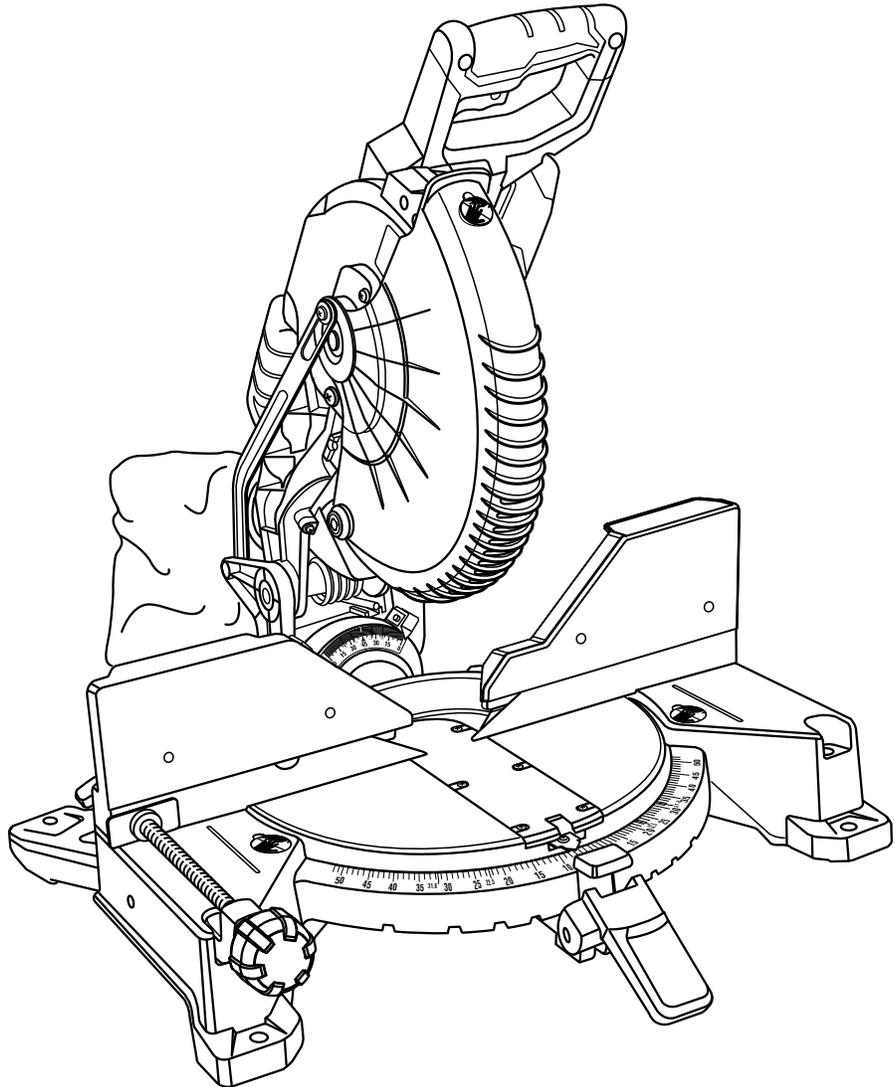


# OPERATOR'S MANUAL

## 10 in. COMPOUND MITER SAW WITH LASER

R4112 - Double Insulated



Your miter saw has been engineered and manufactured to our high standard for dependability, ease of operation, and operator safety. When properly cared for, it will give you years of rugged, trouble-free performance.

**⚠ WARNING:**

To reduce the risk of injury, the user must read and understand the operator's manual before using this product.

Thank you for buying a RIDGID® product.

**SAVE THIS MANUAL FOR FUTURE REFERENCE**

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## INTRODUCTION

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This tool has many features for making its use more pleasant and enjoyable. Safety, performance, and dependability have been given top priority in the design of this product making it easy to maintain and operate.

# GENERAL SAFETY RULES

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## **WARNING:**

**Read and understand all instructions.** Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

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## **READ ALL INSTRUCTIONS**

- **KNOW YOUR POWER TOOL.** Read the operator's manual carefully. Learn the applications and limitations as well as the specific potential hazards related to this tool.
- **GUARD AGAINST ELECTRICAL SHOCK BY PREVENTING BODY CONTACT WITH GROUNDED SURFACES.** For example: pipes, radiators, ranges, refrigerator enclosures.
- **KEEP GUARDS IN PLACE** and in good working order.
- **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents. **DO NOT** leave tools or pieces of wood on the tool while it is in operation.
- **DO NOT USE IN DANGEROUS ENVIRONMENTS.** Do not use power tools in damp or wet locations or expose to rain. Keep the work area well lit.
- **KEEP CHILDREN AND VISITORS AWAY.** All visitors should wear safety glasses and be kept a safe distance from work area. Do not let visitors contact tool or extension cord while operating.
- **MAKE WORKSHOP CHILDPROOF** with padlocks, master switches, or by removing starter keys.
- **DON'T FORCE THE TOOL.** It will do the job better and safer at the feed rate for which it was designed.
- **USE THE RIGHT TOOL.** Do not force the tool or attachment to do a job for which it was not designed.
- **USE THE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. Use only a cord 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. A wire gauge size (A.W.G.) of at least **14** is recommended for an extension cord 25 feet or less in length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
- **DRESS PROPERLY.** Do not wear loose clothing, neckties, or jewelry that can get caught and draw you into moving parts. Rubber gloves and nonskid footwear are recommended when working outdoors. Also wear protective hair covering to contain long hair.
- **ALWAYS WEAR SAFETY GLASSES WITH SIDE SHIELDS.** Everyday eyeglasses have only impact-resistant lenses, they are **NOT** safety glasses.
- **SECURE WORK.** Use clamps or a vise to hold work when practical, it is safer than using your hand and frees both hands to operate the tool.
- **DO NOT OVERREACH.** Keep proper footing and balance at all times.
- **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories.
- **DISCONNECT TOOLS.** When not in use, before servicing, or when changing attachments, blades, bits, cutters, etc., all tools should be disconnected from power source.
- **AVOID ACCIDENTAL STARTING.** Be sure switch is off when plugging in any tool.
- **USE RECOMMENDED ACCESSORIES.** Consult the operator's manual for recommended accessories. The use of improper accessories may result in injury.
- **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
- **CHECK 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 must be properly repaired or replaced by an authorized service center to avoid risk of personal injury.
- **USE THE RIGHT DIRECTION OF FEED.** Feed work into a blade, cutter, or sanding spindle against the direction of rotation of the blade, cutter, or sanding spindle only.
- **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN THE POWER OFF.** Don't leave tool until it comes to a complete stop.
- **PROTECT YOUR LUNGS.** Wear a face or dust mask if the cutting operation is dusty.
- **PROTECT YOUR HEARING.** Wear hearing protection during extended periods of operation.
- **DO NOT ABUSE CORD.** Never carry tool by the cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
- **USE OUTDOOR EXTENSION CORDS.** When tool is used outdoors, use only extension cords with approved ground connection that are intended for use outdoors and so marked.
- **KEEP BLADES CLEAN, SHARP, AND WITH SUFFICIENT SET.** Sharp blades minimize stalling and kickback.
- **BLADE COASTS AFTER BEING TURNED OFF.**
- **NEVER USE IN AN EXPLOSIVE ATMOSPHERE.** Normal sparking of the motor could ignite fumes.

# GENERAL SAFETY RULES

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- **INSPECT TOOL CORDS PERIODICALLY.** If damaged, have repaired by a qualified service technician at an authorized service facility. Repair or replace a damaged or worn cord immediately. Stay constantly aware of cord location and keep it well away from the rotating blade.
- **INSPECT EXTENSION CORDS PERIODICALLY** and replace if damaged.
- **POLARIZED PLUGS.** To reduce the risk of electric shock, this tool 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.
- **KEEP TOOL DRY, CLEAN, AND FREE FROM OIL AND GREASE.** Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products, or any solvents to clean tool.
- **STAY ALERT AND EXERCISE CONTROL.** Watch what you are doing and use common sense. Do not operate tool when you are tired. Do not rush.
- **DO NOT USE TOOL IF SWITCH DOES NOT TURN IT ON AND OFF.** Have defective switches replaced by an authorized service center.
- **USE ONLY CORRECT BLADES.** Do not use blades with incorrect size holes. Never use blade washers or blade bolts that are defective or incorrect. The maximum blade capacity of your saw is 10 in.
- **BEFORE MAKING A CUT, BE SURE ALL ADJUSTMENTS ARE SECURE.**
- **BE SURE BLADE PATH IS FREE OF NAILS.** Inspect for and remove all nails from lumber before cutting.
- **NEVER TOUCH BLADE** or other moving parts during use.
- **NEVER START A TOOL WHEN ANY ROTATING COMPONENT IS IN CONTACT WITH THE WORKPIECE.**
- **DO NOT OPERATE A TOOL WHILE UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR ANY MEDICATION.**
- **WHEN SERVICING** use only identical replacement parts. Use of any other parts may create a hazard or cause product damage.
- **USE ONLY RECOMMENDED ACCESSORIES** listed in this manual or addendums. Use of accessories that are not listed may cause the risk of personal injury. Instructions for safe use of accessories are included with the accessory.
- **DOUBLE CHECK ALL SETUPS.** Make sure blade is tight and not making contact with saw or workpiece before connecting to power supply.

# SPECIFIC SAFETY RULES

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- **FIRMLY CLAMP OR BOLT** your tool to a workbench or table at approximately hip height.
- **KEEP HANDS AWAY FROM CUTTING AREA.** Do not reach underneath work or in blade cutting path with your hands and fingers for any reason. Always turn the power off.
- **ALWAYS SUPPORT LONG WORKPIECES** while cutting to minimize risk of blade pinching and kickback. Saw may slip, walk or slide while cutting long or heavy boards.
- **ALWAYS USE A CLAMP** to secure the workpiece when possible.
- **BE SURE THE BLADE CLEARS THE WORKPIECE.** Never start the saw with the blade touching the workpiece. Allow motor to come up to full speed before starting cut.
- **MAKE SURE THE MITER TABLE AND SAW ARM (BEVEL FUNCTION) ARE LOCKED IN POSITION BEFORE OPERATING YOUR SAW.** Lock the miter table by pushing the miter lock lever down. Lock the saw arm (bevel function) by securely tightening the bevel lock knob.
- **NEVER USE A LENGTH STOP ON THE FREE SCRAP END OF A CLAMPED WORKPIECE. NEVER** hold onto or bind the free scrap end of the workpiece in any operation. If a work clamp and length stop are used together, they must both be installed on the same side of the saw table to prevent the saw from catching the loose end and kicking up.
- **NEVER** cut more than one piece at a time. **DO NOT STACK** more than one workpiece on the saw table at a time.

# SPECIFIC SAFETY RULES

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- **NEVER PERFORM ANY OPERATION FREEHAND.** Always place the workpiece to be cut on the miter table and position it firmly against the fence as a backstop. Always use the fence.
- **NEVER** hand hold a workpiece that is too small to be clamped. Keep hands clear of the cutting area.
- **NEVER** reach behind, under, or within three inches of the blade and its cutting path with your hands and fingers for any reason.
- **NEVER** reach to pick up a workpiece, a piece of scrap, or anything else that is in or near the cutting path of the blade.
- **AVOID AWKWARD OPERATIONS AND HAND POSITIONS** where a sudden slip could cause your hand to move into the blade. **ALWAYS** make sure you have good balance. **NEVER** operate your miter saw on the floor or in a crouched position.
- **ALWAYS** release the power switch and allow the saw blade to stop rotating before raising it out of the workpiece.
- **DO NOT TURN THE MOTOR SWITCH ON AND OFF RAPIDLY.** This could cause the saw blade to loosen and could create a hazard. Should this ever occur, stand clear and allow the saw blade to come to a complete stop. Disconnect your saw from the power supply and securely retighten the blade bolt.
- **IF ANY PART OF THIS MITER SAW IS MISSING** or should break, bend, or fail in any way, or should any electrical component fail to perform properly, shut off the power switch, remove the miter saw plug from the power source and have damaged, missing, or failed parts replaced before resuming operation.
- **IF THE POWER SUPPLY CORD IS DAMAGED,** it must be replaced only by the manufacturer or by an authorized service center to avoid risk.
- **ALWAYS STAY ALERT!** Do not allow familiarity (gained from frequent use of your saw) to cause a careless mistake. **ALWAYS REMEMBER** that a careless fraction of a second is sufficient to inflict severe injury.
- **MAKE SURE THE WORK AREA HAS AMPLE LIGHTING** to see the work and that no obstructions will interfere with safe operation **BEFORE** performing any work using your saw.
- **ALWAYS TURN OFF THE SAW** before disconnecting it to avoid accidental starting when reconnecting to power supply. **NEVER** leave the saw unattended while connected to a power source.
- **TURN OFF TOOL** and wait for saw blade to come to a complete stop before moving workpiece or changing settings.
- **THIS TOOL** should have the following markings:
  - a) Wear eye protection.
  - b) Keep hands out of path of saw blade.
  - c) Do not operate saw without guards in place.
  - d) Do not perform any operation freehand.
  - e) Never reach around saw blade.
  - f) Turn off tool and wait for saw blade to stop before moving workpiece or changing settings.
  - g) Disconnect power (or unplug tool as applicable) before changing blade or servicing.
  - h) No load speed.
- **ALWAYS** carry the tool only by the carrying handle.
- **AVOID** direct eye exposure when using the laser guide.
- **THIS SAW CAN TIP OVER** if the saw head is released suddenly and the saw is not secured to a work surface. **ALWAYS** secure this saw to a stable work surface before any use to avoid serious personal injury.
- **USE THIS SAW TO CUT WOOD, WOOD PRODUCTS, AND SOME PLASTICS ONLY. DO NOT CUT METALS, CERAMICS OR MASONRY PRODUCTS.**
- **SAVE THESE INSTRUCTIONS.** Refer to them frequently and use to instruct other users. If you loan someone this tool, loan them these instructions also.

## CALIFORNIA PROPOSITION 65

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### **WARNING:**

This product and some dust created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals, including lead, known to the State of California to cause cancer, birth defects, or other reproductive harm. ***Wash hands after handling.***

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

# SYMBOLS

The following signal words and meanings are intended to explain the levels of risk associated with this product.

SYMBOL	SIGNAL	MEANING
	<b>DANGER:</b>	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	<b>WARNING:</b>	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	<b>CAUTION:</b>	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	<b>NOTICE:</b>	(Without Safety Alert Symbol) Indicates important information not related to an injury hazard, such as a situation that may result in property damage.

Some of the following symbols may be used on this tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
	Safety Alert	Indicates a potential personal injury hazard.
	Read Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Eye Protection	Always wear eye protection with side shields marked to comply with ANSI Z87.1.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
min	Minutes	Time
~	Alternating Current	Type of current
n <sub>0</sub>	No Load Speed	Rotational speed, at no load
	Class II Construction	Double-insulated construction
.../min	Per Minute	Revolutions, strokes, surface speed, orbits, etc., per minute

# ELECTRICAL

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## DOUBLE INSULATION

Double insulation is a concept in safety in electric power tools, which eliminates the need for the usual three-wire grounded power cord. All exposed metal parts are isolated from the internal metal motor components with protecting insulation. Double insulated tools do not need to be grounded.

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### **WARNING:**

The double insulated system is intended to protect the user from shock resulting from a break in the tool's internal wiring. Observe all normal safety precautions to avoid electrical shock.

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**NOTE:** Servicing of a product with double insulation requires extreme care and knowledge of the system and should be performed only by a qualified service technician. For service, we suggest you return the tool to your nearest authorized service center for repair. Always use original factory replacement parts when servicing.

## ELECTRICAL CONNECTION

This tool has a precision-built electric motor. It should be connected to a **power supply that is 120 V, AC only (normal household current), 60 Hz**. Do not operate this tool on direct current (DC). A substantial voltage drop will cause a loss of power and the motor will overheat. If the tool does not operate when plugged into an outlet, double check the power supply.

## EXTENSION CORDS

When using a power tool at a considerable distance from a power source, be sure to use an extension cord that has the capacity to handle the current the product will draw. An undersized cord will cause a drop in line voltage, resulting in overheating and loss of power. Use the chart to determine the minimum wire size required in an extension cord. Only round jacketed cords listed by Underwriter's Laboratories (UL) should be used.

When working outdoors with a product, use an extension cord that is designed for outside use. This type of cord is designated with "WA" or "W" on the cord's jacket.

Before using any extension cord, inspect it for loose or exposed wires and cut or worn insulation.

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\*\*Ampere rating (on product data plate)

Cord Length	Wire Size (A.W.G.)					
	0-2.0	2.1-3.4	3.5-5.0	5.1-7.0	7.1-12.0	12.1-16.0
25'	16	16	16	16	14	14
50'	16	16	16	14	14	12
100'	16	16	14	12	10	—

\*\*Used on 12 gauge - 20 amp circuit.

**NOTE:** AWG = American Wire Gauge

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### **WARNING:**

Keep the extension cord clear of the working area. Position the cord so that it will not get caught on lumber, tools, or other obstructions while you are working with a power tool. Failure to do so can result in serious personal injury.

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### **WARNING:**

Check extension cords before each use. If damaged replace immediately. Never use tool with a damaged cord since touching the damaged area could cause electrical shock resulting in serious injury.

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# GLOSSARY OF TERMS

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## **Anti-Kickback Pawls (radial arm and table saws)**

A device which, when properly installed and maintained, is designed to stop the workpiece from being kicked back toward the front of the saw during a ripping operation.

## **Arbor**

The shaft on which a blade or cutting tool is mounted.

## **Bevel Cut**

A cutting operation made with the blade at any angle other than 90° to the table surface.

## **Compound Cut**

A cross cut made with both a miter and a bevel angle.

## **Cross Cut**

A cutting or shaping operation made across the grain or the width of the workpiece.

## **Cutterhead (planers and jointer planers)**

A rotating cutterhead with adjustable blades or knives. The blades or knives remove material from the workpiece.

## **Dado Cut**

A non-through cut which produces a square-sided notch or trough in the workpiece (requires a special blade).

## **Featherboard**

A device used to help control the workpiece by holding it securely against the table or fence during any ripping operation.

## **FPM or SPM**

Feet per minute (or strokes per minute), used in reference to blade movement.

## **Freehand**

Performing a cut without the workpiece being guided by a fence, miter gauge, or other aids.

## **Gum**

A sticky, sap-based residue from wood products.

## **Heel**

Alignment of the blade to the fence.

## **Kerf**

The material removed by the blade in a through cut or the slot produced by the blade in a non-through or partial cut.

## **Kickback**

A hazard that can occur when the blade binds or stalls, throwing the workpiece back toward operator.

## **Miter Cut**

A cutting operation made with the workpiece at any angle to the blade other than 90°.

## **Non-Through Cuts**

Any cutting operation where the blade does not extend completely through the thickness of the workpiece.

## **Pilot Hole (drill presses)**

A small hole drilled in a workpiece that serves as a guide for drilling large holes accurately.

## **Push Blocks (for jointer planers)**

Device used to feed the workpiece over the jointer planer cutterhead during any operation. This aid helps keep the operator's hands well away from the cutterhead.

## **Push Blocks (for table saws)**

Device used to hold the workpiece during cutting operations. This aid helps keep the operator's hands well away from the blade.

## **Push Sticks (for table saws)**

Device used to push the workpiece during cutting operations. A push stick should be used for narrow ripping operations. The aid helps keep the operator's hands well away from the blade.

## **Resaw**

A cutting operation to reduce the thickness of the workpiece to make thinner pieces.

## **Resin**

A sticky, sap-based substance that has hardened.

## **Revolutions Per Minute (RPM)**

The number of turns completed by a spinning object in one minute.

## **Ripping or Rip Cut**

A cutting operation along the length of the workpiece.

## **Riving Knife/Spreader/Splitter (table saws)**

A metal piece, slightly thinner than the blade, which helps keep the kerf open and also helps to prevent kickback.

## **Saw Blade Path**

The area over, under, behind, or in front of the blade. As it applies to the workpiece, that area which will be or has been cut by the blade.

## **Set**

The distance that the tip of the saw blade tooth is bent (or set) outward from the face of the blade.

## **Snipe (planers)**

Depression made at either end of a workpiece by cutter blades when the workpiece is not properly supported.

## **Taper Cut**

A cut where the material being cut has a different width at the beginning of the cut from the the end.

## **Through Sawing**

Any cutting operation where the blade extends completely through the thickness of the workpiece.

## **Throw-Back**

The throwing back of a workpiece usually caused by the workpiece being dropped into the blade or being placed inadvertently in contact with the blade.

## **Workpiece or Material**

The item on which the operation is being done.

## **Worktable**

Surface where the workpiece rests while performing a cutting, drilling, planing, or sanding operation.

# FEATURES

## PRODUCT SPECIFICATIONS

Blade Diameter . . . . . 10 in.  
 Arbor Hole . . . . . 5/8 in.  
 No Load Speed . . . . . 5,000 r/min. (RPM)  
 Input . . . . . 120 V, AC Only, 60 Hz, 15 Amps  
 Cutting Capacity with Miter at 0°/Bevel 0°:  
 Maximum lumber sizes: . . . . . 1-1/2 in. x 5-1/2 in.  
 or 3-1/2 in. x 3-1/2 in.  
 Cutting Capacity with Miter at 45°/Bevel 0°:  
 Maximum lumber sizes: . . . . . 1-1/2 in. x 3-1/2 in.

Cutting Capacity (Right Bevel) with Miter at 0°/Bevel 45°:  
 Maximum lumber sizes: . . . . . 3/4 in. x 4-1/4 in.  
 Cutting Capacity (Left Bevel) with Miter at 0°/Bevel 45°:  
 Maximum lumber sizes: . . . . . 1-1/2 in. x 5-1/2 in.  
 Cutting Capacity with Miter at 45°/Bevel 45°:  
 Maximum lumber sizes: . . . . . 1-1/2 in. x 3-1/2 in.  
 Cutting Capacity for Baseboards against the fence:  
 Maximum height . . . . . 3-5/8 in. x 3/4 in.

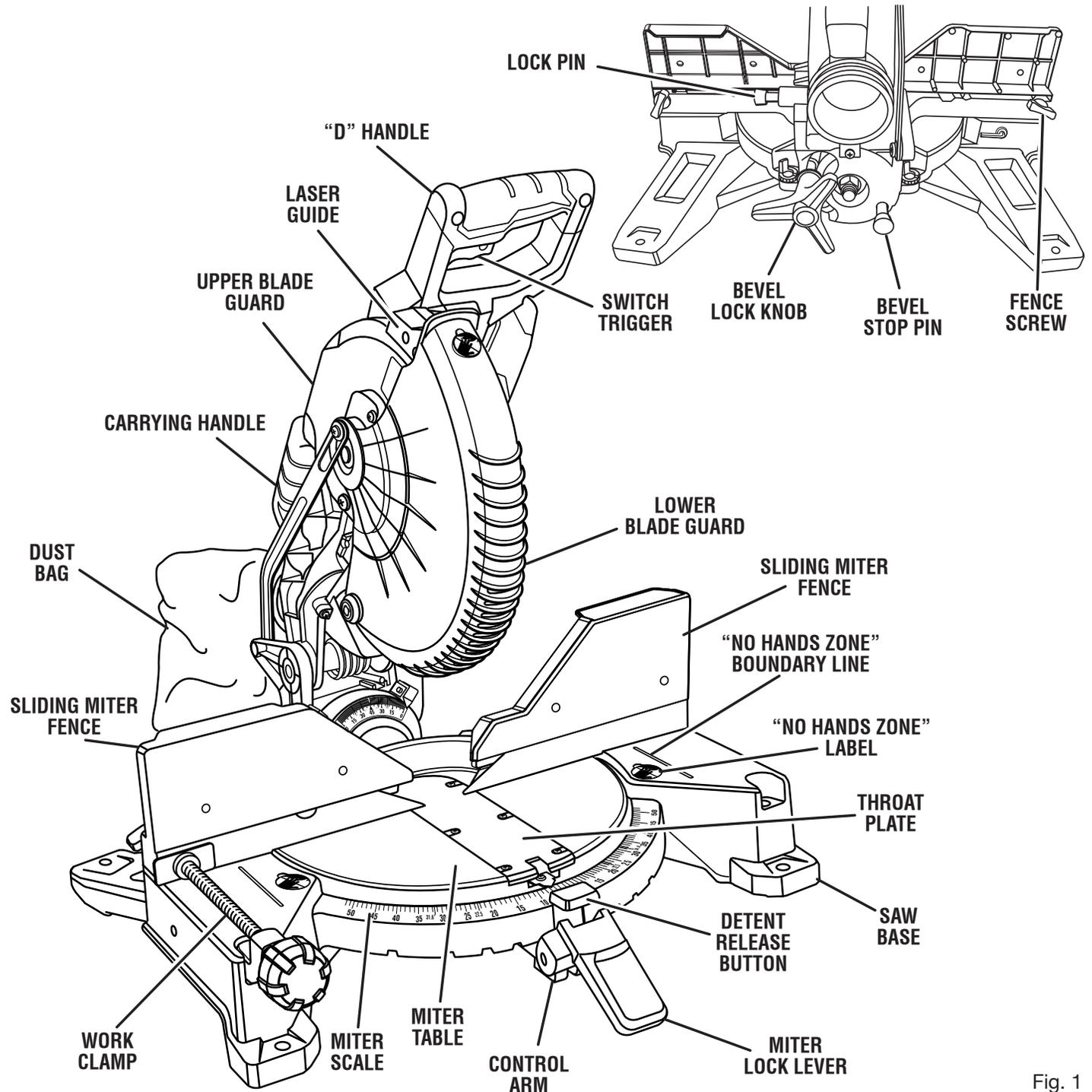


Fig. 1

# FEATURES

## KNOW YOUR COMPOUND MITER SAW

See Figure 1.

The safe use of this product requires an understanding of the information on the tool and in this operator's manual as well as a knowledge of the project you are attempting. Before use of this product, familiarize yourself with all operating features and safety rules.

### 10 in. BLADE

A 10 in. blade is included with your compound miter saw. It will cut materials up to 5-1/2 in. wide, depending upon the angle at which the cut is being made.

### 15 AMP MOTOR

This saw has a powerful 15 amp motor with sufficient power to handle tough cutting jobs. It is made with all ball bearings, and has externally accessible brushes for ease of servicing.

### BEVEL LOCK KNOB

The bevel lock knob securely locks your compound miter saw at desired bevel angles. Loosen the bevel lock knob to release the saw allowing the blade to be tilted either left or right for bevel cuts. Tighten the knob to lock the saw in place.

**NOTE:** To obtain right bevel angles, pull the bevel stop pin out and tilt the saw to the desired angle. Push the bevel stop pin in for a positive 0° bevel stop.

### BEVEL STOP ADJUSTMENT SCREWS

See Figure 2.

Bevel stop adjustment screws have been provided on each side of the saw arm. These adjustment screws are for making fine adjustments at 0°, 33.9°, 45° and 48°.

**NOTE:** Use the bevel stop turrets to locate 33.9°, 45°, and 48° bevel angles. When making any non-bevel cut, the bevel stop turrets should be in the 48° position.

### CARRYING HANDLE

See Figure 3.

For convenience when carrying or transporting the miter saw from one place to another, a carrying handle has been provided. To transport, turn off and unplug the saw, then lower the saw arm and lock it in the down position. Lock saw arm by depressing the lock pin.

### ELECTRIC BRAKE

An electric brake has been provided to quickly stop blade rotation after the switch is released.

### LASER GUIDE

For more accurate cuts, a laser guide is included with your miter saw. When used properly, the laser guide makes accurate, precision cutting simple and easy.

### LASER GUIDE SWITCH

See Figure 3.

Use the laser guide switch to turn the laser guide on and off.

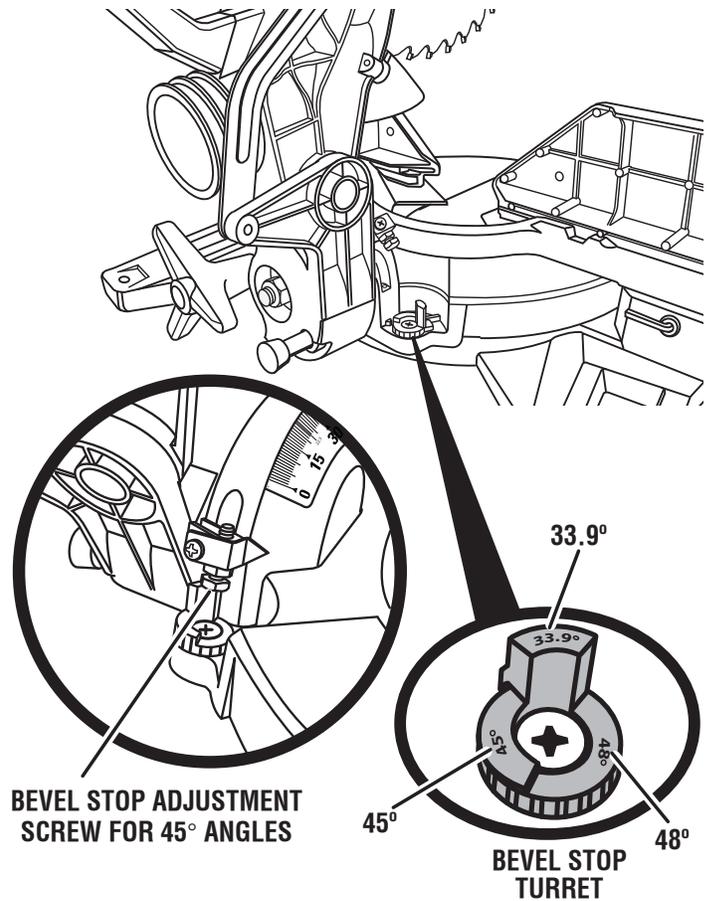
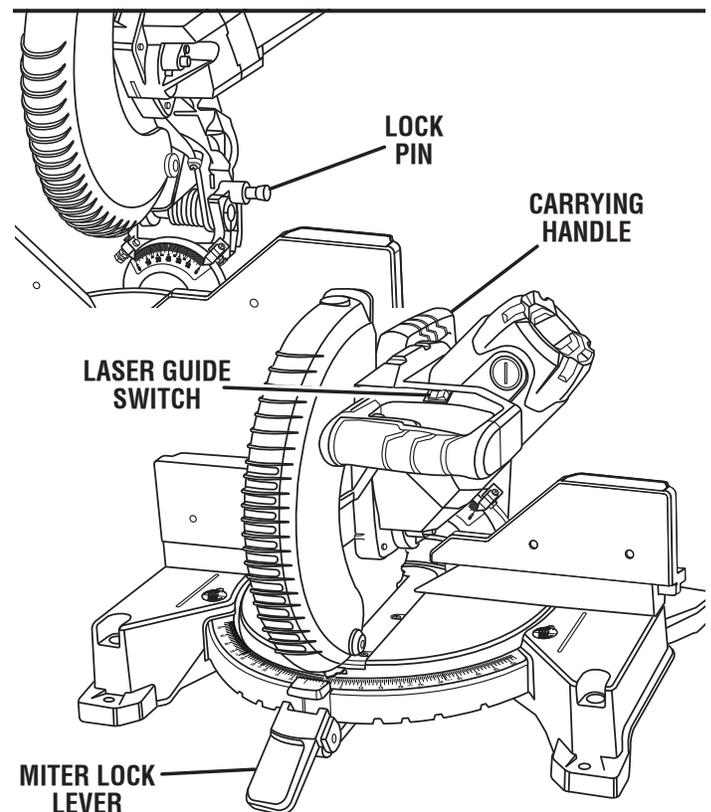


Fig. 2



SAW ARM LOCKED IN DOWN POSITION

Fig. 3

# FEATURES

## MITER LOCK LEVER

See Figure 4.

The miter lock lever securely locks the saw at the desired miter angle. Push the lever down to lock the saw in place. To release the saw, lift the miter lock lever and depress the detent release button.

## POSITIVE STOPS ON MITER TABLE

Positive stops have been provided at 0°, 15°, 22.5°, 31.6°, and 45°. The 0°, 15°, 22.5°, 31.6°, and 45° positive stops have been provided on both the left and right side of the miter table.

## SELF-RETRACTING LOWER BLADE GUARD

The lower blade guard is made of shock-resistant, see-through plastic that provides protection from each side of the blade. It retracts over the upper blade guard as the saw is lowered into the workpiece.

## SPINDLE LOCK BUTTON

See Figure 5.

A spindle lock button has been provided for locking the spindle which keeps the blade from rotating. Unplug the saw. Depress and hold the lock button while installing, changing, or removing blade only.

## SLIDING MITER FENCES

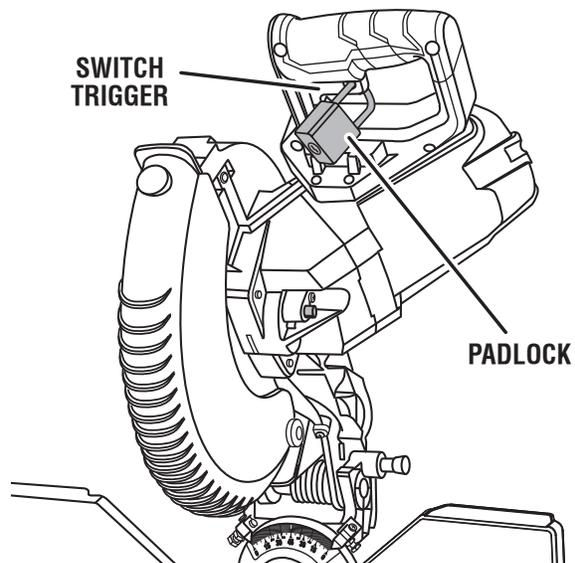
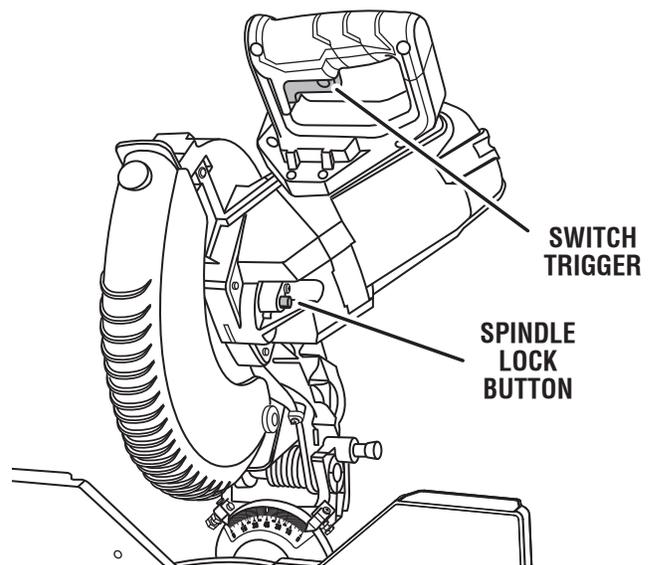
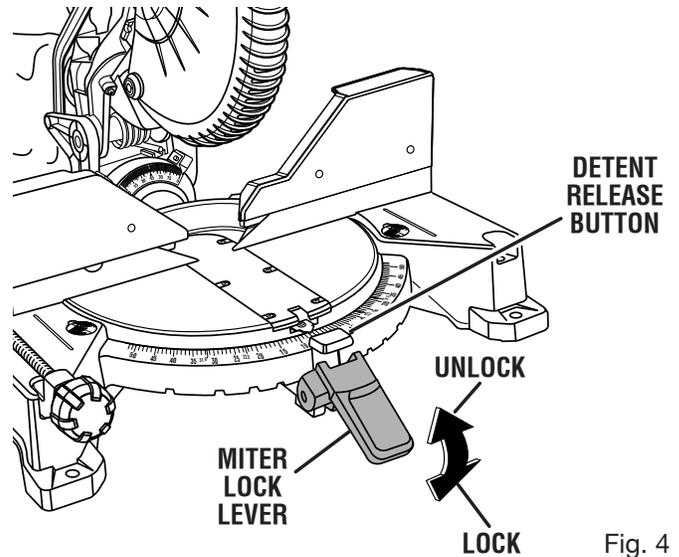
The sliding miter fences on your compound miter saw have been provided to help secure the workpiece when making cuts; the portion of the miter fence located farthest from the blade is larger to provide additional vertical support.

The sliding feature makes it easy to remove or adjust the position of the fences and allow for clearance of the saw arm when making bevel or compound cuts. Loosen the fence screw before attempting to slide the miter fence. Once the desired position of the miter fence is determined, tighten the fence screw to secure the sliding fence.

## SWITCH TRIGGER

See Figure 5.

To prevent unauthorized use of the compound miter saw, disconnect it from the power supply and lock the switch in the off position. To lock the switch, install a padlock (not included) through the hole in the switch trigger. A lock with a long shackle up to 9/32 in. diameter may be used. When the lock is installed and locked, the switch is inoperable. Store the padlock key in another location.



# TOOLS NEEDED

The following tools (not included) are needed for making adjustments:

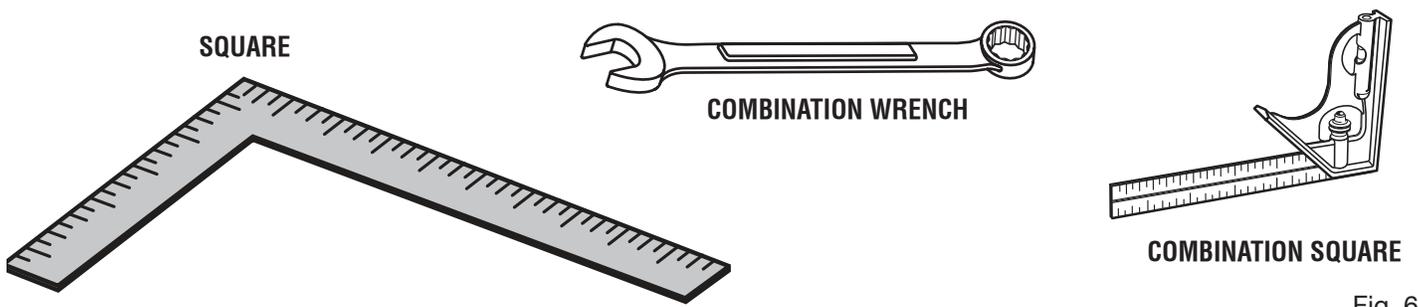


Fig. 6

# LOOSE PARTS

The following items are included with your Compound Miter Saw:

- Blade
- Dust Bag
- Work Clamp
- Blade Wrench
- Hex Key (3 mm and 5 mm)
- Operator's Manual (Not Shown)

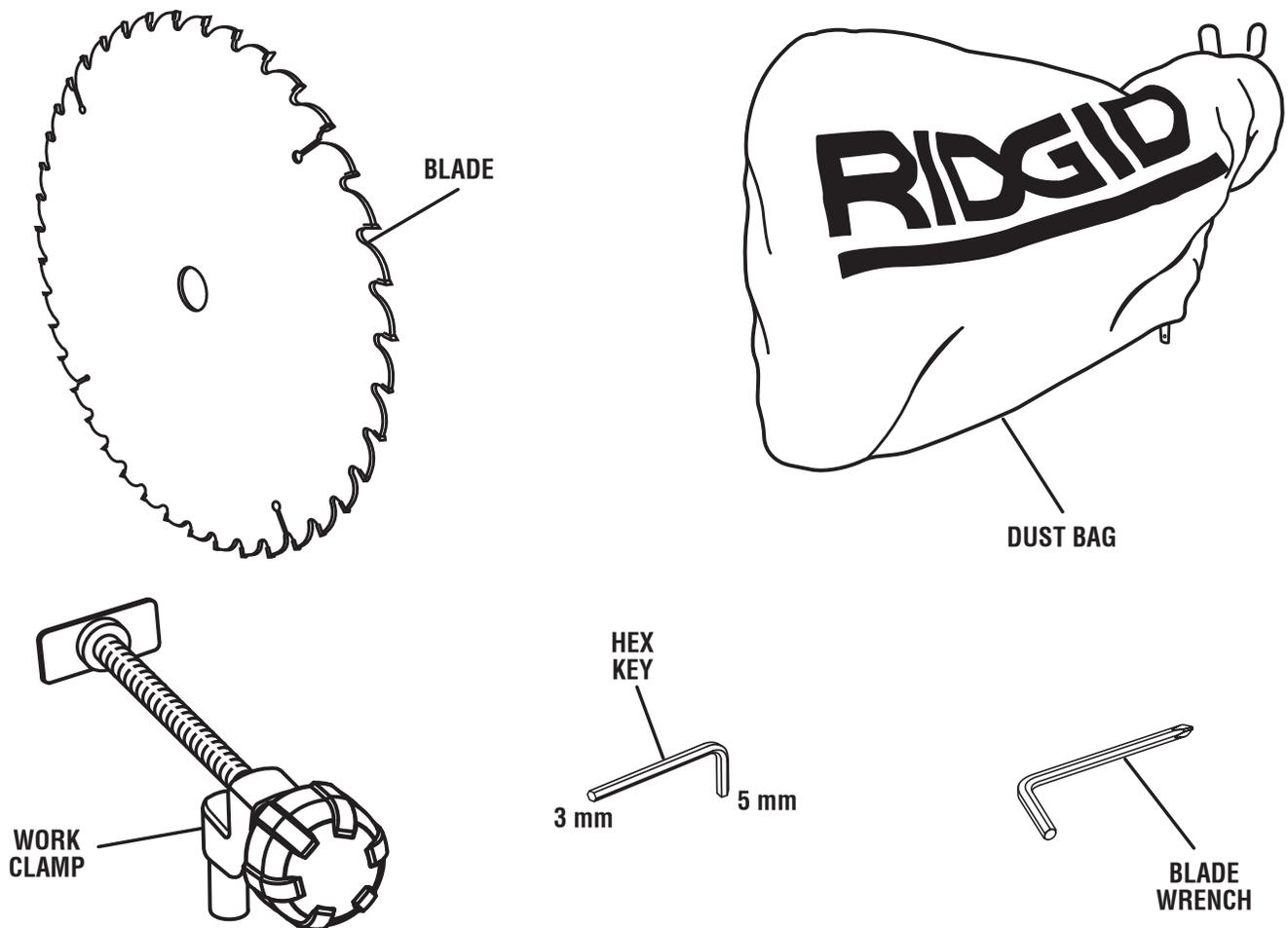


Fig. 7

## **⚠ WARNING:**

The use of attachments or accessories not listed might be hazardous and could cause serious personal injury.

# ASSEMBLY

## UNPACKING

This product requires assembly.

- Carefully lift saw from the carton by the carrying handle and the saw base, and place it on a level work surface.

### **⚠ WARNING:**

Do not use this product if any parts on the Loose Parts List are already assembled to your product when you unpack it. Parts on this list are not assembled to the product by the manufacturer and require customer installation. Use of a product that may have been improperly assembled could result in serious personal injury.

- This saw has been shipped with the saw arm secured in the down position. To release the saw arm, push down on the top of the saw arm, cut the tie-wrap, and pull out the lock pin.
- Lift the saw arm by the handle. Hand pressure should remain on the saw arm to prevent sudden rise upon release of the tie wrap.
- Inspect the tool carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.
- The saw is factory set for accurate cutting. After assembling it, check for accuracy. If shipping has influenced the settings, refer to specific procedures explained in this manual.
- If any parts are damaged or missing, please call 1-866-539-1710 for assistance.

### **⚠ WARNING:**

If any parts are damaged or missing do not operate this product until the parts are replaced. Use of this product with damaged or missing parts could result in serious personal injury.

### **⚠ WARNING:**

Do not attempt to modify this product 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 personal injury.

### **⚠ WARNING:**

Do not connect to power supply until assembly is complete. Failure to comply could result in accidental starting and possible serious personal injury.

### **⚠ WARNING:**

Do not start the compound miter saw without checking for interference between the blade and the miter fence. Damage could result to the blade if it strikes the miter fence during operation of the saw.

### **⚠ WARNING:**

This saw can tip over if the saw head is released suddenly and the saw is not secured to a work surface. ALWAYS secure this saw to a stable work surface before any use to avoid serious personal injury.

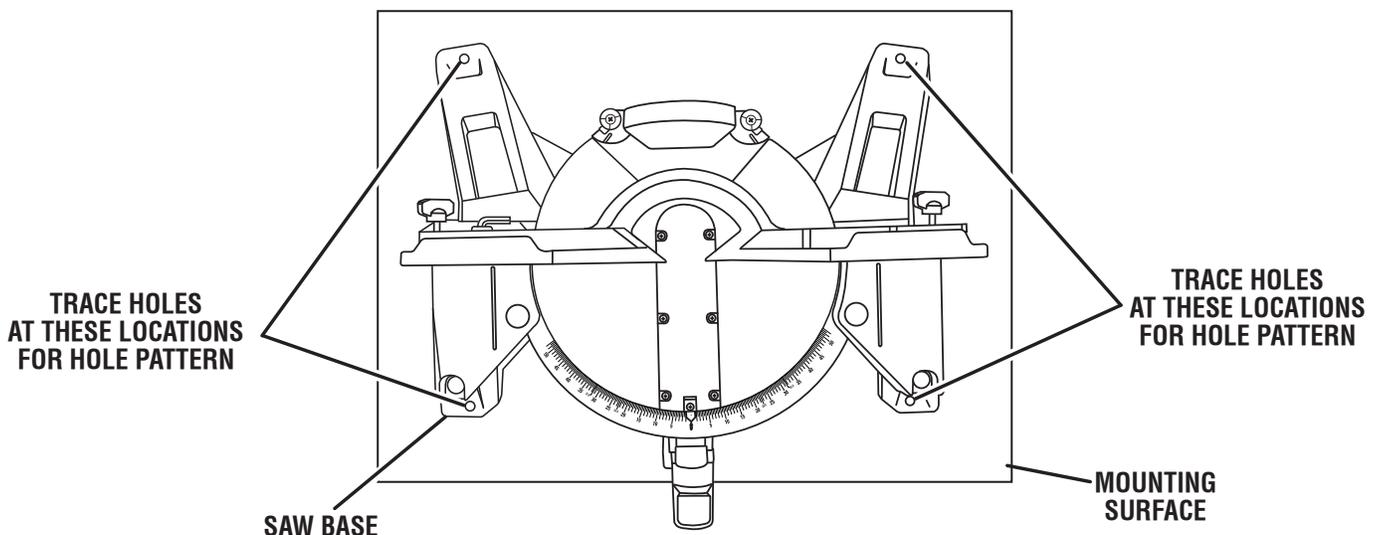


Fig. 8

# ASSEMBLY

## MOUNTING HOLES

See Figure 8.

### **WARNING:**

Before starting any cutting operation, clamp or bolt your miter saw to a workbench or an approved miter saw stand. If a miter saw stand is used, read operator's manual and follow the instructions for the miter saw stand. Never operate your miter saw on the floor or in a crouched position. Failure to heed this warning can result in serious personal injury.

The compound miter saw should be mounted to a firm supporting surface such as a workbench, mounting board, or miter saw stand. Four bolt holes have been provided in the saw base for this purpose. Each of the four mounting holes should be bolted securely using 5/16 in. machine bolts, lock washers, and hex nuts (not included). Bolts should be of sufficient length to accommodate the saw base, lock washers, hex nuts, and the thickness of the workbench. Tighten all four bolts securely.

The hole pattern for mounting to a workbench is shown in figure 8. Carefully check the workbench after mounting to make sure that no movement can occur during use. If any tipping, sliding, or walking is noted, secure the workbench to the floor before operating.

## BLADE WRENCH

See Figure 9.

A blade wrench is packed with this saw. One end of the wrench is a phillips screwdriver and the other end is a hex key. Use the hex key end when installing or removing blade and the phillips end when removing or loosening screws. A storage area for the blade wrench is located on the back of the saw base.

## DUST BAG

See Figure 10.

A dust bag is provided for use on the miter saw. It fits over the exhaust port on the upper blade guard. To install it, squeeze the two metal clips to open the mouth of the bag and slide it on the exhaust port. Release the clips. The metal ring in the bag should lock in between the grooves on the exhaust port. To remove the dust bag for emptying, simply reverse the above procedure.

## WORK CLAMP

See Figure 11.

### **WARNING:**

In some operations, the work clamp assembly may interfere with the operation of the blade guard assembly. Always make sure there is no interference with the blade guard prior to beginning any cutting operation to reduce the risk of serious personal injury.

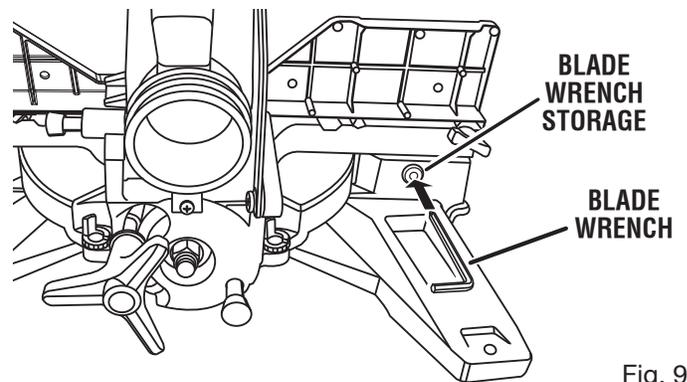


Fig. 9

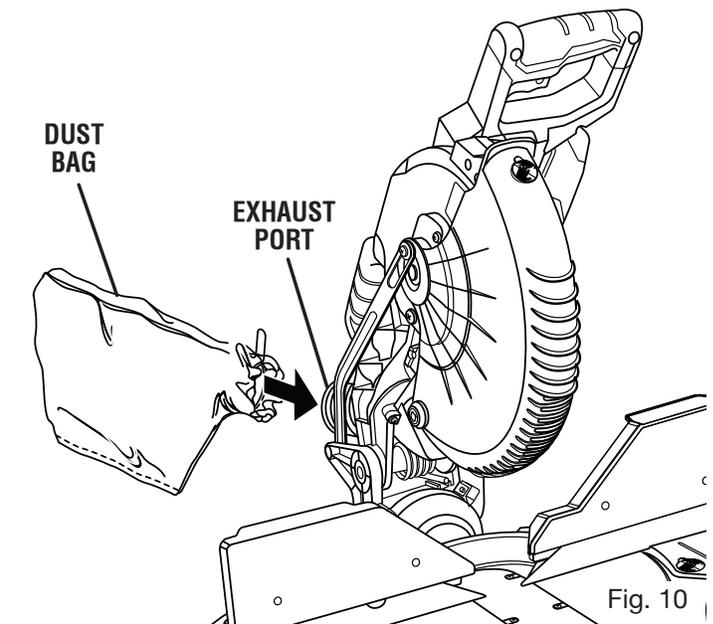


Fig. 10

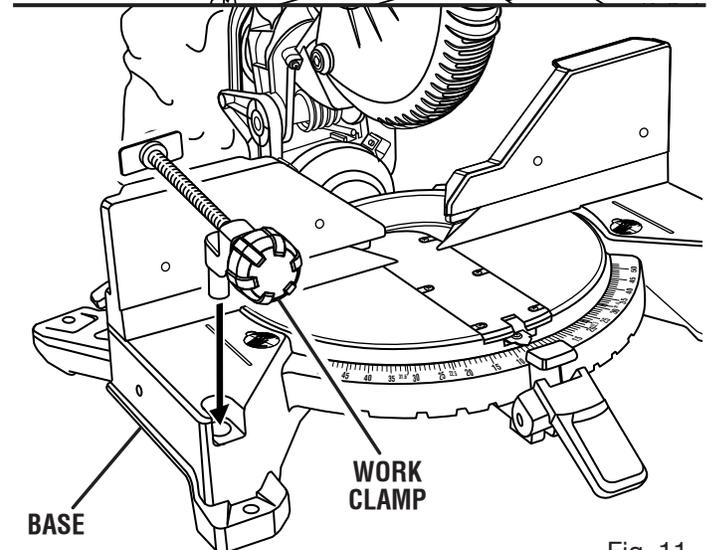


Fig. 11

The work clamp provides greater control by clamping the workpiece to the fence. It also prevents the workpiece from creeping toward the saw blade. This is very helpful when cutting compound miters.

# ASSEMBLY

Depending on the cutting operation and the size of the workpiece, it may be necessary to use a C-clamp instead of the work clamp to secure the workpiece prior to making the cut.

## To install the work clamp:

- Place the shaft of the work clamp in either hole on the miter table base.
- Rotate the knob on the work clamp to move it in or out as needed.

## TO INSTALL THE BLADE

See Figure 12.

### **WARNING:**

A 10 in. blade is the maximum blade capacity of the saw. Never use a blade that is too thick to allow outer blade washer to engage with the flats on the spindle. Larger blades will come in contact with the blade guards, while thicker blades will prevent the blade bolt from securing the blade on the spindle. Either of these situations could result in a serious accident and can cause serious personal injury.

- Unplug the saw.
- Raise saw arm.
- Rotate lower blade guard up and loosen blade bolt cover screw. Slide blade bolt cover toward upper blade guard to expose the blade bolt.
- Depress the spindle lock button and rotate the blade bolt until the spindle locks.
- Using the wrench provided, loosen and remove the blade bolt.

**NOTE:** The blade bolt has left hand threads. Turn blade bolt clockwise to loosen.

- Remove the outer blade washer. **Do not** remove the inner blade washer.
- Wipe a drop of oil onto the inner blade washer and the outer blade washer where they contact the blade.

### **WARNING:**

If inner blade washer has been removed, replace it before placing blade on spindle. Failure to do so could cause an accident since blade will not tighten properly.

- Fit saw blade inside upper blade guard and onto spindle. The blade teeth point downward at the front of saw as shown in figure 12.
- Replace the outer blade washer. The double “D” flats on the blade washers align with the flats on the spindle.
- Depress spindle lock button and replace blade bolt.

**NOTE: BEFORE USE, REPLACE SCREW AND TIGHTEN SECURELY TO PREVENT GUARD MOVEMENT**

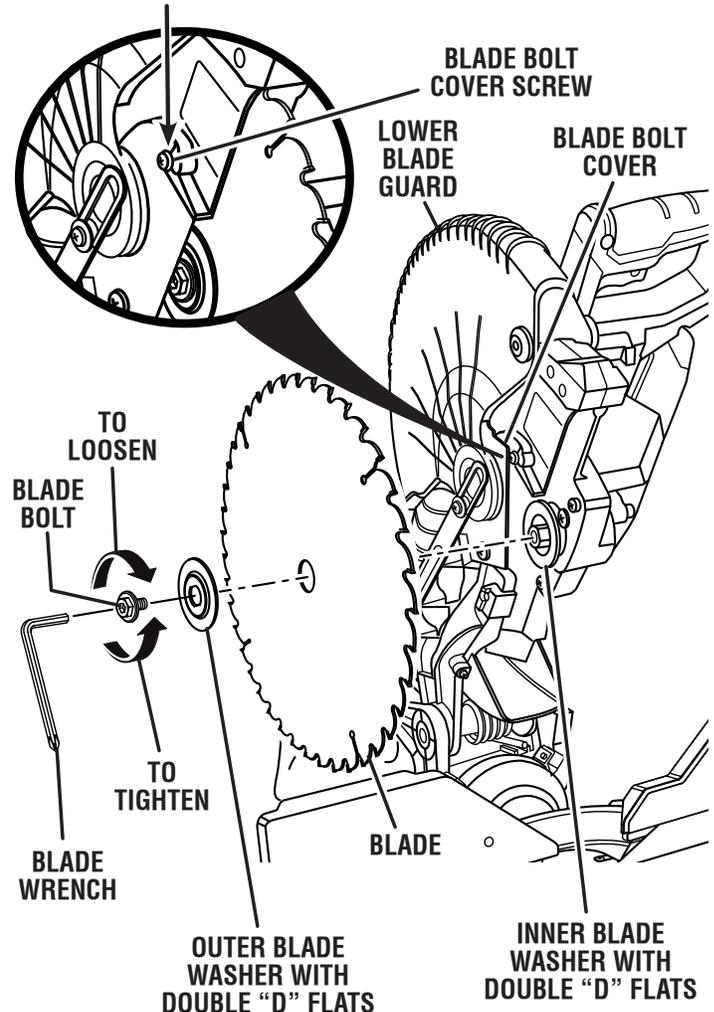


Fig. 12

**NOTE:** The blade bolt has left hand threads. Turn blade bolt counterclockwise to tighten.

### **CAUTION:**

Always install the blade with the blade teeth and the arrow printed on the side of the blade pointing down at the front of the saw. The direction of blade rotation is also stamped with an arrow on the upper blade guard.

- Tighten blade bolt securely.
- Replace blade bolt cover and tighten blade bolt cover-screw securely.
- Lower the blade guard.
- Raise and lower the saw arm to ensure lower blade guard functions correctly.

# ASSEMBLY

## **WARNING:**

Make sure the spindle lock button is not engaged before reconnecting saw into power source. Never engage spindle lock button when blade is rotating.

## **DANGER:**

Laser radiation. Avoid direct eye contact with light source.

## **WARNING:**

Use of controls, adjustments, or performance of procedures other than those specified here can result in hazardous radiation exposure.

## CUTTING A SLOT IN THE ZERO CLEARANCE THROAT PLATE

In order to use your compound miter saw, you must cut a slot through the zero clearance throat plate to allow for blade clearance. To cut the slot, set your saw at 0° bevel, turn saw on and allow the blade to reach full speed, then carefully make a straight cut as far as it will go through the throat plate. Turn your saw off and allow the blade to come to a complete stop before raising the saw arm.

Adjust both sliding miter fences to insure proper clearance prior to making a bevel cut. Set the bevel angle (right) to 48°, turn your saw on and allow the blade to reach full speed, then carefully make another cut through the zero clearance throat plate. Next, set the bevel angle (left) to 48°, turn your saw on and allow the blade to reach full speed, then carefully make another cut through the zero clearance throat plate.

The slot in the throat plate will then be wide enough to allow the blade to pass through it at any angle from 0° to 48°. Reset the position of the sliding miter fences.

## **WARNING:**

The laser guide is powered by the AC power supplied to the saw. User must lock out the trigger switch prior to aligning or performing any maintenance on the laser. Failure to lock out the trigger switch could lead to inadvertent actuation of the miter saw which could result in serious personal injury.

## ALIGNING THE LASER GUIDE LINE

See Figure 13.

Lock out the trigger switch by installing a long shackled padlock (not included) up to 9/32 in. diameter. Plug the saw into the power source. Draw a line on the workpiece. When the laser guide switch is turned on it will generate a red line on the work surface. This line will let you see your mark and

the laser guide line at the same time, and will assist you in lining up the mark for more accurate cutting of the workpiece.

Align the laser line and the mark with the saw arm at the uppermost position. Once both lines are in alignment, do not move the workpiece.

Remove the padlock. Make several practice cuts on different styles and thickness of material. Repeat the steps above as necessary.

### Removing Your Mark:

Position the laser line near the left edge of your mark on the work surface in order to remove the mark.

### To Cut Your Mark:

Position the laser line near or over your mark on the work surface in order to cut the mark.

### To Leave Your Mark:

Position the laser line near the right edge of your mark on the work surface in order to leave the mark.

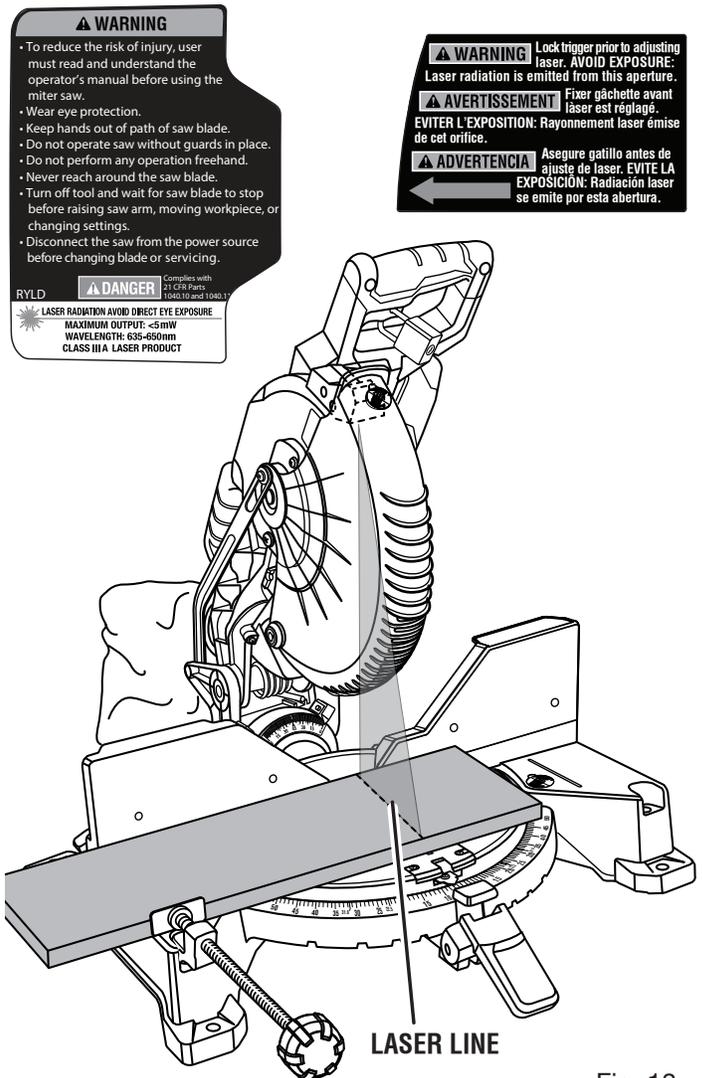


Fig. 13

# ASSEMBLY

After you have become familiar with using the laser guide, you will be able to remove, cut, or leave your mark on the work surface. Practice will teach you the correct position for aligning the laser line with your mark.

**NOTE:** Many of the illustrations in this manual show only portions of the compound miter saw. This is intentional so that we can clearly show points being made in the illustrations. **Never operate the saw without all guards securely in place and in good operating condition.**

## SQUARING THE BLADE TO THE FENCE

See Figures 14 - 20

- Unplug the saw.
- Pull the saw arm all the way down and engage the lock pin to hold the saw arm in transport position.
- Lift the miter lock lever, then depress and hold the detent release button to release the miter table.
- Rotate the miter table until the scale indicator is positioned at 0° and the control arm is seated in the positive notch.
- Release the detent release button, then push the miter lock lever down to secure the miter table.
- Loosen bevel lock knob and set saw arm at 0° bevel (blade set 90° to miter table). Tighten bevel lock knob.
- Lay a square flat on the miter table. Place one leg of the square against the fence. Slide the other leg of the square against the flat part of saw blade.

**NOTE:** Make sure that the square contacts the flat part of the saw blade, not the blade teeth.

- The edge of the square and the saw blade should be parallel as shown in figure 16.
- If the front or back edge of the saw blade angles away from the square as shown in figures 17 and 18, adjustments are needed.
- Remove the sliding miter fences from the fence. See figure 14.

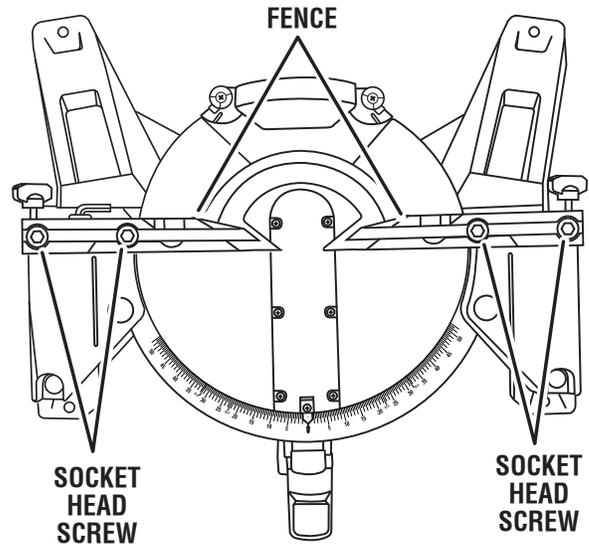
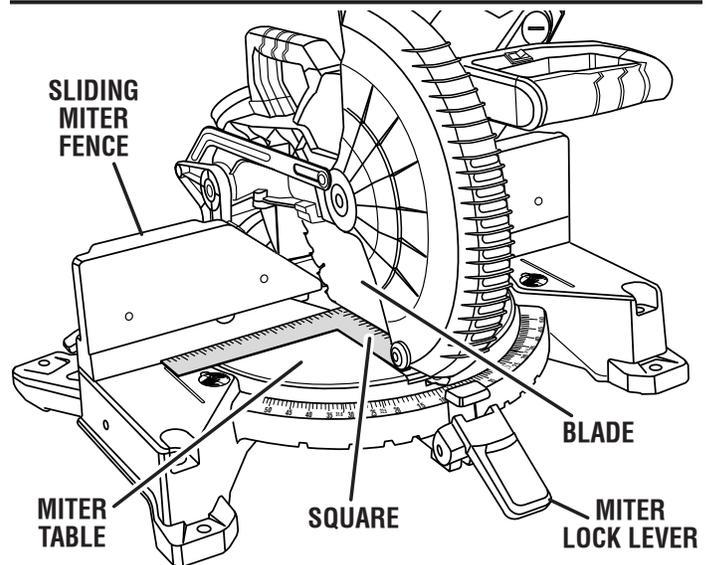
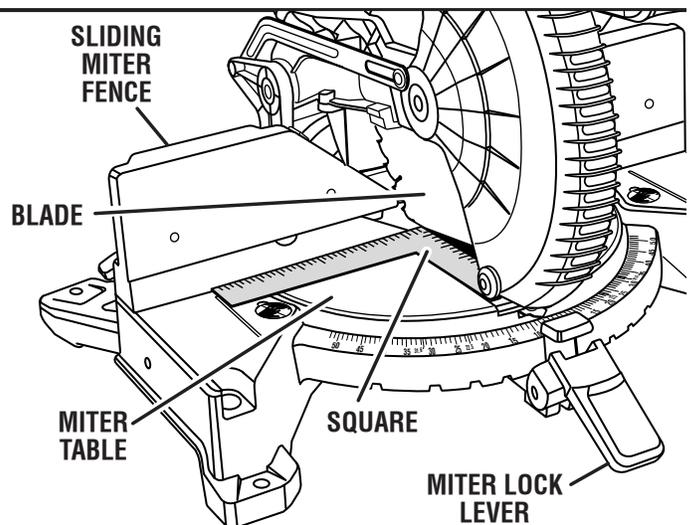


Fig. 15



VIEW OF BLADE SQUARE WITH FENCE Fig. 16



VIEW OF BLADE NOT SQUARE WITH FENCE, ADJUSTMENTS ARE REQUIRED Fig. 17

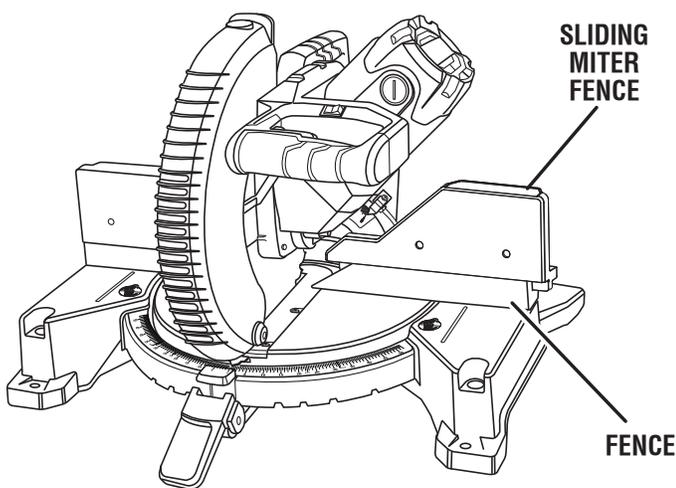
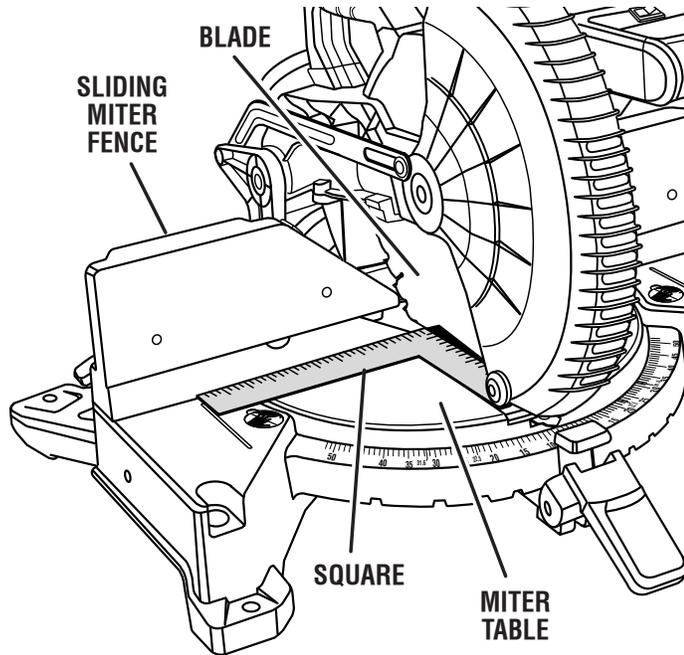


Fig. 14

# ASSEMBLY

- Using the blade wrench, loosen the socket head screws that secure the fence to the miter table. See figure 15.
- Rotate the fence left or right until the saw blade is parallel with the square.
- Retighten the screws securely. Check blade squareness to fence and readjust if necessary.
- Replace the sliding miter fences.

Your saw has several scale indicators. After squaring adjustments have been made, it may be necessary to loosen the indicator screws and reset them to zero. See Figures 19 - 20.



VIEW OF BLADE NOT SQUARE WITH FENCE, ADJUSTMENTS ARE REQUIRED

Fig. 18

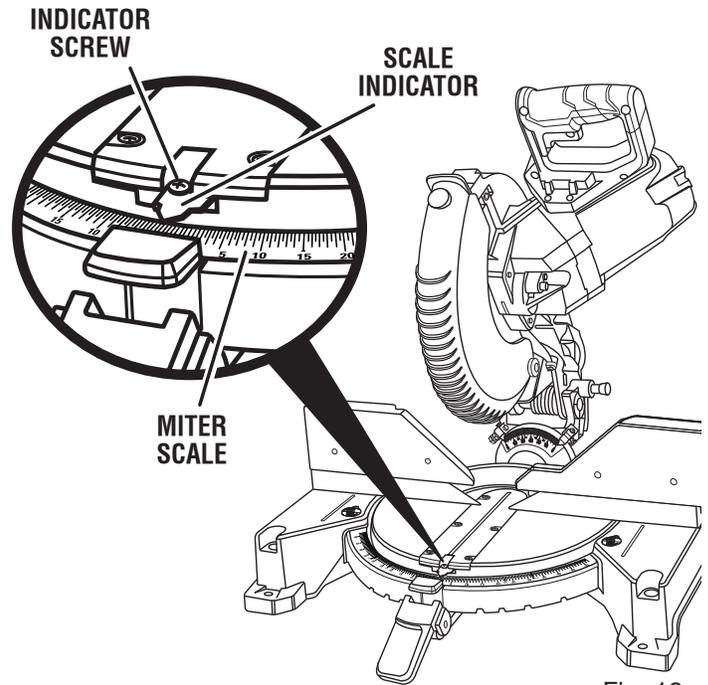


Fig. 19

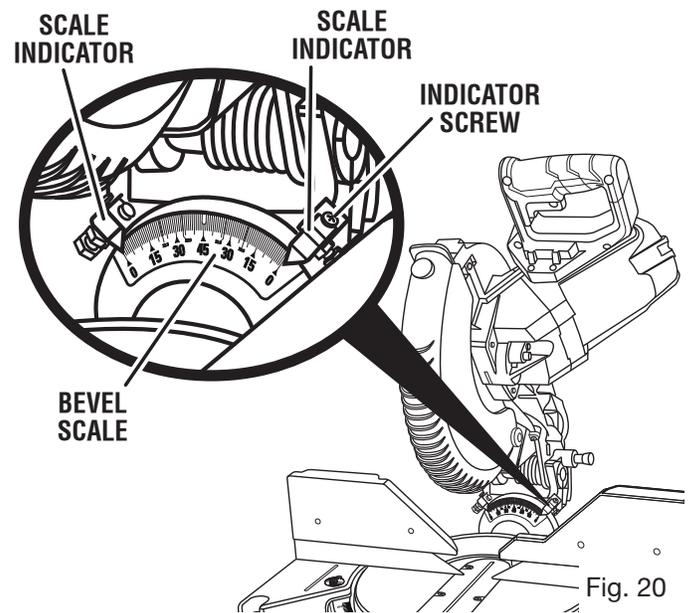


Fig. 20

# ASSEMBLY

## SQUARING THE BLADE TO THE MITER TABLE

See Figures 21 - 23.

### To square the blade at 0°:

- Unplug the saw.
- Pull the saw arm all the way down and engage the lock pin to hold the saw arm in transport position.
- Lift the miter lock lever, then depress and hold the detent release button to release the miter table.
- Rotate the miter table until the scale indicator is positioned at 0°.
- Release the detent release button, then push the miter lock lever down to secure the miter table.
- Push the bevel stop pin inward.
- Loosen bevel lock knob and tilt saw arm until it is seated in the positive 0° bevel stop (blade set 90° to miter table). Tighten bevel lock knob.
- Place a combination square against the miter table and the flat part of saw blade.

**NOTE:** Make sure that the square contacts the flat part of the saw blade, not the blade teeth.

- Rotate the blade by hand and check the blade-to-table alignment at several points.
- The edge of the square and the saw blade should be parallel as shown in figure 21.
- If the top or bottom of the saw blade angles away from the square as shown in figures 22 and 23, adjustments are needed.
- Loosen the bevel lock knob.
- Adjust 0° bevel stop screw to bring saw blade into alignment with the square. See **0° bevel Adjustment** in the *Adjustments* section.

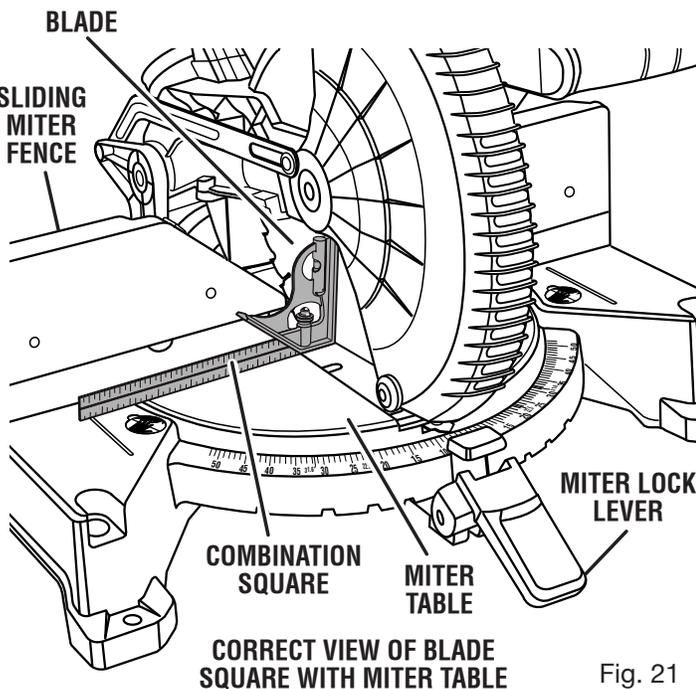


Fig. 21

- Retighten bevel lock knob. Recheck blade-to-table alignment.

### To square the blade at 45°:

- Loosen the bevel lock knob and set the saw arm at 45° bevel. Tighten bevel lock knob.

**NOTE:** To obtain right bevel angles, pull the bevel stop pin out and tilt the saw to the desired angle.

- Using a combination square, check the blade-to-table alignment as described earlier.
- If adjustments are needed, refer to **45° Bevel Adjustment** in the *Adjustments* section.

Your saw has several scale indicators. After squaring adjustments have been made, it may be necessary to loosen the indicators screws and reset them to zero. See *Figures 19 and 20*.

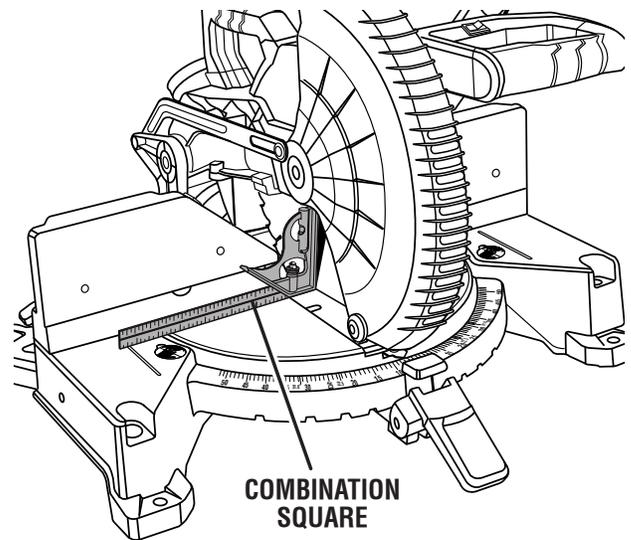


Fig. 22

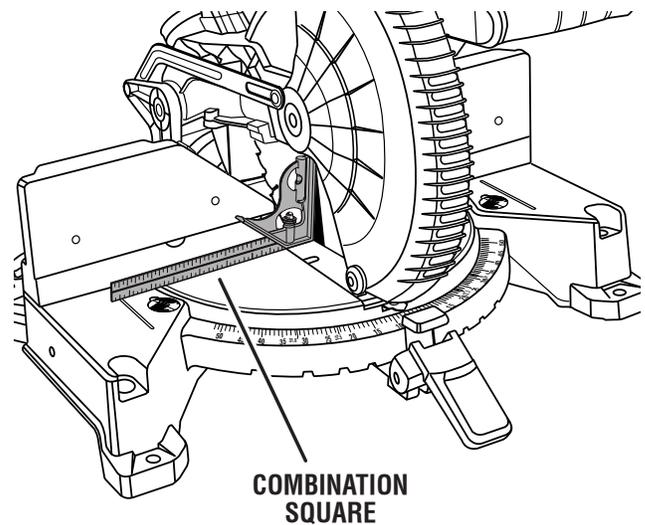


Fig. 23

# OPERATION

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## **WARNING:**

Do not allow familiarity with tools to make you careless. Remember that a careless fraction of a second is sufficient to inflict severe injury.

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## **WARNING:**

Always wear eye protection with side shields marked to comply with ANSI Z87.1. Failure to do so could result in objects being thrown into your eyes, resulting in possible serious injury.

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## **WARNING:**

Do not use any attachments or accessories not recommended by the manufacturer of this tool. The use of attachments or accessories not recommended can result in serious personal injury.

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## **APPLICATIONS**

This product has been designed only for the purposes listed below:

- Cross cutting wood and plastic.
- Cross cutting miters, joints, etc. for picture frames, moldings, door casings, and fine joinery.
- Bevel cutting and compound cutting.

**NOTE:** The blade provided is fine for most wood cutting operations, but for fine joinery cuts or cutting plastic, use one of the accessory blades available from the place of purchase of your new Ridgid miter saw.

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## **WARNING:**

Before starting any cutting operation, clamp or bolt your miter saw to a workbench or leg stand. Never operate your miter saw on the floor or in a crouched position. Failure to heed this warning can result in serious personal injury.

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## **WARNING:**

To avoid serious personal injury, always push the miter lock lever down and tighten the bevel lock knob securely before making a cut. Failure to do so could result in movement of the control arm or miter table while making a cut.

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## **WARNING:**

To avoid serious personal injury, keep your hands outside the no hands zone; at least 3 in. from blade. Never perform any cutting operation freehand (without holding workpiece against the fence). The blade could grab the workpiece if it slips or twists.

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## **WARNING:**

Do not start your compound miter saw without checking for interference between the blade and the miter fence. Damage could result to the blade if it strikes the miter fence during operation of the saw. Failure to heed this warning can also result in serious personal injury.

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## **CUTTING WITH YOUR COMPOUND MITER SAW**

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## **WARNING:**

When using a work clamp or C-clamp to secure your workpiece, clamp workpiece on one side of the blade only. The workpiece must remain free on one side of the blade to prevent the blade from binding in workpiece. The workpiece binding the blade will cause motor stalling and kickback. This situation could cause an accident resulting in possible serious personal injury.

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## **WARNING:**

NEVER move the workpiece or make adjustment to any cutting angle while the saw is running and the blade is rotating. Any slip can result in contact with the blade causing serious personal injury.

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# OPERATION

## TO MITER CUT / CROSS CUT

See Figures 24 - 25.

A cross cut is made by cutting across the grain of the workpiece. A straight cross cut is made with the miter table set at the 0° position. Miter cross cuts are made with the miter table set at some angle other than zero.

- Pull out the lock pin and lift saw arm to its full height.
- Lift the miter lock lever, then depress and hold the detent release button to release the miter table.
- Rotate the control arm until the pointer aligns with the desired angle on the miter scale.
- Release the detent release button, then push the miter lock lever down to secure the miter table.

**NOTE:** You can quickly locate 0°, 15°, 22-1/2°, 31.6°, and 45° left or right by releasing the detent release button as you rotate the control arm. The control arm will seat itself in one of the positive stop notches, located in the miter table base.

- Place the workpiece flat on the miter table with one edge securely against the fence. If the board is warped, place the convex side against the fence. If the concave edge of a board is placed against the fence, the board could collapse on the blade at the end of the cut, jamming the blade. See Figures 39 - 40.
- When cutting long pieces of lumber or molding, support the opposite end of the stock with a roller stand or with a work surface level with the saw table. See Figure 29.
- Align cutting line on the workpiece with the edge of saw blade or laser line.
- Grasp the stock firmly with one hand and secure it against the fence. Use the work clamp or a C-clamp to secure the workpiece when possible.
- Before turning on the saw, perform a dry run of the cutting operation to make sure that no problems will occur when the cut is made.
- Grasp the saw handle firmly. Squeeze the switch trigger. Allow several seconds for the blade to reach maximum speed.
- Slowly lower the blade into and through the workpiece.
- Release the switch trigger and allow the saw blade to stop rotating before raising the blade out of workpiece and removing the workpiece from the miter table.

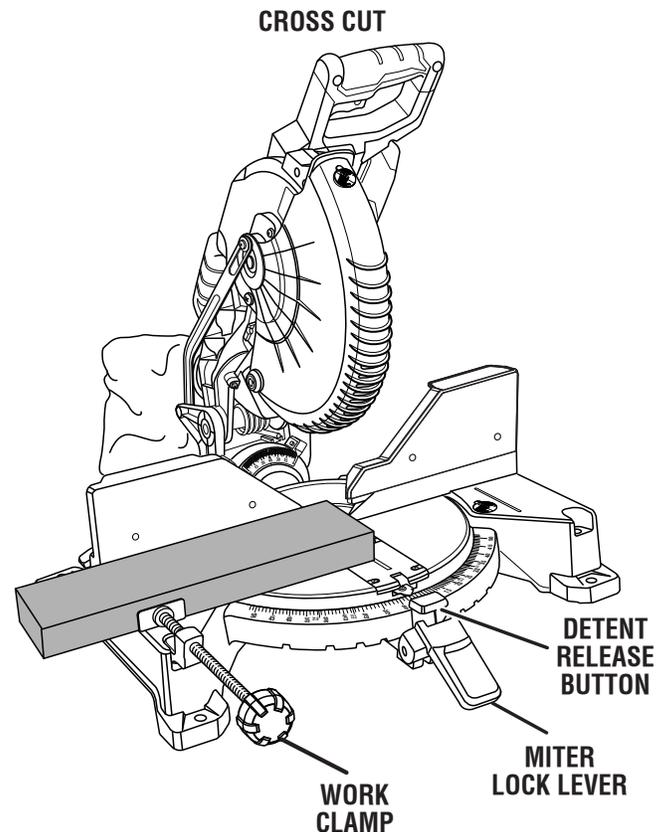


Fig. 24

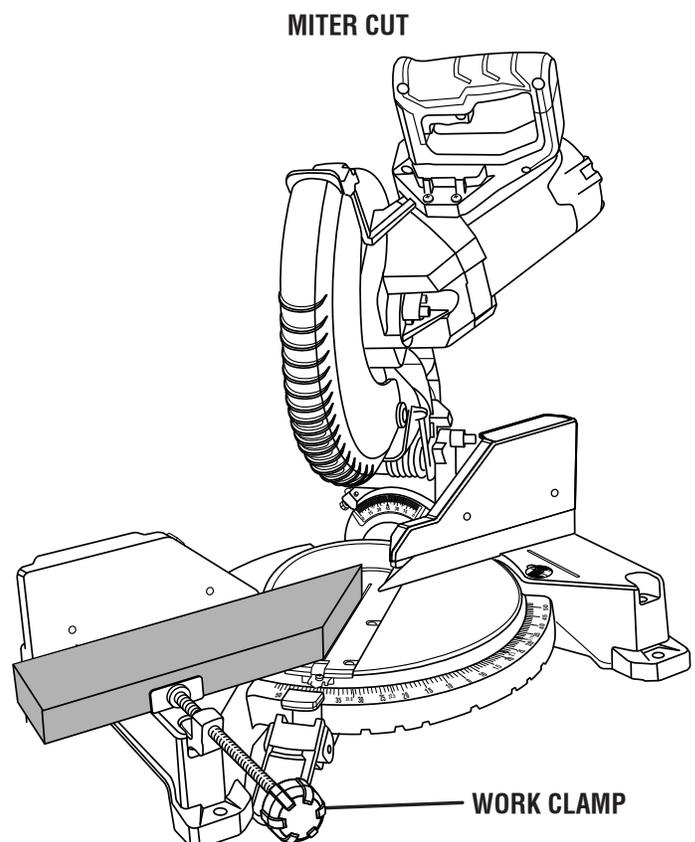


Fig. 25

# OPERATION

## TO BEVEL CUT

See Figures 26 and 27.

A bevel cut is made by cutting across the grain of the workpiece with the blade angled to the workpiece. A straight bevel cut is made with the miter table set at the zero degree position and the blade set at an angle between 0° and 48°.

**NOTE:** It may be necessary to adjust or remove the sliding miter fence to insure proper clearance prior to making the cut.

- Pull out the lock pin and lift saw arm to its full height.
- Lift the miter lock lever, then depress and hold the detent release button to release the miter table.
- Rotate the control arm until the pointer aligns with zero on the miter scale.
- Release the detent release button, then push the miter lock lever down to secure the miter table.
- Loosen the bevel lock knob and move the saw arm to the desired left bevel angle.

**NOTE:** To obtain right bevel angles, pull the bevel stop pin out and tilt the saw to the desired right bevel angle.

- Left and right bevel angles can be set from 0° to 48°.

**NOTE:** Use the bevel stop turret to locate 33.9°, 45°, and 48° bevel angles. See Figure 27.

- Once the saw arm has been set at the desired angle, securely tighten the bevel lock knob and push the bevel stop pin in.
- Place the workpiece flat on the miter table with one edge securely against the fence. If the board is warped, place the convex side against the fence. If the concave edge of a board is placed against the fence, the board could collapse on the blade at the end of the cut, jamming the blade. See Figures 39 - 40.
- When cutting long pieces of lumber or molding, support the opposite end of the stock with a roller stand or with a work surface level with the saw table. See Figure 29.
- Align the cutting line on the workpiece with the edge of saw blade or laser line.
- Grasp the stock firmly with one hand and secure it against the fence. Use the work clamp or a C-clamp to secure the workpiece when possible.
- Before turning on the saw, perform a dry run of the cutting operation to make sure that no problems will occur when the cut is made.
- Grasp the saw handle firmly. Squeeze the switch trigger. Allow several seconds for the blade to reach maximum speed.
- Slowly lower the blade into and through the workpiece.
- Release the switch trigger and allow the saw blade to stop rotating before raising the blade out of workpiece and removing the workpiece from the miter table.

## BEVEL CUT

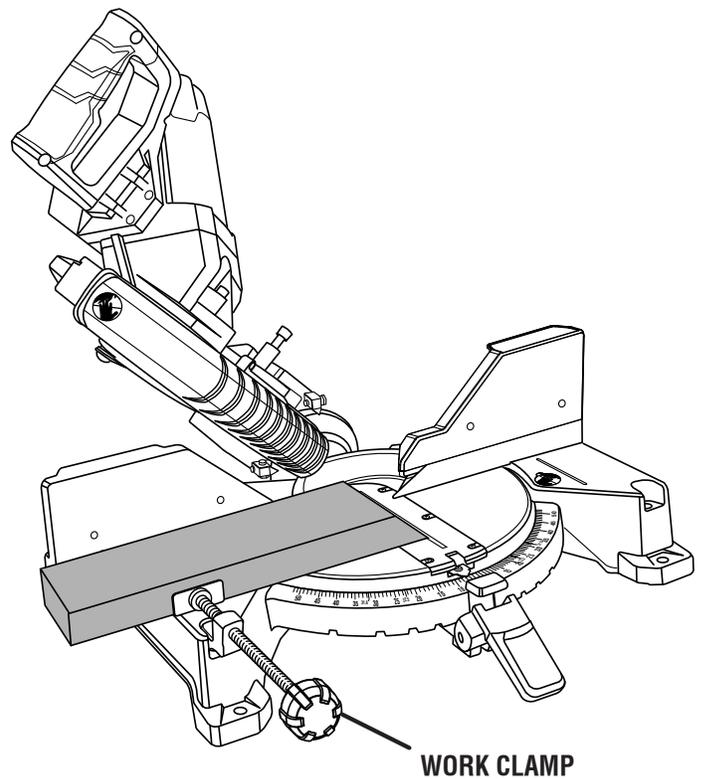


Fig. 26

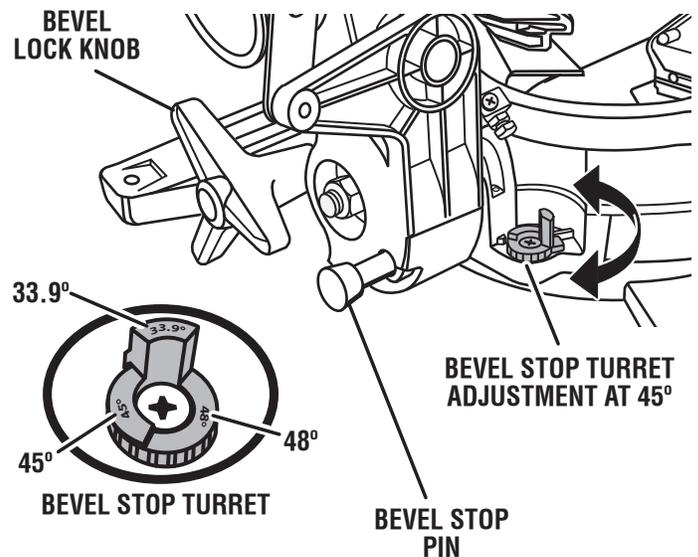


Fig. 27

# OPERATION

## TO COMPOUND MITER CUT

See Figure 28.

A compound miter cut is a cut made using a miter angle and a bevel angle at the same time. This type of cut is used to make picture frames, cut molding, make boxes with sloping sides, and for certain roof framing cuts.

To make this type of cut the control arm on the miter table must be rotated to the correct angle and the saw arm must be tilted to the correct bevel angle. Care should always be taken when making compound miter setups due to the interaction of the two angle settings.

Adjustments of miter and bevel settings are interdependent with one another. Each time you adjust the miter setting you change the effect of the bevel setting. Also, each time you adjust the bevel setting you change the effect of the miter setting.

It may take several settings to obtain the desired cut. The first angle setting should be checked after setting the second angle, since adjusting the second angle affects the first.

Once the two correct settings for a particular cut have been obtained, always make a test cut in scrap material before making a finish cut in good material.

**NOTE:** It may be necessary to adjust or remove the sliding miter fence to insure proper clearance prior to making the cut.

- Pull out the lock pin and lift saw arm to its full height.
- Lift the miter lock lever and depress the detent release button to release the miter table.
- Rotate the control arm until the pointer aligns with the desired angle on the miter scale.
- Release the detent release button, then push the miter lock lever down to secure the miter table.
- Loosen the bevel lock knob and move the saw arm to the desired left bevel angle.

**NOTE:** To obtain right bevel angles, pull the bevel stop pin out and tilt the saw to the desired right bevel angle.

- Left and right bevel angles can be set from 0° to 48°.
- **NOTE:** Use the bevel stop turret to locate 33.9°, 45°, and 48° bevel angles. See Figure 27.
- Once the saw arm has been set at the desired angle, securely tighten the bevel lock knob.
- Recheck miter angle setting. Make a test cut in scrap material.
- Place the workpiece flat on the miter table with one edge securely against the fence. If the board is warped, place

## COMPOUND MITER CUT

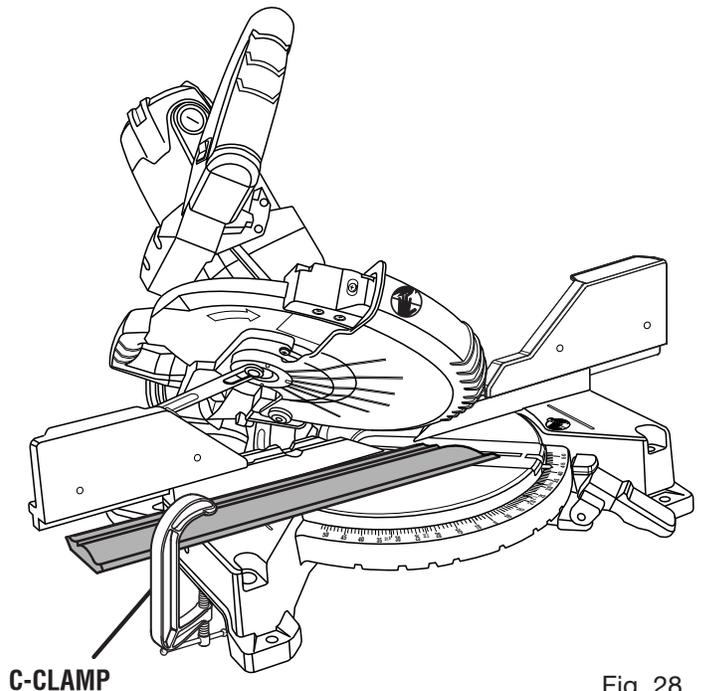


Fig. 28

the convex side against the fence. If the concave edge of a board is placed against the fence, the board could collapse on the blade at the end of the cut, jamming the blade. See Figures 39 - 40.

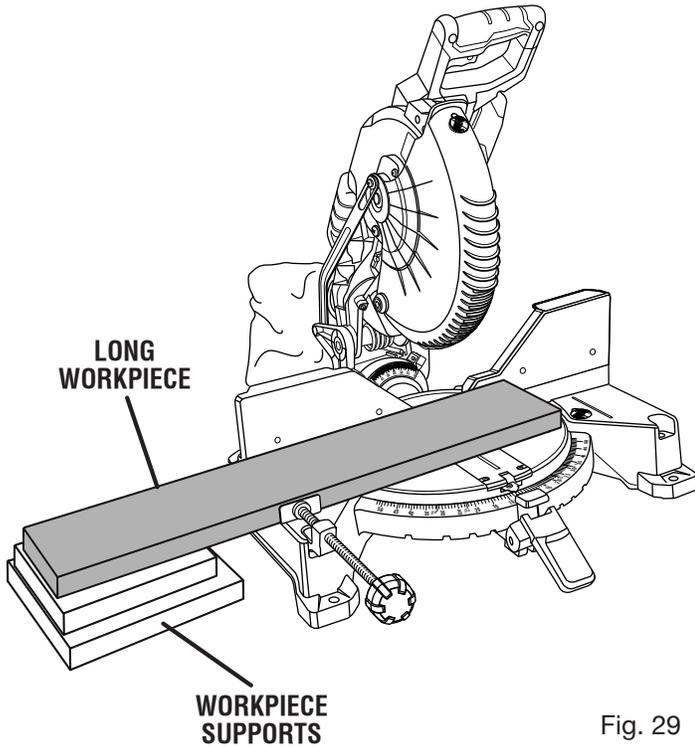
- When cutting long pieces of lumber or molding, support the opposite end of the stock with a roller stand or with a work surface level with the saw table. See Figure 29.
- Align the cutting line on the workpiece with the edge of saw blade or laser line.
- Grasp the stock firmly with one hand and secure it against the fence. Use the work clamp or a C-clamp to secure the workpiece when possible.
- Before turning on the saw, perform a dry run of the cutting operation to make sure that no problems will occur when the cut is made.
- Grasp the saw handle firmly. Squeeze the switch trigger. Allow several seconds for the blade to reach maximum speed.
- Slowly lower the blade into and through the workpiece.
- Release the switch trigger and allow the saw blade to stop rotating before raising the blade out of workpiece and removing the workpiece from the miter table.

# OPERATION

## TO SUPPORT LONG WORKPIECES

See Figure 29.

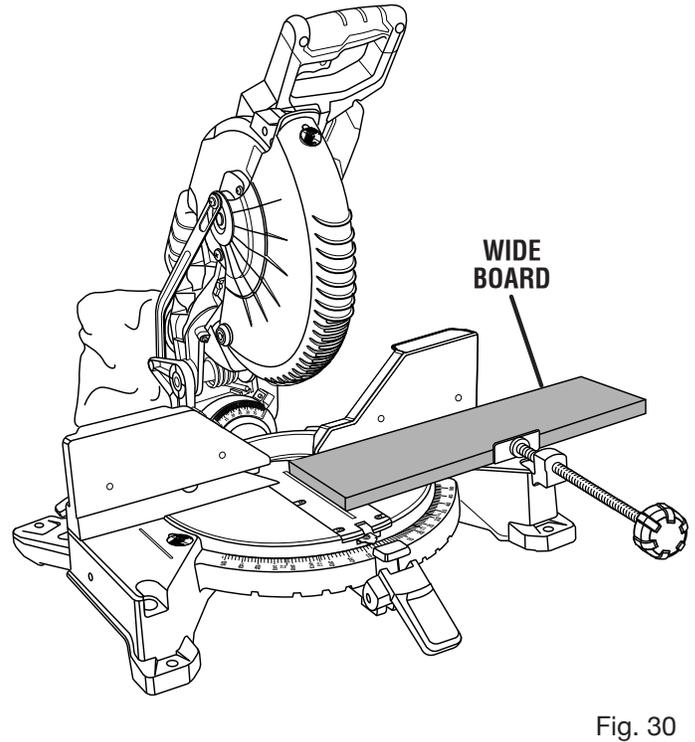
Long workpieces need extra supports. Supports should be placed along the workpiece so it does not sag. The support should let the workpiece lay flat on the base of the saw and miter table during the cutting operation. Use the work clamp or C-clamp to secure the workpiece.



## TO CLAMP WIDE WORKPIECES

See Figure 30.

When cutting wide workpieces, such as nominal 2 in. x 6 in., boards should be clamped with the work clamp or C-clamp.



# OPERATION

## CUTTING COMPOUND MITERS

To aid in making the correct settings, the compound angle setting chart below has been provided. Since compound cuts are the most difficult to accurately obtain, trial cuts should be made in scrap material, and much thought and planning made, prior to making your required cut.

PITCH OF SIDE	NUMBER OF SIDES						
	4	5	6	7	8	9	10
0°	M- 45.00° B- 0.00°	M- 36.00° B- 0.00°	M- 30.00° B- 0.00°	M- 25.71° B- 0.00°	M- 22.50° B- 0.00°	M- 20.00° B- 0.00°	M- 18.00° B- 0.00°
5°	M- 44.89° B- 3.53°	M- 35.90° B- 2.94°	M- 29.91° B- 2.50°	M- 25.63° B- 2.17°	M- 22.42° B- 1.91°	M- 19.93° B- 1.71°	M- 17.94° B- 1.54°
10°	M- 44.56° B- 7.05°	M- 35.58° B- 5.86°	M- 29.62° B- 4.98°	M- 25.37° B- 4.32°	M- 22.19° B- 3.81°	M- 19.72° B- 3.40°	M- 17.74° B- 3.08°
15°	M- 44.01° B- 10.55°	M- 35.06° B- 8.75°	M- 29.15° B- 7.44°	M- 24.95° B- 6.45°	M- 21.81° B- 5.68°	M- 19.37° B- 5.08°	M- 17.42° B- 4.59°
20°	M- 43.22° B- 14.00°	M- 34.32° B- 11.60°	M- 28.48° B- 9.85°	M- 24.35° B- 8.53°	M- 21.27° B- 7.52°	M- 18.88° B- 6.72°	M- 16.98° B- 6.07°
25°	M- 42.19° B- 17.39°	M- 33.36° B- 14.38°	M- 27.62° B- 12.20°	M- 23.56° B- 10.57°	M- 20.58° B- 9.31°	M- 18.26° B- 8.31°	M- 16.41° B- 7.50°
30°	M- 40.89° B- 20.70°	M- 32.18° B- 17.09°	M- 26.57° B- 14.48°	M- 22.64° B- 12.53°	M- 19.73° B- 11.03°	M- 17.50° B- 9.85°	M- 15.72° B- 8.89°
35°	M- 39.32° B- 23.93°	M- 30.76° B- 19.70°	M- 25.31° B- 16.67°	M- 21.53° B- 14.41°	M- 18.74° B- 12.68°	M- 16.60° B- 11.31°	M- 14.90° B- 10.21°
40°	M- 37.45° B- 27.03°	M- 29.10° B- 22.20°	M- 23.86° B- 18.75°	M- 20.25° B- 16.19°	M- 17.60° B- 14.24°	M- 15.58° B- 12.70°	M- 13.98° B- 11.46°
45°	M- 35.26° B- 30.00°	M- 27.19° B- 24.56°	M- 22.21° B- 20.70°	M- 18.80° B- 17.87°	M- 16.32° B- 15.70°	M- 14.43° B- 14.00°	M- 12.94° B- 12.62°
50°	M- 32.73° B- 32.80°	M- 25.03° B- 26.76°	M- 20.36° B- 22.52°	M- 17.20° B- 19.41°	M- 14.91° B- 17.05°	M- 13.17° B- 15.19°	M- 11.80° B- 13.69°
55°	M- 29.84° B- 35.40°	M- 22.62° B- 28.78°	M- 18.32° B- 24.18°	M- 15.44° B- 20.82°	M- 13.36° B- 18.27°	M- 11.79° B- 16.27°	M- 10.56° B- 14.66°
60°	M- 26.57° B- 37.76°	M- 19.96° B- 30.60°	M- 16.10° B- 25.66°	M- 13.54° B- 22.07°	M- 11.70° B- 19.35°	M- 10.31° B- 17.23°	M- 9.23° B- 15.52°
65°	M- 22.91° B- 39.86°	M- 17.07° B- 32.19°	M- 13.71° B- 26.95°	M- 11.50° B- 23.16°	M- 9.93° B- 20.29°	M- 8.74° B- 18.06°	M- 7.82° B- 16.26°
70°	M- 18.88° B- 41.64°	M- 13.95° B- 33.53°	M- 11.17° B- 28.02°	M- 9.35° B- 24.06°	M- 8.06° B- 21.08°	M- 7.10° B- 18.75°	M- 6.34° B- 16.88°
75°	M- 14.51° B- 43.08°	M- 10.65° B- 34.59°	M- 8.50° B- 28.88°	M- 7.10° B- 24.78°	M- 6.12° B- 21.69°	M- 5.38° B- 19.29°	M- 4.81° B- 17.37°
80°	M- 9.85° B- 44.14°	M- 7.19° B- 35.37°	M- 5.73° B- 29.50°	M- 4.78° B- 25.30°	M- 4.11° B- 22.14°	M- 3.62° B- 19.68°	M- 3.23° B- 17.72°
85°	M- 4.98° B- 44.78°	M- 3.62° B- 35.84°	M- 2.88° B- 29.87°	M- 2.40° B- 25.61°	M- 2.07° B- 22.41°	M- 1.82° B- 19.92°	M- 1.62° B- 17.93°
90°	M- 0.00° B- 45.00°	M- 0.00° B- 36.00°	M- 0.00° B- 30.00°	M- 0.00° B- 25.71°	M- 0.00° B- 22.50°	M- 0.00° B- 20.00°	M- 0.00° B- 18.00°

Each B (Bevel) and M (Miter) Setting is Given to the Closest 0.005°.

### COMPOUND-ANGLE SETTINGS FOR POPULAR STRUCTURES

# OPERATION

## CUTTING CROWN MOLDING

Your compound miter saw does an excellent job of cutting crown molding. In general, compound miter saws do a better job of cutting crown molding than any other tool made.

In order to fit properly, crown molding must be compound mitered with extreme accuracy.

The two contact surfaces on a piece of crown molding that fit flat against the ceiling and the wall of a room 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°.

## LAYING MOLDING FLAT ON THE MITER TABLE

See Figure 31.

To use this method for accurately cutting crown molding for a 90° inside or outside corner, lay the molding with its broad back surface flat on the miter table and against the fence.

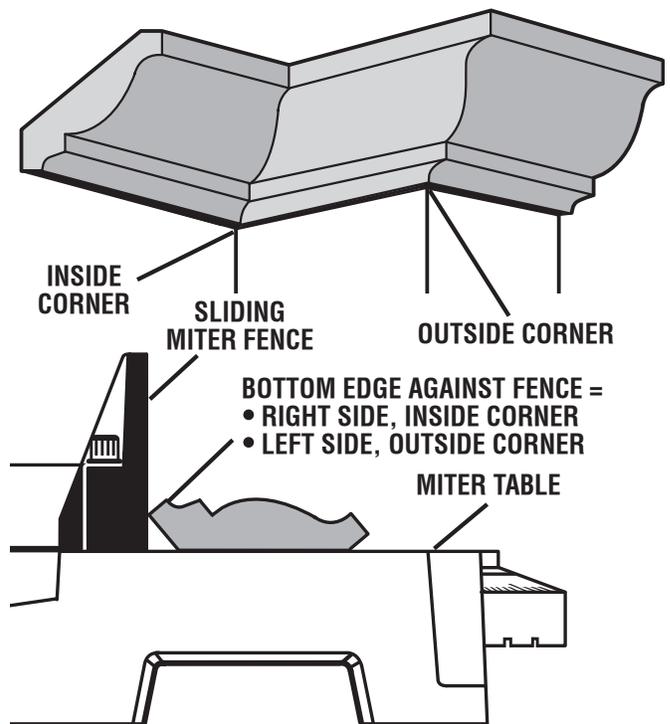
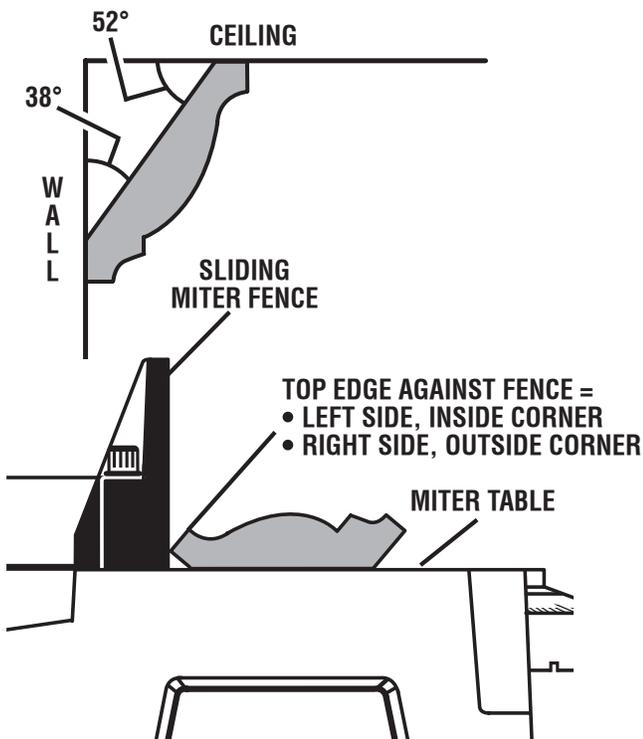
When setting the bevel and miter angles for compound miters, remember that the settings are interdependent; changing one angle changes the other angle as well.

Keep in mind that the angles for crown moldings are very precise and difficult to set. Since it is very easy for these angles to shift, all settings should first be tested on scrap molding. Also most walls do not have angles of exactly 90°, therefore, you will need to fine tune your settings.

When cutting crown molding by this method the bevel angle should be set at 33.9°. The bevel stop turret can be used to set the bevel angle to 33.9°. The miter angle should be set at 31.6° either right or left, depending on the desired cut for the application. See the chart below for correct angle settings and correct positioning of crown molding on miter table.

The settings in the chart below can be used for cutting All Standard (U.S.) crown molding with 52° and 38° angles. The crown molding is placed flat on the miter table using the compound features of your miter saw.

Bevel Angle Setting	Type of Cut
33.9°	Left side, inside corner 1. Top edge of molding against fence 2. Miter table set right 31.6° 3. Save left end of cut
33.9°	Right side, inside corner 1. Bottom edge of molding against fence 2. Miter table set left 31.6° 3. Save left end of cut
33.9°	Left side, outside corner 1. Bottom edge of molding against fence 2. Miter table set left 31.6° 3. Save right end of cut
33.9°	Right side, outside corner 1. Top edge of molding against fence 2. Miter table set right 31.6° 3. Save right end of cut



CROWN MOLDING FLAT ON MITER TABLE

Fig. 31

# OPERATION

## NESTING CROWN MOLDING AGAINST THE MITER FENCE

See Figures 32 - 38.

To nest pieces of crown molding less than 4-5/8 in. tall:

- Set the bevel angle at 0° and the miter angle at 45° to either the left or the right.
- Lay the crown molding on the saw with its bottom edge resting at a natural angle flush against the fence and its top edge resting flush against the miter table, this is called “nesting”.
- Position the crown molding in place by using the work clamp as a material stop.
- Tighten the knob on the work clamp until it rests lightly against the edge of the molding. **Do not overtighten as this may move the material causing misalignment.**
- Before turning on the saw, perform a dry run of the cutting operation to make sure that no problems will occur when the cut is made.
- Grasp the saw handle firmly. Squeeze the switch trigger. Allow several seconds for the blade to reach maximum speed.
- Slowly lower the blade into and through the crown molding.
- Release the switch trigger and allow the saw blade to stop rotating before raising the blade out of the crown molding and removing the crown molding from the miter table.

To nest pieces of crown molding that are 4-5/8 in. and taller:

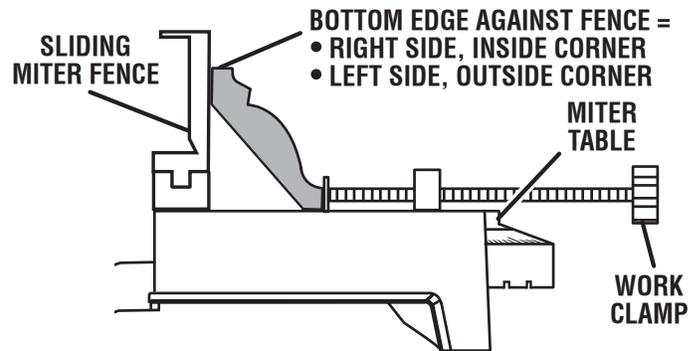
**NOTE:** This method of cut is for crown molding between 4-5/8 in. and 5-1/4 in. tall. Do not attempt to cut molding that is larger than 5-1/4 in. tall.

- Loosen the fence screw and slide miter fences toward the saw arm until they are flush with the miter table.
- Remove the sliding miter fences by pulling them up and away from the miter table.
- Place the left sliding miter fence on the right side of the tool and the right sliding miter fence on the left side with both fences facing the rear of the tool.
- Install the miter fences by aligning the small slot in the fences with the fixed screws on the saw and pushing down.

**NOTE:** The fixed screws prevent the sliding miter fences from sliding too close to the saw arm and possibly interfering with the movement of the blade. **Do not remove fixed screws.**

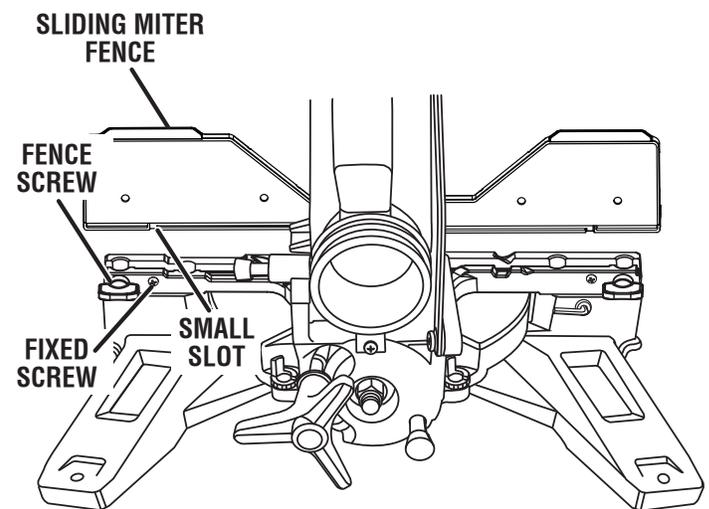
### WARNING:

Only reverse the sliding miter fences in order to cut nested crown molding between 4-5/8 in. and 5-1/4 in. tall. Making any other cuts with the fences reversed could result in serious personal injury.



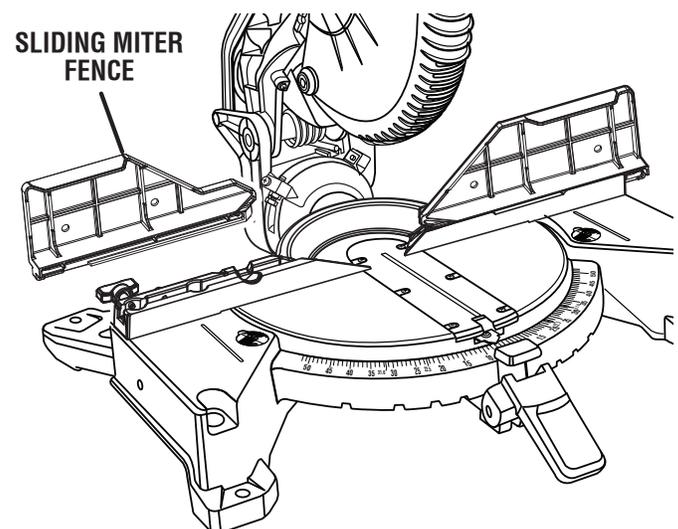
CROWN MOLDING NESTED AGAINST FRONT FACING MITER FENCE

Fig. 32



VIEW OF SAW FROM BEHIND WITH FENCES FACING BACKWARD

Fig. 33



VIEW OF SAW FROM FRONT WITH FENCES FACING BACKWARD

Fig. 34

# OPERATION

- Tighten the fence screws to secure the fences in place.
- Set the bevel angle at 0° and the miter angle at 45° to either the left or the right.
- Nest and secure the crown molding against the back of a sliding miter fence, as shown in figures 35 and 36.
- Position the crown molding in place by using the work clamp as a material stop.
- Tighten the knob on the work clamp until it rests lightly against the edge of the molding. **Do not overtighten as this may move the material causing misalignment.**
- Hold the workpiece as shown in figure 35 with your hand on the outside of the sliding miter fence.
- Before turning on the saw, perform a dry run of the cutting operation to make sure that no problems will occur when the cut is made.
- Grasp the saw handle firmly. Squeeze the switch trigger. Allow several seconds for the blade to reach maximum speed.
- Slowly lower the blade into and through the crown molding.
- Release the switch trigger and allow the saw blade to stop rotating before raising the blade out of the crown molding and removing the crown molding from the miter table.

## To install the sliding miter fences in their normal operating position:

- Loosen the fence screw and slide the miter fences toward the saw arm until they stop.
- NOTE:** The fixed screws prevent the sliding miter fences from sliding too close to the saw arm and possibly interfering with the movement of the blade. **Do not remove fixed screws.**
- Remove the sliding miter fences by pulling them up and away from the miter table.
  - Place the left sliding miter fence on the left side of the tool and the right sliding miter fence on the right side with both fences facing the front of the tool.
  - Install the miter fences by aligning the large slot in the fences with the fence screw on the saw and pushing down.
  - Tighten the fence screws to secure the fences in place.

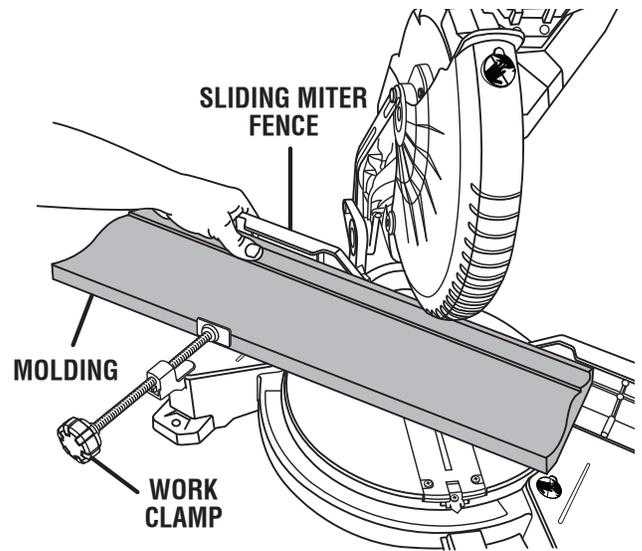
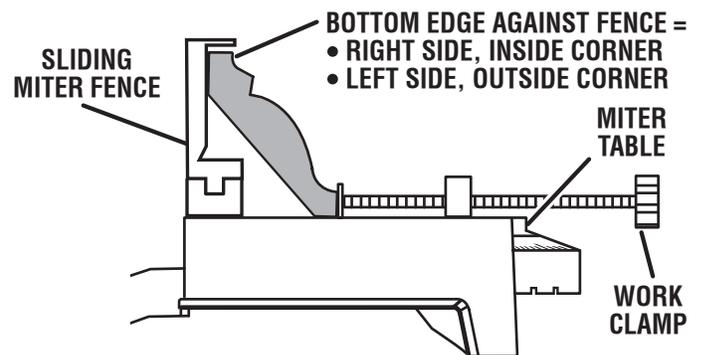
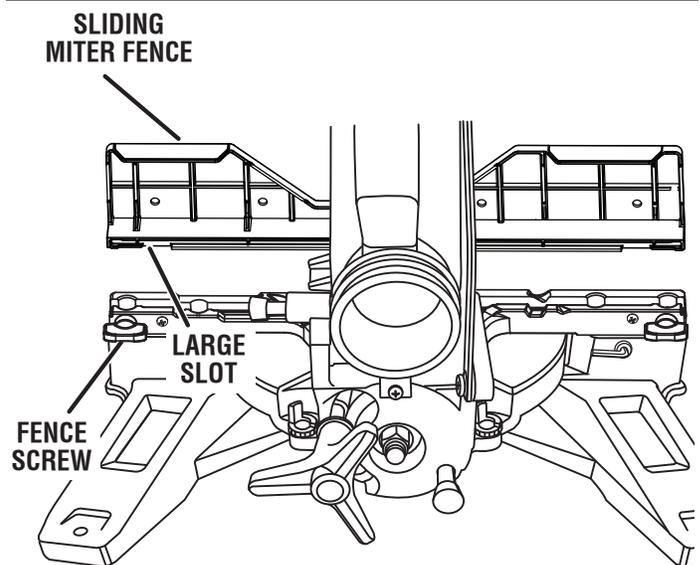


Fig. 35



LARGE CROWN MOLDING NESTED AGAINST REAR FACING MITER FENCE

Fig. 36



VIEW OF SAW FROM BEHIND WITH FENCES FACING FORWARD

Fig. 37

# OPERATION

## CUTTING WARPED MATERIAL

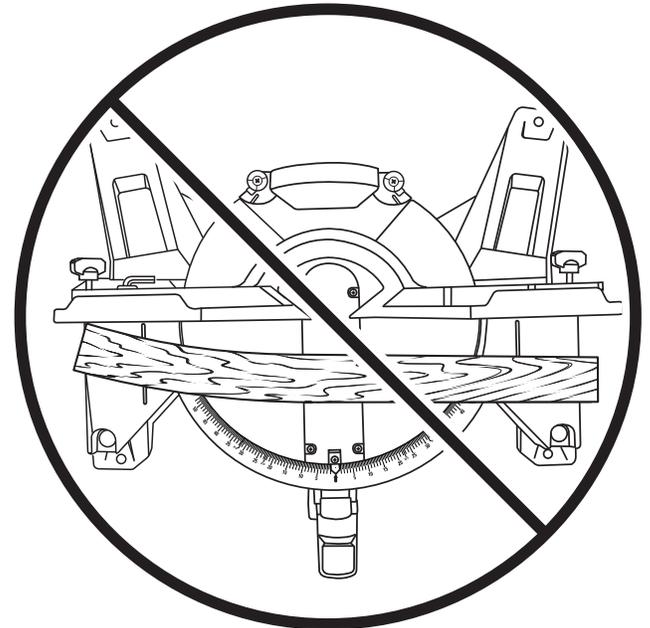
See Figures 39 - 40.

When cutting warped material, always make sure it is positioned on the miter table with the convex side against the fence as shown in figure 40.

If the warped material is positioned the wrong way as shown in figure 39, it will pinch the blade near the completion of the cut.

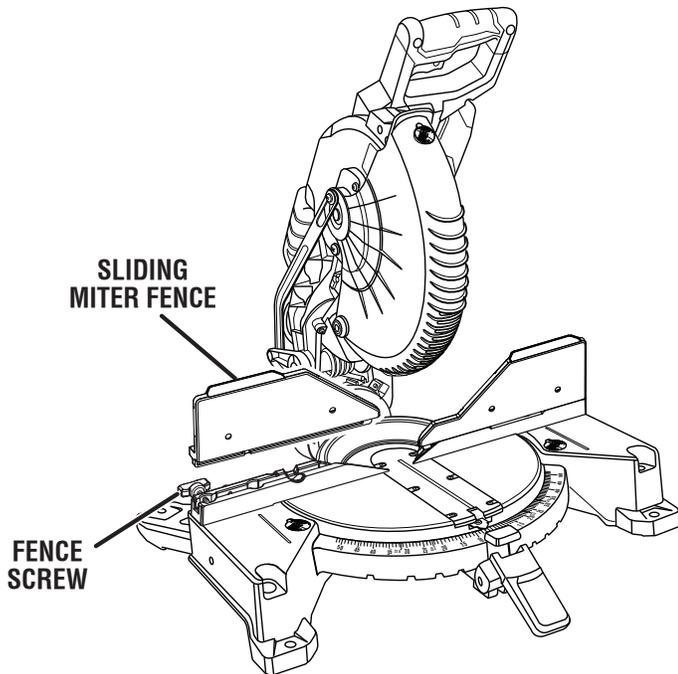
### **WARNING:**

To avoid a kickback and to avoid serious personal injury, never position the concave edge of bowed or warped material against the fence.



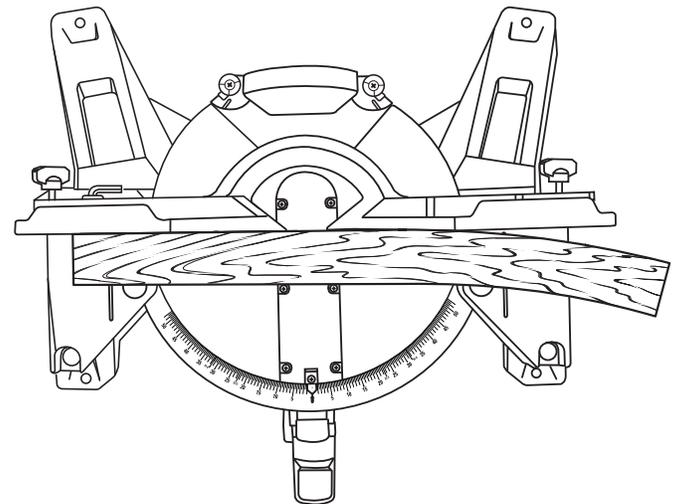
**WRONG**

Fig. 39



**VIEW OF SAW FROM FRONT WITH FENCES  
FACING FORWARD**

Fig. 38



**RIGHT**

Fig. 40

# ADJUSTMENTS

## **⚠ WARNING:**

Before performing any adjustment, make sure the tool is unplugged from the power supply. Failure to heed this warning could result in serious personal injury.

The compound miter saw has been adjusted at the factory for making very accurate cuts. However, some of the components might have been jarred out of alignment during shipping. Also, over a period of time, readjustment will probably become necessary due to wear. After unpacking the saw, check the following adjustments before you begin using saw. Make any readjustments that are necessary and periodically check the parts alignment to make sure that the saw is cutting accurately.

## **PIVOT ADJUSTMENTS**

**NOTE:** These adjustments were made at the factory and normally do not require readjustment.

### **TRAVEL PIVOT ADJUSTMENT**

- The saw arm should rise completely to the up position by itself.
- If the saw arm does not raise by itself or if there is play in the pivot joints, have saw repaired at your nearest **AUTHORIZED SERVICE CENTER**.

### **TO ADJUST THE BEVEL PIVOT**

- The compound miter saw should bevel easily by loosening the bevel lock knob and tilting the saw.

**NOTE:** To obtain right bevel angles, pull the bevel stop pin out and tilt the saw to the desired angle.

- If movement is tight or if there is play in the pivot, have saw repaired at your nearest **AUTHORIZED SERVICE CENTER**.

### **45° BEVEL ADJUSTMENT**

See Figure 41.

- Unplug the saw.
- Using a wrench, loosen the lock nut securing bevel stop adjustment screw.
- Loosen the bevel lock knob and set the saw arm at 45° bevel.

**NOTE:** To obtain right bevel angles, pull the bevel stop pin out and tilt the saw to the desired angle.

- Square the blade to the miter table as described in the *Assembly* section of this manual.

- If the blade is out of square, adjust by tightening or loosening the bevel stop adjustment screw.
- Retighten bevel lock knob and push bevel stop pin in. Recheck blade-to-table alignment.

**NOTE:** The above procedure can be used to check blade squareness of the saw blade to the miter table at both left and right 45° angles.

Your saw has several scale indicators. After squaring adjustments have been made, it may be necessary to loosen the indicators screws and reset them to zero. See Figures 19 and 20.

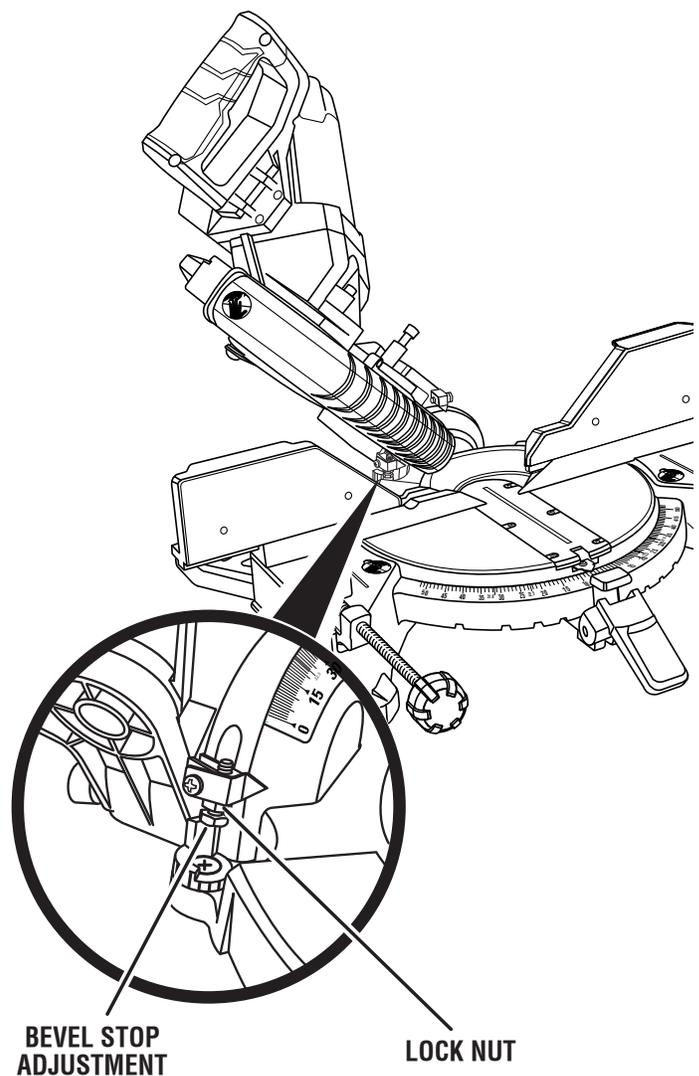


Fig. 41

# ADJUSTMENTS

## 0° BEVEL ADJUSTMENT

See Figure 42.

**NOTE:** These adjustments were made at the factory and normally do not require readjustment.

- Unplug the saw.
- Loosen the bevel lock knob by turning the knob counterclockwise.
- Square the blade to the miter table as described in the Assembly section of this manual.
- If the blade is out of square, adjust by tightening or loosening the 0° bevel stop screw using the 3 mm leg (long leg) of the hex key.
- Retighten bevel lock knob. Recheck blade-to-table alignment.

Your saw has several scale indicators. After squaring adjustments have been made, it may be necessary to loosen the indicators screws and reset them to zero. See Figures 19 and 20.

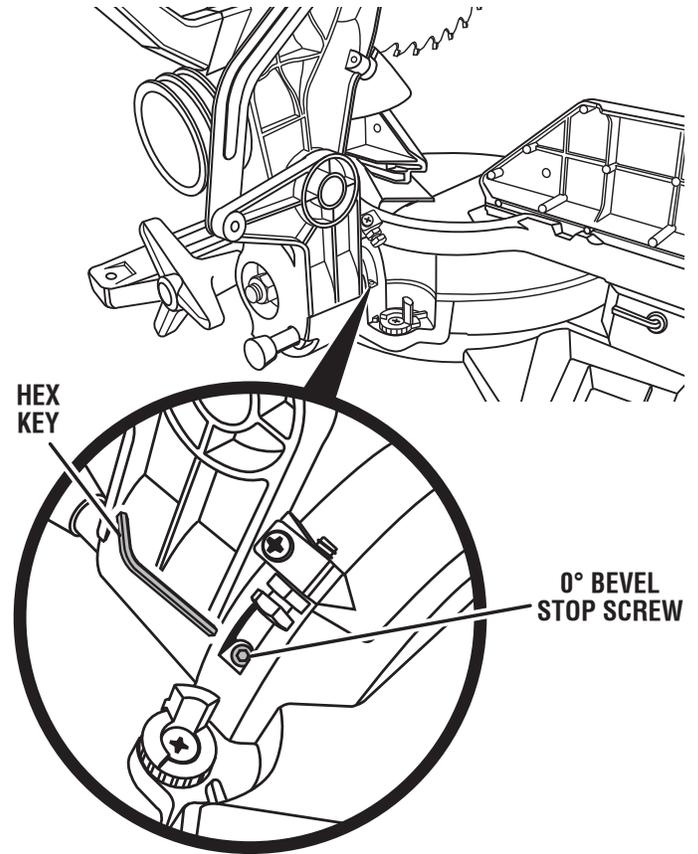


Fig. 42

# ADJUSTMENTS

## **⚠ DANGER:**

Laser radiation. Avoid direct eye contact with light source.

## **⚠ WARNING:**

Use of controls or adjustments or performance of procedures other than those specified herein can result in hazardous radiation exposure.

## TO ADJUST THE LASER GUIDE

See Figure 43.

- Set miter and bevel angles to 0° and lock in place.
- Use the work clamp to secure a piece of scrap wood.
- Plug the saw into the power source and make a slight cut to score the wood.
- Release the switch trigger and allow the saw blade to stop rotating before raising the saw arm.
- Using a padlock, lock the switch trigger to make the saw inoperable.
- Turn on the laser guide.
- Rotate laser adjustment screw #1 (yaw adjustment) clockwise or counter clockwise until the laser is parallel with the cut in the wood.
- Rotate laser adjustment screw #3 (lateral adjustment) until the laser line is parallel against the left edge of the score line.
- Move the saw arm up and down, and inspect the laser line position. If the laser line drifts out of position as the saw arm moves, lift the saw arm to its full height, and rotate laser adjustment screw #2 (tilt adjustment) left or right until the laser no longer moves.

**NOTE:** The laser should remain parallel against the left edge of the kerf of the blade during the full movement of the saw arm.

- Repeat the steps above until the laser is properly aligned.

**NOTE:** If laser does not align correctly, return to your nearest Authorized Service Center for repair.

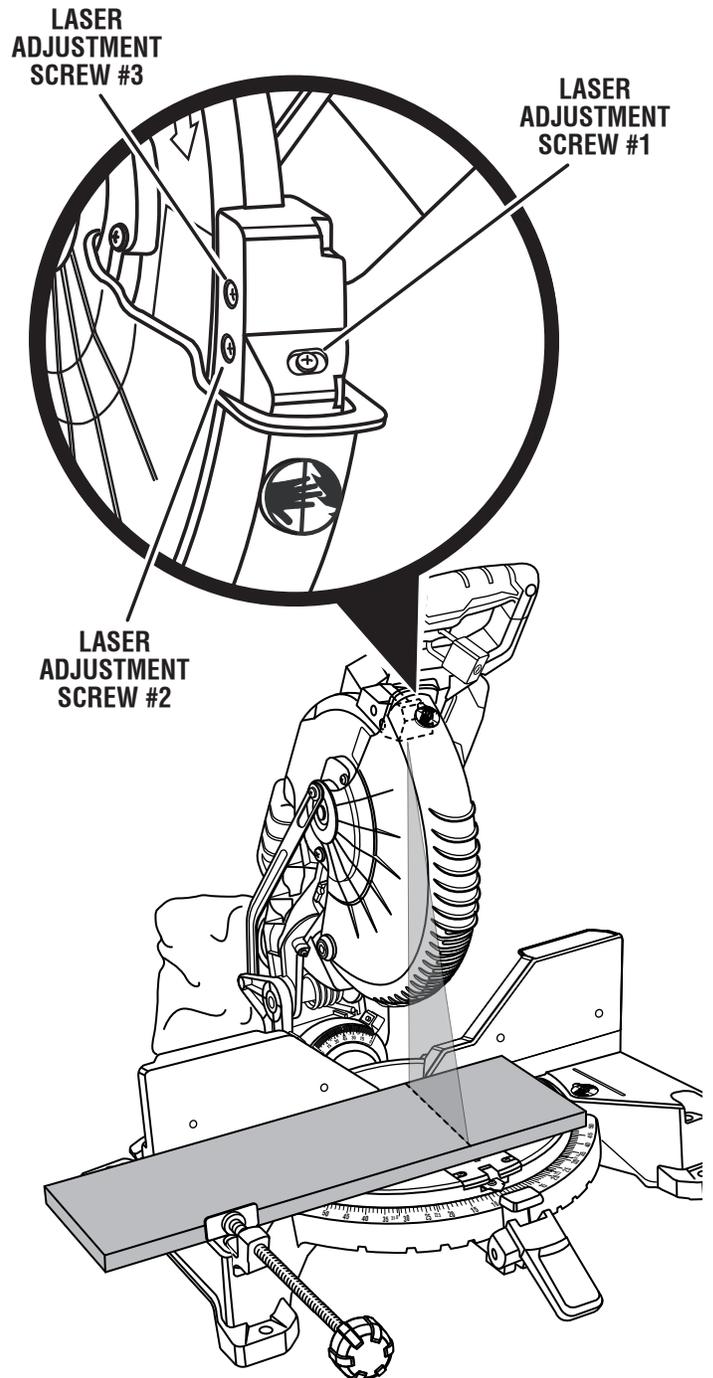


Fig. 43

# ADJUSTMENTS

## TO ADJUST THE MITER LOCK LEVER

See Figures 44 and 45.

In the locked position, the miter lock lever should feel tight and secure, and considerable effort should be required to move the miter table. If the miter lock lever feels loose or the table moves easily when in the locked position, an adjustment to the miter lock lever is required.

### To adjust:

- Unplug the saw.
- Lift the miter lock lever.
- With the unit securely resting on a large stable surface, tilt the unit by lifting up on one side of the base.
- Using the 5 mm leg (short leg) of the hex key, loosen the two socket head cap screws on the underside of the saw table.

### NOTICE:

To keep from losing control of the unit, steady the base with one hand while loosening the two socket head cap screws with the other hand.

- Locate the tensioning screw.
- Using the 5 mm leg (short leg) of the hex key, adjust the tensioning screw until the proper amount of tension in the lock lever is attained.

**NOTE:** It may be necessary to lock and unlock the miter lock lever to determine proper tension.

- Once all adjustments have been made, tighten the two socket head cap screws and return the saw to an upright position and push the miter lock lever down to lock the miter table in place.

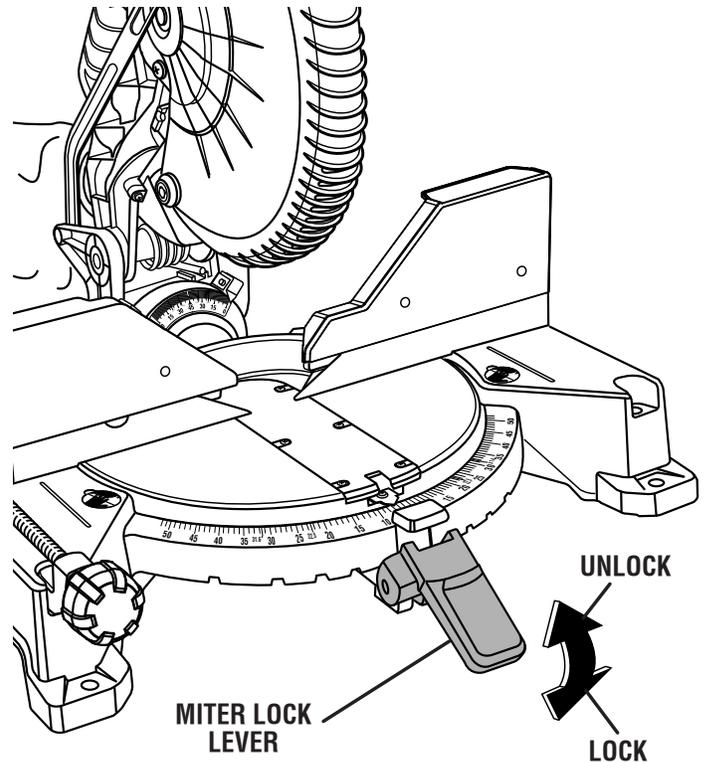


Fig. 44

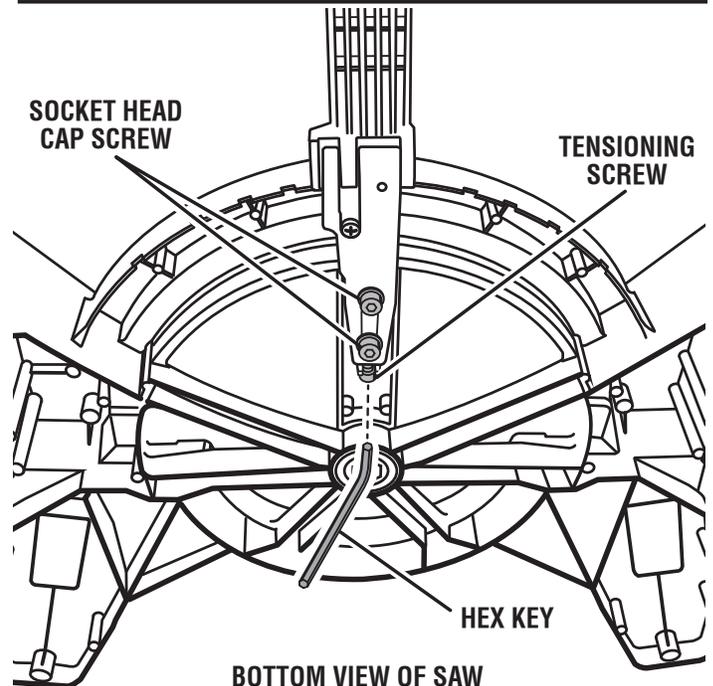


Fig. 45

# MAINTENANCE

## **WARNING:**

When servicing, use only identical replacement parts. Use of any other part can create a hazard or cause product damage.

## **WARNING:**

Always wear eye protection with side shields marked to comply with ANSI Z87.1 during product operation. If operation is dusty, also wear a dust mask.

## **WARNING:**

Before performing any adjustment, make sure the tool is unplugged from the power supply. Failure to heed this warning could result in serious personal injury.

## GENERAL MAINTENANCE

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, carbon dust, etc.

## **WARNING:**

Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. They contain chemicals that can damage, weaken, or destroy plastic.

Electric tools used on fiberglass material, wallboard, spackling compounds, or plaster are subject to accelerated wear and possible premature failure because the fiberglass chips and grindings are highly abrasive to bearings, brushes, commutators, etc. Consequently, we do not recommend using this tool for extended work on these types of materials. However, if you do work with any of these materials, it is extremely important to clean the tool using compressed air.

## LUBRICATION

All of the 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 lubrication is required.

## BRUSH REPLACEMENT

See Figure 46.

The saw has externally accessible brush assemblies that should be periodically checked for wear.

**Proceed as follows when replacement is required:**

- Unplug the saw.
- Remove brush cap with a screwdriver. Brush assembly is spring loaded and will pop out when you remove brush cap.
- Remove brush assembly.
- Check for wear. Replace both brushes when either has less than 1/4 in. length of carbon remaining. **Do not** replace one side without replacing the other.
- Reassemble using new brush assemblies. Make sure curvature of brush matches curvature of motor and that brush moves freely in brush tube.
- Make sure brush cap is oriented correctly (straight) and replace.
- Tighten brush cap securely. **Do not** overtighten.

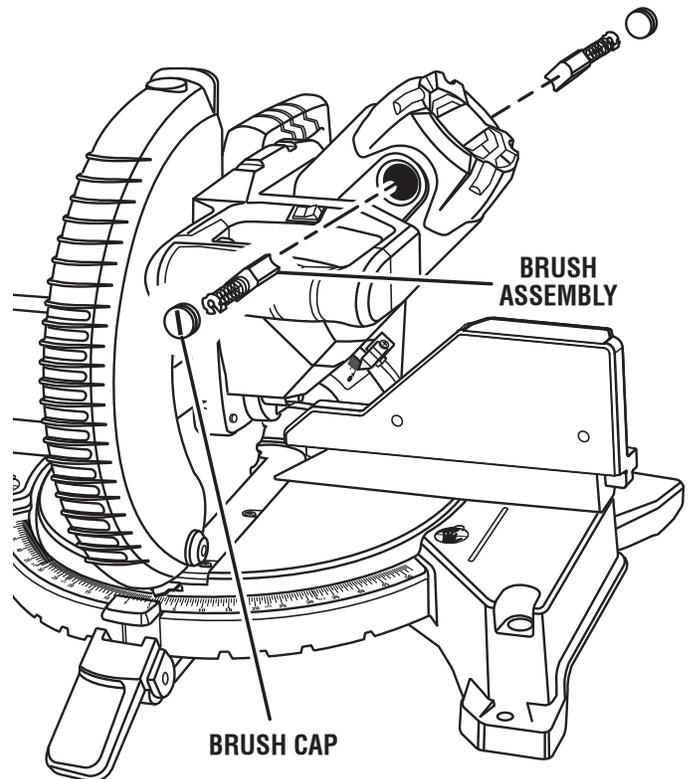


Fig. 46

# ACCESSORIES

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Look for these accessories where you purchased this product or call 1-866-539-1710:

■ AC9945 Miter Saw Utility Vehicle.....	987310001
■ Dust Bag Assembly.....	089036008914
■ 10 in. Blade (40 Tooth) .....	089036008911
■ Zero Clearance Throat Plate .....	089036008155
■ Work Clamp .....	089036008029
■ Blade Wrench.....	089036008028

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 **WARNING:**

Current attachments and accessories available for use with this product are listed above. Do not use any attachments or accessories not recommended by the manufacturer of this product. The use of attachments or accessories not recommended can result in serious personal injury.

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# WARRANTY

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## RIDGID® HAND HELD AND STATIONARY POWER TOOL 3 YEAR LIMITED SERVICE WARRANTY

Proof of purchase must be presented when requesting warranty service.

Limited to RIDGID® hand held and stationary power tools purchased 2/1/04 and after. This product is manufactured by One World Technologies, Inc. The trademark is licensed from RIDGID®, Inc. All warranty communications should be directed to One World Technologies, Inc., attn: RIDGID® Hand Held and Stationary Power Tool Technical Service at (toll free) 1-866-539-1710.

### 90-DAY SATISFACTION GUARANTEE POLICY

During the first 90 days after the date of purchase, if you are dissatisfied with the performance of this RIDGID® Hand Held or Stationary Power Tool for any reason you may return the tool to the dealer from which it was purchased for a full refund or exchange. To receive a replacement tool you must present proof of purchase and return all original equipment packaged with the original product. The replacement tool will be covered by the limited warranty for the balance of the 3 YEAR service warranty period.

### WHAT IS COVERED UNDER THE 3 YEAR LIMITED SERVICE WARRANTY

This warranty on RIDGID® Hand Held and Stationary Power Tools covers all defects in workmanship or materials and normal wear items such as brushes, chucks, motors, switches, cords, gears and even cordless batteries in this RIDGID® tool for three years following the purchase date of the tool. Warranties for other RIDGID® products may vary.

### HOW TO OBTAIN SERVICE

To obtain service for this RIDGID® tool you must return it; freight prepaid, or take it in to an authorized service center for RIDGID® branded hand held and stationary power tools. You may obtain the location of the authorized service center nearest you by calling (toll free) 1-866-539-1710 or by logging on to the RIDGID® website at [www.ridgid.com](http://www.ridgid.com). When requesting warranty service, you must present the original dated sales receipt. The authorized service center will repair any faulty workmanship, and either repair or replace any part covered under the warranty, at our option, at no charge to you.

### WHAT IS NOT COVERED

This warranty applies only to the original purchaser at retail and may not be transferred. This warranty only covers defects arising under normal usage and does not cover any malfunction, failure or defect resulting from misuse, abuse, neglect, alteration, modification or repair by other than an authorized service center for RIDGID® branded hand held and stationary power tools. Consumable accessories provided with the tool such as, but not limited to, blades, bits and sand paper are not covered.

**RIDGID®, INC. AND ONE WORLD TECHNOLOGIES, INC. MAKE NO WARRANTIES, REPRESENTATIONS OR PROMISES AS TO THE QUALITY OR PERFORMANCE OF ITS POWER TOOLS OTHER THAN THOSE SPECIFICALLY STATED IN THIS WARRANTY.**

### ADDITIONAL LIMITATIONS

To the extent permitted by applicable law, all implied warranties, including warranties of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, are disclaimed. Any implied warranties, including warranties of merchantability or fitness for a particular purpose, that cannot be disclaimed under state law are limited to three years from the date of purchase. One World Technologies, Inc. and RIDGID®, Inc. are not responsible for direct, indirect, incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

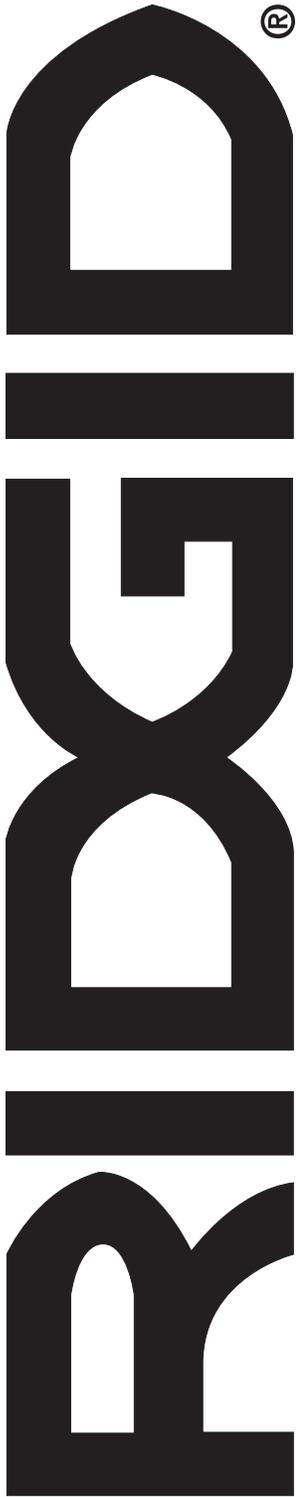
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**One World Technologies, Inc.**

P.O. Box 35, Hwy. 8

Pickens, SC 29671

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# OPERATOR'S MANUAL

## 10 in. COMPOUND MITER SAW WITH LASER

**R4112 - Double Insulated**

### **CUSTOMER SERVICE INFORMATION**

For parts or service, contact your nearest RIDGID authorized service center. Be sure to provide all relevant information when you call or visit. For the location of the authorized service center nearest you, please call 1-866-539-1710 or visit us online at [www.ridgid.com](http://www.ridgid.com).

The model number of this tool is found on a plate attached to the motor housing. Please record the serial number in the space provided below. When ordering repair parts, always give the following information:

**Model No.** \_\_\_\_\_

**Serial No.** \_\_\_\_\_