

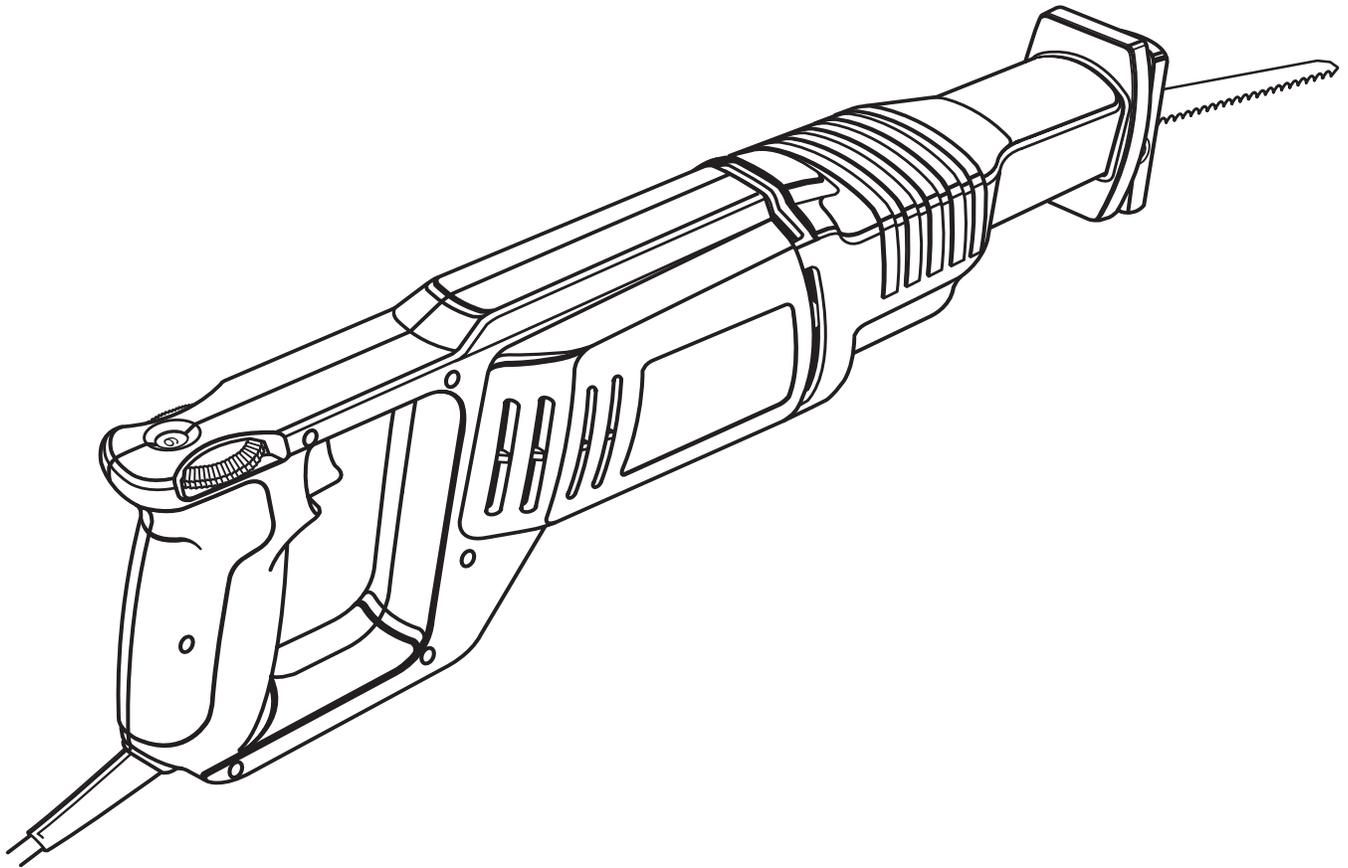
RYOBI®

OPERATOR'S MANUAL

RECIPROCATING SAW

RJ161V

VARIABLE SPEED - DOUBLE INSULATED



Your new reciprocating 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.



WARNING: To reduce the risk of injury, the user must read and understand the operator's manual.

Thank you for buying a Ryobi reciprocating saw.

SAVE THIS MANUAL FOR FUTURE REFERENCE

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INTRODUCTION

Your reciprocating 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 tool making it easy to maintain and operate.

WARNING:

Do not attempt to use this tool until you have read thoroughly and understand completely the operator's manual. Pay close attention to the safety rules, including Dangers, Warnings, and Cautions. If you use your tool properly and only for what it is intended, you will enjoy years of safe, reliable service.



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 or drawn into air vents.
- **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, nonskid 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.
- **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.

GENERAL SAFETY RULES

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

- **Hold tool by insulated gripping surfaces when performing an operation where the 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.

ADDITIONAL SAFETY RULES

- **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 eye-glasses 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 16 is recommended for an extension cord 25 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 using this tool.** 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

Length of Stroke	1-3/16 in. (3 cm)
Strokes per Minute (variable)	2,500 max
Input	120 volts, 60 Hz, AC only, 6.5 amps
Net Weight	7 lbs. (3.2 kg)

UNPACKING

INSTRUCTIONS

Your reciprocating 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 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 call 1-800-525-2579 for assistance.

PACKING LIST

Reciprocating Saw
Blades (2)
Operator's Manual

WARNING:

If any parts are missing do not operate your tool until the missing parts are replaced. Failure to do so could result in possible serious personal injury.

FEATURES

DOUBLE INSULATION

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

⚠ WARNING:

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

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 authorized service center for repair. Always use original factory replacement parts when servicing.

ELECTRIC MOTOR

Your tool has a precision built electric motor. **It should be connected to a power supply that is 120 volts, 60 Hz, AC only (normal household current).** 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 tool does not operate when plugged into an outlet, double-check the power supply.

SWITCH

The reciprocating saw has a conveniently located trigger switch.

VARIABLE SPEED

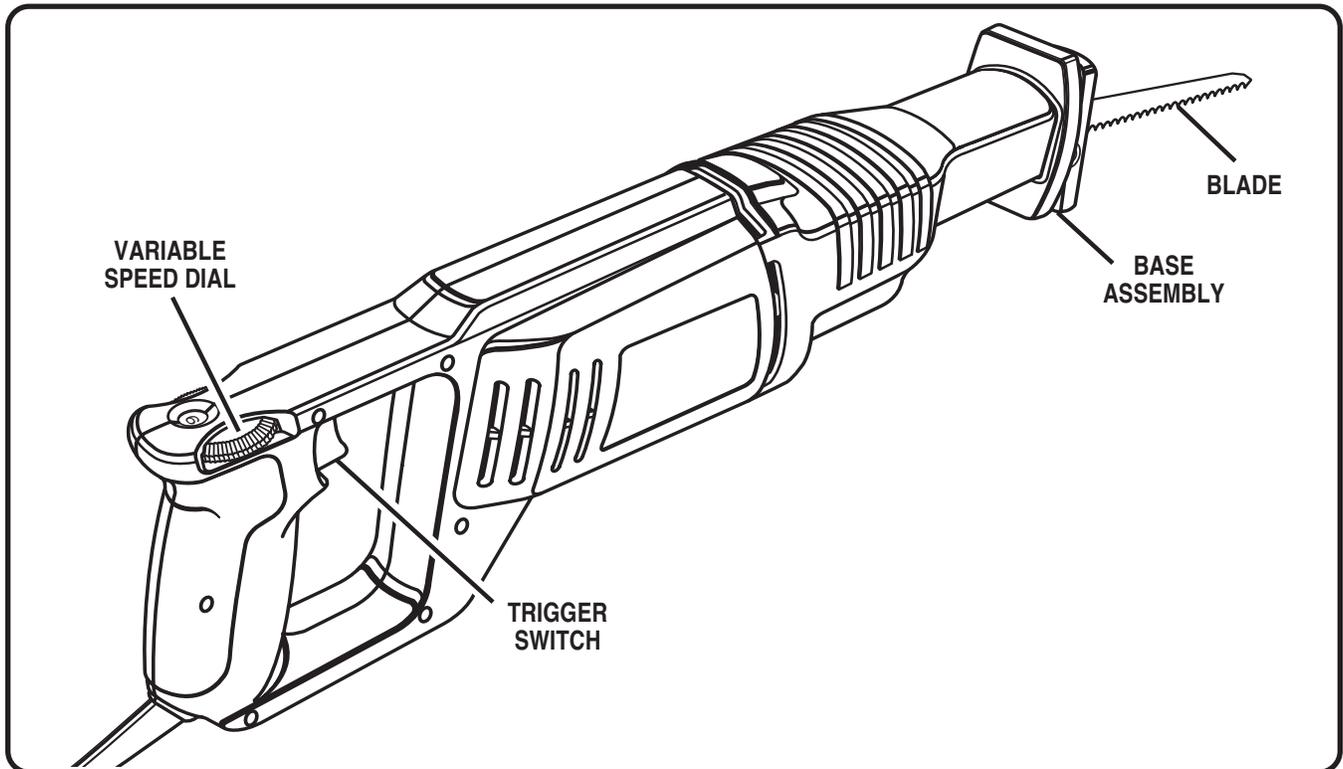
The reciprocating saw has a variable speed dial designed to allow operator control of speed and power limits.

TOOLLESS BLADE CHANGE SYSTEM

The toolless blade change system eliminates the need for tools when changing the blade.

ERGONOMIC DESIGN

The design of this tool provides for easy handling. It is designed for comfort and ease of grasp when operating in different positions and at different angles.



⚠ 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.

OPERATION

⚠ WARNING:

Always wear safety goggles or safety glasses with side shields when operating this tool. Failure to do so could result in dust, shavings, or loose particles being thrown into your eyes, resulting in possible serious injury.

TURNING THE SAW ON/OFF

See Figure 2.

Follow these directions to turn the saw on and off.

- *To turn the saw on:* Depress the switch trigger.
- *To turn the saw off:* Release the switch trigger.

ADJUSTING THE SPEED

See Figure 3.

The variable speed feature allows the saw to operate at speeds that can be increased by rotating the dial from 1 to 6. The dial is conveniently located on the handle, allowing operator control of blade speed.

Follow these directions to adjust the speed.

- *To increase the speed:* Turn the dial to a higher setting.
- *To decrease the speed:* Turn the dial to a lower setting.

SELECTING BLADES

Selecting the correct type of blade is important in order to obtain the best performance from your saw. Select the blade based on the application and on the material you wish to cut. Selecting the right blade will give you a smoother, faster cut and prolong the life of the blade.

Blades with fewer teeth, 10 teeth per inch (TPI) are typically used for cutting wood, while blades with more teeth are better for cutting metal or plastic. We recommend 14 TPI for plastics and soft metals and 18 TPI for hard metals.

INSTALLING BLADES

The toolless blade change system eliminates the need for tools when changing the blade.

See Figure 4.

Follow these directions to install blades.

- Unplug the saw.

⚠ WARNING:

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

- Lift the blade release lever.
- Insert the blade fully, tooth side down.
- Lower the blade release lever.

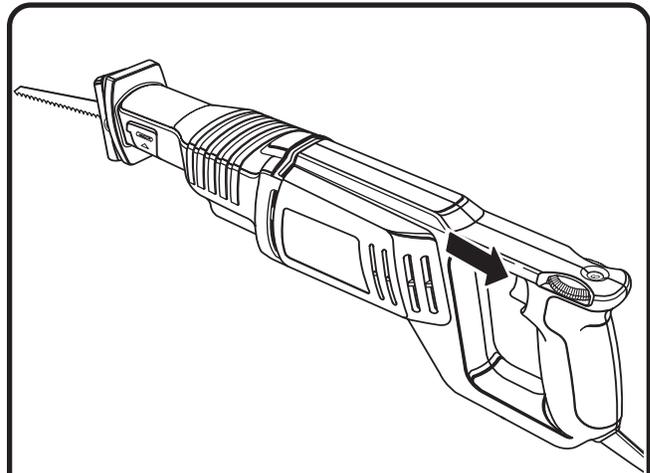


Fig. 2

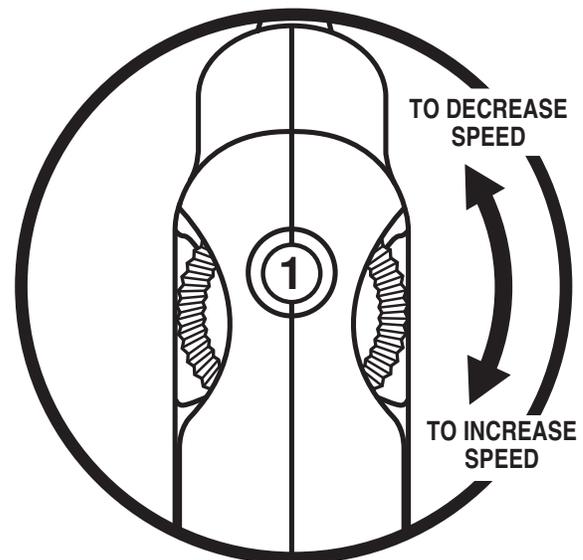


Fig. 3

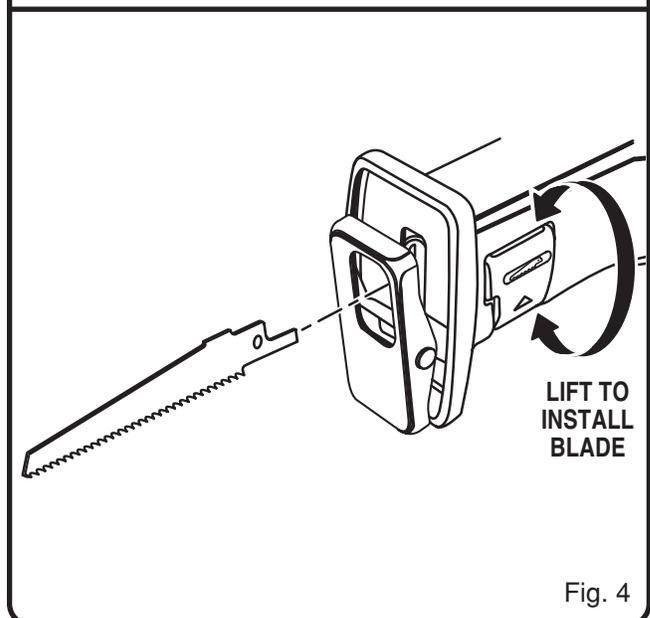


Fig. 4

OPERATION

OPERATING THE SAW

See Figure 5.

Follow these directions to operate the saw.

- Secure the workpiece to a work bench or table with a vise or with clamps.
- Make sure the saw blade is clear of any foreign material and that the power cord and extension cord are out of the blade path.
- Hold the saw firmly in front of and clearly away from you.
- Mark the line of cut clearly.
- Depress the trigger switch to start the cutting action.
- Set the base assembly against the workpiece.
- Move the blade into the workpiece.

NOTE: Do not force. Use only enough pressure to keep the saw cutting. Let the blade and saw do the work. Keep pressure on the base, against the workpiece.

PLUNGE CUTTING

See Figure 6.

Follow these directions to plunge cut.

- Secure the workpiece to a work bench or table with a vise or with clamps.
- Make sure the saw blade is clear of any foreign material and that the power cord and extension cord are out of the blade path.
- Hold the saw firmly in front of and clearly away from you.
- Mark the line of cut clearly.
- Choose a convenient starting point inside the cutting area and place the tip of the blade over that point.
- Rest the front edge of the base assembly on the workpiece and hold it firmly in position during the cut.
- Depress the trigger switch and allow the saw blade to reach full cutting speed.

⚠ WARNING:

Make sure the blade does not touch the workpiece until the motor reaches full speed. Failure to heed this warning can cause you to lose of control of the saw and result in serious injury.

- Tilt the saw downward until the tip of the blade starts cutting the workpiece.
- Allow the saw to penetrate the workpiece.
- Tilt the saw until the blade is perpendicular to the workpiece.

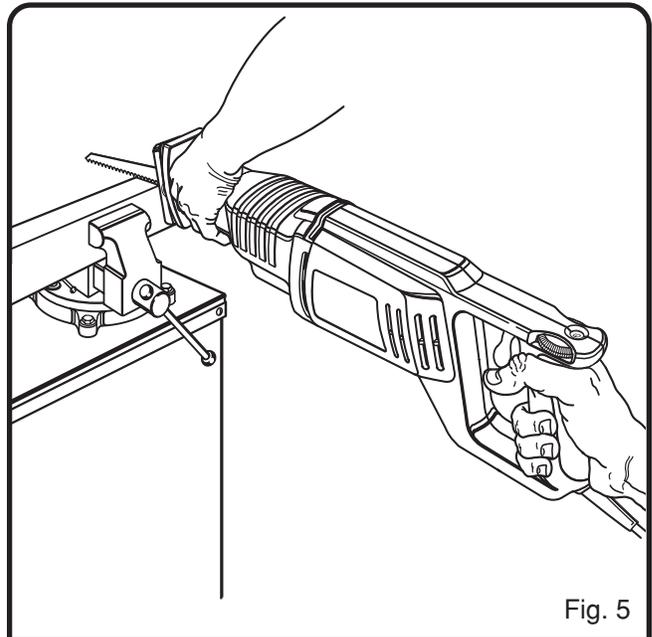


Fig. 5

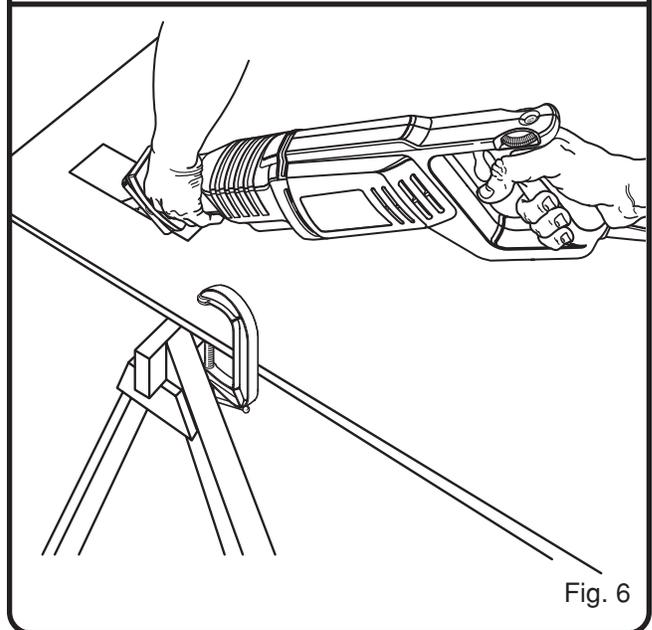


Fig. 6

⚠ WARNING:

Blades longer than 6 in. (15.2 cm) can whip and should not be used for plunge cutting. Failure to heed this warning can result in serious personal injury.

⚠ WARNING:

Cutting into electrical wiring can cause the blade, the blade clamp, and the saw bar assembly to become electrically live. Do not touch metal parts when cutting into a wall; grasp only the insulated surfaces on the tool. Make sure hidden electrical wiring, water pipes, and mechanical hazards are not in the blade path when cutting into a wall.

OPERATION

METAL CUTTING

See Figure 7.

You may cut metals such as sheet steel, pipe, steel rods, aluminum, brass, and copper with your saw.

Observe the following tips when metal cutting.

- Be careful not to twist or bend the saw blade.
- **Do not** force the tool.
- Use cutting oil when cutting soft metals and steel. Cutting oil also keeps the blades cool, increases cutting action, and prolongs blade life.
- **Never** use gasoline since normal sparking of motor could ignite fumes.
- Clamp the workpiece firmly and cut close to the clamping point to eliminate any vibration of the work. When cutting conduit pipe or angle iron, clamp the workpiece in a vise if possible and cut close to the vise. To cut thin sheet material, “sandwich” the material between hardboard or plywood and clamp the layers to eliminate vibration and material tearing.
- Always keep firm pressure on the base to hold it securely against the workpiece.

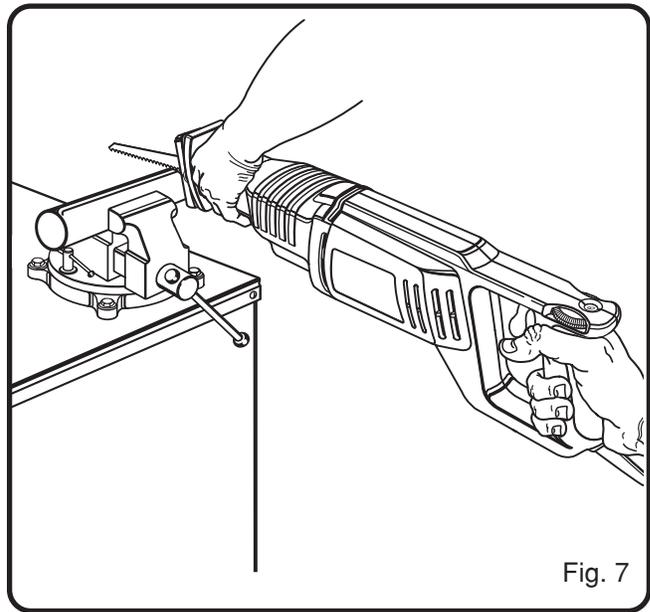


Fig. 7

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.

Electric tools used on fiberglass material, wallboard, spackling compounds, or plaster are subject to accelerated wear and possible premature failure, as the fiberglass chips and grindings are highly abrasive to bearings, brushes, commutators, etc. Consequently, we do not recommend that this tool be used for extended work on these types of materials. If, however, you do work with any of these materials, it is extremely important that you clean the tool frequently by blowing it 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.

