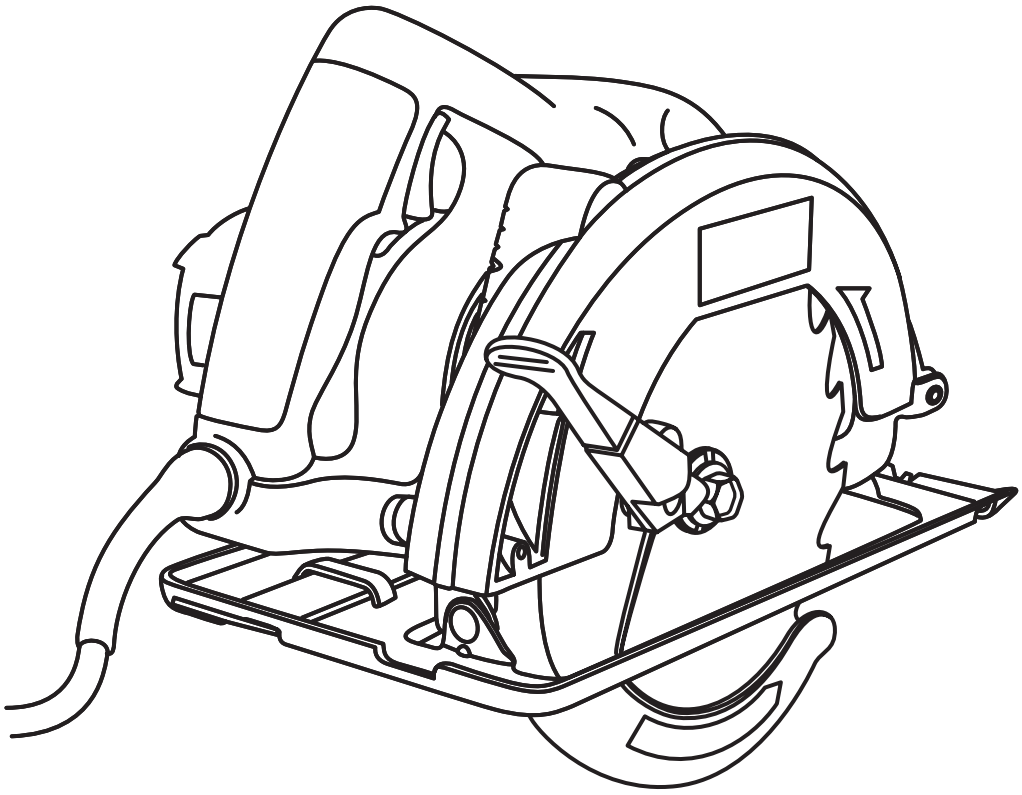
OPERATOR'S MANUAL

7-1/4 in. (184 mm) CIRCULAR SAW

Model CSB121

DOUBLE INSULATED



THANK YOU FOR BUYING A RYOBI CIRCULAR SAW.

Your new circular saw has been engineered and manufactured to Ryobi's high standard for dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble-free performance.

⚠ **CAUTION:** Carefully read through this entire operator's manual before using your new circular saw.

Pay close attention to the Rules for Safe Operation, Warnings, and Cautions. If you use your circular saw properly and only for what it is intended, you will enjoy years of safe, reliable service.

Thank you again for buying Ryobi tools.

SAVE THIS MANUAL FOR FUTURE REFERENCE

TABLE OF CONTENTS

INTRODUCTION

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

⚠ WARNING:

Do not attempt to operate this tool until you have read thoroughly and understand completely all instructions, safety rules, etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock, or serious personal injury. Save the operator's manual and review it frequently for continuing safe operation and instructing others who may use this tool.

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 tool operation, always wear safety goggles or safety glasses with side shields and a full face shield when needed. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always wear eye protection which is marked to comply with ANSI Z87.1.

Look for this symbol to point out important safety precautions. It means attention!!! Your safety is involved.

GENERAL SAFETY RULES

⚠ WARNING:

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

SAVE THESE INSTRUCTIONS

WORK AREA

- **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools may create sparks which may ignite the dust or fumes.
- **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

ELECTRICAL SAFETY

- **Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install 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.
- **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.
- **Don't expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges, or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
- **When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W".** These cords are rated for outdoor use and reduce the risk of electric shock.

PERSONAL SAFETY

- **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.
- **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
- **Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch on, invites accidents.
- **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.
- **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations. Do not use on a ladder or unstable support.
- **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

TOOL USE AND CARE

- **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
- **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
- **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
- **Store idle tools out of the reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- **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.

GENERAL SAFETY RULES

- **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
- **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.

SERVICE

- **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
- **When servicing a tool, 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.

SPECIFIC SAFETY RULES

- **DANGER! Keep hands away from cutting area and blade. Keep your second hand on the auxiliary handle or motor housing.** If both hands are holding the saw, they cannot be cut by the blade.
- **Keep your body positioned to either side of the saw blade, but not in line with the saw blade.** Kickback could cause the saw to jump backwards. (Refer to "CAUSES AND OPERATOR PREVENTION OF KICKBACK" later.)
- **Do not reach underneath the work.** The guard cannot protect you from the blade below the work.
- **Check lower guard for proper closing before each use. Do not operate saw if lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position.** If saw is accidentally dropped, lower guard may be bent. Raise the lower guard with the retracting handle. Make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.
- **Check the operation and condition of the lower guard spring. If the guard and the spring are not operating properly, they must be serviced before use.** Lower guard may operate sluggishly due to damaged parts, gummy deposits, or a buildup of debris.
- **Lower guard should be retracted manually only for special cuts, such as "Pocket Cuts" and "Compound Cuts." Raise lower guard by retracting handle. As soon as blade enters the material, lower guard must be released.** For all other sawing, the lower guard should operate automatically.
- **Always observe that the lower guard is covering the blade before placing saw down on bench or floor.** An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after switch is released.
- **NEVER hold piece being cut in your hands or across your leg.** It is important to support the work properly to minimize body exposure, blade binding, or loss of control.
- **Hold tool by insulated gripping surface when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will also make exposed metal parts of the tool "live" and shock the operator.
- **When ripping, always use a rip fence or straight edge guide.** This improves the accuracy of the cut and reduces the chance for blade binding.
- **Always use blades with correct size and shape (diamond vs. round) arbor holes.** Blades that do not match the mounting hardware of the saw will run eccentrically, causing loss of control.
- **Never use damaged or incorrect blade washers or bolts.** The blade washers and bolts were specially designed for your saw for optimum performance and safety of operation.

CAUSES AND OPERATOR PREVENTION OF KICKBACK

Kickback is a sudden reaction to a pinched, bound, or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator.

When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator.

If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.

SPECIFIC SAFETY RULES

Kickback is the result of tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions, as given below:

- **Maintain a firm grip with both hands on the saw and position your body and arm to allow you to resist KICKBACK forces.** KICKBACK forces can be controlled by the operator, if proper precautions are taken.
- **When blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion, or KICKBACK may occur.** Investigate and take corrective actions to eliminate the cause of blade binding.
- **When restarting a saw in the workpiece, center the saw blade in the kerf and check that saw teeth are not engaged into the material.** If saw blade is binding, it may walk up or KICKBACK from the workpiece as the saw is restarted.
- **Support large panels to minimize the risk of blade pinching and KICKBACK.** Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.
- **Do not use dull or damaged blade.** Unsharpened or improperly set blades produce narrow kerf which causes excessive friction, blade binding and KICKBACK.
- **Blade depth and bevel adjusting locking levers must be tight and secure before making cut.** If blade adjustment shifts while cutting, it may cause binding and KICKBACK.
- **Use extra caution when making a "Pocket Cut" into existing walls or other blind areas.** The protruding blade may cut objects that can cause KICKBACK.

ADDITIONAL SAFETY RULES

Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.

- **Know your power tool. Read operator's manual carefully. Learn its 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.
- **Always wear safety glasses. Everyday eyeglasses have only impact-resistant lenses; they are NOT safety glasses.** Following this rule will reduce the risk of serious personal injury.
- **Protect your lungs. Wear a face or dust mask if the operation is dusty.** Following this rule will reduce the risk of serious personal injury.
- **Protect your hearing. Wear hearing protection during extended periods of operation.** Following this rule will reduce the risk of serious personal injury.
- **Inspect tool cords periodically and, if damaged, have repaired at your nearest Factory Service Center or other Authorized Service Organization. Constantly stay aware of cord location.** Following this rule will reduce the risk of electric shock or fire.
- **Check damaged parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center.** Following this rule will reduce the risk of shock, fire, or serious injury.
- **Do not abuse cord. Never carry the tool by the cord or yank it to disconnect it from the receptacle. Keep cord away from heat, oil, and sharp edges.** Following this rule will reduce the risk of electric shock or fire.
- **Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. A wire gage size (A.W.G.) of at least 14 is recommended for an extension cord 50 feet or less in length. A cord exceeding 100 feet is not recommended. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.** An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.
- **Inspect for and remove all nails from lumber before sawing.** Following this rule will reduce the risk of serious personal injury.
- **Drugs, alcohol, medication. Do not operate tool while under the influence of drugs, alcohol, or any medication.** Following this rule will reduce the risk of electric shock, fire, or serious personal injury.
- **Save these instructions. Refer to them frequently and use them to instruct others who may use this tool. If you loan someone this tool, loan them these instructions also.**

⚠ WARNING:

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

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

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

SYMBOLS

Important: Some of the following symbols may be used on your 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
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
min	Minutes	Time
~	Alternating Current	Type or a characteristic of current
n_0	No Load Speed	Rotational speed, at no load
⧈	Class II Construction	Designates double-insulated construction tools
.../min	Revolutions or Reciprocation Per Minute	Revolutions, strokes, surface speed, orbits etc. per minute
	Safety Alert	Indicates danger, warning or caution. It means attention!!! Your safety is involved.
	Wet Conditions Alert	Do not expose to rain or use in damp locations.

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 or warnings they give are not substitutes for proper accident prevention measures.

SYMBOL	MEANING
	**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.

SAVE THESE INSTRUCTIONS

SPECIFICATIONS

Blade Diameter	7-1/4 in. (184 mm)
Blade Arbor	5/8 in. (16 mm)
Cutting Depth at 0°	2-3/8 in. (60 mm)
Cutting Depth at 45°	1-13/16 in. (46 mm)
Cutting Depth at 51.5°	1-5/8 in. (41 mm)
Rating	120 volts, 60 Hz, AC
Input	12 amperes
No Load Speed	4600 RPM
Net Weight	11 lbs. (5 kg)

UNPACKING

INSTRUCTIONS

Your circular saw has been shipped completely assembled.

- Carefully remove the tool and accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the tool carefully to make sure no breakage or damage has occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.
- If any parts are damaged or missing, please contact Ryobi Customer Service. Refer to the back page of this manual for contact information.

PACKING LIST

Circular Saw

7-1/4 in. (184 mm) Blade

Case

Wrench

Warranty Card

Operator's Manual

⚠ 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 personal injury.

FEATURES

DOUBLE INSULATION

Your Ryobi power tool is double insulated. This means you are separated from the tool's electrical system by two complete sets of electrical insulation. This extra layer of insulation is intended to protect the user from electrical shock due to a break in the wiring insulation. All exposed metal parts are isolated from the internal metal motor components with protecting insulation. Double insulated tools do not need to be grounded.

⚠ WARNING:

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

Important: Servicing of a tool with double insulation requires extreme care and knowledge of the system and should be performed only by a qualified service technician. For service we suggest you return the tool to your nearest **RYOBI AUTHORIZED SERVICE CENTER** for repair. When servicing use only identical Ryobi replacement parts.

ELECTRIC MOTOR

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

SWITCH

Your circular saw is equipped with a pre-travel safety switch which reduces the possibility of accidental starting. When you depress the switch, the saw will not start until you reach the pre-travel position. You must depress the switch fully to activate the saw.

SPINDLE LOCK

The spindle lock allows you to secure the blade when turning the blade screw.

NOTE: Do not run circular saw with spindle lock engaged.

WRENCH STORAGE

The circular saw is equipped with a wrench storage area in the base of the tool.

ERGONOMIC DESIGN

The design of your circular saw provides for easy handling and maintaining proper two hand control when cutting. It has been designed to be comfortable and easy to grasp when operating in different positions or at different angles.

FEATURES

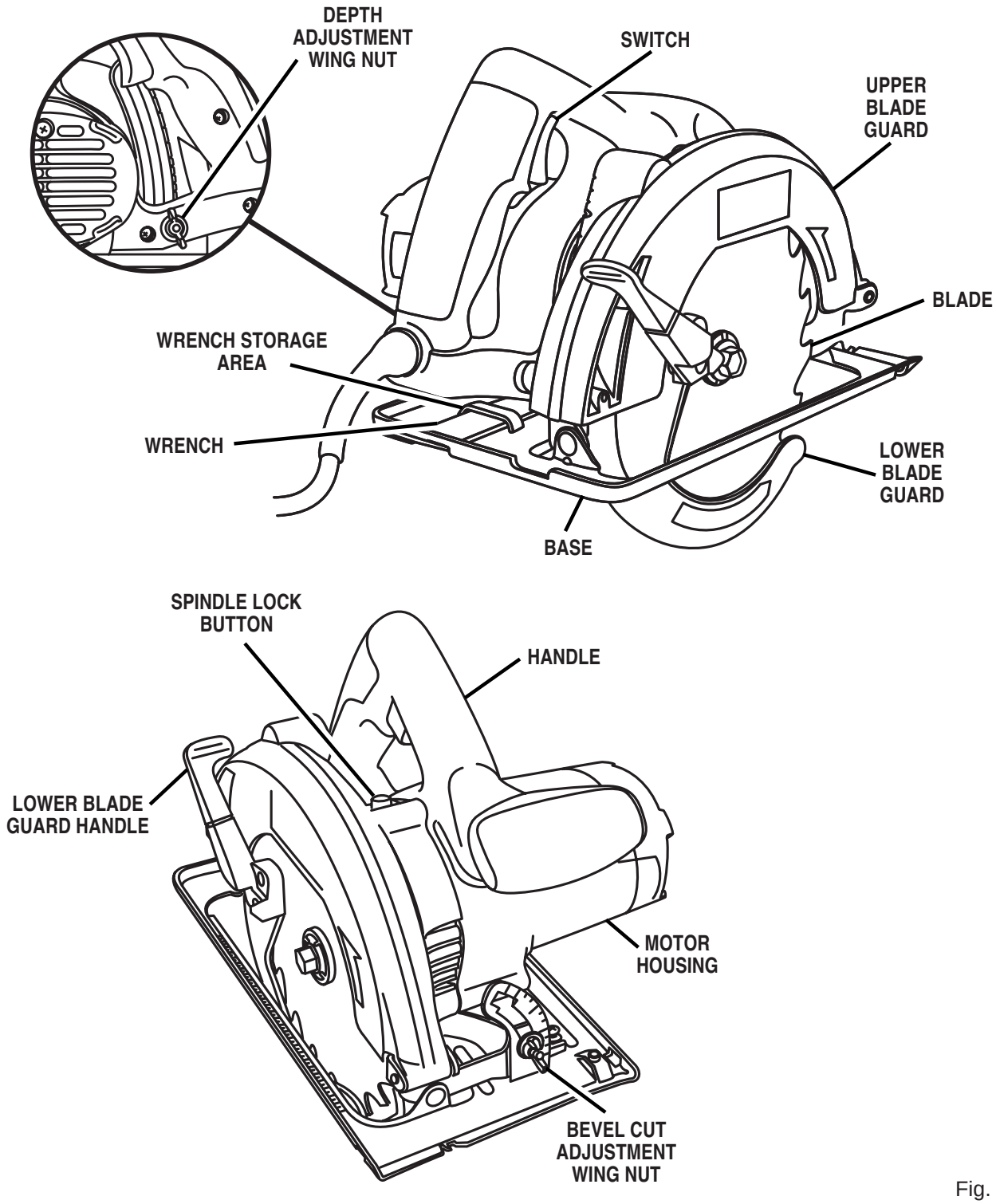


Fig. 1

⚠ 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.

ASSEMBLY

⚠ WARNING:

Your tool should never be connected to power supply when you are assembling parts, making adjustments, cleaning, performing maintenance, or when not in use. Disconnecting your tool will prevent accidental starting that could cause serious injury.

⚠ WARNING:

7-1/4 in. (184 mm) blade is the maximum blade capacity of your saw. Also, never use a blade that is too thick to allow outer blade washer to engage with the flat on the spindle. Larger blades will come in contact with the blade guards, while thicker blades will prevent blade screw from securing blade on spindle. Either of these situations could result in a serious accident.

ATTACHING BLADE

See Figures 2 and 3.

Follow these directions to attach the blade.

- UNPLUG YOUR CIRCULAR SAW.

⚠ WARNING:

Failure to unplug the tool could result in accidental starting causing serious injury.

- Remove wrench from storage area.

⚠ CAUTION:

To prevent damage to the spindle or spindle lock, always allow motor to come to a complete stop before engaging spindle lock.

- Depress spindle lock button.
- Remove blade screw by turning it counterclockwise with the wrench.
- Remove spring washer and outer washer (“D” washer).
- Wipe a drop of oil onto inner washer and outer washer ("D" washer) where they contact blade.

⚠ WARNING:

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

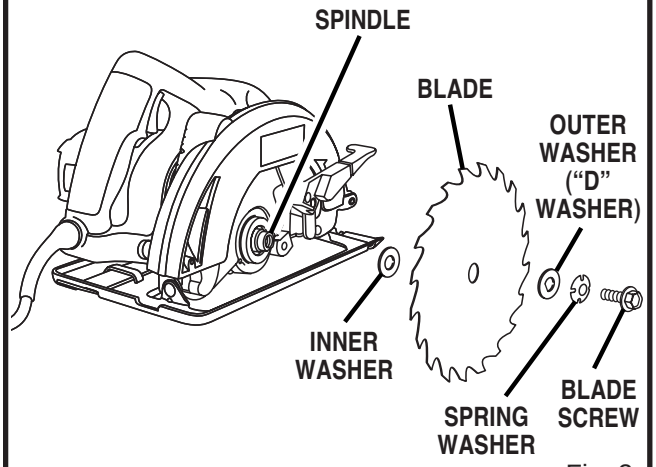


Fig. 2

- Fit saw blade inside lower blade guard and onto spindle.

  NOTE: The saw teeth point upward at the front of the saw as shown.

- Replace “D” washer and spring washer.

  NOTE: "Cupped" side of spring washer goes against “D” washer.

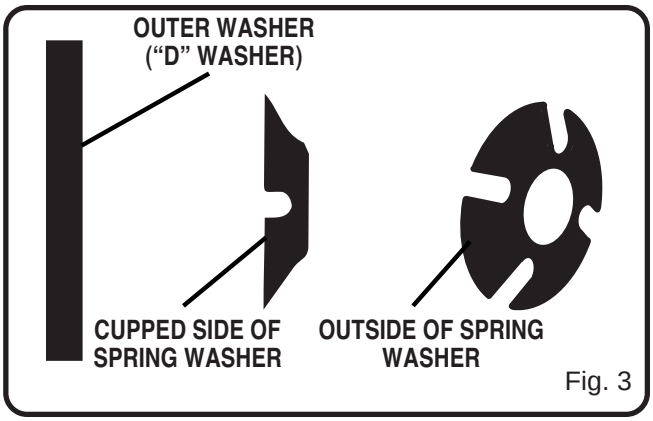


Fig. 3

- Depress spindle lock and replace blade screw.
- Tighten blade screw securely by turning it clockwise with the wrench.
- Return wrench to storage area.

  NOTE: Never use a blade that is too thick to allow the "D" washer to engage with the flat on the spindle.

ASSEMBLY

REMOVING BLADE

See Figure 4.

Follow these directions to remove the blade.

- UNPLUG YOUR CIRCULAR SAW.

⚠ WARNING:

Failure to unplug the tool could result in accidental starting causing serious injury.

- Remove wrench from storage area.

⚠ CAUTION:

To prevent damage to the spindle or spindle lock, always allow motor to come to a complete stop before engaging spindle lock.

- Depress spindle lock button.
- Remove blade screw by turning it counterclockwise with the wrench.
- Remove spring washer and outer blade washer ("D" washer).

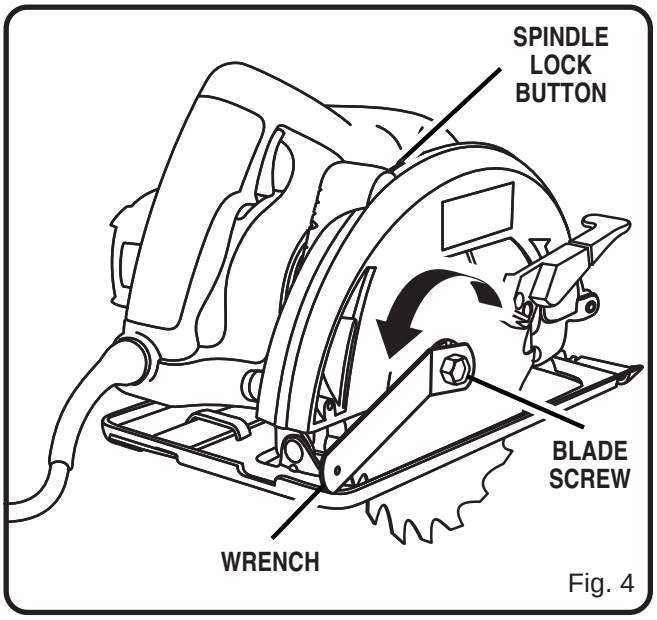


Fig. 4

- Lift lower blade guard.
- Remove blade.
- Return wrench to storage area.

OPERATION

SAW BLADES

The best of saw blades will not cut efficiently if they are not kept clean, sharp, and properly set. Using a dull blade will place a heavy load on your saw and increase the danger of kickback. Keep extra blades on hand, so that sharp blades are always available.

Gum and wood pitch hardened on blades will slow your saw down. Remove saw blade from your saw and use gum and pitch remover, hot water, or kerosene to remove these accumulations. **DO NOT USE GASOLINE**.

BLADE GUARD SYSTEM

See Figure 5.

The lower blade guard attached to your circular saw is there for your protection and safety. Do not alter it for any reason. If it becomes damaged, do not operate the saw until you have the guard repaired or replaced. Always leave guard in operating position when using the saw.

⚠ DANGER:

When sawing through work, lower blade guard does not cover blade on the underside of work. Since blade is exposed on underside of work, keep hands and fingers away from cutting area. Any part of your body coming in contact with moving blade will result in serious injury.

⚠ CAUTION:

Never use saw when guard is not operating correctly. Check the guard for correct operation before each use. The guard is operating correctly when it moves freely and readily returns to the closed position. If you drop the saw, check the lower blade guard and bumper for damage at all depth settings before reuse.

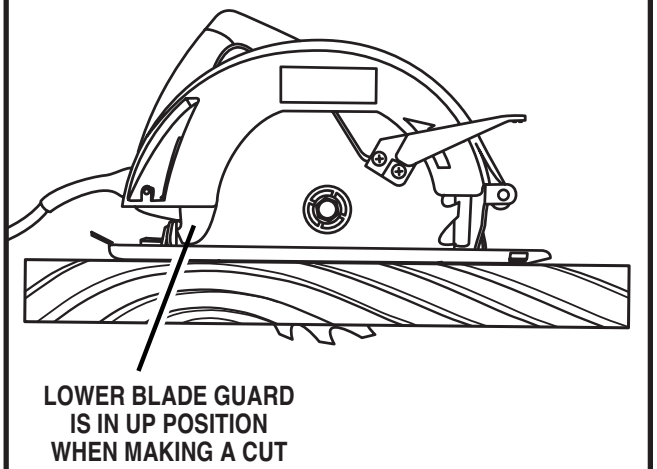


Fig. 5

OPERATION

KICKBACK

See Figure 6, 7, 8, and 9.

Kickback occurs when the blade stalls rapidly and the saw is driven back towards you. Blade stalling is caused by any action which pinches the blade in the wood.

> **⚠ DANGER:**
>
> Release switch immediately if blade binds or saw stalls. Kickback could cause you to lose control of your saw. Loss of control can lead to serious injury.

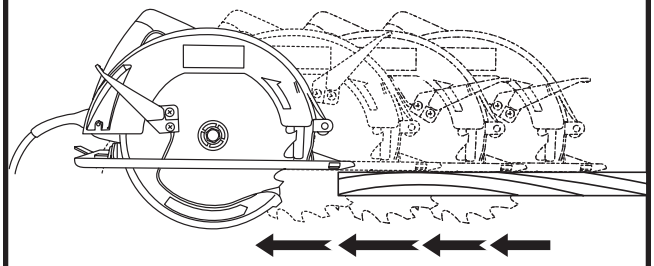
To guard against kickback, avoid dangerous practices such as the following.

- Setting blade depth incorrectly.
- Sawing into knots or nails in workpiece.
- Twisting the blade while making a cut.
- Making a cut with a dull, gummed up, or improperly set blade.
- Supporting the workpiece incorrectly.
- Forcing a cut.
- Cutting warped or wet lumber.
- Operating the tool incorrectly or misusing the tool.

To lesson the chance of kickback, follow these safety practices.

- Keep the blade at the correct depth setting. The depth setting should not exceed 1/4 in. (6.35 mm) below the material being cut.
- Inspect the workpiece for knots or nails before cutting. Never saw into a knot or nail.
- Make straight cuts. Always use a straight edge guide when rip cutting. This helps prevent twisting the blade.
- Use clean, sharp, and properly set blades. Never make cuts with dull blades.
- Support the workpiece properly before beginning a cut.
- Use steady, even pressure when making a cut. Never force a cut.
- Do not cut warped or wet lumber.
- Hold the saw firmly with both hands and keep your body in a balanced position so as to resist the forces if kickback should occur.

> **⚠ WARNING:**
>
> When using your saw, always stay alert and exercise control. Do not remove your saw from the workpiece while the blade is moving.



KICKBACK - BLADE SET TOO DEEP

Fig. 6

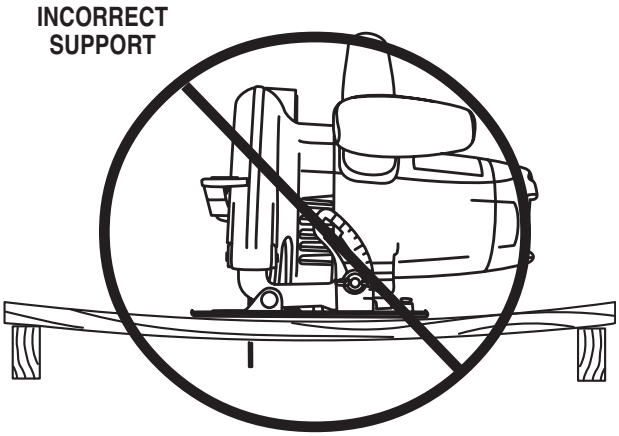
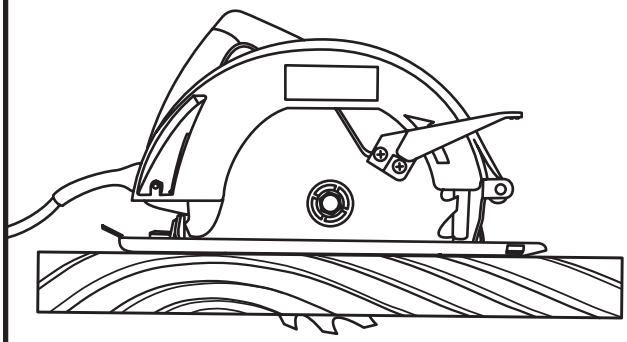


Fig. 7



CORRECT BLADE DEPTH SETTING = BLADE EXPOSED 1/4 in. (6.35 mm) OR LESS ON UNDERSIDE OF WORKPIECE

Fig. 8

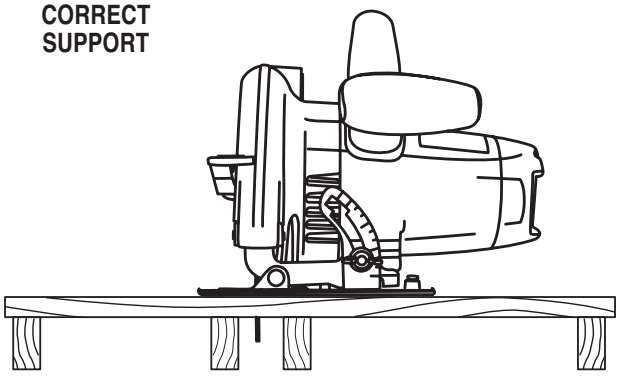


Fig. 9

OPERATION

STARTING/STOPPING THE SAW

See Figure 10.

To start the saw: Depress the switch trigger.

Always let the blade reach full speed, then guide the saw into the workpiece.

> **⚠ WARNING:**
>
> The blade coming in contact with the workpiece before it reaches full speed could cause your saw to "kickback" towards you resulting in serious injury.

To stop the saw: Release the switch trigger.

After you release the switch trigger, allow the blade to come to a complete stop. **Do not remove the saw from the workpiece while the blade is moving.**

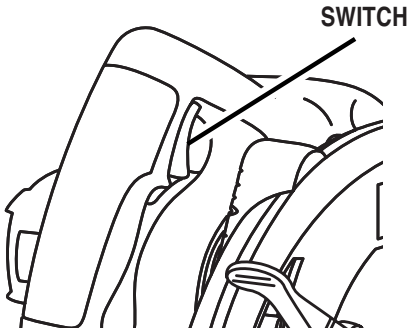


Fig. 10

ADJUSTING BLADE DEPTH

See Figure 11.

Always keep correct blade depth setting. The correct blade depth setting for all cuts should not exceed 1/4 in. (6.35 mm) below the material being cut. More blade depth will increase the chance of kickback and cause the cut to be rough. For more depth of cut accuracy, a scale is located on the upper blade guard.

Follow these directions to adjust the blade depth.

- UNPLUG YOUR CIRCULAR SAW.

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

- Loosen wing nut on back of saw.
- Determine the desired depth of cut.
- Locate depth of cut scale on back of upper blade guard.
- Hold base flat against the workpiece and raise or lower saw until the indicator mark on bracket aligns with notch on blade guard.
- Tighten wing nut securely.

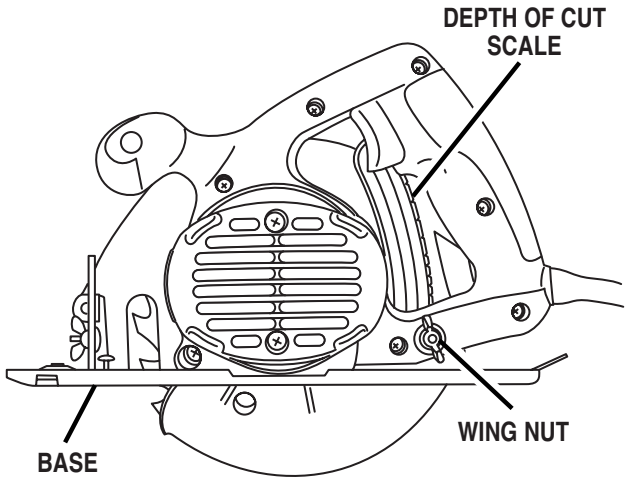


Fig. 11

OPERATION

OPERATING THE SAW

See Figures 12, 13, and 14.

It is important to understand the correct method for operating your saw. Refer to the figures in this section to learn the correct and incorrect ways for handling your saw.

> **⚠ WARNING:**
>
> To make sawing easier and safer, always maintain proper control of the saw. Loss of control could cause an accident resulting in possible serious injury.

> **⚠ DANGER:**
>
> When lifting your saw from the workpiece, the blade is exposed on the underside of the saw until the lower blade guard closes. Make sure the lower blade guard is closed before setting your saw down.

To make the best possible cut, follow these helpful hints.

- Hold the saw firmly with both hands.
- Avoid placing your hand on the workpiece while making a cut.
- Support the workpiece with a clamp near the cut.
- Clamp the workpiece securely so that the workpiece will not move during the cut.
- Support the workpiece so that the cut is always on your right.
- Avoid placing the saw on the part of the workpiece that will fall off when the cut is made.
- Place the workpiece with the “good” side down.
- Draw a guideline along the desired line of cut before beginning your cut.
- Keep the cord away from the cutting area. Always place the cord to prevent it from hanging up on the workpiece while making a cut.

> **⚠ DANGER:**
>
> If the cord hangs up on the workpiece during a cut, release the switch trigger immediately. Unplug the saw and reposition the cord to prevent it from hanging up again.

> **⚠ DANGER:**
>
> Using a saw with a damaged cord could result in serious injury or death. If the cord has been damaged, have it replaced before using the saw again.

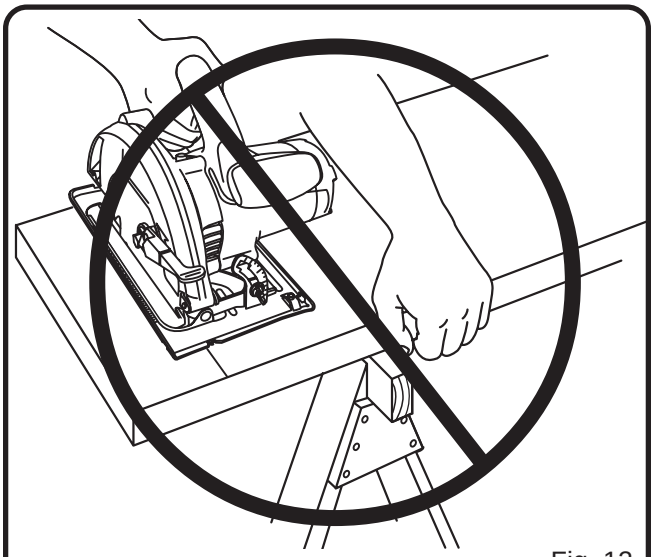


Fig. 12

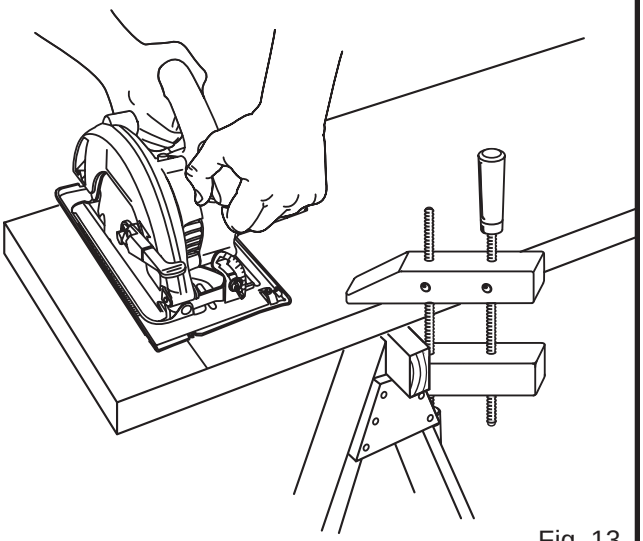


Fig. 13

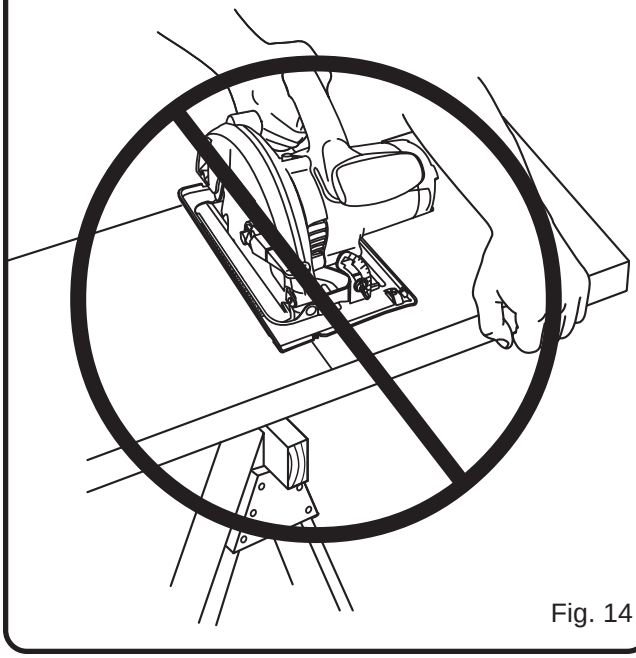


Fig. 14

CROSS CUTTING/RIP CUTTING

See Figure 15.

When making a cross cut or rip cut, align the line of cut with the outer blade guide notch on the base as shown in the figure.

Since blade thicknesses vary, always make a trial cut in scrap material along a guideline to determine how much, if any, you must offset the guideline to produce an accurate cut.

NOTE: The distance from the line of cut to the guideline is the amount you should offset the guideline.

TO RIP CUT

See Figure 16.

Use a guide when making long or wide rip cuts with your saw.

NOTE: You may also use a rip guide to make rip cuts. Refer to “OPTIONAL RIP GUIDE” later in this manual.

Follow these directions to rip cut.

- Secure the workpiece.
- Clamp a straight edge to the workpiece using C-clamps.
- Saw along the straight edge to achieve a straight rip cut.

  NOTE: Do not bind the blade in the cut.

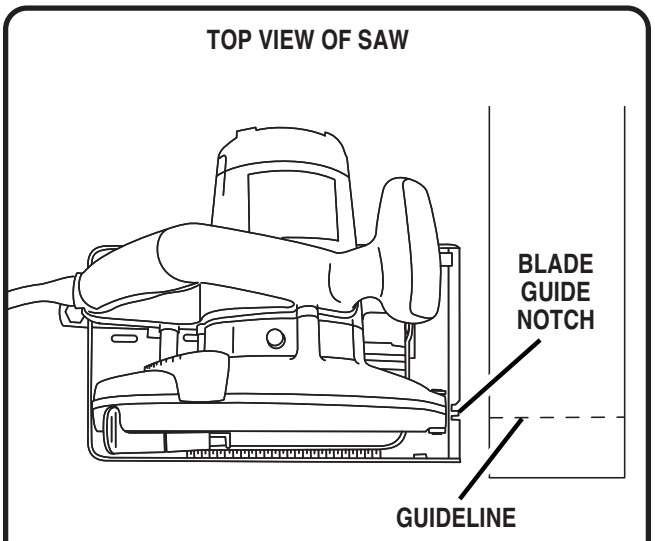


Fig. 15

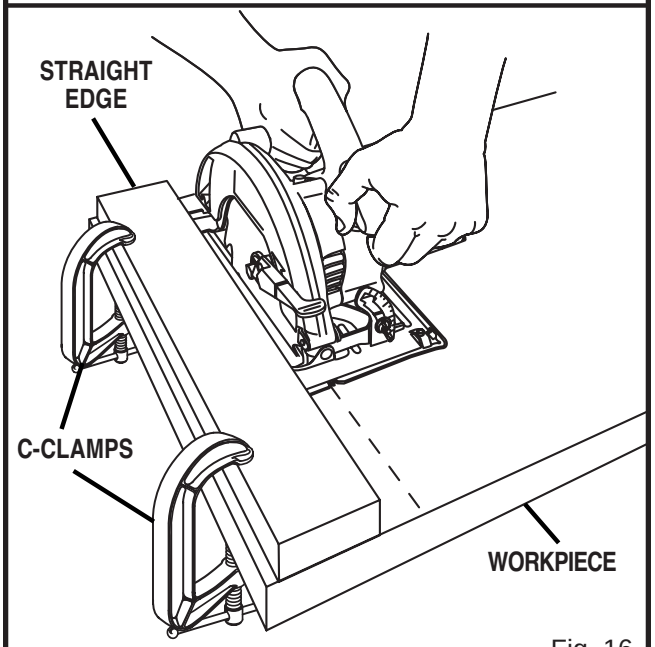


Fig. 16

OPERATION

BEVEL CUTTING

See Figures 17 and 18.

To make the best possible cut, follow these helpful hints.

- Align the line of cut with the inner blade guide notch on the base when making 45° bevel cuts.
- Make a trial cut in scrap material along a guideline to determine how much you should offset the guideline on the cutting material.
- Adjust the angle of the cut to any desired setting between zero and 51.5°. Refer to "TO ADJUST BEVEL SETTING" next.

TO ADJUST BEVEL SETTING

See Figure 17.

Follow these directions to adjust the bevel setting.

- UNPLUG YOUR CIRCULAR SAW.

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

- Loosen wing nut.
- Raise motor housing end of saw until you reach desired angle setting on bevel scale.
- Tighten wing nut securely.

> **⚠ WARNING:**
>
> Attempting a bevel cut without having the wing nut securely tightened can result in serious injury.

TO BEVEL CUT

See Figure 18.

Follow these directions to bevel cut.

- Hold the saw firmly with both hands as shown.
- Rest the front edge of the base on the workpiece.
- Start the saw and let the blade reach full speed.
- Guide the saw into the workpiece and make the cut.
- Release the trigger and allow the blade to come to a complete stop.
- Lift the saw from the workpiece.

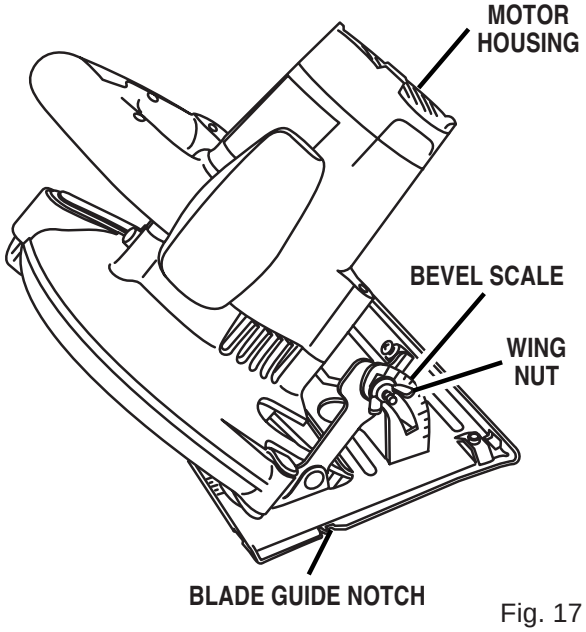


Fig. 17

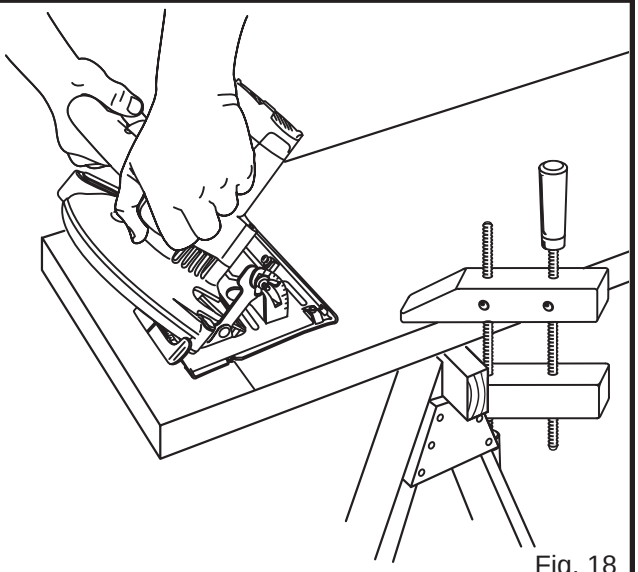


Fig. 18

POSITIVE 0° BEVEL STOP

See Figure 19.

Your saw has a positive 0° bevel stop, that has been factory adjusted to assure 0° angle of the saw blade when making 90° cuts. However, misalignment can occur during shipping.

TO CHECK POSITIVE 0° BEVEL STOP

Follow these directions to check the positive 0° bevel stop.

- UNPLUG YOUR CIRCULAR SAW.

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

- Place the saw in an upside down position on a workbench.
- Check the squareness of the saw blade to the base of the saw using a carpenter's square.

TO ADJUST POSITIVE 0° BEVEL STOP

Follow these directions to adjust the positive 0° bevel stop.

- UNPLUG YOUR CIRCULAR SAW.

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

- Loosen wing nut.
- Loosen hex nut securing adjusting screw.
- Turn screw and adjust base until square with saw blade.
- Tighten hex nut and wing nut securely.

> **⚠ WARNING:**
>
> Attempting a bevel cut without having the wing nut securely tightened can result in serious injury.

LENGTH OF CUT SCALE

See Figure 20.

Your saw is equipped with a length of cut scale on its base. It is parallel with the saw blade and you can use it to measure the distance into the material the blade cuts.

NOTE: Six inches is the maximum length of cut that you can measure. Also, it is accurate only when the depth of cut is set at full maximum depth.

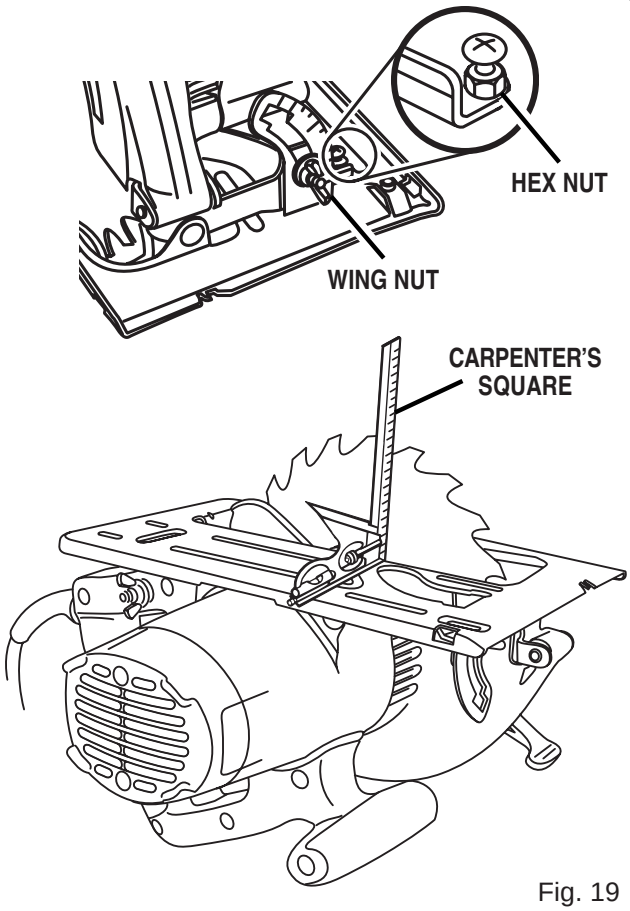


Fig. 19

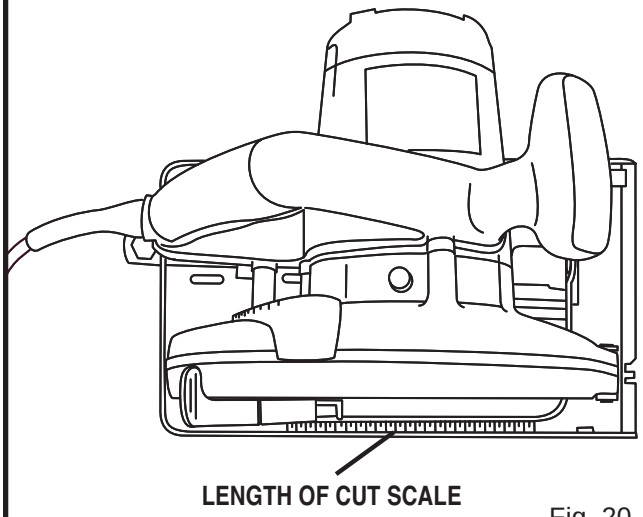


Fig. 20

OPERATION

POCKET CUTTING

See Figure 21.

> **⚠ WARNING:**
>
> Always adjust bevel setting to zero before making a pocket cut. Attempting a pocket cut at any other setting can result in loss of control of your saw possibly causing serious injury.

Follow these directions to pocket cut.

- Adjust the bevel setting to zero.
- Set the blade to the correct blade depth setting.
- Swing the lower blade guard up using the lower blade guard handle.

NOTE: Always raise the lower blade guard with the handle to avoid serious injury.

- Hold the lower blade guard by the handle.
- Rest the front of the base flat against the workpiece with the rear of the handle raised so the blade does not touch the workpiece.
- Start the saw and let the blade reach full speed.
- Guide the saw into the workpiece and make the cut.

> **⚠ WARNING:**
>
> Always cut in a forward direction when pocket cutting. Cutting in the reverse direction could cause the saw to climb up on the workpiece and back toward you.

- Release the trigger and allow the blade to come to a complete stop.
- Lift the saw from the workpiece.
- Clear corners out with a hand saw or sabre saw.

> **⚠ WARNING:**
>
> Never tie the lower blade guard in a raised position. Leaving the blade exposed could lead to serious injury.

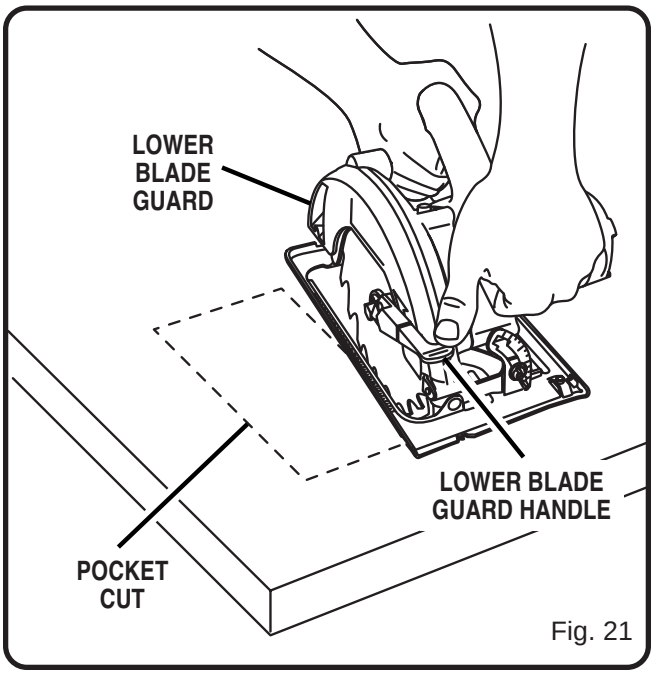


Fig. 21

ACCESSORIES

OPTIONAL RIP GUIDE

Use the optional rip guide, part no. 969862-009, when making long or wide rip cuts with your saw.

TO ASSEMBLE RIP GUIDE

See Figure 22.

Follow these directions to assemble the rip guide.

- UNPLUG YOUR CIRCULAR SAW.

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

- Place rip guide through holes in base as shown in the figure.
- Adjust rip guide to the width needed.
- Tighten rip guide knob securely.

TO USE RIP GUIDE

Follow these directions to use the rip guide.

- Secure the workpiece.
- Position the face of the rip guide firmly against the edge of workpiece.
- Guide the saw along the edge to achieve a straight rip cut.

  NOTE: The guiding edge of the workpiece must be straight for your cut to be straight. Use caution to prevent the blade from binding in the cut.

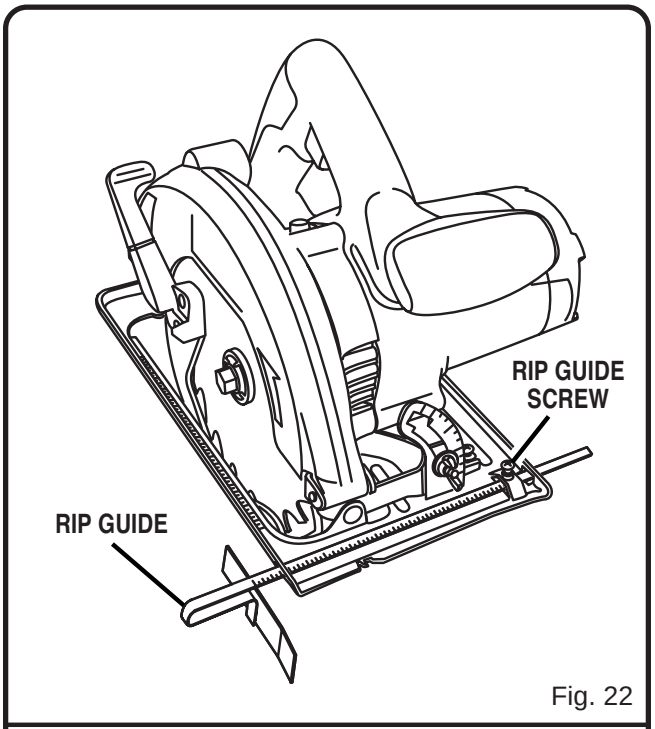


Fig. 22

OPTIONAL DUST NOZZLE KIT

See Figure 23.

You may purchase a dust nozzle kit, part no. 982829-001, for use with your saw. As shown in the figure, the adapter fits over the dust chute which is located on the upper blade guard.The nozzle attaches to the adapter.

NOTE: If you use the nozzle, you should always connect it to a standard vacuum hose.

TO ATTACH DUST NOZZLE

Follow these directions to attach the dust nozzle.

- UNPLUG YOUR CIRCULAR SAW.

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

- Lift lower blade guard.
- Orient adapter to fit into the dust chute opening (1) on upper blade guard.
- Secure adapter with screw (2) provided.
- Align hole in nozzle with raised lip on adapter and snap into place (3) when using a vacuum hose.

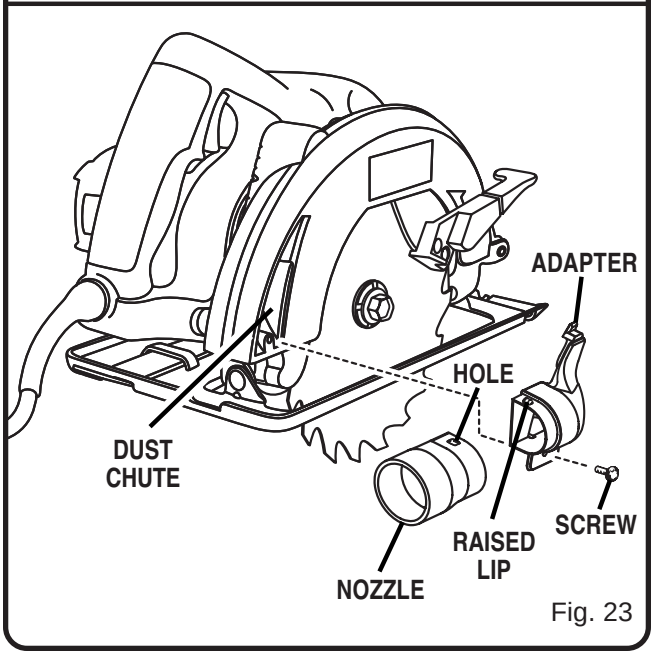


Fig. 23

MAINTENANCE

⚠ WARNING:

When servicing use only identical Ryobi replacement parts. Use of any other parts may create a hazard or cause product damage.

GENERAL

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

⚠ WARNING:

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

When electric tools are used on fiberglass boats, sports cars, wallboard, spackling compounds, or plaster, it has been found that they are subject to accelerated wear and possible premature failure, as the fiberglass chips and grindings are highly abrasive to bearings, brushes, commutators, etc. Consequently, it is not recommended that this tool be used for extended work on any fiberglass material, wallboard, spackling compounds, or plaster. If, however, you do work with any of these materials, it is extremely important that the tool is cleaned frequently by blowing with an air jet.

⚠ 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.

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.

OPERATOR'S MANUAL
7-1/4 in. (184.15 mm) CIRCULAR SAW
Model CSB121
DOUBLE INSULATED

EXTENSION CORD CAUTION

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

When working with a tool outdoors, use an extension cord that is designed for outside use. This is indicated by the letters "WA" on the cord's jacket.

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

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

CAUTION: Keep the extension cord clear of the working area. Position the cord so that it will not get caught on lumber, tools or other obstructions while you are working with a power tool.

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

• SERVICE

Now that you have purchased your tool, should a need ever exist for repair parts or service, simply contact your nearest Ryobi Authorized Service Center. Be sure to provide all pertinent facts when you call or visit. Please call 1-800-525-2579 for your nearest Ryobi Authorized Service Center. You can also check our Web site at www.ryobitools.com for a complete list of Authorized Service Centers.

• MODEL NO. AND SERIAL NO.

The model number of this tool will be found on a plate attached to the motor housing. Please record the model number and serial number in the space provided below.

• HOW TO ORDER REPAIR PARTS

WHEN ORDERING REPAIR PARTS,
ALWAYS GIVE THE FOLLOWING INFORMATION:

- MODEL NUMBER **CSB121**
- SERIAL NUMBER _____

RYOBI TECHNOLOGIES INC.

1428 Pearman Dairy Road Anderson, SC 29625
Post Office Box 1207 Anderson, SC 29622
www.ryobitools.com
Phone 1-800-525-2579

983000-126