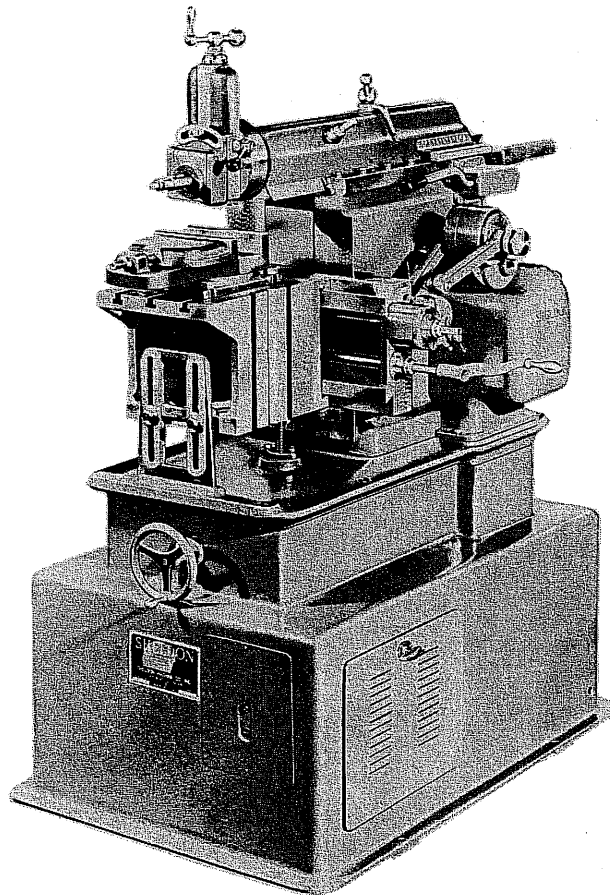


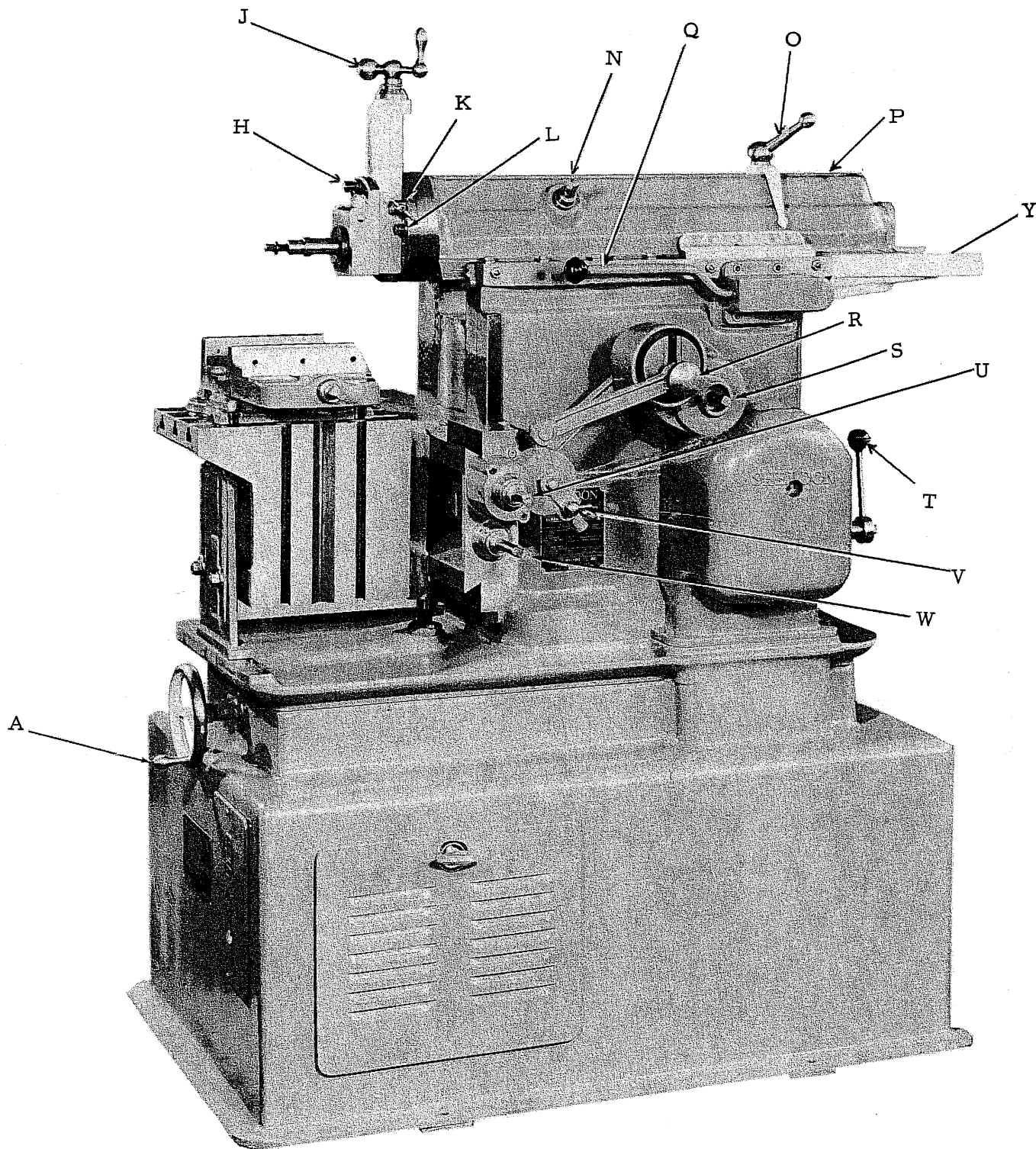
SHELDON SHAPERS

Parts List



SHELDON MACHINE CO. Inc.

Manufacturers of Sheldon Precision Lathes • Milling Machines • Shapers
4258 N. KNOX AVENUE • CHICAGO 41, ILLINOIS, U. S. A.
TELEPHONE: MULBERRY 5-1970 • CABLE ADDRESS: SHELDONCO



OPERATION OF THE SHELDON SHAPER

The shaper is an important machine in surfacing, grooving, and machining metals rapidly. You will find it a simple machine to operate, but you must exercise care in its operation to prevent damage to the workpieces as well as damage to the machine.

The following instructions should help you understand how the Sheldon shaper operates and how it can be adjusted to fit your piece of work.

SETTING UP

After you uncrate your shaper, make sure that it is set on a level and solid foundation. Bolt it securely to the floor and level it accurately.

Put on the Ram Guard (Y) now.

Check the motor tag to determine the correct characteristics of the motor. This tag is located on the Variable Speed Handle (A) and tells you how the motor has been wired. Power can be wired directly to the cable on the inside of the motor base.

After the motor has been wired and the machine is running, note the speed of the ram. If it moves forward more slowly than on the return stroke, the leads are wired correctly. If, however, it moves forward more quickly than on the return stroke, reverse the leads.

THE RAM

The Ram (P) requires two adjustments--one for placing the ram in correct relation to the workpiece and the other for setting the desired length of stroke.

The Ram Control Lever (N) determines the place where the ram will begin its stroke. To start the ram at any desired position, first loosen the Ram Clamp (O) then crank the ram to the desired position. Tighten the ram clamp before starting the machine.

The Stroke Adjusting Rod (S) determines the length of stroke. The length of stroke is indicated by the stroke indicator when the ram is as far back as it will move. The ram may be stopped at this point by means of the Clutch and Brake Handle (Q). To start the ram, pull the clutch and brake handle away from the machine. To stop, push it in towards the machine.

After the length of stroke is set, the ram position may be changed as explained before. The maximum stroke of the ram is 13-1/2"

TOOL HEAD

The Tool Head moves up and down as well as radially. The Ball Crank (J) moves the tool head up and down to determine the depth of cut, and the Tool Head Lock (K) locks this up-and-down movement. The tool head Swivel Nuts (L) lock the radial direction of the tool head. The Clapper Box Nut (H) locks the clapper box in desired position.

TABLE

To set the table at the proper height, loosen the Table Support Nuts and the Cross Rail Lock. The cross rail lock is located on the left side of the machine (as you face the machine) behind the cross rail. Turn the Elevating Shaft (W) clockwise to raise the table and

counterclockwise to lower it. When the table is at proper height, make sure that the table support is solid on its base, then lock the cross rail lock and the table support nuts. The table can be set longitudinally by turning the Cross Feed Screw (U) with the crank provided.

TABLE FEEDS

The Feed Adjusting Knob (R) regulates the amount of table feed and, in conjunction with the Ratchet Handle (V) controls the direction of feed. The instruction plate on the side of the machine explains the procedure for determining the direction of table feed. To set the amount of table feed, loosen the feed adjusting knob and move it to the right or left of the center to correspond to the direction of table feed which has already been determined. The following chart gives the amount of feed per stroke for the various numerical settings.

1 - .0025	4 - .0125
2 - .005	5 - .0175
3 - .0075	

These are the feeds which may be obtained by setting the indicator on the numbers. By setting the feed indicator knob at various points between the numbers from 0 to 5, infinite feeds can be obtained.

BACK GEAR

The back gear is for the slower and heavier cuts. The back gears should be engaged when the machine is in motion. To shift from direct open belt to back gear, pull the Backgear Lever (T) away from the machine, making sure that it is fully engaged. At slow speeds, the back gear can be engaged or disengaged without stopping the ram motion or using the clutch. At high speeds, however, slow down the machine or use the clutch lever simultaneously with operation of the backgear lever. Do not engage or disengage the back gears when the machine is operating at high speeds.

VARIABLE SPEEDS

The Variable Speed Handle (A) controls the strokes per minute of the ram. Total strokes per minute vary from 12 to 180--12 to 55 in back gear, and 55 to 180 in direct drive.

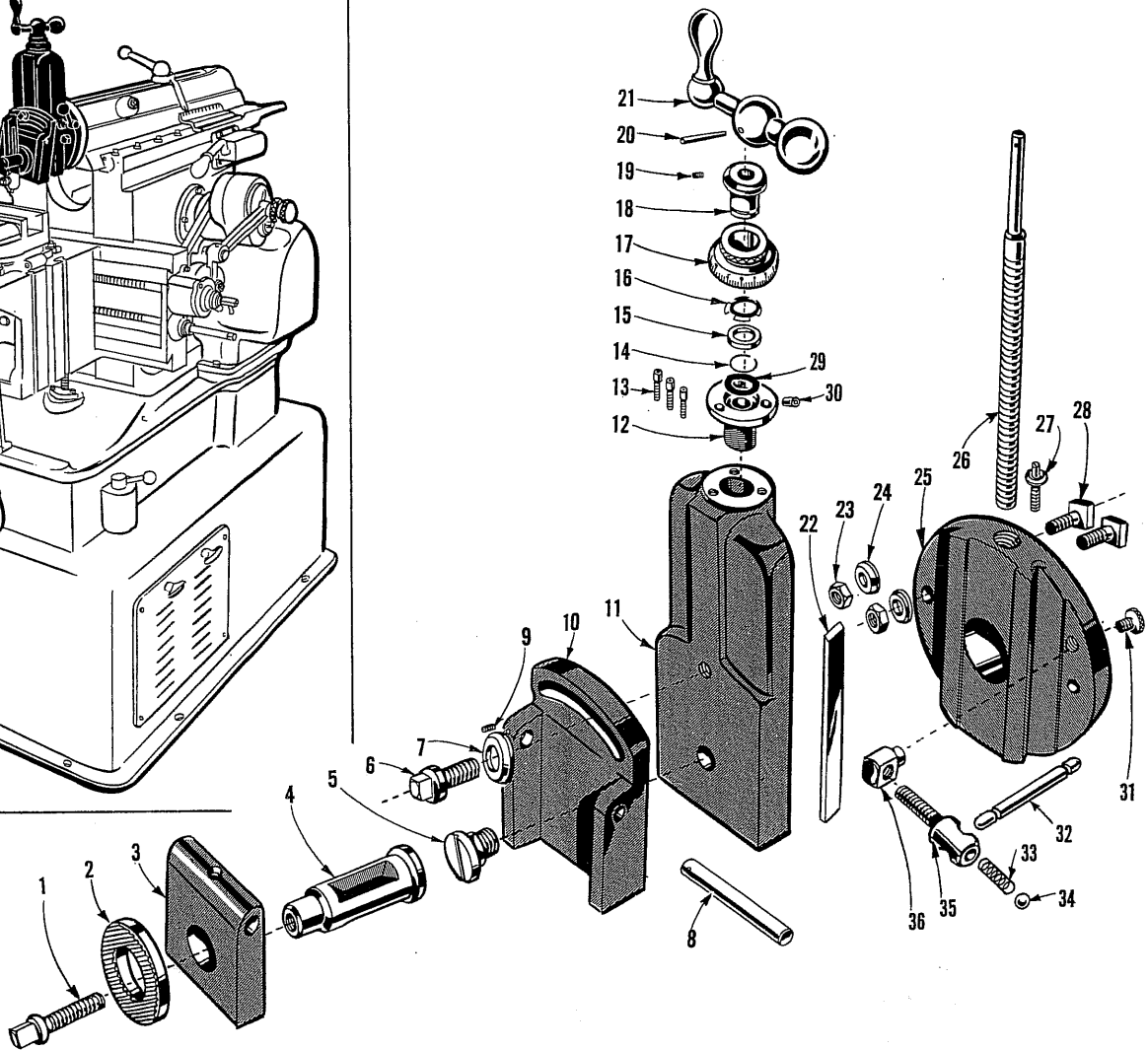
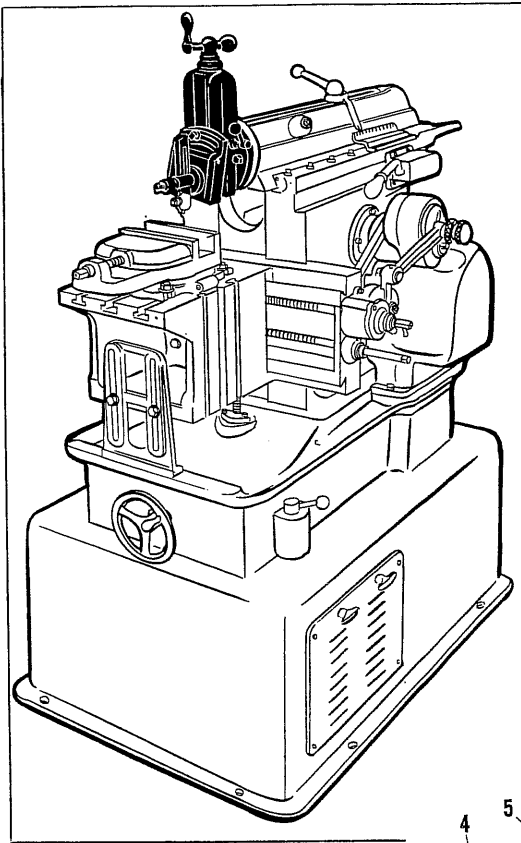
LUBRICATION

Use a neutral mineral oil, viscosity 250 to 300 sec., 100°, approximately SAE 20 on the following parts.

- Crossfeed
- Ramways
- Ram control lever
- Horizontal and vertical ways
- Crossrail
- Dovetails
- Backgear shifter fork
- Vari-drive (two cups)
- Rocker arm slide block
- Upper rocker arm bearing
- Rocker arm link block

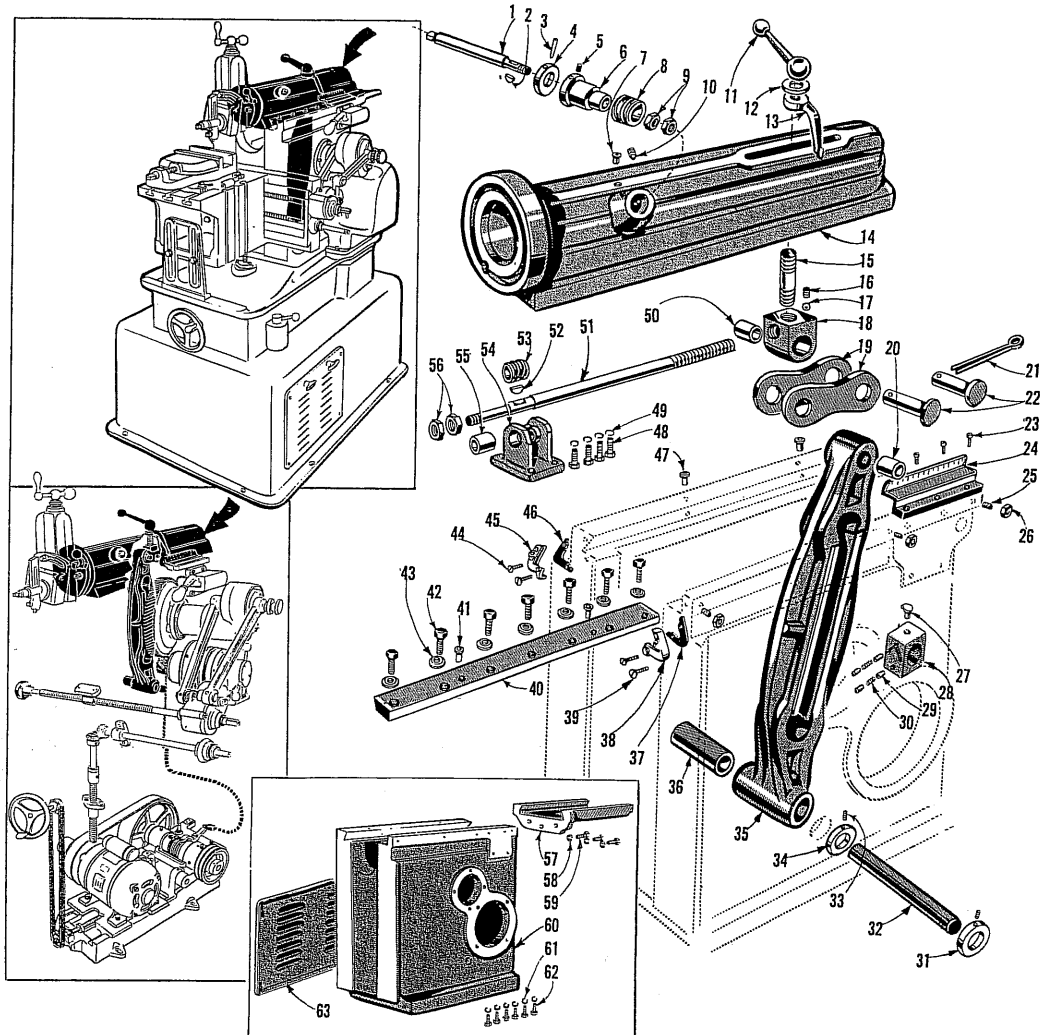
Use a premium ball and roller bearing grease with melting point around 200° with a consistency of a No. 2 on NLGI classification for the following:

- Back gear (Three pressure fittings)
- Bull gear shaft housing
- Vari-drive (Three pressure fittings)



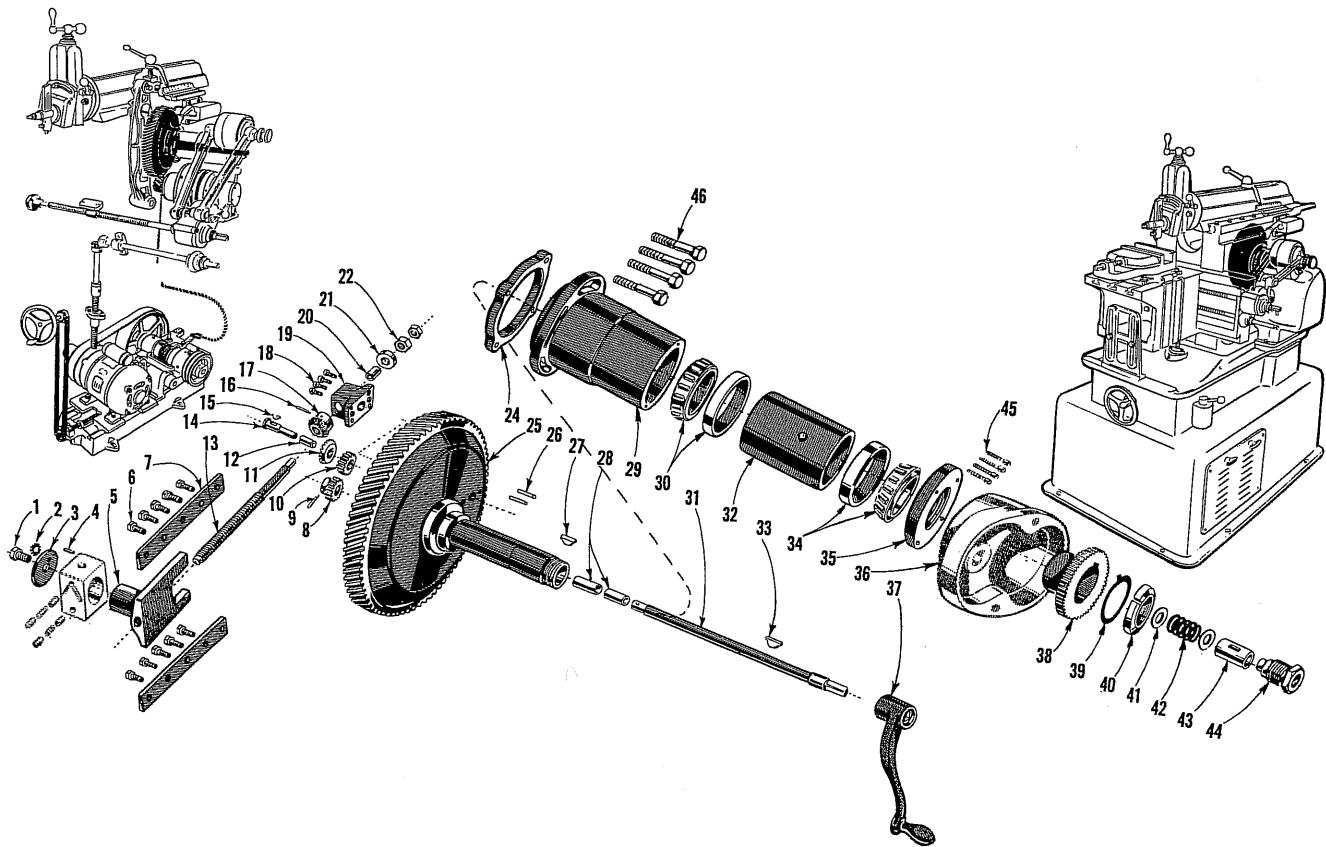
TOOL HEAD ASSEMBLY

Ref. No.	Part No.	Description	Quan.	Ref. No.	Part No.	Description	Quan.
1	8003-28	Tool Post Screw	1	19	A-646	Set Screw 10-32 x 1/4"	2
2	8003-18	Tool Post Washer	1	20	A-815	Taper Pin #0 x 1-1/2"	1
3	8003-9	Clapper	1	21	1014	Ball Crank	1
4	8003-17	Tool Post	1	22	8003-7	Tool Head Gib	1
5	8003-10	Clapper Box Swivel Screw	1	23	A-139	Hex. Nut 3/8 -24	2
6	8003-11	Clapper Box Lock Screw	1	24	K-93	Washer	2
7	8003-19	Lock Screw Washer	1	25	8003-2	Swivel Block	1
8	A-835	Taper Pin #7 x 4"	1	26	8003-3	Tool Head Screw	1
9	A-657	Set Screw 10-32 x 1/2"	1	27	8005-25	Gib Screw	1
10	8003-8	Clapper Box	1	28	8003-29	Tool Head "T" Bolt	2
11	8003-1	Tool Head	1	29	8003-20	Dial Washer	1
12	8003-4	Tool Head Screw Bearing	1	30	A-1004	Oil Hole Cover	1
13	A-413	Cap Screw, 10-32 x 1/4"	3	31	8003-24	Binding Stud Screw	1
14	1012-3	Dial Snap Ring	1	32	8003-26	Binding Handle	1
15	1012-2	Dial Retainer Washer	1	33	8003-27	Binding Handle Spring	1
16	A-1112	Dial Tension Spring	1	34	A-1401	Steel Ball 3/16"	1
17	8003-6	Tool Head Dial	1	35	8003-25	Binding Screw	1
18	8003-5	Dial Sleeve	1	36	8003-22	Binding Stud	1



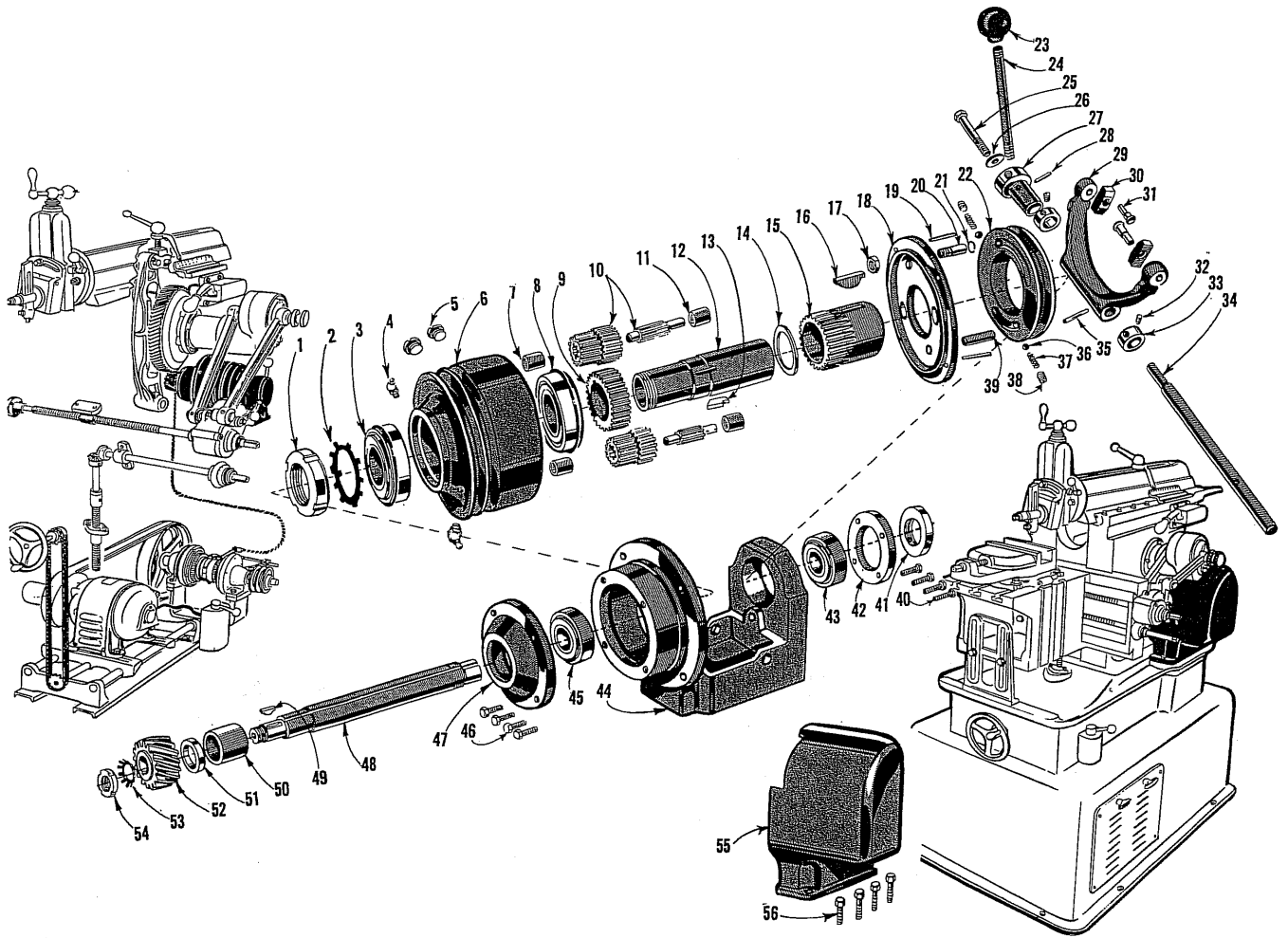
RAM AND ROCKER ARM ASSEMBLY

Ref. No.	Part No.	Description	Quan.	Ref. No.	Part No.	Description	Quan.
1	8001-18	Spiral Gear Shaft	1	32	8004-2	Pivot Shaft	1
2	A-902	Hi-Pro Key 1/2 x 1/2	2	33	A-618	Set Screw 3/8-16 x 3/8	2
3	A-804	Taper Pin #2 x 1-1/4	1	34	U-139	Stop Collar	1
4	8002-23	Shaft Collar	1	35	8004-1	Rocker Arm	1
5	A-1003	Oil Cup	1	36	1372	Bearing	1
6	8001-17	Spiral Gear Shaft Bushing	1	37	8002-8	Ram Wiper Felt	1
7	A-1003	Oil Cup	1	38	8002-7	Ram Wiper R.H.	1
8	A-2015	Spiral Gear 10 T.	1	39	A-403	Machine Screw	2
9	A-100	Hex. Nut 3/8-16	2	40	8002-3X	Ram Gib	1
10	A-656	Set Screw 5/16-18 x 3/8	1	41	A-1016	Oil Cup	1
11	1017	Ram Lock Handle	1	42	A-435	Cap Screw	7
12	8012-19	Ratchet Spacer	1	43	9008-5	Ram Gib Washer	7
13	8001-13	Stroke Indicator	1	44	A-403	Machine Screw	2
14	8001-10	Ram	1	45	8002-5	Ram Wiper L.H.	1
15	8001-16	Stud	1	46	8002-8	Ram Wiper Felt	1
16	A-638	Set Screw 5/6-18 x 3/8	1	47	A-1016	Oil Cup	2
17	A-1400	Steel Ball 1/4"	1	48	A-344	Cap Screw 5/16-18 x 1-1/4	4
18	8001-14	Link Block	1	49	A-226	Lock Washer 5/16	4
19	A-1938	Roller Chain Side Plate	2	50	8004-11	Bearing	1
20	8004-11	Bearing	1	51	8001-15	Screw	1
21	A-704	Cotter Pin 1/4 x 4"	1	52	A-902	Hi-Pro Key 1/2" x 1/8"	1
22	8004-4	Rocker Arm Link Pin	2	53	A-2015	Spiral Gear 10 T	1
23	A-395	Cap Screw	3	54	8001-11	Screw Bearing Bracket	1
24	8001-20	Scale	1	55	8001-12	Screw Bushing	1
25	A-689	Set Screw 1/4-20 x 1-1/4	3	56	A-106	Hex Nut 1/2-13	2
26	A-101	Hex Nut 1/4-20	3	57	8002-2	Ram Guard	1
27	A-1008	Oil Hole Cover	1	58	A226	Lock Washer 5/16	3
28	8013-5	Sliding Block	1	59	A-441	Cap Screw 5/16-18 x 7/8"	3
29	8013-27	Sliding Block Felt	4	60	8002-1X	Column	1
30	S-1158	Felt Spring	2	61	A-237	Lock Washer 1/2"	6
31	U-139	Stop Collar	1	62	AA-309	Cap Screw 1/2-13 x 1-3/4	6
				63	8002-11	Upper Door (With Hardware)	1



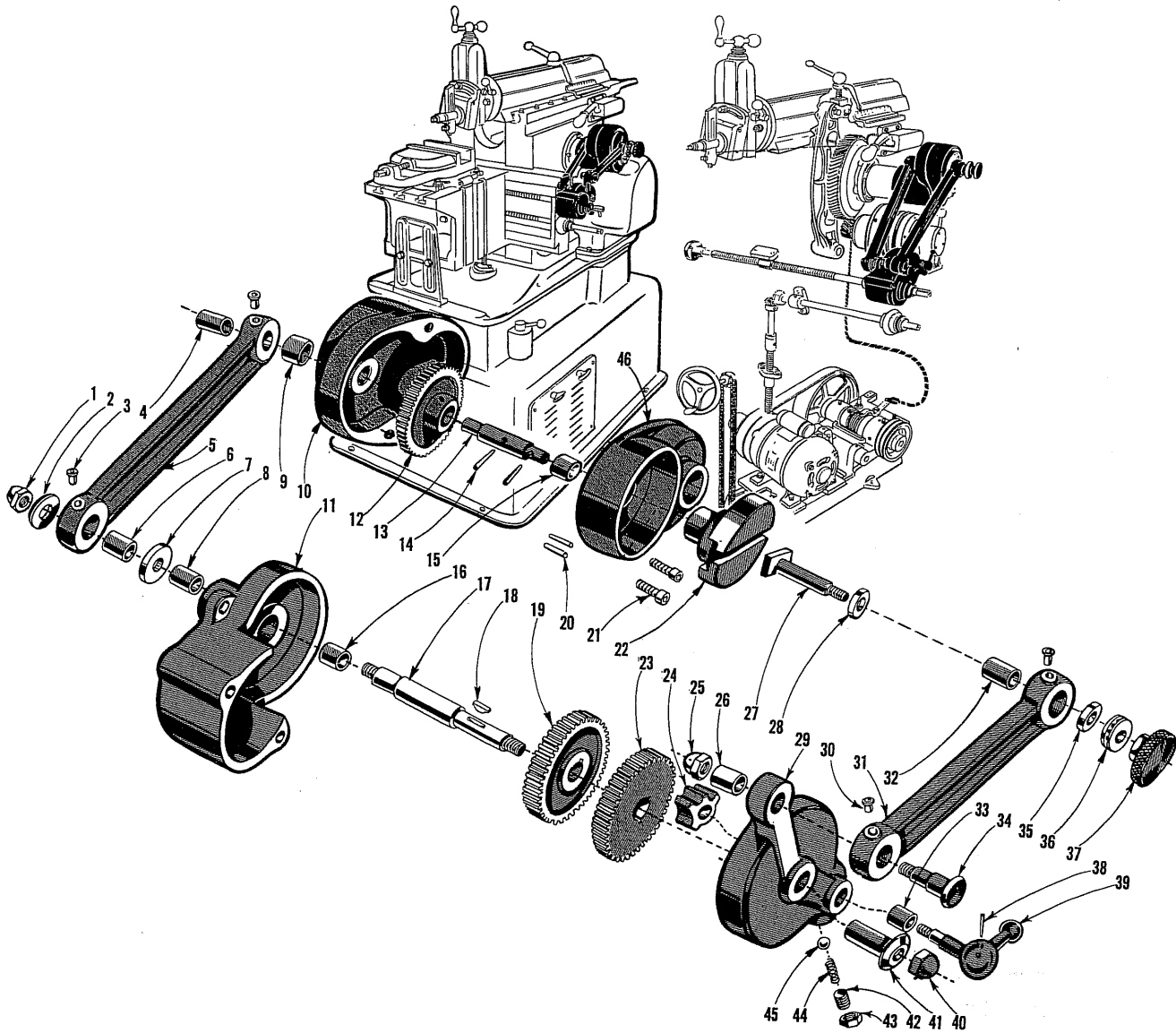
BULL GEAR ASSEMBLY

Ref. No.	Part No.	Description	Quan.	Ref. No.	Part No.	Description	Quan.
1	A-466	Cap Screw 3/8-16 x 5/8	1	24	8008-14	Housing Ring	1
2	A-202	Lockwasher 3/8	1	25	8013-3	Bull Gear 73 T.	1
3	8013-24	Sliding Stud Washer	1	26	A-856	Dowell Pin 1/4" x 1"	2
4	A-860	Groove Pin 1/8 x 1/2	1	27	A-902	Hi-Pro Key	1
5	8013-4	Sliding Stud	1	28	A-1369	Oilite Bearing	2
6	AA-302	Cap Screw 1/4-20 x 5/8	10	29	8013-2	Housing	1
7	8013-23	Sliding Stud Clamp	2	30	A-1109	Roller Bearing	1
8	8013-19	Gear With Boss 16 T.	1	31	8013-18	Adjusting Rod	1
9	A-800	Taper Pin 0 x 3/4"	1	32	8013-25	Spacer	1
10	8013-21	Gear 16 T.	1	33	A-902	Hi-Pro Key	1
11	8013-20	Bevel Gear (Short)	1	34	A-1109	Roller Bearing	1
12	A-1368	Oilite Bearing	1	35	8013-1	Bearing Cap	1
13	8013-11	Screw	1	36	8012-2	Rear Housing	1
14	8013-22	Gear Stud	1	37	8005-24	Crank	1
15	A-902	Hi-Pro Key 1/2" x 1/8"	1	38	8012-5	Feed Gear 56 T. (Driver)	1
16	A-813	Taper Pin	1	39	A-1149	Washer	1
17	8013-13	Bevel Gear (Long) 20 T.	1	40	A-1148	Locknut	1
18	AA-319	Cap Screw 1/4-20 x 1-3/4	4	41	8013-17	Washer	2
19	8013-16	Screw Bearing	1	42	8013-16	Tension Spring	1
20	A-1323	Oilite Bearing	1	43	8013-15	Tension Bushing	1
21	8013-12	Screw Washer	1	44	8013-14	Tension Nut	1
22	A-137	Hex. Nut 8/16-20	2	45	A-396	Cap Screw 1/4-20-5/8 "	4
				46	A-371	Cap Screw 3/8-16-2-1/2"	4



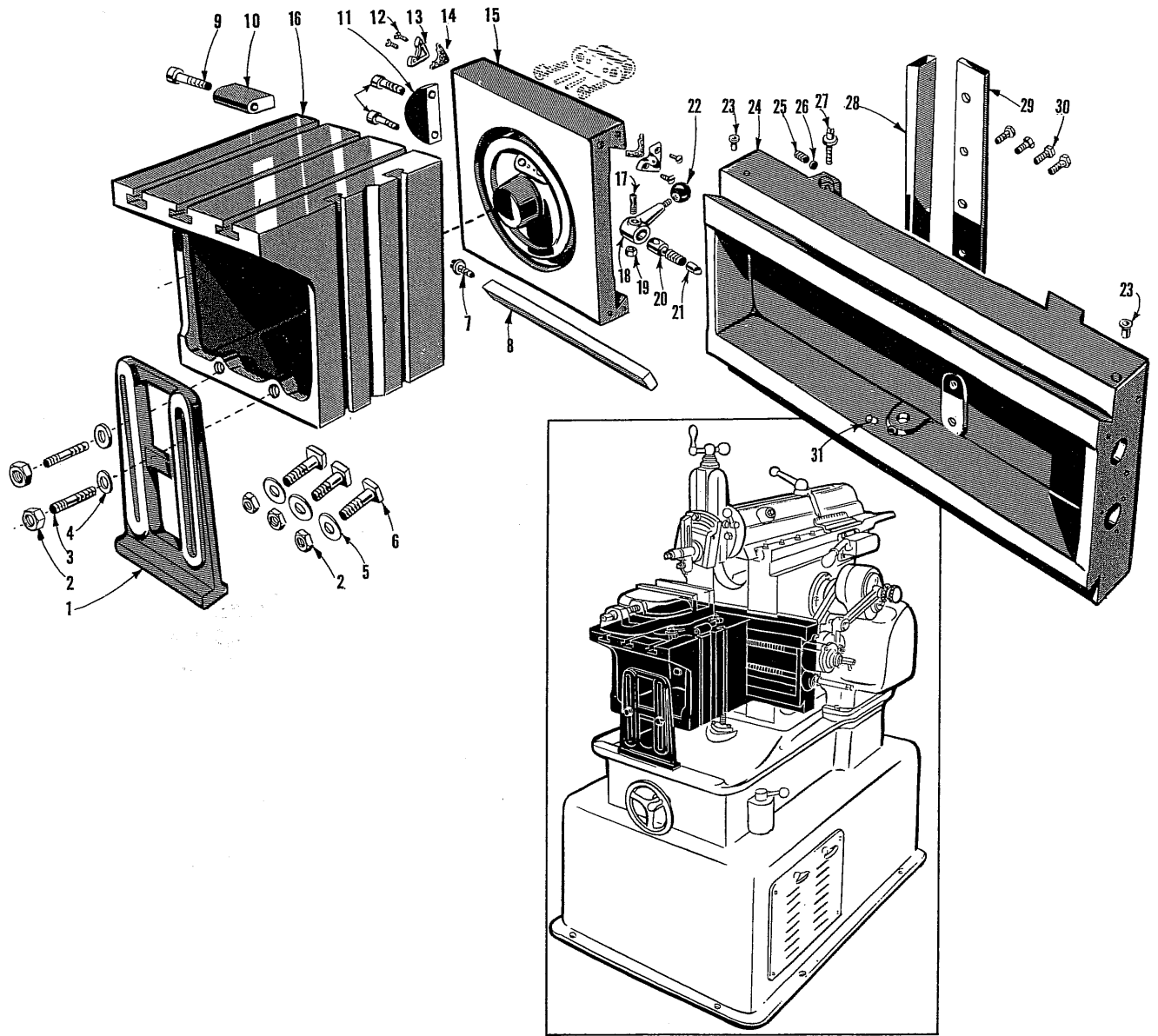
BACK GEAR ASSEMBLY

Ref. No.	Part No.	Description	Quan.	Ref. No.	Part No.	Description	Quan.
1	A-1173	N-08 Lock Nut	1	29	9040-1	Shifter Fork	1
2	A-1172	W-08 Lock Washer	1	30	C-237	Shifting Shoe	2
3	A-1170	New Departure Bearing	1	31	C-238	Shifter Shoe Stud	2
5	9040-10	Grease Plug	2	32	A-601	Set Screw (Cup Point)	2
6	9040-A	V-Belt Pulley	1	33	U-140	Clutch Handle Shaft Collar	2
7	A-1174	Needle Bearing # GB 912	2	34	8011-14	Shifter Fork Pivot	1
8	A-1170	New Departure Bearing	1	35	A-802	Taper Pin # 3 x 1-1/4"	1
9	CL-226	Spindle Drive Gear 30 T.	1	36	A-1400	Steel Ball 1/4" Dia.	2
10	AS8011-62A	Pinion Assembly 14 T. and 16T. Consisting:		37	K-159	Spring	2
		8011-60X Pinion 16 T.		38	A-613	Set Screw (Cup Point)	2
		8011-61X Pinion 14 T.		39	8011-30	Balance Pin	1
		8011-62A Splined Shaft		40	A-319	Hex Head Screw 1/4-20 x 1"	4
11	A-1174	Needle Bearing # GB 912	1	41	9040-20	Collar	1
12	8011-56	Threaded Bushing For Clutch	1	42	8011-53	Clam Plate	1
13	A-921	H. P. 608 Hi-Pro Key 3/4 x 1/4	1	43	A-1171	New Departure Bearing	1
14	A-1378	Thrust Washer	1	44	8011-51	Back Gear Support	1
15	8011-59X	Stop Collar Gear 28 T.	1	45	A-1171	New Departure Bearing	1
16	A-915	H. P. 808 Hi-Pro Key 1" x 1/4	1	46	A-319	Hex. Head Screw 1/4-20 x 1"	4
17	A-137	Hex. Nut 7/16-20	1	47	8011-52	Housing Cap	1
18	C-206-X	Pulley End Plate	1	48	8011-55	Pinion Shaft	1
19	A-880	Dowel Pin 3/16 Dia. x 3/4"	2	49	A-920	Hi-Pro Key 7/8 x 1/4"	1
20	8011-31	Stop Pin	1	50	8011-57	Bushing for Pinion Shaft	1
21	A-1202	Snap Ring	1	51	8011-58	Spacer for Pinion Shaft	1
22	C-236-X	Shifter Collar	1	52	8011-10	Bull Gear Pinion	1
23	U-128	Clutch Lever Knob	1	53	A-1153	W-04 Lockwasher	1
24	9040-9	Shifter Fork Handle	1	54	A-1152	N-04 Lock Nut	1
25	A-470	Cap Screw 3/8-16 x 3	1	55	8011-6	Back Gear Guard	1
26	K-93	Washer	1	56	A-441	Cap Screw	4
27	8011-15	Shifter Lever Hub	1				
28	A-803	Taper Pin # 3 x 1"	1				



FEED HOUSING ASSEMBLY

Ref. No.	Part No.	Description	Quan.	Ref. No.	Part No.	Description	Quan.
1	A-135	Acorn Nut 3/8-16	1	24	8012-15	Pawl	1
2	K-93	Washer	1	25	A-135	Acorn Nut 3/8-16	1
3	A-1003	Oil Hole Cover	2	26	A-1360	Oilite Bearing	1
4	A-1360	Oilite Bearing	1	27	8012-37	T-Bolt	1
5	8012-4	Guide Arm	1	28	8012-39	Washer	1
6	A-1306	Bronze Bearing	1	29	8012-7X	Ratchet Housing Cover	1
7	8012-19	Ratchet Spacer	1	30	A-1003	Oil Hole Cover	1
8	A-1366	Oilite Bearing	1	31	8012-3X	Indexing Arm	1
9	A-1362	Bushing	1	32	A-1361	Oilite Bearing	1
10	8012-2	Rear Housing	1	33	A-1371	Oilite Bearing	1
11	8012-8	Ratchet Housing	1	34	8012-18	Indexing Stud	1
12	8012-6	Feed Gear 56 Ft.	1	35	8012-19	Spacer	1
13	8012-25X	Eccentric Shaft	1	36	A-1108	Thrust Bearing	1
14	A-821	Taper Pin # 1 x 1-1/4	2	37	8012-38	Locknut	1
15	A-1362	Bushing	1	38	A-813	Taper Pin # 0 x 1	1
16	A-1366	Oilite Bearing	1	39	8012-30	Index Pawl Handle	1
17	8012-17	Ratchet Shaft	1	40	A-135	Acorn Nut 3/8-16	1
18	A-902	Hi-Pro Key	1	41	8012-40	Guide Arm Bushing	1
19	8012-28X	Feed Gear 45 Ft.	1	42	A-607	Set Screw 3/8-16 x 5/8	1
20	A-809	Taper Pin # 2 x 1	2	43	A-107	Hex Nut 3/8-16	1
21	AA-303	Cap Screw	2	44	K-159	Shifting Spool Spring	1
22	8012-36	Eccentric	1	45	A-1405	Steel Ball 5/16	1
23	8012-16	Ratchet Wheel	1	46	8012-1	Housing	1



SWIVEL TABLE AND CROSS RAIL ASSEMBLY

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	8006-8	Table Support	1	17	1008-2	Pin	1
2	A-116	Hex. Nut, 1/2"-20	4	18	1008-1	Lock Handle	1
3	8006-12	Table Support Stud	2	19	A-118	Hex. Nut, 1/4"-28	1
4	8002-13	Table Support Washer	2	20	1038	Gib Lock Screw	1
5	A-213	Washer, 1/2"	3	21	8005-21	Dutchman	1
6	8002-12	Saddle "T" Bolt	3	22	M-721	Handle Ball	1
7	8005-25	Gib Screw	2	23	A-1019	Oil Hole Cover	3
8	8006-3	Tapered Gib	2	24	8005-1X	Cross Rail	1
9	A-416	Cap Screw, 8-32 x 1"	2	25	A-606	Set Screw, 5/16-18 x 1/2	2
10	8006-10	Protractor Zero Block	1	26	8005-26	Brass Plug	1
11	8006-9	Table Protractor	1	27	8005-25	Gib Screw	2
12	A-403	Machine Screw, 8-32 x 5/8"	4	28	8006-3	Tapered Gib	2
13	8006-4	Saddle Wiper	2	29	8005-23	Cross Rail Clamp	1
14	8006-5	Saddle Wiper Felt	2	30	A-302	Cap Screw, 5/16-18 x 3/4"	4
15	8006-1X	Saddle	1	31	A-1000	Oil Cup	1
16	8006-7	Swivel Table	1				

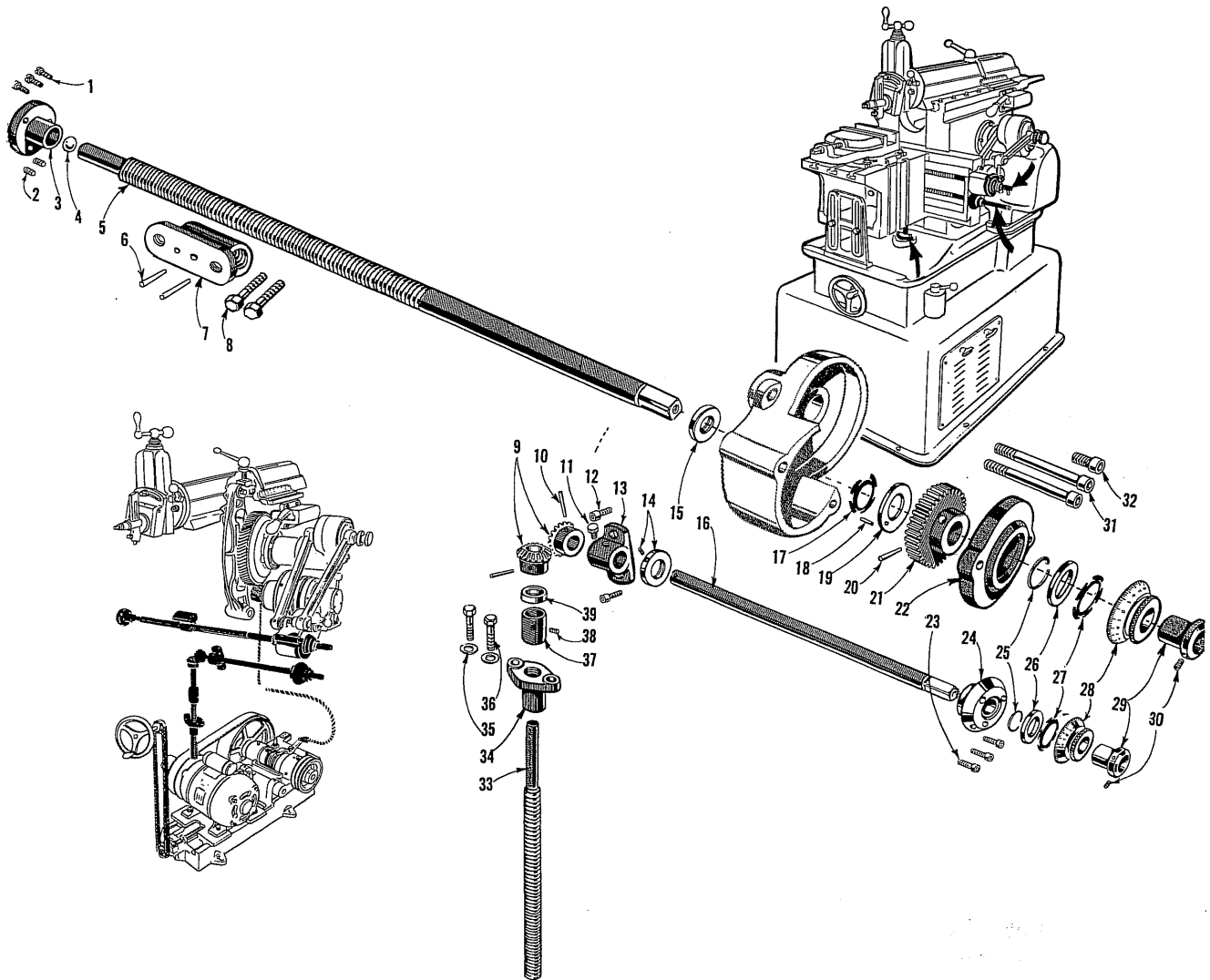
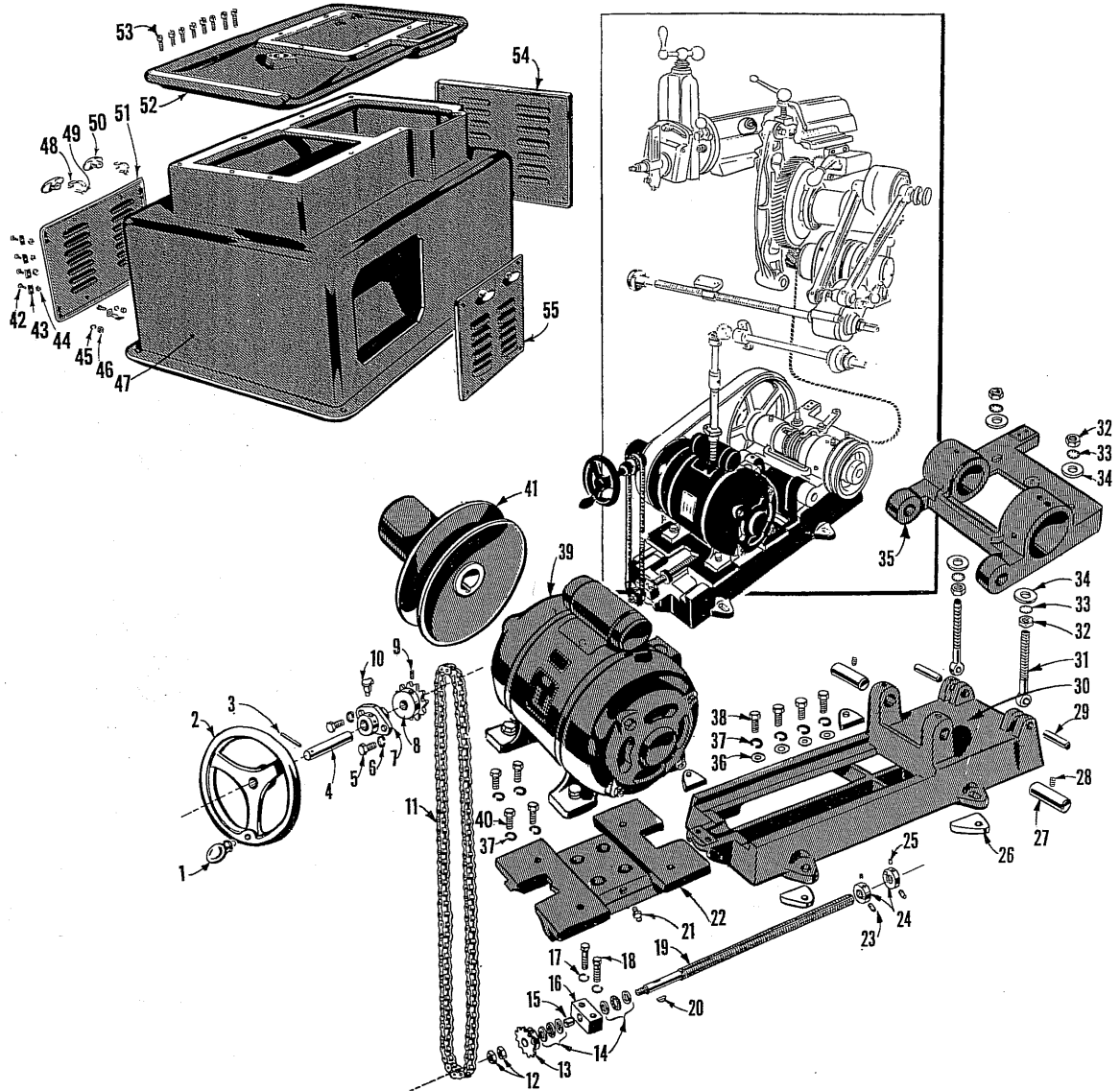


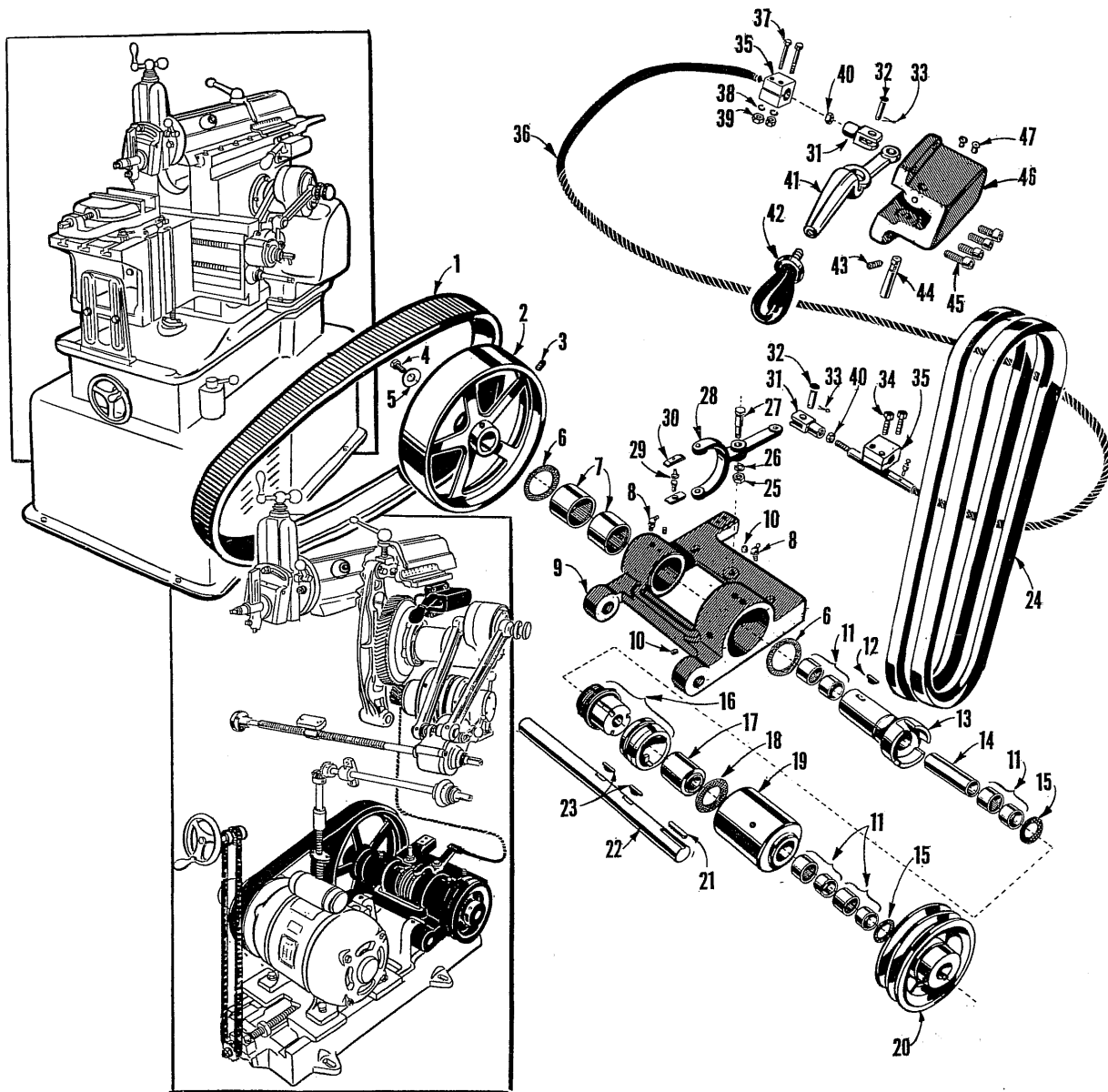
TABLE FEED HOUSING

Ref. #	Part #	Description	Quan.	Ref. #	Part #	Description	Quan.
1	A-413	Cap Screw 10-32 x 3/4"	3	21	8012-29	Feed Gear 36 T.	1
2	A-693	Set Screw 5/16-24 x 1"	2	22	8012-9	Ratchet Housing Cover, Left	1
3	1016	Longitudinal Screw Quill	1	23	A-413	Cap Screw 10-32 x 3/4"	1
4	A-1402	Steel Ball 7/16"	1	24	8005-15	Elevating Shaft Quill	1
5	8005-4	Longitudinal Screw	1	25	1012-3	Dial Snap Ring	1
6	A-804	Taper Pin # 2 x 1-1/4"	1	26	1012-2	Dial Retainer Washer	1
7	8006-2	Longitudinal Nut	1	27	A-1112	Spring	2
8	A-378	Cap Screw	2	28	1012-1	Dial	1
9	A-1942	Mitre Gear	2	29	1012-6	Dial Sleeve	2
10	A-821	Taper Pin # 1 x 1-1/4"	2	30	A-646	Set Screw 10-32 x 1/4"	2
11	A-1008	Oil Cup	1	31	AA-307	Cap Screw 5/16-18 x 2-3/4	2
12	A-407	Cap Screw 5/16-18 x 7/8	2	32	AA-303	Cap Screw 5/16 -18 x 5/8	1
13	8005-16	Elevating Shaft Bearing	1	33	8005-5	Vertical Screw	1
14	A-1943	Collar (With Set Screw)	1	34	8010-2	Vertical Nut	1
15	A-1108	Thrust Bearing	1	35	A-200	Lock Washer	2
16	8005-6	Elevating Shaft	1	36	A-441	Cap Screw 5/16-18 x 7/8	2
17	A-1112	Spring	1	37	8005-20	Vertical Screw Stop	1
18	A-881	Dowel Pin 3/16 Diameter	1	38	A-601	Set Screw 1/4-20 x 1/4"	1
19	8012-34	Fibre Washer	1	39	A-1108	Ball Thrust Bearing	1
20	A-804	Taper Pin # 2 x 1-1/4	1				



MOTOR DRIVE ASSEMBLY

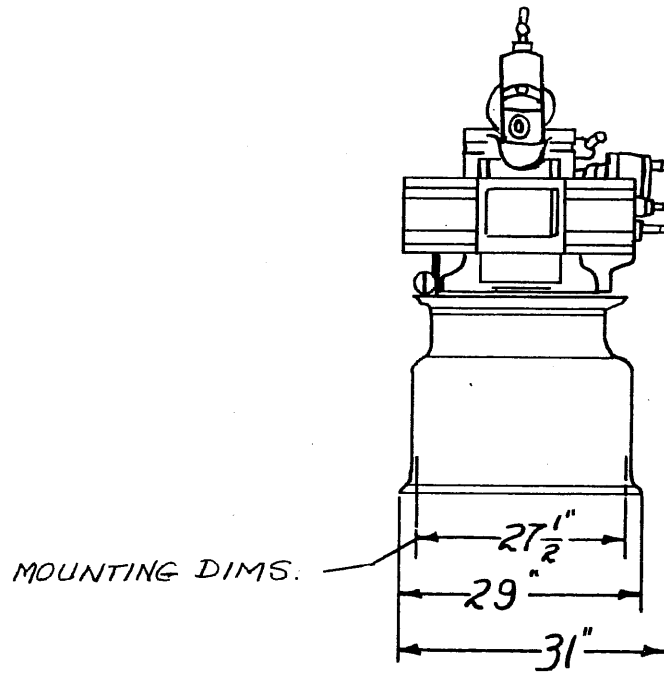
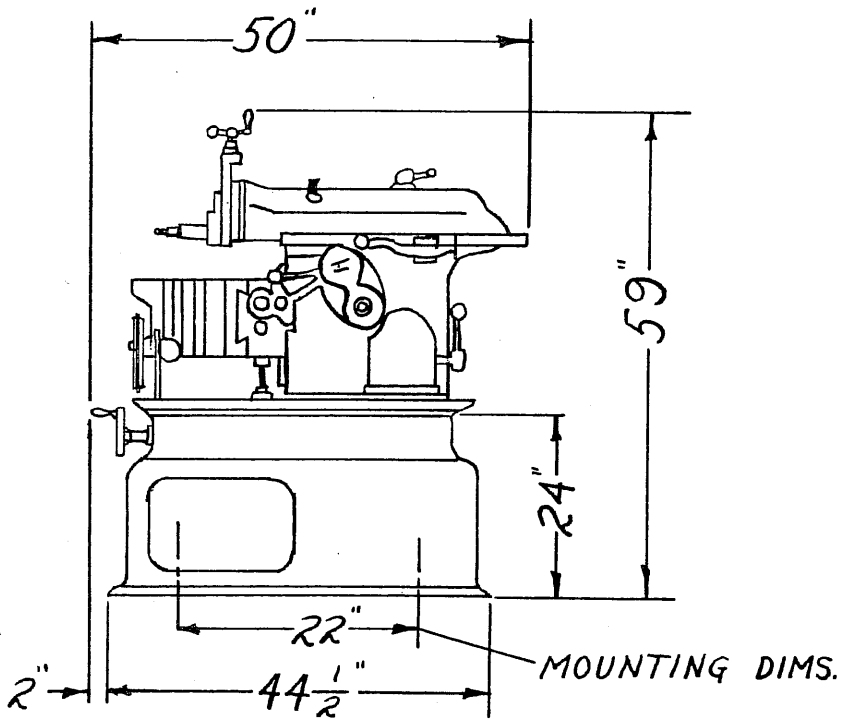
Ref. No.	Part No.	Description	Quan.	Ref. No.	Part No.	Description	Quan.
1	K-24	Machine Handle	1	29	A-883	Pin	2
2	E-197-1	Handwheel	1	30	8014-48	Main Base	1
3	A-812	Taper Pin # 00 x 1-1/4"	1	31	8014-41	Eyebolt	2
4	8015-6X	Handwheel Shaft	1	32	A-106	Nut 1/2-13	4
5	A-302	Cap Screw 1/4-20 x 3/4"	2	33	A-207	Lockwasher	4
6	A-214	Lockwasher 1/4	2	34	A-208	Washer	4
7	8015-5	Handwheel Flange	1	35	8014-33	Swivel Base Upper	1
8	A-2004	Sprocket	1	36	A-225	Washer 7/16	4
9	A-601	Set Screw 1/4-20 x 1/4	1	37	A-232	Lock Washer 7/16	8
10	A-1008	Oil Cup	1	38	A-305	Cap Screw 7/16-14 x 1-1/2	4
11	A-2014	Chain	1	39		Motor	1
12	A-100	Nut 3/8-16	2	40	A-336	Cap Screw 7/16-14 x 1	4
13	8014-56	Sprocket	1	41	A-1508	Variable Pulley	1
14	A-1130	Thrust Bearing	2	42	A-314	Machine Screw 8-32 x 3/8	14
15	A-1346	Bushing	1	43	1002-3	Door Felt	14
16	8014-51	Bearing Block	1	44	A-134	Hex. Nut	14
17	A-202	Lock Washer 3/8	2	45	A-206	Lockwasher 3/16	15
18	A-306	Cap Screw 3/8-16 x 1-1/2	2	46	A-128	Hex. Nut-10-32	17
19	8014-50	Motor Base Screw	1	47	8015-10	Pedestal	1
20	A-902	Key	1	48	1002-2	Door Clip	17
21	A-1037	Grease Fitting	1	49	AA-308	Machine Screw 10-24 x 5/8	7
22	8014-47	Motor Base	1	50	1004	Door Handle	7
23	A-850	Pin 1/4 x 5/8	2	51	1002	Side Door	1
24	8014-49	Stop Collar	2	52	8015-4	Base	1
25	A-600	Set Screw 1/4-20 x 3/8	2	53	AA-311	Cap Screw 3/8-16 x 1-1/4	9
26	8014-59	Cushion	4	54	8015-13	Rear Door	1
27	8014-40	Pivot Pin	2	55	1002	Side Door	1
28	A-607	Set Screw 3/8-16 x 5/8	2				



COUNTERSHAFT ASSEMBLY

Ref. No.	Part No.	Description	Quantity	Ref. No.	Part No.	Description	Quantity
1	A-1589	Rubber Belt, 56-3/4"	1	25	A-102	Nut, 3/8-16	1
2	8014-34	Flat Pulley	1	26	A-202	Washer, 3/8	1
3	A-618	Set Screw, 3/8-16 x 3/8"	1	27	8014-42X	Shifter Fork Shoulder Screw	1
4	A-466	Cap Screw, 3/8-16 x 5/8"	1	28	8014-35	Shifter Fork	1
5	8014-43	Washer	1	29	H1525-46	Clutch Shifter Fork Pin	2
6	8014-55	Fibre Washer	2	30	H1525-45	Clutch Shifter Fork Shoe	2
7	A-1157	Needle Bearing	2	31	8014-13	Link	2
8	A-1032	Grease Fitting	2	32	8014-12	Pin	2
9	8014-33	Swivel Base, Upper	1	33	A-708	Cotter Pin	2
10	A-607	Set Screw, 3/8-16 x 5/8"	3	34	AA-314	Socket Head Cap Screw, 1/4-20 x 1/2	2
11	A-1158	Needle Bearing	4	35	8014-14	Clamp	2
12	A-920	Key	2	36	8006-13	Clutch Control Cable	1
13	8014-38	Driving Sleeve	1	37	A-391	Cap Screw, 1/4-20 x 1-3/4	2
14	8014-44	Spacer Tubing	1	38	A-214	Lock Washer, 1/4"	2
15	8014-60	Fibre Washer	2	39	A-105	Hex. Nut 1/4-20	2
16	A-2017	Clutch Assembly	1	40	A-118	Hex. Nut 1/4-28	2
17	8014-39	Spacer	1	41	8014-2	Clutch Lever	1
18	U-120	Fibre Washer	1	42	U-128	Clutch Lever Handle	1
19	8014-36	Clutch Bushing	1	43	A-600	Set Screw 1/4-20 x 3/8	1
20	A-1525	2-Groove Sheave	1	44	8014-11	Clutch Lever Pin	1
21	8014-52	Key	1	45	A-437	Socket Head Cap Screw 3/8-16 x 3/4	4
22	8014-37	Shaft	1	46	8014-1	Clutch Lever Housing	1
23	A-918	Key	2	47	A-1003	Oil Hole Cover	2
24	A-1591	V-Belt ("B"--69")	2				

BASE DIMENSION PRINTS



"BIG SHAPER" ACCURACY and FEATURES

SHAPER TABLE AND CROSS RAIL

There are three "T" slots on top of table and two "T" slots on each side. A "V" slot for holding bars is also provided on side of table. Front end is supported for maximum rigidity under heavy cuts. The swivel table is standard equipment on 8000S model only. 8000P model has plain table. Swivel table moves on horizontal axis at any angle indicated by a protractor scale. Swivel table is locked by means of three "T" bolts in circular "T" slots. The table cross feed screw has a large, well-marked micrometer dial. Crank swings wide of all controls and makes it easy to move table manually in either direction. Felt wipers are used on all dovetail ways on shaper.

The substantial cross rail is stress-ribbed with broadly spaced ways. A tapered gib to the slide provides compensation for any wear. The cross rail lock is added protection to insure accurate results by locking the cross rail and table assembly into position after table has been moved up or down for work.

FEED HOUSING

Automatic cross feeds are available in both directions. Control lever for feed direction can be set in three positions--up, neutral (for manual feed), or down-- to control the direction of table travel.

BACK GEARS

Back gears for added power are quick-setting type and are controlled by the backgear lever which is located safely near rear of shaper.

RAM AND ROCKER ARM

The ram is heavily ribbed for extra strength. It has sufficient length to provide a minimum of 60% bearing surface on ways at all times. Ram positioner is located on the operating side of the ram (right side as you face machine) for ease in changing position of ram with crank handle in relation to work.

The ram clamp is conveniently located on top of the ram and securely locks the ram in desired position. The stroke indicator is large and easily seen and is marked in increments of 1/2" to show the length of stroke.

The shaft for adjusting the length of stroke has a crank handle for quickly setting or changing the length of stroke. The sliding block of the rocker arm is made of manganese bronze and operates in the rocker arm.

TOOL HEAD

The tool head is graduated by degrees, 120° included angle, for quick and accurate setup. Tapered gibs provide take-up to assure permanent accuracy. The tool head may be swiveled and locked at any desired angle for access to places ordinarily hard to reach. The tool head screw has a large, well-

marked micrometer collar angled so that it can be seen easily from the operator's position. The correct depth of the cut can be calculated quickly and the tool moved accordingly. The tool head can also be set and locked in any vertical position so that extreme accuracy can be maintained. The dials on the machine are friction type for quick adjustment, accurately graduated to .001".

TABLE ELEVATING SCREW

The sturdy elevating screw moves table assembly into proper position by means of a crank.

COLUMN AND PEDESTAL

The column is rigidly designed with exceptionally wide dovetails and is substantially ribbed and reinforced to withstand extreme thrust and torsional strain. The pedestal is of braced-box design with sufficient extra width and length to support machine properly for all operations. The pedestal also fully encloses the variable speed motor drive, completely eliminating the dangers of exposed pulleys and belts. Motor and drive located in the pedestal are easily accessible by removing large doors on any of three sides of machine.

FEED ADJUSTMENT

Feed is controlled by a large feed adjustment knob which can be quickly set for varying amounts of feed between .001" and .0175" per stroke.

BULL GEAR

The bull gear is a large helical type gear made of manganese bronze mounted in tapered roller bearings and is adjustable for wear.

CLUTCH ASSEMBLY

The clutch mechanism is of the latest design and is operated by a convenient clutch lever. It assures instantaneous action for mechanical power and enables the operator to stop all mechanical motion of the shaper without turning off electric current.

MOTOR DRIVE ASSEMBLY

The motor switch is conveniently and safely located on the front of the pedestal. The variable speed drive operates the ram from 12 to 180 strokes per minute. Speed changes can be made instantly while the machine is in operation by turning a conveniently located handwheel. Indicator shows which direction to rotate handwheel for faster or slower speed.

WISE

Single screw swivel base vise has 7" wide jaws which open to 6". Graduations on base of vise are machine cut for accuracy.

SPECIFICATIONS FOR SHELDON SHAPERS

Maximum length of ram stroke	13-1/2"
Length of ram	30-1/2"
Length of ram bearing in column.	22-1/4"
Width of ram bearing	7-1/4"
Strokes per minute--minimum.	12
maximum.	180
Vertical travel of head	4"
Diameter of head	6-1/2"
Vertical travel of table	7"
Dimensions of table top	10" x 12"
Height of table	10"
Cross feed of table (with not less than 6 automatic feeds in either direction)	12"
Range of feeds (infinite within range).0025" to .0175"
Width of vise jaws	7"
Depth of vise jaws	1-1/2"
Opening of vise jaws	6"
Floor space	27" x 44-1/4"
Maximum width	31"
Maximum length	51"
Net weight--domestic.	1600 lbs.
export	730 Kilos.
Shipping weight--domestic	1800 lbs.
export	820 Kilos.
Size of export box	85 cu. ft.
Dimensions of export box	62" x 62" x 38"
Motor recommended	1-1/2 h.p.-1725 r.p.m.

STANDARD EQUIPMENT WITH SHELDON SHAPERS

Two Wrenches Swivel Vise
Crank Handle Tool Post
Stationary Table

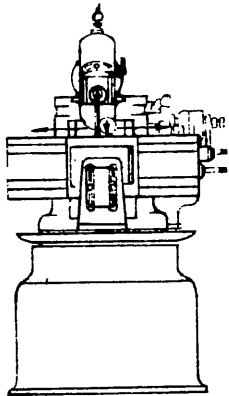
ACCESSORIES FOR SHELDON SHAPERS

184	1-1/2 h.p. Motor, 110/220 volts, 60 cycle, 1-phase 1725 r.p.m.
384	1-1/2 h.p. Motor, 220/440 volts, 60 cycle, 3-phase 1725 r.p.m.
A17609	Start-stop switch, pushbutton control, with overload protection.
A2056	Automatic oiling system (Must be ordered with shaper and fitted at factory.)
40	Shaper tool
47	Extension shaper tool
2351	High speed bits for No. 40, 1/4" x 3/4" x 2-1/2"
2325	High speed bits for No. 47, 5/16" sq. x 1-1/2"

TEST SHEET

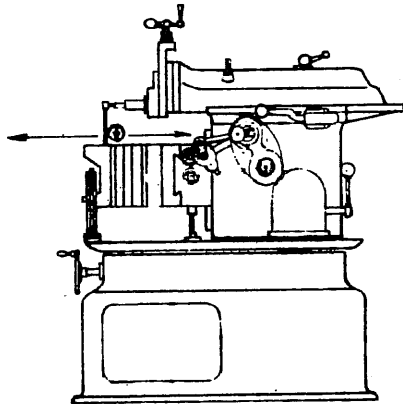
SHELDON MACHINE CO. Inc.

Manufacturers of Sheldon Precision Lathes • Milling Machines • Shapers
 4258 N. KNOX AVENUE • CHICAGO 41, ILLINOIS, U. S. A.
 TELEPHONE: MULBERRY 5-1970 • CABLE ADDRESS: SHELDONCO



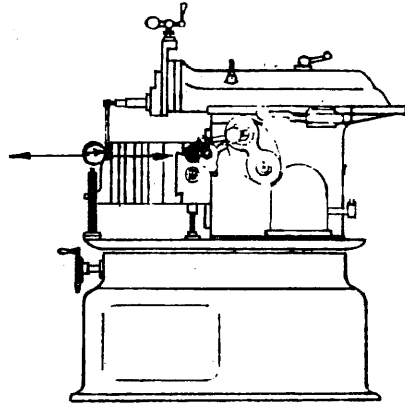
Upper surface of table parallel with its transverse movement not to exceed .001 per 9".

Actual



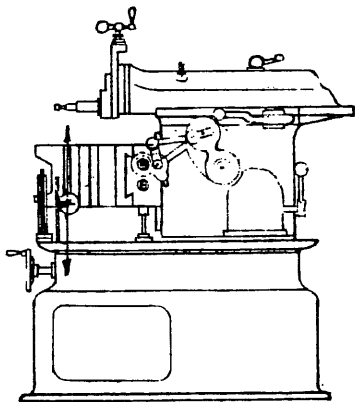
Upper surface of table parallel to movement of ram, not to exceed .001 per 12".

Actual



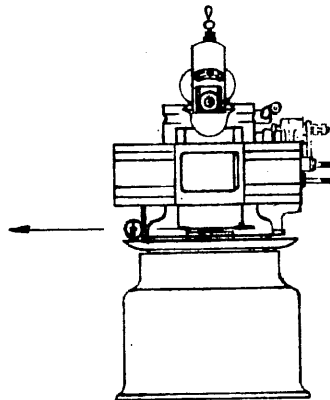
Movement of ram parallel with side clamping surface of table not to exceed .002 per 12".

Actual



Side clamping surface of table parallel with its vertical adjustment not to exceed .001 per 9".

Actual



Guide for table support parallel with transverse movement of table not to exceed .001 per 9".

Actual

Invoice No. _____

Serial No. _____

Date _____

Inspected _____

Approved _____