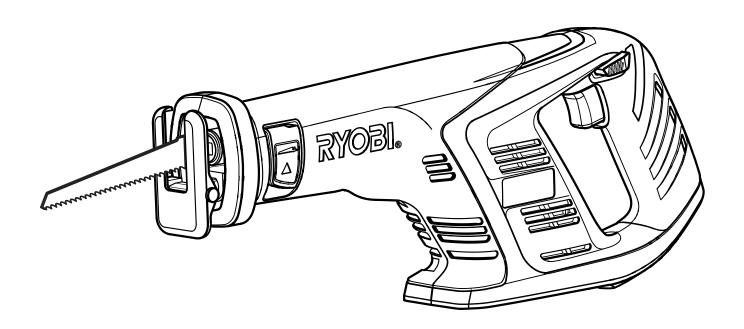


OPERATOR'S MANUAL 18 VOLT RECIPROCATING SAW P513



ACCEPTS ALL ONE+ BATTERY PACKS

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



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

Thank you for your purchase.

SAVE THIS MANUAL FOR FUTURE REFERENCE

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INTRODUCTION

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

WARRANTY

RYOBI® POWER TOOL - LIMITED TWO YEAR WARRANTY AND 30 DAY EXCHANGE POLICY

One World Technologies, Inc., warrants its RYOBI® power tools with the following conditions:

30-DAY EXCHANGE POLICY: During the first 30 days after date of purchase, you may either request service under this warranty or you may exchange any RYOBI® power tool which does not work properly due to defective workmanship or materials by returning the power tool to the dealer from which it was purchased. To receive a replacement power tool or requested warranty service, you must present proof of purchase and return all original equipment packaged with the original product. The replacement power tool will be covered by the limited warranty for the balance of the two year period from the date of the original purchase.

WHAT THIS WARRANTY COVERS: This warranty covers all defects in workmanship or materials in your RYOBI® power tool for a period of two years from the date of purchase. With the exception of batteries, power tool accessories are warranted for ninety (90) days. Batteries are warranted for two years.

HOW TO GET SERVICE: Just return the power tool, properly packaged and postage prepaid, to an Authorized Service Center. You can obtain the location of the Service Center nearest you by contacting a service representative at One World Technologies, Inc., P.O. Box 1207, Anderson, SC 29622-1207, by calling 1-800-525-2579 or by logging on to www.ryobitools.com. When you request warranty service, you must also present proof of purchase documentation, which includes the date of purchase (for example, a bill of sale). We will repair any faulty workmanship, and either repair or replace any defective part, at our option. We will do so without any charge to you. We will complete the work in a reasonable time, but, in any case, within ninety (90) days or less.

WHAT'S NOT COVERED: This warranty applies only to the original purchaser at retail and may not be transferred. This warranty only covers defects arising under normal usage and does not cover any malfunction, failure or defects resulting from misuse, abuse, neglect, alteration, modification or repairs by other than Authorized Service Centers. One World Technologies, Inc. makes no warranties, representations or promises as to the quality or performance of its power tools other than those specifically stated in this warranty.

ADDITIONAL LIMITATIONS: Any implied warranties granted under state law, including warranties of merchantability or fitness for a particular purpose, are limited to two years from the date of purchase. One World Technologies, Inc. is not responsible for direct, indirect, or incidental damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

GENERAL SAFETY RULES



WARNING!

Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed below refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE INSTRUCTIONS **WORK AREA SAFETY**

- Keep work area clean and well lit. Cluttered or 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 create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

ELECTRICAL SAFETY

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not 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 for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- Use only with charger listed.

MODEL	BATTERY PACK (P104 Li-ion)	CHARGER (P113)
	130429001, 130429002	
P513	BATTERY PACK	140501001,
F313	(P100 Ni-Cd)	140501005
	130255004, 130224028	

PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal
- Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

- Avoid accidental starting. Ensure the switch is in the off-position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are **connected and properly used.** Use of these devices can reduce dust-related hazards.
- Do not wear loose clothing or jewelry. Contain long hair. Loose clothes, jewelry, or long hair can be drawn
- Do not use on a ladder or unstable support. Stable footing on a solid surface enables better control of the power tool in unexpected situations.

POWER TOOL USE AND CARE

- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing **power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired **before use.** Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

GENERAL SAFETY RULES

BATTERY TOOL USE AND CARE

- Ensure the switch is in the off position before inserting battery pack. Inserting the battery pack into power tools that have the switch on invites accidents.
- Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- Under abusive conditions, liquid may be ejected from the battery, avoid contact. If contact accidentally

occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

SERVICE

Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

A

WARNING!

To reduce the risk of injury, user must read instruction manual.

■ When servicing a power 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 shock or injury.

SPECIFIC SAFETY RULES

- Hold power tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
- Use clamps or another practical way to secure and support the workpiece to a stable platform. Holding the work by hand or against your body leaves it unstable and may lead to loss of control
- Know your power tool. Read operator's manual carefully. Learn its applications and limitations, as well as the specific potential hazards related to this power tool. Following this rule will reduce the risk of electric shock, fire, or serious injury.
- Always wear safety glasses with side shields. Everyday glasses have only impact resistant lenses. They are NOT safety glasses. Following this rule will reduce the risk of eye 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.
- Battery tools do not have to be plugged into an electrical outlet; therefore, they are always in operating condition. Be aware of possible hazards when not using your battery tool or when changing accessories. Following this rule will reduce the risk of electric shock, fire, or serious personal injury.
- Do not place battery tools or their batteries near fire or heat. This will reduce the risk of explosion and possibly injury.

- Do not crush, drop or damage battery pack. Do not use a battery pack or charger that has been dropped or received a sharp blow. A damaged battery is subject to explosion. Properly dispose of a dropped or damaged battery immediately.
- Batteries vent hydrogen gas and can explode in the presence of a source of ignition, such as a pilot light. To reduce the risk of serious personal injury, never use any cordless product in the presence of open flame. An exploded battery can propel debris and chemicals. If exposed, flush with water immediately.
- Do not charge battery tool in a damp or wet location. Following this rule will reduce the risk of electric shock.
- For best results, your battery tool should be charged in a location where the temperature is more than 50°F but less than 100°F. To reduce the risk of serious personal injury, do not store outside or in vehicles.
- Under extreme usage or temperature conditions, battery leakage may occur. If liquid comes in contact with your skin, wash immediately with soap and water, then neutralize with lemon juice or vinegar. If liquid gets into your eyes, flush them with clean water for at least 10 minutes, then seek immediate medical attention. Following this rule will reduce the risk of serious personal injury.
- If the power supply cord is damaged, it must be replaced only by the manufacturer or by an authorized service center to avoid risk.
- 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 to prevent misuse of the product and possible injury.

SYMBOLS

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

SYMBOL	NAME	DESIGNATION/EXPLANATION
V	Volts	Voltage
А	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
min	Minutes	Time
\sim	Alternating Current	Type of current
	Direct Current	Type or a characteristic of current
n _o	No Load Speed	Rotational speed, at no load
	Class II Tool	Double-insulated construction
/min	Per Minute	Revolutions, strokes, surface speed, orbits etc., per minute
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
	Read The Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Eye Protection	Always wear safety goggles or safety glasses with side shields and, as necessary, a full face shield when operating this product.
lack	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.

SYMBOLS

The following	g signal words and me	eanings are intended to explain the levels of risk associated with this product. MEANING
A	DANGER:	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
A	WARNING:	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
A	CAUTION:	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	CAUTION:	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.

SERVICE

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



MARNING:

To avoid serious personal injury, do not attempt to use this product until you read thoroughly and understand completely the operator's manual. If you do not understand the warnings and instructions in the operator's manual, do not use this product. Call Ryobi customer service for assistance.



WARNING:



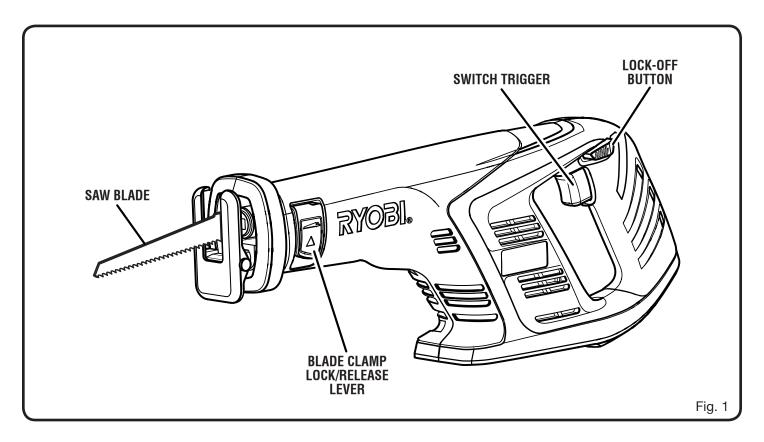
The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and, when needed, a full face shield. We recommend Wide Vision Safety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

SAVE THESE INSTRUCTIONS

FEATURES

PRODUCT SPECIFICATIONS

Motor18	Volt DC	Length of Stroke	7/8 in.
SwitchVariabl	e Speed	No Load Speed	0-3,000/min. (SPM)



KNOW YOUR RECIPROCATING SAW

See Figure 1.

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

BLADE CLAMP LOCK/RELEASE LEVER

The blade clamp lock/release lever is located on the side of your saw. Opening the lever releases the blade clamp, allowing you to remove an old blade and insert a new blade without the need for separate tools.

LOCK-OFF BUTTON

Your saw is equipped with a lock-off button which reduces the possibility of accidental starting. The lock-off button is located on the handle above the switch trigger. You can depress the lock-off button from either the left or right side.

VARIABLE SPEED

This tool has a variable speed switch trigger that delivers higher speed with increased trigger pressure.

ASSEMBLY

UNPACKING

This product has been shipped completely assembled.

- Carefully remove the product and any accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the product 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 product.
- If any parts are damaged or missing, please call 1-800-525-2579 for assistance.

PACKING LIST

Reciprocating Saw Blades (2) Operator's Manual

A WARNING:

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



WARNING:

Do not attempt to modify this product or create accessories not recommended for use with this product. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.



WARNING:

To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the product when assembling parts.

OPERATION



WARNING:

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



WARNING:

Always wear safety goggles or safety glasses with side shields when operating products. Failure to do so could result in objects being thrown into your eyes, resulting in possible serious injury.



WARNING:

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

APPLICATIONS

You may use this product for the purposes listed below:

- Cutting all types of wood products (lumber, plywood, paneling, composition board, and hard wood)
- Cutting masonite and plastic
- Cutting drywall
- Cutting metals such as sheet steel, pipe, steel rods, aluminum, brass, and copper

OPERATION

This product will accept Ryobi One+ 18 V lithium-ion battery packs and Ryobi One+ 18 V nickel-cadmium battery packs. Both types of battery packs are shown on this page. Following pages will show the lithium-ion 18 V battery pack.

For complete charging instructions, refer to the operator's manual for the P113 charger. For battery pack instructions, see the manual for the P104 lithium-i on battery pack or the P100 nickel-cadmium battery pack.

TO INSTALL BATTERY PACK

See Figure 2.

- Insert the battery pack into the product as shown.
- Make sure the latches on each side of the battery pack snap into place and the battery pack is secured before beginning operation.

TO REMOVE BATTERY PACK

See Figure 2.

- Depress the latches on each side of the battery pack.
- Remove the battery pack from the tool.



WARNING:

Battery products are always in operating condition. Therefore, the switch should always be locked when not in use or carrying at your side.

TO INSTALL SAW BLADE

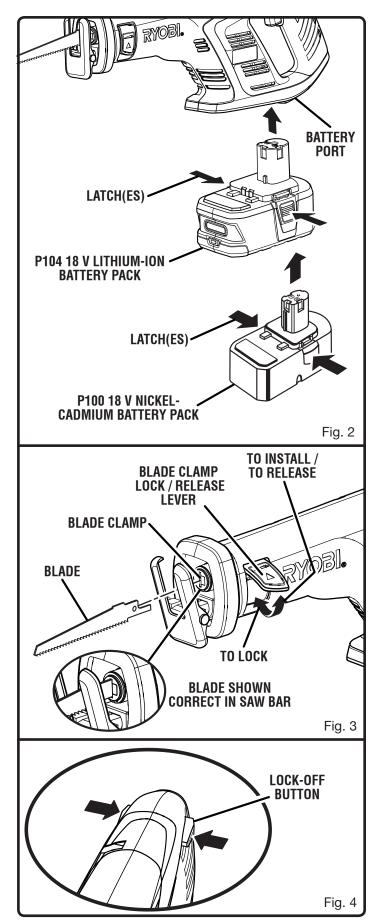
See Figure 3.

- Remove the battery pack.
- Lift the blade clamp lock/release lever located on the side of saw.
- Insert the saw blade between the blade clamp and the saw bar.
- Lock the blade clamp lever.
- Replace the battery pack.

LOCK-OFF BUTTON

See Figure 4.

The saw is equipped with a lock-off button which reduces the possibility of accidental starting. The lock-off button is located on the handle above the switch trigger. You must depress the lock-off button in order to pull the switch trigger. The lock resets each time the trigger is released. You can depress the lock-off button from either the left or right side.



OPERATION

GENERAL CUTTING

See Figure 5.

Hold the saw firmly in front of and clearly away from you. Make sure saw blade is clear of any foreign material. Be sure material to be cut is held firmly. Small work pieces should be securely clamped in a vise or with clamps to the work bench or table. Mark the line of cut clearly. Depress the lock-off button, then pull switch trigger to start the cutting action. Place the base assembly against the work, then move the blade into the work. **Do not force.** Use only enough pressure to keep the saw cutting. Let the blade and saw do the work. Use of excessive pressure that causes bending or twisting of the blade may result in broken blades.

PLUNGE CUTTING

See Figure 6.

Mark the line of cut clearly. Choose a convenient starting point inside the area to be cut out and place the tip of the blade over that point. Rest front edge of base (shoe) assembly on work and hold firmly in position. Depress the lock-off button, then pull switch trigger to start the cutting action.



WARNING:

Make sure blade does not touch work until motor reaches full speed, since this could cause loss of control resulting in serious injury.

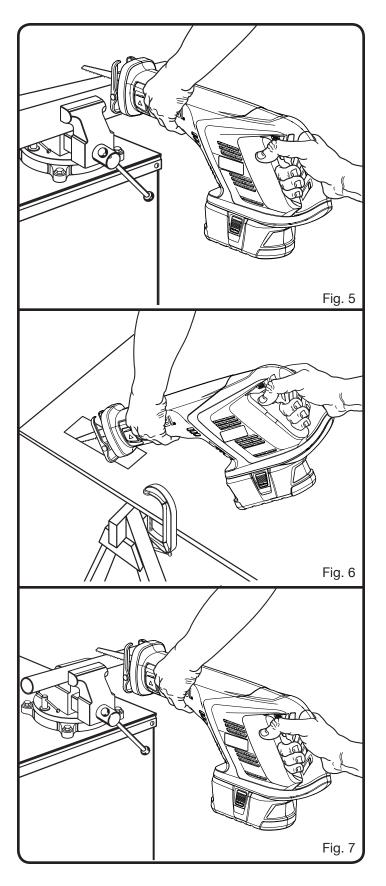
With saw blade at full cutting speed, slowly tilt saw downward until tip of blade starts cutting work. After blade penetrates work, tilt saw until blade is perpendicular to the work.

METAL CUTTING

See Figure 7.

Metals such as sheet steel, pipe, steel rods, aluminum, brass, and copper may be cut with the saw. Be careful not to twist or bend the saw blade. **Do not force.** We recommend cutting oil when cutting most soft metals and steel. Cutting oil will also keep blades cool, increase cutting action, and prolong blade life.

Never use gasoline since normal sparking of motor could ignite fumes. Clamp the work firmly and cut close to the clamping point to eliminate any vibration of the work being cut. When cutting conduit pipe or angle iron, clamp work 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.



MAINTENANCE



WARNING:

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



WARNING:

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



WARNING:

To avoid serious personal injury, always remove the battery pack from the product when cleaning or performing any maintenance.

GENERAL MAINTENANCE

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



WARNING:

Do not at any time let brake fluids, gasoline, petroleumbased products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

Only the parts shown on the parts list are intended to be repaired or replaced by the customer. All other parts should be replaced at an Authorized Service Center.

BATTERIES

This product will accept 18 V lithium-ion batteries or 18 V nickel-cadmium batteries. Length of service from each charging will depend on the type of work you are doing.

The batteries for this product have been designed to provide maximum trouble-free life. However, like all batteries, they will eventually wear out. Do not disassemble battery pack and attempt to replace the batteries. Handling of these batteries, especially when wearing rings and jewelry, could result in a serious burn.

To obtain the longest possible battery life, we suggest the following:

For lithium-ion batteries:

 Remove the battery pack from the charger once it is fully charged and ready for use.

For battery pack storage longer than 30 days:

- Store the battery pack where the temperature is below 80°F and away from moisture.
- Store battery packs in a 30%-50% charged condition.
- Every six months of storage, charge the pack as normal.

For nickel-cadmium batteries:

■ Remove the battery pack from the charger once it is fully charged and ready for use.

For battery pack storage longer than 30 days:

- Store the battery pack where the temperature is below 80°F.
- Store battery packs in a "discharged" condition.

BATTERY PACK REMOVAL AND PREPARATION FOR RECYCLING



To preserve natural resources, please recycle or dispose of batteries properly.



This product uses nickel-cadmium and lithium-ion batteries. Local, state or federal laws may prohibit disposal of batteries in ordinary trash.

Consult your local waste authority for information regarding available recycling and/or disposal options.



WARNING:

Upon removal, cover the battery pack's terminals with heavy-duty adhesive tape. Do not attempt to destroy or disassemble battery pack or remove any of its components. Lithium-ion and nickel-cadmium batteries must be recycled or disposed of properly. Also, never touch both terminals with metal objects and/or body parts as short circuit may result. Keep away from children. Failure to comply with these warnings could result in fire and/or serious injury.



OPERATOR'S MANUAL 18 VOLT RECIPROCATING SAW P513

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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.

PARTS AND SERVICE

Prior to requesting service or purchasing replacement parts, please obtain your model and serial number from the product data plate.

•	MODEL NUMBER	P513
•	SERIAL NUMBER	

HOW TO OBTAIN REPLACEMENT PARTS:

Replacement parts can be purchased online at **www.ryobitools.com** or by calling 1-800-525-2579. Replacement parts can also be obtained at one of our Authorized Service Centers.

HOW TO LOCATE AN AUTHORIZED SERVICE CENTER:

Authorized Service Centers can be located online at **www.ryobitools.com** or by calling 1-800-525-2579.

HOW TO OBTAIN CUSTOMER OR TECHNICAL SUPPORT:

To obtain Customer or Technical Support please contact us at 1-800-525-2579.

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ONE WORLD TECHNOLOGIES, INC.

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