



Operation and Maintenance Instructions

Geared-Head Lathe

Model GH-1340



JET
427 New Sanford Road
LaVergne, Tennessee 37086
Ph.: 800-274-6848
www.jettools.com

Part No. M-JT1-2708
Edition 2 02/2026
Copyright ©2026 JET



1.0 IMPORTANT SAFETY INSTRUCTIONS

Read and understand the entire owner's manual before attempting to set up or operate this lathe.

1. Read and understand the entire owner's manual before attempting assembly or operation.
 2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
 3. Replace the warning labels if they become obscured or removed.
 4. This lathe is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a lathe, do not use until proper training and knowledge have been obtained.
 5. Do not use this lathe for other than its intended use. If used for other purposes, JET®, disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
 6. Always wear approved safety glasses/face shields while using this lathe. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
 7. Before operating this lathe, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do not wear gloves.
 8. Wear ear protectors (plugs or muffs) during extended periods of operation.
 9. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead based paint.
 - Crystalline silica from bricks, cement and other masonry products.
 - Arsenic and chromium from chemically treated lumber.
- Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as face or dust masks that are specifically designed to filter out microscopic particles.
10. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
 11. Make certain the switch is in the OFF position before connecting the machine to the power supply.
 12. Make certain the machine is properly grounded.
 13. Make all machine adjustments or maintenance with the machine unplugged from the power source.
 14. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
 15. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately after maintenance is complete.
 16. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
 17. Do not use power tools in damp/wet locations or other dangerous environments. Do not expose them to rain. Keep work area well lighted. Provide for adequate space surrounding work area and non-glare, overhead lighting.
 18. Keep the floor around the machine clean and free of scrap material, oil and grease.
 19. Keep visitors a safe distance from the work area. Keep children away.
 20. Make your workshop child proof with padlocks, master switches or by removing starter keys.

21. Give your work undivided attention. Looking around, carrying on a conversation and “horse-play” are careless acts that can result in serious injury.
22. Maintain a balanced stance at all times so that you do not fall or lean against moving parts. Do not overreach or use excessive force to perform any machine operation. Never force the cutting action.
23. Do not operate the lathe in flammable or explosive environments. Do not use in a damp environment or expose to rain.
24. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and more safely.
25. Use recommended accessories; improper accessories may be hazardous.
26. Maintain tools with care. Keep cutting tools sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
27. Do not attempt to adjust or remove tools during operation. Disconnect tools before servicing; when changing accessories, such as blades, bits, cutters, and the like.
28. Never stop a rotating chuck or workpiece with your hands.
29. Choose a low spindle speed when working unbalanced workpieces, and for threading and tapping operations.
30. Do not exceed the maximum speed of the workholding device.
31. Do not exceed the clamping capacity of the chuck.
32. Secure Work. For safety and use of both hands, use clamps or a vise to hold work when practical.
33. Workpieces longer than 3 times the chucking diameter must be supported by the tailstock or a steady rest.
34. Avoid small chuck diameters with large turning diameters.
35. Avoid short chucking lengths and small chucking contact.
36. Turn off the machine and disconnect from power before cleaning. Use a brush to remove shavings or debris — do not use your hands.
37. Do not stand on the machine. Serious injury could occur if the machine tips over.
38. Never leave the machine running unattended. Turn the power off and do not leave the machine until moving parts come to a complete stop.
39. Remove loose items and unnecessary work pieces from the area before starting the machine.
40. Direction of feed — feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
41. Installation work and electrical wiring must be done by qualified electrician in accordance with all applicable codes and standards.
42. Tighten all locks before operating.
43. Rotate workpiece by hand before applying power.
44. Rough out workpiece before installing on faceplate.
45. Do not mount split workpiece or one containing knot.
46. Use lowest speed when starting new workpiece.

Safety Devices

⚠ WARNING

Do not bypass, remove, or override safety devices built into this machine. Injury or death to yourself or those nearby may result. Possible consequences include parts flying off at high speed, contact with moving parts, electrocution, and clothing being pulled into the machine.

The lathe includes the following safety devices:

Lockable Main Switch (Figure 1-1)

When the main switch is switched off ("0" position), the current supply to the lathe is interrupted. In the "0" position, the main switch can be secured against accidental or unauthorized activation using a padlock.



Figure 1-1

Emergency-Stop Button (Figure 1-2)

Pressing the emergency-stop button switches the lathe off. Turn the button clockwise to restart the machine.



Figure 1-2

Familiarize yourself with the following safety notices used in this manual:

⚠ CAUTION

This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

⚠ WARNING

This means that if precautions are not heeded, it may result in serious injury or possibly even death.

Chuck Shield (Figure 1-3)

Raise the chuck shield to gain access to the chuck and spindle.

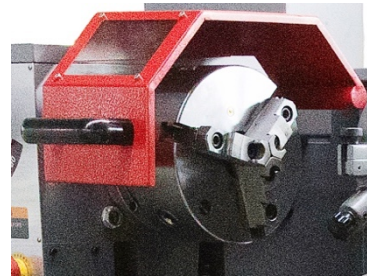


Figure 1-3

Headstock End Panel with Position Switch (Figure 1-4)

When the headstock end panel cover is in place, the position switch is activated, allowing the machine to be turned on.



Figure 1-4

The Overload Clutch on the feed shaft prevents overloading of the machine.

Safety Screws for the camlock bolts on the workpiece holder.

2.0 Table of Contents

Section	Page
1.0 IMPORTANT SAFETY INSTRUCTIONS	2
Safety Devices	4
2.0 Table of Contents	5
3.0 Warranty and Service	7
4.0 About this Manual	8
5.0 Product Identification	9
6.0 Specifications	10
7.0 Setup and Assembly	11
7.1 Shipping Contents	11
7.2 Uncrating and Installation	11
7.3 Chuck Preparation	13
8.0 Lubrication	13
9.0 Coolant Preparation	15
10.0 Electrical Connections	15
11.0 General Description	15
11.1 Lathe Bed	15
11.2 Carriage	15
11.3 Four Way Tool Post	15
11.4 Headstock	15
11.5 Apron	16
11.6 Tailstock	16
11.7 Leadscrew and Feed Rod	16
11.8 Gear Box	16
11.9 Steady Rest	16
11.10 Follow Rest	16
11.11 Micro Carriage Stop	16
11.12 Chip Tray	16
11.13 Foot Brake	16
12.0 Controls	17
13.0 Operation	18
13.1 Before Each Use	18
13.2 Speed Adjustment	18
13.3 Feed and Thread Selection	18
13.4 Change Gear Replacement	18
13.5 Automatic Feed Operation and Feed Changes	19
13.6 Powered Carriage Travel	19
13.7 Thread Cutting	19
14.0 Adjustments	21
14.1 Saddle Adjustment	21
14.2 Cross Slide Adjustment	21
14.3 Compound Slide Adjustment	21
14.4 Tailstock Adjustment	21
14.5 Headstock Alignment	21
14.6 Removing Gap Bridge	22
14.7 Installing Gap Bridge	22
14.8 Chuck Jaw Reversal	22
14.9 Belt Replacement/Adjustment	22
14.10 Aligning Tailstock to Headstock	23
14.11 Shear Pin Replacement	23
14.12 Steady Rest Adjustment	23
14.13 Follow Rest Adjustment	23
15.0 Lubrication Schedule and General Maintenance	24
16.0 Thread and Feed Chart	25
17.0 Replacement Parts	27
17.1.1 Headstock Assembly I – Exploded View	27
17.1.2 Headstock Assembly I – Parts List	28
17.1.3 Headstock Assembly II – Exploded View	29
17.1.4 Headstock Assembly II – Parts List	30

17.1.5	Headstock Assembly III – Exploded View	31
17.1.6	Headstock Assembly III – Parts List	32
17.2.1	Bed Assembly I – Exploded View	33
17.2.2	Bed Assembly I – Parts List	34
17.2.3	Bed Assembly II – Exploded View	36
17.2.4	Bed Assembly II – Parts List	37
17.3.1	Gear Box Assembly I – Exploded View	38
17.3.2	Gear Box Assembly I – Parts List	39
17.3.3	Gear Box Assembly II – Exploded View	40
17.3.4	Gear Box Assembly II – Parts List	41
17.3.5	Gear Box Assembly III – Exploded View	42
17.3.6	Gear Box Assembly III – Parts List	43
17.4.1	Apron Assembly I – Exploded View	44
17.4.2	Apron Assembly I – Parts List	45
17.4.3	Apron Assembly II – Exploded View	46
17.4.4	Apron Assembly II – Parts List	47
17.5.1	Tailstock Assembly I – Exploded View	48
17.5.2	Tailstock Assembly I – Parts List	49
17.5.3	Tailstock Assembly II – Exploded View	50
17.5.4	Tailstock Assembly II – Parts List	50
17.6.1	Tread Dial Assembly – Exploded View & Parts List	51
17.7.1	Micro Carriage Stop Assembly – Exploded View & Parts List	52
17.8.1	Top Slide, Tool Post, Saddle, and Cross Slide I – Exploded View	53
17.8.2	Top Slide, Tool Post, Saddle, and Cross Slide I – Parts List	54
17.8.3	Top Slide, Tool Post, Saddle, and Cross Slide II – Parts List	55
17.8.4	Top Slide, Tool Post, Saddle, and Cross Slide II – Parts List	56
17.9.1	Follow Rest Assembly – Exploded View & Parts List	57
17.10.1	Steady Rest Assembly – Exploded View	58
17.10.2	Steady Rest Assembly – Parts List	59
17.11.1	Coolant and Work Light Assembly – Exploded View & Parts List	60
17.12.1	Chuck Guard Assembly – Exploded View & Parts List	61
17.13.1	Lead Screw Cover Assembly – Exploded View & Parts List	62
18.0	Wiring Diagram	63
18.1	GH-1340 Wiring Diagram	63
18.2	GH-1340 Motor Wiring Diagram	64
18.3	GH-1340 Pump Motor Wiring Diagram	64

3.0 Warranty and Service

JET warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance. JET woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

Warranty Limitations

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

More Information

JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

Limitations on This Warranty

JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

JET SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

JET sells through distributors only. The specifications listed in JET printed materials and on official JET website are given as general information and are not binding. JET reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever. JET® branded products are not sold in Canada by JPW Industries, Inc.

Product Listing with Warranty Period

90 Days – Parts; Consumable items
1 Year – Motors; Machine Accessories
2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery
Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools; Air Tools

NOTE: JET is a division of JPW Industries, Inc. References in this document to JET also apply to JPW Industries, Inc., or any of its successors in interest to the JET brand.

4.0 About this Manual

This manual is provided by JET and covers the safe operation and maintenance procedures for the JET Model GH-1340 Lathe. This manual contains instructions on installation, safety precautions, general operating procedures, and maintenance instructions. Your machine has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions as set forth in this document.

If you have any questions or comments, please contact your local supplier or JET. JET can also be reached at our web site: www.jettools.com.

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.

⚠ WARNING

Read and understand the entire contents of this manual before attempting assembly or operation. Failure to comply may cause serious injury.

Register your product using the mail-in card provided or register online: www.jettools.com/product-registration

To quickly reach the product registration webpage, scan the QR code below.



5.0 Product Identification

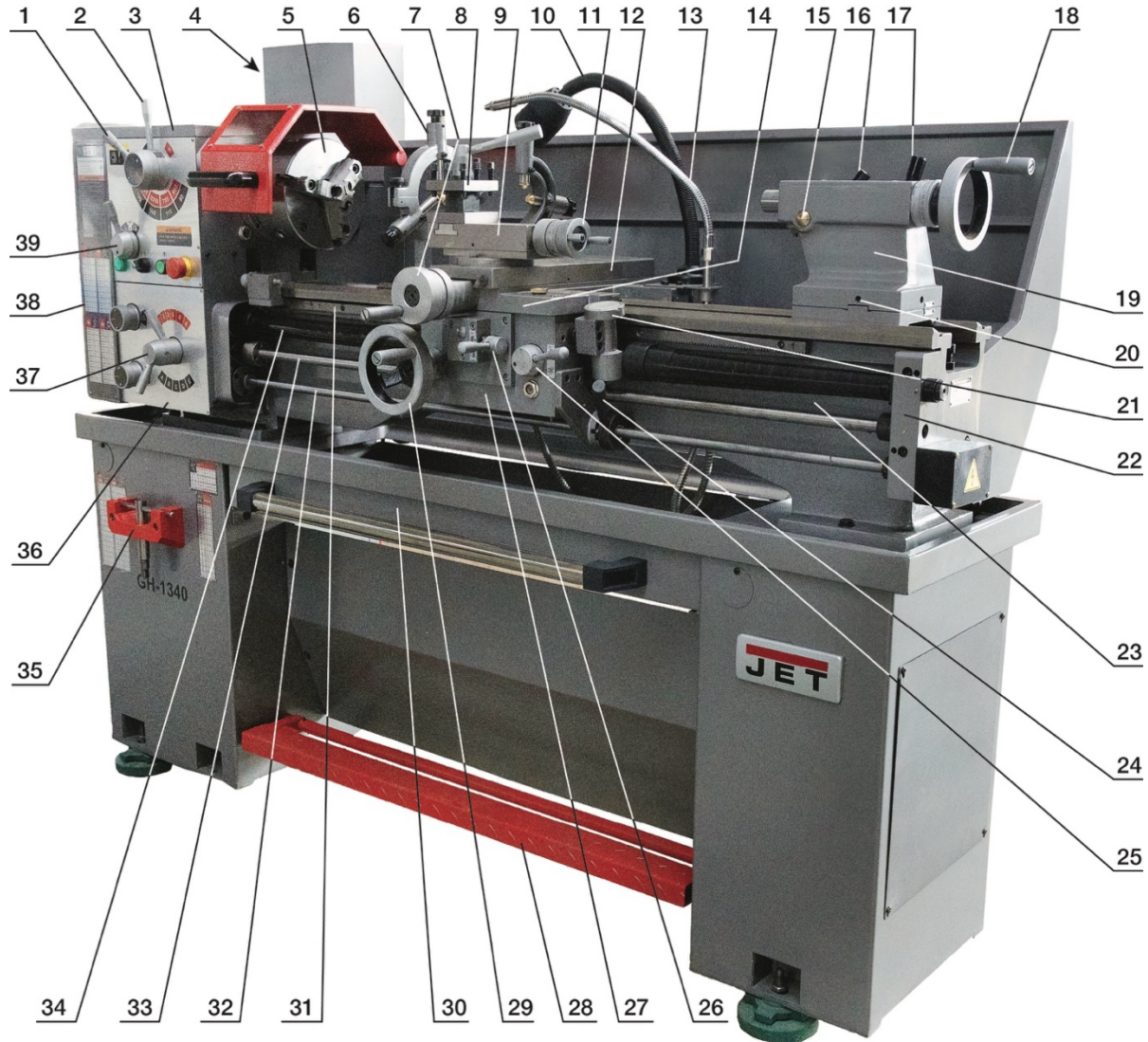


Figure 5-1: Product Identification

- | | |
|--|-------------------------------------|
| 1. RPM Selector Lever | 21. Threading Dial Indicator |
| 2. Low or High Speed Selector Lever | 22. Support Body |
| 3. Headstock | 23. Bed |
| 4. Electric Control Panel (in rear, not shown) | 24. Forward/Reverse Selector |
| 5. Spindle with Three-Jaw Chuck | 25. Half Nut Engagement Lever |
| 6. Steady Rest | 26. Feed Axis Selector |
| 7. Cross Slide Traverse Handwheel | 27. Apron |
| 8. Tool Post | 28. Foot Brake |
| 9. Compound Slide | 29. Longitudinal Traverse Handwheel |
| 10. Work Light | 30. Chip Tray |
| 11. Compound Slide Traverse Handwheel | 31. Rack |
| 12. Cross Slide | 32. Control Rod |
| 13. Coolant System | 33. Feed Rod |
| 14. Carriage | 34. Leadscrew |
| 15. Quill Clamp Body | 35. Chuck Key |
| 16. Tailstock Quill Clamp Lever | 36. Gearbox |
| 17. Tailstock Clamp Lever | 37. Feed Rate/Thread Selectors |
| 18. Quill Traverse Handwheel | 38. Gearbox Cover |
| 19. Tailstock | 39. Feed Direction Selector |
| 20. Tailstock Set-Over Screw | |

6.0 Specifications

Stock Number	JT1-2708
Model Number.....	GH-1340
Main Motor	2HP, 1PH, 230V, 60Hz, 9.3A
Motor Output	1.5kw
Voltage	230V
Transformer.....	Jiuchuan JCY-63V/A, 240V, 24V Output
Coolant Pump	Type MC-8150 90W 120/240V 50/60HZ 0.7/0.4A
Work Lamp	JC34A, 24V, 3W
Swing Over Bed	13" (330mm)
Swing Over Cross Slide	8.7" (220mm)
Swing Over Gap.....	16.9" (430mm)
Length of Gap	7.5" (190mm)
Swing Over Support.....	7.8" (198mm)
Center Height.....	6.5" (166mm)
Distance Between Centers.....	39" (1000mm)
Bed Width.....	7.3" (186mm)
Bed Height	11.41" (290mm)
Spindle Bore.....	2" (51mm)
Spindle Nose.....	D1-5
Taper in Spindle Nose.....	MT-6
Number of Spindle Speeds	8
Range of Spindle Speeds	90-2000 RPM
Number of Longitudinal & Cross Feeds	40 / 40
Range of Longitudinal Feeds	0.0011" – 0.0367"
Range of Cross Feeds	0.0032" – 0.1068"
Number of Inch Threads	32
Range of Inch Threads.....	4 – 56 TPI
Number of Metric Threads	32
Range of Metric Threads.....	0.4 – 7mm
Range of M.P. Threads	0.2 – 3.5MP
Range of D.P. Threads	8 – 120DP
Maximum Tool Size.....	20 x 20mm
Maximum Compound Slide Travel	3.9" (100mm)
Maximum Cross Slide Travel	6.7" (170mm)
Maximum Carriage Travel.....	34.6" (880mm)
Tailstock Spindle Travel	4.1" (105mm) \varnothing 1.3" (\varnothing 32mm)
Taper in Tailstock Spindle.....	MT-3
Steady Rest Capacity.....	0.4" – 2.9" (10 – 73mm)
Follow Rest Capacity	0.4" – 2.4" (10 – 60mm)
Three-Jaw Chuck Diameter	7.9" (200mm)
Gross Weight	1411 lbs. (640kg)
Net Weight	1131 lbs. (513kg)
Machine Overall Dimensions	71" x 29.1" x 51.6" (1805 x 740 x 1310mm)

The specifications in this manual were current at the time of publication. JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.

7.0 Setup and Assembly

7.1 Shipping Contents

- 1 Lathe
- 1 Steady Rest
- 1 Follow Rest
- 1 8" Three-Jaw Chuck
- 1 8" Four-Jaw Chuck
- 1 12" Face Plate
- 1 Splash Guard
- 1 Chip Tray
- 1 Tool Box
- 1 Lamp
- 1 Chuck Guard
- 1 Coolant Pump System
- 1 Leadscrew Cover
- 3 Cam Locks (on face plate)
- 3 Socket Head Cap Screws (on face plate)

Tool Box:

- 3 Open-End Wrenches
(10/12,14/17, 17/19mm)
- 1 Oil Can
- 1 Hex Key Set (3, 4, 5, 6, 8, 10mm)
- 2 Shear Pins (5 x 35mm)
- 1 T-Handle Chuck Wrenches
- 1 Tool Post Wrench
- 2 MT-3 Centers
- 1 MT-3 Live Center
- 1 MT-6 – MT-4 Center Sleeve
- 1 Key for Cam Locks
- 1 Crosspoint Screwdriver
- 1 Flathead Screwdriver
- 1 40T Gear
- 1 42T Gear
- 1 43T Gear
- 1 44T Gear
- 1 46T Gear
- 1 48T Gear
- 1 52T Gear
- 1 56T Gear
- 1 60T Gear
- 1 63T Gear
- 1 85T Gear
- 1 100T Gear
- 6 Leveling Pads
- 6 Leveling Bolts with Hex Nuts
- 1 Owner's Manual, Inspection Sheet,
Warranty Card, Pre-Shipment check list,
Packing List



Figure 7-1

7.2 Uncrating and Installation

⚠ WARNING The machine is heavy. Use an appropriate lifting device and use extreme caution when moving the machine to its final location. Failure to comply may cause serious injury.

⚠ WARNING Confirm that all suspension equipment is properly rated and in good condition for lifting lathe. Do not allow anyone beneath or near load while lifting.

1. Finish removing the wooden crate from around the lathe.
2. Unbolt the lathe from the bottom of the shipping crate.
3. Choose a location for the lathe that is level, dry, well-lit, and has enough room to service it on all four sides. The lathe must sit on a solid foundation. A concrete floor is the best base for the machine.
4. Move the carriage and tailstock to the far right of the bed and lock in place to help balance the machine. To further balance the load, loosen the carriage lock bolt, disengage the half nut lever, put the feed control lever in neutral, and use the carriage handwheel to move the carriage next to the tailstock.

- Place two steel rods or pipes (of sufficient strength) into holes (A, Figure 7-2) of lathe stand. Sling the lathe with properly rated straps. **Do not lift by the spindle.** With adequate lifting equipment, slowly raise the lathe off the bottom of the shipping crate. Make sure lathe is balanced before moving.



Figure 7-2

Locating and Positioning Machine

The lathe is shipped with six leveling bolts installed in the base. Six leveling pads are shipped with the lathe. The lathe can be installed using the installed leveling bolts and leveling pads, or can be attached to the floor using J-bolts set in the concrete floor. Using J-bolts require careful placement of the J-bolts so they align with the base mounting holes. The J-bolts must be set in concrete and the concrete must fully cure before installing the machine. J-bolts and bolts and nuts are not provided. J-bolt size is M10 x 330 (L:mm). See Figure 7-3 for J-bolt installation.

- Carefully and slowly lower the lathe to leveling pads or installed J-bolts. Hard bumps or crashes can damage the machine, the leveling bolts/pads, or the J-bolts, causing the machine to be inaccurate.

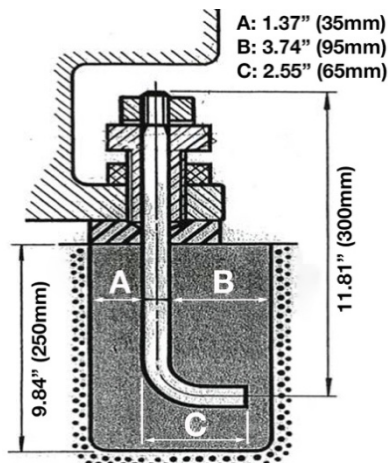


Figure 7-3: J-Bolt Installation

Leveling the Lathe

The lathe must be on a level plane; that is, the headstock and tailstock center points must remain aligned throughout the tailstock travel, with the bed ways free of twist and parallel to the operational center line.

A lathe which is not properly leveled will be inaccurate, producing tapered cuts. Also, the center point of the tailstock will vary as it is positioned along the bed, thus requiring constant readjustment of the set of the tailstock.

- Check for level condition using a machinist's precision level on the bedways, both front-to-back and side-to-side (see Figure 7-4). Take the reading in one direction every ten inches. Make sure the ways are clean and free of any debris before placing a level upon them.

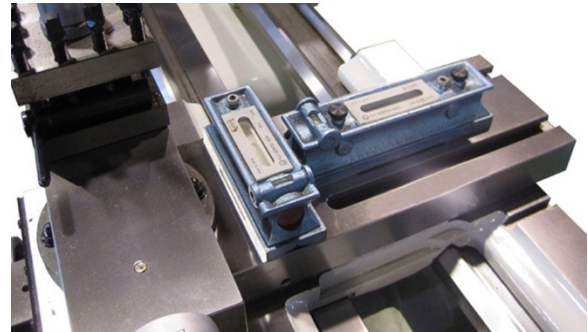


Figure 7-4: Leveling

- Adjust the foot leveling bolts to achieve proper machine level. Tighten leveling bolt nuts evenly when the machine is leveled.
- Inspect leveling occasionally, especially if the lathe accuracy begins to diminish.

Cleaning Components

- Clean all rust-protected surfaces using a mild commercial solvent, kerosene, or diesel fuel. Do not use paint thinner, gasoline, or lacquer thinner. These will damage painted surfaces. Cover all cleaned surfaces with a light film of Mobil DTE® Oil Heavy Medium.
- Open the end panel. Clean all components of the end gear assembly and coat all gears with a heavy, non-slinging grease, like Mobilith® AW 1.

7.3 Chuck Preparation

⚠ WARNING Read and understand all directions for chuck preparation. Failure to comply may cause serious injury and/or damage to the lathe.

Note: Before removing the chuck from the spindle, place a way board across the bedways under the chuck to prevent damage to the bedways should the chuck fall from your hands. Alternatively, many users make a wood chuck cradle that sits atop the ways and accepts the chuck's specific diameter, making installation and removal easier. Figure 6 shows an example.

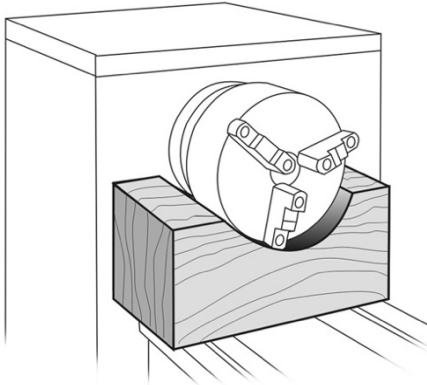


Figure 7-4: Chuck Cradle

Refer to Figures 7-5 & 7-6.

1. Support the chuck. Using the supplied chuck key, turn six camlocks (A) counterclockwise. Line up the camlock index mark (B) with the cam release mark (C) for removal.
2. Carefully remove the chuck from the spindle and place on an adequate work surface.
3. Inspect the camlock studs. Make sure they have not become cracked or broken during transit. Clean all parts thoroughly with solvent. Also, clean the spindle and camlocks.
4. Cover all chuck jaws and scroll inside the chuck with Mobilith® AW2. Cover the spindle, cam locks, and chuck body with a light film of Mobil DTE® Oil Heavy Medium.
5. Lift the chuck to the spindle nose and press onto the spindle. Tighten in place by turning the six camlocks (A) clockwise. The camlock index mark (B) should be between the two “V” indicator arrows (D). If the index mark is not between the two arrows, remove the chuck and adjust the camlock studs (E). To do this, remove the cap-head locking screws (F) and set each stud so the scribed ring (G) is flush with the rear face of the chuck, with the slot lining up with the locking screw hole.
6. Install chuck and tighten in place.

ATTENTION: Only when the incised line on the chuck lines up with that on the spindle, can the chuck be mounted.

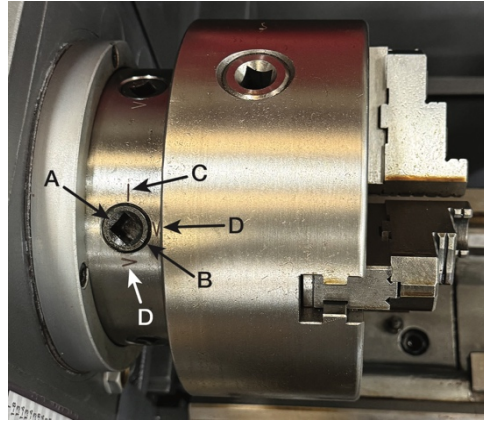


Figure 7-5

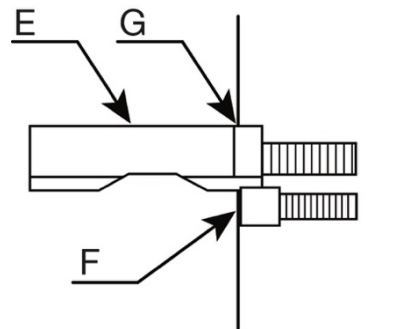


Figure 7-6

8.0 Lubrication

⚠ CAUTION The lathe must be serviced at all lubrication points, and all reservoirs must be filled to operating level before the lathe is placed into service. Failure to comply may cause severe damage to the lathe.

1. **Headstock** – The bearings of the headstock turn in an oil bath. Oil must reach three-quarters of oil level sight glass (see Figure 8-1). Top off with Mobil DTE® Oil Heavy Medium. Fill by removing headstock cover. To drain oil, open the end panel and remove the change gears with swing frame (A, Figure 8-2) Remove drain plug (B, Figure 8-2). Check oil level regularly. Make the first oil change after one month of operation. Clean out any metal shavings. Then, change oil in the headstock every two months.
2. **External Gears** - Coat all gears with a heavy, non-slinging grease, see Figure 8-2.
3. **Gear Shaft** - Remove the set screw (C, Figure 8-2) and oil with a couple drops of Mobil DTE® Oil Heavy Medium once weekly.
4. **Gearbox** - Oil must be up to indicator mark in oil level sight glass (A, Figure 8-3). Remove the oil filling plug (B, Figure 8-3). Top off with

Mobil DTE® Oil Heavy Medium. Drain oil by removing drain plug (D, Figure 8-2). Make the first oil change after operating three months. Then, change oil in the gearbox every six months.



Figure 8-1: Headstock Oil Level Sight Glass

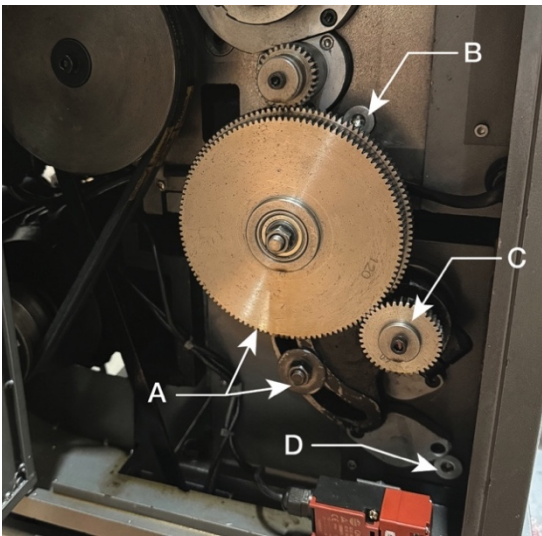


Figure 8-2

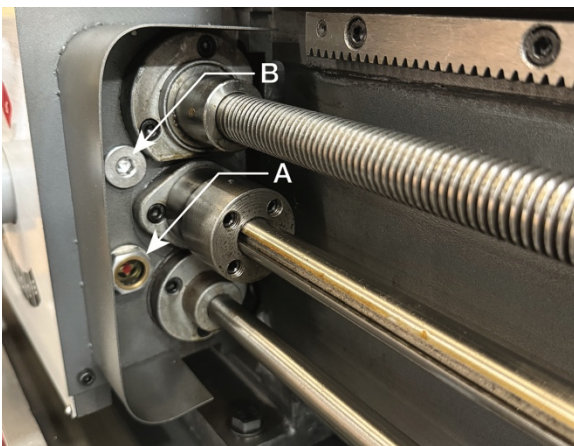


Figure 8-3

5. **Apron** - Oil must be up to indicator mark in oil level sight glass (A, Figure 8-4). Top off with Mobil DTE® Oil Heavy Medium. Fill by removing oil filling plug (B, Figure 8-4). Drain oil by removing drain plug located on the

bottom of the apron. Make the first oil change after operating three months. Then, change oil annually.

6. **Feed Axis Selector** - Lubricate ball oiler (C, Figure 8-4) once daily with Mobil DTE® Oil Heavy Medium.
7. **Carriage** - Lubricate ball oilers (D, Figure 8-4) once daily with Mobil DTE® Oil Heavy Medium.
8. **Threading Dial Indicator** - Lubricate ball oiler (E, Figure 8-4) once daily with Mobil DTE® Oil Heavy Medium.
9. **Compound Slide** - Lubricate ball oiler (A, Figure 8-5) once daily with Mobil DTE® Oil Heavy Medium.
10. **Longitudinal and Cross Slide** - Lubricate ball oilers (B, Figure 8-5) once daily with Mobil DTE® Oil Heavy Medium.
11. **Longitudinal Feed Handwheel** - Lubricate ball oiler (C, Figure 8-5) once daily with Mobil DTE® Oil Heavy Medium.
12. **Tailstock** - Lubricate two ball oilers (D, Figure 8-5) once daily with Mobil DTE® Oil Heavy Medium.
13. **Leadscrew/Feed Rod** - Lubricate two ball oilers once daily (E, Figure 8-5) with Mobil DTE® Oil Heavy Medium.

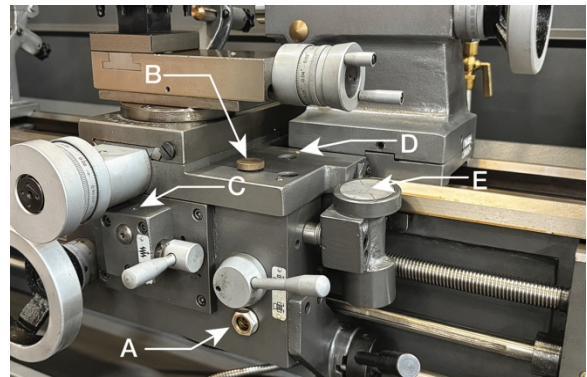


Figure 8-4

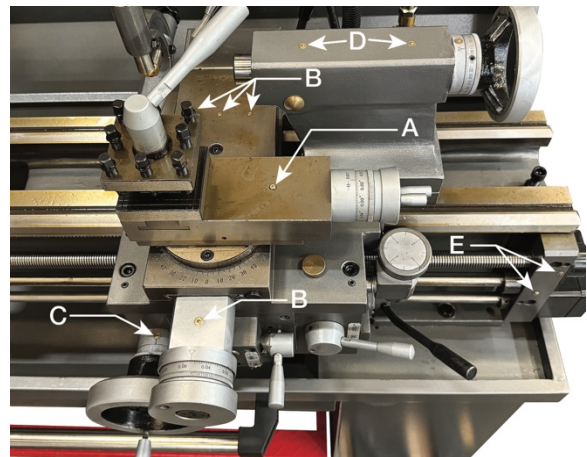


Figure 8-5

9.0 Coolant Preparation

CAUTION Follow coolant manufacturer's recommendations for use, care and disposal.

1. Remove access cover on tailstock end at the rear base of the lathe. Make sure coolant pump has not shifted during transport.
2. Pour four gallons (approximate) of coolant mix into the chip pan.
3. After connecting machine to power, turn coolant on/off switch to ON position. Make sure coolant is cycling properly.
4. Replace access cover.

10.0 Electrical Connections

WARNING Electrical connections must be made by a qualified electrician in compliance with all relevant codes. This machine must be properly grounded while in use to help protect the operator from electrical shock and possible fatal injury.

The GH-1340 lathe is rated at 2HP, 1PH, 230V only. Confirm power available at the lathe's location is the same rating as the lathe.

Turn feed direction selector (A, Figure 10-1) to the right. If the electrical connections are correct, the spindle/chuck will rotate counterclockwise as viewed from the tailstock. If the spindle/chuck rotates clockwise, move the feed direction selector to the neutral position and disconnect the lathe from the power source. Switch any two of the three power leads (not the green ground wire) and reconnect the lathe to the power source. Recheck spindle rotation.

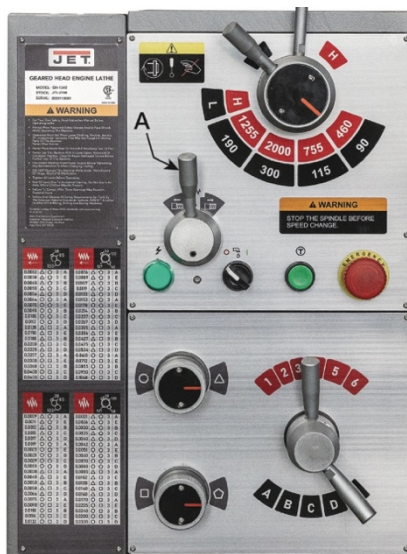


Figure 10-1

11.0 General Description

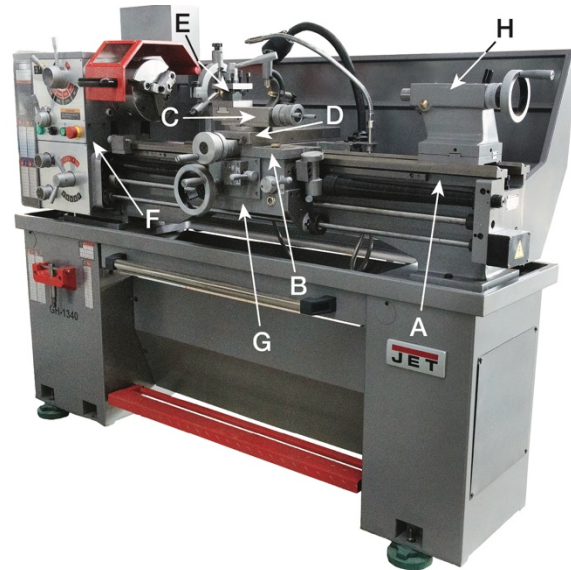


Figure 11-1

11.1 Lathe Bed

The lathe bed (A, Figure 11-1) is made of high-grade cast iron. By combining high cheeks with strong cross ribs, a bed provides low vibration and high rigidity. Two precision-ground V-slideways, reinforced by heat hardening and grinding, are an accurate guide for the carriage and headstock. The main drive motor is mounted to the rear of the bed.

11.2 Carriage

The carriage (B, Figure 11-1) is made from high-quality cast iron. The sliding parts are smooth-ground. The cross-slide is mounted on the carriage and moves on a dovetailed slide, which can be adjusted for play by means of the gibs.

The compound slide (C, Figure 11-1), which is mounted on the cross slide (D, Figure 11-1), can be rotated through 360°. The compound slide and the cross slide travel in a dovetail slide and have adjustable gibs.

11.3 Four Way Tool Post

The four-way tool post (E, Figure 11-1) is mounted on the compound slide and allows up to four tools to be mounted simultaneously. Remember to use at least two clamping screws when installing a cutting tool.

11.4 Headstock

The headstock (F, Figure 11-1) is cast from high-grade, low-vibration cast iron. It is mounted to the bed by four bolts with two adjusting bolts for alignment. In the head, the spindle is mounted on two precision taper roller bearings. The hollow spindle has Morse Taper #5 with a 1-1/2" bore.

11.5 Apron

The apron (G, Figure 11-1) is mounted to the carriage. In the apron a half nut is fitted. The half nut gibs can be adjusted from the outside. The half nut is engaged by use of a lever. Quick travel of the apron is accomplished by means of a bed-mounted rack and pinion, operated by a hand wheel on the front of the apron.

11.6 Tailstock

The tailstock (H, Figure 11-1) slides on a v-way and can be locked at any location by a clamping lever. The tailstock has a heavy-duty spindle with a Morse Taper #3.

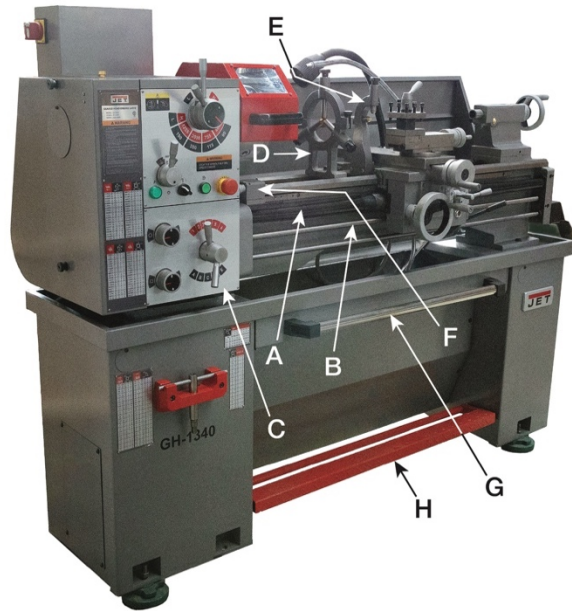


Figure 11-2

11.7 Leadscrew and Feed Rod

The leadscrew (A, Figure 11-2) and feed rod (B, Figure 11-2) are mounted on the front of the machine bed. They are connected to the gearbox at the left for automatic feed and lead. They are supported by bushings on both ends. Both are equipped with brass shear pins.

11.8 Gear Box

The gear box (C, Figure 11-2) is made from high quality cast iron and is mounted to the left side of the machine bed.

11.9 Steady Rest

The steady rest (D, Figure 11-2) serves as a support for shafts on the free tailstock end. The steady rest is mounted on the bedways and secured from below with a bolt, nut and locking plate. The sliding fingers require continuous lubrication at the contact points with the workpiece to prevent premature wear.

11.10 Follow Rest

The traveling follow rest (E, Figure 11-2) is mounted on the saddle and follows the movement of the turning tool. Only two fingers are required as the turning tool takes the place of the third. The follow rest is used for tuning operations on long, slender workpieces. It prevents the workpiece from flexing under the pressure of the cutting tool.

The sliding fingers are set similar to the steady rest, free of play, but not binding. The sliding fingers require continuous lubrication at the contact points with the workpiece to prevent premature wear.

11.11 Micro Carriage Stop

(F, Figure 11-2) Can be used during manual feed operation. The dial can be turned for fine tuning the position of the stop. The micro carriage stop can be moved along the bed by loosening the two socket-head cap screws beneath the stop.

11.12 Chip Tray

(G, Figure 11-2) Tray can be pulled out to clean the stand.

11.13 Foot Brake

(H, Figure 11.2): The connecting rod mechanism is in the bed stand. The braking device is in the pulley of the headstock. Press the pedal to stop all lathe functions. (**Caution:** Lathe still has power.)

12.0 Controls

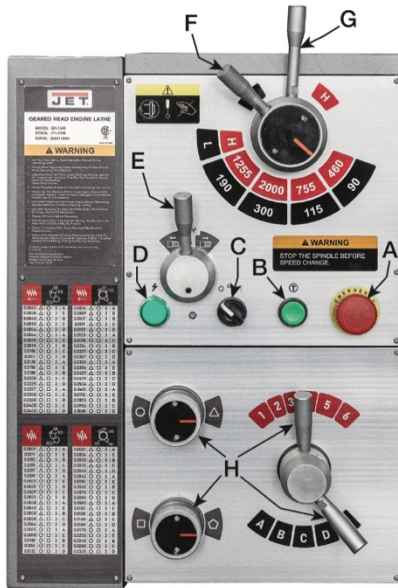


Figure 12-1

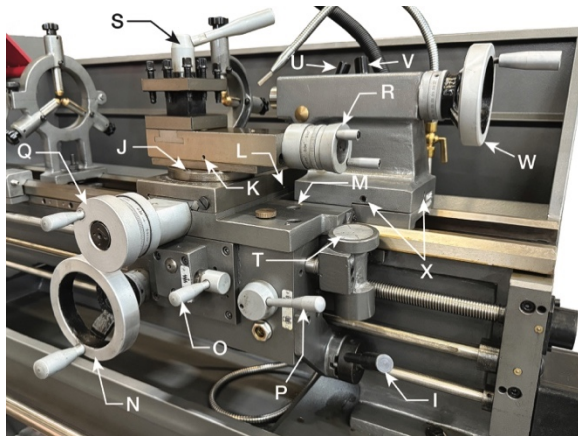


Figure 12-2

1. **Emergency Stop Switch** (A, Figure 12-1) - depress to stop all machine functions.
CAUTION Lathe will still have power. Turn clockwise to re-set.
2. **Jog Switch** (B, Figure 12-1) - Depress and release to advance spindle momentarily.
3. **Coolant ON/OFF Switch** (C, Figure 12-1) - Turns coolant pump on and off.
4. **Power Indicator Light** (D, Figure 12-1) - Lit whenever lathe has power.
5. **Feed Direction Selector** (E, Figure 12-1) - Selects carriage travel direction when the chuck is rotating.
6. **RPM Speed Selector Lever** (F, Figure 12-1) - Use to select one of four spindle speeds in either high or low range (eight speeds total).

7. **High/Low Speed Selector Lever** (G, Figure 12-1) - Move to the left for low-speed range. Move to the right for high-speed range.
8. **Feed Rate/Thread Selector** (H, Figure 12-1) - Use knobs and handles to set desired feed or lead rates.
9. **Forward/Reverse Selector** (I, Figure 12-2) - Pull lever up for clockwise spindle rotation (reverse). Push lever down for counterclockwise spindle rotation (forward). Neutral position is a center detent and the spindle remains idle.
10. **Compound Rest Lock** (J, Figure 12-2) - Turn hex nut clockwise to lock and counterclockwise to unlock.
11. **Compound Slide Lock** (K, Figure 12-2) - Turn set screw clockwise to tighten and counterclockwise to loosen.
12. **Cross Slide Lock** (L, Figure 12-2) - Turn set screw clockwise and tighten to lock. Turn counterclockwise and loosen to unlock.

CAUTION

Cross slide lock screw must be unlocked before engaging automatic feeds or damage to the lathe may occur.

13. **Carriage Lock** (M, Figure 12-2) - Turn hex socket cap screw clockwise and tighten to lock. Turn counterclockwise and loosen to unlock.

CAUTION

Carriage lock screw must be unlocked before engaging automatic feeds or damage to lathe may occur.

14. **Longitudinal Traverse Handwheel** (N, Figure 12-2) - Rotate hand wheel clockwise to move the apron assembly toward the tailstock (right). Rotate the wheel counterclockwise to move the apron assembly toward the headstock (left).
15. **Feed Axis Selector** (O, Figure 12-2) - Push lever to the left and down to activate the crossfeed function. Pull lever to the right and up to activate the longitudinal function.
16. **Half Nut Engagement Lever** (thread cutting) (P, Figure 12-2) - Move the lever down to engage. Move the lever up to disengage.
17. **Cross Traverse Handwheel** (Q, Figure 12-2) - Rotate clockwise or counterclockwise to move or position.
18. **Compound Slide Traverse Handwheel** (R, Figure 12-2) - Rotate clockwise or counterclockwise to move or position.
19. **Tool Post Clamping Lever** (S, Figure 12-2) - Rotate counterclockwise to loosen and clockwise to tighten. Rotate the tool post when the lever is unlocked.

20. **Threading Dial Indicator** (T, Figure 12-2) – Engage by pushing into the leadscrew. Pull out to disengage. The dial indicator and chart will specify at which point a thread can be entered.
21. **Tailstock Quill Clamp Lever** (U, Figure 12-2) – Lift up to lock the spindle. Push down to unlock.
22. **Tailstock Clamp Lever** (V, Figure 12-2) – Lift up lever to lock. Push down lever to unlock.
23. **Tailstock Quill Traverse Handwheel** (W, Figure 12-2) – Rotate clockwise to advance the quill. Rotate counterclockwise to retract the quill.
24. **Tailstock Off-Set Adjustment** (X, Figure 12-2) – Three set screws located on the tailstock base are used to off-set the tailstock for cutting tapers. Loosen lock screw on tailstock end. Loosen one side set screw while tightening the other until the amount of off-set is indicated on scale. Tighten lock screw.

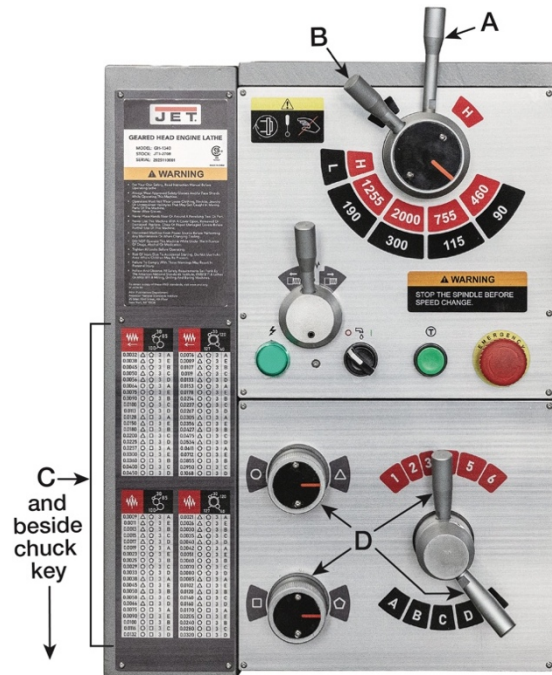


Figure 13-1

13.0 Operation

CAUTION Only change speed, gear, and feed settings when the lathe is completely stopped. Failure to comply may cause machine damage.

13.1 Before Each Use

Before each use, run the machine at 250 RPM for 10 minutes to thoroughly lubricate the bearings. This will raise the temperature of the lubricating oil and ensure it adheres to gear surfaces.

For minimum wear, disengage the threading dial indicator when not in use. See *Section 13.7.1 Threading Dial Indicator* for further instructions.

13.2 Speed Adjustment

CAUTION Only change speed when the lathe is completely stopped. Failure to comply may cause machine damage.

1. Move the High/Low Speed Selector Lever (A, Figure 13-1) to either the High or Low setting.
2. Move the RPM Speed Selector Lever (B, Figure 13-1) to the desired RPM.

13.3 Feed and Thread Selection

1. Reference the Feed/Thread Tables (C, Figure 13-1) NOTE: Additional Feed/Thread Tables are located beside the chuck key.
2. Move Feed Rate/Thread Selector dials and handles (D, Figure 13-1) to the appropriate positions, according to the Feed/Thread Tables.

13.4 Change Gear Replacement

Note: the 30T, 120T, 127T, and 40T gears are factory-installed in the end-gear compartment. This combination will cover most inch feeds and threads under normal circumstances.

To change the gears, follow the steps below.

1. Disconnect the machine from the power source.
2. Remove the end panel.
3. Remove smaller gears socket head cap screws (A, Figure 13-2) and large gear hex nut (B, Figure 13-2). Loosen quadrant hex nut (C, Figure 13-2). Move the quadrant out of the way.
4. Change gears to match the Feed/Thread Tables. Thoroughly clean the new gears before installation. Firmly tighten the socket head cap screws and large gear hex nut.
5. Move the quadrant so the large gear meshes with the smaller gears, then tighten to secure it in place. Note: Make sure there is backlash of 0.002" – 0.003" between gears. Setting the gears too tightly will cause excessive noise and wear.
6. Close the cover and connect the machine to the power source.

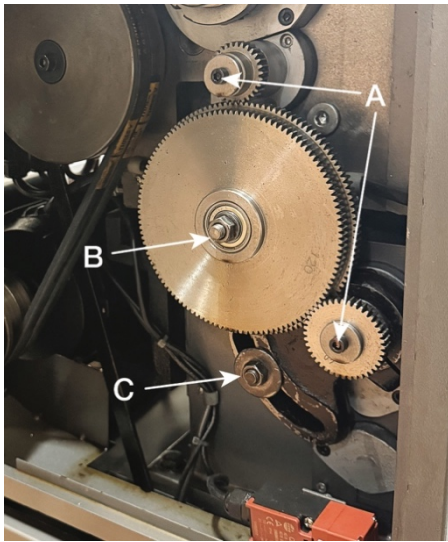


Figure 13-2

13.5 Automatic Feed Operation and Feed Changes

1. Move the forward/reverse selector (A, Figure 13-3) up or down depending on desired direction.

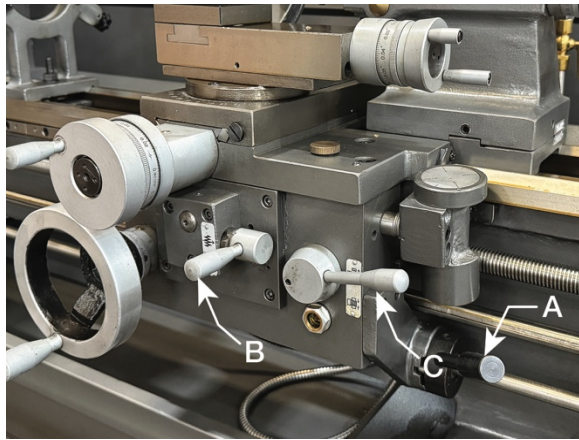


Figure 13-3

2. Set the Feed Rate/Thread Selector Dials and handles (A, Figure 13-4) to desired position.
3. Move Feed Direction Selection Lever (B, Figure 13-4) either right or left, depending on the desired direction. This starts the feed rod rotating.
4. Push Feed Axis Selector Lever (B, Figure 13-3) to the left and down to engage crossfeed. Push lever to the right and up to engage longitudinal feed.



Figure 13-4

13.6 Powered Carriage Travel

Push Feed Axis Selector Lever (B, Figure 13-3) to the left and down to engage crossfeed. Pull lever to the right and up to engage longitudinal feed.

13.7 Thread Cutting

All feed, threads, and gear requirements are provided on the feed/thread tables attached to the front of the gearbox and beside the chuck key. To obtain the desired thread, install all the correct gears as specified in the tables. Failure to do so will give incorrect threads.

1. Set the feed rate/thread selector dials and handles (A, Figure 13-4) to the desired positions. The leadscrew will start rotating. There are 31 thread pitch settings for Imperial and 26 thread pitch settings for Metric. Refer to the feed/thread tables attached to the gearbox.
2. Choose direction of thread cut by turning the feed direction selector (B, Figure 13-4) at the headstock.
3. Make sure the feed axis selector (B, Figure 13-3) is disengaged (neutral position) before engaging the half nut engagement lever. There is an interlock mechanism between the auto-feeding and the thread-cutting half-nut engagement.
4. If cutting Imperial threads, read the threading dial indicator and engage the half nut engagement lever (C, Figure 13-3) by moving

it downward. It will engage with the leadscrew to obtain the longitudinal travel of carriage (the thread cutting feed). See *Section 13.7.1 Threading Dial Indicator* for proper use of dial.

5. If cutting metric threads, engage the half nut engagement lever by moving it downward. The half nut must remain engaged once the start point has been selected and the half nut is initially engaged (the threading dial cannot be used).

13.7.1 Threading Dial Indicator

The threading dial indicator (Figure 13-5) is installed on the right side of the apron. The indicator is used when cutting imperial threads and indicates when to engage the half nut to begin threading.

The indicator face has eight lines and four numbers (see Figure 13-5). An indicator pin is located at the bottom of the rim (A, Figure 13-5). The dial is mounted on a shaft with a small gear at the opposite end (B, Figure 13-6).

By loosening a socket cap screw (A, Figure 13-6), you can pivot the housing to either engage or disengage the gear from the leadscrew (C, Figure 13-6). When engaged, the dial will turn as the spindle rotates. If the dial does not turn, readjust the housing position. For minimum wear, disengage the threading dial indicator when not in use.

When the half nut is engaged, the dial stops turning. By carefully engaging the half nut as the correct number or line reaches the indicator pin, a thread can be started, and the lead maintained through multiple passes until the required depth is reached.

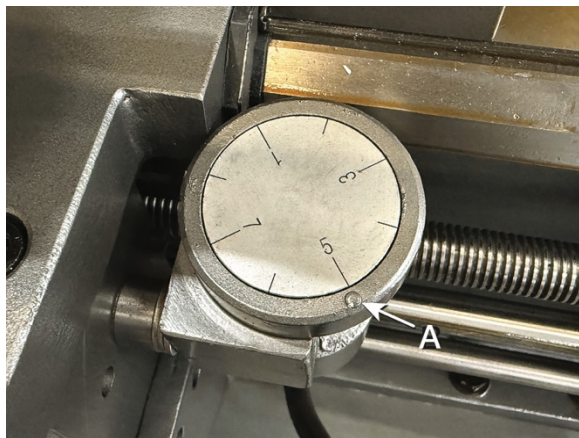


Figure 13-5 – Threading Dial Indicator

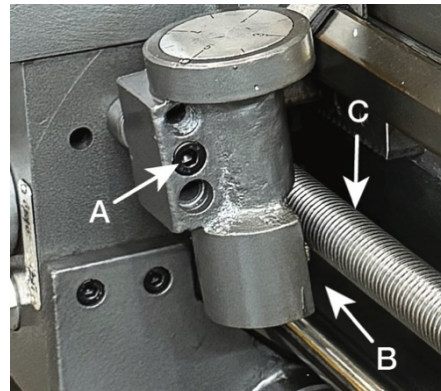


Figure 13-6 – Adjusting Threading Dial Indicator

Example:

1. Using the Thread Dial Table (see Figure 13-7) to cut 20-threads-per-inch, engage the half nut when 1, 2, 3, or 4 is at the indicator pin.
2. Determine how long you want the thread to be. When you reach that length, disengage the half nut.
3. Return the carriage to the beginning of the cut.
4. Set the next depth for the next cutting pass.
5. Watch the dial and engage the half nut at the same mark as started in step 1.
6. Repeat the procedure until you have reached the desired thread depth.

Note: Scale values are as follows:

- 1 = Engage on 1
- 1.3 = Engage on 1 or 3
- 1-4 = Engage any number, 1 thru 4
- 1-8 = Engage any number, 1 thru 8

INDICATOR TABLE			
TPI	Scale	TPI	Scale
4	1-4	23	1
4 1/2	1	24	1-8
4		26	1.3
5	1	28	1-4
5 1/2	1	32	1.3
5	1.3	36	1-4
6 1/2	1	38	1.3
7	1	40	1-8
8	1-8	44	1-4
9	1	46	1.3
9 1/2	1	48	1-8
10	1.3	52	1-4
11	1	56	1-8
11 1/2	1	64	1-8
12	1-4	72	1-8
13	1	76	1-4
14	1.3	80	1-8
16	1-8	88	1-8
18	1.3	92	1-8
19	1	96	1-8
20	1-4	104	1-8
22	1.3	112	1-8

Figure 13-7 – Thread Dial Table

14.0 Adjustments

⚠ CAUTION Adjustments to the lathe, especially those involving alignments of bearings, spindle, leadscrew, clutch, etc., should only be performed by qualified personnel, as improper alignments can damage the machine and/or create a safety hazard.

⚠ WARNING Turn off main switch and press emergency stop button before making adjustments to lathe.

14.1 Saddle Adjustment

1. Loosen four hex nuts (A, Figure 14-1) found on the bottom rear of the cross slide.
2. Turn each of the four set screws (B, Figure 14-1) equally with a hex wrench until a slight resistance is felt. Do not over-tighten.
3. Move the carriage with the hand wheel and determine if the amount of drag is to your preference. Readjust the setscrews as necessary to achieve the desired drag.
4. Hold socket set screw firmly with a hex wrench and tighten hex nut to lock in place.
5. Move the carriage again and adjust if necessary. **Note:** Over-adjustment will cause excessive premature wear of the gibs.

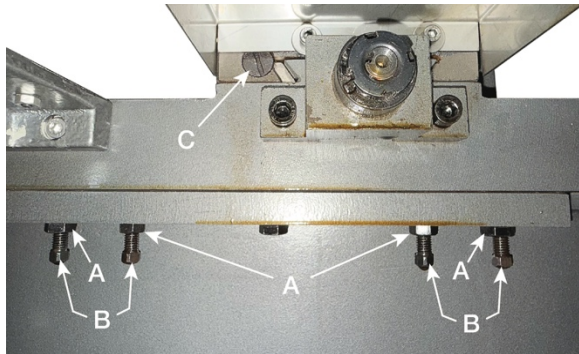


Figure 14-1

14.2 Cross Slide Adjustment

If the cross slide is too loose, follow procedure below to tighten:

1. Loosen the rear gib screw (C, Figure 14-1) approximately one turn.
2. Tighten front gib (A, Figure 14-2) screw a quarter turn. Turn the cross slide handwheel to see if the cross slide is still loose. If it is still loose, tighten the front screw a bit more and try again.
3. When cross slide is adjusted correctly, snug rear gib screw. Do not overtighten; this will cause premature wear on the gib and mating parts.

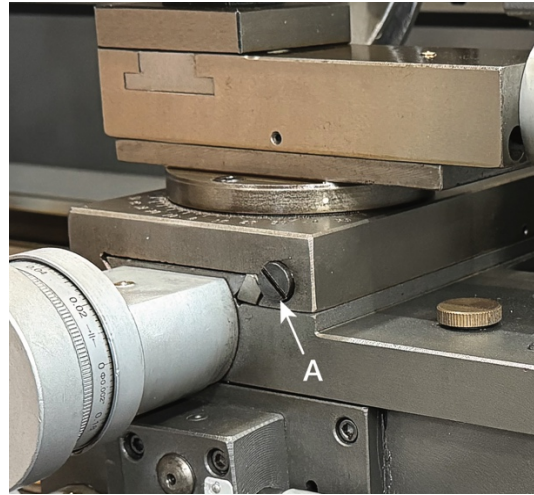


Figure 14-2

14.3 Compound Slide Adjustment

To adjust the compound slide, follow the same procedures as for the cross slide, except adjust the compound slide front and rear gib screws.

14.4 Tailstock Adjustment

If the handle will not lock the tailstock securely, use the following procedure:

1. Lower handle to the unlocked position.
2. Slide tailstock to an area that will allow you to reach under the tailstock.
3. Tighten tailstock clamping nut 1/4 turn, and re-test for proper locking. Repeat as necessary.

14.5 Headstock Alignment

The headstock has been factory-aligned and should not require adjustment. However, if adjustment is deemed necessary, follow the procedure below to align the headstock.

1. Using an engineer's precision level on the bedways, make sure the lathe is level side-to-side and front-to-back. If the lathe is not level, correct to a level condition before proceeding. Re-test alignment if any leveling adjustments were made.
2. From steel bar stock of approximately two inches in diameter, cut a piece approximately eight inches long.
3. Place two inches of bar stock into chuck and tighten chuck (see Figure 14-3). Do not use the tailstock or center to support the other end.
4. Set up and cut along five inches of the bar stock.
5. Using a micrometer, measure the bar stock next to the chuck and at the end. The measurement should be the same.

- If the measurements are not the same and adjustment is required, loosen the four bolts (A, Figure 14-3) that hold the headstock to the bed. Do not loosen completely; some drag should remain. Note: Two bolts are on the chuck side of the headstock, and the other two bolts are behind the large gear behind the end panel door.
- Loosen two hex nuts (B, Figure 14-3) found on the two adjusting bolts located on the backside of headstock. Adjust the bolts (C, Figure 14-3) for alignment and tighten hex nuts. Tighten the headstock bolts and make another cut. Keep adjusting screws after each cut until the bar stock measurements are the same. Tighten all headstock bolts and jam nuts on adjusting screws.

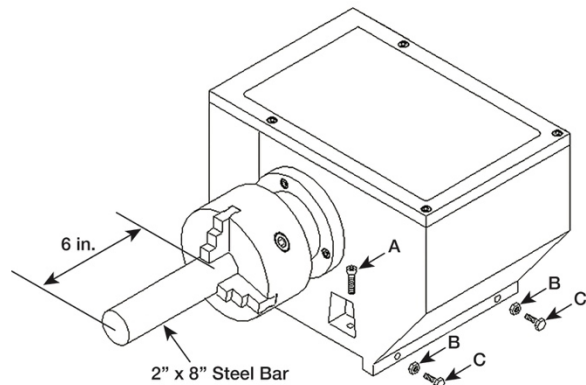


Figure 14-3: Headstock Alignment

14.6 Removing Gap Bridge

- Using an open-end wrench, tighten the two hex nuts (A, Figure 14-4). This will cause the taper pins (B, Figure 14-4) to release. Remove the taper pins.
- Remove the four hex socket cap screws (C, Figure 14-4) with a hex key wrench.
- Gap bridge can now be removed.

14.7 Installing Gap Bridge

- Clean the bottom and the ends of the gap bridge thoroughly.
- Set gap bridge in place and align.
- Remove nuts (A, Figure 14-4) from the taper pins (B, Figure 14-4).
- Slide taper pins in their respective holes and seat using a mallet. Install nuts on the taper pins finger tight.
- Install four socket head cap screws (C, Figure 14-4) and tighten securely.



Figure 14-4

14.8 Chuck Jaw Reversal

To hold stock with larger diameters, the three jaws on the scroll chuck are reversible. See Figure 14-5. Loosen two screws with the provided hex key, remove the jaw, and rotate it 180 degrees. Reinstall the jaw and tighten each screw in increments until fully tightened.

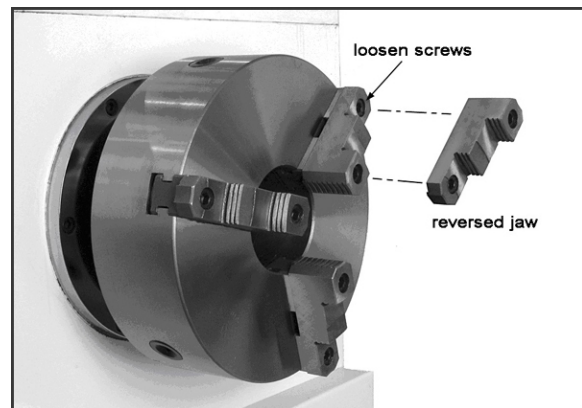


Figure 14-5: Chuck Jaw Reversal

14.9 Belt Replacement/Adjustment

- Disconnect machine from power source.
- Open end gear cover, remove lower rear cover and lower side cover. This will expose the motor and v-belts.
- Loosen three motor base plate bolts (A, Figure 14-6). Place scrap piece of wood under motor to act as lever. Lift motor up and block temporarily.
- Remove belt. Install new belt onto pulleys.
- Lift up motor and remove temporary blocking.

- Tension belt by tapping down on or pushing down on motor base plate (B, Figure 14-6) and tightening the three motor base plate bolts. The target tension is 1mm of deflection for every 100mm of belt span.
- Install covers and connect lathe to the power source.

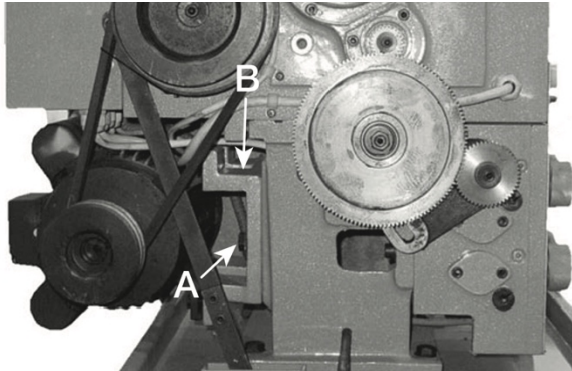


Figure 14-6: Belt Adjustment

14.10 Aligning Tailstock to Headstock

- Fit a 12" ground steel bar between centers of the headstock and tailstock (Figure 14-7).
- Fit a dial indicator to the top slide and traverse the bar's centerline.

If adjustment is needed, align the tailstock using the off-set screws (A, Figure 14-8) until the tailstock is aligned.

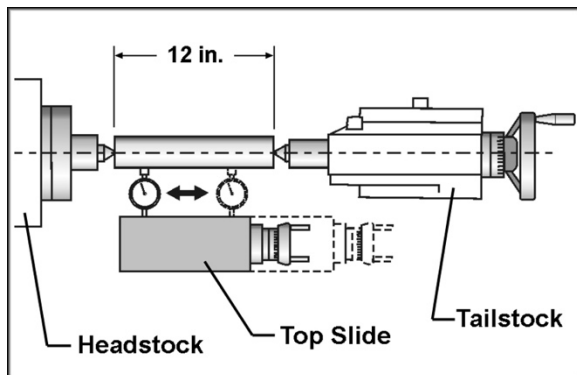


Figure 14-7: Tailstock/Headstock Alignment

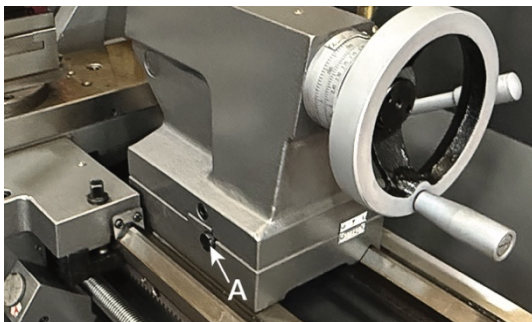


Figure 14-8

14.11 Shear Pin Replacement

The lead screw and feed shaft are equipped with shear pins, which are designed to break in order to protect the drive system against overload. A broken shear pin must be replaced.

Knock out the broken pin; line up the holes and insert new pin.

14.12 Steady Rest Adjustment

Always lubricate the fingers with grease before using the steady rest. The point at which the fingers contact the workpiece requires continuous lubrication to prevent premature wear.

To set the steady rest (see Figure 14-9):

- Loosen hex nut (A) to slide steady rest along the ways.
- Loosen knurled collar handle (B) until it can be pivoted out of the slot.
- Loosen three locking screws (C), and back off the fingers (D) using handles (E).
- Pivot open the collar on its hinge and position the workpiece.
- Slide the follow rest to desired position. Firmly tighten hex nut (A).
- Close the collar and tighten the knurled collar handle (B).
- Set the fingers (D) snugly to workpiece and secure by tightening locking screws (C). Note: Fingers should be snug but not overly tight.

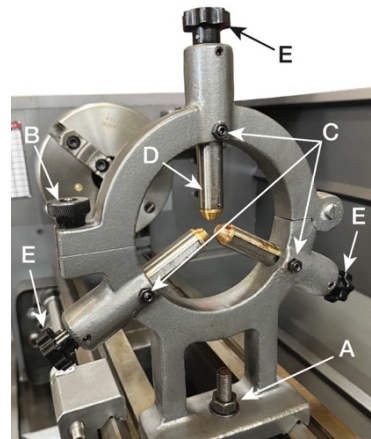


Figure 14-9: Steady Rest Adjustment

14.13 Follow Rest Adjustment

The follow rest mounts to the saddle with two socket head cap bolts. The follow rest should be mounted so that locking knobs point away from chuck.

The sliding fingers are set similar to those on the steady rest – free of play but not binding.

Always lubricate the fingers sufficiently with grease before operating.

15.0 Lubrication Schedule and General Maintenance

Regularly scheduled maintenance is crucial to ensure a long service life for your machine. The schedule below shows general cleaning, lubrication points and coolant replacement information for this machine. **Turn off main switch and press emergency stop button before lubricating.** Follow local regulations for disposal of used coolant/lubricants. Minimize direct skin contact with lubricants and coolants and wear eye protection when pouring coolant in case of splash.





Mobile DTE® Oil Heavy Medium is recommended for the SAE-20W machine oil.



If the brand of oil is ever changed, it is recommended that you flush and clean the reservoir first to prevent any compatibility issues.

Table 1

Section	Element	Action	Lubricant	Frequency
7.3	Chuck	Grease jaws and scroll	#2 lithium tube grease	periodically
7.3	Spindle/cam locks/ chuck body	light coat of oil	SAE-20W machine oil	periodically
	All exposed metal surfaces	light coat of oil	SAE-20W machine oil	frequently
8.0	Headstock	Drain and fill	SAE-20W machine oil	- after 30 days, - every 2 months
8.0	Gearbox	Drain and fill	SAE-20W machine oil	- after first 3 months, - every 6 months
8.0	Apron and Saddle	Drain and fill	SAE-20W machine oil	- after first 3 months, - then annually
8.0	Leadscrew; Feed Rod; Spindle Direction Control Axle	Fill at ball oilers	SAE-20W machine oil	daily (1 or 2 times per shift)
	Travel Setting Rod	Fill at (1) ball oiler	SAE-20W machine oil	as needed
8.0	Cross slide	Fill at (2) ball oilers	SAE-20W machine oil	daily
8.0	Compound rest	Fill at (2) ball oilers	SAE-20W machine oil	daily
8.0	Tailstock	Fill at (1) ball oiler	SAE-20W machine oil	daily
9.0	Coolant reservoir	(follow coolant manufacturer's directions)	Coolant of choice, approx. 4 gallons	(follow coolant manufacturer's directions)
11.9	Steady Rest	Lubricate finger shafts and contact points	Lead-based grease	before each use
11.10	Follow Rest	Lubricate finger shafts and contact points	Lead-based grease	before each use
14.9	V-belts	Inspect and tighten if needed		periodically

16.0 Thread and Feed Chart

																				
0.0032	△	△	3	A	0.0076	△	△	3	A	0.4	△	△	5	B	40	4	○	□	6	E
0.0038	△	△	3	E	0.0089	△	△	3	E	0.45	△	△	4	B	40	4½	○	□	5	C
0.0045	△	△	3	B	0.0107	△	△	3	B	0.5	△	△	2	B	40	5	○	□	5	B
0.0050	△	△	3	C	0.0119	△	△	3	C	0.6	△	△	6	B	44	5½	○	□	5	B
0.0056	△	△	3	D	0.0133	△	△	3	D	0.7	△	△	1	B	46	5¾	○	□	5	B
0.0064	○	△	3	A	0.0153	○	△	3	A	0.75	△	△	6	D	40	6	○	□	5	E
0.0075	○	△	3	E	0.0178	○	△	3	E	0.8	○	△	5	B	52	6½	○	□	5	B
0.0090	○	△	3	B	0.0214	○	△	3	B	0.9	○	△	4	B	40	7	○	□	5	A
0.0100	○	△	3	C	0.0237	○	△	3	C	1.0	○	△	2	B	40	8	△	□	6	E
0.0113	○	△	3	D	0.0267	○	△	3	D	1.2	○	△	6	B	40	9	△	□	5	C
0.0128	△	□	3	A	0.0305	△	□	3	A	1.25	○	△	2	D	40	10	△	□	5	B
0.0150	△	□	3	E	0.0356	△	□	3	E	1.4	○	△	1	B	44	11	△	□	5	B
0.0180	△	□	3	B	0.0427	△	□	3	B	1.5	○	△	6	D	46	11½	△	□	5	B
0.0200	△	□	3	C	0.0475	△	□	3	C	1.6	△	□	5	B	40	12	△	□	5	E
0.0225	△	□	3	D	0.0534	△	□	3	D	1.75	○	△	1	D	52	13	△	□	5	B
0.0257	○	□	3	A	0.0611	○	□	3	A	1.8	△	□	4	B	40	14	△	□	5	A
0.0300	○	□	3	E	0.0712	○	□	3	E	2.0	△	□	2	B	40	16	○	△	6	E
0.0360	○	□	3	B	0.0855	○	□	3	B	2.25	△	□	4	D	40	18	○	△	5	C
0.0400	○	□	3	C	0.0950	○	□	3	C	2.4	△	□	6	B	40	20	○	△	5	B
0.0450	○	□	3	D	0.1068	○	□	3	D	2.5	△	□	2	D	44	22	○	△	5	B
										2.8	△	□	1	B	46	23	○	△	5	B
										3.0	△	□	6	D	40	24	○	△	5	E
										3.2	○	□	5	B	52	26	○	△	5	B
										3.5	△	□	1	D	40	28	○	△	5	A
										3.6	○	□	4	B	40	32	△	△	6	E
										4.0	○	□	2	B	40	36	△	△	5	C
										4.5	○	□	4	D	40	40	△	△	5	B
										4.8	○	□	6	B	44	44	△	△	5	B
										5.0	○	□	2	D	46	46	△	△	5	B
										5.6	○	□	1	B	40	48	△	△	5	E
										6.0	○	□	6	D	52	52	△	△	5	B
										7.0	○	□	1	D	40	56	△	△	5	A

									
0.0009	△	△	3	A	0.0021	△	△	3	A
0.0011	△	△	3	E	0.0026	△	△	3	E
0.0013	△	△	3	B	0.0030	△	△	3	B
0.0015	△	△	3	C	0.0035	△	△	3	C
0.0017	△	△	3	D	0.0040	△	△	3	D
0.0019	○	△	3	A	0.0042	○	△	3	A
0.0023	○	△	3	E	0.0051	○	△	3	E
0.0025	○	△	3	B	0.0060	○	△	3	B
0.0029	○	△	3	C	0.0070	○	△	3	C
0.0033	○	△	3	D	0.0080	○	△	3	D
0.0038	△	□	3	A	0.0085	△	□	3	A
0.0045	△	□	3	E	0.0102	△	□	3	E
0.0050	△	□	3	B	0.0120	△	□	3	B
0.0058	△	□	3	C	0.0140	△	□	3	C
0.0066	△	□	3	D	0.0160	△	□	3	D
0.0075	○	□	3	A	0.0170	○	□	3	A
0.0090	○	□	3	E	0.0205	○	□	3	E
0.0100	○	□	3	B	0.0240	○	□	3	B
0.0116	○	□	3	C	0.0280	○	□	3	C
0.0132	○	□	3	D	0.0320	○	□	3	D

		MODULE		
0.2	△	☆	5	B
0.25	△	☆	2	B
0.3	△	☆	6	B
0.35	△	☆	1	B
0.4	○	☆	5	B
0.45	○	☆	4	B
0.5	○	☆	2	B
0.6	○	☆	6	B
0.7	○	☆	1	B
0.75	○	☆	6	D
0.8	△	□	5	B
0.9	△	□	4	B
1.0	△	□	2	B
1.2	△	□	6	B
1.25	△	□	2	D
1.4	△	□	1	B
1.5	△	□	6	D
1.6	○	□	5	B
1.75	△	□	1	D
1.8	○	□	4	B
2.0	○	□	2	B
2.25	○	□	4	D
2.4	○	□	6	B
2.5	○	□	2	D
2.8	○	□	1	B
3.0	○	□	6	D
3.5	○	□	1	D

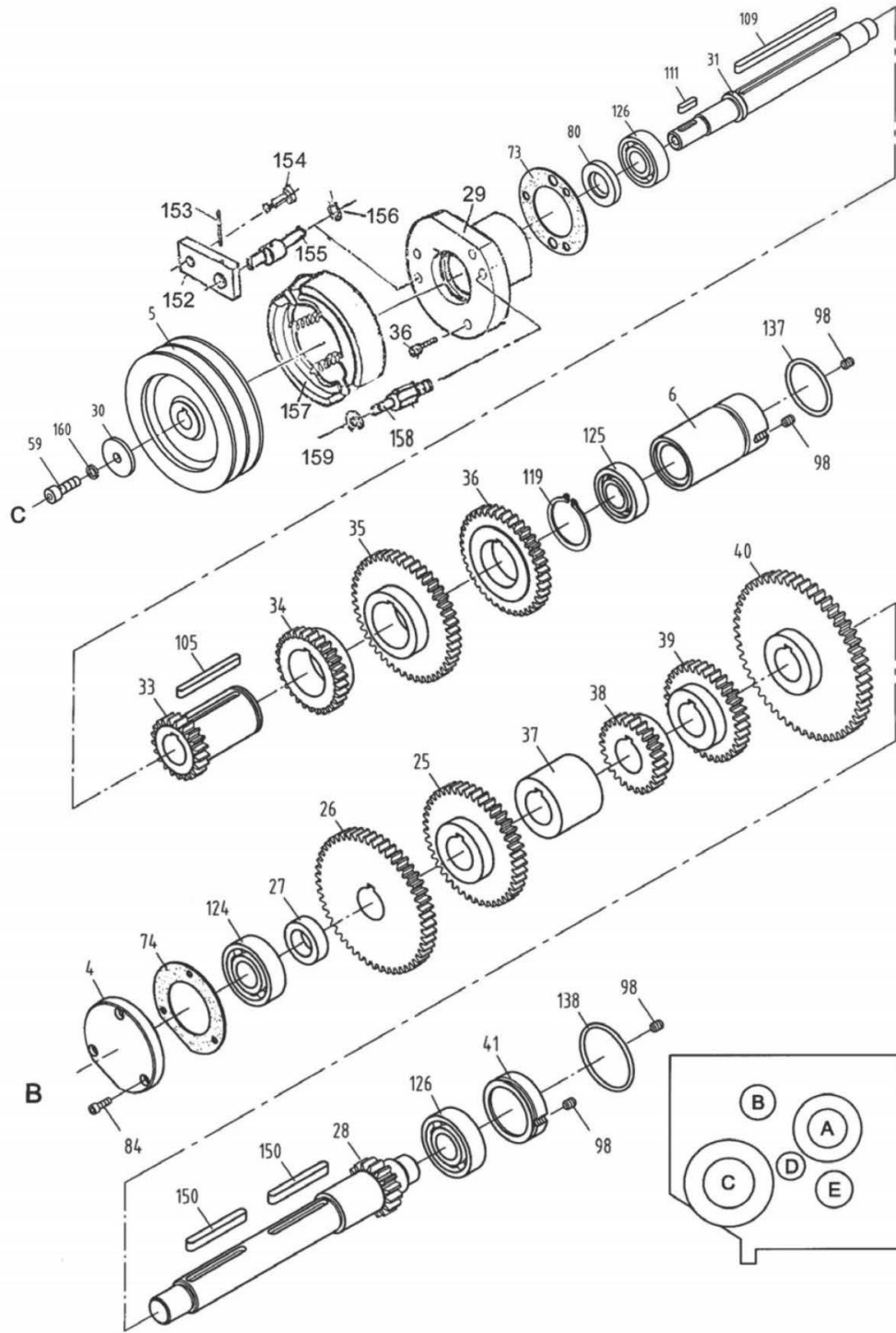
		D.P.							
		6	5	5	5	5	5	5	
		E	C	B	B	B	E	B	A
Z4		40	40	40	44	48	44	56	43
○	□	8	9	10	11	12	13	14	15
△	□	16	18	20	22	24	26	28	30
○	☆	32	36	40	44	48	52	56	60
△	☆	64	72	80	88	96	104	112	120

17.1.2 Headstock Assembly I – Parts List

Index	Part No.	Description	Size	Qty
7	**	Gear Box		1
9	**	Shift Lever		1
10	**	Shaft Housing		1
11	**	Cover		1
12	**	Handle Hub		1
13	**	Shaft Collar		1
14	**	Handle Hub		1
15	**	Handle Block		1
16	**	Hub		1
48	**	Shaft		1
50	**	Gear	1.25m51T	1
51	**	Collar		1
52	**	Shaft		1
56	**	Washer		2
57	**	Gear Shaft	1.25m17T	1
64	**	Handle		1
65	**	Handle		1
66	**	Handle		1
68	**	Shift Fork		1
69	**	Shift Fork		1
78	**	Gasket		1
87	**	Hex Socket Cap Screw	M6 x 20	4
88	**	Hex Socket Cap Screw	M6 x 25	2
93	**	Set Screw	M6 x 18	1
95	**	Set Screw	M8 x 8	1
96	**	Set Screw	M6 x 12	2
97	**	Plug	Z1/4	1
97A	**	Oil Drai Plug		1
99	**	Hex Cap Screw	M8 x 40	2
100	**	Screw	M4 x 8	4
103	**	Key	5 x 15	2
114	**	Pin	4 x 18	1
116	**	Pin	5 x 30	2
129	**	Steel Ball	5	1
130	**	Steel Ball	6	2
132	**	O-Ring	10 x 1.9	1
133	**	O-Ring	14 x 2.4	2
134	**	O-Ring	20 x 2.4	2
136	**	O-Ring	30 x 3.1	1
139	**	Spring	1 x 6 x 7	1
140	**	Spring	1 x 6 x 20	1
141	**	Spring	0.9 x 4.4 x 20	1
142	**	Shift Fork		1
147	**	Knob	M8 x 40	2
147A	**	Knob		1
148	**	Nut	M8	2
149	**	C-Clip	30	1
152	**	Set Screw	M6 x 12	1
153	**	Round Sign Plate		1
154	**	Label		1
155	**	Screw	M3 x 5	8
156	**	Screw	M10 x 18	1
157	**	Rubber Mat		1
	**	Oil Sight Glass (not show)		1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.1.3 Headstock Assembly II – Exploded View

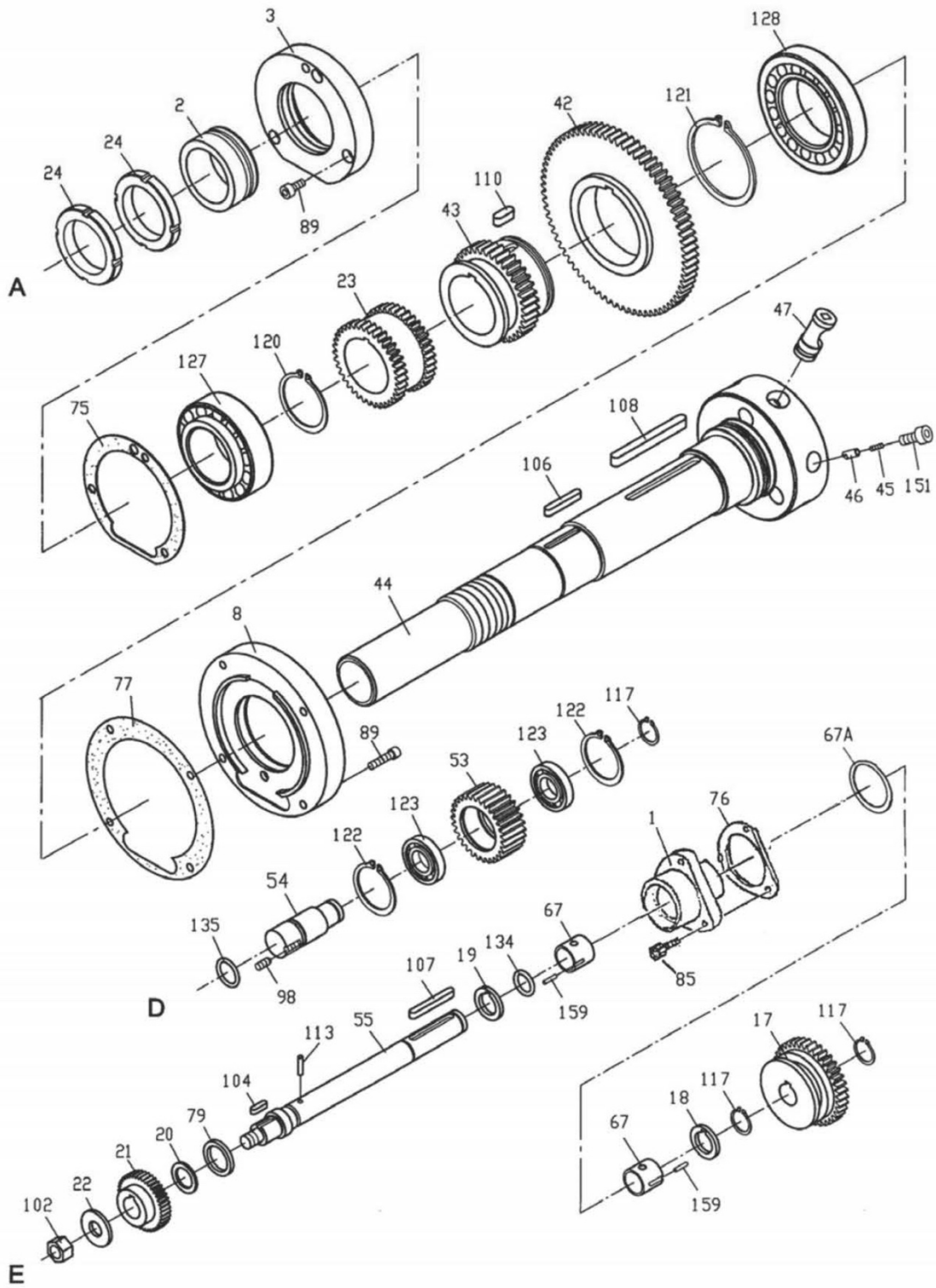


17.1.4 Headstock Assembly II – Parts List

Index	Part No.	Description	Size	Qty
4	**	Rear CoverBox		1
5	**	Pulley		1
6	**	Plug		1
25	**	Gear	2m43T	1
26	**	Gear	2m51T	1
27	**	Spacer		1
28	**	Gear Shaft	2.25m16T	1
29	**	Cover		1
30	**	Washer		1
31	**	Shaft		1
32	**	Washer		1
33	**	Collarw/Gear	2m21T	1
34	**	Gear	2m29T	1
35	**	Gear	2m46T	1
36	**	Gear	2m38T	1
37	**	Collar		1
38	**	Gear	2m26T	1
39	**	Gear	2m34T	1
40	**	Gear	2.25m53T	1
41	**	Plug		1
59	**	Socket Head Cap Screw	M8x20	1
73	**	Gasket		1
74	**	Gasket		1
80	**	Oil Seal	20x40	1
84	**	Hex Sockte Cap Screw	M4x12	3
86	**	Hex Sockte Cap Screw	M6x12	3
98	**	Set Screw	M6x8	4
105	**	Key	5x50	1
109	**	Key	6x120	1
111	**	Key	5x20	1
119	**	C-Cli	35	1
124	**	Bearling	20x47x14	1
125	**	Bearling	17x40x12	1
126	**	Bearling	20x47x14	2
137	**	O-Ring	40X3.1	1
138	**	O-Ring	47X3.1	1
150	**	Key	6x55	2
152	**	Connecting Board		1
153	**	Pin	5x25	1
154	**	Shaft		1
155	**	Break Shaft		1
156	**	Circlip	12	1
157	JT1-3014	Spindle Brake		1
158	**	Positioning Axla		1
159	**	Circlip	8	1
160	**	Washer		1
	JT1-3015	V-belt (not shown)	A838	1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.1.5 Headstock Assembly III – Exploded View

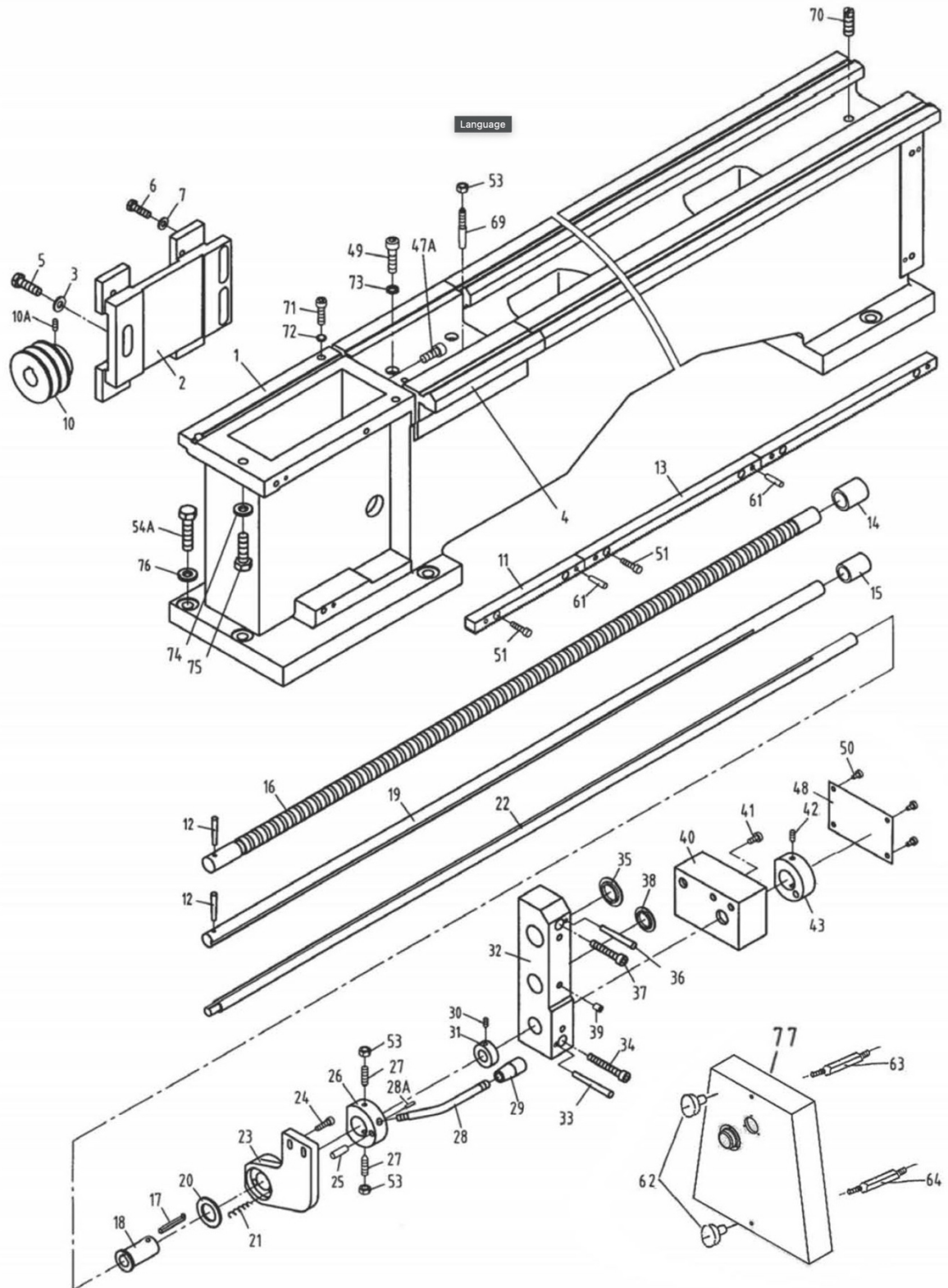


17.1.6 Headstock Assembly III – Parts List

Index	Part No.	Description	Size	Qty
1.....	**	Collar.....		1
2.....	**	Collar.....		1
3.....	**	Rear Cover.....		1
8.....	**	Front Cover.....		1
17.....	**	Gear.....	2m37T.....	1
18.....	**	Spacer.....		1
19.....	**	Washer.....		1
20.....	**	Washer.....		1
21.....	**	Gear.....	1.25m32T.....	1
22.....	**	Washer.....	12.....	1
23.....	**	Gear.....	2m37T.....	1
24.....	**	Lock Nut.....		2
42.....	**	Gear.....	2.25m74T.....	1
43.....	**	Gear.....	2.25m37T.....	1
44.....	**	Spindle.....		1
45.....	**	Spring.....	0.6 x 4 x 16.....	3
46.....	**	Pin.....		3
47.....	**	Cam.....		3
53.....	**	Gear.....	2m30T.....	1
54.....	**	Shaft.....		1
55.....	**	Shaft.....		1
67.....	**	Collar.....		2
67A.....	**	O-ring.....	32 x 3.1.....	1
75.....	**	Gasket.....		1
76.....	**	Gasket.....		1
77.....	**	Gasket.....		1
79.....	**	Oil Seal.....		1
85.....	**	Hex Socket Cap Screw.....	M5 x 16.....	4
89.....	**	Hex Socket Cap Screw.....	M6 x 25.....	7
98.....	**	Set Screw.....	M6 x 8.....	1
102.....	**	Hex Nut.....	M12.....	1
104.....	**	Key.....	5 x 18.....	1
106.....	**	Key.....	6 x 40.....	1
107.....	**	Key.....	6 x 50.....	1
108.....	**	Key.....	8 x 85.....	1
110.....	**	Key.....	8 x 18.....	1
113.....	**	Pin.....	3 x 10.....	1
117.....	**	C-Clip.....	20.....	2
120.....	**	C-Clip.....	50.....	1
121.....	**	C-Clip.....	72.....	1
122.....	**	C-Clip.....	42.....	2
123.....	**	Bearing.....	20 x 42 x 8.....	2
127.....	**	Bearing.....	50 x 90 x 20.....	1
128.....	**	Bearing.....	60 x 110 x 22.....	1
134.....	**	O-Ring.....	20 x 2.4.....	1
135.....	**	O-Ring.....	25 x 2.4.....	1
151.....	**	Hex Socket Cap Screw.....	M8 x 18.....	3
159.....	**	Pin.....	2 x 16.....	2

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.2.1 Bed Assembly I – Exploded View



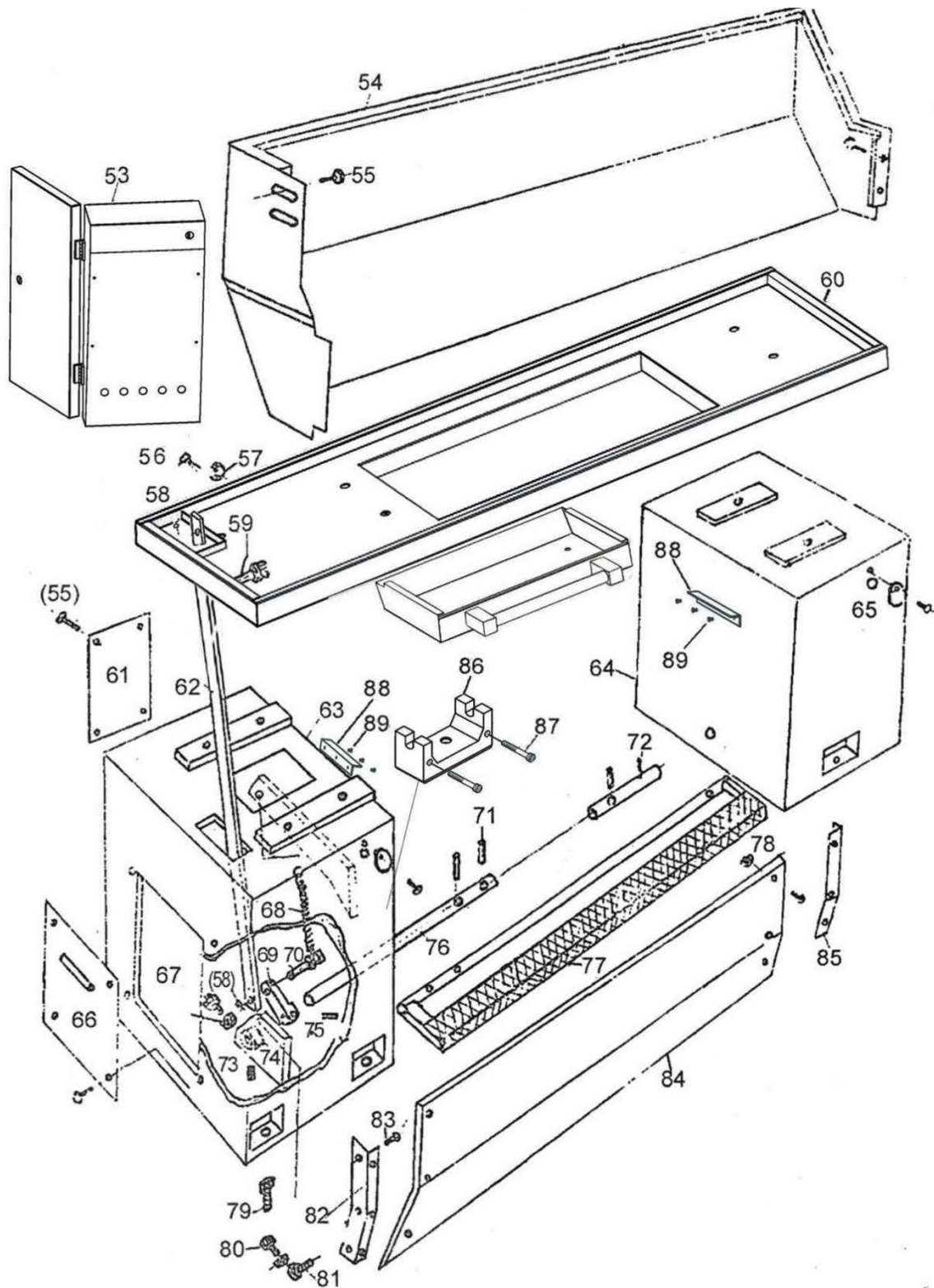
17.2.2 Bed Assembly I – Parts List

Index	Part No.	Description	Size	Qty
1	**	BedRear		1
2	**	Motor Base		1
3	**	Washer	M10	3
4	**	Gap		1
5	**	Hex Cap Bolt	M10X35	3
6	**	Hex Cap Bolt	M8X25	4
7	**	Washer		4
9	**	Screw	M5X8	3
10	**	Pulley		1
10A	**	Set Screw	M6X12	1
11	JT1-3034	Rack		1
13	JT1-3035	Rack		2
12	**	Pin	5x35	2
14	**	Collar		1
15	**	Collar		1
16	**	Lead Screw	GHB-1340A	1
	**	Lead Screw	BDB-1340A	1
17	**	key		1
18	**	Collar		1
19	**	Feed Rod	GHB-1340A	1
	**	Feed Rod	BDB-1340A	1
20	**	Brake Ring		1
21	**	Spring	1x7.5x25	1
22	**	Shaft	GHB-1340A	1
	**	Shaft	BDB-1340A	1
23	**	Bracket		1
24	**	Hex Socket Cap Screw	M6x22	4
25	**	Pin	M4x12	1
26	**	Handle Hub		1
27	**	Screw	M8x28	2
28	**	Handle		1
28A	**	Pin	3x10	1
29	**	Knob	BM10x50	1
30	**	Set Screw	M5x8	1
31	**	Collar		1
32	**	Bracket		1
33	**	Pin	6x70	1
34	**	Hex Socket Cap Screw	M8x65	1
35	**	O-Ring	47X3.1	1
36	**	Key	6x55	2
37	**	Hex Socket Cap Screw	M8x60	2
38	**	Plug		1
39	**	Oil Ball	8	3
40	**	Swich Box		1
41	**	Hex Socket Cap Screw	M8x20	4
42	**	Screw	M6x16	1
43	**	Bushing		1
47A	**	Set Screw	M10x12	148
	**	Switch Box Cover		1
49	**	Hex Socket Cap Screw	M10X35	4
50	**	Socket Head Cap Screw	M5X10	4
51	**	Hex Socket Cap Screw	M6x25	8
53	**	Hex Socket Cap Screw	M8	4
54A	**	Hex Cap Bolt	M12X60	6

Index	Part No.	Description	Size	Qty
61	**	Pin	6x30	6
62	**	Lock Nut		2
63	**	Screw		1
64	**	Shaft		1
69	**	Pin	8x60	2
70	**	Set Screw	M12X40	1
71	**	Hex Socket Cap Screw	M8X35(BDB)	2
	**	Hex Socket Cap Screw	M8X40(GHB)	2
72	**	Lock Washer	M8	4
73	**	Lock Washer	M10	4
74	**	Washer	M8(BDB)	2
	**	Washer	M8(GHB)	4
75	**	Hex Socket Cap Screw	M8x45	2
76	**	Washer	12	6
77	**	Cover		1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.2.3 Bed Assembly II – Exploded View

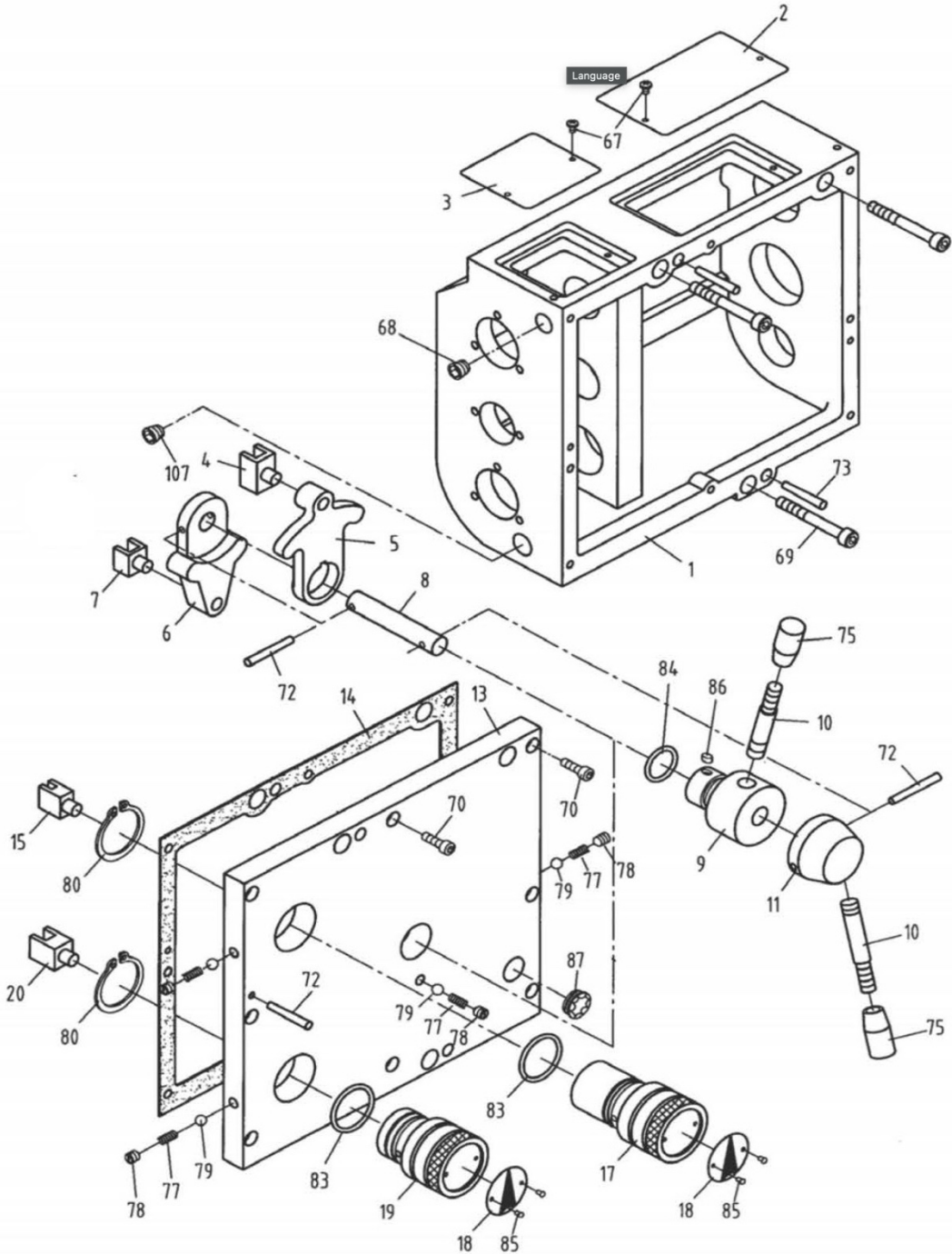


17.2.4 Bed Assembly II – Parts List

Index	Part No.	Description	Size	Qty
53	**	Electrical box		1
56	**	Screw	M6×20	4
57	**	Washer	Ø6	4
58	**	Pin	2×12	1
59	**	Pin		1
60	**	Oil plate		1
62	**	Brake Pull Rod		1
63	**	Left Mounting Feet		1
64	**	Right Mounting Feet		1
65	**	Round Cover		2
66	**	Cover Plate		1
67	**	Cap-Shape Screw		1
68	**	Draw Spring		1
69	**	Pedal Arm		1
70	**	Pin		1
71	**	Pin	3×25	3
72	**	Shaft		1
73	**	Screw	M8x6	1
74	**	Nut		1
75	**	Pin	3×25	1
76	**	Pedal Shaft	1	1
77	**	Brake (750) pedal	750mm	1
78	**	Screw	M5x10	6
80	**	Screw	M12x50	1
81	**	Screw	M10x60	1
82	**	Base support plate		5
83	**	Socket Set Screw	M6x10	6
84	**	Front plate		1
85	**	Base plate		1
86	**	Chuck key support		1
87	**	Socket head cap srew	M8x56	2
88	**	Support		2
89	**	Allen screw	M6x10	6

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.3.1 Gear Box Assembly I – Exploded View

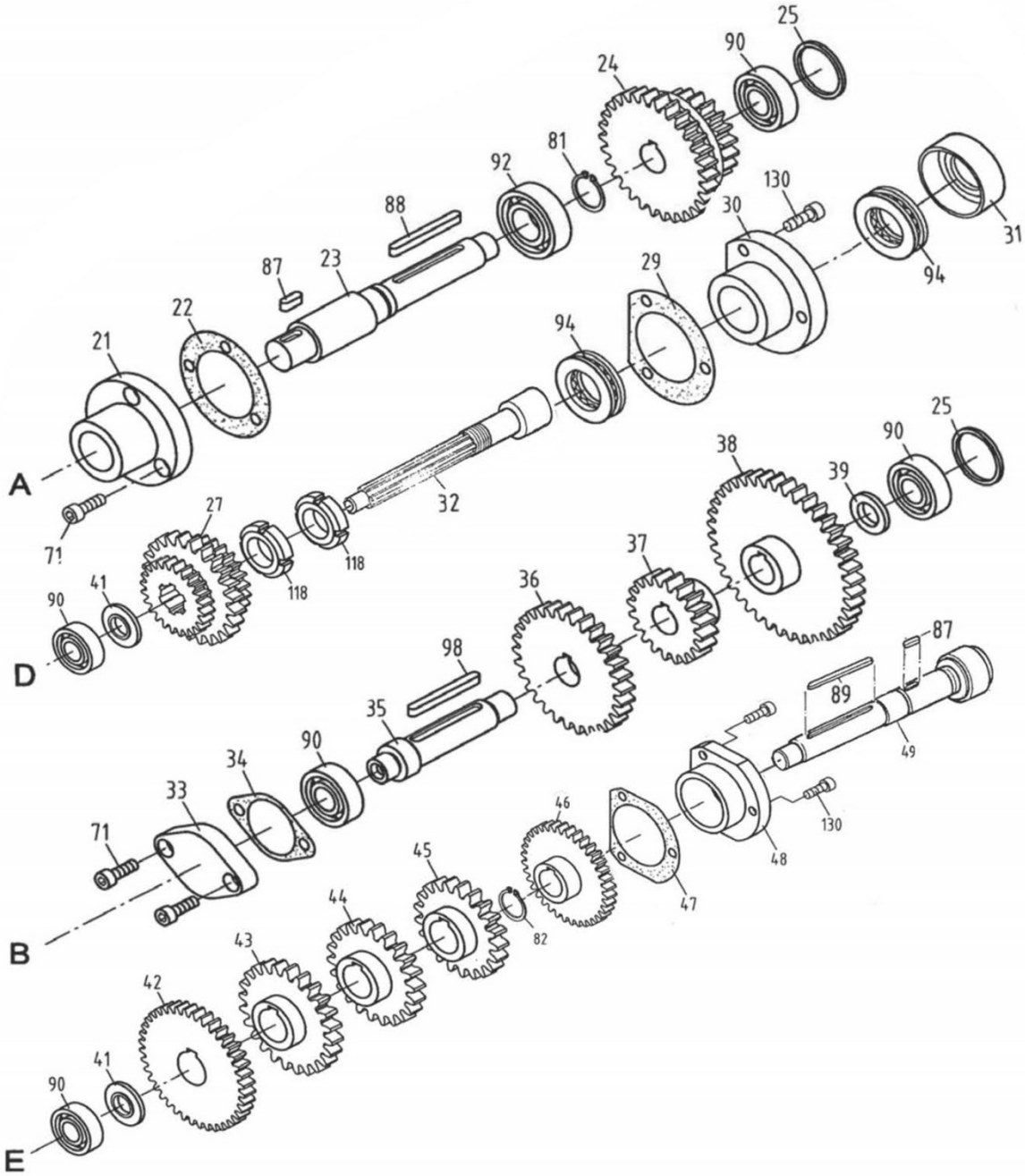


17.3.2 Gear Box Assembly I – Parts List

Index	Part No.	Description	Size	Qty
1	**	Castin		1
2	**	Right cover		1
3	**	Left cove		1
4	**	Slipper		1
5	**	Lever		1
6	**	Lever		1
7	**	Slipper		1
8	**	Shaft		1
10	**	Handle Base		2
11	**	Lever		1
12	**	Handle Base		1
13	**	Cover		1
14	JT1-3036	Gasket		1
15	**	Slipper		1
17	**	Lever		1
18	**	Plate		2
19	**	Handle		1
20	**	Slipper		1
67	**	Screw	M4x6	4
68	**	Tapered Tap	ZG3/8"	2
69	**	Socket Head Cap Screw	M8x65	3
70	**	Socket Head Cap Screw	M6x25	8
72	**	Pin	5x30	4
73	**	Pin	5x40	2
75	**	Knob	MB10x50	2
77	**	Spring	0.8x5x25	5
78	**	Socket Set Screw	M8x10	5
79	**	Steel Ball	6.5	5
80	**	C-clip	40	2
83	**	O-Ring	40x3.1	2
84	**	O-Ring	30x3.1	2
85	**	Screw	M3x6	6
86	**	Key	5x8	1
87	**	Oil Sight Glass	12	1
107	**	Tapered Tap	Z1/4"	1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.3.3 Gear Box Assembly II – Exploded View

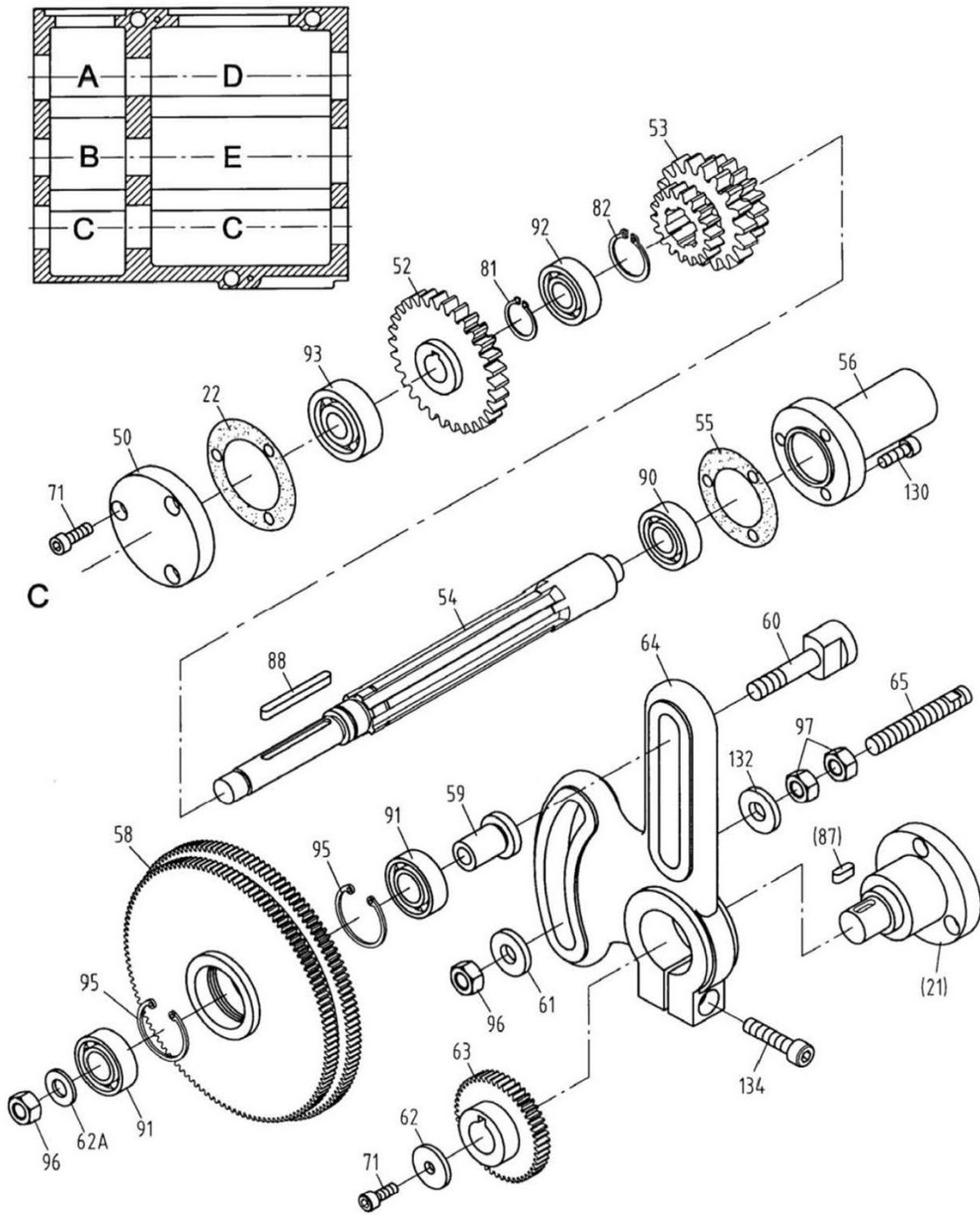


17.3.4 Gear Box Assembly II – Parts List

Index	Part No.	Description	Size	Qty
21	**	Cover		1
22	**	Gasket		1
23	**	Shaft		1
24	**	Gear	2.5m30T,20T	1
25	**	Washer		2
27	**	Gear	2.25m,3.25m,2.5m24T	
29	**	Gasket		
30	**	Bushing		1
31	**	Washer		1
32	**	Shaft		1
33	**	End cover		1
34	**	Gasket		1
35	**	Shaft		1
36	**	Gear	2.5m30T	1
37	**	Gear	2.5m20T	1
38	**	Gear	2.5m40T	1
39	**	Washer		2
41	**	Washer		2
42	**	Gear	2.25m40T	1
43	**	Gear	3.25m24	1
44	**	Gear	3.25m22T	1
45	**	Gear	3.25m21	1
46	**	Cear	2.5m36	1
47	**	Gaske		1
48	**	Flange		1
49	**	Shaft		1
71	**	Socket Head CapScrew	M6×16	5
81	**	C-clip	20	1
82	**	C-clip	25	1
87	**	Key	5×14	1
88	**	Key	5×50	1
89	**	Key	8×110	1
90	**	Bearing	6202	5
92	**	Bearing	6004	1
94	**	Thrust Bearing	51105	2
98	**	Key	5×5	1
118	**	Round Nut	M24x1.5	2
130	**	Socket Head CapScrew	M6×12	6

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.3.5 Gear Box Assembly III – Exploded View

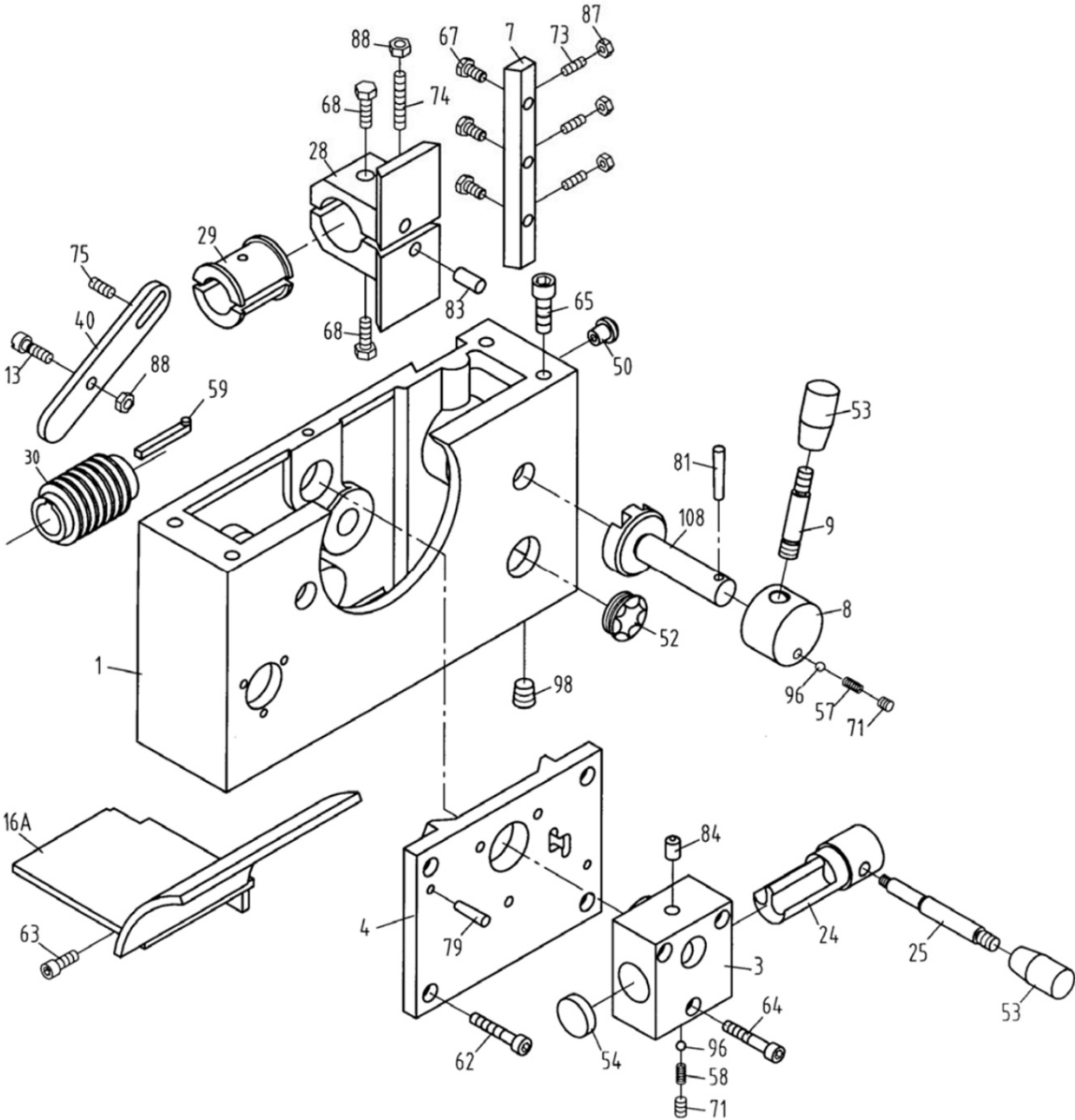


17.3.6 Gear Box Assembly III – Parts List

Index	Part No.	Description	Size	Qty
21	**	Cover		1
22	**	Gasket		1
50	**	End Cover		1
52	**	Gear	.5m30T, 15T	1
53	**	Gear	2.25m, 3.25m, 2.5m18T	1
54	**	Key shaft		1
55	**	Gasket		1
56	**	Cover		1
58	**	Gear	1.25m120T, 127T	1
59	**	Collar		1
60	**	Screw		1
61	**	Washer		1
62	**	Washer		2
62A	**	Washer		1
63	**	Gear	1.25m48T	5
64	**	Gear Frame		1
65	**	Screw rod		1
71	**	Socket Head Cap Screw	M6 x 16	4
81	**	C-clip	20	1
82	**	C-clip	25	1
87	**	Key	5 x 14	1
88	**	Key	5 x 50	1
90	**	Bearing	6202	1
91	**	Bearing	6103	2
92	**	Bearing	6004	1
93	**	Thrust Bearing	6302	1
95	**	C-clip	35	2
96	**	Hex Nut	M10	1
97	**	Hex Nut	M12	3
130	**	Socket Head Cap Screw	M6 x 12	3
132	**	Washer		1
134	**	Hex Socket Cap Screw	M8 x 30	1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.4.1 Apron Assembly I – Exploded View

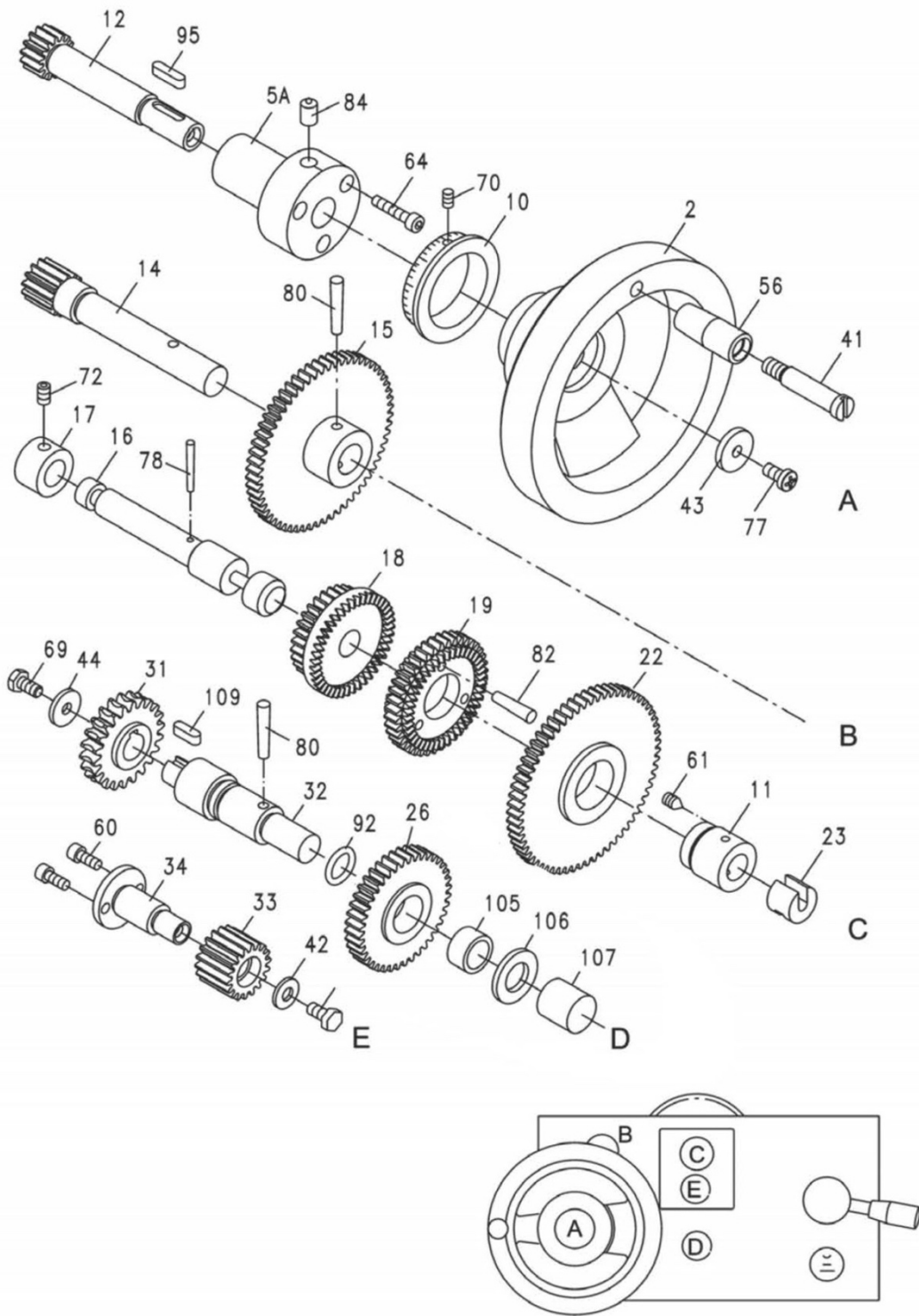


17.4.2 Apron Assembly I – Parts List

Index	Part No.	Description	Size	Qty
1	**	Casting		1
3	**	Housing		1
4	**	Cover		1
7	**	Gib		1
8	**	Handle Hub		1
9	**	Handle		1
13	**	Gear Pin		1
16A	**	Bracket		1
24	**	Shift Lever		1
25	**	Shift Handle		1
28	**	Bracket		1
29	JT1-3016	Half Nut		1
30	JT1-3017	Worm	2m1T	1
40	**	Bar		1
50	**	Oil Filler Plug		1
52	**	Oil Sight		1
53	**	Knob		1
57	**	Spring		1
58	**	Spring		1
59	JT1-3018	Key		1
62	**	Hex Socket Cap Screw	M6 x 12	4
63	**	Hex Socket Cap Screw	M6 x 16	1
64	**	Hex Socket Cap Screw	M6 x 25	2
65	**	Hex Socket Cap Screw	M8 x 30	4
67	**	Screw	M5 x 16	3
68	**	Set Screw	M6 x 12	2
71	**	Set Screw	M6 x 6	3
73	**	Set Screw	M5 x 16	3
74	**	Set Screw	M6 x 35	1
75	**	Set Screw	M6 x 10	1
79	**	Pin	5 x 20	2
81	**	Pin	5 x 32	1
83	**	Pin	8n6 x 12	2
84	**	Oiler	8	2
87	**	Hex Nut	M5	3
88	**	Hex Nut	M6	2
96	**	Steel Ball	5	2
98	**	Plug	Z1/4"	1
108	**	Half Nut Controlling Shaft		1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.4.3 Apron Assembly II – Exploded View

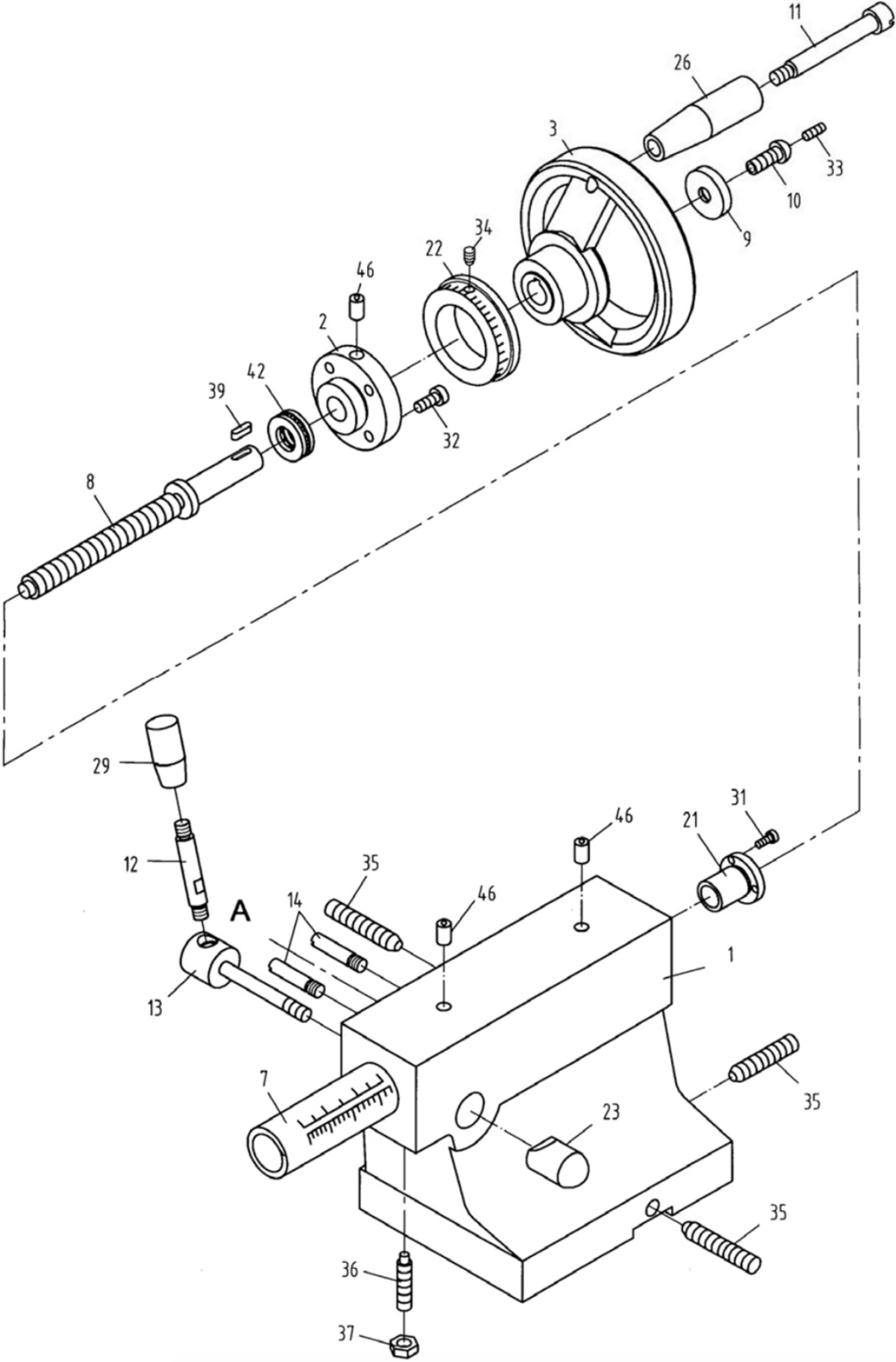


17.4.4 Apron Assembly II – Parts List

Index	Part No.	Description	Size	Qty
2	**	Handwhel		2
5A	**	Hub		1
10	**	Index Ring		1
11	**	Cover		1
12	**	Shaft	1.5m14T	1
14	JT1-3020	Gear Shaft	1.5m13T	1
15	**	Gear	1.5m60T	1
16	**	Shaft		1
17	**	Collar		1
18	**	Gear	1.5m30T	1
19	**	Gear	1.5m40T	1
22	**	Gear		1
26	**	Gear	1.5m40T	1
31	JT1-3019	Gear	2m22T	1
32	**	Shaft		1
33	**	Gear	1.5m18	1
34	**	Shaft		1
41	**	Screw		1
42	**	Washer		1
43	**	Washer		1
44	**	Washer		1
56	**	Handle		1
60	**	Hex Socket CapScrew	M5×12	2
61	**	SetScrew	M6×6	1
64	**	Hex Socket CapScrew	M6×25	3
69	**	Screw	M6×10	2
72	**	Set Screw	M6×10	1
77	**	Screw	M6×12	1
78	**	Pin	3×25	1
80	**	Pin	5×30	2
82	**	Pin	5×25	3
84	**	Oiler	8	1
92	**	O-Ring	20×2.4	1
95	**	Key	A5×18	1
105	**	Collar		1
106	**	Washer		1
107	**	Shaft Plug		1
109	**	Key	5×1	1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.5.1 Tailstock Assembly I – Exploded View

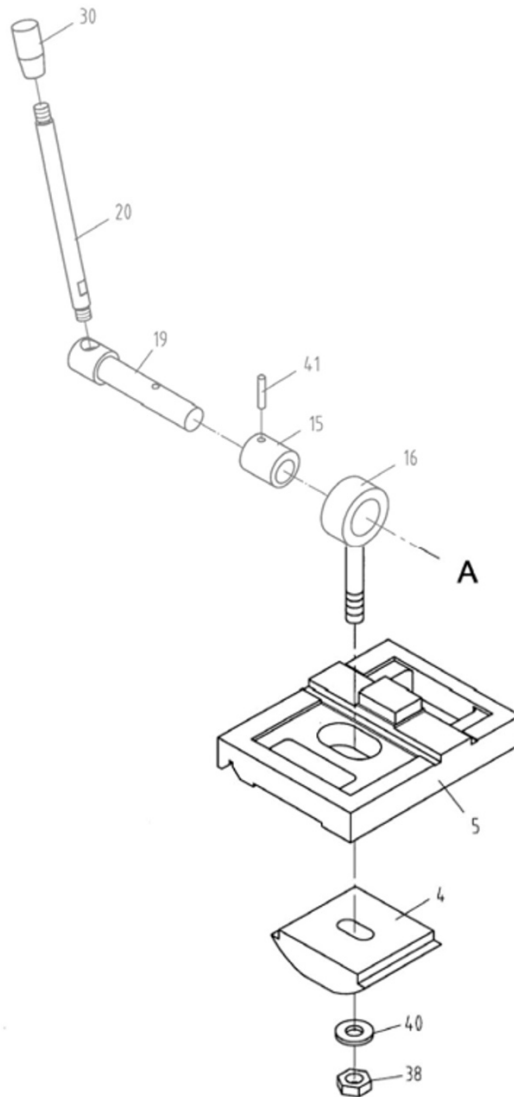


17.5.2 Tailstock Assembly I – Parts List

Index	Part No.	Description	Size	Qty
1	**	Casting		1
2	**	Flange Cover		1
3	**	Hand Wheel		1
7	JT1-3033	Quill		1
8	JT1-3032	Screw		1
9	**	Washer		1
10	**	Screw	M8 x 20	1
11	**	Screw		1
12	**	Lever		1
13	**	Shaft		1
14	**	Screw		2
21	JT1-3031	Nut		1
22	**	Index Ring		1
23	**	Pivot Block		1
26	**	Handle		1
29	**	Handle	M8 x 40	1
31	**	Hex Socket Cap Screw	M4 x 10	3
32	**	Hex Socket Cap Screw	M6 x 16	4
33	**	Set Screw	M5 x 20	1
34	**	Set Screw	M6 x 8	1
35	**	Set Screw	M10 x 45	3
36	**	Screw	M8 x 35	1
37	**	Hex Nut	M8	1
39	**	Key	4 x 15	1
42	**	Bearing	8 102	1
46	**	Oil Ball	8	3
	**	Live Center (not shown)	MT3	1
	**	Arrow Plate (not shown)		1
	**	Scale Plate (not shown)		1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.5.3 Tailstock Assembly II – Exploded View

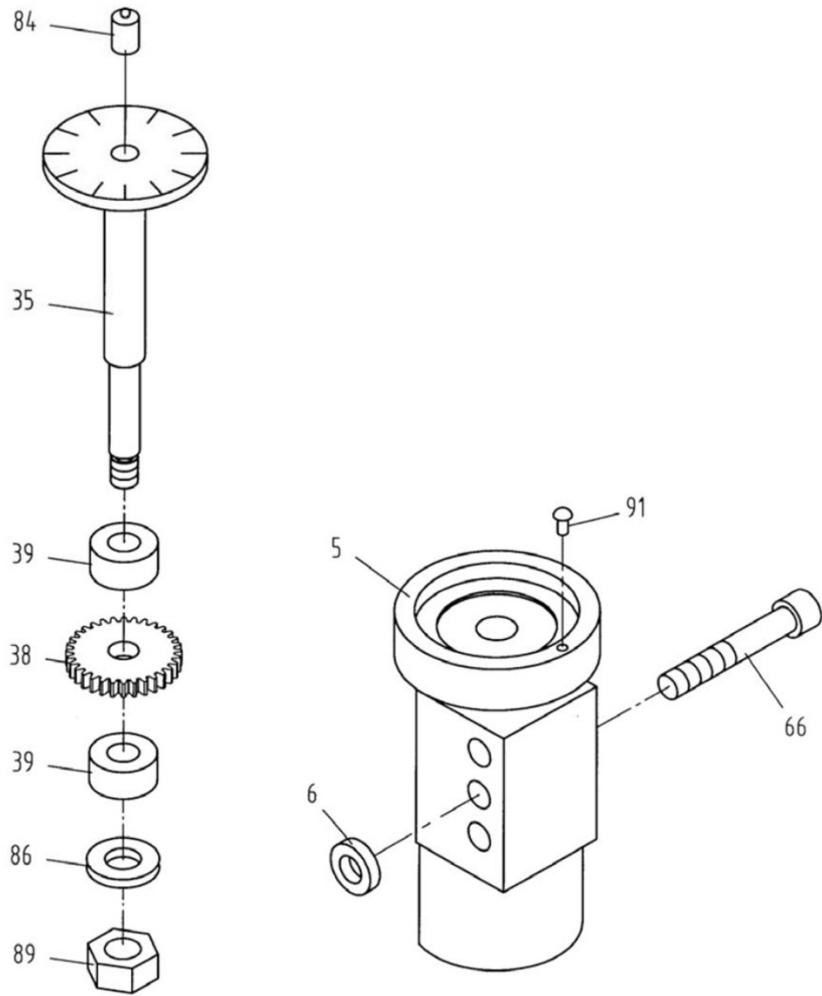


17.5.4 Tailstock Assembly II – Parts List

Index	Part No.	Description	Size	Qty
4	**	Clamp Plate		1
5	**	Base		1
15	**	Collar		1
16	**	Screw		1
19	**	Shaft		1
20	**	Lever		1
30	**	Handle	M10 x 50	1
38	**	Hex Nut	M12	1
40	**	Washer	M12	1
41	**	Pin	5 x 25	1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

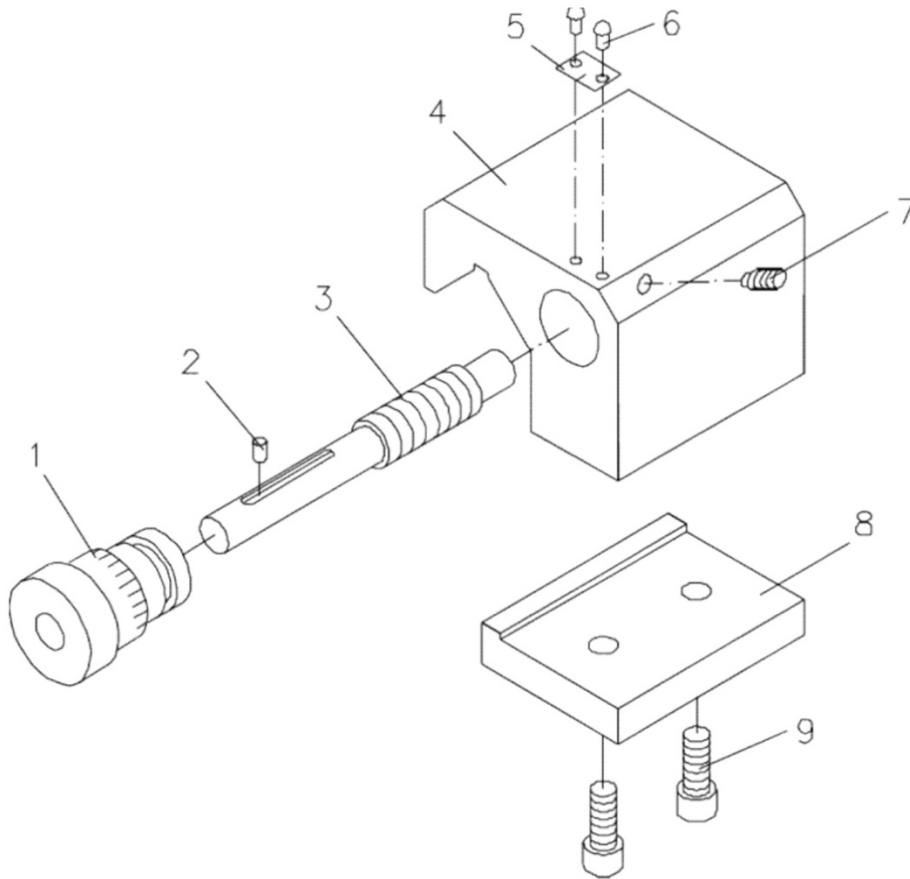
17.6.1 Tread Dial Assembly – Exploded View & Parts List



Index	Part No.	Description	Size	Qty
5.....	**	Threading Dial Body		1
6	**	Washer		1
35	**	Threading Dial Shaft		1
38	**	Gear	1m32T	1
39	**	Spacer.....		2
66	**	Hex Socket Cap Screw	M8 x 50	1
84	**	Oiler.....	8	1
86	**	Lock Washer	M8.....	1
89	**	Hex Nut.....	M8	1
91	**	Rivet	3 x 8.....	1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

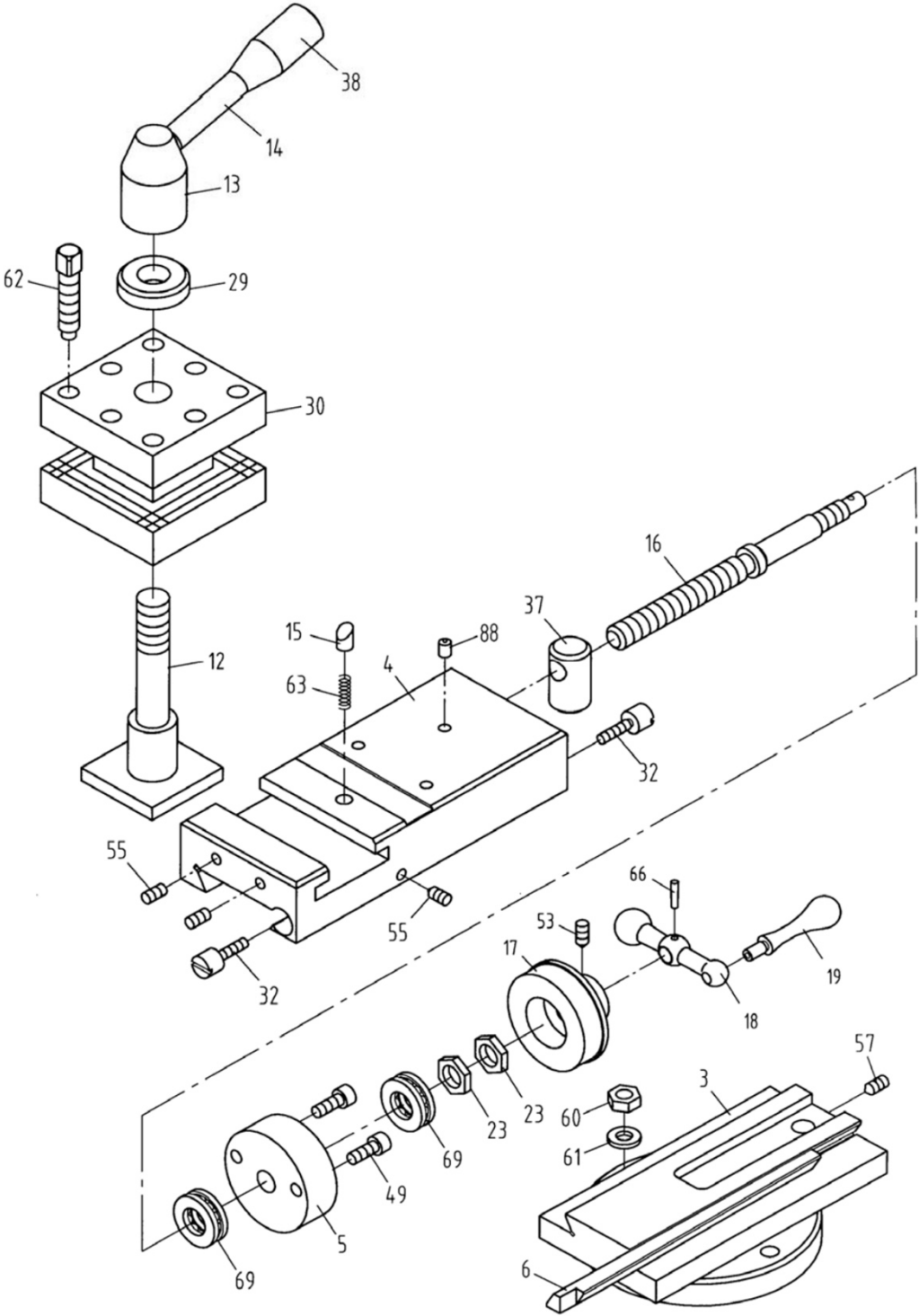
17.7.1 Micro Carriage Stop Assembly – Exploded View & Parts List



Index	Part No.	Description	Size	Qty
1.....	**	Dial.....		1
2.....	**	Pin	B3 x 6.....	1
3.....	**	Axle.....		1
4.....	**	Stop.....		1
5.....	**	Indicator Plate.....		1
6.....	**	Pin	3 x 8.....	2
7.....	**	Socket Set Screw.....	M6 x 10.....	1
8.....	**	Clamping Plate.....		1
9.....	**	Hex Socket Cap Screw	M6 x 20.....	2

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.8.1 Top Slide, Tool Post, Saddle, and Cross Slide I – Exploded View

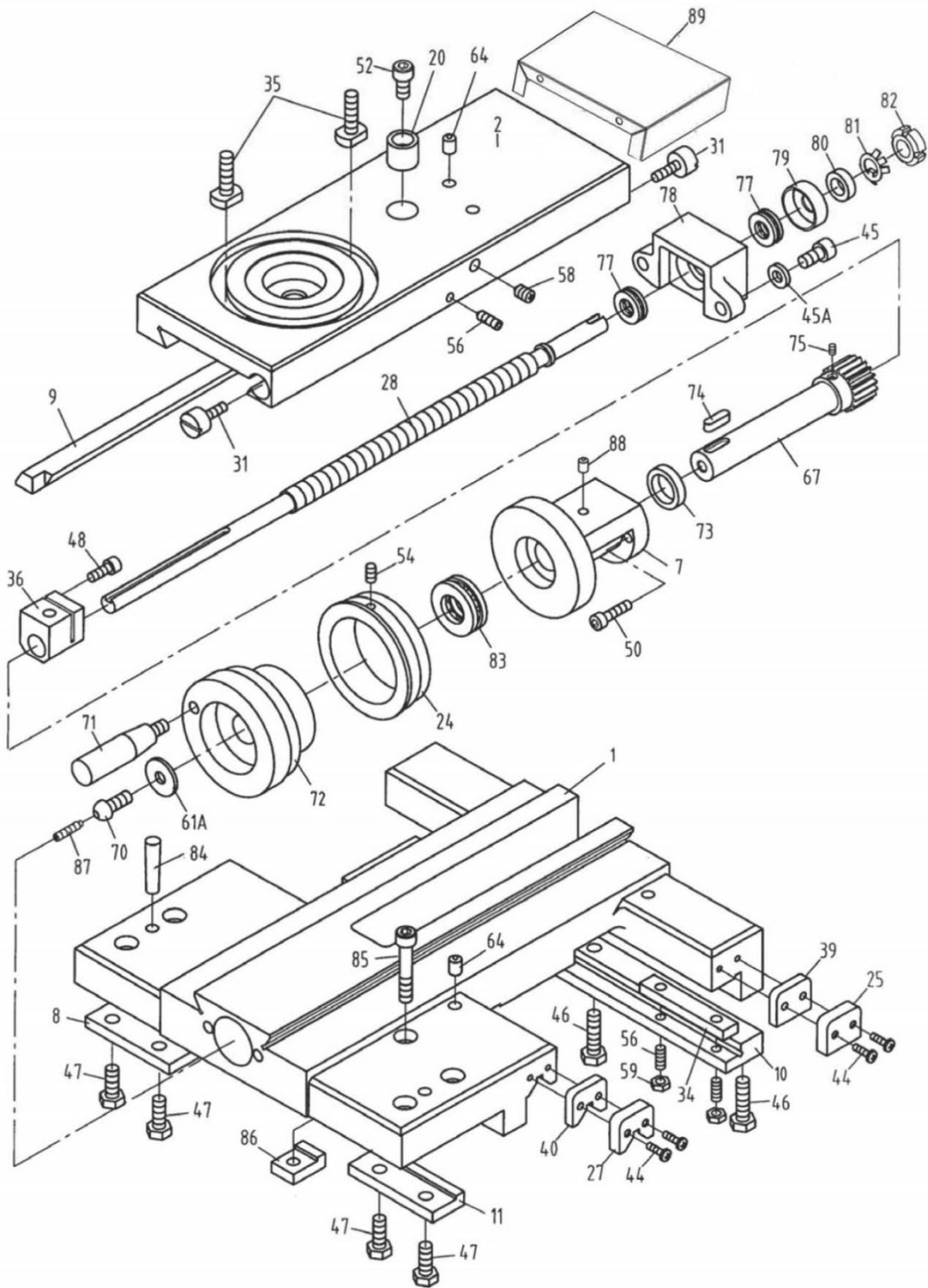


17.8.2 Top Slide, Tool Post, Saddle, and Cross Slide I – Parts List

Index	Part No.	Description	Size	Qty
3	**	Swivel Slide		1
4	**	Top Slide		1
5	**	Collar		1
6	JT1-3021	Gib		1
12	**	Screw		1
13	**	Handle Base		1
14	**	Handle Shaft		1
15	**	Stop		1
16	JT1-3022	Screw		1
17	**	Index Ring		1
18	**	Ball Handle		1
19	**	Handle		1
23	**	Nut		2
29	**	Washer		1
30	**	Post Base		1
32	**	Gib Adjusting Screw		2
37	JT1-3023	Nut		1
38	**	Knob		1
49	**	Hex Socket Cap Screw	M6 x 20	2
53	**	Set Screw	M6 x 6	1
55	**	Set Screw	M6 x 10	3
57	**	Set Screw	M8 x 8	1
60	**	Hex Nut	M8	2
61	**	Washer	M8	1
62	**	Screw	M10 x 40	8
63	**	Spring	0.6 x 4x 18	1
66	**	Pin	3 x 16	1
69	**	Ball Bearing		2
	**	Top Slide Assembly w/o Tool Post		1
70	**	Screw	M8 x 20	1
88	**	Oil Ball	6	1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.8.3 Top Slide, Tool Post, Saddle, and Cross Slide II – Parts List

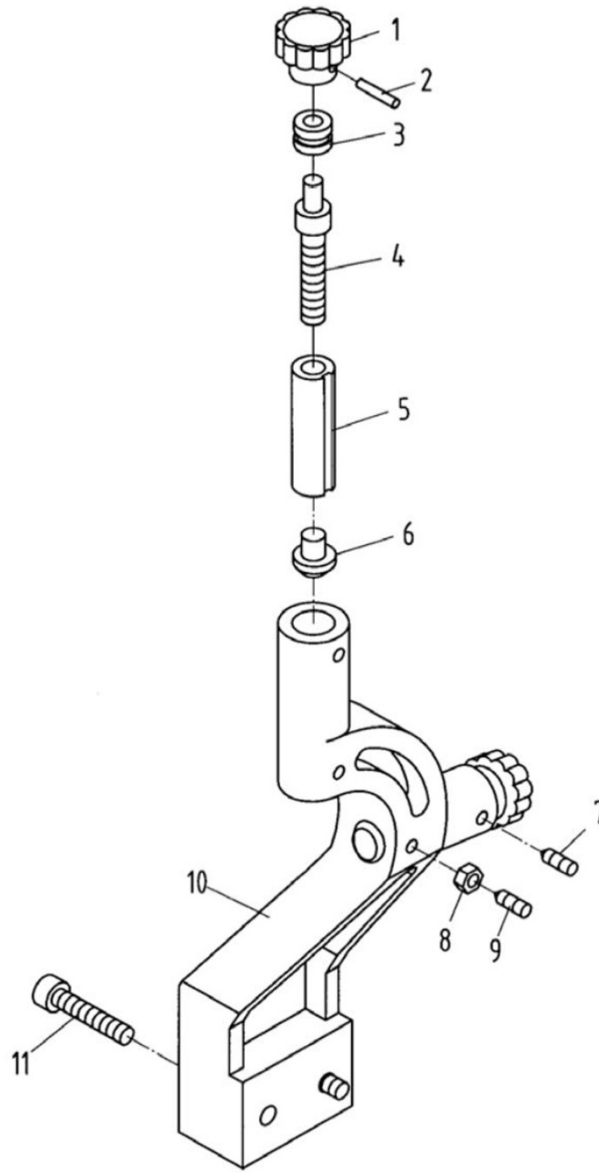


17.8.4 Top Slide, Tool Post, Saddle, and Cross Slide II – Parts List

Index	Part No.	Description	Size	Qty
1	**	Saddle		1
2	**	Cross Slide		1
7	**	Bearing Housing		1
8	**	Strip		1
9	JT1-3026	Gib		1
10	**	Strip		1
11	**	Front Strip		1
20	**	Collar		1
24	**	Index Ring		1
25	JT1-3027	Plate		2
27	JT1-3028	Plate		2
28	JT1-3024	Screw		1
31	**	Gib Adjusting Screw		2
34	**	Gib Strip		2
35	**	T-Bolt		2
36	JT1-3025	Nut		1
39	JT1-3029	Wiper		2
40	JT1-3030	Wiper		2
44	**	Screw	M4 x 12	8
45	**	Hex Socket Cap Screw	M8 x 25	2
45A	**	Lock Washer	M8	2
46	**	Screw	M8 x 20	3
47	**	Screw	M8 x 20	4
48	**	Hex Socket Cap Screw	M6 x 16	1
50	**	Hex Socket Cap Screw	M6 x 25	2
52	**	Hex Socket Cap Screw	M8 x 16	1
54	**	Set Screw	M6 x 8	1
56	**	Set Screw	M6 x 25	5
58	**	Set Screw	M8 x 10	1
59	**	Hex Nut	M6	4
61	**	Washer	M8	1
61A	**	Washer		1
64	**	Oil Ball	8	5
67	**	Gear Shaft		1
70	**	Screw	M8 x 20	1
71	**	Handle		1
72	**	Compound Handle		1
73	**	Spacer		1
74	**	Key		1
75	**	Set Screw	M3 x 8	1
76	**	Key	5 x 5 x 30	1
77	**	Thrust Bearing	8101	2
78	**	Bearing Housing		1
79	**	Bearing Dust Cover		1
80	**	Washer		1
81	**	Star Washer		1
82	**	Locking Nut		1
83	**	Thrust Bearing	8104	1
84	**	Taper Pin	8 x 40	2
85	**	Hex Socket Cap Screw	M8 x 50	1
86	**	Locking Washer		1
87	**	Screw	M5 x 20	1
88	**	Oil Ball	6	1
89	**	Splash Guard		1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

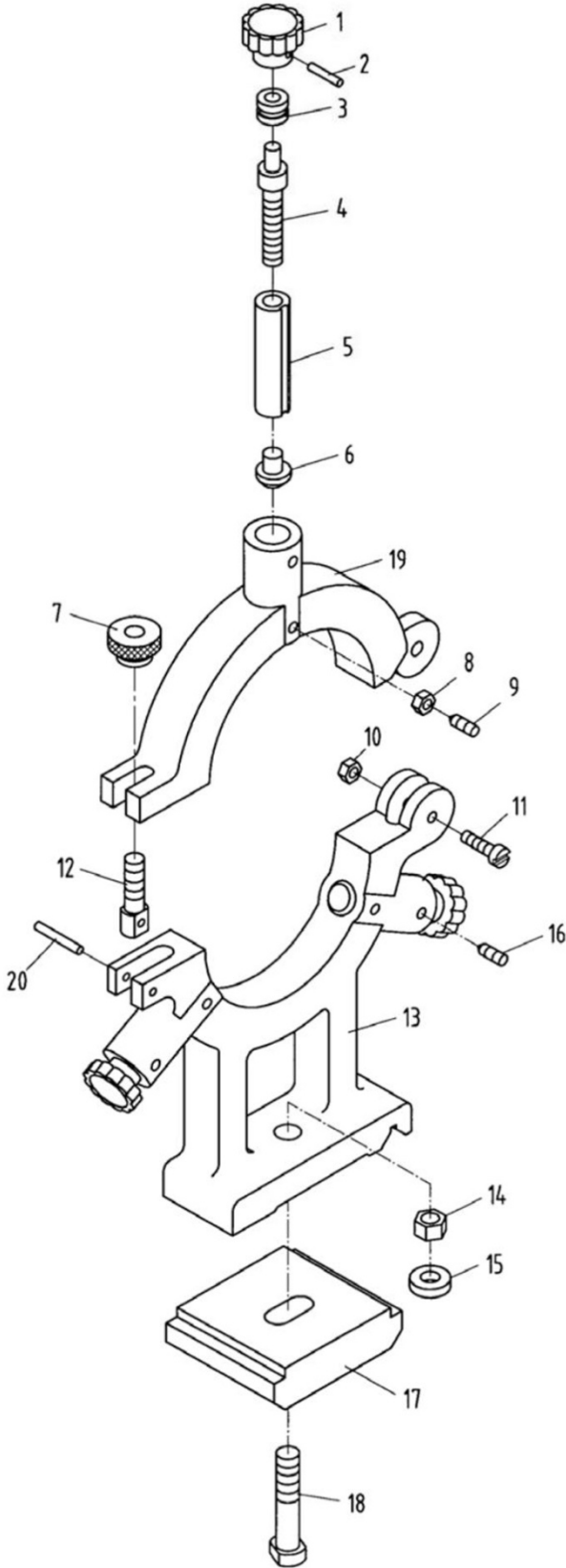
17.9.1 Follow Rest Assembly – Exploded View & Parts List



Index	Part No.	Description	Size	Qty
1	**	Knob		2
2	**	Pin	3 x 18	2
3	**	Bushing		2
4	**	Screw		2
5	**	Sleeve		2
6	**	Brass Finger		2
7	**	Set Screw	M6 x 8	2
8	**	Nut	M6	2
9	**	Set Screw	M6 x 16	2
10	**	Base Casting		1
11	**	Hex Socket Cap Screw	M8 x 35	2
	**	Follow Rest Complete		1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.10.1 Steady Rest Assembly – Exploded View

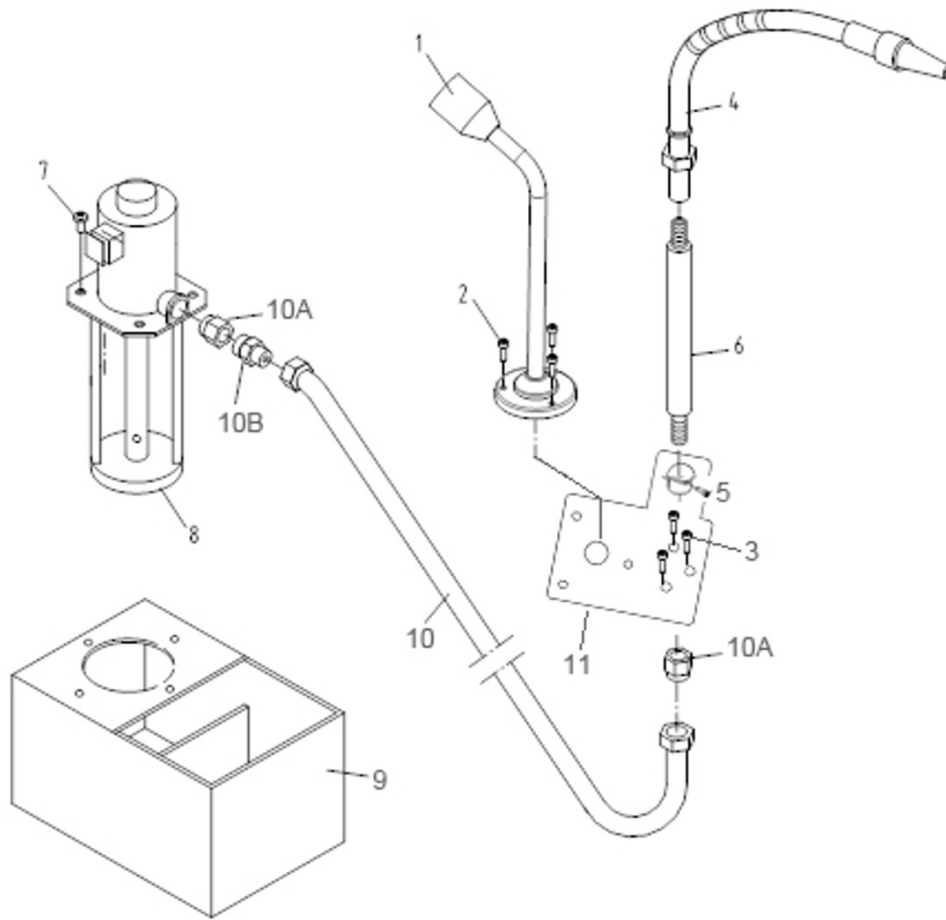


17.10.2 Steady Rest Assembly – Parts List

Index	Part No.	Description	Size	Qty
1	**	Knob		3
2	**	Pin	3 x 18	3
3	**	Bushing		3
4	**	Screw		3
5	**	Sleeve		3
6	**	Brass Finger		3
7	**	Lock Knob		1
8	**	Nut	M6	3
9	**	Set Screw	M6 x 16	3
10	**	Nut	M6	1
11	**	Bolt	M6 x 30	1
12	**	Pivot Bolt		1
13	**	Base Casting		1
14	**	Nut	M12	1
15	**	Flat Washer	M12	1
16	**	Set Screw	M6 x 8	3
17	**	Clamp Rod		1
18	**	Clamp Screw		1
19	**	Top Casting		1
20	**	Pin	5 x 25	1
	**	Steady Rest Complete		1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

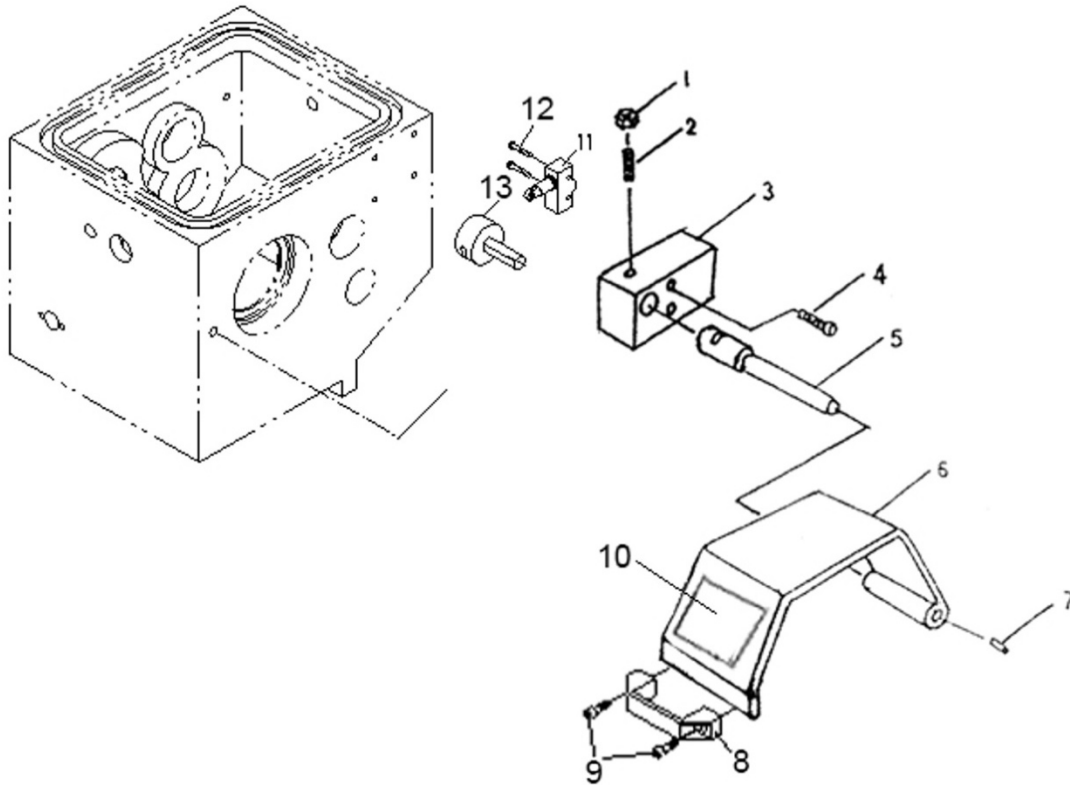
17.11.1 Coolant and Work Light Assembly – Exploded View & Parts List



Index	Part No.	Description	Size	Qty
1	**	Work Light		1
2	**	Hex Socket HdCap Screw	M6x20	3
3	**	Hex Socket HdCap Screw	M5x20	3
4	**	Coolant Nozzle	C2-77	3
5	**	Hex Socket HdCap Screw	M6x16	1
6	**	Rubber Tube		1
7	**	Hex Socket HdCap Screw	M6x10	4
8	**	Coolant Pump	3PH	1
9	**	Coolant Tank		1
10	**	Tube	600 mm	1
10A	**	Pipe Joint		1
10B	**	Pipe Joint		1
11	**	Support		1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

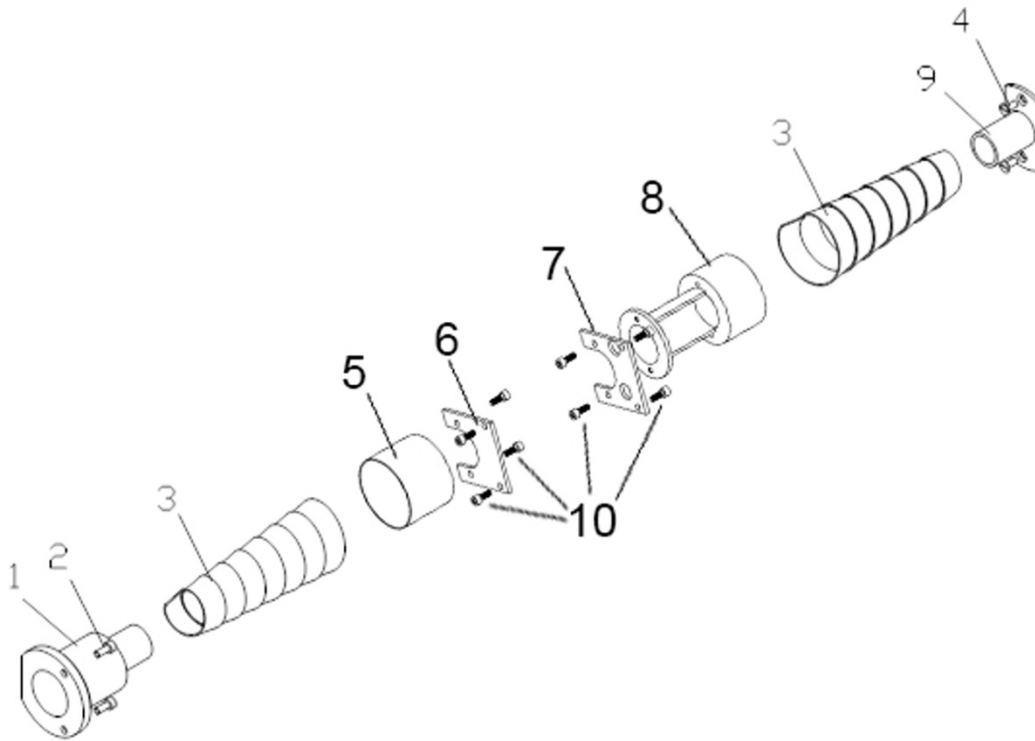
17.12.1 Chuck Guard Assembly – Exploded View & Parts List



Index	Part No.	Description	Size	Qty
1	**	Nut	M6	1
2	**	Hex Socket Cap Screw	M6x16	1
3	**	Switch Box		1
4	**	Hex Socket Cap Screw	M6x45	2
5	**	Shaft		1
6	**	Protecting cover		1
7	**	Pin	M4x12	1
8	**	Handle		1
9	**	Hex Socket Cap Screw	M6x12	2
10	**	Protecting Guard Visual Glass	6	5
11	**	Stroke Switch (op.)	TM-1307	1
12	**	Slotted Pan Head Screw (op.)	M4x25	2
13	**	Shaft (op.)		1

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

17.13.1 Lead Screw Cover Assembly – Exploded View & Parts List

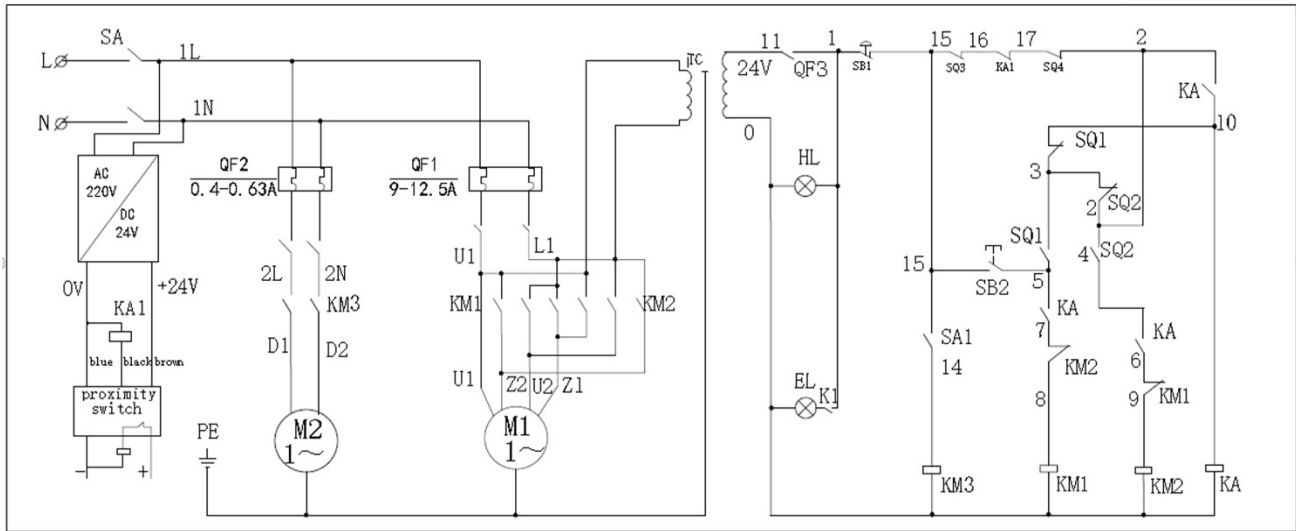


Index	Part No.	Description	Size	Qty
1	**	Left Flange		1
2	**	Hex Socket HdCap Screw	M5x12	2
3	**	Telescoping Sleeve		2
4	**	Hex Socket HdCap Screw	M5x12	2
5	**	Cover		1
6	**	Left Flange Bracket		1
7	**	Right Flange Bracket		1
8	**	Cover		1
9	**	Right Flange		1
10	**	Hex Socket HdCap Screw	M8x6	8

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

18.0 Wiring Diagram

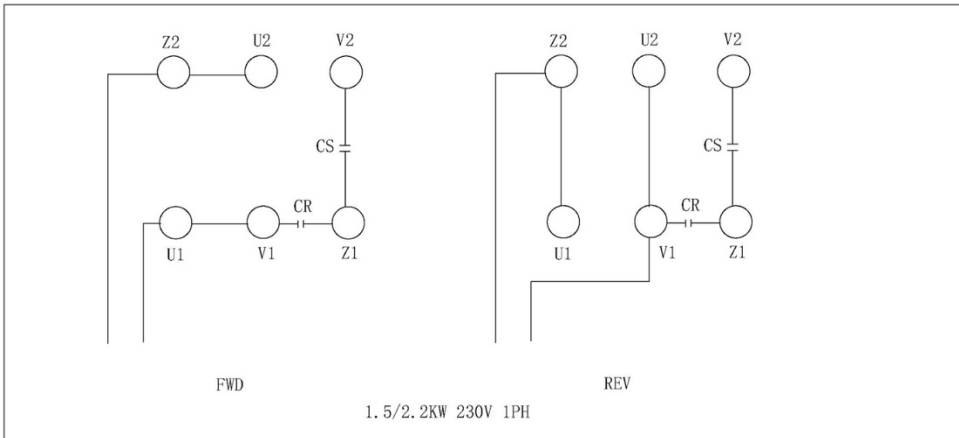
18.1 GH-1340 Wiring Diagram



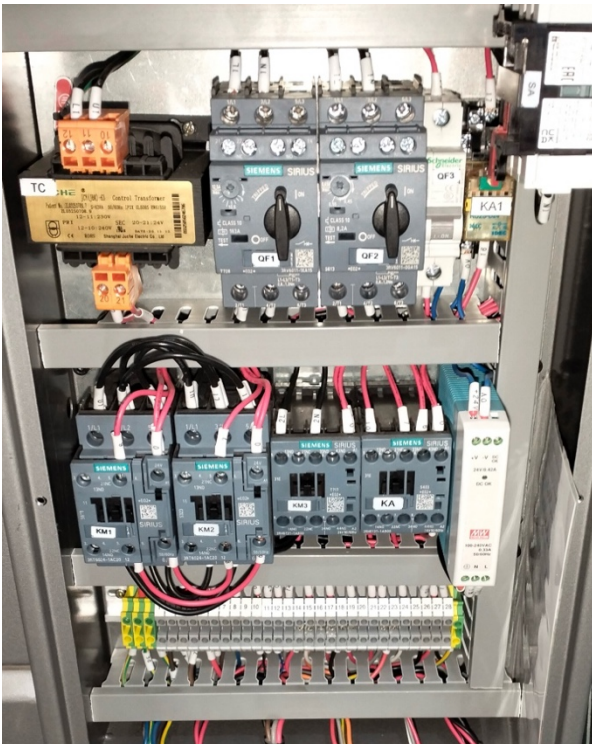
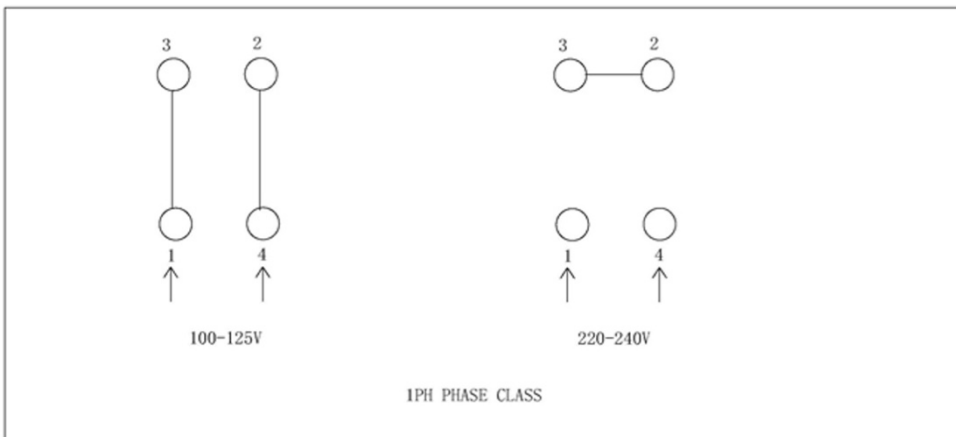
Index	Part No.	Description	Type	Spec.
SA.....**		Power Switch Schneider.....	V01. AC-3 S:lth: 20A.....	690V50/60Hz
QF1.....**		Thermal protector Siemens.....	3RV6011-1KA15 9-12.5A.....	600V 12.5A
QF2.....**		Thermal protector Siemens.....	3RV6011-OEA15 0.4-0.63A.....	400V 100KAS
QF3.....**		Circuit Breaker Schneider.....	OSMC65H1D3/1PD3.....	240V
TC.....JT1-3038.....		Transformer.....	JCY-63VA.....	240V 24V
SB1.....JT1-3039.....		E-Stop Button.....	YW-E01.....	Ui: 600V lth: 10A
KM1.....**		AC Contactor Siemens.....	3RT6024-1AC20 12A.....	Ui=690V ie=40A 24V/50HZ
KM2.....**		AC Contactor Siemens.....	3RT6024-1AC20 12A.....	Ui=690V ie=40A 24V/50HZ
KM3.....**		AC Contactor Siemens.....	3RH6131-1AB00 10A.....	Ui=690V 10A 240V AC
KA.....**		Contactory Relay.....	3RH6131-1AB00.....	24V 50/60Hz
KA1.....**		Intermediate Relay.....	RU2S-D24.....	DC24V
SA1.....**		Pump Switch.....	YW-E10 24V.....	AC15 240V 3A
SB2.....**		Jog Button.....	YW-E10.....	Ui: 600v lth: 10A
SQ.....**		Proximity Switch.....	PNP NC, 4mm.....	DC6-36V
SQ1.....JT1-3037.....		Spindle Forward Switch.....	TM-1704.....	15A 250VAC
SQ2.....JT1-3037.....		Spindle Forward Switch.....	TM-1704.....	15A 250VAC
SQ3.....JT1-3040.....		Foot Brake Switch.....	TM-1701.....	15A 250VAC
SQ4.....**		Door Switch OMRON.....	D4NS-1AF.....	AC15 3A 240V
M1.....**		Motor.....	YL-90L-4.....	230V 60Hz 9.3A 1.5 KW
M2.....**		Pump CSA.....	MC-8150 90W 1PH.....	0.7/0.4A 120/240V
EL.....**		Work Lamp.....	24V 3W.....	LED
HL.....**		Power Light.....	YW-EQ 24V.....	24VAC LED
PS.....**		Power Source.....	MW MDR-10-24.....	100/240V AC
.....JT1-3041.....		Limit Switch for Belt Cover.....	M: QKS8.....	

** These parts are shown for reference only and are not available for order individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores.

18.2 GH-1340 Motor Wiring Diagram



18.3 GH-1340 Pump Motor Wiring Diagram



This page intentionally left blank.

This page intentionally left blank.

This page intentionally left blank.



427 New Sanford Road
LaVergne, Tennessee 37086
Phone: 800-274-6848
www.jettools.com