

# KEARNEY & TRECKER MILWAUKEE

## REPAIR PARTS BOOK

Catalog No. CHR-33

5HP No. 2

### MODEL CH

PLAIN - UNIVERSAL - VERTICAL  
MILLING MACHINES

WITH STANDARD  
DIRECTIONAL  
TABLE CONTROL

WITH MONO-LEVER AND  
AUTOMATIC CYCLE  
TABLE CONTROL



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**KEARNEY & TRECKER CORPORATION**

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MILWAUKEE 14, WISCONSIN, U. S. A.

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Catalog No. CHR-33

**REPLACEMENT PARTS MANUAL**

For 5 hp No. 2

**MODEL CH**

**Plain, Universal and Vertical**



**Milling Machines**

with mono-lever and  
automatic cycle  
table control

with standard  
directional  
control

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

Price: \$3.00

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**Kearney & Trecker  
Corporation**

**Milwaukee 14, Wisconsin**

## FOREWORD

This is a replacement parts manual for the 5hp No. 2 Model CH Plain, Universal and Vertical 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.

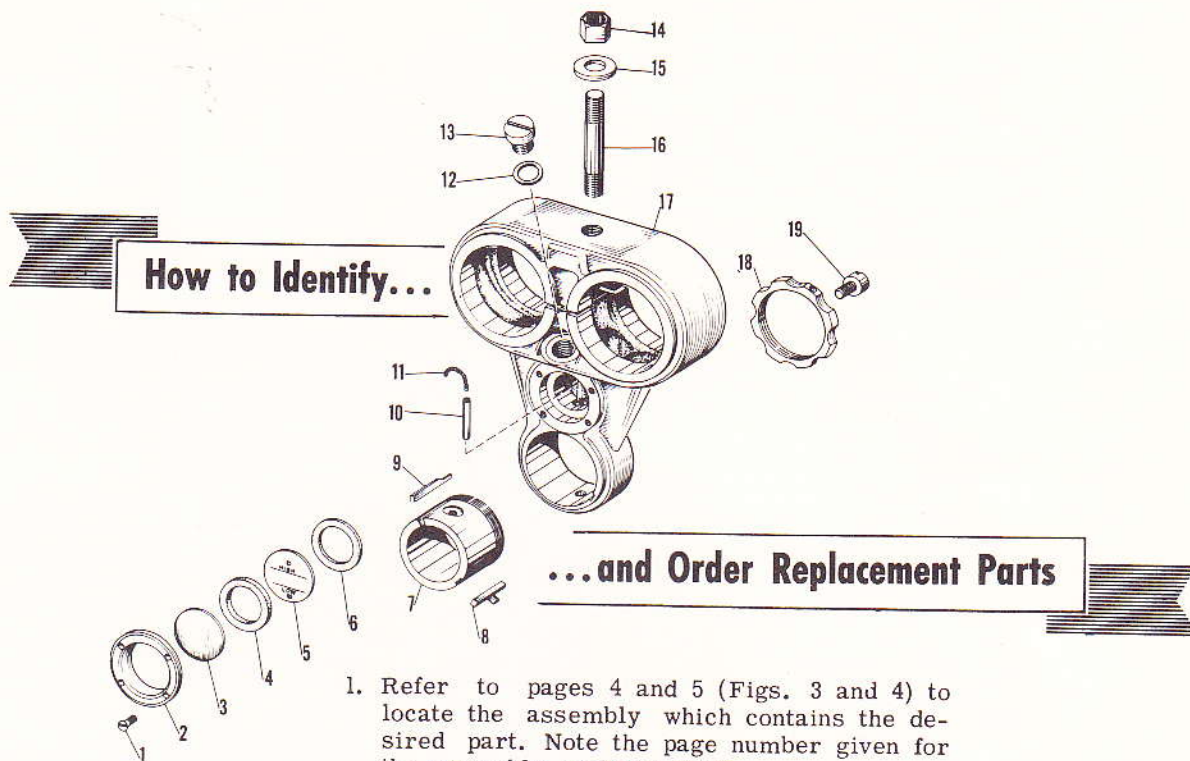
About the manual itself; every effort has been made to make this book as clear and concise as is practical to avoid delay and misunderstanding in ordering parts. The various assemblies are arranged in a natural sequence and are indexed visually on pages 4 and 5. (Figs. 3 and 4)

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.

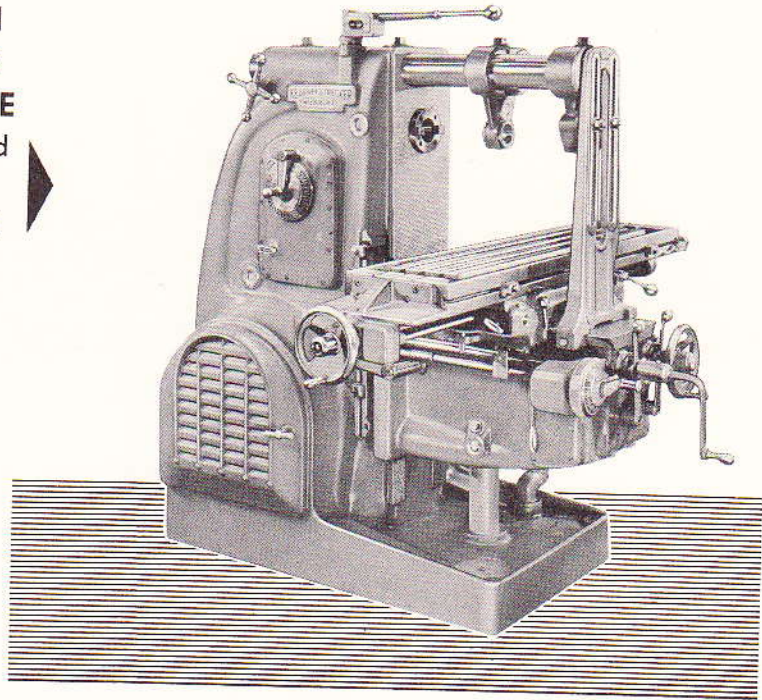
It is our intention to continually improve the service you receive from Kearney & Trecker milling machines and make the parts replacement problem a simple procedure. By following the instructions for identifying and ordering parts, given on the next page, you will be assured of prompt service.

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



1. Refer to pages 4 and 5 (Figs. 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 (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.

**MODEL CH**  
**5 hp No. 2**  
**PLAIN STYLE**  
with standard  
directional  
table control



**MODEL CH**  
**5 hp No. 2**  
**UNIVERSAL STYLE**  
with standard  
directional  
table control

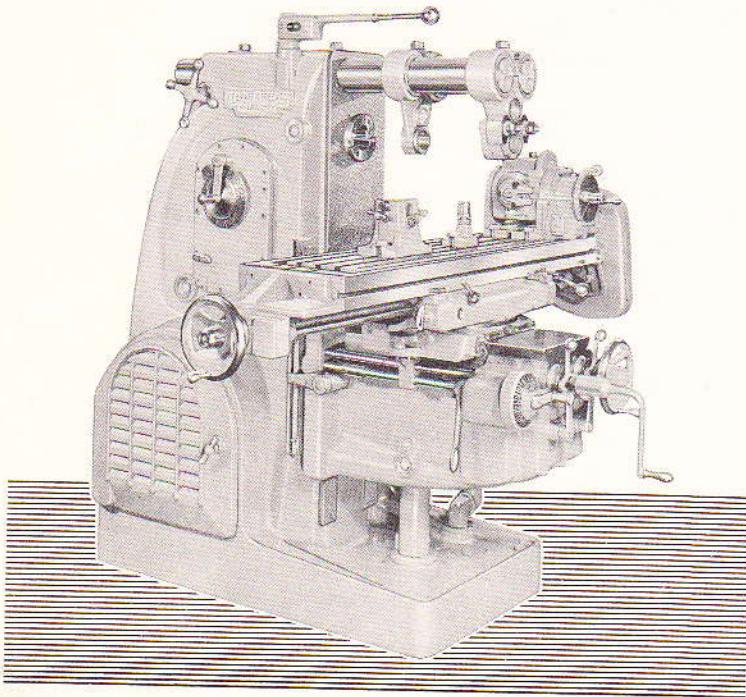
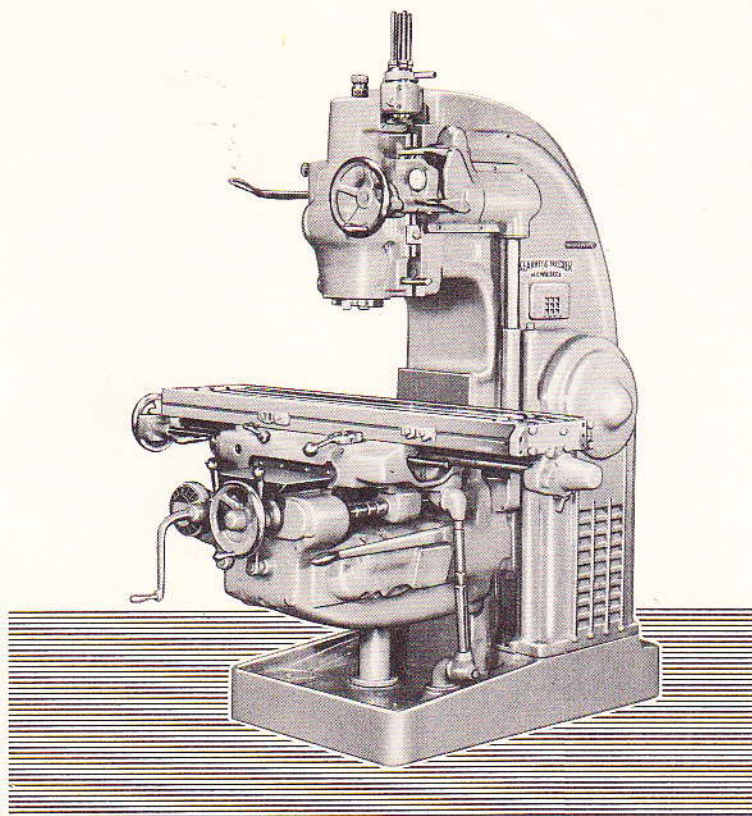


FIGURE 1



**MODEL CH  
5 hp No. 2  
VERTICAL STYLE**

with standard  
directional  
table control

**MODEL CH  
5 hp No. 2  
VERTICAL STYLE**  
with mono-lever and  
automatic cycle  
table control

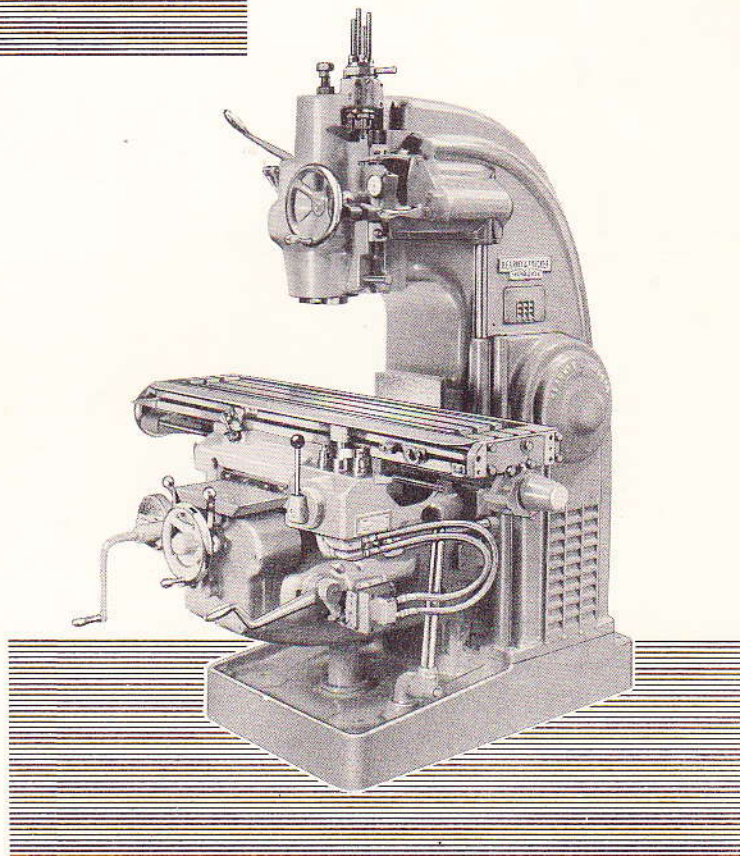


FIGURE 2

**Replacement Parts Manual**  
 5hp No. 2 Model CH Milling Machines

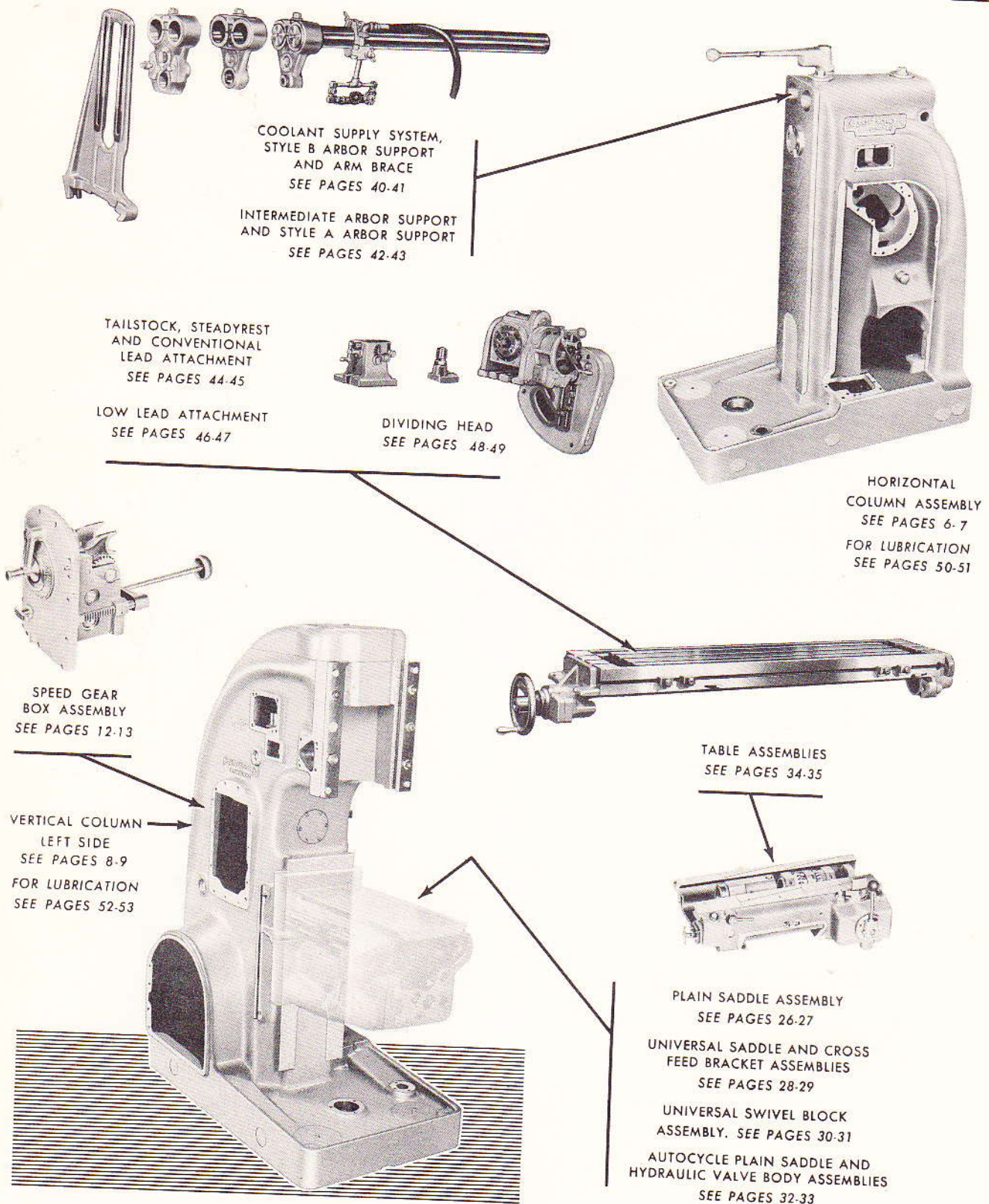


FIG. 3 - HORIZONTAL COLUMN, LEFT FRONT OF VERTICAL COLUMN AND ASSEMBLIES

**Replacement Parts Manual**  
**Milling Machines — Plain, Universal and Vertical**

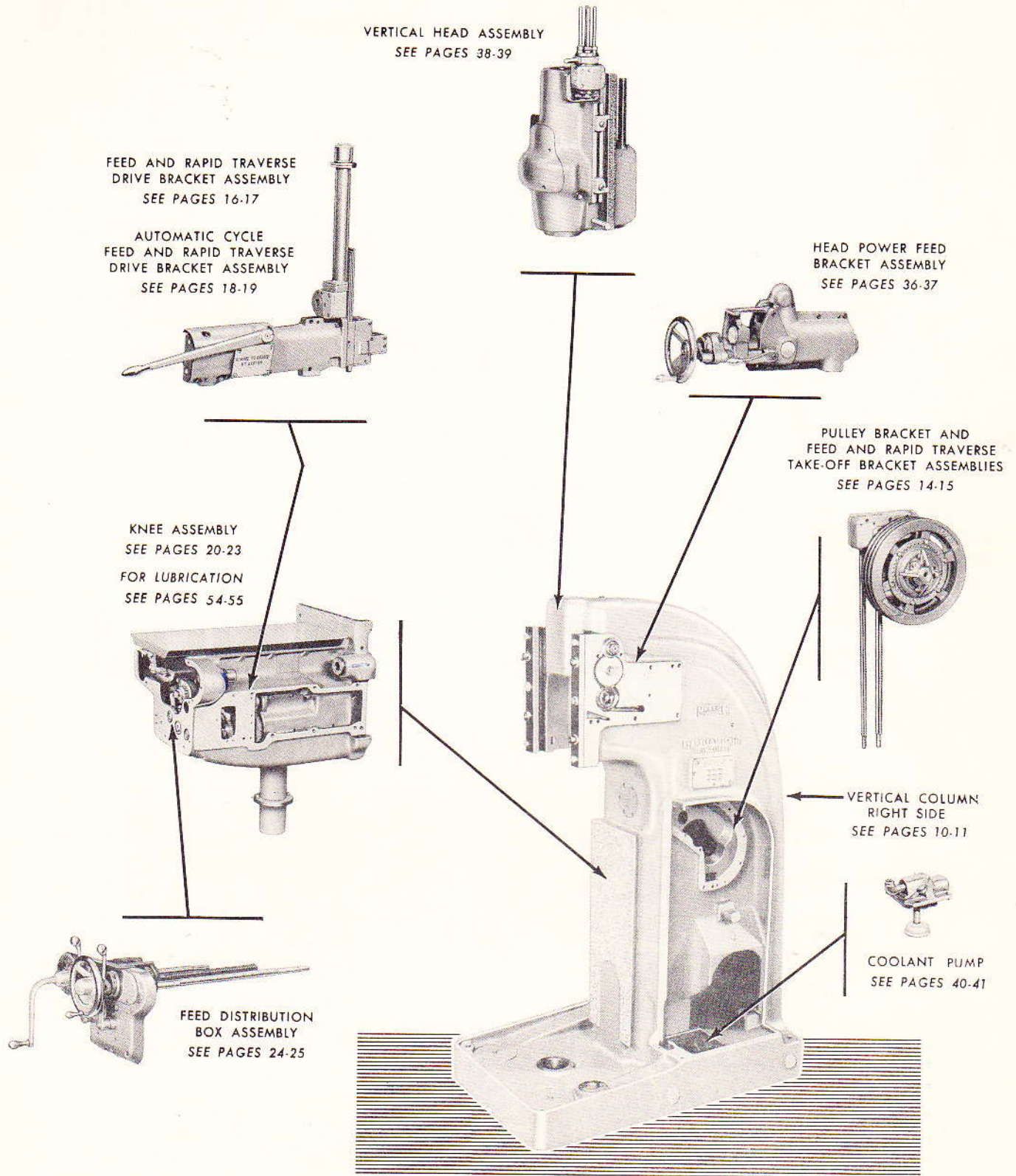


FIG. 4 - RIGHT FRONT OF VERTICAL COLUMN AND ASSEMBLIES



# Replacement Parts Manual

5hp No. 2 Model CH Milling Machines



WHEN ORDERING PARTS  
REPORT SERIAL NUMBER  
SHOWN ON THIS PLATE

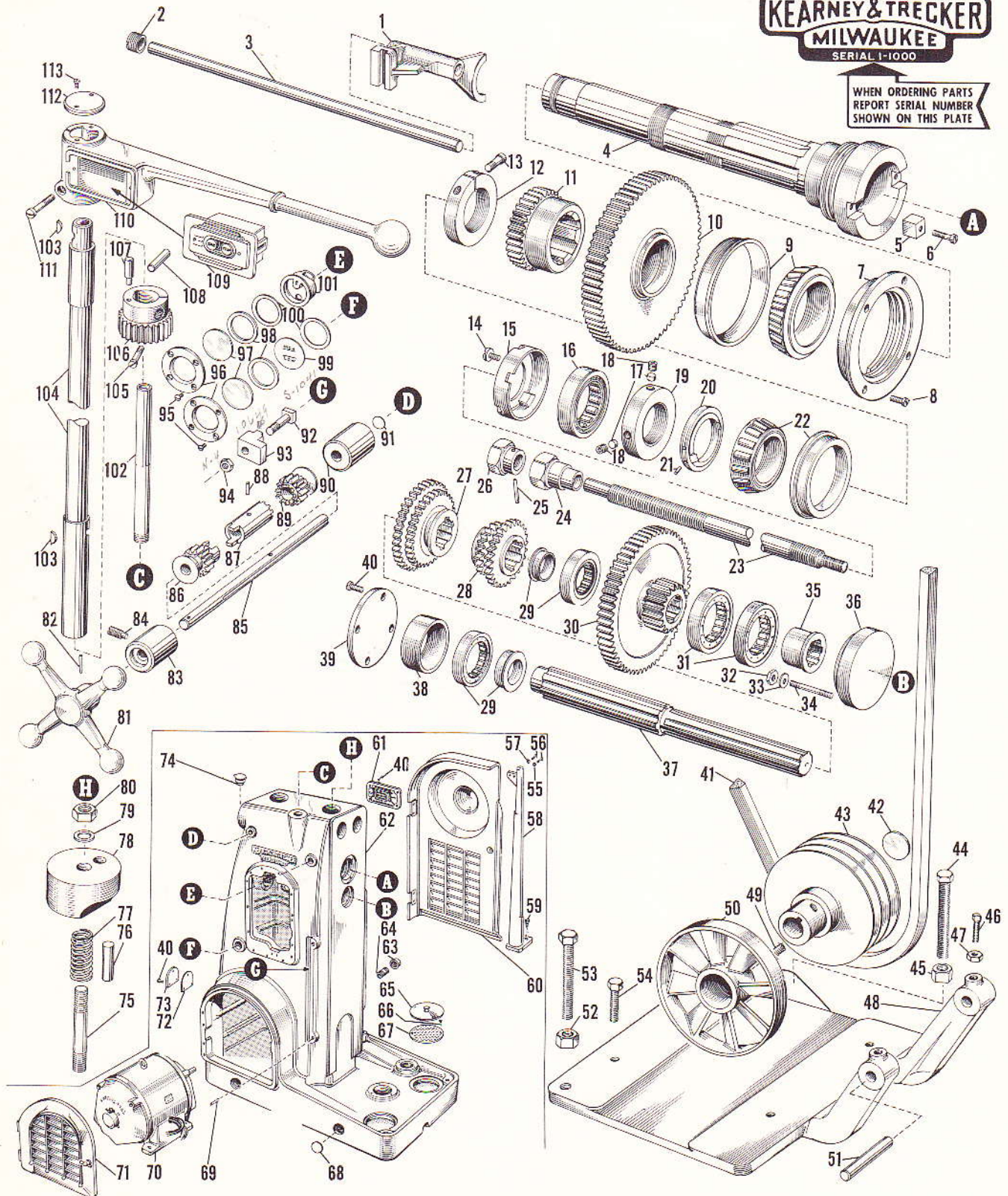


FIG. 5 - HORIZONTAL COLUMN

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 5 - Horizontal Column

Item No.	Part Name and Description	Code No.	Qty.
1	Range change shifter fork	2CH-A1	1
2	Shifter fork rod screw	2CH-A2	1
3	Shifter fork rod	2CH-A3	1
4	Spindle	2CH-A4	1
5	Spindle key	2CH-A5	2
6	Fil hd screw, 7/16-14 x 1-1/8"	2CH-A6	2
7	Spindle oil shield	2CH-A7	1
8	Fil hd screw, 5/16-18 x 11/16"	2CH-A8	4
9	Timken brg, 47620B-47686 (Spindle quality)	2CH-A9	1
10	Spindle gear, (Large)	2CH-A10	1
11	Spindle gear, (Small)	2CH-A11	1
12	Collar nut	2CH-A12	1
13	Socket hd cap screw, 7/16 x 1-1/4"	2CH-A13	1
14	Fil hd screw, 3/8-16 x 9/16"	2CH-A14	3
15	Spindle brg retainer, (Rear)	2CH-A15	1
16	Hyatt brg, 1308-TS	2CH-A16	1
17	Shoe	2CH-A17	2
18	Socket set screw, 1/2-20 x 1/2"	2CH-A18	2
19	Collar nut	2CH-A19	1
20	Spindle brg drive collar	2CH-A20	1
21	Drive collar pin	2CH-A21	1
22	Timken brg, 453B-462W (Spindle quality)	2CH-A22	1
23	Draw-in bolt	2CH-A23	1
24	Nut	2CH-A24	1
25	Taper pin, #4 x 1-1/4"	2CH-A25	1
26	Nut	2CH-A26	1
27	Primary sliding gear, (Rear)	2CH-A27	1
28	Primary sliding gear, (Front)	2CH-A28	1
29	Hyatt brg, R1207 TS	2CH-A29	2
30	Spindle drive sliding gear	2CH-A30	1
31	Hyatt brg, 1208 TS	2CH-A31	2
32	Hex nut, 5/16-18	2CH-A32	2
33	Washer, 5/8"	2CH-A33	2
34	Stud	2CH-A34	2
35	Primary shaft brg race	2CH-A35	1
36	Primary shaft brg cover	2CH-A36	1
37	Primary speed change shaft	2CH-A37	1
38	Primary shaft brg spacer	2CH-A38	1
39	Primary shaft rear brg cover	2CH-A39	1
40	Fil hd screw, 3/8-16 x 13/16"	2CH-A40	11
41	Texrope belt, B-68	2CH-A41	3
42	Expansion plug, 1-1/2" diam	2CH-A42	1
43	Motor sheave	2CH-A43	1
44	Hex hd cap screw, 5/8-11 x 4-1/4"	2CH-A44	1
45	Hex nut, 5/8-11	2CH-A45	1
46	Sq hd cup pt set screw, 3/8 x 1-1/4"	2CH-A46	2
47	Hex nut, 3/8-16	2CH-A47	2
48	Motor base	2CH-A48	1
49	Fl pt sock set screw, 3/8-16 x 3/4"	2CH-A49	2
50	Motor fan	2CH-A50	1
51	Motor base hinge pin	2CH-A51	2
52	Hex nut, 5/8-11	2CH-A52	1
53	Hex hd cap screw, 5/8-11 x 4-1/4"	2CH-A53	1
54	Hex hd cap screw, 1/2 x 1-1/2"	2CH-A54	4
55	Washer	2CH-A55	1
56	Hex hd cap screw, 3/8-16 x 1"	2CH-A56	2
57	Washer, 3/8"	2CH-A57	1
58	Coolant pipe guard	2CH-A58	1
59	Fil hd screw, 1/2-13 x 1-3/4"	2CH-A59	1
60	Pulley door	2CH-A60	1
	Pump clutch plate	2CH-A61	1
	#15 Escutcheon pin	2CH-A62	4
	Door latch	2CH-A63	1
	Sq hd cup pt set screw, 1/4-20 x 5/8"	2CH-A64	1

Item No.	Part Name and Description	Code No.	Qty.
	Door handle	2CH-A65	1
	Pulley door hinge	2CH-A66	2
	Hex hd cap screw, 3/8-16 x 1"	2CH-A67	4
	Lockwasher, 3/8"	2CH-A68	4
	Spacing washer	2CH-A69	*
61	Column vent and name plate	2CH-A70	1
62	Column	2CH-A71	1
63	Pipe cap, 1"	2CH-A72	1
64	Nipple, 1 x 2"	2CH-A73	1
65	Column drain cover	2CH-A74	2
66	Fl hd mach screw, 10-32 x 3/8"	2CH-A75	4
67	Column drain screen	2CH-A76	2
68	Expansion plug, 2-1/2" diam	2CH-A77	6
69	Acme Blue Label Dowel, 1/2 x 1-1/8"	2CH-A78	2
70	Electric motor, 5 hp	2CH-A79	3
71	Motor door	2CH-A80	1
	Motor door hinge	2CH-A81	2
	Hex hd cap screw, 3/8-16 x 13/16"	2CH-A82	8
	Lockwasher, #1220 Shakeproof	2CH-A83	8
	Door latch	2CH-A84	1
	Sq hd cup pt set screw, 1/4-20 x 5/8"	2CH-A85	1
	Door handle	2CH-A86	1
	Spacing washer	2CH-A87	*
72	Gasket	2CH-A88	1
73	Coolant clean-out cover	2CH-A89	1
74	Gits oiler, TS-409	2CH-A90	1
75	Stud	2CH-A91	2
76	Clamp block pin	2CH-A92	2
77	Spring	2CH-A93	2
78	Overarm clamp	2CH-A94	2
79	Washer, 3/4"	2CH-A95	2
80	Hex nut, 3/4-10	2CH-A96	2
81	Overarm hand wheel	2CH-A97	1
82	Taper pin, #4 x 1-3/8"	2CH-A98	1
83	Overarm shaft bushing, (LH)	2CH-A99	1
84	Dog pt set screw, 3/8-16 x 1-9/32"	2CH-A100	2
85	Overarm pinion shaft	2CH-A101	1
86	Overarm pinion, (LH)	2CH-A102	1
87	Overarm clutch sleeve	2CH-A103	1
88	Pin	2CH-A104	1
89	Overarm pinion, (RH)	2CH-A105	1
90	Overarm shaft bushing, (RH)	2CH-A106	1
91	Expansion plug, 3/4" diam	2CH-A107	1
92	T-Bolt	2CH-A108	2
93	Vert tripdog	2CH-A109	2
94	Hex nut, 7/16-14	2CH-A110	2
95	Oval hd screw, 10-32 x 15/32"	2CH-A111	8
96	Oil gage plate	2CH-A112	2
97	Oil gage glass	2CH-A113	2
98	Oil gage washer	2CH-A114	2
99	Oil gage plate	2CH-A115	1
100	Oil gage washer	2CH-A116	2
101	Oil flow gage	2CH-A117	1
102	Starting lever stand pipe	2CH-A118	1
103	Hi-Pro key, #708	2CH-A119	2
104	Starting lever shaft	2CH-A120	1
105	Fil hd screw, 3/8-16 x 1-3/8"	2CH-A121	1
106	Starting lever gear	2CH-A122	1
107	Starting lever stop pin (In gear)	2CH-A123	1
108	Starting lever stop pin (In column)	2CH-A124	1
109	Cutler-Hammer starting switch	2CH-A125	1
110	Starting lever	2CH-A126	1
111	Fil hd screw, 7/16-14 x 1-13/16"	2CH-A127	1
112	Starting lever cover	2CH-A128	1
113	Fil hd screw, 1/4-20 x 1/2"	2CH-A129	1

\* Indicates as required.

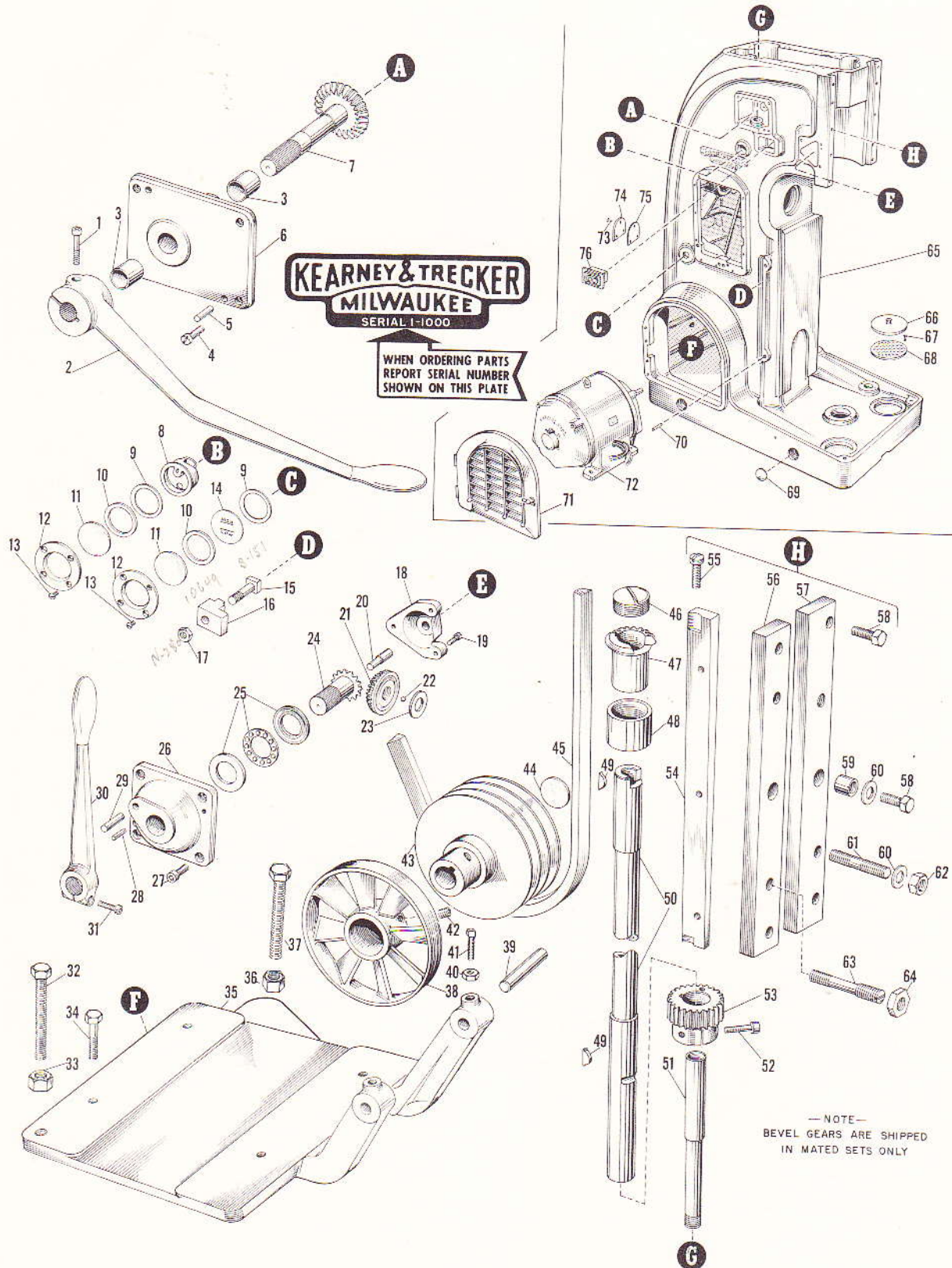


FIG. 6 - VERTICAL COLUMN, LEFT SIDE

# Replacement Parts Manual

Milling Machines — Plain, Universal and Vertical

Fig. 6 - Vertical Column, Left Side

Item No.	Part Name and Description	Code No.	Qty.	Item No.	Part Name and Description	Code No.	Qty.
1	Sock hd cap screw, 3/8 x 1-3/4"	2CH-B1	1	42	Sock hd flat pt set screw, 3/8-16 x 3/4"	2CH-B42	2
2	Starting lever	2CH-B2	1	43	Motor sheave	2CH-B43	1
3	Oilite brg, A1110-1	2CH-B3	2	44	Expansion plug, 1-1/2" diam	2CH-B44	1
4	Fil hd screw, 3/8-16 x 7/8"	2CH-B4	4	45	Texrope belt, B-68	2CH-B45	3
5	Acme Blue Label Dowel, 5/16 x 1"	2CH-B5	2	46	Pipe plug, 1-1/4"	2CH-B46	1
6	Starting lever cover	2CH-B6	1	47	Starting lever bevel pinion	2CH-B47	1
7	Starting lever cross shaft	2CH-B7	1	48	Oilite brg, A-2101	2CH-B48	1
8	Oil flow gage	2CH-B8	1	49	Hi-Pro key, HP-708	2CH-B49	2
9	Oil gage washer	2CH-B9	2	50	Starting lever shaft	2CH-B50	1
10	Oil gage washer	2CH-B10	2	51	Starting lever stand pipe	2CH-B51	1
11	Oil gage glass	2CH-B11	2	52	Fil hd screw, 3/8-16 x 1-3/8"	2CH-B52	1
12	Oil gage plate	2CH-B12	2	53	Starting lever gear	2CH-B53	1
13	Oval hd screw, 8-32 x 11/32"	2CH-B13	8	54	Head taper gib	2CH-B54	1
14	Oil gage plate	2CH-B14	1	55	Gib screw	2CH-B55	2
15	T-Bolt	2CH-B15	2	56	Hd gib, (LH)	2CH-B56	1
16	Vert trip dog	2CH-B16	2	57	Hd gib, (RH)	2CH-B57	1
17	Hex nut, 7/16-20	2CH-B17	2	58	Hex hd cap screw, 1/2-13 x 1-3/8"	2CH-B58	6
18	Pinion stud support	2CH-B18	1	59	Hd gib spacer	2CH-B59	2
19	Fil hd screw, 5/16-18 x 3/4"	2CH-B19	3	60	Washer, 1/2"	2CH-B60	5
20	Hd clamp pinion stud	2CH-B20	1	61	Stud	2CH-B61	3
21	Hd clamp bevel gear	2CH-B21	1	62	Hex nut, 1/2-13	2CH-B62	3
22	Steel ball, 3/16" diam	2CH-B22	19	63	Hd clamp stud	2CH-B63	1
23	Hd clamp bevel gear collar	2CH-B23	1	64	Hex nut, 3/4-10	2CH-B64	1
24	Hd clamp bevel pinion	2CH-B24	1	65	Column	2CH-B65	1
25	Ball thrust brg	2CH-B25	1	66	Column drain cover	2CH-B66	2
26	Clamp pinion brg plate	2CH-B26	1	67	Flat hd mach screw, 10-32 x 3/8"	2CH-B67	4
27	Sock hd cap screw, 3/8-16 x 3/4"	2CH-B27	4	68	Column drain screen	2CH-B68	2
28	Acme Blue Label Dowel, 1/4 x 1"	2CH-B28	2	69	Expansion plug, 2-1/2" diam	2CH-B69	6
29	Acme Blue Label Dowel, 3/8 x 1-1/2"	2CH-B29	1	70	Acme Blue Label Dowel, 1/2 x 1-1/8"	2CH-B70	2
30	Hd clamp handle	2CH-B30	1	71	Motor door	2CH-B71	1
31	Sock hd cap screw, 5/16 x 1-1/8"	2CH-B31	1		Motor door hinge	2CH-B72	2
32	Hex hd cap screw, 5/8-11 x 4-1/4"	2CH-B32	1		Hex hd cap screw, 3/8-16 x 13/16"	2CH-B73	8
33	Hex nut, 1/2-13	2CH-B33	1		Lockwasher, #1220 Shakeproof	2CH-B74	8
34	Hex hd cap screw, 1/2 x 1-1/2"	2CH-B34	4		Door latch	2CH-B75	1
35	Motor base	2CH-B35	1		Sq hd cup pt set screw, 1/4-20 x 5/8"	2CH-B76	1
36	Hex nut, 1/2-13	2CH-B36	1		Door handle	2CH-B77	1
37	Hex hd cap screw, 5/8-11 x 4-1/4"	2CH-B37	1		Spacing washer	2CH-B78	*
38	Motor fan	2CH-B38	1	72	Electric motor, 5 hp	2CH-B79	1
39	Motor base hinge pin	2CH-B39	2	73	Fil hd screw, 3/8-16 x 13/16"	2CH-B80	7
40	Hex nut, 3/8-16	2CH-B40	2	74	Coolant cleanout cover	2CH-B81	1
41	Sq hd cup pt set screw, 3/8 x 1-1/4"	2CH-B41	2	75	Gasket	2CH-B82	1
				76	Cutler-Hammer starting switch	2CH-B83	1

\* Indicates as required.

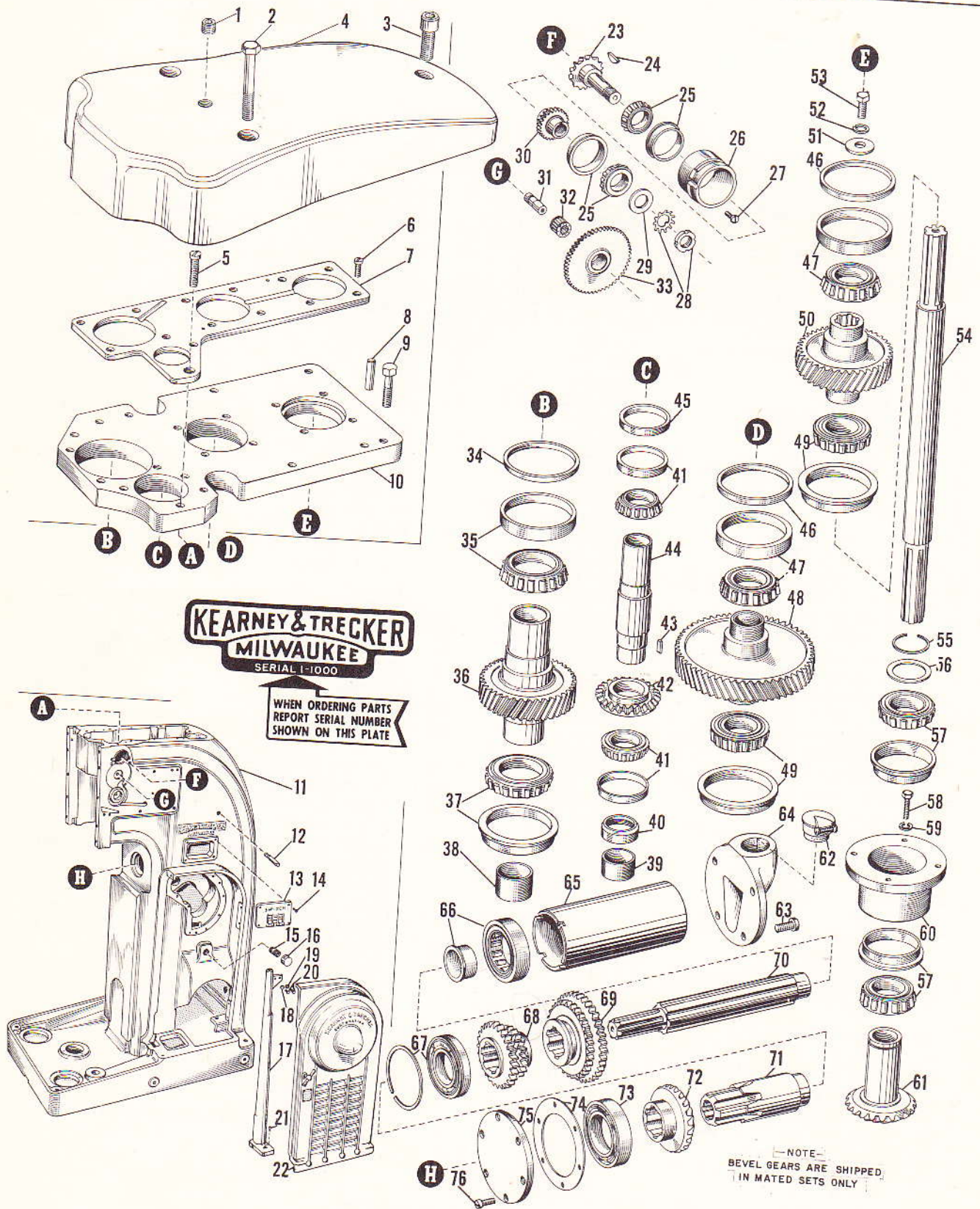


FIG. 7 - VERTICAL COLUMN, RIGHT SIDE

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 7 - Vertical Column, Right Side

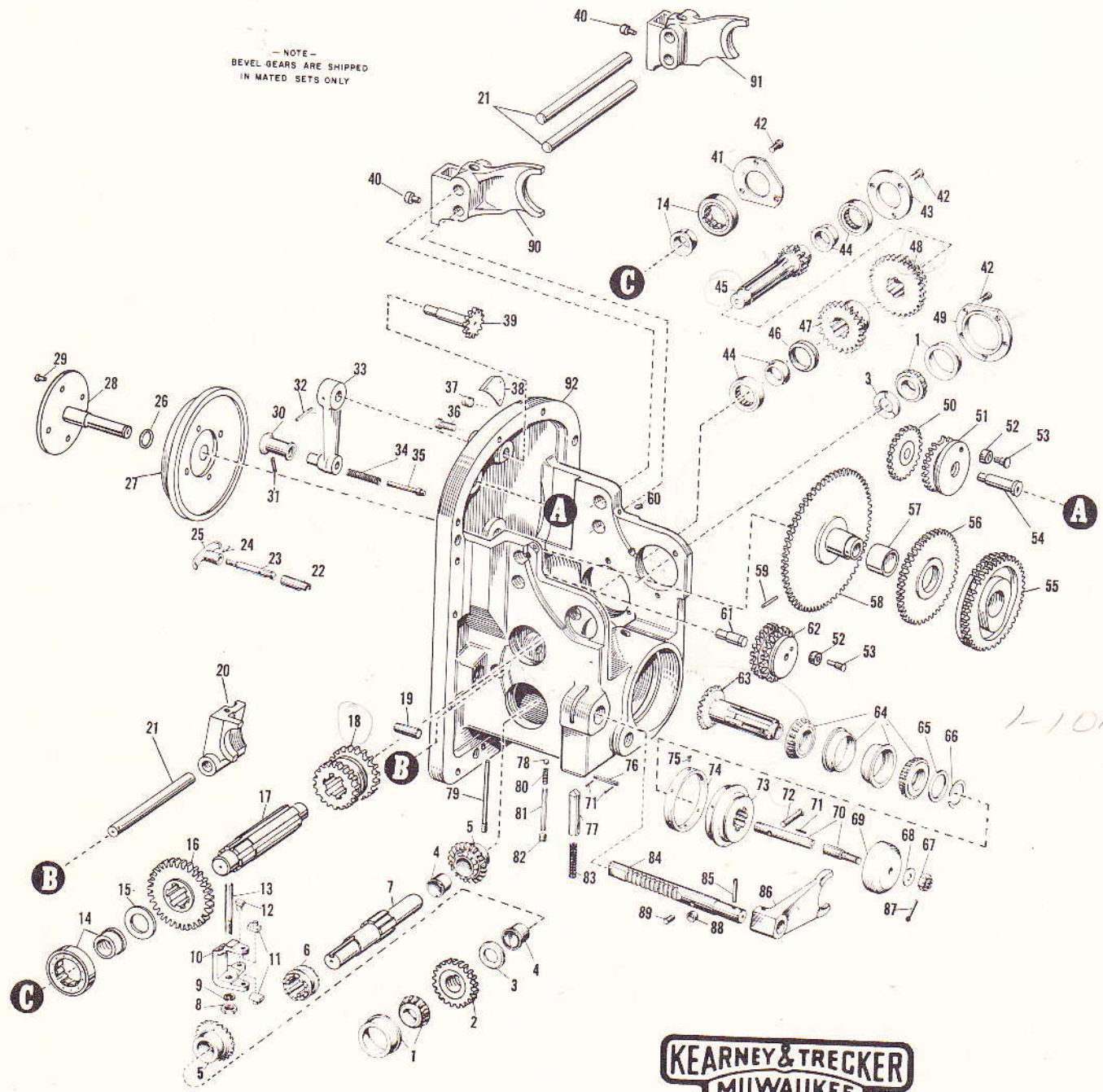
Item No.	Part Name and Description	Code No.	Qty.
1	Sock pipe plug, 1/2"	2CH-C1	1
2	Hex hd cap screw, 5/8-11 x 3-7/8"	2CH-C2	2
3	Sock hd cap screw, 3/4 x 1-3/4"	2CH-C3	1
4	Drive housing	2CH-C4	1
5	Fil hd screw, 1/2-13 x 2-1/8"	2CH-C5	1
6	Fil hd screw, 7/16-14 x 7/8"	2CH-C6	13
7	Drive plate cover	2CH-C7	1
8	Acme Blue Label Dowel, 1/2 x 1-1/2"	2CH-C8	2
9	Hex hd cap screw, 1/2-13 x 1-7/8"	2CH-C9	8
10	Drive brg plate	2CH-C10	1
11	Column	2CH-C11	1
12	Clamp rod	2CH-C12	1
13	Column vent and name plate assy	2CH-C13	1
14	Fil hd screw, 3/8-16 x 13/16"	2CH-C14	7
15	Wrought iron nipple, 1 x 2"	2CH-C15	1
16	Pipe cap, 1"	2CH-C16	1
17	Coolant pipe guard	2CH-C17	1
18	Washer	2CH-C18	1
19	Washer, 3/8"	2CH-C19	1
20	Hex hd cap screw, 3/8-16 x 1"	2CH-C20	2
21	Fil hd screw, 1/2-13 x 1-3/4"	2CH-C21	1
22	Pulley door	2CH-C22	1
	Pump clutch plate	2CH-C23	4
	#15 Escutcheon pins	2CH-C24	4
	Door latch	2CH-C25	1
	Sq hd cup pt set screw, 1/4-20 x 5/8"	2CH-C26	1
	Door handle	2CH-C27	1
	Pulley door hinge	2CH-C28	2
	Hex hd cap screw, 3/8-16 x 1"	2CH-C29	4
	Lockwasher, 3/8"	2CH-C30	4
	Spacing washer	2CH-C31	*
23	Feed cross shaft	2CH-C32	1
24	Hi-Pro key, HP-706	2CH-C33	1
25	Timken brg, 07204B-07100	2CH-C34	2
26	Feed cross shaft brg sleeve	2CH-C35	1
27	Fil hd screw, 5/16-18 x 5/8"	2CH-C36	2
28	Gurney locknut and washer, #3	2CH-C37	1
29	Feed cross shaft washer	2CH-C38	1
30	Feed cross shaft gear	2CH-C39	1
31	Feed drive idler gear shaft	2CH-C40	1
32	Hyatt brg, 93112	2CH-C41	1
33	Feed drive idler gear	2CH-C42	1

Item No.	Part Name and Descriptions	Code No.	Qty.
34	Cross shaft drive gear adj washer	2CH-C43	1
35	Timken brg, 382-387	2CH-C44	1
36	Cross shaft drive gear	2CH-C45	1
37	Timken brg, 382B-387	2CH-C46	1
38	Countershaft oil sleeve	2CH-C47	1
39	Oil sleeve	2CH-C48	1
40	Oil slinger	2CH-C49	1
41	Timken brg, 19268-19150	2CH-C50	2
42	Feed screw nut drive gear	2CH-C51	1
43	Key	2CH-C52	1
44	Hd feed nut	2CH-C53	1
45	Feed screw brg adj washer	2CH-C54	1
46	Drive gear adj washer	2CH-C55	1
47	Timken brg, 354A-355	2CH-C56	2
48	Drive idler gear	2CH-C57	1
49	Timken brg, 354B-355	2CH-C58	2
50	Drive gear	2CH-C59	1
51	Washer	2CH-C60	1
52	Lockwasher, 1/2"	2CH-C61	1
53	Hex hd cap screw, 1/2-13 x 1-3/8"	2CH-C62	1
54	Drive shaft	2CH-C63	1
55	Snap ring	2CH-C64	1
56	Drive shaft brg adj washer	2CH-C65	1
57	Timken brg, 332B-3425	2CH-C66	2
58	Hex hd cap screw	2CH-C67	4
59	Lockwasher, 3/8"	2CH-C68	4
60	Drive shaft brg sleeve	2CH-C69	1
61	Vert drive spiral bevel gear	2CH-C70	1
62	Gits oiler, TC-409	2CH-C71	1
63	Fil hd screw, 1/2-13 x 15/16"	2CH-C72	4
64	Primary shaft brg retainer	2CH-C73	1
65	Brg spacer	2CH-C74	1
66	Hyatt brg, R-1307 TS	2CH-C75	1
67	New Departure brg, 43208	2CH-C76	1
68	Front primary sliding gear	2CH-C77	1
69	Rear primary sliding gear	2CH-C78	1
70	Primary speed change shaft	2CH-C79	1
71	Vert drive sleeve	2CH-C80	1
72	Horizontal spiral bevel gear (Driver)	2CH-C81	1
73	New Departure brg, 3210	2CH-C82	1
74	Bevel gear fitting washer (Large)	2CH-C83	1
75	Brg retainer plate	2CH-C84	1
76	Fil hd screw, 3/8-16 x 7/8"	2CH-C85	6

\* Indicates as required.

**Replacement Parts Manual**  
 5hp No. 2 Model CH Milling Machines

— NOTE —  
 BEVEL GEARS ARE SHIPPED  
 IN MATED SETS ONLY



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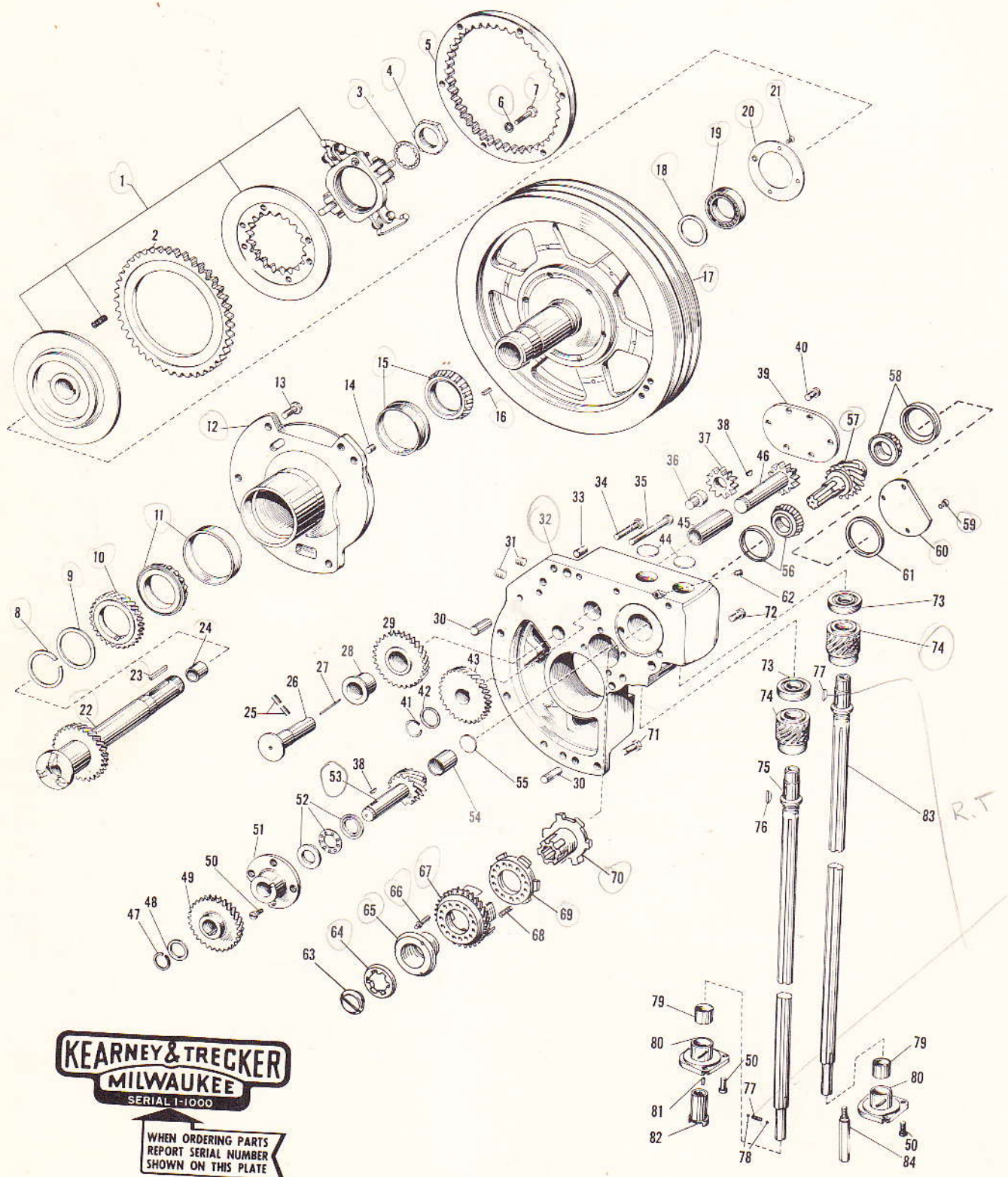
FIG. 8 - SPEED GEAR BOX

Fig. 8 - Speed Gear Box

Item No.	Part Name and Description	Code No.	Qty.
1	Timken brg, #1729B-1755	2CH-D1	2
2	Range gear	2CH-D2	1
3	Reverse bevel thrust washer	2CH-D3	2
4	Spindle reverse bevel gear bushing	2CH-D4	2
5	Spindle reverse bevel gear	2CH-D5	2
6	Spindle reverse clutch	2CH-D6	1
7	Reverse bevel gear shaft	2CH-D7	1
8	Hex hd nut	2CH-D8	1
9	Lockwasher, 1/2" diam	2CH-D9	1
10	Spindle reverse shifter yoke	2CH-D10	1
11	Reverse yoke shoe	2CH-D11	2
12	Reverse rod shoe	2CH-D12	1
13	Spindle reverse yoke stud	2CH-D13	1
14	Hyatt brg, #R-1305TS	2CH-D14	2
15	Secondary speed change shaft spacer	2CH-D15	1
16	Range gear	2CH-D16	1
17	Secondary speed change shaft	2CH-D17	1
18	Secondary speed change gear	2CH-D18	1
19	Acme Blue Lable dowel, 1/2 x 1-1/2"	2CH-D19	2
20	Secondary speed shifter fork	2CH-D20	1
21	Shifter fork guide rod	2CH-D21	3
22	Oil retainer tube	2CH-D22	1
23	Spindle reverse rod	2CH-D23	1
24	Taper pin, #3 x 7/8" (Long)	2CH-D24	1
25	Spindle reverse knob	2CH-D25	1
26	"O" Ring, AN-6227-15	2CH-D26	1
27	Speed dial (25-1500 rpm)	2CH-D27	1
28	Speed dial drive shaft	2CH-D28	1
29	#5 Timmers rivet	2CH-D29	4
30	Speed selection knob	2CH-D30	1
31	Taper pin, #2 x 7/8" (Long)	2CH-D31	1
32	Taper pin, #3 x 1-3/8" (Long)	2CH-D32	1
33	Speed change lever	2CH-D33	1
34	Spring	2CH-D34	1
35	Speed selection lever plunger	2CH-D35	1
36	Sock hd cap screw, 3/8 x 1-1/8"	2CH-D36	11
37	Sock hd set screw, 1/2 x 3/4"	2CH-D37	2
38	RPM plate	2CH-D38	1
39	Cam drive pinion	2CH-D39	1
40	Primary change lever pin	2CH-D40	2
41	Secondary shaft brg retainer	2CH-D41	1
42	Fil hd screw, 5/16-18 x 11/16"	2CH-D42	11
43	Idler shaft brg retainer	2CH-D43	1
44	Hyatt brg, #1205TS	2CH-D44	2
45	Idler shaft and rear gear	2CH-D45	1
46	Idler shaft spacer	2CH-D46	1

Item No.	Part Name and Description	Code No.	Qty.
47	Front idler gear	2CH-D47	1
48	Center idler cluster gear	2CH-D48	1
49	Reverse bevel gear shaft brg carrier	2CH-D49	1
50	Range change gear	2CH-D50	1
51	Range change gear (Upper)	2CH-D51	1
52	Range shifter block	2CH-D52	2
53	Range change roll pin	2CH-D53	2
54	Range change gear shaft	2CH-D54	1
55	Speed change cam	2CH-D55	1
56	Cam drive idler gear	2CH-D56	1
57	Speed dial drive gear bushing	2CH-D57	1
58	Speed dial drive gear	2CH-D58	1
59	Taper pin, #2 x 1-1/8" (Long)	2CH-D59	1
60	Screw	2CH-D60	1
61	Range change gear (Lower) shaft	2CH-D61	1
62	Range change gear (Lower)	2CH-D62	1
63	Spindle drive bevel gear	2CH-D63	1
64	Timken brg, #19283B-19138	2CH-D64	2
65	Drive bevel gear collar	2CH-D65	1
66	Snap ring	2CH-D66	1
67	Castellated nut	2CH-D67	1
68	Washer	2CH-D68	1
69	Clutch cone	2CH-D69	1
70	Clutch shifter rod	2CH-D70	1
71	Cotter pin, 1/16 x 5/8"	2CH-D71	3
72	Clutch shifter spool pin	2CH-D72	1
73	Clutch shifter spool	2CH-D73	1
74	Brake cone	2CH-D74	1
75	Copper rivet	2CH-D75	7
76	Detent plunger pin	2CH-D76	1
77	Detent plunger	2CH-D77	1
78	Steel ball, 5/16" diam	2CH-D78	1
79	Headless set screw	2CH-D79	1
80	Spring	2CH-D80	1
81	Pin	2CH-D81	1
82	Set screw	2CH-D82	1
83	Spring	2CH-D83	1
84	Clutch shifter yoke rod	2CH-D84	1
85	Taper pin, #4 x 1-3/8" (Long)	2CH-D85	1
86	Clutch shifter fork	2CH-D86	1
87	Cotter pin, 7/64 x 1-1/2"	2CH-D87	1
88	Detent roller	2CH-D88	1
89	Detent roller pin	2CH-D89	1
90	Primary shifter fork (Front)	2CH-D90	1
91	Primary shifter fork (Rear)	2CH-D91	1
92	Speed gear box	2CH-D92	1





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

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

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

Item No.	Part Name and Description	Code No.	Qty.
1	Special C - 6-1/2" twin disc, Clutch #5773	2CH-E1	1
2	Clutch #5773	2CH-E2	1
3	Lockwasher, Shakeproof #1238	2CH-E3	1
4	Nut	2CH-E4	1
5	Clutch gear ring	2CH-E5	1
6	Lockwasher, 5/16"	2CH-E6	6
7	Screw	2CH-E7	6
8	Snap ring	2CH-E8	1
9	Pulley fitting washer	2CH-E9	1
10	Rapid traverse drive gear	2CH-E10	1
11	Timken brg, 13181-13318	2CH-E11	1
12	Pulley bracket	2CH-E12	1
13	Screw	2CH-E13	5
14	Sock hd fl pt set screw, 3/8 x 1/2"	2CH-E14	2
15	Timken brg, 18200-18337	2CH-E15	1
16	Key	2CH-E16	1
17	Pulley	2CH-E17	1
18	Feed drive sleeve brg spacer, 18200-18337	2CH-E18	1
19	New Departure brg, #1206	2CH-E19	1
20	Ball brg retainer	2CH-E20	1
21	Screw	2CH-E21	4
22	Feed drive sleeve gear	2CH-E22	1
23	Key	2CH-E23	1
24	Clutch shifter rod bushing	2CH-E24	1
25	Fl pt set screw, 3/8 x 5/8"	2CH-E25	2
26	Rapid traverse idler gear stud	2CH-E26	1
27	Oil wicking	2CH-E27	1
28	Rapid traverse idler gear bushing	2CH-E28	1
29	Rapid traverse drive idler gear	2CH-E29	1
30	Acme Blue Label dowel, 1/2 x 1-1/4"	2CH-E30	2
31	Allen hd pipe plug, 1/4"	2CH-E31	2
32	Feed and rapid traverse take-off bracket	2CH-E32	1
33	Allen set screw, 1/2 x 3/4"	2CH-E33	2
34	Screw	2CH-E34	1
35	Fil hd screw	2CH-E35	3
36	Oil pump gear stud	2CH-E36	1
37	Oil pump gear (Driver)	2CH-E37	1
38	Hi-Pro key, HP-606	2CH-E38	3
39	Oil pump cover	2CH-E39	1
40	Screw	2CH-E40	6
41	Snap ring	2CH-E41	1
42	Fitting collar	2CH-E42	1
43	Pump drive gear	2CH-E43	1
44	Expansion plug, 1-1/8" diam	2CH-E44	2

Item No.	Part Name and Description	Code No.	Qty.
45	Bushing	2CH-E45	1
46	Oil pump gear (Driver)	2CH-E46	1
47	Snap ring	2CH-E47	1
48	Fitting collar	2CH-E48	1
49	Feed worm drive gear	2CH-E49	1
50	Screw	2CH-E50	9
51	Feed drive worm brg (Inner)	2CH-E51	1
52	K and T thrust brg, #4723	2CH-E52	1
53	Feed drive worm	2CH-E53	1
54	Feed drive worm bushing	2CH-E54	1
55	Expansion plug, 15/16" diam	2CH-E55	1
56	Timken brg, 07196-07093	2CH-E56	1
57	Rapid traverse drive worm	2CH-E57	1
58	Timken brg, 07204-07093	2CH-E58	1
59	Fil hd screw	2CH-E59	3
60	Worm brg cover	2CH-E60	1
61	Worm brg fitting washer	2CH-E61	1
62	Allen set screw, 5/16 x 5/16"	2CH-E62	1
63	Rapid traverse safety clutch return screw	2CH-E63	1
64	Rapid traverse clutch thrust washer	2CH-E64	1
65	Rapid traverse worm drive gear bushing	2CH-E65	1
66	Friction drive plate pin	2CH-E66	3
67	Rapid traverse worm drive gear	2CH-E67	1
68	Rapid traverse clutch spring	2CH-E68	15
69	Rapid traverse driving clutch plate	2CH-E69	1
70	Rapid traverse safety clutch hub	2CH-E70	1
71	Screw	2CH-E71	4
72	Fil hd screw	2CH-E72	2
73	New Departure brg, #1204	2CH-E73	2
74	Feed and rapid traverse drive worm wheel	2CH-E74	2
75	Feed drive take-off shaft	2CH-E75	1
76	Hi-Pro key, HP-705	2CH-E76	2
77	Spring	2CH-E77	1
78	Steel ball, 1-3/16" diam	2CH-E78	2
79	Oilite brg, A-1008-4	2CH-E79	2
80	Feed and rapid traverse drive shaft retainer	2CH-E80	2
81	Key	2CH-E81	1
82	Coolant shaft drive clutch	2CH-E82	1
83	Rapid traverse take-off shaft	2CH-E83	1
84	Positive stop screw (For horizontal mach)	2CH-E84	1
84	Positive stop screw (For vertical mach)	2CH-E84	1



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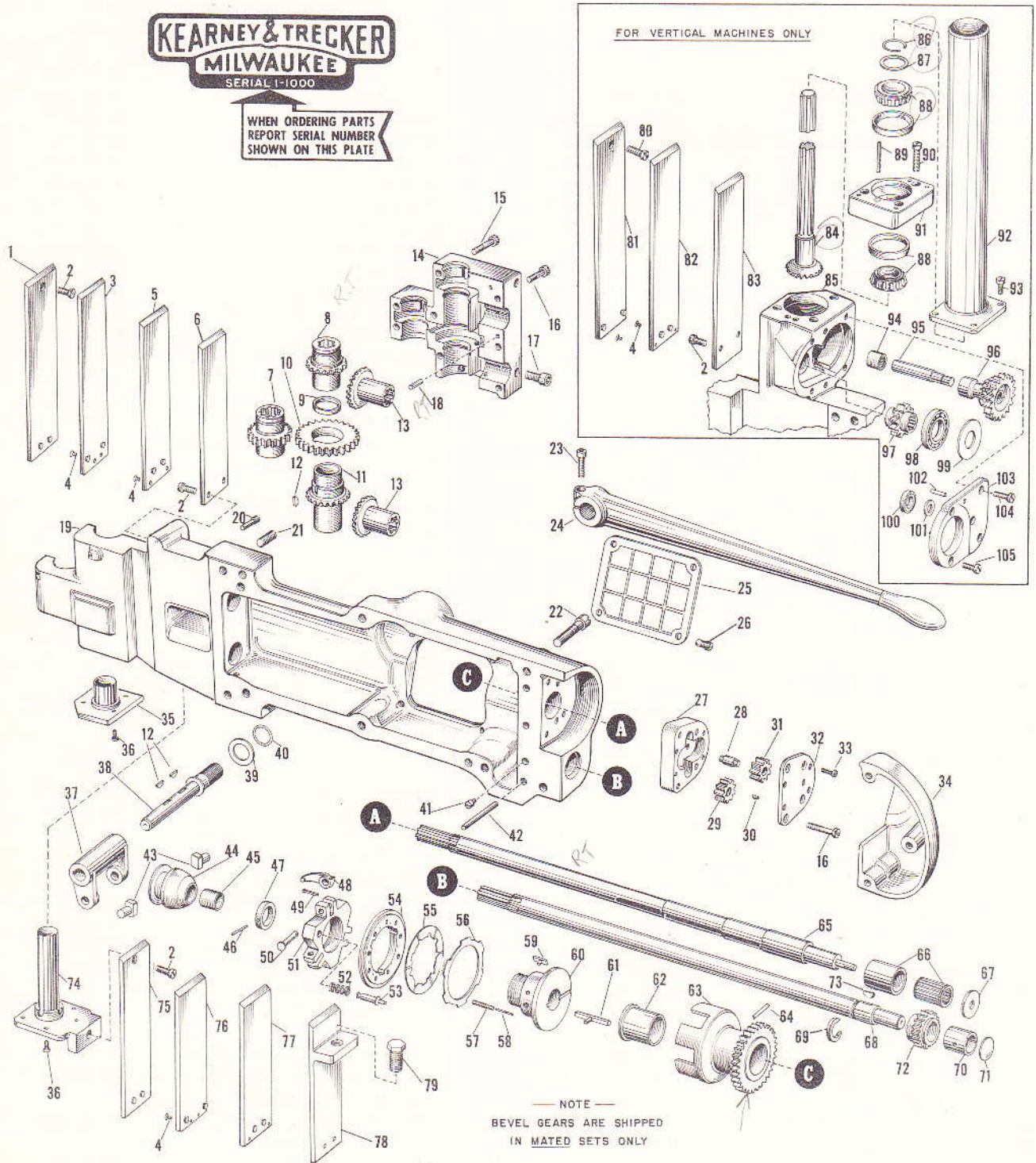


FIG. 10 - FEED AND RAPID TRAVERSE DRIVE BRACKET

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 10 - 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"	2CH-F1	1	55	Clutch plate (Driver)	2CH-F55	5
2	Fil hd screw	2CH-F2	*4	56	Clutch plate (Driver)	2CH-F56	6
3	Drive shaft guard, 2-1/4 x 7-1/4"	2CH-F3	1	57	Spring	2CH-F57	6
4	Oval hd screw	2CH-F4	**12	58	Rapid traverse clutch plate pin	2CH-F58	6
5	Drive shaft guard, 2-1/4 x 7-1/4"	2CH-F5	1	59	Key	2CH-F59	3
6	Drive shaft guard, 2-1/4 x 7"	2CH-F6	1	60	Rapid traverse clutch hub and back plate	2CH-F60	1
7	Feed drive gear	2CH-F7	1	61	Key	2CH-F61	1
8	Rapid traverse drive bevel gear	2CH-F8	1	62	Rapid traverse clutch gear bushing	2CH-F62	1
9	Rapid traverse bevel gear collar	2CH-F9	1	63	Rapid traverse clutch gear (Plain and Vert Mach)	2CH-F63	1
10	Feed drive spur gear	2CH-F10	1	63	Rapid traverse clutch gear (Universal Mach only)	2CH-F63	1
11	Feed drive bevel gear	2CH-F11	1	64	Dowel pin, 1/8 x 1/2"	2CH-F64	1
12	Hi-pro key, #505	2CH-F12	3	65	Rapid traverse clutch shaft	2CH-F65	1
13	Feed and rapid traverse bevel gear	2CH-F13	2	66	Hyatt brg, S-93324	2CH-F66	1
14	Feed and rapid traverse drive bracket cap	2CH-F14	1	67	Rapid traverse clutch shaft collar	2CH-F67	1
15	Fil hd screw	2CH-F15	5	68	Feed drive pinion shaft	2CH-F68	1
16	Fil hd screw	2CH-F16	10	69	Feed drive pinion thrust washer	2CH-F69	1
17	Sock hd cap screw, 3/8 x 3/4"	2CH-F17	2	70	Feed drive shaft brg	2CH-F70	1
18	Acme Blue Label dowel, 5/16 x 1-1/4"	2CH-F18	1	71	Expansion plug, 1-1/4" diam	2CH-F71	1
19	Feed and rapid traverse drive bracket (Horizontal mach)	2CH-F19	1	72	Feed drive shaft gear	2CH-F72	1
20	Screw	2CH-F20	1	73	Key	2CH-F73	1
21	Allen set screw, 1/2 x 1-1/4"	2CH-F21	2	74	Rapid traverse drive oil retainer plate and tube	2CH-F74	1
22	Fil hd screw	2CH-F22	7	75	Drive shaft guard, 2-1/4 x 6-11/16"	2CH-F75	1
23	Allen sock hd cap screw, 5/16 x 1"	2CH-F23	1	76	Drive shaft guard, 2-1/4 x 6-15/16"	2CH-F76	1
24	Rapid traverse lever	2CH-F24	1	77	Drive shaft guard, 2-1/4 x 7-5/16"	2CH-F77	1
25	Rapid traverse clutch cover	2CH-F25	1	78	Drive shaft guard and retainer	2CH-F78	1
26	Fil hd screw	2CH-F26	4	79	Hex hd cap screw	2CH-F79	1
27	Oil pump body	2CH-F27	1	80	Fil hd screw	2CH-F80	1
28	Oil pump gear stud	2CH-F28	1	81†	Cover plate (Upper)	2CH-F81	1
29	Oil pump gear (Driver)	2CH-F29	1	82†	Cover plate	2CH-F82	1
30	Hi-pro key, 1/8 x 1/2", #404	2CH-F30	1	83†	Cover plate (Lower)	2CH-F83	1
31	Oil pump gear (Driver)	2CH-F31	1	84	Vert hd feed bevel gear shaft	2CH-F84	1
32	Oil pump cover	2CH-F32	1	85†	Feed and rapid traverse drive bracket	2CH-F85	1
33	Fil hd screw	2CH-F33	4	86	Snap ring	2CH-F86	1
34	Feed and rapid traverse drive bracket cover	2CH-F34	1	87	Feed bevel gear shaft fitting washer	2CH-F87	1
35	Feed drive oil retainer plate and tube	2CH-F35	1	88	Timken brg, 07196-07100	2CH-F88	2
36	Fil hd screw	2CH-F36	9	89	Oil wicking	2CH-F89	1
37	Rapid traverse clutch fork	2CH-F37	1	90	Fil hd screw	2CH-F90	3
38	Rapid traverse lever shaft	2CH-F38	1	91	Feed drive vert brg cage	2CH-F91	1
39	Spacing washer, 1/16"	2CH-F39	1	92	Telescopic tube (Lower) and brg cover	2CH-F92	1
40	"O" Ring, #14, 3/4 ID x 15/16 OD	2CH-F40	1	93	Fil hd screw	2CH-F93	4
41	Dog pt set screw	2CH-F41	1	94	Torrington brg, B-88	2CH-F94	1
42	Acme Blue Label dowel, 5/16 x 2-3/4"	2CH-F42	1	95	Feed drive gear shaft	2CH-F95	1
43	Rapid traverse clutch cone shoe	2CH-F43	2	96	Vert hd feed drive gear	2CH-F96	1
44	Rapid traverse clutch cone	2CH-F44	1	97	Drive shaft pinion	2CH-F97	1
45	Clutch cone bushing	2CH-F45	1	98	MRC brg, #105-S	2CH-F98	1
46	Taper pin, 2/1-5/16"	2CH-F46	1	99	Take-Off gear brg retainer washer	2CH-F99	1
47	Rapid traverse clutch hub collar	2CH-F47	1	100	MRC brg, #201-S	2CH-F100	1
48	Clutch finger	2CH-F48	3	101	Miter bevel fitting washer	2CH-F101	1
49	Cotter pin, 3/32 x 5/8"	2CH-F49	3	102	Acme Blue Label dowel, 1/4 x 3/4"	2CH-F102	2
50	Finger lever pin	2CH-F50	3	103	Feed drive brg plate	2CH-F103	1
51	Adj yoke	2CH-F51	1	104	Fil hd screw	2CH-F104	2
52	Spring	2CH-F52	1	105	Fil hd screw	2CH-F105	2
53	Adj lock pin	2CH-F53	1				
54	Floating plate	2CH-F54	1				

\*Only 3 used on Vertical Machines

\*\*Only 8 used on Vertical Machines

†Vertical Machine only

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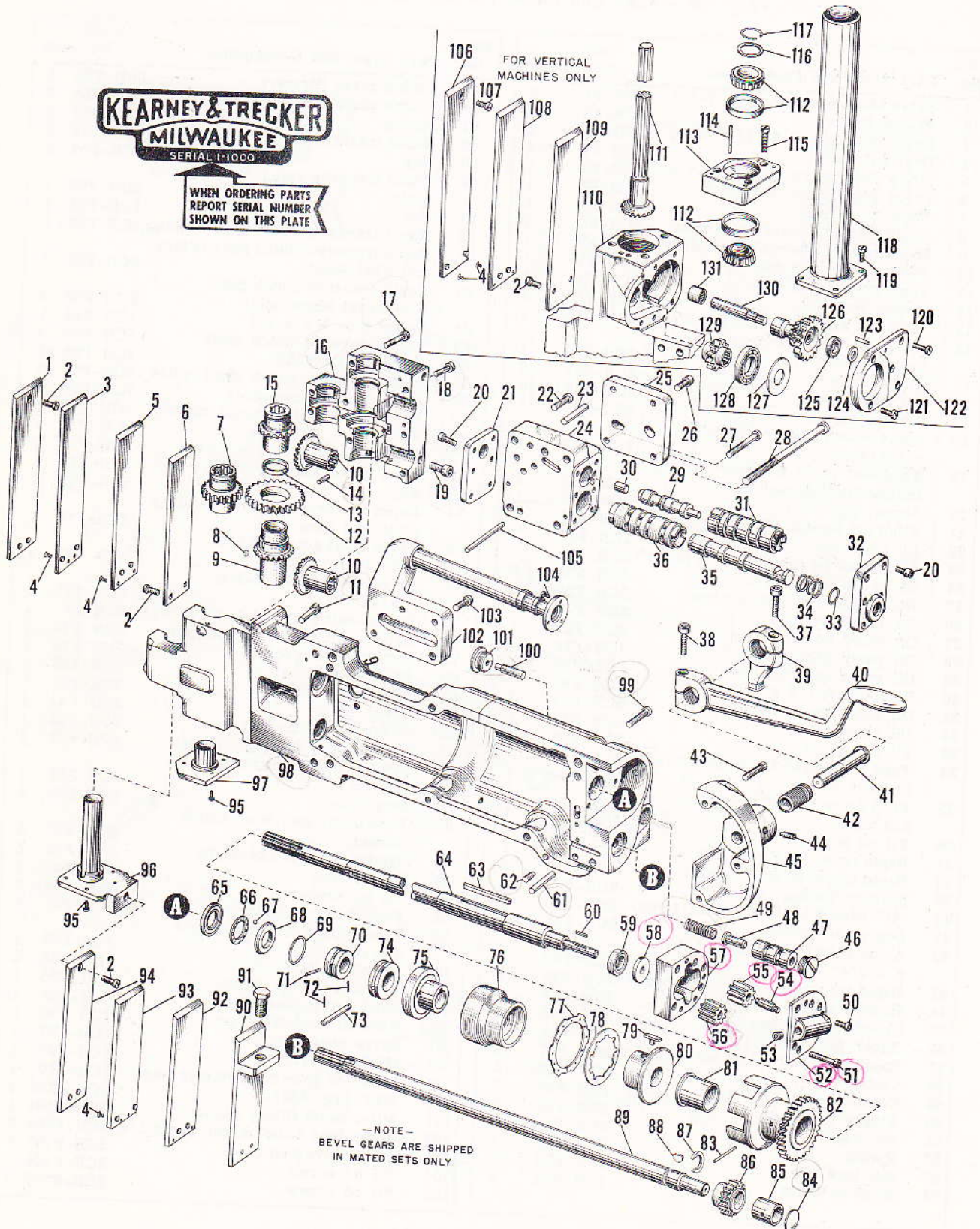


FIG. 11 - AUTOMATIC CYCLE FEED AND RAPID TRAVERSE DRIVE BRACKET

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

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

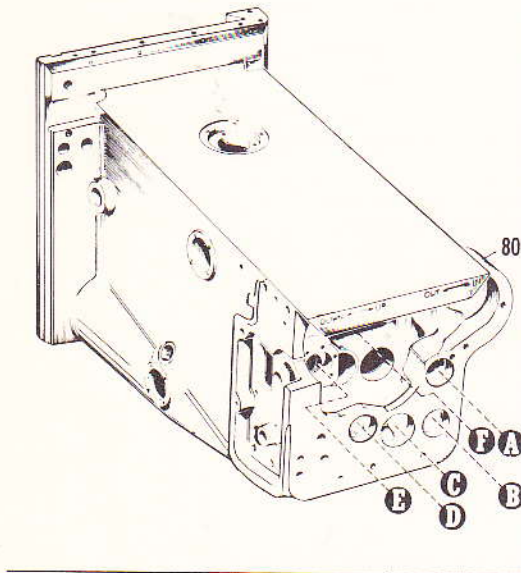
Item No.	Part Name and Description	Code No.	Qty.	Item No.	Part Name and Description	Code No.	Qty.
1	Drive shaft guard, 2-1/4 x 7-1/4"	2CH-G1	1	66	Rapid traverse clutch shaft ball cage	2CH-G66	1
2	Fil hd screw	2CH-G2	*4	67	Ball brg, 1/4"	2CH-G67	12
3	Drive shaft guard, 2-1/4 x 7-1/2"	2CH-G3	1	68	Rapid traverse clutch shaft front race	2CH-G68	1
4	Oval hd screw	2CH-G4	**12	69	Snap ring	2CH-G69	1
5	Drive shaft guard, 2-1/4 x 7-1/4"	2CH-G5	1	70	Rapid traverse drive shaft collar	2CH-G70	1
6	Drive shaft guard, 2-1/4 x 7"	2CH-G6	1	71	Taper pin, #2 x 1-5/16"	2CH-G71	1
7	Feed drive gear	2CH-G7	1	72	Cotter pin, 3/32 x 1/2"	2CH-G72	2
8	Hi-pro key, 1/8 x 5/8", #505	2CH-G8	1	73	Rapid traverse shaft collar pin	2CH-G73	1
9	Feed drive bevel gear	2CH-G9	1	74	Rapid traverse drive shaft collar	2CH-G74	1
10	Feed and rapid traverse bevel gear	2CH-G10	2	75	Rapid traverse operating sleeve	2CH-G75	1
11	Oil metering pin	2CH-G11	1	76	Clutch cylinder sleeve	2CH-G76	1
12	Feed drive spur gear	2CH-G12	1	77	Clutch plate (Driven)	2CH-G77	5
13	Rapid traverse bevel gear collar	2CH-G13	1	78	Clutch plate (Driver)	2CH-G78	6
14	Acme Blue Label dowel, 5/16 x 1-1/4"	2CH-G14	1	79	Clutch plate key	2CH-G79	3
15	Rapid traverse drive bevel gear	2CH-G15	1	80	Hub and back plate	2CH-G80	1
16	Feed and rapid traverse drive bracket cap	2CH-G16	1	81	Rapid traverse clutch gear bushing	2CH-G81	1
17	Fil hd screw	2CH-G17	5	82	Rapid traverse clutch gear	2CH-G82	1
18	Fil hd screw	2CH-G18	3	83	Pin, 1/8 x 1/2"	2CH-G83	1
19	Socket hd cap screw, 3/8 x 1"	2CH-G19	2	84	Expansion plug, 1-1/4" diam	2CH-G84	1
20	Socket hd cap screw, 5/16 x 5/8"	2CH-G20	10	85	Feed drive shaft brg	2CH-G85	1
21	Rapid traverse valve body rear cover	2CH-G21	1	86	Feed drive shaft gear	2CH-G86	1
22	Socket hd cap screw, 3/8 x 1-1/2"	2CH-G22	3	87	Feed drive pinion thrust washer	2CH-G87	1
23	Acme Blue Label dowel, 5/16 x 1-3/4"	2CH-G23	1	88	Key	2CH-G88	1
24	Rapid traverse valve body	2CH-G24	1	89	Feed drive pinion shaft	2CH-G89	1
25	Rapid traverse fitting adapter	2CH-G25	1	90	Drive shaft guard and retainer	2CH-G90	1
26	Socket hd cap screw, 3/8 x 7/8"	2CH-G26	2	91	Hex hd cap screw	2CH-G91	1
27	Socket hd cap screw, 3/8 x 3-3/4"	2CH-G27	1	92	Drive shaft guard, 2-1/4 x 6-15/16"	2CH-G92	1
28	Socket hd cap screw, 7/16 x 7-3/4"	2CH-G28	1	93	Drive shaft guard, 2-1/4 x 7-15/16"	2CH-G93	1
29	Rapid traverse valve piston	2CH-G29	1	94	Drive shaft guard, 2-1/4 x 6-11/16"	2CH-G94	1
30	Pilot valve return plunger	2CH-G30	1	95	Fil hd screw	2CH-G95	9
31	Rapid traverse pilot valve sleeve	2CH-G31	1	96	Rapid traverse drive oil retainer plate and tube	2CH-G96	1
32	Rapid traverse valve body front cover	2CH-G32	1	97	Feed drive oil retainer plate and tube	2CH-G97	1
33	"O" Ring, AN-6227-15	2CH-G33	1	98	Feed and rapid traverse drive bracket (Horizontal mach)	2CH-G98	1
34	Rapid traverse control valve spring	2CH-G34	1	99	Socket hd cap screw, 7/16 x 1-3/4"	2CH-G99	6
35	Rapid traverse control valve piston	2CH-G35	1	100	Lo-pressure plunger stop pin	2CH-G100	1
36	Rapid traverse control valve sleeve	2CH-G36	1	101	Relief valve spring retainer plug	2CH-G101	1
37	Socket hd cap screw, 3/8 x 1-1/4"	2CH-G37	1	102	Oil return bracket and tube assy	2CH-G102	1
38	Socket hd cap screw, 3/8 x 1-1/2"	2CH-G38	1	103	Socket hd cap screw, 3/8 x 1"	2CH-G103	4
39	Rapid traverse valve shifter	2CH-G39	1	104	Screw	2CH-G104	3
40	Rapid traverse lever	2CH-G40	1	105	Acme Blue Label dowel, 5/16 x 3"	2CH-G105	1
41	Rapid traverse lever pin	2CH-G41	1	106	Cover plate (Upper)	2CH-G106	1
42	Rapid traverse lever sleeve	2CH-G42	1	107	Fil hd screw	2CH-G107	1
43	Socket hd cap screw, 5/16 x 1-1/2"	2CH-G43	3	108	Cover plate	2CH-G108	1
44	Screw	2CH-G44	1	109	Cover plate (Lower)	2CH-G109	1
45	Rapid traverse drive bracket cover	2CH-G45	1	110	Feed and rapid traverse drive bracket (Vert mach)	2CH-G110	1
46	Relief valve plug	2CH-G46	1	111	Vert hd feed bevel gear shaft	2CH-G111	1
47	Pressure valve sleeve	2CH-G47	1	112	Timken brg, 07196-07100	2CH-G112	2
48	Relief valve plunger	2CH-G48	1	113	Feed drive vert brg cage	2CH-G113	1
49	Spring	2CH-G49	1	114	Oil wicking	2CH-G114	1
50	Socket hd cap screw, 1/4 x 1/2"	2CH-G50	4	115	Fil hd screw	2CH-G115	3
51	Socket hd cap screw, 5/16 x 1-3/4"	2CH-G51	4	116	Feed bevel gear shaft fitting washer	2CH-G116	1
52	Oil pump cover	2CH-G52	1	117	Snap ring	2CH-G117	1
53	Socket hd pipe plug, 1/8"	2CH-G53	1	118	Telescopic tube (Lower) and brg cover	2CH-G118	1
54	Oil pump gear stud	2CH-G54	1	119	Fil hd screw	2CH-G119	4
55	Oil pump gear (Driven)	2CH-G55	1	120	Fil hd screw	2CH-G120	2
56	Oil pump gear (Driver)	2CH-G56	1	121	Fil hd screw	2CH-G121	2
57	Oil pump body	2CH-G57	1	122	Feed drive brg plate	2CH-G122	1
58	Rapid traverse clutch shift collar	2CH-G58	1	123	Acme Blue Label dowel, 1/4 x 3/4"	2CH-G123	2
59	Hyatt brg, S-93316	2CH-G59	1	124	Miter bevel fitting washer	2CH-G124	1
60	Key	2CH-G60	1	125	MRC brg #201-S	2CH-G125	1
61	Acme Blue Label dowel, 5/16 x 2-3/4"	2CH-G61	1	126	Vert hd feed drive gear	2CH-G126	1
62	Dog pt set screw	2CH-G62	1	127	Take-Off gear brg retainer washer	2CH-G127	1
63	Key	2CH-G63	1	128	MRC brg #105-S	2CH-G128	1
64	Rapid traverse clutch shaft	2CH-G64	1	129	Drive shaft pinion	2CH-G129	1
65	Rapid traverse clutch shaft rear race	2CH-G65	1	130	Feed drive gear shaft	2CH-G130	1
				131	Torrington brg, B-88	2CH-G131	1

\*Only 2 used on Vertical Machines

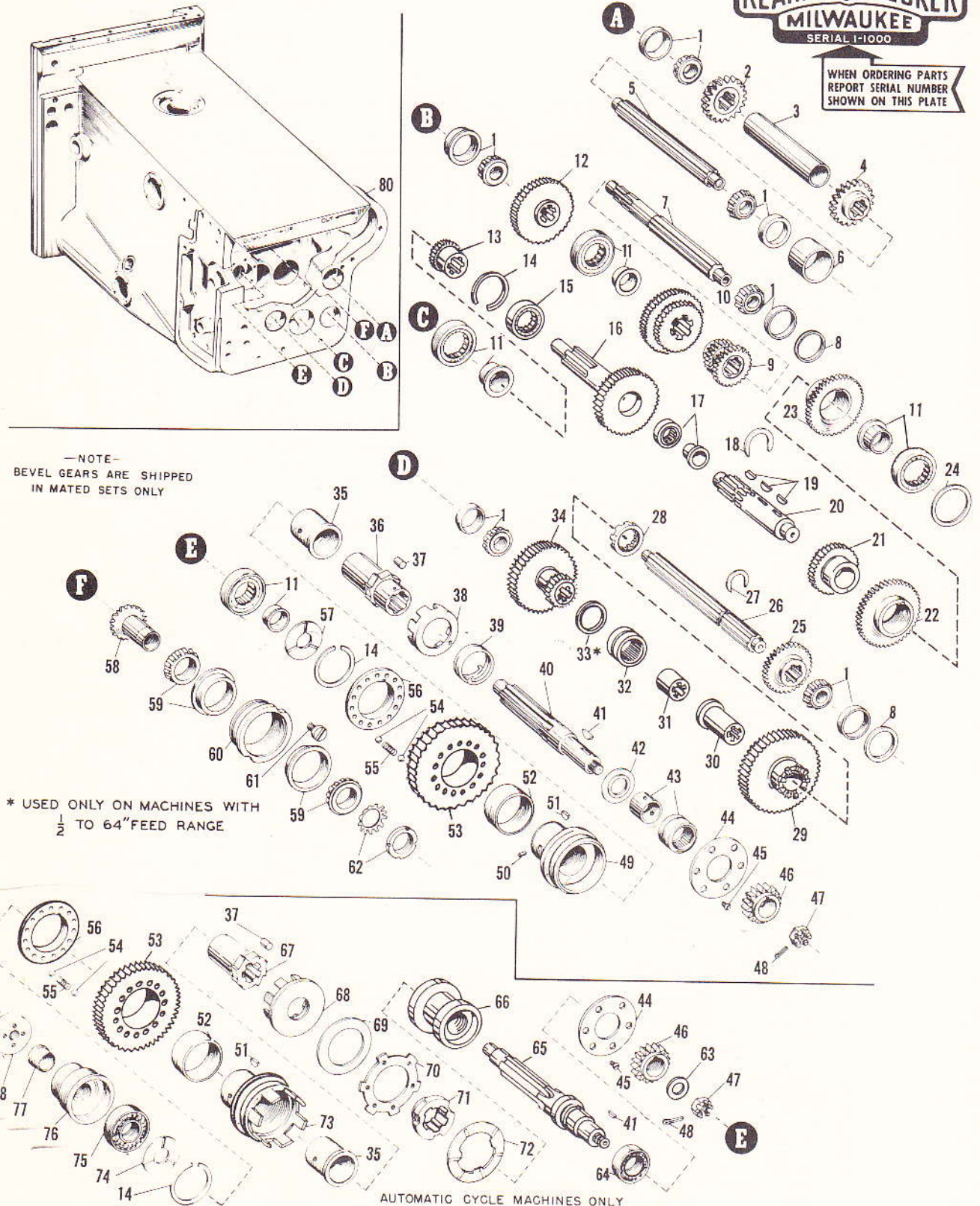
\*\*Only 8 used on Vertical Machines



WHEN ORDERING PARTS REPORT SERIAL NUMBER SHOWN ON THIS PLATE



—NOTE—  
BEVEL GEARS ARE SHIPPED  
IN MATED SETS ONLY



\* USED ONLY ON MACHINES WITH  
1/2" TO 64" FEED RANGE

AUTOMATIC CYCLE MACHINES ONLY

FIG. 12 - KNEE (GEAR TRAINS)

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 12 - Knee (Gear Trains)

Item No.	Part Name and Description	Code No.	Qty.
1	Timken brg, 03162-03062	2CH-H1	6
2*▼	Right traverse idler gear	2CH-H2	1
2*□	Right traverse idler gear	2CH-H2	1
3	Right traverse idler gear spacer	2CH-H3	1
4	Right traverse idler gear	2CH-H4	1
5	Right traverse idler gear shaft	2CH-H5	1
6	Right traverse idler gear collar	2CH-H6	1
7	Primary feed shaft	2CH-H7	1
8	Reverse gear shaft brg spacer	2CH-H8	2
9	Primary low speed cluster gear	2CH-H9	1
10	Primary high speed cluster gear	2CH-H10	1
11	Hyatt brg, R-1304 TS	2CH-H11	4
12	Feed drive gear	2CH-H12	1
13	Low speed back gear	2CH-H13	1
14	Snap ring	2CH-H14	2
15	Hyatt brg, 1304 TS	2CH-H15	1
16	Back gear and shaft	2CH-H16	1
17	Hyatt brg, R-1203 TS	2CH-H17	1
18	Secondary shaft U-washer	2CH-H18	1
19	Hi-Pro key, HP-706	2CH-H19	3
20	Secondary feed gear shaft	2CH-H20	1
21	Secondary high speed gear	2CH-H21	1
22	Secondary low speed cluster gear	2CH-H22	1
23	Secondary intermediate speed cluster gear	2CH-H23	1
24	Secondary shaft spacer collar	2CH-H24	1
25	Tertiary high speed cluster gear	2CH-H25	1
26	Tertiary feed gear shaft	2CH-H26	1
27	U-Washer	2CH-H27	1
28	Tertiary shaft clutch drive collar	2CH-H28	1
29	Tertiary intermediate speed clutch gear	2CH-H29	1
30	Tertiary low speed brg	2CH-H30	1
31	Brg inner race	2CH-H31	1
32	Orange brg, #7214	2CH-H32	1
33*	Tertiary shaft brg spacer	2CH-H33	1
34	Tertiary low speed cluster gear (1/4 to 32" feed range)	2CH-H34	1
34	Tertiary low speed cluster gear (1/2 to 64" feed range)	2CH-H34	1
35	Slip clutch hub bushing	2CH-H35	1
36	Roller clutch hub	2CH-H36	1

Item No.	Part Name and Description	Code No.	Qty.
37	Feed clutch roller	2CH-H37	8
38	Roller clutch cage	2CH-H38	1
39	Slip clutch spring	2CH-H39	1
40	Slip clutch shaft	2CH-H40	1
41	Hi-Pro key, HP-705	2CH-H41	1
42	Slip clutch thrust washer	2CH-H42	1
43	Orange brg, E-7214	2CH-H43	1
44	Brg retainer plate	2CH-H44	1
45	Fl hd mach screw, 10-32 x 7/16"	2CH-H45	6
46	Slip clutch shaft output gear	2CH-H46	1
47	Castellated nut	2CH-H47	1
48	Cotter pin, 1/8 x 1-1/4"	2CH-H48	1
49	Slip clutch hub	2CH-H49	1
50	Pin, 3/16 x 1/4" (Long)	2CH-H50	1
51	Hi-Pro key, HP-505	2CH-H51	1
52	Slip clutch gear bushing	2CH-H52	1
53	High feed range slip clutch gear (1/2 to 64" feed range)	2CH-H53	1
53	Low feed range slip clutch gear (1/4 to 32" feed range)	2CH-H53	1
54	Steel ball, 5/16" diam	2CH-H54	26
55	Slip clutch spring	2CH-H55	13
56	Feed slip clutch back plate	2CH-H56	1
57	Slip clutch hub spacer	2CH-H57	1
58	Elevating bevel pinion	2CH-H58	1
59	Timken brg, 07204B-07100	2CH-H59	2
60	Elevating bevel pinion sleeve	2CH-H60	1
61	Fil hd screw	2CH-H61	2
62	#5 Gurney lock nut and washer	2CH-H62	1
63	Washer	2CH-H63	1
64	New Departure brg, 3LO5	2CH-H64	1
65	Slip clutch shaft	2CH-H65	1
66	Brake cylinder	2CH-H66	1
67	Roller clutch hub	2CH-H67	1
68	Feed clutch roller cage	2CH-H68	1
69	Clutch plate	2CH-H69	1
70	Clutch plate (Driving)	2CH-H70	3
71	Clutch disc retainer	2CH-H71	1
72	Clutch plate (Driven)	2CH-H72	3
73	Feed roller clutch	2CH-H73	1
74	Slip clutch hub spacer	2CH-H74	1
75	New Departure brg, 20304	2CH-H75	1
76	Safety clutch shaft brg carrier	2CH-H76	1
77	Brg carrier bushing	2CH-H77	1
78	Brg carrier cover	2CH-H78	1
79	Sock hd cap screw, 1/4 x 1/2"	2CH-H79	4
80	Knee	2CH-H80	1
80	Automatic knee	2CH-H80	1

▼ Plain and vertical machines

□ Universal machines only

\*Used only on machines with 1/4 to 32" feed range



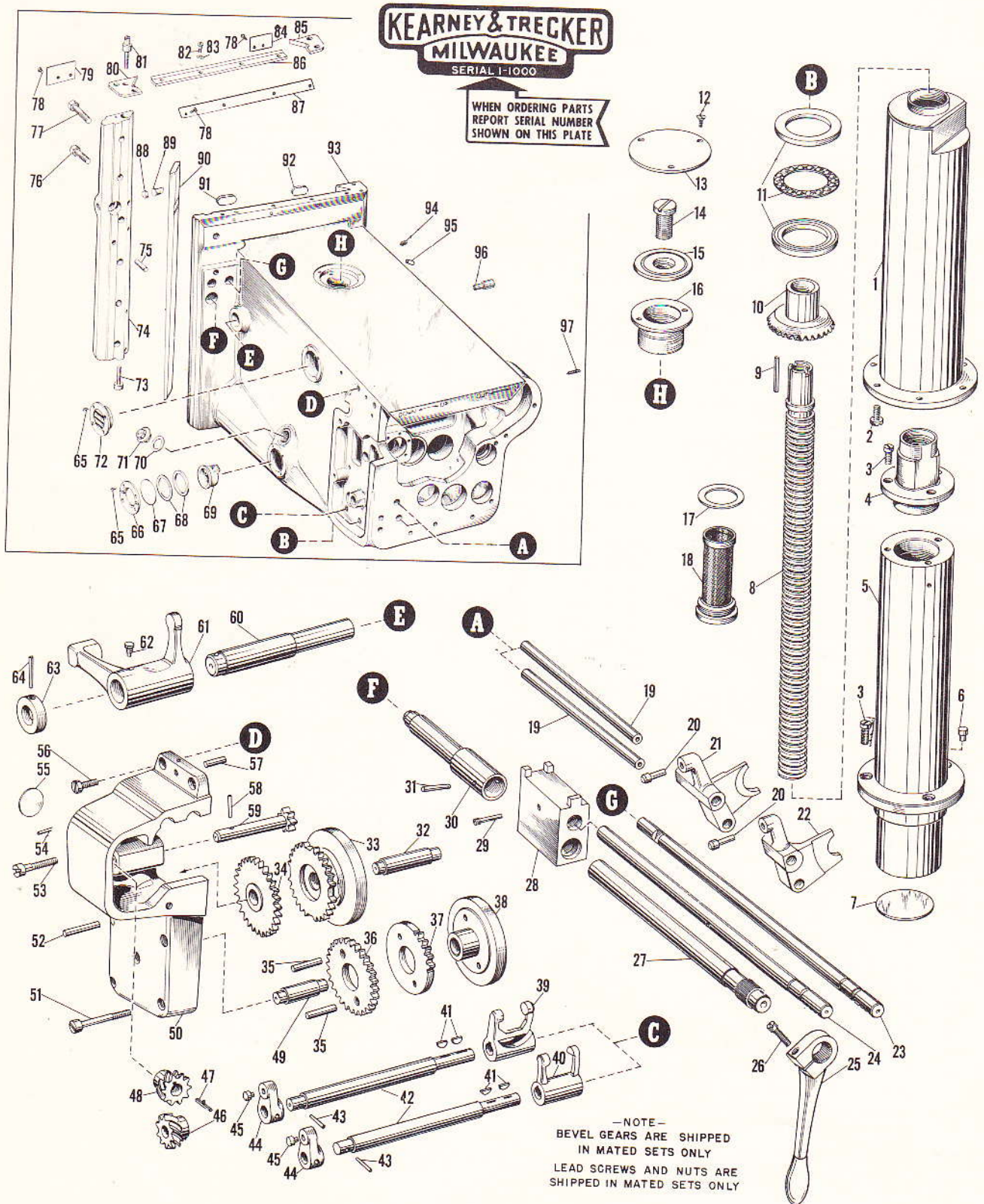


FIG. 13 - KNEE (MISCELLANEOUS PARTS)

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 13 - Knee (Miscellaneous Parts)

Item No.	Part Name and Description	Code No.	Qty.
1	Elevating screw shield assy	2CH-J1	1
2	Fil hd screw, 5/16-18 x 9/16"	2CH-J2	6
3	Fil hd screw, 3/8-16 x 13/16"	2CH-J3	6
4	Elevating nut	2CH-J4	1
5	Elevating nut extension	2CH-J5	1
6	Stop pin in elevating nut extension	2CH-J6	1
7	Expansion plug, 2-1/2" diam	2CH-J7	1
8	Elevating screw	2CH-J8	1
9	Key	2CH-J9	1
10	Elevating bevel gear	2CH-J10	1
11	Gurney thrust brg, 13B	2CH-J11	1
12	Flat hd mach screw, 8-32 x 1/2"	2CH-J12	3
13	Elevating bevel gear cover	2CH-J13	1
14	Fil hd screw, 3/4-16 x 1-3/8"	2CH-J14	1
15	Elevating screw retainer	2CH-J15	1
16	Elevating bevel gear brg	2CH-J16	1
17	Intake screen retaining plug washer	2CH-J17	1
18	Oil intake screen, Retaining plug and ring	2CH-J18	1
19	Tertiary shifter yoke rod	2CH-J19	2
20	Shifting fork pin	2CH-J20	2
21	Tertiary low speed shifter yoke	2CH-J21	1
22	Tertiary high speed shifter yoke	2CH-J22	1
23	Vert feed trip rod	2CH-J23	1
24	Cross feed trip rod	2CH-J24	1
25	Knee clamp lever	2CH-J25	1
26	Fil hd screw, 3/8-16 x 1-1/8"	2CH-J26	1
27	Knee clamp shaft	2CH-J27	1
28	Cross feed trip block	2CH-J28	1
29	Cross feed trip block screw	2CH-J29	1
30	Knee clamp eccentric	2CH-J30	1
31	Taper pin, #5 x 1-3/8"	2CH-J31	1
32	Secondary shift cam stud	2CH-J32	1
33	Secondary shift cam	2CH-J33	1
34	Shift cam drive gear	2CH-J34	1
35	Countersunk hd rivet, 1/4 x 1-5/8"	2CH-J35	2
36	Primary cam drive gear	2CH-J36	1
37	Primary cam intermittent gear	2CH-J37	1
38	Primary shift cam	2CH-J38	1
39	Primary change gear shifter fork	2CH-J39	1
40	Primary low speed shifter yoke	2CH-J40	1
41	Hi-Pro key, HP-504	2CH-J41	4
42	Primary shifter yoke shaft	2CH-J42	2
43	Taper pin, #3 x 1-1/8"	2CH-J43	2
44	Primary shifter yoke operating lever	2CH-J44	2
45	Shifter fork pin	2CH-J45	2
46	Feed change helical gear (Driven)	2CH-J46	1
47	Key	2CH-J47	1
48	Feed change helical gear (Driver)	2CH-J48	1
49	Primary shift cam stud	2CH-J49	1

Item No.	Part Name and Description	Code No.	Qty.
50	Feed change gear housing	2CH-J50	1
51	Fil hd screw, 7/16-14 x 2-3/4"	2CH-J51	4
52	Acme Blue Label Dowel, 5/16 x 2"	2CH-J52	1
53	Fil hd screw, 7/16-14 x 1-13/16"	2CH-J53	1
54	Brass tube, 5/32 x 1-1/2"	2CH-J54	1
55	Expansion plug, 1-3/16" diam	2CH-J55	1
56	Fil hd screw, 7/16-14 x 7/8"	2CH-J56	2
57	Acme Blue Label Dowel, 5/16 x 1-1/8"	2CH-J57	1
58	Taper pin, #3 x 1-1/8"	2CH-J58	1
59	Shift cam drive pinion	2CH-J59	1
60	Vert trip lever shaft	2CH-J60	1
61	Vert trip lever	2CH-J61	1
62	Gits oiler, #532	2CH-J62	1
63	Vert trip lever shaft collar	2CH-J63	1
64	Taper pin, #4 x 1-3/4"	2CH-J64	1
65	Oval hd screw, 10-32 x 15/32"	2CH-J65	8
66	Oil flow gage plate	2CH-J66	1
67	Oil gage glass	2CH-J67	1
68	Oil gage washer	2CH-J68	2
69	Sight oil flow gage	2CH-J69	1
70	Washer	2CH-J70	1
71	Oil plug screw	2CH-J71	1
72	Knee vent plate	2CH-J72	1
73	Gib screw	2CH-J73	1
74	Knee gib support	2CH-J74	1
75	Acme Blue Label Dowel, 3/8 x 1-1/2"	2CH-J75	1
76	Hex hd cap screw, 1/2 x 1-7/8"	2CH-J76	5
77	Hex hd cap screw, 1/2 x 2-3/8"	2CH-J77	1
78	Rd hd mach screw, 10-32 x 3/8"	2CH-J78	8
79	Column dovetail wiper spring (LH)	2CH-J79	1
80	Column dovetail wiper (LH)	2CH-J80	1
81	Gib screw	2CH-J81	1
82	Wiper screw	2CH-J82	8
83	Wiper screw spring	2CH-J83	8
84	Column dovetail wiper spring (RH)	2CH-J84	1
85	Column dovetail wiper (RH)	2CH-J85	1
86	Column face brg wiper	2CH-J86	1
87	Column face wiper spring	2CH-J87	1
88	Knee clamp shoe	2CH-J88	1
89	Knee clamp pin	2CH-J89	1
90	Knee gib	2CH-J90	1
91	Felt oil pad	2CH-J91	1
92	Felt oil pad	2CH-J92	1
93	Knee	2CH-J93	1
94	Dog pt set screw, 3/8-16 x 11/16"	2CH-J94	1
95	Coolant drip spout	2CH-J95	1
96	Stop pin for rapid traverse lever	2CH-J96	1
97	Dog pt set screw, 3/8-16 x 1-5/8"	2CH-J97	1

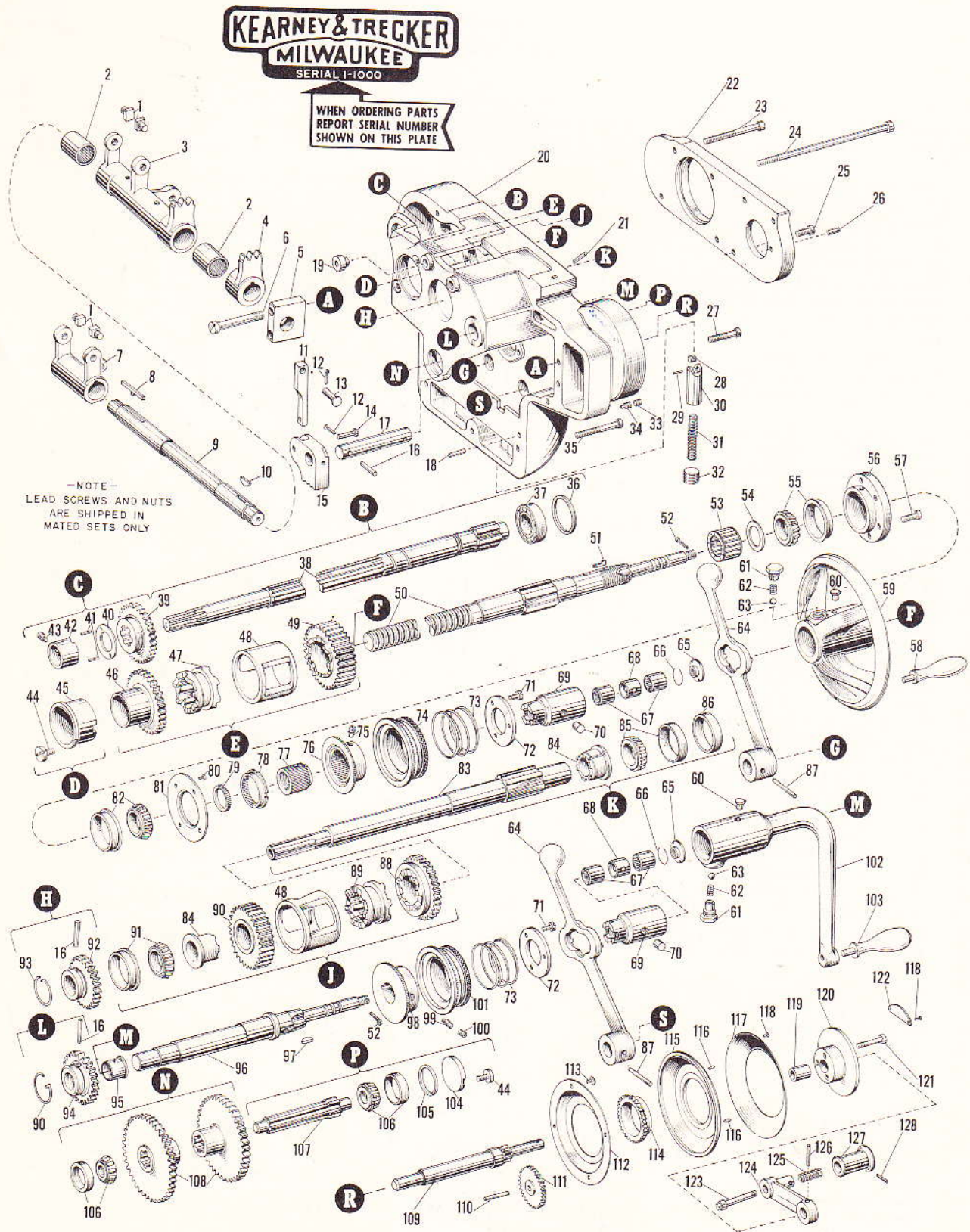


FIG. 14 - FEED DISTRIBUTION BOX

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 14 - Feed Distribution Box

Item No.	Part Name and Description	Code No.	Qty.
1	Cross feed and elevating clutch fork shoe	2CH-K1	4
2	Torrington needle bushing, B-1416	2CH-K2	2
3	Elevating clutch fork and trip segment	2CH-K3	1
4	Cross feed trip segment	2CH-K4	1
5	Clutch fork shaft left end brg	2CH-K5	1
6	Special fil hd screw	2CH-K6	2
7	Cross feed clutch fork	2CH-K7	1
8	Key	2CH-K8	1
9	Cross feed clutch fork shaft	2CH-K9	1
10	Hi-Pro key, #705	2CH-K10	1
11	Cross feed and elevating reverse link	2CH-K11	2
12	Cotter pin, 3/32 x 5/8"	2CH-K12	4
13	Cross feed and elevating reverse link pin (Upper)	2CH-K13	2
14	Cross feed and elevating reverse link pin (Lower)	2CH-K14	2
15	Cross feed and elevating inner lever and detent	2CH-K15	2
16	Taper pin, #4 x 1-3/8"	2CH-K16	4
17	Cross and elevating reverse lever shaft	2CH-K17	2
18	Acme Blue Label Dowel, 3/8 x 2-3/4"	2CH-K18	2
19	Spacing plug	2CH-K19	2
20	Feed distribution box	2CH-K20	1
21	Pin, 3/16 x 1/2"	2CH-K21	1
22	Feed distribution box dial plate	2CH-K22	1
23	Sock hd cap screw, 3/8 x 3"	2CH-K23	2
24	Sock hd cap screw, 3/8-16 x 7"	2CH-K24	2
25	Fil hd screw, 3/8-16 x 5/8"	2CH-K25	3
26	Acme Blue Label Dowel, 5/16 x 3/4"	2CH-K26	1
27	Sock hd cap screw, 3/8 x 1-1/2"	2CH-K27	1
28	Detent plunger roller	2CH-K28	2
29	Detent roller pin	2CH-K29	2
30	Trip detent plunger	2CH-K30	2
31	Spring	2CH-K31	2
32	Pipe plug	2CH-K32	2
33	Fl pt set screw, 3/8 x 3/8"	2CH-K33	2
34	Dog pt set screw, 3/8-16 x 7/16"	2CH-K34	2
35	Sock hd cap screw, 3/8 x 2-1/2"	2CH-K35	5
36	Table feed shaft brg spacer	2CH-K36	1
37	New Departure ball brg, 3205	2CH-K37	1
38	Table feed shaft	2CH-K38	1
39	Table feed shaft drive gear	2CH-K39	1
40	Table feed shaft washer	2CH-K40	1
41	Pin, 3/16 x 5/8"	2CH-K41	2
42	Table feed drive shaft brg	2CH-K42	1
43	Dog pt set screw, 5/16-18 x 3/4"	2CH-K43	1
44	Fil hd screw, 3/8-16 x 9/16"	2CH-K44	4
45	Cross feed clutch gear brg (Rear)	2CH-K45	1
46	Cross feed clutch gear (Rear)	2CH-K46	1
47	Cross feed reverse clutch	2CH-K47	1
48	Cross feed and elevating clutch gear spacer	2CH-K48	2
49	Cross feed reverse clutch gear	2CH-K49	1
50	Cross feed screw	2CH-K50	1
51	Key	2CH-K51	1
52	Cotter pin, 3/32 x 3/4"	2CH-K52	2
53	Hyatt roller brg, 94616	2CH-K53	1
54	Cross feed clutch gear thrust washer	2CH-K54	1
55	Timken brg, 07204B-07100	2CH-K55	1
56	Cross feed clutch brg carrier	2CH-K56	1
57	Sock hd cap screw, 5/16 x 3/4"	2CH-K57	6
58	Rockwood handle, #1QA	2CH-K58	1
59	Cross feed handwheel	2CH-K59	1
60	Gits oiler, RS-532	2CH-K60	2
61	Hand elevating crank set screw	2CH-K61	2
62	Spring	2CH-K62	2
63	Steel ball, 1/4" diam	2CH-K63	2
64	Cross and elevating reverse lever	2CH-K64	2

Item No.	Part Name and Description	Code No.	Qty.
65	Hand feed clutch stop	2CH-K65	2
66	Snap ring	2CH-K66	2
67	Torrington brg, B-1012	2CH-K67	4
68	Brg spacer	2CH-K68	2
69	Hand elevating crank clutch	2CH-K69	2
70	Plug	2CH-K70	2
71	Fil hd screw, 10-32 x 5/8"	2CH-K71	6
72	Graduated dial spring retainer	2CH-K72	2
73	Spring	2CH-K73	2
74	Serrated dial, 250 divisions	2CH-K74	1
75	Dog pt set screw, 5/16-18 x 1/2"	2CH-K75	1
76	Cross feed dial collar	2CH-K76	1
77	Cross feed screw brg adj nut	2CH-K77	1
78	Cross feed screw brg adj ring	2CH-K78	1
79	Cross feed screw brg adj washer	2CH-K79	1
80	Fl hd mach screw, 8-32 x 3/8"	2CH-K80	4
81	Cross feed clutch oil retainer	2CH-K81	1
82	Timken brg, 07204B-07100W	2CH-K82	1
83	Elevating clutch shaft	2CH-K83	1
84	Elevating clutch gear bushing	2CH-K84	2
85	Timken brg, 07204-07100	2CH-K85	1
86	Elevating clutch shaft brg spacer	2CH-K86	1
87	Taper pin, #4 x 1-1/2"	2CH-K87	2
88	Elevating clutch gear (Front)	2CH-K88	1
89	Elevating reverse clutch	2CH-K89	1
90	Elevating clutch gear (Rear)	2CH-K90	1
91	Timken brg, 07204B-07100	2CH-K91	1
92	Hand elevating gear (Driven)	2CH-K92	1
93	G-Spring	2CH-K93	2
94	Hand elevating gear (Driven)	2CH-K94	1
95	Hand elevating shaft brg	2CH-K95	1
96	Hand elevating shaft	2CH-K96	1
97	Hi-Pro key, #505	2CH-K97	1
98	Hand elevating serrated dial collar	2CH-K98	1
99	Dog pt set screw, 1/4 x 5/16"	2CH-K99	1
100	Sock set screw, 1/4 x 1/4"	2CH-K100	1
101	Serrated graduated dial	2CH-K101	1
102	Hand elevating crank	2CH-K102	1
103	Rockwood handle, #3QA	2CH-K103	1
104	Cross feed and elevating reverse gear cover	2CH-K104	1
105	Cross feed and elevating gear brg washer	2CH-K105	1
106	Timken brg, 03162-03062	2CH-K106	2
107	Cross feed and elevating reverse gear shaft	2CH-K107	1
108	Cross feed and elevating reverse gear	2CH-K108	2
109	Feed dial shaft	2CH-K109	1
110	Acme Blue Label Dowel, 1/4 x 1-1/4"	2CH-K110	1
111	Feed selection double gear	2CH-K111	1
112	Grease shield	2CH-K112	1
113	Rd hd mach screw, 10-32 x 1/4"	2CH-K113	4
114	Feed dial carrier gear	2CH-K114	1
115	Feed dial carrier	2CH-K115	1
116	Pin for feed dial carrier	2CH-K116	2
117	Feed selection dial	2CH-K117	1
118	#15 Escutcheon pins	2CH-K118	8
119	Oilite bushing, A-604	2CH-K119	1
120	Feed dial support bracket	2CH-K120	1
121	Fil hd screw, 1/4-20 x 1-1/2"	2CH-K121	3
122	Feed selection arrow	2CH-K122	1
123	Feed selection lever plunger	2CH-K123	1
124	Feed selection lever	2CH-K124	1
125	Spring	2CH-K125	1
126	Taper pin, #2 x 1-1/8"	2CH-K126	1
127	Feed selection knob	2CH-K127	1
128	Taper pin, #2 x 1"	2CH-K128	1

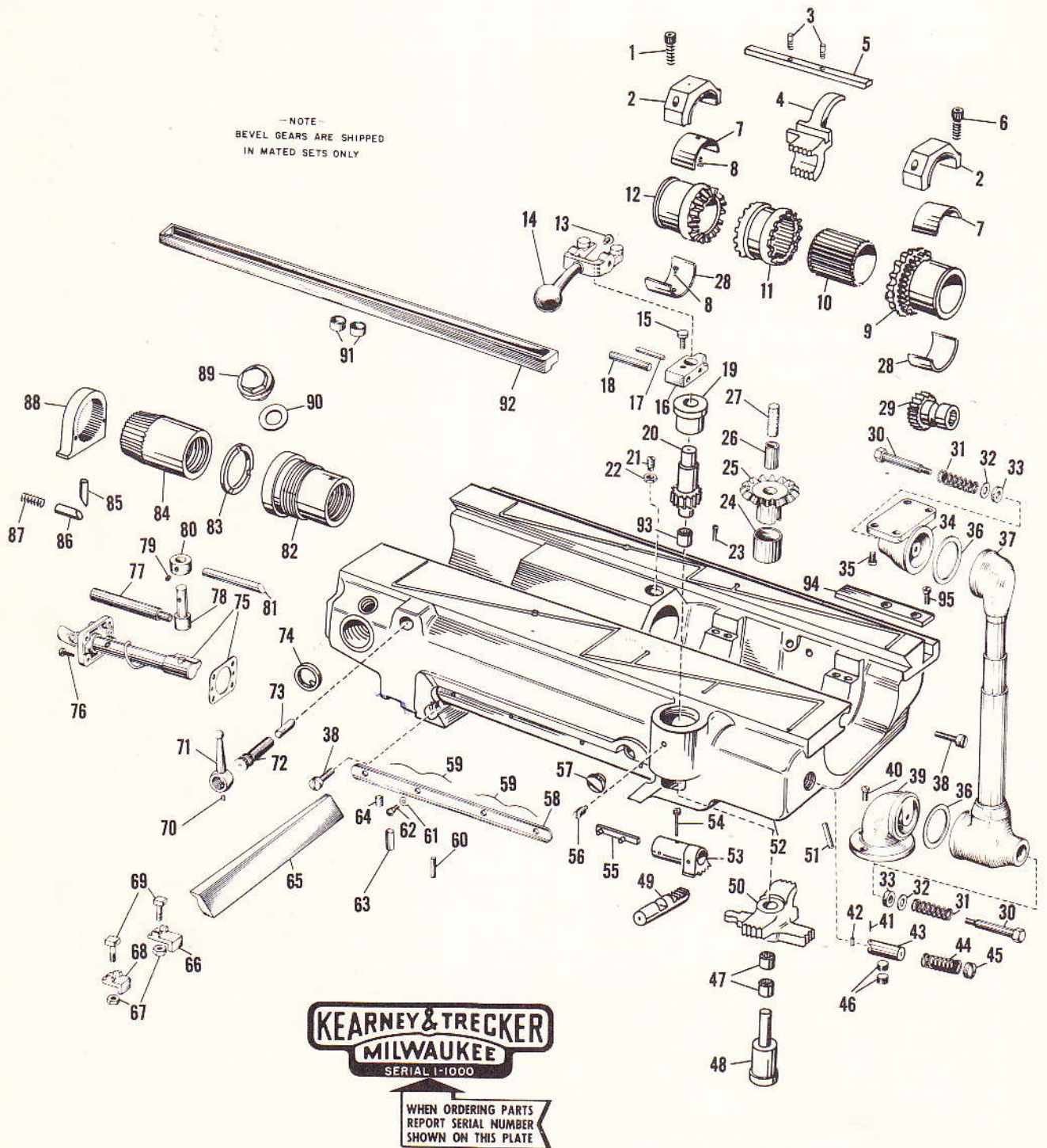


FIG. 15 - PLAIN SADDLE

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 15 - Plain Saddle

Item No.	Part Name and Description	Code No.	Qty.
1	Sock hd cap screw, 5/16-18 x 1-1/2"	2CH-L1	2
2	Brg cap	2CH-L2	2
3	Rivet screw	2CH-L3	2
4	Clutch shifter yoke	2CH-L4	1
5	Shifter rod	2CH-L5	1
6	Sock hd cap screw, 5/16-18 x 1"	2CH-L6	4
7	Table screw clutch gear brg (Upper)	2CH-L7	2
8	Fl hd brass screw, 8-32 x 1/2"	2CH-L8	4
9	Table screw clutch gear	2CH-L9	1
10	Table screw sleeve	2CH-L10	1
11	Table feed reverse clutch	2CH-L11	1
12	Table screw clutch gear	2CH-L12	1
13	Table trip lever fork pin	2CH-L13	1
14	Table trip lever	2CH-L14	1
15	Table trip lever block screw	2CH-L15	1
16	Table trip lever block	2CH-L16	1
17	Taper pin, #5 x 1-3/4"	2CH-L17	1
18	Acme Blue Label dowel, 3/8 x 2-1/2"	2CH-L18	1
19	Pinion shaft brg	2CH-L19	1
20	Table trip lever pinion shaft	2CH-L20	1
21	Dog sock set screw, 3/8-16 x 1/2"	2CH-L21	1
22	Hex nut	2CH-L22	1
23	Bijur meter unit, FKA-O	2CH-L23	8
24	Table drive gear brg	2CH-L24	1
25	Table drive gear	2CH-L25	1
26	Table drive gear plug	2CH-L26	1
27	Table drive gear felt	2CH-L27	1
28	Table screw clutch gear brg	2CH-L28	2
29	Rotary table drive shaft gear	2CH-L29	1
30	Hex hd screw	2CH-L30	2
31	Spring	2CH-L31	2
32	Washer	2CH-L32	2
33	Swivel screw washer (Felt)	2CH-L33	2
34	Coolant return swivel fitting	2CH-L34	1
35	Fil hd screw	2CH-L35	4
36	Coolant fitting washer	2CH-L36	2
37	Telescopic coolant return tube assy	2CH-L37	1
38	Gib screw	2CH-L38	4
39	Coolant return elbow (Base)	2CH-L39	1
40	Screw	2CH-L40	3
41	Detent plunger pin	2CH-L41	1
42	Detent plunger roller	2CH-L42	1
43	Table trip detent plunger	2CH-L43	1
44	Spring	2CH-L44	1
45	Plunger hole plug	2CH-L45	1
46	Allen hd set screw	2CH-L46	2
47	Torrington brg, B-1012	2CH-L47	2

Item No.	Part Name and Description	Code No.	Qty.
48	Reverse shifter stud	2CH-L48	1
49	Release shaft gear rack	2CH-L49	1
50	Feed shifter segment	2CH-L50	1
51	Brake plunger pin	2CH-L51	1
52	Saddle	2CH-L52	1
53	Ball crank release shaft gear	2CH-L53	1
54	Headless dowel screw	2CH-L54	1
55	Tit key	2CH-L55	1
56	Screw	2CH-L56	1
57	Saddle plug	2CH-L57	1
58	Knee top brg wiper	2CH-L58	2
59	Knee wiper spring	2CH-L59	4
60	Pin, 1/4 x 7/8"	2CH-L60	1
61	Wiper screw spring	2CH-L61	8
62	Wiper screw	2CH-L62	8
63	Limit stop pin	2CH-L63	2
64	Allen pipe plug, 3/8"	2CH-L64	1
65	Saddle gib	2CH-L65	1
66	Cross feed trip dog (Rear)	2CH-L66	1
67	Nut	2CH-L67	2
68	Cross feed trip dog (Front)	2CH-L68	1
69	T-Bolt	2CH-L69	2
70	Allen set screw, 1/4 x 1/4"	2CH-L70	1
71	Clamp lever	2CH-L71	1
72	Clamp screw	2CH-L72	1
73	Table clamp plug	2CH-L73	1
74	Bijur oil window, B-4904	2CH-L74	1
75	Bijur KIB lubricator pump (1" stroke), C-1957	2CH-L75	1
76	Allen hd cap screw, 1/4-20 x 3/4"	2CH-L76	4
77	Saddle clamp handle	2CH-L77	1
78	Saddle clamp eccentric shaft	2CH-L78	1
79	Allen dog pt set screw, 5/16 x 5/16"	2CH-L79	1
80	Saddle clamp eccentric	2CH-L80	1
81	Saddle clamp rod	2CH-L81	1
82	Table screw nut	2CH-L82	1
83	Spacer table nut	2CH-L83	1
84	Adj table screw nut	2CH-L84	1
85	Yoke adj plunger (Small)	2CH-L85	2
86	Yoke adj plunger (Large)	2CH-L86	2
87	Sock set screw, 1/2-13 x 1-1/4"	2CH-L87	2
88	Table screw adj yoke	2CH-L88	1
89	Oil hole plug	2CH-L89	1
90	Washer	2CH-L90	1
91	Pipe in saddle slide	2CH-L91	2
92	Saddle slide	2CH-L92	1
93	Torrington brg, M-10121	2CH-L93	1
94	Fil hd screw, 5/16 x 18 x 11/16"	2CH-L94	2
95	Saddle slide stop	2CH-L95	1
96	Screw	2CH-L96	2

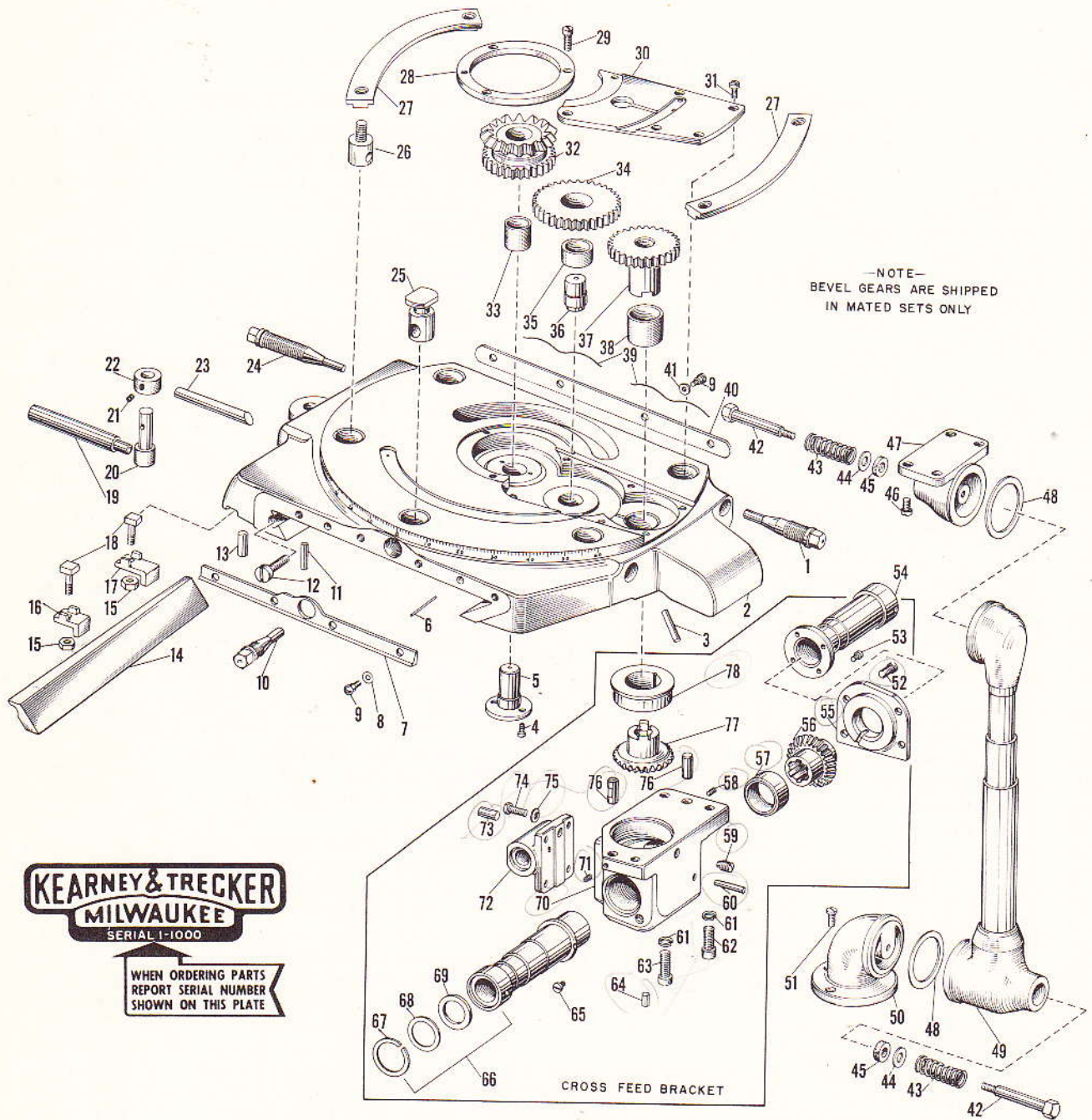


FIG. 16 - UNIVERSAL SADDLE AND CROSS FEED BRACKET

# Replacement Parts Manual

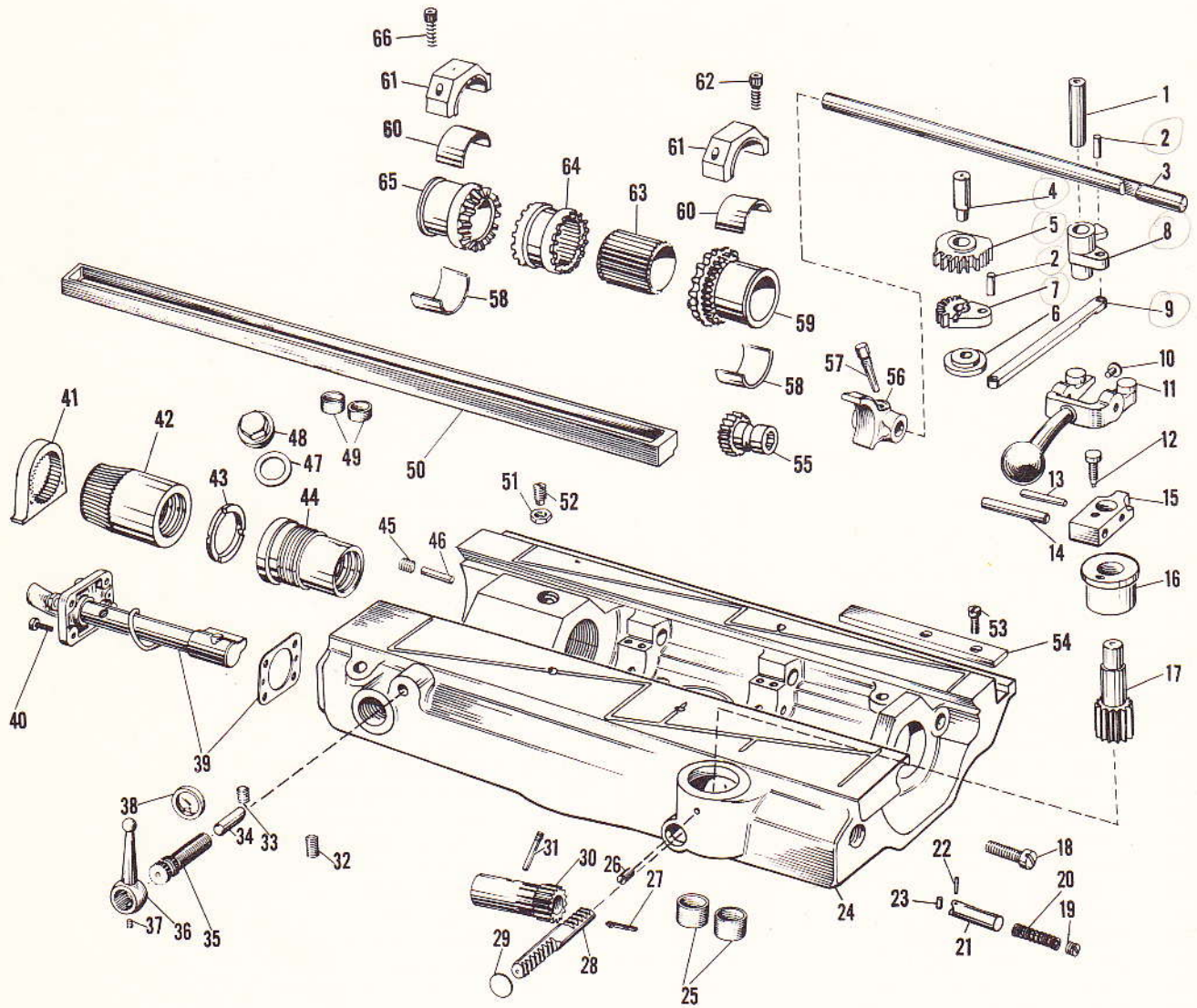
## Milling Machines — Plain, Universal and Vertical

Fig. 16 - Universal Saddle And Cross Feed Bracket

Item No.	Part Name and Description	Code No.	Qty.
1	Clamp screw	2CH-M1	2
2	Universal saddle	2CH-M2	1
3	Brake plunger pin	2CH-M3	1
4	Fil hd screw, 1/4-20 x 1/2"	2CH-M4	2
5	Table drive bevel gear stud	2CH-M5	1
6	Wiper spring	2CH-M6	2
7	Knee top wiper (Front)	2CH-M7	1
8	Wiper screw spring	2CH-M8	4
9	Wiper screw	2CH-M9	8
10	Clamp screw	2CH-M10	1
11	Pin, 1/4 x 7/8"	2CH-M11	1
12	Gib screw	2CH-M12	2
13	Limit stop pin	2CH-M13	2
14	Saddle gib	2CH-M14	1
15	Nut	2CH-M15	2
16	Cross feed trip dog (Front)	2CH-M16	1
17	Cross feed trip dog (Rear)	2CH-M17	1
18	T-Bolt	2CH-M18	2
19	Saddle clamp handle	2CH-M19	1
20	Saddle clamp eccentric shaft	2CH-M20	1
21	Socket dog pt set screw, 5/16 x 5/16"	2CH-M21	1
22	Saddle clamp eccentric	2CH-M22	1
23	Saddle clamp rod	2CH-M23	1
24	Clamp screw	2CH-M24	2
25	Swivel block clamp	2CH-M25	1
26	Swivel block clamp bolt	2CH-M26	4
27	Swivel block clamp ring	2CH-M27	2
28	Universal saddle ring	2CH-M28	1
29	Fil hd screw, 5/16-18 x 3/4"	2CH-M29	3
30	Universal saddle cover	2CH-M30	1
31	Fil hd screw, 5/16-18 x 9/16"	2CH-M31	5
32	Table drive bevel gear	2CH-M32	1
33	Table drive bevel gear bushing	2CH-M33	1
34	Table drive idler gear	2CH-M34	1
35	Table drive idler gear bushing	2CH-M35	1
36	Table drive idler gear stud	2CH-M36	1
37	Table drive gear	2CH-M37	1
38	Table drive gear brg	2CH-M38	1
39	Wiper spring	2CH-M39	2
40	Knee top brg wiper	2CH-M40	1
41	Wiper screw spring	2CH-M41	4
42	Coolant fitting screw	2CH-M42	2

Item No.	Part Name and Description	Code No.	Qty.
43	Spring	2CH-M43	2
44	Washer	2CH-M44	2
45	Swivel screw felt washer	2CH-M45	2
46	Fil hd screw, 3/8-16 x 13/16"	2CH-M46	4
47	Coolant return swivel fitting	2CH-M47	1
48	Coolant fitting washer	2CH-M48	2
49	Telescopic coolant return tube assy	2CH-M49	1
50	Coolant return elbow (Base)	2CH-M50	1
51	Fil hd screw, 3/8-16 x 13/16"	2CH-M51	3
<b>CROSS FEED BRACKET</b>			
52	Fil hd screw, 5/16-18 x 9/16"	2CH-M52	4
53	Fil hd screw, 10-32 x 5/16"	2CH-M53	4
54	Rear telescopic tube assy	2CH-M54	1
55	Cross feed bracket brg	2CH-M55	1
56	Table feed sliding bevel gear	2CH-M56	1
57	Table feed sliding bevel gear bushing	2CH-M57	1
58	Socket set screw, 1/4 x 1/2"	2CH-M58	1
59	Dog pt set screw, 3/8-16 x 11/16"	2CH-M59	1
60	Pin, 3/16 x 1 1/4"	2CH-M60	1
61	Lockwasher, 7/8"	2CH-M61	3
62	Socket hd cap screw, 7/16 x 1"	2CH-M62	2
63	Socket hd cap screw, 7/16 x 7/8"	2CH-M63	1
64	Coolant drip spout	2CH-M64	1
65	Fil hd screw, 1/4-20 x 3/8"	2CH-M65	2
66	Front telescopic tube assy	2CH-M66	1
67	Snap ring	2CH-M67	1
68	Felt retaining plate	2CH-M68	1
69	Oil retainer washer	2CH-M69	1
70	Cross feed bracket	2CH-M70	1
71	Socket set screw, 1/4 x 3/8"	2CH-M71	1
72	Cross feed nut	2CH-M72	1
73	Acme Blue Label Dowel, 3/8 x 1"	2CH-M73	1
74	Hex hd cap screw, 5/16-18 x 15/16"	2CH-M74	4
75	Lockwasher, 5/16"	2CH-M75	4
76	Acme Blue Label Dowel, 1/2 x 1-1/8"	2CH-M76	2
77	Table feed drive bevel gear	2CH-M77	1
78	Cross feed bracket brg sleeve	2CH-M78	1





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FIG. 17 - UNIVERSAL SWIVEL BLOCK

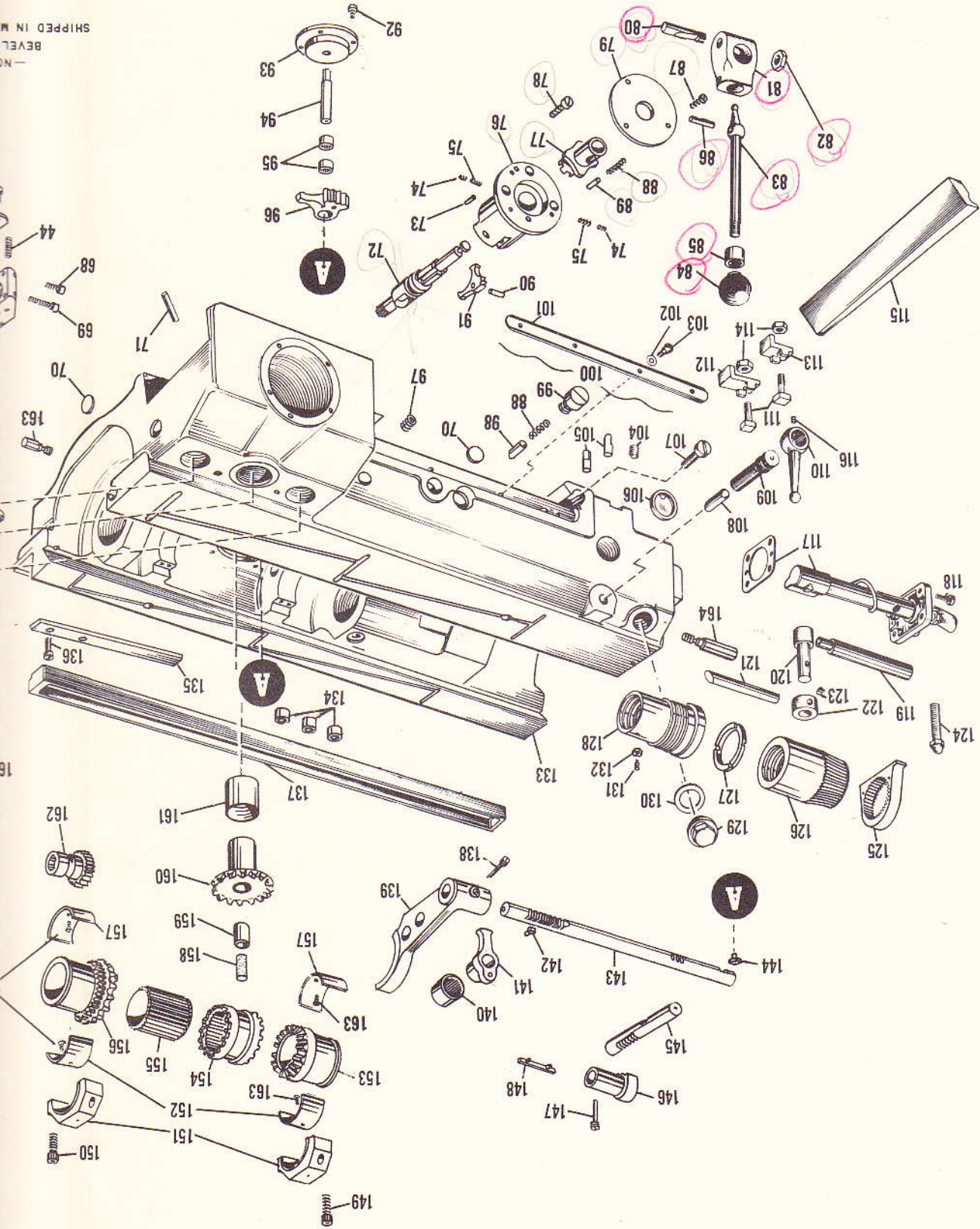
Fig. 17 - Universal Swivel Block

Item No.	Part Name and Description	Code No.	Qty.
1	Bell crank shaft	2CH-N1	1
2	Acme Blue Label dowel, 5/16 x 3/4"	2CH-N2	2
3	Shifter rod	2CH-N3	1
4	Gear segment shaft	2CH-N4	1
5	Gear segment	2CH-N5	1
6	Gear segment shaft brg	2CH-N6	1
7	Shifter lever	2CH-N7	1
8	Shifter bell crank	2CH-N8	1
9	Shifter link	2CH-N9	1
10	Table trip lever fork pin	2CH-N10	1
11	Table trip lever	2CH-N11	1
12	Table trip lever block screw	2CH-N12	1
13	Taper pin, #5 x 1-3/4"	2CH-N13	1
14	Acme Blue Label dowel, 3/8 x 2-1/2"	2CH-N14	1
15	Table trip lever block	2CH-N15	1
16	Table trip lever pinion bushing	2CH-N16	1
17	Table trip lever pinion shaft	2CH-N17	1
18	Gib screw	2CH-N18	4
19	Detent plunger plug	2CH-N19	1
20	Detent spring	2CH-N20	1
21	Detent plunger	2CH-N21	1
22	Detent plunger pin	2CH-N22	1
23	Detent plunger roller	2CH-N23	1
24	Universal swivel block	2CH-N24	1
25	Swivel block coolant tube	2CH-N25	2
26	Dog pt set screw, 5/16-18 x 1/2"	2CH-N26	1
27	Tit key, 1/8 x 3/16"	2CH-N27	1
28	Table trip lever rack	2CH-N28	1
29	Expansion plug, 7/8" diam	2CH-N29	1
30	Handwheel release shaft gear	2CH-N30	1
31	Pin for handwheel release shaft gear	2CH-N31	1
32	Oval pt sock set screw, 1/2-13 x 1-1/4"	2CH-N32	2
33	Sock hd pipe plug, 3/8"	2CH-N33	1

Item No.	Part Name and Description	Code No.	Qty.
34	Table clamp plug	2CH-N34	1
35	Clamp screw	2CH-N35	1
36	Clamp lever	2CH-N36	1
37	Allen set screw, 1/4 x 1/4"	2CH-N37	1
38	Bijur oil window, B-4904	2CH-N38	1
39	Bijur KIB lubricator pump (1" stroke), C-1957	2CH-N39	1
40	Sock hd cap screw, 1/4-20 x 3/4"	2CH-N40	4
41	Adj yoke	2CH-N41	1
42	Adj table screw nut	2CH-N42	1
43	Spacer for table nut	2CH-N43	1
44	Table screw nut	2CH-N44	1
45	Set screw, 3/8-16 x 1"	2CH-N45	2
46	Locking pin	2CH-N46	2
47	Washer	2CH-N47	1
48	Oil hole plug	2CH-N48	1
49	Saddle slide coolant tube	2CH-N49	2
50	Saddle slide	2CH-N50	1
51	Hex nut	2CH-N51	1
52	Dog pt set screw, 3/8-16 x 13/16"	2CH-N52	1
53	Screw, 3/8-16 x 1-1/2"	2CH-N53	2
54	Saddle slide stop	2CH-N54	1
55	Rotary table drive shaft gear	2CH-N55	1
56	Table reverse yoke	2CH-N56	1
57	Taper set screw	2CH-N57	1
58	Table screw clutch gear brg	2CH-N58	2
59	Table screw clutch gear (RH)	2CH-N59	1
60	Table screw clutch gear brg	2CH-N60	2
61	Brg cap	2CH-N61	2
62	Sock hd cap screw, 5/16-18 x 1"	2CH-N62	4
63	Table screw sleeve	2CH-N63	1
64	Table feed reverse clutch	2CH-N64	1
65	Table screw clutch gear (LH)	2CH-N65	1
66	Sock hd set screw, 5/16-18 x 1-1/2"	2CH-N66	2



FIG. 18 - AUTOMATIC CYCLE PLAIN SADDLE



—NO BEVEL SHIPPED IN M

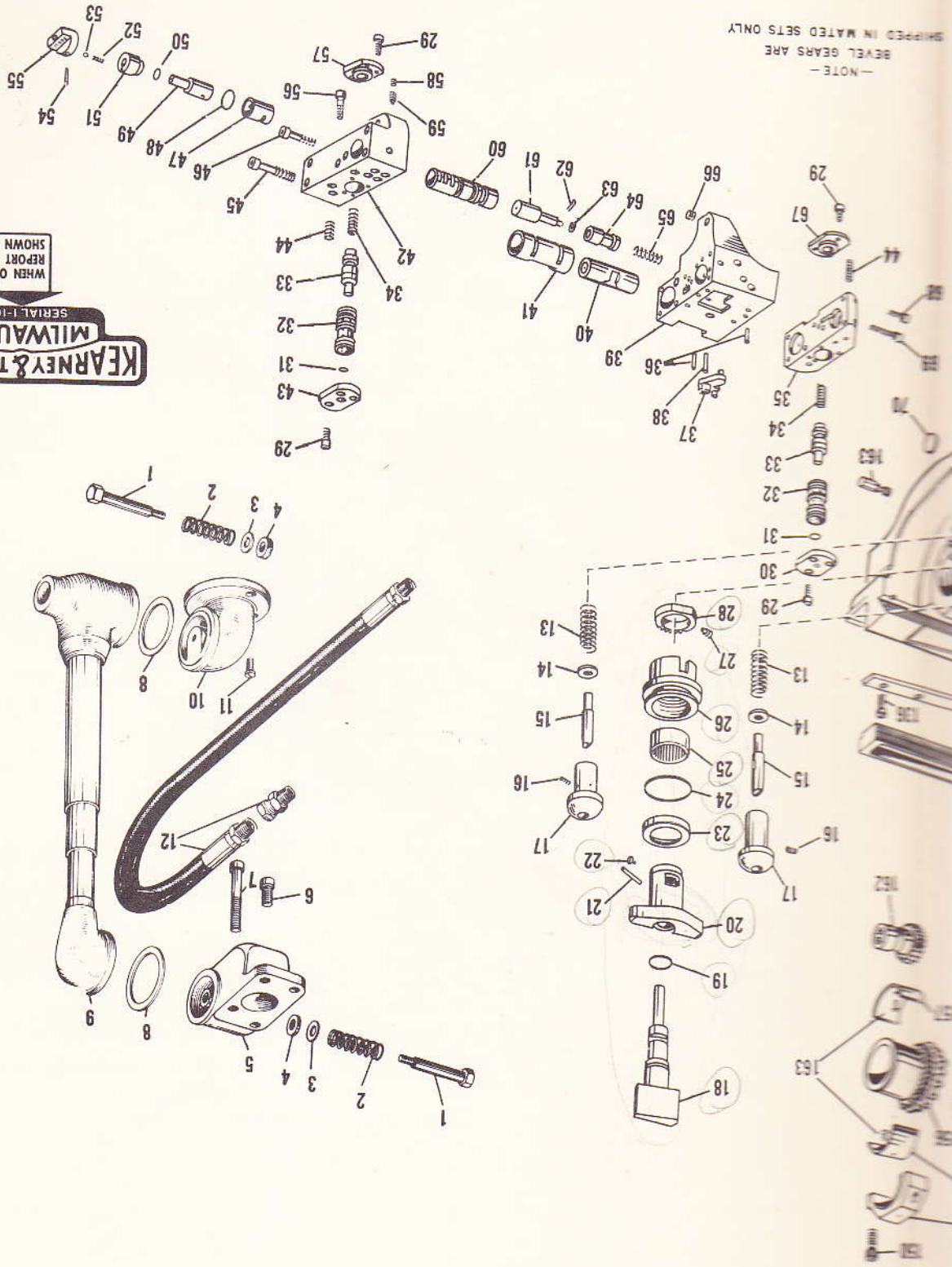
SADDLE AND HYDRAULIC VALVE BODY

BUILDERS OF PRECISION AND PRODUCTION

MILWAUKEE  
KEARNY & TRECKER

MACHINE TOOLS FOR MILLING AND BORING

NOTE -  
BEVEL GEARS ARE  
SHIPPED IN MATED SETS ONLY



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## Replacement Parts Manual

### Milling Machines — Plain, Universal and Vertical

#### Plain Saddle And Hydraulic Valve Body

Qty.	Item No.	Part Name and Description	Code No.	Qty.
1	77	Shifter rod sleeve	2CH-P77	1
1	78	Screw	2CH-P78	3
1	79	Feed and right traverse lever bracket cover	2CH-P79	1
1	80	Feed and right traverse lever hub cotter	2CH-P80	1
2	81	Feed and right traverse lever hub	2CH-P81	1
4	82	Hex nut	2CH-P82	1
1	83	Feed and right traverse lever	2CH-P83	1
1	84	Shifter lever knob	2CH-P84	1
1	85	Feed and right traverse lever chip seal	2CH-P85	1
1	86	Acme Blue Label dowel, 5/16 x 1-3/4"	2CH-P86	1
1	87	Screw	2CH-P87	3
1	88	Spring	2CH-P88	2
1	89	Detent plunger	2CH-P89	1
1	90	Acme Blue Label dowel, 3/8 x 1-1/4"	2CH-P90	1
6	91	Feed and right traverse bell crank	2CH-P91	1
1	92	Screw	2CH-P92	4
1	93	Crank pin retainer	2CH-P93	1
1	94	Crank pin	2CH-P94	1
1	95	Torrington brg, #B-98	2CH-P95	2
1	96	Release shaft gear rack crank	2CH-P96	1
1	97	Pipe plug	2CH-P97	1
1	98	Detent plunger	2CH-P98	1
1	99	Screw	2CH-P99	1
1	100	Knee top wiper spring	2CH-P100	4
1	101	Knee top brg wiper	2CH-P101	2
1	102	Wiper screw spring	2CH-P102	8
2	103	Wiper screw	2CH-P103	8
1	104	Allen pipe plug, 3/8"	2CH-P104	1
1	105	Limit stop pin	2CH-P105	2
1	106	Oil window, B-4904	2CH-P106	1
4	107	Fil hd screw	2CH-P107	4
1	108	Table clamp plug	2CH-P108	1
1	109	Table clamp screw	2CH-P109	1
1	110	Table clamp lever	2CH-P110	1
1	111	T-Bolt	2CH-P111	2
2	112	Cross feed trip dog (Rear)	2CH-P112	1
1	113	Cross feed trip dog (Front)	2CH-P113	1
1	114	Nut	2CH-P114	2
1	115	Saddle gib	2CH-P115	1
1	116	Sock hd set screw, 1/4 x 1/4" (Long)	2CH-P116	1
2	117	Lubricator pump, KIB-C-1957	2CH-P117	1
2	118	Sock hd cap screw, 1/4-20 x 7/8"	2CH-P118	4
1	119	Saddle clamp handle	2CH-P119	1

Item No.	Part Name and Description	Code No.	Qty.
120	Saddle clamp eccentric shaft	2CH-P120	1
121	Saddle clamp rod	2CH-P121	1
122	Saddle clamp eccentric	2CH-P122	1
123	Allen dog pt set screw, 5/16 x 5/16"	2CH-P123	1
124	Adj yoke screw	2CH-P124	2
125	Adj yoke	2CH-P125	1
126	Adj table screw nut	2CH-P126	1
127	Table nut spacer	2CH-P127	1
128	Table screw nut	2CH-P128	1
129	Oil hole plug	2CH-P129	1
130	Washer	2CH-P130	1
131	Set screw	2CH-P131	1
132	Hex nut	2CH-P132	1
133	Saddle	2CH-P133	1
134	Pipe in saddle slide	2CH-P134	3
135	Saddle slide stop	2CH-P135	1
136	Fil hd screw	2CH-P136	2
137	Saddle slide	2CH-P137	1
138	Taper pin screw	2CH-P138	1
139	Clutch shifter yoke	2CH-P139	1
140	Torrington brg, #1612	2CH-P140	1
141	Reverse piston bell crank	2CH-P141	1
142	Automatic cycle reverse lever block	2CH-P142	1
143	Clutch shifter rack	2CH-P143	1
144	Release shaft crank block	2CH-P144	1
145	Release shaft gear rack	2CH-P145	1
146	Handwheel release shaft gear	2CH-P146	1
147	Dowel screw	2CH-P147	1
148	Key	2CH-P148	1
149	Sock hd cap screw, 5/16 x 1-1/2"	2CH-P149	2
150	Sock hd cap screw, 5/16 x 1"	2CH-P150	4
151	Brg cap	2CH-P151	2
152	Table screw clutch gear brg (Upper)	2CH-P152	2
153	Table screw clutch gear	2CH-P153	1
154	Table feed reverse clutch	2CH-P154	1
155	Table screw sleeve	2CH-P155	1
156	Table screw clutch gear	2CH-P156	1
157	Table screw clutch gear brg (Lower)	2CH-P157	2
158	Table drive gear (Felt)	2CH-P158	1
159	Table drive gear plug	2CH-P159	1
160	Table drive gear	2CH-P160	1
161	Table drive gear brg	2CH-P161	1
162	Rotary table drive shaft gear	2CH-P162	1
163	Fl hd brass screw, 8/32 x 1/2"	2CH-P163	4
164	Positive stop screw (LH)	2CH-P164	1
165	Positive stop screw (RH)	2CH-P165	1

## Replacement Parts Manual

### Milling Machines — Plain, Universal and Vertical

Fig. 18 - Automatic Cycle Plain Saddle

Item No.	Part Name and Description	Code No.	Qty.
Hydraulic Valve Body and Coolant Return			
1	Hex hd screw	2CH-P1	2
2	Spring	2CH-P2	2
3	Washer	2CH-P3	2
4	Swivel screw washer (Felt)	2CH-P4	2
5	Coolant return swivel fitting	2CH-P5	1
6	Sock hd cap screw, 3/8-16 x 7/8"	2CH-P6	2
7	Sock hd cap screw, 3/8-16 x 2-3/4"	2CH-P7	2
8	Coolant fitting washer	2CH-P8	2
9	Telescopic coolant return tube assy	2CH-P9	1
10	Coolant return elbow (Base)	2CH-P10	1
11	Screw	2CH-P11	3
12	Anchor two rayon braid hose	2CH-P12	1
12	Anchor two rayon braid hose	2CH-P12	1
13	Reverse plunger spring	2CH-P13	2
14	Reverse plunger washer	2CH-P14	2
15	Table reverse plunger	2CH-P15	2
16	Sock set screw, 1/4 x 3/8"	2CH-P16	2
17	Reverse plunger sleeve	2CH-P17	2
18	Rate change trip post	2CH-P18	1
19	"O" Ring	2CH-P19	1
20	Feed trip sleeve	2CH-P20	1
21	Acme Blue Label dowel, 3/16 x 1-1/2"	2CH-P21	1
22	Key	2CH-P22	1
23	Trip sleeve chip guard	2CH-P23	1
24	"O" Ring	2CH-P24	1
25	Torrington brg, #B-2416	2CH-P25	1
26	Feed trip sleeve brg	2CH-P26	1
27	Headless dowel screw, 1/4 x 1/4"	2CH-P27	1
28	Reverse rack pinion	2CH-P28	1
29	Sock hd cap screw, 1/4 x 3/8"	2CH-P29	12
30	Upper feed reverse piston cover (Inner)	2CH-P30	1
31	"O" Ring	2CH-P31	2
32	Reverse piston sleeve	2CH-P32	2
33	Reverse piston	2CH-P33	2
34	Reverse piston spring	2CH-P34	2
35	Valve body cover (Inner)	2CH-P35	1
36	Acme Blue Label dowel, 5/16 x 1"	2CH-P36	2
37	Automatic cycle reverse lever	2CH-P37	1
38	Acme Blue Label dowel, 5/16 x 1-1/2"	2CH-P38	1
39	Valve body	2CH-P39	1
40	Table direction piston	2CH-P40	1

Item No.	Part Name and Description	Code No.	Qty.
41	Table direction piston sleeve	2CH-P41	1
42	Valve body cover	2CH-P42	1
43	Upper feed reverse piston cover (Outer)	2CH-P43	1
44	Sock hd flat pt set screw, 5/16 x 1-3/4"	2CH-P44	2
45	Sock hd cap screw, 5/16 x 2-1/4"	2CH-P45	4
46	Sock hd cap screw, 5/16 x 1-3/4"	2CH-P46	1
47	Selector valve sleeve	2CH-P47	1
48	"O" Ring	2CH-P48	1
49	Selector valve	2CH-P49	1
50	"O" Ring	2CH-P50	1
51	Oil seal retainer	2CH-P51	1
52	Steel ball, 3/16" diam	2CH-P52	1
53	Spring	2CH-P53	1
54	#000 Taper pin, 5/8" (Long)	2CH-P54	1
55	Rate selector knob	2CH-P55	1
56	Sock hd cap screw, 5/16x2"	2CH-P56	6
57	Lower feed reverse piston cover (Outer)	2CH-P57	1
58	Flat pt set screw, 1/4-20 x 1/4"	2CH-P58	1
59	Dog pt set screw, 1/4-20 x 3/8"	2CH-P59	1
60	Feed and right traverse piston sleeve	2CH-P60	1
61	Right traverse piston	2CH-P61	1
62	Cotter pin, 1/16 x 1/2"	2CH-P62	1
63	Washer	2CH-P63	1
64	Feed and right traverse piston	2CH-P64	1
65	Spring	2CH-P65	1
66	Pipe plug, 1/4"	2CH-P66	2
67	Lower feed reverse piston cover (Inner)	2CH-P67	1
68	Sock hd cap screw, 5/16 x 5/8"	2CH-P68	4
69	Sock hd cap screw, 5/16 x 1-1/2"	2CH-P69	1
Automatic Cycle Plain Saddle			
70	Expansion plug, 7/8"	2CH-P70	2
71	Brake plunger pin	2CH-P71	1
72	Feed and right traverse control shaft	2CH-P72	1
73	Acme Blue Label dowel, 1/4 x 3/4"	2CH-P73	1
74	Hollow fl pt set screw, 1/4-20 x 3/4"	2CH-P74	2
75	Hollow fl pt set screw, 1/4-20 x 3/8"	2CH-P75	2
76	Feed and right traverse lever bracket	2CH-P76	1

**Replacement Parts Manual**  
5hp No. 2 Model CH Milling Machines

**KEARNEY & TRECKER**  
**MILWAUKEE**  
SERIAL 1-1000

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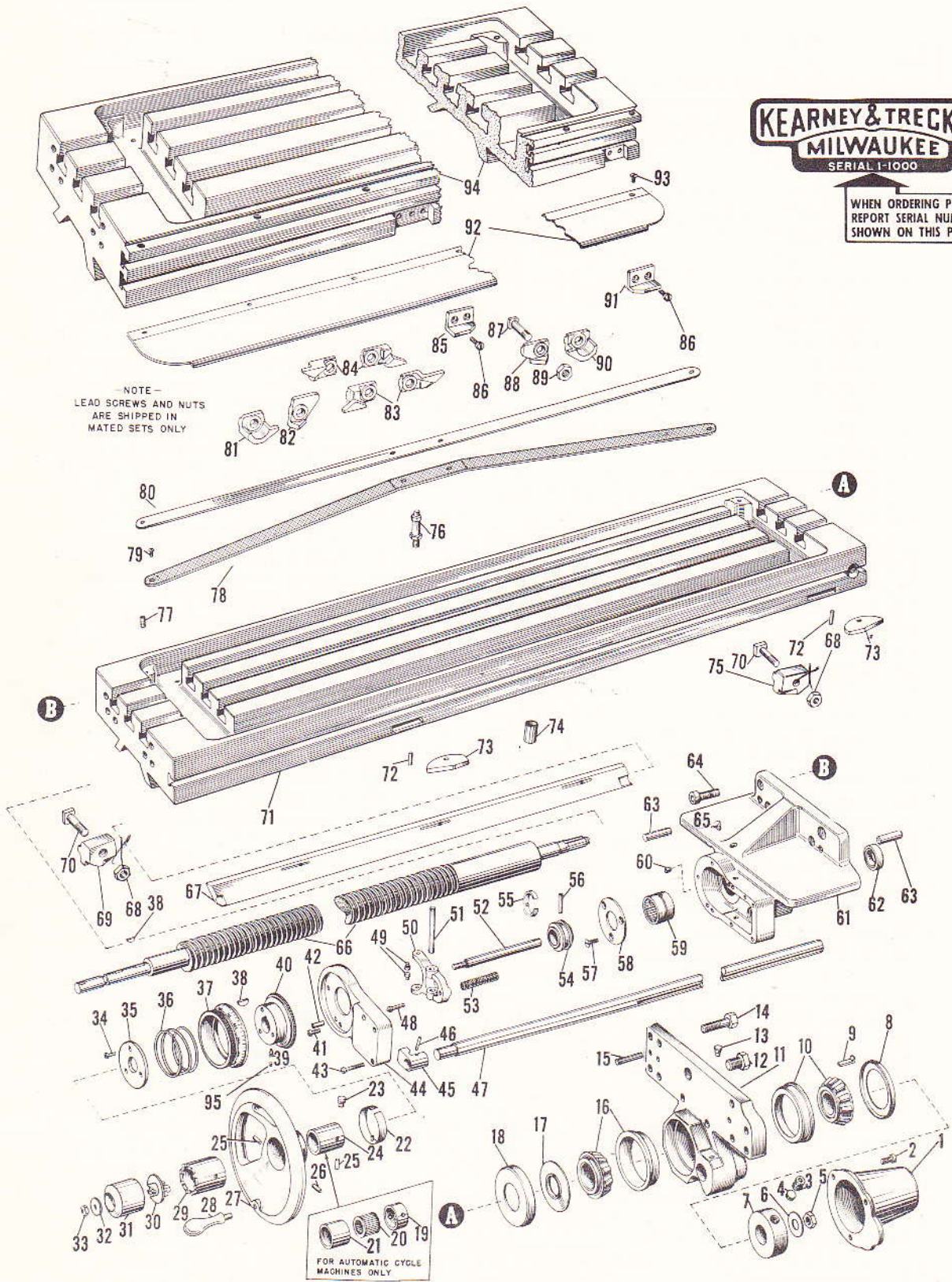


FIG. 19 - TABLES

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 19 - Tables

Item No.	Part Name and Description	Code No.	Qty.
1	Table bracket cover	2CH-Q1	1
2	Fil hd screw, 5/16-18 x 7/16"	2CH-Q2	3
3	Sock set screw, 1/2-20 x 1/2"	2CH-Q3	2
4	Collar nut shoe	2CH-Q4	2
5	Hex nut, 1/2-13	2CH-Q5	1
6	Washer, 1/2"	2CH-Q6	1
7	Collar nut	2CH-Q7	1
8	Brg cover	2CH-Q8	1
9	Timken brg key	2CH-Q9	1
10	Timken brg, 41286B-41125W	2CH-Q10	1
11	Table bracket (RH)	2CH-Q11	1
12	Hex hd plug, 5/8-18 x 3/4"	2CH-Q12	1
13	Gits oiler, RS-533	2CH-Q13	1
14	Hex hd cap screw, 1/2-13 x 1-9/16"	2CH-Q14	6
15	Acme Blue Label dowel, 3/8 x 1-1/2"	2CH-Q15	2
16	Timken brg, 41286B-41125	2CH-Q16	1
17	Spacer collar	2CH-Q17	1
18	Brg cover	2CH-Q18	1
19*	Handwheel bushing	2CH-Q19	1
20*	Torrington brg, B-1416	2CH-Q20	1
21*	Table handwheel brg retainer	2CH-Q21	1
22	Spring	2CH-Q22	1
23	Gits oiler, RS-531	2CH-Q23	1
24†	Handwheel bushing	2CH-Q24	1
25	Handwheel retaining pin	2CH-Q25	1
26	Pin	2CH-Q26	2
27	Handwheel	2CH-Q27	1
28	Rockwood handle, #1QA	2CH-Q28	1
29	Clutch in handwheel	2CH-Q29	1
30	Handwheel clutch	2CH-Q30	1
31	Handwheel clutch knob	2CH-Q31	1
32	Clutch washer	2CH-Q32	1
33	Hex nut, 5/16-24	2CH-Q33	1
34	Fil hd screw, 10-32 x 1/2"	2CH-Q34	3
35	Dial spring retainer	2CH-Q35	1
36	Dial spring	2CH-Q36	1
37	Serrated graduated dial	2CH-Q37	1
38	Hi-pro key, #505	2CH-Q38	1
39	Sock dog pt set screw, 5/16-18 x 3/8"	2CH-Q39	1
40	Table serrated dial collar	2CH-Q40	1
41	Fil hd screw, 1/4-20 x 1/2"	2CH-Q41	3
42	Acme Blue Label dowel, 1/4 x 1-1/4"	2CH-Q42	2
43	Fil hd screw, 1/4-20 x 7/8"	2CH-Q43	2
43	Fil hd screw, 1/4-20 x 1-1/16"	2CH-Q43	2
44	Table bracket cover (LH)	2CH-Q44	1
45	Clutch release cam	2CH-Q45	1
46	Taper pin, #2 x 15/16"	2CH-Q46	1
47	Handwheel release shaft	2CH-Q47	1
48	Clutch release yoke pin	2CH-Q48	1

Item No.	Part Name and Description	Code No.	Qty.
49	Shifter yoke pin	2CH-Q49	2
50	Clutch release yoke	2CH-Q50	1
51	Clutch release yoke shaft	2CH-Q51	1
52	Clutch release rod	2CH-Q52	1
52*	Clutch release rod	2CH-Q52	1
53	Spring	2CH-Q53	1
54†	Clutch release plate	2CH-Q54	1
55	Snap ring	2CH-Q55	1
56	Clutch release rod pin	2CH-Q56	1
57	Fil hd mach screw, 10-32 x 5/8"	2CH-Q57	3
58	Brg retainer cover	2CH-Q58	1
59	Orange brg, 7214-CT	2CH-Q59	1
60*	Cone pt pin	2CH-Q60	1
61	Table bracket (LH)	2CH-Q61	1
62	National oil seal, 50381	2CH-Q62	1
63	Acme Blue Label dowel, 3/8 x 1-1/2"	2CH-Q63	2
64	Sock hd cap screw, 1/2 x 1"	2CH-Q64	4
65	Gits oiler, G-501	2CH-Q65	1
66	Table screw	2CH-Q66	1
67	Table gib	2CH-Q67	1
67*	Table gib	2CH-Q67	1
68	Hex nut, 7/16-14	2CH-Q68	4
69	Table trip dog (LH)	2CH-Q69	2
70	T-Bolt	2CH-Q70	4
71	Table	2CH-Q71	1
72	Limit stop pin	2CH-Q72	2
73	Limit block	2CH-Q73	2
74	Table coolant tube	2CH-Q74	‡2
75	Table trip dog (RH)	2CH-Q75	2
76	Table screen guard support	2CH-Q76	2
77	Set screw, 1/4-20 x 11/16"	2CH-Q77	2
78	Table screen	2CH-Q78	1
79	Rd hd mach screw, 1/4 x 3/8"	2CH-Q79	2
80	Table screen guard	2CH-Q80	1
81*	Reverse dog (LH)	2CH-Q81	1
82*	Stop dog (LH)	2CH-Q82	1
83*	Rate change dog "A"	2CH-Q83	2
84*	Rate change dog "B"	2CH-Q84	2
85*	Table limit block (LH)	2CH-Q85	1
86*	Fil hd screw, 5/16-18 x 11/16"	2CH-Q86	4
87*	T-Bolt	2CH-Q87	8
88*	Stop dog (RH)	2CH-Q88	1
89*	Hex nut	2CH-Q89	8
90*	Reverse dog (RH)	2CH-Q90	1
91*	Table limit block (RH)	2CH-Q91	1
92*	Table coolant guard	2CH-Q92	1
93*	Fl hd mach screw, 1/4-20 x 1/2"	2CH-Q93	9
94*	Table	2CH-Q94	1
95	Sock set screw, 5/16 x 1/4"	2CH-Q95	1

\*Used only on automatic cycle machines

†Used only on machines with standard directional table control

‡Only 3 used on automatic cycle machines



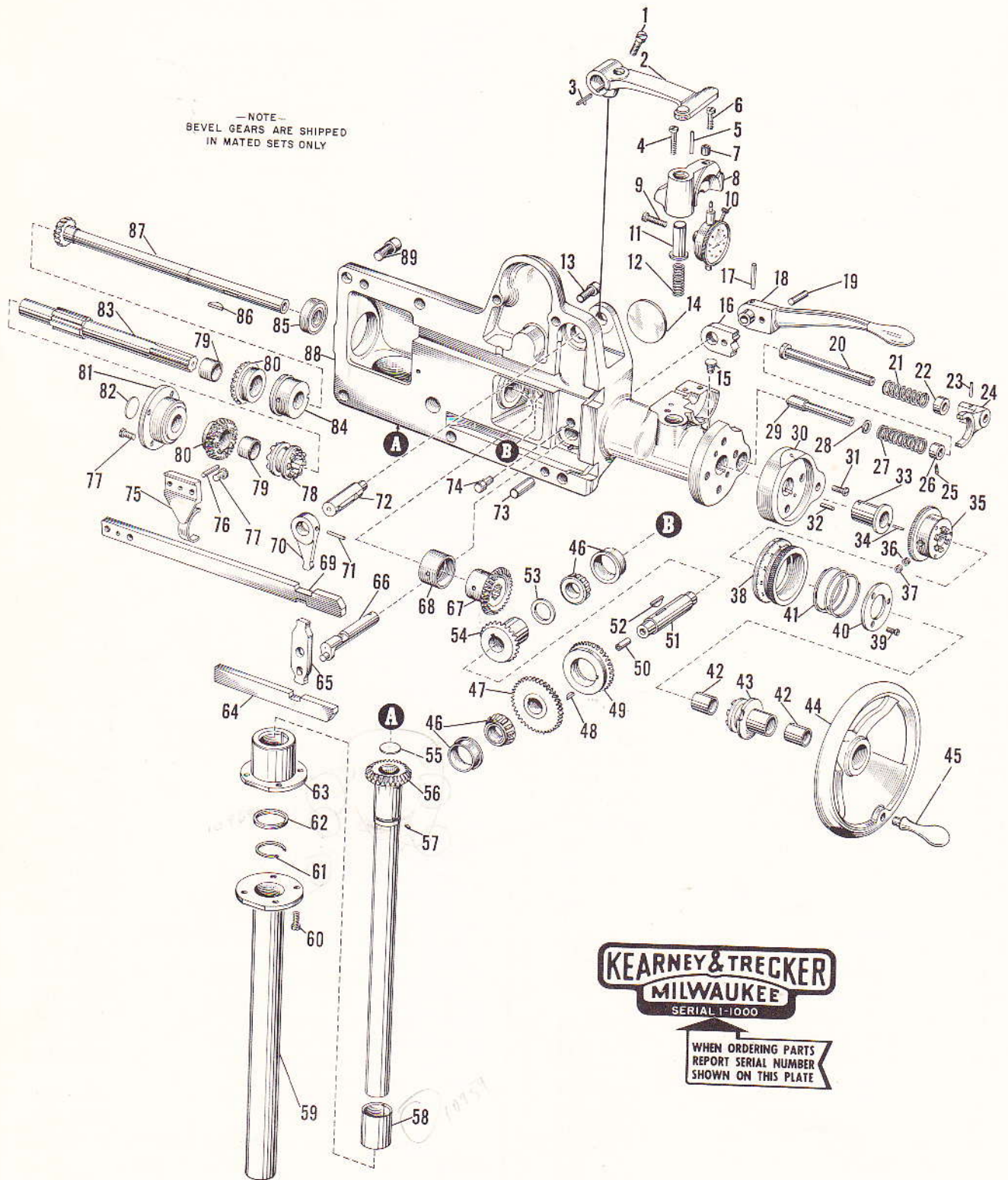


FIG. 20 - HEAD POWER FEED BRACKET

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 20 - Head Power Feed Bracket

Item No.	Part Name and Description	Code No.	Qty.
1	Fil hd screw, 3/8-16 x 1-1/4"	2CH-R1	1
2	Precision stop lever	2CH-R2	1
3	Precision stop lever key	2CH-R3	1
4	Fil hd screw, 5/8 x 2"	2CH-R4	1
5	Acme Blue Label Dowel, 1/4 x 1-3/4"	2CH-R5	2
6	Fil hd screw, 5/16-18 x 1-1/4"	2CH-R6	1
7	Indicator cap bushing	2CH-R7	1
8	Indicator cap	2CH-R8	1
9	Fil hd screw, 1/4-28 x 1"	2CH-R9	1
10	Federal indicator, (C-8-I)	2CH-R10	1
11	Precision stop button	2CH-R11	1
12	Spring	2CH-R12	1
13	Sock hd cap screw, 7/16 x 1"	2CH-R13	2
14	Expansion plug, 2-1/8" diam	2CH-R14	1
15	Gits oiler, #532	2CH-R15	1
16	Vert hd trip detent	2CH-R16	1
17	Taper pin, #4 x 1-1/4"	2CH-R17	1
18	Hd feed lever	2CH-R18	1
19	Acme Blue Label Dowel, 5/16 x 3/4"	2CH-R19	1
20	Handwheel clutch yoke rod	2CH-R20	1
21	Spring	2CH-R21	1
22	Yoke rod spring retainer	2CH-R22	1
23	Taper pin, #1 x 7/8"	2CH-R23	1
24	Handwheel release yoke	2CH-R24	1
25	Sock dog pt set screw, 1/4 x 5/8"	2CH-R25	1
26	Handwheel detent bushing	2CH-R26	1
27	Spring	2CH-R27	1
28	Release rod detent washer	2CH-R28	1
29	Handwheel release rod detent	2CH-R29	1
30	Vert hd bracket dial plate	2CH-R30	1
31	Fil hd screw, 3/8-16 x 3/4"	2CH-R31	4
32	Acme Blue Label Dowel, 1/4 x 3/4"	2CH-R32	2
33	Handwheel shaft bushing	2CH-R33	1
34	Pin, 1/8 x 1/2"	2CH-R34	1
35	Serrated dial collar	2CH-R35	1
36	Sock dog pt set screw, 1/4 x 5/16"	2CH-R36	1
37	Sock set screw, 1/4 x 1/4"	2CH-R37	1
38	Graduated dial, 125 divisions	2CH-R38	1
39	Fil hd screw, 10-32 x 5/8"	2CH-R39	3
40	Graduated dial spring retainer	2CH-R40	1
41	Spring	2CH-R41	1
42	Oilite bearing, A-912	2CH-R42	2
43	Handwheel clutch	2CH-R43	1
44	Head adjusting handwheel	2CH-R44	1
45	Rockwood handle, #3QA	2CH-R45	1
46	Timken brg, 05185B-05075	2CH-R46	2
47	Hd feed take-off gear	2CH-R47	1

Item No.	Part Name and Description	Code No.	Qty.
48	Hi-Pro key, #404	2CH-R48	1
49	Vert hd feed miter gear	2CH-R49	1
50	Copper tubing, 1/2 x 7/8" (Long)	2CH-R50	1
51	Take-off gear shaft	2CH-R51	1
52	Hi-Pro key, HP-706	2CH-R52	1
53	Feed take-off gear fitting washer	2CH-R53	1
54	Hand feed take-off gear	2CH-R54	1
55	Expansion plug, 1" diam	2CH-R55	1
56	Vert hd feed drive upper miter gear	2CH-R56	1
57	Pin, 3/16 x 7/32"	2CH-R57	1
58	Hd feed drive miter gear brg bushing	2CH-R58	1
59	Inner telescopic tube and flange	2CH-R59	1
60	Fil hd screw, 3/8-16 x 7/8"	2CH-R60	4
61	Snap ring	2CH-R61	1
62	Hd feed drive gear washer	2CH-R62	1
63	Hd feed drive miter gear brg	2CH-R63	1
64	Trip plunger (Lower)	2CH-R64	1
65	Trip rod connecting link	2CH-R65	1
66	Hd feed eccentric	2CH-R66	1
67	Power feed take-off gear	2CH-R67	1
68	Power feed gear bushing	2CH-R68	1
69	Trip plunger (Upper)	2CH-R69	1
70	Precision stop trip lever	2CH-R70	1
71	Taper pin, #4 x 1-3/8"	2CH-R71	1
72	Precision stop lever shaft	2CH-R72	1
73	Acme Blue Label Dowel, 1/2 x 1-1/2"	2CH-R73	2
74	Trip rod connecting link pin	2CH-R74	1
75	Hd feed clutch shifter	2CH-R75	1
76	Acme Blue Label Dowel, 1/4 x 3/4"	2CH-R76	1
77	Fil hd screw, 5/8-16 x 11/16"	2CH-R77	6
78	Hd feed reverse clutch	2CH-R78	1
79	Miter gear bushing	2CH-R79	2
80	Hd feed reverse clutch miter gear	2CH-R80	2
81	Reverse clutch shaft end brg	2CH-R81	1
82	Expansion plug, 1-3/8" diam	2CH-R82	1
83	Hd feed reverse clutch shaft	2CH-R83	1
84	Miter gear thrust brg	2CH-R84	1
85	New Departure brg, #204	2CH-R85	1
86	Hi-Pro key, HP-705	2CH-R86	1
87	Handwheel shaft and bevel pinion	2CH-R87	1
88	Vert hd power feed bracket	2CH-R88	1
89	Sock hd cap screw, 1/2 x 1-1/4"	2CH-R89	5

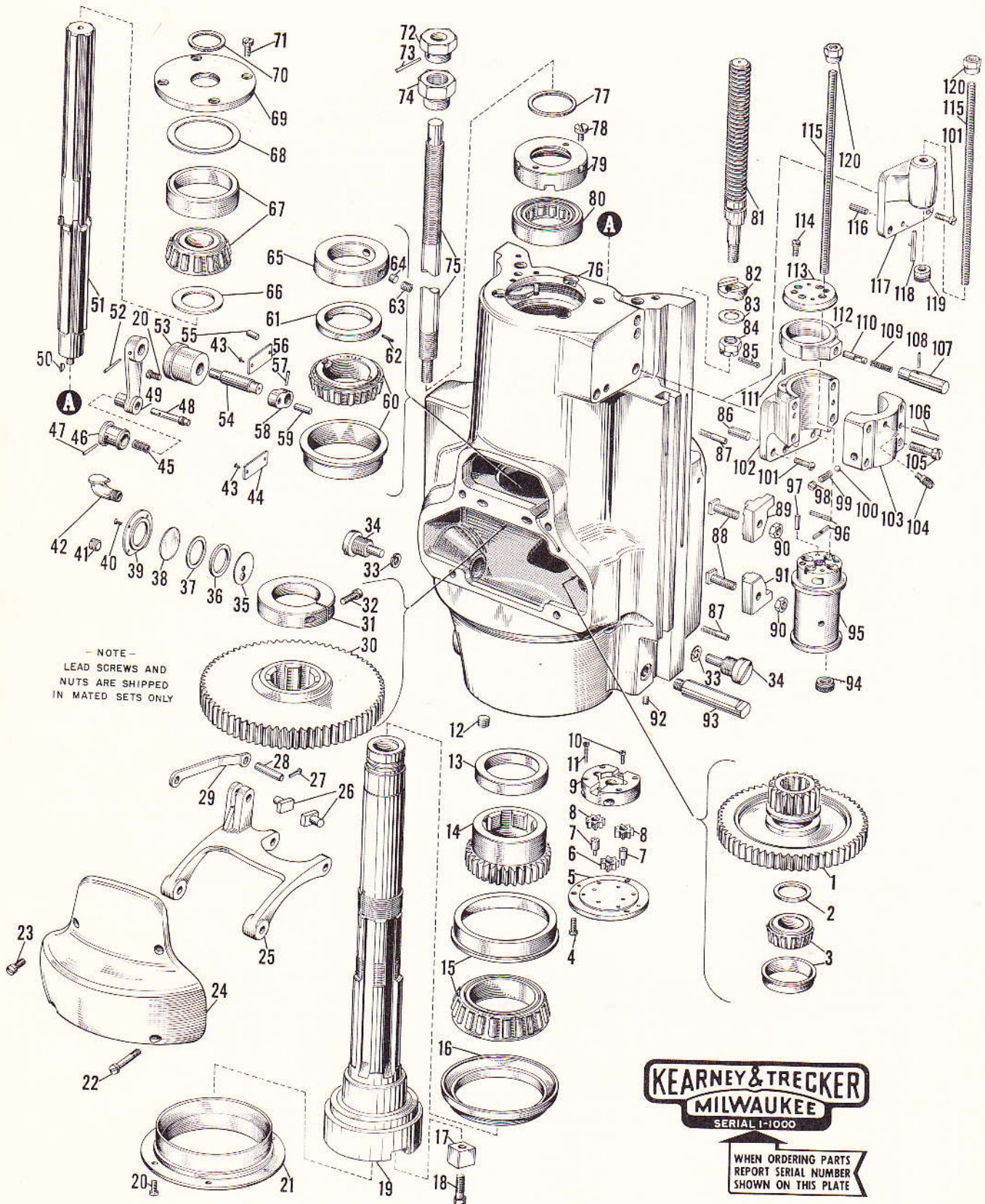


FIG. 21 - VERTICAL HEAD

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 21 - Vertical Head

Item No.	Part Name and Description	Code No.	Qty.
1	Spindle drive sliding gear	2CH-S1	1
2	Cross shaft brg retaining washer, (Lower)	2CH-S2	1
3	Timken brg, 2523B-2580	2CH-S3	1
4	Fil hd screw, 5/16-18 x 11/16"	2CH-S4	3
5	Vert hd oil pump cover	2CH-S5	1
6	Oil pump gear (Driver)	2CH-S6	1
7	Oil pump stud	2CH-S7	2
8	Oil pump gear (Driven)	2CH-S8	2
9	Vert hd oil pump body	2CH-S9	1
10	Fil hd screw, 1/4-20 x 7/8"	2CH-S10	2
11	Fil hd screw, 1/4-20 x 1-1/16"	2CH-S11	4
12	Pipe plug, C.S., 3/4"	2CH-S12	1
13	Spindle gear spacer	2CH-S13	1
14	Small spindle gear	2CH-S14	1
15	Timken brg, 47620B-4786 (Spindle quality)	2CH-S15	1
16	Spindle oil slinger	2CH-S16	1
17	Spindle tongue	2CH-S17	2
18	Fil hd screw, 7/16-14 x 1-1/8"	2CH-S18	2
19	Spindle (#50 Taper)	2CH-S19	1
20	Fil hd screw, 5/16-18 x 9/16"	2CH-S20	8
21	Spindle oil shield	2CH-S21	1
22	Fil hd screw, 3/8-16 x 1-7/8"	2CH-S22	2
23	Fil hd screw, 3/8-16 x 7/8"	2CH-S23	2
24	Vert spindle hd cover	2CH-S24	1
25	Spindle gear shifter lever	2CH-S25	1
26	Spindle lever shoe	2CH-S26	2
27	Cotter pin, 1/16 x 1"	2CH-S27	2
28	Pin	2CH-S28	1
29	Spindle lever link	2CH-S29	1
30	Large spindle gear	2CH-S30	1
31	Spindle nut	2CH-S31	1
32	Socket hd cap screw, 7/16 x 1-1/4"	2CH-S32	1
33	Lockwasher, #1228 Shakeproof, 5/8" Internal tooth	2CH-S33	2
34	Primary speed change shifter stud	2CH-S34	2
35	Oil sight gage back plate	2CH-S35	1
36	Oil gage washer	2CH-S36	1
37	Oil gage washer	2CH-S37	1
38	Oil gage glass	2CH-S38	1
39	Oil gage plate	2CH-S39	1
40	Parker & Kalon 2-8 self tapping screw	2CH-S40	4
41	Slotted pipe plug, 1/4"	2CH-S41	1
42	Gits oiler, LP-1401	2CH-S42	1
43	#15 x 1/2" Escutcheon pin	2CH-S43	4
44	Speed plate (Slow)	2CH-S44	1
45	Spring	2CH-S45	1
46	Speed selection knob	2CH-S46	1
47	Taper pin, #2 x 7/8"	2CH-S47	1
48	Speed lever plunger	2CH-S48	1
49	Range change lever	2CH-S49	1
50	Hi-Pro key, HP 404	2CH-S50	1
51	Spindle cross shaft	2CH-S51	1
52	Taper pin, #2 x 1-3/8"	2CH-S52	1
53	Shifter crank brg	2CH-S53	1
54	Shifter crank stud	2CH-S54	1
55	Dowel pin, 1/4 x 3/4"	2CH-S55	2
56	Speed plate (Fast)	2CH-S56	1
57	Taper pin, #2 x 7/8"	2CH-S57	1
58	Shifter crank plate	2CH-S58	1
59	Shifter crank pin	2CH-S59	1
60	Timken brg, 453B-462W (Spindle quality)	2CH-S60	1

Item No.	Part Name and Description	Code No.	Qty.
61	Spindle brg drive collar	2CH-S61	1
62	Spindle brg drive collar pin	2CH-S62	1
63	Socket set screw, 1/2-20 x 1/2"	2CH-S63	2
64	Collar nut plug	2CH-S64	2
65	Collar nut	2CH-S65	1
66	Cross shaft brg retaining washer	2CH-S66	1
67	Timken brg, 49368-49150	2CH-S67	1
68	Cross shaft brg adj washer	2CH-S68	1
69	Spindle cross shaft cover	2CH-S69	1
70	Cross shaft cover felt washer	2CH-S70	1
71	Fil hd screw, 3/8-16 x 13/16"	2CH-S71	4
72	Draw bolt hd	2CH-S72	1
73	Taper pin, #4 x 1-1/4"	2CH-S73	1
74	Draw bolt nut	2CH-S74	1
75	Spindle draw-in bolt	2CH-S75	1
76	Vert spindle hd	2CH-S76	1
77	Spindle oil shield felt	2CH-S77	1
78	Fil hd screw, 3/8-16 x 9/16"	2CH-S78	3
79	Spindle oil retainer	2CH-S79	1
80	Hyatt brg, 1308 TS	2CH-S80	1
81	Hd feed screw	2CH-S81	1
82	Hd feed screw drive washer	2CH-S82	1
83	Washer, 5/8"	2CH-S83	1
84	Castellated nut, 5/8-18	2CH-S84	1
85	Cotter pin, 1/8 x 1-1/2"	2CH-S85	1
86	Acme Blue Label Dowel, 1/2 x 1-1/4"	2CH-S86	2
87	Vert hd trip (Positive stop)	2CH-S87	2
88	T-Bolt	2CH-S88	2
89	Upper trip dog	2CH-S89	1
90	Hex nut, 7/16-14	2CH-S90	2
91	Lower trip dog	2CH-S91	1
92	Slotted pipe plug, 1/8"	2CH-S92	2
93	Clamp rod	2CH-S93	1
94	Precision stop screw nut	2CH-S94	4
95	Precision stop barrel	2CH-S95	1
96	Key	2CH-S96	2
97	Acme Blue Label Dowel, 1/4 x 3/4"	2CH-S97	2
98	Set screw, 7/16-14 x 1/2"	2CH-S98	1
99	Spring	2CH-S99	1
100	Steel ball, 3/8" diam	2CH-S100	1
101	Fil hd screw, 1/2-13 x 1-1/8"	2CH-S101	6
102	Precision stop bracket	2CH-S102	1
103	Precision stop bracket cap	2CH-S103	1
104	Tucker oiler, #2	2CH-S104	1
105	Fil hd screw, 7/16-14 x 1-1/2"	2CH-S105	4
106	Acme Blue Label Dowel, 5/16 x 1-3/4"	2CH-S106	2
107	Precision stop ratchet	2CH-S107	1
108	Taper pin, #00 x 3/4"	2CH-S108	1
109	Spring	2CH-S109	1
110	Precision stop ratchet pin	2CH-S110	1
111	Dowel	2CH-S111	1
112	Precision stop adj ring	2CH-S112	1
113	Precision stop cover	2CH-S113	1
114	Fil hd screw, 5/16-18 x 11/16"	2CH-S114	2
115	Precision stop screw	2CH-S115	4
116	Acme Blue Label Dowel, 1/2 x 1-1/8"	2CH-S116	2
117	Single precision stop bracket	2CH-S117	1
118	Key	2CH-S118	1
119	Precision stop graduated collar	2CH-S119	1
120	Lock nut, 1/2-20	2CH-S120	5

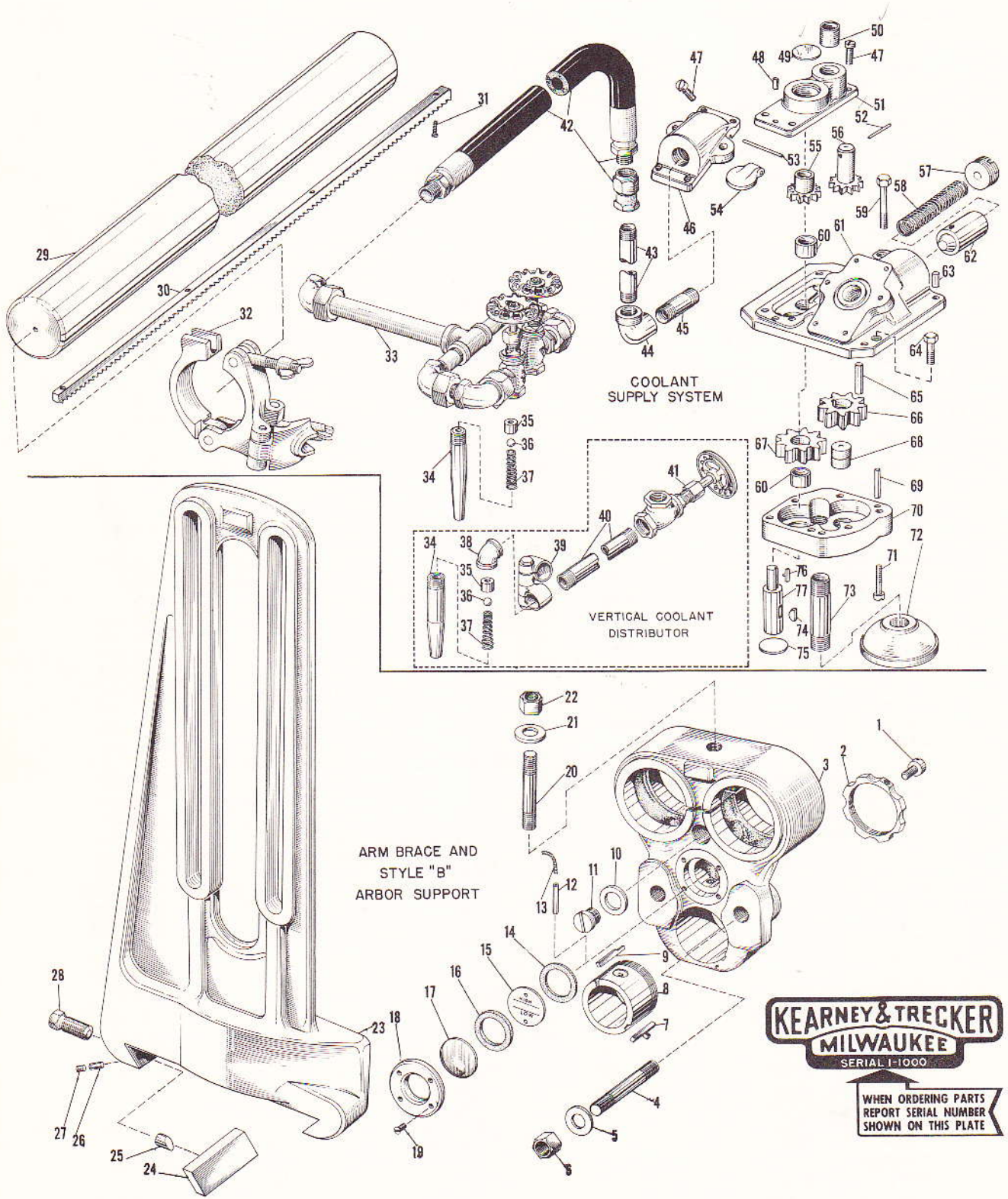


FIG. 22 - COOLANT SUPPLY SYSTEM, STYLE B ARBOR SUPPORT AND ARM BRACE

WHEN ORDERING PARTS  
REPORT SERIAL NUMBER  
SHOWN ON THIS PLATE

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

Item No.	Part Name and Description	Code No.	Qty.
<b>STYLE B ARBOR SUPPORT AND ARM BRACE</b>			
1	Fil hd screw, 3/8-16 x 11/16"	2CH-T1	1
2	Bushing nut	2CH-T2	1
3	Style B arbor support	2CH-T3	1
4	Arm brace clamp stud	2CH-T4	2
5	Washer, 5/8"	2CH-T5	2
6	Hex nut, 5/8-11	2CH-T6	2
7	Key	2CH-T7	1
8	Arbor bushing	2CH-T8	1
9	Oil retainer	2CH-T9	1
10	Fibre washer	2CH-T10	1
11	Oil filler plug	2CH-T11	1
12	Copper tube, 1/4 x 2-3/8"	2CH-T12	1
13	Oil wicking	2CH-T13	1
14	Oil gage washer	2CH-T14	1
15	Oil gage plate	2CH-T15	1
16	Oil gage washer	2CH-T16	1
17	Oil gage glass	2CH-T17	1
18	Oil flow gage plate	2CH-T18	1
19	Oval hd screw, 10-32 x 15/32"	2CH-T19	4
20	Stud	2CH-T20	1
21	Washer, 3/4"	2CH-T21	1
22	Hex nut, 3/4-10	2CH-T22	1
23	Arm brace	2CH-T23	1
24	Clamp gib	2CH-T24	1
25	Table clamp plug	2CH-T25	1
26	Acme Blue Label Dowel pin, 1/4 x 1/2"	2CH-T26	2
27	Sock hd set screw, 5/16 x 5/16"	2CH-T27	2
28	Hex hd lock screw, 5/8-11 x 1-5/8"	2CH-T28	1
<b>OVERARMS</b>			
29*	Overarm	2CH-T29	2
30	Overarm rack	2CH-T30	2
31	Fil hd screw, 5/16-24 x 11/16"	2CH-T31	8
<b>COOLANT SUPPLY SYSTEM</b>			
32*	Coolant distributor support	2CH-T32	1
33*	Distributor complete	2CH-T33	1
34	Coolant nozzle	2CH-T34	2
35	Nozzle ball retainer	2CH-T35	1
36	Ball, 3/8" diam	2CH-T36	1
37	Nozzle spring	2CH-T37	1
38**	Reducing elbow, 1/2 x 3/8"	2CH-T38	1

Item No.	Part Name and Description	Code No.	Qty.
39**	Coolant distributor support	2CH-T39	1
40**	Pipe	2CH-T40	1
41**	Angle valve, 1/2"	2CH-T41	1
42	Coolant hose, 1/2 x 1/2"	2CH-T42	1
43	Wrought iron pipe, 1/2 x 33"	2CH-T43	1
44	Elbow, 1/2 x 90"	2CH-T44	1
45	Nipple, 1/2 x 1-5/8"	2CH-T45	1
46	Check valve cover	2CH-T46	1
47	Fil hd screw, 1/4-20 x 5/8"	2CH-T47	10
48	Acme Blue Label Dowel, 1/4 x 1/2"	2CH-T26	2
49	Expansion plug, 1-1/8" diam	2CH-T48	1
50	Coolant pump drive gear bushing	2CH-T49	1
51	Coolant pump cover plate	2CH-T50	1
52	Pump gear drive pin	2CH-T51	1
53	Pin for check valve cover	2CH-T52	1
54	Check valve	2CH-T53	1
55	Coolant pump driven gear	2CH-T54	1
56	Coolant pump drive gear	2CH-T55	1
57	Pipe plug, 1"	2CH-T56	1
58	Spring	2CH-T57	1
59	Hex hd cap screw, 3/8-16 x 2-1/8"	2CH-T58	1
60	Oilite brg, SM 575	2CH-T59	2
61	Coolant pump cover	2CH-T60	1
62	Coolant relief plunger	2CH-T61	1
63	Acme Blue Label Dowel, 5/16 x 1"	2CH-T62	2
64	Hex hd cap screw, 3/8-16 x 1"	2CH-T63	1
65	Acme Blue Label Dowel, 1/4 x 1-1/2"	2CH-T64	1
66	Coolant pump gear (Driven)	2CH-T65	1
67	Coolant pump gear (Driver)	2CH-T66	1
68	Coolant idler gear stud	2CH-T67	1
69	Acme Blue Label Dowel, 1/4 x 1-1/4"	2CH-T68	2
70	Coolant pump body	2CH-T69	1
71	Fil hd screw, 5/16-18 x 1-1/4"	2CH-T70	6
72	Strainer	2CH-T71	1
73	Nipple, 1/2 x 3"	2CH-T72	1
74	Hi-Pro key, #505	2CH-T73	1
75	Expansion plug, 1" diam	2CH-T74	1
76	Tit key	2CH-T75	1
77	Coolant pump drive shaft	2CH-T76	1

\*Horizontal machines only

\*\*Vertical machines only

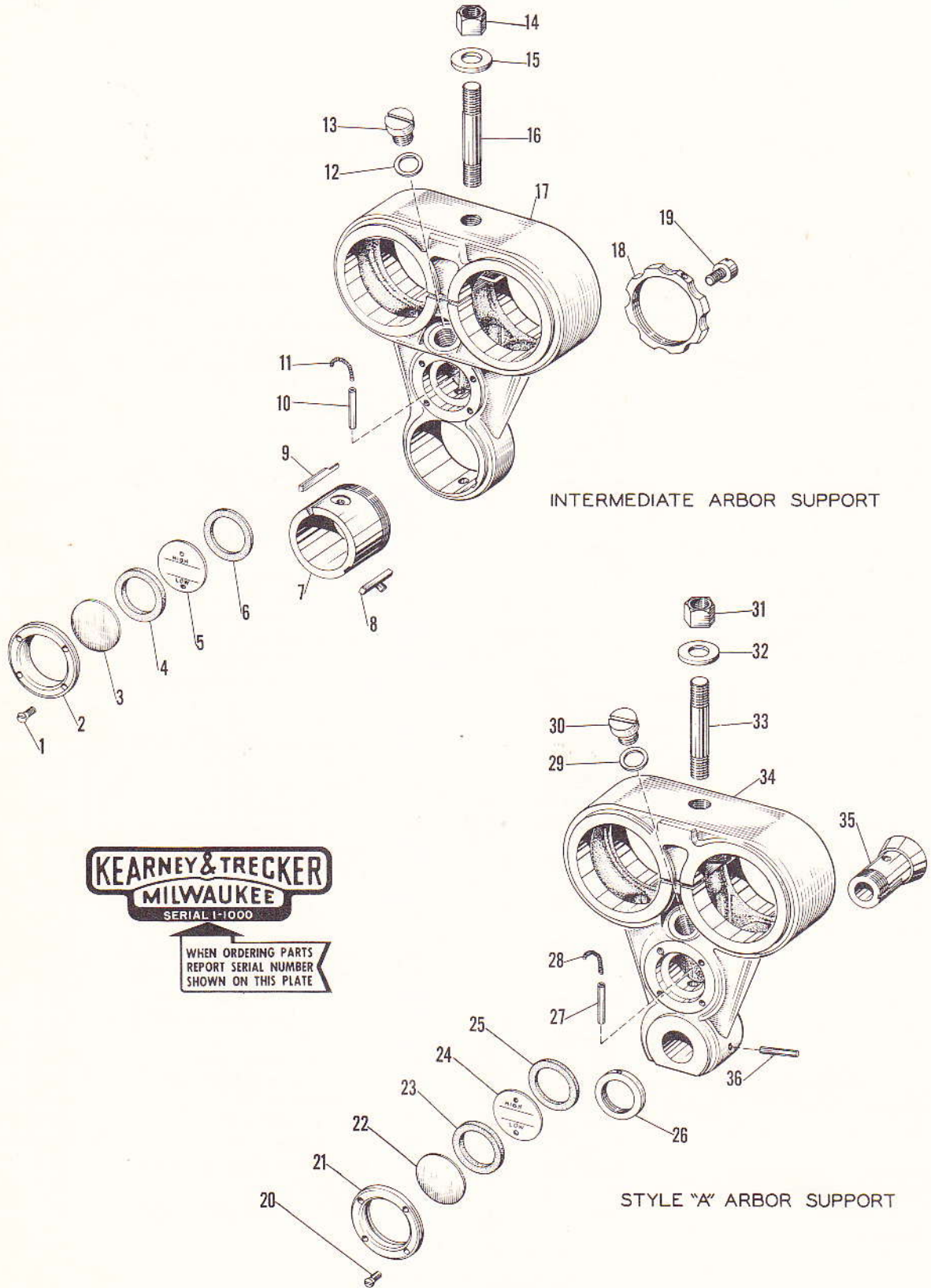


FIG. 23 - INTERMEDIATE ARBOR SUPPORT AND STYLE A ARBOR SUPPORT

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

Item	Part Name and Description	Code No.	Qty.
<b>INTERMEDIATE ARBOR SUPPORT</b>			
1	Oval hd screw, 10-32 x 15/32"	2CH-U1	4
2	Oil flow gage plate	2CH-U2	1
3	Oil gage glass	2CH-U3	1
4	Oil gage washer	2CH-U4	1
5	Oil gage back plate	2CH-U5	1
6	Oil gage washer	2CH-U6	1
7	Arbor support bushing	2CH-U7	1
8	Tit key	2CH-U8	1
9	Oil retainer	2CH-U9	1
10	Copper tube, 1/4 x 1-5/8"	2CH-U10	1
11	Oil wicking	2CH-U11	1
12	Fibre washer	2CH-U12	1
13	Oil filler plug	2CH-U13	1
14	Hex nut, 3/4-10	2CH-U14	1
15	Washer, 3/4"	2CH-U15	1
16	Stud	2CH-U16	1
17	Intermediate arbor support	2CH-U17	1
18	Arm pendant bushing nut	2CH-U18	1
19	Fil hd screw, 3/8-16 x 11/16"	2CH-U19	1
<b>STYLE A ARBOR SUPPORT</b>			
20	Oval hd screw, 10-32 x 15/32"	2CH-U20	4
21	Oil gage plate	2CH-U21	1
22	Oil gage glass	2CH-U22	1
23	Oil gage washer	2CH-U23	1
24	Oil gage back plate	2CH-U24	1
25	Oil gage washer	2CH-U25	1
26	Nut	2CH-U26	1
27	Copper tube, 1/4 x 2-3/8"	2CH-U27	1
28	Oil wicking	2CH-U28	1
29	Washer, 5/8"	2CH-U29	1
30	Oil filler plug	2CH-U30	1
31	Hex nut, 3/4-10	2CH-U31	1
32	Washer, 3/4"	2CH-U32	1
33	Stud	2CH-U33	1
34	Style A arbor support	2CH-U34	1
35	Bushing	2CH-U35	1
36	Pin	2CH-U36	1



**KEARNEY & TRECKER**  
**MILWAUKEE**  
 SERIAL 1-1000

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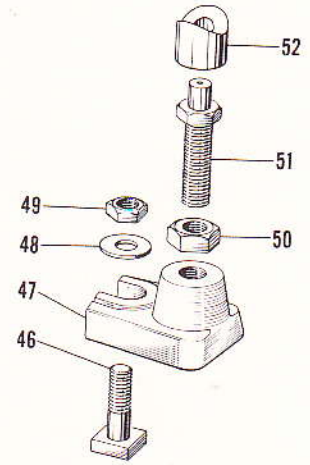
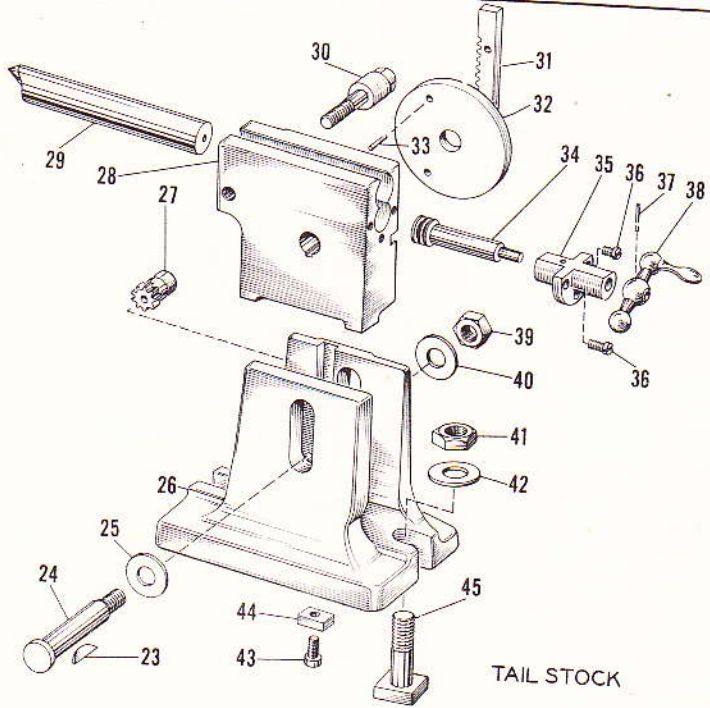
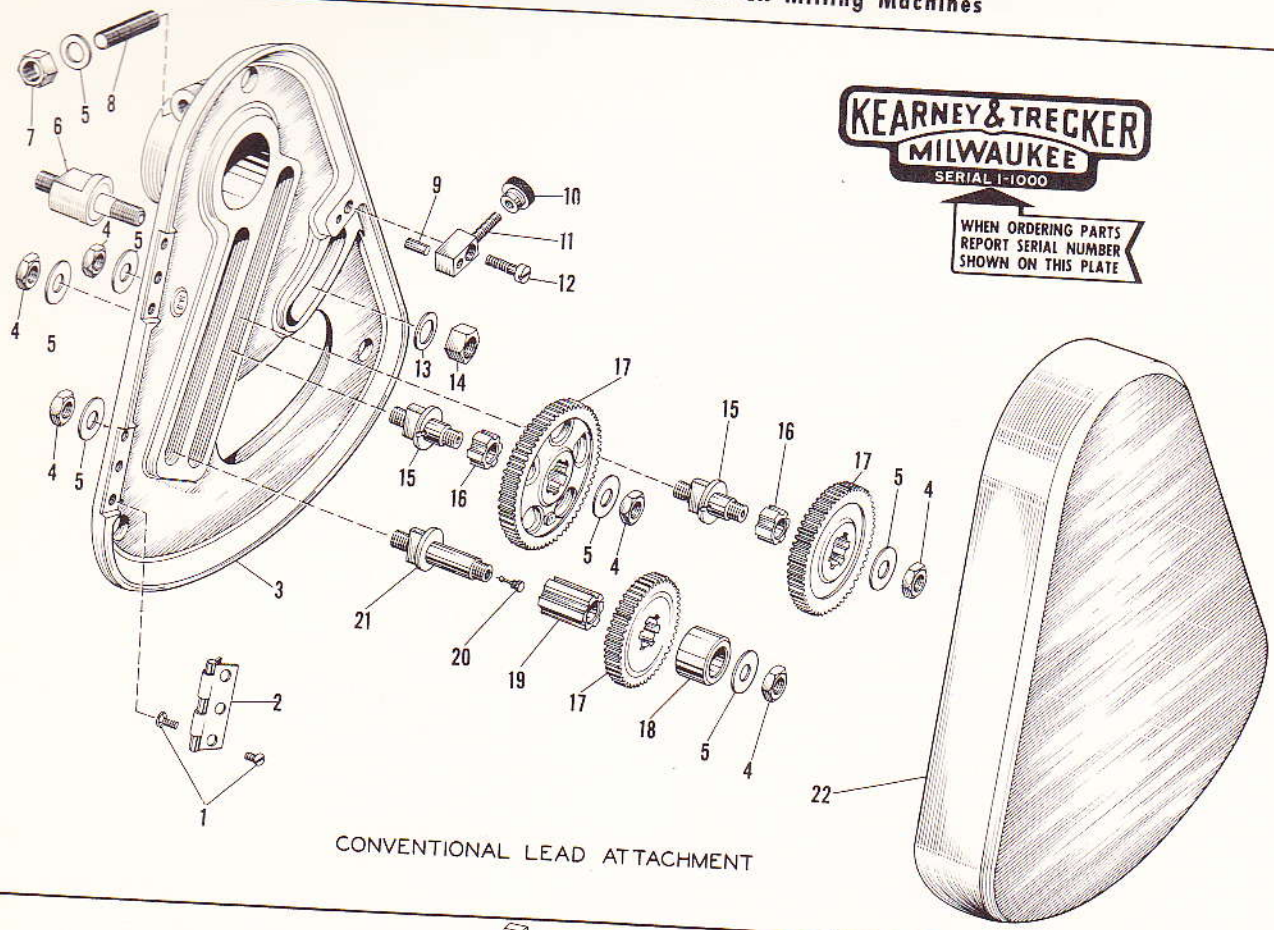


FIG. 24 - CONVENTIONAL LEAD ATTACHMENT, TAIL STOCK AND STEADY REST

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

Item No.	Part Name and Description	Code No.	Qty.
<b>CONVENTIONAL LEAD ATTACHMENT</b>			
1	Fil hd mach screw, 10-32 x 1/2"	2CH-V1	12
2	Butt hinge, #800 Stanley	2CH-V2	2
3	Change gear bracket	2CH-V3	1
4	Hex nut, 1/2-13	2CH-V4	6
5	Washer, 1/2"	2CH-V5	7
6	Change gear stud	2CH-V6	1
7	Hex nut, 1/2-13	2CH-V7	1
8	Stud	2CH-V8	1
9	Acme Blue Label Dowel, 1/4 x 7/8"	2CH-V9	1
10	Thumb nut	2CH-V10	1
11	Door lock bolt	2CH-V11	1
12	Fil hd screw, 5/16-18 x 1"	2CH-V12	1
13	Washer, 5/8"	2CH-V13	1
14	Hex nut, 5/8-18"	2CH-V14	1
15	Idler stud	2CH-V15	2
16	Splined bushing, Short	2CH-V16	2
17	Change gears		
	Change gear, 24T-16P	2CH-V17	2
	Change gear, 28T-16P	2CH-V18	1
	Change gear, 32T-16P	2CH-V19	1
	Change gear, 40T-16P	2CH-V20	1
	Change gear, 44T-16P	2CH-V21	1
	Change gear, 48T-16P	2CH-V22	2
	Change gear, 56T-16P	2CH-V23	1
	Change gear, 64T-16P	2CH-V24	1
	Change gear, 72T-16P	2CH-V25	1
	Change gear, 86T-16P	2CH-V26	1
	Change gear, 100T-16P	2CH-V27	1
18	Spacing collars		
	Spacing collar, (Small)	2CH-V28	1
	Spacing collar, (Large)	2CH-V29	1
19	Splined bushing, (Long)	2CH-V30	1
20	Gits oiler, #RS-531	2CH-V31	1
21	Differential index compound stud	2CH-V32	1
22	Change gear bracket cover	2CH-V33	1
<b>TAILSTOCK</b>			
23	Hi-Pro key, #HP-606	2CH-V34	1
24	Elevating clamp bolt	2CH-V35	1
25	Washer, 5/8"	2CH-V36	1
26	Tailstock	2CH-V37	1
27	Elevating pinion	2CH-V38	1
28	Elevating center	2CH-V39	1
29	Tailstock center	2CH-V40	1
30	Tailstock clamp screw	2CH-V41	1
31	Elevating rack	2CH-V42	1
32	Graduated plate	2CH-V43	1
33	Taper pin, #2 x 9/16"	2CH-V44	2
34	Center adjusting worm	2CH-V45	1
35	Worm sleeve	2CH-V46	1
36	Fil hd screw, 1/4-20 x 1/2"	2CH-V47	3
37	Taper pin, #1 x 13/16"	2CH-V48	1
38	Ball crank	2CH-V49	1
39	Hex nut, 1/2-13	2CH-V50	1
40	Washer, 1/2"	2CH-V51	1
41	Hex nut, 5/8-11	2CH-V52	2
42	Washer, 5/8"	2CH-V53	2
43	Fil hd screw, 5/16-18 x 11/16"	2CH-V54	2
44	Vise tongue	2CH-V55	2
45	T-Bolt	2CH-V56	2
<b>STEADY REST</b>			
46	T-Bolt	2CH-V57	1
47	Steady rest base	2CH-V58	1
48	Washer, 5/8"	2CH-V59	1
49	Hex nut, 5/8-11	2CH-V60	1
50	Hex nut, 3/4-10	2CH-V61	1
51	Steady rest adjustment screw	2CH-V62	1
52	Steady rest vee block	2CH-V63	1



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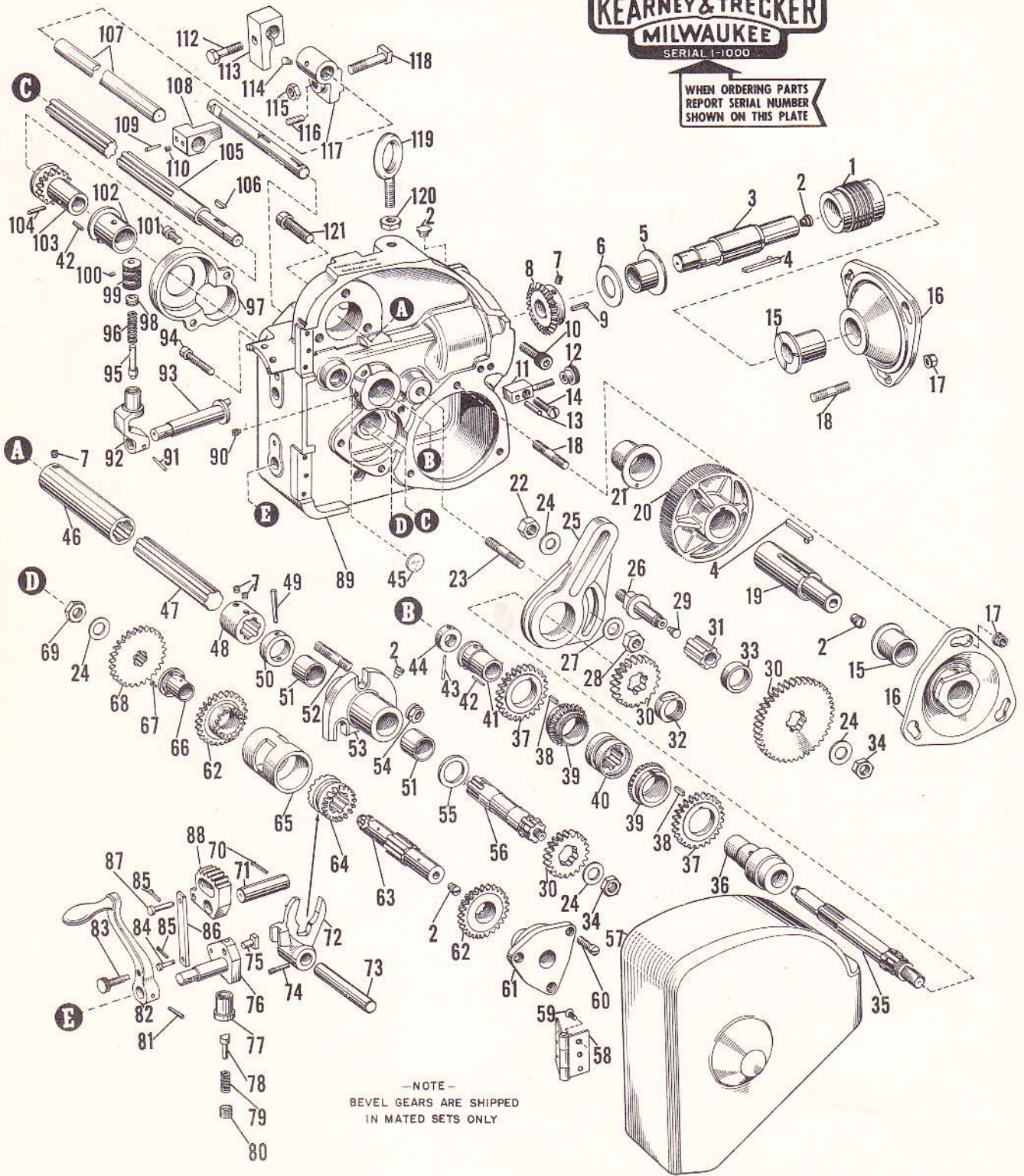


FIG. 25 - LOW LEAD ATTACHMENT

Item No.	Part Name and Description	Code No.	Qty.
	Change gear, 36T-10P	2CH-W47	1
	Change gear, 38T-10P	2CH-W48	1
	Change gear, 40T-10P	2CH-W49	1
31	Splined bushing	2CH-W50	1
32	Hand crank shaft nut	2CH-W51	1
33	Spacing collar	2CH-W52	1
34	Hex nut, 1/2-13	2CH-W53	2
35	Hand crank shaft	2CH-W54	1
36	Hand crank shaft brg (Long)	2CH-W55	1
37	Hand crank shaft spur gear	2CH-W56	2
38	Key	2CH-W57	2
39	Hand crank shaft bevel pinion	2CH-W58	2
40	Clutch on hand crank shaft	2CH-W59	1
41	Hand crank shaft brg (Short)	2CH-W60	1
42	Pin, 1/8 x 1/2"	2CH-W61	3
43	Taper pin, #2 x 1-1/4"	2CH-W62	1
44	Hand crank shaft collar	2CH-W63	1
45	Expansion plug, 3/4" diam	2CH-W64	1
46	Spiral hd drive shaft connector (Long)	2CH-W65	1
47	Spiral hd drive shaft extension	2CH-W66	1
48	Spiral hd drive shaft connector (Short)	2CH-W67	1
49	Taper pin, #4 x 1-5/8"	2CH-W68	1
50	Spiral hd drive shaft collar	2CH-W69	1
51	Spiral hd drive shaft support bracket bushing	2CH-W70	2
52	Stud	2CH-W71	3
53	Spiral hd drive shaft support bracket	2CH-W72	1
54	Hex collar nut, 1/2-20	2CH-W73	3
55	Spiral hd drive shaft washer	2CH-W74	1
56	Spiral hd drive shaft	2CH-W75	1
57	Spiral change gear box cover	2CH-W76	1
58	Stanley butt hinge, #800	2CH-W77	2
59	Fl hd mach screw, 10-32 x 1/2"	2CH-W78	12
60	Fil hd screw, 3/8-16 x 5/8"	2CH-W79	3
61	Reverse gear shaft brg (RH)	2CH-W80	1
62	Reverse gear	2CH-W81	2
63	Reverse gear shaft	2CH-W82	1
64	Reverse gear shaft clutch	2CH-W83	1
65	Reverse gear spacer	2CH-W84	1
66	Reverse gear shaft bushing (LH)	2CH-W85	1
67	Fl hd mach screw, 3/16-32 x 1/2"	2CH-W86	3
68	Reverse shaft drive gear	2CH-W87	1
69	Hex nut, 1/2-13"	2CH-W88	1
70	Cotter pin, 7/64 x 1"	2CH-W89	1
71	Trip segment shaft	2CH-W90	1
72	Clutch shifter	2CH-W91	1
73	Clutch shifter shaft	2CH-W92	1
74	Taper pin set screw	2CH-W93	1

Item No.	Part Name and Description	Code No.	Qty.
75	Detent block shifter shoe	2CH-W94	1
76	Detent block and shaft	2CH-W95	1
77	Detent plunger sleeve	2CH-W96	1
78	Detent plunger	2CH-W97	1
79	Detent spring	2CH-W98	1
80	Detent plunger screw	2CH-W99	1
81	Taper pin, #2 x 1-1/8"	2CH-W100	1
82	Direction lever and handle	2CH-W101	1
83	Knurled head screw	2CH-W102	1
84	Connecting link pin (Short)	2CH-W103	1
85	Cotter pin, 3/32 x 3/4"	2CH-W104	2
86	Connecting link	2CH-W105	1
87	Connecting link pin (Long)	2CH-W106	1
88	Trip segment	2CH-W107	1
89	Spiral change gear box	2CH-W108	1
90	Dog pt set screw, 1/4-20 x 15/32"	2CH-W109	1
91	Taper pin, #2 x 1-1/16"	2CH-W110	1
92	Selection lever	2CH-W111	1
93	Reverse eccentric shaft	2CH-W112	1
94	Socket hd cap screw, 3/8 x 1-3/4"	2CH-W113	1
95	Selection lever plunger	2CH-W114	1
96	Spring	2CH-W115	1
97	Clutch shaft gear guard	2CH-W116	1
98	Plunger guide	2CH-W117	1
99	Selection lever knob	2CH-W118	1
100	Socket set screw, 8-32 x 3/8"	2CH-W119	1
101	Socket hd cap screw, 3/8 x 3/4"	2CH-W120	2
102	Auxiliary drive shaft bushing	2CH-W121	1
103	Auxiliary drive shaft pinion	2CH-W122	1
104	Taper pin, #4 x 1-1/16"	2CH-W123	1
105	Auxiliary drive shaft	2CH-W124	1
106	Hi-Pro key, HP-705	2CH-W125	1
107	Trip shaft	2CH-W126	1
108	Trip shaft key	2CH-W127	1
109	Taper pin, #4 x 1-1/8"	2CH-W128	1
110	Socket hd cup pt set screw, 1/4-20 x 3/16"	2CH-W129	1
111	Trip rack	2CH-W130	1
112	Hex hd cap screw, 3/8-16 x 1-1/4"	2CH-W131	2
113	Trip dog	2CH-W132	2
114	Gits oiler, RS-532	2CH-W133	2
115	Hex nut, 7/16-14	2CH-W134	2
116	Acme Blue Label Dowel, 1/4 x 1-1/2"	2CH-W135	2
117	Trip shaft support bracket	2CH-W136	2
118	T-Bolt	2CH-W137	2
119	Eye bolt, 1/2"	2CH-W138	1
120	Nut	2CH-W139	1
121	Socket hd cap screw, 1/2 x 1-3/4"	2CH-W140	1

## Replacement Parts Manual

Milling Machines — Plain, Universal and Vertical

Item No.	Part Name and Description	Code No.	Qty.
1	Worm, 24-1	2CH-W1	1
1	Worm, 96-1	2CH-W2	1
1	Worm, 24-8	2CH-W3	1
2	Gits oiler	2CH-W4	9
3	Worm and worm wheel shaft	2CH-W5	1
4	Key	2CH-W6	2
5	Worm and worm wheel shaft bushing	2CH-W7	1
6	Thrust washer for reverse bevel gear	2CH-W8	1
7	Sock hd dog pt screw, 5/16-18 x 5/16"	2CH-W9	4
8	Reverse drive bevel gear	2CH-W10	1
9	Key	2CH-W11	1
10	Sock hd cap screw, 1/2 x 1-1/4"	2CH-W12	2
11	Door lock bolt	2CH-W13	1
12	Knurled nut	2CH-W14	1
13	Acme Blue Label Dowel, 1/4 x 1-1/8"	2CH-W15	1
14	Fil hd screw, 5/16-18 x 1"	2CH-W16	1
15	Worm and worm wheel support brg bushing	2CH-W17	2
16	Worm and worm wheel support brg	2CH-W18	2
17	Hex nut, 3/8-16	2CH-W19	6
18	Stud	2CH-W20	6
19	Table screw extension	2CH-W21	1
20	Worm wheel, 24-1	2CH-W22	1
20	Worm wheel, 96-1	2CH-W23	1
20	Worm wheel, 24-8	2CH-W24	1
21	Table screw extension bushing	2CH-W25	1
22	Hex nut, 1/2-13	2CH-W26	1
23	Stud	2CH-W27	1
24	Washer, 1/2"	2CH-W28	4
25	Change gear arm	2CH-W29	1
26	Change gear stud	2CH-W30	1
27	Washer, 7/16"	2CH-W31	1
28	Hex nut, 7/16-20	2CH-W32	1
29	Gits oiler, RS-531	2CH-W33	1
30	Change gears		
	Change gear, 20T-10P	2CH-W34	2
	Change gear, 21T-10P	2CH-W35	1
	Change gear, 22T-10P	2CH-W36	1
	Change gear, 23T-10P	2CH-W37	1
	Change gear, 24T-10P	2CH-W38	1
	Change gear, 25T-10P	2CH-W39	1
	Change gear, 26T-10P	2CH-W40	1
	Change gear, 27T-10P	2CH-W41	1
	Change gear, 28T-10P	2CH-W42	1
	Change gear, 29T-10P	2CH-W43	1
	Change gear, 30T-10P	2CH-W44	1
	Change gear, 32T-10P	2CH-W45	1
	Change gear, 34T-10P	2CH-W46	1

Item No.	Part Name and Description	Code No.
	Change gear, 36T-10P	2CH-W47
	Change gear, 38T-10P	2CH-W48
	Change gear, 40T-10P	2CH-W49
31	Splined bushing	2CH-W50
32	Hand crank shaft nut	2CH-W51
33	Spacing collar	2CH-W52
34	Hex nut, 1/2-13	2CH-W53
35	Hand crank shaft	2CH-W54
36	Hand crank shaft brg (Long)	2CH-W55
37	Hand crank shaft spur gear	2CH-W56
38	Key	2CH-W57
39	Hand crank shaft bevel pinion	2CH-W58
40	Clutch on hand crank shaft	2CH-W59
41	Hand crank shaft brg (Short)	2CH-W60
42	Pin, 1/8 x 1/2"	2CH-W61
43	Taper pin, #2 x 1-1/4"	2CH-W62
44	Hand crank shaft collar	2CH-W63
45	Expansion plug, 3/4" diam	2CH-W64
46	Spiral hd drive shaft connector (Long)	2CH-W65
47	Spiral hd drive shaft extension	2CH-W66
48	Spiral hd drive shaft connector (Short)	2CH-W67
49	Taper pin, #4 x 1-5/8"	2CH-W68
50	Spiral hd drive shaft collar	2CH-W69
51	Spiral hd drive shaft support bracket bushing	2CH-W70
52	Stud	2CH-W71
53	Spiral hd drive shaft support bracket	2CH-W72
54	Hex collar nut, 1/2-20	2CH-W73
55	Spiral hd drive shaft washer	2CH-W74
56	Spiral hd drive shaft	2CH-W75
57	Spiral change gear box cover	2CH-W76
58	Stanley butt hinge, #800	2CH-W77
59	Fl hd mach screw, 10-32 x 1/2"	2CH-W78
60	Fil hd screw, 3/8-16 x 5/8"	2CH-W79
61	Reverse gear shaft brg (RH)	2CH-W80
62	Reverse gear	2CH-W81
63	Reverse gear shaft	2CH-W82
64	Reverse gear shaft clutch	2CH-W83
65	Reverse gear spacer	2CH-W84
66	Reverse gear shaft bushing (LH)	2CH-W85
67	Fl hd mach screw, 3/16-32 x 1/2"	2CH-W86
68	Reverse shaft drive gear	2CH-W87
69	Hex nut, 1/2-13"	2CH-W88
70	Cotter pin, 7/64 x 1"	2CH-W89
71	Trip segment shaft	2CH-W90
72	Clutch shifter	2CH-W91
73	Clutch shifter shaft	2CH-W92
74	Taper pin set screw	2CH-W93

# Replacement Parts Manual

## Milling Machines — Plain, Universal and Vertical

Fig. 26 - Model H Dividing Head

Item	Part Name and Description	Code No.	Qty.
1	Cup pt sock set screw, 1/4-28 x 1/4"	2CH-X1 2CH-X1	1 1
2	Plunger knob	2CH-X2	1
3	Drill rod, # 43 x 7/8"	2CH-X3	1
4	Clamp nut, 3/4-16	2CH-X4	1
5	Index crank	2CH-X5	1
6	Washer, 3/8"	2CH-X6	1
7	Hex hd cap screw, 3/8-16 x 1-5/16"	2CH-X7	1
8	Plunger sleeve	2CH-X8	1
9	Spring	2CH-X9	1
10	Plunger for standard index plates	2CH-X10	1
	Plunger for high number index plates	2CH-X11	1
11	Hi-Pro key, # HP-706	2CH-X12	1
12	Spring	2CH-X13	1
13	Index finger	2CH-X14	1
14	Fil hd screw, 10-32 x 5/32"	2CH-X15	1
15	Index finger	2CH-X16	1
16	Index sleeve	2CH-X17	1
17	Fil hd screw, 5/16-18 x 9/16"	2CH-X18	1
18	Index plates		
STANDARD INDEX PLATES			
	Index plate, 37-39-41-43-47-49	2CH-X19	1
	Index plate, 21-23-27-29-31-33	2CH-X20	1
	Index plate, 15-16-17-18-19-20	2CH-X21	1
HIGH NUMBER INDEX PLATES			
	Index plate, 57-67-77-87-97	2CH-X22	1
	Index plate, 53-63-73-83-93	2CH-X23	1
	Index plate, 51-61-71-81-91-101	2CH-X24	1
	Index plate, 48-59-69-79-89-99	2CH-X25	1
19	Index plate clamp ring	2CH-X26	1
20	Stud	2CH-X27	1
21	Knurled nut	2CH-X28	1
22	Center	2CH-X29	1
23	Sock hd cap screw, 1/2 x 1"	2CH-X30	3
24	Dog driver	2CH-X31	1
25	Sq hd set screw, 3/8-16 x 1"	2CH-X32	2
26	Sq hd set screw, 3/8-16 x 1-1/8"	2CH-X33	1
27	Fil hd screw, 1/4-20 x 1/2"	2CH-X34	2
28	Spindle drive key screw	2CH-X35	1
29	Expansion key wedge	2CH-X36	1
30	Expansion key plug	2CH-X37	1
31	Spindle drive expansion key	2CH-X38	1
32	Centering plug	2CH-X39	1
33	Clamp block	2CH-X40	1
34	Draw-in bolt	2CH-X41	1
35	Draw-in bolt nut	2CH-X42	1
36	Nut	2CH-X43	1
37	Hex nut, 5/8-11	2CH-X44	4
38	Washer, 5/8"	2CH-X45	4
39	T-Bolt	2CH-X46	4
40	Hex nut, 1/2-13	2CH-X47	1
41	Washer, 1/2"	2CH-X48	1
42	Crank	2CH-X49	1
43	Graduated collar	2CH-X50	1
44	Sock set screw, 5/16 x 3/8"	2CH-X51	1
45	Vise tongue	2CH-X52	2
46	Fil hd screw, 5/16-18 x 9/16"	2CH-X53	2