



# Operation and Maintenance Instructions

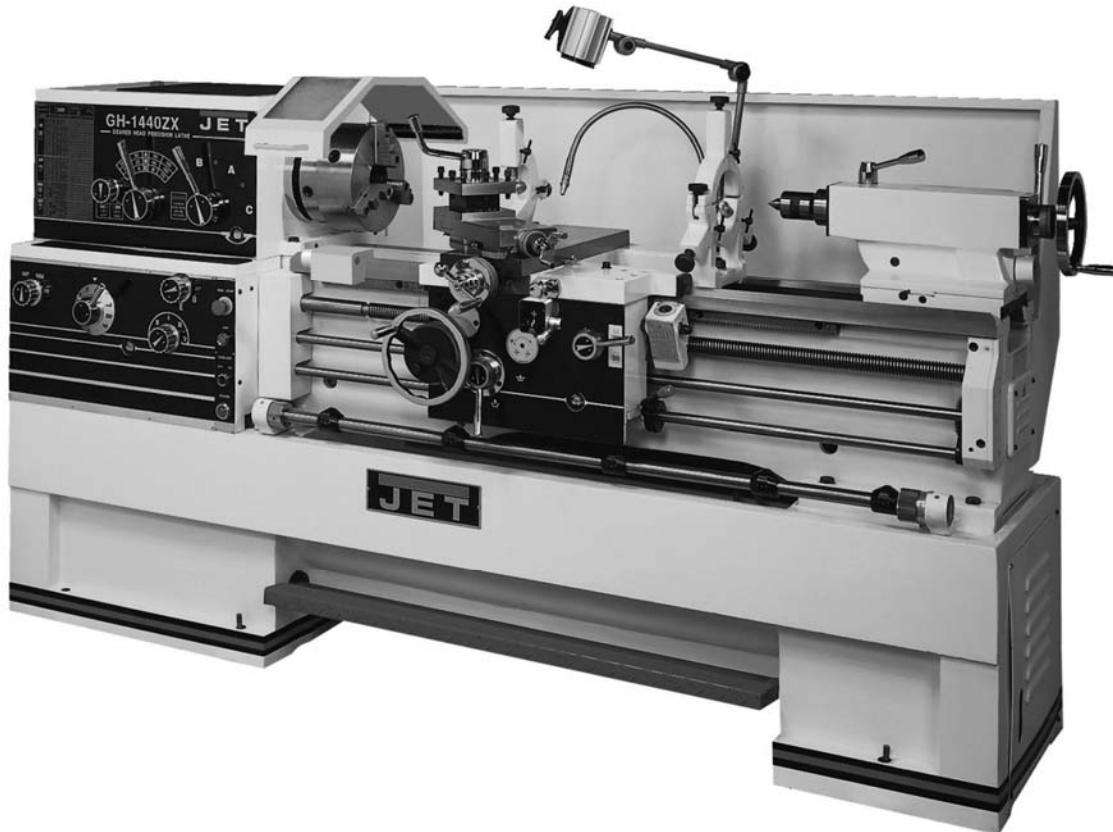
## ZX-Series Large Bore Lathes

Models GH-1440ZX

GH-1640ZX/1660ZX

GH-1860ZX/1880ZX

GH-2280ZX



Model GH-1440ZX shown

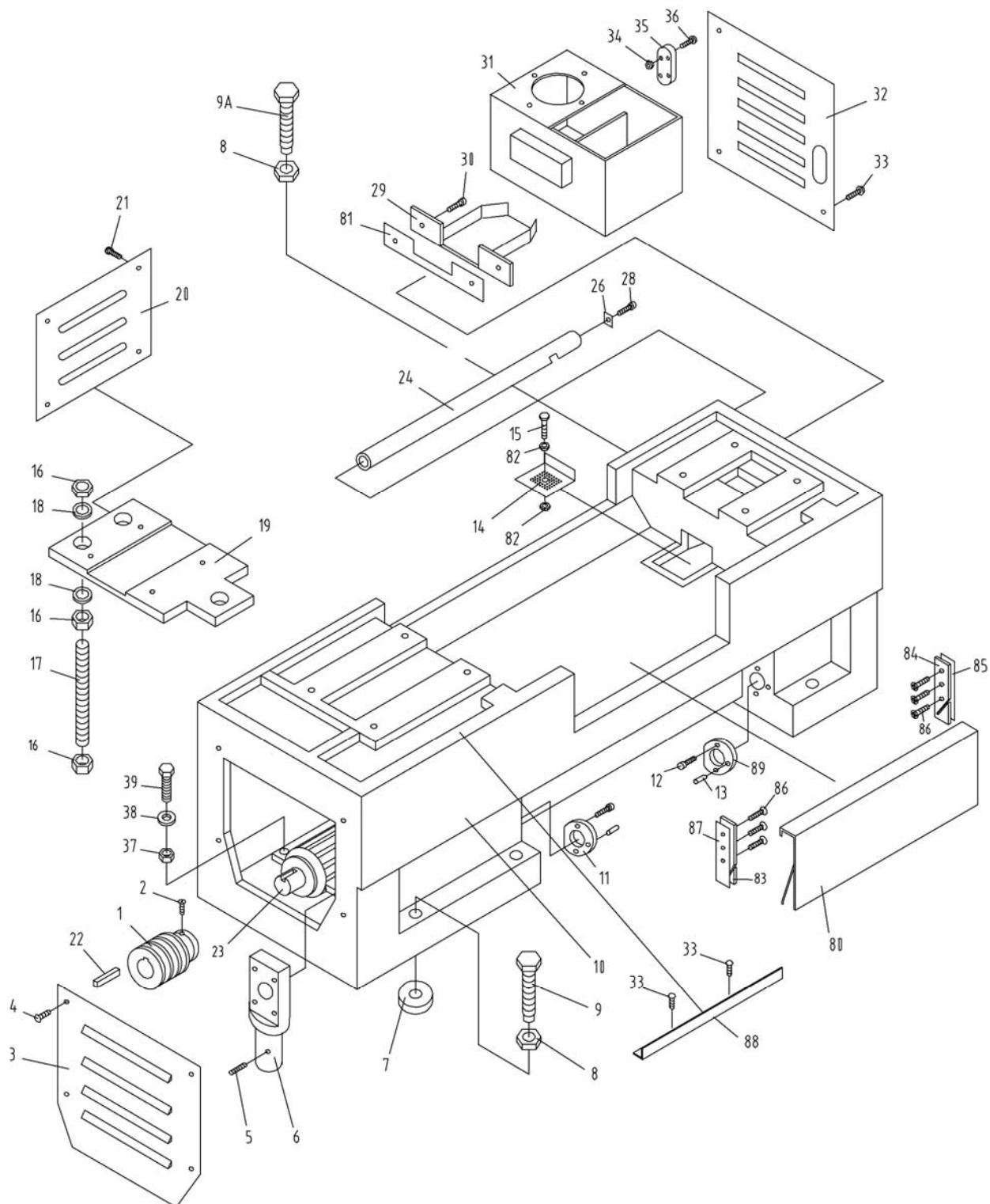
\* For ZX-Series Lathes Parts List & Electrical Diagrams, see document M-321910-1

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## 2.0 Stand Assembly – Exploded View

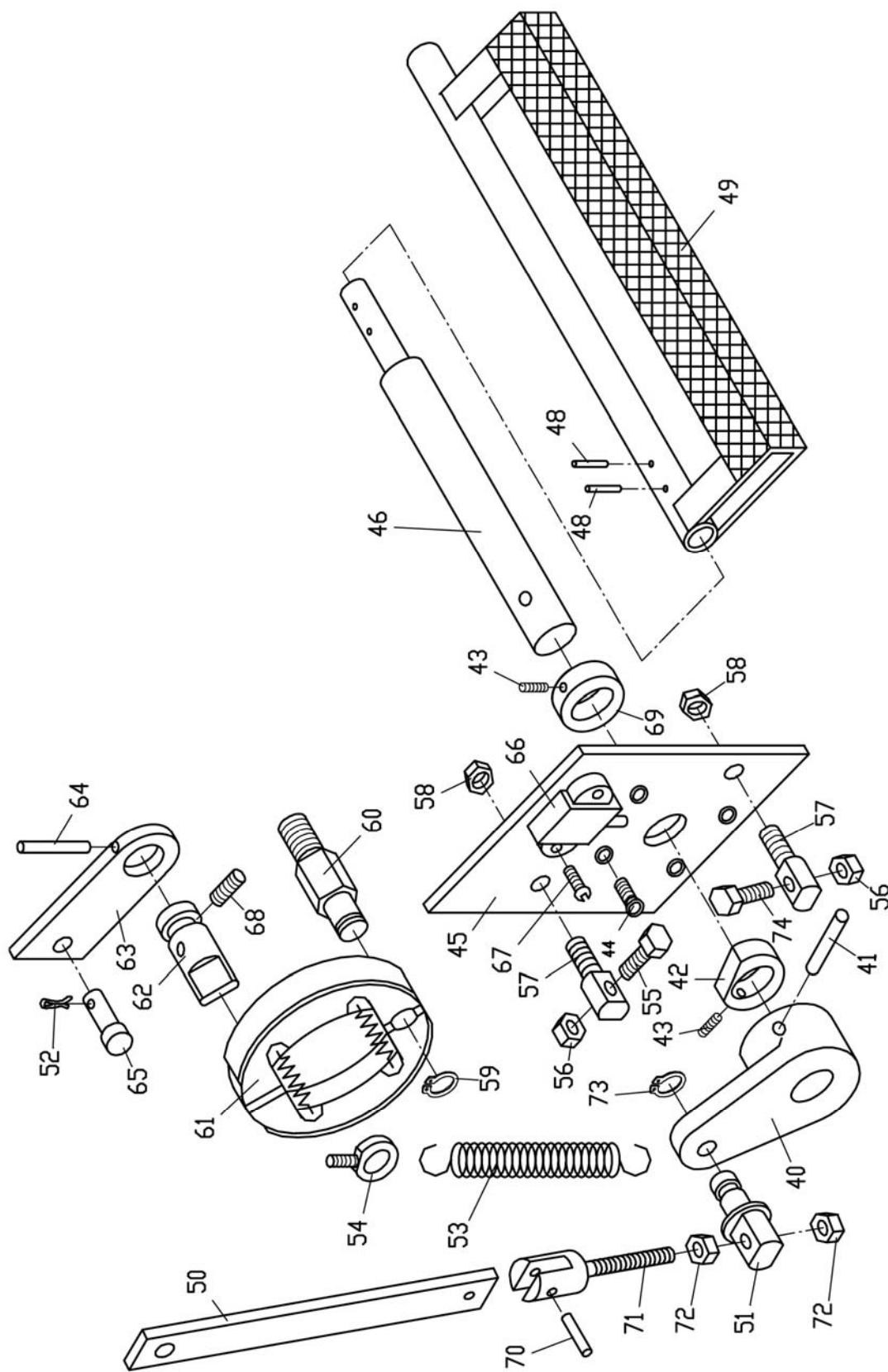


## 2.1 Stand Assembly – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>  | <b>Size</b>    | <b>Qty</b> |
|-----------------|----------------|---|----------------|------------|
| 1               | ZX-01101A      | Pulley .....  |                | 1          |
|                 | GH2280ZX-01101 | Pulley (for 2280ZX).....  |                | 1          |
| 2               | ZX-S2          | Cylindrical End Set Screw .....                                       | M8x16          | 1          |
| 3               | ZX-01734       | Cover .....   |                | 1          |
|                 | ML-2080-01701  | Cover (for 2280ZX).....   |                | 1          |
| 4               | ZX-S4          | Cross Head Screw.....   | M6x14          | 4          |
| 5               | ZX-S2          | Cylindrical End Set Screw .....                                       | M8x16          | 1          |
| 6               | ZX-01701       | Pedal Rod Support .....   |                | 1          |
|                 | ML-2080-01703  | Pedal Rod Support (for 2280ZX).....                                   |                | 1          |
| 7               | ZX-01715       | Leveling Pad.....   |                | 6          |
| 8               | TS-1540231     | Hex Nut.....  | M24-2          | 6          |
| 9               | ZX-01712       | Hex Cap Bolt.....   |                | 3          |
| 9A              | ZX-01713       | Hex Cap Bolt.....   |                | 3          |
| 10              | ZX-01102A      | Bed Stand (for 40" models, serial # 010611ZX349 and lower).....       |                | 1          |
|                 | ZX-01102AN     | New Bed Stand (for 40" models, serial # 010618ZX350 and higher) ..... |                | 1          |
|                 | ZX-01102B      | Bed Stand (for 60" models, serial # 010611ZX349 and lower).....       |                | 1          |
|                 | ZX-01102BN     | New Bed Stand (for 60" models, serial # 010618ZX350 and higher) ..... |                | 1          |
|                 | ZX-01102C      | Bed Stand (for 1880ZX, serial # 010611ZX349 and lower).....           |                | 1          |
|                 | ZX-01102CN     | New Bed Stand (for 1880ZX, serial # 010618ZX350 and higher) .....     |                | 1          |
|                 | GH2280ZX-01102 | Bed Stand (for 2280ZX).....   |                | 1          |
| 11              | ZX-01703       | Fixed Support .....   |                | 2          |
| 12              | TS-150341      | Socket Head Cap Screw.....  | M6x14          | 4          |
| 13              | ZX-S13         | Taper Pin .....   | 5x20           | 2          |
| 14              | ZX-01705       | Water Leaking Chip Guard .....  |                | 1          |
| 15              | ZX-S15A        | Cross Head Screw.....   | M5x20          | 4          |
| 16              | TS-1540121     | Hex Nut.....  | M20            | 9          |
| 17              | ZX-01702       | Bolt.....   |                | 3          |
|                 | ML-2080-01704  | Bolt (for 2280ZX) .....   |                | 3          |
| 18              | TS-1550111     | Flat Washer .....   | M20            | 6          |
| 19              | ZX-01122A      | Motor Mounting Plate (for 14" models) .....                           |                | 1          |
|                 | ZX-01122B      | Motor Mounting Plate (for 16"/18" models) .....                       |                | 1          |
|                 | ML-2080-01122  | Motor Mounting Plate (for 22" model) .....                            |                | 1          |
| 20              | ZX-01726       | Cover .....   |                | 1          |
|                 | GH2280ZX-01701 | Cover .....   |                | 1          |
| 21              | ZX-S4          | Cross Head Screw.....   | M6x14          | 4          |
| 22              | ZX-S22         | Key.....  | 10x8x70        | 1          |
| 23              | ZX-S23BC       | Main Motor (for 22" model) .....                                      | 10 HP, 6P, 3Ph | 1          |
|                 | ZX-S23A        | Main Motor (for 14" models) .....                                     | 7.5HP, 4P, 3Ph | 1          |
|                 | ZX-S23B        | Main Motor (for 16"/18" models) .....                                 | 7.5HP, 6P, 3Ph | 1          |
| 24              | ZX-017609A     | Wire Conduit (for 1440/1640/1840ZX).....                              |                | 1          |
|                 | ZX-017609B     | Wire Conduit (for 1460/1660/1860ZX).....                              |                | 1          |
|                 | ZX-017609C     | Wire Conduit (for 1880/2280ZX).....                                   |                | 1          |
| 26              | ZX-S26         | Locking Plate .....   |                | 1          |
| 28              | ZX-S15         | Cross Head Screw.....   | M4x6           | 1          |
| 29              | ZX-01711       | Water Reception Plate .....   |                | 1          |
| 30              | ZX-S4          | Cross Head Screw.....   | M6x14          | 2          |
| 31              | ZX-01510       | Coolant Tank .....  |                | 1          |
| 32              | ZX-01714       | Cover .....   |                | 1          |
|                 | ML-2080-01702  | Cover (for 2280ZX) .....  |                | 1          |
| 33              | ZX-S4          | Cross Head Screw.....   | M6x14          | 4          |
| 34              | ZX-S34         | Nut .....   | M3             | 4          |
| 35              | ZX-S35         | Coolant Indicator.....  |                | 1          |
| 36              | ZX-S36         | Cross Head Screw.....   | M3x20          | 4          |
| 37              | TS-1540072     | Hex Nut.....  | M10            | 4          |
| 38              | TS-1550071     | Flat Washer .....   | M10            | 4          |
| 39              | TS-1491041     | Hex Cap Bolt.....   | M10x30         | 4          |
| 80              | ZX-01716A      | Stand Front Cover (for 1440/1640/1840ZX) .....                        |                | 1          |
|                 | ZX-01716B      | Stand Front Cover (for 1460/1660/1860ZX) .....                        |                | 1          |
|                 | ZX-01716C      | Stand Front Cover (for 1880/2280ZX) .....                             |                | 1          |
| 81              | ZX-01501       | Gasket .....  |                | 1          |

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                                     | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|--|-------------|------------|
| 82 .....        | ZX-S82.....    | Hex Nut.....   | M5.....     | 2          |
| 83 .....        | ZX-01740 ..... | Left Tray.....   |             | 1          |
| 84 .....        | ZX-01741 ..... | Right Tray .....                                       |             | 1          |
| 85 .....        | ZX-01511 ..... | Gasket .....   |             | 2          |
| 86 .....        | ZX-S86.....    | Cross Head Screw.....                                  | M5x16 ..... | 6          |
| 87 .....        | ZX-01512 ..... | Gasket .....   |             | 1          |
| 88 .....        | ZX-05753 ..... | Extending Plate.....                                   |             | 1          |
| 89 .....        | ZX-01703A..... | Fixed Support (serial # 070916ZX1738 and higher) ..... |             | 1          |
| .....           | JX21004.....   | Terminal Board (not shown) .....                       |             | 1          |
| .....           | 18301 .....    | Junction Box (not shown) .....                         |             | 1          |
| .....           | D97-4 .....    | Plastic Fitting (not shown).....                       |             | 1          |

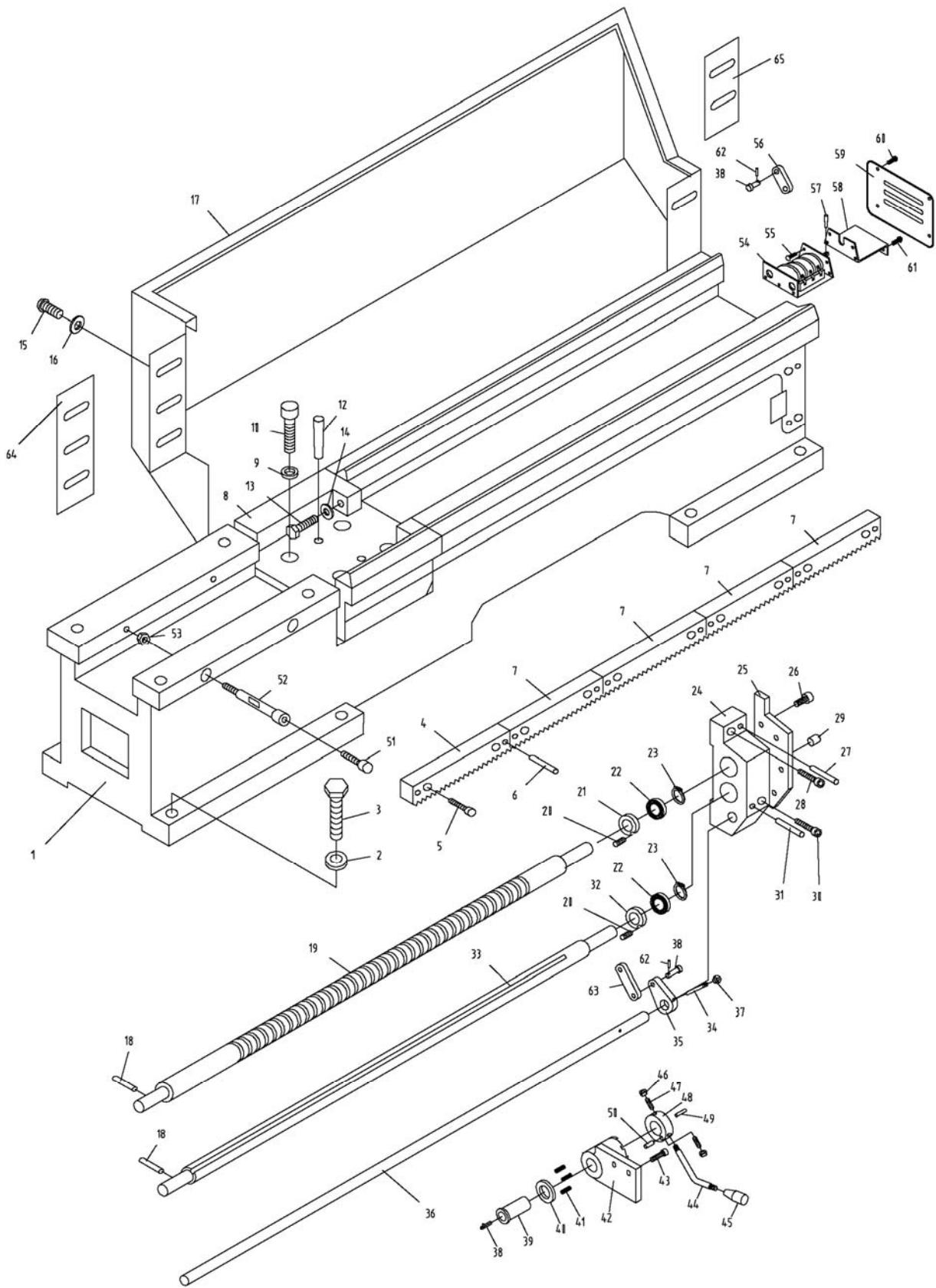
### 3.0 Brake Assembly – Exploded View



### 3.1 Brake Assembly – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>  | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|---|-------------|------------|
| 40              | ZX-22101       | Fork.....   |             | 1          |
| 41              | ZX-S41         | Spring Pin .....  | 5x40        | 1          |
| 42              | ZX-22703       | Butt Nail Support.....  |             | 1          |
| 43              | TS-1524021     | Socket Set Screw .....  | M8x10       | 1          |
| 44              | ZX-S44         | Cross Head Screw.....   | M5x20       | 4          |
| 45              | ZX-22714       | Positioning Plate.....  |             | 1          |
| 46              | ZX-22704A      | Driving Shaft-Longer.....   |             | 1          |
| 48              | ZX-S48         | Spring Pin .....  | 5x30        | 3          |
| 49              | ZX-22712A      | Pedal (for 1440/1640/1840ZX)(serial # 070820ZX1737 and lower) ..... |             | 1          |
|                 | ZX-22712AE     | Pedal (for 1440/1640/1840ZX)(serial # 070916ZX1738 and higher)..... |             | 1          |
|                 | ZX-22712B      | Pedal (for 1460/1660/1860ZX)(serial # 070820ZX1737 and lower) ..... |             | 1          |
|                 | ZX-22712BE     | Pedal (for 1460/1660/1860ZX)(serial # 070916ZX1738 and higher)..... |             | 1          |
|                 | ZX-22712C      | Pedal (for 1880/2280ZX)(serial # 070820ZX1737 and lower) .....      |             | 1          |
|                 | ZX-22712CE     | Pedal (for 1880/2280ZX)(serial # 070916ZX1738 and higher).....      |             | 1          |
| 50              | ZX-22710A      | Draw Bar (for 14" models) .....                                     |             | 1          |
|                 | ZX-22710B      | Draw Bar (for 16" models) .....                                     |             | 1          |
|                 | ZX-22710C      | Draw Bar (for 18" models) .....                                     |             | 1          |
|                 | GH2280ZX-22710 | Draw Bar (for 22" model) .....                                      |             | 1          |
| 51              | ZX-22706       | Connecting Shaft.....   |             | 1          |
| 52              | ZX-S52         | Split Pin.....  | 2x20        | 2          |
| 53              | ZX-S53         | Tensile Spring.....   | 3.5x26x190  | 1          |
| 54              | ZX-S54         | Eyebolt.....  | M8          | 1          |
| 55              | TS-1490091     | Hex Cap Bolt.....   | M8x50       | 1          |
| 56              | TS-1540061     | Hex Nut.....  | M8          | 1          |
| 57              | ZX-22707A      | Butt Rod Support .....  |             | 1          |
| 58              | TS-1540072     | Hex Nut.....  | M10         | 1          |
| 59              | ZX-S59         | C-Clip.....   | 8           | 1          |
| 60              | ZX-22701       | Positioning Shaft.....  |             | 1          |
| 61              | ZX-S61         | Brake Shoe .....  |             | 1          |
| 62              | ZX-22702       | Brake Shaft.....  |             | 1          |
| 63              | ZX-22708       | Connecting Plate .....  |             | 1          |
| 64              | ZX-S64         | Elastic Pin.....  | 5x25        | 1          |
| 65              | ZX-22709       | Connecting Shaft .....  |             | 1          |
| 66              | ZX-S66         | Stroke Switch.....  |             | 1          |
| 67              | ZX-S67         | Screw.....  | M4x25       | 2          |
| 68              | ZX-S68         | Cylindrical End Set Screw .....                                     | M5x10       | 1          |
| 69              | ZX-22711       | Butt Nail Support.....  |             | 1          |
| 70              | ZX-S70         | Pin.....  | 5n6x20      | 1          |
| 71              | ZX-22715       | Adjust Bolt.....  |             | 1          |
| 72              | TS-1540061     | Hex Nut.....  | M8          | 1          |
| 73              | ZX-S73         | C-Clip.....   | 12          | 2          |
| 74              | TS-149006      | Hex Cap Screw.....  | M8x35       | 1          |

#### 4.0 Bed Assembly – Exploded View

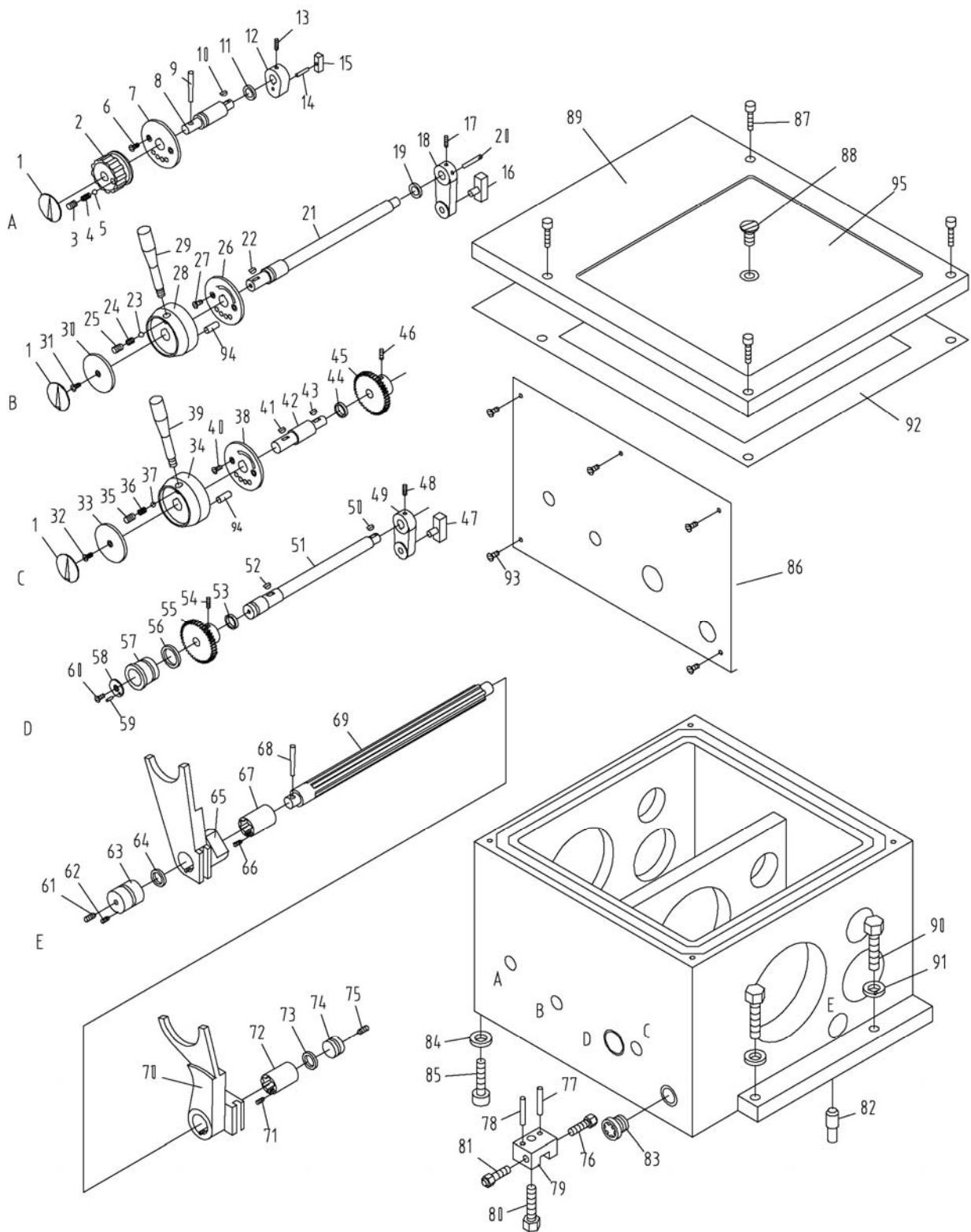


#### 4.1 Bed Assembly – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>   | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|--|-------------|------------|
| 1               | ZX-01104A      | Bed (for 1440/1640/1840ZX)                                       |             | 1          |
|                 | ZX-01104B      | Bed (for 1460/1660/1860ZX)                                       |             | 1          |
|                 | ZX-01104C      | Bed (for 1880/2280ZX)  |             | 1          |
| 2               | TS-1550101     | Flat Washer  | M16         | 8          |
| 3               | ZX-B3          | Hex Cap Bolt   | M16x50      | 8          |
| 4               | ZX-01706       | Rack   |             | 1          |
| 5               | TS-1505051     | Hex Socket Cap Screw (for 1440/1640/1840ZX)                      | M10x35      | 10         |
|                 |                | Hex Socket Cap Screw (for 1460/1660/1860ZX)                      | M10x35      | 14         |
|                 |                | Hex Socket Cap Screw (for 1880/2280ZX)                           | M10x35      | 18         |
| 6               | ZX-B6          | Taper Pin (for 1440/1640/1840ZX)                                 | 8x50        | 10         |
|                 |                | Taper Pin (for 1460/1660/1860ZX)                                 | 8x50        | 14         |
|                 |                | Taper Pin (for 1880/2280ZX)                                      | 8x50        | 18         |
| 7               | ZX-01706A      | Rack (for 1440/1640/1840ZX)                                      |             | 4          |
|                 |                | Rack (for 1460/1660/1860ZX)                                      |             | 6          |
|                 |                | Rack (for 1880/2280ZX)   |             | 8          |
| 8               | ZX-01112       | Gap Bridge   |             | 1          |
| 9               | TS-1551081     | Lock Washer  | M12         | 4          |
| 10              | TS-1506091     | Hex Socket Cap Screw   | M12x55      | 4          |
| 12              | ZX-B12         | Thread Taper Pin   | 12x70       | 2          |
| 13              | TS-1491101     | Hex Cap Bolt   | M10x60      | 2          |
| 14              | TS-1550071     | Washer   | M10         | 2          |
| 15              | TS-1503021     | Hex Socket Cap Screw   | M6x10       | 6          |
| 16              | TS-1550041     | Washer   | M6          | 6          |
| 17              | ZX-01741A      | Splash Guard (for 1440ZX)  |             | 1          |
|                 | ZX-01741B      | Splash Guard (for 1460ZX)  |             | 1          |
|                 | ZX-01741C      | Splash Guard (for 1640ZX)  |             | 1          |
|                 | ZX-01741D      | Splash Guard (for 1660ZX)  |             | 1          |
|                 | ZX-01741E      | Splash Guard (for 1840ZX)  |             | 1          |
|                 | ZX-01741F      | Splash Guard (for 1860ZX)  |             | 1          |
|                 | ZX-01741G      | Splash Guard (for 1880ZX)  |             | 1          |
|                 | GH2280ZX-12701 | Splash Guard (for 2280ZX)  |             | 1          |
| 18              | ZX-B18         | Shear Pin  | 5x35        | 2          |
| 19              | ZX-01708A      | Lead Screw (for 40" models, serial # 010611ZX349 and lower)      |             | 1          |
|                 | ZX-01708AN     | New Lead Screw (for 40" models, serial # 010618ZX350 and higher) |             | 1          |
|                 | ZX-01708B      | Lead Screw (for 60" models, serial # 010611ZX349 and lower)      |             | 1          |
|                 | ZX-01708BN     | New Lead Screw (for 60" models, serial # 010618ZX350 and higher) |             | 1          |
|                 | ZX-01708C      | Lead Screw (for 80" models, serial #010611ZX349 and lower)       |             | 1          |
|                 | ZX-01708CN     | New Lead Screw (for 80" models, serial #010618ZX350 and higher)  |             | 1          |
| 20              | ZX-B20         | Flat End Set Screw   | M6x10       | 2          |
| 21              | ZX-01109       | Sleeve (serial # 010611ZX349 and lower)                          |             | 1          |
|                 | ZX-01109N      | New Sleeve (serial # 010618ZX350 and higher)                     |             | 1          |
| 22              | ZX-1204        | Double Row Spherical Ball Bearing                                | 20x47x14    | 2          |
| 23              | ZX-B23         | C-Clip   | 20          | 2          |
| 24              | ZX-01110       | Bracket (serial # 010611ZX349 and lower)                         |             | 1          |
|                 | ZX-01110N      | New Bracket (serial # 010618ZX350 and higher)                    |             | 1          |
| 25              | ZX-01111       | Cover  |             | 1          |
| 26              | TS-1503041     | Hex Socket Cap Screw   | M6x16       | 4          |
| 27              | ZX-B27         | Taper Pin  | 6x60        | 1          |
| 28              | TS-1505081     | Socket Cap Screw   | M10x50      | 1          |
| 29              | ZX-B29         | Oil Cup  | 10          | 2          |
| 30              | GH2280ZX-1230  | Socket Cap Screw   | M10x100     | 1          |
| 31              | ZX-B31         | Taper Pin  | 6x100       | 1          |
| 32              | ZX-01108       | Sleeve (serial # 010611ZX349 and lower)                          |             | 1          |
|                 | ZX-01108N      | New Sleeve (serial # 010618ZX350 and higher)                     |             | 1          |
| 33              | ZX-01709A      | Feed Rod (for 40" models, serial # 010611ZX349 and lower)        |             | 1          |
|                 | ZX-01709AN     | New Feed Rod (for 40" models, serial # 010618ZX350 and higher)   |             | 1          |
|                 | ZX-01709B      | Feed Rod (for 60" models, serial # 010611ZX349 and lower)        |             | 1          |
|                 | ZX-01709BN     | New Feed Rod (for 60" models, serial # 010618ZX350 and higher)   |             | 1          |
|                 | ZX-01709C      | Feed Rod (for 80" models, serial # 010611ZX349 and lower)        |             | 1          |
|                 | ZX-01709CN     | New Feed Rod (for 80" models, serial # 010618ZX350 and higher)   |             | 1          |

| <b>Index No</b> | <b>Part No</b>    | <b>Description</b>                       | <b>Size</b>   | <b>Qty</b> |
|-----------------|-------------------|--|---------------|------------|
| 34 .....        | ZX-B34 .....      | Taper Pin .....                          | 5x30 .....    | 1          |
| 35 .....        | ZX-01107 .....    | Poking Block .....                       | .....         | 1          |
| 36 .....        | ZX-01707A .....   | Control Rod (for 1440/1640/1840ZX) ..... | .....         | 1          |
| .....           | ZX-01707B .....   | Control Rod (for 1460/1660/1860ZX) ..... | .....         | 1          |
| .....           | ZX-01707C .....   | Control Rod (for 1880/2280ZX) .....      | .....         | 1          |
| 37 .....        | TS-1540031 .....  | Nut .....                                | M5 .....      | 1          |
| 38 .....        | ZX-06720 .....    | Small Shaft .....                        | .....         | 2          |
| 39 .....        | ZX-06001C-3 ..... | Sleeve .....                             | .....         | 1          |
| 40 .....        | ZX-06001C-2 ..... | Spacer .....                             | .....         | 1          |
| 41 .....        | ZX-B41 .....      | Spring .....                             | 1x75x25 ..... | 3          |
| 42 .....        | ZX-06001C-1 ..... | Bracket .....                            | .....         | 1          |
| 43 .....        | TS-1504031 .....  | Hex Socket Cap Screw .....               | M8x16 .....   | 2          |
| 44 .....        | ZX-B44 .....      | Lever .....                              | .....         | 1          |
| 45 .....        | ZX-06001C-4 ..... | Long Lever Sleeve .....                  | .....         | 1          |
| 46 .....        | ZX-B46 .....      | Hex Nut .....                            | M8 .....      | 2          |
| 47 .....        | ZX-B47 .....      | Set Screw .....                          | M8x28 .....   | 2          |
| 48 .....        | ZX-06001C-5 ..... | Direction Change Ring .....              | .....         | 1          |
| 49 .....        | ZX-B49 .....      | Pin .....                                | 8n6x20 .....  | 1          |
| 50 .....        | ZX-B50 .....      | Taper Pin .....                          | 3x20 .....    | 1          |
| 51 .....        | TS-1505081 .....  | Socket Cap Screw .....                   | M10x50 .....  | 2          |
| 52 .....        | ZX-05741 .....    | Threaded Tube .....                      | .....         | 2          |
| 53 .....        | TS-1540081 .....  | Hex Nut .....                            | M12 .....     | 2          |
| 54 .....        | ZX-B54 .....      | Drum Switch .....                        | .....         | 1          |
| 55 .....        | ZX-S27 .....      | Cross Head Screw .....                   | M5x8 .....    | 5          |
| 56 .....        | ZX-01718 .....    | Rocker .....                             | .....         | 1          |
| 57 .....        | ZX-B57 .....      | Pin .....                                | 3x16 .....    | 1          |
| 58 .....        | ZX-01716 .....    | Bracket .....                            | .....         | 1          |
| 59 .....        | ZX-01715C .....   | Cover .....                              | .....         | 1          |
| 60 .....        | ZX-B60 .....      | Cross Recessed Pan Head Screw .....      | M6x18 .....   | 4          |
| 61 .....        | TS-1482031 .....  | Hex Cap Bolt .....                       | M6x16 .....   | 2          |
| 62 .....        | ZX-B62 .....      | Pin .....                                | 2x15 .....    | 2          |
| 63 .....        | ZX-01719 .....    | Rocker .....                             | .....         | 1          |
| 64 .....        | ZX-LRG14 .....    | Rubber Washer (for 14" models) .....     | .....         | 1          |
| .....           | ZX-LRG16 .....    | Rubber Washer (for 16" models) .....     | .....         | 1          |
| .....           | ZX-LRG18 .....    | Rubber Washer (for 18" models) .....     | .....         | 1          |
| .....           | ZX-LRG22 .....    | Rubber Washer (for 22" models) .....     | .....         | 1          |
| 65 .....        | ZX-RRG .....      | Rubber Washer .....                      | .....         | 1          |

## 5.0 Headstock Assembly I – Exploded View

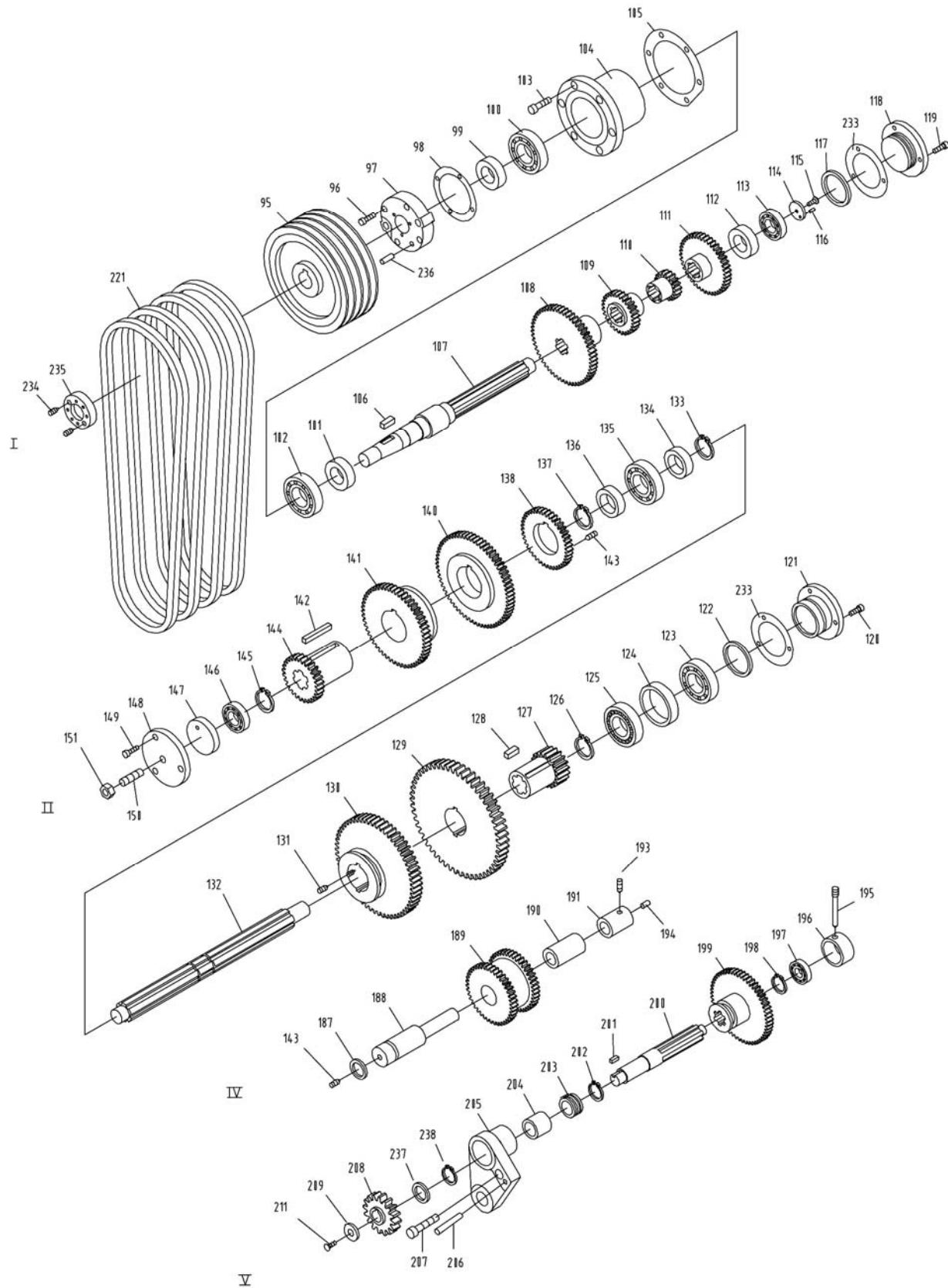


## 5.1 Headstock Assembly I – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>     | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|------------------------|-------------|------------|
| 1               | ZX-02306       | Round Sign Plate       |             | 3          |
| 2               | ZX-02122       | Positioning Handle     |             | 1          |
| 3               | ZX-H3          | Flat End Set Screw     | M10x12      | 1          |
| 4               | ZX-H4          | Spring                 | YI-1x8x25   | 1          |
| 5               | ZX-H5          | Steel Ball             | 8           | 1          |
| 6               | ZX-H6          | Countersunk Head Screw | M5x12       | 2          |
| 7               | ZX-02743       | Positioning Disc       |             | 1          |
| 8               | ZX-02738       | Shaft                  |             | 1          |
| 9               | ZX-H9          | Taper Pin              | 5x55        | 1          |
| 10              | ZX-H10         | Woodruff Key           | 4x16        | 1          |
| 11              | ZX-H11         | Ring Seal              | 25x2.4      | 1          |
| 12              | ZX-02116       | Crank                  |             | 1          |
| 13              | TS-1523051     | Set Screw              | M6x16       | 1          |
| 14              | ZX-H14         | Pin                    | 5n6x28      | 1          |
| 15              | ZX-02302       | Poking Block           |             | 1          |
| 16              | ZX-02738C      | Pin Block              |             | 1          |
| 17              | TS-1523051     | Set Screw              | M6x16       | 1          |
| 18              | ZX-02114       | Crank                  |             | 1          |
| 19              | ZX-H11         | Ring Seal              | 25x2.4      | 1          |
| 20              | ZX-H20         | Pin                    | 5x30        | 1          |
| 21              | ZX-02734       | Shaft                  |             | 1          |
| 22              | ZX-H10         | Woodruff Key           | 4x16        | 1          |
| 23              | ZX-H5          | Steel Ball             | 8           | 1          |
| 24              | ZX-H4          | Spring                 | YI-1x8x25   | 1          |
| 25              | ZX-H3          | Flat End Set Screw     | M10x12      | 1          |
| 26              | ZX-02733       | Left Positioning Disc  |             | 1          |
| 27              | ZX-H6          | Countersunk Head Screw | M5x12       | 2          |
| 28              | ZX-02113       | Left Lever Support     |             | 1          |
| 29              | ZX-02741       | Handle                 |             | 1          |
| 30              | ZX-02732       | Cover                  |             | 1          |
| 31              | ZX-H6          | Countersunk Head Screw | M5x12       | 1          |
| 32              | ZX-H6          | Countersunk Head Screw | M5x12       | 1          |
| 33              | ZX-02732       | Cover                  |             | 1          |
| 34              | ZX-02119       | Right Lever Support    |             | 1          |
| 35              | ZX-H3          | Flat End Set Screw     | M10x12      | 1          |
| 36              | ZX-H4          | Spring                 | YI-1x8x25   | 1          |
| 37              | ZX-H5          | Steel Ball             | 8           | 1          |
| 38              | ZX-02728       | Right Positioning Disc |             | 1          |
| 39              | ZX-02741       | Handle                 |             | 1          |
| 40              | ZX-H6          | Countersunk Head Screw | M5x12       | 2          |
| 41              | ZX-H10         | Woodruff Key           | 4x16        | 1          |
| 42              | ZX-02727       | Shaft                  |             | 1          |
| 43              | ZX-H10         | Half Circle Key        | 4x16        | 1          |
| 44              | ZX-H11         | Ring Seal              | 25x2.4      | 1          |
| 45              | ZX-02730       | Gear                   | 1.5m36T     | 1          |
| 46              | TS-1523051     | Set Screw              | M6x16       | 1          |
| 47              | ZX-02738C      | Pin Block              |             | 1          |
| 48              | TS-1523051     | Set Screw              | M6x16       | 1          |
| 49              | ZX-02111       | Crank                  |             | 1          |
| 50              | ZX-H10         | Woodruff Key           | 4x16        | 1          |
| 51              | ZX-02731/1     | Control Shaft          |             | 1          |
| 52              | ZX-H10         | Woodruff Key           | 4x16        | 1          |
| 53              | ZX-H11         | Ring Seal              | 25x2.4      | 1          |
| 54              | ZX-H54         | Taper End Set Screw    | M6x16       | 1          |
| 55              | ZX-02732/2     | Gear                   | 1.5m36T     | 1          |
| 56              | ZX-H56         | Ring Seal              | 40x3.1      | 1          |
| 57              | ZX-02110       | Bushing                |             | 1          |
| 58              | ZX-02729       | Cover                  |             | 1          |
| 59              | ZX-H59         | Pin                    | 3n6x10      | 1          |
| 60              | ZX-H6          | Countersunk Head Screw | M5x12       | 1          |

| <b>Index No</b> | <b>Part No</b>  | <b>Description</b>   | <b>Size</b>  | <b>Qty</b> |
|-----------------|-----------------|--|--------------|------------|
| 61              | ZX-H61          | Countersunk Head Screw.....                                | M8x12.....   | 1          |
| 62              | ZX-H62          | Flat End Set Screw.....                                    | M8x12.....   | 1          |
| 63              | ZX-02115C       | Bearing Support.....                                       |              | 1          |
| 64              | ZX-H64          | Ring Seal .....  | 40x3.1 ..... | 1          |
| 65              | ZX-02115        | Left Fork.....   |              | 1          |
| 66              | ZX-H66          | Flat End Set Screw.....                                    | M6x10.....   | 1          |
| 67              | ZX-02120A/2     | Bushing.....   |              | 1          |
| 68              | ZX-H68          | Taper Pin .....  | 6x35 .....   | 1          |
| 69              | ZX-02736        | Control Shaft.....   |              | 1          |
| 70              | ZX-02112        | Right Fork .....   |              | 1          |
| 71              | ZX-H66          | Flat End Set Screw.....                                    | M6x10 .....  | 1          |
| 72              | ZX-02120A/2     | Bushing.....   |              | 1          |
| 73              | ZX-H73          | Ring Seal .....  | 30x3.1 ..... | 1          |
| 74              | ZX-02735        | Blocking Piece .....                                       |              | 1          |
| 75              | ZX-H61          | Countersunk Head Screw.....                                | M8x12 .....  | 1          |
| 76              | ZX-02744        | Adjusting Screw.....                                       |              | 1          |
| 77              | ZX-H77          | Taper Pin .....  | 8x40 .....   | 1          |
| 78              | ZX-H77          | Taper Pin .....  | 8x40 .....   | 1          |
| 79              | ZX-92124        | Adjusting Block .....                                      |              | 1          |
| 80              | ZX-H80          | Hex Cap Bolt.....  | M12x50 ..... | 1          |
| 81              | ZX-02744        | Adjusting Screw .....                                      |              | 1          |
| 82              | ZX-02736C       | Positioning Pin .....                                      |              | 1          |
| 83              | ZX-H83          | Oil Sight Glass .....                                      |              | 1          |
| 84              | ZX-H84          | Washer .....   | A16.....     | 2          |
| 85              | ZX-H85          | Hex Socket Cap Screw.....                                  | M16x50 ..... | 2          |
| 86              | ZX-02301A       | Label (for 1440ZX) (serial #110915ZX2363 and lower).....   |              | 1          |
|                 | ZX-02301AJ      | Label (for 1440ZX) (serial #110930ZX2364 and higher) ..... |              | 1          |
|                 | ZX-02301B       | Label (for 1460ZX) (serial #110915ZX2363 and lower).....   |              | 1          |
|                 | ZX-02301BJ      | Label (for 1460ZX) (serial #110930ZX2364 and higher) ..... |              | 1          |
|                 | ZX-02301C       | Label (for 1640ZX) (serial #110915ZX2363 and lower).....   |              | 1          |
|                 | ZX-02301CJ      | Label (for 1640ZX) (serial #110930ZX2364 and higher) ..... |              | 1          |
|                 | ZX-02301D       | Label (for 1660ZX) (serial #110915ZX2363 and lower).....   |              | 1          |
|                 | ZX-02301DJ      | Label (for 1660ZX) (serial #110930ZX2364 and higher) ..... |              | 1          |
|                 | ZX-02301E       | Label (for 1840ZX) (serial #110915ZX2363 and lower).....   |              | 1          |
|                 | ZX-02301EJ      | Label (for 1840ZX) (serial #110930ZX2364 and higher) ..... |              | 1          |
|                 | ZX-02301F       | Label (for 1860ZX) (serial #110915ZX2363 and lower).....   |              | 1          |
|                 | ZX-02301FJ      | Label (for 1860ZX) (serial #110930ZX2364 and higher) ..... |              | 1          |
|                 | ZX-02301G       | Label (for 1880ZX) (serial #110915ZX2363 and lower).....   |              | 1          |
|                 | ZX-02301GJ      | Label (for 1880ZX) (serial #110930ZX2364 and higher) ..... |              | 1          |
|                 | GH2280ZX-02301  | Label (for 2280ZX) (serial #110915ZX2363 and lower).....   |              | 1          |
|                 | GH2280ZX-02301J | Label (for 2280ZX) (serial #110930ZX2364 and higher) ..... |              | 1          |
| 87              | TS-1504071      | Hex Socket Cap Screw.....                                  | M8x35 .....  | 4          |
| 88              | ZX-H88          | Countersunk Head Screw.....                                | M16x25 ..... | 1          |
| 89              | ZX-02117        | Top Cover .....  |              | 1          |
| 90              | ZX-H90          | Hex Cap Bolt.....  |              | 2          |
| 91              | ZX-H91          | Washer .....   | A16.....     | 2          |
| 92              | ZX-02505        | Paper Gasket.....  |              | 1          |
| 93              | TS-1531012      | Slotted Pan Head Screw.....                                | M3x6 .....   | 7          |
| 94              | ZX-H94N         | Pin.....   | 4n6x15 ..... | 2          |
| 95              | ZX-H95          | Rubber Mat.....  |              | 1          |

## 6.0 Headstock Assembly II – Exploded View

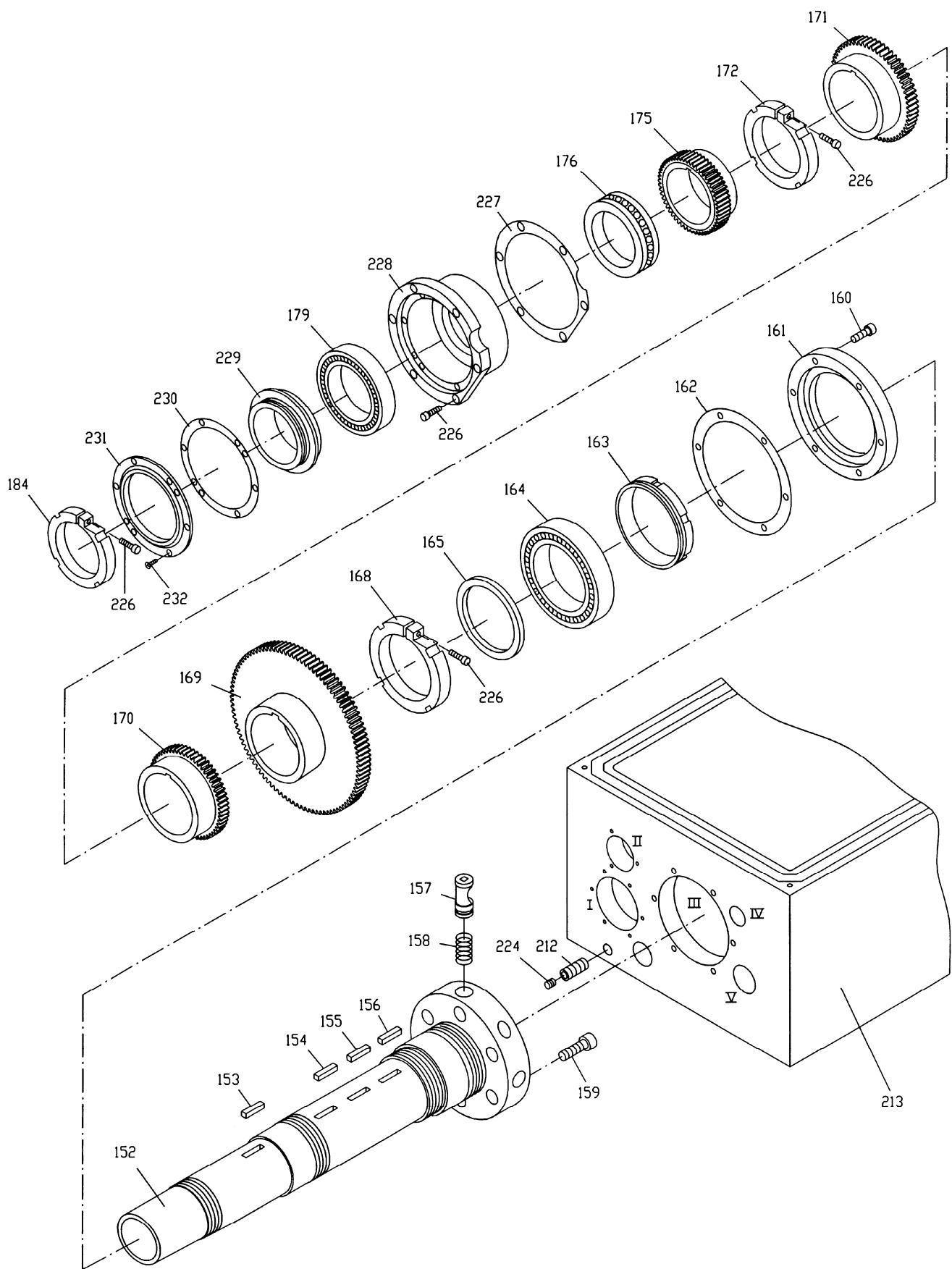


## 6.1 Headstock Assembly II – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                  | <b>Size</b>    | <b>Qty</b> |
|-----------------|----------------|-------------------------------------|----------------|------------|
| 95              | ZX-02107       | Pulley .....                        |                | 1          |
| 96              | TS-1503061     | Socket Cap Screw .....              | M6x25 .....    | 4          |
| 97              | ZX-02106       | Bearing Cover .....                 |                | 1          |
| 98              | ZX-02506       | Gasket .....                        |                | 1          |
| 99              | ZX-H99         | Ring Seal .....                     | 32x52 .....    | 1          |
| 100             | BB-6207/P5     | Ball Bearing .....                  | 35x72x17 ..... | 1          |
| 101             | ZX-H102        | Sleeve .....                        | 30x10 .....    | 1          |
| 102             | BB-6207/P5     | Ball Bearing .....                  | 35x72x17 ..... | 1          |
| 103             | TS-1504051     | Socket Cap Screw .....              | M8x25 .....    | 6          |
| 104             | ZX-02105       | Bearing Support .....               |                | 1          |
| 105             | ZX-02502       | Gasket .....                        |                | 1          |
| 106             | ZX-H106        | Flat Key .....                      | 10x8x35 .....  | 1          |
| 107             | ZX-02709       | Shaft .....                         |                | 1          |
| 108             | ZX-02754X      | Gear (for 14" models) .....         | 2.5m52T .....  | 1          |
|                 | ZX-02754X/6P   | Gear (for 16"/18"/22" models) ..... | 2.5m61T .....  | 1          |
| 109             | ZX-02753X      | Gear (for 14" models) .....         | 2.5m28T .....  | 1          |
|                 | ZX-02753X/6P   | Gear (for 16"/18"/22" models) ..... | 2.5m32T .....  | 1          |
| 110             | ZX-02752X      | Gear .....                          | 2.5m18T .....  | 1          |
| 111             | ZX-02751X      | Gear (for 14" models) .....         | 2.5m41T .....  | 1          |
|                 | ZX-02751X/6P   | Gear (for 16"/18"/22" models) ..... | 2.5m47T .....  | 1          |
| 112             | ZX-H112        | Sleeve .....                        |                | 1          |
| 113             | BB6305/P5      | Ball Bearing .....                  | 25x62x17 ..... | 1          |
| 114             | ZX-H114        | Shaft End Lock Ring .....           | 32 .....       | 1          |
| 115             | ZX-H115        | Countersunk Head Screw .....        | M6x20 .....    | 1          |
| 116             | ZX-H59         | Pin .....                           | 3n6x10 .....   | 1          |
| 117             | ZX-H117        | Ring Seal .....                     | 60x3.1 .....   | 1          |
| 118             | ZX-02104       | Blocking Flange .....               |                | 1          |
| 119             | TS-1503041     | Socket Cap Screw .....              | M6x15 .....    | 3          |
| 120             | TS-1503041     | Socket Cap Screw .....              | M6x15 .....    | 3          |
| 121             | ZX-02103       | Blocking Flange .....               |                | 1          |
| 122             | ZX-H117        | Ring Seal .....                     | 60x3.1 .....   | 1          |
| 123             | BB-6305/P5     | Ball Bearing .....                  | 25x62x17 ..... | 1          |
| 124             | ZX-H124        | Sleeve .....                        | 62x6 .....     | 1          |
| 125             | BB-6305/P5     | Ball Bearing .....                  | 25x62x17 ..... | 1          |
| 126             | ZX-H126        | Circle Clip For Shaft .....         | 35 .....       | 1          |
| 127             | ZX-02705       | Gear .....                          | 3m19T .....    | 1          |
| 128             | ZX-H128        | Flat Key .....                      | 8x7x50 .....   | 2          |
| 129             | ZX-02706       | Gear .....                          | 3m67T .....    | 1          |
| 130             | ZX-02707       | Gear .....                          | 3m59T .....    | 1          |
| 131             | ZX-H62         | Flat End Set Screw .....            | M8x12 .....    | 1          |
| 132             | ZX-02708       | Shaft .....                         |                | 1          |
| 133             | ZX-H133        | C-Clip .....                        | 35 .....       | 1          |
| 134             | ZX-H134        | Sleeve .....                        | 35x8 .....     | 1          |
| 135             | BB-6007/P5     | Ball Bearing .....                  | 35x62x14 ..... | 1          |
| 136             | ZX-H134        | Sleeve .....                        | 35x8 .....     | 1          |
| 137             | ZX-H133        | C-Clip .....                        | 35 .....       | 1          |
| 138             | ZX-02756       | Gear (for 14" models) .....         | 2.5m42T .....  | 1          |
|                 | ZX-02756/6P    | Gear (for 16"/18"/22" models) ..... | 2.5m36T .....  | 1          |
| 139             | ZX-H139        | Pin .....                           | 8n6x25 .....   | 1          |
| 140             | ZX-02757       | Gear (for 14" models) .....         | 2.5m65T .....  | 1          |
|                 | ZX-02757/6P    | Gear (for 16"/18"/22" models) ..... | 2.5m65T .....  | 1          |
| 141             | ZX-02758       | Gear (for 14" models) .....         | 2.5m55T .....  | 1          |
|                 | ZX-02758/6P    | Gear (for 16"/18"/22" models) ..... | 2.5m51T .....  | 1          |
| 142             | ZX-H142        | Flat Key .....                      | 10x6x60 .....  | 2          |
| 143             | ZX-H143        | Flat Head Set Screw .....           | M8x12 .....    | 2          |
| 144             | ZX-02755X      | Gear (for 14" models) .....         | 2.5m31T .....  | 1          |
|                 | ZX-02755X/6P   | Gear (for 16"/18"/22" models) ..... | 2.5m22T .....  | 1          |
| 145             | ZX-H133        | C-Clip .....                        | 35 .....       | 1          |
| 146             | BB-6305        | Ball Bearing .....                  | 25x62x17 ..... | 1          |
| 147             | ZX-H147        | Pushing Disc .....                  | 62 .....       | 1          |

| <b>Index No</b> | <b>Part No</b>       | <b>Description</b>                                   | <b>Size</b>    | <b>Qty</b> |
|-----------------|----------------------|--|----------------|------------|
| 148 .....       | ZX-02109C.....       | Cover .....  | .....          | 1          |
| 149 .....       | TS-1503041 .....     | Socket Cap Screw .....                               | M6x15 .....    | 3          |
| 150 .....       | ZX-H150.....         | Set Screw .....                                      | M12x65 .....   | 1          |
| 151 .....       | ZX-H151.....         | Hex Nut.....   | M12.....       | 1          |
| 187 .....       | ZX-H187.....         | Ring Seal .....                                      | 35x3.1 .....   | 1          |
| 188 .....       | ZX-02714 .....       | Shaft .....  | .....          | 1          |
| 189 .....       | ZX-02716 .....       | Double Gear .....                                    | 2m48T.....     | 1          |
| 190 .....       | ZX-02303 .....       | Copper Sleeve .....                                  | .....          | 1          |
| 191 .....       | ZX-02734C.....       | Positioning Sleeve .....                             | .....          | 1          |
| 192 .....       | TS-1523031 .....     | Set Screw .....                                      | M6x10 .....    | 1          |
| 193 .....       | TS-1524041 .....     | Set Screw .....                                      | M8x15 .....    | 1          |
| 194 .....       | ZX-02733C.....       | Blocking Piece .....                                 | .....          | 1          |
| 195 .....       | ZX-02718 .....       | Taper End Set Screw.....                             | .....          | 1          |
| 196 .....       | ZX-02114C.....       | Sleeve.....  | .....          | 1          |
| 197 .....       | BB-6203 .....        | Ball Bearing .....                                   | 17x40x12 ..... | 1          |
| 198 .....       | ZX-H198.....         | C-Clip.....  | 28 .....       | 1          |
| 199 .....       | ZX-02717 .....       | Gear .....   | 2m65T.....     | 1          |
| 200 .....       | ZX-02715 .....       | Shaft .....  | .....          | 1          |
| 201 .....       | ZX-H201.....         | Flat Key.....  | 5x5x1 .....    | 1          |
| 202 .....       | ZX-H198.....         | C-Clip.....  | 28 .....       | 1          |
| 203 .....       | ZX-02722C.....       | Sleeve.....  | .....          | 1          |
| 204 .....       | ZX-02301 .....       | Oil Bushing (serial # 101029ZX2256 and lower) .....  | .....          | 1          |
|                 | CDL50002302 .....    | Oil Bushing (serial # 101214ZX2257 and higher).....  | .....          | 1          |
| 205 .....       | ZX-08106A.....       | Bracket (for Shaft V, Vb) (for 14"/16" models) ..... | .....          | 1          |
|                 | ZX-08106B.....       | Bracket (for Shaft V, Vb) (for 18" models) .....     | .....          | 1          |
|                 | GH2280ZX-08106.....  | Bracket (for Shaft V, Vb, Vc) (for 22" model) .....  | .....          | 1          |
| 206 .....       | ZX-H77 .....         | Taper Pin .....                                      | 8x40 .....     | 1          |
| 207 .....       | TS-1505031 .....     | Hex Socket Cap Screw.....                            | M10x25 .....   | 1          |
| 208 .....       | TNMP-08706A(N) ..... | Gear (for 14"/16"/22" models).....                   | 3.5m16T .....  | 1          |
|                 | TNMP-08706B(N) ..... | Gear (for 18" models) .....                          | 4m16T .....    | 1          |
| 209 .....       | ZX-02724C.....       | Washer .....   | .....          | 1          |
| 210 .....       | ZX-H59.....          | Pin.....   | 3n6x10 .....   | 1          |
| 211 .....       | ZX-H211.....         | Countersunk Head Screw.....                          | M5x16 .....    | 1          |
| 221 .....       | VB-A75.....          | V-Belt (for 14" models).....                         | A-75 .....     | 4          |
|                 | VB-A76.....          | V-Belt (for 16" models).....                         | A-76 .....     | 4          |
|                 | VB-A77.....          | V-Belt (for 18" models).....                         | A-77 .....     | 4          |
|                 | VB-A85.....          | V-Belt (for 22" model) .....                         | A-85 .....     | 4          |
| 233 .....       | ZX-02506 .....       | Paper Gasket.....                                    | .....          | 2          |
| 234 .....       | ZX-H234.....         | Set Screw .....                                      | M8x6 .....     | 2          |
| 235 .....       | ZX-02743N.....       | Clamping Round Nut .....                             | .....          | 1          |
| 236 .....       | ZX-H236.....         | Pin.....   | 8×30 .....     | 2          |
| 237 .....       | ZX-H237 .....        | Seal Ring (serial # 101214ZX2257 and higher).....    | 25x40x70 ..... | 1          |
| 238 .....       | ZX-H238 .....        | Steel C-clip (serial # 101214ZX2257 and higher)....  | 32 .....       | 1          |

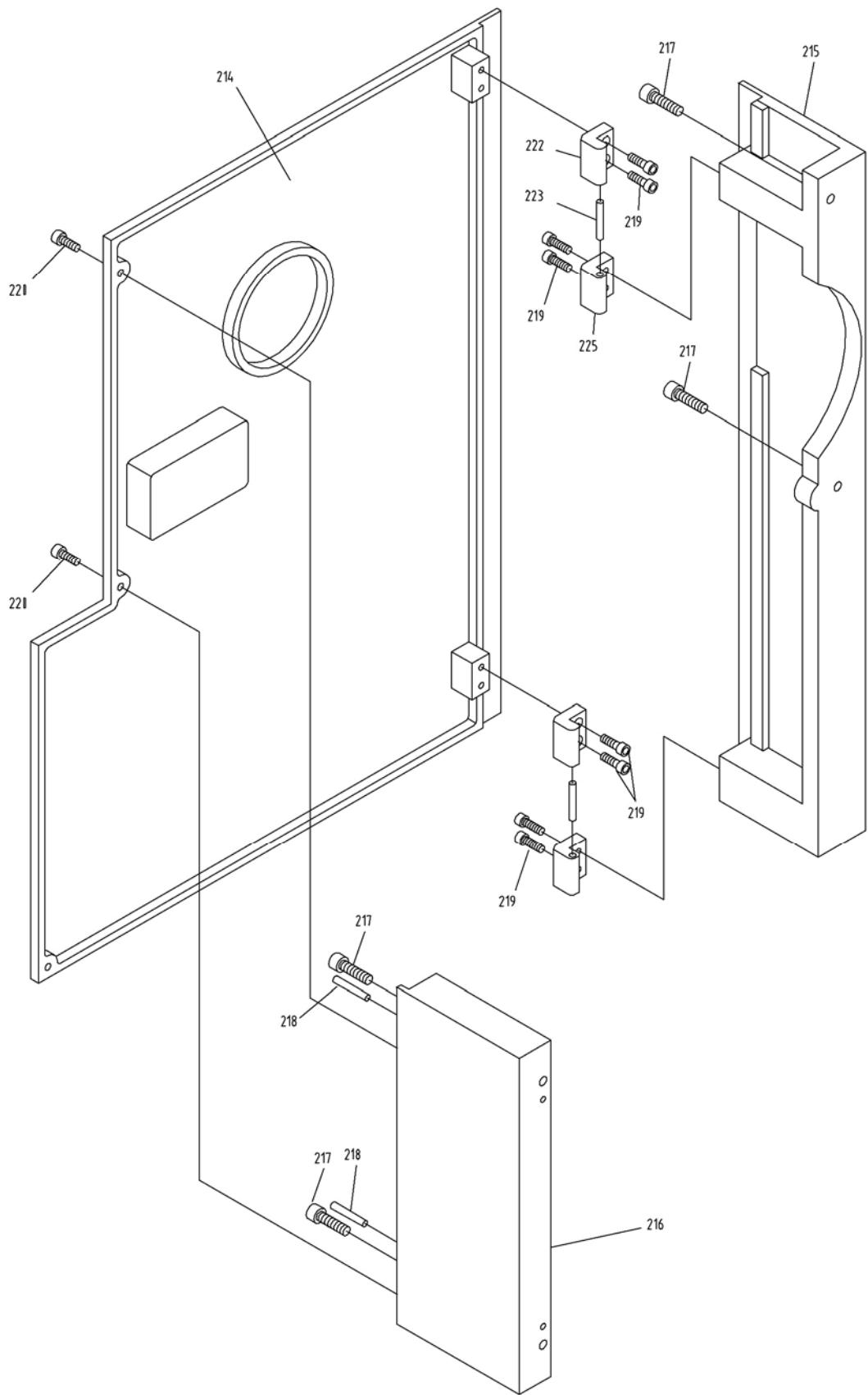
## 7.0 Headstock Assembly III – Exploded View



## 7.1 Headstock Assembly III – Parts List

| <b>Index No</b> | <b>Part No</b>   | <b>Description</b>  | <b>Size</b>      | <b>Qty</b> |
|-----------------|------------------|---|------------------|------------|
| 152             | ZX-02704 .       | Spindle .....   |                  | 1          |
| 153             | ZX-H153 .        | Flat Key.....   | 10x8x40 .....    | 1          |
| 154             | ZX-H154 .        | Flat Key.....   | 10x8x50 .....    | 1          |
| 155             | ZX-H155 .        | Flat Key.....   | 12x8x50 .....    | 1          |
| 156             | ZX-H156 .        | Flat Key.....   | 14x9x50 .....    | 1          |
| 157             | ZX-02701 .       | Cam Lock.....   |                  | 6          |
| 158             | ZX-H158 .        | Spring .....  | 1x8x25 .....     | 6          |
| 159             | ZX-02703 .       | Cam Positioning Screw.....  |                  | 6          |
| 160             | TS-1505041 .     | Hex Socket Cap Screw.....   | M10x28 .....     | 6          |
| 161             | ZX-02102 .       | Bearing Front Cover .....   |                  | 1          |
| 162             | ZX-02501 .       | Gasket .....  |                  | 1          |
| 163             | ZX-02702 .       | Oil Splashing Ring .....  |                  | 1          |
| 164             | NN3024/P5.       | Taper Roller Bearing.....   | 120x180x46 ..... | 1          |
| 165             | ZX-02726 .       | Lining .....  |                  | 1          |
| 168             | ZX-02725A .      | Round Nut w/Screw .....   |                  | 1          |
| 169             | ZX-02723 .       | Gear.....   | 3m98T .....      | 1          |
| 170             | ZX-02722 .       | Gear.....   | 3m50T .....      | 1          |
| 171             | ZX-02721 .       | Gear.....   | 3m58T .....      | 1          |
| 172             | ZX-02720A .      | Round Nut w/Screw .....   |                  | 1          |
| 175             | ZX-02710 .       | Gear.....   | 2m65T .....      | 1          |
| 176             | 51120/P5 .       | Thrust Bearing .....  | 100x135x25 ..... | 1          |
| 179             | BB-7020AC/P5 .   | Angular Bearing .....   | 100x150x24 ..... | 1          |
| 184             | ZX-02713A .      | Round Nut w/Screw .....   |                  | 1          |
| 212             | ZX-H212 .        | Drain Plug (14" models, serial # 001204ZX258 and lower) .....   |                  | 1          |
|                 | ZX-H212 .        | Drain Plug (16" models, serial #010312ZX293 and lower, also includes<br>serial # 010319ZX298 and 299) .....         |                  | 1          |
|                 | ZX-H212 .        | Drain Plug (18" models, serial # 010416ZX313 and lower) .....   |                  | 1          |
|                 | ZX-H212A .       | Drain Plug (14" models, serial # 010105ZX263 and higher) .....  |                  | 1          |
|                 | ZX-H212A .       | Drain Plug (16" models, serial #010319ZX294 and higher, except<br>for serial # 010319ZX298 and 299) .....           |                  | 1          |
|                 | ZX-H212A .       | Drain Plug (18" models, serial # 010514ZX323 and higher) .....  |                  | 1          |
|                 | ZX-H212A .       | Drain Plug (22" model).....   | Z3/8" .....      | 1          |
| 213             | ZX-02101A .      | Headstock Casting (14" models, serial # 001204ZX258 and lower) .....  |                  | 1          |
|                 | ZX-02101AN .     | Headstock Casting (14" models, serial # 010105ZX263 and higher) .....   |                  | 1          |
|                 | ZX-01201B .      | Headstock Casting (16" models, serial # 010312ZX293 and lower, also<br>includes serial # 110319ZX298 and 299) ..... |                  | 1          |
|                 | ZX-02101BN .     | Headstock Casting (16" models, serial # 010319ZX294 and higher,<br>except for serial # 010319ZX298 and 299) .....   |                  | 1          |
|                 | ZX-02101C .      | Headstock Casting (18" models, serial # 010416ZX313 and lower) .....  |                  | 1          |
|                 | ZX-02101CN .     | Headstock Casting (18" models, serial # 010514ZX323 and higher) .....   |                  | 1          |
|                 | GH2280ZX-02101 . | Headstock Casting (22" model) .....   |                  | 1          |
| 224             | ZX-G38-3A .      | Screw.....  |                  | 1          |
| 226             | ZX-H226 .        | Hex Socket Cap Screw.....   | M8x28 .....      | 9          |
| 227             | ZX-02502F .      | Gasket .....  |                  | 1          |
| 228             | ZX-02108F .      | Bearing Support .....   |                  | 1          |
| 229             | ZX-02711F .      | Sleeve .....  |                  | 1          |
| 230             | ZX-02510F .      | Gasket .....  |                  | 1          |
| 231             | ZX-02761F .      | Bearing Back Cover .....  |                  | 1          |
| 232             | ZX-H232 .        | Screw.....  | M5x10 .....      | 6          |

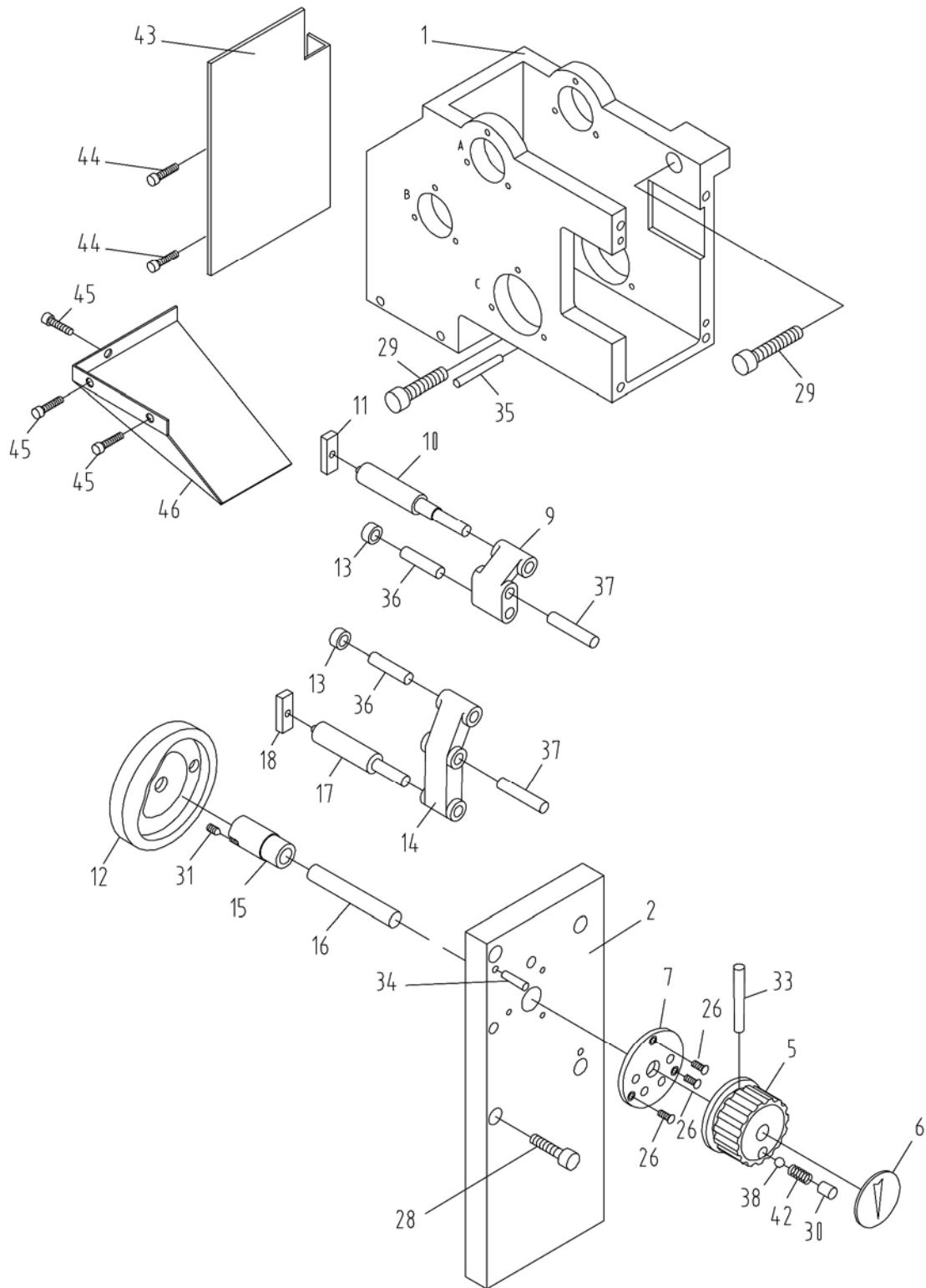
## 8.0 Headstock Assembly IV – Exploded View



## 8.1 Headstock Assembly IV – Parts List

| <b>Index No</b> | <b>Part No</b>       | <b>Description</b>                     | <b>Size</b>  | <b>Qty</b> |
|-----------------|----------------------|--|--------------|------------|
| 214 .....       | ZX-08302A.....       | Back Cover (for 14" models).....       |              | 1          |
| .....           | ZX-08302B.....       | Back Cover (for 16" models).....       |              | 1          |
| .....           | ZX-08302C.....       | Back Cover (for 18" models).....       |              | 1          |
| .....           | GH2280ZX-08301 ..... | Back Cover (for 22" model).....        |              | 1          |
| 215 .....       | ZX-08114A.....       | Rear Side Plate (for 14" models).....  |              | 1          |
| .....           | ZX-08114B.....       | Rear Side Plate (for 16" models).....  |              | 1          |
| .....           | ZX-08114C.....       | Rear Side Plate (for 18" models).....  |              | 1          |
| .....           | GH2280ZX-08114.....  | Rear Side Plate (for 22" model).....   |              | 1          |
| 216 .....       | ZX-08113A.....       | Front Side Plate (for 14" models)..... |              | 1          |
| .....           | ZX-08113B.....       | Front Side Plate (for 16" models)..... |              | 1          |
| .....           | ZX-08113C.....       | Front Side Plate (for 18" models)..... |              | 1          |
| .....           | GH2280ZX-08113.....  | Front Side Plate (for 22" model) ..... |              | 1          |
| 217 .....       | TS-1504051 .....     | Socket Cap Screw .....                 | M8x25 .....  | 4          |
| 218 .....       | ZX-H218.....         | Taper Pin .....                        | 6x25 .....   | 4          |
| 219 .....       | TS-1503051 .....     | Hex Socket Hd Cap Screw .....          | M6x20 .....  | 8          |
| 220 .....       | TS-1514021 .....     | Hex Socket Hd Cap Screw .....          | M6x15 .....  | 3          |
| 222 .....       | ZX-08712 .....       | Upper Hinge.....                       |              | 2          |
| 223 .....       | ZX-H223.....         | Pin.....                               | 6n6x40 ..... | 2          |
| 225 .....       | ZX-08711 .....       | Lower Hinge.....                       |              | 2          |

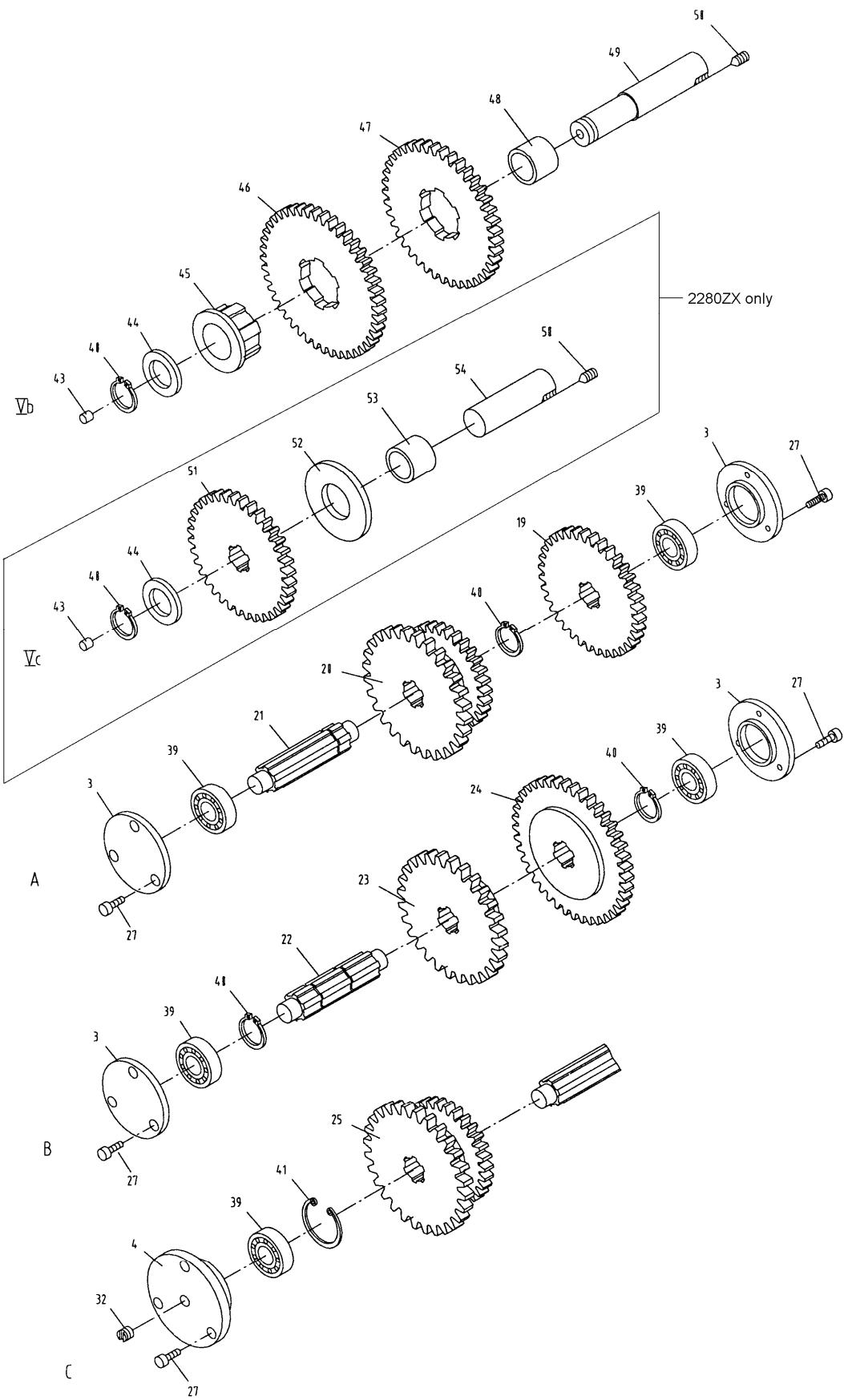
## 9.0 Change Gear Box Assembly I – Exploded View



## 9.1 Change Gear Box Assembly I – Parts List

| <b>Index No</b> | <b>Part No</b>   | <b>Description</b>                  | <b>Size</b>   | <b>Qty</b> |
|-----------------|------------------|-------------------------------------|---------------|------------|
| 1               | ZX-08101 .       | Change Gear Box Casting.....        |               | 1          |
| 2               | ZX-08108 .       | Front Cover.....                    |               | 1          |
| 5               | ZX-05104C.       | Hand Wheel.....                     |               | 1          |
| 6               | ZX-05301C.       | Sign Plate .....                    |               | 1          |
| 7               | ZX-08708 .       | Positioning Disc .....              |               | 1          |
| 8               | ZX-08505 .       | Gasket .....                        |               | 1          |
| 9               | ZX-08111 .       | Crank .....                         |               | 1          |
| 10              | ZX-08705 .       | Connecting Rod.....                 |               | 1          |
| 11              | ZX-08304 .       | Sliding Block .....                 |               | 1          |
| 12              | ZX-05103C.       | Cam .....                           |               | 1          |
| 13              | ZX-05702C.       | Roller .....                        |               | 2          |
| 14              | ZX-08109 .       | Crank .....                         |               | 1          |
| 15              | ZX-08110 .       | Bushing.....                        |               | 1          |
| 16              | ZX-08704 .       | Rotating Shaft.....                 |               | 1          |
| 17              | ZX-08703 .       | Connecting Rod.....                 |               | 1          |
| 18              | ZX-08304 .       | Sliding Block .....                 |               | 1          |
| 26              | ZX-C26.....      | Cross Head Screw.....               | M4x12 .....   | 3          |
| 28              | TS-1504051 ..... | Socket Cap Screw.....               | M8x25 .....   | 4          |
| 29              | TS-1516051 ..... | Hex Socket Cap Screw.....           | M10x40 .....  | 2          |
| 30              | TS-1525021 ..... | Set Screw .....                     | M10x12 .....  | 1          |
| 31              | ZX-C31.....      | Flat Head Set Screw.....            | M6x8 .....    | 1          |
| 33              | ZX-C33.....      | Taper Pin .....                     | 4x45 .....    | 1          |
| 34              | ZX-C34.....      | Taper Pin .....                     | 6x30 .....    | 2          |
| 35              | ZX-C35.....      | Taper Pin .....                     | 6x50 .....    | 1          |
| 36              | ZX-C36.....      | Pin.....                            | 10m6x40 ..... | 2          |
| 37              | ZX-C37.....      | Pin.....                            | 10m6x50 ..... | 2          |
| 38              | SB-8MM .....     | Steel Ball.....                     | 8 .....       | 1          |
| 42              | ZX-C42.....      | Spring .....                        | 1x8x30 .....  | 1          |
| 43              | ZX-08716 .       | Splash Guard.....                   |               | 1          |
| 44              | TS-1534042 ..... | Cross Recessed Pen Head Screw ..... | M6x12 .....   | 2          |
| 45              | TS-1533042 ..... | Cross Recessed Pen Head Screw ..... | M5x12 .....   | 3          |
| 46              | ZX-08715 .....   | Splash Guard.....                   |               | 1          |

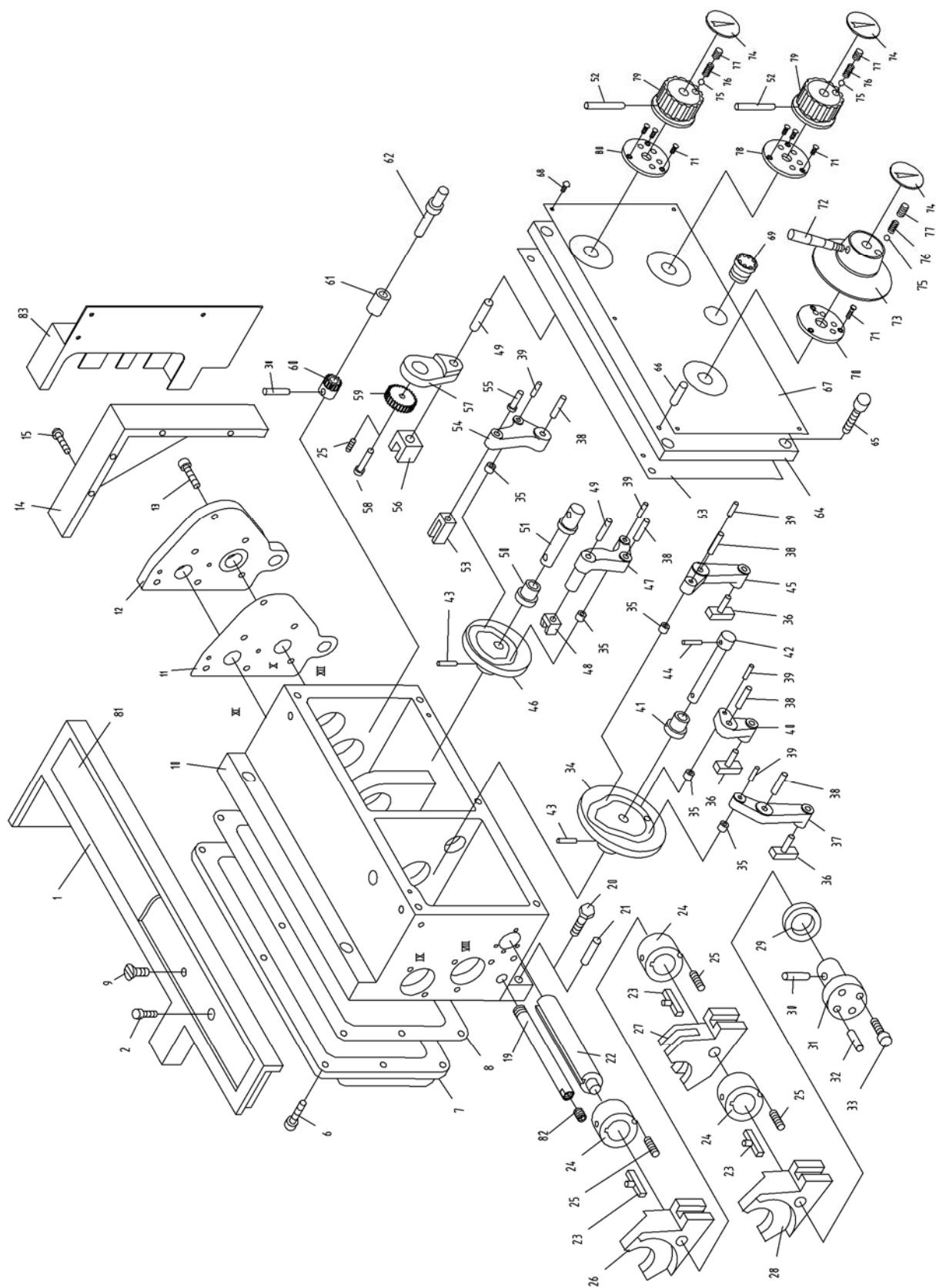
## 10.0 Change Gear Box Assembly II – Exploded View



## 10.1 Change Gear Box Assembly II – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>            | <b>Size</b>    | <b>Qty</b>    |
|-----------------|----------------|-------------------------------|----------------|---------------|
| 3               | ZX-08104       | End Cover                     |                | 4             |
| 4               | ZX-08103       | Bearing Support               |                | 1             |
| 19              | ZX-08107       | Gear                          | 3m36T          | 1             |
| 20              | ZX-08105       | Double Gear                   | 3.75m28T/3m30T | 1             |
| 21              | ZX-08702       | Shaft                         |                | 1             |
| 22              | ZX-08701       | Shaft                         |                | 1             |
| 23              | ZX-08710       | Gear                          | 3.75m27T       | 1             |
| 24              | ZX-08709       | Gear                          | 3m41T          | 1             |
| 25              | ZX-08102       | Double Gear                   | 3.75m30T/3m29T | 1             |
| 27              | ZX-C27         | Slotted Cheese Head Screw     | M5x12          | 15            |
| 32              | ZX-C32         | Flat Head Set Screw           | M10x12         | 1             |
| 39              | BB-6203ZZ/P6   | Ball Bearing                  | 17x40x12       | 5             |
| 40              | ZX-C40         | C-Clip                        | 25             | 4(5 for 22")  |
| 41              | ZX-C41         | C-Clip                        | 40             | 1             |
| 43              | ZX-C43         | Oil Cup                       | 8              | 1 (2 for 22") |
| 44              | TNMP08108      | Washer                        |                | 1 (2 for 22") |
| 45              | TNMP08102      | Splined Sleeve                |                | 1             |
| 46              | TNMP08504      | Gear                          | 3m41T          | 1             |
| 47              | TNMP08501A     | Gear (for 14"/16"/22" models) | 3.5m36T        | 1             |
|                 | TNMP08501B     | Gear (for 18" models)         | 4m36T          | 1             |
| 48              | ZX-05502C      | Oil Bushing                   |                | 1             |
| 49              | ZX-08707       | Shaft Vb                      |                | 1             |
| 50              | ZX-C50         | Flat Head Set Screw           | M8x10          | 1 (2 for 22") |
| 51              | GH2280ZX-08112 | Gear (for 22" model)          | 3m30T          | 1             |
| 52              | GH2280ZX-1052  | Washer                        |                | 1             |
| 53              | GH2280ZX-1053  | Oil Bushing                   |                | 1             |
| 54              | GH2280ZX-08707 | Axis Vc (for 22" model)       |                | 1             |

## 11.0 Quick Change Gear Box I – Exploded View

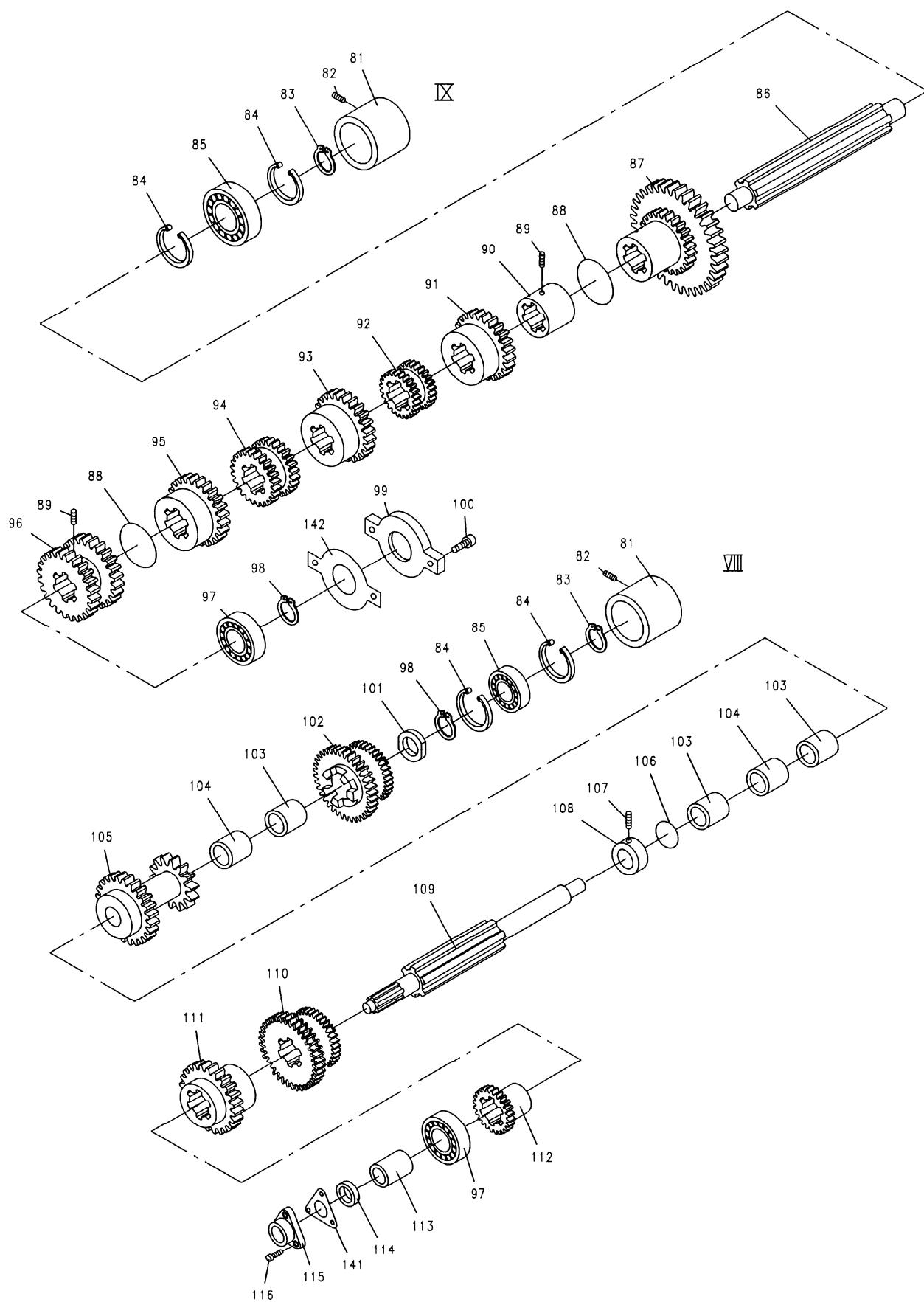


## 11.1 Quick Change Gear Box I – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                                | <b>Size</b>  | <b>Qty</b> |
|-----------------|----------------|---|--------------|------------|
| 1               | ZX-05153A      | Upper Cover .....                                 |              | 1          |
| 2               | TS-1503071     | Hex Socket Cap Screw.....                         | M6x30 .....  | 2          |
| 6               | TS-1504031     | Hex Socket Cap Screw.....                         | M8x16 .....  | 10         |
| 7               | ZX-05109       | Rear Cover .....                                  |              | 1          |
| 8               | ZX-05502       | Gasket .....                                      |              | 1          |
| 9               | ZX-Q09         | Countersunk Head Screw.....                       | M10x18 ..... | 1          |
| 10              | ZX-05101       | Feedbox Casting.....                              |              | 1          |
| 11              | ZX-05501       | Gasket .....                                      |              | 1          |
| 12              | ZX-05108       | Flange .....                                      |              | 1          |
| 13              | TS-1504031     | Hex Socket Cap Screw.....                         | M8x16 .....  | 6          |
| 14              | ZX-05151       | Extending Plate.....                              |              | 1          |
| 15              | TS-1503131     | Hex Socket Cap Screw.....                         | M6x60 .....  | 4          |
| 19              | ZX-Q19         | Hex Cap Bolt.....                                 | M10x1 .....  | 1          |
| 20              | TS-1491061     | Hex Cap Bolt.....                                 | M10x40 ..... | 2          |
| 21              | ZX-H68         | Taper Pin .....                                   | 6x35 .....   | 2          |
| 22              | ZX-05738       | Control Shaft .....                               |              | 1          |
| 23              | ZX-05739       | Sliding Key .....                                 |              | 3          |
| 24              | ZX-05128       | Sliding Sleeve .....                              |              | 3          |
| 25              | ZX-Q25         | Flat Head Set Screw.....                          | M5x8 .....   | 4          |
| 26              | ZX-05125       | Right Fork .....                                  |              | 1          |
| 27              | ZX-05126       | Middle Fork .....                                 |              | 1          |
| 28              | ZX-05127       | Left Fork .....                                   |              | 1          |
| 29              | ZX-Q29         | Ring Seal .....                                   | 32x3.1 ..... | 1          |
| 30              | ZX-Q30         | Taper Pin (serial #121220ZX2630 and lower) .....  | 4x25 .....   | 2          |
|                 | GB877-4x30     | Taper Pin (serial #130102ZX2631 and higher) ..... | 4x30 .....   | 2          |
| 31              | ZX-05129       | Cover .....                                       |              | 1          |
| 32              | ZX-Q32         | Pin .....   | 5n6x15 ..... | 1          |
| 33              | ZX-Q33         | Cheese Head Screw .....                           | M5x16 .....  | 3          |
| 34              | ZX-05122       | Cam .....   |              | 1          |
| 35              | ZX-05728       | Rolling Sleeve .....                              |              | 5          |
| 36              | ZX-05729       | Poking Key .....                                  |              | 3          |
| 37              | ZX-05123       | Crank .....                                       |              | 1          |
| 38              | ZX-Q38         | Pin .....   | 8n6x32 ..... | 5          |
| 39              | ZX-Q39         | Pin .....   | 6n6x20 ..... | 5          |
| 40              | ZX-05124       | Crank .....                                       |              | 1          |
| 41              | ZX-05111       | Sleeve .....                                      |              | 1          |
| 42              | ZX-05726       | Lever Shaft .....                                 |              | 1          |
| 43              | ZX-Q43         | Taper Pin (serial #121220ZX2630 and lower) .....  | 4x32 .....   | 2          |
|                 | GB877-4x35     | Taper Pin (serial #130102ZX2631 and higher) ..... | 4x35 .....   | 2          |
| 44              | ZX-Q44         | Taper Pin .....                                   | 4x65 .....   | 1          |
| 45              | ZX-05121       | Crank .....                                       |              | 1          |
| 46              | ZX-05118       | Cam .....   |              | 1          |
| 47              | ZX-05120       | Crank .....                                       |              | 1          |
| 48              | ZX-05116       | Fork .....  |              | 1          |
| 49              | ZX-Q49         | Pin .....   | 8n6x18 ..... | 2          |
| 50              | ZX-05117       | Sleeve .....                                      |              | 1          |
| 51              | ZX-05737       | Lever Shaft .....                                 |              | 1          |
| 52              | ZX-C33         | Taper Pin .....                                   | 4x45 .....   | 2          |
| 53              | ZX-05115       | Fork .....  |              | 1          |
| 54              | ZX-05119       | Crank .....                                       |              | 1          |
| 55              | ZX-05735       | Pin .....   |              | 1          |
| 56              | ZX-05112       | Fork .....  |              | 1          |
| 57              | ZX-05113       | Crank .....                                       |              | 1          |
| 58              | ZX-05730       | Small Shaft .....                                 |              | 1          |
| 59              | ZX-05731       | Big Gear .....                                    | 1m44T .....  | 1          |
| 60              | ZX-05732       | Small Gear .....                                  | 1m22T .....  | 1          |
| 61              | ZX-05114       | Sleeve .....                                      |              | 1          |
| 62              | ZX-05734       | Lever Shaft .....                                 |              | 1          |
| 63              | ZX-05503       | Gasket .....                                      |              | 1          |
| 64              | ZX-05110       | Front Cover .....                                 |              | 1          |

| <b>Index No</b> | <b>Part No</b>     | <b>Description</b>                                | <b>Size</b>    | <b>Qty</b> |
|-----------------|--------------------|---|----------------|------------|
| 65 .....        | TS-1505021 .....   | Hex Socket Cap Screw.....                         | M10x20 .....   | 5          |
| 66 .....        | ZX-Q66.....        | Taper Pin .....                                   | 5x35 .....     | 6          |
| 67 .....        | ZX-05303A.....     | Sign Plate (serial #110930ZX2364 and lower) ..... | .....          | 1          |
| .....           | ZX-05303B.....     | Sign Plate (serial #110930ZX2365 and higher)..... | .....          | 1          |
| 68 .....        | ZX-Q68.....        | Cross Head Screw.....                             | M3x6 .....     | 7          |
| 69 .....        | ZX-Q69.....        | Oil Sight Glass.....                              | 20.....        | 1          |
| 70 .....        | ZX-05727 .....     | Positioning Disc .....                            | .....          | 1          |
| 71 .....        | ZX-Q71.....        | Countersunk Head Screw.....                       | M4x12 .....    | 9          |
| 72 .....        | ZX-05740 .....     | Lever .....                                       | .....          | 1          |
| 73 .....        | ZX-05130A.....     | Lever Support .....                               | .....          | 1          |
| 74 .....        | ZX-05301 .....     | Sign Disc .....                                   | .....          | 3          |
| 75 .....        | SB-8MM .....       | Steel Ball.....                                   | 8.....         | 3          |
| 76 .....        | ZX-Q76.....        | Compression Spring .....                          | YZ-1x8x25..... | 3          |
| 77 .....        | ZX-H3.....         | Flat End Set Screw.....                           | M10x12 .....   | 3          |
| 78 .....        | ZX-05736 .....     | Positioning Disc .....                            | .....          | 1          |
| 79 .....        | ZX-05140 .....     | Hand Wheel .....                                  | .....          | 2          |
| 80 .....        | ZX-05733 .....     | Positioning Disc .....                            | .....          | 1          |
| 81 .....        | C6136ZK-05551..... | Rubber Washer.....                                | .....          | 1          |
| 82 .....        | ZX-Q82.....        | Hex Socket Head Cap Screw .....                   | M8x5 .....     | 1          |
| 83 .....        | 1440R-05752A.....  | Board .....                                       | .....          | 1          |

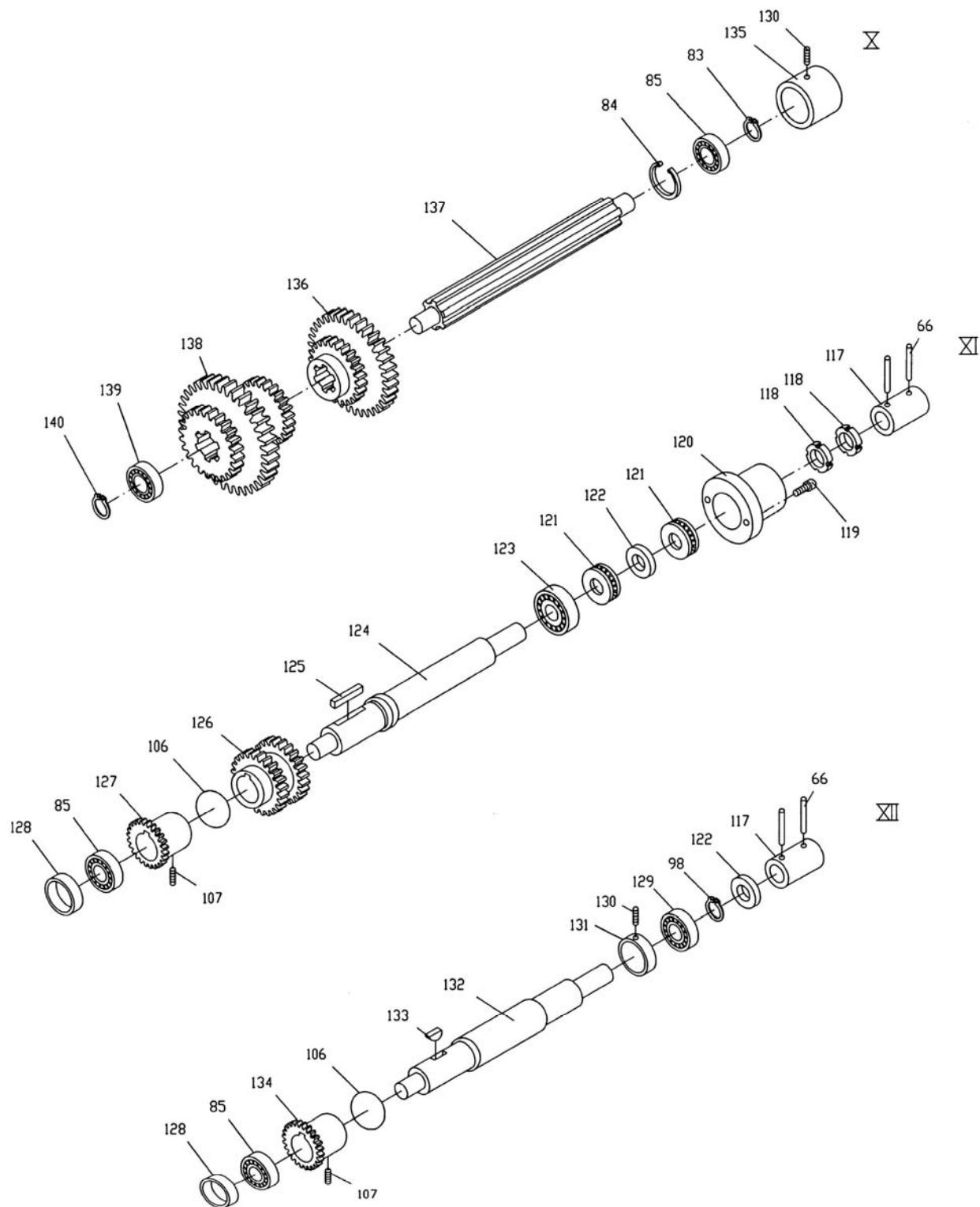
## 12.0 Quick Change Gear Box II – Exploded View



## 12.1 Quick Change Gear Box II – Parts List

| <b>Index No</b> | <b>Part No</b>   | <b>Description</b>                   | <b>Size</b>            | <b>Qty</b> |
|-----------------|------------------|--------------------------------------|------------------------|------------|
| 81              | ZX-05104 .       | Middle Bearing Support .....         |                        | 2          |
| 82              | ZX-Q82.....      | Taper End Set Screw.....             | M10x16 .....           | 2          |
| 83              | ZX-B23.....      | C-Clip.....                          | 20 .....               | 3          |
| 84              | ZX-Q84.....      | C-Clip .....                         | 42 .....               | 5          |
| 85              | BB-6004 .....    | Single Row Radial Ball Bearing ..... | 20x42x12 .....         | 5          |
| 86              | ZX-05721 .....   | Shaft .....                          |                        | 1          |
| 87              | ZX-05722 .....   | Double Gear .....                    | 2m26T/2m52T.....       | 1          |
| 88              | ZX-Q88.....      | Iron Wire .....                      | 1x190 .....            | 2          |
| 89              | TS-1524051 ..... | Set Screw .....                      | M8x20 .....            | 2          |
| 90              | ZX-05720 .....   | Positioning Sleeve .....             |                        | 1          |
| 91              | ZX-05719 .....   | Gear.....                            | 2.25m28T .....         | 1          |
| 92              | ZX-05718 .....   | Double Gear .....                    | 2m26T/2m28T.....       | 1          |
| 93              | ZX-05717 .....   | Gear.....                            | 3.5m20T .....          | 1          |
| 94              | ZX-05716 .....   | Double Gear .....                    | 3.5m18T/3.5m19T.....   | 1          |
| 95              | ZX-05715 .....   | Gear.....                            | 3.25m22T .....         | 1          |
| 96              | ZX-05714 .....   | Double Gear .....                    | 3.25m24T/3.25m23T..... | 1          |
| 97              | BB-6205 .....    | Single Row Radial Ball Bearing ..... | 25x52x15 .....         | 2          |
| 98              | ZX-C40.....      | C-Clip .....                         | 25 .....               | 3          |
| 99              | ZX-05125 .....   | Shaft End Cover .....                |                        | 1          |
| 100             | TS-1504041 ..... | Hex Socket Cap Screw.....            | M8x18 .....            | 2          |
| 101             | ZX-05704 .....   | Spacer .....                         |                        | 1          |
| 102             | ZX-05705 .....   | Double Gear .....                    | 2m52T/2m26T.....       | 1          |
| 103             | ZX-05502C.....   | Oil Bushing .....                    |                        | 3          |
| 104             | ZX-05105 .....   | Sleeve.....                          |                        | 2          |
| 105             | ZX-05707 .....   | Double Gear .....                    | 2m39T/2m26T.....       | 1          |
| 106             | ZX-Q106.....     | Iron Wire .....                      | 1x160 .....            | 3          |
| 107             | TS-1524031 ..... | Set Screw .....                      | M8x12 .....            | 3          |
| 108             | ZX-05714C.....   | Fixed Bushing .....                  |                        | 1          |
| 109             | ZX-05710 .....   | Shaft .....                          |                        | 1          |
| 110             | ZX-05709 .....   | Double Gear .....                    | 2m48T/2.25m42T.....    | 1          |
| 111             | ZX-05711 .....   | Sliding Gear .....                   | 3.5m24T .....          | 1          |
| 112             | ZX-05712 .....   | Sliding Gear .....                   | 3.25m24T .....         | 1          |
| 113             | ZX-05713 .....   | Sleeve.....                          |                        | 1          |
| 114             | ZX-G51-1 .....   | Spacer .....                         | 32 .....               | 1          |
| 115             | ZX-05106 .....   | Bearing Support .....                |                        | 1          |
| 116             | TS-1504051 ..... | Hex Socket Cap Screw.....            | M8x25 .....            | 3          |
| 141             | ZX-05504 .....   | Gasket .....                         |                        | 1          |
| 142             | ZX-05505 .....   | Gasket .....                         |                        | 1          |

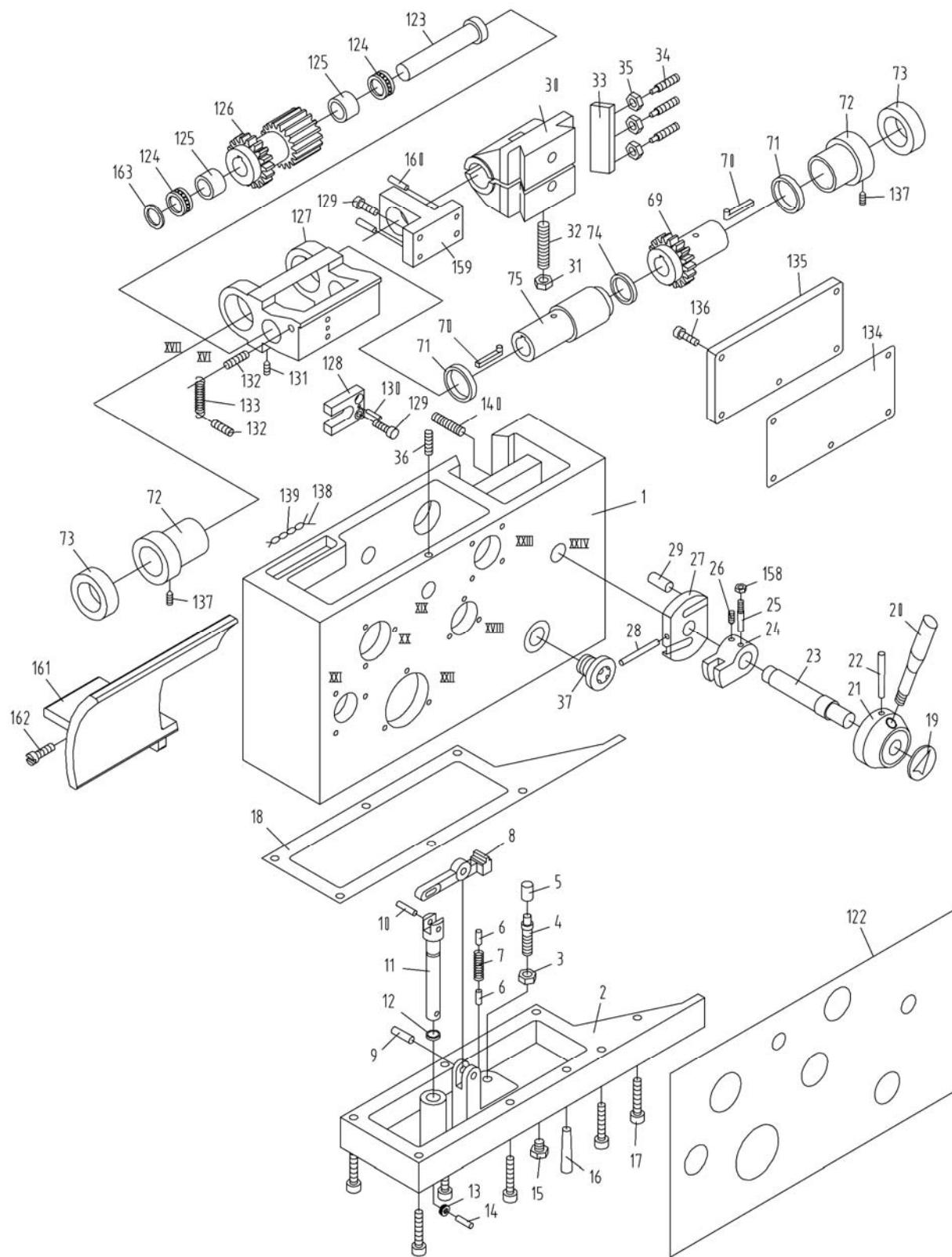
### 13.0 Quick Change Gear Box III – Exploded View



### 13.1 Quick Change Gear Box III – Parts List

| <b>Index No</b> | <b>Part No</b>   | <b>Description</b>                   | <b>Size</b>             | <b>Qty</b> |
|-----------------|------------------|--------------------------------------|-------------------------|------------|
| 66 .....        | ZX-Q66.....      | Taper Pin .....                      | 5x35 .....              | 6          |
| 83 .....        | ZX-Q83.....      | C-Clip .....                         | 20 .....                | 3          |
| 84 .....        | ZX-Q84.....      | C-Clip .....                         | 42 .....                | 5          |
| 85 .....        | BB104 .....      | Single Row Radial Ball Bearing ..... | 20x42x12 .....          | 5          |
| 98 .....        | ZX-Q98.....      | C-Clip .....                         | 25 .....                | 3          |
| 106 .....       | ZX-Q106.....     | Iron Wire .....                      | 1x160 .....             | 3          |
| 107 .....       | TS-1524031 ..... | Set Screw .....                      | M8x12 .....             | 3          |
| 117 .....       | ZX-05113C.....   | Shaft Coupling .....                 | .....                   | 2          |
| 118 .....       | ZX-Q118.....     | Round Nut .....                      | M24x1.5 .....           | 2          |
| 119 .....       | TS-1503021 ..... | Hex Socket Cap Screw .....           | M6x10 .....             | 2          |
| 120 .....       | ZX-05114C.....   | Cover .....                          | .....                   | 1          |
| 121 .....       | BB-51105 .....   | Thrust Bearing .....                 | 25x42x11 .....          | 2          |
| 122 .....       | ZX-Q122.....     | Spacer .....                         | 25 .....                | 2          |
| 123 .....       | BB-6305 .....    | Ball Bearing .....                   | 25x62x17 .....          | 1          |
| 124 .....       | ZX-05725 .....   | Shaft .....                          | .....                   | 1          |
| 125 .....       | ZX-Q125.....     | Key .....                            | 8x7x50 .....            | 1          |
| 126 .....       | ZX-05724 .....   | Double Gear .....                    | 2.25m35T/2.25m36T ..... | 1          |
| 127 .....       | ZX-05723 .....   | Gear .....                           | 2.5m36T .....           | 1          |
| 128 .....       | ZX-05107 .....   | Sleeve .....                         | .....                   | 2          |
| 129 .....       | BB-6005 .....    | Ball Bearing .....                   | 25x47x12 .....          | 1          |
| 130 .....       | TS-1525021 ..... | Set Screw .....                      | M10x12 .....            | 2          |
| 131 .....       | ZX-05103 .....   | Bearing Support .....                | .....                   | 1          |
| 132 .....       | ZX-05701 .....   | Shaft .....                          | .....                   | 1          |
| 133 .....       | ZX-Q133.....     | Half Circle Key .....                | 6x22 .....              | 1          |
| 134 .....       | ZX-05703 .....   | Gear .....                           | 2.5m36T .....           | 1          |
| 135 .....       | ZX-05102 .....   | Bearing Support .....                | .....                   | 1          |
| 136 .....       | ZX-05702 .....   | Double Gear .....                    | 2.5m24T/2.25m35T .....  | 1          |
| 137 .....       | ZX-05708 .....   | Shaft .....                          | .....                   | 1          |
| 138 .....       | ZX-05706 .....   | Triple Gear .....                    | 2m39T/2m52T/2m26T ..    | 1          |
| 139 .....       | BB-6203 .....    | Ball Bearing .....                   | 17x40x12 .....          | 1          |
| 140 .....       | ZX-Q140.....     | C-Clip .....                         | 17 .....                | 1          |

## 14.0 Apron Assembly I – Exploded View

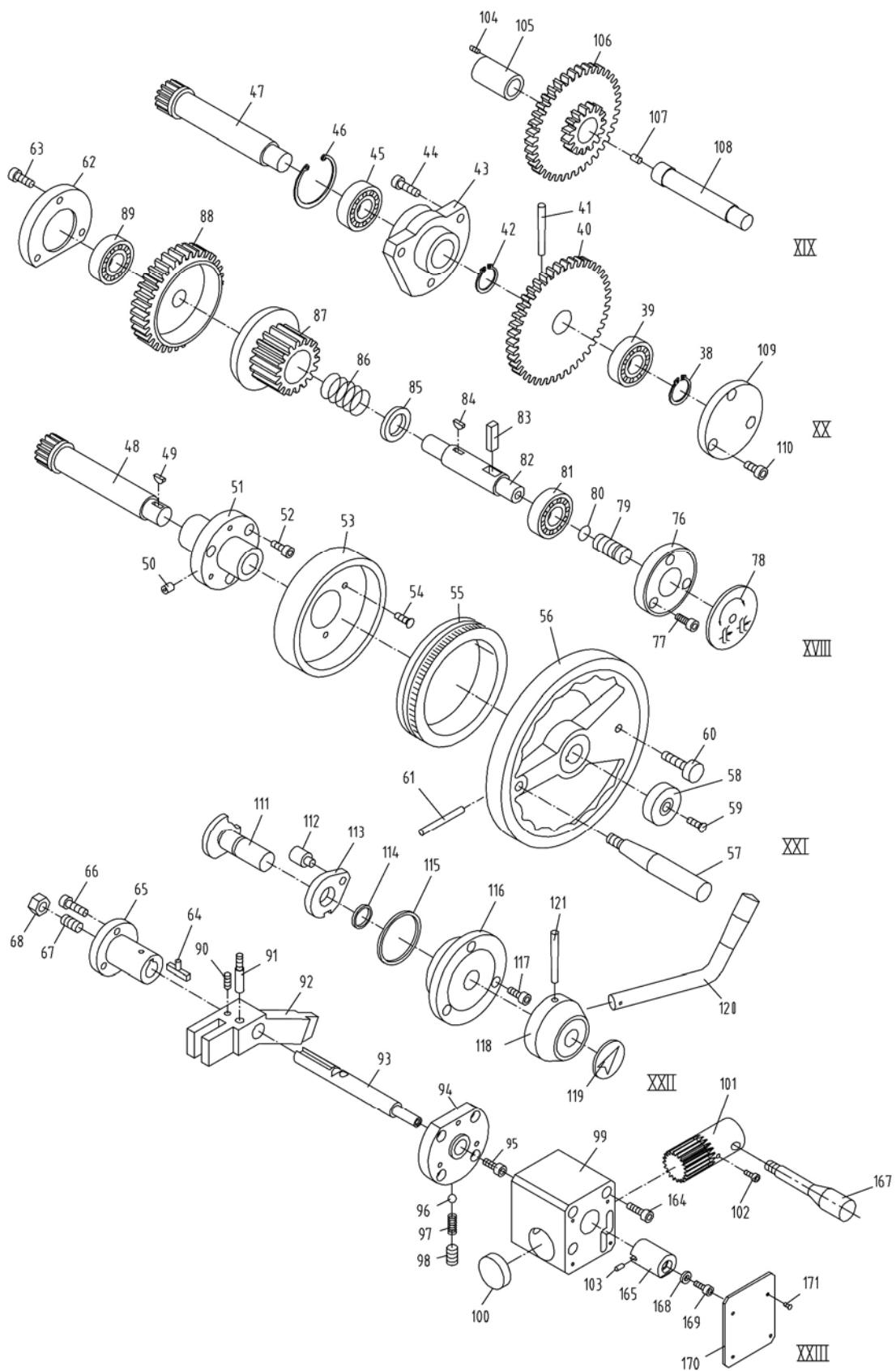


## 14.1 Apron Assembly I – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>   | <b>Size</b>     | <b>Qty</b> |
|-----------------|----------------|--|-----------------|------------|
| 1               | TL06101        | Apron Casting .....  |                 | 1          |
| 2               | TL06103        | Bottom Cover.....  |                 | 1          |
| 3               | TS-1540072     | Hex Nut.....   | M10.....        | 1          |
| 4               | ZX-A4          | Flat Head Set Screw.....                                       | M10x70.....     | 1          |
| 5               | TL06502        | Cushion Cap.....   |                 | 1          |
| 6               | ZX-A6          | Pin.....   | 6n6x16.....     | 2          |
| 7               | ZX-A7          | Tensile Spring.....  | YI1.2x9x50..... | 1          |
| 8               | TL06734        | Lever.....   |                 | 1          |
| 9               | ZX-A9          | Pin.....   | 8n6x30.....     | 1          |
| 10              | ZX-A10         | Pin.....   | 6n6x18.....     | 1          |
| 11              | TL06701-A      | Pushing Rod .....  |                 | 1          |
| 12              | ZX-A12         | Oil Seal .....   | 15x2.4 .....    | 1          |
| 13              | BB60016        | Ball Bearing .....   | 6x17x6 .....    | 1          |
| 14              | ZX-A6          | Pin.....   | 6n6x16.....     | 1          |
| 15              | ZX-A15         | Drain Plug .....   | Z 1/4" .....    | 1          |
| 16              | ZX-B34         | Taper Pin .....  | 5x30 .....      | 2          |
| 17              | TS-1504041     | Hex Socket Cap Screw.....                                      | M8x20 .....     | 6          |
| 18              | TL06501        | Gasket .....   |                 | 1          |
| 19              | TL06307        | Sign Plate .....   |                 | 1          |
| 20              | TL06716        | Lever.....   |                 | 1          |
| 21              | ZX-06122       | Lever Support .....  |                 | 1          |
| 22              | ZX-B27         | Taper Pin .....  | 6x60 .....      | 1          |
| 23              | TL06717        | Half Nut Shaft .....   |                 | 1          |
| 24              | TL06111        | Positioning Block .....  |                 | 1          |
| 25              | ZX-A25         | Thread Tail Taper Pin.....                                     | 6x25 .....      | 1          |
| 26              | TS-1523031     | Set Screw .....  | M6x10 .....     | 1          |
| 27              | ZX-06733       | Half Nut Control Plate .....                                   |                 | 1          |
| 28              | ZX-A28         | Taper Pin .....  | 6x55 .....      | 1          |
| 29              | ZX-06732       | Pin.....   |                 | 2          |
| 30              | ZX-06302       | Half Nut (serial # 010611ZX349 and lower).....                 |                 | 1          |
|                 | ZX-06302N      | New Half Nut (serial # 010618ZX350 and higher).....            |                 | 1          |
| 31              | TS-1540072     | Hex Nut.....   | M10.....        | 1          |
| 32              | ZX-A32         | Cylindrical End Set Screw .....                                | M10x60 .....    | 1          |
| 33              | ZX-06121       | Gib .....  |                 | 1          |
| 34              | ZX-06731       | Cylindrical End Set Screw .....                                |                 | 3          |
| 35              | TS-1540061     | Hex Nut .....  | M8 .....        | 3          |
| 36              | ZX-A36         | Set Screw .....  | M8x32 .....     | 1          |
| 37              | ZX-A37         | Oil Sight Glass.....   | 20 .....        | 1          |
| 69              | TL06727        | Gear (serial # 010611ZX349 and lower).....                     | 2m25T .....     | 1          |
|                 | TL06727N       | New Gear (serial # 010618ZX350 and higher) .....               | 2m25T .....     | 1          |
| 70              | TL06728        | Sliding Key .....  |                 | 2          |
| 71              | TL06121        | Spacer (serial # 010611ZX349 and lower) .....                  |                 | 2          |
|                 | TL06121N       | New Spacer (serial # 010618ZX350 and higher).....              |                 | 2          |
| 72              | TL06304        | Positioning Sleeve (serial # 010611ZX349 and lower) .....      |                 | 2          |
|                 | TL06304N       | New Positioning Sleeve (serial # 010618ZX350 and higher) ..... |                 | 2          |
| 73              | ZX-A73         | Ring Seal For Rotating .....                                   | 3x55 .....      | 2          |
| 74              | ZX-A74         | Oil Seal .....   | 35x3.1 .....    | 1          |
| 75              | TL06729        | Sleeve (serial # 010611ZX349 and lower).....                   |                 | 1          |
|                 | TL06729N       | New Sleeve (serial # 010618ZX350 and higher) .....             |                 | 1          |
| 122             | TL06302        | Sign Plate .....   |                 | 1          |
| 123             | TL06730        | Shaft .....  |                 | 1          |
| 124             | BB-51104       | Thrust Bearing .....   |                 | 2          |
| 125             | TL06305        | Sleeve .....   |                 | 2          |
| 126             | TL06726        | Worm (serial # 010611ZX349 and lower) .....                    |                 | 1          |
|                 | TL06726N       | New Worm (serial # 010618ZX350 and higher) .....               |                 | 1          |
| 127             | TL06122        | Worm Support (serial # 010611ZX349 and lower) ..               |                 | 1          |
|                 | TL06122N       | New Worm Support (serial # 010618ZX350 and higher) .....       |                 | 1          |
| 128             | TL06720        | Control Plate .....  |                 | 1          |
| 129             | TS-1514031     | Hex Socket Cap Screw.....                                      | M6x20 .....     | 4          |
| 130             | ZX-A130        | Taper Pin .....  | 4x20 .....      | 1          |

| <b>Index No</b> | <b>Part No</b>   | <b>Description</b>               | <b>Size</b>        | <b>Qty</b> |
|-----------------|------------------|----------------------------------|--------------------|------------|
| 131 .....       | TS-1524031 ..... | Set Screw .....                  | M8x12 .....        | 2          |
| 132 .....       | ZX-A132 .....    | Screw .....                      | M8x25 .....        | 2          |
| 133 .....       | ZX-A133 .....    | Cylindrical Tensile Spring ..... | L1-1.6x10x58 ..... | 1          |
| 134 .....       | TL06503 .....    | Gasket .....                     | .....              | 1          |
| 135 .....       | TL06114 .....    | Back Cover .....                 | .....              | 1          |
| 136 .....       | TS-1514011 ..... | Hex Socket Cap Screw .....       | M6x12 .....        | 5          |
| 137 .....       | ZX-A137 .....    | Set Screw .....                  | M8x30 .....        | 2          |
| 138 .....       | ZX-A138 .....    | Iron Wire .....                  | 1x50 .....         | 2          |
| 139 .....       | ZX-A139 .....    | Oil Conducting Cord .....        | 3x100 .....        | 2          |
| 140 .....       | ZX-A140 .....    | Screw .....                      | M10x40 .....       | 1          |
| 158 .....       | TS-1540041 ..... | Hex Nut .....                    | M6 .....           | 1          |
| 159 .....       | TL06124 .....    | Bracket .....                    | .....              | 1          |
| 160 .....       | ZX-A160 .....    | Taper Pin .....                  | 5x25 .....         | 2          |
| 161 .....       | TL06308 .....    | Bracket .....                    | .....              | 1          |
| 162 .....       | TS-1503041 ..... | Hex Socket Cap Screw .....       | M6x16 .....        | 1          |
| 163 .....       | TL06120 .....    | Sleeve .....                     | .....              | 1          |

## 15.0 Apron Assembly II – Exploded View

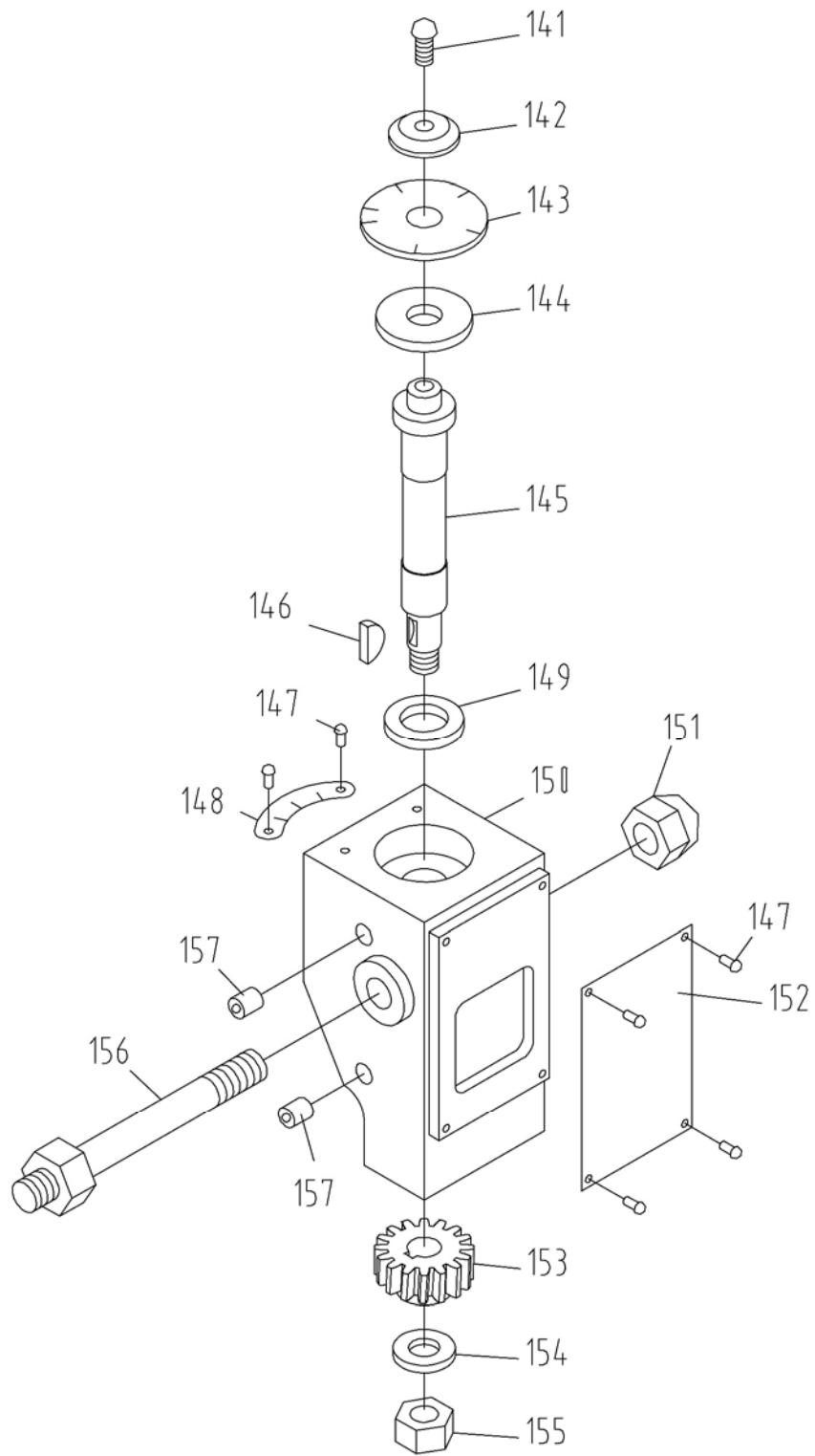


## 15.1 Apron Assembly II – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                                    | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|---|-------------|------------|
| 38              | ZX-B23         | C-Clip  | 20          | 1          |
| 39              | BB-6204        | Ball Bearing  | 20x47x14    | 1          |
| 40              | TL06705        | Gear  | 2m65T       | 1          |
| 41              | ZX-A41         | Taper Pin   | 6x40        | 1          |
|                 | GB877-6x45     | Taper Pin (serial #130102ZX2631 and higher)           | 6x45        | 1          |
| 42              | ZX-C40         | C-Clip  | 25          | 1          |
| 43              | ZX-06127       | Bearing Support (serial # 010611ZX349 and lower)      |             | 1          |
|                 | ZX-06127N      | New Bearing Support (serial # 010618ZX350 and higher) |             | 1          |
| 44              | TS-1504041     | Hex Socket Cap Screw                                  | M8x18       | 3          |
| 45              | BB-6205Z       | Ball Bearing  | 25x52x15    | 1          |
| 46              | ZX-A46         | C-Clip  | 52          | 1          |
| 47              | TL06704        | Shaft (serial # 010611ZX349 and lower)                | 2m14T       | 1          |
|                 | TL06704N       | New Shaft (serial # 010618ZX350 and higher)           | 2m14T       | 1          |
| 48              | TL06706        | Hand Wheel Shaft                                      | 2mx15T      | 1          |
| 49              | ZX-H10         | Half Circle Key                                       | 4x16        | 1          |
| 50              | ZX-A50         | Oil Cup   | 8           | 1          |
| 51              | TL06104        | Lever Support   |             | 1          |
| 52              | TS-1503051     | Hex Socket Cap Screw                                  | M6x18       | 3          |
| 53              | TL06105        | Dial Support  |             | 1          |
| 54              | ZX-A54         | Cross Head Screw                                      | M5x12       | 3          |
| 55              | TL06732        | Dial  |             | 1          |
| 56              | TL06107        | Hand Wheel  |             | 1          |
| 57              | ZX-06710       | Shaft Driven Lever                                    |             | 1          |
| 58              | TL06709        | Shaft Cover   |             | 1          |
| 59              | ZX-A54         | Cross Head Screw                                      | M5x12       | 1          |
| 60              | TL06708        | Screw   |             | 1          |
| 61              | TL06707        | Pin   |             | 1          |
| 62              | TL06112        | End Cover   |             | 1          |
| 63              | TS-1503031     | Hex Socket Cap Screw                                  | M6x12       | 3          |
| 64              | TL06733        | T Shaped Flat Key                                     |             | 1          |
| 65              | TL06115        | Flange Sleeve   |             | 1          |
| 66              | TS-1503031     | Hex Socket Cap Screw                                  | M6x12       | 3          |
| 67              | ZX-A67         | Flat End Set Screw                                    | M6x30       | 1          |
| 68              | TS-1540041     | Hex Nut   | M6          | 1          |
| 76              | TL06109        | Flange  |             | 1          |
| 77              | TS-1503031     | Hex Socket Cap Screw                                  | M6x12       | 3          |
| 78              | TL06303        | Sign Plate  |             | 1          |
| 79              | TL06714        | Adjusting Screw                                       |             | 1          |
| 80              | ZX-A80         | Oil Seal  | 8x1.9       | 1          |
| 81              | BB-7203        | Ball Bearing  | 17x40x12    | 1          |
| 82              | TL06713        | Shaft   |             | 1          |
| 83              | TL06715        | Adjusting Rod   |             | 1          |
| 84              | ZX-H10         | Half Circle Key                                       | 4x16        | 1          |
| 85              | TL06712        | Spring Cover  |             | 1          |
| 86              | ZX-A86         | Spring  | YI-5x35x50  | 1          |
| 87              | TL06718        | Gear  | 2m28T       | 1          |
| 88              | TL06113        | Helical Gear  | 2.5m40T     | 1          |
| 89              | BB7006/P6      | Ball Bearing  | 30x55x13    | 1          |
| 90              | TS-1523031     | Set Screw   | M6x10       | 1          |
| 91              | ZX-A25         | Thread Tail Taper Pin                                 | 6x25        | 1          |
| 92              | TL06110        | Fork  |             | 1          |
| 93              | ZX-06721E      | Control Rod (serial #120520ZX2472 and higher)         |             | 1          |
| 94              | ZX-06116E      | Lever Support (serial #120520ZX2472 and higher)       |             | 1          |
| 95              | ZX-A95E        | Cross Head Screw (serial #120520ZX2472 and higher)    | M6x30       | 1          |
| 96              | ZX-H5          | Steel Ball (serial #120520ZX2472 and higher)          | 8           | 1          |
| 97              | ZX-A97         | Spring (serial #120520ZX2472 and higher)              | YI-1x7x25   | 1          |
| 98              | ZX-A98         | Flat Head Set Screw (serial #120520ZX2472 and higher) | M10x16      | 1          |
| 99              | ZX-06737E      | Bracket (serial #120520ZX2472 and higher)             |             | 1          |
| 100             | ZX-06741E      | Plug (serial #120520ZX2472 and higher)                |             | 1          |
| 101             | ZX-06739E      | Gear Shaft (serial #120520ZX2472 and higher)          |             | 1          |

| <b>Index No</b> | <b>Part No</b>  | <b>Description</b>  | <b>Size</b>  | <b>Qty</b> |
|-----------------|-----------------|---|--------------|------------|
| 102 .....       | ZX-A102E.....   | Hex Head Screw (serial #120520ZX2472 and higher)..M4x8 .....  | 1            |            |
| 103 .....       | ZX-A103E.....   | Pin (serial #120520ZX2472 and higher)..... 4x8 .....          | 1            |            |
| 104 .....       | ZX-A104.....    | Flat Head Set Screw..... M4x8 .....                           | 1            |            |
| 105 .....       | TL06301 .....   | Sleeve.....   |              | 1          |
| 106 .....       | TL06710 .....   | Gear..... 2m21T/2m57T.....                                    | 1            |            |
| 107 .....       | ZX-A107 .....   | Pin..... 6n6x8 .....  | 1            |            |
| 108 .....       | TL06711 .....   | Shaft .....   |              | 1          |
| 109 .....       | TL06108 .....   | End Cover .....   |              | 1          |
| 110 .....       | TS1514011.....  | Hex Socket Cap Screw..... M6x12 .....                         | 3            |            |
| 111 .....       | TL06723 .....   | Control Shaft .....   |              | 1          |
| 112 .....       | TL06725 .....   | Pin .....   |              | 1          |
| 113 .....       | TL06724 .....   | Control Block .....   |              | 1          |
| 114 .....       | ZX-A114 .....   | Oil Seal .....  | 20x2.4 ..... | 1          |
| 115 .....       | ZX-A115 .....   | Oil Seal .....  | 50x3.1 ..... | 1          |
| 116 .....       | TL06119 .....   | Lever Flange .....  |              | 1          |
| 117 .....       | TS1514011.....  | Hex Socket Cap Screw..... M6x12 .....                         | 3            |            |
| 118 .....       | TL06118 .....   | Lever Support (serial #120520ZX2472 and higher). .....        | 1            |            |
| 119 .....       | TL06307 .....   | Sign Plate .....  |              | 1          |
| 120 .....       | ZX-K06722 ..... | Lever (serial #120520ZX2472 and higher) .....                 |              | 1          |
| 121 .....       | ZX-B27 .....    | Taper Pin .....   | 6x60 .....   | 1          |
| 164 .....       | ZX-A164E.....   | Hex Head Screw (serial #120520ZX2472 and higher)..M6x35 ..... | 3            |            |
| 165 .....       | ZX-06738E ..... | Rack (serial #120520ZX2472 and higher) .....                  |              | 1          |
| 167 .....       | ZX-06740E ..... | Handle (serial #120520ZX2472 and higher) .....                |              | 1          |
| 168 .....       | ZX-06736E ..... | Washer (serial #120520ZX2472 and higher) .....                |              | 1          |
| 169 .....       | ZX-A169E .....  | Hex Head Screw (serial #120520ZX2472 and higher)..M5x10 ..... | 1            |            |
| 170 .....       | ZX-06303E ..... | Label (serial #120520ZX2472 and higher) .....                 |              | 1          |
| 171 .....       | ZX-A171E.....   | Screw (serial #120520ZX2472 and higher) .....                 | M3x5 .....   | 4          |

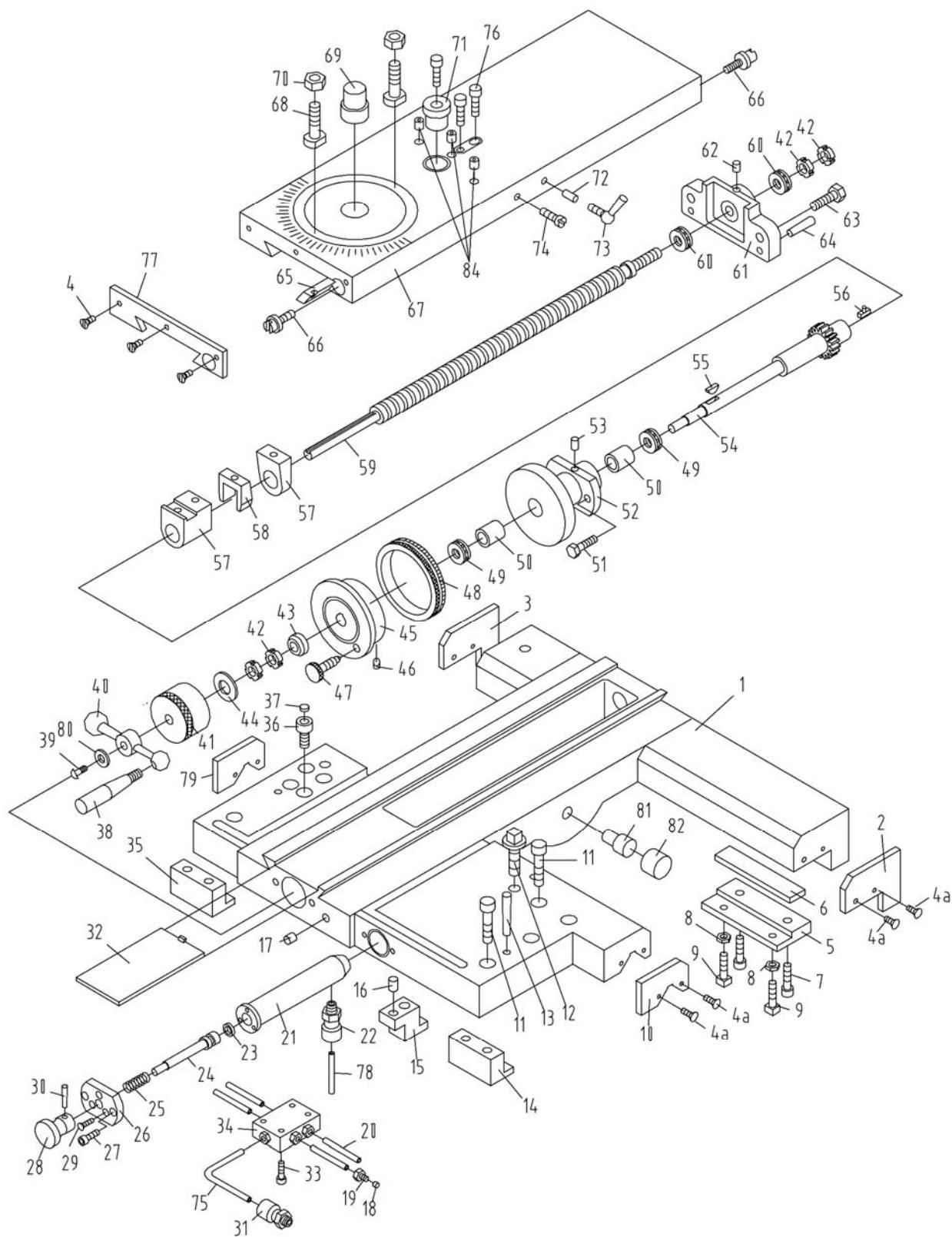
## 16.0 Apron Assembly III – Exploded View



## 16.1 Apron Assembly III – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>          | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|-----------------------------|-------------|------------|
| 141             | ZX-A141        | Half Round Head Screw ..... | M6x18 ..... | 1          |
| 142             | ZX-11704       | Washer .....                | .....       | 1          |
| 143             | ZX-11301       | Dial.....                   | .....       | 1          |
| 144             | ZX-11105       | Adjusting Washer.....       | .....       | 1          |
| 145             | ZX-11701       | Shaft .....                 | .....       | 1          |
| 146             | ZX-H10         | Half Circle Key.....        | 4x16 .....  | 1          |
| 147             | ZX-A147        | Half Round Head Screw ..... | M3x6 .....  | 6          |
| 148             | ZX-11303       | Positioning Sign Plate..... | .....       | 1          |
| 149             | ZX-11703       | Adjusting Washer.....       | .....       | 1          |
| 150             | ZX-11101       | Casting.....                | .....       | 1          |
| 151             | ZX-A151        | Acorn Nut.....              | M12 .....   | 1          |
| 152             | ZX-11304       | Thread Chasing Label .....  | .....       | 1          |
| 153             | ZX-11102       | Helical Gear.....           | 2m16T ..... | 1          |
| 154             | TS-1550071     | Flat Washer .....           | M10 .....   | 1          |
| 155             | TS-1540072     | Hex Nut.....                | M10 .....   | 1          |
| 156             | ZX-11702       | Bolt.....                   | .....       | 1          |
| 157             | ZX-A157        | Oil Cup.....                | 8 .....     | 2          |

## 17.0 Carriage Assembly – Exploded View

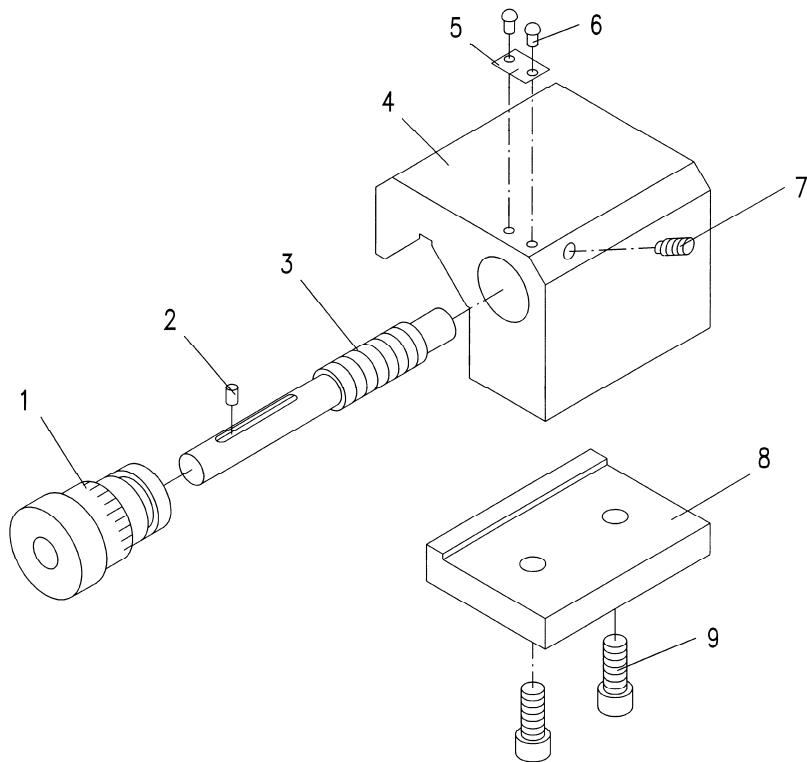


## 17.1 Carriage Assembly – Parts List

| <b>Index No</b> | <b>Part No</b>     | <b>Description</b>   | <b>Size</b> | <b>Qty</b> |
|-----------------|--------------------|--|-------------|------------|
| 1               | ZX-04101A          | Saddle Casting .....   |             | 1          |
|                 | GH2280ZX-14101     | Saddle Casting (for 2280ZX) .....                                  |             | 1          |
| 2               | ZX-04505           | Wipe Plate (serial #100308ZX2172 and lower) .....                  |             | 1          |
|                 | ZX-04505J          | Wipe Plate (serial #100329ZX2173 and higher).....                  |             | 1          |
| 3               | ZX-04504           | Wipe Plate (serial #100308ZX2172 and lower) .....                  |             | 1          |
|                 | ZX-04504J          | Wipe Plate (serial #100329ZX2173 and higher).....                  |             | 1          |
| 4               | ZX-H211            | C'sunk Head Screw (serial #100308ZX2172 and lower)...M5x16.....    | 11          |            |
|                 | ZX-C04             | Half Round Head Screw (serial #100329ZX2173 and higher) M5x16..... | 11          |            |
| 5               | ZX-04724           | Clamping Block.....  |             | 2          |
| 6               | ZX-04113           | Lining Plate .....   |             | 2          |
| 7               | TS-1505041         | Hex Socket Cap Screw.....  | M10x30      | 4          |
| 8               | TS-1540061         | Hex Nut.....   | M8          | 4          |
| 9               | ZX-CA09            | Square Set Screw.....  | M8x20       | 4          |
| 10              | ZX-04506           | Wipe Plate (serial #100308ZX2172 and lower) .....                  |             | 1          |
|                 | ZX-04506J          | Wipe Plate (serial #100329ZX2173 and higher).....                  |             | 1          |
| 11              | TS-1505071         | Hex Socket Cap Screw.....  | M10x45      | 8          |
| 12              | ZX-CA12            | Square Cap Bolt .....  | M12x70      | 1          |
| 13              | ZX-CA13            | Taper Pin .....  | 8x60        | 2          |
| 14              | ZX-04729           | Clamping Block.....  |             | 1          |
| 15              | ZX-04730           | Locking Plate .....  |             | 1          |
| 16              | ZX-CA16            | Pin.....   | 4n6x12      | 1          |
| 17              | ZX-04772           | Blocking Piece .....   |             | 1          |
| 18              | ZX-CA18            | Fitting Joint Seal .....   | A4          | 8          |
| 19              | ZX-CA19            | Hollowed Bolt.....   | A4          | 8          |
| 20              | ZX-CA20            | Copper Tube.....   |             | 4          |
| 21              | ZX-04782           | Manual Oil Pump Casting .....                                      |             | 1          |
| 22              | ZX-04781A          | In Valve.....  |             | 1          |
| 23              | ZX-CA23            | Oil Ring.....  | 15x2.4      | 1          |
| 24              | ZX-04784           | Piston.....  |             | 1          |
| 25              | ZX-CA25            | Spring .....   | 1.2x14x65   | 1          |
| 26              | ZX-04785           | Oil Pump Cover .....   |             | 1          |
| 27              | TS-1502041         | Hex Socket Cap Screw.....  | M5x16       | 2          |
| 28              | ZX-04783           | Lever.....   |             | 1          |
| 29              | ZX-CA29            | Countersunk Head Screw.....  | M4x16       | 3          |
| 30              | ZX-A130            | Taper Pin .....  | 4x20        | 1          |
| 31              | ZX-04781B          | Out Valve .....  |             | 1          |
| 32              | ZX-04716           | Chip Guard .....   |             | 1          |
| 33              | ZX-CA33            | Slotted Cheese Head Screw.....                                     | M5x20       | 4          |
| 34              | ZX-04780           | Oil Distributor .....  |             | 1          |
| 35              | ZX-04740           | Clamping Block.....  |             | 1          |
| 36              | ZX-04750           | Oil Cap.....   |             | 1          |
| 37              | ZX-04301           | Oil Indicator Cap .....  |             | 1          |
| 38              | ZX-04721           | Lever .....  |             | 1          |
| 39              | ZX-CA39            | Cross Head Screw .....   | M5x16       | 1          |
| 40              | ZX-04720           | Handle .....   |             | 1          |
| 41              | ZX-04769           | Sleeve .....   |             | 1          |
| 42              | ZX-CA42            | Round Nut .....  | M12x1.25    | 4          |
| 43              | ZX-04719           | Lining .....   |             | 1          |
| 44              | ZX-04770           | Disc Spring .....  |             | 1          |
| 45              | ZX-04108           | Flat Pan .....   |             | 1          |
| 46              | ZX-04790           | Pushing Rod .....  |             | 1          |
| 47              | ZX-04789           | Screw.....   |             | 1          |
| 48              | ZX-04717           | Dial.....  |             | 1          |
| 49              | BB-51102           | Thrust Bearing .....   | 15x28x9     | 2          |
| 50              | ZX-04111           | Sleeve.....  |             | 2          |
| 51              | TS-1490041         | Hex Cap Bolt.....  | M8x25       | 2          |
| 52              | ZX-04109           | Screw Support .....  |             | 1          |
|                 | GH2280ZX-04109B... | Screw Support (for 2280ZX) .....                                   |             | 1          |
| 53              | ZX-CA53            | Oil Cup .....  | 8           | 2          |

| <b>Index No</b> | <b>Part No</b>     | <b>Description</b>   | <b>Size</b>      | <b>Qty</b> |
|-----------------|--------------------|--|------------------|------------|
| 54              | ZX-04707-1         | Gear Sliding Sleeve .....  | 2m16T.....       | 1          |
|                 | ZX-04707-1A        | Gear Sliding Sleeve (for 2280ZX).....                                |                  | 1          |
| 55              | ZX-H10             | Half Circle Key .....  | 4x16.....        | 1          |
| 56              | ZX-04751           | Flat Key.....  |                  | 1          |
| 57              | ZX-04302           | Nut Assembly.....  |                  | 1          |
|                 | ML-2080-04301      | Nut Assembly (for 2280ZX) .....                                      |                  | 1          |
| 58              | ZX-04748           | Wedge .....  |                  | 1          |
| 59              | ZX-04707-2         | Lead Screw.....  |                  | 1          |
|                 | GH2280ZX-04707-2.. | Lead Screw (for 2280ZX).....   |                  | 1          |
| 60              | BB-51101/P6        | Thrust Bearing .....   | 12x26x9 .....    | 2          |
| 61              | ZX-04116           | Bracket.....   |                  | 1          |
| 62              | ZX-CA62            | Oil Cup.....   | 6.....           | 1          |
| 63              | TS-1491041         | Cap Screw.....   | M10x30.....      | 2          |
| 64              | ZX-CA64            | Taper Pin .....  | 8x30.....        | 2          |
| 65              | ZX-04731           | Cross Slide Gib.....   |                  | 1          |
| 66              | ZX-04725C          | Screw.....   |                  | 2          |
| 67              | ZX-04102A          | Cross Slide .....  |                  | 1          |
|                 | GH2280ZX-04102     | Cross Slide (for 2280ZX) .....                                       |                  | 1          |
| 68              | ZX-04714           | Screw (for 18"/22" models, T-Slot).....                              |                  | 2          |
|                 | ZX-04714C          | Screw (for 14"/16" models, T-Slot).....                              |                  | 2          |
| 69              | ZX-04732           | Pin.....   |                  | 1          |
| 70              | TS-1540081         | Hex Nut.....   | M12.....         | 2          |
| 71              | ZX-04709           | Sleeve.....  |                  | 1          |
|                 | GH2280ZX-04701     | Sleeve (for 2280ZX).....   |                  | 1          |
| 72              | ZX-04304           | Pressing Pin.....  | 1.....           | 1          |
| 73              | ZX-04746           | Screw.....   |                  | 1          |
| 74              | ZX-04786           | Set Screw .....  |                  | 1          |
| 75              | ZX-CA75            | Long Copper Tube .....   |                  | 1          |
| 76              | TS-1504051         | Socket Head Cap Screw.....   | M8x22.....       | 3          |
| 77              | ZX-04502           | Wipe Plate (serial #100308ZX2172 and lower) .....                    |                  | 1          |
|                 | ZX-04502J          | Wipe Plate (serial #100329ZX2173 and higher).....                    |                  | 1          |
|                 | GH2280ZX-04502     | Wipe Plate (for 2280ZX)(serial #100308ZX2172 and lower)              |                  | 1          |
|                 | GH2280ZX-04502J    | Wipe Plate (for 2280ZX)(serial #100329ZX2173 and higher).....        |                  | 1          |
| 78              | ZX-CA78            | Copper Tube.....   |                  | 6          |
| 79              | ZX-04503           | Wipe Plate (serial #100308ZX2172 and lower) .....                    |                  | 1          |
|                 | ZX-04503J          | Wipe Plate (serial #100329ZX2173 and higher).....                    |                  | 1          |
| 80              | ZX-04771           | Lining .....   |                  | 1          |
| 81              | ZX-04788           | Stop Pin .....   |                  | 1          |
| 82              | ZX-04507           | Stop Pin Cap.....  |                  | 1          |
| 83              | ZX-CA83            | Oil Cup.....   | 10.....          | 1          |
| 84              | ZX-CA84            | Oil Cup.....   | 10.....          | 3          |
| 85              | ZX-CA85            | Turcite-B (not shown) .....  | 550x50x0.8 ..... | 1          |
| 86              | ZX-CA86            | Turcite-B (not shown) .....  | 550x25x0.8 ..... | 2          |
|                 | ZX-CSNA            | Crossfeed Screw & Nut Assy. (includes # 57- 59, for 14/16/18") ..... |                  |            |
|                 | ZX-CSNA-GH2280ZX   | Crossfeed Screw & Nut Assy. (includes #57-59, for 22") .....         |                  |            |
|                 | ZX-CDA             | Crossfeed Dial Assy. (includes # 41-50, 51-56, for 14/16/18") .....  |                  |            |
|                 | ZX-CDA-GH2280ZX..  | Crossfeed Dial Assy. (includes # 41-50, 51-56, for 22") .....        |                  |            |

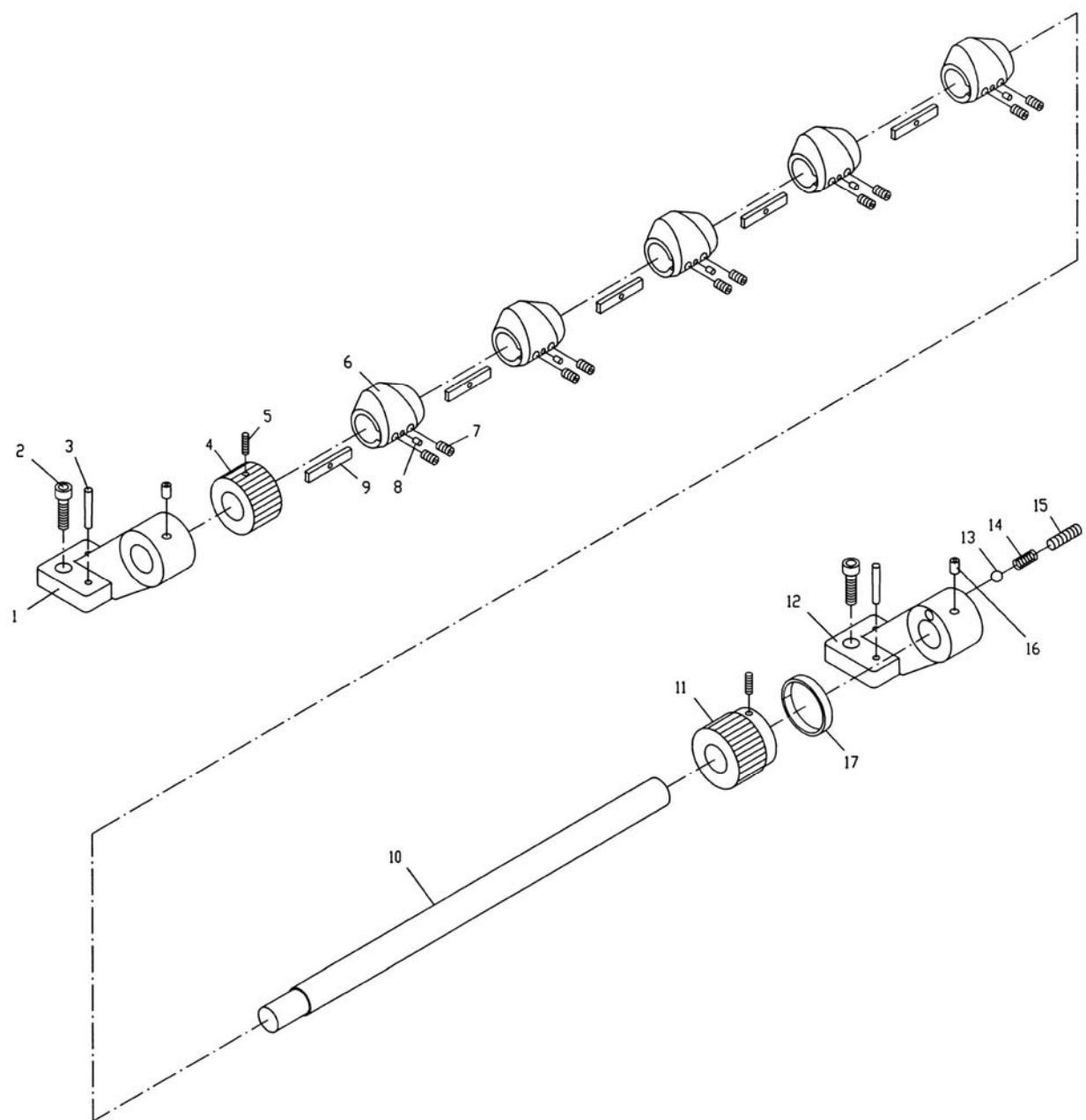
## 18.0 Micro Carriage Stop – Exploded View



## 18.1 Micro Carriage Stop – Parts List

| Index No | Part No        | Description               | Size        | Qty |
|----------|----------------|---------------------------|-------------|-----|
| 1 .....  | ZX-09709 ..... | Dial.....                 |             | 1   |
| 2 .....  | ZX-MS2.....    | Pin.....                  | B4x8.....   | 1   |
| 3 .....  | ZX-09708 ..... | Axle.....                 |             | 1   |
| 4 .....  | ZX-09105 ..... | Stop .....                |             | 1   |
| 5 .....  | ZX-03302 ..... | Sign Plate .....          |             | 1   |
| 6 .....  | ZX-MS6.....    | Nail.....                 | 3x8 .....   | 2   |
| 7 .....  | ZX-MS7 .....   | Hex Socket Set Screw..... | M6x12 ..... | 1   |
| 8 .....  | ZX-09106 ..... | Clamping Plate .....      |             | 1   |
| 9 .....  | ZX-MS9.....    | Hex Socket Cap Screw..... | M8x20 ..... | 2   |

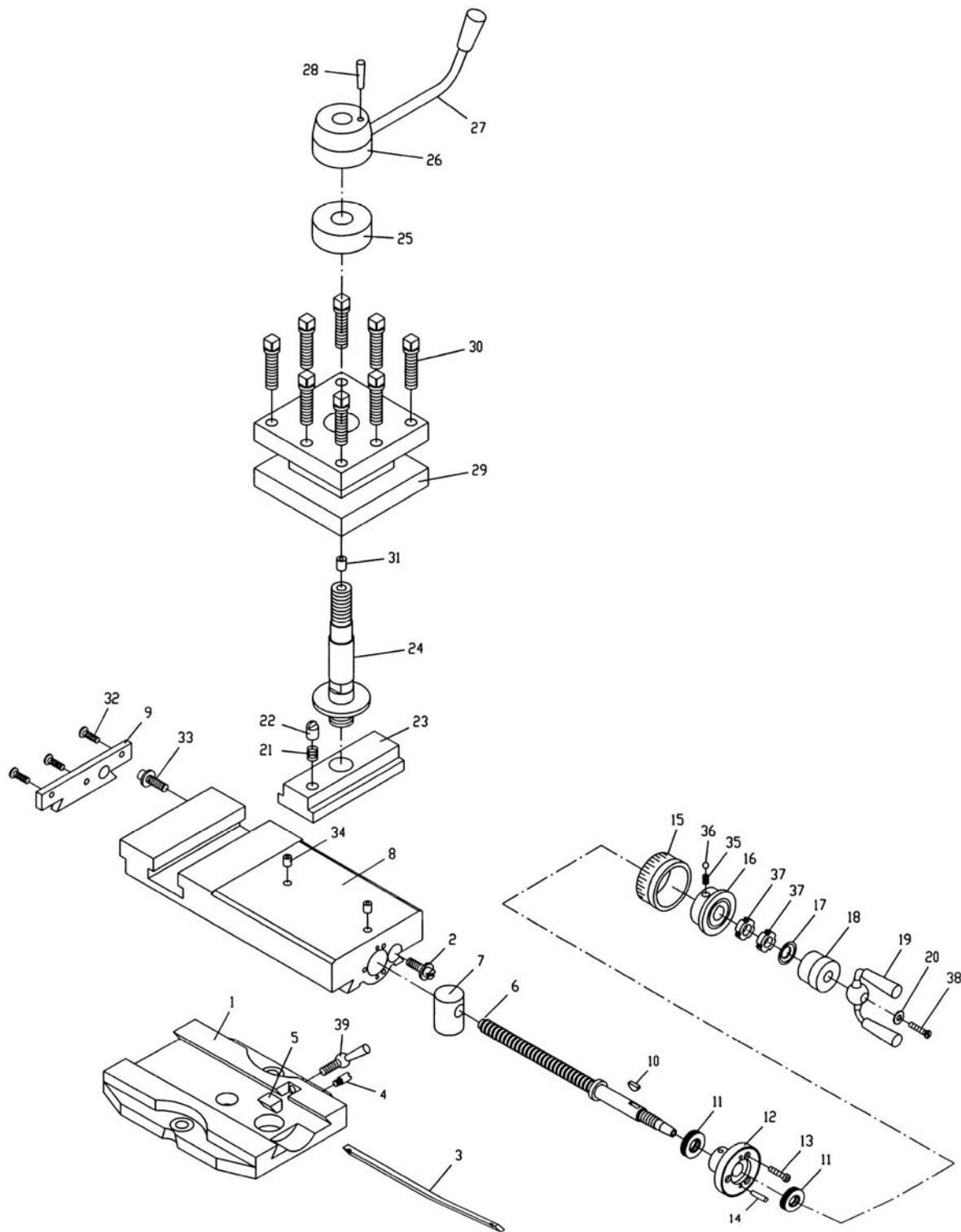
## 19.0 Carriage Stop Assembly – Exploded View



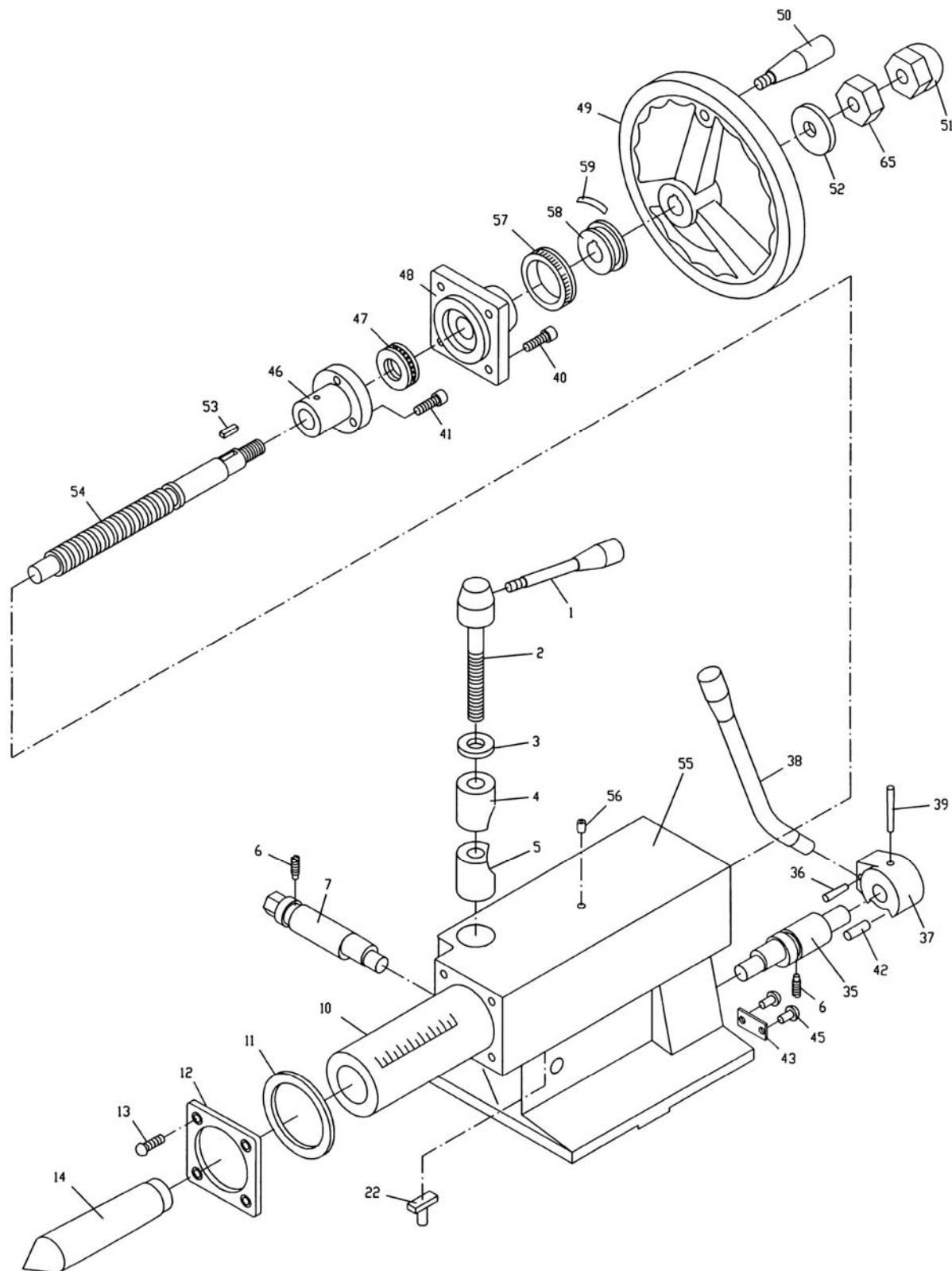
## 19.1 Carriage Stop Assembly – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                        | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|---|-------------|------------|
| 1               | ZX-26101       | Left Support                              |             | 1          |
| 2               | TS-1504041     | Hex Socket Cap Screw                      | M8x20       | 4          |
| 3               | ZX-C34         | Taper Pin                                 | 6x30        | 4          |
| 4               | ZX-26704       | Control Ring                              |             | 1          |
| 5               | TS-1523031     | Set Screw                                 | M6x10       | 2          |
| 6               | ZX-26702       | Eccentric Travel Setting Ring             |             | 5          |
| 7               | ZX-H66         | Flat End Set Screw                        | M6x10       | 10         |
| 8               | ZX-C08         | Pin                                       | 4n6x10      | 5          |
| 9               | ZX-26703       | Locking Key                               |             | 5          |
| 10              | ZX-26701A      | Travel Setting Rod (for 1440/1640/1840ZX) |             | 1          |
|                 | ZX-26701B      | Travel Setting Rod (for 1460/1660/1860ZX) |             | 1          |
|                 | ZX-26701C      | Travel Setting Rod (for 1880/2280ZX)      |             | 1          |
| 11              | ZX-26705       | Control Ring                              |             | 1          |
| 12              | ZX-26104       | Right Support                             |             | 1          |
| 13              | ZX-H5          | Steel Ball                                | 8           | 1          |
| 14              | ZX-CS14        | Compression Spring                        | 2x8x25      | 1          |
| 15              | ZX-CS15        | Flat Head Set Screw                       | M10x12      | 1          |
| 16              | ZX-CS16        | Oil Cup                                   | 8           | 2          |
| 17              | ZX-26301       | Dial                                      |             | 1          |

## 20.0 Four Way Tool Post – Exploded View



## 21.0 Tailstock Assembly I – Exploded View



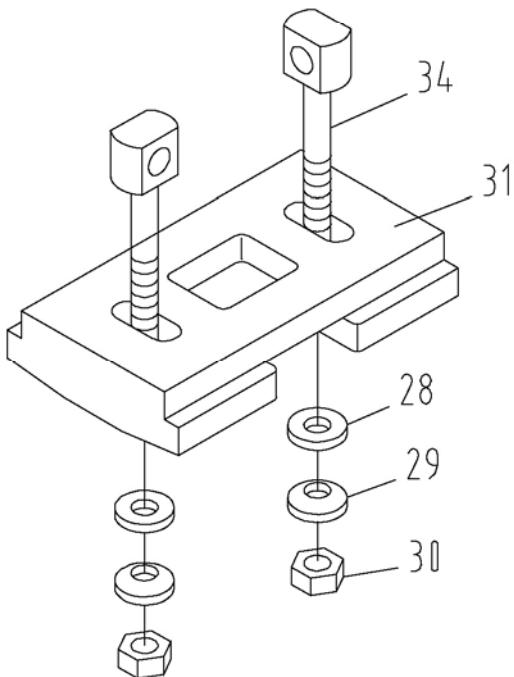
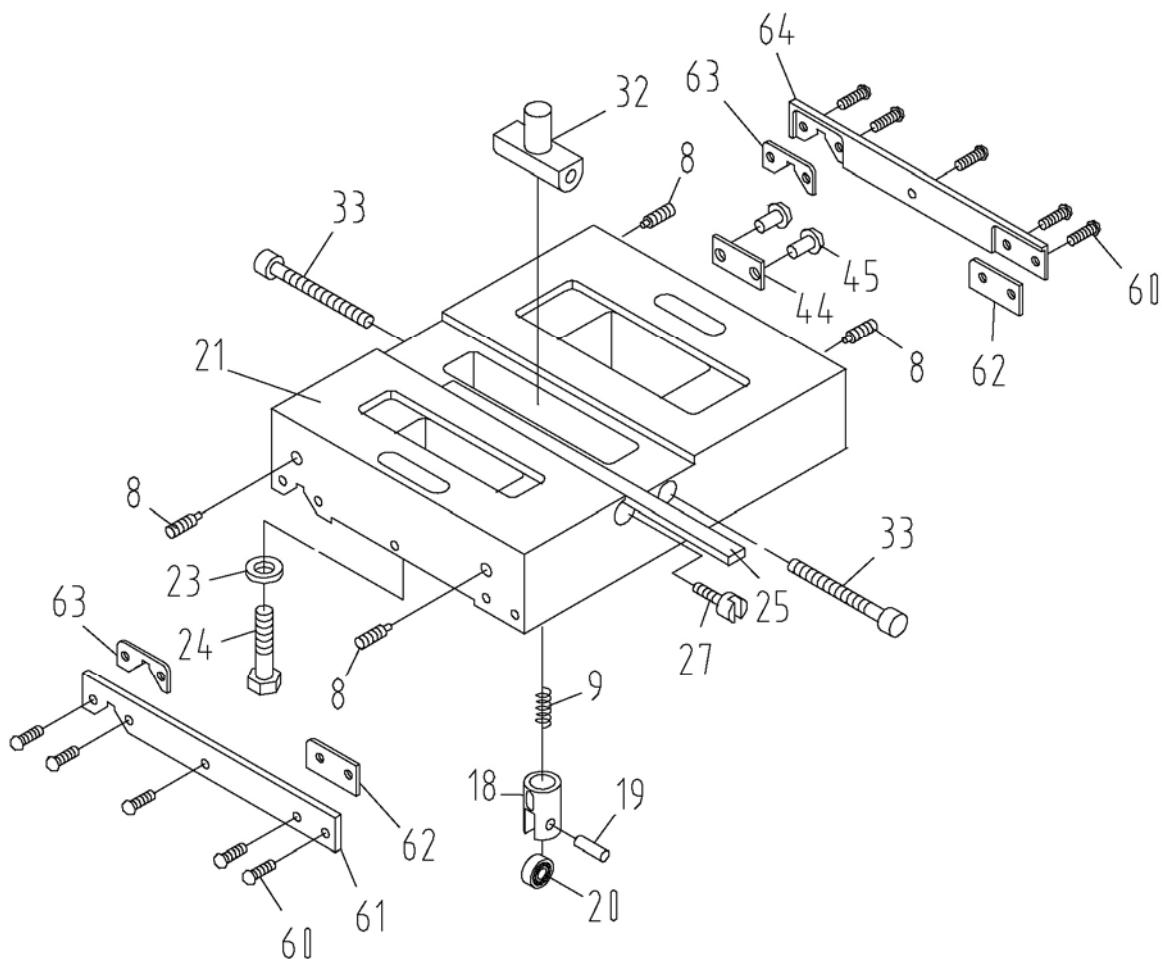
## 20.1 Four Way Tool Post – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                                   | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|--|-------------|------------|
| 1               | ZX-04103A      | Revolving Plate (for 14" models)                     |             | 1          |
|                 | ZX-04103B      | Revolving Plate (for 16" models)                     |             | 1          |
|                 | ZX-04103C      | Revolving Plate (for 18" models)                     |             | 1          |
|                 | GH2280ZX-04103 | Revolving Plate (for 22" model)                      |             | 1          |
| 2               | ZX-04725       | Screw  |             | 1          |
| 3               | ZX-04710       | Gib  |             | 1          |
| 4               | ZX-04786       | Screw  |             | 1          |
| 5               | ZX-04303       | Pressing Block                                       |             | 1          |
| 6               | ZX-04706       | Lead Screw   |             | 1          |
| 7               | ZX-04106A      | Nut  |             | 1          |
| 8               | ZX-04107A      | Top Slide (for 14" models)                           |             | 1          |
|                 | ZX-04107B      | Top Slide (for 16"/18" models)                       |             | 1          |
|                 | GH2280ZX-04107 | Top Slide (for 22" model)                            |             | 1          |
| 9               | ZX-04501       | Wipe Plate   |             | 1          |
| 10              | ZX-F10         | Half Circle Key                                      | 3x13        | 1          |
| 11              | BB-51102       | Thrust Bearing                                       | 15x28x9     | 2          |
| 12              | ZX-04115       | Sleeve   |             | 1          |
| 13              | ZX-F13         | Slotted Cheese Head Screw                            | M5x12       | 3          |
| 14              | ZX-F14         | Taper Pin  | 3x18        | 2          |
| 15              | ZX-04727       | Dial   |             | 1          |
| 16              | ZX-04114       | Sleeve   |             | 1          |
| 17              | ZX-04768       | Disc Spring  |             | 1          |
| 18              | ZX-04767       | Sleeve   |             | 1          |
| 19              | ZX-04726       | Handle   |             | 1          |
| 20              | ZX-04771       | Lining   |             | 1          |
| 21              | ZX-04763       | Spring   | 0.8x6x25    | 1          |
| 22              | ZX-04787       | Positioning Block                                    |             | 1          |
| 23              | ZX-04752A      | T-Slot Nut   |             | 1          |
| 24              | ZX-04754       | Shaft  |             | 1          |
| 25              | ZX-04759       | Adjusting Lining Sheet                               |             | 1          |
| 26              | ZX-04110       | Lever Support  |             | 1          |
| 27              | ZX-04753       | Handle   |             | 1          |
| 28              | ZX-Q66         | Taper Pin  | 5x35        | 1          |
| 29              | ZX-04713A      | Tool Post (for 14" models)                           |             | 1          |
|                 | ZX-04713B      | Tool Post (for 16"/18"/22" models)                   |             | 1          |
| 30              | ZX-F30A        | Clamping Screw (for 16"/18"/22" models)              | M12x45      | 8          |
|                 | ZX-F30B        | Clamping Screw (for 14" models)                      | M12x50      | 8          |
| 31              | ZX-F31         | Oil Cup  | 8           | 1          |
| 32              | ZX-H211        | Countersunk Head Screw                               | M5x16       | 3          |
| 33              | ZX-04725C      | Screw  |             | 1          |
| 34              | ZX-F34         | Oil Cup  | 8           | 2          |
| 35              | ZX-F35         | Spring   | 0.7x5x9     | 1          |
| 36              | ZX-F36         | Steel Ball   | 6           | 1          |
| 37              | ZX-F37         | Round Nut  | M12x1.25    | 2          |
| 38              | ZX-CA39        | Cross Head Screw                                     | M5x16       | 1          |
| 39              | ZX-04746K      | Screw Wrench   |             | 1          |
|                 | ZX-TA14        | Toolholder Assembly 14" (includes # 29 & 30)         |             |            |
|                 | ZX-TA16/18/22  | Toolholder Assembly 16"/18"/22" (includes # 29 & 30) |             |            |
|                 | ZX-CPA14       | Compound Assembly 14" (includes # 1-20,32-39)        |             |            |
|                 | ZX-CPA16       | Compound Assembly 16" (includes # 1-20,32-39)        |             |            |
|                 | ZX-CPA18       | Compound Assembly 18" (includes # 1-20,32-39)        |             |            |
|                 | ZX-CPA22       | Compound Assembly 22" (includes # 1-20,32-39)        |             |            |

## 21.1 Tailstock Assembly I – Parts List

| <b>Index No</b> | <b>Part No</b>       | <b>Description</b>                          | <b>Size</b>    | <b>Qty</b> |
|-----------------|----------------------|---|----------------|------------|
| 1               | ZX-03711 .           | Handle .....                                |                | 1          |
| 2               | ZX-03717 .           | Lever Support .....                         |                | 1          |
| 3               | ZX-03718 .           | Washer .....                                |                | 1          |
| 4               | ZX-03719 .           | Clamping Block .....                        |                | 1          |
| 5               | ZX-03720 .           | Clamping Block .....                        |                | 1          |
| 6               | ZX-T06 .....         | Cylindrical End Set Screw .....             | M8x14 .....    | 2          |
| 7               | ZX-03712 .           | Eccentric Shaft .....                       |                | 1          |
| 10              | ZX-03701A .....      | Center Sleeve (for 18"/22" models) .....    |                | 1          |
|                 | ZX-03701B .....      | Center Sleeve (for 14"/16" models) .....    |                | 1          |
| 11              | ZX-T11 .....         | Ring Seal .....                             | 75x2.65 .....  | 1          |
| 12              | ZX-03703 .....       | Front Cover .....                           |                | 1          |
| 13              | ZX-T13 .....         | Cross Recessed Countersunk Head Screw ..... | M5x10 .....    | 4          |
| 14              | ZX-T14A .....        | Center Morse (for 18"/22" models) .....     | No.5 .....     | 1          |
|                 | ZX-T14B .....        | Center Morse (for 14"/16" models) .....     | No.4 .....     | 1          |
| 22              | ZX-03702 .....       | Positioning Block .....                     |                | 1          |
| 35              | CL1640ZX-0535 .....  | Eccentric Shaft .....                       |                | 1          |
| 36              | ZX-T36 .....         | Taper Pin .....                             | 6x32 .....     | 1          |
| 37              | ZX-03104 .....       | Lever Sleeve .....                          |                | 1          |
| 38              | ZX-03709 .....       | Lock handle .....                           |                | 1          |
| 39              | ZX-A28 .....         | Taper Pin .....                             | 6x55 .....     | 1          |
| 40              | TS-1504041 .....     | Hex Socket Cap Screw .....                  | M8x20 .....    | 4          |
| 41              | TS-1515031 .....     | Hex Socket Cap Screw .....                  | M8x22 .....    | 3          |
| 42              | ZX-T42 .....         | Pin .....                                   | 10n6x22 .....  | 1          |
| 43              | ZX-03302 .....       | Sign Plate .....                            |                | 1          |
| 45              | ZX-T45 .....         | Nail .....                                  | 3x8 .....      | 4          |
| 46              | ZX-03105 .....       | Nut .....                                   |                | 1          |
| 47              | BB-51205 .....       | Thrust Ball Bearing .....                   | 25x47x15 ..... | 1          |
| 48              | ZX-03104 .....       | Back Cover .....                            |                | 1          |
| 49              | ZX-03103 .....       | Hand Wheel .....                            |                | 1          |
| 50              | ZX-03707 .....       | Lever .....                                 |                | 1          |
| 51              | ZX-T51 .....         | Acorn Nut .....                             | M16 .....      | 1          |
| 52              | TS-155010 .....      | Flat Washer .....                           | M16 .....      | 1          |
| 53              | ZX-T53 .....         | Key .....                                   | 6x40 .....     | 1          |
| 54              | ZX-03710A .....      | Lead Screw (for 18"/22" models) .....       |                | 1          |
|                 | ZX-03710B .....      | Lead Screw (for 14"/16" models) .....       |                | 1          |
| 55              | ZX-03101A .....      | Tailstock Casting (for 18" models) .....    |                | 1          |
|                 | ZX-03101B .....      | Tailstock Casting (for 16" models) .....    |                | 1          |
|                 | ZX-03101C .....      | Tailstock Casting (for 14" models) .....    |                | 1          |
|                 | GH2280ZX-03101 ..... | Tailstock Casting (for 22" model) .....     |                | 1          |
| 56              | ZX-T56 .....         | Oil Cup .....                               | 8 .....        | 1          |
| 57              | ZX-03708 .....       | Dial .....                                  |                | 1          |
| 58              | ZX-03706 .....       | Sleeve .....                                |                | 1          |
| 59              | ZX-03711C .....      | Spring Leaf .....                           |                | 1          |
| 65              | TS-2310162 .....     | Nut .....                                   | M16 .....      | 1          |

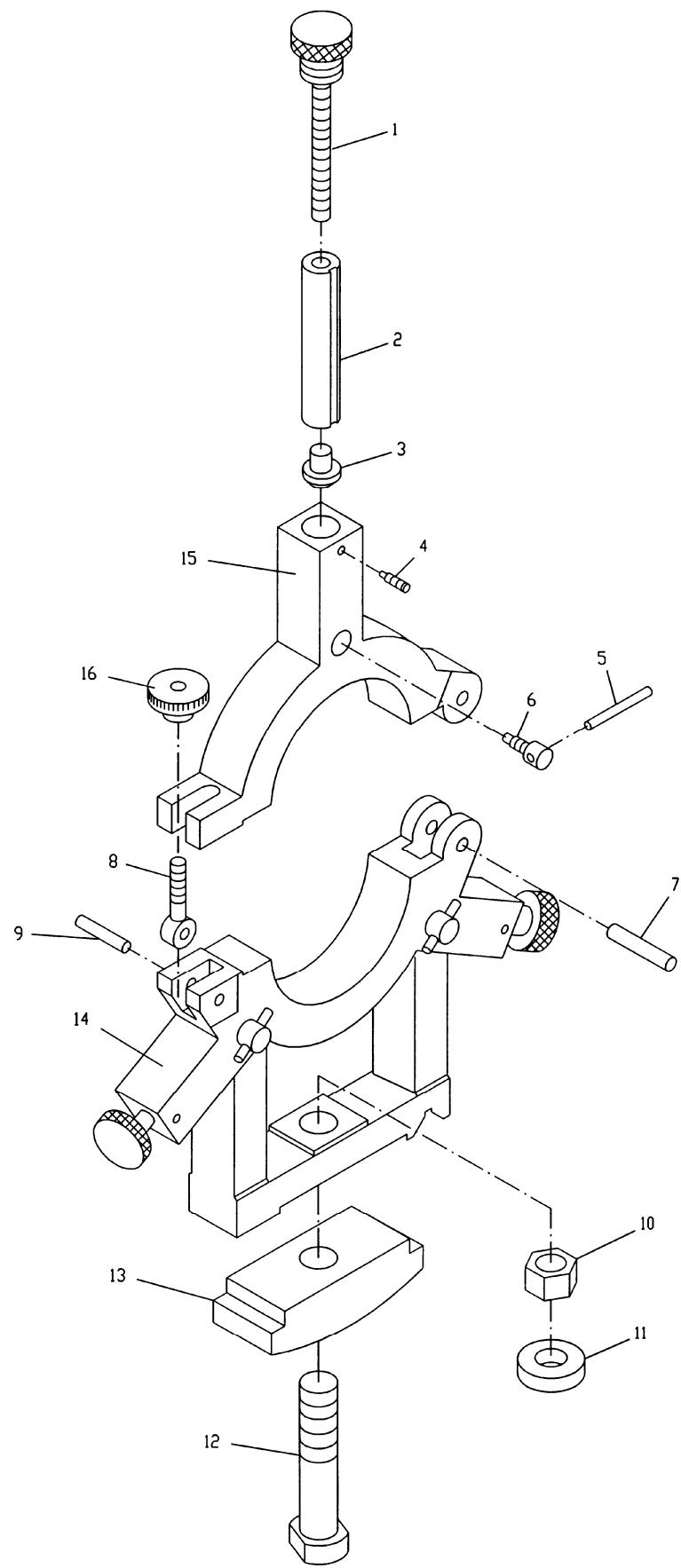
## 22.0 Tailstock Assembly II – Exploded View



## 22.1 Tailstock Assembly II – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                              | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|---|-------------|------------|
| 8               | ZX-T08         | Flat End Set Screw (except in 14" models)       | M6x18       | 4          |
| 9               | ZX-T09E        | Spring (serial # 120120ZX2425 and higher)       |             | 1          |
| 18              | ZX-03714       | Bearing Support (except in 14" models)          |             | 4          |
| 19              | ZX-03715       | Small Axle (except in 14" models)               |             | 4          |
| 20              | ZX-T20         | Ball Bearing (except in 14" models)             | 7x19x6      | 4          |
| 21              | ZX-03102A      | Sliding Base (for 18"/22" models)               |             | 1          |
|                 | ZX-03102B      | Sliding Base (for 16" models)                   |             | 1          |
|                 | ZX-03102C      | Sliding Base (for 14" models)                   |             | 1          |
| 23              | TS-1550071     | Flat Washer                                     | M10         | 2          |
| 24              | TS-1491151     | Hex Cap Bolt (for 18"/22" models)               | M10x90      | 2          |
|                 | TS-1491121     | Hex Cap Bolt (for 16" models)                   | M10x70      | 2          |
|                 | TS-1491081     | Hex Cap Bolt (for 14" models)                   | M10x50      | 2          |
| 25              | ZX-03704       | Gib   |             | 1          |
| 26              | ZX-03721C      | Spherical Washer                                |             | 2          |
| 27              | ZX-03718C      | Adjusting Screw                                 |             | 2          |
| 28              | ZX-T28         | Taper Washer                                    | 16          | 2          |
| 29              | ZX-T29         | Spherical Washer                                | 16          | 2          |
| 30              | TS-2310162     | Hex Nut   | M16         | 2          |
| 31              | ZX-03106       | Clamping Bracket                                |             | 1          |
| 32              | ZX-03105C      | Nut   |             | 1          |
| 33              | ZX-T33         | Hex Socket Cap Screw                            | M8x85       | 2          |
| 34              | ZX-03705A      | Pulling Rod (for 18"/22" models)                |             | 2          |
|                 | ZX-03705B      | Pulling Rod (for 16" models)                    |             | 2          |
|                 | ZX-03705C      | Pulling Rod (for 14" models)                    |             | 2          |
| 44              | ZX-03303       | Sign Plate                                      |             | 1          |
| 45              | ZX-T45         | Nail  | 3x8         | 4          |
| 60              | ZX-T60         | Half Round Head Screw                           | M5 x12      | 10         |
| 61              | ZX-03721       | Plate   |             | 1          |
| 62              | ZX-03502       | Wipe Plate                                      |             | 2          |
| 63              | ZX-03503       | Wipe Plate                                      |             | 2          |
| 64              | ZX-03716       | Plate   |             | 1          |
|                 | ZX-TSA14       | Tailstock Assembly, 14" (includes # 1-13,15-64) |             |            |
|                 | ZX-TSA16       | Tailstock Assembly, 16" (includes # 1-13,15-64) |             |            |
|                 | ZX-TSA18       | Tailstock Assembly, 18" (includes # 1-13,15-64) |             |            |
|                 | ZX-TSA22       | Tailstock Assembly, 22" (includes # 1-13,15-64) |             |            |

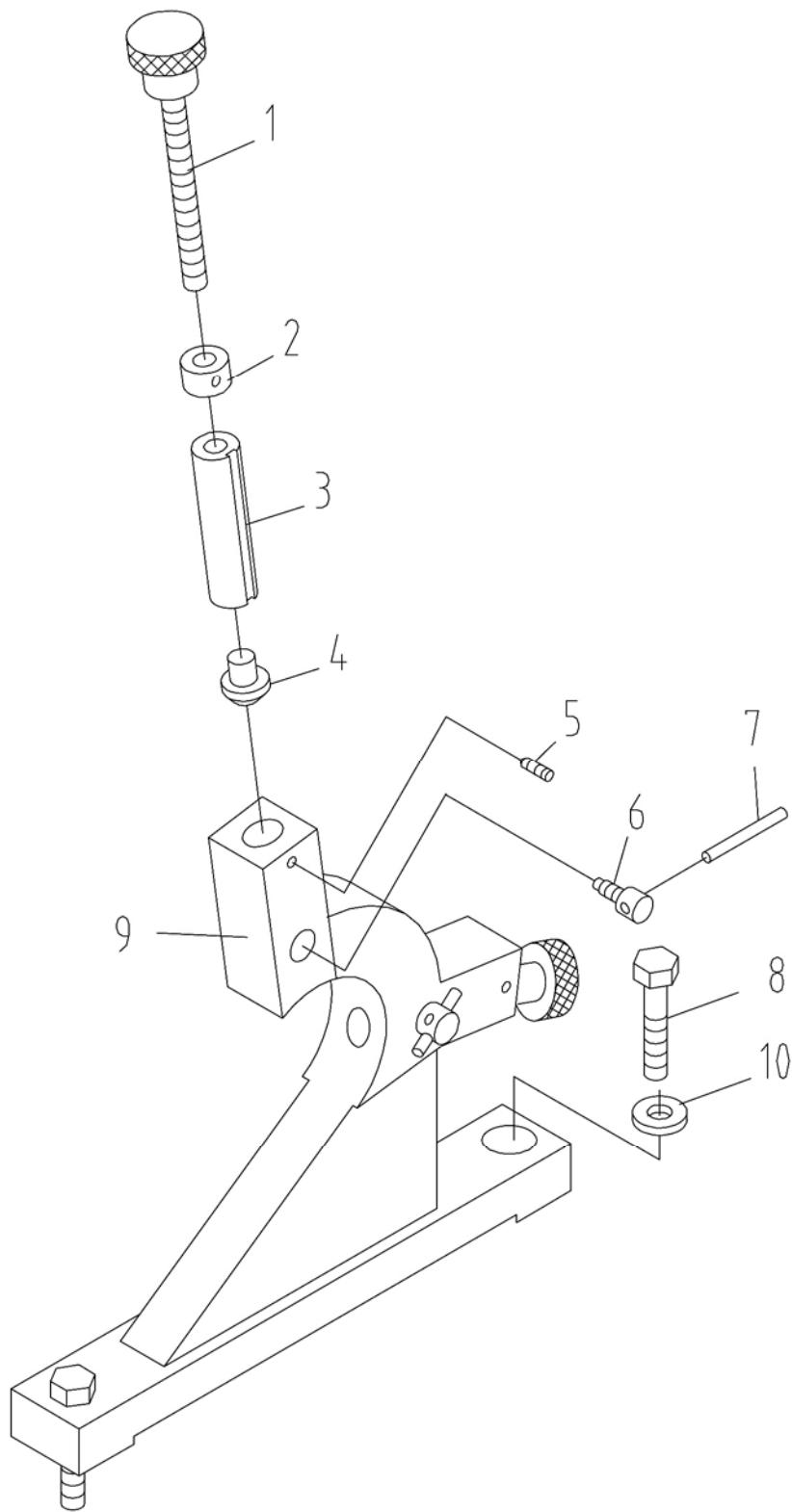
## 23.0 Steady Rest Assembly – Exploded View



### 23.1 Steady Rest Assembly – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                          | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|---|-------------|------------|
|                 | ZX-SRA14       | Steady Rest Assembly, 14" (includes # 1-16) |             |            |
|                 | ZX-SRA16       | Steady Rest Assembly, 16" (includes # 1-16) |             |            |
|                 | ZX-SRA18       | Steady Rest Assembly, 18" (includes # 1-16) |             |            |
|                 | ZX-SRA22       | Steady Rest Assembly, 22" (includes # 1-16) |             |            |
| 1               | ZX-10702A      | Screw (for 14" models)                      |             | 3          |
|                 | ZX-10702B      | Screw (for 16" models)                      |             | 3          |
|                 | ZX-10702C      | Screw (for 18"/22" models)                  |             | 3          |
| 2               | ZX-10704D      | Sliding Sleeve                              | 90-180      | 3          |
|                 | ZX-10705D      | Sliding Sleeve                              | 20-210      | 3          |
| 3               | ZX-10301D      | Pushing Block                               |             | 3          |
| 4               | ZX-SR04        | Slotted Set Screw                           | M6x20       | 3          |
| 5               | ZX-10705       | Lever                                       |             | 3          |
| 6               | ZX-10706       | Locking Screw                               |             | 3          |
| 7               | ZX-C36         | Pin   | 10n6x40     | 1          |
| 8               | ZX-10701D      | Hinge Screw (for 14" models)                |             | 1          |
|                 | ZX-10701E      | Hinge Screw (for 16" models)                |             | 1          |
|                 | ZX-10701F      | Hinge Screw (for 18" models)                |             | 1          |
|                 | ZX-10701       | Hinge Screw (for 22" models)                |             | 1          |
| 9               | ZX-SR9         | Pin   | 8n6x40      | 1          |
| 10              | ZX-SR10        | Hex Nut                                     | M20         | 1          |
| 11              | ZX-SR11        | Flat Washer                                 | 20          | 1          |
| 12              | ZX-10708       | Tightening Screw                            |             | 1          |
| 13              | ZX-10103D      | Clamping Plate                              |             | 1          |
| 14              | ZX-10101D      | Lower Part of Steady Rest (for 14" models)  |             | 1          |
|                 | ZX-10101E      | Lower Part of Steady Rest (for 16" models)  |             | 1          |
|                 | ZX-10101F      | Lower Part of Steady Rest (for 18" models)  |             | 1          |
|                 | GH2280ZX-10101 | Lower Part of Steady Rest (for 22" model)   |             | 1          |
| 15              | ZX-10102D      | Upper Part of Steady Rest (for 14" models)  |             | 1          |
|                 | ZX-10102E      | Upper Part of Steady Rest (for 16" models)  |             | 1          |
|                 | ZX-10102F      | Upper Part of Steady Rest (for 18" models)  |             | 1          |
|                 | ZX-10102       | Upper Part of Steady Rest (for 22" model)   |             | 1          |
| 16              | ZX-SR16        | Round Nut                                   | M10         | 1          |

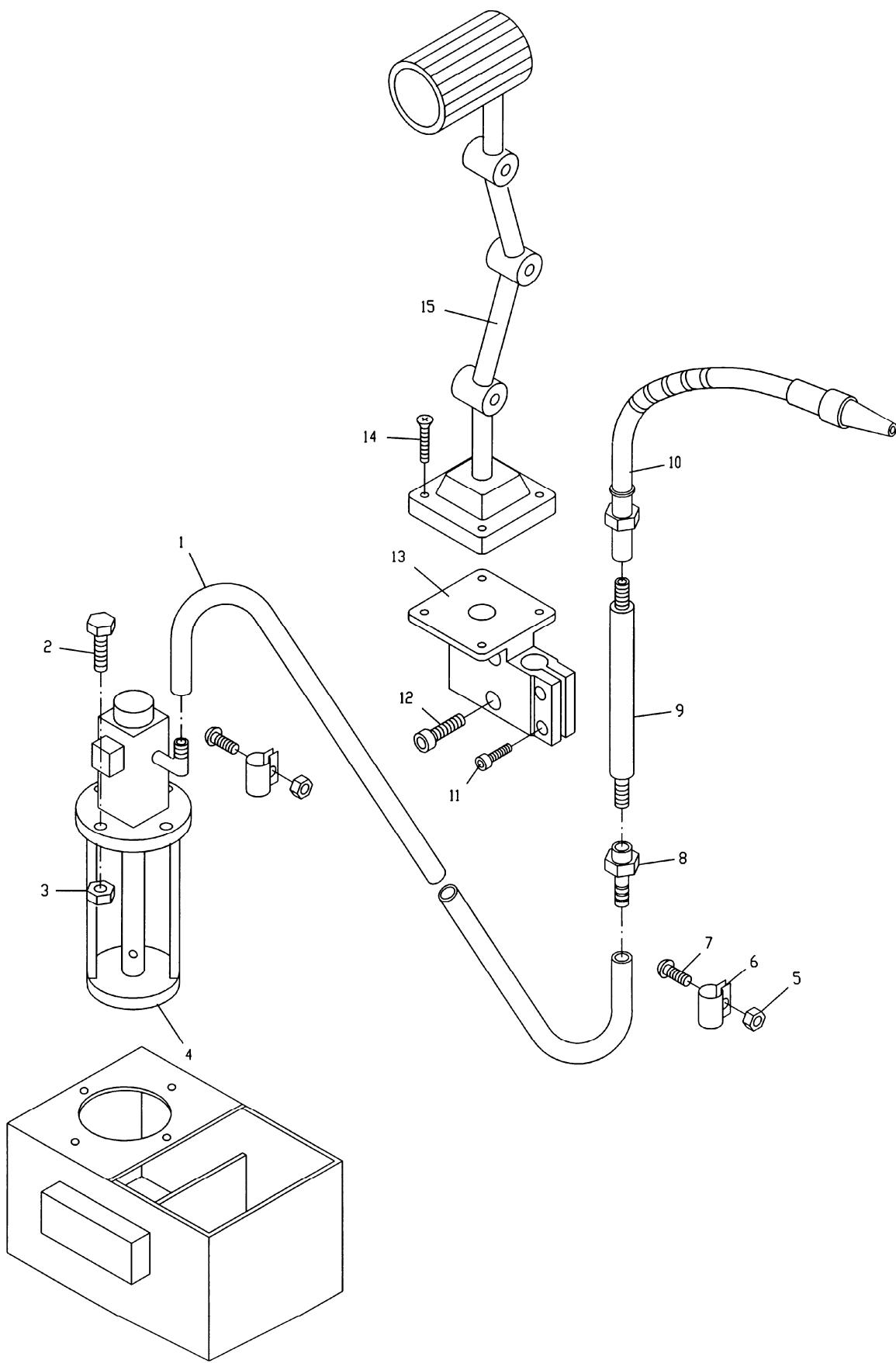
#### 24.0 Follow Rest Assembly – Exploded View



## 24.1 Follow Rest Assembly – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                          | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|---|-------------|------------|
|                 | ZX-FRA14       | Follow Rest Assembly, 14" (includes #1-7,9) |             |            |
|                 | ZX-FRA16       | Follow Rest Assembly, 16" (includes #1-7,9) |             |            |
|                 | ZX-FRA18       | Follow Rest Assembly, 18" (includes #1-7,9) |             |            |
|                 | ZX-FRA22       | Follow Rest Assembly, 22" (includes #1-7,9) |             |            |
| 1               | ZX-10710       | Screw                                       |             | 2          |
| 2               | ZX-10704       | Nut   |             | 2          |
| 3               | ZX-10707       | Sliding Sleeve                              |             | 2          |
| 4               | ZX-10301       | Supporting Piece                            |             | 2          |
| 5               | ZX-FR05        | Slotted Set Screw                           | M6x10       | 2          |
| 6               | ZX-10705       | Locking Screw                               |             | 2          |
| 7               | ZX-10706       | Handle                                      |             | 2          |
| 8               | ZX-FR8         | Hex Cap Bolt                                | M12x55      | 2          |
| 9               | ZX-10102A      | Follow Rest Casting (for 14" models)        |             | 1          |
|                 | ZX-10102B      | Follow Rest Casting (for 16" models)        |             | 1          |
|                 | ZX-10102C      | Follow Rest Casting (for 18" models)        |             | 1          |
|                 | GH2280ZX-10102 | Follow Rest Casting (for 22" model)         |             | 1          |
| 10              | ZX-FR10        | Flat Washer                                 | M12         | 2          |

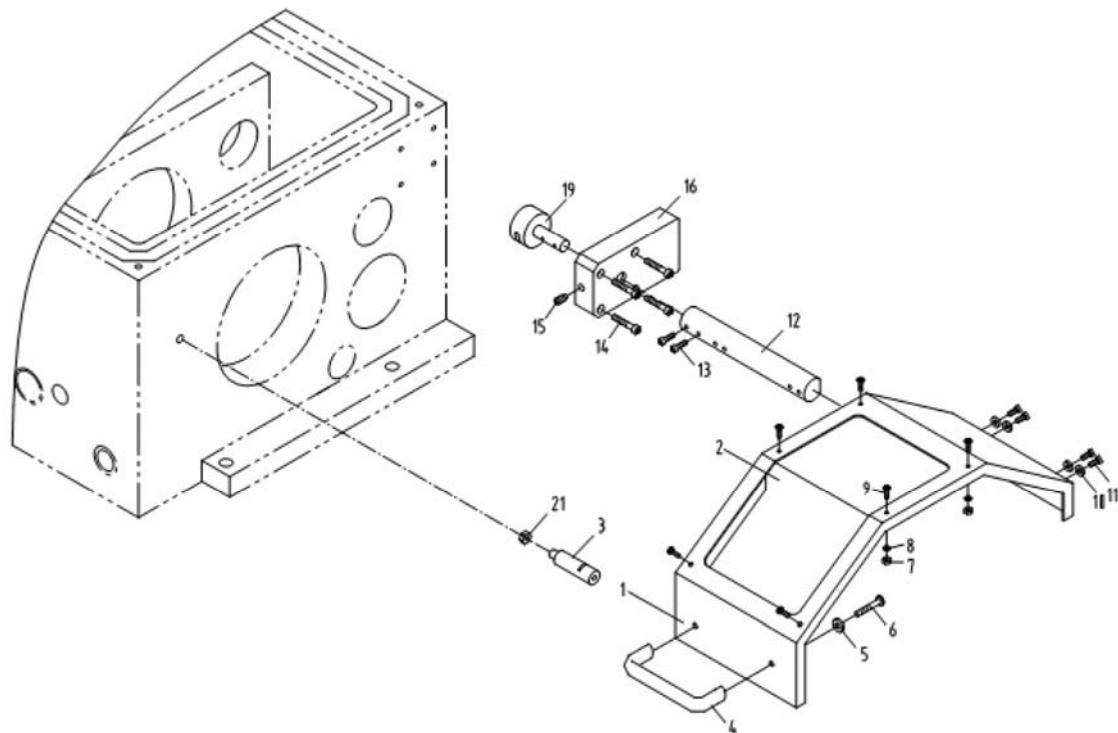
## 25.0 Coolant & Work Light Assembly – Exploded View



## 25.1 Coolant & Work Light Assembly – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                 | <b>Size</b>    | <b>Qty</b> |
|-----------------|----------------|------------------------------------|----------------|------------|
| 1               | RT-001A        | Rubber Tube (for 1440/1640/1840ZX) | ID 1/2"x1280mm | 1          |
|                 | RT-001B        | Rubber Tube (for 1460/1660/1860ZX) | ID 1/2"x1780mm | 1          |
|                 | RT-001C        | Rubber Tube (for 1880/2280ZX)      | ID 1/2"x2280mm | 1          |
| 2               | ZX-CW02        | Hex Cap Bolt                       | M5x25          | 4          |
| 3               | ZX-CW03        | Hex Nut                            | 5              | 4          |
| 4               | ZX-CW04        | Coolant Pump                       |                | 1          |
| 5               | ZX-CW05        | Hex Nut                            | M6             | 2          |
| 6               | ZX-01727       | Clip For Rubber Tube               |                | 2          |
| 7               | ZX-CW07        | Half Round Head Screw              | M6x16          | 2          |
| 8               | ZX-01728       | Fitting                            |                | 1          |
| 9               | ZX-01729       | Flow Pipe                          |                | 1          |
| 10              | ZX-CW10        | Coolant Device                     |                | 1          |
|                 | ZX-CW10-1      | Coolant Tap                        | G 3/8"         | 1          |
| 11              | TS-1514021     | Hex Socket Cap Screw               | M6x16          | 2          |
| 12              | TS-1515051     | Hex Socket Cap Screw               | M8x40          | 2          |
| 13              | ZX-CW13        | Lamp Support                       |                | 1          |
| 14              | ZX-S04         | Cross Head Screw                   | M6x14          | 4          |
| 15              | ZX-CW15        | Lamp Frame                         |                | 1          |
|                 | ZX-CW16        | Bulb (not shown)                   | 50W, AC24V     | 1          |
|                 | ZX-CW17        | Lens (not shown)                   |                | 1          |
|                 | ZX-LA          | Light Assembly (includes # 13-17)  |                |            |
| 16              | ZX-WLCP01      | Tube (for 40" models)              | 1.7m           | 1          |
|                 | ZX-WLCP02      | Tube (for 60" models)              | 2.2m           | 1          |
|                 | ZX-WLCP03      | Tube (for 80" models)              | 2.7m           | 1          |

## 26.0 Chuck Guard Assembly – Exploded View



### 26.1 Chuck Guard Assembly – Parts List

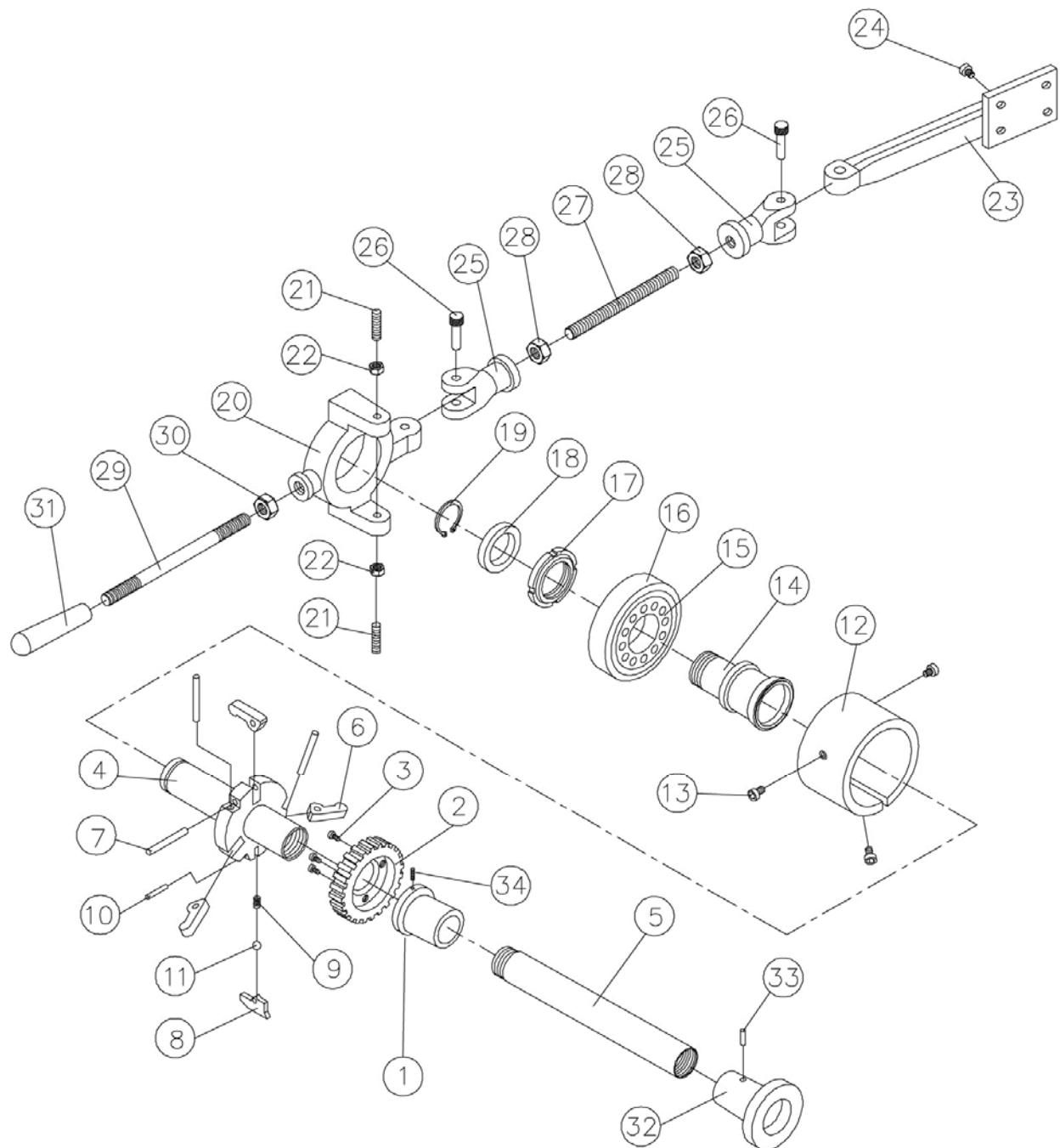
| Index No | Part No             | Description                                 | Size       | Qty |
|----------|---------------------|---|------------|-----|
|          | ZX-CGA.....         | Chuck Guard Assembly (includes #1-21) ..... |            | 1   |
| 1        | ZX-19701E.....      | Protection Guard.....                       |            | 1   |
| 2        | ZX-19501E.....      | Protection Guard Visual Glass.....          |            | 1   |
| 3        | ZX-19704E.....      | Fixing Rod.....                             |            | 1   |
| 4        | ZX-S04E.....        | Handle .....                                | Z96-6..... | 1   |
| 5        | ZX-S05E.....        | Plain Washer .....                          | 6mm.....   | 2   |
| 6        | ZX-S06E.....        | Cross Recessed Pan Head Screw .....         | M6x12..... | 2   |
| 7        | ZX-S07E.....        | Hexagon Thin Nut.....                       | M4.....    | 6   |
| 8        | TS-1550021.....     | Plain Washer .....                          | 4 mm.....  | 6   |
| 9        | TS-1532042.....     | Cross Recessed Pan Head Screw .....         | M4x12..... | 6   |
| 10       | TS-1550031.....     | Plain Washer .....                          | 5 mm.....  | 4   |
| 11       | TS-1502041.....     | Hex Socket Cap Screw.....                   | M5x16..... | 4   |
| 12       | ZX-19703E.....      | Rest Bar.....                               |            | 1   |
| 13       | ZX-S13E.....        | Slotted Set Screw .....                     | M8x10..... | 2   |
| 14       | TS-1503081.....     | Hex Socket Head Cap Screw .....             | M6x35..... | 4   |
| 15       | TS-1524041.....     | Hexagon Socket Set Screw .....              | M8x16..... | 1   |
| 16       | GH1440A-19101E..... | Switch box .....                            |            | 1   |
| 19       | ZX-19702E.....      | Shaft .....                                 |            | 1   |
| 21       | ZX-S21E.....        | Nut .....                                   | M8.....    | 1   |

NOTE: This device is installed from serial # 110825ZX2338.

## Replacement Parts

To order parts or reach our service department, call 1-800-274-6848 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

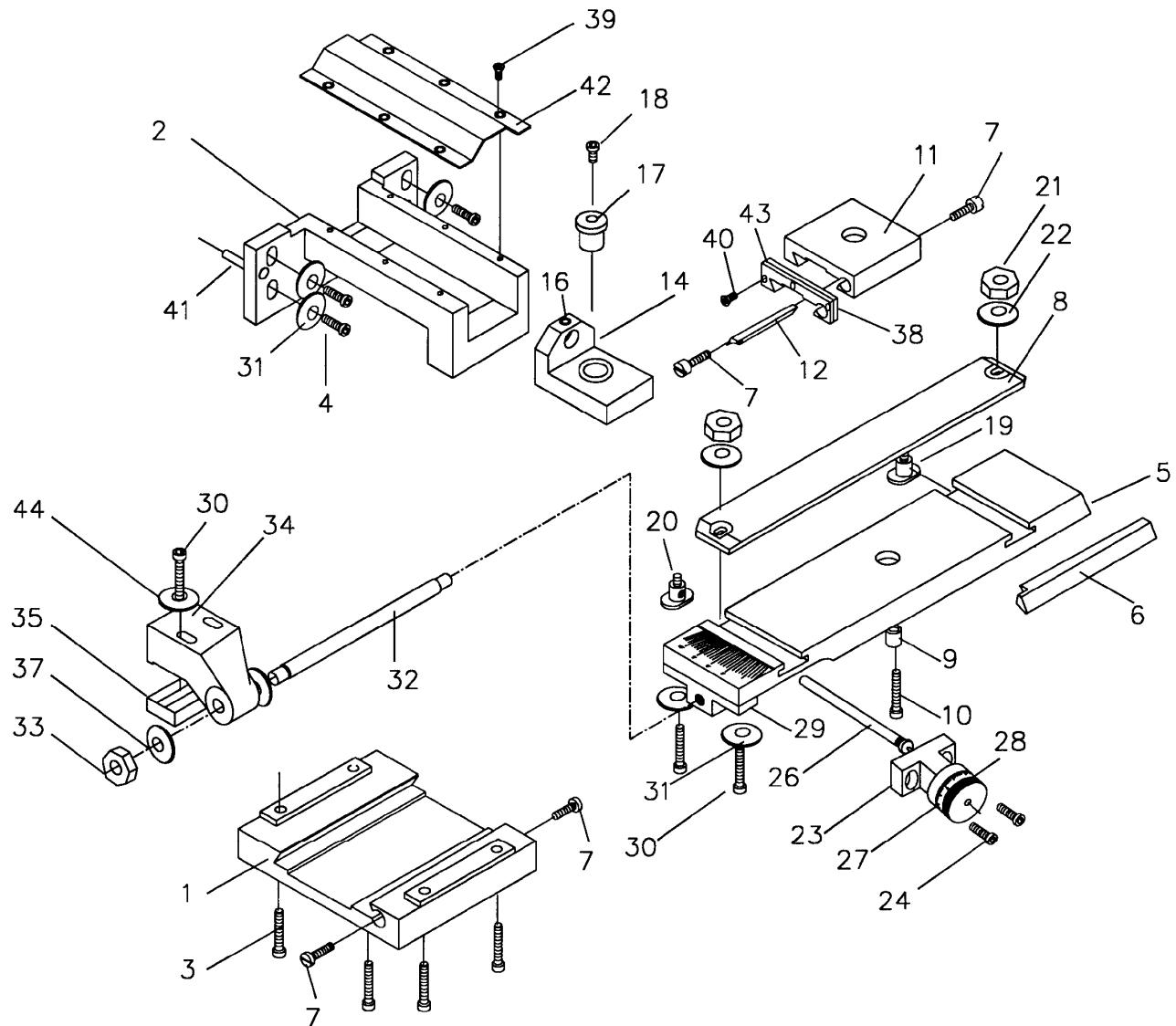
### CC-ZX Collet Closer – Exploded View



## CC-ZX Collet Closer – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>                                  | <b>Size</b> | <b>Qty</b> |
|-----------------|----------------|---|-------------|------------|
| 1               | CC-01D         | Sleeve Coupling.....                                |             | 1          |
| 2               | CC-02          | Coupling.....                                       |             | 1          |
| 3               | CC-03          | Hex Socket Cap Screw.....                           |             | 3          |
| 4               | CC-04          | Arbor.....  |             | 1          |
| 5               | CC-05F         | Draw Bar.....                                       |             | 1          |
| 6               | CC-06          | Buckle.....   |             | 3          |
| 7               | CC-07          | Pin.....  |             | 3          |
| 8               | CC-08          | Buckling Plate.....                                 |             | 1          |
| 9               | CC-09          | Spring .....  |             | 1          |
| 10              | CC-10          | Pin.....  |             | 1          |
| 11              | CC-11          | Steel Ball.....                                     |             | 1          |
| 12              | CC-12          | Outward Flange .....                                |             | 1          |
| 13              | CC-13          | Hex Socket Cap Screw.....                           |             | 3          |
| 14              | CC-14          | Bearing Shaft.....                                  |             | 1          |
| 15              | CC-15          | Ball Bearing .....                                  |             | 1          |
| 16              | CC-16          | Bearing Stand.....                                  |             | 1          |
| 17              | CC-17          | Locking Nut.....                                    |             | 1          |
| 18              | CC-18          | Collar .....  |             | 1          |
| 19              | CC-19          | Retaining Ring (external).....                      |             | 1          |
| 20              | CC-20          | Bearing Body .....                                  |             | 1          |
| 21              | CC-21          | Set Screw .....                                     |             | 2          |
| 22              | CC-22          | Hex Nut.....  |             | 2          |
|                 | CC-23L         | Fixed Seat Assembly (includes #23 through 28) ..... |             | 1          |
| 23              | CC-23          | Fixed Seat.....                                     |             | 1          |
| 24              | CC-24          | Hex Socket Cap Screw.....                           |             | 4          |
| 25              | CC-25          | Coupling.....                                       |             | 2          |
| 26              | CC-26          | Special Pin.....                                    |             | 2          |
| 27              | CC-27          | Screw Bolt.....                                     |             | 1          |
| 28              | CC-28          | Hex Nut.....  |             | 2          |
| 29              | CC-29          | Screw Bolt.....                                     |             | 1          |
| 30              | CC-30          | Hex Nut.....  |             | 1          |
| 31              | CC-31          | Grip .....  |             | 1          |
| 32              | CC-32D         | Sleeve.....   |             | 1          |
| 33              | CC-33          | Pin.....  |             | 1          |
| 34              | CC-34          | Set Screw .....                                     |             | 1          |

## TAK-ZX Taper Attachment Kit – Exploded View



## TAK-ZX Taper Attachment Kit – Parts List

| <b>Index No</b> | <b>Part No</b> | <b>Description</b>        | <b>Size</b>  | <b>Qty</b> |
|-----------------|----------------|---------------------------|--------------|------------|
| 1               | 84-3001-00     | Slide Base.....           |              | 1          |
| 2               | 84-3002-00     | Slide Bracket.....        |              | 1          |
| 3               | TS-1505071     | Hex Socket Cap Screw..... | M10x50 ..... | 4          |
| 4               | TS-1505081     | Hex Socket Cap Screw..... | M10x45 ..... | 4          |
| 5               | 84-3003-00     | Longitudinal Slide .....  |              | 1          |
| 6               | 84-3004-00     | Gib Strip.....            |              | 1          |
| 7               | 84-3005-00     | Adjusting Screw.....      |              | 4          |
| 8               | 84-3006-00     | Taper Slide .....         |              | 1          |
| 9               | 84-3007-00     | Setting Collar .....      |              | 1          |
| 10              | TS-1504031     | Hex Socket Cap Screw..... | M8x16 .....  | 1          |
| 11              | 84-3008-00     | Taper Slide Rest .....    |              | 1          |
| 12              | 84-3009-00     | Gib Strip.....            |              | 1          |
| 14              | 84-3011-00     | Feed Block.....           |              | 1          |
| 16              | 84-3011-00-02  | Ball Cup .....            | 1/4".....    | 1          |
| 17              | 84-3012-00     | Setting Collar .....      |              | 1          |
| 18              | TS-1504051     | Hex Socket Cap Screw..... | M8x25 .....  | 1          |
| 19              | 84-3013-00     | Clamping Screw.....       |              | 1          |
| 20              | 84-3013-00-01  | Clamping Screw.....       |              | 1          |
| 21              | 84-3013-00-02  | Nut .....                 |              | 2          |
| 22              | 84-3014-00     | Washer .....              |              | 2          |
| 23              | 84-3015-00     | Bearing Housing .....     |              | 1          |
| 24              | TS-1503051     | Hex Socket Cap Screw..... | M6x20 .....  | 2          |
| 26              | 84-3016-00     | Screw.....                |              | 1          |
| 27              | 84-3017-00     | Dial.....                 |              | 1          |
| 28              | 84-3017-00-01  | Pin.....                  |              | 1          |
| 29              | 84-3018-00     | Bracket.....              |              | 1          |
| 30              | TS-1491031     | Hex Head Screw.....       | M10x25 ..... | 2          |
| 31              | 84-3018-00-02  | Washer .....              |              | 6          |
| 32              | 84-3019-00     | Adjusting Bar .....       |              | 1          |
| 33              | TS-1540081     | Nut .....                 | M16.....     | 1          |
| 34              | 84-3020-00-01  | Bracket.....              |              | 1          |
| 35              | 84-3021-00     | Clamping Block.....       |              | 1          |
| 37              | 84-3022-00     | Washer .....              |              | 3          |
| 38              | 84-3026-00     | Wiper .....               |              | 2          |
| 39              | 84-3028-00-01  | Cross Head Screw .....    | M4x8 .....   | 6          |
| 40              | 84-3026-00-01  | Cross Head Screw .....    | M8x45 .....  | 6          |
| 41              | 84-3027-00     | Taper Pin .....           |              | 2          |
| 42              | 84-3028-00     | Dust Cover .....          |              | 1          |
| 43              | 84-3029-00     | Case Wiper .....          |              | 2          |
| 44              | 84-3020-00-01  | Washer .....              |              | 2          |



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