

Serial No- 580135

POWERMATIC®

MODEL
180

18" PLANER

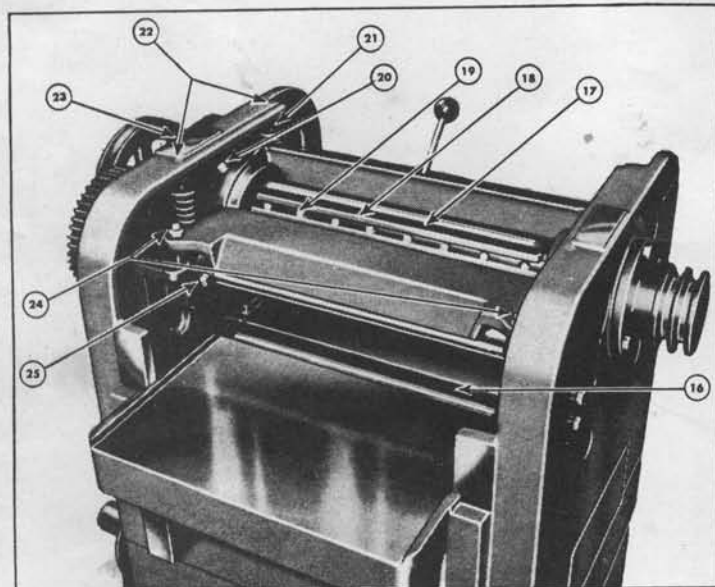
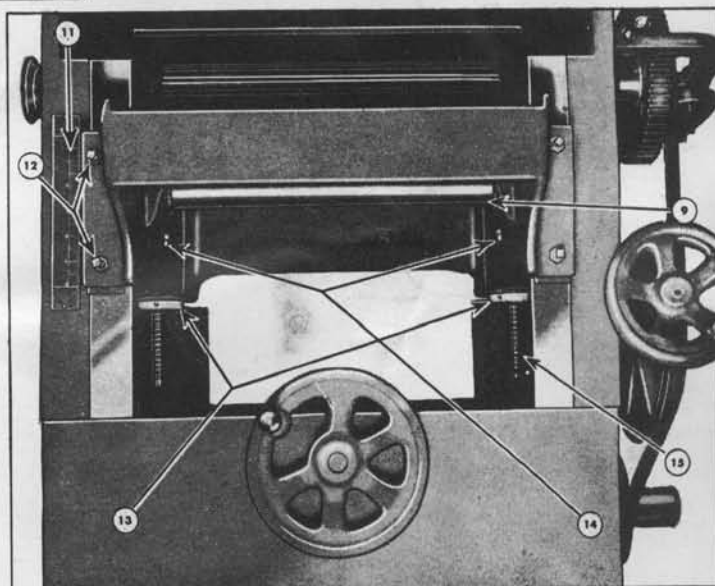
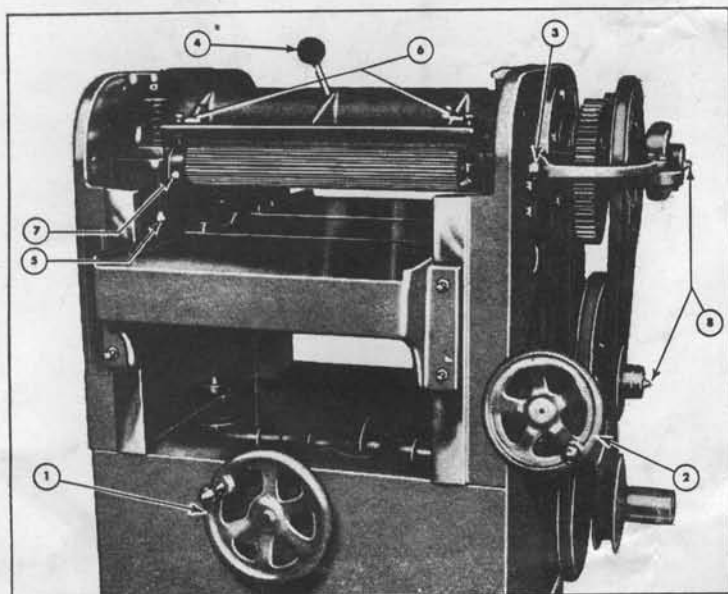
OPERATING INSTRUCTIONS AND PARTS LIST



*motor -
Baldor 7.5 H.P.
Spec- A 37A01-76*

FOR SERIAL NUMBERS FROM 1-101 UP

POWERMATIC  **HOUDAILLE, INC.**
McMinnville, Tennessee 37110



I. GENERAL SET-UP AND ALIGNMENT

1. RECEIVING

Uncrate and check for shipping damage. Clean all coated and greased surfaces. Read instructions thoroughly. Locate all lubrication points; adjustment; methods of drive.

2. MOUNTING

Mount machine securely to solid foundation. Concrete base mounting preferred. Locate in clean, dry and well ventilated building if possible. Motor and electrical connections should be protected when not in operation or if exposed to weather elements.

3. EXHAUST SYSTEM

Recommended as a must if efficient production operation is required. Not a necessity where limited amount of operation being performed and machine can be kept clean of shavings.

4. INSPECTION

The above machine requires the minimum amount of attention in service. Periodic or regular inspections are recommended to insure machine is in proper adjustment, positive electrical connections; worn or loose "V" belts and bearings heating or loose.

5. BEFORE OPERATING

Check motor nameplate date or wiring diagram of motor and switch for proper voltage connection before wiring into line. Run motor without load to check the connections and direction of rotation. Always refer to motor nameplate for rotation connections.

II. LUBRICATION

1. The cutterhead and variable speed pulley are mounted in sealed bearings and do not require any lubrication.

2. GREASE LUBRICATION

The clutch, table and feed rollers are equipped with pressure gun fittings and must be lubricated regularly every twenty-five hours of operation with a good grade High Speed Ball Bearing grease. Also, the feed drive gears should be surfaced greased with the same grease.

3. OIL LUBRICATION

The surface fittings, bed ways, handwheel drive shaft gears and thrust screws should be lubricated regularly every ten hours of operation with oil equivalent to SAE 10. A light film of oil on the table when not in use will prevent rusting.

III. OPERATING ADJUSTMENTS

PLANER BED:

The planer bed mounts in the main frame panels and is raised and lowered on acme screws mounted in thrust bearings. The screws are operated through gears by a large handwheel (1) on the front of the Planer.

The planer bed is held rigid between frames by shims on each side of the bed and is adjusted with two jack screws (12) that can be tightened against the shims. These shims should be adjusted tight enough to prevent rocking or moving when material is fed through the Planer but not tight enough to prevent raising or lowering of the table.

If planer bed rocks when the machine is in operation, dips will appear in the material being planed. The planer bed

must be level with the cutterhead. Check this by lowering the bed to permit placing a small jack-screw type gauge (or small square block) between the bed and the cutterhead at the extreme right side of the bed. Raise bed with handwheel (1) until the screw gauge or block just touches the cutterhead. Move the block to the left side of the table and check under the cutterhead. If the bed is not level with the cutterhead, the bed can be raised or lowered by loosening the set screw in bed nut (13) and turning to the right or left to raise or lower the bed to the proper height—lock the bed nut with the set screw.

PLANER BED IDLER ROLLERS:

Adjusting screws (14) for planer bed idler rollers are located directly under the bearings. Adjust from .000 to .010" above bed level for planing smooth or dry material, .010" to .015" for medium rough and .025" to .035" for rough sawed or green material. Keep rollers adjusted to same height at each end. When rollers are set too high, a snipe or bite will appear at the ends of planed material. If set too low feeding will be restricted due to friction on planer bed.

(WITH QUIK-SET ADJUSTMENTS)

Planer bed rollers are adjusted to the proper height with a quik-set handle mounted on the right side of the planer bed. The height of the rollers in relation to the bed surface is indicated by a graduated dial and pointer on the quik-set handle. If table rollers do not correspond with the height indicator scale, adjustments can be made by loosening the set screw (26) fig. 4 in the roller adjusting arms. Set indicator pointer at zero on the gauge and turn adjusting screws (27) until the bed rollers are level with the planer bed. To plane rough lumber, set quik-set indicator on .030", for medium rough .010" to .015" and for finished lumber .000" to .010". Set the rollers high enough so that the lumber will feed through the machine without hesitation.

POWER DRIVEN FEED ROLLS:

The power driven corrugated infeed roller (7) and smooth outfeed roller (25) are gear driven through V-belts arrangement from cutterhead shaft. The feed roller bearing housings are floating type and held against the feed roller adjusting screws (14) by means of adjustable pressure springs (22). The feed rollers should be adjusted to set approximately 1/16" below arc of the cutterhead knives. A gauge or block may be used to assure proper height. To set feed rolls, lower planer bed about 3" below arc of cutterhead. Place gauge or wooden block directly under cutterhead and turn head until one knife is down. Raise planer bed until block is 1/16" below knife edge. Check the roller to see that each end is the same. Too much pressure on infeed corrugated roller will leave markings on material. Too little pressure will restrict feed.

CHIPBREAKER:

The chipbreaker is a three piece type which mounts and adjusts concentric with cutterhead. The chipbreaker adjusting screws (6) should be adjusted to allow chipbreaker to set 1/16" below level of infeed corrugated feed roller.

PRESSURE BAR:

The pressure bar is a three piece type which mounts and adjusts concentric with cutterhead. The pressure bar should be set equal to the arc of the cutterhead. One

method is to feed a wide board about four feet long half way through the machine. Stop the feed with the clutch and set the holddown bar so that it just touches the board. To set the pressure bar, loosen both top and bottom lock nuts on adjusting studs (24), adjusting the bar with the adjusting bar and lock in place with the locking nuts. Remember, the pressure bar is the most IMPORTANT adjustment on the Planer. If the pressure bar is too high, cutterhead knives will snipe beginning end of material; if set too low, the material will not feed through machine.

MATERIAL THICKNESS GAUGE:

To set the indicator on the material thickness scale (11) to indicate properly after changing knives, loosen the screw in the planer bed that holds the brass pointer and set to the thickness the material measures when planed or fed through the machine. The hole that mounts the brass pointer is slotted and will permit proper adjustment.

CUTTERHEAD:

The cutterhead is equipped with three knives held in position with the lock shims and set screws (18). Knives must be adjusted to set evenly and level in the cutterhead. Before removing knives from cutterhead, the knife gauge should be adjusted to the height of the knives so the height of the knives will not be changed relative to the other parts of the head when the knives are replaced. The feed rollers, chipbreaker and pressure bar are adjusted to the arc of the knife cut. If the height of the knives are

raised or lowered, the feed rollers, chipbreaker and pressure bar should be adjusted accordingly. Knives should not protrude more than 3/32" beyond radius of cutterhead. When replacing knives after sharpening, place the "jack screw" studs in place making sure the "step" will act as a seat for the knife. Drop knife and shim into cutterhead slot so that the beveled edge of knife is just below the surface of the head. Tighten the two outside knife shim screws just enough to hold the knives snugly in the head. With knife setting gauge in place over one extreme end of the head, turn the allen screw in "jack screw" plugs, raising knife until knife touches stop on knife setting gauge. Repeat operation on other end of the cutterhead. Next, tighten the center knife locking shim bolt. Set the other knives in the cutterhead before tightening remainder of the shim bolts. After the knives have been set, final locking of knives should be done by rotating cutterhead and locking all shims uniformly. CAUTION—If one knife is locked tightly before the others, it may spring the cutterhead and cause vibration or uneven knife height.

KNIFE CARE:

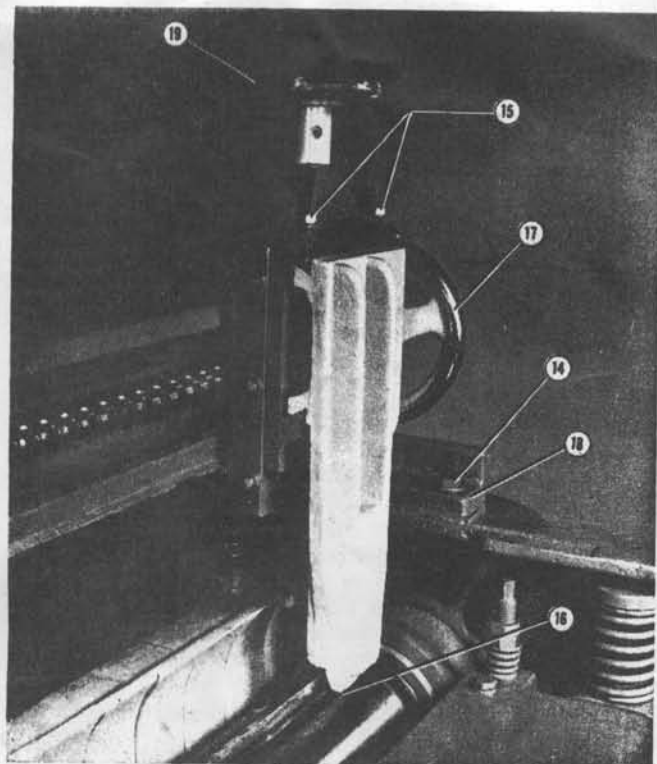
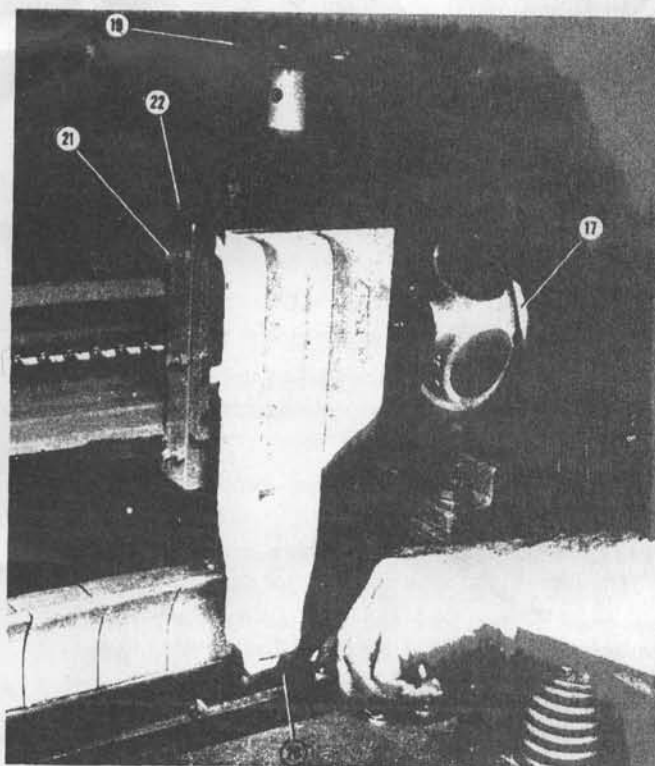
VERY IMPORTANT—knives must be kept sharp. The knives do all the work and they will not do satisfactory work if they are DULL. The sets of knives are matched and balanced at the factory. When the knives are sharpened, care should be taken that they are kept in balance.

Operating and Safety Instructions

1. Be sure the machine frame is electrically grounded.
2. Remove or fasten loose articles of clothing such as necktie, sleeves, coat, etcetera.
3. Remove finger rings and watch.
4. Use a safety face shield, goggles or glasses to protect eyes.
5. Keep the floor around the machine clean and free from scraps, sawdust, oil or grease to minimize the danger of slipping.
6. Before starting the planer:
 - a. Clear machine and table area of dust, chips, tools or foreign matter.
 - b. Check knives for sharpness. Dull blades can cause pounding, kickbacks and poor planing.
 - c. Check the knives for cracks and nicks and that they are securely locked in the cutterhead. Broken or loose knives can be thrown out of the machine causing severe or fatal injury.
 - d. Check for the proper setting of the infeed rollers, chip breaker, pressure bar and outfeed rollers. Improper settings can cause kickbacks and poor planing.
 - e. Check for proper direction of rotation of the cutterhead.
 - f. Make sure all guards are in place and securely fastened.
7. Do not stand or walk directly behind the machine when it is running. The direction of cutterhead rotation throws chips and foreign material from the rear of the machine.
8. Check the material thickness, depth of cut desired and the machine capacity. Never overload the planer by trying to cut beyond its capacity.
9. When feeding material into the machine, stand to the side nearest the switch and never behind the board. Kickbacks can cause serious injury.
10. In case of a jam-up or stopping material part way through the cut -- stop the machine, wait until the cutterhead is completely stopped and lower the table to clear the work. Attempting removal before the cutterhead is stopped can cause kickbacks. Never attempt to force the work through the machine. If the material does not feed properly, stop the machine and correct the cause. On planers equipped with a feed reversing switch, a jam-up or stopping of the board may be cleared by reversing the feed direction.

11. Never feed two boards through a planer with solid infeed rollers at the same time (side-by-side or stacked). Kickback can result causing serious injury. If your machine is equipped with sectional infeed roll and chipbreaker, side-by-side feeding of narrow boards can be done safely.
12. Extra care should be used in feeding short boards. Use another piece of equal thickness in back of the first board to follow it through the planer. The shortest board that can be fed through is one which has a length $1\frac{1}{2}$ " greater than the span between the infeed and outfeed rollers.
13. If leaving the machine area, turn the machine off and wait until all moving parts stop before departing.
14. Give the work you're doing your undivided attention. Looking around, carrying on a conversation and "horse play" are careless acts that can cause serious injury.
15. Stop the machine when making adjustments and disconnect it from its power source when adjusting, replacing and regrinding the cutterhead blades or performing any maintenance.
16. Use only Powermatic or factory authorized replacement parts and accessories, otherwise the warranty and guarantee is null and void.
17. Do not use this Powermatic planer for other than its intended use. If used for other purposes, Powermatic disclaims any real or implied warranty and holds itself harmless for any injury that may result.

WARNING: Do not equip or use this machine with a larger motor than 7 1/2 horsepower at 3600 R.P.M. The use of a larger horsepower or higher speed motor voids the warranty and Powermatic holds itself harmless from any injury that may result.

**Figure 4****Figure 5**

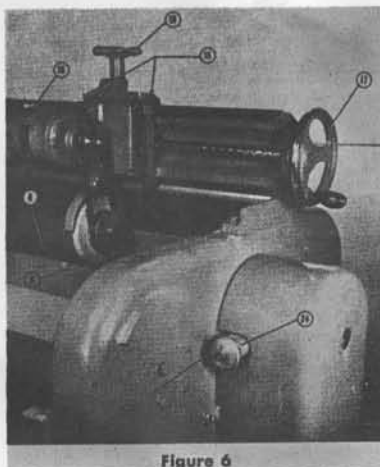


Figure 6

IV. INSTRUCTIONS FOR ADJUSTING AND OPERATING THE 180-18" KNIFE GRINDER AND JOINTER

JOINTING AND GRINDING PROCEDURE:

The first and most important step is to JOINT the knives, then GRIND them. Jointing knives first assures uniform knife height. The knives are fastened in a round head and the cutting is done in an arc by the front edge of the knife. Even though knives are installed with a micrometer gauge, an absolute uniformity of height cannot be obtained and maintained. The knives should all be jointed until all edges are uniform. The jointing process actually sharpens the knives. After jointing, the jointer head is removed and grinding head installed. The excessive joint is then ground from the bevel of the knife edge.

INSTALLATION OF GRINDING BAR AND ADJUSTMENT OF JOINTER:

1. Carefully study illustrated numbers on pictures (Figures 4, 5, 6).
2. Remove cover screws and cover guard from top of Planer.
3. Place jointer bar in position and bolt down with cap screws (14) fig. 4. Cap screws should be tightened very snugly.
4. Place jointer bracket on jointer bar head and fasten with set screws (15) fig. 4.
5. Rotate cutterhead until the edge of the cutterhead knife slot is in line with the edge of the jointer stone (16) fig. 4.
6. Move jointing head back and forth on the jointing bar with handwheel (17) fig. 4 for parallel alignment. If the bar does not move in exact parallel with the knife edge, the holes in the jointer bar base (18) fig. 4 are large enough to permit alignment of the bar. (Make the alignment from one end of the bar).
7. When jointer bar is in alignment, cap screw (14) fig. 4 should be securely tightened. To level jointer bar with cutterhead, rotate cutterhead until jointer stone is be-

tween two of the knives. Adjust the jointer stone with handwheel (19) fig. 4 until it just clears the cutterhead.

8. Operate jointer head back and check with thickness gauge (20) fig. 5, or piece of paper to see if jointer bar is level with cutterhead.
9. To level bar with cutterhead, loosen cap screws on back of jointer bar bracket and adjust with adjusting screws.
10. Check to see if jointing head is in parallel alignment with cutterhead.

JOINTING CUTTERHEAD KNIVES:

11. To joint knives, adjust jointer stone until it just clears knives evenly, lower jointer stone until it just touches knives.
12. Move the jointer head to a position past the cutterhead. With the Planer running at full speed, operate jointer head back and forth RAPIDLY lowering jointer head, if necessary, until knives are properly jointed. Do not OVERJOINT knives.

GRINDING CUTTERHEAD KNIVES:

Mount grinding attachment on jointer bar and secure in place with set screws (15) Fig. 4. Lock cutterhead in place for knife grinding with cutterhead lock (23) Fig. 6. Turn the knob (23) until the pin in the casting (24) enters the hole in knob (23). Turn the cutterhead by hand until the cutterhead is locked in place. Turn grinding wheel (9) Fig. 6 until the wheel very lightly touches knife (8) Fig. 6.

Move the grinder (9) to position past the cutterhead knives with handwheel (17). Start grinder motor with switch (10) Fig. 6, set grinding wheel to take cut, and with hand wheel (17) rapidly move grinder back and forth. Be sure to move grinder fast enough to prevent burning of the knives. Knives should always be ground after jointing, leaving a very slight joint on the knife edge. Each knife should be finished before moving to the next knife. Care should be taken to keep all knives the same weight. Knives out of balance will cause excessive vibration of the cutterhead.

Before operating the grinder, the ways on the grinder bar and the lead screw should be lubricated with a light film of oil. The gib screws on the head should be adjusted to keep any excessive wear or movement out of the head.

V. PLANER OPERATING HINTS

IF CLIP OR SNIPE APPEARS AT BEGINNING OF BOARD:

1. Pressure bar may be set too low.
2. Chipbreaker may be set too high.
3. Upper infeed roll may be set too high.
4. Lower infeed roll may be set too high.
5. Spring tension may be too light on pressure bar.

IF CLIP OR SNIPE APPEARS ON END OF LUMBER:

1. Pressure bar may be set too high.
2. Lower outfeed roll may be set too high.
3. Upper outfeed roll may be set too low.
4. Lumber may not be butted.
5. Grain may be running against knives.

IF KNIVES TEAR OUT LUMBER:

1. Feed may be too fast.
2. Moisture content may be too high.
3. Head may be running too slowly.
4. Cut may be too heavy.
5. Cutting angle may be too large.
6. Grain may be running against knives.

IF KNIVES RAISE THE GRAIN:

1. Feed may be too fast.
2. Cutting angle may be too large.
3. Head may be running too slowly.
4. Moisture content of lumber may be too high.
5. Cut may be too heavy.

IF CHIP MARKS APPEAR ON LUMBER:

1. Blower system may not be strong enough.
2. Feed may be too fast.
3. May be loose connection in blower system—no suction.
4. Exhaust pipe may join at too large an angle to main blower pipe.

IF PANELS ARE TAPERED ACROSS THE WIDTH:

1. Planer bed out of level with cutterhead.
2. Knives not set even with cutterhead.

IF UNDESIRE POUNDED GLOSSY FINISH APPEARS:

1. Knives may be dull.
2. Feed may be too slow.

IF WASHBOARD FINISH APPEARS:

1. Knives may have been driven back into the head.
2. Machine may be completely out of adjustment.
3. Planer bed loose and rocking in ways.

IF REVOLUTION MARK SHOWS UP:

1. Knives may be ground poorly.
2. Knives not set properly or evenly.

IF LINES APPEAR AT RIGHT ANGLES TO THE KNIFE MARKS:

1. Knives may have checkered and nicked up by over-grinding and taking temper out of steel.
2. Chips may have wedged between rolls and tables.
3. Pressure bar may be dragging.

IF STOCK TWISTS IN MACHINE:

1. Pressure bar may be cocked.
2. Upper outfeed roll may be cocked.
3. Upper outfeed roll may have uneven spring tension on it.
4. Lower rolls may be cocked.

IF STOCK STICKS OR HESITATES IN MACHINE:

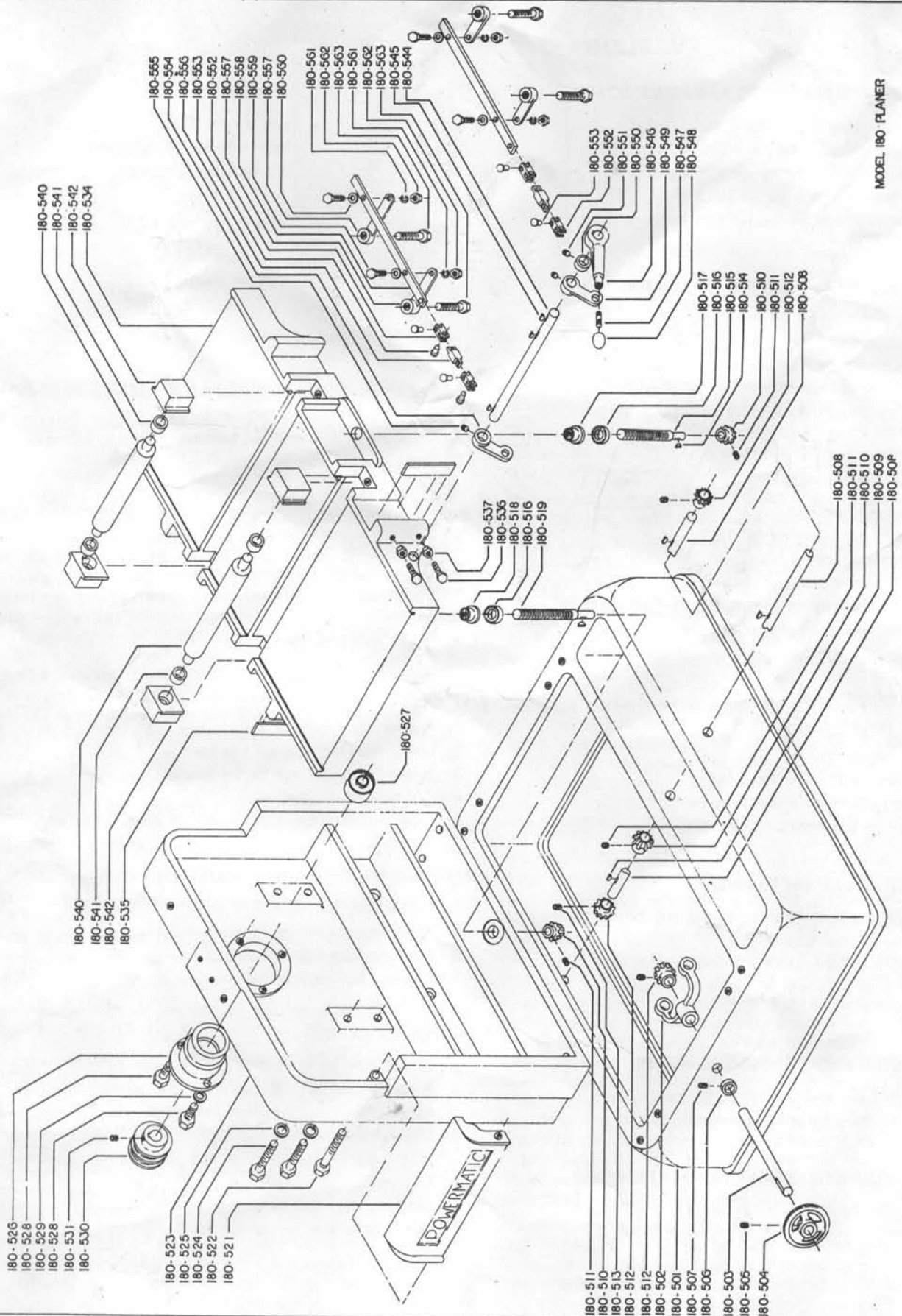
1. Pressure bar may be set too low.
2. Lower rolls may be set too low.
3. Upper rolls may not be set low enough.
4. Cut may be too heavy.
5. Coaxer board may help lumber through machine.

IF MACHINE IS NOISY AND VIBRATES AND POUNDS:

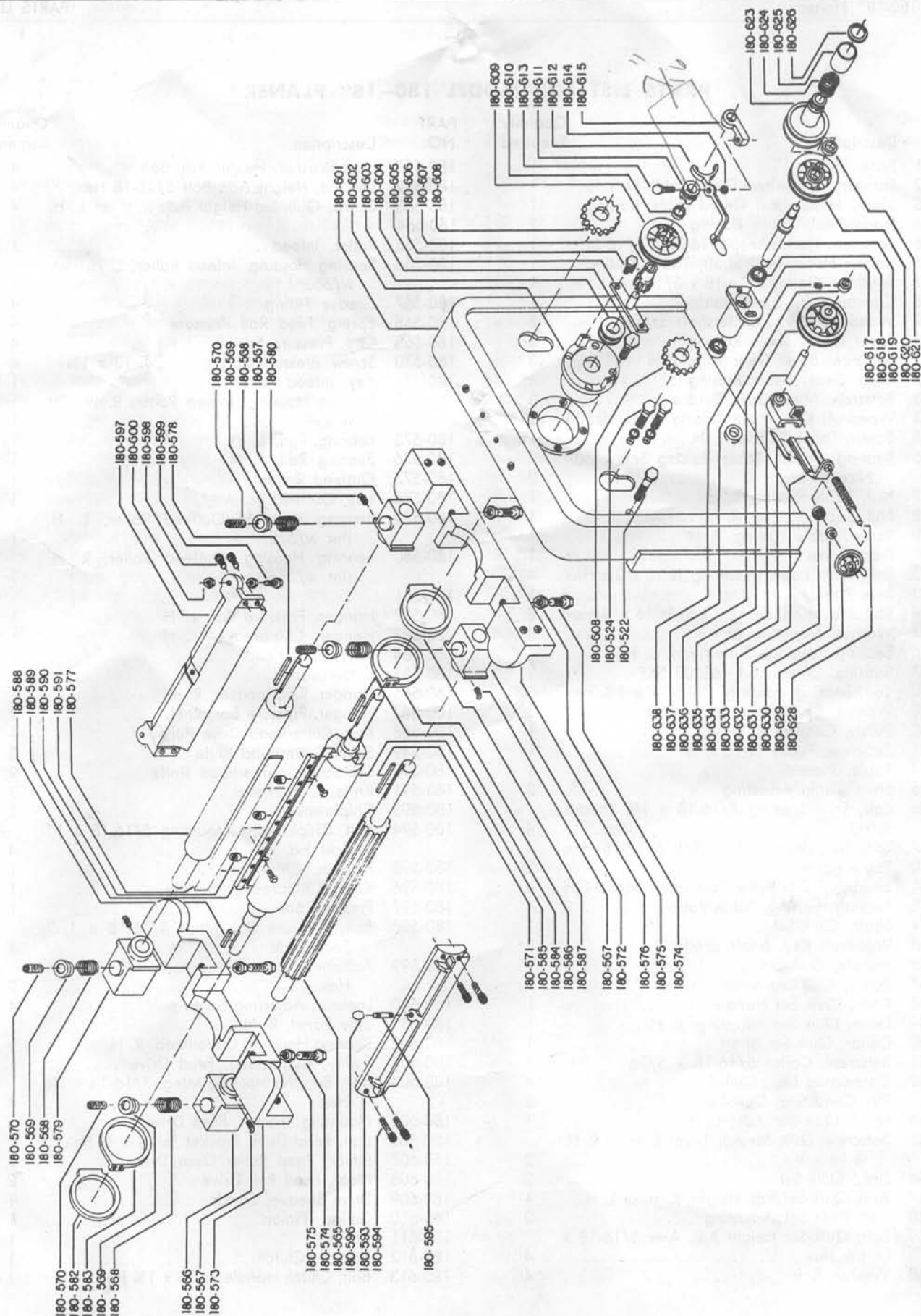
1. Knives may be too dull.
2. Machine may not be leveled up correctly.
3. Machine may not be on solid foundation.
4. Pressure bar may be set too low.

IF MOTOR KICKS OUT:

1. Knives may be dull, thus overloading motor.
2. Pressure bar may be set too low, putting drag on motor.
3. Motor may be drawing high current because other machinery in the plant in use has pulled down the voltage.
4. Machine may be out of adjustment.
5. Lower rolls may be set too low.



MODEL 180 PLANER



PARTS LIST FOR MODEL 180-18" PLANER

PART NO.	Description	Quantity Required	PART NO.	Description	Quantity Required
180-501	Base, Planer	1	180-561	Lock Washer, Height Adj. Bolt	4
180-502	Hanger, Handwheel Gear, Table Raising	1	180-562	Locknut, Height Adj. Bolt 5/16-18 Hex	4
180-503	Shaft, Handwheel Gear, Table Raising	1	180-563	Screw, Quik-Set Height Adj. R. H. or L. H.	4
180-504	Handwheel, Table Raising	1	180-564		
180-505	Setscrew, Handwheel 5/16-18 x 5/16 lg.	1	180-565	Roller, Infeed	1
180-506	Collar, Handwheel Shaft, Table Raising	1	180-566	Bearing Housing, Infeed Roller, L. H. (Int. w/580)	1
180-507	Setscrew, Collar 5/16-18 x 5/16 lg.	1	180-567	Grease Fitting	4
180-508	Countershaft, Table Raising	1	180-568	Spring, Feed Roll Pressure	4
180-509	Woodruff Key, Countershaft #608	3	180-569	Cap, Pressure Spring	4
180-510	Bevel Gear, Table Raising	3	180-570	Screw, Pressure Spring Cap, 1/2-13 x 1 3/4	4
180-511	Setscrew, Bevel Gear 3/8-16 x 3/8	3	180-571	Key, Infeed Roller	1
180-512	Miter Gear, Table Raising	3	180-572	Bearing Housing, Infeed Roller, R. H. (Int. w/579)	1
180-513	Setscrew, Miter Gear 3/8-16 x 3/8	3	180-573	Bearing Rail, L. H.	1
180-514	Woodruff Key, Table Raising Screw #608	2	180-576	Bearing Rail, R. H.	1
180-515	Screw, Table Raising, L. H.	1	180-577	Outfeed Roller	1
180-516	Bearing, Thrust, Table Raising Screw 607 Nice	2	180-578	Key, Outfeed Roller	1
180-517	Nut, Table Raising, L. H.	1	180-579	Bearing Housing, Outfeed Roller, L. H. (Int w/572)	1
180-518	Nut, Table Raising, R. H.	1	180-580	Bearing Housing, Outfeed Roller, R. H. (Int w/566)	1
180-519	Screw, Table Raising, R. H.	1	180-581		
180-521	Front Panel	1	180-582	Hanger, Pressure Bar, L. H.	1
180-522	Bolt, Front Panel Mounting 3/8-16 x 2 1/2 Hex	4	180-583	Hanger, Chipbreaker, L. H.	1
180-523	Side Panel, L. H.	1	180-584	Key, Cutterhead	1
180-524	Bolt, Mounting, Bearing Rail 3/8-16 x 3/4 Hex	8	180-585	Cutterhead	1
180-525	Washer, Mounting Bolt	8	180-586	Hanger, Chipbreaker, R. H.	1
180-526	Bearing Housing, Cutterhead, L. H.	1	180-587	Hanger, Pressure Bar, R. H.	1
180-527	Bearing, Cutterhead 462307 SKF	2	180-588	Key, Cutterhead Drive Pulley	1
180-528	Bolt, Bearing Housing, 7/16-14 x 1 1/4 Hex	3	180-589	Shim, Cutterhead Knife	3
180-529	Washer, Bear. Hous. Mtng. Bolt	3	180-590	Jackscrew, Cutterhead Knife	9
180-530	Pulley, Cutterhead Drive	1	180-591	Knife, Cutterhead	3
180-531	Setscrew, Pulley 3/8-16 x 1/2	1	180-593	Chipbreaker	1
180-534	Table, Planer	1	180-594	Bolt, Chipbreaker Mounting 5/16-18 x 1" Sckt Hd	4
180-535	Shim, Table Adjusting	2	180-595	Handle, Chipbreaker	1
180-536	Bolt, Shim Locking 5/16-18 x 1 3/8 Square Hd.	4	180-596	Knob, Chipbreaker Handle	1
180-537	Lock Nut, Shim Locking Bolt 5/16-18 Hex	4	180-597	Pressure Bar	1
180-540	Table Roller	2	180-598	Bolt, Pressure Bar Mtng 5/16-18 x 1" Socket Hd	4
180-541	Bearing, Table Roller Torrington B1616-OH	4	180-599	Adjusting Screw, Pressure Bar 3/8-16 x 1 1/2 Hex	2
180-542	Bearing Housing, Table Roller	4	180-600	Locknut, Adjusting Screw	4
180-544	Shaft, Quik-Set	1	180-601	Side Panel, R. H.	1
180-545	Woodruff Key, Shaft #608	3	180-602	Bearing Housing, Cutterhead, R. H.	1
180-546	Handle, Quik-Set	1	180-603	Pulley, Cutterhead, Feed Drive	1
180-547	Screw, Quik-Set Knob	1	180-604	Bolt, Bearing Housing Mtng. 7/16-14 x 1 1/4 Hex	4
180-548	Knob, Quik-Set Handle	1	180-605	Mounting Bracket, Feed Drive	1
180-549	Lever, Quik-Set Adjusting, R. H.	1	180-606	Bolt, Feed Drive Bracket 3/8-16 x 3/4 Hex	2
180-550	Collar, Quik-Set Shaft	1	180-607	Pinion, Feed Roller Gear Drive	1
180-551	Setscrew, Collar 5/16-18 x 5/16	1	180-608	Gear, Feed Roll Drive	2
180-552	Connecting Link, Quik-Set	4	180-609	Drive Sheave, Clutch	1
180-553	Pin, Connecting, Quik-Set	8	180-610	Collar, Pinion	1
180-554	Level, Quik-Set Adj., L. H.	1	180-611	Clutch	1
180-555	Setscrew, Quik-Set Adj. Level, L. H. or R. H. 3/8-16 x 3/8	2	180-612	Handle, Clutch	1
180-556	Link, Quik-Set	2	180-613	Bolt, Clutch Handle 3/8-16 x 1 3/4 Hex	1
180-557	Arm, Quik-Set Adj. Height, R. H. or L. H.	4			
180-558	Bar, Quik-Set Adjusting	2			
180-559	Bolt, Quik-Set Height Adj. Arm 5/16-18 x 1 1/4 Hex	4			
180-560	Washer, Bolt	4			

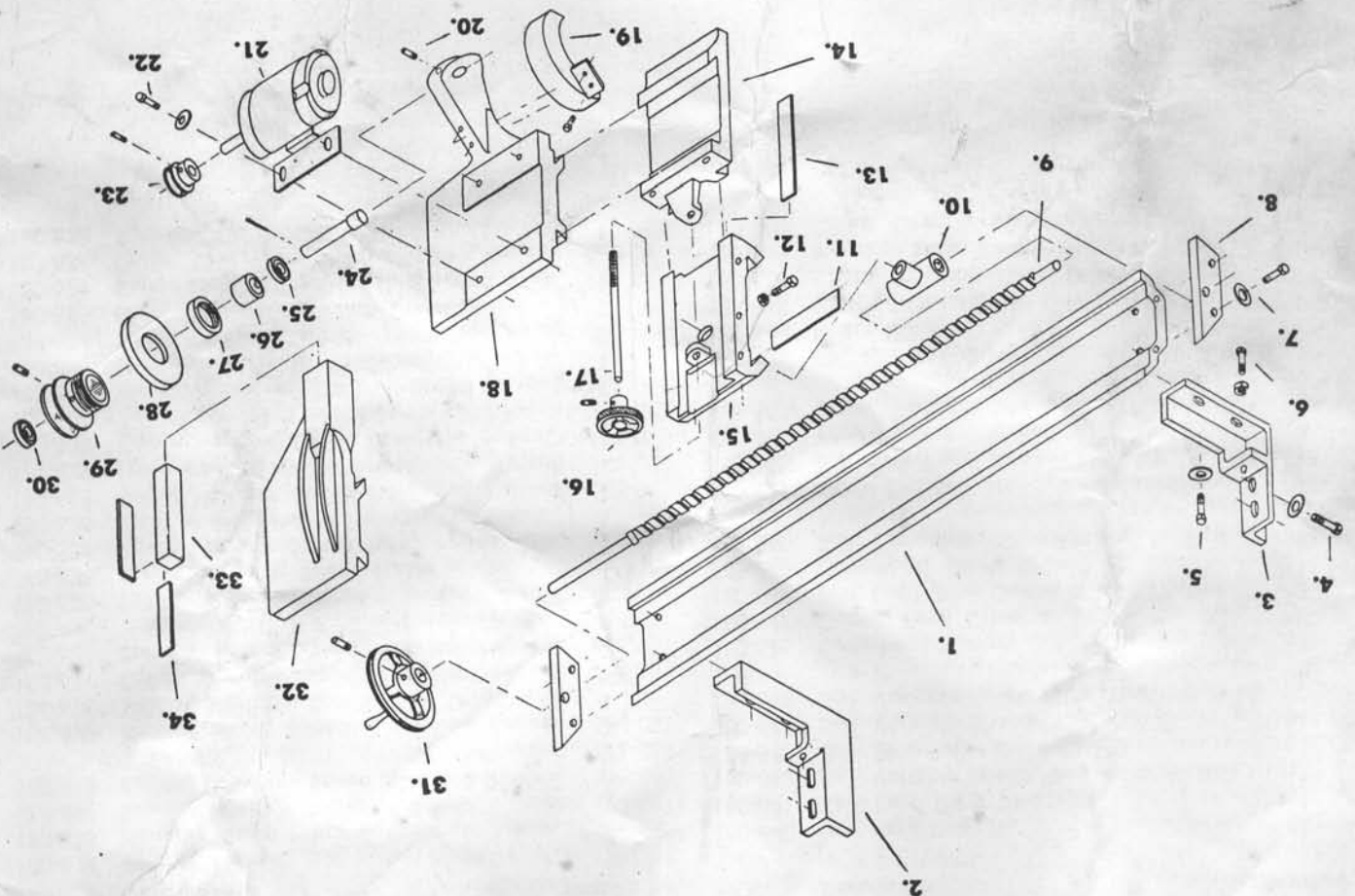
PARTS LIST FOR MODEL 180-18" PLANER

PART NO.	Description	Quantity Required	PART NO.	Description	Quantity Required
180-614	Washer, Handle	1		NOT PICTURED	
180-615	Hanger, Clutch Handle	1	180-640	Dust Hood	1
180-617	Bearing Housing, Variable Speed	1	180-641	Key, Feed Drive Clutch	1
180-618	Bearing, Variable Speed 206KLL & 206SZZ FAFNIR	2	180-642	Belt, Variable Speed Feed Roller 4L 620	1
180-619	Shaft, Variable Speed	1	180-643	Belt, Feed Roller Drive 5L 440	1
180-620	Sheave, Variable Speed Shaft Drive	1	180-644	Belt, Variable Speed Drive 5L 500	1
180-621	Collar, Variable Speed Drive Sheave	1	180-645	Bolt, Variable Speed Slide Mounting $\frac{3}{8}$ -16 x 1"	2
180-622	Bolt, Variable Speed Bearing Housing 7/16-14 x 1 1/4	2	180-646	Cutterhead Cover	1
180-623	Pulley, Variable Speed	1	180-647	Guard, Feed Drive	2
180-624	Spring, Variable Speed Pulley	1	180-648	Bolt, Feed Drive Guard $\frac{3}{8}$ -16 x 1 1/2 Hex	2
180-625	Cover, Variable Speed Pulley Spring	1	180-649	Cutterhead, Direct Drive	1
180-626	Retainer Ring, Pulley Spring	1	180-650	Bolt, Cutterhead Shim Locking $\frac{1}{4}$ -20 x $\frac{3}{8}$ Sq Hd	27
180-628	Screw, Variable Speed Adj.	1	180-651	Motor End Bell, Direct Drive Cutterhead	1
180-629	Handwheel, Variable Speed	1	180-652	Bolt, Side Panel Mtng. 7/16-14 x 1 1/4 Hex	4
180-630	Collar, Variable Speed Screw	1	180-653	Washer, Mounting Bolt	4
180-631	Bearing, Variable Speed Screw 605 Nice	1	180-654	Screw, Variable Speed Shim Adj. $\frac{1}{4}$ -20 x $\frac{3}{8}$ Sq	3
180-632	Mounting Bracket, Variable Speed	1	180-655	Pin, Clutch Shifting	2
180-633	Shim, Variable Speed Slide	1	180-656	Motor Pulley	1
180-634	Slide, Variable Speed	1	180-657	Collar, Indexing, Belt Drive	1
180-635	Shaft, Pulley, Compound Drive	1	180-658	Collar, Indexing, Direct Drive	1
180-636	Compound Sheave, Variable Speed	1	180-659	Housing, Index Plunger	1
180-637	Collar, Compound Sheave Shaft	1	180-660	Collar, Direct Drive	1
180-638	Setscrew, Collar $\frac{3}{8}$ -16 x $\frac{3}{8}$ lg.	1			

Warranty

This machine and its component parts have been carefully inspected and performance tested at various stages of production and each finished machine is subjected to a final inspection before shipment. We agree that for a period of eighteen (18) months from date of delivery from our authorized dealer to replace, at our option, any machine (or component part thereof) proving defective within the above period, F.O.B. our plant, providing such machine (or component part) is returned prepaid to our plant, or a designated service center of the undersigned, for our examination. This warranty does not include repair or replacement required because of misuse, abuse, or because of normal wear and tear; or electrical motors and electrical components which are warranted by their manufacturer and which should be taken to their local authorized repair station for service. Further, we cannot be responsible for the cost of repairs made or attempted outside of our factory or designated service center without our authorization. No claims for defects will be honored if Serial No. plate has been removed. This warranty is made expressly in place of all other warranties or guarantees, express or implied, with respect to fitness, merchantability, quality or operativeness. This warranty becomes effective only when the accompanying card is fully and properly filled out and returned to the factory within ten (10) days from date of delivery.

POWERMATIC  **HOUDAILLE, INC.**
McMinnville, Tennessee 37110



KNIFE GRINDING AND JOINTING ATTACHMENT PARTS LIST

No.	Required	Part Description
1	1	Bar, grinder
2	1	Mounting bracket, grinder bar, L. H.
3	1	Mounting bracket, grinder bar, R. H.
4	4	Bolt, grinder bar mounting
5	4	Bolt, grinder bracket
6	2	Bolt, bar adjusting
7	4	Washer, lead screw bearing bracket
8	4	Bolt, lead screw bearing bracket
9	1	Lead screw
10	1	Nut, lead screw
11	1	Shim, grinder cross slide
12	8	Screw, gib adjusting
13	1	Shim, grinder vertical slide
14	1	Slide, grinder vertical
15	1	Slide, grinder
16	1	Handwheel, vertical adjusting screw
17	1	Screw, vertical adjusting
18	1	Bracket, grinding wheel
19	1	Guard, grinding wheel
20	1	Set screw, wheel shaft
21	1	Motor
22	4	Bolt, motor mounting
23	1	Shaft, motor drive
24	1	Shaft, grinder
25	2	Ball bearing, shaft
26	1	Spacer, shaft
27	1	Nut, grinding wheel
28	1	Grinding wheel
29	1	Wheel hub & pulley
30	2	Ball bearing, shaft
31	1	Handwheel, screw
32	1	Head, jointing
33	1	Stone, jointing
34	1	Shim, jointing stone