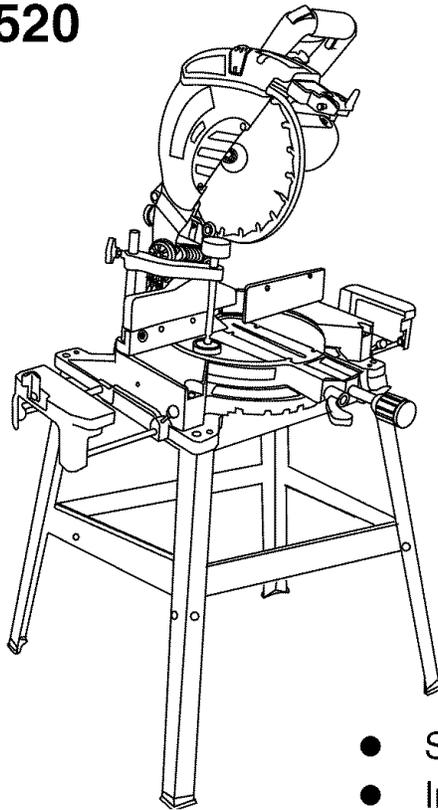


# Operator's Manual



## 10 in. COMPOUND MITER SAW AND STAND WITH LASER TRAC® Model No. 137.212520



### CAUTION:

Before using this Miter Saw, read this manual and follow all its Safety Rules and Operating Instructions

- Safety Instructions
- Installation
- Operation
- Maintenance
- Parts List

**Customer Help Line  
For Technical Support  
1-800-843-1682**

**Sears Parts &  
Repair Center  
1-800-488-1222**

Sears, Roebuck and Co., Hoffman Estates, IL 60179 USA

Visit our Craftsman website: [www.sears.com/craftsman](http://www.sears.com/craftsman)

Part No. 137212520001

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## WARRANTY

### ONE-YEAR FULL WARRANTY ON CRAFTSMAN TOOL

If this Craftsman tool fails due to a defect in material or workmanship within one year from the date of purchase, **CALL 1-800-4-MY-HOME® TO ARRANGE FOR FREE REPAIR** (or replacement if repair proves impossible).

If this tool is used for commercial or rental purposes, this warranty will apply for only ninety days from the date of purchase. This warranty applies only while this tool is in the United States.

This warranty gives you specific legal rights, and you may also have other rights, which vary, from state to state.

**Sears, Roebuck and Co., Hoffman Estates, IL 60179**

#### 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, cement and other masonry products
- Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well ventilated area and work with approved safety equipment such as dust masks that are specially designed to filter out microscopic particles.

## PRODUCT SPECIFICATIONS

#### MOTOR

Power Source .....	120V AC, 60Hz, 15 Amp
Arbor Shaft Size .....	5/8 in.
Speed .....	4800 RPM (No load)
Brake .....	Electric
Double Insulated .....	Yes

#### MITER SAW

##### Rotating Table:

Miter Detent Stops .....	0°, 15°, 22.5°, 31.6°, 45° R & L
Bevel Positive Stops .....	0°, 45° L

#### Cutting Capacity:

Crosscut .....	2-5/8 in. x 5-1/2 in.
Miter 45° R & L .....	2-5/8 in. x 3-1/2 in.
Bevel 45° L .....	1-1/2 in. x 5-1/2 in. L
45° Miter and 45° Bevel .....	1-1/2 in. x 3-1/2 in.
<b>Extension Bars</b> .....	Yes
<b>Stand</b> .....	Yes

#### WARNING

To avoid electrical hazards, fire hazards or damage to the tool, use proper circuit protection.

This tool is wired at the factory for 110-120 Volt operation. It must be connected to a 110-120 Volt / 15 Ampere time delay fuse or circuit breaker. To avoid shock or fire, replace power cord immediately if it is worn, cut or damaged in any way.

Before using your tool, it is critical that you read and understand these safety rules. Failure to follow these rules could result in serious injury to you or damage to the tool.

# POWER TOOL SAFETY

## GENERAL SAFETY INSTRUCTIONS BEFORE USING THIS POWER TOOL

Safety is a combination of common sense, staying alert and knowing how to use your power tool.

### **WARNING**

To avoid mistakes that could cause serious injury, do not plug the tool in until you have read and understood the following.

- 1. READ** and become familiar with the entire Operator's Manual. **LEARN** the tool's application, limitations and possible hazards.
- 2. KEEP GUARDS IN PLACE** and in working order.
- 3. REMOVE ADJUSTING KEYS AND WRENCHES.** Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning ON.
- 4. KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
- 5. DO NOT USE IN DANGEROUS ENVIRONMENTS.** Do not use power tools in damp locations, or expose them to rain or snow. Keep work area well lit.
- 6. KEEP CHILDREN AWAY.** All visitors and bystanders should be kept a safe distance from work area.
- 7. MAKE WORKSHOP CHILD PROOF** with padlocks, master switches or by removing starter keys.
- 8. DO NOT FORCE THE TOOL.** It will do the job better and safer at the rate for which it was designed.
- 9. USE THE RIGHT TOOL.** Do not force the tool or an attachment to do a job for which it was not designed.
- 10. USE PROPER EXTENSION CORDS.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will result in a drop in line voltage and in loss of power which will cause the tool to overheat. The table on page 5 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
- 11. WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
- 12. ALWAYS WEAR EYE PROTECTION.** Any power tool can throw foreign objects into the eyes and could cause permanent eye damage. **ALWAYS** wear Safety Goggles (not glasses) that comply with ANSI Safety standard Z87.1 Everyday eyeglasses have only impact-resistant lenses. They **ARE NOT** safety glasses. Safety Goggles are available at Sears. **NOTE:** Glasses or goggles not in compliance with ANSI Z87.1 could seriously injure you when they break.  

- 13. WEAR A FACE MASK OR DUST MASK.** Sawing operation produces dust.
- 14. SECURE WORK.** Use clamps or a vise to hold work when practical. It is safer than using your hand and it frees both hands to operate the tool.
- 15. DISCONNECT TOOLS FROM POWER SOURCE** before servicing, and when changing accessories such as blades, bits and cutters.
- 16. REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in the OFF position before plugging the tool in.
- 17. USE RECOMMENDED ACCESSORIES.** Consult this Operator's Manual for recommended accessories. The use of improper accessories may cause risk of injury to yourself or others.
- 18. NEVER STAND ON THE TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
- 19. CHECK FOR DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function – check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
- 20. NEVER LEAVE THE TOOL RUNNING UNATTENDED. TURN THE POWER "OFF".** Do not walk away from a running tool until the blade comes to a complete stop and the tool is unplugged from the power source.
- 21. DO NOT OVERREACH.** Keep proper footing and balance at all times.
- 22. MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 23. WARNING:** Dust generated from certain materials can be hazardous to your health. Always operate saw in well-ventilated area and provide for proper dust removal.

# COMPOUND MITER SAW SAFETY

## SPECIFIC SAFETY INSTRUCTIONS FOR THIS COMPOUND MITER SAW

1. **DO NOT USE THIN KERF BLADES** they can deflect and contact guard and can cause possible injury to the operator.
2. **DO NOT** operate the miter saw until it is completely assembled and installed according to these instructions.
3. **IF YOU ARE NOT** thoroughly familiar with the operation of miter saws, seek guidance from your supervisor, instructor or other qualified person.
4. **ALWAYS** hold the work firmly against the fence and table. **DO NOT** perform any operation free hand (use clamp wherever possible).
5. **KEEP HANDS** out of the path of the saw blade. If the workpiece you are cutting would cause your hands to be within 6-3/4 in. of the saw blade, the workpiece should be clamped in place before making the cut.
6. **BE SURE** the blade is sharp, runs freely and is free of vibration.
7. **ALLOW** the motor to come up to full speed before starting a cut.
8. **KEEP THE MOTOR AIR SLOTS CLEAN** and free of chips or dust.
9. **ALWAYS MAKE SURE** all handles are tight before cutting, even if the table is positioned in one of the positive stops.
10. **BE SURE** both the blade and the collar are clean and the arbor bolt is tightened securely.
11. **USE** only blade collars specified for your saw.
12. **NEVER** use blades larger in diameter than 10 inches.
13. **NEVER** apply lubricants to the blade when it is running.
14. **ALWAYS** check the blade for cracks or damage before operation. Replace a cracked or damaged blade immediately.
15. **NEVER** use blades recommended for operation at less than 4800 RPM.
16. **ALWAYS** keep the blade guards in place and use at all times.
17. **NEVER** reach around the saw blade.
18. **MAKE SURE** the blade is not contacting the workpiece before the switch is turned ON.
19. **IMPORTANT:** After completing the cut, release the trigger and wait for the blade to stop before returning the saw to the raised position.
20. **MAKE SURE** the blade has come to a complete stop before removing or securing the workpiece, changing the workpiece angle or changing the angle of the blade.
21. **NEVER** cut metals or masonry products with this tool. This miter saw is designed for use on wood and wood-like products.
22. **NEVER** cut small pieces. If the workpiece being cut would cause your hand or fingers to be within 6-3/4 in. of the saw blade the workpiece is too small.
23. **PROVIDE** adequate support to the sides of the saw table for long work pieces.
24. **NEVER** use the miter saw in an area with flammable liquids or gases.
25. **NEVER** use solvents to clean plastic parts. Solvents could possibly dissolve or otherwise damage the material.
26. **SHUT OFF** the power before servicing or adjusting the tool.
27. **DISCONNECT** the saw from the power source and clean the machine when finished using.
28. **MAKE SURE** the work area is clean before leaving the machine.
29. **SHOULD** any part of your miter saw be missing, damaged, or fail in any way, or any electrical component fail to perform properly, lock the switch and remove the plug from the power supply outlet. Replace missing, damaged, or failed parts before resuming operation.

## ELECTRICAL REQUIREMENTS

### POWER SUPPLY AND MOTOR SPECIFICATIONS

The AC motor used in this saw is a universal, nonreversible type. See "MOTOR" in the "PRODUCT SPECIFICATIONS" section on page 2.

### WARNING

**To avoid electrical hazards, fire hazards, or damage to the tool, use proper circuit protection. Your saw is wired at the factory for 120 V operation. Connect to a 120 V, 15 A circuit and use a 15 A time delay fuse or circuit breaker. To avoid shock or fire, if power cord is worn or cut, or damaged in any way, have it replaced immediately.**

# ELECTRICAL REQUIREMENTS AND SAFETY

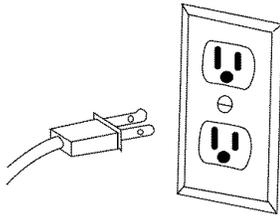
## ELECTRICAL REQUIREMENTS – cont'd

### DOUBLE INSULATED

The power tool is double insulated to provide a double thickness of insulation between you and tool's electrical system. All exposed metal parts are isolated from the internal metal motor components with protecting insulation.

**Replacement parts** – When servicing, use only identical replacement parts.

**Polarized plugs** – This saw has a plug that looks like the one shown below:



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

### **WARNING**

Double insulation does not take the place of normal safety precautions when operating this tool.

To avoid electrocution:

1. Use only identical replacement parts when servicing a tool with double insulation. Servicing should be performed by a qualified technician.
2. Do not use power tools in wet or damp locations or expose them to rain or snow.

### **MOTOR SAFETY PROTECTION IMPORTANT**

To avoid motor damage, the motor should be blown out or vacuumed frequently to keep sawdust from interfering with the motor ventilation.

1. **Connect** this saw to a 120 V circuit. This circuit must not be less than a #12 wire with a 20 A time lag fuse or a #14 wire with a 15 A time lag fuse.  
**NOTE:** When using an extension cord on a circuit with a #14 wire, the extension cord must not exceed 25 feet in length.
2. If the motor will not start, release the trigger switch immediately. **UNPLUG THE SAW.** Check the saw blade to make sure it turns freely. If the blade is free, try to start the saw again. If the motor still does not start, refer to the **TROUBLESHOOTING GUIDE.**
3. If the tool suddenly stalls while cutting wood, release the trigger switch, unplug the tool and free the blade from the wood. The saw may now be started and the cut finished.

4. **FUSES** may “blow” or circuit breakers may trip frequently if:
  - a. **MOTOR** is overloaded – overloading can occur if you feed too rapidly or make too many start/stops in a short time.
  - b. **LINE VOLTAGE** is more than 10% above or below the nameplate voltage rating. For heavy loads, the voltage at motor terminals must equal the voltage specified on the nameplate.
  - c. **IMPROPER** or dull saw blades are used.
5. Most motor troubles may be traced to loose or incorrect connections, overload, low voltage or inadequate power supply wiring. Always check the connections, the load and supply circuit if the motor doesn't run well. Check minimum gauge for the length of cord you are using on the chart below.

### **GUIDELINES FOR EXTENSION CORDS**

Use a 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. The table below shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

**Be sure your extension cord is properly wired** and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it. Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

**Use a separate electrical circuit for your tools.** This circuit must not be less than a #12 wire with a 20 A time lag fuse or a #14 wire with a 15 A time lag fuse.

**NOTE:** When using an extension cord on a circuit with a #14 wire, the extension cord must not exceed 25 feet in length. Before connecting the tool to the power line, make sure the switch is in the OFF position and the electric current is rated the same as the current stamped on the motor nameplate, running at a lower voltage will damage the motor.

### **MINIMUM GAUGE FOR EXTENSION CORDS (AWG)**

(When using 120 volts only)					
Ampere Rating		Total length of Cord			
More Than	Not More Than	25ft.	50ft.	100ft.	150ft.
0	6	18	16	16	14
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not Recommended	

**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.

## ACCESSORIES AND ATTACHMENTS

### RECOMMENDED ACCESSORIES

#### **⚠ WARNING**

- Use only accessories recommended for this miter saw. Follow instructions that accompany accessories. Use of improper accessories may cause hazards.
- The use of any cutting tool except 10 in. saw blades which meet the requirements under recommended accessories is prohibited. Do not use accessories such as shaper cutters or dado sets. Ferrous metal cutting and the use of abrasive wheels is prohibited.
- Do not attempt to modify this tool or create accessories not recommended for use with this tool. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious injury.

### ACCESSORIES

Visit your Sears Hardware Department or see the Sears Power and Hand Tool Catalog to purchase recommended accessories for this power tool.

#### **⚠ WARNING**

To avoid the risk of personal injury, do not modify this power tool or use accessories not recommended by Sears.

#### **⚠ WARNING**

Read warnings and conditions on your CARBIDE TIPPED SAW BLADE. Do not operate the saw without the proper saw blade guard in place. Carbide is a very hard but brittle material. Care should be taken while mounting, using, and storing carbide tipped blades to prevent accidental damage. Slight shocks, such as striking the tip while handling, can seriously damage the blade. Foreign objects in the workpiece, such as wire or nails, can also cause tips to crack or break off. Before using, always visually examine the blade and tips for bent blade, cracks, breakage, missing or loose tips, or other damage. Do not use if damage is suspected. Failure to heed safety instructions and warnings can result in serious bodily injury.

## TOOLS NEEDED FOR ASSEMBLY

### Supplied



Blade Wrench

### Not supplied



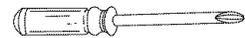
Adjustable Wrench



Hex Key 2.5 mm



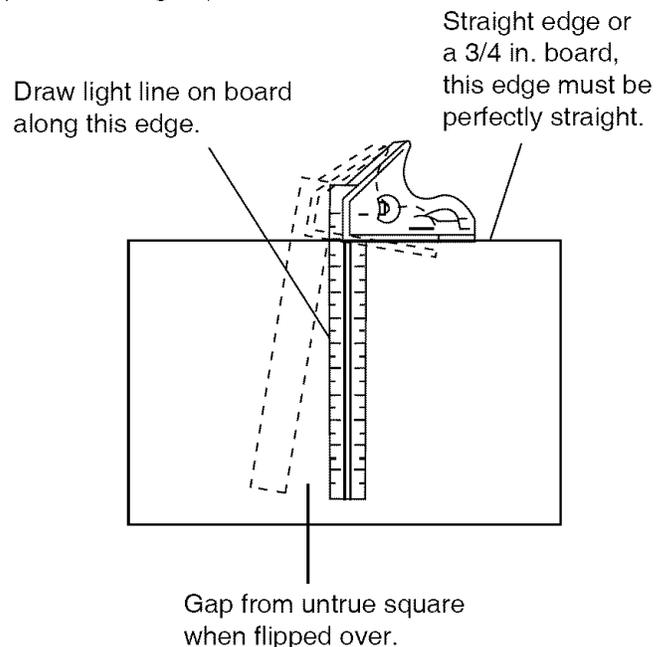
Combination Square



Philips Screwdriver

### COMBINATION SQUARE MUST BE TRUE

Should not gap or overlap when square is flipped over (see dotted figure).



# CARTON CONTENTS

## UNPACKING YOUR MITER SAW

### **⚠ WARNING**

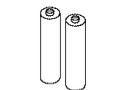
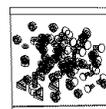
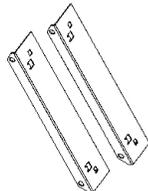
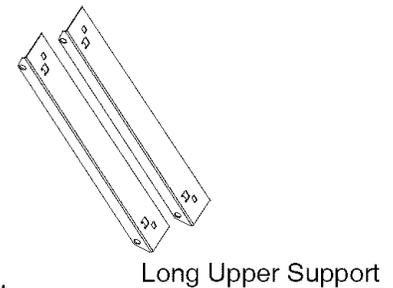
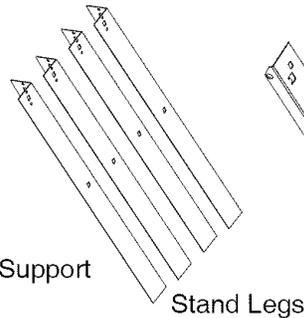
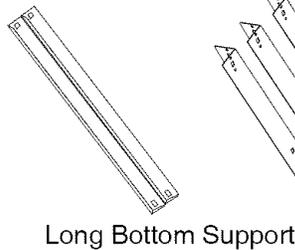
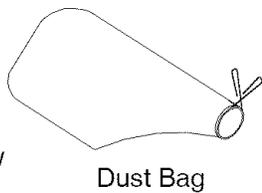
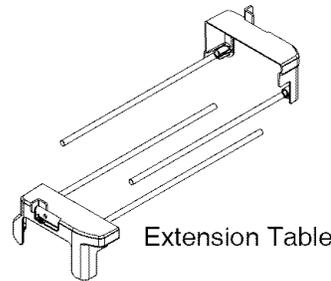
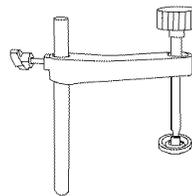
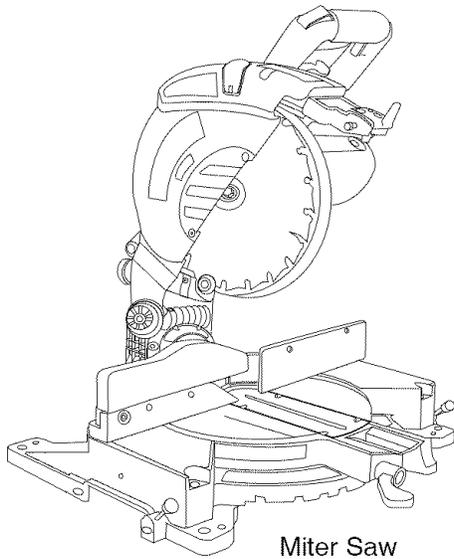
To avoid injury from unexpected starting or electrical shock, do not plug the power cord into a source of power during unpacking and assembly. This cord must remain unplugged whenever you are working on the saw.

1. Remove the miter saw from the carton.  
**IMPORTANT:** Do not lift miter saw by the Trigger Switch handle. It may cause misalignment. Lift machine by the built-in carry handle.

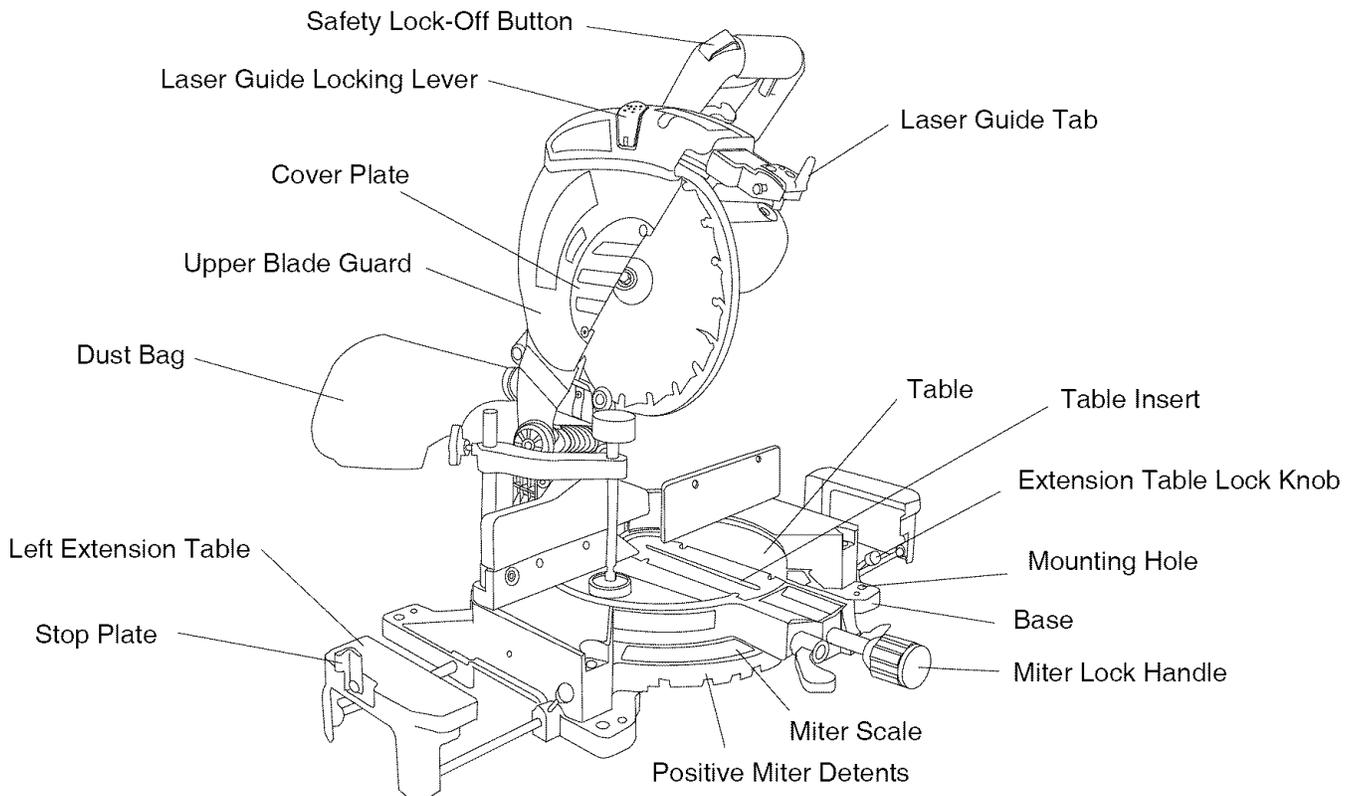
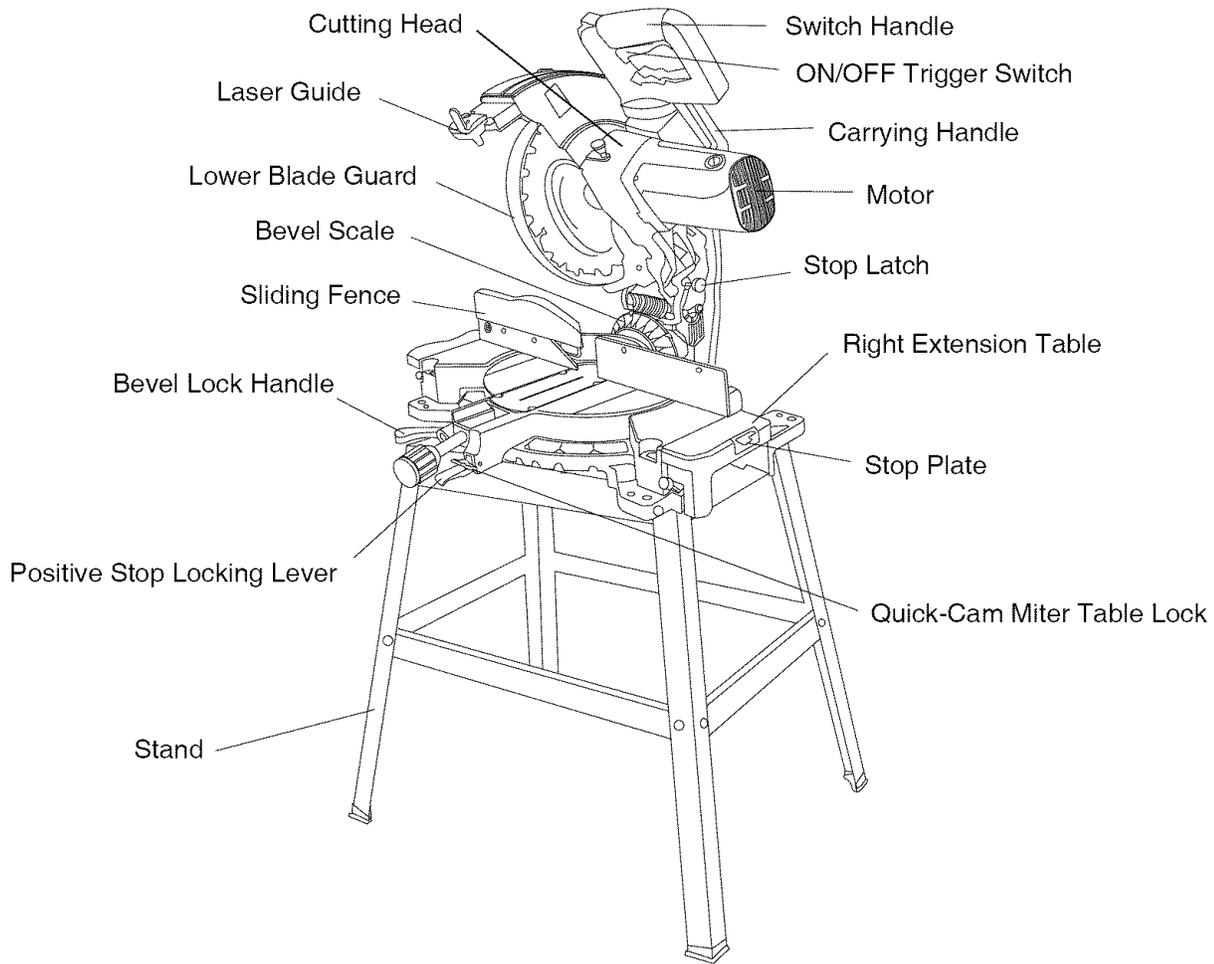
2. Place the saw on a secure stationary work surface.
3. Separate all parts from the packing material. Check each one with the illustration to make certain all items are accounted for, before discarding any packing material.

### **⚠ WARNING**

If any part is missing or damaged, do not attempt to assemble the miter saw, or plug in the power cord until the missing or damaged part is correctly replaced. To avoid electric shock, use only identical replacement parts when servicing double insulated tools. Call 1-800-4-MY-HOME® for replacement parts.



# KNOW YOUR COMPOUND MITER SAW



# GLOSSARY OF TERMS

## COMPOUND MITER SAW TERMS

**ARBOR LOCK** – Allows the user to keep the blade from rotating while tightening or loosening the arbor bolt during blade replacement or removal.

**BASE** – Supports the table, holds accessories and allows for workbench or leg set mounting.

**BEVEL LOCKING HANDLE** – Locks the miter saw at a desired bevel angle.

**BEVEL SCALE** – To measure the bevel angle of the saw blade 0° to 45° left.

**COVER PLATE SCREW** – Loosen this screw and rotate the plate for access to the blade arbor bolt.

**FENCE** – Helps to keep the workpiece from moving when sawing. Scaled to assist with accurate cutting.

**LOWER BLADE GUARD** – Helps protect your hands from the blade in the raised position, it retracts as the blade is lowered.

**MITER HANDLE** – Used to rotate the table, and to rotate the saw to a right or left cutting position.

**MITER SCALE** – Measures the miter angle 0° to 45° left and right.

**MOUNTING HOLES** – To mount the miter saw to a stable surface.

**ON/OFF TRIGGER SWITCH** – To start the tool, push the safety lock-off button and squeeze the trigger. Release the trigger to turn off the miter saw.

**POSITIVE STOP LOCKING LEVER** – Locks the miter saw at a preset positive stop for the desired miter angle.

**STOP LATCH** – Locks the miter saw in the lowered position for compact storage and transportation.

**SWITCH HANDLE** – The switch handle contains the trigger switch and safety lock-off button. The blade is lowered into the workpiece by pushing down on the handle. The saw will return to its upright position when the handle is released.

**WARNING LABELS** – Read and understand for your own safety. Make sure all labels are present on machine and legible.

**WRENCH STORAGE** – Convenient storage to prevent misplacing the blade wrench.

## WOODWORKING TERMS

**ARBOR** – The shaft on which a blade is mounted.

**BEVEL CUT** – An angle cut made through the face of the workpiece.

**COMPOUND CUT** – A simultaneous bevel and miter cut.

**CROSS CUT** – A cut made across the width of the workpiece.

**FREEHAND** – Performing a cut without using a fence (guide), hold down or other proper device to prevent the workpiece from twisting during the cutting operation.

**GUM** – A sticky sap from wood products.

**HEEL** – Misalignment of the blade.

**KERF** – The amount of material removed by blade cut.

**MITER CUT** – An angle cut made across the width of the workpiece.

**RESIN** – A sticky sap that has hardened.

**REVOLUTIONS PER MINUTE (RPM)** – The number of turns completed by a spinning object in one minute.

**SAW BLADE PATH** – The area of the workpiece or table top directly in line with the travel of the blade or the part of the workpiece which will be cut.

**SET** – The distance between two saw blade tips, bent outward in opposite directions to each other. The further apart the tips are, the greater the set.

**WORKPIECE** – The item being cut. The surfaces of a workpiece are commonly referred to as faces, ends and edges.

# ASSEMBLY AND ADJUSTMENTS

## ASSEMBLY INSTRUCTIONS

### **⚠ WARNING**

To avoid injury, do not connect this miter saw to the power source until it is completely assembled and adjusted and you have read and understood this Operator's Manual.

### ASSEMBLE STAND (FIG. A)

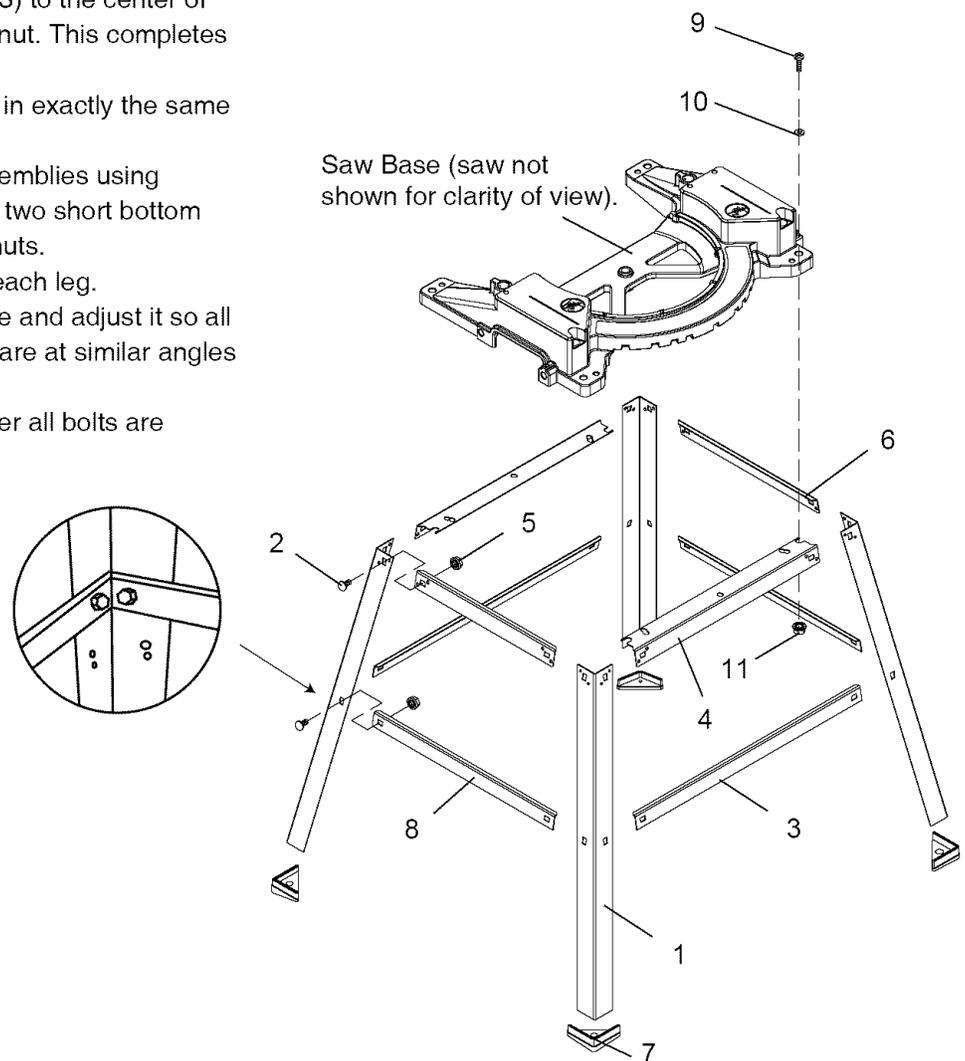
1. Unpack all parts and group by type and size. Refer to the parts list on page 30 for correct quantities.
2. Attach one long upper support (4) to top of leg (1) using one carriage bolt (2) and nut (5).  
**NOTE:** Do not tighten bolts until stand is properly aligned (see step #8).
3. Attach other end of long upper support to the top of another leg using one carriage bolt and one nut.
4. Attach one long bottom support (3) to the center of each leg using carriage bolt and nut. This completes the front frame section.
5. Assemble the rear frame section in exactly the same manner.
6. Join the front and rear frame assemblies using two short upper supports (6) and two short bottom supports (8), carriage bolts and nuts.
7. Place all four foot pads (7) onto each leg.
8. Place the stand on a level surface and adjust it so all legs are contacting the floor and are at similar angles to the floor. Tighten all bolts.  
**NOTE:** Stand should not rock after all bolts are tightened.

### ASSEMBLE MITER SAW TO STAND

1. Carefully place the miter saw on top of stand.
2. Line up the four mounting holes in the saw base to the stand.
3. Fasten the saw to the stand using the four mounting screws (9), four washers (10) and four nuts (11).  
**NOTE:** Place a washer on each bolt before inserting it into the saw base and through the support, then thread the nut onto the bolt. (see Fig. A)
4. Tighten all four nuts.

**NOTE: DO NOT OVER TIGHTEN THE LOCK NUTS HOLDING SAW TO THE STAND. THIS COULD DAMAGE THE SAW BASE.**

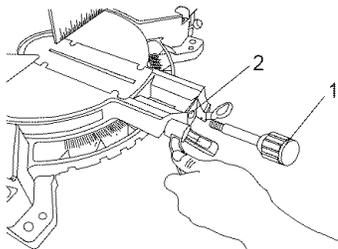
Fig. A



### INSTALLING THE MITER HANDLE (FIG. B)

1. Thread the miter handle (1) into the hole (2) located at the front of the miter table.

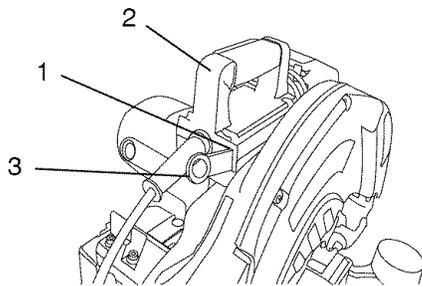
Fig. B



### SAW BLADE WRENCH (FIG. C)

1. For convenient storage and prevention of loss, there is a slot (1) in the rear of the carrying handle (2) for storing the blade wrench (3) when not in use.

Fig. C



### CUTTING HEAD (FIG. D)

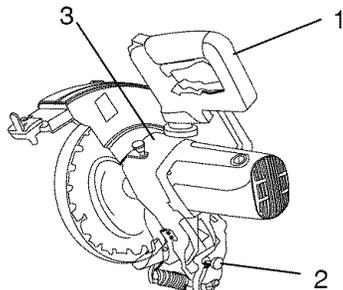
#### Raising

1. Push down slightly on the switch handle (1).
2. Pull out the stop latch knob (2).
3. Allow the cutting head (3) to raise to the up position.

#### **▲ WARNING**

To avoid injury and damage to the saw, transport or store the miter saw with the cutting head locked in the down position. Never use the stop latch to hold the cutting head in a down position for cutting operations.

Fig. D



#### Locking

When transporting or storing the miter saw, the cutting head should always be locked in the down position.

1. Push the cutting head (3) down to its lowest position.
2. Push the stop latch (2) into the locking hole.

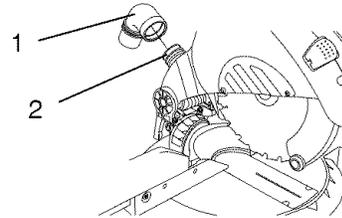
**IMPORTANT:** To avoid damage, never carry the miter saw by the switch handle, the cutting arm or the miter table handle.

### INSTALLING THE DUST COLLECTION ELBOW AND THE DUST BAG (FIG. E)

1. Install the larger end of the elbow (1) onto the exhaust port (2).

**NOTE:** The elbow can be used to attach either the dust bag or a vacuum hose to remove sawdust from the work area.

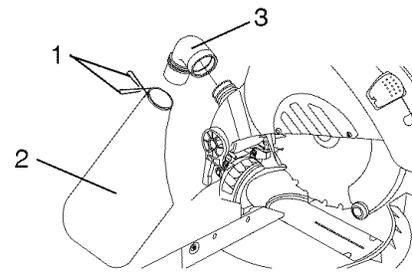
Fig. E



### INSTALLING THE DUST BAG (FIG. E-1)

1. Squeeze the metal collar wings (1) of the dust bag (2).
2. Place the dust bag neck opening around the dust collection elbow (3), and release the metal collar.

FIG. E-1



### REMOVING OR INSTALLING THE BLADE

Only use a 10 in. diameter blade. DO NOT use a thin kerf blade.

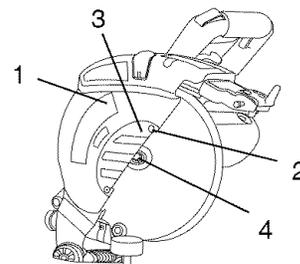
#### Removing Blade (Fig. F, G, H)

#### **▲ WARNING**

To avoid injury from an accidental start, make sure the switch is in the OFF position and plug is not connected to the power source outlet.

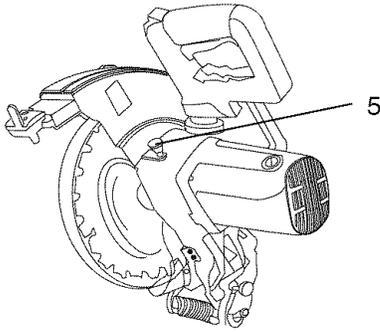
1. Unplug the saw from the outlet.
2. Allow the miter saw to rise to the upright position. Raise the lower blade guard (1) to the up position. (Fig. F)
3. Loosen the cover plate screw (2) with a Phillips screwdriver.
4. Rotate the cover plate (3) towards the rear of the tool to expose the arbor bolt (4).
5. Place the blade wrench over the arbor bolt.

Fig. F



6. Locate the arbor lock (5) on the motor, below the miter saw switch handle. (Fig. G)
7. Press the arbor lock, holding it in firmly while turning the blade wrench clockwise. The arbor lock will engage after turning the wrench. Continue to hold the arbor lock in to keep it engaged, while turning the wrench clockwise to loosen the arbor bolt.

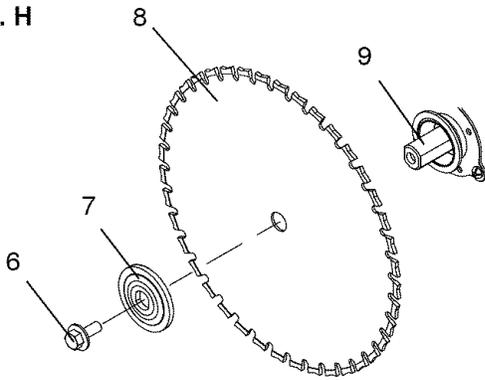
**Fig. G**



8. Remove the arbor bolt (6), outer blade collar (7) and the blade (8). Do not remove the inner blade collar. (Fig. H)

**NOTE:** Pay attention to the pieces removed, noting their position and direction they face. Wipe the blade collars clean of any sawdust before installing the new blade.

**Fig. H**



### Installing Blade (Fig. F, G, H)

1. Install a 10 in. blade, making sure the rotation arrow on the blade matches the clockwise rotation arrow on the upper guard, and the blade teeth are pointing downward.
2. Place the outer blade collar (7) against the blade and on the arbor (9). Thread the arbor bolt (6) into the arbor (9) counterclockwise. (Fig. H)

**IMPORTANT:** Make sure the flats of the blade collars are engaged with the flats on the arbor shaft.

3. Place the blade wrench on the arbor bolt.
4. Press the arbor lock (5), holding it in firmly while turning the blade wrench counterclockwise. When it engages, continue to press the arbor lock in, while tightening the arbor bolt securely. (Fig. G)
5. Rotate the cover plate (3) back until the slot in the cover plate engages with the cover plate screw (2). Tighten the screw with a Phillips screwdriver. Lower the blade guard. (Fig. F)
6. Be sure the arbor lock is released so the blade turns freely by spinning the blade until the arbor lock.

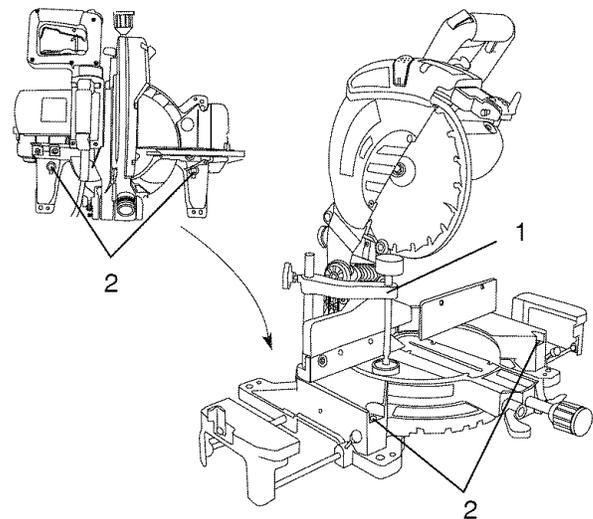
### **▲ WARNING**

- To avoid injury, never use the saw without the cover plate secure in place. It keeps the arbor bolt from falling out if it accidentally loosens, and helps prevent the spinning blade from coming off the saw.
- Make sure the collars are clean and properly arranged. Lower the blade into the table and check for any contact with the metal base or the turn table.

### INSTALLING THE HOLD-DOWN CLAMP ASSEMBLY (FIG. I)

1. Place the hold-down clamp assembly (1) in one of the mounting holes (2).

**Fig. I**



## MOUNTING THE MITER SAW ONTO A WORK SURFACE (FIG. J, K)

### **⚠ WARNING**

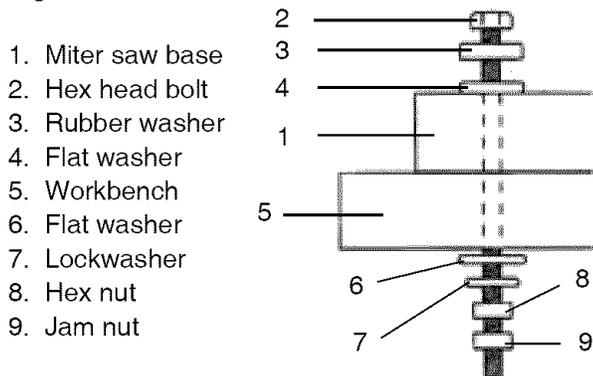
#### To avoid injury from unexpected saw movement:

- Disconnect the power cord from the outlet, and lock the cutting head in the lower position using the lock pin.
- Lock the slide carriage in place by tightening the slide carriage lock knob.
- To avoid back injury, lift the saw by using the designated carrying handle located on the top of the machine. When lifting, bend at your knees, not from your back.
- Never carry the miter saw by the power cord or by the switch handle. Carrying the tool by the power cord could cause damage to the insulation or the wire connections resulting in electric shock or fire.
- To avoid injury from flying debris, do not allow visitors to stand near the saw during all cutting operations.

#### Mounting instructions (if stand is not used)

1. **For stationary use**, place the saw in the desired location, directly on a workbench where there is room for handling and proper support of the workpiece. The base of the saw has four mounting holes. Bolt the base of the miter saw (1) to the work surface (5), using the fastening method as shown in Fig J.

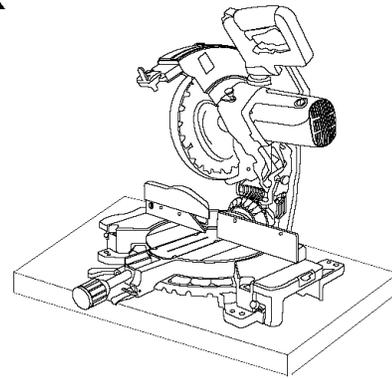
Fig. J



**NOTE:** Mounting hardware is not included with this tool. Bolts, nuts, washers, and screws must be purchased separately.

2. **For portable use**, place the saw on a 3/4 in. thick piece of plywood. Bolt the base of the miter saw securely to the plywood using the mounting holes on the base. Use C-clamps to clamp this mounting board to a stable work surface at the worksite. (Fig. K)

Fig. K



## ADJUSTMENT INSTRUCTIONS

### **⚠ WARNING**

**TO AVOID INJURY FROM AN ACCIDENTAL START, MAKE SURE THE SWITCH IS IN THE OFF POSITION AND THE PLUG IS NOT CONNECTED TO THE POWER SOURCE OUTLET.**

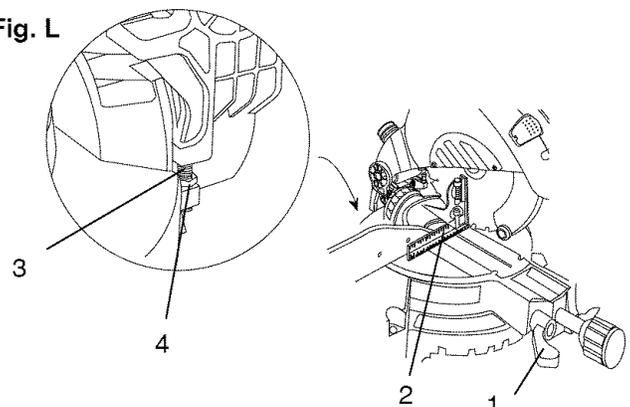
#### BEVEL STOP ADJUSTMENTS (FIG. L, M, N, O, P)

**NOTE:** To ensure accurate cuts, alignment should be checked and adjustments made prior to use.

#### 90° (0°) Bevel Adjustment

1. Loosen bevel lock handle (1) and tilt the cutting arm completely to the right. Tighten the bevel lock handle. Lower blade.
2. Place a combination square (2) on the miter table with the rule against the table and the heel of the square against the saw blade.
3. If the blade is not 90°(0°) square with the miter table, loosen the bevel lock handle (1), tilt the cutting head completely to the left, loosen the jamb nut (4) on the bevel angle adjustment bolt (3) and use a 10 mm wrench to adjust the bolt (3) in or out to increase or decrease the bevel angle.
4. Tilt the cutting arm to back to the right at 90°(0°) bevel and recheck for alignment.
5. Repeat steps 1 through 4 if further adjustment is needed.
6. Tighten bevel lock handle (1) and jamb nut (4) when alignment is achieved.

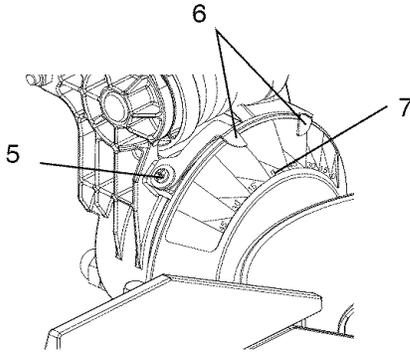
Fig. L



### 0° Bevel Pointer Adjustment (Fig. M)

1. When the blade is exactly 90° (0°) to the table, loosen the bevel indicator screw (5) using a # 2 Phillips screwdriver.
2. Adjust bevel indicator (6) to the "0" mark (7) on the bevel scale and retighten the screw.

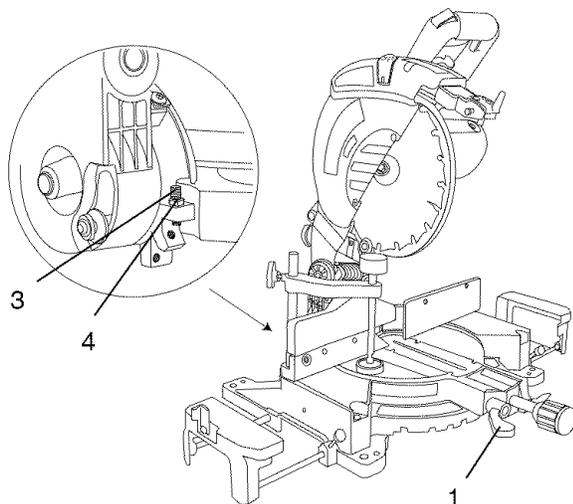
Fig. M



### 45° Left Bevel Positive Stop Adjustment (Fig. N)

1. Unlock the bevel lock handle (1) and tilt the cutting arm as far to the left as possible.
2. Using a combination square, check to see if the blade angle is 45° to the table.
3. If the blade is not at 45° to the miter table, tilt the cutting arm to the right, loosen the jamb nut (4) on the bevel angle adjustment bolt (3) and use a 10 mm wrench to adjust the bolt (3) in or out to increase or decrease the bevel angle.
4. Tilt the cutting arm to the left to 45° bevel and recheck for alignment.
5. Repeat steps 1 through 4 until the blade is at 45° to the miter table.
6. Tighten bevel lock handle (1) and jamb nut (4) when alignment is achieved.

Fig. N

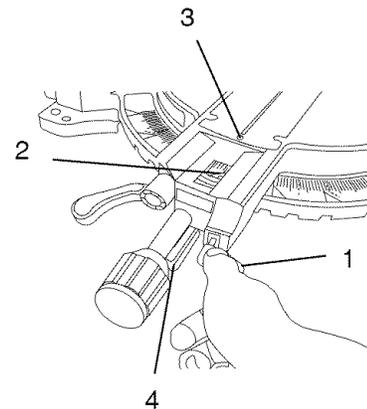


### MITER ANGLE ADJUSTMENT (FIG. O)

The compound miter saw scale can be easily read showing miter angles from 0° to 45° to the left and right. The most common angle cut setting slots have positive stops, permitting fast adjustments to the desired position. Follow the process below for quickest and most accurate adjustments.

1. Lift up on the miter quick lock (1) to unlock the table.
2. Move the turntable while lifting up on the positive stop locking lever (4) to align the indicator (2) to the desired degree measurement.
3. Lock the table into position by pressing down on the miter quick lock (1).

Fig. O



### MITER SCALE INDICATOR ADJUSTMENT (FIG. O)

1. Move the table to the 0° positive stop.
2. Loosen the screw (3) that holds the indicator with a screwdriver.
3. Adjust the indicator (2) to the 0° mark and retighten screw.

### TO SQUARE BLADE TO FENCE (FIG. P)

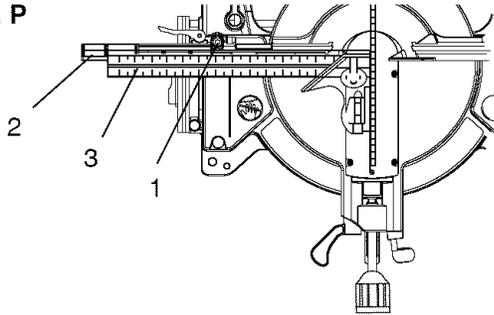
1. Turn the upper arm assembly to the 0° bevel position and lock in position. Fully extend both sliding fences.
2. Using a 6 mm hex key wrench, loosen the three fence locking hex socket bolts (1).
3. Lower the cutting head and lock it in the down position with the stop latch knob.
4. Using a combination square (3), lay the heel of the square against the blade, and the rule against the fence (2) as shown. Check to see if the fence is 90° to the blade.
5. If an adjustment is necessary, shift the fence until it is square to the blade. Tighten the three fence locking bolts (1) once alignment is achieved.

**CAUTION: If the saw has not been used recently, recheck blade squareness to the fence and readjust if needed.**

## **⚠ WARNING**

To avoid injury from unexpected starting or electrical shock, do not plug the saw in. The power cord **MUST** remain unplugged when you are working on the saw.

Fig. P



### **POSITIVE STOP MITER ANGLE ADJUSTMENT (FIG. Q)**

1. Unlock the miter table by lifting up on the miter quick-cam miter table lock (1).
2. While raising the positive stop locking lever (2) up, grasp the miter handle (3) and rotate the miter table left or right to the desired angle.
3. Release the positive stop locking lever and set the miter at the desired angle making sure the lever snaps into place. **NOTE:** The lever will only lock into place at one of the nine positive stops.
4. Once angle is achieved, press down on the quick-cam miter table lock (1).

### **QUICK-CAM MITER TABLE LOCK OPERATION (FIG. Q)**

If miter angles required are NOT one of the nine positive stops noted above, the miter table can be locked at any angle between these positive stops by using the Miter Quick-Cam table lock.

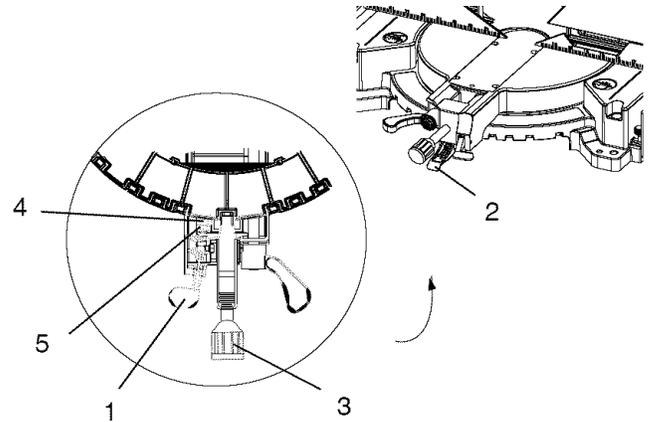
1. Unlock the miter table by lifting up on the miter quick-cam table lock (1).
2. While holding the positive stop locking lever (2) up, grasp the miter handle and move the miter table left or right to the desired angle.
3. Release the positive stop locking lever.
4. Press down on the Miter Quick-Cam locking lever (1) until it locks the miter table in place.

**NOTE:** The miter Quick-Cam locking lever should lock the table and prevent it from moving. If adjustment is needed, see next step.

### **QUICK-CAM MITER TABLE LOCK ADJUSTMENT (FIG. Q)**

1. Press down and lock the miter quick-cam table lock.
2. Using a 13 mm wrench, turn the stop nut (4) to the left as shown to extend the locking arm against the base of the miter saw.
3. Test the quick cam miter lock to verify it locks the table into position securely.
4. Turn the lock nut (5) to the right as shown to lock the miter locking mechanism into place.

Fig. Q



View of bottom of saw base

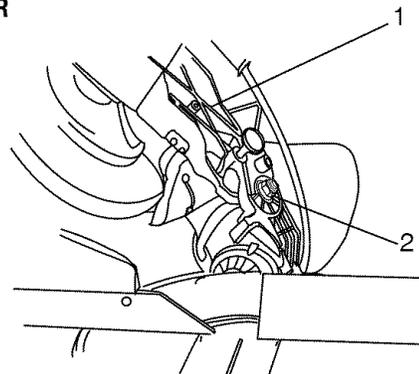
### **CUTTING ARM TRAVEL (FIG. R)**

#### **Cutting arm pivot adjustment**

The up and down pivot movement of the cutting arm should be free of side-to-side movement for accurate miter cuts. It should be tight enough to prevent side-to-side movement while still allowing the arm to move freely up and down when cutting.

1. If cutting arm (1) is too loose, use a 19 mm wrench to turn the cutting arm adjusting nut (2) clockwise.
2. If cutting arm travel is too tight, turn the cutting arm adjusting nut counterclockwise.

Fig. R



## ALIGNING THE LASER BEAM (FIG. T, T-1 & T-2)

### **⚠ WARNING**

For your own safety, never connect the plug to power source outlet until all the adjustment steps are complete and you have read and understood the safety and operational instructions.

The laser beam must always be correctly aligned with the blade to ensure straight, even cutting.

Your saw is equipped with a Dual View Laser Trac® system. The laser beam projects a line onto the workpiece for viewing at both top and front angles of the board.

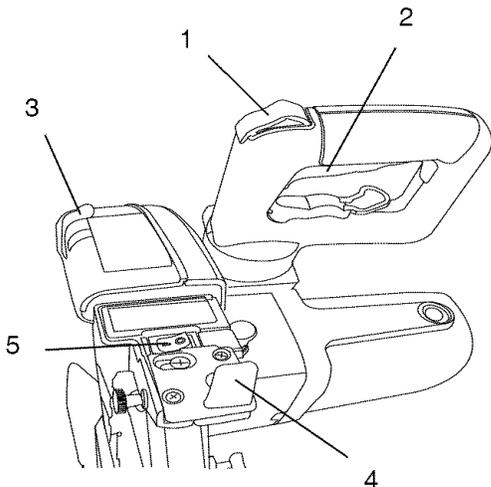
### A. Slide out Laser Guide (Fig. T).

### **⚠ WARNING**

Laser radiation. Avoid direct eye exposure. Always un-plug miter saw from power source before making any adjustments.

1. Unlock the laser guide lever (3) by flipping it to the left.
2. Slide out the laser guide assembly by pulling on the tab (4).
3. Lock the laser guide assembly into place by pushing the locking lever to the right side of the saw.
4. To turn the laser ON or OFF, press the rocker switch (5).

Fig. T



### B. Check Laser Beam Alignment.

1. Mark a straight line across a board to serve as a "pattern line" to test laser alignment. Lay the board on the miter table.
2. Turn on the laser beam and line it up with the pattern line.
3. Check to see that laser beam is aligned from top to bottom of pattern line. If laser beam is not aligned to the pattern line, adjust as follows in procedures C and D.

### C. Laser Beam Fine Adjustment (Fig. T-1, T-2)

1. Lower blade and align with pattern line in board. Raise blade.
2. Loosen screw (1).
3. Turn thumbscrew (2-Fig. T-1) to move laser beam left or right to align with pattern line (Fig. T-2).
4. Tighten screw (1) when laser is in desired position.

Fig. T-1

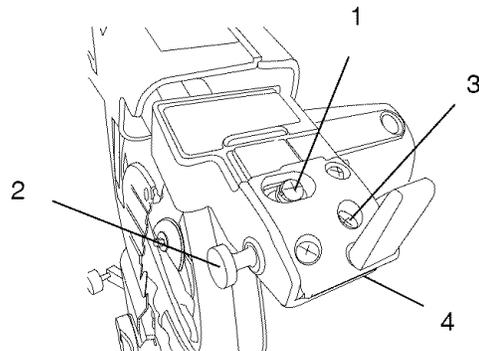
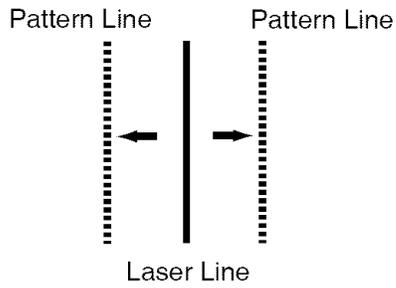


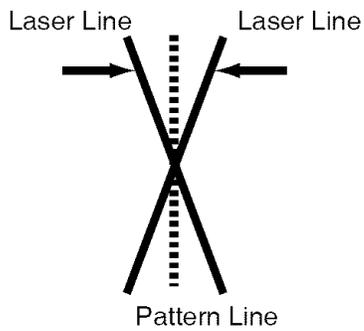
Fig. T-2



**D. Aligning Parallelism (Fig. T-1, T-3 )**

1. Adjust laser line parallel to pattern line by turning screw (3) (Fig. T-1). **NOTE:** Do not overturn this screw or it may damage internal wiring. Maximum screw turn is 1/8 turn in each direction.
2. Move laser close to pattern line by turning screw (4).
3. Fine tune alignment of laser is achieved by adjusting screw (4) no more than 1/8 turn in each direction.

Fig. T-3



# OPERATION

## SAFETY INSTRUCTIONS FOR BASIC SAW OPERATION

### BEFORE USING THE MITER SAW

#### WARNING

To avoid mistakes that could cause serious, permanent injury, do not plug the tool in until the following steps are completed:

- Completely assemble and adjust the saw, following the instructions. **(ASSEMBLY AND ADJUSTMENTS)**
- Learn the use and function of the ON/OFF switch, lock-off switch, upper and lower blade guards, stop latch, bevel lock handle, and cover plate screws.
- Review and understand all safety instructions and operating procedures in this Operator's Manual. **(SAFETY & OPERATIONS)**
- Review the **MAINTENANCE** and **TROUBLESHOOTING GUIDE** for your miter saw.
- To avoid injury or possible death from electrical shock:  
Make sure your fingers do not touch the plug's metal prongs when plugging or unplugging your miter saw. **(ELECTRICAL REQUIREMENTS AND SAFETY)**

### BEFORE EACH USE INSPECT YOUR SAW.

- **Disconnect the miter saw.** To avoid injury from accidental starting, unplug the saw before any adjustments, including set-up and blade changes.
- **Compare the direction of rotation arrow** on the guard to the direction arrow on the blade. The blade teeth should always point downward at the front of the saw.
- **Tighten the arbor bolt.**
- **Tighten the cover plate screw.**
- **Check for damaged parts.** Check for:
  - Alignment of moving parts
  - Damaged electric cords
  - Binding of moving parts
  - Mounting holes
  - Function of arm return spring and lower guard: Push the cutting arm all the way down, then let it rise until it stops. The lower guard should fully close. Follow instructions in **TROUBLESHOOTING GUIDE** for adjustment if necessary.
  - Other conditions that may affect the way the miter saw works.
- Keep all guards in place, in working order and proper adjustment. If any part of this miter saw is missing, bent, damaged or broken in any way, or any electrical parts don't work, turn the saw off and unplug it.

- Replace bent, damaged, missing or defective parts before using the saw again.
- Maintain tools with care. Keep the miter saw clean for best and safest performance. Follow instructions for lubricating. Don't put lubricants on the blade while it's spinning.
- Remove adjusting wrench from the tool before turning it on.
- To avoid injury from jams, slips, or thrown pieces, use only recommended accessories.

### RECOMMENDED ACCESSORIES

- Consult the **ACCESSORIES** and **ATTACHMENTS** section of this Operators Manual for recommended accessories. Follow the instructions that come with the accessory. The use of improper accessories may cause risk of injury to persons.
- Choose the correct 10 in. diameter blade for the material and the type of cutting you plan to do. Do not use thin kerf blades.
- Make sure the blade is sharp, undamaged and properly aligned. With the saw unplugged, push the cutting arm all the way down. Manually spin the blade and check for clearance. Tilt the power-head to a 45° bevel and repeat the test.
- Make sure the blade and arbor collars are clean.
- Make sure all clamps and locks are tight and there is no excessive play in any parts.

### KEEP YOUR WORK AREA CLEAN

Cluttered areas and benches invite accidents.

#### WARNING

To avoid burns or other fire damage, never use the miter saw near flammable liquids, vapors, or gases.

- Plan ahead to protect your eyes, hands, face and ears.
- Know your miter saw.  
Read and understand the Operator's Manual and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool. To avoid injury from accidental contact with moving parts, don't do layout, assembly, or setup work on the miter saw while any parts are moving.
- Avoid accidental starting  
Make sure the trigger switch is disengaged before plugging the miter saw into a power outlet.

## PLAN YOUR WORK

- Use the right tool. Don't force a tool or attachment to do a job it was not designed to do. Use a different tool for any workpiece that can't be held in a solidly braced, fixed position.

**CAUTION: This machine is not designed for cutting masonry, masonry products, ferrous metals (steel, iron, and iron-based metals.) Use this miter saw to cut only wood, wood-like products, or non-ferrous metals. Other material may shatter, bind the blade, or create other dangers. Remove all nails that may be in the workpiece to prevent sparking that could cause a fire. Remove dust bag when cutting non-ferrous metals.**

## DRESS FOR SAFETY

Any power tool can throw foreign objects into the eyes. This can result in permanent eye damage. Everyday eyeglasses have only impact resistant lenses and are not safety glasses. Glasses or goggles not in compliance with ANSI Z87.1 could seriously injure you when they break.

- Do not wear loose clothing, gloves, neckties or jewelry (rings, watches). They can get caught and draw you into moving parts.
- Wear non-slip footwear.
- Tie back long hair.
- Roll long sleeves above the elbow.
- Noise levels vary widely. To avoid possible hearing damage, wear ear plugs when using any miter saw.
- For dusty operations, wear a dust mask along with safety goggles.

## INSPECT YOUR WORKPIECE

Make sure there are no nails or foreign objects in the part of the workpiece being cut.

Plan your work to avoid small pieces that may bind, or that are too small to clamp and get a solid grasp on.

Plan the way you will grasp the workpiece from start to finish. Avoid awkward operations and hand positions. A sudden slip could cause your fingers or hand to move into the blade.

## DO NOT OVER-REACH

Keep good footing and balance. Keep your face and body to one side, out of the line of a possible kickback. NEVER stand in the line of the blade.

## Never cut freehand:

- Brace your workpiece firmly against the fence and table stop so it will not rock or twist during the cut.
- Make sure there is no debris between the workpiece and the table or fence.
- Make sure there are no gaps between the workpiece, fence and table that will let the workpiece shift after it is cut.

- Keep the cut off piece free to move sideways after it is cut off. Otherwise, it could get wedged against the blade and thrown violently.
- Only the workpiece should be on the saws table.
- Secure work. Use clamps or a vise to help hold the work when it's practical.

## USE EXTRA CAUTION WITH LARGE OR ODD SHAPED WORKPIECES.

- Use extra supports (tables, sawhorses, blocks, etc.) for workpieces large enough to tip.
- Never use another person as a substitute for a table extension, or as an additional support for a workpiece that is longer or wider than the basic miter saw table, or to help feed, support, or pull the workpiece.
- Do not use this saw to cut small pieces. If the workpiece being cut would cause your hand or fingers to be within 6-3/4 inches of the saw blade the workpiece is too small. Keep hands and fingers out of the "no hands zone" area marked on the saws table.
- When cutting odd shaped workpieces, plan your work so it will not bind in the blade and cause possible injury. Molding, for example, must lie flat or be held by a fixture or jig that will not let it move when cut.
- Properly support round material such as dowel rods, or tubing, which have a tendency to roll when cut, causing the blade to "bite".

## WARNING

**To avoid injury, follow all applicable safety instructions, when cutting non-ferrous metals:**

- Use only saw blades specifically recommended for non-ferrous metal cutting.
- Do not cut metal workpieces that must be hand held. Clamp workpieces securely.
- Cut non-ferrous metals only if you are under the supervision of an experienced person and the dust bag has been removed from the saw.

## WHEN SAW IS RUNNING

## WARNING

**Do not allow familiarity from frequent use of your miter saw to result in a careless mistake. A careless fraction of a second is enough to cause a severe injury.**

**Before cutting, if the saw makes an unfamiliar noise or vibrates, stop immediately. Turn the saw OFF. Unplug the saw. Do not restart until finding and correcting the problem.**

## BODY AND HAND POSITION (FIG. W)

### **⚠ WARNING**

Never place hands near the cutting area. Proper positioning of your body and hands when operating the miter saw will make cutting easier and safer. Keep children away. Keep all visitors at a safe distance from the miter saw. Make sure bystanders are clear of the saw and workpiece. Don't force the saw. It will do the job better and safer at its designed rate.

#### Starting a cut:

- Place hands at least 6-3/4 in. away from the path of the blade – out of the “no-hands zone” (1). (Fig. W)
- Hold workpiece firmly against the fence to prevent movement toward the blade.
- With the power switch OFF, bring the saw blade down to the workpiece to see the cutting path of the blade.
- Press in lock-off switch in trigger switch handle.
- Squeeze trigger switch to start saw.
- Lower blade into workpiece with a firm downward motion.

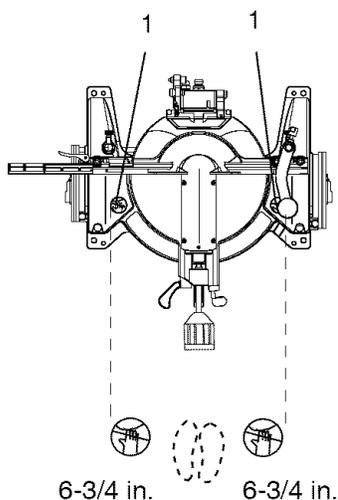
#### Finishing a cut:

- Hold the cutting arm in the down position.
- Release trigger switch and wait for all moving parts to stop before moving your hands and raising the cutting arm.
- If the blade doesn't stop within 6 seconds, unplug the saw and follow the instructions in TROUBLESHOOTING GUIDE section for adjusting the blade brake before using the saw again.

#### Before freeing jammed material:

- Release trigger switch.
- Wait for all moving parts to stop.
- Unplug the miter saw.

Fig. W



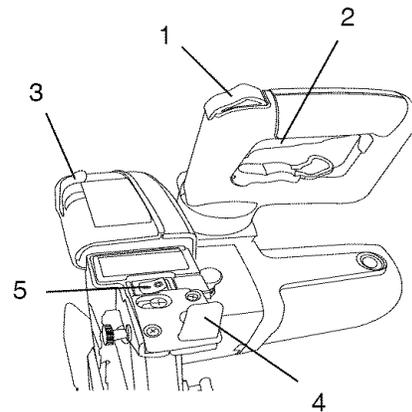
## TURNING THE SAW ON (FIG. X)

To reduce the likelihood of accidental starting, a thumb activated lock-OFF switch is located on top of the switch handle. The lock-OFF switch (1) must be pressed forward before the trigger switch (2) can be activated and the miter saw started.

### **⚠ WARNING**

Make the switch child-proof. Insert a padlock, or chain with padlock, through the hole of the trigger switch, and lock it. This will prevent children and other unauthorized users from turning the machine on.

Fig. X



## LASER ON/OFF SWITCH (FIG. X)

### **⚠ WARNING**

Laser radiation. Avoid direct eye exposure. Always un-plug miter saw from power source before making any adjustments.

1. Unlock the laser guide lever (3) by flipping it to the left.
2. Slide out the laser guide assembly by pulling on the tab (4).
3. Lock the laser guide assembly into place by pushing the locking lever to the right side of the saw.
4. To turn the laser ON or OFF, press the rocker switch (5).

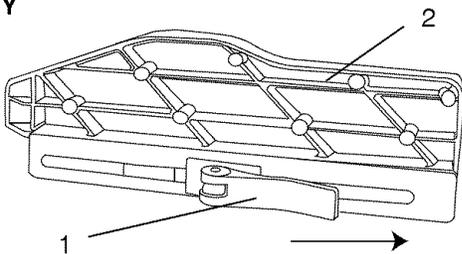
## SLIDING FENCE (FIG. Y)

### **▲ WARNING**

The sliding fence must be extended when making any bevel cut. Failure to extend the sliding fence will not allow enough space for the blade to pass through which could result in serious injury. At extreme miter or bevel angles the saw blade may also contact the fence.

1. Unlock the fence cam locking lever (1) by pushing it toward the rear of the machine.
2. Extend the fence (2) by sliding it out to match the degree of the bevel cut. Lock the fence cam locking lever by pushing it IN toward the fence. **NOTE:** When transporting the saw, always secure the sliding fence in the collapsed position (toward the saw blade).

Fig. Y



## BEFORE LEAVING THE SAW

- Never leave tool running unattended. Turn power OFF. Wait for all moving parts to stop.
- Make workshop child proof. Lock the shop. Disconnect master switches. Store tool away from children and other unqualified users.

### **▲ WARNING**

To avoid injury from materials being thrown, always unplug the saw to avoid accidental starting, and remove small pieces of material from the table cavity.

## MITER CUT (FIG. AA)

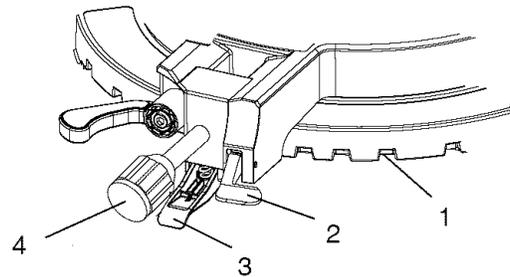
The miter saw is equipped with nine positive miter stops (1) on the saw base. The locations are at 0, 15, 22.5, 31.6 and 45 degrees left and right. These locations represent the most common angles for cutting operation. To make a miter cut:

1. Unlock the miter table by lifting up on the miter quick-cam table lock (2).
2. While raising the positive stop locking lever up (3), grasp the miter handle (4) and rotate the miter table left or right to the desired angle.
3. Release the positive stop locking lever and set the miter at the desired angle making sure the lever

snaps into place. **NOTE:** The lever will only lock into place at one of the nine positive stops.

4. Once the desired miter angle is achieved, press down on the quick cam miter table lock to secure the table into position.
5. If the miter angle desired is NOT one of the nine positive stops noted above, simply lock the table at the desired angle by pressing down on the quick-cam miter table lock (2). For detailed instructions, refer to page 15, QUICK-CAM MITER TABLE LOCK OPERATION.

Fig. AA



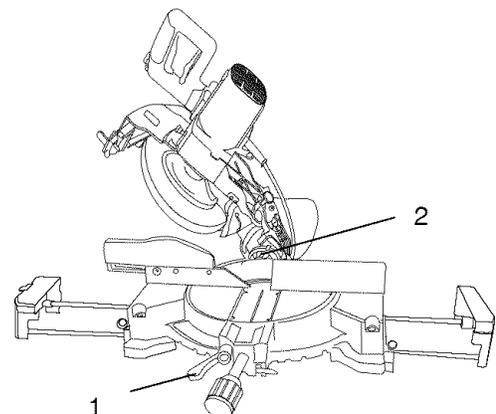
## BEVEL CUT (FIG. BB)

### **▲ WARNING**

The sliding fence must be extended when making any bevel cut. Failure to extend the sliding fence will not allow enough space for the blade to pass through which could result in serious injury. At extreme miter or bevel angles the saw blade may also contact the fence.

1. Loosen the bevel lock handle (1).
2. Tilt the cutting head to the desired angle as shown on the bevel scale (2).
3. The blade can be positioned at any angle, from a 90° straight cut (0° on the scale) to a 45° left bevel.
4. Tighten the lock handle (1) to lock the cutting head in position.

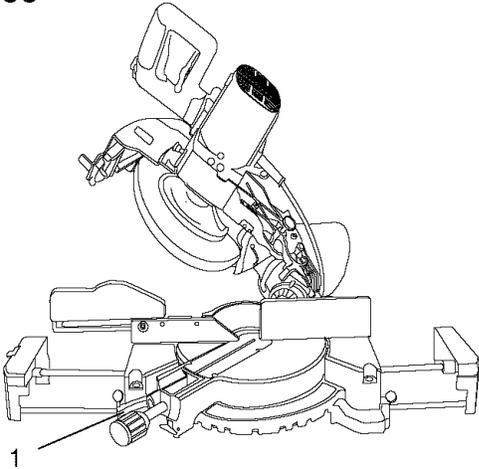
Fig. BB



### COMPOUND CUT (FIG. CC)

1. Extend the sliding fence as described in SLIDING FENCE (Fig. Y).
2. Set the desired bevel angle using the bevel lock handle (1).
3. Set the desired miter angle and lock into position. See "MITER CUT".

Fig. CC



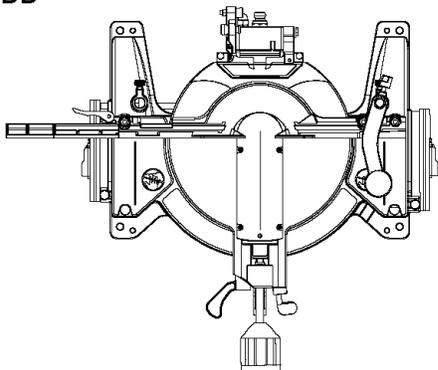
### CUTTING BOWED MATERIAL (FIG. DD)

#### **⚠ WARNING**

To avoid injury from materials being thrown, always unplug the saw to avoid accidental starting and remove small pieces of material from the table cavity.

Before cutting a workpiece, check to make sure it is not bowed. If it is bowed, the workpiece must be positioned and cut as illustrated. Do not position the workpiece incorrectly or try to cut the workpiece without the support of the fence. This will cause the blade to bind and could result in personal injury.

Fig. DD

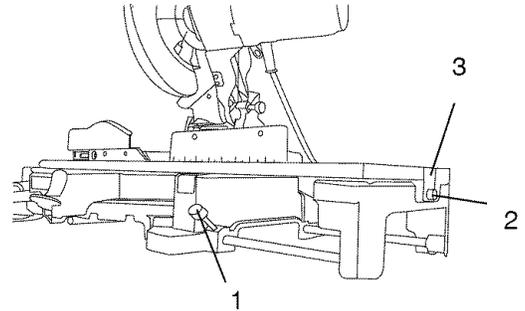


### WORKPIECE SUPPORT & REPETITIVE CUTTING USING THE STOP PLATE (FIG. EE)

Long pieces need extension table support.

1. Loosen the knob (1) then slide the extension wing to desired position and tighten the knob.
2. The stop plate is designed for use during repetitive cutting. Only use one stop plate at a time. Rotate the stop plate (3) to vertical position, and retighten the locking bolt (2) 1/4 turn.

Fig. EE

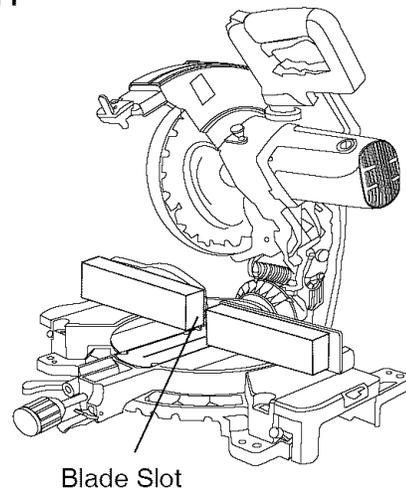


### AUXILIARY WOOD FENCE (FIG. FF)

When making multiple or repetitive cuts that result in cut-off pieces of one inch or less, it is possible for the saw blade to catch the cut-off piece and throw it out of the saw or into the blade guard and housing, possibly causing damage or injury. To minimize this an auxiliary wood fence can be mounted to your saw.

Holes are provided in the saw fence to attach an auxiliary wood fence (this provides additional depth of cut). This fence should be constructed of straight auxiliary wood approximately 3/4 in. thick by 1-1/2 in. high by 20 in. long. Attach the wood fence securely and make a full depth cut to make a blade slot. Check for interference between the wood fence and the lower blade guard. Adjust if necessary.

Fig. FF

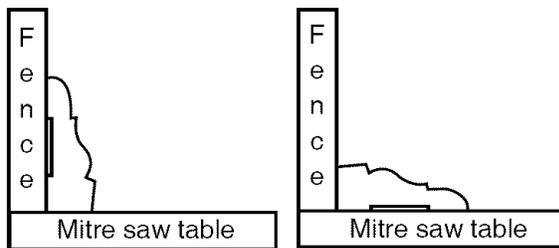


### CUTTING BASE MOLDING (FIG. GG)

Base moldings and many other moldings can be cut on a compound miter saw. The setup of the saw depends on molding characteristics and application, as shown. Perform practice cuts on scrap material to achieve best results:

1. Always make sure moldings rest firmly against fence and table. Use hold-down, crown molding vise or C-clamps, whenever possible and place tape on the area being clamped to avoid marks.
2. Reduce splintering by taping the cut area prior to making the cut. Mark the cut line directly on the tape.
3. Splintering typically happens due to an incorrect blade application and thickness of the material.

Fig. GG



**NOTE:** Always perform a dry run cut so you can determine if the operation being attempted is possible before power is applied to the saw.

### CUTTING CROWN MOLDING (FIG. HH, II)

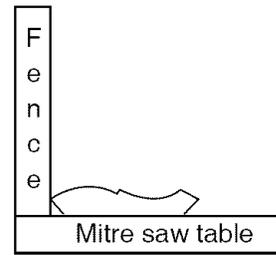
Your compound miter saw is suited for the difficult task of cutting crown molding. To fit properly, crown molding must be compound-mitered with extreme accuracy. The two surfaces on a piece of crown molding that fit flat against the ceiling and wall are at angles that, **when added together, equal exactly 90°.**

Most crown molding has a top rear angle (the section that fits flat against the ceiling) of 52° and a bottom rear angle (the section that fits flat against the wall) of 38°.

In order to accurately cut crown molding for a 90° inside or outside corner, lay the molding with its broad back surface flat on the saw table.

When setting the bevel and miter angles for compound miters, remember that the settings are interdependent; changing one changes the other, as well.

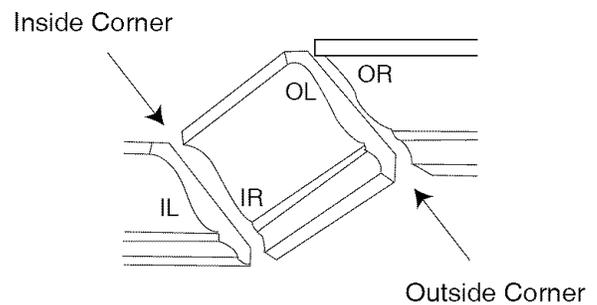
Fig. HH



### Bevel/Miter Settings

Fig. II

Settings for standard crown molding lying flat on compound miter saw table



Compound Cut Crown Moldings

**NOTE:** The chart below references a compound cut for crown molding ONLY WHEN THE ANGLE BETWEEN THE WALLS EQUALS 90°.

KEY	BEVEL SETTING	Miter SETTING	TYPE OF CUT
<b>Inside corner-Left side</b>			
IL	33.9°	31.6° Right	1. Position top of molding against fence. 2. Miter table set at RIGHT 31.6°. 3. LEFT side is finished piece.
<b>Inside corner-Right side</b>			
IR	33.9°	31.6° Left	1. Position bottom of molding against fence. 2. Miter table set at LEFT 31.6°. 3. LEFT side is finished piece.
<b>Outside corner-Left side</b>			
OL	33.9°	31.6° Left	1. Position bottom of molding against fence. 2. Miter table set at LEFT 31.6°. 3. RIGHT side is finished piece.
<b>Outside corner-Right side</b>			
OR	33.9°	31.6° Right	1. Position top of molding against fence. 2. Miter table set at RIGHT 31.6°. 3. RIGHT side is finished piece.

# INSTALLING / CHANGING THE LASER BATTERIES

## INSTALLING / CHANGING

- Unplug your saw.

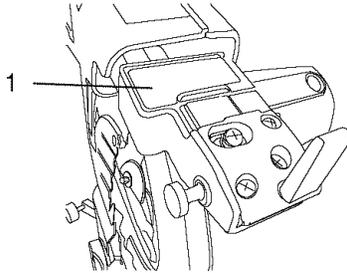
### **⚠ WARNING**

**Failure to unplug your saw could result in accidental starting causing possible serious personal injury.**

1. Flip laser guide locking lever to left.
2. Use laser guide tab to pull out laser guide.
3. Lift open the battery guide cover (1).
4. Install two batteries with 1.5 volt AAA size.

**NOTE:** When replacing the batteries, the battery guide should be thoroughly cleaned. Use a soft paintbrush or similar device, to remove any sawdust and debris.

**Fig. JJ**



# MAINTENANCE

## MAINTENANCE

### **⚠ DANGER**

To avoid injury, never put lubricants on the blade while it is spinning.

### **⚠ WARNING**

To avoid fire or toxic reaction, never use gasoline, naphtha acetone, lacquer thinner or similar highly volatile solvents to clean the miter saw.

### **⚠ WARNING**

To avoid injury from unexpected starting or electrical shock, unplug the power cord before working on the saw.

### **⚠ WARNING**

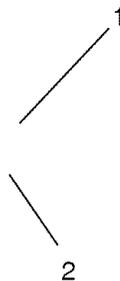
For your safety, this saw is double-insulated. To avoid electrical shock, fire or injury, use only parts identical to those identified in the parts list. Reassemble exactly as the original assembly to avoid electrical shock.

### REPLACING CARBON BRUSHES (FIG. KK)

Replace both carbon brushes when either has less than 1/4 in. length of carbon remaining, or if the spring or wire is damaged or burned. To inspect or replace brushes, first unplug the saw. Then remove the black plastic cap (1) on the side of the motor (2). Remove the cap cautiously, because it is springloaded. Then pull out the brush and replace. Replace for the other side. To reassemble reverse the procedure. The ears on the metal end of the assembly go in the same hole the carbon part fits into. Tighten the cap snugly, but do not overtighten.

**NOTE:** To reinstall the same brushes, first make sure the brushes go back in the way they came out. This will avoid a break-in period that reduces motor performance and increases wear.

Fig. KK



### LOWER BLADE GUARD

Do not use the saw without the lower blade guard. The lower blade guard is attached to the saw for your protection. Should the lower guard become damaged, do not use the saw until the damaged guard has been replaced. Develop a regular check to make sure the lower guard is working properly. Clean the lower guard of any dust or buildup with a damp cloth.

**CAUTION:** Do not use solvents on the guard. They could make the plastic "cloudy" and brittle.

### **⚠ WARNING**

When cleaning the lower guard, unplug the saw from the power source receptacle to avoid unexpected startup.

### SAWDUST

Periodically, sawdust will accumulate under the work table and base. This could cause difficulty in the movement of the worktable when setting up a miter cut. Frequently blow out or vacuum up the sawdust.

### **⚠ WARNING**

If blowing sawdust, wear proper eye protection to keep debris from blowing into eyes.

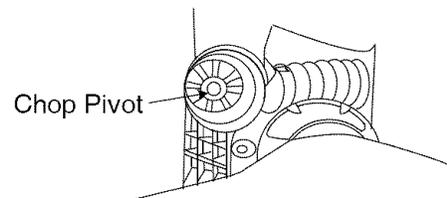
### LUBRICATION

All the motor bearings in this tool are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions; therefore, no further bearing lubrication is required.

Lubricate the following as necessary:

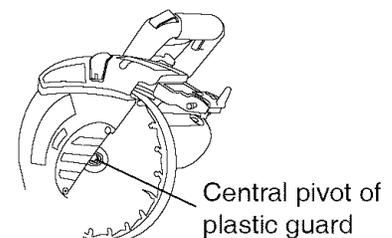
**Chop pivot:** Apply light machine oil to points indicated in illustration.

Fig. LL



**Central pivot of plastic guard:** Use light household oil (sewing machine oil) on metal-to-metal or metal-to-plastic guard contact areas as required for smooth, quiet operation. Avoid excessive oil, to which sawdust will cling.

Fig. MM



# TROUBLESHOOTING GUIDE

## **▲ WARNING**

To avoid injury from accidental starting, always turn switch OFF and unplug the tool before moving, replacing the blade or making adjustments.

### TROUBLESHOOTING GUIDE - MOTOR

PROBLEM	PROBLEM CAUSE	SUGGESTED CORRECTIVE ACTION
Brake does not stop blade within 6 seconds.	<ol style="list-style-type: none"> <li>1. Motor brushes not sealed or lightly sticking.</li> <li>2. Motor brake overheated from use of defective or wrong size blade or rapid ON/OFF cycling.</li> <li>3. Arbor bolt loose.</li> <li>4. Other.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect/clean/replace brushes. See MAINTENANCE section.</li> <li>2. Use a recommended blade. Let cool down. See REMOVING OR INSTALLING THE BLADE section.</li> <li>3. Retighten. See REMOVING OR INSTALLING THE BLADE section.</li> <li>4. Sears Service Center.</li> </ol>
Motor does not start	<ol style="list-style-type: none"> <li>1. Fuse Blown</li> <li>2. Brush worn.</li> <li>3. Other.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check fuse or circuit breaker. See ELECTRICAL REQUIREMENTS section.</li> <li>2. Replace brushes. See MAINTENANCE section.</li> <li>3. Sears Service Center.</li> </ol>
Brush spark when switch released.	<ol style="list-style-type: none"> <li>1. Brush worn.</li> <li>2. Other.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace Brushes. See MAINTENANCE section.</li> <li>2. See Sears Service Center.</li> </ol>

### TROUBLESHOOTING GUIDE - SAW OPERATION

PROBLEM	PROBLEM CAUSE	SUGGESTED CORRECTIVE ACTION
Blade hits table.	<ol style="list-style-type: none"> <li>1. Misalignment.</li> </ol>	<ol style="list-style-type: none"> <li>1. See ADJUSTMENT - Cutting Arm Travel section.</li> </ol>
Angle of cut not accurate. Can not adjust miter.	<ol style="list-style-type: none"> <li>1. Miter table unlocked.</li> <li>2. Sawdust under table.</li> </ol>	<ol style="list-style-type: none"> <li>1. See OPERATION - Miter Angle Adjustment section.</li> <li>2. Vacuum or blow out dust. WEAR EYE PROTECTION.</li> </ol>
Cutting arm wobbles.	<ol style="list-style-type: none"> <li>1. Loose pivot points.</li> </ol>	<ol style="list-style-type: none"> <li>1. See ADJUSTMENT - Cutting Arm Travel section.</li> </ol>
Cutting arm will not fully raise, or blade guard won't fully close.	<ol style="list-style-type: none"> <li>1. Part failure.</li> <li>2. Pivot spring not replaced properly after service.</li> <li>3. Sawdust build-up.</li> </ol>	<ol style="list-style-type: none"> <li>1. Sears Service Center.</li> <li>2. Sears Service Center.</li> <li>3. Clean and lubricate moving parts.</li> </ol>
Blade binds, jams, burns wood.	<ol style="list-style-type: none"> <li>1. Improper operation.</li> <li>2. Dull blade.</li> <li>3. Improper blade size.</li> <li>4. Warped blade.</li> </ol>	<ol style="list-style-type: none"> <li>1. See BASIC SAW OPERATION section.</li> <li>2. Replace or sharpen blade.</li> <li>3. Replace with 10 in. diameter blade.</li> <li>4. Replace blade.</li> </ol>
Saw vibrates or shakes.	<ol style="list-style-type: none"> <li>1. Saw blade not round.</li> <li>2. Saw blade damaged.</li> <li>3. Saw blade loose.</li> <li>4. Other.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace blade.</li> <li>2. Replace blade.</li> <li>3. Tighten arbor bolt.</li> <li>4. Sears Service Center.</li> </ol>

# PARTS LIST

10 in. COMPOUND MITER SAW

MODEL NO. 137.212520



**WARNING**

When servicing use only CRAFTSMAN replacement parts. Use of any other parts may create a HAZARD or cause product damage. Any attempt to repair or replace electrical parts on this Miter Saw may create a HAZARD unless repair is done by a qualified service technician. Repair service is available at your nearest Sears Service Center.

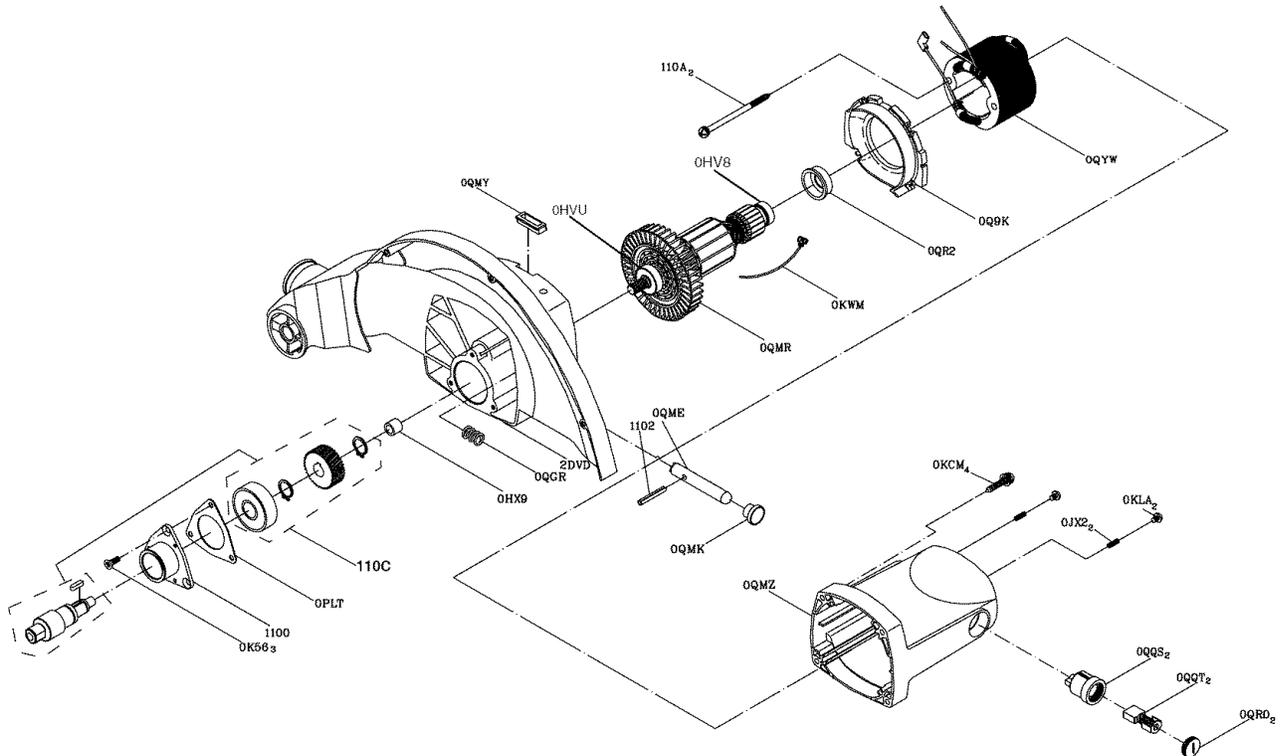
## PARTS LIST FOR SAW SCHEMATIC

I.D.	Description	Size	QTY	I.D.	Description	Size	QTY
0831	SHAFT SLEEVE		1	0KDJ	CR. RE. PAN HD. SCREW	M5*0.8-12	4
0833	LEVER	#6	1	0KDR	CR. RE. PAN HD. SCREW	M5*0.8-10	1
0836	PC-GUARD		1	0KMS	HEX. NUT	M6*1.0 T=5	3
0841	HANDLE		1	0KQW	LOCK NUT	M5*0.8 T=5	2
081J	TABLE INSERT		1	0KQX	NUT	M6*1.0 T=6	2
082Q	LOCK NUT		1	0KQY	LUCK NUT	M8*1.25 T=8	1
083S	TRIGGER		1	0KQZ	NUT	M10*1.5 T=10	1
083V	HANDLE		1	0KR0	NUT	M12*1.75 T=12	1
083X	BUTTON SWITCH		1	0KR1	LUCK NUT	M16*2.0 T=16	1
083Y	COMPRESSION SPRING		1	0KR3	LOCK NUT	M6*1.0 T=6	1
083Z	CORD CLAMP		1	0KR4	LOCK NUT	M8*1.25 T=8	1
084C	HANDLE SEAT	#AW	1	0KTT	CABLE CLAMP		1
084D	HANDLE SEAT		1	0KUX	TERMINAL		4
084K	SET PLATE		1	0KWT	LEAD WIRE ASS'Y		1
084M	STOP CLAMP		1	0L8A	POWER CABLE		1
084Q	COMPRESSION SPRING		1	0LU2	LIMIT SWITCH		1
084S	TILTING SCALE		1	0QQ1	CORD GUARD		1
084V	ELBOW		1	0S2X	LOCK HANDLE ASS'Y		1
084W	WARNING LABEL		1	0STZ	TRADE-MARK LABEL		1
085C	FOLLOWER PLATE		1	2145	HANDLE ASS'Y		1
085D	SLIDE PLATE		1	2146	LASER ASS'Y		1
085E	SPACER		1	20KY	TORSION SPRING		1
0BD1	CUSHION		1	20S3	LOCKING HANDLE ASS'Y		1
0CES	COMPRESSION SPRING		1	21EF	SPRING GUARD		1
0CKS	SPRING WIRE		1	23TE	POINTER		1
0CV5	DUST BAG ASS'Y		1	25TE	FENCE	#23	1
0D7W	CLEVIS PIN		1	25TF	FENCE	#23	1
0D7X	SHAFT		1	25V2	KNOB		2
0D7Z	KNOB-HANDLE		1	25V3	KNOB		2
0D99	SHIM		1	25Z6	LOCKING HANDLE ASS'Y		1
0D9A	ANCHOR BLOCK		1	26LR	WARNING LABEL		1
0DT4	ROLLING WHEEL		1	26LU	WARNING LABEL		1
0DT7	BEARING		1	26NH	SPECIAL NUT		1
0DTH	CENTER BOLT		1	2794	TRADE-MARK LABEL		1
0DVJ	HEX. WRENCH	#6	1	272Y	BOLT		2
0FHE	COMPRESSION SPRING		1	27BC	SAFETY CLAMP ASS'Y		1
0J4E	FLAT WASHER	φ6*13-1	1	27FG	LOCKING HANDLE ASS'Y		1
0J4N	FLAT WASHER	φ16*30-3	2	27NB	ARBOR COLLAR		2
0J4Z	FLAT WASHER	φ12X20-3	1	27NH	ASSIST-FENCE	#AW	1
0J53	FLAT WASHER	φ8.4*24-2	1	28N2	BATTERY		1
0J6A	FLAT WASHER	φ8*16-2.5	1	290M	CAUTION LABEL		1
0J78	FLAT WASHER	1/4*1/2-3/32	1	29TP	CAUTION LABEL(LASER)		1
0J7K	FLAT WASHER	3/8*29/32-5/64	1	2A47	HEX. HD. SCREW AND WASHER	M6*1.0-12	2
0J7R	FLAT WASHER	1/2*1-3/64	1	2A9X	TENSION PLATE		1
0J80	FLAT WASHER	5/32*13/32-3/64	1	2AH6	LOCKING ROD		1
0J95	SPRING WASHER	φ6	1	2AH7	COMPRESSION SPRING		1
0JAZ	WAVE WASHER		2	2AHC	SHAFT-PIVOT		1
0JB3	WAVE WASHER		1	2AHE	SPECIAL BOLT		1
0JEM	C-RING		1	2AHL	SET PLATE		1
0JET	E-RING		1	2AHV	PLUNGER HANDLE		1
0JEV	E-RING		1	2AHX	SLIDE PLATE		3
0JFB	SELF-LOCKING RING		1	2AJ3	CLAMP HANDLE	#AW	1
0JMM	O-RING		1	2C88	BLADE		1
0JMQ	O-RING		2	2CY7	FOLLOWER PLATE(LEFT)	#AW	1
0JUD	HEX. SOC. HD. CAP BOLT	M5*0.8-20	1	2CYW	EXTENSION TABLE(RIGHT)	#AW	1
0JUK	HEX. SOC. HD. CAP BOLT	M6*1.0-16	2	2CYX	EXTENSION TABLE	#AW	1
0JVD	HEX. SOC. HD. CAP BOLT	M5X0.8-35	1	2D69	FENCE		1
0JXC	HEX. SOC. SET SCREW	M6*1.0-20	1	2D4D	SCALE		1
0JZF	HEX. SOC. SET SCREW	M6*1.0-10	2	2DBM	PIN		1
0JZ7	HEX. SOC. SET SCREW	M6*1.0-30	2	2DBR	HEX. HD. SCREW AND WASHER	M6*1.0-16	1
0JZN	ARBOR BOLT	M8*1.25-20	1	2DE8	UPER TUBE	#6	2
0K2L	HEX.SOCKET HD.CAP SCREWS	M8X1.25-30	2	2DMW	SCREW STOP		1
0K2N	HEX SOC. HD. CAP SCREW	M8*1.25-25	1	2DS1	UPER TUBE	#6	2
0K42	CR.RE. PAN HD. SCREW & WASHER	M6*1.0-30	3	2DS2	NEEDLE POINTER (RIGHT)	#23	1
0K72	CR.-RE. TRUSS HD. SCREW	M5X0.8-12	1	2DS3	ANGLE PEGULATOR	#AW	1
0K7K	CR. RE. ROUND WASHER HD. SCREW	M6*1.0-12	1	2DWM	BASE	#AW	1
0K7Z	CR. RE. TRUSS HD. ROUND NECK SCREW	M6*1.0-14	2	2E1E	LOCKING HANDLE ASS'Y		1
0KA6	CR.RE. PAN HD. TAPPING SCREW	M5*12-10	1	2E1G	NEEDLE POINTER (LEFT)	#23	1
0KAD	CR.RE. PAN HD. TAPPING SCREW	M4*0.7-8	4	2E3J	MOTOR		1
0KB7	CR.RE. PAN HD. TAPPING SCREW	M4X18-16	2	2E3L	HOUSING ASS'Y		1
0KB8	CR.RE. PAN HD. TAPPING SCREW	M4X18-20	3	2E3X	DUST COLLECTOR ASS'Y		1
0KB9	CR.RE. PAN HD. TAPPING SCREW	M5X16-10	1	2ED6	CAUTION LABEL		1
0KBC	CR.RE. PAN HD. TAPPING SCREW	M5*16-25	4	2ED7	CAUTION LABEL		1
0KBM	CR.RE. PAN HD. TAPPING SCREW	M4*18-28	5	2ED8	LABEL		1
0KD5	CR. RE. PAN HD. SCREW	M4*0.7-6	2	2EDK	INSTRUCTION MANUAL		1
0KDG	CR. RE. PAN HD. SCREW	M5*0.8-6	1	2EKH	TABLE	#AW	1



PARTS LIST AND SCHEMATIC FOR MOTOR

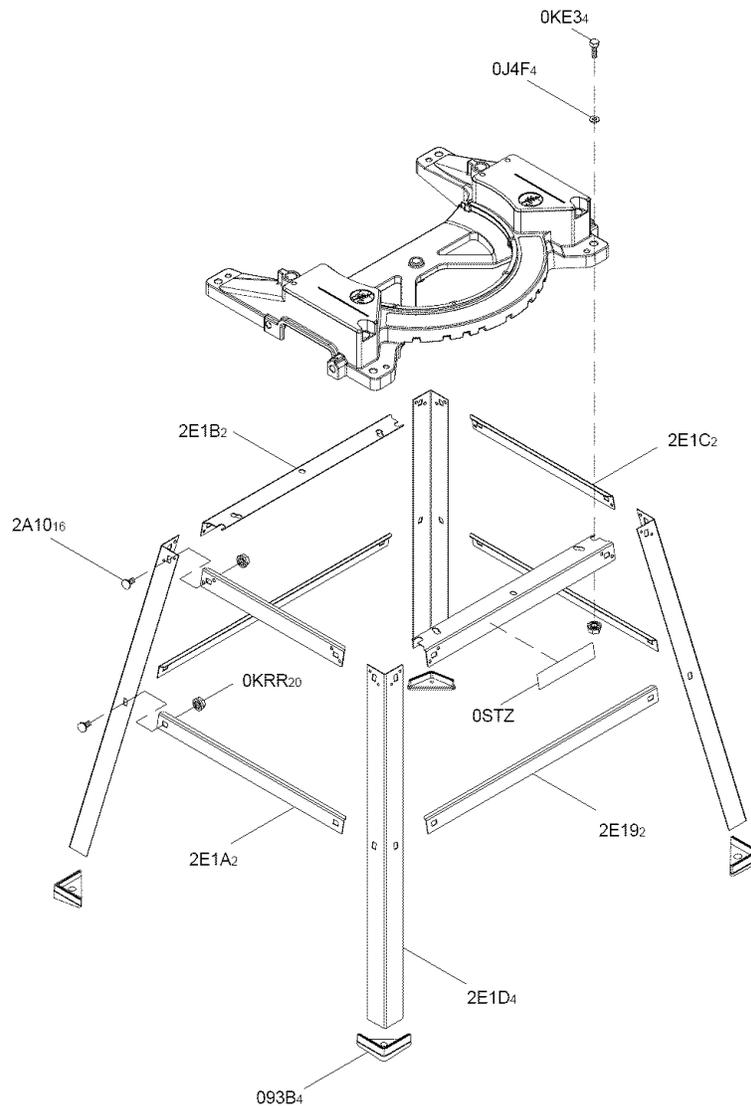
I.D.	Description	Size	QTY
1100	GEAR BOX COVER		1
1102	SPRING PIN	φ4-36	1
0HV8	BALL BEARING	6201ZLU	1
0HVU	BALL BEARING	6200ZZ	1
0HX9	NEEDLE BEARING		1
0JX2	HEX.-SOC SET SCREW	M5*0.8-6	2
0K56	CR. RE. COUNT HD. SCREW	M5*0.8-12	3
0KCM	CR.-RE.PAN HD. AP. SCREW & WASHER	M5*6-35	4
0KLA	PLASTIC SCREW	M5*0.8-6	2
0KWM	LEAD WIRE ASS'Y -RED		1
0PLT	BEARING COVER		1
0Q9K	FLOW GUIDE		1
0QGR	COMPRESSION SPRING		1
0QME	BRACKET STOP		1
0QMK	RUBBER CAP		1
0QMR	ARMATURE ASS'Y		1
0QMY	PROTECTOR WIRE		1
0QMZ	MOTOR HOUSING		1
0QQS	BRUSH HOLDER ASS'Y		2
0QQT	BRUSH ASS'Y		2
0QR0	BRUSH COVER		2
0QR2	BEARING BUSHING		1
0QYW	FIELD ASS'Y		1
110A	CR.-RE.PAN HD.TAPPING SCREW & WASHER	M5*12-55	2
110C	ARBOR SHAFT ASS'Y		1
2DVD	ARM		1



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I.D.	Description	Size	QTY
093B	FOOT PAD		4
0J4F	FLAT WASHER	8*16-2.5	4
0KE3	CR. RE. PAN HD. SCREW	M8*1.25-35	4
0KRR	SERRATED TOOTHED HEXAGON FLANGE NUT	M8*1.25 T=7.5	20
0STZ	TRADE-MARK LABEL		1
2A10	CAP HD. SQ. NECK BOLT	M8*0.25-12	16
2E19	BOTTOM SUPPORT BRACKET		2
2E1A	BOTTOM SUPPORT BRACKET		2
2E1B	UPPER SUPPORT		2
2E1C	UPPER SUPPORT		2
2E1D	BRACKET		4



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