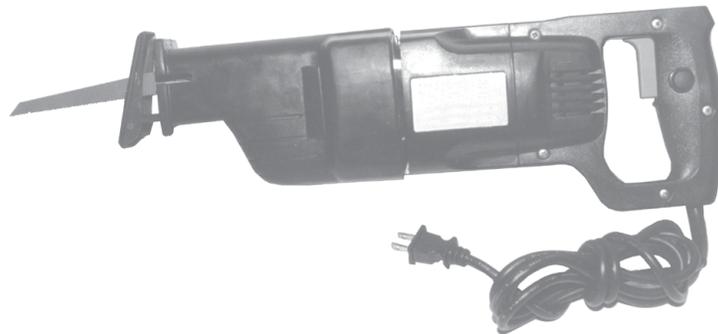


**CHICAGO**  
**Electric Power Tools**

***RECIPROCATING SAW***  
***HEAVY DUTY***

**Model 42597**

**OPERATING AND MAINTENANCE  
INSTRUCTIONS**



3491 Mission Oaks Blvd., Camarillo, CA 93011  
Visit our Web site at <http://www.harborfreight.com>

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**For technical questions and replacement parts, please call 1-800-444-3353**

## Specifications

ITEM	DESCRIPTION
Motor	120V, 60 Hz, Single Phase; 750 watts; 2000 RPM
Power Consumption	7 Amps
Blade Speed	Variable: 0 to 2300 SPM
Stroke	1-1/8 inch
Stock Capacities	1-1/2 inches
Overall Length	17 inches
Shank Size	Standard: 1/2 inch
Blade Size	4 inch steel blade, 5 inch wood blade
Net Weight	8.8 lbs

## Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe place for future reference.

## Safety Warnings and Precautions

**WARNING:** When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

### READ ALL INSTRUCTIONS BEFORE USING THIS TOOL!

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
4. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **Do not force tool.** It will do the job better and more safely at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool capacity.

6. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
7. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
8. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.
9. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
10. **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.
11. **Disconnect power.** Unplug when not in use.
12. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.
13. **Avoid unintentional starting.** Be sure the switch is in the Off position when not in use and before plugging in. Do not carry any tool with your finger on the trigger, whether it is plugged in or not.
14. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
15. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.
16. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.
17. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
18. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.

19. **Don't abuse the power cord.** Never carry a tool by its cord. Do not yank on the cord to disconnect it from the outlet. Do not move bench-mounted, or floor-standing machines with the power cord in the outlet. Keep cord away from heat, oil and sharp edges.
20. **Examine blade before using.** Before each use, examine blade for chips, cracks, or other damage. Do not use if damaged.
21. **Check for tightness on all saw blade adjustments before using.**
22. **Use proper size extension cord.** If an extension cord is required, it must be of the proper size to supply the correct current to the tool without heating up. Otherwise, the extension cord could melt and catch fire, or cause electrical damage to the tool. This tool requires use of an extension cord of 0 to **10 amps** capability (up to 50 feet), with wire size rated at **18 AWG**. Longer extension cords required larger size wire. If you are using the tool outdoors, use an extension cord rated for outdoor use (signified by "WA" on the jacket).

**Note:** Performance of this tool may vary depending on variations in local line voltage. Extension cord usage may also affect tool performance.

**WARNING:** THE WARNINGS, CAUTIONS, AND INSTRUCTIONS DISCUSSED IN THIS INSTRUCTION MANUAL CANNOT COVER ALL POSSIBLE CONDITIONS AND SITUATIONS THAT MAY OCCUR. IT MUST BE UNDERSTOOD BY THE OPERATOR THAT COMMON SENSE AND CAUTION ARE FACTORS WHICH CANNOT BE BUILT INTO THIS PRODUCT, BUT MUST BE SUPPLIED BY THE OPERATOR.

## Unpacking

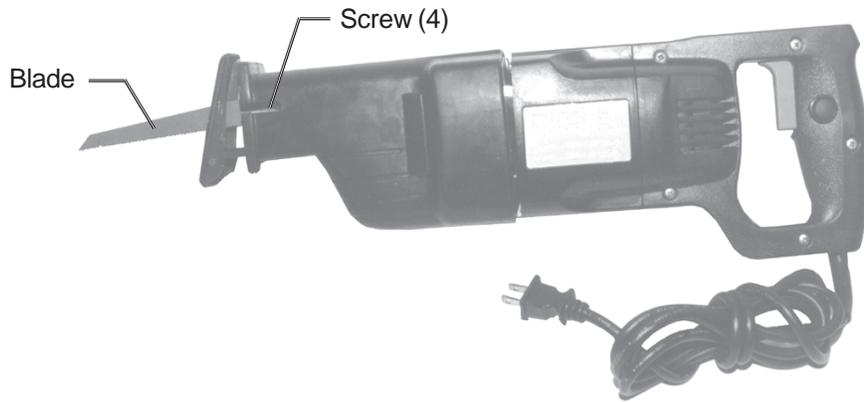
When unpacking, check to make sure the following parts are included: Reciprocating Saw, Wood and Metal Blades, and Hex Key Wrench. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

## Assembly

### Install Blade

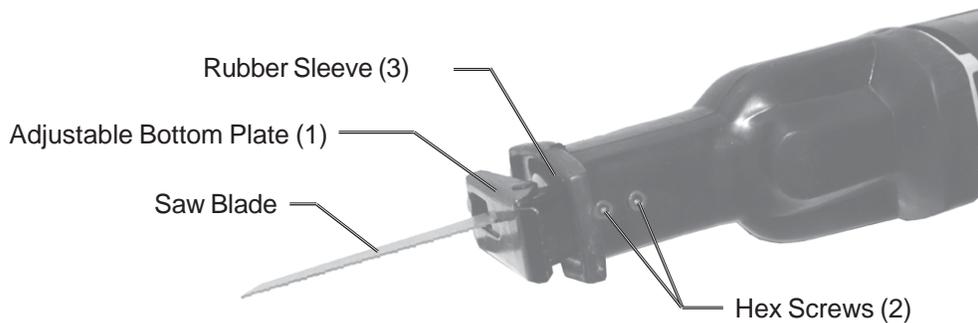
Refer to the photo on the top of the next page.

1. Select the saw blade best suited for stock you are cutting.  
Wood blades have a coarser tooth pitch. Metal blades have a finer tooth pitch. Use each blade only for cutting its specified stock.
2. Using the supplied Hex Key Wrench, loosen, but do not remove Screw (4).
3. Slide the blade (teeth down) into the blade holder as far as possible.
4. Tighten Screw (4).



## Adjusting Shoe

Use the Adjustable Bottom Plate (1) to determine the depth of your cut. Position the Shoe close to the Rubber Sleeve (3) for a deeper cut, further out for a shallower cut.



1. Loosen Hex Screws (2) with supplied Hex Key Wrench.
2. Position the Adjustable Bottom Plate (1) to the desired position.
3. Tighten Hex Screws (2).

## Operation

### Operational Precautions

1. Check the Saw Blade to make sure it does not have any missing teeth or cracks. Do not use a damaged Saw Blade.
2. Check that there is enough space under and behind the workpiece for the reciprocation blade. Be sure that you will not be cutting through any electrical wires or your workbench.
3. Do not put side-to-side pressure on the blade as it may break.
4. Never attempt to remove material stuck in the moving parts of the saw while the saw is running and plugged in.

5. Always unplug the Line Cord (54) before making adjustments or repairs.
6. Never cut stock that is thicker than 1-1/2 inches.
7. Do not attempt to cut curves with the saw as it may break the blade.

**Warning: Always use clamps or other safe, practical ways to hold and support the workpiece. Holding the work by hand or against your body is unstable and may lead to loss of control.**

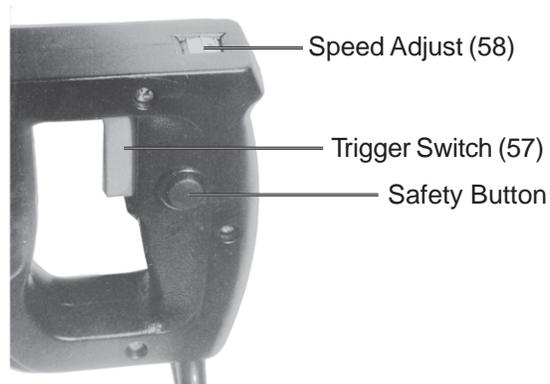
**Caution: Some woods contain preservatives such as copper chromium arsenate (CCA) which can be toxic. When cutting these materials extra care should be taken to avoid inhalation and minimize skin contact.**

### General Operation

1. Before plugging the Line Cord (54) into an outlet, make sure the Safety Button is not being pushed in and fingers are off the Trigger Switch (57).
2. Plug the Line Cord (54) into the outlet.
3. Grip the Saw with both hands, one on the back handle and one on the Rubber Sleeve (3).

Note: The Saw is equipped with a Safety Button which must be depressed before squeezing the Trigger Switch (54).

4. To start the Saw, push in the Safety Button with your thumb and squeeze the Trigger Switch (57) with your index finger.



**Caution: When cutting metal, use cutting oil to cool the blade or damage may result to the blade.**

5. With the blade in motion, place it against the stock to be cut.

Press down on the Saw to help it cut. Do not use too much force, only enough to keep the Saw cutting.

**Caution: When cutting into walls, floor or any object where live electrical wires may be present, DO NOT TOUCH ANY METAL PARTS OF THE TOOL! Hold the tool only by insulated grasping surfaces to prevent electric shock if you cut into a live wire.**

6. Adjust the reciprocating speed of the Saw by moving the Speed Adjust (58) with your thumb (forward or backward) while the Saw is turned ON.
7. To stop the Saw, release the Trigger Switch (57).
8. Rotate the Variable Switch to return the reciprocating speed to its slowest position.

**Warning: If the saw jams, immediately shut off the saw and then remove the saw from the cutting area. If finished with the cut, shut off the saw and be careful not to come into contact with the blade.**

## **Maintenance**

1. Periodically clean or blow out the motor ventilation slots.  
This will prevent the motor from overheating.
2. Replace the saw blade when it becomes worn, bent, or damaged in any other way.
3. Wipe the tool with a clean cloth after every use.
4. Over time, the Carbon Brush (46) in the motor will wear and may need replacement.

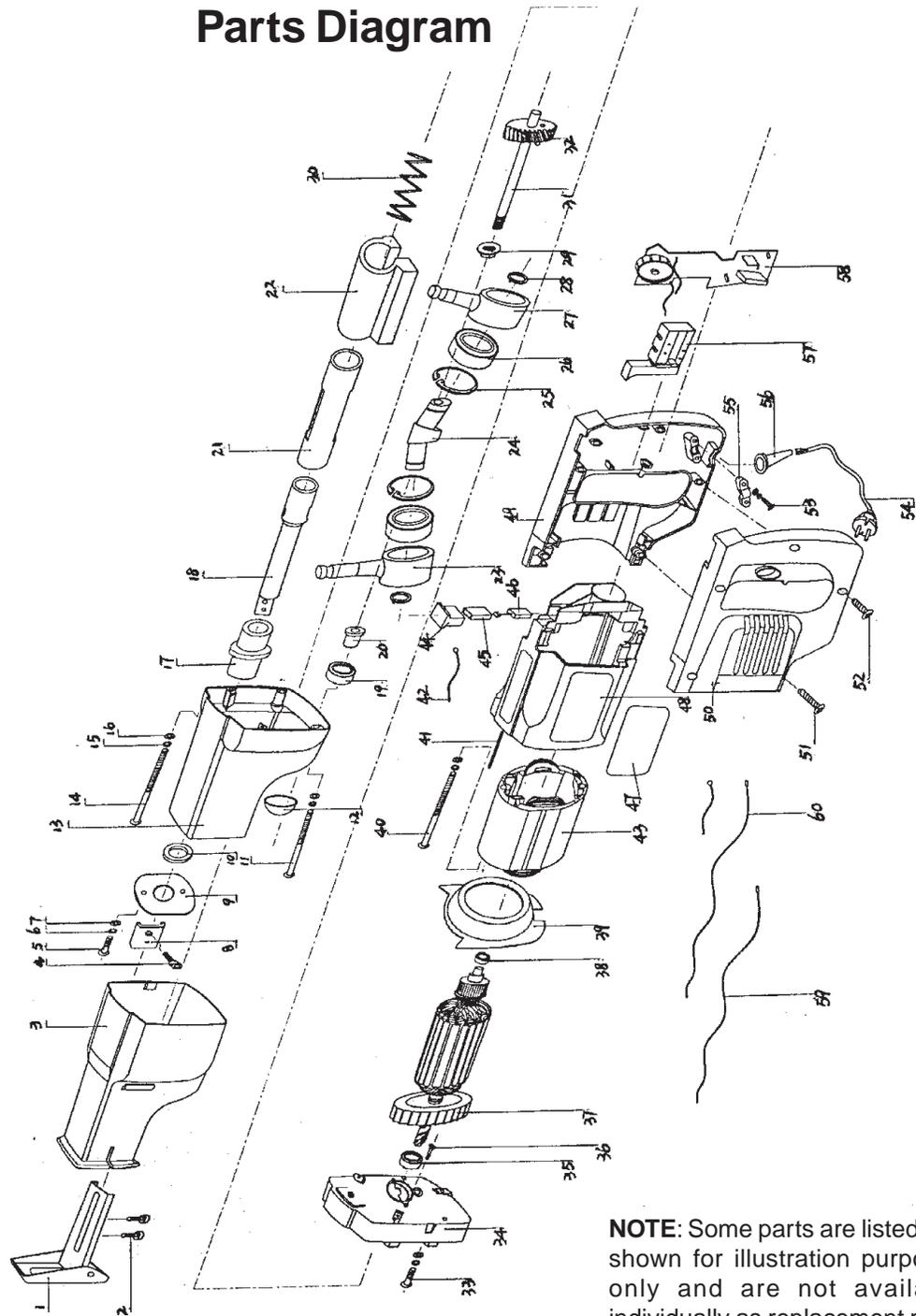
When the Carbon Brush is completely worn out, the Saw will not operate. The Carbon Brush should be replaced by a qualified technician. The Carbon Brush can be accessed for evaluation or replacement by a qualified technician, by removing the Brush Holder (44) atop the Left and Right Body (49 and 50).

## Parts List

Item #	Description	Qty
1	Adjustable Bottom Plate	1
2	Hex Screw	2
3	Rubber Sleeve	1
4	Screw	1
5	Screw	1
6	Retaining Washer	1
7	Washer	1
8	Blade Holder Plate	1
9	Felt Retainer	1
10	Shock Absorber	1
11	Screw	1
12	Cap	1
13	Machine Head	1
14	Screw	1
15	Retainer Washer	1
16	Washer	1
17	Plain Bearing Bushing	1
18	Reciprocating Bar	1
19	Ball Bearing	1
20	Jacket	1
21	Guide Jacket	1
22	Counter Balance	1
23	Long Oscillating Bar	1
24	Crankshaft	1
25	Circlips for Holds	1
26	Angular Contact Bearing	1
27	Short Oscillating Bar	1
28	Circlips for Shaft	1
29	Hexagon Nut with Flangs	1
30	Spring	1

Item #	Description	Qty
31	Long Shaft	1
32	Gear	1
33	Screw	1
34	Connecting Frame	1
35	Ball Bearing	1
36	Screw	2
37	Rotor	1
38	Ball Bearing	1
39	Guide Wing Ring	1
40	Screw	1
41	Pin	1
42	Line	1
43	Stator	1
44	Brush Holder	1
45	Copper Bushing	1
46	Carbon Brush	1
47	Frame	1
48	Rating Plate	1
49	Left Body	1
50	Right Body	1
51	Screw	1
52	Screw	1
53	Screw	1
54	Line Cord	1
55	Cable Support	1
56	Cable Sleeve	1
57	Trigger Switch	1
58	Speed Adjust	1
59	Line	1
60	Line	1

# Parts Diagram



**PLEASE READ THE FOLLOWING CAREFULLY**

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.