

MYFORD SUPER 7 3½" CENTRE LATHE

IMPORTANT. The clutch lever must be moved to the "engaged" or gripping position before any attempt is made to adjust the push-rod.

To increase the grip of the clutch. Remove the screwed plug (7) and rotate the countershaft until the adjusting screw (5) coincides with the access hole.

Remove locking screw (6).

Rotate adjusting screw (5) in a clockwise direction to thrust down on the actuating shaft (4).

Replace locking screw (6) and test the clutch under load.

If the grip is insufficient, increase the pressure of adjusting screw (5).

Replace locking screw (6) and screwed plug (7).

Tumbler Reverse

The Tumbler Reverse or Leadscrew Reverse gear, provides a quick means of changing the rotation of the leadscrew drive to reverse the direction of travel of the lathe carriage. The central lever position is neutral and disengages the leadscrew drive.

Reference to Fig. 36 will show that the tumbler reverse assembly is supported on the headstock by a long swivel pin (1) which is a press fit in the tumbler reverse lever (2). The assembly is retained in position by the thrust screw (3) which draws the tumbler reverse lever back against the pivot boss facing on the headstock.

NOTE. It is important that the thrust screw (3) be set with light pressure only. Heavy pressure may extract the swivel pin (1) from its position in the tumbler reverse lever.

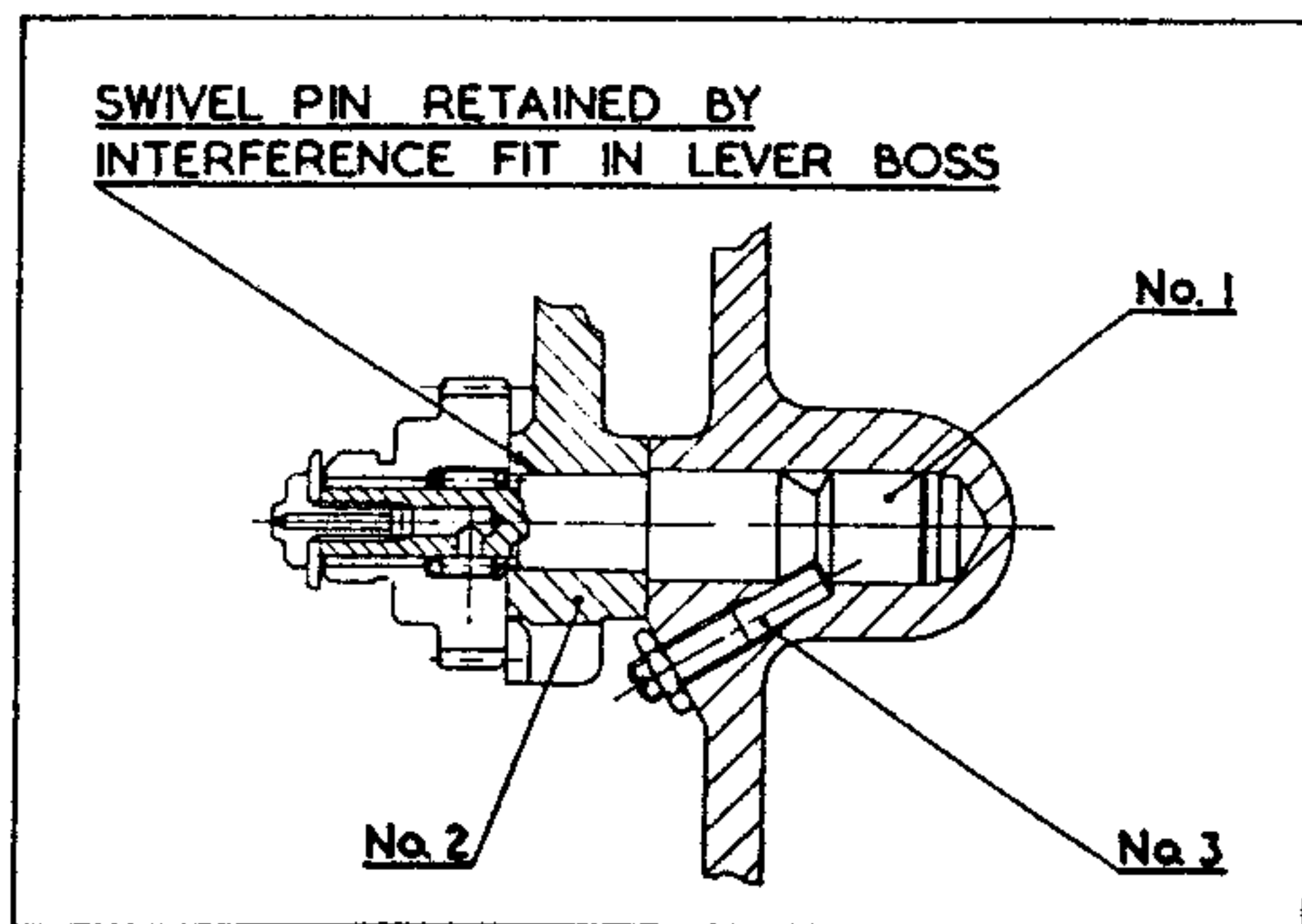


Fig. 36

Power Carriage Feeds

Standard change gear lathes are equipped with a set of 14 change wheels for cutting various screw threads and obtaining various power longitudinal feeds.

To set up the lathe for threading or feeding, refer to the change wheel chart inside the change wheel guard Figs. 39 and 40.

The thread pitch, or feed, to be set up will be located in the first two columns under the headings T.P.I. and Feed per Rev., respectively. In the third column under the heading DRIVER is listed a number of teeth in the change wheel which should be placed on the tumbler reverse stud.

In the fourth and fifth columns under 1st stud and 2nd stud are shown the gears or pairs of gears which should be placed on the 1st and 2nd studs respectively.

The sixth column lists the gear to be placed on the leadscrew under the heading LEADSCREW.

The column headed SET-UP refers to the number of the diagram, Fig. 38, which will indicate the arrangement of gears and spacers for the pitch in question, see also Fig. 37 which shows set-up as in Diagram 3, Fig. 38.

When setting up the gear train sufficient backlash between each pair of meshing gears should be allowed. When the lathe is in operation the play in the gears is automatically taken up according to the direction of travel; the amount of gear clearance does not influence the accuracy of thread cutting. Gear noise can be reduced by the application of grease, preferably graphited.

Tailstock Gib Adjustment

Refer to Fig. 45. Release gib securing screws (1) and retighten until just nipped.

Adjust thrust screws (2) just sufficiently to remove all trace of play of the tailstock relative to the bed shears, but without causing undue friction.

Retighten gib securing screws and check for freedom of movement but lack of "play".

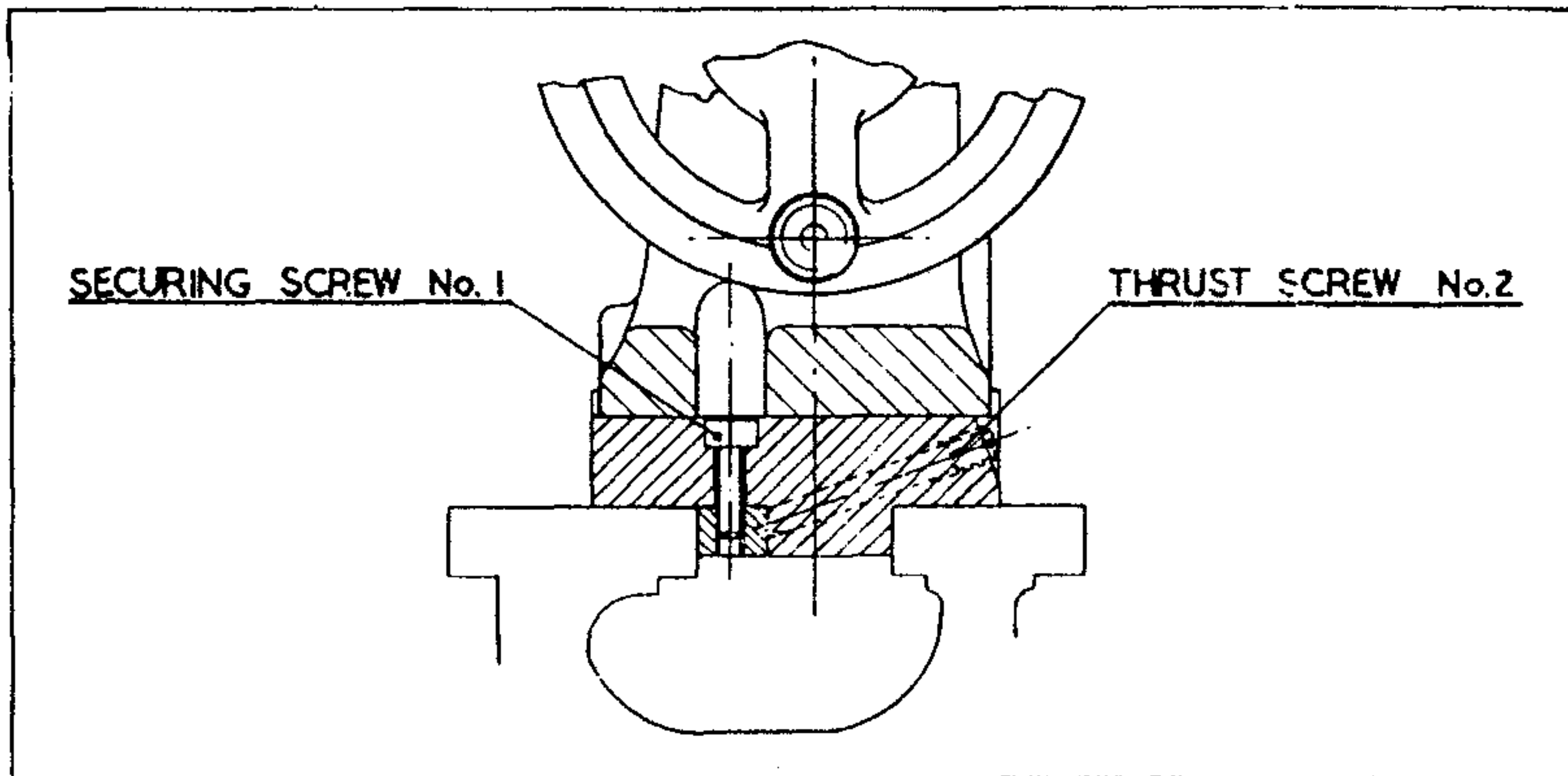


Fig. 45.

REPLACEMENT OF HEADSTOCK VEE BELT

In order to change the vee belt it is necessary partially to dismantle the countershaft and headstock spindles. Both spindles must be withdrawn from their respective bearings sufficiently to allow removal of the vee belt.

The countershaft spindle is formed with a slight step to provide the necessary light press fit to the cone pulley ball-race, the larger diameter being at the Clutch lever end. Consequently the spindle can only be withdrawn in the direction towards the tailstock from the two step pulley.

IMPORTANT. Any attempt to withdraw in the opposite direction will result in damage to the roller bearings in the cone pulley and swing head.

The headstock and countershaft ball bearings are arranged with an interference fit on their respective spindle diameters. Reassembly of these units will be greatly facilitated if the appropriate portions of the spindles are greased before introduction to the ball bearings.

Countershaft Clutch Unit

By reference to Fig. 34 on Page 23 it will be seen that withdrawal of the countershaft spindle is not possible until the clutch operating rod and lever have been removed and all securing screws have been disengaged from the spindle.

To withdraw clutch spindle. Remove screwed plug (7) and rotate countershaft till the adjusting screw (5) coincides with the access hole.

Remove Locking Screws (6).

Release adjusting screw (5) and withdraw as far as it will go. This will completely disengage the adjusting screw from the hole in the countershaft spindle and permit removal of the clutch operating rod.

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Disengage securing screw (12) and tap out swivel pin (13) to free clutch operating lever. Ensure that the plunger (14) and spring (15) do not fly out and become lost.

Remove complete clutch operating lever and rod assembly.

Disengage screws (10 and 11) which secure the pulley retaining collar (16) and clutch backplate.

Release screw (8) withdraw pulley and remove woodruff key.

Tap out shaft in the direction indicated above, sufficiently to allow the pulley retaining collar to be removed. This will give ample room for removal and replacement of vee belt.

Reassemble and adjust clutch as directed on Page 23.

Headstock Spindle

First read the description and instructions with regard to **Adjustment of Spindle Bearings** (page 21) which will provide detailed information on the construction and operation of the headstock spindle.

Spindle Withdrawal. Refer to Fig. 31. Slacken screw (3) just sufficiently to allow adjusting collar (4) to be turned.

Remove adjusting collar.

Withdraw sleeve gear (7) and remove woodruff key.

Release the screw securing the 60T backgear to the spindle.

Tap out the spindle in the direction towards the tailstock until it is free of the interference fit in the rear ball bearings.

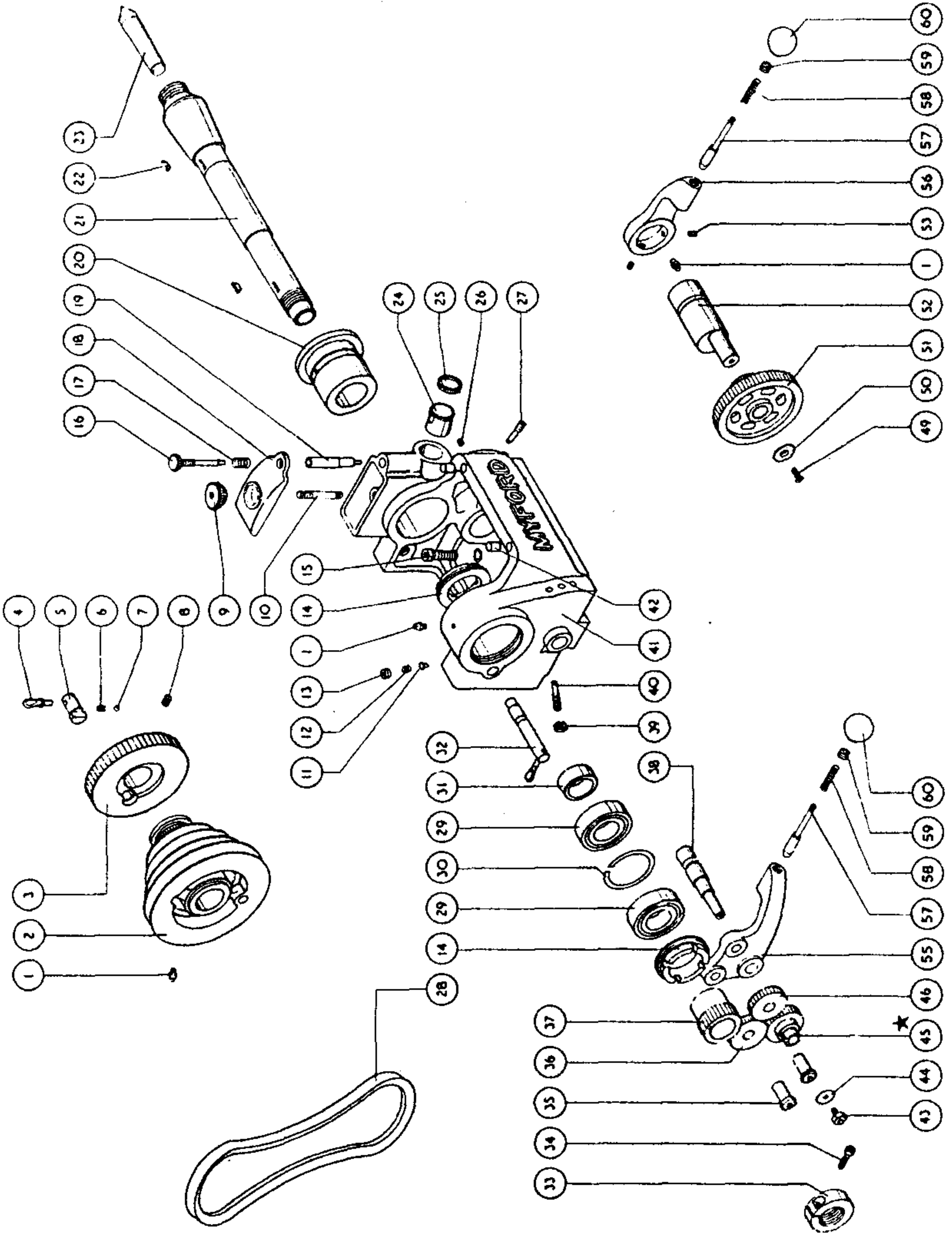
Complete the withdrawal of the spindle and remove the pulley and 60T backgear, which should be held together as a single unit. The distance sleeve (6) should be left in position, supported by the bore of the screwed ring (1).

Remove and replace vee belt.

Reassemble, setting the 60T backgear in the axial position which allows approximately .005" end play between the cone pulley and the distance sleeve (6).

Adjust the rear ball bearings as per the instructions on Page 22.

H



HEADSTOCK ASSEMBLY

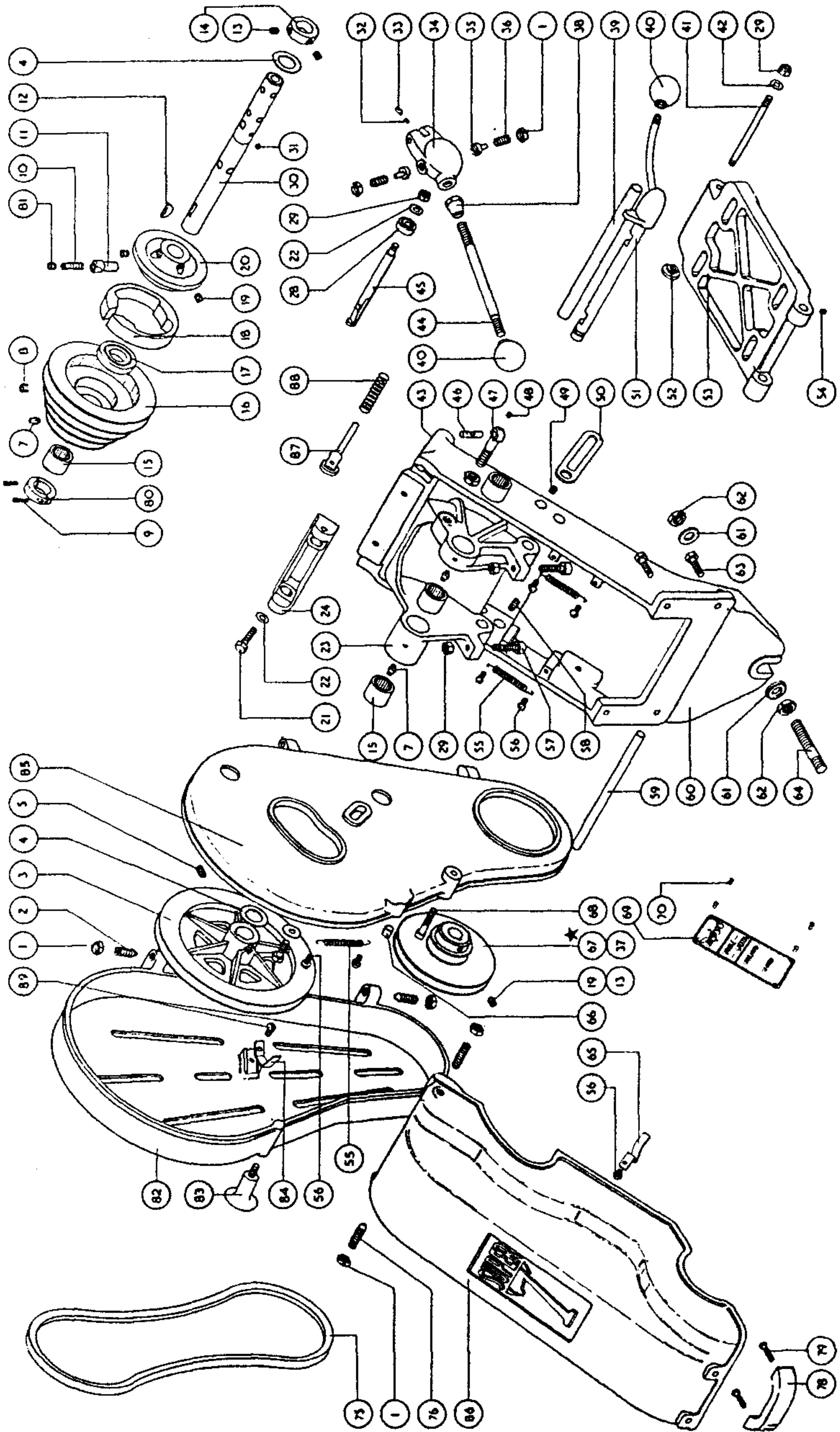
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SECTION H
HEADSTOCK ASSEMBLY

Part No.	Description	No. Off/Mc.
1	Oil Nipple	3
A1994 2	Vee Cone Pulley Assembly	1
A1993 3	60T. Backgear Assembly	1
A2004 4	Lever for Backgear Key	1
A2002/15	Backgear Key	1
A2003 6	Spring	1
DY1105 7	Steel Ball	1
MY4722 8	Socket Grubscrew (¼" B.S.F. x ⅝")	1
A1980 9	Thumb Nut	1
A1979 10	Stud	1
A3021 11	Plunger	1
A3025 12	Spring	1
MY3725 13	Socket Grubscrew (⅝" B.S.F. x ¼")	1
A1990 14	Adjusting Ring	2
MY3636 15	Cap Head Screw (⅝" B.S.F. x 1")	4
A1982 16	Control Screw	1
A1981 17	Spring	1
A1946 18	Cover	1
A1978 19	Valve Body	1
A1968 20	Spindle Bearing (Front)	1
A1992 21	Spindle	1
MY4203 22	Woodruff Key No. 30	2
23	60° Centre (Soft)	1
A1983 24	Thimble	1
A1984 25	Cap and Glass Assembly	1
MY3701 26	Socket Grubscrew (2 B.A. x ⅜")	1
A1987 27	Backgear Eccentric Retaining Screw	1
A29½ 28	Vee Belt (Headstock)	1
29	Ball Bearing (Hoffman 125 Angular Contact)	2
A1991 30	Bearing Spacing Washer	1
A2055 31	Distance Sleeve	1
A2751 32	Pulley Lock Assembly	1
A2056 33	Adjusting Collar	1
MY3611 34	Cap Head Screw (2 B.A. x ⅜")	1
A2008 35	Gear Stud with A.2159 Plug	2
A2006 36	30T. Tumbler Gear	1
A1995 37	30T. Gear	1
A2005/238	Tumbler Reverse Stud	1
MY1903 39	Hexagon Locknut (¼" B.S.F.)	1
A1997/140	Tumbler Reverse Locating Screw	1
A1934/341	Headstock	1
A2023 42	Pad	2
A1999 43	Tumbler Sleeve Gear Retaining Screw	1
VT220 44	Washer	1
A1998* 45	Tumbler Sleeve Gear Assembly	1
A2007 46	28T. Tumbler Gear	1
MY4503 49	C/Sunk Head Screw. (2 B.A. x ½")	1
A1989 50	Washer	1
A1939 51	17/53T. Backgear Cluster	1
A1986 52	Backgear Eccentric	1
MY3703 53	Socket Grubscrew (2 B.A. x ⅝")	2
A1948/155	Tumbler Reverse Lever (A1996 Lever Assy.)	1
A1949/156	Backgear Lever	1
A3021 57	Plunger	2
A3025 58	Spring	2
75/1220 59	Screwed Bush	2
MY4303 60	Knob	2

* This part does not apply to Super 7B Quick Change Lathes, but is included with the loose equipment being required for use in conjunction with 1481 Metric Conversion Set and A.2469 Slotted Quadrant.

N



MOTORISING ASSEMBLY

MYFORD SUPER 7 3½" CENTRE LATHE

SECTION N

New Clutch commences SK 8126.

New Headstock Oiling System SK 9167.

MOTORISING ASSEMBLY

Part No.	Description	No. Off/Mc..
MY1907 1	Hexagon Locknut (5/16" B.S.F.)	6
A2024 2	Hinge Screw	2
A2027 3	Twin Vee Pulley	1
A1973 4	Thrust Washer	2
MY4723 5	Socket Grubscrew (1/4" B.S.F. x 3/8" Flat Point)	2
7	Oil Nipple	3
A2460 8	Grubscrew (5/16" B.S.F. x 3/8")	1
MY3605 9	Cap Head Screw (4 B.A. x 1/2")	2
A2018/10	Adjusting Screw	1
A2017/11	Push Rod	1
12	Woodruff Key No. 90	1
13	Socket Grubscrew (1/4" B.S.F. x 5/16")	2
A2148 14	Collar	1
15	'Oilite' Bush (CT 18 x 3/4") 1"od x 0.75" id x 0.75" long	4 See NOTE below.
A2015 16	Vee Cone Pulley (Assembly)	1
17	Ball Bearing KLNJ 3/4"	1
A2019 18	Clutch Ring	1
MY3714 19	Socket Grubscrew (1/4" B.S.F. x 3/8")	2
A2016 20	Clutch Backplate	1
MY2605 21	Hexagon Head Set Screw (1/4" B.S.F. x 1")	2
DY3203 22	Washer (1/4" B.S.F.)	3
A1936 23	Swing Head (A2013 Sub Assembly)	1
A1941 24	Hinge Bracket	1
28	Ball Bearing (Hoffman S.I.)	1
MY1802 29	Hexagon Nut (1/4" B.S.F.)	4
A2021/130	Countershaft	1
A2030 31	Actuating Shaft Locating Pin	1
D5/192232	Spring	1
A2034 33	Plunger	1
A2032 34	Clutch Lever	1
A2035 35	Trunnion	2
A2036 36	Trunnion Supporting Screw	2
A2273 37	Motor Pulley (1/2" Dia. Bore)	1
A1955 38	Sleeve Nut	1
A2014 39	Swinghead Pivot Shaft	1
40	Knob	2
A2050 41	Clamp Screw	1
A2022 42	Washer	3
43	Hexagon Locknut (3/8" B.S.F.)	1
A2037 44	Lever Extension	1
A2029 45	Actuating Shaft	1
A1807 46	Clutch Lever Pivot Pin	1
A2031 47	Eye Bolt	1
48	Socket Grubscrew (2 B.A. x 3/16")	1
MY3712 49	Socket Grubscrew (1/4" B.S.F. x 1/2") (Pivot Shaft Locating)	1
A204650	Tie Bar	2

NOTE: Some machines have needle roller bearings type M1212ZOH

Continued Overleaf

SECTION N

MOTORISING ASSEMBLY

Continued

Part No.	Description	No. Off/Mc.
A2038 51	Cam Shaft and Lever Assembly	1
A2051 52	Clamp Screw Head	1
A1945 53	Motor Platform	1
MY3702 54	Socket Grubscrew (2 B.A. x ¼")	1
A2012 55	Tension Spring	3
MY3405 56	Round Head Screw (2 B.A. x ⅜")	6
A2123 57	Adjusting Screw	2
MY4825 58	Cam Shaft Locating Screw	1
A2045 59	Motor Platform Pivot Pin	1
A1933/160	Countershaft Arm	1
DY3210 61	Washer (7/16" B.S.F.)	2
MY1909 62	Hexagon Locknut (7/16" B.S.F.)	2
MY2604 63	Hexagon Head Set Screw (¼" B.S.F. x 7/8")	4
A2011 64	Stud	1
A2044 65	Spring Clip	2
A2023 66	Pad	1
A2028*67	Motor Pulley (5/8" Bore)	1
MY3622 68	Cap Head Screw (¼" B.S.F. x 1¼")	1
A2151 69	Speed Chart	1
70	Rivets	4
MY2603 71	Hexagon Head Set Screw (¼" B.S.F. x 3/4")	1
1350 75	Vee Belt (Motor Drive)	1
A2043 76	Hinge Screw	2
78	Handle	1
DY3404 79	Round Head Screw (3/16" Whit. x 3/4")	2
A2928 80	Split Collar	1
MY4722 81	Socket Grubscrew (5/16" Whit. x 3/8" Flat Point)	1
A1454/182	Motor Drive Belt Guard (fitted handle)	1
83	Knob	1
A3020 84	Spring Clip	1
A1944/185	Motor Drive Belt Guard Backplate	1
A1935/186	Headstock Belt Guard	1
A2936/7/887	Roller and Plunger Assembly	1
A2939 88	Spring	1
89	Round Head Screw (2 B.A. x ¼")	1

* Standard bore size—other bores available—state exact size required when ordering.

Headstock Belt-Guards

SK 6542 onwards :- A1935/1
 SK 7402 " :- A1935/2