TOOL SHOP®

241-9843



ELECTRIC RECIPROCATING SAW

Operator's Manual

SAVE THIS MANUAL

You will need this manual for safety instructions, operating procedures and warranty. Put it and the original sales receipt in a safe dry place for future reference.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: *When using electric tools, machines or equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury.*



READ ALL INSTRUCTIONS BEFORE USING THIS TOOL

1. **KEEP WORK AREA CLEAN.** Cluttered areas invite injuries.
2. **CONSIDER WORK AREA ENVIRONMENT.** Don't use power tools in damp, wet, or poorly lit locations. Don't expose your tool to rain. Keep the work area well lit. Don't use tools in the presence of flammable gases or liquids.
3. **KEEP CHILDREN AND BYSTANDERS AWAY.** All children should be kept away from the work area. Don't let them handle machines, tools or extension cords. Visitors can be a distraction and are difficult to protect from injury.
4. **GROUNDED TOOLS** must be plugged into an outlet that itself is properly installed and grounded. Grounding provides a low-resistance path to carry electricity to ground away from the operator, should the tool malfunction electrically. Do not remove the grounding prong from the plug or alter the plug in any way. If in doubt as to whether the outlet is properly grounded according to code, check with a qualified electrician.
5. **OBSERVE PROPER PRECAUTIONS REGARDING DOUBLE INSULATION.** This tool is double insulated. It is equipped with a polarized plug. One blade is wider than the other, so it will fit into a polarized outlet only one way. If you have difficulty inserting the plug, try reversing it. If it still doesn't fit , do not alter the plug; have a qualified electrician install a polarized outlet.
6. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces: pipes, radiators, ranges, and refrigerator enclosures. When your body is grounded the risk of electric shock increases. When working wherever "live" electrical wires may be encountered, try to ascertain whether there is a danger of shock. Even so, DO NOT TOUCH ANY METAL PARTS OF THE TOOL while using it. Hold the tool only by the plastic grip to prevent electric shock if you contact a live wire.
7. **DO NOT ABUSE THE CORD.** Never carry your tool by the cord or pull on the cord to unplug it. Protect the cord from potential sources of damage: heat, oil & solvents, sharp edges, or moving parts. Replace damaged cords immediately.
8. **WHEN WORKING OUTDOORS, USE AN OUTDOOR-RATED EXTENSION CORD.** An extension cord rated for outdoor use must be marked "W-A" or "W".
9. **DO NOT EXPOSE ELECTRICAL POWER TOOLS TO MOISTURE.** Rain or wet conditions can cause water to enter the tool and lead to electric shock.
10. **ENSURE THE EXTENSION CORD YOU USE IS OF SUFFICIENT GAUGE FOR ITS LENGTH.**

Recommended Minimum Wire Gauge for Extension Cords

Amps from Tool Nameplate	25' length	50' length	75' length	100' length	150' length	200' length
0-5 amps	16 ga.	16 ga.	16 ga.	14 ga.	12 ga.	12 ga.
5.1-8 amps	16 ga.	16 ga.	14 ga.	12 ga.	10 ga.	Do Not Use
8.1-12 amps	14 ga.	14 ga.	12 ga.	10 ga.	Do Not Use	Do Not Use
12.1-15 amps	12 ga.	12 ga.	10 ga.	10 ga.	Do Not Use	Do Not Use
15.1-20 amps	10 ga.	10 ga.	10 ga.	Do Not Use	Do Not Use	Do Not Use

11. **STORE IDLE EQUIPMENT.** Store equipment in a dry area to inhibit rust. Equipment also should be in a high location or locked up to keep out of reach of children.
12. **DON'T FORCE THE TOOL.** It will do the job better and more safely at the rate for which it was intended.
13. **USE THE RIGHT TOOL.** Don't force a small tool or attachment to do the work of a larger industrial tool. Don't use a tool for a purpose for which it was not intended.
14. **DRESS PROPERLY.** Don't wear loose clothing or jewelry; they can be caught in moving parts. Protective, non-electrically conductive gloves and non-skid footwear are recommended when working. Wear protective hair covering to contain long hair and keep it from harm.

IMPORTANT SAFETY INSTRUCTIONS

15. **USE EYE PROTECTION.** Use a full-face mask if the work you're doing produces metal filings, dust or wood chips. Goggles are acceptable in other situations. Wear a clean dust mask if the work involves creating a lot of fine or coarse dust.
16. **SECURE WORK.** Use clamps or a vise to hold the work. It's safer than using your hands and it frees both hands to operate the tool.
17. **DON'T OVERREACH.** Keep proper footing and balance at all times. Do not reach over or across machines that are running.
18. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. For safe performance,Keep handles dry, clean and free from oil and grease.
19. **AVOID UNINTENTIONAL STARTING.** Be sure the switch is in the **OFF** position before plugging in.
20. **ALWAYS CHECK AND MAKE SURE TO REMOVE ANY ADJUSTING KEYS OR WRENCHES** before turning the tool on. Left attached, these parts can fly off a moving part and result in personal injury.
21. **DO NOT USE THE TOOL IF IT CANNOT BE SWITCHED ON OR OFF.** Have your tool repaired before using it.
22. **DISCONNECT THE PLUG FROM POWER BEFORE MAKING ANY AD - JUSTMENTS.** Changing attachments or accessories can be dangerous if the tool could accidentally start.
23. **STAY ALERT.** Watch what you are doing & use common sense. Don't operate any tool when you are tired.
24. **CHECK FOR DAMAGED PARTS.** Before using this tool, any 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, mountings, and other conditions that may affect its operation. Inspect screws and tighten any ones that are loose. Any part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in the instruction manual. Have defective switches replaced by an authorized service center. Don't use the tool if switch does not turn it on and off properly.
25. **REPLACEMENT PARTS.** When servicing, use only identical replacement parts.
26. **SERVICE AND REPAIRS** should be made by qualified repair technicians at an authorized repair center. Improperly repaired tools could cause serious shock or injury

SAFETY PRECAUTIONS FOR RECIPROCATING SAW



1. **GUARD AGAINST ELECTRIC SHOCK.** *When cutting wherever "live" electrical wires may be encountered, hold the tool only by the plastic handle and the rubber grip at the front of the tool to prevent electric shock. DO NOT TOUCH ANY METAL PARTS OF THE TOOL. If you contact a live wire, the exposed metal of the saw becomes live as well, and can cause a severe shock to the operater.*
2. *Before switching on the tool, be sure the blade is not contacting the work piece.*
3. **DO NOT START THE SAW WITH THE BLADE IN CONTACT WITH ANY SURFACE.** *The reciprocating action will cause the saw to bounce violently and could cause injury.*
4. **LET THE SAW COME TO A STOP** *before putting it down. The reciprocating action could cause the saw to jerk violently if the blade comes in contact with any objects.*
5. *Always wear safety glasses or goggles, normal prescription eye or sunglasses are not safety glasses.*
6. *Do not cut nails or screws unless you are using a blade specifically designed for this purpose, Inspect your material before cutting.*



WARNING: *The warnings, cautions, and instructions detailed in this manual cannot cover all possible conditions and situations that occur. It must be understood by the operator that* ***COMMON SENSE AND CAUTION ARE FACTORS*** *that cannot be built into this product, but* ***MUST BE SUPPLIED BY THE OPERATOR****.*

SPECIFICATIONS

Reciprocating Saw

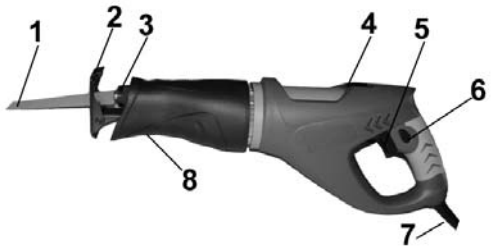
- Rated voltage: 120 volts, 60Hz
- Current rating: 6.0 Amps
- No load speed: 0-2500 SPM
- Stroke length: 7/8 inch (22mm)

Including:

- 1 metal cutting blade
- 1 wood cutting blade
- 1 blade clamp hex key
- 1 set of spare carbon brushes

FUNCTION DESCRIPTION

1. Blade
2. Pivot shoe
3. Quick-release blade clamp
4. Position regulator button
5. On/off trigger switch
6. Lock-on button
7. Power cord & plug
8. Locking nut (not shown)



OPERATING PROCEDURES

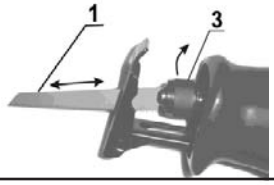
BLADES

Your reciprocating saw is designed to accept Standard Reciprocating Saw Blades. Note the the shape of the ends of the blades supplied with your tool. Check to ensure that any blades you use on this saw are designed for the task.

WARNING: *Before installing or removing saw blade, turn off the power switch and disconnect the plug from the power source.*

INSTALLING A SAW BLADE

1. Unplug the power cord first.
2. Rotate the Quick-release blade clamp (3) counterclockwise by hand
3. At the same time push the blade (1) to the deepest position, then release the quick-release blade clamp, make sure it is securely fastened.



WARNING: *Before you plug in the power cord, always pull on the blade sharply to ensure it is firmly held in the blade clamp. Failure to do so may result in serious injury.*

RUNNING THE RECIPROCATING SAW

NOTE: Always check that the power supply corresponds to the voltage on the rating name plate.

SWITCH ON AND OFF

1. Connect the plug to the power supply.
2. Pull the trigger switch (5) and press the lock-on button (6).
3. When you release the trigger switch(5), the saw turns off.



OPERATING PROCEDURES

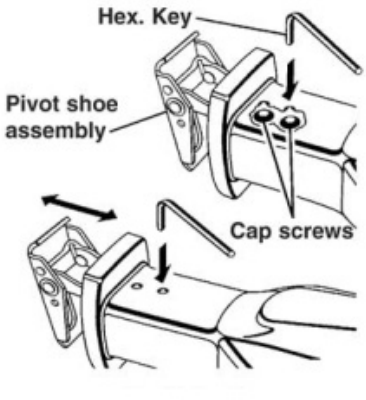


Fig. 1



Fig. 2

SPEED ADJUST

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

Speed is controlled by the amount of trigger switch depression.

PIVOT SHOE ADJUSTMENT

The pivot shoe of your reciprocating saw pivots up and down in both directions. The pivot shoe is also adjustable, allowing the use of the blade teeth at different positions on the blade.

To change position of the pivot shoe assembly- Fig.1

1. Unplug your saw.
   WARNING: Failure to unplug your saw could result in accidental starting causing serious injury.
2. Loosen both the cap screws in the gear frame with hex key.
3. Reposition pivot shoe assembly in or out.
4. Retighten both cap screws securely. Do not over tighten cap screws.
5. Remove hex key.

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

GRIP POSITION ADJUST- Fig. 2

Push the button backward, rotate grip to left or right at the same time. There are five positions for working .

TYPES OF CUTTING

WARNING: *Make sure the blade does not touch the workpiece until the saw reaches its maximum speed set on the Variable Speed Dial. Failure to comply could cause loss of control and result in serious injury.*

NOTE: *Make sure that you do not hit any electrical wires, gas or water pipes. Check the wall with a pipe/cable detector before you begin cutting.*

GENERAL CUTTING

Clamp your workpiece if it is portable, rest the front shoe of the saw on your workpiece (be sure the blade is not contacting the workpiece) and start the saw, exerting enough pressure in the direction of the cut to keep the shoe pressed firmly against the work piece at all times, Do not force the cut or stall the saw. Don't bend or twist the blade, let the tool and the blade do the work.

In general, coarser blades are for wood, plastics , and composites , and finer blades are for cutting metal, chattering or vibration may indicate you need fine blade or higher speed, if the blade overheats or clogs, it may indicate you need a coarser blade when they become dull, dull blades will produce poor results and may overheat the saw.

PLUNGE CUTTING

Clearly mark the line of cut, from a convenient starting point within the cut out area, place the tip of the blade over that point with saw parallel to the line of cut, slowly lower the saw until the bottom edge of the shoe rests on the workpiece and the blade is not touching the workpiece, start the saw and allow it to attain full speed. With the saw resting on the shoe, slowly tilt the saw forward to lower the blade onto the cut line. Continue this motion until the saw blade is perpendicular to the workpiece.

METAL CUTTING

Blades specifically designated for cutting metals must be used for this purpose. You may use light oil as a coolant when cutting metal, this will prevent overheating of the blade, help the blade cut faster, and promote longer blade life.

WOOD CUTTING

When cutting wood material with this tool, it is recommended to use a coarse tooth blade. To ensure maximum performance, adjust the variable speed dial to the upper end of the speed range.

OPERATING PROCEDURES

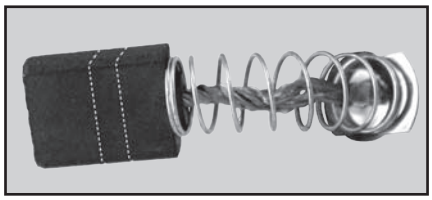
WARNING: *Turn off your reciprocating saw at once, unplug and inspect it for serious problems if:*

- *Moving parts are stuck*
- *Speed drops to an abnormally low level*
- *The motor housing gets hot*
- *Sparks or odors emit from the casing*

MAINTENANCE

CAUTION! *Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.*

- Inspect the tool before each use. Inspect the switch, the power plug and cord assembly for damage. Check for loose screws, misalignment, binding of moving parts, broken, cracked or improper mounting of the bits and attachments, broken parts and any other condition that may affect safe operation. If abnormal noise or vibration occurs, turn off the tool immediately and have the problem corrected before further usage.
- Do not use damaged equipment or serious injury could result.
- Avoid overloading your reciprocating saw. Do not force the tool. It will become hot and lose efficiency. Running it free of load for a minute or two will allow it to cool itself to normal temperature.
- Brushes: This tool has two Carbon Motor Brushes that should be periodically examined for wear. After long use,the brushes in your tool may become worn. This may be evident from a burning smell or excessive sparking visible through the ventilation holes while the tool is running. To inspect or replace the carbon motor brushes:



1. Unscrew the black plastic Motor Brush Cover (See Schematic Drawing #54 on page 8) using a slot screwdriver slowly remove the cover as the brushes are spring-loaded and may jump free, strike a hard surface, and chip.
2. Remove the brushes and examine the black rectangular carbon portions. Examine the concave, wearing surfaces. They should be smooth and clean. If there are large scratch marks, chips broken off and other damage, replace both brushes immediately. When new, these are about 7/16" long ***(see fig. at right)***. We recommend they be replaced when worn about 1/2 way down, at about 1/4"remaining. After this point, they are not held at a steady angle and constant pressure.
3. When the brushes are worn to 1/3 of their original length, about 1/8", they must be replaced or damage to the motor could result.
4. Insert the brushes so that the rectangular carbon portion slides in the slots in the brass holders.
5. Screw the black plastic Motor Brush Cover down properly with a slot screwdriver. Do not over-tighten.
6. Always replace both brushes at the same time.
7. Keep the carbon brushes clean and free to slip in the holders.

When first using the tool with fresh brushes, you will notice a certain amount of sparking. This is normal and will continue until the brush contact surface attains a correct concave profile to match the rotor on the motor .

- Keep the tool housing clean; free of oil, and grease. If necessary, use mild soap and a damp (not wet) cloth. **DO NOT** *let solvents like brake fluid, gasoline, petroleum-based products, etc., contact plastic parts of the housing.* Cleaning with these substances can harm the plastic and compromise the integrity of the double insulation system.
- Clean the tool of all sawdust. Keep the vents clear of dust and debris. Use a brush, soft cloth, or a vacuum cleaner. This will help prevent possible electrical shorts and ensure proper cooling.
- Use care to see that the motor winding does not become damaged or wet with oil or water.
- An authorized repair center should do any repairs, modification, or maintenance that involve opening or disassembling the tool.
- Any damage to the tool should be corrected at an authorized repair center.

SCHEMATIC DRAWING AND PARTS LIST

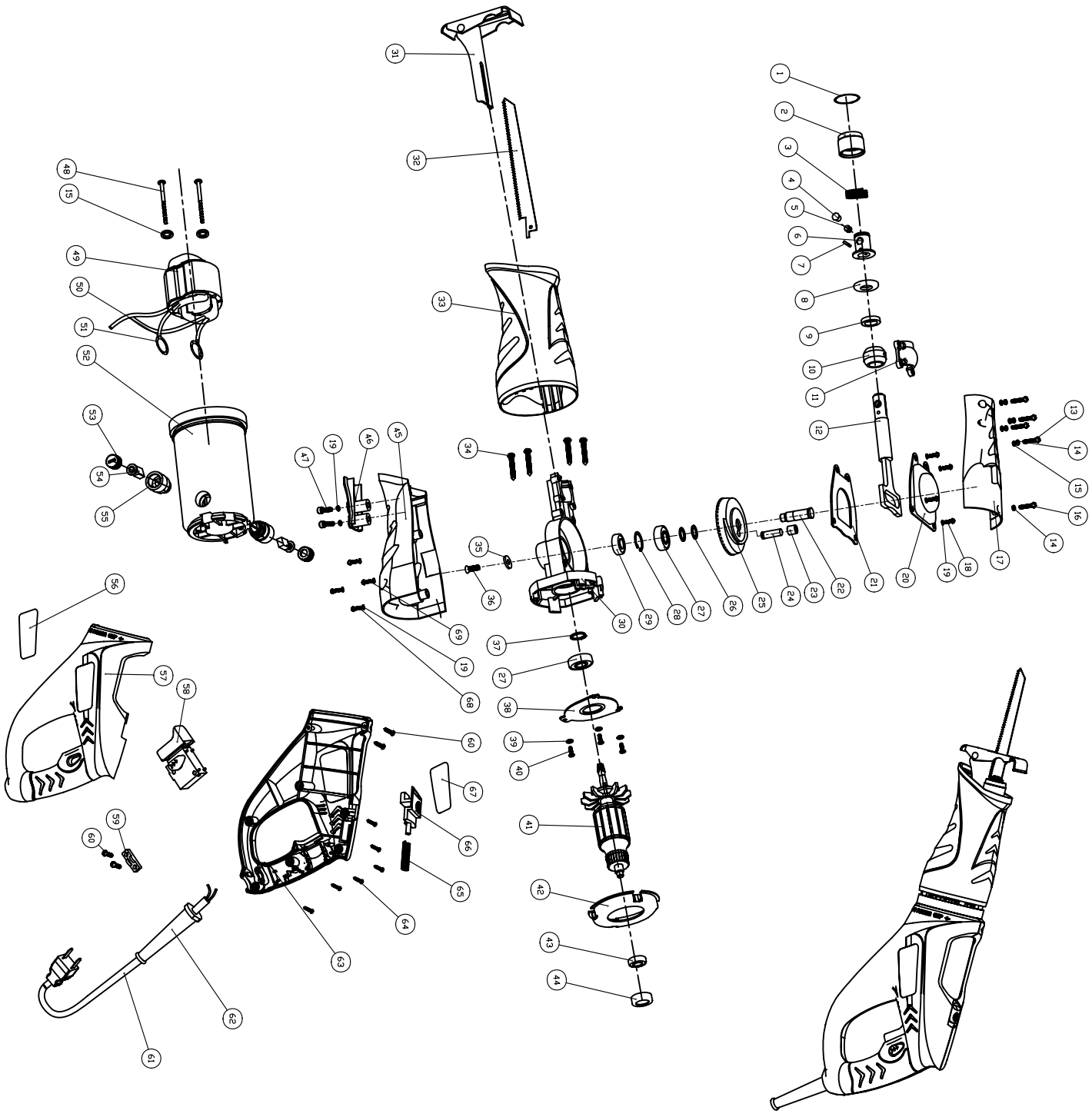
■ Parts list

No.	Part Name	Quantity	No.	Part Name	Quantity
1	Baffle Ring	1	35	Washer	1
2	Outer Ring	1	36	Phillips Sunk Head Screw	1
3	Torsion Spring	1	37	Circularclips for Shaft	1
4	Pin	1	38	Bearing Clamp	1
5	Compression Spring	1	39	Inner Gear Washer	3
6	Inner Ring	1	40	Phillips Sunk Head Screw	3
7	Cylindric Pin	1	41	Armature	1
8	Plastic Washer	1	42	Air Baffle Ring	1
9	Felt Ring	1	43	Bearing	1
10	Sliding Bearing	1	44	Bearing Sleeve	1
11	Ball Cover	1	45	Plastic Sleeve	1
12	Offsetting Rod	1	46	Plastic Supporting Block	1
13	Phillips Pan Head Screw	4	47	Inner Hexagon Cylindric Head Screw	2
14	Spring Washer	5	48	Phillips Pan Head Tapping Screw	2
15	Flat Washer	6	49	Stator	1
16	Phillips Pan Head Screw	1	50	Three Teeth Buckle	6
17	Housing Cover	1	51	Tension Spring	2
18	Phillips Pan Head Screw	4	52	Motor Housing	1
19	Spring Washer	10	53	Brush Cap	2
20	Cover Plate	1	54	Carbon Brush	2
21	Middle Plate	1	55	Brush Holder	2
22	Gear Shaft	1	56	Nameplate	1
23	Needle Bearing	1	57	Left Handle	1
24	Cylindric Pin	1	58	Switch	1
25	Gear	1	59	Cable Clamp	1
26	Washer	2	60	Phillips Pan Head Tapping Screw	4
27	Bearing	2	61	Cable & Plug	1
28	Circularclips for Hole	1	62	Cable Sleeve	1
29	Bearing	1	63	Right Handle	1
30	Enclosure	1	64	Phillips Pan Head Tapping Screw	6
31	Saw Gate	1	65	Self-locking Spring	1
32	Saw Blade	1	66	Revolving Switch	1
33	Leather Sleeve	1	67	Label	1
34	Phill Pan Head Tapping Screw	4	68	Phillips Pan Head Screw	2
			69	Phillips Pan Head Screw	2

■ Please refer to the schematic drawing on page 8.

SCHEMATIC DRAWING AND PARTS LIST

■ Schematic drawing



WARNING: *Repairs should be made by an authorized repair center. Do not open or disassemble this power tool. Contact Sharp Group* Enterprise Co.,Ltd *at 1-866-915-8626 for questions regarding this power tool.*