

REPLACEMENT PARTS MANUAL

No. CER-3



3hp No. 2

MODEL CE

**plain and universal
Milling Machines**

SCOTT MACHINE TOOL CO.

MACHINE TOOLS AND SUPPLIES
417 Williams St., N. W. Atlanta 8, Ga.
Phone JACKSON 5-8311



KEARNEY & TRECKER CORPORATION

MILWAUKEE 14, WISCONSIN, U. S. A.

Manual CER-3

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3hp No. 2

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Milling Machines

One copy of this manual is furnished with each new machine. Additional copies may be obtained by writing direct to Kearney & Trecker Corporation.

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Kearney & Trecker
Corporation

Milwaukee 14, Wisconsin

U. S. A.

FOREWORD

This is a replacement parts manual for the 3hp No. 2 Model CE Plain and Universal KEARNEY & TRECKER milling machines. In the purchase of these machine tools you possess an absolute guarantee of precision built equipment—designed and manufactured so as to assure the greatest measure of long life performance. There remains, however, still another responsibility—that of providing prompt service for replacement parts and general maintenance resulting from natural wear or accidental damage to the machine—to keep them in sound operating condition. This manual will help you do that quickly.

About the manual itself; every effort has been made to make this book as clear and concise as is practical to avoid delay and misunderstanding in ordering parts. The various assemblies are indexed on pages 4 and 5. (Figs. 1 and 2)

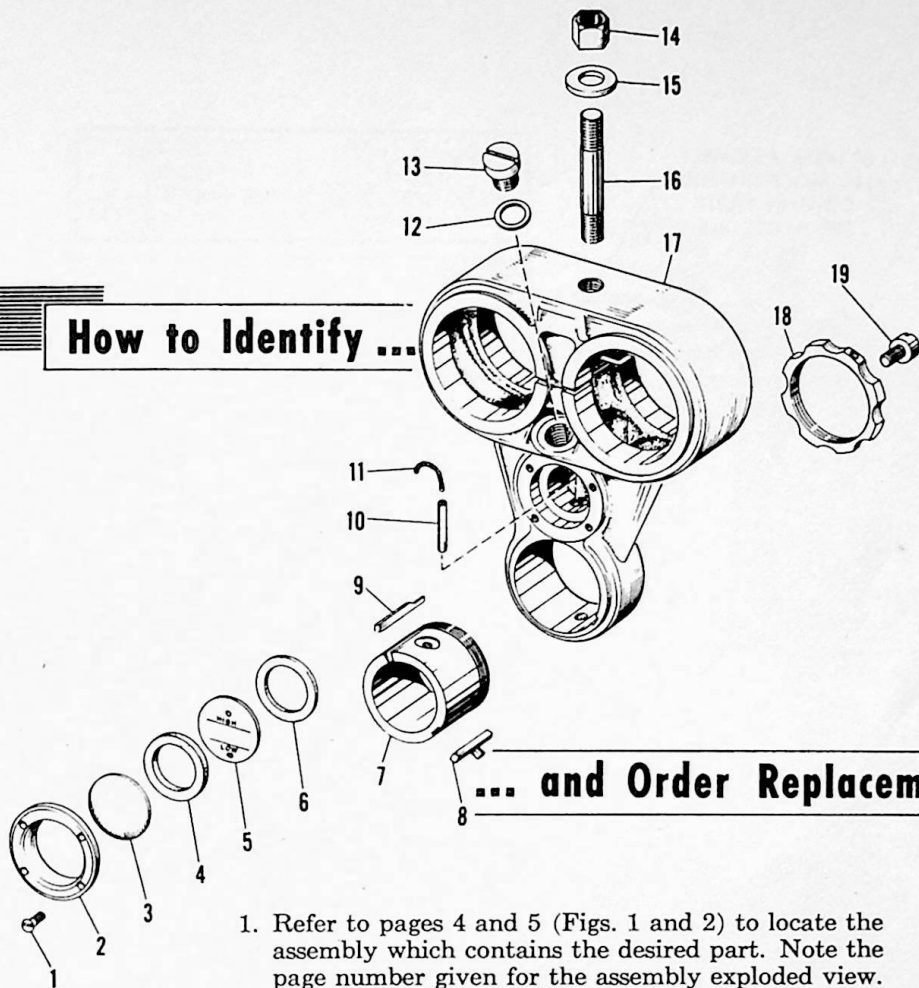
Instructions noted in the following pages must be followed carefully. In several instances it will be observed that certain parts are mated at the home factory. Such parts cannot be replaced individually and must be sent out in pairs or sets.

KEARNEY & TRECKER maintains, insofar as possible, a complete record, based on machine serial number, of every machine built. To insure prompt and efficient service it is imperative, therefore, to include the machine size, model and serial number with every inquiry or order. This information will be found stamped in the lower border of the trademark located on the left side of the column.

It is our intention to continually improve the service you receive from KEARNEY & TRECKER milling machines and make the parts replacement problem a simple procedure. By following the instructions for identifying and ordering parts, given on the next page, you will be assured of prompt service.

KEARNEY & TRECKER
CORPORATION
Milwaukee 14, Wisconsin
U. S. A.

How to Identify ...



... and Order Replacement Parts

1. Refer to pages 4 and 5 (Figs. 1 and 2) 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 (stamped in the lower border of the trademark located 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.

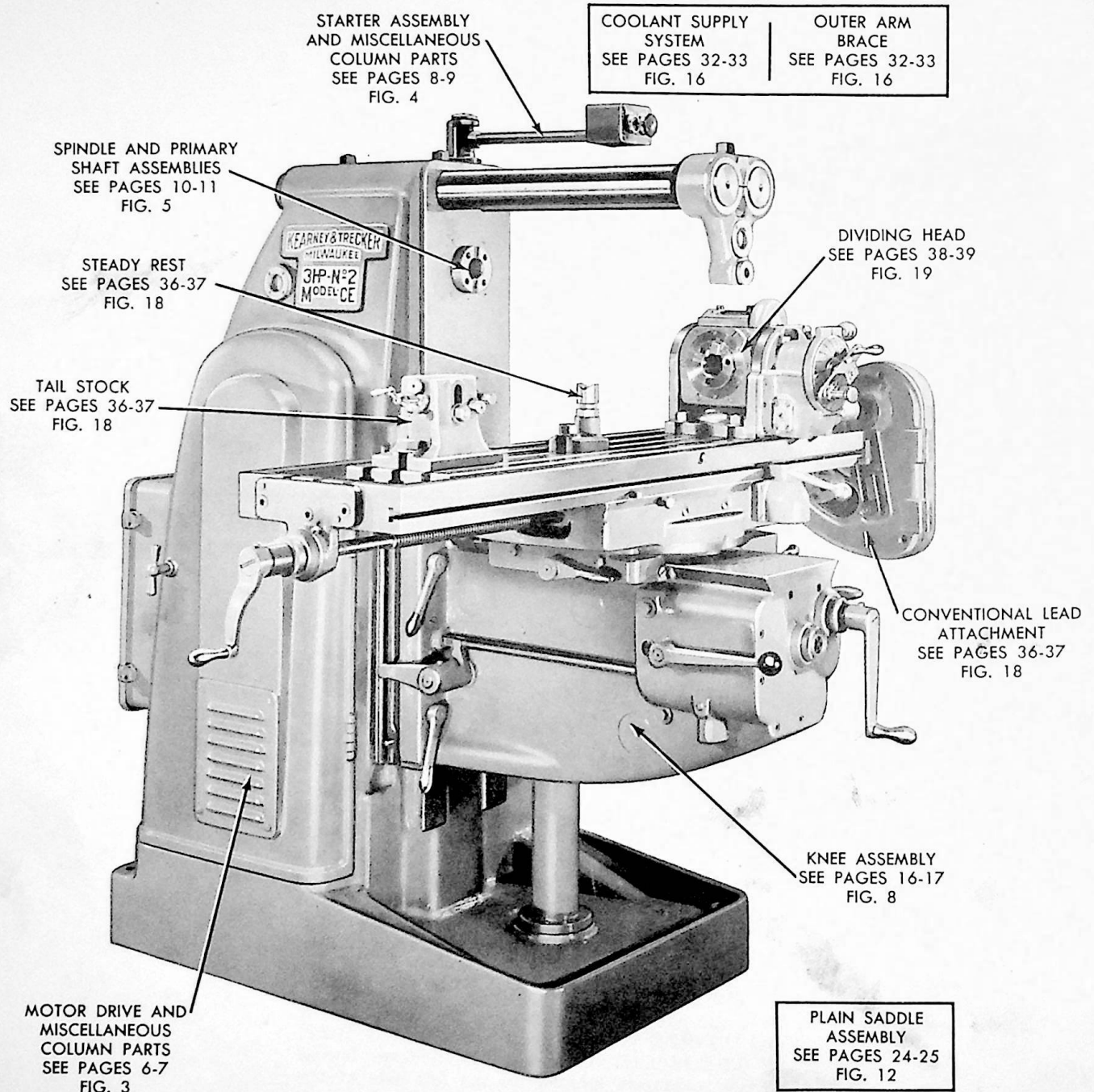


Fig. 1 — No. 2 Model CE Milling Machine — Left Front Side

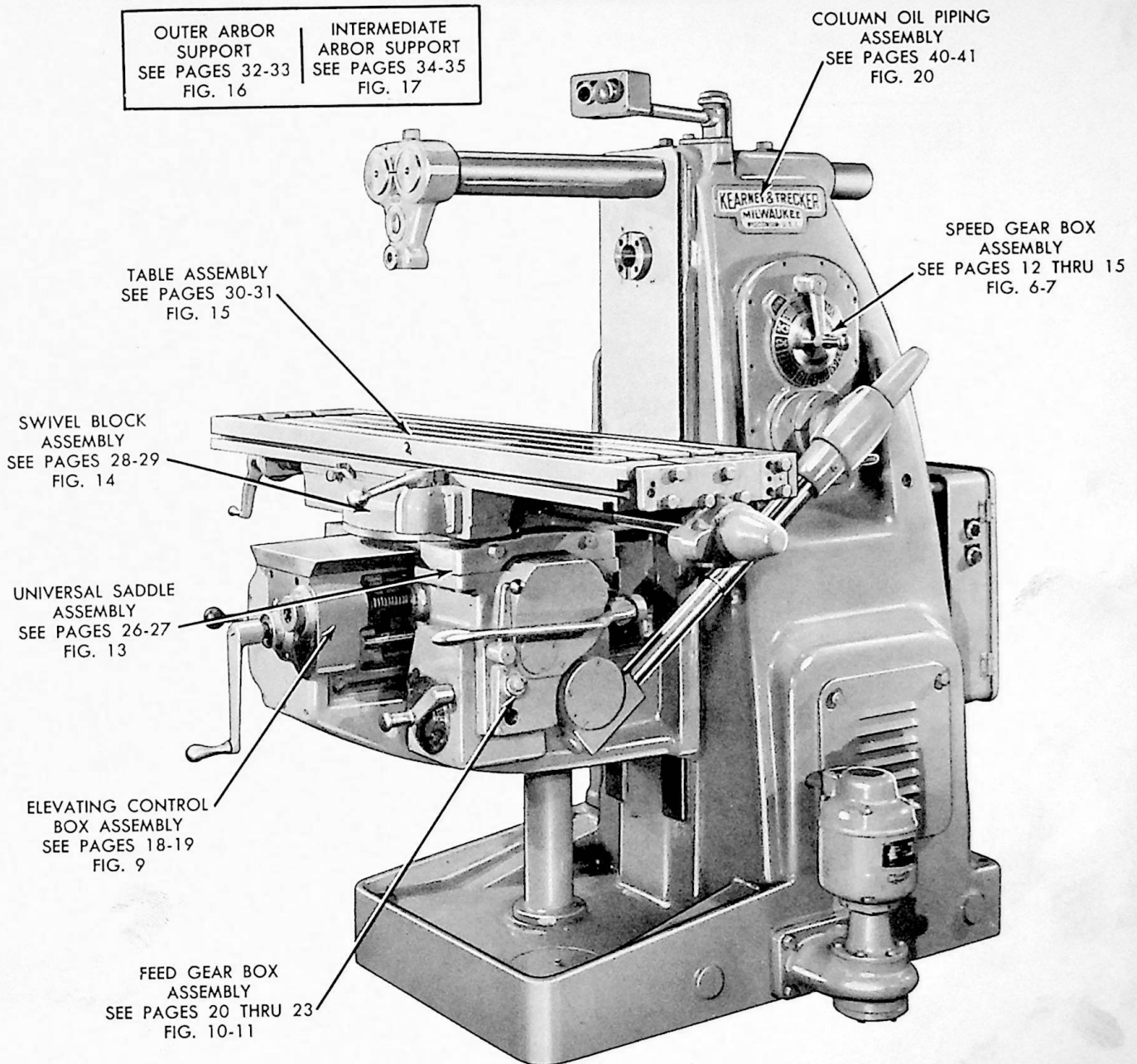


Fig. 2 — No. 2 Model CE Milling Machine — Right Front Side

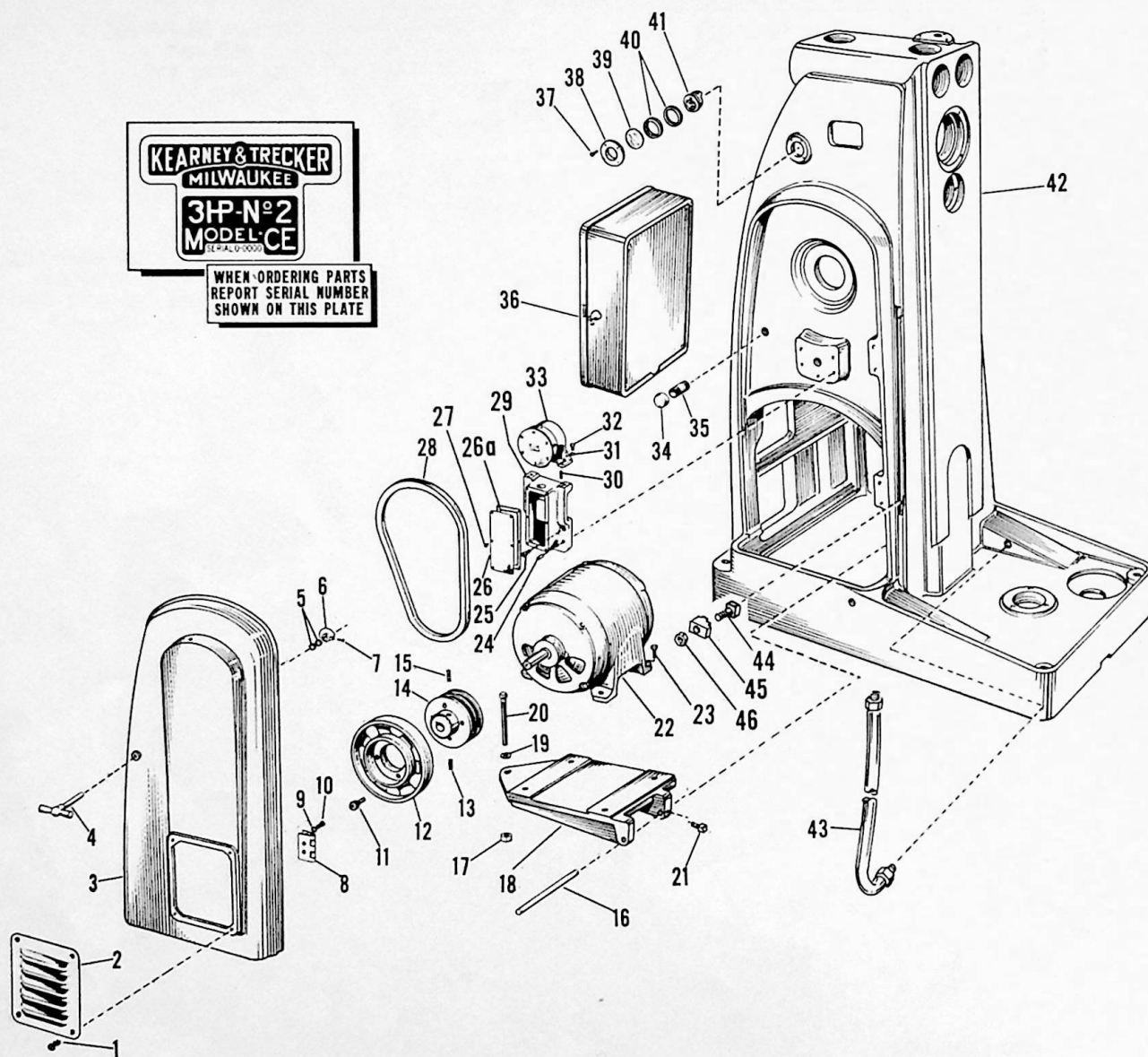


Fig. 3 — Motor drive and miscellaneous column parts

Fig. 3 — Motor drive and miscellaneous column parts

Order by CODE No. and MACHINE SERIAL No.			
Item No.	Part Name and Description	Code No.	Qty.
1	Rd hd mach screw, 1/4 x 3/8 in.....	2CE-A1	4
2	Pulley door louvre plate.....	2CE-A2	1
3	Pulley door.....	2CE-A3	1
4	Door handle.....	2CE-A4	1
5	Spacing washer.....	2CE-A5	*
6	Door latch.....	2CE-A6	1
7	Screw.....	2CE-A7	1
8	Pulley door hinge.....	2CE-A8	2
9	Washer.....	2CE-A9	8
10	Screw.....	2CE-A10	8
11	Soc head cap screw, 5/16 x 5/8 in.....	2CE-A11	2
12	Motor fan.....	2CE-A12	1
13	Soc hd cup pt set screw, 5/16 x 3/4 in..	2CE-A13	1
14	Motor sheave, 1750 RPM 60 c.....	2CE-A14	1
	Motor sheave, 1450 RPM 50 c.....	2CE-A14A	1
15	Soc head cup set screw, 5/16 x 5/8 in....	2CE-A15	1
16	Motor base support rod.....	2CE-A16	1
17	Nut.....	2CE-A17	1
18	Motor base.....	2CE-A18	1
19	Check nut.....	2CE-A19	2
20	Motor base adjusting screw.....	2CE-A20	1
21	Sq hd set screw, 3/8—16 x 1 3/4 in....	2CE-A21	1
22	Electric motor, 3hp, 1800 RPM, 3 phase, 60 cycle, 220/440 volts, frame 225.....	2CE-A22	1
23	Screw.....	2CE-A23	4
24	Blue label dowel pin, 5/16 x 1 1/4 in....	2CE-A24	2
25	Soc head cap screw, 3/8 x 7/8 in.....	2CE-A25	3
26	Switch support bracket cover.....	2CE-A26	1
26A	Switch cover gasket, 1/16 in. Neoprene.	2CE-A26A	1
27	Rd hd mach screw, #10—32 x 3/8 in..	2CE-A27	6
28	Allis-Chalmers V-belt, #B71.....	2CE-A28	2
29	Plug switch support bracket.....	2CE-A29	1
30	Blue label dowel pin, 1/4 x 1/2 in.....	2CE-A30	2
31	Washer.....	2CE-A31	2
32	Soc hd cap screw, 5/16 x 3/4 in.....	2CE-A32	2
33	Allen-Bradley zero speed switch, Per Y-5789-D.....	2CE-A33	1
34	Plain malleable iron cap, 3/4 in.....	2CE-A34	1
35	Nipple, 3/4 in. short, 2 in. long.....	2CE-A35	1
36	Allen-Bradley type 1A control panel..	2CE-A36	1
37	Screw.....	2CE-A37	4
38	Oil flow gage plate.....	2CE-A38	1
39	Oil gage glass.....	2CE-A39	1
40	Oil gage washer.....	2CE-A40	2
41	Oil flow gage.....	2CE-A41	1
42	Column.....	2CE-A42	1
43	Coolant drain hose.....	2CE-A43	1
44	T-bolt.....	2CE-A44	2
45	Vertical trip dog.....	2CE-A45	2
46	Hex nut.....	2CE-A46	2

*As required to fit.

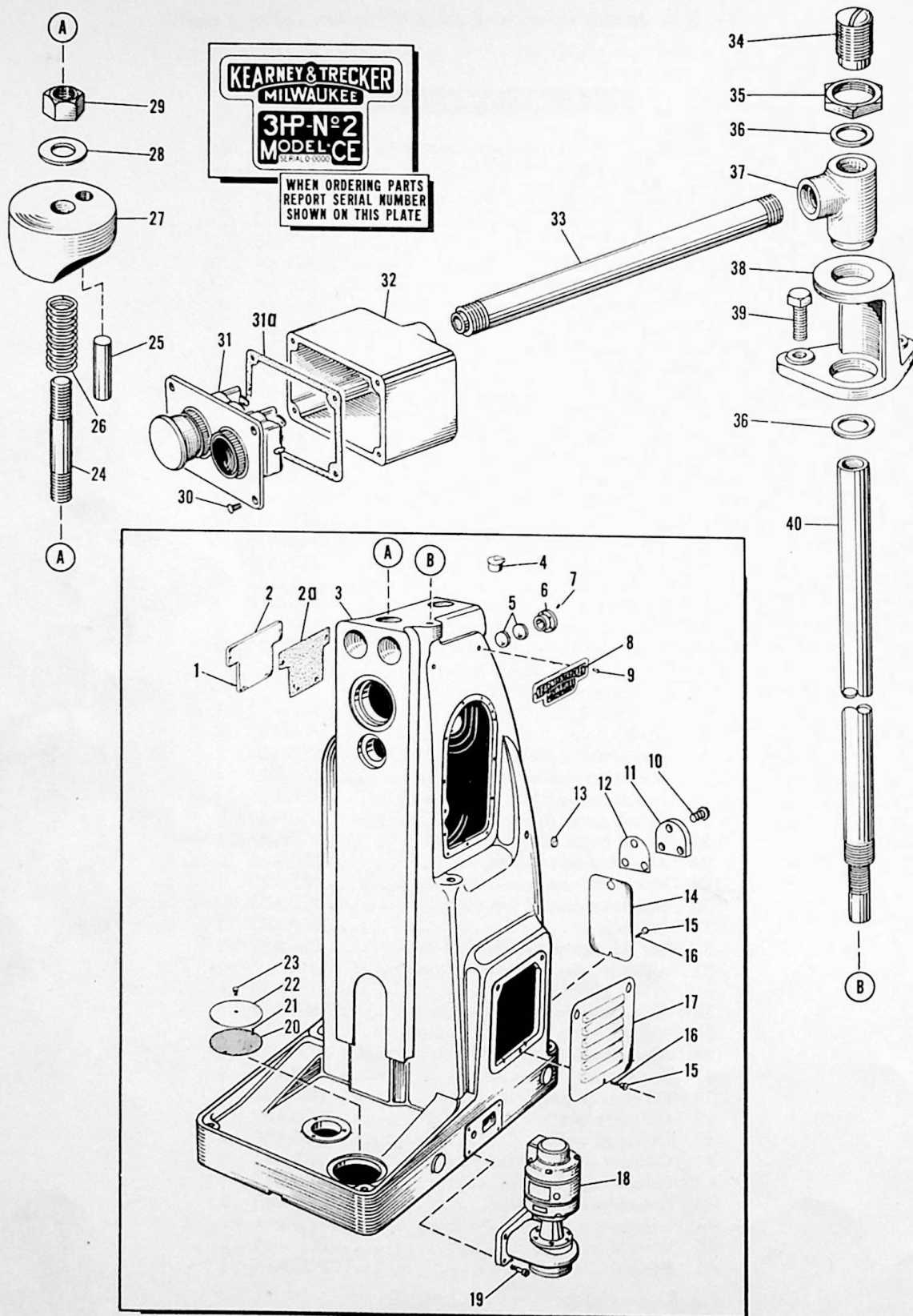


Fig. 4 — Starter assembly and miscellaneous column parts

Fig. 4 — Starter assembly and miscellaneous column parts

Order by CODE No. and MACHINE SERIAL No.

Item No.	Part Name and Description	Code No.	Qty.
1	Flt hd mach screw, #10—32 x 3/4 in...	2CE-B1	4
2	Name plate.....	2CE-B2	1
2A	Column name plate seal.....	2CE-B2A	1
3	Column.....	2CE-B3	1
4	Gits oiler, #409.....	2CE-B4	1
5	Knee vent baffle plate.....	2CE-B5	2
6	Knee vent plate.....	2CE-B6	1
7	Screw.....	2CE-B7	4
8	Name plate (medium).....	2CE-B8	1
9	Flt hd mach screw, 10—32 x 3/4 in...	2CE-B9	2
10	Screw.....	2CE-B10	3
11	Coolant clean-out cover.....	2CE-B11	1
12	Coolant clean-out cover gasket.....	2CE-B12	1
13	Bijur oil window, #B-5093.....	2CE-B13	1
14	Motor base adjusting cover.....	2CE-B14	1
15	Clamp nut.....	2CE-B15	1
16	Stud.....	2CE-A16	1
17	Motor chamber cover.....	2CE-B17	1
18	Gusher coolant pump, Ruthman Co., #11020 (short) 220/440 volts, 3 phase, 50/60 cycle.....	2CE-B18	1
19	Hex head cap screw.....	2CE-B19	4
20	Column drain screen.....	2CE-B20	1
21	Flt hd mach screw, #10—32 x 3/8 in...	2CE-B21	2
22	Column drain cover.....	2CE-B22	1
23	Knob.....	2CE-B23	1
24	Stud.....	2CE-B24	2
25	Clamp block pin.....	2CE-B25	2
26	Spring.....	2CE-B26	2
27	Overarm clamp.....	2CE-B27	2
28	Washer.....	2CE-A28	2
29	Nut.....	2CE-B29	2
30	Oval mach screw, #10—32 x 5/8 in...	2CE-B30	4
31	Push button switch plate.....	2CE-B31	1
31A	Push button plate gasket, 1/16 in. Neoprene.....	2CE-B31A	1
32	Starting lever switch box.....	2CE-B32	1
33	Starting lever arm.....	2CE-B33	1
34	Hub swivel screw.....	2CE-B34	1
35	Nut.....	2CE-B35	1
36	Friction washer.....	2CE-B36	2
37	Starting lever hub.....	2CE-B37	1
38	Starting lever bracket.....	2CE-B38	1
39	Hex head cap screw.....	2CE-B39	1
40	Starting lever conduit.....	2CE-B40	1

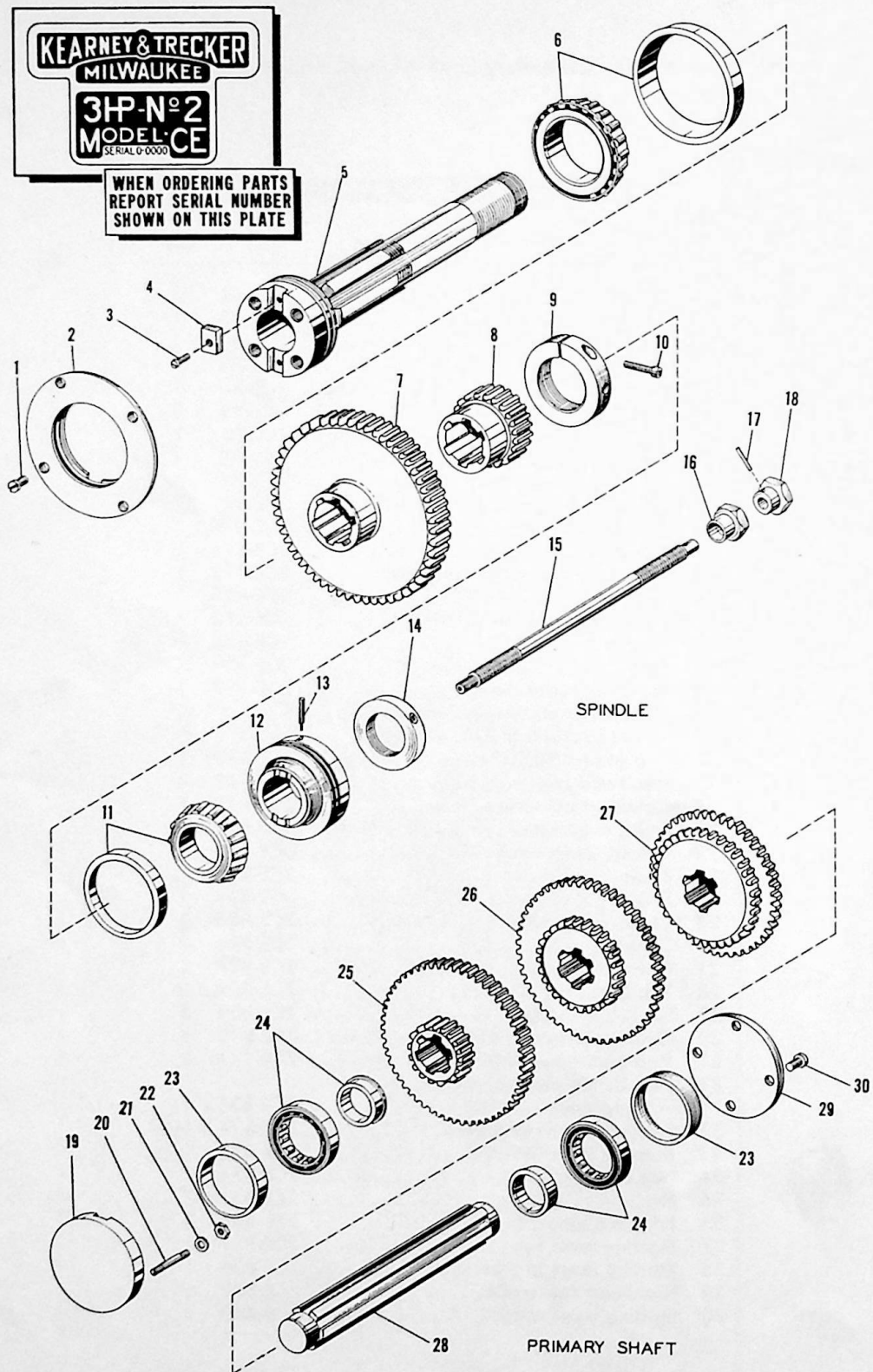


Fig. 5 — Spindle and primary shaft assemblies

Fig. 5 — Spindle and primary shaft assemblies

Order by CODE No. and MACHINE SERIAL No.			
Item No.	Part Name and Description	Code No.	Qty.
1	Screw.....	2CE-C1	4
2	Spindle oil shield.....	2CE-C2	1
3	Screw.....	2CE-C3	2
4	Spindle drive key.....	2CE-C4	2
5	Spindle.....	2CE-C5	1
6	Timken bearing, #3920B-3982.....	2CE-C6	1
7	Large spindle gear.....	2CE-C7	1
8	Small spindle gear.....	2CE-C8	1
9	Spindle.....	2CE-C9	1
10	Soc hd cap screw, $\frac{5}{16}$ x $1\frac{1}{4}$ in.....	2CE-C10	2
11	Timken bearing, #432-438W.....	2CE-C11	1
12	Rear oil slinger.....	2CE-C12	1
13	Oil slinger pin.....	2CE-C13	1
14	Collar nut.....	2CE-C14	1
15	Draw-in bolt.....	2CE-C15	1
16	Draw bolt nut.....	2CE-C16	1
17	Taper pin, #2 x 1 in.....	2CE-C17	1
18	Draw bolt head.....	2CE-C18	1
19	Primary shaft bearing cover.....	2CE-C19	1
20	Stud.....	2CE-C20	2
21	Washer.....	2CE-C21	2
22	Nut.....	2CE-C22	2
23	Primary shaft bearing spacer.....	2CE-C23	2
24	Hyatt bearing, #R1207TS.....	2CE-C24	2
25	Spindle drive sliding gear.....	2CE-C25	1
26	Primary sliding front gear.....	2CE-C26	1
27	Primary sliding rear gear.....	2CE-C27	1
28	Primary speed change shaft.....	2CE-C28	1
29	Primary shaft rear bearing cover.....	2CE-C29	1
30	Screw.....	2CE-C30	4

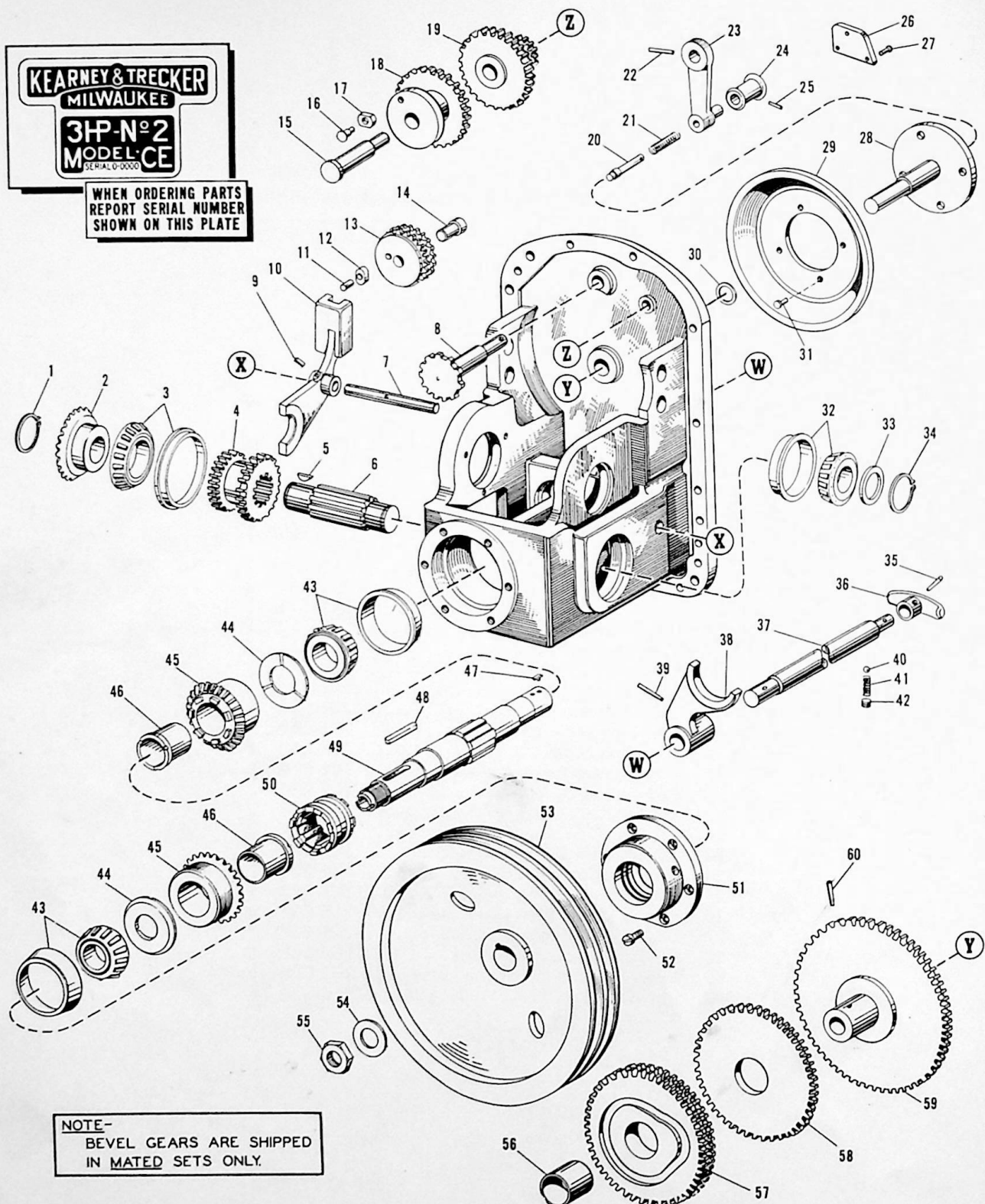


Fig. 6 — Speed gear box assembly — View A

Fig. 6 — Speed gear box assembly — View A

Order by CODE No. and MACHINE SERIAL No.				Order by CODE No. and MACHINE SERIAL No.			
Item No.	Part Name and Description	Code No.	Qty.	Item No.	Part Name and Description	Code No.	Qty.
1	Truarc snap ring, #5100-106.....	2CE-D1	1	31	Tinners rivet, #5.....	2CE-D31	4
2	Spindle drive bevel gear.....	2CE-D2	1	32	Timken bearing, 17244B-17098.....	2CE-D32	1
3	Timken bearing, LL20541B-LL205449.	2CE-D3	1	33	Bevel gear fitting washer.....	2CE-D33	1
4	Primary shift gear.....	2CE-D4	1	34	Snap ring.....	2CE-D34	1
5	Hi-Pro key, #606.....	2CE-D5	1	35	Taper pin, #3 x 7/8 in.....	2CE-D35	1
6	Spindle drive bevel gear shaft.....	2CE-D6	1	36	Spindle reverse knob.....	2CE-D36	1
7	Lower range change fork pin.....	2CE-D7	1	37	Spindle reverse shifter rod.....	2CE-D37	1
8	Cam drive pinion.....	2CE-D8	1	38	Spindle reverse shifter fork.....	2CE-D38	1
9	Roll pin, 3/16 x 1 1/8 in.....	2CE-D9	1	39	Taper pin, #3 x 1 1/8 in.....	2CE-D39	1
10	Lower range change fork.....	2CE-D10	1	40	Steel ball, 3/16 in. dia.....	2CE-D40	1
11	Lower range change roll pin.....	2CE-D11	1	41	Spring.....	2CE-D41	1
12	Range shifter block.....	2CE-D12	1	42	Screw.....	2CE-D42	1
13	Lower range change gear.....	2CE-D13	1	43	Timken bearing, 2523B-2580.....	2CE-D43	2
14	Lower range change gear shaft.....	2CE-D14	1	44	Reverse bevel gear thrust collar.....	2CE-D44	2
15	Range change gear shaft.....	2CE-D15	1	45	Spindle reverse bevel gear.....	2CE-D45	2
16	Range shifter roll pin.....	2CE-D16	1	46	Spindle reverse bevel gear bushing...	2CE-D46	2
17	Range shifter block.....	2CE-D17	1	47	Key.....	2CE-D47	1
18	Range change gear.....	2CE-D18	1	48	Key.....	2CE-D48	1
19	Upper range change gear.....	2CE-D19	1	49	Reverse bevel gear shaft.....	2CE-D49	1
20	Speed selection lever plunger.....	2CE-D20	1	50	Spindle reverse clutch.....	2CE-D50	1
21	Spring.....	2CE-D21	1	51	Bearing carrier.....	2CE-D51	1
22	Taper pin, #3 x 1 3/8 in.....	2CE-D22	1	52	Screw.....	2CE-D52	6
23	Speed change lever.....	2CE-D23	1	53	Pulley.....	2CE-D53	1
24	Speed selection knob.....	2CE-D24	1	54	Washer.....	2CE-D54	1
25	Taper pin, #2 x 1 in.....	2CE-D25	1	55	Elastic stop nut, #42TE164.....	2CE-D55	1
26	R.P.M. plate.....	2CE-D26	1	56	Speed dial drive gear bushing.....	2CE-D56	1
27	Escutcheon pin, #15 x 7/16 in.....	2CE-D27	1	57	Speed change cam.....	2CE-D57	1
28	Speed dial drive shaft.....	2CE-D28	1	58	Cam drive idler gear.....	2CE-D58	1
29	Speed dial, 25-1300.....	2CE-D29	1	59	Speed dial drive gear.....	2CE-D59	1
29A	Speed dial, 30-1575.....	2CE-D29A	1	60	Taper pin, 3 x 1 1/8 in.....	2CE-D60	1
30	"O" ring, AN6227-15.....	2CE-D30	1				

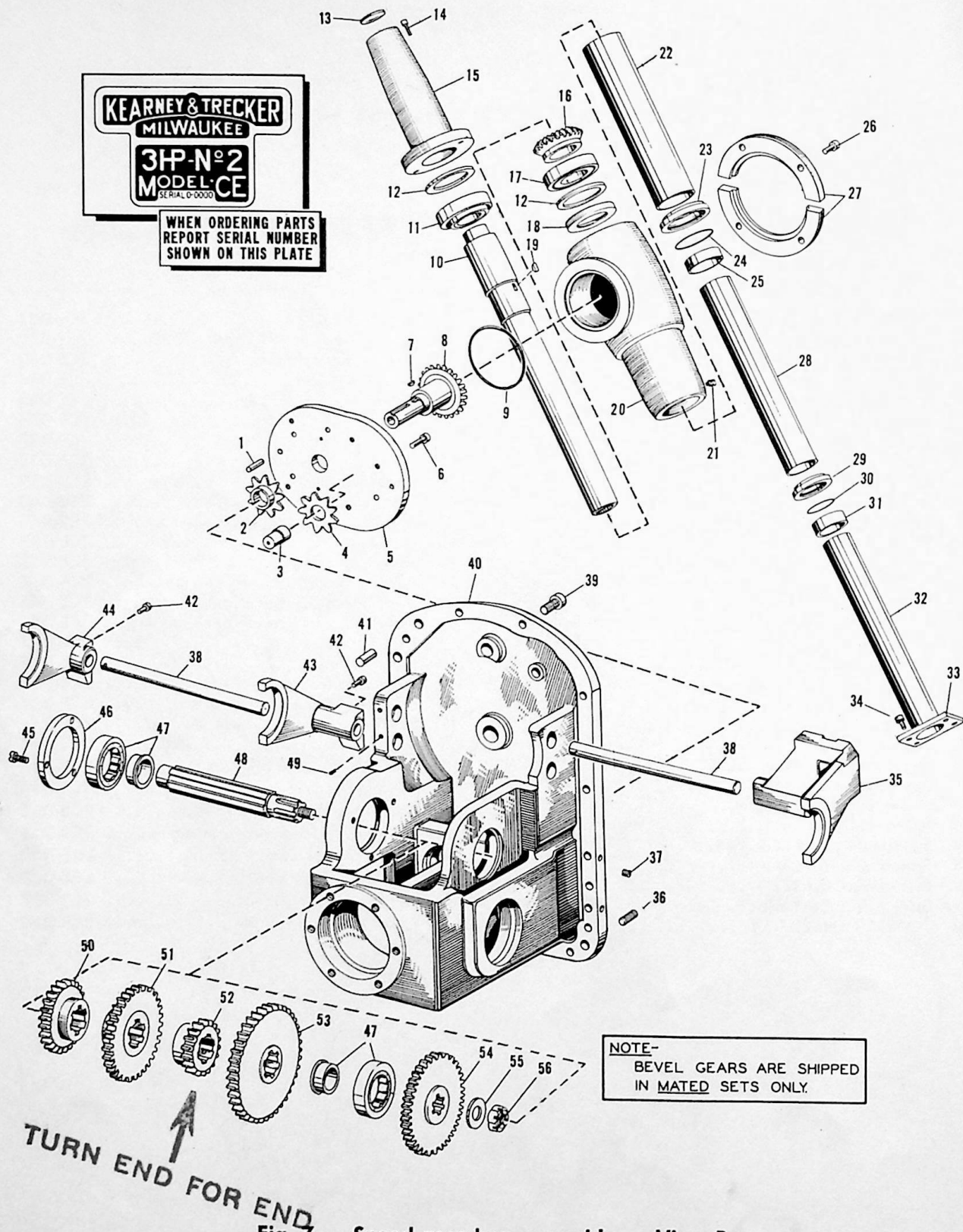


Fig. 7 — Speed gear box assembly — View B

Fig. 7 — Speed gear box assembly — View B

Order by CODE No. and MACHINE SERIAL No.

Item No.	Part Name and Description	Code No.	Qty.
1	Blue label dowel pin, $\frac{5}{16} \times 1\frac{1}{8}$ in....	2CE-E1	2
2	Oil pump driver gear.....	2CE-E2	1
3	Oil pump gear stud.....	2CE-E3	1
4	Oil pump driven gear.....	2CE-E4	1
5	Oil pump cover and bevel gear brg... 2CE-E5	1	
6	Screw.....	2CE-E6	6
7	Hi-pro key, #404.....	2CE-E7	1
8	Feed drive bevel gear driver.....	2CE-E8	1
9	"O" ring, AN6230-9	2CE-E9	1
10	Feed drive sleeve.....	2CE-E10	1
11	New departure bearing, #8506.....	2CE-E11	1
12	Fitting washer.....	2CE-E12	2
13	Expansion plug, $\frac{1}{8}$ in.....	2CE-E13	1
14	Soc hd cap screw, $\frac{1}{4}$ —20 x $\frac{3}{4}$ in... 2CE-E14	2	
15	Feed drive bracket cap.....	2CE-E15	1
16	Feed drive bevel driven gear.....	2CE-E16	1
17	New departure bearing, #OL07.....	2CE-E17	1
18	Vickers oil seal, #R200-108.....	2CE-E18	1
19	Hi-Pro key, #606.....	2CE-E19	1
20	Feed drive bracket.....	2CE-E20	1
21	Soc hd dog pt set screw, $\frac{1}{4} \times \frac{5}{8}$ in... 2CE-E21	1	
22	Telescopic upper tube.....	2CE-E22	1
23	Telescopic tube "O" ring retainer.....	2CE-E23	1
24	"O" ring, AN6230-2	2CE-E24	1
25	Telescopic tube collar.....	2CE-E25	1
26	Soc hd cap screw, $\frac{5}{16} \times \frac{3}{4}$ in.....	2CE-E26	4
27	Feed drive bracket retaining ring.....	2CE-E27	1 pr.
28	Telescopic center tube.....	2CE-E28	1
29	Telescopic tube "O" ring retainer.....	2CE-E29	1
30	"O" ring, AN6227-27	2CE-E30	1
31	Telescopic tube collar.....	2CE-E31	1
32	Telescopic lower tube.....	2CE-E32	1
33	Telescopic tube end plate.....	2CE-E33	1
34	Screw.....	2CE-E34	4
35	Spindle sliding gear shifter.....	2CE-E35	1
36	Soc flt pt set screw, $\frac{1}{2} \times \frac{3}{4}$ in.....	2CE-E36	2
37	Soc hd pipe plug, $\frac{1}{4}$ in. dia.....	2CE-E37	2
38	Shifter fork guide rod.....	2CE-E38	2
39	Soc hd cap screw, $\frac{3}{8} \times 1\frac{1}{4}$ in.....	2CE-E39	2
40	Speed gear box.....	2CE-E40	1
41	Blue label dowel pin, $\frac{1}{2} \times 1\frac{1}{2}$ in.... 2CE-E41	2	
42	Primary change lever pin.....	2CE-E42	2
43	Primary slide gear shifter (front).....	2CE-E43	1
44	Primary slide gear shifter (rear).....	2CE-E44	1
45	Screw.....	2CE-E45	3
46	Idler shaft bearing retainer.....	2CE-E46	1
47	Hyatt bearing, #R1305YS.....	2CE-E47	2
48	Idler shaft.....	2CE-E48	1
49	Set screw.....	2CE-E49	2
50	Idler second speed gear.....	2CE-E50	1
51	Idler third speed gear.....	2CE-E51	1
52	Idler high speed gear..... <i>Low</i>	2CE-E52	1
53	Idler low speed gear..... <i>High</i>	2CE-E53	1
54	Outboard gear.....	2CE-E54	1
55	Washer.....	2CE-E55	1
56	Elastic stop nut, #42E080.....	2CE-E56	1



Fig. 8 — Knee assembly

Fig. 8 — Knee assembly

Order by CODE No. and MACHINE SERIAL No.				Order by CODE No. and MACHINE SERIAL No.			
Item No.	Part Name and Description	Code No.	Qty.	Item No.	Part Name and Description	Code No.	Qty.
1	Knee gib.....	2CE-F1	1	31	Torrington bearing, #B-1816.....	2CE-F31	1
2	Knee gib oil pad.....	2CE-F2	1	32	Elevating screw retainer.....	2CE-F32	1
3	Gits oiler, #532.....	2CE-F3	2	33	Screw.....	2CE-F33	1
4	Plug.....	2CE-F4	1	34	Elevating screw cover.....	2CE-F34	1
4A	Plug.....	2CE-F4A	1	35	Flat head screw, #8—32 x 1/2 in.....	2CE-F35	3
5	Gib clamp screw.....	2CE-F5	2	36	Shifting lever knob.....	2CE-F36	1
6	Fil head cap screw.....	2CE-F6	7	37	Elevating reverse lever.....	2CE-F37	1
7	Clamp handle.....	2CE-F7	2	38	Taper pin, #4 x 1 5/8 in.....	2CE-F38	1
8	Vertical feed reverse stop.....	2CE-F8	1	39	"O" ring.....	2CE-F39	1
9	Oval hd mach screw, 1/4 x 5/8 in.....	2CE-F9	2	40	Elevating reverse lever shaft.....	2CE-F40	1
10	Expansion plug, 2 3/4 in.....	2CE-F10	3	41	Taper pin, #4 x 1 1/2 in.....	2CE-F41	1
11	Filler plug.....	2CE-F11	1	42	Elevating reverse lever arm.....	2CE-F42	1
12	Bijur oil window, B-5093.....	2CE-F12	1	43	Link pin.....	2CE-F43	1
13	Plug.....	2CE-F13	1	44	Vertical rod bushing.....	2CE-F44	1
14	Washer.....	2CE-F14	1	45	"O" ring, AN-6227-14.....	2CE-F45	2
15	Elevation trip detent plunger.....	2CE-F15	1	46	"O" ring retainer.....	2CE-F46	1
15A	Dowel.....	2CE-F15A	1	47	Vertical trip rod.....	2CE-F47	1
16	Spring.....	2CE-F16	1	48	Vertical trip lever shaft.....	2CE-F48	1
17	Soc hd pipe plug, 1/2 in.....	2CE-F17	1	49	Vertical trip lever.....	2CE-F49	1
18	Knee.....	2CE-F18	1	50	Taper pin, #4 x 1 3/4 in.....	2CE-F50	1
19	Expansion plug, 2 1/2 in.....	2CE-F19	1	51	Vertical trip lever shaft collar.....	2CE-F51	1
20	Elevating nut extension.....	2CE-F20	1	52	Gits oiler, #532.....	2CE-F52	1
21	Screw.....	2CE-F21	6	53	Oil pump piston.....	2CE-F53	1
22	Elevating nut.....	2CE-F22	1	54	Spring.....	2CE-F54	1
23	Soc hd cap screw, 1/4—20 x 1/2 in....	2CE-F23	4	55	Pipe plug, 1/8 in. soc head.....	2CE-F55	1
24	Oil seal retainer.....	2CE-F24	1	56	Oil pump sleeve.....	2CE-F56	1
25	Perfect type KSD oil seal, #3252.....	2CE-F25	1	57	Spring.....	2CE-F57	1
26	Elevating screw.....	2CE-F26	1	58	3/2 in. dia. steel ball.....	2CE-F58	1
27	Hi-Pro key, HP-808.....	2CE-F27	1	59	T-bolt.....	2CE-F59	2
28	Oil pump eccentric.....	2CE-F28	1	60	Cross feed trip dog.....	2CE-F60	2
29	Elevating screw bevel gear.....	2CE-F29	1	61	Nut.....	2CE-F61	2
30	M.R.C. bearing, #6-B.....	2CE-F30	1				

Replacement Parts Manual

3hp Model No. 2CE Plain and Universal Milling Machines

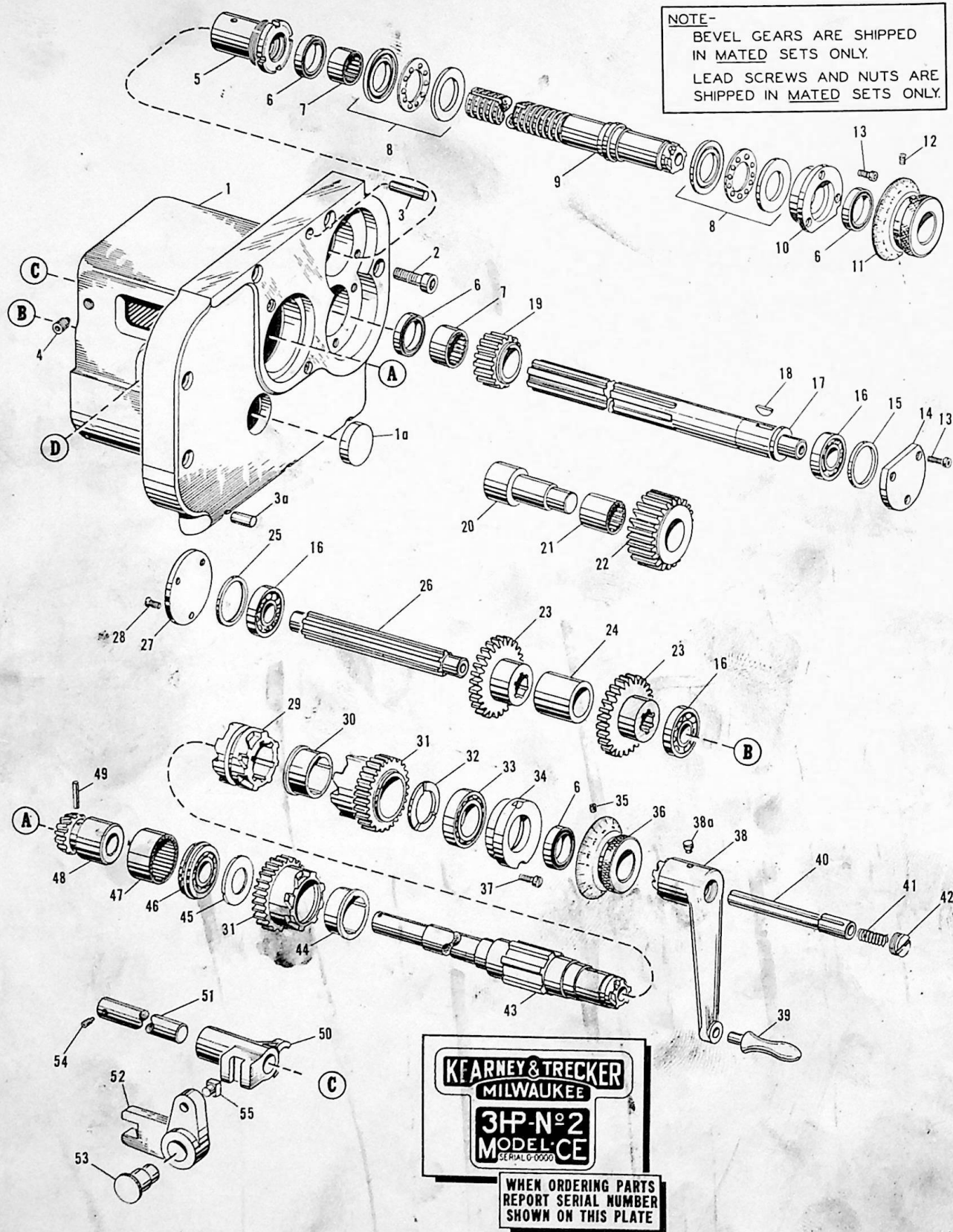


Fig. 9 — Elevating control box assembly

Fig. 9 — Elevating control box assembly

Order by CODE No. and MACHINE SERIAL No.

Item No.	Part Name and Description	Code No.	Qty.
1	Elevation control box.....	2CE-G1	1
1A	Plug, 1 5/8 x 1/4 in.....	2CE-G1A	1
2	Soc hd cap screw, 3/8—1 1/2 in...	2CE-G2	8
3	Blue label dowel pin, 3/8—1 3/4 in....	2CE-G3	1
3A	Blue label dowel pin, 3/8—1 5/8 in....	2CE-G3A	1
4	Dog point set screw.....	2CE-G4	1
5	Cross feed nut.....	2CE-G5	1
6	National oil seal, #50151.....	2CE-G6	4
7	Torrington bearing, #B-1812.....	2CE-G7	2
8	M.R.C. bearing, #2906.....	2CE-G8	2
9	Cross feed screw.....	2CE-G9	1
10	Cross feed shaft oil seal retainer....	2CE-G10	1
11	Cross feed screw graduate collar....	2CE-G11	1
12	Set screw.....	2CE-G12	1
13	Screw.....	2CE-G13	6
14	Elevating drive shaft retaining plate..	2CE-G14	1
15	Elevating drive shaft fitting washer...	2CE-G15	1
16	New departure bearing, #3204.....	2CE-G16	3
17	Elevating drive shaft.....	2CE-G17	1
18	Hi-Pro key, #706.....	2CE-G18	1
19	Elevating gear (driver).....	2CE-G19	1
20	Elevating drive gear stud.....	2CE-G20	1
21	Torrington bearing, #B-1416.....	2CE-G21	1
22	Elevating gear (driven).....	2CE-G22	1
23	Elevating reverse gear.....	2CE-G23	2
24	Elevating reverse gear spacer.....	2CE-G24	1
25	Elevating drive shaft fitting washer...	2CE-G25	1
26	Elevating reverse shaft.....	2CE-G26	1
27	Elevating reverse gear shaft cover...	2CE-G27	1
28	Screw.....	2CE-G28	3
29	Elevating reverse clutch.....	2CE-G29	1
30	Elevating clutch gear bushing.....	2CE-G30	1
31	Elevating clutch gear.....	2CE-G31	1
32	Elevating clutch washer.....	2CE-G32	1
33	New departure bearing, #3206.....	2CE-G33	1
34	Elevating shaft bearing carrier.....	2CE-G34	1
35	Screw.....	2CE-G35	1
36	Elevating graduated collar.....	2CE-G36	1
37	Screw.....	2CE-G37	2
38	Hand cross and elevating crank.....	2CE-G38	1
38A	Gits oiler, #RS-531.....	2CE-G38A	1
39	Rockwood handle, #3QA.....	2CE-G39	1
40	Hand crank guide pin.....	2CE-G40	1
41	Spring.....	2CE-G41	1
42	Plug.....	2CE-G42	1
43	Elevating clutch shaft.....	2CE-G43	1
44	Elevating clutch gear bushing.....	2CE-G44	1
45	Elevating clutch washer.....	2CE-G45	1
46	New departure bearing, #43205.....	2CE-G46	1
47	Torrington bearing, #B-2416.....	2CE-G47	1
48	Elevating pinion.....	2CE-G48	1
49	Roll pin, 1/4 x 1 1/4 in.....	2CE-G49	1
50	Elevating reverse shifter fork.....	2CE-G50	1
51	Elevating reverse shifter rod.....	2CE-G51	1
52	Elevating reverse shifter arm.....	2CE-G52	1
53	Shifter arm stud.....	2CE-G53	1
54	Set screw.....	2CE-G54	1
55	Rapid traverse clutch cone shoe.....	2CE-G55	1

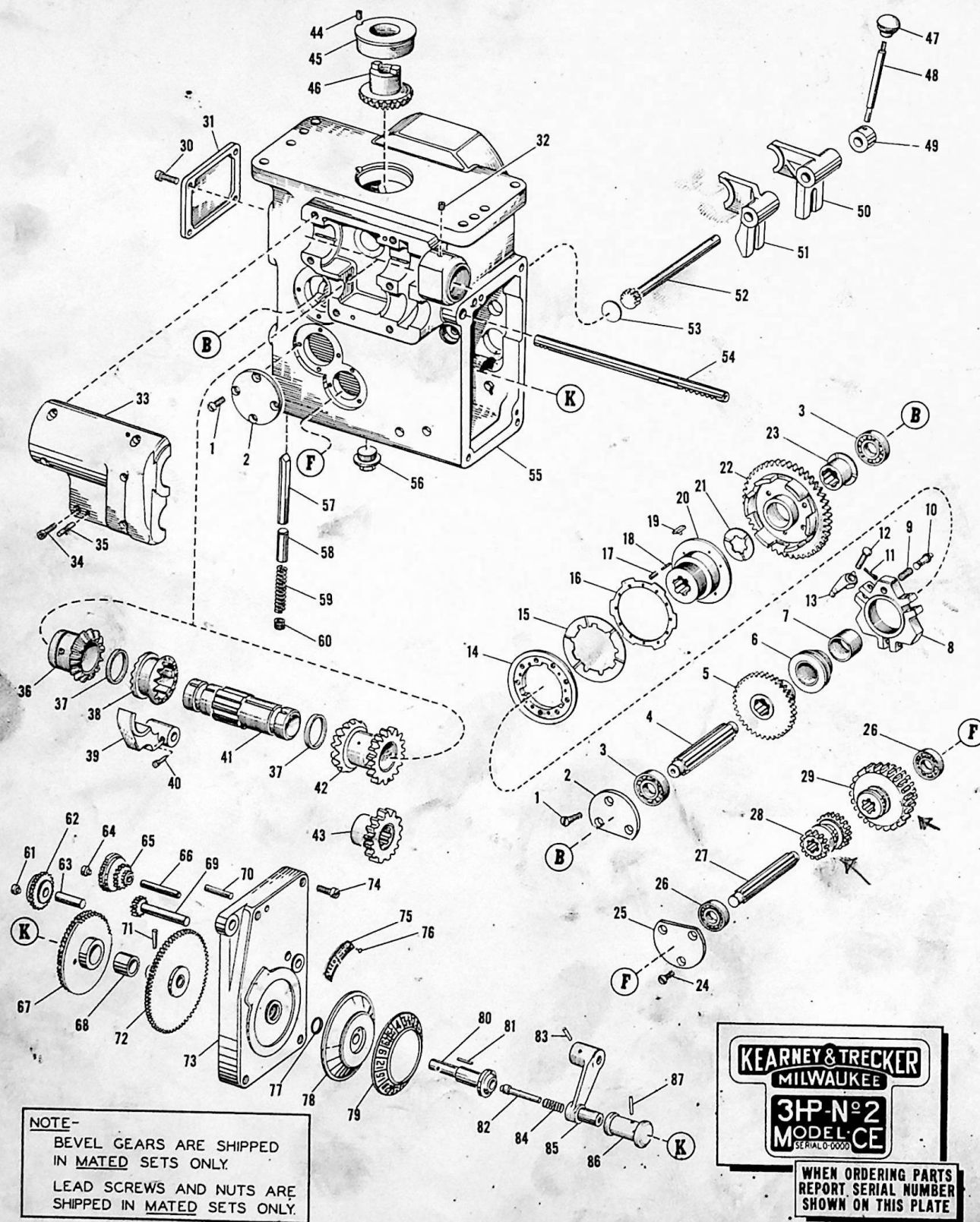


Fig. 10 — Feed gear box assembly — View A

Fig. 10 — Feed gear box assembly — View A

Order by CODE No. and MACHINE SERIAL No.				Order by CODE No. and MACHINE SERIAL No.			
Item No.	Part Name and Description	Code No.	Qty.	Item No.	Part Name and Description	Code No.	Qty.
1	Flat hd cap screw, 1/4—20 x 5/8 in...	2CE-H1	8	45	Table feed drive bevel gear bushing.	2CE-H45	1
2	Large bearing cover.....	2CE-H2	2	46	Table feed drive bevel gear.....	2CE-H46	1
3	New departure bearing, #3203.....	2CE-H3	2	47	Lever ball, #M-281-LX, Chicago Molded Products.....	2CE-H47	1
4	Rapid traverse shaft.....	2CE-H4	1	48	Cross feed lever arm.....	2CE-H48	1
5	Rapid traverse drive shaft gear.....	2CE-H5	1	49	Cross feed lever hub.....	2CE-H49	1
6	Rapid traverse clutch cone.....	2CE-H6	1	50	Minor range change shifter fork.....	2CE-H50	1
7	Rapid traverse clutch cone bushing...	2CE-H7	1	51	Major range change shifter fork.....	2CE-H51	1
8	Adjusting yoke.....	2CE-H8	1	52	Cross feed shifter pinion.....	2CE-H52	1
9	Spring.....	2CE-H9	1	53	Expansion plug, 1 in. dia.....	2CE-H53	1
10	Adjusting lock pin.....	2CE-H10	1	54	Cross feed trip rod.....	2CE-H54	1
11	Cotter pin, 3/32 x 5/8 in.....	2CE-H11	3	55	Feed gear box.....	2CE-H55	1
12	Finger lever pin.....	2CE-H12	3	56	Oil hole plug.....	2CE-H56	1
13	Finger lever.....	2CE-H13	3	57	Cross feed detent.....	2CE-H57	1
14	Rapid traverse clutch floating plate...	2CE-H14	1	58	Spacer.....	2CE-H58	1
15	Clutch driver plate.....	2CE-H15	6	59	Spring.....	2CE-H59	1
16	Clutch driven plate.....	2CE-H16	7	60	Detent plunger guide.....	2CE-H60	1
17	Rapid traverse clutch plate spring.....	2CE-H17	6	61	Feed change cam follower.....	2CE-H61	1
18	Pin, 3/32 x 3/4 in.....	2CE-H18	6	62	Feed range change shifter gear.....	2CE-H62	1
19	Hi-pro key, #706.....	2CE-H19	3	63	Major range change gear shaft.....	2CE-H63	1
20	R. T. clutch hub and back plate.....	2CE-H20	1	64	Feed change cam follower.....	2CE-H64	1
21	Rapid traverse gear bearing plate...	2CE-H21	1	65	Minor range change gear.....	2CE-H65	1
22	Rapid traverse clutch gear.....	2CE-H22	1	66	Minor range change gear shaft.....	2CE-H66	1
23	Rapid traverse gear bushing.....	2CE-H23	1	67	Feed change cam.....	2CE-H67	1
24	Soc flt hd cap screw, 1/4—20 x 5/8 in..	2CE-H24	3	68	Feed change cam bushing.....	2CE-H68	1
25	Bearing cover (small).....	2CE-H25	1	69	Feed change handle gear.....	2CE-H69	1
26	New departure bearing, #3202.....	2CE-H26	2	70	Blue label dowel, 1/4 x 1 1/2 in.....	2CE-H70	2
27	Secondary feed shaft "B".....	2CE-H27	1	71	Taper pin, #2 x 3/4 in.....	2CE-H71	1
28	Secondary shaft low feed gear.....	2CE-H28	1	72	Feed dial drive gear.....	2CE-H72	1
29	Secondary shaft high feed gear.....	2CE-H29	1	73	Feed gear box cam cover.....	2CE-H73	1
30	Fil hd cap screw, 5/16 x 5/8 in.....	2CE-H30	4	74	Fil head cap screw.....	2CE-H74	4
31	Rapid traverse clutch cover.....	2CE-H31	1	75	Feed dial indicator plate.....	2CE-H75	1
32	Dowel set screw.....	2CE-H32	1	76	Escutcheon pin, #5 x 5/16 in.....	2CE-H76	3
33	Cross feed bearing cap.....	2CE-H33	1	77	"O" ring, AN6227-11.....	2CE-H77	1
34	Fil hd cap screw, 3/8 x 1 3/8 in.....	2CE-H34	6	78	Feed dial back plate.....	2CE-H78	1
35	Blue label dowel, 1/4 x 1 1/4 in.....	2CE-H35	2	79	Feed dial.....	2CE-H79	1
36	Table feed screw clutch gear.....	2CE-H36	1	80	Feed dial shaft.....	2CE-H80	1
37	Clutch gear collar.....	2CE-H37	2	81	Blue label dowel, 3/16 x 1/2 in.....	2CE-H81	1
38	Table feed reverse clutch.....	2CE-H38	1	82	Feed selector lever plunger.....	2CE-H82	1
39	Cross feed shifter fork.....	2CE-H39	1	83	Taper pin, #1 x 1 in.....	2CE-H83	1
40	Taper pin screw.....	2CE-H40	1	84	Spring.....	2CE-H84	1
41	Cross feed reverse gear sleeve.....	2CE-H41	1	85	Feed change handle.....	2CE-H85	1
42	Reverse bevel gear (front).....	2CE-H42	1	86	Feed selection knob.....	2CE-H86	1
43	Reverse spur gear.....	2CE-H43	1	87	Taper pin, #2 x 7/8 in.....	2CE-H87	1
44	Screw.....	2CE-H44	1				

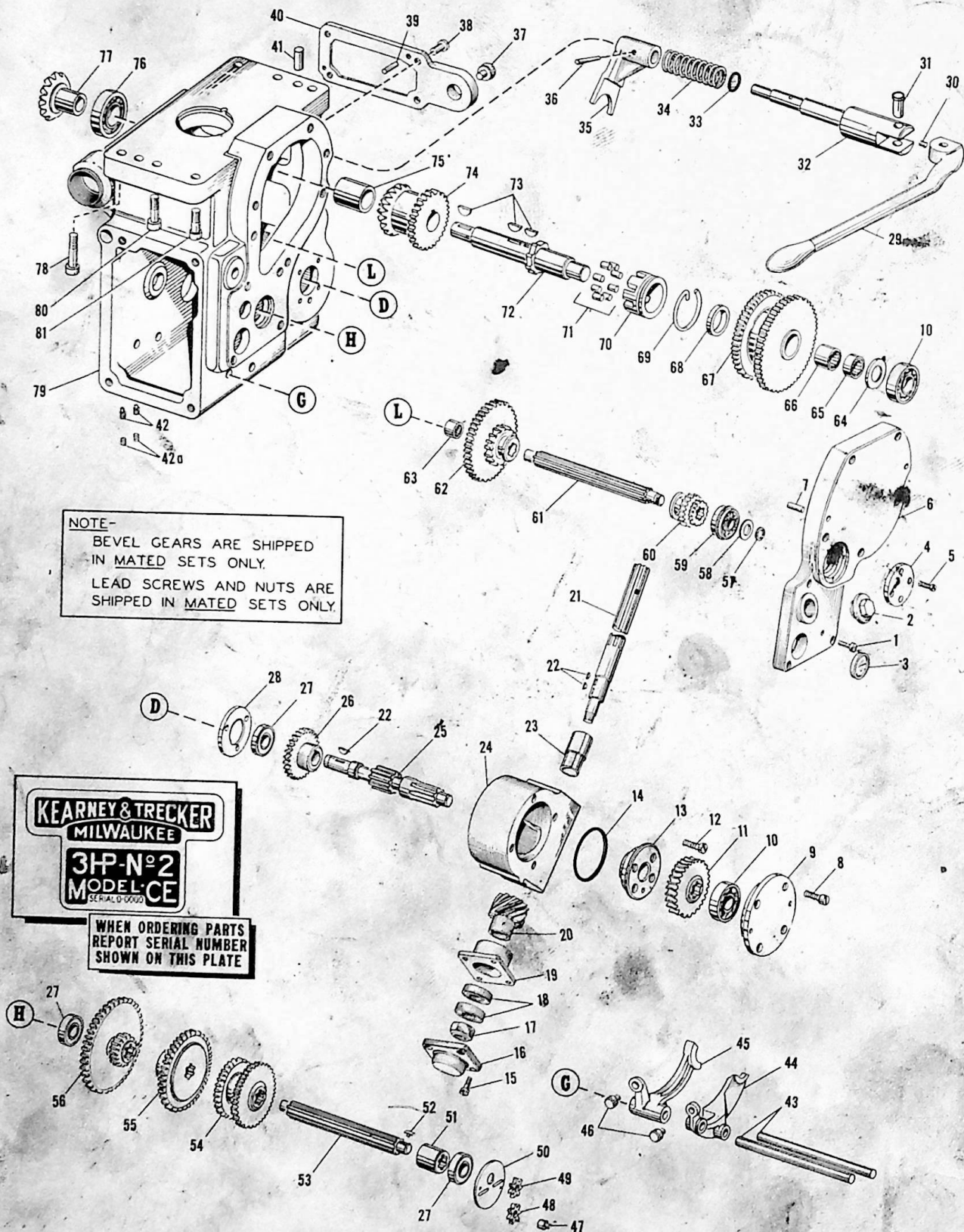


Fig. 11 — Feed gear box assembly — View B

Fig. 11 — Feed gear box assembly — View B

Order by CODE No. and MACHINE SERIAL No.				Order by CODE No. and MACHINE SERIAL No.			
Item No.	Part Name and Description	Code No.	Qty.	Item No.	Part Name and Description	Code No.	Qty.
1	Fil head cap screw	2CE-J1	8	42	Soc hd dog pt set scr, 1/4—20 x 1/2...	2CE-J42	2
2	Oil hole plug	2CE-J2	1	42A	Soc hd set screw, 1/4—20 x 1/2.....	2CE-J42A	2
3	Bijur oil window, #B-5093	2CE-J3	1	43	Feed change shifter shaft.....	2CE-J43	2
4	Feed range change shaft retainer....	2CE-J4	1	44	High feed gear shifter.....	2CE-J44	1
5	Fil head cap screw	2CE-J5	4	45	Low feed gear shifter.....	2CE-J45	1
6	Feed gear box bearing carrier.....	2CE-J6	1	46	Feed change cam follower.....	2CE-J46	2
7	Blue label dowel, 3/16 x 1 in.....	2CE-J7	2	47	Oil pump stud.....	2CE-J47	1
8	Fil head cap screw	2CE-J8	4	48	Oil pump gear (driven).....	2CE-J48	1
9	Worm wheel housing cover.....	2CE-J9	1	49	Oil pump gear (driver).....	2CE-J49	1
10	New departure bearing, #3204.....	2CE-J10	1	50	Pump cover.....	2CE-J50	1
11	Feed drive worm wheel.....	2CE-J11	1	51	Tertiary shaft spacing sleeve.....	2CE-J51	1
12	Fil head cap screw	2CE-J12	4	52	Hi-pro key, #706.....	2CE-J52	1
13	Worm gear housing center plug.....	2CE-J13	1	53	Over-running clutch shaft.....	2CE-J53	1
14	"O" ring, AN-6230-6.....	2CE-J14	1	54	Tertiary shaft high feed gear.....	2CE-J54	1
15	Screw.....	2CE-J15	4	55	Tertiary shaft feed gear.....	2CE-J55	1
16	Spiral gear housing bearing cover....	2CE-J16	1	56	Tertiary shaft low feed gear.....	2CE-J56	1
17	Elastic stop nut, #29TUO92.....	2CE-J17	1	57	Spring.....	2CE-J57	1
18	New departure bearing, #OLO3-DF..	2CE-J18	1 pr	58	Fitting washer.....	2CE-J58	1
19	Spiral gear housing bearing carrier...	2CE-J19	1	59	New departure bearing, #43203.....	2CE-J59	1
20	Feed drive worm.....	2CE-J20	1	60	Feed range change gear (small).....	2CE-J60	1
21	Feed drive shaft.....	2CE-J21	1	61	Feed range change shaft.....	2CE-J61	1
22	Hi-pro key, #604.....	2CE-J22	2	62	Feed range change gear (large).....	2CE-J62	1
23	Feed drive shaft support.....	2CE-J23	1	63	Torrington bearing, B-1112.....	2CE-J63	1
24	Worm and wormwheel housing.....	2CE-J24	1	64	Fitting washer.....	2CE-J64	1
25	Primary feed shaft.....	2CE-J25	1	65	Torrington bearing, B-168.....	2CE-J65	1
26	Rapid traverse drive gear.....	2CE-J26	1	66	Torrington bearing, B-1612.....	2CE-J66	1
27	New departure bearing, #3202.....	2CE-J27	1	67	Over-running clutch drive gear.....	2CE-J67	1
28	Bearing cover (long).....	2CE-J28	1	68	Over-running clutch shaft washer....	2CE-J68	1
29	Rapid traverse lever.....	2CE-J29	1	69	Snap ring with hook.....	2CE-J69	1
30	Soc hd set screw, 1/4 x 3/8 in.....	2CE-J30	1	70	Clutch roller cage.....	2CE-J70	1
31	Rapid traverse lever shoulder pin.....	2CE-J31	1	71	Over-running clutch roller.....	2CE-J71	1
32	Rapid traverse shifter shaft.....	2CE-J32	1	72	Over-running clutch shaft.....	2CE-J72	1
33	"O" ring, AN 6227-15.....	2CE-J33	1	73	Hi-pro key, #706.....	2CE-J73	3
34	Spring.....	2CE-J34	1	74	Over-running clutch shaft gear.....	2CE-J74	1
35	Rapid traverse shifter fork.....	2CE-J35	1	75	Over-running clutch shaft spacer.....	2CE-J75	1
36	Taper pin, #3 x 1 in.....	2CE-J36	1	76	New departure bearing, #R-18.....	2CE-J76	1
37	Rapid traverse lever fulcrum pin.....	2CE-J37	1	77	Cross feed drive gear.....	2CE-J77	1
38	Screw.....	2CE-J38	4	78	Soc hd cap screw, 1/2 x 1 1/4 in.....	2CE-J78	2
39	Blue label dowel, 1/4 x 3/4 in.....	2CE-J39	2	79	Feed gear box.....	2CE-J79	1
40	Rapid traverse lever fulcrum plate....	2CE-J40	1	80	Soc hd cap screw, 1/2 x 1 in.....	2CE-J80	2
41	Feed box dowel pin, 1/2 x 1 1/2 in.....	2CE-J41	2	81	Soc hd cap screw, 1/2 x 7/8 in.....	2CE-J81	2

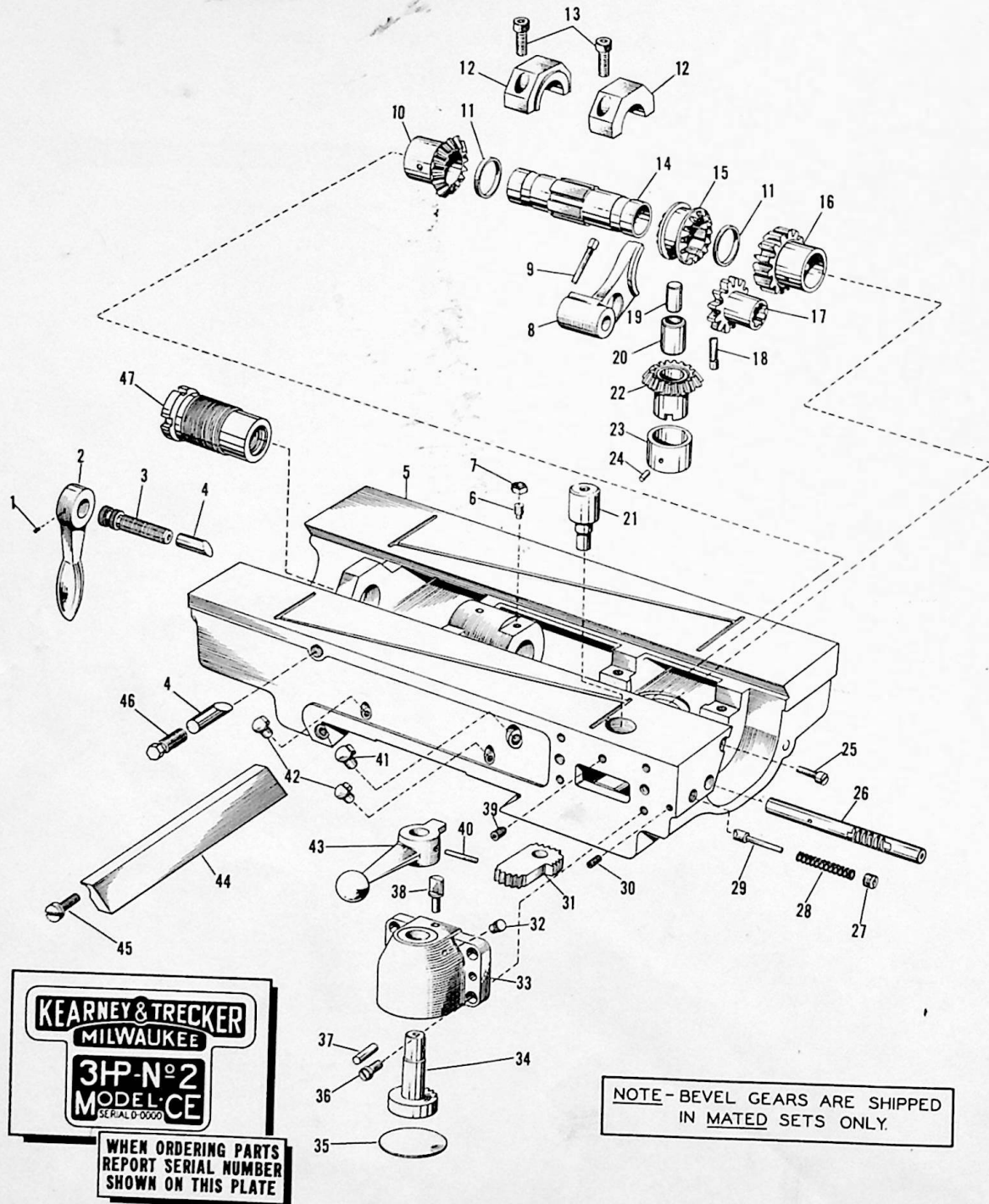


Fig. 12 — Plain Saddle assembly

Fig. 12 — Plain Saddle assembly

Order by CODE No. and MACHINE SERIAL No.

Item No.	Part Name and Description	Code No.	Qty.
1	Soc hd set screw, $\frac{5}{16}$ x $\frac{3}{8}$ in.....	2CE-K1	1
2	Saddle clamp handle.....	2CE-K2	1
3	Clamp screw.....	2CE-K3	1
4	Lock pin.....	2CE-K4	2
5	Plain saddle.....	2CE-K5	1
6	Dowel point set screw.....	2CE-K6	1
7	Hex nut.....	2CE-K7	1
8	Table reverse yoke.....	2CE-K8	1
9	Taper pin screw.....	2CE-K9	1
10	Table screw clutch gear.....	2CE-K10	1
11	Clutch gear collar.....	2CE-K11	2
12	Bearing cap.....	2CE-K12	2
13	Soc hd cap screw, $\frac{3}{8}$ x 1 in.....	2CE-K13	4
14	Feed reverse gear sleeve.....	2CE-K14	1
15	Table feed reverse clutch.....	2CE-K15	1
16	Table screw clutch gear.....	2CE-K16	1
17	Rotary table drive shaft gear.....	2CE-K17	1
18	Rotary table drive gear stop pin.....	2CE-K18	1
19	Table drive gear felt.....	2CE-K19	1
20	Table drive gear plug.....	2CE-K20	1
21	Table drive segment post.....	2CE-K21	1
22	Table drive gear.....	2CE-K22	1
23	Table drive gear bearing.....	2CE-K23	1
24	Pin.....	2CE-K24	1
25	Gib screw.....	2CE-K25	2
26	Table reverse yoke rod.....	2CE-K26	1
27	Detent plunger guide.....	2CE-K27	1
28	Spring.....	2CE-K28	1
29	Table feed detent plunger.....	2CE-K29	1
30	Soc hd flt pt set screw, $\frac{1}{4}$ x $\frac{3}{4}$ in....	2CE-K30	1
31	Table trip segment and detent.....	2CE-K31	1
32	Gits oiler, #RS-531.....	2CE-K32	1
33	Table trip lever bracket.....	2CE-K33	1
34	Table trip lever pinion shaft.....	2CE-K34	1
35	Expansion plug, 2 $\frac{1}{2}$ in. dia.....	2CE-K35	1
36	Fil head cap screw.....	2CE-K36	4
37	Blue label dowel pin, $\frac{5}{16}$ x 1 in.....	2CE-K37	2
38	Table limit stop pin.....	2CE-K38	1
39	Dowel point set screw.....	2CE-K39	1
40	Taper pin, 1 $\frac{1}{2}$ in.....	2CE-K40	1
41	Gits oiler, #E-404.....	2CE-K41	1
42	Gits oiler, #E-401.....	2CE-K42	2
43	Table trip lever.....	2CE-K43	1
44	Saddle gib.....	2CE-K44	1
45	Gib screw.....	2CE-K45	2
46	Table lock screw.....	2CE-K46	1
47	Table screw nut.....	2CE-K47	1

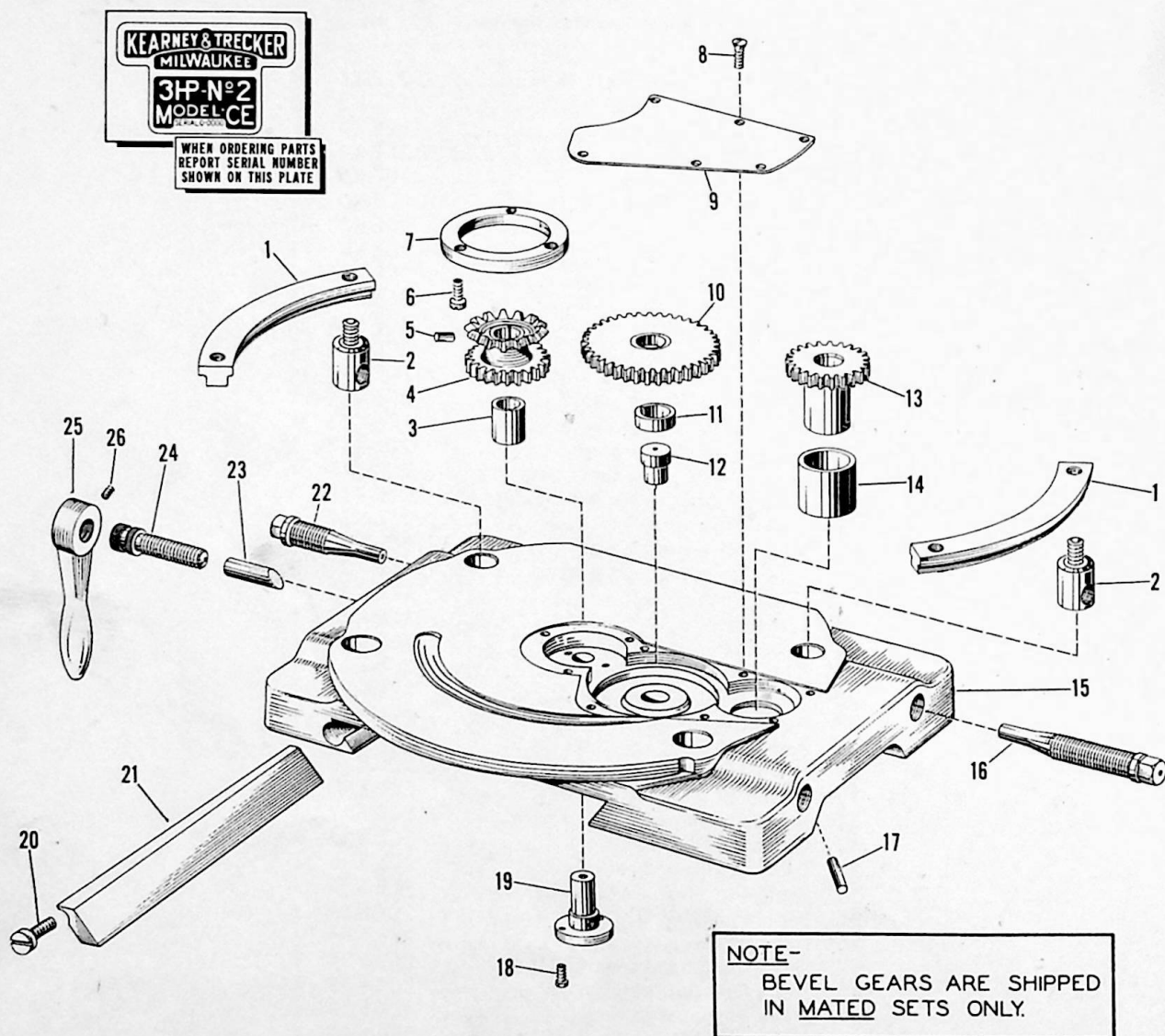


Fig. 13 — Universal saddle assembly

Fig. 13 — Universal saddle assembly

Order by CODE No. and MACHINE SERIAL No.

Item No.	Part Name and Description	Code No.	Qty.
1	Swivel block clamp ring.....	2CE-L1	2
2	Swivel block clamp bolt.....	2CE-L2	4
3	Drive bevel gear bushing.....	2CE-L3	1
4	Table screw drive bevel gear.....	2CE-L4	1
5	Pin, $\frac{3}{16}$ x $\frac{3}{8}$ in.....	2CE-L5	1
6	Fil hd cap screw.....	2CE-L6	3
7	Universal saddle ring.....	2CE-L7	1
8	Fil hd mach screw, 8—32 x $\frac{3}{8}$ in.....	2CE-L8	6
9	Saddle cover.....	2CE-L9	1
10	Table drive idler gear.....	2CE-L10	1
11	Table drive idler gear bushing.....	2CE-L11	1
12	Table drive idler stud.....	2CE-L12	1
13	Table drive gear.....	2CE-L13	1
14	Table drive gear bushing.....	2CE-L14	1
15	Universal saddle.....	2CE-L15	1
16	Swivel block clamp screw.....	2CE-L16	2
17	Pin.....	2CE-L17	1
18	Fil hd cap screw.....	2CE-L18	2
19	Table drive bevel gear stud.....	2CE-L19	1
20	Gib screw.....	2CE-L20	2
21	Saddle gib.....	2CE-L21	1
22	Swivel block clamp screw.....	2CE-L22	2
23	Table lock pin.....	2CE-L23	1
24	Clamp screw.....	2CE-L24	1
25	Saddle clamp handle.....	2CE-L25	1
26	Soc hd set screw, $\frac{5}{16}$ x $\frac{3}{8}$ in.....	2CE-L26	1

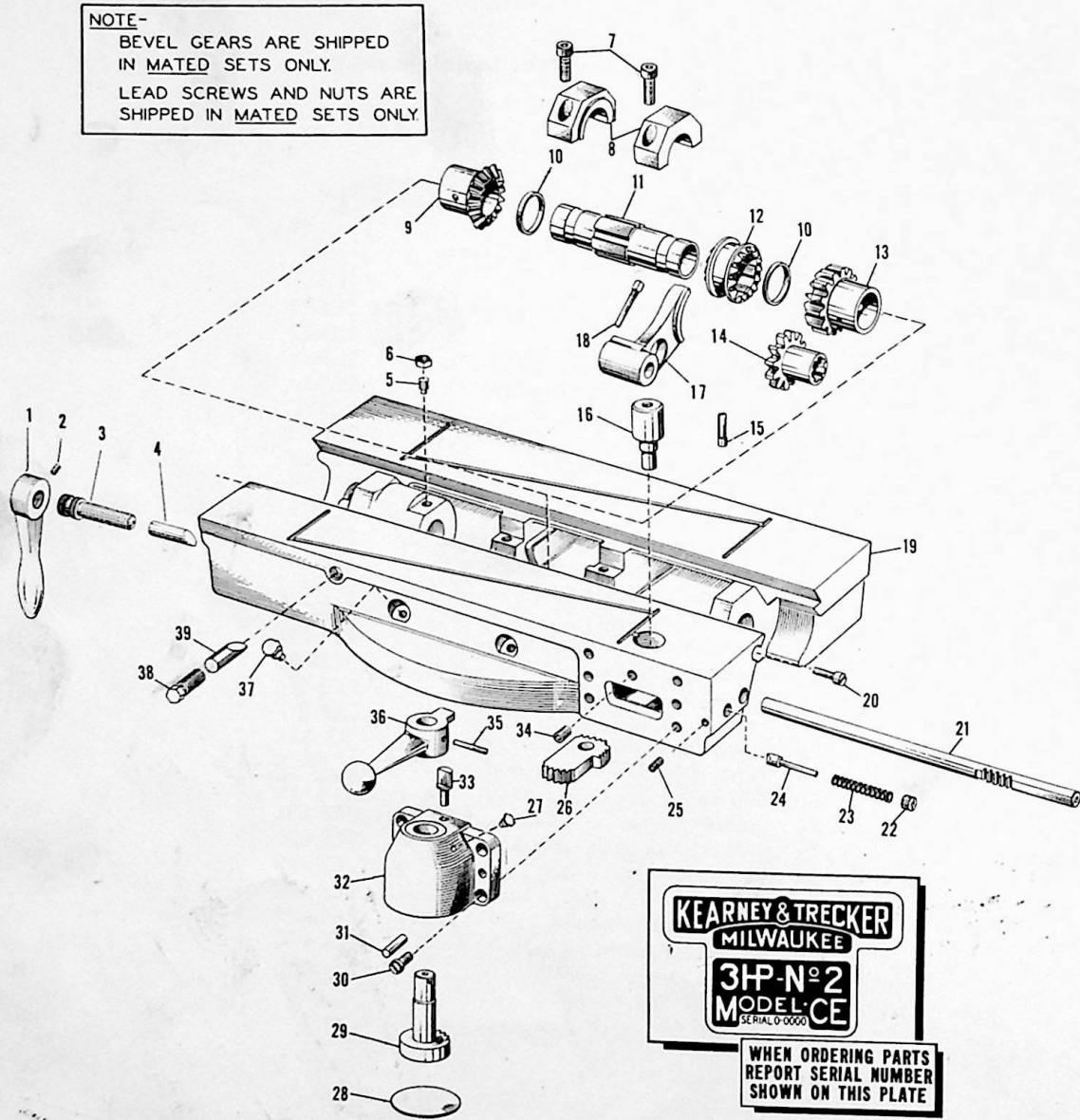


Fig. 14 — Universal Swivel block

Fig. 14 — Universal Swivel block

Order by CODE No. and MACHINE SERIAL No.

Item No.	Part Name and Description	Code No.	Qty.
1	Saddle clamp handle.....	2CE-M1	1
2	Soc hd set screw, $\frac{5}{16}$ x $\frac{3}{8}$ in.....	2CE-M2	1
3	Clamp screw.....	2CE-M3	1
4	Table lock pin.....	2CE-M4	1
5	Dowel pt set screw.....	2CE-M5	1
6	Hex nut.....	2CE-M6	1
7	Soc hd cap screw, $\frac{3}{8}$ x 1 in.....	2CE-M7	4
8	Bearing cap.....	2CE-M8	2
9	Table screw clutch gear.....	2CE-M9	1
10	Clutch gear collar.....	2CE-M10	2
11	Feed reverse gear sleeve.....	2CE-M11	1
12	Table feed reverse clutch.....	2CE-M12	1
13	Table screw clutch gear.....	2CE-M13	1
14	Rotary table drive shaft gear.....	2CE-M14	1
15	Rotary table drive gear stop pin....	2CE-M15	1
16	Table trip segment post.....	2CE-M16	1
17	Table reverse yoke.....	2CE-M17	1
18	Taper pin screw.....	2CE-M18	1
19	Universal swivel block.....	2CE-M19	1
20	Gib screw.....	2CE-M20	2
21	Table reverse yoke rod.....	2CE-M21	1
22	Detent plunger.....	2CE-M22	1
23	Spring.....	2CE-M23	1
24	Table feed detent plunger.....	2CE-M24	1
25	Soc hd flt pt set screw, $\frac{1}{4}$ x $\frac{3}{4}$ in....	2CE-M25	1
26	Table trip segment and detent.....	2CE-M26	1
27	Gits oiler, #RS-531.....	2CE-M27	1
28	Expansion plug, 2 $\frac{1}{2}$ in. dia.....	2CE-M28	1
29	Table trip lever pinion shaft.....	2CE-M29	1
30	Fil hd cap screw.....	2CE-M30	4
31	Blue label dowel pin, $\frac{5}{16}$ x 1 in.....	2CE-M31	2
32	Table trip lever bracket.....	2CE-M32	1
33	Table limit stop pin.....	2CE-M33	1
34	Dowel pt set screw.....	2CE-M34	1
35	Taper pin, #4 x 1 $\frac{1}{2}$ in.....	2CE-M35	1
36	Table trip lever.....	2CE-M36	1
37	Gits oiler, #E-403.....	2CE-M37	1
38	Table locking screw.....	2CE-M38	1
39	Table lock pin.....	2CE-M39	1

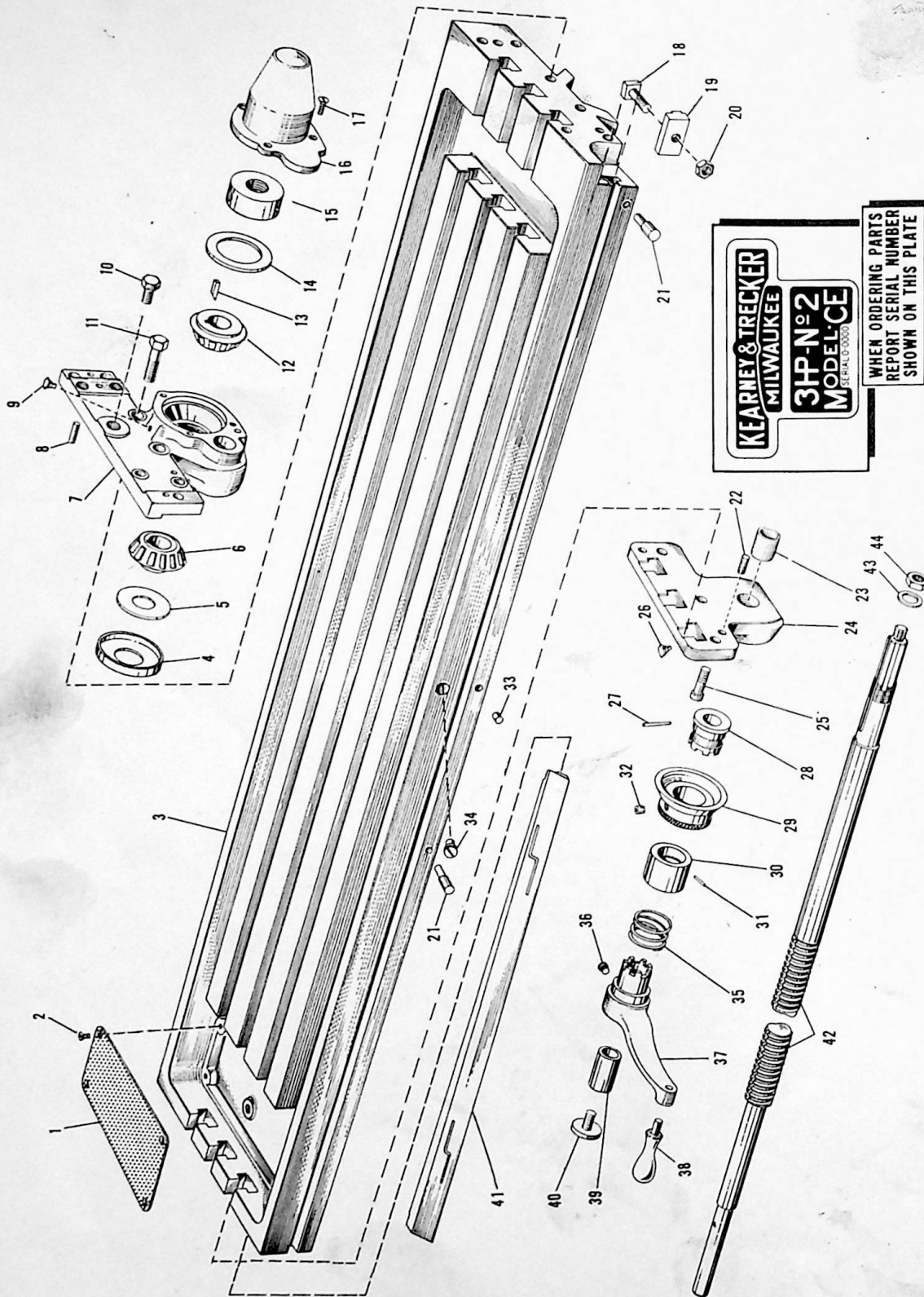


Fig. 15 — Table assembly

Fig. 15 — Table assembly

Order by CODE No. and MACHINE SERIAL No.

Item No.	Part Name and Description	Code No.	Qty.
1	Table screen.....	2CE-N1	1
2	Rd hd mach screw, 1/4—20 x 3/8 in....	2CE-N2	4
3	Table.....	2CE-N3	1
4	Inside bearing cover.....	2CE-N4	1
5	Table bracket oil retainer.....	2CE-N5	1
6	Timken bearing, #23256B-23100....	2CE-N6	1
7	Table right hand bracket.....	2CE-N7	1
8	Blue label dowel pin, 5/16 x 1 1/2 in....	2CE-N8	2
9	Gits oiler, #RS-533.....	2CE-N9	1
10	Table bracket plug.....	2CE-N10	1
11	Hex hd cap screw.....	2CE-N11	6
12	Timken bearing, 23100x-23256B....	2CE-N12	1
13	Bearing key.....	2CE-N13	1
14	Outside bearing cover.....	2CE-N14	1
15	Collar nut.....	2CE-N15	1
16	Table right hand bracket cover.....	2CE-N16	1
17	Fil hd cap screw.....	2CE-N17	3
18	T-bolt.....	2CE-N18	2
19	Table trip dog.....	2CE-N19	2
20	Hex nut.....	2CE-N20	2
21	Table positive stop pin.....	2CE-N21	2
22	Blue label dowel pin, 3/8 x 1 1/2 in....	2CE-N22	2
23	Oilite bearing, #A-1041.....	2CE-N23	1
24	Table left hand bracket.....	2CE-N24	1
25	Fil hd cap screw.....	2CE-N25	3
26	Gits oiler, #RS-532.....	2CE-N26	1
27	Taper pin, #2 x 1 5/16 in.....	2CE-N27	1
28	Table screw crank clutch.....	2CE-N28	1
29	Graduated collar, 250 Div.....	2CE-N29	1
30	Table crank sleeve.....	2CE-N30	1
31	Pin, 1/8 x 5/8 in.....	2CE-N31	1
32	Set screw.....	2CE-N32	1
33	Plug, 3/8 x 3/8 in.....	2CE-N33	1
34	Gits oiler, #E-403.....	2CE-N34	1
35	Spring.....	2CE-N35	1
36	Gits oiler, #RS-532.....	2CE-N36	1
37	Table screw crank.....	2CE-N37	1
38	Rockwood handle, #1QA.....	2CE-N38	1
39	Oilite bearing, #A-1010.....	2CE-N39	1
40	Crank retaining screw.....	2CE-N40	1
41	Table gib.....	2CE-N41	1
42	Table screw.....	2CE-N42	1
43	Washer.....	2CE-N43	1
44	Hex nut.....	2CE-N44	1

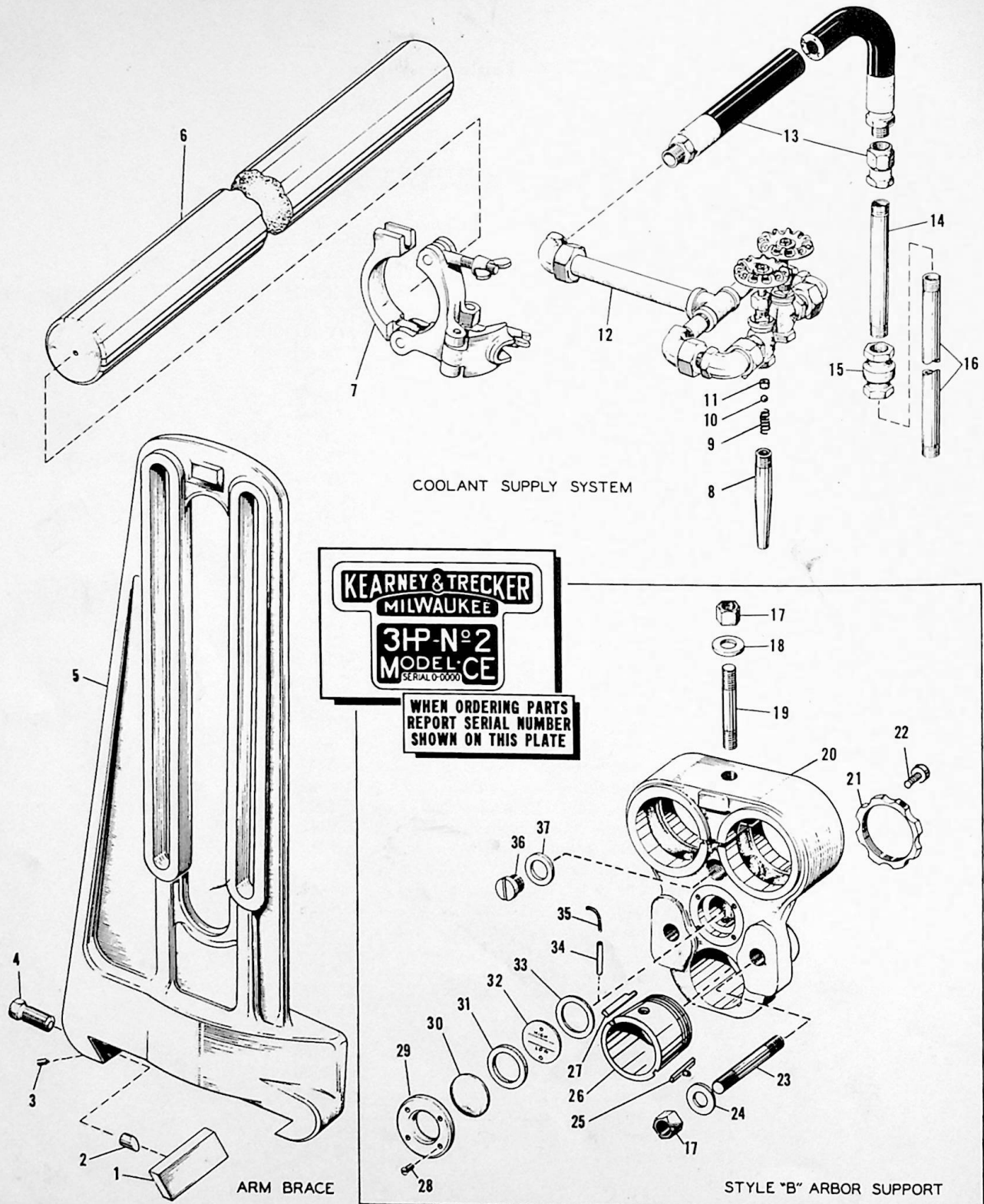


Fig. 16 — Arm brace, coolant supply system and style B arbor support

Fig. 16 — Arm brace, coolant supply system and style B arbor support

Order by CODE No. and MACHINE SERIAL No.

Item No.	Part Name and Description	Code No.	Qty.
1	Clamp gib.....	2CE-P1	1
2	Table clamp plug.....	2CE-P2	1
3	Headless set screw.....	2CE-P3	2
4	Screw.....	2CE-P4	1
5	Arm brace.....	2CE-P5	1
COOLANT SUPPLY SYSTEM			
6	Overarm.....	2CE-P6	2
7	Coolant distributor support.....	2CE-P7	1
8	Coolant nozzle.....	2CE-P8	2
9	Spring.....	2CE-P9	2
10	Steel ball, $\frac{3}{8}$ in. dia.....	2CE-P10	2
11	Ball retainer.....	2CE-P11	2
12	Distributor (complete).....	2CE-P12	1
13	Coolant hose, $\frac{1}{2}$ x $\frac{3}{8}$ in.....	2CE-P13	1
14	Pipe nipple, $\frac{1}{2}$ x 6 in.....	2CE-P14	1
15	Check valve, Crane No. 24 vertical screwed, $\frac{1}{2}$ in. brass.....	2CE-P15	1
16	W, l. pipe, $\frac{1}{2}$ x $21\frac{7}{8}$ in.....	2CE-P16	1
STYLE B ARBOR SUPPORT			
17	Nut.....	2CE-P17	3
18	Washer.....	2CE-P18	1
19	Stud.....	2CE-P19	1
20	Style B arbor support.....	2CE-P20	1
21	Bushing nut.....	2CE-P21	1
22	Screw.....	2CE-P22	1
23	Arm brace clamp stud.....	2CE-P23	2
24	Washer.....	2CE-P24	2
25	Key.....	2CE-P25	1
26	Arbor bushing.....	2CE-P26	1
27	Oil retainer.....	2CE-P27	1
28	Screw.....	2CE-P28	4
29	Oil flow gage plate.....	2CE-P29	1
30	Oil gage glass.....	2CE-P30	1
31	Oil gage washer.....	2CE-P31	1
32	Oil gage plate.....	2CE-P32	1
33	Oil gage washer.....	2CE-P33	1
34	Copper tube, $\frac{1}{4}$ x $1\frac{1}{16}$ in.....	2CE-P34	1
35	Oil wicking.....	2CE-P35	1
36	Oil hole screw.....	2CE-P36	1
37	Fiber washer.....	2CE-P37	1

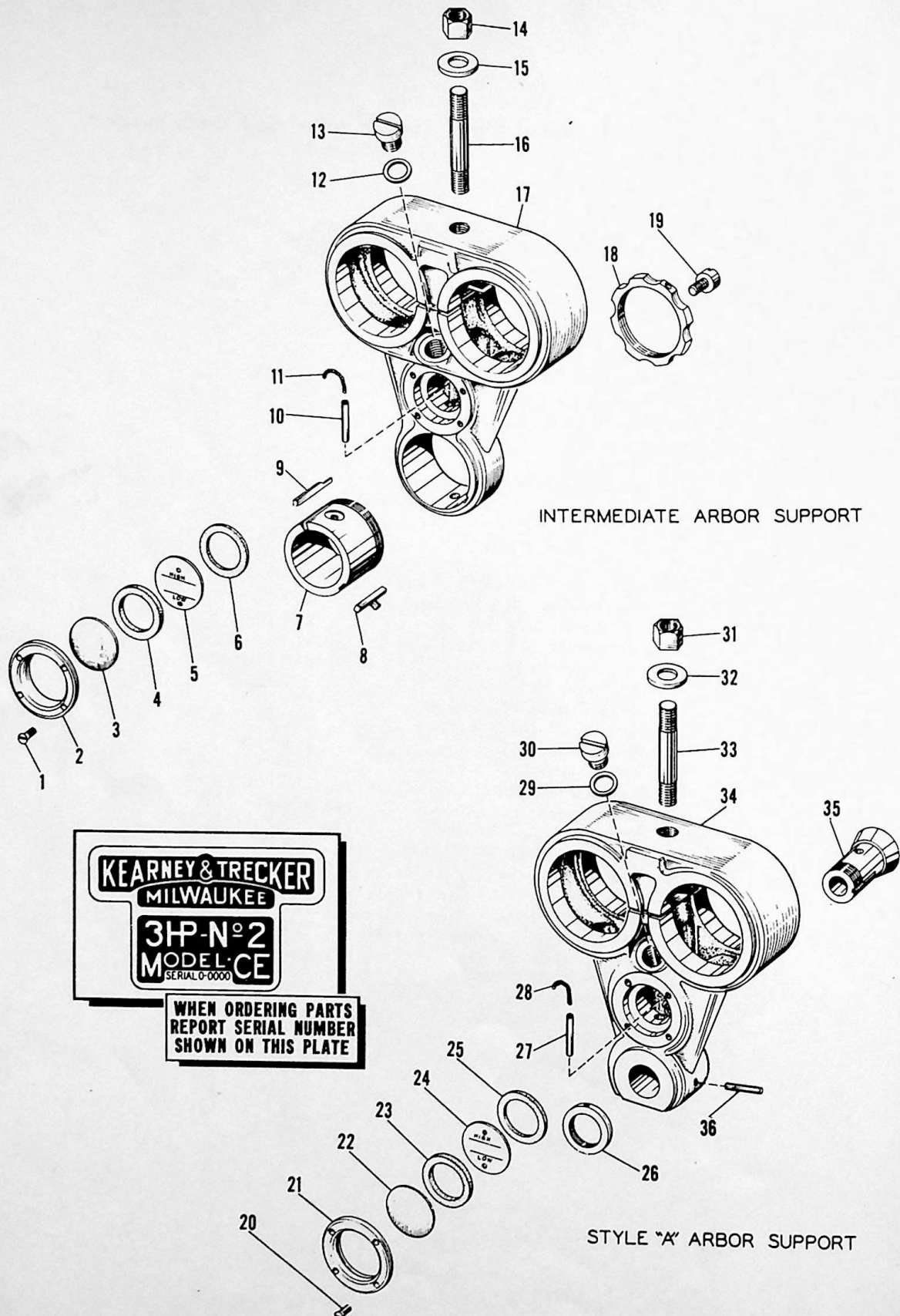


Fig. 17 — Intermediate arbor support and style A arbor support

Fig. 17 — Intermediate arbor support and style A arbor support

Order by CODE No. and MACHINE SERIAL No.			
Item No.	Part Name and Description	Code No.	Qty.
INTERMEDIATE ARBOR SUPPORT			
1	Screw.....	2CE-Q1	4
2	Oil flow gage plate.....	2CE-Q2	1
3	Oil gage glass.....	2CE-Q3	1
4	Oil gage washer.....	2CE-Q4	1
5	Oil gage plate.....	2CE-Q5	1
6	Oil gage washer.....	2CE-Q6	1
7	Arbor support bushing.....	2CE-Q7	1
8	Teat key.....	2CE-Q8	1
9	Oil retainer.....	2CE-Q9	1
10	Copper tube, 1/4 x 1 5/8 in.....	2CE-Q10	1
11	Oil wicking.....	2CE-Q11	1
12	Fiber washer.....	2CE-Q12	1
13	Oil filler plug.....	2CE-Q13	1
14	Nut.....	2CE-Q14	1
15	Washer.....	2CE-Q15	1
16	Stud.....	2CE-Q16	1
17	Intermediate arbor support.....	2CE-Q17	1
18	Arbor support bushing nut.....	2CE-Q18	1
19	Screw.....	2CE-Q19	1
STYLE A ARBOR SUPPORT			
20	Screw.....	2CE-Q20	4
21	Oil gage plate.....	2CE-Q21	1
22	Oil gage glass.....	2CE-Q22	1
23	Oil gage washer.....	2CE-Q23	1
24	Oil gage back plate.....	2CE-Q24	1
25	Oil gage washer.....	2CE-Q25	1
26	Nut.....	2CE-Q26	1
27	Copper tube, 1/4 x 2 1/8 in.....	2CE-Q27	1
28	Oil wicking.....	2CE-Q28	1
29	Fiber washer.....	2CE-Q29	1
30	Oil filler plug.....	2CE-Q30	1
31	Nut.....	2CE-Q31	1
32	Washer.....	2CE-Q32	1
33	Stud.....	2CE-Q33	1
34	Style A arbor support.....	2CE-Q34	1
35	Arbor support bushing.....	2CE-Q35	1
36	Pin.....	2CE-Q36	1

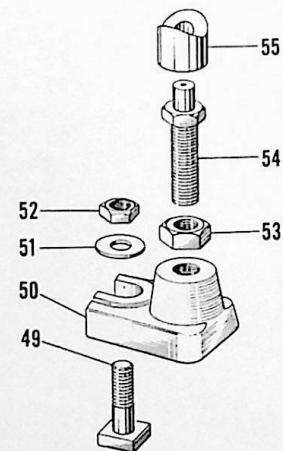
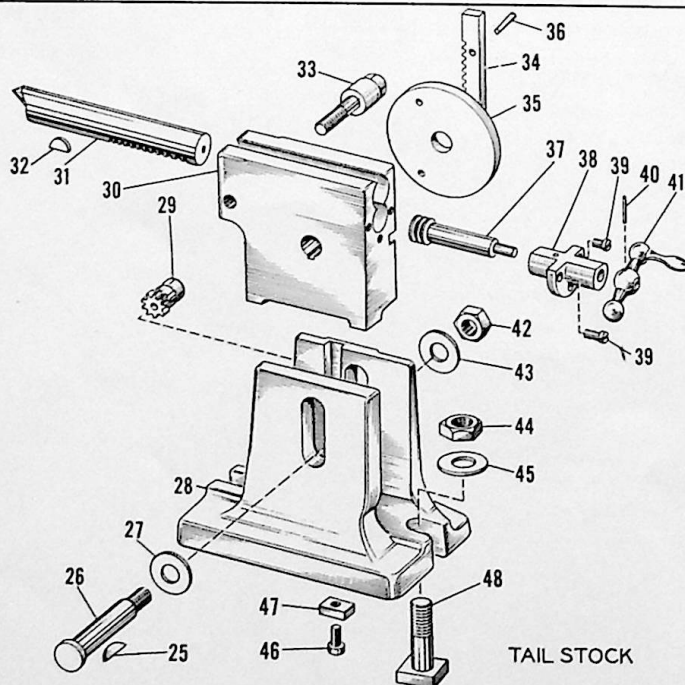
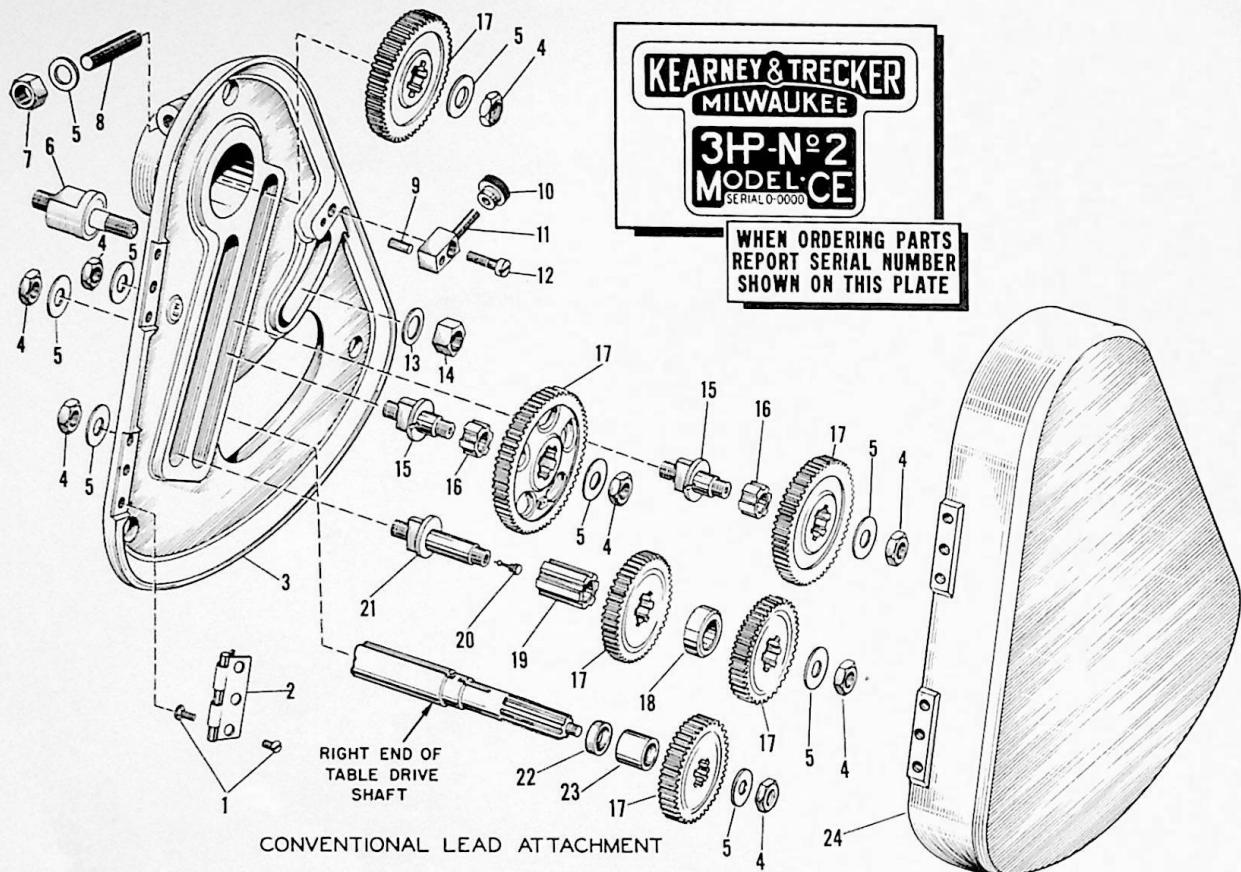


Fig. 18 — Conventional lead attachment, tail stock and steady rest

Fig. 18 — Conventional lead attachment, tail stock and steady rest

Order by CODE No. and MACHINE SERIAL No.			
Item No.	Part Name and Description	Code No.	Qty.
CONVENTIONAL LEAD ATTACHMENT			
1	Flt hd mach screw, #10—32 x ½ in...	2CE-R1	12
2	Stanley Butt hinge, #800.....	2CE-R2	2
3	Change gear bracket.....	2CE-R3	1
4	Nut.....	2CE-R4	8
5	Washer.....	2CE-R5	9
6	Change gear stud.....	2CE-R6	1
7	Nut.....	2CE-R7	1
8	Stud.....	2CE-R8	1
9	Blue label dowel, ¼ x 1 in.....	2CE-R9	1
10	Thumb nut.....	2CE-R10	1
11	Door lock bolt.....	2CE-R11	1
12	Fil hd screw.....	2CE-R12	1
13	Washer.....	2CE-R13	1
14	Nut.....	2CE-R14	1
15	Idler gear stud.....	2CE-R15	2
16	Splined bushing (short).....	2CE-R16	2
17	Change gears		
	Change gear, 24T-16P.....	2CE-R17	2
	Change gear, 28T-16P.....	2CE-R17A	1
	Change gear, 32T-16P.....	2CE-R17B	1
	Change gear, 40T-16P.....	2CE-R17C	1
	Change gear, 44T-16P.....	2CE-R17D	1
	Change gear, 48T-16P.....	2CE-R17E	2
	Change gear, 56T-16P.....	2CE-R17F	1
	Change gear, 64T-16P.....	2CE-R17G	1
	Change gear, 72T-16P.....	2CE-R17H	1
	Change gear, 86T-16P.....	2CE-R17J	1
	Change gear, 100T-16P.....	2CE-R17K	1
18	Spacing collar.....	2CE-R18	1
19	Splined bushing (long).....	2CE-R19	1
20	Gits oiler, #RS-531.....	2CE-R20	1
21	Differential index stud (long).....	2CE-R21	1
22	Spacing collar (spacer).....	2CE-R22	1
23	Spacing collar (large).....	2CE-R23	1
24	Change gear bracket cover.....	2CE-R24	1

Order by CODE No. and MACHINE SERIAL No.			
Item No.	Part Name and Description	Code No.	Qty.
TAILSTOCK			
25	Hi-pro key, #HP-606.....	2CE-R25	1
26	Elevating clamp bolt.....	2CE-R26	1
27	Washer.....	2CE-R27	1
28	Tailstock.....	2CE-R28	1
29	Elevating pinion.....	2CE-R29	1
30	Elevating center.....	2CE-R30	1
31	Tailstock center.....	2CE-R31	1
32	Hi-pro key, #HP-606.....	2CE-R32	1
33	Tailstock clamp screw.....	2CE-R33	1
34	Elevating rack.....	2CE-R34	1
35	Graduated plate.....	2CE-R35	1
36	Taper pin, #2 x ⅞ in.....	2CE-R36	2
37	Center adjusting worm.....	2CE-R37	1
38	Worm sleeve.....	2CE-R38	1
39	Fil hd screw.....	2CE-R39	3
40	Taper pin, #1 x 1⅜ in.....	2CE-R40	1
41	Ball crank.....	2CE-R41	1
42	Hex nut.....	2CE-R42	1
43	Washer.....	2CE-R43	1
44	Hex nut.....	2CE-R44	2
45	Washer.....	2CE-R45	2
46	Screw.....	2CE-R46	2
47	Vise tongue.....	2CE-R47	2
48	T-bolt.....	2CE-R48	2
STEADY REST			
49	T-bolt.....	2CE-R49	1
50	Steady rest base.....	2CE-R50	1
51	Washer.....	2CE-R51	1
52	Hex nut.....	2CE-R52	1
53	Hex nut.....	2CE-R53	1
54	Steady rest adjustment screw.....	2CE-R54	1
55	Steady rest Vee block.....	2CE-R55	1

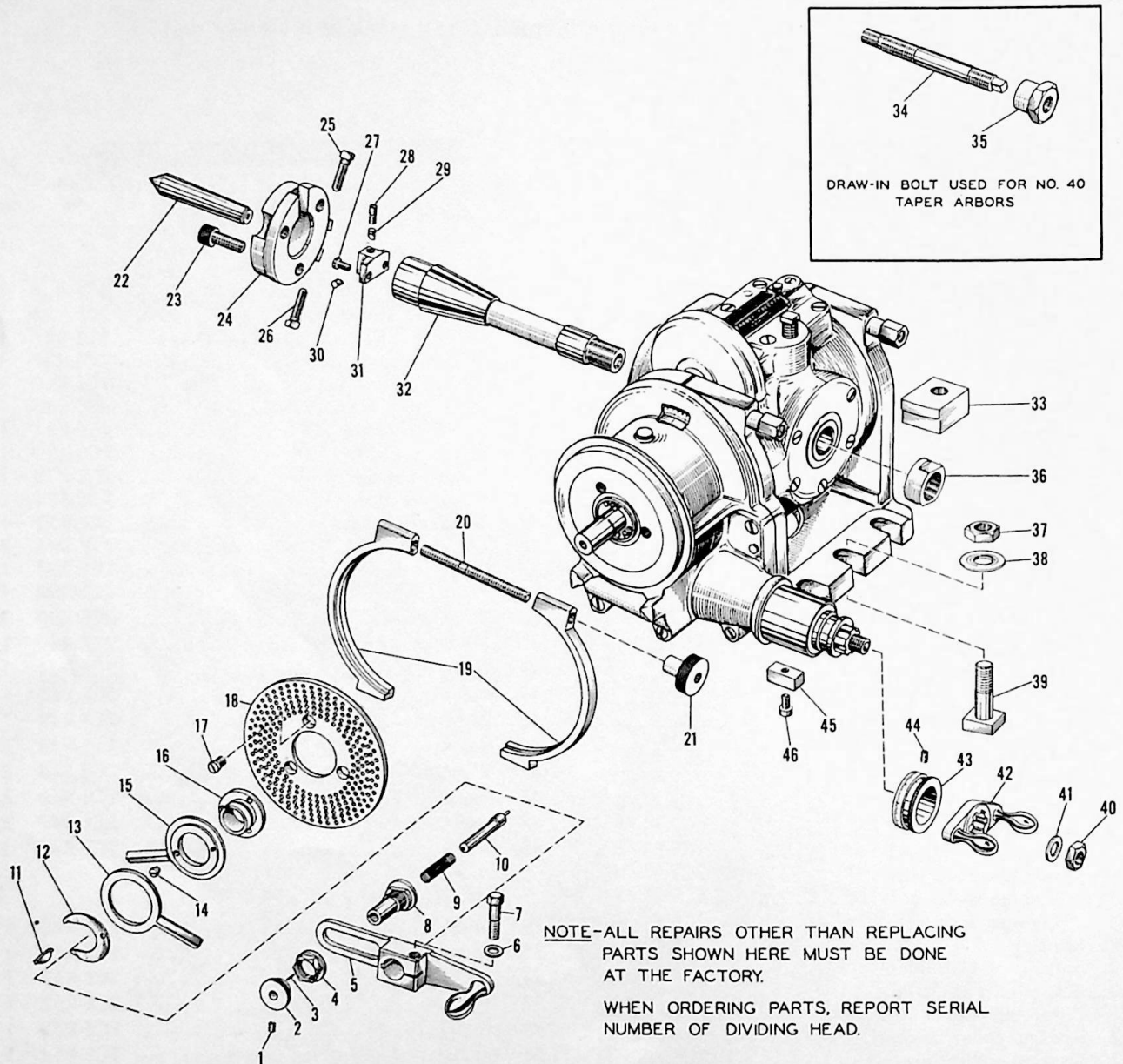
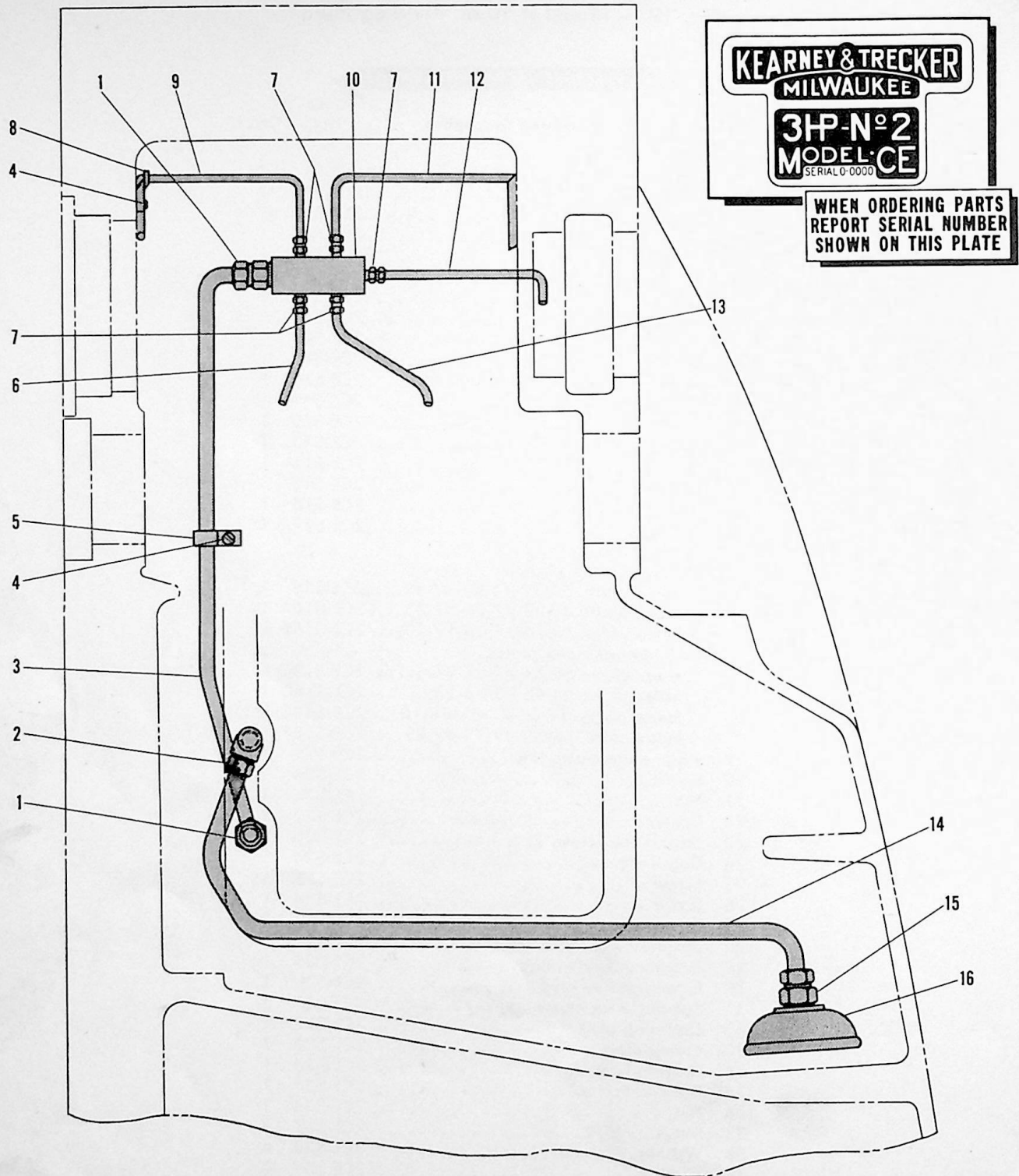


Fig. 19 — Model H 10 in. dividing head

Fig. 19 — Model H 10 in. dividing head

Order by CODE No. and MACHINE SERIAL No.

Item No.	Part Name and Description	Code No.	Qty.
1	Screw.....	2CE-S1	1
2	Plunger knob.....	2CE-S2	1
3	Drill rod, #43 x 7/8 in.....	2CE-S3	1
4	Clamp nut.....	2CE-S4	1
5	Index crank.....	2CE-S5	1
6	Washer.....	2CE-S6	1
7	Hex hd cap screw.....	2CE-S7	1
8	Plunger sleeve.....	2CE-S8	1
9	Spring.....	2CE-S9	1
10	Plunger for standard index plates....	2CE-S10	1
	Plunger for high number index plates.	2CE-S10A	1
11	Hi-pro key, #HP-706.....	2CE-S11	1
12	Spring.....	2CE-S12	1
13	Index finger.....	2CE-S13	1
14	Screw.....	2CE-S14	1
15	Index finger.....	2CE-S15	1
16	Index sleeve.....	2CE-S16	1
17	Screw.....	2CE-S17	3
18	Index plates		
	Standard index plates		
	Index plate, 37-39-41-43-47-49...	2CE-S18	1
	Index plate, 21-23-27-29-31-33...	2CE-S18A	1
	Index plate, 15-16-17-18-19-20...	2CE-S18B	1
	High number index plates		
	Index plate, 56-67-77-87-97.....	2CE-S18C	1
	Index plate, 53-63-73-83-93.....	2CE-S18D	1
	Index plate, 51-61-71-81-91-101.	2CE-S18E	1
	Index plate, 48-59-69-79-89-99...	2CE-S18F	1
19	Index plate clamp ring.....	2CE-S19	1
20	Screw.....	2CE-S20	1
21	Nut.....	2CE-S21	1
22	Center.....	2CE-S22	1
23	Soc hd cap screw, 1/2 x 1 in.....	2CE-S23	3
24	Dog driver.....	2CE-S24	1
25	Screw.....	2CE-S25	1
26	Screw.....	2CE-S26	1
27	Screw.....	2CE-S27	2
28	Spindle drive key screw.....	2CE-S28	1
29	Expansion key wedge.....	2CE-S29	1
30	Expansion key plug.....	2CE-S30	1
31	Spindle drive expansion key.....	2CE-S31	1
32	Centering plug.....	2CE-S32	1
33	Clamp block.....	2CE-S33	1
34	Draw-in bolt.....	2CE-S34	1
35	Draw-in bolt nut.....	2CE-S35	1
36	Nut.....	2CE-S36	1
37	Nut.....	2CE-S37	4
38	Washer.....	2CE-S38	4
39	T-bolt.....	2CE-S39	4
40	Nut.....	2CE-S40	1
41	Washer.....	2CE-S41	1
42	Crank.....	2CE-S42	1
43	Graduated collar.....	2CE-S43	1
44	Soc hd set screw, 5/16 x 3/8 in.....	2CE-S44	1
45	Vise tongue.....	2CE-S45	2
46	Screw.....	2CE-S46	2



VIEWED FROM RIGHT SIDE OF MACHINE

Fig. 20 — Column oil piping assembly

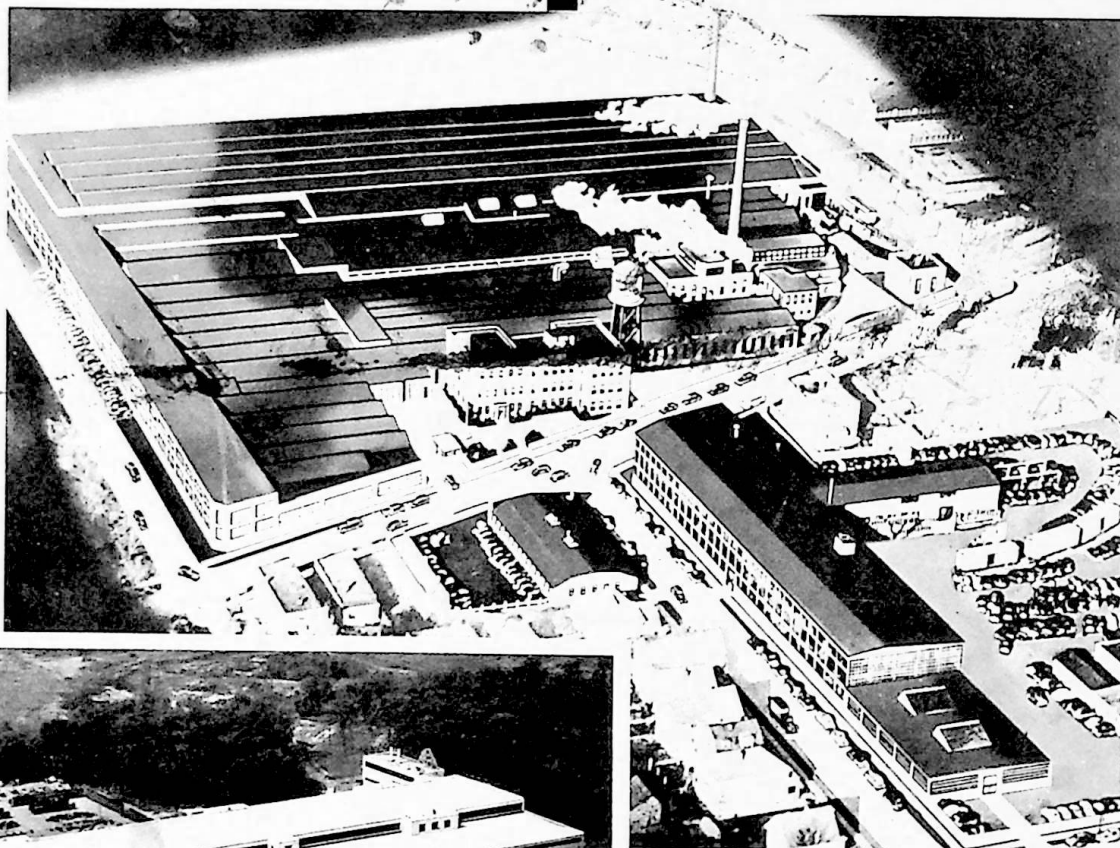
Fig. 20 — Column oil piping assembly

Order by CODE No. and MACHINE SERIAL No.

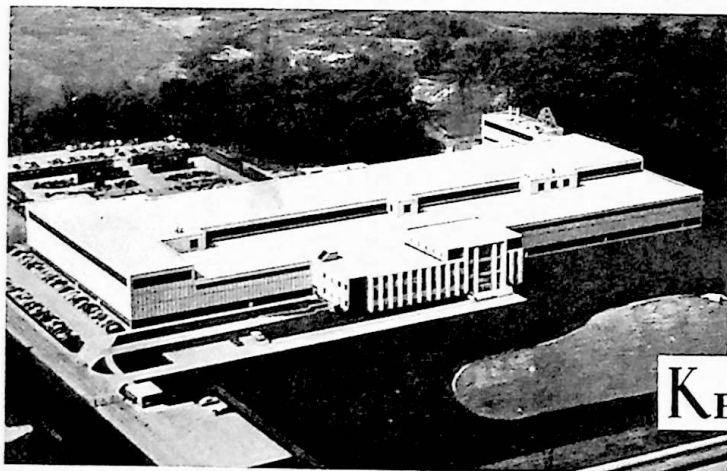
Item No.	Part Name and Description	Code No.	Qty.
1	Weatherhead inverted male connector #200 x 6.....	2CE-T1	2
	Weatherhead inverted nut, #105 x 6.		2
2	Weatherhead inverted male elbow, #400 x 7.....	2CE-T2	1
	Weatherhead inverted nut, #105 x 7.		1
3	Copper tubing, $\frac{3}{8}$ x 42 in.....	2CE-T3	1
4	Rd hd mach screw, 10—32 x $\frac{3}{8}$ in....	2CE-T4	2
	Lock washer, $\frac{3}{16}$ in.....		2
5	Tubing clamp, $\frac{3}{8}$ in.....	2CE-T5	5
6	Copper tubing to spindle drive gear, $\frac{3}{16}$ in. dia.....	2CE-T6	1
7	Weatherhead inverted male connector, #200 x 3.....	2CE-T7	5
	Weatherhead inverted nut, #105 x 3.		5
8	Tubing clamp, $\frac{3}{16}$ in.....	2CE-T8	8
9	Copper tubing to front spindle bearing, $\frac{3}{16}$ in. dia.....	2CE-T9	1
10	Oil manifold.....	2CE-T10	1
11	Copper tubing to rear spindle bearing, $\frac{3}{16}$ in. dia.....	2CE-T11	1
12	Copper tubing to oil flow gage, $\frac{3}{16}$ in. dia.....	2CE-T12	1
13	Copper tubing to speed gear box, $\frac{3}{16}$ in. dia.....	2CE-T13	1
14	Copper tubing, $\frac{7}{16}$ x 23 in.....	2CE-T14	1
15	Weatherhead inverted male connector, #200 x 6.....	2CE-T15	1
	Weatherhead inverted nut, #105 x 6.		1
16	Oil strainer.....	2CE-T16	1

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