table lock lever (A) Fig. 6, and rotate table (B) to the 90 degree straight cut-off position. Then release lock lever (A).

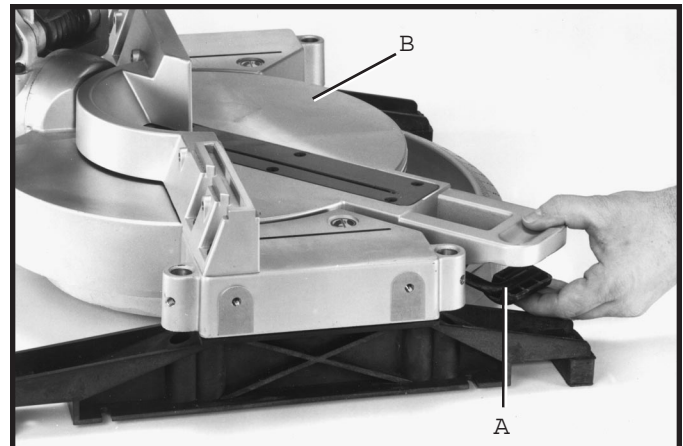


Fig. 6

2 Fig. 7, illustrates the table (B) in the 90 degree straight cut-off position. NOTE: Table lock lever (A) must be depressed when rotating table. When lock lever (A) is not depressed, the table is in the locked position and cannot be moved.

3 For proper operation and adjustment of the table, refer to sections, ROTATING TABLE FOR MITER CUTTING, ADJUSTING CLAMPING ACTION OF TABLE LOCKING MECHANISM and ADJUSTING SLIDING FIT BETWEEN MOVABLE TABLE AND BASE.

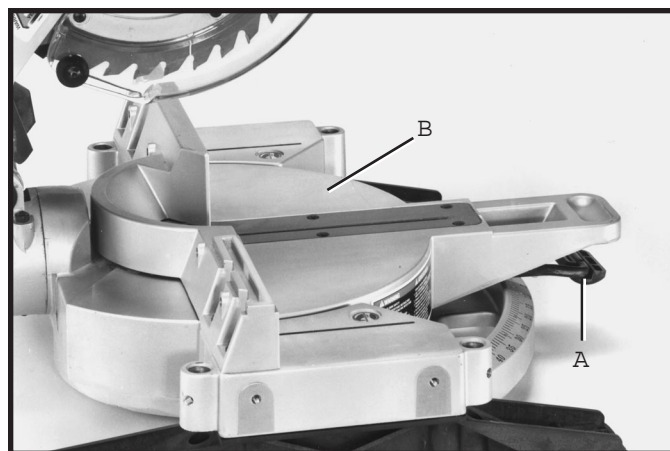


Fig. 7

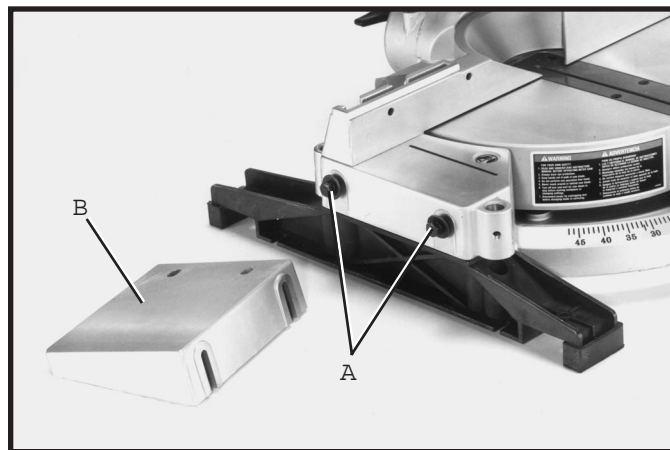


Fig. 7A

## ASSEMBLING EXTENSION TABLE AND FENCE SLIDE

1 Place 5/16 lockwasher and 5/16 flat washer on each 1/2 long hex head screw (A) Fig. 7A, and thread the two screws (A) into the two threaded holes on left side of saw table, as shown. NOTE: Only thread the screws a few threads into the holes at this time.

2 Assemble the table extension (B) Figs. 7A and 7B, to left side of saw table making sure groove of table extension (B) is inside flat washers as shown in Fig. 7B.

3 Using a straight edge (C) Fig. 7C, make certain extension table (B) is level with saw table (D) as shown, and tighten the two screws (A) Fig. 7B.

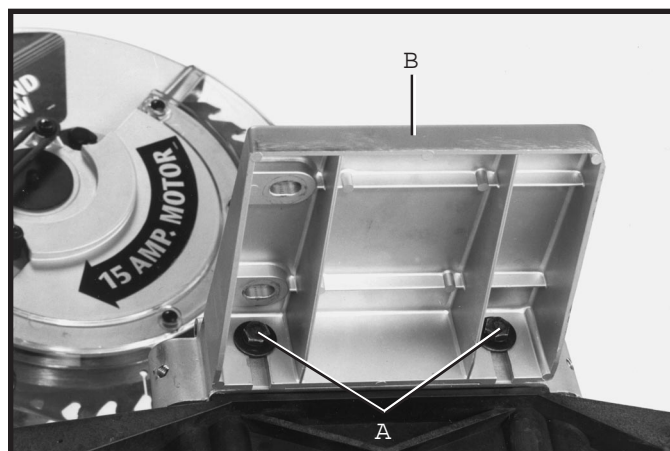


Fig. 7B

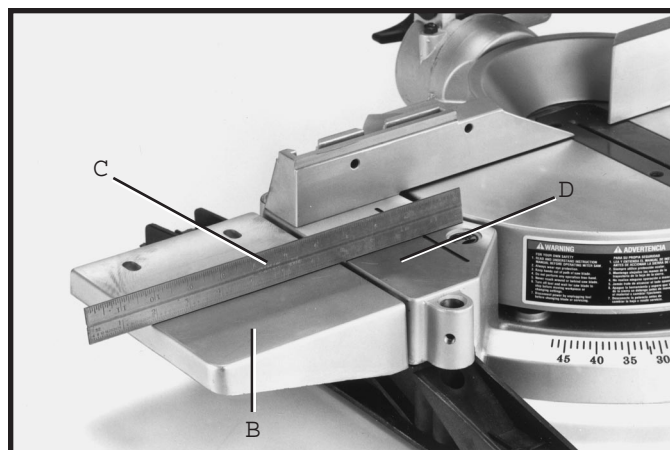


Fig. 7C

4. Assemble the fence slide support (E) Fig. 7D, to the extension table (B) using the two 1-1/4" long hex head screws, 5/16" lockwashers and 5/16" flat washers (F). Bring screws up through the two holes (G) in table extension and thread them into the two threaded holes (H) on bottom of fence slide support. NOTE: Do not completely tighten screws at this time.

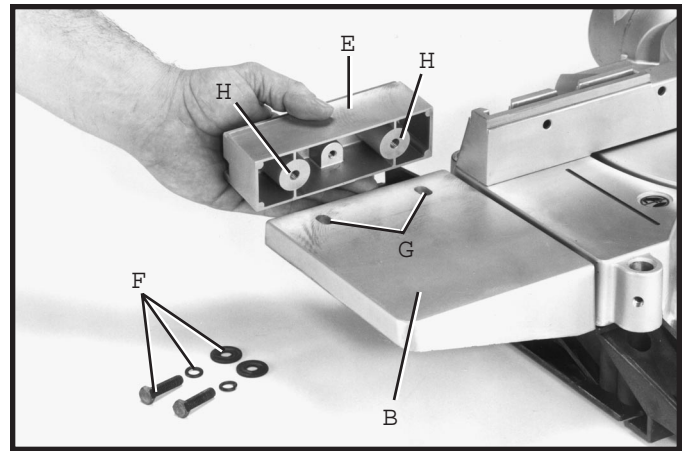


Fig. 7D

5. Using a straight edge (C) Fig. 7E, make certain fence slide support (E) is level with saw fence (J) as shown, and tighten the two screws that were assembled in STEP 4.



Fig. 7E

6. Position the fence slide (K) Fig. 7F, in position on top of saw fence (J) and fence slide support (E). Slide fence slide (K) back and forth several times to check alignment of fence slide support (E) and make final adjustment to fence slide support if necessary.

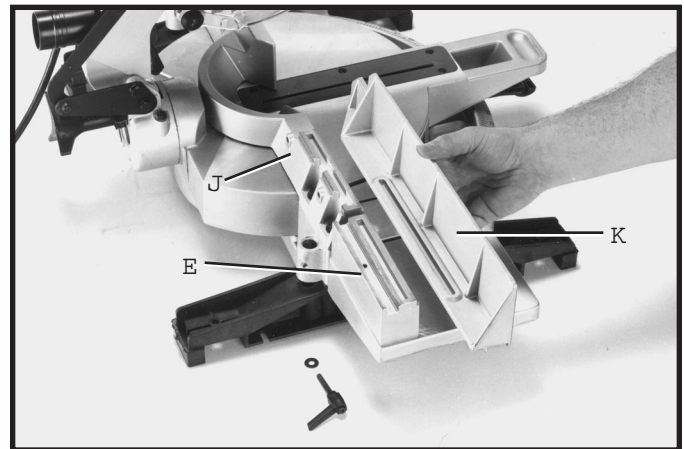


Fig. 7F

7. Remove screw and spring (L) Fig. 7G, and lock handle (M) from locking stud (N) as shown.

8. Place 1/4" flat washer (O) Fig. 7G, onto locking stud (N) and insert locking stud (N) Fig. 7H, through slot in fence slide and thread locking stud into threaded hole in fence slide support (E) as shown.

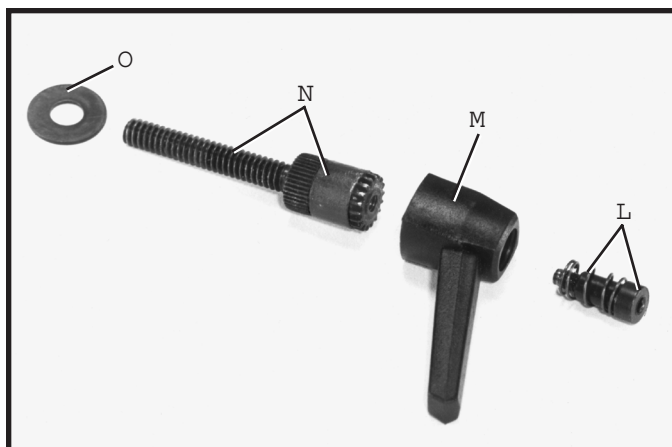


Fig. 7G

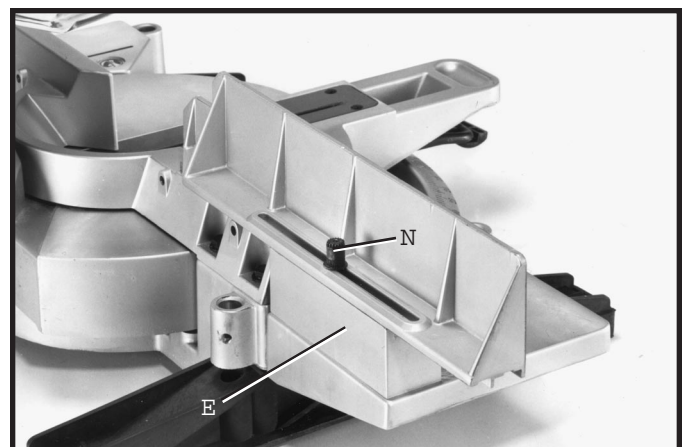


Fig. 7H



9. Position lock handle (M) Fig. 7J, on locking stud and replace screw and spring (L) that were removed in STEP 7. NOTE: Lock handle (M) is spring-loaded and can be repositioned by lifting up on handle and repositioning it on stud located underneath handle.

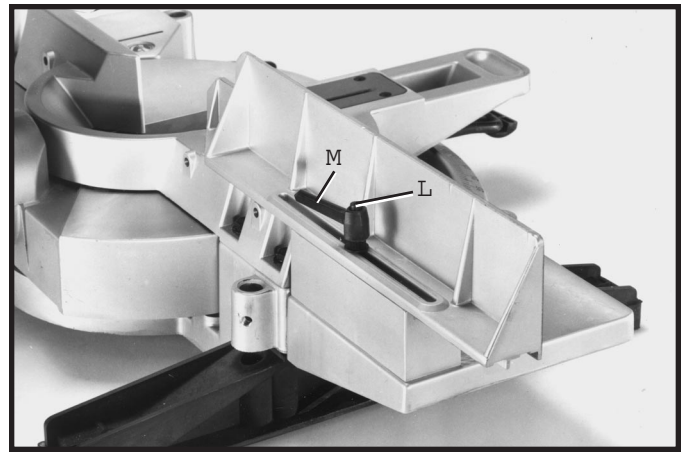


Fig. 7J

## ASSEMBLING WORK CLAMP

1. The standard equipment work clamp can be assembled to any one of the three holes (A) Fig. 8, provided on the base of the machine, as follows:

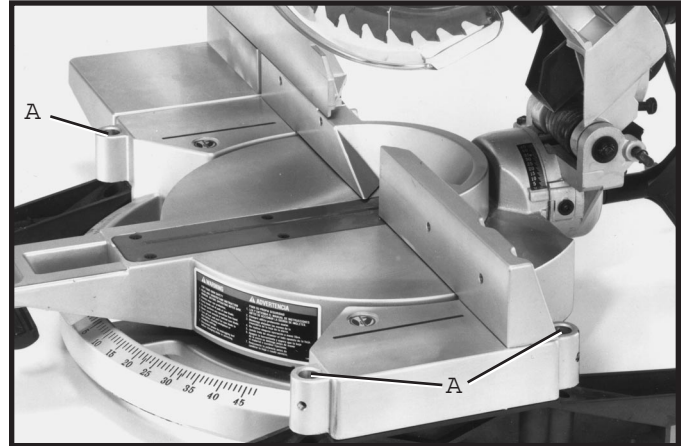


Fig. 8

2. Thread lock knob (B) Fig. 9, into threaded hole on side of hole to be used and insert post (C) of work clamp down through hole as far as possible. Then tighten lock knob (B). An additional lock knob (B) is supplied and can be threaded into one of the other three holes. We suggest having the two lock knobs, one of which is shown at (B), threaded into the two most commonly used holes where the work clamp will be used.



Fig. 9

3. For proper operation and adjustment of the work clamp, refer to section WORK CLAMP OPERATION .

## ASSEMBLING DUST BAG

1. Depress spring clips (A) Fig. 10, of dust bag (B) and clip dust bag (B) onto end of dust chute, as shown.

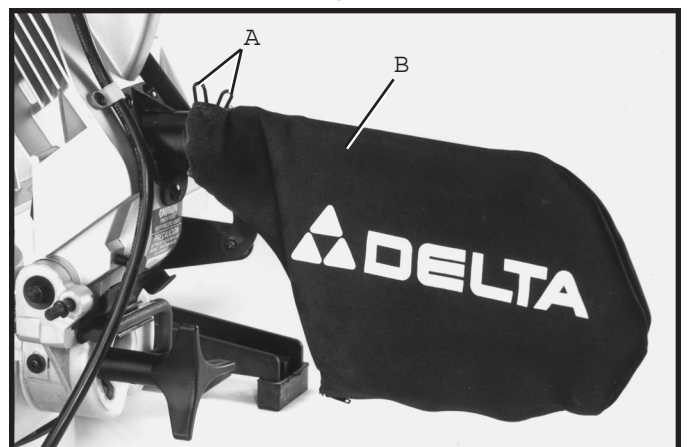


Fig. 10

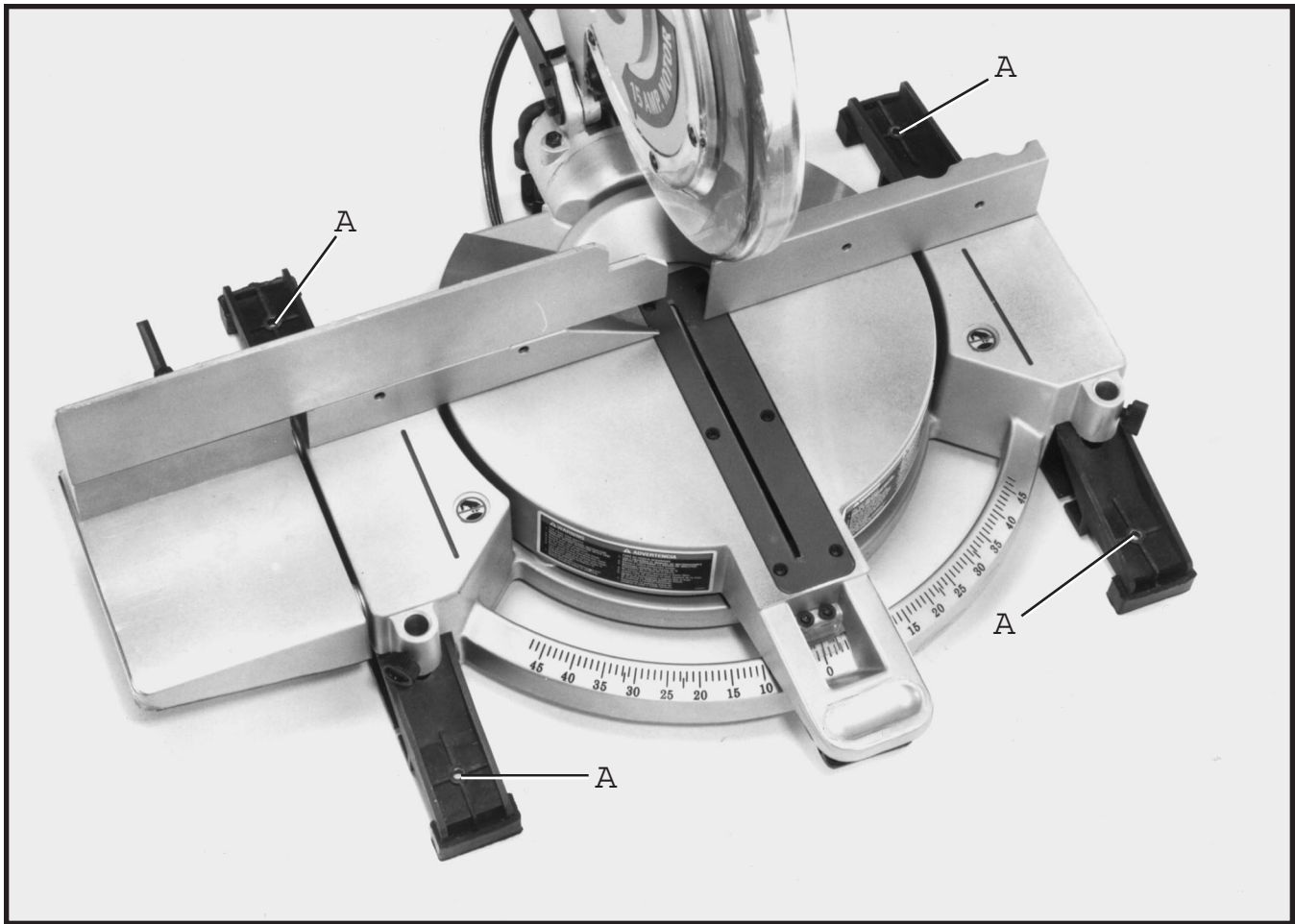


Fig. 11

## FASTENING MACHINE TO SUPPORTING SURFACE

Before operating your compound miter saw, make sure it is firmly mounted to a workbench or other supporting surface. Four holes (A) Fig. 11, are provided for fastening the saw to a supporting surface.

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

## 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 a 3-pole 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 saw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Fig. 12, shows the correct gage to use depending on cord length and voltage. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

TOTAL LENGTH OF CORD IN FEET	GAGE OF EXTENSION CORD TO USE
0 - 25	14 AWG
26 - 50	12 AWG
51 - 100	Not recommended
101 - 150	Not recommended

Fig. 12

# CONNECTING SAW 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 3-pole receptacles which 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.

## MOTOR SPECIFICATIONS

Your saw is wired for 110-120 volts, 60 HZ alternating current. Before connecting the saw to the power source, make sure the switch is in the OFF position. The motor provides a no-load speed of 3600 RPM.

## GROUNDING INSTRUCTIONS

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

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. The motor 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 3-hole receptacles that accept the tool's plug, as shown in Fig. 13.

Repair or replace damaged or worn cord immediately.

This tool is intended for use on a circuit that has an outlet and a plug that looks like the one shown in Fig. 13. A temporary adapter, which looks like the adapter illustrated in Fig. 14, may be used to connect this plug to a 2-pole receptacle, as shown in Fig. 14, 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. THIS ADAPTER IS NOT APPLICABLE IN CANADA. 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, as shown in Fig. 14.

CAUTION: IN ALL CASES, MAKE CERTAIN THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE, HAVE A CERTIFIED ELECTRICIAN CHECK THE RECEPTACLE.

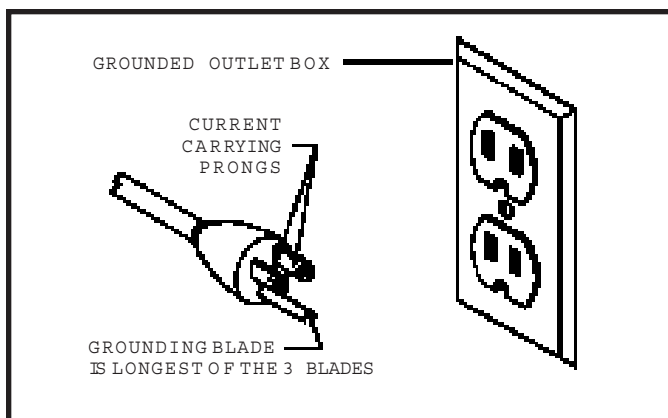


Fig. 13

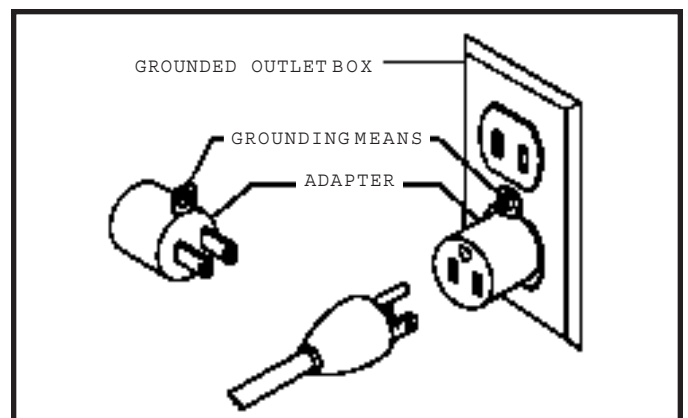


Fig. 14

# OPERATING CONTROLS AND ADJUSTMENTS

## STARTING AND STOPPING MACHINE

To start the machine, depress switch trigger (A) Fig. 15. 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. 15, is released, the electric brake is activated and stops the blade in seconds.

**DANGER:** A TURNING SAW BLADE CAN BE DANGEROUS. AFTER COMPLETING CUT, RELEASE SWITCH TRIGGER (A) FIG. 15, TO ACTIVATE BLADE BRAKE. KEEP CUTTING HEAD DOWN UNTIL 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.



Fig. 15

## LOCKING SWITCH IN THE OFF POSITION

**IMPORTANT:** We suggest that when the miter saw is not in use, the switch be locked in the OFF position using a padlock (B), as shown in Fig. 16. Available as an accessory from Delta is the 50-325 padlock, shown at (B).

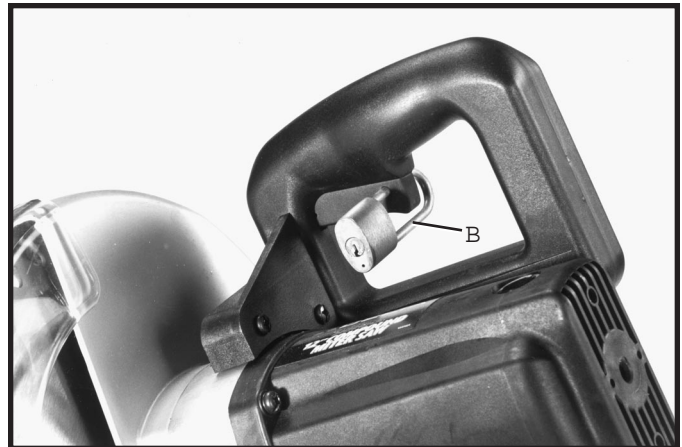


Fig. 16

## ROTATING TABLE FOR MITER CUTTING

1 Your compound miter saw will cut any angle from a straight 90 degree cut to 47 degrees right and left. Simply depress table lock lever (A) Fig. 17, and rotate the table to the desired angle. Then release table lock lever (A).

2 **IMPORTANT:** Table lock lever (A) Fig. 17, must be depressed when rotating the table. When lock lever (A) is not depressed, the table is in the locked position.

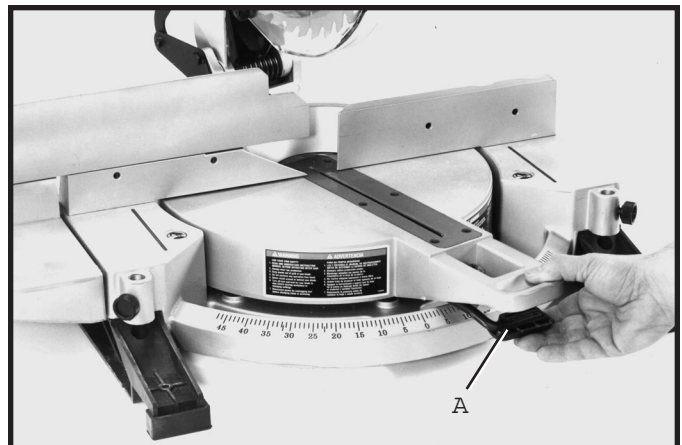


Fig. 17



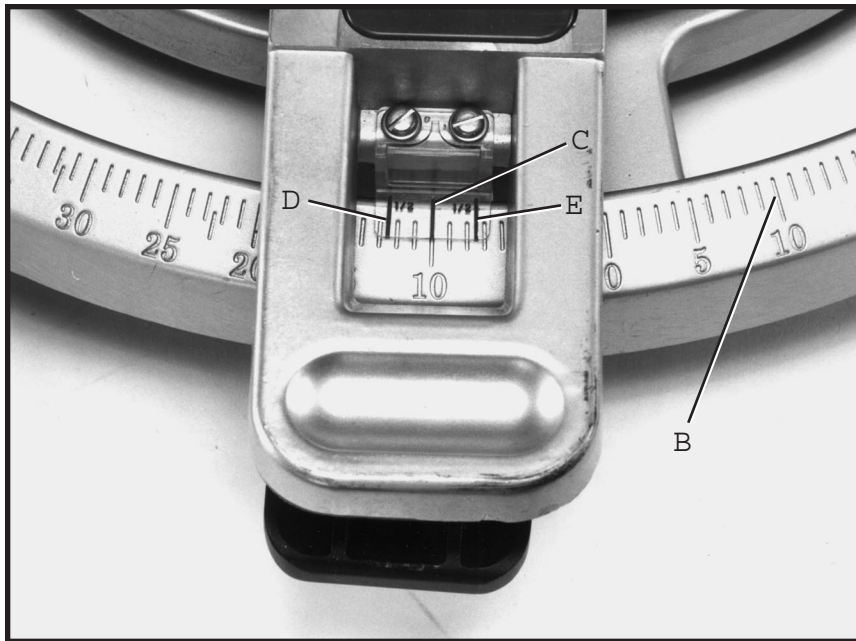


Fig. 18

3. The compound miter saw is equipped with spring-loaded positive stops at the 90 degree straight cut-off position and at the 15, 22.5, 31.62 and 45 degrees right and left miter positions. These spring-loaded positive stops can be felt as you are rotating the table. NOTE: The 31.62 degree right and left miter positive stops are used when cutting crown moulding as explained later in this manual. A large scale (B) Fig. 18, and cursor (C) is provided for intermediate angles.

4. The center line (C) Fig. 18, on the cursor indicates the actual angle of cut. Each line on the scale (B) represents one degree. In effect, when the center line (C) is moved from one line to the next on the scale, the angle of cut is changed by one degree.

5. The pointer is provided with two additional lines (D) and (E) Fig. 18. This allows you to move the control arm exactly 1/2 degree. For example, assume the center line (C) is pointing to the 10 degree mark on the scale, as shown, and you want to change the angle of cut 1/2 degree 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 degree to the right. If you were changing the angle of cut 1/2 degree to the left, use the left line (D) in the same manner.

## ADJUSTING CLAMPING ACTION OF TABLE LOCKING MECHANISM

When rotating the table, the table locking lever must be depressed. When the locking lever is not depressed, the table should be in the locked position. If after a long period of time the clamping action of the table locking mechanism needs adjusted, proceed as follows:

1. Loosen locknut (A) Fig. 19, using open end wrench supplied. Turn screw (B) with allen wrench supplied. Turn screw clockwise to increase or counterclockwise to decrease clamping action of locking lever. IMPORTANT: After adjustment is completed tighten locknut (A), just enough to take all play out of the handle assembly. Tightening locknut (A) too much will defeat the purpose of the adjustment.

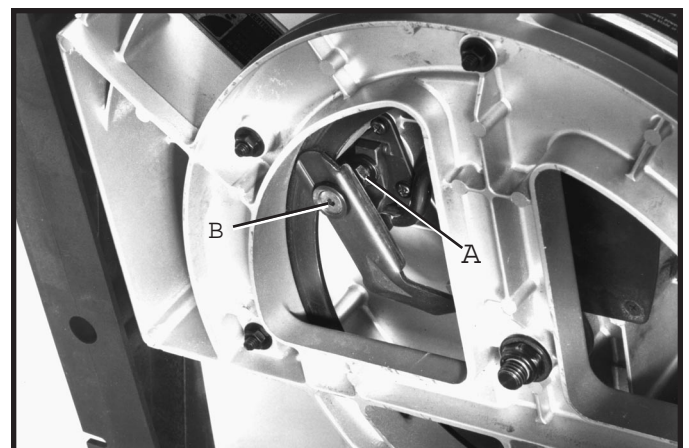


Fig. 19

## ADJUSTING SLIDING FIT BETWEEN MOVABLE TABLE AND BASE

If it ever becomes necessary to adjust the sliding fit between the movable table and the base, turn nut (A) Fig. 20, clockwise to increase or counterclockwise to decrease the sliding fit. This adjustment should not be too tight that it restricts the rotating movement of the table or too loose that it affects the accuracy of the saw.



Fig. 20

## ADJUSTING FENCE 90 DEGREES TO BLADE

IMPORTANT: BEFORE MAKING THIS ADJUSTMENT MAKE CERTAIN THE BLADE IS SET AT 90 DEGREES TO THE TABLE. SEE SECTION ADJUSTING 90 AND 45 DEGREE BEVEL POSITIVE STOPS.

1. DISCONNECT THE SAW FROM THE POWER SOURCE.

2. Rotate the movable table so that the blade is 90 degrees to the fence and the spring-loaded positive stop for the 0 degree mark on the scale is engaged.

3. Using a square (A) Fig. 21, place one end of the square against the front of the fence (B) and the other end against the blade (C), with the blade in the down position, as shown. Check to see if the fence is 90 degrees to the blade.

4. If an adjustment is necessary, the fence (B) Fig. 21, can be adjusted by loosening the four screws, two of which are shown at (D), that attach the fence to the base, using wrench (E) supplied. Adjust the fence (B) as required and tighten the four screws (D).

5. After you are sure the fence is 90 degrees to the blade, adjust the cursor (F) Fig. 22, so the pointer is aligned with the 0 degree mark on the scale by loosening two screws (G), adjusting cursor (F) and tightening screws (G).

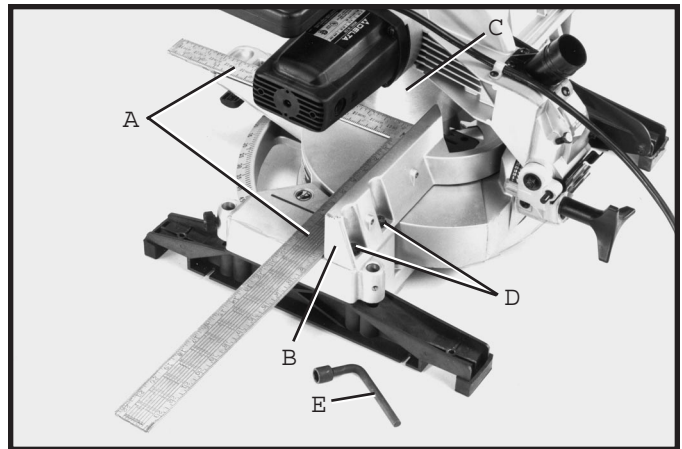


Fig. 21



Fig. 22

## TABLE HAZARD AREA

WARNING: THE AREA INSIDE THE TWO RED LINES (A) FIG. 23, ON THE TABLE IS DESIGNATED AS A HAZARD ZONE. NEVER PLACE YOUR HANDS INSIDE THIS AREA WHILE THE TOOL IS BEING OPERATED.

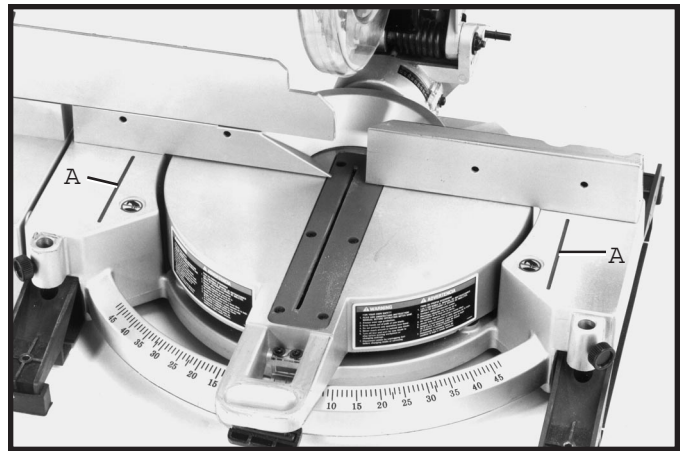


Fig. 23

## WORK CLAMP OPERATION

1. The height of the work clamp (A) Fig. 24, can be adjusted by loosening lock knob (B) and moving post (C) up or down, or depressing lock lever (D) and sliding clamp body (E) up or down. After height of clamp (A) is adjusted, tighten lock knob (B) and/or release lock lever (D).

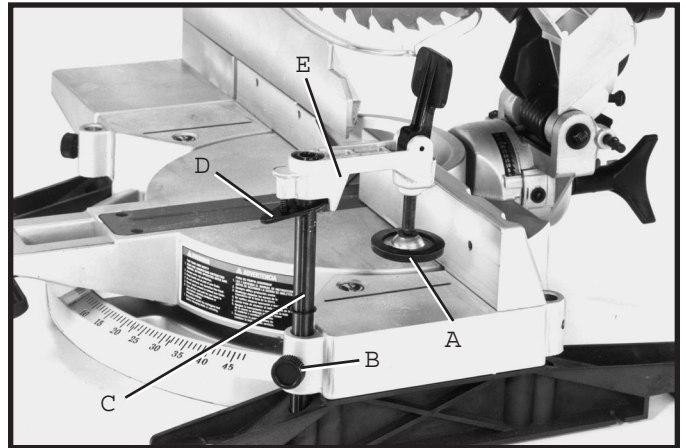


Fig. 24

2. During operation, lower clamp (A) Fig. 25, by depressing lock lever (D), until the bottom of the clamp (A) lightly contacts top of workpiece (F). IMPORTANT: When lowering clamp (A) make certain cam lever (G) is in the up position as shown.



Fig. 25

3. For final clamping of the workpiece (F) Fig. 26, against the table, move cam lever (G) to the rear, as shown. After cut is completed, lift lever (G). This will raise clamp (A) slightly, allowing you to slide or remove workpiece (F).



Fig. 26



# TILTING CUTTINGHEAD FOR BEVEL CUTTING

IMPORTANT: WHEN TILTING THE CUTTINGHEAD FOR BEVEL CUTTING, THE SLIDING FENCE MUST FIRST BE MOVED TO THE LEFT TO PROVIDE CLEARANCE FOR THE BLADE AND GUARD. THE DEGREE OF TILT DETERMINES HOW FAR THE SLIDING FENCE MUST BE MOVED. REFER TO THE SECTION ADJUSTING SLIDING FENCE.

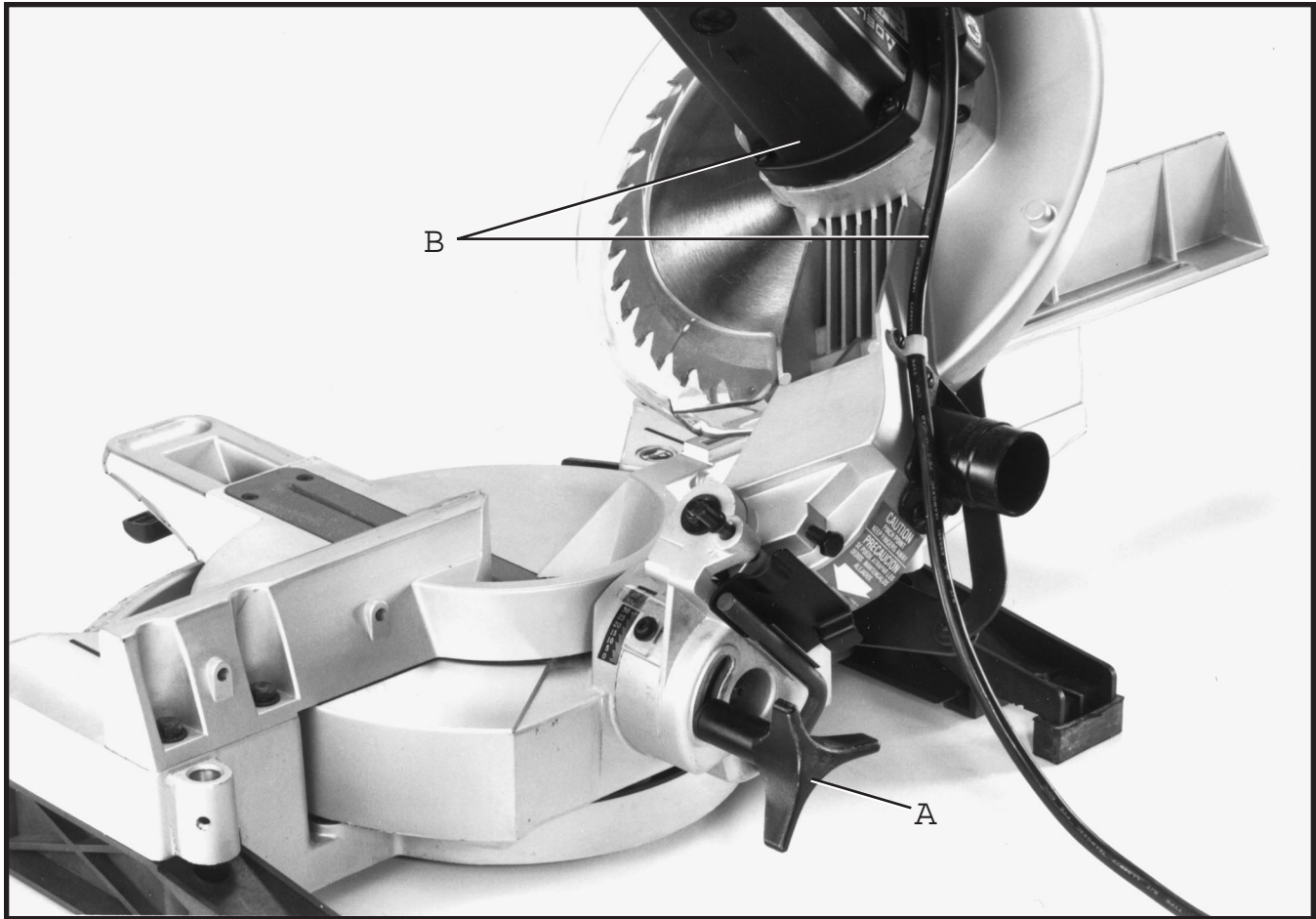


Fig. 27

1. The cuttinghead of your compound miter saw can be tilted to cut any bevel angle from a 90 degree straight cut-off to a 45 degree left bevel angle by loosening bevel lock handle (A) Fig. 27, tilting cuttinghead (B) to the desired angle, and tightening lock handle (A).

2. Positive stops are provided to rapidly position the saw blade at 90 and 45 degrees to the table. Refer to the section of this manual titled ADJUSTING 90 AND 45 DEGREE BEVEL POSITIVE STOPS. The bevel angle of the cutting arm is determined by the position of the pointer (C) Fig. 28, on scale (D).

3. In addition, an indicator (E) Fig. 28, is provided on the bevel scale at the 33.9 degree bevel angle for cutting crown moulding. Refer to the CUTTING CROWN MOULDING section of this manual.

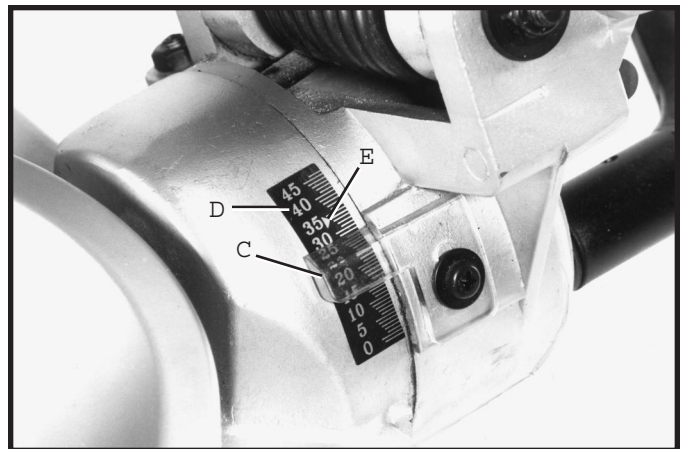


Fig. 28



## ADJUSTING SLIDING FENCE

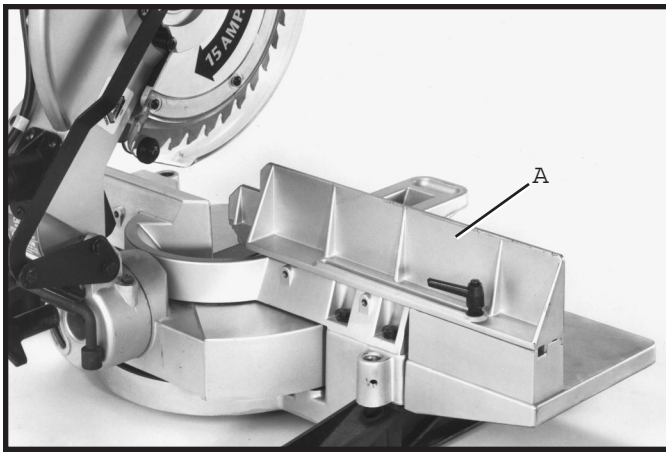


Fig. 28A

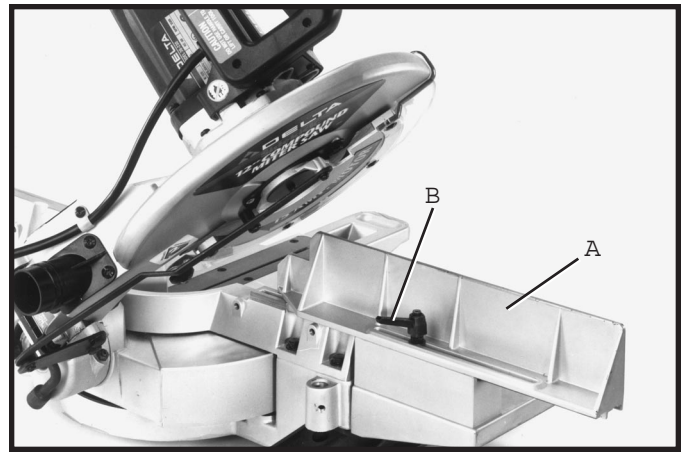


Fig. 28B

1. The high sliding fence (A) Fig. 28A, provides support for extra large workpieces used with your saw and should always be set as close as possible to the saw blade. When miter cutting (blade set 90 degrees to the table and at an angle to the right or left), the fence should be set all the way to the right, as shown in Fig. 28A. When bevel cutting, however (blade tilted at an angle to the table), the fence (A) Fig. 28B, should be moved to the left to allow for proper clearance for the saw blade and guard, as shown in Fig. 28B. This can be accomplished by loosening lock handle (B), sliding the fence (A) to the desired location and tightening lock handle (B). NOTE: Lock handle (B) is spring-loaded and can be repositioned by pulling up on handle and repositioning it on the serrated nut located underneath handle.

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## ADJUSTING CHIP DEFLECTOR

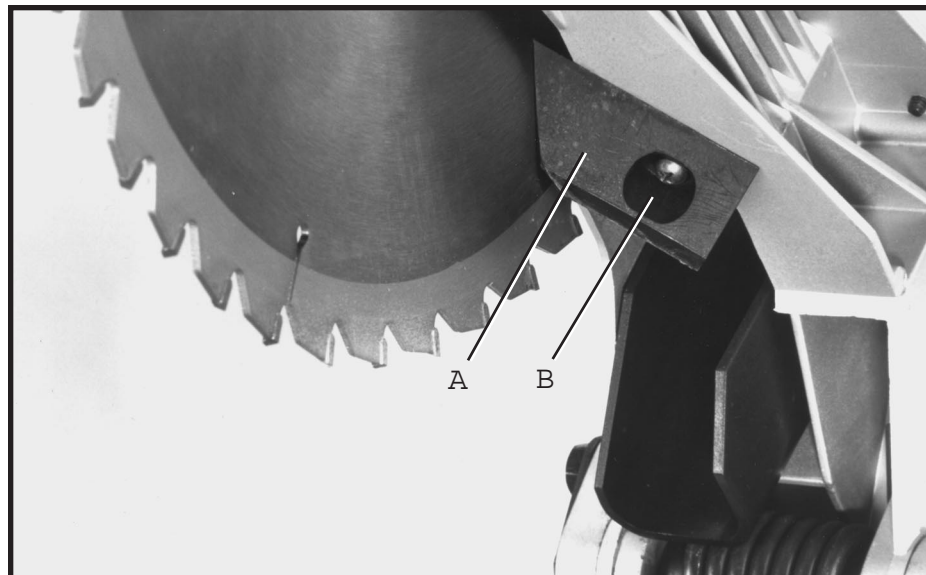


Fig. 29

1. DISCONNECT THE SAW FROM THE POWER SOURCE.

2. A chip deflector (A) Fig. 29, is supplied to help prevent scrap or out-off pieces from entering the upper blade guard. The chip deflector (A) should be adjusted so it is almost touching the side of the blade by loosening screw (B), adjusting chip deflector (A) and tightening screw (B).

# ADJUSTING 90 AND 45 DEGREE BEVEL POSITIVE STOPS

1 DISCONNECT THE SAW FROM THE POWER SOURCE.

2 Loosen bevel lock handle and move the cuttinghead all the way to the right. Then tighten bevel lock handle and lock cuttinghead in the down position.

3 Using a square (A) Fig. 30, place one end of the square on the table and the other end against the blade, as shown. Check to see if the blade is at 90 degrees to the table.

4 If an adjustment is necessary, loosen bevel lock handle (H) Fig. 31. Then loosen locknut (B) and turn adjusting screw (C), with wrenches provided, until blade is 90 degrees to the table. Then tighten locknut (B) and bevel lock handle (H).

5 When you are certain blade is 90 degrees to table, adjust pointer to line up with the 0 degree mark on bevel scale.

6 Loosen bevel lock handle and move cuttinghead all the way to the left bevel position and tighten bevel lock handle.

7 Using a square (A) Fig. 32, check to see if the blade is at 45 degrees to the table, as shown.

8 If an adjustment is necessary, loosen bevel lock handle. Then loosen locknut (E) Fig. 33, and turn adjusting screw (F), with wrenches provided, until blade is 45 degrees to the table. Then tighten locknut (E) and bevel lock handle.

9 These positive stops enable you to rapidly position the blade at the most common bevel angles to the table, 90 and 45 degrees.



Fig. 30

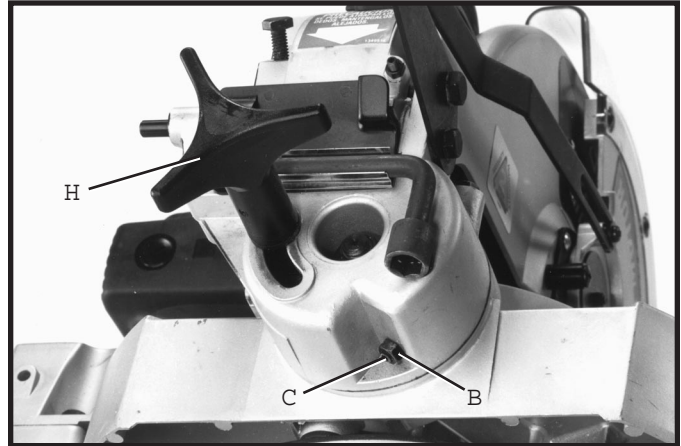


Fig. 31



Fig. 32



Fig. 33



Fig. 36

## ADJUSTING SLIDING FIT BETWEEN TRUNNION AND BEVEL BRACKET

After a long period of time it may become necessary to adjust the sliding fit between the trunnion (A) Fig. 36, and the bevel bracket (B) by tightening adjusting nut (C) using a  $\frac{3}{4}$  socket wrench.

NOTE: This adjustment must be made with the bevel lock handle (D) loose.

Correct adjustment is when a good snug sliding fit is obtained between these two parts. This adjustment should not be too tight that it restricts the tilting movement of the trunnion (A) when bevel cutting, or too loose that it affects the accuracy of the saw cut.



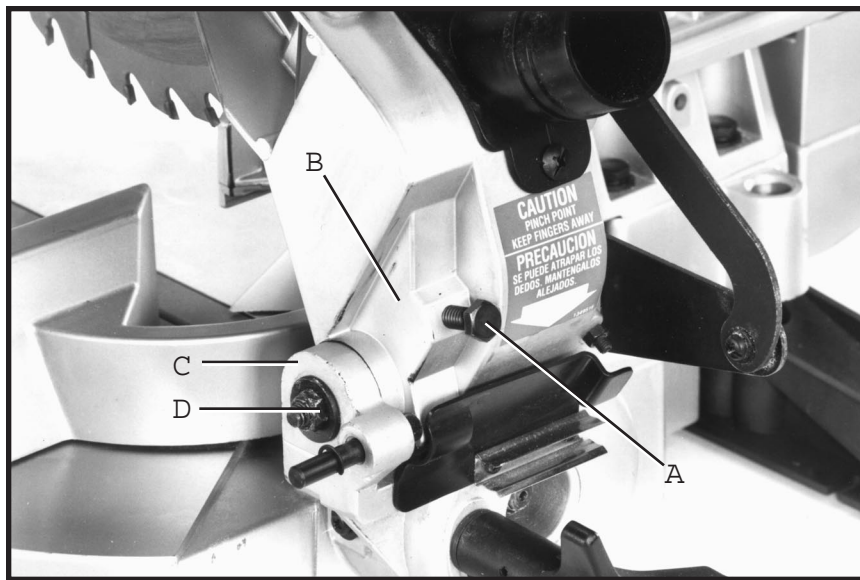


Fig. 37

## ADJUSTING TENSION OF CUTTINGHEAD RETURN SPRING

The tension of the cuttinghead return spring has been adjusted at the factory in order that the cuttinghead returns to the up position after a cut has been made. If it ever becomes necessary to re-adjust the spring tension, proceed as follows:

1. Turn adjusting screw (A) Fig. 37, clockwise to increase or counterclockwise to decrease the spring tension.

## ADJUSTING SLIDING FIT BETWEEN CUTTINGHEAD ARM AND TRUNNION

After a long period of time it may become necessary to adjust the sliding fit between the cuttinghead arm (B) Fig. 37, and the trunnion (C) by tightening nut (D). Correct adjustment is when a good snug sliding fit is obtained between these two parts. This adjustment should not be too tight that it restricts the sliding movement of the cuttinghead arm (B) or too loose that it affects the accuracy of the saw cut.

## ADJUSTING DOWNWARD TRAVEL OF SAW BLADE

1. DISCONNECT THE SAW FROM THE POWER SOURCE.

2. The downward travel of the saw blade can be limited to prevent the saw blade from contacting any metal surfaces of the machine. This adjustment is made by loosening locknut (A) Fig. 38, and turning adjusting screw (B) in or out until other end of screw (B) contacts stop (C) at the full downward travel of the saw blade.

3. When making this adjustment, MAKE SURE THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE and lower the blade as far as possible. Rotate the blade by hand to make certain the teeth do not contact any metal surfaces and adjust if necessary. After adjustment is completed, tighten locknut (A).

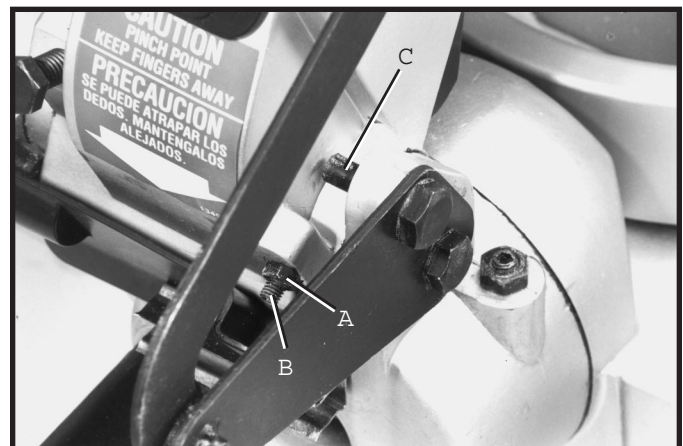


Fig. 38



## TOOL STORAGE

A clip is provided on the rear of the saw and provides a convenient storage area for wrench (A) Fig. 39, as shown.

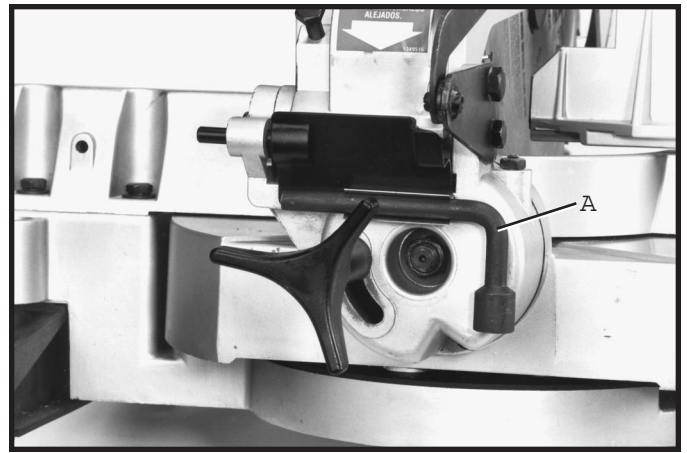


Fig. 39

## ADJUSTING BLADE GUARD



Fig. 40

1. After an extended period of time the movable blade guard (A) Fig. 40, might become sloppy and move erratically when the cuttinghead is lowered. This can be easily corrected by slightly tightening nut (B) until the lower blade guard (A) moves smoothly.

# TYPICAL OPERATIONS AND HELPFUL HINTS

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



Fig. 41

3. Place the workpiece on the table and hold or clamp it firmly against the fence. Figure 41 illustrates the standard equipment work clamp (A) being used to clamp a workpiece to the fence and table. The clamp (A) can also be used in the rear position or on the left front side of the blade.
4. **WARNING:** If the workpiece you are cutting would cause your hand to be inside the table hazard area (see section TABLE HAZARD AREA ), the workpiece should be clamped in place before making the cut, as shown in Fig. 41.
5. For best results cut at a slow, even cutting rate.
6. Never attempt any freehand cutting (wood that is not held firmly against the fence and table).

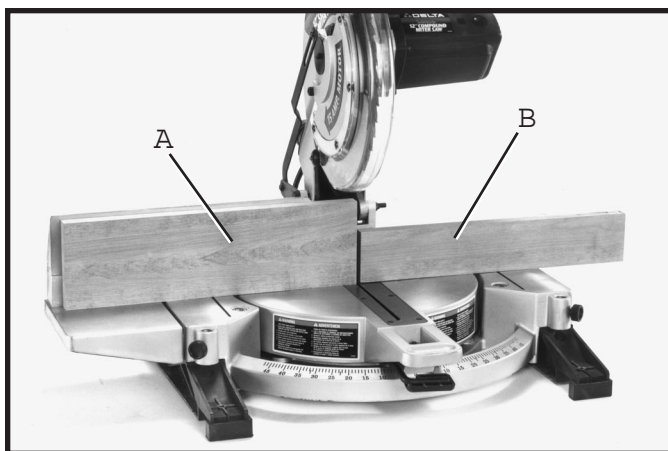


Fig. 43

## AUXILIARY WOOD FENCE

When performing multiple or repetitive cut-off operations that result in small cut-off pieces, one inch or less, it is possible for the saw blade to catch the cut-off pieces and project them out of the machine or into the blade guard and housing, possibly causing damage or injury. In order to limit the possibility of personal injury or blade guard damage, an auxiliary wood fence can be mounted to your saw as follows:

Holes are provided in the fence to attach an auxiliary fence (A) and (B) Fig. 43. This auxiliary fence is constructed of straight wood approximately 1/2 inch thick by 3 inches high by 20 inches long as shown at (B); and 1/2 inch thick by 4-3/4 inches high by 20 inches long as shown at (A) Fig. 43. 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.

## CUTTING ALUMINUM

Aluminum extrusions such as used for making 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 the blade is cutting through the smallest cross-section, as shown in Fig. 44. The wrong way to cut aluminum angles is illustrated in Fig. 45. 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. NEVER APPLY LUBRICANT TO THE BLADE WHILE THE MACHINE IS RUNNING.

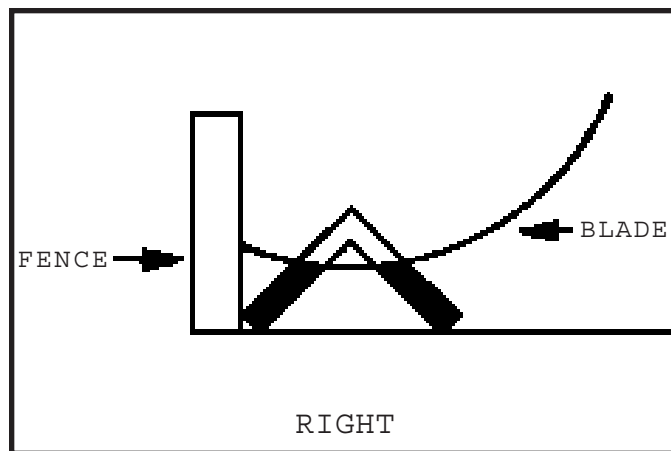


Fig. 44

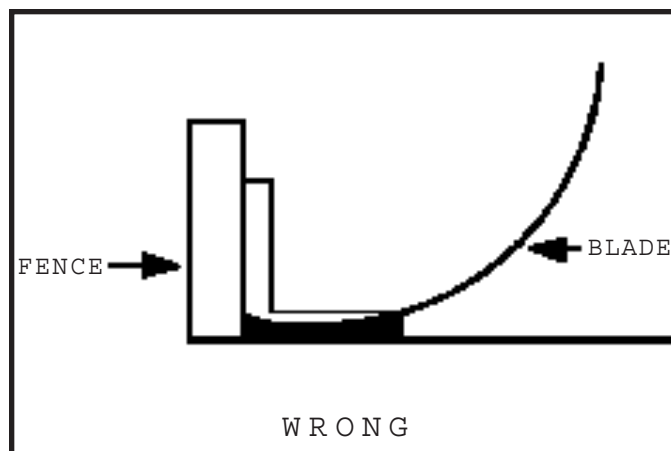


Fig. 45

## CUTTING BOWED MATERIAL

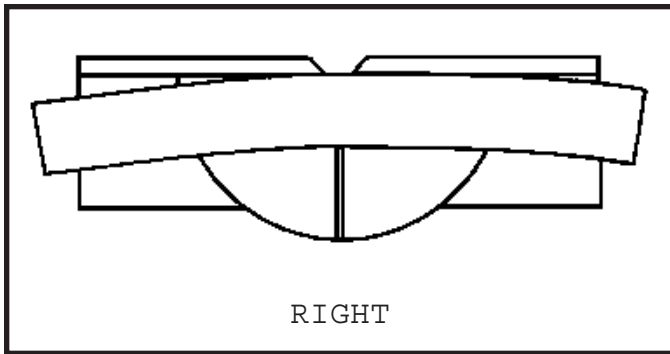


Fig. 46

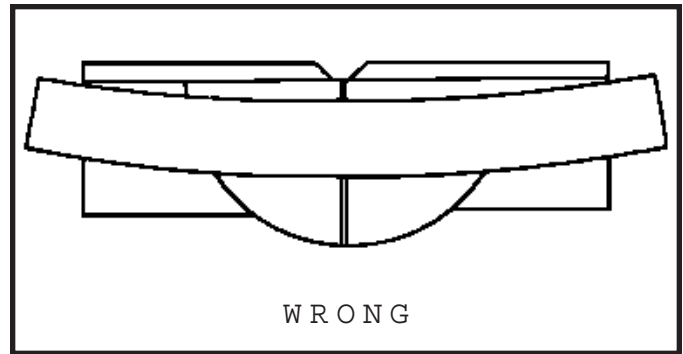


Fig. 47

1. When cutting flat pieces, first check to see if the material is bowed. If it is, make sure the material is positioned on the table as shown in Fig. 46.

2. If the material is positioned the wrong way, as shown in Fig. 47, the workpiece will pinch the blade near the completion of the cut.

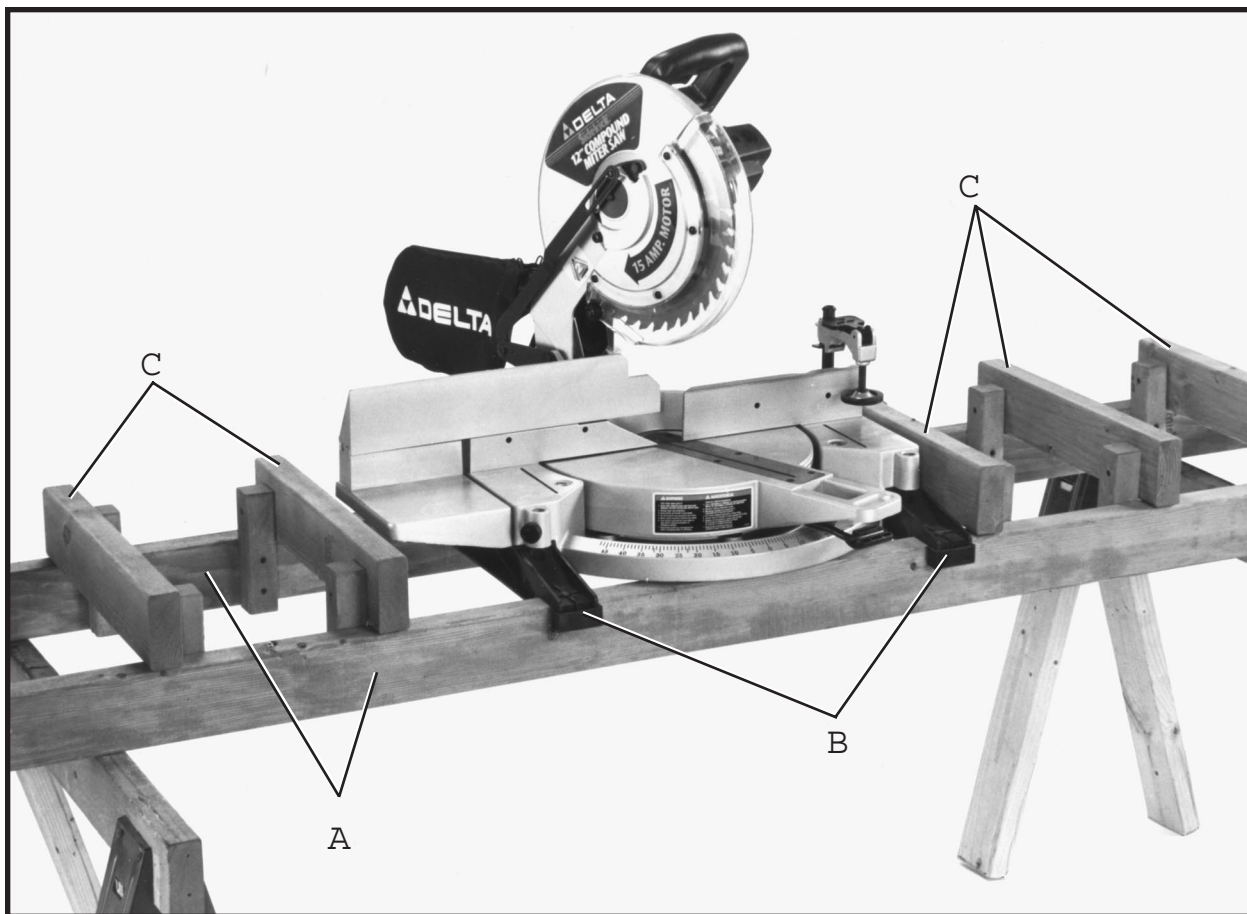


Fig. 48

## CONSTRUCTING WORK SUPPORT EXTENSIONS

One of the unique features of your miter saw is the ease with which you can construct work supports. Fig. 48, 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 your preference. The distance from the top of the 2 x 4 s (A) to the compound miter saw table is 3-5/8 inches. This enables you to fasten standard 2 x 4 s (C) to the top of the 2 x 4 s (A), as shown. 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 your 2 x 4 s. This method allows you to provide support for long workpieces using standard 2 x 4 s instead of constructing an expensive, complicated work support.



# CUTTING CROWN MOULDING

One of the many features of your saw is the ease of cutting crown moulding. The following is an example of cutting both inside and outside corners on 53/38 degree wall angle crown moulding. NOTE: When cutting 45 degree wall angle crown moulding, the following procedure for inside and outside corners is the same with the exception that the bevel position will always be at 30 degrees and the miter position will be 35-1/4 degrees to the right or left.

1. Move the table to the 31-5/8 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 33-7/8 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 moulding on the table with the CEILING EDGE of the moulding against the fence, and make the cut, as shown in Fig. 49. 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. 49. 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. 49. Note that the standard equipment work clamp (E) is being used to hold the workpiece in position.
4. To make the matching halves of the inside and outside corners, simply rotate the table to the 31-5/8 degree 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 degree 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. 50. 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. 50. Again, the standard equipment work clamp (E) is being used to hold the workpiece in position.

6. Fig. 51, illustrates the two outside corner pieces; (A) being the piece cut at (A) Fig. 49, and (C) being the piece cut at (C) Fig. 50.

7. Fig. 52, illustrates the two inside corner pieces; (B) being the piece cut at (B) Fig. 49, and (D) being the piece cut at (D) Fig. 50.

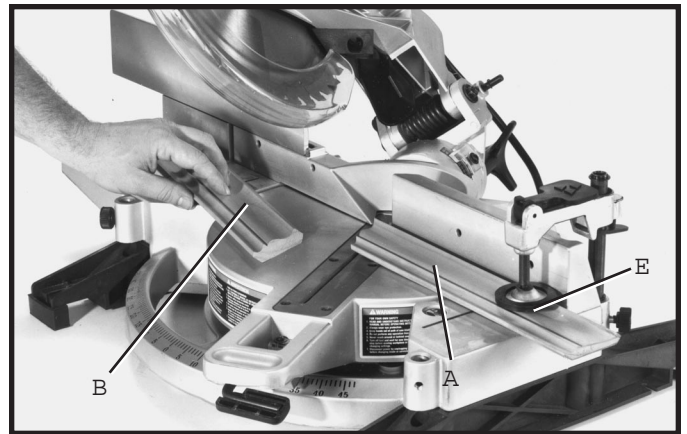


Fig. 49

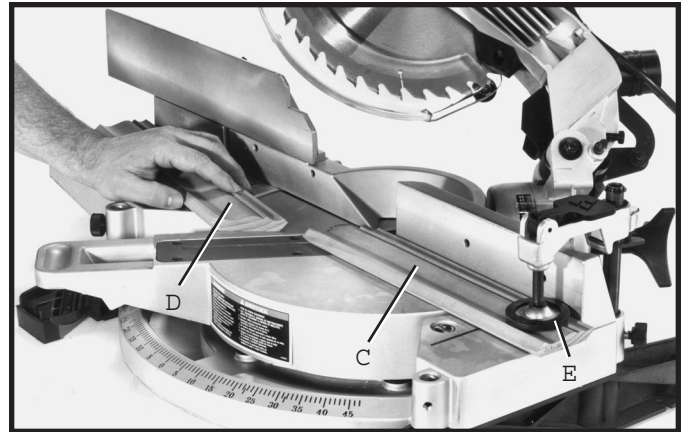


Fig. 50

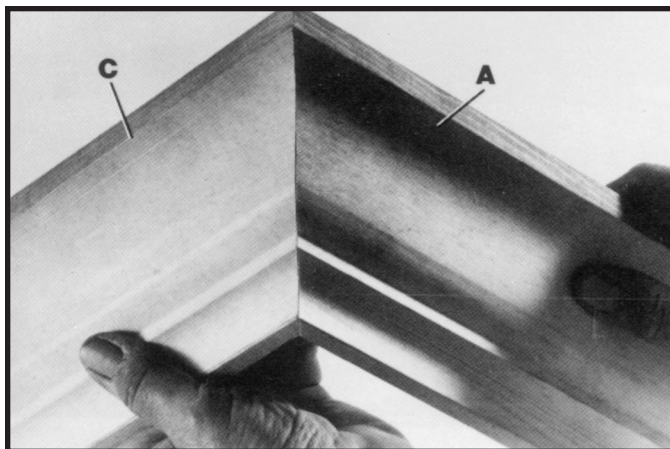


Fig. 51

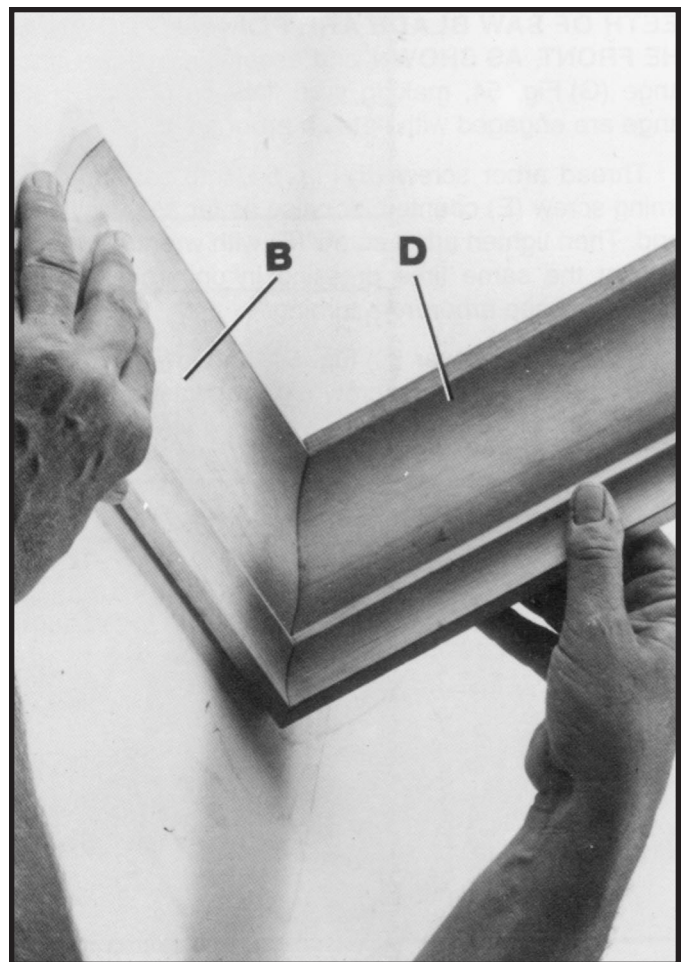


Fig. 52

# MAINTENANCE

## CHANGING THE BLADE

**WARNING:** USE ONLY CROSS-CUTTING SAW BLADES. DO NOT USE BLADES WITH DEEP GULLETS AS THEY CAN DEFLECT AND CONTACT GUARD.

1. Use only 12" diameter blades with 1" arbor holes that are rated for 4800 RPM or higher.
2. DISCONNECT THE MACHINE FROM THE POWER SOURCE.

3. Loosen screw (A) Fig. 53, with wrench (B) provided.

4. Rotate arbor cover (C) Fig. 54, and lower guard (D) to the rear, exposing arbor screw (E), as shown.

5. Remove arbor screw (E) Fig. 54, by turning screw clockwise with wrench supplied while at the same time pressing in on arbor lock (F) Fig. 56, to keep the arbor from turning. Remove outside blade flange (G) Fig. 54, and saw blade (H). DO NOT REMOVE INSIDE BLADE FLANGE.

6. **WARNING:** IF THE INNER BLADE FLANGE (H) FIG. 55, HAPPENS TO BE REMOVED, IT MUST BE PLACED ON THE ARBOR SHAFT SO THE RAISED BUSHING (I) POINTS AWAY FROM MOTOR, AND MAKE SURE FLATS ON INNER BLADE FLANGE ARE ENGAGED WITH FLATS ON ARBOR SHAFT.

7. Assemble the new saw blade MAKING CERTAIN TEETH OF SAW BLADE ARE POINTING DOWN AT THE FRONT, AS SHOWN and assemble outside blade flange (G) Fig. 54, making sure flats on outside blade flange are engaged with flats on arbor shaft.

8. Thread arbor screw (E) Fig. 54, into saw arbor by turning screw (E) counterclockwise as far as possible by hand. Then tighten arbor screw (E) with wrench supplied while at the same time pressing in on arbor lock (F) Fig. 55, to keep arbor from turning.

9. Rotate arbor cover (C) Fig. 54, and lower guard (D) to the front and tighten screw (A) that was loosened in STEP 3.

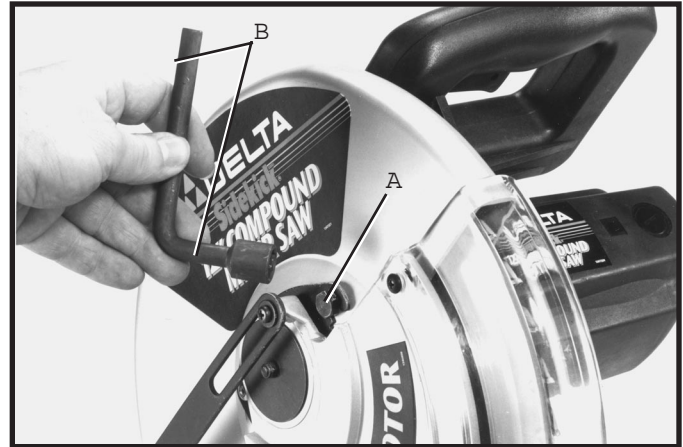


Fig. 53

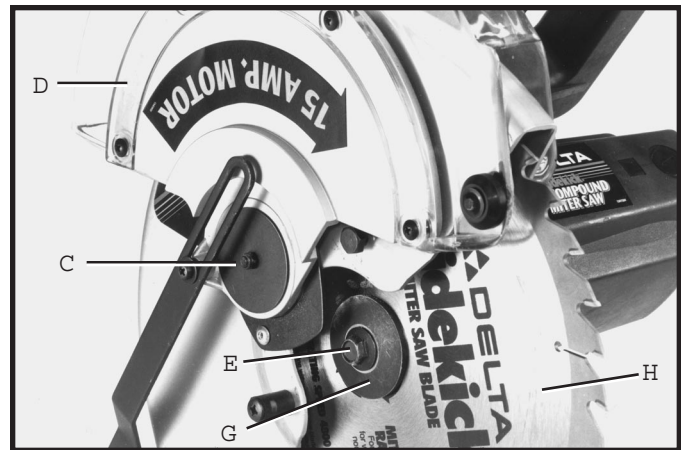


Fig. 54

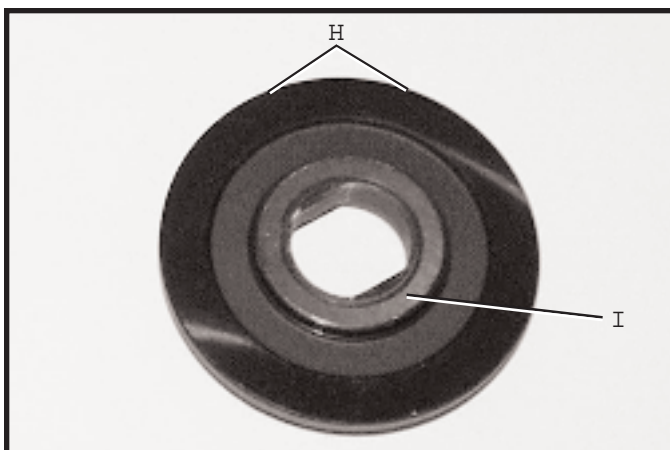


Fig. 55



Fig. 56

## BRUSH INSPECTION AND REPLACEMENT

CAUTION: BEFORE INSPECTING BRUSHES, DISCONNECT THE MACHINE FROM THE 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. 57, are located on the motor housing opposite each other. Fig. 58, illustrates one of the brushes removed for inspection. When the carbon on either brush (B) is worn to  $3/16$  in length or if either spring or shunt wire (C) 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. 57

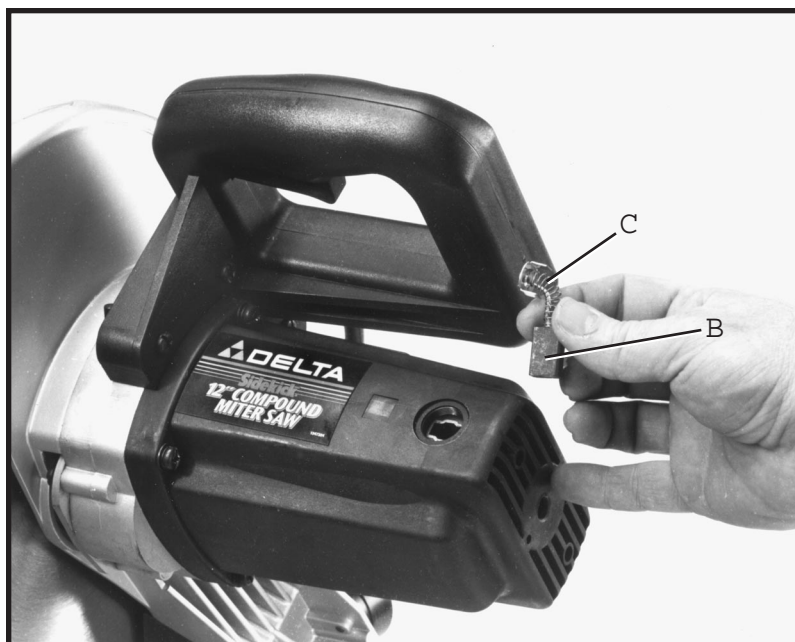


Fig. 58



## PARTS, SERVICE OR WARRANTY ASSISTANCE

All Delta Machines and accessories are manufactured to high quality standards and are serviced by a network of Porter-Cable/Delta Factory Service Centers and Delta Authorized Service Stations. To obtain additional information regarding your Delta quality product or to obtain parts, service, warranty assistance, or the location of the nearest service outlet, please call 1-888-848-5175.



### Delta Building Trades and Home Shop Machinery Two Year Limited Warranty

Delta will repair or replace, at its expense and at its option, any Delta machine, machine part, or machine accessory which in normal use has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to a Delta factory service center or authorized service station with proof of purchase of the product within two years and provides Delta with reasonable opportunity to verify the alleged defect by inspection. Delta may require that electric motors be returned prepaid to a motor manufacturer's authorized station for inspection and repair or replacement. Delta will not be responsible for any asserted defect which has resulted from normal wear, misuse, abuse or repair or alteration made or specifically authorized by anyone other than an authorized Delta Service facility or representative. Under no circumstances will Delta be liable for incidental or consequential damages resulting from defective products. This warranty is Delta's sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Delta.