NG-54

12V RECIPROCATING SAW

Battery and charger sold separately

PRODUCT CODE: 40044

CAUTION: Read the operating instructions to reduce the risk of inquiry

INSTRUCTION MANUAL

SAFETY

CAUTION: Read the operating instructions to reduce the risk of inquiry.

DOUBLE INSULATED
This tool is double insulated in accordance with AS/NZS 60335-1; therefore no earth wire is required.

ELECTRICAL SAFETY

This manual contains important safety and operating instructions for your battery charger (sold separately).

› Before using the charger, read all instructions and cautionary markings on charger, battery pack and product using the battery pack.

⚠ **DANGER!** If the battery pack case is cracked or damaged, do not insert into charger. There is a danger of electric shock or electrocution.

⚠ **Warning:** Do not allow any liquid to get inside charger. Electric shock may result. To facilitate cooling of the battery pack after use, avoid placing the charger or battery pack in a warm environment such as in a metal shed, or an uninsulated trailer.

› This charger is not intended for any uses other than charging rechargeable batteries. Any other use may result in risk of fire, electric shock or electrocution.

› Do not place any object on top of the charger or place the charger on a soft surface that may result in excessive internal heat. Place the charger in a position away from any heat source.

› To reduce risk of damage to the electric plug and cord, pull by the plug rather than the cord when disconnecting the charger.

› Make sure cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.

› An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in the risk of fire, electric shock or electrocution.

› Do not operate charger if it has received a sharp blow, been dropped or otherwise damaged in any way. Have it checked by an electrician or power tool repairer.

› Do not disassemble charger. Take it to an electrician or power tool repairer when service or repair is required. Incorrect reassembling may result in a risk of electric shock, electrocution or fire.

› To reduce risk of electric shock, unplug charger from the outlet before attempting any cleaning. Removing the battery pack will not reduce this risk.

› Never attempt to connect 2 chargers together.

› DO NOT store or use the tool and battery pack in locations where the temperature may reach or exceed 40ºC (such as outside sheds or metal buildings in summer).
› The charger is designed to operate on standard household electrical power (240 volts). Do not attempt to use it on any other voltage! The battery pack is not fully charged out of the carton. First read the safety instructions and then follow the charging notes and procedures.
› The longest life and best performance can be obtained if the battery pack is charged when the air temperature is between 18 – 24ºC. Do not charge the battery pack in an air temperature below 10ºC or above 40ºC. This is important and will prevent damage to the battery pack.
› Do not incinerate the battery pack even if it is seriously damaged or is completely worn out. The battery can explode in a fire.
› Never attempt to open the battery pack for any reason. If the plastic housing of the battery pack breaks or cracks, immediately discontinue use and do not recharge.

GENERAL SAFETY

⚠ **Warning: Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save these instructions and other documents supplied with this tool for future reference.

1) WORK AREA SAFETY
a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.
b) 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.
c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

2) ELECTRICAL SAFETY

a) 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.
b) 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.
c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of

electric shock.
d) 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.
e) 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.
f) If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

3) PERSONAL SAFETY

a) 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 injury.
b) Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
d) 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 injury.
e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
f) Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.

4) POWER TOOL USE AND CARE

a) 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.
b) 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.
c) 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.
d) 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.
e) 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.
f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
g) Use the power tool, accessories and tool bits etc. in accordance with these instructions, 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.

5) SERVICE

a) 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.
b) If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

5) BATTERY TOOL USE AND CARE

a) 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.
b) Use power tools only with specifically designated battery. Use of any other battery packs may create a risk of injury and fire.
c) When the battery 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.
d) 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.

ADDITIONAL SAFETY FOR RECIPROCATING SAWS

a) Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
Recommendations for the use of a residual current device with a rated residual current of 30mA or less:
› Wear a hard hat (safety helmet), safety glasses and/or face shield. It is also highly recommended that you wear a dust mask, ear protection and padded gloves.
› Hold the power tool with a firm grip.
› Secure the work piece. A work piece clamped with clamping devices or in a vice, is held more secure than by hand.
› One-handed operation can be hazardous. It is recommended you hold the unit firmly with both hands when operating the tool.
› After installing a blade, pull lightly on it to make sure that it does not come loose. If the blade is not installed properly, it can come loose during use, which can be dangerous.
› Use a blade that is appropriate for the application.
› Check that any blade to be used is not cracked or broken. Broken or cracked blades are dangerous.
› If the screw securing the blade is damaged, the blade may come off during use causing personal injury.
› The torque delivered by the reciprocating saw depends on how long it is applied and other factors such as the state of the battery charge.
› Stop the reciprocating saw before changing the direction. Always release the trigger and wait for the reciprocating saw to stop before switching the direction of rotation.
› Never touch the blade whilst it is in use. Do not let the blade get near your hands or any other part of your body

as you could be cut.
› Do not touch the blade after it has been in use for an extended period. It could be hot and burn you.

LITHIUM-ION BATTERY & CHARGER SAFETY

OVER CHARGING PROTECTION
This feature ensures that the battery is never overcharged. When the battery has reached its full charge capacity the charger will shut off protecting the internal components of the battery from being damaged.

OVER DISCHARGE PROTECTION
An internal component of the battery pack is an over discharge protector. This feature will stop the battery from discharging beyond the recommended lowest safety voltage.

OVER HEAT PROTECTION
The battery has an internal Thermister cut off sensor which will cease the charging cycle if the battery becomes hot during the charging process. This Thermister sensor will also stop the battery from operating should the battery become too hot during the operation of the tool. This can happen when the tool is overloaded or being used for extended periods of time. Up to 30min in cooling time may be required depending on ambient temperature and operation being performed.

OVER CURRENT PROTECTION
Should the battery be overloaded and the maximum current draw be exceeded the battery will temporarily stop working to protect the internal components. The battery will resume to normal operation once the excessive current draw has returned to normal safe level. This may take a few seconds.

SHORT CIRCUIT PROTECTION
If the battery pack was to short circuit the short circuit protector would immediately stop the battery pack from operating. This will ensure that no further internal components of the battery or the tools are damaged.

INTENDED USE

The cordless reciprocating saw is designed to cut through steel, aluminium, wood and conduit in conjunction with the appropriate blade.

The equipment may only be used for the tasks it is designed to handle. Any other use is deemed to be a case of misuse. The user / operator and not the manufacturer will be liable for any damage or injuries of any kind caused as a result of this.

TECHNICAL SPECIFICATIONS

SPECIFICATIONS	NG-54 Reciprocating Saw
Product code	40044
Warranty	3 years
Voltage	12V
Stroke length	1/2" (13mm)
No-load speed	0-2300 RPM
Battery type	Li-ion 2000mAh
Battery charge time	30 mins

PRODUCT OVERVIEW

IDENTIFICATION

1. LED light
2. Stationary shoe
3. On / off trigger
4. Lock-off button
5. Battery level indicator
6. Battery release button (battery not included)

ACCESSORIES INCLUDED

› 1x cutting blade

BATTERY AND CHARGER

This tool is compatible with the NG-6020 battery and NG-61 charger.

INSTALLING AND REMOVING THE BATTERY

Always switch off the reciprocating saw before insertion or removal of the battery.

INSTALLING THE BATTERY

› Hold the reciprocating saw upright and pick up the battery in your opposite hand. Place two fingers over the battery release buttons and insert the battery until it clicks into place (Fig. 1).

› Do not use excessive force when inserting the battery. If the battery does not slide in easily, it is not being inserted correctly. It is also possible that there could be damage to the battery, battery terminals or the reciprocating saw.

Fig.1

REMOVING THE BATTERY

Press both the battery release buttons on either side and gently pull the battery out of the reciprocating saw.

BATTERY LIFE

The length of service from each charging cycle will depend on the type of work you are doing. To obtain the longest possible battery life, we suggest the following:

› Store and charge your battery in a cool area. Temperatures above or below normal room temperature will shorten battery life.

› Store and charge your battery in a cool area. Temperatures above or below

normal room temperature will shorten battery life.
› Never store batteries in a uncharged condition. Recharge them immediately after they are uncharged.
› All batteries gradually lose their charge. The higher the temperature the quicker they lose their charge. If you store your reciprocating saw for long periods of time without using it, recharge the batteries every month or two. This practice will prolong battery life.

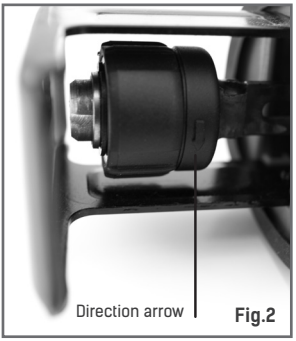

Fig.2

ASSEMBLY

⚠ **Warning:** Always remove the battery from the tool before inserting or removing a blade or when making any adjustments to your tool.

⚠ **Warning:** Ensure the spindle and blade clamp areas are clean. Metal chips and sawdust may prevent the blade clamp from clamping securely

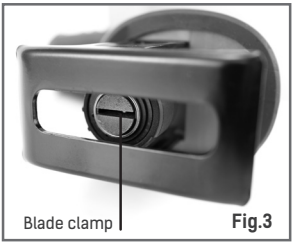

Fig.3

INSTALLING A BLADE

1. Depending on the job, the blade may be inserted with the teeth facing up or down. To install a blade, twist the collar in the direction of the arrow (fig. 2) while inserting the blade into the clamp (fig.3) until the tang butts against the collar.
2. Release collar and the spring loaded

mechanism will clamp the blade firmly in place (Fig. 4).
3. Twist collar in the opposite direction of the arrow to ensure that the blade is locked into the clamp.
4. Tug on blade to make sure it is securely locked in place.


Fig.4

REMOVING A BLADE
To remove a blade, twist collar in the direction of the arrow while pulling on the blade. Be careful when handling hot blades.

REMOVING BROKEN BLADES
Broken blades can be removed by the following:
› Remove battery pack before removing blades.
› Point the tool downward, twist the collar, and shake the tool up and down (DO NOT turn the tool on while your fingers are holding the blade clamp open). The shank of the broken blade should drop out of the clamp.
› If shaking the tool does not work: in most cases, a corner of the broken blade will extend beyond the blade clamp. Twist the collar and pull the broken blade out of the clamp by this corner.
› If the broken stub does not extend far enough to be grabbed by its corner, use a thin blade with small teeth (such as a metal cutting blade) to hook the blade that is jammed in the clamp while twisting the collar and pull it out.

OPERATION

LOCK OFF BUTTON

The lock-off button is a safety device designed to reduce the possibility of a user accidentally starting the saw. This button must be pressed before the on / off trigger can be squeezed (Fig. 5).

NOTE: The lock-off button can be pressed from either the left or right side of the handle.

ON / OFF TRIGGER

1. Turn the reciprocating saw ON by pressing the on / off trigger (Fig. 6) whilst pressing the lock-off button.
2. To turn the reciprocating saw OFF release the on / off trigger and the lock-off button.

VARIABLE SPEED

You can vary the speed of the reciprocating saw by controlling the amount of pressure applied to the on / off trigger. The tool reaches its max speed when the on / off trigger is fully pressed.

Fig.5

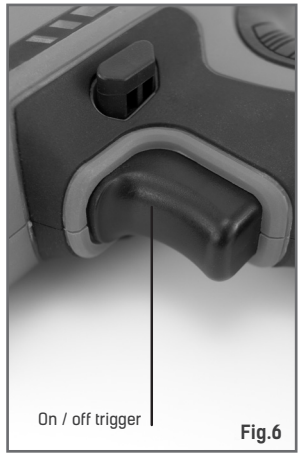

Fig.6

LED LIGHT

› The saw has one LED Light built into the unit (Fig. 7).

› The LED light turns on automatically when you press the on / off trigger.

› The LED light illuminates dark areas in tight corners to assist with cutting. This helps achieve a more accurate result in your work piece.

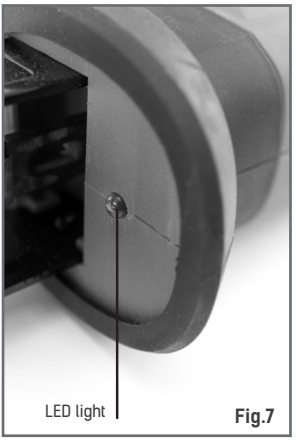

Fig.7

MATERIALS SUITABLE FOR CUTTING

This reciprocating saw is a versatile tool that allows you to cut many different types of materials. Some of these materials include:

› Wood products such as lumber, hardwood, plywood, composite board, and panelling

› Drywall

› Fibre board and plastic

› Metals, such as pipe, steel rods, sheet steel, aluminum, brass, and copper.

NOTE: There are many different types of blades available. Generally, there are metal cutting blades (fine teeth) and wood cutting blades (coarse teeth). Use the correct blade for your application. The packaging on the blade will indicate the type of materials each blade is designed to cut.

Caution: Verify the following every time the reciprocating saw is used:
1. The blade is sharp and in good condition.
2. The blade is firmly clamped in the blade holder.
3. The work piece is properly secured.
4. Safety glasses and hearing protection are being worn. Failure to observe these safety rules will significantly increase the risk of injury.

GENERAL CUTTING

1. Clearly mark the work piece to locate the position of the cut.
2. Hold smaller workpieces with a vice. Clamp larger work pieces to a workbench or table.
3. Make sure there are no nails, screws, clamps or foreign materials in the path of the saw blade.
4. Hold the saw away from your body and in front of you.
5. With both hands firmly gripping the saw, and with the blade NOT in contact with the surface to be cut, start the saw by pressing the lock-off button and squeezing the trigger.
6. Once the saw has reached the desired speed, place the adjustable pivoting shoe against the work piece and gradually bring the moving blade into contact with the work piece at the appropriate location.

PLUNGE CUTTING

1. Clearly mark the work piece to locate the position of the cut.
2. Clamp the work piece to a workbench or table.

NOTE: Make sure the area to be cut is clear under the work piece so that the blade will not come into contact with anything other than the work piece.

3. Select a convenient starting point in the area to be cut out. Place the tip of the blade over that point.
4. Rest the lower edge of the adjustable pivoting shoe on the work piece and hold it firmly in that position, maintaining a shallow cutting angle.
5. Press the lock-off button and squeeze the trigger to start the saw.
6. With the saw running at full speed, slowly tilt the saw until the tip of the blade contacts the work piece and begins to cut. After the blade cuts through the work piece, tilt the saw upward until the blade is perpendicular to the work piece.

Caution: Make sure the blade does not touch the work piece until the saw reaches full speed. Loss of control and possible injury could result.

METAL CUTTING
Metals such as pipe, steel rods, sheet steel, aluminum, brass and copper can be cut with your reciprocating saw.

› To cut thin sheet material, "sandwich" the material between hardboard or plywood and clamp the layers to limit vibration and material tearing.
› Always use a fine toothed metal cutting blade and run the saw at medium speeds when cutting metal.
› Use cutting oil to keep the blade cool, increase cutting action, and prolong the life of the blade.
› Do not twist or bend the saw blade. Let it cut at its own speed.

⚠ **Warning:** Always clamp the work piece in a vise, or to a workbench or table. Do not hold work piece in your hand.

⚠ **Warning:** Never use gasoline as a lubricant or as a cleaning agent. A spark from the motor may cause an explosion. Gasoline will also damage the plastic components of the saw.

MAINTENANCE

› When not in use, the reciprocating saw should be stored in a dry, frost free location, out of reach of children.
› Keep ventilation slots of the reciprocating saw clean at all times and prevent any foreign matter from entering.
› If the housing of the reciprocating saw requires cleaning, do not use solvents but a moist soft cloth only.
› Blow out the ventilation slots with compressed air periodically.
› Periodically clean dust and debris from the blade clamp with dry compressed air.
› If the collar resists twisting, twist the collar back and forth to shake debris loose.
› Periodically lubricate the blade clamp with a dry lubricant such as graphite.

NOTE: Nova Gear will not be responsible for any damage or injuries caused by repair of the reciprocating saw by an unauthorised person or by mishandling of the reciprocating saw.

WASTE DISPOSAL & RECYCLING

Do not dispose of this product in household waste!
Please recycle this product responsibly in accordance with local and national law.

SERVICING

For information on servicing and repairs please contact Spot-on on 1300 658 338 or visit www.spoton.com.au.

WARRANTY

The NG-54 Reciprocating Saw comes with a 3 year manufacturers warranty.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Separate to the above Australia Consumer Law, Spot-on offers a global warranty.

The warranty period commences on the date of purchase, which can be verified on your receipt or invoice. We cannot offer a warranty for damages and defects on appliances or their parts caused by improper use or treatment. Damage caused by failure to comply with the operating manual will be excluded from the warranty. In the event that an unauthorised persons has modified the appliance, the warranty will be rendered void. Damages that are caused by improper handling are excluded from the guarantee.

If you have any concerns or wish to make a warranty claim please contact your retailer or Spot-on Laser and Tool Company on 1300 658 338.

Spot-on Laser and Tool Company PTY LTD
10-12 Dowsett Street,
South Geelong, VIC 3220
Australia

NOTES


Spot-on