

PARTS LIST

and

MAINTENANCE MANUAL

For

Wickman 2.5/8" 6-Spindle

Wickman 3.1/4" 6-Spindle

Bar Automatic Lathes

Your attention please !

The references at the foot of most pages show that this manual was prepared in 1988.

Unfortunately it was never completed, probably due to the compiler being made redundant as a result of the drastic reductions in manpower which the company was forced to make during that difficult time.

The 'masters' were found in the company archives in February 2005. The manual was found to be complete and ready for printing apart from Section 5: Parts Lists and General Arrangements. Only a few of the lists of parts had been done and most of the artwork was missing.

We have now completed the job although we must apologise for the fact that the end result is not as professional as we would have liked. It has been necessary to mix 'old style' pages with new ones but nevertheless this is the most comprehensive manual we have ever issued for the 2.5/8" and 3.1/4" machines and we hope that you will find it useful.

Of course, should you require any assistance in identifying part numbers etc the expertise of our engineers is always at your disposal.

Wickman Coventry Limited



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MAINTENANCE MANUAL

For

Wickman 2.5/8" 6-Spindle

Wickman 3.1/4" 6-Spindle

Bar Automatic Lathes

WICKMAN COVENTRY LIMITED

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PARTS LIST
AND
MAINTENANCE MANUAL
FOR
WICKMAN 2.5/8"-6 SPINDLE
AND
WICKMAN 3.1/4"-6 SPINDLE
BAR AUTOMATIC LATHES

All enquiries to:

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Automatic House
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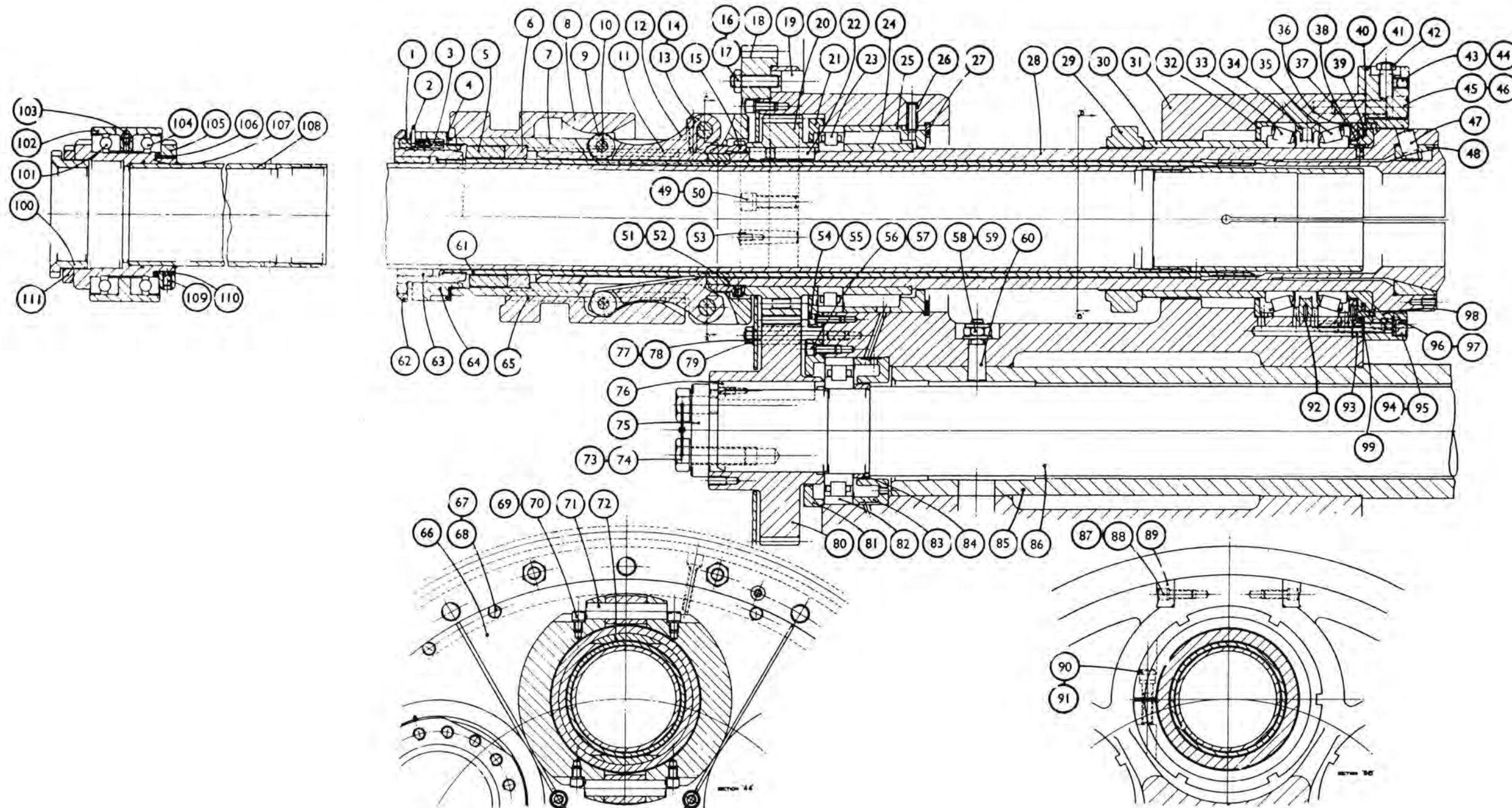
Tel: 024 7654 7900

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Wickman Coventry Limited operate a policy of continual improvement and we therefore reserve the right to change the specifications and illustrations with notice.

SPINDLES

3/4"-6 SPINDLE BAR MACHINE



(Drawing No. 501 Z 21)

WICKMAN
MULTI-SPINDLE
AUTOMATICS

SPINDLES

3¼" — 6 SPINDLE BAR MACHINE

INDEX NO.	PART NO.	TITLE
1	501X.129A	Plunger.
2	125/1012	⅜" Taper Pin, ⅜" long.
3	501X.125	Spring for Plunger.
4	501X.165	Tab Washer.
5	501X.222	Compensating Washer.
6	501X.261	Spacing Washer.
7	501Y.210	Toggle Carrier.
8	501V.211	Toggle Operating Sleeve.
9	501X.207	Toggle Roller.
10	501X.206	Roller Pin.
11	122/1248T	Key, Tapped.
12	501V.204	Toggle.
13	501X.250	Retaining Screw.
14	154/05	⅜" Spring Washer.
15	501X.242	Retaining Nut.
16	173/07L	⅞" Locknut.
17	178/0728	⅞" BSF Socket Set Screw, Half-Dog, 1¼" long.
18	501Y.109	Index Gear on Spindle Drum.
19	—	¾" Parallel Hardened Steel Roller, ¾" long.
20	501V.212	Gear on Work Spindle.
21	501V.221	Clamping Disc.
22	122/2036T.	Key, Tapped.
23	SB 56	Special Bearing.
24	501X.223	Inner Spacer.
25	501X.220	Outer Spacer.
26	501X.272	Lubricant Guide Bush.
27	104/55P	Internal Circlip, 165mm. Bore.
28	501Y.202	Work Spindle.
29	501X.244	Binding Nut.
30	501X.219	Spacer.
31	501Z.201	Spindle Drum.
32	501X.218	Spacer.
33	SB 55	Special Bearing.
34	501X.217	Front Bearing Spacer.
35	SB 55	Special Bearing.
36	501X.259	Spacer.
37	102X.197B	Brake Housing Key.

INDEX NO.	PART NO.	TITLE
38	501X.216	Ring Housing.
39	501X.215	Piston Ring.
40	501X.279	Sealing Ring.
41	501Y.234	Drum Thrust and Stop Ring.
42	501X.156	Stop Screw.
43	178/0606	⅝" BSF Socket Set Screw, Half-Dog, ⅝" long.
44	153/06	Soft Pad, for ⅝" BSF Set Screw, ⅝" long.
45	155/0832	½" BSF Socket Head Cap Screw, 2" long.
46	154/08	½" Spring Washer.
47	501X.148A	Driving Key for Collet.
48	501X.247	Spindle Nose.
49	154/07	⅞" Spring Washer.
50	155/0724	⅞" BSF Socket Head Cap Screw, 1½" long.
51	153/04	Soft Pad for ⅞" BSF Set Screw.
52	176/0404	¼" BSF Socket Head Set Screw, ¼" long.
53	141/14	½" Extractable Taper Dowel, 2" long.
54	155/0414	½" BSF Socket Head Cap Screw, ⅞" long.
55	154/04	¼" Spring Washer.
56	155/0512	⅝" BSF Socket Head Cap Screw, ¾" long.
57	154/05	⅝" Spring Washer.
58	130/08	½" Washer.
59	203/08L	½" BSF Pinnacle Nut, Thin.
60	317X.142	Threaded Taper Pin.
61	501X.254	Collet Tube
62	501X.226	Adjusting Sleeve
63	501X.230	Support Bush.
64	510Y.127A	Plunger Housing.
65	122/1696T	Key, Tapped.
66	501X.240	Cover Plate.
67	154/05	⅝" Spring Washer.
68	155/0512	⅝" BSF Socket Head Cap Screw, ¾" long.
69	154/05	⅝" Spring Washer.
70	155/0506	⅞" BSF Socket Head Cap Screw, ¾" long.
71	501X.105	Pin for Toggle.
72	501X.213	Thrust Pad.
73	198/18	⅝" Shakeproof Washer.
74	503X.244	Bolt for Clamp Plate.

INDEX NO.	PART NO.	TITLE
75	503X.243	Clamp Plate.
76	517X.209	Key for Spindle Drive Gear.
77	130/05	⅞" Washer.
78	173/05	⅞" Hexagon Nut.
79	501X.141A	Stud.
80	503V.136	Centre Driving Gear.
81	503V.241	End Cap.
82	SB 11	Special Bearing.
83	503X.242	Spacer.
84	503X.138	Adjustable Spacer.
85	503Y.108	Centre Guide.
86	517Z.207A	Centre Shaft.
87	154/05	⅜" Spring Washer.
88	155/0514	⅞" BSF Socket Head Cap Screw, ¾" long.
89	501X.146A	Locator Strip.
90	155/0624	¾" BSF Socket Head Cap Screw 1½" long.
91	154/06	⅝" Spring Washer.
92	143/0408D	⅞" Grooved Pin, ½" long.
93	193/104	⅞" BSP Plug ¼" long.
94	154/06	⅝" Spring Washer.
95	155/0632	¾" BSF Socket Head Cap Screw, 2" long.
96	212/18	⅞" BSP Grease Nipple.
97	210/2525	Indicator Washer, Yellow.
98	510V.214	Binding Cap.
99	510X.177	Plug
100	501X.252	Retaining Nut.
101	284/4½	Thrust Bearing, Extra Light, 4½"
102	501X.231	Bearing Housing.
103	212/045	¼" BSF Grease Nipple.
104	284/4½	Thrust Bearing, Extra Light, 4½"
105	501X.235	Nut.
106	501X.233	Adjusting Washer.
107	501X.232	Sleeve for Feed Tube
108	501X.255	Feed Tube.
109	176/0506	⅞" BSF Socket Head Set Screw, Cup Point ⅞" long.
110	153/05	Soft Pad for ⅞" Set Screw, ¼" long.
111	501X.257	Locknut

Feed Tube Assembly
501X.276

List of Parts for

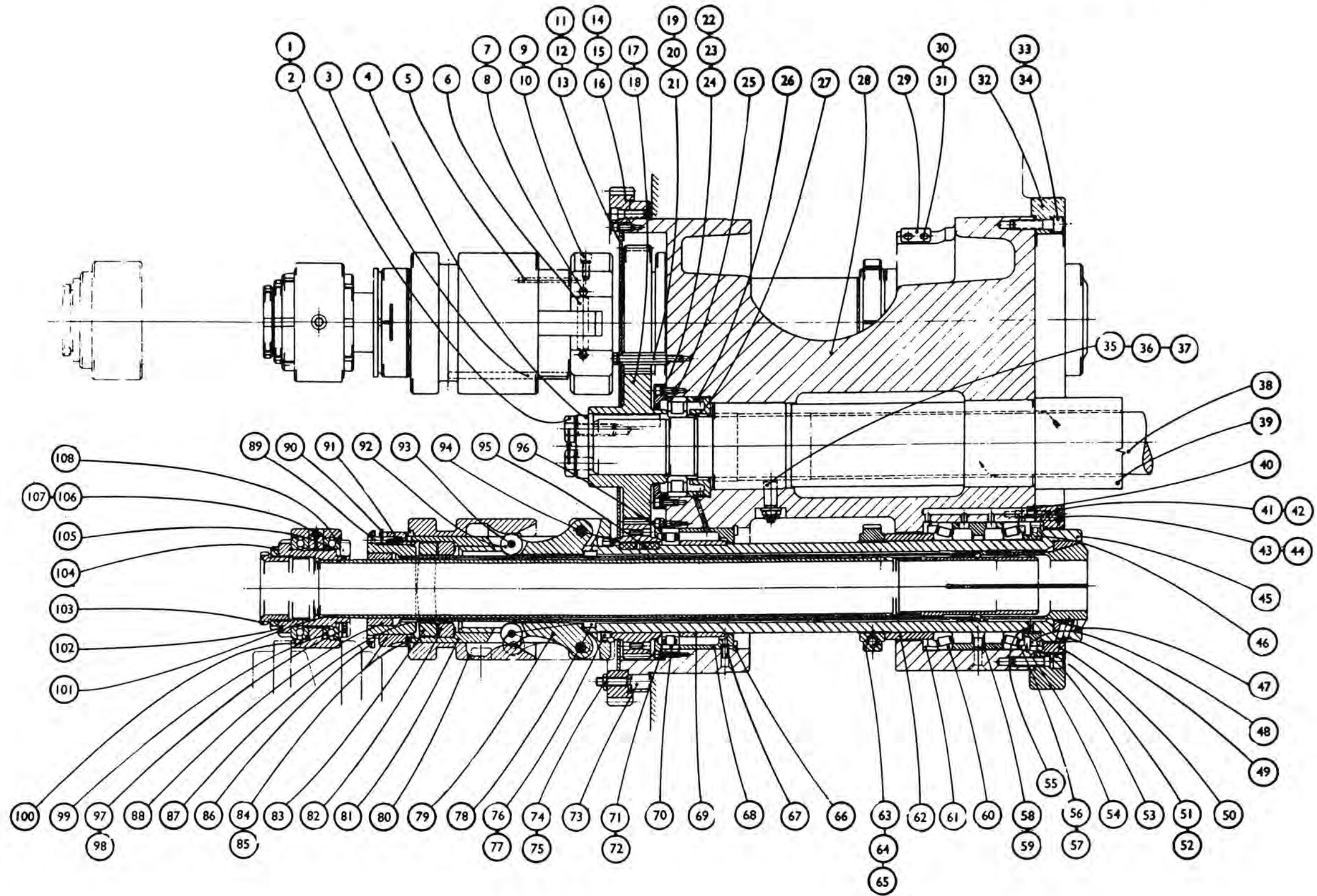
(Drawing No. 501 Z 21)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

SPINDLES

2½"—6 SPINDLE BAR MACHINE

Applicable to Machines
Commencing M/c. No. 8844
(Also on M/c. No. 8820)



(Drawing No. 501 Z 1C)

INDEX NO.	PART NO.	TITLE
1	198/18	¾" Shakeproof Washer.
2	503X.244	Clamp Plate Bolt.
3	503X.243	Clamp Plate.
4	506Y.136B	Centre Driving Gear.
5	130/05	½" Washer.
6	173/05	½" BSF Hexagon Nut.
7	122/2064T	Key Tapped.
8	154/06	¾" Spring Washer.
9	155/0612	¾" BSF Socket Head Cap Screw, 7/8" long.
10	154/06	¾" Spring Washer.
11	506X.150A	Retaining Screw.
12	506X.140B	Cover Plate.
13	154/05	½" Spring Washer.
14	155/0516	½" BSF Socket Head Cap Screw, 1" long
15	501Y.109	Indexing Gear.
16	154/07	½" Spring Washer.
17	155/0724	½" BSF Socket Head Cap Screw, 1½" long.
18	506X.141A	Stud.
19	503V.241	End Cap, Centre Bearing.
20	154/05	½" Spring Washer.
21	155/0514	½" BSF Socket Head Cap Screw, 7/8" long.
22	SB 11	Special Bearing.
23	503X.138	Adjustable Spacer.
24	503X.242	Spacer.
25	517Z.207	Centre Shaft.
26	506Z.101B	Spindle Drum.
27	154/10	¾" Spring Washer.
28	155/1036	¾" BSF Socket Head Cap Screw, 2¼" long.
29	506Y.134	Drum Thrust and Stop Ring.
30	317X.142	Threaded Taper Pin.
31	130/08	½" Washer.
32	203/08L	½" Self-Locknut.
33	506Y.144D	Notched Nut.
34	155/0728	¾" BSF Socket Head Cap Screw, 1½" long.
35	154/07	½" Spring Washer.
36	143/0408D	½" Grooved Pin, ½" long.
37	503Y.108	Centre Guide.
38	506V.159C	Spacer.
39	143/0408D	½" Grooved Pin, ½" long.
40	501X.177	Plug.

INDEX NO.	PART NO.	TITLE
41	155/0632	¾" BSF Socket Head Cap Screw, 2" long.
42	154/06	¾" Spring Washer.
43	506V.116C	Ring, Housing.
44	506X.148A	Driving Key.
45	506X.147A	Sleeve for Collet Seating.
46	102X.197B	Brake Housing Key.
47	506Y.114D	Binding Cap.
48	506X.115	Piston Ring.
49	210/2525	Indicator Washer.
50	212/18	½" BSP Grease Nipple.
51	506V.179	Sealing Ring.
52	194/1	½" BSP Socket Pipe Plug, ¾" long.
53	SB 29	Special Bearing.
54	506V.117C	Spacer.
55	SB 29.	Special Bearing.
56	506X.118A	Oil Shield.
57	506X.119A	Spacer.
58	506Z.102C	Work Spindle.
59	102/60P	Internal Circlip, 7½" Bore.
60	511X.172A	Lubricant Guide Bush.
61	506Y.120D	Spacer.
62	506X.123A	Spacer.
63	SB 46	Special Bearing.
64	506Y.121A	End Cap.
65	506Y.112A	Gear on Work Spindle.
66	—	¾" Parallel, Hardened Steel Roller, ¾" long.
67	178/0728	¾" BSF Socket Set Screw, Half-Dog, 1¾" long
68	173/07L	¾" BSF Hexagon Nut.
69	506X.143A	Tab Washer.
70	506X.142A	Notched Nut.
71	506X.105	Pin for Toggle.
72	506X.113A	Thrust Washer.
73	506X.104A	Toggle.
74	506X.106	Pin for Toggle Roller.
75	506X.107A	Roller for Toggle.
76	506Y.111A	Toggle Operating Sleeve.
77	506Y.122A	Collet Compensating Washer.
78	506Z.110A	Toggle Carrier.
79	506X.154B	Collet Tube
80	506Y.126B	Adjusting Sleeve } Assembly 506X.153

INDEX NO.	PART NO.	TITLE
81	506Y.127A	Plunger Housing.
82	506Y.165	Tab Washer.
83	506X.130A	Guide Bush.
84	501X.129A	Plunger.
85	125/1012	½" Taper Pin, ¾" long.
86	501X.125	Spring for Plunger.
87	506X.161A	Thrust Washer.
88	506X.161A	Thrust Washer.
89	122/24112T	Key, Tapped.
90	122/2036	Key, Tapped.
91	506Y.131	Bearing Housing.
92	284/4½	Thrust Bearing Extra Light Type 4½" Bore
93	506X.155	Feed Tube } Assembly 506X.160
94	506Y.132	Sleeve for Feed Tube
95	506X.157	Locknut.
96	506X.152	Binding Nut.
97	506X.133	Adjustable Spacer
98	212/04	½" BSF Grease Nipple.
99	210/1725	Indicator Washer.
100	153/05	Soft Pad for ½" BSF Set Screw, ½" long.
101	176/0506	½" BSF Socket Set Screw, ¾" long.
102	506X.135	Nut
103	506X.167A	Sleeve for Collet Seating
104	506X.169	Driving Key.
105	506Z.166A	Work Spindle } (Long Collet M
106	506X.170	Collet Tube.
107	506X.171	Feed Tube
108	506Y.132	Sleeve for Feed Tube } Assembly 506X.172
91	506Y.131	Bearing Housing
92	284/4½	Thrust Bearing Extra Light Type 4½" Bore
95	506X.157	Locknut.
96	506X.152	Binding Nut.
97	506X.133	Adjustable Spacer.
98	212/04	½" BSF Grease Nipple.
99	210/1725	Indicator Washer.
100	153/05	Soft Pad for ½" BSF Set Screw, ½" long.
101	176/0506	½" BSF Socket Set Screw, ¾" long.
102	506X.135	Nut.

List of Parts for
PLATE No. 2
 (Drawing No. 506 Z 1C)

COLLET OPERATION - DRAWING NO. 556 Z 1

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	556Y.103A	Collet Operation Lever Bracket
2	155/0824	1/2" B.S.F. Socket Head Cap Screw 1.1/2" long
3	178/0508	5/16" B.S.F. Socket Set Screw, Half-Dog 1/2" long
4	556X.110	Fulcrum Pin
5	558X.113	Stop Collar
6	556Z.101	Collet Operating Slide
7	212/18	1/8" B.S.P. Grease Nipple
8	210/2525	Yellow Washer, 25/64" hole
9	558X.106A	Sleeve
10	556Y.113	Collet Closing Finger
11	126/1044	5/16" Parallel Pin, 2.3/4" long
12	202428	Oil-Retaining Bush
13	101/15	1.1/4" External Circlip
14	210/2525	Yellow Washer 25/64" hole
15	212/18	1/8" B.S.P. Grease Nipple
16	556Y.104A	Collet Operating Lever Swivel
17	556Y.105A	Collet Operating Lever
18	573X.112	Collet Operating Lever
19	556X.109	Swivel Pin
20	556X.110	Fulcrum Pin
21	178/0508	5/16" B.S.F. Socket Set Screw, Half-Dog, 1/2" long
22	556X.111A	Plunger
23	556X.112B	Plunger Spring
24	212/18	1/8" B.S.P. Grease Nipple
25	210/2525	Yellow Washer 25/64" hole
26	556X.106	Cam Roller Sleeve
27	556Y.102	Collet Operation Cam Roller Bracket
28	139/13	3/8" Headed Taper Pin 1.1/2" long
29	178/0614	3/8" B.S.F. Socket Set Screw, Half-Dog, 7/8" long
30	173/06	3/8" B.S.F. Hexagon Nut
31	125/2224	11/32" Taper Pin, 1.1/2" long.
32	558X.107	Cam Roller Pin
33	558X.112	Cam Roller
34	173/08L	1/2" B.S.F. Hexagon Locknuts
35	556X.117	Stop Rod
36	176/0405	1/4" B.S.F. Socket Set Screw 5/16" long
37	558X.110	Bush
38	128/8C	Plain Pad Bush
39	155/0848	1/2" B.S.F. Socket Head Cap Screw 3" long
40	128/8T	Threaded Pad Bush
41	155/0864	1/2" B.S.F. Socket Head Cap Screw 4" long
42	154/08	1/2" Spring Washer
43	212/18	1/8" B.S.P. Grease Nipple
44	210/2525	Yellow Washer 25/64" hole
45	558X.110	Bush
46	176/0405	1/4" B.S.F. Socket Set Screw, 5/16" long
47	558X.115	Washer

**Refer to drawing
showing all part
numbers**

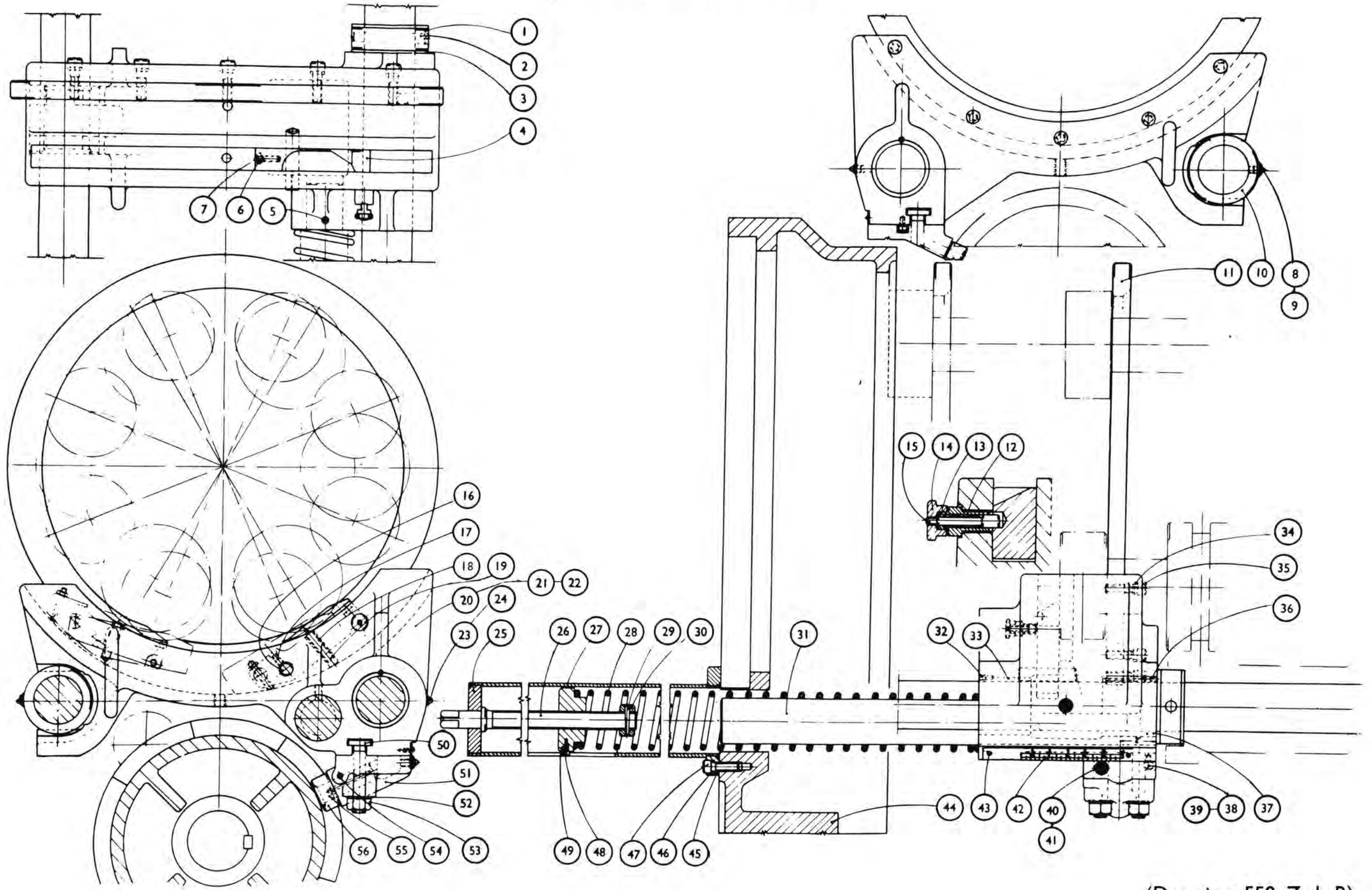
BAR FEED

2 $\frac{5}{8}$ "-6 SPINDLE BAR MACHINE

INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	558X.113	Stop Collar.	30	558X.121A	Collar.
2	125/4064	$\frac{3}{8}$ " Taper Pin, 4" long.	31	558X.111	Spring Guide Rod.
3	558X.115	Washer.	32	176/0405	$\frac{1}{4}$ " B.S.F. Socket Head Set Screw, Cup Point, $\frac{5}{16}$ " long.
4	558X.105B.	Bar Feed Pusher Plate.	33	558X.110	Bush.
5	178/0616	$\frac{3}{8}$ " B.S.F. Socket Head Set Screw, Half-Dog, 1" long.	34	154/08	$\frac{1}{2}$ " Spring Washer.
6	173/06L	$\frac{3}{8}$ " B.S.F. Locknut.	35	155/0828	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long.
7	176/0632	$\frac{3}{8}$ " B.S.F. Socket Head Set Screw, Cup Point, 2" long.	36	176/0405	$\frac{1}{4}$ " B.S.F. Socket Head Set Screw, Cup Point, $\frac{5}{16}$ " long.
8	212/18	$\frac{1}{8}$ " B.S.P. Grease Nipple.	37	558X.110	Bush
9	210/2525	Indicator Washer.	38	155/0508	$\frac{5}{16}$ " B.S.F. Socket Head Cap Screw, $\frac{1}{2}$ " long.
10	558X.106A	Sleeve.	39	154/05	$\frac{5}{16}$ " Spring Washer.
11	558Y.102	Feed Tube Return Ring.	40	212/18	$\frac{1}{8}$ " B.S.P. Grease Nipple.
12	558X.128	Spring.	41	210/2525	Indicator Washer.
13	558X.125B	Plunger Housing.	42	558X.109	Bar Feed Scale.
14	558X.127A	Knot.	43	165/206	2 B.A. Round Head Screw, $\frac{3}{8}$ " long.
15	558X.126B	Plunger.	44	522Z.102	Stock Carriage Indexing Bracket.
16	558X.123A	Fulcrum Pin.	45	558X.117A	Spring Cover Flange.
17	178/0612	$\frac{3}{8}$ " B.S.F. Socket Head Set Screw, Half-Dog, $\frac{3}{4}$ " long.	46	154/08	$\frac{1}{2}$ " Spring Washer.
18	558X.129A	Spring.	47	155/0820	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long.
19	558X.124A	Plunger.	48	155/0406	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{8}$ " long.
20	558Z.101B	Bar Feed Slide.	49	558X.120A	Nut.
21	558Y.130	Extra Drilling for Bar Feed Slide (2 $\frac{5}{8}$ "-6 spindle).	50	558X.108	Tee Bolt.
22	558Z.131	Bar Feed Slide (1 $\frac{3}{4}$ "-8 spindle machine).	51	558Y.104A	Bar Feed Adjustable Cam Bracket.
23	212/18	$\frac{1}{8}$ " B.S.P. Grease Nipple.	52	130/12	$\frac{3}{4}$ " Washer.
24	210/2525	Indicator Washer.	53	173/12	$\frac{3}{4}$ " Hexagon Nut.
25	558X.122A	Cap.	54	125/2236	$\frac{11}{16}$ " Taper Pin, 2 $\frac{1}{4}$ " long.
26	558X.119A	Spring Adjusting Screw.	55	558X.107	Cam Roller Pin.
27	558Y.116A	Spring Cover.	56	558X.112	Cam Roller.
28	558X.118	Bar Feed Spring.			
29	125/1628	$\frac{1}{4}$ " Taper Pin, 1 $\frac{1}{4}$ " long.			

BAR FEED

2 5/8"-6 Spindle Bar Machine



(Drawing 558 Z I B)

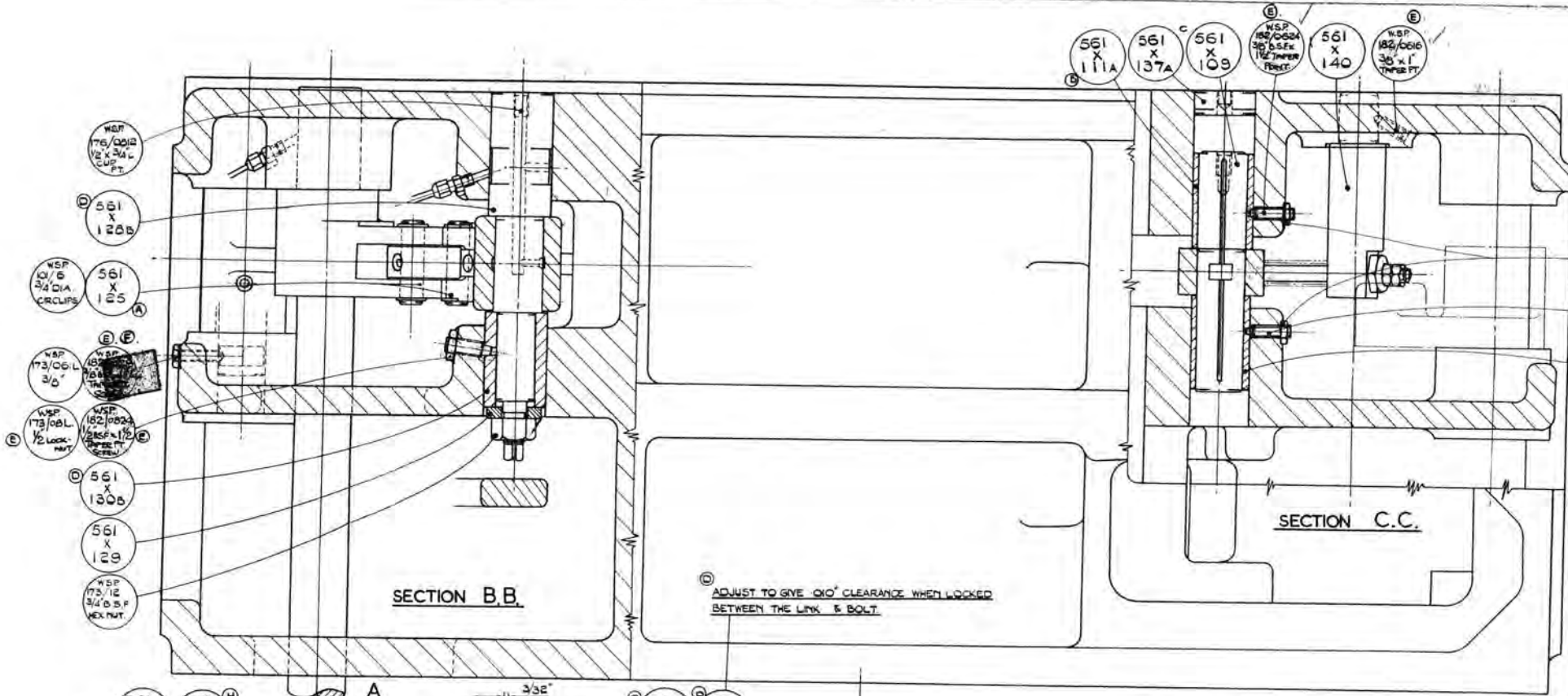
BAR FEED - DRAWING NO. 558 Z 1C

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	558X.113	Stop Collar
2	125/4064	5/8" Taper Pin, 4" long.
3	58X.115	Washer
4	558V.105C	Bar Feed Pusher Rod.
5	182/0616	5/8" B.S.F. Socket Head Screw, Taper Point 1" long
6	126/1218	3/8" Parallel Hardened Pin 1.1/8" long
7	558X.138	Pillar
8	558X.136	Modified Purefoy Handnut.
9	-	3/8" B.S. Whitworth Hexagon Locknut
10	558X.139	Swing Bolt
11	558Y.131A	Bar Feed Slide (1.3/4" 8-Spindle)
12	558Y.102A	Feed Tube Return Ring
13	558X.106A	Sleeve
14	212/18	1/8" B.S.P. Grease Nipple
15	210/2525	Indicator Washer
16	154/08	1/2" Spring Washer
17	155/0828	1/2" Socket Head Cap Screw 1.3/4" long
18	76/0405	1/4" B.S.F. Socket Head Set Screw, Cup Point 5/16" long
19	558X.110	Bush
20	176/0405	1/4" B.S.F. Socket Head Set Screw, Cup Point 5/16" long
21	558X.111	Spring Guide Rod
22	558X.121A	Collar
23	125/1628	1/4" Taper Pin 1.3/4" long
24	558X.118	Bar Feed Spring
25	558Y.116A	Spring Cover
26	558X.119A	Spring Adjusting Screw
27	58X.123A	Fulcrum Pin
28	182/0612	3/8" B.S.F. Socket Head Set Screw, Taper Point 3/4" long
29	8X.129B	Spring
30	558X.124A	Plunger
31	558Z.101C	Bar Feed Slide (2.5/8"-6 and 3.1/4"-6 Spindle)
32	558X.108	Tee Bolt
33	558Y.104A	Bar Feed Adjustable Cam Bracket
34	130/12	3/4" Washer
35	58X.122A	Cap
36	558X.112	Cam Roller
37	558X.107	Cam Roller Pin
38	125/2236	11/32" Taper Pin 2.1/4" long
39	173/12	3/4" B.S.F. Hexagon Nut
40	58X.120A	Nut
41	155/0406	1/4" B.S.F. Socket Head Cap Screw, 3/8" long
42	155/0820	1/2" B.S.F. Socket Head Cap Screw 1.1/4" long
43	154/08	1/2" Spring Washer
44	558X.117A	Spring Cover Flange
45	522Z.102	Stock Carriage Indexing Bracket
46	165/206 BL	2 B.A. Round Head Screw 3/8" long
47	558X.109	Bar Feed Scale (English)
48	212/18	1/8" B.S.P. Grease Nipple
49	210/2525	Indicator Washer
50	154/05	5/16" Spring Washer
51	155/0508	5/16" Socket Head Cap Screw 1/2" long
52	558X.110	Bush

DRUM LOCKING - DRAWING NO. 561 Z 1A

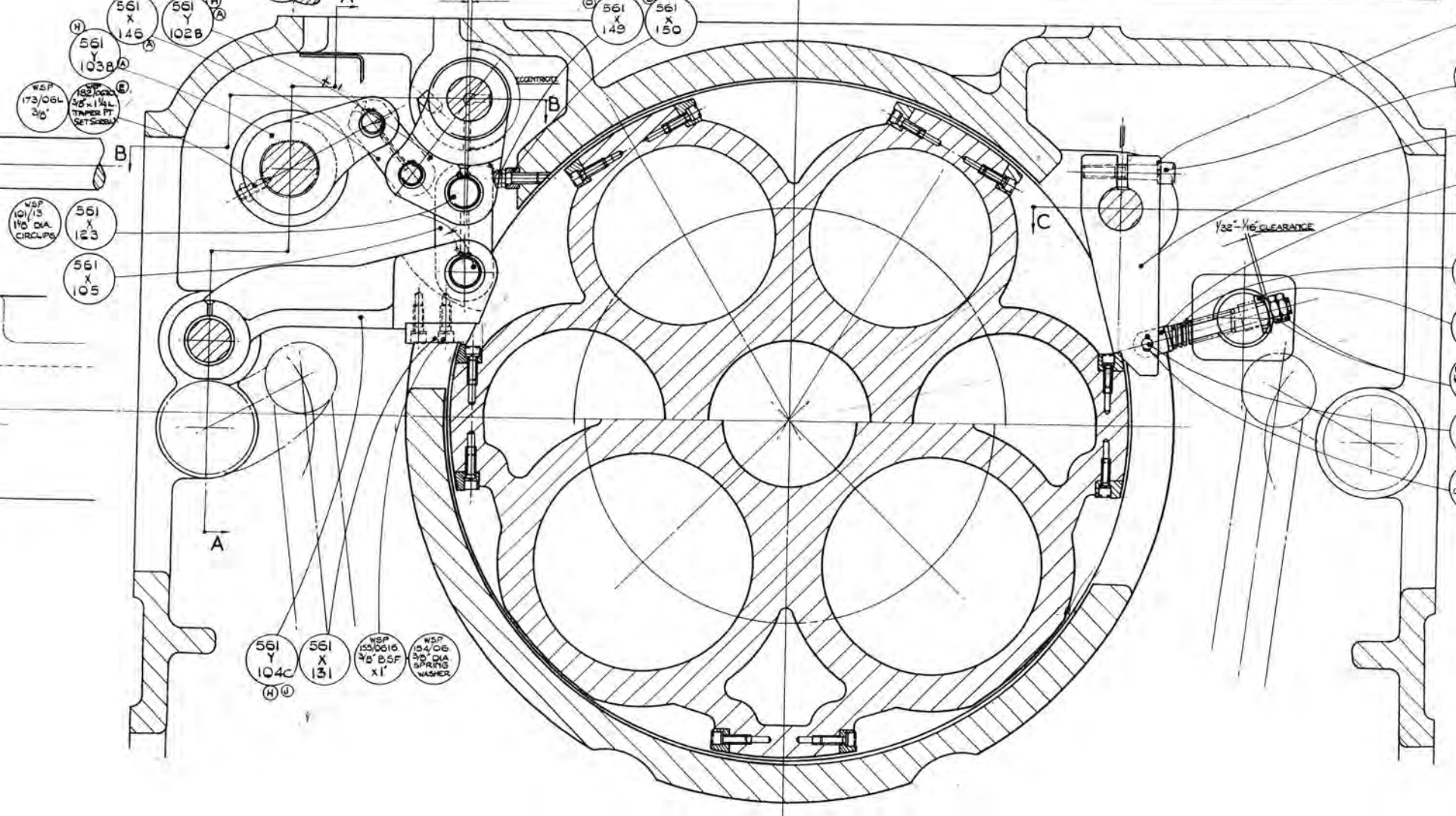
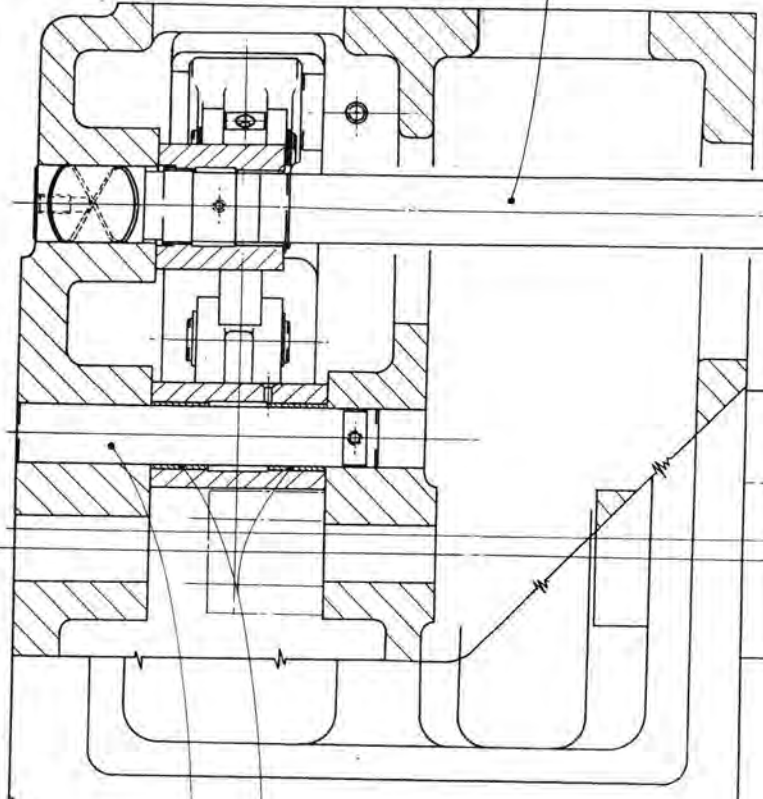
<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>	
1	561X.111A	Bush for Drum Latch Pin	Refer to drawing showing all part numbers
2	561X.137A	Plug for Drum Housing	
3	561X.109	Latch Pin	
4	182/0624	3/8" B.S.F. Socket Set Screw, 1.1/2" long	
5	561X.140	Pillar	
6	182/0616	3/8" B.S.F. Socket Set Screw, 1" long	
7	173/06L	3/8" B.S.F. Hexagon Locknut	
8	182/0624	3/8" B.S.F. Socket Set Screw, Taper Point 1.1/2" long	
9	1X.110	Bush for Drum Latch Pin	
10	173/06L	3/8" B.S.F. Hexagon Locknut	
11	182/0620	3/8" B.S.F. Socket Set Screw, Taper Point 1.1/4" long	
12	561X.108A	Drum Latch	
13	561X.141	Retaining Rod for Drum Latch	
14	561X.113	Spring for Drum Latch	
15	561X.114X	Spring Retaining Plug	
16	173/08L	1/2" B.S.F. Hexagon Locknut	
17	561X.142	Pin	
18	127/0406	1/16" Split Pin 3/4" long	
19	561X.150	Collar	
20	561X.149	Stop Screw	
21	154/06	3/8" Spring Washer	
22	155/0616	3/8" B.S.F. Socket Head Cap Screw, 1" long	
23	561X.131	Drum Locking Pad	
24	561Y.104	Toggle Lever	
25	236/242824	Oil Retaining Bush 1.1/2" x 1.3/4" x 1.1/2"	
26	561X.124	Pin for Toggle Lever	
27	561X.105	Toggle Lever	
28	561X.123	Pin	
29	101/13	1.1/8" External Circlip	
30	182/0620	3/8" B.S.F. Socket Set Screw, Taper Point 1.1/4" long	
31	173/06L	3/8" B.S.F. Hexagon Locknut	
32	561Y.103A	Lever	
33	561X.146	Operating Link	
34	561Y.102A	Toggle Lever	
35	561Y.127A	Drum Locking Shaft	
36	173/12	3/4" B.S.F. Hexagon Nut	
37	561X.129	Locking Washer	
38	561X.130B	Locking Sleeve	
39	182/0824	1/2" B.S.F. Socket Set Screw, Taper Point 1.1/2" long	
40	173/08L	1/2" B.S.F. Hexagon Locknut	
41	182/0624	3/8" B.S.F. Socket Set Screw Taper Point 1.1/2" long	
42	173/06L	3/8" B.S.F. Hexagon Locknut	
43	561X.125	Pin for Glut	
44	101/6	3/4" External Circlip	
45	561X.128B	Pin for Toggle Lever	
46	176/0812	1/2" B.S.F. Socket Set Screw, Cup Point 3/4" long	

NOTE:
WHEN ADJUSTING DRUM LOCKING
TOGGLE MECHANISM SET PIN FOR
TOGGLE LEVER 561X125A WITH
HIGH POINT OF ECCENTRICITY
ALONG ARC SHOWN.



- WSP 176/0012 1/2 x 3/4 L. 1/2 TAPER FT.
- 561 X 120B
- WSP 173/061 3/8 DIA. CIRCLIPS
- 561 X 125
- WSP 173/061 L 3/8
- WSP 173/061 1/2 LOCK-NUT
- WSP 182/0024 1/2 x 1 1/4 L. TAPER FT. SET SCREW
- 561 X 130B
- 561 X 129
- WSP 173/12 3/4 x 5/8 F. HEX NUT
- 561 X 111A
- 561 X 137A
- 561 X 109
- WSP 182/0024 3/8 x 5/8 F. 1/2 TAPER FLANK
- 561 X 140
- WSP 182/0016 3/8 x 1/2 TAPER FT. SCREW
- 561 X 110

ADJUST TO GIVE .010" CLEARANCE WHEN LOCKED BETWEEN THE LINK & BOLT.



- WSP 154/08 SPRING WASHER
- WSP 155/0014 1/2 B.S.F. 1/2 x 3/4 CAP SCREW
- 561 X 100B
- 561 X 141
- MSC 190
- 561 X 144A
- WSP 173/061 1/2 x 5/8 F. LOCKNUT
- 561 X 142
- WSP 127/0406 1/2 x 3/4
- 561 X 146
- 561 Y 102B
- 561 X 149
- 561 X 150
- WSP 173/061 3/8
- WSP 182/0024 1/2 x 1 1/4 L. TAPER FT. SET SCREW
- 561 X 123
- 561 X 105
- WSP 101/13 1 1/8 DIA. CIRCLIPS
- 561 X 104C
- 561 X 131
- WSP 155/0016 3/8 B.S.F. X 1"
- WSP 154/08 3/8 DIA. SPRING WASHER
- 561 X 124
- WSP 182/0024 1/2 x 1 1/4 L. TAPER FT. SET SCREW
- 561 X 127A

UTR 045 52

REWORKED TO CORRECT OTHER WORK

CHANGED DIMENSIONS TO OTHER PARTS

AMERICAN

561 7/4-G
561 9'-4
561 14'-0
561 24'-8
561 32'-4

7/4-G
9'-4
14'-0
24'-8
32'-4

10 9 40 PART LISTS
5001A 2A 3A 4A

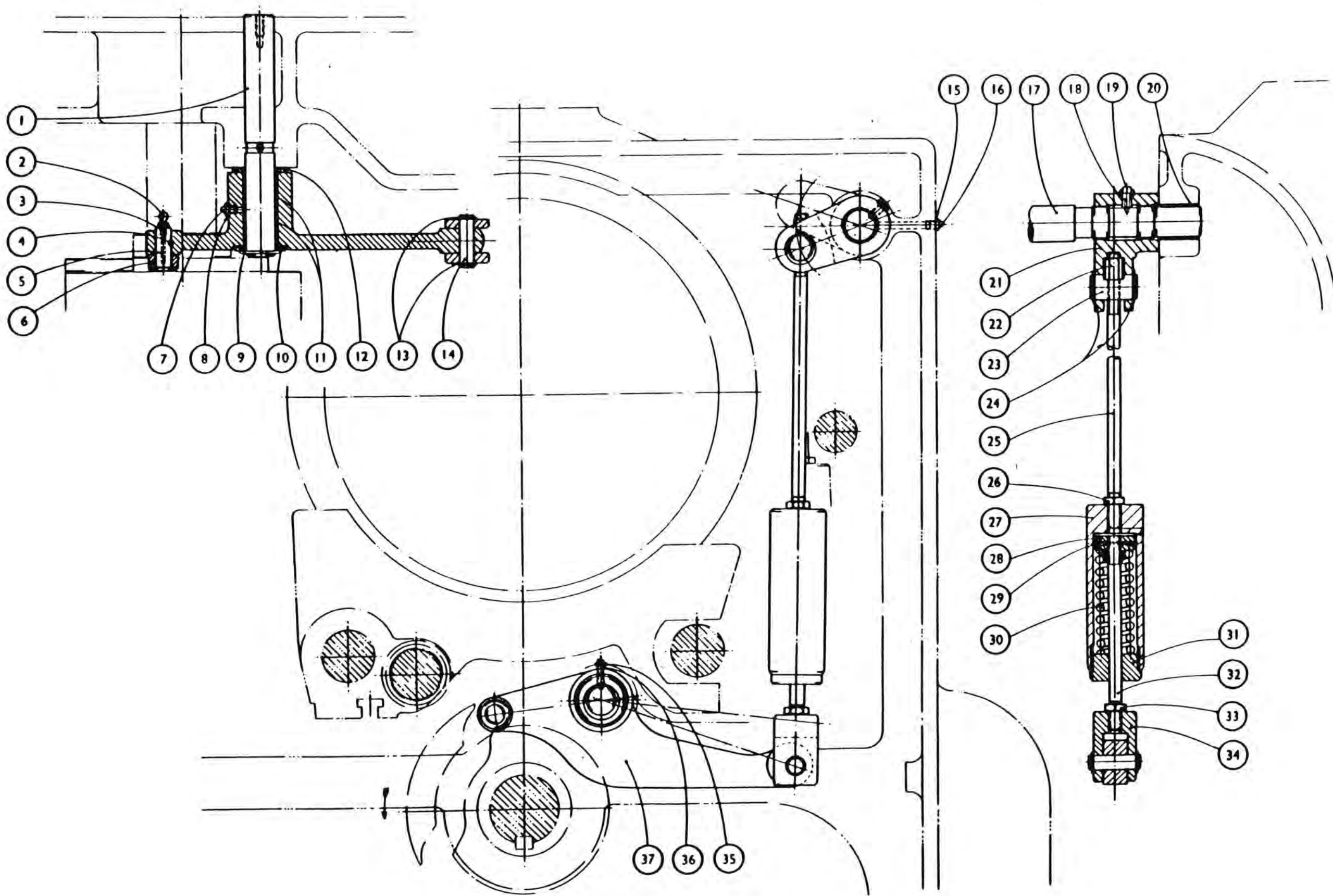
561Z1A

SIZE	QTY	DESCRIPTION	REF.
7/4-G	1	SCREW	10 9 40
9'-4	1	SCREW	10 9 40
14'-0	1	SCREW	10 9 40
24'-8	1	SCREW	10 9 40
32'-4	1	SCREW	10 9 40

DRUM LOCKING - DRAWING NO. 561 Z 2A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	561X.135A	Pin for Cam Lever
2	212/9004	1/4" B.S.F. x 90 deg. Grease Nipple
3	210/1725	1/4" Plastic Indicator Washer, Yellow
4	125/1628	1/4" Taper Pin, 1.3/4" long
5	561X.133	Roller Pin
6	561X.132	Cam Roller
7	212/18	1/8" B.S.P. Grease Nipple
8	210/2525	1/8" B.S.P. Plastic Indicator Washer. Yellow
9	101/18	1.1/2" External Circlip
10	561X.144	Washer for Drum Locking Lever
11	236/242828	Oil Retaining Bush 1.1/2" x 1.3/4" x 1.3/4"
12	561X.134	Adjusting Washer
13	101/6	3/4" External Circlip
14	561X.121A	Pin for Drum Locking Rod Link
15	210/2525	1/8" B.S.P. Plastic Indicator Washer, Yellow
16	212/18	1/8" B.S.P. Straight Grease Nipple
17	561Y.127A	Drum Locking Shaft
18	182/0620	3/8" B.S.F. Socket Set Screw, Taper Point 1.1/4" long
19	173/06L	3/8" B.S.F. Hexagon Locknut
20	236/242832	Oil Retaining Bush 1.1/2" x 1.3/4" x 2" long
21	561X.106A	Lever
22	550X.136	Screw Locking Nut
23	550X.120A	Link Pin
24	101/15	1.1/4" External Circlip
25	561X.119A	Drum Locking Rod (Upper)
26	173/10L	5/8" B.S.F. Hexagon Locknut
27	561X.116A	Spring Tube
28	561X.122A	Spring Retaining Nut
29	125/1632	1/4" Taper Pin 2" long
30	561X.117A	Drum Locking Spring
31	561X.118A	End Cap for Spring Tube
32	561X.120A	Drum Locking Rod (Lower)
33	173/10L	5/8" B.S.F. Hexagon Locknut
34	561X.147	Link for Drum Locking Rod
35	173/06L	3/8" B.S.F. Hexagon Locknut
36	182/0624	3/8" B.S.F. Socket Set Screw, Taper Point 1.1/2" long
37	561Y.101A	Drum Locking Lever

**Refer to drawing
showing all part
numbers**



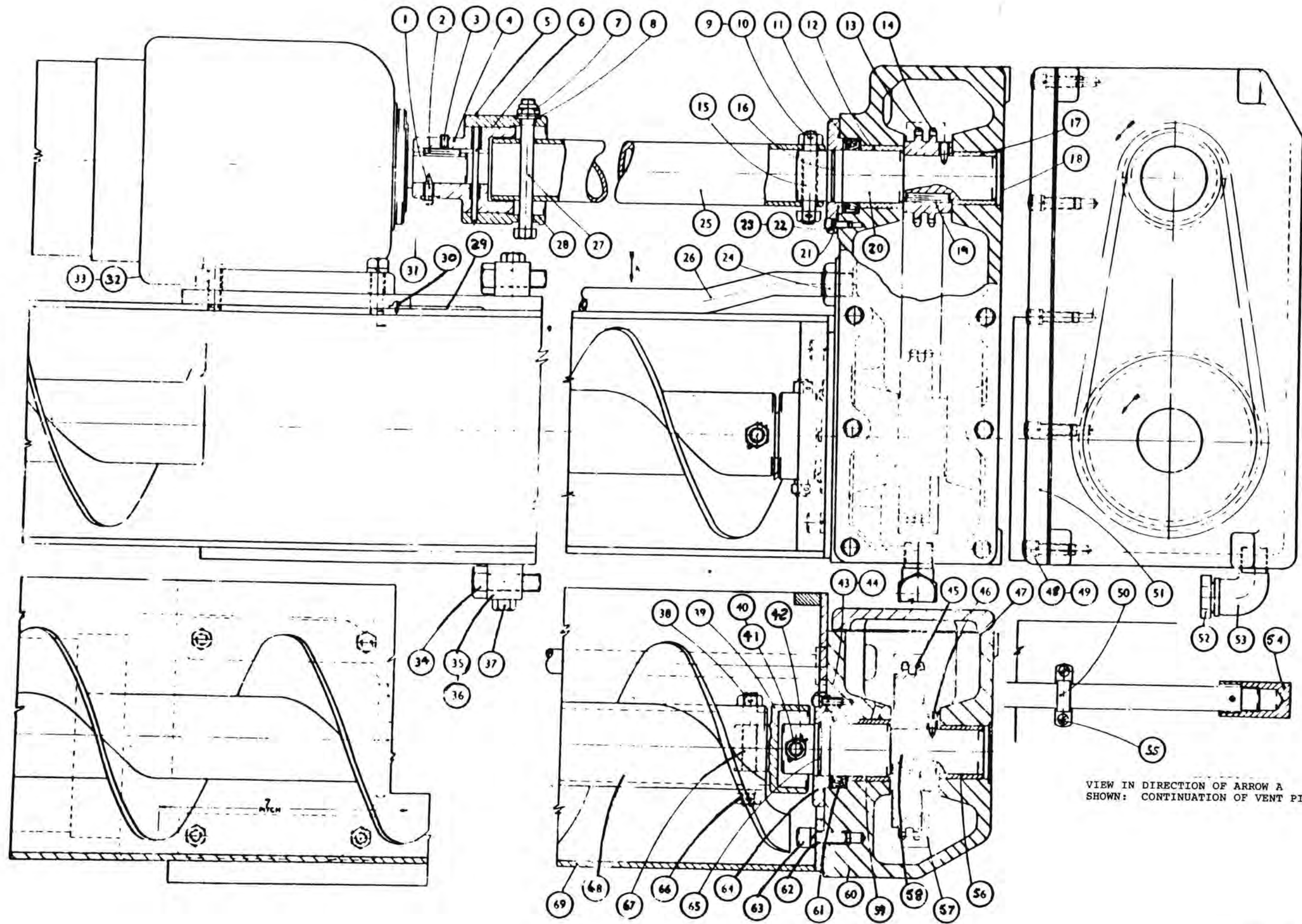
561Z2A

SWARF CONVEYOR - DRAWING NO. 563 Z 1B

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	182/0412	1/4" B.S.F. Set Screw, Taper Point 3/4" long
2	122/0816	Key 1/4" x 3/16" x 1" long
3	179/206	2 B.A. Hollow Set Screw 3/8" long
4	563X.107C	Drive Coupling
5	563X.127	Spring Ring
6	124/0444	1/8" Steel Pin 2.3/4" long
7	203/05L	5/16" B.S.F. Self-Locking Hexagon Nut
8	130/05	5/16" Washer
9	127/0607	3/32" Split Pin, 7/8" long
10	173/06	3/8" B.S.F. Hexagon Nut
11	235/24346	Superfect Oil Seal 212116
12	236/242820	Oil Retaining Bush 1.1/2" x 1.3/4" x 1.3/4" long
13	563X.143	Pinion
14	182/0408	1/4" B.S.F. Set Screw, Taper Point 1/2" long
15	563X.119	Drive Pin
16	563X.114	Piston Ring
17	236/202420	Oil Retaining Brush 1.1/4" x 1.1/2" x 1.1/4" long
18	129/24	1.3/4" Welch Plug
19	122/1020	Key 5/16" x 7/32" x 1.1/4" long
20	563X.113	Sprocket Shaft
21	563X.111	End Cap
22	156/208	2 B.A. Socket Head Cap Screw 1/2" long
23	154/2	2 B.A. Spring Washer
24	224/3	3/8" B.S.P. Locknut
25	563X.106A	Drive Tube
26	563X.116	Ventilation Pipe
27	563X.145	Driving Bolt
28	563X.126A	Driving Sleeve
29	563X.144	Instruction Plate
30	165/403	4 B.A. Round Head Screw 3/16" long
31	173/04L	1/4" B.S.F. Hdxagon Locknut
32	167/0620	5/8" B.S.F. Hexagon Head Set Screw 1.1/4" long
33	154/06	3/8" B.S.F. Spring Washer
34	170/0824	1/2" B.S.F. Hexagon Head Bolt 1.1/2" long
35	63X.107	Support Strip
36	FX.3647	(5 Spindle M/cs)
37	170/0624	3/8" B.S.F. Hexagon Head Bolt 1.1/2" long
38	127/0607	3/32" Split Pin 7/8" long
39	563X.115	Swarf Screw Drive Couple
40	127/0607	3/32" Split Pin 7/8" long
41	173/06	3/8" B.S.F. Hexagon Nut
42	563X.120	Drive Pin
43	156/208	2 B.A. Socket Head Cap Screw 1/2" long
44	154/2	2 B.A. Spring Washer
45	563X.142	Chain Wheel
46	182/0410	1/4" B.S.F. Set Screw, Taper Point 5/8" long
47	563Y.105	Drive Housing Gasket
48	55/0516	5/16" B.S.F. Socket Head Cap Screw 1" long
49	154/05	5/16" Spring Washer
50	--	3/8" Pipe Clip
51	563Y.104	Cover for Drive Housing
52	--	1/2" B.S.P. Hexagon Pipe Plug
53	--	1/2" B.S.P. 90 deg. Elbow M. & F.
54	563X.117	Dust Cap

SWARF CONVEYOR - DRAWING NO. 563 Z 1B

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
55	165/206	2 B.A. Round Head screw, 3/8" long
56	236/202420	Oil Retaining Bush 1.1/4" x 1.1/2" x 1/4" long
57	122/1020	Key 5/16" x 7/32" x 1.1/4" long
58	563X.113	Sprocket Shaft
59	236/242820	Oil Retaining Bush 1.1/2" x 1.3/4" x 1.1/4" long
60	63Z.101	Conveyor Drive Housing
61	235/24346	Superfect Oil Seal, 212116
62	154/06	3/8" Spring Washer
63	155/0616	3/8" B.S.F. Socket Head Cap Screw 1" long
64	563X.111	End cap
65	563X.114	Piston Ring
66	173/06	3/8" B.S.F. Hexagon Nut
67	563X.118	Drive Pin
68	563Y.103A	Swarf Screw
69	563Z.102C	Swarf Trough



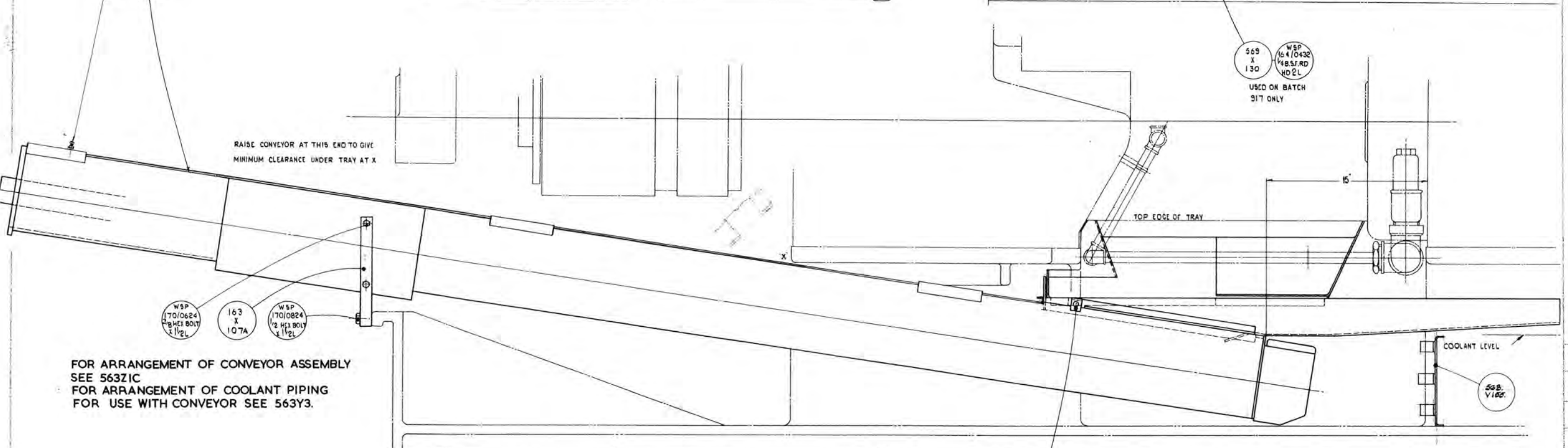
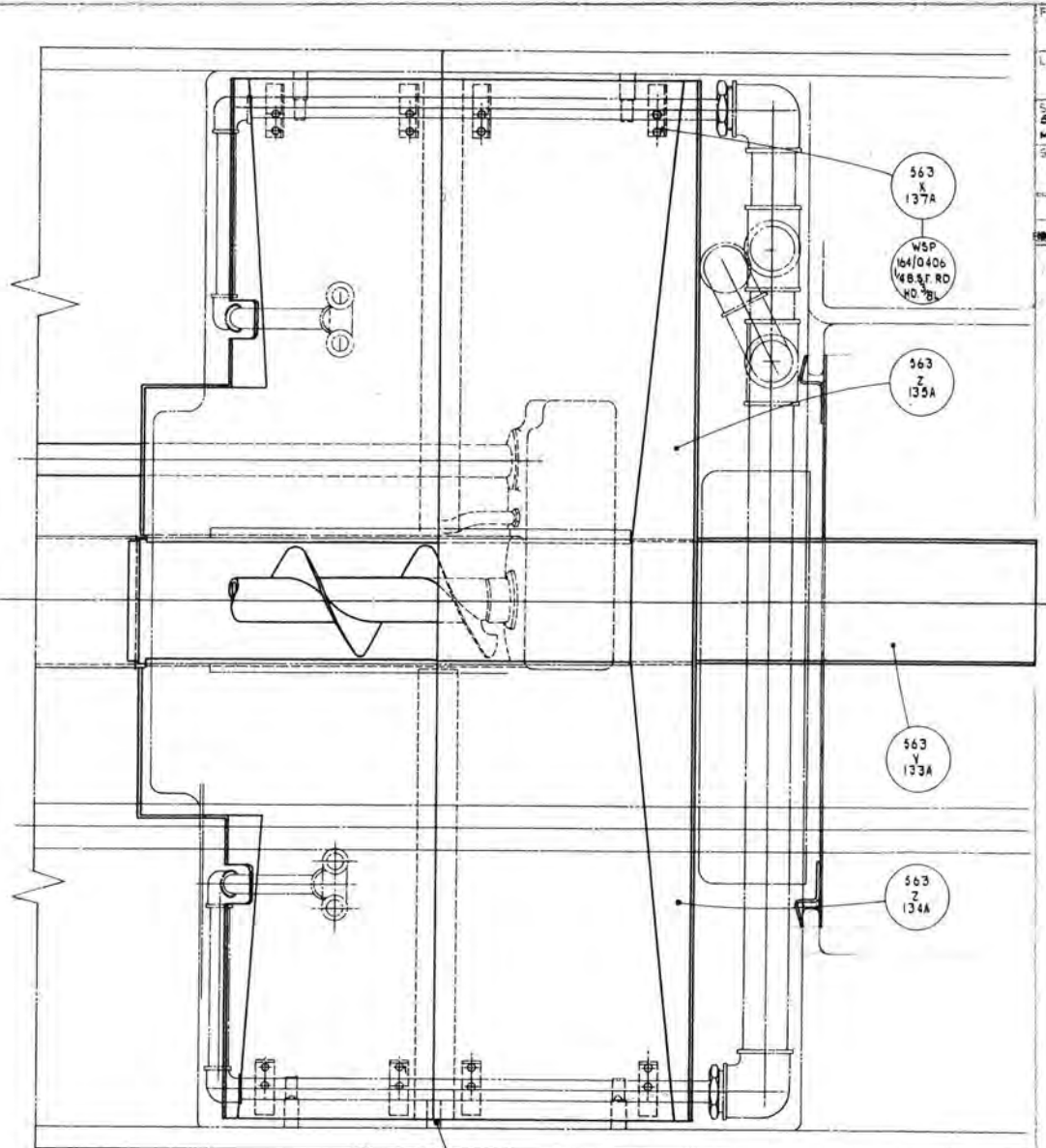
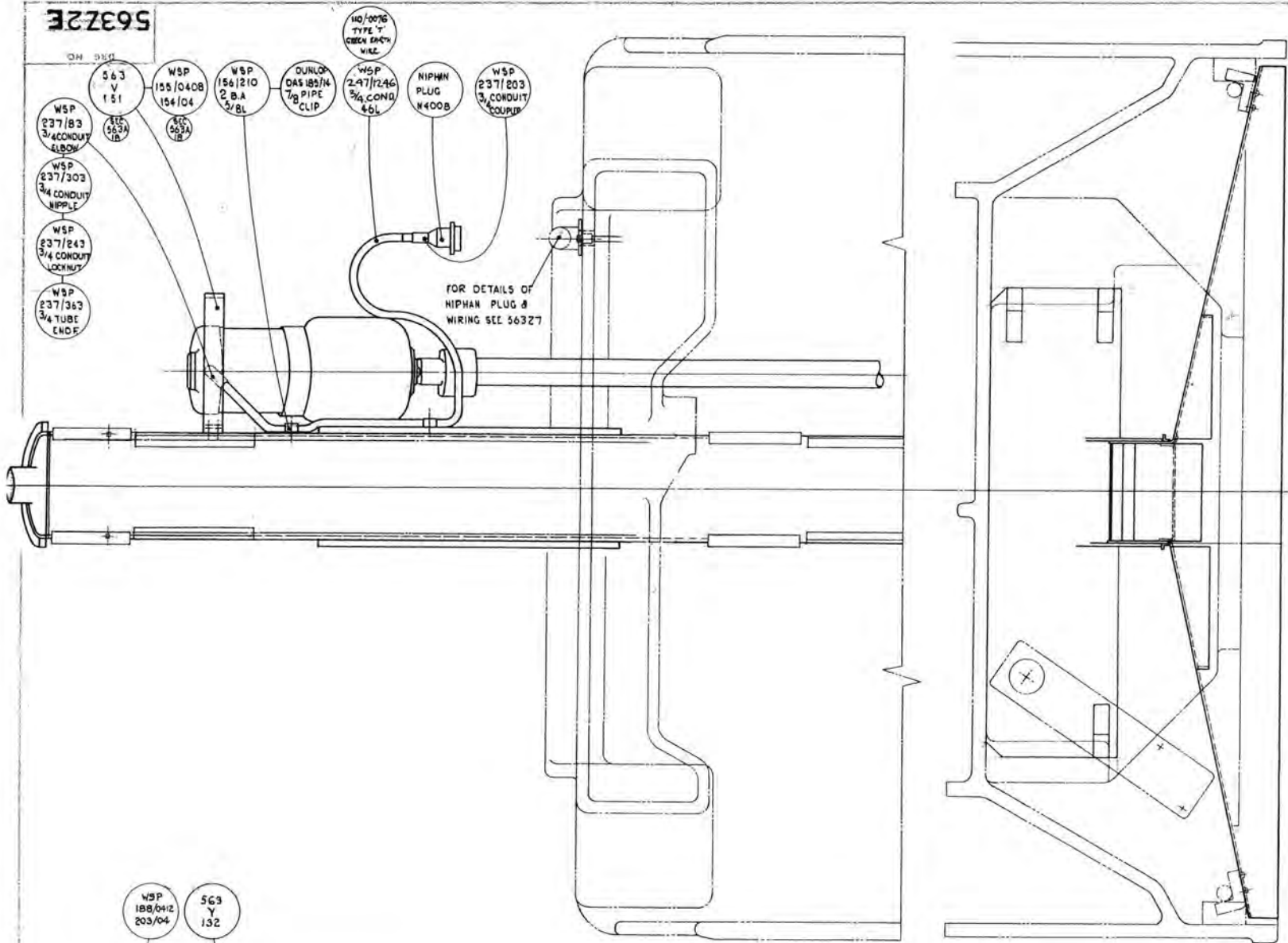
563Z1B

E/C

SWARF CONVEYOR AND SWARF CHUTES - DRAWING NO. 563 Z 2

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	--	3/8" bore Metal flex.
2	237/0610M	3/8" Metal Flex to 5/8" Male Conduit Adaptor
3	237/82	5/8" Conduit Solid Elbow
4	237/302	5/8" Conduit Nipple
5	237/242	5/8" Conduit Hexagon Locknut
6	237/0612M	3/8" Metal Flex to 3/4" Male Conduit Adaptor
7	237/203	3/4" Conduit Coupler
8	--	Niphan Plug, 5 amp. 500 V.
9	165/208	2 B.A. Round Head Screw 1/2" long
10	--	Niphan Angle Socket No. 465.b
11	FX.7119	Attachment Plate
12	237/0610M	3/8" Metal Flex to 5/8" Male Conduit Adaptor
13	237/242	5/8" Conduit Hexagon Locknut
14	--	3/8" bore Metal Flex
15	237/0612M	3/8" Metal Flex to 3/4" Male Conduit Adaptor
16	237/243	3/4" Conduit Hexagon Locknut
17	165/208	2.B.A. Round Head Screw 1/2" long
18	--	M.E.M. "Startet" Starter 500 volt A.C.
19	563X.137A	Bracket
20	164/0406	1/4" B.S.F. Round Head Screw, 3/8" long
21	563Z.135A	Swarf Chute, Rear (L.H. and R.H.)
22	563Y.133A	Swarf Chute
23	563Z.134A	Swarf Chute, Front (L.H. and R.H.)
24	569X.130	Support Block
25	164/0432	1/2" B.S.F. Round Head Screw 2" long
26	167/0406	1/4" B.S.F. Hexagon Head Set Screw 3/8" long
27	563X.140	Clamp

56322E



FOR ARRANGEMENT OF CONVEYOR ASSEMBLY SEE 56321C
 FOR ARRANGEMENT OF COOLANT PIPING FOR USE WITH CONVEYOR SEE 563Y3.

FIRST USED ON BATCH
 LAST USED ON BATCH
 SUPERSEDES 56322 COMMENCING M.E. NO. NO.
 SUPERSEDED BY 56322 G.
 ALTERATIONS
 CANCELLED 500A.400 L.M.
 15/2/60

REMOVE ALL SHARP CORNERS, UNLESS OTHERWISE STATED.
 TOLERANCE ON MACHINING DIMENSIONS ± 0.01 UNLESS OTHERWISE STATED.
 AMERICAN PROJECTION
 F - ROUGH MACHINE
 FF - FINISH MACHINE
 FF - GRIND OR EQUIVALENT.
 PATTERN FORGING NO.



MACHINE TOOL DIVISION
 COVENTRY - ENGLAND

COPYRIGHT

ARRANGEMENT OF SWARF CONVEYOR & SWARF CHUTES.

FIRST USED ON M/C
 INSP. NO.

SCALE
 QUARTER
 FULL
 SIZE

DRAWN J. R. H. H. B. 55
 CHECKED J. G. 19.8.55
 TRACED D. J. C. 25.8.55

MATERIAL PARTS LISTS
 563L68/70

563L68	13/4 - 8	MATERIAL
563L69	2 3/8 - 6	PARTS LISTS
563L70	3 1/2 - 4	

56322E

PUMP MOUNTING UNIT AND FLUSH BLOCK - DRAWING NO, 568 Z 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	154/0523	5/16" Spring Washer
2	155/0628	3/8" B.S.F. Socket Head Cap Screw, 1.3/4" long
3	150/14	7/8" x 22 T.P.I. Slotted Locknut
4	179/204	2 B.A. Socket Set Screw, Cup Point 1/4" long
5	153/42	Copper Pad
6	568X.133A	Lubricating Pump Driven Sprocket
7	568X.188	Pump Bracket
8	568X.189	Adjusting Collar
9	568X.181	Flanged Pin
10	154/05	5/16" Spring Washer
11	155/0520	" B.S.F. Socket Head Cap Screw, 1.1/4" long
12	154/05	5/16" Spring Washer
13	155/0548	5/16" B.S.F. Socket Head Cap Screw, 3" long
14	221/8	3/8" Tubing Sleeve
15	215/10	3/8" Tubing Nut
16	219/7	3/8" B.S.P., 3/8" Tube, Elbow
17	--	Weston W.03707 Synthetic Rubber Ring
18	--	Enots Y/233 Locknut
19	--	Enots Y.232 Adjusting Screw
20	--	Enots Y.235 Spring
21	--	Enots Y.234 Plunger
22	221/8	3/8" Tubing Sleeve
23	215/10	3/8" Tubing Nut
24	194/3	3/8" B.S.P. Socket Pipe Plug
25	FX.6618	Flush Spring
26	568X.190	Flush Block Valve
27	154/02	3/16" Spring Washer
28	156/208	2 B.A. Socket Head Cap Screw, 1/2" long
29	568X.192	Retaining Plate
30	143/0410	Grooved Pin
31	568X.191	Flush Push Button
32	568X.183	Flush Block

**Refer to drawing
showing all part
numbers**

FIRST USED ON BATCH
872.
LAST USED ON BATCH

SUPERSEDES
568Z1.
SUPERSEDED BY

ALTERATIONS

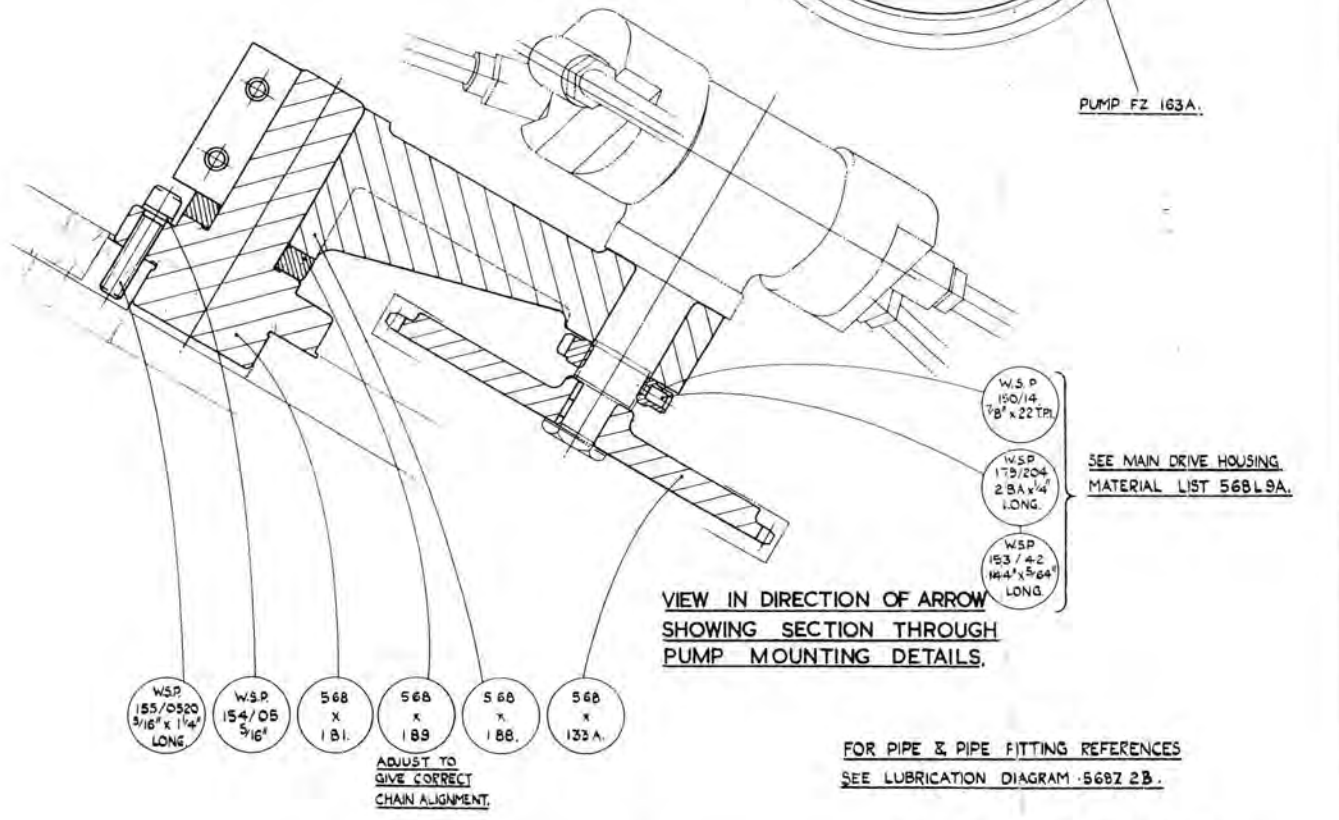
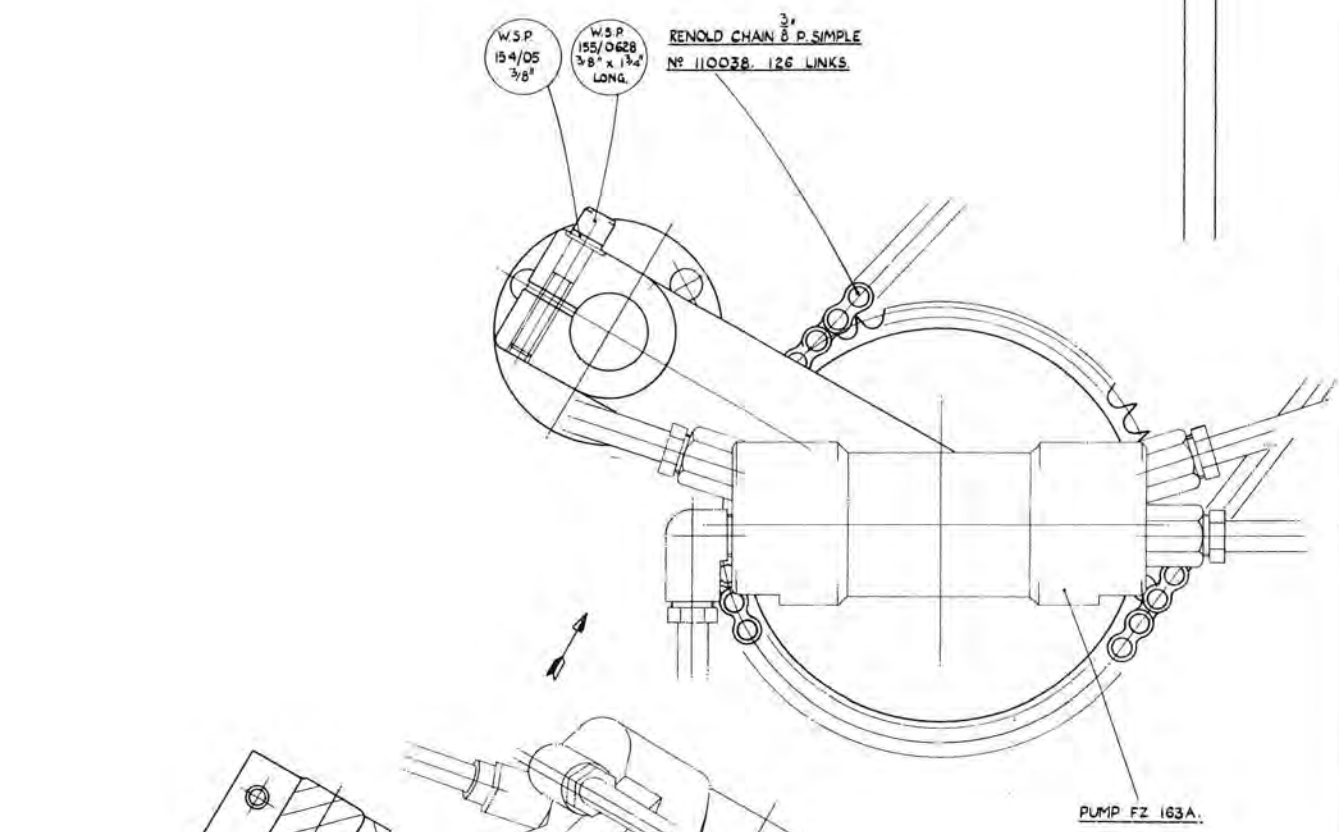
FIRST USED ON BATCH
872.
LAST USED ON BATCH

SUPERSEDES

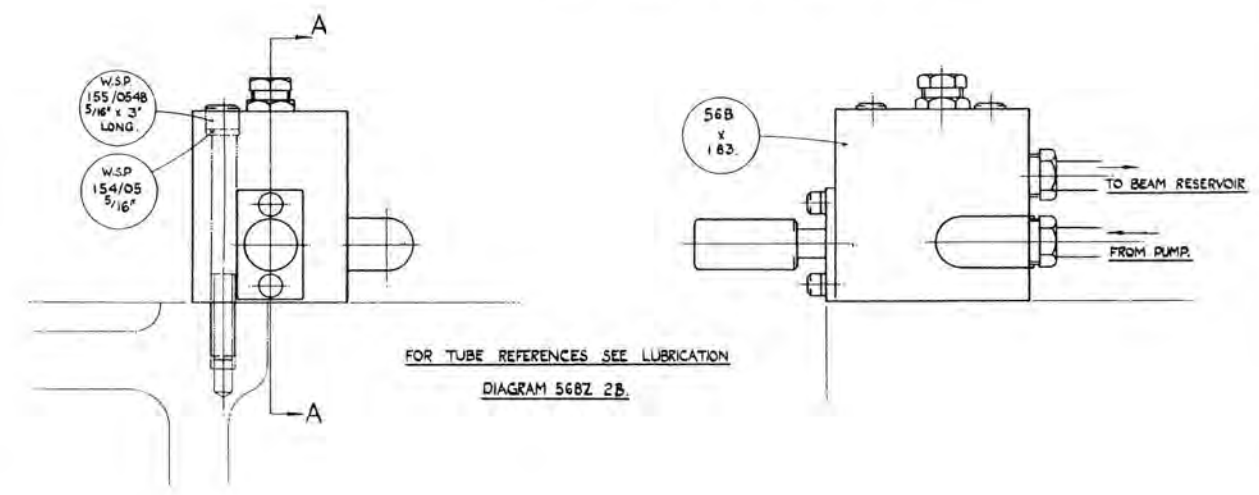
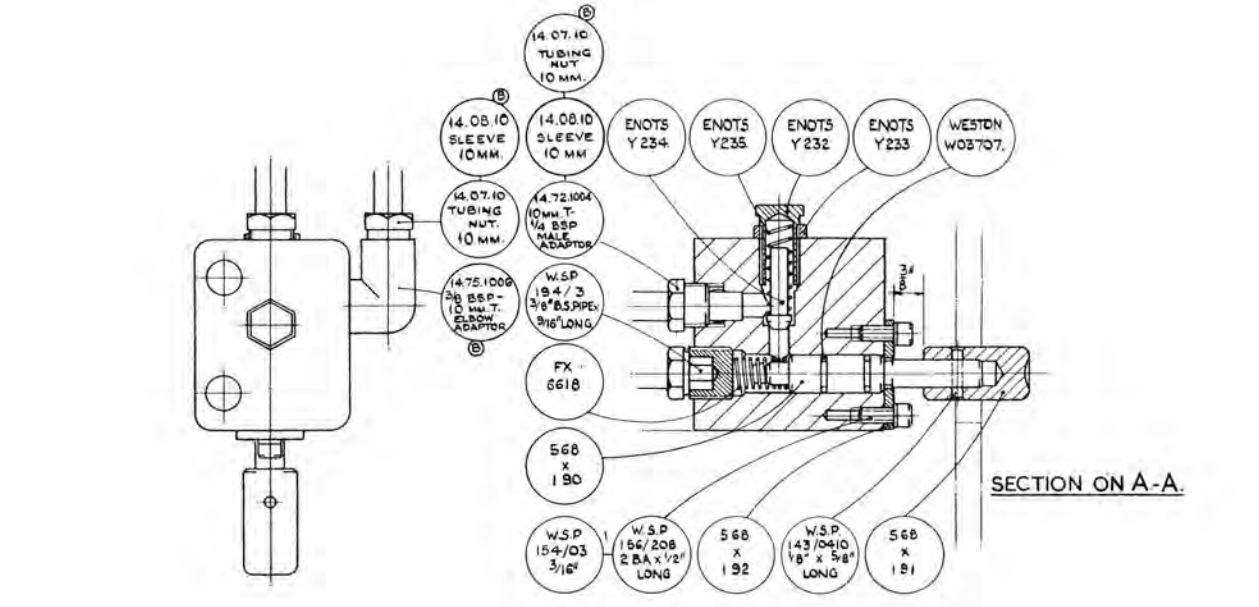
SUPERSEDED BY

ALTERATIONS

A 200A457 FG
B 200A457 FG
23-6-77



PUMP-MOUNTING UNIT.



FLUSH BLOCK.

FOR PIPE & PIPE FITTING REFERENCES
SEE LUBRICATION DIAGRAM 568Z 2B.

SEE ALSO 568Z 2B, 3B, 4B & 5A.

SEE ALSO 568Z 2B, 3B, 4B & 5A.

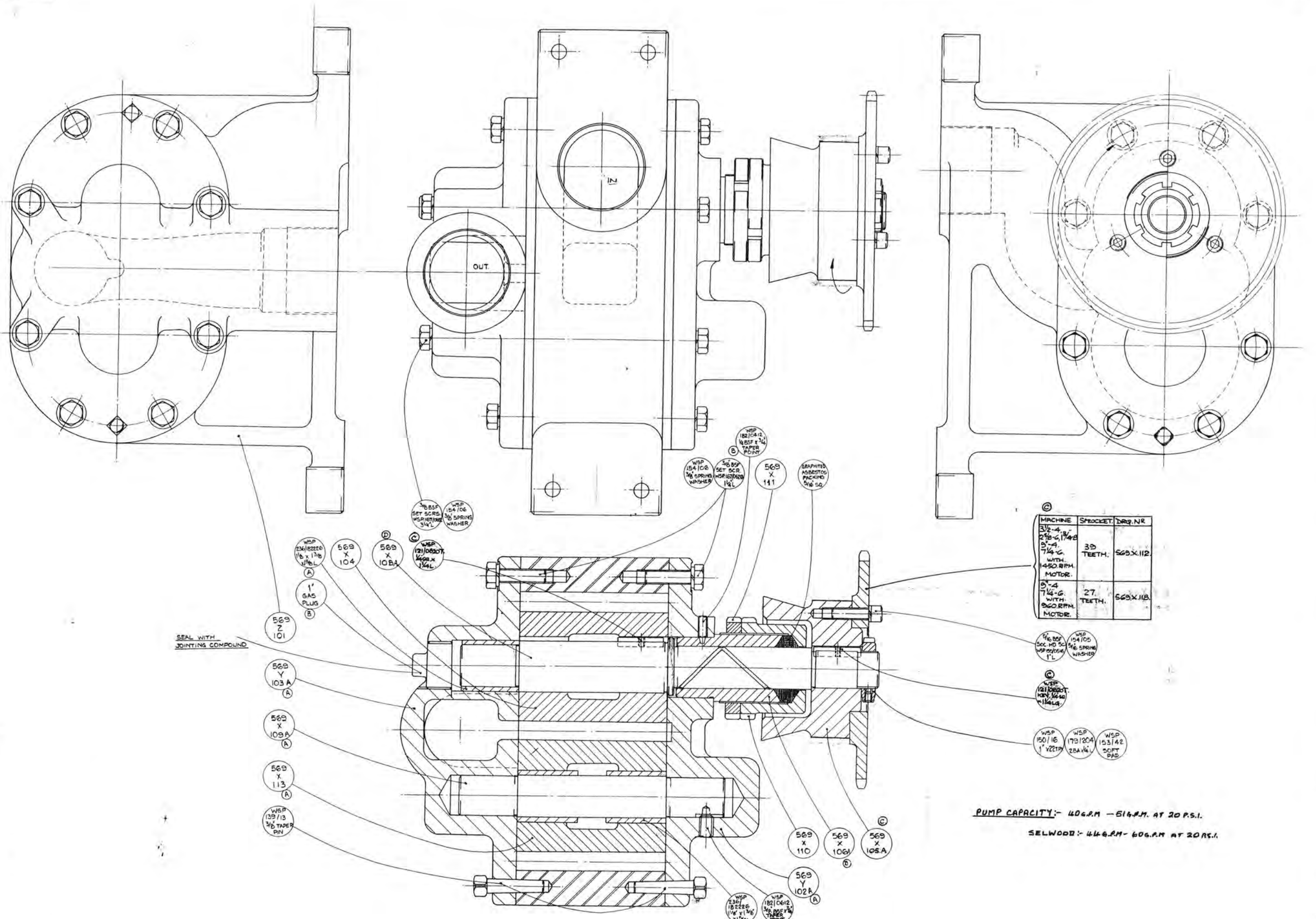
MATERIAL LISTS
568L 1, 2

MATERIAL LISTS
568L 3, 4

COOLANT PUMP - DRAWING NO. 569 Z 1

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	167/0652	3/8" B.S.F. Hexagon Set Screw, 3.1/4" long
2	154/06	3/8" Spring Washer
3	154/06	3/8" Spring Washer
4	167/0620	3/8" B.S.F. Hexagon Set Screw 1.1/4" long
5	182/0412	1/4" B.S.F. Socket Set Screw, Taper Point 3/4" long
6	569X.111	Gland Locknut
7	---	Graphited Asbestos Packing 5/16" square x 1 ft. long
8	569X.112	Pump Sprocket
9	155/0516	5/16" B.S.F. Socket Head Cap Screw 1" long
10	154/05	5/16" Spring Washer
11	569X.107	Key
12	150/16	1" Standard Locknut
13	179/204	2 B.A. Set Screw. Cup Point 1/4" long
14	153/42	Soft Pad
15	569X.105	Sprocket Boss
16	569X.106	Pump Gland
17	569X.110	Gland Nut
18	569Y.102A	Coolant Pump Front Cover
19	182/0612	3/8" B.S.F. Socket Set Screw, Taper Point 3/4" long
20	236/182226	Oil Retaining Bush 1.1/8" x 1.3/8" x 1.5/8" long
21	139/13	3/8" Headed Taper Pin 1.1/2" long
22	569X.113	Driven Gear
23	569X.109A	Pump Shaft
24	569Y.103A	Coolant Pump Rear Cover
25	569Z.101	Coolant Pump Body
26	---	1" Gas Plug
27	236/182226	Oil Retaining Bush 1.1/8" x 1.3/8" x 1.5/8" long
28	569X.104	Pump Gear
29	569X.108	Pump Drive Shaft
30	569X.107	Key

**Refer to drawing
showing all part
numbers**



SEAL WITH JOINTING COMPOUND

MACHINE	SPROCKET	DRG. NR.
3 1/2 - 4 2 3/8 - 6 1/8 D-4 7 1/4 - G WITH 1450 RPM MOTOR.	33 TEETH.	569 X 112
D-4 7 1/4 - G WITH 560 RPM MOTOR.	27 TEETH.	569 X 112

PUMP CAPACITY: 40 G.P.M. - 61 G.P.M. AT 20 P.S.I.
SELWOOD: 44 G.P.M. - 60 G.P.M. AT 20 P.S.I.

ALTERATIONS

TAPER PINS WERE 3/64" ± 1/4" PARALLEL DOWELS ON PROTOTYPE	
(A)	6386 H.J.G. 19-1-51
(B)	6886 H.J.B. 20-12-51
(C)	800 A. 189. RES. 25-8-54.
(D)	500A330.42 31-7-57.

TRACED DATE
A.T.S. 7-5-52



MACHINE TOOL DIVISION
COVENTRY - ENGLAND

DESCRIPTION

COOLANT PUMP.

FULL SIZE RM 26-948 LOP 569LIR.2A.

569	7 1/4 - G
569	3 - 4
569	1 1/4 - 8
569	1 1/2 - 6
569	3 1/2 - 4

569Z.1

STOCK CARRIAGE
2 $\frac{5}{8}$ "-6 SPINDLE BAR MACHINE

INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	575Z.107	Stock Tube Support Frame.	24	130/08	$\frac{1}{2}$ " Washer.
2	—	No. 11 Taper Pin, 6 $\frac{3}{4}$ " long.	25	155/0620	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long.
3	575Z.102	Centre Driving Tube.	26	575X.122	Spring.
4	575Y.101A	Stock Tube.	27	170/1688	1" B.S.F. Hexagon Head Bolt, 5 $\frac{1}{2}$ " long.
5	178/0820	$\frac{1}{2}$ " B.S.F. Socket Set Screw, 1 $\frac{1}{4}$ " long.	28	130/16	1" Washer.
6	575Y.103A	Bush for Stock Tube.	29	575Y.103A	Bush for Stock Tube.
7	575Z.118	Stock Carriage Indexing Gear	30	575X.127	Stock Spring Abutment Washer.
8	522Y.132	Gear Cover.	31	178/0820	$\frac{1}{2}$ " B.S.F. Socket Set Screw, 1 $\frac{1}{4}$ " long.
9	522Z.102	Stock Carriage Indexing Bracket.	32	575X.119	Stock Tube Spring.
10	203/08	$\frac{1}{2}$ " B.S.F. Pinnacle Nut. NP/F.164.	33	575X.121	Spring Clip.
11	130/08	$\frac{1}{2}$ " Washer.	34	154/06	$\frac{3}{8}$ " Washer.
12	575Y.106A	Stop Plate.	35	155/0632	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 2" long.
13	575Y.105	Feed Tube Steady.	36	575Y.104A	Bush for Stock Tube.
14	575X.120	Stud.	37	210/2525	Yellow Indicator Washer.
15	575X.114	Key.	38	212/18	$\frac{1}{4}$ " B.S.P. Grease Nipple.
16	155/0406	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{8}$ " long.	39	575X.116	Roller Pin.
17	188/0748	$\frac{7}{16}$ " B.S.F. Square Head Set Screw.	40	575X.115	Roller.
18	—	No. 11 Taper Pin, 6 $\frac{3}{4}$ " long.	41	575Z.109	Stock Carriage Stand.
19	155/0406	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{8}$ " long.	42	188/1252	$\frac{3}{4}$ " B.S.F. Square Head Set Screw, 3" long.
20	575X.113	Key.	43	173/12L	$\frac{3}{4}$ " B.S.F. Hexagon Locknut.
21	575X.111A	Stud.	44	575Z.108	Stock Tube Support.
22	575X.110	Clamp.	45	176/0608	$\frac{3}{8}$ " B.S.F. Socket Set Screw, $\frac{1}{2}$ " long.
23	203/08	$\frac{1}{2}$ " B.S.F. Pinnacle Nut NP/F164.			

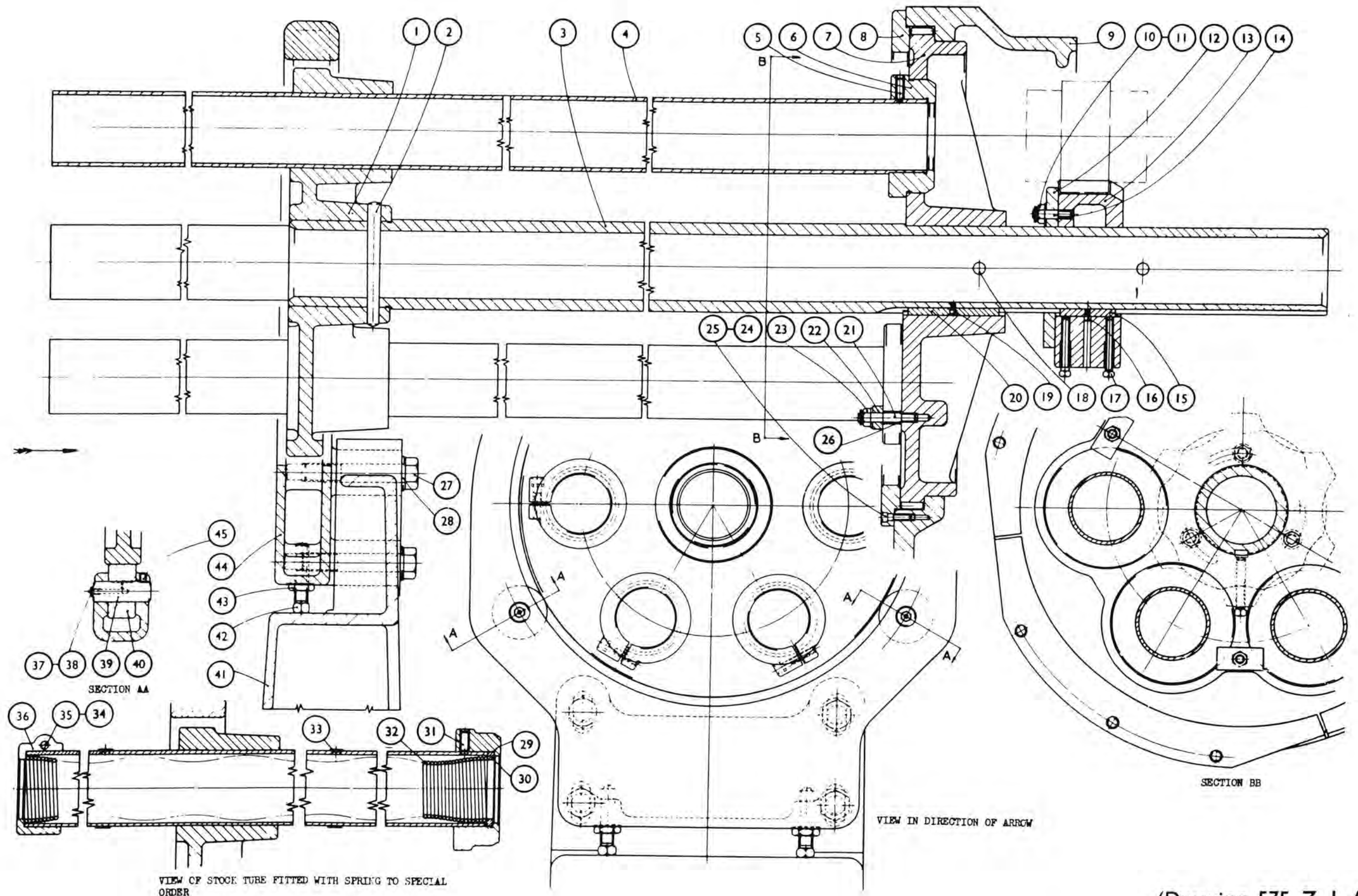
List of Parts for

(Drawing No. 575 Z 1A)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

STOCK CARRIAGE

2 $\frac{5}{8}$ "-6 Spindle Bar Machine



(Drawing 575 Z I A)

**FULL THREADING DRIVE
SECTION 581—MARK I**

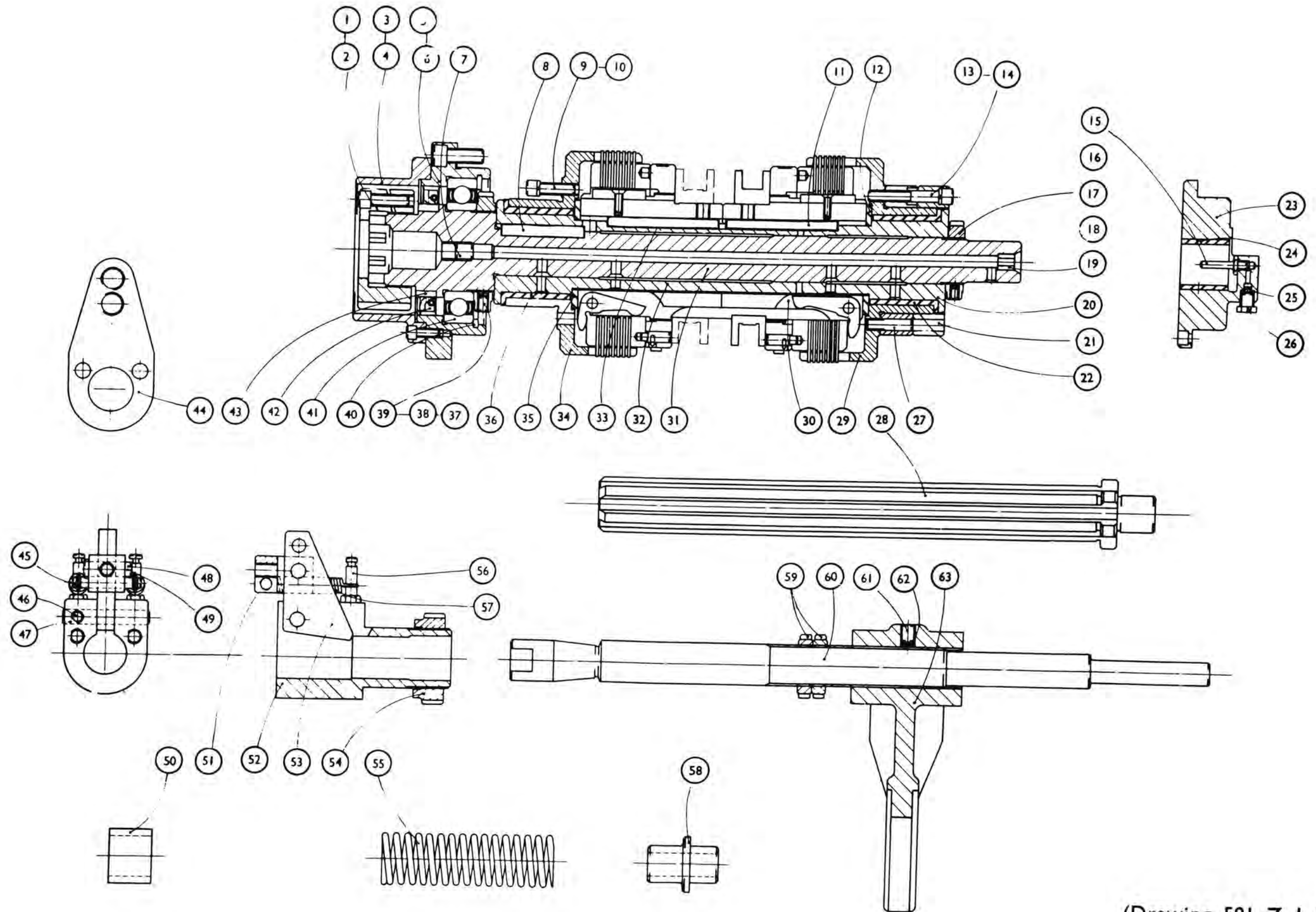
INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	155/0516	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, 1" long.	33	122/1248	Key, $\frac{3}{8}$ " \times $\frac{1}{4}$ " \times 3" long.
2	581X.128	Locknut.	34	581Y.126	Long Clutch Sleeve.
3	155/0410	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{8}$ " long.	35	581X.124	Thrust Washer.
4	581X.103	Coupling Cover.	36	581X.136A	Clutch Cup Bearing.
5	155/0616	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1" long.	37	153/05	$\frac{1}{16}$ " Soft Pad.
6	581Y.101	Front Cap.	38	176/0506	$\frac{1}{16}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{1}{2}$ " long.
7	176/0808	$\frac{1}{2}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{1}{2}$ " long.	39	151/55	55 mm Slotted Locknut.
8	121/1036	Key, $\frac{1}{8}$ " square, 2 $\frac{1}{4}$ " long.	40	104/42	100 mm Internal Circlip.
9	155/0516	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, 1" long.	41	258/55	Light Ball Journal, 55 \times 100 \times 21 mm
10	154/05	$\frac{1}{16}$ " Spring Washer.	42	—	Superfect 350216 or Weston W.350250 50.
11	122/1248	Key, $\frac{3}{8}$ " \times $\frac{1}{4}$ " \times 3" long.	43	581X.123	Oil Seal Ring.
12	581X.124	Thrust Washer.	44	581X.105A	Bracket.
13	154/05	$\frac{1}{16}$ " Spring Washer.	45	581X.138	Spring Anchor Pin.
14	155/0532	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, 2" long.	46	176/0505	$\frac{1}{16}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{1}{8}$ " long.
15	568X.162	Oil Nipple.	47	581X.132	Pivot Pin.
16	176/0405	$\frac{1}{4}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{1}{16}$ " long.	48	581X.108	Pin.
17	150/20	1 $\frac{1}{2}$ " Slotted Locknut.	49	127/0405	$\frac{1}{16}$ " Split Pin, $\frac{1}{2}$ " long.
18	153/04	$\frac{1}{4}$ " Soft Pad.	50	581X.114A	Spacer.
19	168X.160	Pipe Bush.	51	581X.111A	Trip Rod Coupling.
20	581Y.125	Short Clutch Sleeve.	52	581X.118A	Sleeve.
21	581X.116	Gear Spacer.	53	581X.131A	Trip Lever.
22	581X.136A	Clutch Cup Bearing.	54	581X.129	Locknut.
23	581X.102	End Bearing Housing.	55	581X.135	Clutch Return Spring.
24	236/182220	Oil Retaining Bush, 1 $\frac{1}{8}$ " \times 1 $\frac{1}{8}$ " \times 1 $\frac{1}{4}$ " long.	56	581X.137	Spring Anchor.
25	221/3	$\frac{1}{16}$ " Tubing Sleeve.	57	581X.133A	Spring.
26	215/3	$\frac{1}{16}$ " Tubing Nut.	58	581X.112	Sleeve.
27	581X.140	Dowel Pin.	59	581X.139	Stop Nut.
28	581Y.121	Extension Shaft.	60	581Y.119	Clutch Trip Shaft.
29	581Y.120	Clutch Cup.	61	176/0608	$\frac{3}{8}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{1}{2}$ " long.
30	—	Size 5 Matrix Wet Duplex Multi-Disc Clutch.	62	153/06	$\frac{3}{8}$ " Soft Pad.
31	581Y.127	Clutch Shaft.	63	581Y.104	Clutch Glut.
32	581Y.126	Long Clutch Sleeve.			

List of Parts for

(Drawing No. 581 Z 1B)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

FULL THREADING DRIVE



(Drawing 58I Z I B)

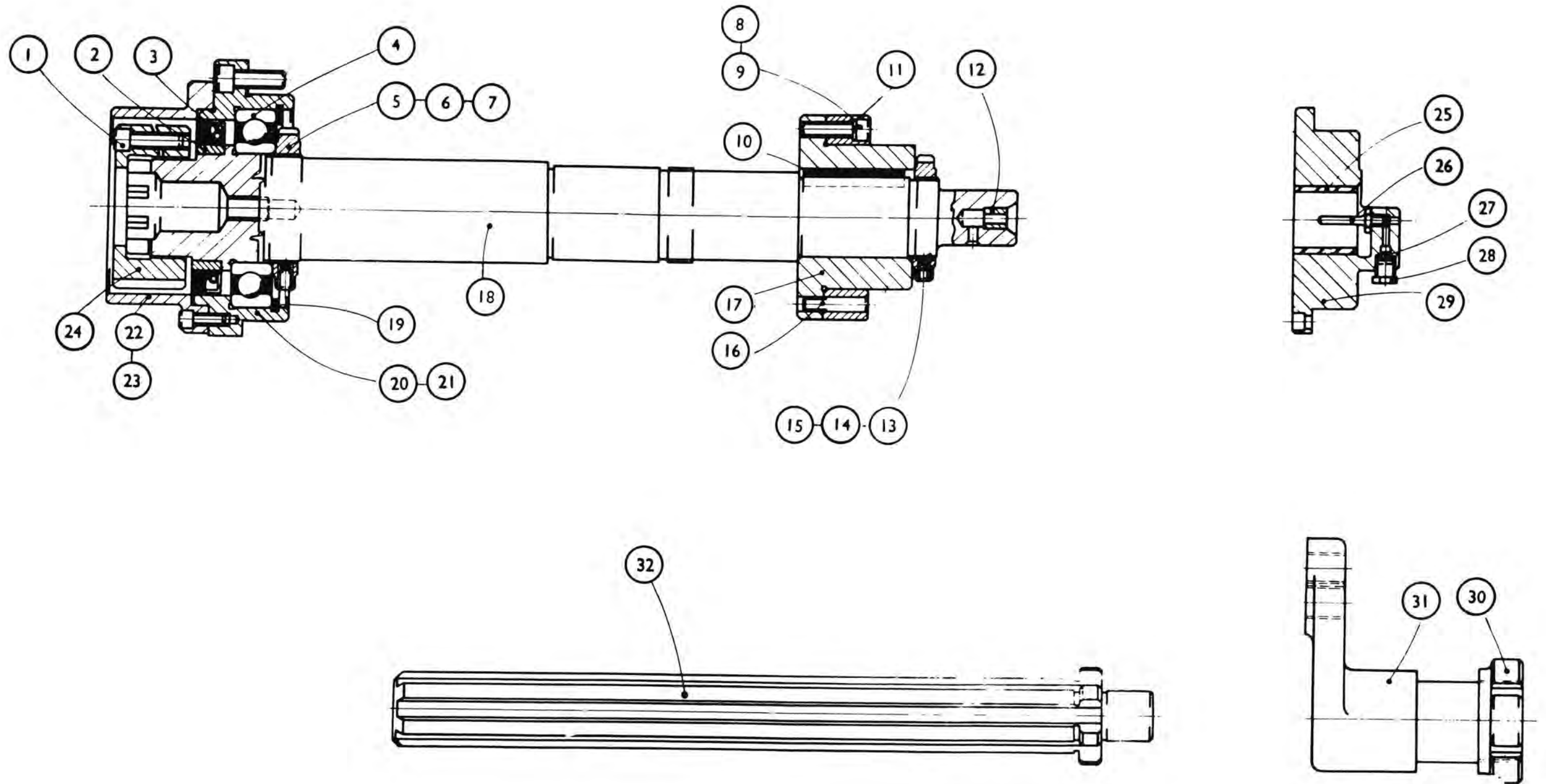
INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	155/0516	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, 1" long.	16	581X.140	Dowel Pin.
2	581X.123	Oil Seal Ring.	17	584X.103	Gear Boss.
3	—	Superfect 350216 or Weston W.350250 50.	18	582Y.101	Diehead Drive Shaft.
4	258/55	Light Ball Journal, 55×100×21 mm	19	104/42	100 mm Internal Circlip.
5	151/55	55 mm Slotted Locknut.	20	581Y.101	Front Cap.
6	176/0506	$\frac{5}{16}$ " B.S.F. Socket Head Set Screw, Cup Point, $\frac{3}{8}$ " long.	21	155/0616	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1" long.
7	153/05	$\frac{5}{16}$ " Soft Pad.	22	581X.103	Coupling Cover.
8	154/05	$\frac{5}{16}$ " Lockwasher.	23	155/0410	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{4}$ " long.
9	155/0520	$\frac{5}{16}$ " B.S.F. Socket Head Cap Screw, $1\frac{1}{4}$ " long.	24	581X.128	Locknut.
10	584X.111	Key.	25	236/182220	Oil Retaining Bush, $1\frac{1}{8}$ " × $1\frac{3}{8}$ " × $1\frac{1}{4}$ " long.
11	581X.116	Gear Spacer.	26	568X.162	Oil Nipple.
12	168X.160	Pipe Bush.	27	221/3	Tubing Sleeve.
13	150/26	$1\frac{3}{8}$ " Slotted Locknut.	28	215/3	Tubing Nut.
14	176/0405	$\frac{1}{4}$ " B.S.F. Socket Head Set Screw, Cup Point, $\frac{5}{16}$ " long.	29	581X.102	End Bearing Housing.
15	153/04	$\frac{1}{4}$ " Soft Pad.	30	581X.129	Locknut.
			31	582X.105	Bracket.
			32	581Y.121	Extension Shaft.

List of Parts for

(Drawing No. 582 Z 1A)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

REVOLVING DIEHEAD DRIVE



(Drawing 582 Z I A)

INDEX NO.	PART NO.	TITLE.
1	155/0410	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{5}{8}$ " long.
2	584X.102	Jackshaft End Cover.
3	155/1024	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, $1\frac{1}{2}$ " long.
4	154/10	$\frac{3}{8}$ " Spring Washer.
5	584X.108	Washer.
6	584X.106	Collar.
7	584X.104	Gear Boss.
8	584X.111	Key.
9	153/04	$\frac{1}{4}$ " Soft Pad.
10	176/0405	$\frac{1}{4}$ " B.S.F. Socket Head Set Screw, $\frac{5}{16}$ " long.
11	150/30	$1\frac{7}{8}$ " Slotted Locknut.
12	584Y.110	Jackshaft.
13	584X.111	Key.
14	584X.103	Gear Boss.

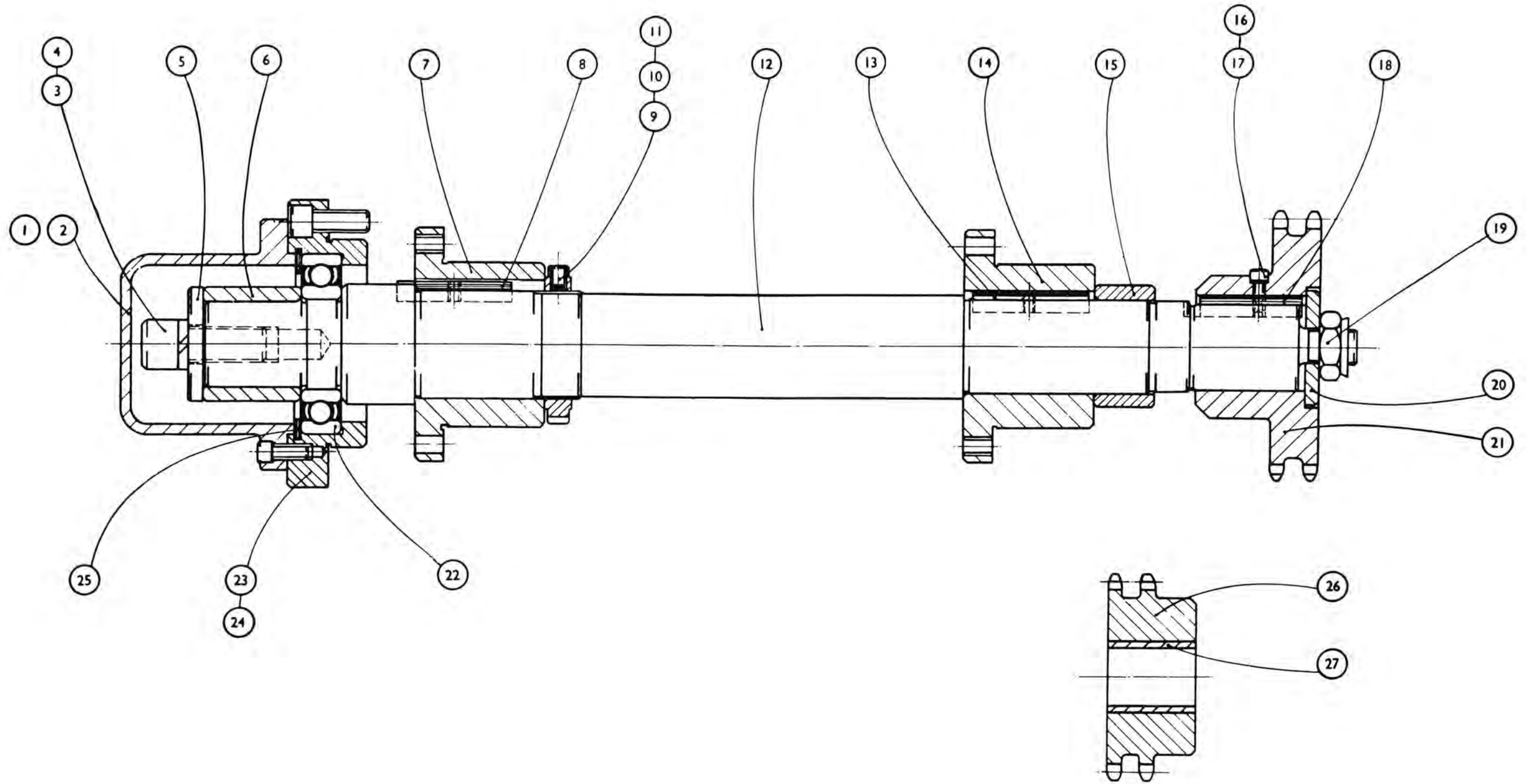
INDEX NO.	PART NO.	TITLE.
15	584X.107	Spacer.
16	154/2	2 B.A. Lockwasher.
17	156/208	2 B.A. Socket Head Cap Screw, $\frac{1}{2}$ " long.
18	584X.112	Key.
19	203/10L	$\frac{3}{8}$ " B.S.F. Self-Locking Nut.
20	584X.108	Washer.
21	584X.109	Sprocket.
22	258/40	Light Ball Journal, 40 x 80 x 18 mm
23	584X.101	Bearing Housing.
24	155/0616	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1" long.
25	104/38	80 mm Internal Circlip.
26	—	Renold 2I T. $\frac{1}{2}$ " P. 212609 Duplex, $1\frac{1}{4}$ " bore.
27	236/162024	Oil Retaining Bush, 1" x $1\frac{1}{4}$ " x $1\frac{1}{2}$ " long.

List of Parts for

(Drawing No. 584 Y 1A)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

JACKSHAFT

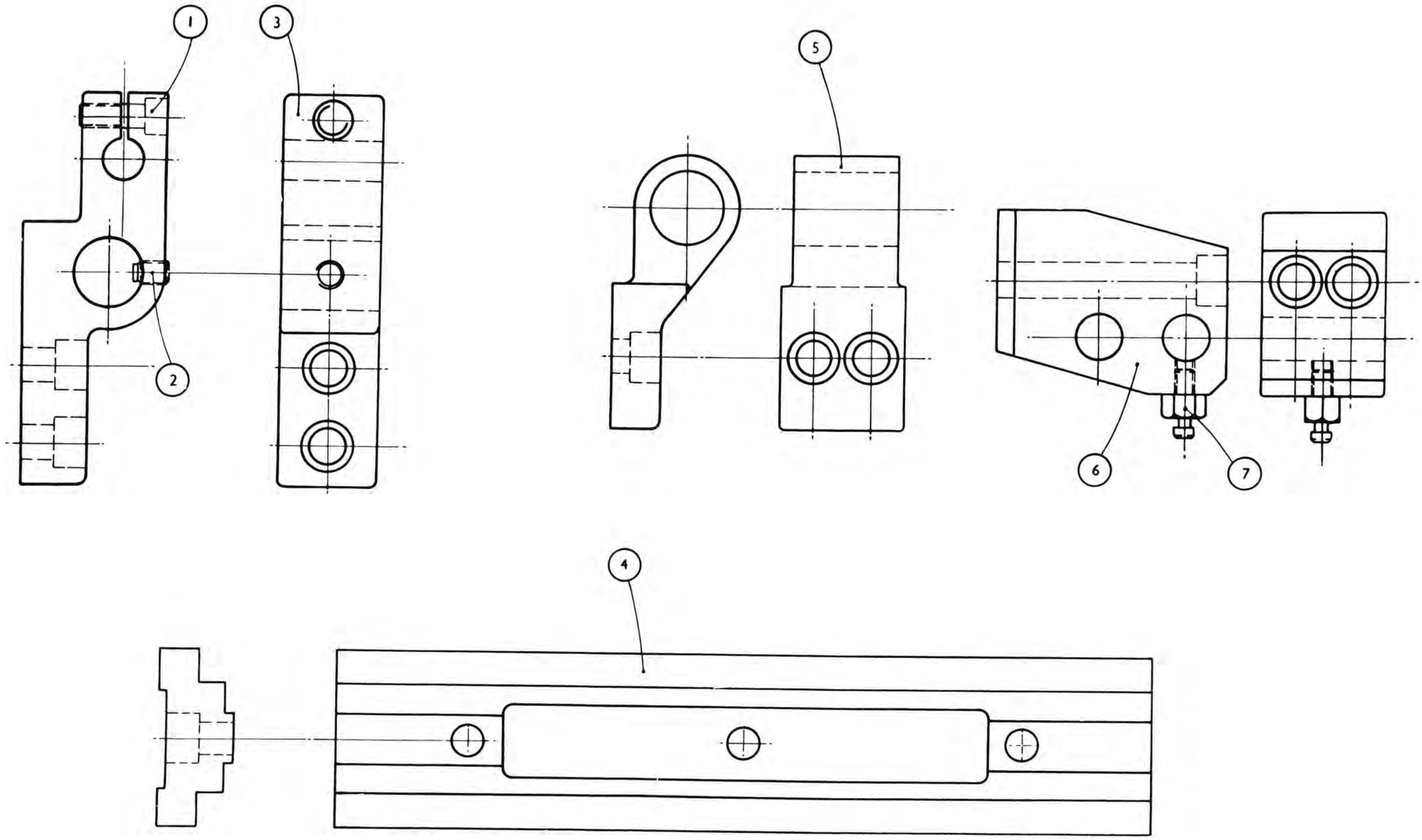


(Drawing 584 Y I A)

**THREADING UNIT, STATIONS 4 and 5
EXTRA PARTS SECTION 586A—MARK I**

INDEX NO.	PART NO.	TITLE.
1	155/0616	$\frac{1}{8}$ " B.S.F. Socket Head Cap Screw, 1" long.
2	178/0608	$\frac{3}{8}$ " B.S.F. Socket Set Screw, Dog Point, $\frac{1}{2}$ " long.
3	586A.X.101	Body Bracket.
4	586A.Y.104	Slide.
5	586A.X.102	Pusher Bracket.
6	586A.X.103	Slide Bracket.
7	586X.114	Spring Anchor.

THREADING UNIT, STATIONS 4 and 5



**THREADING SPINDLE AND BODY
SECTION 586—MARK I**

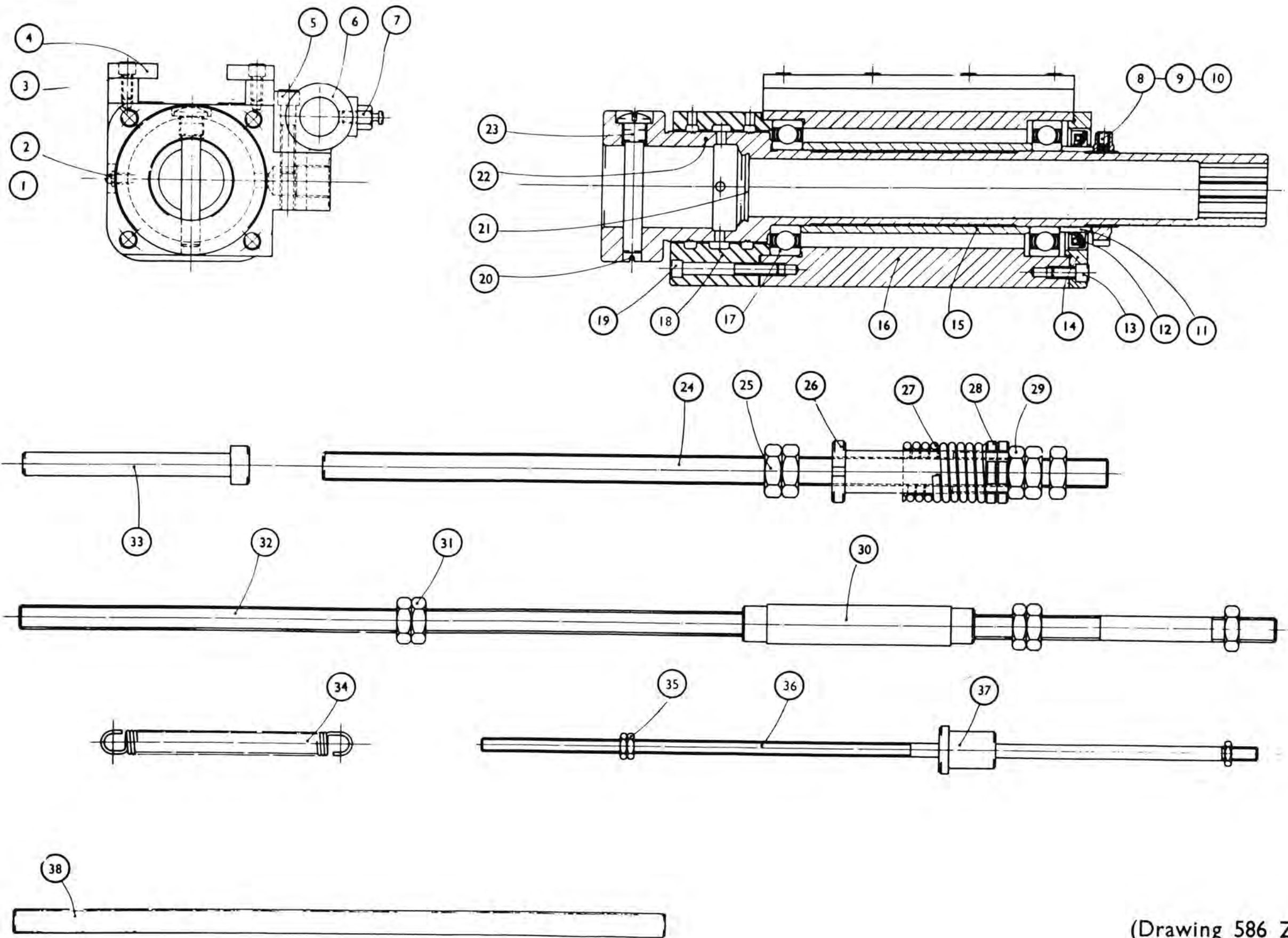
INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	210/1725	Indicator Washer.	20	586X.130	Retaining Ring.
2	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.	21	129/24	$1\frac{1}{2}$ " Welch Plug.
3	155/0510	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, $\frac{1}{2}$ " long.	22	586Y.126	Threading Spindle.
4	586X.115	Strip.	23	586X.123	Drive Pin.
5	155/0628	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, $1\frac{1}{2}$ " long.	24	586X.108	Push Rod.
6	586X.105A	Diehead Glut Bearing.	25	173/12H.L.	$\frac{3}{4}$ " B.S.F. Hardened Hexagon Locknut.
7	586X.114	Spring Anchor.	26	586X.124	Sleeve.
8	151/50	50 mm Slotted Locknut.	27	586X.129	Push Rod Spring.
9	176/0506	$\frac{1}{16}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{3}{8}$ " long.	28	586X.127	Locknut.
10	153/05	$\frac{1}{8}$ " Soft Pad.	29	173/12H.L.	$\frac{3}{4}$ " B.S.F. Hardened Hexagon Locknut.
11	586X.125	Spacer.	30	586X.112	Closing Sleeve.
12	—	Superfect Oil Seal No. 31928 or Weston W.319225 50.	31	173/10H.L.	$\frac{3}{4}$ " B.S.F. Hardened Hexagon Locknut.
13	155/0510	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, $\frac{1}{2}$ " long.	32	586X.109	Diehead Operating Rod.
14	586X.104	Rear Cap.	33	586X.113	Headed Pin.
15	586X.116	Spacer.	34	586X.128	Return Spring.
16	586Y.101	Threading Attachment Body.	35	173/06H.L.	$\frac{3}{4}$ " B.S.F. Hardened Hexagon Locknut.
17	258/50	Light Ball Journal, 50×90×20 mm	36	586X.111	Trip Rod.
18	586Y.106	Front Cap.	37	586X.107	Trip Bush.
19	155/0540	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, $2\frac{1}{2}$ " long.	38	586X.110	Clutch Closing Rod.

List of Parts for

(Drawing No. 586 Z 1A)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

THREADING SPINDLE AND BODY



(Drawing 586 Z I A)

**THREADING UNIT, STATIONS 3 and 6
SECTION 587—MARK I**

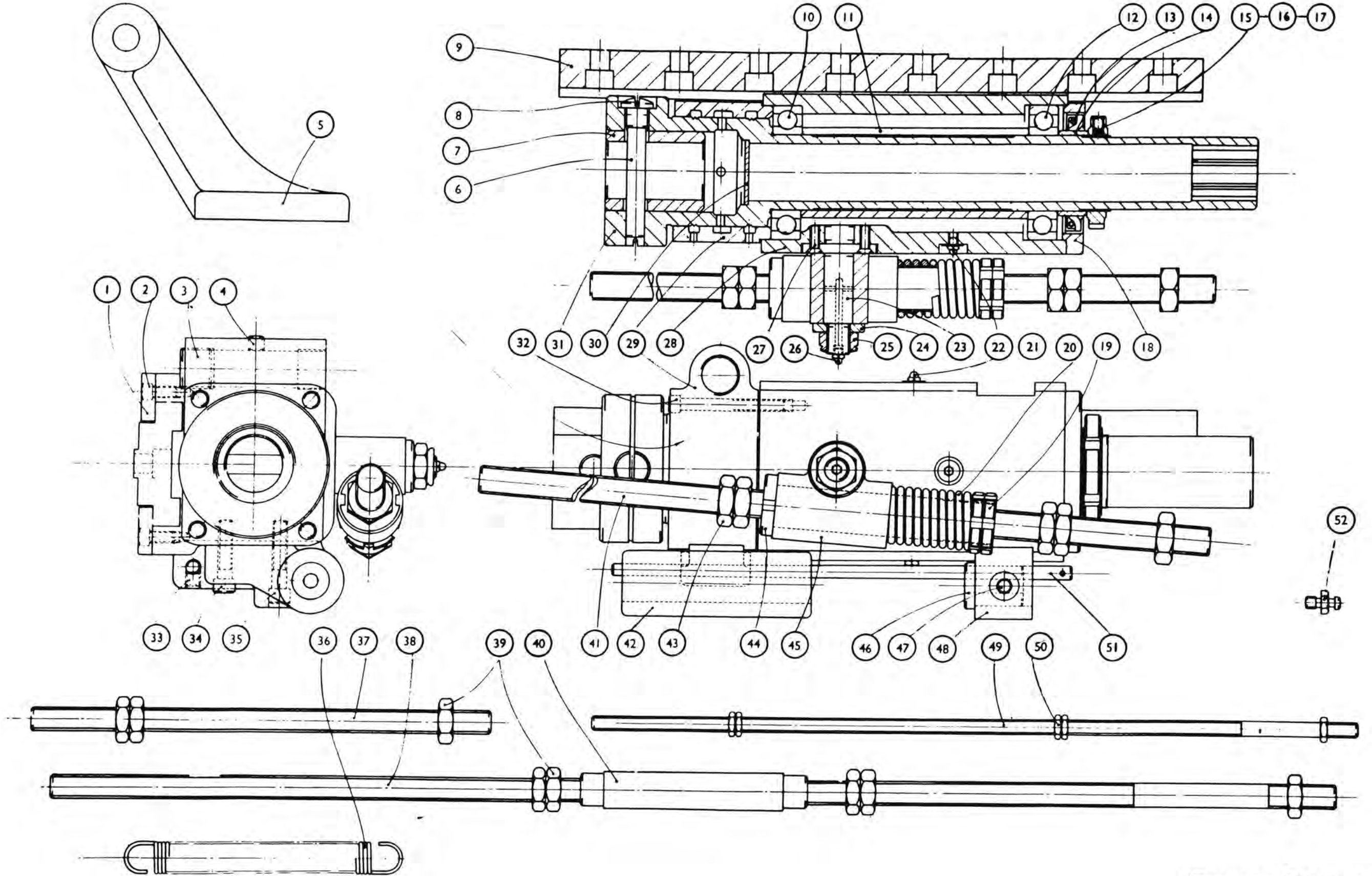
INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	586X.115	Strip.	27	158/0412	$\frac{1}{4}$ " B.S.F. Socket Countersunk Head Screw, $\frac{3}{4}$ " long.
2	155/0510	$\frac{5}{16}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{8}$ " long.	28	587Y.102	Threading Attachment Body.
3	194/6	$\frac{3}{4}$ " B.S.P. Socket Pipe Plug.	29	587Y.105A	Front Cap.
4	194/1	$\frac{1}{2}$ " B.S.P. Socket Pipe Plug.	30	129/24	1 $\frac{1}{4}$ " Welch Plug.
5	587Y.104A	Trip Setting Bracket.	31	586Y.126	Threading Spindle.
6	586X.123	Drive Pin.	32	155/0544	$\frac{5}{16}$ " B.S.F. Socket Head Cap Screw, 2 $\frac{3}{4}$ " long.
7	587X.109	Diehead Shank Bush.	33	176/0606	$\frac{3}{8}$ " B.S.F. Socket Head Set Screw, Cup Point, $\frac{3}{8}$ " long.
8	586X.130	Retaining Ring.	34	155/0624	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{2}$ " long.
9	587Y.101	Slide.	35	155/0628	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{2}$ " long.
10	258/50	Light Ball Journal, 50×90×20 mm	36	587X.120	Return Spring.
11	586X.116	Spacer.	37	587X.119	Closing Rod for Clutch.
12	258/50	Light Ball Journal, 50×90×20 mm	38	586X.109	Diehead Operating Rod.
13	—	Weston W.31922550 or Superfect 31928.	39	173/10HL	$\frac{3}{8}$ " B.S.F. Hexagon Locknut.
14	586X.125	Spacer.	40	586X.112	Closing Sleeve.
15	151/50	50 mm Slotted Locknut.	41	587X.107	Push Rod.
16	176/0506	$\frac{5}{16}$ " B.S.F. Socket Head Set Screw, Cup Point, $\frac{3}{8}$ " long.	42	587X.118	Glut Bracket.
17	153/05	$\frac{5}{16}$ " Soft Pad.	43	173/12H.L.	$\frac{3}{4}$ " B.S.F. Hexagon Locknut.
18	586X.104	Rear Cap.	44	587X.113	Sleeve.
19	586X.127	Locknut.	45	587X.103	Swivel Bearing.
20	586X.129	Push-Rod Spring.	46	586X.107	Trip Bush.
21	210/1725	Indicator Washer.	47	176/0606	$\frac{3}{8}$ " B.S.F. Socket Head Set Screw, Cup Point, $\frac{3}{8}$ " long.
22	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.	48	587X.108A	Trip Bracket.
23	587X.112	Pivot Pin.	49	586X.111	Trip Rod.
24	587X.110	Washer.	50	173/06H.L.	$\frac{3}{8}$ " B.S.F. Hexagon Locknut.
25	203/10L	$\frac{3}{8}$ " B.S.F. Self-Locking Nut.	51	587X.106	Spring Rod.
26	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.			

List of Parts for

(Drawing No. 587 Z 1B)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

THREADING UNIT, STATIONS 3 and 6



(Drawing 587 Z I B)

THREADING CAMS, STATIONS 3 and 6

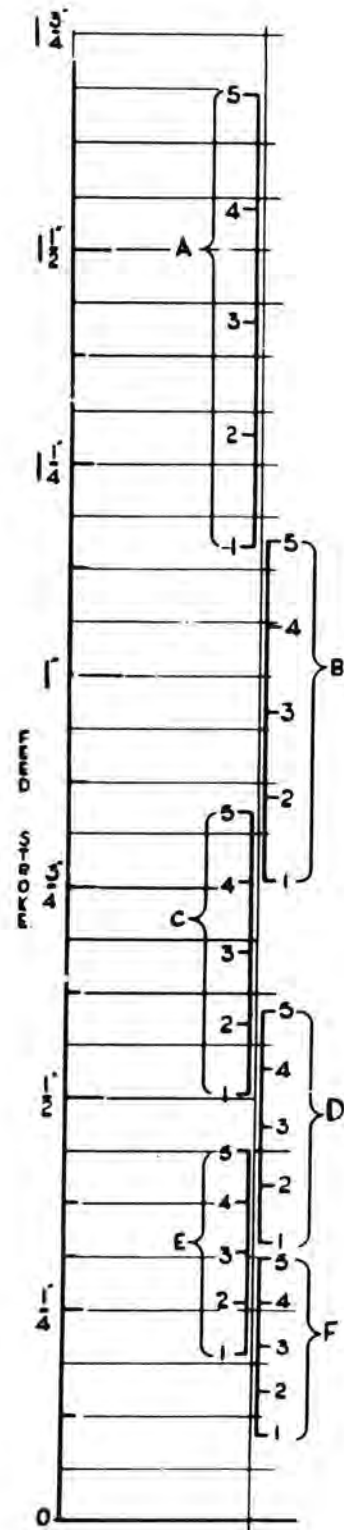
INDEX NO.	PART NO.	TITLE.
1	155/0814	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $\frac{7}{8}$ " long.
2	587B.Y.104	Inner Guard Cam.
3	587B.Y.108	Threading Cam.
4	588B.Y.105	Guard Cam.
5	587B.Y.106	Return Cam.
6	588C.Y.104	Inner Guard Cam, Station 3.
7	587C.Y.108	Threading Cam.
8	155/0814	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $\frac{7}{8}$ " long.
9	587C.Y.106	Return Cam.
10	588B.Y.105	Guard Cam.
11	587A.Y.105	Guard Cam.
12	587A.Y.106	Return Cam.
13	587A.Y.107	Return Guard Cam.
14	587A.Y.108	Threading Cam.
15	155/0814	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $\frac{7}{8}$ " long.
16	587A.Y.103	Drop Back Cam.

List of Parts for

(Drawing No. 587 Y 3A)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE SERIAL NUMBER OF THE MACHINE

THREADING CAMS, STATIONS 3 and 6



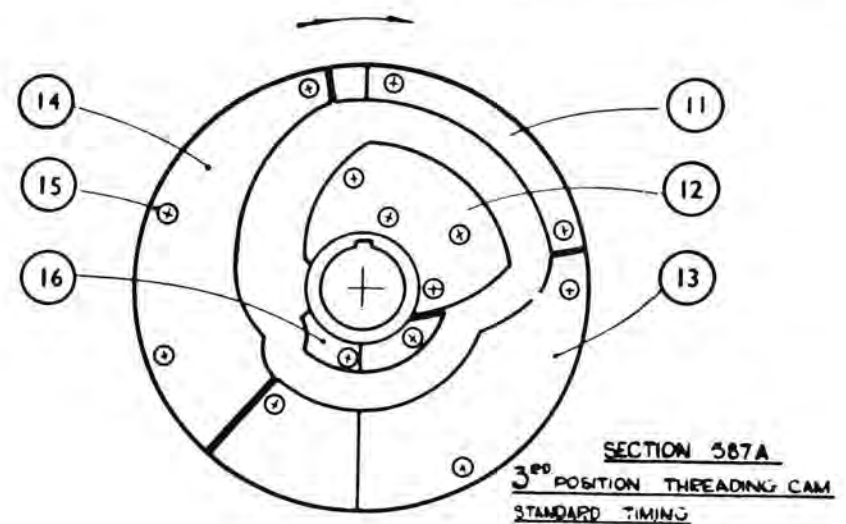
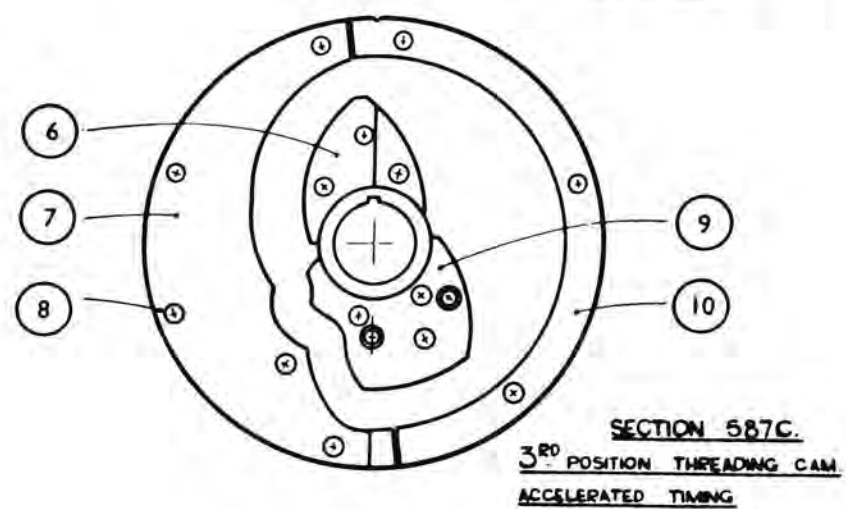
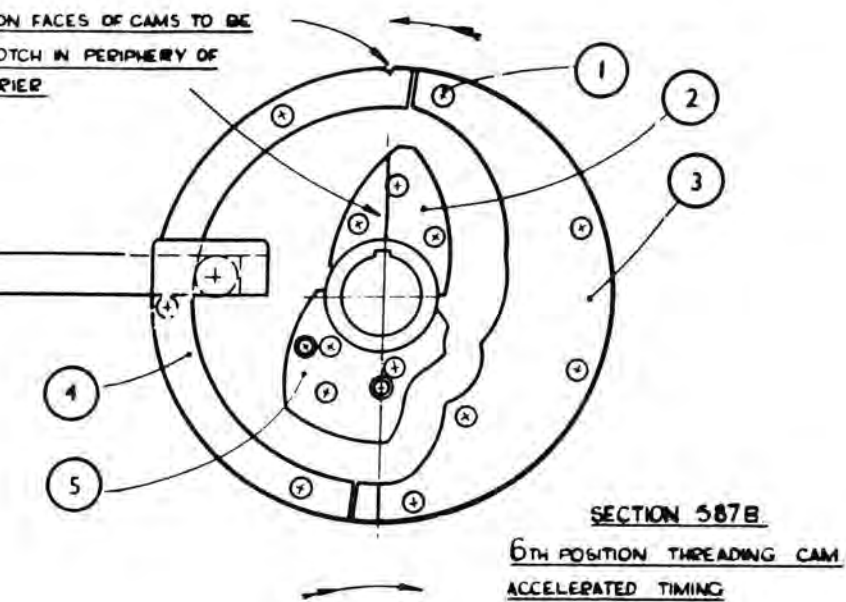
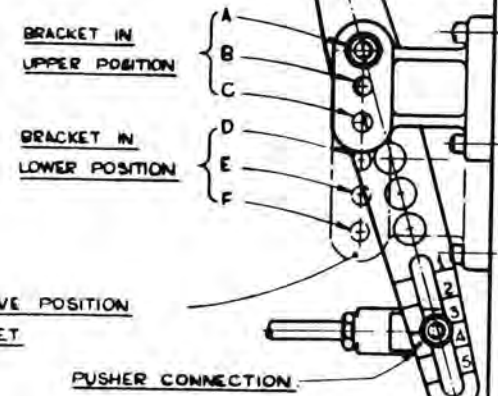
TO OBTAIN STROKE REQUIRED:-
 USE THE FOLLOWING FORMULAE TO OBTAIN STROKE REQ^d
 WITH 3RD & 6TH POS. THREADING CAMS.

$$\text{STROKE REQUIRED} = \frac{\text{AVAILABLE CUTTING REVS}}{4 \times \text{TPI} \times \text{THREADING RATIO 'ON'}}$$

- TO FIND STROKE SETTING.
- 1 ON FEED STROKE SCALE ON LEFT, MARK FEED STROKE REQUIRED (CALCULATED AS ABOVE)
 - 2 DRAW A HORIZONTAL LINE ACROSS TO BRACKETED COLUMN
 - 3 WHERE THE HORIZONTAL LINE CUTS THE BRACKETS GIVES THE PIVOT POSITION (A,B,ETC) & THE RELATIVE POSITION OF THE PUSHER CONNECTION WITH THE GRADUATIONS ON THE LOWER END OF THE LEVER (1,2, ETC)

$$\text{APPROACH STROKE} = 3.75 \times \text{FEED STROKE}$$

LINES MARKED ON FACES OF CAMS TO BE IN LINE WITH NOTCH IN PERIPHERY OF THE CAM CARRIER



REAMING BODY AND SLIDE, STATIONS 3 and 6
SECTION 588—MARK I

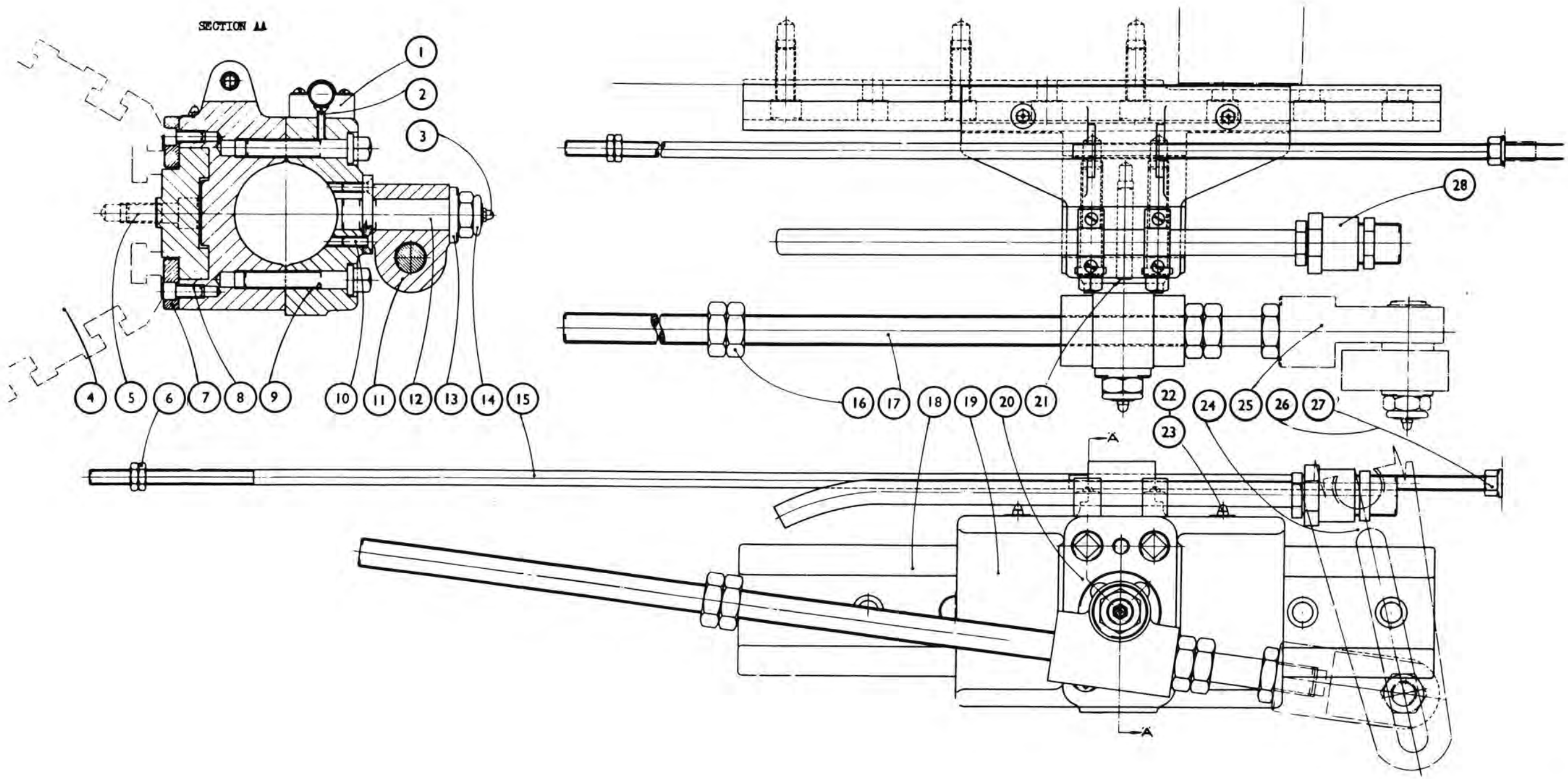
INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	237/382	$\frac{3}{8}$ " Heavy Spacing Saddle.	15	588X.105	Stop Rod.
2	162/210	2 B.A. Countersunk Head Screw, $\frac{5}{8}$ " long.	16	173/12L	$\frac{1}{4}$ " B.S.F. Hexagon Locknut.
3	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.	17	588X.104	Push Rod.
4	527Z.101	Centre Block.	18	587Y.101	Slide.
5	155/0820	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $1\frac{1}{4}$ " long.	19	588Y.101A	Reaming Attachment Sliding Base.
6	173/06L	$\frac{3}{8}$ " B.S.F. Hexagon Locknut.	20	588Y.102A	Reaming Attachment Cap.
7	586X.115	Strip.	21	124/1236	Parallel Dowel.
8	155/0510	$\frac{5}{16}$ " B.S.F. Socket Head Cap Screw, $\frac{5}{8}$ " long.	22	210/1725	Indicator Washer.
9	195/0740	$\frac{7}{16}$ " B.S.F. Naylor Collar Clamping Screw, $2\frac{1}{2}$ " long.	23	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.
10	158/0412	$\frac{1}{4}$ " B.S.F. Socket Countersunk Head Screw, $\frac{1}{4}$ " long.	24	589/Y/107A	Lever (See Plate 67).
11	588X.103	Swivel Bearing.	25	589/X/103A	Coupling (See Plate 67).
12	587X.112	Pivot Pin.	26	130/06	$\frac{3}{8}$ " B.S.F. Flat Washer.
13	587X.110	Washer.	27	173/06	$\frac{1}{4}$ " B.S.F. Hexagon Nut.
14	NT/F.204	$\frac{3}{8}$ " B.S.F. Pinnacle Nut, Type T.	28	C.S.106A	Coolant Pipe.

List of Parts for

(Drawing No. 588 Z 1)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

REAMING BODY AND SLIDE, STATIONS 3 and 6



STROKE DIAGRAM FOR REAMING CAMS, STATIONS 3 and 6

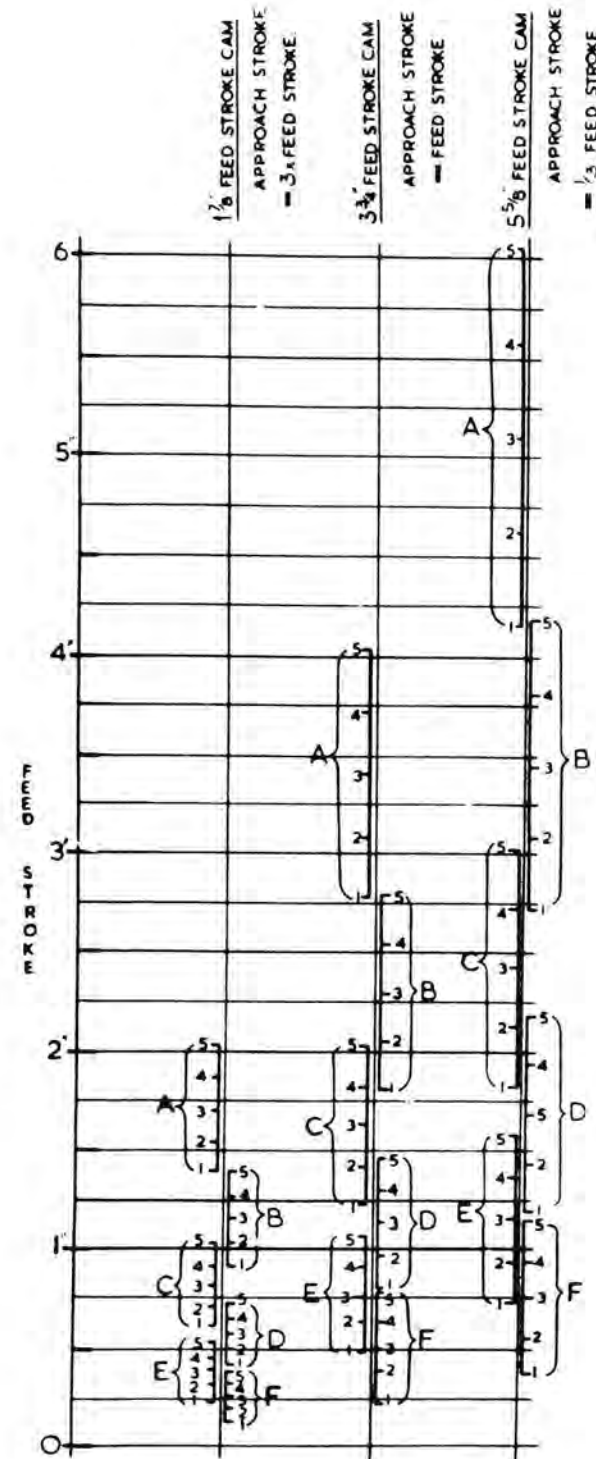
INDEX NO.	PART NO.	TITLE.
1	155/0814	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $\frac{7}{8}$ " long.
2	587B.Y.104	Inner Guard Cam.
3	588B.Y.108	Reaming Cam, $1\frac{1}{8}$ " Feed Stroke, Station 6.
4	588B.Y.107	Reaming Cam, $3\frac{1}{4}$ " Feed Stroke, Station 6.
5	588B.Y.109	Reaming Cam, $5\frac{5}{8}$ " Feed Stroke, Station 6.
6	588B.Y.105	Guard Cam.
7	588B.Y.106	Return Cam, 6th Station Reaming.
8	588C.Y.104	Inner Guard Cam, 3rd Station.
9	588C.Y.108	Reaming Cam, $1\frac{1}{8}$ " Feed Stroke, Station 3.
10	588C.Y.107	Reaming Cam $3\frac{1}{4}$ " Feed Stroke, Station 3.
11	155/0814	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $\frac{7}{8}$ " long.
12	588B.Y.105	Guard Cam.
13	588C.Y.106	Return Cam, 3rd Station Reaming.
14	587A.Y.105	Guard Cam.
15	587A.Y.106	Return Cam.
16	588A.Y.105	Return Guard Cam, $1\frac{7}{8}$ " stroke.
17	588A.Y.104	Return Guard Cam, $3\frac{1}{4}$ " stroke.
18	155/0814	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $\frac{7}{8}$ " long.
19	588A.Y.108	Reaming Cam, $1\frac{7}{8}$ " stroke.
20	588A.Y.107	Reaming Cam, $3\frac{1}{4}$ " stroke.

List of Parts for

(Drawing No. 588 Y 2A)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

STROKE DIAGRAM FOR REAMING CAMS, STATIONS 3 and 6



TO READ CHART

- ON FEED STROKE SCALE ON LEFT MARK THE FEED STROKE REQUIRED
- DRAW A HORIZONTAL LINE ACROSS TO VERTICAL LINE REPRESENTING CAM FITTED ($1\frac{7}{8}$, $3\frac{3}{4}$ OR $5\frac{5}{8}$ STROKE)
- WHERE THE HORIZONTAL LINE CUTS THE BRACKETS ON THE VERTICAL LINE GIVES THE PIVOT POSITION (A B ETC) AND THE RELATIVE POSITION OF THE PUSHER CONNECTION WITH THE GRADUATIONS ON THE LOWER END OF THE LEVER (L2 ETC)

REAMING

TO OBTAIN FEED PER REV

STANDARD TIMING CAMS (STATION 3 ONLY) - FEED PER REV IS THE SAME AS SHOWN ON THE SPEED AND FEED CHART FOR THE PARTICULAR STROKE IN USE

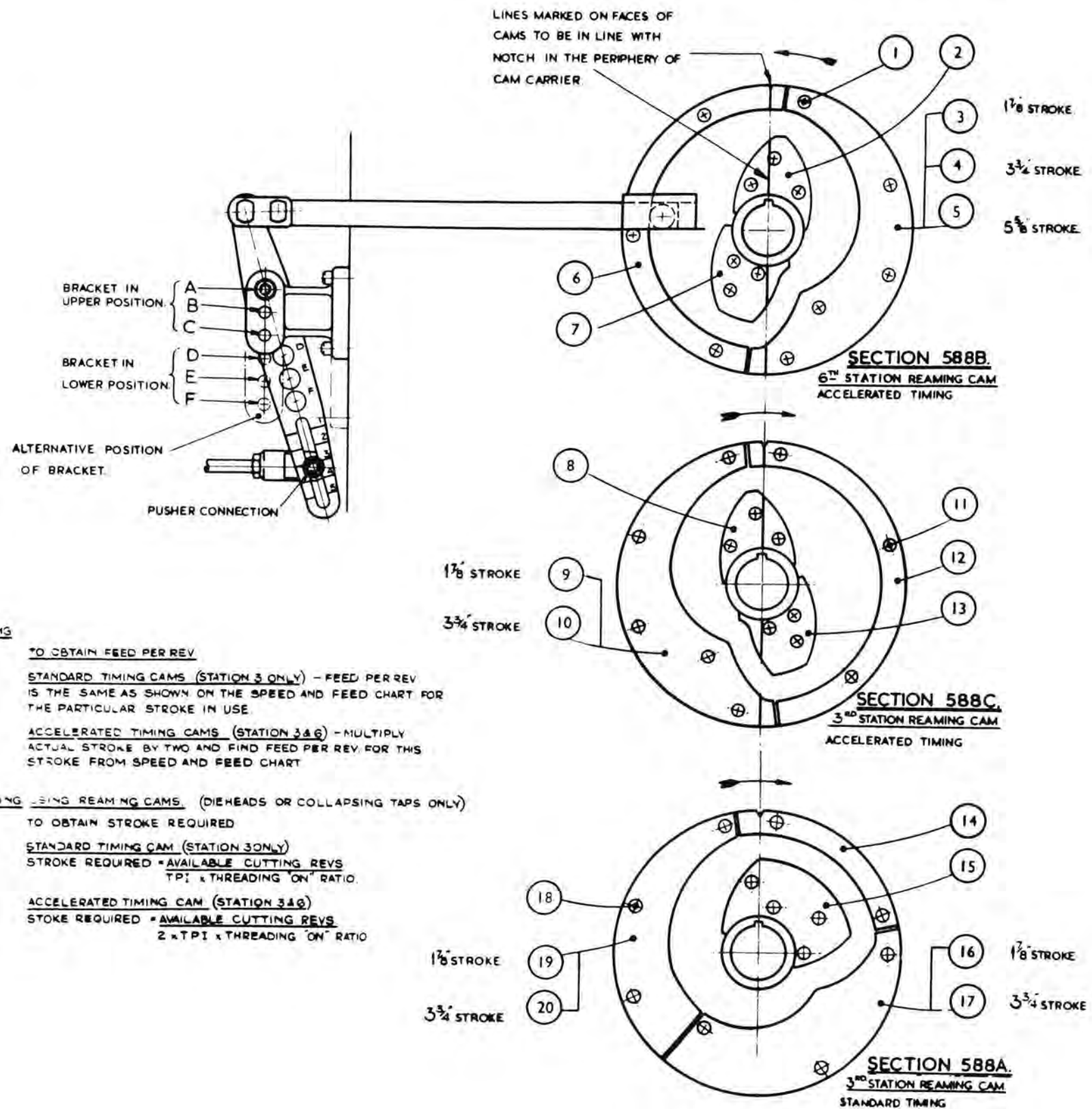
ACCELERATED TIMING CAMS (STATION 3 & 6) - MULTIPLY ACTUAL STROKE BY TWO AND FIND FEED PER REV FOR THIS STROKE FROM SPEED AND FEED CHART

THREADING USING REAMING CAMS (DIEHEADS OR COLLAPSING TAPS ONLY)

TO OBTAIN STROKE REQUIRED

STANDARD TIMING CAM (STATION 3 ONLY)
 STROKE REQUIRED = AVAILABLE CUTTING REVS
 TPI x THREADING "ON" RATIO

ACCELERATED TIMING CAM (STATION 3 & 6)
 STROKE REQUIRED = AVAILABLE CUTTING REVS
 2 x TPI x THREADING "ON" RATIO



**AUXILIARY LONGITUDINAL MOTION, STATIONS 3 and 6
SECTION 589—MARK I**

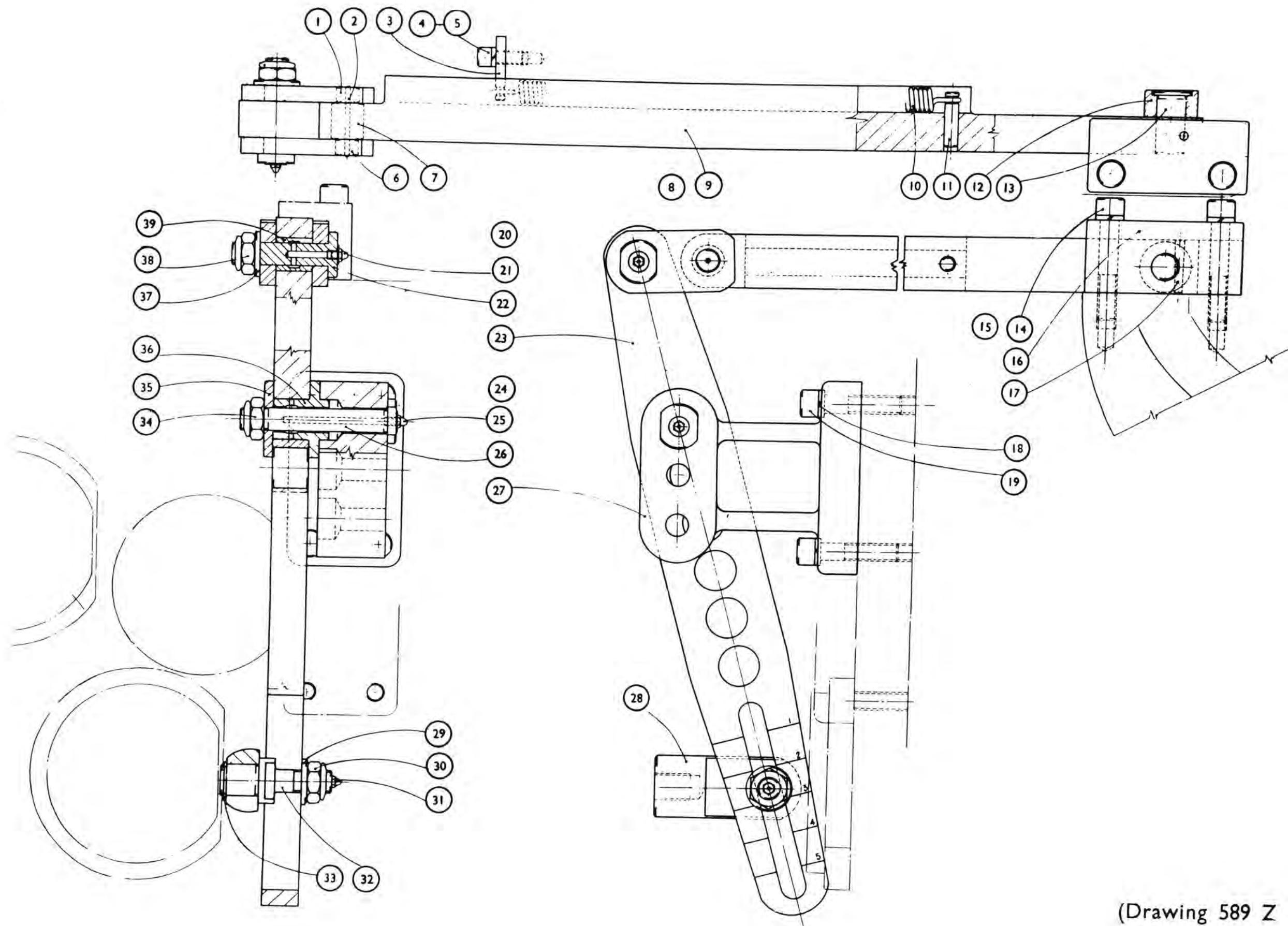
INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	589X.121	Link Bush.	21	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.
2	589X.123	Shear Pin.	22	589X.108	Link Bolt.
3	589X.104	Spring Anchor.	23	589Y.107A	Lever.
4	154/06	$\frac{3}{8}$ " Spring Lockwasher.	24	210/1725	Indicator Washer.
5	155/0614	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, $\frac{7}{8}$ " long.	25	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.
6	589X.121	Link Bush.	26	589X.109	Pivot Bolt.
7	589X.122	Pusher Bush.	27	589Y.102	Pivot Bracket.
8	589X.110	Link.	28	589X.103A.	Coupling.
9	589Y.106	Pusher Arm.	29	130/10	$\frac{3}{8}$ " B.S.F. Flat Washer.
10	589X.118	Pusher Spring ($9\frac{1}{16}$ " long).	30	203/10L	$\frac{3}{8}$ " B.S.F. Pinnacle Nut, NT/F204.
11	589X.105	Spring Anchor.	31	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.
12	589X.113	Cam Roller.	32	589X.115A	Pivot Pin.
13	589X.112	Roller Pin.	33	101/9	$\frac{3}{8}$ " External Circlip.
14	155/0844	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $2\frac{1}{4}$ " long.	34	203/10L	$\frac{3}{8}$ " B.S.F. Pinnacle Nut, NT/F.204.
15	154/08	$\frac{1}{2}$ " B.S.F. Spring Washer.	35	589X.111	Washer.
16	589X.101	Pusher Guide.	36	589X.116	Pivot Sleeve.
17	125/1622	$\frac{1}{4}$ " Solid Taper Pin, $1\frac{1}{8}$ " long.	37	130/10	$\frac{3}{8}$ " B.S.F. Flat Washer.
18	154/08	$\frac{1}{2}$ " Spring Washer.	38	203/10L	$\frac{3}{8}$ " B.S.F. Pinnacle Nut, NT/F.204.
19	155/0836	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $2\frac{1}{4}$ " long.	39	589X.114	Link Bush.
20	210/1725	Indicator Washer.			

List of Parts for

(Drawing No. 589 Z IA)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE SERIAL NUMBER OF THE MACHINE

AUXILIARY LONGITUDINAL MOTION, STATIONS 3 and 6



**HIGH SPEED DRILLING BRACKET
SECTION 590B—MARK I**

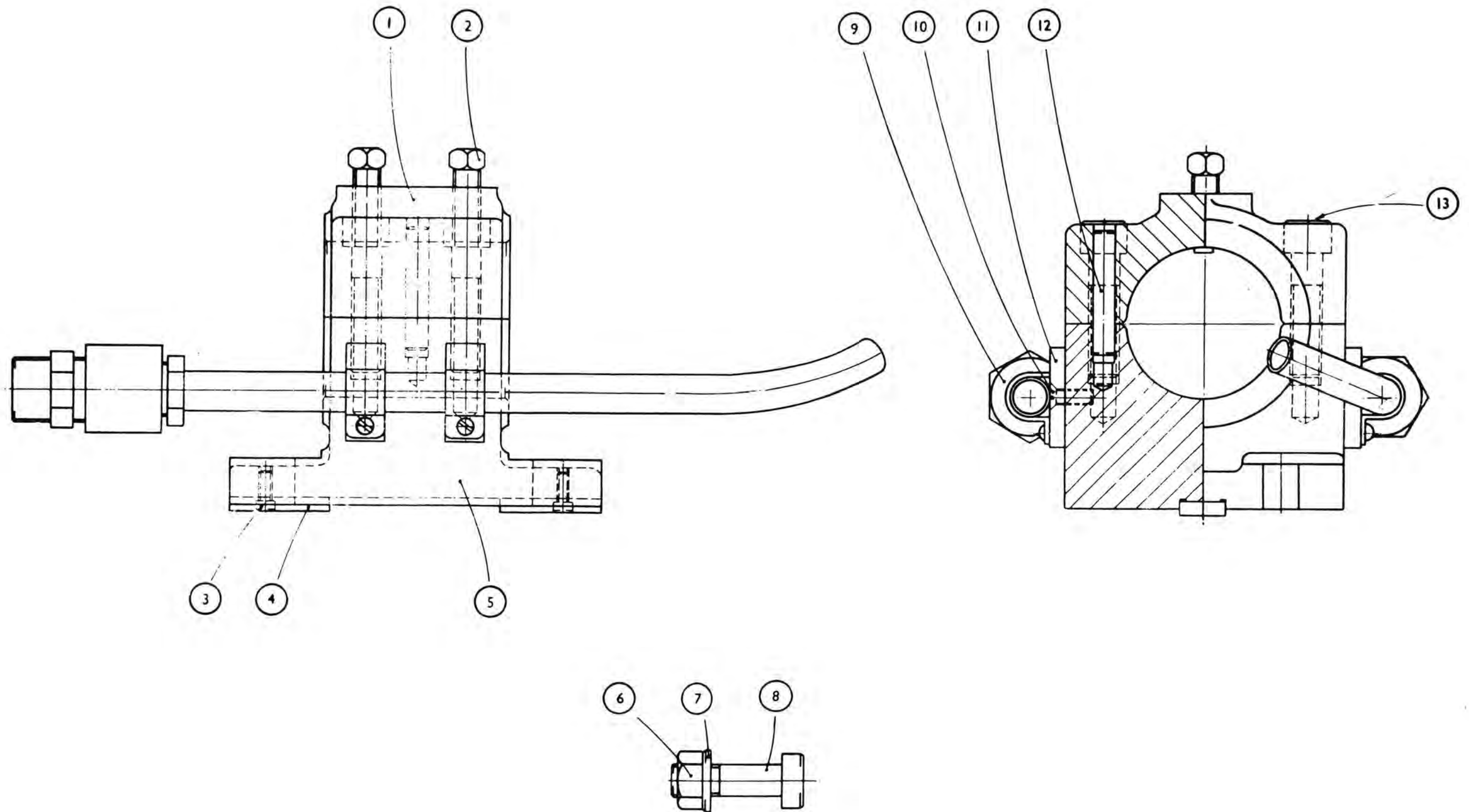
INDEX NO.	PART NO.	TITLE.
1	590B.Y.104	Drilling Bracket Cap.
2	188/0720	$\frac{7}{16}$ " B.S.F. Square Head Set Screw, $1\frac{1}{4}$ " long.
3	156/208	2 B.A. Socket Head Cap Screw, $\frac{1}{2}$ " long.
4	590B.X.105	Tenon.
5	590B.Y.102	High Speed Drilling Bracket.
6	—	$\frac{1}{2}$ " B.S.W. Nut.
7	130/08	$\frac{1}{2}$ " Flat Washer.
8	590B.X.106	Bolt.
9	C.S.106A	Coolant Pipe Assembly.
10	162/210	2 B.A. Countersunk Head Screw, $\frac{3}{8}$ " long.
11	237/382	$\frac{1}{2}$ " Heavy Spacing Saddle.
12	126/1228	$\frac{3}{8}$ " Parallel Dowel, $1\frac{1}{2}$ " long.
13	155/0832	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 2" long.

List of Parts for

(Drawing No. 590 B Y1)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

HIGH SPEED DRILLING BRACKET



(Drawing 590 B Y I)

**WICKMAN
MULTI-SPINDLE
AUTOMATICS**

**HIGH SPEED DRILLING SPINDLE AND DRIVE
SECTION 590—MARK I**

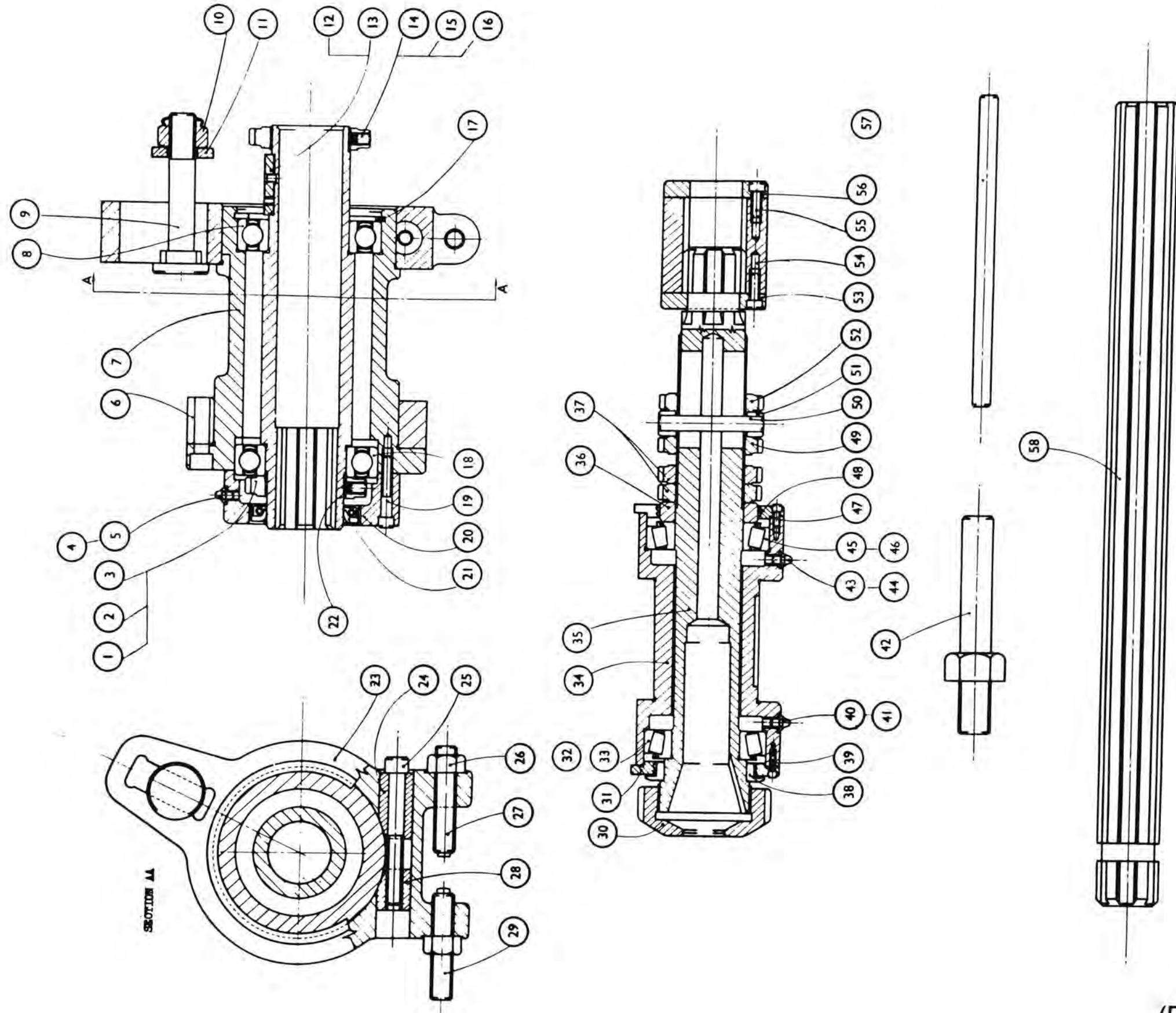
INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	151/50	50 mm Slotted Locknut.	29	178/0844	$\frac{1}{2}$ " B.S.F. Socket Head Set Screw, Half-Dog Point. 2 $\frac{1}{2}$ " long.
2	176/0506	$\frac{1}{16}$ " B.S.F. Socket Head Set Screw, Cup Point, $\frac{3}{8}$ " long.	30	590X.128	Collet Nut.
3	153/05	$\frac{1}{16}$ " Soft Pad.	31	590X.113	Bearing Plate.
4	210/1725	Indicator Washer.	32	—	Timken Cup 11300
5	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.	33	—	Timken Cone 11162
6	590X.105	Spacer.	34	590Y.112	Bearing Housing.
7	590Y.101	Drive Body.	35	590Y.126A	Spindle for High Speed Drill.
8	258/50	Light Ball Journal, 50 × 90 × 20 mm	36	590X.115	Bearing Spacer.
9	590X.122	Idler Bolt.	37	150/28	1 $\frac{1}{8}$ " Slotted Locknut.
10	203/10	$\frac{3}{8}$ " B.S.F. Pinnacle Nut.	38	590X.114	Seal Ring.
11	590X.111	Idler Collar.	39	156/406	4 B.A. Socket Head Cap Screw, $\frac{3}{8}$ " long.
12	—	90° Countersunk Head Steel Rivet $\frac{5}{32}$ " dia., $\frac{3}{8}$ " long.	40	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.
13	590X.132	Key.	41	210/1725	Indicator Washer.
14	151/50	50 mm Slotted Locknut.	42	590X.121	Idler Locator.
15	176/0506	$\frac{1}{16}$ " B.S.F. Socket Head Set Screw, Cup Point, $\frac{3}{8}$ " long.	43	212/04	$\frac{1}{4}$ " B.S.F. Autolub Nipple.
16	153/05	$\frac{1}{16}$ " B.S.F. Soft Pad.	44	210/1725	Indicator Washer.
17	104/40	90 mm Internal Circlip.	45	—	Timken Cone 11162
18	258/50	Light Ball Journal, 50 × 90 × 20 mm	46	—	Timken Cup 11300
19	155/0424	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{2}$ " long.	47	156/406	4 B.A. Socket Head Cap Screw, $\frac{3}{8}$ " long.
20	590X.106	End Cap.	48	590X.113	Bearing Plate.
21	—	Superfect 275128 or Weston W.275175 50.	49	150/28	1 $\frac{1}{8}$ " Slotted Locknut.
22	590Y.127	Drive Sleeve.	50	126/1240	$\frac{3}{8}$ " Parallel Pin, 2 $\frac{1}{2}$ " long.
23	590Y.107	Idler Gear Bracket.	51	590X.118	Drill Stop.
24	590X.110	Pad Bush.	52	150/28	1 $\frac{1}{8}$ " Slotted Locknut.
25	155/0652	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 3 $\frac{1}{4}$ " long.	53	590X.120	Retaining Plate.
26	173/08H.	$\frac{1}{2}$ " B.S.F. Hardened Hexagon Nut.	54	590X.119A	Coupling.
27	178/0844	$\frac{1}{2}$ " B.S.F. Socket Head Set Screw, Half Dog Point, 2 $\frac{1}{2}$ " long.	55	155/0410	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{5}{8}$ " long.
28	590X.109	Pad Nut.	56	590X.120	Retaining Plate.
			57	590X.108	Drill Stop Rod.
			58	590X.129	Drive Shaft.

List of Parts for

(Drawing No. 590 Z 1A)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

HIGH SPEED DRILLING SPINDLE AND DRIVE



(Drawing 590 Z I A)

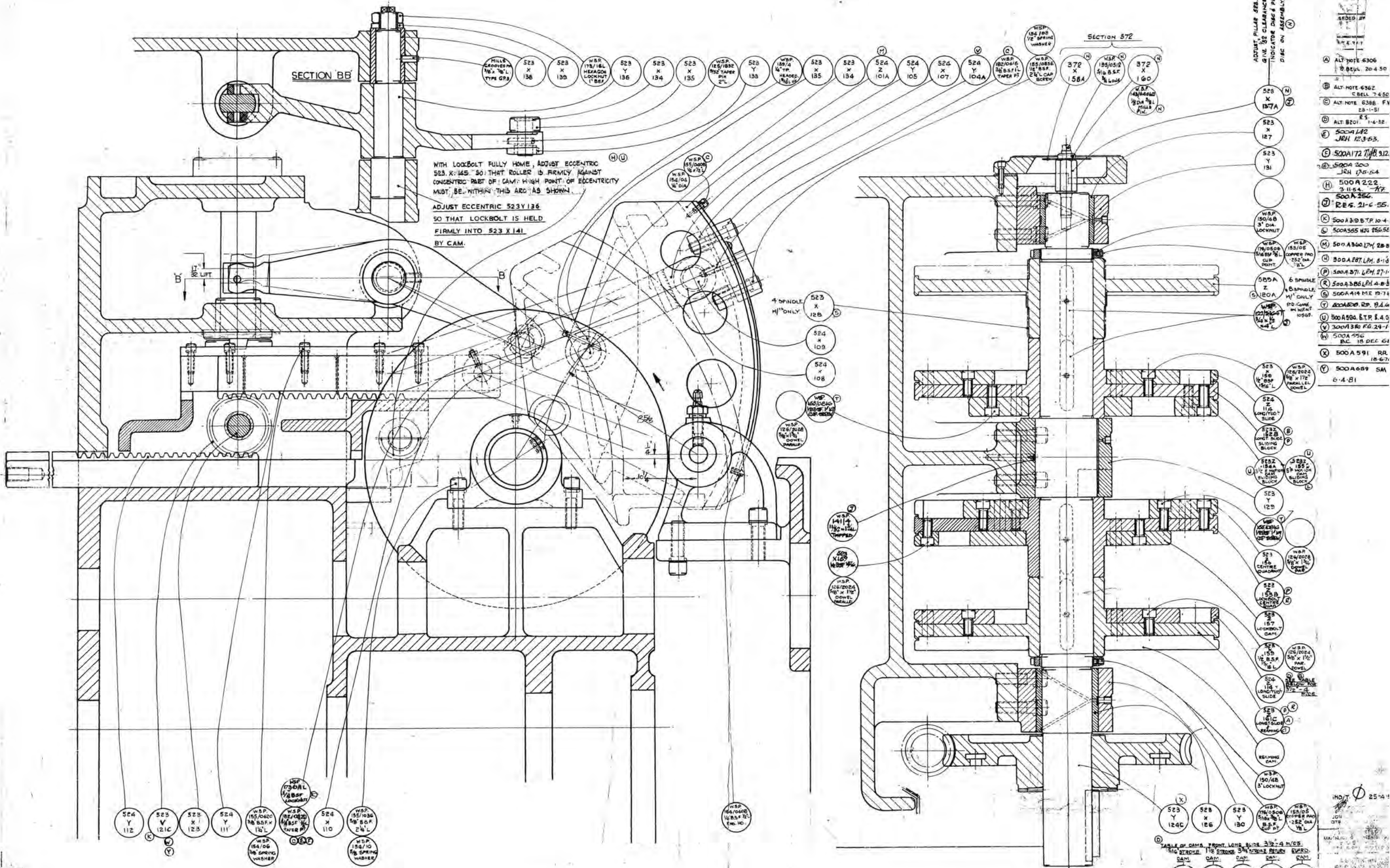
LONGITUDINAL MOTION, FRONT AND REAR QUADRANTS - DRAWING NO. 523 Z 3

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
55	139/11	Headed Taper Dowel, 2.1/8" long
56	523X.158	Special Screw for Cams
57	126/2028	5/8" Parallel Pin, 1.3/4" long
58	154/08	1/2" diameter Spring Washer
59	24X.108	Bush for Link
60	524X.109	Pin for Link, Quadrant End.
61	155/0408	1/4" B.S.F. Socket Head Cap Screw 1/2" long
62	154/04	1/4" diameter Spring Washer
63	164/0408	1/4" B.S.F. Round Head Set Screw 1/2" long
64	155/036	5/8" B.S.F. Socket Head
65	154/10	5/8" diameter Spring Washer
66	524X.110	Pin for Link, Rack End
67	173/04L	1/4" B.S.F. Locknut
68	182/0416	1/4" B.S.F. Socket Set Screw, Taper Point 1" long
69	155/0620	3/8" B.S.F. Socket Head Cap Screw 1.1/4" long
70	154/06	3/8" diameter Spring Washer
71	524Y.111	Upper Rack, Outer.
72	523X.123	Pinion Shaft
73	523X.121	Outer Pinion
74	524Y.112	Lower Rack, Outer

LONGITUDINAL MOTION, FRONT AND REAR QUADRANTS - DRAWING NO. 523 & 3

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	143/1214C	Mills Grooved Pin 3/8" x 7/8" long, type G.P.3.
2	523X.138	Bush (Lockbolt Fulcrum Pin)
3	523X.139	Washer (Locknut Fulcrum Pin)
4	173/16L	1" B.S.F. Hexagon Locknut
5	523Y.136	Fulcrum Pin (for Lockbolt)
6	523X.134	Roller Pin
7	523X.135	Roller
8	125/1832	9/32" Taper Pin, 2" long
9	523Y.133	Lockbolt Lever
10	139/4	Headed Taper Dowel 1.9/16" long
11	523X.135	Roller
12	523X.134	Roller Pin
13	524Z.101	Quadrant (Rear)
14	524Y.105	Link (Independent Quadrant)
15	524X.107	Locking Pin
16	524Y.104	Stroke Adjusting Block (Outer)
17	182/0616	3/8" B.S.F. Socket Set Screw, Taper Point 1" long
18	154/08	1/2" diameter Spring Washer
19	155/0836	1/2" B.S.F. Socket Head Set Screw 2.1/2" long
20	161/0412	1/4" B.S.F. Countersunk screw, Slotted, 3/4" long
21	523X.132	Cover (on Rear Bearing Bracket)
22	523X.127	Rear Bearing for Camshaft
23	523Y.131	Camshaft Rear Bearing Bracket
24	150/48	3" diameter Slotted Locknut
25	176/0506	5/16" B.S.F. Socket Set Screw, Cup Point 3/8" long
26	153/05	Copper Pad 1/8" long
27	523X.128	Spacing Bush
28	523X.125	Key for Camshaft
29	523X.159	Special Screw for Cams
30	126/2024	5/8" Parallel Pin, 1.1/2" long
31	524Z.114	Cam for Longitudinal Slide
32	523Z.152	Cam Carrier
33	523Z.154	Cam, Sliding Block, 3.1/2" stroke
34	523Z.155	Cam, Sliding Block, 5" stroke
35	523Y.129	Camshaft Centre Bearing Bracket
36	523X.158	Special Screw for Cams
37	154/08	1/2" diameter Spring Washer
38	523Z.156	Cam, Centre Block
39	126/2028	5/8" Parallel Pin, 1.3/4" long
40	523Z.153	Cam Carrier
41	523Z.157	Cam Lockbolt
42	523X.159	Special Screw for Cams
43	126/2024	5/8" Parallel Pin, 1.1/2" long
44	524Z.114	Cam for Longitudinal Slide
45	523Z.161	Cam Carrier
46	-	Cams for 6th Station Attachments 2.5/8"-6
47	150/48	3" diameter Slotted Locknut
48	153/05	Copper Pad 1/8" long
49	176/0506	5/16" B.S.F. Socket Set Screw, Cup Point 3/8" long
50	523Y.130	Camshaft, Front Bearing Bracket
51	523X.126	Front Bearing for Camshaft.
52	523Y.124	Cam Shaft
53	126/2024	5/8" Parallel Pin, 1.1/2" long
54	523X.159	Special Screw for Cams

**Refer to drawing
showing all part
numbers**



LONGITUDINAL MOTION FRONT & REAR QUADRANTS.

- ALT. NOTE 6306
- ALT. NOTE 6362
- ALT. NOTE 6368
- ALT. NOTE 6371
- ALT. NOTE 6372
- ALT. NOTE 6373
- ALT. NOTE 6374
- ALT. NOTE 6375
- ALT. NOTE 6376
- ALT. NOTE 6377
- ALT. NOTE 6378
- ALT. NOTE 6379
- ALT. NOTE 6380
- ALT. NOTE 6381
- ALT. NOTE 6382
- ALT. NOTE 6383
- ALT. NOTE 6384
- ALT. NOTE 6385
- ALT. NOTE 6386
- ALT. NOTE 6387
- ALT. NOTE 6388
- ALT. NOTE 6389
- ALT. NOTE 6390
- ALT. NOTE 6391
- ALT. NOTE 6392
- ALT. NOTE 6393
- ALT. NOTE 6394
- ALT. NOTE 6395
- ALT. NOTE 6396
- ALT. NOTE 6397
- ALT. NOTE 6398
- ALT. NOTE 6399
- ALT. NOTE 6400

TABLE OF CAMS, FRONT, REAR, SLIDE, 3/16" - 4" M/C.

CAM	Q.A.M.	CAM	CAM	CAM
524 Y 124	524 Y 125	524 Y 126	524 Y 127	524 Y 128

NOTE
524 Z 114
CAM FOR LONGITUDINAL SLIDE
A. 6 AND B. SPINDLE W/C.

CENTRE BLOCK AND LONGITUDINAL SLIDES

2 $\frac{5}{8}$ "-6 SPINDLE BAR MACHINE

INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	532X.103	Gib Strip (Rear).	30	178/0412	$\frac{1}{4}$ " B.S.F. Half-Dog Point Socket Head Set Screw, $\frac{3}{4}$ " long.
2	532Z.102	Tool Slide Guide (Rear).	31	173/08L	$\frac{1}{2}$ " B.S.F. Standard Locknut.
3	178/0624	$\frac{3}{8}$ " B.S.F. Half-Dog Point Socket Head Set Screw, $1\frac{1}{2}$ " long.	32	154/08	$\frac{1}{2}$ " Spring Lockwasher.
4	529X.105	Locating Block.	33	155/0828	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $1\frac{1}{4}$ " long.
5	154/05	$\frac{5}{16}$ " Spring Lockwasher.	34	529X.108	Stop Nut.
6	155/0514	$\frac{5}{16}$ " B.S.F. Socket Head Cap Screw, $\frac{7}{8}$ " long.	35	532X.104	Stop Nut.
7	532Z.101	Tool Block (Rear).	36	178/0840	$\frac{1}{2}$ " B.S.F. Half-Dog Point Socket Head Set Screw, $2\frac{1}{2}$ " long.
8	527X.104	Guide Strip.	37	155/0620	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, $1\frac{1}{4}$ " long.
9	529Z.101	Tool Block (Front).	38	154/06	Lockwasher for $\frac{3}{8}$ " diameter Cap Screw.
10	155/0864	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 4" long.	39	529X.109	Stop Block.
11	529Z.102	Tool Slide Guide (Front).	40	529X.104	Gib Adjusting Screw.
12	173/12L	$\frac{3}{4}$ " B.S.F. Standard Locknut.	41	529X.103	Gib Strip (Front Tool Block).
13	527Z.102A	Guide Arm.	42	155/1060	$\frac{5}{8}$ " B.S.F. Socket Head Cap Screw, $3\frac{1}{4}$ " long.
14	527X.109	Link.	43	527X.115	Dowel for Bearing.
15	527X.108	Link Pin.	44	194/1	$\frac{1}{8}$ " B.S.P. Socket Pipe Plug.
16	101/11	1" External Circlip.	45	527X.114A	Retaining Plate.
17	529X.107	Adjusting Screw.	46	158/0510	$\frac{5}{16}$ " B.S.F. Socket Countersunk Head Screw, $\frac{5}{8}$ " long.
18	155/1040	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, $2\frac{1}{2}$ " long.	47	527X.113B	Scraper Rings.
19	154/10	$\frac{5}{8}$ " Spring Lockwasher.	48	527X.112B	Backing Plate.
20	155/0836	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, $2\frac{1}{4}$ " long.	49	527X.103A	Bush.
21	154/08	$\frac{1}{2}$ " Spring Lockwasher.	50	527Z.101	Centre Block.
22	529X.106	Extension Arm.	51	194/1	$\frac{1}{8}$ " B.S.P. Socket Pipe Plug.
23	527V.105A	Guide Block.	52	141/17	$\frac{1}{2}$ " Standard Taper Pin (Tapped End).
24	527X.110A	Adjusting Screw.	53	155/1056	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, $3\frac{1}{2}$ " long.
25	527X.106A	Gib Strip for Guide Block.	54	154/10	$\frac{5}{8}$ " Spring Lockwasher.
26	529X.110	Spacer.	55	527X.111	Stop Screw.
27	527X.107A	Adjusting Nut.	56	173/08L	$\frac{1}{2}$ " B.S.F. Standard Locknut.
28	527X.116	Packing Washer.			
29	225/4050	$\frac{1}{4}$ " diameter Tube, 16" long.			

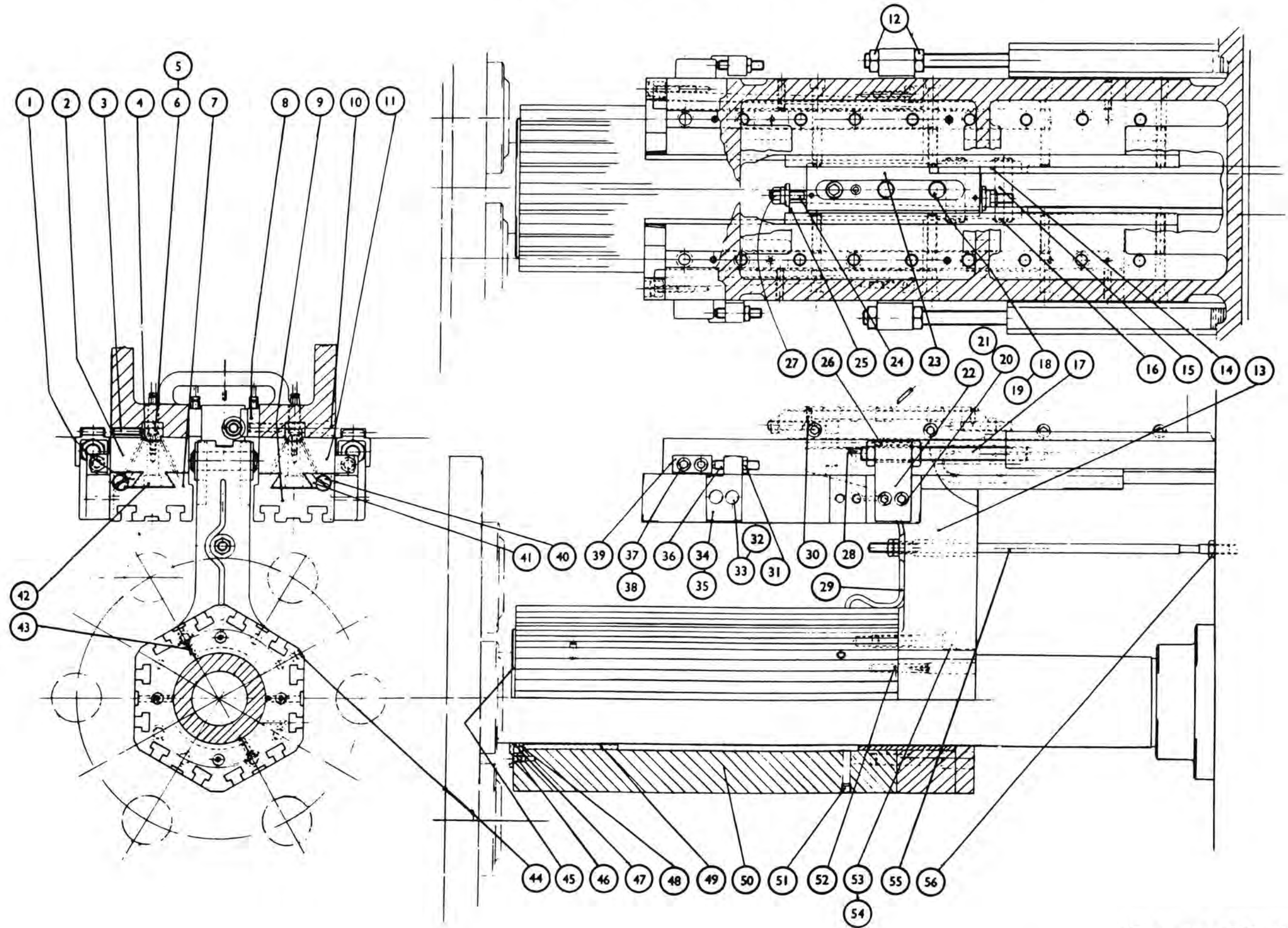
List of Parts for

(Drawing No. 527 Z IA)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

CENTRE BLOCK AND LONGITUDINAL SLIDES

2½"-6 Spindle Bar Machine



(Drawing 527 Z I A)

FRONT INTERMEDIATE CROSS SLIDE

2 $\frac{5}{8}$ "-6 SPINDLE BAR MACHINE

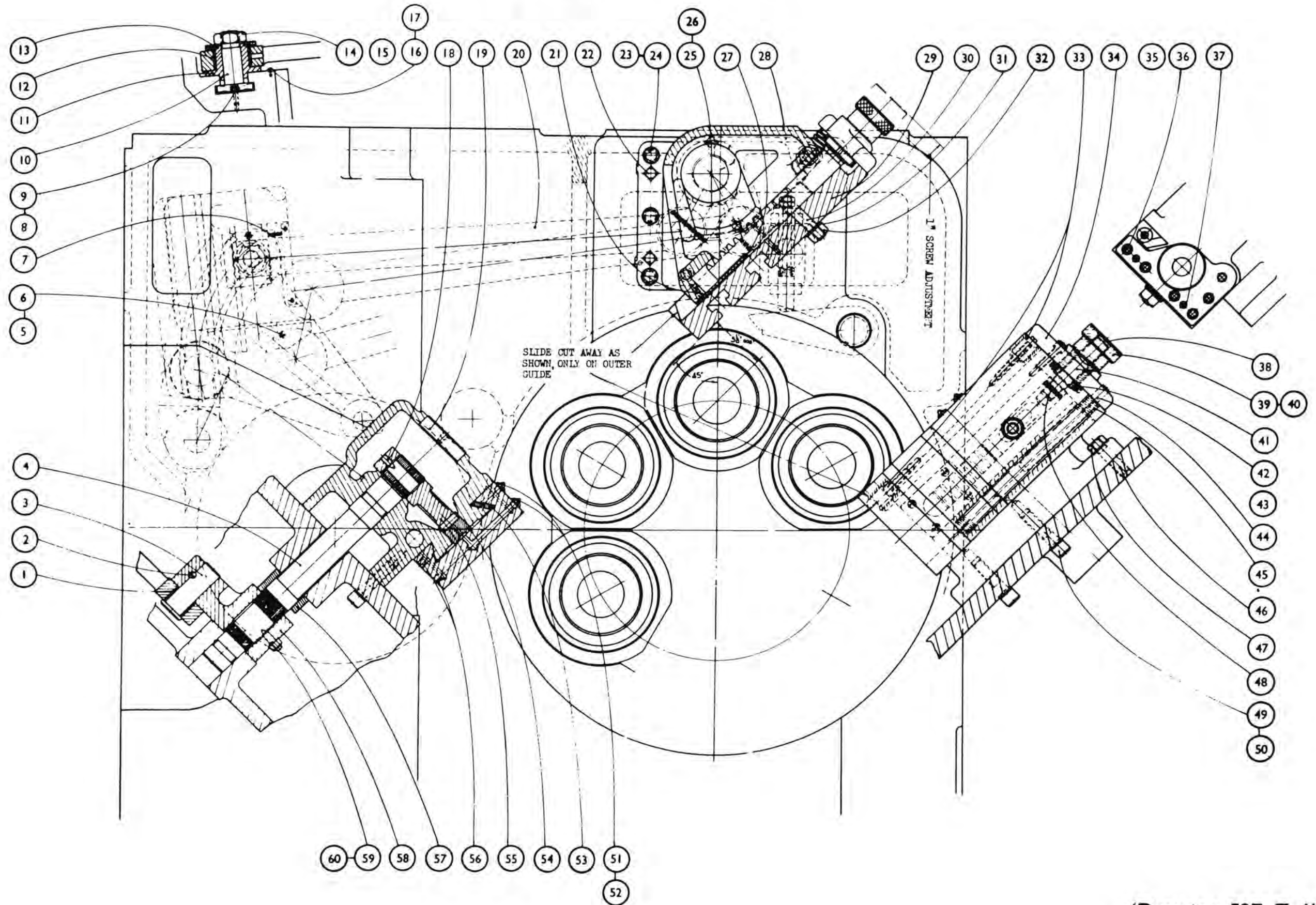
INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	236/182218	Oil Retaining Bush, 1 $\frac{1}{8}$ " x 1 $\frac{3}{8}$ " x 1 $\frac{1}{8}$ " long.	32	542X.141	Clamp Nut for Cross Slide.
2	125/2240	$\frac{11}{32}$ " Taper Pin, 2 $\frac{1}{2}$ " long.	33	542X.115	Gib Screw.
3	537X.107	Headed Pivot Pin.	34	537Y.111	End Plate (Front).
4	537Y.103	Intermediate Slide Shaft.	35	154/06	$\frac{3}{8}$ " Spring Washer.
5	154/04	$\frac{1}{4}$ " Spring Washer.	36	155/0624	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{2}$ " long.
6	155/0412	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{4}$ " long.	37	141/4	$\frac{11}{32}$ " Extractable Taper Pin.
7	541X.118	Indicating Pin.	38	129/13	1" Welch Plug.
8	154/04	$\frac{1}{4}$ " Spring Washer.	39	542X.112	Adjusting Bolt Head.
9	155/0412	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{4}$ " long.	40	542X.148	Adjustable Bolt Head Metric.
10	539X.110	Tee Bolt.	41	542X.111	Rack Feed Screw.
11	537X.109	Sliding Sleeve.	42	150/22	1 $\frac{3}{8}$ " Locknut, 22 T.P.I.
12	541X.131	Oil Retaining Bush, 1 $\frac{3}{4}$ " x 2" x 1 $\frac{1}{8}$ " long.	43	177/0408	$\frac{1}{4}$ " B.S.F. Cone Point Socket Head Set Screw $\frac{1}{2}$ " long.
13	541X.116	Slotted Washer.	44	537X.113	Spring Guide.
14	163/16L	1" B.S.F. Locknut.	45	537X.118	Intermediate Slide Spring.
15	165/406	4 B.A. Round Head Screw, $\frac{3}{8}$ " long.	46	537X.119	Stud.
16	537X.120	Scale for Front Intermediate Cross Slide.	47	173/10	$\frac{3}{8}$ " B.S.F. Nut.
17	537X.121	Metric Scale for Front Intermediate Slide.	48	125/1620	$\frac{1}{4}$ " Taper Pin, 1 $\frac{1}{4}$ " long.
18	182/0612	$\frac{3}{8}$ " B.S.F. Set Screw, Taper Point, $\frac{3}{4}$ " long.	49	155/1040	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 2 $\frac{1}{2}$ " long.
19	537X.116	Plug.	50	154/10	$\frac{3}{8}$ " Spring Washer.
20	537Y.105	Intermediate Connecting Link.	51	212/18	$\frac{1}{8}$ " B.S.P. Grease Nipple.
21	158/0410	$\frac{1}{4}$ " B.S.F. Countersunk Socket Head Screw, $\frac{5}{8}$ " long.	52	210/2525	Plain Indicator Washer, Yellow.
22	139/17	$\frac{1}{2}$ " Square Head Taper Pin, 2 $\frac{1}{2}$ " long.	53	537Y.112	Intermediate Slide Gib Strip (Front).
23	154/10	$\frac{3}{8}$ " Spring Washer.	54	537Y.110	Intermediate Cross Slide Rack.
24	155/1028	$\frac{5}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{3}{4}$ " long.	55	537X.102	Intermediate Quadrant.
25	212/18	$\frac{1}{8}$ " B.S.P. Grease Nipple.	56	194/1	$\frac{1}{8}$ " B.S.P. Plug.
26	210/2525	Plastic Indicator Washer, Yellow.	57	537X.114	Spacer.
27	537X.117	Chip Cover.	58	537Y.106	Intermediate Lever.
28	537Z.104	Intermediate Slide Base (Front).	59	182/0624	$\frac{3}{8}$ " B.S.F. Taper Point Set Screw, 1 $\frac{1}{2}$ " long.
29	537Y.101	Intermediate Slide (Front).	60	173/06	$\frac{3}{8}$ " B.S.F. Nut.
30	537X.115	Rack Bolt.			
31	130/10	$\frac{3}{8}$ " Washer.			

List of Parts for

(Drawing No. 537 Z 1)

FRONT INTERMEDIATE CROSS SLIDE

2 $\frac{5}{8}$ "-6 Spindle Bar Machine



(Drawing 537 Z I)

**REAR INTERMEDIATE CROSS SLIDE
2 $\frac{5}{8}$ "-6 SPINDLE BAR MACHINE**

INDEX NO.	PART NO.	TITLE.
1	173/06	$\frac{3}{8}$ " B.S.F. Nut.
2	182/0624	$\frac{3}{8}$ " B.S.F. Set Screw, Taper Point, 1 $\frac{1}{2}$ " long.
3	539Y.111	Intermediate Lever.
4	537X.114	Spacer.
5	141/14	Taper Pin.
6	194/1	$\frac{1}{8}$ " B.S.P. Plug.
7	537Y.110	Intermediate Cross Slide Rack.
8	537X.102	Intermediate Quadrant.
9	539Y.103	Intermediate Slide Gib Strip (Rear).
10	210/2525	Indicator Washer.
11	212/18	$\frac{1}{8}$ " B.S.P. Grease Nipple.
12	155/1040	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 2 $\frac{1}{2}$ " long.
13	154/10	$\frac{3}{8}$ " Spring Washer.
14	173/10	$\frac{3}{8}$ " B.S.F. Nut.
15	537X.119	Stud.
16	537X.118	Intermediate Slide Spring.
17	537X.113	Spring Guide.
18	150/22	1 $\frac{3}{8}$ " Locknut, 22 T.P.I.
19	177/0408	$\frac{1}{4}$ " B.S.F. Cone Point Socket Head Grub Screw, $\frac{1}{2}$ " long.
20	542X.143	Pad Bolt for Cross Slide Stops.
21	130/06	$\frac{3}{8}$ " Washer.
22	542X.126	Plain Locking Piece.
23	542X.125	Screwed Locking Piece.
24	539Y.104	Intermediate Slide Stop Bracket.
25	155/0828	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{3}{4}$ " long.
26	154/08	$\frac{1}{2}$ " Spring Washer.
27	141/4	$\frac{11}{32}$ " Extractable Taper Pin, 1 $\frac{1}{4}$ " long.
28	542X.115	Gib Screw.
29	155/0624	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{2}$ " long.
30	154/06	$\frac{3}{8}$ " B.S.F. Spring Washer.
31	542X.148	Adjustable Bolt Head (Metric).
32	542X.112	Adjusting Bolt Head.
33	129/13	1" Welch Plug.
34	542X.111	Rack Feed Screw.
35	125/1620	$\frac{1}{4}$ " Taper Pin, 1 $\frac{1}{4}$ " long.
36	539Y.105	End Plate (Rear).
37	542X.123	Stop Bracket Push.

INDEX NO.	PART NO.	TITLE.
38	542X.142	Locknut for Cross Slide Stops.
39	542X.124	Stop Bracket Screw.
40	542X.141	Clamp Nut for Cross-Slide.
41	130/10	$\frac{3}{8}$ " Washer.
42	537X.115	Rack Bolt.
43	539Z.101	Intermediate Slide Base (Rear).
44	212/18	$\frac{1}{8}$ " B.S.P. Grease Nipple.
45	210/2525	Indicator Washer.
46	537X.117	Chip Cover.
47	158/0410	$\frac{1}{4}$ " B.S.F. Countersunk Socket Head Screw, $\frac{3}{4}$ " long.
48	155/1028	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{3}{4}$ " long.
49	154/10	$\frac{3}{8}$ " Spring Washer.
50	139/17	$\frac{1}{2}$ " Square Head Taper Pin, 2 $\frac{1}{2}$ " long.
51	539Y.102	Intermediate Slide (Rear).
52	537Y.105	Intermediate Connecting Link.
53	537X.116	Plug.
54	539X.106	Scale for Rear Intermediate Cross Slide.
55	165/406	4 B.A. Round Head Screw, $\frac{3}{8}$ " long.
56	539X.108	Metric Scale for Rear Intermediate Slide.
57	155/0632	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 2" long.
58	154/06	$\frac{3}{8}$ " Spring Washer.
59	154/04	$\frac{1}{4}$ " Spring Washer.
60	155/0412	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{4}$ " long.
61	539X.107A	Tee Bolt Plate.
62	539X.110	Tee Bolt.
63	541X.117A	Sliding Sleeve.
64	173/16L	1" B.S.F. Locknut.
65	541X.131	Oil Retaining Bush, 1 $\frac{1}{2}$ " x 2" x 1 $\frac{1}{8}$ " long.
66	541X.116	Slotted Washer.
67	541X.118	Indicating Pin.
68	182/0612	$\frac{3}{8}$ " B.S.F. Taper Point Set Screw, $\frac{3}{4}$ " long.
69	537Y.103	Intermediate Slide Shaft.
70	539X.109	Eccentric Pivot Pin.
71	155/0628	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{3}{4}$ " long.
72	236/182218	Oil Retaining Bush, 1 $\frac{1}{4}$ " x 1 $\frac{3}{8}$ " x 1 $\frac{1}{4}$ " long.
73	101/13	1 $\frac{1}{4}$ " External Circlip.

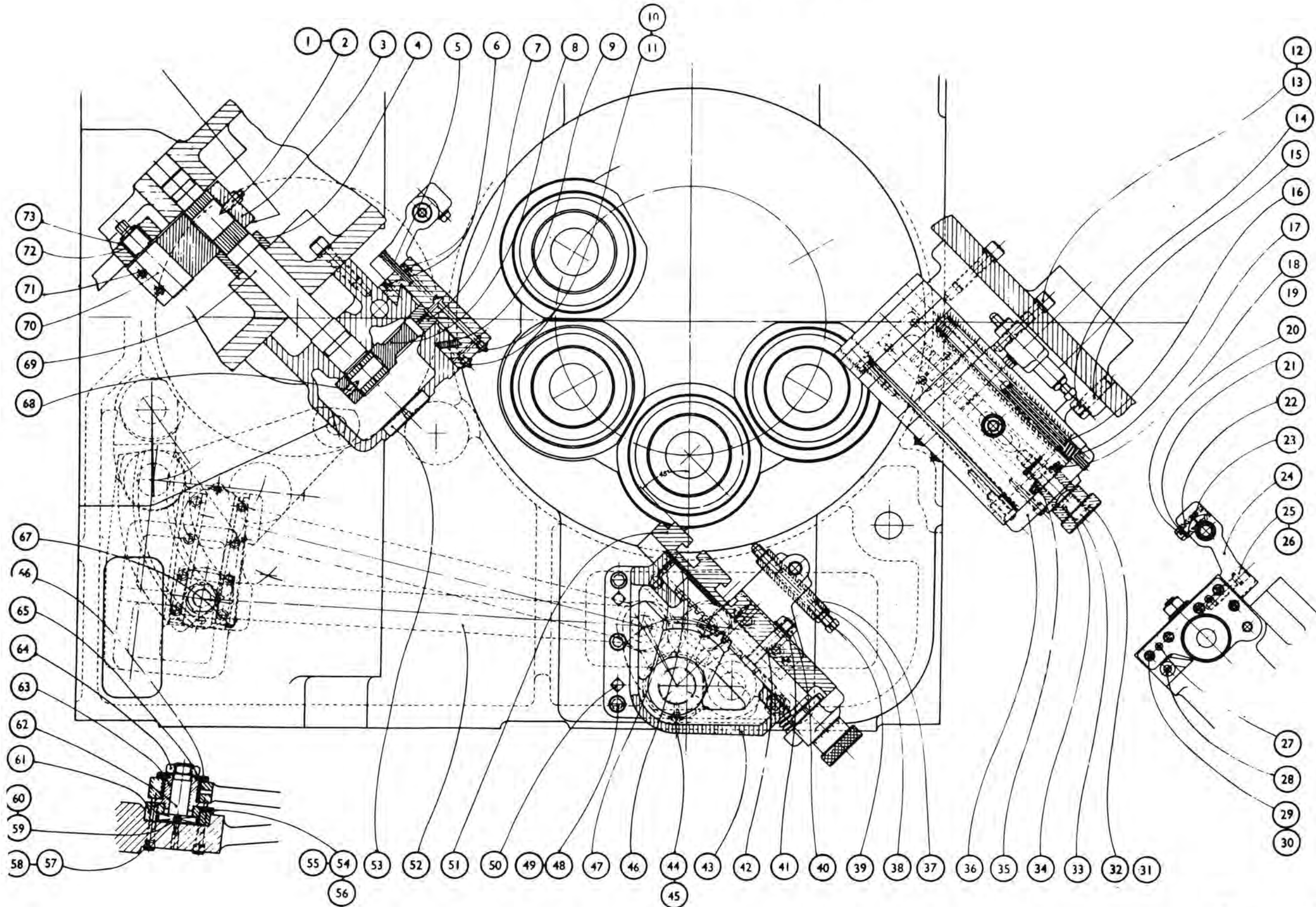
List of Parts for

(Drawing No. 539 Z 1A)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

REAR INTERMEDIATE CROSS SLIDE

2½"-6 Spindle Bar Machine



(Drawing 539 Z I A)

CROSS SLIDE OPERATION - DRAWING NO. 541 Z 1B

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>	Refer to drawing showing all part numbers
1	541Z.101A	Front Cross-Slide Cam Lever	
2	154/04	1/4" Spring Washer	
3	155/0412	1/4" B.S.F. Socket Head Cap Scr	
4	541X.118	Indicating Pin	
5	125/2244	11/32" Taper Pin 2.3/4" long	
6	541Y.106	Front Quadrant Link	
7	173/06	3/8" B.S.F. Hexagon Nut	
8	182/0620	3/8" Hexagon Socket Set Screw, Taper Point 1.1/4" long	
9	541Z.114	Front Quadrant	
10	154/07	7/16" Spring Washer	
11	155/0720	7/16" B.S.F. Socket Head Cap Screw 1.1/4" long	
12	125/3224	1/2" Taper Pin, 2.3/4" long	
13	541Y.143	Gear Segment for Quadrant	
14	541Y.104	Forked Approach Arm	
15	541Y.108	Lower Connecting Link	
16	125/2240	11/32" Taper Pin, 2.1/2" long	
17	541Y.109	Forked Intermediate Lever	
18	330/40	Purefoy Spherical Washer	
19	173/08L	1/2" B.S.F. Locknut	
20	173/08	1/2" B.S.F. Plain Nut	
21	541Y.110	Forked Upper Link	
22	236/242836	Oil Retaining Bush 1.1/2" x 1.3/4" x 2.1/4" long	
23	182/0624	3/8" B.S.F. Hexagon Socket Set Screw, Taper Point 1.1/2" long	
24	173/06	3/8" B.S.F. Hexagon Nut	
25	541X.140	Intermediate Lever Pivot	
26	236/242824	Oil Retaining Bush 1.1/2" x 1.3/4" x 1.1/2" long	
27	541X.130	Oil Retaining Bush 1.1/8" x 1.3/8" x 5/8" long	
28	541X.126	Lower Connecting Link Pin	
29	541X.129	Oil Retaining Bush 1.1/8" x 1.3/8" x 27/32" long	
30	236/182218	Oil Retaining Bush 1.1/8" x 1.3/8" x 1.1/8" long	
31	541Y.111A	Keyed Upper Lever	
32	143/0620B	3/16" Mills Grooved Pin, Type G.P.2. 1.1/4" long	
33	155/1044	5/8" B.S.F. Socket Head Cap Screw, 2.3/4" long	
34	154/10	5/8" Spring Washer	
35	541X.137	Square Key	
36	541Y.135A	Upper Quadrant	
37	155/1044	5/8" B.S.F. Socket Head Cap Screw 2.3/4" long	
38	154/10	5/8" Spring Washer	
39	541Y.135A	Upper Quadrant	
40	41X.137	Square Key	
41	143/0620B	3/16" Mills Grooved Pin Type G.P.2, 1.1/4" long	
42	155/1044	5/8" B.S.F. Socket Head Cap Screw 2.3/4" long	
43	154/10	5/8" Spring Washer	
44	541Y.111A	Keyed Upper Lever	
45	522Z.104	Beam	
46	236/182218	Oil Retaining Bush 1.1/8" x 1.1/2" x 1.1/8" long	
47	572ZX.111	Instruction Plate, Upper Cross-Slide Lever	
48	165/204	2 B.A. Round Head Set Screw 1/4" long	
49	541X.161	Special Locknut	
50	541X.160	Special Locknut	
51	541Y.110	Forked Upper Link	
52	541Y.109	Forked Intermediate Lever	

CROSS SLIDE OPERATION - DRAWING NO. 541 Z 1B

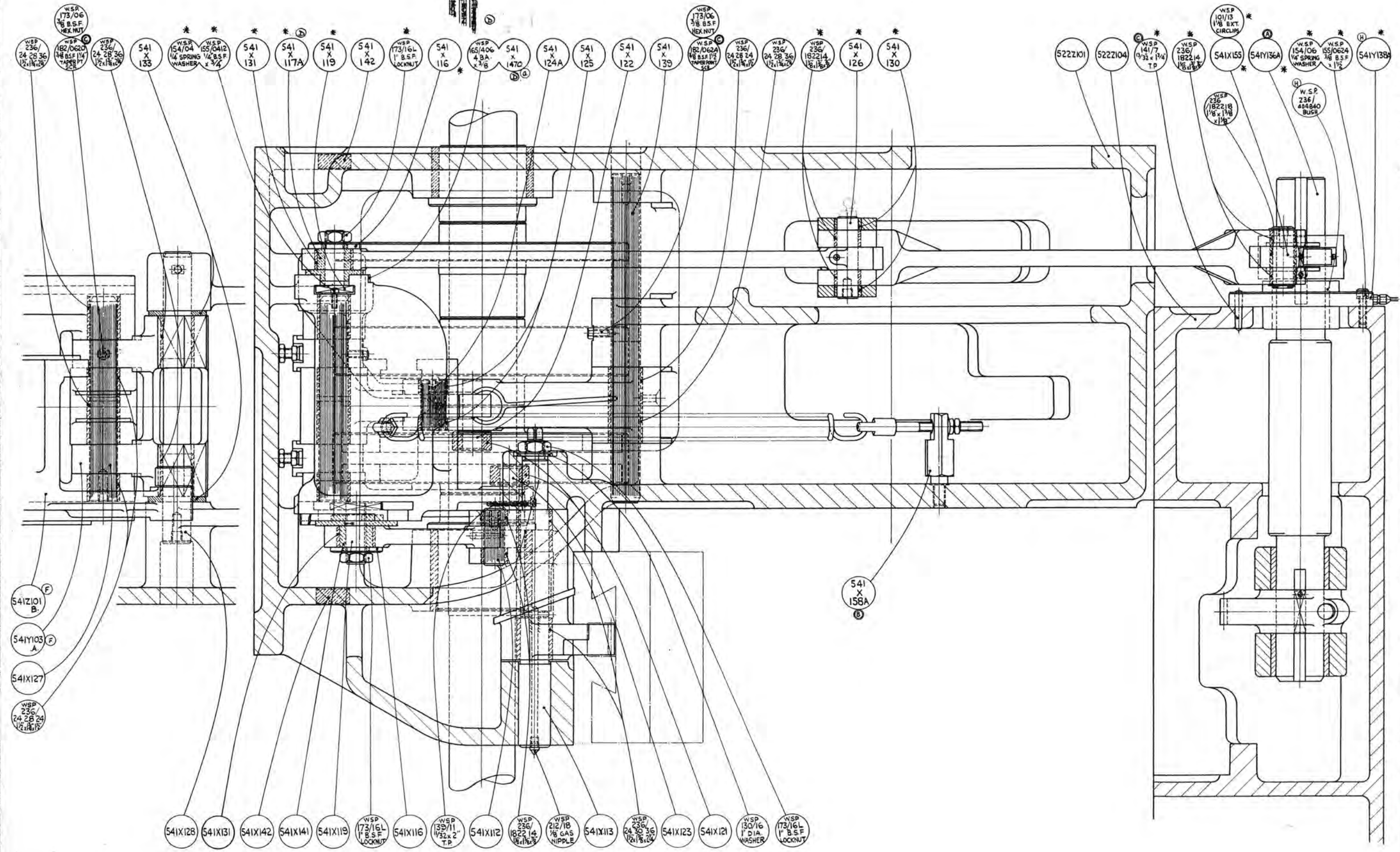
<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
53	541X.157A	Spring Adjuster.
54	541Y.159	Tension Spring
55	125/2240	11/32" Taper Pin 2.1/2" long
56	541Y.108	Lower Connecting Link
57	541Y.104	Forked Approach Arm
58	541Y.143	Gear Segment for Quadrants
59	125/3224	1/2" Taper Pin 1.1/2" long
60	155/0720	7/16" B.S.F. Socket Head Cap Screw 1.1/4" long
61	154/07	7/16" Spring Washer
62	541Z.115	Rear Quadrant
63	182/0620	3/8" Hexagon Socket Set Screw, Taper Point, 1.1/4" long
64	173/06	3/8" B.S.F. Hexagon Nut
65	541Y.107	Rear Quadrant Link
66	125/2244	11//32" Taper Pin 2.3/4" long
67	541X.118	Indicating Pin
68	155/0412	1/4" B.S.F. Socket Head Cap Screw 3/4" long
69	154/04	1/4" Spring Washer
70	541Z.102A	Rear Cross-Slide Cam Lever
71	541X.156	Spring Anchor
72	165/406	4 B.A. Round Head Set Screw, 3/8" long
73	541X.146	Scale for Cam Lever (Lower Rear)
74	541X.150A	Metric Scale for Lower Rear Cross Slide
75	154/04	1/4" Spring Washer
76	155/0412	1/4" B.S.F. Socket Head Cap screw, 3/4" long
77	541X.120	Stop Pad
78	188/0824	1/2" B.S.F. Square Head Set Screw, 1.1/2" long
79	173/08L	1/2" B.S.F. Locknut
80	541X.144	Bush for Stop Screw
81	541Y.103	Approach Anchor Link
82	182/0624	3/8" B.S.F. Hexagon Socket Set Screw, Taper Point 1.1/2" long
83	173/06	3/8" B.S.F. Hexagon Nut
84	41Y.105	Lower Approach Link
85	125/2232	11/32" Taper Pin 2" long
86	522Z.101	Drum Housing
87	125/2232	11/32" Taper Pin 2" long
88	541Y.105	Lower Approach Link
89	182/0624	3/8" B.S.F. Hexagon Socket Set Screw, Taper Point 1.1/2" long
90	173/06	3/8" B.S.F. Hexagon Nut
91	541Y.103	Approach Anchor Link
92	541X.144	Bush for Stop Screw
93	173/08L	1/2" B.S.F. Locknut
94	188/0824	1/2" B.S.F. Square Head Set Screw, Taper Point 1.1/2" long
95	541X.120	Stop Pad
96	154/04	1/4" Spring Washer
97	155/0412	1/4" B.S.F. Socket Head Cap Screw, 3/4" long
98	165/406	4 B.A. Round Head Set Screw, 3/8" long
99	541X.145A	Scale for Cam Lever (Lower Front)
100	541X.149A	Metric Scale for Lower Front Cross Slide
101	--	1/4" o/d, Tube 1.3/8" long

CROSS SLIDE OPERATION - DRAWING NO. 541 Z 2B

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>	Refer to drawing showing all part numbers
1	236/242836	Oil Retaining Bush 1.1/2" bore 2.1/4" long	
2	182/0620	3/8" B.S.F. Hexagon Socket Set 1.1/4" long	
3	173/06	3/8" B.S.F. Hexagon Nut	
4	236/242836	Oil Retaining Bush 1.1/2" bore x 1.3/4" o/d x 2.1/4" long	
5	541X.133	Spring Washer	
6	154/04	1/4" Spring Washer	
7	155/0412	1/4" B.S.F. Socket Head Cap Screw	
8	541X.131	Oil Retaining Bush 1.3/4" bore x 2" o/d x 1.3/32" long	
9	541X.117A	Sliding Sleeve	
10	541X.119	Tee Bolt	
11	541X.142	ug for Drum Housing	
12	173/16L	1" B.S.F. Locknut	
13	541X.116	Slotted Washer	
14	165/406	4 B.A. Round Head Set Screw 3/8" long	
15	541X.147B	Scale for Cam Lever (Upper Front)	
16	541X.151B	Metric Scale for Upper Cross Slide only	
17	541X.124A	Lower Approach Pin	
18	541X.125	Lower Approach Bush	
19	541X.122	Approach Roller Pin	
20	541X.139	Approach Arm Shaft	
21	182/0624	3/8" B.S.F. Hexagon Socket Set Screw, Taper Point	
22	173/06	3/8" B.S.F. Hexagon Nut	
23	236/242824	Oil Retaining Bush 1.1/2" bore x 1.3/4" o/d x 1.1/2" long	
24	236/242836	Oil Retaining Bush 1.1/2" bore x 1.3/4" o/d x 2.1/4" long	
25	236/182214	Oil Retaining Bush 1.1/8" bore x 1.3/8" o/d x 7/8" long	
26	541X.126	Lower Connectinb Link Pin	
27	541X.130	Oil Retaining Bush 1.1/8" bore x 1.3/8" o/d x 5/8" long	
28	522Z.101	Drum Housing	
29	522Z.104	Beam	
30	141/7	13/32" Extractable Taper Dowel 1.3/4" long	
31	236/182214	Oil Retaining Bush 1.1/8" bore x 1.3/8" o/d x 7/8" long	
32	236/182218	Oil Retaining Bush 1.1/8" bore x 1.3/8" o/d x 1.1/8" long	
33	541X.155	ot Pin	
34	101/33	1.1/8" External Circlip	
35	541Y.136A	Upper Quadrant Shaft	
36	154/06	3/8" Spring Washer	
37	155/0624	3/8" B.S.F. Socket Head Cap Screw 1.1/2" long	
38	541Y.138	End Bracket	
39	541X.158A	Spring Anchor	
40	173/16L	1" B.S.F. Locknut	
41	130/16	1" Washer	
42	541X.121	Cam Roller	
43	541X.123	Feed Roller Pin	
44	36/243036	Oil Retaining Bush 1.1/2" bore x 1.7/8" o/d x 2 1/4" long	

CROSS SLIDE OPERATION - DRAWING NO. 541 Z 2B

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
45	541X.113	Lower Quadrant Pivot
46	212/18	1/8" Gas Grease Nipple
47	236/182214	Oil Retaining Bush 1.1/8" bore x 1.3/8" o/d x 7/8" long
48	41X.112	Pivot Pin
49	139/11	11/32" Square Head
50	541X.116	Slotted Washer
51	173/16L	1" B.S.F. Locknut
52	541X.119	Tee Bolt
53	541X.141	Sliding Sleeve
54	541X.142	Plug for Drum Housing
55	541X.131	Oil Retaining Bush 1.3/4" bore x 2" o/d x 1.3/32" long
56	541X.128	Approach Anchor Pin
57	36/242824	Oil Retaining Bush 1.1/2" bore x 1.3/4" o/d x 1.1/2" long
58	541X.137	Cam Lever Pivot
59	541Y.103	Approach Link
60	541Z.101	Front Cross-Slide Cam Lever



A	6354 C.BELL. 12. 10. 50
B	ALT. 6821 D.C.F. 23. 3. 51
C	500A106 RS. 25. 8. 51
D	500A104 RS. 11. 2. 53
E	500A 187. RES. 24. 3. 54
F	500A 187. RES. 24. 3. 54
G	500A 392 B.M. 20. 4. 50
H	500A 474 P.M. 9. 10. 62

CHECKED BY 7.2.58
 M.I.D. CO. 23.10.52
 REVISIONS:
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* DENOTES SECTION. 541.A. (FRONT UPPER CROSS SLIDE)

WICKMAN MACHINE TOOL MANUFACTURING CO. LTD.

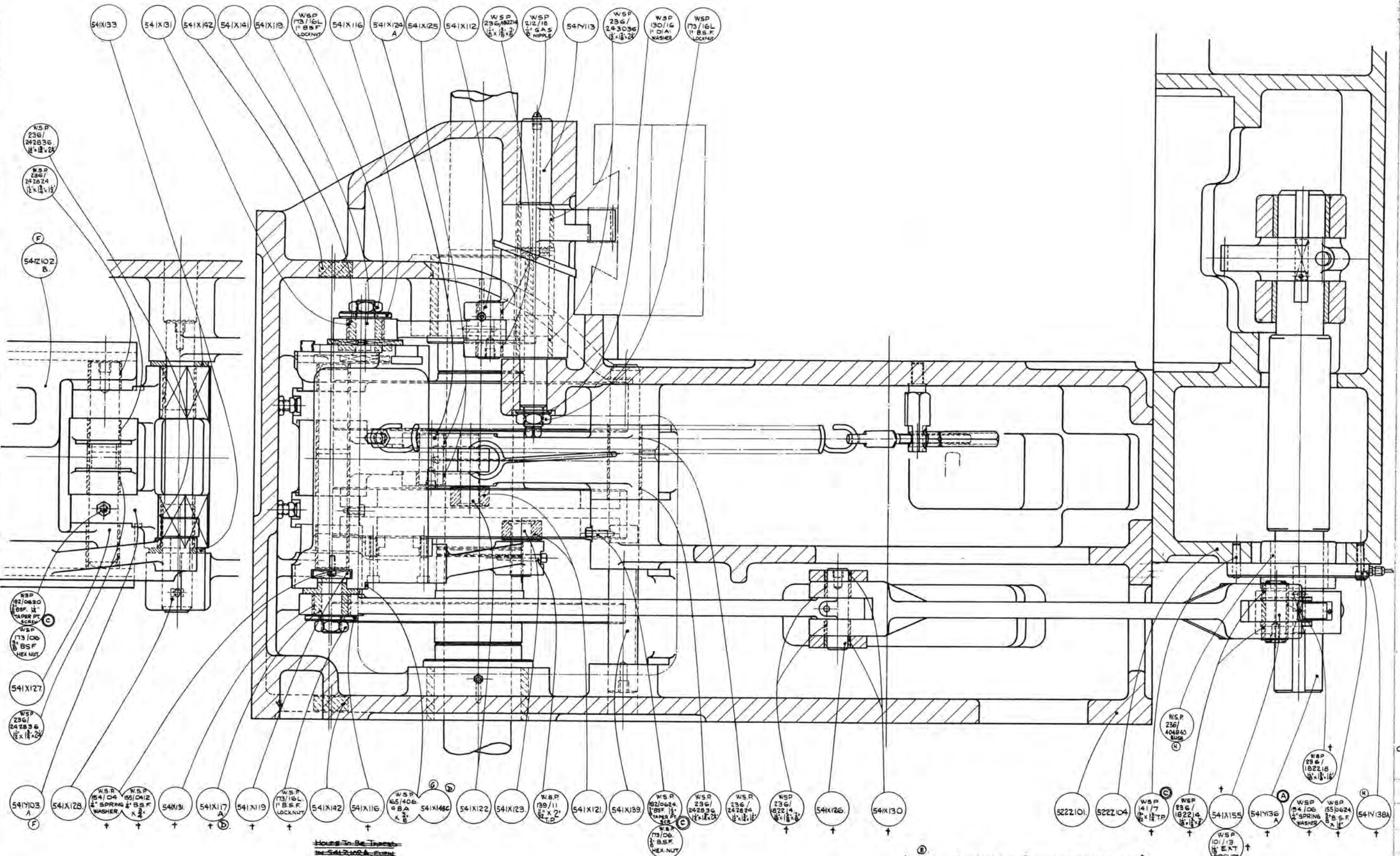
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DATE	13. 8. 48
BY	H. G. J.
CHECKED	B. S.
APPROVED	B. S.
DESIGN NO.	541LW23A
REV.	7.2.58
NO. OF	1
SECTION	1
MAINTENANCE	

CROSS SLIDE OPERATION - DRAWING NO. 541 Z 3B

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>	
1	541Z.102	Rear Cross-Slide Cam Lever	Refer to drawing showing all part numbers
2	236/242824	Oil Retaining Bush 1.1/2" x 1.	
3	236/242836	Oil Retaining Bush 1.1/2" x 1.	
4	541X.133	Spacing Washer	
5	541X.131	Oil Retaining Bush 1.3/4" bore long	
6	541X.142	Plug for Drum Housing	
7	541X.141	Sliding Sleeve	
8	541X.119	Tee Bolt	
9	173/16L	1" Locknut	
10	541X.116	Slotted Washer	
11	541X.124X	Lower Approach Pin	
12	541X.125	Lower Approach Bush	
13	541X.112	Pivot Pin	
14	236/182214	Oil Retaining Bush 1.1/8" x 1.3/8" x 7/8" long	
15	212/18	1/8" B.S.P. Grease Nipple	
16	541Y.113	Lower Quadrant Pivot	
17	36/243036	Oil Retaining Bush 1.1/2" x 1.7/8" x 2.1/4" long	
18	30/16	1" Washer	
19	173/16L	1" B.S.F. Locknut	
20	541Y.138	End Bracket	
21	155/0624	3/8" B.S.F. Socket Head Cap Screw 1.1/2" long	
22	154/06	3/8" Spring Washer	
23	236/182218	Oil Retaining Bush 1.1/8" x 1.3/8" x 1.1/8" long	
24	541Y.136A	Upper Quadrant Shaft	
25	101/13	1.1/8" External Circlip	
26	541X.155	Pivot Pin	
27	236/182214	Oil Retaining Bush 1.1/8" x 1.3/8" x 7.8" long	
28	141/7	11/32" Extractable Taper Pin 1.3/4" long	
29	522Z.104	Beam	
30	522Z.101	Drum Housing	
31	541X.130	Oil Retaining Bush 1.1/8" bore x 1.3/8" o/d. x 5/8" long	
32	541X.126	Lower Connecting Link Pin	
33	236/182214	Oil Retaining Bush 1.1/8" x 1.3/8" x 7/8" long	
34	236/242824	Oil Retaining Bush 1.1/2" x 1.3/4" x 1.1/2" long	
35	236/42836	Oil Retaining Bush 1.1/2" x 1.3/4" x 2.1/4" long	
36	182/0624	3/8" B.S.F. Hexagon Socket Set Screw, Taper Point 1.1/2" long	
37	173/06	3/8" Hexagon Nut	
38	541X.139	Approach Arm Shaft	
39	541X.121	Cam Roller	
40	139/11	11/32" Square Head Taper Pin 2" long	
41	541X.123	Feed Roller Pin	
42	541X.122	Approach Roller Pin	
43	541X.148B	Scale for Cam Lever (Upper Rear)	
44	165/406	4 B.A. Round Head Set Screw 3/8" long	
45	541X.152B	Metric Scale for Cam Lever (Upper Rear)	
46	541X.116	Slotted Washer	
47	541X.142	Plug for Drum Housing	
48	173/16L	1" B.S.F. Locknut	
49	541X.119	Tee Bolt	
50	541X.117A	Sliding Sleeve	

CROSS SLIDE OPERATION - DRAWING NO. 541 Z 3B

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
51	541X.131	Oil Retaining Bush 1.3/4" bore x 2" o/d x 1.3/32" long
52	155/0412	1/4" B.S.F. Socket Head Cap Screw 3/4" long
53	154/04	1/4" Spring Washer
54	541X.128	Approach Anchor Pin
55	541Y.103	Approach Anchor Link
56	236/242836	Oil Retaining Bush 1.1/2" x 1.3/4" x 2.1/4" long
57	541X.127	Cam Lever Pivot
58	173/06	3/4" B.S.F. Hexagon Nut
59	182/0620	3/8" B.S.F. Hexagon Socket Set Screw, Taper Point 1.1/4" long



Holes to be Tapped
in 541X103A, 541X103B
if Score is not Required

† DENOTES SECTION 541.B (REAR UPPER CROSS SLIDES)

CHECKED BY 7.2.53

M.I.D. 20-10-52

REPEAT ALL SHARP CORNERS UNLESS OTHER WISE STATED

TOLERANCES UNLESS OTHERWISE SPECIFIED

AMERICAN PRODUCTION

TOLERANCE

FINISH

EQV. OR EQUIVALENT

ENGR. Dwg. No. 541Z3B

541Z3B

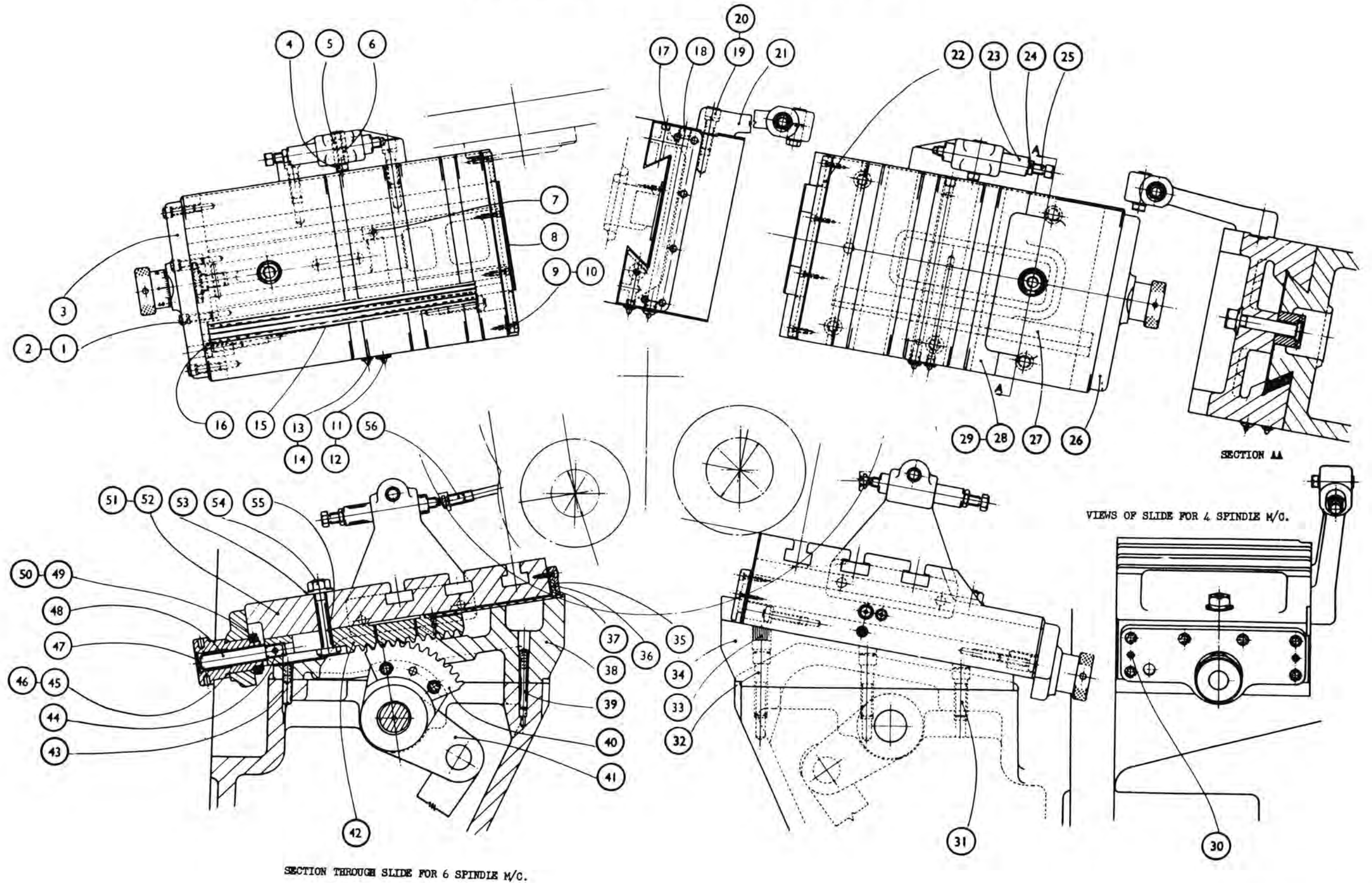
NO.	SECTION	DESCRIPTION	QTY
541	7/8-C		
	5-4		
	3/2-4		
	2/8-6		
	1/4-8		

LOWER CROSS-SLIDES
2 $\frac{5}{8}$ "-6 SPINDLE AND 3 $\frac{1}{2}$ "-4 SPINDLE BAR MACHINES

INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	155/0620	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long.	29	542Z.104	Lower Rear Cross-Slide (6 Spindle machine only).
2	154/06	$\frac{3}{8}$ " Lockwasher.	30	141/4	$\frac{1}{32}$ " Extractable Taper Pin, 1 $\frac{1}{4}$ " long.
3	542Y.109	Front Lower-Slide End Bracket.	31	155/1032	$\frac{5}{8}$ " B.S.F. Socket Head Cap Screw, 2" long.
4	542X.143	Pad Bolt.	32	155/1044	$\frac{5}{8}$ " B.S.F. Socket Head Cap Screw, 2 $\frac{1}{4}$ " long.
5	542X.125	Screwed Locking Piece.	33	542X.128	Plug.
6	542X.126	Plain Locking Piece.	34	542Z.108A	Lower Rear Slide Base.
7	158/0406	$\frac{1}{4}$ " B.S.F. Socket Countersunk Screw, $\frac{1}{8}$ " long.	35	542X.144	Front Plate—Front Slide.
8	542X.118A	Cover Plate.	36	542X.147	Felt Wiper.
9	156/212	2 B.A. Socket Head Cap Screw, $\frac{1}{4}$ " long.	37	542X.146	Back Plate for Slide Wiper.
10	154/2	2 B.A. Lockwasher.	38	542Z.107A	Lower Front Slide Base.
11	212/14	$\frac{1}{4}$ " B.S.P. Autolub Nipple.	39	141/17	$\frac{1}{2}$ " Extractable Taper Pin, 3" long.
12	210/3425	Plastic Indicator Washer, Yellow.	40	541Y.143	Gear Segment for Quadrants.
13	212/18	$\frac{1}{8}$ " B.S.P. Autolub Nipple.	41	541Z.114	Front Quadrant.
14	210/2525	Plastic Indicator Washer, Yellow.	42	542Y.121	Lower Cross-Slide Rack.
15	542Y.113	Front Gib Strip.	43	141/14	$\frac{1}{2}$ " Extractable Taper Pin, 2" long.
16	542X.115	Gib Screw.	44	125/1624	$\frac{1}{4}$ " Taper Pin, 1 $\frac{1}{2}$ " long.
17	194/1	$\frac{1}{8}$ " B.S.P. Hexagon Socket Plug.	45	542X.112	Adjustable Bolt Head.
18	194/2	$\frac{1}{4}$ " B.S.P. Hexagon Socket Plug.	46	542X.148	Adjustable Bolt Head (Metric).
19	155/0828	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long.	47	129/13	Welch Plug for 1" diameter.
20	154/08	$\frac{1}{2}$ " B.S.F. Lockwasher.	48	542X.111	Rack Feed Screw.
21	542Y.120	Lower Slide Stop Bracket.	49	150/22	1 $\frac{3}{8}$ " Slotted Locknut.
22	542X.145	Front Plate—Rear Slide.	50	177/0406	$\frac{1}{4}$ " B.S.F. Socket Set Screw, Cone Point, $\frac{3}{8}$ " long.
23	542X.123	Stop Bracket Bush.	51	542Z.101	Lower Front Cross-Slide (4 spindle machine).
24	542X.142	Locknut.	52	542Z.103	Lower Front Cross-Slide (6 spindle machine).
25	542X.124	Stop Bracket Screw.	53	130/10	$\frac{5}{8}$ " Washer.
26	542Y.110	Rear Lower-slide End Bracket.	54	542X.141	Clamp Nut.
27	542Y.114	Rear Gib Strip.	55	542X.122	Rack Tee Bolt.
28	542Z.102	Lower Rear Cross-Slide (4 Spindle machine only).	56	501X.156	Stop Screw.

LOWER CROSS SLIDES

2 $\frac{5}{8}$ "-6 Spindle and 3 $\frac{1}{2}$ "-4 Spindle Bar Machines



(Drawing 542 Z I A)

MAIN CAMSHAFT - DRAWING NO. 544 Z 1A

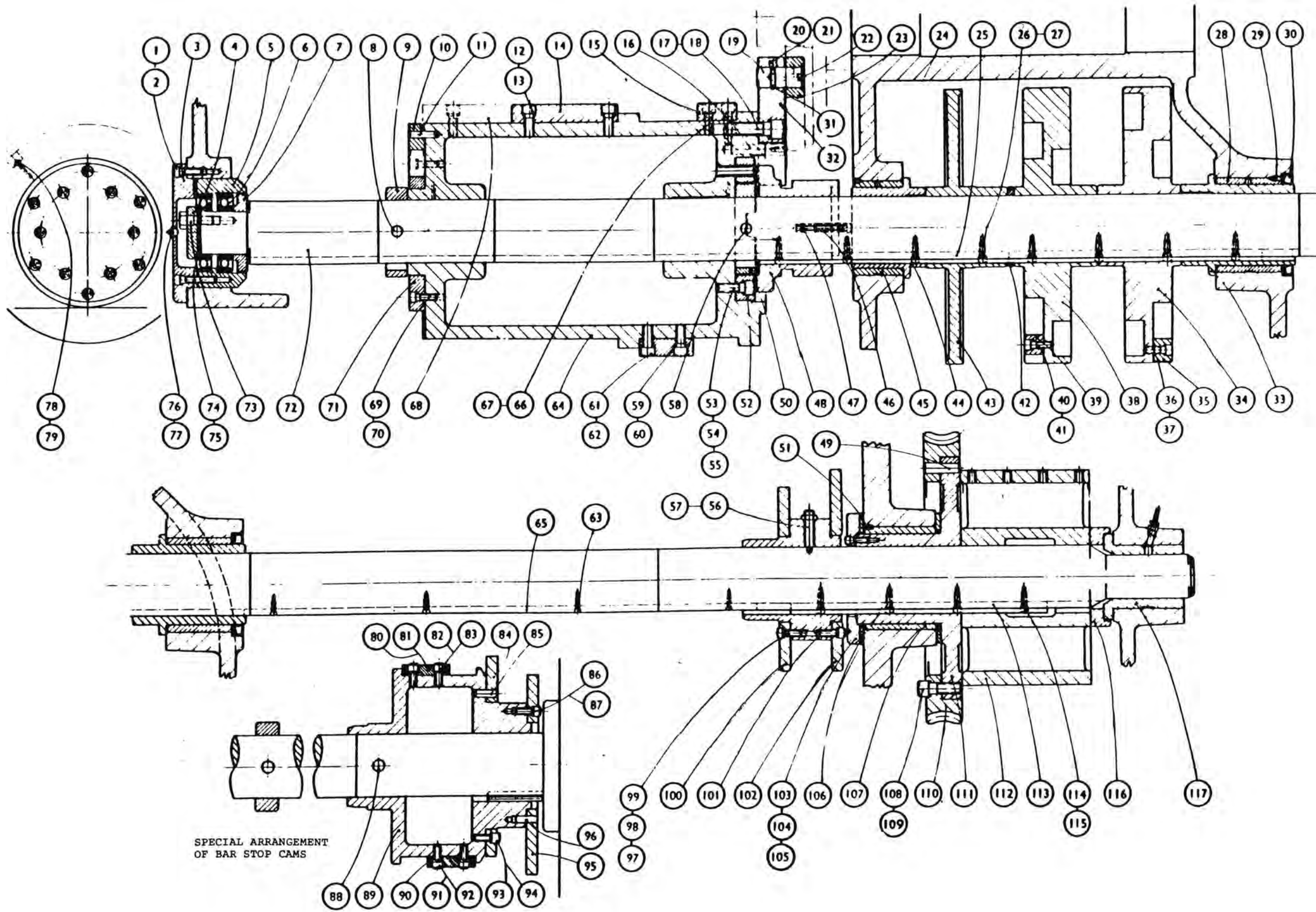
<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	154/06	3/8" Spring Washer
2	155/0620	3/8" B.S.F. Socket Head Cap Screw 1.1/4" long
3	544Y.102A	End Cover
4	544X.128A	Bearing Clamp Plate
5	544Y.121A	End Bearing Housing
6	263/60	Light Ball Journal, Angular Contact 60 x 110 x 22mm
7	544X.114A	Bearing Extractor
8	125/4080	5/8" Taper Pin 5" long
9	544X.118	Collar
10	544Y.110	Cam Drum Locking, Outer
11	126/1224	1/8" Parallel Pin 1.1/2" long
12	154/08	1/2" Spring Washer
13	155/0820	1/2" B.S.F. Socket Head Cap Screw, 1.1/4" long
14	544Y.107B	Cam, Bar Feed (Short)
15	544Y.109A	Cam, Collet Operation
16	141/21	5/8" Tapped Taper Pin, 3" long
17	154/12	3/4" Spring Washer
18	155/232	3/4" B.S.F. Socket Cap Screw, 2" long
19	544X.139	Roller Pin
20	210/2525	Indicator Washer
21	212/18	1/8" B.S.P. Grease Nipple
22	194/1	1/8" B.S.P. Plug
23	523X.104	Roller for Centre Quadrant
24	176.0406	1/8" B.S.F. Socket Grub Screw, Cup Point 3/8" long
25	544X.133	Key
26	155/0514	5/16" B.S.F. Socket Head Cap Screw, 7/8" long
27	154/05	5/16" Spring Washer
28	544X.134A	Camshaft Bush
29	76.0406	1/4" B.S.F. Socket Comb. Screw, Cup Point 1/4" long
30	235/7928	Oil Seal, Weston, 4.1/2" x 5.3/4" 3/8"
31	125/2236	11/32" Taper Pin 2.1/4" long
32	544Y.124	Geneva Arm
33	544Y.137A	Camshaft Bearing Sleeve
34	544Z.105	Cam, Front Cross Slide
35	544X.112A	Cam Insert Blank
36	155/0620	1/4" B.S.F. Socket Head Cap Screw 1.1/4" long
37	154.06	3/8" B.S.F. Spring Washer
38	544Z.104	Cam, Rear Cross Slide
39	544X.112A	Cam, Insert Blank
40	155/0620	3/4" B.S.F. Socket Head Cap Screw, 1.1/4" long
41	154/06	3/4" B.S.F. Spring Washer
42	544X.136	Camshaft Spacer
43	544Y.103	Cam Disc
44	544Y.138	Camshaft Bearing Sleeve
45	544X.135	Camshaft Bush
46	544X.119	Clutch Plunger
47	544X.129	Clutch Spring
48	544Y.123B	Dog Clutch
49	125/4036	5/8" Taper Pin 2.1/4" long
50	544X.118	Collar
51	176/0406	1/4" B.S.F. Socket Set Screw, Cup Point 3/8" long
52	544Y.122B	Clutch Plate
53	155/1024	5/8" B.S.F. Socket Head Cap Screw 1.1/2" long

MAIN CAMSHAFT - DRAWING NO. 544 Z 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
54	154/10	5/8" Spring Washer
55	544X.149	Dowel for 544Y.122A
56	178/0836	1/2" B.S.F. Socket Set Screw, Half-Dog, 2.1/4" long
57	173/08L	1/2" B.S.F. Locknut
58	125/4080	5/8" Taper Pin 5" long
59	544Y.108B	Cam, Collet Operation (Short)
60	44Y.117B	Cam, Collet Operation
61	154/08	1/2" B.S.F. Spring Washer
62	5/0820	1/2" B.S.F. Socket Head Cap Screw 1.1/4" long
63	156/208	2 B.A. Socket Head Cap Screw, 1/2" long
64	544Z.102	Cam Drum
65	544X.142	Filling Piece for Camshaft
66	155/0820	1/2" B.S.F. Socket Head Cap Screw 1.1/4" long
67	154/08	1/2" B.S.F. Spring Washer
68	544Y.106B	Cam. Bar Feed (long)
69	155/0620	3/8" B.S.F. Socket Head Cap Screw 1.1/4" long
70	154/06	3/8" B.S.F. Spring Washer
71	544Y.111	Cam, Drum Locking, Inner
72	544Z.101A	Main Camshaft
73	167/0824	1/2" B.S.F. Hexagon Head Set Screw, 1.1/2" long
74	155/0632	3/8" B.S.F. Socket Head Cap Screw 2" long
75	154/06	3/8" B.S.F. Spring Washer
76	212/18	1/8" B.S.P. Grease Nipple
77	210/2525	Indicator Washer
78	212/04	1/4" B.S.P. Autolub Grease Nipple
79	210/1725	Indicator Washer, Yellow
80	544Y.144	Bar Stop Cam
81	544Y.146	Bar Stop Cam
82	154/06	3/8" B.S.F. Spring Washer
83	155/0614	3/8" B.S.F. Socket Head Cap Screw, 7/8" long
84	544Y.143	Bar Stop "Advance" Cam
85	6/1220	3/8" Parallel Pin, 1.1/4" long
86	155/0616	3/8" B.S.F. Socket Head Cap Screw, 1" long
87	154/06	3/8" B.S.F. Spring Washer
88	125/4080	5/8" Taper Pin 5" long
89	544Z.126	Centre for Bar Stop Cams
90	544Y.145	Bar Stop Cam
91	154/06	3/8" B.S.F. Spring Washer
92	155/0614	3/8" B.S.F. Socket Head Cap Screw, 7/8" long
93	155/0616	3/8" B.S.F. Socket Head Cap Screw, 1" long
94	154/06	3/8" B.S.F. Spring Washer
95	544Y.116	Cam, Bar Stop, Retard
96	126/1220	3/8" Parallel Pin, 1.1/4" long
97	154/06	3/8" Spring Washer
98	126/1220	3/8" Parallel Pin 1.1/4" long
99	155/0616	3/8" B.S.F. Socket Head Cap Screw, 1" long
100	544Y.115A	Cam, Bar Stop Advance
101	544Y.125A	Centre for Bar Stop Cams
102	544Y.116A	Cam, Bar Stop Retard
103	518X.115	End Cap.
104	155/0516	5/16" B.S.F. Socket Head Cap Screw, 1" long
105	154/05	5/16" Spring Washer
106	518X.123	Thrust Plate
107	518X.121	Worm Wheel Bearing

MAIN CAMSHAFT - DRAWING NO. 544 8 1A

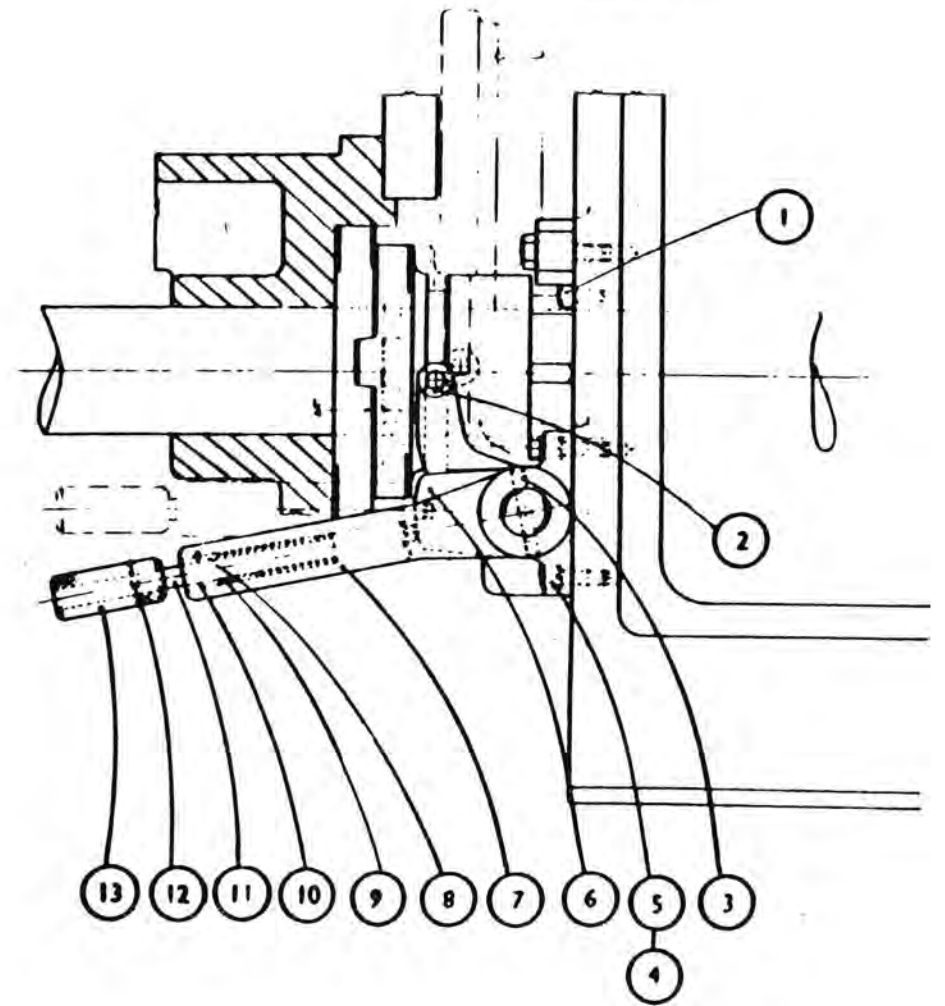
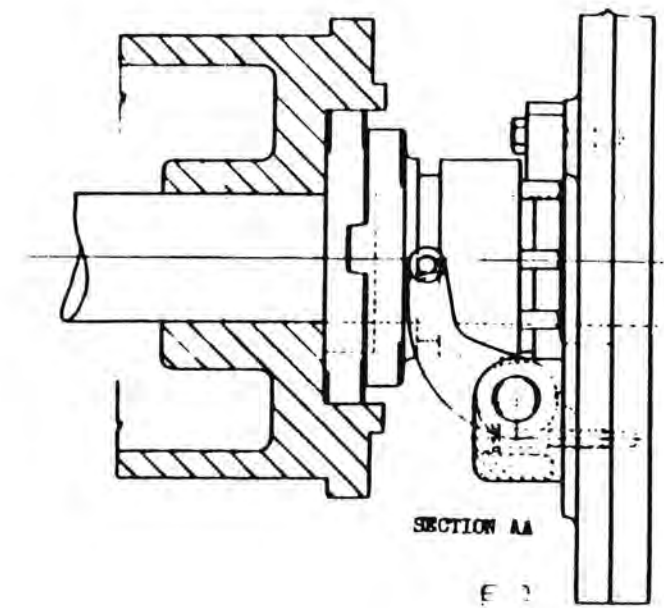
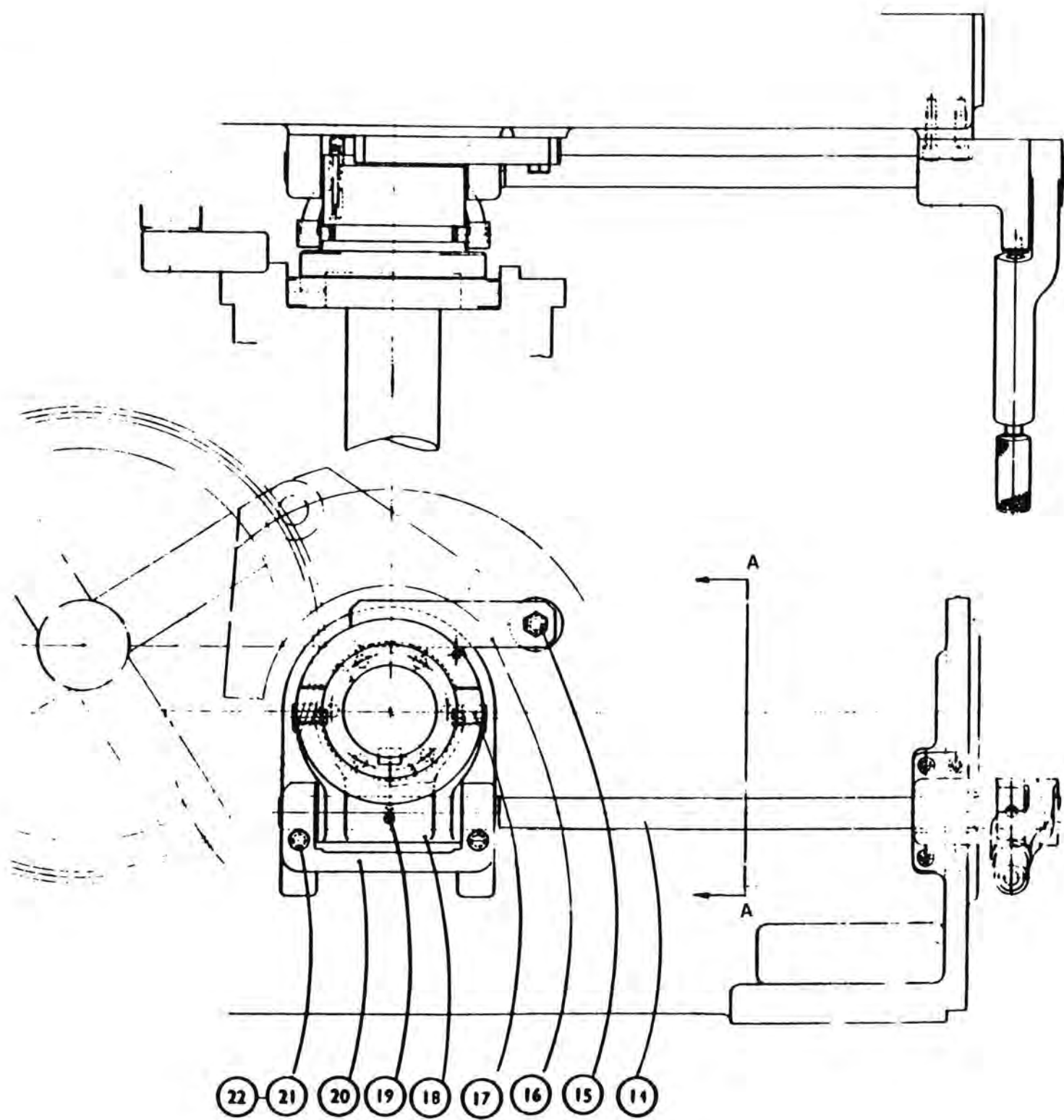
<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
108	155/1028	5/8" B.S.F. Socket Head Cap Screw, 1.3/4" long
109	154/10	5/8" B.S.F. Spring Washer
110	518Y.124	Worm Wheel
111	518Y.118	Worm Wheel Hub
112	544Y.130A	Cam Drum
113	544X.133	Key
114	155/0514	5/16" B.S.F. Socket Head Cap Screw 7/8" long
115	154/05	5/16" Spring Washer
116	544X.141	Adjusting Washer
117	544X.132A	Camshaft Bearing



544Z1A

INDEX CLUTCH OPERATION - DRAWING NO. 545 Z 1

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	155/0612	3/8" B.S.F. Socket Head Cap Screw 3/4" long
2	125/1216	3/16" Taper Pin, 1" long
3	125/2240	11/32" Taper Pin 2.1/2" long
4	154/07	7/16" Spring Washer
5	155/0720	7/16" B.S.F. Socket Head Cap Screw 1.1/4" long
6	545Y.105A	Clutch Lever Bracket
7	5Y.106	Clutch Lever
8	125/1220	3/16" Taper Pin 1.1/4" long
9	545X.110	Spring for Plunger
10	545X.107	Bush
11	545X.108	Plunger
12	125/1220	3/16" Taper Pin 1.1/4" long
13	545X.109	Plunger Handle
14	545X.104A	Clutch Operating Shaft
15	545X.112	Fulcrum Stud
16	545X.111	Baulking Strip
17	545X.103	Clutch Fork Pin
18	545Y.101A	Clutch Fork
19	125/2236	11/32" Taper Pin 2.1/4" long
20	545Y.102	Clutch Fork Bracket
21	155/0848	1/2" B.S.F. Socket Head Cap Screw, 3" long
22	154/08	1/2" Spring Washer



545Z1

INDEXING GEARS
2 $\frac{5}{8}$ "-6 SPINDLE BAR MACHINE

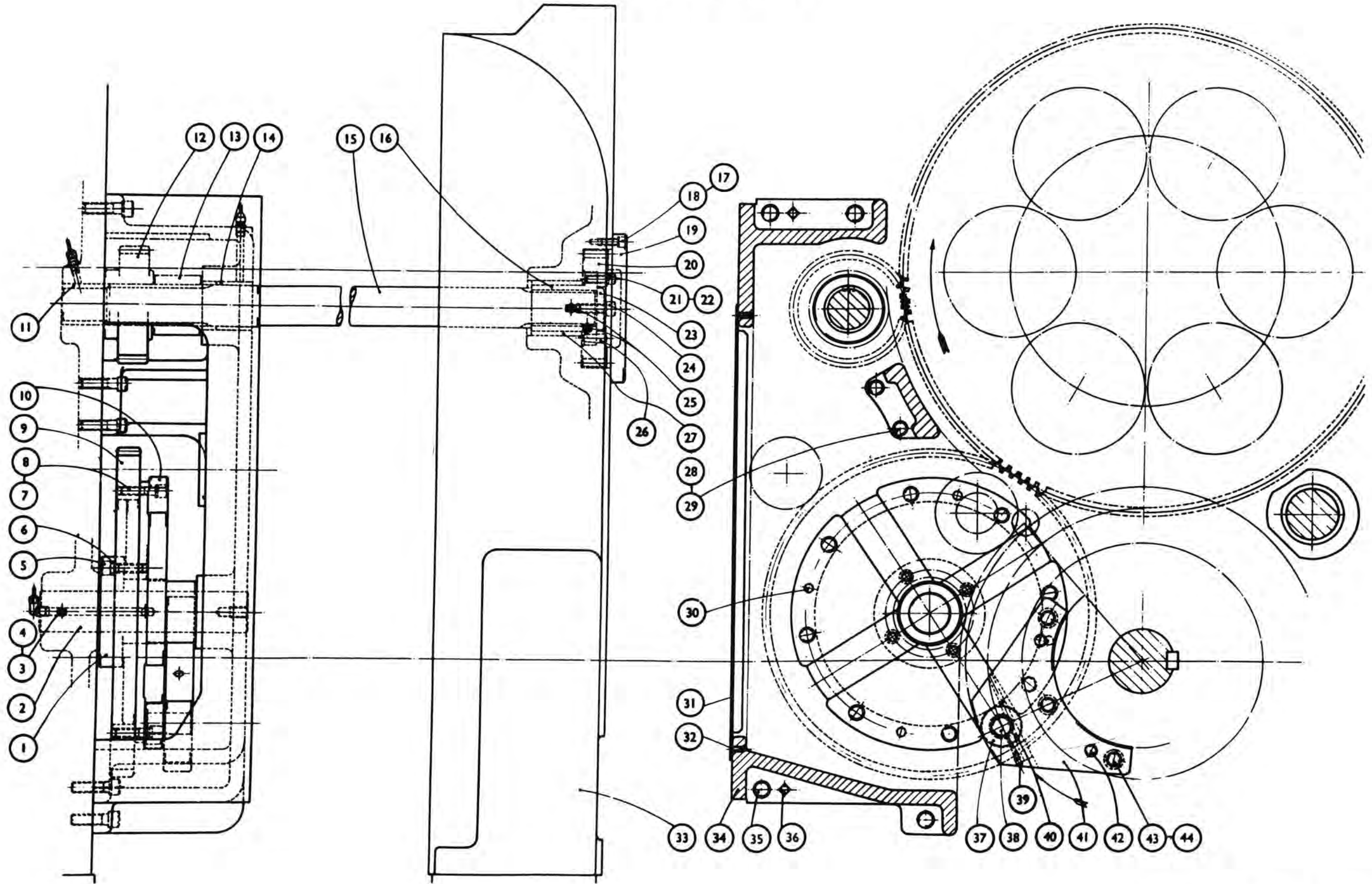
INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	546Y.103	Geneva Wheel Bearing.	23	546X.107A	Locking Washer.
2	546X.104	Pin for Geneva Wheel.	24	155/0828	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long.
3	182/0828	$\frac{1}{2}$ " B.S.F. Hexagon Socket Set Screw, 1 $\frac{1}{4}$ " long.	25	212/18	$\frac{1}{8}$ " B.S.P. Grease Nipple.
4	173/08	$\frac{1}{2}$ " B.S.F. Hexagon Nut.	26	125/3222	$\frac{1}{2}$ " Taper Pin, 1 $\frac{3}{8}$ " long.
5	155/0828	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{3}{4}$ " long.	27	236/404844	Oil Retaining Bush, 2 $\frac{1}{2}$ " x 3" x 2 $\frac{3}{4}$ " long.
6	154/08	$\frac{1}{2}$ " Spring Washer.	28	154/08	$\frac{1}{2}$ " Spring Washer.
7	154/08	$\frac{1}{2}$ " Spring Washer.	29	155/0832	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 2" long.
8	155/0832	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 2" long.	30	125/3232	$\frac{1}{2}$ " Taper Pin, 2" long.
9	546Y.102	Geneva Wheel Gear.	31	546Y.113	Indexing Gear Guard.
10	546Y.101	Geneva Wheel.	32	158/0410	$\frac{1}{4}$ " B.S.F. Countersunk Head Screw, $\frac{3}{8}$ " long.
11	236/283636	Oil Retaining Bush, 1 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ " long.	33	522Z.102	Stock Carriage Indexing Bracket.
12	546Y.108A	Upper Indexing Gear.	34	522Z.103	Indexing Gear Bracket.
13	546X.114	Spacer.	35	155/1032	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 2" long.
14	236/364432	Oil Retaining Bush 2 $\frac{1}{4}$ " x 2 $\frac{3}{4}$ " x 2" long.	36	137/17	$\frac{1}{2}$ " Taper Pin, 2 $\frac{1}{4}$ " long.
15	546Y.105A	Indexing Shaft.	37	523X.104	Roller for Centre Quadrant.
16	546X.115	Gear Centre.	38	544X.139	Roller Pin.
17	154/06	$\frac{3}{8}$ " Spring Washer.	39	212/18	$\frac{1}{8}$ " B.S.P. Grease Nipple.
18	155/0616	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1" long.	40	125/2236	No. 6 Taper Pin, 2 $\frac{1}{4}$ " long.
19	522Y.133A	Pinion Cover.	41	544Y.124	Geneva Arm.
20	546Y.106A	Stock Indexing Gear.	42	141/22	Extractable Taper Dowel, $\frac{3}{8}$ " dia. x 3" long.
21	155/0620	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long.	43	155/1232	$\frac{3}{4}$ " B.S.F. Socket Head Cap Screw, 2" long.
22	154/06	$\frac{3}{8}$ " Spring Washer.	44	154/12	$\frac{3}{8}$ " Spring Washer.

List of Parts for
Drawing No. 546 Z 1A)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE

INDEXING GEARS

2 $\frac{5}{8}$ "-6 Spindle Bar Machine



(Drawing 546 Z I A)

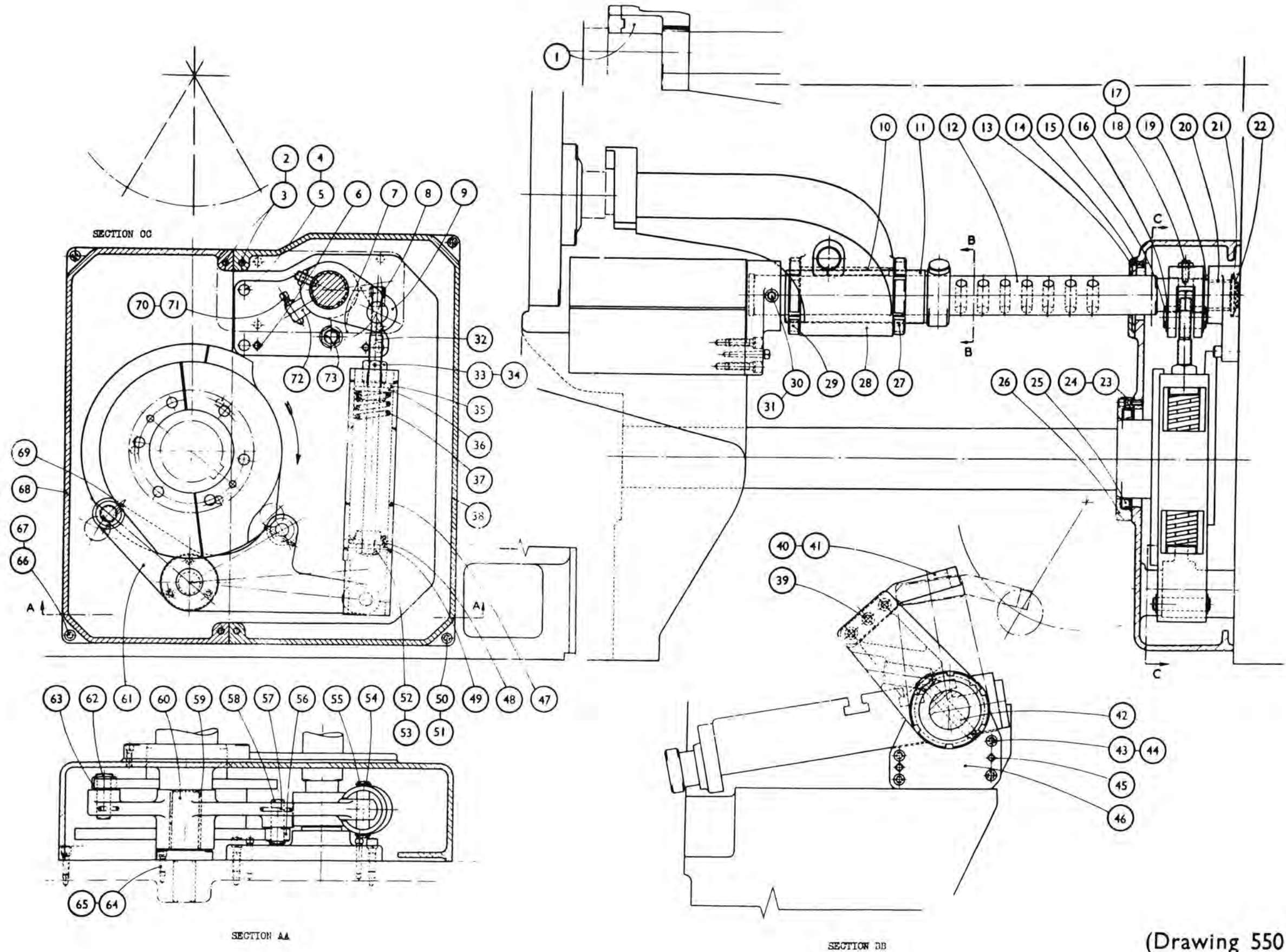
BAR STOP AND OPERATING MECHANISM

2 $\frac{5}{8}$ "-6 SPINDLE BAR MACHINE

INDEX NO.	PART NO.	TITLE.	INDEX NO.	PART NO.	TITLE.
1	550V.151	Bar Stop (Special 2 $\frac{5}{8}$ "-6 spindle, and 3 $\frac{1}{2}$ "-4 spindle).	38	550Z.102A	Bar Stop Cover.
2	154/06	$\frac{3}{8}$ " Spring Washer.	39	155/0828	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{2}$ " long.
3	155/0696	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 6" long.	40	154/08	$\frac{1}{2}$ " Spring Washer.
4	154/07	$\frac{7}{16}$ " Spring Washer.	41	550X.109A	Bar Stop (Standard 2 $\frac{5}{8}$ "-6 spindle).
5	155/0724	$\frac{7}{16}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{2}$ " long.	42	550X.114	Locating Pin.
6	139/11	$\frac{1}{32}$ " Headed Taper Pin, 2" long.	43	155/0724	$\frac{7}{16}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{2}$ " long.
7	550Y.110A.	Bracket for Bar Stop Shaft.	44	154/07	$\frac{7}{16}$ " Spring Washer.
8	550X.136	Screw Locking Nut.	45	139/11	$\frac{1}{32}$ " Headed Taper Pin, 2" long.
9	550Y.115A	Bar Stop Operating Crank.	46	550Y.111A	Bracket (Drum Housing End).
10	550X.142	Key.	47	550Y.130	Spring Housing.
11	550Y.113A	Adjusting Sleeve.	48	550X.134	Spring Seat.
12	550Y.112A	Bar Stop Shaft	49	550X.133	Retaining Washer.
13	161/0412	$\frac{1}{4}$ " B.S.F. Countersunk Head Screw, $\frac{3}{4}$ " long.	50	155/0620	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long.
14	550X.103A	Shaft Cover.	51	154/06	$\frac{3}{8}$ " Spring Washer.
15	550X.120A	Link Pin.	52	550X.137	Spring Retaining Nut.
16	101/15	1 $\frac{1}{2}$ " External Circlip.	53	127/0814	$\frac{1}{8}$ " Split Pin, 1 $\frac{3}{4}$ " long.
17	173/08L	$\frac{1}{2}$ " B.S.F. Hexagon Locknut.	54	101/6	$\frac{3}{4}$ " External Circlip.
18	178/0820	$\frac{1}{2}$ " Half Dog Set Screw, 1 $\frac{1}{4}$ " long.	55	550X.138	Pin.
19	550X.126A	Adjusting Washer.	56	550X.106A	Cam Roller.
20	236/242820	Oil Retaining Bush, 1 $\frac{1}{2}$ " x 1 $\frac{3}{4}$ " x 1 $\frac{1}{4}$ " long.	57	125/1632	$\frac{1}{2}$ " Taper Pin, 2" long.
21	550X.126A	Adjusting Washer.	58	550X.107A	Roller Pin.
22	101/18	1 $\frac{1}{2}$ " External Circlip.	59	236/242824	Oil Retaining Bush, 1 $\frac{1}{2}$ " x 1 $\frac{3}{4}$ " x 1 $\frac{1}{2}$ " long.
23	155/0516	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, 1" long.	60	550X.105B	Fulcrum Pin
24	154/05	$\frac{1}{16}$ " Spring Washer.	61	550Y.104A	Cam Lever.
25	235/72928	Oil Seal, 4 $\frac{1}{2}$ " x 5 $\frac{3}{4}$ " x $\frac{5}{8}$ ".	62	550X.107A	Roller Pin.
26	550Y.143	Oil Seal Cap.	63	550X.106A	Cam Roller.
27	550X.127	Locknut.	64	155/0516	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, 1" long.
28	550Z.108B	Bar Stop Bracket.	65	154/05	$\frac{1}{16}$ " Spring Washer.
29	550X.127	Locknut.	66	155/0620	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long.
30	212/18	$\frac{1}{8}$ " B.S.P. Grease Nipple	67	154/06	$\frac{3}{8}$ " Spring Washer.
31	210/2525	Indicator Washer.	68	550Z.101A	Bar Stop Cover.
32	550X.140	Link Rod.	69	125/1632	$\frac{1}{2}$ " Taper Pin, 2" long.
33	550X.135	Adjusting Nut.	70	173/06L	$\frac{3}{8}$ " B.S.F. Hexagon Locknut.
34	125/1220	$\frac{1}{16}$ " Taper Pin, 1 $\frac{1}{4}$ " long.	71	188/0628	$\frac{3}{8}$ " B.S.F. Square Head Set Screw, 1 $\frac{3}{4}$ " long.
35	550X.133	Retaining Washer.	72	550X.150	Stop Carrier.
36	550X.134	Spring Seat.	73	550X.149	Stop Peg.
37	550X.132	Compression Spring.			

BAR STOP AND OPERATING MECHANISM

2 5/8"-6 Spindle Bar Machine



(Drawing 550 Z I A)

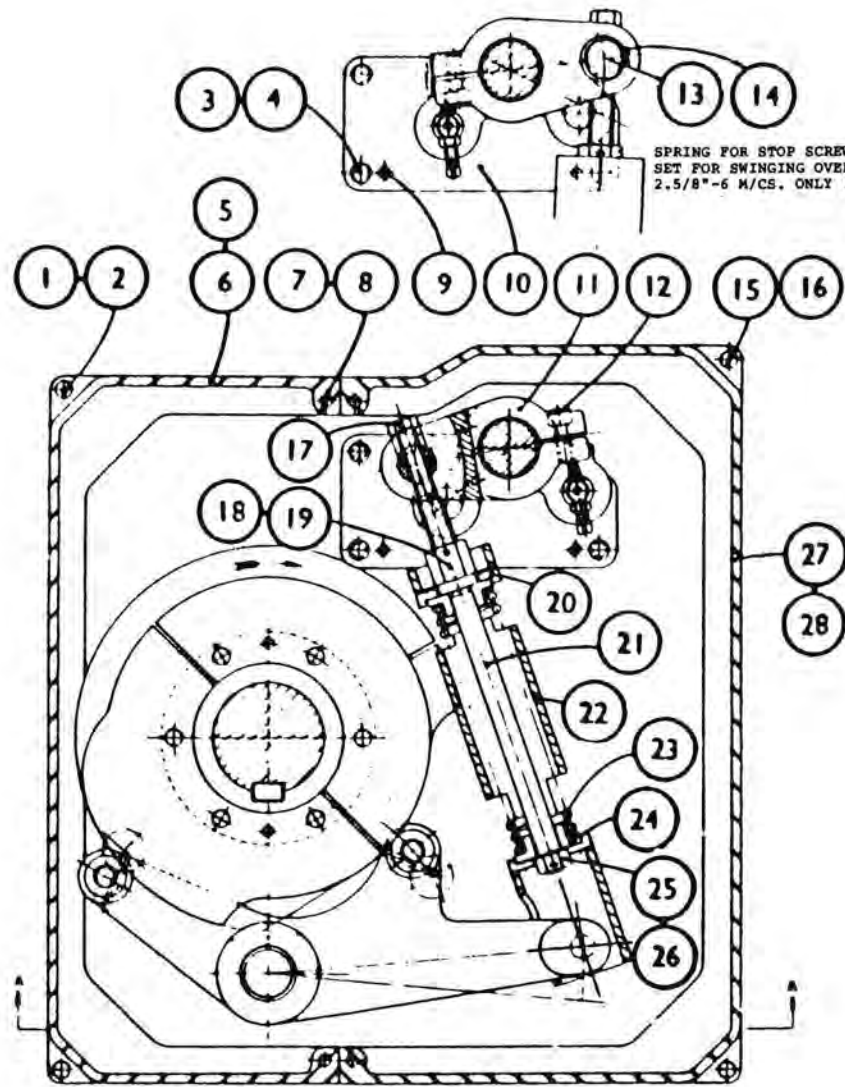
BAR STOP and OPERATING MECHANISM - DRAWING NO. 550 Z 1B

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	154/06	3/8" Spring Washer
2	155/0620	3/8" B.S.F. Socket Head Cap Screw 1.1/4" long
3	154/07	7/16" Spring Washer
4	155/0724	7/16" B.S.F. Socket Head Cap Screw 1.1/2" long
5	550Z.201	Bar Stop Cover (1.3/4"-8 Spindle).
6	550Z.101A	Bar Stop Cover (2.5/8"-6 Spindle and 3.1/4"-6 Spindle)
7	155/0696	3/8" B.S.F. Socket Head Cap Screw 6" long.
8	154/06	3/8" Spring Washer
9	139/11	11/32" Headed Taper Pin 2" long
10	550Y.110B	Bracket for Bar Stop Shaft
11	550V.115B	Bar Stop Operating Crank
12	155/0820	1/2" B.S.F. Socket Head Cap Screed 1.1/4" long
13	550X.120A	Link Pin
14	101/15	1.1/4" External Circlip
15	155/0620	3/8" B.S.F. Socket Head Cap Screw 1.1/4" long
16	154/06	3/8" Spring Washer
17	50X.136	Screw Locking Nut
18	125/1220	3/16" Taper Pin 1.1/4" long.
19	550X.135	Adjusting Nut
20	550X.133	Retaining Washer
21	550X.140	Link Rod
22	550Y.130	Spring Housing
23	550X.132	Compression Spring
24	550X.134	Spring Seat
25	550X.137	Spring Retaining Nut
26	127/0814	1/8" Split Cotter Pin 1.3/4" long
27	550Z.102A	Bar Stop Cover (2.5/8"-6 spindle and 3.1/4"-6 Spindle)
28	550Z.202	Bar Stop Cover (1.3/4"-8 Spindle)
29	155/0828	1/2" B.S.F. Socket Head Cap Screw 1.1/4" long
30	154/08	1/2" Spring Washer
31	210/2525	Indicator Washer, Yellow
32	212/18	1/8" B.S.P. Grease Nipple
33	550Y.112A	Bar Stop Shaft
34	550Y.113A	Adjusting Sleeve
35	550Z.1088	Bar Stop Bracket
36	122/2056T	Key. Tapped
37	550X.127	Locknut
38	550X.114	Lockating Pin
39	550X.203	Shaft Cover (1.3/4"-8 spindle)
40	550X.103A	Shaft Cover (2.5/8"-6 and 3.1/4"-6 spindle)
41	236/242820	Oil Retaining Bush 1.1/2" x 1.3/4" x 1.1/2" long
42	101/18	1.1/2" External Circlip
43	550X.126A	Adjusting Washer
44	173/05	5/16" B.S.F. Nut
45	176/0536	5/16" Socket Head Set Sscrw Cup Point 2.1/4" long
46	550X.150A	Stop Carrier
47	188/0632	3/8" B.S.F. Square Headed Set Scres 2" long
48	173/06	3/8" B.S.F. Nut
49	158/0412	1/4" B.S.F. Countersunk Socket Head Screw 1.3/4" long
50	550Y.143A	Oil Seal Cap.
51	235/7292B	Oil Seal 4.1/2" x 5.3/4" x 5/8" long

BAR STOP and OPERATING MECHANISM - DRAWING NO. 550 Z 1B

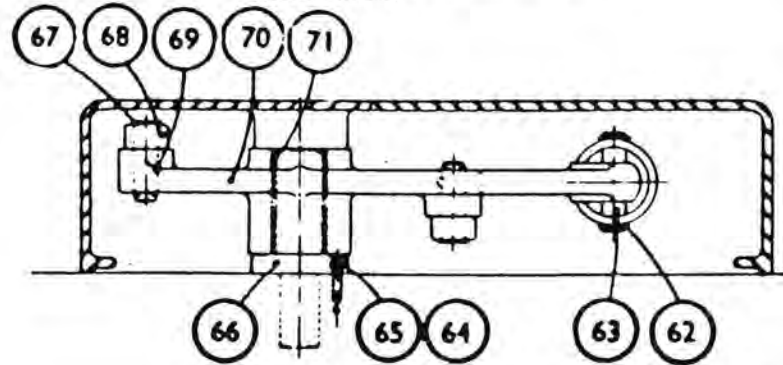
<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
52	155/0516	5/16" B.S.F. Socket Head Cap Screw 1" long
53	154/05	5/16" Spring Washer
54		
55		
56	50X.204	Bar Stop (1.3/4"-8 spindle)
57	550X.148	Bar Stop for Lower Position (2.5/8"-6 and 3.1/4"-6 spindle).
58	550Y.111A	Bracket (Drum Housing End)
59	139/11	11/32" Square Headed Taper Pin 2" long
60	155/0724	7/16" B.S.F. Socket Head Cap Screw 1.1/2" long
61	154/07	7/16" Spring Lockwasher
62	101/6	3/4" External Circlip
63	550X.138	Pin
64	154/05	5/16" Spring Washer
65	155/0516	5/16" B.S.F. Socket Head Cap Screw 1" long
66	550X.105B	Fulcrum Pin
67	550X.107A	Roller Pin
68	550X.106A	Cam Roller
69	125/1632	1/4" Taper Pin, 2" long.
70	550Y.104Y	Cam Lever
71	236/242824	Oil Retaining Bush 1.1/2" x 1.3/4" x 1.1/2" long

Applicable to Machines
Commencing M/c No. 8417

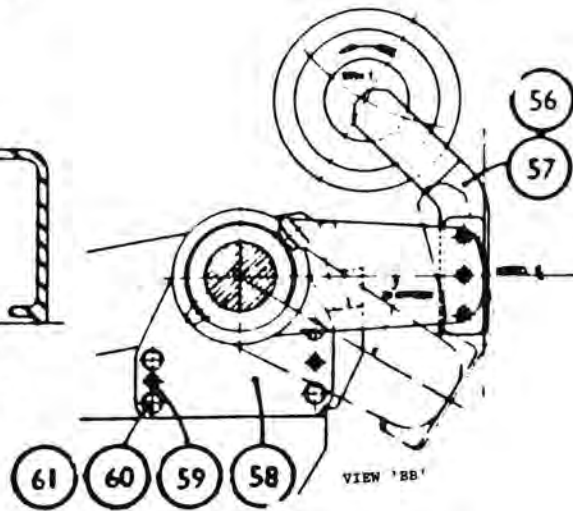


SPRING FOR STOP SCREW
SET FOR SWINGING OVER THE SLIDE
2.5/8"-6 M/CS. ONLY (SPECIAL)

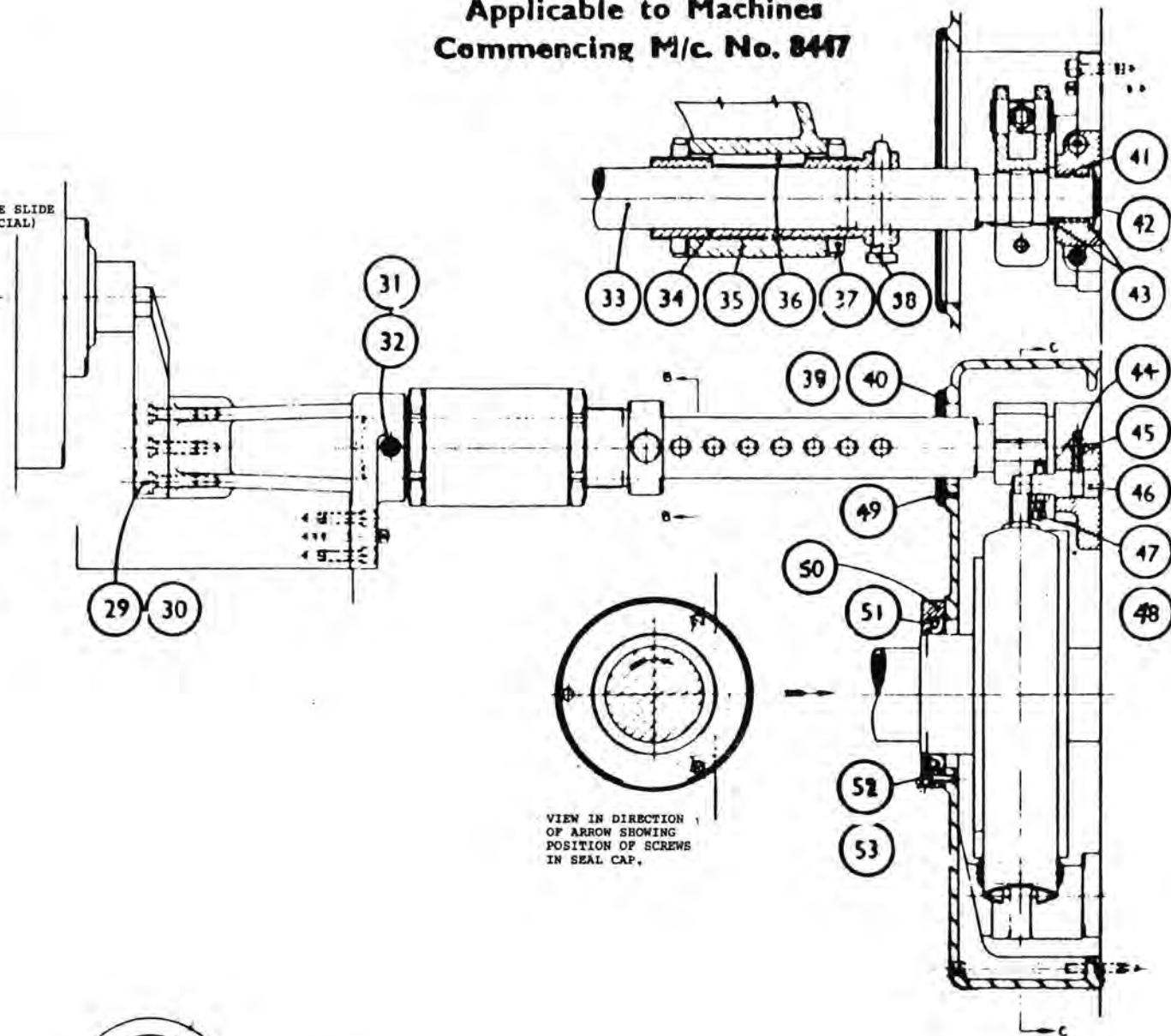
VIEW ON 'CC' SHOWING THE SCREWS AND
STOP SCREW, SET FOR THE STANDARD LOWER
POSITION WORKING.



VIEW ON 'AA' SHOWING CAM LEVER



VIEW 'BB'



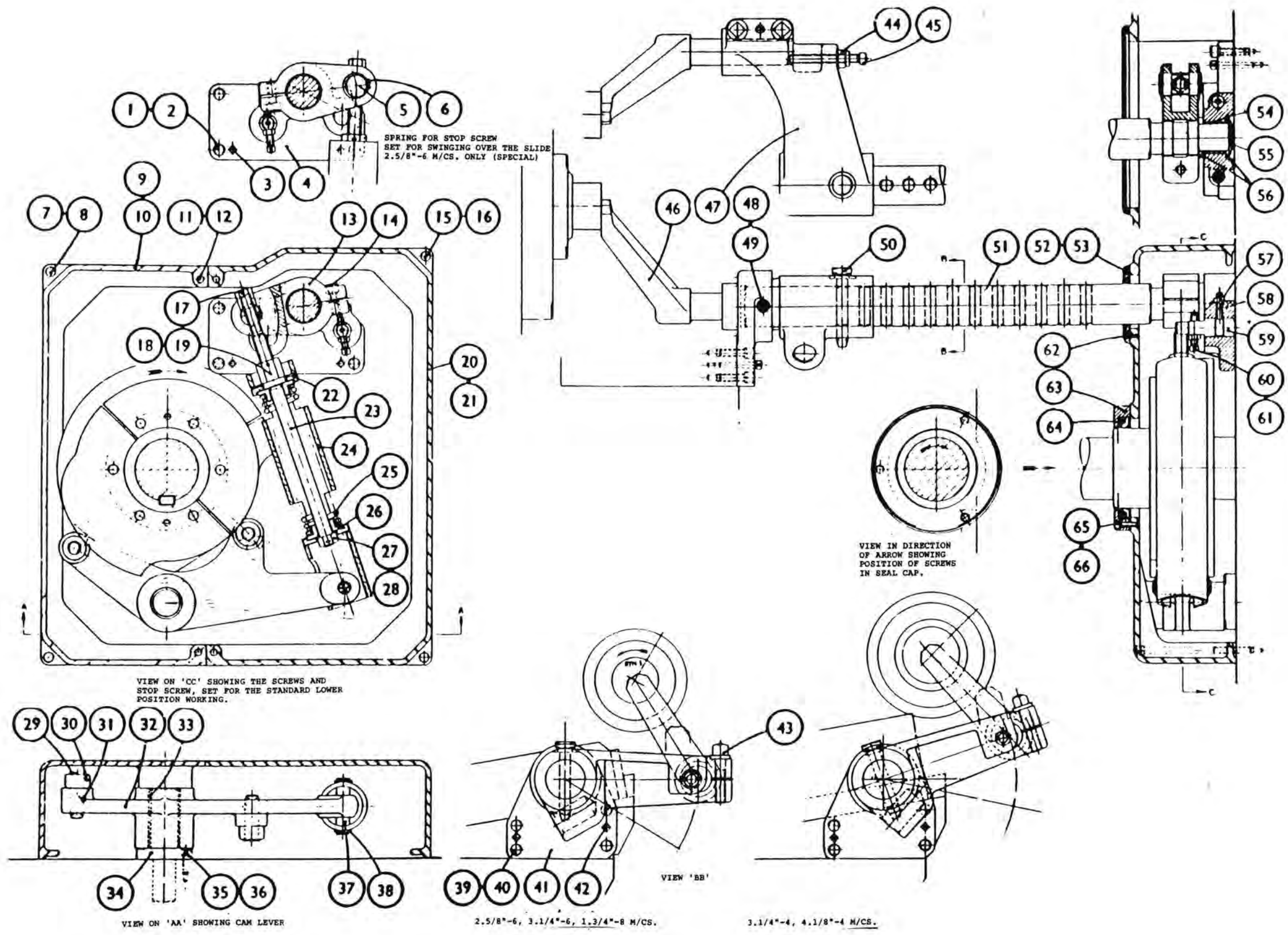
VIEW IN DIRECTION
OF ARROW SHOWING
POSITION OF SCREWS
IN SEAL CAP.

BAR STOP and OPERATING MECHANISM - DRAWING NO. 550 Z 1C

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	154/07	Lockwasher
2	155/0724	7/16" B.S.F. Hexagon Socket Cap Screw 1.1/2" long
3	139/11	11/32" dia. Square Head Taper Pin 2" long
4	550Y.110B	Bracket
5	550X.120A	Link Pin
6	101/15	1/4" dia. External Circlip
7	154/06	3/8" Spring Lockwasher
8	155/0620	3/8" B.S.F. Hexagon Socket Cap Screw 1.1/4" long
9	550Z.201	Bar Stop Cover (1.3/4"-8)
10	550Z.101A	Bar Stop Cover 2.5/8"-6, 3.1/4"-6, 3.1/2"-4, 4.1/8"-4)
11	155/0696	3/8" B.S.F. Hexagon Socket Cap Screw 6" long
12	154/06	3/8" Spring Lockwasher
13	550V.115C	Bar Stop Operating Crank
14	155/0820	1/2" B.S.F. Hexagon Socket Cap Screw 1.1/4" long
15	155/0620	3/8" B.S.F. Hexagon Socket Cap Screw 1.1/4" long
16	154/06	3/8" Spring Lockwasher
17	550X.136	Screw Locking Nut
18	125/1220	3/16" dia. Taper Pin 1.1/4" long
19	550X.135	Adjusting Nut
20	550Z.102A	Bar Stop Cover (2.5/8"-6, 3.1/4"-6, 3.1/2"-4, 4.1/8"-4)
21	550Z.202	Bar Stop Cover (1.3/4"-8)
22	550X.133	Retaining Washer
23	550X.140	Link Rod
24	550Y.130	Spring Housing
25	550X.132	Compression Spring
26	550X.134	Spring Seat
27	550X.137	Spring Retaining Nut
28	127/0814	1/8" dia. Split Cotter Pin 1.3/4" long
29	550X.107A	Roller Pin
30	550X.106A	Cam Roller
31	125/1632	1/4" dia. Taper Pin 2" long
32	550Y.104B	Cam Lever
33	236/242824	Oil Retaining Bush 1.1/2" x 1.3/4" x 1.1/2"
34	550X.105B	Fulcrum Pin
35	155/0516	5/16" B.S.F. Hexagon Socket Cap Screw 1" long
36	154/05	5/16" Spring Lockwasher
37	550X.138	Pin
38	101/6	3/4" dia. External Circlip
39	154/07	7/16" Spring Lockwasher
40	155/0724	7/16" B.S.F. Hexagon Socket Cap Screw 1.1/2" long
41	550Y.111A	Bracket
42	139/11	11/32" Square Head Taper Pin 2" long
43	195/1040	5/8" dia. B.S.F. Collar Screw 2.1/2" long
44	203/08	1/2" B.S.F. Self Locking Nut
45	188/0864	1/2" B.S.F. Square Head Set Screw 4" long
46	550X.148A	Bar Stop (Lower Position)
47	550X.108C	Bar Stop Bracket
48	210/2525	Yellow Indicator Washer
49	212/18	1/8" B.S.P. Hexagon Nipple
50	550X.114	Locating Pin
51	550Y.112B	Bar Stop Shaft
52	550X.203	Shaft Cover (1.3/4"-8)

BAR STOP and OPERATING MECHANISM - DRAWING NO. 550 Z 1C

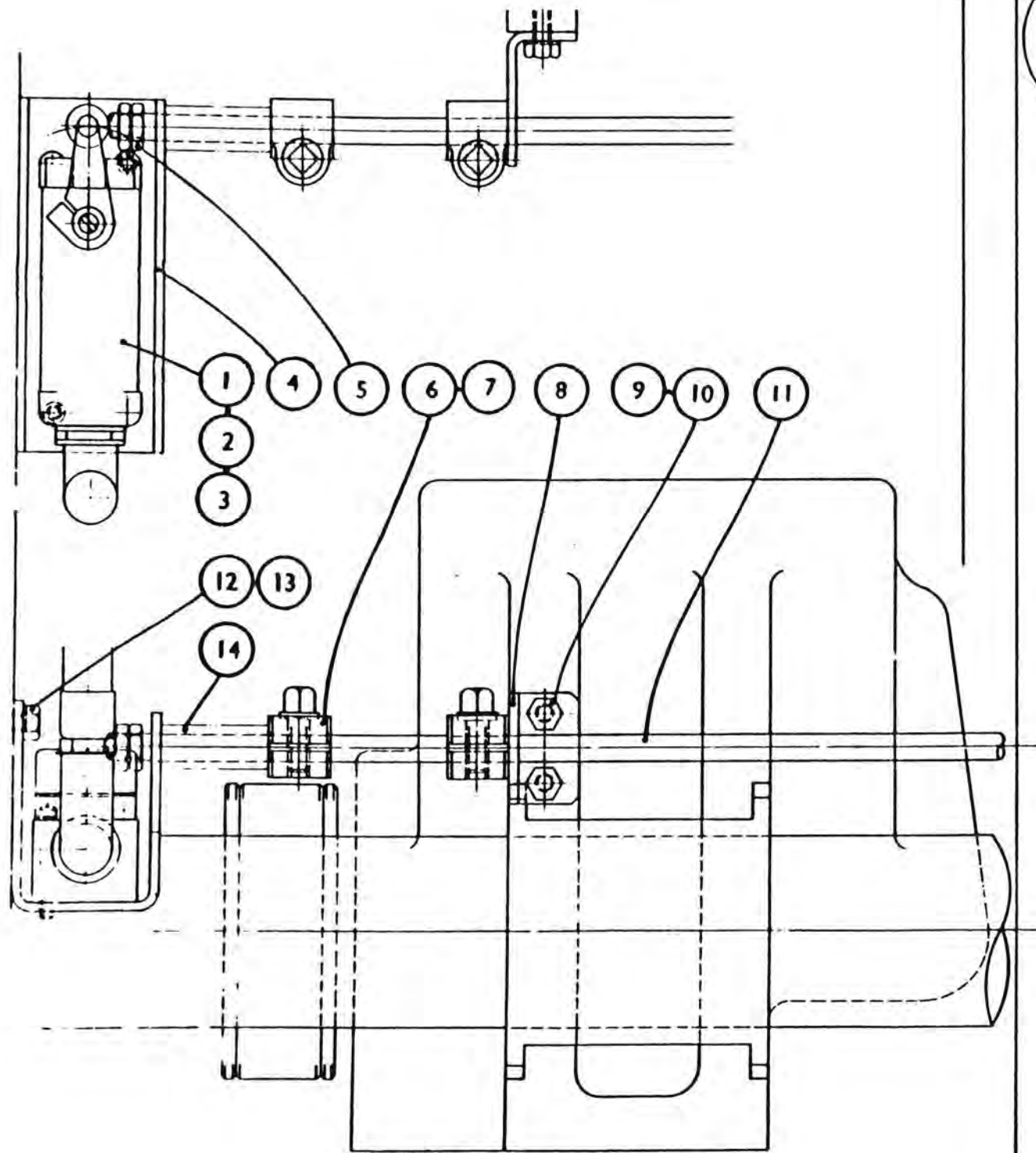
<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
53	550X.103A	Shaft Cover (2.5/8"-6, 3.1/4"-6, 3.1/2"-4, 4.1/8"-4)
54	236/242824	Oil Retaining Bush 1.1/2" x 1.3/4" x 1.1/2"
55	101/18	1.1/2" dia. External Circlip
56	550X.126A	Adjusting Washer
57	173/05	5/16" B.S.F. Hexagon Nut
58	176/0536	5/16" B.S.F. Hexagon Socket Set Screw Cup Point 2.1/4" long
59	550X.150A	Stop Carrier
60	188/0632	3/8" B.S.F. Square Head Set Screw 2" long
61	173/06	3/8" B.S.F. Hexagon Nut
62	158/0412	1/4" B.S.F. Hexagon Socket Countersunk Head Screw 3/4" long
63	550Y.143A	Oil Seal Cap
64	235/7292B	Oil Seal 4.1/2" Bore
65	155/0516	5/16" B.S.F. Hexagon Socket Cap Screw 1" long.
66	154/05	5/16" Spring Lockwasher



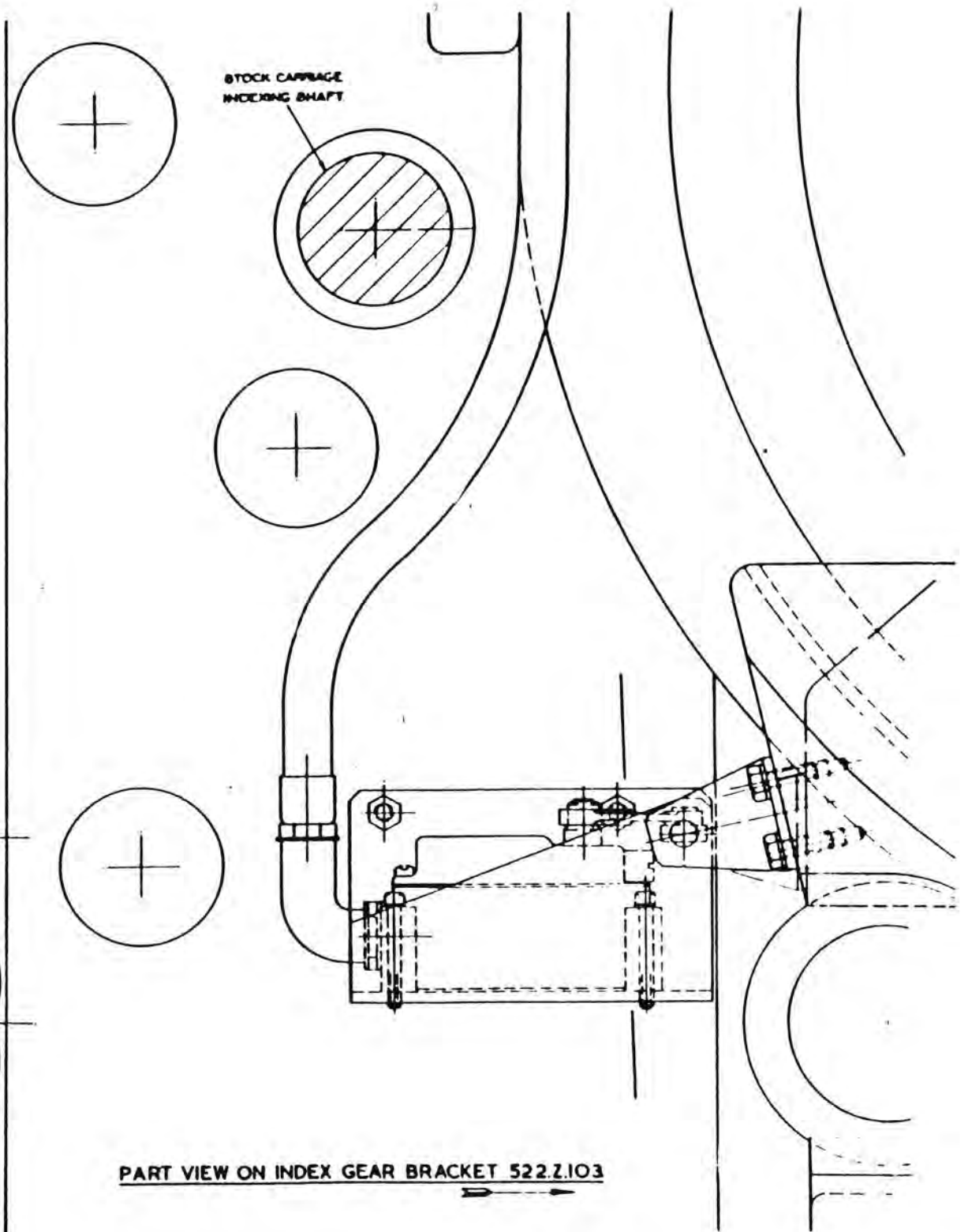
550Z1C 10A

BAR FEED TRIP- DRAWING NO. 553 Y 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	AW12-B1	Square D Limit Switch, Class 9007
2	156/224	2 B.A. Socket Head Cap Screw 1.1/2" long
3	154/03	Spring Washer
4	553X.104	Switch Bracket
5	173/06L	3/8" B.S.F. Hexagon Locknut
6	188X.108	Trip Clamp
7	195/0512	5/16" B.S.F. Square Head Screw 3/4" long
8	553X.105	Pusher Bracket
9	167/0412	1/4" B.S.F. Hexagon Head Set Screw 3/4" long
10	198/8	Lockwasher
11	553X.106	Trip Rod
12	167/0412	1/4" B.S.F. Hexagon Head Set Screw 3/4" long.
13	198/8	Lockwasher
14	MSC173	Compression Spring



VIEW IN DIRECTION OF ARROW.

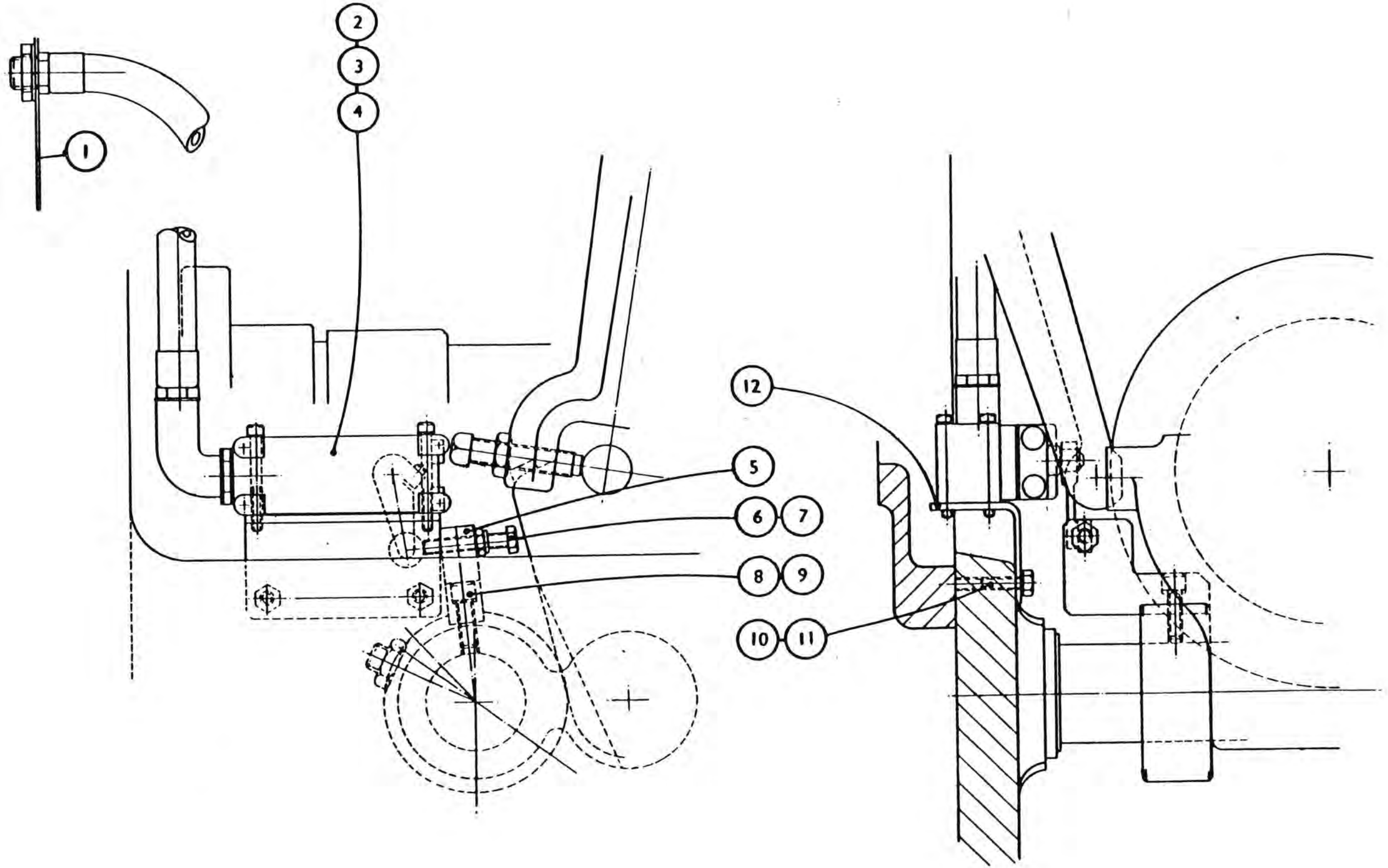


PART VIEW ON INDEX GEAR BRACKET 522.Z.103

553Y1A

FEED BRAKE INTERLOCK - DRAWING NO. 553Y5

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	522X.195A	Cover Plate
2	AW12-B1	Square D Limit Switch, Class 9007.
3	156/228	2 B.A. Socket Head Cap Screw 1.3/4" long
4	154/03	3/16" dia. Spring Washer
5	553X.112	Bracket
6	167/0524	5/16" B.S.F. Hexagon Head Set Screw 1.1/2" long
7	203/05	5/16" B.S.F. Self Locknut
8	155/0514	5/16" B.S.F. Socket Head Cap Screw 7/8" long
9	154/05	5/16" dia. Spring Washer
10	167/0412	1/4" B.S.F. Hexagon Head Set Screw 3/4" long
11	198/8	1/4" dia. Lockwasher



553Y5

MAIN DRIVE GEARING - DRAWING NO. 517 Z 3

<u>INDEX NO.</u>	<u>PART NO.</u>	<u>TITLE</u>
1	503Y 0	Centre Guide
2	176/05 6	5/8" B.S.F. Socket Head Set Screw, Cup Point 3/8" long
3	153/05	Copper Pad 3/8" long
4	151/85	85mm Slotted Locknut
5	194/1	5/8" B.S.P. Socket Pipe Plug
6	22/1 80T	Key Tapped
7	517X.212	Attachment Drive Gear, 36T (2.5/8"-6 and 3.1/4"-6 Spindle)
	517X.210	Attachment Drive Gear, 34T, (3.1/2"-4 and 4.1/8"-4 Spindle)
8	517X.213	Attachment Drive Gear, 50T (2.5/8"-6 and 3.1/4"-6 Spindle)
	517X.1 1A	Attachment Drive Gear, 46T, (3.1/2"-4 and 4.1/8"-4 Spindle)
9	517X.214	Adjustable Spacer
10	517Z.207A	Centre Shaft
11	150/22	1.3/8 Slotted Locknut
12	153/04	Copper Pad 3/32" long
13	176/0405	B.S.F. Socket Set Screw Cup Point 3/16" long
14	155/0520	5/16" B.S.F. Socket Head Cap Screw 1.1/4" long (2.5/8"-6 and 3.1/4"-6)
15	517X.107A	Cap
16	183/0520	5/16" B.S.F. Square Head set Screw Taper Point 1.1/4" long
17	203/05	5/16" B.S.F. Self Locking Hexagon Nut
18	258/70	Ball Journal, Medium Type 70 x 125 x 24mm (2.5/8"-6 and 3.1/4"-6)
19	517V.111B	Jackshaft Jockey Carrier (2.5/8"-6 and 3.1/4"-6)
20	518X.162A	Jockey Pin
21	517Y.141	Jackshaft Drive Sprocket 31T (2.5/8"-6 and 3.1/4"-6)
	517V.142A	Jackshaft Drive Sprocket 24T (2.5/8"-6 and 3.1/4"-6)
22	517X.129	Collar (2.5/8"-6 and 3.1/4"-6)
23	122/1648T	Ley, Tapped
24	151/170	70mm Slotted Locknut
25	153/05	Copper Pad 1/4" long
26	176/0506	5/16" B.S.F. Socket Head Cap Screw, Cup Point 3/8" long
27	517Y.148	Low Range Gear 46T
28	257/55	Ball Journal, Medium Type 55 x 120 x 29mm
29	517X.126	Collar
30	122/0824T	Key, Tapped
31	517X.139	Feed Drive Sprocket 22T
32	155/0616	3/8" B.S.F. Socket Head Cap Screw 1" long
33	--	Speed Pick Off Gears
34	517Y.106	Bearing Housing
35	104/50	140mm Internal Circlip
36	257/65	Ball Journal, Medium Type 65 x 140 x 33mm
37	151/65	65mm Slotted Locknut
38	153/05	Copper Pad, 1/4" long
39	176.0506	5/16" Socket Head Set Screw, Cup Point 3.8" long
40	155/0410	1/4" B.S.F. Socket Head Cap Screw, 3/8" long

MAIN DRIVE GEARING - DRAWING NO. 517 Z 3

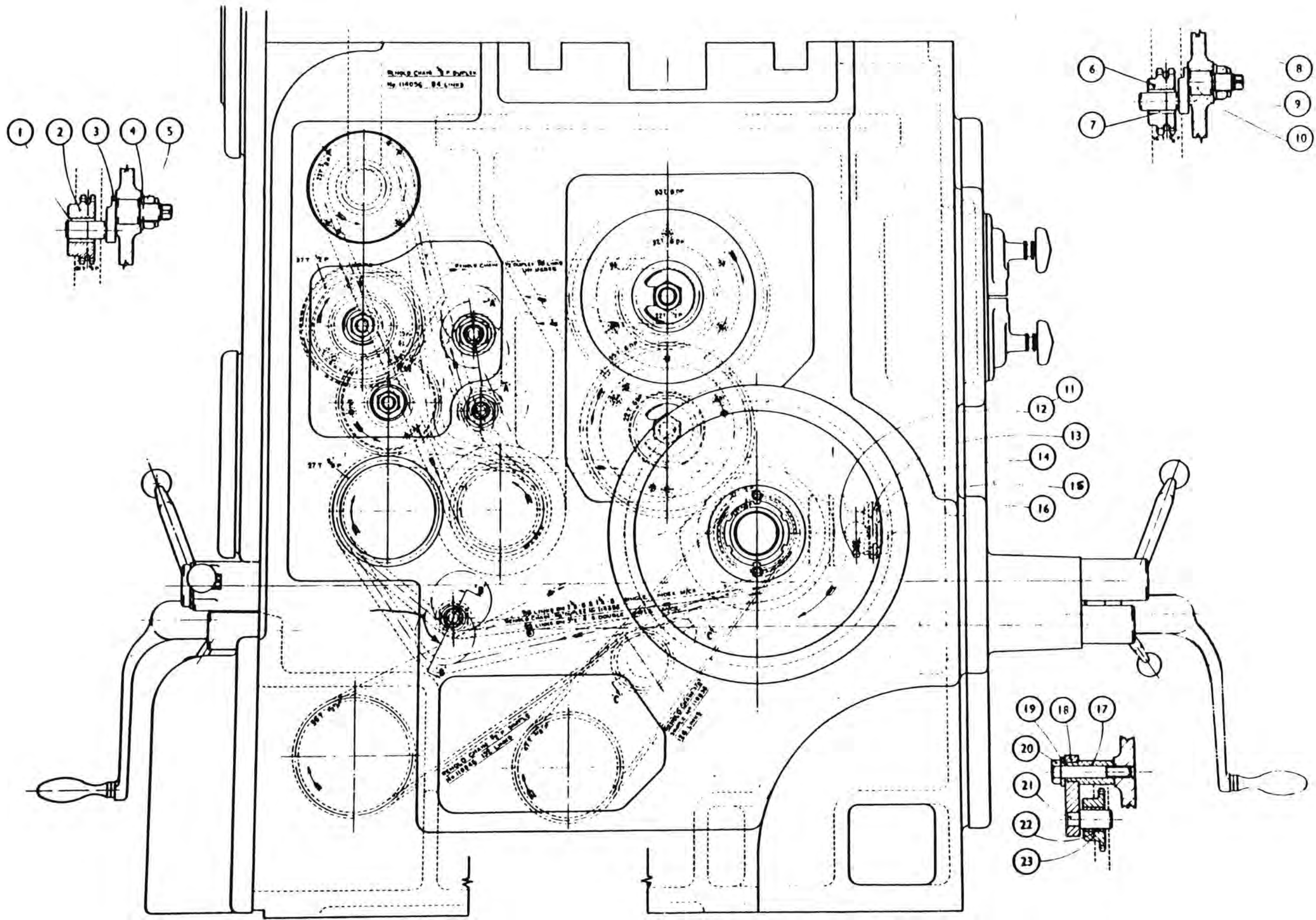
<u>INDEX NO.</u>	<u>PART NO.</u>	<u>TITLE</u>
41	517X.185	Key for Slip Gears
42	517X.116	"C" Washer
43	203/16L	1" B.S.F. Self Locking Nut, thin type
44	517Y.105A	Bearing Housing
45	104/48	130mm Internal Circlip
46	151/60	60mm Slotted Locknut
47	153/05	Copper Pad 1/8" long
48	176/0506	5/16" B.S.F. Socket Head Set Screw, Cup Point 3/8" long
49	257/60	Ball Journal Medium Type 60 x 130 x 31mm
50	517Y.125A	Range Gear Shaft
51	517X.185	Key
52	155/0410	1/4" B.S.F. Socket Head Cap Screw, 3/8" long
53	176/0506	5/16" B.S.F. Socket Set Screw, Cup Point 3/8" long
54	150/44	2.3/4" Slotted Locknut
55	153/05	Copper Pad 1/8" long
56	517X.123	Collar
57	155/0520	5/16" B.S.F. Socket Head Cap Screw 1.1/4" long
58	154/05	5/16" Spring Washer
59	257/65	Ball Journal, Medium Type 65 x 140 x 33mm
60	--	Weston Oil Seal, 50040050, 5" x 4" x 1/2"
61	55/0824	1/2" BSF Socket Head Cap Screw 1.1/2" long
62	516X.106	Oil seal Ring
63	150/38	2.5/8" Slotted Locknut
64	153/05	Copper Psd, 1/8" long
65	176/0506	5/16" Socket Set Screw, Cup Point 3/8" long
66	517Y.102	Pulley Bearing Cap
67	517Y.101	Driven Pulley Bearing Extension
68	522X.156	Plug
69	516Y.102A	Driving Pulley
70	517X.133	Pump Drive Sprocket
71	121/0824T	Key, Tapped
72	517X.103	Spacer
73	121/0816T	Key, Tapped
74	517X.134	Oil Pump Drive Sprocket
75	258/75	Ball Journal Medium Type 75 x 130 x 25mm
76	122/1632T	Key, Tapped
77	517Y.135A	Fast Motion Drive Sprocket, (2.5/8"-6 and 1.3/4"-8 spindle)
	517Y.136	Fast Motion Drive Sprocket, (3.1/4"-6, 3.1/2"-4 and 4.1/8"-4 spindle)
78	150/44	2.3/4" Slotted Locknut
79	153/05	Copper Pad 1/8" long
80	176/0506	5/16" B.S.F. Socket Set Screw, Cup Point 3/8" long
81	155/0616	3/8" B.S.F. Socket Head Cap Screw 1" long
82	517X.137	Pulley Shaft Abutment
83	257/60	Ball Journal, Medium Type 60 x 130 x 31mm
84	151/600	60mm Slotted Locknut
85	153/05	Copper Pad 1/8" long
86	176/0506	5/16" B.S.F. Socket Set screw, cup Point 3/4" long
87	7Y.120	Low Range Sliding Pinion
88	22/1626T	Key Tapped
89	519X.115	Glut
90	519X.165	Glut Shaft

MAIN DRIVE GEARING - DRAWING NO. 517 Z 3

<u>INDEX NO.</u>	<u>PART NO.</u>	<u>TITLE</u>
91	177/0612	3/8" B.S.F. Socket Set Screw, Cone Point 3/4" long
92	517Z.122A	Pulley Shaft
93	122/1452T	Key, Tapped
94	517X.143	Bearing Sleeve (3.1/2"-4 and 4.1/8"-4 spindle)
95	182/0616	3/8" B.S.F. Socket Set Screw, Taper Point, 1" long
96	517X.216	Collar
97	517V.208	Centre Guide Bearing
98	155/0724	7/16" B.S.F. Socket Head Cap screw 1.1/2" long
99	258/85	Ball Journal, Medium Type 85 x 150 x 28mm
100	517X.124	Adjustable Spacer
101	257/40	Ball Journal, Medium type 40 x 90 x 23mm
102	122/1652T	Key, Tapped
103	517X.127	Collar
104	522 X.154	Plug
105	517X.124	Collar
106	176/0405	1/4" B.S.F. Socket Set Screw, Cup Point 5/16" long
107	153/04	Copper Pad, 3/32" long
108	150/22	1.3/8" Slotted Locknut
109	517X.104	Bearing Sleeve
110	257/40	Ball Journal, Medium Type 40 x 90 x 23mm
111	517X.130	Collar
112	182/0616	3/8" B.S.F. Socket Set Screw, Taper Point 1" long
113	517Y.146	High Range Sliding Gear
114	511Y.108A	Centre Guide
115	Y.203A	Jackshaft Jockey Carrier)
116	517X.206	Jockey Sprocket)
117	236/121618	Oil Retaining Bush)
118	517X.205	Jockey Pin)
119	125/1024	3/32" Taper Pin, 1.1/2" long)
120	122/1648T	Key, Tapped)
121	517X.195	Collar) 1.3/4"-8
122	151/70	70mm Slotted Locknut) only
123	176/0506	5/16" B.S.F. Socket Set Screw, Cup Point))
		3/8" long)
124	153/05	Copper Pad, 1/8" long)
125	517X.204	Jockey Carrier Plate)
126	155/0516	5/16" B.S.F. Socket Head Cap Screw)
		1" long)
127	154/05	5/16" Spring Washer)
128	517X.196	Jackshaft Drive Sprocket)
129	258/70	Ball Journal, Medium Type)
		70 x 125 x 24mm)
130	517X.107A	Cap)
131	155/0520	5/16" B.S.F. Socket Head Cap Screw)
		1.1/4" long)
132	154/05	5/16" Spring Washer)
133	122/1680T	Key, Tapped)
134	517X.197A	Spacer)
135	517X.199A	Attachment Drive Gear)
136	258/85	Ball Journal, Medium Type)
		85 x 150 x 28mm)
137	151/85	85mm Slotted Locknut)
138	176/0506	5/16" B.S.F. Socket Set Screw, Cup Point))
		3/8" long)
139	153/05	Copper Pad 1/8" only)
140	517V.202A	Bearing Housing)

MAIN DRIVE GEARING - DRAWING NO. 517 Z 3

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>	
141	155/0524	5/16" B.S.F. Socket Head Cap Screw, 1.1/2" long)
142	154/05	5/16" Spring Washer)
143	517Y.201	Centre Guide Bearing)
144	155/0824	1/2" B.S.F. Socket Head Cap Screw, 1.1/2" long)
145	54/08	1/2" Spring Washer)
146	212/1656T	Key. Tapped)

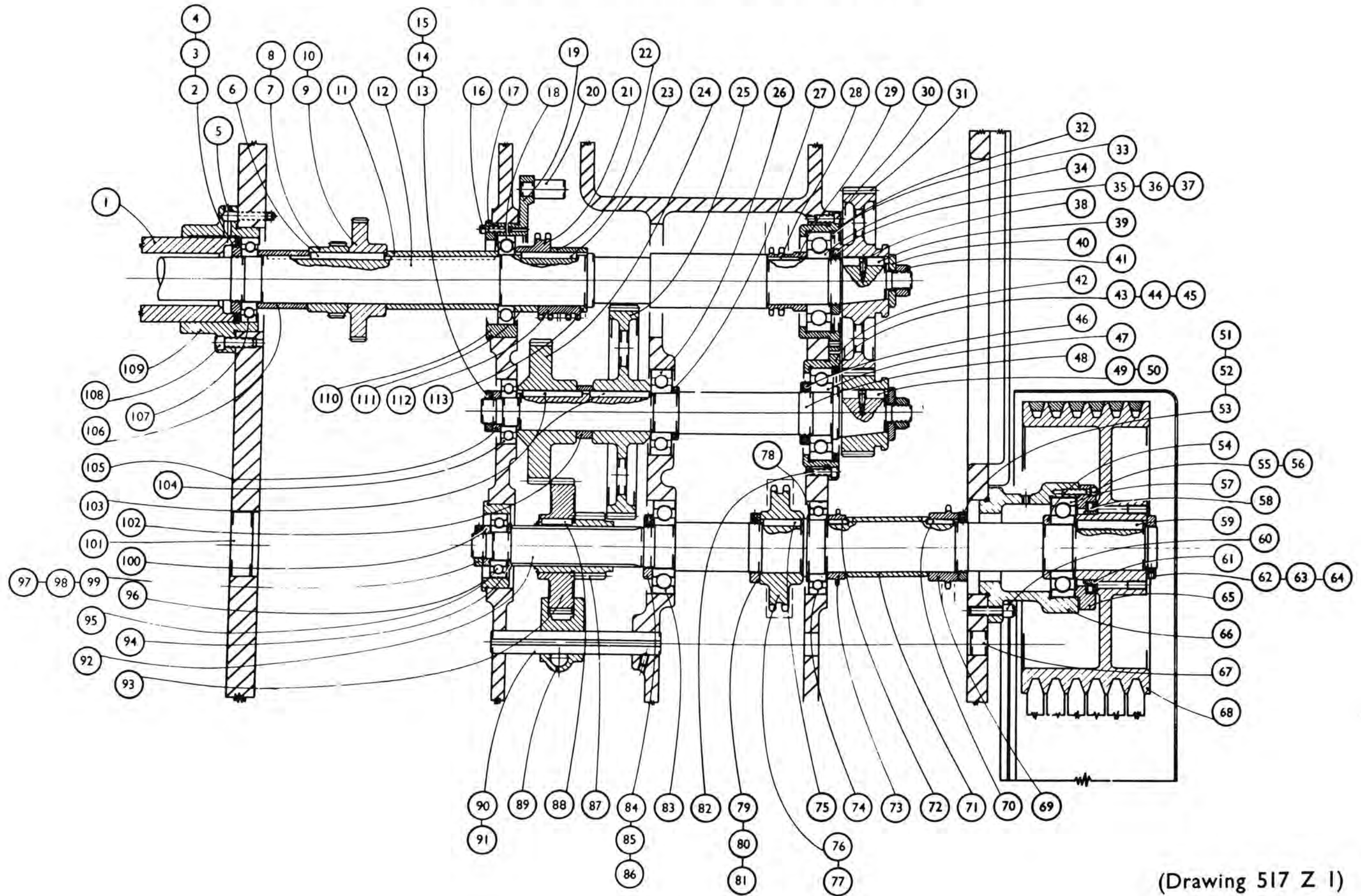


CHAIN DRIVES - DRAWING NO. 517 Z 2A

<u>INDEX NO.</u>	<u>PART NO.</u>	<u>TITLE</u>
1	236/162024	Oil Retaining Bush, 1" bore x 1.1/4" o/d x 1.1/2" long
2	--	Renold 21T 1/2"P. Duplex No. 212609, 1.1/4" bore
3	518X.163	Jockey Eccentric
4	518X.197	Collar for Jockey Sprockets
5	203/12L	3/4" B.S.F. Pinnacle Nut, NT/F.244
6	528X.169	Jockey Sprocket
7	236/162024	Oil Retaining Bush, 1" bore x 1.1/4" o/d x 1.1/2" long
8	203/12L	3/4" B.S.F. Pinnacle Nut, NT/F.244
9	518X.197	Collar for Jockey Sprockets
10	518X.163	Jockey Eccentric
11	154/2	2 B.A. Spring Steel Washer
12	156/208	2 B.A. Socket Head Cap Screw
13	167/0640	3/8" B.S.F. Hexagon Head Set Screw, 2.1/2" long
14	519X.172	Key for Sliding Gear
15	128/6C.	Pad Bush 1" long (Plain Part)
16	128/6T	Pad Bush 1" long (Threaded Part)
17	568X.126	Pump Jockey Pillar
18	568X.125	Pump Jockey Arm
19	568X.127	Washer
20	170/1060	5/8" B.S.F. Hexagon Head Bolt 3.1/2" long
21	518X.162	Jockey Pin
22	236/162018	Oil Retaining Bush, 1" bore x 1.1/4" o/d x 1.1/4" long
23	---	Reynold 19T. 1/2P. No. 212461. 1.1/4" bore

MAIN DRIVE GEARING

2 $\frac{5}{8}$ "-6 Spindle and 3 $\frac{1}{2}$ "-4 Spindle Bar Machines



(Drawing 517 Z I)

MAIN DRIVE GEARING

2⁵/₈"-6 SPINDLE AND 3¹/₂"-4 SPINDLE BAR MACHINES

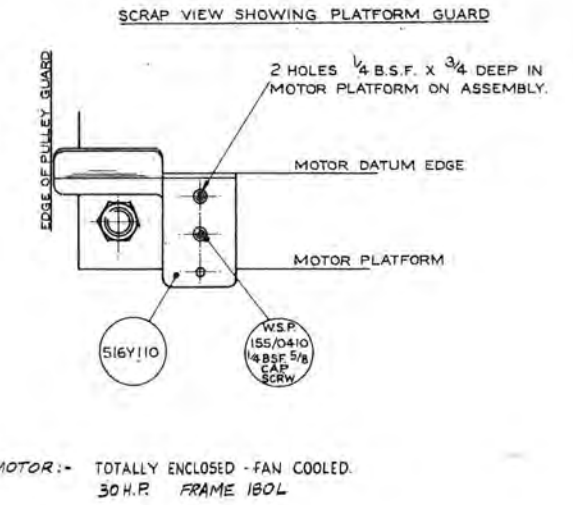
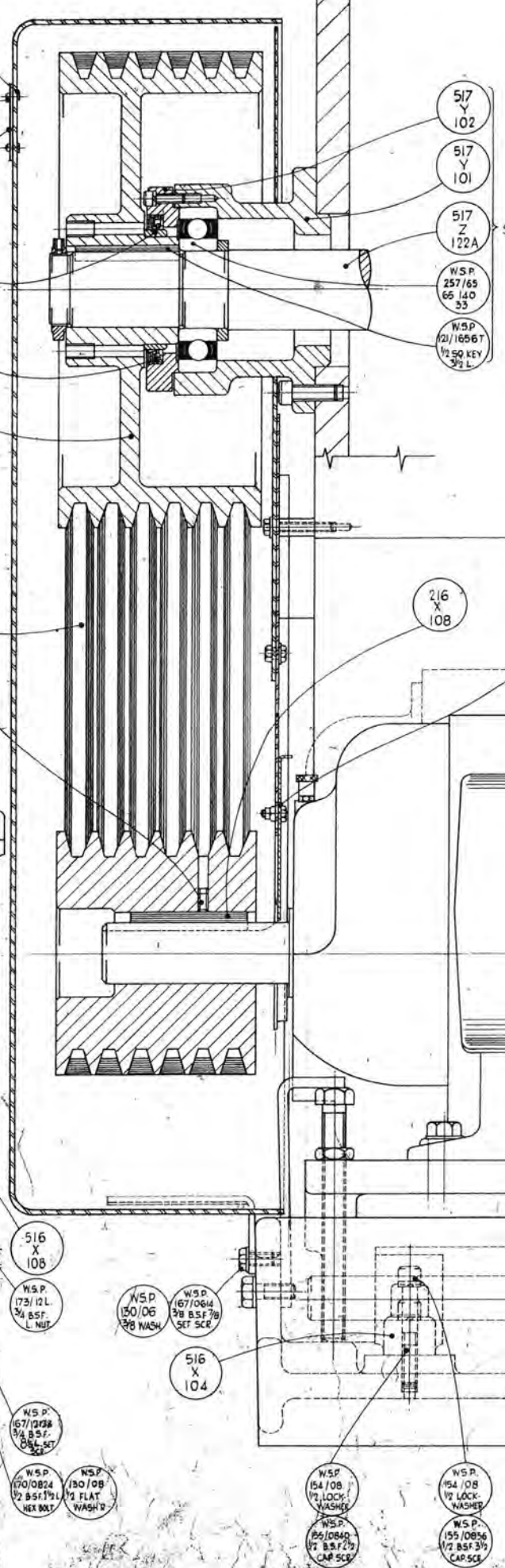
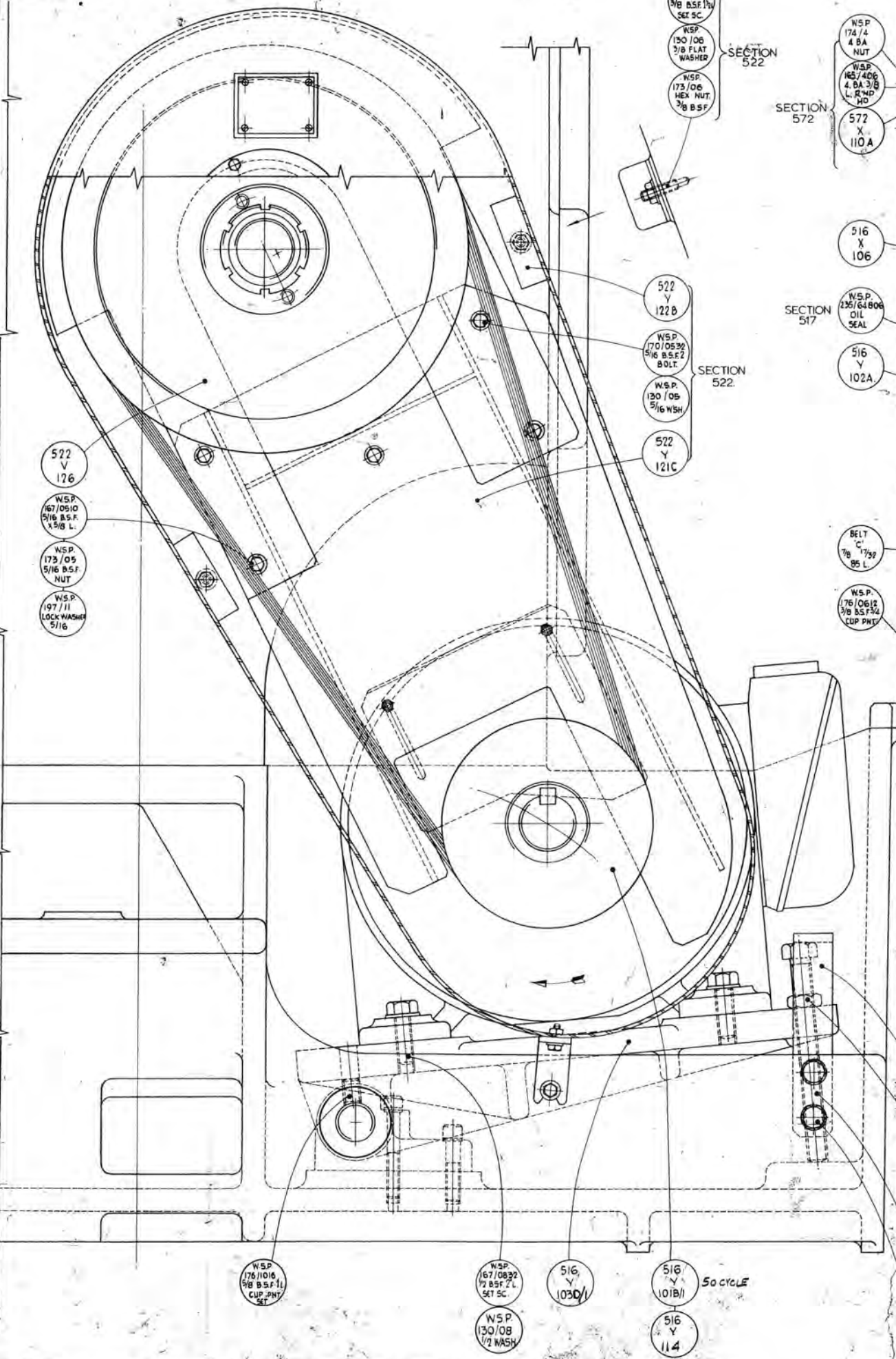
INDEX NO.	PART NO.	TITLE.
1	501Y.108A	Centre Guide.
2	141/65	65 mm Slotted Locknut.
3	153/05	Copper Pad, $\frac{1}{8}$ " long.
4	176/0506	$\frac{5}{16}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{3}{8}$ " long.
5	194/1	$\frac{1}{8}$ " B.S.P. Socket Pipe Plug.
6	517X.182	Key.
7	517X.150	Attachment Drive Gear (32T for 3 $\frac{1}{2}$ "-4).
8	517X.152	Attachment Drive Gear (36T for 2 $\frac{3}{8}$ "-6).
9	517X.149	Attachment Drive Gear (50T for 2 $\frac{3}{8}$ "-6).
10	517X.151	Attachment Drive Gear (46T for 3 $\frac{1}{2}$ "-4).
11	517X.109	Spacer.
12	517Z.128A	Centre Shaft.
13	150/22.	1 $\frac{3}{8}$ " Slotted Locknut.
14	153/04	Copper Pad, $\frac{3}{32}$ " long.
15	176/0405	$\frac{1}{4}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{1}{16}$ " long.
16	155/0520	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long (2 $\frac{5}{8}$ "-6 only).
17	517X.107	Cap (2 $\frac{5}{8}$ "-6 only)
18	258/70	Ball Journal, Light Type, 70×125×24 mm (2 $\frac{5}{8}$ "-6 only).
19	517Y.111	Jackshaft Jockey Carrier (2 $\frac{3}{8}$ "-6 only).
20	518X.162	Jockey Pin (2 $\frac{5}{8}$ "-6 only).
21	517Y.141	Jackshaft Drive Sprocket (2 $\frac{3}{8}$ "-6 only).
22	517X.129	Collar (2 $\frac{3}{8}$ "-6 only).
23	517X.191	Key for 517Y.141.
24	517Y.147	High Range Gear.
25	517Y.148	Low Range Gear.
26	257/55	Ball Journal, Medium Type, 55×120×29 mm
27	517X.126	Collar.
28	517X.190	Key for 517X.139.
29	517X.139	Feed Drive Sprocket.
30	155/0616	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1" long.
31	517Y.159 to 176	Speed Pick Off Gear.
32	517Y.106	Bearing Housing.
33	104/50	140 mm Internal Circlip.
34	257/65	Ball Journal, Medium Type, 65×140×33 mm
35	151/65	65 mm Slotted Locknut.
36	153/05	Copper Pad, $\frac{1}{8}$ " long.
37	176/0506	$\frac{5}{16}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{3}{8}$ " long.
38	155/0410	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{8}$ " long.
39	517X.185	Key.
40	517X.116	"C" Washer.
41	203/16L	1" B.S.F. Pinnacle Nut, NT/F324.
42	517Y.105	Bearing Housing.
43	104/48	130 mm Internal Circlip.
44	153/05	Copper Pad, $\frac{1}{8}$ " long.
45	176/0506	$\frac{5}{16}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{3}{8}$ " long.
46	151/60	60 mm Slotted Locknut.
47	257/60	Ball Journal, Medium Type, 60×130×31 mm
48	517Y.125	Range Gears Shaft.
49	517X.185	Key.
50	155/0410	$\frac{1}{4}$ " B.S.F. Socket Head Cap Screw, $\frac{3}{8}$ " long.
51	176/0506	$\frac{5}{16}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{3}{8}$ " long.
52	150/44	2 $\frac{3}{4}$ " Slotted Locknut.
53	153/05	Copper Pad, $\frac{1}{8}$ " long.
54	517X.123	Collar.
55	155/0520	$\frac{1}{16}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{4}$ " long.
56	154/05	$\frac{1}{16}$ " Spring Washer.

INDEX NO.	PART NO.	TITLE.
57	257/65	Ball Journal, Medium Type, 65×140×33 mm
58	235/64806	Weston Oil Seal 50040050, 4"×5"× $\frac{1}{2}$ " wide.
59	517X.183A	Key.
60	155/0824	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{2}$ " long.
61	516X.106	Oil Seal Ring.
62	150/38	2 $\frac{3}{8}$ " Slotted Locknut.
63	153/05	Copper Pad, $\frac{1}{8}$ " long.
64	176/0506	$\frac{5}{16}$ " B.S.F. Socket Set Screw, Cup Point $\frac{3}{8}$ " long.
65	517Y.102	Pulley Bearing Cap.
66	517Y.101	Driven Pulley Bearing Extension.
67	522X.156	Plug.
68	516Y.102A	Driving Pulley.
69	517X.133	Pump Drive Sprocket.
70	517X.187	Key.
71	517X.103	Spacer.
72	517X.186	Key
73	517X.134	Oil Pump Drive Sprocket.
74	258/75	Ball Journal, light type, 75×130×25 mm
75	517X.188	Key for 517Y.135.
76	517Y.135A	Fast Motion Drive Sprocket (2 $\frac{3}{8}$ "-6 only).
77	517Y.136	Fast Motion Drive Sprocket (3 $\frac{1}{2}$ "-4 only).
78	517X.137	Pulley Shaft Abutment.
79	150/44	2 $\frac{3}{4}$ " Slotted Locknut.
80	153/05	Copper Pad $\frac{1}{8}$ " long.
81	176/0506	$\frac{5}{16}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{3}{8}$ " long.
82	155/0616	$\frac{3}{8}$ " B.S.F. Socket Head Cap Screw, 1" long.
83	257/60	Ball Journal, Medium Type, 60×130×31 mm
84	151/60	60 mm Slotted Locknut.
85	153/05	Copper Pad, $\frac{1}{8}$ " long.
86	176/0506	$\frac{5}{16}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{3}{8}$ " long.
87	517Y.120	Low Range Sliding Pinion.
88	517X.189	Key for 517Y.120
89	519X.115	Glut.
90	519X.165	Glut Shaft.
91	177/0612	$\frac{3}{8}$ " B.S.F. Socket Set Screw, Cone Point, $\frac{1}{2}$ " long.
92	517Z.122A	Pulley Shaft.
93	517Y.146	High Range Sliding Gear.
94	517X.130	Collar.
95	257/40	Ball Journal, Medium Type, 40×90×23 mm
96	517X.104	Bearing Sleeve.
97	176/0405	$\frac{1}{4}$ " B.S.F. Socket Set Screw, Cup Point, $\frac{1}{16}$ " long.
98	153/04	Copper Pad, $\frac{3}{32}$ " long.
99	150/22	1 $\frac{3}{8}$ " Slotted Locknut.
100	517X.124	Collar.
101	522X.154	Plug.
102	517X.127	Collar.
103	517X.184	Key.
104	257/40	Ball Journal, Medium Type, 40×90×23 mm
105	517X.124	Collar.
106	517X.108	Spacer.
107	258/65	Ball Journal, Light Type. 65×120×23 mm
108	155/0824	$\frac{1}{2}$ " B.S.F. Socket Head Cap Screw, 1 $\frac{1}{2}$ " long.
109	517Y.117A	Centre Guide Bearing.
110	517X.143	Bearing Sleeve (3 $\frac{1}{2}$ "-4 only).
111	517X.131	Collar (3 $\frac{1}{2}$ "-4 only)
112	517Y.142	Jackshaft Drive Sprocket (3 $\frac{1}{2}$ "-4 only).
113	517X.132	Collar (3 $\frac{1}{2}$ "-4 only).

List of Parts for

(Drawing No. 517 Z 1)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE



MOTOR:- TOTALLY ENCLOSED - FAN COOLED.
30 H.P. FRAME 180L

SEE MOTOR PLATFORM 516Y 103 D/1 FOR POSITION.

- 522 V 176
- W.S.P. 167/0510 5/16 B.S.F. 4.50 L.
- W.S.P. 173/05 5/16 B.S.F. NUT
- W.S.P. 197/11 LOCK WASHER 5116

- 522 Y 122B
- W.S.P. 170/0530 5/16 B.S.F. 2.0 BOLT
- W.S.P. 130/05 5/16 WASH
- 522 Y 121C

- W.S.P. 176/0624 7/8 B.S.F. 1 1/2 SET SC.
- W.S.P. 150/06 3/8 FLAT WASHED
- W.S.P. 173/05 HEX NUT 3/8 B.S.F.

- SECTION 572
- W.S.P. 174/4 4 BA NUT
- W.S.P. 165/406 4 BA 3/8 L.R.M.P. W.D.
- 572 X 110 A

- SECTION 517
- 516 X 106
- W.S.P. 125/64806 OIL SEAL
- 516 Y 102A

- 517 Y 102
- 517 Y 101
- 517 Z 122A
- SECTION 517
- W.S.P. 257/65 66 1/4 O 33
- W.S.P. 121/16567 1/2 50 KEY 29 L

- BELT C 1739 85 L
- W.S.P. 176/0612 3/8 B.S.F. 1 1/4 CUP PNT

- 216 X 108
- 522 X 193
- W.S.P. 167/0410 1/2 B.S.F. 3/8 LG

- 516 X 108
- W.S.P. 173/12L 3/8 B.S.F. NUT

- W.S.P. 150/06 3/8 WASH
- W.S.P. 167/0614 3/8 B.S.F. 7/8 SET SC.
- 516 X 104

- W.S.P. 157/1238 3/8 B.S.F. 3/4 SET SC.
- W.S.P. 170/0824 1/2 B.S.F. 1 1/4 HEX BOLT
- W.S.P. 130/08 1/2 FLAT WASH 2

- W.S.P. 154/08 1/2 LOCK WASH
- W.S.P. 155/0856 1/2 B.S.F. 3/8 CAP SC.

- W.S.P. 178/1016 3/8 B.S.F. 1 1/2 CUP PNT SET
- W.S.P. 167/0832 1/2 B.S.F. 2 L SET SC.
- W.S.P. 130/08 1/2 WASH
- 516 Y 103 D/1
- 516 Y 101 B/1 50 CYCLE
- 516 Y 114 60 CYCLE

WICKMAN MACHINE TOOL MANUFACTURING Co. Ltd.
COVENTRY ENGLAND.

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MOTOR DRIVE

SCALE HALF FULL SIZE

DRAWN: F.G. 4-B-69
CHECKED: 510 A/13-9-71
TRACED:

MATERIAL: L.O.B.
NO. OF ARRANGEMENT: 510 A/13-9-71
SECTION: MACHINE 5

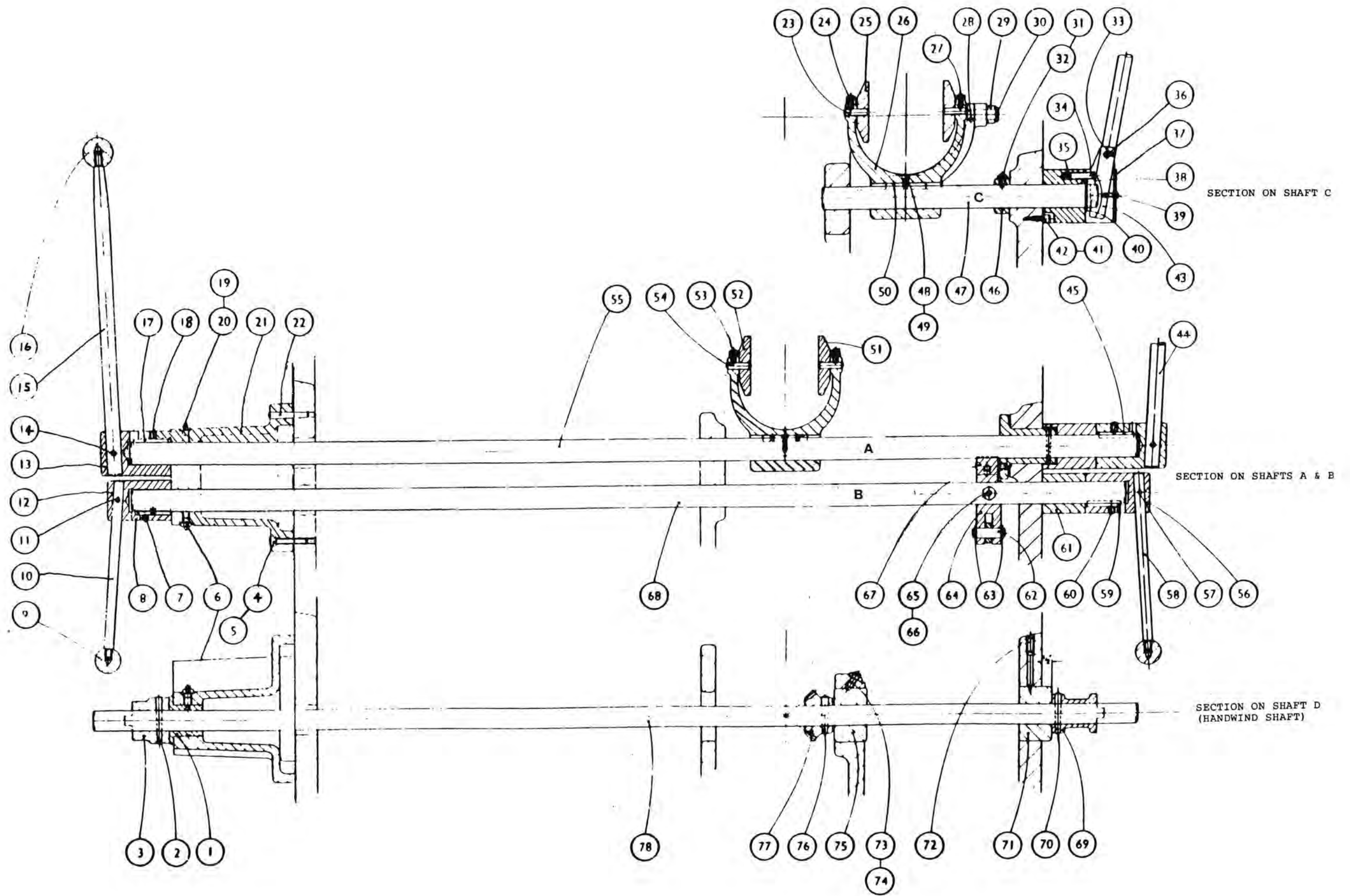
516	1 1/2 - B
516	6 - B
516	9 - 4
516	3 1/2 - 4
516	7 1/2 - 6
516	7 1/2 - 6

D

MOTOR DRIVE - DRAWING NO. 516 Z 1X

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	176/1016	5/8" B.S.F. Hexagon Socket Set Screw, Cup Point 1" long
2	522Y.121A	Belt Guard Backplate
3	130/05	5/16" Washer
4	170/0532	5/16" B.S.F. Hexagon Head Bolt 2" long
5	522/Y.122A	Belt Guard
6	167/0614	3/8" B.S.F. Hexagon Head Set Screw 7/8" long
7	130/06	3/8" Washer
8	174/2	2 B.A. Hexagon Nut
9	165/206	2 B.A. Round Head Set Screw 3/8" long
10	572X.110	Instruction Plate, Belt Pulley Director
11	516X.106	Oil Seal Ring
12	235/64806	Weston 50040050 or Superfed 5004
13	516Y.102A	Driving Pulley
14	-	Fenner Belt C. 7/8" x 17/32" x 85" long
15	176/0612	3/8" B.S.F. Hexagon Socket Set Screw, Cup Point 3/4" long
16	517Y.102	Pulley Bearing Cap
17	517Y.101	Driven Pulley Bearing Extension
18	517Y/122A	Pulley Shaft
19	257/165	Medium Ball Journal, 65 x 140 x 33mm
20	517X.183A	Key
21	--	30 H.P. Brooks Motor
22	--	40 H.P. Brooks Motor
23	516X.105	Shaft for Motor Platform
24	154/08	1/2" Lockwasher
25	155/0840	1/2" B.S.F. Socket Head Cap Screw, 2.1/2" long
26	516X.104	Bracket for Motor Platform
27	154/08	1/2" Lockwasher
28	155/0856	1/2" B.S.F. Socket Head Cap Screw, 3.1/2" long
29	167/0614	3/8" B.S.F. Hexagon Head Set Screw, 7/8" long
30	130/06	3/8" Washer
31	516Y.101	Motor Pulley
32	121/2064	Key, 5/8" square, 4" long
33	516X.108	Platform steady Bracket
34	167/12128	3/4" B.S.F. Hexagon Head Set Screw, 8" long
35	167/1248	3/4" B.S.F. Hexagon Head Set Screw, 3" long
36	130/12	3/4" Washer
37	173/12L	3/4" Hexagon Locknut
38	170/0824	1/2" B.S.F. Hexagon Head Bolt, 1.1/2" long
39	130/08	1/2" Washer
40	516Y.103	Motor Platform

**Refer to drawing
showing all part
numbers**



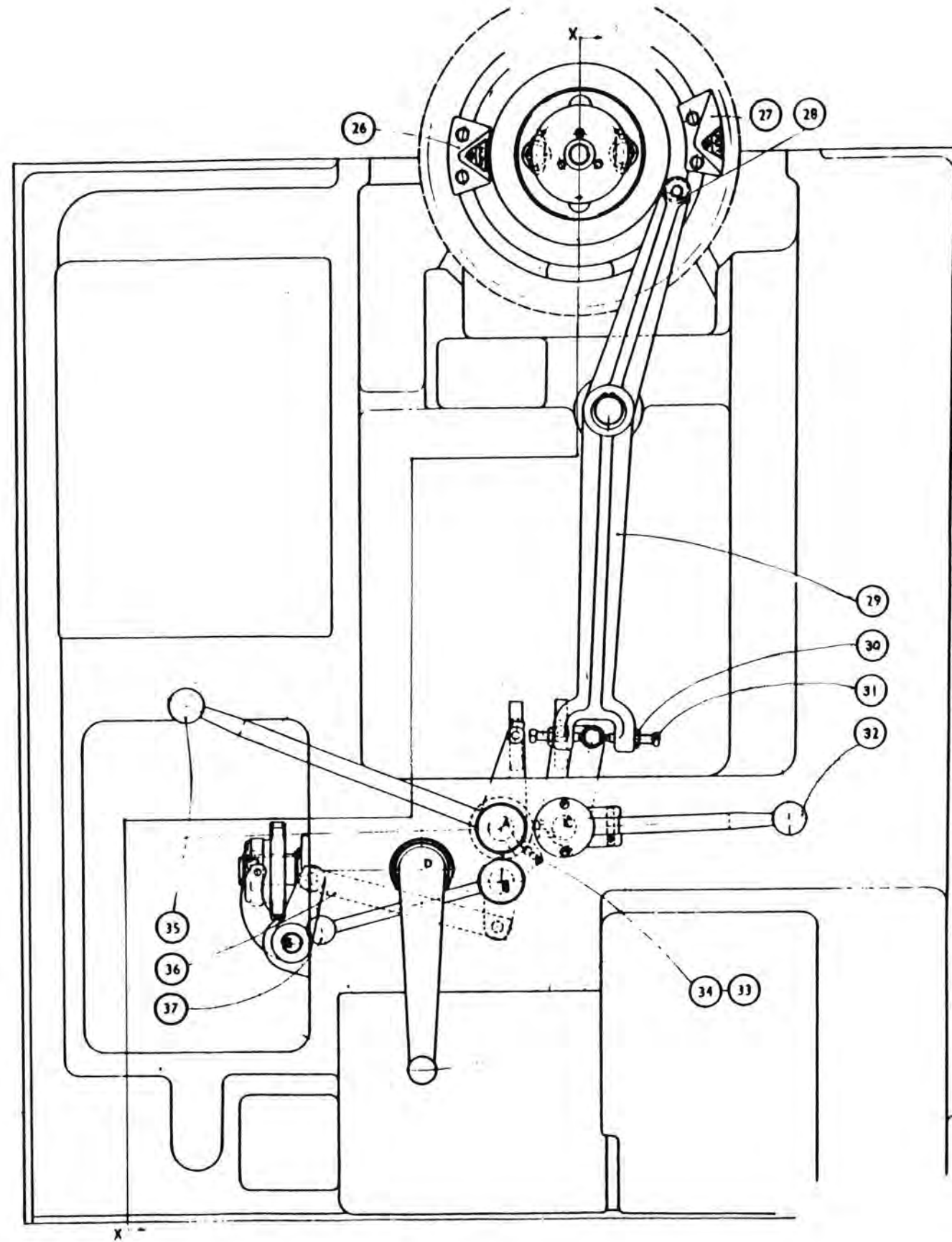
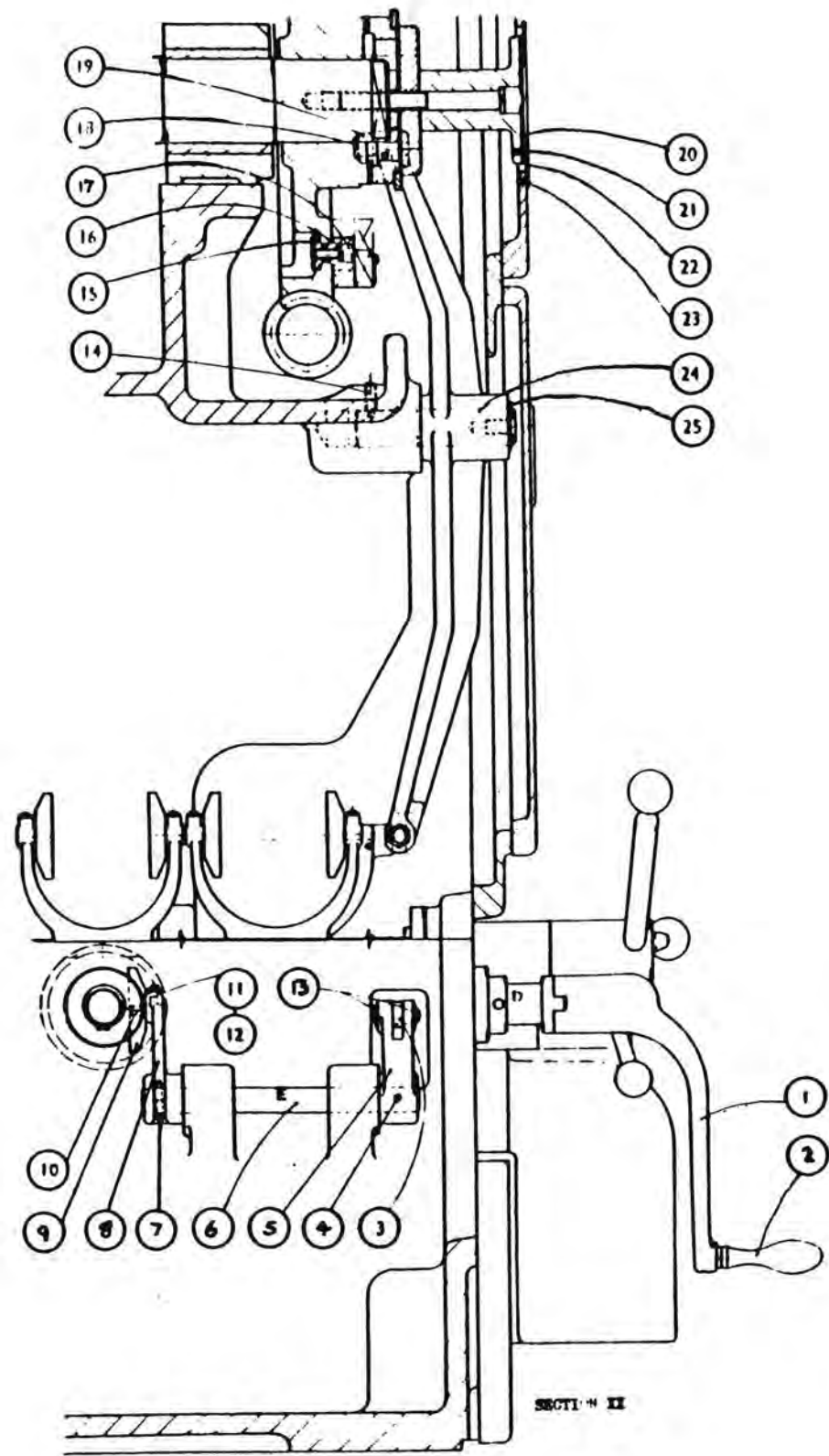
519Z2A

CONTROLS - DRAWING NO. 519 Z 2A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	519X.114A	Handwind Thrust Bearing
2	125/2240	Taper Pin 11/32" dia. 2.1/2" long
3	519X.150A	Handwind Thrust Block
4	155/0524	5/16" B.S.F. Socket Head Cap Screw, 1.1/2" long
5	210/2525	Yellow Washer
6	212/18	1/8" B.S.P. Autolub Nipple
7	176/0505	5/16" B.S.F. Socket Set Screw 5/16" long
8	519X.171	ver Boss Key
9	241/9	1/8" B.S.F. Bakelite Knob 1.1/4" dia.
10	519X.151	Handwind Engage Lever
11	182/0512	5/16" B.S.F. Hexagon Socket Set Screw, taper point 3/4" long
12	519X.180A	Handwide Engage Boss
13	519X.179A	Lever Boss
14	182/0612	3/8" B.S.F. Hexagon Socket Set Screw, taper point 3/4" long
15	519X.146	Feed Lever
16	241/13	1/8" B.S.F. Bakelite Knob 1.1/2" dia.
17	519X.171	Lever Boss Key
18	176/0506	5/16" B.S.F. Socket Set Screw, 3/8" long
19	212/18	1/8" B.S.P. Autolub Nipple
20	210/2525	Yellow Washer
21	519Y.101A	Extension Bracket
22	125/2232	Taper Pin 11/32" dia. 2" long
23	519X.192	Glut Pin
24	176/0410	1/4" B.S.F. Socket Set Screw, cup Point 5/8" long
25	519X.111	Glut
26	519Y.126B	Glut Lever
27	173/04L	1/4" B.S.F. Hexagon Locknut
28	125/1220	Taper Pin 3/16" dia. 1.1/4" long
29	519X.127	Glut Lever Roller
30	519X.128	Glut Lever Roller Pin
31	182/0512	5/16" B.S.F. Hexagon Socket Set Screw, taper point 1/4" long
32	173/05L	5/16" B.S.F. Hexagon Locknut
33	179/204	2 B.A. Socket Set Screw, 1/4" long
34	153X.111	Plunger
35	153X.118A	Plunger Spring
36	519X.186	Pivot Pin
37	519X.185	Cover Plate
38	519X.184A	Fast Motion Lever Boss
39	164/0408	1/4" B.S.F. Round Head Screw, 1/2" long
40	101/13	External Circlip 1.1/8" dia.
41	154/05	5/16" dia. Spring Washer
42	155/0506	5/16" B.S.F. Socket Head Cap Screw 3/8" long
43	519X.160A	Fast Motion Lever
44	519X.146	Feed Lever
45	519X.171	Lever Boss Key
46	519X.162A	Collar
47	519X.161A	Fast Motion Lever Shaft
48	156/208	2 B.A. Socket Head Cap Screw, 1/2" long
49	154/2	2 B.A. Spring Washer
50	519X.172	Key for Sliding Gear
51	173/04L	1/4" B.S.F. Hexagon Locknut

CONTROLS - DRAWING NO. 519 Z 2A

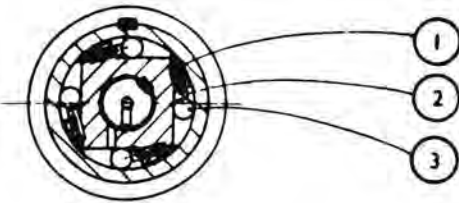
<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
52	519X.111	Glut
53	176/0410	1/4" B.S.F. Hexagon Set Screw, Cup Point 5/8" long
54	519X.192	Glut Pin
55	519X.147A	Feed Lever Shaft
56	519X.180A	Handwind Engage BOSS
57	182/0512	5/16" B.S.F. Hexagon Socket Set Screw, taper point 3/4" long
58	519X.151	Handwind Engage Lever
59	519X.171	Lever Boss Key
60	176/0505	5/16" B.S.F. Socket Set Screw 5/16" long
61	519X.169	Lever Spacer
62	519X.144	Link Pin
63	101/2	External Circlip 1/2" dia.
64	519X.122A	Handwind and Interlock Lever
65	182/0614	3/8" B.S.F. Socket Set Screw, taper point 7/8" long
66	173/06	3/8" B.S.F. Hexagon Nut
67	519X.181B	Interlock Pin
68	519X.152A	Handwind Engage Shaft
69	519X.167	Handwind Drive
70	125/2232	Taper Pin 11/32" dia. 2" long
71	519X.113A	Bush
72	519X.148	Screw
73	182/0616	3/8" B.S.F. Socket Set Screw, Taper Point 1" long
74	173/06L	3/8" B.S.F. Hexagon Locknut
75	519X.113A	Bush
76	125/2232	Taper Pin 11/32" dia. 2" long
77	519X.187A	Handwind Bevel Pinion
78	19X.149A	Handwind Shaft.



CONTROLS - DRAWING NO. 519 & 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	FY.5219A	Lever
2	519X.204	Revolving Handle
3	519X.144	Link Pin
4	125/1628	Taper Pin 1/4" dia. 1.3/4" long
5	519X.123	Lever
6	519X.154	Shaft
7	125/1628	Taper Pin 1/4" dia. 1.3/4" long
8	519X.124	Lever
9	519X.111	Glut
10	519X.192	Glut Pin
11	176/0414	1/4" B.S.F. Socket Set Screw, Cup Point 7/8" long
12	173/04L	1/4" B.S.F. Hexagon Locknut
13	101/2	1/2" dia. External Circlip
14	182/0616	3/8" B.S.F. Socket Set Screw, Taper Point 1" long
15	519X.176A	Outer T-Nut
16	154/06	3/8" dia. Spring Washer
17	155/0616	3/8" B.S.F. Socket Head Cap Screw, 1" long
18	519X.133A	Operating Lever Roller Pin
19	519X.194	Roller
20	572X.158A	Indicator Plate
21	159/406	4 B.A. Socket Countersunk Screw 3/8" long
22	572X.157A	Programme Disc
23	159/406	4 B.A. Socket Countersunk Screw 3/8" long
24	519X.175A	Lever Pivot Pin
25	101/15	1.1/4" dia. External Circlip
26	519X.131A	Feed Motion Cam
27	519X.130A	Fast Motion Cam
28	125/1220	Taper Pin 3/16" dia. 1.1/4" long
29	519Z.119A	Fast Motion Operating Lever
30	173/07L	7/16" B.S.F. Locknut
31	188/0732	2 B.S.F. Square Head Set Screw, 2" long
32	241/13 RED	Bakelite Knob, Red. 1.1/2" dia. 3/8" B.S.F.
33	173/04L	1/4" B.S.F. Hexagon Locknut
34	176/0412	1/4" B.S.F. Hexagon Socket Set Screw 3/4" long
35	241/9	Bakelite Knob, Black 1.1/4" dia. 3/8" B.S.F.
36	519X.153A	Link
37	241/13	Bakelite Knob, Black 1.1/2" dia. 3/8" B.S.F.

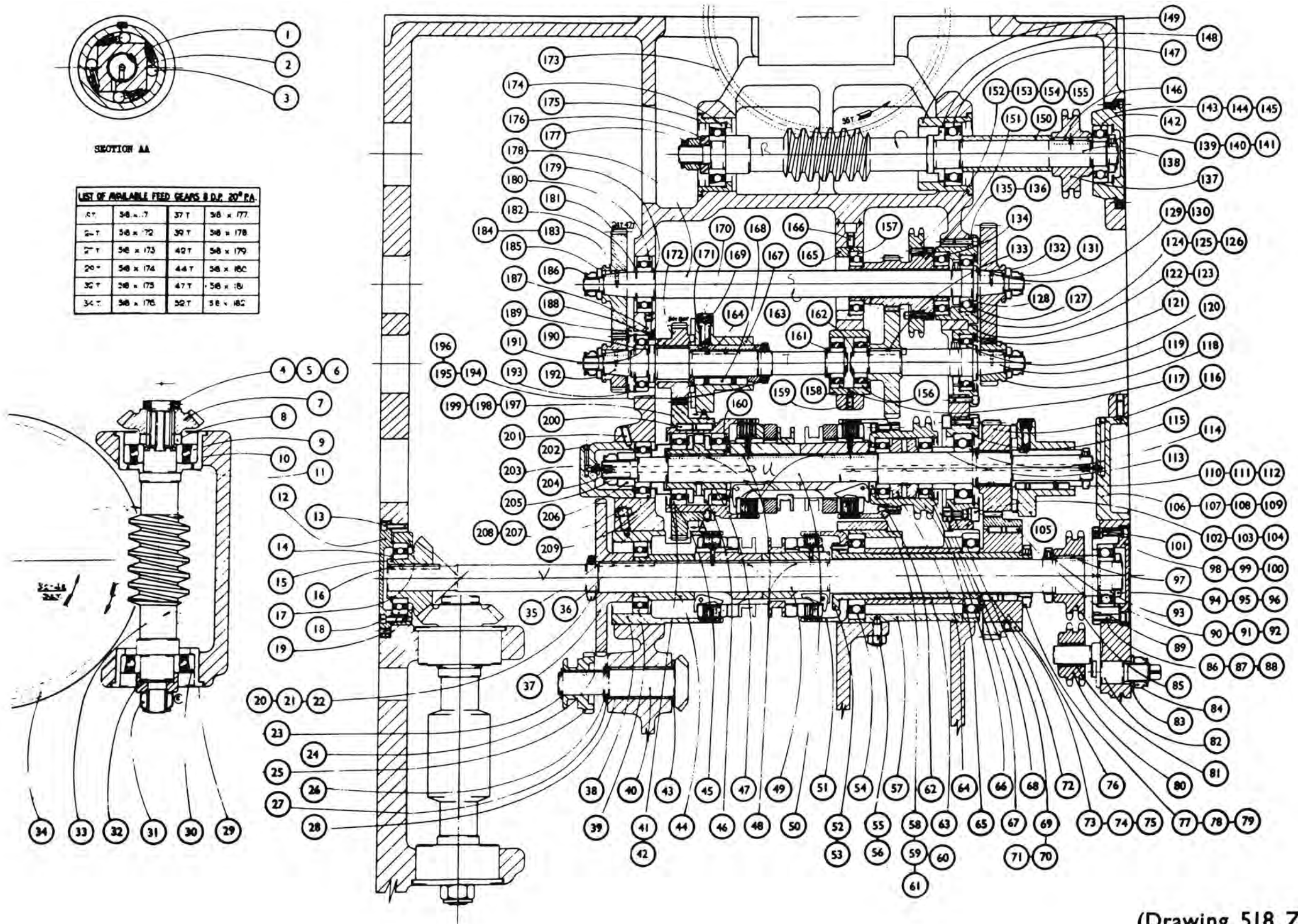
FEED GEARING



SECTION AA

LIST OF AVAILABLE FEED GEARS 8 D.P. 20° PA.

5T	58 x .7	37T	58 x 177
6T	58 x 172	39T	58 x 178
7T	58 x 173	42T	58 x 179
20°	58 x 174	44T	58 x 180
35T	58 x 175	47T	58 x 181
34T	58 x 176	52T	58 x 182



(Drawing 518 Z I A)

FEED GEARING - DRAWING NO., 518 Z 1A

**Refer to drawing
showing all part
numbers**

<u>INDEX NO.</u>	<u>PART NO.</u>	<u>TITLE</u>
1	518X.220	Free Wheel Spring
2	518X.221	Free Wheel Plunger
3	---	5/8" dia. Roller, 5/8" long,
4	150/18	1.1/2" Slotted Locknut
5	176/0405	1/4" B.S.F. Socket Set Screw, Cup Point 5/16" long
6	153/04	Copper Pad 3/32" long
7	518X.196A	Worm Shaft Mitre Wheel
8	518X.157A	Adjusting Washer
9	262/45	Angular Contact Bearing 45 x 100 x 25mm
10	518X.113A	Bearing Housing
11	518X.189	Preload Spacer
12	518X.155A	Bearing Cap
13	155/0516	5/16" B.S.F. Socket Head Cap Screw 1" long
14	103/30	55mm External Circlip
15	518X.194B	Feed Mitre Wheel
16	518X.204	Key
17	518X.111A	Bearing Housing
18	55/0516	5/16" B.S.F. Socket Head Cap Screw 1" long
19	258/55	Light Ball Journal 55 x 100 x 21mm
20	153/04	Copper Pad 3/32" long
21	176/0405	1/4" B.S.F. Socket Set Screw Cup Point, 5/16" long
22	151/40	40mm Slotted Locknut
23	101/15	1.1/4" External Circlip
24	519X.172	Key for Sliding Gear
25	519X.189A	Handwind Sliding Gear
26	101/15	1.1/4" External Circlip
27	519X.182	Washer
28	236/242824	Oil Retaining Bush 1.1/2" bore x 1.1/4" od x 1.1/2" long
29	518X.113A	Bearing Housing
30	262/45	Angular Contact Bearing 45 x 100 x 25mm
31	203/16	1" B.S.F. Pinnacle Nut Type P. NP/F.324
32	518X.159A	Collar
33	518Y.137A	Worm Shaft
34	518Y.124	Worm Wheel
35	518X.218	Spacer
36	518X.204	Key
37	518Y.195A	Handwind Gear
38	518Y.166A	Brake Housing
39	258/55	Light Ball Journal 55 x 100 x 21mm
40	519X.188	Handwind Bevel Gear Shaft
41	518Y.131A	Feed Clutch Cup
42	104/42	100mm Internal Circlip
43	519X.112	Thrust Plate
44	518X.156	Bearing Sleeve
45	258/55Z.	Light Ball Journal 55 x 100 x 21mm. Three Dot Fit
46	518X.133A	Side Plate
47	518X.132A	Free Wheel body
48	518X.204	Key
49	518Y.154A	Final Feed Shaft
50	518Y.151A	Clutch Shaft
51	518X.136	Clutch Cup
52	518Y.152	Driving Sleeve
53	126/1013	5/16" Parallel Pin
54	258/55	Light Ball Journal 55 x 100 x 21mm

FEED GEARING - DRAWING NO. 518 Z 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
55	182/0824	1/2" B.S.F. Socket Set Screw, Taper Point 1.1/2" long
56	173/08	1/2" B.S.F. Hexagon Nut
57	518Y.153	Bearing Sleeve
58	518Y.135A	Fast Motion Clutch Cup
59	154/05	5/16" Spring Washer
60	126/1020	5/16" Parallel Pin 1.1/4" long
61	155/0520	5/16" B.S.F. Socket Head Cap Screw 1.1/4" long
62	518X.109A	Spacer
63	518X.143	Spacer
64	518X.108	Spacer
65	518Y.170A	Fast Motion Sprocket
66	258/45Z	Light Ball Journal 45 x 85 x 19mm. Three Dot Fit.
67	104/39	85mm Internal Circlip
68	518X.213	Locating Clamp Ring
69	518X.107A	Bearing Housing
70	155/0516	5/16" B.S.F. Socket Head Cap Screw 1" long
71	154/05	5/16" Spring Washer
72	518X.205	Key
73	18Y.193A	Gear
74	182/0610	3/8" B.S.F. Socket Set Screw, Taper Point 5/8" long
75	---	Wire Ring
76	518X.164	Gear Centre
77	150/38	5/16" B.S.F. Slotted Locknut
78	176/0506	5/16" B.S.F. Socket Set Screw, Cup Point 3/8" long
79	153/05	5/16" Soft Pad 1/8" long
80	518X.169	Jockey Sprocket
81	236/162024	Oil Retaining Bush 1" bore x 1.1/4" o/d x 1.1/2" long
82	518X.163	Jockey Eccentric
83	518X.197	Collar for Jockey Sprockets
84	203/12L	1/4" B.S.F. Pinnacle Nut NT/F.244
85	518X.167	Upper Drive Sprocket
86	518X.215	Bearing Housing
87	155/0524	5/16" B.S.F. Socket Head Cap Screw 1.1/2" long
88	154/05	5/16" Spring Washer
89	518X.209	Key
90	150/32	5/16" B.S.F. Slotted Locknut
91	176/0506	5/16" B.S.F. Socket Set Screw, Cut Point 3/8" long
92	153/05	5/16" Soft Pad 1/8" long
93	257/40	Medium Ball Journal 40 x 90 x 23mm
94	151/40	40mm Slotted Locknut
95	76/0405	1/4" B.S.F. Socket Set Screw, Cup Point 5/16" long
96	153/04	1/4" Soft Pad 5/32" long
97	518X.206	Key
98	518X.110A	Clamp Plate
99	155/0516	5/16" B.S.F. Socket Head Cap Screw, 1" long.
100	154/05	5/16" Spring Washer
101	518X.214	Clamping Ring
102	518X.212	Clamping Ring
103	155/0516	5/16" B.S.F. Socket Head Cap Screw 1" long
104	154/05	5/16" Spring Washer
105	518Y.127B	Slipping Clutch Body
106	568X.178	Plug

FEED GEARING - DRAWING NO. 518 Z 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
107	168X.160	Oil Bush
108	568X.162	Oil Nipple
109	178/0616	3/8" B.S.F. Socket Set Screw. Half-Dog Point 1" long
110	150/22	1/4" B.S.F. Slotted Locknut
111	176/0405	1/4" B.S.F. Socket Set Screw, Cup Point 5/16" long
112	153/04	1" Soft Pad 5/32" long
113	518X.219	Spacer
114	257/45	Medium Ball Journal 45 x 100 x 25mm
115	104/42	100mm Internal Circlip
116	8X.129B	Drive Member
117	518X.191	Input Driven Gear
118	---	See Table
119	518Y.145	Shaft
120	258/40	Light Ball Journal 40 x 80 x 18mm
121	104/3B	80mm Internal Circlip
122	518X.103	Bearing Housing
123	155/0516	5/16" B.S.F. Socket Head Cap Screw 1" long
124	151/40	40mm Slotted Locknut
125	176/0405	1/4" B.S.F. Socket Set Screw, Cup Point 5/16" long
126	153/04	1/4" Soft Pad 5/32" long
127	104/38	80mm Internal Circlip
128	258/40	Light Ball Journal 40 x 80 x 18mm
129	518X.201	Key
130	159/408	4 B.A. Socket Countersunk Screw 1/2" long
131	NT/F.244	3/4" B.S.F. Pinnacle Nut
132	518X.148	Washer
133	518X.207	Key
134	258/50	Light Ball Journal 50 x 90 x 20mm
135	518X.101	Bearing Housing
136	155/0516	5/16" B.S.F. Socket Head Cap Screw 1" long
137	518X.168	Worm Shaft Sprocket
138	518Y.138A	Worm Shaft
139	150/20	1/4" Slotted Locknut
140	76/0405	1/4" B.S.F. Socket Set Screw, Cup Point 5/16" long
141	153/04	1/4" Soft Pad 3/32" long
142	257/35	Medium Ball Journal 35 x 80 x 21mm
143	518X.116A	Bearing Housing
144	155/0412	1/4" B.S.F. Socket Head Cap Screw 3/4" long
145	154/04	1/4" Spring Washer
146	518X.202	Key
147	262/40	Medium Ball Journal, Angular Contact 40 x 90 x 23mm
148	518X.190	Preload Spacer
149	518X.140	Bearing Housing
150	518X.160A	Spacer
151	518Y.126	Input gear Sleeve
152	518Y.165	Feed Input Sprocket

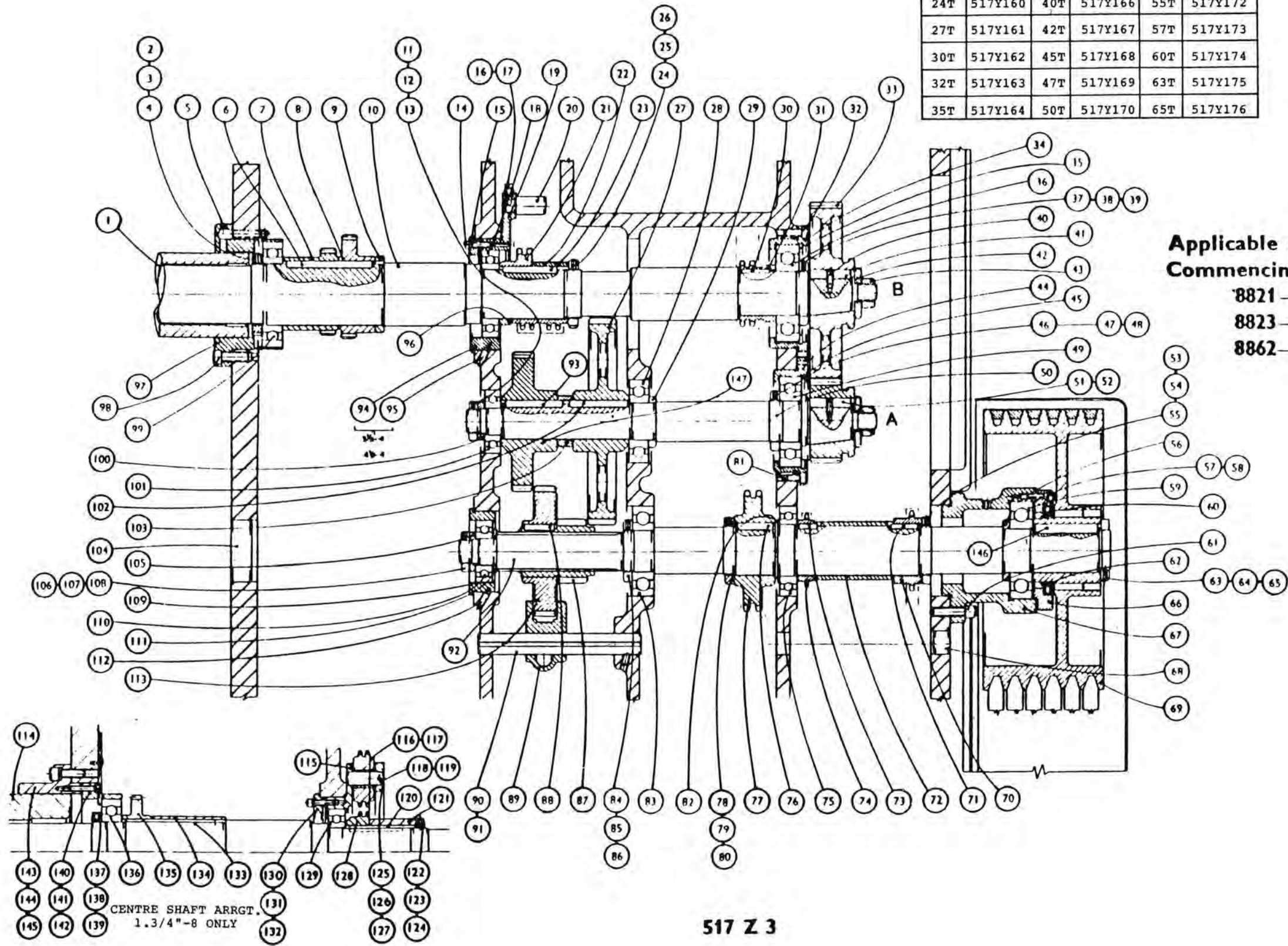
FEED GEARING - DRAWING NO. 518 Z 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
153	155/0520	5/16" B.S.F. Socket Head Cap screw 1.1/4" long
154	154/05	5/16" Spring Washer
155	141/2220	11/32" Extractable Taper Dowel 1.1/4" long
156	257/30	Medium Ball Journal 30 x 72 x 19mm
157	258/50	Light Ball Journal 50 x 90 x 20mm
158	518X.104	Bearing Sleeve
159	182/0612	3/8" B.S.F. Socket Set Screw, Taper Point 3/4" long
160	518X.216	Spacer
161	518X.217	Spacer
162	103/19	30mm External Circlip
163	518X.128A	Keyed Sleeve
164	518X.203A	Key
165	518X.102	Bearing Sleeve
166	82/0612	3/8" B.S.F. Socket Set Screw, 1/4" long
167	518Y.187A	Slipping Clutch Body (Feed Motion)
168	518X.208	Key
169	518X.188	Overload Clutch Spring
170	118X.141	Spring Retaining Plug
171	518X.199A	Plunger
172	518X.130C	Feed Motion Drive Member
173	518Y.125A	Upper Worm Wheel
174	262/40	Medium Ball Journal Angular Contact 40 x 90 x 23mm
175	518X.117A	Bearing Housing
176	518X.161A	Washer
177	NP/F.324	1" B.S.F. Pinnacle Nut
178	518Y.146A	Shaft
179	518X.147A	Spacer
180	257/35	Medium Ball Journal 35 x 80 x 21mm
181	---	See Table
182	103/21	35mm External Circlip
183	518X.201	Key
184	159/408	4 B.A. Socket Countersunk Screw 1/2" long
185	518X.148	Washer
186	NT/F.244	3/4" B.S.F. Pinnacle Nut
187	518X.144A	Locking Pin
188	518X.122A	Bearing
189	518X.106	Bearing Housing
190	103/23	40mm External Circlip
191	258/40	Light Ball Journal 40 x 80 x 18mm
192	51BY.149A	Shaft
193	104/38	80mm Internal Circlip
194	150/22	1.3/8" Slotted Locknut
195	176/0405	1/4" B.S.F. Socket Set Screw, Cup Point 5/16" long
196	153/04	1/4" B.S.F. Soft Pad 5/32" long
197	518Y.192A	Gear
198	182/0610	3/8" B.S.F. Socket Set Screw, Taper Point, 5/8" long
199	---	Wire Ring

FEED GEARING - DRAWING NO. 518 Z 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
200	518X.205	Key
201	182/0616	3/8" B.S.F. Socket Set Screw, Taper Point 1" long
202	568X.161A	Oil Nipple Holder
203	568X.162	Oil Nipple
204	168X.160	Oil Bush
205	NT/F.324	1" B.S.F. Pinnacle Nut
206	518X.142A	Collar
207	182/0824	1/2" B.S.F. Socket Set Screw, Taper Point, 1.1/2" long
208	173/08L	1/2" B.S.F. Hexagon Locknut
209	257/35	Medium Ball Journal 35 x 80 x 21mm.

LIST OF AVAILABLE SPINDLE PICK OFF GEARS					
22T	517Y159	37T	517Y165	52T	517Y171
24T	517Y160	40T	517Y166	55T	517Y172
27T	517Y161	42T	517Y167	57T	517Y173
30T	517Y162	45T	517Y168	60T	517Y174
32T	517Y163	47T	517Y169	63T	517Y175
35T	517Y164	50T	517Y170	65T	517Y176



Applicable to Machines
Commencing M/c. Nos.
8821—2 $\frac{1}{8}$ "-6
8823—3 $\frac{1}{2}$ "-4
8862—1 $\frac{1}{2}$ "-8

517 Z 3

LONGITUDINAL MOTION

2 $\frac{3}{8}$ "-6 SPINDLE AND 3 $\frac{1}{2}$ "-4 SPINDLE BAR MACHINES

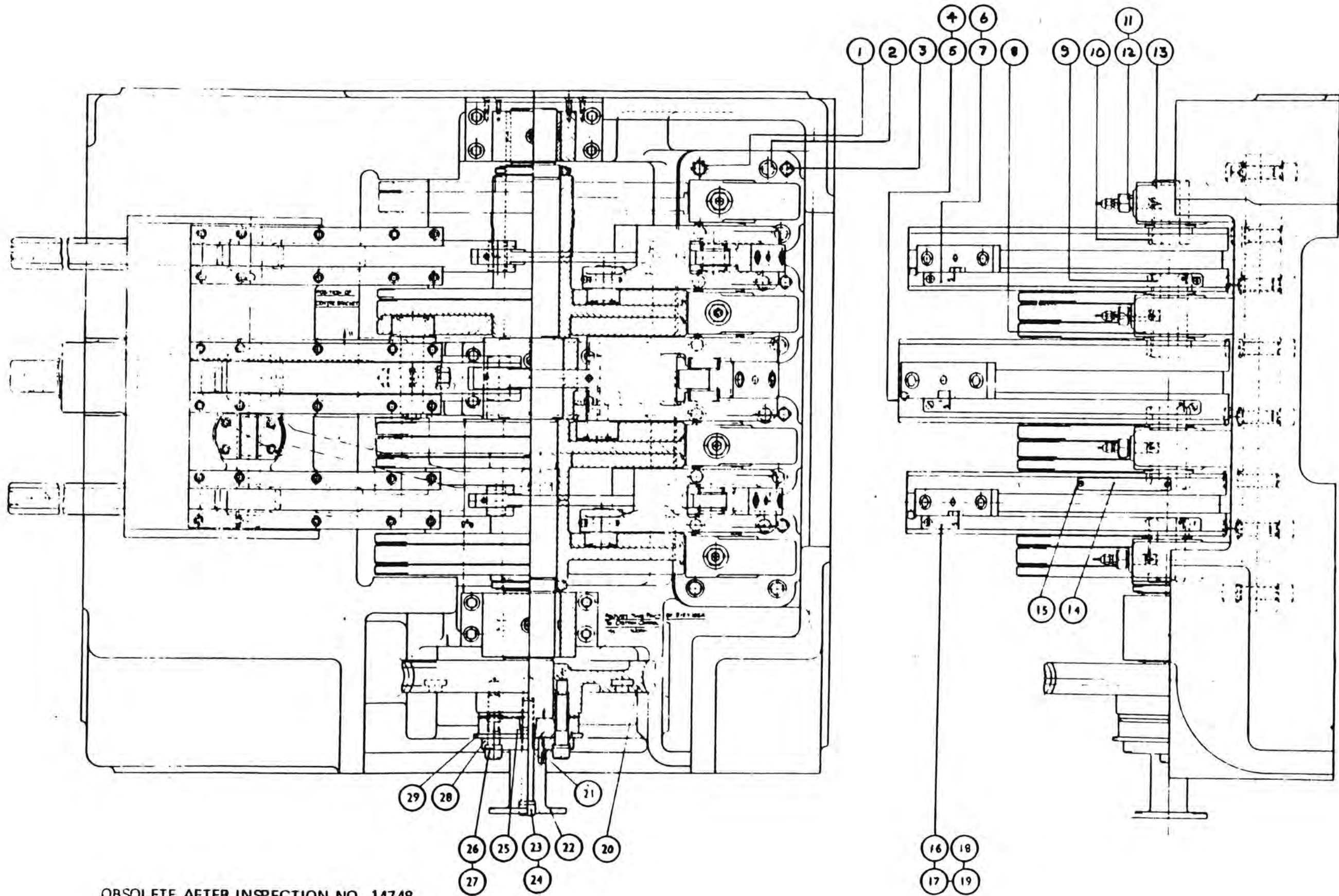
INDEX NO.	PART NO.	TITLE	INDEX NO.	PART NO.	TITLE
1	155/1236	Socket Head Cap Screw, 3/4" B.S.F. x 2.1/4" long	22	520Y141	Coupling Body (Section 520)
2	154/12	Spring Washer, 3/4" dia.	23	523Y124C	Camshaft
3	139/15	Headed Taper Dowel, 1.7/8" long	24	520V142	Clamping Disc (Section 520)
4	523Y105C	Scale for Centre Quadrant, English	25	124/0408	Parallel Dowel, 1/8" dia. x 1/2" long
5	524Y102C	Scale for Quadrant, English	26	195/0512	Clamp Screw, 5/16" B.S.F. x 3/4" long
6	523Y107A	Quadrant Bracket	27	520X143	Clamp
7	523X109	Bearing Pin for Centre Quadrant	28	155/0824	Hexagon Socket Head Cap Screw, 1/2" B.S.F. x 1.1/2" long
8	523X110	Bush for Quadrant	29	155/1088	Hexagon Socket Head Cap Screw, 5/8" B.S.F. x 5.1/2" long (Section 520)
9	154/10	Spring Washer, 5/8" dia.	30	523X165	Key (Section 523)
10	523X108	Special Bolt	31	154/05	Spring Washer, 5/16" dia. (Section 523)
11	524X106	Bearing Pin for Outer Guard	32	155/0514	Hexagon Socket Head Cap Screw, 5/16" B.S.F. x 7/8" long (Section 523)
12	-	Note: Use Quadrant Bearing Pin 524X106 in these Positions when Centre Quadrant Mechanism only is fitted.	33	520V184A	Switch Cam (Section 520)
13	572X118A	Instruction Plate for Scale Reading (3.1/2"-4 Machines Only)	34	181/206	Socket Set Screw, Half-Dog Point, 2 B.A. x 3/8" long (Section 520)
14	165/204	Round Head Screw, 2 B.A. x 1/4" long	35	520V108B	Cam Ring (Section 520)
15	572X121B	Instruction Plate (7.1/4"-6, 9"-4 only)	36	181/206	Socket Set Screw, Half-Dog Point, 2 B.A. x 3/8" long (Section 520)
16	165/204	Round Head Set Screw, 2 B.A. x 1/4" long	37	518Y125B	Upper Wormwheel (Section 518)
17	524Y116	Scale for Independent Quadrant, English (4 Spindle Machines)			
18	524Y102C	Scale for Quadrant, English (6 Spindle Machines)			
19	520X145	Spacer (Section 520A only)			
20	520X144	Spacer (Section 520 only)			
21	181/206	Socket Set Screw, Half-Dog Point, 2 B.A. x 3/8" long (Section 520 only)			

COMMENCING ON INSPECTION NO. 14749

it of Parts for

rawing No. 523 Z 1B)

WHEN ORDERING SPARE PARTS ALWAYS QUOTE THE INSPECTION NUMBER OF THE MACHINE



OBSOLETE AFTER INSPECTION NO. 14748

523Z1A

LONGITUDINAL MOTION - DRAWING NO. 523 Z 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	155/1236	3/4" B.S.F. Socket Head Cap Screw, 2.1/4" long
2	154/12	3/4" Spring Lockwasher
3	139/15	Headed Taper Dowel, 1.7/8" long
4	523Y.106A	Scale for Centre Quadrant, Metric
5	523Y.105A	Scale for Centre Quadrant, English
6	524Y.103A	Scale for Quadrant, Metric
7	524Y.102A	Scale for Quadrant, English
8	523Y.107	Quadrant Bracket
9	523X.109	Bearing Pin for Centre Quadrant
10	523X.110	Bush for Quadrant
11	154/10	5/8" Spring Steel Washer
12	523X.108	Special Bolt
13	524X.106	Bearing Pin for Outer Guard
14	572X.118	Instruction Plate for Scale Reading
15	165/204	2 B.A. Round Head Screw, 1/4" long
16	524Y.102A	Scale for Quadrant, English - 6-Spindle Machine
17	524Y.103A	Scale for Quadrant, Metric - 6-Spindle Machine
18	524Y.116A	Scale for Independent Quadrant, English - 4-Spindle Machine
19	524Y.117A	Scale for Independent Quadrant, Metric - 4-Spindle Machine
20	518Y.125A	Upper Worm Wheel
21	143/1016	5/16" diameter G.P.4. Grooved Dowel 1" long
22	519X.102B	Extension
23	155/1092	5/8" B.S.F. Socket Head Cap screw, 5.3/4" long.
24	154/10	5/8" x 22 T.P.I. Slotted Locknut
25	519Y.106A	Coupling Disc
26	155/1044	5/8" B.S.F. Socket Head Cap Screw, 2.1/2" long
27	154/10	5/8" x 22 T.P.I. Slotted Locknut
28	519X.107	Back Plate
29	520X.108	Cam Ring

DRUM LOCKING OPERATION
SECTION 561
DRG. No. 561Z1

DRUM INDEXING GEARS
2 1/2"-G - SECT 546 - 546Z1 2 1/2"-GD - SECT 549 - 549Z1
3 1/2"-4 & 1 1/2"-B-D - SECTION 547 - 547Z1
1 3/4"-B, SEC 548 - 548Z1

522
Z
102

W.S.P.
155/0610
2 B.S.F.
1 LG

522
Y
135

W.S.P.
30/20
1/2 DIA x 1/4
TAPER
PIN

522
A
125A

CAMSHAFT
SECTION 544
DRG. No. 544Z1

522
Z
103

DRUM LOCKING
SECTION 561
DRG. No. 561Z1

BAR FEED
SECTION 558
2 1/2"-G & 2 1/2"-GD
1 1/2"-B & 1 1/2"-B-D 558Z1, 3 1/2"-4 - 558Z2

522
X
124

W.S.P.
155/0610
2 B.S.F.
1 LG

W.S.P.
155/0610
1/2 DIA.
SPRING
WASHER

W.S.P.
30/20
1/2 x 1/4
TAPER
PIN

522
Y
123A

COLLET OPERATION
2 1/2"-G & 1 1/2"-B - SECT 556 - 556Z1
3 1/2"-4 - SECT 557 - 557Z1
2 1/2"-GD & 1 1/2"-B-D - SEC 556A - 556AZ1

INDEX CLUTCH OPERATION
SECTION 545
DRG. No. 545Z1

522
Z
101

REVISIONS
SUPERSEDES
SUPERSEDED BY
SCALE RATINGS
A 500A 402 BTR 1.3 GO

M.I.D. & Co. 1752
REMOVE ALL SHARP
CORNERS UNLESS
OTHERWISE STATED

TOLERANCE OF
FINISHING DIMENSIONS
± 0.01 UNLESS
OTHERWISE STATED

AMERICAN
PRODUCTION

NO. OF
PARTS
SECTION
MACHINE
52274



MACHINE TOOL DIVISION
COVENTRY - ENGLAND

COPYRIGHT

DESCRIPTION

PLAN OF SECTIONS BEYOND DRUM HOUSING

SCALE
HALF
SIZE

DRAWN BY
CHECKED BY
TRACED BY
DATE

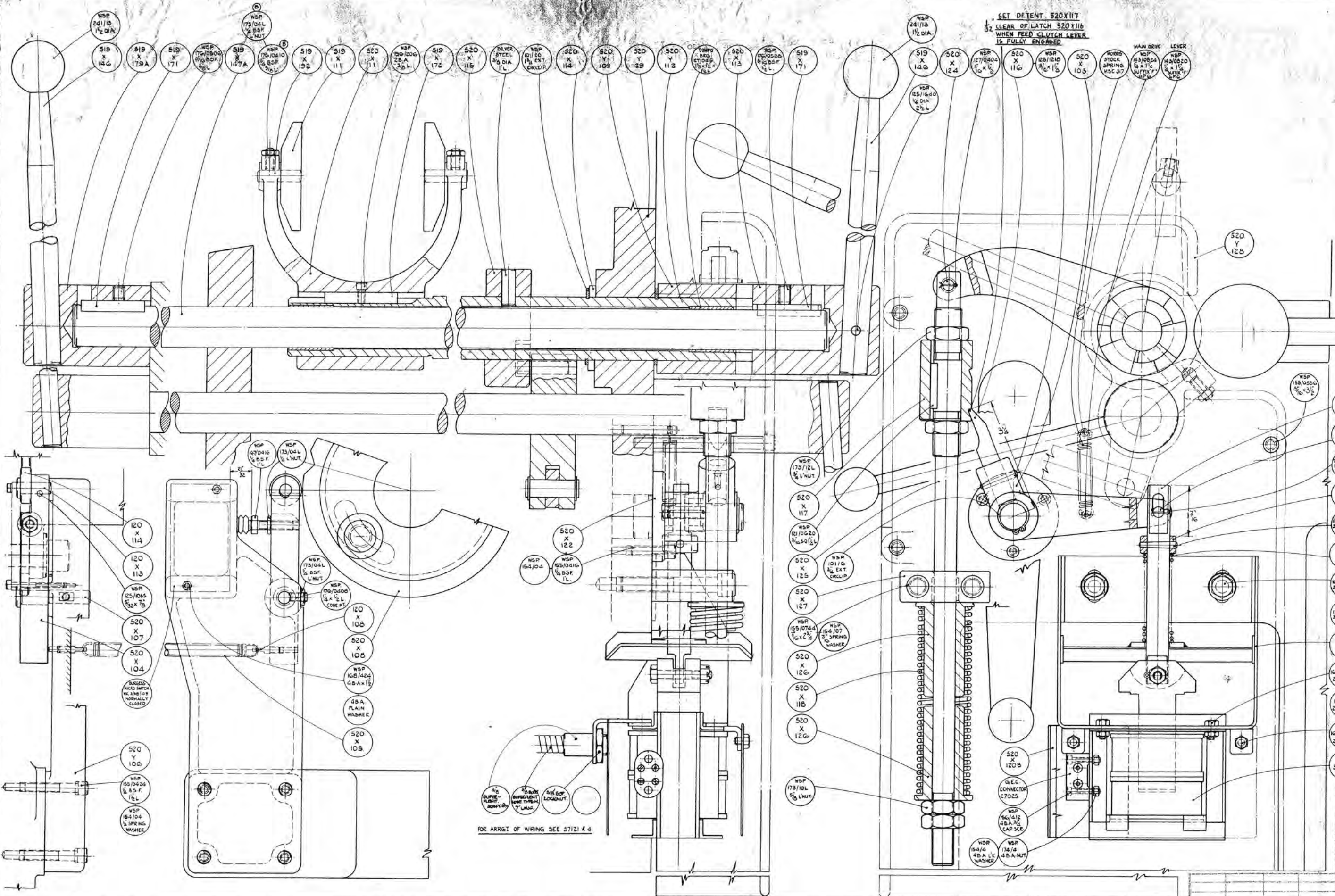
NO. OF PARTS
SECTION
MACHINE

52274

PLAN OF REAR SECTIONS - DRAWING NO. 522 Z 4

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	522Y.123	Front Tie Rod
2	139/29	Headed Extractable Taper Dowel 4.3/8" long
3	522X.125	Rear Tie Rod
4	139/29	Headed Extractable Taper Dowel 4.3/8" long
5	522Y.133	Pinion Cover
6	155/0616	3/8" B.S.F. Socket Head Cap Screw, 1" long
7	522Z.102	Stock Carriage Indexing Brzcket
8	522Z.103	Indexing Gear Bracket
9	522X.124	Clamp Plate
10	155/0824	1/2" B.S.F. Socket Head Cap Screw, 1.1/2" long
11	154/08	1/2" Spring Steel Washer
12	522Z.101	Drum Housing

**Refer to drawing
showing all part
numbers**



SET DETENT 520X117
 1/2 CLEAR OF LATCH 520Y116
 WHEN FEED CLUTCH LEVER
 IS FULLY ENGAGED

FIRST USED ON DRAWING 1031.
 LAST USED ON BATCH
 SUPERSEDES 520Z1 AFTER 916.
 SUPERSEDED BY
 ALTERATIONS
 ISSUE 6675 453-4

FOR ARRGT OF WIRING SEE 57121 & 4

REMOVE ALL SHARP CORNERS, UNLESS OTHERWISE STATED.
 TOLERANCE ON MACHINING DIMENSIONS ±.010" UNLESS OTHERWISE STATED.
 AMERICAN PROJECTION
 F - ROUGH
 FF - FINISH MACHINE
 FFF - GRIND TOP EQUIVALENT
 MARK DRG. NO. AT

Wickman MACHINE TOOL DIVISION
 COVENTRY, ENGLAND.

DESCRIPTION
AUTOMATIC STOP

SCALE FULL SIZE
 DRAWN D.C.F. 3-7-50
 CHECKED J.H. 2-11-52
 PARTS LIST 520L1/2/3/4/5
 NO. OFF. ARRANGEMENT DRG. NO. SECTION MACHINE

DRG. NO.
520Z1A.

SECTION FIVE, PARTS LISTS AND GENERAL ARRANGEMENTS.

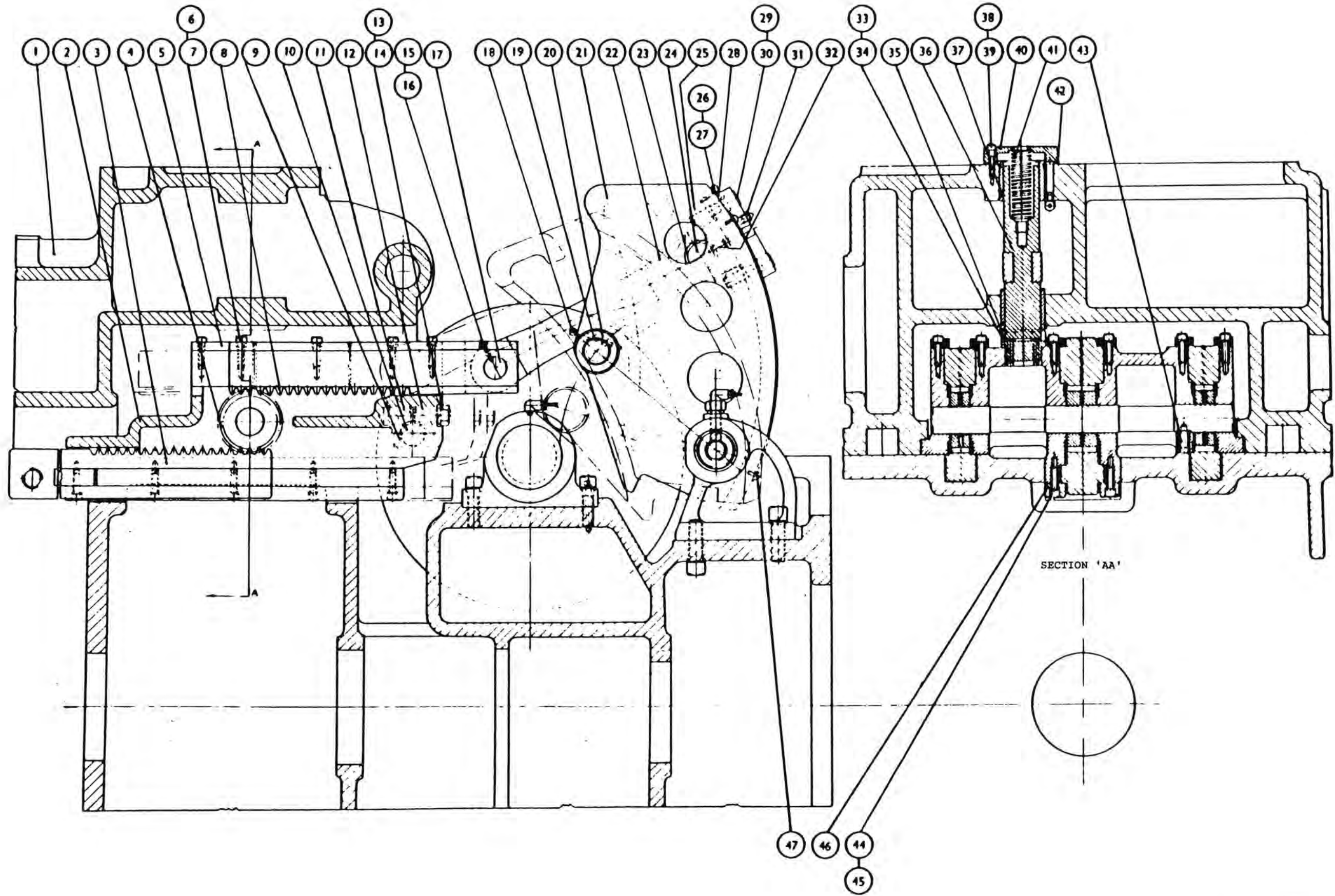
AUTOMATIC STOP - DRAWING NO. 520 Z 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	241/13	3/8" B.S.F. Bakelite Knob, 1.1
2	519X.146	Feed Lever
3	519X.179A	Lever Boss
4	519X.171	Lever Boss Key
5	176/0506	5/16" B.S.F. Socket Set Screw,
6	519X.147A	Feed Lever Shaft
7	173/04L	1/4" B.S.F. Hexagon Locknut
8	176/0410	1/4" B.S.F. Socket Set Screw,
9	519X.192	Glut Pin
10	519X.111	Glut
11	520X.111	Glut Lever
12	156/206	2 B.A. Socket Cap Screw 3/8" long
13	519X.172	Key for Sliding Gear
14	520X.115	Interlock
15	173/08L	1/2" B.S.F. Hexagon Locknut
16	182/0824	1/2" B.S.F. Socket Set Screw, Taper Point 1.1/2" lg
17	101/20	1.3/4" dia. External Seeger Circlip
18	520X.114	Spacer
19	520Y.101	Spring Lever
20	522Z.105	Main Drive Housing
21	520Y.112	Glut Sleeve Lever
22	--	"Compo" Bearing CT.045. 1.1/8" x 1.1/4" x 1.1/4" lg
23	520X.113	Lever Boss
24	176/0508	5/16" B.S.F. Socket Set Screw, COne Point 1/2" long
25	519X.171	Lever Boss Key
26	241/13	3/8" B.S.F. Bakelite Knob
27	X.146	Feed Lever
28	182/0612	3/8" B.S.F. Socket Set Screw, Taper Point 3/4" long
29	520X.124	Link Pin
30	127/0404	3/16" dia. Split Cotter Pin, 1/2" long
31	520X.116	Trip Latch
32	125/1218	3/16" dia. Taper Pin, 1.1/8" long
33	520X.103	Trip Lever
34	MSE.317	Morris Stock Spring
35	143/0824	1/4" dia. Mill's Grooved Pin, 1.1/2" long
36	143/0820	1/4" dia. Mill's Grooved Pin, 1.1/4" long
37	520Y.128	Automatic Stop Cover
38	520X.109	Solenoid Link
39	155/0556	5/16" B.S.F. Socket Cap Screw, 3.1/2" long
40	520X.124	Link Pin
41	127/0404	1/16" dia. Split Cotter Pin, 1/2" long
42	520X.110	Spring Collar
43	125/1218	3/16" dia. Taper Pin, 1.1/8" long
44	520X.119	Solenoid Spring
45	167/0614	3/8" B.S.F. Hexagon Head Set Screw, 7/8" long
46	130/06	3/8" dia. Plain Washer
47	520Y.102A	Solenoid Mounting
48	167/0408	1/4" B.S.F. Hexagon Head Set Screw, 1/2" long
49	0/04	1/4" dia. Plain Washer
50	173/04L	1/4" B.S.F. Hexagon Locknut
51	168/206	2 B.A. Hexagon Head Set Screw 3/8" long.

Refer to drawing
showing all part
numbers

AUTOMATIC STOP - DRAWING NO. 520 Z 1A

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
52	FX.5416A/2	Solenoid
53	520X.120B	Solenoid Cover
54	--	G.E.C. Connector C.7025
55	156/412	4 B.A. Socket Head Cap Screw, 3/4" long
56	174/4	4 B.A. Hexagon Nut
57	154/4	4 B.A. Spring Steel Washer
58	173/10L	5/8" B.S.F. Hexagon Locknut
59	520X.126	Spring Seat
60	520X.118A	Clutch Operating Sleeve
61	20X.126	Spring Seat
62	155/0744	7/16" B.S.F. Socket Cap Screw, 2.1/4" long
63	154/07	7/16" dia. Spring Washer
64	520X.127	Spring Thrust Block
65	520X.125	Spring Rod
66	101/6	3/4" dia. External Seeger Circlip
67	121/0620	Key, 3/16" square, 1.1/4" long
68	520X.117	Latch Sleeve
69	173/12L	3/4" B.S.F. Hexagon Locknut
70	520X.122	Trip Lever Pivot
71	155/0416	1/4" B.S.F. Socket Cap Screw, 1" long
72	154/04	1/4" dia. Spring Washer
73	173/04L	1/4" B.S.F. Hexagon Locknut
74	167/0416	1/4" B.S.F. Hexagon Head Set Screw, 3/8" long
75	173/04L	1/4" B.S.F. Hexagon Locknut
76	176/0408	1/4" B.S.S. Socket Set Screw, Cone Point, 1/2" long
77	120X.108	Spring Anchor
78	520X.108	Cam Ring
79	168/424	4 B.A. Hexagon Head Set Screw, 1.1/2" long
80	154/4	4 B.A. Plain Washer
81	520X.105	Switch Lever Spring
82	154/04	1/4" dia. Spring Washer
83	155/0424	1/4" B.S.F. Socket Cap Screw 1.1/2" long
84	520Y.106	Switch Bracket
85	--	Burgess Micro Switch Mk.3/M.S./109 (normally closed)
86	520X.104	Switch Lever
87	520X.107	Pivot Pin
88	125/1014	5/32" dia. Taper Pin, 3/8" long
89	120X.113	Roller Pin
90	120X.114	Roller



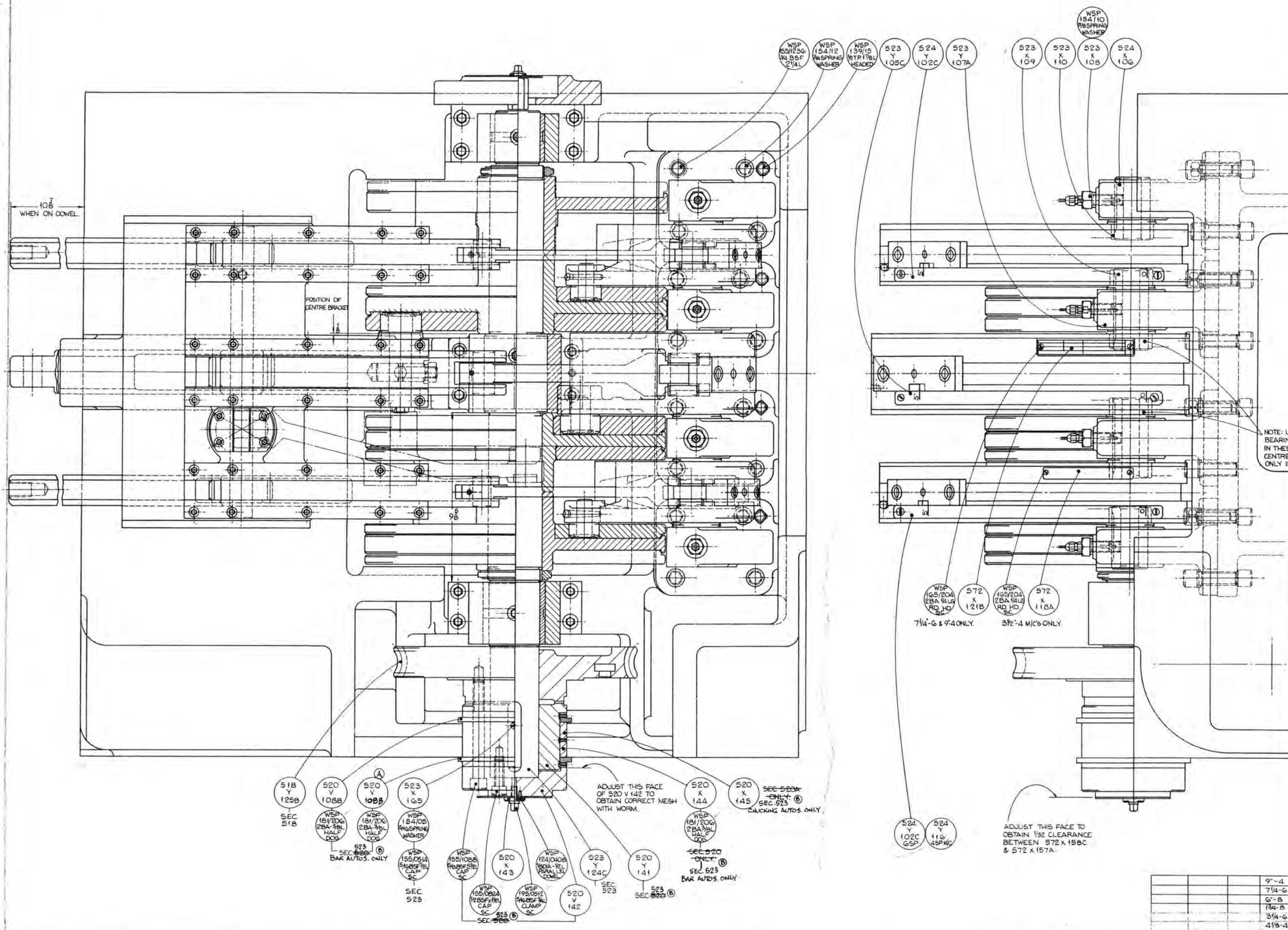
523Z2

LONGITUDINAL MOTION, CENTRE QUADRANT - DRAWING NO. 523 Z 2

<u>INDEX</u> <u>NO.</u>	<u>PART</u> <u>NO.</u>	<u>TITLE</u>
1	522Z.104	Beam
2	523Z.101	Sliding Block
3	523Y.120	Bottom Rack
4	423X.122	Centre Pinion
5	523X.150	Guide Strips
6	154/06	3/8" diameter Spring Washer
7	155/0620	3/8" B.S.F. Socket Head Cap screw, 1.1/4" long
8	523Y.119	Top Centre Rack
9	523X.146	Roller for Sliding Block
10	523X.145	Eccentric Pin for Sliding Block Roller
11	523X.148A	Lockbolt
12	523X.147A	Lockbolt Bush
13	154/10	5/8" diameter Spring Washer
14	173/10	5/8" B.S.F. Hexagon Nut
15	182/0416	1/4" B.S.F. Socket Set Screw, Taper Point, 1" long
16	73/04L	1/4" B.S.F. Locknut
17	523X.118	Centre Rack Pin (Upper Rack)
18	139/11	Lead Taper Dowel, 2.1/8" long
19	523.103	Roller Pin for Centre Quadrant
20	523X.104	Roller for Centre Quadrant
21	523Z.102	Centre Quadrant
22	523Y.116	Centre Quadrant Link
23	523X.115	Link Bush
24	523X.114	Pin for Link
25	523X.113	Locking Pad for Centre Quadrant
26	154/04	1/4" diameter Spring Washer
27	155/0408	1/4" B.S.F. Socket Head Cap Screw, 1/2" long
28	523Y.111	Stroke Adjusting Block
29	154/06	3/8" diameter Spring Washer
30	155/1036	5/8" B.S.F. Socket Head Cap Screw, 2.1/4" long
31	212/18	1/8" B.S.P. Grease Nipple
32	182/0616	1/8" B.S.F. Socket Set Screw, Taper Point 1" long
33	154/06	3/8" diameter Spring Washer
34	155/0620	3/8" B.S.F. Socket Head Cap Screw, 1.1/4" long
35	523X.141	Locator for Sliding Block
36	523X.140	Lockbolt
37	523X.143	Bush for Lockbolt
38	154/05	5/16" Spring Washer
39	155/0528	5/16" B.S.F. Socket Head Cap Screw, 1.1/4" long
40	523X.144A	Spring Cap for Lockbolt
41	523X.142	Spring for Lockbolt
42	523X.160	Gasket
43	182/0820	1/2" B.S.F. Socket Set Screw, Taper Point 1.1/4" long
44	620	3/8" B.S.F. Socket Head Cap Screw, 1.1/4" long
45	154/06	3/8" Spring Washer
46	523X.151	Guide Strip - Lower
47	164/0408	1/4" B.S.F. Round Head Set Screw, 1/2" long

ALTERATIONS

ISSUED/FILMED	500 A 591
RER	18-6-70.
A	500 A 603 RER 26-3-73.
B	500 A 653 Jc. Nov. 73.



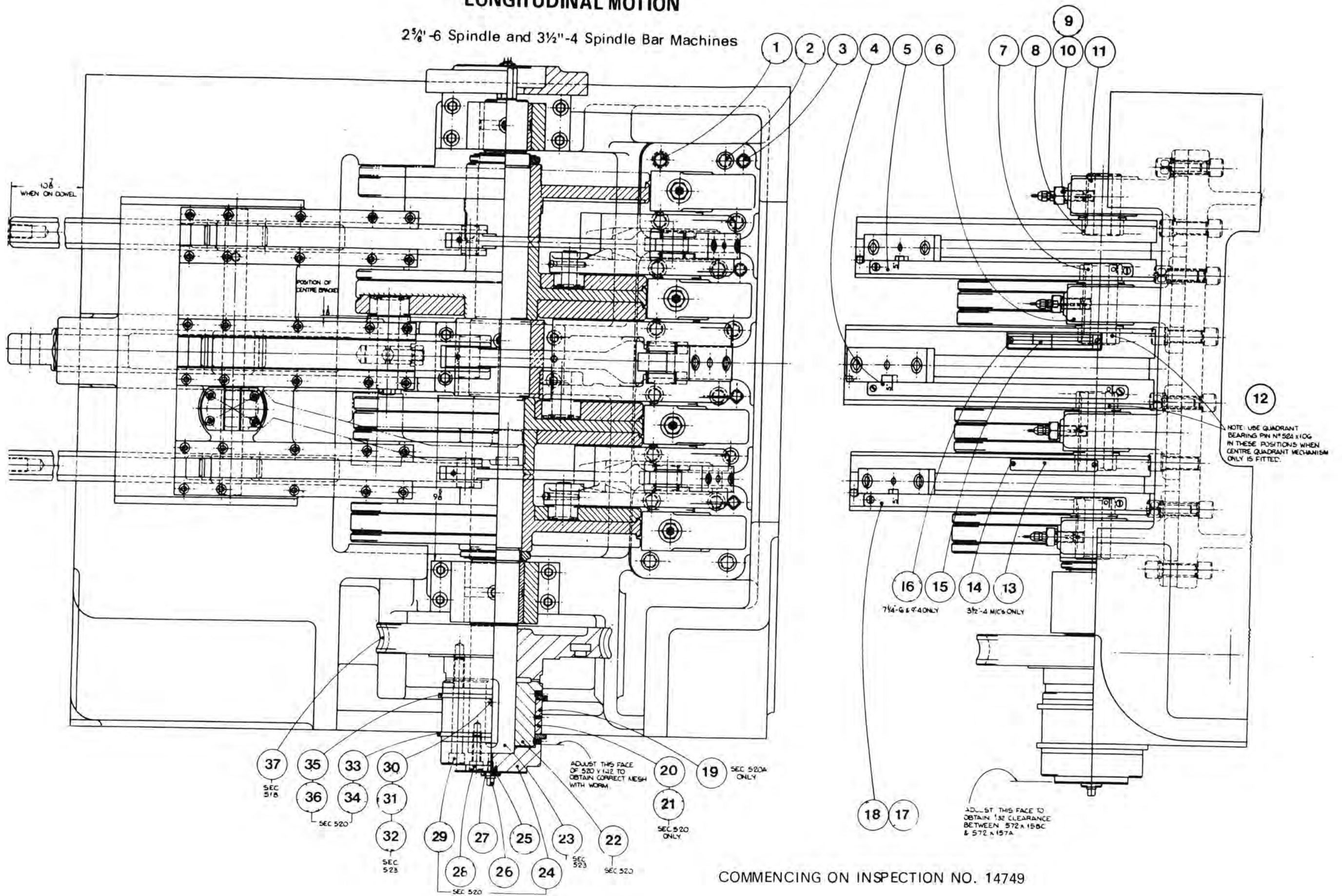
NOTE: USE QUADRANT BEARING PIN N° 524 X 106 IN THESE POSITIONS WHEN CENTRE QUADRANT MECHANISM ONLY IS FITTED.

PROJECTION

9"-4
7 1/4-G
6-B
134-B
3/4-G
4/8-4
3/2-4
258-G

LONGITUDINAL MOTION

2 5/8" - 6 Spindle and 3 1/2" - 4 Spindle Bar Machines



COMMENCING ON INSPECTION NO. 14749

LONGITUDINAL MOTION

(Drawing 523 Z 1B)