

Operator's Manual

Companion
A GENUINE SEARS PRODUCT

**10-in. Compound
Miter Saw**
Double Insulated

Model No.
172.21199



Save this manual for future reference.

CAUTION: Read, understand and follow all Safety Rules and Operating Instructions in this manual before using this product.

- SAFETY
- FEATURES
- ADJUSTMENT
- OPERATION
- MAINTENANCE

Sears, Roebuck and Co., Hoffman Estates, IL 60179 U.S.A.

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ONE YEAR FULL WARRANTY ON COMPANION TOOL

If this Companion tool fails due to a defect in material or workmanship within one year from the date of purchase, CONTACT THE NEAREST SEARS PARTS & REPAIR CENTER at 1-800-4-MY-HOME® and Sears will replace it, free of charge. This warranty applies only while this product is in the United States.

This warranty is void if this tool is used for commercial or rental purposes.

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

Sears, Roebuck and Co., Dept. 817WA, Hoffman Estates, IL 60179

SAVE THESE INSTRUCTIONS!
READ ALL INSTRUCTIONS!

SAFETY INSTRUCTIONS

⚠ WARNING: BE SURE to read and understand all safety instructions in this manual, including all safety alert symbols such as DANGER, WARNING and CAUTION, **BEFORE** using this saw.

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

SAFETY SYMBOLS

The purpose of safety symbols is to attract your attention to possible dangers.

The safety symbols, and the explanations with them, deserve your careful attention and understanding. The safety warnings **DO NOT** by themselves eliminate any danger.

The instructions and warnings they give are no substitutes for proper accident prevention measures.

SYMBOL MEANING

- ⚠ SAFETY ALERT SYMBOL:** Indicates danger, warning or caution.
May be used in conjunction with other symbols or pictographs.
- ⚠ DANGER:** Failure to obey a safety warning will result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.
- ⚠ WARNING:** Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.
- ⚠ CAUTION:** Failure to obey a safety warning may result in property damage or personal injury to yourself or to others.
Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

NOTE: Advises you of information or instructions vital to the operation or maintenance of the equipment.



⚠ WARNING: The operation of any saw 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 side shields and a full face shield when needed. We recommend A Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shield, both available at Sears Retail Stores. **ALWAYS** wear eye protection which is marked to comply with ANSI Z87.1.

SAFETY INSTRUCTIONS cont.

ELECTRICAL SAFETY

GENERAL ELECTRICAL CONNECTIONS

⚠ DANGER: To reduce the risk of electrocution:

- 1. Use only identical replacement parts when servicing. Servicing should be performed by a qualified service technician.**
- 2. Do not use in rain or where floor is wet. This tool is intended for indoor use only.**

110-120-Volt, 60 Hz. Tool Information

The plug supplied on your tool may not fit into the outlet you are planning to use. Your local electrical code may require slightly different power cord plug connections. If these differences exist refer to and make the proper adjustments per your local code before your tool is plugged in and turned on.

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug, as shown in Figure A. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified electrician.

A temporary adapter may be used to connect this plug to a 2-prong outlet (as shown in Figure A), if a properly grounded 3-prong outlet is not available. This temporary adapter should be used only until a properly grounded 3-prong outlet can be installed by a qualified electrician. The green colored rigid ear, lug or the like, extending from the adapter must be connected to a permanent ground, such as a properly grounded outlet box.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

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

If the grounding instructions are not completely understood, or if you are in doubt as to whether the tool is properly grounded, check with a qualified electrician or service personnel.

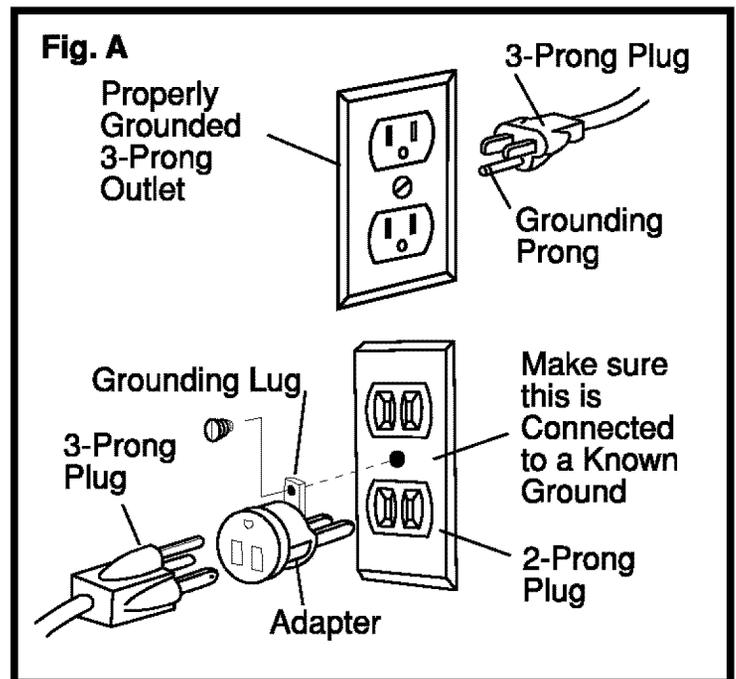
⚠ WARNING: : If not properly grounded, this tool can cause an electrical shock, particularly when used in damp locations, in proximity to plumbing, or out of doors. If an electrical shock occurs there is the potential of a secondary hazard, such as your hands contacting the saw blade.

SAFETY INSTRUCTIONS cont.

GENERAL ELECTRICAL CONNECTIONS cont.

NOTE: The adapter illustrated is for use only if you already have a properly grounded 2-prong outlet.

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



1. If operating the 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.
2. **DO NOT** expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
3. **ALWAYS** periodically inspect tool cords and extension cords for damage. Have damaged cords repaired at a Sears Service Center. **BE SURE** to stay constantly aware of the cord location and keep it well away from the moving blade.
4. **ALWAYS** use the proper extension cord and **MAKE SURE** the cord is in good condition. **ONLY USE** a cord that is heavy enough to carry the current your tool will draw. An undersized cord will cause a current drop in line voltage resulting in a loss of power and overheating. A wire gauge size AWG (American Wire Gauge) of at least 14 is recommended for an extension cord 25 feet or less in length. If in doubt, use the next heavier size. Smaller gauge wires, have greater capacity (14 gauge wire has more capacity than 16 gauge wire).
5. **DO NOT** abuse the cord. **NEVER** use the cord to pull the plug from the outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.
6. When operating a power tool outside, **ALWAYS** use an outdoor extension cord marked "W-A" or "W". These cords are rated for outdoor use and reduce the risk of electric shock.

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 safer.

SYMBOL	NAME	DESIGNATION / EXPLANATION
	Wet Conditions Alert	Do not expose to rain or use in wet conditions.
	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.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	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.

SAFETY INSTRUCTIONS

WORK AREA SAFETY

1. **ALWAYS keep your work area clean and well lit. DO NOT** leave tools or pieces of wood on the saw while it is in operation. Cluttered benches and dark areas invite accidents.
2. **DO NOT operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **ALWAYS keep bystanders, children and visitors away while operating a power tool.** Distractions can cause you to lose control.
4. **ALWAYS make your workshop childproof** with padlocks and master switches or by removing starter keys.
5. **ALWAYS make sure the work area has ample lighting** so you can see the work and that there are no obstructions that will interfere with safe operation **BEFORE** using your saw.

PERSONAL SAFETY

1. **ALWAYS know your power tool.** Read the operator's manual carefully, learn the saw's applications and limitations, as well as, the specific potential hazards related to this tool.
2. **ALWAYS stay alert, watch what you are doing and use common sense when operating a power tool. DO NOT use tool while tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
3. **ALWAYS dress properly. DO NOT wear loose clothing, gloves, neckties, rings, bracelets or other jewelry that can get caught and draw you into moving parts. Non-slip footwear is also recommended. Pull back long hair. Keep your hair, clothing and gloves away from moving parts.** Loose clothing, jewelry or long hair can be caught in moving parts.
4. **ALWAYS remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
5. **ALWAYS wear safety glasses with side shields.** Everyday eyeglasses have only impact resistant lenses, they are **NOT** safety glasses.
6. **ALWAYS wear a dust mask** to keep you from inhaling fine particles.
7. **ALWAYS protect your hearing.** Wear hearing protection during extended periods of operation.
8. **ALWAYS secure your work.** Use clamps or a vise to hold work when practical. It is safer than using your hand and frees both hands to operate tool.
9. **DO NOT overreach. ALWAYS keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
10. **ALWAYS avoid accidental starting. BE SURE switch is in the "Off" position before plugging in.**
11. **NEVER stand on tool.** Serious injury could occur if the tool is tipped or if the blade is accidentally contacted.

SAFETY INSTRUCTIONS cont.

TOOL USE AND CARE SAFETY

- 1. NEVER leave the tool running unattended. ALWAYS turn it off. DO NOT leave the tool until it comes to a complete stop.**
- 2. DO NOT use the tool if the switch does not turn it “On” or “Off”. Any tool that cannot be controlled with the switch is dangerous. ALWAYS have defective switches replaced at a Sears Service Center.**
- 3. ALWAYS disconnect the plug from the power source before making any adjustments, changing accessories or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
- 4. ALWAYS store idle tools out of the reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- 5. ALWAYS maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control. Follow instructions for lubricating and changing accessories.
- 6. DO NOT force the tool,** it will do the job better and more safely at the rate for which it was designed.
- 7. ALWAYS use the right tool for the job. DO NOT force the tool or attachment to do a job it was not designed for.** Use it only the way it was intended.
- 8. Before using this saw, ALWAYS check for damaged parts, including guards for proper operation and performance. Also ALWAYS check the alignment of moving parts, binding of moving parts, breakage of parts, saw stability, mounting and any other condition that may affect the tool's operation. If damaged, have the tool serviced at a Sears Service Center before using.** Many accidents are caused by poorly maintained tools.

⚠ WARNING: USE OF ACCESSORIES THAT ARE NOT RECOMMENDED FOR USE WITH THIS TOOL MAY CREATE A HAZARDOUS CONDITION.

- 9. ALWAYS use only accessories that are recommended for this tool.**
Using improper accessories may cause the risk of serious injury. See accessories section of this manual for proper accessories.

ADDITIONAL SPECIFIC SAFETY RULES FOR MITER SAWS

- 1. Know your power tool. Read 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.
- 2. ALWAYS firmly clamp or bolt your miter saw to a workbench or table at approximately hip height.**
- 3. ALWAYS be sure that all adjustments are secure BEFORE making a cut.**
- 4. ALWAYS make sure that the miter table and saw (bevel function) are locked in position BEFORE operating your saw.** Lock the motor table by securely tightening the miter lock handle. Lock the saw arm (bevel function) by securely tightening the bevel lock knob.

SAFETY INSTRUCTIONS cont.

ADDITIONAL SPECIFIC SAFETY RULES FOR MITER SAWS cont.

- 5. ALWAYS use a clamp to secure the workpiece, when possible.**
- 6. ALWAYS be sure the blade path is free of nails. ALWAYS carefully inspect lumber and remove all nails BEFORE cutting.**
- 7. ALWAYS be sure that the blade clears the workpiece. NEVER start the saw with the blade touching the workpiece. ALWAYS allow the motor to come up to full speed BEFORE starting a cut.**
- 8. ALWAYS support long workpieces when cutting to minimize the risk of the blade pinching or kickback.** The saw may slip, walk or slide while cutting long or heavy boards.
- 9. 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.
- 10. NEVER cut more than one piece at a time. DO NOT STACK** more than one workpiece on the saw table at a time.
- 11. ALWAYS 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.
- 12. NEVER stand or have any part of your body in line with the path of the blade.**
- 13. ALWAYS only use the correct blades.** Use the right 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. **The maximum blade capacity for this saw is 10 inches.**
- 14. ALWAYS keep blades clean, sharp and with the sufficient set.** Sharp blades minimize stalling and kickback.
- 15. DO NOT use dull or damaged blades.** Bent blades can break easily, or cause kickback.
- 16. DO NOT remove the saw's blade guards. NEVER** operate the saw with any guard or cover removed. **MAKE SURE** that all guards are operating properly **BEFORE** each use.
- 17. NEVER hand hold a workpiece that is too small to be clamped. ALWAYS** keep your hands clear of the "no hands' zone.
- 18. 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.
- 19. ALWAYS keep your hands away from cutting area. DO NOT** reach under the material being cut or in the blade's cutting path with your fingers or hand for any reason. **ALWAYS** turn the power off.

SAFETY INSTRUCTIONS cont.

ADDITIONAL SPECIFIC SAFETY RULES FOR MITER SAWS cont.

⚠ WARNING: Blade continues to turn after power to saw cuts off. To avoid possible serious injury, after releasing trigger switch to cut power, allow the saw blade to stop rotating **BEFORE** raising the blade out of the workpiece

20. **NEVER** reach behind, under or within three inches of the blade and its cutting path with your hands or fingers for any reason.
21. **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.
22. **NEVER**, for any reason, touch the blade or other moving parts during use.
23. **ALWAYS** release the power switch and allow the saw blade to stop rotating **BEFORE** raising it out of the workpiece.
24. **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.
25. **ALWAYS** turn off the saw before disconnecting it to avoid accidental starting when reconnecting the saw to a power supply. **NEVER** leave the saw unattended while connected to a power supply.
26. **NEVER** lift this tool by gripping the sliding miter fence.
27. **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.

⚠ WARNING: Some dust particles created by power sanding, sawing, grinding, drilling and other construction jobs contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks and cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending upon 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 those dust masks that are specially designed to filter out microscopic particles.

SAFETY INSTRUCTIONS cont.

ADDITIONAL SPECIFIC SAFETY RULES FOR MITER SAWS cont.



⚠ WARNING: The operation of any saw 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 side shields and a full face shield when needed. We recommend a Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shield, both available at Sears Retail Stores.

SERVICE SAFETY

1. If any part of this table saw is missing or should break, bend, or fail in any way; or should any electrical component fail to perform properly: **ALWAYS** shut off the power switch and remove the miter saw plug from the power source and have the missing, damaged or failed parts replaced **BEFORE** resuming operation.
2. Tool service must be performed only at a Sears Service Center. Service or maintenance performed by unqualified personnel could result in a risk of injury.
3. When servicing a tool, **ALWAYS** use only identical replacement parts. Follow instructions in the Maintenance Section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

The label on your tool may include the following symbols.

V.....	Volts
A.....	Amperes
Hz.....	Hertz
W.....	Watts
min.....	Minutes
~	Alternating current
====	Direct current
no	No-load speed
☐.....	Class II construction
.../min.....	Revolutions or reciprocation per minute
⚠.....	Indicates danger, warning caution. It means attention!!! Your safety is involved.

IMPORTANT! READ ALL INSTRUCTIONS

GLOSSARY OF TERMS FOR WOODWORKING

Arbor

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

Revolutions Per Minute (RPM)

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

FPM or SPM

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

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 no hands zone labels placed inside the marked lines on the miter table base.

Throat Plate

A plastic throat plate inserted in the miter table that allows for blade clearance.

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 saw blade tooth is bent (or set) outward from the face of the blade.

Miter Cut

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

Compound Miter Cut

A compound miter cut is a cut made using a miter angle and a bevel angle at the same time.

Cross Cut

A cutting or shaping operation made against the grain of the workpiece.

Bevel Cut

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

Dado Cut

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

Chamfer

A cut removing a wedge from a block of wood so the end (or part of the end) is angled at other than 90°.

Ripping or Rip Cut

A cutting operation along the length of the workpiece.

Freehand

Performing a cut without using a fence, miter gauge, fixture, work clamp, or other proper device to keep the workpiece from twisting or moving during the cut.

Through Sawing

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

GLOSSARY OF TERMS FOR WOODWORKING cont.

Non-Through Cuts

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

Resaw

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

Heel

Alignment of blade to fence.

Leading End

The end of the workpiece pushed into tool first.

Kerf

The material removed by the blade in a thorough 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.

Throw-Back

Throwing of a workpiece in a manner similar to a kickback. Usually associated with a cause other than the kerf closing, such as a workpiece not being against the fence, being dropped into the blade, or being placed inadvertently in contact with the blade.

Splitter

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

Featherboard

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

Push Blocks and Push Sticks

Devices used to feed the workpiece through the saw blade during cutting operations. A push stick (not a push block) should be used for narrow ripping operations. These aids help keep the operator's hands well away from the blade.

Workpiece or Material

The item on which the cutting operation is being done. The surfaces of a workpiece are commonly referred to as faces, ends and edges.

Work Table

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

Gum

A sticky, sap-based residue from wood products.

Resin

A sticky, sap-based substance that has hardened.

UNPACKING

1. Remove all packing materials from around your saw.
2. Carefully lift the saw from carton and place it on a level work surface. The saw is heavy, so get help, if you need it, to help avoid injuring your back.
3. Do not discard the packing materials until you have carefully inspected the saw for loose or damaged parts and successfully operated the saw.
4. 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 cut the tie wrap. Lift the saw arm by the handle.

IMPORTANT: Keep hand pressure on the saw arm while cutting the tie wrap to prevent it from suddenly raising the wrapping if fully cut.

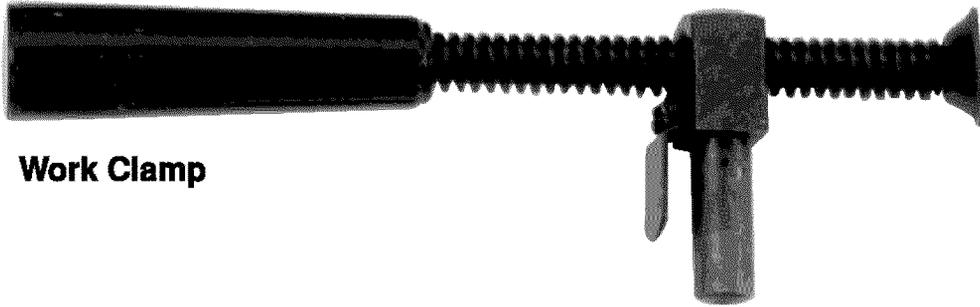
5. Carefully inspect all parts of the saw to make sure that no breakage or damage has occurred during shipping.

⚠ WARNING: If any parts are missing, **DO NOT** operate this tool until the missing parts are replaced. Failure to do so could result in possible serious injury.

LOOSE PARTS LIST Fig.1

The following items are included with your compound miter saw.

- Work Clamp
- Blade Wrench
- Owner's Manual



Work Clamp

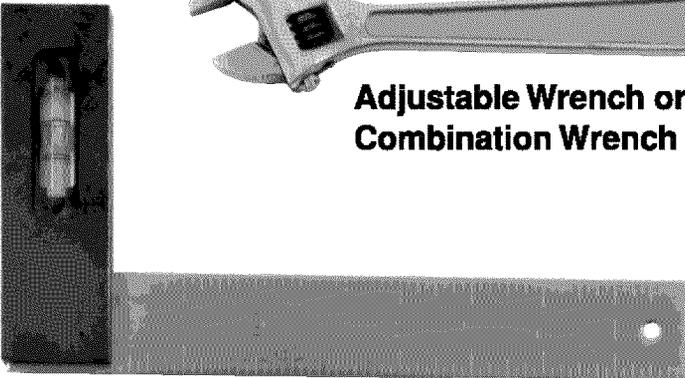


Blade Wrench

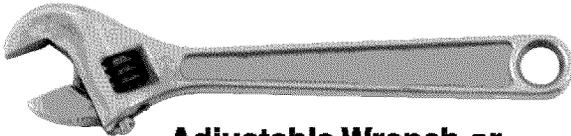
⚠ WARNING: The use of attachments or accessories that are not recommended might be dangerous and could cause serious personal injury.

TOOLS NEEDED Fig.2

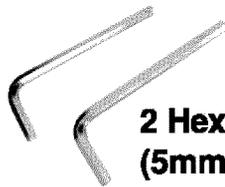
The following tools are not included, but are needed for removing the blade and for making adjustments on your saw.



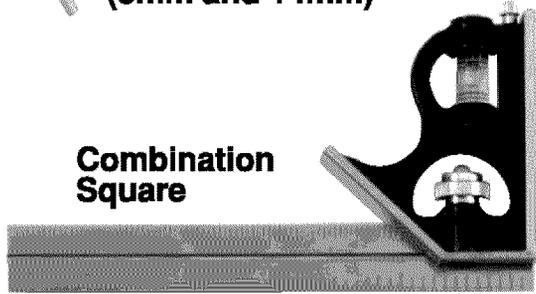
Framing Square



**Adjustable Wrench or
Combination Wrench**



**2 Hex Keys
(5mm and 14mm)**



**Combination
Square**



Phillips Screwdriver

DESCRIPTION

KNOW YOUR SAW (see fig. 6)

Before attempting to use your saw, familiarize yourself with all of the operating features and safety requirements.

⚠ WARNING: DO NOT allow familiarity with your saw to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

12-Amp Motor

Your saw has a powerful 12-amp motor that provides the power for a variety of cutting applications. It has permanently-lubricated ball bearings and externally accessible brushes for servicing ease.

10-inch Blade

The blade included with your compound miter saw will cut a variety of materials up to 6 in. wide and 2 in. thick, depending upon the angle at which the cut is made.

Your saw was shipped with the blade already attached, however in time there will be a need to replace the blade.

TO REPLACE BLADE (See Figs. 3 - 5)

⚠ WARNING: A 10-inch blade is the maximum blade capacity of your saw. A larger than 10-inch blade will come in contact with the blade guards. Also, **NEVER** use a blade that is so thick that it prevents the outer blade washer from engaging with the flat side of the spindle. Blades that are too large or too thick can result in an accident causing serious personal injury.

1. Unplug the saw.

⚠ WARNING: To prevent personal injury, **ALWAYS** disconnect the plug from power source **BEFORE** assembling parts, making adjustments or changing blades.

2. Push down on saw arm and pull out the lock pin to release saw arm.
3. Raise saw arm to its full raised position. Be cautious because saw arm is spring loaded to raise.
4. Remove Phillips screws (A) and (B) on the blade bolt cover until blade bolt cover and the lower blade guard can be raised (see Figure 3 and 4).
5. Gently raise the lower blade guard bracket to release the lower blade guard from the notch. This will allow the lower blade guard and the blade bolt cover to be rotated up and back to expose the blade bolt (see Figure 4).
6. Press the spindle lock button and rotate the blade bolt until the spindle locks (see Figure 5.)

DESCRIPTION cont.

Fig. 3

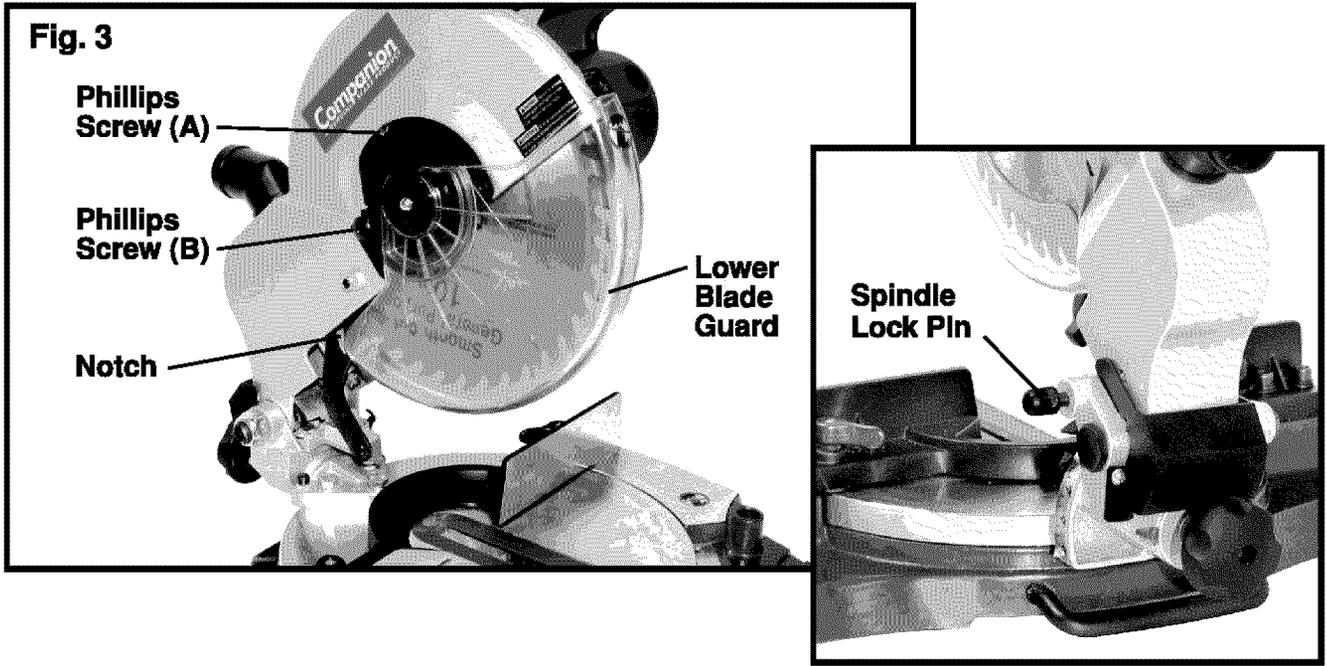
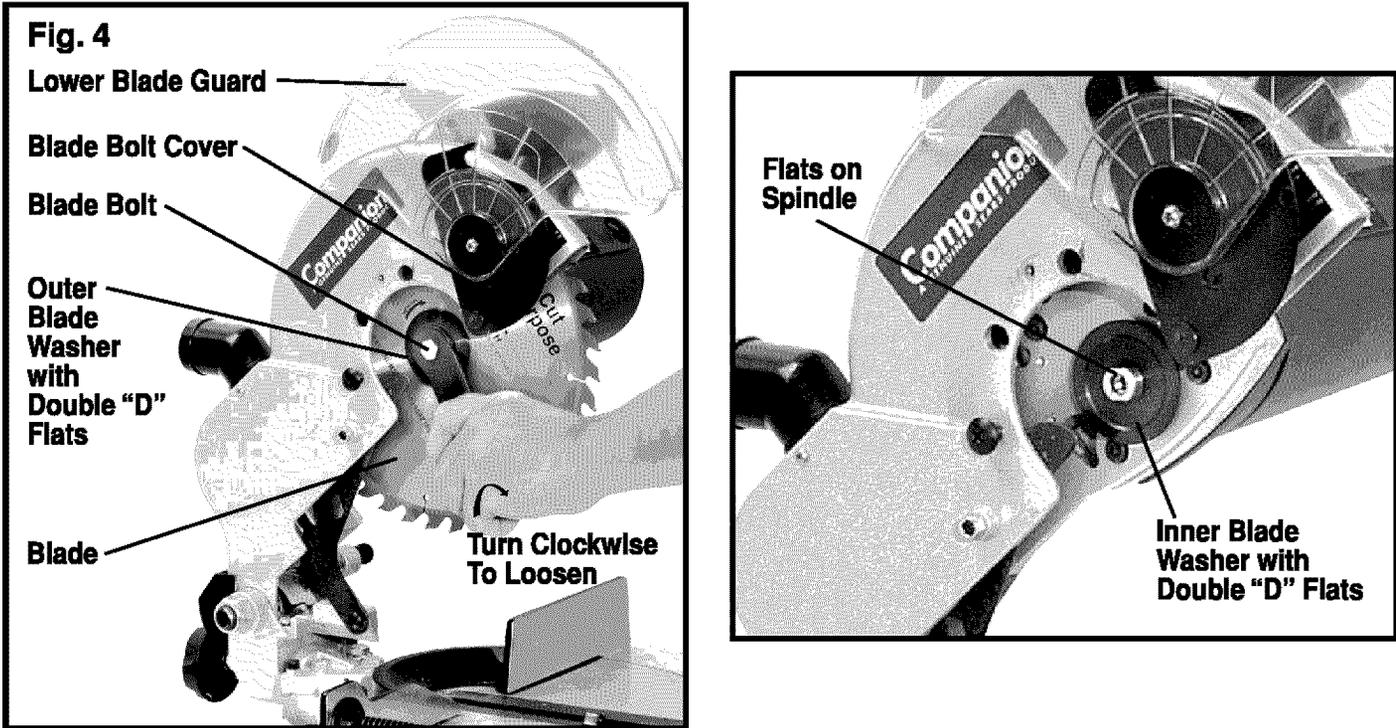


Fig. 4



DESCRIPTION cont.

TO REPLACE BLADE (See Figs. 3 - 5) cont.

7. Use the blade wrench (included) to loosen and remove the blade bolt. Turn the blade bolt **CLOCKWISE** to loosen and remove.
8. Remove the outer blade washer behind the blade bolt. Then carefully remove the black Double "D" flat outer blade washer. **DO NOT** remove the inner Double "D" flat blade washer. Remove blade.
9. Wipe a drop of oil onto the inner and outer black Double "D" flat washers where they come in contact with the blade.

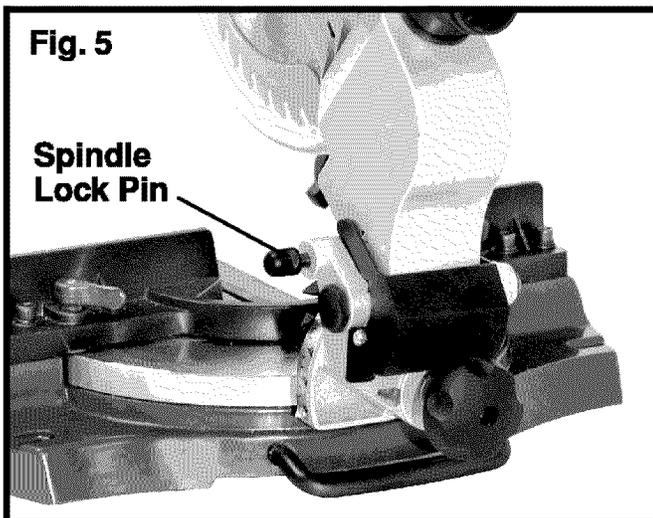
⚠ WARNING: If the inner blade black Double "D" flat washer has been removed, replace it **BEFORE** placing blade on the spindle. Failure to do so could cause an accident because the blade will not tighten properly.

10. Fit the saw blade inside the lower blade guard and onto the inner blade washer. The blade teeth should point downward at the front of the saw as shown in Figure 3.

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.

11. Replace the outer blade washer. The black Double "D" flats on the blade washers align with the flats on the spindle.
12. Press the spindle lock button and replace blade bolt.
13. Tighten the blade bolt securely by turning it counterclockwise with the blade wrench.
14. Replace the lower blade guard and the blade bolt cover.
15. Securely re-tighten the Phillips screw that secures the blade bolt cover (see Figure 4).

⚠ WARNING: To prevent damage to the spindle lock, **ALWAYS** allow the motor to come to a complete stop before engaging the spindle lock. **ALWAYS** make sure the spindle lock is disengaged before reconnecting saw to the power source.



DESCRIPTION cont.

KNOW YOUR SAW cont.

Miter Lock Levers (See Fig. 7)

The miter lock levers securely lock the saw table at the desired miter angles.

Spindle Lock Button (see Fig. 8)

The spindle lock button on your saw allows you to lock the spindle that keeps the blade in your saw from rotating. Depress and hold the lock button when installing, changing or removing the blade.

Trigger Lock (See Fig. 9)

To prevent unauthorized use of your compound miter saw, we suggest that you 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-inch diameter may be used. When the lock is installed and lock the switch is inoperable.

Store the padlock in another location.

⚠ WARNING: The operation of any saw 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 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 shield, both available at Sears Retail Stores.

Bevel Lock Knob

The bevel lock knob securely locks your compound miter saw at the desired bevel angles. A positive stop adjustment screw has been provided on each side of the saw arm. These adjustment screws are for making fine adjustments at 0° and 45°.

Electric Brake

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

Fence

The fence on your compound miter saw has been provided as a support to hold the workpiece against when making all cuts.

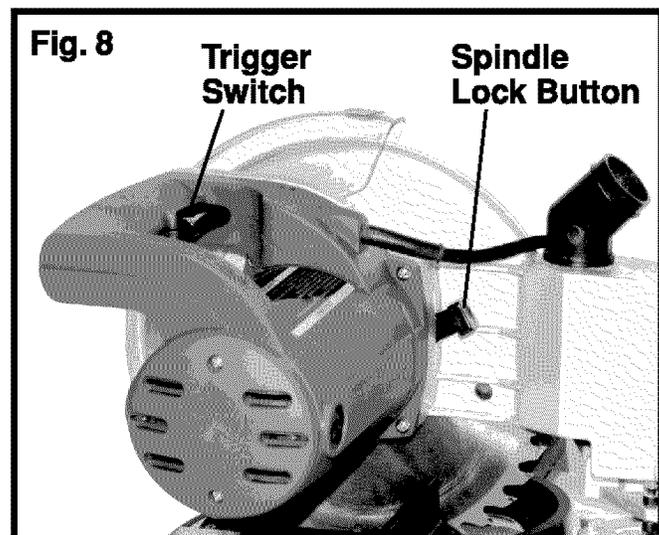
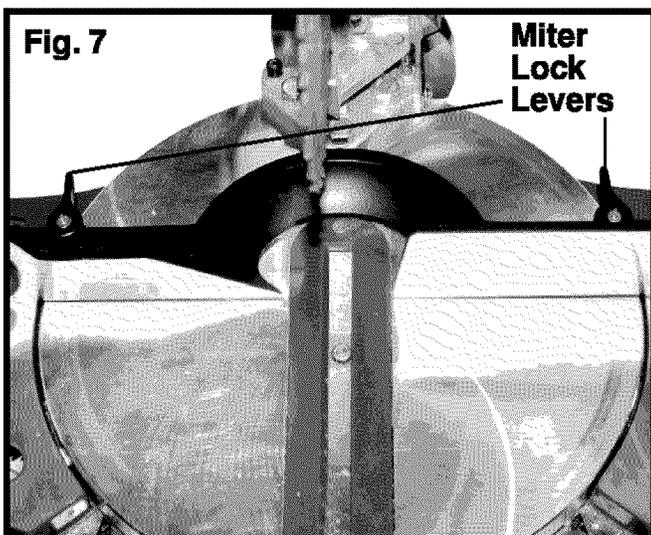
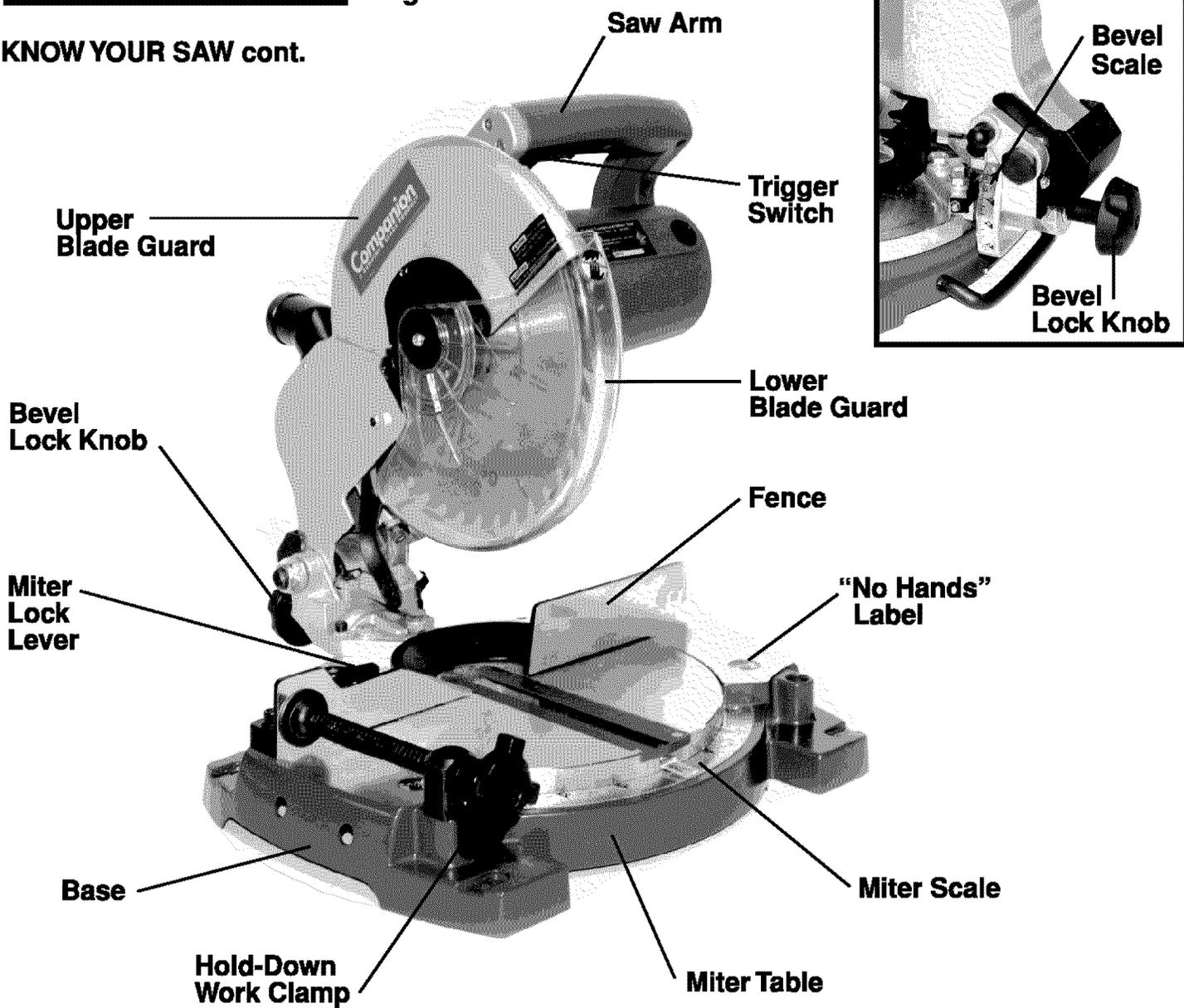
Self-Retracting Lower Blade Guard

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.

DESCRIPTION cont.

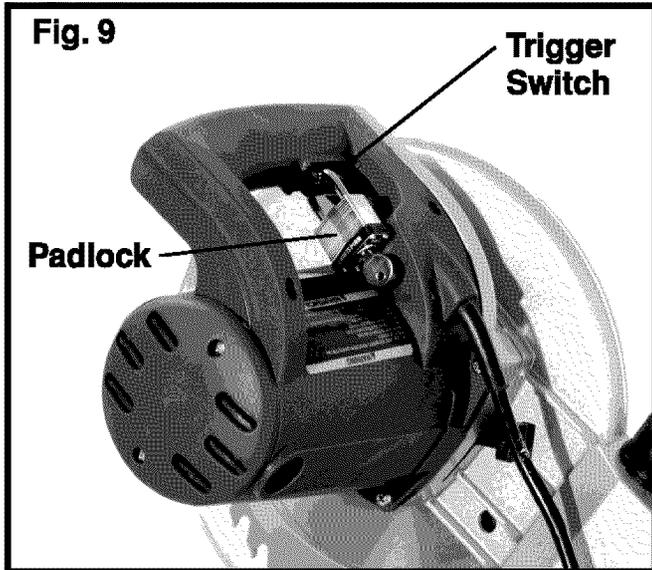
Fig. 6

KNOW YOUR SAW cont.



DESCRIPTION cont.

KNOW YOUR SAW cont.



PRODUCT SPECIFICATIONS

Blade Diameter	10 in.
Blade Arbor	5/8 in.
No-Load Speed	4500 RPM
Rating	12 Amperes
Input	120 Volts, 60 Hz AC Only

Cutting Capacities

When the miter angle (miter table) is set at 0° and the bevel angle is set at 0°:
Your saw will cut materials up to a maximum of 5 1/2 in. wide x 3 in. thick.

~~Maximum nominal lumber sizes: 2 x 6~~

When the miter angle (miter table) is set at 45° and the bevel angle is set at 0°:
Your saw will cut materials up to a maximum of 4 in. wide x 3 in. thick.

Maximum nominal lumber sizes: 2 x 4

When the miter angle (miter table) is set at 0° and the bevel angle is set at 45°:
Your saw will cut materials up to a maximum of 5 1/2 in. wide x 2 3/32 in. thick.

~~Maximum nominal lumber sizes: 2 x 6~~

When the miter angle (miter table) is set at 45° and the bevel angle is set at 45°:
Your saw will cut materials up to a maximum of 4 in. wide x 2 3/32 in. thick.

Maximum nominal lumber sizes: 2 x 4

ASSEMBLY

⚠ WARNING: DO NOT attempt to modify this tool or create accessories not recommended for 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.

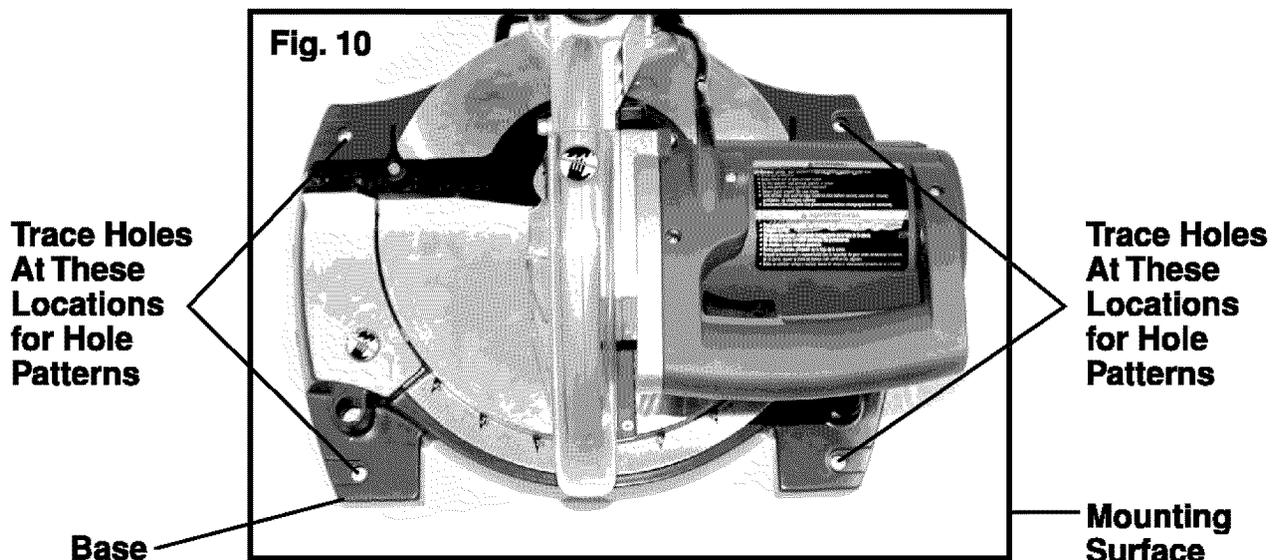
⚠ WARNING: ALWAYS make sure your compound miter saw is securely mounted to a workbench or an approved work stand. Failure to do so could result in an accident, resulting in possible serious personal injury.

Mounting Holes (See Fig. 10)

Your compound miter saw should be permanently mounted to a firm, stable supporting surface, such as a workbench. Four bolt holes have been provided in the saw base for this purpose. Each of these four mounting holes should be securely bolted using 3/8-in. machine bolts, lock washers and hex nuts (not included). Bolts should be long enough to fit through the saw base, lock washers, hex nuts and the thickness of the workbench.

Tighten all four bolts securely.

The hole pattern for an 18 x 24-in. workbench is shown in Figure 10. Carefully check the workbench after mounting the saw 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.



ASSEMBLY cont.

Work Clamp (See Fig. 11)

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

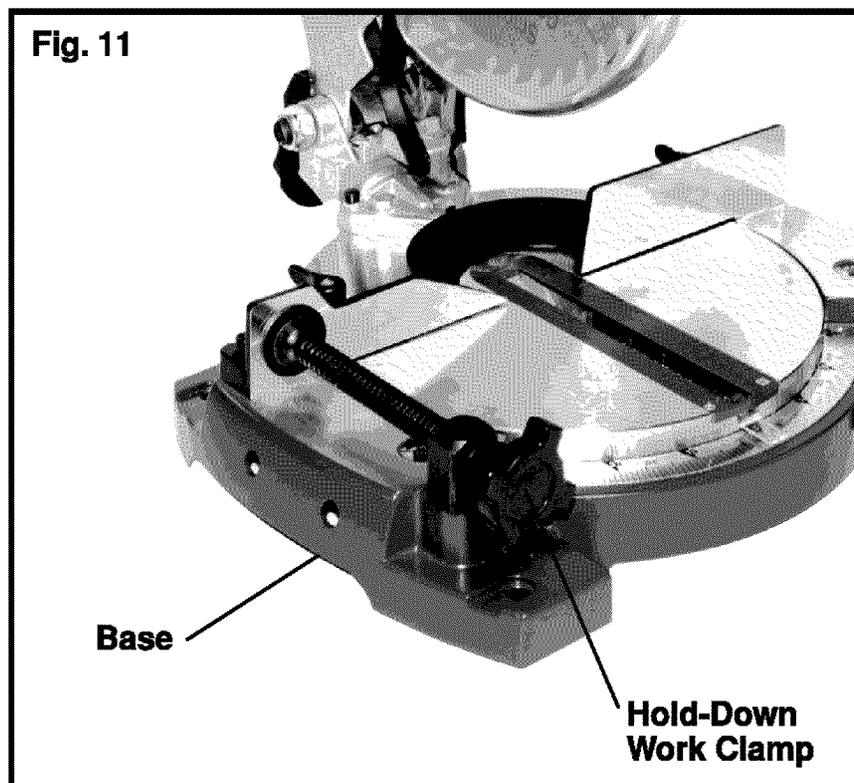
Depending on the cutting operation and the size of the workpiece, it may be necessary to use a C-clamp (not included) instead of the work clamp to secure the workpiece prior to making the cut.

⚠ 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.

Follow these instructions to install the work clamp:

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

⚠ WARNING: When using any clamp with a stop block, install the clamp on the same side as the stop block. This will eliminate the possibility of trapping the workpiece, resulting in the saw blade and workpiece kicking up. Failure to heed this warning can result in serious personal injury.



ADJUSTMENTS

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

NOTE: Many of the drawings in this manual show only portions of your compound miter saw. This was intentional, so we can clearly illustrate the points being made. **NEVER** operate your saw without all the guards securely in place and in good operating condition.

SQUARING THE MITER TABLE TO THE FENCE (See Figs. 12 - 15)

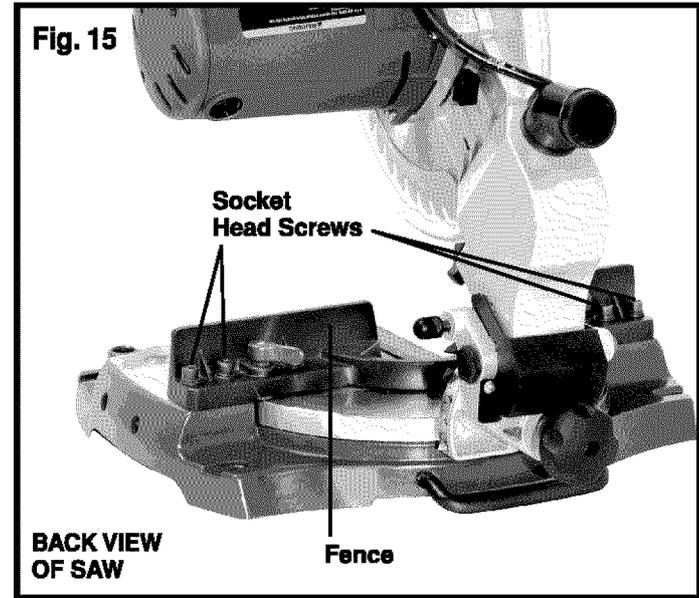
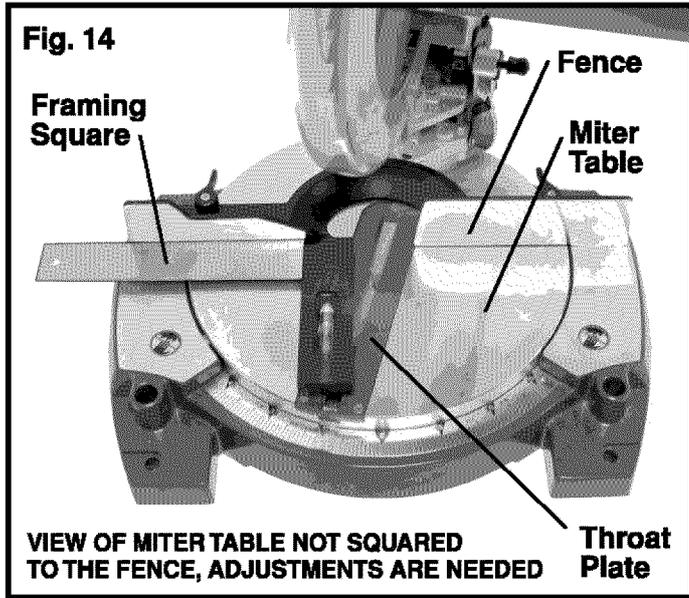
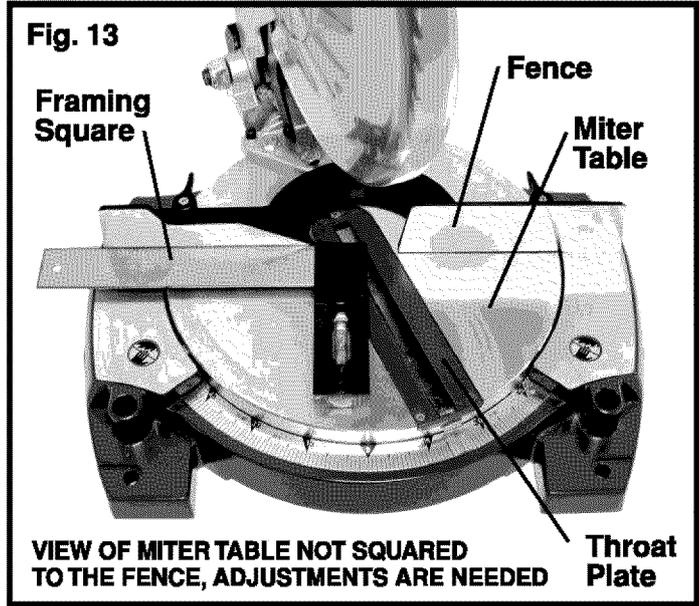
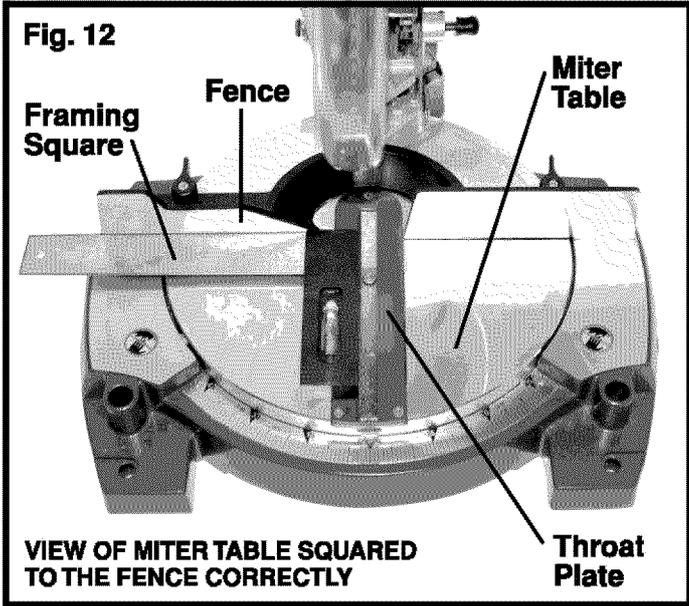
1. Unplug the saw.

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

2. Push down on the saw arm and pull out the lock pin to release the saw arm.
3. Raise saw arm to its full raised position.
4. Loosen the miter lock levers.
5. Rotate the miter table until the pointer is positioned at 0°.
6. Securely tighten the miter lock levers.
7. Lay a framing square flat on the miter table, placing one leg of square flat up against the Fence and the other leg flat up against the throat plate in the miter table. The edge of the square and the slot in the throat plate in the miter table should be parallel as shown in figure 12.
8. If the edge of the framing square and the throat plate in the miter table are not parallel as shown in figures 13 and 14, adjustments are needed.
9. Use the blade wrench to loosen the socket head of the screws securing the fence. Adjust the fence left or right until the framing square and throat plate are parallel.
10. Retighten the screws securely and recheck the fence to table alignment.

ADJUSTMENTS cont.

SQUARING THE MITER TABLE TO THE FENCE (See Figs. 12 - 15) cont.



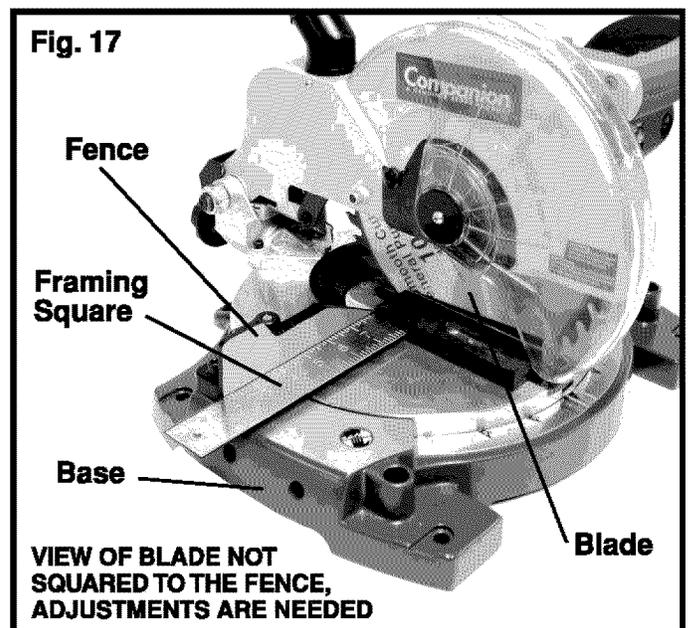
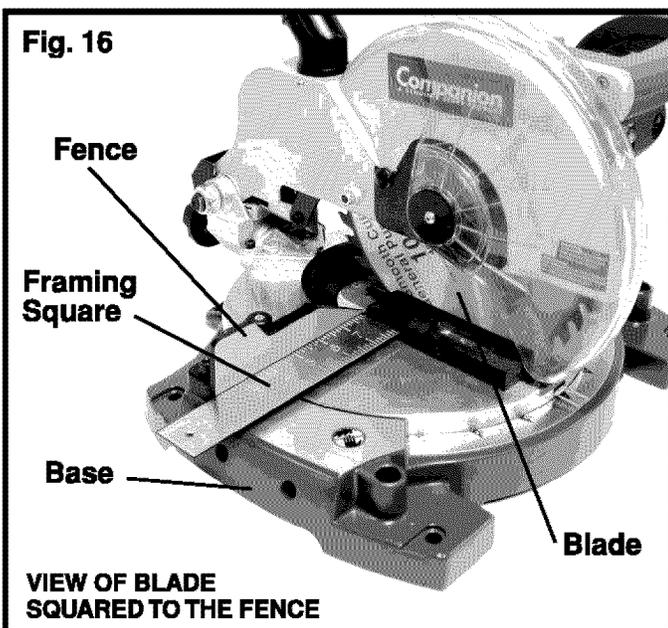
ADJUSTMENTS cont.

SQUARING THE SAW BLADE TO THE FENCE (See Figs. 16-19)

1. Unplug the saw.

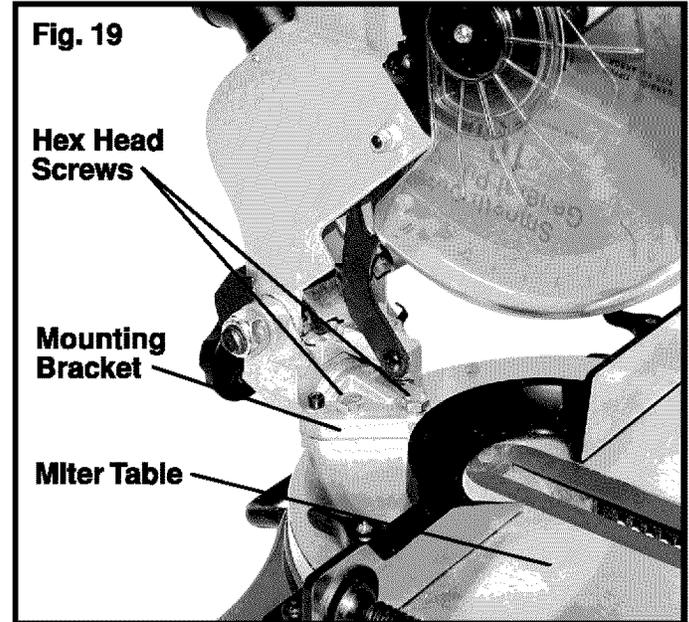
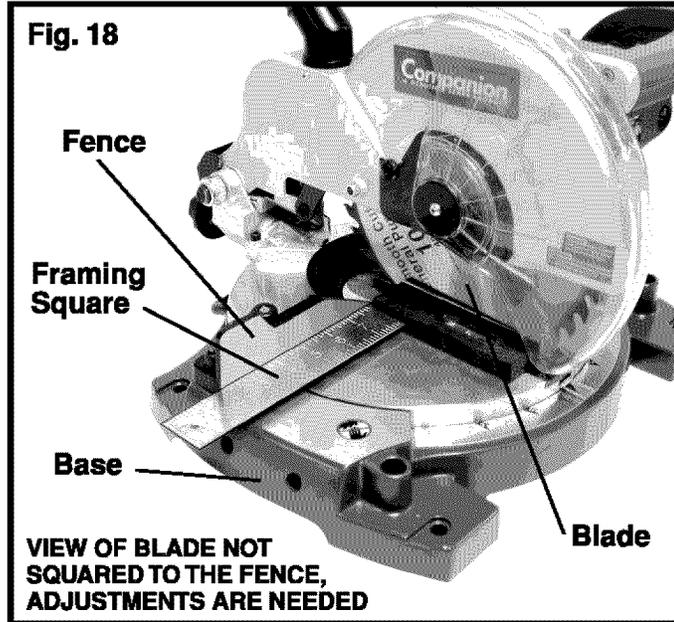
⚠ WARNING: Failure to unplug your saw could result in accidental starting causing possible serious personal injury!

2. Pull the saw arm all the way down and engage the lock pin to hold the saw arm in the transport position.
3. Loosen the miter lock levers.
4. Rotate the miter table until the pointer is positioned at 0°.
5. Securely tighten the miter lock levers.
6. Lay a framing square flat on the miter table, placing one leg of square flat up against the Fence and the other leg flat up against the flat part of the saw blade.
NOTE: Make sure the square contacts the flat part of the saw blade, not the blade teeth.
7. The edge of the square and the saw blade should be parallel as shown in figure 16.
8. 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.
9. Use the 14mm blade wrench to loosen the hex screws that secure the mounting bracket to the miter table.
10. Rotate the mounting bracket left or right until the saw blade is parallel with the square.
11. Retighten the screws securely and recheck the blade to fence alignment.



ADJUSTMENTS cont.

SQUARING THE SAW BLADE TO THE FENCE (See Figs. 16-19) cont.



SQUARING THE SAW BLADE TO THE MITER TABLE (See Figs. 20-23)

1. Unplug the saw.

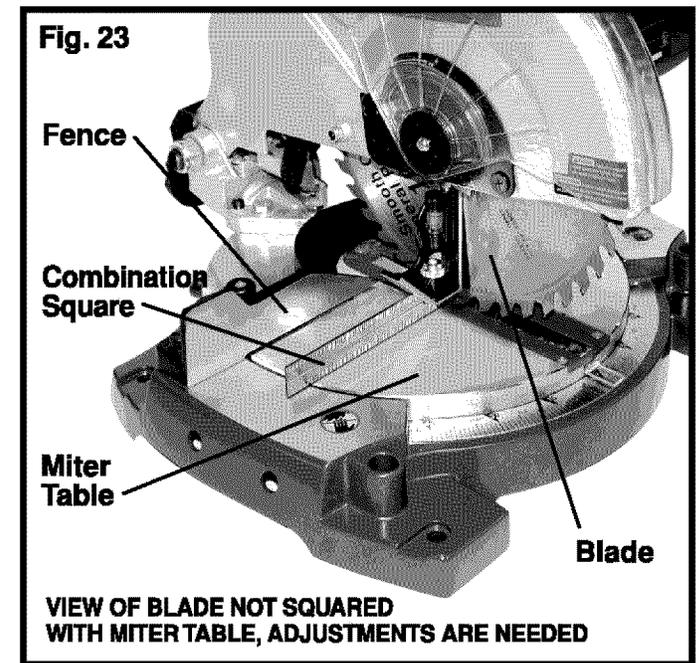
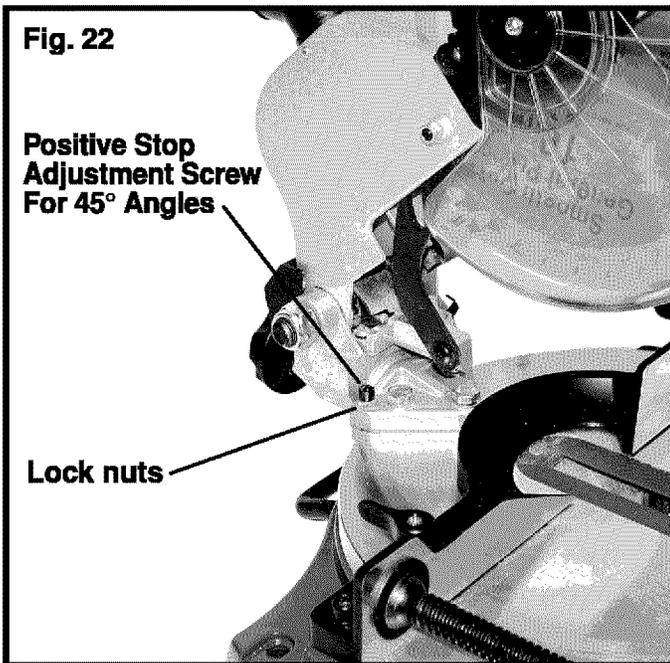
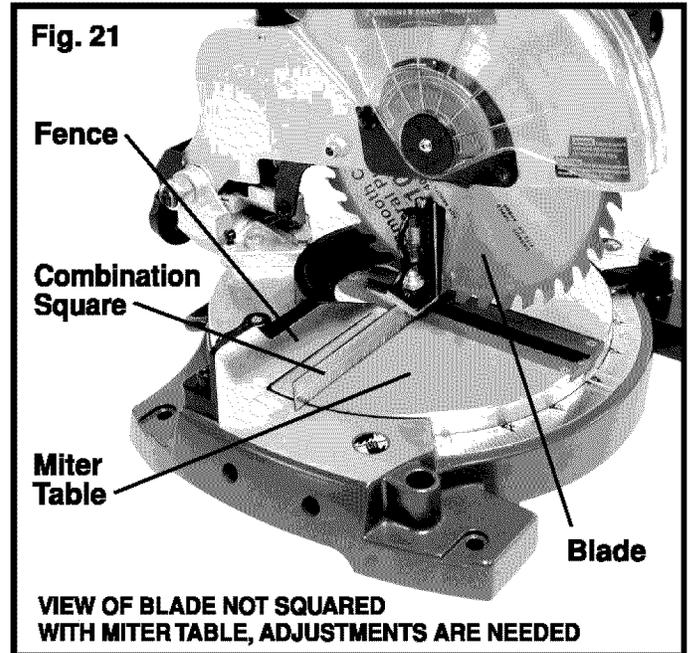
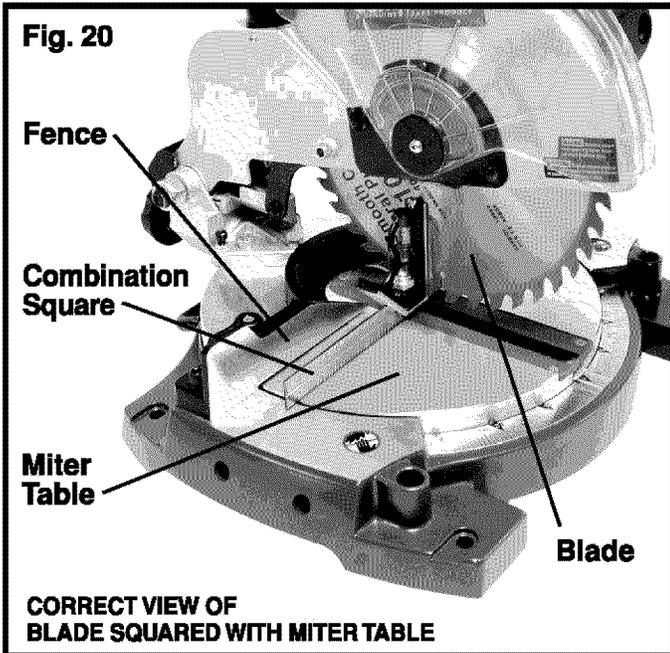
⚠ WARNING: Failure to unplug your saw could result in accidental starting causing possible serious personal injury!

2. Pull the saw arm all the way down and engage the lock pin to hold the saw arm in the transport position.
3. Loosen the miter lock levers.
4. Rotate the miter table until the pointer is positioned at 0°.
5. Securely tighten the miter lock levers.
6. Loosen the bevel lock knob and set the saw arm at 0° bevel (blade set 90° to miter table). Tighten bevel lock knob.
7. Place a combination square against the miter table and the flat part of the saw blade.
NOTE: Make sure the square contacts the flat part of the saw blade, not the blade teeth.
8. Rotate the blade by hand and check the blade to table alignment.
9. The edge of the square and the saw blade should be parallel as shown in figure 20.
10. If the top or bottom of the saw blade angles away from the square as shown in figures 21 and 22 adjustments are needed.
11. Use the 10mm wrench or adjustable wrench to loosen the lock nut securing the positive stop adjustment screw. Also loosen the bevel lock knob. (See Figure 23).
12. Adjust the positive stop adjustment screw to bring saw blade into alignment with the square.
13. Retighten the bevel lock knob. Next, re-tighten the lock nut securing the positive stop adjustment screw. 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 0° and 45° angles.

ADJUSTMENTS cont.

SQUARING THE SAW BLADE TO THE MITER TABLE (See Figs. 20-23) cont.



Your saw has two scale indicators, one on the bevel scale and one on the miter scale. After squaring adjustments have been made, it may be necessary to loosen the indicator screws and reset them to zero.

ADJUSTMENTS cont.

PIVOT ADJUSTMENTS

NOTE: These adjustments were made at the factory and under normal circumstances do not require readjustment.

Travel Pivot Adjustment

Your saw arm should rise completely to the up position by itself.

To avoid risk of personal injury, if your saw arm does not rise by itself or if there is play in the pivot joints, have your saw serviced at a Sears Service Center before using.

Bevel Pivot Adjustment

Your compound miter saw arm should bevel easily by loosening the bevel lock knob and tilting the saw arm to the left.

To avoid risk of personal injury, if movement is tight or if there is play in the pivot, have your saw serviced at a Sears Service Center before using

DEPTH STOP (see Figure 24)

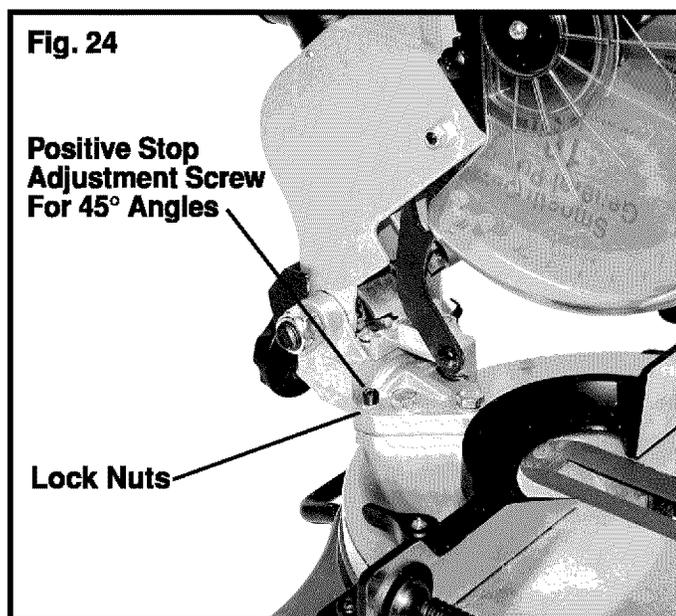
The depth stop limits the downward travel of the blade. It allows the blade to go below the miter table enough to maintain full cutting capacities. The depth stop positions the blade 1/4-inch from the miter table support.

NOTE: The miter table support is located inside the miter table.

The depth stop is factory set to provide maximum cutting capacity for the 10-inch blade included with your saw. Therefore the blade included with your saw should never need adjustments.

However, when the diameter of the blade has been reduced due to sharpening, it may become necessary to adjust the depth stop in order to provide the maximum cutting capacity.

Also, when a new blade is installed, it is necessary to check the clearance of the blade to the miter table support before starting the saw. Make adjustments if necessary.



ADJUSTMENTS cont.

Depth Stop Adjustments (See Figure 25)

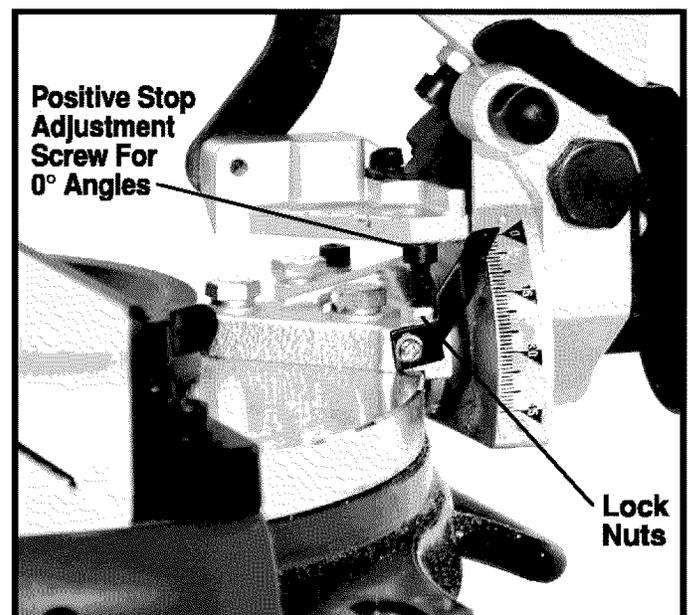
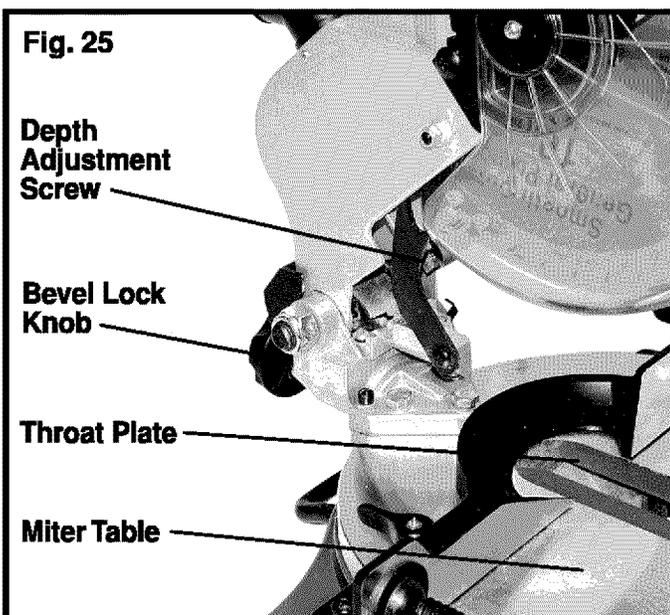
1. Unplug the saw.

⚠ WARNING: To prevent personal injury, **ALWAYS** disconnect the plug from power source **BEFORE** assembling parts, making adjustments or changing blades.

2. To adjust the depth stop use a 10mm wrench or adjustable wrench to loosen the hex nut at the rear of the miter saw arm.
3. Use the 5mm hex key to adjust the depth stop adjustment screw.
4. To lower the blade, turn the screw counterclockwise.
5. To raise the blade, turn the screw clockwise.
6. Lower the blade into the throat plate of the miter table.
7. Check blade clearance and maximum cutting distance (distance from fence where blade enters) to front of miter table slot.
8. Readjust if necessary.

⚠ WARNING: **DO NOT** start your compound miter saw without checking for interference between the blade and the miter table support. The blade could be damaged if it strikes the miter table support during operation of the saw.

9. Tighten the screw with 10mm hex key.
10. To prevent the depth stop adjustment screw from turning while tightening the hex nut, carefully hold it with the hex key wrench while tightening the hex nut.



OPERATION

Depth Stop Adjustments (See Figure 25) cont.

⚠ WARNING: DO NOT allow familiarity with your tool make you careless, remember, that a careless fraction of a second is sufficient to inflict severe injury.

⚠ WARNING: ALWAYS wear safety goggles or safety glasses with side shields when operating tools. Failure to do so could result in objects being thrown into you eyes, resulting in possible serious injury.

⚠ 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.

APPLICATIONS

Only use your compound miter saw for the purposes listed below:

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

NOTE: The blade included with this saw is ideal for a wide variety of wood cutting operations. However, for fine joinery cuts or cutting plastic, we recommend using one of the accessory blades sold separately at your local Sears Store.

⚠ WARNING: BEFORE starting any cutting operation, clamp or bolt your compound miter saw to a work bench. **NEVER** operate your miter saw on the floor or in a crouched position. Failure to heed this warning could result in serious personal injury.

CUTTING WITH YOUR COMPOUND MITER SAW

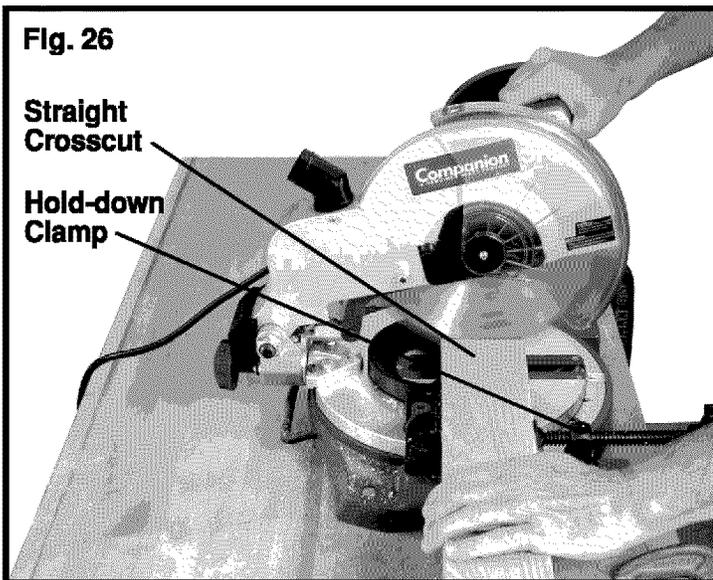
⚠ WARNING: When using a hold-down clamp or C-clamp to secure the workpiece, clamp workpiece on one side of the blade only. The workpiece **MUST** remain free on one side of the blade to prevent the blade from binding in the workpiece. The workpiece binding the blade will cause the motor to stall and cause kickback, resulting in possible serious personal injury.

CROSSCUTTING (See Figure 26)

A crosscut is a cut made across the grain of the workpiece. A straight crosscut is a cut made with the miter table set in the 0° position. Miter crosscuts are made with the miter table set at some angle other than zero.

OPERATION cont.

CROSSCUTTING (See Figure 26) cont.



To Miter Cut

1. Unplug the saw.

⚠ WARNING: To prevent personal injury, **ALWAYS** disconnect the plug from power source **BEFORE** assembling parts, making adjustments or changing blades.

2. Pull out the lock pin and lift the saw arm to its full height.
3. Loosen the miter lock levers.
4. Rotate the saw table until the pointer aligns with the desired angle on the miter scale.
5. Tighten the miter lock levers securely.

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

6. Place 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 the board is against the fence, the board could collapse on the blade at the end of the cut and jam the blade.
7. When cutting long pieces of lumber or molding, support the opposite end of the stock with a roller stand or with another work surface that is level with the saw table.
8. Align cutting line on the workpiece with the edge on the saw blade.
9. Hold the stock firmly with one hand and secure it against the fence. Use the hold-down clamp or a C-clamp to secure the workpiece when possible.

⚠ WARNING: To avoid serious personal injury, **ALWAYS** keep your hands outside the "no hands zone" (red lines); at least 3 inches from blade. Also, **NEVER** perform any cutting operation "freehand" (i.e. without holding workpiece against the fence); the blade could grab the workpiece, causing it to slip and twist.

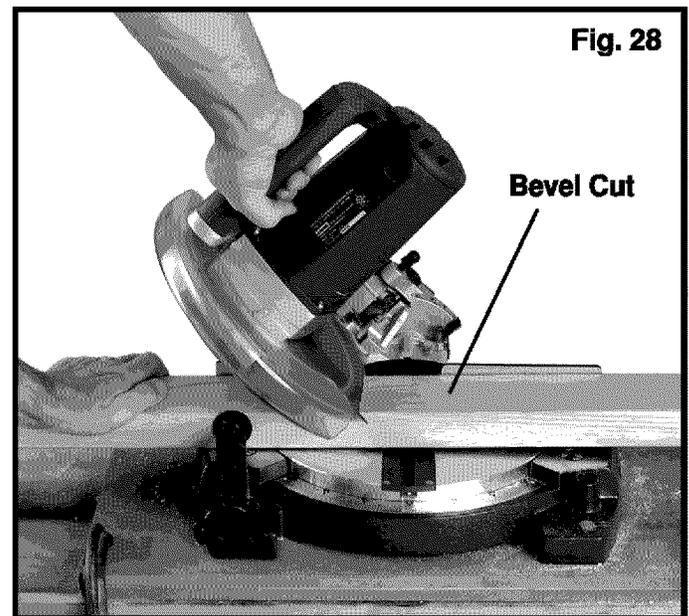
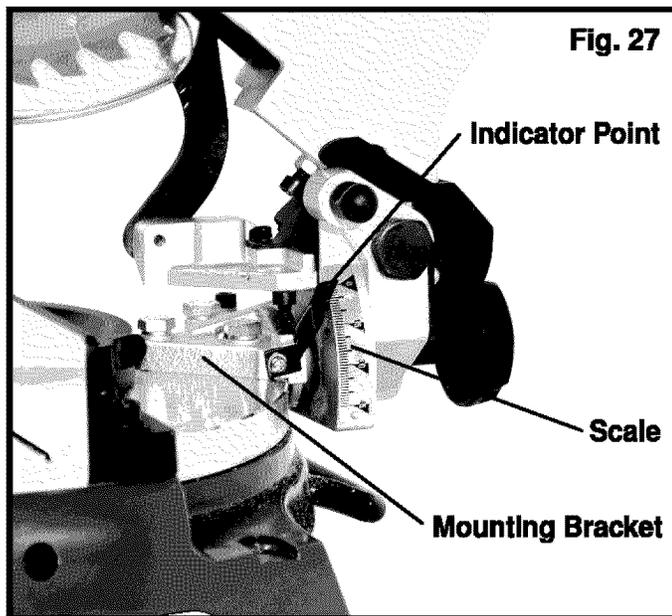
OPERATION cont.

To Miter Cut cont.

10. **BEFORE** turning on the saw, perform a dry run of the cutting operation just to make sure that no problems will occur when the cut is made.
11. Hold the saw handle firmly when squeezing the trigger switch. Allow several seconds for the blade to reach maximum speed.
12. Slowly lower the blade into and through the workpiece.
13. Release the trigger switch and allow the saw blade to stop rotating **BEFORE** raising the blade out of the workpiece. Wait until the electric brake stops the blade from turning **BEFORE** removing the workpiece from the miter table.

BEVEL CUTTING (See Figures 27 and 28)

A bevel cut is a cut made across the grain of the workpiece with the blade at an angle to the workpiece. A straight bevel cut is made with the miter table set in the 0° position and the blade set at an angle between 0° and 45° .



To Bevel Cut

1. Unplug the saw.

⚠ WARNING: To prevent personal injury, **ALWAYS** disconnect the plug from power source **BEFORE** assembling parts, making adjustments or changing blades.

2. Pull out the lock pin and lift the saw arm to its full height.
3. Loosen the miter lock levers.
4. Rotate the saw table until the pointer aligns with zero on the miter scale.
5. Tighten the miter lock levers securely.

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

OPERATION cont.

To Bevel Cut cont.

6. Loosen the bevel lock knob and move the saw arm to the left to the desired bevel angle.
7. Bevel angles can be set from 0° to 45°.
8. Align the indicator point with the desired angle.
9. Once the saw arm has been set at the desired angle, securely tighten the bevel lock knob.
10. Place 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 the board is against the fence, the board could collapse on the blade at the end of the cut and jam the blade.
11. When cutting long pieces of lumber or molding, support the workpiece with a roller stand or other support to bring the workpiece level with the saw table (see Fig. 28).
12. Align cutting line on the workpiece with the edge on the saw blade.
13. Hold the stock firmly with one hand and secure it against the fence. Use the hold-down clamp or a C-clamp to secure the workpiece when possible.

⚠ WARNING: To avoid serious personal injury, **ALWAYS** keep your hands outside the "no hands zone" (red lines); at least 3 inches from blade. Also, **NEVER** perform any cutting operation "freehand" (i.e. without holding workpiece against the fence); the blade could grab the workpiece, causing it to slip and twist.

14. Before turning on the saw, perform a dry run of the cutting operation just to make sure that no problems will occur when the cut is made.
15. Hold the saw handle firmly when squeezing the trigger switch. Allow several seconds for the blade to reach maximum speed.
16. Slowly lower the blade into and through the workpiece.
17. Release the trigger switch and allow the saw blade to stop rotating **BEFORE** raising the blade out of the workpiece. Wait until the electric brake stops the blade from turning **BEFORE** removing the workpiece from the miter table.

COMPOUND MITER CUTTING

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 moldings, picture frames, and boxes with sloping sides.

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.

ALWAYS take special care when making compound miter setups due to the interaction of the two angle settings.

Adjustments of miter and bevel settings are dependent on 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.

OPERATION cont.

COMPOUND MITER CUTTING cont.

To Make a Compound Miter Cut With Your Miter Saw (see Figures 29 and 30)

1. Unplug the saw.

⚠ WARNING: To prevent personal injury, **ALWAYS** disconnect the plug from power source **BEFORE** assembling parts, making adjustments or changing blades.

2. Pull out the lock pin and lift the saw arm to its full height.
3. Loosen the miter lock levers.
4. Rotate the saw table until the pointer aligns with zero on the miter scale.
5. Tighten the miter lock levers securely.

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

6. Loosen the bevel lock knob and move the saw arm to the left to the desired bevel angle.
7. Bevel angles can be set from 0° to 45°.
8. Once the saw arm has been set at the desired angle, securely tighten the bevel lock knob.
9. Recheck the miter angle setting. Plug in saw, turn it on and make a test cut in scrap material.
Turn off and unplug saw.
10. Place 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 the board is against the fence, the board could collapse on the blade at the end of the cut and jam the blade.
11. When cutting long pieces of lumber or molding, support the workpiece with a roller stand or other support to bring the workpiece level with the saw table.
12. Align cutting line on the workpiece with the edge on the saw blade.
13. Hold the stock firmly with one hand and secure it against the fence. Use the hold-down clamp or a C-clamp to secure the workpiece when possible.

NOTE: When making a 45° left miter and a bevel angle greater than 30°, you must use a C-clamp to secure the workpiece or move clamp to the right side of the base.

⚠ WARNING: To avoid serious personal injury, **ALWAYS** keep your hands outside the "no hands zone" (red lines); at least 3 inches from blade. Also, **NEVER** perform any cutting operation "freehand" (i.e. without holding workpiece against the fence); the blade could grab the workpiece, causing it to slip and twist.

14. **MAKE SURE** that there will be no obstructions to interfere with making the cut.
15. Hold the saw handle firmly, when squeezing the trigger switch. Allow several seconds for the blade to reach maximum speed.
16. Slowly lower the blade into and through the workpiece. (See Figure 30.)
17. Release the trigger switch and allow the saw blade to stop rotating **BEFORE** raising the blade out of the workpiece. Wait until the electric brake stops the blade from turning **BEFORE** removing the workpiece from the miter table.

OPERATION cont.

COMPOUND MITER CUTTING cont.

Fig. 29 Compound Miter Cut

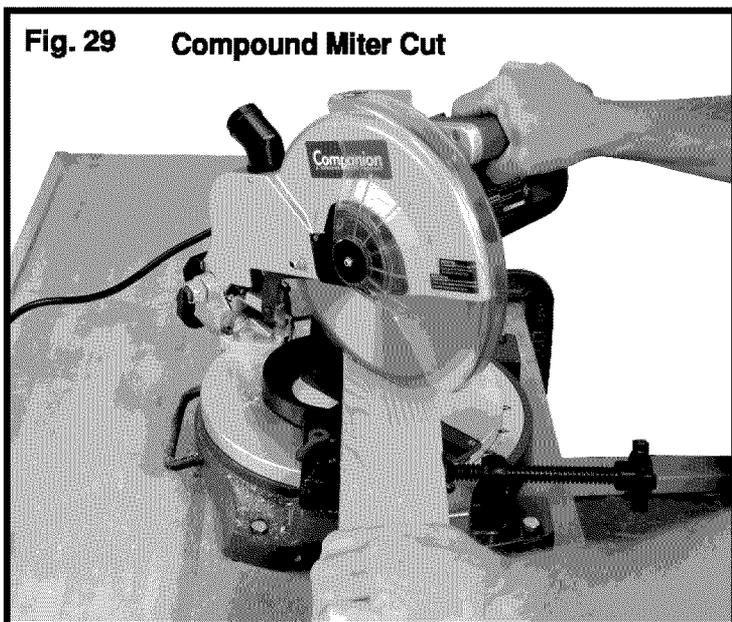
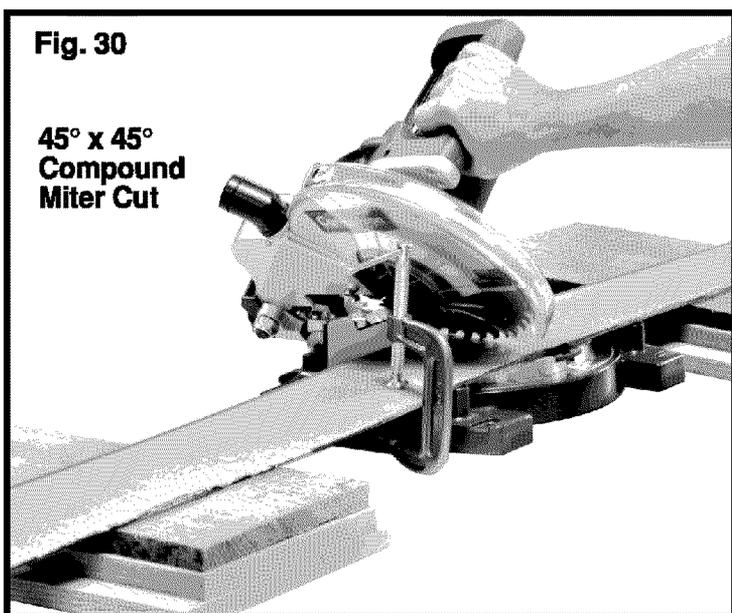


Fig. 30

45° x 45°
Compound
Miter Cut



SUPPORT LONG WORKPIECES

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

⚠ WARNING: To avoid serious personal injury, **ALWAYS** keep your hands outside the "no hands zone" (red lines); at least 3 inches from blade. Also, **NEVER** perform any cutting operation "freehand" (i.e. without holding workpiece against the fence); the blade could grab the workpiece, causing it to slip and twist.

OPERATION cont.

CUTTING COMPOUND MITERS

To help you to make the correct settings, use the compound angle setting chart below. Since compound cuts are the most difficult to accurately obtain, plan carefully and make trial cuts in scrap material 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-23.35° B- 10.57°	M-20.58° B- 9.31°	M-18.26° B- 6.72°	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 listed to the closest 0.005°

COMPOUND-ANGLE SETTINGS FOR POPULAR STRUCTURES

*Pitch of Side = Angle of side from vertical. Example:



OPERATION cont.

CUTTING CROWN MOLDING

Your compound miter saw is excellent for cutting crown molding.

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

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

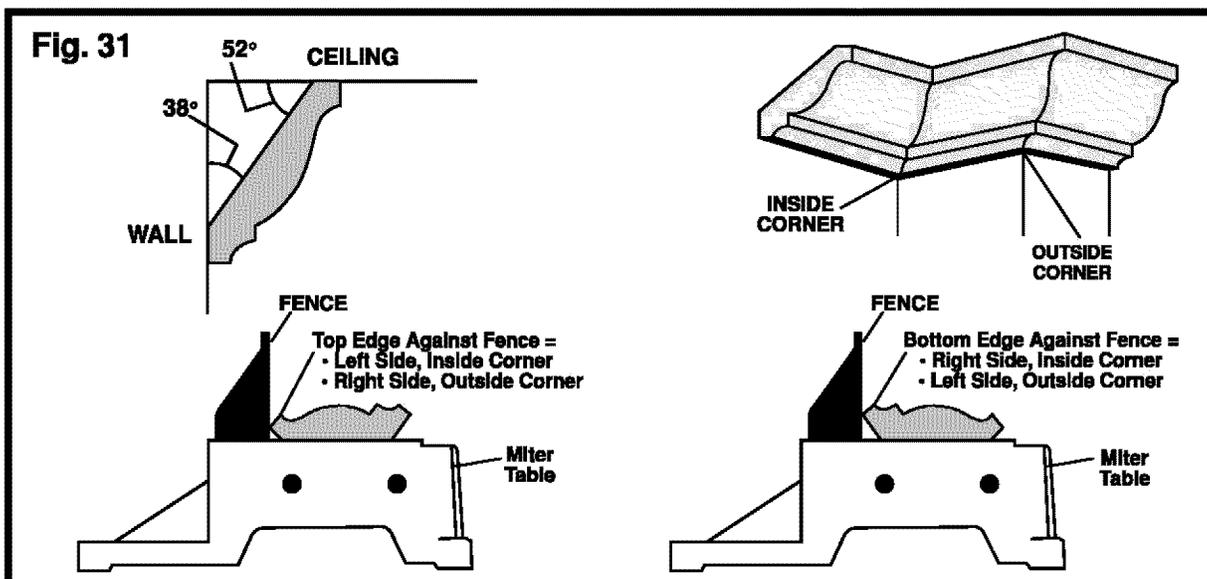
To use this method for accurately cutting crown molding for a 90° inside or outside corner, lay the molding with its broad back surface flat on the miter table and against the fence.

Remember that when you set the bevel and miter angles for compound miters, the settings are interdependent. When you change one angle, the other angle is changed as well.

Keep in mind that the angles for crown molding 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 precisely 90° , therefore, you will need to fine tune your settings.

When cutting crown molding using this method, the bevel angle should be set at 33.85° . The miter angle should be set at 31.62° either left or right, depending upon the desired cut for the application. See the following Cutting Crown Molding table for correct angle setting and correct positioning of the crown molding on the miter table.

The settings in the table 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.



Crown Molding Flat on Miter Table

OPERATION cont.

CUTTING CROWN MOLDING cont.

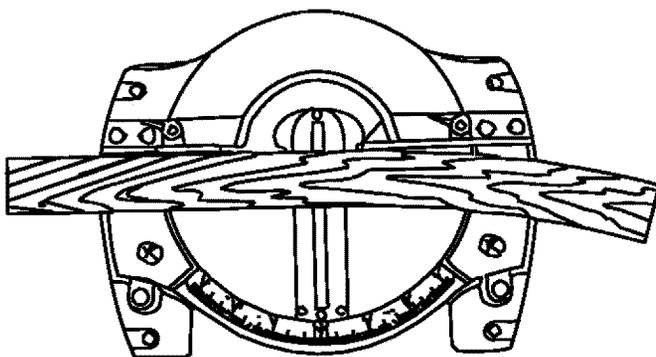
Bevel Angle Setting	Type of Cut
33.85°	Left side, inside 90° corner 1. Top edge of molding against fence 2. Miter table set right 31.62° 3. Save left end of cut
33.85°	Right side, inside 90° corner 1. Bottom edge of molding against fence 2. Miter table set left 31.62° 3. Save left end of cut
33.85°	Left side, outside 90° corner 1. Bottom edge of molding against fence 2. Miter table set left 31.62° 3. Save right end of cut
33.85°	Right side, outside 90° corner 1. Top edge of molding against fence 2. Miter table set right 31.62° 3. Save right end of cut

CUTTING WARPED MATERIAL (See Figures 32 - 33)

When cutting warped material, **ALWAYS** make sure that it is positioned on the miter table with the convex side against the fence, as shown in Figure 32.

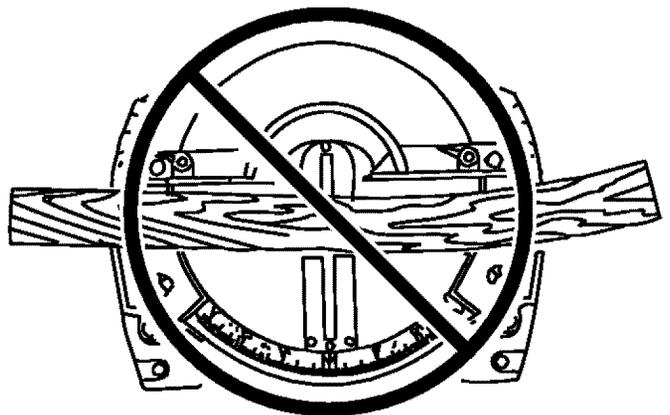
If the warped material is positioned the wrong way, as shown in Figure 33, it will pinch the blade near the end of the cut.

Fig. 32



Right

Fig. 33



Wrong

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

OPERATION cont.

CLAMPING WIDE WORKPIECES

When cutting wide workpieces (such as 2-in x 6-in. boards), the boards should **ALWAYS** be clamped with a hold-down clamp or a C-clamp.

MAINTENANCE

⚠ 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

- Avoid 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. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

It has been found that electric tools are subject to accelerated wear and possible premature failure when they are used to work on fiber glass boats and sports cars, wallboard, spackling compounds or plaster. The chips and grindings from these materials are highly abrasive to electrical tool parts, such as bearings, brushes, commutators, etc. Consequently, it is not recommended that this tool be used for extended work on any fiber glass material, wallboard, spackling compound, or plaster. During any use on these materials, it is extremely important that the tool is cleaned frequently by blowing with an air jet.

LUBRICATION

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

⚠ WARNING: To ensure safety and reliability, all repairs with the exception of the externally accessible brushes should be performed by a qualified service technician at a Sears store to avoid the risk of personal injury.

MAINTENANCE

BRUSH REPLACEMENT (See Figure 34-35)

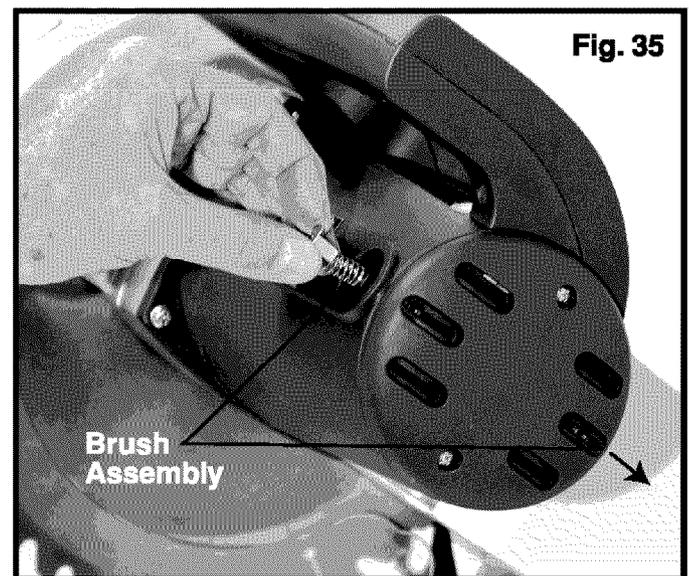
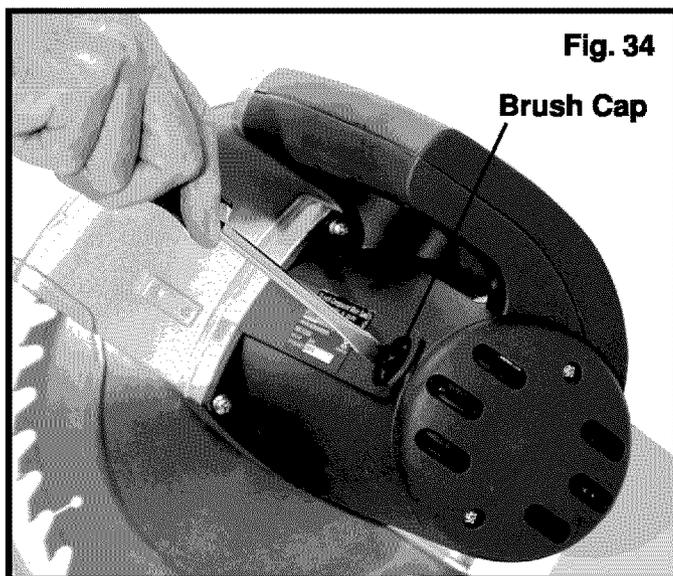
Your saw has externally accessible brushes that should be periodically checked for wear.

When replacement is necessary, follow these steps:

1. Unplug the saw.

⚠ WARNING: To prevent personal injury, **ALWAYS** disconnect the plug from power source **BEFORE** assembling parts, making adjustments or changing blades.

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



ACCESSORIES

Sears offers a large selection of blades, table extensions, roller tables, extension cords and more that are ideal for use with your 10-inch compound miter saw for a variety of cutting needs.

⚠ WARNING: The use of attachments or accessories not sold by Sears may result in serious personal injury.

EXTENSION CORDS

The use of any extension cord will cause some loss of power. To keep the loss at a minimum and to prevent overheating, use an extension cord that is heavy enough to carry the current that the tool will draw.

A wire gauge (AWG) of at least 14 is recommended for an extension cord 25 feet or less in length. When working outdoors **ALWAYS** use an extension cord that is suitable for outdoor use. The cord's jacket will be marked **WA**.

⚠ CAUTION: Keep extension cords away from the cutting area and position the cord so it will not get caught on lumber, tools, etc. during the cutting operation.

⚠ WARNING: Check extension cord before each use. If damaged, replace it immediately. **NEVER** use a tool with a damaged cord because touching the damaged area could cause electrical shock, resulting in serious injury.

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