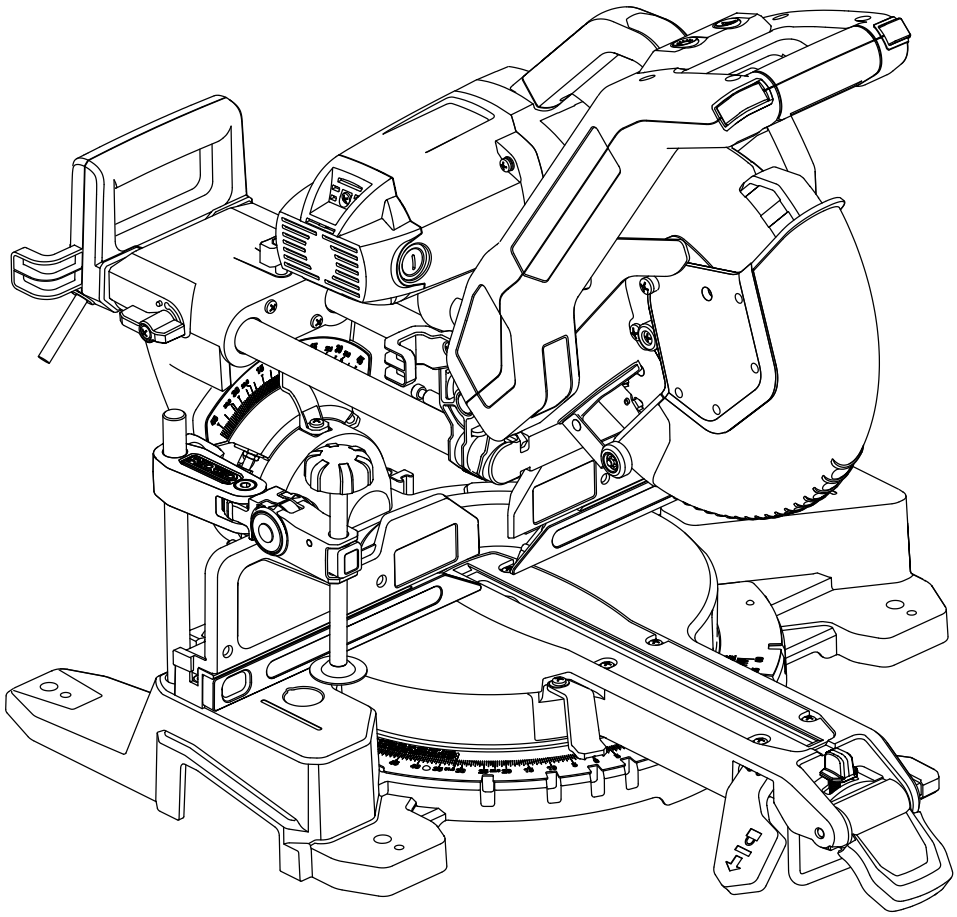
OPERATOR'S MANUAL

10 INCH SLIDING COMPOUND MITER SAW
WITH DUAL LASER
MS255SR



⚠ 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.
1-866-974-3443/USA

SAVE THIS MANUAL FOR FUTURE REFERENCE

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GENERAL SAFETY INSTRUCTIONS

Safety is a combination of using common sense, staying alert, and knowing how your miter saw works. Read this manual to understand this miter saw and how to use it safely.

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

READ ALL INSTRUCTIONS

- **Keep guards in place and in working order.**
- **Remove adjusting keys and wrenches.** Form a habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
- **Keep the work area clean.** Cluttered areas and benches invite accidents.
- **Don't use in a dangerous environment.** Don't use power tools in damp or wet locations or expose them to rain. Keep the work area well lit.
- **Keep children away.** All visitors should be kept at a safe distance from the work area.
- **Make the workshop childproof** with padlocks and master switches or by removing starter keys.
- **Don't force the tool;** it will do the job better and more safely when used at the rate at which it is designed to work.
- **Use the right tool.** Don't force a tool or attachment to do a job that it was not designed to do.
- **Use the proper extension cord.** Make sure that your extension cord is in good condition. When using an extension cord, be sure to use one that is heavy enough to carry the current that your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Table 1 shows the correct size to use, depending on the cord length and the nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gauge number, the heavier the cord.
- **Wear proper apparel.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry that can get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
- **Always use safety glasses.** Also use a face mask or dust mask if the cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses. They are not safety glasses.
- **Secure the work piece.** Use clamps or a vise to hold the work piece whenever practical. It's safer than using your hand and it frees both hands to operate the tool.
- **Don't over reach.** Keep proper footing and balance at all times.
- **Maintain tools with care.** Keep tools sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
- **Disconnect tools** before servicing and when changing accessories, such as blades, bits, cutters, and the like.
- **Reduce the risk of unintentional starting.** Make sure that the switch is in the off position before plugging the tool into an electrical outlet.
- **Use recommended accessories.** Consult the operator's manual for recommended accessories. The use of improper accessories may cause a risk of injury to persons.
- **Never stand on the tool.** Serious injury could occur if the tool is tipped or if the cutting tool is contacted unintentionally.
- **Check for damaged parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine whether it will operate properly and perform its intended function. Check for misalignment or binding of moving parts, broken parts or mountings, and any other condition that may affect the operation of the tool. A guard or other part that is damaged should be properly repaired or replaced.
- **Direction of feed:** always feed work into a blade or cut against the direction of rotation of the blade or cutter.
- **Never leave a tool running unattended. Turn the power off.** Don't leave the tool until it comes to a complete stop.

Recommended size of extension cords:

Tool's Ampere Rating (120 V circuit only)	Volts	Total length of cord in feet Cord size in A. W. G. (minimum)		
		25'	50'	100'
0-6	120 V~	18	16	16
6-10		18	16	14
10-12		16	16	14
12-16		14	12	Not Recommended

SPECIFIC SAFETY INSTRUCTIONS

⚠ WARNING: for your own safety, read the operator's manual before operating the miter saw.

- **Always wear eye protection.**
- **Do not operate the saw without the guards in place.**
- **Be sure to turn the tool off and wait for the saw blade to stop** before moving the work piece or changing the settings.
- **Be sure that the power is disconnected** before changing the blade or servicing the saw.
- **Do not expose to rain or use in a damp location.**
- **When servicing, use only identical replacement parts.**
- **Never reach around the saw blade.**
- **Do not perform any operation freehand.** Always place the work piece to be cut on the miter saw table, and position it firmly against the fence as a backstop. Always use the fence.
- **Always keep hands out of the path of the saw blade. Do not** reach under the material being cut or into the blade's cutting path with your fingers or hand for any reason.
- **To reduce the risk of injury,** return the saw arm to the full rear position after each crosscut operation.
- **Always make sure that the miter table and saw arm (bevel function) are locked in position before operating your saw.** Lock the miter table by securely tightening the miter-lock lever. Lock the saw arm (bevel function) by securely tightening the bevel locking lever.
- **Be sure that the blade path is free of nails.** Always carefully inspect lumber and remove all nails before cutting.
- **Always be sure that the blade clears the work piece.** Never start the saw with the blade touching the work piece. Always allow the motor to come to full speed before starting a cut.
- **Support long work pieces when cutting** to minimize the risk of blade pinching or kickback. The saw may slip, walk or slide while cutting long or heavy boards.
- **Never use a length-stop on the free (scrap) end of a clamped work piece; never hold onto or bind the free (scrap) end of the work piece in any operation.** If a clamp and a 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 work piece on the worktable at a time.
- **Avoid awkward operations and hand positions** where a sudden slip could cause your hand to move into the blade. Always make sure that you have good balance. Never operate your saw on the floor or in a crouched position.
- **Only use the correct blades.** Use the correct blade size, style and cutting speed for the material and the type of cut. Do not use blades with incorrect size holes. Never use blade washers or blade bolts that are defective or incorrect.
- **Always keep blades clean, sharp and with sufficient set.** Sharp blades minimize stalling and kickback.
- **Do not use dull or damaged blades.** Bent blades can break easily or cause kickback.
- **Never hold a work piece by hand if it is too small to be clamped.** Always keep your hands clear of the "no hands" zone.
- **Never apply lubricants to the blade when it is running.**
- **Never use solvents to clean plastic parts.** Solvents could dissolve or otherwise damage the material.
- **Do not turn the motor switch on and off rapidly.** This could cause the blade to loosen, which could create a hazard. Should this ever occur, stand clear and allow the saw blade to come to a complete stop. Disconnect the saw from the power source and securely tighten the blade bolt.
- **Never leave the saw unattended** while it is connected to a power supply.
- **Keep the motor air slots** clean and free of chips or dust. To avoid motor damage, the motor should be blown out or vacuumed frequently to keep sawdust from interfering with the motor ventilation.
- **Never lift this tool by gripping the cutting handle or the miter fence.** This may cause misalignment. Always lock the saw arm in the "DOWN" position and then carry the saw by holding the base or lift it using the carrying handle/support bracket.

⚠WARNING: Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California 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.**
- **Work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.**

Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water.
Allowing dust to get into your mouth or eyes or to lie on the skin may promote absorption of harmful chemicals.

ADDITIONAL INSTRUCTIONS FOR SAFE OPERATION

⚠WARNING: The use of this tool can generate and/or disburse dust, which may cause serious and permanent respiratory or other injury. Always use protection appropriate for the dust exposure. Direct particles away from the face and body.

- **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. Following this rule will reduce the risk of electric shock, fire or serious injury.
- **Before beginning power tool operation, always wear safety goggles or safety glasses with a side shield and a full face shield when needed.** We recommend a Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1.
- **Protect your lungs.** Wear a face mask or a dust mask if the operation is dusty.
- **Protect your hearing.** Wear appropriate personal hearing protection during use. Under some conditions and duration of use, noise from this product may contribute to hearing loss.
- **All visitors and bystanders must** wear the same safety equipment that the operator of the saw wears.
- **Inspect the tool cords** periodically and, if damaged, have them repaired by a qualified person.
- **Always check the tool for damaged parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine whether it will operate properly and perform its intended function. Check for misalignment or binding of moving parts, broken parts, and any other condition that may affect the tool's operation. A guard or other part that is damaged should be properly repaired or replaced by a qualified person.
- **Save these instructions.** Refer to them frequently and use them to instruct others who may use this tool. If someone borrows this tool, make sure they have these instructions also.

SYMBOLS

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 more safely.

Symbol	Name	Designation / Explanation
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watts	Power
∿	Alternating current	Type of current
⎓	Direct current	Type of characteristic of current
n_o	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
	Wet conditions alert	Do not expose to rain or use in damp locations.
	Read the 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 safety goggles or safety glasses with side shields and a full face shield when operating this product.
	Safety alert	Precautions that involve your safety.
	No hands symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	Hot surface	To reduce the risk of injury or damage, avoid contact with any hot surface.

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

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

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

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

NOTE: (Without Safety Alert Symbol) Indicates a situation that may result in property damage.

SERVICE
Service requires extreme care and knowledge and should be performed only by a qualified service technician. For service we suggest you return the product to your nearest AUTHORIZED SERVICE CENTER for repair. When servicing, use only identical replacement parts.

⚠ WARNING: To avoid serious personal injury, do not attempt to use this product until you read thoroughly and understand completely the operator's manual. Save this operator's manual and review it frequently for continuing safe operation and instructing others who may use this product. Call customer service for assistance at 1-866-974-3443.

⚠ WARNING: The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with a side shield and a full face shield when needed. We recommend a Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1.

SAVE THESE INSTRUCTIONS.

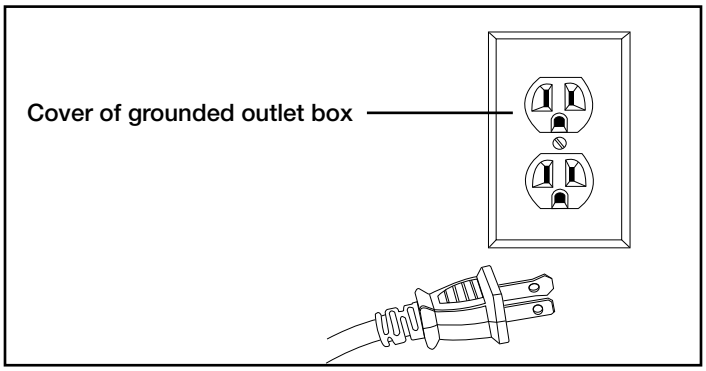
ELECTRICAL

⚠WARNING: Do not permit fingers to touch the terminal or the plug when installing or removing the plug from an outlet.

- **To reduce the risk of electric shock, double-insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit into a polarized outlet only one way.** If the plug does not fit in the outlet properly, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.
- **Double insulation** eliminates the need for the three-wire grounded power cord and grounded power supply system. Applicable only to Class II (double-insulated) tools. This compound miter saw is a double-insulated tool.

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

- **Before plugging in the tool, be sure that the outlet voltage supplied is within the voltage marked on the tool's data plate. Do not use** "AC only" rated tools with a DC power supply.
- **Avoid body contact with grounded surfaces** such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded.
- **Do not expose power tools to rain or wet conditions, and do not use power tools in wet or damp locations.** Water entering a power tool will increase the risk of electric shock. This tool is intended for indoor use only.



- **If operating a power tool in damp locations is unavoidable, always use a ground fault circuit interrupter** to supply power to your tool. Always wear electrician's rubber gloves and footwear in damp conditions.
- **Inspect tool cords for damage.** Have damaged tool cords repaired by a qualified person. Be sure to stay constantly aware of the cord location, and keep it well away from the moving blade.
- **Do not abuse the cord. Never** use the cord to carry the tool or to remove the plug from the outlet. Keep the cord away from heat, oil, sharp edges and moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.

LASERS

This miter saw has a built-in laser light. This is a Class II laser that emits a maximum output power of 635 nm 1 mW wavelengths. These lasers do not normally present an optical hazard. However, do not stare into the beam. Doing so can cause flash blindness.

⚠ CAUTION: The following label is affixed to your tool. It indicates the location from which the saw emits the laser light. Be aware of the laser light location when using the tool. Always make sure that any bystanders in the vicinity of use are made aware of the dangers of looking directly into the laser.

⚠ WARNING: LASER LIGHT. LASER RADIATION. Avoid direct eye exposure. Do not stare into the beam. Only turn the laser beam on when the laser will shine on a work piece.

⚠ WARNING: Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

⚠ WARNING: The use of optical instruments to view the laser beam, including but not limited to telescopes or transits, will increase eye hazard.

- **The laser should be used and maintained in accordance with the manufacture's instructions.**
- **Never aim the beam at any person** or any object other than the work piece.
- **Always ensure that the laser beam is aimed at a sturdy work piece without a reflective surface.** Wood or rough-coated surfaces are acceptable. Bright, shiny reflective surfaces are not suitable for laser use, because the reflective surface could reflect the beam back at the operator.
- **Do not attempt to activate the laser when the tool housing is removed.**
- **The laser is activated with a button** switch that is independent of the main switch for the saw.
- **Do not replace the laser light assembly** with a different type. Any repairs must be carried out by the laser manufacturer or a qualified service technician.
- **Do not attempt to repair the laser guide by yourself.**
- **Do not attempt to change any parts of the laser guide.**

OPERATOR'S GLOSSARY OF TERMS

- **Bevel Cut:** A cutting operation made with the blade at any angle other than 90° to the miter table.
- **Blade Flange:** A ring or collar on a spindle or arbor that permits other objects, such as a blade, to be attached to it.
- **Chamfer Cut:** A cut that removes a wedge from a block of wood so that the end (or part of the end) is angled at more than 90°.
- **Compound Miter Cut:** A cut made using both a miter angle and a bevel angle at the same time.
- **Crosscut:** A cutting operation made across the grain of the work piece.
- **Freehand Cut:** Performing a cut without using a fence, miter gauge, fixture, work clamp, or other proper device to keep the work piece from twisting or moving during the cut. Do not perform any operation freehand. Use a clamp or a vise whenever possible.
- **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 work piece back toward the operator.
- **Miter Cut:** A cutting operation made with the blade at any angle other than 90° to the fence.

- **No-Hands Zone:** The area between the marked lines on the left and right side of the miter-table base. This zone is identified by the No-Hands Zone symbols inside the lines marked on the miter table base.
- **Non-through Cut:** Any cutting operation where the blade does not extend completely through the thickness of the work piece.
- **Revolutions Per Minute (RPM):** The number of turns completed by a spinning object in one minute.
- **Saw-Arm Locking pin:** Locks the saw arm in the "DOWN" position.
- **Saw Blade Path:** The area over, under, behind, or in front of the blade, as it applies to the work piece; the area that will be or has been cut by the blade.
- **Set:** The distance that the saw blade tooth is bent (or set) outward from the face of the blade.
- **Slide Bars:** Guide the saw arm when making a slide cut.
- **Spindle Lock:** Allows the user to stop the blade from rotating while tightening or loosening the blade screw during blade replacement or removal.
- **Spindle:** The revolving shaft on which a blade or cutting tool is mounted.
- **Throat Plate:** A plate inserted in the Miter Saw's table that allows for blade clearance.
- **Through Sawing:** Any cutting operation where the blade extends completely through the thickness of the work piece.
- **Work Piece or Material:** The item on which the cutting operation is performed. The surfaces of a work piece are commonly referred to as faces, ends, and edges.

FEATURES

SPECIFICATIONS

Motor	120 V~ 60 Hz 15 A
No-load Speed	3,600 RPM
Blade Diameter	10 in.
Arbor Size	5/8 in.
Laser	Wavelength: 635nm, Power ≤ 1mW Class II
Cutting Capacity with Miter at 0°/Bevel 0°: Maximum nominal lumber size:	2x12, 4x4
Cutting Capacity with Miter at 45°/Bevel 0°: Maximum nominal lumber size:	2x8, 4x4
Cutting Capacity with Miter at 0°/right Bevel 45°: Maximum nominal lumber size:	2x12
Cutting Capacity with Miter at 0°/left Bevel 45°: Maximum nominal lumber size:	2x12
Cutting Capacity of Crown Molding Miter 45° Left & Right: Maximum size:	6"
Net Weight	59.6 lbs. (27.1 kg)

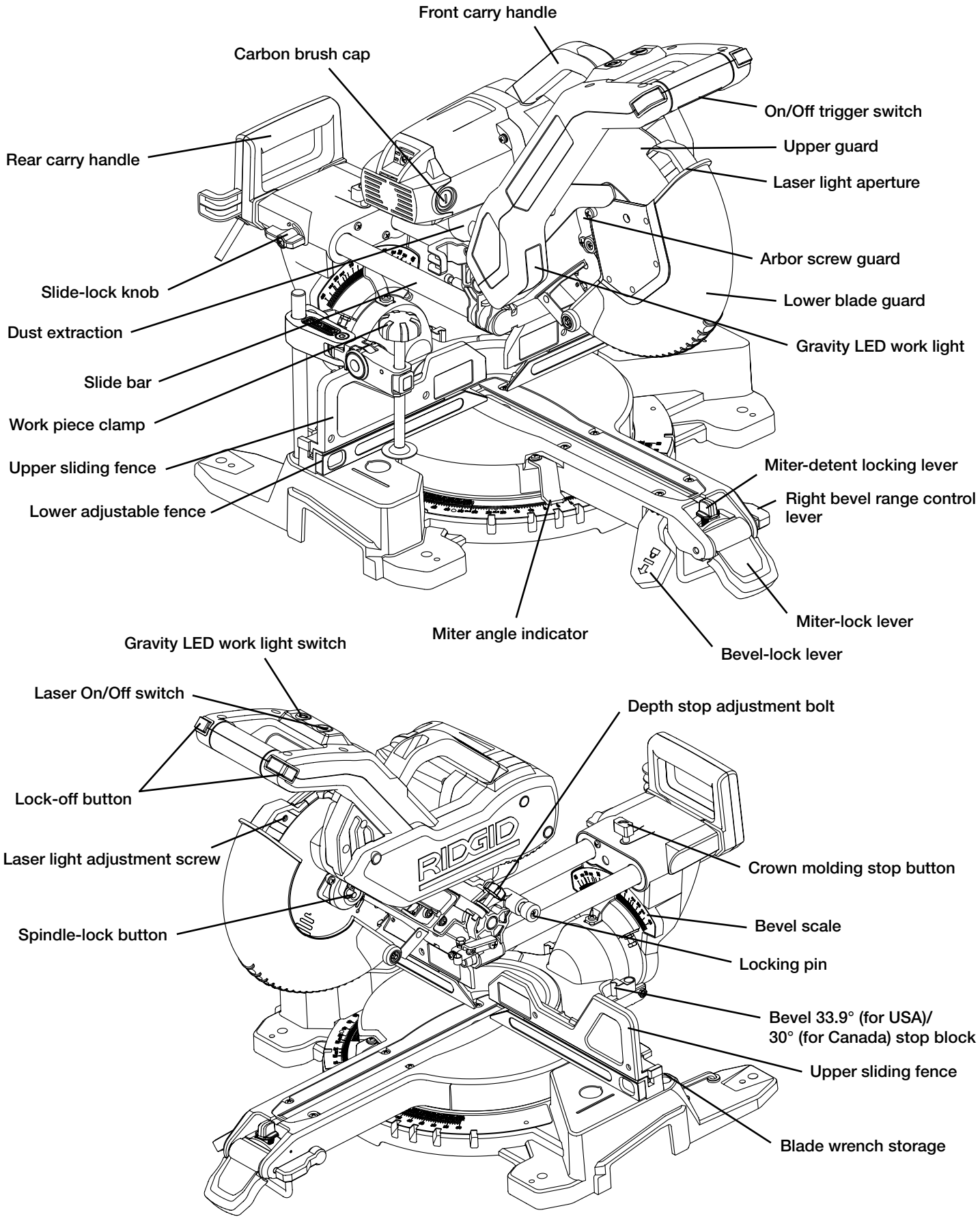

Front carry handle
Carbon brush cap
On/Off trigger switch
Rear carry handle
Upper guard
Laser light aperture
Arbor screw guard
Slide-lock knob
Lower blade guard
Dust extraction
Gravity LED work light
Slide bar
Work piece clamp
Upper sliding fence
Miter-detent locking lever
Right bevel range control lever
Lower adjustable fence
Miter-lock lever
Miter angle indicator
Bevel-lock lever
Gravity LED work light switch
Laser On/Off switch
Depth stop adjustment bolt
Lock-off button
Laser light adjustment screw
Crown molding stop button
Spindle-lock button
Bevel scale
Locking pin
Bevel 33.9° (for USA)/
30° (for Canada) stop block
Upper sliding fence
Blade wrench storage
RIDGID

Fig. 1

FEATURES

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

10 INCH BLADE
Your compound miter saw is equipped with a 10-inch Freud 40-tooth, general purpose blade.

15 AMP MOTOR
This saw has a powerful 15 amp motor with sufficient power to handle tough cutting jobs.

RIGHT BEVEL RANGE CONTROL LEVER
With the right bevel range control lever "up" the head assembly can tilt to the left side only. Press the right bevel range control lever down and the saw arm can tilt both right and left.

BEVEL-LOCK LEVER
To lock the saw at desired bevel angles.

WRENCHES
The larger blade wrench is used for changing the blade. One end of the blade wrench is a Phillips screwdriver and the other end is a hex key.

The smaller hex key is used for laser adjustment and for miter 0° fine adjustment.

The storage area for the two wrenches is located in the saw's base.

CARRYING HANDLES
For convenience when carrying or transporting the miter saw from one place to another, carrying handles are located on the top of the saw arm and the end of the slide bar.

ELECTRIC BRAKE
The electric brake quickly stops blade rotation after the On/Off trigger switch is released.

GRAVITY LED WORK LIGHT
Unique work light that shines on the work area regardless of the position of the saw arm.

MITER-LOCK LEVER
The miter-lock lever securely locks the saw at the desired miter angle.

MITER-DETENT LOCKING LEVER
The miter-detent locking lever, when used with the miter-lock lever lifted (unlocked), can release the miter table from pre-set index points.

POSITIVE STOPS ON MITER TABLE
Positive stops at right and left 0°, 15°, 22.5°, 31.6°, and 45° (for USA) / 0°, 15°, 22.5°, 35.3°, 45° (for Canada).

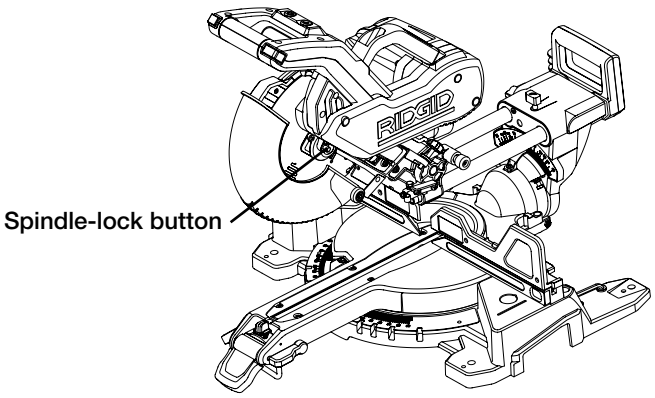


Fig. 2

LOWER BLADE GUARD
The lower blade guard is made of shock-resistant, translucent plastic that provides protection from each side of the blade. It retracts over the upper blade guard as the saw is lowered into the work piece.

SPINDLE-LOCK BUTTON (Fig. 2)
The spindle-lock button locks the spindle while installing, changing, or removing blades.

SLIDE BAR
When unlocked, the saw arm will glide forward and backward the length of the slide bar for cutting various work-piece widths.

SLIDE-LOCK KNOB
The slide-lock knob locks and unlocks the sliding feature of this tool.

UPPER SLIDING FENCE/ LOWER ADJUSTABLE FENCE
Upper and lower fences adjust for added precision.

WORK PIECE CLAMP
The work piece clamp is mounted on the left or right fence or base to securely clamp the work piece. The work piece clamp can be turned to different angles along the X-axis and Y-axis.

DEPTH-STOP ADJUSTMENT BOLT
The depth-stop adjustment is a feature used when cutting grooves in the work piece. The depth adjustment is used to limit the blade depth.

BEVEL 33.9° (USA)/ 30° (CANADA) STOP BLOCK
Use this stop block to set the saw-arm at bevel 33.9° (USA)/ 30° (Canada). To cut crown molding horizontally or vertically, use the bevel stop block and set the miter to 31.6° left or right (USA)/miter 35.3° left or right (Canada). This setting can also be used to cut flat wood stock.

CROWN MOLDING STOP BUTTON
The crown molding stop button locks the saw head into the optimal position to accurately cut crown molding at 45° right or left miter with no need for a bevel cut.

TOOLS NEEDED

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

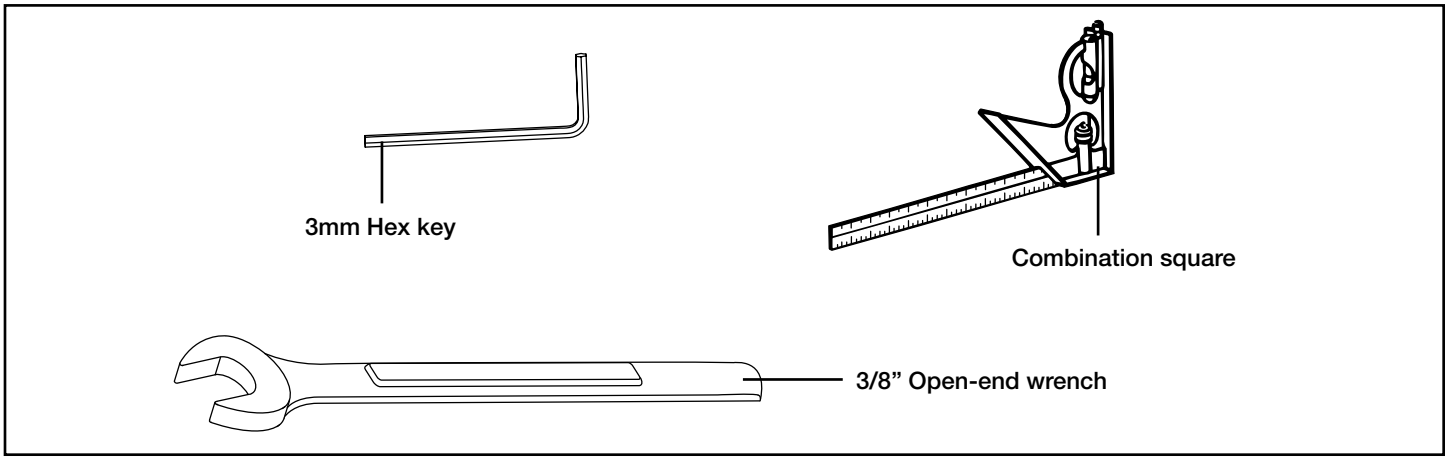


Fig. 3

LOOSE PARTS

The following items are included with your sliding compound miter saw:

- Dust Bag
- Blade wrench
- Hex key
- Work piece clamp
- Operator’s manual

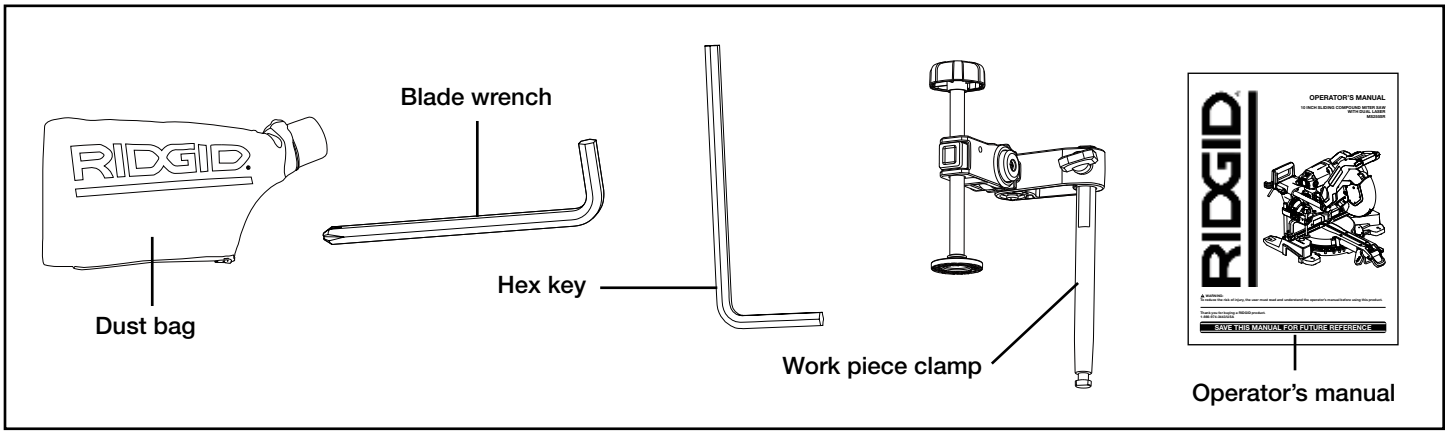


Fig. 4

⚠ 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 the saw from the carton by the carrying handle and place it on a level work surface.

NOTE: This tool is heavy. To avoid back injury, lift with your legs, not your back, and get help when needed.

- 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, and pull out the locking pin.
- Use the handle to lift the saw arm.
- Inspect the tool carefully to make sure that 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 as directed in the adjustment section of this manual. If shipping has influenced the settings, refer to specific procedures explained in this manual.
- If any parts are damaged or missing, please call 1-866-974-3443/USA for assistance.

⚠ WARNING: If any parts are damaged or missing, do not operate this tool until the missing parts are replaced. Failure to heed this warning could result in serious personal injury.

⚠ WARNING: 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 personal injury.

⚠ WARNING: Do not connect to a 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: Always make sure that the compound miter saw is securely mounted to a workbench or an approved work stand. Failure to heed this warning can result in serious personal injury.

MOUNTING HOLES

Fig. 5

The compound miter saw should be mounted to a firm supporting surface, such as a workbench. Four large bolt holes have been provided in the saw base for this purpose. Each of the four large mounting holes should be bolted securely using 5/16 in. (M8) 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 other small mounting holes are for use with nails or screws. The nails or screws should have sufficient length to secure the saw.

The hole pattern for mounting to a workbench is shown in Fig. 5. 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.

NOTE: Many of the illustrations in this manual show 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.

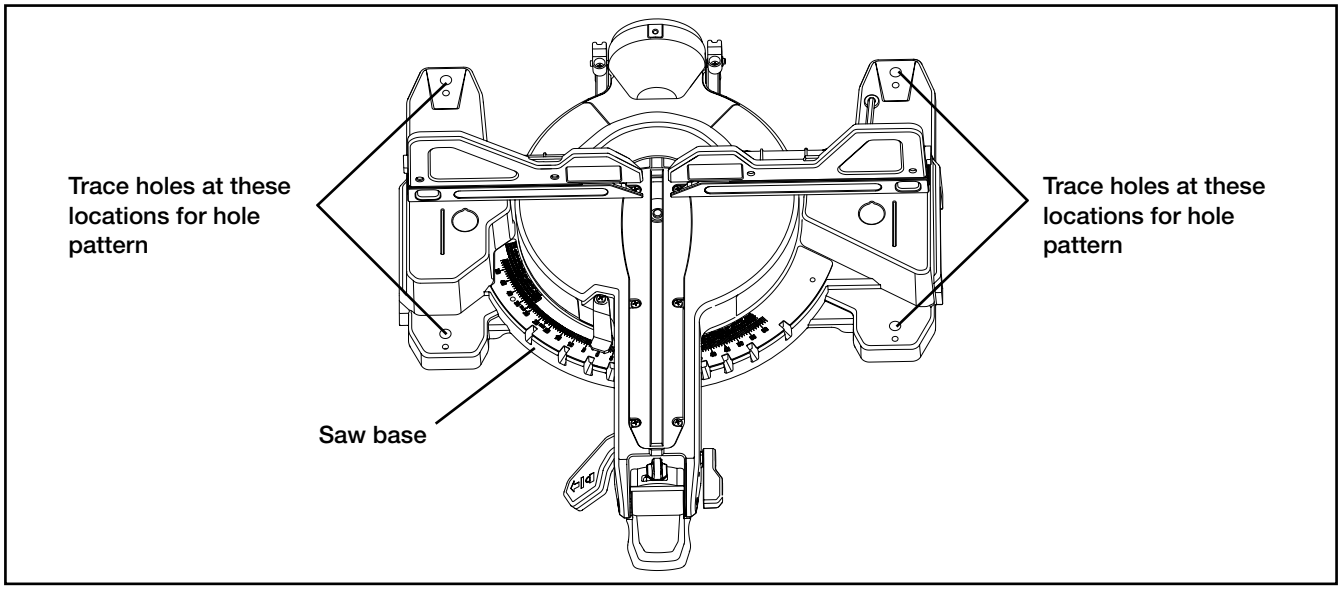


Fig. 5

DUST-EXTRACTION PORT
Fig. 6

This miter saw comes with a dust bag to help you keep the work area clean. The dust bag is ideal for smaller jobs. The dust port also accepts a standard 2-1/2" (6.4cm) vacuum hose for dust collection.

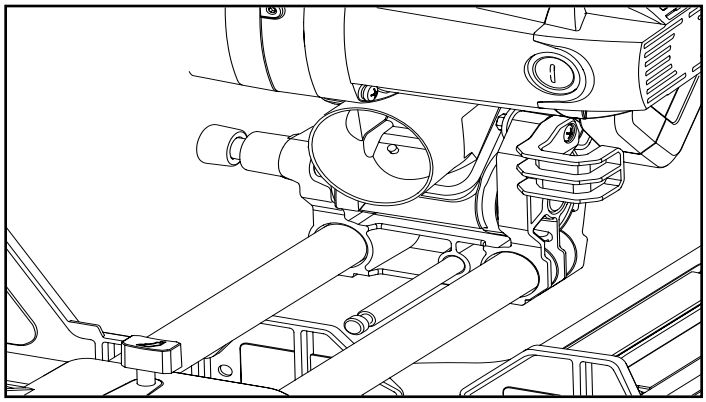


Fig. 6

ADJUSTMENTS

The miter saw is properly set and adjusted prior to shipping. If, in the course of use, adjustments are required, please follow the directions below.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

SQUARING THE BLADE TO THE FENCE
Fig. 7

1. Unplug the saw.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

2. Set the bevel and miter angles to 0°.
3. Lower and lock the saw arm in the "DOWN" position.
4. Place the heel of a combination square against the blade and the rule of the square against the fence.

NOTE: Be sure to rest the square against the body of the blade, and not against the teeth of the blade.

5. If the blade is not 90° to the fence, completely unscrew the fence-locking knob and remove the upper sliding fences.
6. Loosen the four hex-head bolts (Fig. 7) and rotate the fence until the square is flush along its entire length. Retighten the hex-head bolts.
7. Replace the upper sliding fences and reattach the fence-locking knobs.

NOTE: If the saw has not been used recently, verify that the blade is square to the fence, and readjust if necessary.

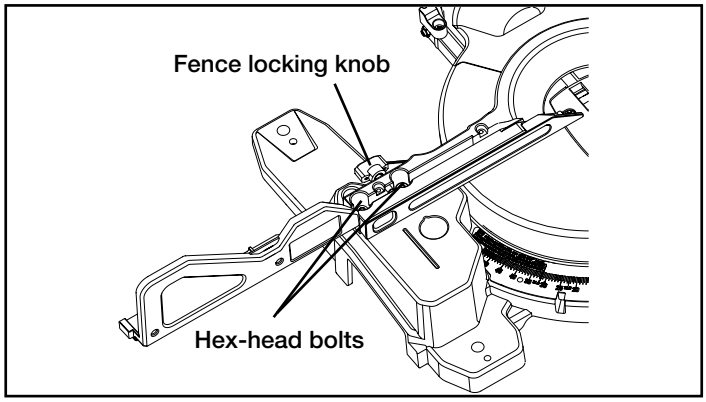


Fig. 7

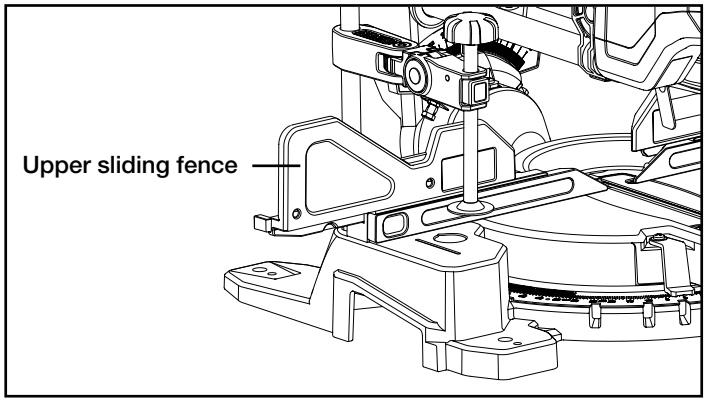


Fig. 8

MITER-ANGLE INDICATOR ADJUSTMENT
Fig. 8

1. Unplug the saw.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

2. Place the miter table at the zero position, making sure that the miter-detent locking lever is secured at the center, then lock the miter-lock lever.

3. Loosen the miter-angle indicator screw and adjust the miter-angle indicator to the “0” mark on the miter scale.
4. Tighten the miter-angle indicator screw.

SQUARING THE BLADE TO THE TABLE
Fig. 9-11

1. Unplug the saw.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

2. Adjust the right bevel range control lever: set the bevel angle to 0° and lock it in place.
3. Lower the saw arm all the way, and hold it down while pushing the locking pin to lock the saw arm in the “DOWN” position. Place a combination square on the miter table with the rule against the table and the heel of the square against the saw blade.

NOTE: Be sure to rest the square against the body of the blade, and not against the teeth of the blade.

4. Loosen the bevel-lock lever.
5. Loosen the locking screw with the small hex wrench stored on the saw base, and adjust the inner screw in or out until the leg of the square is flush with the saw blade along its entire length.
6. Once the angle is set, retighten all of the bolts and the bevel-lock lever.

BEVEL-ANGLE INDICATOR ADJUSTMENT
Fig. 12

1. Unplug the saw.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

2. Place the bevel angle at 0° position; press the bevel-lock lever down to lock the bevel.
3. Check to see if the bevel-angle indicator is pointing to 0° on the bevel scale.
4. If the indicator is not pointing to 0°, loosen the bevel-angle indicator screw, adjust the indicator to 0° on bevel-angle scale, and then retighten the screw.

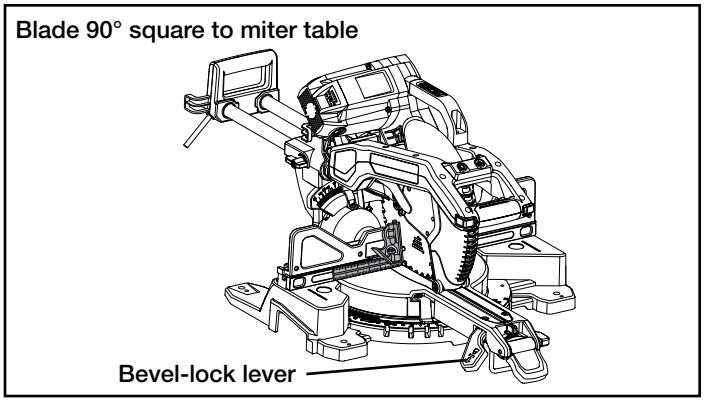


Fig. 9

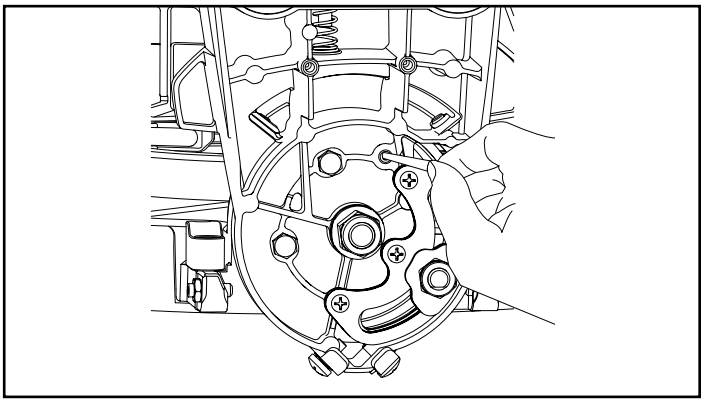


Fig. 10

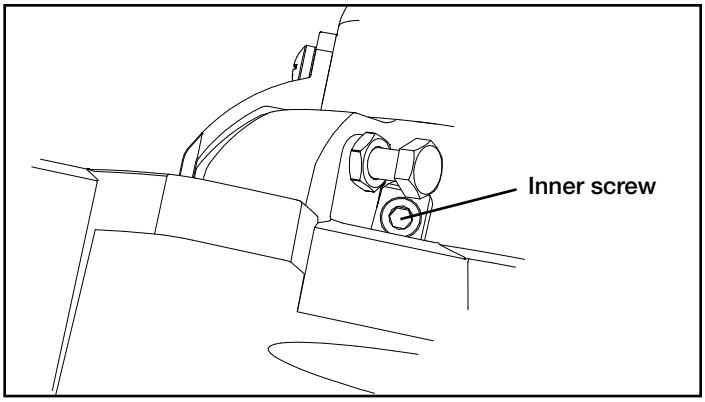


Fig. 11

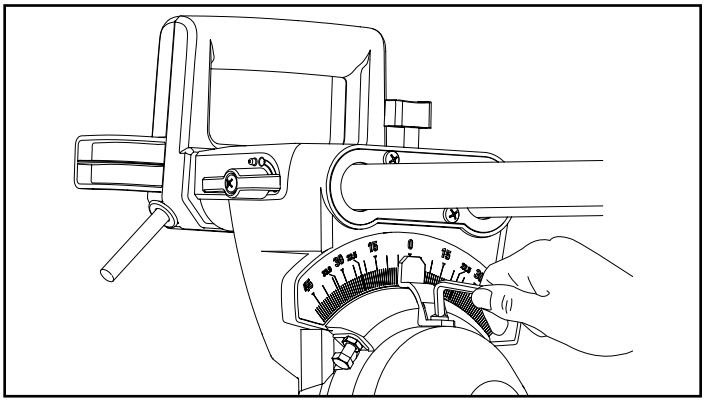


Fig. 12

ADJUSTMENTS

ADJUSTING THE BLADE TO THE MITER TABLE 45° BEVEL, 0° MITER
Fig. 13-15

1. Unplug the saw.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

2. Lift the bevel-lock lever to release the bevel-lock.
3. Set the bevel-angle indicator to 45°. The miter indicator should point to 0°. Lower the saw arm and push the locking pin to lock the saw arm in the "DOWN" position.
4. Place a combination square (available separately) on the miter table with the rule against the table and the heel of the square against the saw blade.

NOTE: Be sure to rest the square against the body of the blade, and not against the teeth of the blade.

If the blade is not 45° to the miter table, perform the following adjustments:

5. Loosen the lock nut on the 45° stopping screw with a 3/8" open-end wrench. The 45° stopping bolts are located to your left and right as you face the back of the saw.
6. Lift the bevel-lock lever to release the bevel-lock, then adjust the blade to 45° by adjusting the set screws clockwise or counter-clockwise with a 3 mm hex key (not included). You may need to carefully move the saw arm left or right by hand while turning the set screw.
7. When the angle is set, tighten the lock nut and the bevel-lock lever.

NOTE: If the bevel-lock lever does not secure the saw arm when it is tightened, please refer to Bevel-Lock Lever Adjustment on page 16.

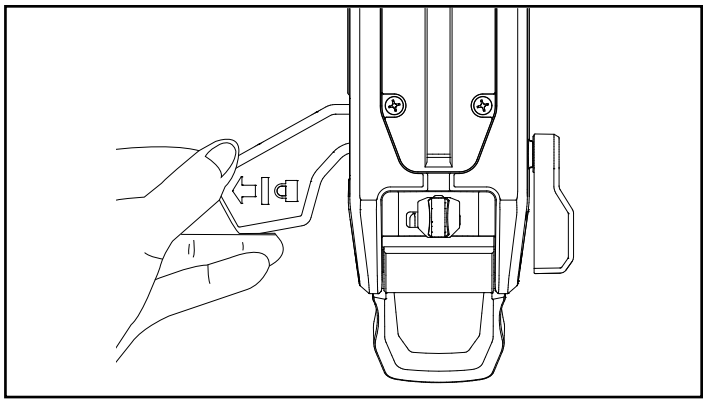


Fig. 13

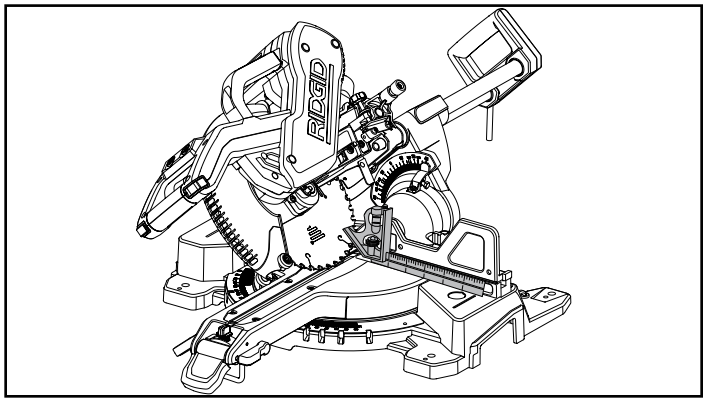


Fig. 14

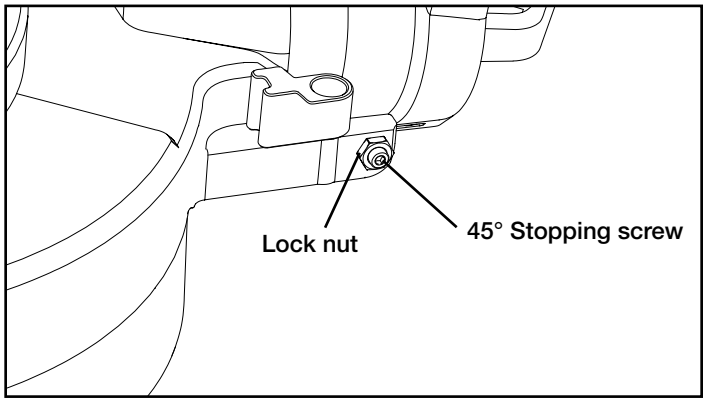


Fig. 15

BEVEL-LOCK LEVER ADJUSTMENT
Fig. 16a - 16b

The bevel-lock lever securely locks your compound miter saw at the desired bevel angles. Press the lever down to lock the head assembly. The bevel-lock lever can be adjusted, if necessary.

1. Unplug the saw.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

2. To loosen the bevel-lock lever (Fig. 16a), lift the bevel-lock lever and pull it towards the operator, then press it down and release it. The bevel-lock lever will return to the forward position automatically. Several cycles may be required.
3. To tighten the bevel-lock lever (Fig. 16b), hold the lever in the lower (tight) position and pull it towards the operator, then lift the bevel-lock lever and release it. The bevel-lock lever will return to the forward position automatically. Several cycles may be required.

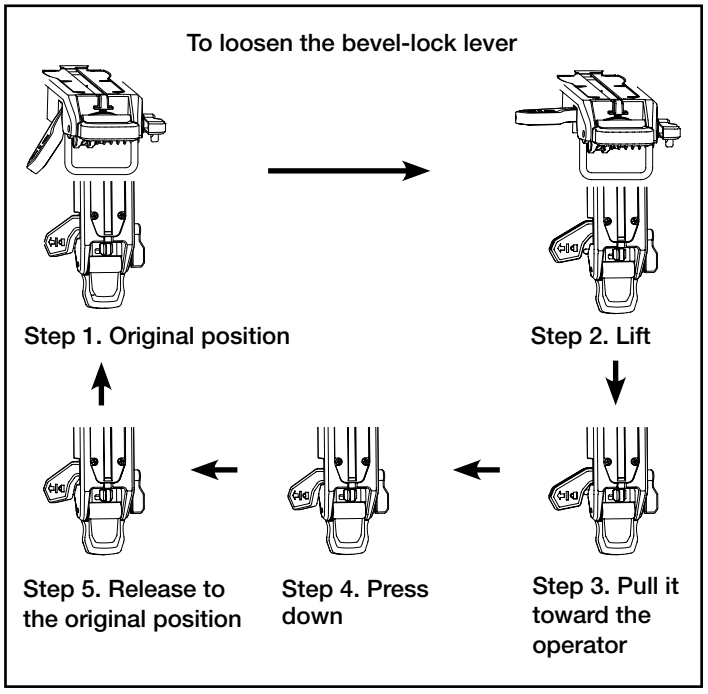


Fig. 16a

FINE ADJUSTING THE BEVEL STOP AT 33.9° (for USA)/ 30° (for Canada)
Fig. 17

NOTE: Adjust the 33.9° (for USA) / 30° (for Canada) bevel angle only after performing the 45° bevel-angle adjustment.

1. Unplug the saw.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

2. With the stop blocks positioned as shown in Fig. 17, the saw can be quick set to a 45° bevel angle. To quick set the bevel angle to 33.9° (for USA)/ 30° (for Canada), rotate the stop block 180°.
3. Lift the bevel-lock lever to release the bevel-lock.
4. Tilt the saw arm to the left or right. If the indicator does not indicate exactly 33.9° (30° for Canada), loosen the lock nut and adjust the 33.9° (for USA)/ 30° (for Canada) stopping bolt.
5. When the angle is set, tighten the locking nut and the bevel-lock lever.

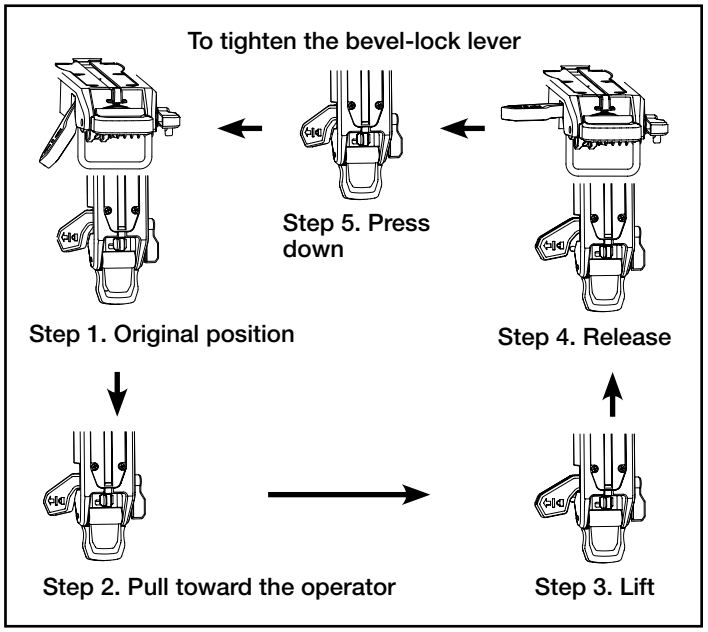


Fig. 16b

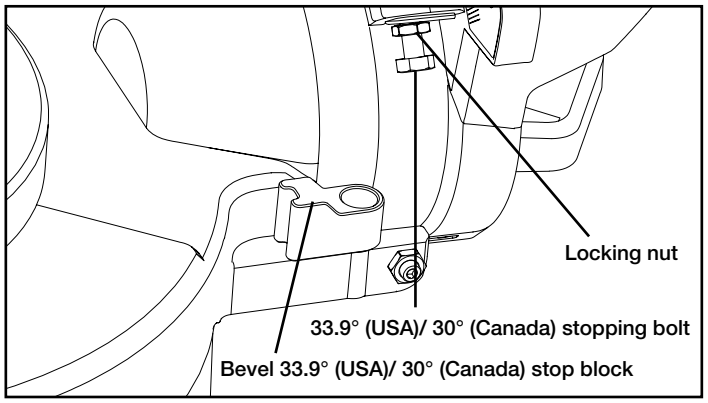


Fig. 17

ADJUSTMENTS

ADJUSTING THE BEVEL STOP TO 48° LEFT

Two 45° to 48° stop plates are positioned as shown in Fig. 18a; one for adjusting the right bevel and one for adjusting the left bevel.
Fig. 18a - 18b

1. Unplug the saw.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

2. Loosen the bevel-lock lever.
3. Rotate the bevel 33.9° (for USA)/ 30° (for Canada) stop block out of the way.
4. Hold the saw-arm and tilt it a few degrees to the right so that the 48° to 45° stop plate can be adjusted.
5. While holding the saw arm in the tilted position, pull out the 48° and 45° stop plate toward the rear of the saw.
6. Lock and tighten the bevel-lock lever.

ADJUSTING THE BEVEL STOP TO 48° RIGHT

1. Unplug the saw.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

2. Press and hold down the right bevel range control lever; while pressing the right bevel range control lever, loosen the bevel-lock lever.
3. Rotate the bevel 33.9° (USA)/ 30° (Canada) stop block out of the way.
4. Hold the saw-arm and tilt it a few degrees to the left so that the 48° to 45° stop plate can be adjusted.
5. While holding the saw arm in the tilted position, pull out the 48° and 45° stop plate toward the rear of the saw.
6. Lock and tighten the bevel-lock lever.

PIVOT ADJUSTMENTS

NOTE: These adjustments were made at the factory and, under normal circumstances, they do not require re-adjustment.

Saw-arm Travel Pivot Adjustment:
The saw arm should automatically rise (travel) completely to the full "UP" position by itself after the saw arm locking pin is released.

⚠ WARNING: To avoid risk of personal injury, if your saw arm does not raise by itself, or if there is play in the pivot joints, have your saw serviced by a qualified service technician before using.

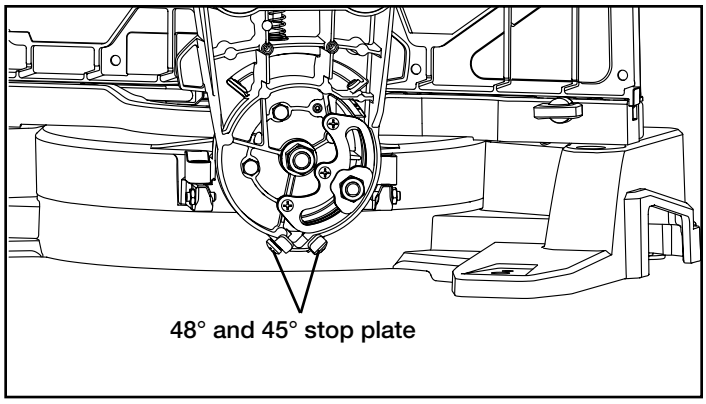


Fig. 18a

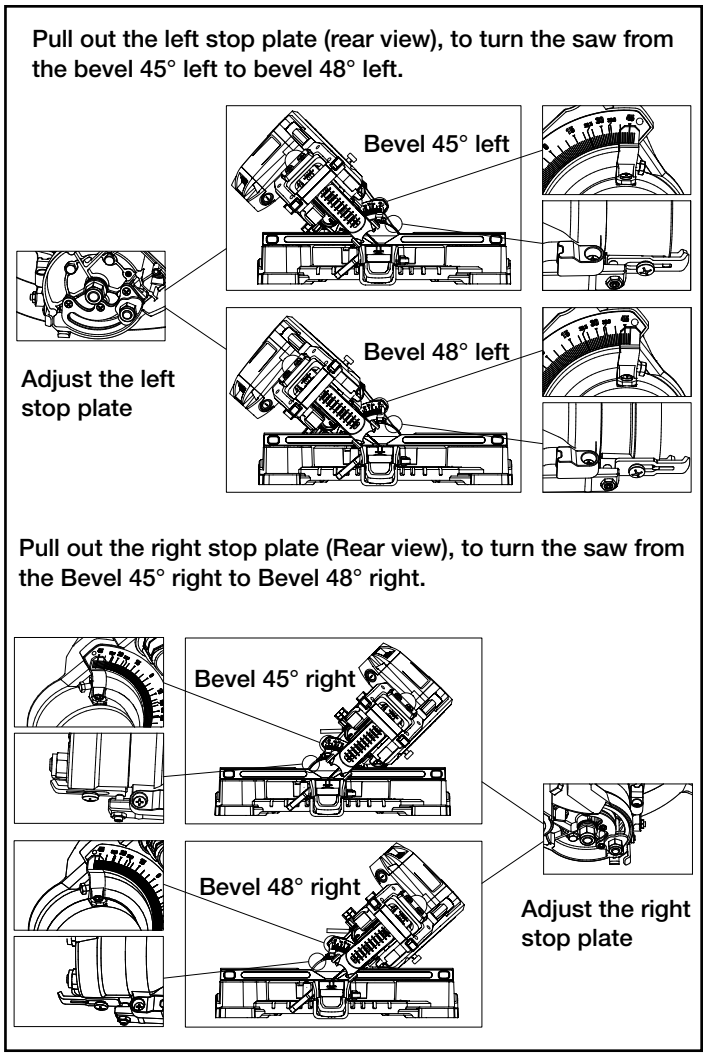


Fig. 18b

Bevel Pivot Adjustment:
Your miter saw arm should bevel smoothly by loosening the bevel-lock lever and tilting the saw arm to the left or right.

⚠ WARNING: To avoid risk of personal injury, if movement is tight or if there is play in the bevel pivot, have your saw serviced by a qualified service person before using.

LASER LIGHT ADJUSTMENT
NOTE: Avoid direct eye exposure when using the laser light.

1. Set both the bevel angle and the miter table at 0°.
2. Use the work piece clamp or a C-clamp to secure a piece of scrap wood.
3. Plug the saw into the power source and make a slight cut to get a cutting line.
4. Turn the laser light on, and, if the cut line is not positioned between the two laser lines, proceed to the next step.

⚠ WARNING: To avoid the risk of injury, ensure that the lower blade guard is in the fully closed position.

5. To adjust the laser, turn the laser light adjustment screw counter-clockwise or clockwise with the hex key provided. It may require several cycles.

OPERATION

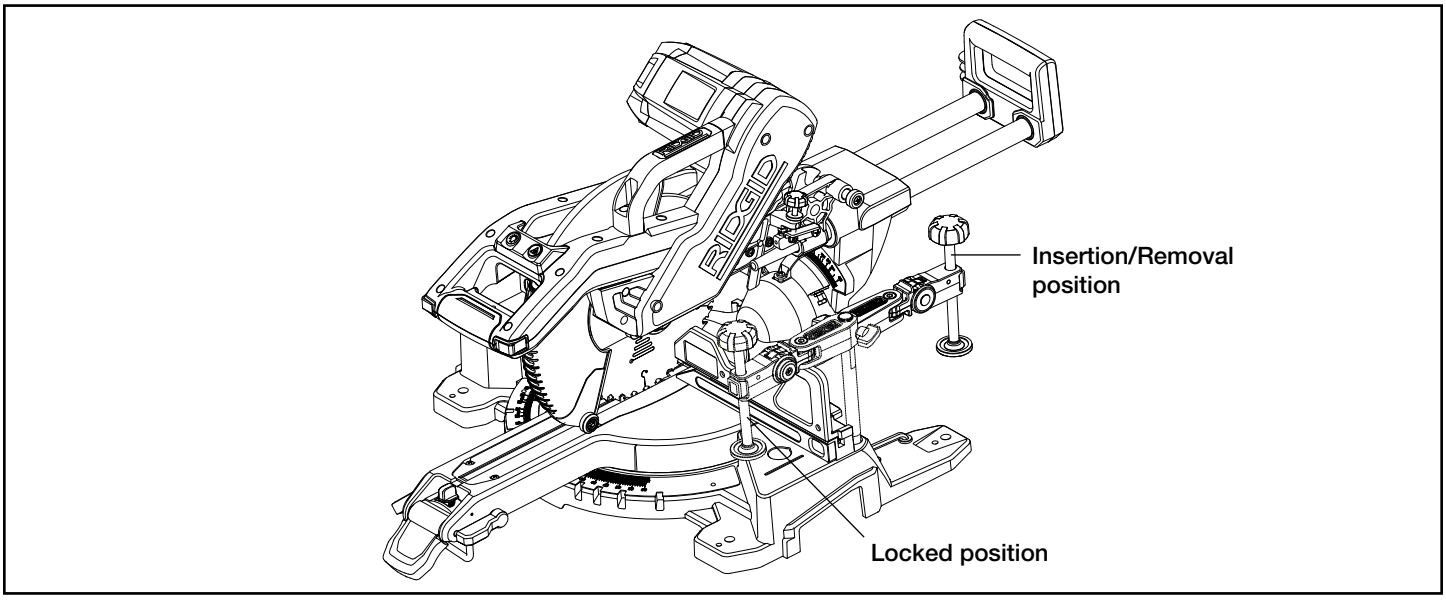


Fig. 19a

When transporting the saw, turn off and unplug the saw, then lower the saw arm and lock it in the "DOWN" position. Lock the saw arm by depressing the locking pin. Carrying handles are located on the top of the saw arm and the end of the slide bar. Never lift the saw by the handle on the front end of the saw arm or by the fence.

⚠ WARNING: To reduce the risk of injury, wear safety goggles or glasses with side shields.

⚠ WARNING: Before each use, verify that the blade is free of cracks, loose teeth, missing teeth, or any other damage. Do not use if damage is observed or suspected.

⚠ WARNING: Always wait for the blade to stop completely, and unplug the tool before changing accessories or making adjustments.

WORK PIECE CLAMP
Fig. 19a-19c

⚠ WARNING: In some operations, the clamp assembly may interfere with the operation of the lower blade guard assembly. To reduce the risk of serious personal injury, always make sure that there is no interference with the lower blade guard prior to beginning any cutting operation.

1. Insert the work piece clamp into one of the two receptacles in the base behind the fence. The clamp should be facing toward the rear of the miter saw.
2. Rotate the work piece clamp 180º (toward the front of the miter saw). The clamp should now be securely locked in the receptacle and cannot be removed in this position.
3. Adjust the work piece clamp to firmly clamp the work piece in place.
4. To remove the work piece clamp, rotate the work piece clamp 180º toward the rear of the miter saw and then remove the clamp.

When cutting wide work pieces (such as nominal 2x8 boards), the boards must be clamped with the work piece clamp provided or a C-clamp (sold separately). The work piece clamp angle is adjustable in both horizontal and vertical axes.

Horizontal adjustment: The work piece clamp can adjust left 90° to right 90° (Fig. 19b).

Vertical adjustment: the work piece clamp has multiple quick stops for cutting base molding and crown molding. Rotate the work piece clamp to the desired angle. To release, press the clamp knob while rotating the work piece clamp (Fig. 19c).

⚠ WARNING: When using the work piece clamp included or a C-clamp (sold separately) to secure the work piece, clamp the work piece on one side of the blade only. The work piece must remain unclamped on the other side of the blade to prevent the blade from binding in the work piece. The work piece binding the blade will cause the motor to stall and cause kickback, resulting in possible serious injury.

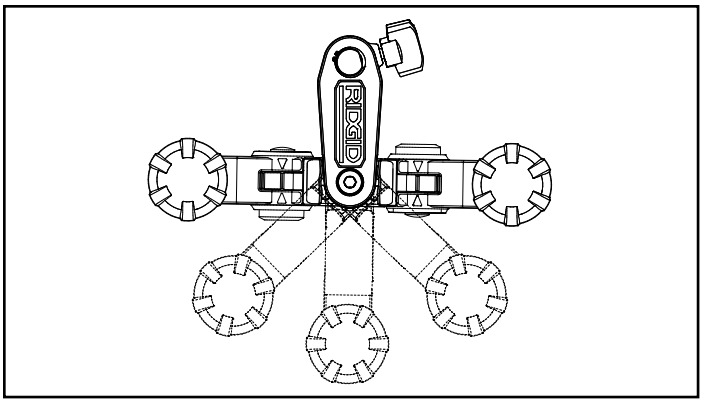
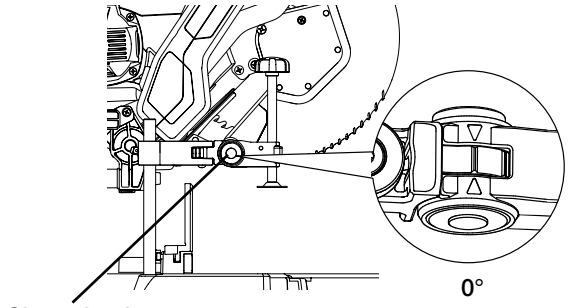
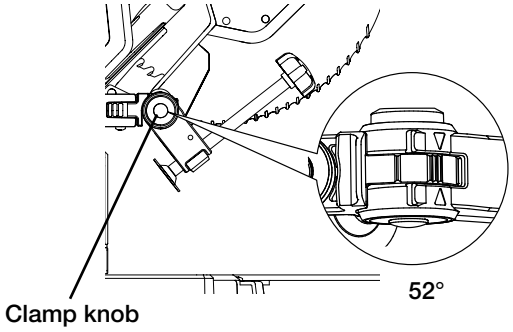
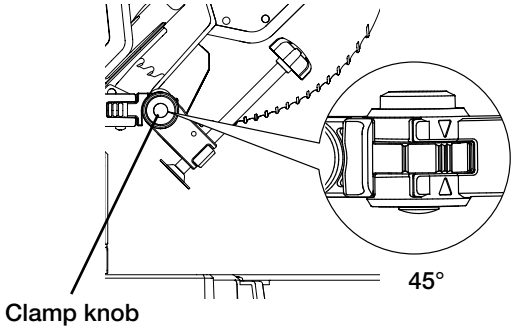
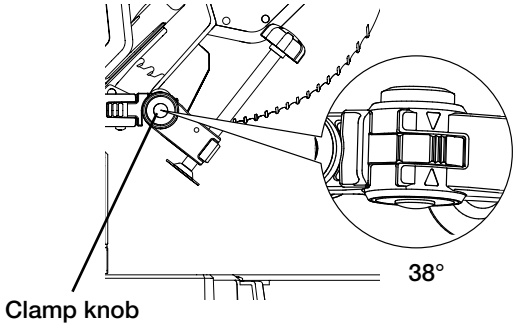


Fig. 19b









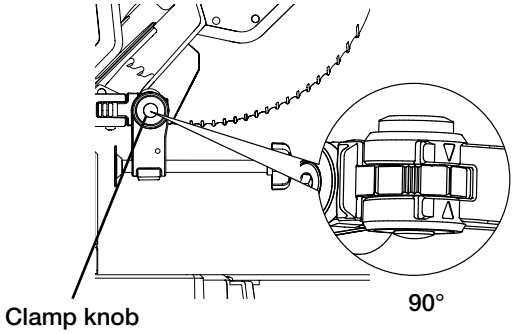


Fig. 19c

OPERATION

UPPER SLIDING FENCE/LOWER ADJUSTABLE FENCE

⚠ WARNING: Unplug the saw before adjusting the fence.

⚠ CAUTION: Adjust and fasten the fence properly before cutting.

The upper and lower fences adjust to accommodate different sized work pieces. Loosen the locking knob on the upper sliding fences to adjust them.

The lower fences can be moved to either of two positions. When making a crosscut or a miter cut, move the lower fence closer to the blade to better support the work piece. When making a bevel cut, move the lower fence away from the blade to make sure the blade can't contact the fence.

HOW TO USE THE DUAL LASER LINE
Fig. 20

1. Mark your work piece with a pencil line at the point to be cut.
2. Press the laser On/Off switch to "On" to activate the dual laser line. Align your pencil line between the dual laser lines.
3. Clamp your work piece in place using the work piece clamp.
4. Follow all of the cutting instructions for the type of cut to be performed.

ON/OFF TRIGGER SWITCH
Fig. 21a-21b

For safety, the On/Off trigger switch is designed to prevent accidental starts. To operate the saw, press the lock-off button to disengage the lock, then squeeze the On/Off trigger switch and release the lock-off button. When the On/Off trigger switch is released, the lock-off button will engage the safety switch automatically.

NOTE: Make the On/Off trigger switch childproof. Insert a small padlock (not included) or cable with padlock through the holes in the On/Off trigger switch, locking the switch and preventing children or other unauthorized users from turning on the saw.

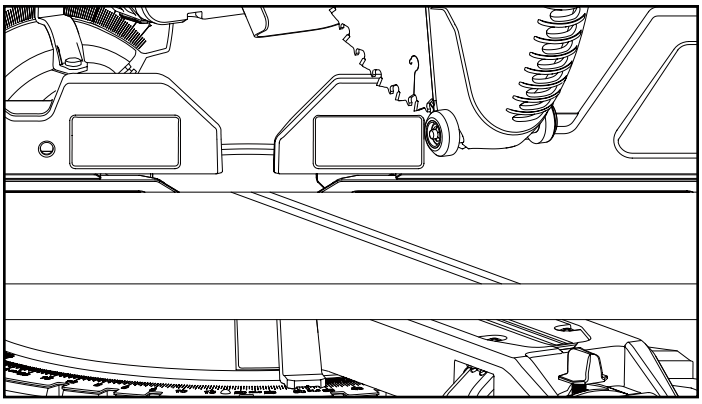


Fig. 20

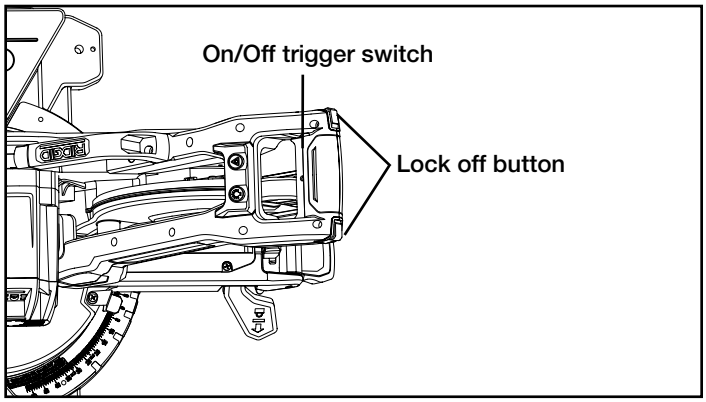


Fig. 21a

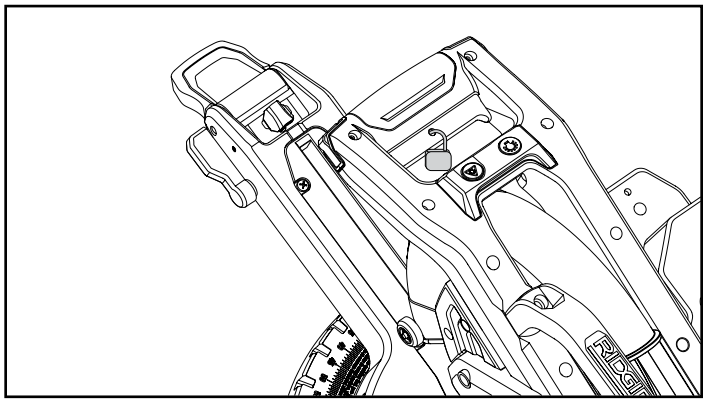


Fig. 21b

CHOP CUTS
Chop cuts are used mainly for narrow pieces.
Fig. 22

1. Unplug the saw.

⚠ WARNING: Failure to unplug the saw could result in accidental start up, which may cause serious injury.

2. Turn the slide-lock knob counterclockwise to release the slide rail.
3. Slide the saw arm to the rear as far as it will go.
4. Tighten the slide-lock knob.
5. Properly position the work piece. Make sure that the work piece is clamped firmly against the table and the fence. Make sure that the clamp does not interfere with the cutting operation.
6. Plug the saw into an electrical outlet.
7. Before turning the saw on, lower the saw arm to make sure that the clamp clears the lower guard and the saw arm.

⚠ WARNING: Use a clamping position that does not interfere with the cutting operation.

8. Turn on the switch. Always allow the blade to reach full speed before cutting. Lower the saw arm and make your cut.
9. Wait until blade comes to a complete stop before returning the saw arm to the raised position and/or removing the work piece.

SLIDE CUTS
Fig. 23

This type of cut is used mainly for wide pieces. The slide-lock knob is loosened, the saw arm is pulled towards the operator, and the saw arm is lowered to the work piece and then pushed to the rear of the saw to make the cut.

⚠ WARNING: Never pull the saw toward you during a cut. The blade can suddenly climb up on top of the work piece and force itself toward you.

Follow these instructions for making your slide cut:

1. Unplug the saw.

⚠ WARNING: Failure to unplug the saw could result in accidental start up, which may cause serious injury.

2. Properly position the work piece. Make sure the work piece is clamped firmly against the table and the fence.
3. Loosen the slide-lock knob.
4. Plug the saw into an electrical outlet.
5. Grasp the switch handle, and pull the saw arm away from the fence until the blade clears the front of the work piece or to its maximum extension.
6. Before turning the saw on, lower the saw arm to make sure the clamp clears the lower guard and saw arm.

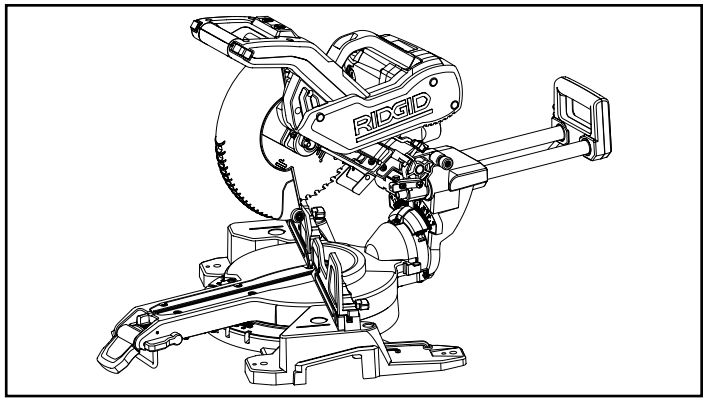


Fig. 22

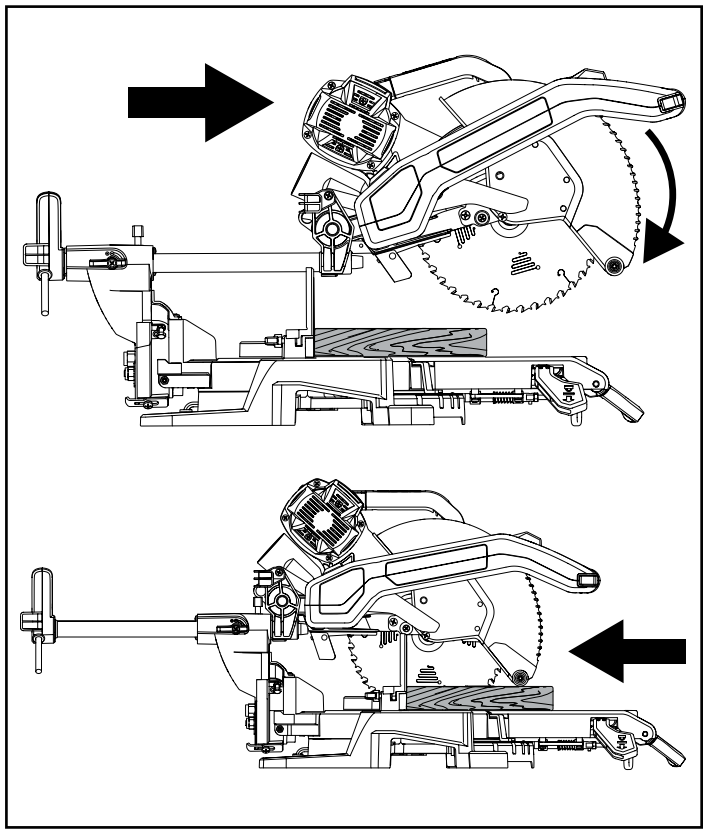


Fig. 23

⚠ WARNING: Use a clamping position that does not interfere with the cutting operation.

7. Turn on the switch. Always allow the blade to reach full speed before cutting.
8. Lower the saw arm all the way down, and cut through the edge of the work piece.
9. Push (but do not force) the saw arm toward the fence all the way to the rear position to complete the cut.
10. Wait until the blade comes to a complete stop before returning the saw arm to the raised position and/or removing the work piece.

CROSSCUTTING
Fig. 24-25

A crosscut is a cut made across the grain of the work piece. A straight crosscut is a cut made with the miter table set at the 0° position (Fig. 24).
Miter crosscuts are made with the miter table set at an angle other than 0°, either left or right.

1. Unplug the saw.

⚠ WARNING: Failure to unplug the saw could result in accidental start up, which may cause serious injury.

2. Mark the cutting line on the work piece with a pencil.
3. Push in the locking pin to lock the saw arm in the "DOWN" position.
4. Loosen the miter-lock lever, and turn the miter-detent locking lever to the right side.
5. Move the saw to the desired angle, using either the miter-detent or the miter scale. Quickly locate 0°, 15°, 22.5°, 31.6°, and 45° (for USA) / 0°, 15°, 22.5°, 35.3°, and 45° (for Canada) left or right by noting the stops or clicks at these angle settings.
6. Retighten the miter-lock lever.

NOTE: With the miter-detent locking lever pushed to the left (and released), the miter table moves freely to any desired angle. Alternately, press the locking lever and move the table until it is close to the desired position, release the locking lever and move the next detent. The miter table will stop at each index point on the miter scale.

7. Plug the saw into an electrical outlet.
8. Pull out the locking pin to release the saw arm.
9. Place the work piece 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 the board is against the fence, the board could collapse on the table at the end of the cut and jam the blade (see CUTTING WARPED MATERIAL, page 25).
10. Turn on the laser and align the pencil line in between the dual laser lines.
11. Use the work piece clamp to secure the work piece against the saw table and fence.

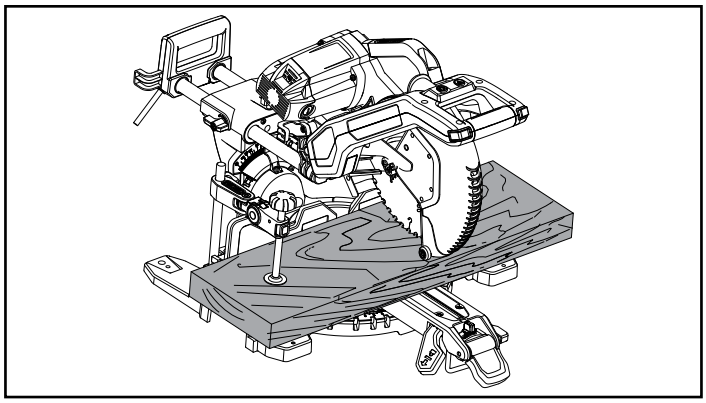


Fig. 24

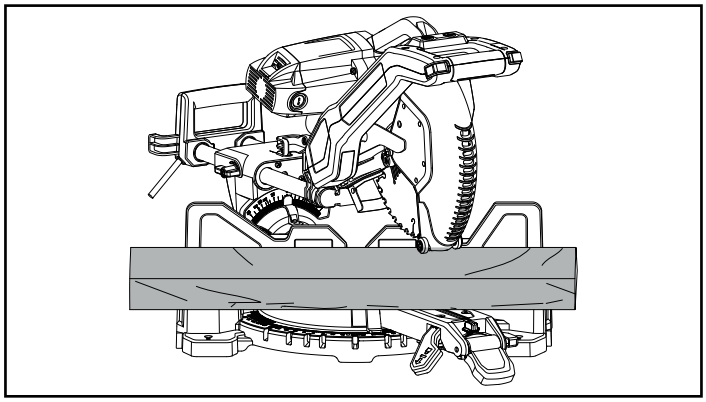


Fig. 25

12. When cutting a long work piece, use a 3.5" block (not supplied) to support the work piece.

⚠ WARNING: To avoid serious personal injury, always tighten the miter-lock lever securely before making a cut. Failure to do so could result in movement of the control arm or miter table while making a cut.

⚠ CAUTION: Never use another person as an additional support for a work piece that is longer or wider than the basic saw table, or to help feed, support, or pull the work piece.

⚠ WARNING: To avoid serious personal injury, always keep hands outside of the "No-Hands Zone", as marked on the saw table, or at least 3" (7.6 cm) away from the blade. Never perform any cutting operation "freehand" (i.e., without holding the work piece against the fence), because the blade could grab the work piece, causing it to slip and twist.

13. Before turning on the saw, perform a test of the cutting operation by lowering the saw arm to make sure that no problems will occur when the cut is made.

14. Raise the saw arm, hold the saw handle and turn the saw on: press the lock-off button to disengage the lock, then press the lock-off button while squeezing the On/Off trigger switch and release the lock-off button.
15. Allow several seconds for the blade to reach maximum speed.
16. Slowly lower the blade into and through the work piece. Complete the cut.
17. Release the On/Off trigger switch; at this time the lock-off button will engage automatically and turn off the laser switch. Allow the saw blade to stop rotating before raising the blade out of the work piece.

NOTE: You can turn on the Gravity LED work light for lighting in darker areas.

BEVEL CUTTING
Fig. 26

A bevel cut is a cut made across the grain of the work piece with the blade at an angle other than 90° to the miter table to the work piece. A straight bevel cut is made with the miter table set at the 0° position and the saw arm set at a bevel angle between 0° and 48° right or left.

1. Unplug the saw.

⚠ WARNING: Failure to unplug the saw could result in accidental start up, which may cause serious injury.

2. Mark the cutting line on the work piece with a pencil.
3. Make sure that the miter table is positioned at 0° and locked with the miter-lock lever.

⚠ WARNING: To avoid serious personal injury, always tighten the miter-lock lever securely before making a cut. Failure to do so could result in movement of the control arm or the miter table while making a cut.

4. Pull out the locking pin to release the saw arm.
5. Lift the bevel-lock lever and tilt the saw arm to the desired bevel angle as indicated on the bevel scale. The blade can be positioned at any angle from a 90° straight cut (0° on the scale) to a 48° right and a 48° left bevel.
6. Securely tighten the bevel-lock lever.

⚠ WARNING: Tighten the bevel-lock lever to secure the saw arm in position.

⚠ WARNING: Loosen the sliding fence, and adjust the lower fence. Position the fence so that it will not interfere with the saw assembly during the cut, and then re-tighten the fence.

7. Plug the saw into an electrical outlet.
8. Place the work piece 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 the board is against the fence, the board could collapse on the blade at the end of the cut and jam the blade (see CUTTING WARPED MATERIAL, page 25).

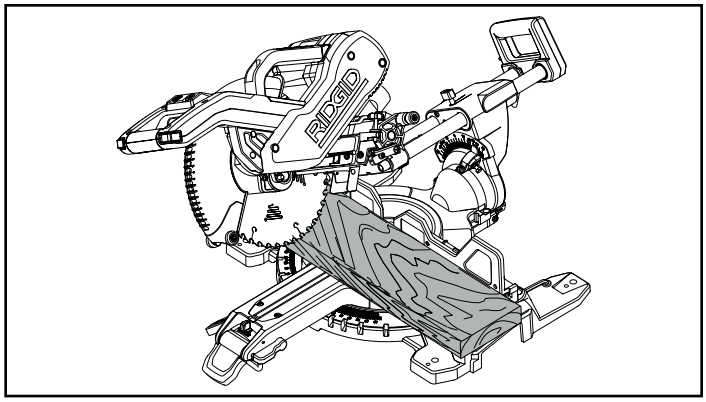


Fig. 26

9. Turn on the laser, and align the pencil line between the dual laser lines.
10. Use the work piece clamp to secure the work piece against the miter saw table and fence.
11. When cutting a long work piece, use a 3.5” block (not supplied) to support the long work piece.

⚠ CAUTION: Never use another person as an additional support for a work piece that is longer or wider than the basic saw table, or to help feed, support, or pull the work piece.

⚠ WARNING: To avoid serious personal injury, always keep hands outside the “No-Hands Zone,” as marked on the saw table, or at least 3” (7.6 cm) away from the blade. Also, never perform any cutting operation “freehand” (i.e., without holding the work piece against the fence), because the blade could grab the work piece, causing it to slip and twist.

12. Before turning the saw on, perform a trial of the cutting operation by lowering the saw arm to make sure that no problems will occur when the cut is made.
13. Raise the saw arm, hold the saw handle, and turn the saw on: press the lock-off button to disengage the lock, then squeeze the On/Off trigger switch and release the lock-off button.
14. Allow several seconds for the blade to reach maximum speed.
15. Slowly lower the blade into and through the work piece.
16. Release the On/Off trigger switch; at this time the lock-off button will engage automatically and turn off the laser switch. Allow the saw blade to stop rotating before raising the blade out of the work piece.

⚠ CAUTION: Always perform a “dry-run” cut to determine whether the operation being attempted is possible before power is applied to the miter saw.

OPERATION

ADJUSTING THE BEVEL-LOCK LEVER
(Fig. 27a-27b)

The bevel-lock lever securely locks your compound miter saw at the desired bevel angles. Press the lever down to lock the saw arm. The bevel-lock lever can be adjusted, if necessary.

1. Unplug the saw.

⚠ WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.

2. To loosen, lift the bevel-lock lever and pull it towards the operator, then press it down and release it. The bevel-lock lever will return to the forward position automatically. Several cycles may be required.
3. To tighten, hold the lever in the lower (tight) position and pull it towards the operator, then lift the bevel-lock lever and release it. The bevel-lock lever will return to the forward position automatically. Several cycles may be required.

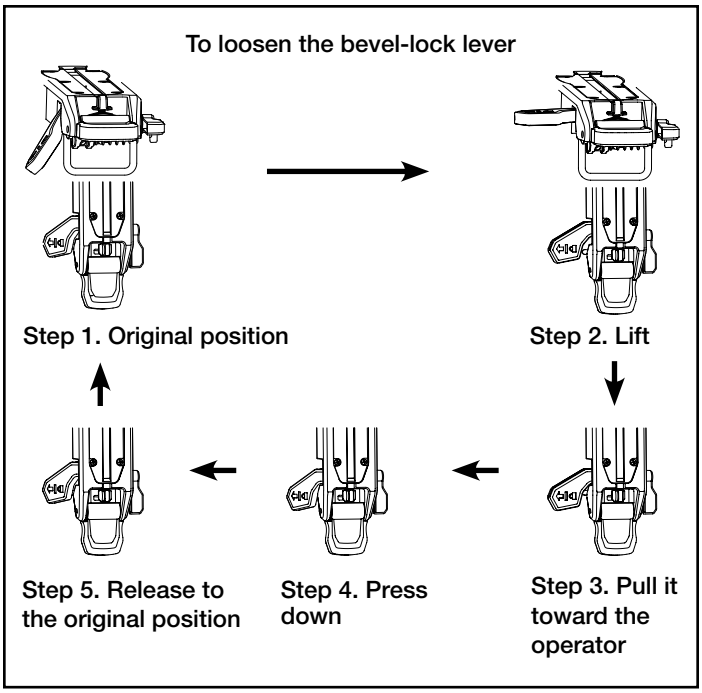


Fig. 27a

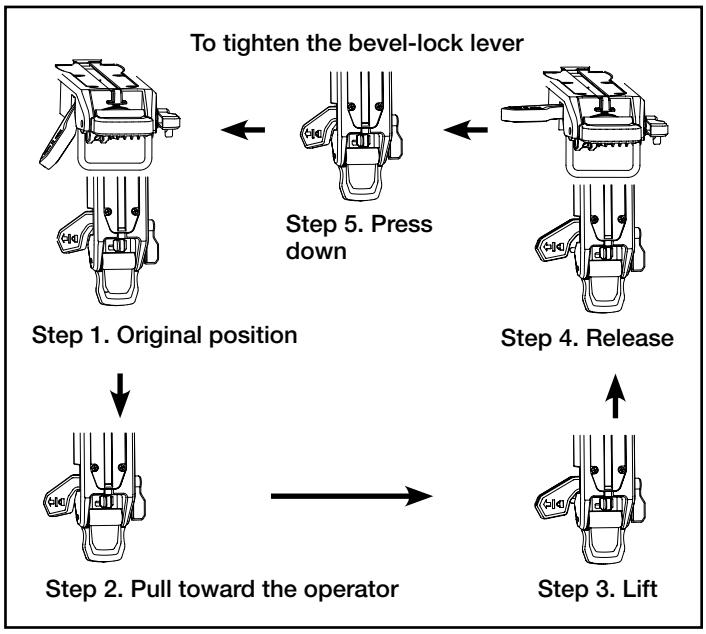


Fig. 27b

COMPOUND MITER CUTTING
Fig. 28

⚠ WARNING: When making a cut with a bevel angle, turn the lower fence out, and slide the upper sliding fence out to avoid having the blade cutting the fence.

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 for decorative moldings, picture frames, and other fine joinery. To make this type of cut, the miter table must be rotated to the correct miter angle and the saw arm must be tilted to the correct bevel angle.

Always take special care when making compound miter cuts, due to the interaction of the two angle settings. Adjustments of miter and bevel settings are interdependent. Whenever the miter setting is adjusted, the effect of the bevel setting also changes. Whenever the bevel setting is adjusted, the effect of the miter setting is changed. It may take several settings to obtain the desired cut. The first angle setting should be checked after setting the second angle, because 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.

1. Unplug the saw.

⚠ WARNING: Failure to unplug the saw could result in accidental start up, which may cause serious injury.

2 Mark the cutting line on the work piece with a pencil.
3. Pull out the locking pin to release the saw arm.
4. Loosen the miter-lock lever and rotate the miter table to the desired miter angle.
5. Quickly locate 0°, 15°, 22.5°, 31.6° and 45° (for USA) 0°, 15°, 22.5°, 35.3°, and 45° (for Canada) left or right by the stops or clicks at these angle settings.
6. When the desired miter table setting is achieved, tighten the miter-lock lever.

⚠ WARNING: To avoid serious personal injury, always tighten the miter-lock lever securely before making a cut. Failure to do so could result in movement of the control arm or miter table while making a cut.

7. To set the bevel angle, lift the bevel-lock lever and tilt the saw arm to the desired bevel angle, as shown on the bevel scale. Bevel angles can be set from 0° to 45° right and left (pull out the stop plate under the saw arm to permit a bevel angle of 48°).
8. When the saw arm has been set at the desired angle, tighten the bevel-lock lever securely.

⚠ WARNING: Tighten the bevel-lock lever to secure the saw arm in position.

9. Plug the saw into an electrical outlet.

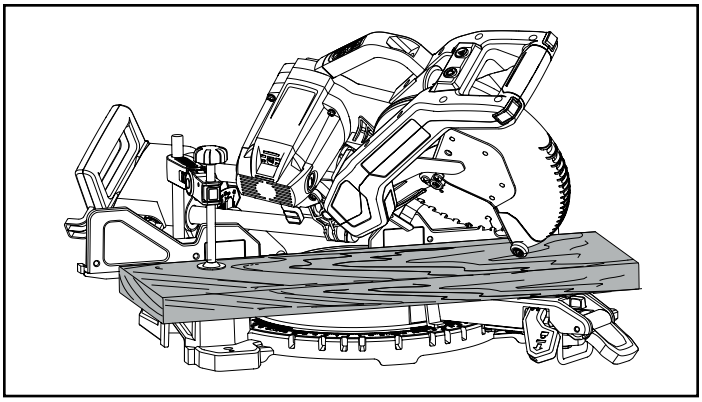


Fig. 28

10. Place the work piece 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 the board is against the fence, the board could collapse on the blade at the end of the cut and jam the blade.
11. Turn on the laser and align the pencil line between the dual laser lines.
12. Use the work piece clamp to secure the work piece against the saw table and fence.
13. When cutting a long work piece, use a 3.5” block (not supplied) to support the long work piece.

⚠ CAUTION: Never use another person as an additional support for a work piece that is longer or wider than the basic saw table, or to help feed, support, or pull the work piece.

⚠ WARNING: To avoid serious personal injury, always keep hands outside the “No-Hands Zone,” as marked on the saw table, or at least 3” (7.6 cm) away from the blade. Also, never perform any cutting operation “freehand” (i.e.; without holding the work piece against the fence), because the blade could grab the work piece, causing it to slip and twist.

14. Before turning the saw on, perform a trial of the cutting operation by lowering the saw arm to make sure that no problems will occur when the cut is made.
15. Raise the saw arm and, turn the saw on: press the lock-off button while squeezing the On/Off trigger switch located under the handle.
16. Allow several seconds for the blade to reach maximum speed.
17. Slowly lower the blade into and through the work piece.
18. Release the lock-off button and the trigger switch, and turn the laser On/Off switch off. Allow the saw blade to stop rotating before raising the blade out of the work piece.

GROOVES
Fig. 29-30

The depth-stop adjustment is a feature used when cutting grooves in the work piece. The depth stop adjustment is used to limit the blade depth. A groove should be cut as a slide cut.

1. Unplug the saw.

⚠ WARNING: Failure to unplug the saw could result in accidental start up, which may cause serious injury.

2. Loosen the lock nut, rotate the depth stop adjustment bolt to the desired cutting depth, and retighten the lock nut.
3. Plug the saw into an electrical outlet.
4. Cut the two outside edges of the groove.
5. To create the groove, use a wood chisel or make multiple passes with a router to remove the material between the outside edges.

CUTTING WARPED MATERIAL
Fig. 31-32

⚠ WARNING: To avoid kickback and serious personal injury, never position the concave side of bowed or warped material against the fence.

When cutting warped material, be certain that the material to be cut is positioned on the miter table with the convex side against the fence, as shown (Fig. 31). If the warped material is positioned the wrong way (Fig. 32), it will pinch the blade near the end of the cut.

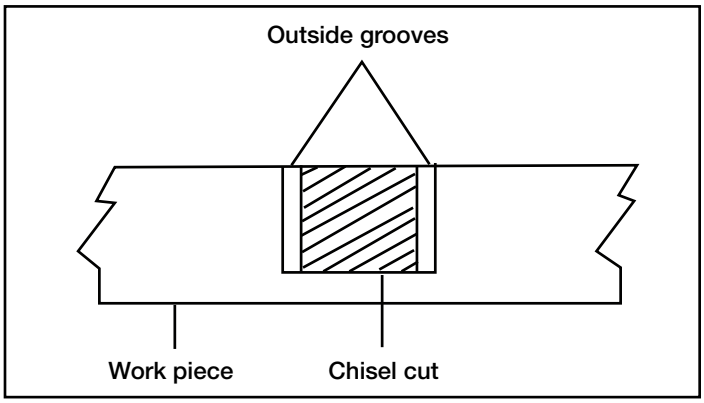


Fig. 29

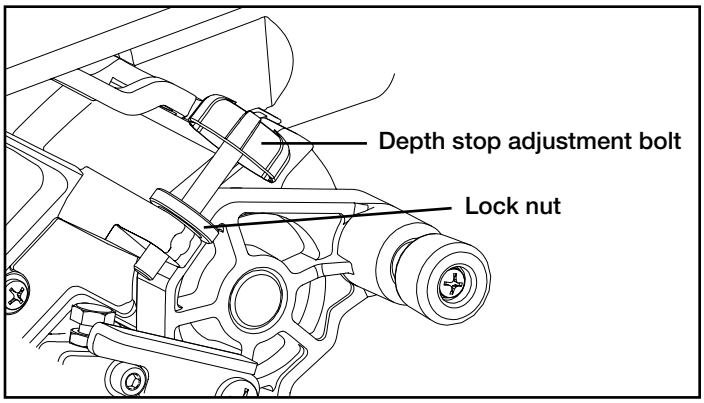


Fig. 30

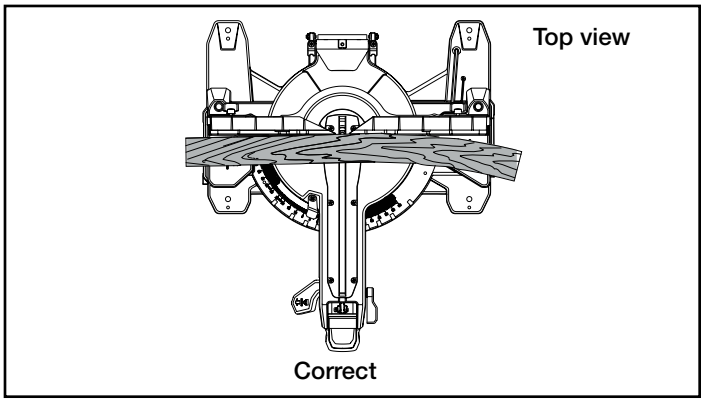


Fig. 31

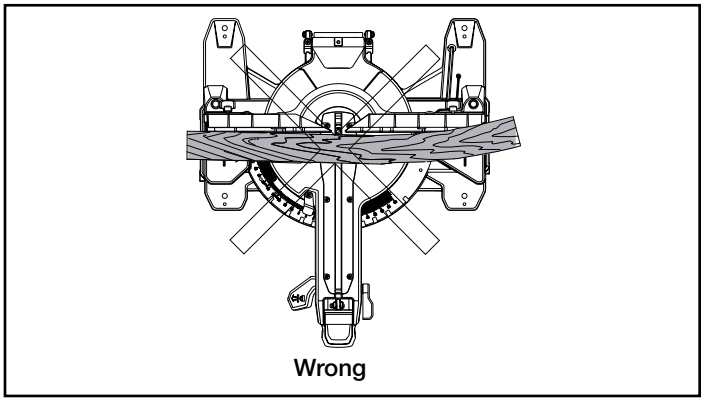


Fig. 32

CUTTING BASE MOLDING
Fig. 33

Base moldings and many other moldings can be cut on a miter saw. The setup of the saw depends on the base molding characteristics and applications, as shown. Perform practice cuts on scrap materials to achieve the best result.

1. Always make sure that the molding rests firmly against the fence and table. Use the work piece clamp provided or use C-clamps (not supplied), and place tape on the area being clamped to avoid marks on the work piece.
2. Reduce splintering by taping the cut area prior to making the cut. Mark the cutting line directly on the tape. Splintering typically happens due to incorrect blade style, dull blade, thinness of work piece, or improperly dried wood.

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

3. Place the work piece 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 the board is against the fence, the board could collapse on the blade at the end of the cut and jam the blade.
4. Align your pencil line between the dual laser lines.
5. Use extra support when cutting long work pieces.
6. Carefully follow all instructions for applicable miter, bevel or compound cuts.

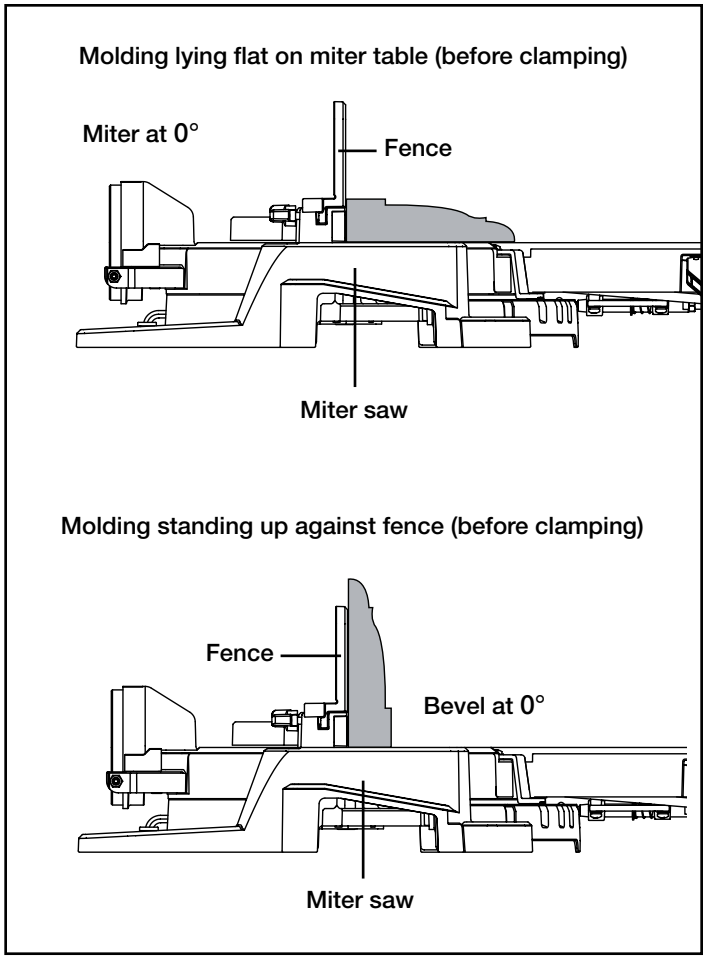


Fig. 33

OPERATION

CUTTING CROWN MOLDING
Fig. 34-35

⚠ WARNING: Always use the work piece clamp, and place tape on the area being clamped to avoid marks on the work piece.

Your miter saw is ideal for cutting crown molding. To fit properly, crown molding must be compound-mitered with extreme accuracy. This saw has a special feature for cutting crown molding.

CUTTING CROWN MOLDING WITH CROWN MOLDING STOP BUTTON

1. Unplug the saw.

⚠ WARNING: Failure to unplug the saw could result in accidental start up, which may cause serious injury.

2. Turn the slide-lock knob counterclockwise to release the slide bar.
3. Press the crown molding stop button down. Slide the saw arm fully away from the operator at the same time.
4. Release the crown molding stop button.
5. Slide the saw arm toward the operator and the crown molding stop button will lock.
6. Place the molding on the table at an angle between the fence and the saw table, as shown in Figure 34. It is highly recommended to use the work piece clamp to fix crown molding. Make sure that the work piece is clamped firmly against the table and the fence.

NOTE: The advantage to cutting crown molding using this method is that no bevel cut is required. Minor changes in the miter angle can be made without affecting the bevel angle. This way, when corners other than 90º are encountered, the saw can be quickly and easily adjusted for them.

7. Plug the saw into an electrical outlet.
8. Before turning the saw on, lower the saw arm to make sure that the clamp clears the lower guard and the saw arm.
9. Turn on the switch. Always allow the blade to reach full speed before cutting. Lower the saw arm and make your cut.
10. Wait until the blade comes to a complete stop before returning the saw arm to the raised position and/or removing the work piece.
11. To release the lock, press the crown molding stop button down again, then slide the saw arm far away from the operator.

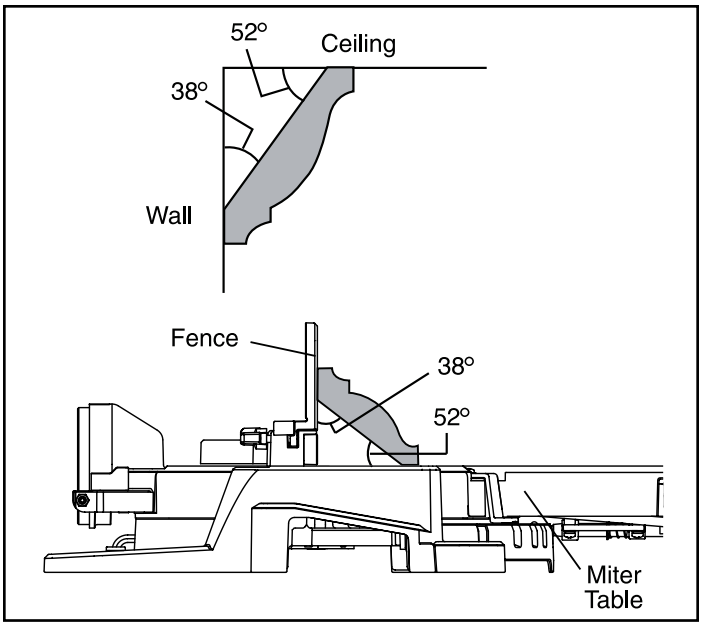


Fig. 34

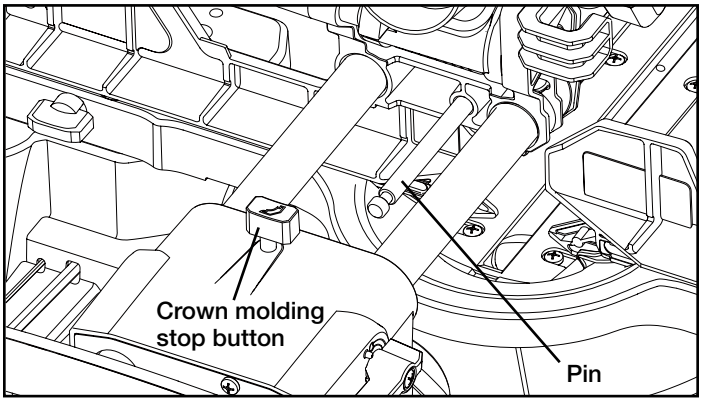


Fig. 35

See the following table for correct Miter setting.

Angle the molding so the bottom of the molding (the part which goes against the wall when installed) is against the fence and the top of the molding is resting on the base of the saw (Fig 34).

Key	Miter Setting	Bevel Setting	Type of Cut
IR	45° Right	0°	**Inside corner - Right side** RIGHT side is finished piece.
IL	45° Left	0°	**Inside Corner - Left side** LEFT side is finished piece.
OR	45° Right	0°	**Outside Corner - Right side** RIGHT side is finished piece.
OL	45° Left	0°	**Outside Corner - Left side** LEFT side is finished piece.

CUTTING CROWN MOLDING WITHOUT CROWN MOLDING STOP BUTTON
(Fig. 36)

To fit flat against the ceiling and the wall, the sum of the angles of the crown molding's two connecting surfaces must equal 90°.

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

Keep in mind that, because it is very easy for the angles of crown molding to shift slightly, all settings should be tested on scrap molding. Also, most walls do not have angles of precisely 90°, therefore, you will need to fine-tune your settings.

When cutting crown molding, the bevel angle should be set at 33.9° (for USA)/ 30° (for Canada), the miter angle should be set at 31.6° (for USA) / 35.3° (for Canada) either left or right, depending on the desired cut for the application.

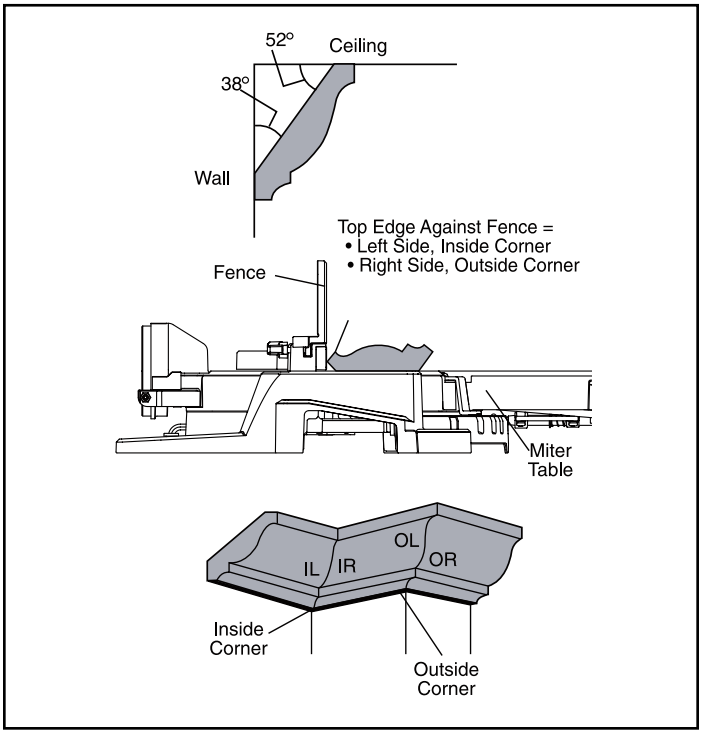


Fig. 36

OPERATION

See the following table for correct angle settings and correct positioning of the crown molding on the miter table.

1. Crown molding has a high top rear spring angle (the section that fits flat against the ceiling) of 52° and a bottom rear spring angle (the section that fits flat against the wall) of 38° (for USA).

Key	Miter Setting	Bevel Setting	Type of Cut
IL	31.6° Right	33.9° Left	**Inside corner - Left side** 1. Position top of molding against fence. 2. LEFT side is finished piece.
IR	31.6° Left	33.9° Right	**Inside Corner - Right side** 1. Position top of molding against fence. 2. RIGHT side is finished piece.
OL	31.6° Left	33.9° Right	**Outside Corner - Left side** 1. Position top of molding against fence. 2. LEFT side is finished piece.
OR	31.6° Right	33.9° Left	**Outside Corner - Right side** 1. Position top of molding against fence. 2. RIGHT side is finished piece.

2. Crown molding with a spring angle of 45° (for Canada).

Key	Miter Setting	Bevel Setting	Type of Cut
IL	35.3° Right	30.0° Left	**Inside corner - Left side** 1. Position top of molding against fence. 2. LEFT side is finished piece.
IR	35.3° Left	30.0° Right	**Inside Corner - Right side** 1. Position top of molding against fence. 2. RIGHT side is finished piece.
OL	35.3° Left	30.0° Right	**Outside Corner - Left side** 1. Position top of molding against fence. 2. LEFT side is finished piece.
OR	35.3° Right	30.0° Left	**Outside Corner - Right side** 1. Position top of molding against fence. 2. RIGHT side is finished piece.

MAINTENANCE

TO REMOVE THE BLADE
Fig. 37a-37c

⚠ WARNING: To reduce the risk of injury, always unplug the tool before removing or installing a blade.

1. Unplug the tool.
2. Raise the saw arm.
3. Loosen the screw with the Phillips screwdriver on the end of the blade wrench (included) as illustrated in Fig. 37a.
4. Lift and hold the lower blade guard, and rotate the blade-screw guard to expose the threaded blade screw.
5. Press and hold the spindle-lock button, and rotate the blade at the same time until it locks into position.
6. Use the hex end blade wrench (included) to turn the threaded blade screw clockwise. Remove the threaded blade screw.
7. Remove the outer blade flange and the blade. Wipe the blade flanges and spindle to remove any dust and debris.

TO INSTALL THE BLADE
Fig. 37d

⚠ WARNING: Do not use thin-kerf blades. Thin-kerf blades can deflect and contact the guard, which can cause injury to the operator.

1. Unplug the saw.
2. Ensure that the inner blade flange (Fig. 37b) is properly installed.
3. Match the arrow on the blade with the arrow on the upper blade guard. Make sure that the teeth of the blade are pointing downward. Install the selected blade by sliding the blade into the upper blade guard and then placing the blade in position.
4. Install the outer blade flange (Fig. 37b).

⚠ WARNING: Make sure that the flat side of the blade flange is placed against the blade.

5. Press and hold the spindle-lock button, and use the blade wrench (included) to turn the blade screw counter-clockwise until the lock engages. Securely tighten the blade screw.
6. Rotate the blade-screw guard into position, and use the Phillips screwdriver end of blade wrench to securely tighten the screw by turning it clockwise. Remove the blade wrench, and store it safely. Wrench storage is provided in the miter saw base.
7. Make sure that the spindle-lock button is released so the blade will rotate freely.
8. Lower the saw arm, and check the clearance between the blade and the miter table. The blade should rotate freely.

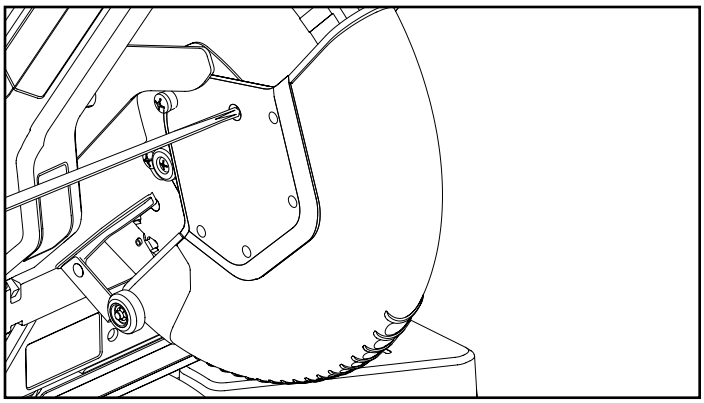


Fig. 37a

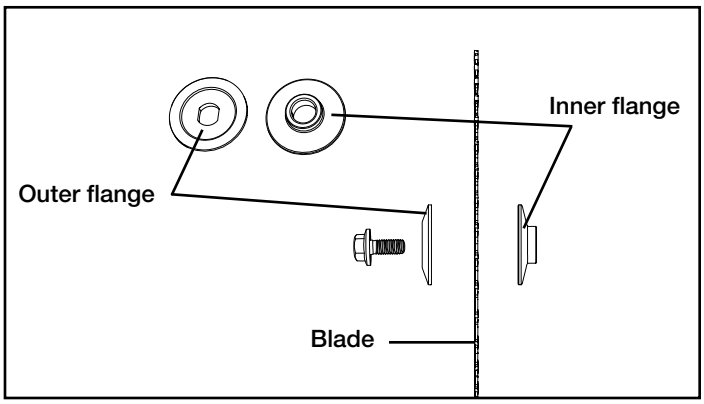


Fig. 37b

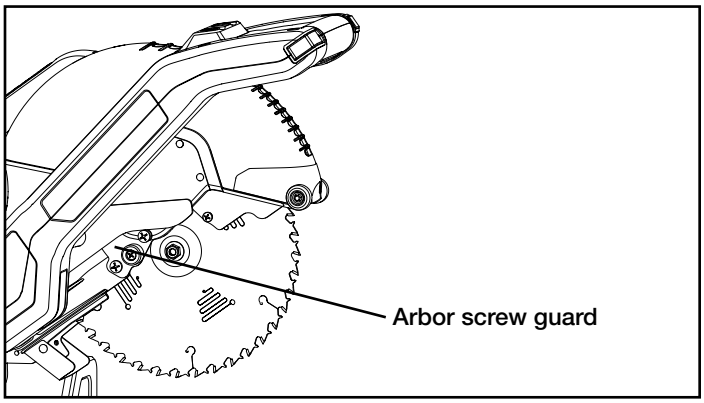


Fig. 37c

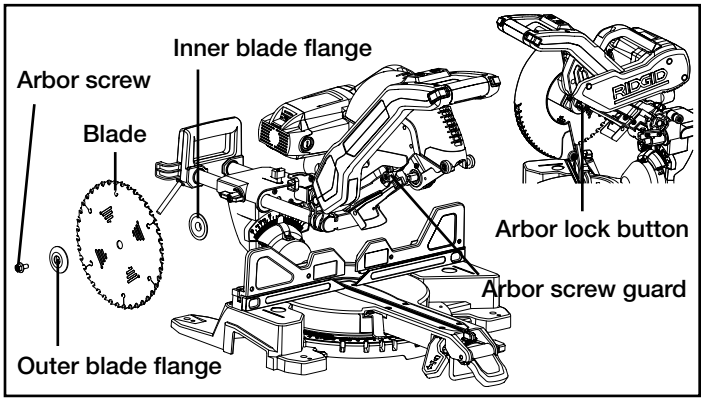


Fig. 37d

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

⚠ WARNING: Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

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., to come in contact with plastic parts. They contain chemicals that can damage, weaken, or destroy plastic.

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.

⚠ WARNING: To ensure safety and reliability, all repairs should be performed by a qualified service technician at an authorized service center to avoid risk of personal injury.

Some areas will require infrequent lubrications. You will need to apply:

1. Automotive oil directly to the slide bars.
2. Light oil or pressurized light spray oil to the arm pivot shaft.
3. Light oil or pressurized light spray oil to the torsion spring.

BRUSH REPLACEMENT

Fig. 38

The saw has externally accessible brush assemblies that should be periodically checked for wear.
Proceed as follows when replacement is required:

1. Unplug the saw.

⚠ WARNING: Failure to unplug the saw could result in accidental starting causing serious injury.

2. Remove the brush cap with a screwdriver. The brush assembly is spring loaded and will pop out when you remove the brush cap.
3. Remove the brush assembly.
4. 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.
5. Reassemble using new brush assemblies. Make sure that the curvature of the brush matches curvature of the motor and that the brush moves freely in the brush tube.
6. Make sure that the brush cap is oriented correctly (straight) and replace.
7. Tighten the brush cap securely. Do not over-tighten.

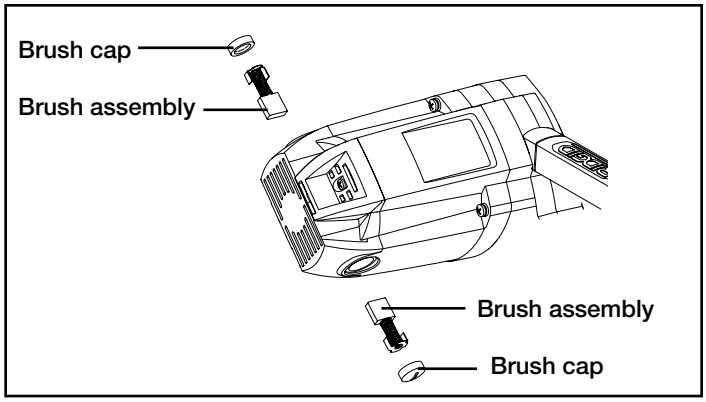


Fig. 38

TROUBLESHOOTING

PROBLEM	CAUSE	SUGGESTED CORRECTIVE ACTION
Brake does not stop blade within 5 seconds.	1. Motor brushes not seated or lightly sticking. 2. Motor brake overheated from use of defective or wrong size blade or rapid On/Off cycling. 3. Arbor bolt is loose.	1. Inspect/clean/replace brushes. See MAINTENANCE section. 2. Use a recommended blade. 3. Retighten.
Motor does not start.	1. Fuse problem. 2. Brush worn.	1. Check time delay fuse or circuit breaker. 2. Replace brushes. See MAINTENANCE section.
Brush sparks excessively when switch is released.	1. Brush worn/damaged.	1. Replace brushes. See MAINTENANCE section.
Blade hits table.	1. Misalignment.	1. See ADJUSTMENT section.
Angle of cut is inaccurate.	1. Miter table is unlocked. 2. Too much sawdust under table.	1. Use miter-lock lever. See ADJUSTMENT section. 2. Vacuum or blow out dust. WEAR EYE PROTECTION!
Cutting arm cannot fully raise or blade guard cannot fully close.	1. Parts failure. 2. Pivot spring not replaced properly after service. 3. Sawdust buildup.	1. Contact authorized service center. 2. Contact authorized service center. 3. Clean and lubricate moving parts.
Blade binds, jams, or burns wood.	1. Improper operation. 2. Dull blade. 3. Improper blade. 4. Warped blade.	1. See OPERATION section. 2. Replace or sharpen blade. 3. Replace blade. 4. Replace blade.
Saw vibrates or shakes.	1. Saw blade is damaged. 2. Saw blade is loosened.	1. Replace blade. 2. Tighten arbor bolt.
Laser line projection is hard to see.	1. Light in work area is too bright. 2. Sawdust on the laser lens.	1. Move the Miter Saw to the work area with proper light. 2. Clean laser lens with a soft, dry brush.

WARRANTY

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 Chervon North America. The trademark is licensed from RIDGID®, Inc. All warranty communications should be directed to Chervon North America at (toll free) 1-866-974-3443.

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) 1-866-974-3443 or by logging on to the RIDGID® website at 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 CHERVON NORTH AMERICA 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. Chervon North America 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.

OPERATOR'S MANUAL

10 INCH SLIDING COMPOUND MITER SAW WITH DUAL LASER
MS255SR

CUSTOMER SERVICE INFORMATION

For parts or service, call 1-866-974-3443. Be sure to provide all relevant information when you call.

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. MS255SR
Serial No. _____