HAFCO WOODMASTER



Edition : 1
Date: (11/26)

Instruction Manual

VARIABLE SPEED WOOD LATHE
MODEL WL-590VS

Order Code: (W3886)

MACHINE DETAILS

MACHINE.	**Variable Speed Wood Lathe**
MODEL NO.	**WL-590VS**
SERIAL NO.	
DATE OF MANF.	

IMPORTED BY

AUSTRALIA

HARE&FORBES MACHINERYHOUSE

www.machineryhouse.com.au

NEW ZEALAND

MACHINERYHOUSE

www.machineryhouse.co.nz

NOTE:
This manual is only for your reference. At the time of the compiling of this manual every effort to be exact with the instructions, specifications, drawings, and photographs of the machine was taken. Owing to the continuous improvement of the HAFCO Woodmaster machine, changes may be made at any time without obligation or notice. Please ensure the local voltage is the same as listed on the specification plate before operating any electric machine.

SAFETY SYMBOLS:
The purpose of safety symbols is to attract your attention to possible hazardous conditions

⚠WARNING **Indicates a potentially hazardous situation causing injury or death**

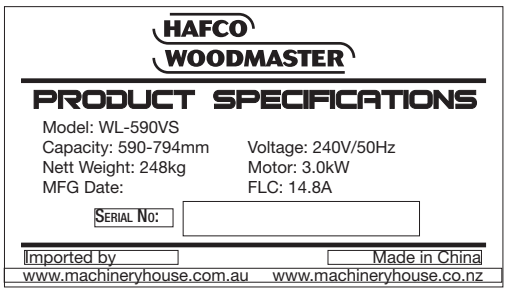
⚠CAUTION **Indicates an alert against unsafe practices.**

Note: Used to alert the user to useful information



NOTE:
In order to see the type and model of the machine, please see the specification plate. Usually found on the back of the machine. See example (Fig.1)

FIG.1



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1.1 SPECIFICATIONS

Order Code	W3886
MODEL	**WL-590VS**
Capacity Swing Over Bed (mm)	590-794
Swing Over Tool Rest Base (mm)	442 & 646
Distance Between Centers (mm)	508-1016
Spindle Speeds (Type / Range rpm)	Variable /20 -3850
Speed Ranges (rpm)	20 - 650, 50 - 1750, 100 - 3850
Spindle Nose Thread	M30 x 3.5
Headstock Taper (MT)	2
Tailstock Taper (MT)	2
Hole Through Drive Spindle (mm)	10
Hole Through Tail-stock	10
Tail-stock RAM Travel (mm)	120
Number of Indexing Positions	36 (10°)
Tool Rest Post Diameter (mm)	25.4
Spindle to Floor Distance (mm)	1118
Overall Length Size (mm)	1565-2073
Overall Width & Depth Size (mm)	765 x 1286
Base / Stand Size (mm)	1280 x 685
Motor (kW)	1.9
Volts / Amps (V / A)	240 / 15
Weight (kg)	249

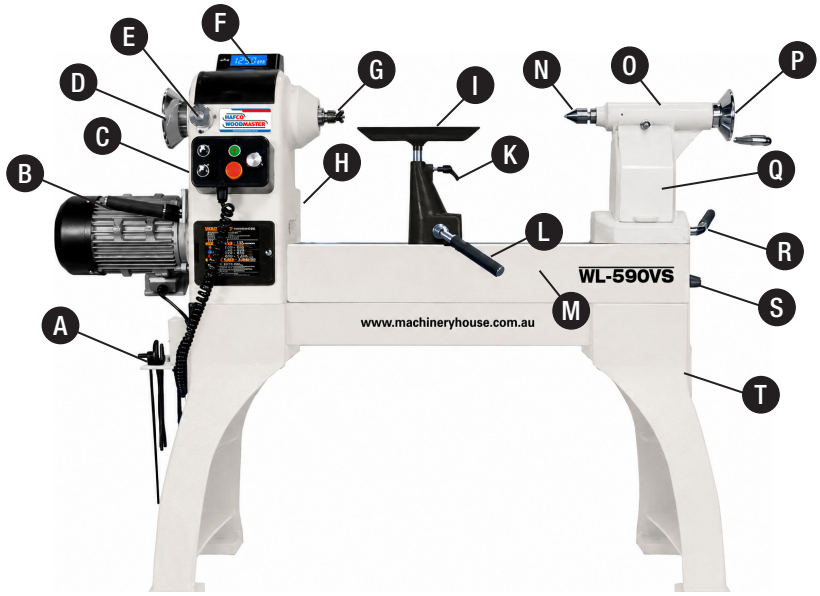
1.2 PACKING LIST

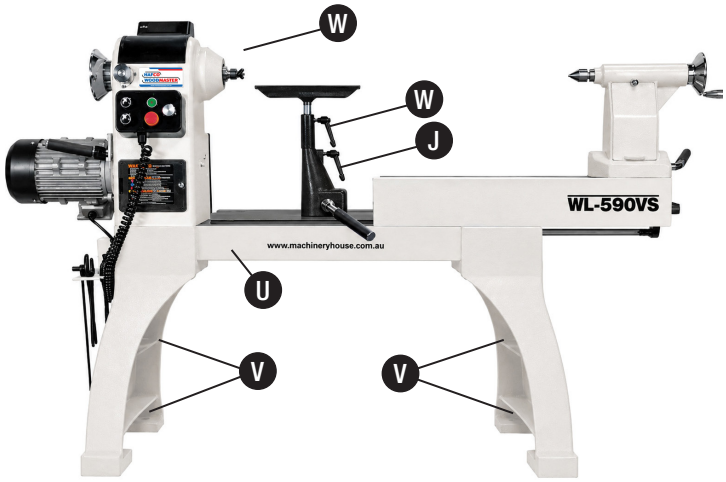
12” Tool Rest
Tool Rest Height Extension
60° Live Center
Spur Center
Small Knockout Bar for Spur cente
Faceplate 3-3/8”
Tool Holder
Tailstock Hand Wheel
Handle
Long Knockout Bar
Wrenches (2) 13/16 & 17/19mm
Wrenches (2) 38/46mm
Rubber Foot Pads (4)
T. Hex Wrenches (7) -2.5,3,4,5, 6, 8 & 10mm
WL-590VS Wood Lathe.(Not Shown)



1.3 IDENTIFICATION

Become familiar with the names and locations of the controls and features shown below to better understand the instructions when mentioned later in this manual.





A. Tool Holder
B. Motor & Locking Handle
C. Electronic Controls
D. Outboard Hand Wheel
E. Spindle Lock
F. Digital Speed Readout
G. Spindle with Spur Center
H. Inverter Control Box (rear)
I. Tool Rest 12”
J. Tool Rest Locking Handle
K. Tool Rest Base Assembly
L. Tool Rest Base Locking Handle
M. Upper Sliding Bed
N. 60° Live Center
O. Tailstock Assembly
P. Tailstock Hand Wheel
Q. Tailstock Storage
R. Tailstock Locking Handle
S. Sliding Bed Handle
T. Legs (2)
U. Lower Lathe Bed
V. Shelf Brackets (4)
W. Tool Rest Height Extension

2. SAFETY INFORMATION

2.1 GENERAL WOODWORKING MACHINE SAFETY

DO NOT use this machine unless you have read this manual or have been instructed in the use of this machine in its safe use and operation.

WARNING

This manual provides safety instructions on the proper setup, operation, maintenance, and service of this machine. Save this manual, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution or death.

The owner of this machine is solely responsible for its safe use. This responsibility includes, but is not limited to proper installation in a safe environment, personnel training and authorization to use, proper inspection and maintenance, manual availability and comprehension of the application of the safety devices, integrity, and the use of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



Exposure to the dust created by power sanding, sawing, grinding, drilling and other construction activities may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer and death. Avoid breathing the dust, and avoid prolonged contact with dust. Some examples of these chemicals are:

- ❑ Lead from lead-based paints.
- ❑ Crystalline silica from bricks, cement and other masonry products.
- ❑ Arsenic and chromium from chemically-treated timber.

Always operate tool in well ventilated area and provide for proper dust removal. Use a dust collection system along with an air filtration system whenever possible. Always use properly fitting approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.



Safety glasses must be worn at all times in work areas. Earmuffs should be worn if the work area is noisy.



Sturdy footwear must be worn at all times in work areas.



Gloves should NOT be worn when operating machinery. Should only be worn when handling the material.



Long and loose hair must be contained with a net or under a hat.

2.1 GENERAL WOODWORKING MACHINE SAFETY Cont.

DISCONNECT POWER FIRST. If using power, always disconnect the machine from power supply before making adjustments, or servicing the machine. This prevents any risk of injury from unintended startup or contact with live wires.

HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

REMOVE ADJUSTING TOOLS. Tools left on machinery can become dangerous projectiles upon startup. Never leave hex keys, wrenches, or any other tools on machine. Always verify removal before starting!

USE CORRECT TOOL FOR THE JOB. Only use this tool for its intended purpose. Do not force the machine or its attachments to do a job for which they were not designed. Never make unapproved modifications. Modifying the machine or using it differently than intended may result in malfunction or mechanical failure that can lead to personal injury or death!

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make operating control difficult. This could increase the risk of accidental injury.

GUARDS & COVERS. Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged and working correctly.

MENTAL ALERTNESS REQUIRED. Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

TRAINED OPERATORS ONLY. Only allow trained or supervised people to use this machine. When the machine is not being used, disconnect the power to the machine to prevent unauthorized use—especially around children. Make the workshop safe.

FORCING MACHINERY. Do not force the machine. It will do the job safer and better at the rate for which it was designed.

NEVER STAND ON MACHINE. Serious injury may occur if the machine is tipped or if the cutting tool is unintentionally contacted.

STABLE MACHINE. Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify the machine is stable and if using a mobile base it is locked in position.

UNATTENDED OPERATION. To reduce the risk of accidental injury, turn the machine OFF and ensure all moving parts have completely stopped before walking away. Never leave the machine running while unattended.

MAINTAIN WITH CARE. Follow all the maintenance instructions and lubrication schedules to keep the machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

CHECK DAMAGED PARTS. Regularly inspect the machine for any condition that may affect the safe operation. Immediately repair or replace damaged or parts that are incorrectly fitted before operating.

CHILDREN & BYSTANDERS. Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.



WARNING!

People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.

2.2 SPECIFIC SAFETY FOR WOOD LATHES

DO NOT use this machine unless you have been instructed in its safe use and operation and have read and understood this manual



Safety glasses must be worn at all times in work areas



Long and loose hair must be contained.



Hearing protection must be worn



Sturdy footwear must be worn at all times in work areas



Close fitting/protective clothing must be worn



Respirators must be worn to protect from dust particles

PRE-OPERATIONAL SAFETY CHECKS

- Locate and ensure you are familiar with all machine operations and controls.
- Ensure all guards are fitted, secure and functional. Do not operate if guards are missing or faulty.
- Check workspaces and walkways to ensure no slip/trip hazards are present.
- Ensure the workpiece has been suitably prepared for the lathe operation.
- Work piece must be securely fastened to face plate, chuck or between centres.
- Adjust speed to suit the diameter of the work and turning operation.
- Rotate the workpiece by hand to check clearance between tool rest and bed.
- Ensure the cutting tools are sharp and in good condition.
- Start the dust extraction unit before using the machine.

OPERATIONAL SAFETY CHECKS

- Only one person may operate this machine at any one time.
- Before making adjustments, switch off and bring the machine to a complete standstill.
- Keep the tool rest adjusted close to the work and at the correct height.
- Adjust speed to suit the diameter of the work and turning operation.
- Stop the lathe and remove all tool rests before sanding.

ENDING OPERATIONS AND CLEANING UP

- Switch off the machine when work completed.
- Return all chisels and other tools to racks.
- Remove all tool-rests and place in rack.
- Leave the machine in a safe, clean and tidy state.

DON'T

- Do not use faulty equipment. Immediately report suspect equipment.
- Never leave the machine running unattended.

POTENTIAL HAZARDS AND INJURIES

- Eye injuries from flying debris or defective timber.
- Hair/clothing getting caught in moving machine parts.
- Airborne dust.

3. POWER SUPPLY

3.1 ELECTRICAL REQUIREMENTS

Place the machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure there is access to a means of disconnecting the power source. The electrical circuit must meet the requirements for the power used by the machine.

NOTE : The use of an extension cord is not recommended as it may decrease the life of electrical components on your machine.

ELECTRICAL REQUIREMENTS

Nominal Voltage.....240V
Cycle.....50 Hz
Phase.....Single Phase
Power Supply Circuit.....15 Amps
Full Load Current.....14.8 Amps

(Full load current rating is also on the specification plate on the motor.)

3.2 FULL-LOAD CURRENT RATING

The full-load current rating is the amperage a machine draws when running at 100% of the output power. Where machines have more than one motor, the full load current is the amperage drawn by the largest motor or a total of all the motors and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating for these machine is available on the motor plate.

It should be noted that the full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating and if the machine is overloaded for a long period of time, damage, overheating, or fire may be caused to the motor and circuitry.

This is especially true if connected to an undersized circuit or a long extension lead. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the requirements.





4 SET-UP

4.1 UNPACKING

This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. If items are damaged, please contact your distributor.

NOTE: Save all the packaging materials until you are completely satisfied with the machine and have resolved any issues with the distributor, or the shipping agent.

When unpacking, check the packing list to make sure that all parts shown are included. If any parts are missing or broken, please contact your distributor.

4.2 CLEAN - UP

The unpainted surfaces of the machine have been coated with a waxy oil to protect them from corrosion during shipment. Remove the protective coating with a solvent cleaner or a citrus based degreaser.

Optimum performance from your machine will be achieved when you clean all moving parts or sliding contact surfaces that are coated with rust preventive products.

It is advised to avoid chlorine based solvents, such as acetone or brake parts cleaner, as they will damage painted surfaces and strip metal should they come in contact. Always follow the manufacturer's instructions when using any type of cleaning product.

4.3 SITE PREPARATION

When selecting the site for the machine, consider the largest size of workpiece that will be processed through the machine and provide enough space around the machine for operating the machine safely. Consideration should be given to the installation of auxiliary equipment. Leave enough space around the machine to open or remove doors/covers as required for the maintenance and service as described in this manual.

It is recommended that the machine is anchored to the floor to prevent tipping or shifting. It also reduces vibration that may occur during operation.

4.4 LIFTING INSTRUCTIONS

On the day that the machine arrives, make sure that a forklift or lifting device, with sufficient capacity is available to unload the machine from the vehicle. Ensure access to the chosen site is clear and that doors and ceilings are sufficiently high and wide enough to receive the machine.

⚠ WARNING ***This machine is extremely heavy. Serious personal injury may occur if safe moving methods are not followed. To be safe, you will need assistance and power equipment when moving the shipping crate and removing the machine from the crate.***





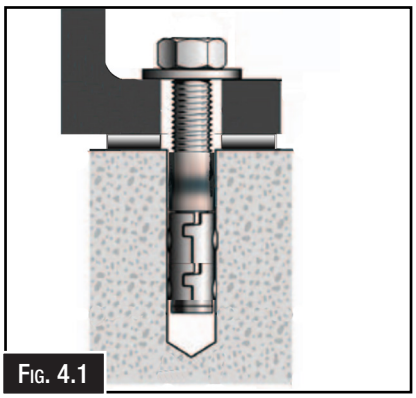
WARNING!

Make sure everyone is away from the load before hoisting. The load must be under control when lowering loads suspended. Rigging and crane operation must be carried out by persons with approved qualifications.

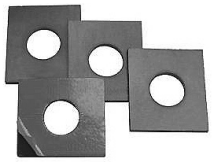
4.5 ANCHORING TO THE FLOOR

The machine is best mounted on a concrete slab.

Masonry anchors with bolts are the best way to anchor machinery, because the anchors sit flush with the floor surface, making it easy to unbolt and move the machine later if needed (Fig. 4.1).


FIG. 4.1

Position the machine: Place the machine in its final location and lower the centre of gravity if applicable. Mark the holes**.** Use the machine's mounting feet as a template then drill the holes. Install the anti-vibration rubber foot pads to the bottom of the lathe legs then bolt to the floor.



4.6 ASSEMBLY

The machine must be fully assembled before it can be operated. First clean any parts that are coated in rust preventative to ensure the assembly process can proceed smoothly.

INSTALL THE LATHE BED ONTO THE LEGS

1. Position the two Legs approximately 1118mm apart measuring from the outside edges. Be sure that the shelf brackets on the legs are facing inward, towards each other. (Fig. 4.2)

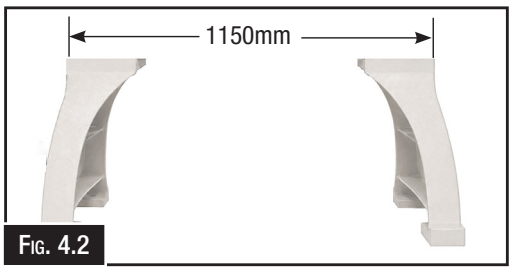


FIG. 4.2

2. Secure the Tailstock, and Tool Rest Base assemblies to the Lathe Bed by tightening their locking Lever Handles.

NOTE: To lighten the weight of the bed assembly, the tailstock and tool rest base assembly can be removed from the lathe.

- At the right end of the Bed, with a 5mm hex wrench loosen the Bolt so that the offset stop washer swivels down below the bed surface. (Fig. 4.3)

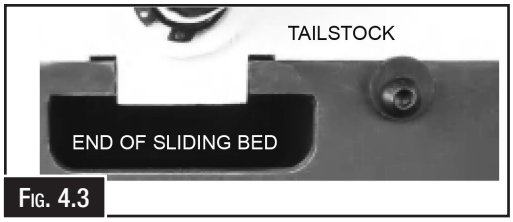


FIG. 4.3

- Loosen the Tailstock Handle and slide the Tailstock off the the end of the lathe bed
- Loosen the Tool Rest Base Handle, and slide the Tool Rest Base off the end of the lathe bed.



FIG. 4.4

3. With assistance of a hoist or fork lift, lift up the lathe bed assembly and carefully position it onto the stand legs to align the 6 bolt holes.

CAUTION Lift the lathe body by the underside of the bed only, not by the motor, headstock, tailstock, or tool rest assemblies. Prevent the lathe from tipping, as the head-stock end is extremely heavy.

4. Secure the lathe bed to the stand legs with the six Washers, Spring Lock Washers and Hex Head Bolts. Use the 8mm hex wrench provided. Fig. 4.4 shows 3 bolts securing the legs to the tailstock end of the lathe bed.

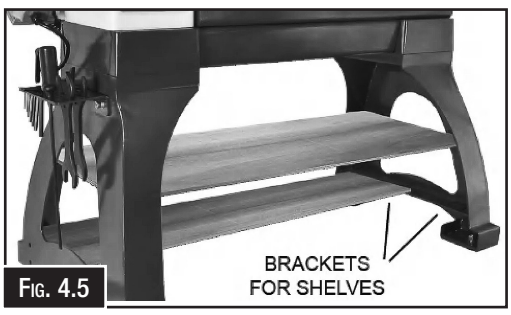


FIG. 4.5

NOTE: Two shelf brackets for wooden shelfs are found in the legs (Shelf not supplied) (Fig. 4.5)

INSTALL THE TOOL HOLDER

Install the Tool Holder onto the outside surface of either the left or right leg with the two washers and hex head mounting screws provided. This holder includes multiple holes for convenient storage of wrenches, centers, tool rests and other lathe accessories. (Fig. 4.6)

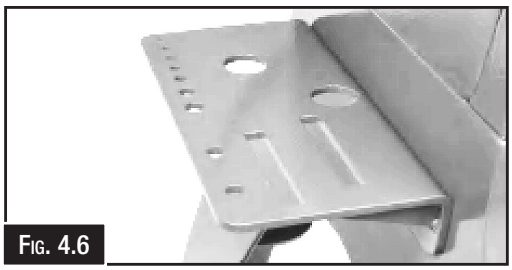


FIG. 4.6

INSTALL THE TAILSTOCK HAND WHEEL

Install the Tailstock Hand Wheel onto the rear spindle of the Shaft Assembly (Quill) . Secure with the 2 set screws onto the 2 flat spindle areas with the 3mm Hex Wrench provided. (Fig. 4.7)

TAILSTOCK STORAGE

For additional storage of spur and live centers, the tailstock features a small tool holder behind the front hinged door. It will also hold the short knockout bar used to remove the spur center's removable point. (Fig. 4.7)

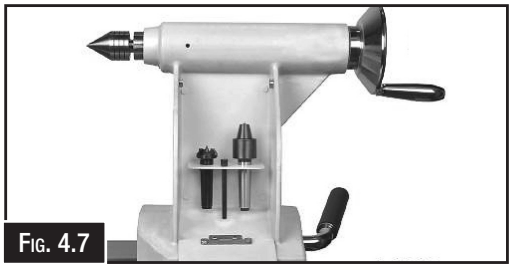


FIG. 4.7

INSTALL THE SLIDING BED HANDLE

Install the Handle onto the right end of the sliding bed with the two Hex Screws provided. (Fig. 4.8)

NOTE: INSTALLING THIS HANDLE IS OPTIONAL. This handle is NOT to be used for moving or lifting the lathe. If ever the sliding bed fails to work due to a motor or mechanical issue, the motorized screw mechanism can be disengaged by removing the two end Cotter Pins

Then the sliding bed will be free to be moved by pulling or pushing with the end handle.



FIG. 4.8

WARNING!

The machine is the sole responsibility of the owner for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training, proper inspection and maintenance, manual availability and comprehension. The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

WARNING!

DO NOT operate any machine before it is fully assembled and all the safety guards have been fitted and secured. Failure to do so may cause death or severe injury.

5. OPERATION

This machine may perform many types of operations that are beyond the scope of this manual. Many of these operations may be dangerous or deadly if performed incorrectly.

The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. If at any time you are experiencing difficulties performing any operation, stop using the machine! **Above all, your safety should come first!**

5.1 OPERATION OVERVIEW

This overview purpose is to provide a novice machine operator with a basic understanding of how the machine is used during operation, and so that if the machine controls or components are mentioned later in this manual, it will be easy to understand. The overview is not intended to be an instructional guide and is only generic in nature. To learn more about the specific operation, read this entire manual and seek additional training from an experienced machine operator. Another source of information may be found in video's on websites or by reading trade magazines.

1. **Mounting and Centering:** Secure the wood blank between a spur drive on the headstock and a live or cup center on the tailstock (or via a faceplate/chuck for bowls).
2. **Speed Selection:** Start the lathe at its lowest speed setting to safely check for balance and clearance before increasing the RPMs.
3. **Positioning the Tool Rest:** Adjust the tool rest so it sits close to the workpiece (about 1/4 inch away) and roughly on or slightly below the centerline of the wood.
4. **Roughing and Shaping:** Turn on the machine and gently brace a gouge or turning tool against the tool rest, feeding the cutting edge into the wood as it spins counter-clockwise.
5. **Finishing and Sanding:** Progress from roughing gouges to detail tools, and finish the symmetrical surface with sandpaper while the lathe runs at a moderate speed.

5.2 TOOL REST CONTROLS

A Tool Rest Body Lock Handle: This cam action lever handle locks the tool rest body down in position on the lathe bed. Unlock handle to position the tool rest in any location along the lathe bed. Tighten the handle when the tool rest is properly located for safe turning of the work-piece. See page 17 for instructions on how to adjust the locking tension.

B Tool Rest Lock Handle: Locks the tool rest in position for supporting your tools during turning. Unlock the handle to adjust the tool rest at a specific angle, or height. Tighten handle when properly positioned.

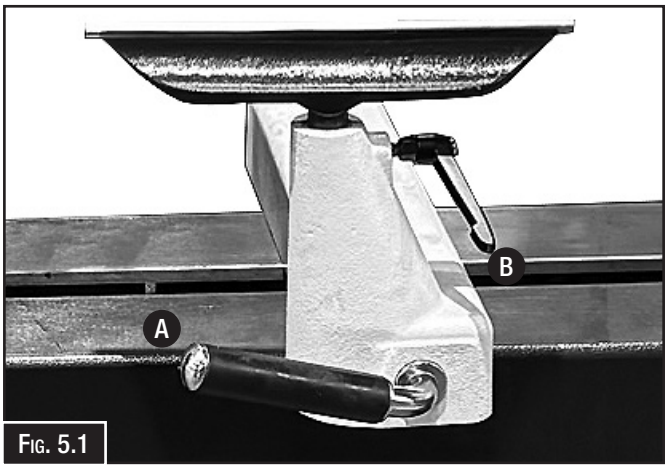


FIG. 5.1

NOTE: The handle is spring loaded on its internal bolt. To change the handle position, pull the handle out, rotate it to the position you desire, then release the handle and it will align itself back onto the bolt.

WARNING!

Serious injury could occur if you connect machine to power before completing the setup process. DO NOT connect to power until all assembly and adjusting processes are complete.

5.3 TAILSTOCK CONTROLS (Fig. 5.2)

A. Tailstock Lock Handle: Locks the tailstock in position along the length of the lathe bed. Unlock handle to position the tool rest to move the tailstock. Tighten handle when properly positioned.

B. Tailstock Quill Hand Wheel: The hand wheel advances or retracts the quill. The quill's locking handle (C) must be loose to move the quill.

C. Tailstock Quill Lock Handle: Secures the tailstock quill in position. Unlock the handle to move the quill, with live center, forward or backwards. Tighten the locking when the quill is finally positioned.

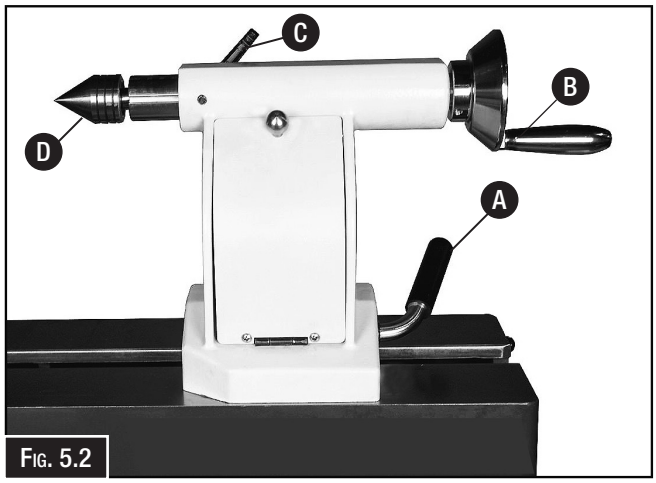


Fig. 5.2

D. Tailstock Live Center: Used for turning between centers. The Live Center and the Quill have Morse #2.

5.4 HEADSTOCK SPUR CENTER

The Spur Center is used for turning between centers. It fits into the spindle. Both spindle and the spur have a MT2 matching tapers. The spur center can be removed from the spindle with the long Knockout Bar.


Fig. 5.3

NOTE: Be careful and hold the spur center during this process so it does not fly out onto the floor. Fig.5.3

5.5 HEADSTOCK FACEPLATE

Faceplates are used for turning bowls and plates. There are a number of screw holes on the plate for mounting the workpiece for turning.

To INSTALL the faceplate, thread the faceplate onto the spindle in a clockwise direction, and tighten it in place with the set screws that are located on the back hub of the faceplate.

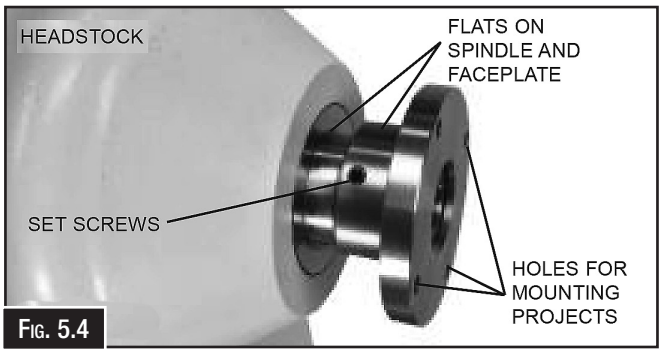
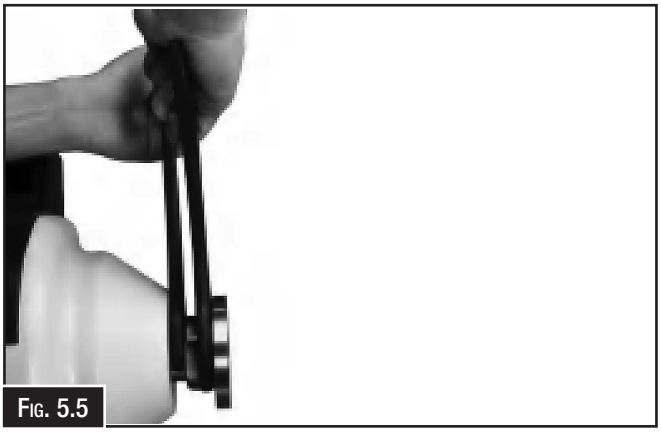


Fig. 5.4

NOTE: there may be more than one set of set screws on the faceplate hub. Fig. 5.4.

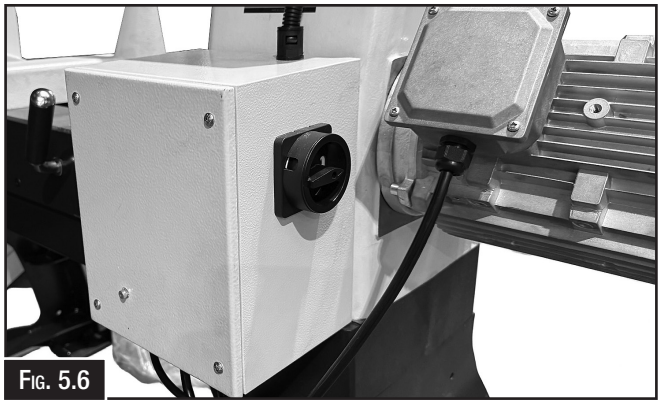
To REMOVE the faceplate, first loosen the set screws. Next, use the 2 extra large, double ended wrenches (38mm/46mm) for holding the spindle and also to hold the back hub of the faceplate for removal of the faceplate. Use the same process for removing a chuck. (Fig. 5.5)


Fig. 5.5

NOTE: Never use the index pin to hold the spindle to remove accessories from the lathe, or damage to the pin or the spindle pulley will result.

5.6 MAIN ON/OFF SWITCH (Fig. 5.6)

The Lathe has a Main ON/OFF switch located on the inverter box which is on the back of the head-stock of the lathe. This switch MUST be operated before and after the lathe is used. When switched to OFF it also totally shuts down the lathe and should be done when not in use for any extended time. This switch protects the lathe's electrics, particularly the LCD display from burning out, and prevents unwanted access by children or bystanders.


Fig. 5.6

5.7 ELECTRONIC CONTROLS (Fig. 5.7)

The lathe features a corded Control Box (Fig. 5.7) with magnets on its back that allow it to be positioned anywhere on the face of the headstock or anywhere along the lathe's bed! Wherever it is most comfortable for the turner to quickly access the controls to regulate turning speeds, stopping the lathe, or even to move the sliding bed.

A. Forward / Off / Reverse Switch:
This selector switch will change the direction that the spindle turns, as well as a non-rotating 'off' position.

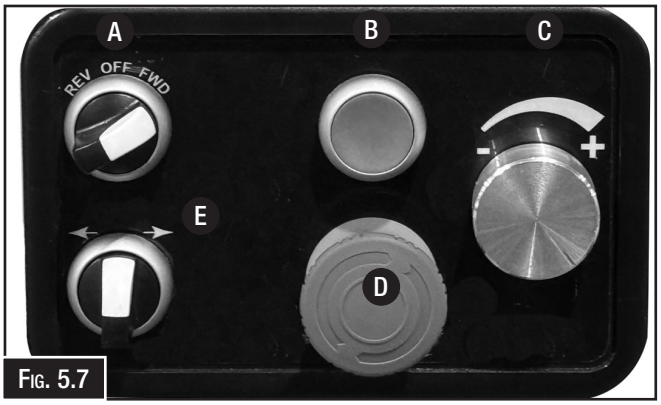


Fig. 5.7

NOTE: Only change rotation direction when the spindle has completely stopped. Should the switch be changed while the lathe is operating, the machine will automatically turn off in 'protection' mode, then restart in the new rotation direction.

B. 'ON' BUTTON: Push the green Button so that it turns the lathe ON.

C. Rpm Knob: This knob controls the desired spindle revolutions per minute (RPM). See the Speed Charts for the 3 speed range settings on page 16. Spindle speeds are shown on the LCD Display. (Fig. 5.8)

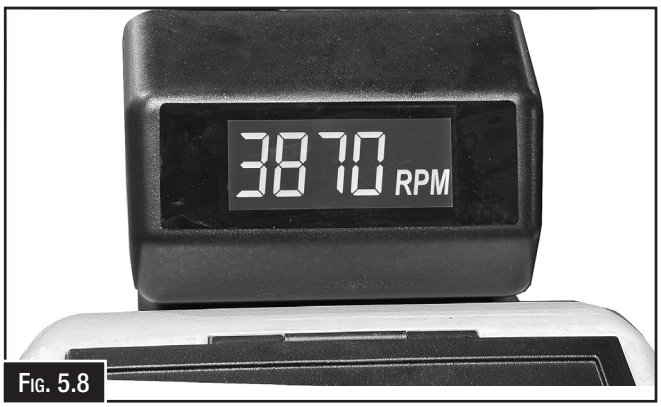


Fig. 5.8

D. 'Stop' Button: Push in the extended red Button to stop the lathe. To reset the button for restarting the lathe with the 'ON' button, push in the 'STOP' button a second time to pop it back out into the reset position.

E. Sliding Bed Direction: This selector switch controls the direction of movement for the lathe's upper bed.

To EXTEND the sliding bed first loosen the bed's rear locking handle, (Fig. 5.9) and then turn the control switch (E in Fig. 5.8) to the right. Lock when desired position is reached.


Fig. 5.9

5.8 HEADSTOCK SPINDLE LOCK

Conveniently located on the front of the headstock, the Index Pin Assembly (Fig. 5.10 & 5.11) is used to hold and position the spindle for making accurate, spaced pattern work on projects such as straight fluting, grooving, drilling, and detail carving, wood burning patterns and laying out designs. The Index Pin is spring loaded. To operate:

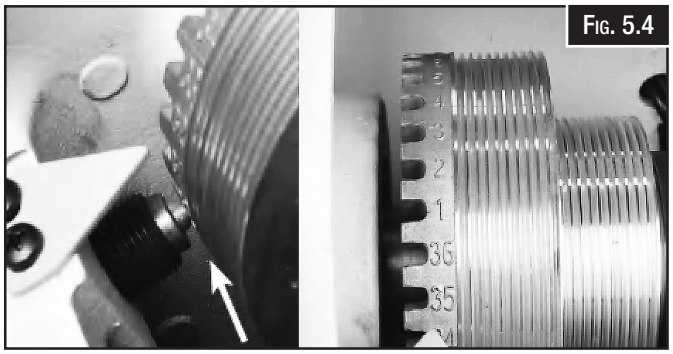


Fig. 5.10

1. Rotate the Index Knob (Fig. 5.10) from the 'not-indexing' position (red dot) down to the 'indexing position' (green dot). This will insert the Index Pin's shaft into one of the Spindle Pulley's holes, locking the spindle in place.
2. To unlock and free the spindle, reverse the process.

The Pointer (Fig. 5.11) lets you select a specific numbered index hole when creating patterns on your work.

See page 19 for an index chart for 9 different spindle settings.


Fig. 5.4

WARNING! Never use the index pin to hold the spindle to remove accessories from the lathe, or damage to the pin or the spindle pulley will result.

5.9 THE SLIDING BED

See page 15 for instructions on operating the electronic controls for moving the upper motorized sliding bed.

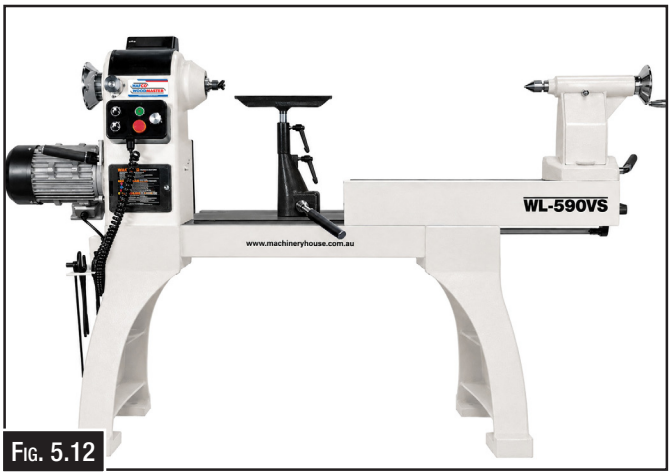
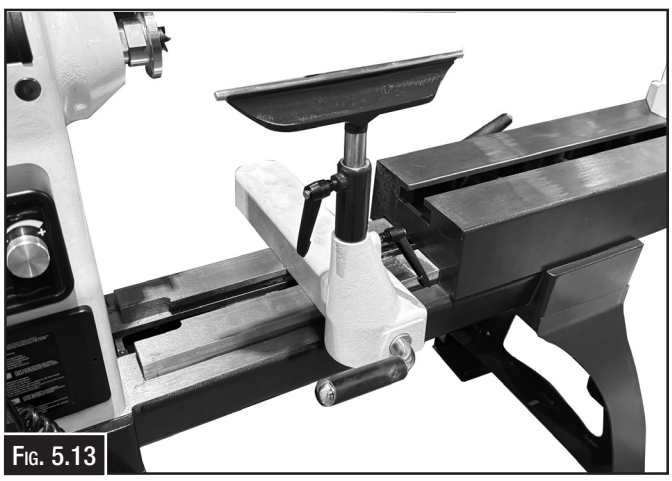


Fig. 5.12

The unique Sliding Bed feature of WL-590VS lathe expands the working capacities of the lathe with a twist of a dial. Spindle turning between centers increases from 508 up to 1016mm and turning diameters/swing from 590 to 794mm for bowl and platter work.

When the upper bed is slid away from the headstock, a 'GAP' in the bed occurs, revealing the lower bed. (Fig. 5.13) For spindle turning, there are 2 options on how to use your tool rests when dealing with this gap.


Fig. 5.13

Option 1: Included with the lathe is the Tool Rest Height Extension. When the tool rest base is moved down onto the lower bed, install the tool rest height extension to raise the base 100mm for holding your tool rest at the proper level for turning, (Fig.5.13) or leave it mounted on the upper bed.

5.10 SLIDING BED MOTOR ASSEMBLY

As instructed on page 16, the sliding bed's position on the lathe is set with a selector switch on the lathe's control box. This switch activates the lathe's second DC 24V motor and screw drive that is located under the sliding bed. Fig5.9.1

It is important that the sliding bed's rear locking handle (Fig. 5.9 on page 16), is released before the bed is moved, or excess stress to the DC motor assembly and electrical circuitry will result. Once the sliding bed is positioned where you want it for turning, secure the rear locking handle to prevent the bed from moving during work.

If the sliding bed's DC motor assembly ever fails, it can be disconnected from the lathe. Simply disconnect the electrical wires at the connector, and remove the 2 cotter pins that hold the assembly ends in place under the sliding bed's frame. (Fig. 5.14) The DC motor assembly can then be removed from the lathe for replacement or repair.

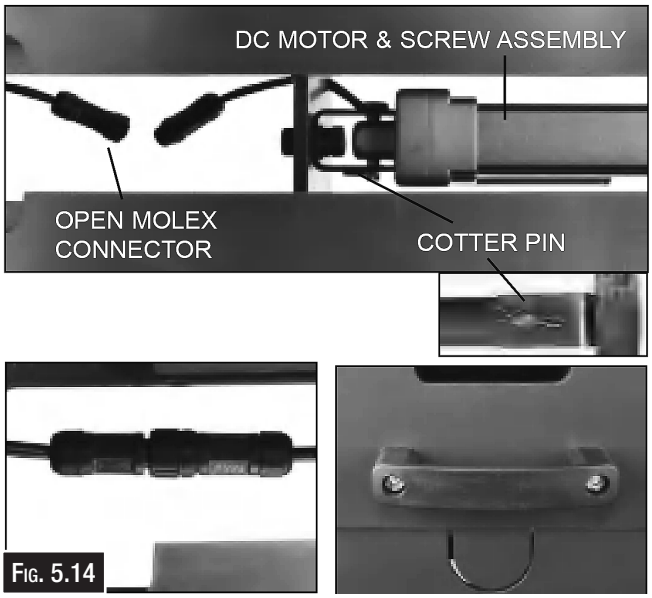


FIG. 5.14

NOTE: The end handle is to be used ONLY when the DC motor assembly is disconnected from the sliding bed to move the sliding bed manually. It is not designed for lifting.

NOTE: With the DC Motor Assembly off of the lathe, the sliding bed can be moved manually. The Sliding Bed Handle, can now be used to pull/extend the sliding bed away from the head-stock. Just push the end of the sliding bed to move it back towards the headstock. Make sure that the sliding bed's locking handle is released before moving the bed, and secured once the bed is positioned

5.11 ALIGNING SPINDLE CENTERS

The alignment of the headstock spur center and the tailstock live center are set at the factory, but this should be checked once the lathe is assembled and ready for use.

1. Slide the tailstock towards the headstock until the center point of the live center almost touches the headstock's spur center. Fig.6.1.
2. Check the alignment of the center points by viewing from the top and side.
3. If the centers do not align, slightly loosen the 4 bolts that secure the headstock to the bed. Carefully nudge the head-stock to align the centers. Then fasten the 4 bolts to secure the headstock in place.

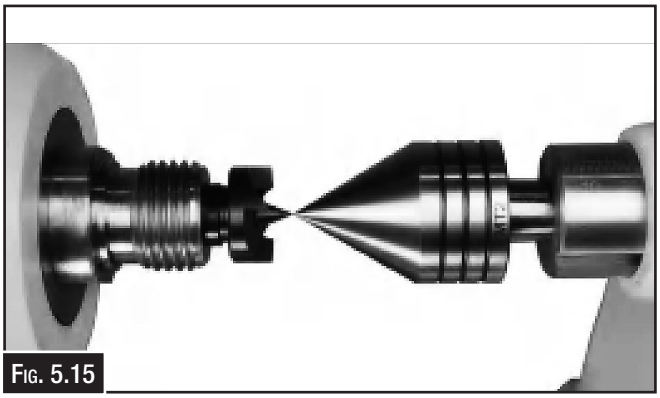


FIG. 5.15

WARNING!

SAFETY FIRST

The machine must not be plugged in and the power switch must be in the Off position until ALL adjustments are made.

5.12 CHANGING SPEEDS

To change between the 3 speed ranges, the position of the drive belt on the motor and spindle pulleys must be changed. To do this:

1. Unplug the lathe from the power source.
2. Open the 2 Belt Doors to gain access to the belt and pulleys that are inside of the headstock. (Fig. 5.16, A & B)
3. Pull the Belt Tensioning Handle forward, away from the motor. Fig. 5.16, C)
4. Push the Tensioning Handle down to loosen the tension on the Poly-V-Belt. The belt can now be positioned on the pulleys for the desired speed range. Fig. 5.18, shows the belt positions for the three speed ranges.
5. With the Poly-V-Belt positioned on the pulleys, raise the tensioning handle so that the weight of the motor provides the needed tension on the belt. Then secure the tensioning handle in place by pushing the handle back towards the motor. (Fig. 5.17)
6. Close the two front Belt Doors on the headstock to protect the belt, pulleys and internal working from dust.
7. Plug the lathe back into the power source.

NOTE: The 'High' speed range #3 (100-3,850 RPM) provides maximum speed. The 'Low' speed range #1 (20-650 RPM) will provide maximum torque.

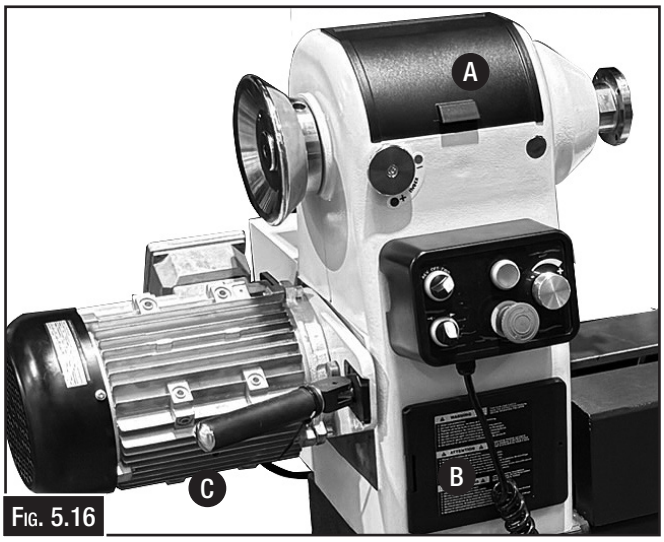


Fig. 5.16

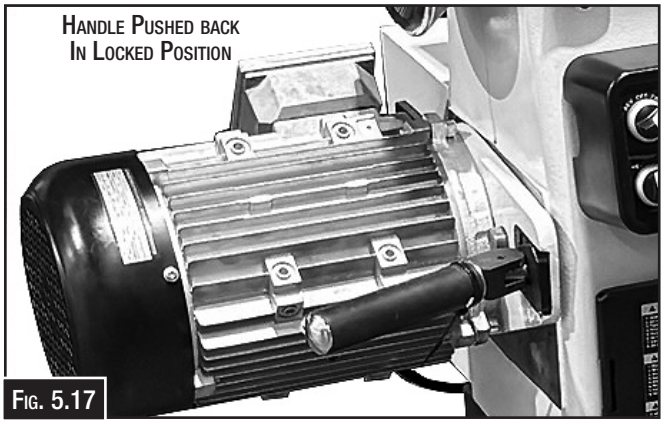
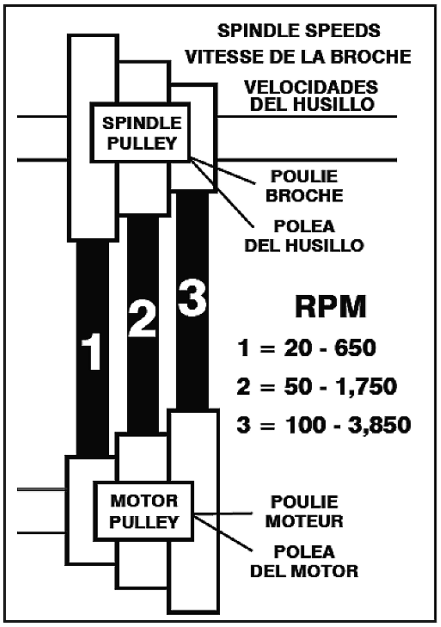


Fig. 5.17

General Lathe Speeds For Work Piece Diameters

DIAMETER OF WORK	ROUGHING RPM	GENERAL CUTTING RPM	FINISHING RPM
Under 2"	1529	3200	3200
2 - 4"	750	1600	2480
3 - 6"	510	1080	1650
6 - 8"	380	810	1240
8 - 10"	300	650	1000
10 - 12"	255	540	830
12 - 14"	220	460	710
14 - 16"	190	400	620
16 - 20"	170	350	500
30 - 24"	50	200	375

Fig. 5.18



5.13 SPINDLE INDEXING

The Headstock Spindle has 36 indexing holes, each 10° apart, which allows accurate pattern work on projects such as straight fluting, grooving, drilling, detail carving, wood burning patterns, laying out designs and more.

The Indexing Chart, FIG.6.3, shows how to rotate the spindle to access any of the 36 indexing holes. The 9 primary settings are listed below, however, other indexing/design settings are possible. Vary the index combinations to make non-equal, spaced patterns (EX:10° & 20° series (1,2,4,5,7,8,10,11,13 etc.)). Also, by rotating/repositioning your work while it is being held between centers, in a chuck or on a faceplate, new orientation points for the index holes will be set for your work.

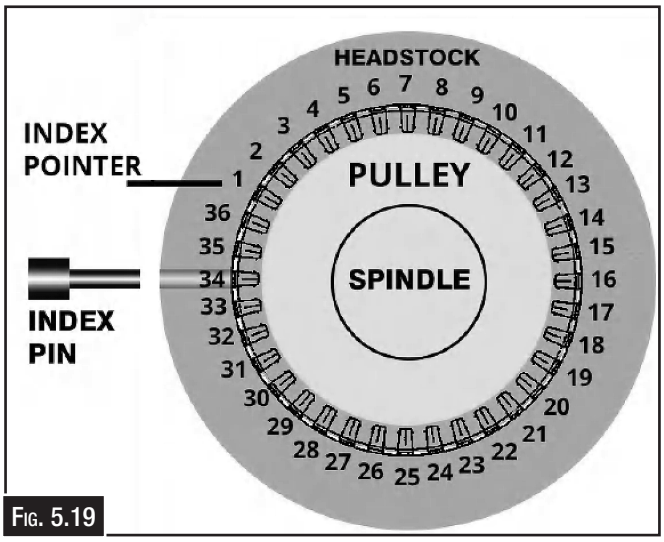


FIG. 5.19

To Use:

1. Insert the Indexing Pin into one of the 36 spindle's positioning holes according to the chart, and the number of setting you need for your workpiece. Make sure that the pin locates and securely enters into one of the indexing holes so that there is no accidental slipping.
2. With the Indexing Pin in the first spindle hole setting, do your work (drilling /marking/etc.), then rotate the spindle to the next index setting noted on the chart. Work through all of the designated index setting numbered positions and complete the remaining markings, or work, on your work-piece.

Number Of Index Positions	Angle Between Positions	Spindle Index Numbers
1	360 °	Any Single Hole
2	180 °	1, 19
3	120 °	1, 13, 25
4	90 °	1, 10, 19, 28
6	60 °	1, 7, 13, 19, 25, 31
9	40 °	1, 5, 9, 13, 17, 21, 25, 29, 3, 33
12	30 °	1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34
18	20 °	1, 3, 5, 7,9, 11,13, 15, 17,19, 21, 23, ,25, 27, 29, 31,33,35,
36	10 °	Every Hole 1~36

WARNING!

SAFETY FIRST

Never use the index pin to hold the spindle to remove accessories from the lathe, or damage to the pin or the spindle pulley will result

WARNING!

The machine is the sole responsibility of the owner for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training, proper inspection and maintenance, manual availability and comprehension. The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

6. MAINTENANCE

It is very important that regular maintenance of the equipment is carried out. The operators need to follow the daily maintenance procedures.

For optimum performance from this machine, the maintenance schedule listed below and in this section must be followed.



WARNING!

Always disconnect the power to the machine before servicing or doing maintenance to the machine.

It is very important that regular maintenance of the equipment is carried out. The operators need to follow the daily maintenance procedures.

For optimum performance from this machine, the maintenance schedule listed below and in this section must be followed.

6.1 SCHEDULE

Avoid a build-up of wood shavings and dust. Regularly clean all parts of the machine using a soft cloth, brush or compressed air.

The lathe's ball bearings are lifetime lubricated, sealed, and do not need any further care. To prevent slipping, keep the drive belt free of oil and grease.

Daily Check

A general cleaning should be done after every use to avoid future problems and ensure that the machine is in ready condition for its next use.

Keep the lathe beds free of resin and rust. Clean them regularly with a non-flammable solvent, then coat with a light film of dry lubricant spray, or wax, to enhance passage of the tool rest base, tail-stock and upper sliding bed on/over the lathe bed.

NOTE: When not in use, make sure that the WL-475VS Main ON/OFF Switch that is located on the lathe's inverter box is turned off. This will prevent any damage to the lathe's electrical system and prevent any unauthorized use.



WARNING!

If using compressed air to remove the sawdust, wear proper eye and face protection to prevent debris from blowing into eyes, and prevent fine dust particles produced by the woodworking machine going inside your lungs and cause serious respiratory problems.

6.2 TAIL-STOCK MAINTENANCE

Regular maintenance of the Tail-stock requires the occasional disassembly, cleaning and lubricating of the lathe's quill and screw. One of the common issues with lathe quills is that the 2 grooves in the quill sides get damaged by the quills positioning set screws from the rotational pressure from normal use, and especially by drilling.
Lastly, the overall cleaning of the screw and other surfaces of any debris and old oil/grease should also be done, then reapply new grease or oil to lubricate the parts.

6.3 CHANGING THE BELT

Changing the belt requires that the headstock spindle be removed, or half removed, from the headstock casting.

Then the new belt can be slipped over the spindle and down inside of the headstock to the motor pulley.

1. Unplug the lathe from the power source and remove any installed spur center or faceplate from the spindle.
2. Open the 2 Belt Doors to gain access to the belt and pulleys that are inside of the headstock. Fig.6.5.1, A & B.
3. Pull the Belt Tensioning Handle (#B52) forward, away from the motor. FIG.6.5.2. (See Page 16, Fig.6.2.2& .6.2.3).
4. Push the Tensioning Handle down to loosen the tension on the Poly-V-Belt, and then secure the handle in place. The belt can now be moved off of the 2 pulleys.
5. Unscrew the Spindle Lock Nut clockwise with the supplied 10mm Hex Wrench, while holding the spindle steady at the opposite end with the large 38mm Wrench.
6. Remove the Spindle Hand Wheel counter-clockwise from the spindle.
7. Unscrew the large Lock Nut counterclockwise from the spindle with the large 46mm Wrench. Fig.6.5.4.
8. Loosen the Set Screws that attach the Spindle Pulley to the spindle.

NOTE: There are 2 set screws in each hole, one stacked upon the other.

9. Unscrew the Set Screws that attach the Plastic RPM Reader Disc to the spindle. Fig.6.5.5 B.

The spindle can now be removed, or half removed, from the headstock in order to install the new belt.

10. Place a block of wood against the left spindle end and strike it with a mallet/hammer to move the spindle towards the tailstock and remove the belt.
11. Reassemble the lathe parts by also reversing the procedure described in steps 1 - 9 above.

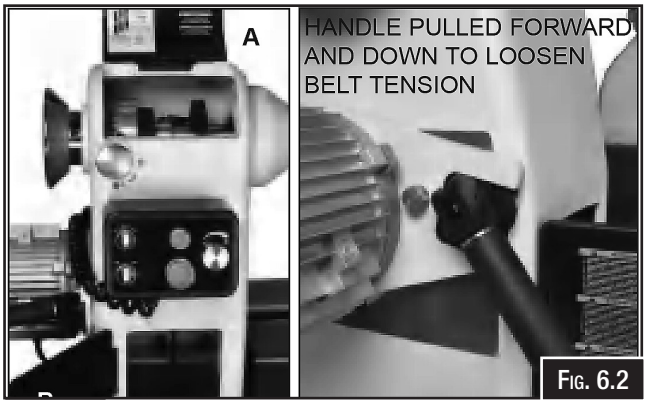
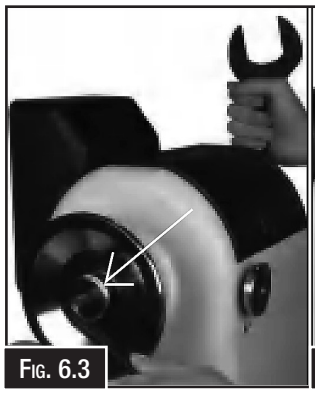
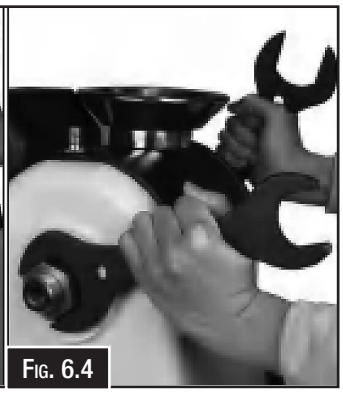


FIG. 6.2


FIG. 6.3


FIG. 6.4

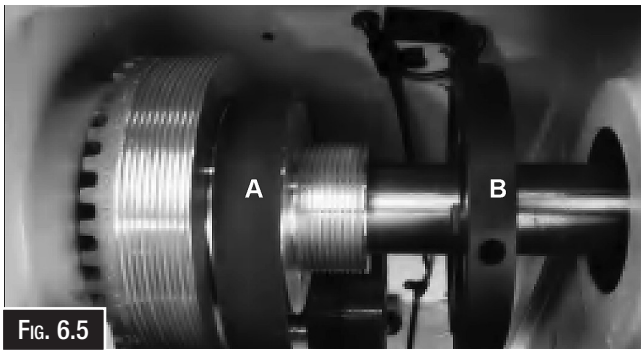
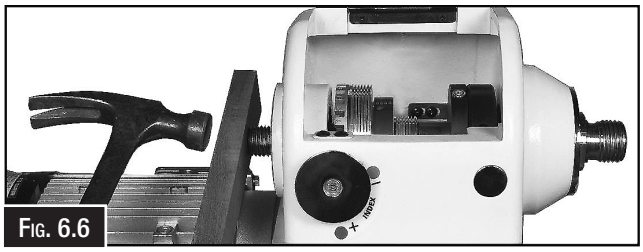
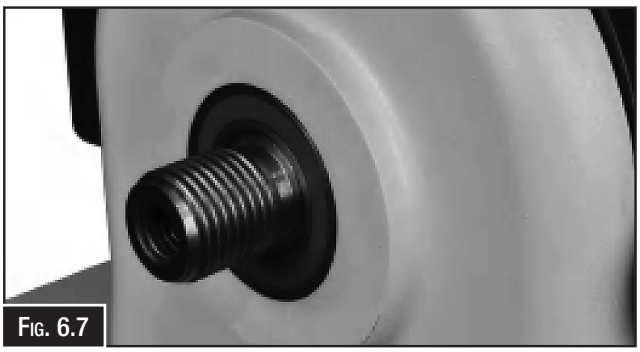


FIG. 6.5


FIG. 6.6

6.4 CHANGING THE SPINDLE BEARINGS


FIG. 6.7

Changing the spindle bearings follows the same spindle removal process as described on page 23 for "'CHANGING THE BELT".

1. Unplug the lathe from the power source, and remove any installed spur center or faceplate from the spindle.
2. Follow the steps 2-9 on page 18 for 'Changing the Belt'.
3. Once the Spindle Pulley and Plastic RPM Reader Disc set screws are loose, place a block of wood against the left spindle end and strike it with a mallet/hammer to move the spindle towards the tailstock. The wood will prevent any damage when the spindle is hit. Carefully knock out the spindle.
4. Carefully remove the bearings from the spindle and/or headstock casting by tapping them loose. Bearings on the spindle can be removed with a gear pulley, if available.
5. Replace the four Bearings on the spindle or in the headstock casting as applicable.
6. Reassemble the lathe parts by reversing the procedure above.

6.5 ADJUSTING THE LOCKING HANDLES

The locking handles on the Tool Rest Base and Tail-stock are pre-set at the factory to give ample holding pressure against the lathe bed to keep these lathe assemblies positioned so that they will not move during use.

If adjustments are needed, the clamping pressure can be changed by turning the large Hex Nuts (A in Fig. 6.8) that are located under the lathe bed below the assemblies.

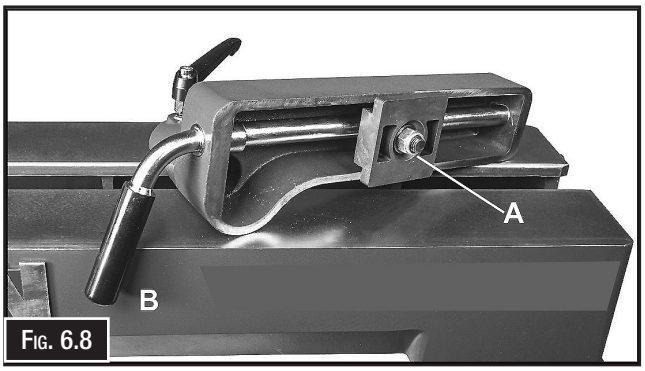


FIG. 6.8

Test the clamping pressure with the locking handle, (B in Fig. 6.8) and adjust the nut again, if needed.

1. Loosen the locking Handle, (B) so that there is no clamping pressure being exerted on the lathe assembly.
2. With the wrench, slightly turn the Hex Nut (A) to loosen or tighten it on its threaded Draw-bar Bolt.
3. Test the clamping pressure with the locking handle, and adjust the nut again, if needed, to set the right pressure

WARNING!

SAFETY FIRST

The machine must not be plugged in and the power switch must be in the Off position until ALL adjustments are made.

CAUTION!

Before attempting this feature, disconnect the machine from the power supply to avoid injury to the operator from accidental startup, injury or death to the operator.

6.6 TROUBLESHOOTING

Review the troubleshooting and procedures in this section if a problem develops with your machine. If you need replacement parts then follow the procedure in the begining of the spare parts section or if additional help with a procedure is required, then contact your distributor.

Note: Make sure you have the model of the machine, serial number,and manufacture date before calling.

Symptoms	Possible Cause	Possible Solution
Motor fails to develop full power.	1. Power line is overloaded 2. Undersize wires in supply system 3. Low voltage 4. Worn motor	1. Correct the overload condition 2. Increase supply wire size or eliminate extension cord if one is used 3. Request voltage check from power company and correct low voltage condition 4. Replace the motor
Motor will not start	1. Machine is not plugged in 2. Main ON/OFF switch is in the OFF position 3. Low voltage or loose connection	1. Plug in machine 2. Turn main ON/OFF switch ON. 3. Check plug, connections and fuse
Motor or Spindle Stalls or will not start	1. Excessive depth of cut 2. Loose or broken belt 3. Worn spindle bearings 4. Improper cooling of motor 5. Worn motor	1. Reduce cutting depth 2. Check tension or replace drive belt 3. Replace bearings 4. Clean motor to increase air flow or reduce motor running time 5. Replace Motor
Excessive Vibration.	1. Workpiece is warped, out of round, has major flaws or was improperly prepared or centered for turning 2. Lathe is on an uneven surface 3. Motor mount bolt or handles are loose 4. Worn belt 5. Worn spindle bearings	1. Correct problem by planing, band sawing, or discard the workpiece 2. Shim the lathe stand, or adjust the feet on the stand for stability 3. Tighten all bolts or handles 4. Replace the belt 5. Replace the bearings
Tailstock Moves when applying pressure	1. Tailstock is not secured in place 2. Excessive pressure being applied by the tail-stock onto the workpiece 3. Lathe bed and tailstock mating surfaces are greasy or oily.	1. Tighten tailstock locking lever. 2. Apply only sufficient force with the tailstock to hold the workpiece securely between centers. 3. Remove tailstock and clean bed surfaces with a cleaner de greaser
Tailstock Handwheel is hard to turn	1. Tailstock quill locking lever is still tight 2. Build up of dirt, resin on inside quill thread	1. Loosen tailstock quill locking lever 2. Remove quill, clean all parts, oil and grease parts, then re-assemble
Tailstock or Tool Rest Base do not lock in place	1. Incorrect adjustment on locking lever mechanism	1. Adjust the nut under the clamping plate to increase (or decrease) the clamping pressure of the lock levers
Spur or Live Centers slip when turning	1. MT2 tapers are damaged, or have buildup of dirt or excessive grease. 2. Insufficient pressure when loading	1. File or polish away any damage and clean tapers, inside and out. Apply light coating of oil on tapers to prevent rusting 2. Install centres with firm hand pressure. Do not knock in with solid object
Spur and live centres do not align.	1. Headstock is not aligned with the tailstock	1. Loosen bolts securing the headstock to the bed, align centres, then re-tighten the headstock bolts
Digital readout does not work	1. Dust buildup on RPM reader 2. Digital readout sensor out of position	1. Blow off the dust from the RPM reader 2. Adjust the sensor with the RPM reader 3. Contact Customer Service
Magnet Control Box will not stick to lathe frame	1. Control box is positioned on labels 2. Control box is positioned on a curved surface 3. Magnets are loose or are missing	1. Move controls to alternate location. 2. Move the control box to a flat surface so the magnets get full holding power 3. Secure the nuts holding the magnets to the control box back plate

6.6 TROUBLESHOOTING

Symptoms	Possible Cause	Possible Solution
Machine bogs down during cutting	1. Excessive depth of cut is taken 2. Turning tools are dull 3. Drive belt is loose	1. Decrease the depth of cut 2. Sharpen the turning tools 3. Increase tension of drive belt
Tools tend to grab or dig in.	1. Dull turning tools 2. Tool rest is set too low 3. Tool rest is set too far from the workpiece 4. Improper turning tool is being used	1. Sharpen the tools 2. Reposition the tool rest height 3. Set the tool rest closer to the workpiece 4. Use the correct tool for operation

6.7 AC INVERTER CONTROL BOX

The AC Inverter Control Box (Fig. 6.9) that is located on the rear of the headstock does not require any programming.

It is pre-programmed from the factory. The buttons and knob on the face of the inverter should not be changed. Only use the 5 electronic controls on the front of headstock (Fig.6.10) to operate the lathe.

Only the main ON/OFF switch should be used.

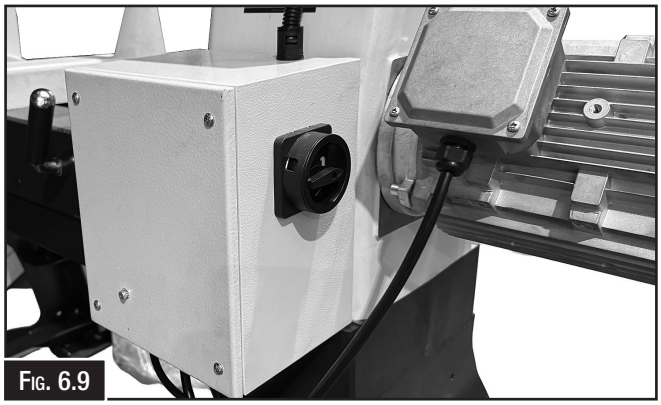


Fig. 6.9

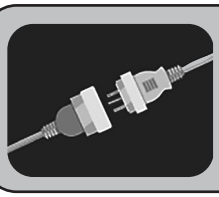


Fig. 6.10



WARNING!

Any issues with the AC Inverter must be only serviced by a qualified HAFCO/METALMASTER service engineer or qualified electrician. Failure to do so may cause injury or death.



WARNING!

Always disconnect the power to the machine before doing any adjusting or maintenance to the machine.

VARIABLE SPEED WOOD LATHE
MODEL WL-590VS

Order Code: (W3886)

The following section covers the spare parts diagrams and lists that were current at the time this manual was originally printed. Due to continuous improvements of the machine, changes may be made at anytime without notification.

HOW TO ORDER SPARE PARTS

1. Have your machines model number, serial number & date of manufacture on hand, these can be found on the specification plate mounted on the machine.

2. A scanned copy of your parts list/diagram with required spare part/s identified.

NOTE: SOME PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

3. Go to www.machineryhouse.com.au/contactus and fill out the inquiry form attaching a copy of scanned parts list.



WARNING!

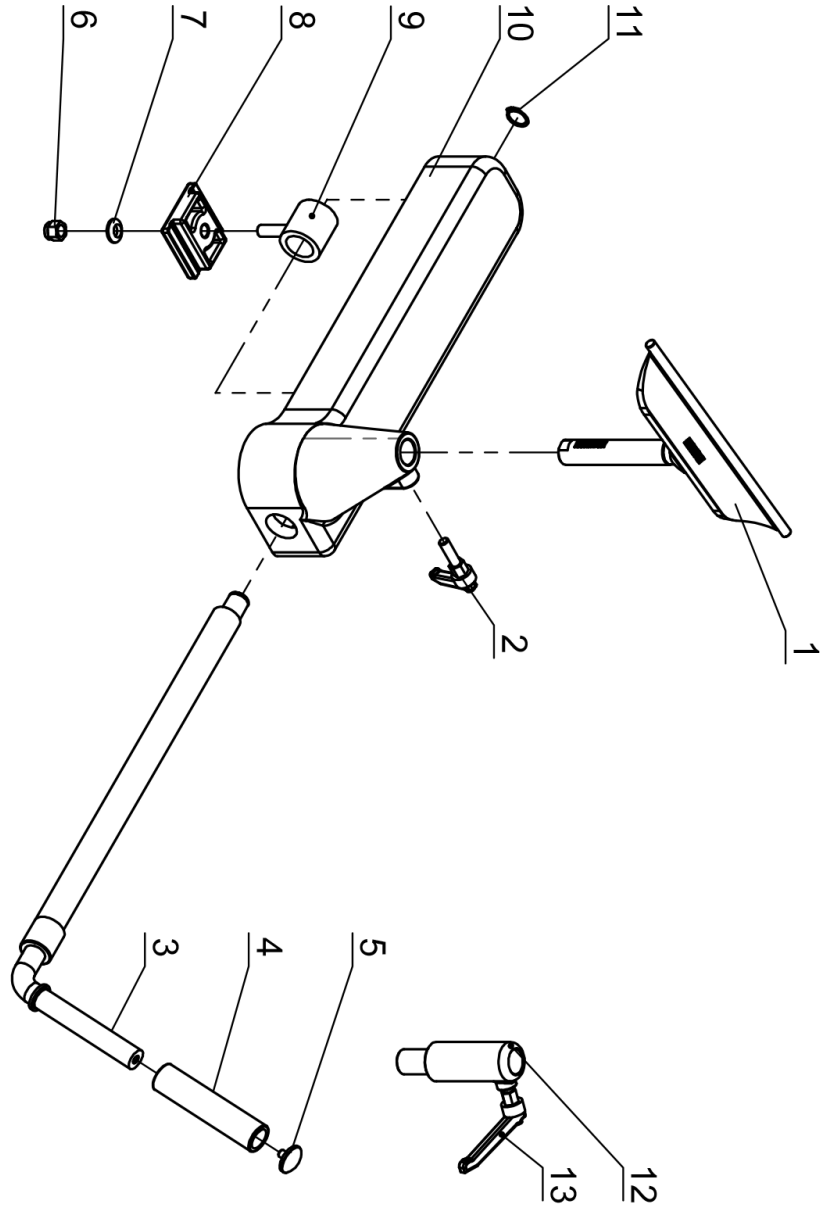
Electricity is dangerous and could cause death.
All electrical work must be carried out by a qualified electrician.



CAUTION!

It is impossible to cover all possible hazards Every workshop environment is different. These are designed as a guide to be used to compliment training and as a reminder to users prior to equipment use. Always consider safety first, as it applies to the individual working conditions.

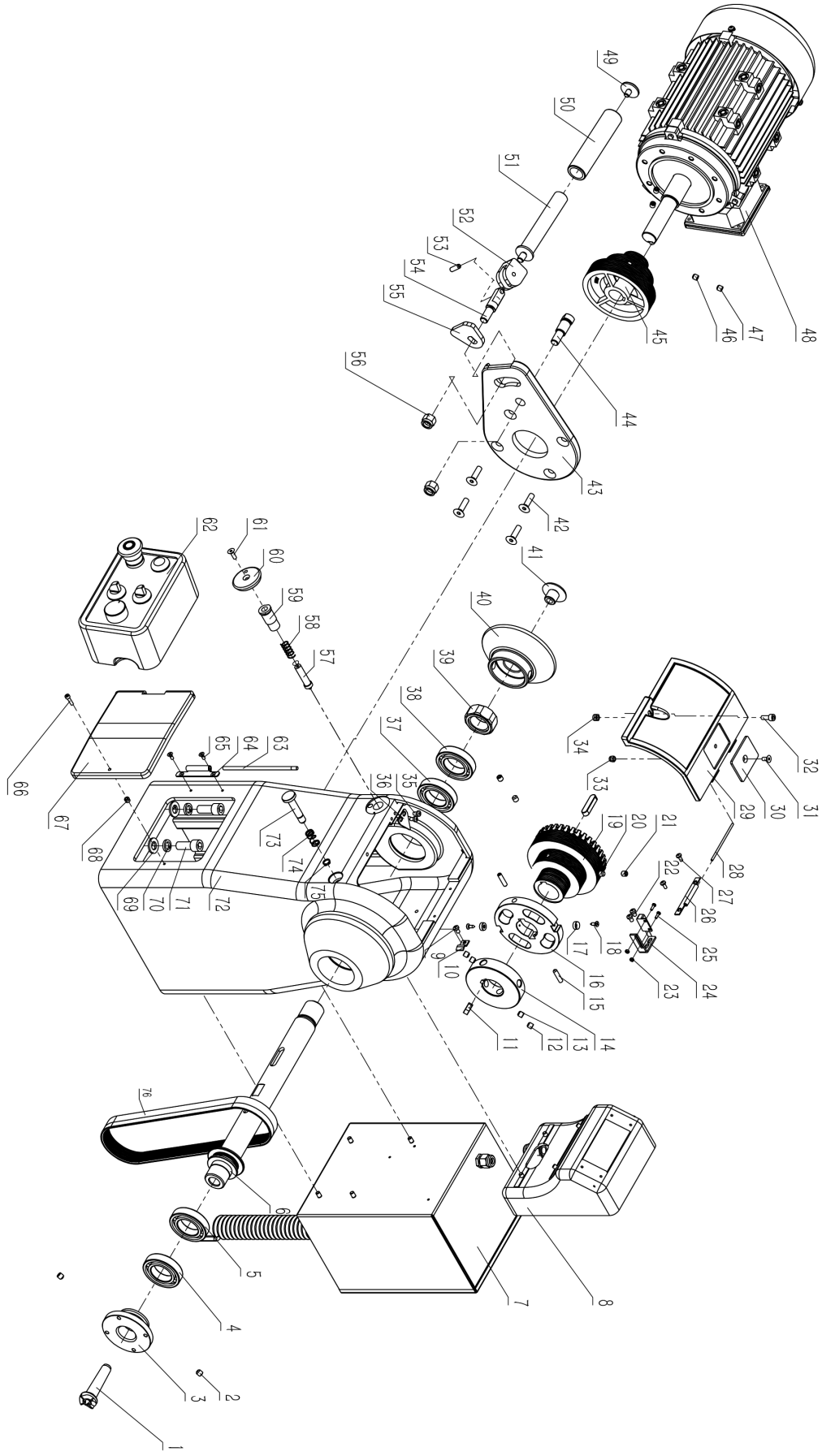
TOOL REST SPARE PARTS



ITEM	DESCRIPTION	DRAWING NO.
1-1	12" TOOL REST	WL1220A054000A
1-2	ADJUSTABLE HANDLE	KTSB-1-B-M10X80X32
1-3	TOOL HOLDER ECCENTRIC HANDLE	WL3040A050002
1-4	HANDLE SLEEVE	WL3040A050003
1-5	THREAD CAP	WL3040A010306
1-6	HEXAGON LOCK NUT	M12GB889D1ZF
1-7	SPHERICAL WASHER	WSH12GB849B
1-8	T - LATCH SEGMENT	WL3040A040005
1-9	LONG CAM SHAFT BUSHING ASSEMBLY	WL2036A032000
1-10	TOOL HOLDER BASE	WL3040A050001-040B
1-11	CIRCLIPS FOR SHAFT	CLP21GB894D1B
1-12	TOOL REST HEIGHT EXTENSION	WL3040A050011-040B
1-13	ADJUSTABLE HANDLE	KTSB-1-B-M10X80X20

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

HEADSTOCK SPARE PARTS



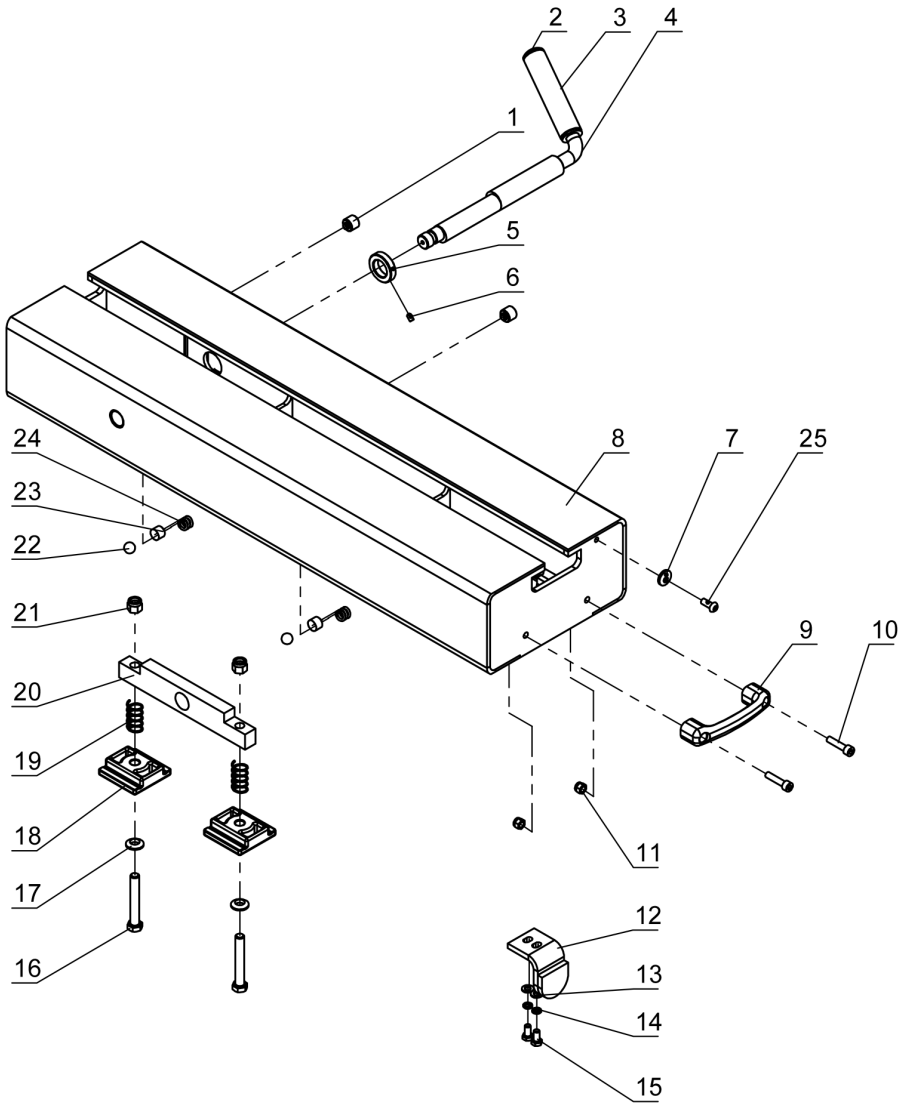
HEADSTOCK PARTS LIST

Item	Description	Drawing No.
1	Spur center	WL1216A010002
2	Set screw M6X12	M6X12GB80B
3	82mm face plate	WL2036A010010C/D/E/F
4	Bearing	BRG6007DDUGB276
5	Bearing	BRG6007DDUGB276
6	Spindle	WL3040A020004B/C/D
7	Control box	WL3040A090005/B/D
8	Display unit	WL3040A090000
9	Screw M5X8	M5X8GB818B
10	Cable clamp	1502014-02
11	Flat key	PLN8C7C20GB1096
12	Screw M8X8	M8X8GB80B
13	Screw M8X8	M8X8GB80B
14	Stopping spacer sleeve	WL3040A020022
15	Screw M6X25	M6X25 M6X25GB80B
16	Plastic sleeve	WL3040A020009
17	Magnetic steel	WL1220A010006
18	Screw	ST4D2X13GB846Z
19	Spindle pulley	WL3040A020002
20	Screw M8X8	M8X8GB80B
21	Screw M8X8	M8X8GB80B
22	Screw M5X8	M5X8GB818B
23	I-type hexagonal nut	M3GB6170Z
24	Installation plate	WL3040A020017
25	Screw M3X10	M3X10GB818Z
26	Hinge	WL1220A020002
27	Screw M4X10	M4X10GB819D1B
28	Hinge shaft	WL1220A020003
29	Cover	WL3040A020013A
30	Panel	WL1420A020009
31	Screw M5X12	M5X12GB70D3B
32	Screw M6X16	M6X16GB70D1B
33	Screw M5	M5GB889D1B
34	I-type hexagonal locking thin nut	M6GB6172D2Z
35	Screw M5X8	M5X8GB818B
36	Pointer	WL3040A020019
37	Bearing	BRG6007DDUGB276
38	Bearing	BRG6007DDUGB276
39	Locking nut	WL3040A020008
40	Spindle handwheel	WL3040A020003
41	Spindle locking nut	WL3040A020016
42	Screw M8X30	M8X30GB70D3Z
43	Motor adjustment plate	WL3040A020006
44	Shoulder screw	WL2036B010115
45	Motor pulley	WL3040A020012
46	Screw M8X8	M8X8GB80B
47	Screw M8X8	M8X8GB80B
48	Motor	YSH105224
49	Thread cap	WL3040A010306
50	Handle sleeve	WL3040A050003
51	Handle	WL3040A020011
52	Positioning cam	WL2036B010116
53	Elastic cylindrical pin	PIN6X22GB879D2B
54	Locating shaft	WL2036B010117
55	Locating shaft	WL2036B010302A

Item	Description	Drawing No.
56	Hex nut	M12GB889D1ZF
57	Locating pin	WL3040A020201
58	Spring	WL3040A020204
59	Locating sleeve	WL3040A020203
60	Knob	WL3040A020202
61	Screw M5X16	M5X16GB70D3Z10D9
62	Switch box	WL3040A090100
63	Hinge shaft	WL3040A020020
64	Hinge	WL3040A020015
65	Screw M4X10	M4X10GB819D1B
66	Screw M4X16	M4X16GB70D1B
67	Plate	WL3040A020018-001S
68	Hex Lock Nut M4	M4GB889D1B
69	Washer	WSH12GB97D1B
70	Spring washer	WSH12GB93B
71	Screw M12X30	M12X30GB70D1B
72	Headstock	WL3040A020001B
73	Pin shaft	WL1824A020013
74	Spring	BS350C014008
75	A Type External Circlips	CLP10GB894D1B
76	Poly-v-belt	10PJ762GB16588

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

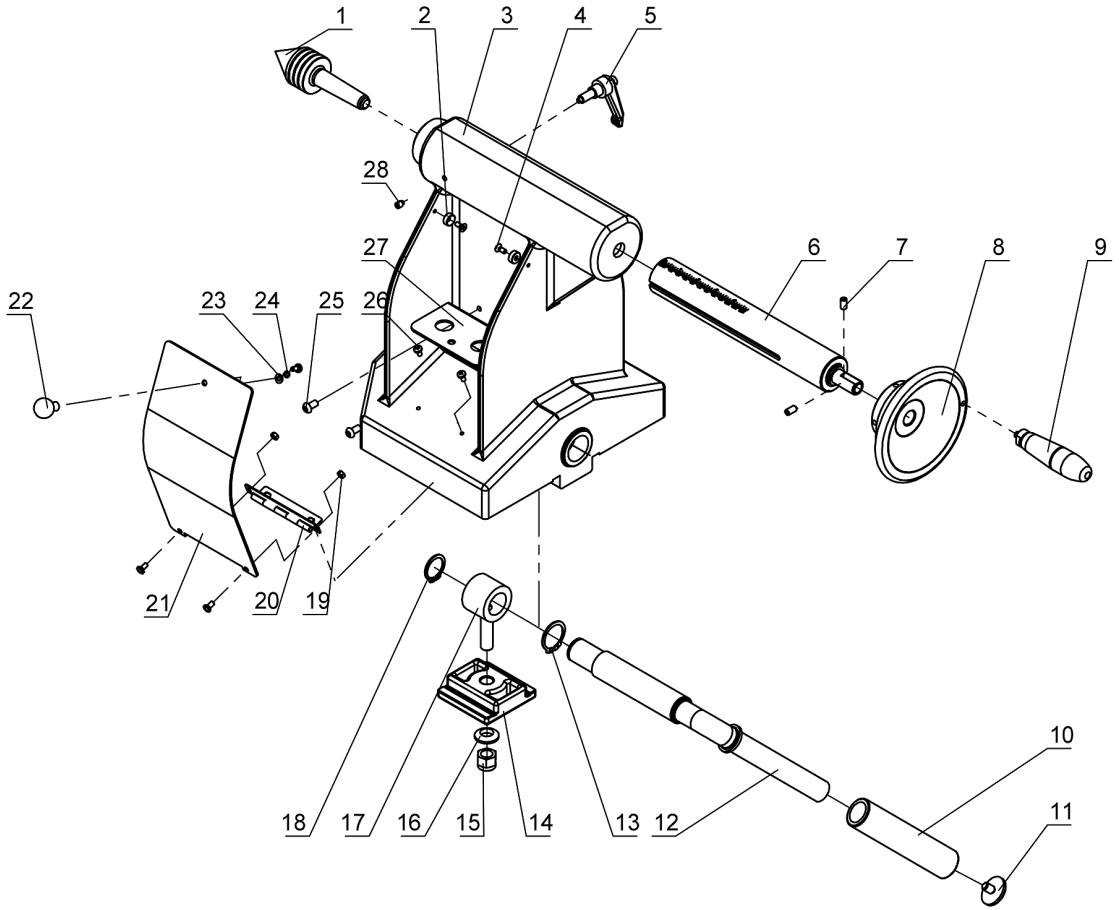
SLIDING BED SPARE PARTS DIAGRAM



Item	Description	Drawing No.
3-1	Compression spring screw	TH410B051007
3-2	Thread cap	WL3040A010306
3-3	Handle sleeve	WL3040A050003
3-4	Eccentric handle	WL3040A040001A
3-5	Locking sleeve	WL3040A010008
3-6	Set screw M6X10	M6X10GB80B12D9
3-7	Eccentric washer	WL3040A010009
3-8	Upper bed weldment	WL3040A010100-040V
3-9	Handle	PT310B030030A-001S
3-10	Hex socket cap screw M8X35	M8X35GB70D1B
3-11	Hexagon lock nut M8	M8GB889D1B
3-12	Junction plate weldment	WL3040A010117-040V
3-13	Washer	WSH8GB97D1B
3-14	Spring washer	WSH8GB93B
3-15	Hex head bolt (full thread) M8X16	M8X16GB5783B
3-16	Hex head bolt (full thread) M12X80	M12X80GB5783Z
3-17	Spherical washer	WSH12GB849B
3-18	T - latch segment	WL3040A040005
3-19	Pressure spring	WL3040A010307
3-20	Square steel	WL3040A010305
3-21	Hexagon lock nut M12	M12GB889D1ZF
3-22	Steel ball (15mm)	WL3040A010015
3-23	Copper billet	WL3040A010013
3-24	Pressure spring	WL3040A010014
3-25	Screw M8X12	M8X12GB70D2B

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

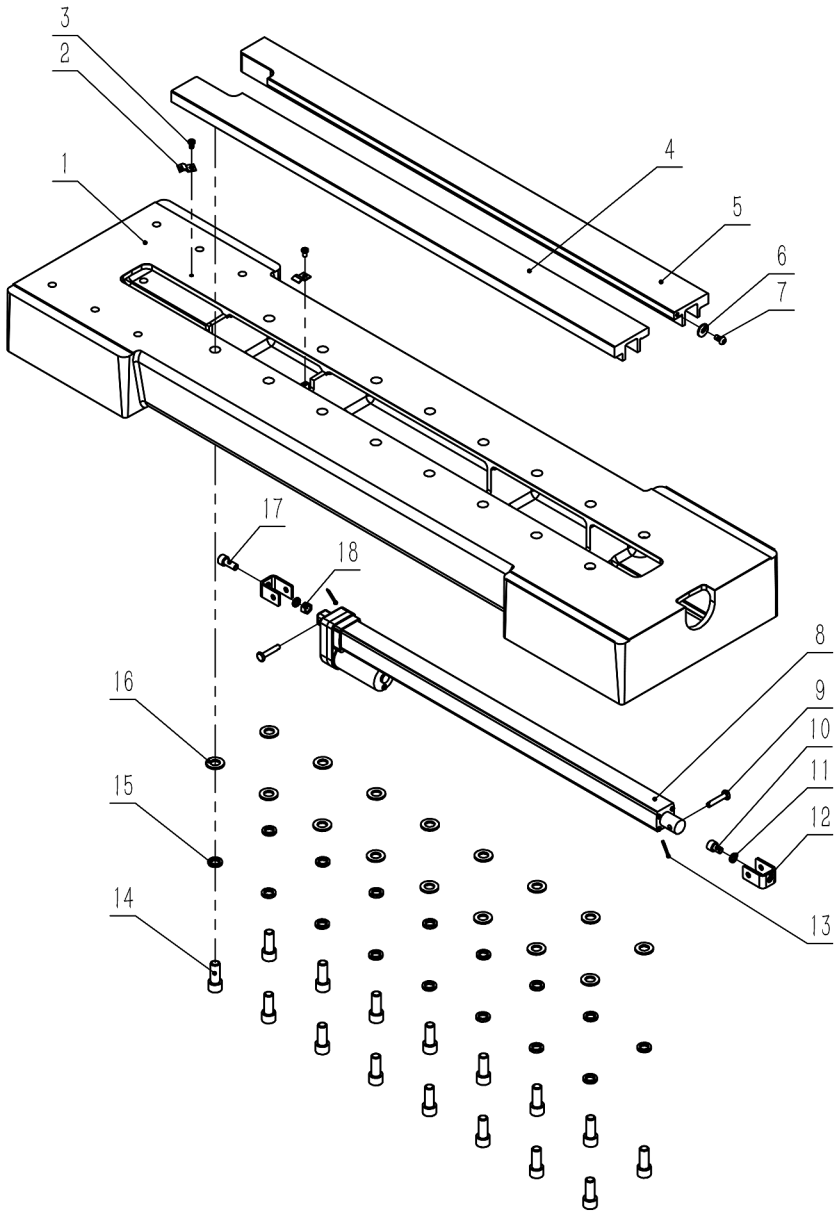
TAILSTOCK SPARE PARTS



Item	Description	Drawing No.
4-1	Tailstock center	WL3040A040019
4-2	Magnetic steel	WL1220A010006
4-3	Tailstock	WL3040A040001-117L
4-4	Screw M4X10	M4X10GB819D1Z
4-5	Adjustable handle	KTSB-1-B-M8X63X25A
4-6	Tailstock shaft assembly	WL3040A041100
4-7	Hex socket end set screw M6X12	M6X12GB80B
4-8	Tailstock hand wheel	WL3040A040004
4-9	Tailstock handle assembly	WL3040A040015
4-10	Handle sleeve	WL3040A050003
4-11	Thread cap	WL3040A010306
4-12	Tailstock eccentric handle	WL3040A040007
4-13	Circlip for shaft	CLP28GB894D1B
4-14	T - latch segment	WL3040A040005
4-15	Hexagon lock nut M12	M12GB889D1ZF
4-16	Spherical washer	WSH12GB849B
4-17	Tighten barrel	WL3040A050006
4-18	Circlip for shaft	CLP24GB894D1B
4-19	Hex nut M4	M4GB6170Z
4-20	Hinge	WL3040A040100
4-21	Cover plate	WL3040A040006-117U
4-22	Small handle	WL3040A040003
4-23	Washer	WSH4GB97D1Z
4-24	Spring washer	WSH4GB93Z
4-25	Hex socket button head screw	M6X12GB70D2B
4-26	Cross recess pan head screw	M4X8GB818Z
4-27	Tool holder	WL3040A040011-117U
4-28	Screw	M6X8GB79B

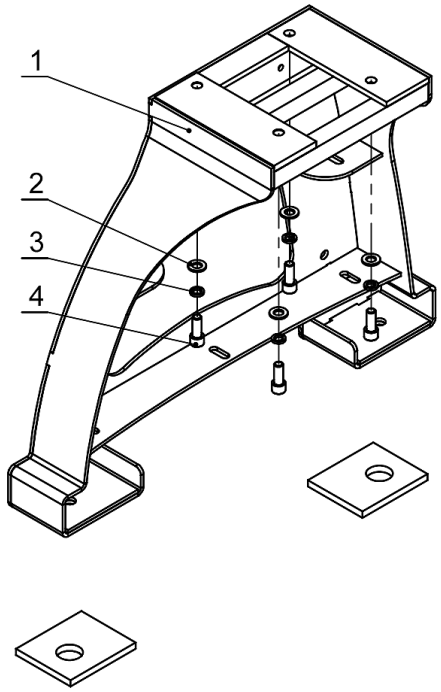
NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

LATHE BED SPARE PARTS

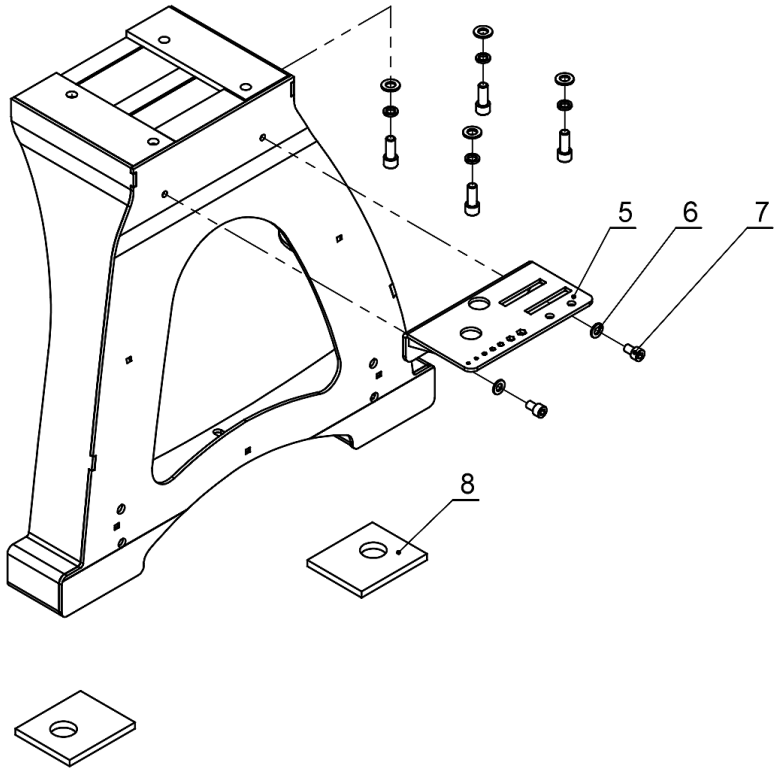


Item	Description	Drawing No.
5-1	Lower bed	WL3040A011200B
5-2	Cable clamp	1502014-02
5-3	Cross recess pan head screw	M5 X8GB818B
5-4	Front rail	WL3040A010007
5-5	Rear rail	WL3040A010006
5-6	Washer	WSH6GB96D1B
5-7	Hex socket flat round head screw	M6X12GB70D2B
5-8	Electric cylinder assembly	WL3040A010410
5-9	Safety pin	WL3040A090101
5-10	Hex socket cap screw M8X12 Hex	M8X12GB70D1B
5-11	Washer	WSH8GB93B
5-12	Dead plate	WL3040A010304
5-13	Split cotter	PIN2D5X16GB91Z
5-14	socket cap screw M12X30 Spring	M12X30GB70D1B
5-15	Washer	WSH12GB93B
5-16	Washer	WSH12GB97D1B
5-17	Hex socket cap screw M8X20	M8X20GB70D1B
5-18	Hex nut M8	M8GB6170B

LATHE STAND SPARE PARTS



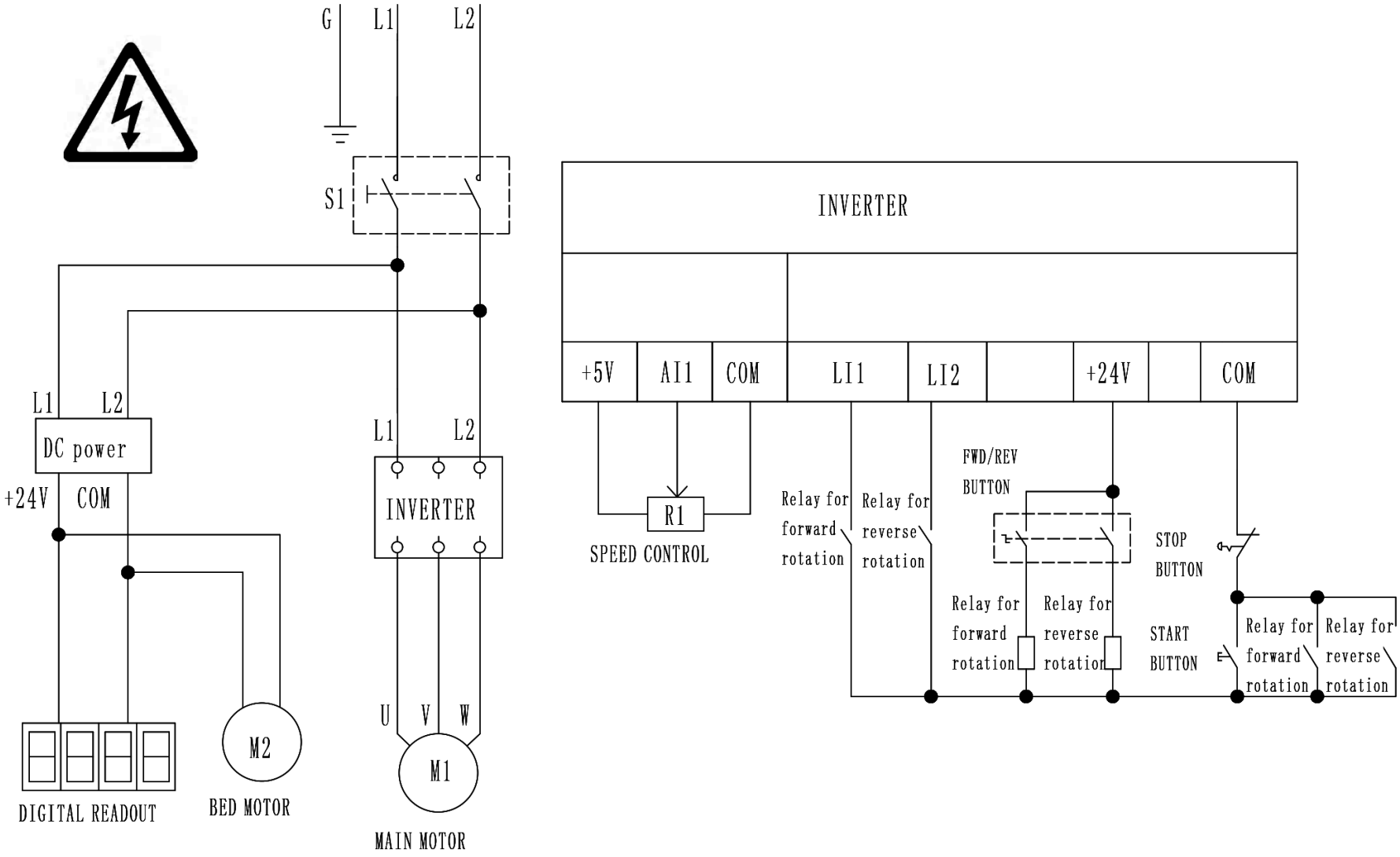
Item	Description	Drawing No.
6-1	Leg	WL3040A100200-040V
6-2	Washer	WSH12GB97D1B
6-3	Spring washer	WSH12GB93B
6-4	Hex socket head cap screw	M12X35GB70D1B
6-5	Tool holder	WL3040A100001-001U
6-6	Washer	WSH10GB97D1Z
6-7	Hex socket cap screw M10X16	M10X16GB70D1Z
6-8	New Shock pad	WL3040A110009



NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

HAFCO WOODMASTER

WIRING DIAGRAM



NOTES:

ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

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