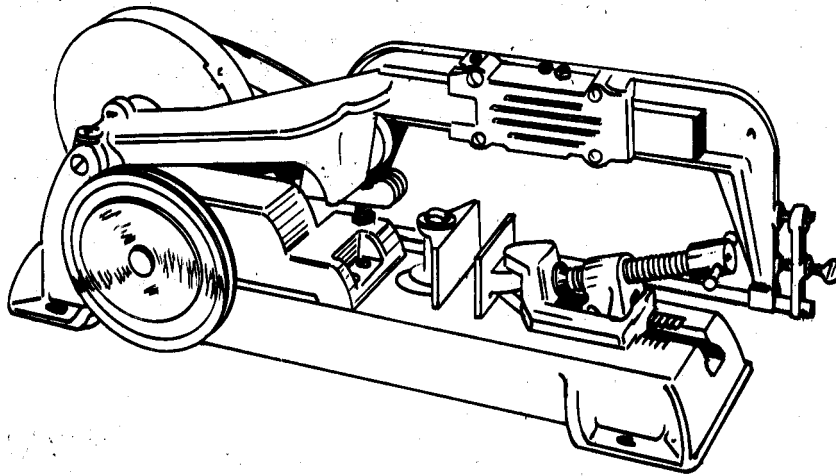


OPERATING INSTRUCTIONS
and
PARTS LIST

ATLAS



POWER HACKSAW
MODEL 4350
SERIAL NUMBER 4310

INSTRUCTIONS FOR ORDERING REPAIR PARTS

It is important to furnish the following information in addition to **QUANTITY** required.

1. **PART NUMBER**
2. **PART NAME**
3. **MODEL and SERIAL NUMBER** of machine - you'll find both on the metal plate attached to the base - note illustration at right.



Be sure to give Model and Serial Number on this plate.
We reserve the right to make changes in design and specifications without notice.

CLAUSING CORPORATION

1915-2023 N. PITCHER ST. KALAMAZOO, MICHIGAN - 49001 - U.S.A.

WARRANTY

Clausing machine tools are guaranteed against defects in material and workmanship for a period of one year from date of sale to original purchaser. Liability shall be limited to replacing, free of charge, f.o.b. factory, any such parts proving defective within the period of this warranty, but Clausing will not be responsible for transportation charges or other charges, loss or damages.

Clausing machine tools are guaranteed to equal or excel the standards of accuracy as represented. Clausing reserves the right to make changes in design and construction without notice, and without making changes in products previously manufactured.

CLAUSING CORPORATION

IMPORTANT --- YOUR CLAUSING WARRANTY

is NOT effective unless this card is returned ----

Your Warranty ▶▶ **IS NOT EFFECTIVE UNLESS THIS CARD IS RETURNED**

MACHINE SERIAL NO: _____ MODEL NO: _____

NAME OF PURCHASER _____

STREET _____

CITY, ZONE, STATE _____

PURCHASED FROM _____

DATE PURCHASED _____

MACHINE IS USED PRIMARILY FOR _____

WHAT IS YOUR PRINCIPAL PRODUCT _____

NUMBER OF PEOPLE EMPLOYED _____

WHAT LED YOU TO CONSIDER THIS MACHINE? Please check one: _____ Machine ad.
_____ Previous experience _____ Saw in dealer's display _____ trade show _____ friend's shop.

COMPLETE
And Return
NOW

COMPLETE
And Return
NOW

OPERATION AND MAINTENANCE INSTRUCTIONS

POWER HACKSAW - MODEL NUMBER 4350

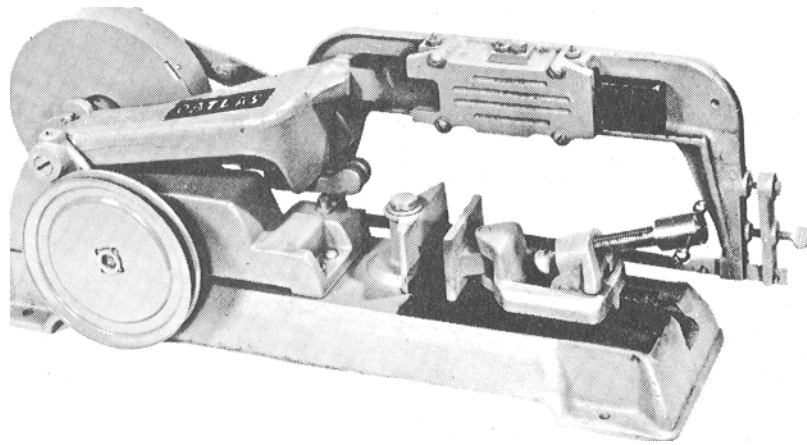


FIGURE 1

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. For other materials use pulley shown in following table.

MATERIAL	STROKES PER MIN.	PULLEY OD
Aluminum, brass, fiber, plastic	100	2-1/2
Annealed tool steel, alloy steel	60	1-1/2
Spring steel	40	1

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 PRINCIPLES

Your Atlas Power Hacksaw is designed to cut through metal stock up to 4 inches square. The saw has draw-cut action and cuts when the blade moves toward the rear. The blade is raised slightly on the forward stroke to avoid drag.

The saw blade is secured to a main slide by pins at either end, blade tension is maintained by a thumb screw. Reciprocal motion is applied to the main slide by a crank lever eccentrically attached to the main gear which is turned by a pinion mounted on the same shaft as the drive pulley. The lifting arm supports the main slide and may be raised up out of the way when loading with stock. A ratchet arrangement prevents the saw from dropping while work is being clamped in the saw vise.

The vise jaw can be positioned straight (for a 90° cutoff), or at any angle to 35°. Loosening of a hex head capscrew permits setting the jaw at a desired position.

The vise swivel jaw (which swivels to adjust automatically to any position of the vise jaw) is mounted on a slide which permits it to be moved for opening or closing of the vise jaws. It can be moved freely when the vise screw handle is raised. When the handle is lowered, a sliding knuckle engages teeth in the slide and the jaws can be tightened to hold any workpiece firmly. The screw must be loosened before the handle can be raised.

OPERATING PROCEDURE

1. 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.
2. Adjust stationary vise jaw for desired angle and tighten the capscrew.
3. Raise the vise screw and slide swivel jaw against the workpiece. Lower the vise screw and tighten to clamp the workpiece securely.

CAUTION

Solid clamping is essential to prevent blade breakage.

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

CAUTION

Do not allow main slide to drop. Shock of the ratchet plates striking the ratchet teeth may cause damage to these parts.

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

6. 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.

MAIN SLIDE. The main slide (56) should slide freely on the lifting arm (1) but without side play. Take-up gib (53) is provided for this adjustment. Three set screws (54) lock this adjustment when made.

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.

**ATLAS POWER HACKSAW - MODEL NO. 4350
SERIAL NUMBER 4310**

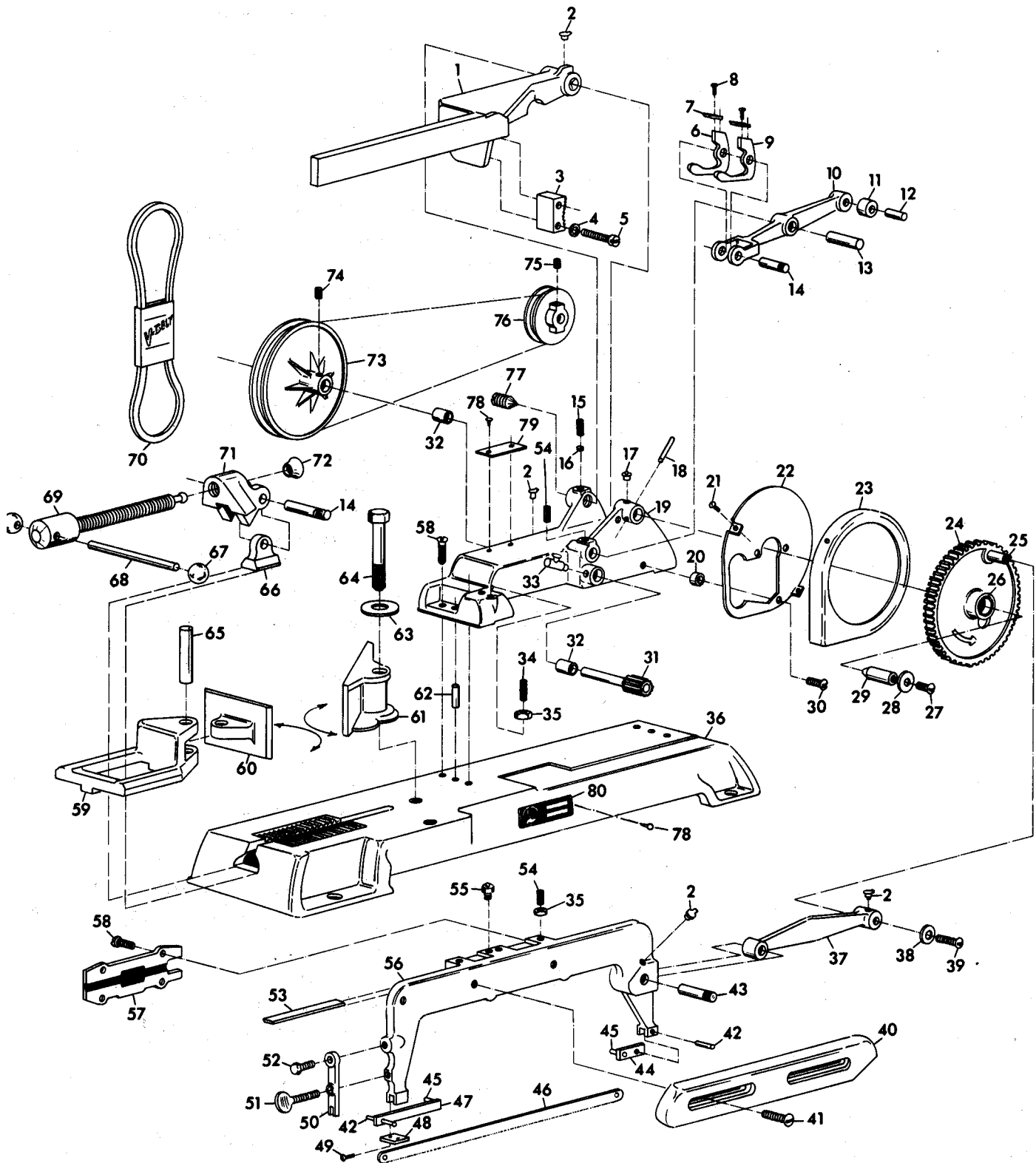


FIGURE 2

**PARTS LIST FOR ATLAS POWER HACKSAW
MODEL NO. 4350 SERIAL NUMBER 4310**

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	002-077	Lifting Arm	43	562-151	Crank Pin
2	547-014	Oiler (4 req)	44	4350-11	Pin and Holder Assembly
3	053-047	Feed Ratchet Block	45	456876	*Roll Pin. 1/8x1/2
4	103319	*Lockwasher, 1/4 (2 req)	46	042-036	Saw Blade
5	114353	*Screw, Fil Hd, 1/4-20x1/2 (2 req)	47	4350-10	Pin and Holder Assembly
6	452-056	Raising Lever - Rear	48	556-290	Plate
7	556-289	Raising Lever Plate (2 req)	49	100750	*Screw, Rd Hd, #8-32x3/8 (2 req)
8	100749	*Screw, Rd Hd, #8-32x1/4 (4 req)	50	452-059	Tension Lever
9	542-055	Raising Lever - Front	51	53-1014	*Thumb Screw, 5/16-18x1-1/4
10	452-058	Main Raising Lever	52	100111	*Screw, Hex Hd, 1/4-20x1-1/4
11	642-023	Lifting Arm Roller	53	345-056	Gib
12	562-150	Roller Pin	54	102572	*Set Screw, Soc, 1/4-20x5/8 Cup Pt (4 req)
13	562-147	Pivot Pin	55	547-011	Oiler
14	562-153	Pin (2 req)	56	704-059	Main Slide
15	102582	*Set Screw, Soc, 5/16-18x1/2 Cup Pt	57	556-288	Cover Plate
16	557-077	Brass Plug	58	169801	*Tapping Screw, Pan Hd, 1/4-20x7/8 (8 req)
17	W30-16	Oiler	59	431-016	Sliding jaw
18	103585	*Taper Pin, #2x1-1/4	60	431-017	Swivel jaw
19	387-030	Head	61	431-015	Stationary jaw
20	699-192	Spacer (3 req)	62	103584	*Taper Pin, #2x1 (2 req)
21	169684	*Tapping Screw, Pan Hd, #6x1/4 (2 req)	63	446220	*Washer, 1/2x1-1/8x1/16
22	342-102	Rear Guard	64	108620	*Screw, Hex Hd, 1/2-13x2-3/4
23	342-101	Front Guard	65	562-152	Pin
24	341-301	Main Gear	66	445-002	Bottom Knuckle
25	562-149	Pin	67	057-015	Ball (2 req)
26	049-150	Drive Gear Bushing	68	381-063	Handle
27	53-315	*Screw, Flt Hd, 1/4-20LHx1/2	69	696-229	Vise Screw
28	932-139	Washer	70	051-057	V-Belt, 1/2x42
29	562-148	Drive Gear Pin	71	445-001	Swivel Vise Knuckle
30	100752	*Screw, Rd Hd, #8-32x5/8 (3 req)	72	712-009	Swivel Shoe
31	4350-13	Pinion Gear and Shaft Assembly	73	560-166	Drive Pulley
32	049-050	Pinion Shaft Bushing (2 req)	74	102592	*Set Screw, Soc, 3/8-16x3/8 Cup Pt
33	547-013	Oiler	75	115321	*Set Screw, Soc, 5/16-18x5/16 Cup Pt
34	102872	*Set Screw, Sq Hd, 1/4-20x3/4 Cup Pt (2 req)	76	560-168	Motor Pulley
35	9416106	*Nut, 1/4-20 (5 req)	77	696-228	Adjusting Screw
36	050-097	Base	78	145370	*Drive Screw, Rd Hd, #2x1/4 (4 req)
37	452-057	Crank Lever	79	10F-176	Model Number Plate
38	932-140	Washer	80	536-037	Name Plate
39	113954	*Screw, Rd Hd, 1/4-20x3/8	81	4350	Parts List and Instructions
40	946-001	Weight			
41	113862	*Screw, Rd Hd, 5/16-18x7/8 (2 req)			
42	456384	*Roll Pin. 1/8x3/4			

*Standard hardware items - may be purchased locally.