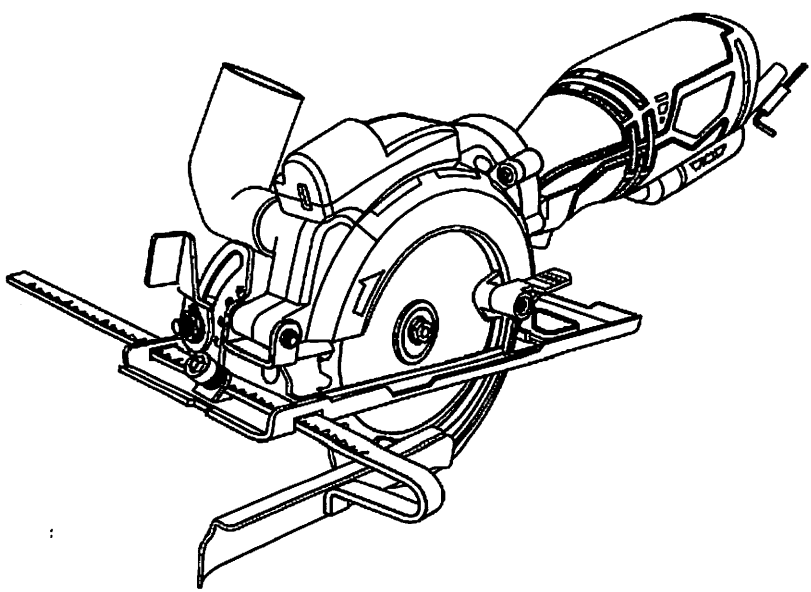
5.8A MINI CIRCULAR SAW

Owner's Manual



PRODUCT SPECIFICATIONS:

Rated Power:	120 V, 60 Hz,5.8 A
No Load Speed:	3,700 RPM (no load)
Blade Dimension:	4 ½" (115 mm)
Arbor:	3/8" (9.5 mm)
Cutting Capacity:	1 11/16" (42.8mm)

⚠ WARNING: To reduce the risk of injury, user must read and understand this operator's manual before operating this tool. Save this Manual for future reference.

⚠ 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 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:

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.

⚠ WARNING: READ AND UNDERSTAND ALL WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS

WORK AREA SAFETY:

- **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 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

- **Power tool plugs must match the outlet.** Never modify the plug in any way. Do not use any adapter plugs in any earthed (grounded) power tools. 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.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the 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 grounded.
- **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 cords increase the risk of electric shock.
- **When operating a power tool outside, use an extension cord suitable for outdoor use.** These cords are rated for outdoor use and reduce the risk of electric shock.
- **Do not use AC only rated tools with a DC power supply.** While the tool may appear to work. The electrical components of the AC rated tool are likely to fail and rate a hazard to the operator.

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.
- **Use safety equipment.** Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection for appropriate conditions will reduce personal injuries.

- **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. Air vents may cover moving parts and should be avoided.
- **Avoid accidental starting.** Ensure the switch is in the off position before plugging in. Carrying power tool with your finger on the switch or plugging in power tools that have the switch on invites accidents.
- **Remove any adjusting keys or wrenches before turning the power tool on.** A wrench or key that is left attached to a rotating part of the tool may result in personal injury.
- **Do not overreach.** Maintain proper footing and balance at all times. Loss of balance can cause an injury in an unexpected situation.
- **If devices are provided for 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 use a ladder or unstable support.** Stable footing on a solid surface enables better control of the tool in unexpected situations.
- **Keep tool handles dry, clean and free from oil and grease.** Slippery handles cannot safely control the tool.

TOOL USE AND CARE

- **Secure the work piece.** Use clamp or other practical way to hold the work piece to a stable platform. Holding the work piece by hand or against your body is unstable and may lead to loss of control.
- **Do not force the power tool.** The tool will perform the job better and safer at the feed rate for which it is designed. Forcing the tool could possibly damage the tool and may result in personal injury.
- **Use the correct power tool for the job.** Don't force the tool or attachment to do a job for which it is not 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 or replaced by an authorized service center.
- **Turn power tool off, and disconnect the plug** from the power source and/or battery pack from the power tool before making any adjustments, changing the accessories, or storing the tools. Such preventive safety measures reduce the risk of an accidental start up which may cause personal injury.
- **Store idle tool out of reach of children and other inexperienced persons.** It is dangerous in the hand of untrained users.
- **Maintain power tools with care.** Check for proper alignment and binding of moving parts, component breaks, and any other conditions that may affect the tool's operation. A guard or any other part that is damaged must be properly repaired or replaced by an authorized service center to avoid risk of personal injury.
- **Use recommended accessories.** Using accessories and attachments not recommended by the manufacturer or intended for use on this type tool may cause damage to the

tool or result in personal injury to the user. Consult the operator's manual for recommended accessories.

- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Feed the work piece in the correct direction and speed.** Feed the work piece into a blade, cutter, or abrasive surface against the direction of the cutting tool's direction of rotation only. Incorrectly feeding the work piece in the same direction may cause the work piece to be thrown out at high speed.
- **Never leave the tool running unattended, turn the power off.** Do not leave the tool until it comes to a complete stop.
- **Never start the power tool when any rotating component is in contact with the work piece.**

⚠ WARNING:

USE OF THIS TOOL CAN GENERATE AND DISBURSE DUST OR OTHER AIRBORNE PARTICLES, INCLUDING WOOD DUST, CRYSTALLINE SILICA DUST AND ASBESTOS. Direct particles away from face and body. Always operate tool in a well-ventilated area and provide for proper dust removal. Use dust collection system wherever possible. Exposure to the dust may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with the dust. Allowing dust to get into your mouth or eyes, or lay on your skin may promote absorption of harmful material. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for dust exposure, and wash exposed areas with soap and water.

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.
- **Service Your Power Tool periodically.** When cleaning a tool, be careful not to disassemble any portion of the tool since internal wires may be misplaced or pinched.

⚠ WARNING:

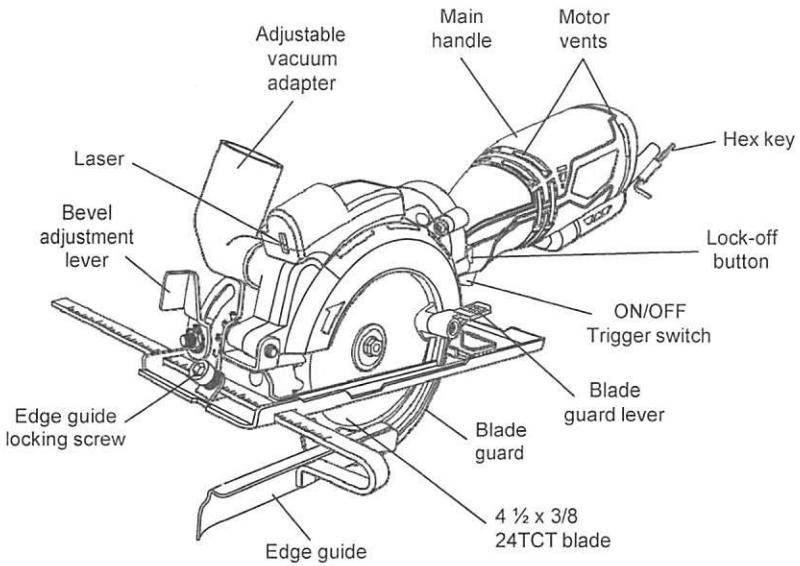
READ AND UNDERSTAND ALL WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

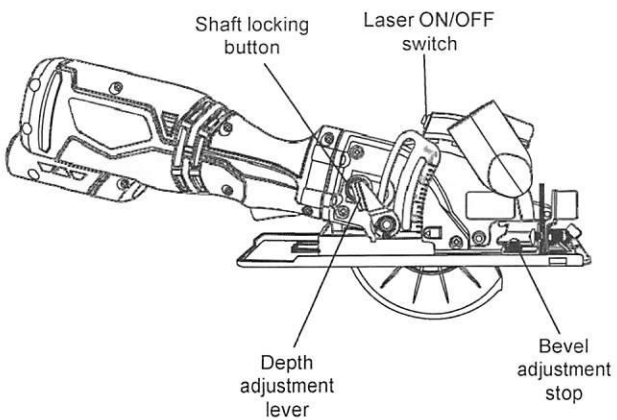
SAVE THESE INSTRUCTIONS

EXTENSION CORDS

Grounded tools require a three wire extension cord. Double insulated tools can use either a two or three wire extension cord. As the distance from the power supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. Refer to the table shown below to determine the required minimum wire size.
The smaller the gauge number of the wire, the greater the capacity of the cord. For example: a 14-gauge cord can carry a higher current than a 16-gauge cord. When using more than one extension cord to make up the total length, be sure each cord contains at least the minimum wire size required. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum wire size.

KNOW YOUR CIRCULAR SAW





ASSEMBLY AND OPERATING

NOTE: For illustrative purposes, some drawings show the vacuum adaptor installed on the saw. The vacuum adaptor does NOT have to be installed if a vacuum is not being used.

REMOVING AND INSTALLING A BLADE

⚠ **WARNING:** Always remove the plug from the power source before removing the blade or adjusting the saw in any way.

⚠ **WARNING:** Use caution when handling the blade. It is sharp and can easily cut your hand.

1. Press inward on the shaft locking button (1) (Fig. 1).

2. Insert the 5mm hex key (2) into the blade screw (3). While pressing inward on the shaft locking button, rotate the hex key clockwise until the shaft locking button engages with the blade shaft. Continue turning the hex key clockwise and remove the blade screw and the outer blade flange (4).
   NOTE: The blade screw is a left hand thread.

3. Rotate the blade guard lever (5) counter clockwise as far as it will go.

4. If there is already a blade installed on the saw, lift the blade off the spindle (6) and slide it out through the slot in the sole plate.

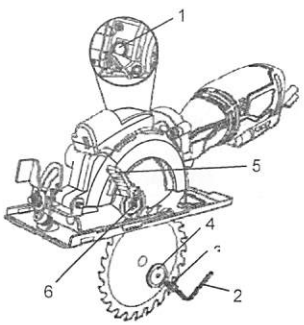
5. 

Fig. 1

To reinstall a blade, reverse the above procedure.
NOTES:
a) Make sure the blade teeth are pointing forward at the bottom of the blade.
b) When re-installing the outer flange nut make sure the flats of the flange nut fit over the flats on the spindle.
c) Turn the blade screw counter clockwise to thread it into the spindle. Make sure the screw is not cross threaded.

6. When the new blade, outer flange and blade screw are in place, press the spindle locking button and fully tighten the blade screw.

7. When the blade screw is fully tightened, carefully rotate the blade to ensure it does not wobble. If it wobbles, remove and reinstall the blade making sure it is installed correctly.

SETTING THE CUTTING DEPTH

The cutting depth of the blade should be set to suit the thickness of the material being cut. The cutting depth should be approximately 1/8" (3 mm) greater than the thickness of the material being cut.

1. Rotate the cutting depth locking lever (1) counter clockwise (Fig. 2).

2. Lower the sole plate to the desired depth.
   NOTE: Align the desired depth on the depth control scale (2) with the alignment mark (3) on the saw housing.

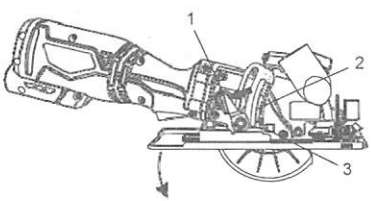


Fig. 2

ASSEMBLY AND OPERATING

SETTING THE BEVEL CUTTING ANGLE

The sole plate can be set to perform bevel cuts up to 45°.

1. Rotate the bevel angle locking lever (1) counter clockwise (Fig. 3).

2. Rotate the sole plate (2) to the desired angle.
   NOTES:
   a) Align the desired angle on the bevel scale (3) with the alignment mark (4) on the sole plate housing.
   b) Always make a test cut on a scrap workpiece and check to make sure the bevel cut is correct.

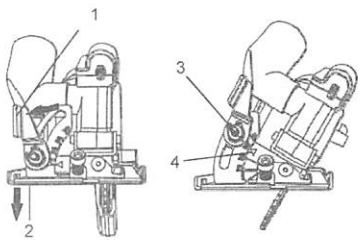


Fig. 3

SETTING THE "ZERO" BEVEL ANGLE FOR ACCURATE 90° CUTTING

Before making any cuts, it is important to make a test cut on a scrap workpiece and adjust the bevel angle stop if necessary to ensure that the "zero" bevel adjustment provides accurate 90° cuts.

1. Loosen the bevel locking lever (1) and rotate the sole plate toward the 0° mark as far as it will go and tighten the bevel angle locking lever (Fig 4).

2. Make a test cut on a scrap workpiece and check the cut with a carpenters' square to verify that the saw is cutting at 90°.

3. If the test cut is not at 90°, turn the zero adjustment lock nut (2) counter clockwise approximately ¼ turn using a 7mm wrench.

4. Use a #2 ⊜ screwdriver to turn the zero bevel adjusting screw (3) in or out until the saw is cutting at 90° when the sole plate is contacting the adjusting screw.

5. Tighten the lock nut while using the screwdriver to prevent the adjusting screw from turning.
   NOTE: When the final adjustment is made and the locknut tightened, recheck the cutting angle on a scrap workpiece.

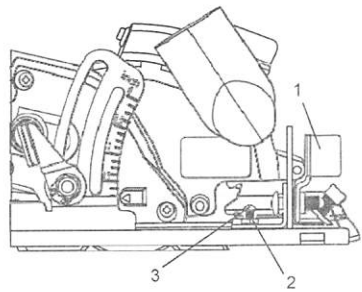


Fig. 4

INSTALLING THE EDGE GUIDE

The edge guide can be used to facilitate accurate cutting when ripping pieces up to 5" wide.

1. Loosen the edge guide locking screw (1) counter clockwise approximately 2 turns using the 5mm hex key (Fig. 5).

2. Slide the edge guide mounting rod (2) into the mounting slots (3) in the sole plate.

3. Align the desired cutting width on the scale (4) with the 0° cutting mark (5) in the sole plate.

4. Tighten the edge guide locking screw to lock the edge guide into position.
   NOTE: Do not over tighten as you may strip the threads.

5. Make a test cut on a scrap workpiece to verify the edge guide setting. Adjust as necessary.

ASSEMBLY AND OPERATING

INSTALLING THE EDGE GUIDE – cont'd

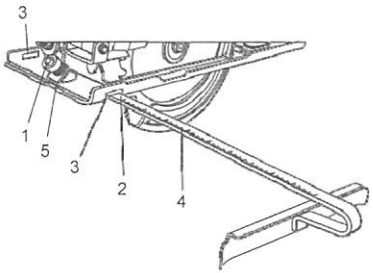


Fig. 5

INSTALLING THE VACUUM ADAPTER

A workshop vacuum can be attached to the circular saw to collect much of the dust created from cutting.

1. Place the small end of the vacuum adaptor (1) over the vacuum port (2) on the blade housing (Fig. 6).
   NOTE: Rotate the adaptor slightly while pushing it onto the vacuum port.

2. Attach a standard workshop vacuum to the large end of the adaptor.
   NOTE: Not all of the cutting dust will be captured by the vacuum as some will be thrown beyond the vacuum range.

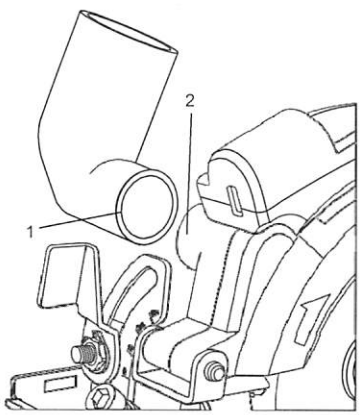


Fig. 6

⚠ WARNING

For safety reasons, the operator must read the sections of this Owner's Manual entitled "GENERAL SAFETY WARNINGS", "POWER TOOL SAFETY", "SPECIFIC SAFETY RULES", "EXTENSION CORD SAFETY" and "SYMBOLS" before using this circular saw.

Verify the following every time the circular saw is used:

1. **Correct blade is installed for the material being cut.**
2. **Blade is in good condition and is properly installed.**
3. **Blade guard is in place and is in good working order.**
4. **Workpiece is properly secured.**
5. **Safety glasses, dust mask and hearing protection are being worn.**

Failure to observe these safety rules will significantly increase the risk of injury.

ASSEMBLY AND OPERATING

LOCK-OFF BUTTON AND TRIGGER SWITCH

The lock-off button (1) is a safety device designed to reduce the possibility of accidentally starting the saw (Fig. 7). This button must be depressed before the trigger switch (2) can be depressed.

1. To turn the saw ON, depress the lock-off button with your thumb.

2. While holding the lock-off button in the depressed position, squeeze the trigger switch to start the saw.

3. Once the saw starts, release the lock-off button. The saw will remain running until the trigger switch is released.

4. To turn the saw OFF, release the trigger switch.
   NOTE: The lock-off button must be depressed again to restart the saw.

ASSEMBLY AND OPERATING

LOCK-OFF BUTTON AND TRIGGER SWITCH – cont'd

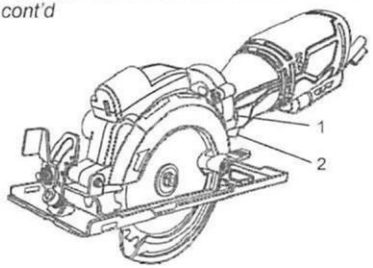


Fig. 7

LASER ON/OFF SWITCH

This saw is equipped with a laser guidance system for more precise cutting.

⚠ **DANGER:** Never allow the laser beam to shine into a person's eyes. Serious eye damage could result.

To turn the laser ON, press the left side of the laser switch (1) (Fig. 8). To turn the laser OFF, press the right side of the laser switch.

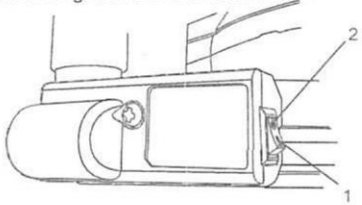


Fig. 8

GENERAL CUTTING

NOTE: Always make a test cut on a scrap workpiece to verify that all settings are correct.

1. Make any adjustments to the saw before plugging it into the power source. Adjustments include cutting depth, bevel cutting angle and edge guide (if installed).
2. Clearly mark the workpiece to locate the position of the cut.
3. Hold a smaller workpiece with a vise. Clamp a larger workpiece to a work bench or table.

⚠ **DANGER:** Any workpiece that is not adequately clamped in place or properly supported for cutting may come loose or jamb the blade, causing serious injury. Never hold the workpiece in your hand.

4. Make sure there are no nails, screws, clamps or foreign materials in the path of the saw blade.
5. Turn the laser ON.
6. Place the front edge of the sole plate on the workpiece.
7. While firmly gripping the saw, and with the blade NOT in contact with the surface to be cut, start the saw by depressing the lock-off button and then the trigger switch.
8. Once the saw has reached full speed, gradually bring the moving blade into contact with the workpiece at the appropriate location.

NOTE: To align the saw blade with the cutting mark, use the guide marks on the front of the sole plate (Fig. 9). Use the 0° cutting mark (1) and the laser line (2) for right angle cuts. Use the 45° mark (3) for 45° bevel cuts. The 45° mark will allow for the extra material needed for the angle cut. Always make a test cut on a scrap workpiece before cutting the new material.

ASSEMBLY AND OPERATING

GENERAL CUTTING – cont'd

⚠ WARNING: Do not force the circular saw. Use only enough force to keep the blade cutting at full speed. Excessive pressure on the blade will cause it to slow down and overheat, resulting in poor cut quality and damage to the motor.

9. Turn laser OFF.

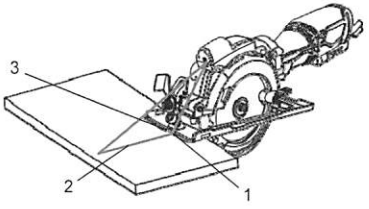


Fig. 9

PLUNGE CUTTING

⚠ WARNING: To avoid loss of control, damage to the blade or damage to the workpiece, always use extreme caution when making plunge cuts. It is not recommended to plunge cut any material other than wood.

1. To plunge cut inside the edges of a workpiece, clearly mark the cutting line on the workpiece.

2. Set the depth (Fig. 2) and set the bevel angle at 0° (Fig. 3).

3. Set the saw on the workpiece so the front edge of the sole plate (1) is flat on the workpiece (Fig. 10).

4. Open the blade guard by rotating the blade guard lever (2) forward.

5. Align the saw blade with the cutting line (3) using the 0° cutting mark on the sole plate and the laser line.
   NOTE: Make sure the saw blade is inside the area to be cut out.

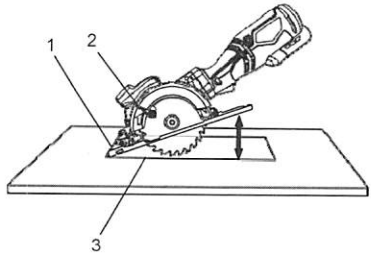


Fig. 10

6. Start the saw and slowly lower the blade onto the workpiece while holding the blade guard lever forward to allow the blade to cut into the workpiece.

7. Continue lowering the blade into the workpiece until the full cutting depth has been achieved. Continue sawing and complete the cut as required.

CUTTING USING THE EDGE GUIDE

Whenever possible, install the edge guide on the left hand side of the sole plate (Fig. 11). This will place the majority of the tool weight on the larger portion of the workpiece, making it easier to control the tool. If necessary, the edge guide may be installed from the opposite side, but the edge guide mounting rod MUST engage both of the edge guide slots in the sole plate.

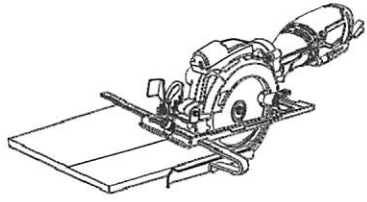


Fig. 11

ASSEMBLY AND OPERATING

CHANGING THE LASER BATTERIES

The batteries that operate the laser will have to be replaced after considerable use of the laser.

1. Turn the laser switch OFF.

2. Remove the laser cover screw (1) using a #2 ⊖ screwdriver (Fig. 12).

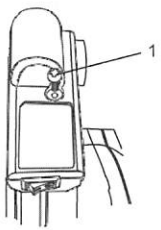


Fig. 12

3. Lift the laser cover (2) off the top of the laser assembly Fig. 13).

4. Remove the two old batteries (3).

⚠ **DANGER:** Never allow the laser beam to shine into a person's eyes. Serious eye damage could result. Make sure the laser switch is OFF and the laser is NOT pointing toward you while replacing the laser batteries and when checking the laser function.

5. Insert two new batteries.
   NOTES:
   a) Use two 1.5V LR 44 batteries
   b) Install the batteries with the "+" side (4) of the batteries facing the rear of the tool.

6. Re-install the laser cover and fasten it in place with the laser cover screw.

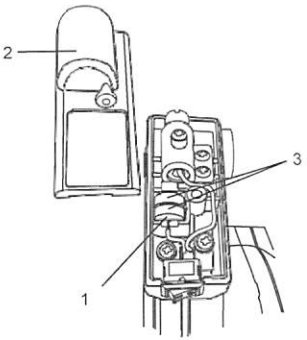


Fig. 13

MAINTENANCE

GENERAL

⚠ WARNING: When servicing, use only identical replacement parts. The use of any other part may create a hazard or cause product damage.

DO NOT use solvents when cleaning plastic parts. Plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use a clean cloth to remove dirt, dust, oil, grease etc.

⚠ WARNING: Do not allow brake fluids, gasoline, petroleum-based products, penetrating oils, etc. to come into contact with plastic parts. They contain chemicals that can damage, weaken or destroy plastic.

DO NOT abuse power tools. Abusive practices can damage the tool and the workpiece.

⚠ WARNING: DO NOT attempt to modify tools or create accessories. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious injury. It will also void the warranty.

It has been found that electric tools are subjected to accelerated wear and possible premature failure when they are used on fiberglass boats and sports cars, wallboard, spackling compounds or plaster. The chips and grindings from these materials are highly abrasive to electric tool parts such as 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. During any use on these materials it is extremely important that the tool is cleaned frequently by blowing it out with an air jet.

⚠ WARNING: Always wear safety goggles or safety glasses with side shields during all cutting operations. It is critical that you also wear safety goggles or safety glasses with side shields and a dust mask while blowing dust out of the circular saw with an air jet. Failure to take these safety precautions could result in permanent eye or lung damage.

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 conditions. Therefore, no further lubrication is required.