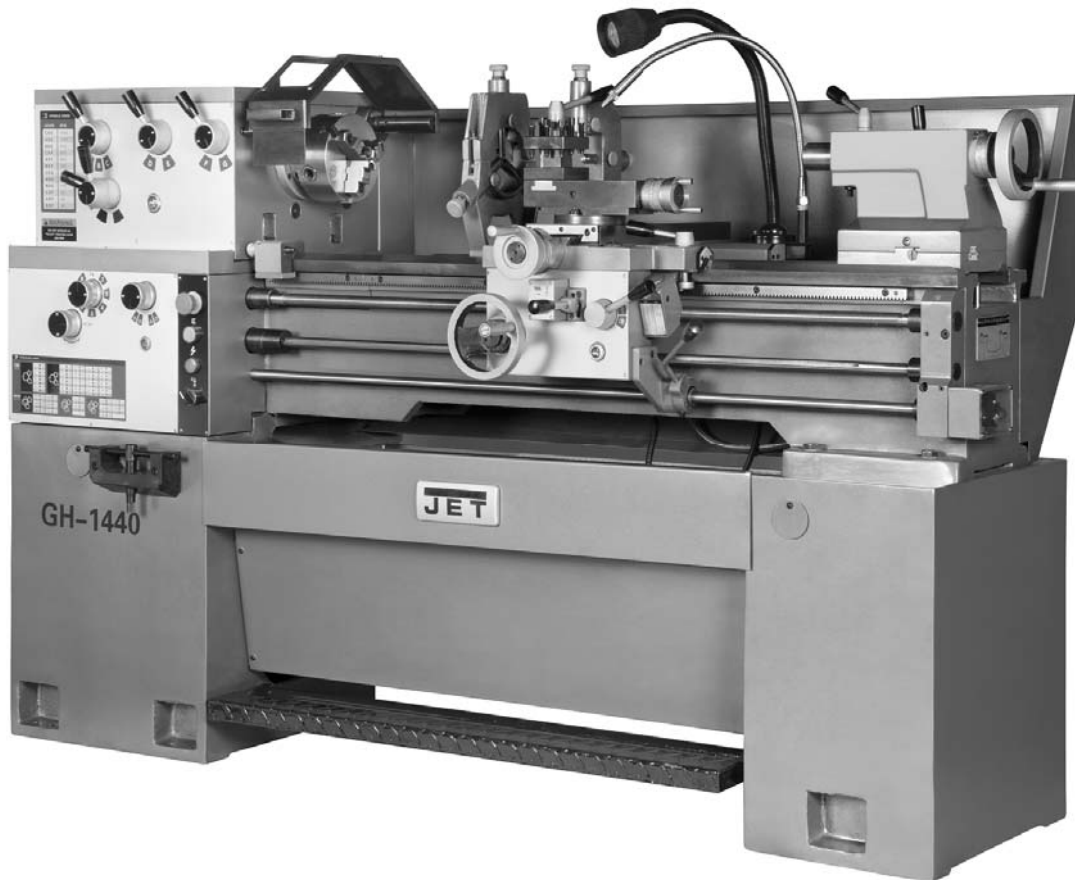




# Operating Instructions and Parts Manual

## Geared Head Lathe 14x40 inch

Model GH-1440



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

**Part No. M-322830**  
Edition 2 12/2017  
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## 1.0 IMPORTANT SAFETY INSTRUCTIONS

**Read and understand the entire owner's manual before attempting set-up or operation of this lathe.**

**WARNING: To reduce risk of injury:**

1. This machine is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe use of lathes, do not use this machine until proper training and knowledge have been obtained.
2. Keep guards in place. Safety guards must be kept in place and in working order.
3. Remove adjusting keys and wrenches. Before turning on machine, check to see that any adjusting wrenches are removed from the tool.
4. Reduce the risk of unintentional starting. Make sure switch is in the OFF position before plugging in the tool.
5. Do not force tools. Always use a tool at the rate for which it was designed.
6. Use the right tool. Do not force a tool or attachment to do a job for which it was not designed.
7. Maintain tools with care. Keep tools sharp and clean for best and safest performance. Follow instructions for lubrication and changing accessories.
8. Always disconnect the tool from the power source before adjusting or servicing.
9. Check for damaged parts. Check for alignment of moving parts, breakage of parts, mounting, and any other condition that may affect the tool's operation. A guard or any part that is damaged should be repaired or replaced.
10. Keep work area clean. Cluttered areas and benches invite accidents.
11. Keep work area well lighted.
12. Keep children and visitors away. All visitors should be kept a safe distance from the work area.
13. Make the workshop child proof. Use padlocks, master switches, and remove starter keys.
14. Wear proper apparel. Loose clothing, gloves, neckties, rings, bracelets, or other jewelry may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Do not wear any type of glove.
15. Always wear ANSI Z87.1 approved safety glasses or face shield while using this machine. (Everyday eyeglasses only have impact resistant lenses; they are *not* safety glasses.)
16. Do not overreach. Keep proper footing and balance at all times.
17. Do not place hands near the chuck or workpiece while the machine is operating.
18. Do not perform any set-up work while machine is operating.
19. Read and understand all warnings posted on the machine.
20. This manual is intended to familiarize you with the technical aspects of this lathe. It is not, nor was it intended to be, a training manual.
21. CALIFORNIA PROPOSITION 65 WARNING: This product contains chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.
22. This product, when used for welding, cutting, or working with metal, produces fumes, gases, or dusts which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health and Safety Code Section 25249.5 et seq.)
23. Do not attempt to adjust or remove tools during operation.
24. Never stop a rotating chuck or workpiece with your hands.
25. Choose a low spindle speed when working unbalanced workpieces, and for threading and tapping operations.
26. Do not exceed the maximum speed of the workholding device.
27. Do not exceed the clamping capacity of the chuck.
28. Workpieces longer than 3 times the chucking diameter must be supported by the tailstock or a steady rest.
29. Avoid small chuck diameters with large turning diameters.
30. Avoid short chucking lengths and small chucking contact.
31. Turn off the machine and disconnect from power before cleaning. Use a brush to remove shavings or debris — do not use bare hands.
32. Do not stand on the machine. Serious injury could occur if the machine tips over.

33. Never leave the machine running unattended. Turn the power off and do not leave the machine until moving parts come to a complete stop.
34. Remove loose items and unnecessary work pieces from the area before starting the machine.

35. Do not operate the lathe in flammable or explosive environments. Do not use in a damp environment or expose to rain.

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



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



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

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### 3.0 About this manual

This manual is provided by JET, covering the safe operation and maintenance procedures for a JET Model GH-1440 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.

This manual is not intended to be a training guide for lathe operations, or tool and workpiece selection. Consult a machinery handbook or shop supervisor for information on proper speed and feed rates for specific materials, or type of cutter suitable for a particular operation. Whatever accepted methods or materials are used, always make personal safety a priority.

Note: The Figures in this manual may or may not show your exact lathe model, but the procedures will be identical.

If there are questions or comments, please contact your local supplier or JET. JET can also be reached at our web site: [www.jettools.com](http://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: <http://www.jettools.com/us/en/service-and-support/warranty/registration/>

## 4.0 Specifications

Table 1

Model number	<b>GH-1440-1</b>	<b>GH-1440-3</b>
Stock number	322830	322840
<b>Motor and Electricals</b>		
Motor type	TEFC induction	
Horsepower	3 HP (2.2 kW)	
Phase	single	3
Voltage	230V only	230/460V (prewired 230V)
Cycle	60 Hz	
Listed FLA (full load amps)	18 A	8.3 / 4.2 A
Start capacitor	350V/400 $\mu$ F	n/a
Run capacitor	450v/40 $\mu$ F	n/a
Motor speed	1720 RPM	
Power cord	3 x 2.5 mm <sup>2</sup>	4x 2.5 mm <sup>2</sup>
Power plug installed	n/a	
Recommended circuit size <sup>1</sup>	25 A	15 A
Sound emission without load <sup>2</sup>	78dB	78dB
<b>Capacities</b>		
Swing over bed	14 in. (356 mm)	
Swing over cross slide	8-3/16 in. (208 mm)	
Distance between centers	40 in. (1016 mm)	
Swing through gap	20 in. (508 mm)	
Length of gap	9-3/8 in. (238 mm)	
Steady rest capacity	1/4 to 3-1/2 in. (6.4 to 89 mm)	
Follow rest capacity	1/4 to 2-5/8 in. (6.4 to 66.7 mm)	
<b>Headstock</b>		
Hole through spindle	1-1/2 in. (38 mm)	
Spindle nose	D1-4	
Taper in spindle nose	MT5	
Spindle taper adaptor	MT3	
Spindle bearing type	Taper roller bearing	
Number of spindle speeds	12	
Range of spindle speeds	40-1800 RPM	
<b>Gearbox</b>		
Number of longitudinal and cross feed rates	40	
Range of longitudinal feeds	0.0012 – 0.0294 in./rev	
Range of cross feeds	0.0004 – 0.0103 in./rev	
Number of inch threads	40	
Range of inch threads	4 – 112 TPI	
Number of metric threads	23	
Range of metric threads	0.45 – 7.5 mm	
Leadscrew	7/8 x 49-1/2 in. 8TPI	
Feed rod diameter	3/4 in. (19 mm)	
<b>Compound and carriage</b>		
Tool post type	4-way	
Maximum tool size	5/8 x 5/8 in.	
Maximum compound slide travel	3-1/2 in. (89 mm)	
Maximum cross slide travel	6-3/8 in. (162 mm)	
Maximum carriage travel	37-1/2 in. (953 mm)	

	GH-1440-1	GH-1440-3
<b>Tailstock</b>		
Tailstock spindle travel	4-3/4 in. (121 mm)	
Diameter of tailstock spindle	1-3/4 in. (45 mm)	
Taper in tailstock spindle	MT3	
<b>Main materials</b>		
Headstock	Cast iron	
Bed	Cast iron	
Apron/Saddle	Cast iron	
Tailstock	Cast iron	
Splash guard	Steel	
Stand	Steel	
<b>Dimensions</b>		
Bed width	10-3/16 in. (259 mm)	
Bed length	54-1/2 in. (1384 mm)	
Height of bed from floor	12-3/4 in. (324 mm)	
Overall dimensions, L x W x H	74-4/5 x 28 x 46 in. (1900 x 635 x 1168 mm)	
Shipping dimensions, L x W x H	78-3/8 x 30 x 55 in. (1990 x 760 x 1400 mm)	
<b>Weights</b>		
Net weight, approx.	2,116 lb (960 kg)	
Shipping weight, approx.	2,336 lb (1060 kg)	

<sup>1</sup> subject to local and national electrical codes.

<sup>2</sup> The specified values are emission levels and are not necessarily to be seen as safe operating levels. As workplace conditions vary, this information is intended to allow the user to make a better estimation of the hazards and risks involved only.

L = length, W = width, H = height, TPI = threads per inch

n/a = not applicable

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

#### 4.1 Cross Slide T-slot dimensions

These dimensions (in millimeters) can be used to cut an appropriately sized block for a quick change tool post.

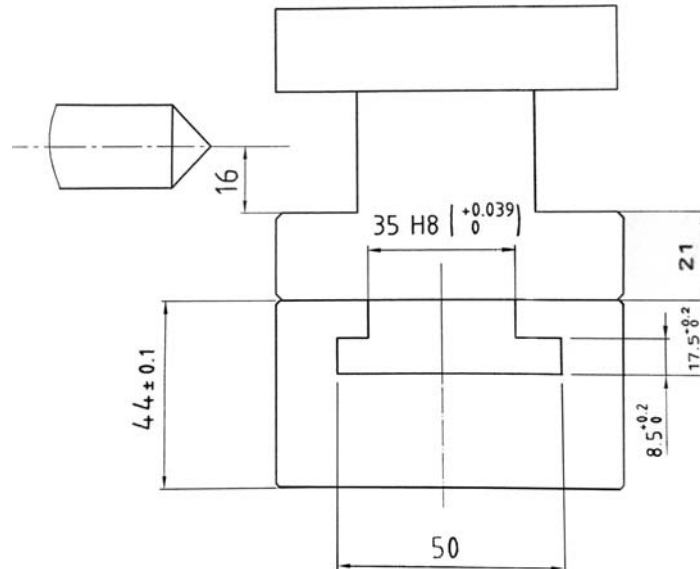


Figure A1

## 5.0 Uncrating

Open shipping crate and check for shipping damage. Report any damage immediately to your distributor and shipping agent. Do not discard any shipping material until the Lathe is assembled and running properly.

Compare the contents of your crate with the following parts list to make sure all parts are intact. Missing parts, if any, should be reported to your distributor.

**⚠WARNING** Read and understand the entire contents of this manual before attempting set-up or operation. Failure to comply may cause serious injury!

### 5.1 Contents of shipping container

- 1 Lathe
- 1 Steady Rest (mounted on lathe)
- 1 Follow Rest (mounted on lathe)
- 1 6" Three Jaw Chuck w/ Top Reversing Jaws (mounted on lathe)
- 1 8" Four Jaw Chuck with Backplate (strapped to container)
- 1 12" Face Plate (strapped to container)
- 1 Backplate
- 1 Tool Box (p/n GH1440-TBCP)

#### Tool Box Contents (p/n GH1440-TBCP):

(Fig. 1)

- 1 No. 1 Cross Point Screwdriver
- 1 No. 1 Flat Blade Screwdriver
- 4 Open End Wrench (9-11, 10-12, 12-14, 17-19mm)
- 7 Hex Socket Wrench (2,2.5, 3, 4, 5, 6, 8mm)
- 2 Shear Pins
- 1 30T Change Gear
- 1 32T Change Gear
- 2 40T Change Gear
- 2 Handles
- 1 Can, Gray Touchup Paint
- 1 Oil Gun
- 1 Live Center
- 2 No. 3 Morse Taper Dead Center
- 1 No. 5 to No. 3 Spindle Sleeve
- 6 Leveling Pads
- 6 Leveling Bolts with Hex Nuts
- 2 Hex Socket Cap Screw
- 1 Chuck Key
- 1 Key for Cam Locks
- 1 Tool Post Wrench
- 1 Taper Piece
- 1 Operating Instructions and Parts Manual
- 1 Product Registration Card

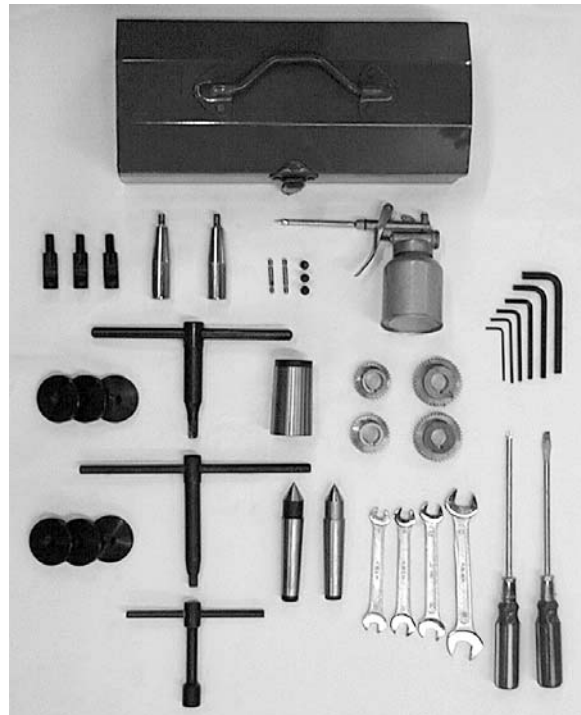


Figure 1

## 6.0 Installation

1. Finish removing the wooden crate from around the lathe.
2. Unbolt the lathe from the shipping crate bottom.
3. Choose a location for the lathe that is dry, has good lighting, and has enough room to service the lathe on all four sides
4. Place two steel rods or pipes (of sufficient strength) into four holes (A, Fig. 2) of lathe stand. Sling the lathe with properly rated straps. **Do not lift by spindle.** With adequate lifting equipment, slowly raise the lathe off the shipping crate bottom. Make sure lathe is balanced before moving.
5. To avoid twisting the bed, the lathe's location must be absolutely flat and level. Check for a level condition using a machinist's precision level on the bedways both front to back and side to side. The leveling pads included in the tool box and the leveling screws in the lathe base will help you to reach a level condition. **The lathe must be level to be accurate.**
6. Clean all rust protected surfaces using a mild commercial solvent, kerosene or diesel fuel. Do not use paint thinner, gasoline, or lacquer thinner, as these can damage painted surfaces. Cover all cleaned surfaces with a light film of Mobil DTE® Oil Heavy Medium.
7. Open the end gear door. Clean all components of the end gear assembly and coat all gears with Mobilith® AW 1. Close the door.



Figure 2

### 6.1 Chuck preparation (three jaw)

**⚠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

1. Support the chuck while turning three camlocks (Fig. 3) 1/4 turn counter-clockwise with the chuck key enclosed in the tool box.
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.

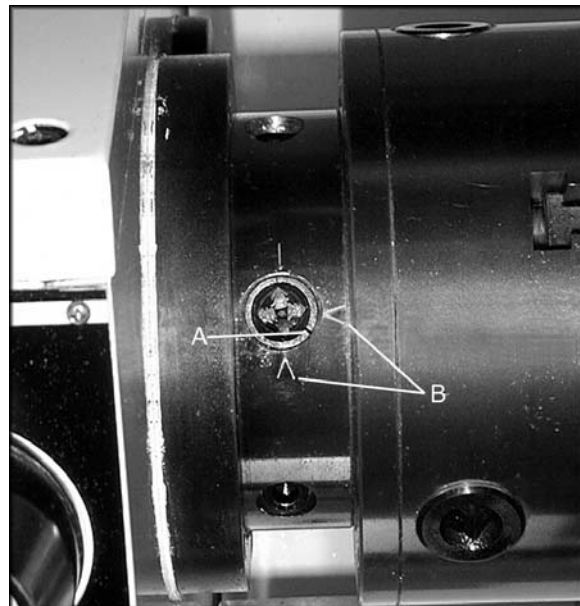


Figure 3

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 up to the spindle nose and press onto the spindle. Tighten in place by turning the cam locks 1/4 turn clockwise. The index mark (A, Fig. 3) on the camlock should be between the two indicator arrows (B, Fig. 3). If the index mark is not between the two arrows, remove the chuck and adjust the camlock studs by either turning out one full turn (if cams will not engage) or turning in one full turn (if cams turn beyond indicator marks).
6. Install chuck and tighten in place.

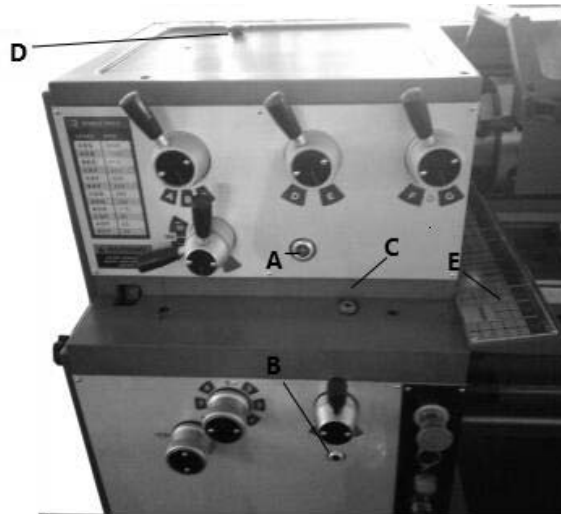


Figure 4

## 7.0 Lubrication

**CAUTION** Lathe must be serviced at all lubrication points and all reservoirs filled to operating level before the lathe is put into service. Failure to comply may cause serious damage to the lathe.

1. **Headstock** – Oil must be up to indicator mark in oil sight glass (A, Fig. 4). Top off with Mobil DTE® Oil Heavy Medium. Fill by pulling plug (D, Fig. 4). To drain, remove drain plug (A, Fig. 5) with an 8mm hex wrench. Drain oil completely and refill after the first month of operation. Clean out any metal shavings. Then, change oil in the headstock annually.
2. **Gearbox** – Oil must be up to indicator mark in oil sight glass (B, Fig. 4). Top off with Mobil DTE® Oil Heavy Medium. Fill by lifting off thread chart cover (E, Fig. 4) and remove plug (C, Fig. 4) with an 8mm hex wrench. To drain, remove drain plug (A, Fig. 6) with an 8mm hex wrench. Drain oil completely and refill after the first month of operation. Then, change oil in the Gearbox annually.

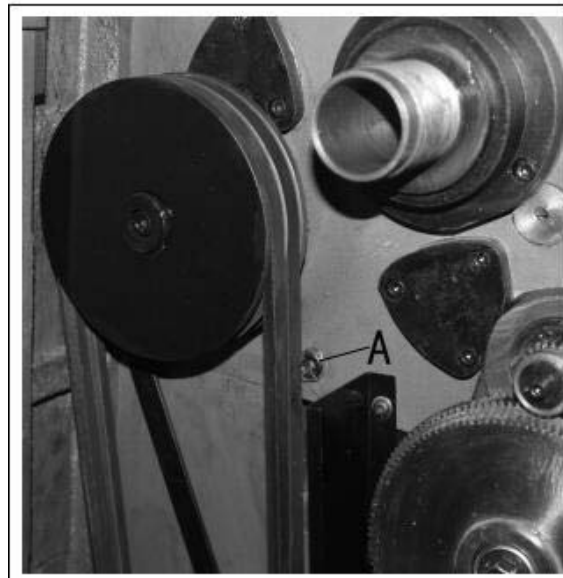


Figure 5

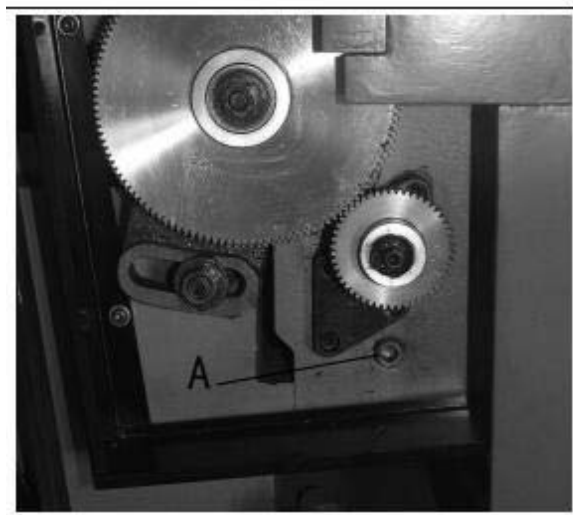


Figure 6

3. **Apron** – Oil must be up to indicator mark in oil sight glass (A, Fig. 7). Top off with Mobil DTE® Oil Heavy Medium. Remove oil cap (B, Fig. 7) on top of apron to fill. To drain, remove drain plug on bottom of apron. Drain oil completely and refill after the first month of operation. Then, change oil in the apron annually.
4. **Leadscrew Feed Rod** – Lubricate ball oiler (A, Fig. 8) on leadscrew/feed rod bracket with Mobil DTE® Oil Heavy Medium once daily.
5. **Tailstock** – Lubricate two ball oilers (B, Fig. 8) on tailstock with Mobil DTE® Oil Heavy Medium once daily.
6. **Cross Slide** – Lubricate four ball oilers (A, Fig. 9) with Mobil DTE® Oil Heavy Medium once daily.
7. **Compound Rest** – Lubricate one ball oiler (B, Fig. 9) with Mobil DTE® Oil Heavy Medium once daily.
8. **Carriage** – Lubricate four ball oilers (D, Fig. 9) with Mobil DTE® Oil Heavy Medium once daily.

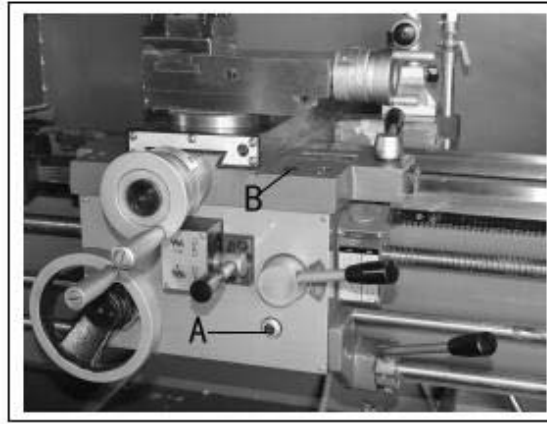


Figure 7

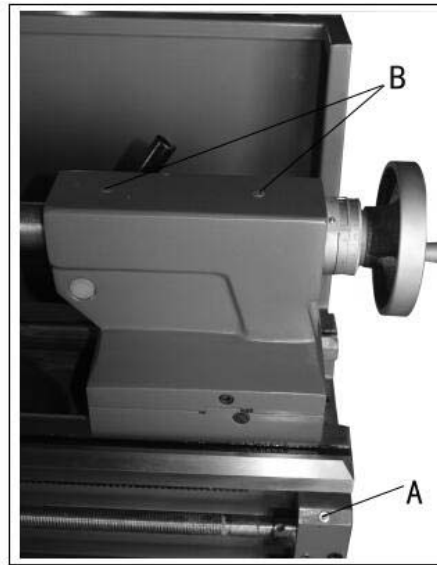


Figure 8

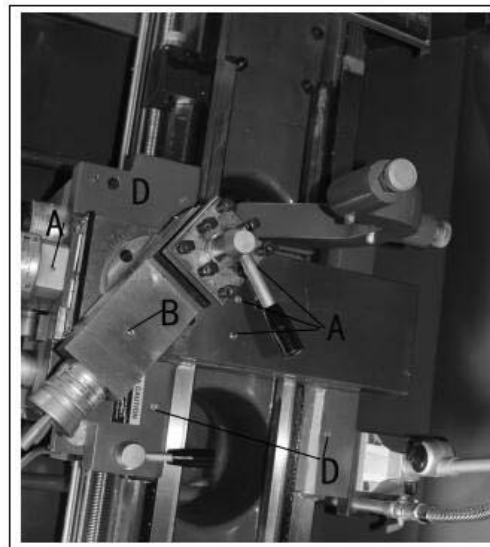


Figure 9

## 8.0 Coolant preparation

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

1. Remove rear access cover on tailstock end. Make sure coolant tank has not shifted during transport and is located properly under the recovery chute (Fig. 10).
2. Pour three gallons of coolant mix into drip pan.
3. After machine has been connected to power, turn on coolant pump and check to see coolant is cycling properly.
4. Fasten coolant door to stand.



Figure 10

## 9.0 Electrical connections

**WARNING** Electrical connections must be made by a qualified electrician in compliance with all relevant codes. This machine must be properly grounded to help prevent electrical shock and possible fatal injury.

The **GH-1440-1** lathe is rated at **3HP, single-phase, 230V only**. The **GH-1440-3** lathe is rated at **3HP, 3-phase, 230V/460V (prewired 230V)**. Confirm power available at the lathe's location is the same rating as the lathe.

**Lathe Power Source Junction Box:** Remove the cover. Run the main power through the strain relief bushing and attach the ground, followed by power leads. Replace the cover.

**Main Power Switch:** Located on the backside of the machine. Turns the power to the machine on and off.

**Make sure the lathe is properly grounded.**

Power is connected properly when pulling up on the forward-reverse lever causes spindle to rotate counterclockwise as viewed from tailstock. If the chuck rotates in clockwise direction, disconnect lathe from power source, switch two of three power leads, and re-connect lathe to power source.

### 9.1 Voltage conversion (GH-1440-3 only)

**WARNING** Disconnect machine from power source. Failure to comply may cause serious injury!

To switch from 230- to 460-volt operation:

**Main Motor:** Change the wires according to the diagram on inside of motor junction box.

**Transformer:** Remove electrical panel on rear of machine, headstock side, and switch wire from 230V terminal to 460V terminal as outlined on the transformer.

**Coolant Pump:** Open access panel on base at tailstock end. Change wires in coolant pump junction box according to diagram on inside of junction box cover.

## 10.0 General description

### Lathe bed

The lathe bed (A, Fig. 11) is made of high grade cast iron. By combining high cheeks with strong cross ribs, a bed with low vibration and high rigidity is realized. 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 in the stand below headstock.

### Headstock

The headstock (B, Fig. 11) is cast from high grade, low vibration cast iron. It is bolted to the bed by four screws with two adjusting screws 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.

### Carriage

The carriage (A, Fig. 12) 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 (B, Fig. 12), which is mounted on the cross slide (C, Fig. 12), can be rotated through 360°. The top slide and the cross slide travel in a dovetail slide and have adjustable gibs. A four way tool post is fitted on the top slide.

### Four way tool post

The four way toolpost (D, Fig. 12) is mounted on the top slide and allows a maximum of four tools to be mounted simultaneously. Remember to use a minimum of two clamping screws when installing a cutting tool.

### Apron

The apron (E, Fig. 12) 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 handwheel on the front of the apron.

### Tailstock

The tailstock (A, Fig. 13) 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.

### Leadscrew and feed Rod

The leadscrew (B, Fig. 13) and feed rod (C, Fig. 13) are mounted on the front of the machine bed. They are connected to the gearbox at the left for automatic feed and lead, and are supported by bushings on both ends. Both are equipped with brass shear pins.

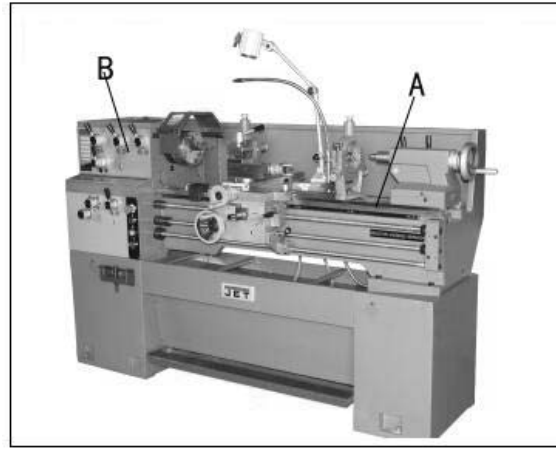


Figure 11

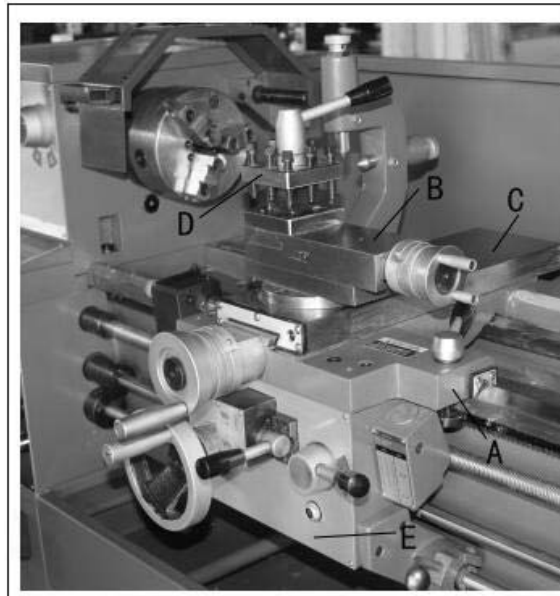


Figure 12

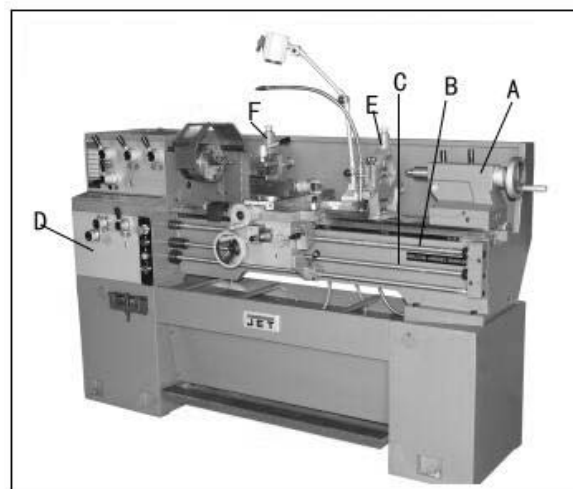


Figure 13

## Gear box

The gear box (D, Fig. 13) is made from high quality cast iron and is mounted to the left side of the machine bed.

## Steady rest

The steady rest (E, Fig. 13) serves as a support for shafts on the free tailstock end. The steady rest is mounted on the bedway 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.

To set the steady rest:

1. Loosen three hex socket screws.
2. Loosen knurled screw and open sliding fingers until the steady rest can be moved with its fingers around the workpiece. Secure the steady rest in position.
3. Set the fingers snugly to the workpiece and secure by tightening three hex socket cap screws. Fingers should be snug but not overly tight. Lubricate sliding points with Mobil DTE® Oil Heavy Medium.
4. After prolonged use, the fingers will show wear. Re-mill or file the tips of the fingers.

## Follow rest

The traveling follow rest (F, Fig. 13) is mounted on the saddle and follows the movement of the turning tool. Only two fingers are required as the place of the third is taken by the turning tool. The follow rest is used for tuning operations on long, slender workpieces. It prevents flexing of the workpiece from the pressure of the cutting tool.

The sliding fingers are set similar to the steady rest, free of play, but not binding. Always lubricate with Mobil DTE® Oil Heavy Medium.

## Controls

1. **Control Panel** - located on front of gearbox.
  - A. Coolant On-Off Switch** (A, Fig. 14) – turns coolant pump on and off.
  - B. Power Indicator Light** (B, Fig. 14) – illuminated whenever lathe has power.  
**Emergency Stop Switch** (C, Fig. 14) – press to stop all machine functions.  
**Caution: Lathe will still have power.** To restart machine, rotate button clockwise until it disengages.
  - C. Jog Switch** (D, Fig. 14) – Press and release to advance spindle momentarily.

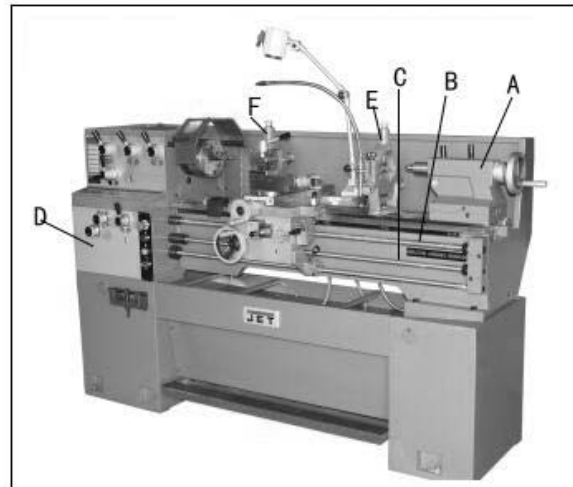


Figure 13 (repeated)

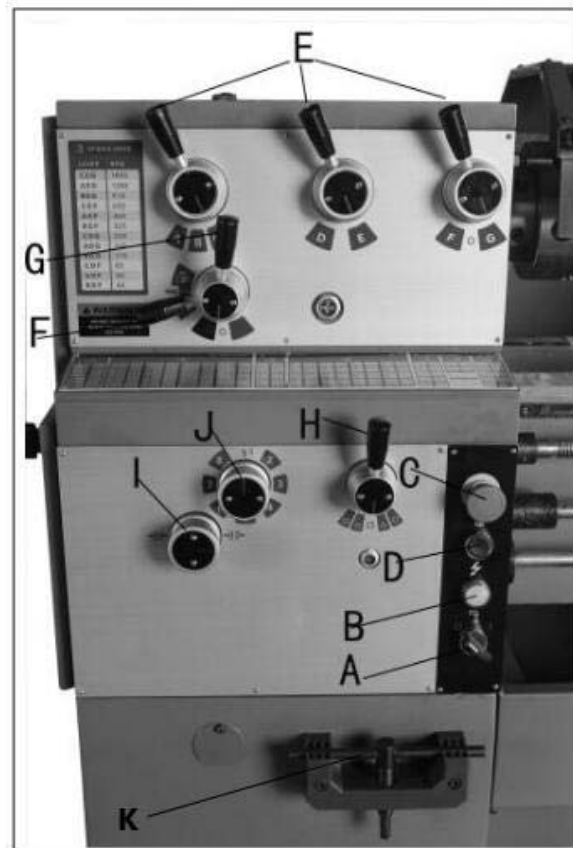


Figure 14

2. **Headstock Gear Change Levers (E, Fig. 14)** – located on front of headstock. Move levers according to speed chart for desired setting.
3. **Leadscrew/Feed Rod Directional Lever (F, Fig. 14)** – located on front of headstock. Moving the lever up causes carriage travel toward the tailstock; moving the lever down causes carriage travel toward the headstock (when chuck is spinning in forward or counterclockwise direction). Do not move lever while machine is running.
4. **Feed/Lead Selector Lever (G, Fig. 14)** – located on the front of the headstock. Used whenever setting up for threading or feeding.

**CAUTION** In the "A" position, never run the lathe higher than 650 RPM.

5. **Feed/Lead Selector Lever (H, Fig. 14)** – located on the front of the gearbox. Used in setting up for feeding and threading. Positions "F" and "D" are for the feed rod. Positions "E" and "C" are for the feed screw. Position "0" is neutral.
6. **Lock Knob (I, Fig. 14)** – located on the front of the gearbox. With the knob in the six o'clock position, feed/lead selector knob (J, Fig. 14) may be adjusted. With the knob in the twelve o'clock position, the feed/lead selector knob (J, Fig. 14) is locked.
7. **Feed/Lead Selector Knob (J, Fig. 14)** – located on front of the gearbox. Used for setting up for feeding and threading.
8. **Compound Lock (A, Fig. 15)** – hex socket screw located on left side of compound. Turn clockwise to lock and counterclockwise to unlock.
9. **Carriage Lock (B, Fig. 15)** – lock handle located on top of carriage. Turn clockwise to lock. Turn counterclockwise to unlock.

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

10. **Longitudinal Traverse Hand Wheel - (D, Fig. 15)** – located on the apron assembly. Rotate hand wheel clockwise to move the apron assembly toward the tailstock. Rotate the wheel counterclockwise to move the apron assembly toward the headstock.
11. **Feed Selector (E, Fig. 15)** – located in the center front of the apron assembly. Pushing lever to the left and down activates the crossfeed function. Pulling lever to the right and up activates the longitudinal function.

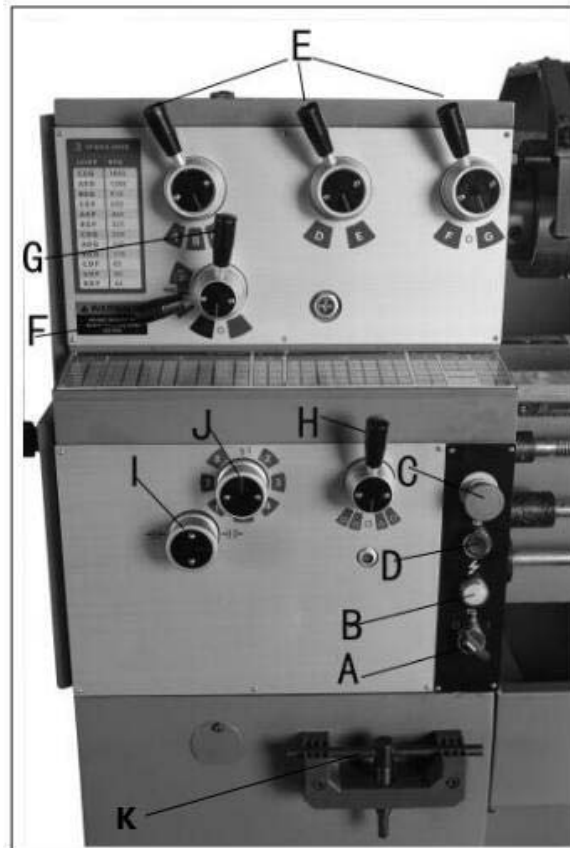


Figure 14 (repeated)

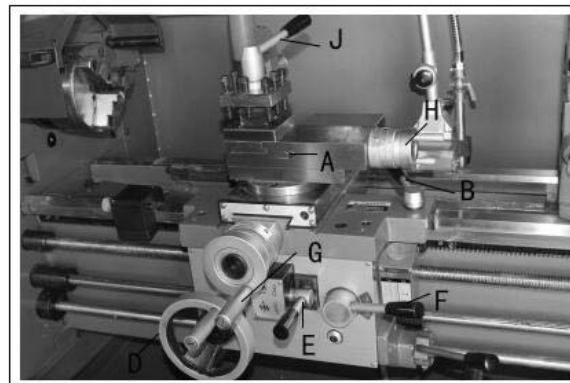


Figure 15

12. **Half Nut Engage Lever (thread cutting)** (F, Fig. 15) – located on front of the apron. Move the lever down to engage. Move the lever up to disengage.
13. **Cross Traverse Handwheel** (G, Fig. 15) – located above the apron assembly. Rotate clockwise or counter-clockwise to move, or position.
14. **Compound Rest Traverse Handwheel** (H, Fig. 15) – located on the end of the compound slide. Rotate clockwise or counter-clockwise to move, or position.
15. **Tool Post Clamping Lever** (J, Fig. 15) – located on top of the tool post. Rotate counter-clockwise to loosen and clockwise to tighten.
16. **Tailstock Quill Clamping Lever** (A, Fig. 16) – located on the tailstock. Lift up to lock the spindle. Push down to unlock.
17. **Tailstock Clamping Lever** (B, Fig. 16) – located on the tailstock. Lift up lever to lock. Push down lever to unlock.
18. **Tailstock Quill Traverse Handwheel** (C, Fig. 16) – located on the tailstock. Rotate clockwise to advance the quill. Rotate counter-clockwise to retract the quill.
19. **Tailstock Off-Set Adjustment** (D, Fig. 16) – Two hex socket cap screws located on the tailstock base are used to off-set the tailstock for cutting tapers. Loosening one screw while tightening the other off sets the tailstock.
20. **Foot Brake** (A, Fig. 17) – located between stand pedestals. Depress to stop all lathe functions.
21. **Micro Carriage Stop** (B, Fig. 17) – located on the lathe bed. Loosen two hex socket cap screws underneath body and slide along bed to desired position. Tighten screws to hold in place.
22. **Main Power Switch** (not shown) – located on the electrical box door on the rear of the lathe. Turns main power to the lathe on and off.

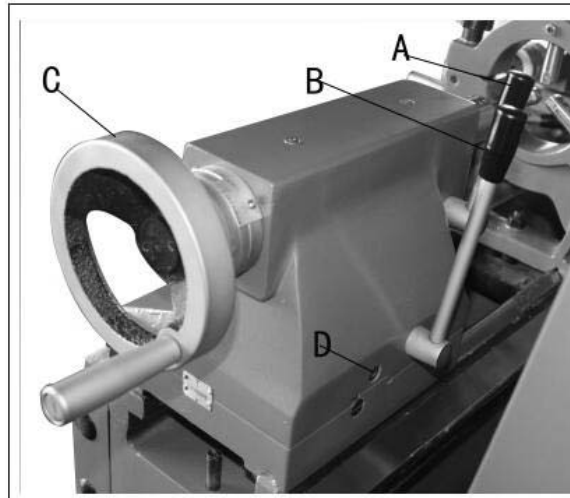


Figure 16

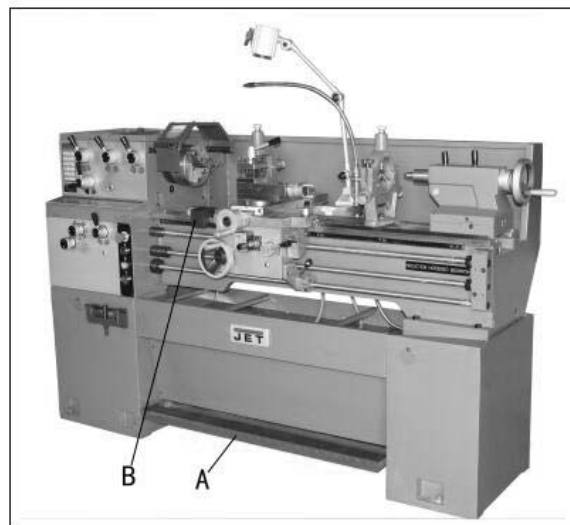


Figure 17

## 11.0 Operation

### 11.1 Break-in procedure

During manufacture and testing, this lathe has been operated in the low R.P.M. range for three hours.

To allow time for the gears and bearings to break-in and run smoothly, do not run the lathe above 650 R.P.M. for the first six hours of operation.

## 11.2 Feed and thread selection

1. Refer to the feed and thread charts found on the gear box faceplate (A, Fig. 18 and sect. 13.0 of this manual).
2. Move levers (B, C, D, E, F, Fig. 18) to the appropriate positions according to the chart.

## 11.3 Change gears replacement

The 25T, 127T, 50T gears are installed in the end gear compartment when delivered from the factory. This combination will cover most inch feeds and threads under normal circumstances.

The 30T, 32T, and two 40T gears found in the tool box are used with different combinations as indicated on feed and thread tables (A, Fig. 18).

1. **Disconnect machine from power source (unplug).**
2. Open the door on the left end of the headstock.
3. Loosen nuts (A & B, Fig. 19).
4. Move quadrant (C, Fig. 19) out of the way and hold in place temporarily by tightening nut (B, Fig. 19).
5. Remove hex socket cap screws (D and/or E, Fig. 19), depending on which gear is to be changed.
6. Install new gear(s) and tighten in place with a hex socket cap screw.
7. Loosen nut (B, Fig. 19), move quadrant back so teeth mesh on gears, and tighten nuts (A & B, Fig. 19).

**CAUTION:** Make sure there is a backlash of .002"-.003" between gears. Setting the gears too tight will cause excessive noise and wear.

8. Close the door and connect machine to power source.

## 11.4 Automatic feed operation and feed changes

1. Move the forward/reverse selector (A, Fig. 20) up or down depending on desired direction.
2. Set selector levers (A, B, C, D, Fig. 21) to desired rate.

**Note:** For feeding, lever (D) will be set at "F" or "D", depending on desired feed rate.

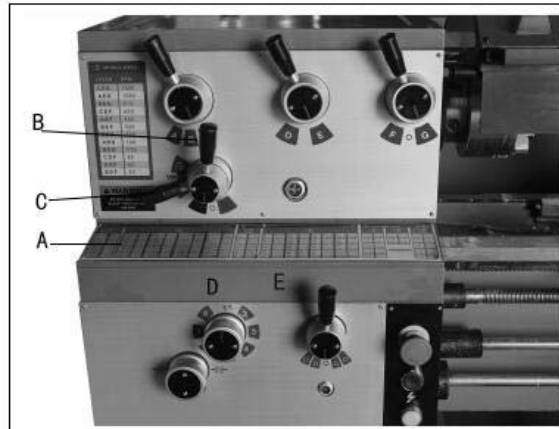


Figure 18

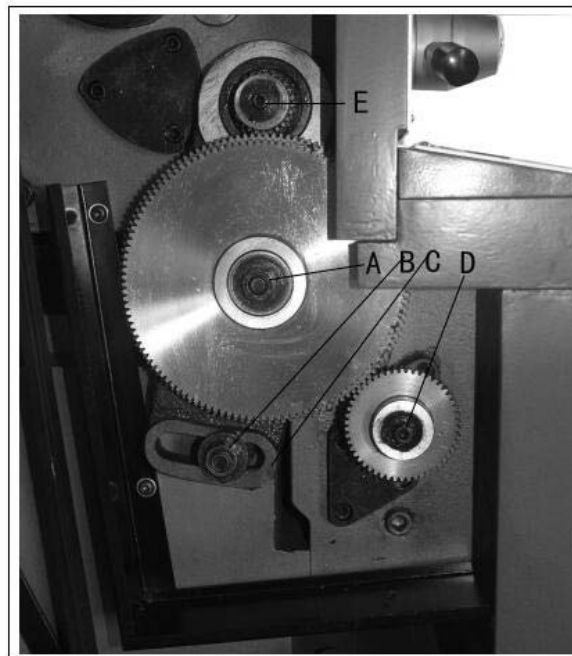


Figure 19

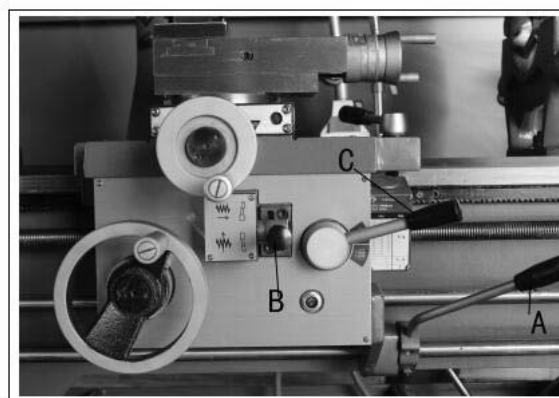


Figure 20

## 11.5 Powered carriage travel

1. Push lever (B, Fig. 20) to the left and down to engage crossfeed.
2. Pull lever to the right and up to engage longitudinal feed.

## 11.6 Thread cutting

1. Set forward/reverse lever (A, Fig. 20) up or down depending on the desired direction.
2. Set selector levers (A, B, C, D, Fig. 21) to desired rate.

**Note:** For threading, lever (D) will be set at "C" or "E", depending on desired thread.

3. Push lever (B, Fig. 19) to the right.
4. Engage the half nut lever (C, Fig. 20).
5. To cut inch threads, refer to the feed and thread tables. The half nut lever and the threading dial are used to thread in the conventional manner. The thread dial chart specifies at which point a thread can be entered using the threading dial.
6. To cut metric threads, the half nuts must be left continually engaged once the start point has been selected and the half nut is initially engaged (thread dial cannot be used).

## 11.7 Compound rest

The compound rest is located on top of the cross slide and can be rotated 360 degrees. Loosen the two socket head cap screws (A, Fig. 22) on the compound rest base. There is a calibrated dial in degrees (B, Fig. 22) below the rest to assist in placement of the compound to the desired angle.

## 12.0 Adjustments

After a period of time, wear in some of the moving components may need to be adjusted:

### 12.1 Saddle

1. Locate four hex nuts found on the bottom rear of the cross slide and back off one full turn each.
2. Turn each of the four set screws with a hex wrench until a slight resistance is felt. Do not over tighten these screws.
3. Move the carriage with the handwheel and determine if the drag is to your preference. Readjust the set screws as necessary to achieve the desired drag.
4. Hold the socket set screw firmly with a hex wrench and tighten the hex nut to lock the set screw in place.

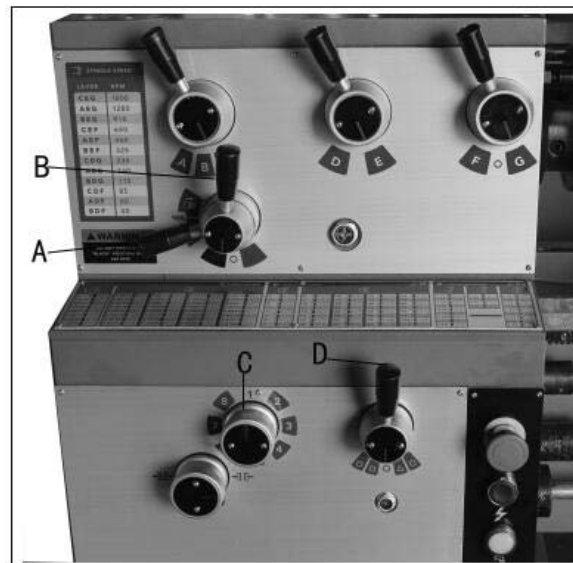


Figure 21

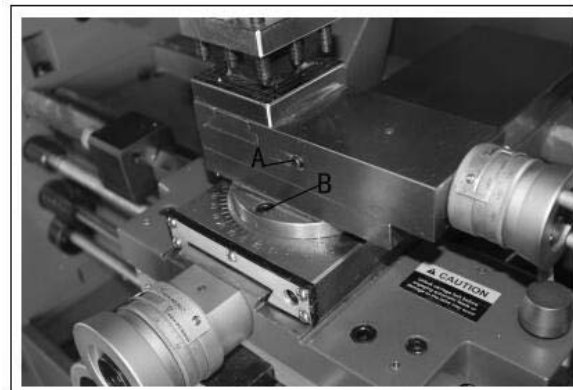


Figure 22

5. Move the carriage again and readjust if necessary.

**Note:** Over-adjustment will cause excessive and premature wear of the gibs.

## 12.2 Cross slide

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

1. Loosen the rear gib screw (not shown) approximately one turn.
2. Tighten the front gib screw (B, Fig. 23) 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 the cross slide is properly adjusted, tighten the rear gib screw.

**Note:** Over-adjustment will cause excessive and premature wear of the gibs.

## 12.3 Compound rest

Follow the same procedure as the cross slide adjustment to adjust the compound rest. Rear gib screw is shown (A, Fig. 23). Front gib screw (not shown) is by the handwheel.

## 12.4 Tailstock

If the handle (A, Fig. 24) will not lock the tailstock, follow the procedure below :

1. Lower the handle to the unlocked position.
2. Slide the tailstock to an area that allows access to the underside of the tailstock.
3. Tighten tailstock clamping bolt (underside of tailstock) 1/4 turn. Test for proper locking. Repeat as necessary.

## 12.5 Tailstock off-set

Follow the procedure below to off-set the tailstock to cut shallow tapers:

1. Lock tailstock in position by raising locking handle (A, Fig. 24).
2. Alternately loosen and tighten two hex socket cap screws (B, Fig. 24).

## 12.6 Tailstock gibs

Take up play in the tailstock by tightening two gib screws (C, Fig. 24) on either side of the tailstock base.

**Note:** Do not over-tighten. Excessive tightening will lead to premature wear of the gibs and mating parts

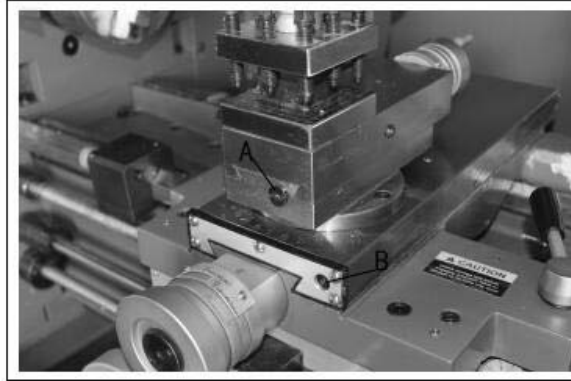


Figure 23

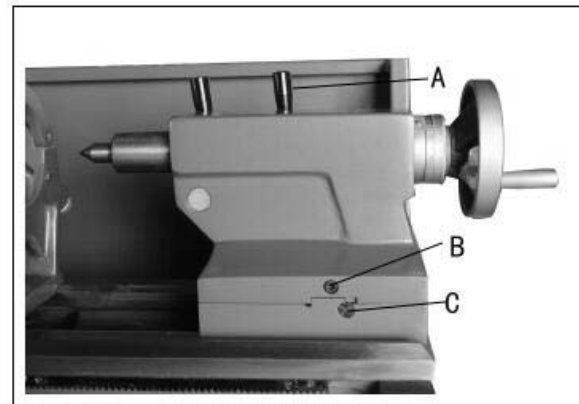


Figure 24

## 12.7 Headstock alignment

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

1. Using a machinist'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. Do not use the tailstock or center to support the other end.
4. Set up and cut along five inches of bar stock.
5. Using a micrometer, measure the bar stock next to the chuck and at the end. The measurement should be the same.
6. If the measurements are not the same and adjustment is required, loosen hex socket cap screws (A, Fig. 25) which hold the headstock to the bed. **Do not** loosen completely; some drag should remain.
7. Adjust two screw nuts (B, Fig. 25) located on the endgear side of the headstock. Loosen one and tighten the other. Make another cut. Keep adjusting screw nuts after each cut until the bar stock measurements are the same. Tighten all headstock screws.

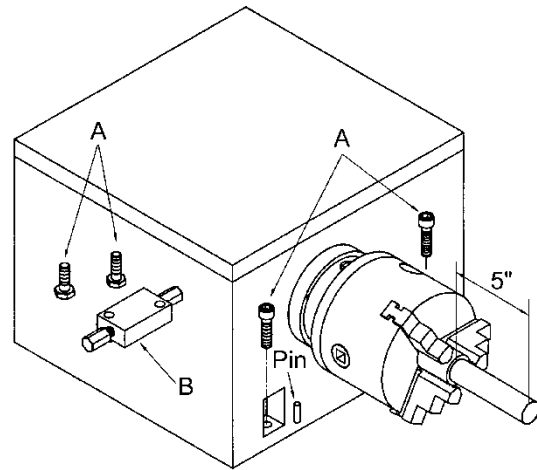


Figure 25

## 12.8 Removing gap bridge

1. To remove gap bridge, locate two nuts (A, Fig. 26) in the center of the gap bridge.
2. Using an open end wrench, tighten the two nuts. This will cause the taper pins to release. Remove the taper pins.
3. Remove six hex socket cap screws (B, Fig. 26) with a hex wrench.
4. Gap bridge can now be removed.

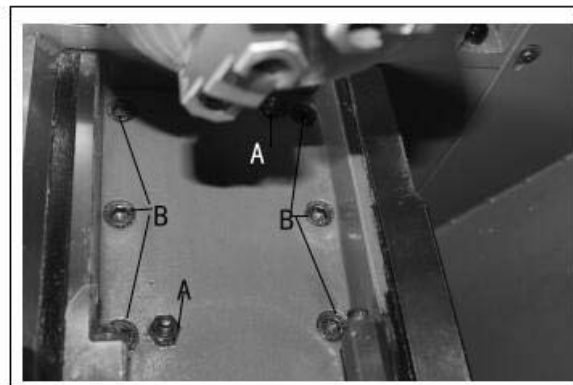


Figure 26

## 12.9 Installing gap bridge

1. Clean the bottom and the ends of the gap bridge thoroughly.
2. Set gap bridge in place and align.
3. Remove nuts from the taper pins.
4. Slide taper pins in their respective holes and seat using a mallet. Install nuts on the taper pins finger tight.
5. Install six socket head cap screws and tighten securely.

## 12.10 Belt replacement and adjustment

1. **Disconnect machine from the power source (unplug).**
2. Open the end gear cover and lower cover on the headstock side.
3. Take tension off old belts by loosening motor mount hex nut (A, Fig. 27).
4. Remove belts. Install new belts onto pulleys.
5. Tension by tightening motor mount hex nut until 8 lbs. force causes approximately 3/4" deflection on belts.
6. Close end gear door, install cover and connect lathe to the power source.

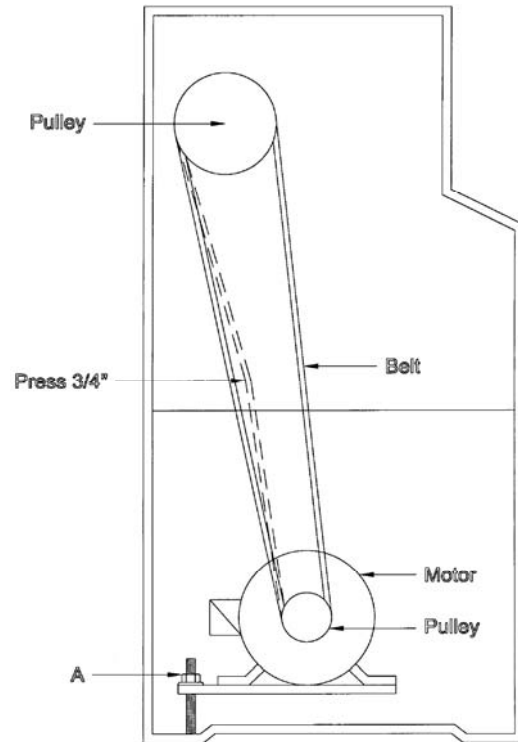


Figure 27

## 12.11 Aligning tailstock to headstock

Before proceeding, headstock should be aligned. See sect. 12.7, *Headstock Alignment*.

1. Fit a 12" ground steel bar between centers of the headstock and tailstock (Fig. 28).
2. Fit a dial indicator to the compound slide and traverse the center line of the bar, using the carriage movement.
3. If tailstock adjustment is needed, alternately loosen and tighten front and rear hex socket cap screws (A, Fig. 29).

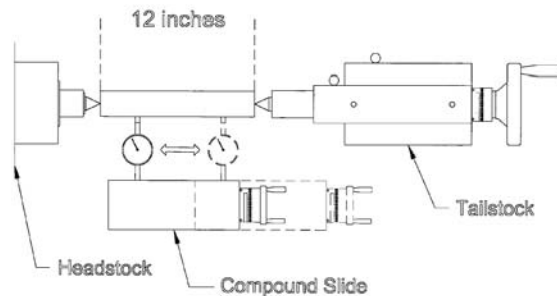


Figure 28

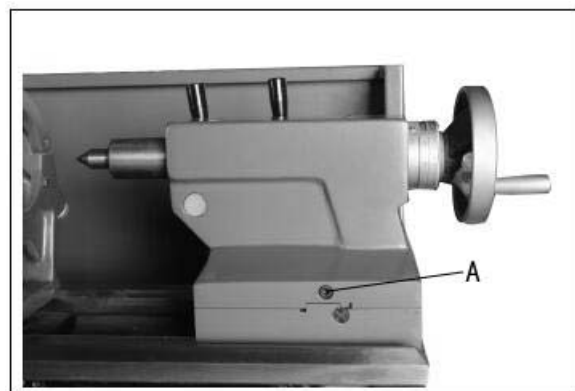


Figure 29

# 13.0 Operation tables

## 13.1 Thread table

		THREADING CHART															
<b>IN</b> INCH		4	1	○		8	1	○	16	1	○	32	1	△	64	1	△
		4½	2	○		9	2	○	18	2	○	36	2	△	72	2	△
		5	3	○		10	3	○	20	3	○	40	3	△	80	3	△
		5½	4	○		11	4	○	22	4	○	44	4	△	88	4	△
		5¾	5	○		11½	5	○	23	5	○	46	5	△	92	5	△
		6	6	○		12	6	○	24	6	○	48	6	△	96	6	△
		6½	7	○		13	7	○	26	7	○	52	7	△	104	7	△
		7	8	○		14	8	○	28	8	○	56	8	△	112	8	△
<b>mm</b> METRIC		0.45	3	△		0.60	3	△		0.75	3	△	3.75	1	○		
		0.50	2	△		1.20	3	△		1.25	6	△	5.00	6	○		
		0.90	3	△		2.40	3	○		1.50	3	△	6.00	3	○		
		1.00	2	△		4.80	3	○		2.50	6	○	7.50	1	○		
		1.80	3	○						3.00	3	○					
		2.00	2	○													
		2.25	1	○													
		3.60	3	○													
4.00	2	○															
4.50	1	○															

## 13.2 Feed table

		FEED IN/REV																														
	0,0012	8	○	0,0024	8	○	0,0042	8	○	0,0084	8	○		0,0168	8	○		0,0004	8	○	0,0008	8	○	0,0015	8	○	0,0030	8	○	0,0059	8	○
	0,0013	7	○	0,0026	7	○	0,0048	7	○	0,0092	7	○		0,0181	7	○		0,0004	7	○	0,0008	7	○	0,0015	7	○	0,0031	7	○	0,0063	7	○
	0,0014	6	○	0,0028	6	○	0,0049	6	○	0,0098	6	○		0,0196	6	○		0,0004	6	○	0,0009	6	○	0,0017	6	○	0,0035	6	○	0,0069	6	○
	0,0015	5	○	0,0030	5	○	0,0051	5	○	0,0102	5	○		0,0205	5	○		0,0005	5	○	0,0009	5	○	0,0018	5	○	0,0036	5	○	0,0072	5	○
	0,0016	4	○	0,0031	4	○	0,0053	4	○	0,0107	4	○		0,0214	4	○		0,0005	4	○	0,0010	4	○	0,0019	4	○	0,0038	4	○	0,0075	4	○
	0,0017	3	○	0,0034	3	○	0,0058	3	○	0,0119	3	○		0,0235	3	○		0,0006	3	○	0,0011	3	○	0,0020	3	○	0,0041	3	○	0,0082	3	○
	0,0019	2	○	0,0038	2	○	0,0065	2	○	0,0131	2	○		0,0261	2	○		0,0007	2	○	0,0013	2	○	0,0023	2	○	0,0045	2	○	0,0091	2	○
	0,0021	1	○	0,0042	1	○	0,0073	1	○	0,0147	1	○		0,0294	1	○		0,0007	1	○	0,0014	1	○	0,0025	1	○	0,0051	1	○	0,0103	1	○

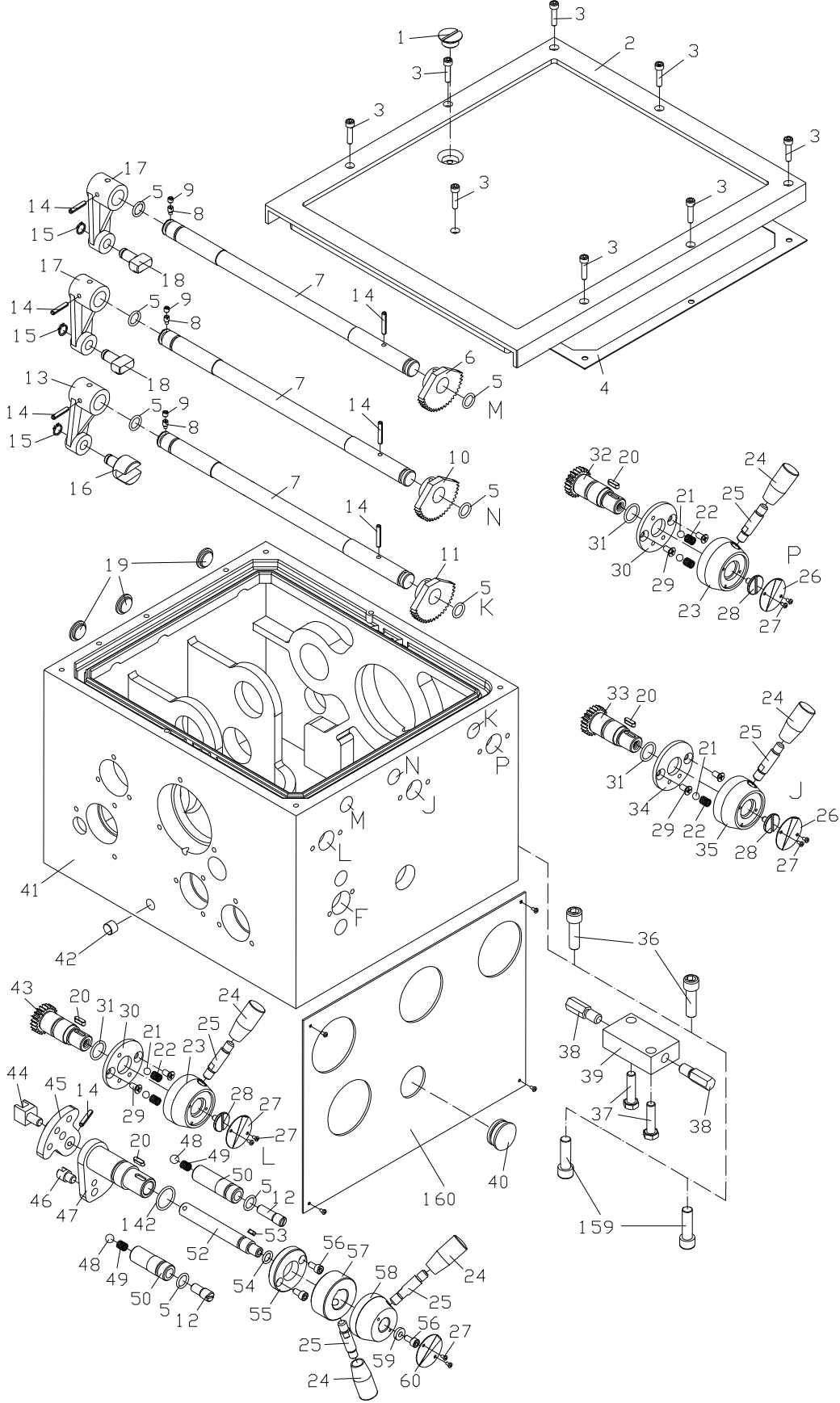
# 14.0 Replacement Parts

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

Non-proprietary parts, such as fasteners, can be found at local hardware stores, or may be ordered from JET.

Some parts are shown for reference only, and may not be available individually.

### 14.1.1 Headstock Assembly I – Exploded View

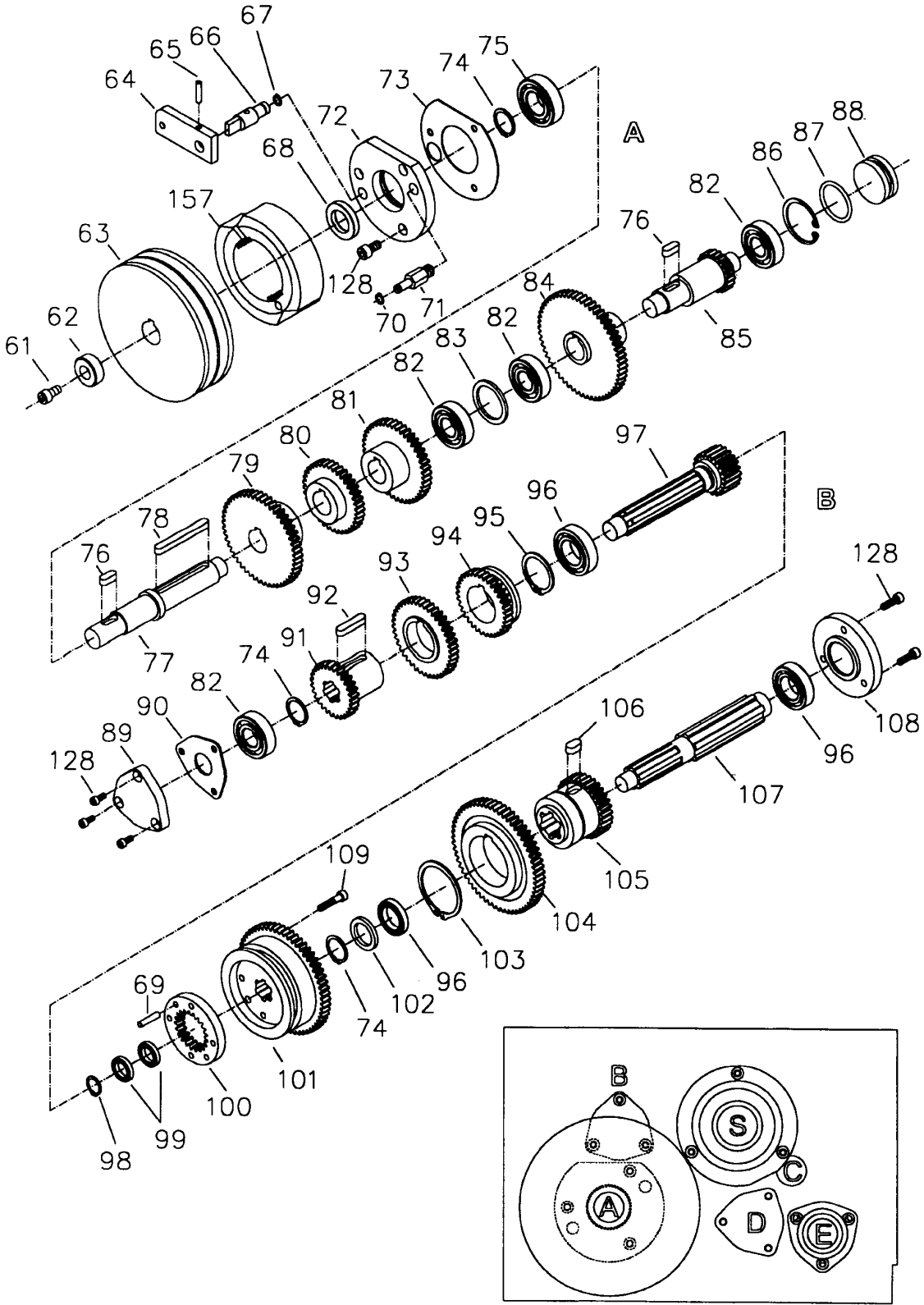


## 14.1.2 Headstock Assembly I – Parts List

Index No.	Part No.	Description	Size	Qty
1	C6136-02755	Plug		1
2	GH1440K-02119	Headstock Cover		1
3	TS-1503061	Hex Socket Hd Cap Screw	M6x25	6
4	GH1440K-02509	Gasket		1
5	GH1440K-005	O-Ring	14x2.65 mm	8
6	GH1440-04-38	Gear	38T	1
7	GH1440K-02749	Shaft		3
8	TS-1523031	Socket Set Screw	M6x10	3
9	F010445	Socket Set Screw FP	M6x6	3
10	GH1440-04-37	Gear	48T	1
11	GH1440-04-36	Gear	43T	1
12	GH1440K-02754	Set Screw		1
13	GH1440-04-43	Shift Arm		1
14	ZX-S48	Spring Pin	5x30 mm	7
15	F006041	C-Retaining Ring, Ext	12 mm	3
16	GH1440-04-45	Shift Fork		1
17	GH1440-04-35	Shift Arm		2
18	GH1440-04-44	Gear Shifter		2
19	GH1440K-02748	Plug		3
20	5510677	Key, Dbl Rd Hd	5x16 mm	4
21	SB-8MM	Steel Ball	8 mm	5
22	C6240-20018	Spring		5
23	GH1440-04-49	Lever Hub		2
24	GB4141.14-BM10x50	Knob		5
25	GH1440-04-34	Handle Lever		5
26	GH1440K-02303	Lever Indicator Plate		4
27	TS-1531012	Pan Hd Screw	M3x6	14
28	GH1440-04-59	Screw		3
29	TS-1514011	Socket Hd Flat Screw	M6x12	6
30	GH1440-04-50	Position Plate		2
31	GH1440K-031	O-Ring	19x2.65 mm	3
32	GH1440-04-40	Gear Shaft	22T	1
33	GH1440-04-42	Gear Shaft	17T	1
34	GH1440-04-51	Position Plate		1
35	GH1440-04-58	Lever Hub		1
36	TS-1506051	Hex Socket Hd Cap Screw	M12x40	2
37	GB5782-86	Alignment Bolt	M10x40	2
38	GH1440-04-62	Alignment Bolt		2
39	GH1440-04-63	Alignment Block		1
40	GB1160.1-89	Oil Sight Glass	20 mm	1
41	GH1440K-02101	Headstock Casting		1
42	05-75	Drain Plug		1
43	GH1440-04-39	Gear Shaft	27T	1
44	GH1440-04-47	Shaft Fork		1
45	GH1440-04-36	Shifting Crank		1
46	GH1440-04-71	Shaft Fork		1
47	GH1440K-02117	Shifting Crank		1
48	SB-10MM	Steel Ball	10 mm	2
49	GB2089	Spring	0.9×9×40 mm	2
50	GH1440K-02753	Shaft		1
51	GH1440K-02755	Shaft		1
52	GH1440K-02747	Shaft		1
53	GB1096-4X10	Key, Dbl Rd Hd	4x10 mm	1
54	GH1440K-054	O-Ring	10.6x2.65 mm	1
55	GH1440-04-55	Collar		1
56	TS-150303	Hex Socket Hd Cap Screw	M6x12	3
57	GH1440-04-57	Collar		1
58	GH1440-04-58	Lever Hub		1
59	TS-1550041	Flat Washer	6mm	1
60	GH1440K-02756	Lever Indicator Plate		1

<b>Index No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Size</b>	<b>Qty</b>
142	GH1440K-142	O-Ring	25x2.65 mm	3
159	TS-1506041	Hex Socket Hd Cap Screw	M12x35	2
160	GH1440K-02304-24	Name Plate		1

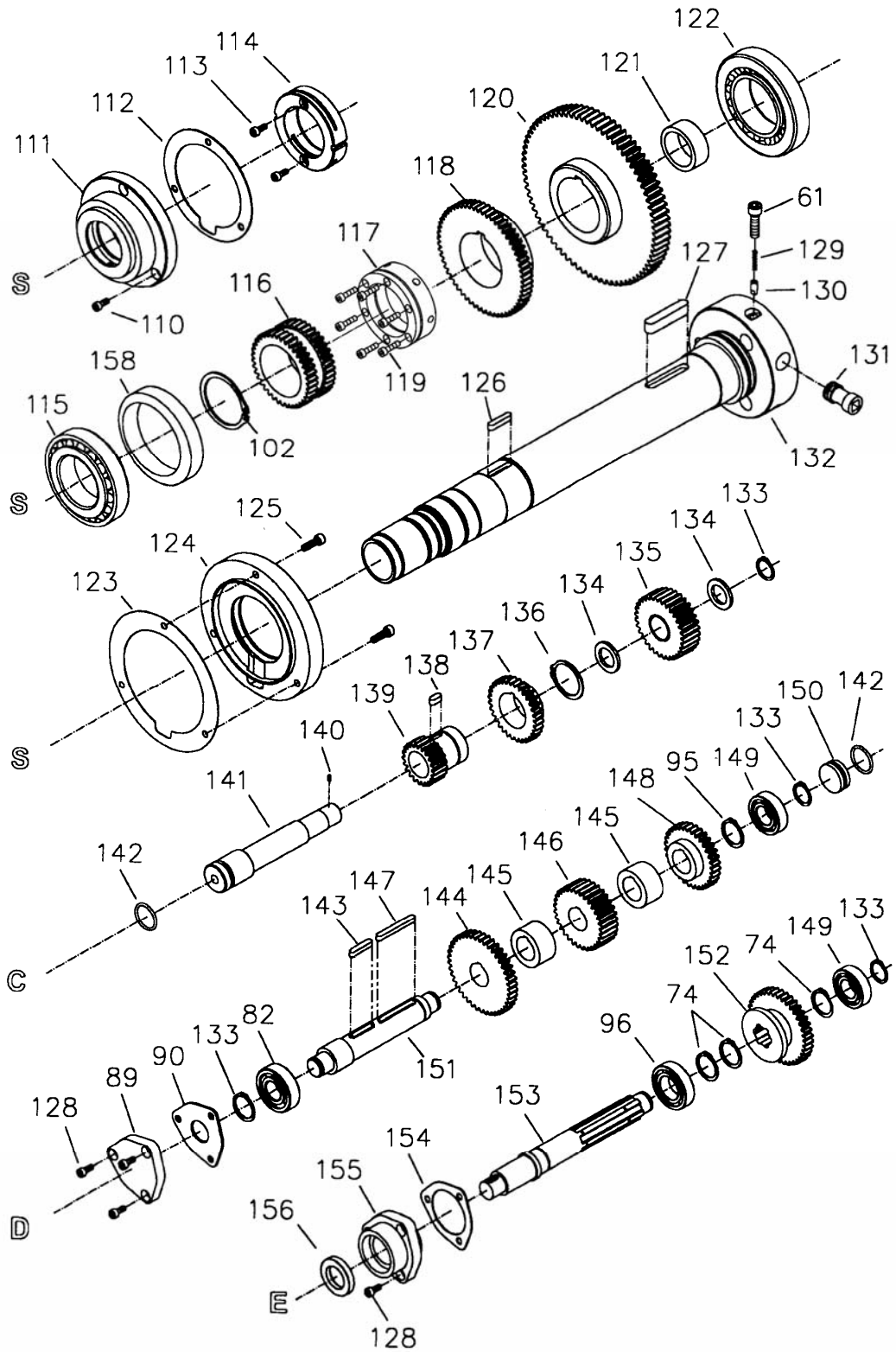
14.2.1 Headstock Assembly II – Exploded View



## 14.2.2 Headstock Assembly II – Parts List

Index No.	Part No.	Description	Size	Qty
61	TS-1504031	Hex Socket Hd Cap Screw	M8x16	1
62	04-12	Washer		1
63	04-11	Pulley		1
64	GH1440K-02722	Brake Block		1
65	5625391	Spring Pin	5x16 mm	1
66	11-09	Brake Actuator Shaft		1
67	F006041	C-Retaining Ring, Ext	12 mm	1
68	GB9877.1-88	Spacer	SD25x45x7	1
69	GHW-H69	Taper Pin	A6x26 mm	2
70	F006039	C-Retaining Ring, Ext	8 mm	1
71	11-11	Brake Retaining Stud		1
72	04-13	Cover		1
73	04-14	Gasket		1
74	F006050	C-Retaining Ring, Ext	25 mm	6
75	BB-6205	Ball Bearing	6205/p5	1
76	AK052	Key, Dbl Rd Hd	8x20 mm	2
77	GH1440K-02718	Shaft		1
78	GHW-H78	Key	8x72 mm	1
79	GH1440-04-04	Gear	50T	1
80	GH1440-04-05	Gear	37T	1
81	GH1440-04-06	Gear	43T	1
82	BB-6204	Ball Bearing	6204/p5	5
83	GH1440-04-17	Washer		1
84	GH1440-04-12	Gear	57T	1
85	GH1440-04-11	Gear Shaft	20T	1
86	F006075	C-Retaining Ring, Int	47 mm	1
87	GH1440K-287	O-Ring	40x2.65	1
88	GH1440K-02106	Plug		1
89	04-53	Bearing Cap		2
90	04-52	Gasket		2
91	GH1440-04-08	Gear	28T	1
92	GHW-H92	Key, Dbl Rd Hd	8x38 mm	1
93	GH1440-04-09	Gear	41T	1
94	GH1440-04-10	Gear	34T	1
95	F006055	C-Retaining Ring, Ext	40 mm	1
96	BB-6005	Ball Bearing	6005/p5	4
97	GH1440K-02724	Gear Shaft	21T	1
98	F006045	C-Retaining Ring, Ext	17 mm	1
99	BB-61803	Ball Bearing	61803/p5	2
100	GH1440-04-15	Gear	21T	1
101	GH1440-04-14	Gear	58T	1
102	GH1440K-02709	Washer		1
103	F006082	C-Retaining Ring, Ext	55 mm	1
104	GH1440-04-19	Gear	59T	1
105	GH1440-04-18	Gear	31T	1
106	GB1096-10X18	Key, Dbl Rd Hd	10x18 mm	1
107	GH1440-04-13	Spline Shaft		1
108	GH1440-04-24	Cover		1
109	TS-1503081	Hex Socket Hd Cap Screw	M6x35	4
128	JHM610-22	Hex Socket Hd Cap Screw	M6x14	9
157	11-15	Brake Shoe Assembly		1

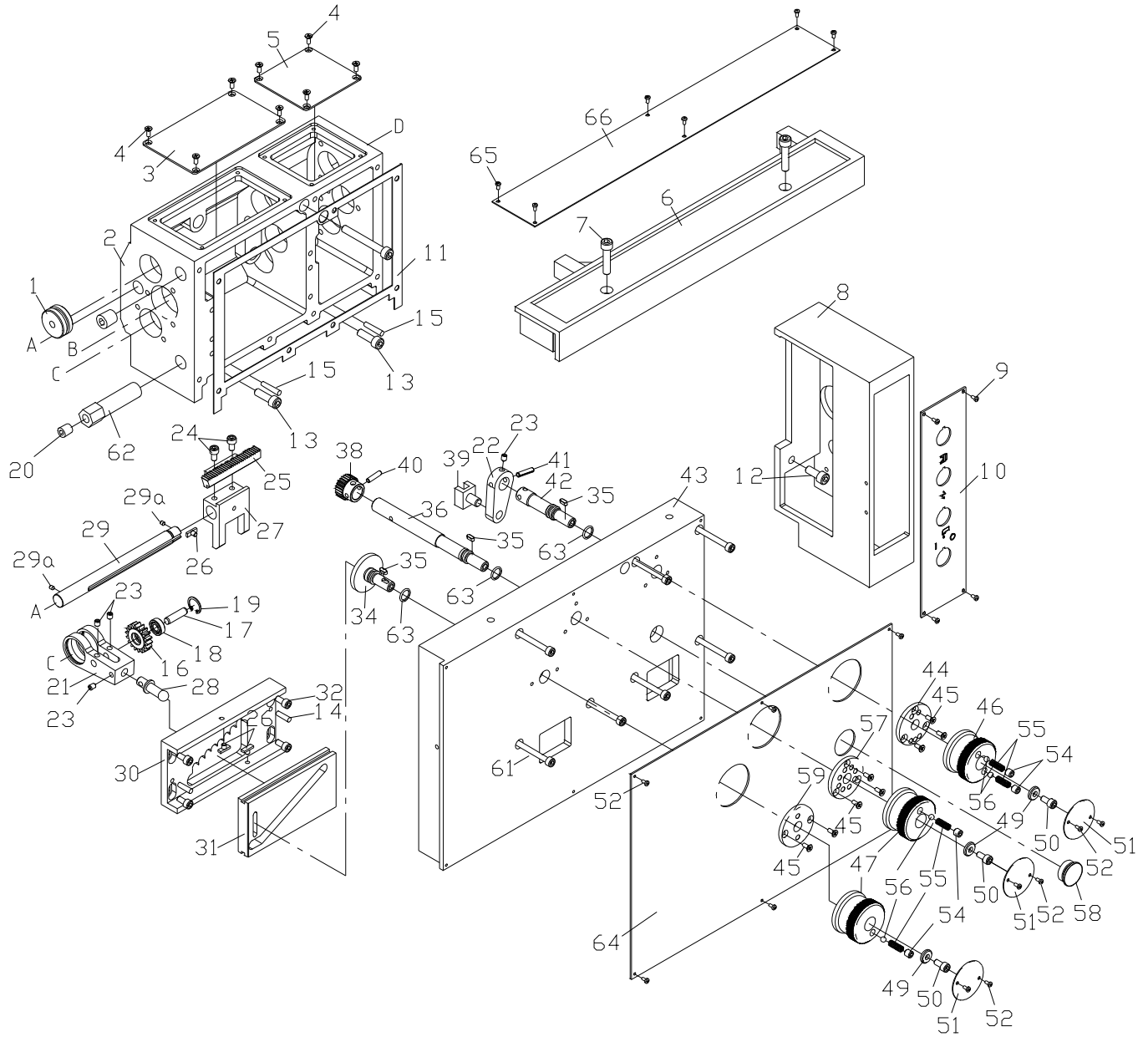
14.3.1 Headstock Assembly III – Exploded View



### 14.3.2 Headstock Assembly III – Parts List

Index No.	Part No.	Description	Size	Qty
56	TS-150303	Hex Socket Hd Cap Screw	M6x12	18
61	TS-1504031	Hex Socket Hd Cap Screw	M8x16	3
74	F006050	C-Retaining Ring, Ext	25 mm	6
82	BB-6204	Ball Bearing	6204/p5	5
89	04-53	Bearing Cap		2
90	04-52	Bearing Cap Gasket		2
95	F006055	C-Retaining Ring, Ext	40 mm	1
96	BB-6005	Ball Bearing	6005/p5	4
102	F006082	C-Retaining Ring, Ext	55 mm	1
110	TS-1503041	Hex Socket Hd Cap Screw	M6x16	3
111	GH1440-04-29	Cover		1
112	04-60	Gasket		1
113	TS-1502031	Hex Socket Hd Cap Screw	M5x12	2
114	GH1440-04-31	Nut		1
115	BB-32011	Tapered Roller Bearing	32011/p5	1
116	GH1440-04-30	Gear	38T	1
117	CK6125-02713	Lock Collar		1
118	GH1440-04-21	Gear	59T	1
119	TS-1502051	Hex Socket Hd Cap Screw	M5x20	6
120	GH1440-04-23	Gear	87T	1
121	GH1440-04-25	Collar		1
122	BB-30212	Tapered Roller Bearing	30212/p5	1
123	GH1440-04-32	Gasket		1
124	GH1440-04-28	Cover		1
125	TS-1503061	Hex Socket Hd Cap Screw	M6x25	3
126	5509094	Key, Dbl Rd Hd	6x30 mm	1
127	GHW-H127	Key, Dbl Rd Hd	10x55 mm	1
128	JHM610-22	Hex Socket Hd Cap Screw	M6x14	6
129	04-31/1	Spring		3
130	04-86	Camlock Set Pin		3
131	04-85	Camlock		3
132	GH1440K-02701	Spindle		1
133	F006047	C-Retaining Ring, Ext	20 mm	4
134	04-36	Washer		2
135	04-35	Gear Assembly	32T	1
136	F006083	C-Retaining Ring, Ext	37 mm	1
137	04-54	Gear	32T	1
138	KF2R5516	Key, Dbl Rd Hd	5x16 mm	1
139	04-55	Gear Assembly	32T	1
140	TS-1523041	Socket Set Screw	M6x12	1
141	04-37	Shaft		1
142	GH1440K-342	O-Ring	25x2.65	3
143	GHW-H126	Key	6x30 mm	1
144	GH1440K-02733	Gear	42T	1
145	GH1440K-02111	Collar		2
146	04-44	Gear	32T	1
147	GHB1340-108	Key, Dbl Rd Hd	6x55 mm	1
148	GH1440K-02736	Gear	32T	1
149	BB-6004	Ball Bearing	6004/p5	2
150	GH1440K-02102	Plug		1
151	GH1440K-02732	Shaft		1
152	04-43	Gear	38T	1
153	04-42	Spline Shaft		1
154	04-48	Gasket		1
155	04-49	Cover		1
156	GB9877.1-88	Spacer	SD25x40x7	1
158	GH1440-04-65	Collar		1

### 14.4.1 Gearbox Assembly I – Exploded View

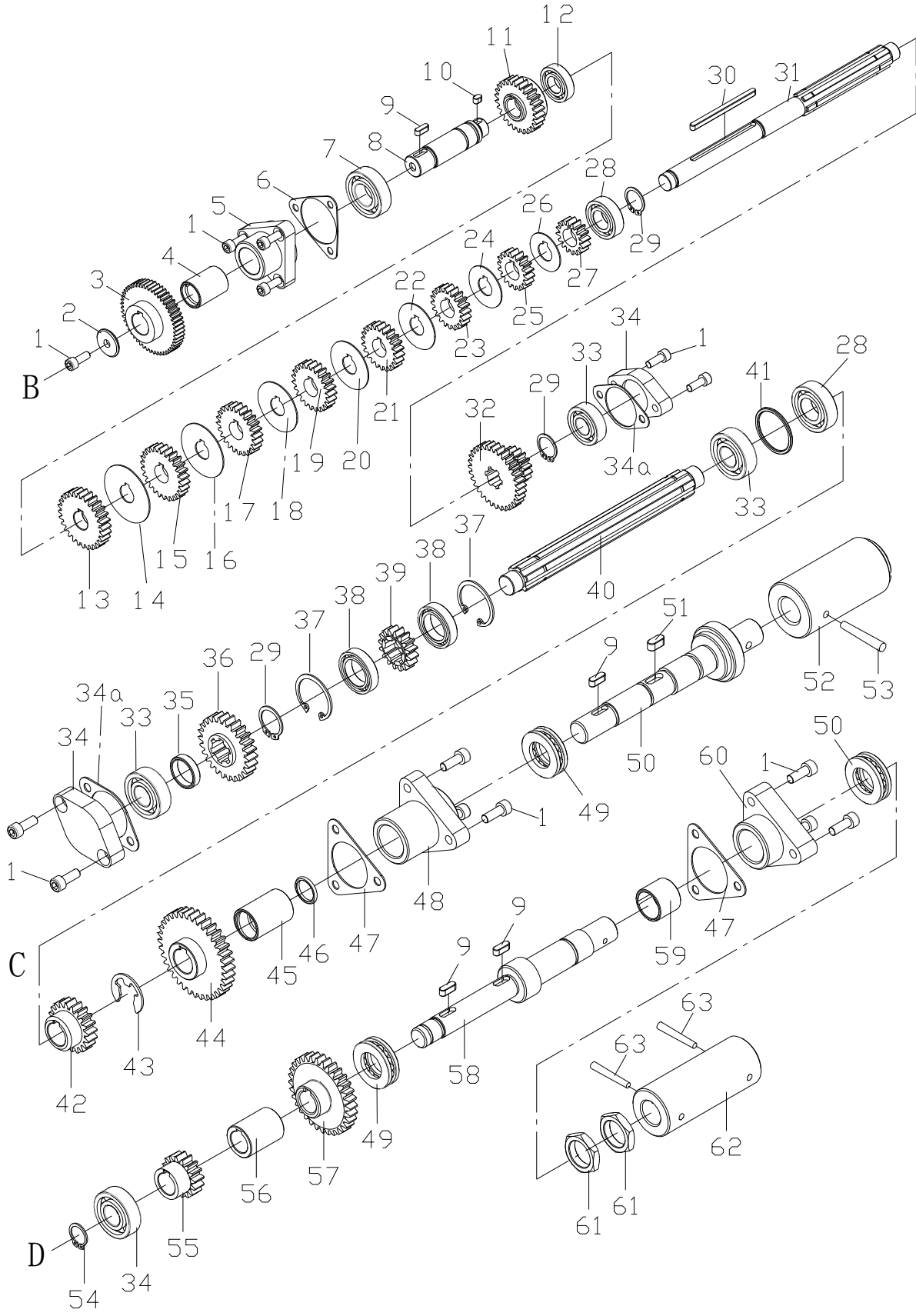


## 14.4.2 Gearbox Assembly I – Parts List

Index No.	Part No.	Description	Size	Qty
1	05-73	Plug		1
2	GH1440K-05101	Gearbox Casting		1
3	05-07	Front Cover		1
4	TS-1512011	Socket Flat Head Screw	M4x10	8
5	GH1440A-05719	Oil Cover		1
6	GH1440K-05501	Cover		1
7	TS-1504071	Hex Socket Hd Cap Screw	M8x35	2
8	GH1440-05-09	Bracket		1
9	GB2672	Screw	M3x6	4
10	GH1440K-18301-2	Electrical Plate		1
11	05-61	Gasket		1
12	TS-1504081	Hex Socket Hd Cap Screw	M8x40	2
13	TS-1504051	Hex Socket Hd Cap Screw	M8x25	3
14	ZX-S75	Taper Pin	5x20 mm	2
15	GH1440K-415	Taper Pin	5x28 mm	2
16	05-49	Gear	16T	1
17	05-51	Shaft	8x30 mm	1
18	GB/T276-94	Bearing	619/8/p5	1
19	F006084	C-Retaining Ring, Int	19 mm	1
20	05-75	Plug		2
21	05-03	Shifter		1
22	GH1440A-5107	Shift Arm		1
23	TS-2276081	Socket Set Screw	M6x8	4
24	TS-1503021	Hex Socket Hd Cap Screw	M6x10	2
25	05-13	Rack		1
26	05-01	Shift Key		3
27	05-12	Shift Fork		1
28	GH1440-0128	Shaft		1
29	05-15	Shaft		1
29a	TS-2276081	Socket Set Screw	M6x8	2
30	05-05	Locating Plate		1
31	05-04	Control Plate		1
32	TS-150303	Hex Socket Hd Cap Screw	M6x12	4
34	GH1440K-05701	Shift Hub		1
35	6293384	Key, Dbl Rd Hd	4x10 mm	3
36	GH1440K-05702	Shaft		1
38	05-14	Gear	26T	1
39	05-55	Shift Fork		1
40	GA7X-122	Spring Pin	5x20 mm	1
41	GHB1340-A82	Spring Pin	5x25 mm	1
42	GH1440K-05703	Shaft		1
43	GH1440K-05102	Cover		1
44	05-58	Locating Disc		1
45	TS-1512011	Socket Flat Hd Screw	M4x10	8
46	GH14440K-05724	Shift Hub		1
47	GH1440-05-13	Shift Hub		2
49	05-08	Washer		3
50	TS-1503041	Hex Socket Hd Cap Screw	M6x16	3
51	GH1440K-05302	Shift Hub Indicator Plate		3
52	TS-1531012	Pan Head Screw	M3x6	6
54	TS-1524011	Socket Set Screw	M8x8	4
55	GH1440K-455	Spring	0.8x5x25 mm	4
56	SB-6.5MM	Steel Ball	6.5 mm	4
57	05-10	Locating Disc		1
58	GH1440-05-27	Oil Sight Glass		1
59	05-59	Locating Disc		1
61	TS-1503111	Hex Socket Hd Cap Screw	M6x50	7
62	GHB1340A-05724	Oil Drain Pipe		1
63	G51-2A	O-Ring		3

<b>Index No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Size</b>	<b>Qty</b>
64	GH1440K-05301-19	Name Plate		1
65	GB2672	Screw	M3x6	6
66	GH1440K-05303	Graphic Plate - Speed Chart		1

14.5.1 Gearbox Assembly II – Exploded View

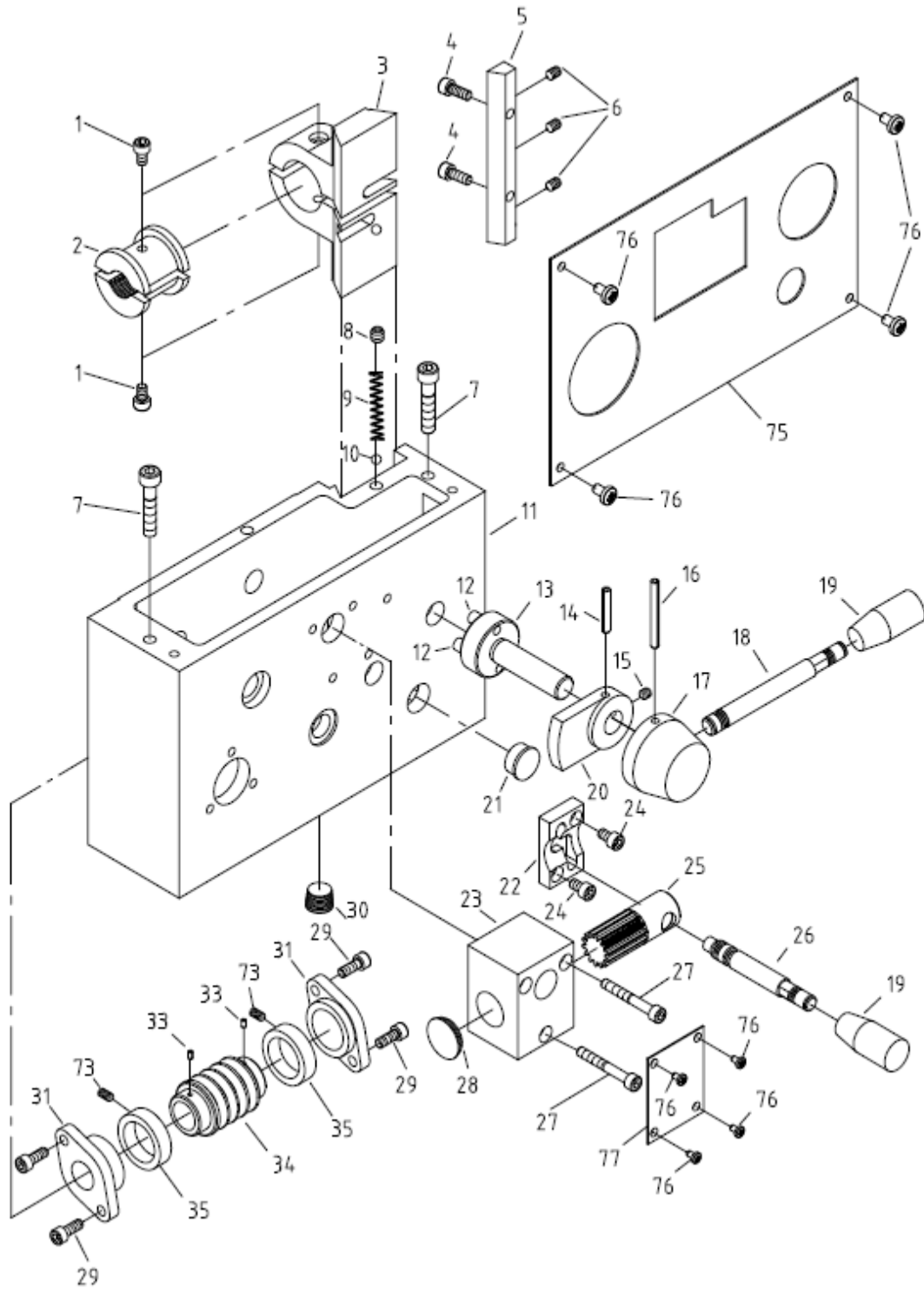


## 14.5.2 Gearbox Assembly II – Parts List

Index No.	Part No.	Description	Size	Qty
1	TS-1503041	Hex Socket Cap Screw	M6x16	1
2	05-42	Washer		1
3	05-41	Gear	52T	1
4	GH1440A-05305	Shaft Collar		1
5	05-39	Flange		1
6	05-38	Gasket		1
7	BB-6004	Ball Bearing	6004/P5	1
8	GH1440A-05725	Shaft (Inch)		1
9	GB1096-5x14	Key, Dbl Rd Hd	5x14 mm	4
10	KF2R5508	Key, Dbl Rd Hd	5x8 mm	1
11	GH1440A-05722	Gear		1
12	GB/T276-94	Ball Bearing	16002/p5	1
13	05-35	Gear	28T	1
14	GH1440K-05719	Key Slot Washer		1
15	GH1440K-05712	Gear	26T	1
16	GH1440K-05718	Key Slot Washer		1
17	GH1440K-05711	Gear	24T	1
18	GH1440K-05717	Key Slot Washer		1
19	GH1440K-05710	Gear	23T	1
20	GH1440K-05716	Key Slot Washer		1
21	GH1440K-05709	Gear	22T	1
22	GH1440K-05715	Key Slot Washer		1
23	GH1440K-05708	Gear	20T	1
24	GH1440K-05714	Key Slot Washer		1
25	GH1440K-05707	Gear	18T	1
26	GH1440K-05713	Key Slot Washer		1
27	GH1440K-05706	Gear	16T	1
28	BB-6003	Ball Bearing	6003/P5	2
29	F006047	C-Retaining Ring, Ext	20 mm	3
30	F014005	Key, Dbl Rd Hd	5x5x75 mm	1
31	GH1440A-05733A	Shaft (Inch)		1
32	GH1440A-05721	Gear	16T/32T	1
33	BB-6202	Ball Bearing	6202/p5	3
34	05-47	Flange		2
34a	05-48	Flange		2
35	GH1440A-05118	Shaft Collar		1
36	05-37	Gear	26T	1
37	F006031	C-Retaining Ring, Int	32 mm	2
38	BB-61804	Ball Bearing	61804/p5	2
39	05-49	Gear	16T	1
40	05-52	Shaft		1
41	GH1440A-05729	Shaft Collar		1
42	05-25	Gear	20T	1
43	PT2748A-032	E-Ring	15 mm	1
44	05-19	Gear	32T	1
45	GH1440A-05306	Shaft Collar		1
46	G51-2A	O-Ring	20X2.4 mm	1
47	05-53	Gasket		2
48	05-17	Flange		1
49	BB-51104	Ball Bearing	51104	2
50	GH1440K-05704	Shaft		1
51	5217851	Key, Dbl Rd Hd	6x6x14 mm	1
52	GH1440K-05727	Collar		1
53	GB117-5x40	Taper Pin	5x40 mm	1
54	F006043	C-Retaining Ring, Ext	15 mm	1
55	05-26	Gear	16T	1
56	05-24	Shaft Collar		1
57	05-22	Gear	32T	1

<b>Index No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Size</b>	<b>Qty</b>
58	GH1440K-05705	Shaft		1
59	GH1440A-05307	Shaft Collar		1
60	05-18	Flange		1
61	05-20	Nut		2
62	GH1440K-05726	Collar		1
63	GB117-4x35	Taper Pin	4x35 mm	2

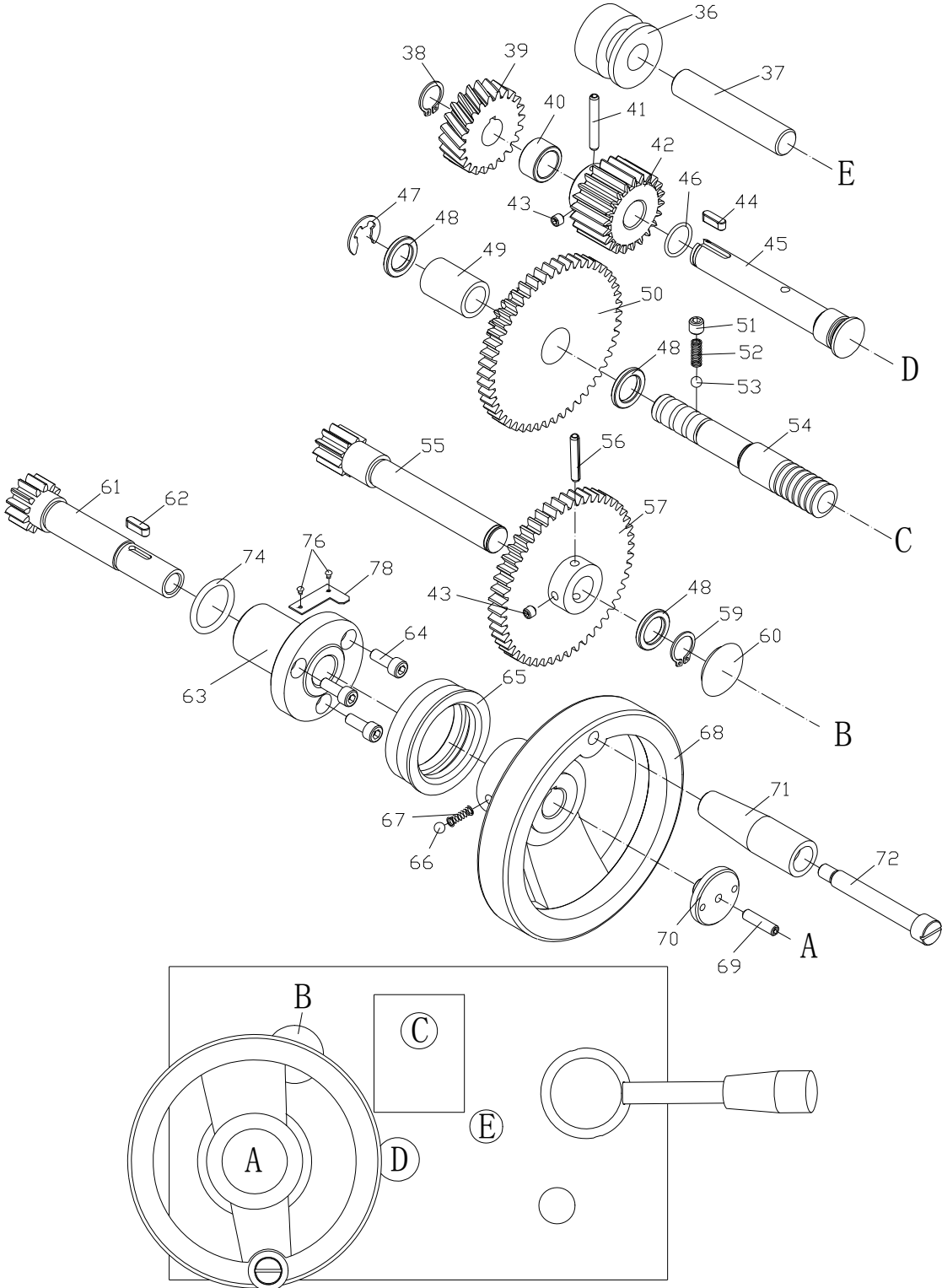
### 14.6.1 Apron Assembly I – Exploded View



## 14.6.2 Apron Assembly I – Parts List

Index No.	Part No.	Description	Size	Qty
1	TS-1503021	Hex Socket Hd Cap Screw	M6x10	2
2	06-37	Half Nut		1
3	06-36	Bracket		1
4	TS-1503041	Hex Socket Hd Cap Screw	M6x16	2
5	06-33	Gib		1
6	TS-1523031	Socket Set Screw	M6x10	3
7	TS-1504081	Hex Socket Hd Cap Screw	M8x40	2
8	TS-1524011	Socket Set Screw	M8x8	1
9	06-39	Spring		1
10	SB-6MM	Steel Ball	6 mm	1
11	06-01	Apron Casting		1
12	06-42-1	Pin		2
13	06-42	Half Nut Cam		1
14	GB879-5X35	Spring Pin	5x35 mm	1
15	TS-1523011	Socket Set Screw	M6x6	1
16	JRD1000-J39	Spring Pin	5x50 mm	1
17	GH1440-06-09	Hub		1
18	GH1440-06-04	Handle Shaft		1
19	GB4141.14-BM10x50	Knob		2
20	06-40	Safety Catch		1
21	GB1160-12	Sight Glass	12 mm	1
22	06-04	Bracket		1
23	06-16	Block		1
24	TS-1503031	Hex Socket Hd Cap Screw	M6x12	2
25	GH1440-06-07	Spline Shaft		1
26	GH1440-06-08	Handle Shaft		1
27	TS-1503101	Hex Socket Hd Cap Screw	M6x45	3
28	06-02	Plug		1
29	TS-1503041	Hex Socket Hd Cap Screw	M6x16	4
30	06-35	Drain Plug		1
31	06-34	Flange		2
33	GB879-3X5	Spring Pin	3x5 mm	2
34	06-27	Worm		1
35	06-50	Collar		2
73	TS-1522031	Set Screw	M5x10	2
75	GH1440K06301-6	Apron Label		1
76	TS-1531012	Screw	M3x6	8
77	GH1440K06302-2	Graphic Plate - Thread Dial		1

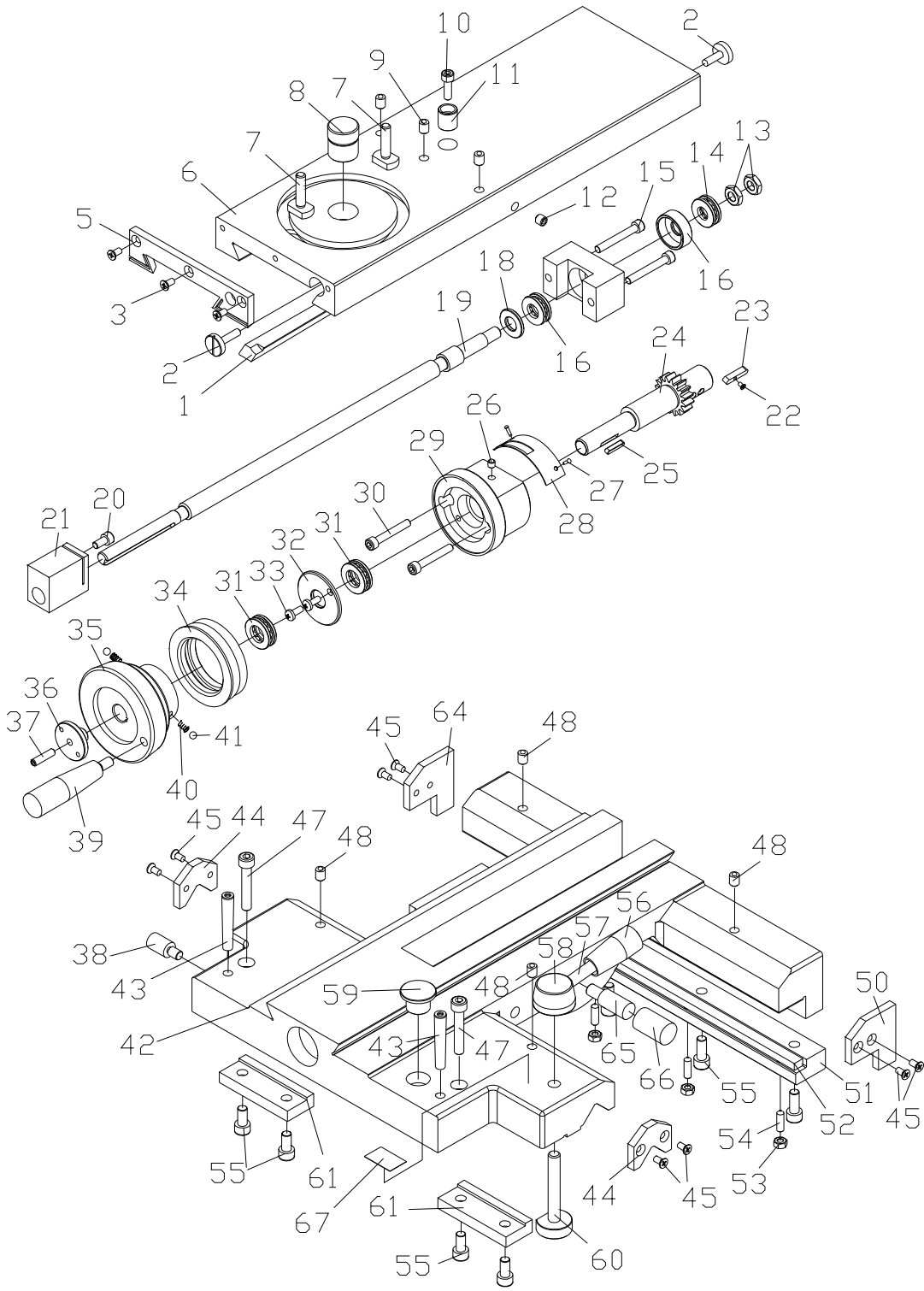
### 14.7.1 Apron Assembly II – Exploded View



## 14.7.2 Apron Assembly II – Parts List

Index No.	Part No.	Description	Size	Qty
36	06-44	Bushing		1
37	06-43	Shaft		1
38	F006044	C-Retaining Ring, Ext	16 mm	1
39	06-28	Gear	22T	1
40	06-26	Collar		1
41	GB879-86	Pin	5x35 mm	1
42	06-20	Gear	24T	1
43	TS-152301	Set Screw	M6x6	1
44	GB1096-79	Key	5x15 mm	1
45	06-19	Shaft		1
46	GB3452.1-82	O-Ring	17x1.8 mm	1
47	6012062	E-Retaining Ring, Ext	12 mm	1
48	06-10	Bushing		2
49	06-15-1	Collar		1
50	06-15	Cluster Gear	50T/20T	1
51	TS-152401	Set Screw	M8x8	1
52	06-14	Spring		1
53	SB-6MM	Steel Ball	6 mm	1
54	06-13	Shaft		1
55	06-06	Shaft		1
56	ZX-S48	Spring Pin	5x30 mm	1
57	06-08	Gear	50T	1
58	06-10	Bushing		1
59	F006044	C-Retaining Ring, Ext	16 mm	1
60	06-11	Plug		1
61	06-07	Shaft		1
62	GB1096-79	Key, Dbl Rd Hd	5x15	1
63	GH1440-06-05	Handwheel Flange		1
64	TS-150304	Hex Socket Hd Cap Screw	M6x16	3
65	06-31	Indicator Ring		1
66	SB-6MM	Steel Ball	6 mm	2
67	06-32	Spring		2
68	GH1440-06-06	Handwheel		1
69	TS-152307	Set Screw	M6x25	1
70	06-30	Wheel Stud		1
71	GH1440-06-11	Handle Sleeve		1
72	GH1440-06-10	Handle Screw		1
74	GH1440K-774	O-Ring	25.8x3.55 mm	1
76	TS-1531012	Screw	M3x6	2
78	GH1440-06304A	Indicator Label		1

14.8.1 Saddle and Cross Slide Assembly – Exploded View

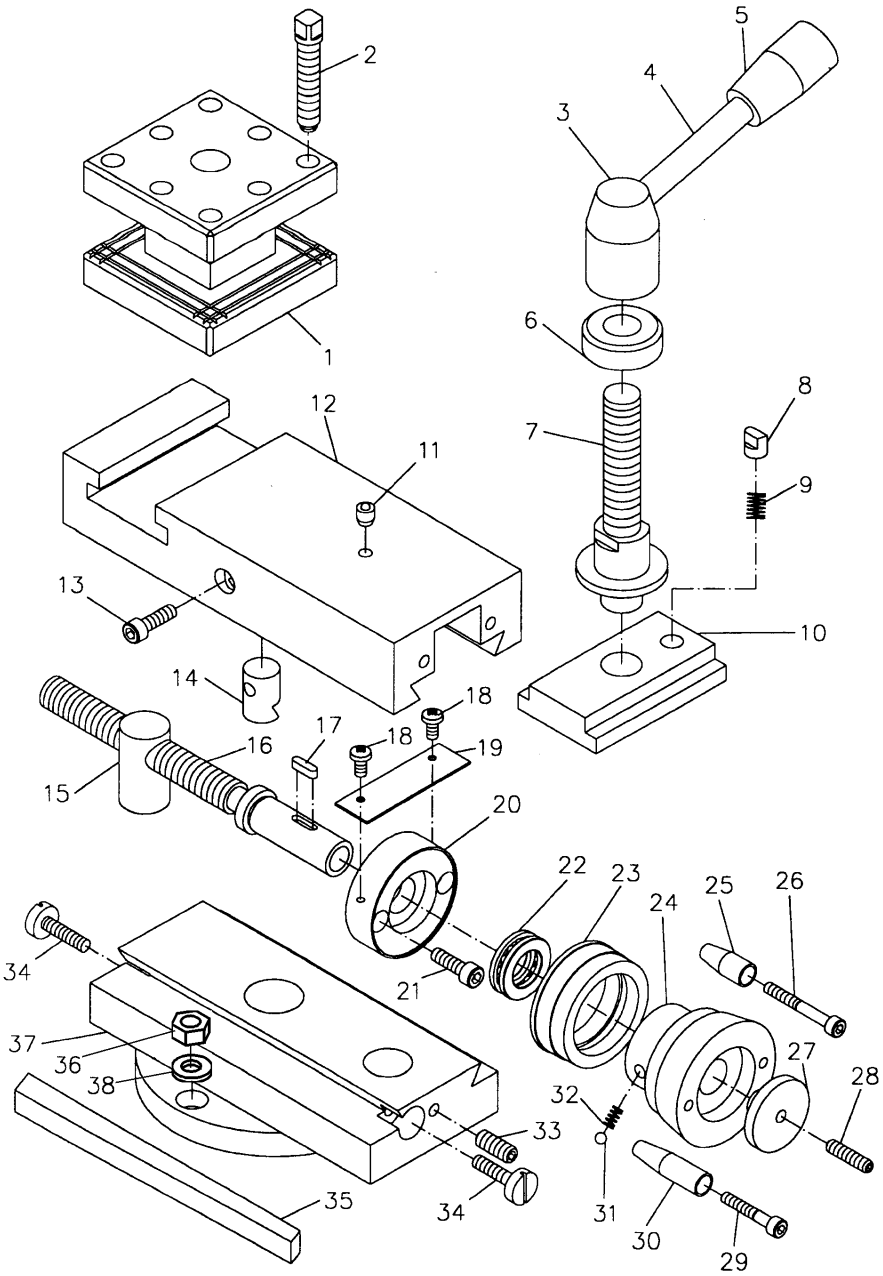


## 14.8.2 Saddle and Cross Slide Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	GH1440K-04702	Gib		1
2	GH1440A-04728	Gib Adjusting Screw		2
3	TS-1533032	Pan Head Machine Screw	M5x10	5
5	GH1440K-04504	Plate Wiper		1
6	GH1440K-04102	Cross Slide Body		1
7	GH1440K-04704	Clamp Nut		2
8	GH1440A-04726	Hub		1
9	GH1440K-809	Ball Oiler	8 mm	3
10	TS-1503051	Hex Socket Hd Cap Screw	M6x20	3
11	GH1440K-04705	Sleeve		1
12	TS-1524011	Socket Set Screw	M8x8	1
13	TS-1540071	Hex Nut	M10	2
14	GH1440A-04701	Bearing Cap		1
15	TS-1503071	Hex Socket Hd Cap Screw	M6x30	2
16	BB-8101	Thrust Bearing	8101	2
17	GH1440A-04103	Block		1
18	GH1440A-04702	Spacer		1
19	GH1440-07-16	Leadscrew		1
20	TS-1503031	Hex Socket Hd Cap Screw	M6x12	1
21	GH1440K-04301	Crossfeed Nut		1
22	GHB1340A-155	Pan Head Machine Screw	M3x5	1
23	KF2R5525	Key, Dbl Rd Hd	5X25 mm	1
24	GH1440K-04703	Gear Shaft		1
25	GB1096-4X20	Key, Dbl Rd Hd	4x20 mm	2
26	GB1155-89	Oiler	6 mm	1
27	TS-1531012	Pan Head Machine Screw	M3x6	2
28	GH1440K-04713	Indicator Plate		1
29	GH1440K-04103	Housing		1
30	TS-1503091	Hex Socket Hd Cap Screw	M6x40	2
31	BB-8102	Thrust Bearing	8102	2
32	GH1440A-04715	Washer, spcl		1
33	TS-1533032	Pan Head Machine Screw	M5x10	2
34	GH1440A-04716A	Index Ring		1
35	GH1440A-04107	Compound Handle		1
36	GH1440A-04717	Cover Screw		2
37	TS-1523071	Socket Set Screw	M6x25	1
39	GH1440A-06719	Handle Sleeve		1
40	GB2089-79	Spring	0.7x5x9 mm	2
41	SB-6MM	Steel Ball	6 mm	2
42	GH1440K-04101	Saddle		1
43	ZX-A41	Taper Pin	6x40 mm	2
44	GH1440K-04503	Plate Wiper		2
45	TS-1533032	Pan Head Machine Screw	M5x10	11
47	TS-1504091	Hex Socket Hd Cap Screw	M8x45	2
48	GH1440K-809	Oiler	8 mm	4
50	GH1440K-04501	Plate Wiper		1
51	GH1440A-04720	Rear Pressure Plate		1
52	GH1440A-04108	Gib		1
53	TS-1540041	Hex Nut	M6	4
54	TS-1523061	Socket Set Screw	M6x20	4
55	TS-1504041	Hex Socket Hd Cap Screw	M8x20	6
56	GB4141.14-10X50	Knob	M10x50	1
57	GH1440A-04733	Handle Shaft		1
58	GH1440A-04730	Hub		1
59	GH1440A-04502	Oil Cap		1
60	GH1440A-04731	Lock Stud		1
61	GH1440A-04719	Front Pressure Plate		2
64	GH1440K-04502	Plate Wiper		1

<b>Index No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Size</b>	<b>Qty</b>
65 .....	GHB1340A-04788....	Pin.....	.....	1
66 .....	GHB1340A-04507....	Sleeve.....	.....	1
67 .....	GH1440K04303 .....	Plate.....	.....	1

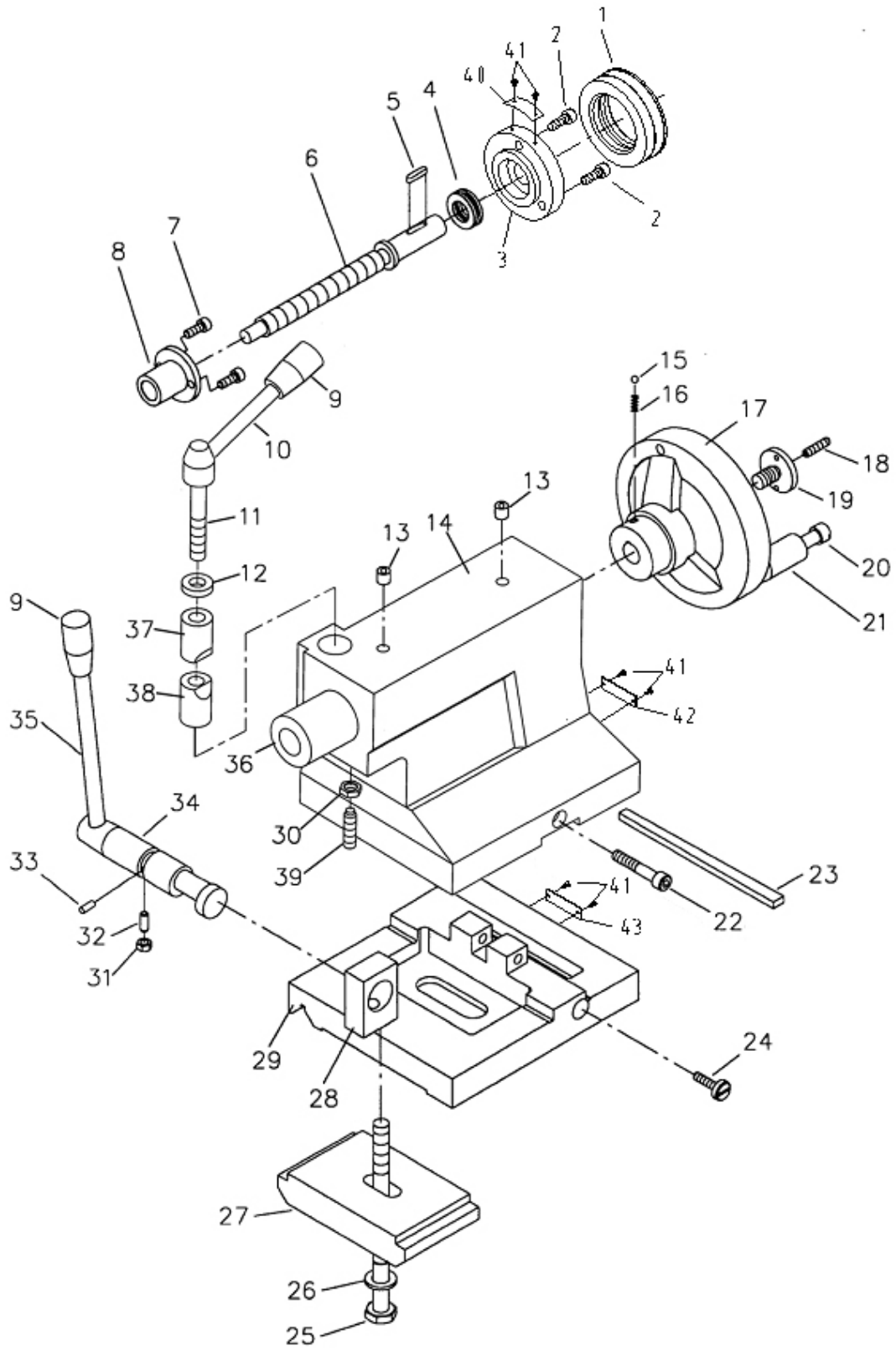
14.9.1 Top Slide and Tool Post – Exploded View



## 14.9.2 Top Slide and Tool Post – Parts List

Index No.	Part No.	Description	Size	Qty
1	GH1440A-04707	Tool Post		1
2	GB83-88	Tool Lock Screw	10x50 mm	8
3	C0632-04704	Handle Hub		1
4	GH1440A-04705	Handle Shaft		1
5	GB4141.14-BM10x50	Knob		1
6	GH1440A-04706	Spacer		1
7	GH1440A-04708	Tool Post Pin		1
8	GH1440A-04709	Tool Post Position Pin		1
9	GB2089-80	Spring	1x8x11 mm	1
10	GH1440A-04725	Clamp Nut		1
11	GH1440K-809	Ball Oiler	8 mm	1
12	GH1440A-04105	Compound Slide		1
13	TS-1503051	Hex Socket Hd Cap Screw	M6x20	1
14	GH1440A-04729	Position Pin		1
15	GH1440A-04302A	Cylindrical Nut		1
16	GH1440A-04724C	Compound Screw		1
17	GB1096-79	Key, Dbl Rd Hd	4x14 mm	1
18	TS-1531012	Screw	M3x6	2
19	GH1440K-04714	Indicator Label		1
20	GH1440A-04110	Screw Bushing		1
21	TS-1503051	Hex Socket Hd Cap Screw	M6x20	2
22	BB-8103	Thrust Bearing	8103	1
23	GH1440A-04723A	Index Ring		1
24	GH1440A-04109	Handwheel		1
25	GH1440A-04722	Handle		1
26	TS-1502061	Hex Socket Hd Cap Screw	M5x25	1
27	GH1440A-04717	Cover Screw		1
28	TS-1523071	Socket Set Screw	M6x25	1
29	TS-1502091	Hex Socket Hd Cap Screw	M5x40	1
30	GH1440A-04721	Handle		1
31	SB-6MM	Steel Ball	6 mm	2
32	GB2089-80	Spring	0.7x5x9 mm	2
33	TS-1523051	Socket Set Screw	M6x16	1
34	GH1440A-04728	Gib Adjusting Screw		2
35	GH1440K-04702	Gib		1
36	TS-1540061	Hex Nut	M8	2
37	GH1440K-04104	Swivel Slide		1
38	TS-1550061	Flat Washer	8 mm	2

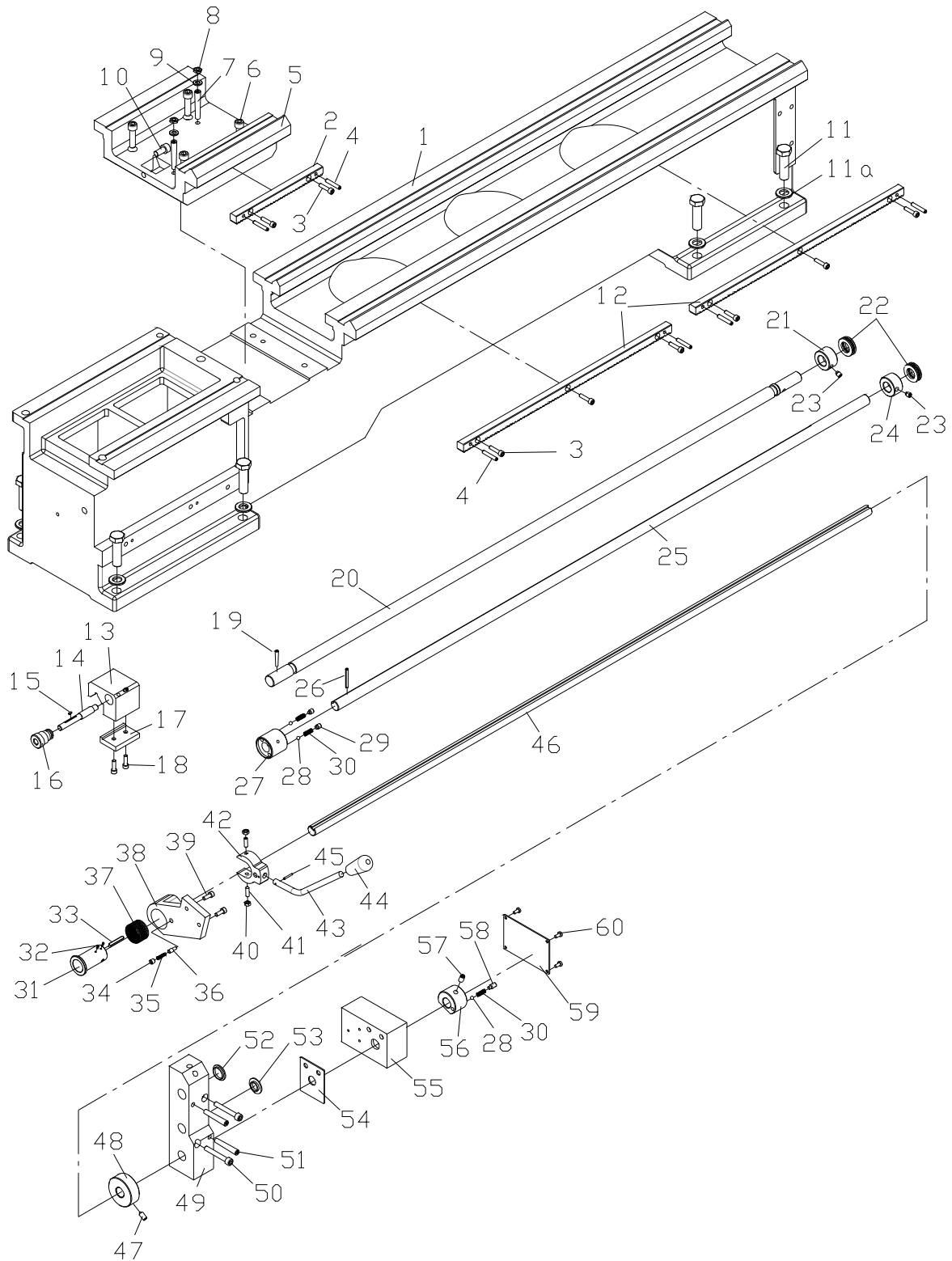
### 14.10.1 Tailstock Assembly – Exploded View



## 14.10.2 Tailstock Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	GH1440A-03703A	Index Ring		1
2	TS-1503051	Hex Socket Hd Cap Screw	M6x20	3
3	GH1440K-03102	Hub		1
4	BB-8103	Thrust Bearing	8103	1
5	KF2R4420	Key, Dbl Rd Hd	4x20 mm	1
6	GH1440K-03702	Leadscrew		1
7	TS-1503041	Hex Socket Hd Cap Screw	M6x16	2
8	GH1440K-03301	Flange		1
9	GB4141. 14	Knob	BM10x50	2
10	GH1440K-03705	Lever Handle		1
11	GH1440K-03704	Lever Support		1
12	GH1440K-03703	Washer		1
13	GB1155-89	Ball Oiler	10 mm	2
14	GH1440K-03101	Tailstock Body		1
15	SB-6MM	Steel Ball	6 mm	2
16	GB2089-80	Spring	0.8x5x8	2
17	GH1440A-06108	Handwheel		1
18	TS-1523081	Socket Set Screw	M6x30	1
19	GH1440A-06721	Cover Screw		1
20	GH1440A-06720	Handle Lever		1
21	GH1440A-06719	Handle Sleeve		1
22	TS-1504131	Hex Socket Hd Cap Screw	M8x70	2
23	GH1440K-03711	Gib		1
24	GH1440K-03712	Gib Adjusting Screw		2
25	TS-1492071	Hex Cap Bolt	M12x70	1
26	TS-155008	Washer	12 mm	1
27	GH1440K-03103	Tailstock Clamp Plate		1
28	GH1440A-03710	Block		1
29	GH1440K-03104	Tailstock Base		1
30	F012319	Hex Jam Nut	M10	1
31	F012316	Hex Jam Nut	M6	1
32	F010438	Socket Set Screw DP	M6x16	1
33	GB879-86	Pin	5x10 mm	1
34	GH1440K-03710	Eccentric Shaft		1
35	GH1440K-03709	Lever Handle		1
36	GH1440K-03701	Quill		1
37	GH1440K-03707	Clamping Block		1
38	GH1440K-03708	Clamping Block		1
39	F010446	Socket Set Screw DP	M10x40	1
40	GH1440K-03714	Indicator Label		1
41	TS-1531012	Screw	M3x6	6
42	GH1440K-03302	Indicator Label		1
43	GH1440K-03303	Indicator Label		1

### 14.11.1 Bed and Shaft Assembly – Exploded View

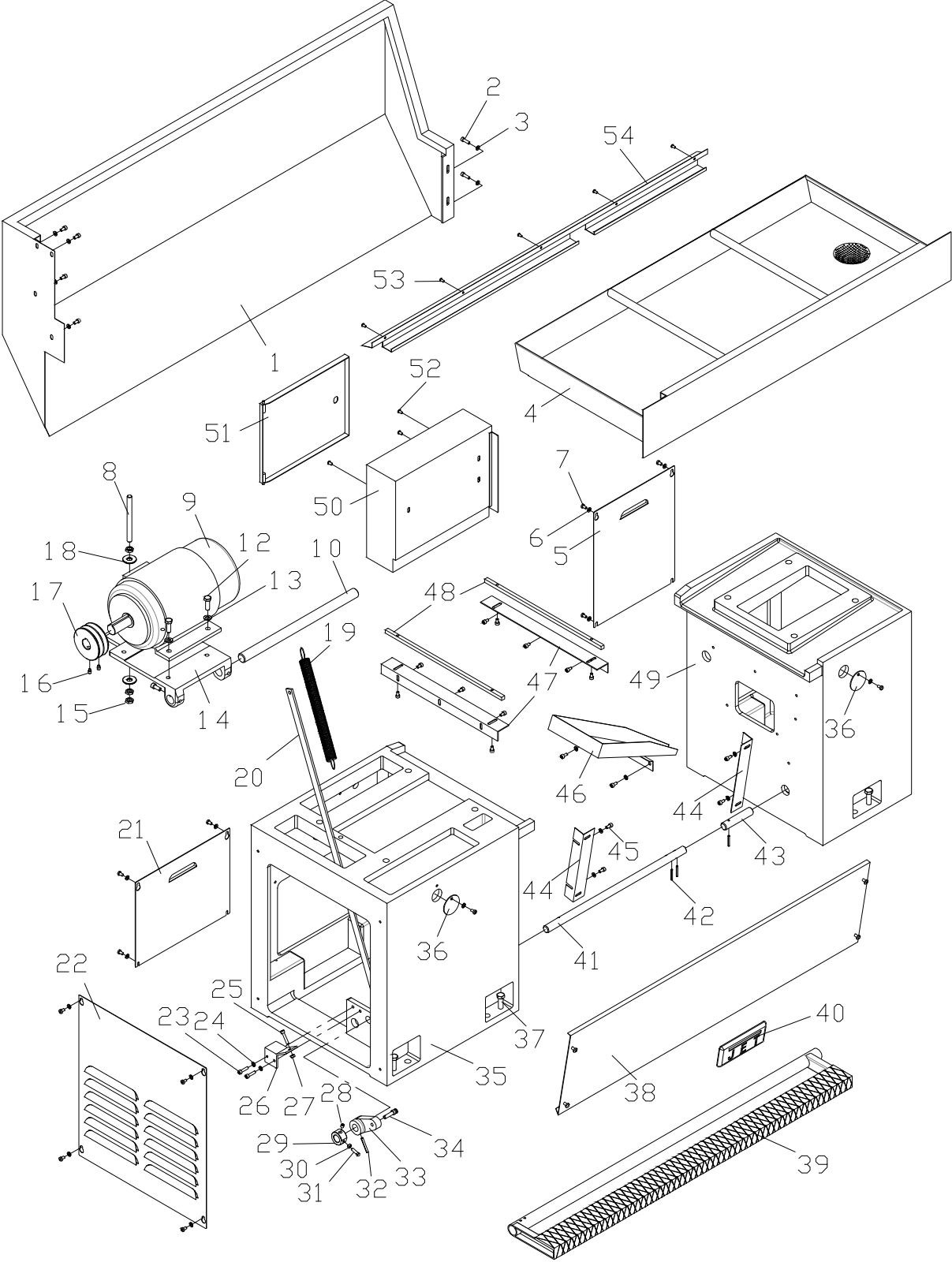


## 14.11.2 Bed and Shaft Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	GH1440K-01101	Bed		1
2	GH1440A-01704	Rack (short)		1
3	TS-150306	Hex Socket Cap Screw	M6x25	8
4	ESR1650-81	Spring Pin	6x35 mm	6
5	GH1440K-01102	Gap Bridge		1
6	TS-1505061	Hex Socket Cap Screw	M10x40	4
7	GH1440K-1109	Taper Pin, Ext. Thread	8x60 mm	2
8	TS-1540061	Hex Nut	M8	2
9	TS-1550061	Flat Washer	M8	2
10	TS-1505021	Hex Socket Cap Screw	M10x20	1
11	CL1640ZX-0204	Hex Cap Bolt	M16x55	8
11a	TS-155010	Flat Washer	M16	8
12	GH1440A-01705	Rack (long)		2
13	GH1440K-01705	Micro Adjust Bracket		1
	GH1440K-MA	Micro Adjust Assembly (#13 thru 18)		1
14	GH1440A-01716	Shaft		1
15	JAT741-21	Spring Pin	3x6 mm	1
16	GH1440A-01717	Index Ring		1
17	GH1440A-01108	Plate		1
18	TS-1503051	Hex Socket Cap Screw	M6x20	2
19	GHB1330-12B	Taper Pin	5x35 mm	1
20	GH1440A-01712/1000	Lead Screw		1
21	GH1440A-01718	Collar		1
22	BB-51104	Bearing	51104	2
23	TS-1524021	Socket Set Screw	M8x10	2
24	GH1440A-01718	Collar		1
25	GH1440K-01701	Control Rod		1
26	ZX-S41	Spring Pin	5x40 mm	1
27	GH1440A-01706	Clutch		1
28	SB-6MM	Steel Ball	6 mm	3
29	TS-152402	Socket Set Screw	M8x10	2
30	01-38	Spring	1.2×6×28 mm	2
31	GH1440A-01711	Sleeve		1
32	SP-36	Spring Pin	3x6 mm	2
33	F014006	Key, Dbl Rd Hd	5x36 mm	1
34	TS-1524011	Socket Set Screw	M8x8	1
35	GB2089-80	Spring	0.8x5x25 mm	1
36	GH1440A-01711	Key		1
37	GB2089-80	Spring	3x35x70 mm	1
38	GH1440A-01105	Control Bracket		1
39	TS-1503041	Hex Socket Cap Screw	M6x16	2
40	TS-1540041	Hex Nut	M6	2
41	TS-1523061	Socket Set Screw	M6x20	2
42	GH1440A-01106	Control Fork		1
43	GH1440A-01715	Control Handle		1
44	GB4141.14	Knob	BM10x50	1
45	6295576	Spring Pin	3x20 mm	1
46	GH1440K-01701A	Control Rod		1
47	TS-1523031	Socket Set Screw	M6x10	1
48	GH1440A-01709	Collar		1
49	GH1440K-01108	End Bracket		1
50	TS-1504111	Hex Socket Cap Screw	M8x55	2
51	GH1440K-151	Taper Pin, Int Thread	8x55 mm	2
52	C0632-01502	Plug		1
53	C0632-01503	Plug		1
54	C0632A-01505	Gasket		1
55	C0632A-01301	Shaft Box		1
56	GH1440A-01708	Shift Collar		1
57	TS-1523051	Socket Set Screw	M6x16	1

<b>Index No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Size</b>	<b>Qty</b>
58	F010448	Socket Set Screw DP	M8x16	1
59	C0632A-01504	Shaft Box Cover		1
60	TS-1502021	Socket Head Cap Screw	M5x10	4

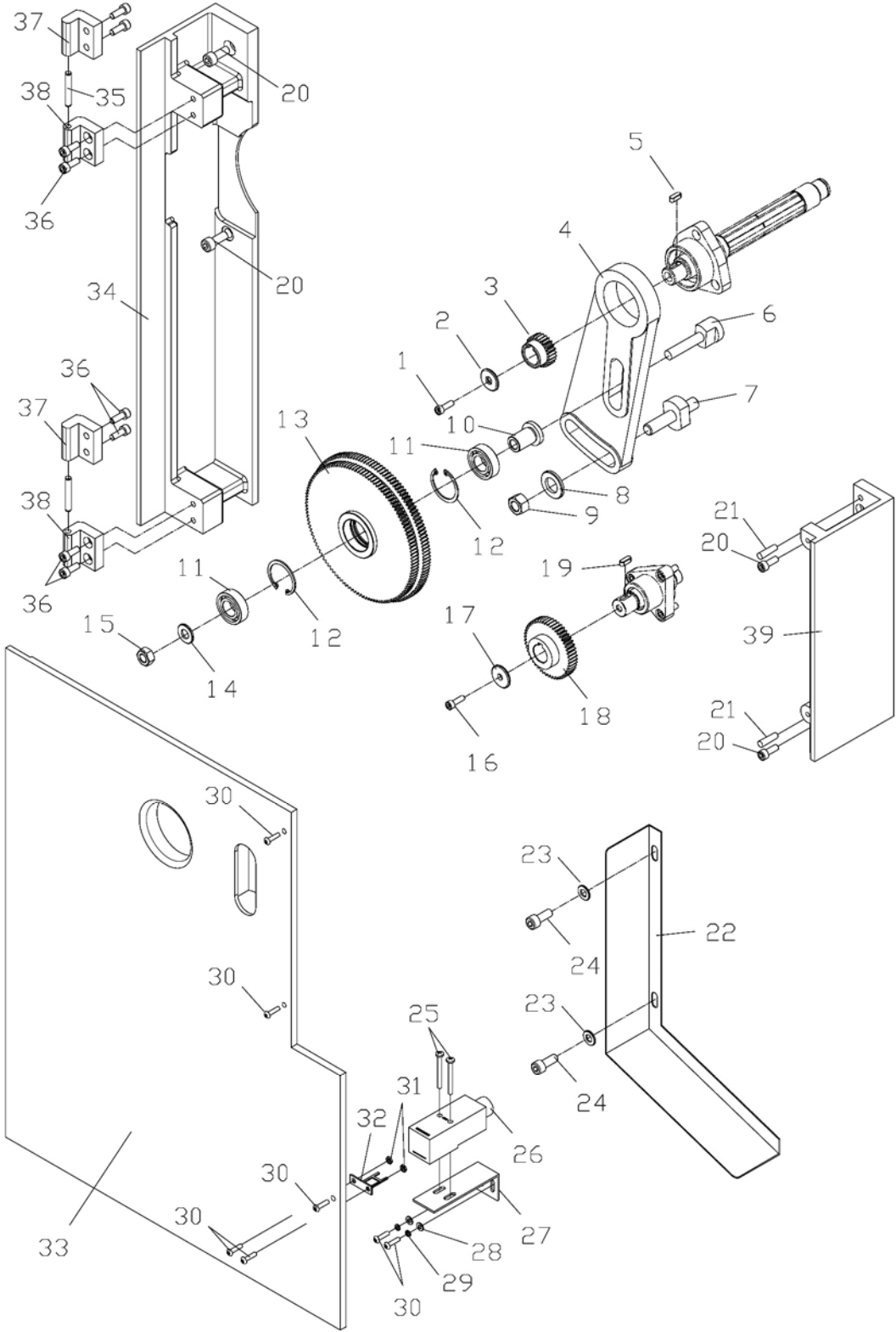
14.12.1 Stand and Brake Assembly – Exploded View



## 14.12.2 Stand and Brake Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	GH1440K-01-707A	Splash Guard	M6x10	1
2	TS-1503021	Hex Socket Hd Cap Screw	M6x10	2
3	TS-1550041	Flat Washer	6 mm	2
4	GH1440K-01705	Chip Tray		1
5	GH1440K-01710	Cover		1
6	TS-1550041	Flat Washer	6 mm	27
7	TS-1534032	Phillips Pan Hd Machine Screw	M6x10	19
8	GH1440A-1730	Screw	M6x10	1
9	GH1440-M1-1	Main Motor (1 Phase)		1
	GH1440-M1-1SC	Start Capacitor	400µF 350V	1
	GH1440-M1-1RC	Run Capacitor	40µF 450V	1
	GH1440-M1-3	Main Motor (3 Phase)		1
10	GH1440K-01704	Shaft	M6x10	1
12	TS-1491041	Hex Cap Bolt	M10x30	4
13	TS-1550071	Flat Washer	10 mm	4
14	GH1440K-01107	Motor Mounting Bracket		1
	TS-1524011	Set Screw	M8x8	3
15	TS-1540081	Hex Nut	M12	3
16	TS-1524031	Socket Set Screw	M8x12	1
17	GH1440K-01106	Pulley		1
18	GH1440A-01731	Washer	12 mm	2
19	11-04	Spring	3.5x25x270	1
20	GH1440K-22702	Connector Bar		1
21	GH1440K01709	Cover		1
22	GH1440K-01708	Cover		1
23	TS-1503061	Hex Socket Hd Cap Screw	M6x25	2
24	TS-1550041	Flat Washer	6 mm	2
25	TS-1503071	Hex Socket Hd Cap Screw	M6x30	1
26	GH1440K-22703	Angle Steel	M12	1
27	TS-2311061	Hex Nut	M6	1
28	TS-1524021	Socket Set Screw	M8x10	1
29	GH1440A-22705	Link Nut		1
30	TS-2311061	Hex Nut	M6	1
31	GH1440A-22713	Screw		1
32	ESR1650-18	Spring Pin	5x40mm	1
33	GH1440A-22101	Link		1
34	GH1440A-22704	Shaft Pin		1
	F003804	Cotter Pin	1/16 x 3/4	1
35	GH1440K-01103	Pedestal (left)		1
36	GH1440A-01723	Round Cover		4
37	TS-1492051	Hex Cap Bolt	M12x50	1
38	GH1440K-01706	Front Plate		1
39	GH1440K-01701	Brake Pedal		1
40	JET-165	JET Logo	165x68mm	1
41	C0632A-22704	Shaft		1
42	2210-108	Spring Pin	M5x30	3
43	GH1440A-22707	Shaft		1
44	GH1440K-01714	Bracket		2
45	TS-1503021	Hex Socket Hd Cap Screw	M6x10	16
46	GH1440K-01713	Tray		1
47	GH1440K-01712	Bracket		2
48	GH1440K-01711	Guide		2
49	GH1440K-01104	Pedestal (right)		1
50	GH1440K-18701	Electric Cabinet		1
51	GH1440K-18702	Electric Cabinet Door		1
52	TS-1503021	Hex Socket Hd Cap Screw	M6x10	3
53	TS-1502021	Hex Socket Hd Cap Screw	M5x10	5
54	GH1440K-18717	Support		1

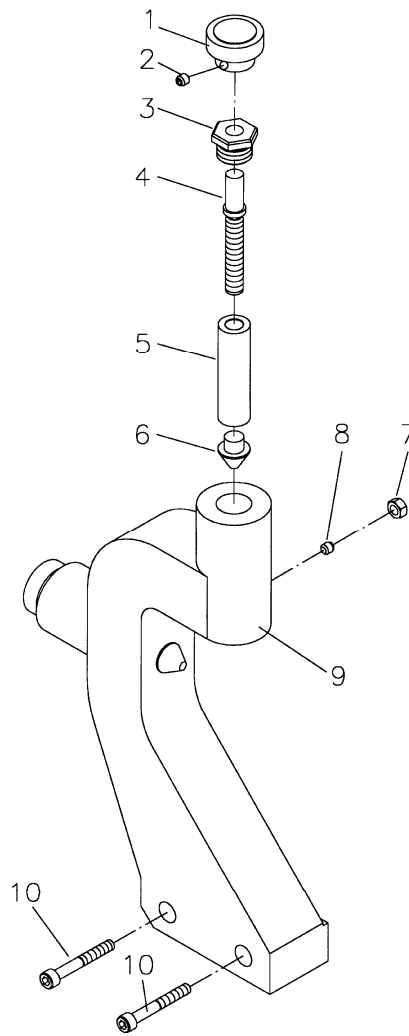
14.13.1 End Gear Assembly – Exploded View



### 14.13.2 End Gear Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	TS-1502041	Hex Socket Hd Cap Screw	M5x16	1
2	GH1440K-1304	Washer, spcl	6 mm	1
3	04-50	Gear	25T	1
4	GH1440K-05104	Quadrant (inch)		1
5	GB1096-5X14	Key, Dbl Rd Hd	5x14 mm	1
6	05-43	Threaded Shaft		1
7	GH1440K-05720	Stud		1
8	TS-2360121	Flat Washer	12 mm	1
9	TS-1540081	Hex Nut	M12	1
10	05-45	Collar		1
11	BB-6103	Ball Bearing	6103	2
12	F006033	C-Retaining Ring, Int	35 mm	2
13	05-65	Gear	120/127	1
14	05-44	Flat Washer		1
15	TS-1540071	Hex Nut	M10	1
16	TS-1503041	Hex Socket Hd Cap Screw	M6x16	1
17	05-42	Washer	6mm	1
18	05-41	Gear	50T	1
19	GB1096-5X14	Key, Dbl Rd Hd	5x14 mm	1
20	TS-1504041	Hex Socket Hd Cap Screw	M8x20	4
21	ZX-H218	Pin	6x25 mm	2
22	GH1440K-05722	Bracket		1
23	TS-1550061	Flat Washer	8mm	2
24	TS-1504041	Hex Socket Hd Cap Screw	M8x20	2
25	PS1652T-105	Phillips Pan Hd Machine Screw	M4x40	2
26	QKS8-1	Door Switch		1
	ZH-SQ1	Door Switch Assembly (includes #26, 32)		1
27	C0632A-18704	Bracket		1
28	TS-1550021	Flat Washer	4 mm	2
29	TS-1551021	Spring Washer	4 mm	2
30	TS-1501051	Hex Socket Hd Cap Screw	M4x16	7
31	TS-1540021	Hex Nut	M4	2
32	QKS8-2	Door Switch		1
33	GH1440K-05502	Back Cover		1
34	GH1440K-05105	Rear side plate		1
35	ZX-H223	Dowel Pin	6h8x40	2
36	TS-1503041	Hex Socket Cap Screw	M6x16	8
37	1440R-08712	Upper Hinge		2
38	1440R-08711	Lower Hinge		2
39	GH1440K-05106	Front Plate		1

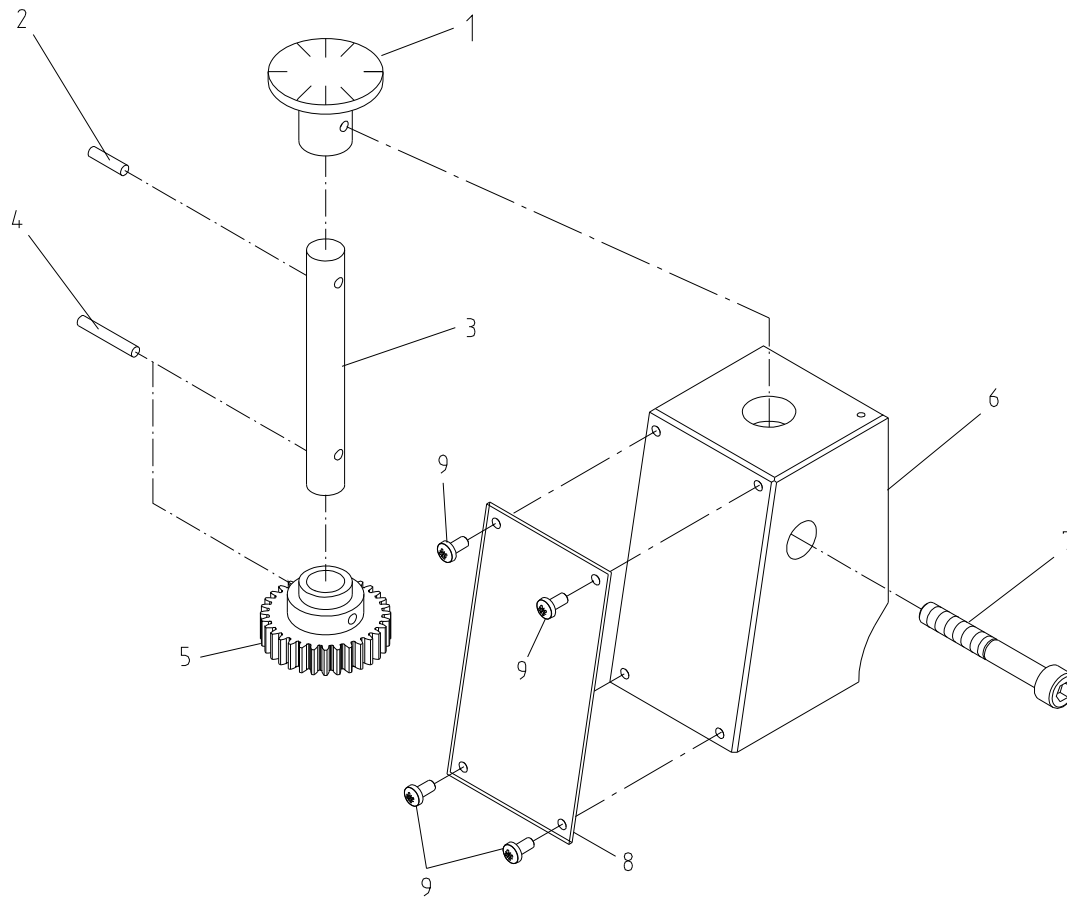
### 14.14.1 Follow Rest – Exploded View



### 14.14.2 Follow Rest – Parts List

Index No.	Part No.	Description	Size	Qty
	GH1440K-FRA	Follow Rest Assembly (#1 thru 10)		
1	GH1440-09-02	Knob		2
2	TS-1523011	Socket Set Screw	M6x6	2
3	10B-04	Bushing		2
4	10B-05	Screw		2
5	10B-02	Sleeve		2
6	10B-06	Brass Finger		1
7	TS-2311061	Hex Nut	M6	2
8	TS-1523011	Socket Set Screw	M6x6	2
9	GH1440-09-01	Follow Rest Body		1
10	TS-1503101	Hex Socket Hd Cap Screw	M6x45	2

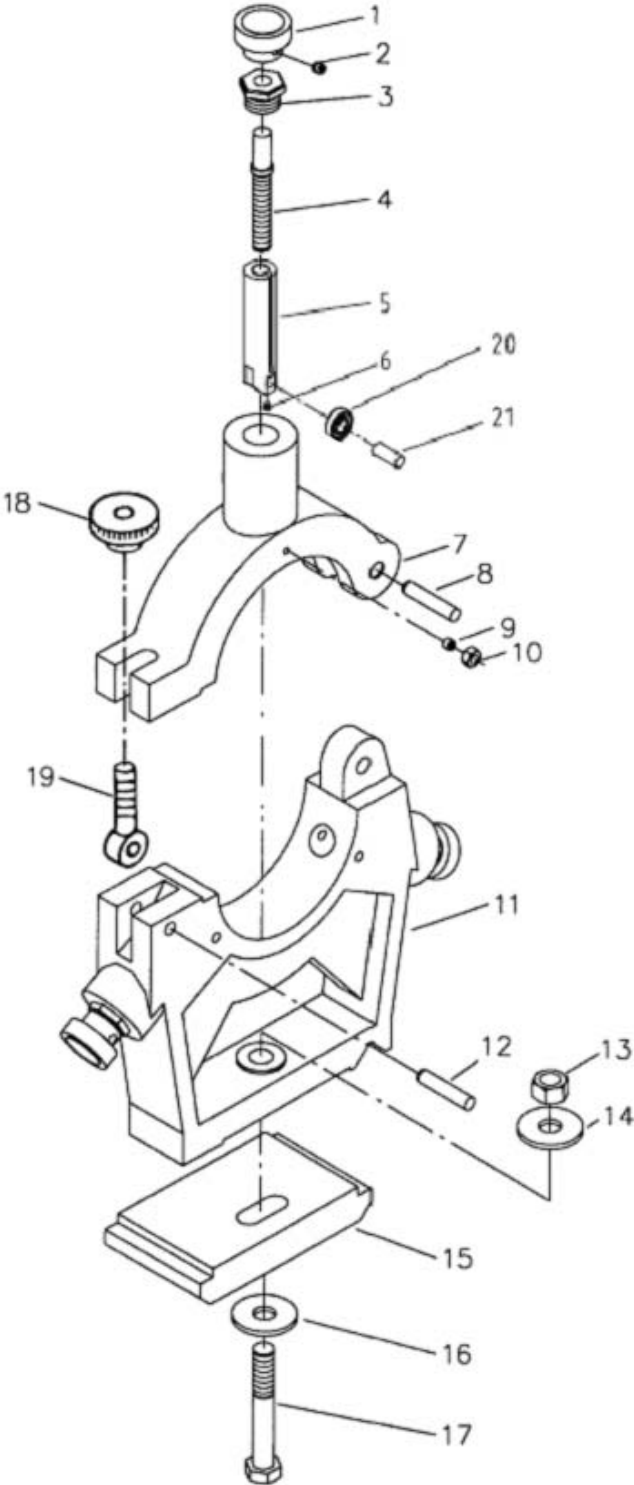
### 14.15.1 Thread Dial Assembly – Exploded View



### 14.15.2 Thread Dial Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
.....	GH1440K-TDA .....	Thead Dial Assembly (includes #1 thru 9) .....	.....	.....
1 .....	06-22 .....	Dial .....	.....	1 .....
2 .....	GB879-3x12 .....	Spring Pin .....	3x12 .....	1 .....
3 .....	06-23 .....	Shaft .....	.....	1 .....
4 .....	GB879-3x20 .....	Spring Pin .....	3x20 .....	1 .....
5 .....	06-25 .....	Gear .....	32T .....	1 .....
6 .....	06-24 .....	Body .....	.....	1 .....
7 .....	TS-1503101 .....	Hex Socket Hd Cap Screw .....	M6x45 .....	1 .....
8 .....	GH1440K-11305-1 .....	Graphic Plate – Thread Dial .....	.....	1 .....
9 .....	TS-1531012 .....	Screw .....	M3x6 .....	4 .....

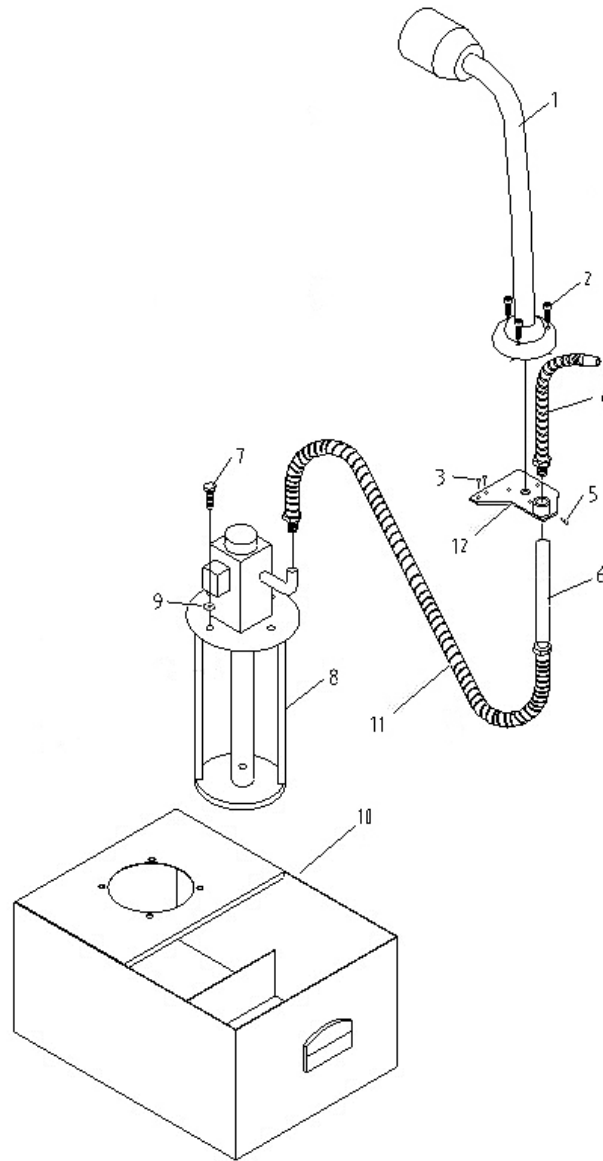
14.16.1 Steady Rest – Parts List



## 14.16.2 Steady Rest – Parts List

Index No.	Part No.	Description	Size	Qty
	GH1440K-SRA	Steady Rest Assembly (#1 thru 21)		1
1	GH1440-09-02	Knob		3
2	TS-1523011	Socket Set Screw	M6x6	3
3	10A-05	Bushing		3
4	10A-06	Screw		3
5	GH1440K-10704	Sleeve		3
6	10A-08	Brass Finger		3
7	10A-03	Steady Rest Upper Body		1
8	F004047	Dowel Pin	8x40 mm	1
9	TS-1523061	Socket Set Screw	M6x20	3
10	TS-1540041	Hex Nut	M6	3
11	GH1440-10-01	Steady Rest Lower Body		1
12	10A-02	Lock Pin		1
13	TS-1540081	Hex Nut	M12	1
14	TS-1550081	Washer	12 mm	1
15	GH1440-10-02	Clamp Plate		1
16	TS-1550081	Flat Washer	12 mm	1
17	TS-1492081	Hex Cap Bolt	M12x80	1
18	GH1440K-1618	Knurled Thumb Knob		1
19	GH1440K-1619	Pivot Stud		1
20	BB-606	Ball Bearing	606	3
21	ZX-Q49	Dowel Pin	6x18 mm	1

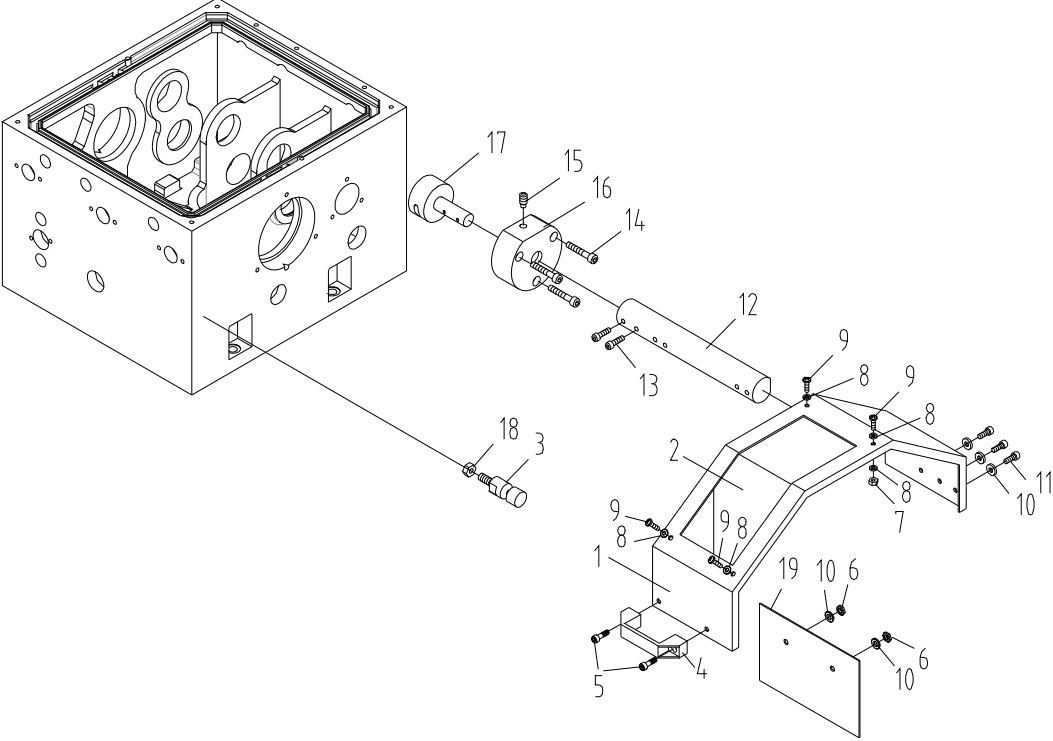
### 14.17.1 Coolant and Work Light Assembly – Exploded View



### 14.17.2 Coolant and Work Light Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	GHB1340-EL	Work Light		1
2	TS-1503051	Hex Socket Hd Cap Screw	M6x20	3
3	TS-1502051	Hex Socket Hd Cap Screw	M5x20	3
4	GH1440K-1704	Coolant Nozzle	C2-77	3
5	TS-1503041	Hex Socket Hd Cap Screw	M6x16	1
6	GHB1440A01739	Rubber Tube		1
7	TS-1482011	Hex Cap Bolt	M6x10	4
8	YSB-12TH	Coolant Pump	3PH	1
	YDB-12TH	Coolant Pump	1PH	1
9	TS-1550041	Flat Washer	6 mm	4
10	GH1440K01715	Coolant Tank		1
11	GH1440K1711	Tube	600 mm	1
12	GH1440K18711	Support		1

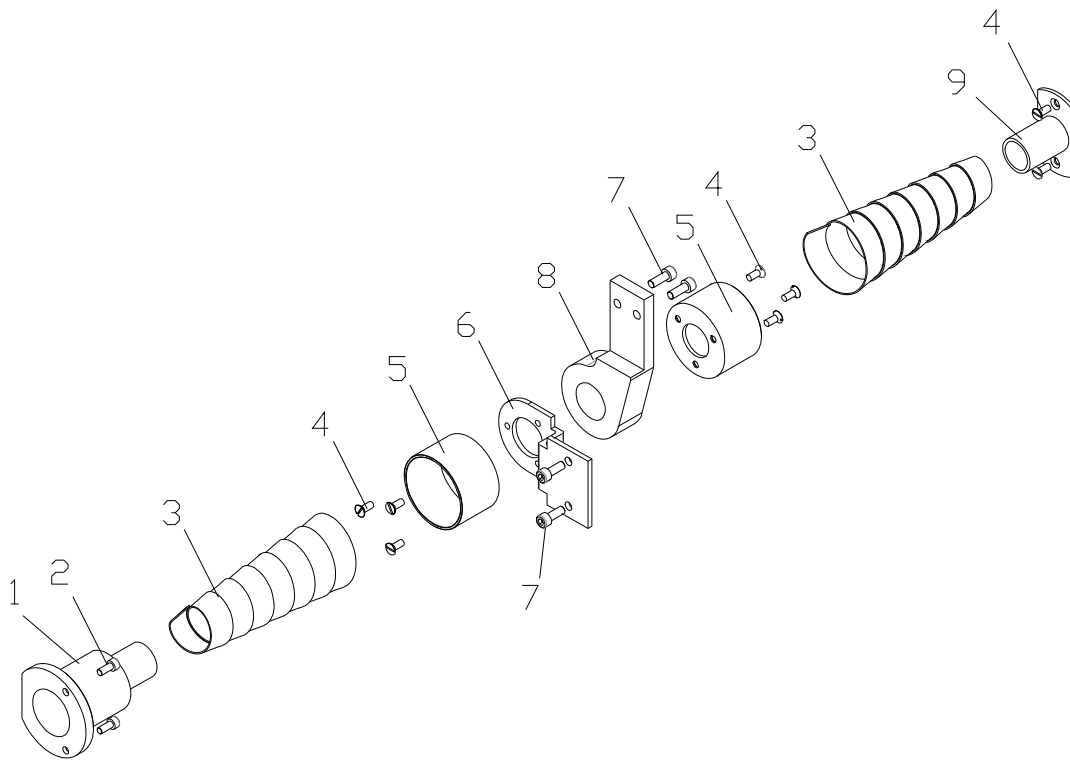
**14.18.1 Chuck Guard Assembly – Exploded View**



**14.18.2 Chuck Guard Assembly – Parts List**

Index No.	Part No.	Description	Size	Qty
.....	GH1440K-CGA.....	Chuck Guard Assembly (#1 thru 19).....		1
1	GH1440K-19701J.....	Chuck Guard.....		1
2	GHB1340A-19501E...	Guard Acrylic Window .....		1
3	ZX-19704E.....	Fixing Rod.....		1
4	A90.....	Handle .....		1
5	TS-1503031 .....	Hex Socket Hd Cap Screw.....	M6x12.....	2
6	TS-1540041 .....	Hex Nut .....	M6.....	2
7	TS-1540021 .....	Hex Nut.....	M4.....	4
8	TS-1550021 .....	Plain Washer.....	4 mm .....	8
9	TS-1532042 .....	Cross Recessed Pan Head Screw .....	M4x12.....	4
10	TS-1550041 .....	Plain Washer.....	6 mm .....	3
11	TS-1534032 .....	Cross Recessed Pan Head Screw .....	M6x10.....	3
12	GH1440K-19702J.....	Rest Bar .....		1
13	TS-1524021 .....	Hex Socket Set Screw .....	M8x10.....	2
14	TS-1503071 .....	Hex Socket Hd Cap Screw.....	M6x30.....	3
15	TS-1524041 .....	Hex Socket Set Screw .....	M8x16.....	1
16	GHB1340A19704 .....	Switch Box .....		1
17	GHB1340A19702E....	Shaft .....		1
18	TS-1540061 .....	Hex Nut.....	M8.....	1
19	GH1440K-19703J .....	Panel.....		1

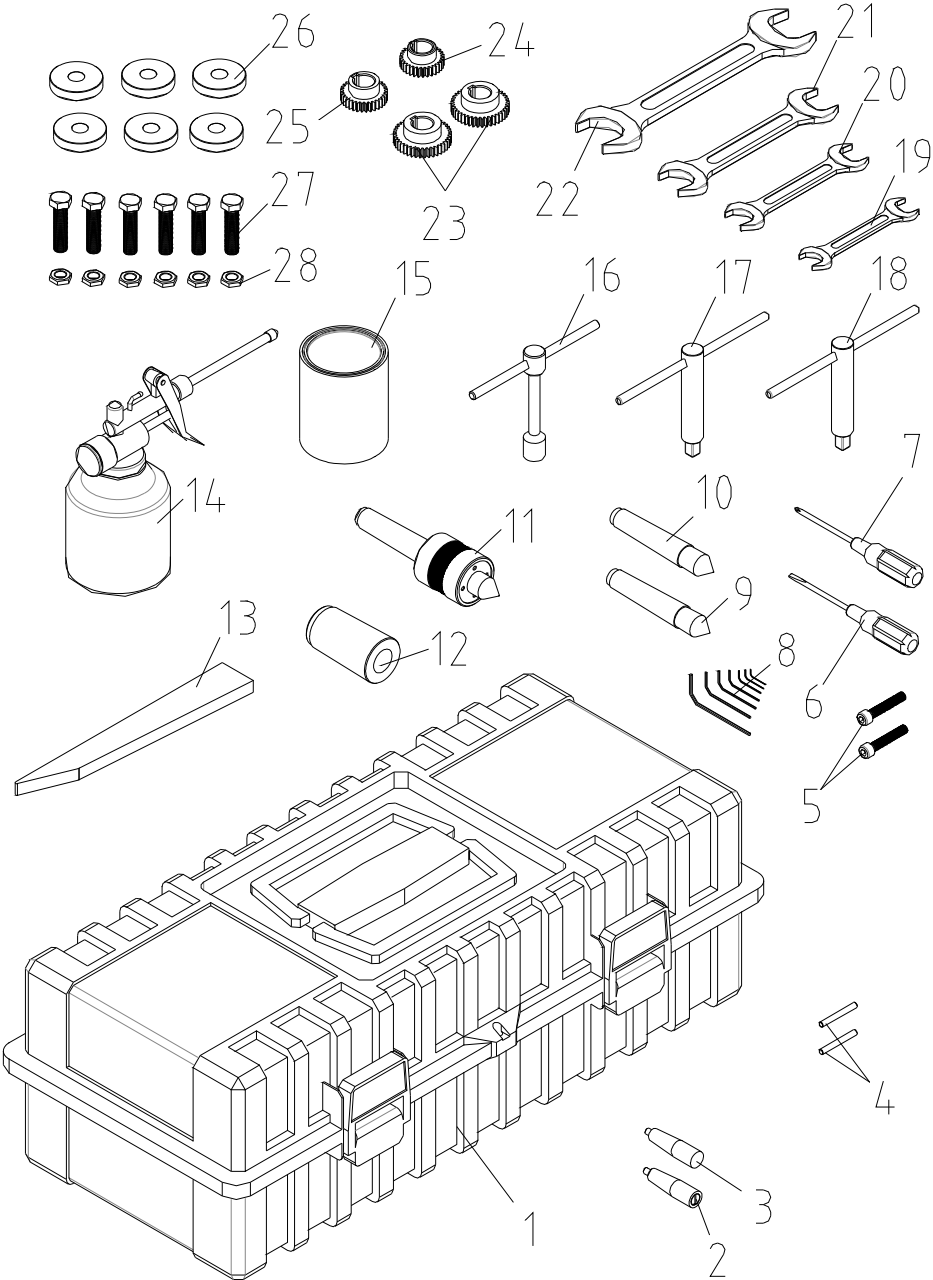
### 14.19.1 Lead Screw Cover Assembly – Exploded View



### 14.19.2 Lead Screw Cover Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	GH1440K-14701	Left Flange		1
2	TS-1502031	Hex Socket Hd Cap Screw	M5x12	2
3	LGB 28-900-70	Telescoping Sleeve		2
4	TS-2285121	Phillips Flat Head Machine Screw	M5x12	8
5	GH1440A-14702	Cover		2
6	GH1440K-14702	Left Flange Bracket		1
7	TS-1503041	Hex Socket Hd Cap Screw	M6x16	4
8	GH1440K-14101	Right Flange Bracket		1
9	GH1440A-14703	Right Flange		1

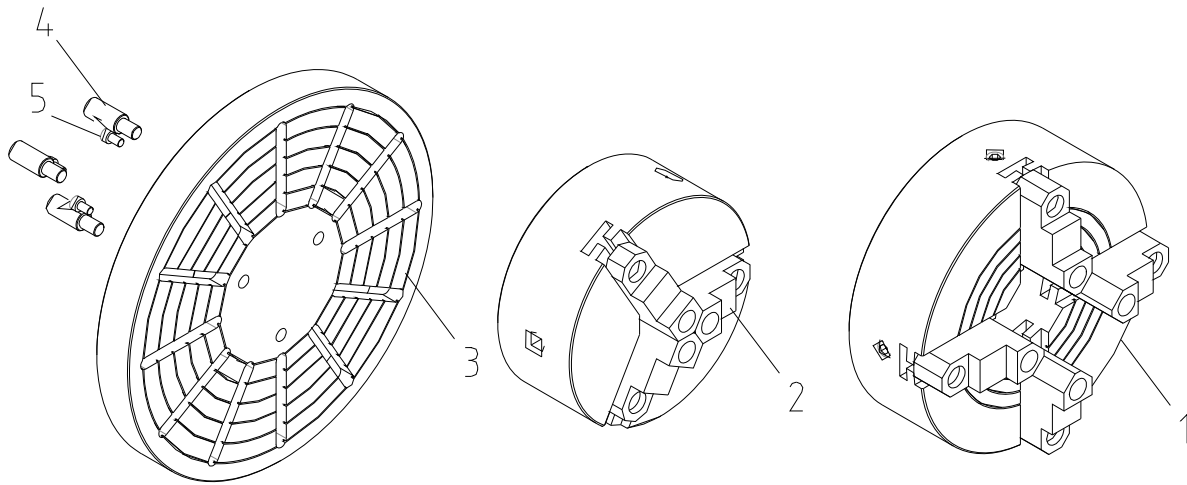
14.20.1 Accessories I – Exploded View



## 14.20.2 Accessories I – Parts List

Index No.	Part No.	Description	Size	Qty
	GH1440-TBCP	Tool Box Complete (#1 thru 28)		1
1		Tool Box		1
2	GH1440-0611	Handle Sleeve		1
	GH1440-0610	Handle Lever		1
3	GH1440A-06719	Handle Sleeve		1
4	GH1440-06-04	Shear Pin	4X35 mm	2
5	TS-1504081	Hex Socket Hd Cap Screw	M8X40	2
6	ZX-OP-14	Flat Blade Screwdriver		1
7	ZX-OP-15	Cross Point Screwdriver		1
8	GH1440-06-08	Hex Socket Wrench Set	.2, 2.5, 3, 4, 5, 6, 8mm	7
9	C0632-09703	Dead Center	MT-3 (Alloy)	1
10	C0632-09702	Dead Center	MT-3	1
11	GH1440-06-11	Live Center	MT-3	1
12	C0632-09701	Tapered Reducing Sleeve	No. 5 to No. 3	1
13	1440R-F001	Drift Key		1
14	GH1440B-1707	Oil Gun		1
15		Touchup Paint Can (Gray)		1
16	C0632-04726	Tool Post Wrench Rod		1
	C0632-04727	Tool Post Wrench		1
17	C0632-09705	Cam Lock Key Rod		1
	C0632-09704	Cam Lock Key		1
18	GH1440-0618	Chuck Key		1
19	GH1340A-TBCP-16-03	Open End Wrench	9-11mm	1
20	6295506	Open End Wrench	10-12mm	1
21	6295507	Open End Wrench	12-14mm	1
22	6295508	Open End Wrench	17-19mm	1
23	GH1440A05735-3	Change Gear	40T	2
24	GH1440A05735-1	Change Gear	30T	1
25	GH1440A05735-2	Change Gear	32T	1
26	GH1440K-01720	Leveling Pads		6
27	GH1440K-01721	Leveling Bolts		6
28	F012321	Hex Thin Jam Nut	M12-1.75	6

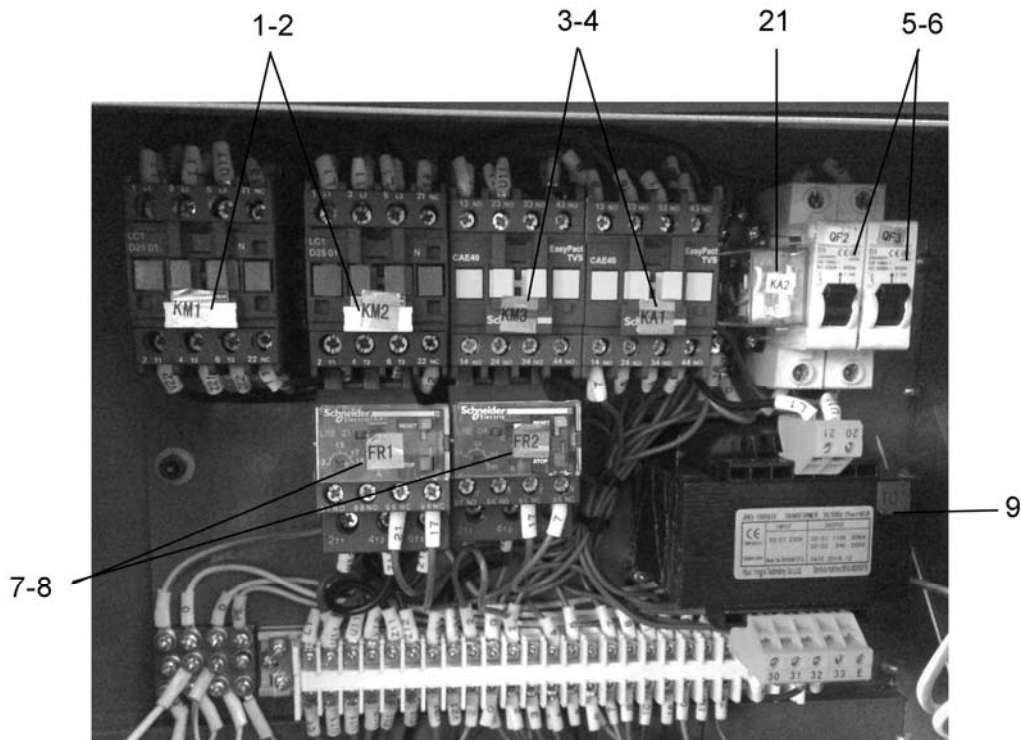
### 14.21.1 Accessories II – Exploded View



### 14.21.2 Accessories II – Parts List

Index No.	Part No.	Description	Size	Qty
1	K72200D4	Four Jaw Chuck with Camlock Stud	8"	1
2	K11160AD4	Three Jaw Chuck with Camlock Stud (Direct Mount)	6"	1
3	C0632-09101	Face Plate	12"	1
4	C0632-02722	Camlock Stud		3
5	TS-1503021	Hex Socket Hd Cap Screw	M6X10	3

## 14.22.1 Electrical Components – Exploded View



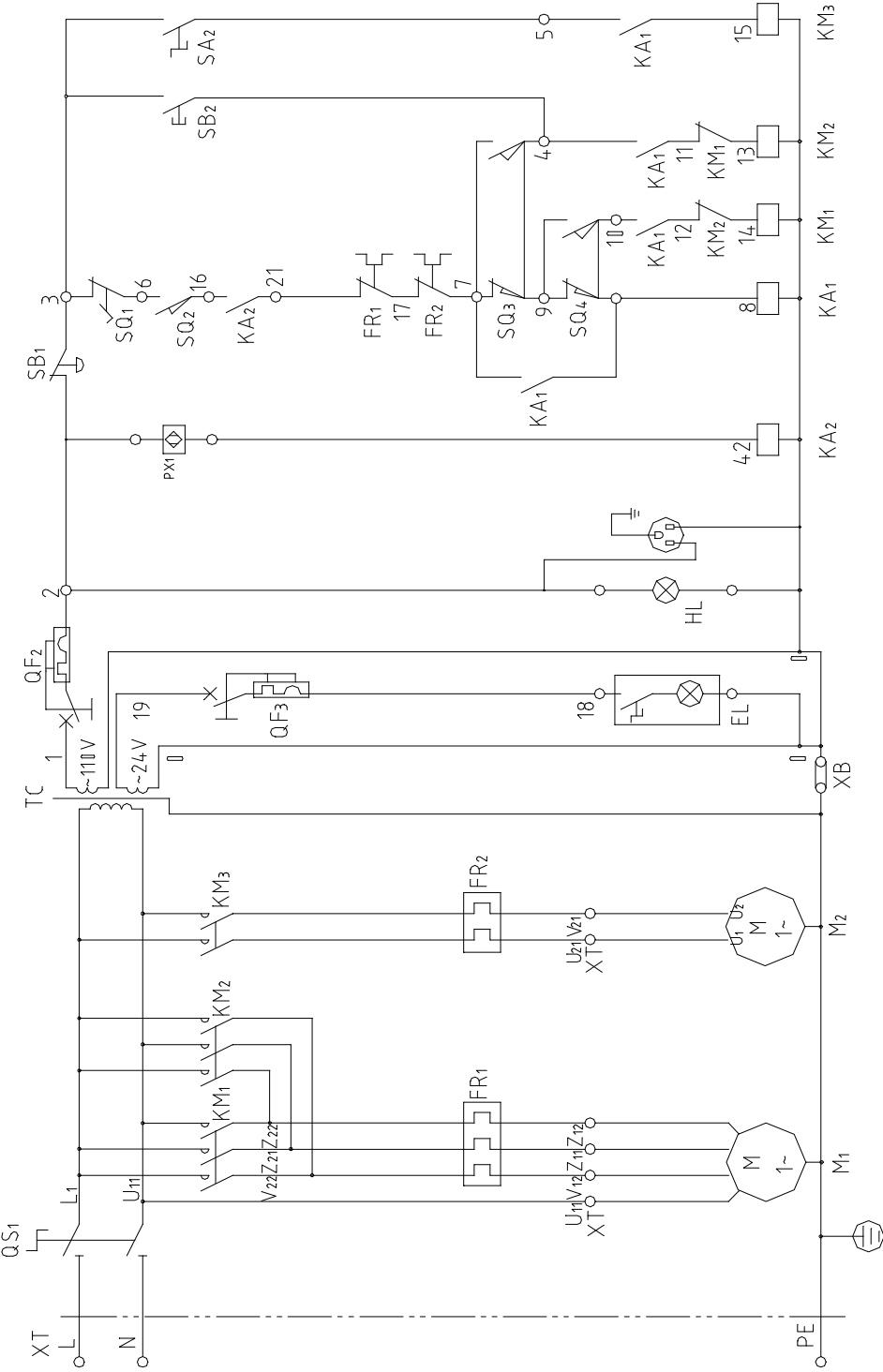
## 14.22.2 Electrical Components – Parts List

Index No.	Part No.	Symbol*	Description	Size	Qty
1	GH1440K-KM1	KM1	Magnetic Starter	LC1-D2501	1
2	GH1440K-KM1	KM2	Magnetic Starter	LC1-D2501	1
3	GH1440K-KM3	KM3	Coolant Pump Contactor	CA2-DN40B7	1
4	GH1440K-KM3	KA1	Control Contactor	CA2-DN40B7	1
5	GH1440K-QF2	QF2	Breaker	DZ47-63	1
6	GH1440K-QF2	QF3	Breaker	DZ47-63	1
7	GH1440K-FR1	FR1	Motor Overload Relay	LR2-D1321N	1
8	GH1440K-FR2	FR2	Motor Overload Relay	LR2-D1304N	1
9	GH1440K-TC	TC	Transformer	JBK5-100TH	1
10	GH1440K-SQ2	SQ2	Door Switch	QKS8	1
11	GH1440K-QS1	QS1	Power On/Off Switch	VCD0	1
12	GH1440K-SQ1	SQ1	Brake Switch	TM-1701	1
13	GH1440K-SB1	SB1	Off Switch	ZB2-BS54C	1
14	GH1440K-SB2	SB2	Jog Switch	ZB2BA3C	1
15	GH1440K-HL	HL	Power Indicator Light	XB7-EVF3LC	1
16	GH1440K-SA2	SA2	Coolant Pump Switch	ZB2-BD2C	1
17	GH1440K-SQ3	SQ3	Forward Switch	TM1306	1
18	GH1440K-SQ3	SQ4	Reverse Switch	TM1306	1
19	GH1440K-PX1	PX1	Switch	LJ12A3-4-J/EZ	1
20	GH1440K-EL	EL	Lamp	JC34A	1
21	GH1440K-KA2	KA2	Relay	HH52P	1

\* refer to wiring diagrams

# 15.0 Electrical Connections

## 15.1 Wiring Diagram – 1 Phase





## 16.0 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.

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### 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.



427 New Sanford Road  
LaVergne, Tennessee 37086  
Phone: 800-274-6848  
[www.jettools.com](http://www.jettools.com)