

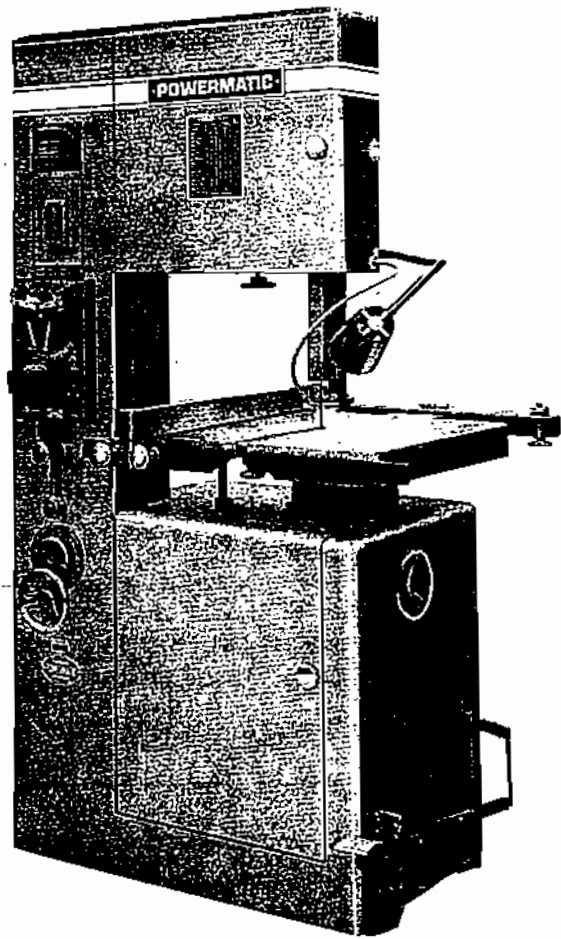
Shop

POWERMATIC®

MODEL
87

20" BAND SAW

OPERATING INSTRUCTIONS AND PARTS LIST



For Serial Numbers From 2-2000 Up

POWERMATIC  **HOUDAILLE, INC.**

McMinnville, Tennessee 37110

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 band saw:
 - a. Clear table area of tools, chips and all foreign matter.
 - b. Check the band saw blade for general condition, sharpness, proper set, and make sure it is the right blade for the work to be done. Missing teeth, a peeled back and dullness place a severe strain on the blade and can cause the blade to break.
 - c. Rotate the band wheel by hand to make certain the blade tracks properly.
 - d. Check blade tension. Make sure it is set for the blade width to be used. Excessive tension can cause the blade to fatigue and break.
 - e. Set the upper guide as close to the works height as possible to insure the maximum blade rigidity.
 - f. Make sure the trunnion, guide bar and guides are securely locked.
7. Make sure, under power, that the band wheels rotate in the correct direction.
8. Use the correct speed and feed for the blade, blade material and work piece to be cut.
9. Do not clear chips from blade with the blade moving.
10. When manually feeding narrow parts, use a push stick or other piece of the same material to finish the cut.
11. When cutting with the table at an angle, be sure to block or clamp the work piece to prevent it or the cut-off portion from falling off the table.
12. On long piece cutting, use out-board supports to prevent the work piece from becoming overbalanced and falling to the floor.
13. Do not overfeed -- it will reduce blade life and can cause blade breakage.
14. Never operate the saw with either the upper or lower wheel door, or with the blade guard, open.
15. If the machine is equipped with a blade welder and grinder, follow the operating and safety instructions provided to insure welding with safety.
16. Give the work you're doing your undivided attention. Looking around, carrying on a conversation and "horse play" are careless acts that can result in serious injury.
17. If leaving the machine area, turn the machine off and wait until all moving parts stop before departing.
18. Make no adjustments except speed and feed changes with the band rotating, and always disconnect power source when changing bands or servicing in order to avoid accidental starting.
19. Use only Powermatic or factory authorized replacement parts and accessories, otherwise the warranty and guarantee are null and void.
20. Do not use this Powermatic band saw 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 from that use.

WARNING: Do not equip or use with a motor larger than 3 horsepower at 1800 R.P.M. The use of a larger and/or higher speed motor voids the warranty and Powermatic holds itself harmless for any injury that may result.

OPERATING INSTRUCTIONS

The Powermatic Model 87-20" Metal Cutting Band Saw is constructed of steel plate, braced to give maximum rigidity. Streamlined in appearance, all moving parts are completely guarded for safe operation. The top and bottom band wheels are easily accessible through large hinged doors on front of the saw. Sealed dust chute keeps motor and drive free from cuttings and dust.

MOTOR AND WIRING: Electric wiring is connected to a motor wiring in conduit box mounted on the side of the column. Motor should be inspected and checked for rotation before operating machine. Operate lower unit and check rotation before installing blade. Frame of machine should ALWAYS be grounded.

POWER DRIVE: The saw is driven with a motor fastened on an adjustable hinge base mounted in the base of the machine. A motor from 1½HP, single or 3-phase is available; 1½ HP for light work and 1½ HP to 3 HP for medium to heavy work is recommended. Two A section belts drive the lower band wheel.

INSTALLING BLADE: To install band saw blade: remove table insert (19) Fig. 1, from table; open top and bottom doors. Take the blade in both hands and slide through table slot and over band wheels. With blade placed in the center of the band wheels, increase tension on upper wheel with tension screw (16) Fig. 5, located under upper wheel. Set upper and lower saw guides so they will clear the saw blade. Turn band wheels by hand to see that saw blade tracks properly. It is important that the blade runs centered on the wheels for accurate work and maximum blade life. When the adjustment has been properly made, the blade will track; that is, it will run steadily in the same line.

BLADE TENSION: Correct blade tension is very important for efficient operation. The wider and thicker blades require more tension than narrow blades. A graduated tension indicator for different blade widths (17) Fig. 5, is located inside the frame and behind upper wheel. Tension is regulated by screw (16) Fig. 5, maintaining pressure on tension spring. The spring is designed to give correct tension only for standard gauge blades. Tension may vary for heavier and/or thicker blades. Blade tension does not vary with length of blade.

WHEEL ALIGNMENT: Band wheels are properly aligned at the factory and should operate correctly. However, in shipping, the original adjustments may have moved, necessitating realignment. The lower wheel housing is mounted on jack screws, two in the rear and two in the front. The shaft may be leveled by loosening the two bearings locking bolts and adjusting the two jack screws. Bearing bolts should be retightened after shaft is leveled.

BLADE GUIDE ADJUSTMENT: For proper operation, the saw blade must be supported by an upper and lower saw guide. The lower guide is mounted under the table and the upper guide on a counterbalanced bar above the table (18) Fig. 5. The purpose of the saw guides is to support the blade for cutting curve surfaces. It is very IMPORTANT for the guides to be adjusted in proper relation to saw blades. Before adjusting guides, adjust tension on blade, start motor and check tracking on band wheels. Stop Motor—take no chances. Adjust the side blocks or bearings (both upper and lower) to saw blades, leaving a little clearance on each side. The thickness of a piece of paper is a good clearance gauge (20) Fig. 2. Guide blocks or bearings are held in place with socket head set screws (9) Fig. 2 and can easily be adjusted. After blade clearance is set, the back guide holder should be adjusted with the knurled knob (8) Fig. 4 so the edge of the side guides is just behind saw teeth gullets (21) Fig. 4. The back guide consists of a ball bearing mounted on an adjustable bar (22) Fig. 4 and should be set 1/64", or thickness of a piece of paper, from back edge of the blade. The back guide is set at a slight angle to back of blade so the edge of the blade will not cut a groove in back bearing guide. For best operation, the LOWER saw guide (7) Fig. 1 should be set as CLOSE as possible to bottom of table. To adjust the lower guides, loosen guide bolts (6) Fig. 1 and raise the guide as close as possible to bottom of table. Tighten guide bolt.

TABLE ADJUSTMENTS: The table is mounted on an extremely heavy duty single action trunnion that rests on trunnion base (23) Fig. 1. The table may be tilted to the right 45 degrees and to the left 15 degrees. Table is locked in position with trunnion handwheel mounted on side of machine base (5) Fig. 1. To tilt table, turn handwheel to left about ½ turn, and tilt the table to the desired angle—tighten trunnion. To level table with blade, raise counterbalanced arm to highest position and place machinist square against side of blade. Set table stop (24) Fig. 6, on side of table by adjusting screw on top of the stop. Stop bar should be removed for tilting table to the left.

LUBRICATION: The bearings on top and bottom shaft are sealed for life, requiring no lubrication. The slides and adjusting screws should be lubricated at regular intervals to insure proper operation. Variable speed transmission is filled with 3½ quarts of 40 or 50 weight motor oil—DO NOT use transmission grease—keep oil to top of elbow on oil filler pipe.

TRANSMISSION OPERATION: To change speed range of transmission, turn variable speed hand wheel (15) Fig. 6 to slow speed. Pull the lock pin shifting handle (13) Fig. 6 to the right for slow speed, left for high speed and center for neutral. To obtain maximum variable speed range, the variable sheaves must be properly adjusted. To adjust belt, set hand wheel (15) Fig. 6 to slow range and remove bolt (1) Fig. 3. Turn turnbuckle (2) Fig. 3 to right to raise belt in upper variable speed pulley and to left to lower. When belt is properly adjusted, it will ride flush with the top of the upper pulley in the slow speed range and flush with the top of the lower pulley in the high speed range.

POWER FEED OPERATION: To operate power feed, push foot pedal down until latched. Place material to be cut against feed block and push up to blade. The material does not have to be "squared" in relation to material guide. Fasten the chain hook, Part 87-615, to the chain 87-616, place chain in chain segments 87-609. The cables and chain can be adjusted for various sizes by adjusting the power feed wheels (10) Fig. 7 either in or out. The two power feed wheels can be adjusted independently. To change feed rate, move weight toward linkage to increase feed rate, toward hinge pin to decrease feed rate. Start the saw and release the latch on foot pedal.

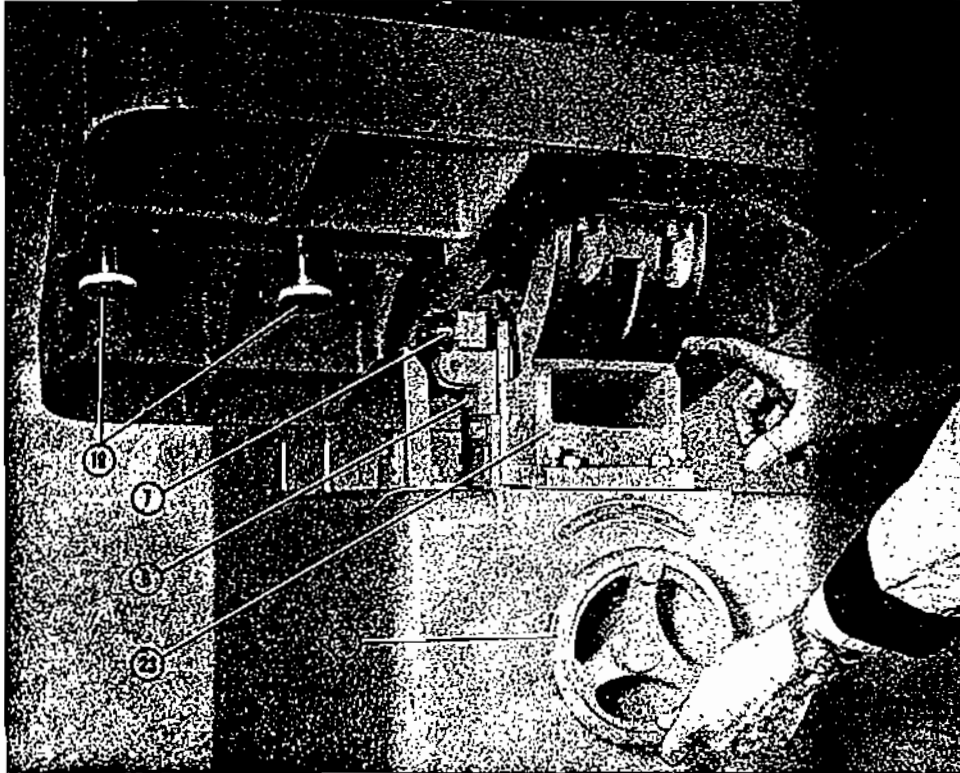


Fig. 1

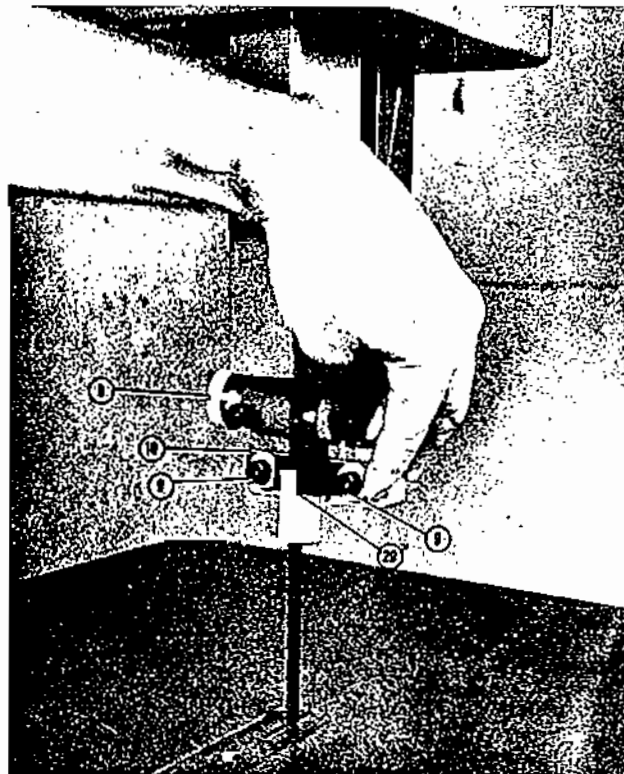


Fig. 2

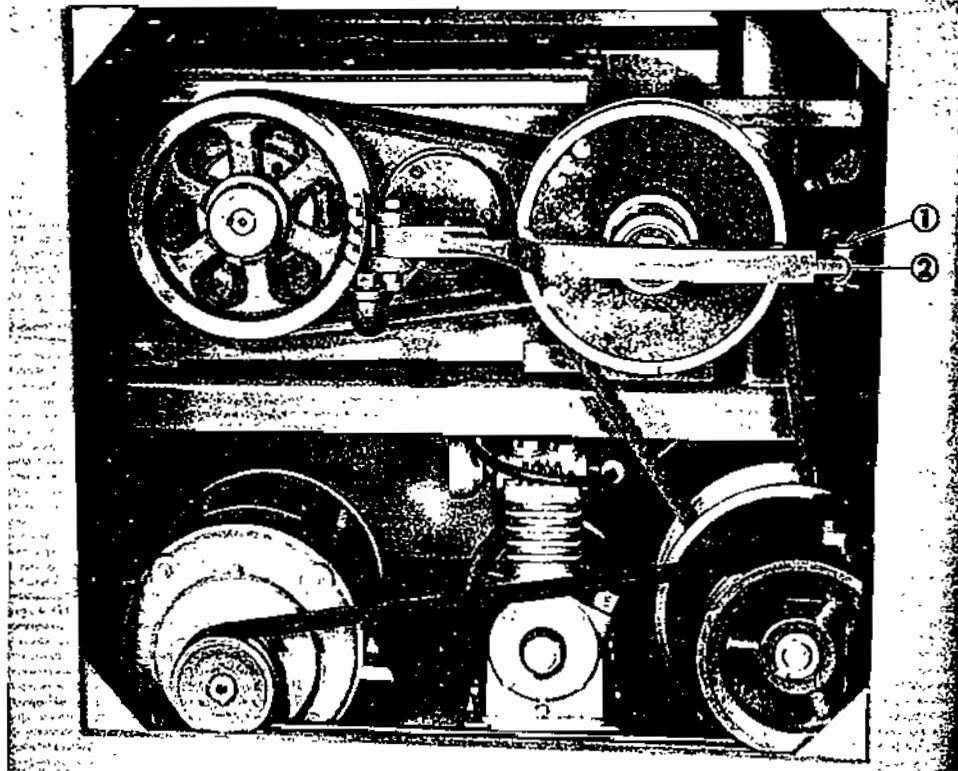


Fig. 3

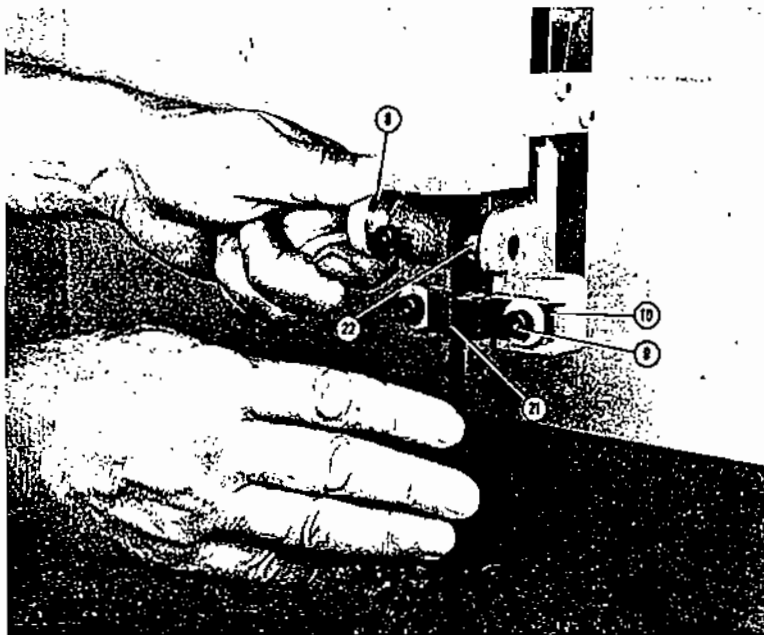


Fig. 4

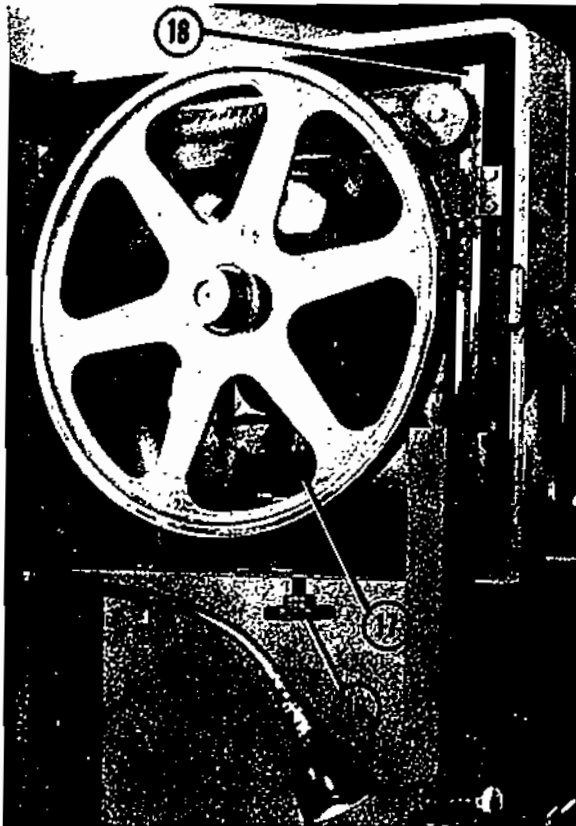


Fig. 5

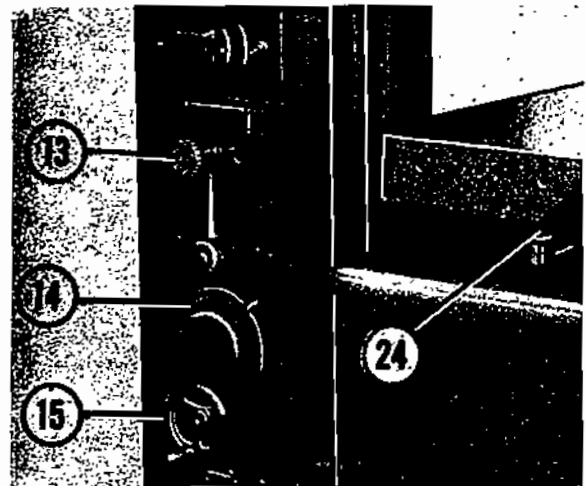


Fig. 6

To shift transmission from low to high or high to low speeds, turn variable speed handwheel to slow speed. Pull the lock pin shifting handle to the right for high speed and to the left for slow speed. Center position of lock pin shifting handle is Neutral.

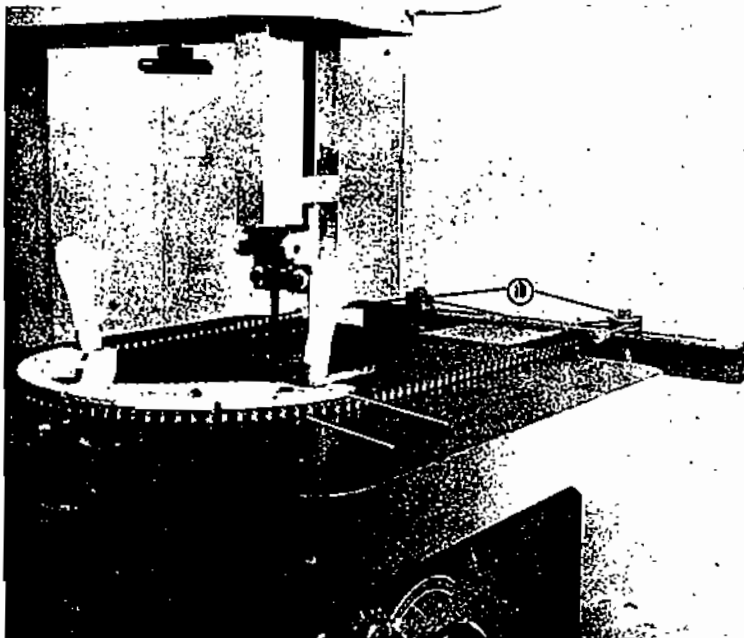


Fig. 7

To operate power feed, push pedal down until latched. Place material against feed block and push against saw blade. Fasten chain hook to chain, place in chain segments and adjust to the material with the adjusting feed wheels. Start saw and release the latch on foot pedal.

To Disassemble Transmission

First—Remove set screws from lower Band Wheel (868), and remove wheel. Remove (3) hex head bolts behind lower wheel, releasing front of transmission box from Band Saw frame. From rear of machine, remove variable speed arm bolt (8134). Swing variable speed arm (8266) out of way. Remove (4) cap screws from base of transmission box. Remove all drive belts. Remove set screws holding variable speed pulley (8903) to shaft (8216). Remove variable speed pulley (8903). Remove set screw (8212) from clutch shift arm (8215) and disengage clutch shift arm from clutch shift shaft (8230). Remove Transmission box from cabinet.

To remove clutch or wheel shaft, first remove top of Transmission box, (8252) and pour out oil. Loosen set screw (8475) and remove clutch shift shaft (8230) and clutch shift fork (8232). Remove bearing cap (8187) and bearing cap gasket (8480.) Remove cap screws (8468) and remove variable speed arm bracket (8263). Put sliding clutch in neutral position and with screwdriver or punch remove wheel shaft lock ring (8457). Lock ring is located between clutch (8197) and high speed clutch assembly (8901). Shaft cannot be removed without removal of this lock ring. Remove wheel shaft from Transmission box by tapping with a wooden block. Shaft is driven out from rear of transmission toward front.

Reverse above procedure for re-assembly.

To remove main shaft (8171), first remove solid bearing cap (8173) and bearing cap gasket (8480). Remove bearing cap (8187) and bearing cap gasket (8480). Loosen allen screws from high speed main shaft sprocket (8174) and low speed main shaft sprocket (8900). With wood block drive main shaft (8171) out from rear of transmission box toward front.

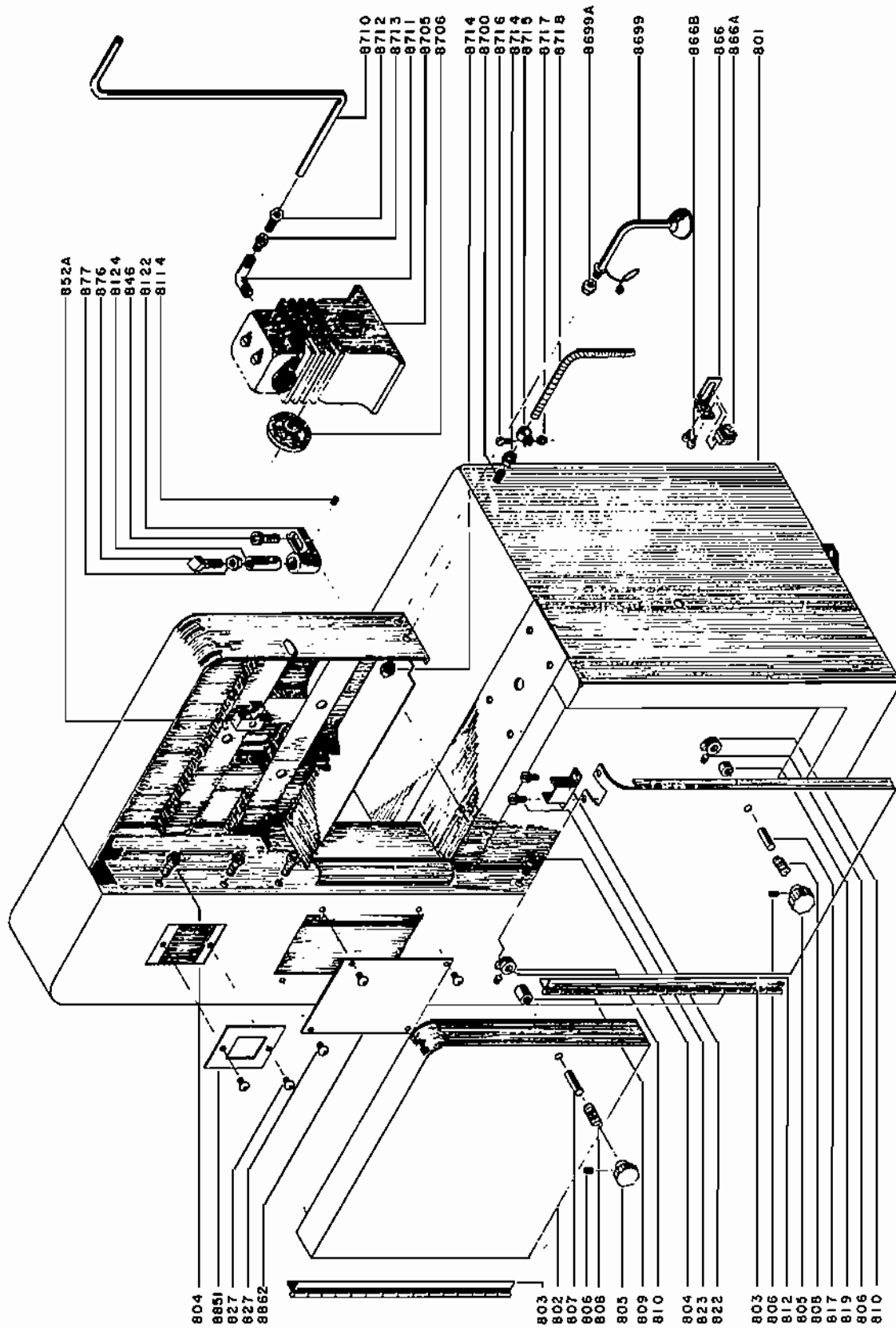
Reverse above procedure for re-assembly.

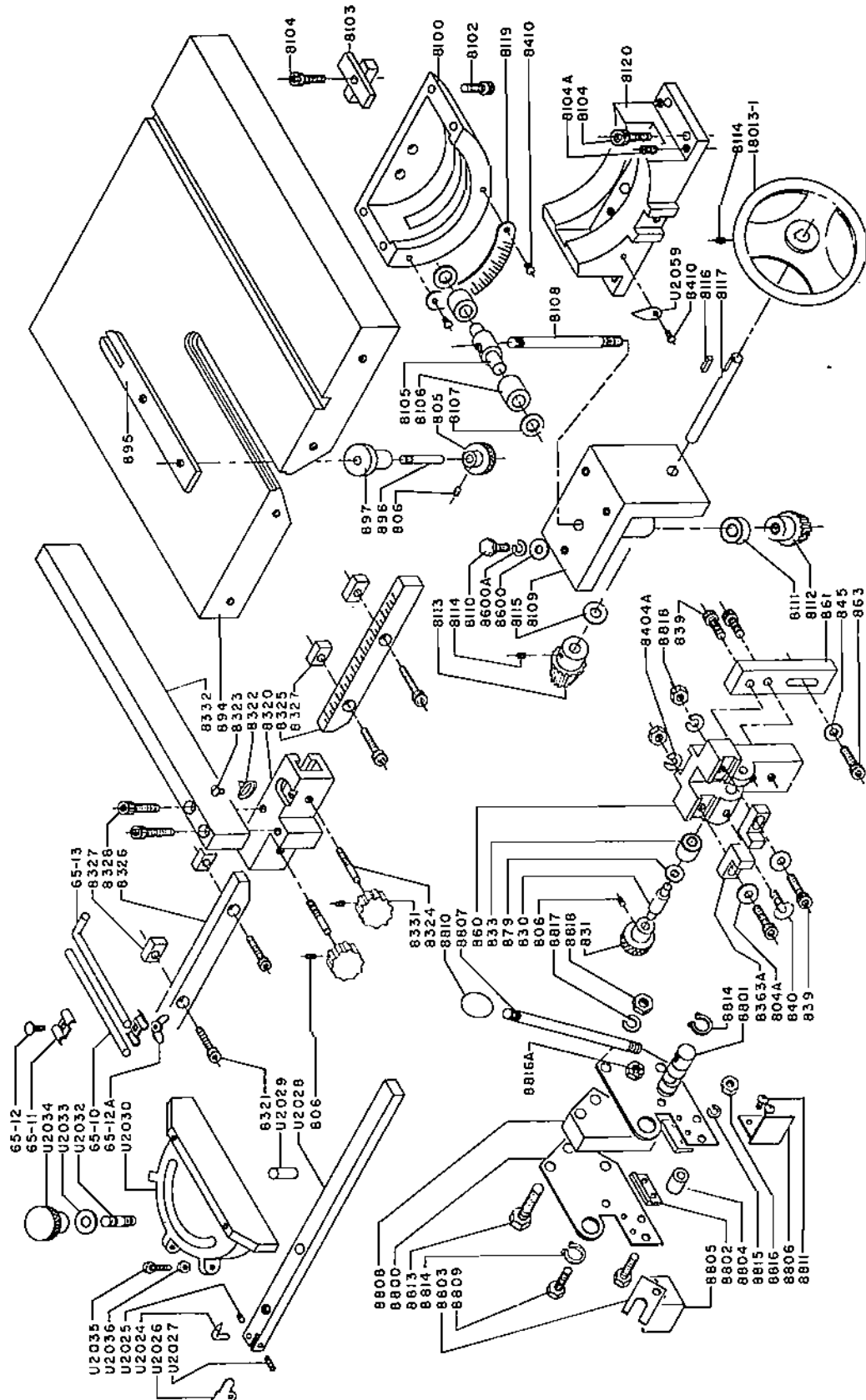
Drive chains may be removed or replaced in transmission box without removing any shaft or sprocket. To remove chain, rotate sprockets until master link appears. Remove master link locking clip. Chain will come apart readily. Transmission box uses 4 drive chains, 3 #40ASA chains 33 links or 66 pitch long and one (1) short chain, #40ASA 26 links or 52 pitches long.

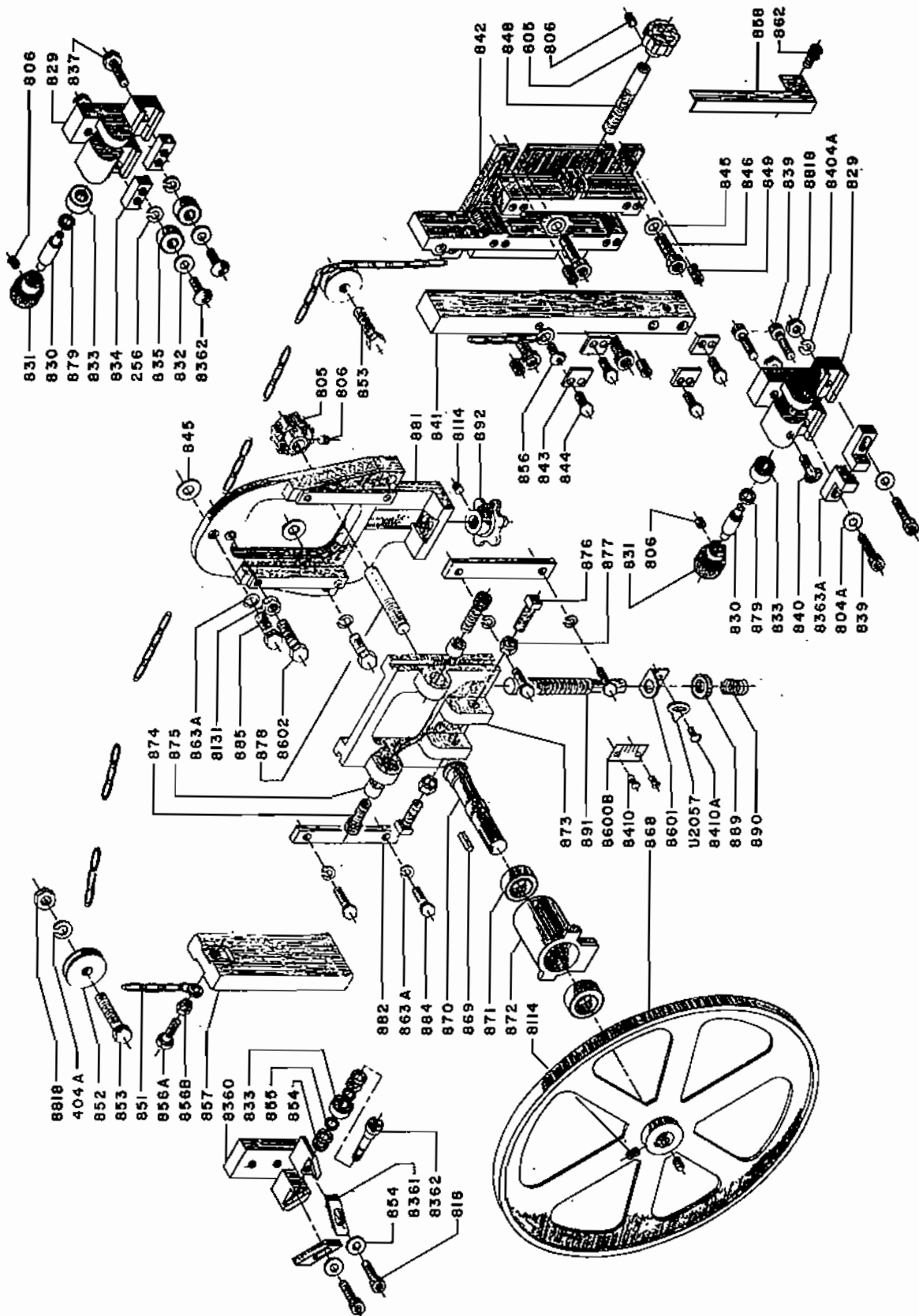
When replacing transmission, transmission box must be leveled to assure proper alignment of drive on lower wheel. Transmission Box feet are equipped with leveling screws for easy adjustment

Disassembly Of Speed Adjusting Mechanism

In sequence remove 8414, 8413, 8415, 8418, 8409, 8280, 8401, 8400, 8409, 8404, 8242, 8429, 8444. Remove 8490, 8489 and 8430, disengage 8236 from 8235. Remove (4) bolts and take out. Lift assembly out through electric welder access hole.







PARTS LIST SUPPLEMENT FOR THE NEW 1974 UNITS OF THE MODEL 87 BANDSAW

AS APPLIED TO NOS.:
1870140 – 1870150 – 1870160 and 1870170

TRANSMISSION ASSEMBLY

No.	Part No.	Description	Quantity
1	6576004	Nut, Flexloc 1"-14 (thin HT)	1
2	6863002	Washer, Belville spring B2500-120	1
3	3595333	Plate, friction	1
4	3719068	Sheave, transmission	1
5	3301040	Hub, friction	1
6	3234022	Gasket, transmission	1
7	3800034	Top, transmission	1
8	6861100	Washer, ¼" lock	6
9	6714127	Screw, hex head cap, ¼"-20 x ½"	6
10	6638004	Fitting, Pipe, ½" NTP plug	1
11	6634038	Fitting, Pipe, ½" elbow	1
12	3509005	Nipple, pipe	1
13	6714038	Screw, socket head button, ¼"-20 x ½"	16
14	3078078	Cap, bearing	2
15	6060014	Bearing, ball	2
16	3237312	Gear, input drive	1
17	3298367	Housing, transmission	1
18	6420009	Key, Woodruff 807	1
19	3705016	Shaft, counter	1
20	3659016	Retainer, bearing	2
21	6670013	Ring, retaining 5100-137	2
22	6060184	Bearing, ball	2
23	3735077	Spacer, bearing	2
24	6060185	Bearing, ball	2
25	3388066	Key, friction, hub	1
26	3239325	Gear, low speed driven	1
27	6063041	Bearing, roller, Torrington J-1612	1
28	6063013	Bearing, inner race, Torrington IR-1212	1
29	6718056	Screw, socket head set, ½"-13 x ¾"	4
30	3388063	Key, drive	1
31	3700098	Shaft, output	1
32	6710015	Screw, socket head cap, 10-24 x ½"	2
33	3237325	Gear, low speed driven	1
34	3582090	Pin, shifting	2
35	3936011	Yoke, shifting	1
36	6626040	Pin, spring, ¼" diameter x 1¼"	1
37	3700097	Shaft, shifting	1
38	3096243	Collar	1
39	6715015	Screw, socket head set, 5/16"-18 x ¼"	1

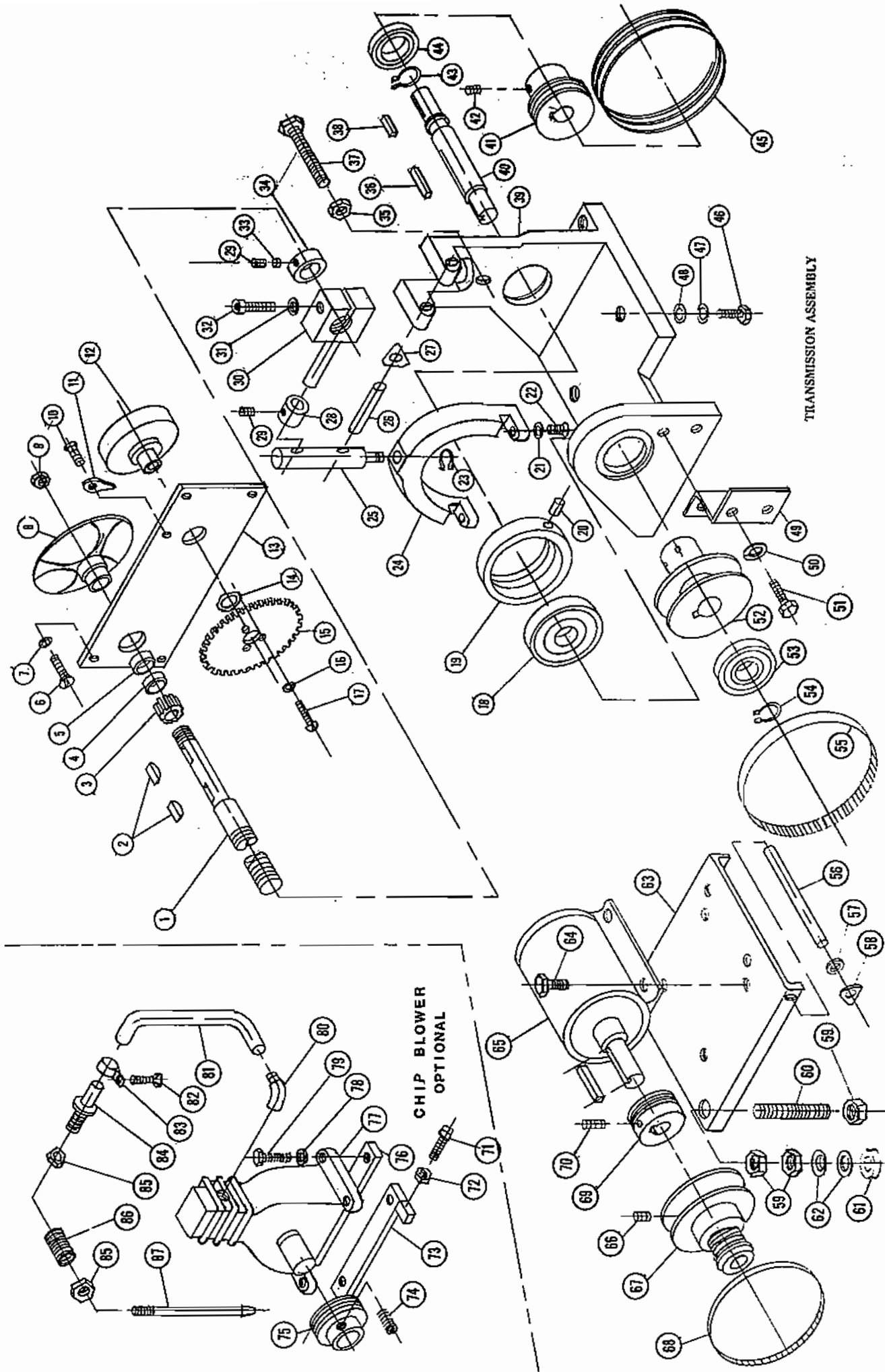
(This parts supplement must accompany each Model 87 Bandsaw Operating Manual issued from 5-6-74, until further notice.)

TRANSMISSION ASSEMBLY

No.	Part No.	Description	Quantity
1	3701051	Shaft, speed adjust	1
2	6420000	Key, Woodruff 404	2
3	3886024	Pinion, speed dial	1
4	6095175	Bushing, bronze, 503/.502 I.D. x .267/.628 O.D. x 1/4" L (Powdercraft PS -500-16	1
5	6064000	Bearing, thrust 603 1/2"	1
6	6714063	Screw, round head machine, 1/2"-20 x 1/2"	4
7	6861100	Washer, lock 1/2"	4
8	3271049	Handwheel, 6"	1
9	6568010	Nut, flexloc (thin HT)	1
10	6705010	Screw, round head machine 5-40 x 3/8"	1
11	3604001	Pointer	1
12	3148007	Drum, speed dial	1
13	3595384	Plate, speed adjusting mounting	1
14	6861508	Washer, wavy spring, Associated Spring W2028022	1
15	3237314	Gear, speed dial	1
16	6860802	Washer, 10 lock	3
17	6710035	Screw, round head machine 10-24 x 3/8"	3
18	6060098	Bearing, ball. 111LSZZ	1
19	3096098	Collar, bearing	1
20	6623013	Pin, dowel 5/16" diameter x 1"	2
21	6860802	Washer, 10 lock	2
22	6710031	Screw, round head machine 10-24 x 3/8"	2
23	6670008	Ring, retaining 5100-62	1
24	3936012	Yoke, speed adjusting	1
25	3044308	Bar, speed adjusting	1
26	3582091	Pin, pivot	1
27	6670078	Ring, retaining 5305-37	2
28	3096061	Collar, pinion shaft	2
29	6714004	Screw, socket head set 1/2"-20 x 1/2"	4
30	3526083	Nut, speed adjusting	1
31	6861100	Washer, lock 1/2"	1
32	6714016	Screw, socket head cap 1/2"-20 x 1"	1
33	3598028	Plug	2
34	3096099	Collar	2
35	6518001	Nut, hex 1/2"-13	1
36	3388009	Key, 3/16" square x 1 1/2"	1
37	6718089	Screw, hex head cap 1/2"-13 x 7"	1
38	3388004	Key, 3/16" square x 1"	1
39	3063415	Bracket, camshaft	1
40	3705017	Shaft, counter	1
41	3771062	Sheave, camshaft	1
42	6714004	Screw, socket head set 1/2"-20 x 1/2"	1
43	6670014	Ring, retaining 5100-98	1
44	6060053	Bearing, ball 205SZZG	1
45	6077141	Belt, Vee 7M1180 (matched set of 3)	1
46	6715032	Screw, hex head round machine 5/16"-18 x 1"	4
47	6861200	Washer, lock 5/16"	4
48	6861201	Washer, flat 5/16"	4
49	3068210	Bracket, camshaft stabilizer	1
50	6861200	Washer, lock 5/16"	4
51	6715035	Screw, hex head cap 5/16"-18 x 3/4"	4
52	2719051	Sheave, variable speed assembly	1
53	6060186	Bearing, ball 2499604	1
54	6670015	Ring, retaining 5100-78	1
55	6077143	Belt, variable speed 1922V426	1
56	3584035	Pin, pivot	1
57	6336001	Grommet, rubber Atlantic India 896 (pivot)	2
58	6670078	Ring, retaining 5305-37	2
59	6515007	Nut, hex 5/16"-28	6
60	3773301	Stud, mounting base adjustment	2
61	6336000	Grommet, rubber Atlantic India 2856 (Adjusting stud)	2
62	6861201	Washer, flat 5/16"	4
63	3595336	Plate, motor mounting	1
64	6715007	Screw, hex head machine 5/16"-18 x 1/2"	4
65		Motor electric (see Master Catalog)	1
66	6715015	Screw, socket head set 5/16"-18 x 1/2"	2
67	2719009	Sheave, variable speed motor	1

CHIP BLOWER – OPTIONAL

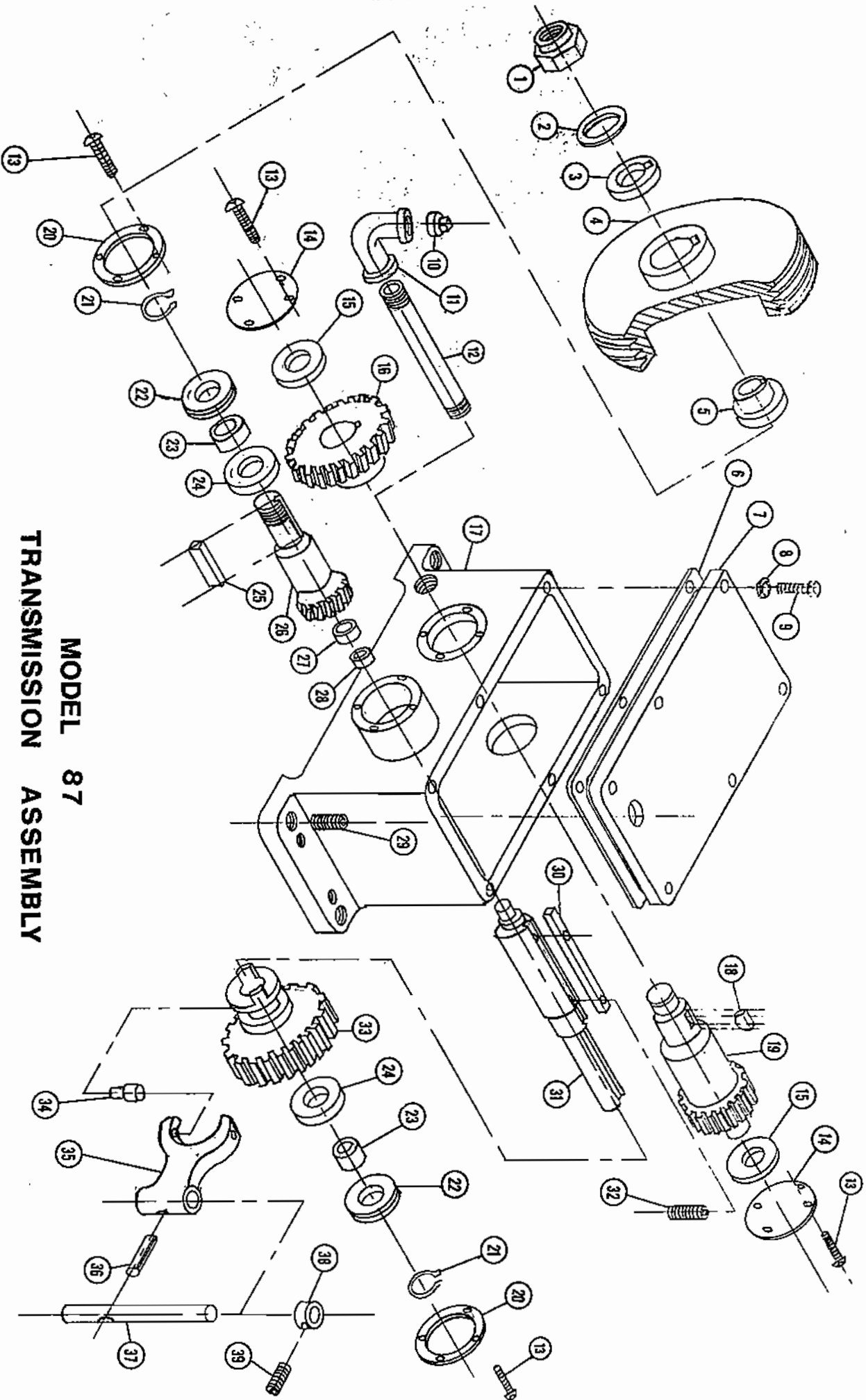
68	6077076	Belt, Vee 7M710	1
69	3717063	Sheave, motor	1
70	6714003	Screw, socket head set 1/2"-20 x 3/8"	1
71	6715032	Screw, square head set 5/16"-18 x 1 1/2" (belt adjustment)	1
72	6515007	Nut, hex head jam 5/16"-18 (belt adjustment)	1
73	2040036	Bar, compressor mounting assembly	1
74	6714009	Screw, socket head set 1/2"-20 x 1/2"	1
75	3716035	Sheave, compressor	1
76	3044309	Bar, compressor mounting	1
77	6134001	Compressor, Smith 28	1
78	6861200	Washer, lock 5/16"	4
79	6715032	Screw, hex head cap 5/16"-18 x 1"	4
80	6284000	Fitting, tubex 1/4" NPT, male elbow 600-2-4	1
81	6833009	Tube, black plastic 3/8" O.D. x .075 I.D. wall	1
82	6746002	Screw, pan head self tapping 8 x 3/8" L	1
83	6122023	Clamp, tube tinnerman C-3053A-6 3/8"	1
84	6284073	Fitting, tube 1/4" I.D. Tube x 1/8" NPT MBS 300 1/8" x 27	1
85	6519004	Nut, hex jam 9/16"-12	2
86	3773216	Stud, mounting	1
87	6498001	Nozzle, 1/8"-27 NPT	1

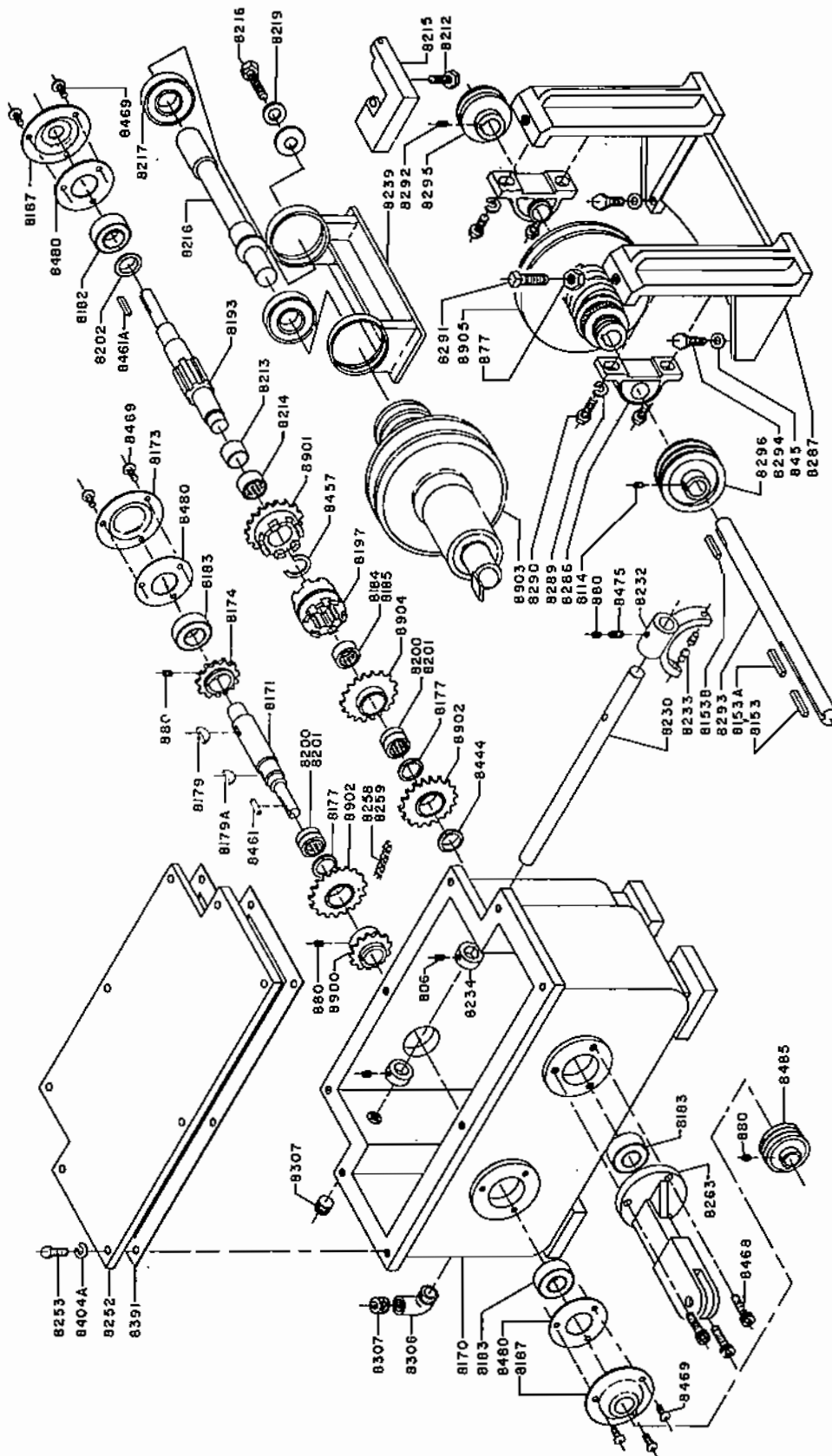


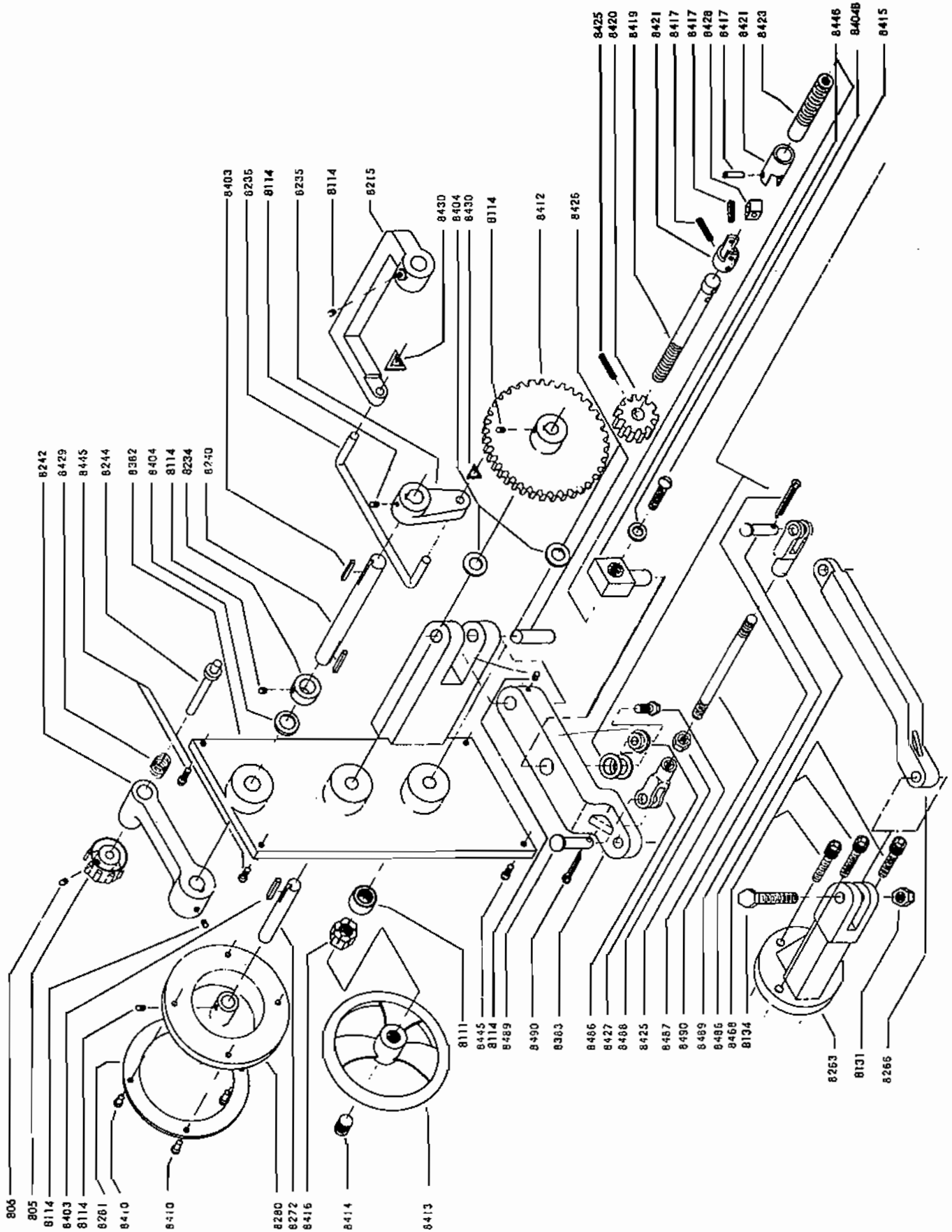
TRANSMISSION ASSEMBLY

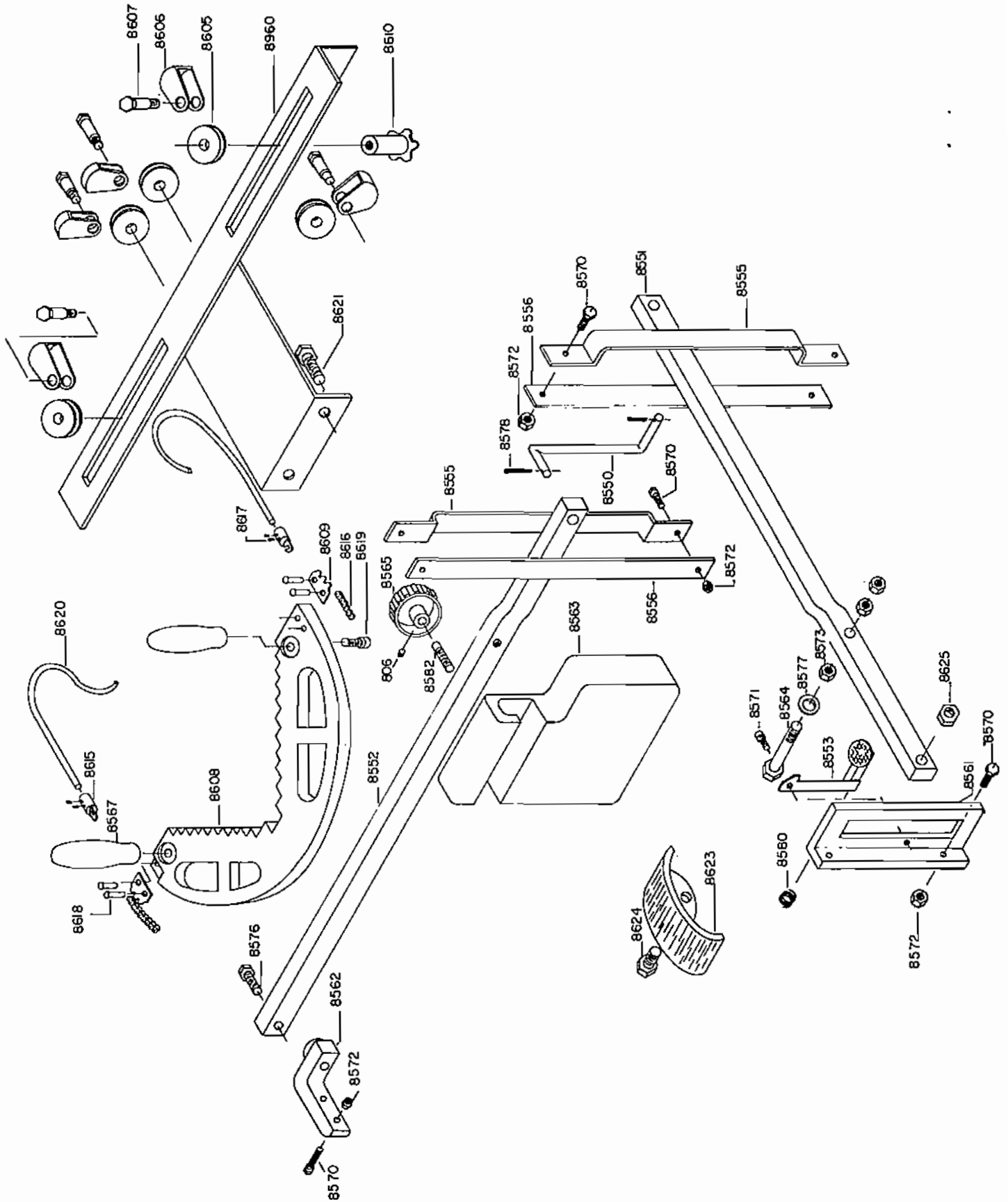
CHIP BLOWER
OPTIONAL

MODEL 87
TRANSMISSION ASSEMBLY









MODEL 87 20" METAL CUTTING BAND SAW

Part Number	PART DESCRIPTION	Quantity Required
801	Body Assembly	1
802	Door, Upper	1
803	Hinge, Door (upper & lower)	2
804	Screw, Door Hinge H.H. 5/16-18 x 5/8	6
804A	Washer, Flat 5/16	10
805	Knob 3/8	8
805A	Knob 1/2	1
806	Setscrew 1/4-20 x 1/4	13
807	Shaft, Upper Door Lock	1
808	Spring, Lock Shaft	3
809	Spacer, Upper Door Latch	1
810	Latch, Door	3
812	Door, Lower	1
817	Shaft, Door Locking	2
818	Screw, Socket Cap 1/4-20 x 3/4	2
819	Spacer, Door Shaft	2
822	Blade Guard, Lower Door	1
823	Screw, Saw Guard	2
824	Door, Motor Drive	1
826	Switch Box & Cover	1
827	Screw, Switch Box Mounting, Round Head 1/4-20 x 3/8	2
829	Upper Guide Bracket	1
830	Shaft, Blade Guide Bearing	2
831	Knob, Blade Guide Bearing Shaft	2
832	Washer, Flat Thin 3/8	4
833	Bearing, Blade Guide Fafnir 37PP3 or equal	2
834	Plate, Saw Guide Bearing, Mounting	1
835	Bearing, Saw Guide 200 PP	1
837	Screw, Saw Guide Bearing 5/16-24 x 7/8	4
838	Screw, Saw Guide Bearing, Socket Head Cap Screw 3/8-24 x 1	4
838A	Screw, Saw Guide Bearing, Socket Head Cap Screw 3/8-24 x 7/8	4
839	Screw, Socket Cap 5/16-18 x 1 1/2	14
839A	Screw, Socket Cap 5/16-18 x 3/4	2
840	Screw, Thumb 1/4-20 x 1/2	2
841	Guide Bar	1
842	Holder, Guide Bar	1
843	Plate, Guide Bar Holder	4
844	Screw, Guide Bar Holder Plate 1/4-20 x 5/8	8
845	Washer, Flat 3/8	21
846	Screw, Socket Cap 3/8-16 x 1 1/2	5
847	Splitpin, Guide Bar Holder 1/4-20 x 1 1/4	2
848	Screw, Guide Bar Locking	1
849	Screw, Socket Set 3/8-16 x 3/4	10
851	Chain, Guide Bar	1
852	Balance Wheel	2
852A	Bracket, balance wheel	2
853	Screw, balance wheel HH 5/16-18 x 1 3/4	2
854	Washer, Flat Thin 1/4	6
855	Washer, Flat 1/4 Special	2

Always give Serial Number of Machine when ordering parts.

Part Number	PART DESCRIPTION	Quantity Required
856	Screw, Chain Mounting 1/4-20 x 3/4, Button Head Socket	1
856A	Screw, Filister Head 6-32 x 5/8	1
856B	Nut, Hex 6-32	2
857	Bar, Balance	1
858	Guard Bar, Saw Blade	1
860	Lower Guide Bracket	1
861	Bar, Lower Guide Mounting	1
862	Screw, Guard Bar Mounting, Button Head Socket 1/4-20 x 1/2	2
863A	Washer, Lock 3/8	17
866	Holder, Wheel Cleaning Brush	1
866A	Brush, Wheel Cleaning	1
866B	Screw, Brush	2
868	Wheel, Band Saw	2
869	Key, Band Saw Wheel	2
870	Shaft, Upper Wheel	1
871	Bearing, Upper Wheel Shaft Fafnir 206	2
872	Bearing, Housing, Upper Wheel Shaft	1
873	Bracket, Upper Bearing Housing	1
874	Pivot Screw, Socket Cap Screw 3/8-16 x 7/8	6
875	Bushing, Pivot Screw 3/8 x 5/8 x 1/2 long	4
876	Screw, Square Head 3/8-16 x 1 1/2	3
877	Nut Hex 3/8-16	7
878	Screw, Upper Wheel Aligning	1
879	Washer Flat 1/4	1
880	Screw, Socket Set 3/8-16 x 3/8	4
880A	Plug, Setscrew 5/16	1
881	Mounting Bracket, Upper Bearing Slide	1
882	Slide Shim, Upper Bearing Housing Bracket	2
884	Screw, H.H. 3/8-16 x 3/4	4
885	Screw, Upper Bearing Slide Bracket, Mounting 3/8-16 x 2	3
889	Bearing, Tension Adjusting Screw, Nice 603	1
890	Spring, Tension Adjusting Screw	1
891	Screw, Tension Adjusting	2
892	Knob, Tension Adjusting	1
894	Table, Band Saw	1
895	Insert, Table	1
896	Screw, Insert Locking	2
897	Spacer, Insert Locking Screw	2
8100	Trunnion, Table Tilting	1
8103	Guide, Trunnion	1
8104A	Screw, Socket Cap 3/8-16 x 1	5
8105	Holder, Trunnion Lock Roller	1
8106	Roller, Trunnion Lock	2
8107	Washer, Flat 1/2	2
8108	Lockscrew, Trunnion	1
8109	Bracket, Trunnion Lockscrew & Gear	1
8110	Screw, Bracket H. H. 5/16-18 x 3/4	7
8111	Bearing, Lockscrew Nice 605	2
8112	Bevel Gear, Lockscrew	1
8113	Bevel Gear, Lockscrew Shaft	1
8114	Screw, Socket Set 5/16-18 x 5/16	11
8115	Washer, Bevel Gear Flat 5/8	1

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Part Number	PART DESCRIPTION	Quantity Required
8116	Key, Trunnion Lock Shaft.....	1
8117	Shaft, Trunnion Lock Screw.....	1
8119	Dial, Trunnion Tilt.....	1
8120	Bracket, Table Trunnion.....	1
8122	Bracket, Table Stop.....	1
8124	Pin, Table Stop Bracket.....	1
8131	Nut, Hex 1/2-13.....	3
8134	Screw, Variable Speed Arm 1/2-13 x 3.....	1
8153	Key, Lower Countershaft 3/16 x 1 1/2.....	1
8153A	Key, Lower Countershaft 3/16 x 3.....	1
8153B	Key, Lower Countershaft 3/16 x 1.....	1
8170	Box, Transmission.....	1
8170A	Panel, Transmission.....	1
8171	Main Shaft.....	1
8173	Bearing Cap w/o Hole.....	1
8174	Sprocket, High Speed Main Shaft.....	1
8175	Is a V. S. Sheave sold in a unit.....	
8177	Spacer, Inner Transmission.....	2
8179	Woodruff Key #810.....	1
8179A	Woodruff Key #608.....	1
8181	Is a Sheave Sold in a unit.....	
8181A	Is a Bronze Bushing sold in a unit.....	
8182	Bearing Fafnir 5306.....	1
8183	Bearing Fafnir 306.....	3
8184	Bearing, Inner Race I.R. 7315 R.B.C.....	1
8185	Bearing, Outer Race S.J. 7315 R.B.C.....	1
8187	Bearing Cap, With Hole.....	2
8193	Wheel Shaft.....	1
8196	Hub, sold in a unit Assy #8901.....	
8197	Clutch, Center Sliding.....	1
8200	Bearing, Inner Race I.R. 7275, 2C RBC.....	2
8201	Bearing, Outer Race ESJ, 7275, 2CRBC.....	2
8202	Spacer, High Speed Wheel Shaft.....	1
8211	Lock Ring 5133-118.....	1
8212	Screw, Socket Set 5/16-18 x 5/16.....	2
8213	Bearing, Inner Race IR 7315 RBC.....	1
8214	Bearing, Outer Race SJ 7315 RBC.....	1
8215	Clutch, Shift Arm.....	1
8216	Upper Countershaft.....	1
8217	Bearing, Upper Countershaft SKF 6206 2RS.....	2
8225	Pulley & Sheave sold in a unit.....	
8225A	Bushing, sold in a unit.....	
8226	Sheave, V. S., sold in a unit.....	
8230	Shaft, Clutch Shift.....	1
8232	Clutch, Shift Fork.....	1
8233	Pin, Clutch Fork.....	2
8234	Collar, Clutch Shaft.....	3
8235	Arm, Shift.....	1
8236	Rod, connecting.....	1
8237	Is a Sprocket sold in a unit.....	
8238	Nut, sold only in a unit.....	
8239	Bracket, Upper Countershaft.....	1

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Part Number	PART DESCRIPTION	Quantity Required
8240	Shaft, Shift Lever.....	1
8241	U-C-Shaft Adjusting Bracket welded to frame.....	1
8242	Lever, Shift.....	1
8244	Shaft, Handle.....	1
8252	Top, Gear Box.....	1
8253	Screw, H.H. 5/16-18 x 1.....	8
8256	Screw, H.H. 3/8-16 x 1/4.....	8
8258	Chain #40 51 Links & 1 connecting Link.....	1
8259	Chain #40 64 Links & 1 connecting Link.....	3
8263	Bracket, Speed Arm.....	1
8266	Speed Arm.....	1
8272	Shaft, Dial Wheel.....	1
8280	Dial Wheel.....	1
8281	Dial, Speed Adjusting.....	1
8286	Pillow Block PB200 7/8 Bore.....	2
8287	Bracket, Lower Countershaft.....	1
8289	Washer.....	4
8290	Screw, Pillow Block Mounting.....	4
8291	Screw, Pillow Block Adjusting, Sq. Hd. 3/8-16 x 1 1/2.....	2
8292	Screw, Socket Set comes w/8295.....	1
8293	Lower Countershaft.....	1
8294	Screw, Bracket Mounting HH 3/8-16 x 1.....	4
8295	Pulley, Compressor AK64 x 3/4.....	1
8296	Pulley, 2 Groove D2650 x 7/8.....	1
8297	Compressor Strap, Optional w/Chipblower.....	1
8298	Belt, Compressor.....	1
8298A	Belt, 1 1/2 or 2HP Motor 4L530.....	2
8298B	Motor Holddown Strap.....	2
8299	Belt, Transmission 4L489.....	3
8299A	Belt, Variable Speed 2322V441.....	1
8305	Oil Pipe.....	1
8306	El, Pipe.....	1
8307	Plug, Pipe.....	2
8308	Bearing MRC-R-16-ZZ.....	1
8309	Bearing Holder.....	1
8361	45° Guide Optional.....	1
8382	Plate, Speed Adjusting.....	1
8383	Lever, Hinge.....	1
8391	Gasket, Transmission.....	1
8403	Key 3/16 x 1.....	2
8404	Spacer, Plastic.....	1
8404A	Washer, Lock 5/16.....	2
8404B	Washer, Speed Adjusting Screw.....	2
8410	Screw, Dial & Pointer.....	9
8412	Spur Gear, Dial Adjusting.....	1
8413	Handwheel.....	1
8414	Screw, Socket Set 5/8-11 x 1/2.....	1
8415	Bolt, Feed Screw HH 5/16-18 x 1/2.....	2
8416	Nut, Handwheel Shaft 5/8-11 self lock.....	1
8417	Splitpin 3/16 x 1 1/8.....	3
8417A	Splitpin 3/16 x 1/2.....	2
8419	Shaft, Handwheel.....	1

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Part Number	PART DESCRIPTION	Quantity Required
8420	Pinion, Spur Gear	1
8421	Universal Joint	2
8423	Feed Screw	1
8425	Screw, Socket Set 10-24 x 3/16	1
8426	Pin, Hinge Lever	1
8428	Block, Universal	1
8429	Spring, Handle Shaft	1
8430	Lock Ring 5305-25	1
8437	Hub, Low Speed Main Shaft	1
8442	Spacer, High Speed, Main Shaft	1
8444	Spacer, Low Speed, Wheel Shaft	1
8446	Nut, Feed Screw	1
8457	Lock Ring, Wheel Shaft	1
8459	Key V. S. Pulley, sold in units only	1
8461	Key, Main Shaft 3/16 x 1 1/2	2
8461A	Key, Wheel Shaft 1/4 x 2	1
8468	Screw, Socket Cap 1/4-20 x 1 1/2	3
8468A	Washer, Lock 1/4	3
8469	Screw, Button Head 1/4-20 x 3/8	9
8475	Screw, Socket Set 3/8-16 x 1	1
8480	Gasket, Bearing Cap	4
8484	See 8307	
8485	Pulley, 3 Groove	1
8486	Clevis, Tie Rod	2
8487	Tie Rod	1
8488	Nut, Hex 1/2-20	1
8489	Clevis Pin	2
8490	Cotter Key	2
8491	Nut, Spring Cap, sold in units	
8492	Cap, Spring, sold in units	
8493	Spring V. S., sold in units only	
8494	Bearing 3/4 Steel Ball	1
8495	Plate, Bearing Holder	1
8550	Link, Connection	1
8551	Bar, Pedal	1
8552	Bar, Weight	1
8553	Lock, Pedal Ass'y	1
8555	Strip, Outer Guide	2
8556	Strip, Inner Guide	2
8561	Brk't Pedal Bar	1
8562	Brk't Pivot Weight Arm	1
8563	Weight	1
8564	Bolt	1
8565	Knob	1
8567	Handle, Powerfeed	2
8570	H.H.C.S.	8
8571	Fill. Head C.S.	2
8572	Hex Nut	10
8573	Hex Nut	3
8576	H.H.C.S.	2
8577	Washer, Flat	1
8578	Lock Ring, Waldes	2

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Part Number	PART DESCRIPTION	Quantity Required
8580	Spring, Pedal Lock	1
8582	Lock Screw, Weight	1
8600	Pointer	1
8600B	Scale, Tension Adjusting	1
8601	Bracket, Tension Adjusting Screw	1
8602	Screw, Upper Bearing Housing Stop H.H. 1/2-13 x 2	1
8605	Wheel, P.F.	5
8606	Guard, P.F. Wheel	5
8607	Mtg. Bolt P.F. Wheel	5
8608	Material Guide	1
8609	Tooth Segment	2
8610	Handle, P.F.	2
8611	Gussett, P.F.	2
8612	Holder, P.F.	1
8613	Wheel Brk't P.F.	1
8615	Chain Hook	2
8616	Chain	1
8617	S.S.S.	4
8618	Rivets	4
8619	B.H.C.S.	2
8620	Cable	1
8621	H.H.C.S.	2
8623	Pedal, P.F.	1
8624	H.H.C.S.	1
8699	Lamp, Work	1
8699A	Nut, Hex	1
8700	Stud, Plastic Hose Mounting 9/16-12 x 1	1
8705	Compressor	1
8706	Pulley, Compressor AK64	1
8710	Plastic Tubing	1
8711	Ell 1/4 x 1/8	1
8712	Adaptor 1/4	1
8713	Fitting, Plastic Tube	2
8714	Nut, Hex 9/16	2
8715	Clamp, Hose	2
8716	Screw, Filister Head 6-32 x 5/8	2
8717	Nut, Hex 6-32	2
8718	Air Line, Flexible, 24" Long	1
8816A	Nut, Hex Self Lock 1/4-20	1
8851	Plate, Switch Box Mounting	1
8862	Plate, Welding Cover	1
8900	Sprocket, Low Speed Main Shaft	1
8901	Clutch, High Speed	1
8902	Sprocket, Low Speed	2
8903	Variable Speed Pulley Assembly, Upper C' Shaft	1
8904	Clutch, Low Speed	1
8905	Lower Variable Speed Pulley Assy.	1
8907	Bearing, Plug Assembly (shown with 8903)	1
18013-1	Handwheel	1
U2059	Pointer	1
8915	Hand Filing Attachment Assembly	1

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