

10" Motorized Miter Box

(Model 34-080)



DATED 5-22-95

PART NO. 1340238
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 **DELTA**

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ADDITIONAL SAFETY RULES FOR THE MITER BOX

1. **WARNING: USE ONLY CROSS-CUTTING SAW BLADES. WHEN USING CARBIDE TIPPED BLADES, MAKE SURE THEY HAVE A NEGATIVE HOOK ANGLE. DO NOT USE BLADES WITH DEEP GULLETS AS THEY CAN DEFLECT AND CONTACT GUARD.**
2. **WARNING:** Do not operate the miter box until it is completely assembled and installed according to the instructions.
3. **IF YOU ARE NOT** thoroughly familiar with the operation of miter boxes, 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:** Keep hands out of path of saw blade. If the workpiece you are cutting would cause your hand to be within 4 inches 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** the table clamp handle 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.
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 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 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** tool and wait for blade to stop before moving workpiece or changing setting.
23. **NEVER** cut ferrous metals or masonry.
24. **NEVER** recut small pieces.
25. **PROVIDE** adequate support to the sides of the saw table for long workpieces.
26. **NEVER** use the miter box in an area with flammable liquids or gases.
27. **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.
28. **DISCONNECT** power before changing blades or servicing.
29. **DISCONNECT** saw from power source and clean the machine before leaving it.
30. **MAKE SURE** the work area is cleaned before leaving the machine.
31. **THE USE** of attachments and accessories not recommended by Delta may result in the risk of injuries.
32. **SHOULD** any part of your miter box 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 01.1 Safety Requirements for Woodworking Machinery and the U.S. Department of Labor OSHA 1910.213 Regulations.
34. **SAVE THESE INSTRUCTIONS.** Refer to them often and use them to instruct others.

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.

**DELTA INTERNATIONAL MACHINERY CORP.
MANAGER OF TECHNICAL SERVICES
246 ALPHA DRIVE
PITTSBURGH, PENNSYLVANIA 15238
(IN CANADA: 644 IMPERIAL ROAD, 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.

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 CHILDPROOF - 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. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.

13. ALWAYS USE SAFETY GLASSES. Wear safety glasses (must comply with ANSI Z87.1). 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 improper accessories 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.

UNPACKING

1. Remove the miter box and all loose items from the carton. **IMPORTANT: DO NOT LIFT THE MITER BOX BY THE SWITCH HANDLE OR TABLE CONTROL HANDLE AS THIS MAY CAUSE MISALIGNMENT. ALWAYS LIFT THE MACHINE BY THE BASE.**

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

NOTE: The scale, nameplates and pointer are supplied with a plastic protective coating. These protective coatings can be removed by peeling them off.

ASSEMBLY INSTRUCTIONS

MOVING CUTTINGHEAD TO THE UP POSITION

1. The miter box is shipped with the cuttinghead (A) locked in the down position, as shown in Fig. 2.

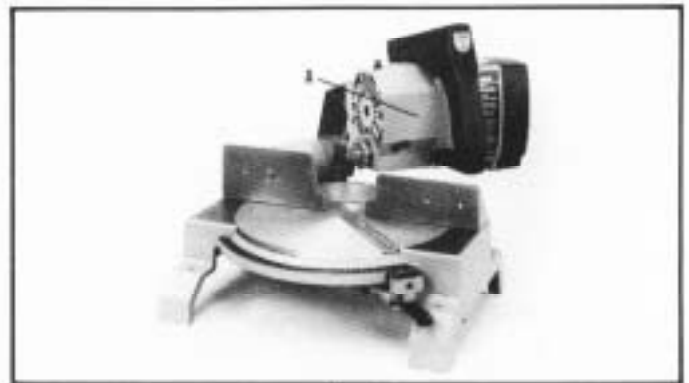


Fig. 2

2. To move the cuttinghead to the up position, move locking lever (B) Fig. 3, to the right, as shown.

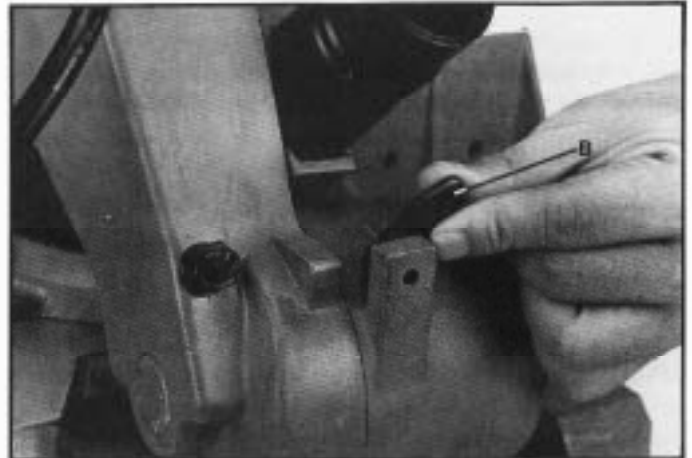


Fig. 3

ASSEMBLING TABLE LOCK HANDLE

1. Thread table lock handle (A) into the control arm, as shown in Fig. 4.

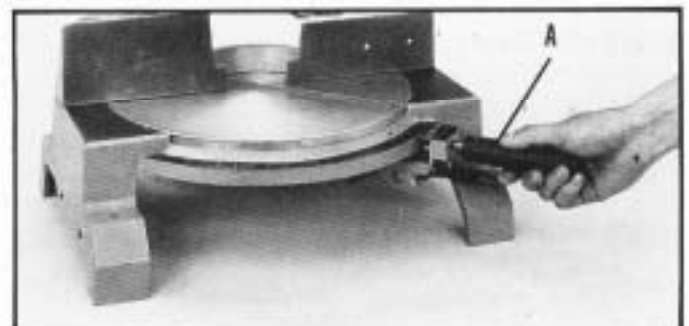


Fig. 4

ASSEMBLING BLADE GUARD AND BLADE

1. Remove four screws (A) Fig. 5, and blade guard side cover (B).

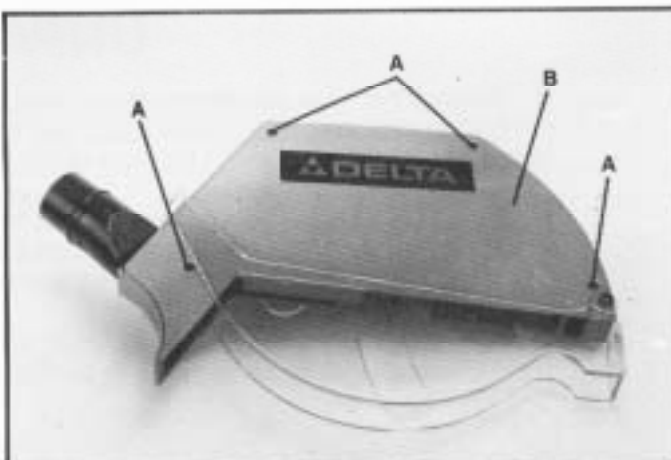


Fig. 5

2. Assemble the short end of "L" bracket (C) Fig. 6, to guard, as shown, using the 1/2" long screw (D), lockwasher and flat washer. Do not completely tighten screw (D) at this time.

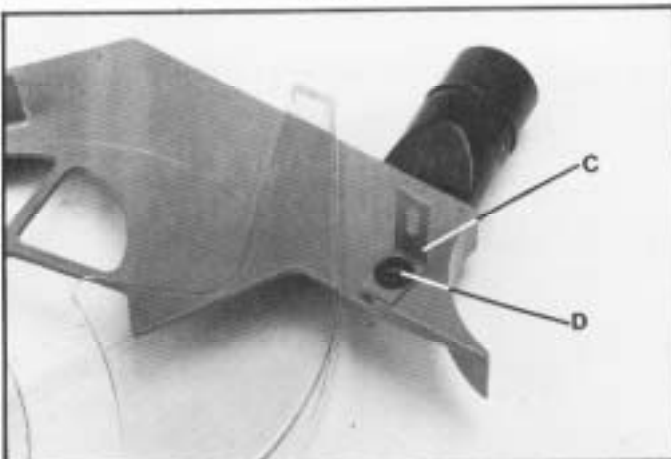


Fig. 6

3. Assemble guard (E) Fig. 7, to motor housing using the 1/2" long screw (F), star washer, flat washer and lock washer. Do not completely tighten screw (F) at this time.



Fig. 7

4. Fasten other end of "L" bracket (C) Fig. 8, to saw arm using the 5/8" long screw (G), flat washer and lockwasher. Do not completely tighten screw (G) at this time.

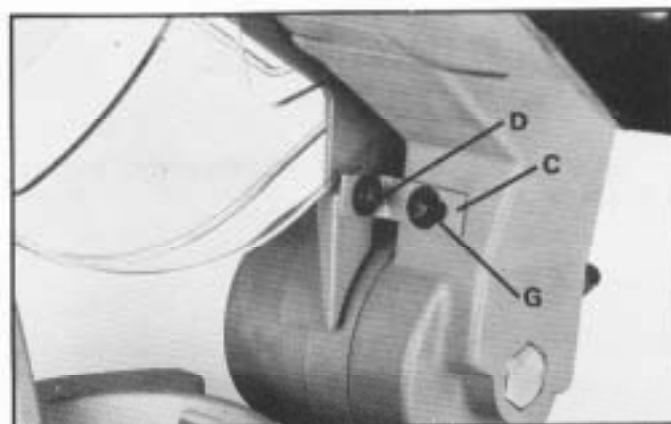


Fig. 8

5. Assemble blade (H) Fig. 8A, to the saw arbor using the flange and arbor nut (J). **MAKE CERTAIN TEETH OF SAW BLADE (H) ARE POINTING DOWN AT THE FRONT OF THE SAW, AS SHOWN.** The arbor nut has a left hand thread. Turn the arbor nut (J) counterclockwise by hand as far as possible.

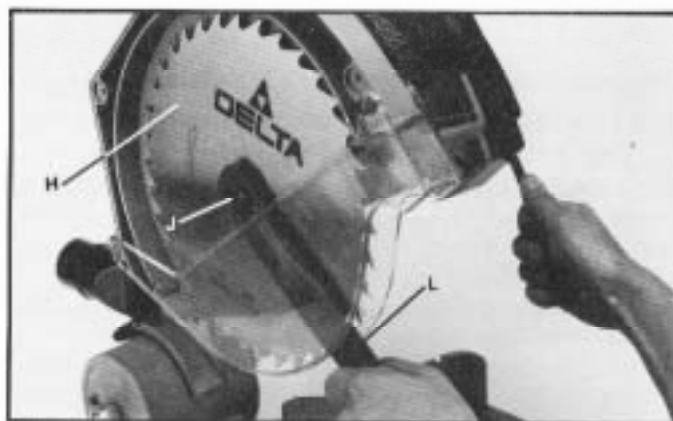


Fig. 8A

6. To tighten arbor nut, insert hexagon wrench (K) Fig. 8B, into hex hole in end of arbor shaft, to keep the shaft from turning and tighten arbor nut (J) Fig. 8A, using wrench (L). **REMOVE WRENCHES (L) FIG. 8A AND (K) FIG. 8B.**



Fig. 8B

7. Make certain the inside surface (M) Fig. 8C, of blade guard is parallel with the blade (H) and that the movable see-thru guard (N) moves up and down without interference.

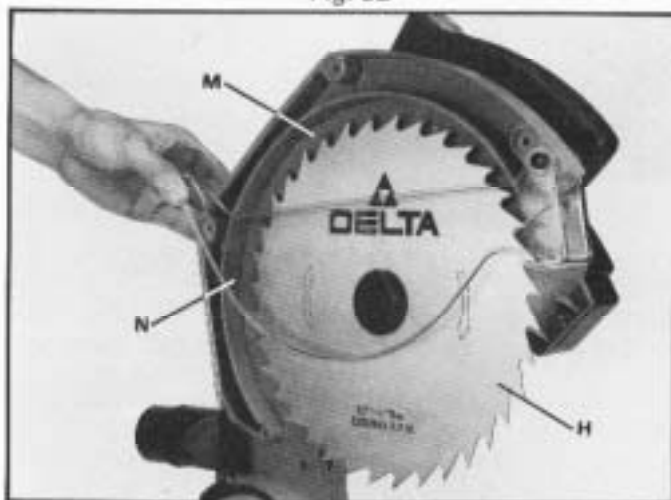


Fig. 8C

8. When you are certain the blade guard is adjusted as stated in STEP 7, tighten screw (F) Fig. 7, first. Then tighten screw (D) Fig. 8, and screw (G) Fig. 8, in that order moving the "L" shaped bracket if necessary.

9. Replace blade guard side cover (B) Fig. 8D, using four screws (A) that were removed in STEP 1.

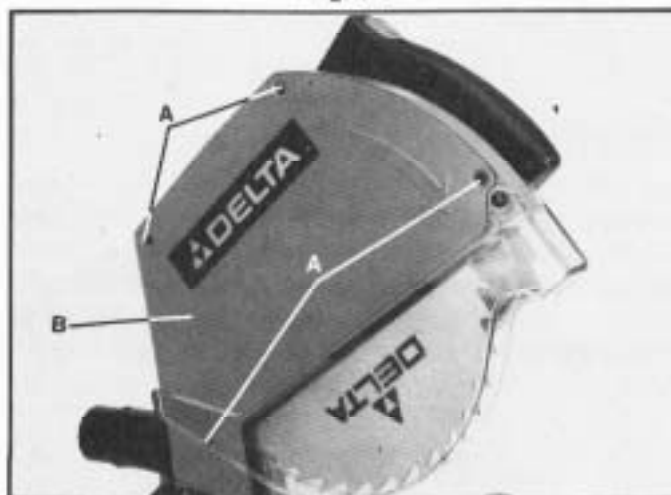


Fig. 8D

FASTENING MITER BOX TO SUPPORTING SURFACE

IF DURING OPERATION THERE IS ANY TENDENCY FOR THE MITER BOX TO TIP OVER, SLIDE OR WALK ON THE SUPPORTING SURFACE, THE MITER BOX MUST BE SECURED TO THE SUPPORTING SURFACE USING THE FOUR HOLES, THREE OF WHICH ARE SHOWN AT (A) FIG. 9.

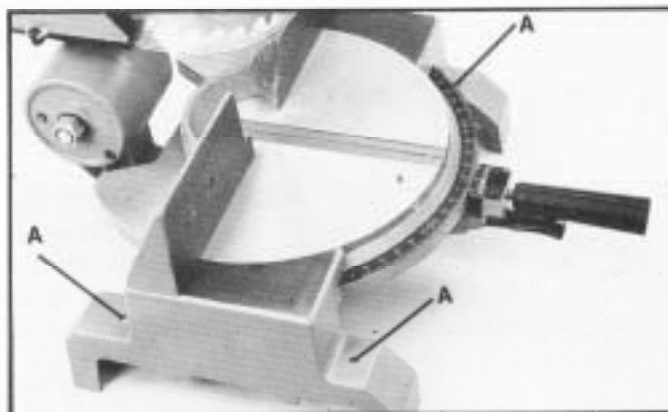


Fig. 9

DUST CHUTE AND ACCESSORY DUST BAG

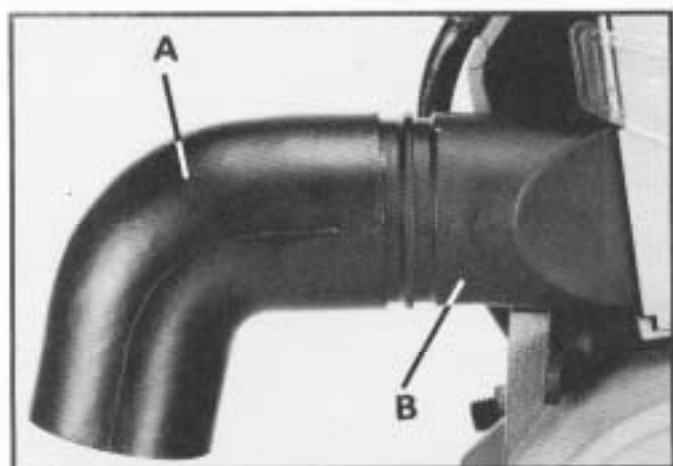


Fig. 10

A dust chute (A) Fig. 10, is supplied with your miter box to deflect sawdust down at the rear of the saw. To assemble the dust chute (A), simply press it on the spout (B) at the rear of the guard, as shown.

Available as an accessory for your miter box is the Catalog No. 34-084 Dust Bag, shown at (C) Fig. 10A. To assemble the accessory dust bag, remove dust chute (A) Fig. 10, and assemble dust bag (C) Fig. 10A, to the spout, as shown,

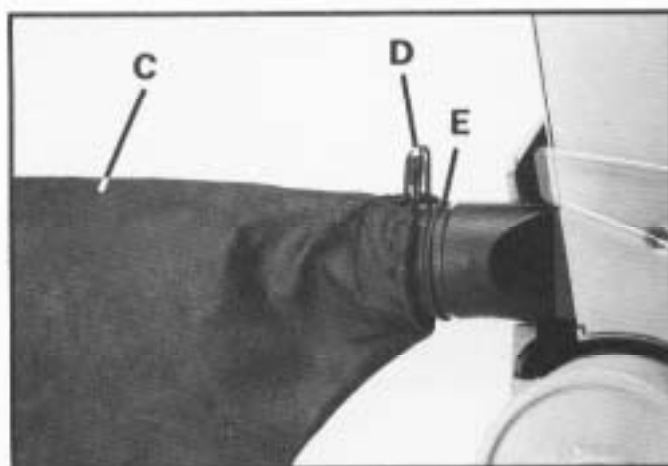


Fig. 10A

making certain the wire ring (D) is engaged in groove (E) in spout.

The miter box can be connected directly to the accessory 49-255 UL listed, 28-gallon all purpose vacuum cleaner by removing the dust chute (A) Fig. 10, and using the accessory 49-220 (2-1/2" x 1-1/2") adapter and the 49-228 (2-1/2" x 2-1/2") coupling. The hose from the 49-255 vacuum cleaner can then be connected to the coupling.

CONNECTING MITER BOX TO POWER SOURCE

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-hole 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. 10B, shows the correct size to use depending on cord length. 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. 10B

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 fuse. Have a certified electrician replace or repair a worn cord immediately. Before connecting the motor to a power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as stamped on the motor nameplate. 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 miter saw is wired for 110-120 volt, 60 HZ alternating current. Before connecting the miter saw to the power source, make sure the switch is in the "OFF" position. The motor provides a no-load speed of 5500 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. 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 3-hole receptacles that accept the tool's plug, as shown in Fig. 11.

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. 11. A temporary adapter, which looks like the adapter illustrated in Fig. 12, may be used to connect this plug to a 2-pole receptacle, as shown in Fig. 12, 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. 12.

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.

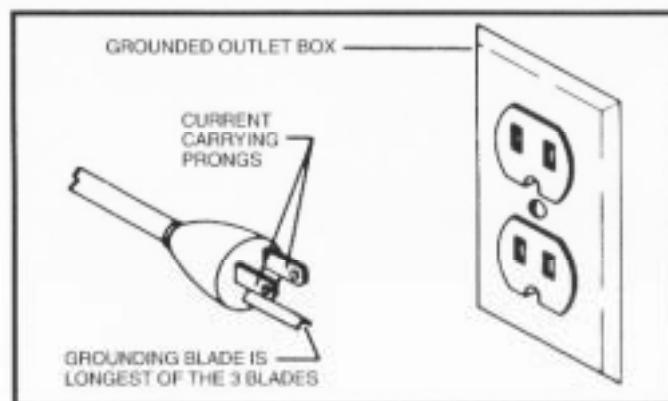


Fig. 11

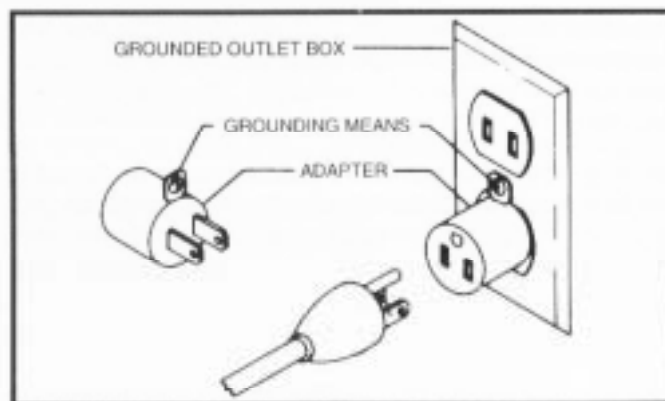


Fig. 12

OPERATING CONTROLS

STARTING AND STOPPING MACHINE

To start the machine, depress switch trigger (A) Fig. 13. To stop the machine, release the switch trigger.

Your miter box is equipped with a blade brake. As soon as the cut is completed, release the switch trigger (A) and press down on the brake button (B) Fig. 13, until the blade comes to a complete stop. The brake button (B) is conveniently located on the top of the handle for easy thumb operation.

IMPORTANT: If the blade does not stop promptly after activating the brake button, check the condition of the motor brushes. See section "BRUSH INSPECTION AND REPLACEMENT." If the carbon on either brush is worn to 3/16" in length, or if either spring or shunt wire is burned or damaged in any way, replace both brushes immediately. Check brush condition periodically to insure proper operation of the blade braking system.

DANGER: A COASTING SAW BLADE CAN BE DANGEROUS. AFTER COMPLETING CUT, APPLY BLADE BRAKE TO STOP COASTING BLADE. KEEP SAW HEAD DOWN UNTIL BLADE HAS COME TO A COMPLETE STOP.

WARNING: THE TORQUE DEVELOPED DURING BRAKING MAY LOOSEN THE ARBOR NUT. THE ARBOR NUT SHOULD BE CHECKED PERIODICALLY AND TIGHTENED IF NECESSARY, ESPECIALLY AFTER BRAKING.



Fig. 13

LOCKING SWITCH IN THE "OFF" POSITION

IMPORTANT: We suggest that when the miter box is not in use, the switch be locked in the "OFF" position using a padlock, as shown in Fig. 14.



Fig. 14

TABLE CONTROLS

Your miter box will cut any angle from a straight 90 degree cut-off to 47 degrees right and left. Simply loosen lock handle (A) Fig. 15, depress index lever (B) and move the control arm to the desired angle. Then tighten lock handle (A).

Your miter box also contains positive stops for the table control arm at the 0, 22-1/2 and 45 degree right and left positions. Simply loosen lock handle (A) Fig. 15, and move the control arm until the spring loaded positive stop engages into the indent located directly underneath the ledge (C) at the 0, 22-1/2 and 45 degree positions. Then tighten the lock handle (A). To disengage the positive stop, depress index lever (B). Always tighten lock handle (A) before cutting.

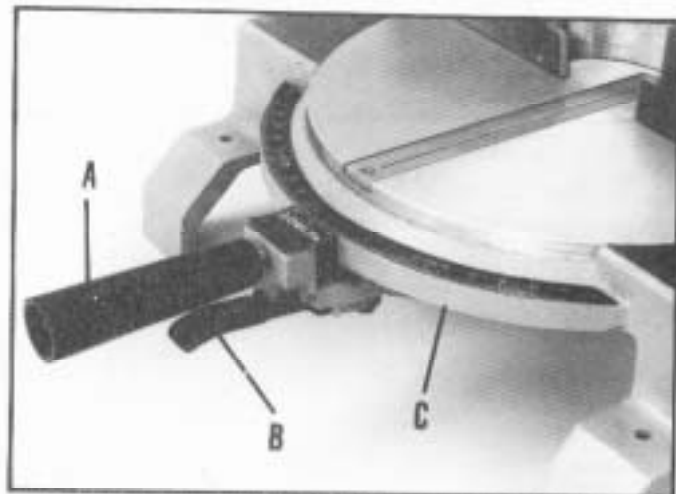


Fig. 15

SCALE AND POINTER

The center line (A) Fig. 16, on the pointer indicates the actual angle of cut. Each line on the scale (B) represents 1/2 degree. In effect, when the center line (A) is moved from one line to the next on the scale the angle of cut is changed by 1/2 degree.

The pointer is provided with two additional lines (C) and (D) Fig. 16. This allows you to move the control arm 1/4 degree. For example, assume the center line (A) is pointing to the 10 degree mark on the scale, as shown, and you want to change the angle of cut 1/4 degree to the right. Move the control arm until the right line (D) lines up with the next line on the scale. The angle of cut will then be changed 1/4 degree to the right. If you were changing the angle of cut 1/4 degree to the left, use the left line (C) in the same manner.

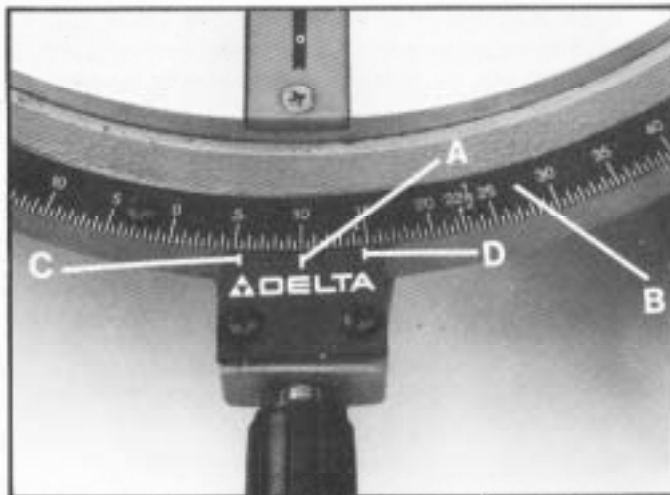


Fig. 16

LOCKING CUTTINGHEAD IN THE DOWN POSITION

When transporting the miter box, the cuttinghead should always be locked in the down position. This can be accomplished by lowering the cuttinghead and moving the locking lever (A) to the locked position, as shown in Fig. 17. **NEVER CARRY THE MITER BOX BY THE SWITCH HANDLE OR TABLE CONTROL HANDLE AS THIS MAY CAUSE MISALIGNMENT. ALWAYS LIFT THE MACHINE BY THE BASE.**

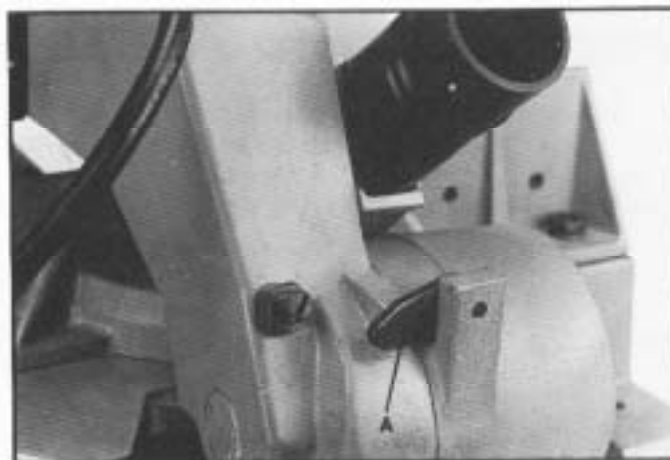


Fig. 17

ADJUSTMENTS

ADJUSTING FENCE 90 DEGREES TO BLADE

1. Move the table control arm so that the blade is at 90 degrees to the fence and the spring loaded positive stop is engaged into the indent located directly underneath the 0 degree mark on the scale. Then lock the control arm in this position.
2. Disconnect saw from power source.
3. Lower the saw blade into the slot in the table insert and using a square, place one end of the square against the fence and the other end against the saw blade, as shown in Fig. 18. Check to see if the fence is at 90 degrees to the blade.



Fig. 18

4. If an adjustment is necessary, the fence can be adjusted by loosening the two screws, one of which is shown at (A) Fig. 19, that attach the fence to the base.

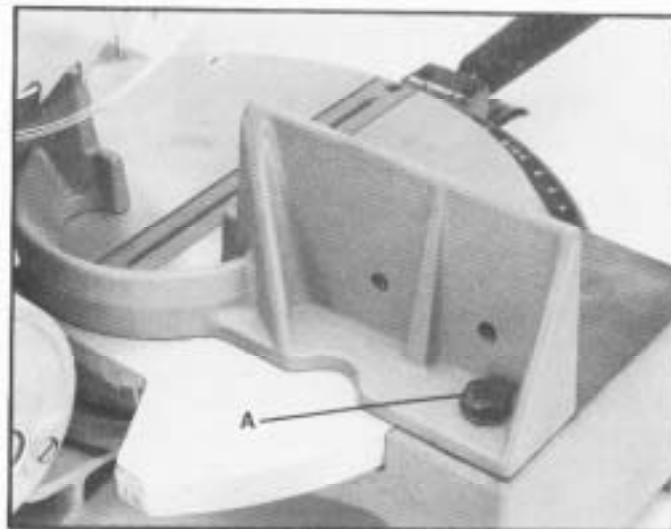


Fig. 19

ADJUSTING TABLE POSITIVE STOPS

1. Move the control arm to the center of the scale until the spring loaded positive stop engages into the factory drilled indent located directly under the 0 degree mark on the scale and tighten the lock handle (A) Fig. 20.

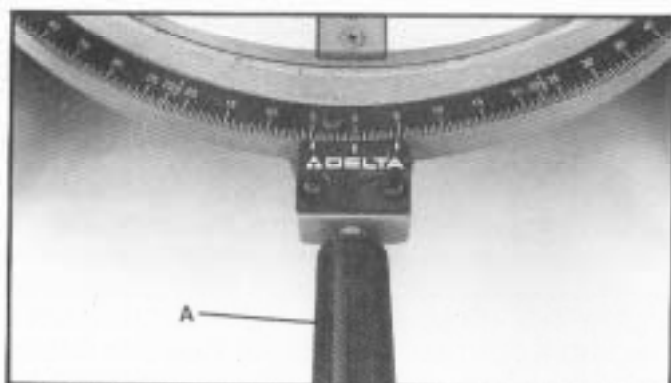


Fig. 20

2. Make a cut on a piece of wood, as shown in Fig. 21.



Fig. 21

3. Using a square, check to see if the piece of wood was cut at 90 degrees, as shown in Fig. 22.



Fig. 22

4. If an adjustment is necessary, loosen the arm lock handle (A) Fig. 23, and the two screws (B). Then tap the arm (C) to the right or left as necessary, and tighten the two screws (B).

5. Make another test cut and if further adjustment is necessary, repeat the above instructions.

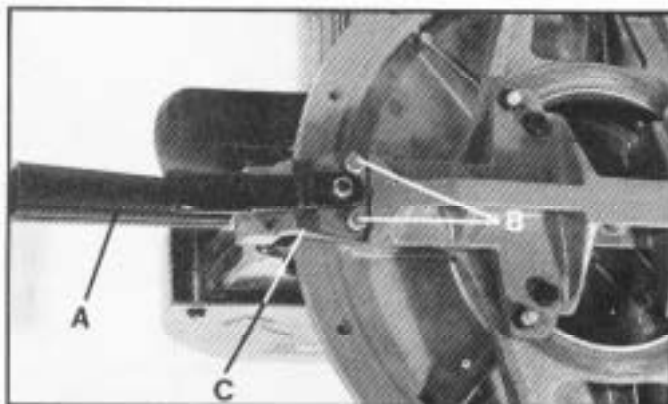


Fig. 23

6. When you are certain the cut is at 90 degrees, adjust the pointer so that the center line (D) Fig. 24, points to the 0 mark on the scale by loosening the two screws (E).

7. Once the 90 degree positive stop is adjusted, the positive stops at 22-1/2 and 45 degrees right and left will also be adjusted.

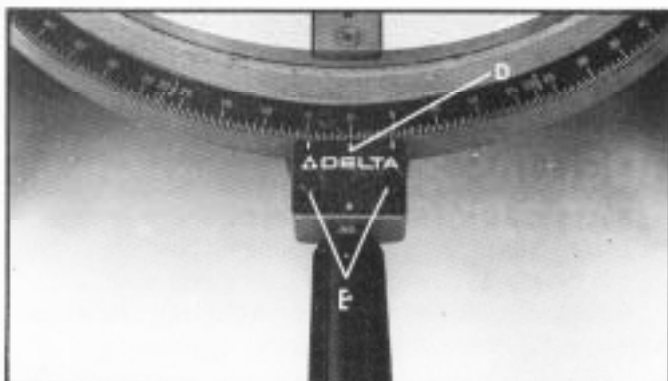


Fig. 24

ADJUSTING DOWNWARD TRAVEL OF SAW BLADE

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 lock nut (A) Fig. 25, and turning the adjusting screw (B) in or out until the blade lowers to the desired position. Then tighten the lock nut (A).

When making this adjustment, disconnect the machine 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.

ADJUSTING SPRING TENSION OF CUTTINGHEAD ARM ASSEMBLY

The spring tension of the cuttinghead arm assembly is adjusted at the factory in order that the saw blade returns to the up position. If it is ever necessary to re-adjust the spring tension, proceed as follows:

1. Loosen locknut (C) Fig. 25, and turn adjusting screw (D) clockwise to increase or counterclockwise to decrease the spring tension. After tension is adjusted, tighten locknut (C).

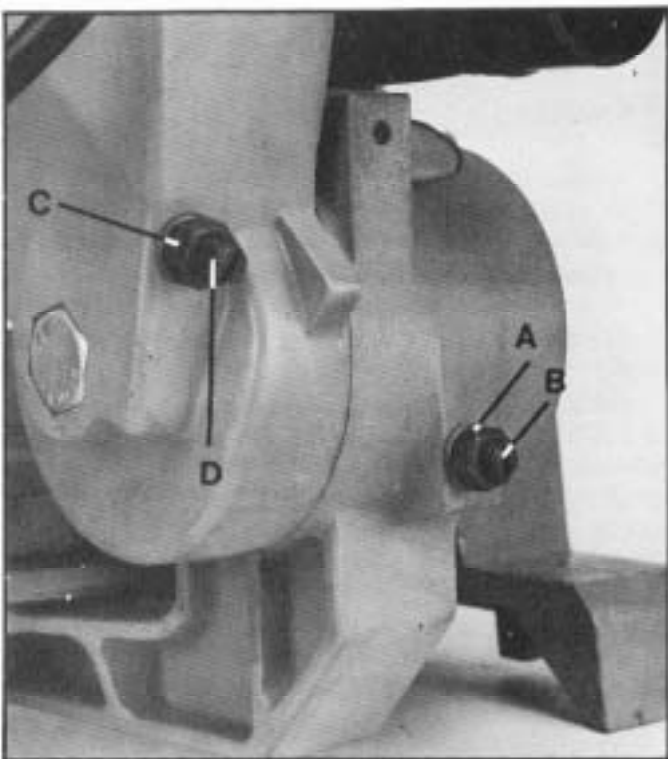


Fig. 25

REMOVING "HEELING" IN SAW CUT

Your saw is provided with an adjustment to allow the arbor to be set parallel with the pivot shaft at the rear of the machine. The saw blade should be perpendicular to the table surface, and also should be at right angles to the pivot shaft. Even though the blade may be perfectly aligned at 90° to the table, the blade may not be at right angle to the pivot shaft. This condition is called "heeling."

To check and adjust, proceed as follows:

1. Clamp a piece of scrap material (about 3" to 3-1/2" in height) to the fence, and make a 90° cut. Shut off the motor but do not return the saw blade to the up position.

2. Refer to Fig. 26, and also observe the cut you have just made.

3. If a condition exists similar to the top drawing shown in Fig. 26, the blade is not at right angle to the pivot shaft and an adjustment is necessary, as follows:

4. Disconnect machine from power circuit.

5. Remove the saw blade and blade guard.

6. Reassemble the saw blade, lower the blade and with a square, place one end of the square on the table and the other end against the blade, as shown in Fig. 27, to determine how much adjustment must be made.

7. Remove the saw blade.

8. To adjust, loosen the three screws (A) Fig. 28, and shift the cuttinghead (B). Then tighten the three screws (A). Reassemble the saw blade and re-check until you are certain the saw blade is not "heeling" and is entering the work as shown in the bottom drawing of Fig. 26.

9. Replace the blade guard before operating the miter box.



WRONG WAY



RIGHT WAY

FRONT VIEW

Fig. 26

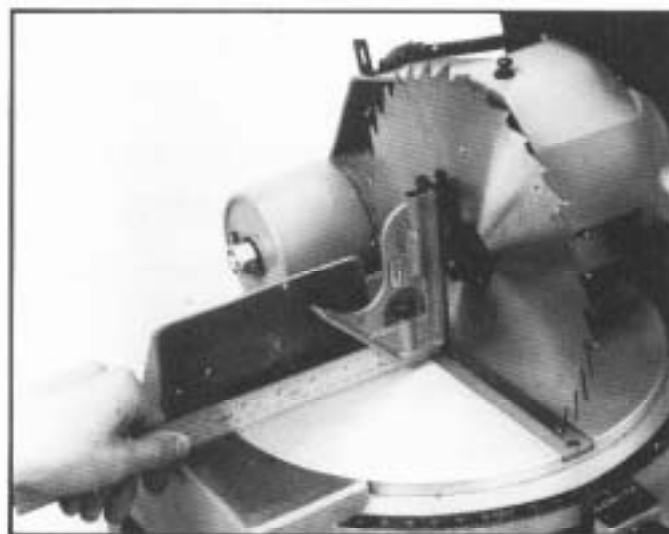


Fig. 27

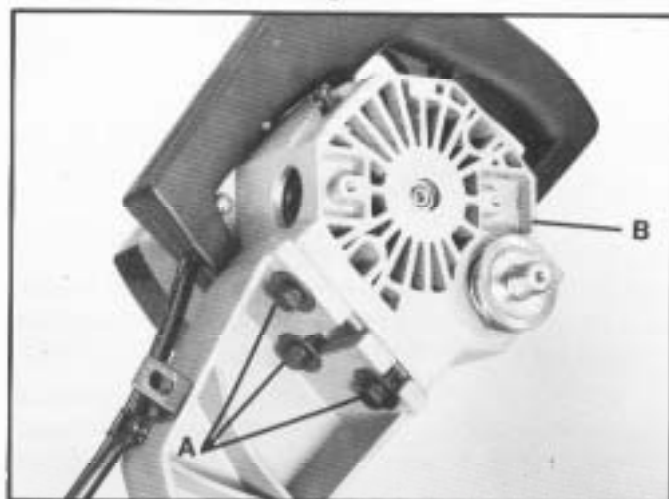


Fig. 28

ADJUSTING SLIDING FIT BETWEEN ARM ASSEMBLY AND TABLE BRACKET

To adjust the sliding fit between the arm assembly (A) Fig. 29, and the table bracket (B), tighten or loosen the adjusting nut (C). Correct adjustment is when a good snug sliding fit is obtained without any side movement between these two parts. This adjustment should not be too tight that it restricts the sliding movement or too loose that it affects the accuracy of the saw cut.

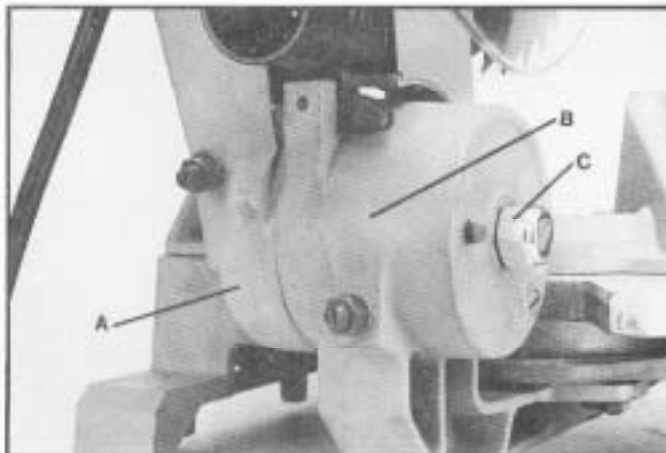


Fig. 29

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, loosen locknuts that fasten the four nylon adjusting screws (A) Fig. 30, and with a screwdriver, turn the nylon adjusting screws (A) until a good snug sliding fit is obtained. Then tighten the four locknuts.

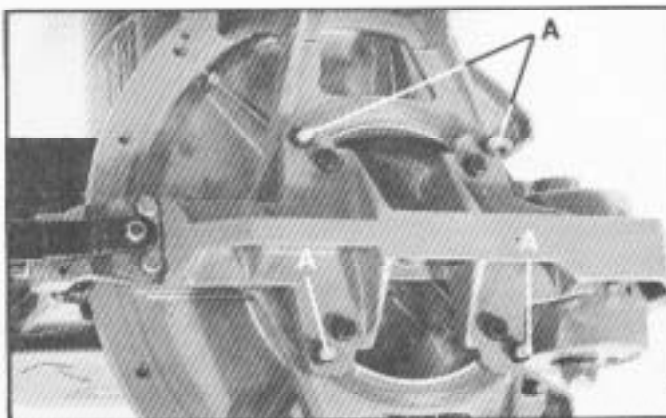


Fig. 30

MAINTENANCE

CHANGING THE BLADE

WARNING: USE ONLY CROSS-CUTTING SAW BLADES. WHEN USING CARBIDE TIPPED BLADES, MAKE SURE THEY HAVE A NEGATIVE HOOK ANGLE. DO NOT USE BLADES WITH DEEP GULLETS AS THEY CAN DEFLECT AND CONTACT GUARD. USE ONLY 10" DIAMETER SAW BLADES RATED FOR 6000 RPM OR HIGHER WITH 5/8" ARBOR HOLES.

1. DISCONNECT THE MACHINE FROM THE POWER SOURCE.
2. Remove the four screws (A) Fig. 31, and remove the blade guard side cover (B).

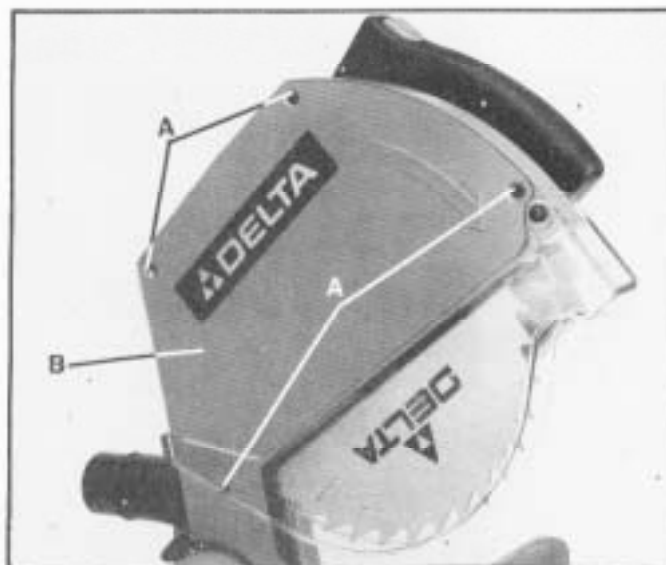


Fig. 31



Fig. 32

3. To remove the saw blade, insert the hexagon wrench (C) Fig. 32, into the hexagon hole located on the end of the arbor shaft, to keep the shaft from turning.



Fig. 32A

4. Using wrench (D) Fig. 32A, loosen arbor nut (E), by turning it clockwise.
5. Remove arbor nut, flange and blade from saw arbor.
6. Assemble new blade, flange and nut on the saw arbor and tighten the arbor nut (E) Fig. 32A, by turning it counterclockwise while at the same time using the wrench (C) Fig. 32, to keep the arbor from turning.
7. Replace blade guard side cover that was removed in STEP 2.
8. **WARNING: REMOVE WRENCHES (C) FIG. 32, AND (D) FIG. 32A, BEFORE TURNING ON THE POWER.**

BELT REPLACEMENT

Should you find it necessary to replace the belt on your miter box, proceed as follows:

1. **DISCONNECT THE MACHINE FROM THE POWER SOURCE.**

2. Remove the four screws (A) Fig. 33, and cover (B) from the end of the motor housing.

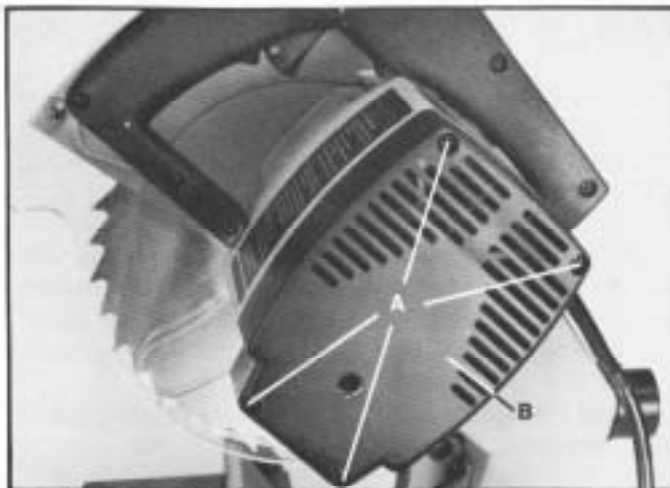


Fig. 33

3. Use a 5/8" wrench on hex of special washer (C) Fig. 34, to keep armature from turning, and remove screw (H) and special washer (C). Slide belt (D) off armature shaft (E) and arbor pulley (F).

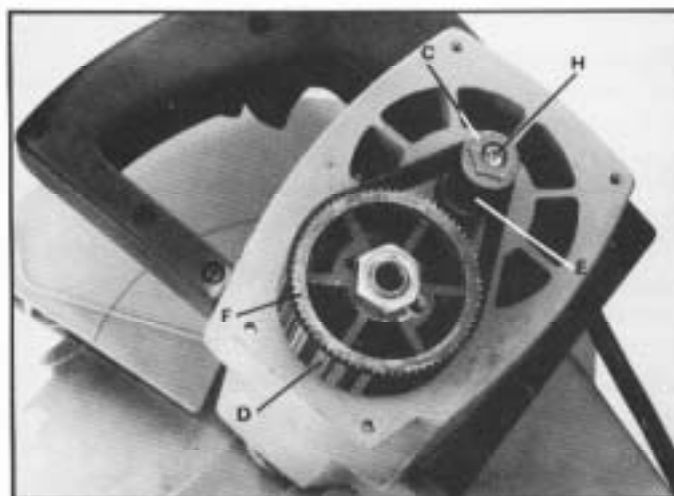


Fig. 34

4. Place new belt (D) Fig. 35, on teeth of arbor pulley (F) and armature shaft (E) as shown. Push in belt (D) and at the same time turn arbor pulley (F) until belt is completely engaged.

5. Replace special washer (C) and screw (H) Fig. 34.

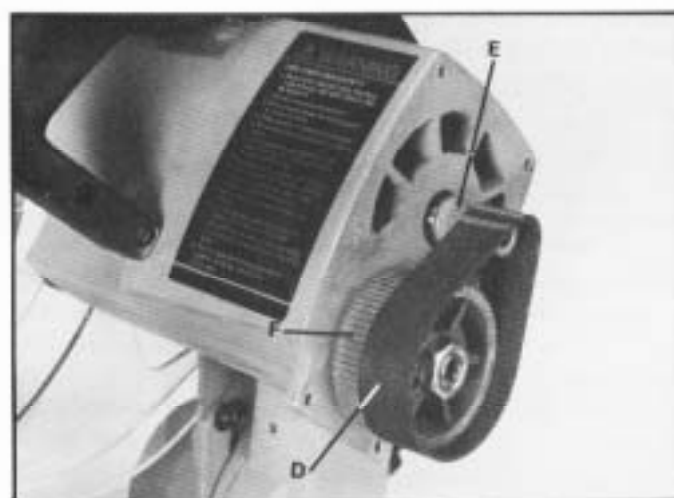


Fig. 35

TABLE INSERT

The blade slot (A) Fig. 36, in the table insert (B) was cut at the factory with the same thickness blade that is supplied with your saw, and acts as a chip breaker preventing splintering of the wood at the bottom of the cut.

If it is desired to use blades of various thicknesses with your miter box we suggest you obtain additional inserts and cut the slot into the insert with that particular blade. You will then have an insert that is matched with the blade.

If desired, inserts can be constructed using standard 1/4" thick plywood.

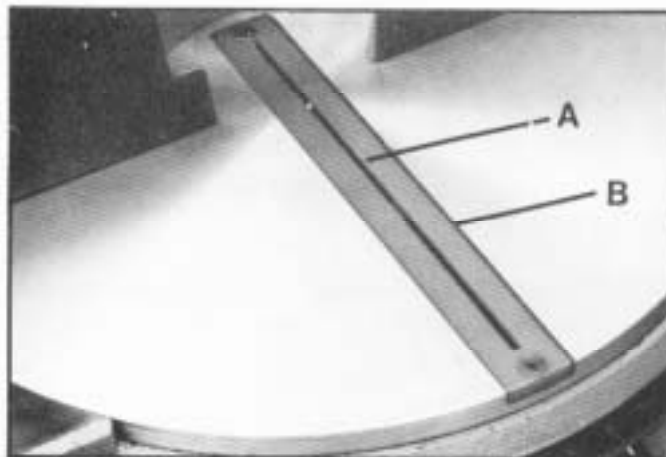


Fig. 36

BRUSH INSPECTION AND REPLACEMENT

CAUTION: BEFORE INSPECTING THE 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. 37, are located on the motor housing opposite each other. Fig. 38, illustrates one of the brushes removed for inspection. When the carbon on either brush is worn to 3/16" in length or if either spring or shunt wire is burned or damaged in any way, replace both brushes. If the brushes are found serviceable after removing, reinstall them in the same position as removed.



Fig. 37



Fig. 38

TYPICAL OPERATIONS AND HELPFUL HINTS

GENERAL CUTTING OPERATIONS



Fig. 39

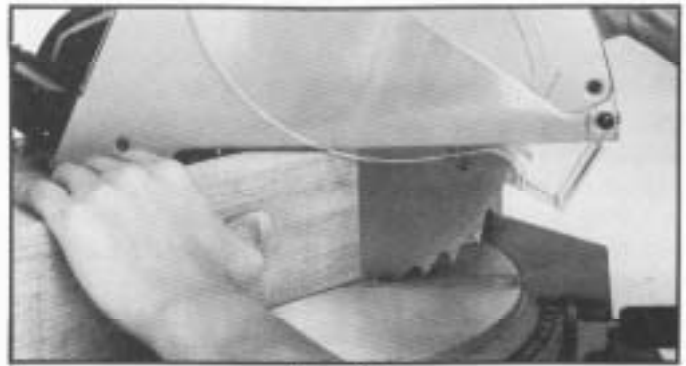


Fig. 39A

Your miter box has the capacity to cut standard 2 x 4's, laying flat or on edge, at the 45 degree right and left miter angles, as shown in Figs. 39 and 39A.

A standard 2 x 6 can easily be cut at the 90 degree straight cut-off position, as shown in Fig. 40.



Fig. 40

Cutting a standard 4 x 4 is easily accomplished with your miter box, as shown in Fig. 41. One pass cutting (trim) can be done up to 7" in length. Longer cut-off requires turning stock over for second cut.



Fig. 41

Cutting various sizes of plastic pipe is an easy job for the miter box, as shown in Fig. 42.



Fig. 42

CUTTING ALUMINUM

Aluminum extrusions such as used for making aluminum screens and storm windows can easily be cut with your miter box. 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. 43. The wrong way to cut aluminum angles is illustrated in Fig. 44. 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.**

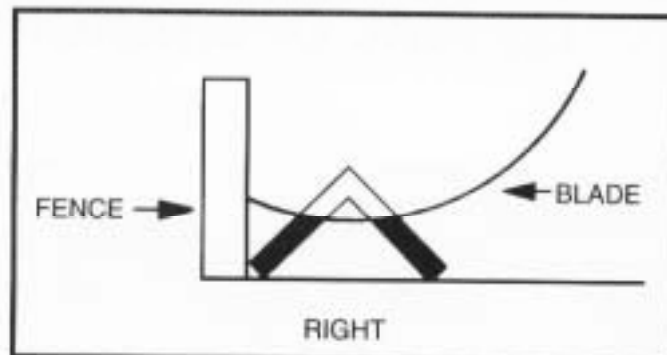


Fig. 43

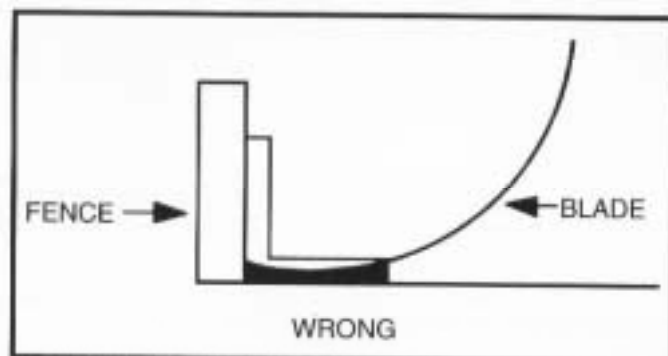


Fig. 44

CUTTING BOWED MATERIAL

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. 45.

If the material is positioned the wrong way, as shown in Fig. 46, the work piece will pinch the blade near the completion of the cut.

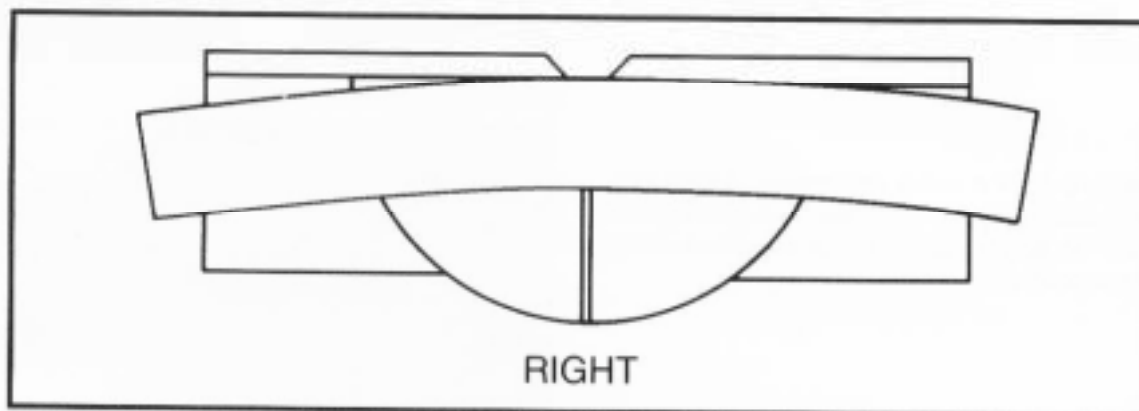


Fig. 45

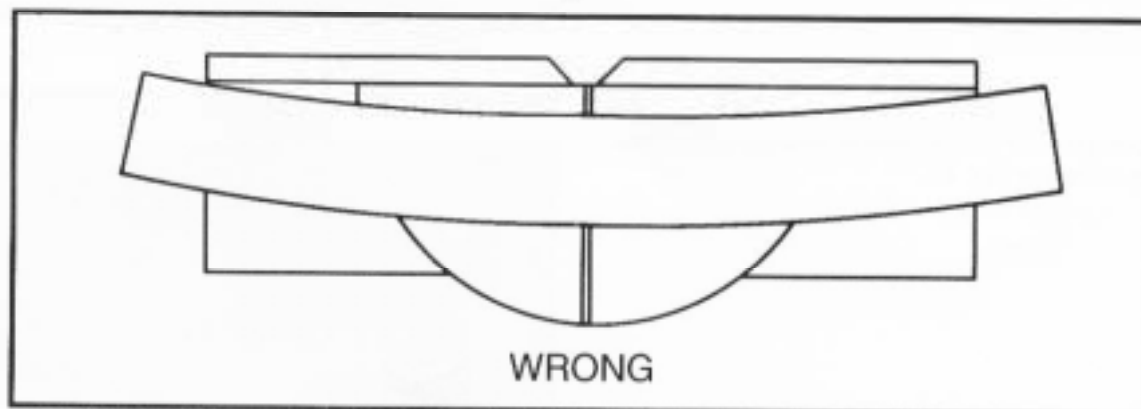


Fig. 46

CUTTING COMPOUND MITERS

1. Fig. 47, illustrates a filler block that can easily be constructed for use in cutting compound miters. Compound miters are used mostly for shadow box picture frames, etc. The face of the filler block is shown at 45 degrees to the fence and table. If a different work angle tilt is desired, simply vary the angle of the filler block face accordingly.

2. Although Fig. 47, illustrates the face of the filler block 3-5/8" wide, this dimension will vary depending on the material being cut.

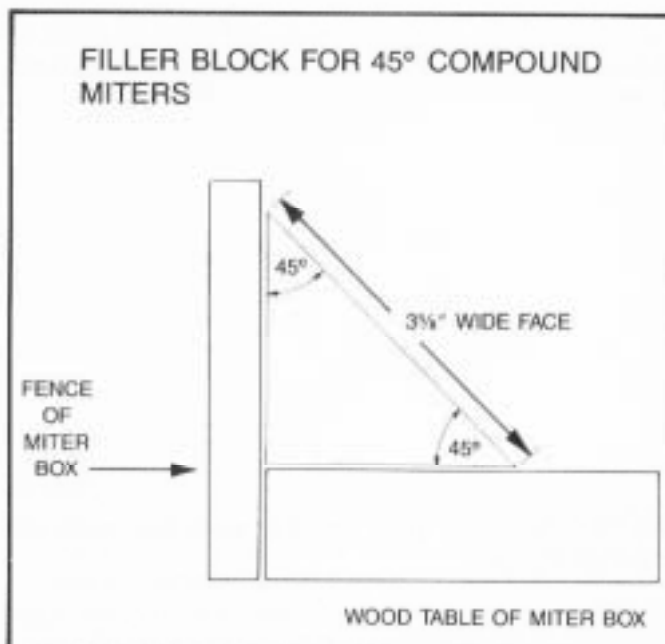


Fig. 47

Fig. 48, illustrates the filler block for compound miters fastened to the miter box fence with the center portion of the filler block (45 degree right and left angle) removed after it was cut-out on the saw.



Fig. 48

Before attaching the filler blocks to the fence make sure there is clearance between the edge (A) of the movable blade guard and the edge (B) of the filler block, as shown in Fig. 49. This clearance between the blade guard and the filler block must be at both the right and left miter angles.

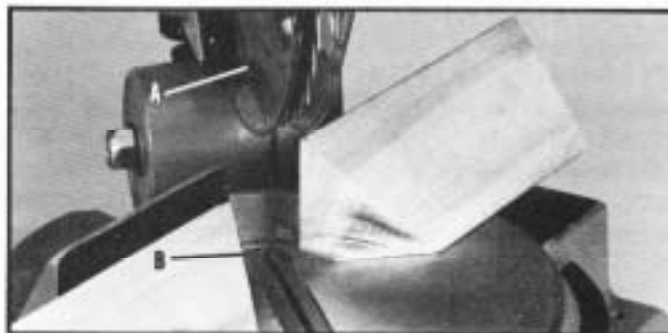


Fig. 49

Then attach the filler blocks to the fence using wood screws (C) through the two holes provided on each fence half, as shown in Fig. 50. This enables you to easily remove the filler blocks when not in use and quickly reassemble them to the fence when needed.

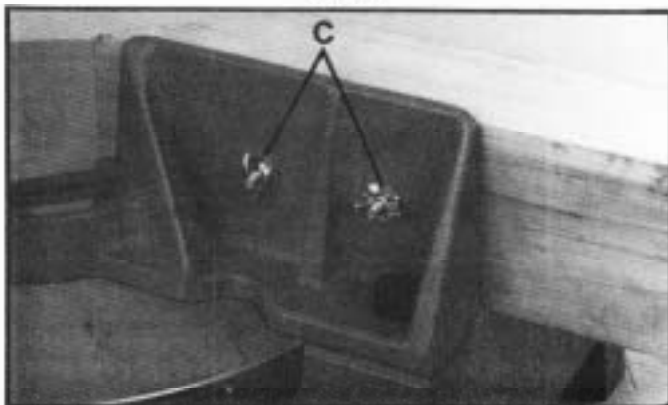


Fig. 50

Fig. 51, illustrates making a compound miter cut at the 45 degree right miter position. The 45 degree left compound miter cut, shown at (A) Fig. 51, was previously cut with the saw blade at the 45 degree left miter position.



Fig. 51

The two compound miter cuts that were just made are shown in Fig. 52.

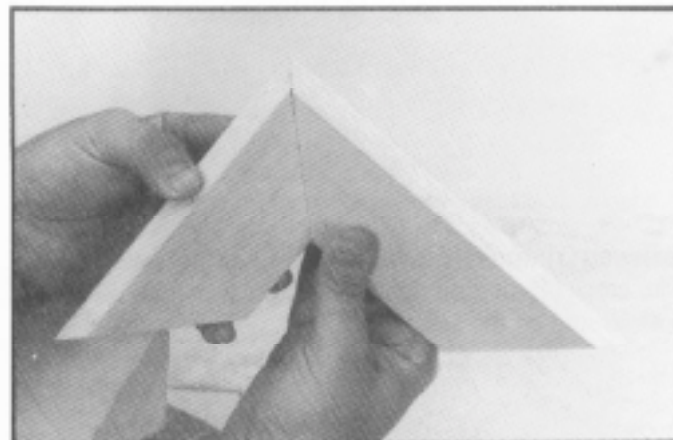


Fig. 52

CUTTING CROWN MOULDINGS

There are several methods that can be used to cut crown mouldings on the miter box.

The method shown in Fig. 53, illustrates the contact surfaces (the surfaces that contact the wall and ceiling) of the crown moulding held firmly against the fence and table of the miter box. This method is acceptable when making a small number of cuts but would not be practical for a production application as it may be difficult to firmly hold the work in this position.

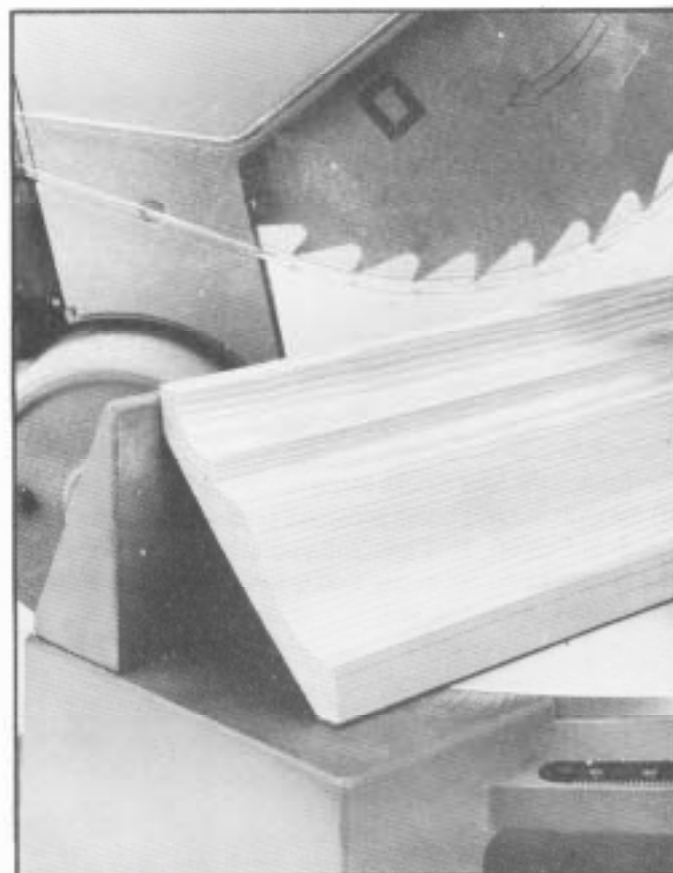


Fig. 53

2. When a large number of repetitive cuts of crown moulding are required we suggest the use of filler blocks, as shown in Fig. 54 through Fig. 57. The majority of crown mouldings have contact surfaces at 52 and 38 degrees to the rear surface of the moulding and these angles must be utilized when jointing the face of the filler block. For crown mouldings with different angles, appropriate filler blocks can be produced.

3. Fig. 54 and Fig. 55, illustrate the filler block fastened to the miter box fence with the face of the filler block extending outward from the top of the fence and down to the surface of the table. When the filler block is positioned in this manner, the crown moulding must be positioned on the table in the upside down position. This means that the surface of moulding that contacts the ceiling is against the table.

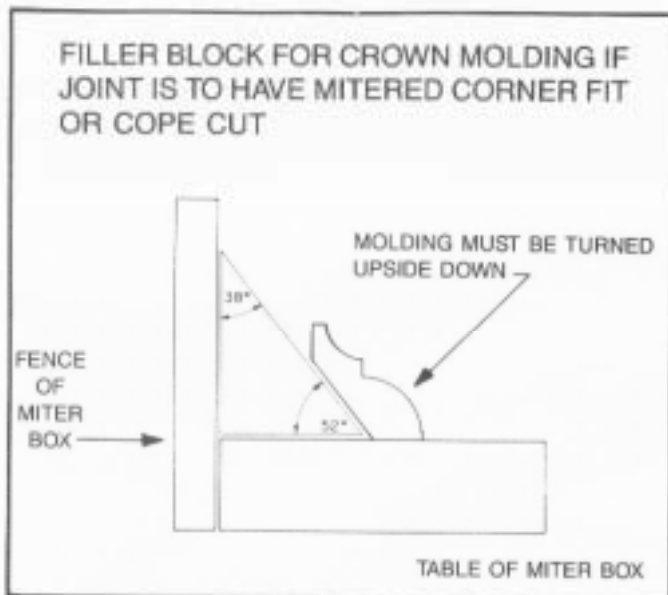


Fig. 54



Fig. 55

4. Fig. 56 and Fig. 57, illustrate the filler block fastened to the miter box fence with the face of the filler block extending inward toward the fence from the top to the bottom. When the filler block is positioned in this manner, the crown moulding is placed on the table in the same position as it would be when nailed between the ceiling and wall.

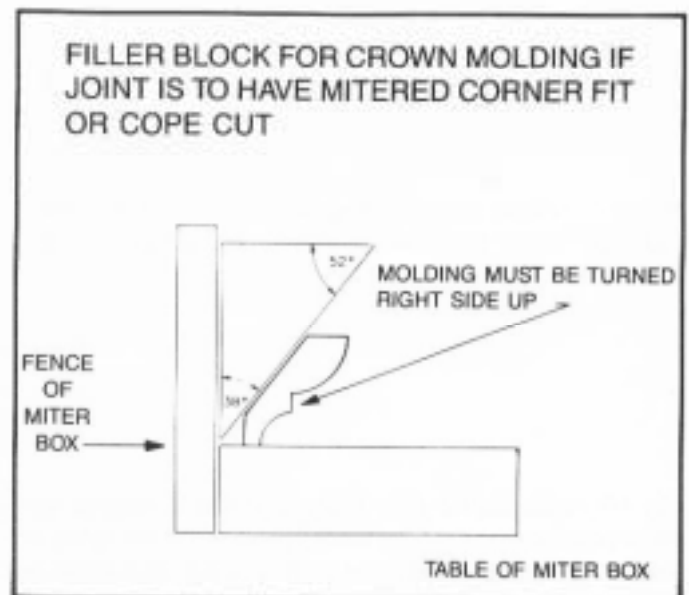


Fig. 56

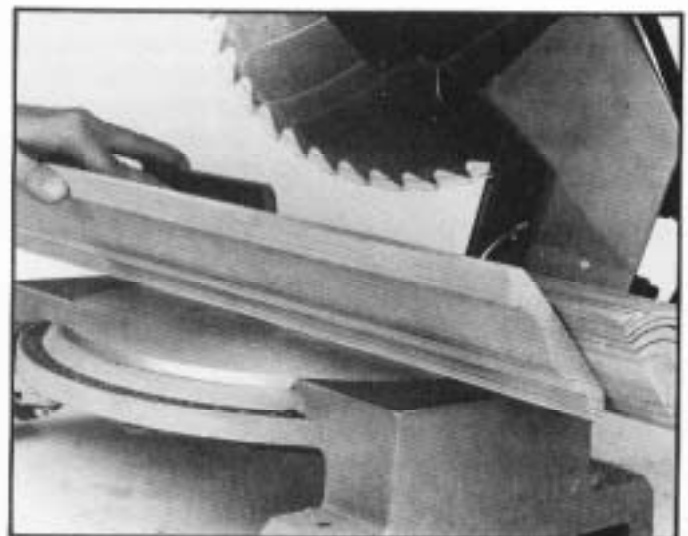


Fig. 57

When attaching the filler block to the fence, make sure there is clearance between the edge (A) of the movable blade guard and the edge (B) of the filler block, as shown in Fig. 58. This clearance between the blade guard and the filler block must be at both the right and left miter angles.



Fig. 58

Then fasten the filler blocks to the fence using wood screws (C) through the two holes provided on each fence half, as shown in Fig. 59. This enables you to easily remove the filler blocks when not in use and quickly reassemble them to the fence when needed.

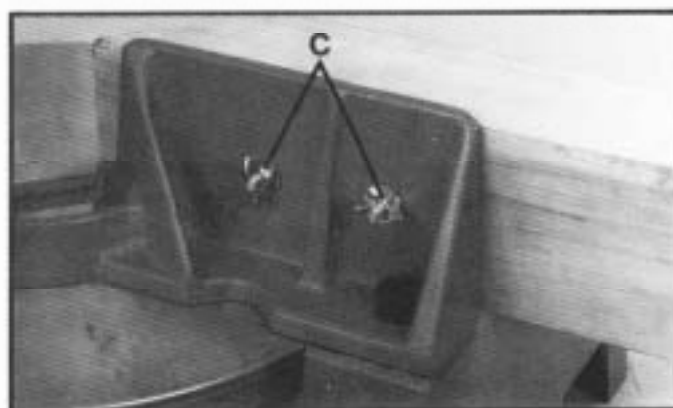


Fig. 59

Fig. 60, illustrates the miter box arm in the 45 degree right miter position and the filler blocks fastened to the fence so that the moulding will be in the same position as it would be when nailed between the ceiling and wall. When making this cut the moulding (A) on the left of the saw blade will be for an outside corner and the moulding (B) on the right of the saw blade will be for an inside corner. To cut the mating pieces for mouldings (A) and (B) Fig. 60, simply rotate the miter box arm to the 45 degree left miter position and make the cut, as shown in Fig. 61. In this case the moulding (C) on the left of the saw blade will be for an inside corner and the moulding (D) on the right of the saw blade will be for an outside corner.



Fig. 60



Fig. 61

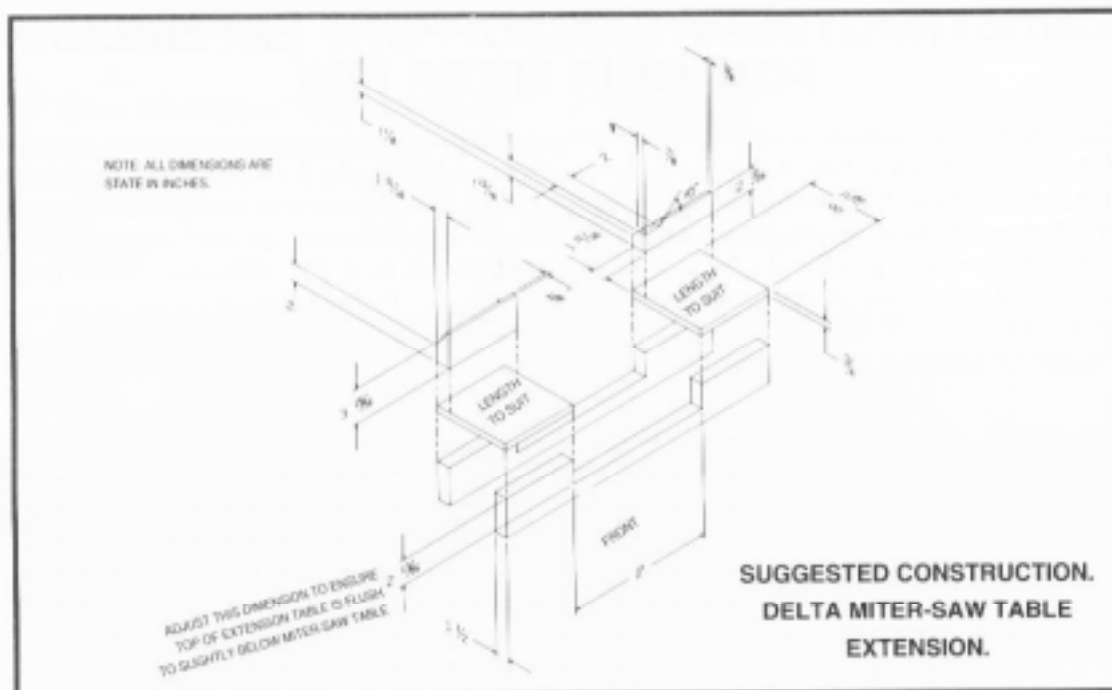


Fig. 62

CONSTRUCTING TABLE EXTENSIONS FOR YOUR MITER BOX

The drawing shown in Fig. 62, illustrates an auxiliary table extension that can be easily constructed for use with your miter box. The overall length of the table extension can vary depending on your preference.

Fig. 63, illustrates the table extension assembled. The two tables (B) are nailed to the two base supports (A) and the fences (C) and (D) are fastened to the table with screws from underneath the table. The cut-out (E) on the right hand fence is necessary for motor clearance.

The miter box is fastened to the two base supports (A) Fig. 63, using four screws, two of which are shown at (F). Shims can be placed between the mounting legs of the miter box base and the two base supports (A) Fig. 63, in order to make sure that the miter box tables (G) are in alignment with the wooden table extensions (B). Make certain the wood fences (C) and (D) Fig. 63, are in alignment with the miter box fences (H).

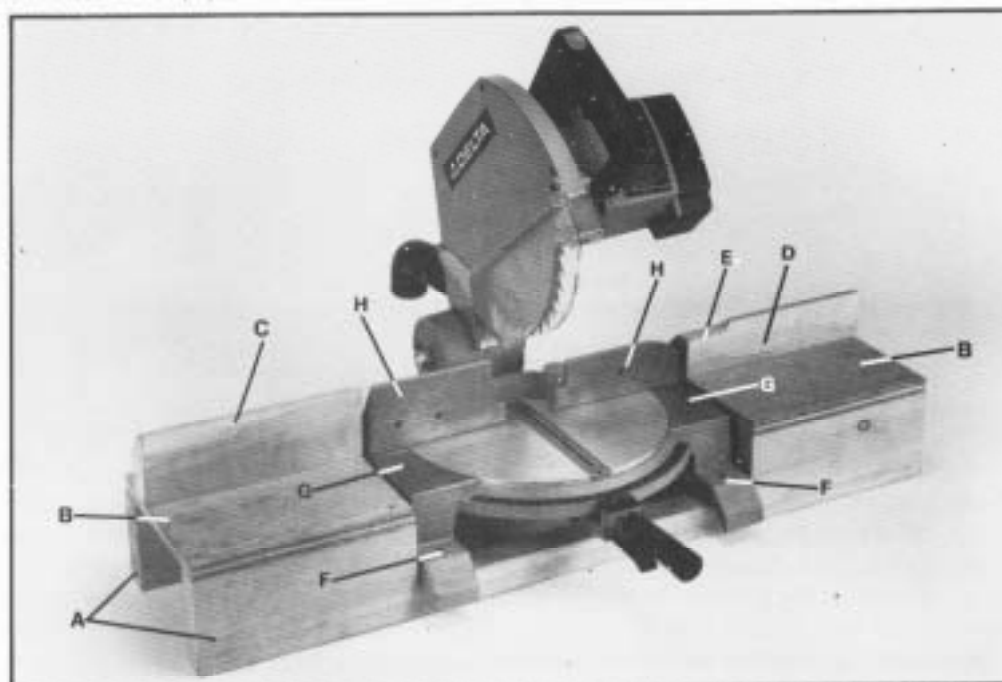


Fig. 63

CONSTRUCTING WORK SUPPORT EXTENSIONS FOR YOUR MITER BOX

One of the unique features of your miter box is the ease with which you can construct work supports. Fig. 64, illustrates the miter box mounted to two standard 2 x 6's (B). 2 x 4's can also be used for this purpose. Fasten the mounting legs (A) to the 2 x 6's using four screws through the four holes in the mounting legs. The length of the 2 x 6's (B) can vary depending on your preference. The distance from the top of the 2 x 6's to the miter box table will be 3-1/2". This enables you to nail standard 2 x 4's to the mounting boards, as shown in Fig. 64. The top of the 2 x 4 pieces will then be in alignment with the table of the miter box. If desired, you can fasten fence extensions (C) Fig. 65, to the work supports making sure they are in alignment with the fences (D) of the miter box.

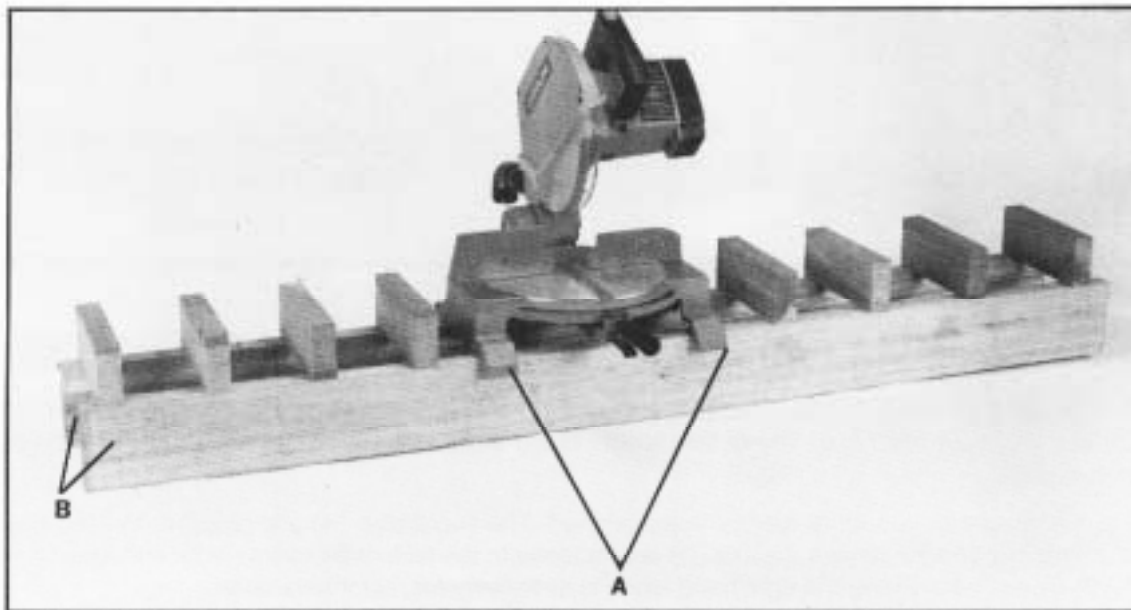


Fig. 64

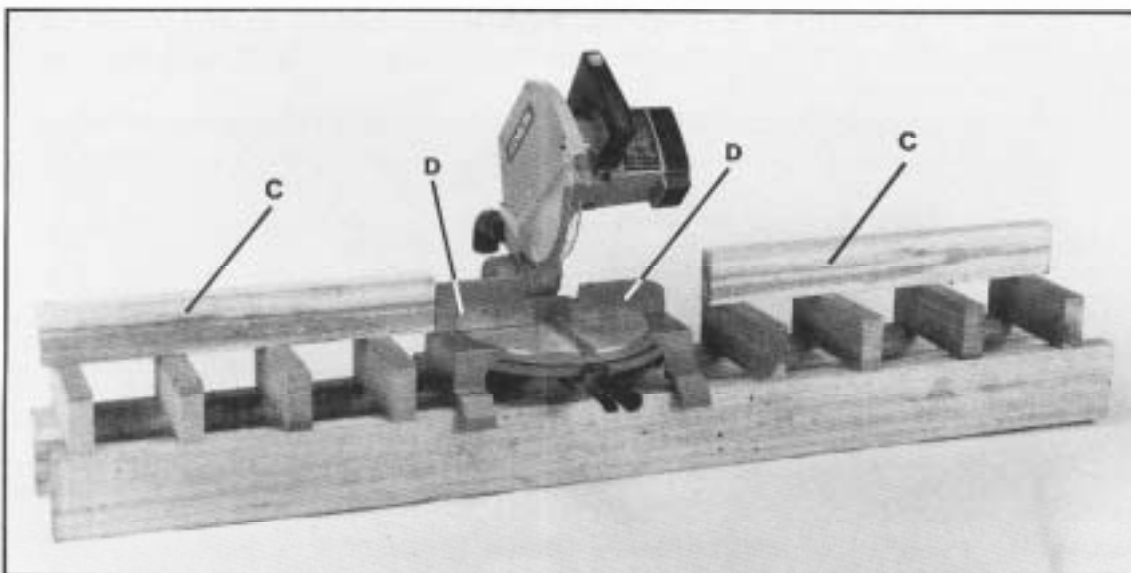


Fig. 65

CONSTRUCTING AUXILIARY TABLE AND FENCE FOR CERTAIN MITER BOX APPLICATIONS

When performing multiple or repetitive cut-off operations on a miter box 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. **THIS SITUATION CAN OCCUR ON ANY MITER BOX**; especially when hardwoods such as oak, walnut or maple are being cut.

In order to limit the possibility of personal injury or blade guard damage, the following precautions should be observed when cutting off small cut-off pieces.

1. Always wear eye protection.
2. Use only recommended blades with a negative tooth rake configuration.
3. To prevent build up of cut-off pieces behind the fence and blade, construct an auxiliary work support fence and table as shown in the following instructions.
4. Keep cutting area clear of scrap and debris.

1. For the Delta 34-080 miter box, construct the fence and table support by following the dimensions shown in Fig. 66.

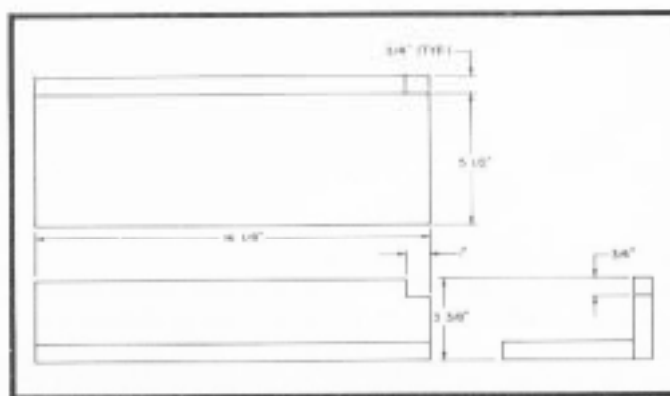


Fig. 66

2. Fig. 67, illustrates the fence and table support assembled.

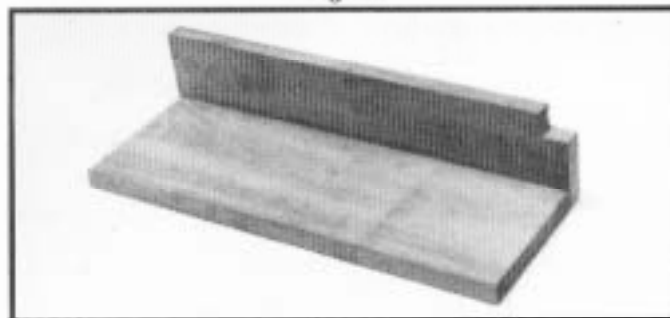


Fig. 67

3. Fasten the support to the fence of the miter box utilizing the four holes located on the miter box fence, as shown in Fig. 68. We recommend for ease of removal and assembly of the support, hanger bolts and wing nuts be used.

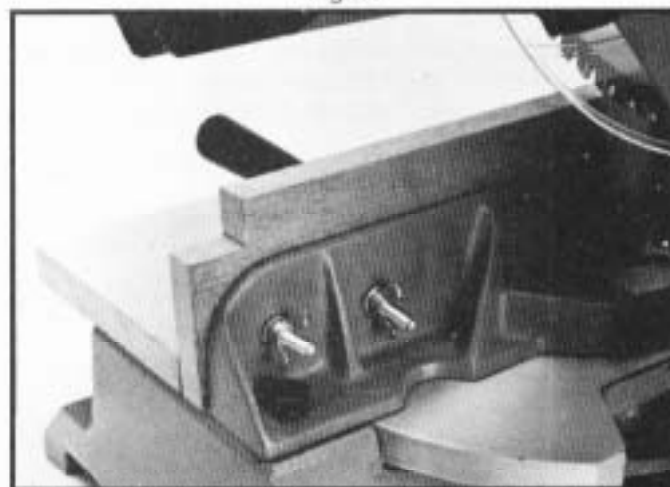


Fig. 68

4. When using the auxiliary fence and table for straight 90 degree cuts, cut a slot in the wooden fence and table, as shown in Fig. 69.



Fig. 69

5. Fig. 70, illustrates making a trim cut at 90 degrees on a piece of oak flooring. Notice that the cut-off piece remains in front of the fence where it can be safely removed before the next cut is made.



Fig. 70

6. If the auxiliary fence and table is to be used for cutting 45 degree right or left miters, an additional fence and table should be constructed and a 45 degree right hand miter cut made in the fence and table, as shown in Fig. 71.

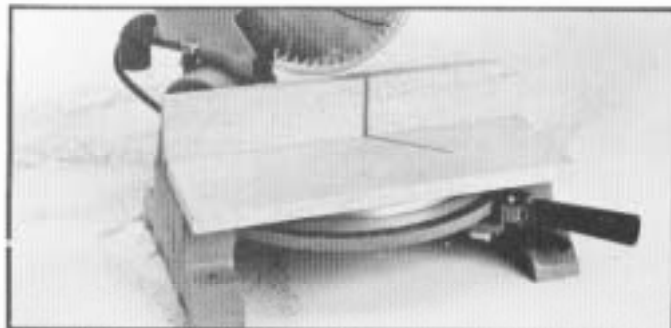


Fig. 71

7. Fig. 72, illustrates making a trim cut at the 45 degree right miter position. Again notice that the cut-off piece remains in front of the fence where it can be safely removed before the next cut is made.

8. If the work piece must be at a 45 degree left angle, simply turn over the work piece and make the cut at the 45 degree right position, as shown in Fig. 72.

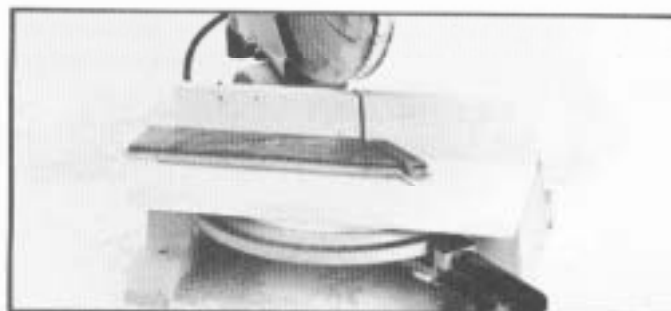


Fig. 72



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.