

Please carefully read and save these instructions before attempting to assemble, maintain, install, or operate this product. Observe all safety information to protect yourself and others. Failure to observe the instructions may result in property damage and/or personal injury. Please keep instructions for future reference.

## Important Operating Instructions



## VARIABLE SPEED RECIPROCATING SAW

**Model: 8609**

### CALIFORNIA PROPOSITION 65

**WARNING:** You can create dust when you cut, sand, drill or grind materials such as wood, paint, metal, concrete, cement, or other masonry. This dust often contains chemicals known to cause cancer, birth defects, or other reproductive harm. Wear protective gear.

**WARNING:** This product or its power cord may contain chemicals, including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

### CAUTION:

**FOR YOUR OWN SAFETY READ INSTRUCTION MANUAL COMPLETELY AND CAREFULLY BEFORE OPERATING THIS RECIPROCATING SAW.**



### SPECIFICATIONS

**Voltage:** 120 AC  
**Cycle:** 60Hz, single phase  
**Power:** 6 Amp  
**No-Load Speed:** 0-2500 RPMs  
**Stroke Length:** 7/8 inch  
**Cutting Capacity:** 4-1/2 inch (Wood); 3/16 inch (Meta)  
**Cord length:** 6-1/2 ft.  
**Weight:** 5.9 lbs

### WARNING!

**Read and understand all instructions.**

Failure to follow all instructions listed below may result in electrical shock, fire and/or serious personal injury.

### SAVE THESE INSTRUCTIONS

#### WORK AREA

**1. Keep your work area clear, clean and well lit.** Cluttered work surfaces and dark areas invite accidents.

**2. Keep people not involved in the work, especially children away from the work area while operating a power tool.**

Distractions can cause you to lose control of the tool.

**3. Do not operate power tools in an unsafe environment such as explosive atmosphere, flammable liquids, gasses and dust.** A spark created by a power tool may ignite the fumes or dust.

### ELECTRICAL SAFETY

**1. Double insulated tools are equipped with a polarized plug (one prong is wider than the other). This plug will fit into a polarized outlet only one way. If it does not fit fully in the outlet, reverse the plug and try again. If it still does not fit fully, contact a qualified electrician to install a polarized plug. Do not modify the plug in any way.** Double insulation eliminates the need for the three wire grounded power cord and grounded electrical system.

**2. Avoid body contact with grounded surfaces such as radiators, pipes, ranges and refrigerators.** There is an increased risk of electrical

For warranty purchases, please keep your dated proof of purchase. File or attach to the manual for safekeeping.

shock if your body is grounded.

**3. Do not operate power tools in the rain or wet conditions.**

Water entering a power tool increases the risk of electrical shock.

**4. Do not stress the power cord. Never carry the power tool by the cord or disconnect the plug from the receptacle by yanking on the cord. Keep cord away from sharp edges, heat, solvents and oil.**

Replace damaged cord immediately. Damaged cords increase the risk of electrical shock.

**5. Use outdoor extension cords when operating the power tool outside. Outdoor power cords are marked "W-A" or "W" and are rated for outdoor use. These cords reduce the risk of electrical shock.**

**ENSURE THE EXTENSION CORD YOU USE IS OF SUFFICIENT GAUGE FOR ITS LENGTH.**

**PERSONAL SAFETY**

**1. Dress appropriately. Do not wear loose clothing or jewelry. Keep long hair pulled back. Keep clothing, hair and gloves away from moving parts.** Loose clothing, jewelry and hair can be snagged in moving parts.

**2. Use common sense, stay alert and watch what you are**

**doing while operating a power tool. Do not use tools while under the influence of alcohol, medication, or drugs.** Keep focused on the work at hand while using a power tool to prevent personal injury.

**3. Make sure the power switch is in the "OFF" position before plugging it into the receptacle.** This will prevent accidental starting. Do not carry tools with your finger on the switch or plugging in the tools with the switch in the "ON" position because it may cause an accident.

**4. Remove adjusting tools such as wrenches or keys before turning the tool on.** A wrench or key left attached to a rotating part can fly off and may cause personal injury.

**5. Do not overreach while operating a this tool. Keep proper footing and balance at all times.** Good balance and solid footing enables better control in unexpected situations.

**6. Always wear appropriate safety equipment. Wear eye protection while operating a power tool.** Use appropriate dust respirators, hearing protection, hard-hat, face shield or safety shoes as dictated by the work and tool.

**TOOL USE AND CARE**

**1. Secure the work piece with clamps or other practical**

**methods to provide a secure work platform.** Holding the work by hand or against your body is not secure and may lead to loss of control.

**2. Do not use the tool if the "ON/OFF" switch is not working.** Operating a tool that cannot be controlled by you is dangerous and must be repaired before use.

**3. Always disconnect the power cord from the electrical outlet before storing the tool, making adjustments or adding/replacing accessories.** This reduces the risk of accidental starting of the tool.

**4. Store the tool in a secure place out of reach of children.** It will prevent the unauthorized use by untrained users.

**5. Properly maintain tools.** Keep all cutting tools sharp and clean. Remove contaminants from the tool and keep clean. Check for broken parts or bending of moving parts before use. If damaged, have the tool serviced before use.

**6. Use only accessories recommended for your model.** Accessories suitable for one tool may become hazardous when used on another tool.

**SERVICE**

**Tool service, mechanical and/or electrical is to be performed only**

by qualified repair personnel. Service performed by unqualified personnel may result in a risk of injury.

**When servicing a tool, use only identical replacement parts.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electrical shock or injury.

## SAFETY RULES FOR RECIPROCATING SAWS

**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 operator.

**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.**

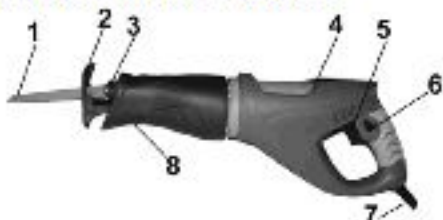
## SAVE THESE INSTRUCTIONS

The package contains:

- ▼ 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

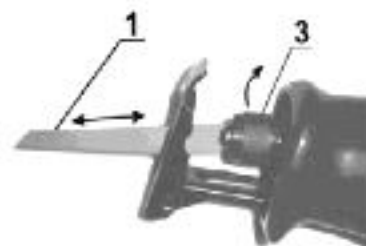
### BLADES

Your reciprocating saw is designed to accept standard reciprocating saw blades. Note the 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.



### 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.

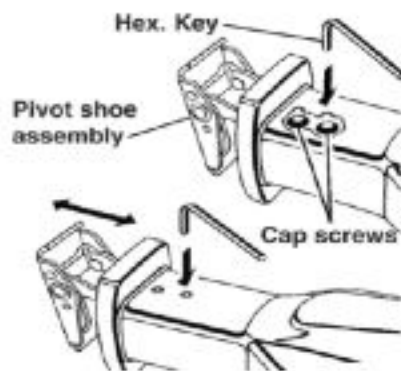


Fig.1

**WARNING:** Failure to unplug your saw could result in 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. Five positions are available.

**WARNING:** Make sure the blade does not touch the work piece 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.

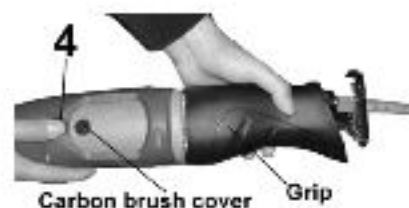


Fig.2

### GENERAL CUTTING

Clamp your work piece, if it is portable. Rest the front shoe of the saw on your work piece (be sure the blade is not contacting the work piece) and start the saw. Exert 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, blades will produce poor results and may overheat the saw.

## PLUNGE CUTTING

Clearly mark the cut line. 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 work piece and the blade is not touching the work piece. Start the saw and allow it to attain full speed. With the saw resting on the shoe, slowly tilt the saw tip into the cut line. Continue this motion until the saw blade is perpendicular to the work piece.

## 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 it 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.

**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. Check for loose screws; misalignment; bending 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 tool inspected.

▼ 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. We recommend they be replaced when worn about 1/2 way down, 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

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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 to clean the vents. 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.

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## **Limited Manufacturer Warranty**

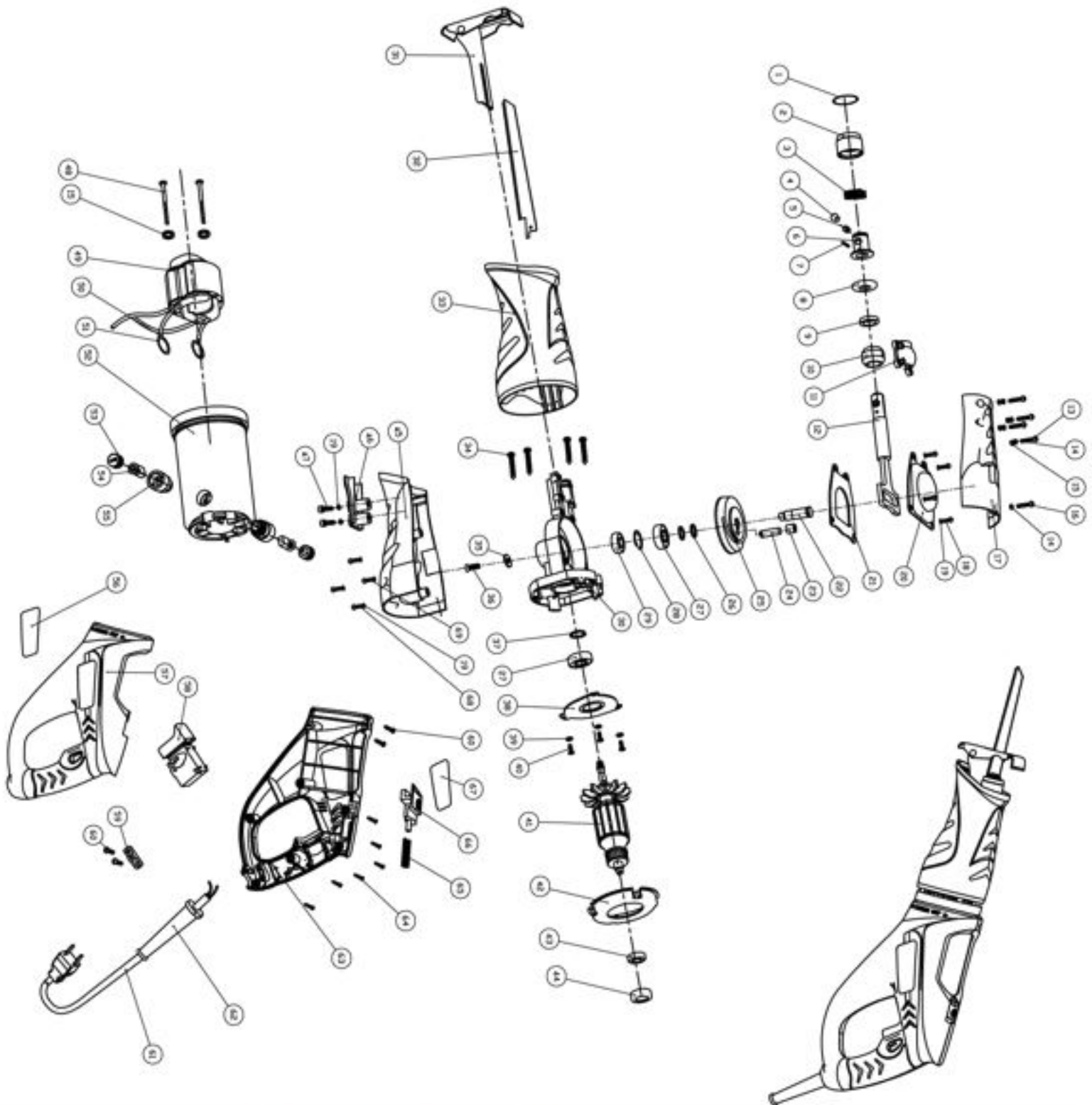
*North American Tool (NAT) Industries makes every effort to ensure that this product meets high quality and durability standards. NAT warrants to the original retail consumer a 1-year limited warranty from the date the product was purchased at retail and each product is free from defects in materials. Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations, or a lack of maintenance. NAT shall in no event be liable for death, injuries to persons or property, or for incidental, special or consequential damages arising from the use of our products. To receive service under warranty, the original manufacturer part must be returned for examination by an authorized service center. Shipping and handling charges may apply. If a defect is found, NAT will either repair or replace the product at its discretion.*

## **DO NOT RETURN TO STORE**

For Customer Service:

Email: [feedback@natitools.com](mailto:feedback@natitools.com) or Call 1-800-348-5004

### Parts List





## Call 1-800-348-5004 for assistance or replacement parts

Please provide the following information:

- Model number
- Part description and number as shown in parts list
- Serial number (if any)

Address any correspondence to:

North American Tool Industries  
84 Commercial Rd  
Huntington, IN 46750

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