

ALWAYS QUOTE MODEL AND MACHINE NUMBER WHEN ORDERING SPARES

## SPARE PARTS

SHOULD SPARE PARTS BE REQUIRED DUE TO BREAKAGE OR WEAR, FULL PARTICULARS INCLUDING MACHINE AND TEST NUMBER MUST BE GIVEN, THIS INFORMATION IS ON THE NAMEPLATE ATTACHED TO THE FRONT OF THE MACHINE AND SHOULD BE FORWARDED TO THE SERVICE MANAGER.

|                                      |   |
|--------------------------------------|---|
| <b>Wadkin PLC</b>                    |   |
| GREEN LANE WORKS, LEICESTER, ENGLAND |   |
| MACHINE NO.                          | <input type="text"/>                                |
| TEST NO.                             | <input type="text"/>                                |
| VOLTS                                | <input type="text"/> 3- <input type="checkbox"/> HZ |
| AMPS                                 | <input type="text"/> MAX                            |
| "GEM" 170                            |   |

## SAMPLE TYPE ORDER

MACHINE

MACHINE NO:

TEST NO:

PARTS REQUIRED

- |   |   |                                     |
|---|---|-------------------------------------|
| 1 | - | M10 x 50mm. long screwed stud       |
| 1 | - | M10 size. bright mild steel washers |
| 1 | - | Raising screw                       |

Wadkin PLC., Green Lane Works. Leicester LE5 4PF Telephone: 0116 2769111

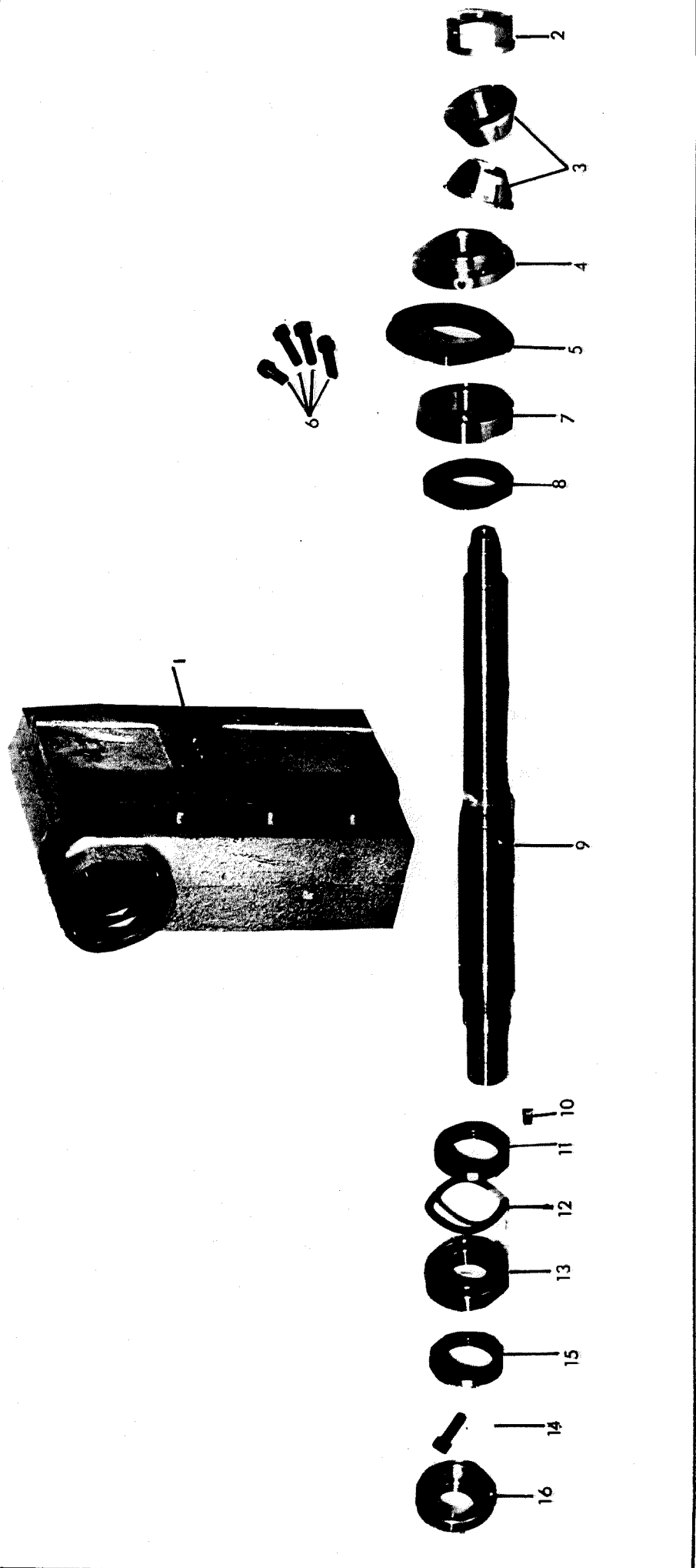
BOTTOM HORIZONTAL HEAD - 40MM DIA. SQUARE SHOULDERED SINGLE ROW RADIAL BEARINGS

| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| 1       | Spindle Housing   | GEM 4521   |
| 2       | Cutter Spindle Locknut                                  | GEM 708    |
| 3       | Cutterblock Locking Cones                               | FAC 13     |
| 4       | Ball Bearing Locknut                                    | GEM 3030   |
| 5       | End Cap   | GEM 3044   |
| 6       | Socket Head Hexagon Screws M10 x 30mm long              | K05 25 210 |
| ∅ 7     | Ball Bearing RHP 6209 TB EP7                            | K06 20 106 |
| 8       | Labyrinth Sleeve for Front Bearing                      | GEM 3032   |
| 9       | Cutterblock Spindle                                     | GEM 3788   |
| 10      | Key   | K05 23 113 |
| 11      | Grease Retainer   | GEM 3792   |
| 12      | EMO Waved Washer EPL 60                                 | K30 89 110 |
| ∅ 13    | Ball Bearing RHP 6209 TB EP7                            | K06 20 106 |
| + 14    | Hexagon Socket Countersunk Head Screw<br>M4 x 10mm long | K05 25 309 |
| 15      | Ball Bearing Locknut                                    | GEM 3958   |
| 16      | Grease Retainer for Spindle Rearing                     | GEM 3791   |
| * 17    | Square Head Dowel 8mm dia. x 40mm long for<br>GEM 4521  | K05 29 210 |
| * 18    | Hexagon Socket Screws (cup point) 2 for GEM 4521        | K05 26 112 |
| * 19    | Hexagon Socket Screw M5 x 20mm long<br>4 for GEM 3044   | K05 25 145 |

∅ "KLUBER" Grease Packed

\* Not Shown

+ Not supplied since 16.9.76



CUTTERBLOCK SPINDLE (40mm dia.) ASSEMBLY WITH  
 LUBRICATED BEARINGS EXCLUSIVE OF DRIVING PULLEY  
 BOTTOM HORIZONTAL HEAD

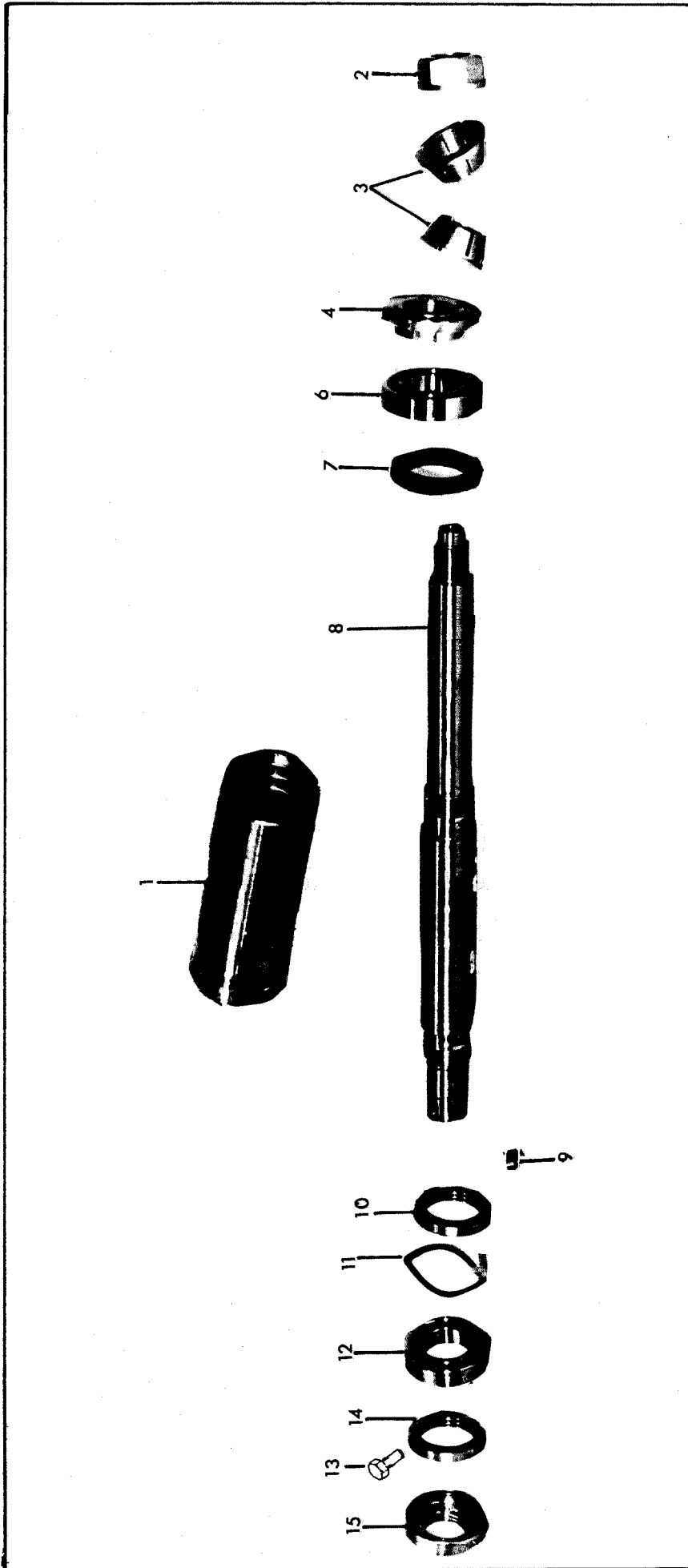
TOP HORIZONTAL HEAD - 40MM DIA. SQUARE SHOULDERED WITH SINGLE ROW RADIAL BEARINGS

| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| 1       | Spindle Barrel  | GEM 4318   |
| 2       | Cutterblock Spindle Locknut                                       | GEM 707    |
| 3       | Cutterblock Locking Cones   | FAC 13     |
| 4       | Ball Bearing Locknut  | GEM 3030   |
| 5       | Ball Bearing Locknut (Not Shown)                                  | GEM 3029   |
| ∅ 6     | Ball Bearing RHP 6209 TB EP7                                      | K06 20 106 |
| 7       | Labyrinth Sleeve for Front Bearing                                | GEM 3032   |
| 8       | Cutterblock Spindle   | GEM 3787   |
| 9       | Key   | K05 23 113 |
| 10      | Grease Retainer   | GEM 3791   |
| 11      | EMO Waved Washer EPL 60   | K30 89 110 |
| ∅ 12    | Ball Bearing RHP 6209 TB EP7                                      | K06 20 106 |
| + 13    | Hexagon Socket Countersunk Head Screw<br>M4 x 10mm long           | K05 25 309 |
| 14      | Ball Bearing Locknut  | GEM 3957   |
| 15      | Grease Retainer for Spindle Lower Bearing                         | GEM 3792   |
| * 16    | Hexagon Socket Screws (cup point) M6 x 6mm long<br>2 for GEM 4318 | K05 26 112 |

∅ "KLUBER" Grease Packed

\* Not Shown

+ Not supplied since 16.9.76



CUTTERBLOCK SPINDLE (40mm dia.) ASSEMBLY WITH PERMANENTLY  
 LUBRICATED BEARINGS - EXCLUSIVE OF DRIVING PULLEY  
 TOP HORIZONTAL HEAD

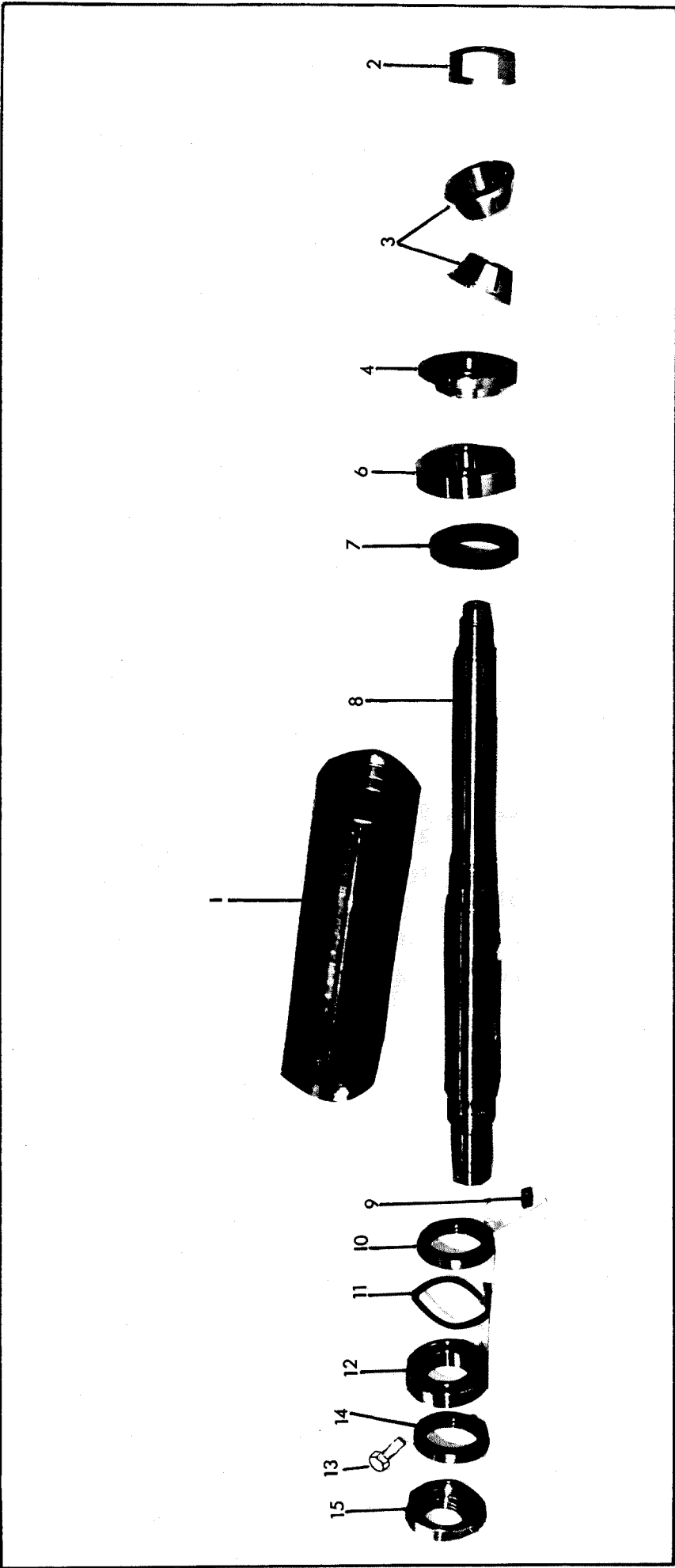
FENCE SIDE VERTICAL HEAD - 40MM DIA. SQUARE SHOULDERED WITH SINGLE ROW RADIAL BEARINGS

| REF.NO. | DESCRIPTION  | PART NO.   |
|---------|--|------------|
| 1       | Spindle Barrel   | GEM 4319   |
| 2       | Cutterblock Spindle Locknut                                      | GEM 707    |
| 3       | Cutterblock Locking Cones  | FAC 13     |
| 4       | Ball Bearing Locknut   | GEM 3030   |
| * 5     | Ball Bearing Locknut   | GEM 3029   |
| ∅ 6     | Ball Bearing RHP 6209 TB EP7                                     | K06 20 106 |
| 7       | Labyrinth Sleeve for Front Bearing                               | GEM 3032   |
| 8       | Cutterblock Spindle  | GEM 3758   |
| 9       | Key 10mm x 8mm x 32mm long                                       | K05 23 129 |
| 10      | Grease Retainer  | GEM 3792   |
| 11      | EMO Waved Washer EPL 60  | K30 89 110 |
| ∅ 12    | Ball Bearing RHP 6209 TB EP7                                     | K06 20 106 |
| + 13    | Hexagon Socket Countersunk Head Screw M4 x 10mm long             | K05 25 309 |
| 14      | Ball Bearing Locknut   | GEM 3957   |
| 15      | Grease Retainer for Spindle Lower Bearings                       | GEM 3791   |
| * 16    | Cup Point Hexagon Socket Screw M6 dia. x 6mm long 2 for GEM 4319 | K05 26 112 |
| * 17    | Fenner Vee Belt Spindle Pulley 95 PCD 2 Grooves 031Z 0133        | K05 78 235 |
| * 18    | Fenner Taper Lock Bush No. 1610 38mm bore                        | K30 77 186 |
| * 19    | Fenner Vee Belts SPZ 2000  | K30 78 231 |

\* Not Shown

∅ "KLUBER" Grease Packed

+ Not supplied since 16.9.76



CUTTERBLOCK SPINDLE (40mm dia.) ASSEMBLY WITH  
 PERMANENTLY LUBRICATED BEARINGS - EXCLUSIVE  
 OF DRIVING PULLEY - FENCE SIDE VERTICAL HEAD

NEAR SIDE VERTICAL HEAD - 40MM DIA. SQUARE SHOULDERED WITH SINGLE ROW RADIAL BEARINGS

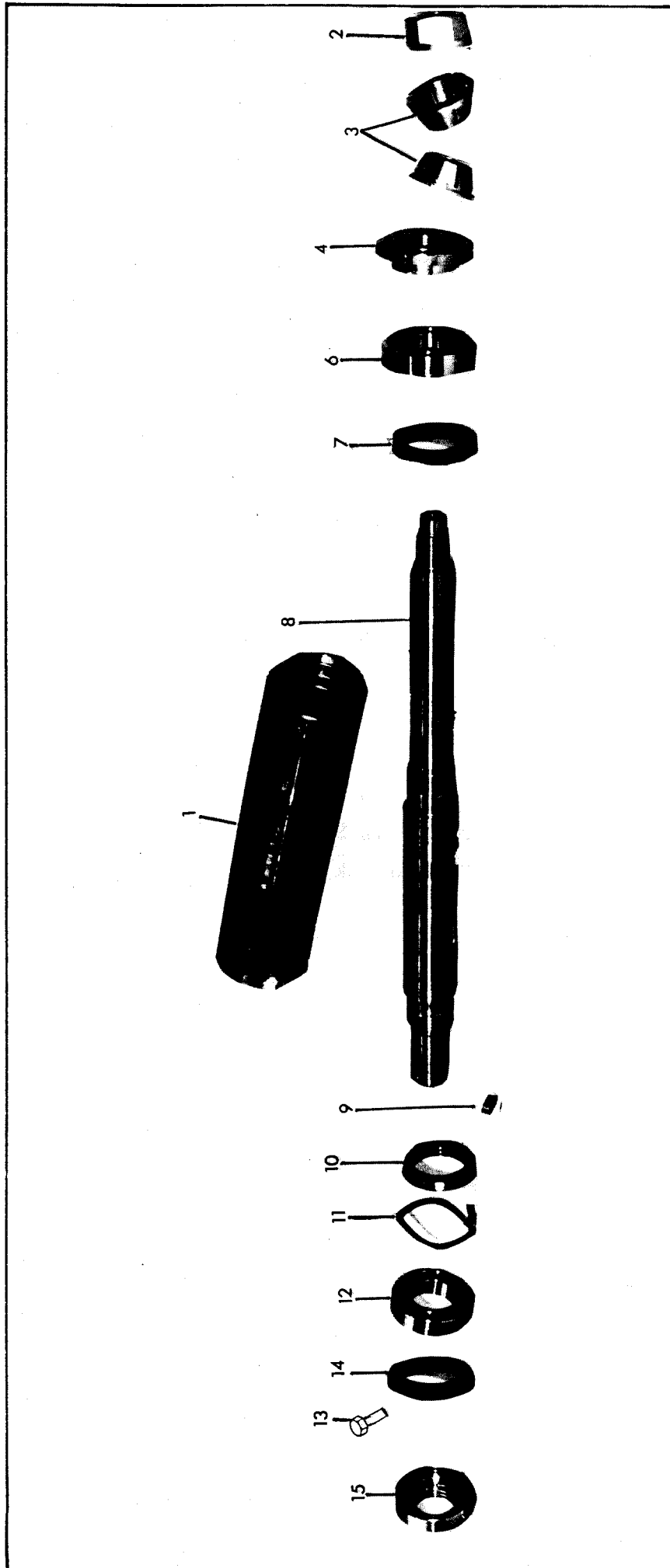
| REF.NO. | DESCRIPTION  | PART NO.   |
|---------|--|------------|
| 1       | Spindle Barrel   | GEM 4319   |
| 2       | Cutterblock Spindle Locknut  | GEM 708    |
| 3       | Cutterblock Locking Cones  | FAC 13     |
| 4       | Ball Bearing Locknut   | GEM 3030   |
| * 5     | Ball Bearing Locknut   | GEM 3029   |
| ∅ 6     | Ball Bearing RHP 6209 TB EP7   | K06 20 106 |
| 7       | Labyrinth Sleeve for Front Bearing                                   | GEM 3032   |
| 8       | Cutterblock Spindle  | GEM 3757   |
| 9       | Key  | K05 23 129 |
| 10      | Grease Retainer  | GEM 3792   |
| 11      | EMO Waved Washer EPL 60  | K30 89 110 |
| ∅ 12    | Ball Bearing RHP 6209 TB EP7   | K06 20 106 |
| + 13    | Hexagon Socket Countersunk Head Screw<br>M4 x 10mm long              | K05 25 309 |
| 14      | Ball Bearing Locknut M45 x 1.5 LH                                    | GEM 3957   |
| 15      | Grease Retainer for Spindle Lower Bearing                            | GEM 3791   |
| * 16    | Cup Point Hexagon Socket Screws M6 dia.<br>x 6mm long 2 for GEM 4319 | K05 26 112 |
| * 17    | Fenner Vee Belt Spindle Pulley 95 PCD<br>2 grooves 031Z 0132         | K30 78 235 |
| * 18    | Fenner Taper Lock Bush No. 1610 38mm bore                            | K30 77 186 |
| * 19    | Fenner Vee Belts 02Z 2540  | K30 77 157 |

\* Not Shown

∅ "KLUBER" Grease Packed

+ Not supplied since 16.9.76





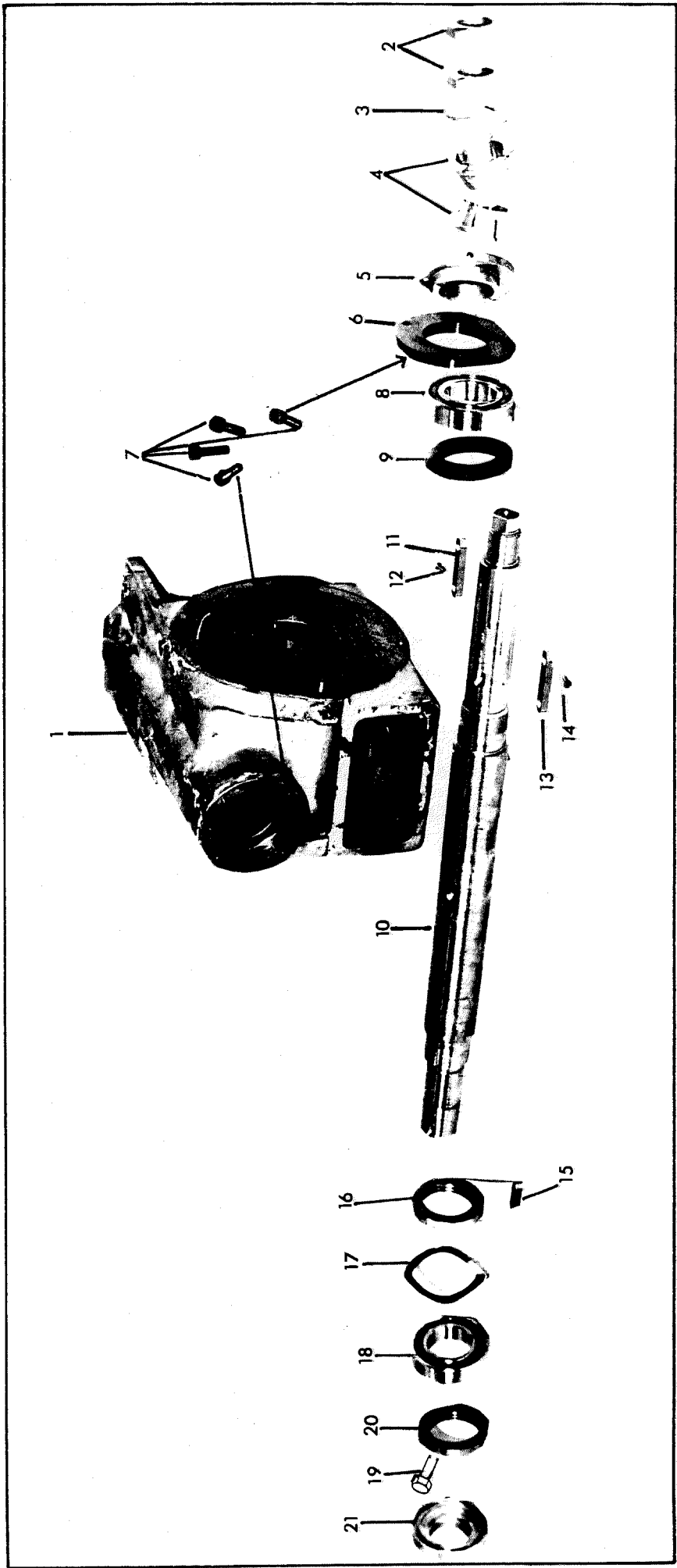
CUTTERBLOCK SPINDLE (40mm dia.) ASSEMBLY WITH PERMANENTLY  
LUBRICATED BEARINGS - EXCLUSIVE OF DRIVING PULLEY -  
NEAR SIDE VERTICAL HEAD

UNIVERSAL HEAD CUTTERBLOCK SPINDLE - 40MM DIA. SQUARE SHOULDERED WITH SINGLE ROW RADIAL BEARINGS

| REF.NO. | DESCRIPTION  | PART NO.   |
|---------|--|------------|
| 1       | Spindle Housing  | GEM 3787   |
| 2       | Locknuts   | GEM 3442   |
| 3       | Washer   | GEM 3443   |
| 4       | Cutterblock Locking Cones  | FAC 13     |
| 5       | Ball Bearing Locknut   | GEM 3030   |
| 6       | End Cap  | GEM 3044   |
| 7       | Socket Hexagon Head Screws M5 x 20mm long                        | KO5 25 145 |
| ∅ 8     | Ball Bearing RHP 6209 TB EP7                                     | KO6 20 106 |
| 9       | Labyrinth Sleeve for Front Bearing                               | GEM 3032   |
| 10      | Cutterblock Spindle  | GEM 3696   |
| 11      | Key  | GEM 3790   |
| 12      | Socket Hexagon Head Countersunk Screw M4 x 12mm long             | KO5 25 310 |
| 13      | Key  | GEM 3790   |
| 14      | Socket Hexagon Head Countersunk Screw M4 x 12mm long             | KO5 25 310 |
| 15      | Key  | KO5 23 129 |
| 16      | Grease Retainer  | GEM 3792   |
| 17      | EMO Waved Washer EPL 60  | K30 89 110 |
| ∅ 18    | Ball Bearing RHP 6209 TB EP7                                     | KO6 20 106 |
| + 19    | Hexagon Socket Countersunk Screw M4 x 10mm long                  | KO5 25 309 |
| 20      | Ball Bearing Locknut M45 x 1.5 LH                                | GEM 3957   |
| 21      | Grease Retainer for Spindle Rear Bearing                         | GEM 3791   |
| * 22    | Hexagon Screw - cup point - M6 dia. x 6mm long<br>2 for GEM 3789 | KO5 26 112 |
| * 23    | Fenner Vee Belt Spindle Pulley 95 PCD<br>2 grooves 031Z 0132     | K30 78 235 |
| * 24    | Fenner Taper Lock Bush No. 161D 38mm bore                        | K30 77 186 |
| * 25    | Fenner Vee Belts SPZ 940   | K30 77 156 |

∅ "KLUBER" Grease Packed

+ Not supplied since 16.9.76



CUTTERBLOCK SPINDLE (40mm dia.) ASSEMBLY WITH PERMANENTLY LUBRICATED BEARINGS - EXCLUSIVE OF DRIVING PULLEY - UNIVERSAL HEAD

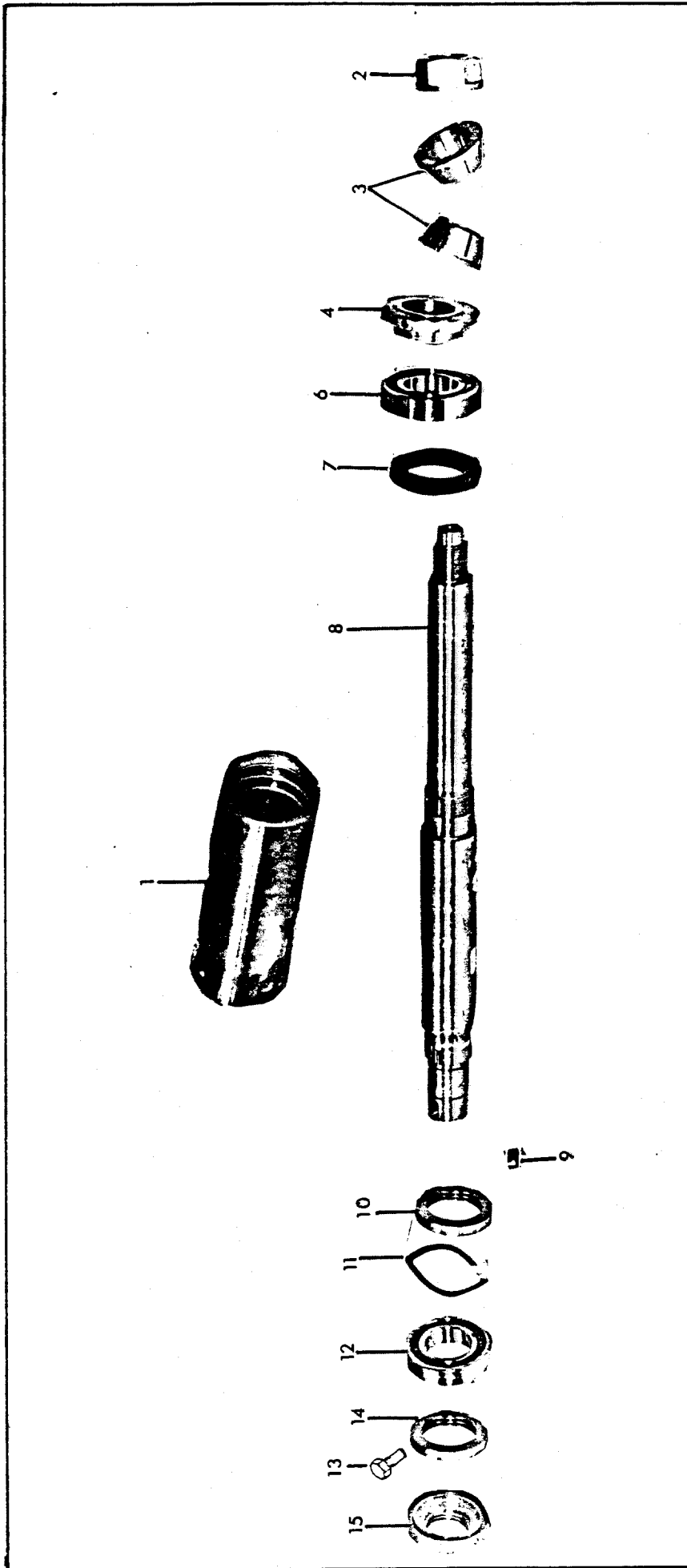
TOP HORIZONTAL HEAD - 40MM DIA. SQUARE SHOULDERED WITH OUTBOARD BEARINGS AND SINGLE ROW RADIAL BEARINGS

| REF.NO. | DESCRIPTION  | PART NO.   |
|---------|--|------------|
| 1       | Spindle Barrel   | GEM 4318   |
| 2       | Cutterblock Spindle Locknut  | GEM 707    |
| 3       | Cutterblock Locking Cones  | FAC 13     |
| 4       | Ball Bearing Locknut   | GEM 3030   |
| * 5     | Ball Bearing Locknut   | GEM 3029   |
| ∅ 6     | Ball Bearing RHP 6209 TB EP7   | K06 20 106 |
| 7       | Labyrinth Sleeve for Front Bearing   | GEM 3032   |
| 8       | Cutterblock Spindle  | GEM 4543   |
| 9       | Key  | GEM 4255   |
| 10      | Grease Retainer  | GEM 3791   |
| 11      | EMO Waved Washer EPL 60  | K30 89 110 |
| ∅ 12    | Ball Bearing RHP 6209 TB EP7   | K06 20 106 |
| + 13    | Hexagon Socket Countersunk Head Screw<br>M4 x 10mm long                                  | K05 25 309 |
| 14      | Ball Bearing Locknut   | GEM 3957   |
| 15      | Grease Retainer for Spindle Lower Bearing  | GEM 3792   |
| * 16    | Hexagon Socket Screws ( cup point )<br>M6 x 6mm long                      2 for GEM 4318 | K05 26 112 |

\* Not Shown

∅ "KLUBER" Grease Packed

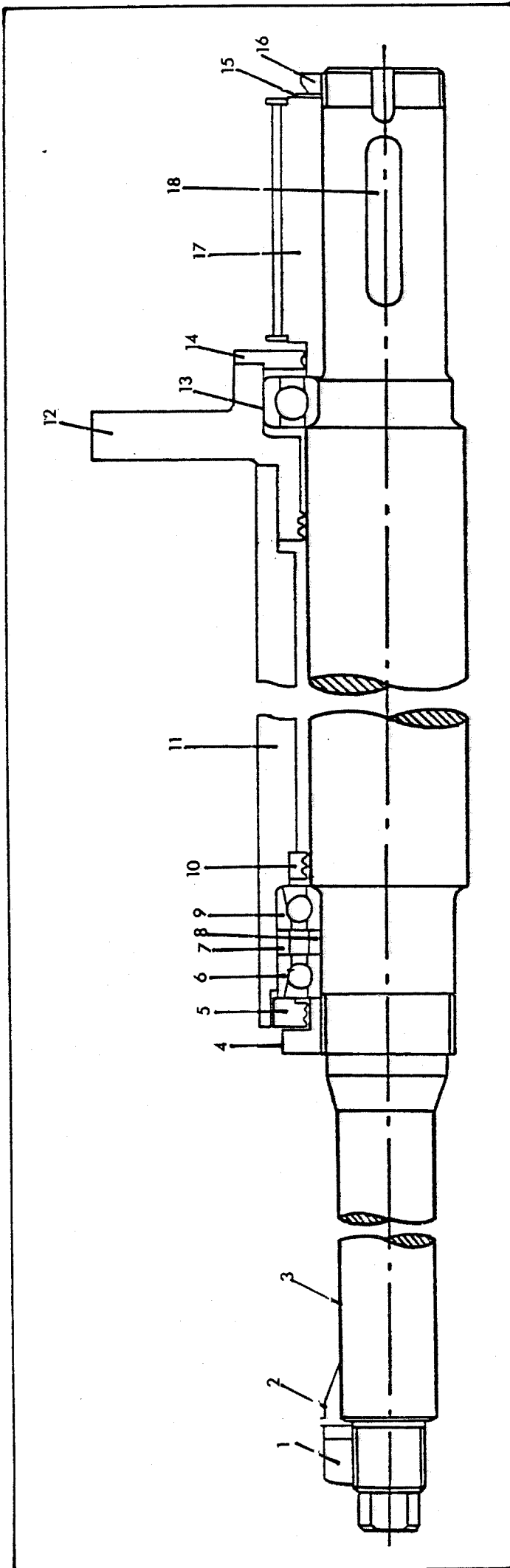
+ Not supplied since 16.9.76



CUTTERBLOCK SPINDLE (40mm dia.) ASSEMBLY WITH PERMANENTLY  
 LUBRICATED BEARINGS - EXCLUSIVE OF DRIVING PULLEY  
 TOP HORIZONTAL HEAD

TOP HORIZONTAL SPINDLE - 40MM. DIA. SOLID CONE WITH OUTBOARD BEARINGS AND ANGULAR CONTACT BEARINGS

| REF.NO: | DESCRIPTION  | PART NO:   |
|---------|--|------------|
| 1       | Spindle Locknut  | GEM 707    |
| 2       | Cutterblock locking cones  | FAC 13     |
| 3       | Top horizontal cutterblock spindle   | GEM 4541   |
| 4       | Bearing locknut  | GEM 3808   |
| 5       | Bearing locknut and grease retainer  | GEM 3810   |
| ∅ 6     | Paired angular contact bearing 90mm. O.D. x 55mm. bore x 18mm. wide RHP 7011 EP7     | K06 20 132 |
| 7       | Outer bearing spacer   | GEM 3800   |
| 8       | Inner bearing spacer   | GEM 3801   |
| ∅ 9     | Paired angular contact bearing 90mm. O.D. x 55mm. bore x 18mm. wide RHP 7011 EP7     | K06 20 132 |
| 10      | Grease retainer  | GEM 3802   |
| 11      | Barrel for top head spindle  | GEM 4835   |
| ≠ 12    |  |            |
| ∅ 13    | Single row radial ball bearing 100mm. O.D. x 55mm. bore x 21mm. wide RHP 6211 TB EP7 | K06 20 110 |
| 14      | Grease retainer  | GEM 3802   |
| 15      | Tab lockwasher for M50. nut  | K05 27 260 |
| 16      | Chamfered notch nut M50. x 1.5 pitch   | K05 27 211 |
| 17      | Spindle pulley   | GEM 4546   |
| 18      | Key 14mm. x 9mm. x 70mm. long  | K05 23 187 |
| * 19    | "FENNER" vee belts 1340  | K30 77 126 |
| * 20    | Square head dowel 8mm. dia. x 40mm. long (1) FOR GEM 4835                            | K05 29 210 |
| ∅       | "KLUBER" grease packed   |            |
| ≠       | Not supplied   |            |
| *       | Not shown  |            |



TOP HORIZONTAL SPINDLE

BOTTOM HORIZONTAL CUTTERBLOCK SPINDLE - 40MM DIA. WITH SOLID CONES AND HEAVY DUTY ANGULAR CONTACT BEARINGS

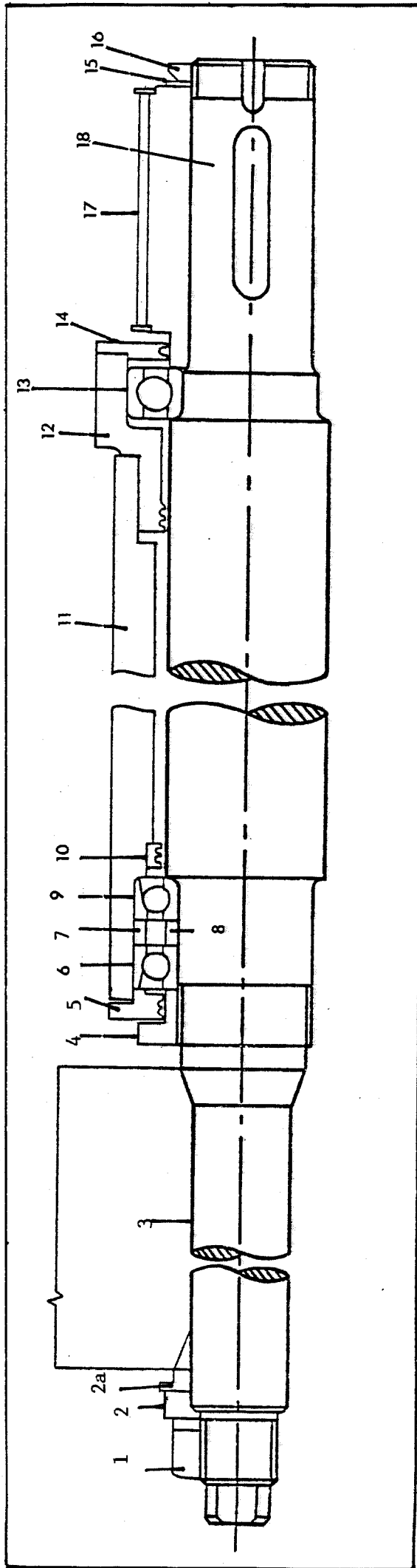
| REF.NO. | DESCRIPTION  | PART NO.   |
|---------|--|------------|
| 1       | Spindle Locknut  | GEM 708    |
| 2       | Spacer   | GEM 3954   |
| 2a      | Cutterblock Locking Cones  | FAC 13     |
| 3       | Bottom Horizontal Cutterblock Spindle  | GEM 4399   |
| 4       | Bearing Locknut  | GEM 3809   |
| 5       | Bearing Locknut and Grease Retainer  | GEM 3827   |
| ∅ 6     | Paired Angular Contact Bearing 90mm O/D<br>x 55mm bore x 21mm wide RHP 7011 EP7  | K06 20 132 |
| 7       | Outer Bearing Spacer   | GEM 3800   |
| 8       | Inner Bearing Spacer   | GEM 3801   |
| ∅ 9     | Paired Angular Contact Bearing 90mm O/D<br>x 55mm bore x 21mm wide RHP 7011 EP7  | K06 20 132 |
| 10      | Grease Retainer  | FEM 3802   |
| 11      | Spindle Housing  | GEM 4837   |
| † 12    |  |            |
| ∅ 13    | Single Row Radial Ball Bearing 100mm O/D<br>x 55mm bore x 21mm wide RHP 6211 EP7 | K06 20 110 |
| 14      | Grease Retainer for Pulley   | GEM 3811   |
| 15      | Tab Lockwasher for M50 Nut   | K05 27 260 |
| 16      | Chamfered Notch Nut M50 x 1.5 pitch  | K05 27 211 |
| 17      | Spindle Pulley   | GEM 4546   |
| 18      | Key 14mm x 9mm x 70mm long   | K05 23 187 |
| * 19    | Fenner Vee Belts SPZ 1340  | K30 77 126 |
| * 20    | Square Head Dowel 8mm dia.<br>x 40mm long 1 for GEM 4837                         | K05 29 210 |

∅ "KLUBER" Grease Packed

† Not Supplied

\* Not Shown





BOTTOM HORIZONTAL SPINDLE

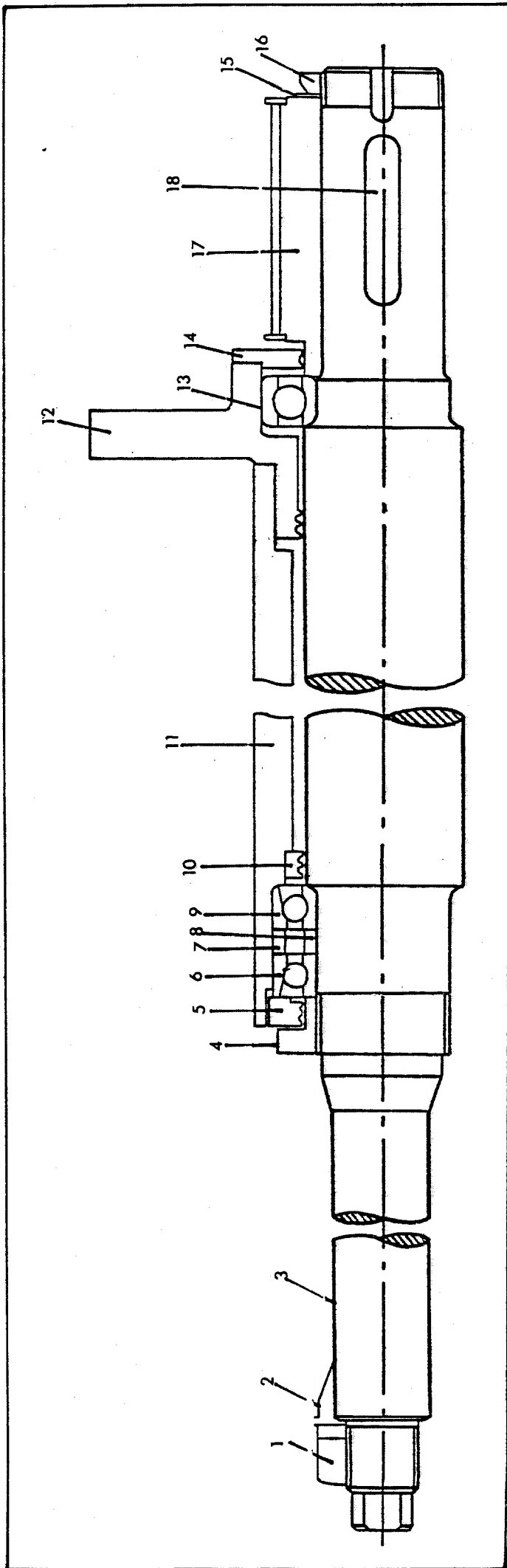
TOP HORIZONTAL SPINDLE - 40MM DIA. SOLID CONES WITH HEAVY DUTY ANGULAR CONTACT BEARINGS

| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| 1       | Spindle Locknut   | GEM 707    |
| 2       | Cutterblock Locking Cones   | FAC 13     |
| 3       | Top Horizontal Cutterblock Spindle  | GEM 4364   |
| 4       | Bearing Locknut   | GEM 3808   |
| 5       | Bearing Locknut and Grease Retainer   | GEM 3810   |
| ∅ 6     | Paired Angular Contact Bearing 90mm O/D<br>x 55mm bore x 18mm wide RHP 7011 EP7     | K06 20 132 |
| 7       | Outer Bearing Spacer  | GEM 3800   |
| 8       | Inner Bearing Spacer  | GEM 3801   |
| ∅ 9     | Paired Angular Contact Bearing 90mm O/D<br>x 55mm bore x 18mm wide RHP 7011 EP7     | K06 20 132 |
| 10      | Grease Retainer   | GEM 3802   |
| 11      | Barrel for Top Head Spindle   | GEM 4835   |
| ≠ 12    |   |            |
| ∅ 13    | Single Row Radial Ball Bearing 100mm O/D<br>x 55mm bore x 21mm wide RHP 6211 TB EP7 | K06 20 110 |
| 14      | Grease Retainer   | GEM 3802   |
| 15      | Tab Lockwasher for M50 Nut  | K05 27 260 |
| 16      | Chamfered Notch Nut M50 x 1.5 pitch   | K05 27 211 |
| 17      | Spindle Pulley  | GEM 4546   |
| 18      | Key 14mm x 9mm x 70mm long  | K05 23 187 |
| * 19    | Fenner Vee Belts SPZ 1340   | K30 77 126 |
| * 20    | Square Head Dowel 8mm dia. x 40mm long<br>1 for GEM 4835                            | K05 29 210 |

∅ "KLUBER" Grease Packed

≠ Not Supplied

\* Not Shown



TOP HORIZONTAL SPINDLE

FENCE SIDE VERTICAL SPINDLE - 40MM DIA. SOLID CONE WITH HEAVY DUTY ANGULAR CONTACT BEARINGS

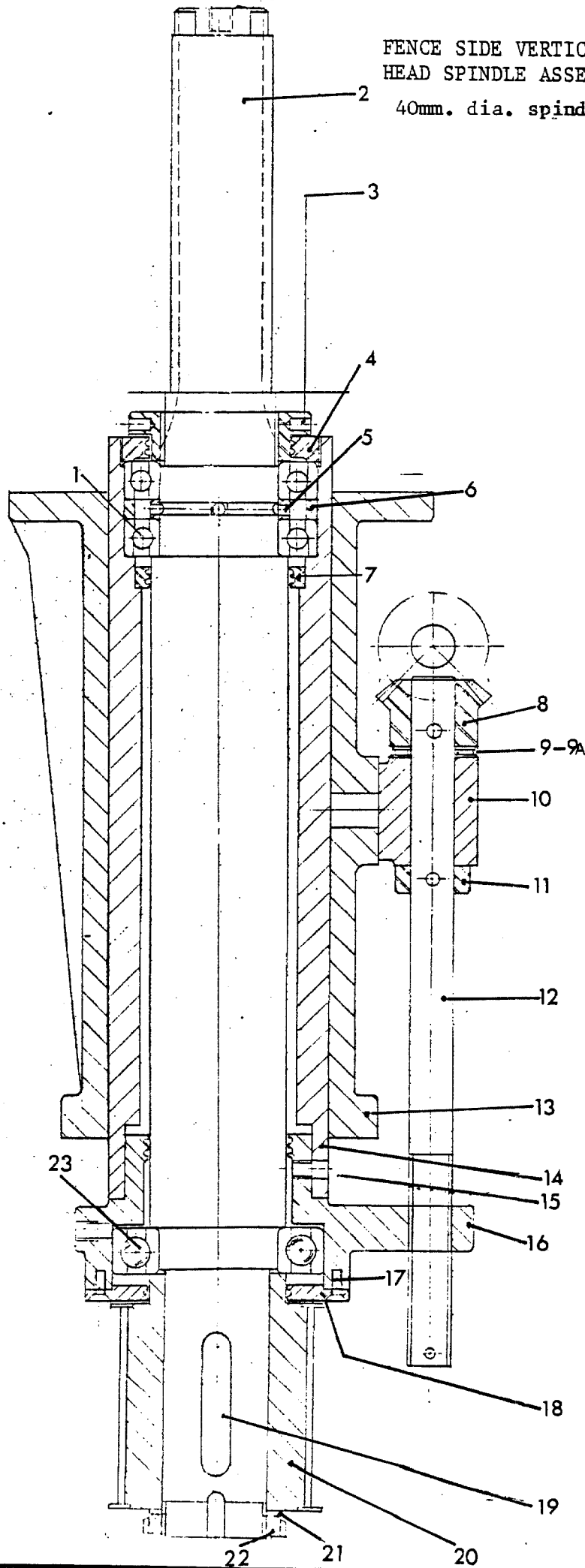
| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| ∅ 1     | Angular Contact Bearing 90mm O/D<br>x 55mm bore x 18mm wide RHP 7011 TDU EP7        | K06 20 132 |
| 2       | Fence Side Vertical Spindle   | GEM 4662   |
| 3       | Bearing Locknut   | GEM 3808   |
| 4       | Bearing Locknut and Grease Retainer   | GEM 3810   |
| 5       | Inner Bearing Spacer  | GEM 3801   |
| 6       | Outer Bearing Spacer  | GEM 3800   |
| 7       | Grease Retainer   | GEM 3802   |
| 8       | Mitre Gear  | GEM 2519   |
| 9       | INA Thrust Bearing AXK 2035   | K06 10 212 |
| 9a      | INA Thrust Washer 2035  | K06 10 252 |
| 10      | Mitre Gear Bracket for Side Head<br>Vertical Adjustment                             | GEM 3122   |
| 11      | Collar 20mm dia.  | K05 28 215 |
| 12      | Vertical Screw for Fence Side Head Vertical<br>Adjustment                           | GEM 3122   |
| 13      | Carriage for Side Head  | GEM 3818   |
| 14      | Side Head Barrel  | GEM 3817   |
| 15      | Locating Screw M8   | GEM 3889   |
| 16      | Bearing Housing and Adjuster  | GEM 3816   |
| 17      | Hexagon Socket Countersunk Head Screw<br>M5 x 12mm long                             | K05 25 317 |
| 18      | Grease Retainer for Pulley  | GEM 3811   |
| 19      | Key 14mm x 9mm x 70mm long  | K05 23 187 |
| 20      | Fenner Vee Belt Pulley 95 PCD<br>2 grooves 031Z 0132                                | K05 78 235 |
| 21      | Tab Lockwasher for M50 Nut  | K05 27 260 |
| 22      | Chamfered Notch Nut M50 x 1.5 pitch   | K05 27 211 |
| ∅ 23    | Single Row Radial Ball Bearing 100mm O/D<br>x 55mm bore x 21mm wide RHP 6211 TB EP7 | K06 20 110 |
| * 24    | Fenner Taper Lock Bush No. 1610 38mm bore   | K30 77 186 |
| * 25    | Fenner Vee Belts SPZ 2000   | K30 78 231 |

∅ "KLUBER" Grease Packed

\* not shown

FENCE SIDE VERTICAL  
HEAD SPINDLE ASSEMBLY

40mm. dia. spindle

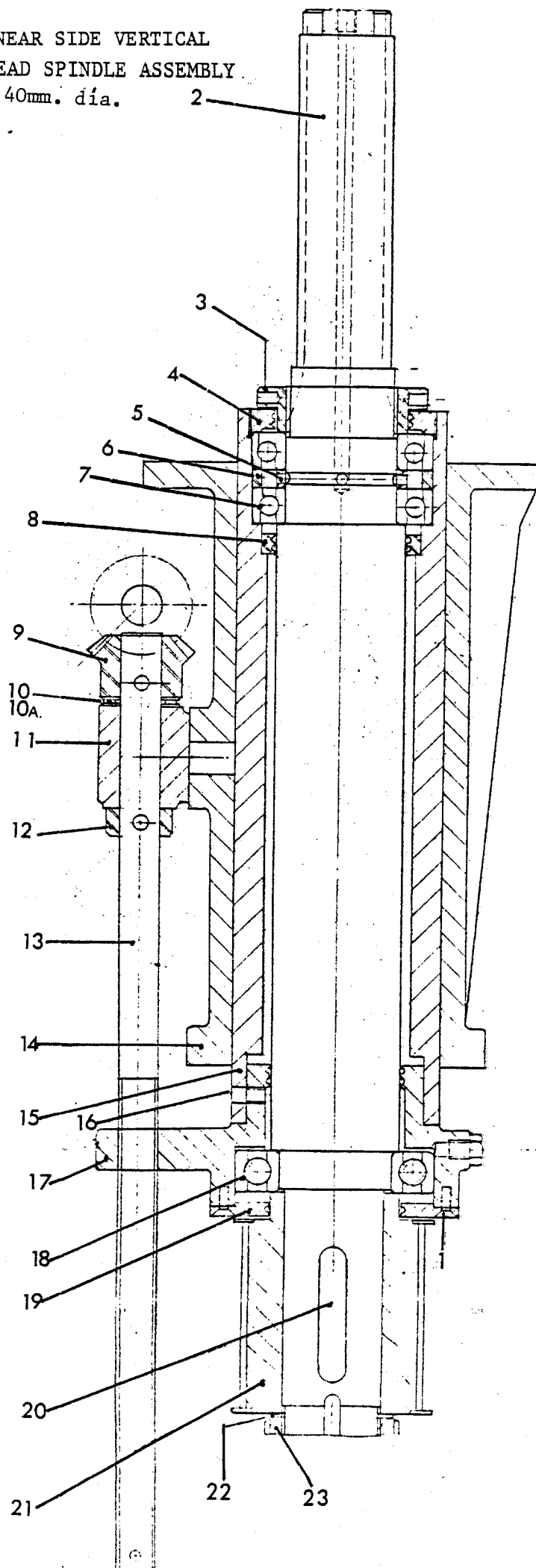


NEAR SIDE CUTTERBLOCK SPINDLE - 40MM DIA. SOLID CONES WITH HEAVY DUTY ANGULAR CONTACT BEARINGS

| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| 1       | Hexagon Socket Countersunk Head Screws<br>M5 x 12mm long                            | K05 25 317 |
| 2       | Near Side Vertical Spindle  | GEM 4442   |
| 3       | Bearing Locknut   | GEM 3809   |
| 4       | Bearing Locknut and Grease Retainer   | GEM 3810   |
| 5       | Inner Bearing Spacer  | GEM 3801   |
| 6       | Outer Bearing Spacer  | GEM 3800   |
| ∅ 7     | Angular Contact Bearing 90mm O/D x 55mm bore<br>x 18mm wide RHP 7011 TDU EP7        | K06 20 132 |
| 8       | Grease Retainer   | GEM 3802   |
| 9       | Mitre Gear  | GEM 2519   |
| 10      | INA Thrust Bearing AXK 2035   | K06 10 212 |
| 10a     | INA Thrust Washer 2035  | K06 10 252 |
| 11      | Mitre Gear Bracket for Side Head Vertical<br>adjustment                             | GEM 3121   |
| 12      | Collar 20mm dia.  | K05 28 211 |
| 13      | Vertical Screw for Near Side Head Vertical<br>Adjustment                            | GEM 3123   |
| 14      | Carriage for Side Head  | GEM 3818   |
| 15      | Side Head Barrel  | GEM 3817   |
| 16      | Locating Screw M8   | GEM 3889   |
| 17      | Bearing Housing   | GEM 3816   |
| ∅ 18    | Single Row Radial Ball Bearing 100mm O/D<br>x 55mm bore x 21mm wide RHP 6211 TB EP7 | K06 01 309 |
| 19      | Grease Retainer for Pulley  | GEM 3811   |
| 20      | Key 14mm x 9mm x 70mm long  | K05 23 187 |
| 21      | Fenner Vee Belt Pulley 95PCD 2grooves 031Z 0132                                     | K05 78 235 |
| 22      | Tab Lockwasher for M50 Nut  | K05 27 260 |
| 23      | Chamfered Notch Nut M50 x 1.5 pitch   | K05 27 211 |
| * 24    | Fenner Taper Lock Bush No. 1610 38mm bore   | K30 77 186 |
| * 25    | Fenner Vee Belts SPZ 2000   | K30 78 231 |
| ∅       | "KLUBER" Grease Packed  |            |
| *       | not shown   |            |

NEAR SIDE VERTICAL  
HEAD SPINDLE ASSEMBLY

40mm. dia.



UNIVERSAL HEAD SPINDLE - 40MM DIA. SOLID WITH HEAVY DUTY ANGULAR CONTACT BEARINGS

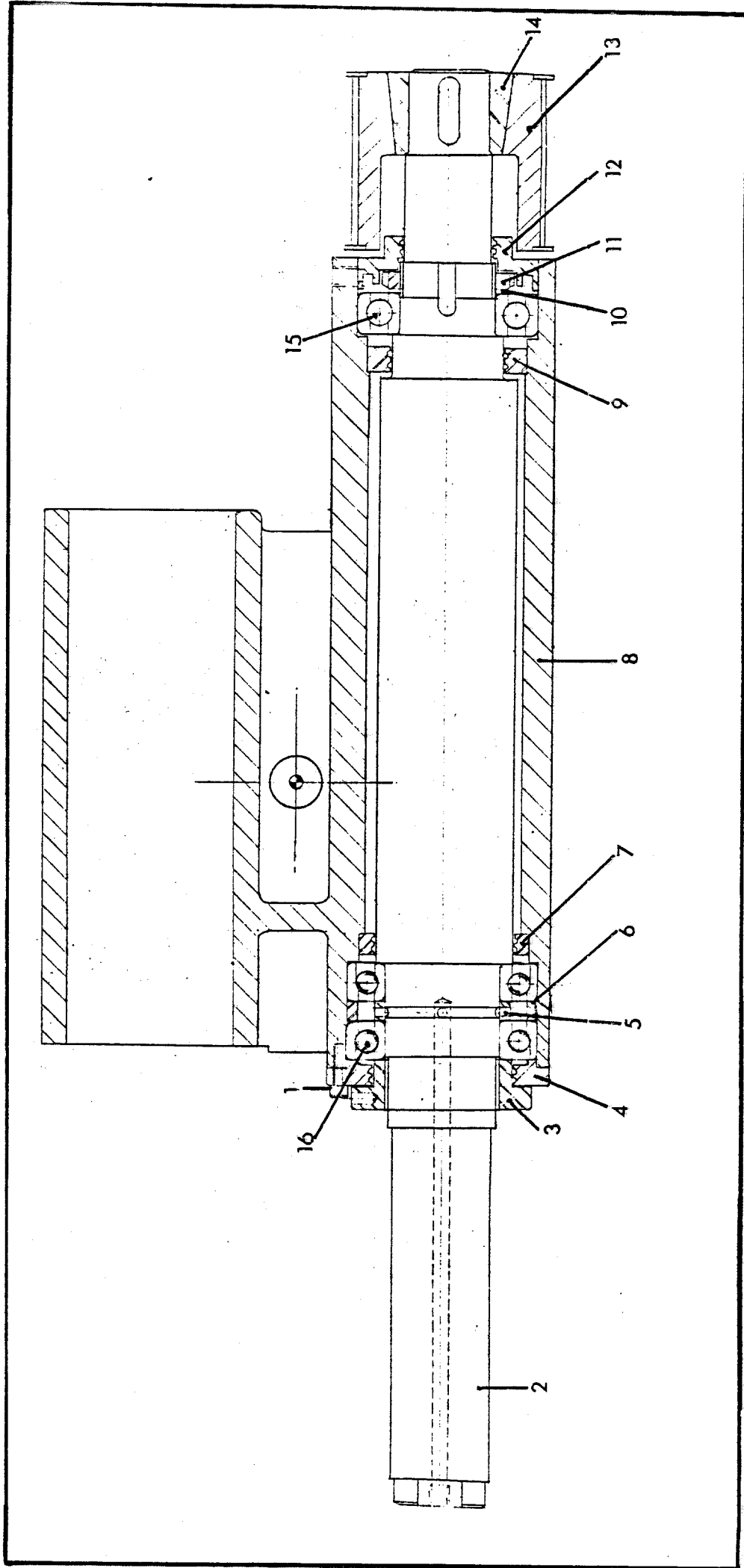
| REF.NO. | DESCRIPTION  | PART NO.   |
|---------|--|------------|
| 1       | Hexagon Socket Countersunk Head Screws<br>M5 x 12mm long                           | K05 25 317 |
| 2       | Universal Head Spindle   | GEM 4445   |
| * 2a    | Unrversal Head Spindle - long  | GEM 3906   |
| 3       | Bearing Locknut  | GEM 3808   |
| 4       | End Cap for Spindle Housing  | GEM 3827   |
| 5       | Inner Bearing Spacer   | GEM 3801   |
| 6       | Outer Bearing Spacer   | GEM 3800   |
| 7       | Grease Retainer  | GEM 3802   |
| 8       | Universal Head Spindle Housing   | GEM 3904   |
| 9       | Grease Retainer - rear bearings  | GEM 3792   |
| 10      | Ball Bearing Locknut M45 x 1.5mm left hand   | GEM 3957   |
| + 11    | Hexagon Socket Countersunk Head Screw<br>M4 dia. x 10mm long                       | K05 25 309 |
| 12      | Grease Retainer - Rear Bearings  | GEM 3792   |
| 13      | Fenner Vee Belt Spindle Pulley<br>95 PCD 2 grooves 031Z 0262                       | K05 78 235 |
| 14      | Fenner Taper Lock Bush No. 1610 38mm bore  | K30 77 186 |
| ∅ 15    | Single Row Radial Ball Bearing 85mm O/D x<br>45mm bore x 19mm wide RHP 6209 TB E.5 | K06 20 106 |
| 16      | Angular Contact Bearing 90mm O/D x 55mm bore<br>x 18mm wide RHP 7011 EP7           | K06 01 161 |
| * 17    | Fenner Vee Belts SPZ 940   | K30 77 156 |

\* Not Shown

∅ "KLUBER" Grease Packed

+ Not supplied since 16.9.76





UNIVERSAL HEAD SPINDLE ASSEMBLY  
40mm. dia. spindle

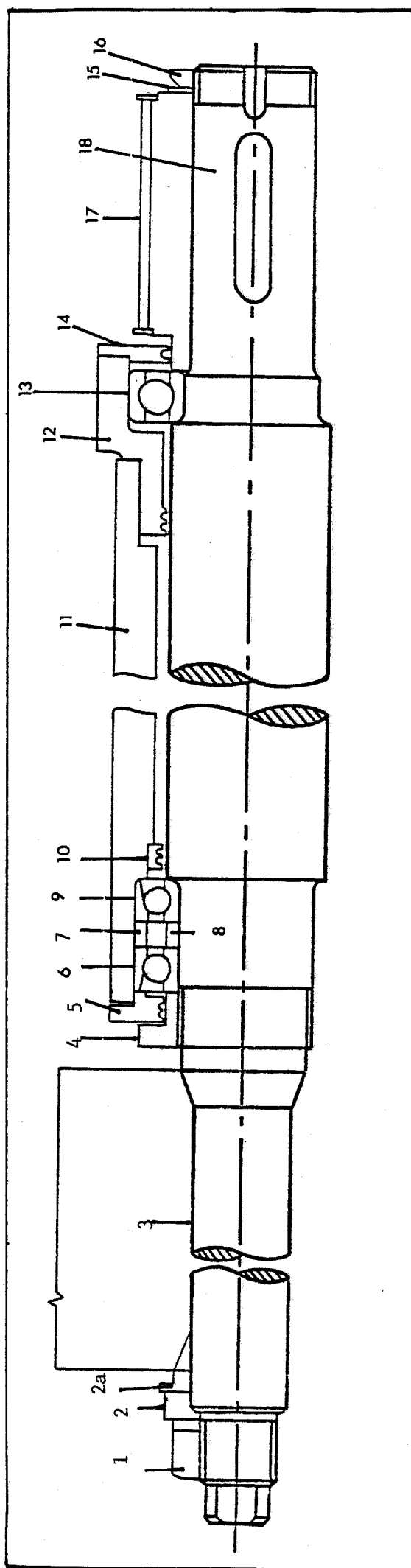
BOTTOM HORIZONTAL CUTTERBLOCK SPINDLE - 40MM DIA. SQUARE SHOULDERED WITH HEAVY DUTY ANGULAR CONTACT BEARINGS

| REF.NO. | DESCRIPTION  | PART NO.   |
|---------|--|------------|
| 1       | Spindle Locknut  | GEM 708    |
| 2       | Spacer   | GEM 3954   |
| 2a      | Cutterblock Locking Cones  | FAC 13     |
| 3       | Bottom Horizontal Cutterblock Spindle  | GEM 4165   |
| 4       | Bearing Locknut  | GEM 3809   |
| 5       | Bearing Locknut and Grease Retainer  | GEM 3827   |
| ∅ 6     | Paired Angular Contact Bearing 90mm O/D<br>x 55mm bore x 18mm wide RHP 7011 EP7  | K06 20 132 |
| 7       | Outer Bearing Spacer   | GEM 3800   |
| 8       | Inner Bearing Spacer   | GEM 3801   |
| ∅ 9     | Paired Angular Contact Bearing 90mm O/D<br>x 55mm bore x 21mm wide RHP 7011 EP7  | K06 20 132 |
| 10      | Grease Retainer  | GEM 3802   |
| 11      | Spindle Housing  | GEM 4837   |
| ≠ 12    |  |            |
| ∅ 13    | Single Row Radial Ball Bearing 100mm O/D<br>x 55mm bore x 21mm wide RHP 6211 EP7 | K06 20 110 |
| 14      | Grease Retainer for Pulley   | GEM 3811   |
| 15      | Tab Lockwasher for M50 Nut   | K05 27 260 |
| 16      | Chamfered Notch Nut M50 x 1.5 pitch  | K05 27 211 |
| 17      | Spindle Pulley   | GEM 4546   |
| 18      | Key 14mm x 9mm x 70mm long   | K05 23 187 |
| * 19    | Fenner Vee Belts SPZ 1340  | K30 77 126 |
| * 20    | Square Head Dowel 8mm dia.<br>x 40mm long 1 for GEM 4837                         | K05 29 210 |

∅ "KLUBER" Grease Packed

≠ Not Supplied

\* Not Shown



BOTTOM HORIZONTAL SPINDLE

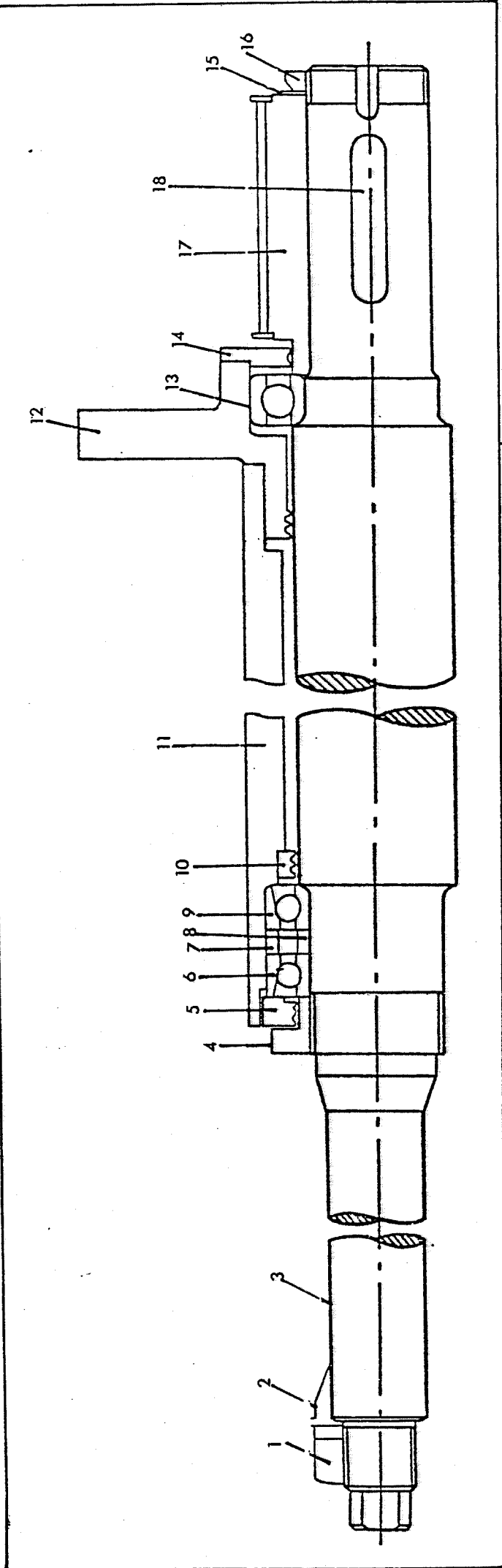
TOP HORIZONTAL CUTTERBLOCK SPINDLE - 40MM DIA. SQUARE SHOULDERED WITH HEAVY DUTY ANGULAR CONTACT BEARINGS

| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| 1       | Spindle Locknut   | GEM 707    |
| 2       | Cutterblock Locking Cones   | FAC 13     |
| 3       | Top Horizontal Cutterblock Spindle  | GEM 4164   |
| 4       | Bearing Locknut   | GEM 3808   |
| 5       | Bearing Locknut and Grease Retainer   | GEM 3810   |
| ∅ 6     | 'Paired' Angular Contact Bearing 90mm O/D<br>x 55mm bore x 18mm wide RHP 7011 EP7   | K06 20 132 |
| 7       | Outer Bearing Spacer  | GEM 3800   |
| 8       | Inner Bearing Spacer  | GEM 3801   |
| ∅ 9     | 'Paired' Angular Contact Bearing 90mm O/D<br>x 55mm bore x 18mm wide RHP 7011 EP7   | K06 20 132 |
| 10      | Grease Retainer   | GEM 3802   |
| 11      | Barrel for Top Head Spindle   | GEM 4835   |
| ≠ 12    |   |            |
| ∅ 13    | Single Row Radial Ball Bearing 100mm O/D<br>x 55mm bore x 21mm wide RHP 6211 TB EP7 | K06 20 110 |
| 14      | Grease Retainer   | GEM 3802   |
| 15      | Tab Lockwasher for M50 Nut  | K05 27 260 |
| 16      | Chamfered Notch Nut M50 x 1.5 pitch   | K05 27 211 |
| 17      | Spindle Pulley  | GEM 4546   |
| 18      | Key 14mm x 9mm x 70mm long  | K05 23 187 |
| * 19    | Fenner Vee Belts SPZ 1340   | K30 77 126 |
| * 20    | Square Head Dowel 8mm dia. x 40mm long<br>1 for GEM 4835                            | K05 29 210 |

∅ "KLUBER" Grease Packed

≠ Not Supplied

\* Not Shown



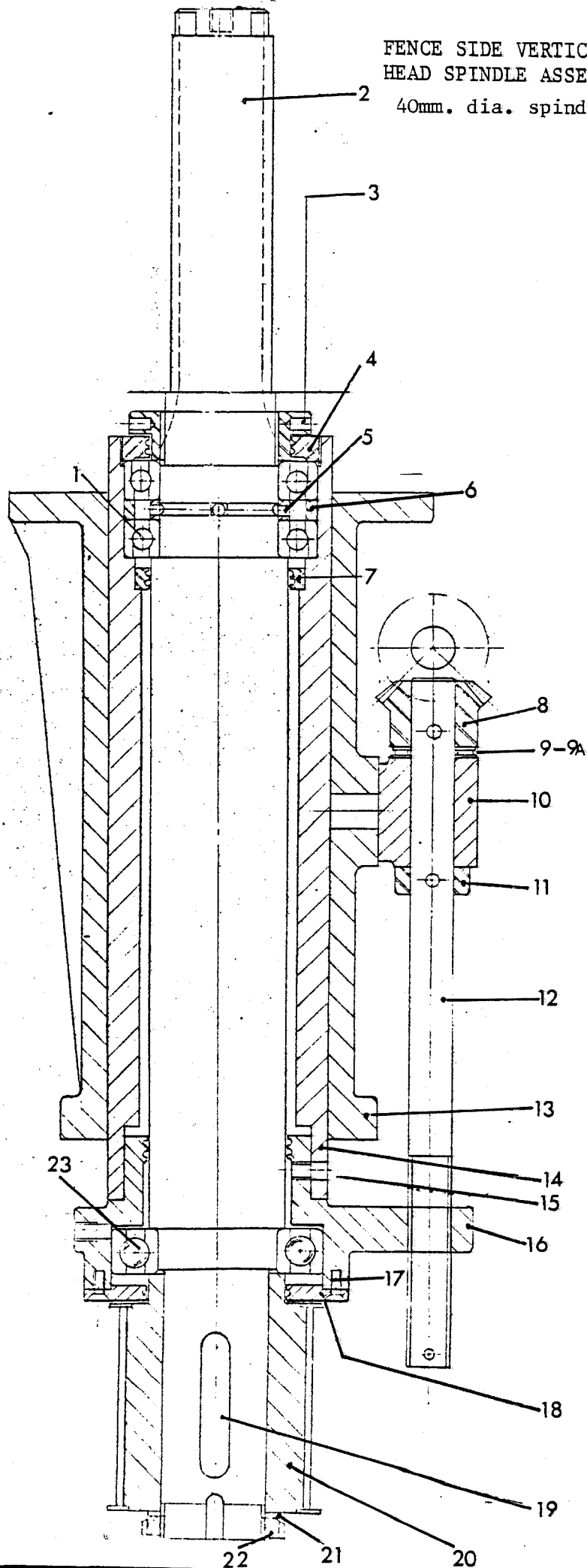
TOP HORIZONTAL SPINDLE

FENCE SIDE CUTTERBLOCK SPINDLE - 40MM DIA. SQUARE SHOULDERED WITH HEAVY DUTY ANGULAR CONTACT BEARINGS

| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| ∅ 1     | Angular Contact Bearing 90mm O/D x<br>55mm bore x 18mm wide RHP 7011 TDU EP7        | K06 20 132 |
| 2       | Fence Side Vertical Spindle   | GEM 4662   |
| 3       | Bearing Locknut   | GEM 3808   |
| 4       | Bearing Locknut and Grease Retainer   | GEM 3810   |
| 5       | Inner Bearing Spacer  | GEM 3801   |
| 6       | Outer Bearing Spacer  | GEM 3800   |
| 7       | Grease Retainer   | GEM 3802   |
| 8       | Mitre Gear  | GEM 2519   |
| 9       | INA Thrust Bearing AXK 2035   | K06 10 212 |
| 9a      | INA Thrust Washer 2035  | K06 10 252 |
| 10      | Mitre Gear Bracket for Side Head Vertical<br>Adjustment                             | GEM 3122   |
| 11      | Collar 20mm dia.  | K05 28 215 |
| 12      | Vertical Screw for Fence Side Head Vertical<br>Adjustment                           | GEM 3122   |
| 13      | Carriage for Side Head  | GEM 3818   |
| 14      | Side Head Barrel  | GEM 3817   |
| 15      | Locating Screw M8   | GEM 3889   |
| 16      | Bearing Housing and Adjuster  | GEM 3816   |
| 17      | Hexagon Socket Countersunk Head Screw<br>M5 x 12mm long                             | K05 25 317 |
| 18      | Grease Retainer for Pulley  | GEM 3811   |
| 19      | Key 14mm x 9mm x 70mm long  | K05 23 187 |
| 20      | Fenner Vee Belt Pulley 95 PCD<br>2 grooves 031Z 0132                                | K05 78 235 |
| 21      | Tab Lockwasher for M50 Nut  | K05 27 260 |
| 22      | Chamfered Notch Nut M50 x 1.5 pitch   | K05 27 211 |
| ∅ 23    | Single Row Radial Ball Bearing 100mm O/D<br>x 55mm bore x 21mm wide RHP 6211 TB EP7 | K06 20 110 |
| * 24    | Fenner Taper Lock Bush No. 1610 38mm bore   | K30 77 186 |
| * 25    | Fenner Vee Belts SPZ 2000   | K30 78 231 |
| ∅       | "KLUBER" Grease Packed  |            |
| *       | not shown   |            |

FENCE SIDE VERTICAL  
HEAD SPINDLE ASSEMBLY

40mm. dia. spindle

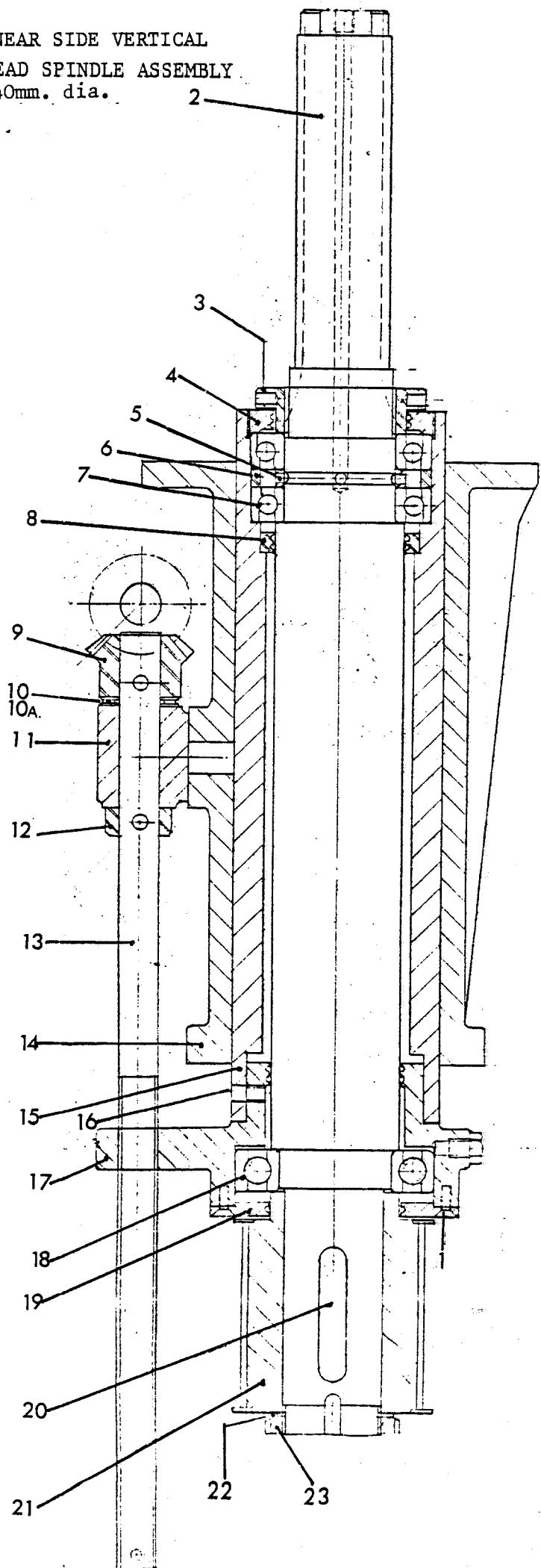


NEAR SIDE CUTTERBLOCK SPINDLE - 40MM DIA. SQUARE SHOULDERED WITH HEAVY DUTY ANGULAR CONTACT BEARINGS

| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| 1       | Hexagon Socket Countersunk Head Screws<br>M5 x 12mm long                            | KO5 25 317 |
| 2       | Near Side Vertical Spindle  | GEM 4663   |
| 3       | Bearing Locknut   | GEM 3809   |
| 4       | Bearing Locknut and Grease Retainer   | GEM 3810   |
| 5       | Inner Bearing Spacer  | GEM 3801   |
| 6       | Outer Bearing Spacer  | GEM 3800   |
| ∅ 7     | Angular Contact Bearing 90mm O/D x 55mm<br>bore x 18mm wide RHP 7011 TDU EP7        | KO6 20 132 |
| 8       | Grease Retainer   | GEM 3802   |
| 9       | Mitre Gear  | GEM 2519   |
| 10      | INA Thrust Bearing AXK 2035   | KO6 10 212 |
| 10a     | INA Thrust Washer 2035  | KO6 10 252 |
| 11      | Mitre Gear Bracket for Side Head Vertical<br>Adjustment                             | GEM 3121   |
| 12      | Collar 20mm dia.  | KO5 28 211 |
| 13      | Vertical Screw for Near Side Head Vertical<br>Adjustment                            | GEM 3123   |
| 14      | Carriage for Side Head  | GEM 3818   |
| 15      | Side Head Barrel  | Gem 3817   |
| 16      | Locating Screw M8   | GEM 3889   |
| 17      | Bearing Housing and Adjuster  | GEM 3816   |
| ∅ 18    | Single Row Radial Ball Bearing 100mm O/D<br>x 55mm bore x 21mm wide RHP 6211 TB EP7 | KO6 01 309 |
| 19      | Grease Retainer for Pulley  | GEM 3811   |
| 20      | Key 14mm x 9mm x 70mm long  | KO5 23 187 |
| 21      | Fenner Vee Belt Pulley<br>95 PCD 2 Grooves 031Z 0132                                | KO5 78 235 |
| 22      | Tab Lockwasher for M50 Nut  | KO5 27 260 |
| 23      | Chamfered Notch Nut M50 x 1.5 pitch   | KO5 27 211 |
| * 24    | Fenner Taper Lock Bush No. 1610 38mm bore   | K30 77 186 |
| * 25    | Fenner Vee Belts SPZ 2000   | K30 78 231 |
| ∅       | "KLUBER" Grease Packed  |            |
| *       | not shown   |            |



NEAR SIDE VERTICAL  
HEAD SPINDLE ASSEMBLY  
40mm. dia.



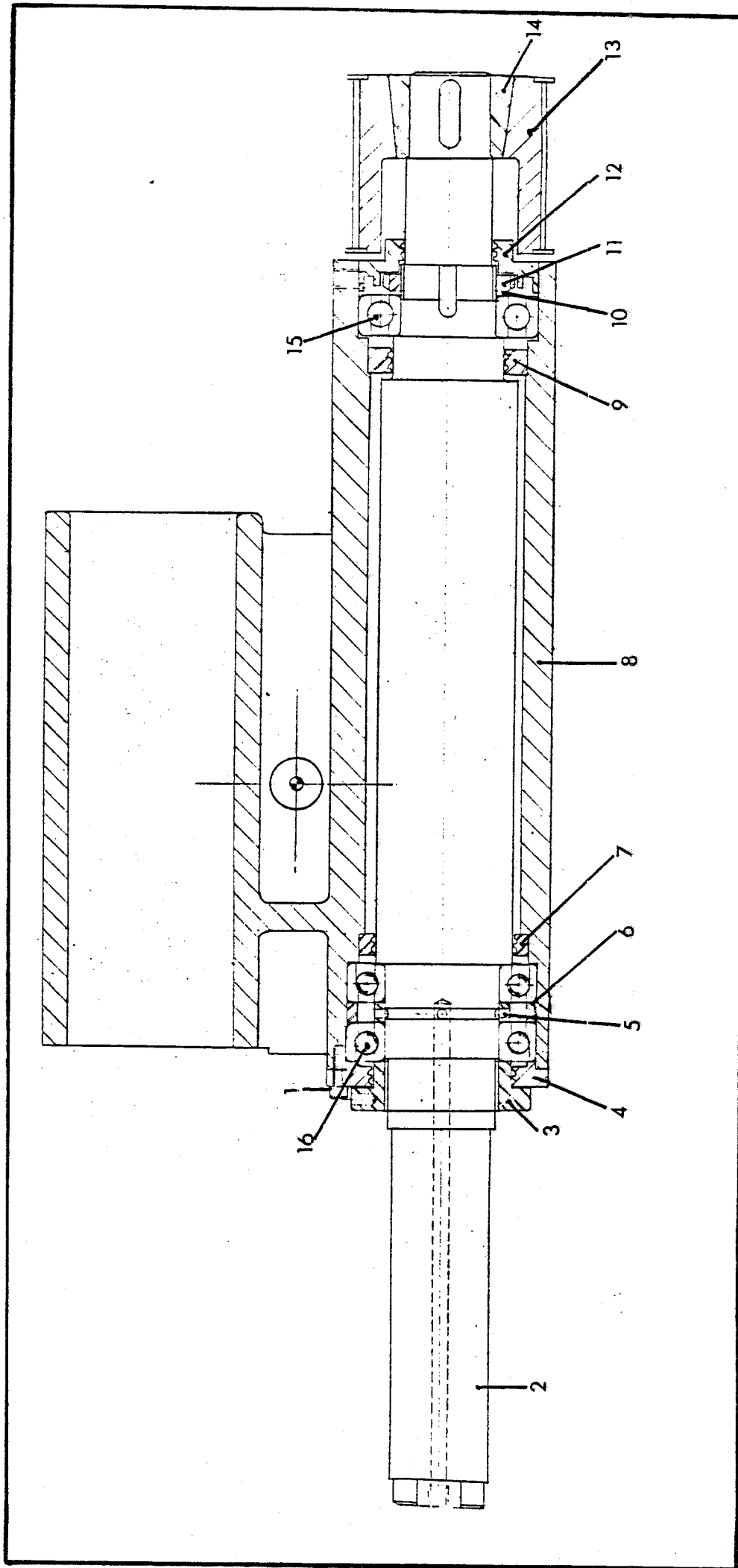
UNIVERSAL HEAD SPINDLE - 40MM DIA. SQUARE SHOULDERED WITH HEAVY DUTY ANGULAR CONTACT BEARINGS

| REF.NO. | DESCRIPTION  | PART NO.   |
|---------|--|------------|
| 1       | Hexagon Socket Countersunk Head Screws<br>M5 x 12mm long                           | K05 25 317 |
| 2       | Universal Head Spindle   | GEM 4664   |
| * 2a    | Universal Head Spindle - long  | GEM 3906   |
| 3       | Bearing Locknut  | GEM 3808   |
| 4       | End Cap for Spindle Housing  | GEM 3827   |
| 5       | Inner Bearing Spacer   | GEM 3801   |
| 6       | Outer Bearing Spacer   | GEM 3800   |
| 7       | Grease Retainer  | GEM 3802   |
| 8       | Universal Head Spindle Housing   | GEM 3904   |
| 9       | Grease Retainer - rear bearings  | GEM 3792   |
| 10      | Ball Bearing Locknut M45 x 1.5mm left hand   | GEM 3957   |
| + 11    | Hexagon Socket Countersunk Head Screw<br>M4 dia. x 10mm long                       | K05 25 309 |
| 12      | Grease Retainer - Rear Bearings  | GEM 3792   |
| 13      | Fenner Vee Belt Spindle Pulley<br>95 PCD 2 grooves 031Z 0262                       | K05 78 235 |
| 14      | Fenner Taper Lock Bush No. 1610 38mm bore  | K30 77 186 |
| ∅ 15    | Single Row Radial Ball Bearing 85mm O/D<br>x 45mm bore x 19mm wide RHP 6209 TB E.5 | K06 20 106 |
| 16      | Angular Contact Bearing 90mm O/D x 55mm bore<br>x 18mm wide RHP 7011 7DU EP7       | K06 01 161 |
| * 17    | Fenner Vee Belts SPZ 940   | K30 77 156 |

\* Not Shown

∅ "KLUBER" Grease Packed

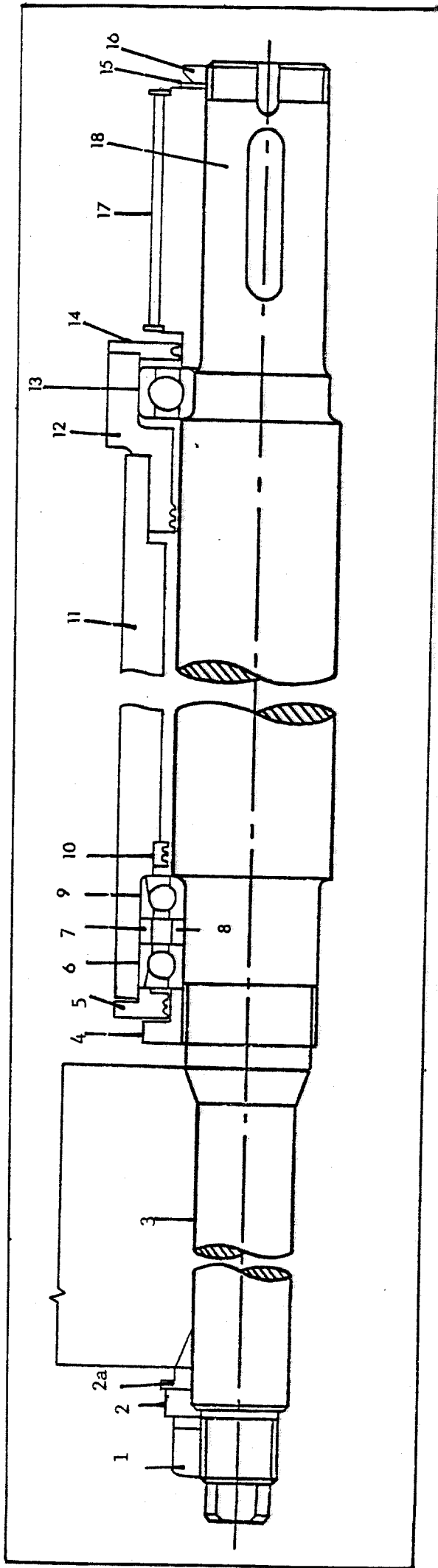
+ Not supplied since 16.9.76



UNIVERSAL HEAD SPINDLE ASSEMBLY  
40mm. dia. spindle

BOTTOM HORIZONTAL CUTTERBLOCK SPINDLE 40MM. DIA. SQUARE SHOULDERED WITH  
OUTBOARD BEARINGS AND HEAVY DUTY ANGULAR CONTACT BEARINGS

| REF.NO: | DESCRIPTION  | PART NO:   |
|---------|--|------------|
| 1       | Spindle locknut  | GEM 708    |
| 2       | Spacer   | GEM 3954   |
| 2a      | Cutterblock locking cones  | FAC 13     |
| 3       | Bottom horizontal cutterblock spindle  | GEM 4665   |
| 4       | Bearing locknut  | GEM 3809   |
| 5       | Bearing locknut and grease retainer  | GEM 3827   |
| ∅ 6     | Paired angular contact bearing 90mm. O.D. x 55mm.<br>bore x 21mm. wide RHP 7011 EP7  | K06 20 132 |
| 7       | Outer bearing spacer   | GEM 3800   |
| 8       | Inner bearing spacer   | GEM 3801   |
| ∅ 9     | Paired angular contact bearing 90mm. O.D. x 55mm.<br>bore x 21mm. wide RHP 7011 EP7  | K06 20 132 |
| 10      | Grease retainer  | GEM 3802   |
| 11      | Spindle housing  | GEM 4837   |
| ≠ 12    |  |            |
| ∅ 13    | Single row radial ball bearing 100mm. O.D. x 55mm.<br>bore x 21mm. wide RHP 6211 EP7 | K06 20 110 |
| 14      | Grease retainer for pulley   | GEM 3811   |
| 15      | Tab lockwasher for M50.nut   | K05 27 260 |
| 16      | Chamfered notchnut M50. x 1.5 pitch  | K05 27 211 |
| 17      | Spindle pulley   | GEM 4546   |
| 18      | Key 14mm. x 9mm. x 70mm. long  | K05 23 187 |
| * 19    | "FENNER" vee belts SPZ 1340  | K30 77 126 |
| * 20    | Square head dowel 8mm. dia. x 40mm. long (1) FOR<br>gem 4837                         | K05 29 210 |
| ∅       | "KLUBER" grease packed   |            |
| ≠       | Not supplied   |            |
| *       | Not shown  |            |



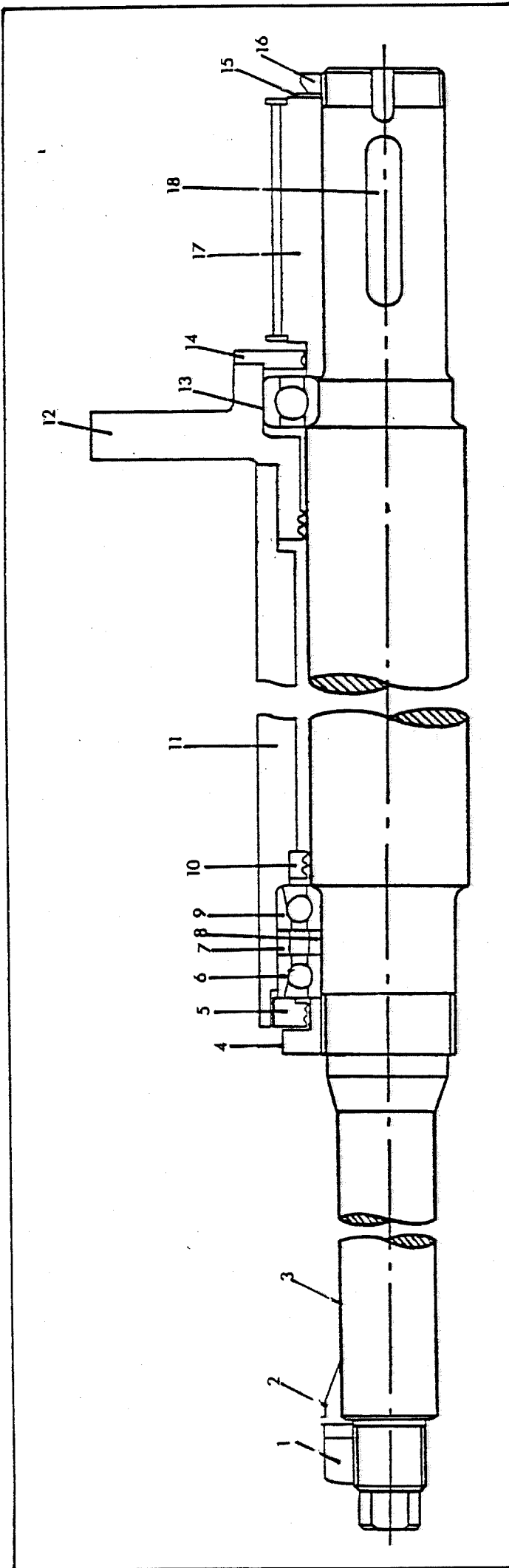
BOTTOM HORIZONTAL SPINDLE

TOP HORIZONTAL HEAD 40MM DIA. SQUARE SHOULDERED WITH HEAVY DUTY ANGULAR CONTACT BEARINGS AND OUTBOARD BEARINGS

| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| 1       | Spindle Locknut   | GEM 707    |
| 2       | Cutterblock Locking Cones   | FAC 13     |
| 3       | Top Horizontal Cutterblock Spindle  | GEM 4542   |
| 4       | Key for Cutterblock Spindle   | GEM 4255   |
| 5       | Hexagon Socket Countersunk Head Screws<br>M3 dia. x 12mm long 1 for GEM 4255  | K05 25 303 |
| 6       | Bearing Locknut   | GEM 3808   |
| 7       | Bearing Locknut and Grease Retainer   | GEM 3810   |
| ∅ 8     | Angular Contact Bearing 90mm O/D x 55mm bore<br>x 18mm wide RHP 7011 TDWX EP7 | K06 20 132 |
| 9       | Outer Bearing Spacer  | GEM 3800   |
| 10      | Inner Bearing Spacer  | GEM 3801   |
| ∅ 11    | Angular Contact Ball Bearing RHP 6211 TB EP7                                  | K06 20 110 |
| 12      | Grease Retainer   | GEM 3802   |
| 13      | Barrel and Bearing Housing for Top Head Spindle                               | GEM 4835   |
| 14      | Grease Retainer for Pulley  | GEM 3811   |
| 15      | Hexagon Socket Countersunk Head Screw M5 dia.<br>x 12mm long 4 for GEM 3811   | K05 25 317 |
| 16      | Tab Lockwasher for M50 Nut  | K05 27 260 |
| 17      | Chamfered Notch Nut M50 x 1.5 pitch   | K05 27 211 |
| 18      | Key 14mm x 9mm x 70mm long  | K05 23 187 |
| * 19    | Square Head Dowel 8mm dia. x 40mm long<br>1 for GEM 4835                      | K05 29 210 |
| * 20    | Spindle Pulley  | GEM 4546   |
| * 21    | Fenner Vee Belts SPZ 1420   | K30 77 129 |

∅ "KLUBER" Grease Packed

\* Not shown



TOP HORIZONTAL SPINDLE

BOTTOM HORIZONTAL HEAD - 35MM DIA. SQUARE SHOULDERED SINGLE ROW RADIAL BEARINGS

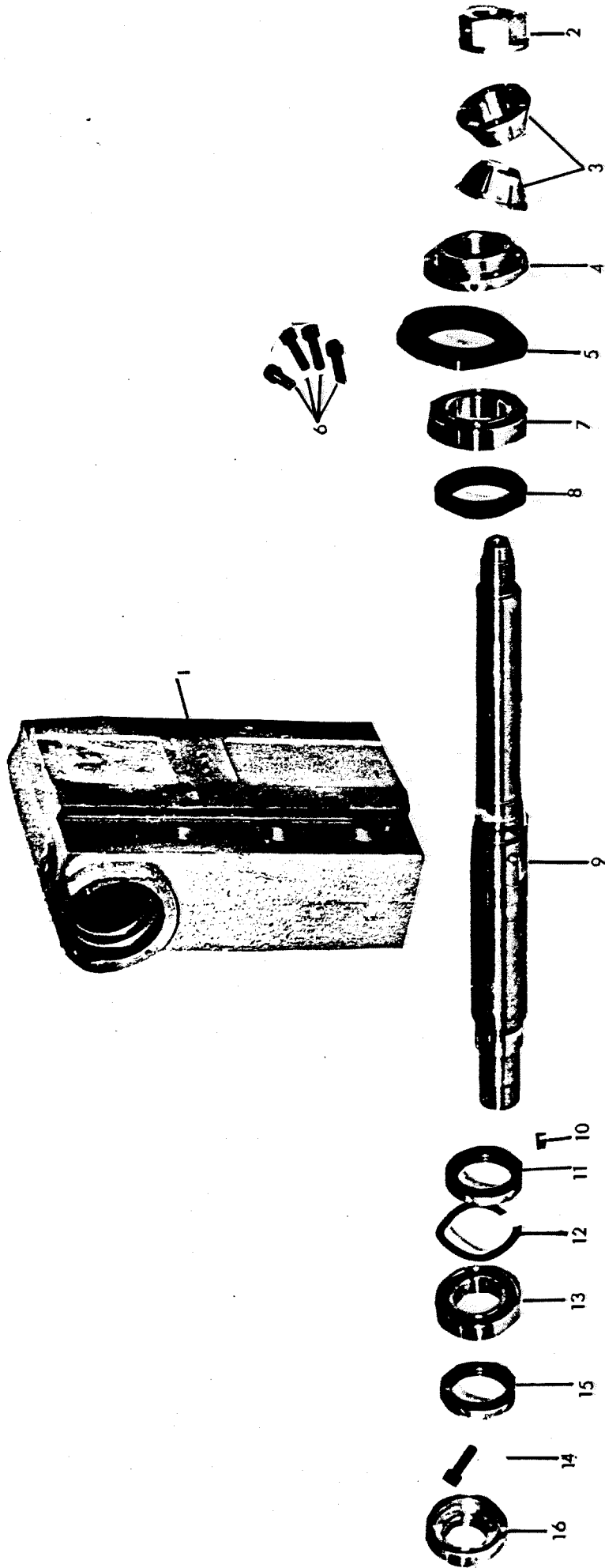
| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| 1       | Spindle Housing   | GEM 4521   |
| 2       | Cutter Spindle Locknut                                  | GEM 708    |
| 3       | Cutterblock Locking Cones                               | FD 2407    |
| 4       | Ball Bearing Locknut                                    | GEM 3030   |
| 5       | End Cap   | GEM 3044   |
| 6       | Socket Head Hexagon Screws M10 x 30mm long              | K05 25 210 |
| ∅ 7     | Ball Bearing RHP 6209 TB EP7                            | K06 20 106 |
| 8       | Labyrinth Sleeve for Front Bearing                      | GEM 3032   |
| + 9     | Cutterblock Spindle                                     | GEM 3970   |
| 10      | Key   | K05 23 113 |
| 11      | Grease Retainer   | GEM 3792   |
| 12      | EMO Waved Washer EPL 60                                 | K30 89 110 |
| ∅ 13    | Ball Bearing RHP 6209 TB EP7                            | K06 20 106 |
| + 14    | Hexagon Socket Countersunk Head Screw<br>M4 x 10mm long | K05 25 309 |
| 15      | Ball Bearing Locknut                                    | GEM 3958   |
| 16      | Grease Retainer for Spindle Bearing                     | GEM 3791   |
| * 17    | Square Head Dowel 8mm dia. x 40mm long for<br>GEM 4521  | K05 29 210 |
| * 18    | Hexagon Socket Screws - cup point -<br>2 for GEM 4521   | K05 26 112 |
| * 19    | Hexagon Socket Screw M5 x 20mm long<br>4 for GEM 3044   | K05 25 145 |

∅ "KLUBER" Grease Packed

+ Not supplied since 16.9.76

\* Not Shown





CUTTERBLOCK SPINDLE (35mm dia.) ASSEMBLY WITH  
 LUBRICATED BEARINGS EXCLUSIVE OF DRIVING PULLEY  
 BOTTOM HORIZONTAL HEAD

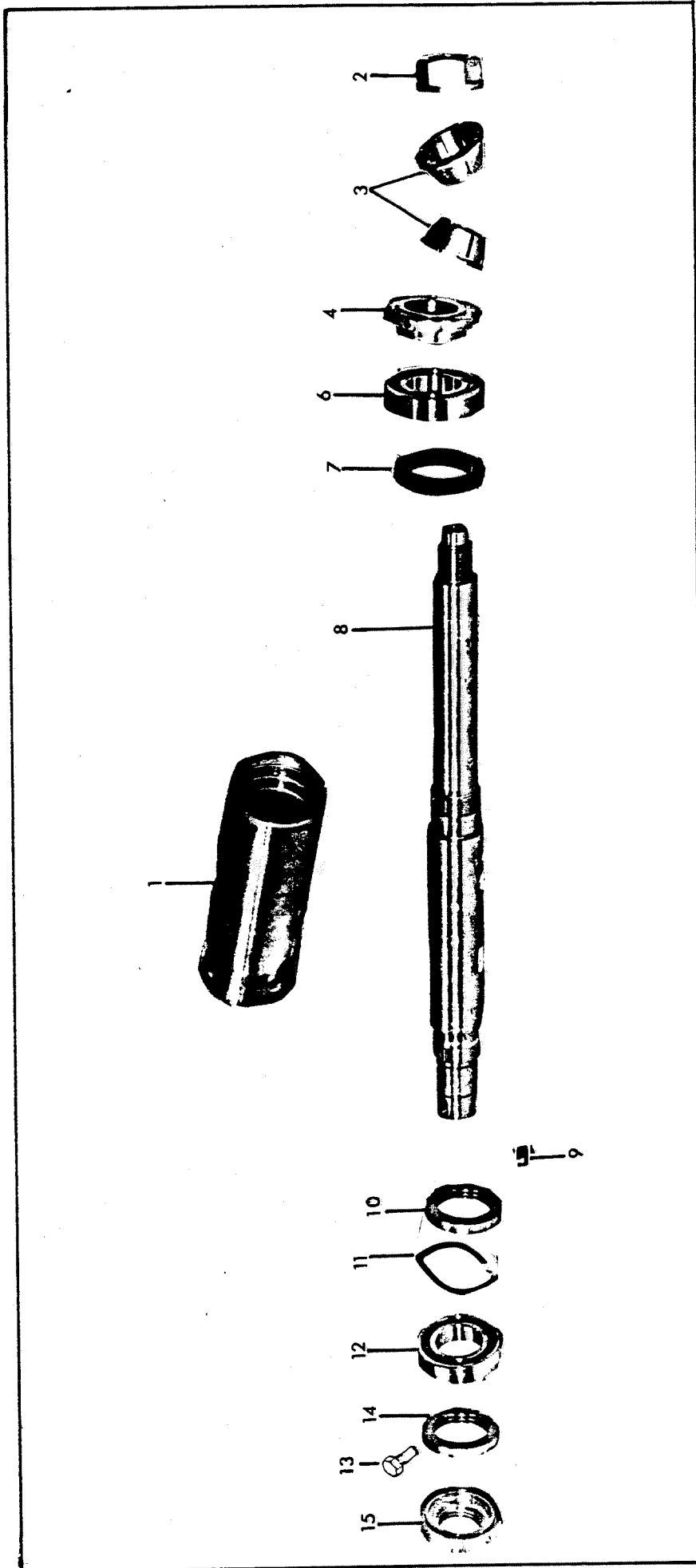
TOP HORIZONTAL HEAD - 35MM DIA. SQUARE SHOULDERED SINGLE ROW RADIAL BEARINGS

| REF.NO. | DESCRIPTION  | PART NO.   |
|---------|--|------------|
| 1       | Spindle Barrel   | GEM 4318   |
| 2       | Cutterblock Spindle Locknut  | GEM 707    |
| 3       | Cutterblock Locking Cones  | FD 2407    |
| 4       | Ball Bearing Locknut   | GEM 3030   |
| * 5     | Ball Bearing Locknut   | GEM 3029   |
| ∅ 6     | Ball Bearing RHP 6209 TB EP7   | KO6 20 106 |
| 7       | Labyrinth Sleeve for Front Bearing   | GEM 3032   |
| 8       | Cutterblock Spindle  | GEM 3972   |
| 9       | Key  | KO5 23 113 |
| 10      | Grease Retainer  | GEM 3791   |
| 11      | EMO Waved Washer EPL 60  | K30 89 110 |
| ∅ 12    | Ball Bearing RHP 6209 TB EP7   | KO6 20 106 |
| + 13    | Hexagon Socket Countersunk Head Screw<br>M4 x 10mm long                                  | KO5 25 309 |
| 14      | Ball Bearing Locknut   | GEM 3957   |
| 15      | Grease Retainer for Spindle Bearing  | GEM 3792   |
| * 16    | Hexagon Socket Screws ( cup point )<br>M6 x 6mm long                      2 for GEM 4318 | KO5 26 112 |

∅ "KLUBER" Grease Packed

\* Not Shown

+ Not supplied since 16.9.76



CUTTERBLOCK SPINDLE (35mm.dia.) ASSEMBLY WITH PERMANENTLY  
 LUBRICATED BEARINGS - EXCLUSIVE OF DRIVING PULLEY  
 TOP HORIZONTAL HEAD

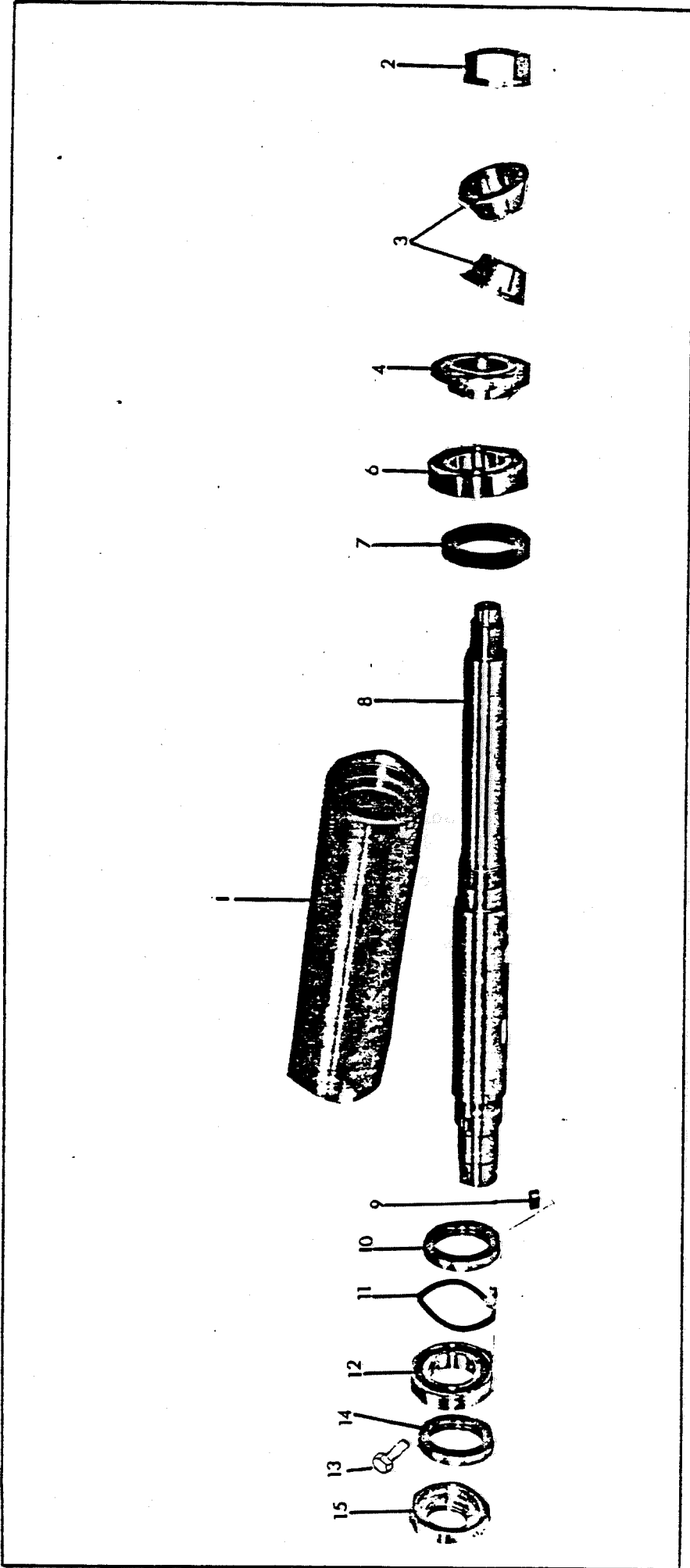
FENCE SIDE VERTICAL HEAD - 35MM DIA. SQUARE SHOULDERED WITH SINGLE ROW RADIAL BEARINGS

| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| 1       | Spindle Barrel  | GEM 4319   |
| 2       | Cutterblock Spindle Locknut   | GEM 707    |
| 3       | Cutterblock Locking Cones   | FD 2407    |
| 4       | Ball Bearing Locknut  | GEM 3030   |
| * 5     | Ball Bearing Locknut  | GEM 3029   |
| ∅ 6     | Ball Bearing RHP 6209 TB EP7  | K06 20 106 |
| 7       | Labyrinth Sleeve for Front Bearing  | GEM 3032   |
| 8       | Cutterblock Spindle   | GEM 3975   |
| 9       | Key 10mm x 8mm x 32mm long  | K05 23 129 |
| 10      | Grease Retainer   | GEM 3792   |
| 11      | EMO Waved Washer EPL 60   | K30 89 110 |
| ∅ 12    | Ball Bearing RHP 6209 TB EP7  | K06 20 106 |
| + 13    | Hexagon Socket Countersunk Head Screw<br>M4 x 10mm long   | K05 25 309 |
| 14      | Ball Bearing Locknut  | GEM 3957   |
| 15      | Grease RETainer for Spindle Lower Bearings  | GEM 3791   |
| * 16    | Cup Point Hexagon Socket Screw M6 dia. x 6mm long<br>M6 dia. x 6mm long                      2 for GEM 4319 | K05 26 112 |
| * 17    | Fenner Vee Belt Spindle Pulley<br>95 PCD    2 Grooves    031Z 0133  | K05 78 235 |
| * 18    | Fenner Taper Lock Bush No. 1610    38mm bore  | K30 77 186 |
| * 19    | Fenner Vee Belts                      SPZ 2000  | K30 78 231 |

\* Not Shown

∅ "KLUBER" Grease Packed

+ Not supplied since 16.9.76



CUTTERBLOCK SPINDLE (35mm dia.) ASSEMBLY WITH  
 PERMANENTLY LUBRICATED BEARINGS - EXCLUSIVE  
 OF DRIVING PULLEY - FENCE SIDE VERTICAL HEAD

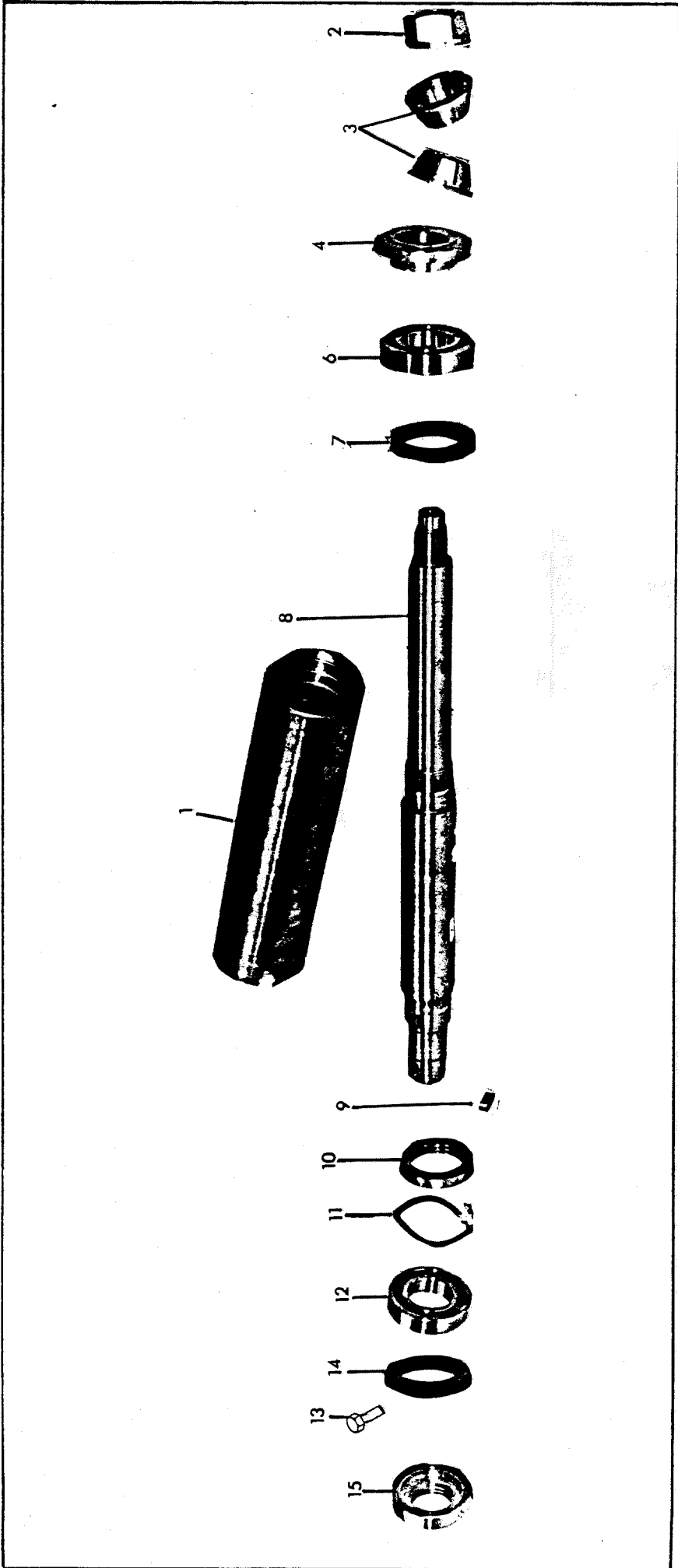
NEAR SIDE VERTICAL HEAD - 35MM DIA. SQUARE SHOULDERED WITH SINGLE ROW RADIAL BEARINGS

| REF.NO. | DESCRIPTION   | PART NO.   |
|---------|---|------------|
| 1       | Spindle Barrel  | GEM 4319   |
| 2       | Cutterblock Spindle Locknut                                       | GEM 708    |
| 3       | Cutterblock Locking Cones   | FD 2407    |
| 4       | Ball Bearing Locknut  | GEM 3030   |
| * 5     | Ball Bearing Locknut  | GEM 3029   |
| ∅ 6     | Ball Bearing RHP 6209 TB EP7                                      | K06 20 106 |
| 7       | Labyrinth Sleeve for Front Bearing                                | GEM 3032   |
| 8       | Cutterblock Spindle   | GEM 3976   |
| 9       | Key   | K05 23 129 |
| 10      | Grease Retainer   | GEM 3792   |
| 11      | EMO Waved Washer EPL 60   | K30 89 110 |
| ∅ 12    | Ball Bearing RHP 6209 TB EP7                                      | K06 20 106 |
| + 13    | Hexagon Socket Countersunk Head Screw M4 x 10mm long              | K05 25 309 |
| 14      | Ball Bearing Locknut M45 x 1.5 LH                                 | GEM 3957   |
| 15      | Grease Retainer for Spindle Lower Bearing                         | GEM 3791   |
| * 16    | Cup Point Hexagon Socket Screws M6 dia. x 6mm long 2 for GEM 4319 | K05 26 112 |
| * 17    | Fenner Vee Belt Spindle Pulley 95 PCD 2 Grooves 031Z 0132         | K30 78 235 |
| * 18    | Fenner Taper Lock Bush No. 1610 38mm bore                         | K30 7/ 186 |
| * 19    | Fenner Vee Belts SPZ 2540   | K30 77 157 |

\* Not Shown

∅ "KLUBER" Grease Packed

+ Not supplied since 16.9.76



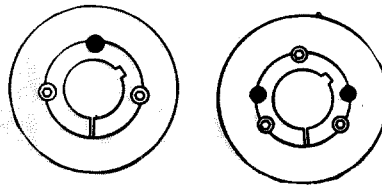
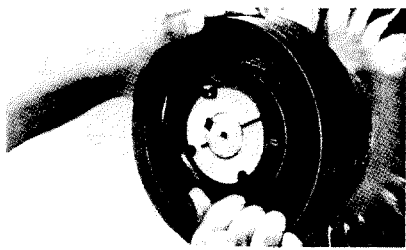
CUTTERBLOCK SPINDLE (35mm dia.) ASSEMBLY WITH PERMANENTLY  
 LUBRICATED BEARINGS - EXCLUSIVE OF DRIVING PULLEY -  
 NEAR SIDE VERTICAL HEAD

## REPLACEMENT OF PARTS ASSOCIATED WITH THE CUTTERBLOCK SPINDLES.

The following procedure is applicable to all spindles.

1. Remove the cutterblock, chipbreaker (when fitted) and guard.
2. Slacken off the tension of the cutterblock spindle driving belt. This is effected by loosening the motor fixing bolts on the attendant motor bracket or the motor tensioner bolts whichever apply. The belt can then be removed.
3. Remove the taper lock bush from the cutterblock spindle pulley.

TO REMOVE

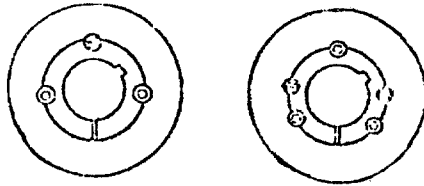


1. Slacken all screws by several turns, remove one or two according to number of jacking off holes shown thus ● in diagram. Insert screws in jacking off holes after oiling thread and point of grub screws or thread and under head of cap screws.
2. Tighten screws alternately until bush is loosened in hub and assembly is free on shaft.
3. Remove assembly from shaft.



## RE-FITTING THE PULLEYS AND TAPER LOCK BUSHES

1. After ensuring that the mating tapered surfaces are completely clean and free from oil or dirt, insert bush in hub so that holes line up.
2. Oil thread and point of grub screws or thread under head of cap screws. Place screws loosely in holes threaded in hub, shown thus ⊙ in diagram



3. Clean shaft and fit hub and bush to shaft as one unit and locate in position desired, remembering that bush will nip the shaft first and then hub will be slightly drawn on to the bush.
4. Using a hexagon wrench, tighten screws gradually and alternately until all are pulled up very tightly. Use a piece of pipe on wrench to increase leverage.
5. After the bush has been tightened on to the shaft fit the parallel key which is side fitting with top clearance.
6. After drive has been running under load for a short time, stop and check tightness of screws.
7. Fill empty holes with grease to exclude dirt.

## BOTTOM HORIZONTAL HEAD

To Remove the cutterblock spindle from the spindle housing GEM 3790

1. Unscrew the Ball Bearing Locknut GEM 3030 at the cutterblock end of the spindle housing.
2. Gently tap the spindle assembly from the 'Front' and withdraw from the rear of the machine.
3. To remove the front bearing it will be necessary to take off the end cap GEM 3044 by removing the four socket head screws.
4. From the rear of the machine 'persuade' by knocking the bearing through the spindle housing GEM 4521.

The dis-assembled state of the spindle is shown in detail on pages 122, 123

Also refer to pages 93 and 94

## VERTICAL SIDE HEADS

Removal of the spindle barrel GEM 4319 from the carriage GEM 3134

1. From the front of the machine release the four equi-spaced locknuts of the pip screws about the periphery of vertical adjustment nut GEM 3120 (3621- In early machines a single nut).
2. Remove the two locknuts from the lower end of the spindle unit. Raise and Lower Screw and then lower the cutter head to its extreme position to the extent that the screw clears the vertical adjusting nut.
3. Enlist the services of a second person to release the lock.
4. Gently hoist the complete barrel assembly from the carriage.

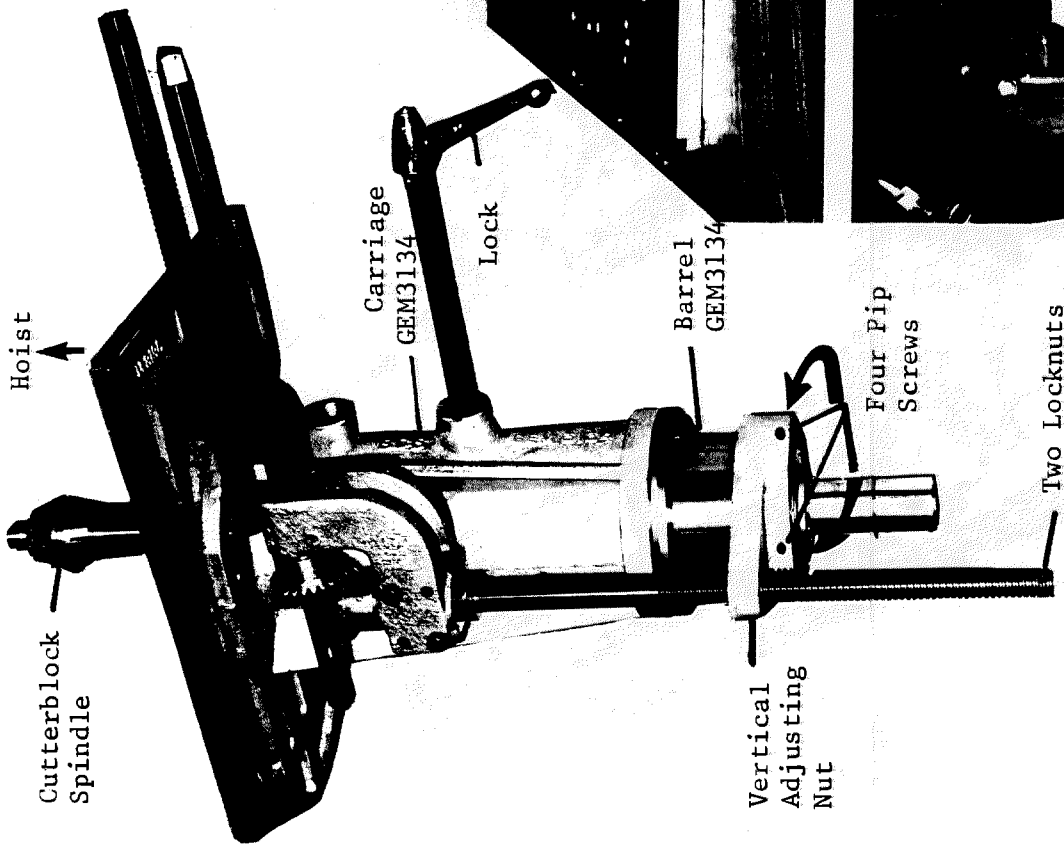
To remove the cutterblock spindle from the barrel GEM 4319

1. Unscrew the ball bearing locknuts GEM 3030 and 3029 at the cutterblock end of the spindle barrel.
2. Gently tap the spindle assembly from the 'Front' to the rear of the barrel
3. To remove the front bearing from the rear of the barrel 'persuade' by knocking the bearing through the barrel.

The dis-assembled state of the spindle is shown in detail on pages 126, 127 and 128, 129.

Also refer to pages 93 and 94

VERTICAL SIDE HEADS



Carriage  
GEM3134

Lock

Barrel  
GEM3134

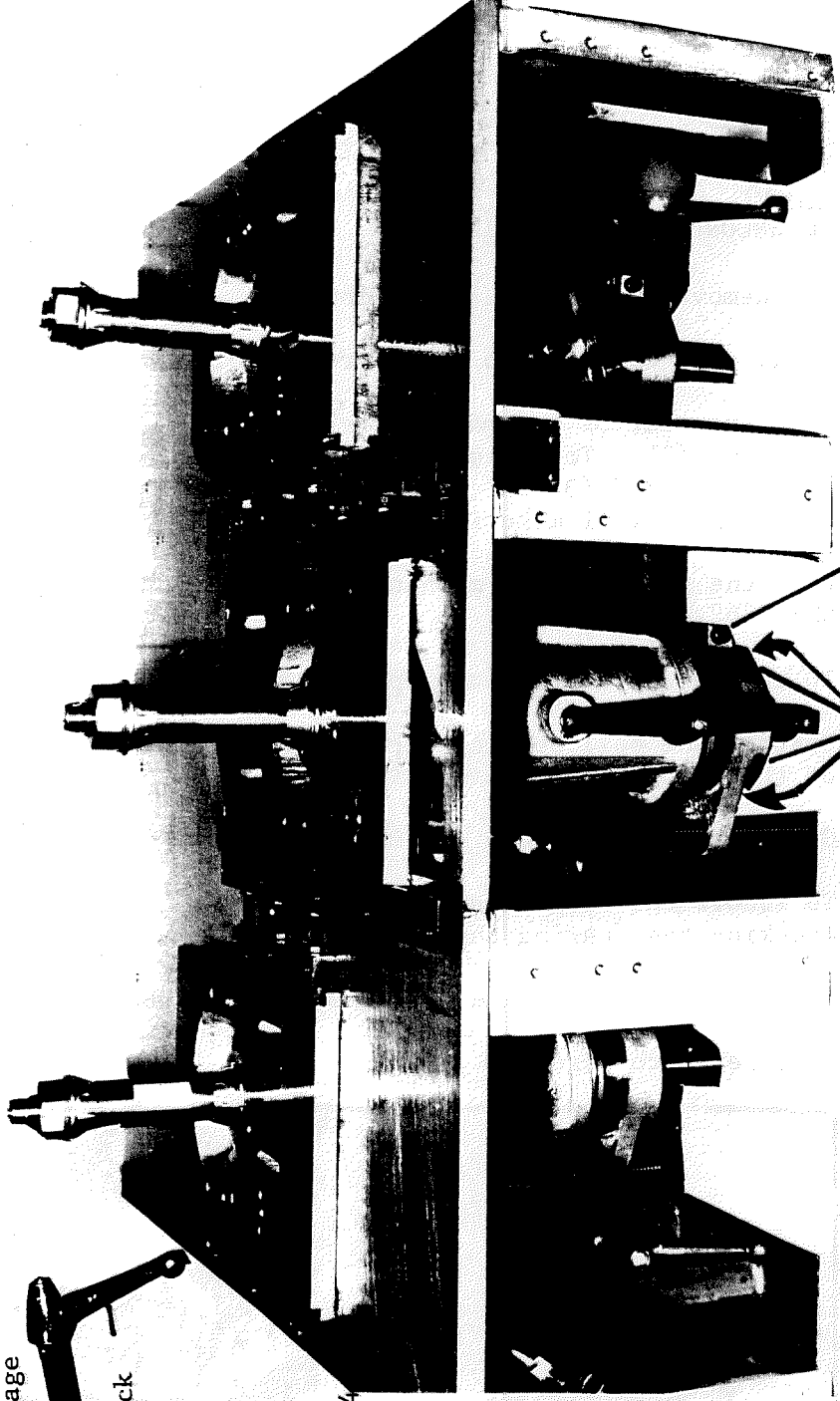
Four Pip  
Screws

Two Locknuts

Hoist

Cutterblock  
Spindle

Vertical  
Adjusting  
Nut



Four Pip Screws

Clamp Nut (Early machine)

REMOVAL OF THE BARREL ASSEMBLY FROM THE SLIDE GEM 3262 FOR THE TOP HORIZONTAL OR SECOND TOP HORIZONTAL HEAD

The Removal Stages are as follows:-

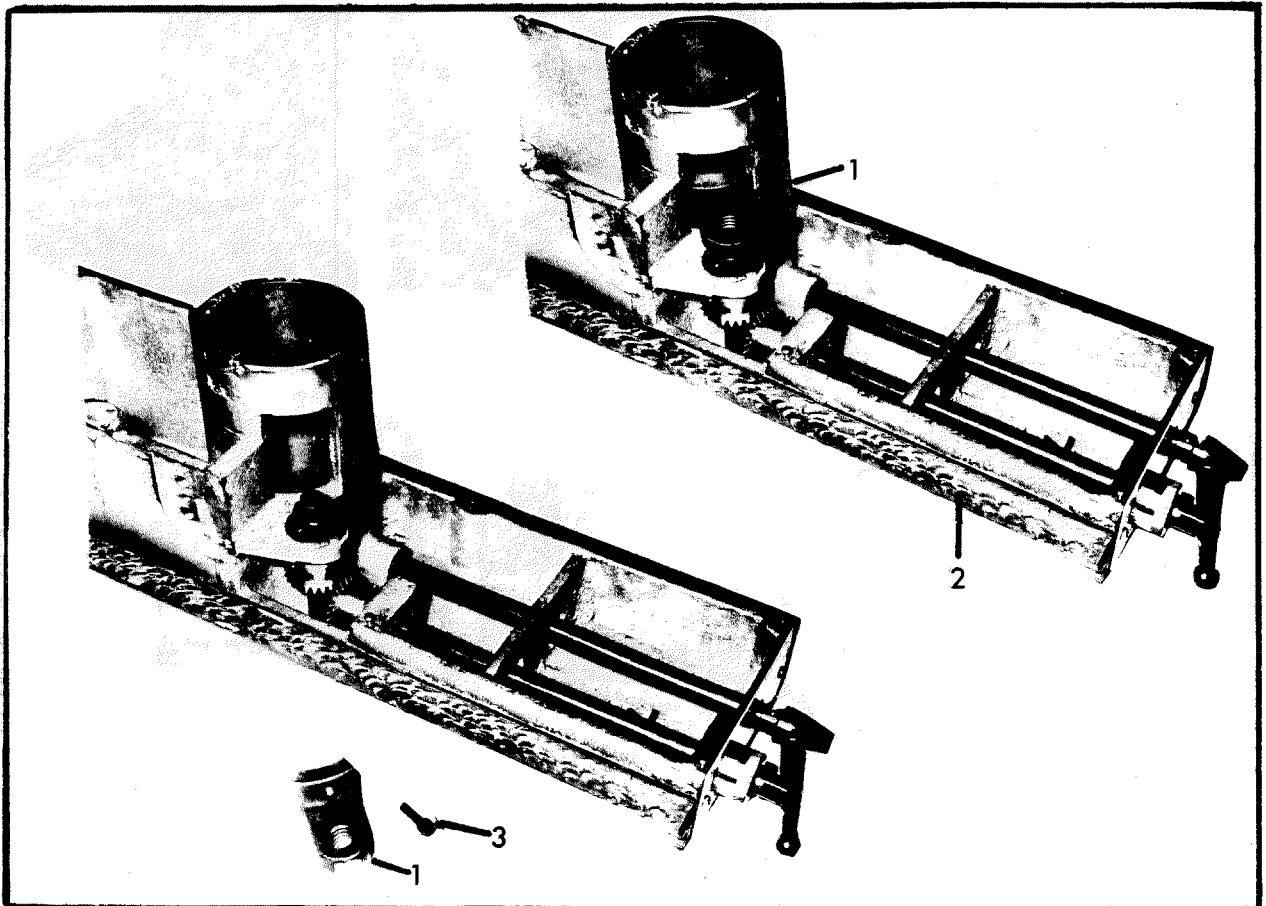
1. 'Wind out' the head to the extremity of its lateral movement.
2. From the rear of the machine release the barrel locking pad (1) in the slide GEM 3262 (2). To achieve this it will be necessary to remove the socket head cap screw (3) which secures the locking pad to the barrel. The space confinement will make it necessary to employ a shortened version Allen Key.
3. From the front of the machine withdraw the barrel assembly from the slide GEM 3262.

To remove the cutterblock spindle from the barrel GEM 4318

1. Unscrew the ball bearing locknuts GEM 3030 and 3029 at the cutterblock end of the spindle barrel.
2. Gently tap the spindle assembly from the front to the rear of the barrel.
3. To remove the front bearing from the rear of the barrel 'persuade' by knocking the bearing through the barrel.

The dis-assembled state of the spindle is shown in detail on pages 132 and 133

Also refer to pages 93 and 94



UNIVERSAL HEAD.

To remove the cutterblock spindle from the spindle Housing GEM 3787

1. Unscrew the bearing locknut GEM 3030 at the cutterblock end of the spindle housing.
2. Gently tap the spindle assembly from the front and withdraw from the rear of the machine.
3. To remove the front bearing it will be necessary to take off End Cap GEM 3044 by removing the four socket head screws.
4. From the rear of the machine 'persuade' by knocking the bearing through the spindle housing GEM 3787

The dis-assembled state of the spindle is shown in detail on Pages 130 and 131

Also refer to Pages 93 and 94

TIMING BELTS AND PULLEYS FOR MACHINES HAVING AN ELECTRICAL FREQUENCY OF 50 HERTZ

| HEAD                       | SPEED | MOTOR SIZE AND OUTPUT    | FENNER BELT REF. | MOTOR                   |                        |                         | CUTTER                 |                         | SPINDLE                |
|----------------------------|-------|--------------------------|------------------|-------------------------|------------------------|-------------------------|------------------------|-------------------------|------------------------|
|                            |       |                          |                  | FENNER PULLEY REFERENCE | FENNER TAPER LOCK BUSH | FENNER PULLEY REFERENCE | FENNER TAPER LOCK BUSH |                         |                        |
| First Bottom Horizontal    | 6000  | D112M 4.0 KW (5.5 h.p.)  | 540 H 100        | 48H 100                 | Bush 2012<br>Bore 28mm | 23H 200                 | FENNER TAPER LOCK BUSH | FENNER PULLEY REFERENCE | FENNER TAPER LOCK BUSH |
|                            | 6000  | D132S 7.5 KW (10 h.p.)   | 540 H 100        | 48H 100                 | Bush 2012<br>Bore 38mm | 23H 200                 |                        |                         | Bush 1610<br>Bore 38mm |
|                            | 7500  | D112M 4.0 KW (5.5 h.p.)  | 570 H 100        | GEM 2361                | Bush 2012<br>Bore 28mm | 23H 200                 |                        |                         | Bush 1610<br>Bore 38mm |
|                            | 7500  | D132S 7.5 KW (10 h.p.)   | 570 H 100        | GEM 2361                | Bush 2012<br>Bore 38mm | 23H 200                 |                        |                         | Bush 1610<br>Bore 38mm |
| First Fence Side Vertical  | 6000  | D112M 4.0 KW (5.5 h.p.)  | 750 H 100        | 48H 100                 | Bush 2012<br>Bore 28mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 6000  | D132S 7.5 KW (10 h.p.)   | 750 H 100        | 48H 100                 | Bush 2012<br>Bore 38mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 6000  | D160M 11.0 KW (15 h.p.)  | 800 H 100        | 48H 100                 | Bush 2012<br>Bore 42mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 7500  | D112M 4.0 KW (5.5 h.p.)  | 750 H 100        | GEM 2361                | Bush 2012<br>Bore 28mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 7500  | D132S 7.5 KW (10 h.p.)   | 750 H 100        | GEM 2361                | Bush 2012<br>Bore 38mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 7500  | D160M 11.0 KW (15 h.p.)  | 800 H 100        | GEM 2361                | Bush 2012<br>Bore 42mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
| Near Side Vertical         | 6000  | D112M 4.0 KW (5.5 h.p.)  | 1000 H 100       | 48H 100                 | Bush 2012<br>Bore 28mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 6000  | D132S 7.5 KW (10 h.p.)   | 1000 H 100       | 48H 100                 | Bush 2012<br>Bore 38mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 6000  | D160M 11.0 KW (15 h.p.)  | 1000 H 100       | 48H 100                 | Bush 2012<br>Bore 42mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 7500  | D112M 4.0 KW (5.5 h.p.)  | 1000 H 100       | GEM 2361                | Bush 2012<br>Bore 28mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 7500  | D 132S 7.5 KW (10 h.p.)  | 1000 H 100       | GEM 2361                | Bush 2012<br>Bore 38mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 7500  | D 160M 11.0 KW (15 h.p.) | 1000 H 100       | GEM 2361                | Bush 2012<br>Bore 42mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
| Second Fence Side Vertical | 6000  | D112M 4.0 KW (5.5 h.p.)  | 700 H 100        | 48 H 100                | Bush 2012<br>Bore 28mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 6000  | D132S 7.5 KW (10.0 h.p.) | 700 H 100        | 48 H 100                | Bush 2012<br>Bore 38mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 6000  | D160M 11.0 KW (15 h.p.)  | 700 H 100        | 48 H 100                | Bush 2012<br>Bore 42mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 7500  | D112M 4.0 KW (5.5 h.p.)  | 700 H 100        | GEM 2361                | Bush 2012<br>Bore 28mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 7500  | D132S 7.5 KW (10 h.p.)   | 700 H 100        | GEM 2361                | Bush 2012<br>Bore 38mm | 23 H 300                |                        |                         | Bush 1615<br>Bore 38mm |
|                            | 7500  | D160M 11.0 KW (15 h.p.)  | 750 H 100        | GEM 2361                | Bore-2012<br>Bore 42mm | 23H 300                 |                        |                         | Bush 1615<br>Bore 38mm |

TIMING BELTS AND PULLEYS FOR MACHINES HAVING AN ELECTRICAL CAPACITY OF 50 HERTZ MOTOR CUTTER SPINDLE

| HEAD  | SPEED | MOTOR SIZE AND OUTPUT    | FENNER BELT REFERENCE | FENNER PULLEY REFERENCE | FENNER TAPER LOCK BUSH | FENNER PULLEY | FENNER TAPER LOCK      |
|---|-------|--------------------------|-----------------------|-------------------------|------------------------|---------------|------------------------|
| First or Second Top Horizontal                  | 6000  | D112M 4.0 KW (5.5 h.p.)  | 660 H 100             | 48 H 100                | Bush 2012<br>Bore 28mm | 23 H 200      | Bush 1610              |
|   | 6000  | D132S 7.5 KW (10 h.p.)   | 660 H 100             | 48 H 100                | Bush 2012<br>Bore 38mm | 23 H 200      | Bore 38mm<br>Bush 1610 |
|   | 6000  | D160M 11.0 KW (15 h.p.)  | 600 H 100             | 48 H 100                | Bush 2012<br>Bore 42mm | 23 H 200      | Bore 38mm<br>Bush 1610 |
|   | 7500  | D112M 4.0 KW (5.5 h.p.)  | 660 H 100             | GEM 2361                | Bush 2012<br>Bore 28mm | 23 H 200      | Bore 38mm<br>Bush 1610 |
|   | 7500  | D132S 7.5 KW (10 h.p.)   | 700 H 100             | GEM 2361                | Bush 2012<br>Bore 38mm | 23 H 200      | Bore 38mm<br>Bush 1610 |
|   | 7500  | D160M 11.0 KW (15 h.p.)  |                       |                         |                        |               |                        |
| Second Bottom Horizontal                        | 6000  | D 112M 4.0 KW (5.5 h.p.) | 540 H 100             | 48 H 100                | Bush 2012<br>Bore 28mm | 23 H 200      | Bush 1610              |
|   | 6000  | D 132S 7.5 KW (10 h.p.)  | 540 H 100             | 48 H 100                | Bush 2012<br>Bore 38mm | 23 H 200      | Bore 38mm<br>Bush 1610 |
|   | 6000  | D.160M 11.0 KW (15 h.p.) |                       |                         |                        |               |                        |
|   | 7500  | D 112M 4.0 KW (5.5 h.p.) | 570 H 100             | GEM 2361                | Bush 2012<br>Bore 28mm | 23 H 200      | Bore 38mm<br>Bush 1610 |
|   | 7500  | D 132S 7.5 KW (10 h.p.)  | 570 H 100             | GEM 2361                | Bush 2012<br>Bore 38mm | 23 H 200      | Bore 38mm<br>Bush 1610 |
|   | 7500  | D160M 11.0 KW (15 h.p.)  |                       |                         |                        |               |                        |
| Universal Top & Bottom Horizontal Vertical Cant | 6000  | D 112M 4.0 KW (5.5 h.p.) | 360 H 100             | 48 H 100                | Bush 2012<br>Bore 28mm | 23 H 300      | Bush 1615              |
|   | 6000  | D132S 7.5 KW (10 h.p.)   | 360 H 100             | 48 H 100                | Bush 2012<br>Bore 38mm | 23 H 300      | Bore 38mm<br>Bush 1615 |
|   | 7500  | D112M 4.0 KW (5.5 h.p.)  | 390 H 100             | GEM 2361                | Bush 2012<br>Bore 28mm | 23 H 300      | Bore 38mm<br>Bush 1615 |
|   | 7500  | D132S 7.5 KW (10 h.p.)   | 390 H 100             | GEM 2361                | Bush 2012<br>Bore 38mm | 23 H 300      | Bore 38mm<br>Bush 1615 |

Vee Belts and Pulleys for machines having an Electrical Frequency of 50 hertz  
GEM 170

| Head                       | MOTOR           |                           |                         |                         |                                      | SPINDLE                 |                                      |  |
|----------------------------|-----------------|---------------------------|-------------------------|-------------------------|--------------------------------------|-------------------------|--------------------------------------|--|
|                            | Speed<br>R.P.M. | Motor Size and Output     | Fenner Vee<br>Belt Ref. | Vee Pulley<br>Ref.      | Fenner Taper<br>Lock bush            | Vee Pulley<br>Belt Ref. | Fenner Taper<br>Lock bush            |  |
| First Bottom<br>Horizontal | 6000            | D112M 4.0 KW (5.5 h.p.)   | SPZ 1400<br>K30 78 229  | 031Z 0262<br>K30 78 238 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235 | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |
|                            | 6000            | D132S 7.5 KW (10.0 h.p.)  | SPZ 1400<br>K30 78 229  | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |
|                            | 6000            | D160M 11.0 KW (15.0 h.p.) | SPZ 1400<br>K30 78 229  | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |
|                            | 7500            | D112M 4.0 KW (5.5 h.p.)   | SPZ 1470<br>K30 77 129  | 031Z 0302<br>K30 78 241 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 23  | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |
|                            | 7500            | D132S 7.5 KW (10.0 h.p.)  | SPZ 1470<br>K30 77 129  | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |
| Top Horizontal             | 6000            | D112M 4.0 KW (5.5 h.p.)   | SPZ 1470<br>K30 77 129  | 031Z 0262<br>K30 78 238 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235 | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |
|                            | 6000            | D132S 7.5 KW (10.0 h.p.)  | SPZ 1470<br>K30 77 129  | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |
|                            | 6000            | D160M 11.0 KW (15.0 h.p.) | SPZ 1520<br>K30 77 119  | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |
|                            | 7500            | D112M 4.0 KW (5.5 h.p.)   | SPZ 1560<br>K30 77 297  | 031Z 0302<br>K30 78 241 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235 | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |
|                            | 7500            | D132S 7.5 KW (10.0 h.p.)  | SPZ 1560<br>K30 77 297  | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |
|                            | 7500            | D160M 11.0 KW (15.0 h.p.) | SPZ 1600<br>K30 78 230  | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |  |



June 77 Vee Belts and Pulleys for machines having an Electrical Frequency of 50 hertz.

GEM 170

MOTOR

Spindle

| Head        | Speed<br>R.P.M.       | Motor Size and Output     | Fenner Vee<br>Belt Ref. | Vee Pulley<br>Ref.      | Fenner Taper<br>Lock bush            | Vee Pulley<br>Ref.                   | Fenner Taper<br>Lock bush            |
|-------------|-----------------------|---------------------------|-------------------------|-------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| First Fence | 6000                  | D112M 4.0 KW (5.5 h.p.)   | SPZ 2000<br>K30 78 231  | 031Z 0262<br>K30 78 238 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|             | 6000                  | D132S 7.5 KW (10.0 h.p.)  | SPZ 2000<br>K30 78 231  | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|             | 6000                  | D160M 11.0 KW (15.0 h.p.) | SPZ 2000<br>K30 78 231  | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|             | 7500                  | D112M 4.0 KW (5.5 h.p.)   | SPZ 2030<br>K30 77 110  | 031Z 0302<br>K30 78 241 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|             | 7500                  | D132S 7.5 KW (10.0 h.p.)  | SPZ 2030<br>K30 77 110  | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|             | 7500                  | D160M 11.0 KW (15.0 h.p.) | SPZ 2120<br>K30 78 232  | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|             | Near Side<br>Vertical | 6000                      | D112M 4.0 KW (5.5 h.p.) | SPZ 2540<br>K30 77 157  | K30 71 238<br>031Z 0262              | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235              |
| 6000        |                       | D132S 7.5 KW (10.0 h.p.)  | SPZ 2540<br>K30 77 157  | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| 6000        |                       | D160M 11.0 KW (15.0 h.p.) | SPZ 2650<br>K30 78 233  | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| 7500        |                       | D112M 4.0 KW (5.5 h.p.)   | SPZ 2690<br>K3078 234   | 031Z 0302<br>K30 78 241 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| 7500        |                       | D132S 7.5 KW (10.0 h.p.)  | SPZ 2690<br>K30 78 234  | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |

Vee Belts and Pulleys for machine having an Electrical Frequency of 50 hertz

MOTOR

SPINDLE

| Head                       | Speed R.P.M. | Motor Size and Output     | Fenner Vee Belt Ref.   | Vee Pulley Ref.         | Fenner Taper Lock bush               | Vee Pulley Ref.         | Fenner Taper Lock bush               |
|----------------------------|--------------|---------------------------|------------------------|-------------------------|--------------------------------------|-------------------------|--------------------------------------|
| Near Side Vertical         | 7500         | D160M 11.0 KW (15.0 h.p.) | SPZ 2690<br>K30 78 234 | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| Second Fence Side Vertical | 6000         | D112M 4.0 KW (5.5 h.p.)   | SPZ 1800<br>K30 77 118 | 031Z 0262<br>K30 78 238 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 6000         | D132S 7.5 KW (10.0 hp)    | SPZ 1800<br>K30 77 118 | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 7500         | D112M 3.0 KW (5.5 h.p.)   | SPZ 1900<br>K30 78 205 | 031Z 0302<br>K30 78 241 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 7500         | D132S 7.5 KW (10 h.p.)    | SPZ 1900<br>K30 78 205 | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 7500         | D160M 11.0 KW (15.0 h.p.) | SPZ 2000<br>K30 78 231 | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| Second Bottom Horizontal   | 6000         | D112M 4.0 KW (5.5 h.p.)   | SPZ 1400<br>K30 78 229 | 031Z 0262<br>K30 78 238 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 6000         | D132S 7.5 KW (10.0 h.p.)  | SPZ 1400<br>K30 78 229 | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 6000         | D160M 11.0 KW (15.0 h.p.) | SPZ 1400<br>K30 78 229 | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 7500         | D112M 4.0 KW (5.5 hp)     | SPZ 1470<br>K30 77 129 | 031Z 0302<br>K30 78 241 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 23  | Bush 1610<br>Bore 38mm<br>K30 77 186 |

Vee Belts and Pulleys for Machines having an Electrical Frequency of 50 hertz.  
GEM 170

SPINDLE

MOTOR

| Head   | Speed<br>R.P.M. | Motor Size and Output  | Fenner Vee<br>Belt Ref. | Vee Pulley<br>Ref.      | Fenner Taper<br>Lock Bush            | Vee Pulley<br>Ref.                   | Fenner Taper<br>Lock Bush            |
|--|-----------------|--|-------------------------|-------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Second Bottom<br>Horizontal                                | 7500            | D132S 7.5 KW (10.0 h.p.)   | SPZ 1470<br>K30 77 129  | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|  | 7500            | D160M 11.0 KW (15 h.p.)  | SPZ 1470<br>K30 77 129  | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| Universal Top<br>and Bottom<br>Horizontal<br>Vertical Cant | 6000            | D112M 4.0 KW (5.0 h.p.)  | SPZ 940<br>K30 77 156   | 031Z 0262<br>K30 78 238 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|  | 6000            | D132S 7.5 KW (10.0 h.p.)   | SPZ 940<br>K30 77 156   | 031Z 0263<br>K30 78 244 | Bush 2012<br>Bore 38mm<br>K30 77 113 | 031Z 0133<br>K30 78 243              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|  | 7500            | D112M 4.0 KW (5.0 h.p.)  | SPZ 1010<br>K30 77 115  | 031Z 0302<br>K30 78 241 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|  | 7500            | D132S 7.5 KW (10. h.p.)  | SPZ 1010<br>K30 77 115  | 031Z 0303<br>K30 78 245 | Bush 2012<br>Bore 38mm<br>K30 77 113 | 031Z 0133<br>K30 78 243              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| Throating Head   | 5000            | *D100L 3.0 KW (4.0 h.p.)<br>*Adaptor plate WU 516<br>Socket Head Screws<br>8mm x 20mm KO5 25 187 - 4 | 187L 100<br>(Timing)    | WU 524                  |                                      | Fenner 22L100*<br>*Bore to WU<br>522 |                                      |

June 77

PULLEYS AND TIMING BELTS FOR MACHINES OPERATING AT AN ELECTRICAL FREQUENCY OF 60 HERTZ

MOTOR

SPINDLE

| HEAD                      | SPEED R.P.M. | MOTOR SIZE AND OUTPUT      | FENNER BELT REFERENCE | PULLEY REF. | FENNER TAPER LOCK BUSH | PULLEY REF. | FENNER TAPER LOCK BUSH |
|---------------------------|--------------|----------------------------|-----------------------|-------------|------------------------|-------------|------------------------|
| First Bottom Horizontal   | 6000         | D112M 4.0 KW (5.5 h.p.)    | 510 H 100             | 40 H 100    | Bush 1610<br>Bore 28mm | 23 H 200    | Bush 1610<br>Bore 38mm |
|                           | 6000         | D132S 7.5 KW (10.0 h.p.)   | 510 H 100             | 40 H 100    | Bush 1610<br>Bore 38mm | 23 H 200    | Bush 1610<br>Bore 38mm |
|                           | 7200         | D112M 4.0 KW (5.5 h.p.)    | 540 H 100             | 48 H 100    | Bush 2012<br>Bore 38mm | 23 H 200    | Bush 1610<br>Bore 38mm |
|                           | 7200         | D132S 7.5 KW (10.0 h.p.)   | 540 H 100             | 48 H 100    | Bush 2012<br>Bore 38mm | 23 H 200    | Bush 1610<br>Bore 38mm |
| First Fence Side Vertical | 6000         | D112M 4.0 KW (5.5 h.p.)    | 700 H 100             | 40 H 100    | Bush 1610<br>Bore 28mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 6000         | D132S 7.5 KW (10.0 h.p.)   | 700 H 100             | 40 H 100    | Bush 1610<br>Bore 38mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 6000         | D160M 11.0KW (15.0 h.p.)   | 750 H 100             | 40 H 100    | Bush 1610<br>Bore 42mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 7200         | D112M 4.0 KW (5.5 h.p.)    | 750 H 100             | 48 H 100    | Bush 2012<br>Bore 28mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 7200         | D132S 7.5 KW (10.0 h.p.)   | 750 H 100             | 48 H 100    | Bush 2012<br>Bore 38mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 7200         | D160M 11.0 KW (15.0 h.p.)  | 800 H 100             | 48 H 100    | Bush 2012<br>Bore 42mm | 23 H 300    | Bush 1615<br>Bore 38mm |
| Near Side Vertical        | 6000         | D112M 4.0 KW (5.5 h.p.)    | 900 H 100             | 40 H 100    | Bush 1610<br>Bore 28mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 6000         | D132S 7.5 KW (10.0 h.p.)   | 900 H 100             | 40 H 100    | Bush 1610<br>Bore 38mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 6000         | D 160M 11.0 KW (15.0 h.p.) | 900 H 100             | 40 H 100    | Bush 1610<br>Bore 42mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 7200         | D112M 4.0 KW (5.5 h.p.)    | 900 H 100             | 48 H 100    | Bush 2012<br>Bore 28mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 7200         | D132S 7.5 KW (10.0 h.p.)   | 1000 H 100            | 48 H 100    | Bush 2012<br>Bore 38mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 7200         | D160M 11.0 KW (15.0 h.p.)  | 1000 H 100            | 48 H 100    | Bush 2012<br>Bore 42mm | 23 H 300    | Bush 1615<br>Bore 38mm |
| Second Fence              | 6000         | D112M 4.0 KW (5.5 h.p.)    | 660 H 100             | 40 H 100    | Bush 1610<br>Bore 28mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 6000         | D132S 7.5 KW (10.0 h.p.)   | 660 H 100             | 40 H 100    | Bush 1610<br>Bore 38mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 6000         | D160M 11.0 KW (15.0 h.p.)  | 700 H 100             | 40 H 100    | Bush 1610<br>Bore 42mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 7200         | D112M 4.0 KW (5.5 h.p.)    | 700 H 100             | 48 H 100    | Bush 2012<br>Bore 28mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 7200         | D132S 7.5 KW (10.0 h.p.)   | 700 H 100             | 48 H 100    | Bush 2012<br>Bore 38mm | 23 H 300    | Bush 1615<br>Bore 38mm |
|                           | 7200         | D160M 11.0 KW (15.0 h.p.)  | 700 H 100             | 48 H 100    | Bush 2012<br>Bore 42mm | 23 H 300    | Bush 1615<br>Bore 38mm |

PULLEYS AND TIMING BELTS FOR MACHINES OPERATING AT AN ELECTRICAL FREQUENCY OF 60 HERTZ

MOTOR

SPINDLE

| HEAD  | SPEED R.P.M.                  | MOTOR SIZE AND OUTPUT     | FENNER BELT REFERENCE   | PULLEY REF. | FENNER TAPER LOCK BUSH | PULLEY REF             | FENNER TAPER LOCK BUSH |
|---|-------------------------------|---------------------------|-------------------------|-------------|------------------------|------------------------|------------------------|
| First or Second Top Horizontal                  | 6000                          | D112M 4.0 KW (5.5 h.p.)   | 630 H 100               | 40 H 100    | Bush 1610<br>Bore 28mm | 23 H 200               | Bush 1610              |
|   | 6000                          | D132S 7.5 KW (10.0 h.p.)  | 660 H 100               | 40 H 100    | Bush 1610<br>Bore 38mm | 23 H 200               | Bore 38mm<br>Bush 1610 |
|   | 6000                          | D160M 11.0 KW (15.0 h.p.) | 570 H 100               | 40 H 100    | Bush 2012<br>Bore 42mm | 23 H 200               | Bore 38mm<br>Bush 1610 |
|   | 7200                          | D112M 4.0 KW (5.5 h.p.)   | 660 H 100               | 48 H 100    | Bush 2012<br>Bore 28mm | 23 H 200               | Bore 38mm<br>Bush 1610 |
|   | 7200                          | D132S 7.5 KW (10.0 h.p.)  | 660 H 100               | 48 H 100    | Bush 2012<br>Bore 38mm | 23 H 200               | Bore 38mm<br>Bush 1610 |
|   | 7200                          | D160M 11.0 KW (15.0 h.p.) | 600 H 100               | 48 H 100    | Bush 2012<br>Bore 42mm | 23 H 200               | Bore 38mm<br>Bush 1610 |
|   | Through Top/Bottom Horizontal | 6000                      | D112M 4.0 KW (5.5 h.p.) | 630 H 100   | 40 H 100               | Bush 1610<br>Bore 28mm | 23 H 200               |
| 6000  |                               | D132S 7.5 KW (10.0 h.p.)  | 660 H 100               | 40 H 100    | Bush 1610<br>Bore 38mm | 23 H 200               | Bore 38mm<br>Bush 1610 |
| 7200  |                               | D112M 4.0 KW (5.5 h.p.)   | 660 H 100               | 48 H 100    | Bush 2012<br>Bore 28mm | 23 H 200               | Bore 38mm<br>Bush 1610 |
| 7200  |                               | D132S 7.5 KW (10.0 h.p.)  | 660 H 100               | 48 H 100    | Bush 2012<br>Bore 38mm | 23 H 200               | Bore 38mm<br>Bush 1610 |
| Second Bottom Horizontal                        | 6000                          | D112M 4.0 KW (5.5 h.p.)   | 510 H 100               | 40 H 100    | Bush 1610<br>Bore 28mm | 23 H 200               | Bush 1610              |
|   | 6000                          | D 132S 7.5 KW (10.0 h.p.) | 510 H 100               | 40 H 100    | Bush 1610<br>Bore 38mm | 23 H 200               | Bore 38mm<br>Bush 1610 |
|   | 6000                          | D 160M 11.0KW (15.0 h.p.) |                         |             |                        |                        |                        |
|   | 7200                          | D112M 4.0 KW (5.5 h.p.)   | 540 H 100               | 48 H 100    | Bush 2012<br>Bore 28mm | 23 H 200               | Bush 1610              |
|   | 7200                          | D132S 7.5 KW (10.0 h.p.)  | 540 H 100               | 48 H 100    | Bush 2012<br>Bore 38mm | 23 H 200               | Bore 38mm<br>Bush 1610 |
|   | 7200                          | D160M 11.0 KW (15.0 h.p.) |                         |             |                        |                        |                        |
| Universal Top & Bottom Horizontal Vertical Cant | 6000                          | D112M 4.0 KW (5.5 h.p.)   | 330 H 100               | 40 H 100    | Bush 1610<br>Bore 28mm | 23 H 300               | Bush 1615              |
|   | 6000                          | D132S 7.5 KW (10 h.p.)    | 330 H 100               | 40 H 100    | Bush 1610<br>Bore 38mm | 23 H 300               | Bore 38mm<br>Bush 1615 |
|   | 7200                          | D112M 4.0 KW (5.5 h.p.)   | 360 H 100               | 48 H 100    | Bush 2012<br>Bore 28mm | 23 H 300               | Bore 38mm<br>Bush 1615 |
|   | 7200                          | D132S 7.5 KW (10 h.p.)    | 360 H 100               | 48 H 100    | Bush 2012<br>Bore 38mm | 23 H 300               | Bore 38mm<br>Bush 1615 |

MOTOR SPINDLE

| Head                         | Speed<br>R.P.M. | Motor Size and Output     | Fenner Vee<br>Belt Ref. | Vee Pulley<br>Ref.      | Fenner Taper<br>Lock bush            | Vee Pulley<br>Ref.      | Fenner Taper<br>Lock bush            |
|------------------------------|-----------------|---------------------------|-------------------------|-------------------------|--------------------------------------|-------------------------|--------------------------------------|
| First Bottom<br>Horizontal   | 6000            | D112M 4.0 KW (5.5 h.p.)   | SPZ 1320<br>K30 78 228  | 031Z 0222<br>K30 78 237 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                              | 6000            | D132S 7.5 KW (10.0 hp)    | SPZ 1320<br>K30 78 228  | 031Z 0224<br>K30 78 209 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                              | 7200            | D112M 4.0 KW (5.5 h.p.)   | SPZ 1470<br>K30 77 129  | 031Z 0302<br>K30 78 241 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 23  | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                              | 7200            | D160M 7.5 KW (10.0 h.p.)  | SPZ 1470<br>K30 77 129  | 031Z 0304<br>K30 78 225 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| First Fence<br>Side Vertical | 6000            | D112M 4.0 KW (5.5 h.p.)   | SPZ 1900<br>K30 78 205  | 031Z 0222<br>K30 78 237 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                              | 6000            | D132S 7.5 KW (10 h.p.)    | SPZ 1900<br>K30 78 205  | 031Z 0224<br>K30 78 209 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                              | 6000            | D160M 11.0 KW (15.0 h.p.) | SPZ 1900<br>K30 78 205  | 031Z 0224<br>K30 78 209 | Bush 2517<br>Bore 42mm<br>K30 70 101 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                              | 7200            | D112M 4.0 KW (5.5 h.p.)   | SPZ 2000<br>K30 78 231  | 031Z 0262<br>K30 78 238 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| Near Side Vertical           | 7200            | D132S 7.5 KW (10.0 h.p.)  | SPZ 2000<br>K30 78 231  | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                              | 7200            | D160M 11.0 KW (15.0 h.p.) | SPZ 2000<br>K30 78 231  | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236 | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                              | 6000            | D112M 4.0 KW (5.5 h.p.)   | SPZ 2540<br>K30 77 157  | 031Z 0224<br>K30 78 209 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235 | Bush 1610<br>Bore 38mm<br>K30 77 186 |

June 77 Vee Belts and Pulleys for machines having an Electrical Capacity of 60 hertz.  
GEM 170

| Head                       | MOTOR                   |                           |                         |                                      |                                      | SPINDLE                              |                                      |
|----------------------------|-------------------------|---------------------------|-------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
|                            | Speed R.P.M.            | Motor Size and Output     | Fenner Vee Belt Ref.    | Vee Pulley Ref.                      | Fenner Taper Lock Bush               | Vee Pulley Ref.                      | Fenner Taper Lock bush               |
| Near Side Vertical         | 6000                    | D132S 7.5 KW (10.0 h.p.)  | SPZ 2540<br>K30 77 157  | 031Z O224<br>K30 78 209              | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z O134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 6000                    | D160M 11.0 KW (15.0 h.p.) | SPZ 2540<br>K30 77 157  | 031Z O224<br>K30 78 209              | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z O134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K3077 186  |
|                            | 7200                    | D112M 4.0 KW (5.5 h.p.)   | SPZ 2540<br>K30 77 157  | 031Z O262<br>K30 78 238              | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z O132<br>K30 78 235              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 7200                    | D132S 7.5 KW (10.0 h.p.)  | SPZ 2540<br>K30 77 157  | 031Z O264<br>K30 78 239              | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z O134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 7200                    | D160M 11.0 KW (15.0 h.p.) | SPZ 2650<br>K30 78 233  | 031Z O264<br>K30 78 239              | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z O134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| Second Fence Side Vertical | 6000                    | D112M 4.0 KW (5.5 h.p.)   | SPZ 1800<br>K30 77 118  | 031Z O222<br>K30 78 235              | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z O132<br>K30 78 235              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 6000                    | D132S 7.5 KW (10.0 h.p.)  | SPZ 1800<br>K30 77 118  | 031Z O224<br>K30 78 209              | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z O134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 6000                    | D160M 11.0 KW (15 h.p.)   | SPZ 1800<br>K30 77 118  | 031Z O224<br>K30 78 209              | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z O134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 7200                    | D112M 4.0 KW (5.5 h.p.)   | SPZ 1800<br>K30 77 118  | 031Z O262<br>K30 78 238              | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z O132<br>K30 78 235              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                            | 7200                    | D132S 7.5 KW (10.0 h.p.)  | SPZ 1800<br>K30 77 118  | 031Z O264<br>K30 78 239              | Bush 2517<br>Bore 38mm<br>K30 77 194 | 031Z O134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| 7200                       | D160M 11.0 KW (15 h.p.) | SPZ 1900<br>K30 78 205    | 031Z O264<br>K30 78 239 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z O134<br>K30 78 236              | Bush 1610<br>Bore 38mm<br>K30 77 186 |                                      |

Vee Belts and Pulleys for machines having an Electrical Capacity of 60 hertz.  
GEM 170

SPINDLE

MOTOR

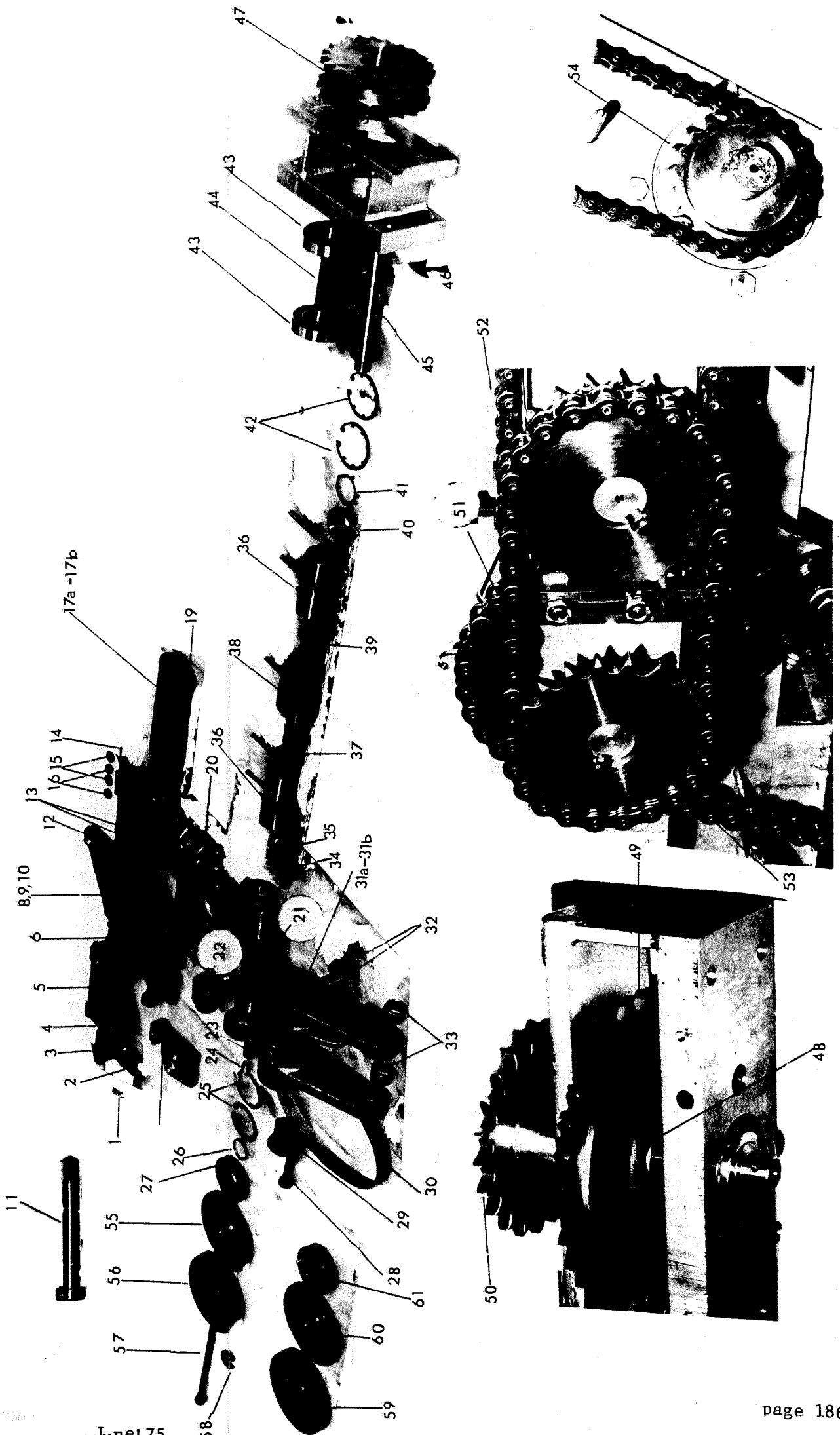
| Head                     | Speed R.P.M.              | Motor Size and Output    | Fenner Vee Belt Ref. | Vee Pulley Ref. | Fenner Taper Lock bush | Vee Pulley Ref. | Fenner Taper Lock bush |           |
|--------------------------|---------------------------|--------------------------|----------------------|-----------------|------------------------|-----------------|------------------------|-----------|
| Top Horizontal           | 6000                      | D112M 4.0 KW (5.5 h.p.)  | SPZ 1400             | 031Z 0222       | Bush 2012              | 031Z 0132       | Bush 1610              |           |
|                          |                           |                          | K30 78 229           | K30 78 237      | Bore 28mm              | K30 78 235      | Bore 38mm              | Bore 38mm |
|                          |                           |                          |                      |                 | K30 77 114             |                 | K30 77 186             |           |
|                          | 6000                      | D132S 7.5 KW (10.0 h.p.) | SPZ 1400             | 031Z 0224       | Bush 2517              | 031Z 0134       | Bush 1610              |           |
|                          |                           |                          | K30 78 229           | K30 78 209      | Bore 38mm              | K30 78 236      | Bore 38mm              | Bore 38mm |
|                          |                           |                          |                      |                 | K30 77 194             |                 | K30 77 186             |           |
| 6000                     | D160M 11.0 KW (15.0 h.p.) | SPZ 1400                 | 031Z 0224            | Bush 2517       | 031Z 0134              | Bush 1610       |                        |           |
|                          |                           | K30 78 229               | K30 78 209           | Bore 42mm       | K30 78 236             | Bore 38mm       | Bore 38mm              |           |
|                          |                           |                          |                      | K30 77 101      |                        | K30 77 186      |                        |           |
| 7200                     | D112M 4.0 KW (5.5 h.p.)   | SPZ 1470                 | 031Z 0262            | Bush 2012       | 031Z 0132              | Bush 1610       |                        |           |
|                          |                           | K30 77 129               | K30 78 238           | Bore 28mm       | K30 78 235             | Bore 38mm       | Bore 38mm              |           |
|                          |                           |                          |                      | K30 77 114      |                        | K30 77 186      |                        |           |
| 7200                     | D132S 7.5 KW (10.0 h.p.)  | SPZ 1470                 | 031Z 0264            | Bush 2517       | 031Z 0134              | Bush 1610       |                        |           |
|                          |                           | K30 77 129               | K30 78 239           | Bore 38mm       | K30 78 236             | Bore 38mm       | Bore 38mm              |           |
|                          |                           |                          |                      | K30 77 194      |                        | K30 77 186      |                        |           |
| 7200                     | D160M 11.0 KW (15.0 h.p.) | SPZ 1520                 | 031Z 0264            | Bush 2517       | 031Z 0134              | Bush 1610       |                        |           |
|                          |                           | K30 77 119               | K30 78 239           | Bore 42mm       | K30 77 186             | Bore 38mm       | Bore 38mm              |           |
|                          |                           |                          |                      | K30 77 101      |                        | K30 77 186      |                        |           |
| Second Bottom Horizontal | 6000                      | D112M 4.0 KW (5.5 h.p.)  | SPZ 1320             | 031Z 0222       | Bush 2012              | 031Z 0132       | Bush 1610              |           |
|                          |                           |                          | K30 78 228           | K30 78 237      | Bore 28mm              | K30 78 235      | Bore 38mm              | Bore 38mm |
|                          |                           |                          |                      |                 | K30 77 114             |                 | K30 77 186             |           |
|                          | 6000                      | D132S 7.5 KW (10.0 h.p.) | SPZ 1320             | 031Z 0224       | Bush 2517              | 031Z 0134       | Bush 1610              |           |
|                          |                           |                          | K30 78 228           | K30 78 209      | Bore 38mm              | K30 78 236      | Bore 38mm              | Bore 38mm |
|                          |                           |                          |                      |                 | K30 77 194             |                 | K30 77 186             |           |
| 6000                     | D160M 11.0 KW (15 h.p.)   | SPZ 1320                 | 031Z 0224            | Bush 2517       | 031Z 0134              | Bush 1610       |                        |           |
|                          |                           | K30 78 228               | K30 78 209           | Bore 42mm       | K30 78 236             | Bore 38mm       | Bore 38mm              |           |
|                          |                           |                          |                      | K30 77 101      |                        | K30 77 186      |                        |           |
| 7200                     | D112M 4.0 KW (5.5 h.p.)   | SPZ 1400                 | 031Z 0262            | Bush 2012       | 031Z 0132              | Bush 1610       |                        |           |
|                          |                           | K30 78 229               | K30 78 238           | Bore 28mm       | K30 78 235             | Bore 38mm       | Bore 38mm              |           |
|                          |                           |                          |                      | K30 77 114      |                        | K30 77 186      |                        |           |
| 7200                     | D160M 7.5 KW (10.0 h.p.)  | SPZ 1400                 | 031Z 0262            | Bush 2517       | 031Z 0134              | Bush 1610       |                        |           |
|                          |                           | K30 78 229               | K30 78 238           | Bore 38mm       | K30 78 236             | Bore 38mm       | Bore 38mm              |           |
|                          |                           |                          |                      | K30 77 194      |                        | K30 77 186      |                        |           |



Vee Belts and Pulleys for machines having an Electrical Frequency of 60 hertz.  
GEM 170

MOTOR SPINDLE

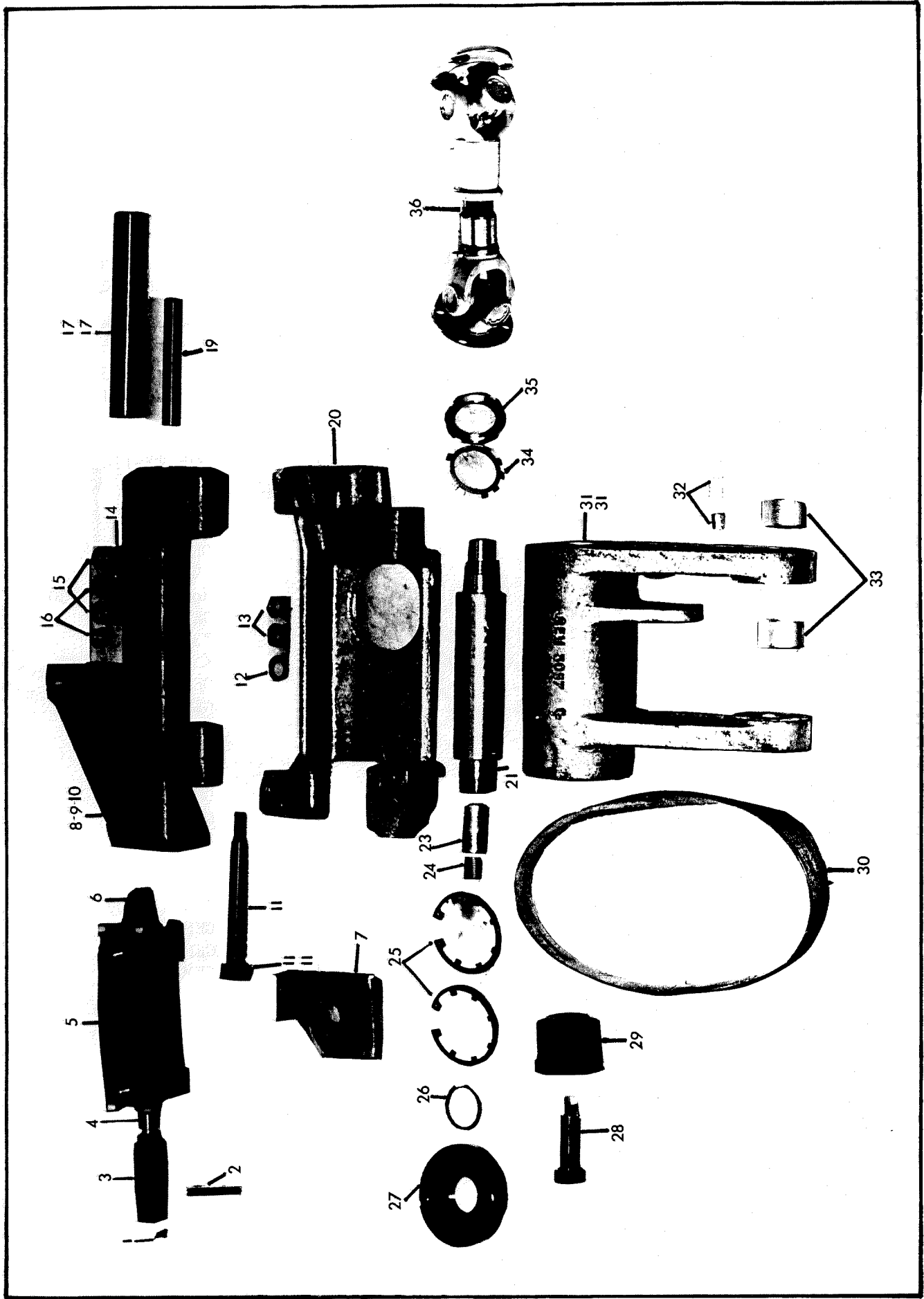
| Head                     | Speed R.P.M. | Motor Size and Output   | Fenner Vee Belt Ref.              | Vee Pulley Ref.         | Fenner Taper Lock bush               | Vee Pulley Ref.          | Fenner Taper Lock bush               |
|--------------------------|--------------|---|-----------------------------------|-------------------------|--------------------------------------|--------------------------|--------------------------------------|
| Second Bottom Horizontal | 7200         | D160M 11.0 KW (15 h.p.)   | SPZ 1400<br>K30 78 229            | 031Z 0264<br>K30 78 239 | Bush 2517<br>Bore 42mm<br>K30 77 101 | 031Z 0134<br>K30 78 236  | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| Universal                | 6000         | D112M 4.0 KW (5.5 h.p.)   | SPZ 850<br>K30 78 213             | 031Z 0222<br>K30 78 237 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235  | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                          | 6000         | D132S 7.5 KW (10.0 h.p.)  | SPZ 850<br>K30 78 213             | 031Z 0223<br>K30 78 218 | Bush 2012<br>K30 77 113<br>Bore 38mm | 031Z 0133<br>K30 78 243  | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                          | 7200         | D112M 4.0 KW (5.5 h.p.)   | SPZ 940<br>K30 77 156             | 031Z 0262<br>K30 78 238 | Bush 2012<br>Bore 28mm<br>K30 77 114 | 031Z 0132<br>K30 78 235  | Bush 1610<br>Bore 38mm<br>K30 77 186 |
|                          | 7200         | D132S 7.5 KW (10.0 h.p.)  | SPZ 940<br>K30 77 156             | 031Z 0263<br>K30 78 244 | Bush 2012<br>Bore 38mm<br>K30 77 113 | 031Z 0133<br>K30 78 243  | Bush 1610<br>Bore 38mm<br>K30 77 186 |
| Throating Head           | 5000         | *D100L 3.0KW (4.0 h.p.)<br>*Adaptor plate WU 516<br>Socket Head Screws<br>8mm x 20mm KO5 25 187 - 4 | No. 9030<br>BINI/inch<br>(Timing) | WU 606                  |                                      | Fenner 22L100*<br>WU 604 |                                      |



June 75

FEED WORKS - SINGLE TRAILING SWING

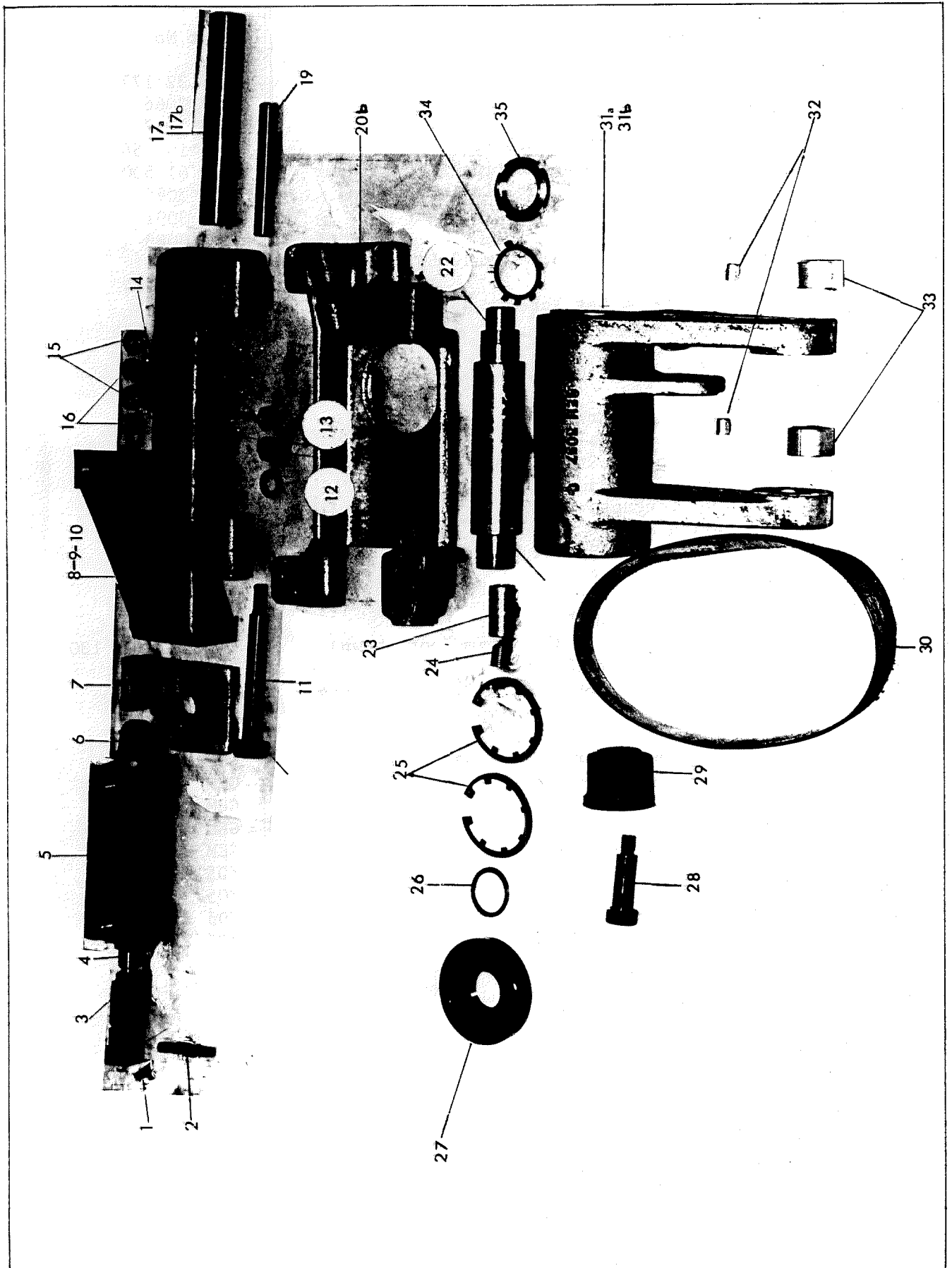
| Drg. No. | Description                                   | Part No.        |
|----------|---|-----------------|
| 1        | Bush for Filboe Axle                          | K05 32 177      |
| 2        | Pin for Filboe                                | GEM 3666        |
| 3        | Filboe  | GEM 3097        |
| 4        | Locknut 7/16in. B.S.F.                        | K05 10 156      |
| 5        | Martonair Double Acting Air Cylinder          | K30 61 500      |
| 6        | Air Cylinder Pivot Pin (not shown)            | GEM 3096        |
| 7        | Air Cylinder Support Bracket                  | GEM 3091        |
| 8        | Swing Support                                 | GEM 3088        |
| 9        | M8 Hexagon Socket Screw x 12 long (not shown) | K05 25 164      |
| 10       | M8 Hexagon Socket Screw x 45 long (not shown) | K05 25 192      |
| 11       | Top Pivot                                     | GEM 3052        |
| 11a      | Collar dia. 16 bore                           | K05 28 209      |
| 11b      | Taper Pin                                     | K05 20 507      |
| 12       | Plain Washer                                  | K05 28 105      |
| 13       | M10 Locknuts                                  | K05 27 111      |
| 14       | 'Pitching' Stud                               | GEM 3098        |
| 15       | Spherical Washer                              | GEM 143         |
| 16       | M10 Locknuts                                  | K05 27 110      |
| 17a      | Swing Axle                                    | GEM 132         |
| 18       | Swing Axle Spacer (not shown)                 | GEM 3098        |
| 19       | Bottom Pivot                                  | GEM 3053        |
| 20a      | Hinge Bracket                                 | GEM 3089        |
| 21       | Feed Roll Shaft                               | GEM 3332        |
| 22       | Bearings 62 x 30 x 16mm (not shown)           | Hoffman RSS 130 |
| 23       | Feed Roll Shaft Bush                          | GEM 3325        |
| 24       | Helicoil Insert M12 x 1.75 x 24 long          | K30 33 114      |
| 25       | Circlips Seeger JK Type dia. 62               | K30 09 164      |
| 26       | Spacer  | GEM 3572        |
| 27       | Feed Roll Mounting Flange                     | GEM 3333        |
| 28       | Shoulder Screw                                | GEM 3095        |
| 29       | Belt Anchor                                   | GEM 3021        |
| 30       | Stephans Endless Belt                         | GEM 3099        |
| 31       | Trailing Swing                                | GEM 3056        |
| 31a      | Leading Swing                                 | GEM 3057        |
| 32       | Bushes for item 6                             | K05 32 177      |
| 33       | Bushes  | K05 32 203      |
| 34       | Tab Lockwasher                                | K05 32 256      |
| 35       | Notched Nut                                   | K05 27 207      |
| 36       | Universal Joint                               | GEM 3564        |
| 37       | Front Flange (not shown)                      | GEM 3563        |
| 38       | Rear Flange (not shown)                       | GEM 3562        |



FEED WORKS - SINGLE TRAILING SWING

FEED WORKS SINGLE LEADING SWING

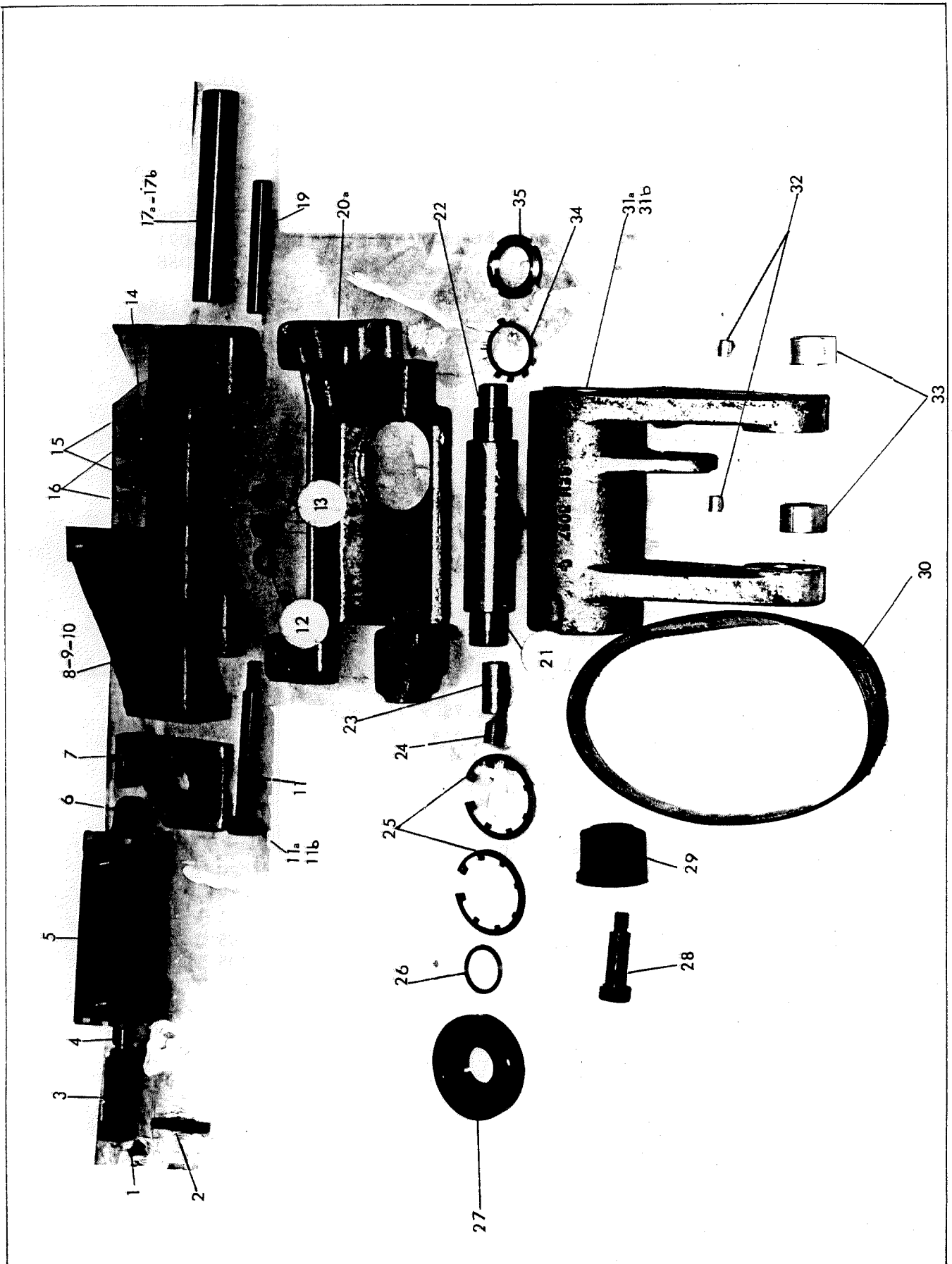
| Drq. No. | Description                                    | Part No.               |
|----------|--|------------------------|
| 1        | Bush for Filboe Axle                           | K05 32 177             |
| 2        | Pin for Filboe                                 | GEM 3066               |
| 3        | Filboe   | GEM 3097               |
| 4        | Locknut 7/16in. B.S.F.                         | K05 10 156             |
| 5        | Martonair Double Acting Air Cylinder           | K30 61 500             |
| 6        | Air cylinder Pivot Pin (not shown)             | GEM 3096               |
| 7        | Air Cylinder Support Bracket                   | GEM 3091               |
| 8        | Swing Support                                  | GEM 3088               |
| 9        | M8 Hex Socket Screw x 12 Lg in.<br>(not shown) | GEM 3666<br>K05 25 164 |
| 10       | M8 Hex Socket Screw x 45 Lg in<br>(not shown)  | GEM 3666<br>K05 25 192 |
| 11       | Top Pivot                                      | GEM 3052               |
| 11a      | Collar dia 16 bore                             | K05 28 209             |
| 11b      | Taper Pin                                      | K05 20 507             |
| 12       | Plain Washer                                   | K05 28 105             |
| 13       | M10 Locknuts                                   | K05 27 111             |
| 14       | 'Pitching' Stud                                | GEM 3098               |
| 15       | Spherical Washer                               | GEM 143                |
| 16       | M10 Locknuts                                   | K05 27 110             |
| 17b      | Swing Axle                                     | GEM 132                |
| 18       | Swing Axle Spacer (not shown)                  | GEM 3093               |
| 19       | Bottom Pivot                                   | GEM 3053               |
| 20b      | Hinge Bracket                                  | GEM 3090               |
| 21       | Feed Roll Shaft                                | GEM 3332               |
| 22       | Bearings 62 x 30 x 16mm (not shown)            | Hoffman RSS 130        |
| 23       | Feed Roll Shaft Bush                           | GEM 3325               |
| 24       | Helicoil Insert M12 x 1.75 x 24 long           | K30 33 114             |
| 25       | Circlips Seeger JK Type dia. 62                | K30 09 164             |
| 26       | Spacer   | GEM 3572               |
| 27       | Feed Roll Mounting Flange                      | GEM 3333               |
| 28       | Shoulder Screw                                 | GEM 3095               |
| 29       | Belt Anchor                                    | GEM 3021               |
| 30       | Stephans Endless Belt                          | GEM 3099               |
| 31b      | Leading Swing                                  | GEM 3056               |
| 32       | Bushes for item 6                              | K05 32 177             |
| 33       | Bushes   | K05 32 203             |
| 34       | Tab Lockwasher                                 | K05 27 256             |
| 35       | Notched Nut                                    | K05 27 207             |



FEED WORKS SINGLE LEADING SWING

FEED WORKS - DOUBLE SWING UNIT

| Drg. No. | Description                                 | Part No.        |
|----------|---|-----------------|
| 1        | Bush for Filboe Axle                        | K05 32 177      |
| 2        | Pin for Filboe                              | GEM 3666        |
| 3        | Filboe                                      | GEM 3097        |
| 4        | Locknut 7/16in. B.S.F.                      | K05 10 156      |
| 5        | Martonair Double Acting Air Cylinder        | K30 61 500      |
| 6        | Air Cylinder Pivot Pin<br>(not shown)       | GEM 3096        |
| 7        | Air Cylinder Support Bracket                | GEM 3091        |
| 8        | Swing Support                               | GEM 3088        |
| 9        | M8 Hex Socket Screw x 12 Lg<br>(not shown)  | K05 25 164      |
| 10       | M8 Hex Socket Screw x 45 Lg.<br>(not shown) | K05 25 192      |
| 11       | Top Pivot                                   | GEM 3052        |
| 11a      | Collar dia. 16 bore                         | K05 28 209      |
| 11b      | Taper Pin                                   | K05 20 507      |
| 12       | Plain Washer                                | K05 28 105      |
| 13       | M10 Locknuts                                | K05 27 111      |
| 14       | 'Pitching' Stud                             | GEM 3098        |
| 15       | Spherical Washer                            | GEM 143         |
| 16       | M10 Locknuts                                | K05 27 110      |
| 17a      | Swing Axle                                  | GEM 132         |
| 18       | Swing Axle Spacer (not shown)               | GEM 3098        |
| 19       | Bottom Pivot                                | GEM 3053        |
| 20a      | Hinge Bracket                               | GEM 3089        |
| 21       | Feed Roll Shaft                             | GEM 3332        |
| 22       | Bearings 62 x 30 x 16mm (not shown)         | Hoffman RSS 130 |
| 23       | Feed Roll Shaft Bush                        | GEM 3325        |
| 24       | Helicoil Insert M12 x 1.75 x 24 long        | K30 33 114      |
| 25       | Circlips Seeger JK Type dia. 62             | K30 09 164      |
| 26       | Spacer                                      | GEM 3572        |
| 27       | Feed Roll Mounting Flange                   | GEM 3333        |
| 28       | Shoulder Screw                              | GEM 3095        |
| 29       | Belt Anchor                                 | GEM 3021        |
| 30       | Stephans Endless Belt                       | GEM 3099        |
| 31a      | Trailing Swing                              | GEM 3056        |
| 31b      | Leading Swing                               | GEM 3057        |
| 32       | Bushes for item 6                           | K05 32 177      |
| 33       | Bushes                                      | K05 32 203      |
| 34       | Tab Lockwasher                              | K05 32 256      |
| 35       | Notched Nut                                 | K05 27 207      |

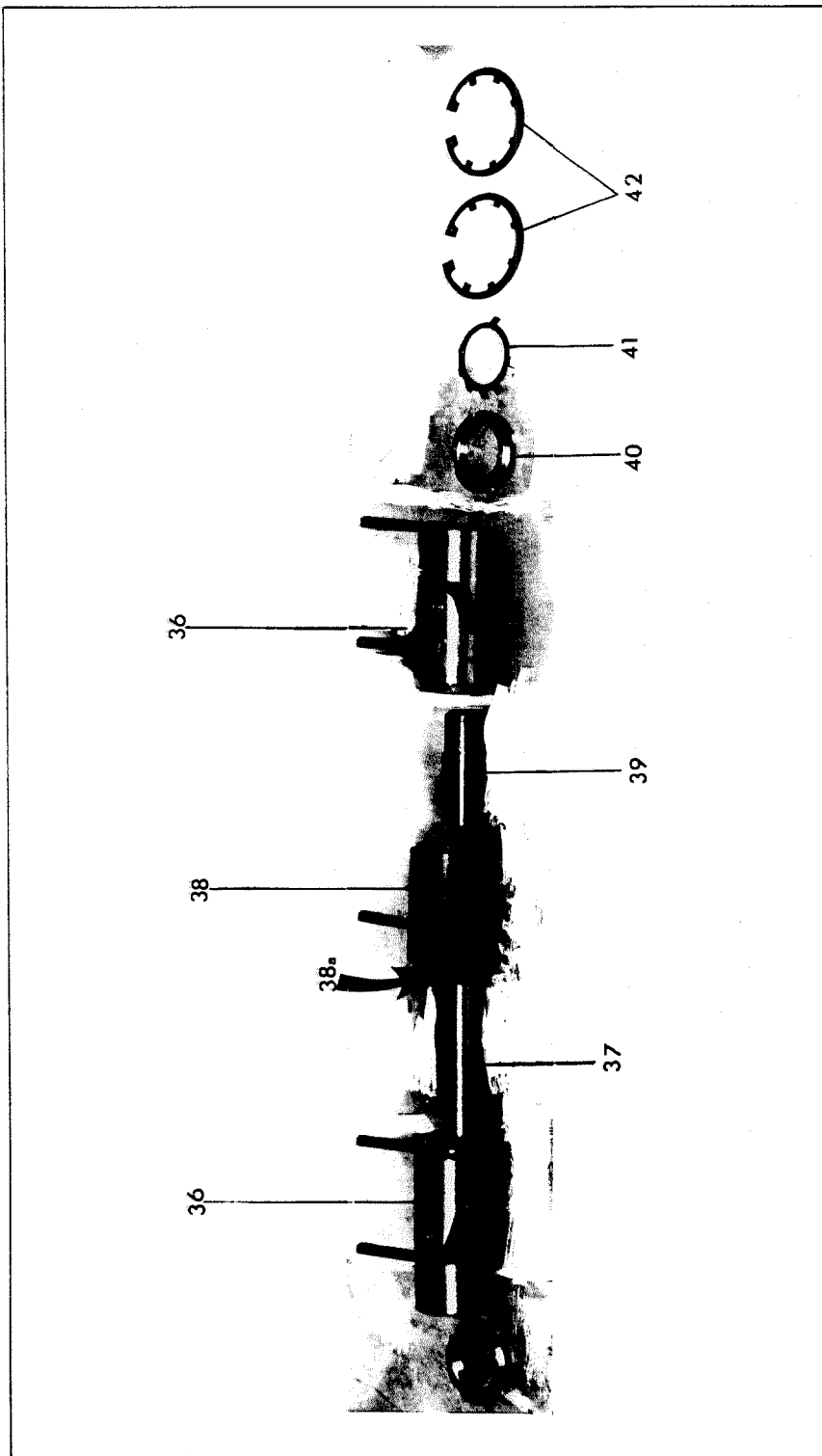


FEED WORKS - DOUBLE SWING UNIT



FEED ROLL UNIT TRANSMISSION

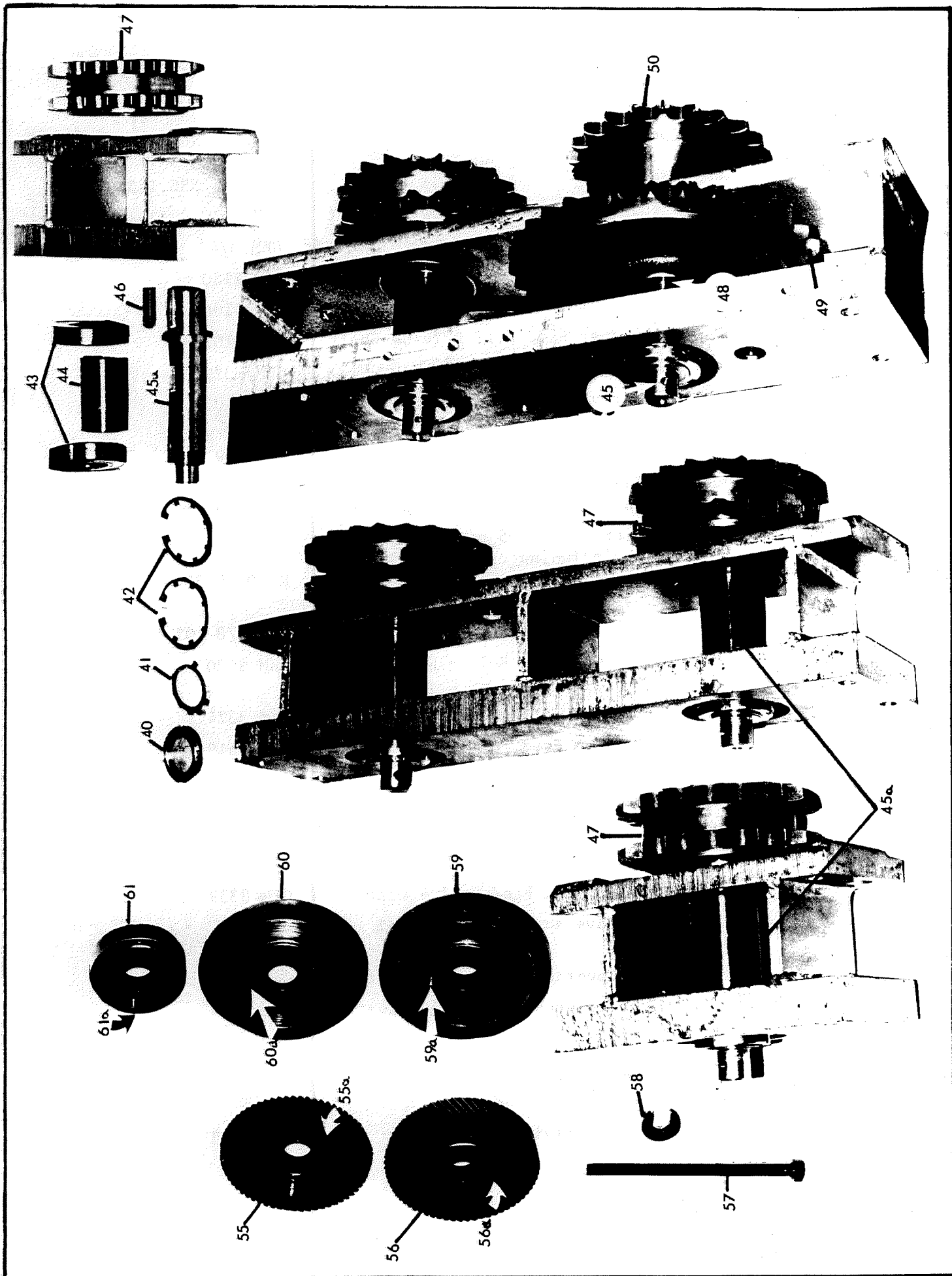
| Drg.<br>No. | Description         | Part No.    |
|-------------|---------------------|-------------|
| 36          | Universal Joint     | GEM 2171    |
| 37          | Driven Shaft        | GEM 2131    |
| 38          | Drive Sleeve        | GEM 2128    |
| 38a         | Key                 | GEM 2130    |
| 39          | Driving Shaft       | GEM 3049    |
| 40          | Chamfered Notch Nut | K 05 27 208 |
| 41          | Tab Washer          | K 05 27 257 |
| 42          | Circlip             | K 30 09 161 |



FEED ROLL UNIT TRANSMISSION

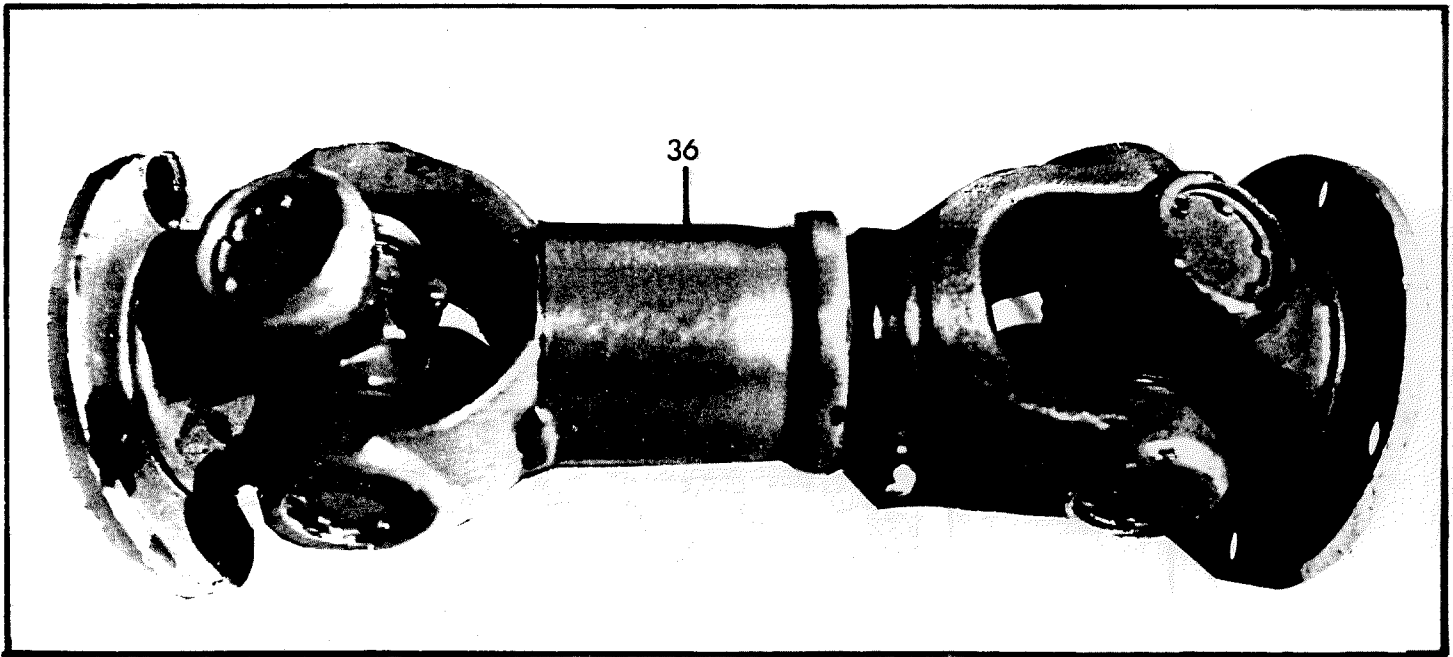
FEED ROLL UNIT TRANSMISSION

| Drg. No. | Description  | Part No.        |
|----------|--|-----------------|
| 43       | Bearings   | Hoffman RSS 135 |
| 44       | Spacer for Rear Feed Roll Driving Shaft  | GEM 3110        |
| *45      | Rear Intermediate Feed Roll Driving Shaft  | GEM 3747        |
| 45a      |  |                 |
| 46       | Key  | GEM 2130        |
| 47       | Feed Roll Driving Sprocket <del>link</del>   | GEM 3106        |
| 48       | Spacer for Rear Feed Roll Driving Shaft  | GEM 3109        |
| 49       | Feed Roll Input Sprocket   | GEM 3320        |
| 50       | Feed Roll Driving Sprocket   | GEM 3105        |
| 51       | Renold Roller Chain 40 pitches of 19.05 pitch including connecting                       | K 30 09 360     |
| 52       | Renold Roller Chain 50 pitches of 19.05 pitch including connecting link                  | K 30 09 360     |
| 53       | Renold Roller Chain 105 pitches of 19.05 pitch including cranked link and connector link | K 30 09 354     |
| 54       | Feedworks Reduction Gearbox output Pinion 15T x 19.05 pitch                              | K 30 78 101     |
| 55       | Spiral Saw Tooth Feed Roll - Narrow  | GEM 3620        |
| 55a      | Spiral Saw Tooth Feed Roll Drive pin   | GEM 3324        |
| 56       | Spiral Saw Tooth Feed Roll - wide  | GEM 3619        |
| 56a      | Spiral Saw Tooth Feed Roll Dowel No. 8 x 16 Lg   | K05 29 142      |
| 57       | Draw Bolt  | GEM 3331        |
| 58       | 'C' Washer   | GEM 3326        |
| 59       | Presscallon Covered Feed Roll - wide   | GEM 3339        |
| 59a      | Presscallon Covered Feed Roll Dowel No. 8 x 16 Lg  | K 05 29 142     |
| 60       | Presscallon Covered Feed Roll - Narrow   | GEM 3341        |
| 60a      | Presscallon Covered Feed Roll-Drive Pin  | GEM 3324        |
| 61       | Feed Roll Spacer   | GEM 3334        |
| 61a      | Feed Roll Spacer Dowel No. 8 x 16 lg.  | K 05 29 142     |
| *45      | Rear Feed Roll Driving Shaft   | GEM 3101        |



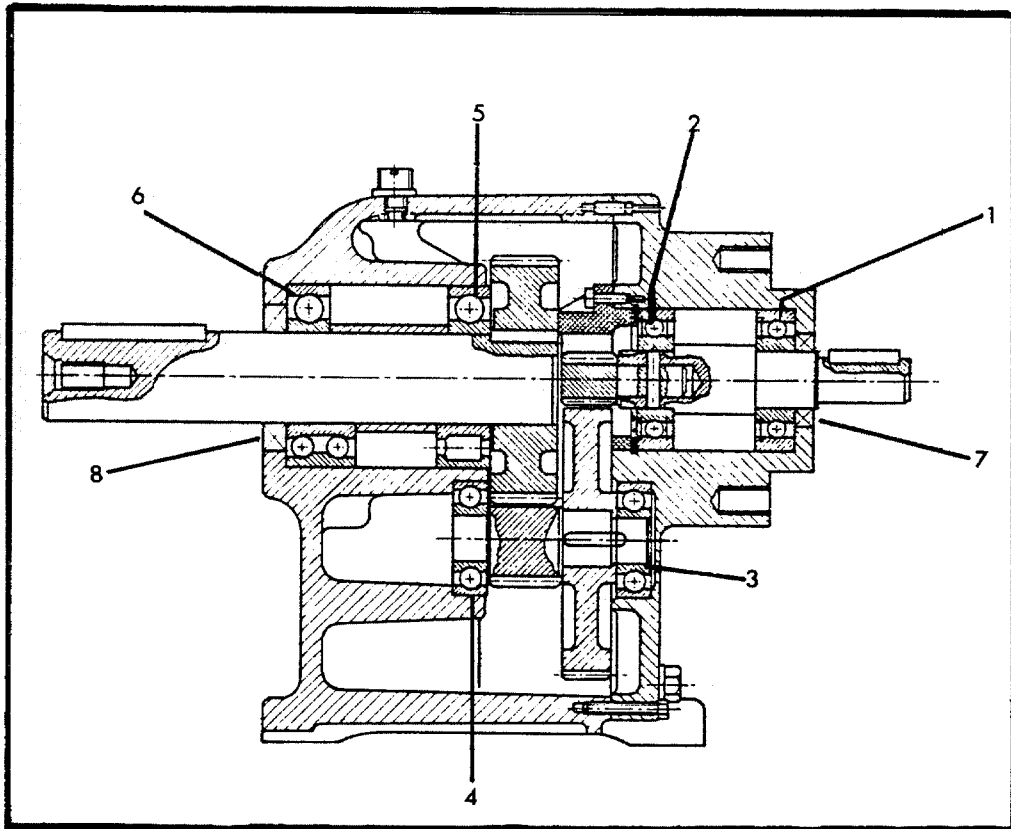
# UNIVERSAL JOINT

| Drg. No. | Description   | Part No.   |
|----------|---|------------|
| 36       | Universal Joint   | GEM 3564   |
| 37       | Front Flange (not shown)                                      | GEM 3563   |
| 38       | Rear Flange (not shown)                                       | GEM 3562   |
| 39       | Cap head socket screws (12 off)<br>M6 x 12mm long (not shown) | K05 25 164 |



VARIABLE SPEED FEED DRIVE GEARBOX FOR OVERHEAD FEED ROLLS

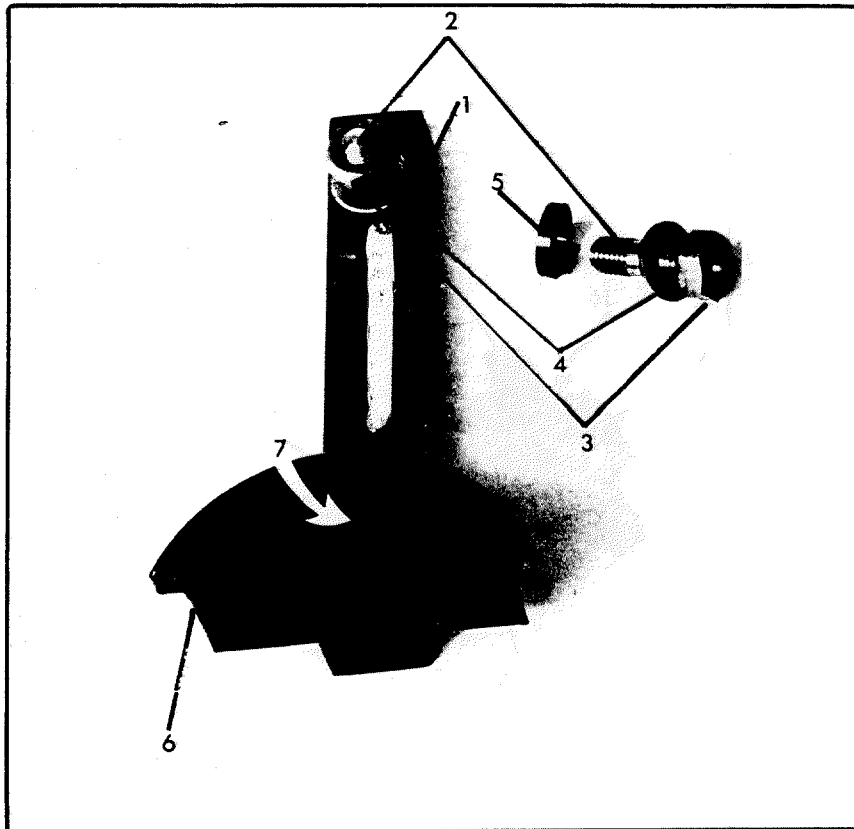
| Drg. No.             | Description                     | Part No.                                 |
|----------------------|---------------------------------|--|
| 1                    | Input Shaft Ball Bearing        | Simplana ref. 6305 ZZ                    |
| 2                    | Input Shaft Ball Bearing        | Simplana ref. 6305 Z                     |
| 3                    | Intermediate Shaft Ball Bearing | Simplana ref. 6304                       |
| 4                    | Intermediate Shaft Ball Bearing | Simplana ref. 6304                       |
| 5                    | Output Shaft Ball Bearing       | Simplana ref. 6208                       |
| 6                    | Output Shaft Ball Bearing       | Simplana ref. 6208                       |
| Seals to D.I.N. 3760 |                                 |  |
| 7                    | Input Shaft Seal                | Simplana ref. 25 x 47 x 7BA <sub>1</sub> |
| 8                    | Output Shaft Seal               | Simplana ref. 40 x 65 x 7BA              |



# CHAIN TENSIONERS

## WIDE CHAIN TENSIONER FOR REAR FEED ROLL DRIVING SHAFT BRACKET.

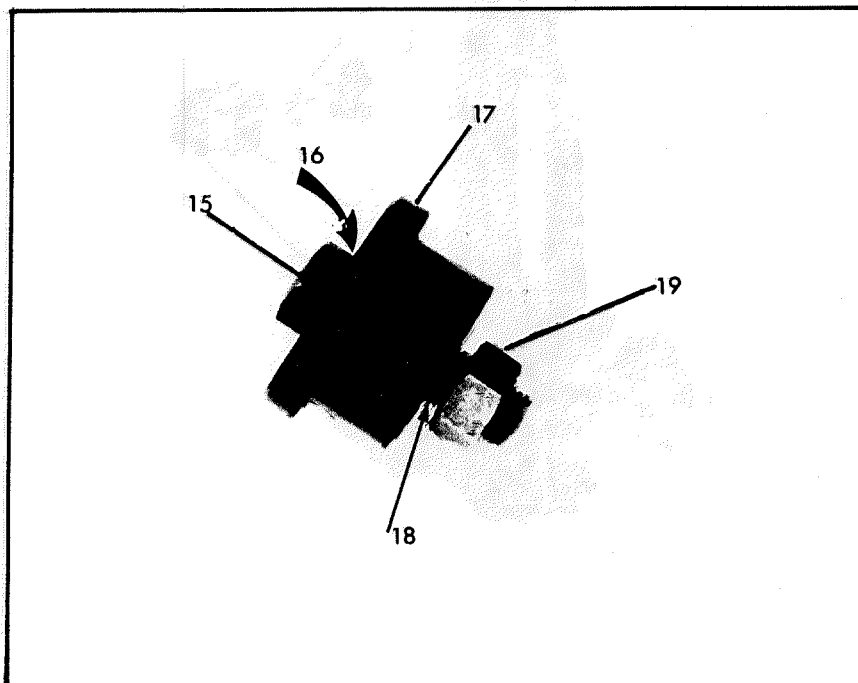
| Drg. No. | Description                                  | Part No.   |
|----------|--|------------|
| 1        | Chain Tensioner plate for intermediate drive | GEM 3113   |
| 2        | Stud M10 x 40mm long                         | K05 26 266 |
| 3        | Hex Nuts M10                                 | K05 27 103 |
| 4        | Washers 10mm Bore                            | K05 28 103 |
| 5        | Spacing collar for chain tensioner plate     | GEM 3114   |
| 6        | Chain Tensioner skid for intermediate drive  | GEM 3103   |
| 7        | Socket Head Cap screw M8 x 30mm long         | K05 25 189 |



CHAIN TENSIONER (cont.)

CHAIN TENSIONER FOR MAIN DRIVE

| Drg. No. | Description                    | Part No.   |
|----------|--------------------------------|------------|
| 15       | Hex Head Screw M16 x 60mm long | K05 25 734 |
| 16       | Bush for Main Drive Tensioner  | GEM 3115   |
| 17       | Chain Tensioner                | GEM 3104   |
| 18       | Washer M16                     | K05 28 106 |
| 19       | Hex Head Locknut               | K05 27 112 |

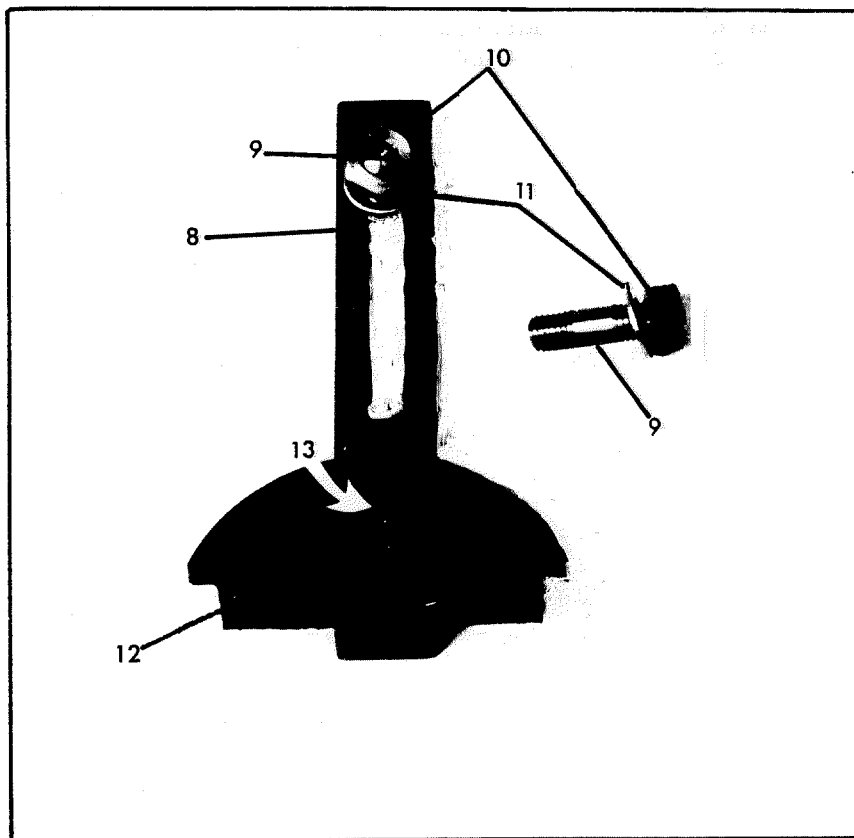




CHAIN TENSIONERS (cont.)

NARROW CHAIN TENSIONER FOR REAR FEED ROLL DRIVING SHAFT BRACKET

| Drg. No. | Description                                  | Part No.   |
|----------|--|------------|
| 8        | Chain Tensioner Plate for Intermediate drive | GEM 3113   |
| 9        | Stud M10 x 40mm long                         | K05 26 266 |
| 10       | Hex Nuts M10                                 | K05 27 103 |
| 11       | Washers 10mm bore                            | K05 28 104 |
| 12       | Chain tensioner skid for intermediate drive  | GEM 3102   |
| 13       | Socket head cap screw M8 x 30mm long         | K05 25 189 |

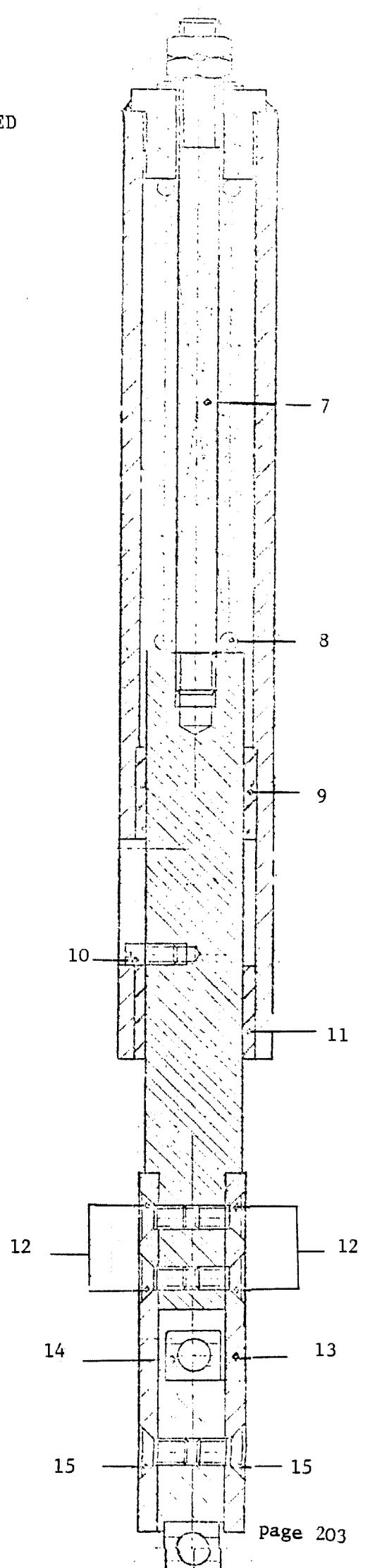
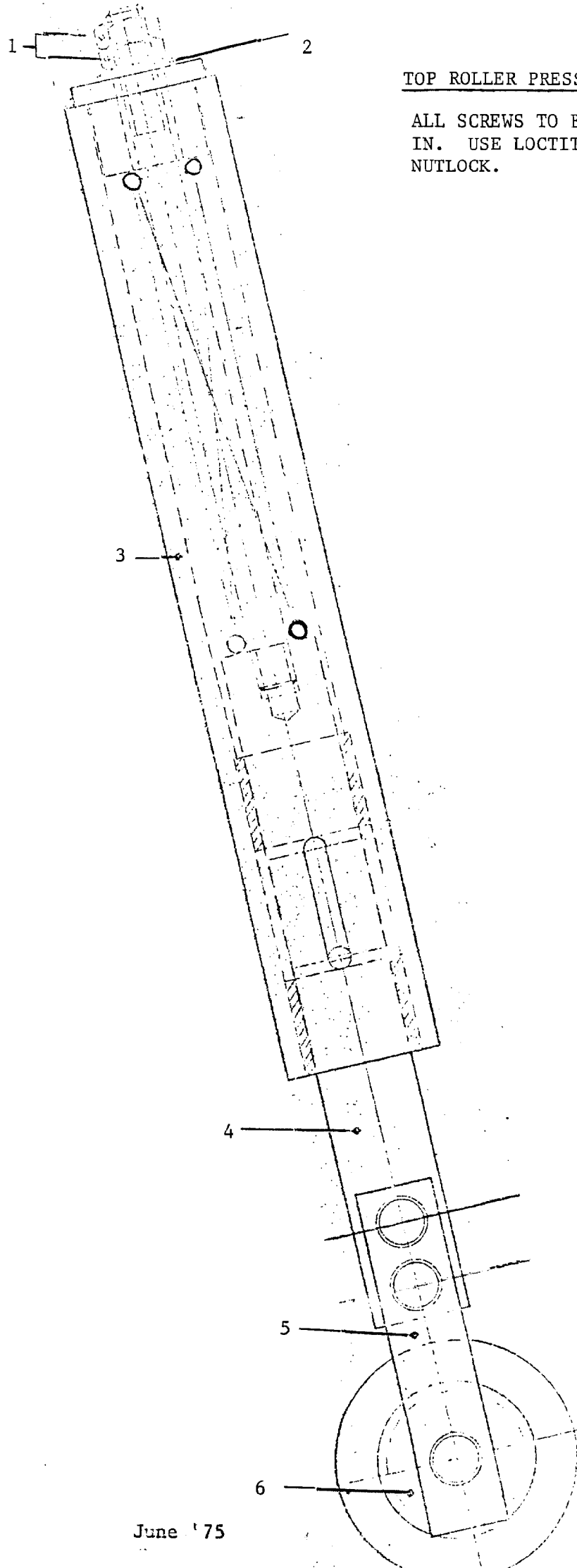


TOP ROLLER PRESSURE

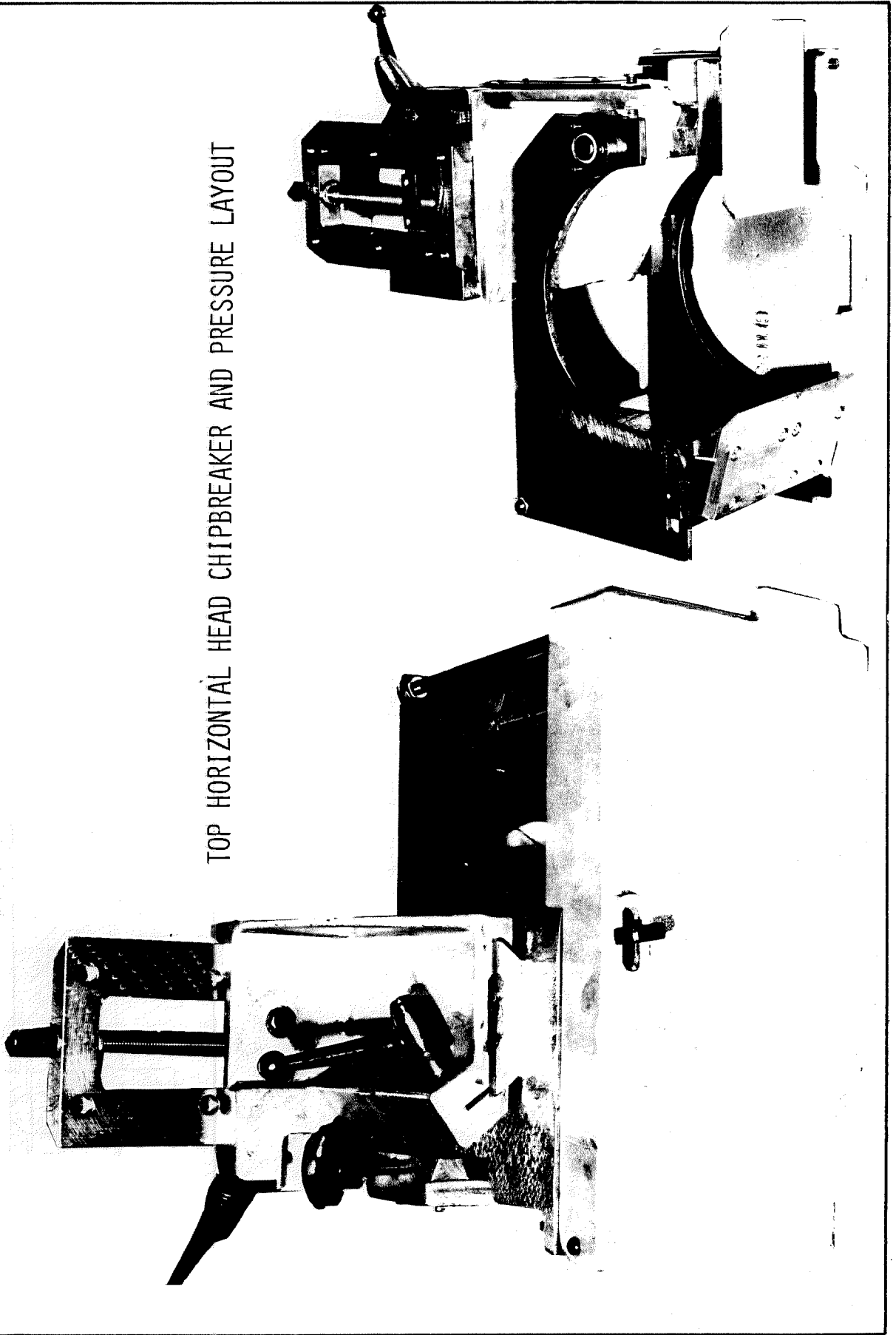
| Drg. No. | Description   | Part No.   | No. Off |
|----------|---|------------|---------|
| 1        | M10 Washer  | K05.28.104 | 2       |
| 2        | M10 Washer  | K05.28.104 | 1       |
| 3        | Pressure Body Casing  | GEM 3315   | 1       |
| 4        | Pressure Body   | GEM 3316   | 1       |
| 5        | Side Plate  | GEM 3899   | 1       |
| 6        | Flange Axle for Bearing   | GEM 3313   | 1       |
| 7        | Stud  | K05.26.285 | 1       |
| 8        | Flexo Spring  | K30.73.803 | 1       |
| 9        | Oil Retaining Bush  | K05.31.177 | 1       |
| 10       | Stop Pin  | GEM 3311   | 1       |
| 11       | Oil Retaining Bush  | K05.31.177 | 1       |
| 12       | Countersunk Screws M6 x 12  | K05.25.324 | 4       |
| 13       | Side Plate  | GEM 3899   | 1       |
| 14       | Sealed for Life Ball Race<br>RHP 6007-2RS O/D 62 x I/D<br>35 x 14 wide        | K06.01.124 | 1       |
| 15       | Countersunk Screws M6 x 12  | K05.25.324 | 2       |
| 16       | Pressure Tyre (not shown) pressed<br>on Part 14                               | GEM 3900   |         |
| 17       | Hexagon Socket Countersunk Screws<br>M6 x 12 for parts 4 and 6 (not<br>shown) | K05 25 324 |         |

TOP ROLLER PRESSURE

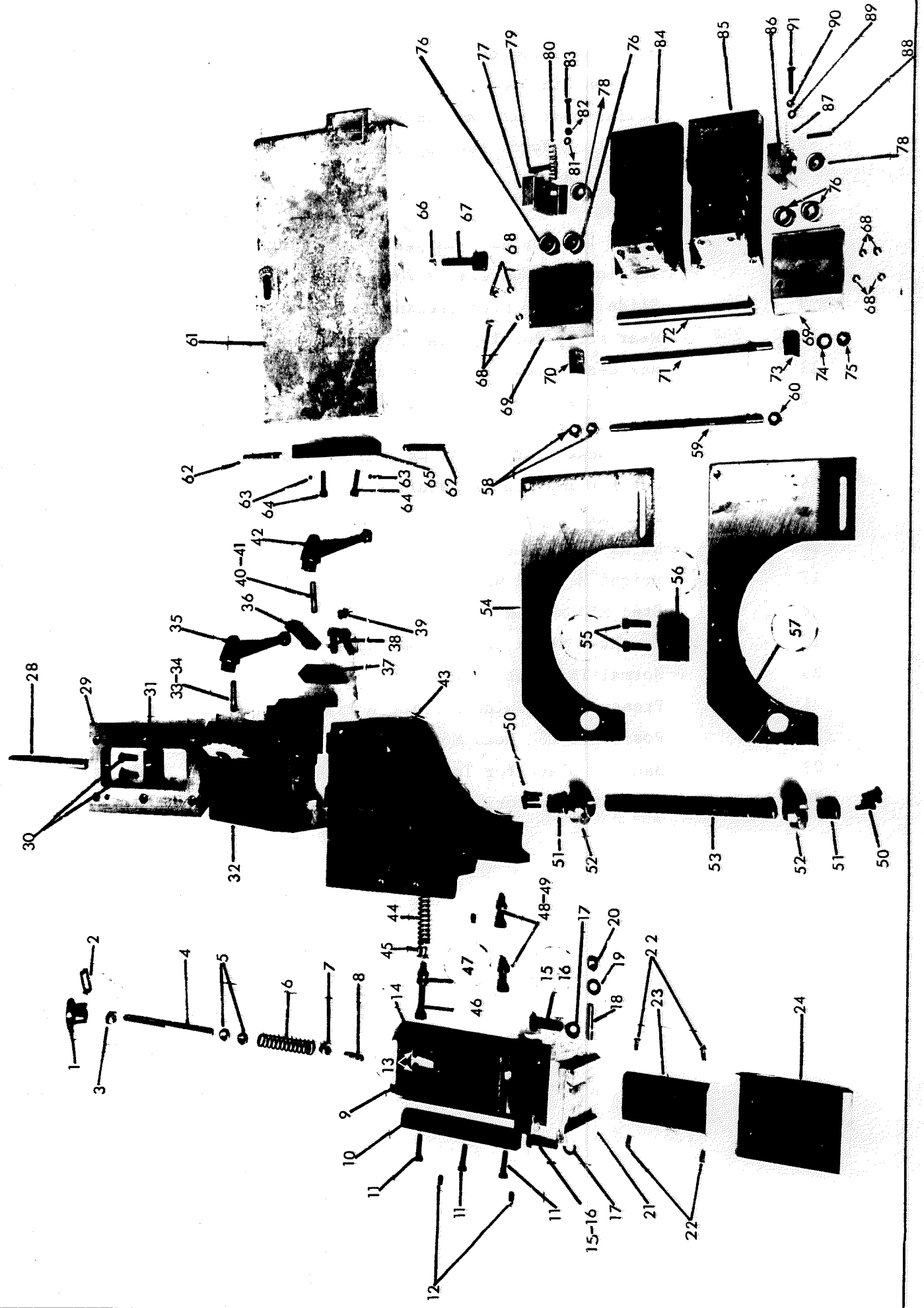
ALL SCREWS TO BE LOCTITED  
IN. USE LOCTITE GRADE  
NUTLOCK.



TOP HORIZONTAL HEAD CHIPBREAKER AND PRESSURE LAYOUT

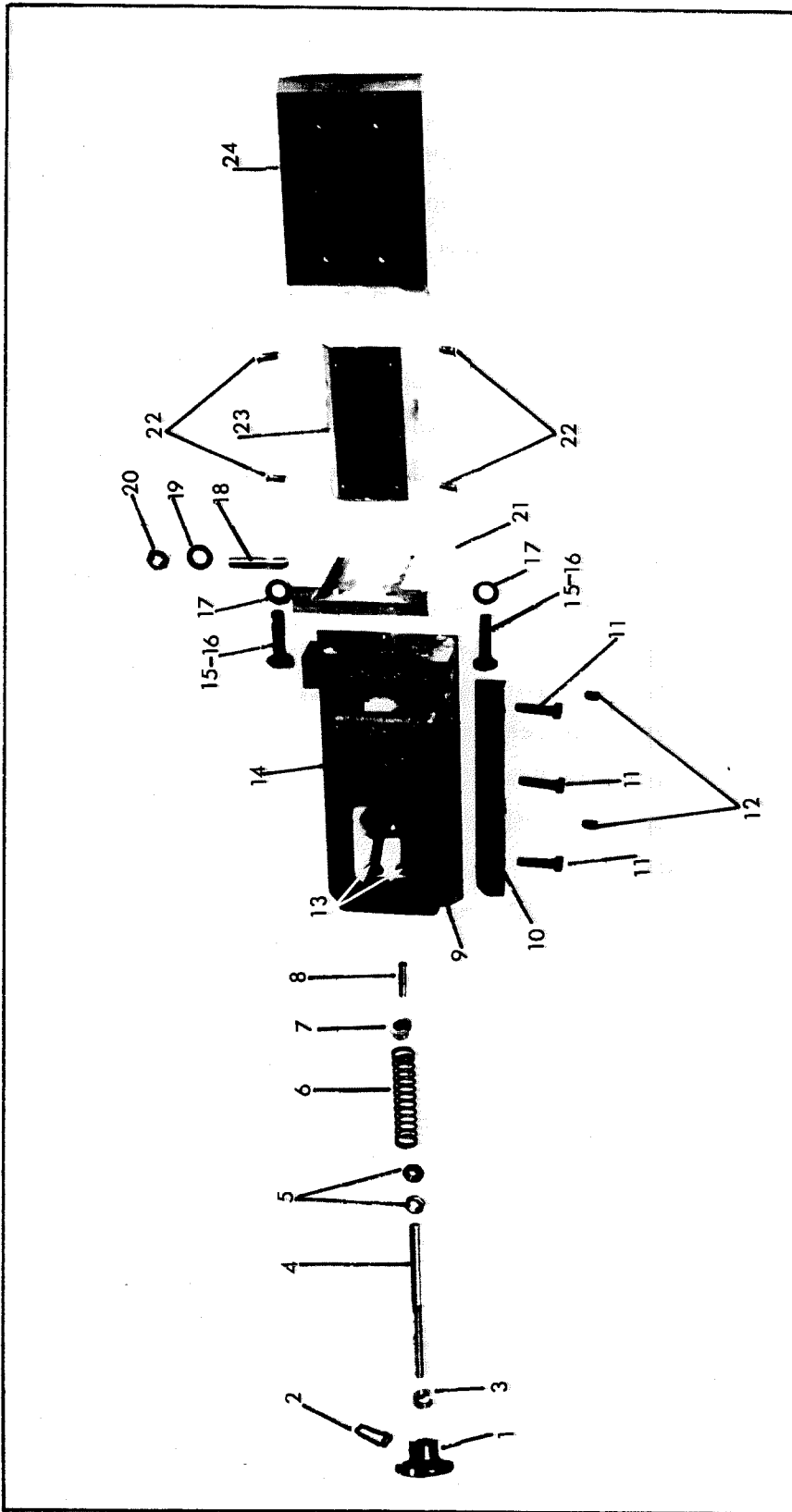


25  
26  
27



## TOP HORIZONTAL HEAD CHIPBREAKER AND PRESSURE LAYOUT

| Drg. No. | Description   | Part No.   |
|----------|---|------------|
| 1        | Handwheel 10mm bore                                     | K05 30 256 |
| 2        | Tension Pin 4mm dia. x 20mm long                        | K05 20 482 |
| 3        | Collar 20mm dia. x 10mm bore x 10mm long                | K05 28 205 |
| 4        | Adjusting screw for Top Pressure                        | GEM 3366   |
| 5        | Hex. locknuts   | K05 27 110 |
| 6        | Spring  | GEM 3775   |
| 7        | Guide for Top Head Chipbreaker Spring                   | GEM 3358   |
| 8        | Tension pin 8mm dia. x 20mm long                        | K05 20 538 |
| 9        | Slide for top head pressure                             | GEM 3348   |
| 10       | Wear strip for Top Head Pressure Slide                  | GEM 3365   |
| 11       | Hex Head Screws M8 x 30mm long                          | K05 25 518 |
| 12       | Nyloc Hex Socket Half Dog Point<br>Screw M8 x 15mm long | K05 26 571 |
| 13       | Hex Socket Cap Screws M8 x 30mm long                    | K05 29 189 |
| 14       | Nut for Top Head Pressure Slide                         | GEM 3291   |
| 15       | Stud M10 x 45mm   | K05 26 267 |
| 16       | Normal thickness nuts M10                               | K05 27 103 |
| 17       | Bright M Steel Washer 10mm dia.                         | K05 28 104 |
| 18       | Stud M10 x 40mm   | K05 26 266 |
| 19       | Bright M Steel washer 10mm dia.                         | K05 28 104 |
| 20       | Normal Thickness Nut M10                                | K05 27 103 |
| 21       | Pressure Pad Guide for Top Horizontal Head              | GEM 3368   |
| 22       | Posidrive CSK Head M6 x 20mm                            | K05 25 326 |
| 23       | Backing plate for Top Head Pressure Pad                 | GEM 3369   |
| 24       | Pressure Pad for Top Head                               | GEM 3370   |

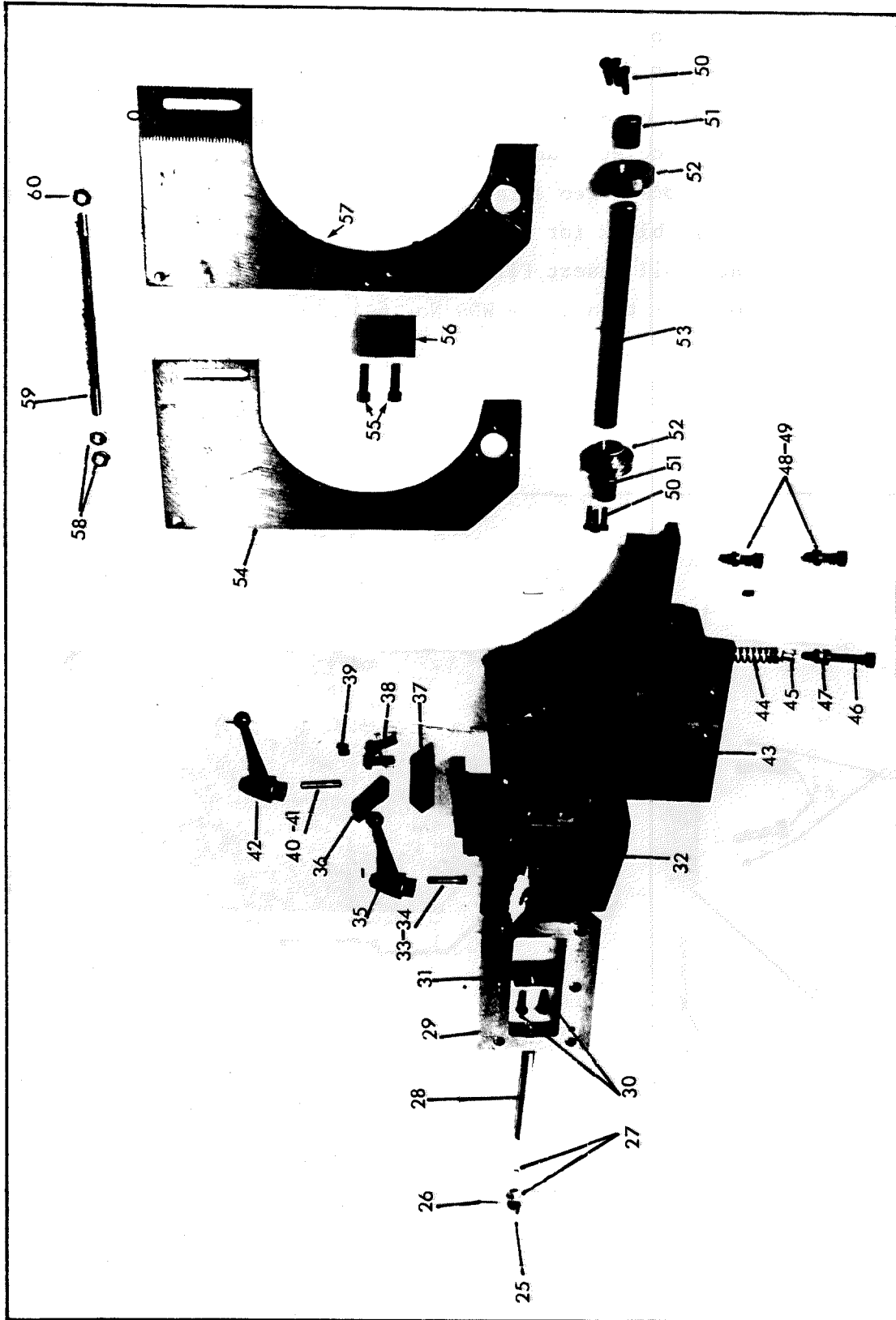


TOP HORIZONTAL HEAD CHIPBREAKER AND PRESSURE LAYOUT  
PART NUMBERS 1 - 24

## TOP HORIZONTAL CHIPBREAKER AND PRESSURE LAYOUT (cont.)

| Drg. No. | Description   | Part No.   |
|----------|---|------------|
| 25       | Square Boss for adjusting screw                                   | GEM 3351   |
| 26       | Taper Pin No.000  | K05 20 501 |
| 27       | Flanged oil retaining bushes<br>16mm dia. x 10mm bore x 10mm long | K05 31 310 |
| 28       | Adjusting screw for Top Head Chipbreaker Slide                    | GEM 3360   |
| 29       | Slide for Top Head Chipbreaker                                    | GEM 3345   |
| 30       | Hex Head Screws M10 x 30mm long                                   | K05 25 531 |
| 31       | Nut for Top Head Chipbreaker Slide                                | GEM 3352   |
| 32       | Slide for Mounting Top Head Chipbreaker                           | GEM 3344   |
| 33       | Stud 10mm dia. x 50mm long  | K05 26 268 |
| 34       | Bright Ms Washer 10mm dia. (not shown)                            | K05 28 104 |
| 35       | Female adjustable hand lever M10 (Black)                          | K05 30 301 |
| 36       | Clamp for Top Head Chipbreaker                                    | GEM 3289   |
| 37       | Wear Strip for Top Head Chipbreaker Slide                         | GEM 3290   |
| 38       | Hex Head Screws M10 x 35mm long                                   | K05 25 532 |
| 39       | Nyloc Grub Screws M8 x 15mm long                                  | K05 26 571 |
| 40       | Stud 10mm dia. x 50mm long  | K05 26 268 |
| 41       | Bright Ms Washer 10mm dia. (not shown)                            | K05 28 104 |
| 42       | Female Adjustable Hand lever M10 (Black)                          | K05 30 301 |
| 43       | Pivot bracket for Top Head Chipbreaker                            | GEM 3343   |
| 44       | Top Head Chipbreaker Shoe Spring                                  | K05 24 101 |
| 45       | Guide for Top Head Chipbreaker Spring                             | GEM 3358   |
| 46       | Hex Head Screw M10 x 80mm long                                    | K05 25 620 |
| 47       | Locknuts M10  | K05 27 110 |
| 48       | Hex Head Screw M10 x 35mm long                                    | K05 25 532 |
| 49       | Locknuts M10  | K05 27 110 |
| 50       | Hex Socket Cap Screws M5 x 20mm long                              | K05 25 145 |
| 51       | Bronze Oil Retaining Bush 25mm dia. x 20mm<br>bore x 20mm long    | K05 31 564 |
| 52       | Boss for Top Head Chipbreaker Sideplate                           | GEM 3353   |
| 53       | Shaft for Top Head Chipbreaker Sideplate                          | GEM 3361   |
| 54       | Sideplate for Top Head Chipbreaker (rear)                         | GEM 3350   |
| 55       | Hex Socket Cap Screws M8 x 30mm long                              | K05 25 189 |
| 56       | Spring stop for Top Head Chipbreaker                              | GEM 3292   |
| 57       | Sideplate for Top Head Chipbreaker (front)                        | GEM 3349   |
| 58       | Hex nuts normal thickness M10                                     | K05 27 103 |
| 59       | Tie bar for top head chipbreaker sideplates                       | GEM 3356   |
| 60       | Hex nut normal thickness M10                                      | K05 27 103 |

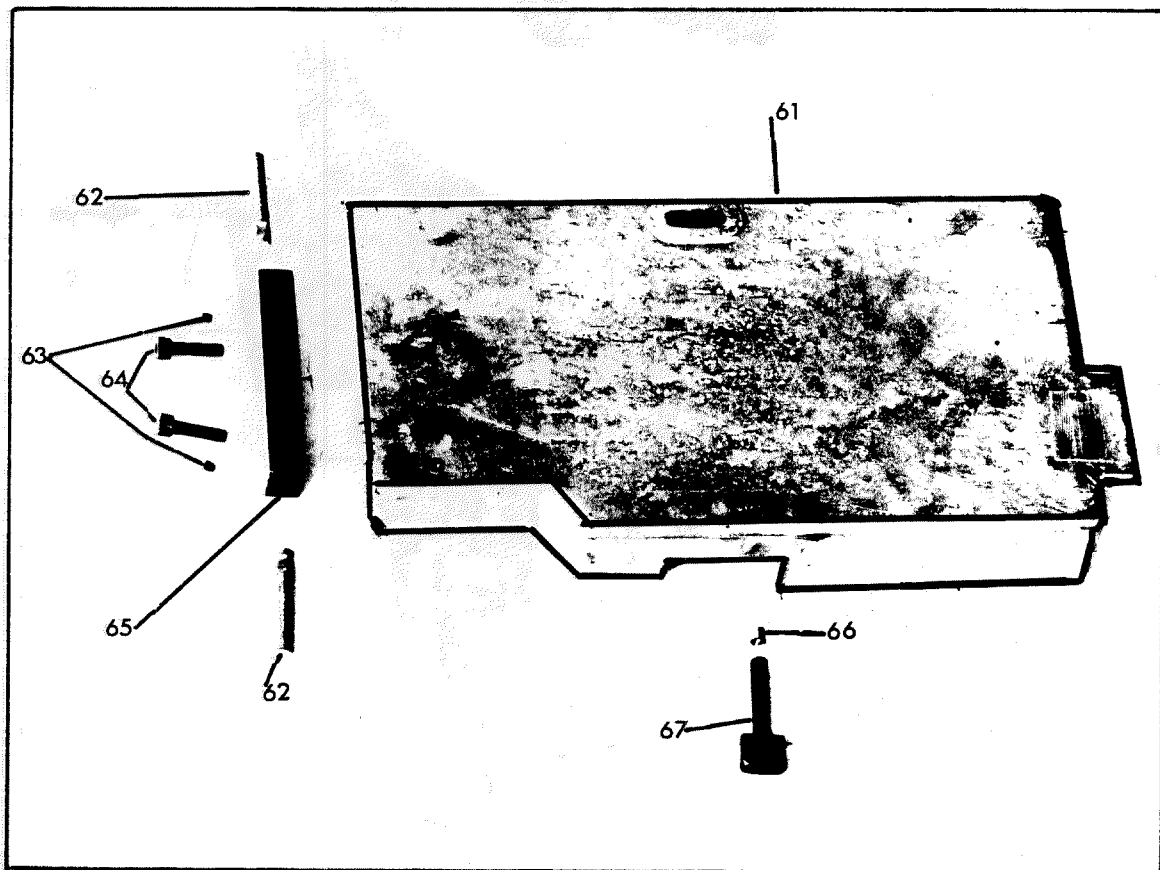




TOP HORIZONTAL HEAD CHIPBREAKER AND PRESSURE LAYOUT  
 PART NUMBERS 25 - 60

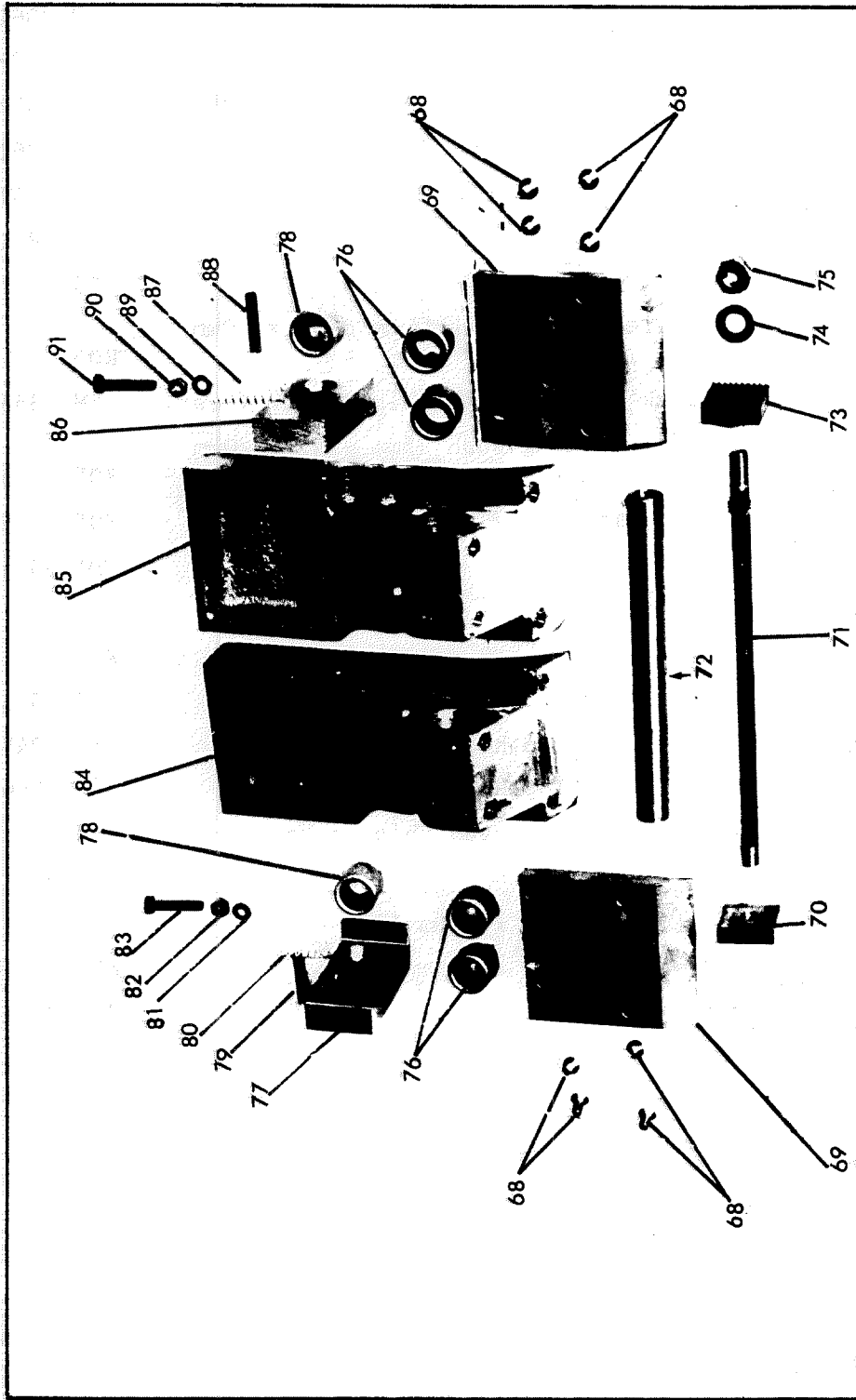
TOP HORIZONTAL HEAD CHIPBREAKER AND PRESSURE LAYOUT (cont.)

| Drg. No. | Description                                | Part No.   |
|----------|--|------------|
| 61       | Door for Top Head Chipbreaker              | GEM 3372   |
| 62       | Hinge Pin for Door                         | GEM 3076   |
| 62a      | Bright Ms Washer 10mm dia. (not shown)     | K05 28 104 |
| 63       | Hex. Socket Grub Screw M6 x 15mm long      | K05 26 116 |
| 64       | Hex Socket cap screws M8 x 25mm long       | K05 25 188 |
| 65       | Hinge block for door                       | GEM 3072   |
| 66       | Helicoil insert F110 M10 x 1.5 x 10mm long | K30 33 115 |
| 67       | Quarter turn screw WDS No. 604 203         | K30 73 862 |

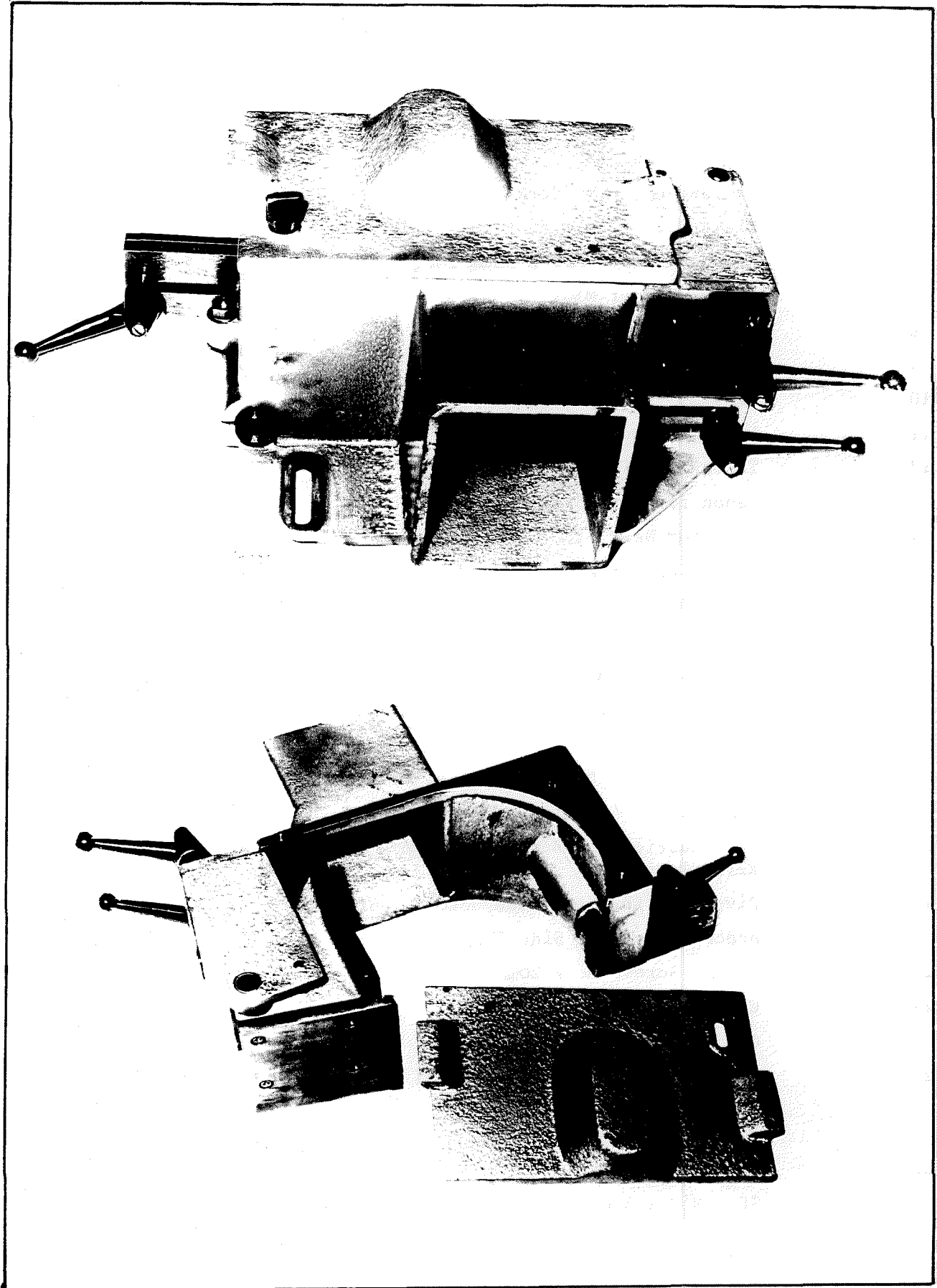


TOP HORIZONTAL HEAD CHIPBREAKER AND PRESSURE LAYOUT (cont.)

| Drg. No. | Description  | Part No.   |
|----------|--|------------|
| 68       | CSK Head Posidrive Screws M6 x 20mm long                     | K05 25 326 |
| 69       | Plate for Top Head Chipbreaker Shoe                          | GEM 3364   |
| 70       | Nut for Top Head Chipbreaker Shoe Clamp                      | GEM 3288   |
| 71       | Stud for Top Head Chipbreaker Shoe Clamp                     | GEM 3363   |
| 72       | Bearing Tube for Top Head Chipbreaker Shoes                  | GEM 3362   |
| 73       | Serrated Clamp for Top Head Chipbreaker                      | GEM 3357   |
| 74       | Bright Ms Washer 10mm dia.                                   | K05 28 104 |
| 75       | Nut M10  | K05 27 103 |
| 76       | Bronze oil retaining bush 14mm dia. x 10mm bore x 10mm long. | K05 31 513 |
| 77       | Spring block for top head chipbreaker (rear)                 | GEM 3355   |
| 78       | Bronze oil retaining bush 25mm dia. x 20mm bore x 15mm long  | K05 31 540 |
| 79       | Tension Pin 6mm dia. x 32mm long                             | K05 20 526 |
| 80       | Spring   | K05 24 101 |
| 81       | Washer M steel M6  |            |
| 82       | Nut M8   | K05 27 109 |
| 83       | Hex Hd. Screw M8 x 30mm long                                 | K05 25 518 |
| 84       | Chipbreaker shoe top head (rear)                             | GEM 3347   |
| 85       | Chipbreaker Shoe Top Head (front)                            | GEM 3346   |
| 86       | Spring Block for Top Head Chipbreaker (Rear)                 | GEM 3354   |
| 87       | Spring   | K05 24 101 |
| 88       | Tension Pin 6mm dia. x 32mm long                             | K05 20 526 |
| 89       | Washer M steel M6  | K05 28 102 |
| 90       | Nut M8   | K05 27 109 |
| 91       | Hex Hd. Screw M8 x 30mm long                                 | K05 25 518 |



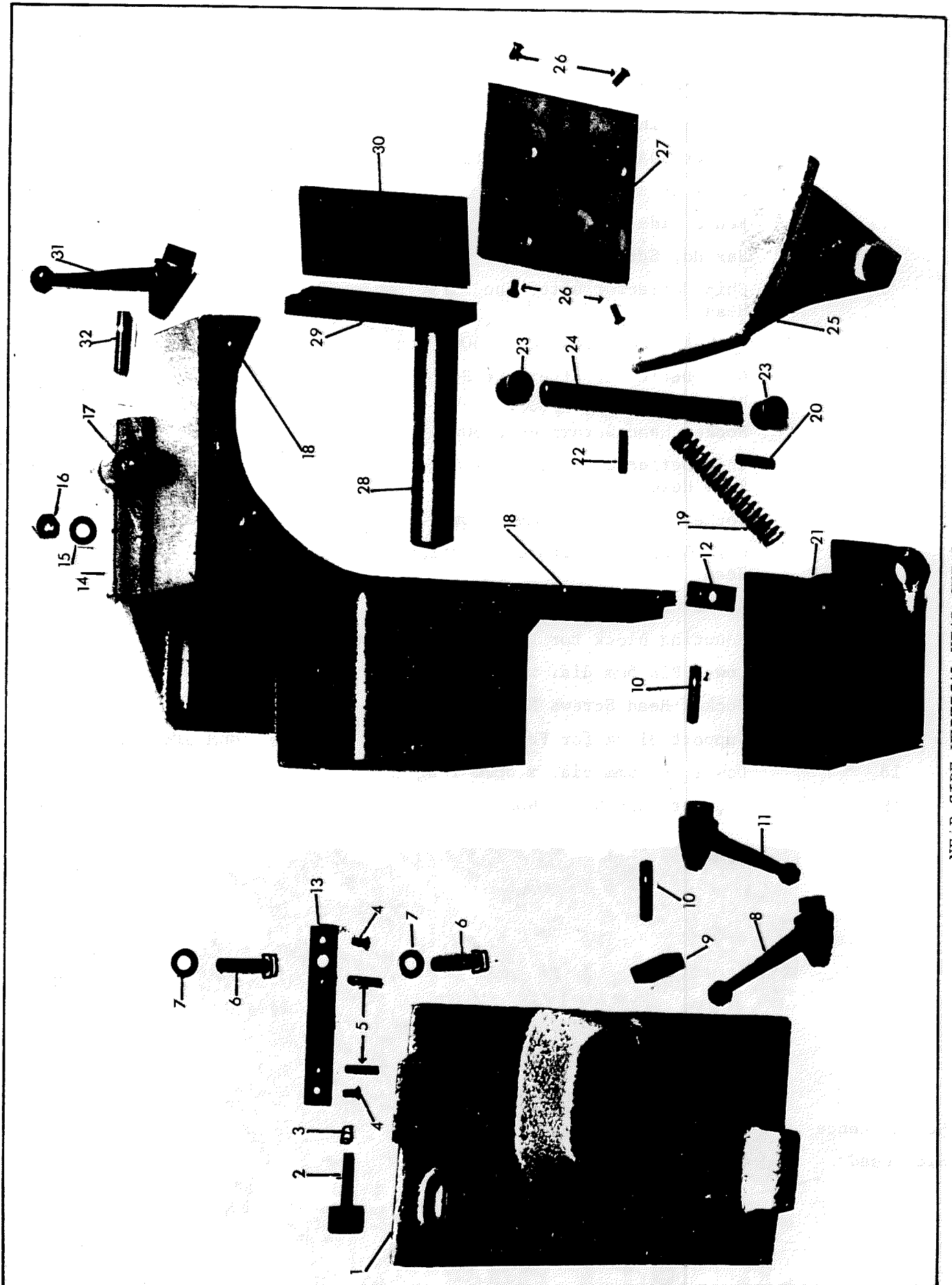
TOP HORIZONTAL HEAD CHIPBREAKER AND PRESSURE LAYOUT  
PART NUMBERS 68 - 91



NEAR SIDE VERTICAL HEAD CHIPBREAKER

NEAR SIDE VERTICAL HEAD CHIPBREAKER

| Drg. No. | Description   | Part No.   |
|----------|---|------------|
| 1        | Cover for Near Side Head Chipbreaker                              | GEM 3277   |
| 2        | Quarter Turn Screw M8   | K30 73 128 |
| 3        | Helicoil Insert   | K30 33 133 |
| 4        | Posidrive C.S.K. Screw M5 x 10mm long                             | K05 25 316 |
| 5        | Plain Dowel 5mm dia. x 10mm long                                  | K05 29 115 |
| 6        | Hex Head Screw M10 x 30mm long                                    | K05 25 533 |
| 7        | Bright Washer M10   | K05 28 104 |
| 8        | Locking handle  | K05 30 301 |
| 9        | Serrated Clamp  | GEM 3357   |
| 10       | Stud M10 x 45mm long  | K05 26 267 |
| 11       | Locking Handle  | K05 30 301 |
| 12       | Tenon for Pivot Bracket   | GEM 3284   |
| 13       | Tenon for Near Side Chipbreaker                                   | GEM 3127   |
| 14       | Hood for Near Side Chipbreaker                                    | GEM 3276   |
| 15       | Bright Washer M10   | K05 28 104 |
| 16       | Nut M10   | K05 27 103 |
| 17       | Stud M10 x 45mm long  | K05 26 267 |
| 18       | Plain Dowel 5mm dia. x 16mm long                                  | K05 29 116 |
| 19       | Compression Spring  | WO 2656    |
| 20       | Stepped pin   | GEM 4058   |
| 21       | Pivot Bracket for Near Side Chipbreaker                           | GEM 3278   |
| * 22     | Tension Pin 4mm dia. x 32mm long                                  | K05 20 485 |
| 23       | Self Lubricating Bush dia. 22mm x 16mm bore x25mm long            | K05 31 122 |
| 24       | Pivot Pin for Near Side Head Chipbreaker                          | GEM 3280   |
| 25       | Bracket for Near Side Chipbreaker                                 | GEM 3279   |
| 26       | C.S.K. Screws M6 x 20mm long                                      | K05 25 326 |
| 27       | Chipbreaker   | GEM 3260   |
| 28       | Guide for Pressure  | GEM 3281   |
| 29       | Backing Plate for Pressure Pad (Welded to Part 28)                | GEM 3282   |
| ** 30    | Plate for Pressure Pad  | GEM 3283   |
| 31       | Locking Handle  | K05 30 301 |
| 32       | Stud M10 x 35mm long  | K05 26 265 |
| *21a     | Hexagon Head Locknut M10 (not shown)                              | K05 27 110 |
| **29a    | Baffle (not shown) for Part 29                                    | GEM 3779   |
| 29b      | Hexagon Socket Cap Screws M6 x 12mm long for Part 29a (not shown) | K05 25 164 |

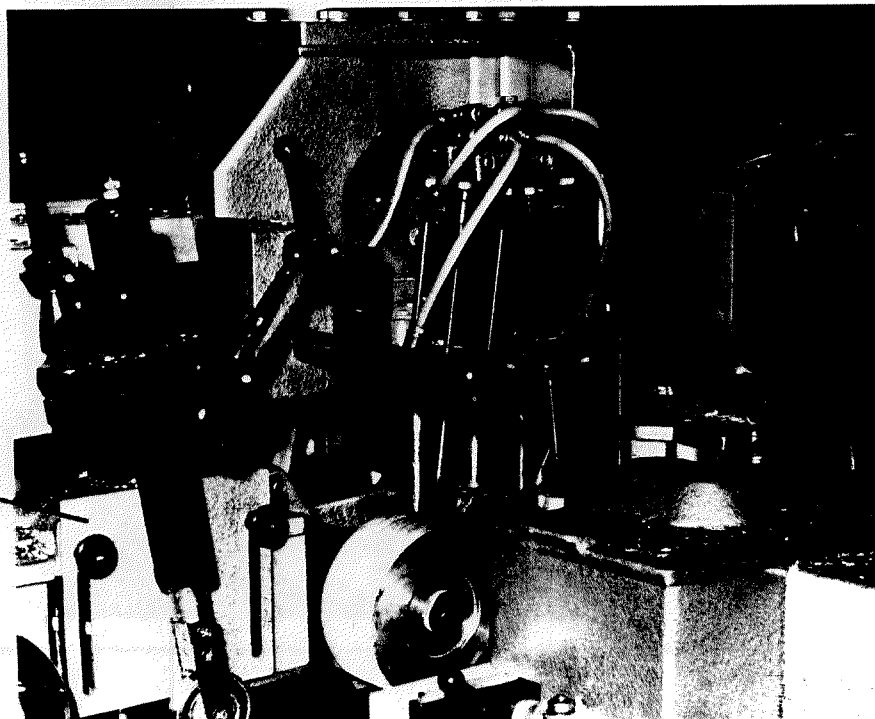


NEAR SIDE VERTICAL HEAD CHIPBREAKER

FENCE SIDE VERTICAL HOOD AND CHIP DEFLECTORS

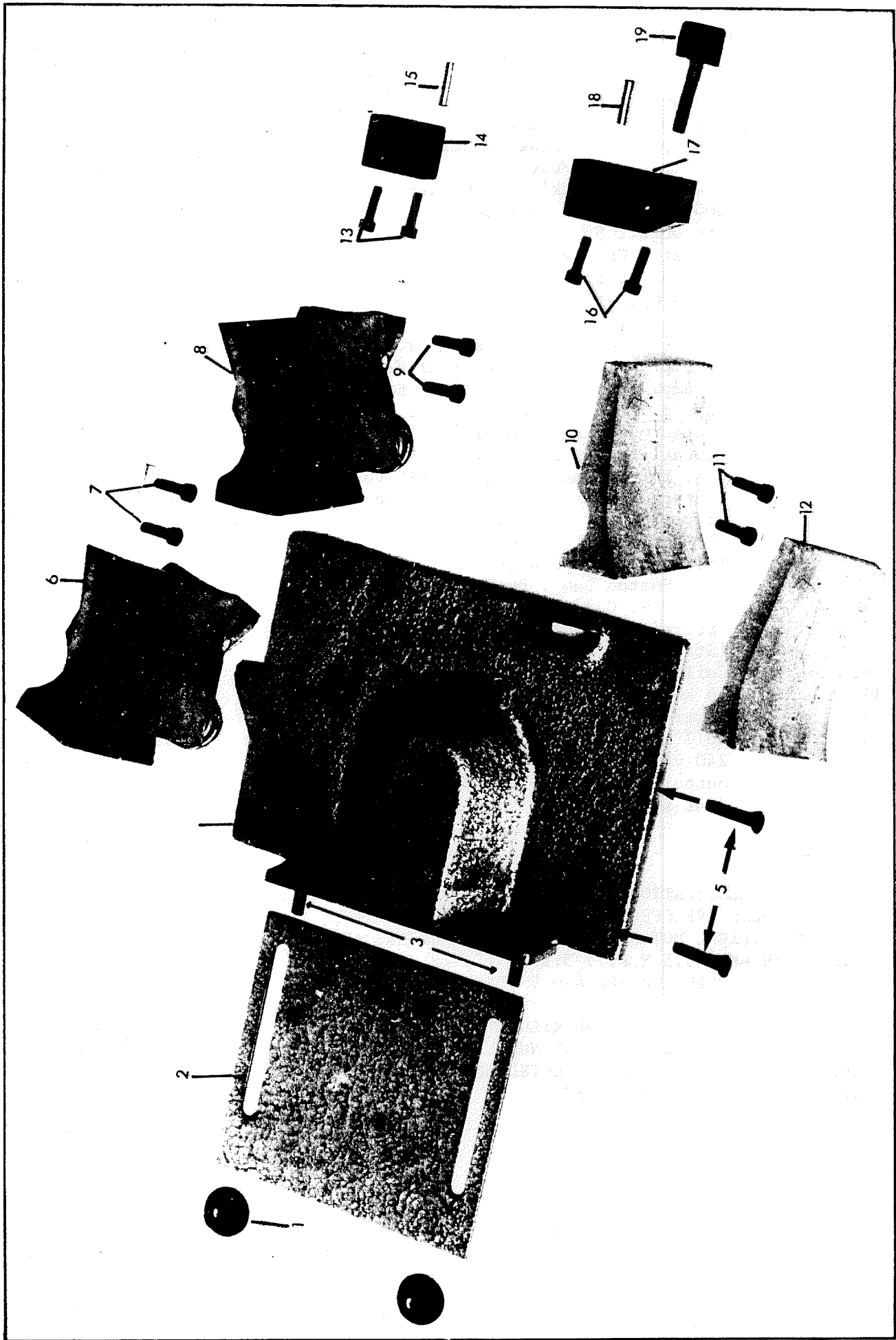
| Drg. No. | Description                                      | Part No.   |
|----------|--|------------|
| 1        | Knurled Thumb Nut NDS 520 - 204                  | K30 53 137 |
| 2        | Cutter Guard for Fence Side Head                 | GEM 3158   |
| 3        | Studs M8 x 30mm long                             | K05 26 235 |
| 4        | Fence Side Head                                  | GEM 3200   |
| 5        | Hex Hd. Screws M6 x 30mm long                    | K05 25 505 |
| 6        | Chip Deflector after the First Fence Side Head   | GEM 3462   |
| 7        | Socket Head Screws M6 x 30mm long                | K05 25 168 |
| 8        | Chip Deflector after the Second Fence Side Head  | GEM 3464   |
| 9        | Socket Head Screws M6 x 30mm long                | K05 25 168 |
| 10       | Chip Deflector before the Second Fence Side Head | GEM 3463   |
| 11       | Socket Head Screws M6 x 30mm long                | K05 25 168 |
| 12       | Chip Deflector before the First Fence Side Head  | GEM 3467   |
| 13       | Socket Head Screws M6 x 30mm long                | K05 25 168 |
| 14       | Mounting block for Fence Side Head Hood          | GEM 3184   |
| 15       | Dowel Pin 5mm dia. x 30mm long                   | K05 29 119 |
| 16       | Socket Head Screws M6 x 30mm long                | K05 25 168 |
| 17       | Support Block for Fence Side Head Hood           | GEM 3185   |
| 18       | Dowel Pin 5mm dia. x 30mm long                   | K05 29 119 |
| 19       | Quarter Turn Screw NDS 604 202                   | K30 73 128 |

Second Fence  
Side Head



First Fence  
Side Head





FENCE SIDE VERTICAL HEAD HOOD AND CHIP DEFLECTOR

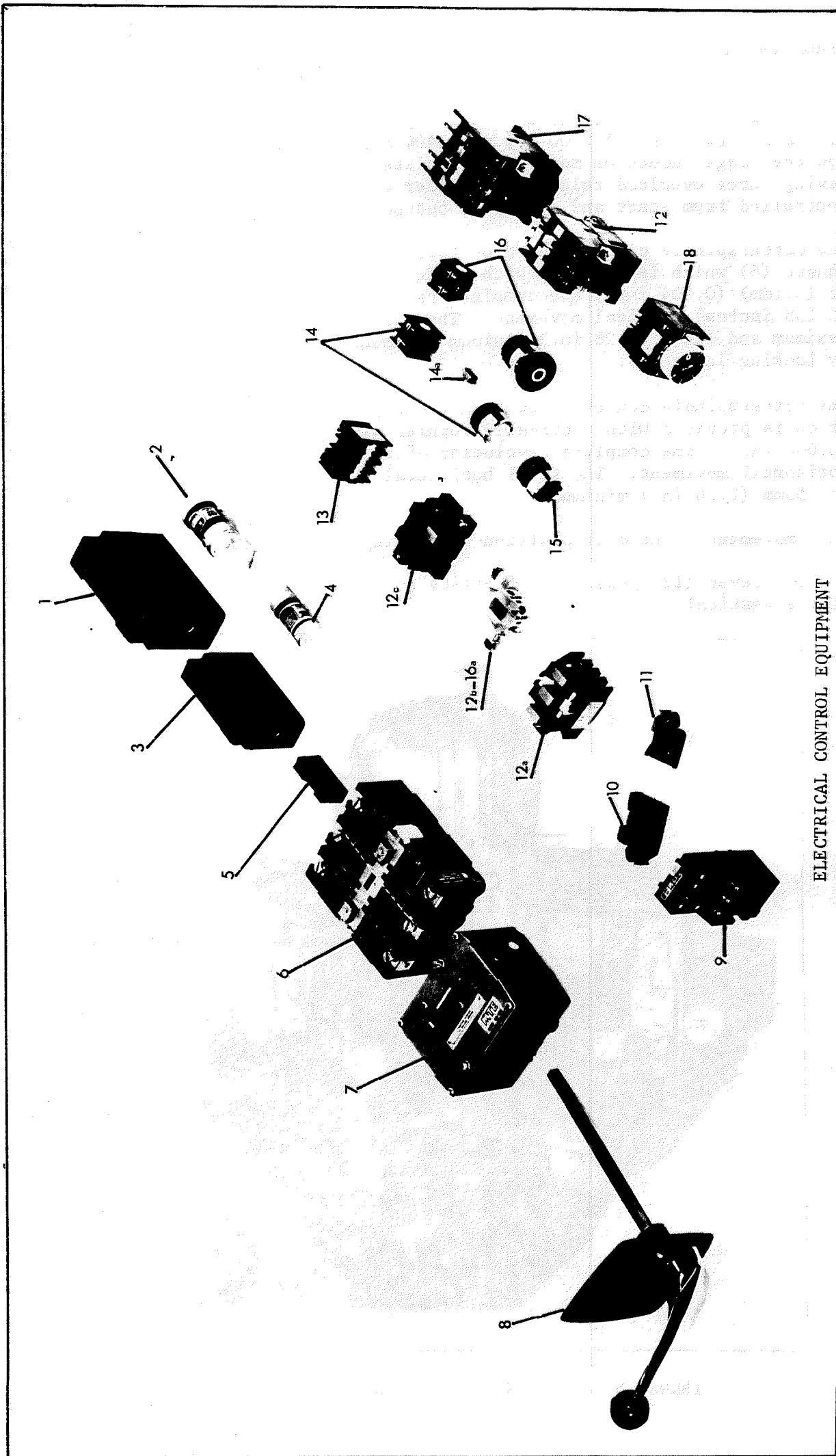
## ELECTRICAL CONTROL EQUIPMENT

| Drq. No. | Description   | Part No.   |
|----------|---|------------|
| 1        | 100 amp. H.R.C. Fuse Holder and Base  | K12 04 153 |
| 2        | 100 amp. H.R.C. Fuse  | K12 04 145 |
| 3        | 30 amp. H.R.C. Fuse Holder and Base   | K12 04 151 |
| 4        | 30 amp H.R.C. Fuse  | K12 04 139 |
| 5        | 5 amp. 'Slydlock' Fuse Holder and Base  | K12 04 156 |
| 6        | 100 amp. Triple Pole Contact Bank for Disconnect Switch   | K12 02 155 |
| 7        | Actuator Unit with Door Interlock for Disconnect Switch   | K12 02 156 |
| 8        | Large Operating Handle for U.C.O. Disconnect Switch   | K12 02 158 |
| 9        | Triple Pole Overload Assembly 7-10 amp.   | K12 05 925 |
| 10       | 75 amp. Terminal Block (Rail Fixing Type)   | K12 03 153 |
| 11       | 25 amp. Terminal Block (Rail Fixing Type)   | K12 03 158 |
| 12       | 12 amp. Triple Pole Contactor   | K12 05 900 |
| 12a      | Contactor Armature Assembly Top (shown for educative purposes only)   |            |
| 12b      | Coil for 12 amp. Contactor 110 volts 50 hertz   | K12 05 935 |
| 12c      | Contactor Armature Assembly Base (shown for educative purposes only)  |            |
| 13       | Clip on Auxiliary Contact Block   | K12 05 940 |
| 14       | Illuminated Push Button   | K12 01 210 |
| 14a      | Push Button Lamp. Bulb 2 watt 110 - 120 volt BA9s Cap   | K12 01 190 |
| 15       | 'Start' Push Button Operator  | K12 01 118 |
| 16       | 'Stop' Stay put Push Button   | K12 01 134 |
| 16a      | Coil for 16 amp Contactor 110 volts 50 hertz  | K12 05 940 |
| 17       | 16 amp. Triple Pole Contactor   | K12 05 901 |
| 18       | Timer 0.1 - 30 seconds (Delay on Energising)  | K12 05 911 |
| 19       | Coil Circuit and Indicator Light Transformer 240 volt-amps/110 volt/50 hertz output - 380/440 volt/50 hertz input. (not illustrated.) | K12 01 101 |

### IMPORTANT

WHILST THE ILLUSTRATIONS OF THE ELECTRICAL COMPONENTS ARE REPRESENTATIVE FOR ALL MODELS IRRESPECTIVE OF THE KILOWATT RATING, VOLTAGE AND FREQUENCY OF THE ELECTRICAL MOTORS, THE 'K' PART NUMBERS ARE ONLY VALID FOR MACHINES FITTED WITH 4KW (5.5 H.P.), 5.5 KW (7.1/2 H.P.) MOTORS OPERATING ON ELECTRICAL SUPPLIES OF 380/440 VOLTS 3 PHASE 50 HERTZ.

WHERE PARTS ARE REQUIRED FOR KILOWATT RATINGS, VOLTAGES AND FREQUENCIES OUTSIDE THESE RANGES, THE PART NUMBER SHOWN ON THE LEGEND PLATE OF THE REQUIRED COMPONENTS MUST BE QUOTED AGAINST THE RESPECTIVE DESCRIPTION GIVEN IN THE ABOVE PARTS LIST.



ELECTRICAL CONTROL EQUIPMENT

## THROATING HEAD

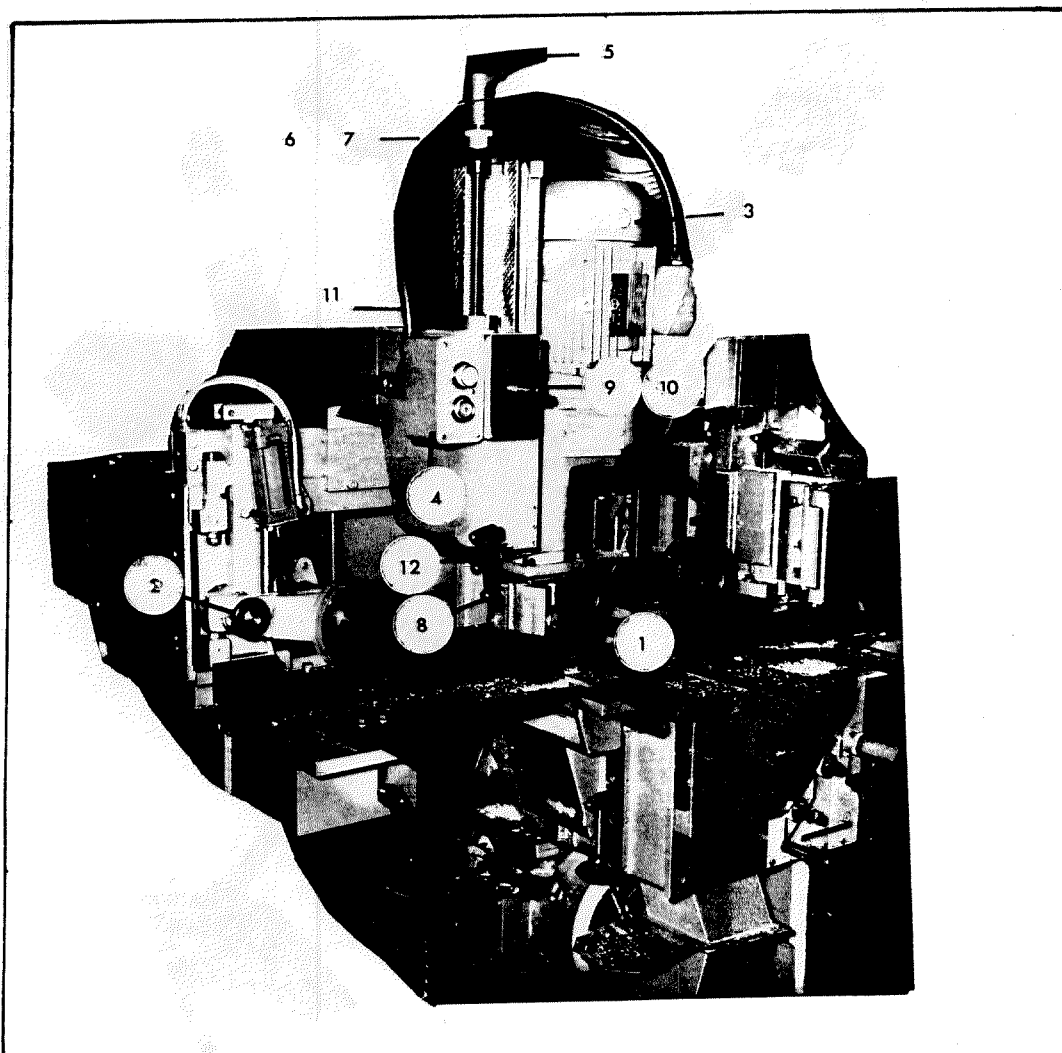
The vertical throating head (1) is fitted at the outfeed end of the machine and is followed by a single pneumatically operated roller pressure (2). It is equipped with a 3.7 kw (5.h.p.) 2800 r.p.m. (3400 r.p.m. when the frequency is 60 hertz) squirrel cage induction motor (3) complete with direct on line contactor starter having three overload releases and under voltage protection independently controlled from start and stop push buttons (4).

The cutterspindle can be raised or lowered by engaging a crank handle (5) on square (6) which is provided with a circular vernier (7) graduated in increments of (0.1mm) (0.004 ins.) one complete revolution of the handle produces 4mm (0.158 inches) vertical movement. The total vertical traverse is 325mm (12.8 in.) maximum and 185mm (7.28 in.) minimum movement. This movement is held in position by locking lever (8).

The cutterspindle can be moved transversely by engaging a crank handle or square (9) which is provided with a circular vernier (10) graduated in increments of 0.1mm (0.004 ins.), one complete revolution of the crank handle produces 4mm (0.158 in.) horizontal movement. The total horizontal traverse is 275mm (10.83in.) maximum and 55mm (2.16 in.) minimum.

This movement is held in position by locking lever (11).

Locking lever (12) provides a facility for canting the cutterspindle fore or aft of the vertical.



THROATING HEAD MINUS CUTTERBLOCK GUARD

OUTBOARD BEARINGS FOR TOP AND BOTTOM HORIZONTAL SPINDLES GEM 170 AND GEM 205

GENERAL ARRANGEMENT DRAWING GEM 10095

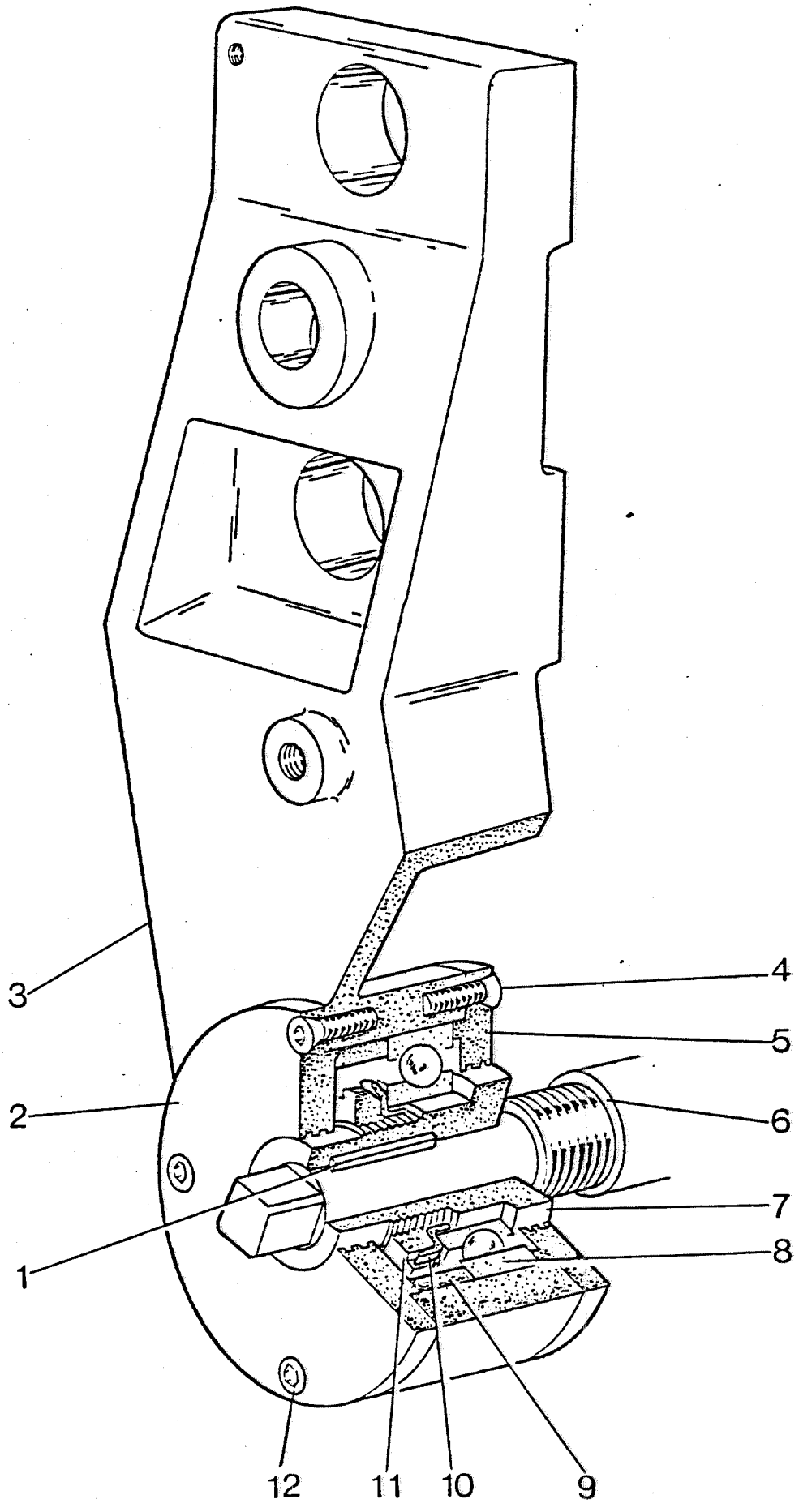
Parts Lists reading the Drawing from Left to Right and in a clockwise direction

| Ref No: | Description                              | Part No:                   | No.Off |
|---------|--|----------------------------|--------|
| 1       | Location Bung                            | GEM 4251                   | 2      |
| 2       | Quarter Turn Screw WOS.604-203           | K30-73-862                 | 1      |
| 3       | Door for Top Head Chipbreaker            | GEM 4239                   | 1      |
| 4       | 'C' Washer                               | GEM 3903                   | 1      |
| 5       | Outboard bearing for Top Horizontal Head | GEM 4237                   | 1      |
| 6       | Cutterblock Spindle 40mm. Dia.           | GEM 4248                   | 1      |
|         | Cutterblock Spindle 1.13/16in.dia.       | GEM 4348                   | 1      |
| 7       | Slide for Top Head with Outboard Bearing | GEM 4250                   | 1      |
| 8       | Outer End Cap                            | GEM 4241                   | 1      |
| 9       | Bearing Spacer                           | GEM 4253                   | 1      |
| 10      | Notch Nut                                | K05-27-210                 | 1      |
| 11      | Tab Washer                               | K05-27-259                 | 1      |
| 12      | Ball Bearing RHP 6209 TB EP 5            | K05-20-106                 | 1      |
| 13      | Inner End Cap                            | GEM 4240                   | 1      |
| 14      | Sleeve (Tufnol)                          | GEM 4252                   | 1      |
| 15      | Key for Cutter Spindle                   | GEM 4507<br>(was GEM 4255) | 1      |
| 16      | Front Plate                              | GEM 4277                   | 1      |
| 17      | Check for Outboard                       | GEM 4254                   | 1      |
| 18      | Spindle Housing                          | GEM 4275                   | 1      |
| 19      | Bracket for Bottom Head Outboard Bearing | GEM 4245                   | 1      |
| 20      | Cutterblock Spindle 40mm.dia.            | GEM 4249                   | 1      |
|         | Cutterblock Spindle 1.13/16in.dia.       | GEM 4563                   | 1      |
| 21      | Outboard Bearing for Bottom Head         | GEM 4238                   | 1      |
| 22      | Door for Bottom Head                     | GEM 4639<br>(was GEM 4281) | 1      |
| 23      | Front Plate                              | GEM 4562<br>(was GEM 4279) | 1      |

OUTBOARD BEARING FOR TOP HEAD - GEM 170

| REF.NO: | DESCRIPTION   | NO:OFF |
|---------|---|--------|
| 1       | Key   | 1      |
| 2       | Outer end cap for outboard bearing                      | 1      |
| 3       | Outboard bearing for top head                           | 1      |
| 4       | M6. x 16mm. long hexagon socket countersunk head screws | 4      |
| 5       | Outer end cap for outboard bearing with jointer         | 1      |
| 6       | Spindle   | 1      |
| 7       | Sleeve for outboard bearing                             | 1      |
| ∅ 8     | Ball bearing RHP 6209 TB EP7                            | 1      |
| 9       | Bearing spacer  | 1      |
| 10      | Tab lock washer to suit M45 nut                         | 1      |
| 11      | M45. x 1.5 pitch chamfered notch nut                    | 1      |
| 12      | M6. x 20mm. long hexagon socket countersunk head screws | 4      |

∅ "KLUBER" Grease Packed



OUTBOARD BEARING FOR TOP HEAD GEM 170 & 205