

Catalog No. HR-23

REPLACEMENT PARTS MANUAL

For 5 hp . . No. 2

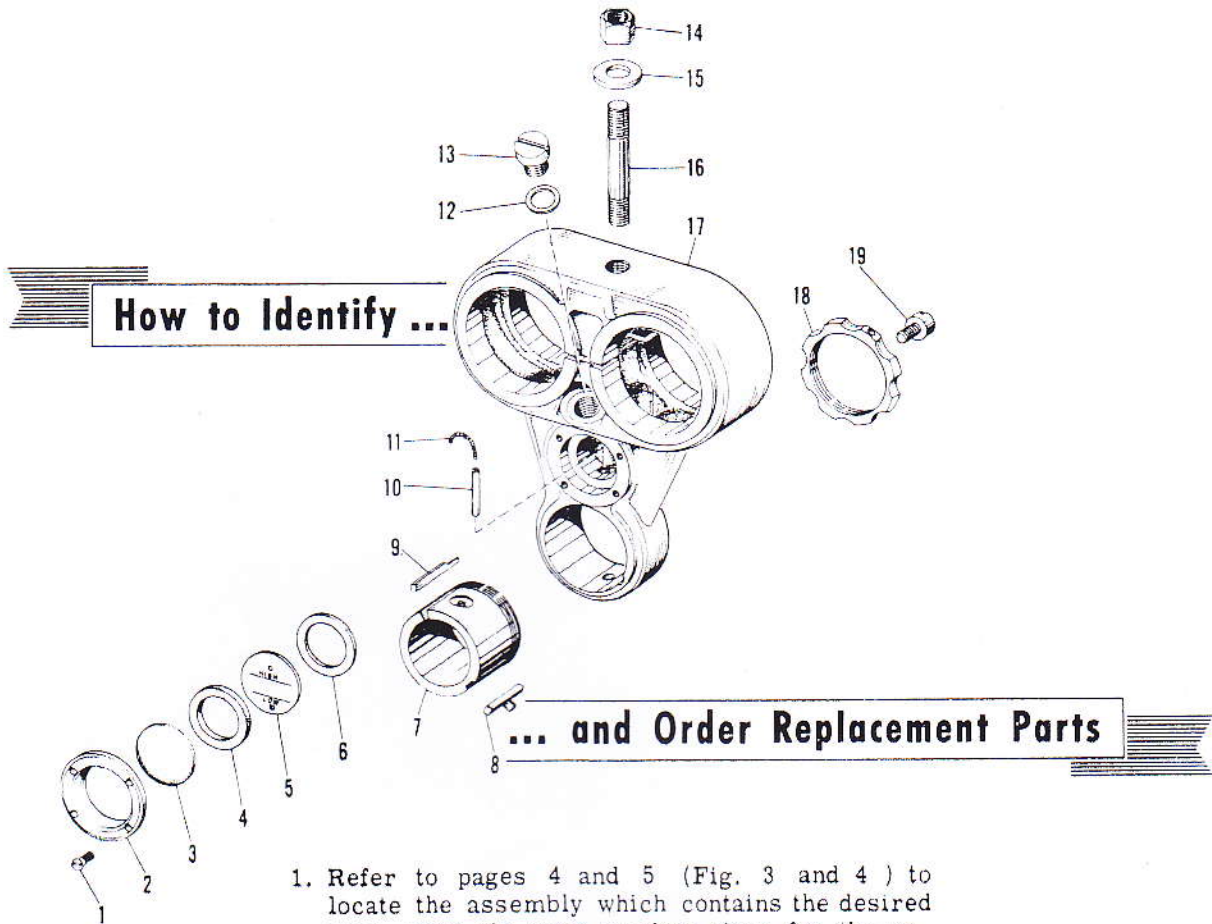
MODEL H

**Plain—Universal—Vertical—Automatic Cycle
Milling Machines**

with standard
directional
table control

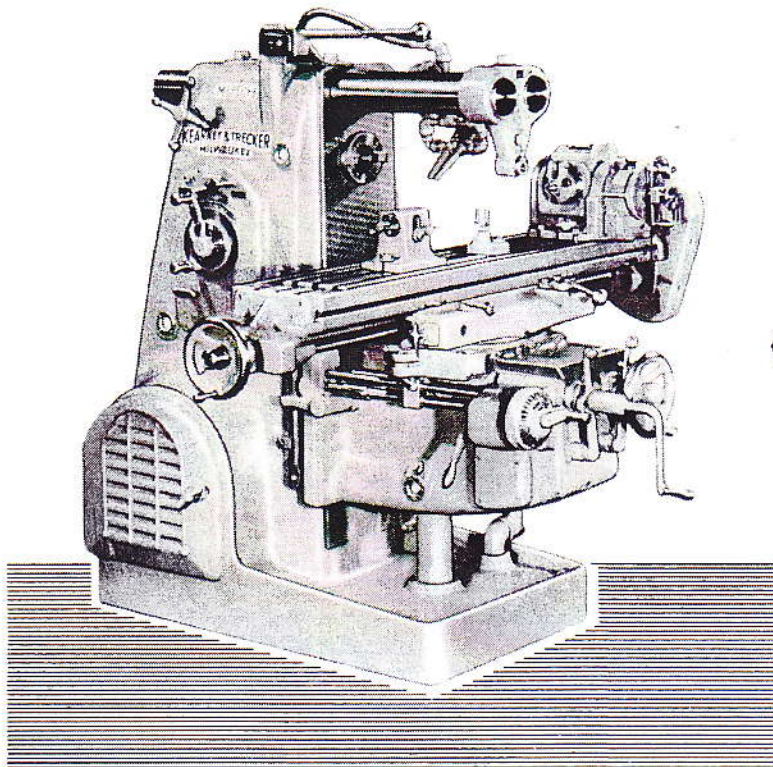
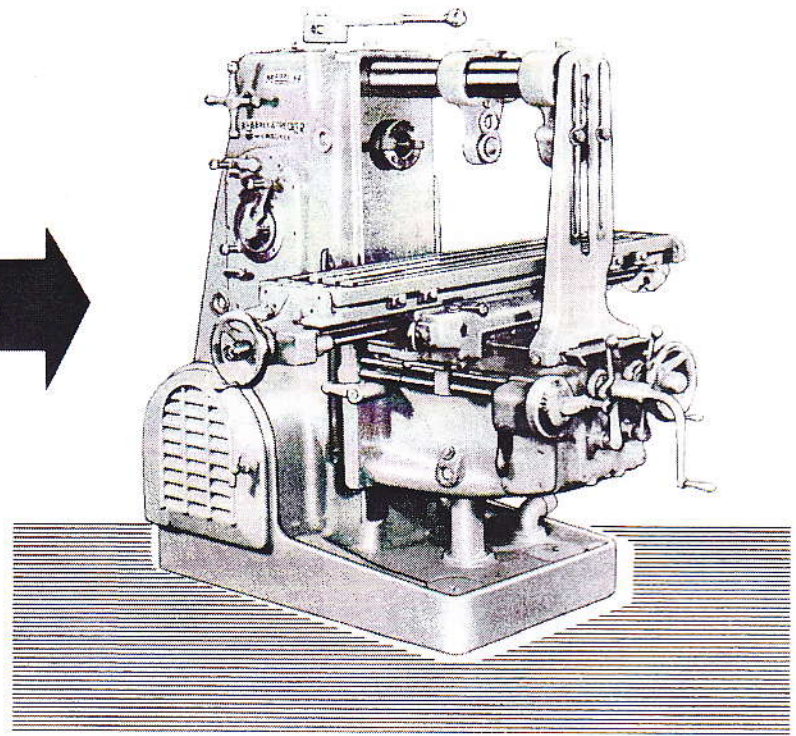
with mono-lever and
automatic cycle
table control

**KEARNEY & TRECKER
MILWAUKEE**



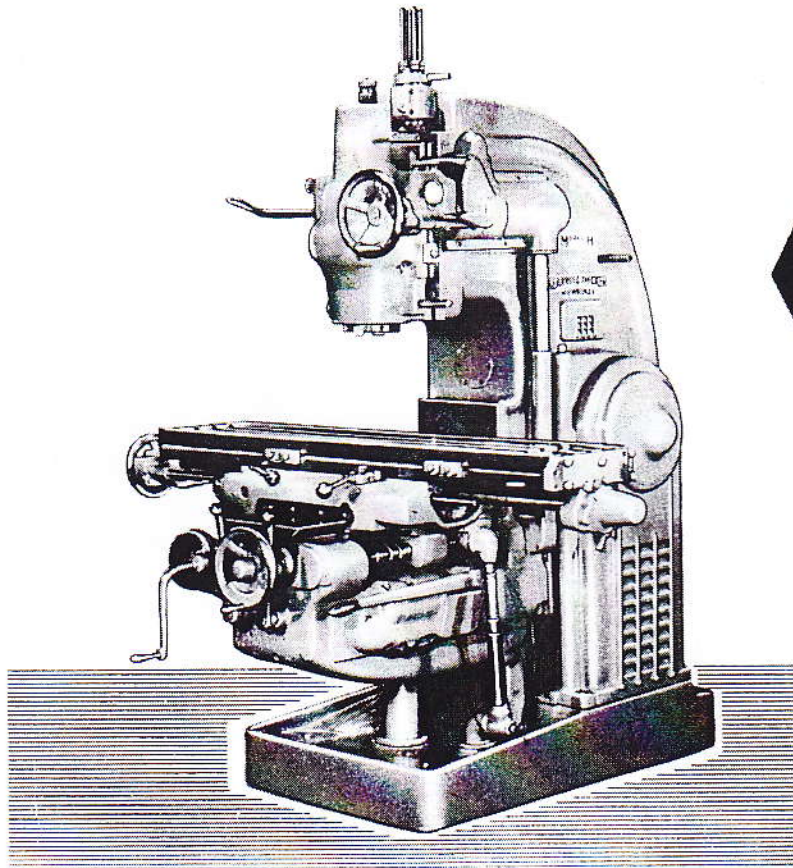
1. Refer to pages 4 and 5 (Fig. 3 and 4) to locate the assembly which contains the desired part. Note the page number given for the assembly exploded view.
2. Locate the desired part and its item number in the assembly exploded view. For convenience and clearness in showing parts on some large units, it was necessary to remove them from the proper location in relation to the main casting. Such assemblies are indicated by a letter in a circle A, B, C, etc. A brief study of the exploded view will show where such sub-assemblies properly belong.
3. In the parts list on the facing page, find the corresponding item number to determine the part name description and code number.
4. Send the part name description, the code number and the SIZE, MODEL and SERIAL NUMBER OF THE MACHINE (Located on the name plate on the left side of the column) to the Service Department, Kearney & Trecker Corporation, Milwaukee 14, Wisconsin, U.S.A.
5. For service by telephone, call Greenfield 6-8300, and give the information in paragraph 4 above.

MODEL 2H Plain



MODEL 2H Universal

FIGURE 1



MODEL 2H Vertical

**MODEL 2H
Automatic Cycle**

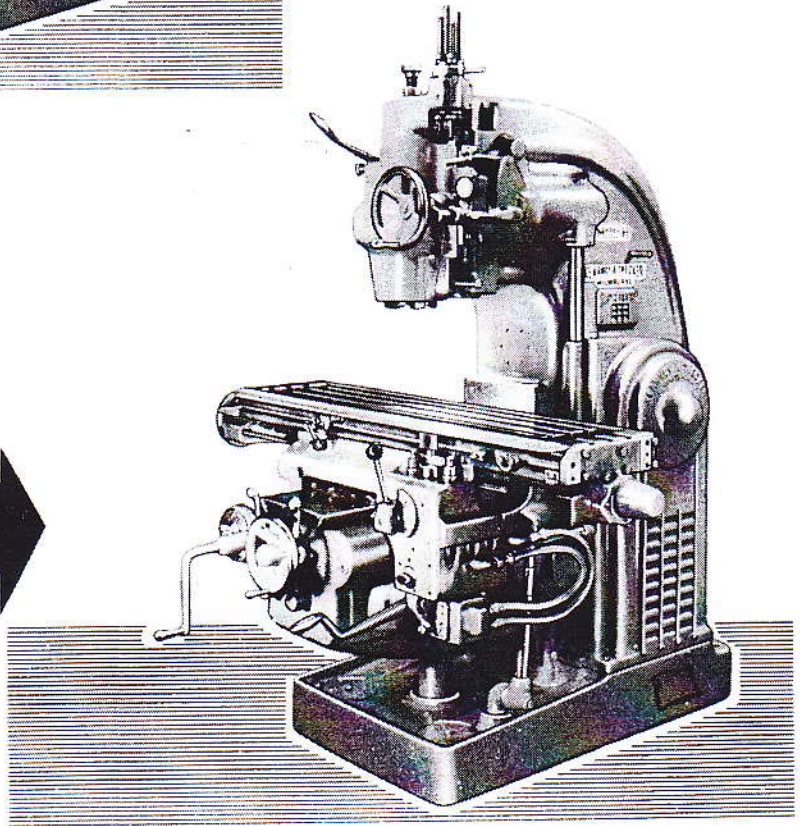
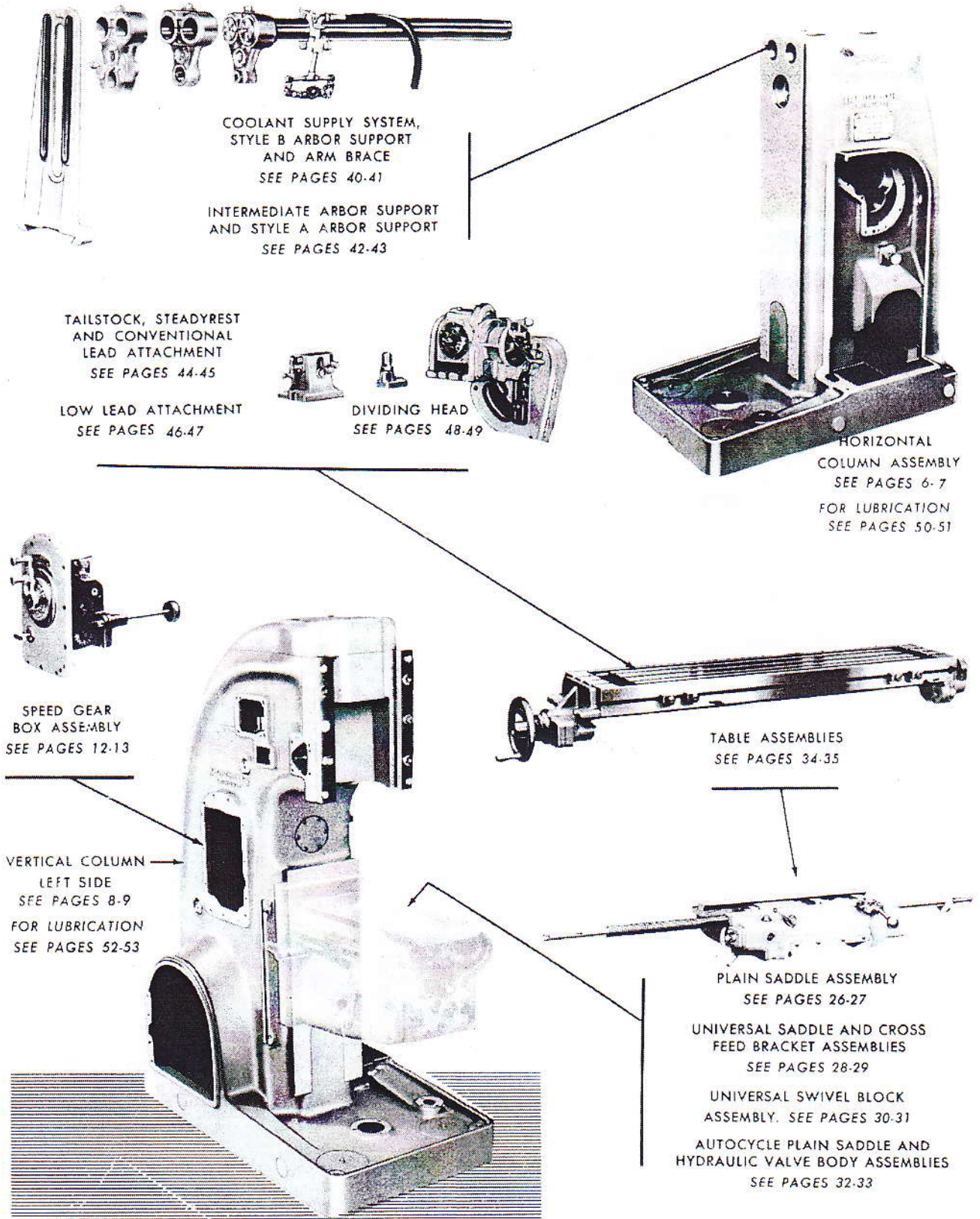


FIGURE 2



COOLANT SUPPLY SYSTEM,
STYLE B ARBOR SUPPORT
AND ARM BRACE
SEE PAGES 40-41

INTERMEDIATE ARBOR SUPPORT
AND STYLE A ARBOR SUPPORT
SEE PAGES 42-43

TAILSTOCK, STEADYREST
AND CONVENTIONAL
LEAD ATTACHMENT
SEE PAGES 44-45

LOW LEAD ATTACHMENT
SEE PAGES 46-47

DIVIDING HEAD
SEE PAGES 48-49

HORIZONTAL
COLUMN ASSEMBLY
SEE PAGES 6-7
FOR LUBRICATION
SEE PAGES 50-51

SPEED GEAR
BOX ASSEMBLY
SEE PAGES 12-13

VERTICAL COLUMN
LEFT SIDE
SEE PAGES 8-9
FOR LUBRICATION
SEE PAGES 52-53

TABLE ASSEMBLIES
SEE PAGES 34-35

PLAIN SADDLE ASSEMBLY
SEE PAGES 26-27

UNIVERSAL SADDLE AND CROSS
FEED BRACKET ASSEMBLIES
SEE PAGES 28-29

UNIVERSAL SWIVEL BLOCK
ASSEMBLY. SEE PAGES 30-31

AUTOCYCLE PLAIN SADDLE AND
HYDRAULIC VALVE BODY ASSEMBLIES
SEE PAGES 32-33

FIG. 3 - HORIZONTAL COLUMN, LEFT FRONT OF VERTICAL COLUMN AND ASSEMBLIES

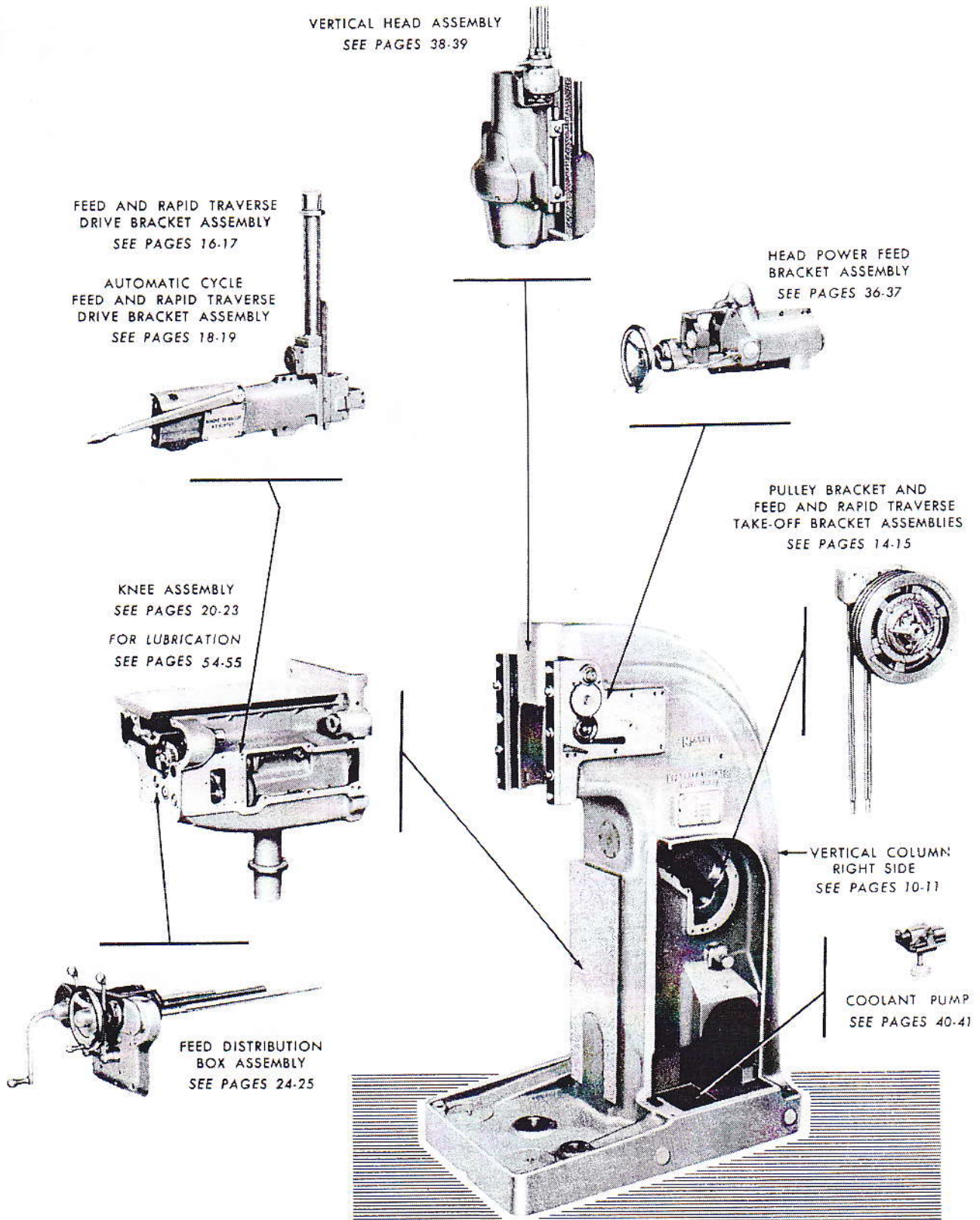


FIG. 4 - RIGHT FRONT OF VERTICAL COLUMN AND ASSEMBLIES



WHEN ORDERING PARTS
REPORT SERIAL NUMBER
SHOWN ON THIS PLATE

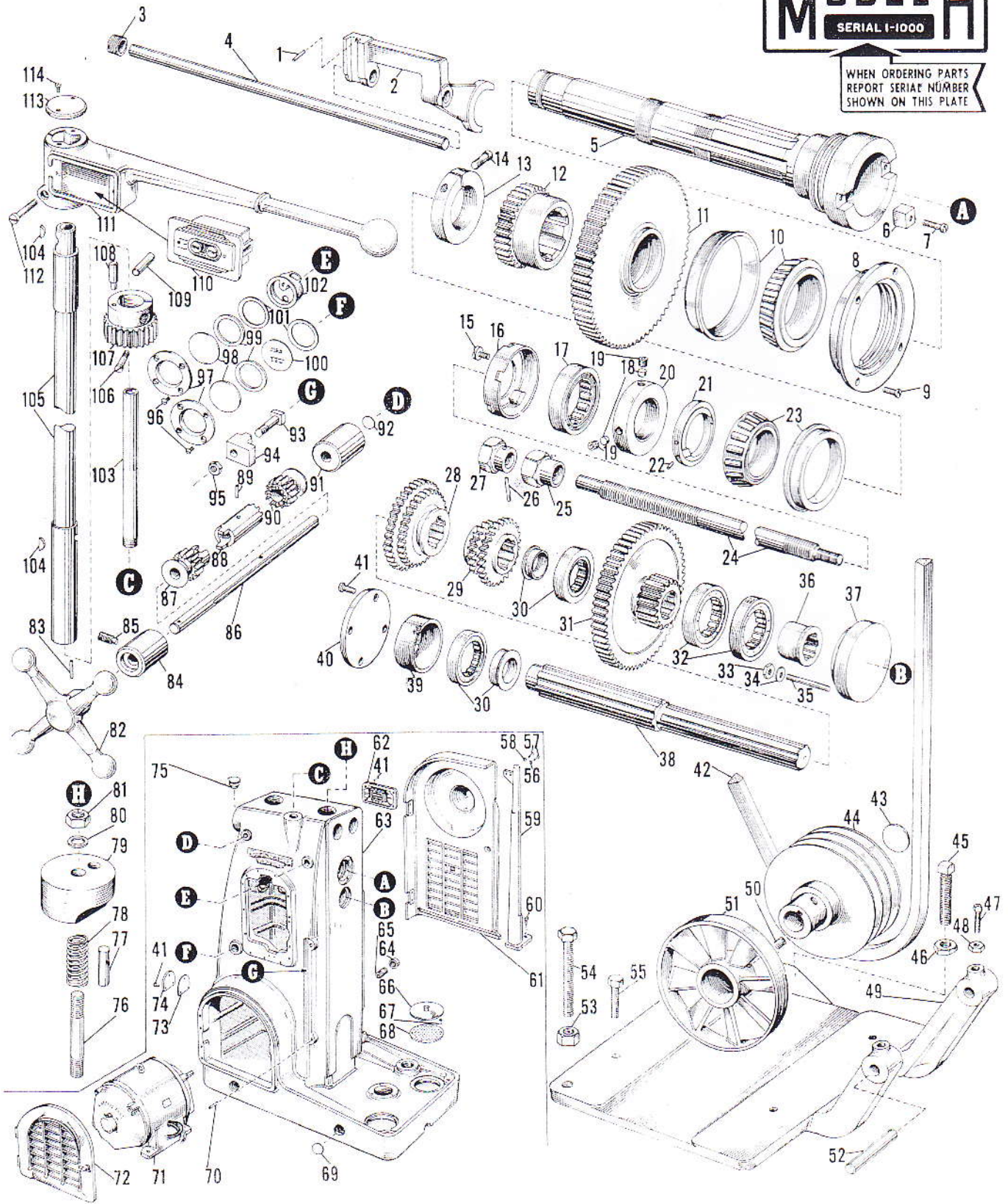


FIG. 5 - HORIZONTAL COLUMN

Fig. 5 - Horizontal Column

Item No.	Part Name and Description	Code No.	Qty.		Item No.	Part Name and Description	Code No.	Qty.
1	Acme Blue Label Dowel, 1/4 x 1 in.	2H-A1	1			Door Handle	2H-A66	1
2	Range Change Shifter Fork	2H-A2	1			Pulley Door Hinge	2H-A67	2
3	Shifter Fork Rod Screw	2H-A3	1			Screw	2H-A68	4
4	Shifter Fork Rod	2H-A4	1			Lockwasher	2H-A69	4
5	Spindle	2H-A5	1			Spacing Washer	2H-A70	*
6	Spindle Key	2H-A6	2		62	Column Vent and Name Plate	2H-A71	1
7	Screw	2H-A7	2		63	Column	2H-A72	1
8	Spindle Oil Shield	2H-A8	1		64	Pipe Cap, 1 in.	2H-A73	1
9	Screw	2H-A9	4		65	Nipple, 1 x 2 in.	2H-A74	1
10	Timken Spindle Bearing, 47620B-47686	2H-A10	1		66	Column Drain Cover	2H-A75	2
11	Large Spindle Gear	2H-A11	1		67	Flat Head Machine Screw, 10-32 x 3/8 in.	2H-A76	4
12	Small Spindle Gear	2H-A12	1		68	Column Drain Screen	2H-A77	2
13	Nut	2H-A13	1		69	Expansion Plug, 2-1/2 in.	2H-A78	6
14	Allen Head Cap Screw, 7/16 x 1-1/4 in.	2H-A14	1		70	Acme Blue Label Dowel, 1/2 x 1-1/8 in.	2H-A79	2
15	Screw	2H-A15	3		71	Electric Motor, 5HP	2H-A80	1
16	Rear Spindle Bearing Retainer	2H-A16	1		72	Motor Door	2H-A81	1
17	Hyatt Bearing, 1308-TS	2H-A17	1			Motor Door Hinge	2H-A82	2
18	Shoe	2H-A18	2			Screw	2H-A83	8
19	Screw	2H-A19	2			Lockwasher, No. 1220		
20	Nut	2H-A20	1			Shakeproof	2H-A84	8
21	Spindle Bearing Drive Collar	2H-A21	1			Door Latch	2H-A85	1
22	Drive Collar Pin	2H-A22	1			Set Screw	2H-A86	1
23	Timken Spindle Bearing, 453B-462W	2H-A23	1			Door Handle	2H-A87	1
24	Draw in Bolt	2H-A24	1			Spacing Washer	2H-A88	*
25	Nut	2H-A25	1		73	Gasket	2H-A89	1
26	Taper Pin, No. 4 x 1-1/4 in.	2H-A26	1		74	Coolant Clean-Out Cover	2H-A90	1
27	Nut	2H-A27	1		75	Gits Oiler, TS-409	2H-A91	1
28	Rear Primary Sliding Gear	2H-A28	1		76	Stud	2H-A92	2
29	Front Primary Sliding Gear	2H-A29	1		77	Clamp Block Pin	2H-A93	2
30	Hyatt Bearing, R1207 TS	2H-A30	2		78	Spring	2H-A94	2
31	Spindle Drive Sliding Gear	2H-A31	1		79	Overarm Clamp	2H-A95	2
32	Hyatt Bearing, 1208 TS	2H-A32	2		80	Washer	2H-A96	2
33	Nut	2H-A33	2		81	Nut	2H-A97	2
34	Washer	2H-A34	2		82	Overarm Hand Wheel	2H-A98	1
35	Stud	2H-A35	2		83	Taper Pin, No. 4 x 1-3/8 in.	2H-A99	1
36	Primary Shaft Bearing Race	2H-A36	1		84	Overarm Shaft Bushing, Left Hand	2H-A100	1
37	Primary Shaft Bearing Cover	2H-A37	1		85	Set Screw	2H-A101	2
38	Primary Speed Change Shaft	2H-A38	1		86	Overarm Pinion Shaft	2H-A102	1
39	Primary Shaft Bearing Spacer	2H-A39	1		87	Overarm Pinion, Left Hand	2H-A103	1
40	Primary Shaft Rear Bearing Cover	2H-A40	1		88	Overarm Clutch Sleeve	2H-A104	1
41	Screw	2H-A41	11		89	Pin	2H-A105	1
42	Texrope Belt, B-68	2H-A42	3		90	Overarm Pinion, Right Hand	2H-A106	1
43	Expansion Plug, 1-1/2 in. diam.	2H-A43	1		91	Overarm Shaft Bushing, Right Hand	2H-A107	1
44	Motor Sheave	2H-A44	1		92	Expansion Plug, 3/4 in.	2H-A108	1
45	Screw	2H-A45	1		93	Screw	2H-A109	2
46	Nut	2H-A46	1		94	Vertical Trip Dog	2H-A110	2
47	Square Head Cup Point Set Screw, 3/8 x 1-1/4 in.	2H-A47	2		95	Nut	2H-A111	2
48	Nut	2H-A48	2		96	Screw	2H-A112	8
49	Motor Base	2H-A49	1		97	Oil Gage Plate	2H-A113	2
50	Flat Point Allen Head Set Screw, 3/8-16 x 3/4 in.	2H-A50	2		98	Oil Gage Glass	2H-A114	2
51	Motor Fan	2H-A51	1		99	Oil Gage Washer	2H-A115	2
52	Motor Base Hinge Pin	2H-A52	2		100	Oil Gage Plate	2H-A116	1
53	Nut	2H-A53	1		101	Oil Gage Washer	2H-A117	2
54	Screw	2H-A54	1		102	Oil Flow Gage	2H-A118	1
55	Hex Head Cap Screw, 1/2 x 1-1/2 in.	2H-A55	4		103	Starting Lever Stand Pipe	2H-A119	1
56	Washer	2H-A56	1		104	Hi-Pro Key, No. 708	2H-A120	2
57	Screw	2H-A57	2		105	Starting Lever Shaft	2H-A121	1
58	Washer	2H-A58	1		106	Screw	2H-A122	1
59	Coolant Pipe Guard	2H-A59	1		107	Starting Lever Gear	2H-A123	1
60	Screw	2H-A60	1		108	Starting Lever Stop Pin (in Gear)	2H-A124	1
61	Pulley Door	2H-A61	1		109	Starting Lever Stop Pin (in Column)	2H-A125	1
	Pump Clutch Plate	2H-A62	1		110	Cutler-Hammer Starting Switch	2H-A126	1
	No. 15 Escutcheon Pins	2H-A63	4		111	Starting Lever	2H-A127	1
	Door Latch	2H-A64	1		112	Screw	2H-A128	1
	Screw	2H-A65	1		113	Starting Lever Cover	2H-A129	1
					114	Screw	2H-A130	2

*Indicates As Required

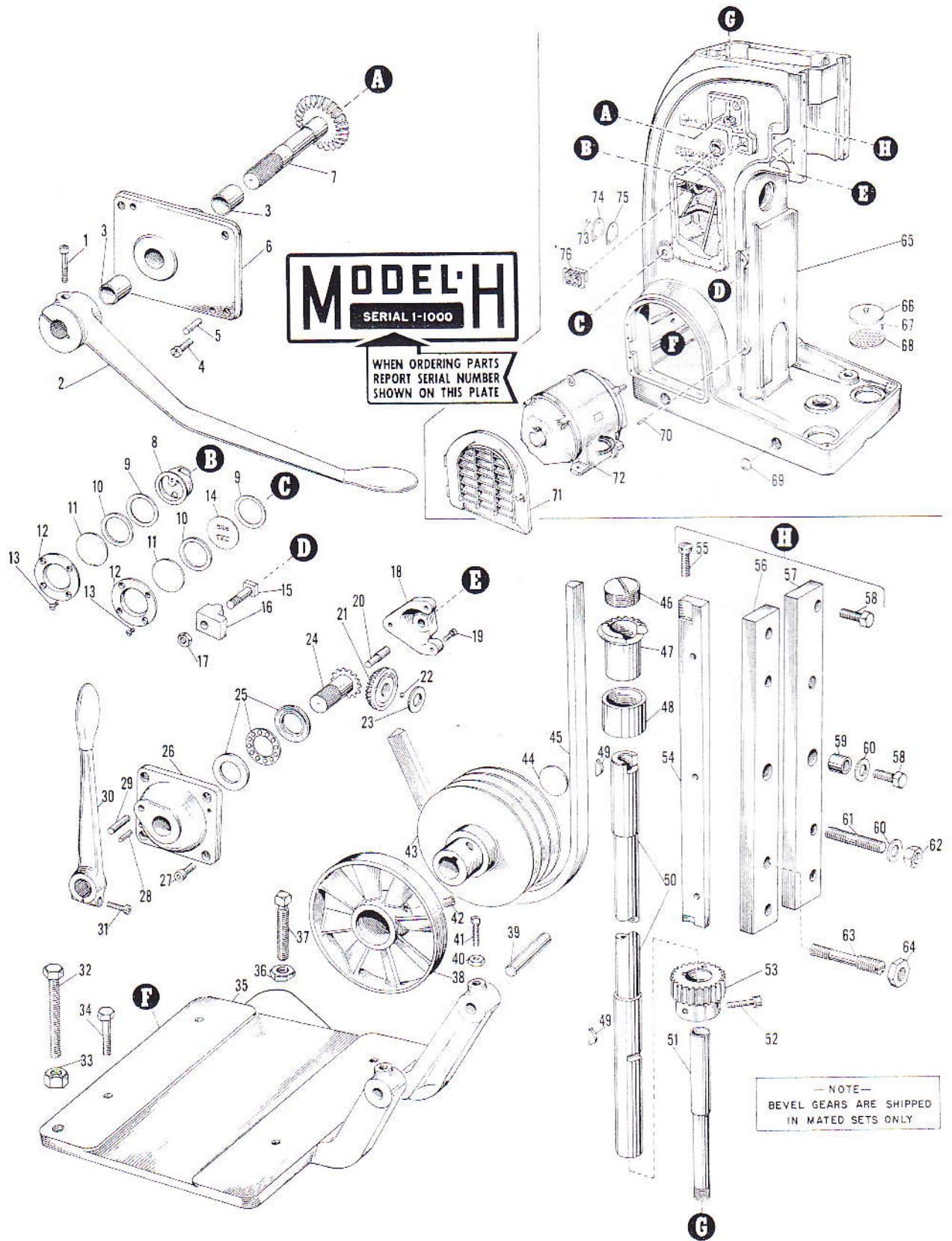


FIG. 6 - VERTICAL COLUMN, LEFT SIDE

Fig. 6 - Vertical Column, Left Side

Item No.	Part Name and Description	Code No.	Qty.
1	Allen Head Cap Screw, 3/8 x 1-3/4 in.	2H-B1	1
2	Starting Lever	2H-B2	1
3	Oilite Bearing, A1110-1	2H-B3	2
4	Fillister Head Screw	2H-B4	4
5	Acme Blue Label Dowel, 5/16 x 1 in.	2H-B5	2
6	Starting Lever Cover	2H-B6	1
7	Starting Lever Cross Shaft	2H-B7	1
8	Oil Flow Gage	2H-B8	1
9	Oil Gage Washer	2H-B9	2
10	Oil Gage Washer	2H-B10	2
11	Oil Gage Glass	2H-B11	2
12	Oil Gage Plate	2H-B12	2
13	Screw	2H-B13	8
14	Oil Gage Plate	2H-B14	1
15	Screw	2H-B15	2
16	Vertical Trip Dog	2H-B16	2
17	Nut	2H-B17	2
18	Pinion Stud Support	2H-B18	1
19	Screw	2H-B19	3
20	Head Clamp Pinion Stud	2H-B20	1
21	Head Clamp Bevel Gear	2H-B21	1
22	Steel Ball, 3/16 in. diam.	2H-B22	19
23	Head Clamp Bevel Gear Collar	2H-B23	1
24	Head Clamp Bevel Pinion	2H-B24	1
25	Ball Thrust Bearing	2H-B25	1
26	Clamp Pinion Bearing Plate	2H-B26	1
27	Allen Cap Screw, 3/8-16 x 3/4 in.	2H-B27	4
28	Acme Blue Label Dowel, 1/4 x 1 in.	2H-B28	2
29	Acme Blue Label Dowel, 3/8 x 1-1/2 in.	2H-B29	1
30	Head Clamp Handle	2H-B30	1
31	Allen Cap Screw, 5/16 x 1-1/8 in.	2H-B31	1
32	Screw	2H-B32	1
33	Nut	2H-B33	1
34	Hex Head Cap Screw, 1/2 x 1-1/2 in.	2H-B34	4
35	Motor Base	2H-B35	1
36	Nut	2H-B36	1
37	Screw	2H-B37	1
38	Motor Fan	2H-B38	1
39	Motor Base Hinge Pin	2H-B39	2
40	Nut	2H-B40	2
41	Square Head Cup Point Set Screw, 3/8 x 1-1/4 in.	2H-B41	2

Item No.	Part Name and Description	Code No.	Qty.
42	Flat Point Allen Head Set Screw, 3/8-16 x 3/4 in.	2H-B42	2
43	Motor Sheave	2H-B43	1
44	Expansion Plug, 1-1/2 in. diam.	2H-B44	1
45	Texrope Belt, B-68	2H-B45	3
46	Pipe Plug	2H-B46	1
47	Starting Lever Bevel Pinion	2H-B47	1
48	Oilite Bearing, A-2101	2H-B48	1
49	Hi-Pro Key, HP-708	2H-B49	2
50	Starting Lever Shaft	2H-B50	1
51	Starting Lever Stand Pipe	2H-B51	1
52	Screw	2H-B52	1
53	Starting Lever Gear	2H-B53	1
54	Head Taper Gib	2H-B54	1
55	Gib Screw	2H-B55	2
56	Head Gib, Left Hand	2H-B56	1
57	Head Gib, Right Hand	2H-B57	1
58	Hex Head Cap Screw	2H-B58	6
59	Head Gib Spacer	2H-B59	2
60	Washer	2H-B60	5
61	Stud	2H-B61	3
62	Nut	2H-B62	3
63	Head Clamp Stud	2H-B63	1
64	Nut	2H-B64	1
65	Column	2H-B65	1
66	Column Drain Cover	2H-B66	2
67	Flat Head Machine Screw, 10-32 x 3/8 in.	2H-B67	4
68	Column Drain Screen	2H-B68	2
69	Expansion Plug, 2-1/2 in. diam.	2H-B69	6
70	Acme Blue Label Dowel, 1/2 x 1-1/8 in.	2H-B70	2
71	Motor Door	2H-B71	1
	Motor Door Hinge	2H-B72	2
	Screw	2H-B73	8
	Lockwasher, No. 1220		
	Shakeproof	2H-B74	8
	Door Latch	2H-B75	1
	Set Screw	2H-B76	1
	Door Handle	2H-B77	1
	Spacing Washer	2H-B78	*
72	Electric Motor, 5HP	2H-B79	1
73	Screw	2H-B80	7
74	Coolant Cleanout Cover	2H-B81	1
75	Gasket	2H-B82	1
76	Cutler-Hammer Starting Switch	2H-B83	1

*Indicates As Required

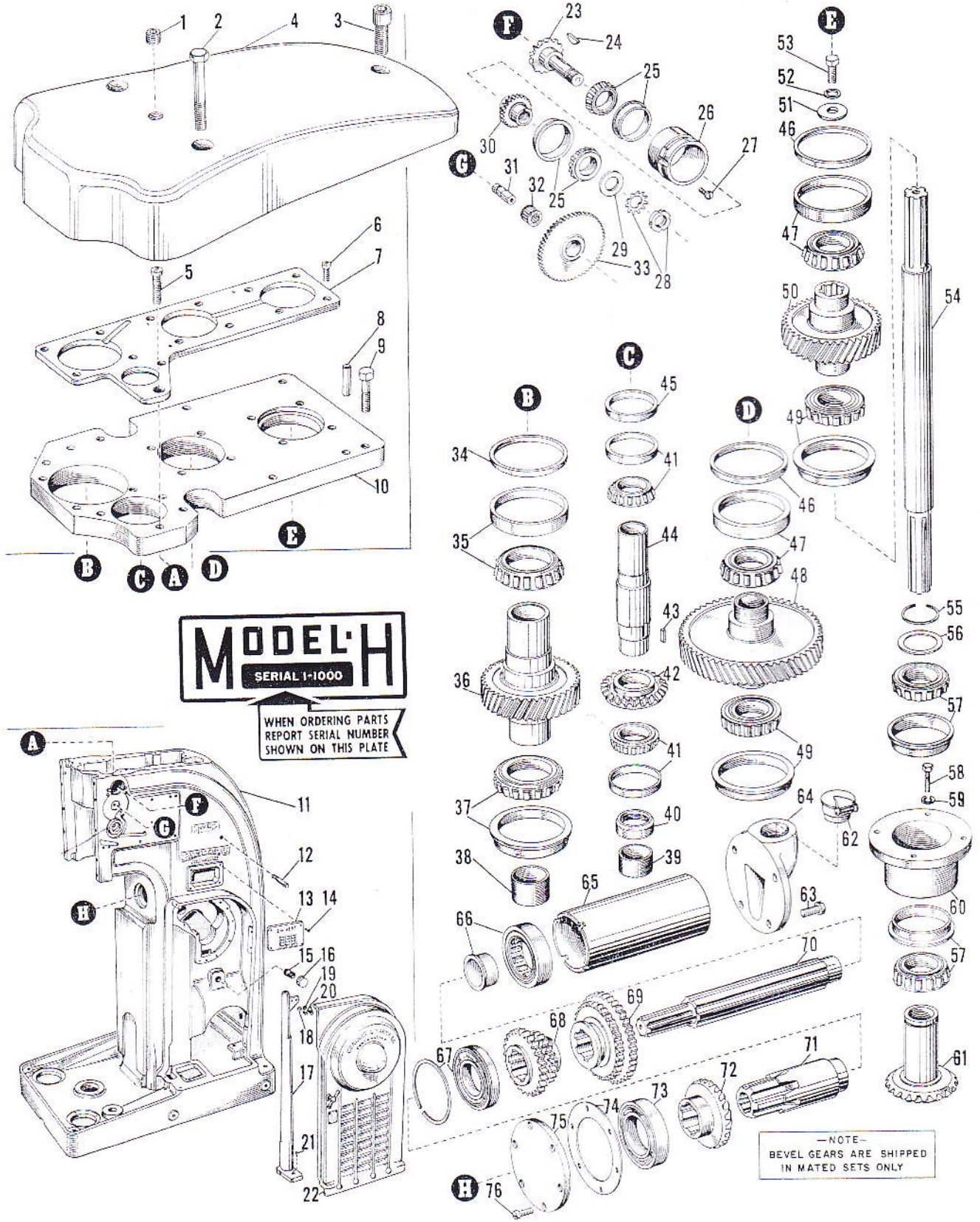


FIG. 7 - VERTICAL COLUMN, RIGHT SIDE

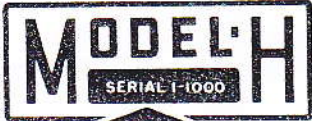
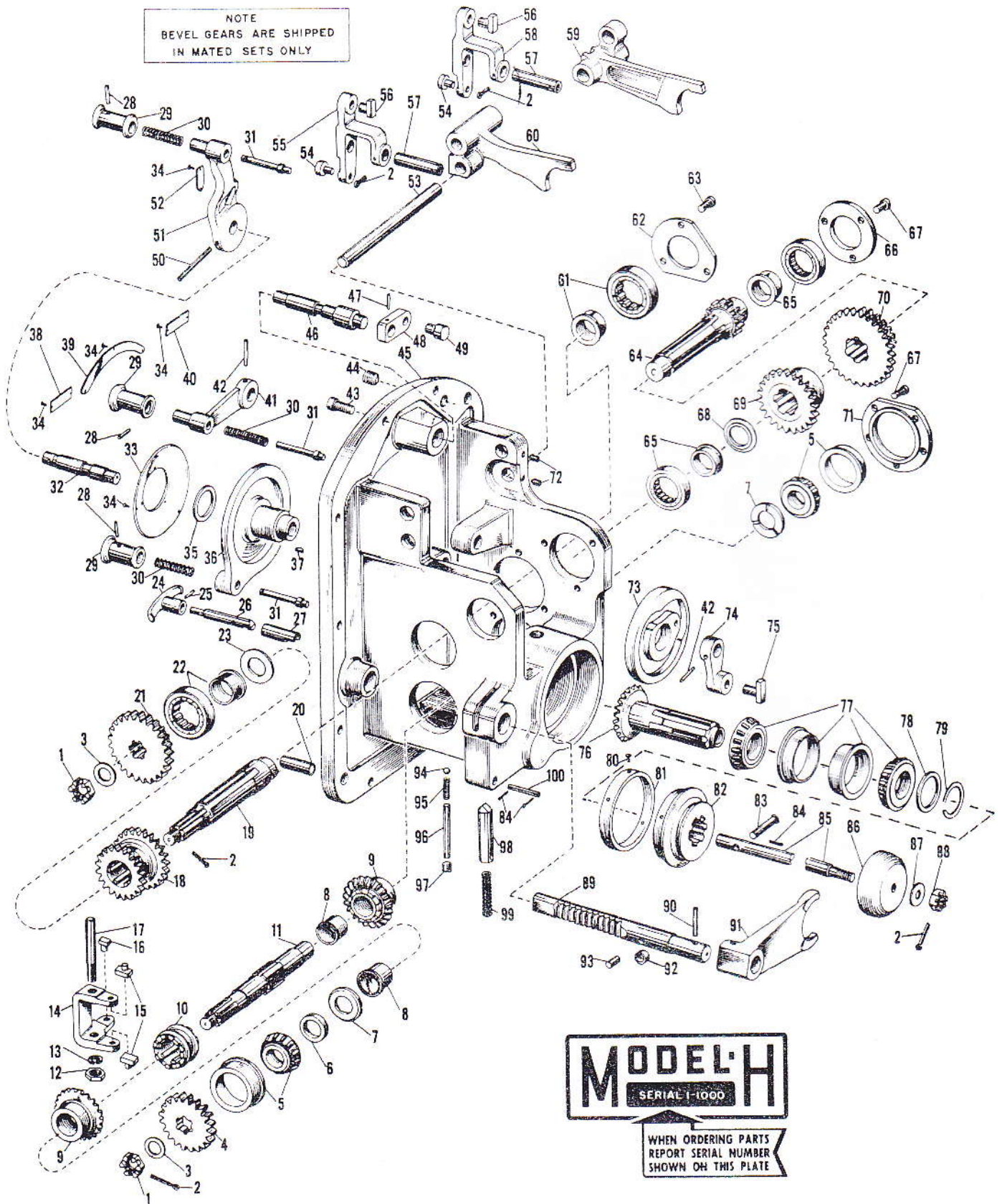
Fig. 7 - Vertical Column, Right Side

Item No.	Part Name and Description	Code No.	Qty.
1	Allen Pipe Plug, 1/2 in.	2H-C1	1
2	Screw	2H-C2	2
3	Allen Head Cap Screw, 3/4 x 1-3/4 in.	2H-C3	1
4	Drive Housing	2H-C4	1
5	Screw	2H-C5	1
6	Screw	2H-C6	13
7	Drive Plate Cover	2H-C7	1
8	Acme Blue Label Dowel, 1/2 x 1-3/4 in.	2H-C8	2
9	Hex Head Cap Screw	2H-C9	8
10	Drive Bearing Plate	2H-C10	1
11	Column	2H-C11	1
12	Clamp Rod	2H-C12	1
13	Column Vent and Name Plate Assembly	2H-C13	1
14	Screw	2H-C14	7
15	Wrought Iron Nipple, 1 x 2 in.	2H-C15	1
16	Pipe Cap, 1 in.	2H-C16	1
17	Coolant Pipe Guard	2H-C17	1
18	Washer	2H-C18	1
19	Washer	2H-C19	1
20	Screw	2H-C20	2
21	Screw	2H-C21	1
22	Pulley Door	2H-C22	1
	Pump Clutch Plate	2H-C23	1
	No. 15 Escutcheon Pins	2H-C24	4
	Door Latch	2H-C25	1
	Screw	2H-C26	1
	Door Handle	2H-C27	1
	Pulley Door Hinge	2H-C28	2
	Screw	2H-C29	4
	Lockwasher	2H-C30	4
	Spacing Washer	2H-C31	*
23	Feed Cross Shaft	2H-C32	1
24	Hi-Pro Key, HP-706	2H-C33	1
25	Timken Bearing, 07204B-07100	2H-C34	2
26	Feed Cross Shaft Bearing Sleeve	2H-C35	1
27	Fillister Head Screw	2H-C36	2
28	Gurney Locknut and Washer, No. 3	2H-C37	1
29	Feed Cross Shaft Washer	2H-C38	1
30	Feed Cross Shaft Gear	2H-C39	1
31	Feed Drive Idler Gear Shaft	2H-C40	1
32	Hyatt Bearing, 93112	2H-C41	1
33	Feed Drive Idler Gear	2H-C42	1
34	Cross Shaft Drive Gear Adjusting Washer	2H-C43	1

Item No.	Part Name and Description	Code No.	Qty.
35	Timken Bearing, 382-387	2H-C44	1
36	Cross Shaft Drive Gear	2H-C45	1
37	Timken Bearing, 382B-387	2H-C46	1
38	Countershaft Oil Sleeve	2H-C47	1
39	Oil Sleeve	2H-C48	1
40	Oil Slinger	2H-C49	1
41	Timken Bearing, 19268-19150	2H-C50	2
42	Feed Screw Nut Drive Gear	2H-C51	1
43	Key	2H-C52	1
44	Head Feed Nut	2H-C53	1
45	Feed Screw Bearing Adjusting Washer	2H-C54	1
46	Drive Gear Adjusting Washer	2H-C55	1
47	Timken Bearing, 345A-355	2H-C56	2
48	Drive Idler Gear	2H-C57	1
49	Timken Bearing, 345B-355	2H-C58	2
50	Drive Gear	2H-C59	1
51	Washer	2H-C60	1
52	Lockwasher, 1/2 in.	2H-C61	1
53	Hex Head Cap Screw	2H-C62	1
54	Drive Shaft	2H-C63	1
55	Snap Ring	2H-C64	1
56	Drive Shaft Bearing Adjusting Washer	2H-C65	1
57	Timken Bearing, 332B-342S	2H-C66	2
58	Hex Head Cap Screw	2H-C67	4
59	Lockwasher, 3/8 in.	2H-C68	4
60	Drive Shaft Bearing Sleeve	2H-C69	1
61	Vertical Drive Spiral Bevel Gear	2H-C70	1
62	Gits Oiler, TC-409	2H-C71	1
63	Screw	2H-C72	4
64	Primary Shaft Bearing Retainer	2H-C73	1
65	Bearing Spacer	2H-C74	1
66	Hyatt Bearing, R-1307 TS	2H-C75	1
67	New Departure Bearing, 43208	2H-C76	1
68	Front Primary Sliding Gear	2H-C77	1
69	Rear Primary Sliding Gear	2H-C78	1
70	Primary Speed Change Shaft	2H-C79	1
71	Vertical Drive Sleeve	2H-C80	1
72	Horizontal Spiral Bevel Gear (Driver)	2H-C81	1
73	New Departure Bearing, 3210	2H-C82	1
74	Bevel Gear Fitting Washer (Large)	2H-C83	1
75	Bearing Retainer Plate	2H-C84	1
76	Screw	2H-C85	6

*Indicates As Required

NOTE
BEVEL GEARS ARE SHIPPED
IN MATED SETS ONLY



WHEN ORDERING PARTS
REPORT SERIAL NUMBER
SHOWN ON THIS PLATE

FIG. 8 - SPEED GEAR BOX

Fig. 8 - Speed Gear Box

Item No.	Part Name and Description	Code No.	Qty.
1	Nut	2H-D1	2
2	Cotter Pin, 7/64 x 1-1/2 in.	2H-D2	5
3	Washer	2H-D3	2
4	Range Gear	2H-D4	1
5	Timken Bearing, 1729B-1755	2H-D5	2
6	Fitting Washer	2H-D6	1
7	Reverse Bevel Gear Thrust Washer	2H-D7	2
8	Spindle Reverse Bevel Gear Bushing	2H-D8	2
9	Spindle Reverse Bevel Gear	2H-D9	2
10	Spindle Reverse Clutch	2H-D10	1
11	Reverse Bevel Gear Shaft	2H-D11	1
12	Nut	2H-D12	1
13	Lock Washer	2H-D13	1
14	Spindle Reverse Shifter Yoke	2H-D14	1
15	Reverse Yoke Shoe	2H-D15	2
16	Reverse Rod Shoe	2H-D16	1
17	Spindle Reverse Yoke Stud	2H-D17	1
18	Secondary Speed Change Gear	2H-D18	1
19	Secondary Speed Change Shaft	2H-D19	1
20	Acme Blue Label Dowel, 1/2 x 1-1/2 in.	2H-D20	2
21	Range Gear	2H-D21	1
22	Hyatt Bearing A-1206-TS	2H-D22	1
23	Secondary Shaft Collar	2H-D23	1
24	Spindle Reverse Knob	2H-D24	1
25	Taper Pin, No. 3 x 7/8 in.	2H-D25	1
26	Spindle Reverse Rod	2H-D26	1
27	Oil Retainer Tube	2H-D27	1
28	Taper Pin, No. 2 x 7/8 in.	2H-D28	*3
29	Speed Selection Knob	2H-D29	*3
30	Spring	2H-D30	*3
31	Speed Selection Lever Plunger	2H-D31	*3
32	Range Change Lever Shaft	2H-D32	1
33	Speed Selection Dial	2H-D33	1
34	Escutcheon Pin No. 15	2H-D34	17
35	Washer	2H-D35	1
36	Speed Change Lever and Dial Plate	2H-D36	1
37	Hi-Pro Key No. 404	2H-D37	1
38	Speed Plate (Fast)	2H-D38	1
39	Instruction Plate	2H-D39	1
40	Speed Plate (Slow)	2H-D40	1
41	Range Change Lever	2H-D41	†1
42	Taper Pin, No. 3 x 1-3/8 in.	2H-D42	2
43	Allen Head Cap Screw, 3/8 x 1 in.	2H-D43	11
44	Cup Point Allen Head Set Screw, 1/2 x 3/4 in.	2H-D44	2
45	Speed Box	2H-D45	1
46	Range Change Lever Shaft	2H-D46	1
47	Taper Pin, No. 3 x 1 in.	2H-D47	1
48	Range Change Crank	2H-D48	1

Item No.	Part Name and Description	Code No.	Qty.
49	Range Change Crank Pin	2H-D49	1
50	Taper Pin, No. 3 x 2-1/4 in.	2H-D50	1
51	Secondary Speed Change Lever	2H-D51	1
52	Speed Dial Pointer	2H-D52	1
53	Shifter Fork Guide Rod	2H-D53	2
54	Primary Change Lever Pin	2H-D54	2
55	Front Primary Change Lever	2H-D55	1
56	Rapid Traverse Clutch Cone Shoe	2H-D56	2
57	Primary Change Lever Shaft	2H-D57	2
58	Rear Primary Change Lever	2H-D58	1
59	Rear Primary Shifter Fork	2H-D59	1
60	Front Primary Shifter Fork	2H-D60	1
61	Hyatt Bearing R-1305-YS	2H-D61	1
62	Secondary Shaft Bearing Retainer	2H-D62	1
63	Screw	2H-D63	3
64	Idler Shaft and Rear Gear	2H-D64	1
65	Hyatt Bearing R-1205-YS	2H-D65	2
66	Idler Shaft Bearing Retainer	2H-D66	1
67	Screw	2H-D67	8
68	Idler Shaft Collar	2H-D68	1
69	Front Idler Gear	2H-D69	1
70	Center Idler Cluster	2H-D70	1
71	Reverse Bevel Shaft Bearing Carrier	2H-D71	1
72	Dog Point Set Screw,	2H-D72	2
73	Speed Change Cam	2H-D73	1
74	Secondary Speed Change Crank	2H-D74	1
75	Crank Shoe	2H-D75	1
76	Spindle Drive Bevel Gear	2H-D76	1
77	Timken Bearing 19283B-19138	2H-D77	2
78	Drive Bevel Bearing Collar	2H-D78	1
79	Snap Ring	2H-D79	1
80	Copper Rivet	2H-D80	7
81	Brake Cone	2H-D81	1
82	Clutch Shifter Spool	2H-D82	1
83	Clutch Shifter Spool Pin	2H-D83	1
84	Cotter Pin, 1/16 x 5/8 in.	2H-D84	3
85	Clutch Shifter Rod	2H-D85	1
86	Clutch Cone	2H-D86	1
87	Washer	2H-D87	1
88	Nut	2H-D88	1
89	Clutch Shifter Yoke Rod	2H-D89	1
90	Taper Pin, No. 4 x 1-3/8 in.	2H-D90	1
91	Clutch Shifter Fork	2H-D91	1
92	Detent Roller	2H-D92	1
93	Detent Roller Pin	2H-D93	1
94	Steel Ball, 5/16 in.	2H-D94	1
95	Spring	2H-D95	1
96	Pin	2H-D96	1
97	Screw	2H-D97	1
98	Detent Plunger	2H-D98	1
99	Spring	2H-D99	1
100	Detent Plunger Pin	2H-D100	1

* Only 2 Used on Vertical Machines

† Used on Horizontal Machines Only

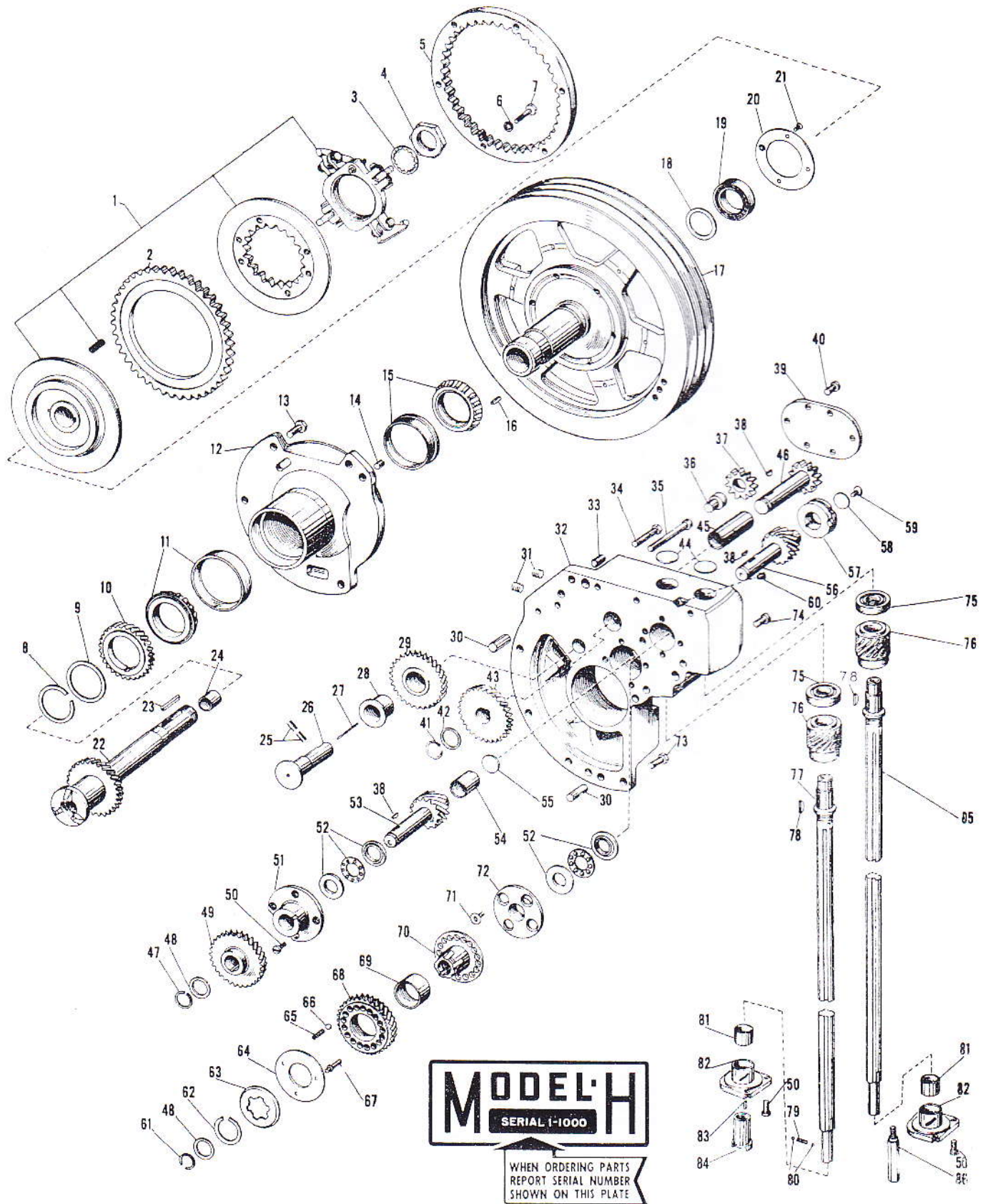


FIG. 9 - PULLEY BRACKET AND FEED AND RAPID TRAVERSE TAKE-OFF BRACKET

Fig. 9 - Pulley Bracket And Feed And Rapid Traverse Take-Off Bracket

Index No.	Part Name and Description	Code No.	Qty.
1	Special C-6 1/2 in. Twin Disc, Clutch No. 5773	2H-E1	1
2	Clutch No. 5773	2H-E2	1
3	Shakeproof Lock Washer, No. 1238	2H-E3	1
4	Nut	2H-E4	1
5	Clutch Gear Ring	2H-E5	1
6	Lockwasher, 5/16 in.	2H-E6	6
7	Screw	2H-E7	6
8	Snap Ring	2H-E8	1
9	Pulley Fitting Washer	2H-E9	1
10	Rapid Traverse Drive Gear	2H-E10	1
11	Timken Bearing, 13181-13318	2H-E11	1
12	Pulley Bracket	2H-E12	1
13	Screw	2H-E13	5
14	Socket Head, Flat Point Set Screw, 3/8 x 1/2 in.	2H-E14	2
15	Timken Bearing, 18200-18337	2H-E15	1
16	Key	2H-E16	1
17	Pulley	2H-E17	1
18	Feed Drive Sleeve Bearing Spacer	2H-E18	1
19	New Departure Bearing No. 1206	2H-E19	1
20	Ball Bearing Retainer	2H-E20	1
21	Screw	2H-E21	4
22	Feed Drive Sleeve Gear	2H-E22	1
23	Key	2H-E23	1
24	Clutch Shifter Rod Bushing	2H-E24	1
25	Flat Point Set Screw, 3/8 x 5/8 in.	2H-E25	2
26	Rapid Traverse Idler Gear Stud	2H-E26	1
27	Oil Wicking	2H-E27	1
28	Rapid Traverse Idler Gear Bushing	2H-E28	1
29	Rapid Traverse Drive Idler Gear	2H-E29	1
30	Acme Blue Label Dowel, 1/2 x 1-1/4 in.	2H-E30	2
31	Allen Head Pipe Plug, 1/4 in.	2H-E31	2
32	Feed and Rapid Traverse Take-Off Bracket	2H-E32	1
33	Allen Set Screw, 1/2 x 3/4 in.	2H-E33	2
34	Screw	2H-E34	1
35	Fillister Head Screw	2H-E35	3
36	Oil Pump Gear Stud	2H-E36	1
37	Oil Pump Gear (Driven)	2H-E37	1
38	Hi-Pro Key, HP-606	2H-E38	3
39	Oil Pump Cover	2H-E39	1
40	Screw	2H-E40	6
41	Snap Ring	2H-E41	1
42	Fitting Collar	2H-E42	1
43	Pump Drive Gear	2H-E43	1
44	Expansion Plug, 1-1/8 in. diam.	2H-E44	2

Index No.	Part Name and Description	Code No.	Qty.
45	Bushing	2H-E45	1
46	Oil Pump Gear (Driver)	2H-E46	1
47	Snap Ring	2H-E47	1
48	Fitting Collar	2H-E48	2
49	Feed Worm Drive Gear	2H-E49	1
50	Screw	2H-E50	9
51	Feed Drive Worm Bearing (Inner)	2H-E51	1
52	K and T Thrust Bearing No. 4723	2H-E52	2
53	Feed Drive Worm	2H-E53	1
54	Feed Drive Worm Bushing	2H-E54	1
55	Expansion Plug, 15/16 in. diam.	2H-E55	1
56	Rapid Traverse Drive Worm	2H-E56	1
57	Rapid Traverse Drive Worm Bearing (Outer)	2H-E57	1
58	Expansion Plug, 1-1/16 in. diam.	2H-E58	1
59	Fillister Head Screw	2H-E59	3
60	Allen Set Screw, 5/16 x 5/16 in.	2H-E60	1
61	Snap Ring	2H-E61	1
62	Snap Ring	2H-E62	1
63	Rapid Traverse Slip Clutch Plate	2H-E63	1
64	Rapid Traverse Slip Clutch Friction Plate	2H-E64	1
65	Spring	2H-E65	18
66	Steel Ball, 5/16 in. diam.	2H-E66	18
67	Friction Drive Plate Pin	2H-E67	3
68	Rapid Traverse Worm Drive Gear	2H-E68	1
69	Rapid Traverse Slip Clutch Bushing	2H-E69	1
70	Rapid Traverse Slip Clutch Sleeve	2H-E70	1
71	Hex Socket Flat Head Cap Screw, 5/16 x 3/4 in.	2H-E71	4
72	Rapid Traverse Drive Worm Bearing (Inner)	2H-E72	1
73	Screw	2H-E73	4
74	Fillister Head Screw	2H-E74	2
75	New Departure Bearing No. 1204	2H-E75	2
76	Feed and Rapid Traverse Drive Worm Wheel	2H-E76	2
77	Feed Drive Take-Off Shaft	2H-E77	1
78	Hi-Pro Key, HP-705	2H-E78	2
79	Spring	2H-E79	1
80	Steel Ball, 3/16 in. diam.	2H-E80	2
81	Oilite Bearing A-1008-4	2H-E81	2
82	Feed and Rapid Traverse Drive Shaft Retainer	2H-E82	2
83	Key	2H-E83	1
84	Coolant Shaft Drive Clutch	2H-E84	1
85	Rapid Traverse Take-Off Shaft	2H-E85	1
86	Positive Stop Screw (For Horizontal Machine)	2H-E86	1

MODEL H
SERIAL 1-1000

WHEN ORDERING PARTS
REPORT SERIAL NUMBER
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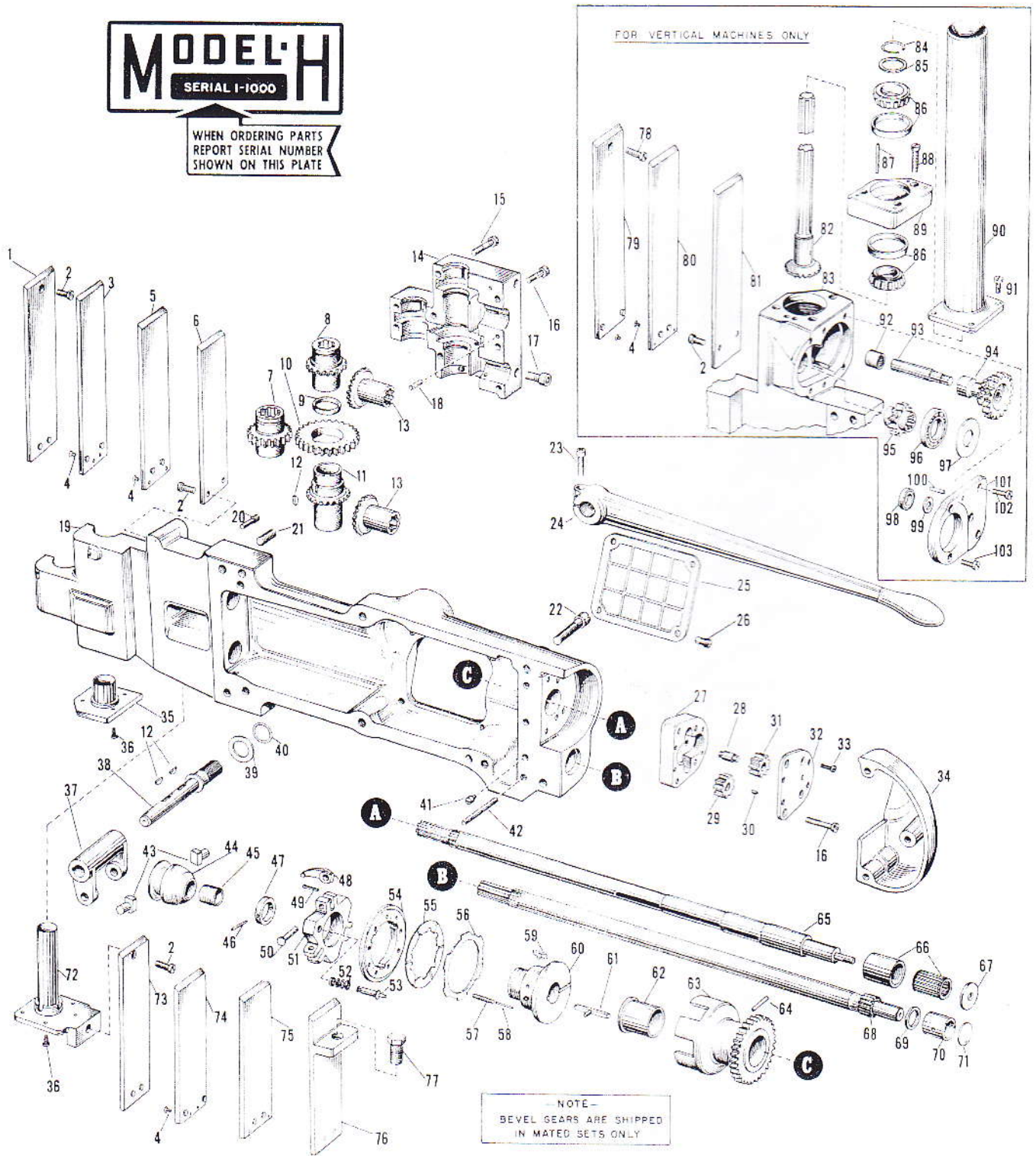


FIG. 10 - FEED AND RAPID TRAVERSE DRIVE BRACKET

Fig. 10 - Feed And Rapid Traverse Drive Bracket

Item No.	Part Name and Description	Code No.	Qty.
1	Drive Shaft Guard, 2-1/4 x 7-1/4 in.	2H-F1	1
2	Fillister Head Screw	2H-F2	†4
3	Drive Shaft Guard, 2-1/4 x 7-1/2 in.	2H-F3	1
4	Oval Head Screw	2H-F4	*12
5	Drive Shaft Guard, 2-1/4 x 7-1/4 in.	2H-F5	1
6	Drive Shaft Guard, 2-1/4 x 7 in.	2H-F6	1
7	Feed Drive Gear	2H-F7	1
8	Rapid Traverse Drive Bevel Gear	2H-F8	1
9	Rapid Traverse Bevel Gear Collar	2H-F9	1
10	Feed Drive Spur Gear	2H-F10	1
11	Feed Drive Bevel Gear	2H-F11	1
12	Hi-Pro Key, HP-505	2H-F12	3
13	Feed and Rapid Traverse Bevel Gear	2H-F13	2
14	Feed and Rapid Traverse Drive Bracket Cap	2H-F14	1
15	Fillister Head Screw	2H-F15	5
16	Fillister Head Screw	2H-F16	10
17	Socket Head Cap Screw, 3/8 x 3/4 in.	2H-F17	2
18	Acme Blue Label Dowel, 5/16 x 1-1/4 in.	2H-F18	1
19	Feed and Rapid Traverse Drive Bracket (Horizontal Machine)	2H-F19	1
20	Screw	2H-F20	1
21	Allen Set Screw, 1/2 x 1-1/4 in.	2H-F21	2
22	Fillister Head Screw	2H-F22	7
23	Allen Socket Head Cap Screw, 5/16 x 1 in.	2H-F23	1
24	Rapid Traverse Lever	2H-F24	1
25	Rapid Traverse Clutch Cover	2H-F25	1
26	Fillister Head Screw	2H-F26	4
27	Oil Pump Body	2H-F27	1
28	Oil Pump Gear Stud	2H-F28	1
29	Oil Pump Gear (Driver)	2H-F29	1
30	Hi-Pro Key, HP-404	2H-F30	1
31	Oil Pump Gear (Driven)	2H-F31	1
32	Oil Pump Cover	2H-F32	1
33	Fillister Head Screw	2H-F33	4
34	Feed and Rapid Traverse Drive Bracket Cover	2H-F34	1
35	Feed Drive Oil Retainer Plate and Tube	2H-F35	1
36	Fillister Head Screw	2H-F36	9
37	Rapid Traverse Clutch Fork	2H-F37	1
38	Rapid Traverse Lever Shaft	2H-F38	1
39	Spacing Washer, 1/16 in.	2H-F39	1
40	O Ring No. 14, 3/4 I.D. x 15/16 O.D.	2H-F40	1
41	Dog Point Set Screw	2H-F41	1
42	Acme Blue Label Dowel, 5/16 x 2-3/4 in.	2H-F42	1
43	Rapid Traverse Clutch Cone Shoe	2H-F43	2
44	Rapid Traverse Clutch Cone	2H-F44	1
45	Clutch Cone Bushing	2H-F45	1
46	Taper Pin 2 x 1-5/16 in.	2H-F46	1
47	Rapid Traverse Clutch Hub Collar	2H-F47	1
48	Clutch Finger	2H-F48	3
49	Cotter Pin, 3/32 x 5/8 in.	2H-F49	3
50	Finger Lever Pin	2H-F50	3
51	Adjusting Yoke	2H-F51	1
52	Spring	2H-F52	1

Index No.	Part Name and Description	Code No.	Qty.
53	Adjusting Lock Pin	2H-F53	1
54	Floating Plate	2H-F54	1
55	Clutch Plate (Driver)	2H-F55	5
56	Clutch Plate (Driven)	2H-F56	6
57	Spring	2H-F57	6
58	Rapid Traverse Clutch Plate Pin	2H-F58	6
59	Key	2H-F59	3
60	Rapid Traverse Clutch Hub and Back Plate	2H-F60	1
61	Key	2H-F61	1
62	Rapid Traverse Clutch Gear Bushing	2H-F62	1
63	Rapid Traverse Clutch Gear	2H-F63	1
64	Dowel Pin, 1/8 x 1/2 in.	2H-F64	1
65	Rapid Traverse Clutch Shaft	2H-F65	1
66	Hyatt Bearing, S-93324	2H-F66	1
67	Rapid Traverse Clutch Shaft Collar	2H-F67	1
68	Feed Drive Pinion Shaft	2H-F68	1
69	Feed Drive Pinion Thrust Washer	2H-F69	1
70	Feed Drive Shaft Bearing	2H-F70	1
71	Expansion Plug, 1-1/4 in. diam.	2H-F71	1
72	Rapid Traverse Drive Oil Retainer Plate and Tube	2H-F72	1
73	Drive Shaft Guard, 2-1/4 x 6-11/16 in.	2H-F73	1
74	Drive Shaft Guard, 2-1/4 x 6-15/16 in.	2H-F74	1
75	Drive Shaft Guard, 2-1/4 x 7-5/16 in.	2H-F75	1
76	Drive Shaft Guard and Retainer	2H-F76	1
77	Hex Head Cap Screw	2H-F77	1
78	Fillister Head Screw	2H-F78	1
79	Cover Plate, upper (Vertical Only)	2H-F79	1
80	Cover Plate (Vertical Only)	2H-F80	1
81	Cover Plate, Lower (Vertical Only)	2H-F81	1
82	Vertical Head Feed Bevel Gear Shaft	2H-F82	1
83	Feed and Rapid Traverse Drive Bracket (Vertical)	2H-F83	1
84	Snap Ring	2H-F84	1
85	Feed Bevel Gear Shaft Fitting Washer	2H-F85	1
86	Timken Bearing 07196-07100	2H-F86	2
87	Oil Wicking	2H-F87	1
88	Fillister Head Screw	2H-F88	3
89	Feed Drive Vertical Bearing Cage	2H-F89	1
90	Telescopic Tube (lower) and Bearing Cover	2H-F90	1
91	Fillister Head Screw	2H-F91	4
92	Torrington Bearing, E-88	2H-F92	1
93	Feed Drive Gear Shaft	2H-F93	1
94	Vertical Head Feed Drive Gear	2H-F94	1
95	Drive Shaft Pinion	2H-F95	1
96	MRC Bearing No. 105-S	2H-F96	1
97	Take-Off Gear Bearing Retainer Washer	2H-F97	1
98	MRC Bearing No. 201-S	2H-F98	1
99	Miter Bevel Fitting Washer	2H-F99	1
100	Acme Blue Label Dowel, 1/4 x 3/4 in.	2H-F100	2
101	Feed Drive Bearing Plate	2H-F101	1
102	Fillister Head Screw	2H-F102	2
103	Fillister Head Screw	2H-F103	2

†Only 3 Used on Vertical Machines *Only 8 Used on Vertical Machines

MODEL H
SERIAL 1-1000

WHEN ORDERING PARTS
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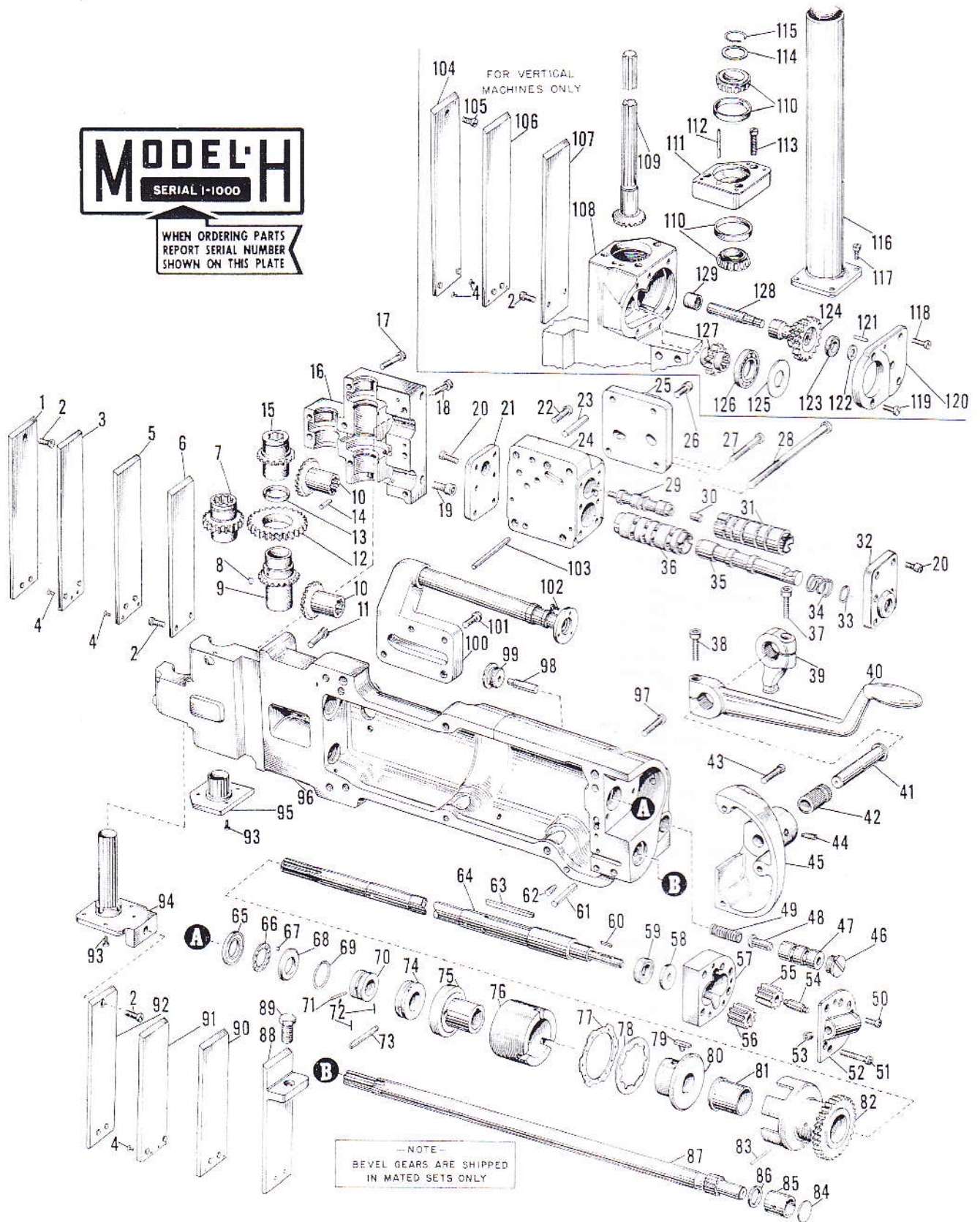


FIG. 11 - AUTOMATIC CYCLE FEED AND RAPID TRAVERSE DRIVE BRACKET

Fig. 11 - Automatic Cycle Feed And Rapid Traverse Drive Bracket

Item No.	Part Name and Description	Code No.	Qty.		Item No.	Part Name and Description	Code No.	Qty.
1	Drive Shaft Guard, 2-1/4 x 7-1/4 in.	2H-G1	1		64	Rapid Traverse Clutch Shaft	2H-G64	1
2	Fillister Head Screw	2H-G2	†4		65	Rapid Traverse Clutch Shaft Rear Race	2H-G65	1
3	Drive Shaft Guard, 2-1/4 x 7-1/2 in.	2H-G3	1		66	Rapid Traverse Clutch Shaft Ball Cage	2H-G66	1
4	Oval Head Screw	2H-G4	*12		67	Ball Bearing, 1/4 in.	2H-G67	12
5	Drive Shaft Guard, 2-1/4 x 7-1/4 in.	2H-G5	1		68	Rapid Traverse Clutch Shaft Front Race	2H-G68	1
6	Drive Shaft Guard, 2-1/4 x 7 in.	2H-G6	1		69	Snap Ring	2H-G69	1
7	Feed Drive Gear	2H-G7	1		70	Rapid Traverse Drive Shaft Collar	2H-G70	1
8	Hi-Pro Key, 1/8 x 5/8 in. No. 505	2H-G8	1		71	Taper Pin, No. 2 x 1-5/16 in.	2H-G71	1
9	Feed Drive Bevel Gear	2H-G9	1		72	Cotter Pin, 3/32 x 1/2 in.	2H-G72	2
10	Feed and Rapid Traverse Bevel Gear	2H-G10	2		73	Rapid Traverse Shaft Collar Pin	2H-G73	1
11	Oil Metering Pin	2H-G11	1		74	Rapid Traverse Drive Shaft Collar	2H-G74	1
12	Feed Drive Spur Gear	2H-G12	1		75	Rapid Traverse Operating Sleeve	2H-G75	1
13	Rapid Traverse Bevel Gear Collar	2H-G13	1		76	Clutch Engaging Sleeve	2H-G76	1
14	Acme Blue Label Dowel, 5/16 x 1-1/4 in.	2H-G14	1		77	Clutch Plate (Driven)	2H-G77	5
15	Rapid Traverse Drive Bevel Gear	2H-G15	1		78	Clutch Plate (Driver)	2H-G78	6
16	Feed and Rapid Traverse Drive Bracket Cap	2H-G16	1		79	Clutch Plate Key	2H-G79	3
17	Fillister Head Screw	2H-G17	5		80	Hub and Back Plate	2H-G80	1
18	Fillister Head Screw	2H-G18	3		81	Rapid Traverse Clutch Gear Bushing	2H-G81	1
19	Socket Head Cap Screw, 3/8 x 1 in.	2H-G19	2		82	Rapid Traverse Clutch Gear	2H-G82	1
20	Socket Head Cap Screw, 5/16 x 5/8 in.	2H-G20	13		83	Pin, 1/8 x 1/2 in.	2H-G83	1
21	Rapid Traverse Valve Body Rear Cover	2H-G21	1		84	Expansion Plug, 1-1/4 diam.	2H-G84	1
22	Socket Head Cap Screw, 3/8 x 1-1/2 in.	2H-G22	3		85	Feed Drive Shaft Bearing	2H-G85	1
23	Acme Blue Label Dowel, 5/16 x 1-3/4 in.	2H-G23	1		86	Feed Drive Pinion Thrust Washer	2H-G86	1
24	Rapid Traverse Valve Body	2H-G24	1		87	Feed Drive Pinion Shaft	2H-G87	1
25	Rapid Traverse Fitting Adapter	2H-G25	1		88	Drive Shaft Guard And Retainer	2H-G88	1
26	Socket Head Cap Screw, 3/8 x 7/8 in.	2H-G26	2		89	Hex Head Cap Screw	2H-G89	1
27	Socket Head Cap Screw, 3/8 x 3-3/4 in.	2H-G27	1		90	Drive Shaft Guard, 2-1/4 x 6-15/16 in.	2H-G90	1
28	Socket Head Cap Screw, 7/16 x 7-3/4 in.	2H-G28	1		91	Drive Shaft Guard, 2-1/4 x 7-5/16 in.	2H-G91	1
29	Rapid Traverse Pilot Valve Piston	2H-G29	1		92	Drive Shaft Guard, 2-1/4 x 6-11/16 in.	2H-G92	1
30	Pilot Valve Return Plunger	2H-G30	1		93	Fillister Head Screw	2H-G93	9
31	Rapid Traverse Pilot Valve Sleeve	2H-G31	1		94	Rapid Traverse Drive Oil Retainer Plate and Tube	2H-G94	1
32	Rapid Traverse Valve Body Front Cover	2H-G32	1		95	Feed Drive Oil Retainer Plate and Tube	2H-G95	1
33	"O" Ring, AN-6227-15	2H-G33	1		96	Feed and Rapid Traverse Drive Bracket (Horizontal Machines)	2H-G96	1
34	Rapid Traverse Control Valve Spring	2H-G34	1		97	Socket Head Cap Screw, 7/16 x 1-3/4 in.	2H-G97	6
35	Rapid Traverse Control Valve Piston	2H-G35	1		98	Lo-Pressure Plunger Stop Pin	2H-G98	1
36	Rapid Traverse Control Valve Sleeve	2H-G36	1		99	Relief Valve Spring Retainer Plug	2H-G99	1
37	Socket Head Cap Screw, 3/8 x 1-1/4 in.	2H-G37	1		100	Oil Return Bracket and Tube Assembly	2H-G100	1
38	Socket Head Cap Screw, 3/8 x 1-1/2 in.	2H-G38	1		101	Socket Head Cap Screw, 3/8 x 1 in.	2H-G101	4
39	Rapid Traverse Valve Shifter	2H-G39	1		102	Screw	2H-G102	3
40	Rapid Traverse Lever	2H-G40	1		103	Acme Blue Label Dowel, 5/16 x 3 in.	2H-G103	1
41	Rapid Traverse Lever Pin	2H-G41	1		104	Cover Plate (Upper)	2H-G104	1
42	Rapid Traverse Lever Sleeve	2H-G42	1		105	Fillister Head Screw	2H-G105	1
43	Socket Head Cap Screw, 5/16 x 1-1/2 in.	2H-G43	3		106	Cover Plate	2H-G106	1
44	Screw	2H-G44	1		107	Cover Plate (Lower)	2H-G107	1
45	Rapid Traverse Drive Bracket Cover	2H-G45	1		108	Feed and Rapid Traverse Drive Bracket (Vertical Machines)	2H-G108	1
46	Relief Valve Plug	2H-G46	1		109	Vertical Head Feed Bevel Gear Shaft	2H-G109	1
47	Pressure Valve Sleeve	2H-G47	1		110	Timken Bearing 07196-07100	2H-G110	2
48	Relief Valve Plunger	2H-G48	1		111	Feed Drive Vertical Bearing Cage	2H-G111	1
49	Spring	2H-G49	1		112	Oil Wicking	2H-G112	1
50	Socket Head Cap Screw, 1/4 x 1/2 in.	2H-G50	4		113	Fillister Head Screw	2H-G113	3
51	Socket Head Cap Screw, 5/16 x 1-3/4 in.	2H-G51	4		114	Feed Bevel Gear Shaft Fitting Washer	2H-G114	1
52	Oil Pump Cover	2H-G52	1		115	Snap Ring	2H-G115	1
53	Socket Head Pipe Plug, 1/8 in.	2H-G53	1		116	Telescopic Tube (Lower) and Bearing Cover	2H-G116	1
54	Oil Pump Gear Stud	2H-G54	1		117	Fillister Head Screw	2H-G117	4
55	Oil Pump Gear (Driven)	2H-G55	1		118	Fillister Head Screw	2H-G118	2
56	Oil Pump Gear (Driver)	2H-G56	1		119	Fillister Head Screw	2H-G119	2
57	Oil Pump Body	2H-G57	1		120	Feed Drive Bearing Plate	2H-G120	1
58	Rapid Traverse Clutch Shaft Collar	2H-G58	1		121	Acme Blue Label Dowel, 1/4 x 3/4 in.	2H-G121	2
59	Hyatt Bearing, S-93316	2H-G59	1		122	Miter Bevel Fitting Washer	2H-G122	1
60	Key	2H-G60	1		123	MRC Bearing No. 201-S	2H-G123	1
61	Acme Blue Label Dowel, 5/16 x 2-3/4 in.	2H-G61	1		124	Vertical Head Feed Drive Gear	2H-G124	1
62	Dog Point Set Screw	2H-G62	1		125	Take-Off Gear Bearing Retainer Washer	2H-G125	1
63	Key	2H-G63	1		126	MRC Bearing No. 105-S	2H-G126	1
					127	Drive Shaft Pinton	2H-G127	1
					128	Feed Drive Gear Shaft	2H-G128	1
					129	Torrington Bearing, B-88	2H-G129	1

†Only 2 Used On Vertical Machines

*Only 8 Used On Vertical Machines

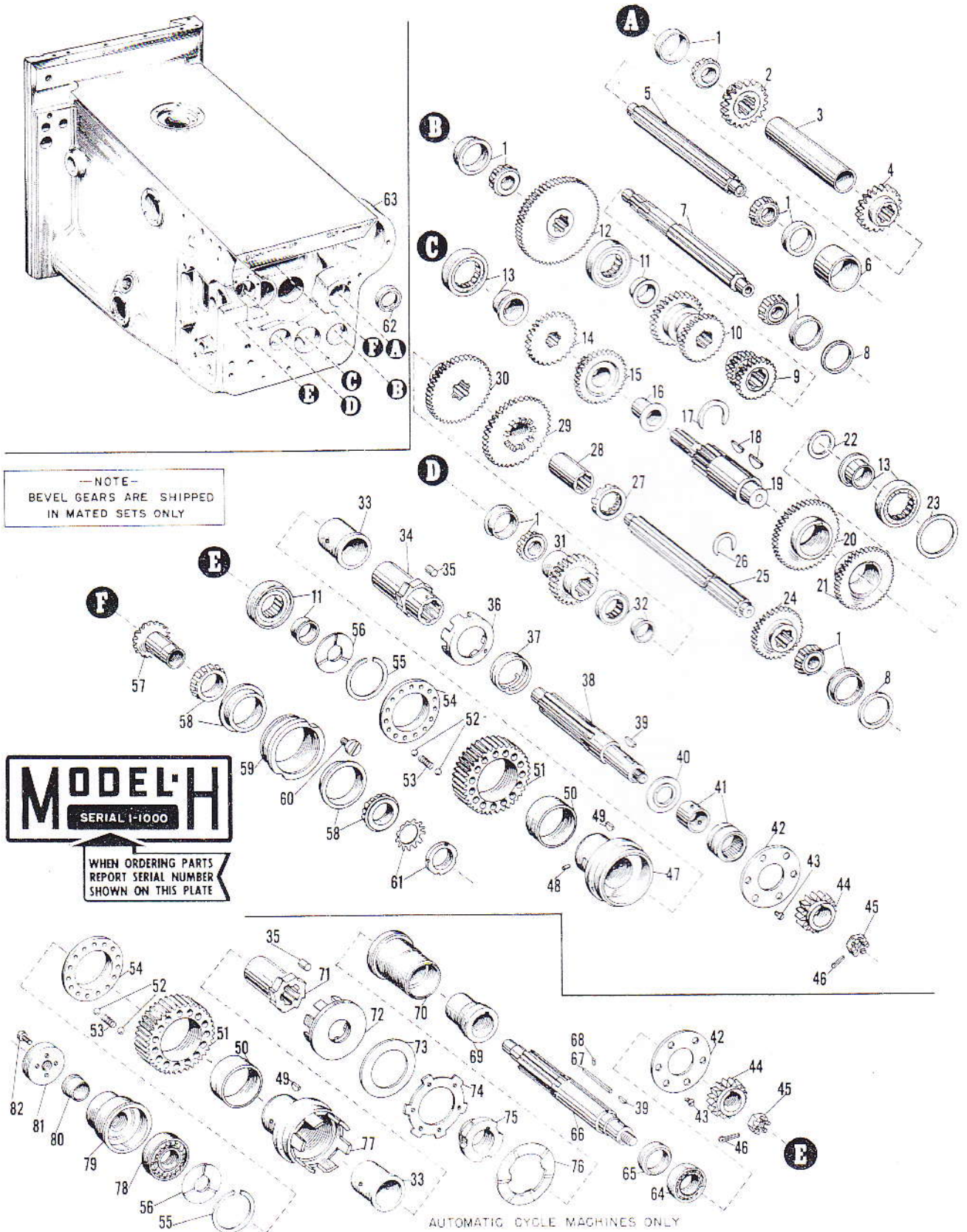


FIG. 12 - KNEE (GEAR TRAINS)

Fig. 12 - Knee (Gear Trains)

Item No.	Part Name and Description	Code No.	Qty.
1	Timken Bearing, 03162-03062	2H-H1	6
2	Rapid Traverse Idler Gear	2H-H2	1
3	Rapid Traverse Idler Gear Spacer	2H-H3	1
4	Rapid Traverse Idler Gear	2H-H4	1
5	Rapid Traverse Idler Gear Shaft	2H-H5	1
6	Rapid Traverse Idler Gear Fitting Collar	2H-H6	1
7	Primary Feed Shaft	2H-H7	1
8	Reverse Gear Shaft Bearing Spacer	2H-H8	2
9	Primary Low Speed Cluster Gear	2H-H9	1
10	Primary High Speed Cluster Gear	2H-H10	1
11	Hyatt Roller Bearing, R-1304 TS	2H-H11	2
12	Feed Drive Gear	2H-H12	1
13	Hyatt Roller Bearing, R-1205 TS	2H-H13	2
14	Secondary Shaft High Speed Gear	2H-H14	1
15	Cluster Idler Gear	2H-H15	1
16	Idler Gear Bushing	2H-H16	1
17	Secondary Shaft "U" Washer	2H-H17	1
18	Hi-Pro Key, HP-806	2H-H18	2
19	Secondary Gear Shaft	2H-H19	1
20	Secondary Low Speed Cluster Gear	2H-H20	1
21	Secondary Intermediate Speed Cluster Gear	2H-H21	1
22	Spacing Washer	2H-H22	1
23	Secondary Shaft Space Collar	2H-H23	1
24	Tertiary Shaft High Speed Cluster Gear	2H-H24	1
25	Tertiary Shaft	2H-H25	1
26	"U"-Washer	2H-H26	1
27	Tertiary Shaft Clutch Drive Collar	2H-H27	1
28	Tertiary Low Speed Bearing	2H-H28	1
29	Tertiary Intermediate Speed Clutch Gear	2H-H29	1
30	Tertiary Low Speed Gear	2H-H30	1
31	Range Pinion	2H H31	1
32	Hyatt Roller Bearing No. 1205 TS	2H-H32	1
33	Slip Clutch Hub Bushing	2H-H33	1
34	Roller Clutch Hub	2H-H34	1
35	Feed Clutch Roller	2H-H35	8
36	Roller Clutch Cage	2H-H36	1
37	Slip Clutch Spring	2H-H37	1
38	Slip Clutch Shaft	2H-H38	1

Item No.	Part Name and Description	Code No.	Qty.
39	Hi-Pro Key No. HP 705	2H-H39	1
40	Slip Clutch Thrust Washer	2H-H40	1
41	Orange Bearing, E-7214	2H-H41	1
42	Bearing Retainer Plate	2H-H42	1
43	Flat Head Machine Screw	2H-H43	6
44	Slip Clutch Shaft Out-Put Gear	2H-H44	1
45	Castellated Nut	2H-H45	1
46	Cotter Pin, 1/8 x 1-1/4 in.	2H-H46	1
47	Slip Clutch Hub	2H-H47	1
48	Pin	2H-H48	1
49	Hi-Pro Key No. 505	2H-H49	1
50	Slip Clutch Gear Bushing	2H-H50	1
51	Slip Clutch Gear	2H-H51	1
52	Steel Ball, 5/16 in. diam.	2H-H52	26
53	Spring	2H-H53	13
54	Slip Clutch Back Plate	2H-H54	1
55	Snap Ring	2H-H55	1
56	Slip Clutch Hub Spacer	2H-H56	1
57	Elevating Bevel Pinion	2H-H57	1
58	Timken Bearing, 07204B-07100	2H-H58	2
59	Elevating Bevel Pinion Sleeve	2H-H59	1
60	Fillister Head Screw	2H-H60	2
61	Gurney Lock Nut and Washer, No. 5	2H-H61	1
62	Victoprene Oil Seal No. 60320	2H-H62	1
63	Knee	2H-H63	1
64	New Departure Bearing, 3L05	2H-H64	1
65	Bearing Spacer	2H-H65	1
66	Slip Clutch Shaft	2H-H66	1
67	Key	2H-H67	1
68	Pin, 1/8 x 3/8 in.	2H-H68	1
69	Brake Cylinder Sleeve	2H-H69	1
70	Brake Cylinder	2H-H70	1
71	Roller Clutch Hub	2H-H71	1
72	Feed Clutch Roller Cage	2H-H72	1
73	Clutch Plate	2H-H73	1
74	Driving Plate	2H-H74	3
75	Disc Retainer	2H-H75	1
76	Driven Plate	2H-H76	4
77	Feed Roller Clutch	2H-H77	1
78	New Departure Bearing, 20304	2H-H78	1
79	Safety Clutch Shaft Bearing Carrier	2H-H79	1
80	Bearing Carrier Bushing	2H-H80	1
81	Bearing Carrier Cover	2H-H81	1
82	Socket Head Cap Screw, 1/4 x 1/2 in.	2H-H82	4

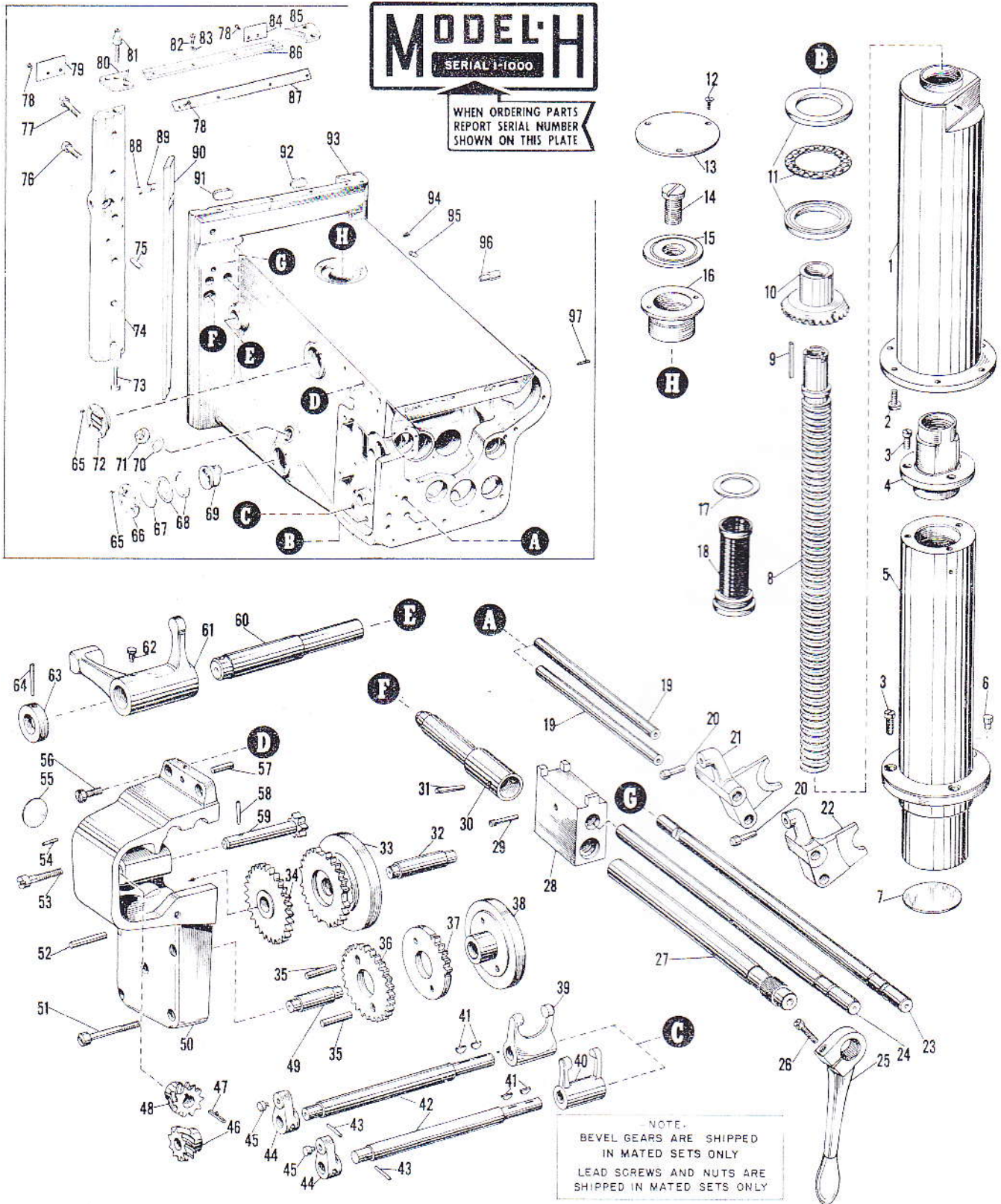


FIG. 13 - KNEE (MISCELLANEOUS PARTS)

Replacement Parts Manual

Plain—Universal—Vertical—Automatic Cycle

Fig. 13 - Knee (Miscellaneous Parts)

Item No.	Part Name and Description	Code No.	Qty.
1	Elevating Screw Shield Assembly	2H-J1	1
2	Fillister Head Screw	2H-J2	6
3	Fillister Head Screw	2H-J3	6
4	Elevating Nut	2H-J4	1
5	Elevating Nut Extension	2H-J5	1
6	Stop Pin in Elevating Nut Extension	2H-J6	1
7	Expansion Plug, 2-1/2 in. diam.	2H-J7	1
8	Elevating Screw	2H-J8	1
9	Key	2H-J9	1
10	Elevating Bevel Gear	2H-J10	1
11	Gurney Thrust Bearing, 13B	2H-J11	1
12	Flat Head Machine Screw, 8-32 x 1/2 in.	2H-J12	3
13	Elevating Bevel Gear Cover	2H-J13	1
14	Fillister Head Screw	2H-J14	1
15	Elevating Screw Retainer	2H-J15	1
16	Elevating Bevel Gear Bearing	2H-J16	1
17	Intake Screen Retaining Plug Washer	2H-J17	1
18	Oil Intake Screen, Retaining Plug and Ring	2H-J18	1
19	Tertiary Shifter Yoke Rod	2H-J19	2
20	Shifting Fork Pin	2H-J20	2
21	Tertiary Low Speed Shifter Yoke	2H-J21	1
22	Tertiary High Speed Shifter Yoke	2H-J22	1
23	Vertical Feed Trip Rod	2H-J23	1
24	Cross Feed Trip Rod	2H-J24	1
25	Knee Clamp Lever	2H-J25	1
26	Fillister Head Screw	2H-J26	1
27	Knee Clamp Shaft	2H-J27	1
28	Cross Feed Trip Block	2H-J28	1
29	Cross Feed Trip Block Screw	2H-J29	1
30	Knee Clamp Eccentric	2H-J30	1
31	Taper Pin, No. 5 x 1-3/8 in.	2H-J31	1
32	Secondary Shift Cam Stud	2H-J32	1
33	Secondary Shift Cam	2H-J33	1
34	Shift Cam Drive Gear	2H-J34	1
35	Countersunk Head Rivet, 1/4 x 1-5/8 in.	2H-J35	2
36	Primary Cam Drive Gear	2H-J36	1
37	Primary Cam Intermittent Gear	2H-J37	1
38	Primary Shift Cam	2H-J38	1
39	Primary Shifter Yoke	2H-J39	1
40	Primary Low Speed Shifter Yoke	2H-J40	1
41	Hi-Pro Key, HP-504	2H-J41	4
42	Primary Shifter Yoke Shaft	2H-J42	2
43	Taper Pin, No. 3 x 1-1/8 in.	2H-J43	2
44	Primary Shifter Yoke Operating Lever	2H-J44	2
45	Shifter Fork Pin	2H-J45	2
46	Feed Change Helical Gear (Driven)	2H-J46	1
47	Key	2H-J47	1
48	Feed Change Helical Gear (Driver)	2H-J48	1

Item No.	Part Name and Description	Code No.	Qty.
49	Primary Shift Cam Stud	2H-J49	1
50	Feed Change Gear Housing	2H-J50	1
51	Fillister Head Screw	2H-J51	4
52	Acme Blue Label Dowel, 5/16 x 2 in.	2H-J52	1
53	Fillister Head Screw	2H-J53	1
54	Brass Tube	2H-J54	1
55	Expansion Plug, 1-3/16 in. diam.	2H-J55	1
56	Fillister Head Screw	2H-J56	2
57	Acme Blue Label Dowel, 5/16 x 1-1/8 in.	2H-J57	1
58	Taper Pin, No. 3 x 1-1/8 in.	2H-J58	1
59	Shift Cam Drive Pinion	2H-J59	1
60	Vertical Trip Lever Shaft	2H-J60	1
61	Vertical Trip Lever	2H-J61	1
62	Gits Oiler, No. 532	2H-J62	1
63	Vertical Trip Lever Shaft Collar	2H-J63	1
64	Taper Pin, No. 4 x 1-3/4 in.	2H-J64	1
65	Oval Head Screw	2H-J65	8
66	Oil Flow Gauge Plate	2H-J66	1
67	Oil Gauge Glass	2H-J67	1
68	Oil Gauge Washer	2H-J68	2
69	Sight Oil Flow Gauge	2H-J69	1
70	Washer	2H-J70	1
71	Oil Plug Screw	2H-J71	1
72	Knee Vent Plate	2H-J72	1
73	Gib Screw	2H-J73	1
74	Knee Gib Support	2H-J74	1
75	Acme Blue Label Dowel, 3/8 x 1-1/2 in.	2H-J75	1
76	Hex Head Cap Screw, 1/2 x 1-7/8 in.	2H-J76	5
77	Hex Head Cap Screw, 1/2 x 2-3/8 in.	2H-J77	1
78	Round Head Machine Screw, 10-32 x 3/8 in.	2H-J78	8
79	Column Dovetail Wiper Spring (Left Hand)	2H-J79	1
80	Column Dovetail Wiper (Left Hand)	2H-J80	1
81	Gib Screw	2H-J81	1
82	Wiper Screw	2H-J82	8
83	Wiper Screw Spring	2H-J83	8
84	Column Dovetail Wiper Spring (Right Hand)	2H-J84	1
85	Column Dovetail Wiper (Right Hand)	2H-J85	1
86	Column Face Bearing Wiper	2H-J86	1
87	Column Face Wiper Spring	2H-J87	1
88	Knee Clamp Shoe	2H-J88	1
89	Knee Clamp Pin	2H-J89	1
90	Knee Gib	2H-J90	1
91	Felt Oil Pad	2H-J91	1
92	Felt Oil Pad	2H-J92	1
93	Knee	2H-J93	1
94	Headless Dowel Screw	2H-J94	1
95	Coolant Drip Spout	2H-J95	1
96	Stop Pin for Rapid Traverse Lever	2H-J96	1
97	Headless Dog Point Set Screw	2H-J97	1

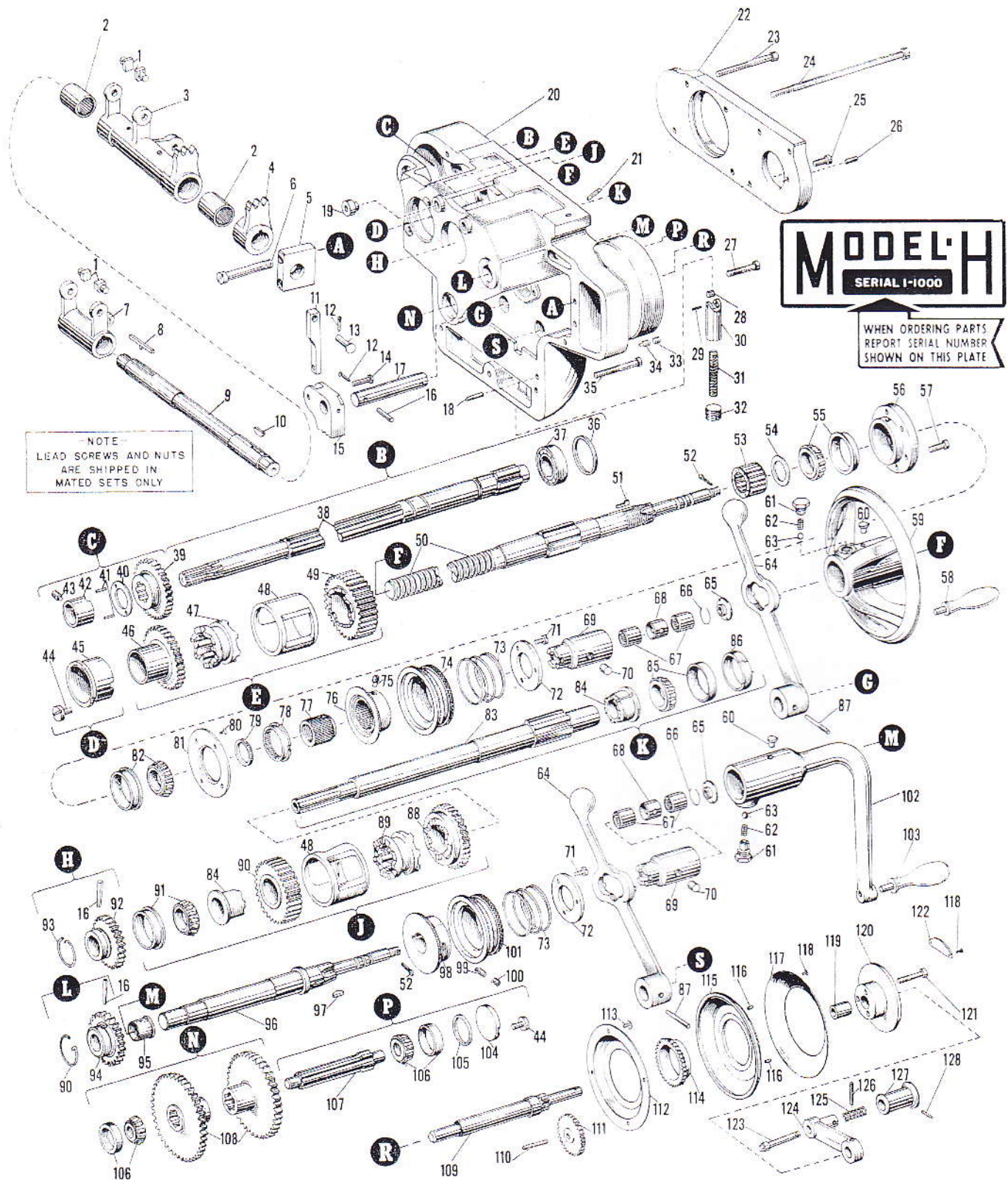
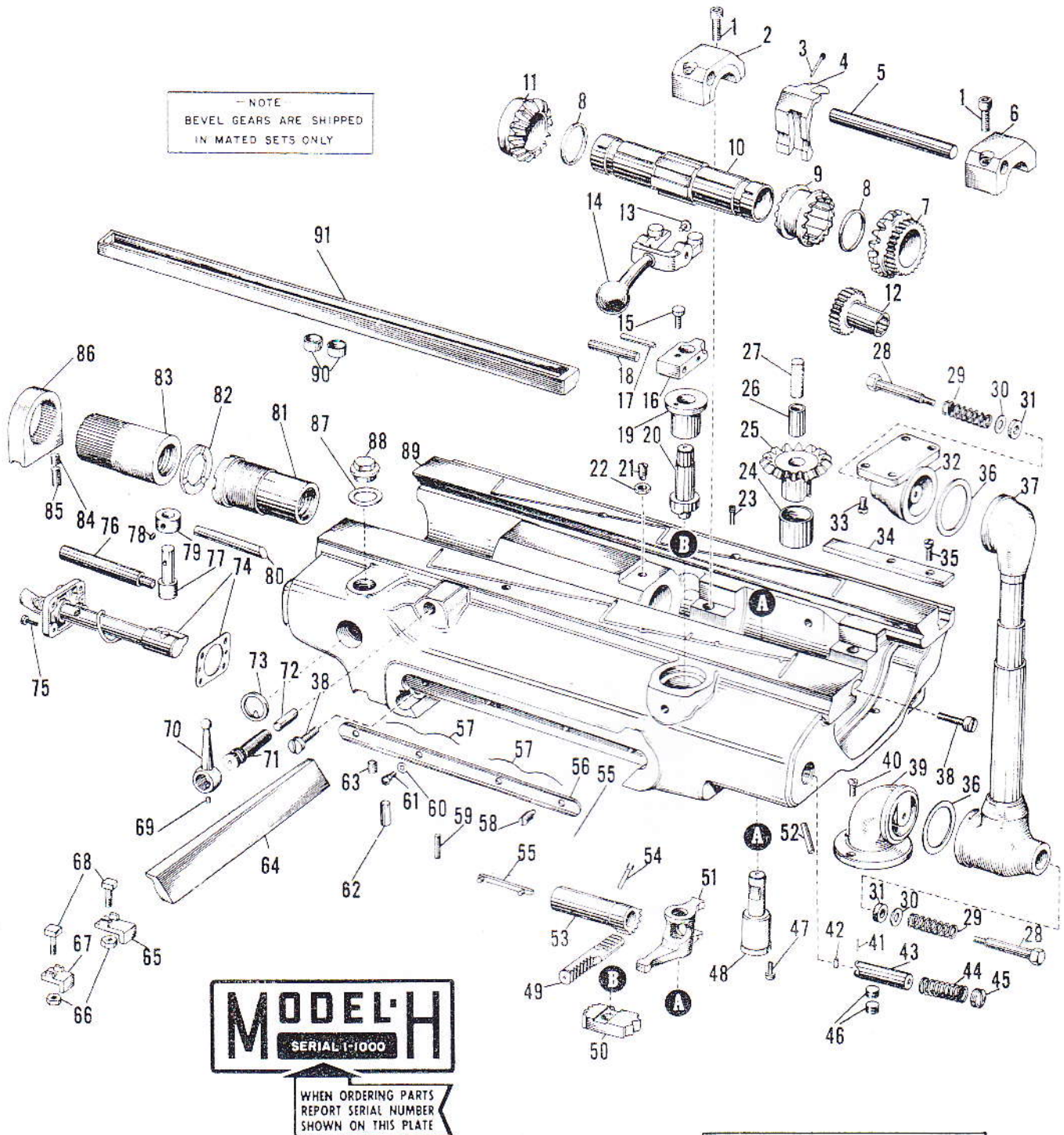


FIG. 14 - FEED DISTRIBUTION BOX

Fig. 14 - Feed Distribution Box

Item No.	Part Name and Description	Code No.	Qty.	Item No.	Part Name and Description	Code No.	Qty.
1	Crossfeed and Elevating Clutch Fork Shoe	2H-K1	4	64	Cross and Elevating Reverse Lever	2H-K64	2
2	Torrington Needle Bushing, B-1416	2H-K2	2	65	Hand Feed Clutch Stop	2H-K65	2
3	Elevating Clutch Fork and Trip Segment	2H-K3	1	66	Snap Ring	2H-K66	2
4	Crossfeed Trip Segment	2H-K4	1	67	Torrington Bearing, B-1012	2H-K67	4
5	Clutch Fork Shaft Left End Bearing	2H-K5	1	68	Bearing Spacer	2H-K68	2
6	Fillister Head Screw	2H-K6	2	69	Hand Elevating Crank Clutch	2H-K69	2
7	Cross Feed Clutch Fork	2H-K7	1	70	Plug	2H-K70	2
8	Key	2H-K8	1	71	Screw	2H-K71	6
9	Cross Feed Clutch Fork Shaft	2H-K9	1	72	Graduated Dial Spring Retainer	2H-K72	2
10	Hi-Pro Key, No. 705	2H-K10	1	73	Spring	2H-K73	2
11	Cross Feed and Elevating Reverse Link	2H-K11	2	74	Serrated Dial, 250 Divisions	2H-K74	1
12	Cotter Pin, 3/32 x 5/8 in.	2H-K12	4	75	Dog Point Set Screw	2H-K75	1
13	Cross Feed and Elevating Reverse Link Pin (Upper)	2H-K13	2	76	Cross Feed Dial Collar	2H-K76	1
14	Cross Feed and Elevating Reverse Link Pin (Lower)	2H-K14	2	77	Cross Feed Screw Bearing Adjusting Nut	2H-K77	1
15	Cross Feed and Elevating Inner Lever and Detent	2H-K15	2	78	Cross Feed Screw Bearing Adjusting Ring	2H-K78	1
16	Taper Pin, No. 4 x 1-3/8 in.	2H-K16	4	79	Cross Feed Screw Bearing Adjusting Washer	2H-K79	1
17	Cross and Elevating Reverse Lever Shaft	2H-K17	2	80	Flat Head Machine Screw, 8-32 x 3/8 in.	2H-K80	4
18	Acme Blue Label Dowel, 3/8 x 2-3/4 in.	2H-K18	2	81	Cross Feed Clutch Oil Retainer	2H-K81	1
19	Spacing Plug	2H-K19	2	82	Timken Bearing, 07204B-07100W	2H-K82	1
20	Feed Distribution Box	2H-K20	1	83	Elevating Clutch Shaft	2H-K83	1
21	Pin, 3/16 x 1/2 in.	2H-K21	1	84	Elevating Clutch Gear Bushing	2H-K84	2
22	Feed Distribution Box Dial Plate	2H-K22	1	85	Timken Bearing, 07204-07100	2H-K85	1
23	Allen Head Cap Screw, 3/8 x 3 in.	2H-K23	2	86	Elevating Clutch Shaft Bearing Spacer	2H-K86	1
24	Screw, 3/8 x 7 in.	2H-K24	2	87	Taper Pin, No. 4 x 1-1/2 in.	2H-K87	2
25	Fillister Head Screw	2H-K25	3	88	Elevating Clutch Gear (Front)	2H-K88	1
26	Acme Blue Label Dowel, 5/16 x 3/4 in.	2H-K26	1	89	Elevating Reverse Clutch	2H-K89	1
27	Allen Head Cap Screw, 3/8 x 1-1/2 in.	2H-K27	1	90	Elevating Clutch Gear (Rear)	2H-K90	1
28	Detent Plunger Roller	2H-K28	2	91	Timken Bearing, 07204B-07100	2H-K91	1
29	Detent Roller Pin	2H-K29	2	92	Hand Elevating Gear (Driven)	2H-K92	1
30	Trip Detent Plunger	2H-K30	2	93	G-Spring	2H-K93	2
31	Spring	2H-K31	2	94	Hand Elevating Gear (Driven)	2H-K94	1
32	Pipe Plug	2H-K32	2	95	Hand Elevating Shaft Bearing	2H-K95	1
33	Flat Point Set Screw	2H-K33	2	96	Hand Elevating Shaft	2H-K96	1
34	Dog Point Set Screw	2H-K34	2	97	Hi-Pro Key, No. 505	2H-K97	1
35	Allen Head Cap Screw, 3/8 x 2-1/2 in.	2H-K35	5	98	Hand Elevating Serrated Dial Collar	2H-K98	1
36	Table Feed Shaft Bearing Spacer	2H-K36	1	99	Dog Point Set Screw, 1/4 x 5/16 in.	2H-K99	1
37	New Departure Ball Bearing, 3205	2H-K37	1	100	Set Screw, 1/4 x 1/4 in.	2H-K100	1
38	Table Feed Shaft	2H-K38	1	101	Serrated Graduated Dial, 125 Divisions	2H-K101	1
39	Table Feed Shaft Drive Gear	2H-K39	1	102	Hand Elevating Crank	2H-K102	1
40	Table Feed Shaft Washer	2H-K40	1	103	Rockwood Handle, No. 3QA	2H-K103	1
41	Pin, 3/16 x 9/16 in.	2H-K41	2	104	Cross Feed and Elevating Reverse Gear Shaft Cover	2H-K104	1
42	Table Feed Drive Shaft Bearing	2H-K42	1	105	Cross Feed and Elevating Gear Bearing Washer	2H-K105	1
43	Dog Point Set Screw	2H-K43	1	106	Timken Bearing, 03162-03062	2H-K106	2
44	Fillister Head Screw	2H-K44	4	107	Cross Feed and Elevating Reverse Gear Shaft	2H-K107	1
45	Cross Feed Clutch Gear Bearing (Rear)	2H-K45	1	108	Cross Feed and Elevating Reverse Gear	2H-K108	2
46	Cross Feed Clutch Gear (Rear)	2H-K46	1	109	Feed Dial Shaft	2H-K109	1
47	Cross Feed Reverse Clutch	2H-K47	1	110	Acme Blue Label Dowel, 1/4 x 1-1/4 in.	2H-K110	1
48	Cross Feed and Elevating Clutch Gear Spacer	2H-K48	2	111	Feed Selection Double Gear	2H-K111	1
49	Cross Feed Reverse Clutch Gear	2H-K49	1	112	Grease Shield	2H-K112	1
50	Cross Feed Screw	2H-K50	1	113	Round Head Machine Screw, 10-32 x 1/4 in.	2H-K113	4
51	Key	2H-K51	1	114	Feed Dial Carrier Gear	2H-K114	1
52	Cotter Pin, 3/32 x 3/4 in.	2H-K52	2	115	Feed Dial Carrier	2H-K115	1
53	Hyatt Roller Bearing, 94616	2H-K53	1	116	Pin for Feed Dial Carrier	2H-K116	2
54	Cross Feed Clutch Gear Thrust Washer	2H-K54	1	117	Feed Selection Dial	2H-K117	1
55	Timken Bearing, 07204B-07100	2H-K55	1	118	Escutcheon Pins, No. 15	2H-K118	11
56	Cross Feed Clutch Bearing Carrier	2H-K56	1	119	Oilite Bushing, A-604	2H-K119	1
57	Allen Head Cap Screw, 5/16 x 3/4 in.	2H-K57	6	120	Feed Dial Support Bracket	2H-K120	1
58	Rockwood Handle, No. 1QA	2H-K58	1	121	Screw	2H-K121	3
59	Cross Feed Hand Wheel	2H-K59	1	122	Feed Selection Arrow	2H-K122	1
60	Gits Oiler, RS-532	2H-K60	2	123	Feed Selection Lever Plunger	2H-K123	1
61	Hand Elevating Crank Set Screw	2H-K61	2	124	Feed Selection Lever	2H-K124	1
62	Spring	2H-K62	2	125	Spring	2H-K125	1
63	Steel Ball, 1/4 in. diam.	2H-K63	2	126	Taper Pin, No. 2 x 1-1/8 in.	2H-K126	1
				127	Feed Selection Knob	2H-K127	1
				128	Taper Pin, No. 2 x 1 in.	2H-K128	1



Parts for Cross Feed Bracket - Figure 16 Page 28.

FIG. 15 - PLAIN SADDLE

Fig. 15 - Plain Saddle

Item No.	Part Name and Description	Code No.	Qty.
1	Allen Head Cap Screw, 7/16 x 1-1/4 in.	2H-L1	4
2	Left Hand Bearing Cap	2H-L2	1
3	Screw	2H-L3	1
4	Clutch Shifter Yoke	2H-L4	1
5	Shifter Rod	2H-L5	1
6	Right Hand Bearing Cap	2H-L6	1
7	Table Screw Clutch Gear	2H-L7	1
8	Clutch Gear Collar	2H-L8	2
9	Table Feed Reverse Clutch	2H-L9	1
10	Feed Reverse Gear Sleeve	2H-L10	1
11	Table Screw Clutch Gear	2H-L11	1
12	Rotary Table Drive Shaft Gear	2H-L12	1
13	Table Trip Lever Fork Pin	2H-L13	1
14	Table Trip Lever	2H-L14	1
15	Table Trip Lever Block Screw	2H-L15	1
16	Table Trip Lever Block	2H-L16	1
17	Taper Pin, No. 5 x 1-3/4 in.	2H-L17	1
18	Acme Blue Label Dowel, 3/8 x 2-1/2 in.	2H-L18	1
19	Reverse Segment Shaft Bearing	2H-L19	1
20	Table Trip Lever Shaft	2H-L20	1
21	Set Screw	2H-L21	1
22	Hex Nut	2H-L22	1
23	Bijur Meter Unit FKA-0	2H-L23	10
24	Table Drive Gear Bearing	2H-L24	1
25	Table Drive Gear	2H-L25	1
26	Table Drive Gear Plug	2H-L26	1
27	Table Drive Gear Felt	2H-L27	1
28	Hex Head Screw	2H-L28	2
29	Spring	2H-L29	2
30	Washer	2H-L30	2
31	Swivel Screw Felt Washer	2H-L31	2
32	Coolant Return Swivel Fitting	2H-L32	1
33	Fillister Head Screw	2H-L33	4
34	Saddle Slide Stop	2H-L34	1
35	Screw	2H-L35	2
36	Coolant Fitting Washer	2H-L36	2
37	Telescopic Coolant Return Tube Assembly	2H-L37	1
38	Gib Screw	2H-L38	4
39	Coolant Return Elbow (Base)	2H-L39	1
40	Screw	2H-L40	3
41	Detent Plunger Pin	2H-L41	1
42	Detent Plunger Roller	2H-L42	1
43	Table Trip Detent Plunger	2H-L43	1
44	Spring	2H-L44	1
45	Plunger Hole Plug	2H-L45	1
46	Allen Head Set Screw	2H-L46	2

Item No.	Part Name and Description	Code No.	Qty.
47	Socket Head Cap Screw, 5/16 x 5/8 in.	2H-L47	2
48	Reverse Shifter Stud	2H-L48	1
49	Release Shaft Gear Rack	2H-L49	1
50	Table Trip Lever Detent	2H-L50	1
51	Reverse Shifter Yoke Arm	2H-L51	1
52	Brake Plunger Pin	2H-L52	1
53	Ball Crank Release Shaft Gear	2H-L53	1
54	Headless Dowel Screw	2H-L54	1
55	Tit Key	2H-L55	1
56	Knee Top Bearing Wiper	2H-L56	2
57	Knee Top Wiper Spring	2H-L57	4
58	Set Screw	2H-L58	1
59	Pin, 1/4 x 7/8 in.	2H-L59	1
60	Wiper Screw Spring	2H-L60	8
61	Wiper Screw	2H-L61	8
62	Limit Stop Pin	2H-L62	2
63	Allen Pipe Plug, 3/8 in.	2H-L63	1
64	Saddle Gib	2H-L64	1
65	Cross Feed Trip Dog (Rear)	2H-L65	1
66	Nut	2H-L66	2
67	Cross Feed Trip Dog (Front)	2H-L67	1
68	T-Bolt	2H-L68	2
69	Allen Set Screw, 1/4 x 1/4 in.	2H-L69	1
70	Clamp Lever	2H-L70	1
71	Clamp Screw	2H-L71	1
72	Table Clamp Plug	2H-L72	1
73	Bijur Oil Window, B-4904	2H-L73	1
74	Bijur KIB Lubricator Pump (1/2 in. Stroke), C-1957	2H-L74	1
75	Allen Head Cap Screw, 1/4-20 x 3/4 in.	2H-L75	4
76	Saddle Clamp Handle	2H-L76	1
77	Saddle Clamp Eccentric Shaft	2H-L77	1
78	Allen Dog Point Set Screw, 5/16 x 5/16 in.	2H-L78	1
79	Saddle Clamp Eccentric	2H-L79	1
80	Saddle Clamp Rod	2H-L80	1
81	Table Screw Nut	2H-L81	1
82	Spacer Table Nut	2H-L82	1
83	Adjustable Table Screw Nut	2H-L83	1
84	Oval Point Socket Screw, 1/2 x 1-1/4 in.	2H-L84	2
85	Oval Point Socket Screw, 1/2 x 5/8 in.	2H-L85	2
86	Table Screw Adjusting Yoke	2H-L86	1
87	Washer	2H-L87	1
88	Oil Hole Plug	2H-L88	1
89	Saddle	2H-L89	1
90	Pipe in Saddle Slide	2H-L90	2
91	Saddle Slide	2H-L91	1

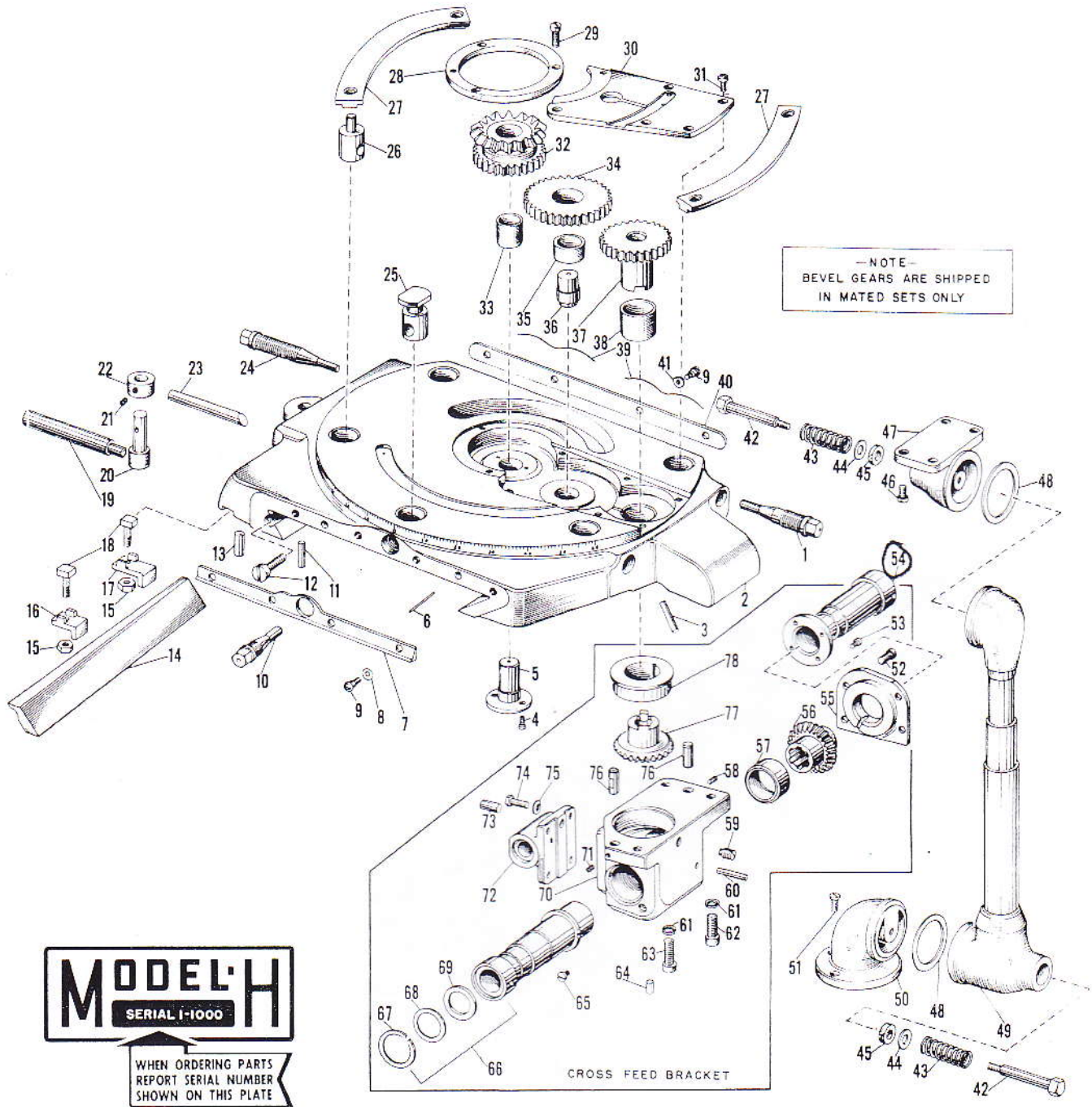
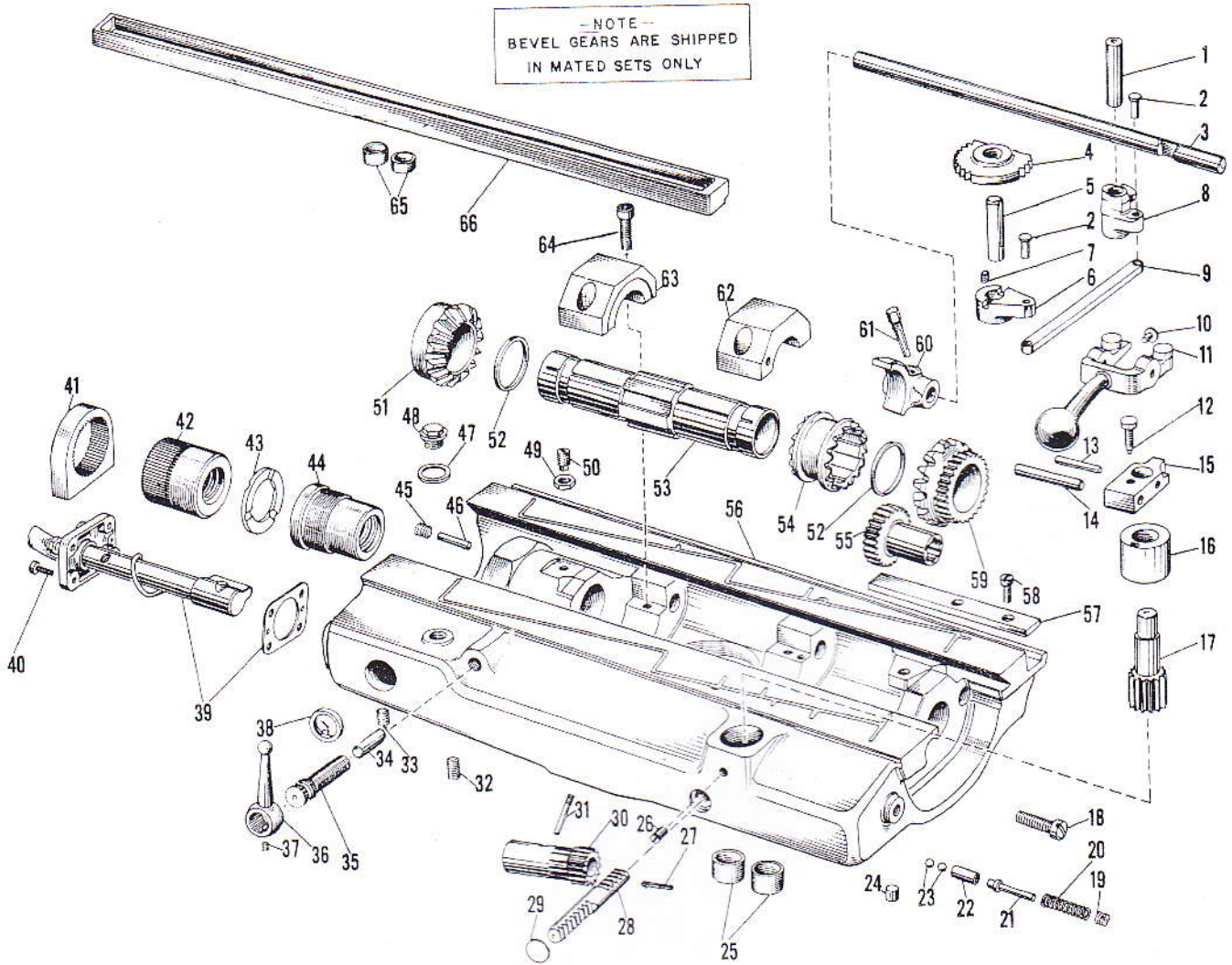


FIG. 16 - UNIVERSAL SADDLE AND CROSS FEED BRACKET

Fig. 16 - Universal Saddle And Cross Feed Bracket

Item No.	Part Name and Description	Code No.	Qty.
UNIVERSAL SADDLE			
1	Clamp Screw	2H-M1	2
2	Universal Saddle	2H-M2	1
3	Brake Plunger Pin	2H-M3	1
4	Screw	2H-M4	2
5	Table Screw Drive Bevel Gear Stud	2H-M5	1
6	Wiper Spring	2H-M6	2
7	Knee Top Wiper (Front)	2H-M7	1
8	Wiper Screw Spring	2H-M8	4
9	Wiper Screw	2H-M9	8
10	Clamp Screw	2H-M10	1
11	Pin, 1/4 x 7/8 in.	2H-M11	1
12	Gib Screw	2H-M12	4
13	Limit Stop Pin	2H-M13	2
14	Saddle Gib	2H-M14	1
15	Nut	2H-M15	2
16	Cross Feed Trip Dog (Front)	2H-M16	1
17	Cross Feed Trip Dog (Rear)	2H-M17	1
18	T-Bolt	2H-M18	2
19	Saddle Clamp Handle	2H-M19	1
20	Saddle Clamp Eccentric Shaft	2H-M20	1
21	Allen Dog Point Set Screw, 5/16 x 5/16 in.	2H-M21	1
22	Saddle Clamp Eccentric	2H-M22	1
23	Saddle Clamp Rod	2H-M23	1
24	Clamp Screw	2H-M24	2
25	Swivel Block Clamp	2H-M25	1
26	Swivel Block Clamp Bolt	2H-M26	4
27	Swivel Block Clamp Ring	2H-M27	2
28	Universal Saddle Ring	2H-M28	1
29	Screw	2H-M29	3
30	Universal Saddle Cover	2H-M30	1
31	Screw	2H-M31	5
32	Table Screw Drive Bevel Gear	2H-M32	1
33	Table Screw Drive Bevel Gear Bushing	2H-M33	1
34	Table Drive Idler Gear	2H-M34	1
35	Table Drive Idler Gear Bushing	2H-M35	1
36	Table Drive Idler Gear Stud	2H-M36	1
37	Table Drive Gear	2H-M37	1
38	Table Drive Gear Bearing	2H-M38	1
39	Wiper Spring	2H-M39	2
40	Knee Top Bearing Wiper	2H-M40	1
41	Wiper Screw Spring	2H-M41	4
42	Hex Head Screw	2H-M42	2

Item No.	Part Name and Description	Code No.	Qty.
43	Spring	2H-M43	2
44	Washer	2H-M44	2
45	Swivel Screw Felt Washer	2H-M45	2
46	Fillister Head Screw	2H-M46	4
47	Coolant Return Swivel Fitting	2H-M47	1
48	Coolant Fitting Washer	2H-M48	2
49	Telescopic Coolant Return Tube Assembly	2H-M49	1
50	Coolant Return Elbow (Base)	2H-M50	1
51	Screw	2H-M51	3
CROSS FEED BRACKET			
52	Fillister Head Screw	2H-M52	4
53	Fillister Head Screw	2H-M53	4
54	Rear Telescopic Tube Assembly	2H-M54	1
55	Cross Feed Bracket Bearing	2H-M55	1
56	Table Feed Sliding Bevel Gear	2H-M56	1
57	Table Feed Sliding Bevel Gear Bushing	2H-M57	1
58	Allen Set Screw, 1/4 x 1/2 in.	2H-M58	1
59	Set Screw	2H-M59	1
60	Pin, 3/16 x 1 in.	2H-M60	1
61	Lockwasher, 7/8 in.	2H-M61	3
62	Allen Head Cap Screw, 7/16 x 1 in.	2H-M62	2
63	Allen Head Cap Screw, 7/16 x 7/8 in.	2H-M63	1
64	Coolant Drip Spout	2H-M64	1
65	Fillister Head Screw	2H-M65	2
66	Front Telescopic Tube Assembly	2H-M66	1
67	Snap Ring	2H-M67	1
68	Felt Retaining Plate	2H-M68	1
69	Oil Retainer Washer	2H-M69	1
70	Cross Feed Bracket	2H-M70	1
71	Allen Set Screw, 1/4 x 3/8 in.	2H-M71	1
72	Cross Feed Nut	2H-M72	1
73	Acme Blue Label Dowel, 3/8 x 1 in.	2H-M73	1
74	Hex Head Cap Screw	2H-M74	4
75	Lockwasher	2H-M75	4
76	Acme Blue Label Dowel, 1/2 x 1-1/8 in.	2H-M76	2
77	Table Feed Drive Bevel Gear	2H-M77	1
78	Cross Feed Bracket Bearing Sleeve	2H-M78	1



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FIG. 17 - UNIVERSAL SWIVEL BLOCK

Fig. 17 - Universal Swivel Block

Item No.	Part Name and Description	Code No.	Qty.
1	Bell Crank Shaft	2H-N1	1
2	Link Pin	2H-N2	2
3	Shifter Rod	2H-N3	1
4	Gear Segment	2H-N4	1
5	Gear Segment Shaft	2H-N5	1
6	Shifter Bell Crank	2H-N6	1
7	Allen Hollow Set Screw	2H-N7	1
8	Shifter Lever	2H-N8	1
9	Shifter Link	2H-N9	1
10	Table Trip Lever Fork Pin	2H-N10	1
11	Table Trip Lever	2H-N11	1
12	Table Trip Lever Block Screw	2H-N12	1
13	Taper Pin, No. 5 x 1-3/4 in.	2H-N13	1
14	Acme Blue Label Dowel, 3/8 x 2-1/2 in.	2H-N14	1
15	Table Trip Lever Block	2H-N15	1
16	Table Trip Lever Pinion Bushing	2H-N16	1
17	Table Trip Lever Pinion Shaft	2H-N17	1
18	Gib Screw	2H-N18	4
19	Detent Plunger Guide	2H-N19	1
20	Detent Spring	2H-N20	1
21	Detent Plunger Rod	2H-N21	1
22	Detent Plunger Sleeve	2H-N22	1
23	Steel Ball, 5/16 in. diam.	2H-N23	2
24	Shifter Link Support Pin	2H-N24	1
25	Swivel Block Coolant Tube	2H-N25	2
26	Allen Cup Point Set Screw, 3/8-16 x 1/2 in.	2H-N26	1
27	Tit Key, 1/8 x 3/16 in.	2H-N27	1
28	Table Trip Lever Rack	2H-N28	1
29	Expansion Plug, 7/8 in. diam.	2H-N29	1
30	Hand Wheel Release Shaft Gear	2H-N30	1
31	Pin for Hand Wheel Release Shaft Gear	2H-N31	1
32	Adjusting Yoke Screw	2H-N32	2

Item No.	Part Name and Description	Code No.	Qty.
33	Socket Head Pipe Plug, 3/8 in.	2H-N33	1
34	Table Clamp Plug	2H-N34	1
35	Clamp Screw	2H-N35	1
36	Clamp Lever	2H-N36	1
37	Allen Set Screw, 1/4 x 1/4 in.	2H-N37	1
38	Bijur Oil Window, B-4904	2H-N38	1
39	Bijur KIB Lubricator Pump (1/2 in. Stroke) C-1957	2H-N39	1
40	Socket Head Cap Screw, 1/4-20 x 3/4 in.	2H-N40	4
41	Adjusting Yoke	2H-N41	1
42	Adjustable Table Screw Nut	2H-N42	1
43	Spacer for Table Nut	2H-N43	1
44	Table Screw Nut	2H-N44	1
45	Set Screw, 3/8 x 1/2 in.	2H-N45	2
46	Locking Pin	2H-N46	2
47	Washer	2H-N47	1
48	Oil Hole Plug	2H-N48	1
49	Hex Nut	2H-N49	1
50	Set Screw	2H-N50	1
51	Table Screw Clutch Gear	2H-N51	1
52	Clutch Gear Collar	2H-N52	2
53	Feed Reverse Gear Sleeve	2H-N53	1
54	Table Feed Reverse Clutch	2H-N54	1
55	Rotary Table Drive Shaft Gear	2H-N55	1
56	Swivel Block	2H-N56	1
57	Saddle Slide Stop	2H-N57	1
58	Screw	2H-N58	2
59	Table Screw Clutch Gear	2H-N59	1
60	Table Reverse Yoke	2H-N60	1
61	Hex Head Taper Point Screw	2H-N61	1
62	Bearing Cap, Right Hand	2H-N62	1
63	Bearing Cap, Left Hand	2H-N63	1
64	Allen Head Cap Screw, 7/16 x 1-1/4 in.	2H-N64	4
65	Pipe in Saddle Slide	2H-N65	2
66	Saddle Slide	2H-N66	1

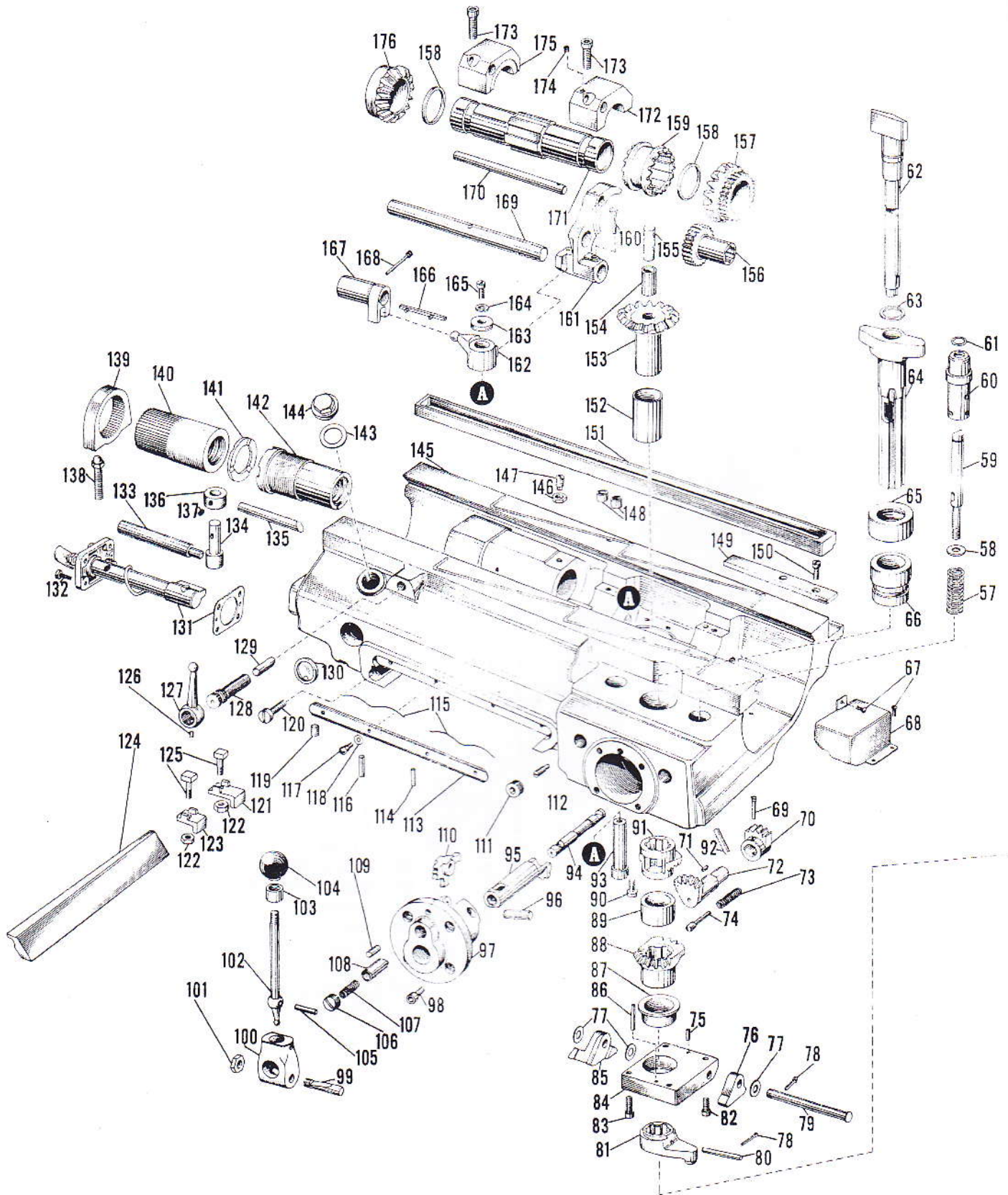


FIG. 18 - AUTOMATIC CYCLE PLAIN SADDLE AND HYDRAULIC VALVE BODY



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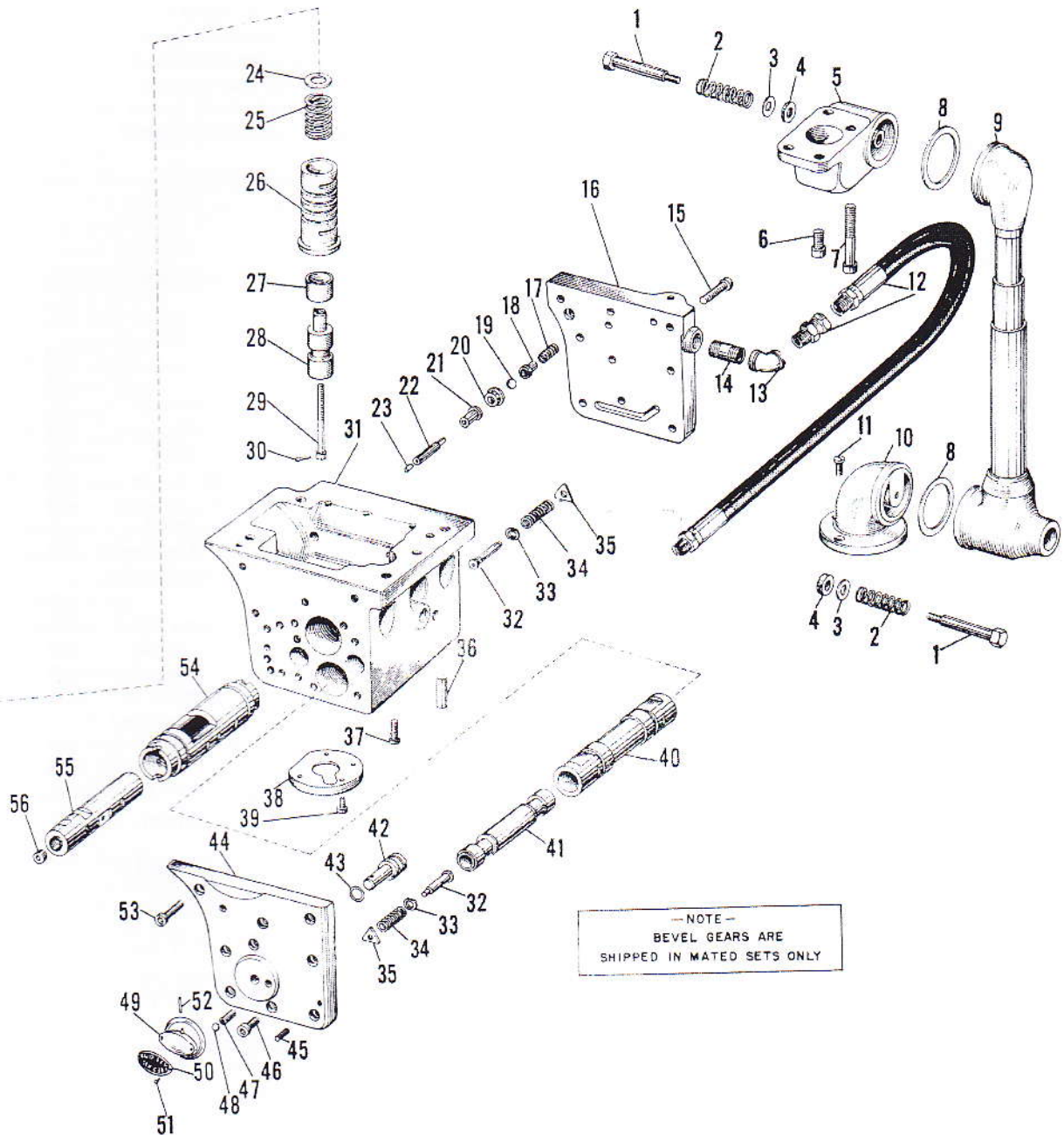


FIG. 18 - AUTOMATIC CYCLE PLAIN SADDLE AND HYDRAULIC VALVE BODY

Replacement Parts Manual

Plain—Universal—Vertical—Automatic Cycle

Fig. 18 - Automatic Cycle Plain Saddle And Hydraulic Valve Body

Item No.	Part Name and Description	Code No.	Qty.
Hydraulic Valve Body and Coolant Return			
1	Hex Head Screw	2H-P1	2
2	Spring	2H-P2	2
3	Washer	2H-P3	2
4	Swivel Screw Felt Washer	2H-P4	2
5	Coolant Return Swivel Fitting	2H-P5	1
6	Socket Head Cap Screw, 3/8-16 x 7/8 in.	2H-P6	2
7	Socket Head Cap Screw, 3/8-16 x 2-3/4 in.	2H-P7	2
8	Coolant Fitting Washer	2H-P8	2
9	Telescopic Coolant Return Tube Assembly	2H-P9	1
10	Coolant Return Elbow (Base)	2H-P10	1
11	Screw	2H-P11	3
12	Ario Flexible Hose and Fittings, 3/8 ID	2H-P12	2
13	Elbow, 3/8 in.	2H-P13	2
14	Close Nipple, 3/8 in.	2H-P14	2
15	Socket Head Cap Screw, 3/8 x 1-1/2 in.	2H-P15	9
16	Valve Body Cover, Back	2H-P16	1
17	Spring	2H-P17	2
18	Valve Ball Guide	2H-P18	2
19	Steel Ball, 7/16 in. diam.	2H-P19	2
20	Valve Seat Insert	2H-P20	2
21	Automatic Reverse Valve Stem Bushing	2H-P21	2
22	Automatic Reverse Valve Stem	2H-P22	2
23	Automatic Reverse Valve Stem Plug	2H-P23	2
24	Rate Piston Spring Washer	2H-P24	1
25	Rate Piston Spring	2H-P25	1
26	Rate Cylinder Sleeve	2H-P26	1
27	Rate Return Piston	2H-P27	1
28	Rate Piston	2H-P28	1
29	Screw	2H-P29	1
30	Cotterpin, 1/16 x 1 in.	2H-P30	1
31	Control Valve Body	2H-P31	1
32	Spring Retaining Pin	2H-P32	2
33	Automatic Reverse Spring Retaining Washer	2H-P33	2
34	Spring	2H-P34	2
35	Spring Retaining Collar	2H-P35	2
36	Acme Blue Label Dowel, 3/8 x 1-1/4 in.	2H-P36	2
37	Socket Head Cap Screw, 7/16 x 1-1/4 in.	2H-P37	5
38	Rate Cylinder Retaining Plate	2H-P38	1
39	Socket Head Cap Screw, 1/4 x 5/8 in.	2H-P39	4
40	Automatic Reverse Valve Sleeve	2H-P40	1
41	Automatic Reverse Valve	2H-P41	1
42	Manual Reverse Rate Valve	2H-P42	1

Item No.	Part Name and Description	Code No.	Qty.
43	"O"-Ring, PRP 902-10	2H-P43	1
44	Valve Body Cover, Front	2H-P44	1
45	Socket Head Oval Point Set Screw, 5/16 x 5/8 in.	2H-P45	2
46	Socket Head Cap Screw, 3/8 x 3/4 in.	2H-P46	1
47	Spring	2H-P47	1
48	Steel Ball, 5/16 in. diam.	2H-P48	1
49	Selector Knob	2H-P49	1
50	Selector Knob Plate	2H-P50	1
51	No. 15 Escutcheon Pins	2H-P51	2
52	Taper Pin, No. 02 x 3/4 in.	2H-P52	1
53	Socket Head Cap Screw, 3/8 x 1 in.	2H-P53	8
54	Table Direction Cylinder Sleeve	2H-P54	1
55	Table Direction Piston	2H-P55	1
56	Socket Head Pipe Plug, 1/4 in.	2H-P56	1
Automatic Cycle Plain Saddle			
57	Spring	2H-P57	2
58	Table Reverse Plunger Washer	2H-P58	2
59	Reverse Plunger	2H-P59	2
60	Reverse Plunger Sleeve	2H-P60	2
61	"O" Ring, AN6227-12	2H-P61	2
62	Rate Change Trip Post	2H-P62	1
63	Neoprene Packing	2H-P63	1
64	Feed Trip Sleeve	2H-P64	1
65	Trip Sleeve Chip Guard	2H-P65	1
66	Feed Trip Sleeve Bearing	2H-P66	1
67	Round Head Machine Screw, 10-32 x 3/8 in.	2H-P67	3
68	Reverse Gear Pinion Shield	2H-P68	1
69	Taper Pin Screw	2H-P69	1
70	Table Trip Lever Segment	2H-P70	1
71	Hi-Pro Key No. 604	2H-P71	1
72	Rack Bevel Gear Segment Shaft	2H-P72	1
73	Spring	2H-P73	1
74	Detent Plunger	2H-P74	1
75	Acme Blue Label Dowel, 1/4 x 7/8 in.	2H-P75	1
76	Right Hand Reverse Bell Crank	2H-P76	1
77	Washer, 1/2 in.	2H-P77	3
78	Cotterpin, 3/32 x 3/4 in.	2H-P78	3
79	Bell Crank Shaft	2H-P79	1
80	Automatic Reverse Lever Pin	2H-P80	1
81	Automatic Reverse Lever	2H-P81	1
82	Socket Head Cap Screw, 5/16 x 5/8 in.	2H-P82	2
83	Socket Head Cap Screw, 5/16 x 7/8 in.	2H-P83	2
84	Bell Crank Support	2H-P84	1

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Item No.	Part Name and Description	Code No.	Qty.
85	Left Hand Reverse Bell Crank	2H-P85	1
86	Acme Blue Label Dowel, 1/4 x 1-1/4 in.	2H-P86	1
87	Bell Crank Support Bushing	2H-P87	1
88	Hand Trip Bevel Gear Segment	2H-P88	1
89	Spacing Collar	2H-P89	1
90	Allen Head Screw	2H-P90	1
91	Feed Trip Bevel Segment	2H-P91	1
92	Brake Plunger Pin	2H-P92	1
93	Bell Crank Pin	2H-P93	1
94	Feed and Rapid Traverse Shifter Rod	2H-P94	1
95	Feed and Rapid Traverse Shifter Rod Sleeve and Pinion	2H-P95	1
96	Acme Blue Label Dowel, 1/2 x 1-5/8 in.	2H-P96	1
97	Feed and Rapid Traverse Lever Bracket	2H-P97	1
98	Socket Head Cap Screw, 3/8 x 3/4 in.	2H-P98	4
99	Feed and Rapid Traverse Lever Hub Cotter	2H-P99	1
100	Feed and Rapid Traverse Lever Hub	2H-P100	1
101	Hex Nut	2H-P101	1
102	Feed and Rapid Traverse Lever	2H-P102	1
103	Feed and Rapid Traverse Lever Chip Seal	2H-P103	1
104	Shifter Lever Knob	2H-P104	1
105	Acme Blue Label Dowel, 5/16 x 1-1/2 in.	2H-P105	1
106	Pipe Plug	2H-P106	1
107	Spring	2H-P107	1
108	Feed and Rapid Traverse Detent Plunger	2H-P108	1
109	Acme Blue Label Dowel, 3/8 x 1-1/4 in.	2H-P109	1
110	Feed and Rapid Traverse Bell Crank	2H-P110	1
111	Socket Head Pipe Plug, 1/2 in.	2H-P111	2
112	Screw	2H-P112	2
113	Knee Top Bearing Wiper	2H-P113	2
114	Pin, 1/4 x 7/8 in.	2H-P114	1
115	Knee Top Wiper Spring	2H-P115	4
116	Limit Stop Pin	2H-P116	2
117	Wiper Screw	2H-P117	8
118	Wiper Screw Spring	2H-P118	8
119	Allen Pipe Plug, 3/8 in.	2H-P119	1
120	Gib Screw	2H-P120	4
121	Cross Feed Trip Dog (Rear)	2H-P121	1
122	Nut	2H-P122	2
123	Cross Feed Trip Dog (Front)	2H-P123	1
124	Saddle Gib	2H-P124	1
125	T-Bolt	2H-P125	2

Item No.	Part Name and Description	Code No.	Qty.
126	Allen Set Screw, 1/4 x 1/4 in.	2H-P126	1
127	Clamp Lever	2H-P127	1
128	Clamp Screw	2H-P128	1
129	Table Clamp Plug	2H-P129	1
130	Bijur Oil Window, B-4904	2H-P130	1
131	Bijur KIB Lubricator Pump (1 in. Stroke), C-1957	2H-P131	1
132	Socket Head Cap Screw, 1/4-20 x 7/8 in.	2H-P132	4
133	Saddle Clamp Handle	2H-P133	1
134	Saddle Clamp Eccentric Shaft	2H-P134	1
135	Saddle Clamp Rod	2H-P135	1
136	Saddle Clamp Eccentric	2H-P136	1
137	Allen Dog Point Set Screw, 5/16 x 5/16 in.	2H-P137	1
138	Adjusting Yoke Screw	2H-P138	2
139	Adjusting Yoke	2H-P139	1
140	Adjustable Table Screw Nut	2H-P140	1
141	Table Nut Spacer	2H-P141	1
142	Table Screw Nut	2H-P142	1
143	Washer	2H-P143	1
144	Oil Hole Plug	2H-P144	1
145	Plain Saddle	2H-P145	1
146	Hex Nut	2H-P146	1
147	Set Screw	2H-P147	1
148	Pipe in Saddle Slide	2H-P148	2
149	Saddle Slide Stop	2H-P149	1
150	Screw	2H-P150	2
151	Saddle Slide	2H-P151	1
152	Table Drive Gear Bearing	2H-P152	1
153	Table Drive Gear	2H-P153	7
154	Table Drive Gear Plug	2H-P154	1
155	Table Drive Gear Felt	2H-P155	1
156	Rotary Table Drive Shaft Gear	2H-P156	1
157	Table Screw Clutch Gear	2H-P157	1
158	Clutch Gear Collar	2H-P158	2
159	Table Feed Reverse Clutch	2H-P159	1
160	Taper Pin Screw	2H-P160	1
161	Clutch Shifter Yoke	2H-P161	1
162	Bell Crank	2H-P162	1
163	Bell Crank Retainer	2H-P163	1
164	Lockwasher, 5/16 in.	2H-P164	1
165	Fillister Head Cap Screw, 5/16-18 x 3/4 in.	2H-P165	1
166	Tit Key	2H-P166	1
167	Hand Wheel Release Shaft Fork	2H-P167	1
168	Dowel Screw	2H-P168	1
169	Clutch Shifter Rack	2H-P169	1
170	Clutch Shifter Yoke Rod	2H-P170	1
171	Feed Reverse Gear Sleeve	2H-P171	1
172	Bearing Cap, Right Hand	2H-P172	1
173	Allen Head Cap Screw, 7/16 x 1-1/4 in.	2H-P173	4
174	Allen Cup Point Set Screw, 1/4-20 x 1/4 in.	2H-P174	1
175	Bearing Cap, Left Hand	2H-P175	1
176	Table Screw Clutch Gear	2H-P176	1

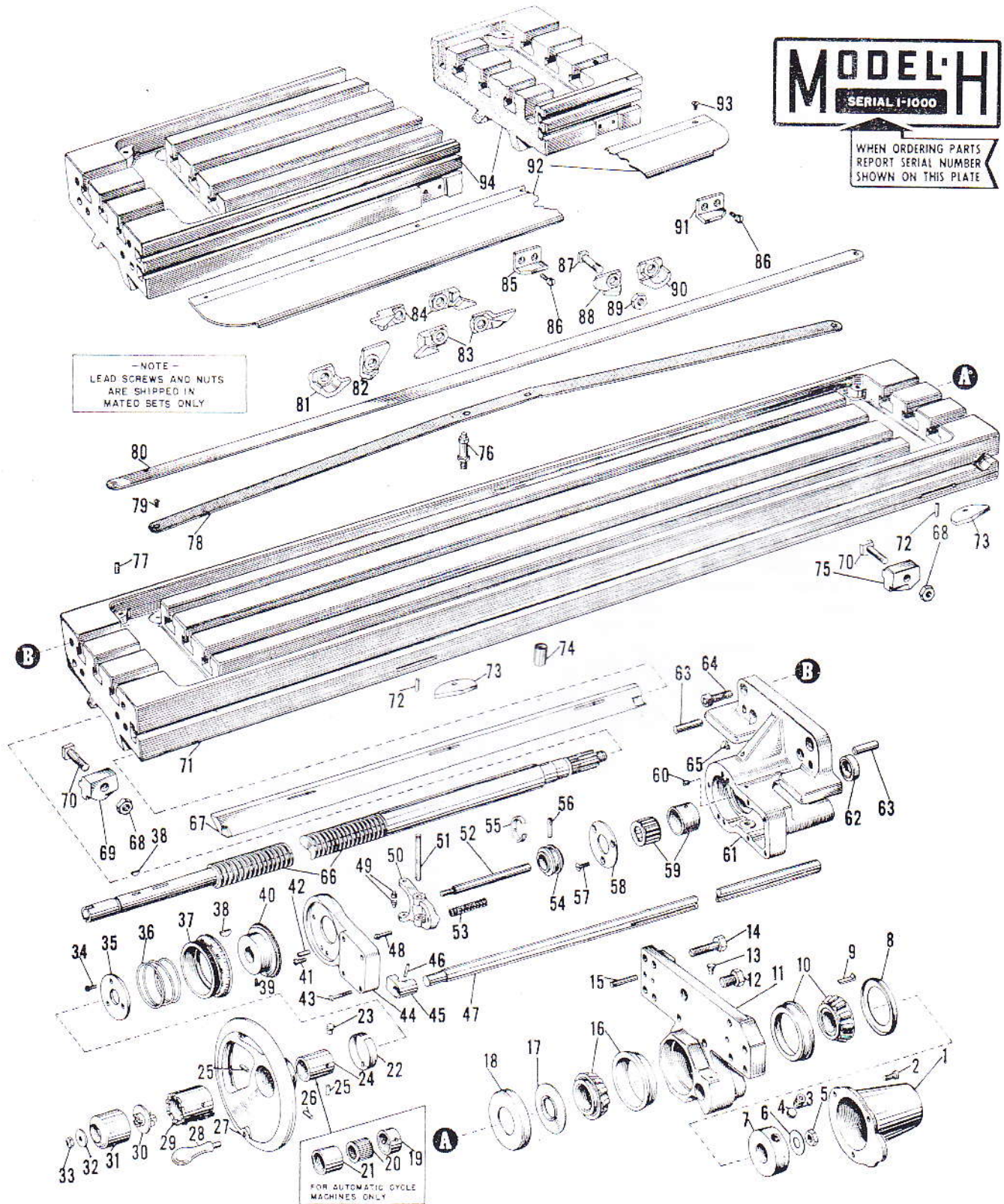


FIG. 19 - TABLES

Replacement Parts Manual

Plain—Universal—Vertical—Automatic Cycle

Fig. 19 - Tables

Item No.	Part Name and Description	Code No.	Qty.
1	Table Bracket Cover	2H-Q1	1
2	Screw	2H-Q2	3
3	Socket Head Set Screw	2H-Q3	2
4	Collar Nut Shoe	2H-Q4	2
5	Nut	2H-Q5	1
6	Washer	2H-Q6	1
7	Collar Nut	2H-Q7	1
8	Bearing Cover	2H-Q8	1
9	Timken Bearing Key	2H-Q9	1
10	Timken Bearing, 4128GB-41125W	2H-Q10	1
11	Table Bracket, Right Hand	2H-Q11	1
12	5/8-18 Hex Head Screw	2H-Q12	1
13	Gits Oiler, RS-533	2H-Q13	1
14	Hex Head Screw	2H-Q14	6
15	Acme Blue Label Dowel, 3/8 x 1-1/2 in.	2H-Q15	2
16	Timken Bearing, 41286B-41125	2H-Q16	1
17	Spacer Collar	2H-Q17	1
18	Bearing Cover	2H-Q18	1
†19	Hand Wheel Bushing	2H-Q19	1
†20	Torrington Bearing, B-1416	2H-Q20	1
†21	Table Hand Wheel Bearing Retainer	2H-Q21	1
22	Spring	2H-Q22	1
23	Gits Oiler, RS-531	2H-Q23	1
*24	Hand Wheel Bushing	2H-Q24	1
25	Hand Wheel Retaining Pin	2H-Q25	1
26	Pin	2H-Q26	2
27	Hand Wheel	2H-Q27	1
28	Rockwood Handle, No. 1QA	2H-Q28	1
29	Clutch in Hand Wheel	2H-Q29	1
30	Hand Wheel Clutch	2H-Q30	1
31	Hand Wheel Clutch Knob	2H-Q31	1
32	Clutch Washer	2H-Q32	1
33	Nut	2H-Q33	1
34	Screw	2H-Q34	3
35	Dial Spring Retainer	2H-Q35	1
36	Dial Spring	2H-Q36	1
37	Serrated Graduated Dial	2H-Q37	1
38	Hi-Pro Key No. 505	2H-Q38	1
39	Dog Point Set Screw	2H-Q39	1
40	Table Serrated Dial Collar	2H-Q40	1
41	Screw	2H-Q41	3
42	Acme Blue Label Dowel, 1/4 x 3/4 in.	2H-Q42	2
43	Screw	2H-Q43	**4
44	Table Bracket Cover (Left Hand)	2H-Q44	1
45	Clutch Release Cam	2H-Q45	1
46	Taper Pin, No. 2 x 15/16 in.	2H-Q46	1
47	Hand Wheel Release Shaft	2H-Q47	1

Item No.	Part Name and Description	Code No.	Qty.
48	Clutch Release Yoke Pin	2H-Q48	1
49	Shifter Yoke Pin	2H-Q49	2
50	Clutch Release Yoke	2H-Q50	1
51	Clutch Release Yoke Shaft	2H-Q51	1
52	Clutch Release Rod	2H-Q52	1
53	Spring (Not Used in Auto- cycle Machines)	2H-Q53	1
54	Clutch Release Plate	2H-Q54	1
55	Snap Ring	2H-Q55	1
56	Clutch Release Rod Pin	2H-Q56	1
57	Screw	2H-Q57	3
58	Bearing Retainer Cover	2H-Q58	1
59	Hyatt Bearing, S-94416	2H-Q59	1
†60	Cone Point Pin	2H-Q60	1
61	Table Bracket (Left Hand)	2H-Q61	1
62	Gits Oil Seal, No. OS-875	2H-Q62	1
63	Acme Blue Label Dowel, 3/8 x 1-1/2 in.	2H-Q63	2
64	Socket Head Cap Screw, 1/2 x 1 in.	2H-Q64	4
65	Gits Oiler, G-501	2H-Q65	1
66	Table Screw	2H-Q66	1
67	Table Gib	2H-Q67	1
68	Nut	2H-Q68	4
69	Table Trip Dog Left Hand	2H-Q69	2
70	T-Bolt	2H-Q70	4
71	Table	2H-Q71	1
72	Limit Stop Pin	2H-Q72	2
73	Limit Block	2H-Q73	2
74	Table Coolant Tube	2H-Q74	**2
75	Table Trip Dog Right Hand	2H-Q75	2
76	Table Screen Guard Support	2H-Q76	2
77	Screw	2H-Q77	2
78	Table Screen	2H-Q78	1
79	Round Head Machine Screw, 1/4 x 3/8 in.	2H-Q79	2
80	Table Screen Guard	2H-Q80	1
*81	Reverse Dog, Left Hand	2H-Q81	1
*82	Stop Dog, Left Hand	2H-Q82	1
*83	Rate Change Dog "A"	2H-Q83	2
*84	Rate Change Dog "B"	2H-Q84	2
*85	Table Limit Block, Left Hand	2H-Q85	1
*86	Fillister Head Screw	2H-Q86	4
*87	T-Bolt	2H-Q87	8
*88	Stop Dog, Right Hand	2H-Q88	1
*89	Hex Nut	2H-Q89	8
*90	Reverse Dog, Right Hand	2H-Q90	1
*91	Table Limit Block, Right Hand	2H-Q91	1
*92	Table Coolant Guard	2H-Q92	1
*93	Flat Head Machine Screw	2H-Q93	9
*94	Table (Autocycle)	2H-Q94	1

† Used Only on Auto-Cycle Machines

* Used Only On Machines With Standard Direction Control

** Three Used on Auto-Cycle Machines

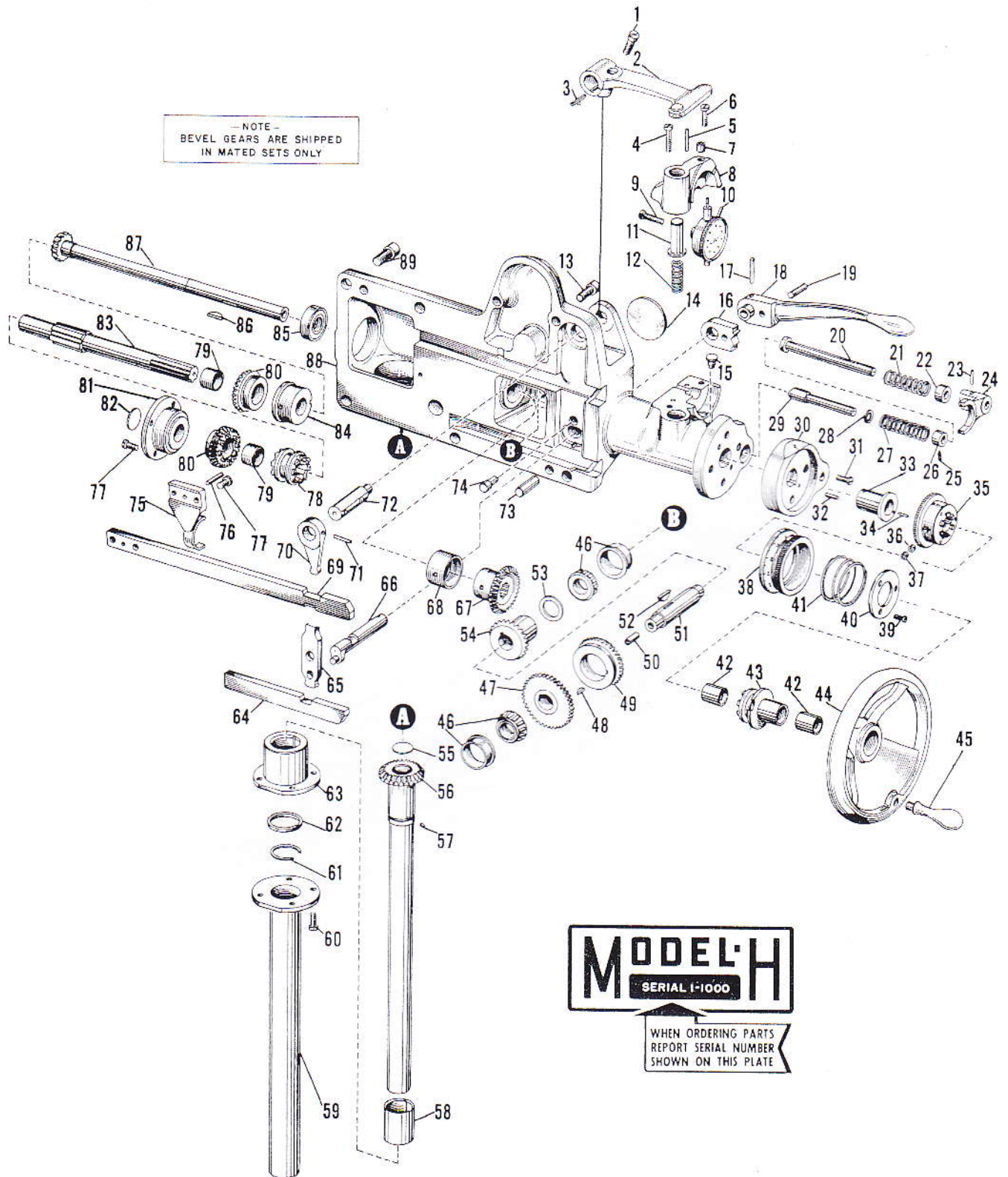


FIG. 20 - HEAD POWER FEED BRACKET

Replacement Parts Manual

Plain—Universal—Vertical—Automatic Cycle

Fig. 20 - Head Power Feed Bracket

Item No.	Part Name and Description	Code No.	Qty.	Item No.	Part Name and Description	Code No.	Qty.
1	Fillister Head Screw	2H-R1	1	48	Hi-Pro Key No. 404	2H-R48	1
2	Precision Stop Lever	2H-R2	1	49	Vertical Head Feed Miter Gear	2H-R49	1
3	Precision Stop Lever Key	2H-R3	1	50	Copper Tubing, 5/16" x 7/8 in. long	2H-R50	1
4	Fillister Head Screw	2H-R4	1	51	Take-Off Gear Shaft	2H-R51	1
5	Acme Blue Label Dowel, 1/4 x 1-3/4 in.	2H-R5	2	52	Hi-Pro Key, HP-706	2H-R52	1
6	Fillister Head Screw	2H-R6	1	53	Feed Take-Off Gear Fitting Washer	2H-R53	1
7	Indicator Cap Bushing	2H-R7	1	54	Hand Feed Take-Off Gear	2H-R54	1
8	Indicator Cap	2H-R8	1	55	Expansion Plug, 1 in. diam.	2H-R55	1
9	Fillister Head Screw	2H-R9	1	56	Vertical Head Feed Drive Upper Miter Gear	2H-R56	1
10	Federal Indicator (C-8-I)	2H-R10	1	57	Pin, 3/16 x 7/32 in.	2H-R57	1
11	Precision Stop Button	2H-R11	1	58	Head Feed Drive Miter Gear Bearing Bushing	2H-R58	1
12	Spring	2H-R12	1	59	Inner Telescopic Tube and Flange	2H-R59	1
13	Socket Head Cap Screw, 7/16 x 1 in.	2H-R13	2	60	Fillister Head Screw	2H-R60	4
14	Expansion Plug, 2-1/8 in. diam.	2H-R14	1	61	Snap Ring	2H-R61	1
15	Gits Oiler No. 532	2H-R13	1	62	Head Feed Drive Gear Washer	2H-R62	1
16	Vertical Head Trip Detent	2H-R16	1	63	Head Feed Drive Miter Gear Bearing	2H-R63	1
17	Taper Pin, No. 4 x 1-1/4 in.	2H-R17	1	64	Trip Plunger (Lower)	2H-R64	1
18	Head Feed Lever	2H-R18	1	65	Trip Rod Connecting Link	2H-R65	1
19	Acme Blue Label Dowel, 5/16 x 3/4 in.	2H-R19	1	66	Head Feed Eccentric	2H-R66	1
20	Hand Wheel Clutch Yoke Rod	2H-R20	1	67	Power Feed Take-Off Gear	2H-R67	1
21	Spring	2H-R21	1	68	Power Feed Gear Bushing	2H-R68	1
22	Yoke Rod Spring Retainer	2H-R22	1	69	Trip Plunger (Upper)	2H-R69	1
23	Taper Pin, No. 1 x 7/8 in.	2H-R23	1	70	Precision Stop Trip Lever	2H-R70	1
24	Hand Wheel Release Yoke	2H-R24	1	71	Taper Pin, No. 4 x 1-3/8 in.	2H-R71	1
25	Allen Dog Point Set Screw, 1/4 x 5/8 in.	2H-R25	1	72	Precision Stop Lever Shaft	2H-R72	1
26	Handwheel Detent Bushing	2H-R26	1	73	Acme Blue Label Dowel, 1/2 x 1-1/2 in.	2H-R73	2
27	Spring	2H-R27	1	74	Trip Rod Connecting Link Pin	2H-R74	1
28	Release Rod Detent Washer	2H-R28	1	75	Head Feed Clutch Shifter	2H-R75	1
29	Hand Wheel Release Rod Detent	2H-R29	1	76	Acme Blue Label Dowel, 1/4 x 3/4 in.	2H-R76	1
30	Vertical Head Bracket Dial Plate	2H-R30	1	77	Fillister Head Screw	2H-R77	6
31	Screw	2H-R31	4	78	Head Feed Reverse Clutch	2H-R78	1
32	Acme Blue Label Dowel, 1/4 x 3/4 in.	2H-R32	2	79	Miter Gear Bushing	2H-R79	2
33	Handwheel Shaft Bushing	2H-R33	1	80	Head Feed Reverse Clutch Miter Gear	2H-R80	2
34	Pin, 1/8 x 1/2 in.	2H-R34	1	81	Reverse Clutch Shaft End Bearing	2H-R81	1
35	Serrated Dial Collar	2H-R35	1	82	Expansion Plug, 1-3/8 in. diam.	2H-R82	1
36	Allen Dog Point Set Screw, 1/4 x 5/16 in.	2H-R36	1	83	Head Feed Reverse Clutch Shaft	2H-R83	1
37	Socket Set Screw, 1/4 x 1/4 in.	2H-R37	1	84	Miter Gear Thrust Bearing	2H-R84	1
38	Graduated Dial, 125 Divisions	2H-R38	1	85	New Departure Bearing No. 0204	2H-R85	1
39	Screw	2H-R39	3	86	Hi-Pro Key, HP-705	2H-R86	1
40	Graduated Dial Spring Retainer	2H-R40	1	87	Handwheel Shaft and Bevel Pinion	2H-R87	1
41	Spring	2H-R41	1	88	Vertical Head Power Feed Bracket	2H-R88	1
42	Oilite Bearing A-912	2H-R42	2	89	Socket Head Cap Screw, 1/2 x 1-1/4 in.	2H-R89	5
43	Handwheel Clutch	2H-R43	1				
44	Head Adjusting Handwheel	2H-R44	1				
45	Rockwood Handle, No. 3QA	2H-R45	1				
46	Timken Bearing 05185B-05075	2H-R46	2				
47	Head Feed Take-Off Gear	2H-R47	1				

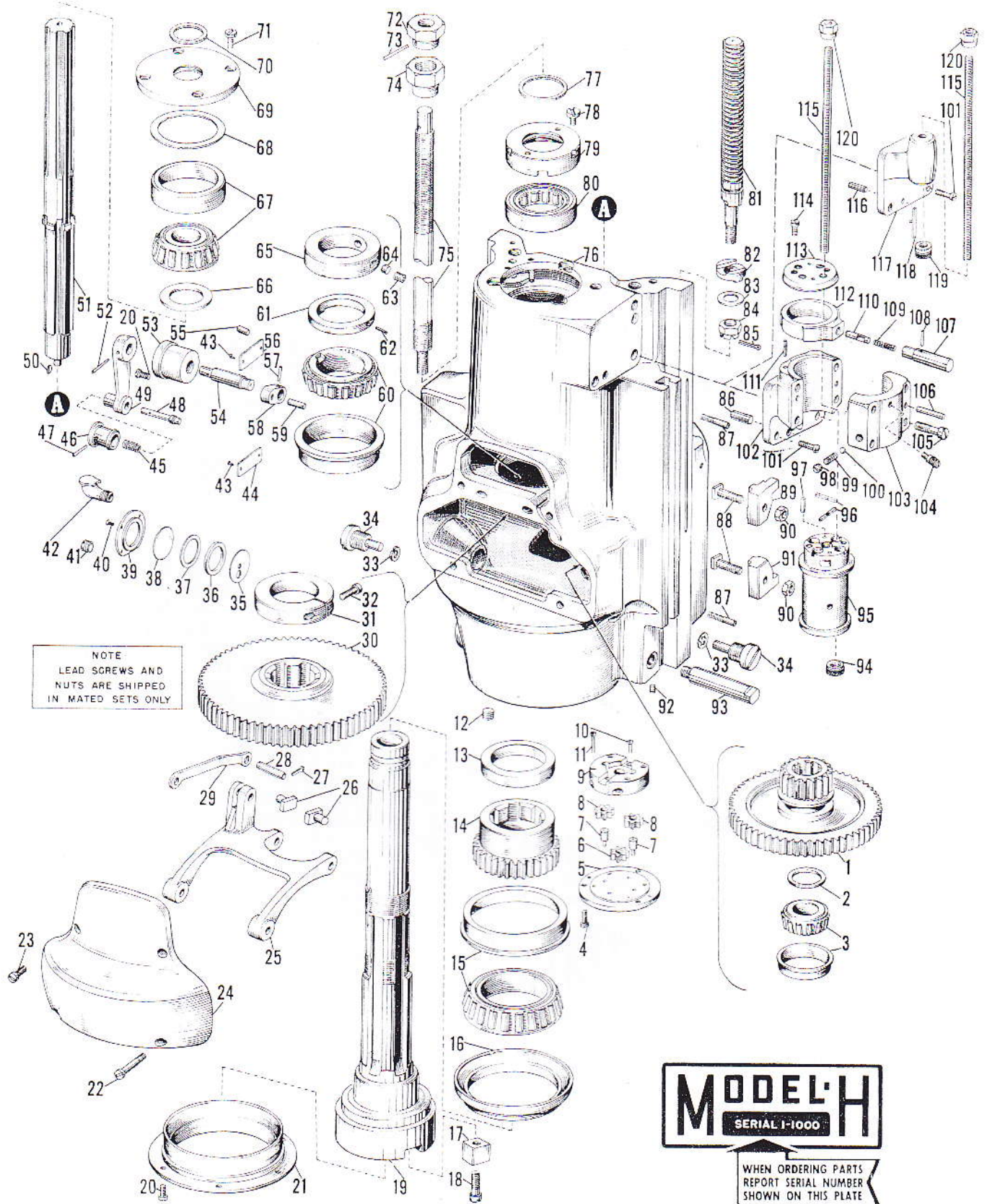


FIG. 21 - VERTICAL HEAD

Fig. 21 - Vertical Head

Item No.	Part Name and Description	Code No.	Qty.
1	Spindle Drive Sliding Gear	2H-S1	1
2	Cross Shaft Bearing Retaining Washer (Lower)	2H-S2	1
3	Timken Bearing 2523B-2580	2H-S3	1
4	Screw	2H-S4	3
5	Vertical Head Oil Pump Cover	2H-S5	1
6	Oil Pump Gear (Driver)	2H-S6	1
7	Oil Pump Stud	2H-S7	2
8	Oil Pump Gear (Driven)	2H-S8	2
9	Vertical Head Oil Pump Body	2H-S9	1
10	Screw	2H-S10	2
11	Screw	2H-S11	4
12	Pipe Plug C. S., 3/4 in.	2H-S12	1
13	Spindle Gear Spacer	2H-S13	1
14	Small Spindle Gear	2H-S14	1
15	Timken Bearing 47620B-47686 (Spindle Quality)	2H-S15	1
16	Spindle Oil Slinger	2H-S16	1
17	Spindle Tongue	2H-S17	2
18	Screw	2H-S18	2
19	Spindle (No. 50 Taper)	2H-S19	1
20	Screw	2H-S20	8
21	Spindle Oil Shield	2H-S21	1
22	Fillister Head Screw	2H-S22	2
23	Fillister Head Screw	2H-S23	2
24	Vertical Spindle Head Cover	2H-S24	1
25	Spindle Gear Shifter Lever	2H-S25	1
26	Spindle Lever Shoe	2H-S26	2
27	Cotterpin, 1/16 x 1 in.	2H-S27	2
28	Pin	2H-S28	1
29	Spindle Lever Link	2H-S29	1
30	Large Spindle Gear	2H-S30	1
31	Spindle Nut	2H-S31	1
32	Socket Head Cap Screw, 7/16 x 1-1/4 in.	2H-S32	1
33	Lockwasher, No. 1228 Shakeproof, 5,8 Internal Tooth	2H-S33	2
34	Primary Speed Change Shifter Stud	2H-S34	2
35	Oil Sight Gage Back Plate	2H-S35	1
36	Oil Gage Washer	2H-S36	1
37	Oil Gage Washer	2H-S37	1
38	Oil Gage Glass	2H-S38	1
39	Oil Gage Plate	2H-S39	1
40	Screw	2H-S40	4
41	Slotted Pipe Plug, 1/4 in.	2H-S41	1
42	Gits Oiler, LP-1401	2H-S42	1
43	No. 15 x 1/2 in. Escutcheon Pin	2H-S43	4
44	Speed Plate (Slow)	2H-S44	1
45	Spring	2H-S45	1
46	Speed Selection Knob	2H-S46	1
47	Taper Pin, No. 2 x 7/8 in.	2H-S47	1
48	Speed Lever Plunger	2H-S48	1
49	Range Change Lever	2H-S49	1
50	Hi-Pro Key, HP404	2H-S50	1
51	Spindle Counter Shaft	2H-S51	1
52	Taper Pin, No. 2 x 1-3/8 in.	2H-S52	1
53	Shifter Crank Bearing	2H-S53	1
54	Shifter Crank Stud	2H-S54	1
55	Dowel Pin, 1/4 x 3/4 in.	2H-S55	2
56	Speed Plate (Fast)	2H-S56	1
57	Taper Pin, No. 2 x 7/8 in.	2H-S57	1
58	Shifter Crank Plate	2H-S58	1
59	Shifter Crank Pin	2H-S59	1
60	Timken Bearing 453B-462W (Spindle Quality)	2H-S60	1

Item No.	Part Name and Description	Code No.	Qty.
61	Spindle Bearing Drive Collar	2H-S61	1
62	Spindle Bearing Drive Collar Pin	2H-S62	1
63	Screw	2H-S63	2
64	Collar Nut Plug	2H-S64	2
65	Collar Nut	2H-S65	1
66	Cross Shaft Bearing Retaining Washer	2H-S66	1
67	Timken Bearing 49368-49150	2H-S67	1
68	Cross Shaft Bearing Adjusting Washer	2H-S68	1
69	Spindle Counter shaft Cover	2H-S69	1
70	Cross Shaft Cover Felt Washer	2H-S70	1
71	Screw	2H-S71	4
72	Draw Bolt Head	2H-S72	1
73	Taper Pin, No. 4 x 1-1/4 in.	2H-S73	1
74	Draw Bolt Nut	2H-S74	1
75	Spindle Draw-In Bolt	2H-S75	1
76	Vertical Spindle Head	2H-S76	1
77	Spindle Oil Shield Felt	2H-S77	1
78	Fillister Head Screw	2H-S78	3
79	Spindle Oil Retainer	2H-S79	1
80	Hyatt Bearing 1308 TS	2H-S80	1
81	Head Feed Screw	2H-S81	1
82	Head Feed Screw Drive Washer	2H-S82	1
83	Washer	2H-S83	1
84	Lock Nut	2H-S84	1
85	Cotterpin, 1/8 x 1-1/2 in.	2H-S85	1
86	Acme Blue Label Dowel, 1/2 x 1-1/4 in.	2H-S86	2
87	Vertical Head Trip (Positive Stop)	2H-S87	2
88	T-Bolt	2H-S88	2
89	Upper Trip Dog	2H-S89	1
90	Nut	2H-S90	2
91	Lower Trip Dog	2H-S91	1
92	Slotted Pipe Plug, 1/8 in.	2H-S92	2
93	Clamp Rod	2H-S93	1
94	Precision Stop Screw Nut	2H-S94	4
95	Precision Stop Barrel	2H-S95	1
96	Key	2H-S96	2
97	Acme Blue Label Dowel, 1/4 x 3/4 in.	2H-S97	2
98	Screw	2H-S98	1
99	Spring	2H-S99	1
100	Steel Ball, 3/8 in. diam.	2H-S100	1
101	Fillister Head Screw	2H-S101	6
102	Precision Stop Bracket	2H-S102	1
103	Precision Stop Bracket Cap	2H-S103	1
104	Tucker Oiler, No. 2	2H-S104	1
105	Fillister Head Screw	2H-S105	4
106	Acme Blue Label Dowel, 5/16 x 1-3/4 in.	2H-S106	2
107	Precision Stop Ratchet	2H-S107	1
108	Taper Pin, No. 00 x 3/4 in.	2H-S108	1
109	Spring	2H-S109	1
110	Precision Stop Ratchet Pin	2H-S110	1
111	Dowel	2H-S111	1
112	Precision Stop Adjusting Ring	2H-S112	1
113	Precision Stop Cover	2H-S113	1
114	Fillister Head Screw	2H-S114	2
115	Precision Stop Screw	2H-S115	4
116	Acme Blue Label Dowel, 1/2 x 1-1/8 in.	2H-S116	2
117	Single Precision Stop Bracket	2H-S117	1
118	Key	2H-S118	1
119	Precision Stop Graduated Collar	2H-S119	1
120	Nut	2H-S120	5

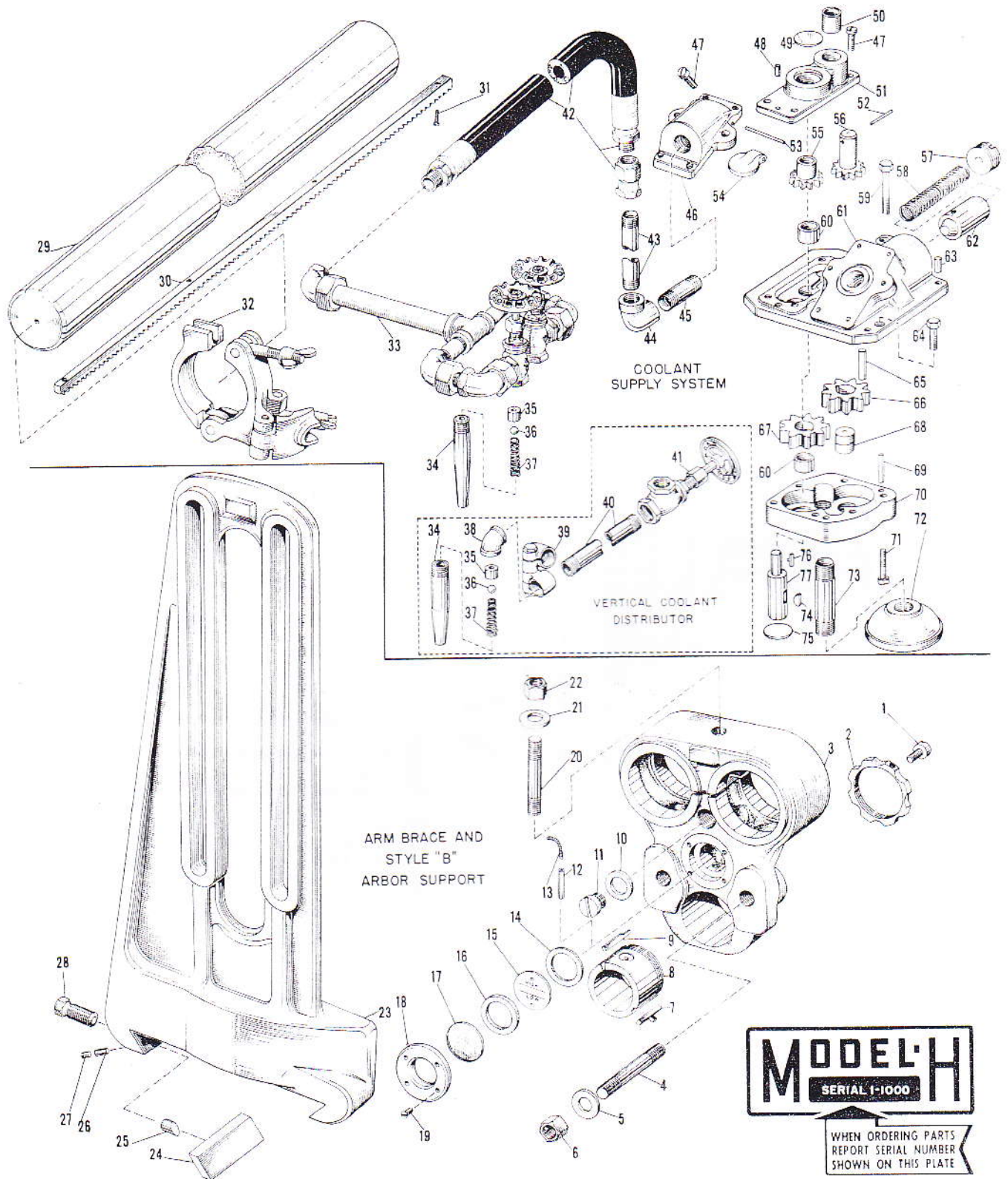
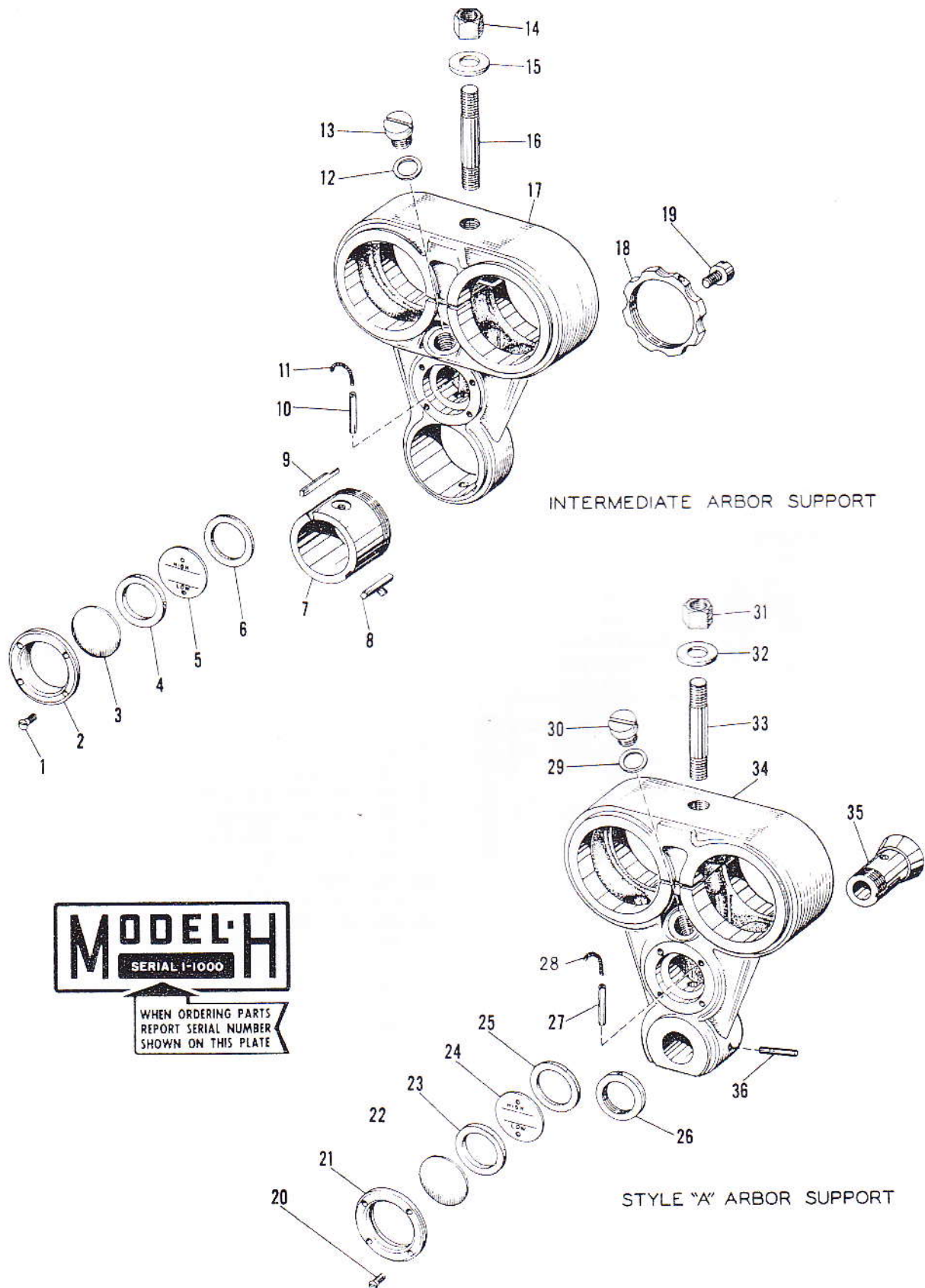


FIG. 22 - COOLANT SUPPLY SYSTEM, STYLE B ARBOR SUPPORT AND ARM BRACE

Fig. 22 - Coolant Supply System, Style B Arbor Support And Arm Brace

Item No.	Part Name and Description	Code No.	Qty.
STYLE B ARBOR SUPPORT AND ARM BRACE			
1	Screw	2H-T1	1
2	Bushing Nut	2H-T2	1
3	Style B Arbor Support	2H-T3	1
4	Arm Brace Clamp Stud	2H-T4	2
5	Washer	2H-T5	2
6	Nut	2H-T6	2
7	Key	2H-T7	1
8	Arbor Bushing	2H-T8	1
9	Oil Retainer	2H-T9	1
10	Fiber Washer	2H-T10	1
11	Oil Hole Screw	2H-T11	1
12	Copper Tube, 1/4 x 2-3/8 in.	2H-T12	1
13	Oil Wicking	2H-T13	1
14	Oil Gage Washer	2H-T14	1
15	Oil Gage Plate	2H-T15	1
16	Oil Gage Washer	2H-T16	1
17	Oil Gage Glass	2H-T17	1
18	Oil Flow Gage Plate	2H-T18	1
19	Screw	2H-T19	4
20	Stud	2H-T20	1
21	Washer	2H-T21	1
22	Nut	2H-T22	1
23	Arm Brace	2H-T23	1
24	Clamp Gib	2H-T24	1
25	Table Clamp Plug	2H-T25	1
26	Acme Blue Label Dowel Pin, 1/4 x 1/2 in.	2H-T26	2
27	Allen Head Set Screw, 5/16 x 5/16 in.	2H-T27	2
28	Screw	2H-T28	1
OVERARMS			
29	Overarm (Horizontal Machines Only)	2H-T29	2
30	Overarm Rack	2H-T30	2
31	Screw	2H-T31	8
COOLANT SUPPLY SYSTEM			
32	Coolant Distributor Support (Horizontal Machines Only)	2H-T32	1
33	Distributor Complete (Horizontal Machines Only)	2H-T33	1
34	Coolant Nozzle	2H-T34	2
35	Nozzle Ball Retainer	2H-T35	1
36	Ball, 3/8 in. diam.	2H-T36	1
37	Nozzle Spring	2H-T37	1
38	Reducing Elbow, 1/2 x 3/8 in. (Vertical Machines Only)	2H-T38	1

Item No.	Part Name and Description	Code No.	Qty.
39	Coolant Distributor Support (Vertical Machines Only)	2H-T39	1
40	Pipe (Vertical Machines Only)	2H-T40	1
41	Angle Valve, 1/2 in. (Vertical Machines Only)	2H-T41	1
42	Coolant Hose, 1/2 x 1/2 in.	2H-T42	1
43	Wrought Iron Pipe, 1/2 x 3/8 in.	2H-T43	1
44	Elbow, 1/2 x 90°	2H-T44	1
45	Nipple, 1/2 x 1-5/8 in.	2H-T45	1
46	Check Valve Cover	2H-T46	1
47	Screw	2H-T47	10
48	Acme Blue Label Dowel, 1/4 x 1/2 in.	2H-T26	2
49	Expansion Plug, 1-1/8 in. diam.	2H-T48	1
50	Coolant Pump Drive Gear Bushing	2H-T49	1
51	Coolant Pump Cover Plate	2H-T50	1
52	Pump Gear Drive Pin	2H-T51	1
53	Pin for Check Valve Cover	2H-T52	1
54	Check Valve	2H-T53	1
55	Coolant Pump Driven Gear	2H-T54	1
56	Coolant Pump Drive Gear	2H-T55	1
57	Plug	2H-T56	1
58	Spring	2H-T57	1
59	Hex Head Cap Screw	2H-T58	1
60	Oilite Bearing SM 575	2H-T59	2
61	Coolant Pump Cover	2H-T60	1
62	Coolant Relief Plunger	2H-T61	1
63	Acme Blue Label Dowel, 5/16 x 1 in.	2H-T62	2
64	Hex Head Cap Screw	2H-T63	1
65	Acme Blue Label Dowel, 1/4 x 1-1/2 in.	2H-T64	1
66	Coolant Pump Gear (Driven)	2H-T65	1
67	Coolant Pump Gear (Driver)	2H-T66	1
68	Coolant Idler Gear Stud	2H-T67	1
69	Acme Blue Label Dowel, 1/4 x 1-1/4 in.	2H-T68	2
70	Coolant Pump Body	2H-T69	1
71	Screw	2H-T70	6
72	Strainer	2H-T71	1
73	Nipple, 1/2 x 3 in.	2H-T72	1
74	Hi-Pro Key, No. 505 (For 12123)	2H-T73	1
75	Expansion Plug, 1 in. diam.	2H-T74	1
76	Tit Key (For 23744)	2H-T75	1
77	Coolant Pump Drive Shaft	2H-T76	1



MODEL H
SERIAL 1-1000

WHEN ORDERING PARTS
REPORT SERIAL NUMBER
SHOWN ON THIS PLATE

FIG. 23 - INTERMEDIATE ARBOR SUPPORT AND STYLE A ARBOR SUPPORT

Fig. 23 - Intermediate Arbor Support And Style A Arbor Support

Item No.	Part Name and Description	Code No.	Qty.
INTERMEDIATE ARBOR SUPPORT			
1	Screw	2H-U1	4
2	Oil Flow Gage Plate	2H-U2	1
3	Oil Gage Glass	2H-U3	1
4	Oil Gage Washer	2H-U4	1
5	Oil Gage Back Plate	2H-U5	1
6	Oil Gage Washer	2H-U6	1
7	Arbor Support Bushing	2H-U7	1
8	Tit Key	2H-U8	1
9	Oil Retainer	2H-U9	1
10	Copper Tube, 1/4 x 1-5/8 in.	2H-U10	1
11	Oil Wicking	2H-U11	1
12	Fibre Washer	2H-U12	1
13	Oil Filler Plug	2H-U13	1
14	Nut	2H-U14	1
15	Washer	2H-U15	1
16	Stud	2H-U16	1
17	Intermediate Arbor Support	2H-U17	1
18	Arm Pendant Bushing Nut	2H-U18	1
19	Fillister Head Screw	2H-U19	1
STYLE A ARBOR SUPPORT			
20	Screw	2H-U20	4
21	Oil Gage Plate	2H-U21	1
22	Oil Gage Glass	2H-U22	1
23	Oil Gage Washer	2H-U23	1
24	Oil Gage Back Plate	2H-U24	1
25	Oil Gage Washer	2H-U25	1
26	Nut	2H-U26	1
27	Copper Tube, 1/4 x 2-3/8 in.	2H-U27	1
28	Oil Wicking	2H-U28	1
29	Washer	2H-U29	1
30	Screw	2H-U30	1
31	Nut	2H-U31	1
32	Washer	2H-U32	1
33	Stud	2H-U33	1
34	Style A Arbor Support	2H-U34	1
35	Bushing	2H-U35	1
36	Pin	2H-U36	1

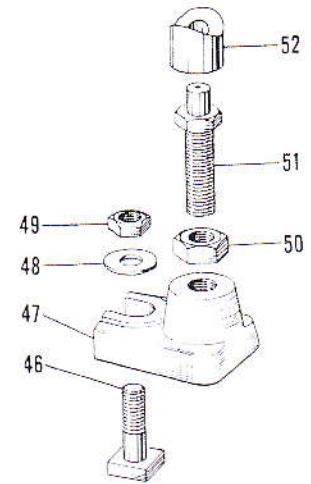
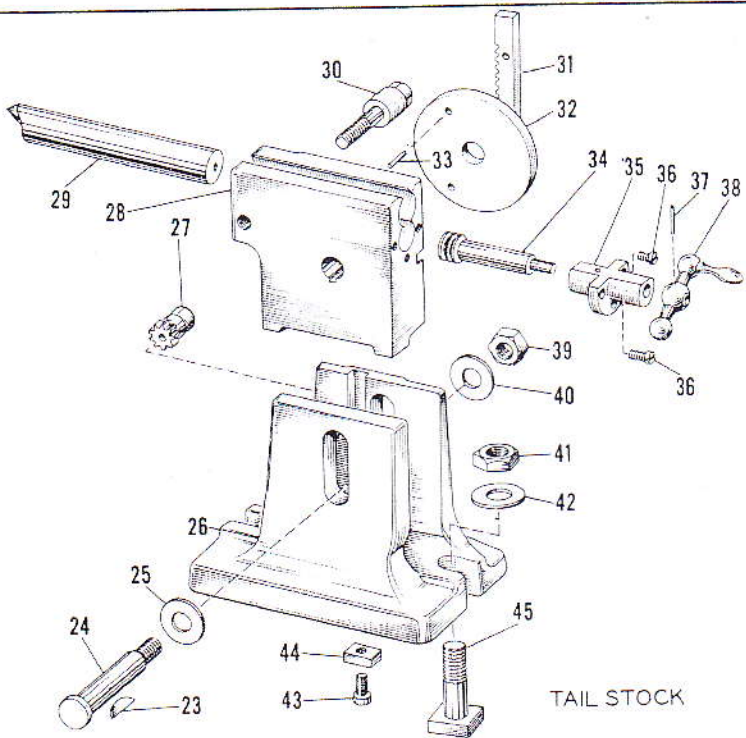
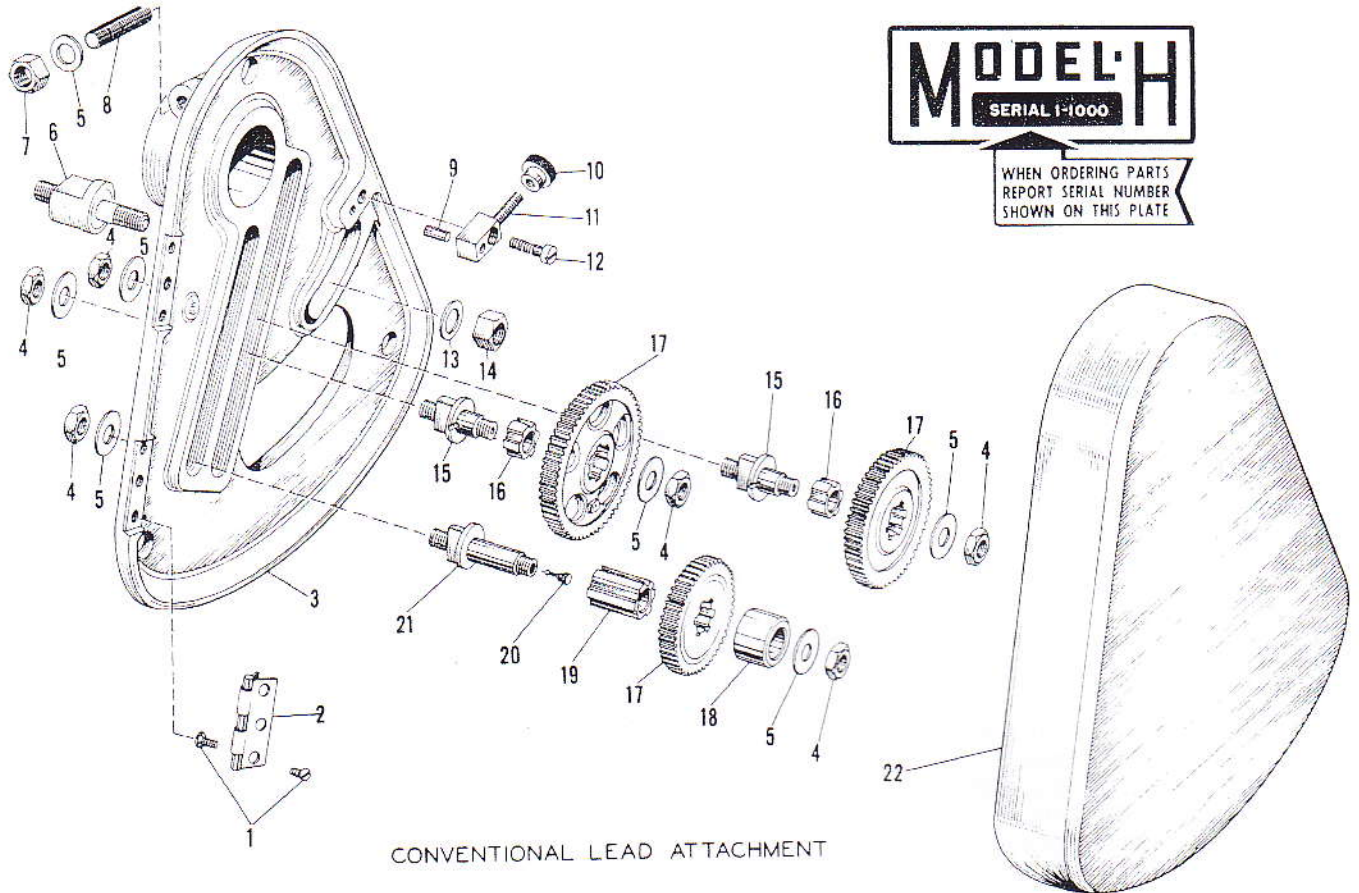


FIG. 24 - CONVENTIONAL LEAD ATTACHMENT, TAIL STOCK AND STEADY REST

Fig. 24 - Conventional Lead Attachment, Tail Stock And Steady Rest

Item No.	Part Name and Description	Code No.	Qty.
CONVENTIONAL LEAD ATTACHMENT			
1	Fillister Head Machine Screw, No. 10-32 x 1/2 in.	2H-V1	12
2	Butt Hinge, No. 800 Stanley	2H-V2	2
3	Change Gear Bracket	2H-V3	1
4	Nut	2H-V4	6
5	Washer	2H-V5	7
6	Change Gear Stud	2H-V6	1
7	Nut	2H-V7	1
8	Stud	2H-V8	1
9	Acme Blue Label Dowel Pin	2H-V9	1
10	Thumb Nut	2H-V10	1
11	Door Lock Bolt	2H-V11	1
12	Fillister Head Screw	2H-V12	1
13	Washer	2H-V13	1
14	Hex Nut	2H-V14	1
15	Idler Stud	2H-V15	2
16	Splined Bushing, Short	2H-V16	2
17	Change Gears		
	Change Gear, 24T-16P	2H-V17	2
	Change Gear, 28T-16P	2H-V18	1
	Change Gear, 32T-16P	2H-V19	1
	Change Gear, 40T-16P	2H-V20	1
	Change Gear, 44T-16P	2H-V21	1
	Change Gear, 48T-16P	2H-V22	2
	Change Gear, 56T-16P	2H-V23	1
	Change Gear, 64T-16P	2H-V24	1
	Change Gear, 72T-16P	2H-V25	1
	Change Gear, 86T-16P	2H-V26	1
	Change Gear, 100T-16P	2H-V27	1
18	Spacing Collars		
	Spacing Collar, Small	2H-V28	1
	Spacing Collar, Large	2H-V29	1
19	Splined Bushing, Long	2H-V30	1
20	Gits Oiler, No. RS-531	2H-V31	1
21	Differential Index Compound Stud	2H-V32	1
22	Change Gear Bracket Cover	2H-V33	1
TAILSTOCK			
23	Hi-Pro Key, No. HP-606	2H-V34	1
24	Elevating Clamp Bolt	2H-V35	1
25	Washer	2H-V36	1
26	Tailstock	2H-V37	1
27	Elevating Pinion	2H-V38	1
28	Elevating Center	2H-V39	1
29	Tailstock Center	2H-V40	1
30	Tailstock Clamp Screw	2H-V41	1
31	Elevating Rack	2H-V42	1
32	Graduated Plate	2H-V43	1
33	Taper Pin, No. 2 x 9/16 in.	2H-V44	2
34	Center Adjusting Worm	2H-V45	1
35	Worm Sleeve	2H-V46	1
36	Fillister Head Screw	2H-V47	3
37	Taper Pin, No. 1 x 13/16 in.	2H-V48	1
38	Ball Crank	2H-V49	1
39	Hex Nut	2H-V50	1
40	Washer	2H-V51	1
41	Nut	2H-V52	2
42	Washer	2H-V53	2
43	Screw	2H-V54	2
44	Vise Tongue	2H-V55	2
45	T-Bolt	2H-V56	2
STEADY REST			
46	T-Bolt	2H-V57	1
47	Steady Rest Base	2H-V58	1
48	Washer	2H-V59	1
49	Nut	2H-V60	1
50	Nut	2H-V61	1
51	Steady Rest Adjustment Screw	2H-V62	1
52	Steady Rest Vee Block	2H-V63	1

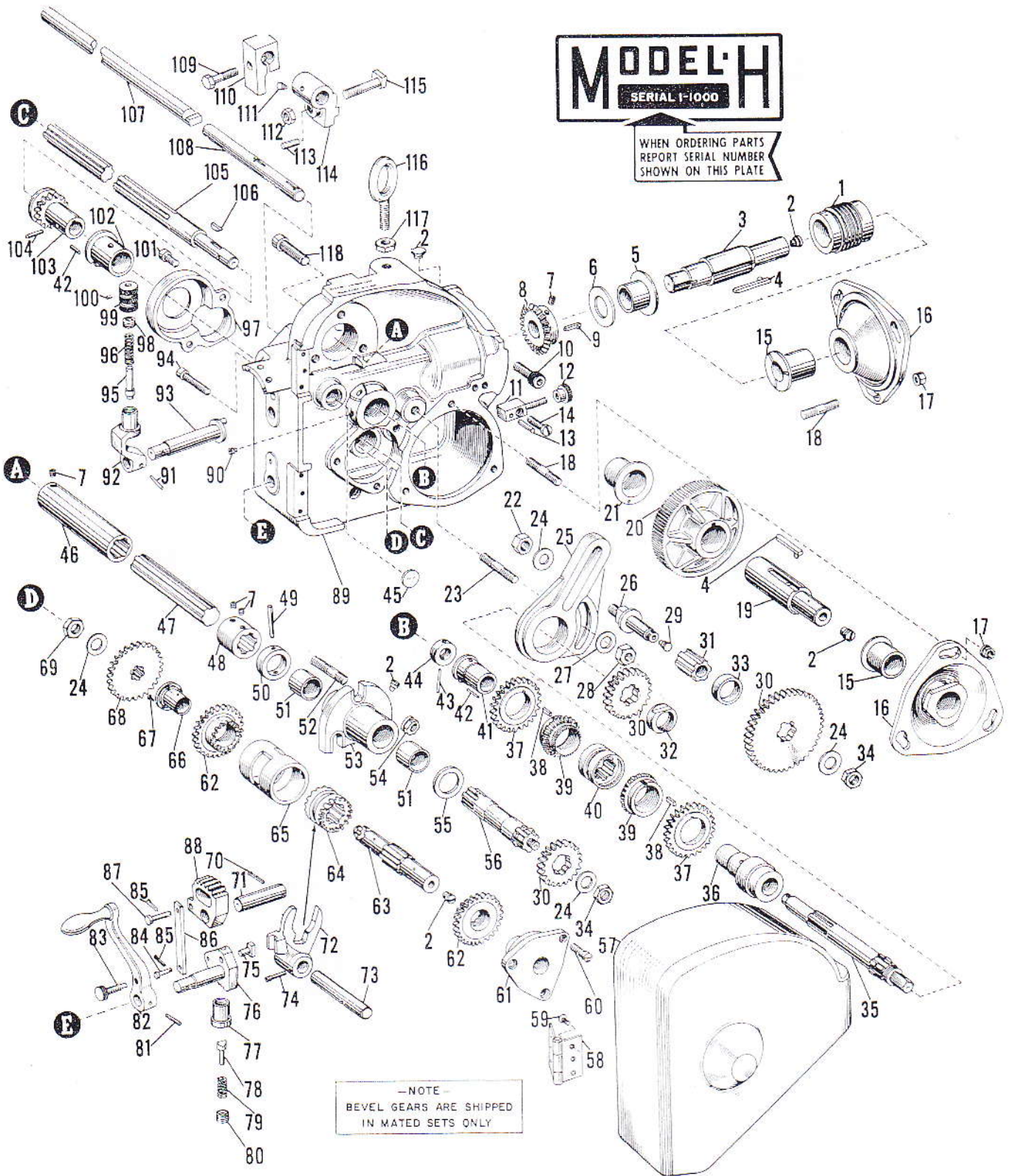


FIG. 25 - LOW LEAD ATTACHMENT

Replacement Parts Manual

Plain—Universal—Vertical—Automatic Cycle

Fig. 25 Low Lead Attachment

Item No.	Part Name and Description	Code No.	Qty.
1	Worms		
	Worm, 24-1	2H-W1	1
	Worm, 96-1	2H-W2	1
	Worm, 24-8	2H-W3	1
2	Gits Oiler	2H-W4	9
3	Worm and Worm Wheel Shaft	2H-W5	1
4	Key	2H-W6	2
5	Worm and Worm Wheel Shaft Bushing	2H-W7	1
6	Thrust Washer for Reverse Bevel Gear	2H-W8	1
7	Allen Head Dog Point Screw, 5/16-18 x 5/16 in.	2H-W9	4
8	Reverse Drive Bevel Gear	2H-W10	1
9	Key	2H-W11	1
10	Allen Head Cap Screw, 1/2 x 1-1/4 in.	2H-W12	2
11	Door Lock Bolt	2H-W13	1
12	Knurled Nut	2H-W14	1
13	Acme Blue Label Dowel, 1/4 x 1-1/8 in.	2H-W15	1
14	Screw	2H-W16	1
15	Worm and Worm Wheel Support Bearing Bushing	2H-W17	2
16	Worm and Worm Wheel Support Bearing	2H-W18	2
17	Nut	2H-W19	6
18	Stud	2H-W20	6
19	Table Screw Extension	2H-W21	1
20	Worm Wheels		
	Worm Wheel, 24-1	2H-W22	1
	Worm Wheel, 96-1	2H-W23	1
	Worm Wheel, 24-8	2H-W24	1
21	Table Screw Extension Bushing	2H-W25	1
22	Nut	2H-W26	1
23	Stud	2H-W27	1
24	Washer	2H-W28	4
25	Change Gear Arm	2H-W29	1
26	Change Gear Stud	2H-W30	1
27	Washer	2H-W31	1
28	Nut	2H-W32	1
29	Gits Oiler, RS-531	2H-W33	1
30	Change Gears		
	Change Gear 20 T 10 P	2H-W34	2
	Change Gear 21 T 10 P	2H-W35	1
	Change Gear 22 T 10 P	2H-W36	1
	Change Gear 23 T 10 P	2H-W37	1
	Change Gear 24 T 10 P	2H-W38	1
	Change Gear 25 T 10 P	2H-W39	1
	Change Gear 26 T 10 P	2H-W40	1
	Change Gear 27 T 10 P	2H-W41	1
	Change Gear 28 T 10 P	2H-W42	1
	Change Gear 29 T 10 P	2H-W43	1
	Change Gear 30 T 10 P	2H-W44	1

Item No.	Part Name and Description	Code No.	Qty.
	Change Gear 32 T 10 P	2H-W45	1
	Change Gear 34 T 10 P	2H-W46	1
	Change Gear 36 T 10 P	2H-W47	1
	Change Gear 38 T 10 P	2H-W48	1
	Change Gear 40 T 10 P	2H-W49	1
31	Splined Bushing	2H-W50	1
32	Hand Crank Shaft Nut	2H-W51	1
33	Spacing Collar	2H-W52	1
34	Nut	2H-W53	2
35	Hand Crank Shaft	2H-W54	1
36	Hand Crank Shaft Bearing (Long)	2H-W55	1
37	Hand Crank Shaft Spur Gear	2H-W56	2
38	Key	2H-W57	2
39	Hand Crank Shaft Bevel Pinion	2H-W58	2
40	Clutch on Hand Crank Shaft	2H-W59	1
41	Hand Crank Shaft Bearing (Short)	2H-W60	1
42	Pin, 1/8 x 1/2 in.	2H-W61	2
43	Taper Pin, No. 2 x 1-1/4 in.	2H-W62	1
44	Hand Crank Shaft Collar	2H-W63	1
45	Expansion Plug, 3/4 in.	2H-W64	1
46	Spiral Head Drive Shaft Connector (Long)	2H-W65	1
47	Spiral Head Drive Shaft Extension	2H-W66	1
48	Spiral Head Drive Shaft Connector (Short)	2H-W67	1
49	Taper Pin, No. 4 x 1-5/8 in.	2H-W68	1
50	Spiral Head Drive Shaft Collar	2H-W69	1
51	Spiral Head Drive Shaft Support Bracket Bushing	2H-W70	2
52	Stud	2H-W71	3
53	Spiral Head Drive Shaft Support Bracket	2H-W72	1
54	Nut	2H-W73	3
55	Spiral Head Drive Shaft Washer	2H-W74	1
56	Spiral Head Drive Shaft	2H-W75	1
57	Spiral Change Gear Box Cover	2H-W76	1
58	Stanley Butt Hinge, No. 800	2H-W77	2
59	Flat Head Machine Screw, 10-32 x 1/2 in.	2H-W78	12
60	Screw	2H-W79	3
61	Reverse Gear Shaft Bearing (Right Hand)	2H-W80	1
62	Reverse Gear	2H-W81	2
63	Reverse Gear Shaft	2H-W82	1
64	Reverse Gear Shaft Clutch	2H-W83	1
65	Reverse Gear Spacer	2H-W84	1
66	Reverse Gear Shaft Bushing, Left Hand	2H-W85	1
67	Flat Head Machine Screw, 3/16-32 x 1/2 in.	2H-W86	3
68	Reverse Shaft Drive Gear	2H-W87	1

Item No.	Part Name and Description	Code No.	Qty.
69	Nut	2H-W88	1
70	Cotter Pin, 7/64 x 1 in.	2H-W89	1
71	Trip Segment Shaft	2H-W90	1
72	Clutch Shifter	2H-W91	1
73	Clutch Shifter Shaft	2H-W92	1
74	Taper Pin Set Screw	2H-W93	1
75	Detent Block Shifter Shoe	2H-W94	1
76	Detent Block and Shaft	2H-W95	1
77	Detent Plunger Sleeve	2H-W96	1
78	Detent Plunger	2H-W97	1
79	Detent Spring	2H-W98	1
80	Detent Plunger Screw	2H-W99	1
81	Taper Pin, No. 2 x 1-1/8 in.	2H-W100	1
82	Direction Lever and Handle	2H-W101	1
83	Knurled Head Screw	2H-W102	1
84	Connecting Link Pin (Short)	2H-W103	1
85	Cotter Pin, 3/32 x 3/4 in.	2H-W104	2
86	Connecting Link	2H-W105	1
87	Connecting Link Pin (Long)	2H-W106	1
88	Trip Segment	2H-W107	1
89	Spiral Change Gear Box	2H-W108	1
90	Dog Point Set Screw	2H-W109	1
91	Taper Pin, No. 2 x 1-1/16 in.	2H-W110	1
92	Selection Lever	2H-W111	1
93	Reverse Eccentric Shaft	2H-W112	1
94	Cap Screw	2H-W113	1
95	Selection Lever Plunger	2H-W114	1
96	Spring	2H-W115	1
97	Clutch Shaft Gear Guard	2H-W116	1
98	Plunger Guide	2H-W117	1
99	Selection Lever Knob	2H-W118	1
100	Allen Head Set Screw, 8-32 x 3/8 in.	2H-W119	1
101	Socket Head Cap Screw, 3/8 x 3/4 in.	2H-W120	2
102	Auxiliary Drive Shaft Bushing	2H-W121	1
103	Auxiliary Drive Shaft Pinion	2H-W122	1
104	Taper Pin, No. 4 x 1-1/16 in.	2H-W123	1
105	Auxiliary Drive Shaft	2H-W124	1
106	Hi-Pro Key HP-705	2H-W125	1
107	Trip Shaft	2H-W126	1
108	Trip Rack	2H-W127	1
109	Hex Head Screw	2H-W128	2
110	Trip Dog	2H-W129	2
111	Gits Oiler, RS-532	2H-W130	2
112	Nut	2H-W131	2
113	Acme Blue Label Dowel, 1/4 x 1-1/2 in.	2H-W132	2
114	Trip Shaft Support Bracket	2H-W133	2
115	T-Bolt	2H-W134	2
116	Eye Bolt, 1/2 in.	2H-W135	1
117	Nut	2H-W136	1
118	Allen Head Cap Screw, 1/2 x 1-3/4 in.	2H-W137	1

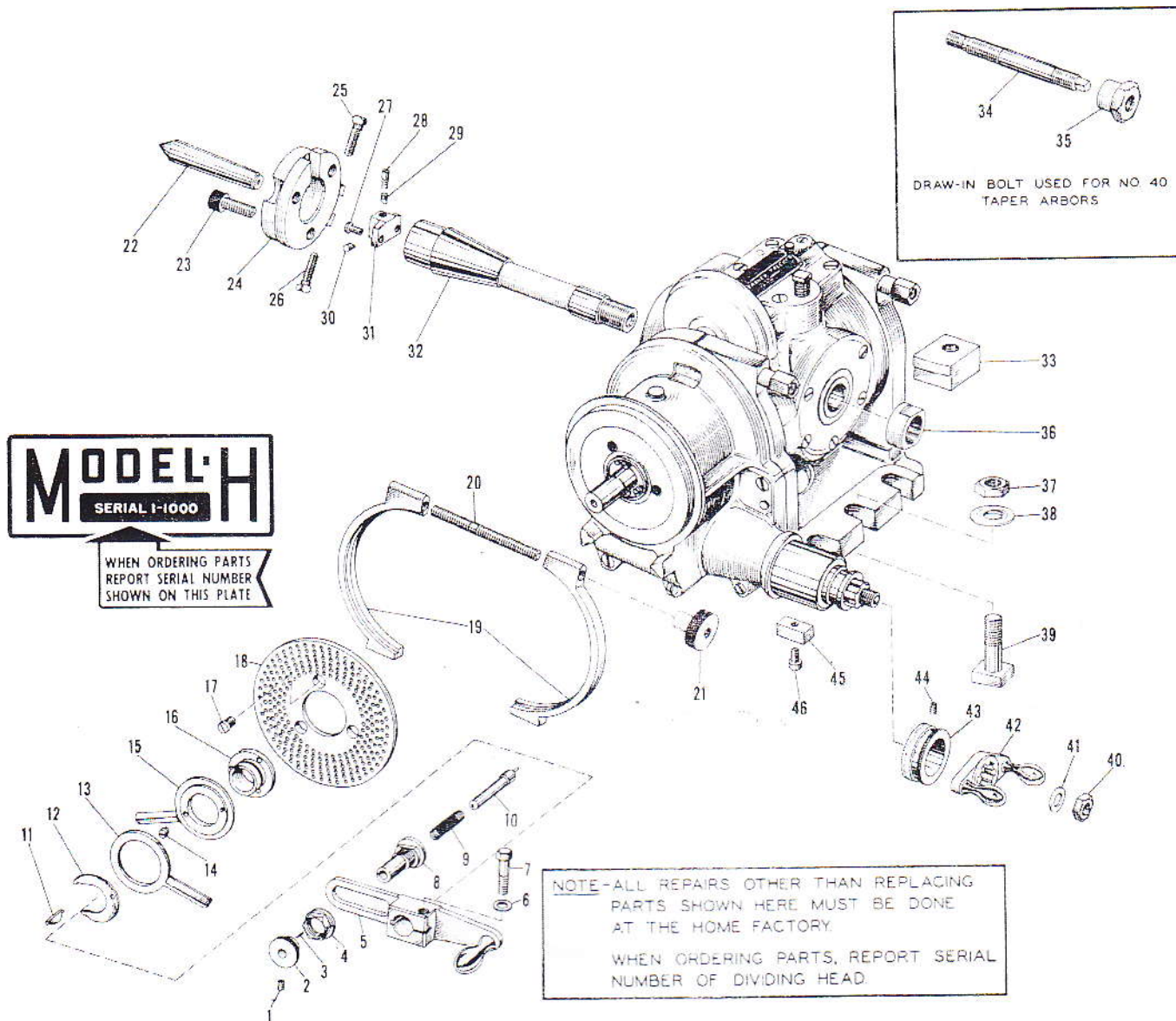


FIG. 26 - MODEL H DIVIDING HEAD

Fig. 26 - Model H Dividing Head

Item No.	Part Name and Description	Code No.	Qty.
1	Screw	2H-X1	1
2	Plunger Knob	2H-X2	1
3	Drill Rod, No. 43 x 7/8 in.	2H-X3	1
4	Clamp Nut	2H-X4	1
5	Index Crank	2H-X5	1
6	Washer	2H-X6	1
7	Hex Head Cap Screw	2H-X7	1
8	Plunger Sleeve	2H-X8	1
9	Spring	2H-X9	1
10	Plunger for Standard Index Plates	2H-X10	1
	Plunger for High Number Index Plates	2H-X11	1
11	Hi-Pro Key, No. HP-706	2H-X12	1
12	Spring	2H-X13	1
13	Index Finger	2H-X14	1
14	Screw	2H-X15	1
15	Index Finger	2H-X16	1
16	Index Sleeve	2H-X17	1
17	Screw	2H-X18	1
18	Index Plates		
	Standard Index Plates		
	Index Plate, 37-39-41-43-47-49	2H-X19	1
	Index Plate, 21-23-27-29-31-33	2H-X20	1
	Index Plate, 15-16-17-18-19-20	2H-X21	1
	High Number Index Plates		
	Index Plate, 57-67-77-87-97	2H-X22	1
	Index Plate, 53-63-73-83-93	2H-X23	1
	Index Plate, 51-61-71-81-91-101	2H-X24	1
	Index Plate, 48-59-69-79-89-99	2H-X25	1
19	Index Plate Clamp Ring	2H-X26	1
20	Screw	2H-X27	1
21	Nut	2H-X28	1
22	Center	2H-X29	1
23	Allen Head Cap Screw, 1/2 x 1 in.	2H-X30	3
24	Dog Driver	2H-X31	1
25	Screw	2H-X32	2
26	Screw	2H-X33	1
27	Screw	2H-X34	2
28	Spindle Drive Key Screw	2H-X35	1
29	Expansion Key Wedge	2H-X36	1
30	Expansion Key Plug	2H-X37	1
31	Spindle Drive Expansion Key	2H-X38	1
32	Centering Plug	2H-X39	1
33	Clamp Block	2H-X40	1
34	Draw-In-Bolt	2H-X41	1
35	Draw-In-Bolt Nut	2H-X42	1
36	Nut	2H-X43	1
37	Nut	2H-X44	4
38	Washer	2H-X45	4
39	T-Bolt	2H-X46	4
40	Nut	2H-X47	1
41	Washer	2H-X48	1
42	Crank	2H-X49	1
43	Graduated Collar	2H-X50	1
44	Allen Set Screw, 5/16 x 3/8 in.	2H-X51	1
45	Vise Tongue	2H-X52	2
46	Screw	2H-X53	2

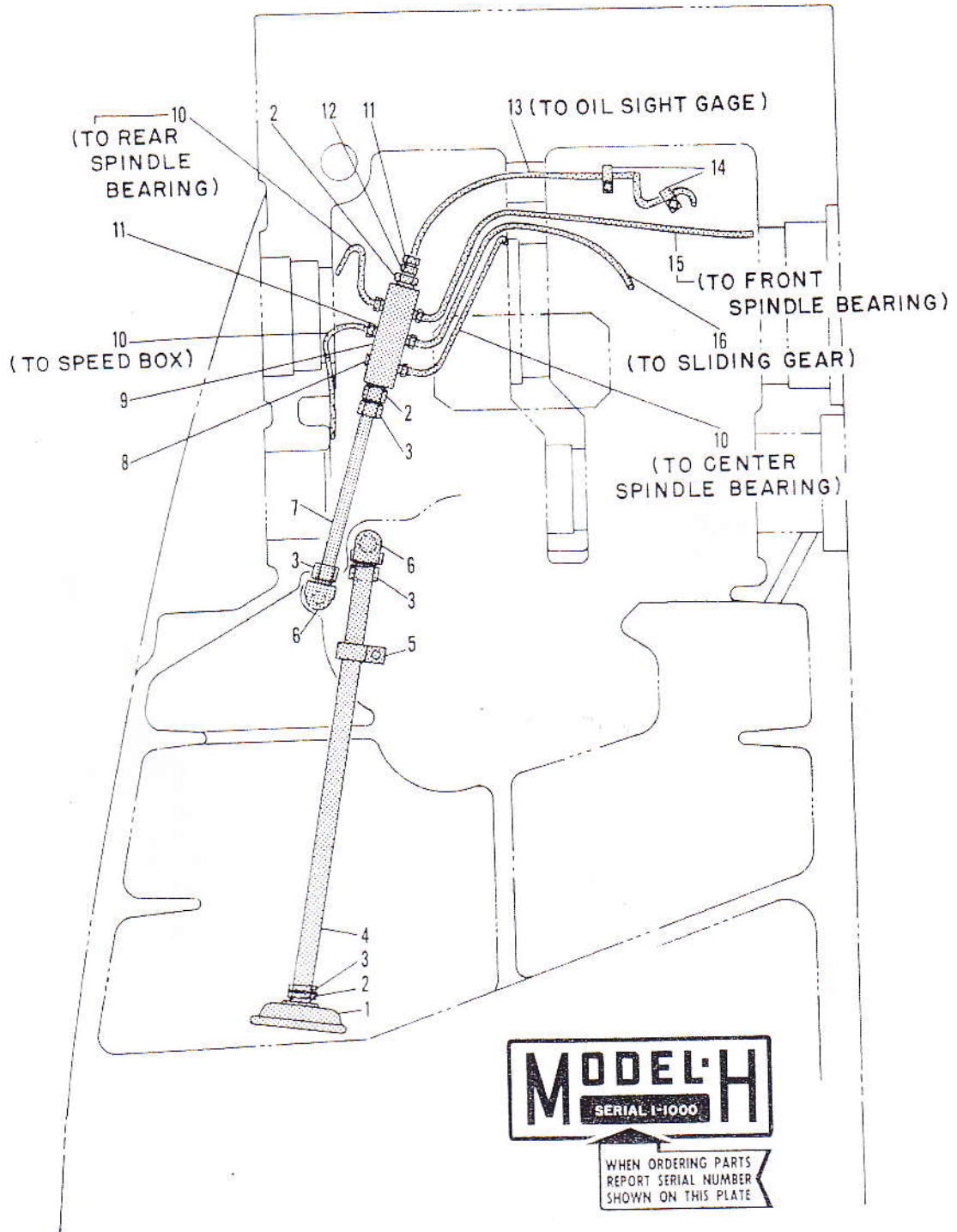


FIG. 27 HORIZONTAL COLUMN LUBRICATION

Fig. 27 Horizontal Column Lubrication

Item No.	Part Name and Description	Code No.	Qty.
1	Strainer	2H-Y1	1
2	Weatherhead Fitting, No. 200 x 6	2H-Y2	3
3	Weatherhead Fitting, No. 105 x 6	2H-Y3	4
4	Copper Tubing, 3/8 x 13 in.	2H-Y4	1
5	Pipe Clamp	2H-Y5	1
6	Weatherhead Fitting, No. 400 x 6	2H-Y6	2
7	Copper Tubing, 3/8 x 6 in.	2H-Y7	1
8	Manifold	2H-Y8	1
9	Slotted Plug, 3/16 in.	2H-Y9	1
10	Copper Tubing, 3/16 x 6 in.	2H-Y10	3
11	Weatherhead Fitting, No. 105 x 3	2H-Y11	6
12	Weatherhead Fitting, No. 200 x 3	2H-Y12	1
13	Copper Tubing, 3/16 x 24 in.	2H-Y13	1
14	Pipe Clamp, 3/16 in.	2H-Y14	2
15	Copper Tubing, 3/16 x 14 in.	2H-Y15	1
16	Copper Tubing, 3/16 x 10 in.	2H-Y16	1

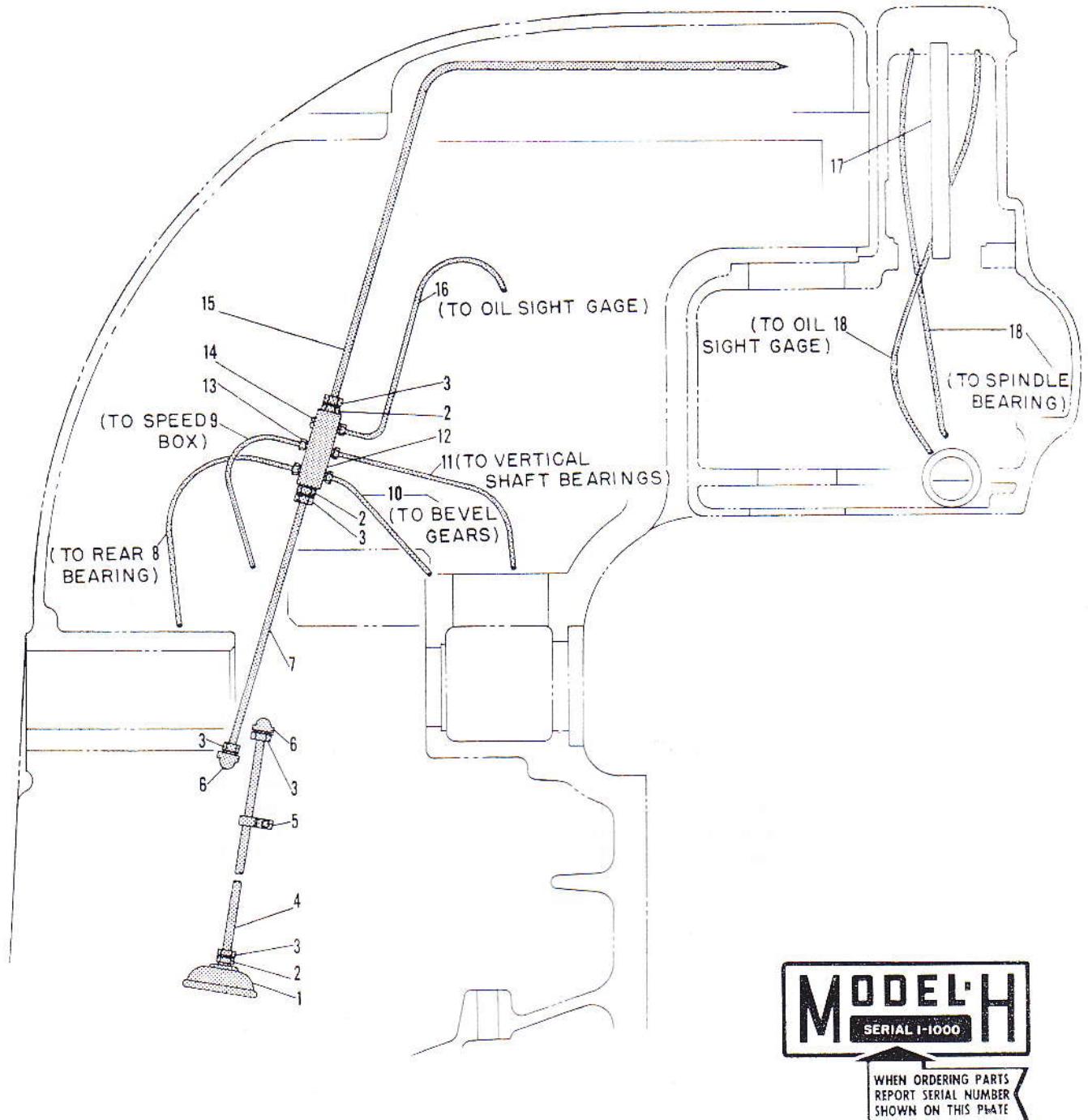
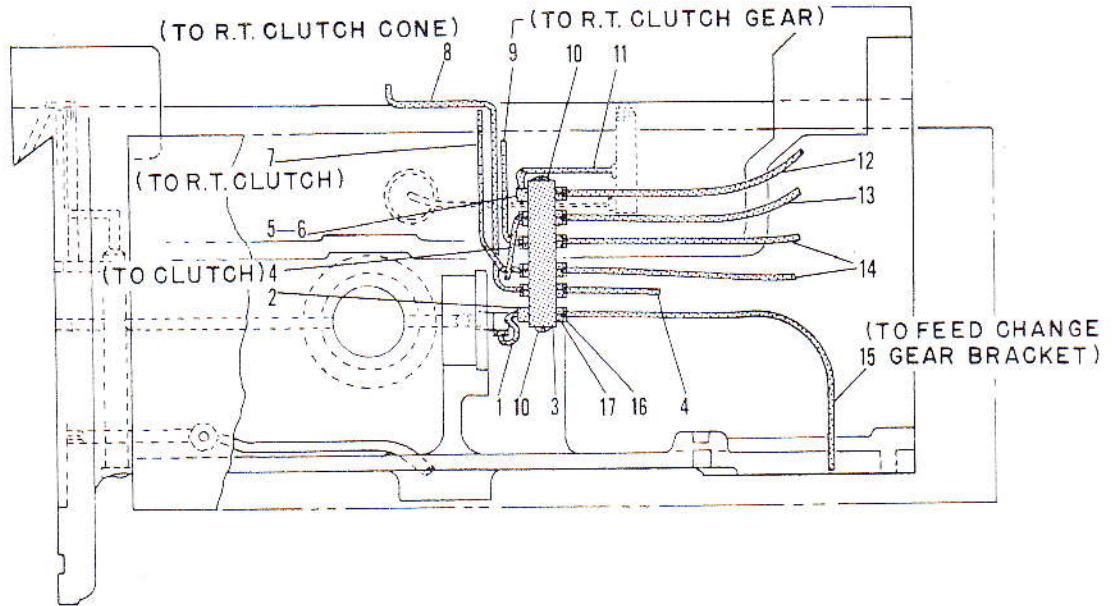


FIG. 28 VERTICAL COLUMN AND HEAD LUBRICATION

Fig. 28 Vertical Column and Head Lubrication

Item No.	Part Name and Description	Code No.	Qty.
1	Strainer	2H-Y17	1
2	Weatherhead Fitting, No. 200 x 6	2H-Y18	3
3	Weatherhead Fitting, No. 105 x 6	2H-Y19	5
4	Copper Tubing, 3/8 x 13 in.	2H-Y20	1
5	Pipe Clamp	2H-Y21	1
6	Weatherhead Fitting, No. 400 x 6	2H-Y22	2
7	Copper Tubing, 3/8 x 9 in.	2H-Y23	1
8	Copper Tubing, 3/16 x 8 in.	2H-Y24	1
9	Copper Tubing, 3/16 x 6 in.	2H-Y25	1
10	Copper Tubing, 3/16 x 7 in.	2H-Y26	1
11	Copper Tubing, 3/16 x 9 in.	2H-Y27	1
12	Manifold	2H-Y28	1
13	Weatherhead Fitting, No. 105 x 3	2H-Y29	5
14	Slotted Plug, 3/16 in.	2H-Y30	1
15	Copper Tubing, 3/8 x 31 in.	2H-Y31	1
16	Copper Tubing, 3/16 x 18 in.	2H-Y32	1
17	Stand Pipe	2H-Y33	1
18	Copper Tubing, 1/4 x 19-1/2 in.	2H-Y34	2



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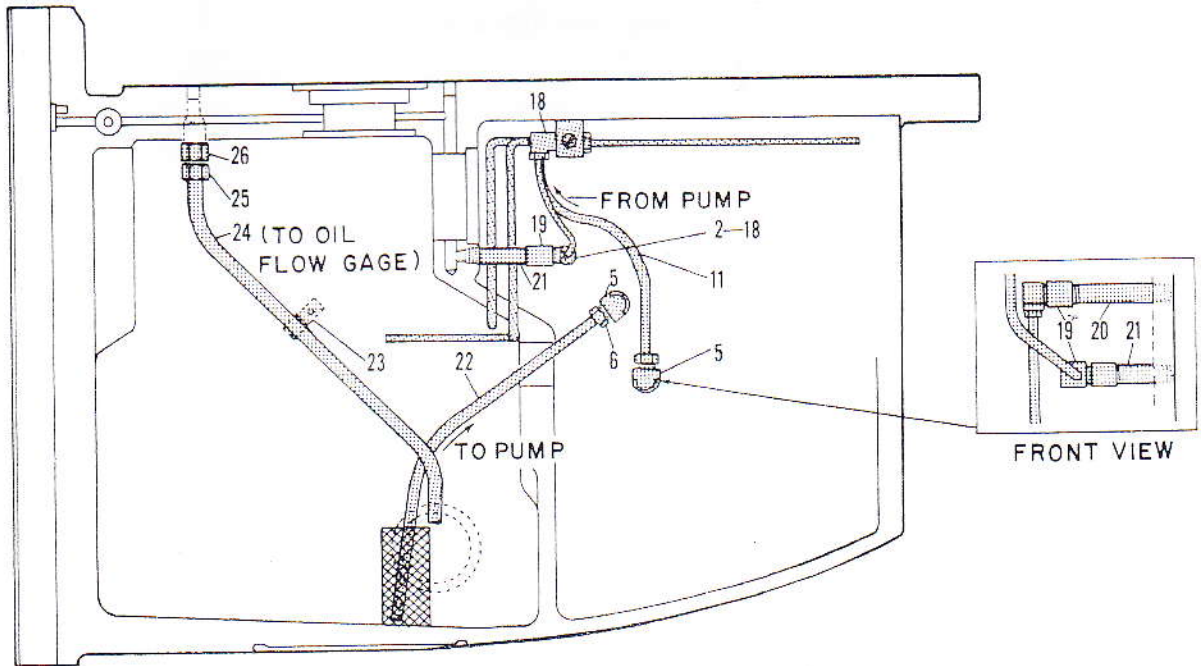


FIG. 29 KNEE LUBRICATION

Fig. 29 Knee Lubrication

Item No.	Part Name and Description	Code No.	Qty.
1	Copper Tubing, 3/16 x 6 in.	2H-Y35	1
2	Weatherhead Fitting, No. 400 x 3	2H-Y36	2
3	Manifold	2H-Y37	1
4	Copper Tubing, 5/32 x 6 in.	2H-Y38	2
5	Weatherhead Fitting, No. 400 x 5	2H-Y39	3
6	Weatherhead Fitting, No. 105 x 5	2H-Y40	3
7	Copper Tubing, 5/32 x 14-1/2 in.	2H-Y41	1
8	Copper Tubing, 5/32 x 18 in.	2H-Y42	1
9	Copper Tubing, 5/32 x 11-1/2 in.	2H-Y43	1
10	Slotted Pipe Plug, 1/4 in.	2H-Y44	2
11	Copper Tubing, 5/16 x 10 in.	2H-Y45	2
12	Copper Tubing, 5/32 x 7 in.	2H-Y46	1
13	Copper Tubing, 5/32 x 5 in.	2H-Y47	1
14	Copper Tubing, 5/32 x 5-1/2 in.	2H-Y48	2
15	Copper Tubing, 5/32 x 6-1/2 in.	2H-Y49	1
16	Bijur Bushing, No. B-1371	2H-Y50	10
	Bijur Compression Sleeve, No. B-1061	2H-Y51	10
17	Bijur Straight Adapter, No. B-2835	2H-Y52	10
18	Weatherhead Fitting, No. 105 x 3	2H-Y53	2
19	W. I. Coupling, 1/8 in.	2H-Y54	3
20	W. I. Nipple, 1/8 x 2-1/2 in.	2H-Y55	1
21	W. I. Nipple, 1/8 x 2 in.	2H-Y56	2
22	Copper Tubing, 5/16 x 11-1/2 in.	2H-Y57	1
23	Pipe Clamp, 3/8 in.	2H-Y58	1
24	Copper Tubing, 3/8 x 13-1/2 in.	2H-Y59	1
25	Weatherhead Fitting, No. 105 x 6	2H-Y60	1
26	Weatherhead Fitting, No. 200 x 6	2H-Y61	1