

# JET<sup>®</sup>

## Operating Instructions

### GH-1340W/1440W Geared Head Lathes



See manual no. M-321810-1 for service parts and electrical diagrams.

**WALTER MEIER (Manufacturing) Inc.**

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**Part No. M-321810**  
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# Warranty and Service

Walter Meier (Manufacturing) Inc., warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Service Centers located throughout the United States can give you quick service. In most cases, any of these Walter Meier Authorized Service Centers can authorize warranty repair, assist you in obtaining parts, or perform routine maintenance and major repair on your JET® tools. For the name of an Authorized Service Center in your area call 1-800-274-6848.

## MORE INFORMATION

Walter Meier is consistently adding new products to the line. For complete, up-to-date product information, check with your local Walter Meier distributor, or visit [waltermeier.com](http://waltermeier.com).

## WARRANTY

JET products carry a limited warranty which varies in duration based upon the product (MW = Metalworking, WW = Woodworking).

|   |                              |  |                              |   |                              |                      |                              |  |   |                                     |  |
|---|------------------------------|--|------------------------------|---|------------------------------|----------------------|------------------------------|--|---|-------------------------------------|--|
| <b>90</b><br>DAY<br>WARRANTY  | <b>1</b><br>YEAR<br>WARRANTY | Body Repair Kits<br>Bottle Jacks<br>Cable Pullers<br>Cold Saws<br>Hoists-Air<br>Hoists-Electric<br>Metal forming<br>Mill/Drills<br>Milling Machines<br>MW Bandsaws<br>MW Drill Presses<br>MW Finishing<br>Equipment<br>MW Lathes<br>MW Precision Vises | <b>2</b><br>YEAR<br>WARRANTY | Palet Trucks<br>Rigging Equip.<br>Service Jacks<br>Stackers<br>Surface Grinders<br>Tapping<br>Trolleys-Air<br>Trolleys-Electric<br>Web Slings<br>Winches-Electric | <b>3</b><br>YEAR<br>WARRANTY | WW Benchtop<br>Tools | <b>5</b><br>YEAR<br>WARRANTY | Beam Clamps<br>Chain Hoist-<br>Manual<br>Lever Hoists<br>Pullers-JCH Models<br>Scissor Lift Tables<br>Screw Jacks<br>Trolleys-Geared<br>Trolleys-Plain<br>Winches-Manual<br>WW Air Filtration<br>WW Bandsaws<br>WW Buffers | WW Drill Presses<br>WW Dust Collectors<br>WW Dust Filters<br>WW Dust Fittings<br>WW Jointers<br>WW Lathes<br>WW Planers<br>WW Sanders<br>WW Shapers<br>WW Tablesaws | <b>LIFE</b><br>LIFETIME<br>WARRANTY | Fastening Tools<br>Mechanics Hand Tools<br>Striking Tools<br>Vises (no -precision)<br>Clamps |
| <i>Warranty reverts to 1 Year Warranty if woodworking (WW) products listed above are used for industrial or educational purposes.</i> |                              |  |                              |   |                              |                      |                              |  |   |                                     |  |

## WHAT IS COVERED?

This warranty covers any defects in workmanship or materials subject to the exceptions stated below. Cutting tools, abrasives and other consumables are excluded from warranty coverage.

## WHO IS COVERED?

This warranty covers only the initial purchaser of the product.

## WHAT IS THE PERIOD OF COVERAGE?

The general JET warranty lasts for the time period specified in the product literature of each product.

## WHAT IS NOT COVERED?

Five Year Warranties do not cover woodworking (WW) products used for commercial, industrial or educational purposes. Woodworking products with Five Year Warranties that are used for commercial, industrial or education purposes revert to a One Year Warranty. This warranty does not cover defects due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair or alterations, or lack of maintenance.

## HOW TO GET SERVICE

The product or part must be returned for examination, postage prepaid, to a location designated by us. For the name of the location nearest you, please call 1-800-274-6848.

You must provide proof of initial purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, we will repair or replace the product, or refund the purchase price, at our option. We will return the repaired product or replacement at our expense unless it is determined by us that there is no defect, or that the defect resulted from causes not within the scope of our warranty in which case we will, at your direction, dispose of or return the product. In the event you choose to have the product returned, you will be responsible for the shipping and handling costs of the return.

## HOW STATE LAW APPLIES

This warranty gives you specific legal rights; you may also have other rights which vary from state to state.

## LIMITATIONS ON THIS WARRANTY

WALTER MEIER (MANUFACTURING) INC., LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG THE IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

WALTER MEIER 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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# Table of Contents

|   |    |
|---|----|
| Warranty and Service .....                      | 2  |
| Table of Contents .....                         | 3  |
| Warning.....                                    | 4  |
| Specifications .....                            | 5  |
| Uncrating.....                                  | 6  |
| Installation.....                               | 7  |
| Chuck Preparation (Three Jaw).....              | 8  |
| Lubrication.....                                | 9  |
| Coolant Preparation.....                        | 11 |
| Electrical Connections .....                    | 11 |
| General Description.....                        | 12 |
| Operation .....                                 | 17 |
| Feed and Thread Selection .....                 | 17 |
| Change Gears Replacement.....                   | 17 |
| Automatic Feed Operation and Feed Changes ..... | 18 |
| Powered Carriage Travel .....                   | 18 |
| Thread Cutting .....                            | 18 |
| Compound Rest .....                             | 19 |
| Adjustments .....                               | 19 |
| Saddle .....                                    | 19 |
| Cross Slide .....                               | 19 |
| Compound Rest .....                             | 19 |
| Tailstock .....                                 | 20 |
| Tailstock Off-Set .....                         | 20 |
| Tailstock Gibs .....                            | 20 |
| Headstock Alignment .....                       | 20 |
| Removing Gap Section .....                      | 21 |
| Installing Removable Gap Section.....           | 21 |
| Belt Replacement and Adjustment.....            | 22 |
| Aligning Tailstock to Headstock.....            | 22 |
| Metric Thread Table .....                       | 23 |
| Inch Lead and Feed Table.....                   | 23 |
| Cross Feed Table.....                           | 23 |



# Warnings

**Read and understand the entire instruction manual before attempting assembly or operation. These lathes are 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.**

1. Always wear approved safety glasses/face shields while using this machine.
2. Make certain the machine is properly grounded.
3. Before operating the machine, remove tie, rings, watches, other jewelry, and roll up sleeves above the elbows. Remove all loose clothing and confine long hair. Do **not** wear gloves.
4. Keep the floor around the machine clean and free of scrap material, oil and grease.
5. Keep machine 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.
6. Do **not** over reach. Maintain a balanced stance at all times so that you do not fall or lean against blades or other moving parts.
7. Make all machine adjustments or maintenance with the machine unplugged from the power source.
8. Use the right tool. Don't force a tool or attachment to do a job for which it was not designed.
9. Replace warning labels if they become obscured or removed.
10. Make certain the main power switch is in the **OFF** position before connecting the machine to the power supply.
11. Give your work undivided attention. Looking around, carrying on a conversation, and "horse-play" are careless acts that can result in serious injury.
12. Keep visitors a safe distance from the work area.
13. Use recommended accessories; improper accessories may be hazardous.
14. Make a habit of checking to see that keys and adjusting wrenches are removed before turning on the machine.
15. Never attempt any operation or adjustment if the procedure is not understood.
16. Keep fingers away from revolving parts and cutting tools while in operation.
17. Keep belt guard in place and in working order.
18. Never force the cutting action.
19. Do **not** attempt to adjust or remove tools during operation.
20. Always keep cutters sharp.
21. Always use identical replacement parts when servicing.
22. Never operate this machine under the influence of alcohol or drugs.
23. Failure to comply with all of these warnings may cause serious injury.

**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 or even fatal injury.

# Specifications

|                             | <b>GH-1340W-1</b> | <b>GH-1440W-1</b> |
|-----------------------------|-------------------|-------------------|
|                             | <b>GH-1340W-3</b> | <b>GH-1440W-3</b> |
| Stock Number (1 Phase)..... | 321810            | 321830            |
| Stock Number (3 Phase)..... | 321820            | 321840            |

## Capacities:

|                                      |       |       |
|--------------------------------------|-------|-------|
| Swing Over Bed (in.).....            | 13    | 14    |
| Swing Over Cross Slide (in.).....    | 7-1/4 | 8-1/4 |
| Swing Through Gap (in.).....         | 19    | 20    |
| Length of Gap (in.).....             | 9-3/8 | 9-3/8 |
| Distance Between Centers (in.) ..... | 40    | 40    |

## Headstock:

|                                     |                      |                      |
|-------------------------------------|----------------------|----------------------|
| Hole Through Spindle (in.).....     | 1-1/2                | 1-1/2                |
| Spindle Nose.....                   | D1-4                 | D1-4                 |
| Taper in Spindle Nose .....         | MT-5                 | MT-5                 |
| Spindle Taper Adapter.....          | MT-3                 | MT-3                 |
| Spindle Bearing Type .....          | Taper Roller Bearing | Taper Roller Bearing |
| Number of Spindle Speeds .....      | 12                   | 12                   |
| Range of Spindle Speeds (RPM) ..... | 40-1800              | 40-1800              |

## Gearbox:

|  |                 |                 |
|--|-----------------|-----------------|
| Number of Longitudinal and Cross Feeds ..... | 40              | 40              |
| Range of Longitudinal Feeds (inch/rev.)..... | 0.0011 – 0.0271 | 0.0011 – 0.0271 |
| Range of Cross Feeds (inch/rev.) .....       | 0.0003 – 0.0100 | 0.0003 – 0.0103 |
| Number of Inch Threads .....                 | 40              | 40              |
| Range of Inch Threads (T.P.I.).....          | 4 – 112         | 4 – 112         |
| Number of Metric Threads .....               | 22              | 22              |
| Range of Metric Threads (mm) .....           | 0.45 – 7.5      | 0.45 – 7.5      |
| Leadscrew (in.).....                         | 7/8 x 49-1/2    | 7/8 x 49-1/2    |
| Feed Rod Diameter (in.) .....                | 3/4             | 3/4             |

## Compound and Carriage:

|   |           |           |
|---|-----------|-----------|
| Toolpost Type.....                        | 4-Way     | 4-Way     |
| Maximum Tool Size (in.) .....             | 5/8 x 5/8 | 5/8 x 5/8 |
| Maximum Compound Slide Travel (in.) ..... | 3-1/2     | 3-1/2     |
| Maximum Cross Slide Travel (in.) .....    | 6-3/8     | 6-3/8     |
| Maximum Carriage Travel (in.).....        | 37-1/2    | 37-1/2    |

## Tailstock:

|   |         |         |
|---|---------|---------|
| Tailstock Spindle Travel (in.).....       | 4-3/4   | 4-3/4   |
| Diameter of Tailstock Spindle (in.) ..... | 1-25/32 | 1-25/32 |
| Taper in Tailstock Spindle.....           | MT-3    | MT-3    |

## Miscellaneous:

|                                      |                                  |                                   |
|--------------------------------------|----------------------------------|-----------------------------------|
| Steady Rest Capacity (in.) .....     | 1/4 – 3-1/2                      | 1/4 – 3-1/2                       |
| Follow Rest Capacity (in.) .....     | 1/4 – 2-3/4                      | 1/4 – 2-3/4                       |
| Length of Bed (in.).....             | 54-1/2                           | 54-1/2                            |
| Width of Bed (in.).....              | 10-1/4                           | 10-1/4                            |
| Height of Bed (in.).....             | 12-3/4                           | 12-3/4                            |
| Overall Dimensions (in.).....        | 78L x 38W x 59H                  | 78L x 38W x 59H                   |
| Main Motor (1-Phase) .....           | 3HP, 1PH, 230V Only              | 3HP, 1PH, 230V Only               |
| Main Motor (3-Phase) .....           | 3HP, 3PH, 230/460V prewired 230V | 3HP, 3PH, 230/460V, prewired 230V |
| Net Weight (lbs./approx.) .....      | 2,081                            | 2,191                             |
| Shipping Weight (lbs./approx.) ..... | 2,351                            | 2,491                             |

*The above specifications were current at the time this manual was published, but because of our policy of continuous improvement, Walter Meier reserves the right to change specifications at any time and without prior notice, without incurring obligations.*

## 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!

### Contents of the Shipping Container

(Figure 1)

- 1 Lathe
- 1 Steady Rest
- 1 Follow Rest
- 1 6" Three Jaw Chuck w/ Top Reversing Jaws (Direct Mount)
- 1 8" Four Jaw Chuck with Backplate
- 1 12" Face Plate (strapped to container floor)
- 1 Backplate
- 1 Tool Box



Figure 1

### Tool Box Contents:

- 1 No. 1 Cross Point Screwdriver
- 1 No. 1 Flat Blade Screwdriver
- 4 Open End Wrench (9-11, 10-12, 12-14, 17-19mm)
- 6 Hex Socket Wrench (2.5, 3, 4, 5, 6, 8mm)
- 2 Shear Pin
- 1 30T Change Gear
- 1 32T Change Gear
- 2 40T Change Gear
- 1 Oil Can
- 2 No. 3 Morse Taper Dead Center
- 1 No. 5 to No. 3 Spindle Sleeve
- 6 Leveling Pads
- 1 Chuck Key
- 1 Key for Cam Locks
- 1 Tool Post Wrench
- 1 Instruction Manual
- 1 Parts List Manual
- 1 Warranty Card

## 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.

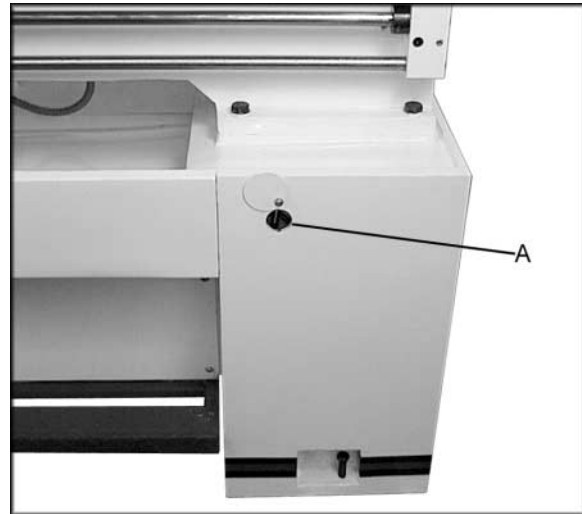


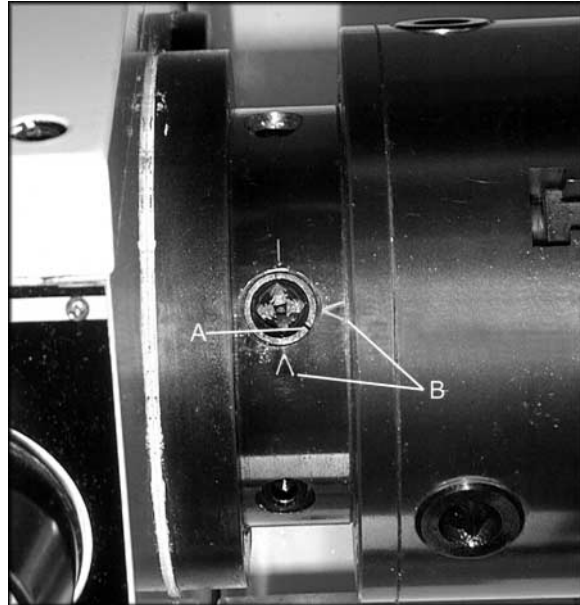
Figure 2

## 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 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.
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 3*

# 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 4



Figure 5

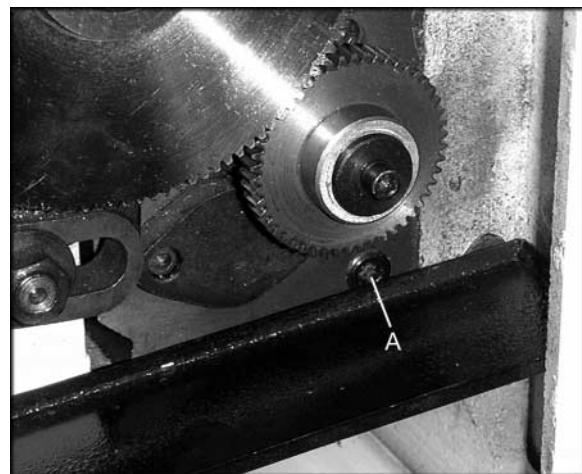


Figure 6

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.

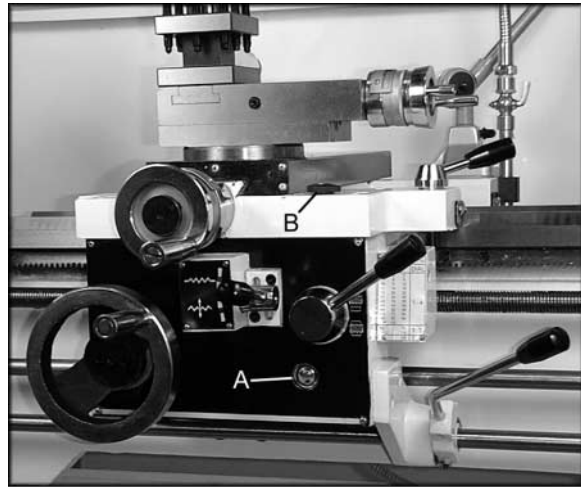


Figure 7

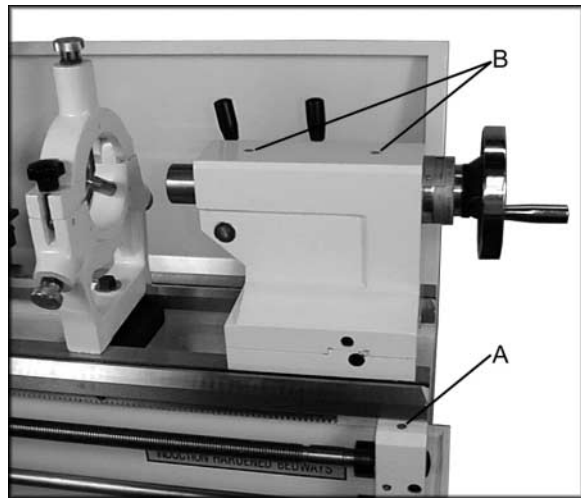


Figure 8

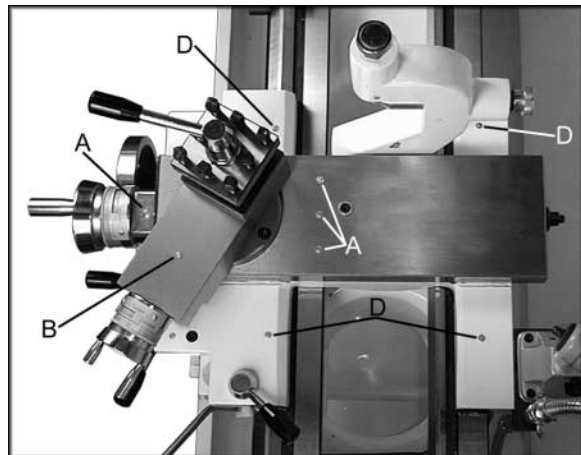


Figure 9

## 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

## Electrical Connections

**WARNING** All electrical connections must be completed by a qualified electrician. Failure to comply may cause serious injury and/or damage to the machinery and property!

The GH-1340W-1 & GH-1440W-1 Gear Head Lathes are rated at 3HP, 1Ph, 230V only. Confirm power available at the lathe's location is the same rating as the lathe.

The GH-1340W-3 & GH-1440W-3 Gear Head Lathes are rated at 3HP, 3Ph, 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 the spindle to rotate counter-clockwise as viewed from the tailstock. If the chuck rotates in the clockwise direction, disconnect the lathe from the power source, switch two of three power leads (for GH-1340W-3 & GH1440W-3), and connect the lathe to the power source.

**To Switch from 230V to 460V Operation (GH-1340W-3 & GH1440W-3 Only)**

**WARNING** Disconnect the machine from the power source. Failure to do so may cause serious injury!

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

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

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

# 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 vee 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 dove tailed 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 hand wheel on the front of the apron.



Figure 11



Figure 12

### 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.

### 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.

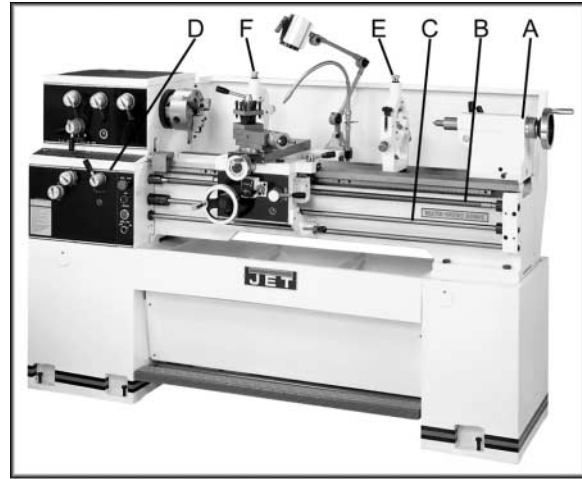


Figure 13

## 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.

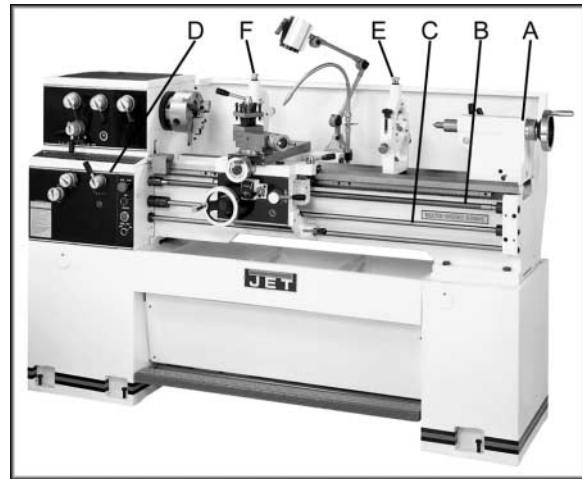


Figure 13

## 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) - lit whenever lathe has power.
  - C. **Emergency Stop Switch** (C, Fig. 14) - depress to stop all machine functions.  
**Caution: Lathe will still have power.**  
Twist to re-set.
  - D. **Jog Switch** (D, Fig. 14) - Press and release to advance spindle momentarily.

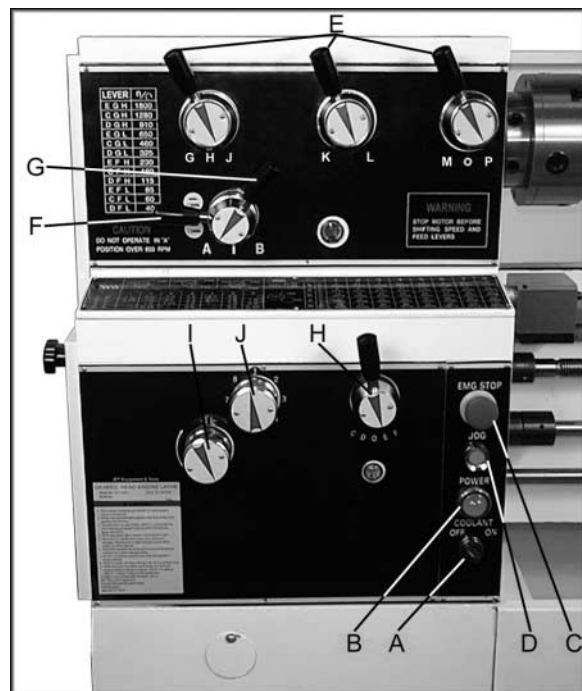


Figure 14

2. **Headstock Gear Change Levers** (E, Fig. 14) - located on front of the 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 the forward or counter-clockwise 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 counter-clockwise to unlock.

9. **Carriage Lock (B, Fig. 15)** - lock handle located on top of carriage. Turn clockwise to lock. Turn counter-clockwise 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 counter-clockwise 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.

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.

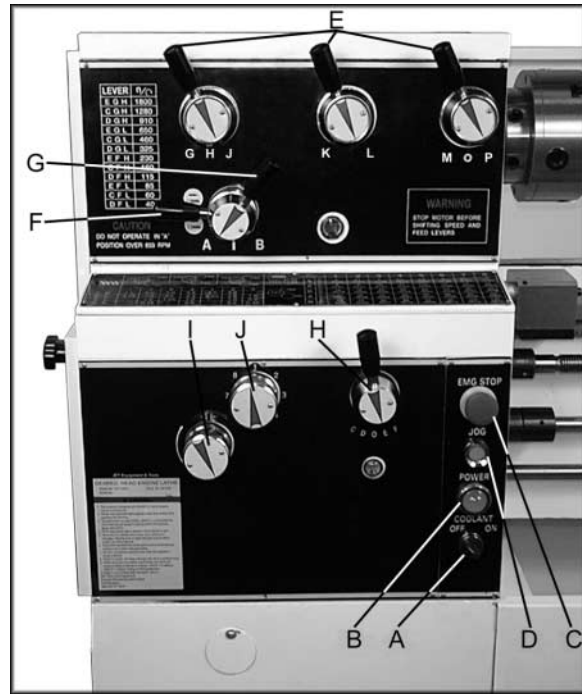


Figure 14



Figure 15

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.

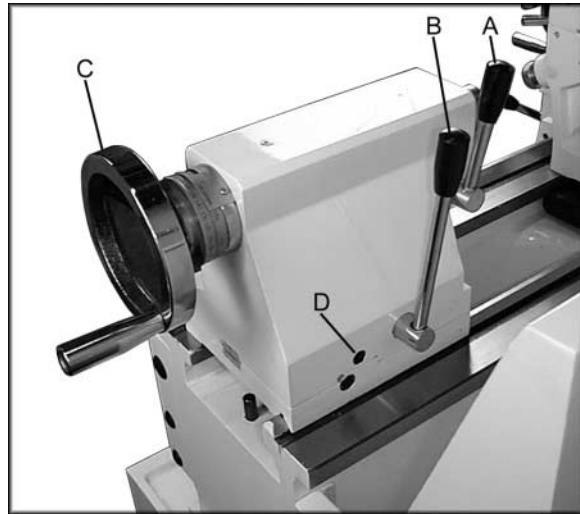


Figure 16

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 17

## 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 and use.



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

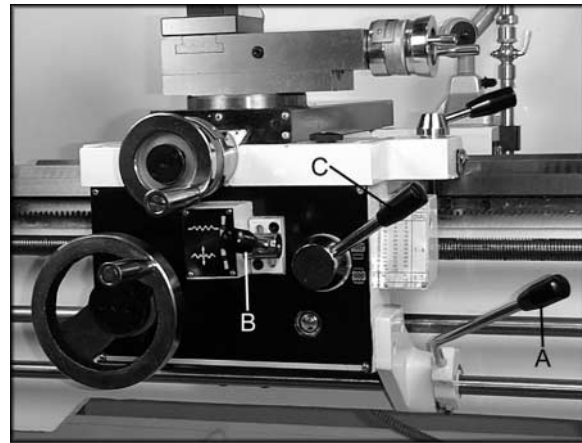


Figure 20

## 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.

## 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, and 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, reference 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).

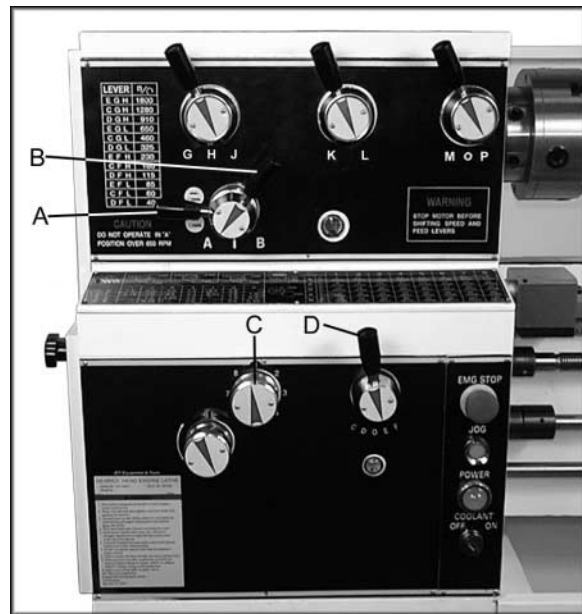


Figure 21

## 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.

## Adjustments

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

### 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 hand wheel 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.
5. Move the carriage again and adjust again if necessary.

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

### 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.

### 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.

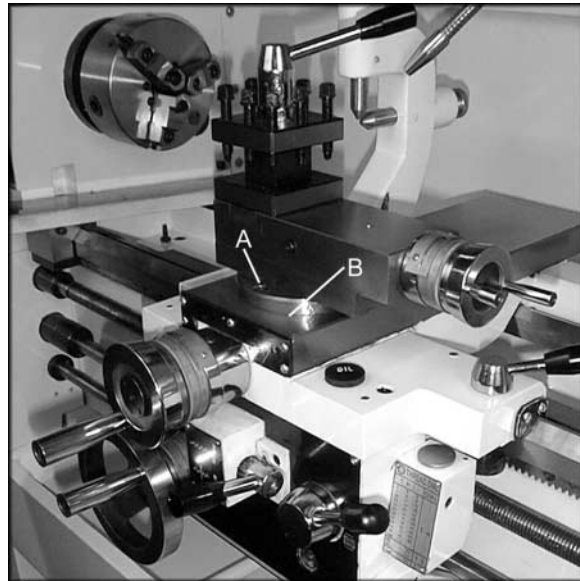


Figure 22

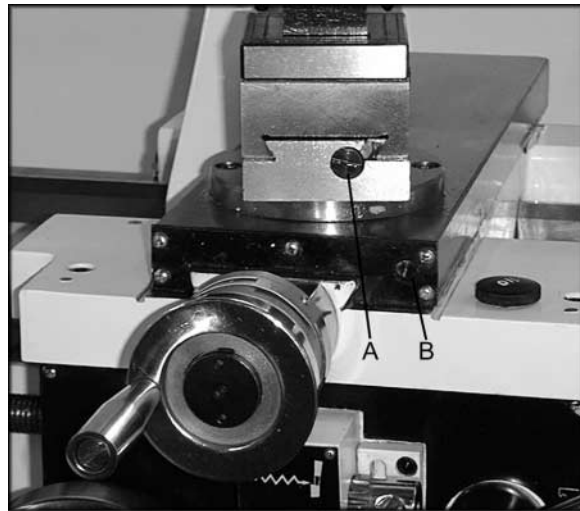


Figure 23

## 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.

## 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).

## 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.

## 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 the bar stock.

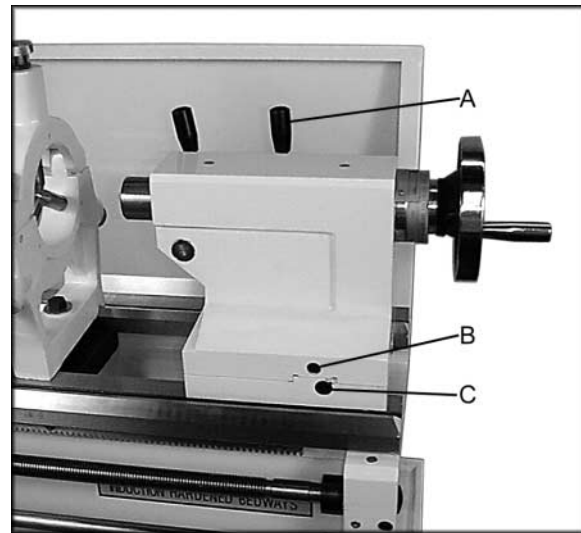


Figure 24

- 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 hex socket cap screws (A, Fig. 25) which holds the headstock to the bed. **Do not** loosen completely; some drag should remain.
- 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.

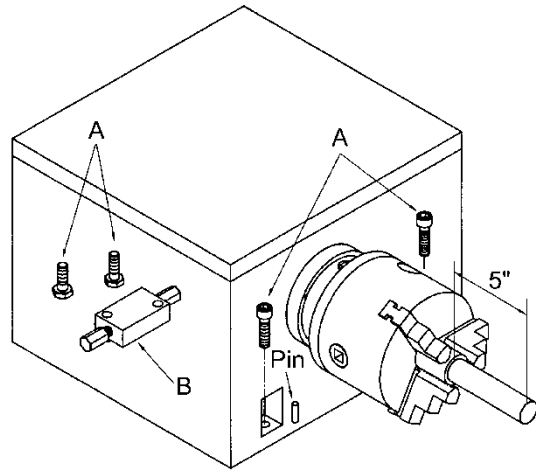


Figure 25

### Removing Gap Section

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

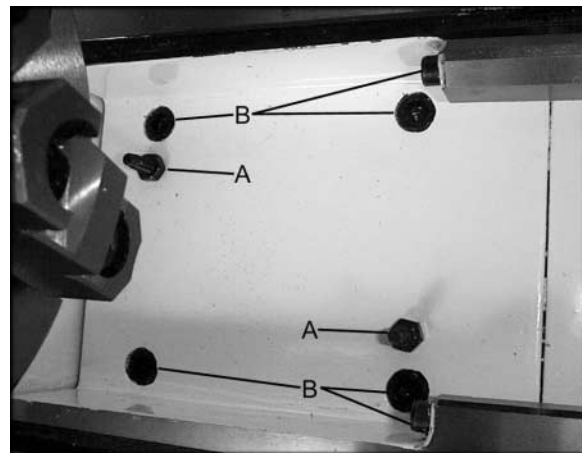


Figure 26

### Installing Removable Gap Section

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

## 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.

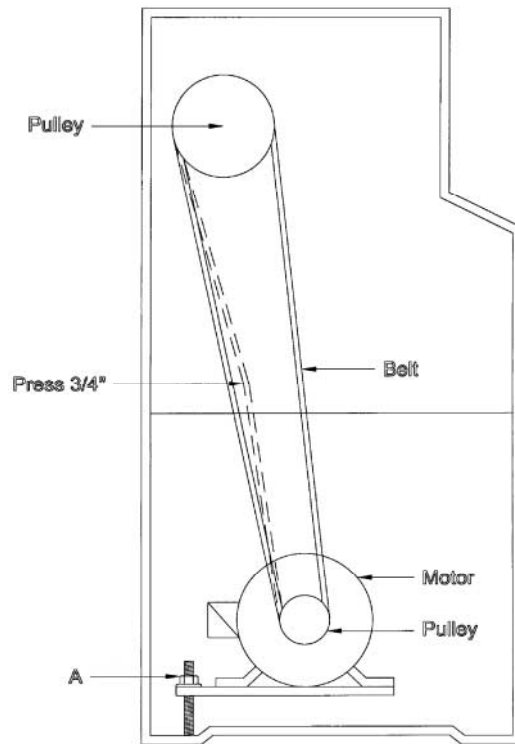


Figure 27

## Aligning Tailstock to Headstock

Before proceeding, headstock should be aligned. See section labeled "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).

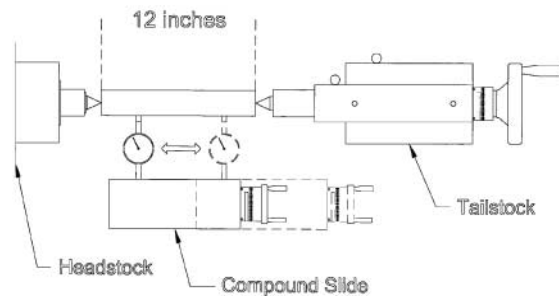


Figure 28

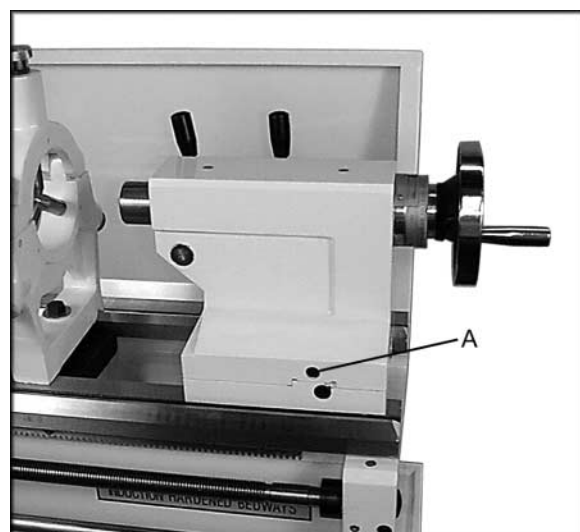


Figure 29

## Metric Thread Table

|          |          | 1    | 3    | 6    | 3   | 1    | 2   | 3    |
|----------|----------|------|------|------|-----|------|-----|------|
| <b>A</b> | <b>C</b> | 7.5  | 6.0  | 5.0  | 4.8 | 4.5  | 4.0 |      |
| <b>B</b> | <b>C</b> | 3.75 | 3.0  | 2.5  | 2.4 | 2.25 | 2.0 | 1.8  |
| <b>A</b> | <b>E</b> |      | 1.5  | 1.25 | 1.2 |      | 1.0 | 0.9  |
| <b>B</b> | <b>E</b> |      | 0.75 |      | 0.6 |      | 0.5 | 0.45 |

## Inch Lead and Feed Table

|  |          | 1        | 2     | 3     | 4     | 5     | 6     | 7     | 8     |       |
|--|----------|----------|-------|-------|-------|-------|-------|-------|-------|-------|
|  | <b>A</b> | <b>C</b> | 4     | 4½    | 5     | 5½    | 5¾    | 6     | 6½    | 7     |
|  |          | <b>D</b> | .0294 | .0261 | .0235 | .0214 | .0205 | .0196 | .0181 | .0168 |
|  | <b>A</b> | <b>C</b> | 8     | 9     | 10    | 11    | 11½   | 12    | 13    | 14    |
|  |          | <b>D</b> | .0147 | .0131 | .0117 | .0107 | .0102 | .0098 | .0090 | .0084 |
|  | <b>B</b> | <b>C</b> | 16    | 18    | 20    | 22    | 23    | 24    | 26    | 28    |
|  |          | <b>D</b> | .0073 | .0065 | .0058 | .0053 | .0051 | .0049 | .0045 | .0042 |
|  | <b>A</b> | <b>E</b> | 32    | 36    | 40    | 44    | 46    | 48    | 52    | 56    |
|  |          | <b>F</b> | .0042 | .0038 | .0034 | .0031 | .0030 | .0028 | .0026 | .0024 |
|  | <b>B</b> | <b>E</b> | 64    | 72    | 80    | 88    | 92    | 96    | 104   | 112   |
|  |          | <b>F</b> | .0021 | .0019 | .0017 | .0015 | .0015 | .0014 | .0013 | .0012 |

## Cross Feed Table

|  |          | 1        | 2     | 3     | 4     | 5     | 6     | 7     | 8     |       |
|--|----------|----------|-------|-------|-------|-------|-------|-------|-------|-------|
|  | <b>A</b> | <b>D</b> | .0103 | .0092 | .0083 | .0075 | .0072 | .0069 | .0064 | .0059 |
|  |          | <b>D</b> | .0052 | .0046 | .0042 | .0038 | .0036 | .0035 | .0032 | .0030 |
|  | <b>B</b> | <b>D</b> | .0026 | .0023 | .0021 | .0019 | .0018 | .0017 | .0016 | .0015 |
|  |          | <b>F</b> | .0013 | .0012 | .0010 | .0010 | .0009 | .0008 | .0008 | .0007 |
|  | <b>B</b> | <b>F</b> | .0007 | .0006 | .0005 | .0005 | .0004 | .0004 | .0004 | .0003 |



**PARTS LIST  
and Electrical Diagrams  
for GH-1340W/1440W Lathes**



*See manual no. M-321810 for operating and maintenance instructions.*

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**Part No. M-321810-1**  
Revision G1 10/2012

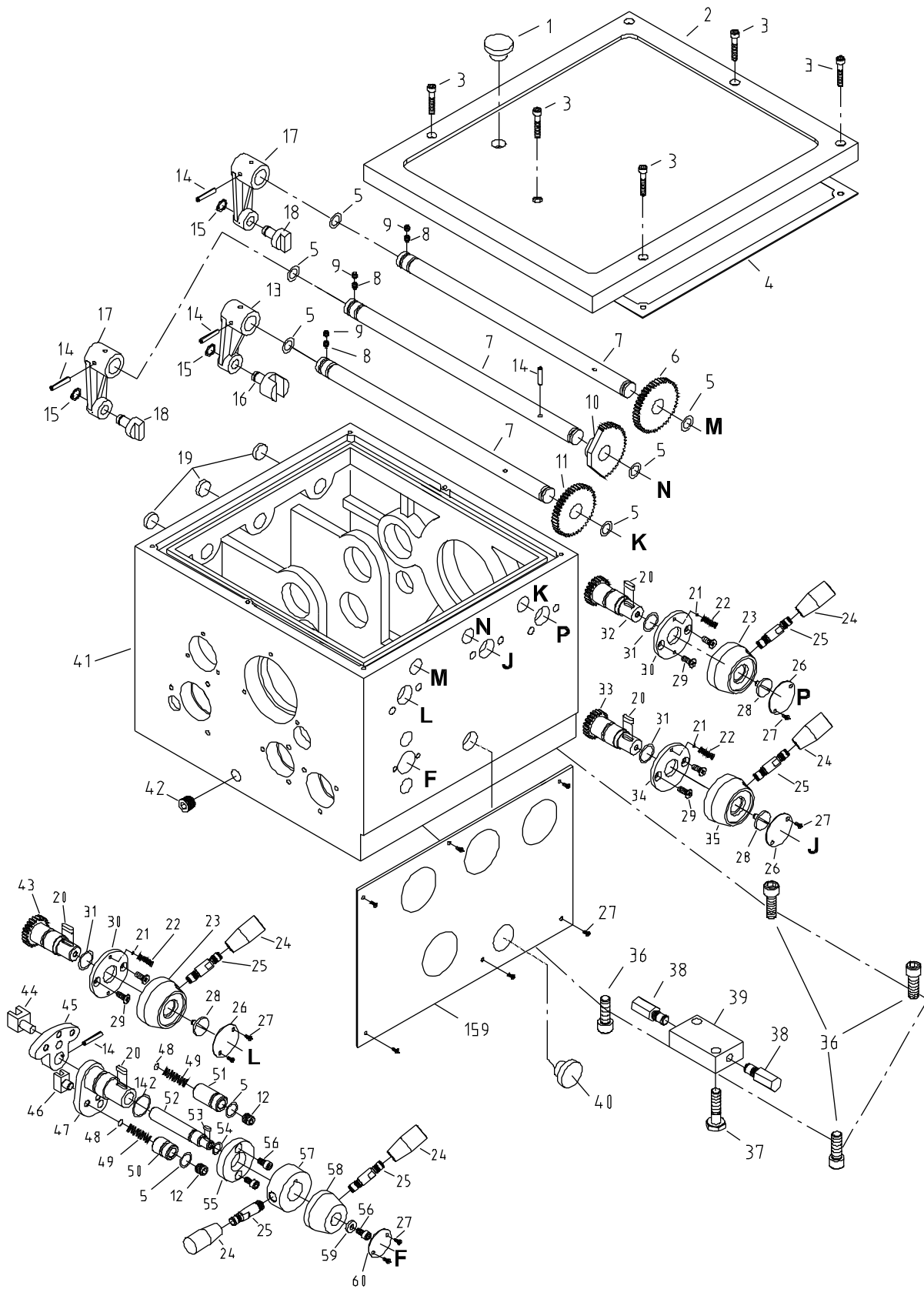
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# Table of Contents

|   |    |
|---|----|
| Headstock Assembly I .....                                | 3  |
| Headstock Assembly II .....                               | 6  |
| Headstock Assembly III .....                              | 8  |
| Gearbox Assembly I .....                                  | 11 |
| Gearbox Assembly II .....                                 | 13 |
| Gearbox Assembly III .....                                | 15 |
| Apron Assembly I .....                                    | 18 |
| Apron Assembly II .....                                   | 20 |
| Carriage and Cross Slide Assembly.....                    | 22 |
| Four Way Tool Post and Compound Slide Assembly .....      | 25 |
| Tailstock Assembly.....                                   | 27 |
| Bed Assembly .....  | 29 |
| Stand Assembly .....                                      | 32 |
| End Gear Assembly.....                                    | 34 |
| Follow Rest.....  | 36 |
| Steady Rest .....   | 38 |
| Coolant and Work Light Assembly .....                     | 40 |
| Electrical Components .....                               | 42 |
| W Series Lathes Electrical Schematic Symbol Glossary..... | 43 |
| Wiring Diagram – 1 Phase .....                            | 44 |
| Wiring Diagram – 3 Phase .....                            | 45 |

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# Headstock Assembly I

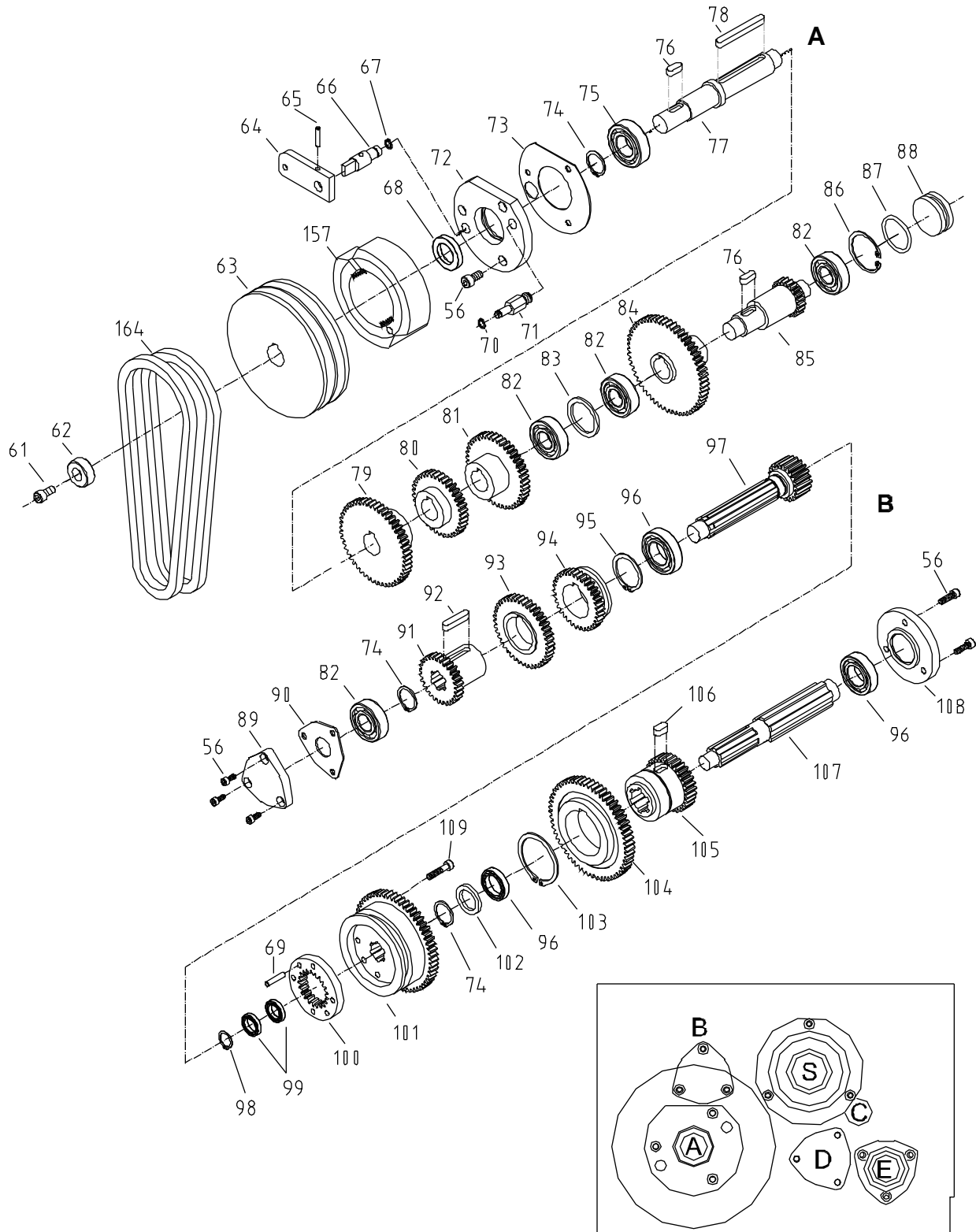


## Headstock Assembly I

| Index No. | Part No.           | Description  | Size      | Qty |
|-----------|--------------------|--|-----------|-----|
| 1         | GH1340A-04-06      | Plug   |           | 1   |
| 2         | GH1440W-04-60      | Headstock Cover                                    |           | 1   |
| 3         | TS-1503081         | Hex Socket Cap Screw                               | M6x35     | 6   |
| 4         | GH1440W-04-61      | Gasket   |           | 1   |
| 5         | GB3452.1-14X2.65   | O-Ring   | 14x2.65   | 8   |
| 6         | GH1440W-04-38      | Gear   | 38T       | 1   |
| 7         | GH1440W-04-41      | Shaft  |           | 3   |
| 8         | GB75-M6x10         | Set Screw  | M6x10     | 3   |
| 9         | GB77-M6x6          | Set Screw  | M6x6      | 3   |
| 10        | GH1440W-04-37      | Gear   | 48T       | 1   |
| 11        | GH1440W-04-36      | Gear   | 43T       | 1   |
| 12        | GB77-M12x12        | Set Screw  | M12x12    | 2   |
| 13        | GH1440W-04-43      | Shift Arm  |           | 1   |
| 14        | GB879-5X30         | Spring Pin   | 5x30      | 7   |
| 15        | GB894.2-12         | Retainer Ring                                      | 12        | 3   |
| 16        | GH1440W-04-45      | Shift Fork   |           | 1   |
| 17        | GH1440W-04-35      | Shift Arm  |           | 2   |
| 18        | GH1440W-04-44      | Gear Shifter                                       |           | 2   |
| 19        | GH1440W-04-10      | Plug   |           | 3   |
| 20        | GB1096-5X16        | Key  | 5x16      | 4   |
| 21        | GB308-SB8          | Steel Ball   | 8         | 5   |
| 22        | C6240-20018        | Spring   |           | 5   |
| 23        | GH1440W-04-49      | Handle Body  |           | 2   |
| 24        | GB4141.14-BM10X50  | Handle Cap   |           | 5   |
| 25        | GH1440W-04-34      | Handle Lever                                       |           | 5   |
| 26        | C6240-20001        | Lever Name Plate                                   |           | 3   |
| 27        | TS-1531012         | Pan Head Machine Screw                             | M3x6      | 14  |
| 28        | GH1440W-04-59      | Screw  |           | 3   |
| 29        | TS-1503031         | Screw  | M6x12     | 6   |
| 30        | GH1440W-04-50      | Position Plate                                     |           | 2   |
| 31        | GB3452.9-19X2.65   | O-Ring   | 19x2.65   | 3   |
| 32        | GH1440W-04-40      | Gear Shaft   | 22T       | 1   |
| 33        | GH1440W-04-42      | Gear Shaft   | 17T       | 1   |
| 34        | GH1440W-04-51      | Position Plate                                     |           | 1   |
| 35        | GH1440W-04-48      | Handle Body  |           | 1   |
| 36        | TS-1506041         | Hex Socket Cap Screw                               | M12x35    | 4   |
| 37        | GB5782-M10x40      | Alignment Bolt                                     | M10x40    | 2   |
| 38        | GH1440W-04-62      | Alignment Bolt                                     |           | 2   |
| 39        | GH1440W-04-63      | Alignment Block                                    |           | 1   |
| 40        | GB1160.1-89        | Oil Sight Glass                                    | 20        | 1   |
|           | GHW1160-20A        | Oil Sight Glass (serial no. 1002W2659W and higher) | M20x1.5   | 1   |
| 41        | GH1440W-04-01      | Headstock Casting (14")                            |           | 1   |
|           | GH1340W-04-01      | Headstock Casting (13")                            |           | 1   |
| 42        | 05-75              | Drain Plug   |           | 1   |
| 43        | GH1440W-04-39      | Gear Shaft   | 27T       | 1   |
| 44        | GH1440W-04-47      | Shaft Fork   |           | 1   |
| 45        | GH1440W-04-72      | Shifting Crank                                     |           | 1   |
| 46        | GH1440W-04-71      | Shaft Fork   |           | 1   |
| 47        | GH1440W-04-56      | Shifting Crank                                     |           | 1   |
| 48        | GB308-SB9          | Steel Ball   | 9         | 2   |
| 49        | GH1440W-49         | Spring   |           | 2   |
| 50        | GH1440W-04-52      | Shaft  |           | 1   |
| 51        | GH1440W-04-54      | Shaft  |           | 1   |
| 52        | GH1440W-04-53      | Shaft  |           | 1   |
| 53        | GB1096-4X10        | Key  | 4x10      | 1   |
| 54        | GB3452.9-10.6X2.65 | O-Ring   | 10.6x2.65 | 1   |

| <b>Index No.</b> | <b>Part No.</b>  | <b>Description</b>           | <b>Size</b> | <b>Qty</b> |
|------------------|------------------|------------------------------|-------------|------------|
| 55               | GH1440W-04-55    | Collar                       |             | 1          |
| 56               | TS-1503031       | Hex Socket Cap Screw         | M6x12       | 18         |
| 57               | GH1440W-04-57    | Collar                       |             | 1          |
| 58               | GH1440W-04-58    | Handle Body                  |             | 1          |
| 59               | 04-62            | Washer                       |             | 1          |
| 60               | 04-90            | Indicator Disk               |             | 1          |
| 142              | GB3452.9-25X2.65 | O-Ring                       | 25x2.65     | 3          |
| 159              | GH1340W-04-02    | Name Plate                   |             | 1          |
|                  | GH1440W-04-02    | Name Plate                   |             | 1          |
|                  | 321449           | 3-Jaw Chuck (not shown)      | 6"          | 1          |
|                  | GH1340W-CKW      | Chuck Key (3-jaw)(not shown) |             | 1          |
|                  | 321430           | 4-Jaw Chuck (not shown)      | 8"          | 1          |

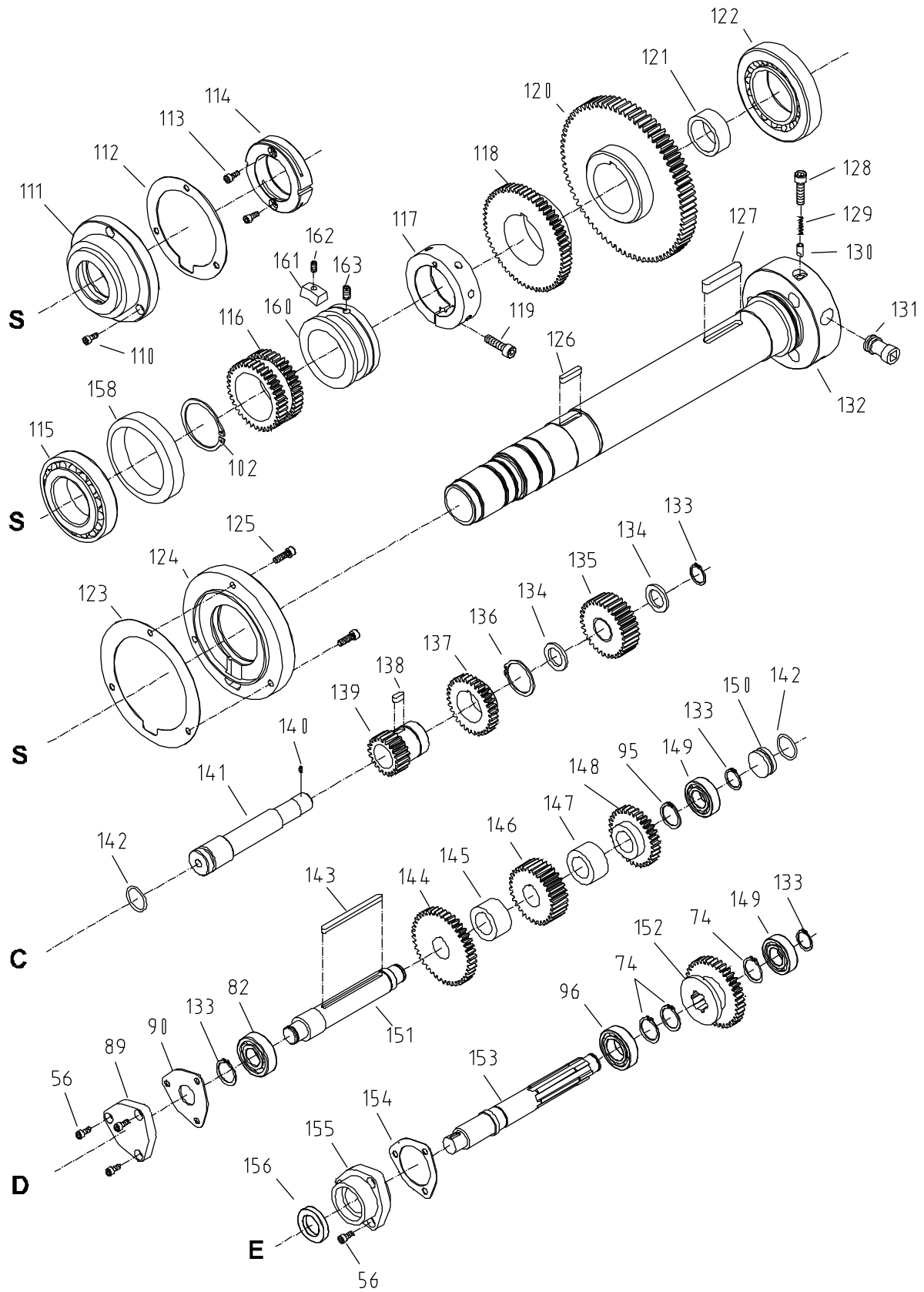
# Headstock Assembly II



## Headstock Assembly II

| Index No. | Part No.           | Description                        | Size      | Qty |
|-----------|--------------------|------------------------------------|-----------|-----|
| 56        | TS-1503031         | Hex Socket Cap Screw               | M6x12     | 18  |
| 61        | TS-1504041         | Hex Socket Cap Screw               | M8x20     | 1   |
| 62        | 04-12              | Washer                             |           | 1   |
| 63        | 04-11              | Pulley                             |           | 1   |
| 64        | 11-10              | Break Block                        |           | 1   |
| 65        | GB879-5X16         | Pin                                | 5x16      | 1   |
| 66        | 11-09              | Brake Actuator Shaft               |           | 1   |
| 67        | GB894.2-12         | Retainer Ring                      | 12        | 1   |
| 68        | GB9877.1-SD25X45X7 | Spacer                             | SD25x45x7 | 1   |
| 69        | GB117-A6X26        | Pin                                | A6x26     | 2   |
| 70        | GB894.2-8          | Retainer Ring                      | 8         | 1   |
| 71        | 11-11              | Brake Retainer Stud                |           | 1   |
| 72        | 04-13              | Cover                              |           | 1   |
| 73        | 04-14              | Gasket                             |           | 1   |
| 74        | GB894.2-25         | Retainer Ring                      | 25        | 6   |
| 75        | GB/T276-6205       | Ball Bearing                       | 6205/p5   | 1   |
| 76        | GB1096-8X20        | Key                                | 8x20      | 2   |
| 77        | GH1440W-04-03      | Shaft                              |           | 1   |
| 78        | GB1096-8X72        | Key                                | 8x72      | 1   |
| 79        | GH1440W-04-04      | Gear                               | 50T       | 1   |
| 80        | GH1440W-04-05      | Gear                               | 37T       | 1   |
| 81        | GH1440W-04-06      | Gear                               | 43T       | 1   |
| 82        | GB/T276-6204       | Ball Bearing                       | 6204/p5   | 5   |
| 83        | GH1440W-04-17      | Washer                             |           | 1   |
| 84        | GH1440W-04-12      | Gear                               | 57T       | 1   |
| 85        | GH1440W-04-11      | Gear Shaft                         | 20T       | 1   |
| 86        | GB893.1-47         | Retainer Ring                      | 47        | 1   |
| 87        | GB3452.1-40X2.65   | O-Ring                             | 40x2.65   | 1   |
| 88        | 04-28              | Plug                               |           | 1   |
| 89        | 04-53              | Bearing Cap                        |           | 2   |
| 90        | 04-52              | Bearing Cap Gasket                 |           | 2   |
| 91        | GH1440W-04-08      | Gear                               | 28T       | 1   |
| 92        | GB1096-8X38        | Key                                | 8x38      | 1   |
| 93        | GH1440W-04-09      | Gear                               | 41T       | 1   |
| 94        | GH1440W-04-10      | Gear                               | 34T       | 1   |
| 95        | GB894.2-40         | Retainer Ring                      | 40        | 1   |
| 96        | GB/T276-6005       | Ball Bearing                       | 6005/p5   | 4   |
| 97        | GH1440W-04-07      | Gear Shaft                         | 21T       | 1   |
| 98        | GB894.2-17         | Retainer Ring                      | 17        | 1   |
| 99        | GB/T276-61803      | Ball Bearing                       | 61803/p5  | 2   |
| 100       | GH1440W-04-15      | Gear                               | 21T       | 1   |
| 101       | GH1440W-04-14      | Gear                               | 58T       | 1   |
| 102       | GH1440W-04-16      | Washer                             |           | 1   |
| 103       | GB894.2-55         | Retainer Ring                      | 55        | 1   |
| 104       | GH1440W-04-19      | Gear                               | 59T       | 1   |
| 105       | GH1440W-04-18      | Gear                               | 31T       | 1   |
| 106       | GB1096-10X18       | Key                                | 10x18     | 1   |
| 107       | GH1440W-04-13      | Spline Shaft                       |           | 1   |
| 108       | GH1440W-04-24      | Cover                              |           | 1   |
| 109       | TS-1503081         | Hex Socket Cap Screw               | M6x35     | 4   |
| 157       | 11-15              | Brake Shoe Assembly                |           | 1   |
| 164       | VB-A73             | V-Belt (GH-1340W-1/3 & GH-1440W-1) |           | 2   |
|           | VB-A74             | V-Belt (GH-1440W-3)                |           | 2   |

# Headstock Assembly III

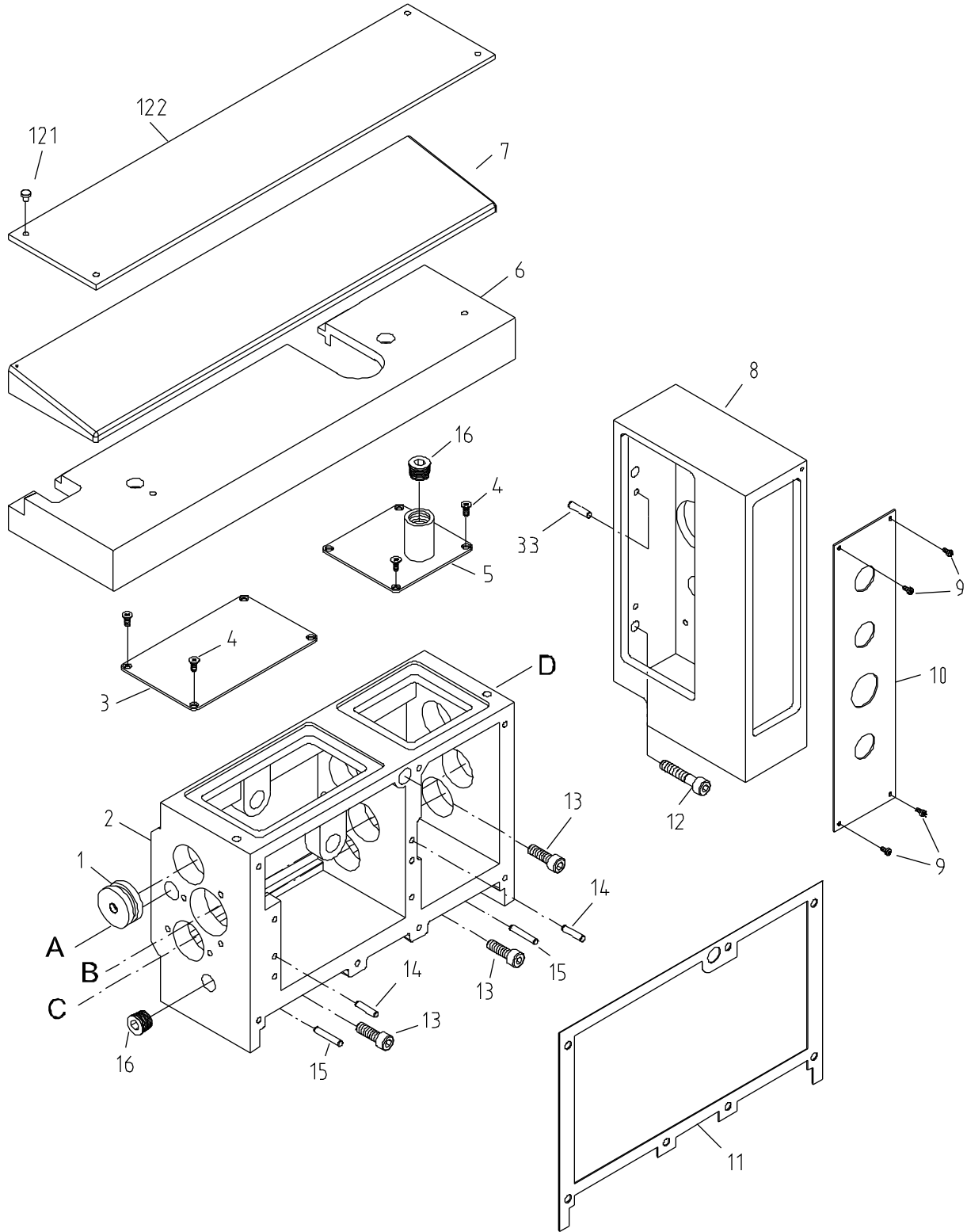


### Headstock Assembly III

| Index No. | Part No.           | Description            | Size      | Qty |
|-----------|--------------------|------------------------|-----------|-----|
| 56        | TS-1503031         | Hex Socket Cap Screw   | M6x12     | 18  |
| 74        | GB894.2-25         | Retainer Ring          | 25        | 6   |
| 82        | GB/T276-6204       | Ball Bearing           | 6204/p5   | 5   |
| 89        | 04-53              | Bearing Cap            |           | 2   |
| 90        | 04-52              | Bearing Cap Gasket     |           | 2   |
| 95        | GB894.2-40         | Retainer Ring          | 40        | 1   |
| 96        | GB/T276-6005       | Ball Bearing           | 6005/p5   | 4   |
| 102       | GH1440W-04-16      | Washer                 |           | 1   |
| 110       | TS-1503041         | Hex Socket Cap Screw   | M6x16     | 3   |
| 111       | GH1440W-04-29      | Cover                  |           | 1   |
| 112       | 04-60              | Gasket                 |           | 1   |
| 113       | TS-1502031         | Hex Socket Cap Screw   | M5x12     | 2   |
| 114       | GH1440W-04-31      | Nut                    |           | 1   |
| 115       | GB/T297-32011      | Tapered Roller Bearing | 32011/p5  | 1   |
| 116       | GH1440W-04-30      | Gear                   | 38T       | 1   |
| 117       | GH1440W-04-27      | Lock Collar            |           | 1   |
| 118       | GH1440W-04-21      | Gear                   | 59T       | 1   |
| 119       | TS-1504061         | Hex Socket Cap Screw   | M8x30     | 1   |
| 120       | GH1440W-04-23      | Gear                   | 87T       | 1   |
| 121       | GH1440W-04-25      | Collar                 |           | 1   |
| 122       | GB/T297-30212      | Tapered Roller Bearing | 30212/p5  | 1   |
| 123       | GH1440W-04-32      | Gasket                 |           | 1   |
| 124       | GH1440W-04-28      | Cover                  |           | 1   |
| 125       | TS-1503051         | Hex Socket Cap Screw   | M6x20     | 3   |
| 126       | GB1096-6X30        | Key                    | 6x30      | 1   |
| 127       | GB1096-10X55       | Key                    | 10x55     | 1   |
| 128       | TS-1504031         | Hex Socket Cap Screw   | M8x16     | 3   |
| 129       | 04-31/1            | Spring                 |           | 3   |
| 130       | 04-86              | Camlock Set Pin        |           | 3   |
| 131       | 04-85              | Camlock                |           | 3   |
| 132       | GH1440W-04-22      | Spindle                |           | 1   |
| 133       | GB894.2-20         | Retainer Ring          | 20        | 4   |
| 134       | 04-36              | Spacer                 |           | 2   |
| 135       | 04-35              | Gear                   | 32T       | 1   |
| 136       | GB894.2-37         | Retainer Ring          | 37        | 1   |
| 137       | 04-54              | Gear                   | 32T       | 1   |
| 138       | GB1096-5X16        | Key                    | 5x16      | 1   |
| 139       | 04-55              | Gear                   | 32T       | 1   |
| 140       | TS-1523041         | Set Screw              | M6x12     | 1   |
| 141       | 04-37              | Shaft                  |           | 1   |
| 142       | GB3452.9-25X2.65   | O-Ring                 | 25x2.65   | 3   |
| 143       | 04-47/1            | Key                    | 6x90      | 1   |
| 144       | 04-46              | Gear                   | 42T       | 1   |
| 145       | 04-45              | Collar                 |           | 1   |
| 146       | 04-44              | Gear                   | 32T       | 1   |
| 147       | 04-39              | Collar                 |           | 1   |
| 148       | 04-41              | Gear                   | 32T       | 1   |
| 149       | GB/T276-6004       | Ball Bearing           | 6004/p5   | 2   |
| 150       | GH1440W-04-33      | Plug                   |           | 1   |
| 151       | 04-47              | Shaft (D)              |           | 1   |
| 152       | 04-43              | Gear                   | 38T       | 1   |
| 153       | 04-42              | Spline Shaft (E)       |           | 1   |
| 154       | 04-48              | Housing Gasket         |           | 1   |
| 155       | 04-49              | Housing                |           | 1   |
| 156       | GB9877.1-SD25X40X7 | Spacer                 | SD25x40x7 | 1   |
| 158       | GH1440W-04-65      | Collar                 |           | 1   |

| <b>Index No.</b> | <b>Part No.</b> | <b>Description</b> | <b>Size</b> | <b>Qty</b> |
|------------------|-----------------|--------------------|-------------|------------|
| 160              | GH1440W-04-66   | Balance Space      |             | 1          |
| 161              | GH1440W-04-67   | Balance Block      |             | 1          |
| 162              | TS-1523041      | Set Screw          | M6x12       | 1          |
| 163              | TS-1524031      | Set Screw          | M8x12       | 1          |

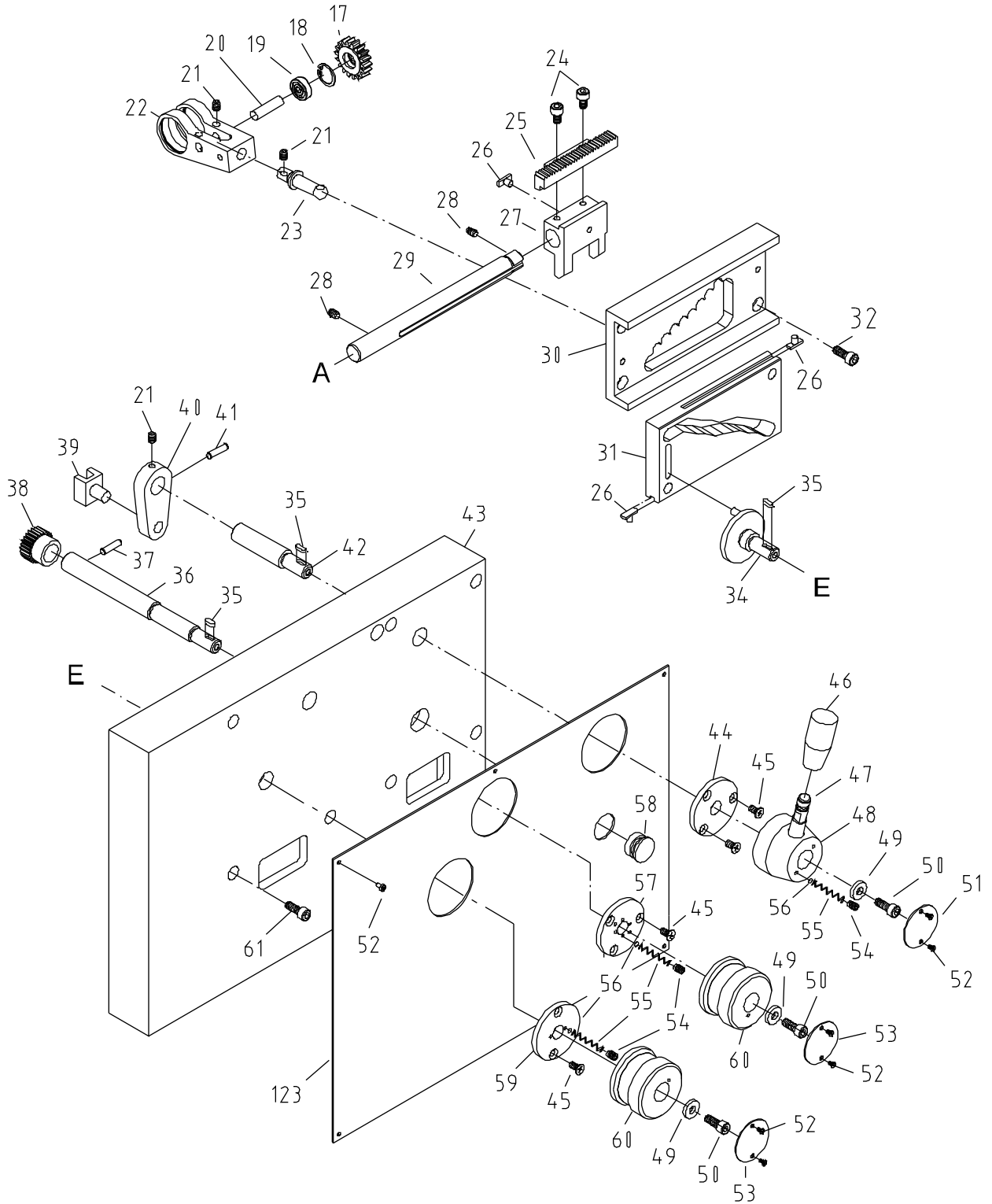
# Gearbox Assembly I



## Gearbox Assembly I

| Index No. | Part No.         | Description             | Size  | Qty |
|-----------|------------------|-------------------------|-------|-----|
| 1         | 05-73            | Plug                    |       | 1   |
| 2         | GH1440W-05-06    | Gearbox Casting         |       | 1   |
| 3         | 05-07            | Front Cover             |       | 1   |
| 4         | TS-1532032       | Flat Head Machine Screw | M4x10 | 8   |
| 5         | GH1440W-05-26    | Oil Cover (14")         |       | 1   |
|           | GH1340W-05-26    | Oil Cover (13")         |       | 1   |
| 6         | GH1440W-05-07/1  | Cover (14")             |       | 1   |
|           | GH1340W-05-07/1  | Cover (13")             |       | 1   |
| 7         | GH1440W-05-08    | Top Cover               |       | 1   |
| 8         | GH1440W-05-09    | Bracket                 |       | 1   |
| 9         | TS-1531012       | Pan Head Machine Screw  | M3x6  | 4   |
| 10        | GH1440W-05-11    | Electrical Plate        |       | 1   |
| 11        | 05-61            | Gearbox Gasket          |       | 1   |
| 12        | TS-1504081       | Hex Socket Cap Screw    | M8x40 | 2   |
| 13        | TS-1504051       | Hex Socket Cap Screw    | M8x25 | 3   |
| 14        | GH1440W-14       | Pin                     | 5x20  | 2   |
| 15        | GH1440W-15       | Pin                     | 5x28  | 2   |
| 16        | 05-75            | Plug                    |       | 2   |
| 33        | GB118-A8X30      | Pin                     | A8x30 | 2   |
| 121       | GB867-2X4        | Rivet                   | 2x4   | 4   |
| 122       | GH-1440W-05-12/1 | Speed Chart             |       | 1   |

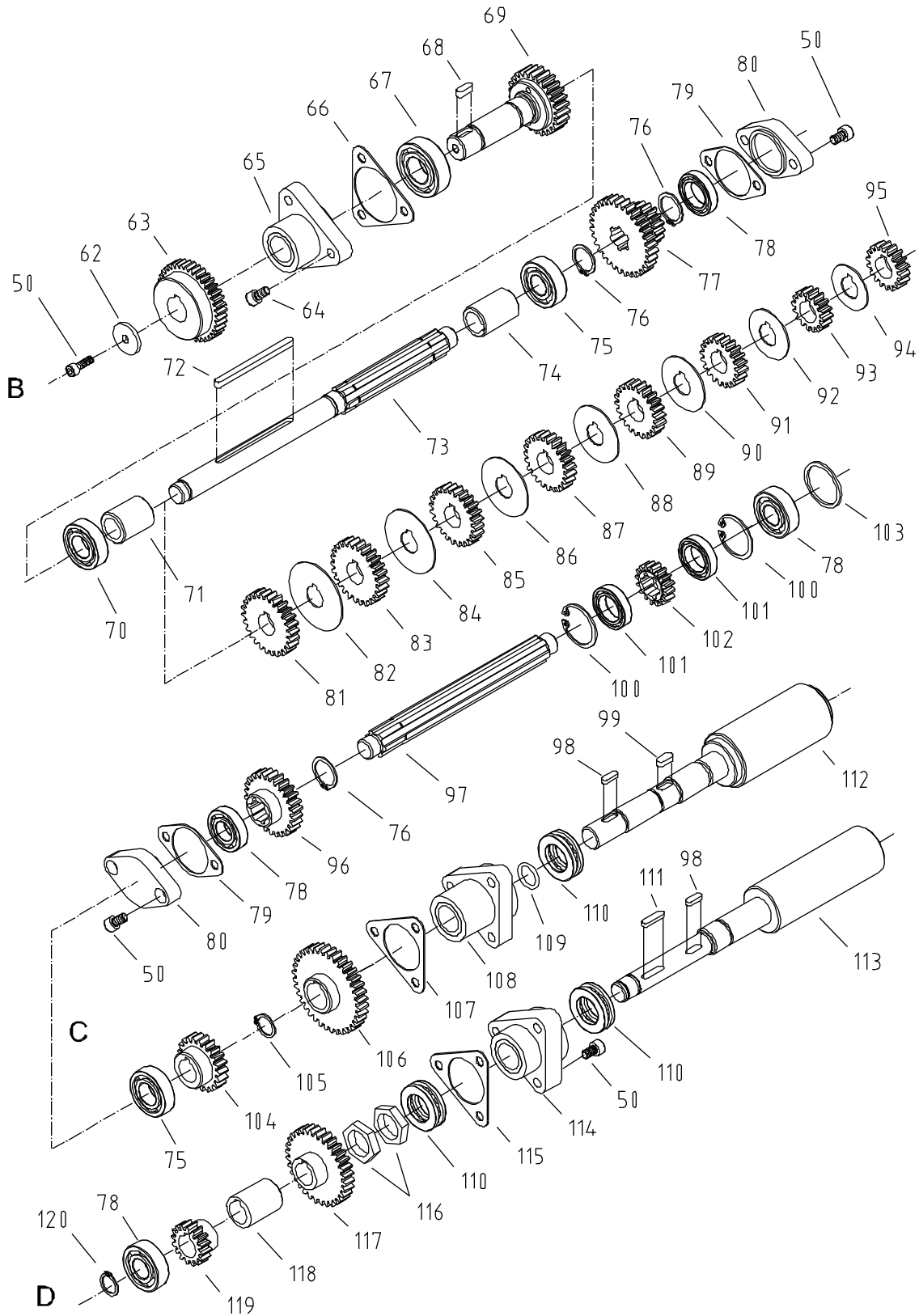
# Gearbox Assembly II



## Gearbox Assembly II

| Index No. | Part No.          | Description  | Size    | Qty |
|-----------|-------------------|--|---------|-----|
| 17        | 05-49             | Gear   | 16T     | 1   |
| 18        | GH893.1-19        | Retainer Ring                                      | 19      | 1   |
| 19        | GB/T276-6198      | Bearing  | 6198/p5 | 1   |
| 20        | 05-51             | Shaft  |         | 1   |
| 21        | TS-1523021        | Set Screw  | M6x8    | 4   |
| 22        | 05-03             | Shifter  |         | 1   |
| 23        | 05-02             | Shaft  |         | 1   |
| 24        | TS-1503051        | Hex Socket Cap Screw                               | M6x20   | 2   |
| 25        | 05-13             | Rack   |         | 1   |
| 26        | 05-01             | Shift Key  |         | 3   |
| 27        | 05-12             | Shift Fork   |         | 1   |
| 28        | TS-1523021        | Set Screw  | M6x8    | 2   |
| 29        | 05-15             | Shaft  |         | 1   |
| 30        | 05-05             | Locating Plate                                     |         | 1   |
| 31        | 05-04             | Control Plate                                      |         | 1   |
| 32        | TS-1503031        | Hex Socket Cap Screw                               | M6x12   | 4   |
| 33        | GB118-A8X30       | Pin  | A8x30   | 2   |
| 34        | 05-60             | Shift Hub  |         | 1   |
| 35        | GB1096-4X10       | Key  | 4x10    | 3   |
| 36        | GH1440W-05-02     | Shaft  |         | 1   |
| 37        | GB879-5X20        | Pin  | 5x20    | 1   |
| 38        | 05-14             | Gear   | 26T     | 1   |
| 39        | 05-55             | Shift Fork   |         | 1   |
| 40        | 05-56             | Shift Lever  |         | 1   |
| 41        | GB879-5X20        | Pin  | 5x20    | 1   |
| 42        | GH1440W-05-03     | Shaft  |         | 1   |
| 43        | GH1440W-05-01     | Cover  |         | 1   |
| 44        | 05-58             | Locating Disk                                      |         | 1   |
| 45        | GB819-M5X10       | Flat Head Machine Screw                            | M5x10   | 8   |
| 46        | GB4141.14-BM10X50 | Knob   |         | 1   |
| 47        | GH1440W-05-15     | Handle Shaft                                       |         | 1   |
| 48        | GH14440W-05-14    | Shift Hub  |         | 1   |
| 49        | 05-08             | Washer   |         | 3   |
| 50        | TS-1503041        | Hex Socket Cap Screw                               | M6x16   | 14  |
| 51        | 04-90             | Indicator Disk                                     |         | 1   |
| 52        | TS-1531012        | Pan Head Machine Screw                             | M3x6    | 12  |
| 53        | 05-70             | Indicator Disk                                     |         | 2   |
| 54        | TS-1524011        | Set Screw  | M8x8    | 4   |
| 55        | GH1440W-05-72     | Spring   |         | 4   |
| 56        | GB308-SB6.5       | Steel Ball   | 6.5     | 4   |
| 57        | 05-10             | Locating Disk                                      |         | 1   |
| 58        | GH1440W-05-27     | Oil Sight Glass                                    |         | 1   |
|           | GHW1160-16A       | Oil Sight Glass (serial no. 1007W2720W and higher) | M16x1.5 | 1   |
| 59        | 05-59             | Locating Disk                                      |         | 1   |
| 60        | GH1440W-05-13     | Shift Hub  |         | 2   |
| 61        | TS-1503081        | Hex Socket Cap Screw                               | M6x35   | 7   |
| 123       | GH1440W-05-10-1   | Name Plate (1 Phase)                               |         | 1   |
|           | GH1440W-05-10-3   | Name Plate (3 Phase)                               |         | 1   |
|           | GH1340W-05-10-1   | Name Plate (1 Phase)                               |         | 1   |
|           | GH1340W-05-10-3   | Name Plate (3 Phase)                               |         | 1   |

# Gearbox Assembly III

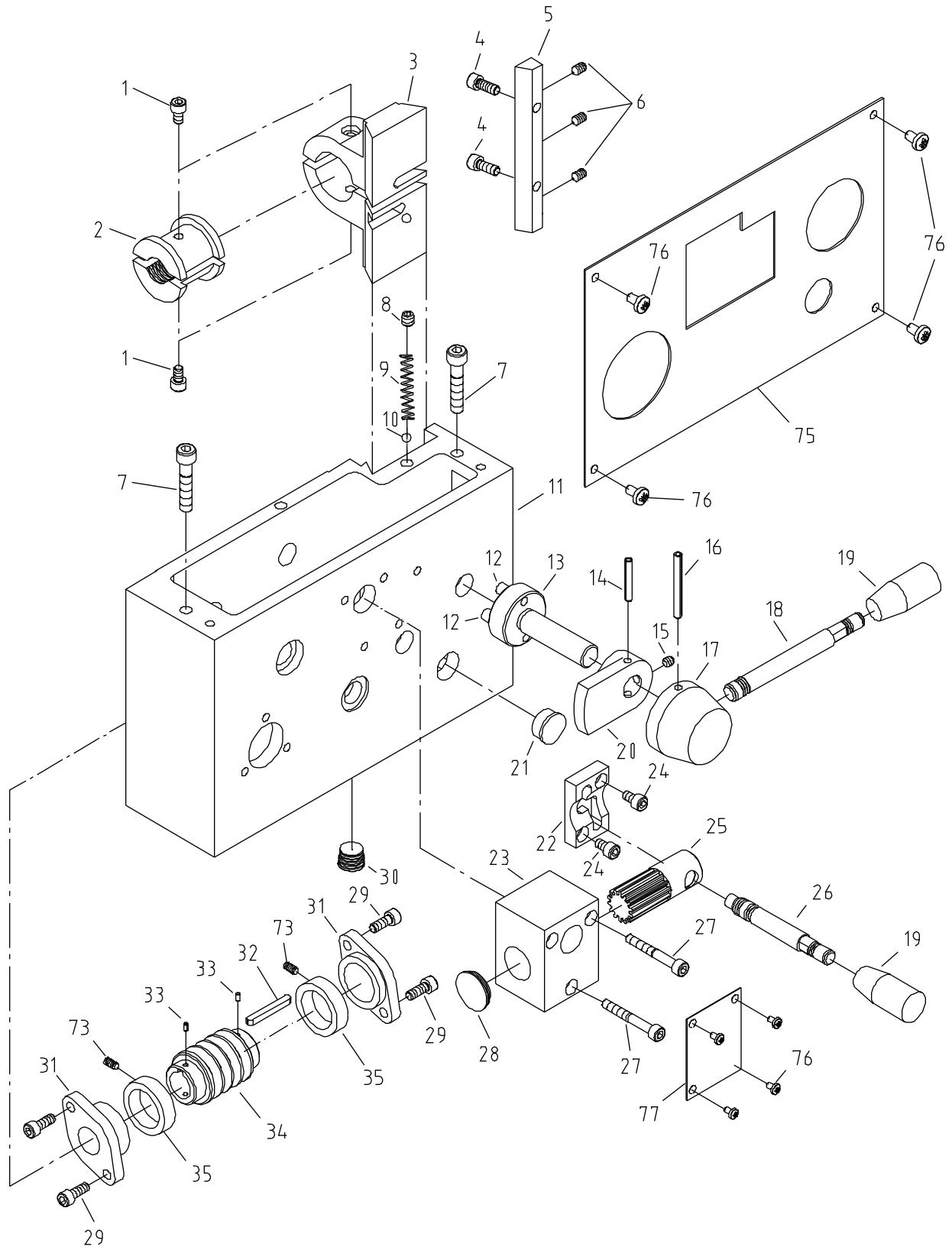


### Gearbox Assembly III

| Index No. | Part No.         | Description          | Size     | Qty |
|-----------|------------------|----------------------|----------|-----|
| 50        | TS-1503041       | Hex Socket Cap Screw | M6x16    | 14  |
| 62        | 05-42            | Washer               |          | 1   |
| 63        | 05-41            | Gear                 | 50T      | 1   |
| 64        | TS-1503051       | Hex Socket Cap Screw | M6x20    | 3   |
| 65        | 05-39            | Flange               |          | 1   |
| 66        | 05-38            | Gasket               |          | 1   |
| 67        | GB/T276-6004     | Ball Bearing         | 6004/P5  | 1   |
| 68        | GB1096-5X14      | Key                  | 5x14     | 1   |
| 69        | 05-40            | Gear Shaft Assembly  |          | 1   |
| 70        | GB/T276-6002     | Ball Bearing         | 6002/p5  | 1   |
| 71        | 05-36            | Shaft Collar         |          | 1   |
| 72        | GB1096-5X75      | Key                  | 5x75     | 1   |
| 73        | 05-27            | Shaft                |          | 1   |
| 74        | 05-67            | Shaft Collar         |          | 1   |
| 75        | GB/T276-6003     | Ball Bearing         | 6003/p5  | 2   |
| 76        | GB894.1-20       | Retainer Ring        | 20       | 3   |
| 77        | 05-21            | Gear                 | 16T/32T  | 1   |
| 78        | GB/T276-6202     | Ball Bearing         | 6202/p5  | 4   |
| 79        | 05-48            | Gasket               |          | 2   |
| 80        | 05-47            | Flange               |          | 2   |
| 81        | 05-35            | Gear                 | 28T      | 1   |
| 82        | GH1440W-05-19    | Washer               |          | 1   |
| 83        | 05-34            | Gear                 | 26T      | 1   |
| 84        | GH1440W-05-20    | Washer               |          | 1   |
| 85        | 05-33            | Gear                 | 24T      | 1   |
| 86        | GH1440W-05-21    | Washer               |          | 1   |
| 87        | 05-32            | Gear                 | 23T      | 1   |
| 88        | GH1440W-05-22    | Washer               |          | 1   |
| 89        | 05-31            | Gear                 | 22T      | 1   |
| 90        | GH1440W-05-23    | Washer               |          | 1   |
| 91        | 05-30            | Gear                 | 20T      | 1   |
| 92        | GH1440W-05-24    | Washer               |          | 1   |
| 93        | 05-29            | Gear                 | 18T      | 1   |
| 94        | GH1440W-05-25    | Washer               |          | 1   |
| 95        | 05-28            | Gear                 | 16T      | 1   |
| 96        | 05-37            | Gear                 | 26T      | 1   |
| 97        | 05-52            | Spline Shaft         |          | 1   |
| 98        | GB1096-5X14      | Key                  | 5x14     | 2   |
| 99        | GB1096-6X14      | Key                  | 6x14     | 1   |
| 100       | GB893.1-32       | Retainer Ring        | 32       | 2   |
| 101       | GB/T276-61804    | Bearing              | 61804/p5 | 2   |
| 102       | 05-49            | Gear                 | 16T      | 1   |
| 103       | GH1340A-05-66    | Washer               |          | 1   |
| 104       | 05-25            | Gear                 | 21T      | 1   |
| 105       | GB896-15         | Retainer Ring        | 15       | 1   |
| 106       | 05-19            | Gear                 | 36T      | 1   |
| 107       | 05-53            | Gasket               |          | 1   |
| 108       | 05-17            | Flange               |          | 1   |
| 109       | GB3452.1-15X2.65 | O-Ring               | 15x2.65  | 1   |
| 110       | GB301-8104       | Ball Bearing         | 8104     | 3   |
| 111       | GB1096-5X20      | Key                  | 5x20     | 1   |
| 112       | GH1440W-05-04    | Shaft                |          | 1   |
| 113       | GH1440W-05-05    | Shaft                |          | 1   |
| 114       | 05-18            | Flange               |          | 1   |
| 115       | 05-53            | Gasket               |          | 1   |
| 116       | 05-20            | Nut                  |          | 2   |

| <b>Index No.</b> | <b>Part No.</b> | <b>Description</b> | <b>Size</b> | <b>Qty</b> |
|------------------|-----------------|--------------------|-------------|------------|
| 117              | 05-22           | Gear               | 32T         | 1          |
| 118              | 05-24           | Collar             |             | 1          |
| 119              | 05-26           | Gear               | 16T         | 1          |
| 120              | GB894.1-15      | Retainer Ring      |             | 1          |

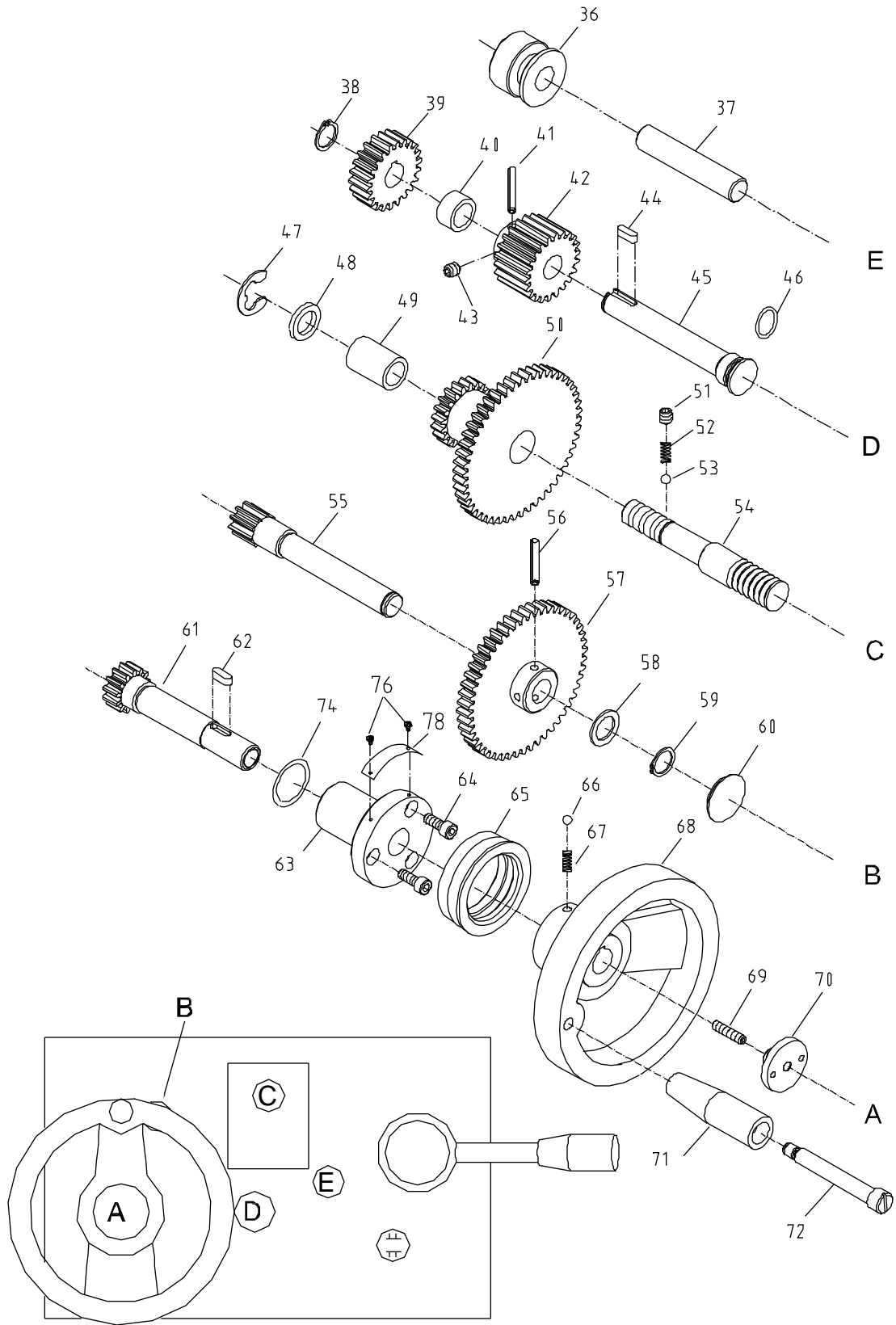
# Apron Assembly I



## Apron Assembly I

| Index No. | Part No.          | Description   | Size    | Qty |
|-----------|-------------------|---|---------|-----|
| 1         | TS-1503021        | Hex Socket Cap Screw                                  | M6x10   | 2   |
| 2         | 06-37             | Half Nut  |         | 1   |
| 3         | 06-36             | Bracket   |         | 1   |
| 4         | TS-1503041        | Hex Socket Cap Screw                                  | M6x16   | 2   |
| 5         | 06-33             | Gib   |         | 1   |
| 6         | TS-1523031        | Set Screw   | M6x10   | 3   |
| 7         | TS-1504081        | Hex Socket Cap Screw                                  | M8x40   | 2   |
| 8         | TS-1524011        | Set Screw   | M8x8    | 1   |
| 9         | 06-39             | Spring  |         | 1   |
| 10        | GB308-SB6         | Steel Ball  | 6       | 1   |
| 11        | 06-01             | Casting   |         | 1   |
| 12        | 06-42-1           | Pin   |         | 2   |
| 13        | 06-42             | Half Nut Cam  |         | 1   |
| 14        | GB879-5X35        | Pin   | 5x35    | 1   |
| 15        | TS-1523011        | Set Screw   | M6x6    | 1   |
| 16        | GB879-5X50        | Pin   | 5x50    | 1   |
| 17        | GH1440W-06-09     | Hub   |         | 1   |
| 18        | GH1440W-06-04     | Handle Shaft  |         | 1   |
| 19        | GB4141.14-BM10X50 | Knob  |         | 2   |
| 20        | 06-40             | Safety Catch  |         | 1   |
| 21        | GB1160-12         | Oil Sight Glass                                       | 12      | 1   |
|           | GHW1160-16A       | Oil Sight Glass (serial no. 1007W2720W and higher)... | M16x1.5 | 1   |
| 22        | GH1340W-06-04     | Bracket   |         | 1   |
| 23        | 06-16             | Block   |         | 1   |
| 24        | TS-1503031        | Hex Socket Cap Screw                                  | M6x12   | 2   |
| 25        | GH1440W-06-07     | Spline Shaft  |         | 1   |
| 26        | GH1440W-06-08     | Handle Shaft  |         | 1   |
| 27        | TS-1503101        | Hex Socket Cap Screw                                  | M6x45   | 3   |
| 28        | 06-02             | Plug  |         | 1   |
| 29        | TS-1503041        | Hex Socket Cap Screw                                  | M6x16   | 4   |
| 30        | 06-35             | Drain Plug  |         | 1   |
| 31        | 06-34             | Flange  |         | 2   |
| 32        | GB1096-5X56       | Key   | 5x56    | 1   |
| 33        | GB879-3X5         | Pin   | 3x5     | 2   |
| 34        | 06-27             | Worm  |         | 1   |
| 35        | 06-50             | Collar  |         | 2   |
| 73        | TS-1522031        | Set Screw   | M5x10   | 2   |
| 75        | GH1440W-06-01     | Apron Label   |         | 1   |
| 76        | TS-1531012        | Pan Head Screw  | M3x6    | 10  |
| 77        | GH1440W-06-03     | Thread Dial Label                                     |         | 1   |
|           | GHW-AP-CA         | Apron Assembly Complete                               |         |     |

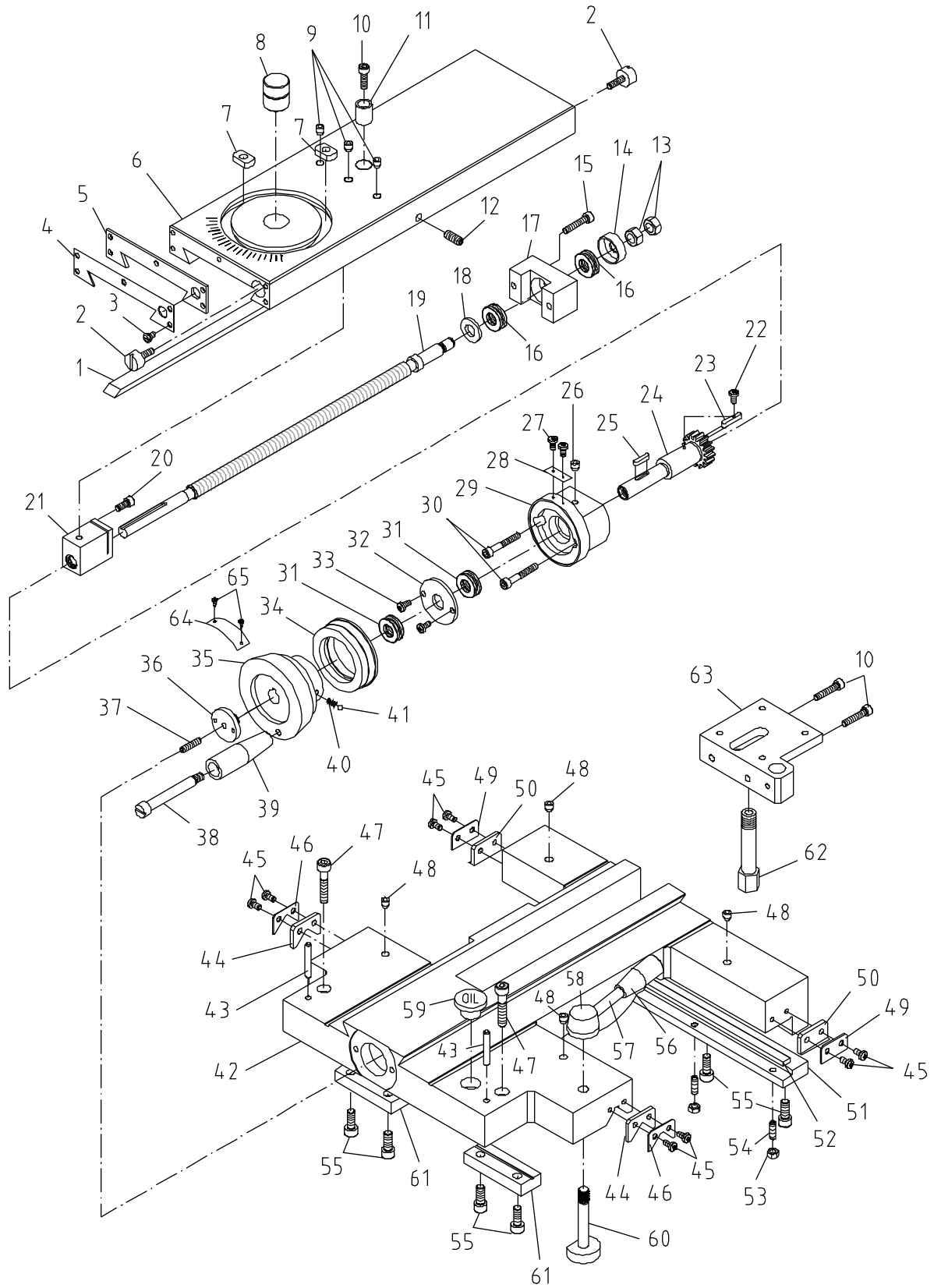
# Apron Assembly II



## Apron Assembly II

| Index No. | Part No.           | Description          | Size      | Qty |
|-----------|--------------------|----------------------|-----------|-----|
| 36        | 06-44              | Bushing              |           | 1   |
| 37        | 06-43              | Shaft                |           | 1   |
| 38        | GB894.1-16         | Retainer Ring        | 16        | 1   |
| 39        | 06-28              | Gear                 | 22T       | 1   |
| 40        | 06-26              | Collar               |           | 1   |
| 41        | GB879-5X35         | Pin                  | 5x35      | 1   |
| 42        | 06-20              | Gear                 | 24T       | 1   |
| 43        | TS-1523011         | Set Screw            | M6x6      | 1   |
| 44        | GB1096-5X15        | Key                  | 5x15      | 1   |
| 45        | 06-19              | Shaft                |           | 1   |
| 46        | GB3452.1-17X1.8    | O-Ring               | 17x1.8    | 1   |
| 47        | GB896-12           | Retainer Ring        | 12        | 1   |
| 48        | 06-10              | Bushing              |           | 1   |
| 49        | 06-15-1            | Collar               |           | 1   |
| 50        | GH1440W-06-15      | Cluster Gear         | 50T/20T   | 1   |
| 51        | TS-1524011         | Set Screw            | M8x8      | 1   |
| 52        | GH1440W-06-14      | Spring               |           | 1   |
| 53        | GB308-SB6          | Steel Ball           | 6         | 1   |
| 54        | GH1440W-06-13      | Shaft                |           | 1   |
| 55        | 06-06              | Shaft                |           | 1   |
| 56        | GB879-5X30         | Pin                  | 5x30      | 1   |
| 57        | 06-08              | Gear                 | 50T       | 1   |
| 58        | 06-10              | Bushing              |           | 1   |
| 59        | GB894.1-16         | Retainer Ring        | 16        | 1   |
| 60        | 06-11              | Plug                 |           | 1   |
| 61        | 06-07              | Shaft                |           | 1   |
| 62        | GB1096-5X15        | Key                  | 5x15      | 1   |
| 63        | GH1440W-06-05      | Wheel Flange         |           | 1   |
| 64        | TS-1503041         | Hex Socket Cap Screw | M6x16     | 3   |
| 65        | 06-31              | Indicator Ring       |           | 1   |
| 66        | GB308-SB6          | Steel Ball           | 6         | 2   |
| 67        | 06-32              | Spring               |           | 2   |
| 68        | GH1440W-06-06      | Wheel                |           | 1   |
| 69        | TS-1523071         | Set Screw            | M6x25     | 1   |
| 70        | 06-30              | Wheel Stud           |           | 1   |
| 71        | GH1440W-06-11      | Handle Sleeve        |           | 1   |
| 72        | GH1440W-06-10      | Handle Lever         |           | 1   |
| 73        | TS-1522031         | Set Screw            | M5x10     | 2   |
| 74        | GB3452.1-25.8X3.55 | O-Ring               | 25.8x3.55 | 1   |
| 76        | TS-1531012         | Pan Head Screw       | M3x6      | 10  |
| 78        | GH1440W-06-38      | Indicator Label      |           | 1   |

# Carriage and Cross Slide Assembly

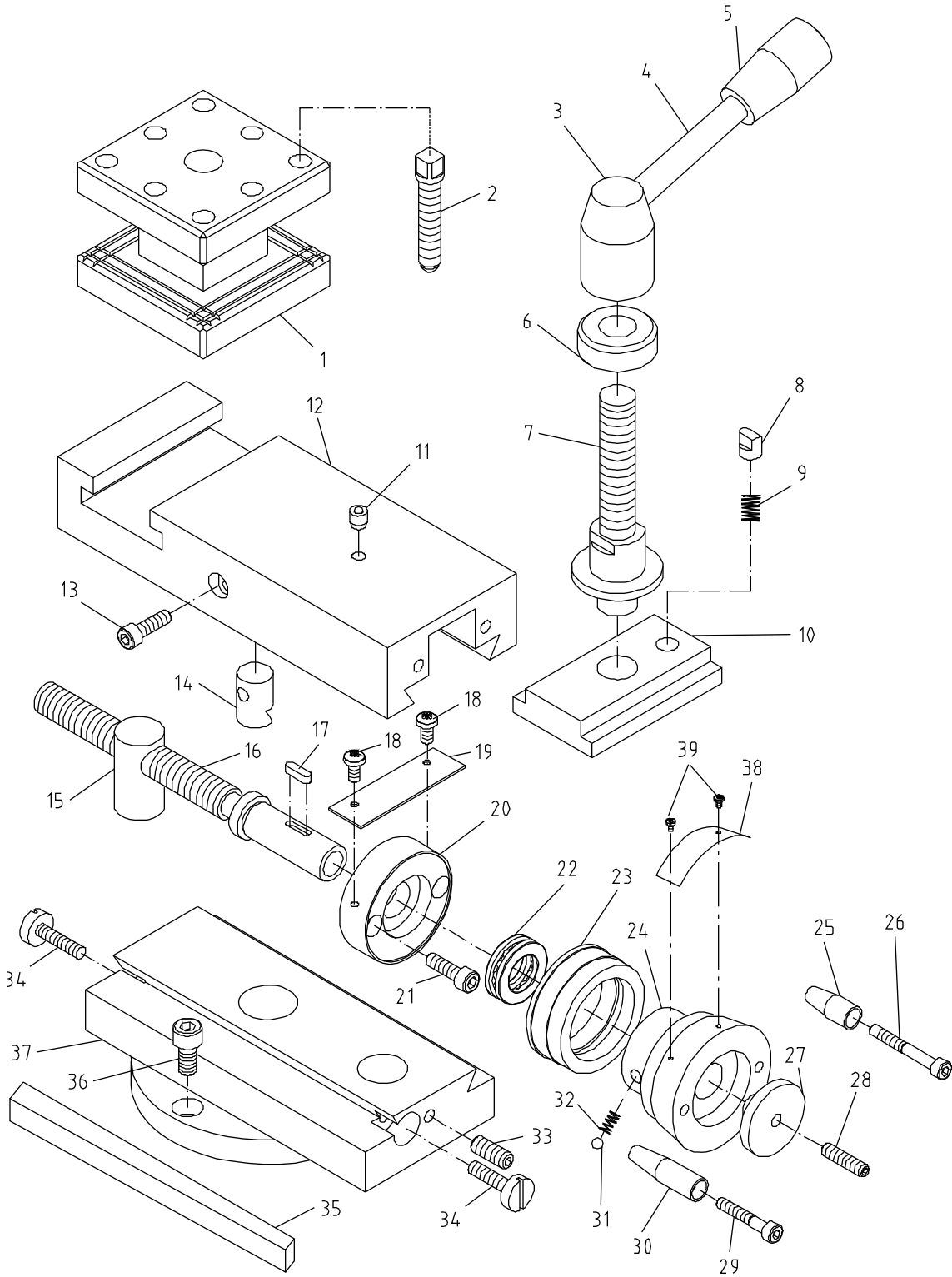


## Carriage and Cross Slide Assembly

| Index No. | Part No.         | Description            | Size    | Qty |
|-----------|------------------|------------------------|---------|-----|
| 1         | GH1440W-07-04    | Gib                    |         | 1   |
| 2         | 07-28            | Gib Adjusting Screw    |         | 2   |
| 3         | GB818-M5X10      | Pan Head Machine Screw | M5x10   | 5   |
| 4         | GH1440W-07-12    | Plate                  |         | 1   |
| 5         | GH1440W-07-11    | Plate Wiper            |         | 1   |
| 6         | GH1440W-07-02    | Cross Slide Body       |         | 1   |
| 7         | 07-07            | Clamp Nut              |         | 2   |
| 8         | 07-08            | Hub                    |         | 1   |
| 9         | GB1155-8         | Oiler                  | 8       | 3   |
| 10        | TS-1503051       | Hex Socket Cap Screw   | M6x20   | 1   |
| 11        | 07-05            | Sleeve                 |         | 1   |
| 12        | TS-1524011       | Set Screw              | M8x8    | 1   |
| 13        | GB6172-M10       | Hex Nut                | M10     | 2   |
| 14        | 07-02            | Bearing Cap            |         | 1   |
| 15        | TS-1503071       | Hex Socket Cap Screw   | M6x30   | 2   |
| 16        | GB301-8101       | Thrust Bearing         | 8101    | 2   |
| 17        | 07-03            | Block                  |         | 1   |
| 18        | 07-25            | Spacer                 |         | 1   |
| 19        | GH1440W-07-16    | Leadscrew              |         | 1   |
| 20        | TS-1503031       | Hex Socket Cap Screw   | M6x12   | 1   |
| 21        | GH1440W-07-10    | Crossfeed Nut          |         | 1   |
| 22        | GB819-M3X5       | Pan Head Machine Screw | M3x5    | 1   |
| 23        | 07-21            | Key                    | 5X25    | 1   |
| 24        | GH1440W-07-14    | Gear Shaft             |         | 1   |
| 25        | GB1096-4X20      | Key                    | 4x20    | 2   |
| 26        | GB1155-6         | Oiler                  | 6       | 1   |
| 27        | GB818-M3X6       | Pan Head Screw         | M3x6    | 2   |
| 28        | 07-04-01         | Indicator Label        |         | 1   |
| 29        | GH1440W-07-13    | Housing                |         | 1   |
| 30        | TS-1503091       | Hex Socket Cap Screw   | M6x40   | 2   |
| 31        | GB301-8102       | Thrust Bearing         | 8102    | 2   |
| 32        | 07-18            | Washer                 |         | 1   |
| 33        | TS-2285102       | Pan Head Machine Screw | M5x10   | 2   |
| 34        | 07-17            | Index Ring             |         | 1   |
| 35        | GH1440W-07-18    | Compound Handle        |         | 1   |
| 36        | 07-15            | Cover Screw            |         | 1   |
| 37        | TS-1523071       | Set Screw              | M6x25   | 1   |
| 38        | GH1440W-07-17    | Handle Lever           |         | 1   |
| 39        | GH1440W-07-26    | Handle Sleeve          |         | 1   |
| 40        | GB2089-0.7X5X9   | Spring                 | 0.7x5x9 | 2   |
| 41        | GB308-SB6        | Steel Ball             | 6       | 2   |
| 42        | GH1440W-07-01    | Saddle                 |         | 1   |
| 43        | GB117-6X40       | Pin                    | 6x40    | 2   |
| 44        | GH1440W-07-03    | Plate Wiper            |         | 2   |
| 45        | TS-2285102       | Pan Head Machine Screw | M5x10   | 8   |
| 46        | GH1440W-07-07    | Plate                  |         | 2   |
| 47        | TS-1515051       | Hex Socket Cap Screw   | M8x40   | 2   |
| 48        | GB1155-79        | Oiler                  |         | 4   |
| 49        | GH1440W-07-05    | Plate                  |         | 2   |
| 50        | GH1440W-07-06    | Plate Wiper            |         | 2   |
| 51        | 07-24            | Rear Pressure Plate    |         | 1   |
| 52        | 07-23            | Gib                    |         | 1   |
| 53        | GB6170-M6        | Lock Nut               | M6      | 4   |
| 54        | TS-1523061       | Set Screw              | M6x20   | 4   |
| 55        | TS-1504041       | Hex Socket Cap Screw   | M8x20   | 6   |
| 56        | GB4141.14-M10X50 | Handle Knob            | M10x50  | 1   |

| <b>Index No.</b> | <b>Part No.</b> | <b>Description</b>                                  | <b>Size</b> | <b>Qty</b> |
|------------------|-----------------|---|-------------|------------|
| 57               | GH1440W-07-27   | Handle Shaft  |             | 1          |
| 58               | GH1440W-07-25   | Hub   |             | 1          |
| 59               | 04-06           | Oil Cap   |             | 1          |
| 60               | GH1440W-07-08   | Lock Stud   |             | 1          |
| 61               | GH1440W-07-09   | Front Pressure Plate                                |             | 2          |
| 62               | 14-04           | Connected Tube                                      |             | 1          |
| 63               | 14-03           | Lamp Bracket  |             | 1          |
|                  | GHW-CFLA        | Cross Feed Lead Screw & Nut Assy. (includes #19-21) |             |            |
|                  | GHW1440W-CFDA   | Cross Feed Dial Assy. (includes 22-26, 29-41)       |             |            |

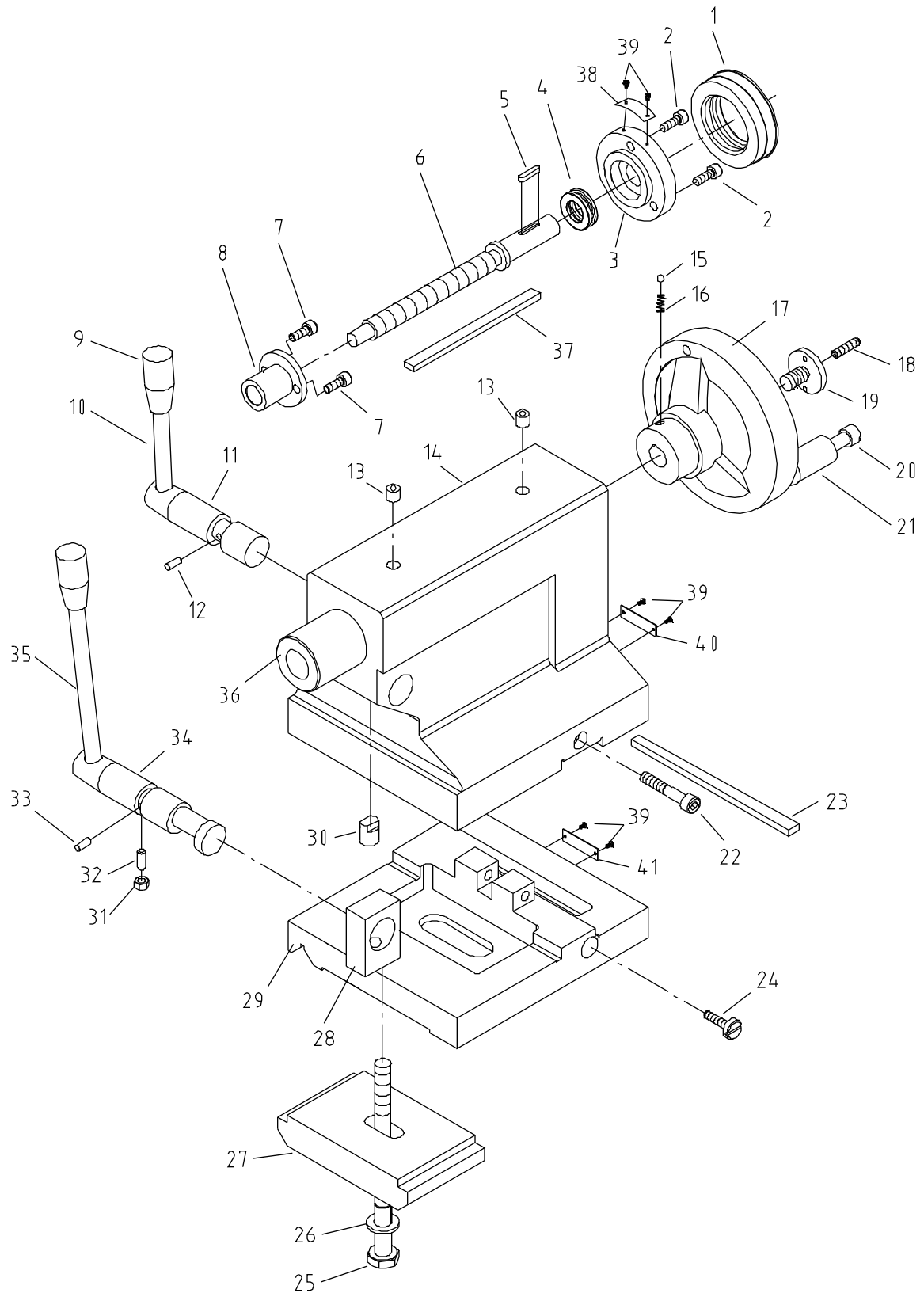
# Four Way Tool Post and Compound Slide Assembly



## Four Way Tool Post and Compound Slide Assembly

| Index No. | Part No.          | Description                               | Size    | Qty |
|-----------|-------------------|---|---------|-----|
| 1         | 07-32             | Tool Post                                 |         | 1   |
| 2         | GB83-10X50        | Tool Lock Screw                           | 10x50   | 8   |
| 3         | GH1440W-07-20     | Handle Hub                                |         | 1   |
| 4         | GH1440W-07-21     | Handle Shaft                              |         | 1   |
| 5         | GB4141.14-BM10X50 | Knob                                      |         | 1   |
| 6         | GH1440W-07-19     | Spacer                                    |         | 1   |
| 7         | 07-34             | Tool Post Pin                             |         | 1   |
| 8         | 07-29             | Tool Post Pin                             |         | 1   |
| 9         | GB2089-1X8X11     | Spring                                    | 1x8x11  | 1   |
| 10        | 07-37             | Clamp Nut                                 |         | 1   |
| 11        | GB1155-89         | Oiler                                     | 8       | 1   |
| 12        | 07-49             | Compound Slide                            |         | 1   |
| 13        | TS-1503051        | Hex Socket Cap Screw                      | M6x20   | 1   |
| 14        | 07-09             | Position Pin                              |         | 1   |
| 15        | 07-39             | Nut                                       |         | 1   |
| 16        | 07-40             | Compound Screw                            |         | 1   |
| 17        | GB1096-4X14       | Key                                       | 4x14    | 1   |
| 18        | TS-1531012        | Pan Head Machine Screw                    | M3x6    | 2   |
| 19        | 07-04-02          | Name Plate                                |         | 1   |
| 20        | GH1440W-07-22     | Screw Bushing                             |         | 1   |
| 21        | TS-1503051        | Hex Socket Cap Screw                      | M6x20   | 2   |
| 22        | GB301-8103        | Thrust Bearing                            | 8103    | 1   |
| 23        | 07-42             | Index Ring                                |         | 1   |
| 24        | GH1440W-07-.28    | Handwheel                                 |         | 1   |
| 25        | GH1440W-07-23     | Handle                                    |         | 1   |
| 26        | TS-1513051        | Hex Socket Cap Screw                      | M5x25   | 1   |
| 27        | 07-15             | Cover Screw                               |         | 1   |
| 28        | TS-1523071        | Set Screw                                 | M6x25   | 1   |
| 29        | TS-1502091        | Hex Socket Cap Screw                      | M5x40   | 1   |
| 30        | GH1440W-07-24     | Handle                                    |         | 1   |
| 31        | GB308-SB6         | Steel Ball                                | 6       | 2   |
| 32        | GB2089-0.7X5X5    | Spring                                    | 0.7x5x5 | 2   |
| 33        | TS-1523051        | Set Screw                                 | M6x16   | 1   |
| 34        | 07-28             | Gib Adjusting Screw                       |         | 2   |
| 35        | 07-10             | Gib                                       |         | 1   |
| 36        | TS-1515011        | Hex Socket Cap Screw                      | M8x16   | 2   |
| 37        | GH1440W-07-15     | Swivel Slide (14")                        |         | 1   |
|           | GH1340W-07-15     | Swivel Slide (13")                        |         | 1   |
| 38        | 07-04-02          | Indicator Label                           |         | 1   |
| 39        | GB818-M3X6        | Pan Head Screw                            | M3x6    | 2   |
|           | GHW-THA           | Tool Post Assy. (includes #1 & 2)         |         | 1   |
|           | GH1440W-CPA       | Compound Assy. (includes # 11-39 for 14") |         | 1   |
|           | GH1340W-CPA       | Compound Assy. (includes # 11-39 for 13") |         | 1   |

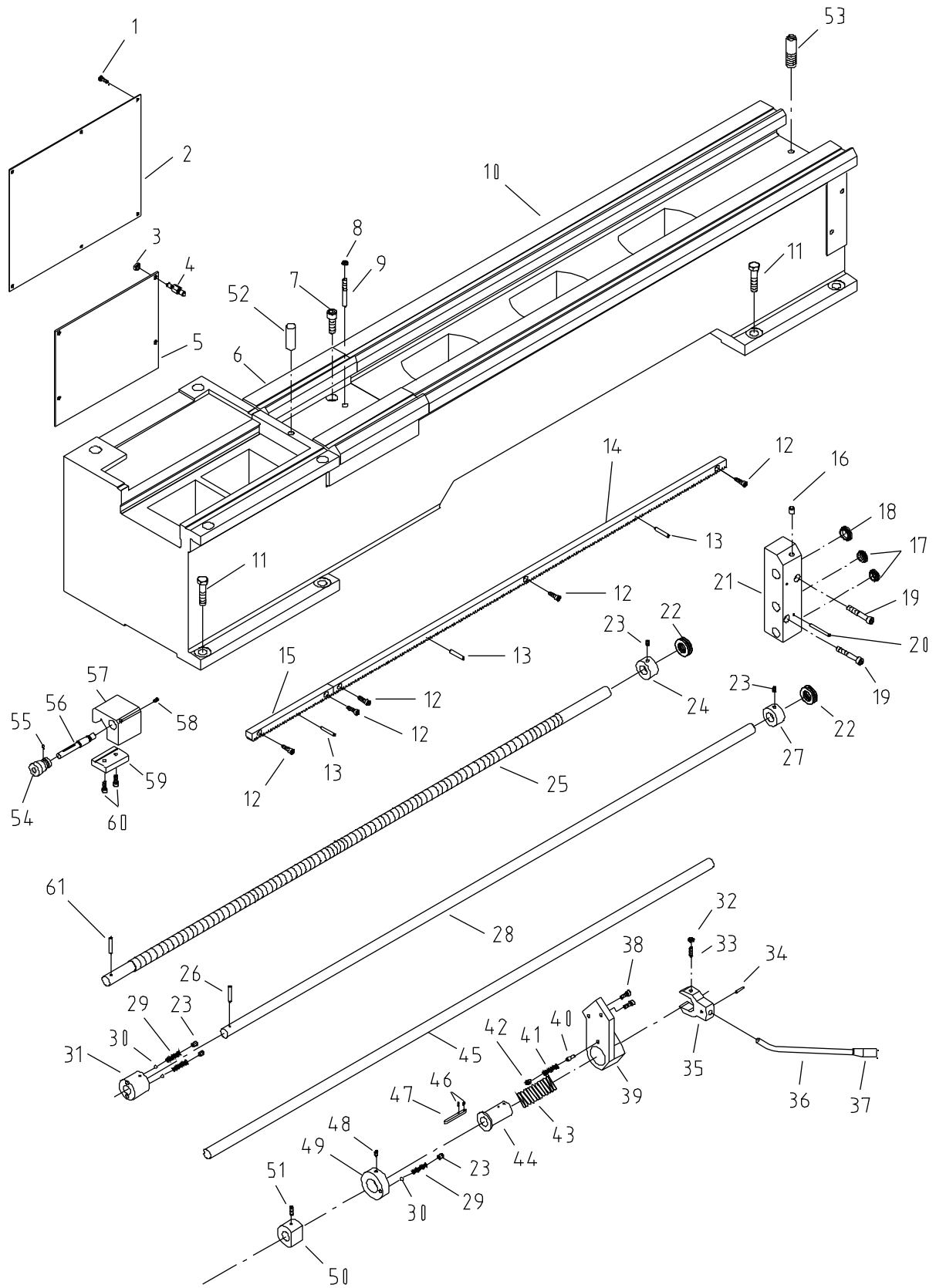
# Tailstock Assembly



## Tailstock Assembly

| Index No. | Part No.          | Description                           | Size     | Qty |
|-----------|-------------------|---------------------------------------|----------|-----|
| 1         | 08-09             | Index Ring                            |          | 1   |
| 2         | TS-1503051        | Hex Socket Cap Screw                  | M6x20    | 3   |
| 3         | GH1440W-08-07     | Hub                                   |          | 1   |
| 4         | GB301-8103        | Thrust Bearing                        | 8103     | 1   |
| 5         | GB1096-4X20       | Key                                   | 4x20     | 1   |
| 6         | 08-05             | Screw                                 |          | 1   |
| 7         | TS-1503041        | Hex Socket Cap Screw                  | M6x16    | 2   |
| 8         | 08-06             | Flange                                |          | 1   |
| 9         | GB4141.14-BM10X50 | Knob                                  |          | 2   |
| 10        | GH1440W-06-04     | Lever Handle                          |          | 1   |
| 11        | GH1440W-08-06     | Eccentric Shaft                       |          | 1   |
| 12        | GB879-5X12        | Pin                                   | 5x12     | 1   |
| 13        | GB1155-10         | Oiler                                 | 10       | 2   |
| 14        | GH1440W-08-01     | Tailstock Body                        |          | 1   |
| 15        | GB308-SB6         | Steel Ball                            | 6        | 1   |
| 16        | GB2089-0.7X5X12   | Spring                                | 0.7x5x12 | 1   |
| 17        | GH1440W-08-09     | Wheel                                 |          | 1   |
| 18        | TS-1523071        | Set Screw                             | M6x25    | 1   |
| 19        | 08-12             | Wheel Screw                           |          | 1   |
| 20        | GH1440W-06-10     | Handle Lever                          |          | 1   |
| 21        | GH1440W-06-11     | Handle Sleeve                         |          | 1   |
| 22        | GH1440W-T22       | Hex Socket Cap Screw                  | M8x70    | 2   |
| 23        | GH1440W-08-03     | Gib                                   |          | 1   |
| 24        | 08-18             | Gib Adjusting Screw                   |          | 2   |
| 25        | TS-1492091        | Hex Cap Bolt (for 14")                | M12x90   | 1   |
|           | TS-1492071        | Hex Cap Bolt (for 13")                | M12x70   | 1   |
| 26        | TS-1550081        | Washer                                | 12       | 1   |
| 27        | GH1440W-08-04     | Tailstock Clamp Plate                 |          | 1   |
| 28        | 08-16             | Block                                 |          | 1   |
| 29        | GH1440W-08-02     | Tailstock Base (for 14")              |          | 1   |
|           | GH1340W-08-02     | Tailstock Base (for 13")              |          | 1   |
| 30        | 08-02             | Stop Pin                              |          | 1   |
| 31        | TS-1540041        | Nut                                   | M6       | 1   |
| 32        | TS-1523051        | Set Screw                             | M6x16    | 1   |
| 33        | GB879-5X12        | Pin                                   | 5x12     | 1   |
| 34        | GH1440W-08-05     | Eccentric Shaft                       |          | 1   |
| 35        | GH1440W-08-08     | Lever Handle                          |          | 1   |
| 36        | 08-04             | Spindle                               |          | 1   |
| 37        | 08-24             | Key                                   | 3x6x55   | 1   |
| 38        | 08-07             | Indicator Label                       |          | 1   |
| 39        | GHW-TA39          | Pan Head Screw                        | M3x6     | 6   |
| 40        | 08-22             | Indicator Label                       |          | 1   |
| 41        | 08-23             | Indicator Label                       |          | 1   |
|           | GH1440W-TA-CA     | Tailstock Complete Assembly (for 14") |          | 1   |
|           | GH1340W-TA-CA     | Tailstock Complete Assembly (for 13") |          | 1   |

# Bed Assembly

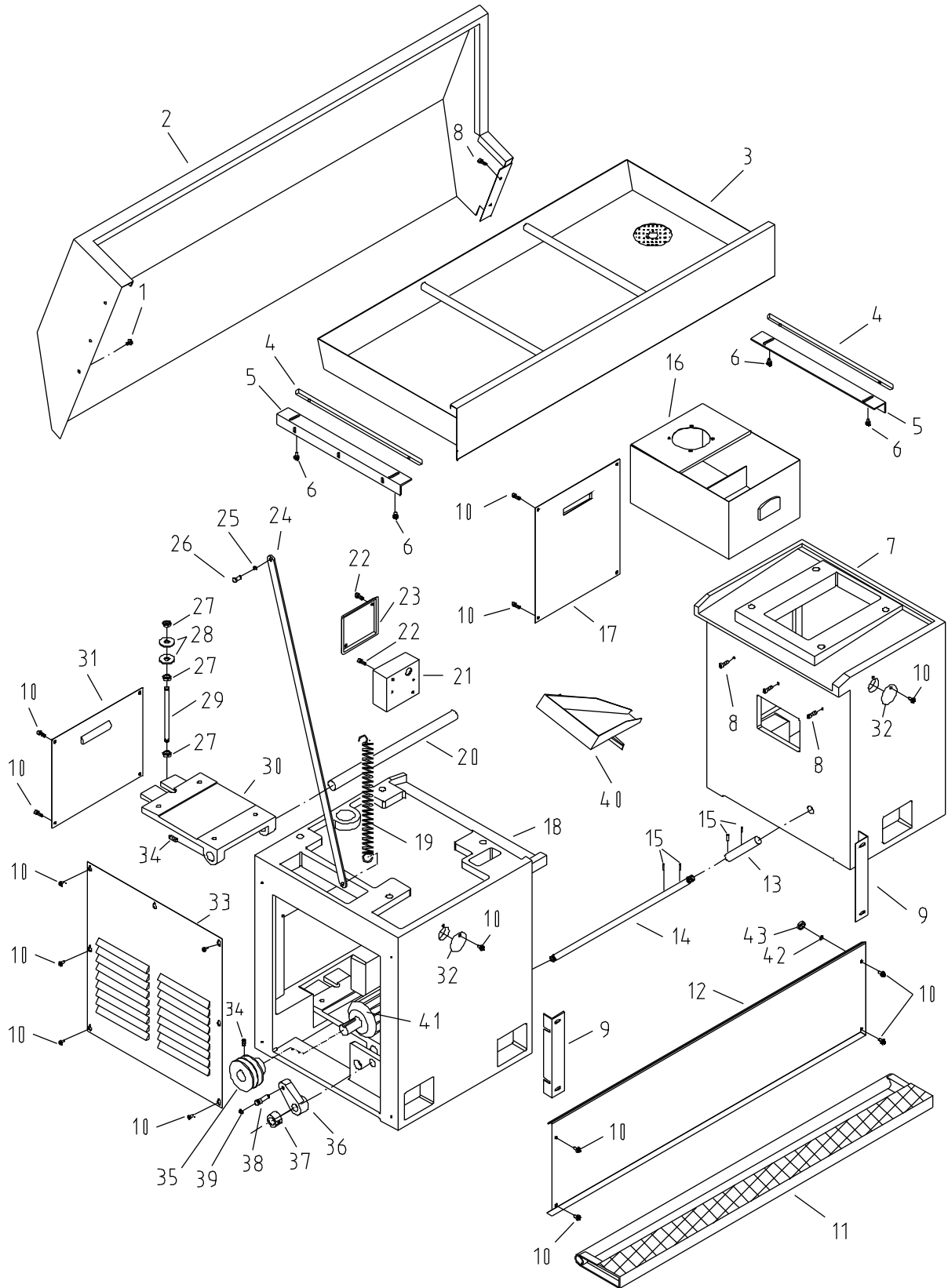


## Bed Assembly

| Index No. | Part No.          | Description                                 | Size     | Qty |
|-----------|-------------------|---|----------|-----|
| 1         | GB818-M8X10       | Pan Head Screw                              | M8x10    | 6   |
| 2         | GH1440W-12-01     | Electrical Box Cover                        |          | 1   |
| 3         | TS-1540061        | Hex Nut                                     | M8       | 4   |
| 4         | C6240-120003      | Stud  |          | 4   |
| 5         | 12-05             | Electrical Plate                            |          | 1   |
| 6         | GH1440W-01-02     | Gap   |          | 1   |
| 7         | TS-1506051        | Hex Socket Cap Screw                        | M12x40   | 4   |
| 8         | TS-1540061        | Hex Nut                                     | M8       | 2   |
| 9         | GB881-8X60        | Pin   | 8x60     | 2   |
| 10        | GH1440W-01-01     | Bed   |          | 1   |
| 11        | GB5782-M16X50     | Hex Cap Bolt                                | M16x50   | 8   |
| 12        | TS-1503061        | Hex Socket Cap Screw                        | M6x25    | 6   |
| 13        | GB879-5X35        | Pin   | 5x35     | 6   |
| 14        | 01-07             | Rack (long)                                 |          | 2   |
| 15        | 01-06             | Rack (short)                                |          | 1   |
| 16        | GB1155-10         | Oiler                                       | 10       | 1   |
| 17        | 01-41             | Plug  |          | 2   |
| 18        | 01-42             | Plug  |          | 1   |
| 19        | TS-1504111        | Hex Socket Cap Screw                        | M8x55    | 2   |
| 20        | GB118-8X60        | Pin   | 8x60     | 2   |
| 21        | 01-13             | End Bracket                                 |          | 1   |
| 22        | GB301-51104       | Bearing                                     | 51104    | 2   |
| 23        | TS-1524021        | Socket Set Screw                            | M8x10    | 5   |
| 24        | 01-10             | Collar                                      |          | 1   |
| 25        | 01-11             | Lead Screw                                  |          | 1   |
| 26        | GB879-5X35        | Pin   | 5x35     | 1   |
| 27        | 01-16             | Collar                                      |          | 1   |
| 28        | 01-15             | Feed Shaft                                  |          | 1   |
| 29        | 01-38             | Spring                                      |          | 3   |
| 30        | GB308-SB6         | Steel Ball                                  | 6        | 3   |
| 31        | 01-05             | Clutch                                      |          | 1   |
| 32        | TS-1540041        | Hex Nut                                     | M6       | 2   |
| 33        | TS-1523061        | Set Screw                                   | M6x20    | 2   |
| 34        | GB879-3X20        | Pin   | 3x20     | 1   |
| 35        | 01-086/6          | Control Fork                                |          | 1   |
| 36        | 01-081/6          | Control Handle                              |          | 1   |
| 37        | GB4141.14-BM10X50 | Knob  |          | 1   |
| 38        | TS-1503041        | Hex Socket Cap Screw                        | M6x16    | 2   |
| 39        | 01-084/6          | Control Bracket                             |          | 1   |
| 40        | 01-082/6          | Pin   |          | 1   |
| 41        | 01-38             | Spring                                      | 1.2x6x20 | 1   |
| 42        | TS-1524011        | Set Screw                                   | M8x8     | 1   |
| 43        | GB2089-3X35X70    | Spring                                      | 3x35x70  | 1   |
| 44        | 01-085/6          | Sleeve                                      |          | 1   |
| 45        | GH1440W-01-21     | Spindle Control Shaft                       |          | 1   |
| 46        | TS-1520021        | Set Screw                                   | M3x6     | 2   |
| 47        | 01-083/6          | Key   | 5x56     | 1   |
| 48        | TS-1523031        | Set Screw                                   | M6x10    | 1   |
| 49        | GH1440W-01-26     | Collar                                      |          | 1   |
| 50        | GH1440W-01-22     | Shift Collar                                |          | 1   |
| 51        | TS-1523051        | Set Screw                                   | M6x16    | 1   |
| 52        | GB119-16X40       | Pin   | 16x40    | 1   |
| 53        | 01-19             | Pin   |          | 1   |
|           | GH1340W-MCSA      | Micro Carriage Stop Assembly (index #54-60) |          | 1   |
| 54        | 13-03             | Index Ring                                  |          | 1   |
| 55        | GB879-3X5         | Pin   | 3x5      | 1   |
| 56        | 13-02             | Shaft                                       |          | 1   |

| <b>Index No.</b> | <b>Part No.</b> | <b>Description</b>   | <b>Size</b> | <b>Qty</b> |
|------------------|-----------------|----------------------|-------------|------------|
| 57               | GH1440W-13-01   | Bracket              |             | 1          |
| 58               | GB79-M6X12      | Set Screw            | M6x12       | 1          |
| 59               | 13-04           | Plate                |             | 1          |
| 60               | TS-1503041      | Hex Socket Cap Screw | M6x16       | 2          |
| 61               | 05-74           | Pin                  | 5x37        | 1          |

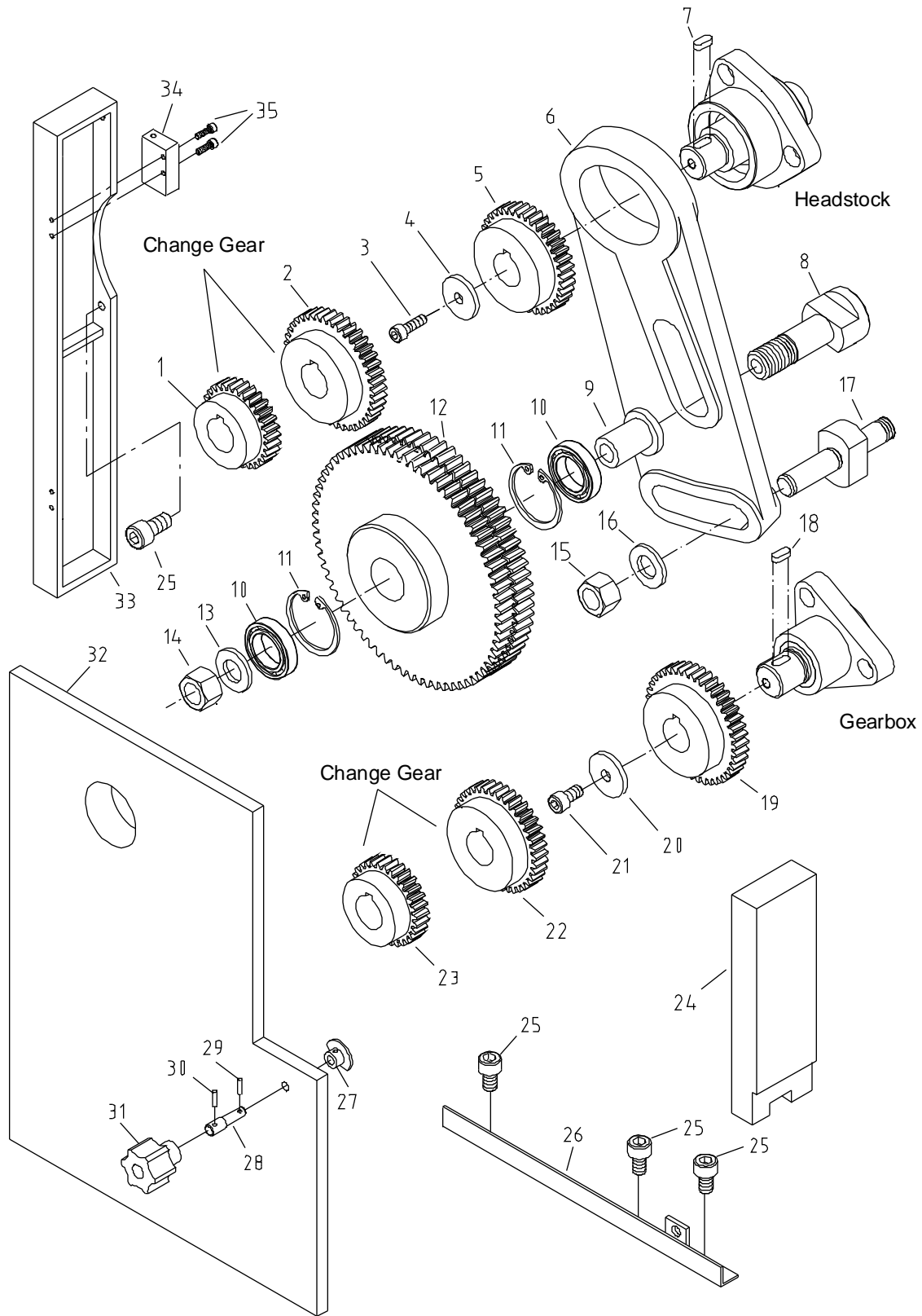
# Stand Assembly



## Stand Assembly

| Index No. | Part No.      | Description                                | Size          | Qty |
|-----------|---------------|--|---------------|-----|
| 1         | GB818-M6X10   | Pan Head Machine Screw                     | M6x10         | 3   |
| 2         | GH1440W-01-23 | Splash Guard                               |               | 1   |
| 3         | GH1440W-01-05 | Chip Tray                                  |               | 1   |
| 4         | GH1440W-01-07 | Guide                                      |               | 2   |
| 5         | GH1440W-01-06 | Bracket                                    |               | 2   |
| 6         | GB818-M6X10   | Pan Head Machine Screw                     | M6x10         | 4   |
| 7         | GH1440W-01-04 | Pedestal (right)                           |               | 1   |
| 8         | TS-1503021    | Hex Socket Cap Screw                       | M6x10         | 8   |
| 9         | GH1440W-01-08 | Bracket                                    |               | 2   |
| 10        | GB818-M6X10   | Pan Head Machine                           | M6x10         | 29  |
| 11        | GH1440W-01-12 | Brake Pedal                                |               | 1   |
| 12        | GH1440W-01-09 | Front Plate                                |               | 1   |
| 13        | 11-01         | Shaft                                      |               | 1   |
| 14        | GH1440W-01-13 | Shaft                                      |               | 1   |
| 15        | GB879-5X15    | Pin  | 5x15          | 4   |
| 16        | 14-01         | Coolant Tank                               |               | 1   |
| 17        | GH1440W-01-10 | Cover                                      |               | 1   |
| 18        | GH1440W-01-03 | Pedestal (left)                            |               | 1   |
| 19        | 11-04         | Spring                                     |               | 1   |
| 20        | GH1440W-01-14 | Shaft                                      |               | 1   |
| 21        | 12-08         | Switch Box                                 |               | 1   |
| 22        | GB818-M6X10   | Pan Head machine Screw                     | M6x10         | 4   |
| 23        | 12-09         | Switch Box Cover                           |               | 1   |
| 24        | GH1440W-01-15 | Connector Bar (for 14")                    |               | 1   |
|           | GH1340W-01-15 | Connector Bar (for 13")                    |               | 1   |
| 25        | GB896-6       | Retaining Clip                             | 6             | 1   |
| 26        | 11-12         | Pin  |               | 1   |
| 27        | GB6172-M12    | Hex Nut                                    | M12           | 3   |
| 28        | GB96-12       | Washer                                     | 12            | 2   |
| 29        | 01-23         | Screw                                      |               | 1   |
| 30        | GHW-SB-30-1   | Motor Mounting Bracket (for 1 phase motor) |               | 1   |
|           | GHW-SB-30-3   | Motor Mounting Bracket (for 3 phase motor) |               | 1   |
| 31        | 01-25         | Cover                                      |               | 1   |
| 32        | 01-27         | Cover                                      |               | 4   |
| 33        | GH1440W-01-11 | Cover                                      |               | 1   |
| 34        | TS-1524011    | Set Screw                                  | M8x8          | 3   |
| 35        | GH1440W-01-20 | Pulley                                     |               | 1   |
| 36        | GH1440W-01-24 | Link                                       |               | 1   |
| 37        | 11-07         | Link Nut                                   |               | 1   |
| 38        | 11-05         | Shaft Pin                                  |               | 1   |
| 39        | GB896-6       | Retaining Clip                             | 6             | 1   |
| 40        | 01-12         | Tray                                       |               | 1   |
| 41        | GHW-M1-1      | Main Motor (1 Phase)                       |               | 1   |
|           | GHW-M1-3      | Main Motor (3 Phase)                       |               | 1   |
|           | GH1440W-3MF   | Motor Fan (not shown)                      |               | 1   |
|           | GHW-CPS       | Start Capacitor (for pre-2001 models)      | 800MFD 125VAC | 1   |
|           | GHW-CPS-01    | Start Capacitor (for post-2001 models)     | 150MFD 250VAC | 1   |
|           | GHW-CP        | Run Capacitor (for pre-2001 models)        | 60µF 450VAC   | 1   |
|           | GHW-CP-01     | Run Capacitor (for post-2001 models)       | 30µF 500VAC   | 1   |
| 42        | TS-1550041    | Washer                                     | 6             | 4   |
| 43        | TS-1540041    | Hex Nut                                    | M6            | 4   |

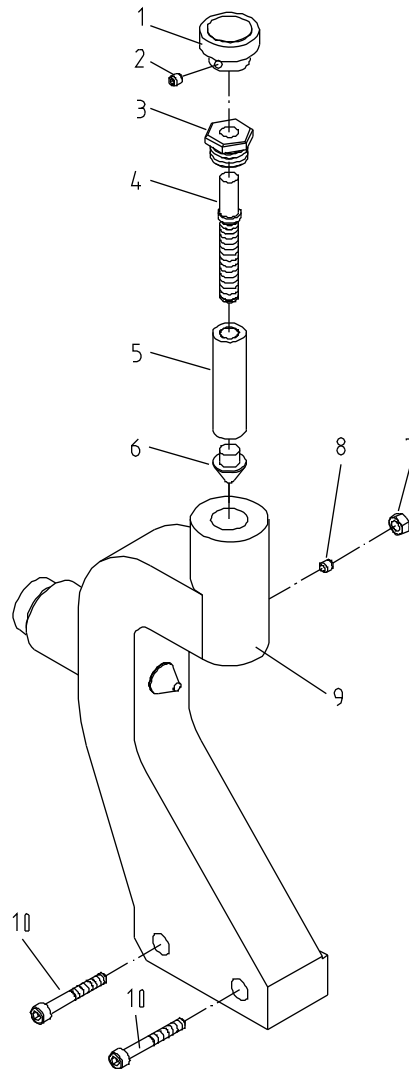
# End Gear Assembly



## End Gear Assembly

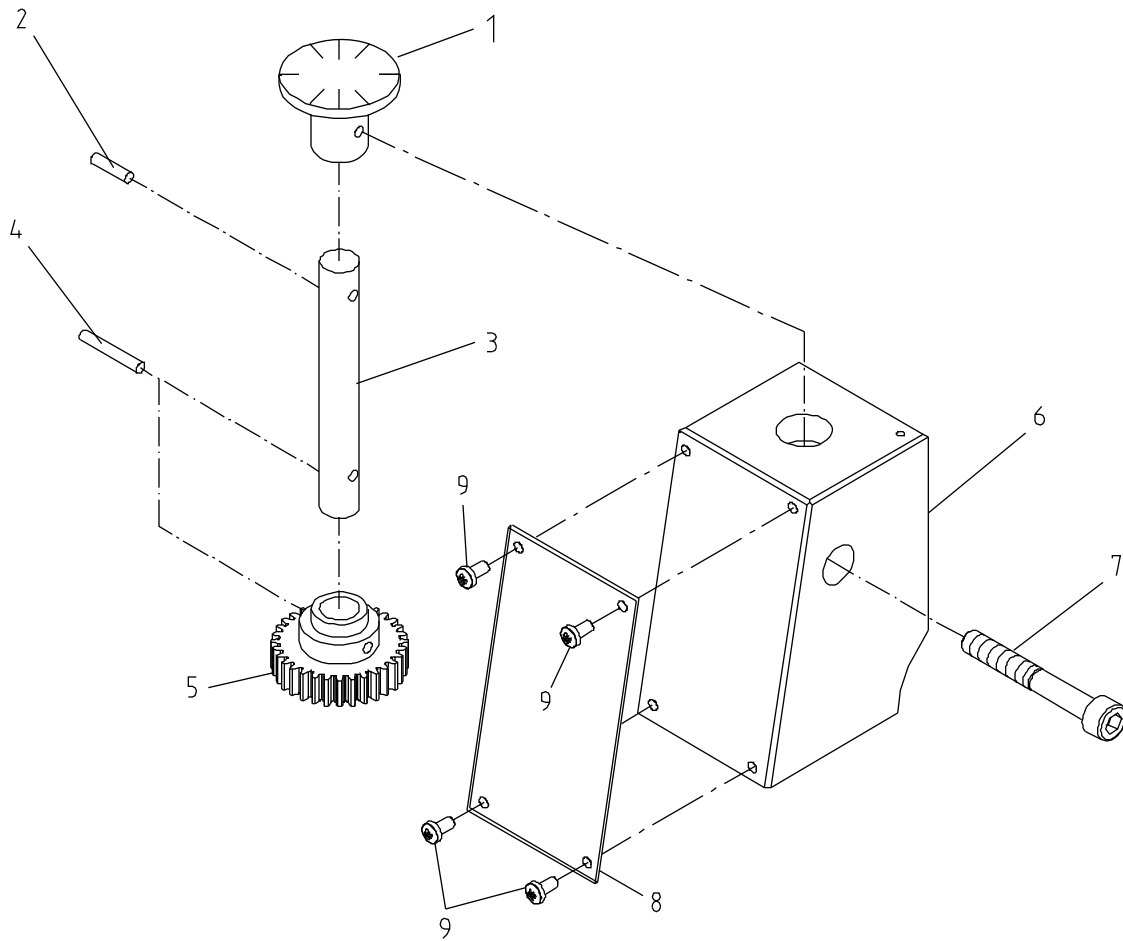
| Index No. | Part No.      | Description                 | Size    | Qty |
|-----------|---------------|-----------------------------|---------|-----|
| 1         | 15-02         | Gear                        | 30T     | 1   |
| 2         | 15-04         | Gear                        | 40T     | 1   |
| 3         | TS-1502041    | Hex Socket Cap Screw        | M5x16   | 1   |
| 4         | 04-51         | Washer                      |         | 1   |
| 5         | 04-50         | Gear                        | 25T     | 1   |
| 6         | GH1440W-15-01 | Quadrant                    |         | 1   |
| 7         | GB1096-5X14   | Key                         | 5x14    | 1   |
| 8         | 05-43         | Thread Shaft                |         | 1   |
| 9         | 05-45         | Collar                      |         | 1   |
| 10        | BB-6103       | Bearing                     | 6103    | 2   |
| 11        | GB893.1-35    | Retaining Ring              | 35      | 2   |
| 12        | 05-65         | Gear                        | 120/127 | 1   |
| 13        | 05-44         | Washer                      |         | 1   |
| 14        | TS-1540071    | Hex Nut                     | M10     | 1   |
| 15        | TS-1540081    | Hex Nut                     | M12     | 1   |
| 16        | GB97.2-85     | Washer                      |         | 1   |
| 17        | GH1440W-15-20 | Stud                        |         | 1   |
| 18        | GB1096-5X14   | Key                         | 5x14    | 1   |
| 19        | 05-41         | Gear                        | 50T     | 1   |
| 20        | 05-42         | Washer                      |         | 1   |
| 21        | TS-1503041    | Hex Socket Cap Screw        | M6x16   | 1   |
| 22        | 15-03         | Gear                        | 32T     | 1   |
| 23        | 15-04         | Gear                        | 40T     | 1   |
| 24        | GH1440W-01-17 | Front Plate (for 14" model) |         | 1   |
|           | GH1340W-01-17 | Front Plate (for 13" model) |         | 1   |
| 25        | TS-1504041    | Hex Socket Cap Screw        | M8x20   | 7   |
| 26        | GH1440W-01-19 | Plate                       |         | 1   |
| 27        | C6240-10002   | Door Latch                  |         | 1   |
| 28        | C6240-10001   | Shaft                       |         | 1   |
| 29        | GB879-4X18    | Pin                         | 4x18    | 1   |
| 30        | GB879-4X24    | Pin                         | 4x24    | 1   |
| 31        | GB4141.29A-85 | Knob                        |         | 1   |
| 32        | GH1440W-01-16 | Change Gear Cover (for 14") |         | 1   |
|           | GH1340W-01-16 | Change Gear Cover (for 13") |         | 1   |
| 33        | GH1440W-01-18 | Rear Plate (for 14")        |         | 1   |
|           | GH1340W-01-18 | Rear Plate (for 13")        |         | 1   |
| 34        | C6240-10004   | Plate                       |         | 2   |
| 35        | TS-1503021    | Hex Socket Cap Screw        | M6x10   | 4   |

## Follow Rest



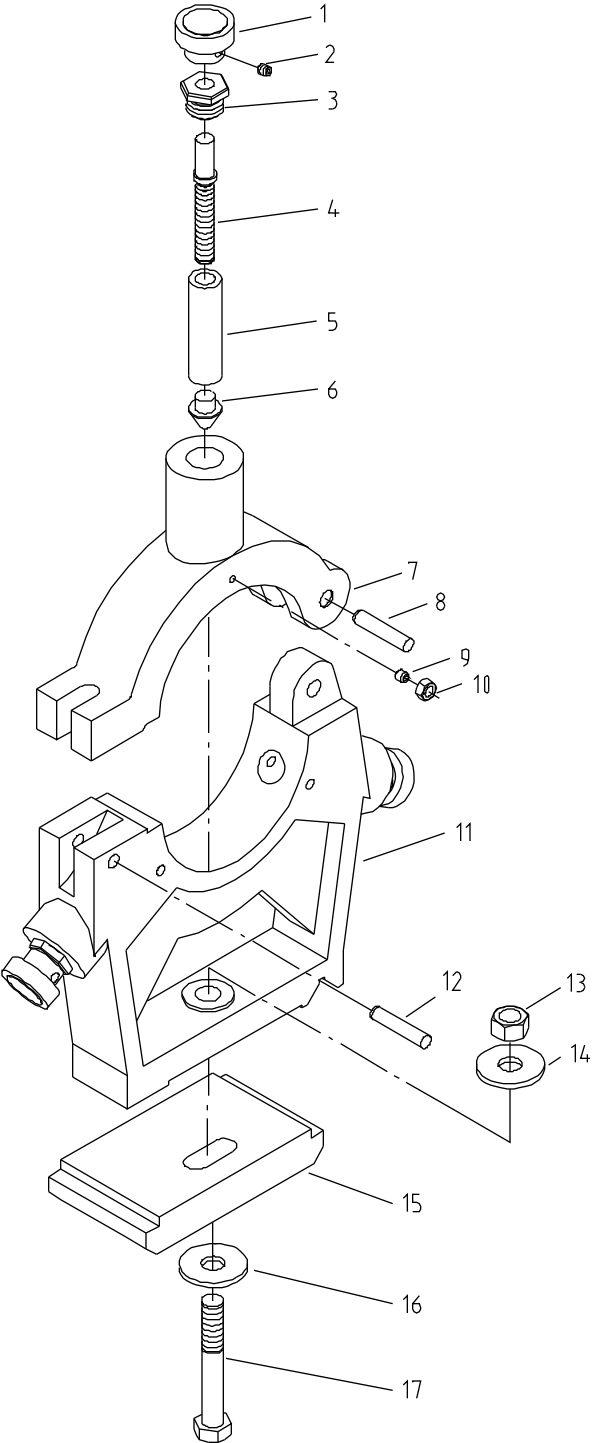
| Index No. | Part No.           | Description                                  | Size       | Qty |
|-----------|--------------------|--|------------|-----|
| 1.....    | GH1440W-09-02..... | Knob.....                                    |            | 2   |
| 2.....    | TS-1523011.....    | Set Screw.....                               | 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-1540041.....    | Hex Nut.....                                 | M6.....    | 2   |
| 8.....    | TS-1523011.....    | Set Screw.....                               | M6x6.....  | 2   |
| 9.....    | GH1440W-09-01..... | Body Casting (for 14" model).....            |            | 1   |
| .....     | GH1340W-09-01..... | Body Casting (for 13" model).....            |            | 1   |
| 10.....   | TS-1504121.....    | Hex Socket Cap Screw.....                    | M8x60..... | 2   |
| .....     | GH1440W-FR-CA..... | Follow Rest Complete Assembly (for 14")..... |            | 1   |
| .....     | GH1340W-FR-CA..... | Follow Rest Complete Assembly (for 13")..... |            | 1   |

# Thread Dial Assembly



| Index No. | Part No.         | Description                  | Size       | Qty |
|-----------|------------------|------------------------------|------------|-----|
| 1.....    | 06-22 .....      | Dial .....                   |            | 1   |
| 2.....    | GB879-3X12 ..... | Pin.....                     | 3x12 ..... | 1   |
| 3.....    | 06-23 .....      | Shaft.....                   |            | 1   |
| 4.....    | GB879-3X20 ..... | Pin.....                     | 3x20 ..... | 1   |
| 5.....    | 06-25 .....      | Gear .....                   | 32T.....   | 1   |
| 6.....    | 06-24 .....      | Body .....                   |            | 1   |
| 7.....    | TS-1503101 ..... | Hex Socket Cap Screw .....   | M6x45..... | 1   |
| 8.....    | GHW-06-02 .....  | Name Plate .....             |            | 1   |
| 9.....    | GHW-TD09 .....   | Pan Head Machine Screw ..... | M3x6 ..... | 4   |
| 10.....   | GHW-TD10 .....   | Rivet.....                   | 2x4 .....  | 1   |
| .....     | GHW-TD-CA .....  | Threading Dial Assembly..... |            | 1   |

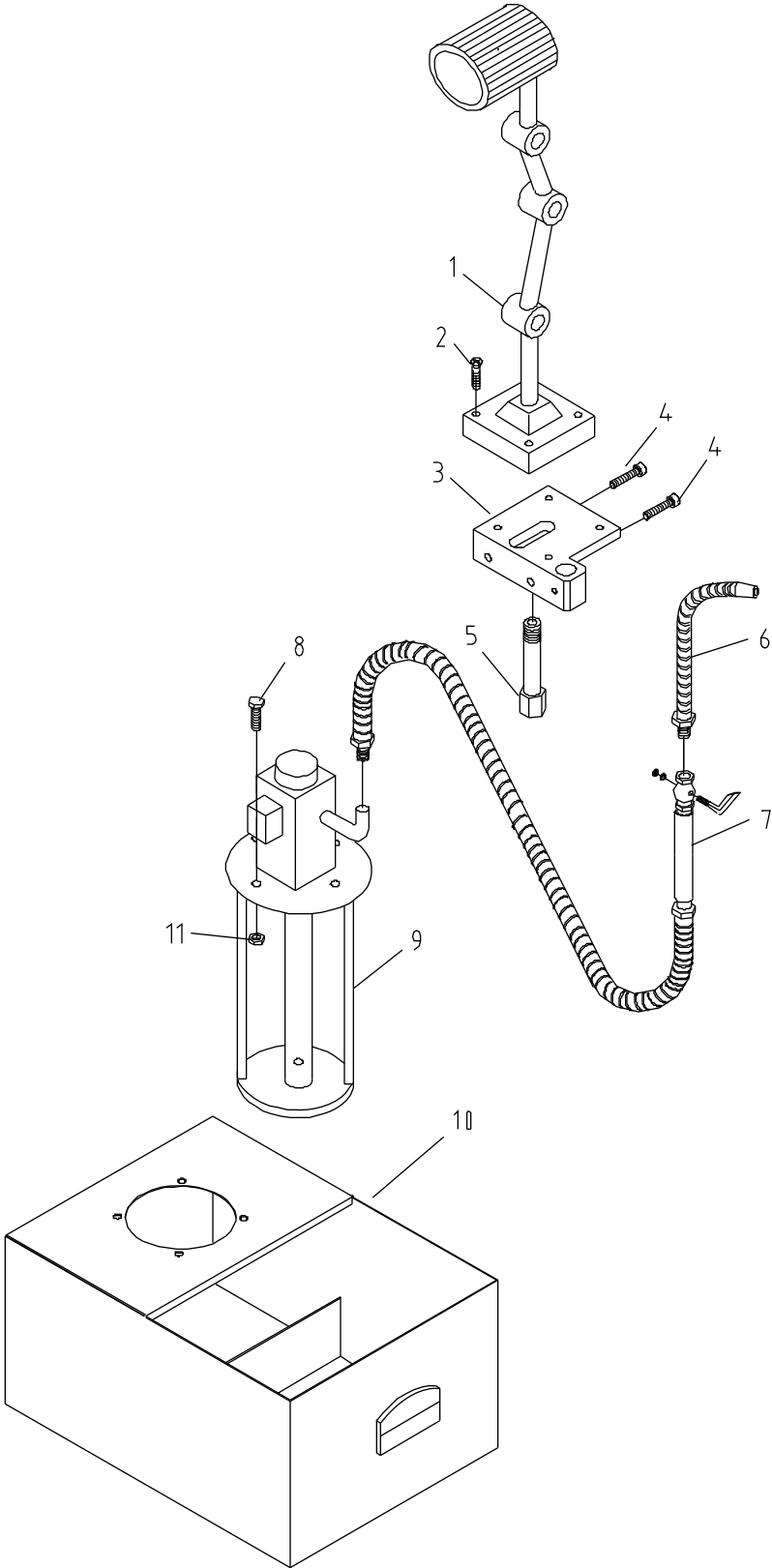
# Steady Rest



## Steady Rest

| Index No. | Part No.      | Description                             | Size   | Qty |
|-----------|---------------|---|--------|-----|
| 1         | GH1440W-09-02 | Knob                                    |        | 3   |
| 2         | TS-1523011    | Set Screw                               | M6x6   | 3   |
| 3         | 10A-05        | Bushing                                 |        | 3   |
| 4         | 10A-06        | Screw                                   |        | 3   |
| 5         | 10A-07        | Sleeve                                  |        | 3   |
| 6         | 10A-08        | Brass Finger                            |        | 3   |
| 7         | 10A-03        | Upper Body Casting                      |        | 1   |
| 8         | GB119-8X40    | Pin                                     | 8x40   | 1   |
| 9         | TS-1523061    | Set Screw                               | M6x20  | 3   |
| 10        | TS-1540041    | Hex Nut                                 | M6     | 3   |
| 11        | GH1440W-10-01 | Lower Body Casting (for 14")            |        | 1   |
|           | GH1340W-10-01 | Lower Body Casting (for 13")            |        | 1   |
| 12        | 10A-02        | Lock Pin                                |        | 1   |
| 13        | TS-1540081    | Hex Nut                                 | M12    | 1   |
| 14        | TS-1550081    | Flat Washer                             |        | 1   |
| 15        | GH1440W-10-02 | Clamp Plate                             |        | 1   |
| 16        | TS-1550081    | Flat Washer                             | 12     | 1   |
| 17        | TS-1492081    | Hex Cap Bolt                            | M12x80 | 1   |
|           | GH1440W-SR-CA | Steady Rest Complete Assembly (for 14") |        | 1   |
|           | GH1340W-SR-CA | Steady Rest Complete Assembly (for 13") |        | 1   |

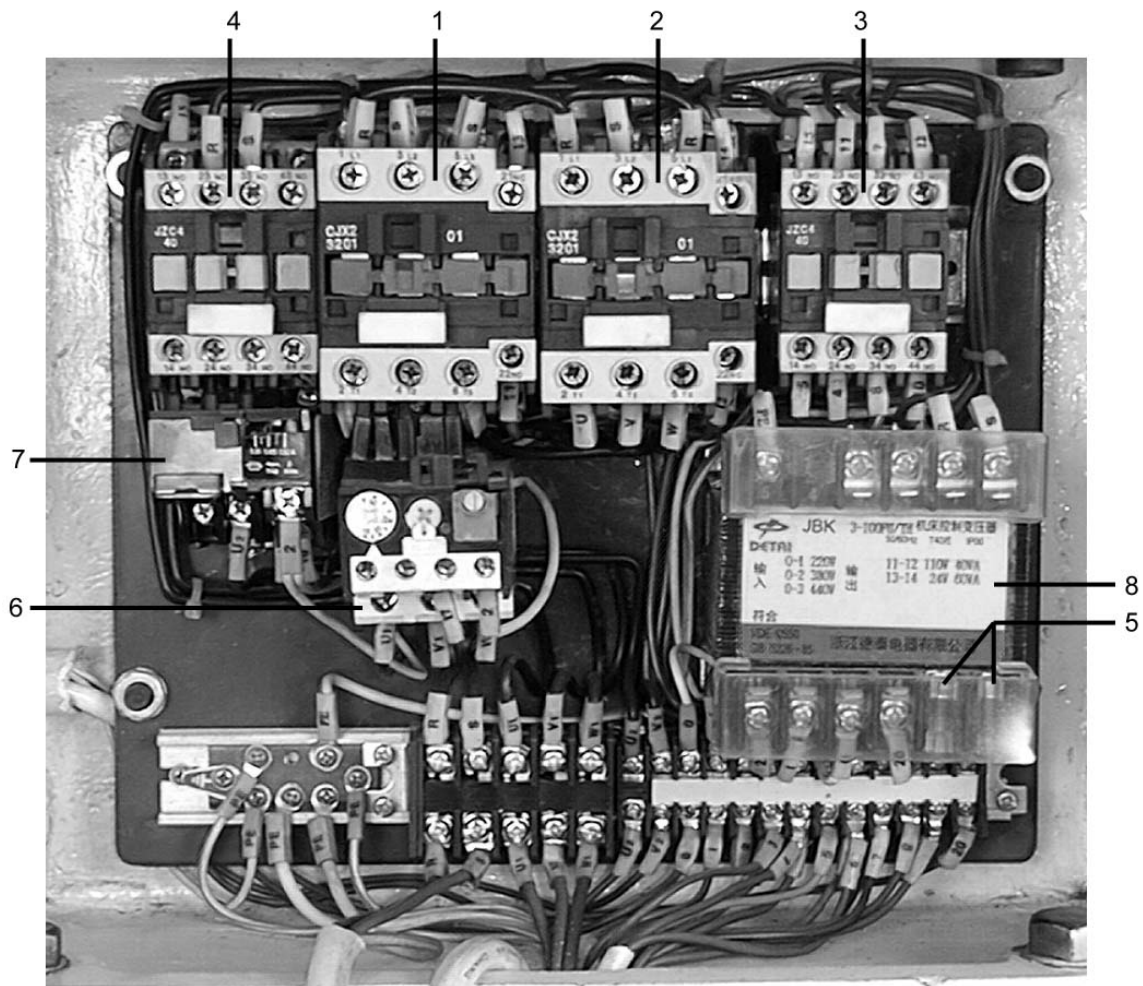
# Coolant and Work Light Assembly



## Coolant and Work Light Assembly

| Index No. | Part No.   | Description                                 | Size  | Qty |
|-----------|------------|---|-------|-----|
| 1         | JC38       | Work Light**                                |       | 1   |
| 2         | GHW-CW02   | Cross Head Screw**                          | M6x14 | 4   |
| 3         | 14-03      | Lamp Bracket**                              |       | 1   |
| 4         | TS-1503051 | Hex Socket Cap Screw**                      | M6x20 | 2   |
| 5         | 14-04      | Connected Tube**                            |       | 1   |
| 6         | GHW-CW06   | Coolant Device                              |       | 1   |
| 7         | GHW-CW07   | Rubber Tube                                 |       | 1   |
| 8         | GHW-CW08   | Hex Cap Bolt                                | M5x25 | 4   |
| 9         | GHW-M2-1   | Coolant Pump (1 Phase)                      | 1/8HP | 1   |
| 9         | GHW-M2-3   | Coolant Pump (3 Phase)                      | 1/8HP | 1   |
| 10        | 14-01      | Water Tank                                  |       | 1   |
| 11        | TS-1540031 | Nut   | M5    | 4   |
| **        | GHW-WL-CA  | Work Light Complete Assembly (includes#1-5) |       | 1   |

## Electrical Components



| Index No. | Part No.     | Description                         | Qty |
|-----------|--------------|-------------------------------------|-----|
| 1         | GH1440W-KM1  | Magnetic Starter (1 Phase, forward) | 1   |
|           | GH1340A-KM1  | Magnetic Starter (3 Phase, forward) | 1   |
| 2         | GH1440W-KM2  | Magnetic Starter (1 Phase, reverse) | 1   |
|           | GH1340A-KM2  | Magnetic Starter (3 Phase, reverse) | 1   |
| 3         | GH1440W-KM3  | Coolant Pump Contactor              | 1   |
| 4         | GH1440W-KA   | Control Contactor                   | 1   |
| 5         | GH1440W-F1   | 2 Amp Fuse (local purchase)         | 1   |
|           | GH1440W-F2   | 4 Amp Fuse (local purchase)         | 1   |
| 6         | GH1440W-FR1  | Motor Overload Relay (1 Phase)      | 1   |
|           | GH1340A-FR1  | Motor Overload Relay (3 Phase)      | 1   |
| 7         | GH1440W-FR2  | Control Relay (1 Phase)             | 1   |
|           | GH1340A-FR2  | Control Relay (3 Phase)             | 1   |
| 8         | GH1440W-TC   | Transformer (1 Phase)               | 1   |
|           | GH1440W-TC-3 | Transformer (3 Phase)               | 1   |
| 9         | GH1440W-SQ2  | Door Switch (not shown)             | 1   |
| 10        | GH1440W-SA1  | Power On /Off Switch (not shown)    | 1   |
| 11        | GH1440W-SQ1  | Brake Switch (not shown)            | 1   |
| 12        | GH1440W-SB1  | Off Switch (not shown)              | 1   |
| 13        | GH1440W-SB2  | Jog Switch (not shown)              | 1   |
| 14        | GH1440W-HL   | Power Indicator Light (not shown)   | 1   |
| 15        | GH1440W-SA2  | Coolant Pump Switch (not shown)     | 1   |
| 16        | GH1440W-SQ3  | Forward Switch (not shown)          | 1   |

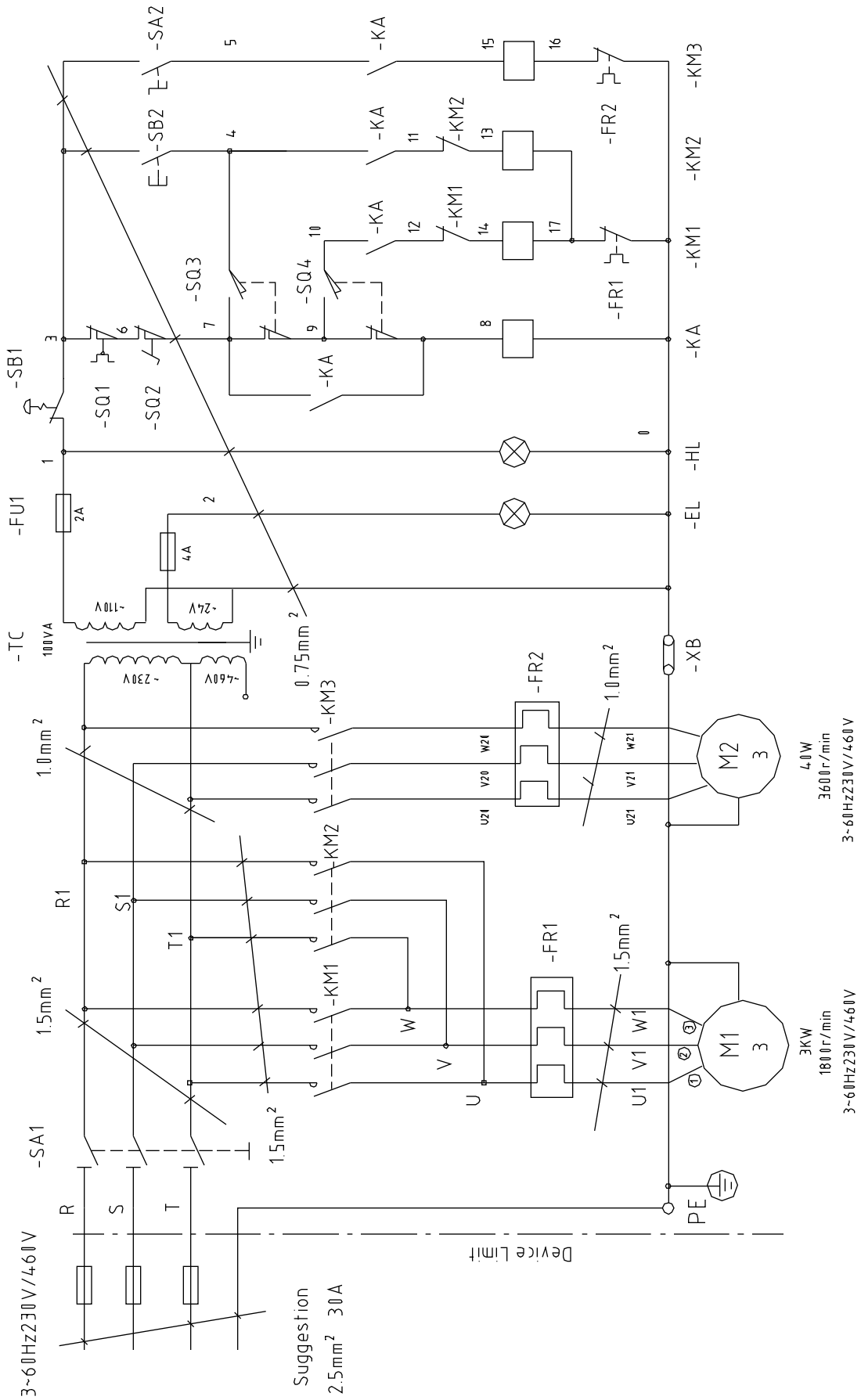
|         |                   |   |   |
|---------|-------------------|---|---|
| 17..... | GH1440W-SQ4 ..... | Reverse Switch (not shown) .....        | 1 |
| .....   | GHW-M1-1 .....    | Main Motor (1 Phase, not shown) .....   | 1 |
| .....   | GHW-M1-3 .....    | Main Motor (3 Phase, not shown) .....   | 1 |
| .....   | GHW-M2-1 .....    | Coolant Pump (1 Phase, not shown) ..... | 1 |
| .....   | GHW-M2-3 .....    | Coolant Pump (3 Phase, not shown) ..... | 1 |

## W Series Lathes Electrical Schematic Symbol Glossary

| Symbol    | Component                      | Location                                  |
|-----------|--------------------------------|---|
| SB1 ..... | Off Switch .....               | Front Panel                               |
| SB2 ..... | Jog Switch .....               | Front Panel                               |
| HL .....  | Power Indicator Light .....    | Front Panel                               |
| SA2 ..... | Coolant Pump Switch .....      | Front Panel                               |
| SQ1 ..... | Brake Switch .....             | Inside Bottom Cover-Headstock End         |
| SQ2 ..... | Door Switch .....              | Inside Change Gear Cover                  |
| SQ3 ..... | Forward Switch .....           | Inside Front Panel (Right Of Gearbox)     |
| SQ4 ..... | Reverse Switch .....           | Inside Front Panel (Right Of Gearbox)     |
| SA1 ..... | Power On/Off Switch .....      | On Electrical Panel Cover-Rear of Machine |
| KM3 ..... | Coolant Pump Contactor .....   | Electrical Control Box- Rear of Machine   |
| KA .....  | Control Contactor .....        | Electrical Control Box- Rear of Machine   |
| FR1 ..... | Motor Overload Relay .....     | Electrical Control Box- Rear of Machine   |
| FR2 ..... | Coolant Pump O/L Relay .....   | Electrical Control Box- Rear of Machine   |
| KM1 ..... | Magnetic Starter-Forward ..... | Electrical Control Box- Rear of Machine   |
| KM2 ..... | Magnetic Starter-Reverse ..... | Electrical Control Box- Rear of Machine   |
| TC .....  | Control Transformer .....      | Electrical Control Box- Rear of Machine   |
| M1 .....  | Main Motor .....               | Inside Stand-Headstock End                |
| M2 .....  | Coolant Pump Motor .....       | Inside Stand-Tailstock End                |



# Wiring Diagram – 3 Phase



## NOTES

## NOTES



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