

OPERATING INSTRUCTIONS AND PARTS LIST FOR

JIG SAW 18 INCH

MODEL NUMBER 103.0407

This is the model number of your jig saw. It will be found on a plate on the top of the base. Always mention this model number when communicating with us regarding your jig saw or when ordering parts.

This list is valuable. It will assure your being able to obtain proper parts service at all times. We suggest you keep it with other valuable papers.

SEARS, ROEBUCK and CO.

OPERATING INSTRUCTIONS FOR 18 INCH JIG SAW MODEL 103.0407

INSTALLATION

After removing the jig saw from the carton place it approximately in the desired position on the bench or stand. The stand must be long enough to accommodate the jig saw and a motor placed behind the base or wide enough to carry the saw and the motor side by side—unless, of course, the machine is to be driven from below. The minimum belt length required, when the jig saw and motor are on the same level, is 52 inches.

It is advisable to use rubber washers under the bolt heads if the saw is mounted on a steel stand. Insulating the iron base from the steel top in this manner will dampen out any vibration of the bench top.

Before operating the machine make sure the factory adjustment of the blade to the table has not been disturbed. To make this test rotate the pulley by hand to the top of the stroke. The blade should be at right angles to the surface of the table when the protractor is set at 90°. Check the angle between the saw blade and the table with a try square.

When belting the motor to the saw pulley make sure that the direction of rotation will be as shown by the arrow on the bearing housing in the right side of the crankcase.

LUBRICATION

Do not operate this machine until the crankcase has been filled with oil.

This tool was inspected when operating under power. Before packing the oil was drained from the crankcase in order to avoid spilling in transit. To prevent injury to the close fitting parts in the drive mechanism be sure to replace this oil. Use an oil of a good grade similar in viscosity to S.A.E. No. 30.

The filler plug is located in the depression at the rear of the crankcase. To fill with oil remove the plug and add oil until it comes out of plug hole. The capacity is approximately 1/2 pint. Do not tip saw when adding oil or in any way attempt to fill above this level.

The oil reservoir on the main bearing of the pulley shaft should be filled with an S. A. E. No. 20 oil. To fill the oil reservoir easily and completely, use an oil can with a small spout, or a pressure oil can in order to displace air in reservoir.

Always keep oil reservoir filled with oil.

This tool is equipped with one of the new type bronze bearings which meter filtered oil to the moving parts. This bearing has invisible pores that become saturated with oil. The heat generated by the turning of the shaft causes the lubricant in the reservoir to automatically flow through the bronze bearing, thus lubricating the moving shaft. When the shaft is at rest, the oil is absorbed by the bearing.

Do not drill holes through the bearing to feed oil to the shaft as it is not necessary.

The air pump piston and upper saw guide rod should be lubricated occasionally through the hole in the pump tube cap.

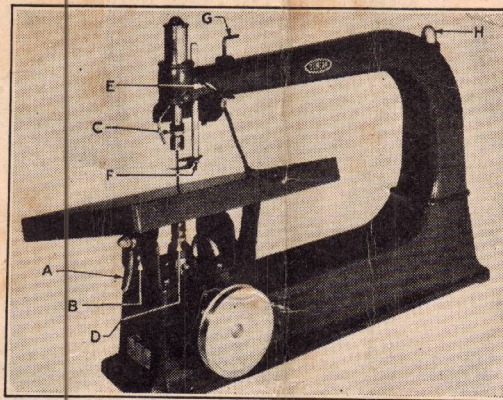


Fig. 1

trator. Moving the protractor pointer (B) corrects any discrepancy between the table and blade angle and the reading on the protractor. The nut (C) locks the upper housing after the blade has been turned for either ripping or straight sawing. The nut (D) locks the lower chuck housing in the same manner. The saw guide rod thumb screw (E) provides a quick means of locking the guide rod after the hold down spring has been adjusted to the material being cut. Loosening the saw guide rod nut (F) allows resetting of the saw guides. The Allen wrench (G) releases and locks clamp screws in both chucks. The upper arm is held in place by the acorn nut (H).

INSERTING BLADES

To replace blades rotate the pulley until the lower chuck is at the top of its stroke. Using the Allen wrench loosen the chuck clamp screw. Place the blade in the lower chuck with the teeth pointing down toward the table and retighten the clamp screw. The blade should be approximately in the center of the hole in the blade centering cover. If the blade is not in this position loosen and tighten both the set and clamp screws until blade is properly located.

Loosen clamp screw in upper chuck. With lower chuck still at the top of its stroke insert blade in upper chuck by sliding the upper chuck down about 5/8 inch. Retighten the clamp screw.

Pin type blades can be used in these chucks by removing the pin and then clamping the blades in the regular manner.

BLADE TENSION

The tension used on blades under different conditions can be varied at will by changing the distance that the upper chuck is pulled down from the pump tube. The proper tension depends on several factors (such as kind of material, its thickness, and the type of cutting action required) and can best be determined under actual operating conditions. The general rule is to place the blade under enough tension to prevent flexing and to hold it straight with the work but not enough to cause breakage due to an excessive pull at the bottom of the stroke. Very fine puzzle blades require proportionately less tension than the regular width blades.



Fig. 2

SPEED

This saw was designed to develop between 800 and 1000 strokes per minute. To obtain this speed use a 2 inch motor pulley with a 1750 R.P.M. motor. Avoid using a higher speed motor without reducing the R.P.M. by means of a jackshaft.

CONTROLS

The protractor clamp lever (A in Fig. 1) locks the table at any angle shown on the table pro-

OPERATING INSTRUCTIONS (CON'T.)

SAW GUIDES

The guides used on this jig saw are adjustable for blades of different thickness. By loosening the nut on the saw guide, the upper and lower saw guides may be spread or drawn together to support the blade (Fig. 1 and 3).



Fig. 3



Fig. 4

They should be set close to the blade but not tight enough so that they bind on the blade. The guides are slotted to allow adjustment toward or away from the front of the table to suit blades of various widths.

When the chucks and blade are turned 90°, for ripping the guides are readily changed to give the blade the proper support. To readjust to the changed position of the blade loosen the nut on the saw guide rod and slide the guides to the position indicated in Fig. 4. If desired to cut on the opposite side make the same guide angle on the other side of the center line.

The guides should touch the back of the blade only very slightly. In this way the flexible action of the guides will come into use when the work is fed to the blade.

CHUCKS

To change the direction of the blade 90° as required for some operations loosen the chuck housing lock nuts (C and D, Fig. 1). Turn both chucks to right or left as required and retighten the lock nuts. Make sure both chucks are turned the same amount so there will be no twisting action set up in the blade when the tool is operating under power.

Tap out and turn the table insert to line up the slot with the blade.

HOLD DOWN SPRING

The hold down spring supplied on this jig saw is designed to keep the wood from rising on the reverse stroke of the blade thus releasing the hands for the work of guiding the material against the blade. The spring should, therefore, touch only lightly on the top of the work.

TILTING TABLE

To cut material at any angle other than 90° loosen the protractor locking clamp (A Fig. 1) and tilt table to proper angle as indicated on table protractor. Protractor pointer (B) is adjustable for correcting small discrepancies in reading on the protractor.

SABRE SAWING

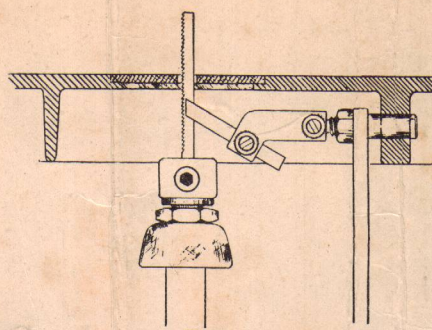


Fig. 5

Sabre saw blades are held in the lower chuck in the same manner as regular blades. To insert the wider blades remove the clamp screw with the wrench provided and turn in the set screw with a

screwdriver until it is below the blade centering cap. Lift off the cap and back out set screw to its original position. Insert sabre blade and replace clamp screw, tightening screw securely. The sabre saw attachment, supports the blade as shown in Fig. 5. To permit cutting large pieces the saw arm can be taken off by removing the arm stud nut and the arm stud. The arm is correctly aligned, when replaced by matching the marks in the arm and base at the pivot joint.

FILING

The round shank files to be used in this machine, listed in the Sears Power Tool Catalog, are held in the lower chuck. To insert a file remove the chuck screws and lift off the blade centering cap. Place file in chuck and fasten securely by tightening slotted set screw only against the file shank. The table may be tilted, by removing the table insert, to file angles or to correct for any bow in the file.

OPERATING THE JIG SAW

The universal type of chuck used in this jig saw grips blades of different width and thickness without any adjustment other than loosening the screws in the chuck housing. For this reason it is possible to use a puzzle-blade when unusually fine cuts are required. In general it is best to use as wide a blade as possible to avoid breakage. Fret saw blades having wide spaced teeth with no set are recommended when sawing wood or other materials which tend to gum the blade. These blades produce a very smooth cut.



Fig. 6

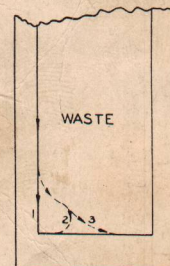


Fig. 7

Use blades having finer teeth for materials harder

than wood such as plastics. Blades having teeth spaced wider than the thickness of the work will tend to catch in the work.

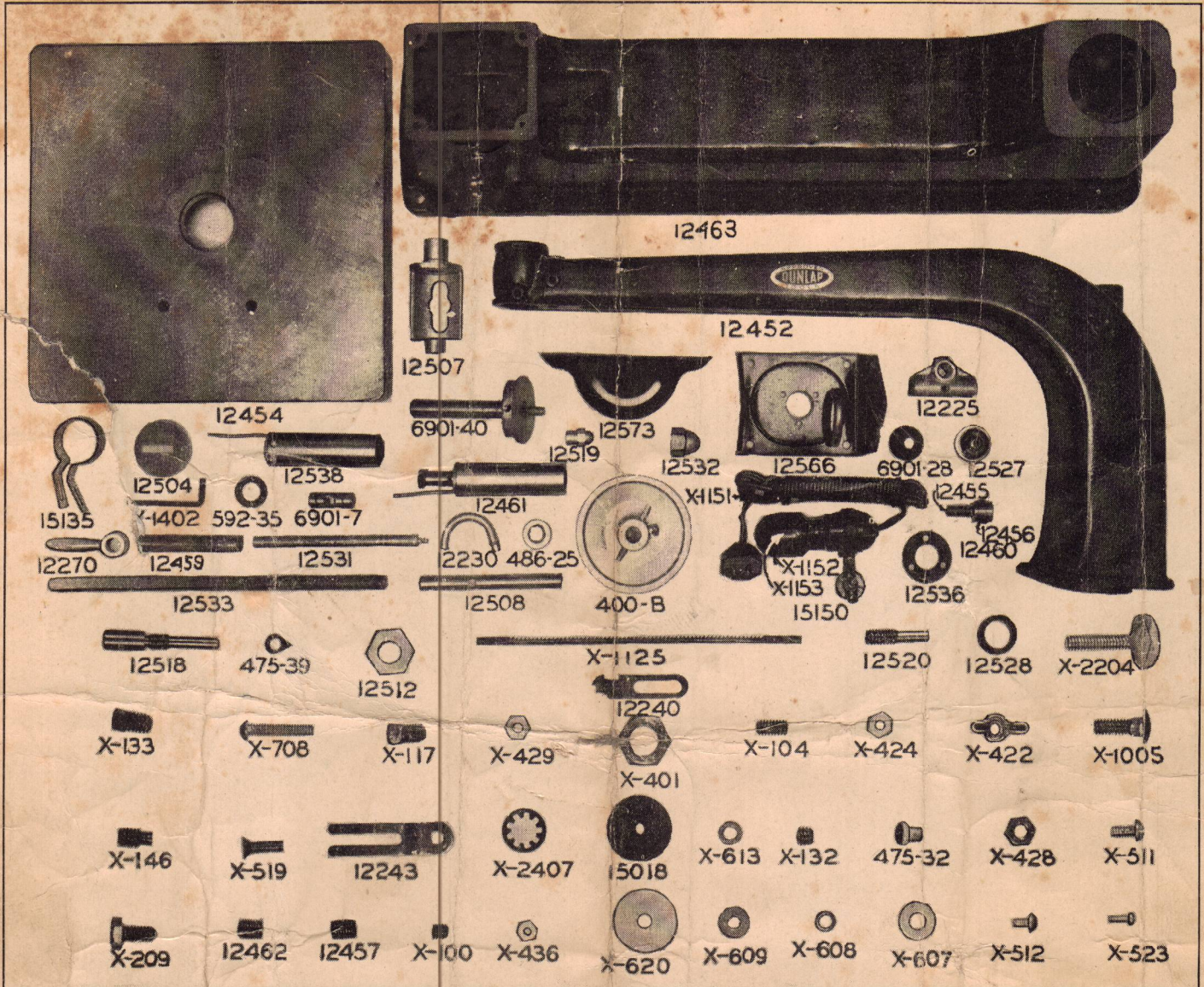
Very often it is possible to avoid sharp turns by cutting into waste stock. Two common methods of making sharp corners are illustrated (Fig. 6 and 7).

While a guard for the "V" belt cannot be supplied, due to the variety of possible installations, it is strongly recommended that suitable protection be provided by the operator.

HOW TO ORDER PARTS FOR MODEL NUMBER 103.0407 SAW

All parts listed here may be ordered through any Sears retail or mail order store. Parts are shipped prepaid. When ordering repair parts, always give the following information:

1. The Part Number in this list.
2. The Part Name and Price in this list.
3. The Model Number which is 103.0407 and will be found on a plate on top of the base.



Part No.	Name of Part	Selling Price
475-32	Oil Hole Plug	.15
475-39	Protractor Pointer	.15
486-25	Spindle Collar	.15
486-25	Drive Pulley Washer	.25
592-35	Yoke Pin	.15
6901-7	Saw Dust Deflector	.15
6901-28	Shaft and Crank Disc Assembly	.75
12225	Yoke	.30
12230	Breather Tube	.20
12240	Upper Saw Guide (2 used)	.15
12243	Hold Down Foot	.15
12270	Protractor Clamp Lever	.20
12452	Arm	4.00
12454	Table	4.30
12455	Chuck Housing	.30
12456	Blade Centering Cover	.20
12457	Socket Blade Clamp Screw	.15
12459	Upper Guide Rod	.45
12460	Chuck Assembly Upper or Lower	.50
12461	Pump Tube Assembly Complete	1.30
12462	Slotted Blade Clamp Screw	.15
12463	Base Assembly	6.00
12504	Table Insert	.25
12506	Table Support Gasket (Not Illus.)	.15
12507	Lower Guide Rod Support	.45
12508	Lower Guide Rod	.40
12512	Chuck Jaw Housing Lock Nut	.15
12518	Table Pivot Pin (Rear)	.15
12519	Protractor Lock Nut	.15
12520	Table Pivot Pin (Front)	.15
12524	Pump Spring (Not Illus.)	.15
12525	Pump Spring Washer (Not Illus.)	.15
12526	Pump Cap Leather (Not Illus.)	.15
12527	Pump Tube Cap	.25
12528	Bumper	.15
12531	Saw Guide Rod	.15
12532	Saw Arm Stud Nut	.15

Part No.	Name of Part	Selling Price
12533	Saw Arm Stud	.30
12535	Lower Saw Guide (Not Illus.)	.15
12536	Lower Guide Rod Support Gasket	.15
12538	Pump Tube Sub. Assembly	.60
12540	Lower Saw Guide Support Assembly (Not Illus.)	.35
12566	Table Support Assembly	.75
12573	Protractor Assembly	.40
15018	Rubber Bushing	.15
15135	Lamp Bracket	.30
15150	Lamp Assembly Complete	1.30
400-B	V Pulley-Single Groove 4" Dia. 3/8 Bore (Purchase from Div. 9 in nearest retail store.)	
X-1125	Saw Blade 6" Long - 3/8" Wide - 15 Teeth Per inch. (Purchase from Div. 9 in nearest retail store.)	
X-1151	Lamp Socket	.90
X-1152	Lamp Shade	.20
X-1153	Lamp Bulb	.15
THE FOLLOWING PARTS ARE STANDARD AND CAN BE PURCHASED LOCALLY.		
X-100	Collar Set Screw 1/4-20x3/4	.10
X-104	Pump Tube Lock Screw 1/4-20x1/2	.10
X-109	Set Screw (Sable Saw) 3/8x24-3/4 (Not Illus.)	.10
X-117	Yoke Set Screw 5/16-24x3/8	.10
X-132	Pulley Set Screw 5/16-18x1/4	.10
X-146	Crank Disc Set Screw 5/16-18x1/2	.10
X-209	Table Support Screw 1/4-20x1/2	.10
X-401	Arm Stud Nut 1/2-20-nut	.10
X-422	Lamp Bracket Screw Wing Nut 3/8-24 nut	.10
X-424	Mounting Screw Nut No. 10-24 nut	.10
X-428	Table Pivot Pin nut 1/4-28 nut	.10
X-429	Table to Protractor Screw Nut No. 10-32	.10

Part No.	Name of Part	Selling Price
X-436	Lamp Bracket Nut No. 5-40 Nut	.10
X-511	Lower Guide Rod Support Screw No. 10-24x3/8	.10
X-512	Protractor Pointer Screw No. 8-32x5/8	.10
X-519	Table to Protractor Screw No. 10-32x5/8	.10
X-523	Lamp Bracket Screw No. 5-30x5/16	.10
X-607	Protractor Washer 17/64 Plain	.10
X-608	Table to Protractor Screw Lock Washer 200 lock	.10
X-609	Clamp Screw Washer 13/64-1/2 Plain	.10
X-613	Saw Guide Lock Washer 13/64-3/8 Plain	.10
X-620	Clamp Screw Washer 13/64-1 Plain	.10
X-708	Lamp Mounting Screw 3/16-24x1	.10
X-805	Bushing (Not Illus.) .628 Bearing	.20
X-1005	Protractor Clamp Bolt 1/4-20x3/4	.10
X-1402	Allen Wrench	.15
X-2204	Saw Guide Rod Thumb Screw 1/4-20x1	.10
X-2407	Shake Proof Lock Washer 3/8 Lock	.10

We suggest you write your orders for repair parts like this sample:
Sears, Roebuck & Co.

Enclosed find my check for \$4.45 for which please send me by Parcel Post the following parts for my Jig Saw Model 103.0407.

1 each No. 12454 Table \$4.30
1 each No. 12240 Upper Saw Guide .15

\$4.45

Yours truly,

John Martin, Box 128, Richmond, Ind.

This Sheet is intended for instruction and repair parts only and is not a Packing Slip. The Parts shown and listed may include Accessories not necessarily part of this tool.