# 10" Miter Saw
## (Model MS210)

INSTRUCTION MANUAL


U.S. Patent #5,347,902

PART NO. 905590 - 11-26-03


DELTA® ShopMaster™

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

**ESPAÑOL: PÁGINA 19**

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

# SAFETY GUIDELINES - DEFINITIONS

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

**⚠DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

**⚠WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**⚠CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

**⚠CAUTION** Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

**⚠WARNING** **SOME DUST CREATED BY POWER SANDING, SAWING, GRINDING, DRILLING, AND OTHER CONSTRUCTION ACTIVITIES** contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

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

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

# GENERAL SAFETY RULES

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

**IMPORTANT SAFETY INSTRUCTIONS**

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

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

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

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

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

# ADDITIONAL SAFETY RULES FOR MITER SAWS

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

1. **DO NOT OPERATE THIS MACHINE** until it is completely assembled and installed according to the instructions. A machine incorrectly assembled can cause serious injury.
2. **OBTAIN ADVICE** from your supervisor, instructor, or another qualified person if you are not thoroughly familiar with the operation of this machine. Knowledge is safety.
3. **FOLLOW ALL WIRING CODES** and recommended electrical connections to prevent shock or electrocution.
4. **SECURE THE MACHINE TO A SUPPORTING SURFACE.** Vibration can possibly cause the machine to slide, walk, or tip over, causing serious injury.
5. **USE ONLY CROSSCUT SAW BLADES.** Use only zero-degree or negative hook angles when using carbide-tipped blades. Do not use blades with deep gullets. These can deflect and contact the guard, and can cause damage to the machine and/or serious injury.
6. **USE ONLY BLADES OF THE CORRECT SIZE AND TYPE** specified for this tool to prevent damage to the machine and/or serious injury.
7. **USE A SHARP BLADE.** Check the blade to see if it runs true and is free from vibration. A dull blade or a vibrating blade can cause damage to the machine and/or serious injury.
8. **INSPECT BLADE FOR CRACKS** or other damage prior to operation. A cracked or damaged blade can come apart and pieces can be thrown at high speeds, causing serious injury. Replace cracked or damaged blades immediately.
9. **CLEAN THE BLADE AND BLADE FLANGES** prior to operation. Cleaning the blade and flanges allows you to check for any damage to the blade or flanges. A cracked or damaged blade or flange can come apart and pieces can be thrown at high speeds, causing serious injury.
10. **USE ONLY BLADE FLANGES** specified for this tool to prevent damage to the machine and/or serious injury.
11. **CLEAR THE AREA OF FLAMMABLE LIQUIDS** and/or gas prior to operation. Sparks can occur that would ignite the liquids and cause a fire or an explosion.
12. **CLEAN THE MOTOR AIR SLOTS** of chips and sawdust. Clogged motor air slots can cause the machine to overheat, damaging the machine and possibly causing a short which could cause serious injury.
13. **TIGHTEN THE TABLE CLAMP HANDLE** and any other clamps prior to operation. Loose clamps can cause parts or the workpiece to be thrown at high speeds.
14. **NEVER START THE TOOL** with the blade against the workpiece. The workpiece can be thrown, causing serious injury.
15. **KEEP ARMS, HANDS, AND FINGERS** away from the blade to prevent severe cuts. Clamp all workpieces that would cause your hand to be in the "Table Hazard Zone" (within the red lines).
16. **WHEN CUTTING WITH A COMPOUND SLIDING MITER SAW, PUSH THE SAW FORWARD (AWAY FROM YOU)** and toward the fence. Pulling the saw toward you can cause the saw to kick upward and toward you.
17. **WHEN USING A SLIDING MITER SAW AS A REGULAR MITER SAW, LOCK THE SLIDE MECHANISM IN PLACE**. If the slide mechanism is not locked, the saw can kick back toward you.
18. **ALLOW THE MOTOR TO COME TO FULL SPEED** prior to starting cut. Starting the cut too soon can cause damage to the machine or blade and/or serious injury.
19. **NEVER REACH AROUND** or behind the saw blade. A moving blade can cause serious injury.
20. **NEVER CUT FERROUS METALS** or masonry. Either of these can cause the carbide tips to fly off the blade at high speeds causing serious injury.
21. **NEVER CUT SMALL PIECES.** Cutting small pieces can cause your hand to move into the blade, resulting in serious injury.
22. **NEVER LOCK THE SWITCH** in the "ON" position. Setting up the next cut could cause your hand to move into the blade, resulting in severe injury.
23. **NEVER APPLY LUBRICANT** to a running blade. Applying lubricant could cause your hand to move into the blade, resulting in serious injury.
24. **DO NOT PERFORM FREE-HAND OPERATIONS**. Hold the work firmly against the fence and table. Free-hand operations on a miter saw could cause the workpiece to be thrown at high speeds, causing serious injury. Use clamps to hold the work when possible.
25. **PROPERLY SUPPORT LONG OR WIDE WORK-PIECES.** Loss of control of the workpiece can cause serious injury.
26. **AFTER COMPLETING CUT,** release power switch and wait for coasting blade to come to a complete stop before returning saw to raised position. A moving blade can cause serious injury.
27. **TURN OFF THE MACHINE** and allow the blade to come to a complete stop prior to cleaning the blade area or removing debris in the path of the blade. A moving blade can cause serious injury.
28. **TURN OFF MACHINE** and allow the blade to come to a complete stop before removing or securing workpiece, changing workpiece angle, or changing the angle of the blade. A moving blade can cause serious injury.
29. **PROPERLY SUPPORT LONG OR WIDE WORK-PIECES.** Loss of control of the workpiece can cause injury.
30. **NEVER PERFORM LAYOUT, ASSEMBLY, OR SET-UP WORK** on the table/work area when the machine is running. A sudden slip could cause a hand to move into the blade. Severe injury can result.
31. **TURN THE MACHINE "OFF",** disconnect the machine from the power source, and clean the table/work area before leaving the machine. **LOCK THE SWITCH IN THE "OFF" POSITION** to prevent unauthorized use. Someone else might accidentally start the machine and cause injury to themselves.
32. **BEFORE OPERATING THE SAW,** check and securely lock the bevel, miter, and sliding fence adjustments.
33. **ADDITIONAL INFORMATION** regarding the safe and proper operation of power tools (i.e. a safety video) is available from the Power Tool Institute, 1300 Sumner Avenue, Cleveland, OH 44115-2851 (www.powertool institute.com). Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor regulations.

## SAVE THESE INSTRUCTIONS.

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

04-24-03

# POWER CONNECTIONS

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

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

# MOTOR SPECIFICATIONS

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

# GROUNDING INSTRUCTIONS

**⚠DANGER THIS MACHINE MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.**

**1. All grounded, cord-connected machines:**

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 machine 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 machine is properly grounded.

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

Repair or replace damaged or worn cord immediately.

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

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

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

**⚠DANGER IN ALL CASES, MAKE CERTAIN THAT THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE, HAVE A QUALIFIED ELECTRICIAN CHECK THE RECEPTACLE.**

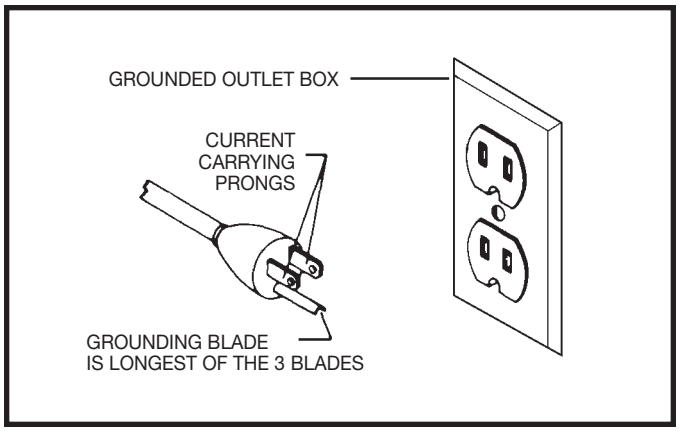


**Fig. A**

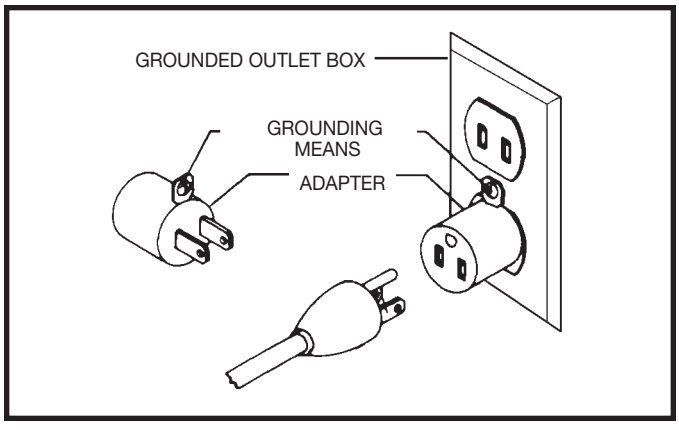


**Fig. B**

# EXTENSION CORDS

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

**MINIMUM GAUGE EXTENSION CORD**

RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC MACHINES

| Ampere Rating | Volts | Total Length of Cord in Feet | Gauge of Extension Cord |
|---|---|---|---|
| 0-6 | 120 | up to 25 | 18 AWG |
| 0-6 | 120 | 25-50 | 16 AWG |
| 0-6 | 120 | 50-100 | 16 AWG |
| 0-6 | 120 | 100-150 | 14 AWG |
| 6-10 | 120 | up to 25 | 18 AWG |
| 6-10 | 120 | 25-50 | 16 AWG |
| 6-10 | 120 | 50-100 | 14 AWG |
| 6-10 | 120 | 100-150 | 12 AWG |
| 10-12 | 120 | up to 25 | 16 AWG |
| 10-12 | 120 | 25-50 | 16 AWG |
| 10-12 | 120 | 50-100 | 14 AWG |
| 10-12 | 120 | 100-150 | 12 AWG |
| 12-16 | 120 | up to 25 | 14 AWG |
| 12-16 | 120 | 25-50 | 12 AWG |
| 12-16 | 120 | GREATER THAN 50 FEET NOT RECOMMENDED | |

**Fig.C**

# FUNCTIONAL DESCRIPTION

## FOREWORD

Delta ShopMaster Model MS210 is a 10" Power Miter Saw designed to cut wood, plastic, and aluminum. Cross cutting and miter cutting are easy and accurate. It can crosscut up to 2-1/4" x 5-3/4", miter at 45 both left and right 2-1/4" x 4-1/8". It has positive miter stops at 0, 22.5, and 45 degrees both left and right, and is accurate to one-half degree.

# UNPACKING AND CLEANING

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

**IMPORTANT: Carrying the machine by the switch handle will cause misalignment. Always lift the machine by the base or rear support/carrying handle (A) Fig. 16.**

1. Remove the miter saw and all loose items from the carton.Fig. 1 illustrates the machine and all loose items after they have been removed from the carton.

1 - Miter Saw
2 - Wrenches for changing the blade
3 - Table lock handle

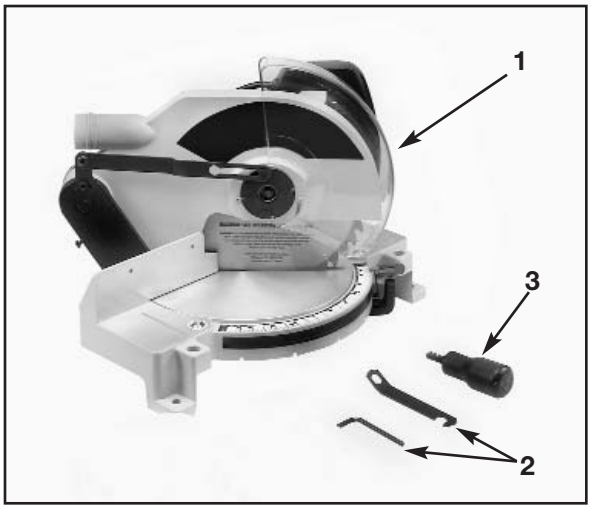


**Fig. 1**

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

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

# ASSEMBLY

## ATTACHING TABLE LOCK HANDLE

Thread table lock handle (A) Fig. 2 into the threaded hole (B) of the arm bracket.

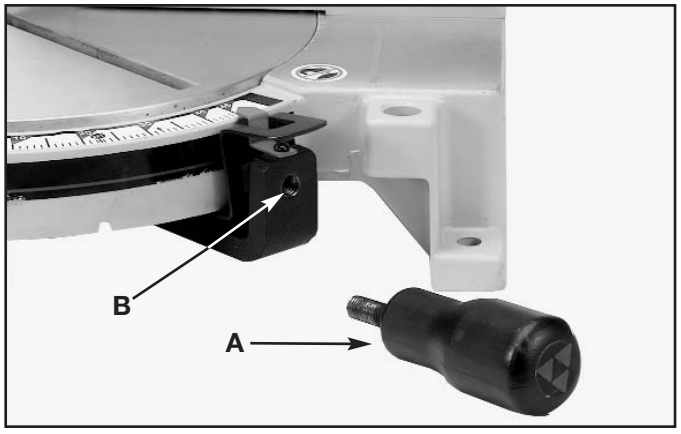

Fig. 2

## ROTATING TABLE TO 90 DEGREE POSITION

1. Loosen table lock handle (A) Fig. 3 one or two turns and depress index lever (B) to release 45 degree positive stop.
2. Rotate table to the left until index stop engages with the 90 degree positive stop (B) Fig. 4. Tighten table lock handle (A).

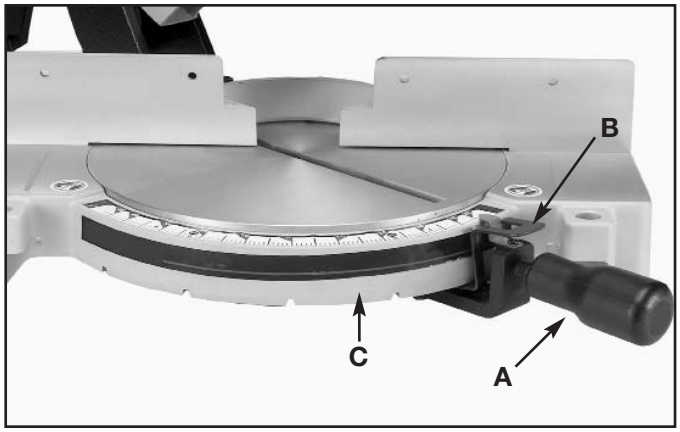

Fig. 3

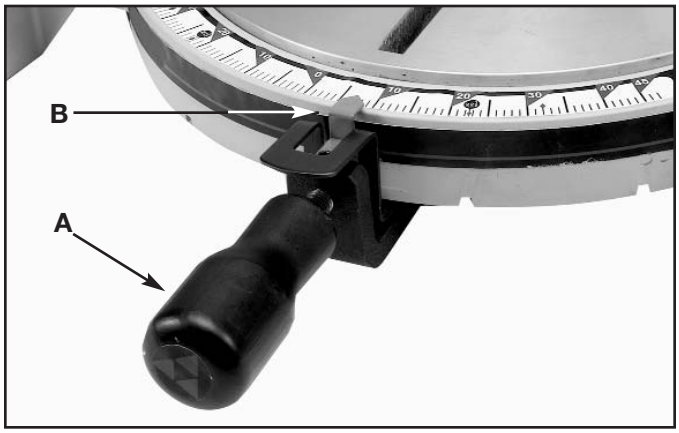

Fig. 4

## MOVING CUTTERHEAD TO THE UP POSITION

1. Push down on switch handle (A) Fig. 5, and pull out cutterhead lockpin (B).
2. Move the cutterhead (C) to the up position (Fig. 6).

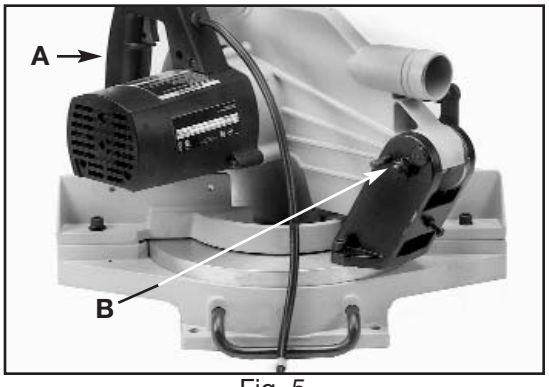

Fig. 5

Fig. 6

## FASTENING MACHINE TO SUPPORTING SURFACE

Before operating your miter saw, make sure that it is firmly mounted to a sturdy workbench or other supporting surface. Four holes are provided, two of which are shown at (A) Fig. 7.

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.

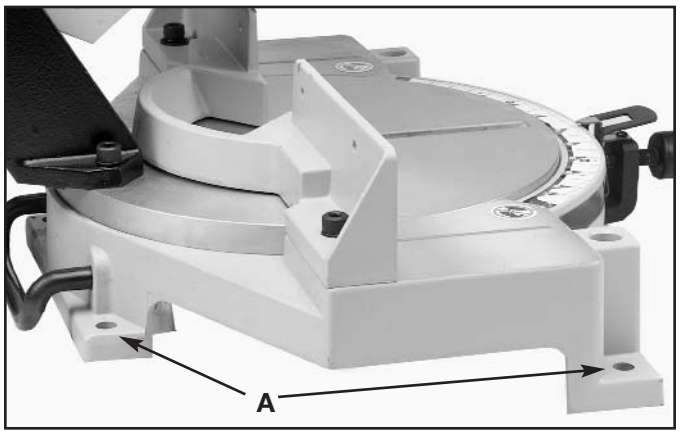

Fig. 7

## TABLE HAZARD AREA

**⚠WARNING** **The area inside the two red lines (A) Fig. 8 on the table is designated as a hazard zone. Never place your hands inside this area while the tool is being operated.**

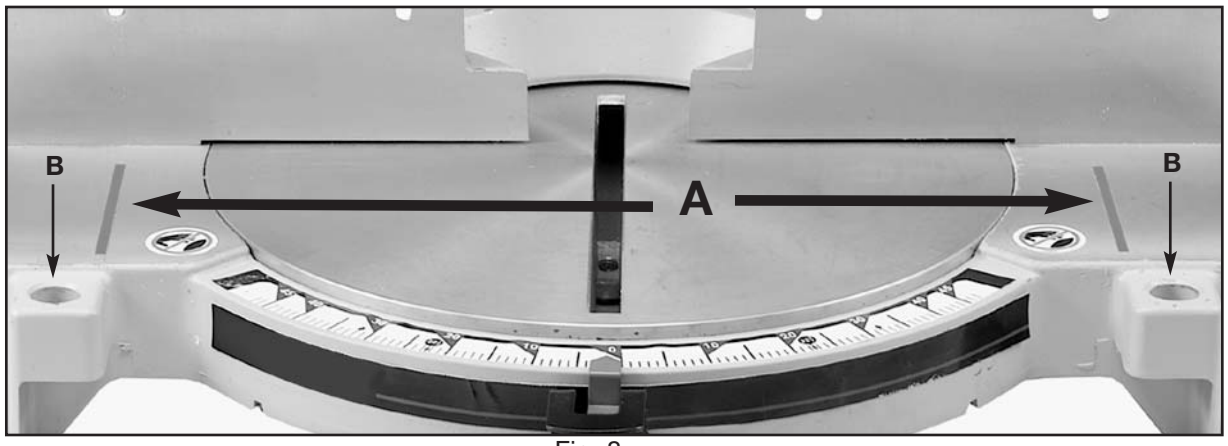

Fig. 8

1. An optional work clamp (A) Fig. 9 is available. Use this accessory clamp, especially with short workpieces. Never allow your hands to be in the “Hazard Zone”.

2. Two holes (B) Figs. 8 and 9 are provided in the base of the miter saw enabling you to use the clamp (A) on either the right or left hand side of the saw blade.

**⚠WARNING** **Keep hands out of path of saw blade. If necessary, clamp the workpiece in place before making cut.**

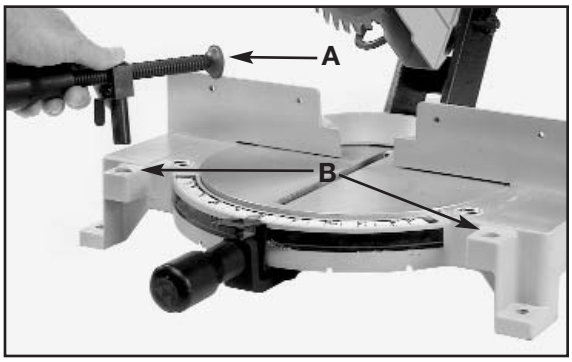

Fig. 9

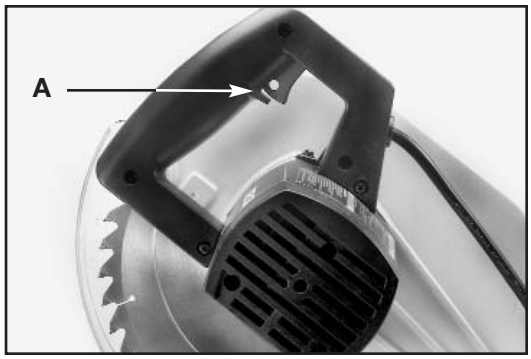


Fig. 10

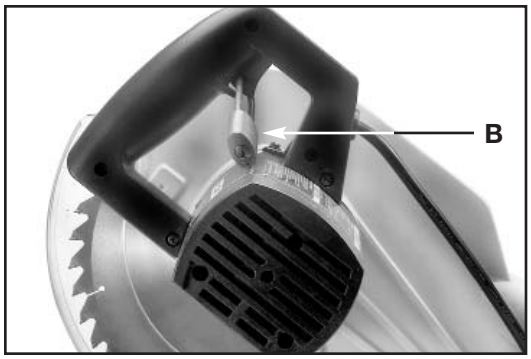


Fig. 11

## STARTING AND STOPPING MACHINE

To start the machine, depress switch trigger (A) Fig. 10. To stop the machine, release the switch trigger. This miter saw is equipped with an automatic electric blade brake. As soon as the switch trigger (A) Fig. 10 is released, the electric brake is activated and stops the blade in seconds.

**⚠WARNING** **A turning saw blade can be hazardous. After completing the cut, release the switch trigger (A) Fig. 10 to activate the blade brake. Keep the cutterhead down until the blade has come to a complete stop.**

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

## LOCKING SWITCH IN THE "OFF" POSITION

**IMPORTANT:** When the machine is not in use, the switch should be locked in the "OFF" position to prevent unauthorized use, using a padlock (B) Fig. 11 with 3/16" diameter shackle.

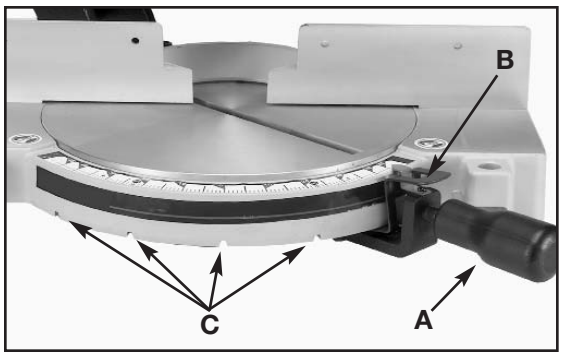


Fig. 12

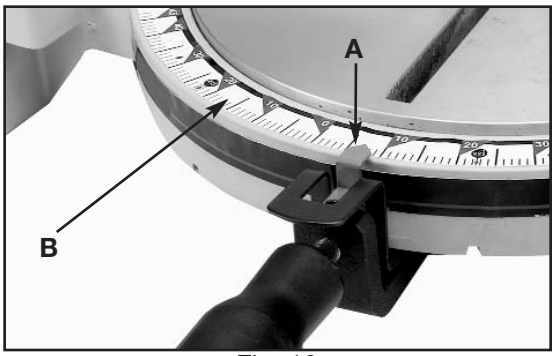


Fig. 13

## ROTATING TABLE FOR MITER CUTTING

Your miter saw will cut any angle from a straight 90 degree cut to 47 degrees, right and left. Loosen lock handle (A) Fig. 12 one or two turns, depress index lever (B) and move the control arm to the desired angle. TIGHTEN LOCK HANDLE (A).

The miter saw is equipped with positive stops at the 0, 22-1/2, and 45 degree, right and left positions. Loosen lock handle (A) Fig. 12, and move the control arm until the bottom of the index lever (B) engages into one of the positive stops, four of which are shown at (C). TIGHTEN LOCK HANDLE (A). To disengage the positive stop, depress index lever (B).

**IMPORTANT: Always tighten the lock handle (A) Fig. 12 before cutting.**

## POINTER AND SCALE

A pointer (A) Fig. 13 is supplied which indicates the actual angle of cut. Each line on the scale (B) represents 1 degree. When the pointer is moved from one line to the next on the scale, the angle of cut is changed by 1 degree.

## ADJUSTING POINTER

If it becomes necessary to adjust the pointer (A) Fig. 14, loosen screw (B), adjust the pointer and tighten screw (B).

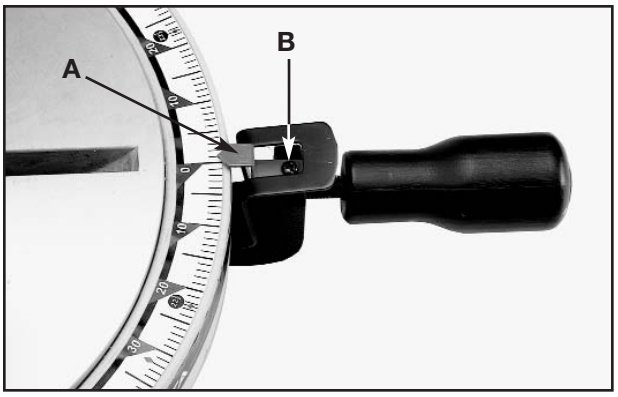

Fig. 14

## LOCKING CUTTERHEAD IN THE DOWN POSITION

When transporting the miter saw, the cutterhead should always be locked in the down position. Lower the cutting arm (A) Fig. 15, and push in plunger (B) until other end of plunger (B) engages with hole in cutting arm.

**IMPORTANT:** Carrying the machine by the switch handle will cause misalignment. Always lift the machine by the base or rear support/carrying handle (A) Fig. 16 and 17.

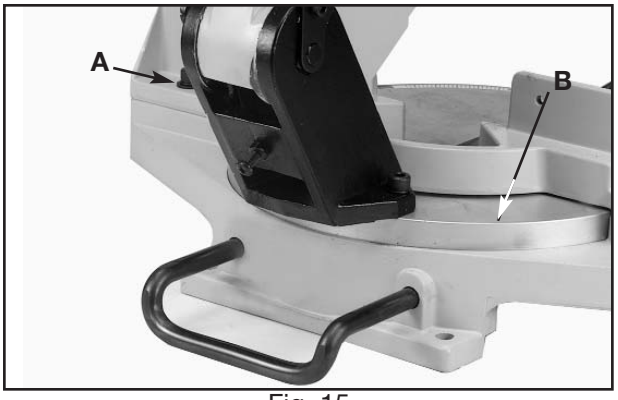

Fig. 15

## REAR SUPPORT/CARRYING HANDLE

A rear support bar (A) Fig. 16 is provided to prevent the miter saw from tipping to the rear when the cutterhead is returned to the up position. For maximum support, the bar (A) should be pulled out as far as possible.
The support bar (A) Figs. 16 and 17 can also be used as a carrying handle.

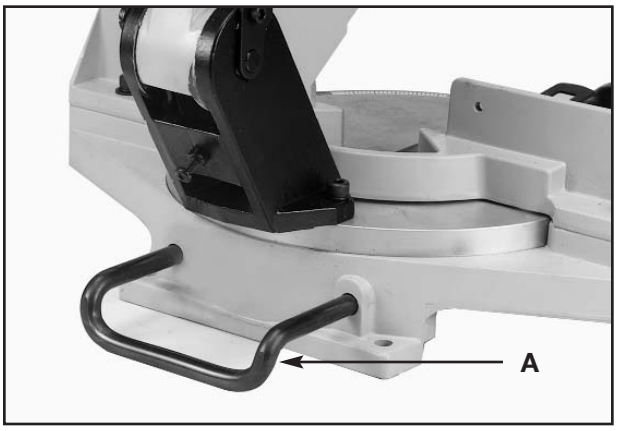

Fig. 16

Fig. 17

# ADJUSTMENTS

## ADJUSTING BLADE PARALLEL TO TABLE SLOT

**⚠WARNING Disconnect machine from power source.**

1. Lower the cutterhead and check to see if the saw blade (A) Fig. 18 is parallel to the left edge (B) of the table opening.
2. If an adjustment is necessary, loosen two screws, one of which is shown at (C) Fig. 18, and move the cutterhead until the blade (A) is parallel with the left edge (B) of the table opening. Tighten two screws (C).

Fig. 18

## ADJUSTING FENCE 90 DEGREES TO BLADE

If the fence (A) Fig. 19 is removed from the saw, re-adjust it so that it is 90 degrees to the blade when the fence is replaced.

**⚠WARNING Disconnect machine from power source.**

1. Place one end of the square (B) Fig. 19 against the fence (A) and the other end against the blade.
2. If an adjustment is necessary, loosen the two screws (C) Fig. 20, and adjust fence 90 degrees to the blade.
3. Tighten the two screws (C).

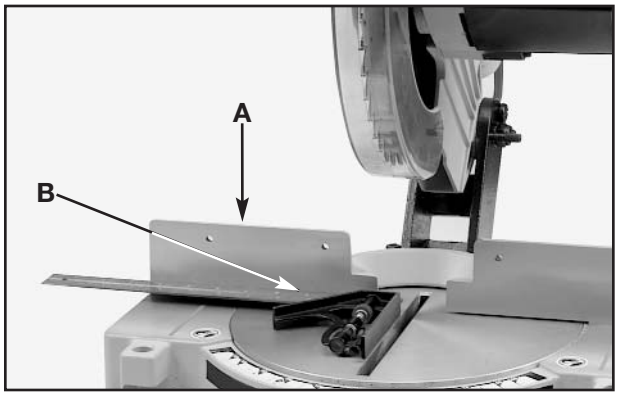

Fig. 19

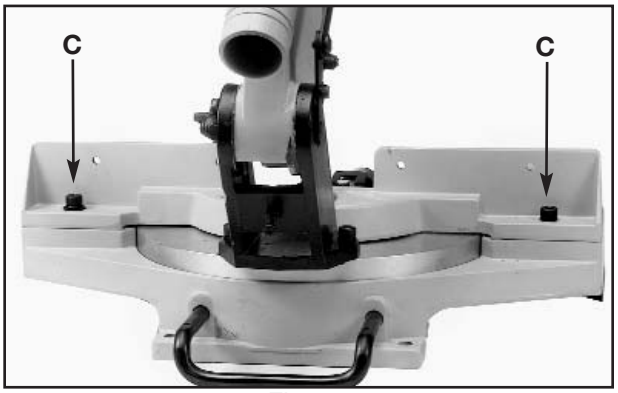

Fig. 20

## ADJUSTING DOWNWARD TRAVEL OF SAW BLADE

**⚠WARNING Disconnect machine from power source.**

1. The downward travel of the saw blade should 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. 21 and turning the adjusting screw (B) in or out.
2. 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.
3. Tighten lock nut (A).

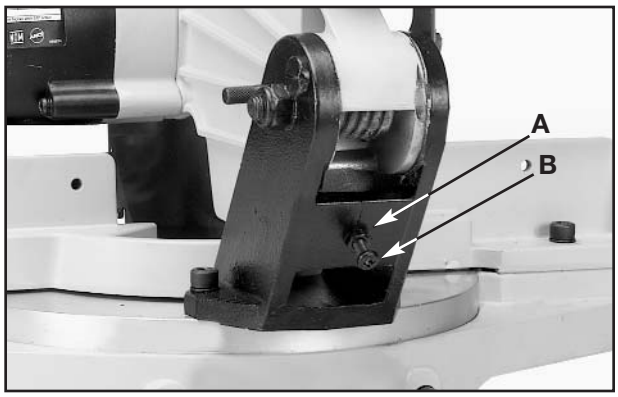

Fig. 21

# TYPICAL OPERATIONS AND HELPFUL HINTS

**⚠WARNING** If the size of the workpiece causes your hand to be within the hazard zone of of the saw blade, clamp the workpiece in place before making cut.

1. Before cutting, make certain the cutting arm and table are at their correct settings and firmly locked in place.
2. Place the workpiece on the table and hold or clamp it firmly against the fence. Fig. 22 illustrates an accessory work clamp (A). The clamp (A) can also be used on the right side of the machine.
3. For best results, cut at a slow, even cutting rate.
4. Never attempt freehand cutting (wood that is not held firmly against the fence and table).

Fig. 22

## AUXILIARY WOOD FENCE

**⚠WARNING** 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. To limit the possibility of personal injury or blade guard damage, an auxiliary wood fence can be mounted to your saw.

Holes are provided in the fence to attach an auxiliary fence (A) Fig. 23. This auxiliary fence is constructed of straight wood approximately 1/2" thick by 3" high by 20" long.

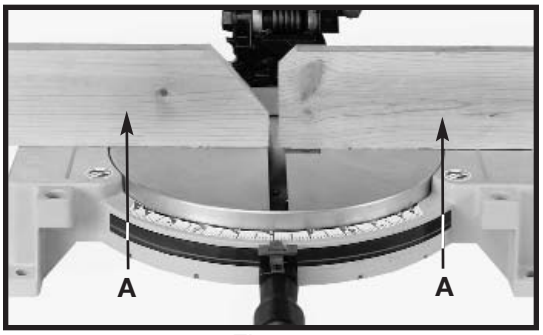

Fig. 23

# GENERAL CUTTING OPERATIONS

1. Your machine has the capacity to cut standard 2 x 4's lying flat or on edge, at the 45 degree right and left miter angles (Figs. 24A and 24B).
2. A standard 2 x 6 can be cut in the 90 degree straight cut-off position in one pass (Fig. 24C) or at 45 degree right or left miter angles (Figs. 24C and 24D).
3. Cutting a standard 4 x 4 can be accomplished with one pass (Fig. 24E).
4. Cutting various sizes of plastic pipe is an easy job with this machine (Fig. 24F).

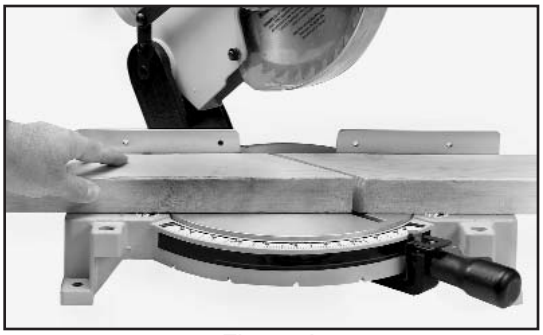
Fig. 24A


Fig. 24B

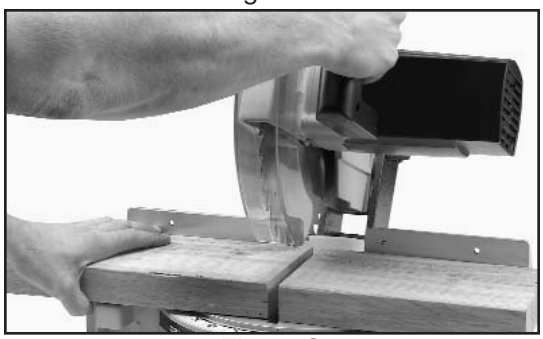
Fig. 24C


Fig. 24D


Fig. 24E


Fig. 24F

## CUTTING ALUMINUM

Aluminum extrusions, such as used for making aluminum screens and storm windows, can be cut with your miter saw. To cut aluminum extrusions, or other sections that can be cut with a saw blade and are within the capacity of the machine, position the material so that the blade cuts through the smallest cross-section (Fig. 25). The wrong way to cut aluminum angles is illustrated in Fig. 26. Be sure to apply a stick wax to the blade before cutting aluminum stock. This stick wax is available at most industrial mill supply houses. The stick wax provides proper lubrication and keeps chips from adhering to the blade.

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

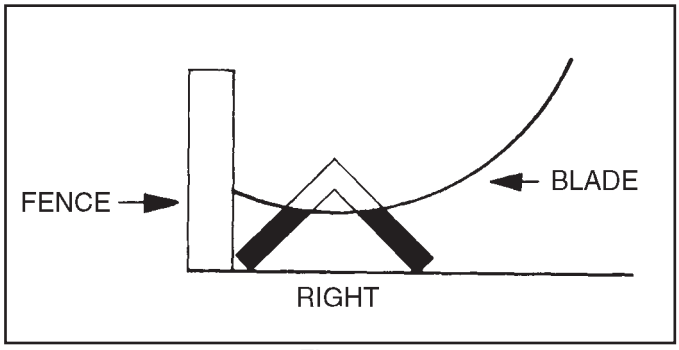

Fig. 25

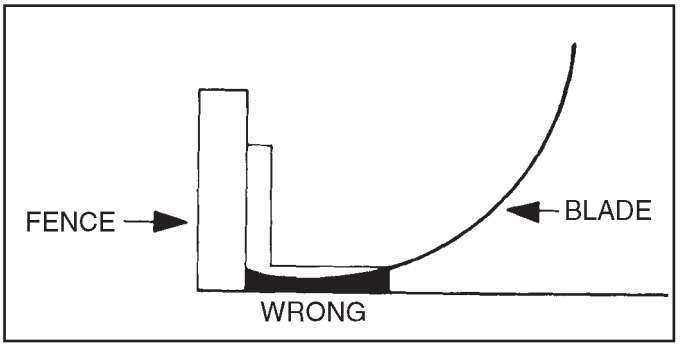

Fig. 26

## 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. 27.
If the material is positioned the wrong way, as shown in Fig. 28, the workpiece will pinch the blade near the completion of the cut.

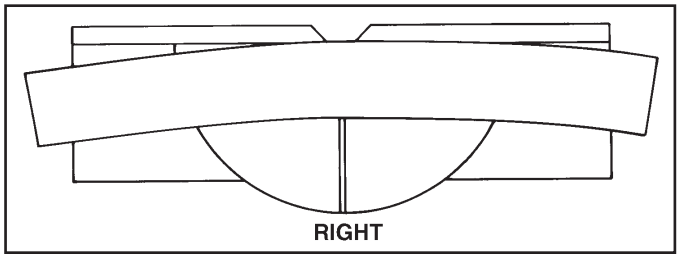

Fig. 27

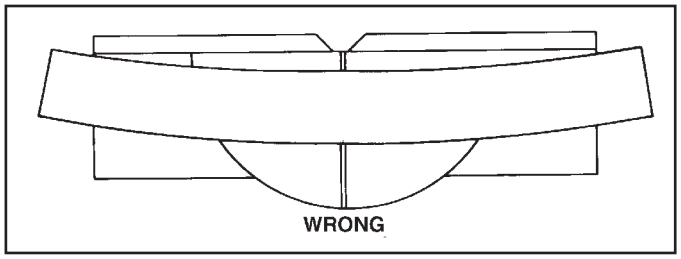

Fig. 28

# CUTTING CROWN MOULDINGS

1. Several methods can be used to cut crown mouldings on the miter saw. The method shown in Fig. 29, 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 saw. 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. Also, this method means that the crown moulding must be positioned on the table in the upside down position.


Fig. 29

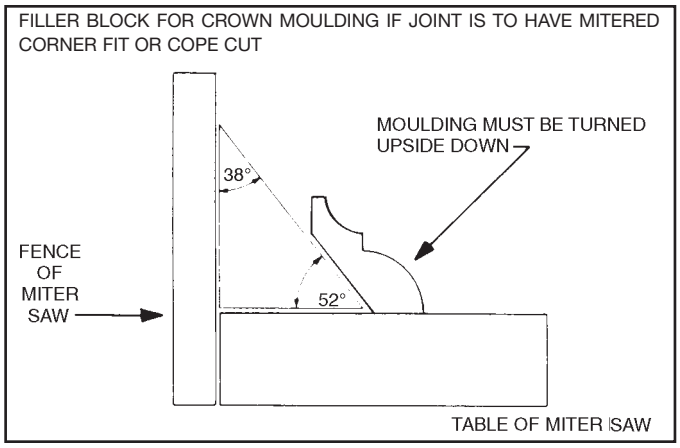


Fig. 30

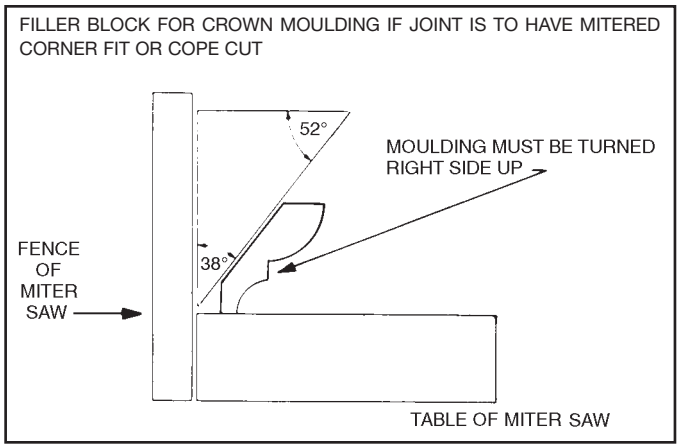


Fig. 31

2. When a large number of repetitive cuts of crown moulding are required, we suggest the use of filler blocks, as shown in Fig. 30 through Fig. 33. 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. 30 and Fig. 32 illustrate the filler block fastened to the miter saw 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.

4. Fig. 31 and Fig. 33 illustrate the filler block fastened to the miter saw 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.

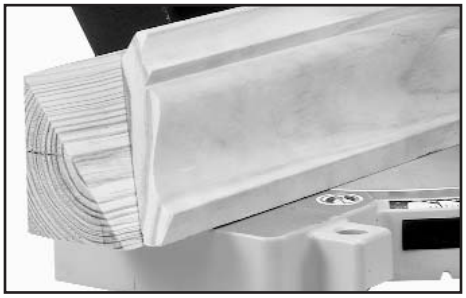

Fig. 32

Fig. 33

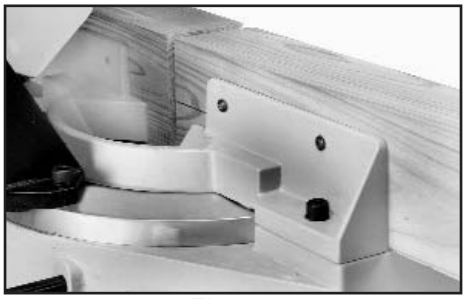

Fig. 34

5. Fasten the filler blocks to the fence using wood screws (A) through the two holes provided on each fence half, as shown in Fig. 34. This enables you to easily remove the filler blocks when not in use and quickly reassemble them to the fence when needed.

6. Fig. 35 illustrates the miter saw 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 (B) on the left of the saw blade will be for an outside corner and the moulding (C) on the right of the saw blade will be for an inside corner.

To cut the mating pieces for mouldings (B) and (C) Fig. 35, rotate the miter saw arm to the 45 degree left miter position and make the cut (Fig. 35). In this case the moulding (D) Fig. 36 on the left of the saw blade will be for an inside corner and the moulding (E) on the right of the saw blade will be for an outside corner.

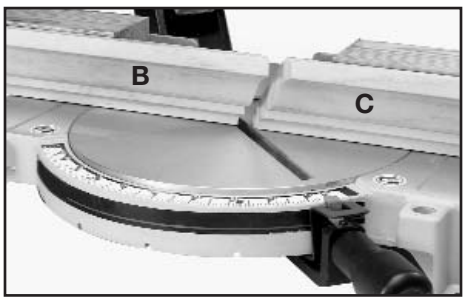


Fig. 35

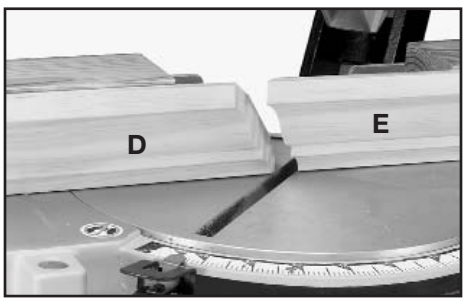


Fig. 36

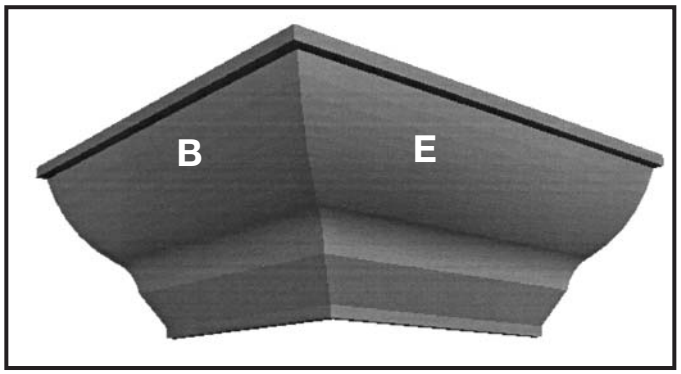


Fig. 36A

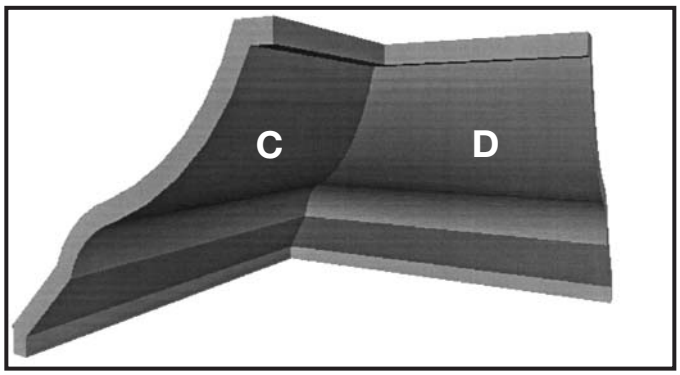


Fig. 36B

6. Fig. 36A illustrates the two outside corner pieces (B) and (E)
7. Fig. 36B illustrates the two inside corner pieces (C), and (D).

# MAINTENANCE

## CHANGING THE BLADE

**⚠WARNING** **Use only cross-cutting saw blades. Use carbide-tipped blades with a negative hook angle. Do not use blades with deep gullets that can deflect and contact the guard. Use only 10" diameter saw blades which are rated for 5200 rpm or higher and have 5/8" diameter arbor holes.**

**⚠WARNING** **Disconnect machine from power source.**

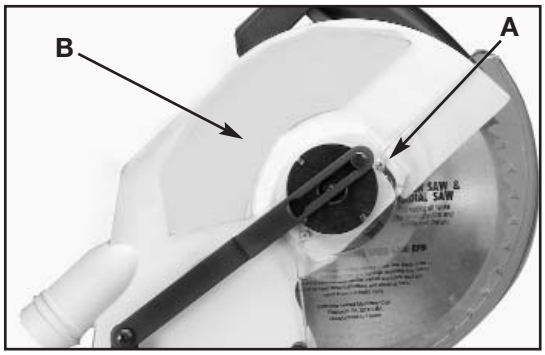


Fig. 37

Fig. 38


Fig. 39

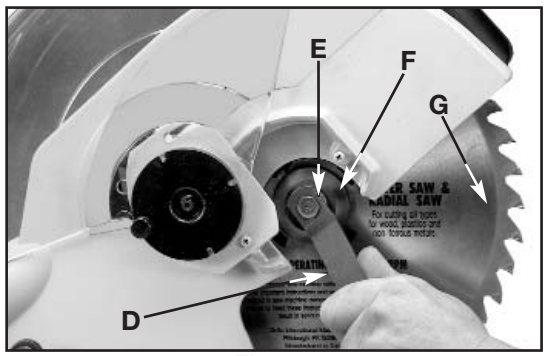


Fig. 40

1. Remove screw (A) Fig. 37, and rotate cover (B) to the rear as shown in Fig. 38.
2. To remove the saw blade, insert hex wrench (C) Fig. 39 into the hex hole located in the rear end of the motor shaft, to keep the shaft from turning.
3. Use wrench (D) Fig. 40 to loosen arbor screw (E) by turning it clockwise.
4. Remove arbor screw (E) Fig. 40, outside blade flange (F) and saw blade (G) from saw arbor.
5. Place new blade on arbor. MAKE CERTAIN TEETH OF SAW BLADE ARE POINTING DOWN AT THE FRONT. Re-attach outside blade flange (F) Fig. 40, and arbor screw (E) by turning it counterclockwise using wrench (D) Fig. 40. At the same time use hex wrench (C) Fig. 39 to keep the arbor from turning.
6. Replace screw and cover that was rotated to the rear in STEP 2.

**⚠WARNING** **Remove wrenches (C) Fig 39 and (D) Fig. 40 before starting the machine.**

## BRUSH INSPECTION AND REPLACEMENT

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. To inspect the brushes, proceed as follows:

**⚠WARNING** **Disconnect machine from power source.**

1. Remove three screws (A) Fig. 41, and remove motor cover (B).
2. The brushes are located in the two holders (C) Fig. 42. Remove terminal connector (D) and pull out brush holders (C).
3. Fig. 43 illustrates one of the brushes (E) removed from the holder (C). When the carbon on either brush (E) is worn to 3/16" in length or if either spring (F) or shunt wire is burned or damaged in any way, replace both brushes. If the brushes are found to be serviceable after removing, reinstall them in the same position as removed.

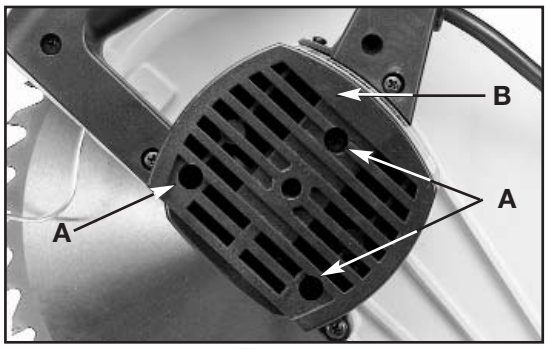

Fig. 41

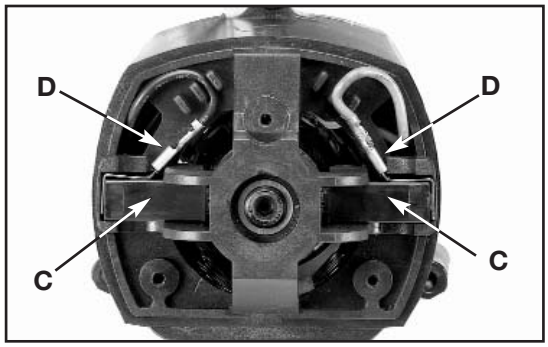

Fig. 42

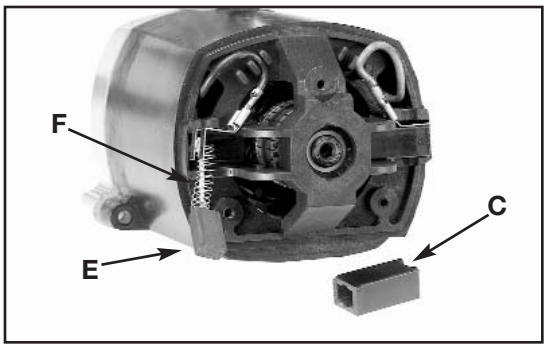

Fig. 43

# ACCESSORIES

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

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

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

## Two Year Limited New Product Warranty

**Delta will repair or replace, at its expense and at its option, any new 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. For all refurbished Delta product, the warranty period is 180 days. 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.**

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Auburn 98001(Seattle)
3320 West Valley HWY, North
Building D, Suite 111
Phone: (253) 333-8353
Fax: (253) 333-9613

Authorized Service Stations are located in many large cities. Telephone **800-438-2486** or **731-541-6042** for assistance locating one. Parts and accessories for Porter-Cable·Delta products should be obtained by contacting any Porter-Cable·Delta Distributor, Authorized Service Center, or Porter-Cable·Delta Factory Service Center. If you do not have access to any of these, call **800-223-7278** and you will be directed to the nearest Porter-Cable·Delta Factory Service Center. Las Estaciones de Servicio Autorizadas están ubicadas en muchas grandes ciudades. Llame al **800-438-2486** ó al **731-541-6042** para obtener asistencia a fin de localizar una. Las piezas y los accesorios para los productos Porter-Cable·Delta deben obtenerse poniéndose en contacto con cualquier distribuidor Porter-Cable·Delta, Centro de Servicio Autorizado o Centro de Servicio de Fábrica Porter-Cable·Delta. Si no tiene acceso a ninguna de estas opciones, llame al **800-223-7278** y le dirigirán al Centro de Servicio de Fábrica Porter-Cable·Delta más cercano.

# CANADIAN PORTER-CABLE • DELTA SERVICE CENTERS

**ALBERTA**
Bay 6, 2520-23rd St. N.E.
Calgary, Alberta
T2E 8L2
Phone: (403) 735-6166
Fax: (403) 735-6144

**BRITISH COLUMBIA**
8520 Baxter Place
Burnaby, B.C.
V5A 4T8
Phone: (604) 420-0102
Fax: (604) 420-3522

**MANITOBA**
1699 Dublin Avenue
Winnipeg, Manitoba
R3H 0H2
Phone: (204) 633-9259
Fax: (204) 632-1976

**ONTARIO**
505 Southgate Drive
Guelph, Ontario
N1H 6M7
Phone: (519) 836-2840
Fax: (519) 767-4131

**QUÉBEC**
1515 ave.
St-Jean Baptiste,
Québec, Québec
G2E 5E2
Phone: (418) 877-7112
Fax: (418) 877-7123

1447, Begin
St-Laurent, (Montréal),
Québec
H4R 1V8
Phone: (514) 336-8772
Fax: (514) 336-3505



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