

KEARNEY & TRECKER
MILWAUKEE
SERIAL 1-1000

WHEN ORDERING PARTS
REPORT SERIAL NUMBER
SHOWN ON THIS PLATE

FIG. 13 - KNEE (GEAR TRAINS)

Fig. 13 - Knee (Gear Trains)

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
1	Rapid traverse idler gear (Short)	3CH-J1	4CH-J1	1
2	Hyatt brg. R-1205 TS	3CH-J2	4CH-J2	3
3	Rapid traverse idler gear (Long)	3CH-J3	4CH-J3	1
4	Hi-pro key, HP-606	3CH-J4	4CH-J4	1
5	Hi-pro key, HP-806	3CH-J5	4CH-J5	2
6	Rapid traverse idler gear shaft	3CH-J6	4CH-J6	1
7	Primary feed shaft brg washer	3CH-J7	4CH-J7	3
8	Cotter pin, 5/32 x 1-1/2"		4CH-J8	1
9	Castellated nut, 5/8-11	3CH-J9	4CH-J9	1
10	Washer, 5/8"	3CH-J10	4CH-J10	1
11	Primary feed shaft drive gear	3CH-J11	4CH-J11	1
12	Hyatt brg. R-1304 TS	3CH-J12	4CH-J12	16
13	Primary feed sliding gear (Long)	3CH-J13	4CH-J13	1
14	Primary feed sliding gear (Short)	3CH-J14	4CH-J14	1
15	Hi-pro key, HP-806	3CH-J15		1
15	Key		4CH-J15	1
16	Primary feed shaft	3CH-J16	4CH-J16	1
17	Feed back gear retaining washer	3CH-J17	4CH-J17	1
18	Hi-pro key, HP-706	3CH-J18	4CH-J18	1
19	Feed back gear pinion shaft	3CH-J19	4CH-J19	1
20	Feed back gear	3CH-J20	4CH-J20	1
21	Pinion shaft brg spacer	3CH-J21	4CH-J21	1
22	Hyatt brg. U-1205 TS	3CH-J22	4CH-J22	3
23	Double gear on secondary feed shaft (Rear)	3CH-J23	4CH-J23	1
24	Secondary feed gear retaining washer	3CH-J24	4CH-J24	1
25	Hi-pro key, HP-1008	3CH-J25	4CH-J25	2
26	Secondary feed shaft	3CH-J26	4CH-J26	1
27	Double gear on secondary feed shaft	3CH-J27	4CH-J27	1
28	Double gear on secondary feed shaft (Front)	3CH-J28	4CH-J28	1
29	Hyatt brg. R-1206 TS	3CH-J29	4CH-J29	*2
30	Secondary feed shaft brg washer	3CH-J30	4CH-J30	1
31	Feed sliding double back gear bushing	3CH-J31	4CH-J31	1
32	Feed sliding double back gear	3CH-J32	4CH-J32	1
33	Feed back gear pinion	3CH-J33	4CH-J33	1
34	Tertiary feed sliding gear (Large)	3CH-J34	4CH-J34	1
35	Tertiary feed sliding gear (Small)	3CH-J35	4CH-J35	1
36	Tertiary feed shaft	3CH-J36	4CH-J36	1
37	Feed roller clutch sleeve bushing	3CH-J37	4CH-J37	2
38	Feed safety clutch thrust washer	3CH-J38	4CH-J38	1
39	Feed clutch roller	3CH-J39	4CH-J39	8
40	Feed roller clutch hub	3CH-J40	4CH-J40	1
41	Feed clutch roller cage	3CH-J41	4CH-J41	1
42	Feed safety clutch shaft	3CH-J42	4CH-J42	1
43	Spring	3CH-J43	4CH-J43	1
44	Feed safety clutch shaft washer	3CH-J44	4CH-J44	1
45	Fil hd screw, 5/16-18 x 11/16"	3CH-J45	4CH-J45	4
46	Feed safety clutch shaft pinion	3CH-J46	4CH-J46	1
47	Washer, 5/8"	3CH-J47	4CH-J47	1
48	Castellated nut, 5/8-11	3CH-J48	4CH-J48	1
49	Cotter pin, 5/32 x 1-1/2"	3CH-J49	4CH-J49	1
50	Feed safety clutch shaft washer	3CH-J50	4CH-J50	1
51	Cotter pin, 1/8 x 1-1/8"	3CH-J51	4CH-J51	1
52	Feed safety clutch sleeve nut	3CH-J52	4CH-J52	1
53	Feed safety clutch end plate	3CH-J53	4CH-J53	1
54	Steel ball, 9/16" diam	3CH-J54	4CH-J54	*24
55	Spring	3CH-J55	4CH-J55	*12
56	Feed safety clutch gear	3CH-J56	4CH-J56	1
57	Feed safety clutch gear bushing	3CH-J57	4CH-J57	1

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
58	Feed roller clutch sleeve	3CH-J58	4CH-J58	1
59	Elevating bevel pinion	3CH-J59	4CH-J59	1
60	Timken brg. 14276B-14137	3CH-J60	4CH-J60	2
61	Elevating bevel pinion brg sleeve	3CH-J61	4CH-J61	1
62	Fil hd screw, 1/2-13 x 3/4"	3CH-J62		2
62	Fil hd screw, 1/2-13 x 1"		4CH-J62	2
63	Gurney lockwasher, #7	3CH-J63	4CH-J63	1
64	Gurney locknut, #7	3CH-J64	4CH-J64	1
65	Socket cap screw, 1/4-20 x 1"	3CH-J65		1
65	Socket cap screw, 1/4-20 x 7/8"	3CH-J66		2
65	Socket cap screw, 1/4-20 x 5/8"	3CH-J67		1
65	Socket cap screw, 1/4 x 1/2"		4CH-J68	4
66	Brg carrier cover	3CH-J69	4CH-J69	1
67	Brg carrier bushing	3CH-J70	4CH-J70	1
68	Safety clutch shaft brg carrier	3CH-J71	4CH-J71	1
69	New Departure brg. 20304	3CH-J72	4CH-J72	1
70	Feed safety clutch sleeve nut	3CH-J73	4CH-J73	1
71	Feed safety clutch end plate	3CH-J74	4CH-J74	1
72	Feed safety clutch gear bushing	3CH-J75	4CH-J75	1
73	Feed safety clutch gear	3CH-J76	4CH-J76	1
74	Spring	3CH-J77	4CH-J77	*12
75	Feed roller clutch	3CH-J78	4CH-J78	1
76	Feed safety clutch thrust washer	3CH-J79	4CH-J79	1
77	Feed clutch roller cage	3CH-J80	4CH-J80	1
78	Feed roller clutch hub	3CH-J81	4CH-J81	1
79	Clutch plate (Driven)	3CH-J82	4CH-J82	3
80	Clutch plate (Driver)	3CH-J83	4CH-J83	3
81	Brake plate key	3CH-J84	4CH-J84	3
82	Clutch plate retainer	3CH-J85	4CH-J85	1
83	Brake cylinder	3CH-J86	4CH-J86	1
84	Brake piston	3CH-J87	4CH-J87	1
85	Feed safety clutch shaft	3CH-J88	4CH-J88	1
86	Round end key	3CH-J89	4CH-J89	1
87	New Departure brg. 20206	3CH-J90	4CH-J90	1
88	Feed safety clutch shaft brg retainer	3CH-J91	4CH-J91	1
89	Knee	3CH-J92	4CH-J92	1
90	Oval hd screw, 10-32 x 3/8"	3CH-J93	4CH-J93	8
91	Oil sight gage	3CH-J94	4CH-J94	1
92	Oil gage glass	3CH-J95	4CH-J95	1
93	Oil gage washer	3CH-J96	4CH-J96	2
94	Sight oil flow gage	3CH-J97	4CH-J97	1
95	Oil filler screw	3CH-J98	4CH-J98	1
96	Washer	3CH-J99	4CH-J99	1
97	Knee vent plate	3CH-J100	4CH-J100	1
98	Fil hd screw, 1/2-13 x 15/16"	3CH-J101	4CH-J101	5
99	Rear control opening cover	3CH-J102	4CH-J102	1
100	Expansion plug, 1-1/8" diam	3CH-J103	4CH-J103	1
101	Expansion plug, 7/8"	3CH-J104	4CH-J104	1
102	"O" Ring, 6227-19	3CH-J105	4CH-J105	1
103	Knee clamp shaft spacer	3CH-J106	4CH-J106	1
104	Expansion plug, 1-1/4" diam	3CH-J107	4CH-J107	2
105	Oil pad	3CH-J108	4CH-J108	1
106	Oil pad	3CH-J109	4CH-J109	1
107	Dog pt set screw, 3/8-16 x 11/16"	3CH-J110		1
107	Dog pt set screw, 3/8-16 x 7/8"		4CH-J110	1
108	Oil seal, Victoprene 60318	3CH-J111	4CH-J111	1
109	Coolant drip spout	3CH-J112	4CH-J112	1
110	Oil flow gage plate	3CH-J113	4CH-J113	1
111	Oil gage indicator plate	3CH-J114	4CH-J114	1
112	Oil seal, Victoprene 60388	3CH-J115		1
112	Oil seal, Victoprene 60562		4CH-J115	1

*One used on machines with mono-lever control
 †Five used on machines with mono-lever control
 •Two used on machines with mono-lever control
 •Nine springs and 18 balls used on 3CH machines
 ‡Used only on machines without rear control



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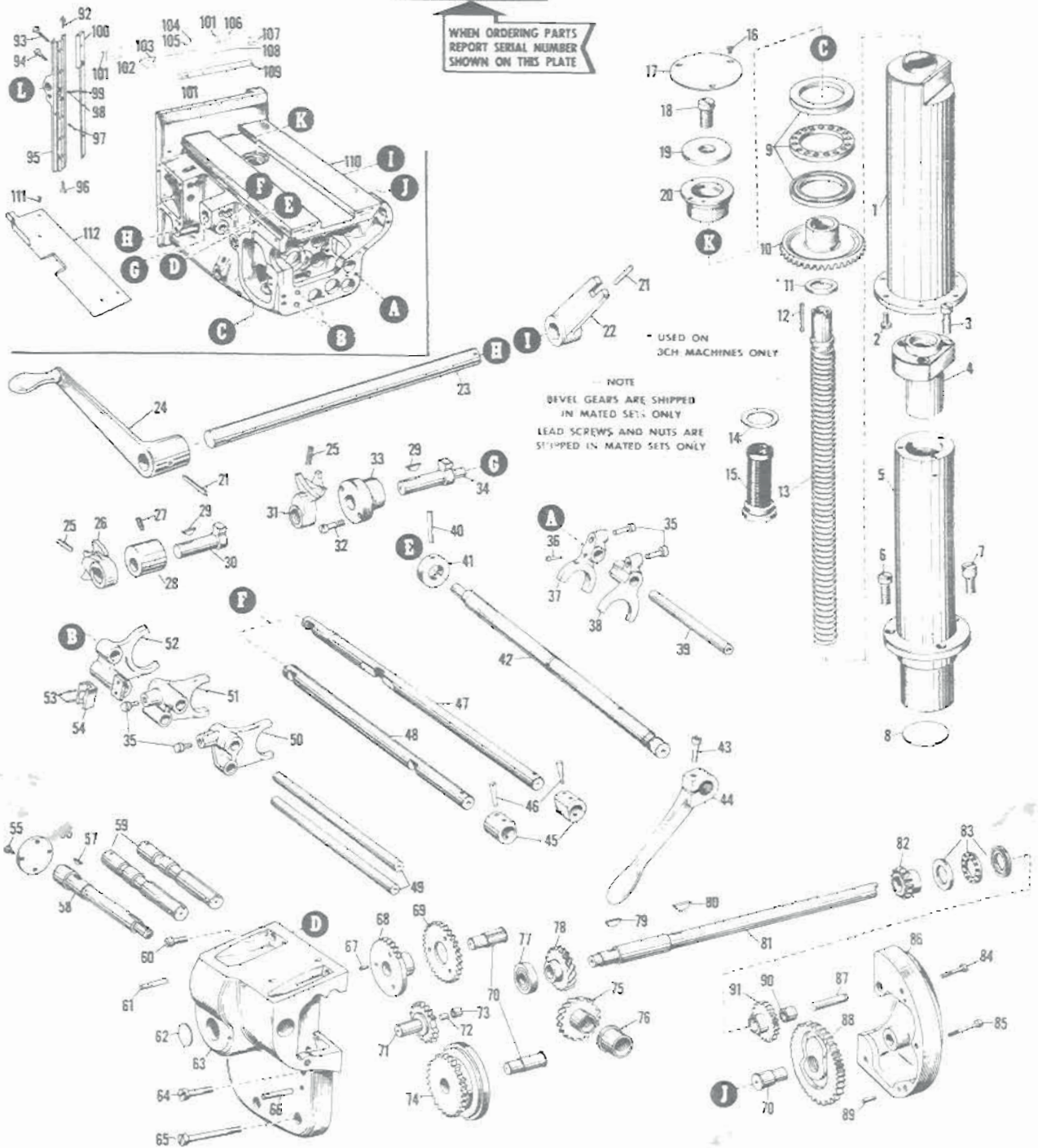


FIG. 14 - KNEE (MISCELLANEOUS PARTS)

Fig. 14 - Knee (Miscellaneous Parts)

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
1	Elevating screw shield assy	3CH-K1	4CH-K1	1
2	Fil hd screw, 3/8-16 x 13/16"	3CH-K2	4CH-K2	6
3	Fil hd screw, 3/8-16 x 1-3/8"	3CH-K3		3
3	Fil hd screw, 1/2-13 x 1"		4CH-K3	3
4	Elevating screw nut	3CH-K4	4CH-K4	1
5	Elevating nut extension	3CH-K5	4CH-K5	1
6	Fil hd screw, 1/2-13 x 1-1/8"	3CH-K6		2
6	Fil hd screw, 5/8-11 x 1-1/4"		4CH-K6	2
7	Knee bumper screw	3CH-K7	4CH-K7	1
8	Expansion plug, 2-1/2" diam	3CH-K8		1
8	Expansion plug, 2-5/8" diam		4CH-K8	1
9	Gurney thrust brg, 13-B	3CH-K9		1
9	Gurney thrust brg, 15-B		4CH-K9	1
10	Elevating bevel gear	3CH-K10	4CH-K10	1
11	Elevating screw collar	3CH-K11		1
12	Key	3CH-K12	4CH-K12	1
13	Elevating screw	3CH-K13	4CH-K13	1
14	Intake screen retaining plug washer	3CH-K14	4CH-K14	1
15	Oil intake screen, retaining plug and ring	3CH-K15	4CH-K15	1
16	Flat hd screw, 8-32 x 1/2"	3CH-K16		3
16	Flat hd screw, 8-32 x 3/8"		4CH-K16	3
17	Elevating bevel gear cover	3CH-K17	4CH-K17	1
18	Fil hd screw, 3/4-16 x 1-3/8"	3CH-K18	4CH-K18	1
19	Elevating screw retainer	3CH-K19	4CH-K19	1
20	Elevating bevel gear brg	3CH-K20	4CH-K20	1
21	Taper pin, #4 x 1-3/4"	3CH-K21	4CH-K21	2
22	Rapid traverse lever shifter arm	3CH-K22	4CH-K22	1
23	Rapid traverse lever shaft	3CH-K23	4CH-K23	1
24	Rapid traverse lever (Rear)	3CH-K24	4CH-K24	1
25	Cup pt sock set screw, 5/16-18 x 1"	3CH-K25	4CH-K25	2
26	Vert feed trip lever	3CH-K26	4CH-K26	1
27	Dog pt screw, 3/8-16 x 13/16"	3CH-K27	4CH-K27	1
28	Vert feed trip lever shaft bushing	3CH-K28	4CH-K28	1
29	Hi-pro key, HP-708	3CH-K29	4CH-K29	2
30	Vert feed trip lever arm shaft	3CH-K30	4CH-K30	1
31	Cross feed trip lever	3CH-K31	4CH-K31	1
32	Fil hd screw, 1/4-20 x 1-1/16"	3CH-K32	4CH-K32	2
33	Cross feed lever shaft bushing	3CH-K33	4CH-K33	1
34	Cross feed trip lever arm shaft	3CH-K34	4CH-K34	1
35	Feed shifting fork pin	3CH-K35	4CH-K35	4
36	Taper pin set screw	3CH-K36	4CH-K36	1
37	Primary shaft low speed shifter	3CH-K37	4CH-K37	1
38	Primary shaft high speed shifter	3CH-K38	4CH-K38	1
39	Primary shifter rod	3CH-K39	4CH-K39	1
40	Taper pin, #4 x 1-7/8"	3CH-K40	4CH-K40	1
41	Knee clamp shaft collar	3CH-K41	4CH-K41	1
42	Knee clamp shaft	3CH-K42	4CH-K42	1
43	Fil hd screw, 3/8-16 x 1-1/4"	3CH-K43	4CH-K43	1
44	Knee clamp lever	3CH-K44	4CH-K44	1
45	Trip rod coupling	3CH-K45	4CH-K45	2
46	Taper pin, #4 x 1-7/16"	3CH-K46	4CH-K46	2
47	Vert feed trip rod	3CH-K47	4CH-K47	1
48	Cross feed trip rod	3CH-K48	4CH-K48	1
49	Tertiary shaft shifting rod	3CH-K49	4CH-K49	2
50	Tertiary shaft high speed shifter	3CH-K50	4CH-K50	1
51	Tertiary shaft low speed shifter	3CH-K51	4CH-K51	1
52	Back gear shifter	3CH-K52	4CH-K52	1
53	Pin, 3/16 x 1"	3CH-K53	4CH-K53	2
54	Back gear shifter cam	3CH-K54	4CH-K54	1
55	Fil hd screw, 1/4-20 x 1/2"	3CH-K55	4CH-K55	4
56	Feed change shaft thrust plate	3CH-K56	4CH-K56	1
57	Hi-pro key, HP-606	3CH-K57	4CH-K57	1
58	Feed change shaft	3CH-K58	4CH-K58	1
59	Feed change housing trip rod	3CH-K59	4CH-K59	2
60	Fil hd screw, 7/16-14 x 1"	3CH-K60	4CH-K60	2
61	Acme Blue Label dowel, 3/8 x 1-1/4"			
62	Expansion plug, 1-3/8" diam	3CH-K61	4CH-K61	1
63	Feed change gear housing	3CH-K62	4CH-K62	1
64	Fil hd screw, 1/2-13 x 1-3/4"	3CH-K63	4CH-K63	1
65	Fil hd screw, 1/2-13 x 2-1/2"	3CH-K64	4CH-K64	1
65	Fil hd screw, 1/2-13 x 3-5/8"	3CH-K65		4
66	Acme Blue Label dowel, 3/8 x 1-3/4"		4CH-K65	4
66	Acme Blue Label dowel, 3/8 x 1-3/4"	3CH-K66	4CH-K66	1
67	Section hd rivet, #5 x 7/8"	3CH-K67	4CH-K67	3
68	Secondary change intermittent gear	3CH-K68	4CH-K68	1
69	Intermittent gear driver	3CH-K69	4CH-K69	1
70	Shifting cam stud	3CH-K70	4CH-K70	3
71	Back gear shifter cam	3CH-K71	4CH-K71	1
72	Acme Blue Label dowel, 5/16 x 7/8"			
73	Back gear shifter roller	3CH-K72	4CH-K72	1
74	Secondary shifter cam	3CH-K73	4CH-K73	1
75	Feed change helical gear(Driver)	3CH-K74	4CH-K74	1
76	Feed change helical gear brg	3CH-K75	4CH-K75	1
77	New Departure brg, 3203	3CH-K76	4CH-K76	1
78	Feed change helical gear(Driven)	3CH-K77	4CH-K77	1
79	Hi-pro key, HP-705	3CH-K78	4CH-K78	1
80	Hi-pro key, HP-806	3CH-K79	4CH-K79	1
81	Feed change cross shaft	3CH-K80	4CH-K80	1
82	Secondary shifter cam driving gear	3CH-K81	4CH-K81	1
83	Ball thrust brg	3CH-K82	4CH-K82	1
84	Socket cap screw, 3/8 x 1-3/4"	3CH-K83	4CH-K83	1
84	Socket cap screw, 3/8 x 1-1/2"	3CH-K84		3
85	Socket cap screw, 3/8 x 2-1/2"		4CH-K84	3
86	Feed selection cam housing	3CH-K85	4CH-K85	1
87	Primary shifter cam driving gear stud	3CH-K86	4CH-K86	1
88	Primary shifter cam	3CH-K87	4CH-K87	1
89	Acme Blue Label dowel, 1/4 x 2"	3CH-K88	4CH-K88	1
89	Acme Blue Label dowel, 1/4 x 1-1/2"	3CH-K89		2
90	Primary shifter cam driving gear bushing		4CH-K89	2
91	Primary shifter cam driving gear	3CH-K90	4CH-K90	1
92	Gib screw	3CH-K91	4CH-K91	1
93	Hex hd screw, 5/8-11 x 2-1/2"	3CH-K92	4CH-K92	1
93	Hex hd screw, 5/8-11 x 2-3/4"	3CH-K93		2
94	Hex hd screw, 5/8-11 x 2-5/16"		4CH-K93	2
95	Knee gib support	3CH-K94	4CH-K94	4
96	Fil hd screw, 1/2-13 x 1-1/2"	3CH-K95	4CH-K95	1
97	Acme Blue Label dowel, 3/8 x 1-1/2"	3CH-K96	4CH-L96	1
98	Knee clamp shoe	3CH-K97	4CH-K97	1
99	Knee clamp pin	3CH-K98	4CH-K98	1
100	Knee gib	3CH-K99	4CH-K99	1
101	Rd hd mach screw, 10-32 x 3/8"	3CH-K100	4CH-K100	1
102	Column dovetail wiper spring (LH)	3CH-K101	4CH-K101	8
103	Column dovetail wiper (LH)	3CH-K102	4CH-K102	1
104	Wiper screw	3CH-K103	4CH-K103	1
105	Wiper spring	3CH-K104	4CH-K104	*7
106	Column dovetail wiper spring (RH)	3CH-K105	4CH-K105	*7
107	Column dovetail wiper (RH)	3CH-K106	4CH-K106	1
108	Column face brg wiper	3CH-K107	4CH-K107	1
109	Column face brg wiper spring	3CH-K108	4CH-K108	1
110	Knee	3CH-K109	4CH-K109	1
111	Flat hd mach screw, 1/4-20 x 1/2"	3CH-K110	4CH-K110	1
112	Knee chip guard	3CH-K111	4CH-K111	4
		3CH-K112	4CH-K112	1

*Nine used on 4CH machines

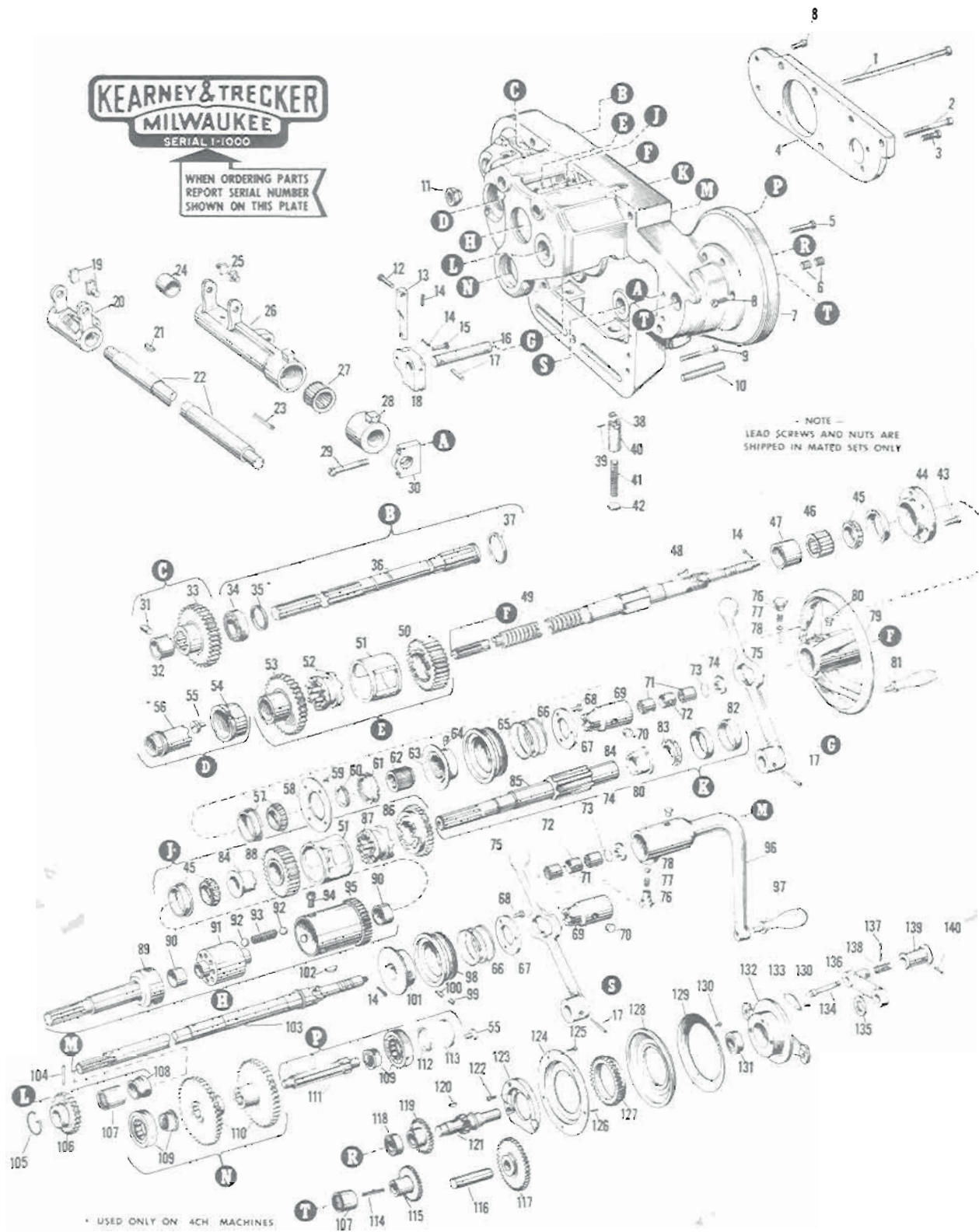


FIG. 15 - FEED DISTRIBUTION BOX

ent Part
Milling Machines — Plain, Universal and Vertical

Fig. 15 - Feed Distribution Box

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
1	Socket cap screw, 1/2-13 x 8-1/4"	3CH-L1	4CH-L1	2
2	Socket cap screw, 1/2 x 3-1/4"	3CH-L2	4CH-L2	2
3	Fil hd screw, 3/8-16 x 21/32"	3CH-L3	4CH-L3	2
4	Feed distribution box dial plate	3CH-L4	4CH-L4	1
5	Socket cap screw, 1/2 x 1-3/4"	3CH-L5	4CH-L5	1
6	Special socket set screw	3CH-L6	4CH-L6	4
7	Feed distribution box	3CH-L7	4CH-L7	1
8	Fil hd screw, 3/8-16 x 7/8"	3CH-L8	4CH-L8	8
9	Socket cap screw, 1/2 x 2-3/4"	3CH-L9	4CH-L9	5
10	Acme Blue Label dowel, 1/2 x 3"	3CH-L10	4CH-L10	2
11	Spacing plug	3CH-L11	4CH-L11	2
12	Reverse lever link pin (Upper)	3CH-L12	4CH-L12	2
13	Reverse lever link	3CH-L13	4CH-L13	2
14	Cotter pin, 3/32 x 3/4"	3CH-L14	4CH-L14	6
15	Reverse lever link pin (Lower)	3CH-L15	4CH-L15	2
16	Cross and elevating reverse lever shaft	3CH-L16	4CH-L16	2
17	Taper pin, #4 x 1-7/8"	3CH-L17	4CH-L17	2
18	Cross feed and elevating inner lever detent	3CH-L18	4CH-L18	2
19	Cross feed and elevating clutch fork shoe	3CH-L19	4CH-L19	2
20	Cross feed clutch fork	3CH-L20	4CH-L20	1
21	Hi-pro key, HP-806	3CH-L21	4CH-L21	1
22	Cross feed clutch fork shaft	3CH-L22	4CH-L22	1
23	Key	3CH-L23	4CH-L23	1
24	Elevating clutch fork and trip segment bushing	3CH-L24	4CH-L24	1
25	Cross feed and elevating clutch fork shoe	3CH-L25	4CH-L25	2
26	Elevating clutch fork and trip segment	3CH-L26	4CH-L26	1
27	Hyatt brg, 94620	3CH-L27	4CH-L27	1
28	Cross feed trip segment	3CH-L28	4CH-L28	1
29	Clutch fork shaft brg screw	3CH-L29	4CH-L29	2
30	Clutch fork shaft brg	3CH-L30	4CH-L30	1
31	Pin, 5/16 x 9/16"	3CH-L31	4CH-L31	1
32	Table feed shaft brg	3CH-L32	4CH-L32	1
33	Table feed shaft drive gear	3CH-L33	4CH-L33	1
34	New Departure brg, 1207	3CH-L34	4CH-L34	1
35	Collar	4CH-L35		1
36	Table feed shaft	3CH-L36	4CH-L36	1
37	Table feed shaft brg spacer	3CH-L37	4CH-L37	1
38	Detent plunger roller	3CH-L38	4CH-L38	2
39	Detent roller pin	3CH-L39	4CH-L39	2
40	Trip detent plunger	3CH-L40	4CH-L40	2
41	Spring	3CH-L41	4CH-L41	2
42	Detent lever plug	3CH-L42	4CH-L42	2
43	Socket cap screw, 5/16 x 3/4"	3CH-L43	4CH-L43	6
44	Cross feed screw brg carrier	3CH-L44	4CH-L44	1
45	Timken brg, 17244B-17119	3CH-L45	4CH-L45	2
46	Torrington brg, B-2420	3CH-L46		1
46	Orange roller brg, 7294		4CH-L46	1
47	Roller brg carrier	3CH-L47	4CH-L47	1
48	Key	3CH-L48	4CH-L48	1
49	Cross feed screw	3CH-L49	4CH-L49	1
50	Cross feed clutch gear (Front)	3CH-L50	4CH-L50	1
51	Clutch gear spacer	3CH-L51	4CH-L51	2
52	Cross feed reverse clutch	3CH-L52	4CH-L52	1
53	Cross feed clutch gear (Rear)	3CH-L53	4CH-L53	1
54	Cross feed clutch gear brg	3CH-L54	4CH-L54	1
55	Fil hd screw, 3/8-16 x 9/16"	3CH-L55	4CH-L55	4
56	Cross feed reverse clutch gear sleeve		4CH-L56	1
57	Timken brg, 17244B-17119W	3CH-L57	4CH-L57	1
58	Cross feed screw oil retainer	3CH-L58	4CH-L58	1
59	Flat hd screw, 8-32 x 3/4"	3CH-L59	4CH-L59	4
60	Cross feed screw brg adj washer	3CH-L60	4CH-L60	1
61	Cross feed screw brg adj ring	3CH-L61	4CH-L61	1
62	Cross feed screw brg adj nut	3CH-L62	4CH-L62	1
63	Cross feed dial collar	3CH-L63	4CH-L63	1
64	Dowel pt screw, 5/16-18 x 1/2"	3CH-L64	4CH-L64	1
65	Serrated graduated dial (250 Divisions)	3CH-L65	4CH-L65	1
66	Spring	3CH-L66	4CH-L66	2
67	Graduated dial spring retainer	3CH-L67	4CH-L67	2

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
68	Fil hd screw, 10-32 x 1/2"	3CH-L68	4CH-L68	6
69	Handwheel clutch	3CH-L69	4CH-L69	2
70	Plug	3CH-L70	4CH-L70	2
71	Torrington brg, B-1210	3CH-L71	4CH-L71	4
72	Brg spacer	3CH-L72	4CH-L72	2
73	Snap ring	3CH-L73	4CH-L73	2
74	Hand feed clutch stop	3CH-L74	4CH-L74	2
75	Cross and elevating reverse lever	3CH-L75	4CH-L75	2
76	Hand elevating crank set screw	3CH-L76	4CH-L76	2
77	Spring	3CH-L77	4CH-L77	2
78	Steel ball, 1/4" diam	3CH-L78	4CH-L78	2
79	Cross feed hand wheel	3CH-L79	4CH-L79	1
80	Gits oiler, RS-532	3CH-L80	4CH-L80	2
81	Rockwood handle, #3QA	3CH-L81	4CH-L81	1
82	Elevating clutch shaft brg spacer	3CH-L82	4CH-L82	1
83	Timken brg, 17244-17119	3CH-L83	4CH-L83	1
84	Elevating clutch gear bushing	3CH-L84	4CH-L84	2
85	Elevating clutch shaft	3CH-L85	4CH-L85	1
86	Elevating clutch gear (Front)	3CH-L86	4CH-L86	1
87	Elevating reverse clutch	3CH-L87	4CH-L87	1
88	Elevating clutch gear (Rear)	3CH-L88	4CH-L88	1
89	Elevating slip clutch shaft	3CH-L89	4CH-L89	1
90	Elevating slip clutch hub bushing	3CH-L90	4CH-L90	2
91	Elevating slip clutch hub	3CH-L91	4CH-L91	1
92	Steel ball, 9/16" diam	3CH-L92	4CH-L92	12
93	Spring	3CH-L93	4CH-L93	*6
94	Socket cap screw, 3/8-24 x 3/8"	3CH-L94	4CH-L94	3
95	Elevating slip clutch sleeve	3CH-L95	4CH-L95	1
96	Hand elevating crank	3CH-L96	4CH-L96	1
97	Rockwood handle, #4QA	3CH-L97	4CH-L97	1
98	Serrated graduated dial (100 Divisions)	3CH-L98	4CH-L98	1
99	Socket set screw, 1/4 x 1/4"	3CH-L99	4CH-L99	1
100	Socket dog pt screw, 1/4 x 5/16"	3CH-L100	4CH-L100	1
101	Elevating shaft dial collar	3CH-L101	4CH-L101	1
102	Hi-pro key, HP-505	3CH-L102	4CH-L102	1
103	Hand elevating shaft	3CH-L103	4CH-L103	1
104	Taper pin, #4 x 1-9/16"	3CH-L104	4CH-L104	1
105	Snap ring	3CH-L105	4CH-L105	1
106	Hand elevating gear	3CH-L106	4CH-L106	1
107	Torrington brg, B-1616	3CH-L107	4CH-L107	2
108	Elevating shaft brg (Front)	3CH-L108	4CH-L108	1
109	Hyatt brg, R-1305 TS	3CH-L109	4CH-L109	2
110	Cross and elevating reverse gear	3CH-L110	4CH-L110	2
111	Cross and elevating reverse gear shaft	3CH-L111	4CH-L111	1
112	Brg washer	3CH-L112	4CH-L112	1
113	Reverse gear shaft brg cover	3CH-L113	4CH-L113	1
114	Key	3CH-L114	4CH-L114	1
115	Feed selection gear (Driven)	3CH-L115	4CH-L115	1
116	Acme Blue Label dowel, 7/16 x 1-3/4"	3CH-L116	4CH-L116	1
117	Feed dial idler gear	3CH-L117	4CH-L117	1
118	New Departure brg, 3203	3CH-L118	4CH-L118	1
119	Feed selection gear (Driver)	3CH-L119	4CH-L119	1
120	Hi-pro key, HP-404	3CH-L120	4CH-L120	1
121	Feed dial pinion shaft	3CH-L121	4CH-L121	1
122	Fil hd screw, 5/16-18 x 9/16"	3CH-L122	4CH-L122	3
123	Dial support ring	3CH-L123	4CH-L123	1
124	Grease shield	3CH-L124	4CH-L124	1
125	Flat hd screw, 8-32 x 3/8"	3CH-L125	4CH-L125	5
126	Pin	3CH-L126	4CH-L126	2
127	Feed dial carrier gear	3CH-L127	4CH-L127	1
128	Feed dial carrier	3CH-L128	4CH-L128	1
129	Feed dial (3/8-90 Feed range)	3CH-L129	4CH-L129	1
130	Escutcheon pin, #15	3CH-L130	4CH-L130	18
131	New Departure brg, 88503	3CH-L131	4CH-L131	1
132	Feed dial support bracket	3CH-L132	4CH-L132	1
133	Feed indicator plate	3CH-L133	4CH-L133	1
134	Lever plunger	3CH-L134	4CH-L134	1
135	Dial support washer	3CH-L135	4CH-L135	1
136	Feed dial lever	3CH-L136	4CH-L136	1
137	Taper pin, #3 x 1-5/8"	3CH-L137	4CH-L137	1
138	Spring	3CH-L138	4CH-L138	1
139	Lever knob	3CH-L139	4CH-L139	1
140	Taper pin, #2 x 1"	3CH-L140	4CH-L140	1

* Eight used on 4CH machines

† Eighteen used on 4CH machines

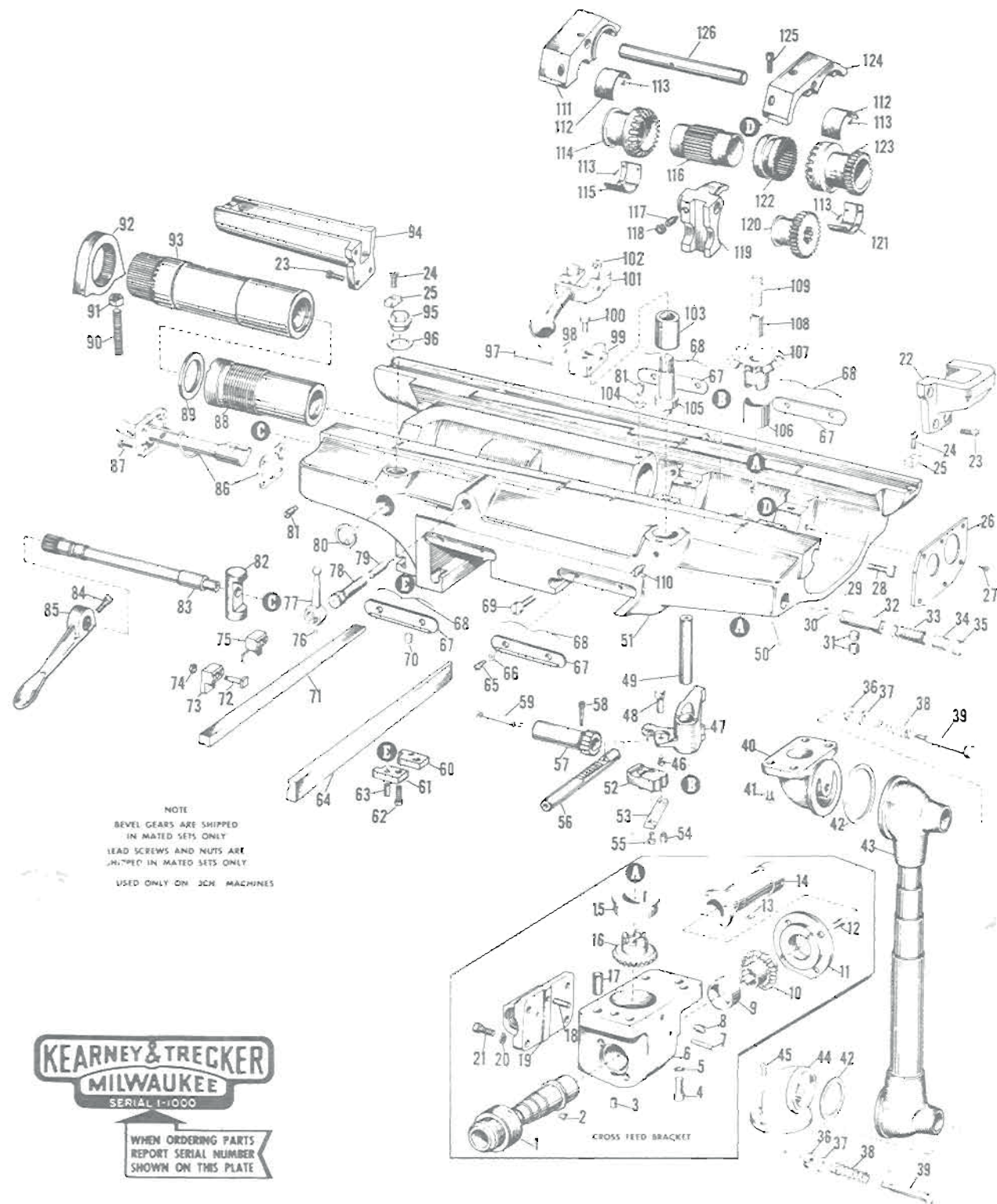


FIG. 16 - PLAIN SADDLE AND CROSS FEED BRACKET

Fig. 16 - Plain Saddle and Cross Feed Bracket

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
1	Telescopic tube assy (Front)	3CH-M1	4CH-M1	1
2	Fil hd screw, 5/16-18 x 5/8"	3CH-M2	4CH-M2	2
3	Coolant drip spout	3CH-M3	4CH-M3	1
4	Sock hd cap screw, 1/2 x 1-1/4"	3CH-M4	4CH-M4	4
5	Lockwasher, 1/2"	3CH-M5	4CH-M5	4
6	Cross feed bracket (Standard table control)	3CH-M6	4CH-M6	1
7	Pin, 1/4 x 1-3/8"	3CH-M7		1
7	Pin, 3/16 x 1/8"		4CH-M7	1
8	Dog pt set screw, 3/8-16 x 7/8"	3CH-M8	4CH-M8	1
9	Table feed sliding bevel gear brg	3CH-M9	4CH-M9	1
10	Table feed sliding bevel gear	3CH-M10	4CH-M10	1
11	Table feed sliding bevel gear brg	3CH-M11	4CH-M11	1
12	Fil hd screw, 3/8-16 x 13/16"	3CH-M12	4CH-M12	4
13	Fil hd screw, 10-32 x 5/16"	3CH-M13	4CH-M13	4
14	Telescopic tube assy (Rear)	3CH-M14	4CH-M14	1
15	Cross feed bracket brg sleeve	3CH-M15	4CH-M15	1
16	Table feed drive bevel gear	3CH-M16	4CH-M16	1
17	Acme Blue Label dowel, 5/8 x 1-1/2"	3CH-M17		2
17	Acme Blue Label dowel, 5/8 x 1-5/8"		4CH-M17	2
18	Acme Blue Label dowel, 3/8 x 7/8"	3CH-M18		1
18	Acme Blue Label dowel, 3/8 x 1"		4CH-M18	1
19	Cross feed nut	3CH-M19	4CH-M19	1
20	Lockwasher, 7/16"	3CH-M20	4CH-M20	4
21	Hex hd cap screw, 7/16-14 x 1-1/8"	3CH-M21		4
21	Sock hd cap screw, 7/16 x 1"		4CH-M21	4
22	Saddle extension (RH)	3CH-M22		1
23	Fil hd screw, 7/16-14 x 1"	3CH-M23	4CH-M23	*6
24	Fil hd screw, 5/16-18 x 9/16"	3CH-M24	4CH-M24	2
25	Coolant pocket block	3CH-M25	4CH-M25	2
26	Auxiliary drive shaft gear cover	3CH-M26	4CH-M26	1
27	Rd hd mach screw, 10-32 x 3/8"	3CH-M27	4CH-M27	5
28	Gib screw	3CH-M28	4CH-M28	2
29	Detent roller pin	3CH-M29	4CH-M29	1
30	Detent plunger roller	3CH-M30	4CH-M30	1
31	Special set screw	3CH-M31	4CH-M31	2
32	Table trip detent plunger	3CH-M32	4CH-M32	1
33	Spring	3CH-M33	4CH-M33	1
34	Spring spacer	3CH-M34	4CH-M34	1
35	Plunger hole plug	3CH-M35	4CH-M35	1
36	Coolant fitting washer	3CH-M36	4CH-M36	2
37	Washer, 5/8"	3CH-M37	4CH-M37	2
38	Spring	3CH-M38	4CH-M38	2
39	Coolant fitting stud	3CH-M39	4CH-M39	2
40	Saddle coolant return elbow	3CH-M40	4CH-M40	1
41	Fil hd screw, 3/8-16 x 13/16"	3CH-M41	4CH-M41	4
42	Coolant fitting washer	3CH-M42	4CH-M42	2
43	Coolant return tube assy	3CH-M43	4CH-M43	1
44	Coolant return elbow	3CH-M44	4CH-M44	1
45	Fil hd screw, 1/2-13 x 15/16"	3CH-M45	4CH-M45	3
46	Link pin	3CH-M46	4CH-M46	1
47	Reverse shifter yoke arm	3CH-M47	4CH-M47	1
48	Reverse shifter yoke arm stop pin	3CH-M48	4CH-M48	1
49	Clutch shifter arm stud	3CH-M49	4CH-M49	1
50	Pin	3CH-M50	4CH-M50	1
51	Saddle	3CH-M51	4CH-M51	1
52	Table trip lever detent	3CH-M52	4CH-M52	1
53	Table trip lever link	3CH-M53	4CH-M53	1
54	Reverse link support pin	3CH-M54	4CH-M54	1
55	Link pin (Long)	3CH-M55	4CH-M55	1
56	Release shaft gear rack	3CH-M56	4CH-M56	1
57	Handwheel release shaft gear	3CH-M57	4CH-M57	1
58	Dowel set screw	3CH-M58	4CH-M58	1
59	Key	3CH-M59	4CH-M59	1
60	Limit stop (LH)	3CH-M60	4CH-M60	1
61	Limit stop (RH)	3CH-M61	4CH-M61	1
62	Fil hd screw, 3/8-16 x 21/32"	3CH-M62	4CH-M62	2
63	Acme Blue Label dowel, 5/16 x 3/4"	3CH-M63	4CH-M63	2

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
64	Saddle gib	3CH-M64	4CH-M64	1
65	Wiper spring screw	3CH-M65	4CH-M65	8
66	Wiper spring	3CH-M66	4CH-M66	8
67	Knee top brg wiper	3CH-M67	4CH-M67	4
68	Spring	3CH-M68	4CH-M68	4
69	Gib screw	3CH-M69	4CH-M69	4
70	Pipe plug, 3/4"	3CH-M70		1
70	Sock pipe plug, 1/2"		4CH-M70	1
71	Saddle gib	3CH-M71	4CH-M71	1
72	T-Bolt	3CH-M72	4CH-M72	2
73	Trip dog (RH)	3CH-M73	4CH-M73	1
74	Hex nut, 7/16-14	3CH-M74	4CH-M74	2
75	Trip dog (LH)	3CH-M75	4CH-M75	1
76	Sock set screw, 1/4-20 x 1/4"	3CH-M76	4CH-M76	1
77	Clamp lever	3CH-M77	4CH-M77	1
78	Clamp screw	3CH-M78	4CH-M78	1
79	Table clamp plug	3CH-M79	4CH-M79	1
80	Bijur oil window, B-4904	3CH-M80	4CH-M80	1
81	Dog pt set screw, 3/8-16 x 7/8"	3CH-M81	4CH-M81	2
82	Saddle clamp	3CH-M82	4CH-M82	1
83	Saddle clamp eccentric	3CH-M83	4CH-M83	1
84	Fil hd screw, 3/8-16 x 7/8"	3CH-M84	4CH-M84	1
85	Saddle clamp handle	3CH-M85	4CH-M85	1
86	Bijur KIB lubricator pump, (1" stroke) C-1957	3CH-M86	4CH-M86	1
87	Sock hd cap screw, 1/4 x 3/4"	3CH-M87	4CH-M87	4
88	Table screw nut	3CH-M88	4CH-M88	1
89	Spacing washer	3CH-M89	4CH-M89	2
90	Oval pt sock set screw, 1/2 x 2-3/4"	3CH-M90	4CH-M90	2
91	Hex nut, 1/2-13	3CH-M91	4CH-M91	2
92	Adj nut yoke	3CH-M92	4CH-M92	1
93	Adj table screw nut	3CH-M93	4CH-M93	1
94	Saddle extension (LH)	3CH-M94	4CH-M94	1
95	Oil filler plug	3CH-M95	4CH-M95	1
96	Fibre washer	3CH-M96	4CH-M96	1
97	Acme Blue Label dowel, 3/8 x 3"	3CH-M97	4CH-M97	1
98	Taper pin, #5 x 1-3/8"	3CH-M98	4CH-M98	1
99	Table trip lever block	3CH-M99	4CH-M99	1
100	Table trip block screw	3CH-M100	4CH-M100	1
101	Table trip lever	3CH-M101	4CH-M101	1
102	Table trip lever fork pin	3CH-M102	4CH-M102	1
103	Table trip lever shaft bushing	3CH-M103	4CH-M103	1
104	Hex nut, 3/8-16	3CH-M104	4CH-M104	1
105	Table trip lever shaft	3CH-M105	4CH-M105	1
106	Table drive gear brg	3CH-M106	4CH-M106	1
107	Table drive gear	3CH-M107	4CH-M107	1
108	Table drive gear plug	3CH-M108	4CH-M108	1
109	Table drive gear felt	3CH-M109	4CH-M109	1
110	Dog pt set screw, 3/8-16 x 3/4"	3CH-M110		1
110	Dog pt set screw, 3/8-16 x 15/16"		4CH-M110	1
111	Brg cap (LH)	3CH-M111	4CH-M111	1
112	Feed reverse gear brg (Upper)	3CH-M112	4CH-M112	2
113	Flat hd brass screw, 8-32 x 1/2"	3CH-M113	4CH-M113	16
114	Table screw clutch gear (LH)	3CH-M114	4CH-M114	1
115	Feed reverse gear brg (Lower LH)	3CH-M115	4CH-M115	1
116	Table screw sleeve	3CH-M116	4CH-M116	1
117	Dog pt set screw, 3/8-16 x 13/16"	3CH-M117		1
118	Table feed reverse clutch	3CH-M118	4CH-M118	1
119	Clutch shifter yoke	3CH-M119	4CH-M119	1
120	Auxiliary drive shaft gear	3CH-M120	4CH-M120	1
121	Feed reverse gear brg (Lower RH)	3CH-M121	4CH-M121	1
122	Table feed reverse clutch	3CH-M122	4CH-M122	1
123	Table screw clutch gear (RH)	3CH-M123	4CH-M123	1
124	Brg cap (RH)	3CH-M124	4CH-M124	1
125	Sock cap screw, 3/8 x 1-1/4"	3CH-M125		2
125	Sock cap screw, 3/8 x 7/8"	3CH-M126		2
125	Sock cap screw, 7/16 x 7/8"	3CH-M127		2
125	Sock cap screw, 7/16 x 1"		4CH-M128	4
125	Sock cap screw, 7/16 x 1-3/8"		4CH-M129	2
126	Clutch shifter yoke rod	3CH-M130	4CH-M130	1

*3 used on 4CH machines

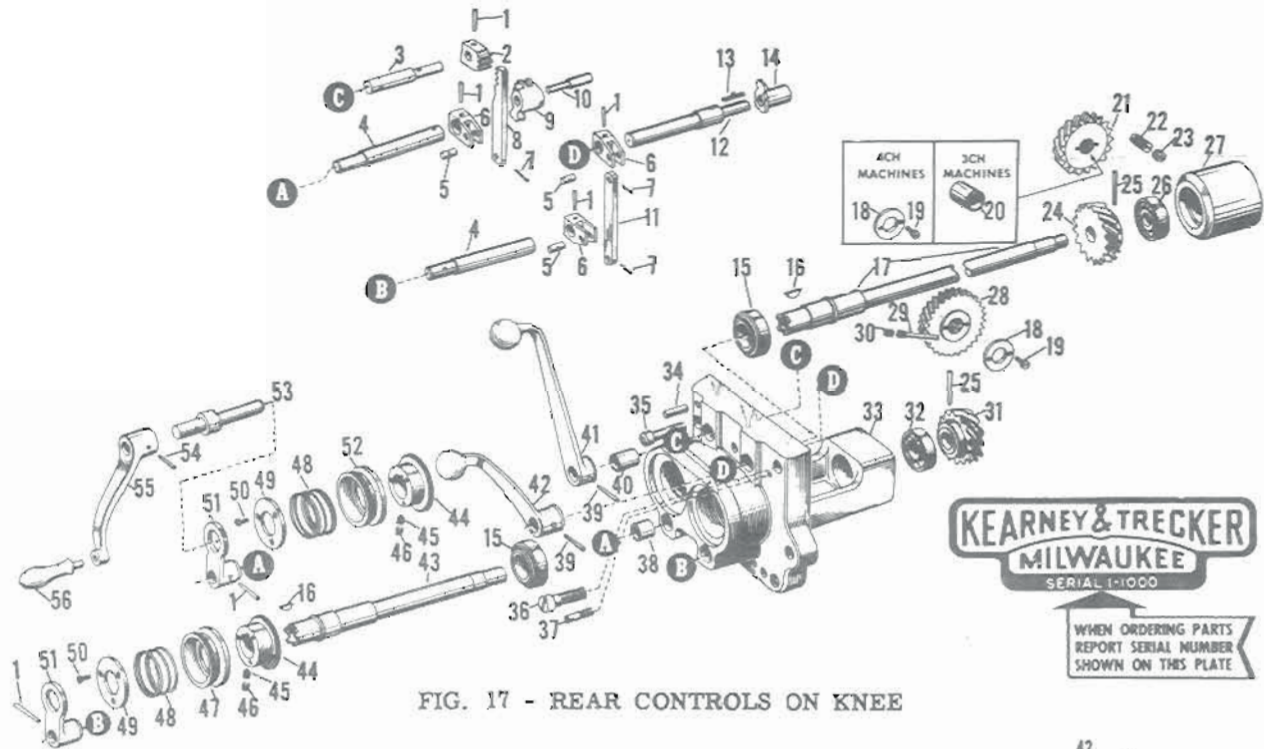


FIG. 17 - REAR CONTROLS ON KNEE

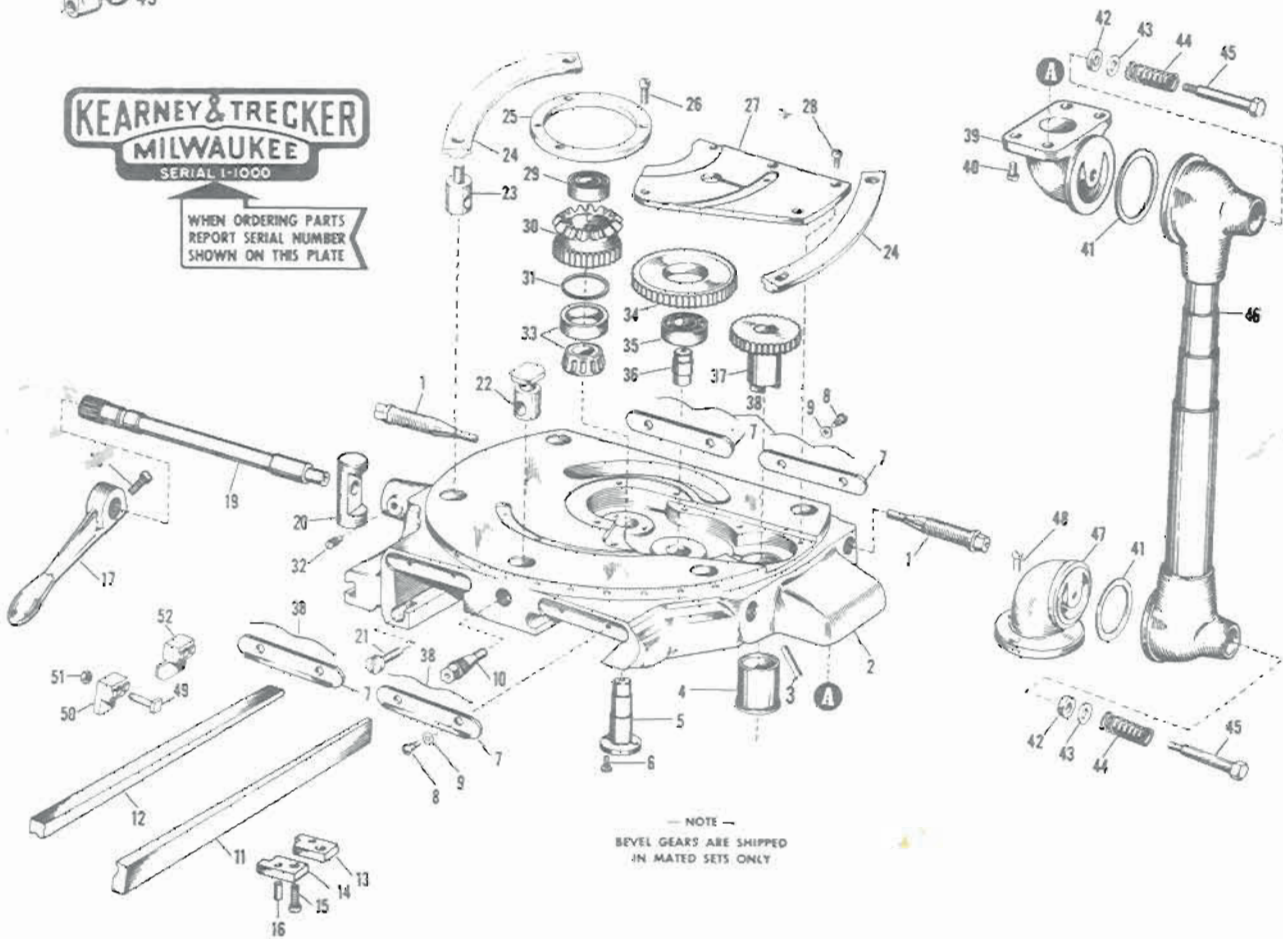


FIG. 18 - UNIVERSAL SADDLE

Fig. 17 - Rear Controls On Knee

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
1	Taper pin. #3 x 1-1/8"	3CH-N1	4CH-N1	6
2	Cross feed rear control lever segment	3CH-N2	4CH-N2	1
3	Cross feed rear control lever shaft	3CH-N3	4CH-N3	1
4	Crank guard shaft	3CH-N4	4CH-N4	2
5	Clevis pin	3CH-N5	4CH-N5	3
6	Clevis joint	3CH-N6	4CH-N6	3
7	Cotter pin. 3/32 x 1"	3CH-N7	4CH-N7	3
8	Clevis joint rack	3CH-N8	4CH-N8	1
9	Cross feed trip rod segment	3CH-N9	4CH-N9	1
10	Cross feed trip rod segment shaft	3CH-N10	4CH-N10	1
11	Link	3CH-N11	4CH-N11	1
12	Vert feed rear control lever shaft	3CH-N12	4CH-N12	1
13	Key	3CH-N13	4CH-N13	1
14	Vert feed lever shaft arm	3CH-N14	4CH-N14	1
15	New Departure brg. 88506	3CH-N15	4CH-N15	2
16	Hi-pro key. HP-505	3CH-N16	4CH-N16	2
17	Cross feed rear control shaft	3CH-N17	4CH-N17	1
18	Spiral gear thrust collar	3CH-N18	4CH-N18	*1
19	Fil hd screw. 3/16-32 x 3/8"	3CH-N19	4CH-N19	*2
20	Spacer and oil sealed sieve	3CH-N20		1
21	Cross feed rear control spiral gear (Driven)	3CH-N21	4CH-N21	1
22	Dog pt set screw. 3/8-16 x 1-3/16"	3CH-N22		1
22	Dog pt set screw. 1/2-13 x 1-3/8"		4CH-N22	1
23	Socket set screw. 3/8 x 3/8"	3CH-N23		1
23	Socket set screw. 1/2 x 1/4"		4CH-N23	1
24	Cross feed rear control spiral gear (Driver)	3CH-N24	4CH-N24	1
25	Taper pin. #4 x 1-7/8"	3CH-N25	4CH-N25	2
26	New Departure brg. 3306	3CH-N26	4CH-N26	1
27	Cross feed spiral gear brg carriage	3CH-N27	4CH-N27	1
28	Vert rear control spiral gear (Driven)	3CH-N28	4CH-N28	1
29	Socket set screw. 3/8 x 3/8"	3CH-N29		1
29	Set screw. 3/8 x 1/2"		4CH-N29	1
30	Dowel screw	3CH-N30	4CH-N30	1
31	Vert rear control spiral gear (Driver)	3CH-N31	4CH-N31	1
32	New Departure brg. 3205	3CH-N32	4CH-N32	1
33	Rear control bracket	3CH-N33	4CH-N33	1
34	Acme Blue Label dowel. 1/2 x 2"	3CH-N34	4CH-N34	2
35	Fil hd screw. 1/2 x 1-11/16"	3CH-N35	4CH-N35	4
36	Fil hd screw. 1/2-13 x 1-1/2"	3CH-N36	4CH-N36	1
37	Socket set screw. 3/8 x 1-1/4"	3CH-N37	4CH-N37	2
38	Oilite brg. A-1049-3	3CH-N38	4CH-N38	4
39	Taper pin. #4 x 1-5/16"	3CH-N39	4CH-N39	2
40	Oilite brg. A-1049-4	3CH-N40	4CH-N40	2
41	Cross feed rear control lever	3CH-N41	4CH-N41	1
42	Vert feed rear control lever	3CH-N42	4CH-N42	1
43	Vert rear control shaft	3CH-N43	4CH-N43	1
44	Rear control serrated dial collar	3CH-N44	4CH-N44	2
45	Socket dog pt screw. 5/16 x 1/4"	3CH-N45	4CH-N45	2
46	Socket set screw. 5/16 x 1/4"	3CH-N46	4CH-N46	2
47	Vert rear control serrated dial	3CH-N47	4CH-N47	1
48	Spring	3CH-N48	4CH-N48	2
49	Rear control dial spring retainer	3CH-N49	4CH-N49	2
50	Fil hd screw. 10-32 x 1/2"	3CH-N50	4CH-N50	6
51	Rear control crank guard	3CH-N51	4CH-N51	2
52	Cross feed rear control serrated dial	3CH-N52	4CH-N52	1
53	Rear control crank guide pin	3CH-N53	4CH-N53	1
54	Taper pin. #4 x 1-7/16"	3CH-N54	4CH-N54	1
55	Rear control cross and elevating crank	3CH-N55	4CH-N55	1
56	Rockwood handle. 3QA	3CH-N56	4CH-N56	1

*Two used on 4CH machines
: Four used on 4CH machines

Fig. 18 - Universal Saddle

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
1	Swivel block clamp screw	3CH-P1	4CH-P1	4
2	Universal saddle	3CH-P2	4CH-P2	1
3	Pin	3CH-P3	4CH-P3	1
4	Table drive gear brg	3CH-P4	4CH-P4	1
5	Table drive bevel gear stud	3CH-P5	4CH-P5	1
6	Fil hd screw. 5/16-18 x 9/16"	3CH-P6	4CH-P6	2
7	Knee top brg wiper	3CH-P7	4CH-P7	4
8	Wiper screw	3CH-P8	4CH-P8	8
9	Spring	3CH-P9	4CH-P9	8
10	Swivel block clamp screw	3CH-P10	4CH-P10	1
11	Saddle gib	3CH-P11	4CH-P11	1
12	Saddle gib	3CH-P12	4CH-P12	1
13	Limit stop (LH)	3CH-P13	4CH-P13	1
14	Limit stop (RH)	3CH-P14	4CH-P14	1
15	Fil hd screw. 3/8-16 x 21/32"	3CH-P15	4CH-P15	2
16	Acme Blue Label dowel. 5/16 x 3/4"	3CH-P16	4CH-P16	2
17	Saddle clamp handle	3CH-P17	4CH-P17	1
18	Fil hd screw. 3/8-16 x 7/8"	3CH-P18	4CH-P18	1
19	Saddle clamp eccentric	3CH-P19	4CH-P19	1
20	Saddle clamp	3CH-P20	4CH-P20	1
21	Gib screw	3CH-P21	4CH-P21	4
22	Swivel block clamp	3CH-P22	4CH-P22	1
23	Swivel block clamp bolt	3CH-P23	4CH-P23	4
24	Swivel block clamp ring	3CH-P24	4CH-P24	2
25	Ring in saddle	3CH-P25	4CH-P25	1
26	Fil hd screw. 5/16-18 x 11/16"	3CH-P26		3
26	Fil hd screw. 3/8-16 x 7/8"		4CH-P26	3
27	Universal saddle cover	3CH-P27	4CH-P27	1
28	Fil hd screw. 5/16-18 x 11/16"	3CH-P28	4CH-P28	4
29	New Departure brg. #1204	3CH-P29		1
29	New Departure brg. #3205		4CH-P29	1
30	Table drive bevel gear	3CH-P30	4CH-P30	1
31	Bevel gear adj washer	3CH-P31	4CH-P31	1
32	Dog pt set screw. 3/8-16 x 13/16"	3CH-P32		1
32	Dog pt set screw. 3/8-16 x 7/8"		4CH-P32	1
33	Timken brg. #1779-1729	3CH-P33		1
33	Timken brg. #26126-26274		4CH-P33	1
34	Table drive idler gear	3CH-P34	4CH-P34	1
35	New Departure brg. #1205	3CH-P35		1
35	New Departure brg. #1207		4CH-P35	1
36	Idler gear stud	3CH-P36	4CH-P36	1
37	Table drive gear	3CH-P37	4CH-P37	1
38	Spring	3CH-P38	4CH-P38	4
39	Saddle coolant return elbow	3CH-P39	4CH-P39	1
40	Fil hd screw. 3/8-16 x 13/16"	3CH-P40	4CH-P40	4
41	Coolant fitting washer (Leather)	3CH-P41	4CH-P41	2
42	Coolant fitting washer (Felt)	3CH-P42	4CH-P42	2
43	Washer. 5/8"	3CH-P43	4CH-P43	2
44	Spring	3CH-P44	4CH-P44	2
45	Coolant fitting stud	3CH-P45	4CH-P45	2
46	Coolant return tube assy	3CH-P46	4CH-P46	1
47	Coolant return elbow	3CH-P47	4CH-P47	1
48	Fil hd screw. 1/2-13 x 15/16"	3CH-P48	4CH-P48	3
49	T-Bolt	3CH-P49	4CH-P49	2
50	Trip dog (RH)	3CH-P50	4CH-P50	1
51	Hex nut. 7/16-14	3CH-P51	4CH-P51	2
52	Trip dog (LH)	3CH-P52	4CH-P52	1

KEARNEY & TRECKER
MILWAUKEE
 SERIAL 1-1000

WHEN ORDERING PARTS
 REPORT SERIAL NUMBER
 SHOWN ON THIS PLATE

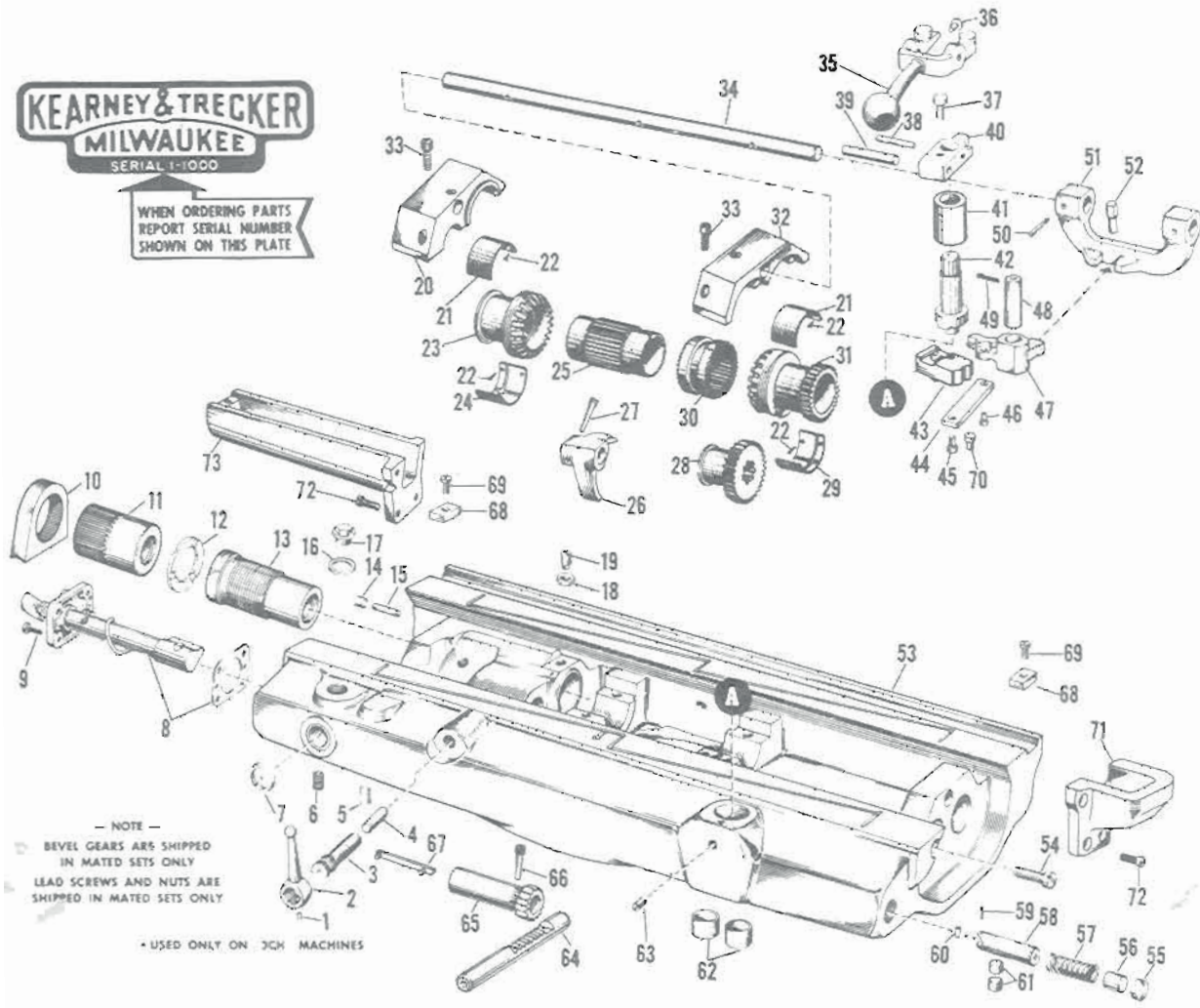


FIG. 19 - UNIVERSAL SWIVEL BLOCK

Fig. 19 - Universal Swivel Block

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
1	Socket set screw, 1/4 x 1/4"	3CH-Q1	4CH-Q1	1
2	Clamp lever	3CH-Q2	4CH-Q2	1
3	Clamp screw	3CH-Q3	4CH-Q3	1
4	Clamp plug	3CH-Q4	4CH-Q4	1
5	Socket set screw, oval pt. 1/2-13 x 1-3/8"	3CH-Q5		2
5	Socket set screw, oval pt. 1/2-13 x 1-3/4"		4CH-Q5	2
6	Pipe plug, 3/4"	3CH-Q6		1
6	Pipe plug, 1/2"		4CH-Q6	1
7	Bijur oil window, B-5093	3CH-Q7	4CH-Q7	1
8	Bijur KIB lubricator pump, C-1957 (1" stroke)	3CH-Q8	4CH-Q8	1
9	Socket hd cap screw, 1/4-20 x 3/4"	3CH-Q9	4CH-Q9	4
10	Adj nut yoke	3CH-Q10	4CH-Q10	1
11	Adjustable table screw nut	3CH-Q11	4CH-Q11	1
12	Spacing washer	3CH-Q12	4CH-Q12	1
13	Table screw nut	3CH-Q13	4CH-Q13	1
14	Socket set screw flat pt. 3/8-16 x 3/4"	3CH-Q14	4CH-Q14	2
15	Yoke lock screw plug	3CH-Q15	4CH-Q15	2
16	Fibre washer	3CH-Q16	4CH-Q16	1
17	Oil hole plug	3CH-Q17	4CH-Q17	1
18	Hex nut, 3/8-16	3CH-Q18	4CH-Q18	1
19	Dog pt set screw, 3/8-16 x 7/8"	3CH-Q19		1
19	Dog pt set screw, 3/8-16 x 11/16"		4CH-Q19	1
20	Brg cap (LH)	3CH-Q20	4CH-Q20	1
21	Feed reverse gear brg (Upper)	3CH-Q21	4CH-Q21	2
22	Flat hd brass screw, 8-32 x 1/2"	3CH-Q22	4CH-Q22	16
23	Table screw clutch gear (LH)	3CH-Q23	4CH-Q23	1
24	Feed reverse gear brg (Lower LH)	3CH-Q24	4CH-Q24	1
25	Table screw sleeve	3CH-Q25	4CH-Q25	1
26	Clutch shifter	3CH-Q26	4CH-Q26	1
27	Taper pin screw	3CH-Q27	4CH-Q27	1
28	Auxiliary drive shaft gear	3CH-Q28	4CH-Q28	1
29	Feed reverse gear brg (Lower RH)	3CH-Q29	4CH-Q29	1
30	Table feed reverse clutch	3CH-Q30	4CH-Q30	1
31	Table screw clutch gear (RH)	3CH-Q31	4CH-Q31	1
32	Brg cap (RH)	3CH-Q32	4CH-Q32	1
33	Socket hd cap screw, 3/8 x 1-1/4"	3CH-Q33		2
33	Socket hd cap screw, 3/8 x 7/8"	3CH-Q34		2
33	Socket hd cap screw, 7/16 x 7/8"	3CH-Q35		2
33	Socket hd cap screw, 7/16 x 1"		4CH-Q36	4

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
33	Socket hd cap screw, 7/16 x 1-1/4"		4CH-Q37	2
34	Clutch shifter yoke rod	3CH-Q38	4CH-Q38	1
35	Table trip lever	3CH-Q39	4CH-Q39	1
36	Table trip lever fork pin	3CH-Q40	4CH-Q40	1
37	Table trip lever block screw	3CH-Q41	4CH-Q41	1
38	Taper pin, #5 x 1-3/4"	3CH-Q42	4CH-Q42	1
39	Acme Blue Label dowel, 3/8 x 3"	3CH-Q43	4CH-Q43	1
40	Table trip lever block	3CH-Q44	4CH-Q44	1
41	Table trip lever shaft bushing	3CH-Q45	4CH-Q45	1
42	Table trip lever shaft	3CH-Q46	4CH-Q46	1
43	Table trip lever detent	3CH-Q47	4CH-Q47	1
44	Table trip lever link	3CH-Q48	4CH-Q48	1
45	Link pin (Long)	3CH-Q49	4CH-Q49	1
46	Link pin	3CH-Q50	4CH-Q50	1
47	Reverse shifter yoke arm	3CH-Q51	4CH-Q51	1
48	Clutch shifter arm stud	3CH-Q52	4CH-Q52	1
49	Cotter pin, 1/8 x 1"	3CH-Q53	4CH-Q53	1
50	Taper pin, #4 x 1-3/8"	3CH-Q54		2
50	Taper pin, #4 x 1-1/4"		4CH-Q54	2
51	Reverse shifter yoke	3CH-Q55	4CH-Q55	1
52	Shifter yoke stop pin	3CH-Q56	4CH-Q56	1
53	Universal Swivel block	3CH-Q57	4CH-Q57	1
54	Gib screw	3CH-Q58	4CH-Q58	2
55	Detent plunger plug	3CH-Q59	4CH-Q59	1
56	Spring spacer	3CH-Q60	4CH-Q60	1
57	Spring	3CH-Q61	4CH-Q61	1
58	Table trip detent plunger	3CH-Q62	4CH-Q62	1
59	Detent roller pin	3CH-Q63	4CH-Q63	1
60	Detent roller	3CH-Q64	4CH-Q64	1
61	Special set screw	3CH-Q65	4CH-Q65	2
62	Coolant return tube	3CH-Q66	4CH-Q66	2
63	Dog pt set screw, 3/8-16 x 13/16"		3CH-Q67	1
63	Dog pt set screw, 3/8-16 x 15/16"		4CH-Q67	1
64	Release shaft gear rack	3CH-Q68	4CH-Q68	1
65	Handwheel release shaft gear	3CH-Q69	4CH-Q69	1
66	Dowel set screw	3CH-Q70	4CH-Q70	1
67	Key	3CH-Q71	4CH-Q71	1
68	Coolant pocket block	3CH-Q72	4CH-Q72	2
69	Flt hd screw, 5/16-18 x 9/16"	3CH-Q73	4CH-Q73	2
70	Link support pin	3CH-Q74	4CH-Q74	1
71	Saddle extension (RH)	3CH-Q75		1
72	Flt hd screw, 7/16-14 x 1"	3CH-Q76	4CH-Q76	*6
73	Saddle extension (LH)	3CH-Q77	4CH-Q77	1

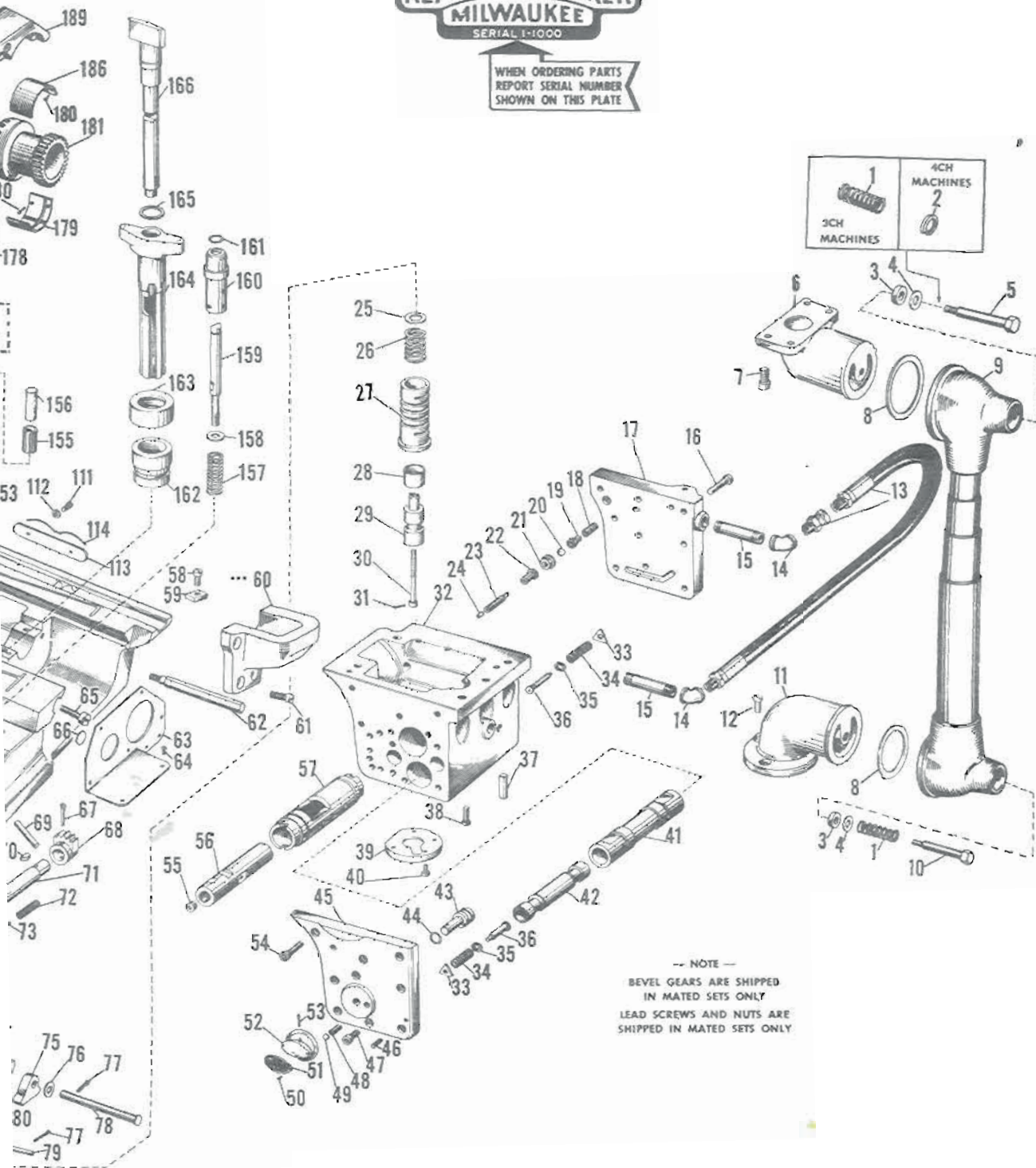
*Only 3 used on 4CH machines

Replacement Parts Manual

7½ hp No. 3 and 10 hp No. 4 Model CH



WHEN ORDERING PARTS
REPORT SERIAL NUMBER
SHOWN ON THIS PLATE



SADDLE & HYDRAULIC VALVE BODY

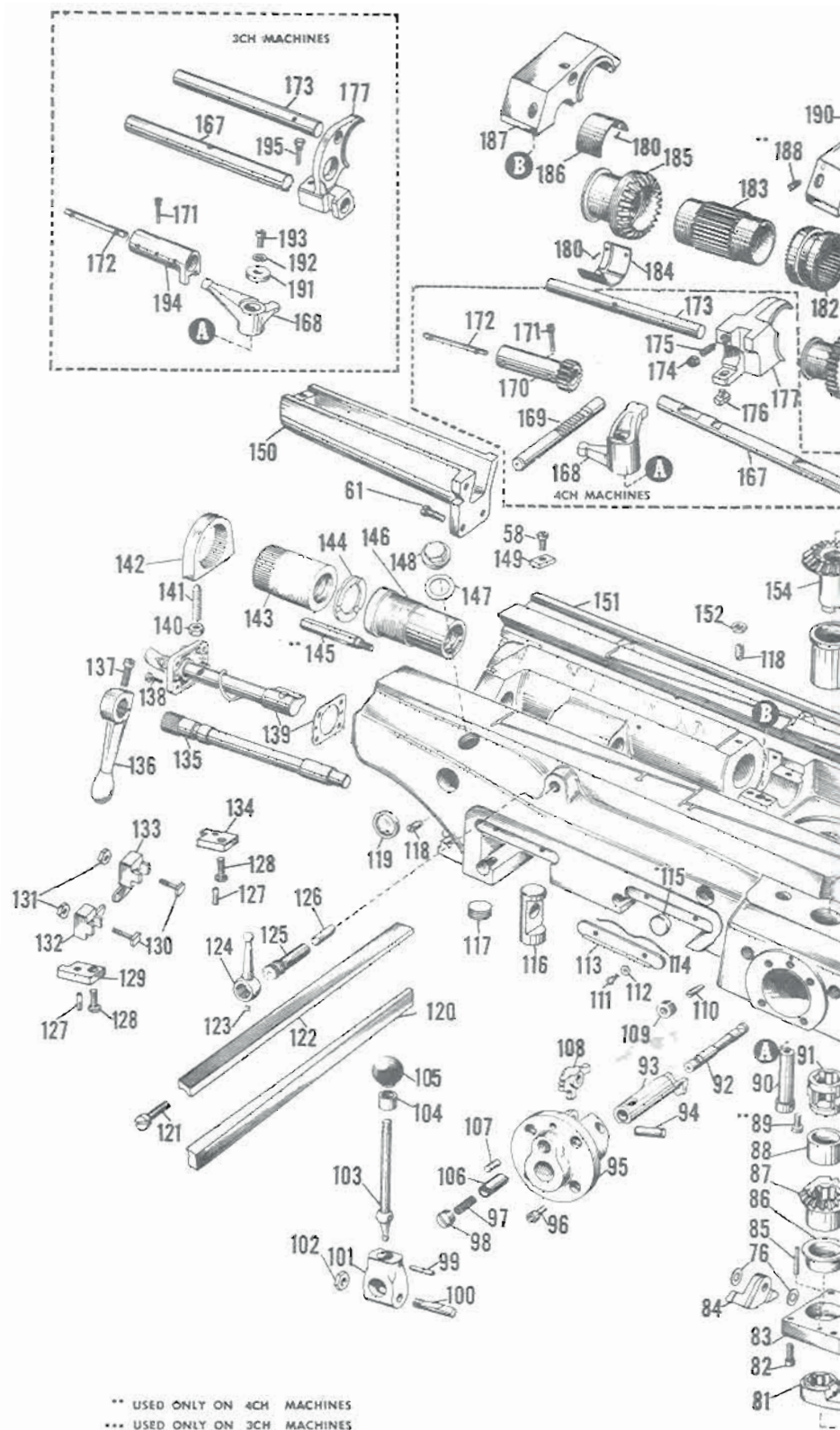


FIG. 20 - AUTOMATIC CYLINDER

Fig. 20 - Automatic Cycle Saddle & Hydraulic Valve Body

Item No.	Part Name and Description	Code Nos.		Qty.	Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH				3CH	4CH	
Hydraulic Valve Body and Coolant Return									
1	Spring	3CH-R1	4CH-R1	*2	51	Selector knob plate	3CH-R51	4CH-R51	1
2	Lockwasher, 5/8"		4CH-R2	1	52	Selector knob	3CH-R52	4CH-R52	1
3	Coolant fitting washer	3CH-R3	4CH-R3	2	53	Taper pin, #02 x 3/4"	3CH-R53	4CH-R53	1
4	Washer	3CH-R4	4CH-R4	2	54	Sock hd cap screw, 3/8 x 1"	3CH-R54	4CH-R54	8
5	Coolant fitting stud	3CH-R5	4CH-R5	1	55	Sock hd pipe plug, 1/4"	3CH-R55	4CH-R55	1
6	Saddle coolant return elbow	3CH-R6	4CH-R6	1	56	Table direction piston	3CH-R56	4CH-R56	1
7	Fil hd screw, 3/8-16 x 13/16"	3CH-R7	4CH-R7	4	57	Table direction cylinder sleeve	3CH-R57	4CH-R57	1
8	Coolant fitting washer	3CH-R8	4CH-R8	2	Automatic Cycle Plain Saddle				
9	Telescopic coolant return tube assy	3CH-R9	4CH-R9	1	58	Fil hd screw, 5/16-18 x 9/16"	3CH-R58	4CH-R58	2
10	Coolant fitting stud	3CH-R10	4CH-R10	1	59	Coolant pocket block (RH)	3CH-R59	4CH-R59	1
11	Column coolant return elbow	3CH-R11	4CH-R11	1	60	Saddle extension (RH)	3CH-R60		1
12	Fil hd screw, 1/2-13 x 15/16"	3CH-R12	4CH-R12	3	61	Fil hd screw, 7/16-14 x 1"	3CH-R61	4CH-R61	**6
13	Ario flexible hose and fitting, 3/8"ID		4CH-R13	1	62	Positive stop	3CH-R62	4CH-R62	1
14	Elbow, 3/8"	3CH-R14	4CH-R14	4	63	Auxiliary drive shaft gear cover	3CH-R63	4CH-R63	1
15	W. I. Nipple, 3/8 x 3-1/4"	3CH-R15	4CH-R15	4	64	Rd hd mach screw, 10-32 x 3/8"	3CH-R64	4CH-R64	3
16	Sock hd cap screw, 3/8 x 1-1/2"	3CH-R16	4CH-R16	9	65	Gib screw	3CH-R65	4CH-R65	2
17	Valve body cover (Back)	3CH-R17	4CH-R17	1	66	Expansion plug, 9/16"	3CH-R66		1
18	Spring	3CH-R18	4CH-R18	2	66	Expansion plug, 5/8"		4CH-R66	1
19	Valve ball guide	3CH-R19	4CH-R19	2	67	Taper pin screw	3CH-R67	4CH-R67	1
20	Steel ball, 7/16" diam	3CH-R20	4CH-R20	2	68	Table trip lever segment	3CH-R68	4CH-R68	1
21	Valve seat insert	3CH-R21	4CH-R21	2	69	Pin	3CH-R69	4CH-R69	1
22	Automatic reverse valve stem bushing	3CH-R22	4CH-R22	2	70	Hi-pro key, HP-604	3CH-R70	4CH-R70	1
23	Automatic reverse valve stem	3CH-R23	4CH-R23	2	71	Shifter bevel gear segment	3CH-R71	4CH-R71	1
24	Automatic reverse valve stem plug	3CH-R24	4CH-R24	2	72	Spring	3CH-R72	4CH-R72	1
25	Rate piston spring washer	3CH-R25	4CH-R25	1	73	Detent plunger	3CH-R73	4CH-R73	1
26	Spring	3CH-R26	4CH-R26	1	74	Acme Blue Label dowel, 1/4 x 7/8"	3CH-R74	4CH-R74	1
27	Rate cylinder sleeve	3CH-R27	4CH-R27	1	75	Right hand reverse bell crank	3CH-R75	4CH-R75	1
28	Rate return piston	3CH-R28	4CH-R28	1	76	Washer	3CH-R76	4CH-R76	3
29	Rate piston	3CH-R29	4CH-R29	1	77	Cotter pin, 3/32 x 7/8"	3CH-R77	4CH-R77	3
30	Rate piston screw	3CH-R30	4CH-R30	1	78	Bell crank shaft	3CH-R78	4CH-R78	1
31	Cotter pin, 1/16 x 1	3CH-R31	4CH-R31	1	79	Automatic reverse lever pin	3CH-R79	4CH-R79	1
32	Control valve body	3CH-R32	4CH-R32	1	80	Sock hd cap screw, 5/16 x 5/8"	3CH-R80	4CH-R80	2
33	Spring retaining collar	3CH-R33	4CH-R33	2	81	Automatic reverse lever	3CH-R81	4CH-R81	1
34	Spring	3CH-R34	4CH-R34	2	82	Sock hd cap screw, 5/16 x 7/8"	3CH-R82	4CH-R82	2
35	Automatic reverse spring retaining washer	3CH-R35	4CH-R35	2	83	Bell crank support	3CH-R83	4CH-R83	1
36	Spring retaining pin	3CH-R36	4CH-R36	2	84	Left hand reverse bell crank	3CH-R84	4CH-R84	1
37	Acme Blue Label dowel, 3/8 x 1-1/4"	3CH-R37	4CH-R37	2	85	Acme Blue Label dowel, 1/4 x 1-1/4"	3CH-R85	4CH-R85	1
38	Sock hd cap screw, 7/16 x 1-1/4"	3CH-R38	4CH-R38	5	86	Bell crank support bushing	3CH-R86	4CH-R86	1
39	Rate cylinder retaining plate	3CH-R39	4CH-R39	1	87	Hand trip bevel gear segment	3CH-R87	4CH-R87	1
40	Sock hd cap screw, 1/4 x 5/8"	3CH-R40	4CH-R40	4	88	Spacing collar	3CH-R88	4CH-R88	1
41	Automatic reverse valve sleeve	3CH-R41	4CH-R41	1	89	Sock hd cap screw, 5/16 x 5/8"	3CH-R89	4CH-R89	1
42	Automatic reverse valve	3CH-R42	4CH-R42	1	90	Clutch shifter arm stud	3CH-R90	4CH-R90	1
43	Manual reverse rate valve	3CH-R43	4CH-R43	1	91	Feed trip bevel segment	3CH-R91	4CH-R91	1
44	"O" Ring, PRP902-10	3CH-R44	4CH-R44	1	92	Feed and rapid traverse shifter rod	3CH-R92	4CH-R92	1
45	Valve body cover (Front)	3CH-R45	4CH-R45	1	93	Feed and rapid traverse shifter rod sleeve and pinion	3CH-R93	4CH-R93	1
46	Sock hd oval pt set screw, 5/16 x 5/8"	3CH-R46	4CH-R46	2	94	Acme Blue Label dowel, 1/2 x 1-5/8"	3CH-R94	4CH-R94	1
47	Sock hd cap screw, 3/8 x 3/4"	3CH-R47	4CH-R47	1	95	Feed and rapid traverse lever bracket	3CH-R95	4CH-R95	1
48	Spring	3CH-R48	4CH-R48	1	96	Sock hd cap screw, 3/8 x 3/4"	3CH-R96	4CH-R96	4
49	Steel ball, 5/16" diam	3CH-R49	4CH-R49	1	97	Spring	3CH-R97	4CH-R97	1
50	#15 Escutcheon pin	3CH-R50	4CH-R50	2	98	Plug screw, 3/4-16 x 7/16"	3CH-R98	4CH-R98	1
					99	Acme Blue Label dowel, 5/16 x 1-1/2"	3CH-R99	4CH-R99	1

*One used on 4CH machines **Only 3 used on 4CH machines

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
100	Feed and rapid traverse lever hub cotter	3CH-R100	4CH-R100	1
101	Feed and rapid traverse lever hub (For machines without low lead attachment)	3CH-R101	4CH-R101	1
101	Feed and rapid traverse lever hub (For machines with low lead attachment)	3CH-R101	4CH-R101	1
102	Hex nut, 1/2-13	3CH-R102	4CH-R102	1
103	Feed and rapid traverse lever	3CH-R103	4CH-R103	1
104	Feed and rapid traverse lever chip seal	3CH-R104	4CH-R104	1
105	Shifter lever knob	3CH-R105	4CH-R105	1
106	Feed and rapid traverse detent plunger	3CH-R106	4CH-R106	1
107	Acme Blue Label dowel, 3/8 x 7/8"	3CH-R107	4CH-R107	1
108	Feed and rapid traverse bell crank	3CH-R108	4CH-R108	1
109	Socket hd pipe plug, 1/2"	3CH-R109	4CH-R109	2
110	Dowel screw	3CH-R110	4CH-R110	2
111	Wiper screw	3CH-R111	4CH-R111	8
112	Wiper screw spring	3CH-R112	4CH-R112	8
113	Knee top brg wiper	3CH-R113	4CH-R113	4
114	Wiper spring	3CH-R114	4CH-R114	4
115	Saddle plug	3CH-R115	4CH-R115	1
116	Saddle clamp	3CH-R116	4CH-R116	1
117	Pipe plug, 3/4"	3CH-R117		1
117	Pipe plug, 1/2"		4CH-R117	1
118	Dog pt set screw, 3/8-16 x 7/8"	3CH-R118	4CH-R118	2
119	Bijur oil window, B-4904	3CH-R119	4CH-R119	1
120	Saddle gfb	3CH-R120	4CH-R120	1
121	Gfb screw	3CH-R121	4CH-R121	4
122	Saddle gfb	3CH-R122	4CH-R122	1
123	Socket set screw, 1/4 x 1-4"	3CH-R123	4CH-R123	1
124	Clamp lever	3CH-R124	4CH-R124	1
125	Clamp screw	3CH-R125	4CH-R125	1
126	Table clamp plug	3CH-R126	4CH-R126	1
127	Acme Blue Label dowel, 5/16 x 3/4"	3CH-R127	4CH-R127	2
128	Flt hd screw, 3/8-16 x 21/32"	3CH-R128	4CH-R128	2
129	Saddle limit stop (Front)	3CH-R129	4CH-R129	1
130	T-Bolt	3CH-R130	4CH-R130	2
131	Hex nut, 7/16-14	3CH-R131	4CH-R131	2
132	Trip dog (LH)	3CH-R132	4CH-R132	1
133	Trip dog (RH)	3CH-R133	4CH-R133	1
134	Saddle limit stop (Rear)	3CH-R134	4CH-R134	1
135	Saddle clamp eccentric	3CH-R135	4CH-R135	1
136	Saddle clamp lever	3CH-R136	4CH-R136	1
137	Flt hd screw, 3/8-16 x 7/8"	3CH-R137	4CH-R137	1
138	Socket hd cap screw, 1/4-20 x 3/4"	3CH-R138	4CH-R138	4
139	Bijur KIB lubricator pump (1" stroke) C-1957	3CH-R139	4CH-R139	1
140	Hex nut, 1/2-13	3CH-R140	4CH-R140	2
141	Rd pt sock set screw, 1/2-13 x 2-1/2"	3CH-R141		2
141	Rd pt sock set screw, 1/2-13 x 3-1/2"		4CH-R141	2
142	Adj nut yoke	3CH-R142	4CH-R142	1

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
143	Adj table screw nut	3CH-R143	4CH-R143	1
144	Spacer washer	3CH-R144	4CH-R144	1
145	Positive stop	3CH-R145		1
146	Table screw nut	3CH-R146	4CH-R146	1
147	Washer	3CH-R147	4CH-R147	1
148	Oil hole plug	3CH-R148	4CH-R148	1
149	Coolant pocket block (LH)	3CH-R149	4CH-R149	1
150	Saddle extension (LH)	3CH-R150	4CH-R150	1
151	Saddle	3CH-R151	4CH-R151	1
152	Hex nut, 3/8-16	3CH-R152	4CH-R152	1
153	Table drive bevel gear brg	3CH-R153	4CH-R153	1
154	Table feed drive bevel gear	3CH-R154	4CH-R154	1
155	Table drive gear plug	3CH-R155	4CH-R155	1
156	Table drive gear felt	3CH-R156	4CH-R156	1
157	Spring	3CH-R157	4CH-R157	2
158	Table reverse plunger washer	3CH-R158	4CH-R158	2
159	Reverse plunger	3CH-R159	4CH-R159	2
160	Reverse plunger sleeve	3CH-R160	4CH-R160	2
161	"O" Ring, AN6227-12	3CH-R161	4CH-R161	2
162	Feed trip sleeve brg	3CH-R162	4CH-R162	1
163	Trip sleeve chip guard	3CH-R163	4CH-R163	1
164	Feed trip sleeve	3CH-R164	4CH-R164	1
165	Neoprene packing	3CH-R165	4CH-R165	1
166	Rate change trip post	3CH-R166	4CH-R166	1
167	Clutch shifter rack	3CH-R167	4CH-R167	1
168	Reverse shifter yoke arm	3CH-R168	4CH-R168	1
169	Release shaft gear rack		4CH-R169	1
170	Handwheel release shaft gear		4CH-R170	1
171	Headless dowel screw	3CH-R171	4CH-R171	1
172	Key	3CH-R172	4CH-R172	1
173	Clutch shifter yoke rod	3CH-R173	4CH-R173	1
174	Hex nut, 3/8-16	3CH-R174	4CH-R174	1
175	Headless dowel screw, 3/8-16 x 1"	3CH-R175	4CH-R175	1
176	Clutch fork trip block	3CH-R176	4CH-R176	1
177	Clutch shifter yoke	3CH-R177	4CH-R177	1
178	Auxiliary drive shaft gear	3CH-R178	4CH-R178	1
179	Feed reverse gear brg (Lower RH)	3CH-R179	4CH-R179	1
180	Flat hd brass screw, 8-32 x 1/2"	3CH-R180	4CH-R180	16
181	Table screw clutch gear (RH)	3CH-R181	4CH-R181	1
182	Table feed reverse clutch	3CH-R182	4CH-R182	1
183	Table screw sleeve	3CH-R183	4CH-R183	1
184	Feed reverse gear brg (Lower LH)	3CH-R184	4CH-R184	1
185	Table screw clutch gear (LH)	3CH-R185	4CH-R185	1
186	Feed reverse gear brg (Upper)	3CH-R186	4CH-R186	2
187	Brg cap (LH)	3CH-R187	4CH-R187	1
188	Dog pt sock set screw, 3/8 x 1"	3CH-R188		1
189	Brg cap (RH)	3CH-R189	4CH-R189	1
190	Socket cap screw, 3/8 x 1-1/4"	3CH-R190		2
190	Socket cap screw, 3/8 x 7/8"	3CH-R191		2
190	Socket cap screw, 7/16 x 7/8"	3CH-R192		2
190	Socket cap screw, 7/16 x 1"		4CH-R193	2
190	Socket cap screw, 7/16 x 1-3/8"		4CH-R194	2
191	Bell crank retainer	3CH-R195		1
192	Lockwasher, 5/16"	3CH-R196		1
193	Flt hd screw, 5/16-18 x 3/4"	3CH-R197		1
194	Handwheel release shaft fork	3CH-R198		1
195	Taper pin screw	3CH-R199		1



WHEN ORDERING PARTS
REPORT SERIAL NUMBER
SHOWN ON THIS PLATE

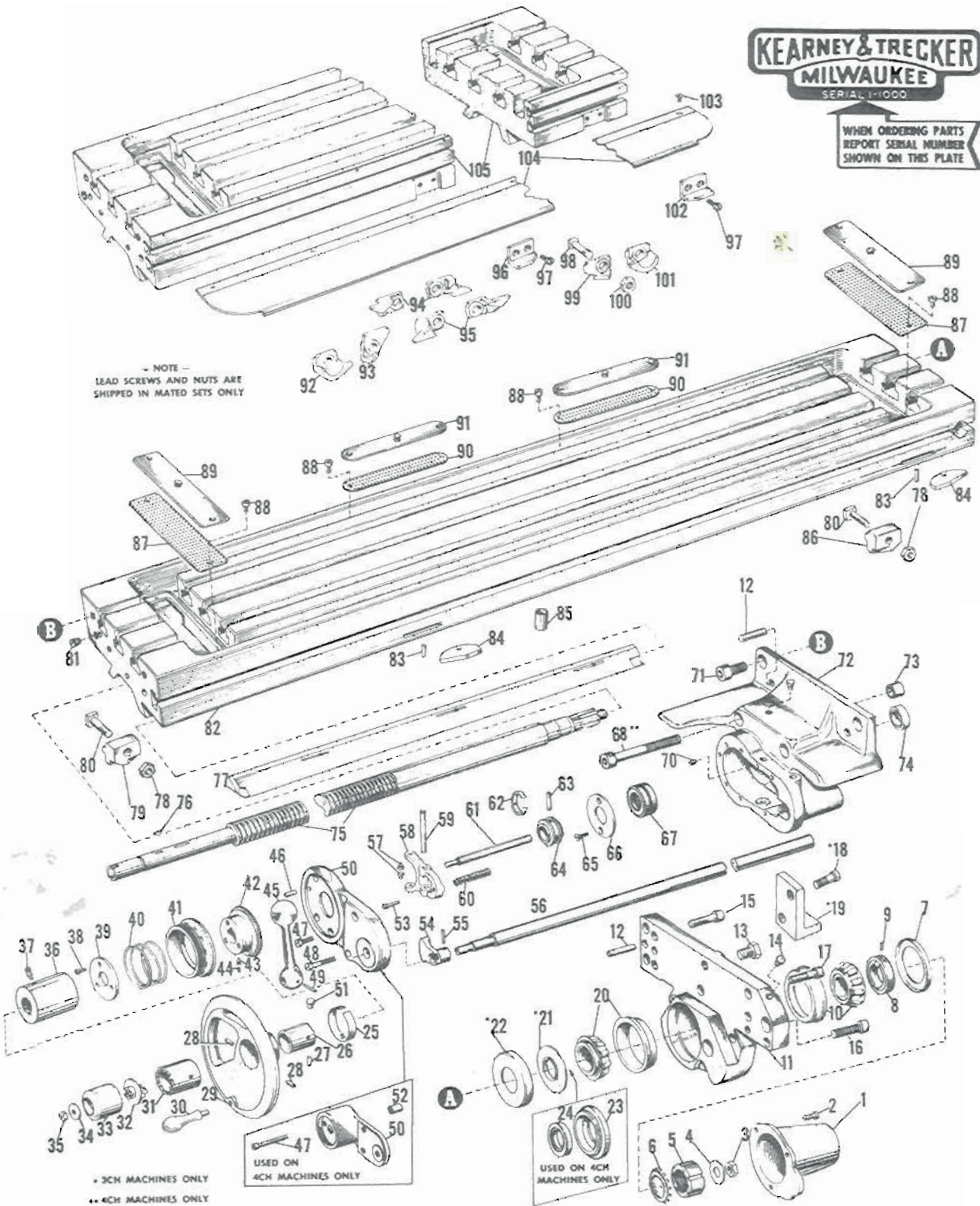


FIG. 21 - TABLES

Fig. 21 - Tables

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
1	Table bracket cover (RH)	3CH-S1	4CH-S1	1
2	Fil hd screw. 5/16-18 x 11/16"	3CH-S2		3
2	Fil hd screw. 5/16-18 x 9/16"		4CH-S2	3
3	Hex nut. 1/2-13	3CH-S3	4CH-S3	1
4	Washer. 1/2"	3CH-S4		1
4	Washer. 1/2"		4CH-S4	1
5	Brg adj nut	3CH-S5	4CH-S5	1
6	Lockwasher. Timken 3809	3CH-S6		1
6	Lockwasher. #7		4CH-S6	1
7	Brg cover	3CH-S7	4CH-S7	1
8	Brg clutch collar	3CH-S8	4CH-S8	1
9	Pin	3CH-S9		1
9	Pin. 1/4 x 5/8"		4CH-S9	1
10	Timken brg. 41286B-41125W	3CH-S10		1
10	Timken brg. 44348B-44143W		4CH-S10	1
11	Table bracket (RH)	3CH-S11	4CH-S11	1
12	Acme Blue Label dowel. 3/8 x 1-1/2"			4
12	Acme Blue Label dowel. 1/2 x 1-3/4"	3CH-S12		4
13	Table bracket plug	3CH-S13	4CH-S13	1
14	Gits oiler. RS533	3CH-S14	4CH-S14	2
15	Socket hd cap screw. 1/2 x 1-1/2"	3CH-S15		2
15	Socket hd cap screw. 5/8 x 1-1/2"		4CH-S15	3
16	Socket hd cap screw. 7/16-14 x 1-1/2"	3CH-S16		2
16	Socket hd cap screw. 1/2 x 1-1/4"		4CH-S16	1
17	Hex hd cap screw. 1/2-13 x 1-7/8"	3CH-S17		4
17	Hex hd cap screw. 5/8-11 x 1-7/8"		4CH-S17	3
18	Fil hd screw. 1/2-13 x 13/16"	3CH-S18		2
19	Saddle extension cover	3CH-S19		1
20	Timken brg. 41286B-41125	3CH-S20	4CH-S20	1
21	Grease retainer	3CH-S21		1
22	Brg cover	3CH-S22		1
23	Oil seal carrier		4CH-S23	1
24	Gits oil seal. O.S. 1750		4CH-S24	1
25	Snap ring	3CH-S25	4CH-S25	1
26	Handwheel bushing	3CH-S26	4CH-S26	1
27	Handwheel retaining pin	3CH-S27	4CH-S27	1
28	Pin	3CH-S28	4CH-S28	2
29	Handwheel	3CH-S29	4CH-S29	1
30	Rockwood handle. #3QA	3CH-S30	4CH-S30	1
31	Clutch in handwheel	3CH-S31	4CH-S31	1
32	Handwheel clutch	3CH-S32	4CH-S32	1
33	Handwheel clutch knob	3CH-S33	4CH-S33	1
34	Clutch washer	3CH-S34	4CH-S34	1
35	Hex nut. 5/16-24	3CH-S35	4CH-S35	1
36	Graduated dial spacer	3CH-S36	4CH-S36	1
37	Socket dog pt set screw. 5/16 x 5/8"	3CH-S37	4CH-S37	1
38	Fil hd screw. 10-32 x 1/2"	3CH-S38	4CH-S38	3
39	Graduated dial spring retainer	3CH-S39	4CH-S39	1
40	Spring	3CH-S40	4CH-S40	1
41	Graduated dial	3CH-S41	4CH-S41	1
42	Serrated dial collar	3CH-S42	4CH-S42	1
43	Dog pt set screw. 1/4-20 x 1/2"	3CH-S43	4CH-S43	1
44	Socket set screw. 1/4-20 x 1/4"	3CH-S44	4CH-S44	1
45	Table reverse lever	3CH-S45	4CH-S45	1
46	Acme Blue Label dowel. 1/4 x 3/4"	3CH-S46	4CH-S46	1
47	Fil hd screw. 5/16-18 x 11/16"	3CH-S47		4

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
47	Fil hd screw. 5/16-18 x 3-3/4"		4CH-S48	3
48	Fil hd screw. 5/16-18 x 1-1/4"	3CH-S49	4CH-S49	2
49	Taper pin. #2 x 1-3/8"	3CH-S50	4CH-S50	1
50	Table bracket cover (LH)	3CH-S51	4CH-S51	1
51	Gits oiler. RS532	3CH-S52	4CH-S52	1
52	Ollite brg. A-1110-1		4CH-S53	1
53	Clutch release yoke pin	3CH-S54	4CH-S54	2
54	Clutch release cam	3CH-S55	4CH-S55	1
55	Taper pin. #2 x 7/8"	3CH-S56	4CH-S56	1
56	Handwheel release shaft	3CH-S57	4CH-S57	1
57	Shifter yoke pin	3CH-S58	4CH-S58	2
58	Clutch release yoke	3CH-S59	4CH-S59	1
59	Clutch release yoke shaft	3CH-S60	4CH-S60	1
60	Spring (Not used in Auto-cycle mach)	3CH-S61	4CH-S61	1
61	Clutch release rod	3CH-S62	4CH-S62	1
62	Snap ring	3CH-S63	4CH-S63	1
63	Clutch release rod pin	3CH-S64	4CH-S64	1
64	Clutch release plate	3CH-S65	4CH-S65	1
65	Flat hd mach screw. 1/4-20 x 5/8"	3CH-S66		2
65	Fil hd screw. 10-32 x 1/2"		4CH-S66	2
66	Brg retainer	3CH-S67	4CH-S67	1
67	Orange brg. 7194	3CH-S68	4CH-S68	1
68	Socket cap screw. 5/8 x 5"		4CH-S69	2
70	Cone pt pin	3CH-S71	4CH-S71	1
71	Fil hd screw. 1/2-13 x 1-1/4"	3CH-S72		4
71	Socket hd cap screw. 5/8-11 x 1-1/2"		4CH-S72	2
72	Table bracket (LH)	3CH-S73	4CH-S73	1
73	Ollite brg. A-1203	3CH-S74	4CH-S74	1
74	Gits oil seal. O.S.-1000	3CH-S75		1
74	Gits oil seal. O.S.-1250		4CH-S75	1
75	Table screw	3CH-S76	4CH-S76	1
76	Hi-pro key. HP-606	3CH-S77	4CH-S77	2
77	Table gib	3CH-S78	4CH-S78	1
78	Hex nut. 7/16-14	3CH-S79	4CH-S79	4
79	Table trip dog (LH)	3CH-S80	4CH-S80	2
80	T-Bolt	3CH-S81	4CH-S81	4
81	Pipe plug. 3/4"	3CH-S82	4CH-S82	1
82	Table	3CH-S83	4CH-S83	1
83	Limit stop pin	3CH-S84	4CH-S84	2
84	Limit block	3CH-S85	4CH-S85	1
85	Coolant return tube	3CH-S86	4CH-S86	2
86	Table trip dog (RH)	3CH-S87	4CH-S87	2
87	Table screen (Large)	3CH-S88	4CH-S88	2
88	Fil hd screw. 10-32 x 5/16"	3CH-S89	4CH-S89	8
89	Table screen cover (Large)	3CH-S90	4CH-S90	2
90	Table screen (Small)	3CH-S91	4CH-S91	2
91	Table screen cover (Small)	3CH-S92	4CH-S92	2
*92	Reverse dog (LH)	3CH-S93	4CH-S93	1
*93	Stop dog (LH)	3CH-S94	4CH-S94	1
*94	Rate change dog "B"	3CH-S95	4CH-S95	2
*95	Rate change dog "A"	3CH-S96	4CH-S96	2
*96	Table limit block (LH)	3CH-S97	4CH-S97	1
*97	Fil hd screw. 5/16-18 x 11/16"	3CH-S98	4CH-S98	4
*98	T-Bolt	3CH-S99	4CH-S99	8
*99	Stop dog (RH)	3CH-S100	4CH-S101	1
100	Hex nut. 7/16-20	3CH-S101	4CH-S100	8
*101	Reverse dog (RH)	3CH-S102	4CH-S102	1
*102	Table limit block (RH)	3CH-S103	4CH-S103	1
*103	Flat hd mach screw. 1/4-20 x 1/2"	3CH-S104	4CH-S104	13
*104	Table coolant guard	3CH-S105	4CH-S105	1
*105	Table (Automatic cycle)	3CH-S106	4CH-S106	1

*For automatic cycle machines only

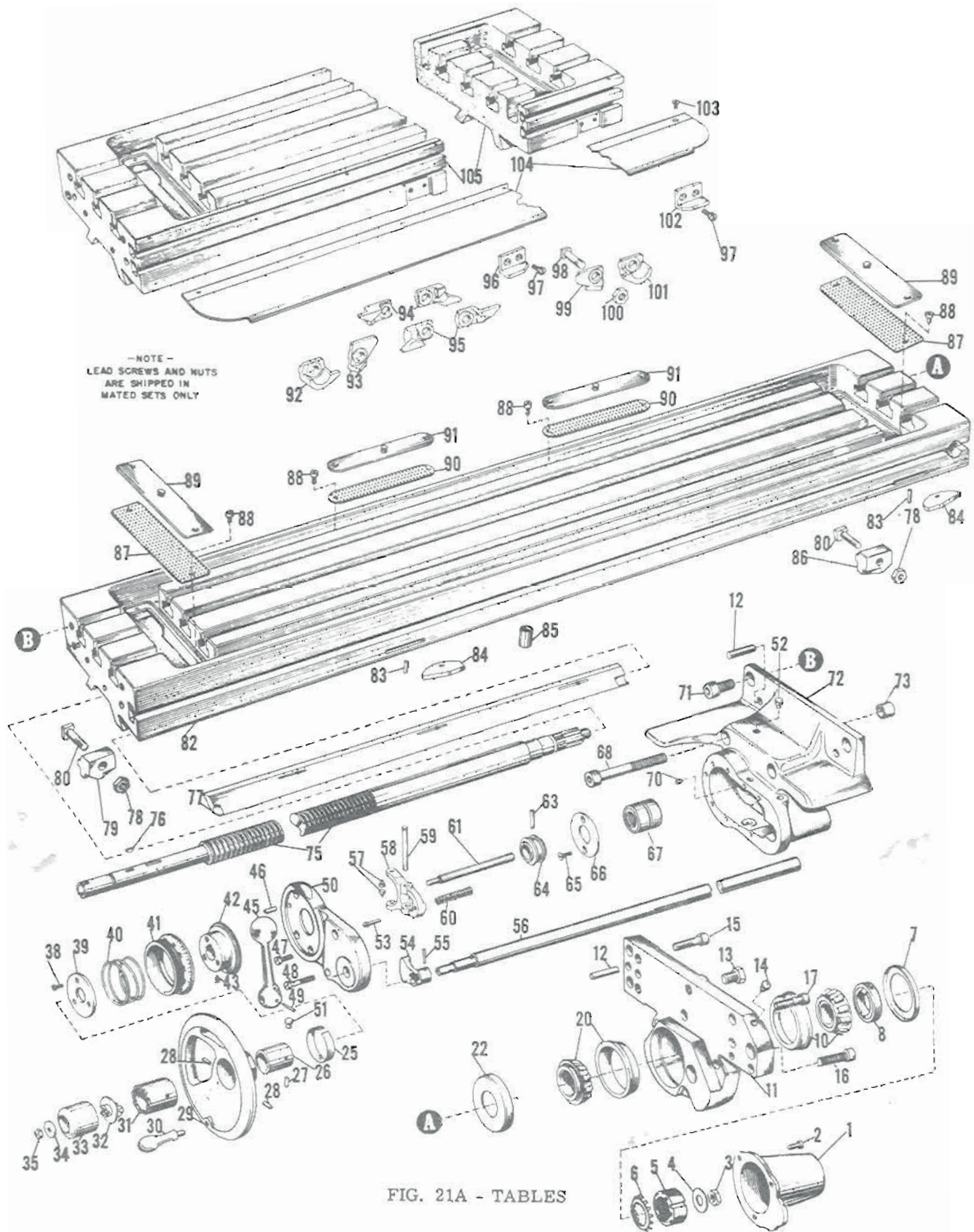


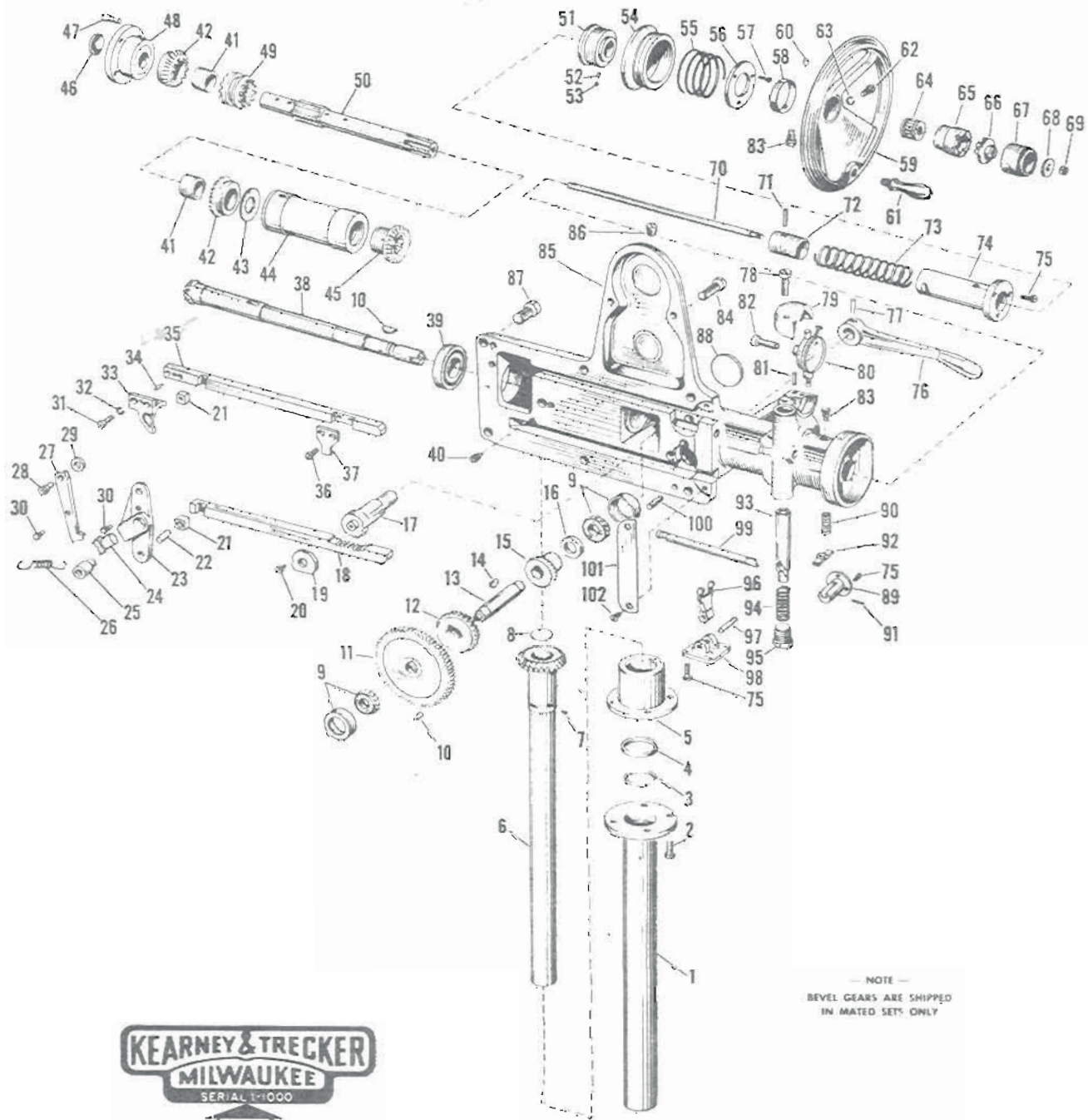
FIG. 21A - TABLES

315CH-16	415CH-16	Qty.
16CH-S46		1
16CH-S47-a		4
16CH-S47-b		3
16CH-S48		2
16CH-S49		1
16CH-S50b		1
16CH-S50c		1
16CH-S51		1
16CH-S52		1
16CH-S53		1
16CH-S54		1
16CH-S55		1
16CH-S56c		1
16CH-S56d		1
16CH-S57		2
16CH-S58		1
16CH-S59		1
16CH-S60		1
16CH-S61c		1
16CH-S61d		1
16CH-S63		1
16CH-S64		1
16CH-S65		2
16CH-S66		1
16CH-S67		1
16CH-S68		2
16CH-S70		1
16CH-S71		2
16CH-S72c		1
16CH-S72d		1
16CH-S72g		1
16CH-S72h		1
16CH-S73		1
16CH-S75c		1
16CH-S75d		1
16CH-S76		1

Item No.	Part Name	210CH-14	310CH-14	315CH-16	415CH-16	Qty.
77	Table Gib (Plain)		14CH-S77a			1
77	Tab Gib (A. C. only)		14CH-S77c		16CH-S77b	1
78	Hex Nut - Plain		14CH-S78		16CH-S77d	1
79	Trip Dog L. H. (Plain)		14CH-S79		16CH-S78	4
80	"T" Bolt - (Plain)		14CH-S80		16CH-S79	2
82	Table (Plain)	14CH-S82a			16CH-S80	4
			14CH-S82b			1
				16CH-S82c		1
					16CH-S82d	1
83	Screw (Plain)	14CH-S83		16CH-S83		4
84	Limit Block (Plain)	14CH-S84		16CH-S84		2
85	Coolant Return tube	14CH-S85				2
86	Trip Dog R. H. (Plain)	14CH-S86		16CH-S85		2
87	Table Screen (Large)	14CH-S87		16CH-S86		2
88	Screw	14CH-S88		16CH-S87		2
89	Screen Cover (Large)	14CH-S89		16CH-S88		8
90	Table Screen (Small)	14CH-S90		16CH-S89		2
91	Screen Cover (Small)	14CH-S91		16CH-S90		2
92	Reverse Dog L. H. (A. C. only)	14CH-S92		16CH-S91		2
93	Stop Dog L. H. (A. C. only)	14CH-S93		16CH-S92		1
94	Rate Change Dog "B" (A. C.)	14CH-S94		16CH-S93		1
95	Rate Change Dog "A" (A. C.)	14CH-S95		16CH-S94		2
96	Limit Block L. H. (A. C. only)	14CH-S96		16CH-S95		2
97	Screw (A. C. only)	14CH-S97		16CH-S96		1
98	"T" Bolt (A. C. only)	14CH-S98		16CH-S97		4
99	Stop Dog R. H. (A. C. only)	14CH-S99		16CH-S98		8
100	Hex Nut (A. C. only)	14CH-S100		16CH-S99		1
101	Reverse Dog R. H. (A. C. only)	14CH-S101		16CH-S100		8
102	Limit Block R. H. (A. C. only)	14CH-S102		16CH-S101		1
103	Screw (Auto cycle only)	14CH-S103		16CH-S102		1
104	Table Coolant Guard (w/auto cycle only)	14CH-S104a		16CH-S103		10
105	Table (Auto cycle)	14CH-S105a				11
			14CH-S104b	16CH-S104c		1
					16CH-S104d	1
			14CH-S105b			1
				16CH-S105c		1
					16CH-S105d	1

315CH-16	415CH-16	Qty.
16CH-S46		1
16CH-S47-a		4
16CH-S47-b		3
16CH-S48		2
16CH-S49		1
16CH-S50b		1
16CH-S50c		1
16CH-S51		1
16CH-S52		1
16CH-S53		1
16CH-S54		1
16CH-S55		1
16CH-S56c		1
16CH-S56d		1
16CH-S57		2
16CH-S58		1
16CH-S59		1
16CH-S60		1
16CH-S61c		1
16CH-S61d		1
16CH-S63		1
16CH-S64		1
16CH-S65		2
16CH-S66		1
16CH-S67		1
16CH-S68		2
16CH-S70		1
16CH-S71		2
16CH-S72c		1
16CH-S72d		1
16CH-S72g		1
16CH-S72h		1
16CH-S73		1
16CH-S75c		1
16CH-S75d		1
16CH-S76		1

Item No.	Part Name	210CH-14	310CH-14	315CH-16	415CH-16	Qty.
77	Table Gib (Plain)		14CH-S77a			1
77	Tab Gib (A. C. only)		14CH-S77c		16CH-S77b	1
78	Hex Nut - Plain		14CH-S78		16CH-S77d	1
79	Trip Dog L. H. (Plain)		14CH-S79		16CH-S78	4
80	"T" Bolt - (Plain)		14CH-S80		16CH-S79	2
82	Table (Plain)	14CH-S82a			16CH-S80	4
			14CH-S82b			1
				16CH-S82c		1
					16CH-S82d	1
83	Screw (Plain)	14CH-S83		16CH-S83		4
84	Limit Block (Plain)	14CH-S84		16CH-S84		2
85	Coolant Return tube	14CH-S85				2
86	Trip Dog R. H. (Plain)	14CH-S86		16CH-S85		2
87	Table Screen (Large)	14CH-S87		16CH-S86		2
88	Screw	14CH-S88		16CH-S87		2
89	Screen Cover (Large)	14CH-S89		16CH-S88		8
90	Table Screen (Small)	14CH-S90		16CH-S89		2
91	Screen Cover (Small)	14CH-S91		16CH-S90		2
92	Reverse Dog L. H. (A. C. only)	14CH-S92		16CH-S91		2
93	Stop Dog L. H. (A. C. only)	14CH-S93		16CH-S92		1
94	Rate Change Dog "B" (A. C.)	14CH-S94		16CH-S93		1
95	Rate Change Dog "A" (A. C.)	14CH-S95		16CH-S94		2
96	Limit Block L. H. (A. C. only)	14CH-S96		16CH-S95		2
97	Screw (A. C. only)	14CH-S97		16CH-S96		1
98	"T" Bolt (A. C. only)	14CH-S98		16CH-S97		4
99	Stop Dog R. H. (A. C. only)	14CH-S99		16CH-S98		8
100	Hex Nut (A. C. only)	14CH-S100		16CH-S99		1
101	Reverse Dog R. H. (A. C. only)	14CH-S101		16CH-S100		8
102	Limit Block R. H. (A. C. only)	14CH-S102		16CH-S101		1
103	Screw (Auto cycle only)	14CH-S103		16CH-S102		1
104	Table Coolant Guard (w/auto cycle only)	14CH-S104a		16CH-S103		10
105	Table (Auto cycle)	14CH-S105a				11
			14CH-S104b	16CH-S104c		1
					16CH-S104d	1
			14CH-S105b			1
				16CH-S105c		1
					16CH-S105d	1



— NOTE —
BEVEL GEARS ARE SHIPPED
IN MATED SETS ONLY

KEARNEY & TRECKER
MILWAUKEE
SERIAL 11000

WHEN ORDERING PARTS
REPORT SERIAL NUMBER
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FIG. 22 - HEAD POWER FEED BRACKET

Fig. 22 - Head Power Feed Bracket

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
1	Inner telescopic tube and flange	3CH-T1	4CH-T1	1
2	Fil hd screw, 3/8-16 x 1-1/16"	3CH-T2	4CH-T2	4
3	Snap ring	3CH-T3	4CH-T3	1
4	Hd feed drive gear washer	3CH-T4	4CH-T4	1
5	Hd feed drive miter gear brg	3CH-T5	4CH-T5	1
6	Hd feed drive miter gear (Upper)	3CH-T6	4CH-T6	1
7	Pin, 3/16 x 9/32"	3CH-T7	4CH-T7	1
8	Expansion plug, 1-3/16"	3CH-T8	4CH-T8	1
9	Timken brg. 07204B-07079	3CH-T9	4CH-T9	2
10	Hi-pro key, HP-606	3CH-T10	4CH-T10	2
11	Hd feed take-off gear	3CH-T11	4CH-T11	1
12	Vert hd feed miter gear	3CH-T12	4CH-T12	1
13	Feed take-off gear shaft	3CH-T13	4CH-T13	1
14	Hi-pro key, HP-706	3CH-T14	4CH-T14	1
15	Hd feed take-off bevel gear	3CH-T15	4CH-T15	1
16	Fitting washer	3CH-T16	4CH-T16	7
17	Hd feed starting lever eccentric and pinion	3CH-T17	4CH-T17	1
18	Trip plunger (Lower)	3CH-T18	4CH-T18	1
19	Starting lever brg	3CH-T19	4CH-T19	1
20	Fil hd screw, 1/4-20 x 1/2"	3CH-T20	4CH-T20	3
21	Trip plunger shoe	3CH-T21	4CH-T21	2
22	Acme Blue Label dowel, 3/8 x 1"	3CH-T22	4CH-T22	2
23	Vert hd feed trip equalizing lever	3CH-T23	4CH-T23	1
24	Vert hd trip detent	3CH-T24	4CH-T24	1
25	Equalizing lever plug	3CH-T25	4CH-T25	1
26	Spring	3CH-T26	4CH-T26	1
27	Detent lever	3CH-T27	4CH-T27	1
28	Detent lever stud	3CH-T28	4CH-T28	1
29	Detent spacer	3CH-T29	4CH-T29	1
30	Spring post	3CH-T30	4CH-T30	2
31	Fil hd screw, 5/16-18 x 1"	3CH-T31		2
31	Allen hd screw, 5/16-18 x 3/4"		4CH-T31	2
32	Lockwasher, 5/16"	3CH-T32	4CH-T32	2
33	Hd feed clutch shifter	3CH-T33	4CH-T33	1
34	Acme Blue Label dowel, 1/4 x 3/4"	3CH-T34	4CH-T34	1
35	Trip plunger	3CH-T35	4CH-T35	1
36	Fil hd screw, 5/16-18 x 7/16"	3CH-T36	4CH-T36	2
37	Trip plunger connecting block	3CH-T37	4CH-T37	1
38	Handwheel shaft and bevel pinion	3CH-T38	4CH-T38	1
39	New Departure brg. 20206	3CH-T39	4CH-T39	1
40	Dog pt set screw	3CH-T40	4CH-T40	1
41	Hd feed reverse bevel gear bushing	3CH-T41	4CH-T41	2
42	Hd feed reverse clutch miter gear	3CH-T42	4CH-T42	2
43	Thrust washer	3CH-T43	4CH-T43	1
44	Clutch shaft bevel brg retainer	3CH-T44	4CH-T44	1
45	Reverse clutch shaft bevel gear	3CH-T45	4CH-T45	1
46	Expansion plug, 1-3/8"	3CH-T46	4CH-T46	1
47	Fil hd screw, 3/8-16 x 7/8"	3CH-T47	4CH-T47	4
48	Reverse clutch shaft end brg	3CH-T48	4CH-T48	1
49	Hd feed reverse clutch	3CH-T49	4CH-T49	1

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
50	Hd feed reverse clutch shaft	3CH-T50	4CH-T50	1
51	Serrated dial collar	3CH-T51	4CH-T51	1
52	Socket pt screw, 1/4 x 5/16"	3CH-T52	4CH-T52	1
53	Socket set screw, 1/4 x 1/4"	3CH-T53	4CH-T53	1
54	Graduated dial	3CH-T54	4CH-T54	1
55	Spring	3CH-T55	4CH-T55	1
56	Graduated dial spring retainer	3CH-T56	4CH-T56	1
57	Fil hd screw, 10-32 x 1/2"	3CH-T57	4CH-T57	3
58	Pin retainer spring	3CH-T58	4CH-T58	1
59	Hd adj handwheel	3CH-T59	4CH-T59	1
60	Handwheel retaining pin	3CH-T60	4CH-T60	1
61	Rockwood handle, 3QA	3CH-T61	4CH-T61	1
62	Adj screw	3CH-T62	4CH-T62	1
63	Lockwasher, 5/16"	3CH-T63	4CH-T63	1
64	Hyatt brg. 93416	3CH-T64	4CH-T64	1
65	Vert hd handwheel clutch	3CH-T65	4CH-T65	1
66	Handwheel clutch	3CH-T66	4CH-T66	1
67	Handwheel clutch knob	3CH-T67	4CH-T67	1
68	Clutch washer	3CH-T68	4CH-T68	1
69	Hex nut, 5/16-24	3CH-T69	4CH-T69	1
70	Handwheel release rod	3CH-T70	4CH-T70	1
71	Handwheel release rod pin	3CH-T71	4CH-T71	1
72	Vert handwheel release shaft	3CH-T72	4CH-T72	1
73	Spring	3CH-T73	4CH-T73	1
74	Handwheel shaft retainer bushing	3CH-T74	4CH-T74	1
75	Fil hd screw, 1/4-20 x 1/2"	3CH-T75	4CH-T75	10
76	Hd feed starting lever	3CH-T76	4CH-T76	1
77	Taper pin, #3 x 1-1/2"	3CH-T77	4CH-T77	1
78	Fil hd screw, 5/16-18 x 1-1/4"	3CH-T78	4CH-T78	2
79	Indicator cap	3CH-T79	4CH-T79	1
80	Starrett indicator (Standard)	3CH-T80	4CH-T80	1
81	Acme Blue Label dowel, 1/4 x 1-3/8"	3CH-T81	4CH-T81	2
82	Fil hd screw, 1/4-28 x 1"	3CH-T82	4CH-T82	1
83	Gits oiler, RS-532	3CH-T83	4CH-T83	2
84	Socket cap screw, 3/8 x 1"	3CH-T84	4CH-T84	2
85	Vert hd power feed bracket	3CH-T85	4CH-T85	1
86	Plug, 1/2-13 x 1/2"		4CH-T86	1
87	Socket cap screw, 5/8 x 1-1/4"	3CH-T87	4CH-T87	*5
88	Expansion plug, 2-1/4" diam	3CH-T88	4CH-T88	1
89	Indicator level carrier	3CH-T89	4CH-T89	1
90	Spring	3CH-T90	4CH-T90	1
91	Pin	3CH-T91	4CH-T91	1
92	Indicator lever	3CH-T92	4CH-T92	1
93	Precision stop plunger	3CH-T93	4CH-T93	1
94	Spring	3CH-T94	4CH-T94	1
95	Stop screw	3CH-T95	4CH-T95	1
96	Vert hd handwheel release yoke	3CH-T96	4CH-T96	1
97	Release yoke pin	3CH-T97	4CH-T97	1
98	Release yoke carrier plate	3CH-T98	4CH-T98	1
99	Precision stop trip plunger	3CH-T99	4CH-T99	1
100	Acme Blue Label dowel, 1/2 x 1-1/2"	3CH-T100	4CH-T100	2
101	Power feed bracket cover plate	3CH-T101	4CH-T101	1
102	Flat hd screw, 10-32 x 3/8"	3CH-T102	4CH-T102	2

*Six used on 4CH machines

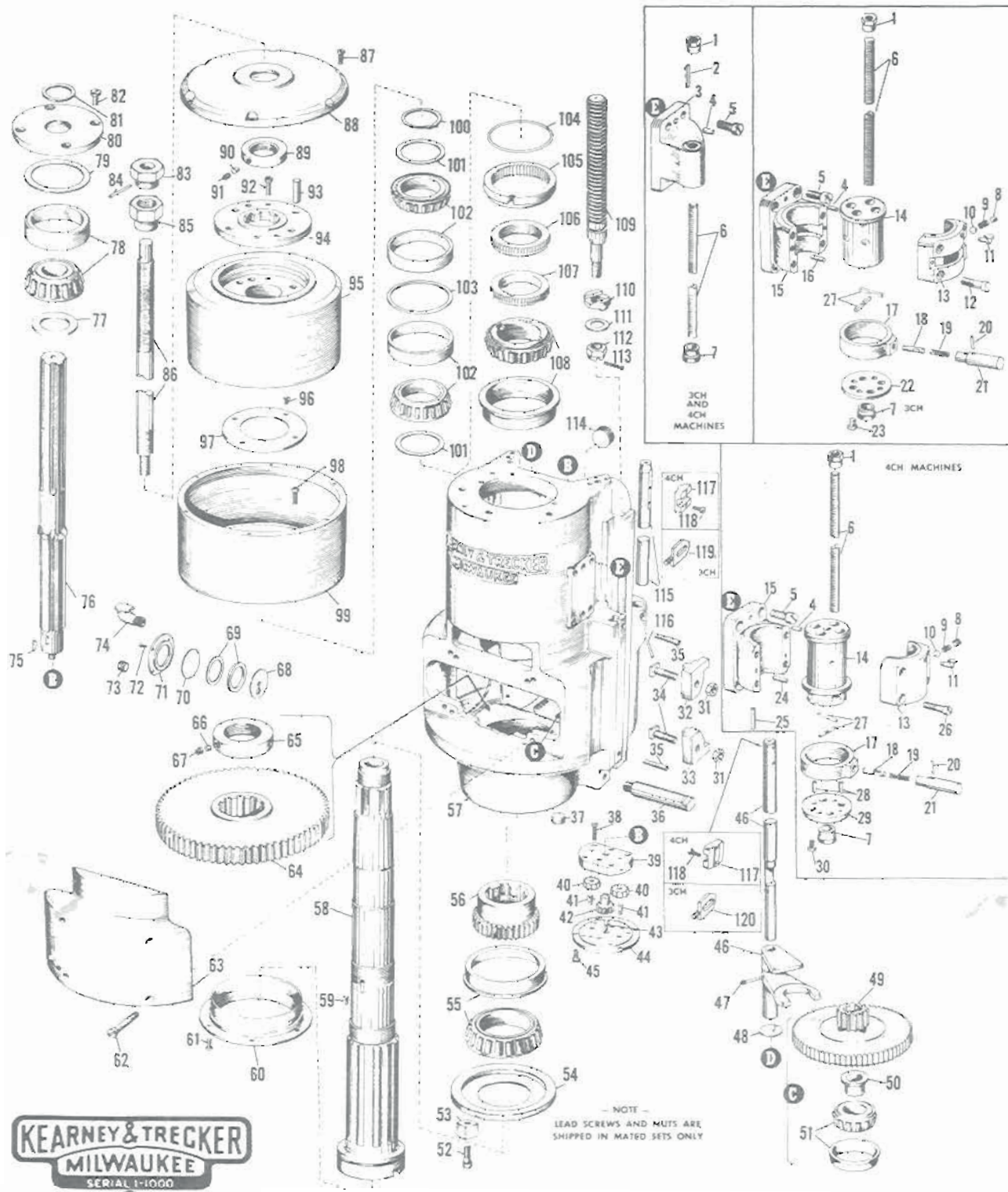


FIG. 23 - VERTICAL HEAD

FIG. 23A - VERTICAL HEAD

Item No.	Part Name and Description	Code No.		Qty.	Item No.	Part Name and Description	Code No.		Qty.
		14CH	16CH				14CH	16CH	
1	Draw Bolt Head	14CH-U1	16CH-U1	1	57	Oil Retainer	14CH-U57	16CH-U57	1
2	Roll Pin	14CH-U2	16CH-U2	1	58	Spindle Bearing Key	14CH-U58	16CH-U58	1
3	Draw Bolt Nut	14CH-U3	16CH-U3	1	59	Key	14CH-U59	16CH-U59	1
4	Arbor Draw Bolt	14CH-U4		1	60	Spindle	14CH-U60		1
			16CH-U4	1				16CH-U60	1
5	Set Screw	14CH-U5	16CH-U5	2	61	Adjusting Vertical Head	14CH-U61		1
6	Dowel	14CH-U6	16CH-U6	2				16CH-U61	1
7	Expansion Plug	14CH-U7	16CH-U7	1	62	Plug	14CH-U62	16CH-U62	2
8	Cover Screw	14CH-U8	16CH-U8	6	63	Baffle Plate	14CH-U63	16CH-U63	2
9	Flywheel Cover	14CH-U9	16CH-U9	1	64	Vent Plate	14CH-U64	16CH-U64	1
10	Set Screw	14CH-U10	16CH-U10	1	65	Trip Screw	14CH-U65	16CH-U65	2
11	Spindle Nut	14CH-U11	16CH-U11	1	66	"T" Bolt	14CH-U66	16CH-U66	2
12	Set Screw	14CH-U12	16CH-U12	1	67	Upper Trip Dog	14CH-U67	16CH-U67	1
13	Draw Rod Sleeve	14CH-U13	16CH-U13	1	68	Lower Trip Dog	14CH-U68	16CH-U68	1
14	Flywheel	14CH-U14		1	69	Nut	14CH-U69	16CH-U69	2
			16CH-U14	1	70	Plug	14CH-U70	16CH-U70	1
15	Cover Plate Screw	14CH-U15	16CH-U15	4	71	Plug	14CH-U71	16CH-U71	2
16	Cover Plate	14CH-U16		1	72	Clamp Rod	14CH-U72	16CH-U72	1
			16CH-U16	1	73	Pipe Plug	14CH-U73	16CH-U73	1
17	Housing Screw	14CH-U17		5	74	Small Spindle Gear	14CH-U74		1
			16CH-U17	5				16CH-U74	1
18	Flywheel Housing	14CH-U18		1	75	Bearing	14CH-U75		1
			16CH-U18	1				16CH-U75	1
19	Gits Oiler	14CH-U19	16CH-U19	1	76	Spindle Oil Slinger	14CH-U76		1
20	Pipe Plug	14CH-U20	16CH-U20	1				16CH-U76	1
21	Oil Window	14CH-U21	16CH-U21	1	77	Spindle Drive Key	14CH-U77	16CH-U77	2
22	Snap Ring	14CH-U22		2	78	Drive Key Screw	14CH-U78	16CH-U78	2
			16CH-U22	1	79	Plug	14CH-U79	16CH-U79	1
23	Fitting Washer	14CH-U23	16CH-U23	2	80	Nylon Ball	14CH-U80	16CH-U80	2
24	Bearing Timken	14CH-U24	16CH-U24	2	81	Oil Pump Body	14CH-U81	16CH-U81	1
25	Spindle Bearing Nut	14CH-U25		1	82	Pump Eccentric	14CH-U82	16CH-U82	1
			16CH-U25	1	83	Spring	14CH-U83	16CH-U83	1
26	Collar Nut Shoe	14CH-U26	16CH-U26	4	84	Pump Piston	14CH-U84	16CH-U84	1
27	Collar Nut Screw	14CH-U27	16CH-U27	4	85	Plug	14CH-U85	16CH-U85	1
28	Spindle Nut Spacer	14CH-U28		1	86	Pump Body Screw	14CH-U86	16CH-U86	4
			16CH-U28	1	87	Stud	14CH-U87	16CH-U87	1
29	Bearing Timken	14CH-U29		1	88	Pump Inlet Sleeve	14CH-U88	16CH-U88	1
			16CH-U29	1	89	Bushing	14CH-U89	16CH-U89	2
30	Spherical Collar Nut	14CH-U30		1	90	Bearing Lockwasher	14CH-U90	16CH-U90	1
			16CH-U30	1	91	Bearing Lock Nut	14CH-U91	16CH-U91	1
31	Spherical Washer	14CH-U31		1	92	Shifter Rod	14CH-U92		1
			16CH-U31	1				16CH-U92	1
32	Drive Washer	14CH-U32	16CH-U32	1	93	Shifter Fork	14CH-U93		1
33	Washer	14CH-U33	16CH-U33	1				16CH-U93	1
34	Stop Nut	14CH-U34	16CH-U34	1	94	Dowel Screw	14CH-U94		1
35	Head Feed Screw	14CH-U35		1				16CH-U94	1
			16CH-U35	1	95	Expansion Plug	14CH-U95	16CH-U95	1
36	Counter Shaft	14CH-U36		1	96	Drive Pinion	14CH-U96		1
			16CH-U36	1				16CH-U96	1
37	Felt Washer	14CH-U37		1	97	Drive Gear	14CH-U97		1
			16CH-U37	1				16CH-U97	1
38	Cover Screw	14CH-U38		4	98	Bearing	14CH-U98	16CH-U98	2
			16CH-U38	6	99	Cover	14CH-U99		1
39	Spacer	14CH-U39		1				16CH-U99	1
			16CH-U39	1	100	Set Screw	14CH-U100	16CH-U100	2
40	Snap Ring	14CH-U40	16CH-U40	2	101	Jam Nut	14CH-U101	16CH-U101	4
41	Bearing	14CH-U41		2	102	Dowel	14CH-U102	16CH-U102	2
			16CH-U41	2	103	Cover Screw	14CH-U103	16CH-U103	1
42	Dowel	14CH-U42	16CH-U42	1	104	Roll Pin	14CH-U104	16CH-U104	1
43	Range Change Handle	14CH-U43	16CH-U43	1	105	Stop Cover	14CH-U105	16CH-U105	1
44	Roll Pin	14CH-U44	16CH-U44	1	106	Locating Ring	14CH-U106	16CH-U106	1
45	Spring	14CH-U45	16CH-U45	1	107	Steel Ball	14CH-U107	16CH-U107	1
46	Bearing	14CH-U46	16CH-U46	1	108	Spring	14CH-U108	16CH-U108	1
47	Range Change Pinion	14CH-U47		1	109	Roll Pin	14CH-U109	16CH-U109	1
			16CH-U47	1	110	Bracket Screw	14CH-U110	16CH-U110	4
48	Plug	14CH-U48	16CH-U48	1	111	Stop Bracket	14CH-U111	16CH-U111	1
49	Dowel	14CH-U49		1	112	Roll Pin	14CH-U112	16CH-U112	1
			16CH-U49	1	113	Dowel	14CH-U113	16CH-U113	2
50	Vertical Head Cover	14CH-U50		1	114	Roll Pin	14CH-U114	16CH-U114	2
			16CH-U50	1	115	Ratchet Pin	14CH-U115	16CH-U115	1
51	Large Spindle Gear	14CH-U51		1	116	Spring	14CH-U116	16CH-U116	1
			16CH-U51	1	117	Index Handle	14CH-U117	16CH-U117	1
52	Escutcheon Pin	14CH-U52	16CH-U52	4	118	Stop Barrel	14CH-U118	16CH-U118	1
53	Speed Plate (Fast)	14CH-U53	16CH-U53	1	119	Pin Key	14CH-U119	16CH-U119	2
54	Speed Plate (Slow)	14CH-U54	16CH-U54	1	120	Stop Screw	14CH-U120	16CH-U120	4
55	Cover Screw	14CH-U55		4	121	Gear Collar	14CH-U121	16CH-U121	4
			16CH-U55	4	122	Dowel	14CH-U122	16CH-U122	2
56	Oil Retainer Screw	14CH-U56	16CH-U56	6					

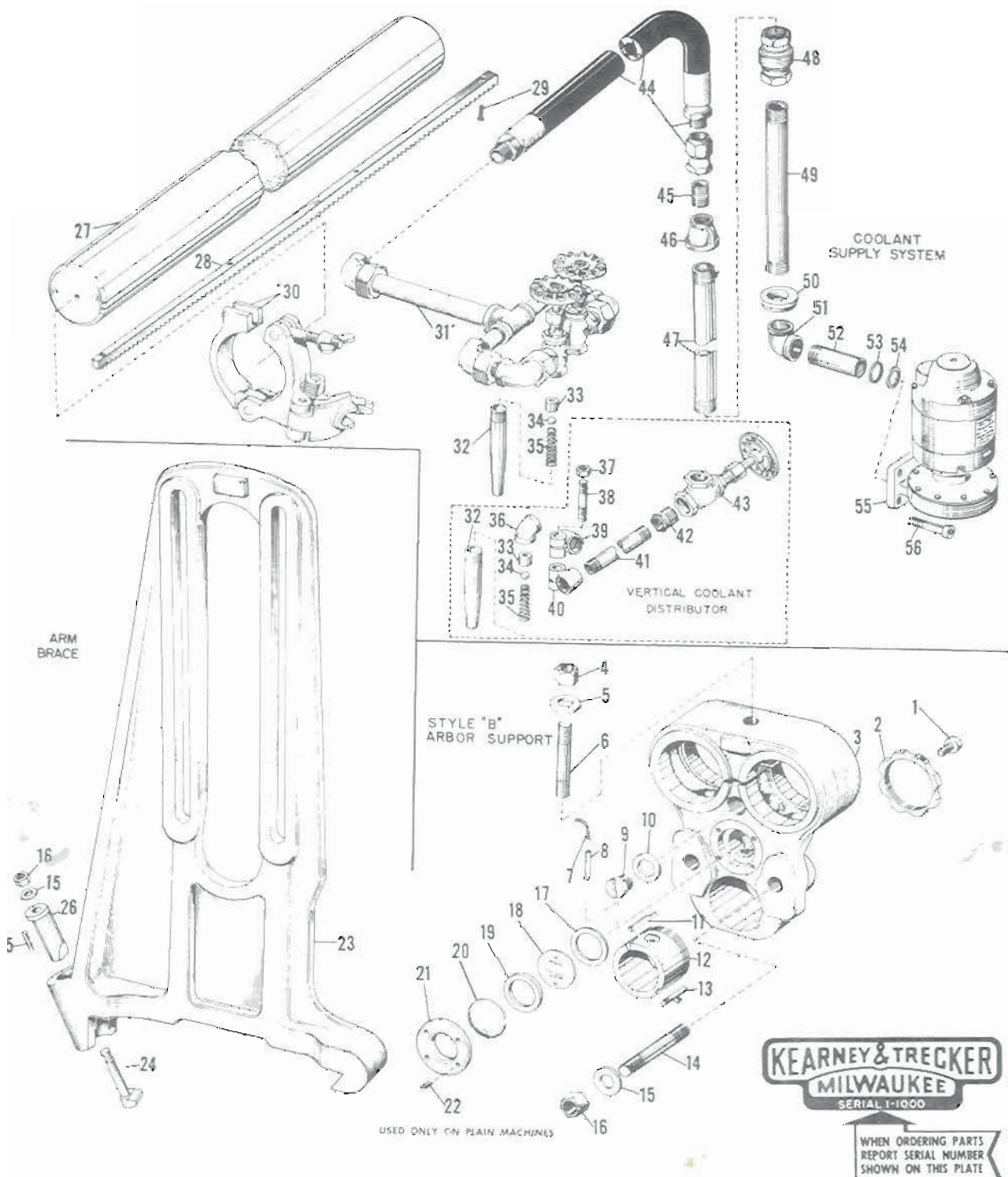


FIG. 24 - COOLANT SUPPLY SYSTEM, STYLE B ARBOR SUPPORT AND ARM BRACE

BUILDERS OF PRECISION AND PRODUCTION



MACHINE TOOLS FOR MILLING AND BORING

Fig. 24 - Coolant Supply System, Style B Arbor Support And Arm Brace

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
STYLE B ARBOR SUPPORT AND ARM BRACE				
1	Fil hd screw, 3/8-16 x 11/16"	3CH-V1	4CH-V1	1
2	Bushing nut	3CH-V2	4CH-V2	1
3	Style B arbor support	3CH-V3	4CH-V3	1
4	Hex nut, 3/4-10	3CH-V4	4CH-V4	1
5	Washer, 3/4"	3CH-V5	4CH-V5	1
6	Stud	3CH-V6	4CH-V6	1
7	Oil wicking	3CH-V7	4CH-V7	1
8	Copper tube, 1/4 x 2-7/8"	3CH-V8	4CH-V8	1
9	Oil filler plug	3CH-V9	4CH-V9	1
10	Fibre washer	3CH-V10	4CH-V10	1
11	Oil retainer	3CH-V11	4CH-V11	1
12	Arbor support bushing	3CH-V12	4CH-V12	1
13	Key	3CH-V13	4CH-V13	1
14	Stud	3CH-V14	4CH-V14	2
15	Washer, 5/8"	3CH-V15	4CH-V15	3
16	Hex nut, 5/8-11	3CH-V16	4CH-V16	3
17	Oil gage washer	3CH-V17	4CH-V17	1
18	Oil gage back plate	3CH-V18	4CH-V18	1
19	Oil gage washer	3CH-V19	4CH-V19	1
20	Oil gage glass	3CH-V20	4CH-V20	1
21	Oil gage plate	3CH-V21	4CH-V21	1
22	Oval hd screw, 10-32 x 15/32"	3CH-V22	4CH-V22	4
23	Arm brace	3CH-V23	4CH-V23	1
24	Clamp stud	3CH-V24	4CH-V24	1
25	Spring	3CH-V25	4CH-V25	1
26	Clamp sleeve	3CH-V26	4CH-V26	1
OVERARMS				
27	Overarm (Horiz mach only)	3CH-V27	4CH-V27	2
28	Overarm rack	3CH-V28	4CH-V28	2
29	Fil hd screw, 5/16-18 x 11/16"	3CH-V29		8
29	Fil hd screw, 5/16-24 x 11/16"		4CH-V29	10

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
COOLANT SUPPLY SYSTEM				
*30	Coolant distributor support assy	3CH-V30	4CH-V30	1
*31	Coolant distributor complete	3CH-V31	4CH-V31	1
32	Coolant nozzle	3CH-V32	4CH-V32	†2
33	Nozzle ball retainer	3CH-V33	4CH-V33	†2
34	Steel ball, 1/2" diam	3CH-V34	4CH-V34	†2
35	Spring	3CH-V35	4CH-V35	†2
36	Elbow, 1/2" x 90°	3CH-V36	4CH-V36	1
37	Hex nut, 7/16-14	3CH-V37	4CH-V37	1
38	Stud	3CH-V38	4CH-V38	1
39	Coolant pipe clamp	3CH-V39	4CH-V39	1
40	Coolant pipe clamp	3CH-V40	4CH-V40	1
41	Coolant pipe	3CH-V41	4CH-V41	1
42	Hex reducer bushing, 3/4 x 1/2"	3CH-V42	4CH-V42	1
43	Angle valve, 3/4" x 90°	3CH-V43	4CH-V43	1
44	Flexible coolant hose	3CH-V44	4CH-V44	1
45	Nipple, 3/4 x 3"	3CH-V45	4CH-V45	1
46	Reducer, 1 x 3/4"	3CH-V46	4CH-V46	1
47	Wrought iron pipe, 1 x 23"	3CH-V47		1
47	Wrought iron pipe, 1 x 24-3/4"		4CH-V47	1
48	Vert screwed brass check valve, No. 24 x 1"	3CH-V48	4CH-V48	1
49	Wrought iron pipe, 1 x 8"	3CH-V49	4CH-V49	1
50	Coolant pipe seal	3CH-V50	4CH-V50	1
51	Elbow, unbanded, 1" x 90°	3CH-V51	4CH-V51	1
52	Coolant pipe	3CH-V52	4CH-V52	1
53	"O" Ring, #24, 1/8 x 1-5/16 x 1-9/16"	3CH-V53	4CH-V53	1
54	Sealing washer	3CH-V54	4CH-V54	1
55	Special gusher pump	3CH-V55	4CH-V55	1
56	Sock cap screw, 1/2 x 7/8"	3CH-V56	4CH-V56	4

*Used only on plain machines

†Only one used on vertical machines

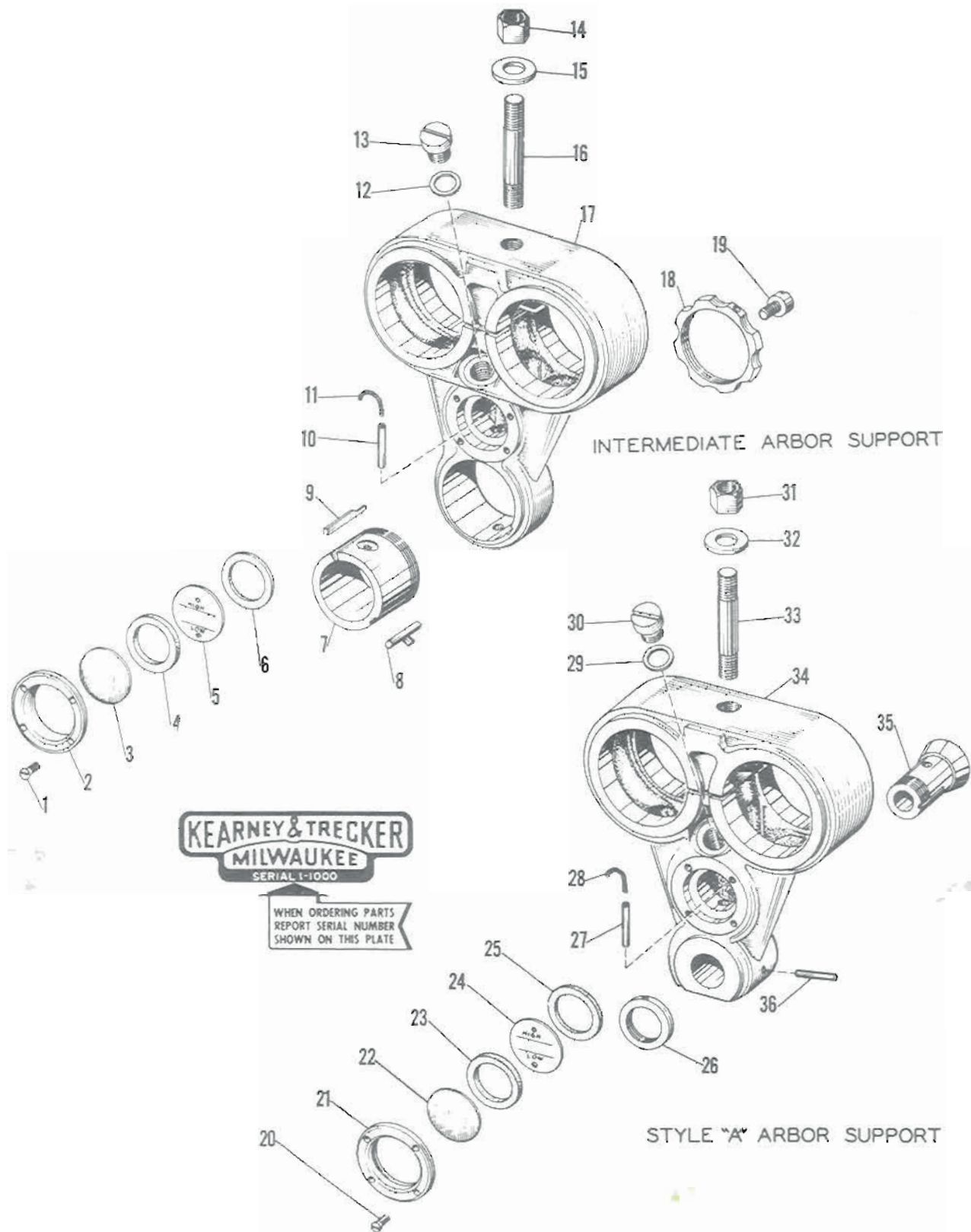


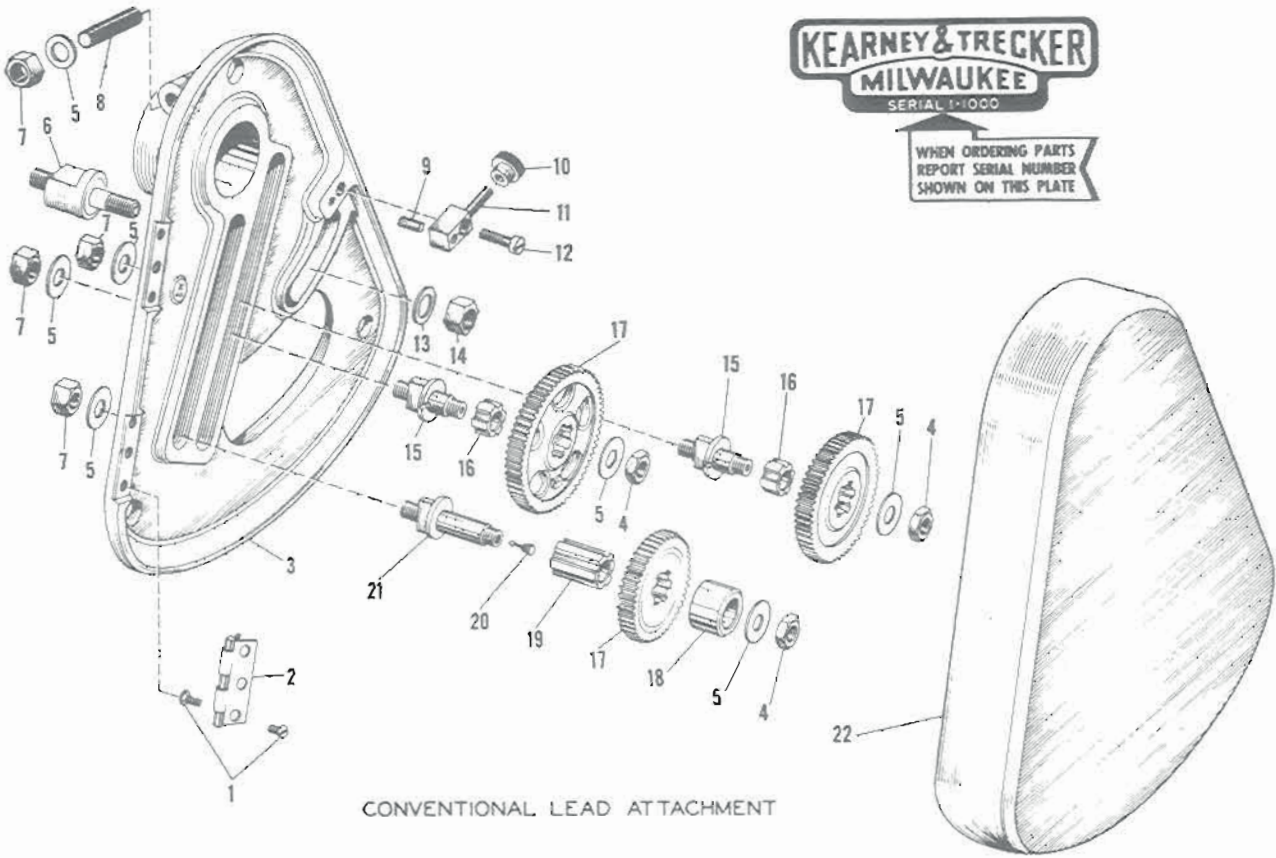
FIG. 25 - INTERMEDIATE STYLE ARBOR SUPPORT AND STYLE A ARBOR SUPPORT

FIG. 25 - INTERMEDIATE STYLE ARBOR SUPPORT AND STYLE A ARBOR SUPPORT

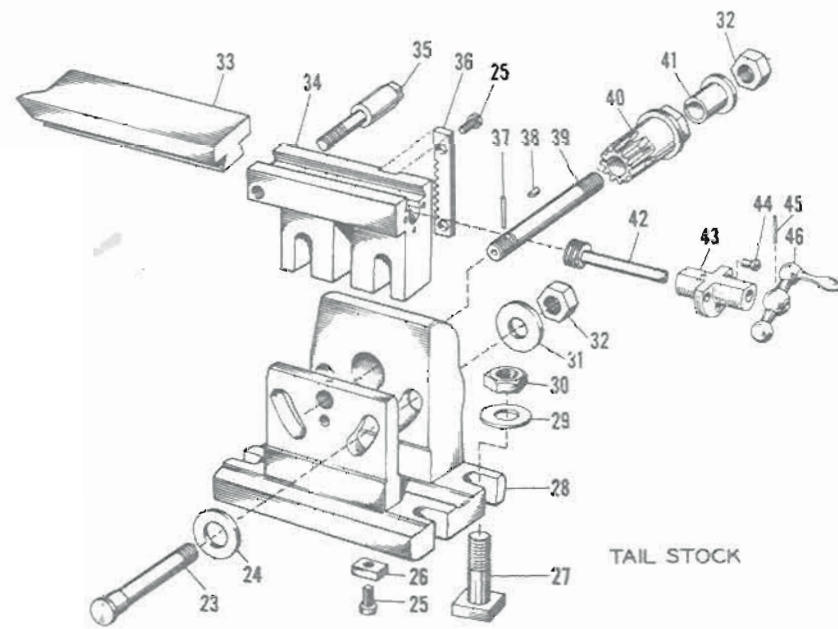
Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
INTERMEDIATE ARBOR SUPPORT				
1	Oval hd screw, 10-32 x 15/32"	3CH-W1	4CH-W1	4
2	Oil gage plate	3CH-W2	4CH-W2	1
3	Oil gage glass	3CH-W3	4CH-W3	1
4	Oil gage washer	3CH-W4	4CH-W4	1
5	Oil gage back plate	3CH-W5	4CH-W5	1
6	Oil gage washer	3CH-W6	4CH-W6	1
7	Arbor support bushing	3CH-W7	4CH-W7	1
8	Key	3CH-W8	4CH-W8	1
9	Oil retainer	3CH-W9	4CH-W9	1
10	Copper tube, 1/4 x 2-5/16"	3CH-W10		1
10	Copper tube, 1/4 x 2-1/4"		4CH-W10	1
11	Oil wicking	3CH-W11	4CH-W11	1
12	Fibre washer	3CH-W12	4CH-W12	1
13	Oil filler plug	3CH-W13	4CH-W13	1
14	Hex nut, 3/4-10	3CH-W14	4CH-W14	1
15	Washer, 3/4"	3CH-W15	4CH-W15	1
16	Stud	3CH-W16	4CH-W16	1
17	Intermediate arbor support	3CH-W17	4CH-W17	1
18	Bushing nut	3CH-W18	4CH-W18	1
19	Fil hd screw, 3/8-16 x 11/16"	3CH-W19	4CH-W19	1
STYLE A ARBOR SUPPORT				
20	Oval hd screw, 10-32 x 15/32"	3CH-W20	4CH-W20	4
21	Oil gage plate	3CH-W21	4CH-W21	1
22	Oil gage glass	3CH-W22	4CH-W22	1
23	Oil gage washer	3CH-W23	4CH-W23	1
24	Oil gage back plate	3CH-W24	4CH-W24	1
25	Oil gage washer	3CH-W25	4CH-W25	1
26	Bushing nut	3CH-W26	4CH-W26	1
27	Copper tube, 1/4 x 3"	3CH-W27		1
27	Copper tube, 1/4 x 3-7/8"		4CH-W27	1
28	Oil wicking	3CH-W28	4CH-W28	1
29	Fibre washer	3CH-W29	4CH-W29	1
30	Oil filler plug	3CH-W30	4CH-W30	1
31	Hex nut, 3/4-10	3CH-W31	4CH-W31	1
32	Washer, 3/4"	3CH-W32	4CH-W32	1
33	Stud	3CH-W33	4CH-W33	1
34	Style A arbor support	3CH-W34	4CH-W34	1
35	Bushing	3CH-W35	4CH-W35	1
36	Pin	3CH-W36	4CH-W36	1

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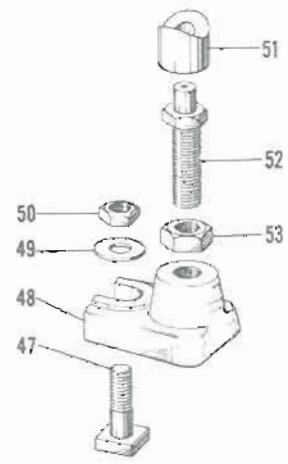
WHEN ORDERING PARTS
 REPORT SERIAL NUMBER
 SHOWN ON THIS PLATE



CONVENTIONAL LEAD ATTACHMENT



TAIL STOCK



STEADY REST

FIG. 26 - CONVENTIONAL LEAD ATTACHMENT, TAIL STOCK & STEADY REST

Fig. 26 - Conventional Lead Attachment, Tail Stock and Steady Rest

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
CONVENTIONAL LEAD ATTACHMENT				
1	Flat head screw, 10-32 x 1/2"	3CH-X1	4CH-X1	12
2	Butt hinge, #800 Stanley	3CH-X2	4CH-X2	2
3	Change gear bracket	3CH-X3	4CH-X3	1
4	Hex nut, 1/2-13	3CH-X4	4CH-X4	3
5	Washer, 1/2"	3CH-X5	4CH-X5	7
6	Change gear bracket stud	3CH-X6	4CH-X6	1
7	Hex nut, 1/2-13	3CH-X7	4CH-X7	4
8	Stud	3CH-X8	4CH-X8	1
9	Acme Blue Label dowel, 1/4 x 7/8"	3CH-X9	4CH-X9	1
10	Knurled nut	3CH-X10	4CH-X10	1
11	Door lock bolt	3CH-X11	4CH-X11	1
12	Fil hd screw, 5/16-18 x 1"	3CH-X12	4CH-X12	1
13	Washer	3CH-X13	4CH-X13	1
14	Hex nut	3CH-X14	4CH-X14	1
15	Idler stud	3CH-X15	4CH-X15	2
16	Splined bushing (Short)	3CH-X16	4CH-X16	2
17	Change gears			
	Change gear, 24T-12P	3CH-X17	4CH-X17	1
	Change gear, 28T-12P	3CH-X18	4CH-X18	1
	Change gear, 32T-12P	3CH-X19	4CH-X19	1
	Change gear, 40T-12P	3CH-X20	4CH-X20	1
	Change gear, 44T-12P	3CH-X21	4CH-X21	1
	Change gear, 48T-12P	3CH-X22	4CH-X22	2
	Change gear, 56T-12P	3CH-X23	4CH-X23	1
	Change gear, 64T-12P	3CH-X24	4CH-X24	1
	Change gear, 72T-12P	3CH-X25	4CH-X25	1
	Change gear, 86T-12P	3CH-X26	4CH-X26	1
	Change gear, 100T-12P	3CH-X27	4CH-X27	1
18	Spacing collars			
	Spacing collar (Small)	3CH-X28	4CH-X28	1
	Spacing collar (Large)	3CH-X29	4CH-X29	1
19	Splined bushing, (Long)	3CH-X30	4CH-X30	1
20	Gits oiler, RS-531	3CH-X31	4CH-X31	1
21	Differential index com- pound stud	3CH-X32	4CH-X32	1
22	Change gear bracket cover	3CH-X33	4CH-X33	1

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
TAILSTOCK				
23	Clamp screw	3CH-X34	4CH-X34	2
24	Washer, 5/8"	3CH-X35	4CH-X35	2
25	Fil hd screw, 5/16-18 x 11/16"			
		3CH-X36	4CH-X36	4
26	Tongue	3CH-X37	4CH-X37	2
27	T-Bolt	3CH-X38	4CH-X38	4
28	Tail stock	3CH-X39	4CH-X39	1
29	Washer, 5/8"	3CH-X40	4CH-X40	4
30	Hex nut, 5/8-11	3CH-X41	4CH-X41	4
31	Washer, 5/8"	3CH-X42	4CH-X42	2
32	Hex nut, 3/4"	3CH-X43	4CH-X43	3
33	Center	3CH-X44	4CH-X44	1
34	Center block	3CH-X45	4CH-X45	1
35	Center locking screw	3CH-X46	4CH-X46	1
36	Elevating rack	3CH-X47	4CH-X47	1
37	Taper pin, #1 x 1-1/8"	3CH-X48	4CH-X48	1
38	Hi-pro key, HP-504	3CH-X49	4CH-X49	1
39	Clamping stud	3CH-X50	4CH-X50	1
40	Elevating rack pinion	3CH-X51	4CH-X51	1
41	Sleeve	3CH-X52	4CH-X52	1
42	Center adj worm	3CH-X53	4CH-X53	1
43	Worm sleeve	3CH-X54	4CH-X54	1
44	Fil hd screw, 1/4-20x1/2"	3CH-X55	4CH-X55	3
45	Taper pin, #1 x 13/16"	3CH-X56	4CH-X56	1
46	Ball crank, No. 00	3CH-X57	4CH-X57	1
STEADY REST				
47	T-Bolt	3CH-X58	4CH-X58	1
48	Steady rest base	3CH-X59	4CH-X59	1
49	Washer, 5/8"	3CH-X60	4CH-X60	1
50	Hex nut, 5/8"	3CH-X61	4CH-X61	1
51	Steady rest vee block	3CH-X62	4CH-X62	1
52	Steady rest adjusting screw	3CH-X63	4CH-X63	1
53	Hex nut, 3/4-10	3CH-X64	4CH-X64	1

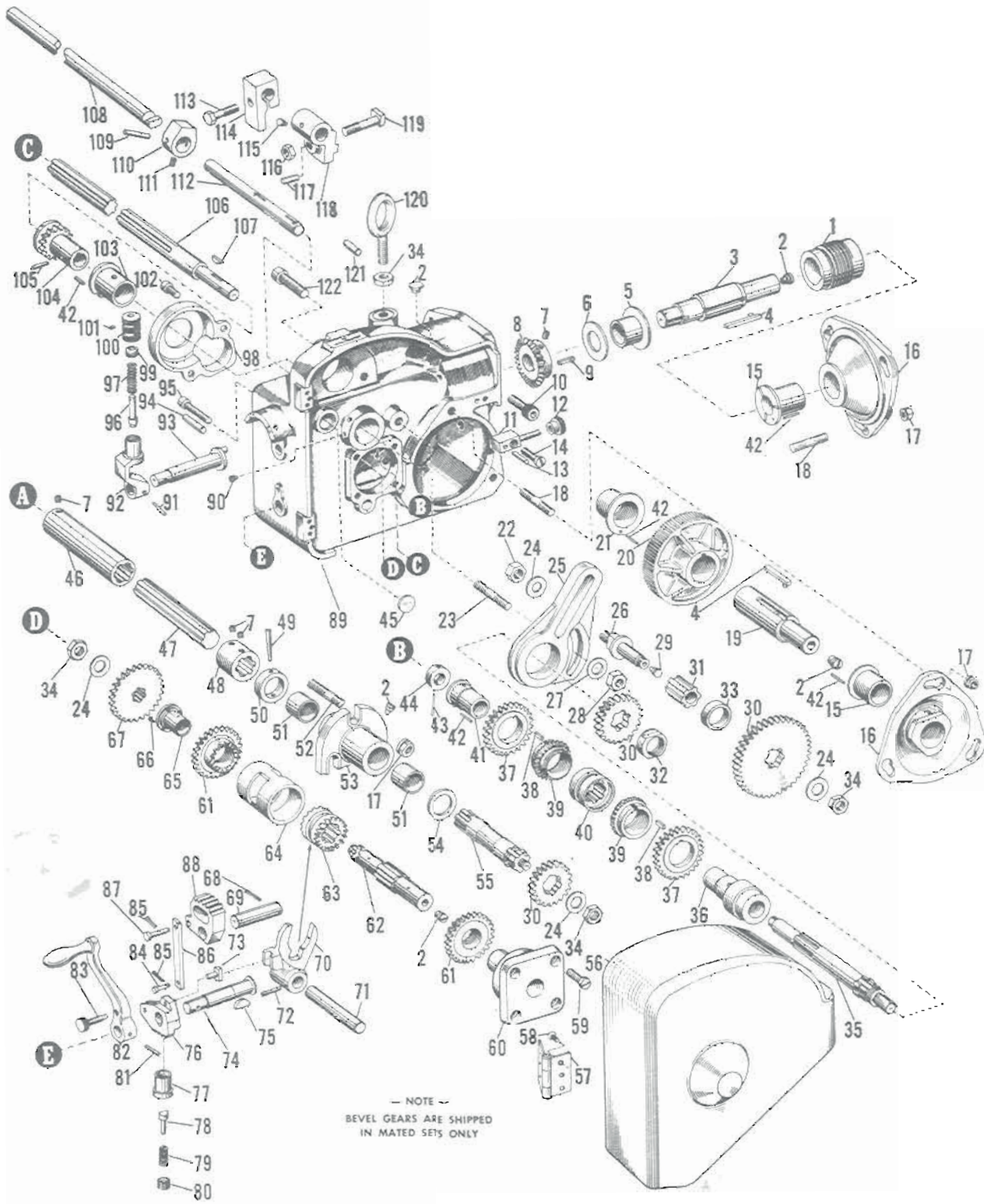


FIG. 27 - LOW LEAD ATTACHMENT

Fig. 27 - Low Lead Attachment

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
1	Worms			
	Worm 24-1	3CH-Y1	4CH-Y1	1
	Worm 96-1	3CH-Y2	4CH-Y2	1
	Worm 24-8	3CH-Y3	4CH-Y3	1
2	Gits oiler, RS-533	3CH-Y4	4CH-Y4	9
3	Worm and worm wheel shaft	3CH-Y5	4CH-Y5	1
4	Key	3CH-Y6	4CH-Y6	2
5	Worm and worm wheel shaft bushing	3CH-Y7	4CH-Y7	1
6	Reverse bevel gear washer	3CH-Y8	4CH-Y8	1
7	Socket cap screw, 5/16 x 5/16"	3CH-Y9	4CH-Y9	4
8	Reverse bevel gear	3CH-Y10	4CH-Y10	1
9	Key	3CH-Y11	4CH-Y11	1
10	Socket cap screw, 1/2-13 x 1-1/2"	3CH-Y12		2
10	Socket cap screw, 5/8-13 x 1-1/2"		4CH-Y12	2
11	Door lock bolt	3CH-Y13	4CH-Y13	1
12	Knurled nut	3CH-Y14	4CH-Y14	1
13	Acme Blue Label dowel, 1/4 x 7/8"	3CH-Y15	4CH-Y15	1
14	Fil hd screw, 5/16-18 x 1"	3CH-Y16	4CH-Y16	1
15	Worm and worm wheel support brg bushing	3CH-Y17	4CH-Y17	2
16	Worm and worm wheel support brg	3CH-Y18	4CH-Y18	2
17	Hex collar nut	3CH-Y19	4CH-Y19	9
18	Stud	3CH-Y20	4CH-Y20	6
19	Table screw extension	3CH-Y21	4CH-Y21	1
20	Worm wheels			
	Worm wheel 24-1	3CH-Y22	4CH-Y22	1
	Worm wheel 96-1	3CH-Y23	4CH-Y23	1
	Worm wheel 24-8	3CH-Y24	4CH-Y24	1
21	Table screw extension bushing	3CH-Y25	4CH-Y25	1
22	Hex nut, 1/2-13	3CH-Y26	4CH-Y26	1
23	Stud	3CH-Y27	4CH-Y27	1
24	Washer, 1/2"	3CH-Y28	4CH-Y28	4
25	Change gear arm	3CH-Y29	4CH-Y29	1
26	Change gear stud	3CH-Y30	4CH-Y30	1
27	Washer, 1/2"	3CH-Y31	4CH-Y31	1
28	Hex nut	3CH-Y32	4CH-Y32	1
29	Gits oiler, RS-531	3CH-Y33	4CH-Y33	1
30	Change gears			
	Change gear, 20T-10P	3CH-Y34	4CH-Y34	2
	Change gear, 21T-10P	3CH-Y35	4CH-Y35	1
	Change gear, 22T-10P	3CH-Y36	4CH-Y36	1
	Change gear, 23T-10P	3CH-Y37	4CH-Y37	1
	Change gear, 24T-10P	3CH-Y38	4CH-Y38	1
	Change gear, 25T-10P	3CH-Y39	4CH-Y39	1
	Change gear, 26T-10P	3CH-Y40	4CH-Y40	1
	Change gear, 27T-10P	3CH-Y41	4CH-Y41	1
	Change gear, 28T-10P	3CH-Y42	4CH-Y42	1
	Change gear, 29T-10P	3CH-Y43	4CH-Y43	1
	Change gear, 30T-10P	3CH-Y44	4CH-Y44	1
	Change gear, 32T-10P	3CH-Y45	4CH-Y45	1
	Change gear, 34T-10P	3CH-Y46	4CH-Y46	1
	Change gear, 36T-10P	3CH-Y47	4CH-Y47	1
	Change gear, 38T-10P	3CH-Y48	4CH-Y48	1
	Change gear, 40T-10P	3CH-Y49	4CH-Y49	1
31	Splined bushing	3CH-Y50	4CH-Y50	1
32	Hand crank shaft nut	3CH-Y51	4CH-Y51	1

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
33	Spacing collar	3CH-Y52	4CH-Y52	1
34	Hex nut, 1/2-13	3CH-Y53	4CH-Y53	4
35	Hand crank shaft	3CH-Y54	4CH-Y54	1
36	Hand crank shaft support brg	3CH-Y55	4CH-Y55	1
37	Hand crank shaft spur gear	3CH-Y56	4CH-Y56	2
38	Key	3CH-Y57	4CH-Y57	2
39	Reverse clutch bevel gear	3CH-Y58	4CH-Y58	2
40	Reverse clutch	3CH-Y59	4CH-Y59	1
41	Hand crank shaft bushing	3CH-Y60	4CH-Y60	1
42	Pin, 1/8 x 1/2"	3CH-Y61	4CH-Y61	5
43	Taper pin, #2 x 1-1/4"	3CH-Y62	4CH-Y62	1
44	Hand crank shaft collar	3CH-Y63	4CH-Y63	1
45	Expansion plug, 1" diam	3CH-Y64	4CH-Y64	1
46	Spiral head drive shaft connector (Long)	3CH-Y65	4CH-Y65	1
47	Spiral head drive shaft extension	3CH-Y66	4CH-Y66	1
48	Spiral head drive shaft connector (Short)	3CH-Y67	4CH-Y67	1
49	Taper pin, #4 x 1-5/8"	3CH-Y68	4CH-Y68	1
50	Spiral head drive shaft collar	3CH-Y69	4CH-Y69	1
51	Spiral head drive shaft support bracket bushing	3CH-Y70	4CH-Y70	2
52	Stud	3CH-Y71	4CH-Y71	3
53	Spiral head drive shaft support bracket	3CH-Y72	4CH-Y72	1
54	Spiral head drive shaft washer	3CH-Y73	4CH-Y73	3
55	Spiral head drive shaft	3CH-Y74	4CH-Y74	1
56	Spiral change gear box cover	3CH-Y75	4CH-Y75	1
57	Stanley butt hinge, No. 800	3CH-Y76	4CH-Y76	2
58	Flat hd screw, 10-32 x 1/2"	3CH-Y77	4CH-Y77	12
59	Fil hd screw, 3/8-16 x 5/8"	3CH-Y78	4CH-Y78	4
60	Reverse gear shaft brg (RH)	3CH-Y79	4CH-Y79	1
61	Reverse gear	3CH-Y80	4CH-Y80	2
62	Reverse gear shaft	3CH-Y81	4CH-Y81	1
63	Reverse gear shaft clutch	3CH-Y82	4CH-Y82	1
64	Reverse gear spacer	3CH-Y83	4CH-Y83	1
65	Reverse gear shaft brg (LH)	3CH-Y84	4CH-Y84	1
66	Flat hd screw, 3/16-32 x 1/2"	3CH-Y85	4CH-Y85	3
67	Reverse shaft driving gear	3CH-Y86	4CH-Y86	1
68	Cotter pin, 7/64 x 1"	3CH-Y87	4CH-Y87	1
69	Trip segment shaft	3CH-Y88	4CH-Y88	1
70	Clutch shifter	3CH-Y89	4CH-Y89	1
71	Clutch shifter shaft	3CH-Y90	4CH-Y90	1
72	Taper pin set screw	3CH-Y91	4CH-Y91	1
73	Detent block shifter shoe	3CH-Y92	4CH-Y92	1
74	Direction lever shaft	3CH-Y93	4CH-Y93	1
75	Hi-pro key, HP-706	3CH-Y94	4CH-Y94	1
76	Detent block	3CH-Y95	4CH-Y95	1
77	Detent plunger sleeve	3CH-Y96	4CH-Y96	1
78	Detent plunger	3CH-Y97	4CH-Y97	1
79	Detent spring	3CH-Y98	4CH-Y98	1
80	Detent plunger screw	3CH-Y99	4CH-Y99	1
81	Taper pin, #3 x 1-1/8"	3CH-Y100	4CH-Y100	1

* Used only on 4CH machines

Fig. 27 - Low Lead Attachment

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
33	Spacing collar	3CH-Y52	4CH-Y52	1
34	Hex nut, 1/2-13	3CH-Y53	4CH-Y53	4
35	Hand crank shaft	3CH-Y54	4CH-Y54	1
36	Hand crank shaft support brg	3CH-Y55	4CH-Y55	1
37	Hand crank shaft spur gear	3CH-Y56	4CH-Y56	2
38	Key	3CH-Y57	4CH-Y57	2
39	Reverse clutch bevel gear	3CH-Y58	4CH-Y58	2
40	Reverse clutch	3CH-Y59	4CH-Y59	1
41	Hand crank shaft bushing	3CH-Y60	4CH-Y60	1
42	Pin, 1/8 x 1/2"	3CH-Y61	4CH-Y61	5
43	Taper pin, #2 x 1-1/4"	3CH-Y62	4CH-Y62	1
44	Hand crank shaft collar	3CH-Y63	4CH-Y63	1
45	Expansion plug, 1" diam	3CH-Y64	4CH-Y64	1
46	Spiral head drive shaft connector (Long)	3CH-Y65	4CH-Y65	1
47	Spiral head drive shaft extension	3CH-Y66	4CH-Y66	1
48	Spiral head drive shaft connector (Short)	3CH-Y67	4CH-Y67	1
49	Taper pin, #4 x 1-5/8"	3CH-Y68	4CH-Y68	1
50	Spiral head drive shaft collar	3CH-Y69	4CH-Y69	1
51	Spiral head drive shaft sup- port bracket bushing	3CH-Y70	4CH-Y70	2
52	Stud	3CH-Y71	4CH-Y71	3
53	Spiral head drive shaft support bracket	3CH-Y72	4CH-Y72	1
54	Spiral head drive shaft washer	3CH-Y73	4CH-Y73	3
55	Spiral head drive shaft	3CH-Y74	4CH-Y74	1
56	Spiral change gear box cover	3CH-Y75	4CH-Y75	1
57	Stanley butt hinge, No. 800	3CH-Y76	4CH-Y76	2
58	Flat hd screw, 10-32 x 1/2"	3CH-Y77	4CH-Y77	12
59	Fil hd screw, 3/8-16 x 5/8"	3CH-Y78	4CH-Y78	4
60	Reverse gear shaft brg (RH)	3CH-Y79	4CH-Y79	1
61	Reverse gear	3CH-Y80	4CH-Y80	2
62	Reverse gear shaft	3CH-Y81	4CH-Y81	1
63	Reverse gear shaft clutch	3CH-Y82	4CH-Y82	1
64	Reverse gear spacer	3CH-Y83	4CH-Y83	1
65	Reverse gear shaft brg (LH)	3CH-Y84	4CH-Y84	1
66	Flat hd screw, 3/16-32 x 1/2"	3CH-Y85	4CH-Y85	3
67	Reverse shaft driving gear	3CH-Y86	4CH-Y86	1
68	Cotter pin, 7/64 x 1"	3CH-Y87	4CH-Y87	1
69	Trip segment shaft	3CH-Y88	4CH-Y88	1
70	Clutch shifter	3CH-Y89	4CH-Y89	1
71	Clutch shifter shaft	3CH-Y90	4CH-Y90	1
72	Taper pin set screw	3CH-Y91	4CH-Y91	1
73	Detent block shifter shoe	3CH-Y92	4CH-Y92	1
74	Direction lever shaft	3CH-Y93	4CH-Y93	1
75	Hi-pro key, HP-706	3CH-Y94	4CH-Y94	1
76	Detent block	3CH-Y95	4CH-Y95	1
77	Detent plunger sleeve	3CH-Y96	4CH-Y96	1
78	Detent plunger	3CH-Y97	4CH-Y97	1
79	Detent spring	3CH-Y98	4CH-Y98	1
80	Detent plunger screw	3CH-Y99	4CH-Y99	1
81	Taper pin, #3 x 1-1/8"	3CH-Y100	4CH-Y100	1

Item No.	Part Name and Description	Code Nos.		
		3CH	4CH	Qty.
82	Direction lever and handle	3CH-Y101	4CH-Y101	1
83	Knurled hd screw	3CH-Y102	4CH-Y102	1
84	Connecting link pin (Short)	3CH-Y103	4CH-Y103	1
85	Cotter pin, 3/32 x 3/4"	3CH-Y104	4CH-Y104	1
86	Connecting link	3CH-Y105	4CH-Y105	1
87	Connecting link pin (Long)	3CH-Y106	4CH-Y106	1
88	Trip segment	3CH-Y107	4CH-Y107	1
89	Spiral change gear box	3CH-Y108	4CH-Y108	1
90	Dog pt set screw, 1/4-20 x 15/32"	3CH-Y109	4CH-Y109	1
91	Taper pin, #2 x 1-1/16"	3CH-Y110	4CH-Y110	1
92	Selection lever	3CH-Y111	4CH-Y111	1
93	Reverse eccentric shaft	3CH-Y112	4CH-Y112	1
94	Acme Blue Label dowel, 3/8 x 2-1/4"	3CH-Y113		1
94	Acme Blue Label dowel, 1/2 x 2-1/2"		4CH-Y113	1
95	Socket cap screw, 1/2-13 x 2"	3CH-Y114		1
96	Selection lever plunger	3CH-Y115	4CH-Y115	1
97	Spring	3CH-Y116	4CH-Y116	1
98	Clutch shaft gear guard	3CH-Y117	4CH-Y117	1
99	Plunger guide	3CH-Y118	4CH-Y118	1
100	Selection lever knob	3CH-Y119	4CH-Y119	1
101	Cone pt set screw, 8-32 x 3/8"	3CH-Y120	4CH-Y120	1
102	Socket cap screw, 1/2 x 1"	3CH-Y121	4CH-Y121	2
103	Auxiliary drive shaft bushing	3CH-Y122	4CH-Y122	1
104	Auxiliary drive shaft bushing pinion	3CH-Y123	4CH-Y123	1
105	Taper pin, #4 x 1-1/16"	3CH-Y124	4CH-Y124	1
106	Auxiliary drive shaft	3CH-Y125	4CH-Y125	1
107	Hi-pro key, HP-906	3CH-Y126	4CH-Y126	1
108	Trip shaft	3CH-Y127	4CH-Y127	1
109	Taper pin, #4 x 1-3/8"		*4CH-Y128	1
110	Trip shaft key		4CH-Y129	1
111	Socket set screw, 1/4-20 x 1/4"		*4CH-Y130	1
112	Trip rack	3CH-Y131	4CH-Y131	1
113	Hex hd screw, 3/8-16 x 1-1/4"	3CH-Y132	4CH-Y132	2
114	Trip dog	3CH-Y133	4CH-Y133	2
115	Gits oiler, RS-531	3CH-Y134	4CH-Y134	1
116	Hex nut, 7/16-14	3CH-Y135	4CH-Y135	2
117	Acme Blue Label dowel, 1/4 x 1-1/2"	3CH-Y136	4CH-Y136	2
118	Trip shaft support bracket	3CH-Y137	4CH-Y137	2
119	T-Bolt	3CH-Y138	4CH-Y138	1
120	Eye bolt, 1/2"	3CH-Y139	4CH-Y139	1
121	Acme Blue Label dowel, 3/8 x 1-3/8"	3CH-Y140		1
121	Acme Blue Label dowel, 1/2 x 1-1/2"		4CH-Y140	1
122	Socket cap screw, 1/2 x 2-1/2"	3CH-Y141		1
122	Socket cap screw, 1/2 x 2-1/4"		4CH-Y141	1

* Used only on 4CH machines

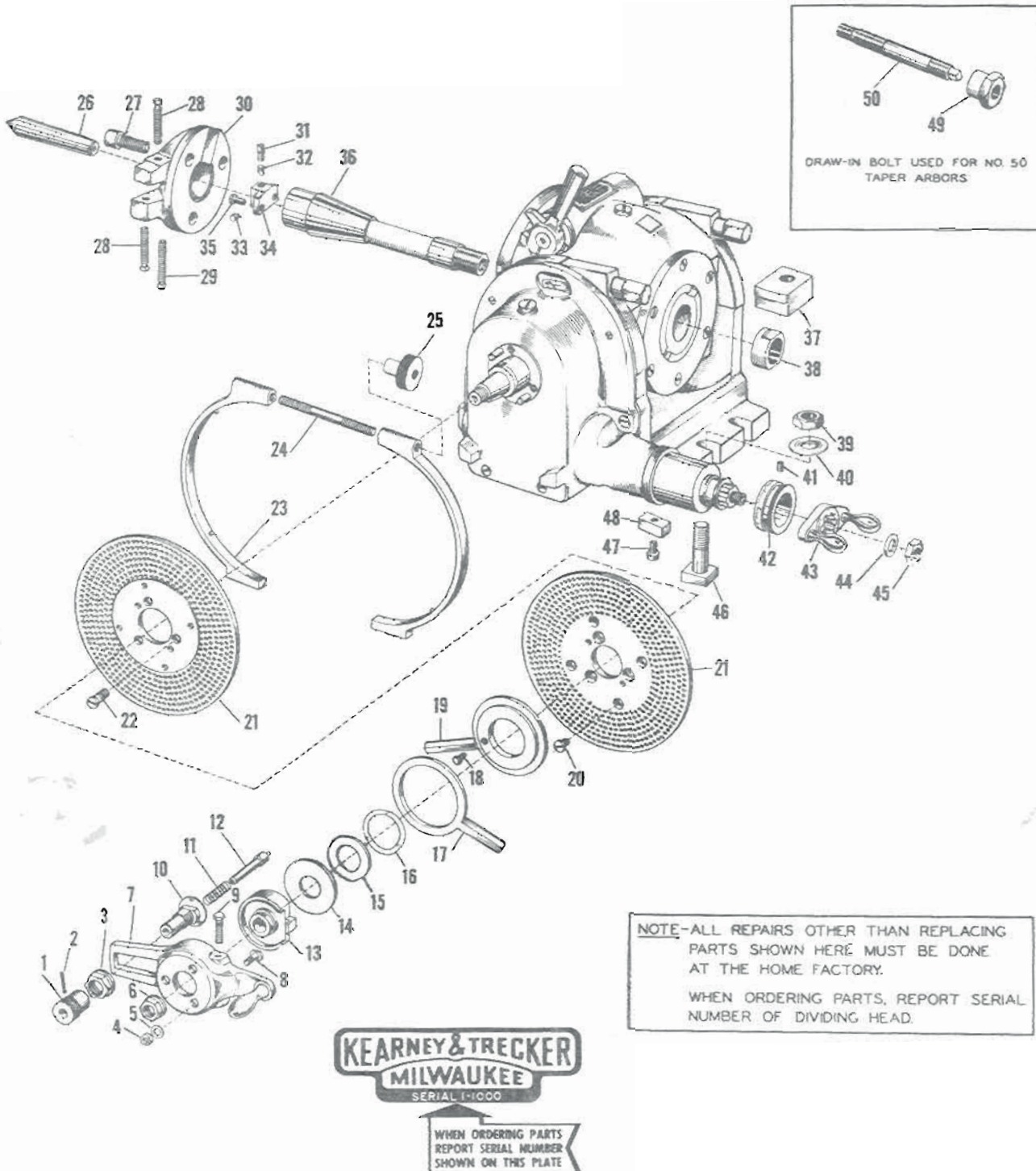


FIG. 28 - MODEL K DIVIDING HEAD

Fig. 28 - Model K Dividing Head

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
1	Index plunger knob	3CH-Z1	4CH-Z1	1
2	Taper pin, #1 x 1-1/16"	3CH-Z2	4CH-Z2	1
3	Clamp nut	3CH-Z3	4CH-Z3	1
4	Hex nut, 3/8-16	3CH-Z4	4CH-Z4	3
5	Washer, 3/8"	3CH-Z5	4CH-Z5	3
6	Clamp nut	3CH-Z6	4CH-Z6	1
7	Index crank	3CH-Z7	4CH-Z7	1
8	T-Bolt, 3/8-16 x 13/16"	3CH-Z8	4CH-Z8	3
9	Adj screw, 3/8-24 x 1-1/8"	3CH-Z9	4CH-Z9	2
10	Index plunger sleeve	3CH-Z10	4CH-Z10	1
11	Spring	3CH-Z11	4CH-Z11	1
12	Index plunger	3CH-Z12	4CH-Z12	1
13	Index crank adj lever	3CH-Z13	4CH-Z13	1
14	Index crank back plate	3CH-Z14	4CH-Z14	1
15	Spring retainer	3CH-Z15	4CH-Z15	1
16	Spring	3CH-Z16	4CH-Z16	1
17	Index finger	3CH-Z17	4CH-Z17	1
18	Hex hd screw, 10-32 x 1/16"	3CH-Z18	4CH-Z18	1
19	Index finger	3CH-Z19	4CH-Z19	1
20	Fil hd screw, 5/16-18 x 7/16"	3CH-Z20	4CH-Z20	4
21	Index plates			
	Index plate, 100-96-92-84-72-66-60	3CH-Z21	4CH-Z21	1
	Index plate, 98-88-78-76-68-58-54	3CH-Z22	4CH-Z22	1
	Index plate, 99-91-83-77-69-62-56	3CH-Z23	4CH-Z23	1
	Index plate, 94-87-81-73-64-59-52	3CH-Z24	4CH-Z24	1
	Index plate, 97-89-82-74-67-61-53	3CH-Z25	4CH-Z25	1
	Index plate, 93-86-79-71-63-57-51	3CH-Z26	4CH-Z26	1

Item No.	Part Name and Description	Code Nos.		Qty.
		3CH	4CH	
22	Fil hd screw, 3/8-16 x 1-3/32"	3CH-Z27	4CH-Z27	3
23	Index plate clamp ring	3CH-Z28	4CH-Z28	1
24	Stud	3CH-Z29	4CH-Z29	1
25	Knurled nut	3CH-Z30	4CH-Z30	1
26	Center	3CH-Z31	4CH-Z31	1
27	Allen hd screw, 5/8 x 1-1/2"	3CH-Z32	4CH-Z32	3
28	Sq hd set screw, 3/8-16 x 3/4"	3CH-Z33	4CH-Z33	2
29	Sq hd set screw, 3/8-16 x 1"	3CH-Z34	4CH-Z34	1
30	Driving dog	3CH-Z35	4CH-Z35	1
31	Spindle drive key screw	3CH-Z36	4CH-Z36	1
32	Expansion key plug	3CH-Z37	4CH-Z37	1
33	Expansion wedge key	3CH-Z38	4CH-Z38	1
34	Spindle drive expansion key	3CH-Z39	4CH-Z39	1
35	Fil hd screw, 1/4-20 x 11/16"	3CH-Z40	4CH-Z40	2
36	Centering plug	3CH-Z41	4CH-Z41	1
37	Clamp block	3CH-Z42	4CH-Z42	1
38	Nut	3CH-Z43	4CH-Z43	1
39	Hex nut, 5/8-11	3CH-Z44	4CH-Z44	5
40	Washer, 5/8"	3CH-Z45	4CH-Z45	5
41	Allen set screw, 5/16-18 x 3/8"	3CH-Z46	4CH-Z46	1
42	Graduated collar	3CH-Z47	4CH-Z47	1
43	Crank	3CH-Z48	4CH-Z48	1
44	Washer, 1/2"	3CH-Z49	4CH-Z49	1
45	Hex nut, 1/2-13	3CH-Z50	4CH-Z50	1
46	T-Bolt	3CH-Z51	4CH-Z51	5
47	Fil hd screw, 5/16-18 x 11/16"	3CH-Z52	4CH-Z52	2
48	Vise tongue	3CH-Z53	4CH-Z53	2
49	Draw bolt head	3CH-Z54	4CH-Z54	1
50	Draw-in bolt	3CH-Z55	4CH-Z55	1