

POWERSAW MACHINE MANUAL



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Powersaw Machine 18”

MANUAL BOOK

SETTING UP YOUR POWER HACKSAW:

Unpack the power hacksaw carefully. Saw pulley, weight, motor pulley and drive belt are separately wrapped and packed under the saw base. Remove rust-preventive from machined surfaces with kerosene.

For stationary use, bolt the saw to a workbench in a position which will provide room for handling the longest stock you will cut. For portable use, bolt it to a suitable board (1 to 2 inches thick) on which the motor can also be mounted. In either case, shim under the feet as required to prevent twisting of the saw base when the bolts are tightened. Attach weight to main slide and place pulley on drive shaft. Tighten set screw.

The motor used to drive the saw must be a 1750 rpm type to obtain the proper blade speed for smooth cutting. We recommend a minimum of 1/4 hp size. Be sure electric motor is properly grounded.

The two inch motor pulley supplied with your hacksaw will reciprocate the saw blade at about 80 strokes per minute. This is the proper cutting speed for cast iron, machine steel, pipe and conduit.

Mount the motor pulley on your motor, and mount the motor on the bench (or board) in a position which will align the motor pulley with the saw drive pulley - so that the saw main gear will rotate in direction indicated by the arrow on the gear. When mounted, the belt must run straight and have the proper tension. If it is too loose, it will slip and wear out; if too tight, it can damage the motor and hacksaw drive shaft bushings. We suggest mounting the motor on a motor rail or similar pivot type mount which will allow motor weight to keep correct belt tension. Otherwise, provide some means of adjusting the belt tension, and adjust it so that finger pressure at its mid point will depress the belt approximately 1/2 inch.

OPERATING PROCEDURE:-

Raise the main slide enough to insert workpiece under saw blade. Turn main gear until ratchet plates engage ratchet block to hold main slide in raised position.

Adjust stationary vise jaw for desired angle and tighten the capscrew.

Raise the vise screw and slide swivel jaw against the workpiece. Lower the vise screw and tighten to clamp the workpiece securely.

CAUTION:-

Lift the main slide, disengage ratchet plates from ratchet block and lower blade onto workpiece.

Check clearance of saw frame at each end of stroke before starting machine.

Check saw blade pressure. Saw pressure is varied by moving the weight (40, figure 2) on the main frame. Proper saw pressure depends upon the type of material to be cut. Soft materials require less pressure than hard material. Cross-sections having little material require less pressure than solid cross-sections. Never over feed, as this causes blade breakage and poor quality cuts.

ADJUSTMENTS:-

The following adjustments are provided to compensate for wear and should be checked if you have excessive blade breakage.

LIFTING ARM. The lifting arm (1, figure 2) swings on tapered bearing surfaces and is adjusted by turning adjusting screw (77) with a screwdriver. The screw is locked in place with a set screw (15)•

RATCHET MECHANISM. Lifting action of the saw arm is controlled by a cam arrangement on the main gear, connected to two dogs (6 and 9) by a crank lever (10). Two hardened steel plates on top of the dogs serve as the pawl against a ratchet block (3). The plates are adjusted by the set screws (8) with which they are attached. When worn the plates may be removed and resharpened and are easily replaced when worn out. The plates should be so adjusted as to clear the ratchet on the cutting stroke but engage on the return stroke.

LUBRICATION:-

Lubricate regularly by putting 3 to 4 drops of SAE 30 oil into each of the seven oil holes. Locations are:

- One on the lifting arm.**
- Three on the saw head.**
- Two on the main slide.**
- One on the main raising lever.**

