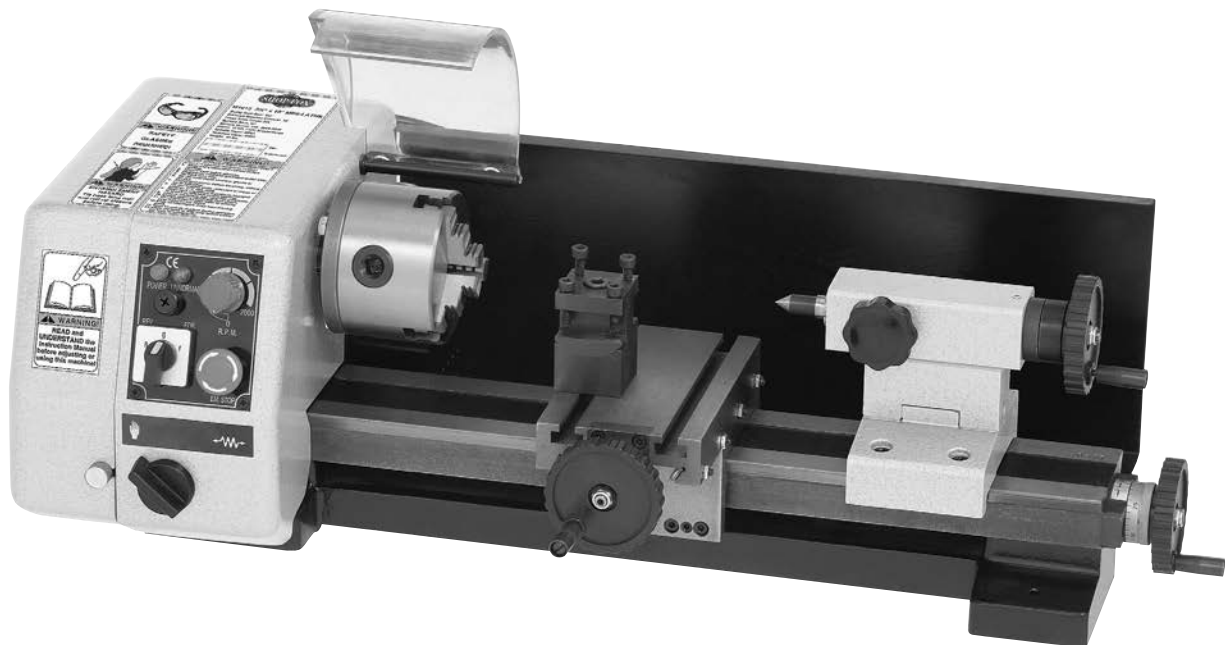




# MODEL M1015 6" X 10" MINI-LATHE



## INSTRUCTION MANUAL

*(FOR MODELS MANUFACTURED SINCE 9/08)*

Phone: (360) 734-3482 • On-Line Technical Support: [tech-support@shopfox.biz](mailto:tech-support@shopfox.biz)

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WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE OR FORM WITHOUT

THE WRITTEN APPROVAL OF WOODSTOCK INTERNATIONAL, INC.

# WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

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

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

# Contents

- INTRODUCTION** ..... 2
  - Woodstock Technical Support ..... 2
  - About Your New 6" x 10" Mini-Lathe..... 2
  - Specifications ..... 2
- SAFETY**..... 4
  - Standard Safety Instructions ..... 4
  - Additional Safety Instructions for 6" x 10" Mini-Lathes ..... 6
  - Avoiding Potential Injuries..... 7
- ELECTRICAL** ..... 8
  - 110V Operation..... 8
  - Grounding ..... 8
- SET UP** ..... 9
  - Unpacking ..... 9
  - Inventory ..... 9
  - Cleaning the Lathe..... 10
  - Machine Placement ..... 10
  - Mounting the Lathe ..... 11
  - Chuck Installation..... 12
  - Replacing Jaws ..... 14
  - Tailstock Alignment ..... 15
  - Centers..... 16
- OPERATIONS** ..... 17
  - General ..... 17
  - Test Run, Start-up, and Lathe Break-in..... 18
  - Loading a Workpiece ..... 19
  - Using the Cross Slide and Tool Holder ..... 19
  - Auto and Manual Feed..... 20
  - Setting RPM ..... 21
  - TPI and Gear Selection..... 22
  - Feed Rate and Gear Selection ..... 23
- MAINTENANCE** ..... 24
  - General ..... 24
  - Cleaning and Lubrication ..... 24
- SERVICE** ..... 25
  - General ..... 25
  - Cross Feed and Saddle Backlash ..... 25
  - Replacing Belt ..... 26
  - Replacing Motor Brushes ..... 27
  - Replacing Electrical Controls..... 27
  - Troubleshooting..... 28
- PARTS** ..... 30
  - Parts List..... 30
  - Parts Diagram ..... 30
  - Parts List..... 31
  - Notes ..... 32
  - Warranty..... 34

USE THE QUICK GUIDE PAGE LABELS TO SEARCH OUT INFORMATION FAST!

# INTRODUCTION

## Woodstock Technical Support

We stand behind our machines! In the event that questions arise about your machine, parts are missing, or a defect is found, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: [tech-support@shopfox.biz](mailto:tech-support@shopfox.biz). Our knowledgeable staff will help you troubleshoot problems and send out parts for warranty.

If you need the latest edition of this manual, you can download it from <http://www.shopfox.biz>. If you still have questions after reading the latest manual, or if you have comments please contact us at:

Woodstock International, Inc.  
Attn: Technical Support Department  
P.O. Box 2309  
Bellingham, WA 98227

## About Your New 6" x 10" Mini-Lathe

Your new SHOP FOX® 6" x 10" Mini-Lathe has been specially designed to provide many years of trouble-free service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

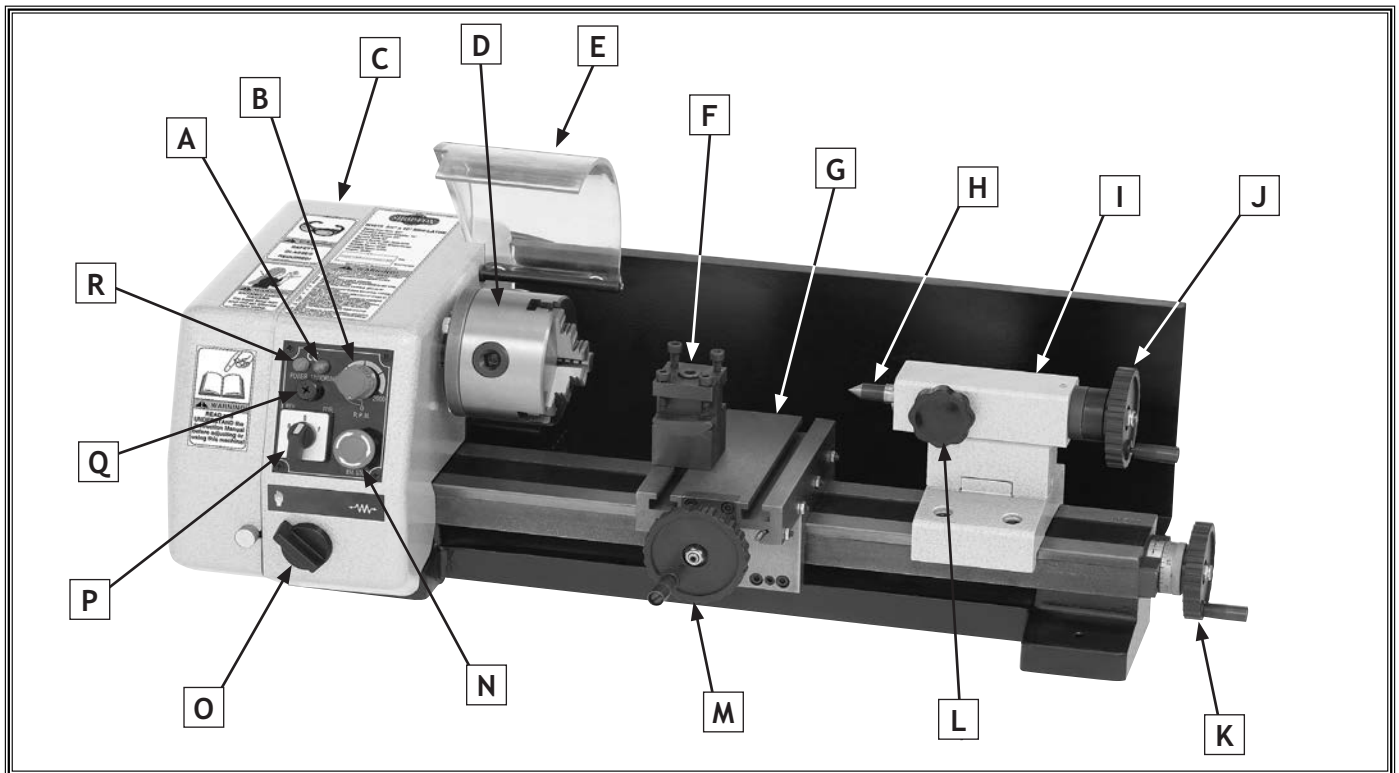
The Model M1015 Mini-Lathe is a perfect lathe for someone who wants a durable and well-designed machine that can fit in a small location. This Mini-Lathe gives model makers, toolmakers, gun hobbyists, and the weekend machinist a way to economically produce small precision parts, threaded parts, fittings, and dies.

Woodstock International, Inc. is committed to customer satisfaction in providing this manual. It is our intent to make sure all the information necessary for safety, ease of assembly, practical use and durability of this product be included.

## Specifications

|                                  |                                  |
|----------------------------------|----------------------------------|
| Motor .....                      | 1/5 HP, 1.2A, 110V, Single Phase |
| Drive System .....               | Internal-Tooth Belt              |
| Overall Size .....               | 11"W x 8"T x 24-1/4"L            |
| Distance Between Centers .....   | 10"                              |
| Swing Over Bed .....             | 6"                               |
| Cross Slide Travel .....         | 2-3/8"                           |
| Spindle Bore .....               | 3/8"                             |
| Spindle Speed .....              | 100-2000 RPM +/- 10%             |
| Spindle Taper .....              | MT#2                             |
| Tailstock Taper .....            | MT#1                             |
| Threads (Standard) .....         | 16, 18, 19, 20, 24 TPI           |
| Approximate Machine Weight ..... | 64 lbs.                          |

## Controls and Features



- A. **Reset Light (Orange):** When lit, it indicates that an overload or potentially unsafe action has taken place. You must reset the machine and DO NOT repeat the unsafe action.
- B. **Spindle Speed Dial:** Allows you to control the spindle RPM from 100 to 2000  $\pm$  10%.
- C. **Gearbox Cover:** Allows you to access all drive gears, and make easy gear changes for threading operations.
- D. **Three-Jaw Chuck:** Holds and centers rods, shafts, and tubes for machining purposes.
- E. **Chuck Safety Cover:** Helps keep tools or hands from entangling with chuck.
- F. **Tool Rest:** Holds bits for lathe operations.
- G. **Apron, Saddle, and Cross Slide:** Allow for tool rest installation and other fixtures.
- H. **MT# 1 Dead Center:** Holds an indexed workpiece in alignment with the chuck.
- I. **Tailstock:** Holds chuck arbors, live centers, dead centers, and other taperd-shank tools.
- J. **Quill Positioning Handwheel:** Allows for incremental movement of the quill and live or dead center.
- K. **Lead Screw Handwheel:** Allows for manual feed of the apron.
- L. **Quill Lock Knob:** Locks the quill in place for lathe operations.
- M. **Cross Slide Handwheel:** Gives precise movement of the cross slide/tool rest.
- N. **Emergency Stop Button:** Immediately shuts off power to the lathe allowing chuck to stop rotation.
- O. **Lead Screw Clutch Control Dial:** Toggles the feed between gear driven and manual control.
- P. **Rotation Direction Dial:** Toggles the chuck rotation.
- Q. **Fuse (2 Amp):** Protects the circuit board from overload.
- R. **Power ON Light (Green):** Indicates the lathe has power.

# SAFETY

**READ MANUAL BEFORE OPERATING MACHINE.  
FAILURE TO FOLLOW INSTRUCTIONS BELOW WILL  
RESULT IN PERSONAL INJURY.**



Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury.

## ***NOTICE***

This symbol is used to alert the user to useful information about proper operation of the equipment, and/or a situation that may cause damage to the machinery.

## Standard Safety Instructions


1. **Thoroughly read the Instruction Manual before operating your machine.** Learn the applications, limitations and potential hazards of this machine. Keep the manual in a safe and convenient place for future reference.
2. **Keep work area clean and well lighted.** Clutter and inadequate lighting invite potential hazards.
3. **Ground all tools.** If a machine is equipped with a three-prong plug, it must be plugged into a three-hole grounded electrical receptacle or grounded extension cord. If using an adapter to aid in accommodating a two-hole receptacle, ground using a screw to a known ground.
4. **Wear eye protection at all times.** Use safety glasses with side shields or safety goggles that meet the appropriate standards of the American National Standards Institute (ANSI).
5. **Avoid dangerous environments.** Do not operate this machine in wet or open flame environments. Airborne dust particles could cause an explosion and severe fire hazard.
6. **Ensure all guards are securely in place and in working condition.**
7. **Make sure switch is in the OFF position** before connecting power to machine.
8. **Keep work area clean, free of clutter, grease, etc.**
9. **Keep children and visitors away.** Visitors must be kept at a safe distance while operating unit.
10. **Childproof your workshop** with padlocks, master switches or by removing starter keys.
11. **Stop and disconnect the machine when cleaning, adjusting or servicing.**

12. **Do not force tool.** The machine will do a safer and better job at the rate for which it was designed.
13. **Use correct tool.** Do not force machine or attachment to do a job for which it was not designed.
14. **Wear proper apparel.** Do not wear loose clothing, neck ties, gloves, jewelry, and secure long hair away from moving parts.
15. **Remove chuck keys, rags, and tools.** Before turning the machine on, make it a habit to check that all chuck keys and wrenches have been removed.
16. **Avoid using an extension cord.** But if you must use one, examine the extension cord to ensure it is in good condition. Immediately replace a damaged extension cord. Always use an extension cord that uses a ground pin and connected ground wire. Use an extension cord that meets the amp rating on the motor nameplate. If the motor is dual voltage, be sure to use the amp rating for the voltage you will be using. If you use an extension cord with an undersized gauge or one that is too long, excessive heat will be generated within the circuit, increasing the chance of a fire or damage to the circuit.
17. **Keep proper footing and balance** at all times.
18. **Lock the mobile base from moving before feeding the workpiece into the machine.**
19. **Do not leave machine unattended.** Wait until it comes to a complete stop before leaving the area.
20. **Perform machine maintenance and care.** Follow lubrication and accessory attachment instructions in the manual.
21. **Keep machine away from open flame.** Operating machines near pilot lamps or open flames creates a high risk if dust is dispersed in the area. Dust particles and an ignition source may cause an explosion. Do not operate the machine in high-risk areas, including but not limited to, those mentioned above.
22. **If at any time you are experiencing difficulties** performing the intended operation, stop using the machine! Then contact our technical support or ask a qualified expert how the operation should be performed.
23. **Be aware that certain materials may cause an allergic reaction in people and animals,** especially when exposed to fine dust. Make sure you know what type of material dust you will be exposed to and the possibility of an allergic reaction.
24. **Habits—good and bad—are hard to break.** Develop good habits in your shop and safety will become second-nature to you.



# Additional Safety Instructions for 6" x 10" Mini-Lathes

SAFETY



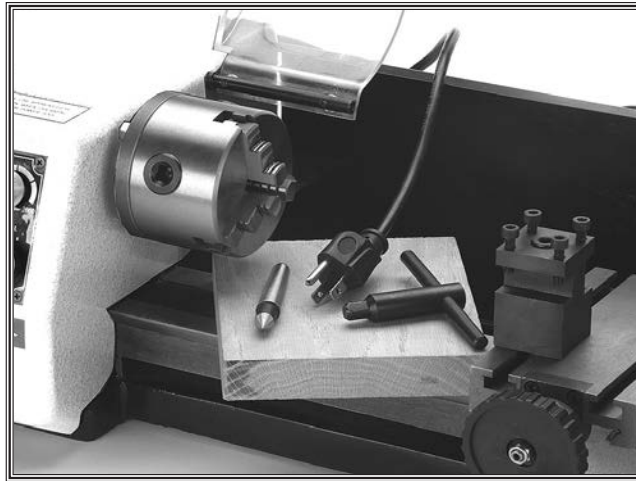
**! WARNING**  
 READ and understand this entire instruction manual before using this machine. Serious personal injury may occur if safety and operational information is not understood and followed. **DO NOT** risk your safety by not reading!

**! CAUTION**  
 USE this and other machinery with caution and respect. Always consider safety first, as it applies to your individual working conditions. No list of safety guidelines can be complete—every shop environment is different. Failure to follow guidelines could result in serious personal injury, damage to equipment or poor work results.

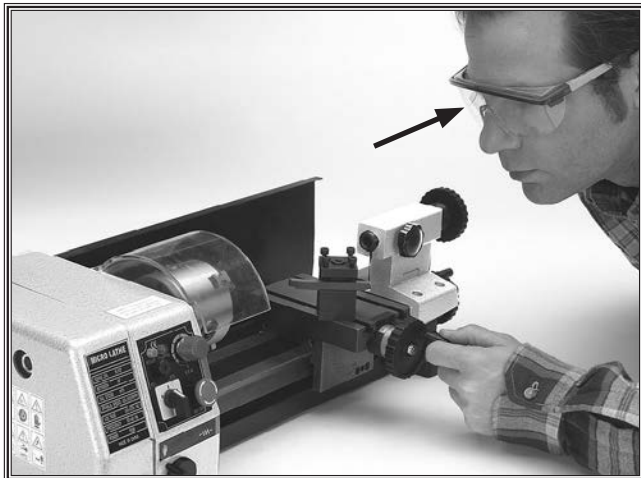
1. **LEARNING ABOUT THE LATHE.** Read and understand this manual before operating this machine.
2. **CLEANING THE LATHE.** Never clean chips by hand, use a brush, and never clear chips while the lathe is turning.
3. **USING LATHE CUTTING TOOLS.** Always use the right cutter for the job, and make sure they are sharp. The right tool decreases strain on the lathe components and provide a better finish.
4. **USING THE CHUCK KEY.** Always remove the chuck key after use, and never walk away from the lathe when the key is in the chuck.
5. **USING THE CHUCK.** Make sure the chuck securely holds the workpiece before starting lathe. A workpiece thrown from the chuck will severely injure you or a bystander.
6. **CHANGING GEARS.** The lathe must be turned **OFF** and the spindle brought to a complete stop before opening the gear cover and starting to change gears.
7. **PROTECTING YOUR FINGERS AND THE BEDWAY.** When removing the chuck, wear gloves and always place wood or rags on the bedway to protect it from the chuck if dropped.
8. **PREVENTING CHUCK CRASH.** Check tool and tool post clearance, chuck clearance, and saddle clearance, and make sure that the auto feed is disengaged before starting the lathe.
9. **AVOIDING MOTOR OVERLOAD.** Always use the appropriate feed and speed rates.
10. **AVOIDING HAND INJURY.** Keep hands clear of rotating chuck, and never attempt to slow or stop the lathe chuck by using your hand.
11. **OPERATING THE LATHE SAFELY.** Never walk away while the lathe is running, always turn it **OFF** first.
12. **AVOIDING HAIR AND CLOTHING ENTANGLEMENT.** Tie up long hair. Hair hanging down in a ponytail still poses a risk of entanglement with moving parts. Roll up or button loose sleeves, and tuck in loose shirts.



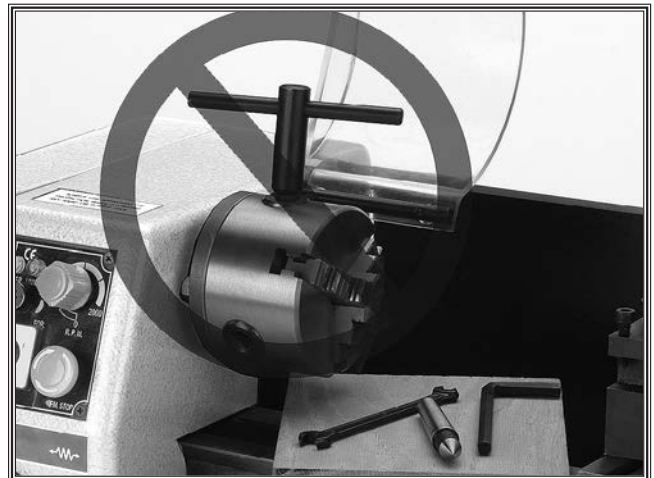
# Avoiding Potential Injuries



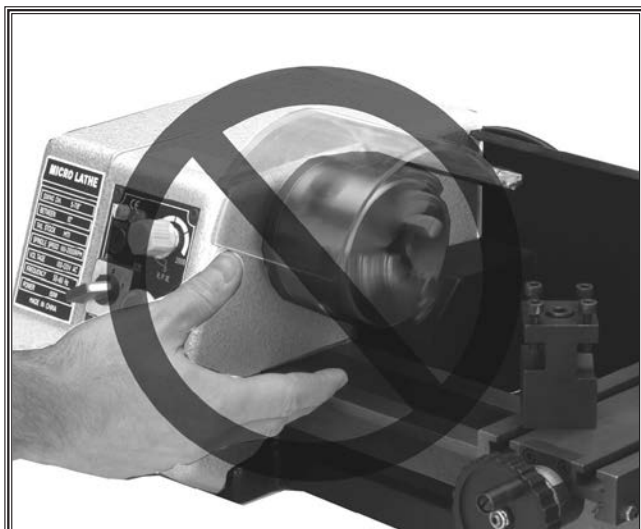
**Figure 1.** Always protect the bedways with wood when retooling, and unplug the lathe.



**Figure 2.** Always wear safety glasses when using the lathe.



**Figure 4.** Never leave chuck key inserted in the chuck.



**Figure 3.** Never attempt to use hands to stop the chuck after turning lathe **OFF**.



**Figure 5.** Never use the lathe with loose fitting clothing, or you may become entangled.

# ELECTRICAL

## 110V Operation

The SHOP FOX® Model M1015 is wired for 110 volt, single-phase operation. The motor supplied with your new 6" x 10" Mini-lathe is rated at 1/5 HP and draws approximately 1.2 amps. You will need a NEMA-style 5-15 plug and outlet (see Figure 6).

## Grounding

This machine must be grounded! Use a plug with a ground pin. If your outlet does not accommodate a ground pin, have it replaced by a qualified electrician or have an appropriate adapter installed and grounded properly. An adapter with a grounding wire does not guarantee the machine will be grounded. A ground source must be verified.

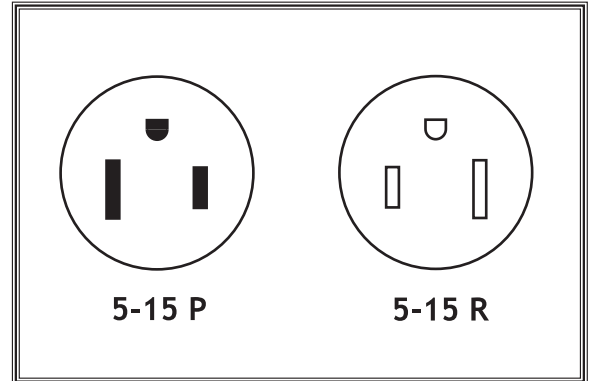
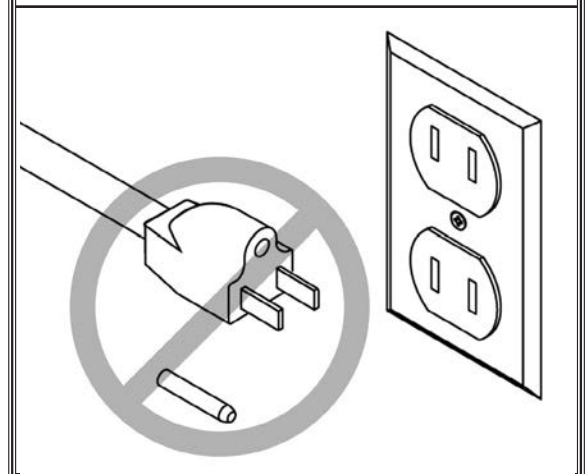


Figure 6. Typical 110V 15 Amp 3-prong plug and outlet.

## **⚠️ WARNING**

This equipment must be grounded. Verify that any existing electrical outlet and circuit you intend to plug into is actually grounded. If it is not, it will be necessary to run a separate 14 AWG copper grounding wire from the outlet to a known ground. Under no circumstances should the grounding pin be removed from any three-pronged plug or serious injury may occur.



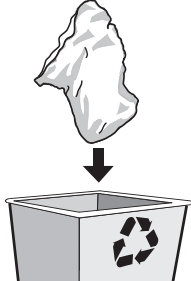
# SET UP

## Unpacking

The SHOP FOX® Model M1015 has been carefully packaged for safe transporting. If you notice the machine has been damaged, please contact your authorized SHOP FOX® dealer immediately.

## Inventory

If any parts are missing, find the part number in the back of this manual and contact Woodstock International, Inc. at (360) 734-3482 or at tech-support@shopfox.biz



**!WARNING**

**SUFFOCATION HAZARD!**


Immediately discard all plastic bags and packing materials to eliminate choking/suffocation hazards for children and animals.

The following is a description of the main components shipped with the SHOP FOX® Model M1015. Lay the components out to inventory them, and refer to the list below and **Figure 1**.

### Main Contents

|                                        |   |
|----------------------------------------|---|
| A. Hex Wrench (6mm).....               | 1 |
| B. Hex Wrench (4mm).....               | 1 |
| C. Hex Wrench (3mm).....               | 1 |
| D. Hex Wrench (2mm).....               | 1 |
| E. Spanner Wrench (28~32mm).....       | 1 |
| F. Crescent Tool Seat .....            | 1 |
| G. Tool Rest .....                     | 1 |
| H. Dead Center .....                   | 1 |
| I. Open-End Wrench (5.5mm x 7mm) ..... | 1 |
| J. Oil Container .....                 | 1 |
| K. T-Nut Assemblies.....               | 2 |
| L. Fuse (2 Amp) .....                  | 1 |
| M. Chuck Key.....                      | 1 |
| N. Change Gears .....                  | 9 |
| O. Three-Jaw Chuck .....               | 1 |
| P. Outside External Jaw #1 .....       | 1 |
| Q. Outside External Jaw #2 .....       | 1 |
| R. Outside External Jaw #3 .....       | 1 |
| S. Micro-Lathe (Not Shown).....        | 1 |

**!WARNING**



**READ** and understand this instruction manual before using this lathe. Serious personal injury may occur if safety and operational information is not understood and followed.

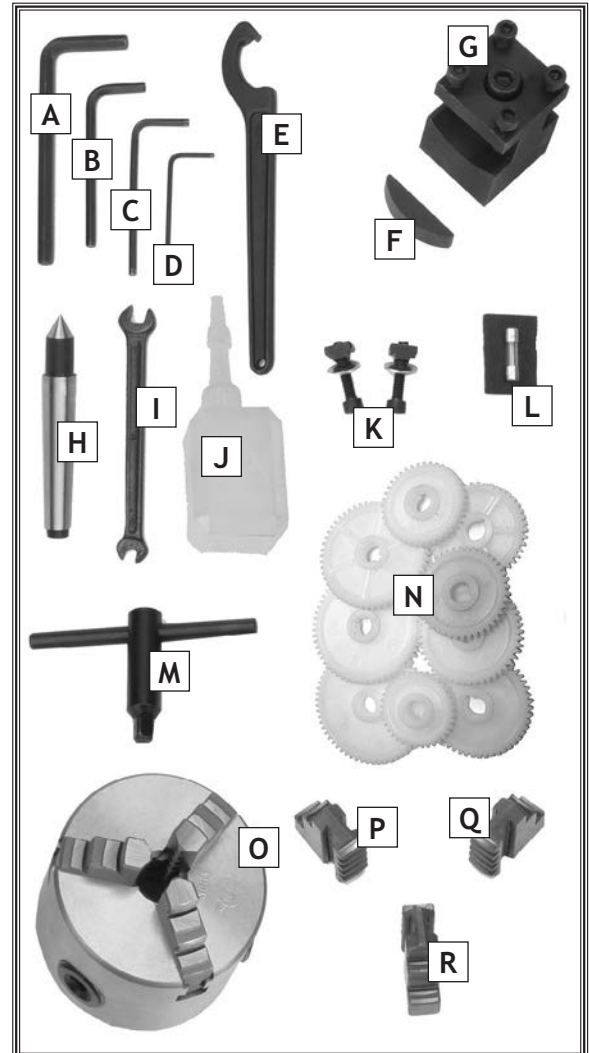


Figure 1. Inventory.

SETUP

# Cleaning the Lathe

The machined surfaces and other unpainted parts of your 6" x 10" Mini-Lathe are coated with a waxy grease that protects them from corrosion during shipment. Clean this grease off with a solvent cleaner or citrus-based degreaser. DO NOT use chlorine-based solvents such as brake parts cleaner or acetone—if you happen to splash some onto a painted surface, you will ruin the finish.



## CAUTION

ALWAYS work in well-ventilated areas far from possible ignition sources when using solvents to clean machinery. Many solvents are toxic when inhaled or ingested. Use care when disposing of waste rags and towels to be sure they DO NOT create fire or environmental hazards.

## WARNING



NEVER use flammables such as gas or other petroleum-based solvents to clean your machine. These products have low flash points and present the risk of explosion and severe personal injury!

# Machine Placement

- **Work Surface Load:** Your 6" x 10" Mini-Lathe weighs approximately 64 lbs. and has a 19-3/4" x 4" footprint. Considering the weight of the workpiece and other tools on the table, make sure the work surface can hold this total weight and the lathe is high enough so you do not have to lean over while using the machine.
- **Working Clearances:** Consider existing and anticipated needs, size of material to be processed through the machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your 6" x 10" Mini-Lathe (see Figure 2).
- **Lighting:** Lighting should be bright enough and positioned to eliminate shadow and prevent eye strain.
- **Electrical:** Electrical circuits must be dedicated or large enough to handle amperage requirements. Outlets must be located near each machine, so power or extension cords are clear of high-traffic areas. Follow local electrical codes for proper installation of new lighting, outlets, or circuits.

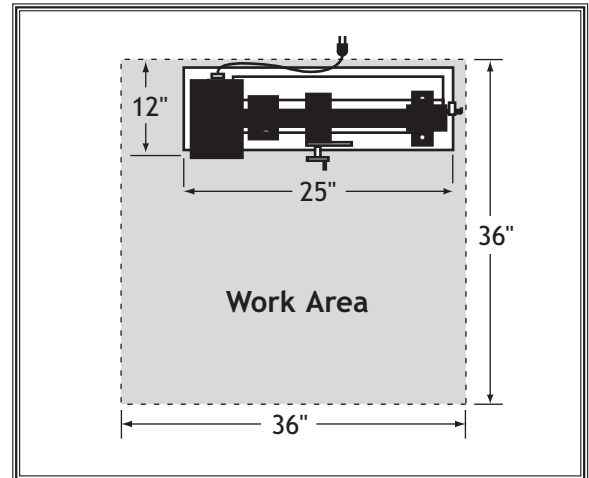


Figure 2. Minimum safe working clearances.

## WARNING



MAKE your shop "child safe." Ensure that your workplace is inaccessible to youngsters by closing and locking all entrances when you are away. NEVER allow untrained visitors in your shop when assembling, adjusting or operating equipment.

## Mounting the Lathe

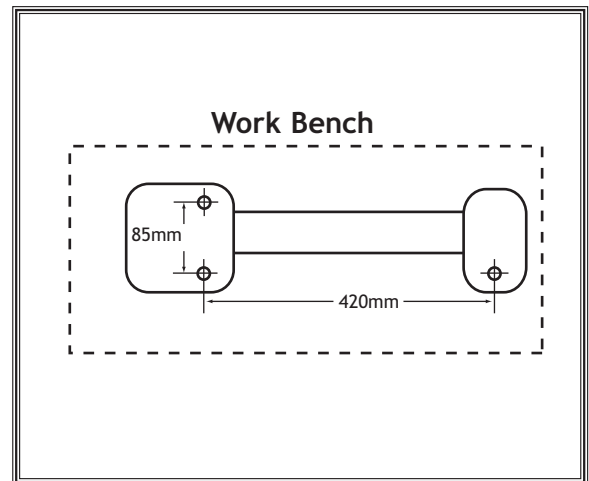
Bolt this lathe to a tool table or workbench. Refer to **Figure 3** for hole layout. Never use this lathe unless it is securely mounted to a stable surface.

For these steps, gather these items:

- Safety Glasses
- Drill
- 1/4" Drill Bit
- Center Punch
- Hex Bolt M6-1.0 (3)
- Flat Washer 6mm (3)

To mount the lathe to the workbench, do these steps:

1. Put on your safety glasses.
2. Position the lathe where you want it, keeping in mind the clearances suggested in **Figure 2**.
3. Transfer the bolt pattern from **Figure 3** to the workbench top with the center punch.
4. Drill three 1/4" mounting holes in the workbench top.
5. Position the lathe over the mounting holes and secure it to the workbench with the three washers, hex bolts of required length.



**Figure 3.** Drill pattern.

# Chuck Installation

Three-jaw chucks feature hardened steel jaws that self-center the workpiece within 0.002"-0.003". An extra set of jaws is included for machining larger workpieces.

The instructions listed below are written with the expectation that the operator has the necessary knowledge and skills for general lathe operations.

## CAUTION

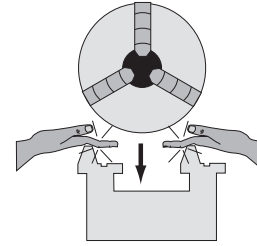
Install the chuck correctly. An improperly installed chuck may loosen and launch from the lathe, causing severe injury.

To install the three-jaw chuck, do these steps:

1. UNPLUG THE LATHE!
2. Lay a piece of plywood over the bedways to protect the precision ground surfaces from damage and to prevent your fingers from being pinched.
3. Using the 3mm hex wrench, make sure that the three mounting-flange retaining cap screws are tight (see Figure 4).
4. Invert the chuck, and make sure that the studs are tight and bottomed in the chuck with the 3mm hex wrench.
5. Measure the stud protrusion, and make sure that the studs extend at least 1/2" from the chuck when tight (see Figure 5).

If for any reason the studs do not protrude at least 1/2", contact Woodstock International for longer studs. Or for faster stud replacement, you can purchase three M6-1.0 x 25 set screws from a local hardware or automotive parts store.

## WARNING



**PINCH HAZARD!** Protect your hands and precision ground bedways with plywood when removing lathe chuck! The heavy weight of a falling chuck can cause serious injury.

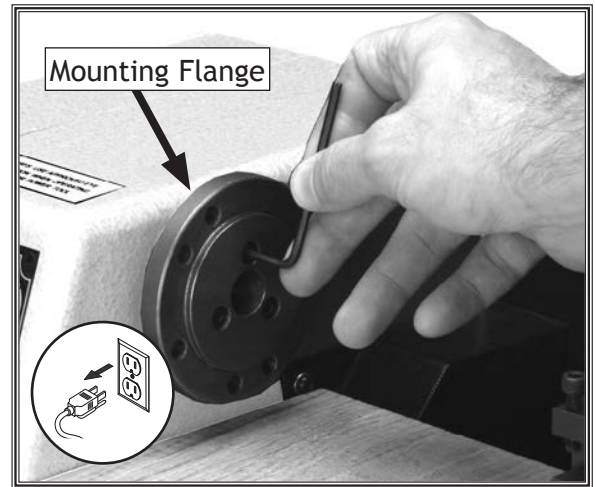


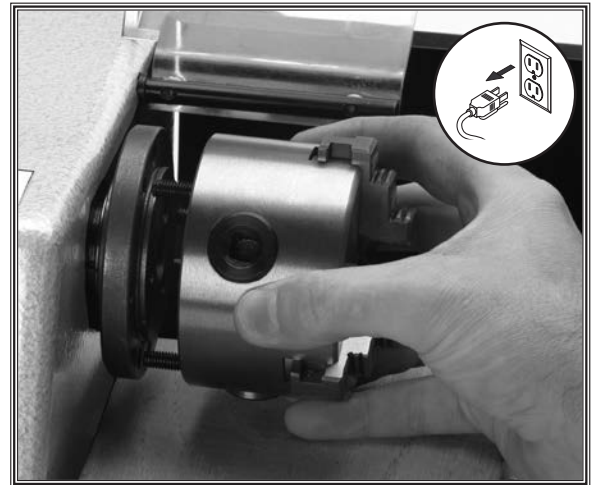
Figure 4. Tightening mounting flange.



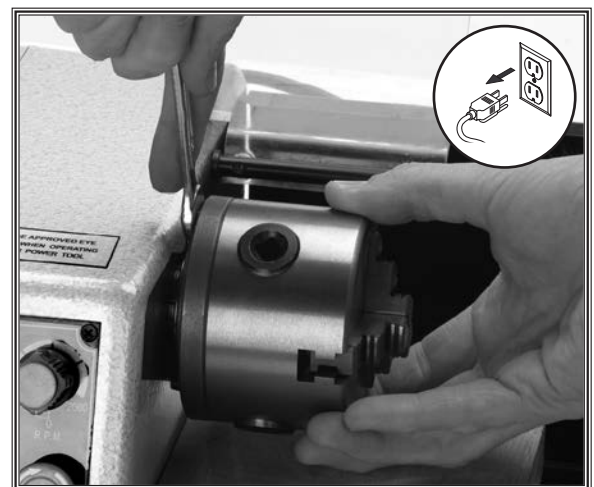
Figure 5. Checking stud protrusion.



6. Align and seat the chuck onto the chuck-mounting flange and install the three M6-1 hex nuts onto the studs (see **Figure 6**).
7. Using a 10mm wrench, tighten the hex nuts until snug (see **Figure 7**).
8. By hand, rotate the chuck and make sure the chuck is fully seated into the chuck mounting flange.



**Figure 6.** Positioning the chuck.



**Figure 7.** Tightening the chuck retaining hex nuts.

SETUP



# Replacing Jaws

The Model M1015 lathe chuck comes with two sets of hardened steel jaws. The outside jaws are used to hold the workpiece from the outer diameter. The inside jaws (Figure 8) are for holding larger work, usually from the inside diameter. The inside jaws can hold a workpiece from the outside when held in the central position.

The jaws are numbered 1-3 (Figure 8) and must be installed in this sequence as described below.

To install the three-jaw chuck, do these steps:

1. **UNPLUG THE LATHE!**
2. Lay a piece of plywood over the bedways to protect the precision bedways.
3. Insert the chuck key into the chuck, and turn counterclockwise until the chuck jaws slide from the chuck one at a time.
4. Turn the chuck key clockwise until you find the lead thread (see Figure 9).
5. Locate the alternate jaws 1, 2, and 3, and insert jaw #1 into the channel that is showing the lead thread (see Figure 9).
6. While holding inward pressure against the jaw, turn the chuck key clockwise until the jaw is engaged with the lead thread.
7. Moving in a counterclockwise direction, repeat Step 6 on jaw #2 and #3 (Figure 10) until all three jaws come together at the center of the chuck.

If the jaws do not come together evenly, repeat Steps 3 through 7 until the jaws do.

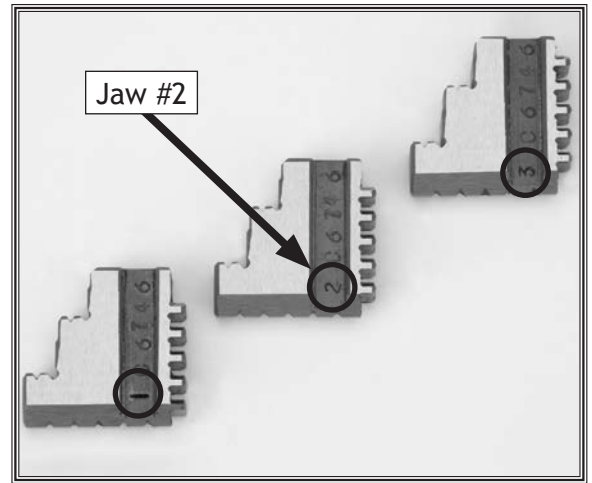


Figure 8. Extra chuck jaws, inside clamping type.

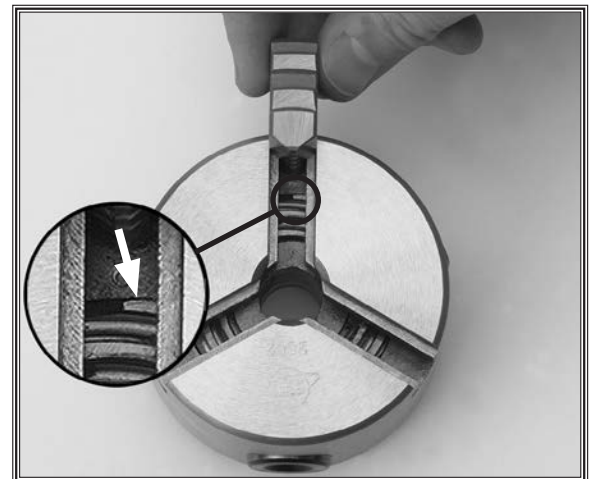


Figure 9. Lead thread and Jaw # 1.

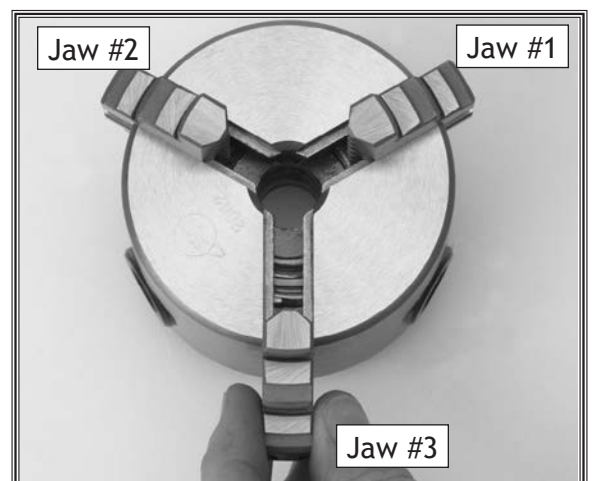


Figure 10. Lead thread coming in to view for jaw #3.

# Tailstock Alignment

The tailstock (Figure 13) of the Model M1015 lathe is used to support workpieces with the use of a live or dead center. When fitted with a drill chuck and an MT #1 arbor to mount the chuck to the tailstock, the chuck will hold a center drill to drill or bore holes in the center of a part.

The tailstock comes from the factory aligned with the spindle centerline. However, if you find that the tailstock is out of alignment, you will have to re-adjust it.

To align the tailstock, do these steps:

1. **UNPLUG THE LATHE!**
2. Remove the two cap screws, gib, and then the tailstock.
3. With the tailstock removed (Figure 11), use a 6mm hex wrench to loosen the base-to-tailstock cap screw.
4. Set the tailstock onto the bedway, and without the gibs, make sure the tailstock is against the bedway, and install a drill bit or dowel into the chuck.
5. Slide the tailstock to the dowel end, and adjust the tailstock so the dead center is aligned with the center of the dowel (see Figure 12).
6. Carefully remove the tailstock and base without changing the adjustment, and tighten the cap screw.
7. Reinstall the tailstock, and recheck the alignment.
  - If the alignment is off, repeat Steps 4 through 6 until the alignment is correct.
  - If the alignment is correct, reinstall the tailstock with the two cap screws and the gib (see Figure 13).

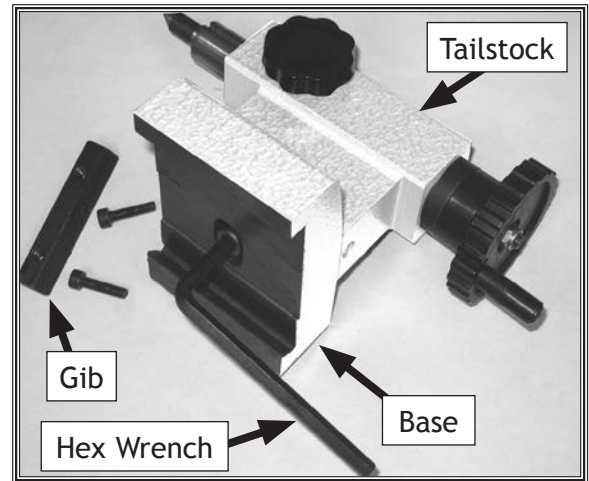


Figure 11. Removed tailstock.

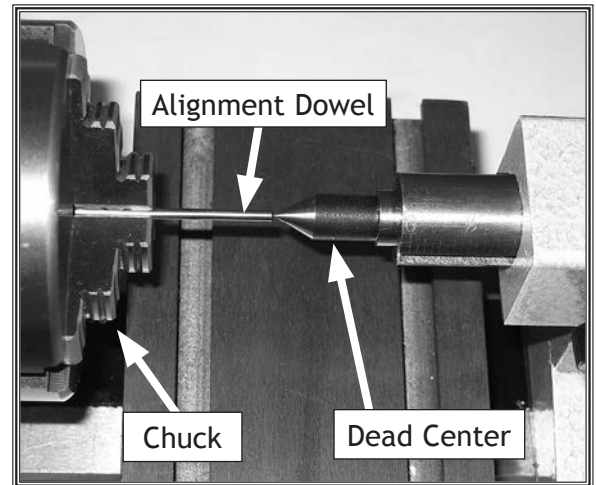


Figure 12. Alignment Dowel.

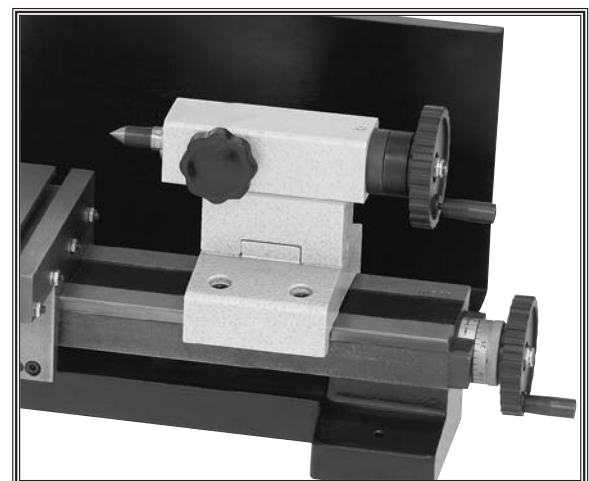


Figure 13. Tailstock installed.

## Centers

The Model M1015 lathe is supplied with a HSS MT#1 dead center. A live center, 4-jaw chuck, and other lathe accessories are available through your SHOP FOX® dealer.

The dead center is used in the tailstock to support workpieces. When used in the tailstock, make sure to keep the dead center point and workpiece lubricated with a dab of grease.

To install a dead or live center, do these steps:

1. Feed the quill out about 1/2" so that the dead center can be inserted.
2. Insert the dead center into the quill opening. Matching tapers provide the locking action (see **Figure 14**).
3. Move the tailstock into position and lock in place.
4. Feed the quill into the workpiece.

**Note:** Make sure there is a center drilled hole in the end of workpiece for the dead center. If a hole is not drilled, you will have to use a center drill.

5. Lock the quill into place once the live center and the part rotate together.

**Note:** The quill may need to be adjusted during operation.

**Note:** To remove the dead center, retract the quill until the dead center pops free.

### NOTICE

Failure to keep dead center point well lubricated will damage dead center and workpiece.

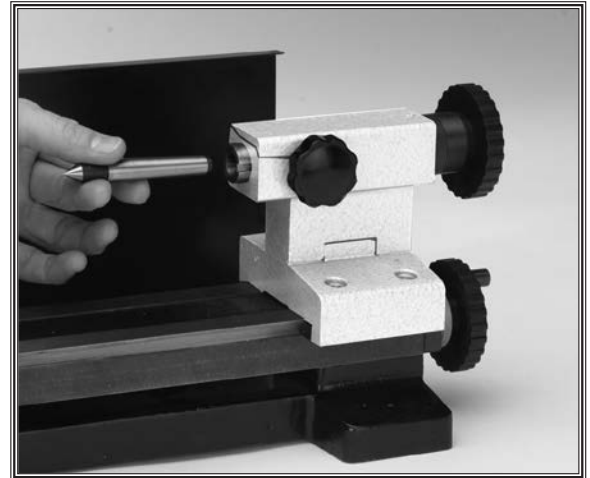


Figure 14. Inserting dead center.

# OPERATIONS

## General

The Model M1015 lathe will perform many types of operations that are beyond the scope of this manual. Many of these operations can 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!**

If you are an inexperienced operator, we strongly recommend that you read books, trade articles, or seek training from an experienced lathe operator before performing any unfamiliar operations. **Above all, your safety should come first!**

For basic lathe operation, these are the general sequence of events:

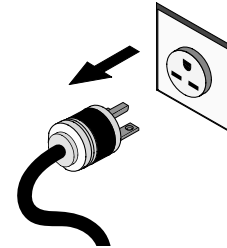
1. Read and understand this Instruction Manual.
2. Isolate the order of machining operations for your workpiece and determine the material type.
3. Select and inspect the cutting tool for sharpness and type of cut needed.
4. Select and set the lathe RPM.
5. Select and set the feed or threading gear ratios.
6. Follow all safety requirements.
7. Load the workpiece.
8. Index the tailstock into the workpiece and lock the tailstock in position.
9. Install and index the cutting tool near the workpiece.
10. Check for free clearance of all rotating parts, and begin lathe operation.

### WARNING



Always wear safety glasses when operating the 6" x 10" Mini-Lathe. Failure to comply may result in serious personal injury.

### WARNING



**DO NOT** investigate problems or adjust the 6" x 10" Mini-Lathe while it is running. Wait until the machine is turned off, unplugged and all working parts have come to a complete stop before proceeding!

# Test Run, Start-up, and Lathe Break-in

The purpose of the break-in procedure is to make sure the lathe is wired correctly and the motor is working properly, and to seat the bearings.

**NOTICE**

Failure to follow start up and spindle break-in procedures can damage the lathe spindle bearings.

To break-in the lathe, do these steps:

1. Put on your safety glasses.
2. Lower the chuck safety cover. **Note:** If this cover is open, the lathe will not operate.
3. Make sure the clutch knob (Figure 15) is turned to the manual position, and move the cross slide assembly to the far right away from the chuck.
4. Turn the speed dial (Figure 15) completely counter-clockwise to the "0" RPM selection.
5. Using the rotation selector knob (Figure 15), select the "F" (forward) position.
6. Plug the lathe in, and the green light should be lit (see Figure 16).

If the light is not lit, and you know that you have power to the lathe, turn the emergency stop switch clockwise until it pops out and the light illuminates.

7. Turn the speed dial until the spindle just begins to turn smoothly, and let the lathe run at this speed for one minute.
  - If the orange light (Figure 16) illuminates or the spindle fails to turn, the fuse could be missing, so install the spare fuse.
8. Turn the speed dial to the mid setting and let the lathe run for two minutes.
9. Turn the speed dial to the maximum RPM setting and let the lathe run for two minutes, and then turn **OFF** the lathe. The spindle is now broken-in properly.

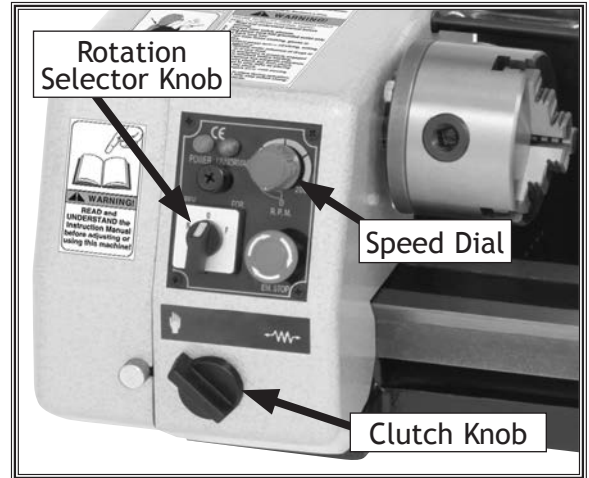


Figure 15. Lathe control panel.

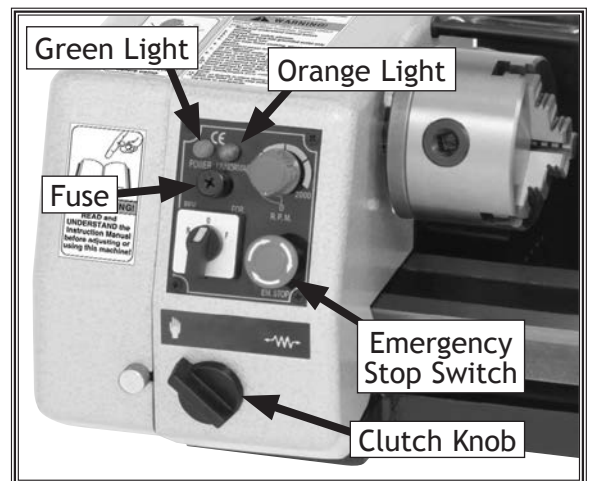


Figure 16. Lathe control panel.



## Loading a Workpiece

This lathe comes with a 3-jaw chuck which will hold most workpieces. For more holding options, a 4-jaw chuck and face plate are available through your SHOP FOX® dealer.

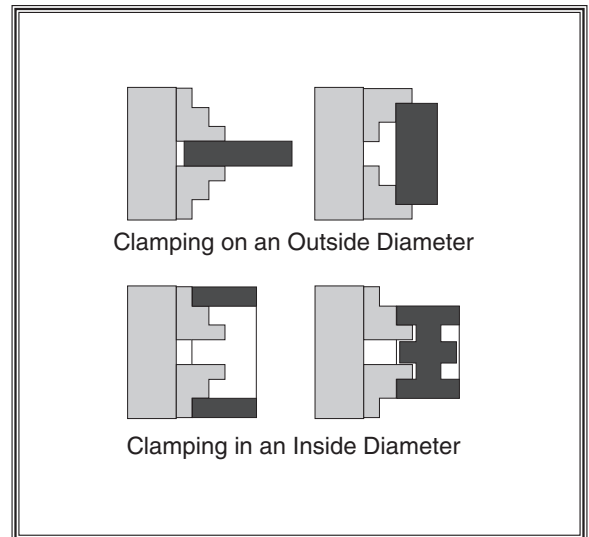
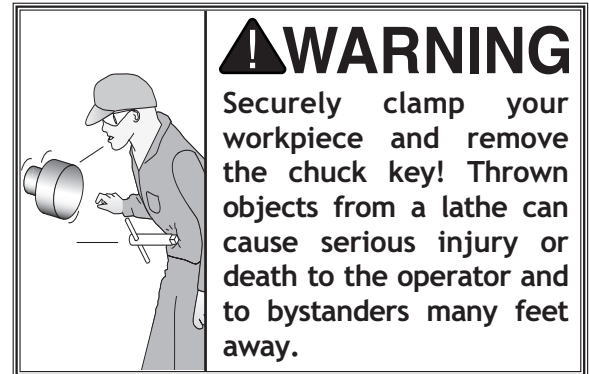
To load a workpiece, do these steps:

1. With the chuck key, open the jaws so the workpiece lays flat against the chuck face and jaw step, or fits in the through hole. For jaw and work holding options, see **Figure 17**.
2. Turn the chuck by hand to make sure you have even contact with all three jaws and the workpiece is not off-center.
  - If the workpiece is off-center, loosen the jaws and adjust the workpiece.
  - If the workpiece is seated correctly, tighten the chuck key until all jaws clamp the workpiece tightly.

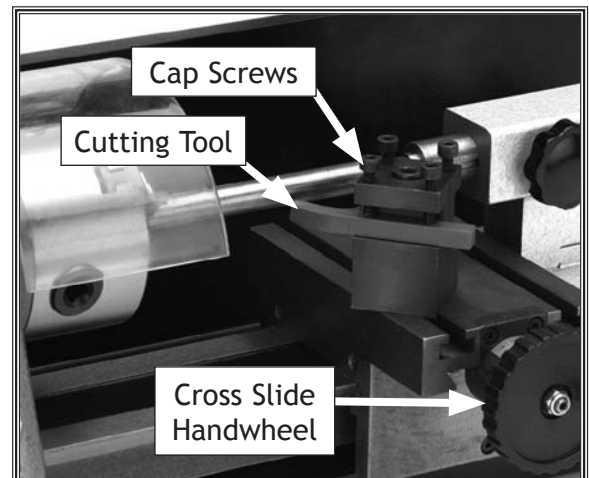
## Using the Cross Slide and Tool Holder

The cross slide handwheel (**Figure 18**) has a graduated dial for 0.001" feed increments and controls the in and out movement of the cross slide table. The cross slide table has T-nut slots for mounting cutting accessories that are available through your SHOP FOX® dealer.

The adjustable tool holder, which can hold a variety of cutters, is mounted on the cross slide table with a T-nut assembly. The horizontal angle of cut is adjusted by loosening the 6mm T-nut cap screw and rotating the tool holder. The vertical angle of cut is adjusted by loosening the tool holder cap screws and tilting the tool and adjustable crescent.



**Figure 17.** Chuck jaw application.



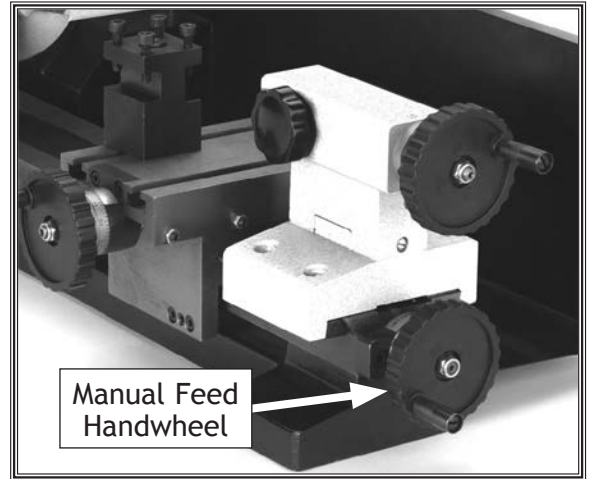
**Figure 18.** Cross slide and tool holder.

# Auto and Manual Feed

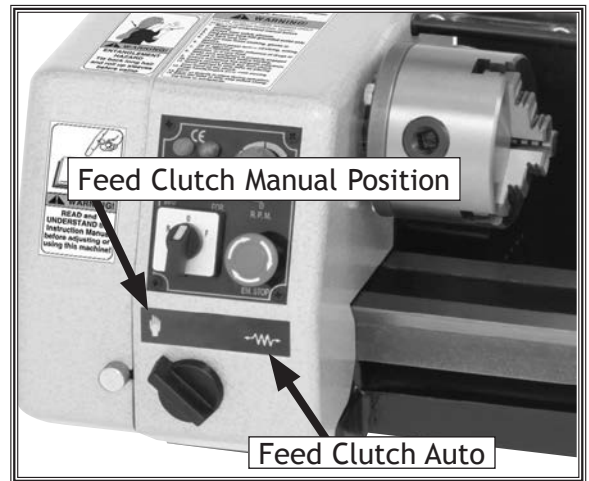
The manual feed handwheel moves the carriage left or right along the bed. This control is helpful when setting up the machine for turning or when manual movement is desired during turning operations (see **Figure 19**).

The feed clutch allows you to engage and disengage the feed from automatic to manual feed (see **Figure 20**).

**Note:** Sometimes, when shifting the feed clutch knob from manual to auto feed, you must turn the manual feed handwheel slightly so the gear teeth will engage the lead screw; otherwise a butt-tooth condition will exist and the gears will grind when the lathe is started.



**Figure 19.** Manual feed control.



**Figure 20.** Feed clutch positions.



# Setting RPM

To determine the needed cutting RPM, do these steps:

1. Use the table in Figure 21 to determine the cutting speed required for the material of your workpiece.

**⚠️ WARNING**

Failure to follow RPM and feed rate guidelines may threaten operator safety from ejected parts or broken tools.

2. Determine the final diameter, in inches, for the cut you are about to take.
3. Use the following formula to determine the needed RPM for your operation:

$$(\text{Cutting Speed} \times 4) / \text{Diameter of cut} = \text{RPM}$$

4. When you are ready to cut, turn the speed dial to your selected RPM (see Figure 22).

| Workpiece Material | Cutting Speed (sfm) |
|--------------------|---------------------|
| Aluminum & alloys  | 300                 |
| Brass & Bronze     | 150                 |
| Copper             | 100                 |
| Cast Iron, soft    | 80                  |
| Cast Iron, hard    | 50                  |
| Mild Steel         | 90                  |
| Cast Steel         | 80                  |
| Alloy Steel, hard  | 40                  |
| Tool Steel         | 50                  |
| Stainless Steel    | 60                  |
| Titanium           | 50                  |
| Plastics           | 300-800             |
| Wood               | 300-500             |

**Note:** For carbide cutting tools, double the cutting speed. These values are a guideline only. Refer to the *MACHINERY'S HANDBOOK* for more detailed information.

Figure 21. Cutting speed table for HSS cutting tools.

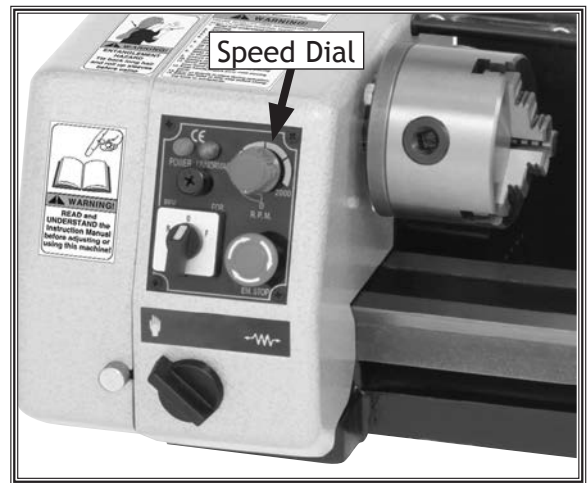


Figure 22. Speed Dial.

# TPI and Gear Selection

The Model M1015 lathe can cut threads of 16, 18, 19, 20, and 24 threads per inch (TPI). Below are instructions for selecting the gear ratios to cut your needed thread TPI.

**! WARNING**

Failure to follow RPM and threading guidelines may threaten operator safety by ejecting parts or broken tools.

To change gear ratios to cut threads, do these steps:

1. Determine the needed TPI.
2. Examine the gear ratio threading chart shown in **Figure 23**, and select the needed gear ratios.

**Note:** In some TPI selections, gears on the shafts are not meshed. These gears merely act as spacers to press against the meshed gear. For example, in the 16 TPI selection, the 24-tooth gear is acting as a spacer to hold the 50-tooth gear. The lines between the numbers indicate which gears mesh.

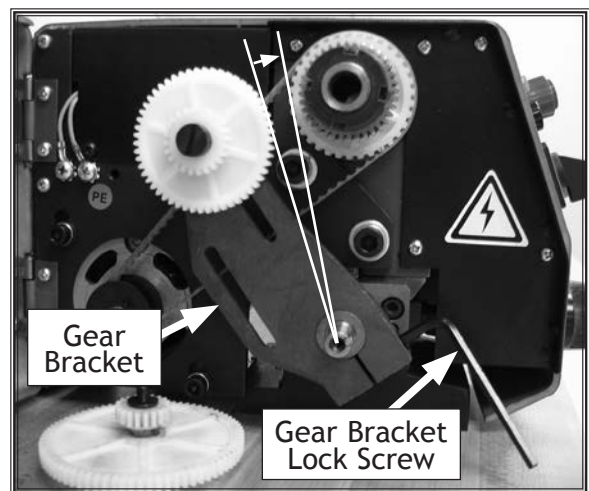
3. **UNPLUG THE LATHE!**
4. Remove the appropriate gear(s), and install the selected gear(s). You must make sure that the gears have a slight backlash (looseness) between all teeth that mesh with each other. If a piece of note paper can be fed between the meshed gear teeth, this gap has sufficient backlash. Otherwise, the machine will be noisy, and gear life will be reduced.

**Note:** In most cases it is necessary to move the gear bracket so you can mesh the new gears together with the correct backlash. Use a 4mm hex wrench to loosen the gear bracket lock screw shown in **Figure 24**, and reposition the gear bracket.

5. Rotate the chuck by hand and observe the gearing operation. Look for any problems with incorrect backlash and meshing. Re-adjust as required.
6. If all is well, close the gearbox safety cover and secure it shut.

| Location | 16 TPI | 18 TPI |
|----------|--------|--------|
| W =      | 36     | 36     |
| Z1 =     | 24 50  | 24 42  |
| Z2 =     | 60-48  | 40-36  |
| Z3 =     | 45     | 45     |
| Location | 19 TPI | 20 TPI |
| W =      | 36     | 36     |
| Z1 =     | 24-42  | 24-42  |
| Z2 =     | 60 57  | 48 60  |
| Z3 =     | 45     | 36     |
| Location | 24 TPI |        |
| W =      | 36     |        |
| Z1 =     | 24 32  |        |
| Z2 =     | 40 50  |        |
| Z3 =     | 54     |        |

**Figure 23.** Gear ratio threading chart (TPI = Teeth per-inch).



**Figure 24.** Gear Bracket Adjustment.

# Feed Rate and Gear Selection

The Model M1015 lathe has two available feed rates which move the apron 0.002" and 0.004" per each revolution of the workpiece. These two feed rates will be sufficient for general turning. Below are instructions for selecting the gear ratios to achieve either feed rate. A slower feed rate will give a better finish.

**⚠ WARNING**

Failure to follow RPM and feed rate guidelines may threaten operator safety by ejecting parts or broken tools.

To set the feed rate to 0.002" or 0.004" per revolution, do these steps:

1. Determine the needed feed rate.
2. Examine the gear ratio feed chart shown in **Figure 25**, and select the needed gear ratios.
3. **UNPLUG THE LATHE!**
4. Remove the appropriate gear(s), and install the selected gear(s). You must make sure that the gears have a slight backlash (looseness) between all teeth that mesh with each other. If a piece of note paper can be fed between the meshed gear teeth, this gap has sufficient backlash. Otherwise, the machine will be noisy, and gear life will be reduced.

**Note:** In most cases it is necessary to move the gear bracket so you can mesh the new gears together with the correct backlash. Use a 4mm hex wrench to loosen the gear bracket lock screw shown in **Figure 26**, and reposition the gear bracket.

5. Rotate the chuck by hand and observe the gearing operation. Look for any problems with incorrect backlash and meshing. Re-adjust as required.
6. If all is well, close the gearbox safety cover and secure it shut.

| Location | Feed Rate 0.002" | Feed Rate 0.004" |
|----------|------------------|------------------|
| W =      | 36               | 36               |
| Z1 =     | 24-72            | 24-54            |
| Z2 =     | 76-19            | 60-19            |
| Z3 =     | 90               | 76               |

Figure 25. Gear ratio feed chart.

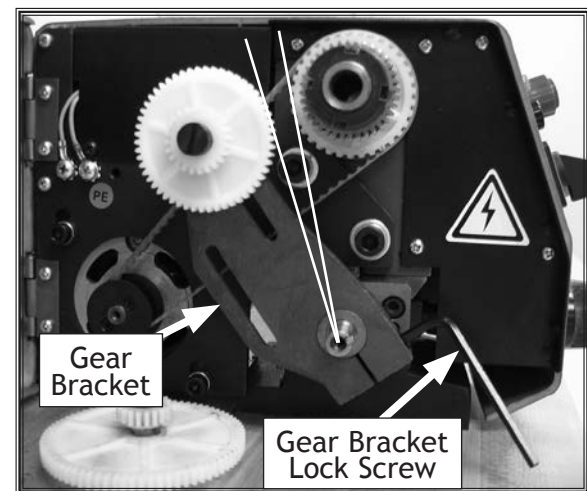


Figure 26. Gear Bracket Adjustment.

OPERATIONS

# MAINTENANCE

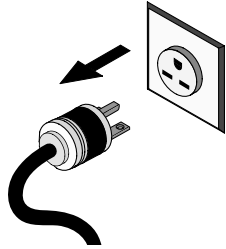
## General

Regular periodic maintenance on your SHOP FOX® Model M1015 will ensure its optimum performance. Make a habit of inspecting your machine each time you use it.

Check for the following conditions and repair or replace when necessary:

- Loose chuck mounting nuts.
- Worn switch or faulty safety features.
- Worn or damaged cords and plugs.
- Damaged drive belt.
- Loose or damaged gearing.
- Any other condition that could hamper the safe operation of this machine.

**⚠ WARNING**



**MAKE SURE** that your machine is unplugged during all maintenance procedures! If this warning is ignored, serious personal injury may occur.

## Cleaning and Lubrication

Make sure to unplug the lathe before cleaning it. Chips and drops of some cutting fluids left on machined surfaces will rust your machine. Clean and lubricate all machined metal surfaces and parts often. Remove chips as they accumulate. Preventative measures like this will help keep your lathe running smoothly.

# SERVICE

## General

This section covers the most common service adjustments or procedures that may need to be made during the life of your machine.

If you require additional machine service not included in this section, please contact Woodstock International Technical Support at 360-7343482, or send e-mail to: [tech-support@shopfox.biz](mailto:tech-support@shopfox.biz).

## Cross Feed and Saddle Backlash

The amount of backlash can be found by turning the cross slide handwheel in one direction, and then turning the handwheel the other direction. When the cross slide begins to move, the backlash is indicated by the amount of handwheel free movement before it begins to move the cross slide. During the life of your lathe, you may find it necessary to remove backlash that may develop in the cross slide. This service check and adjustment also applies to the saddle and manual feed handwheel.

To remove excessive backlash in the cross feed or saddle, do these steps:

1. Loosen the gib screw jam nuts on the cross slide or saddle (see Figure 27).
2. Using a 2mm hex wrench in an alternating pattern, carefully tighten the gib screws slightly until the backlash is just removed. Do not overtighten the gib screws or the ways and lead screws will wear prematurely.
3. Test after each adjustment until the backlash is removed and the handwheels are easily turned.
4. Hold the gib screws, and snug the jam nuts.

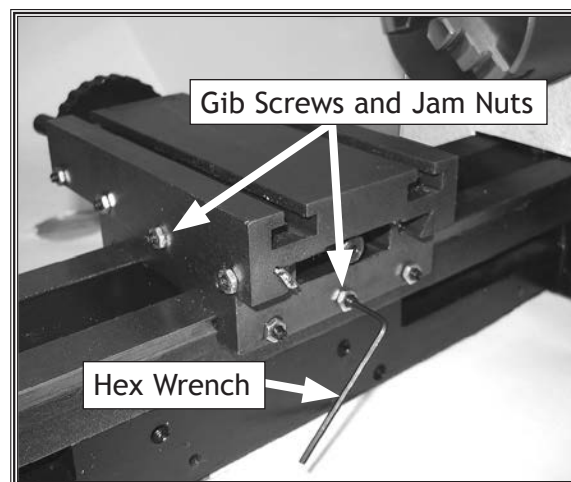
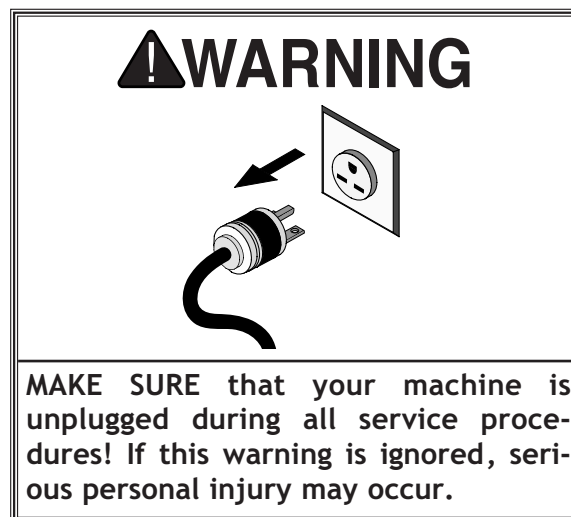


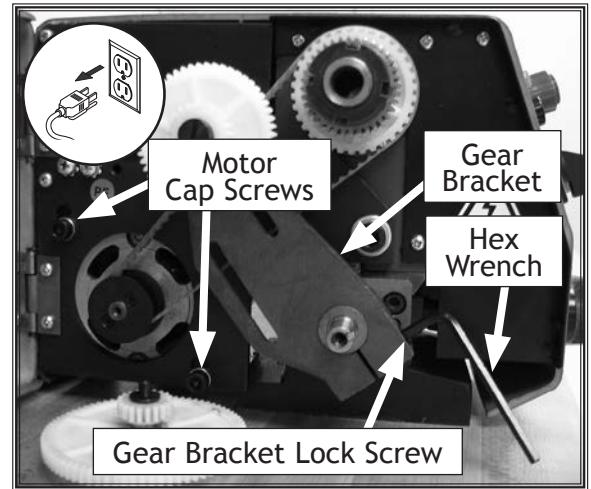
Figure 27. Gib adjustment locations.

# Replacing Belt

The belt on this lathe should last the life of the machine. However, should you need to replace the belt for any reason, the process is very simple.

To replace the belt on the lathe, do these steps:

1. **UNPLUG THE LATHE!**
2. Open the end cover door.
3. Using a 4mm hex wrench, loosen the gear bracket lock screw, and let the gear bracket fall away from the drive position (see **Figure 7**).
4. Using a 5mm hex wrench, loosen the motor cap screws (**Figure 7**) and remove the belt.
5. Install the new belt, making sure the belt lugs mesh with the pulley lug grooves.
6. Adjust and tighten the motor cap screws so the belt has approximately  $\frac{1}{4}$ " of deflection in the middle when pushed slightly.
7. Reposition the gear bracket so the gears are meshed with slight backlash, and tighten the gear bracket lock screw.
8. Close gearbox safety cover.



**Figure 7.** Belt adjustments.



# Replacing Motor Brushes

Should you ever need to replace the motor brushes, do these steps:

1. UNPLUG THE LATHE!
2. Unscrew four Phillips screws and remove the splash guard.
3. Unscrew two brush holders and replace the brushes in the brush bore (see **Figure 28**).
4. Reinstall the brush holders and the splash guard.

# Replacing Electrical Controls

The following is a list of the electrical components that control motor operation. Electrical repairs are made by unplugging the lathe, removing the control panel or the circuit board panel, and replacing the electrical part at fault. Refer to the list below for description and part number, and see **Figures 29** and **30** for part location.

- A. Fwd/N/Rev Control Switch (XM1015168) .....1
- B. Green Power Light (XM1015169) .....1
- C. Orange Reset Light (XM1015172).....1
- D. Fuse and Holder (XM1015170) .....1
- E. Spindle Speed Control Dial (XM1015166) .....1
- F. Emergency Stop Switch (XM1015167) .....1
- G. Motor Speed Circuit Board (XM1015153).....1
- H. Chuck Guard Safety Micro Switch (XM1015131) .....1

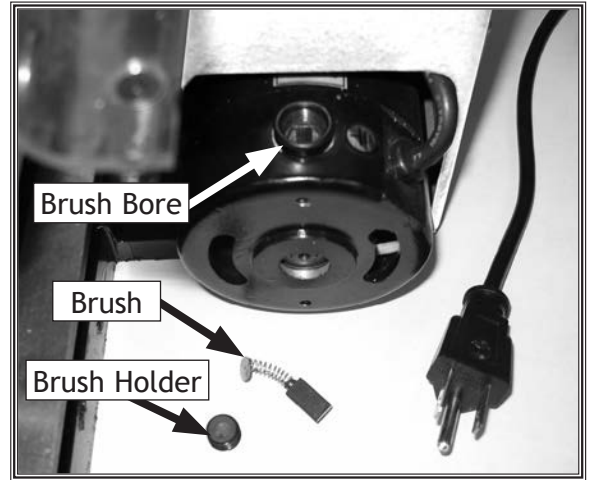


Figure 28. Motor brush and holder.

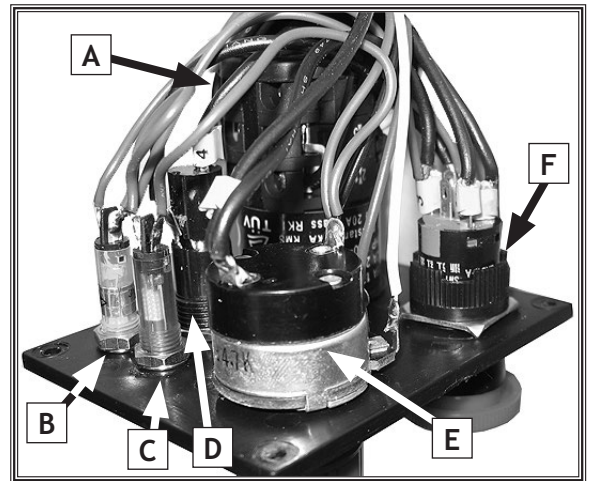


Figure 29. Control panel electrical.

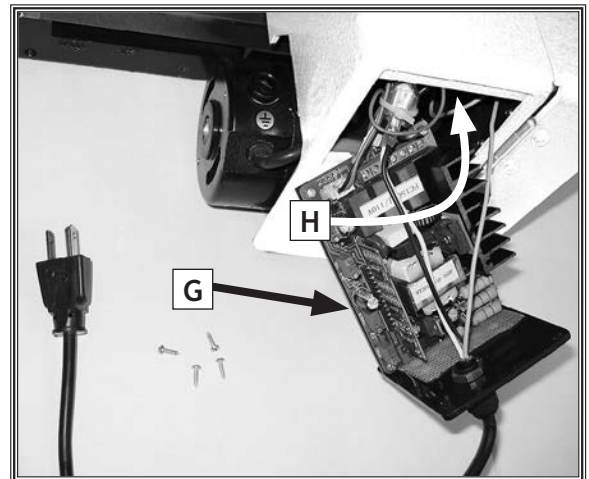
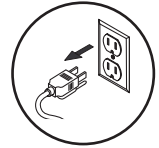


Figure 30. Motor speed circuit board.

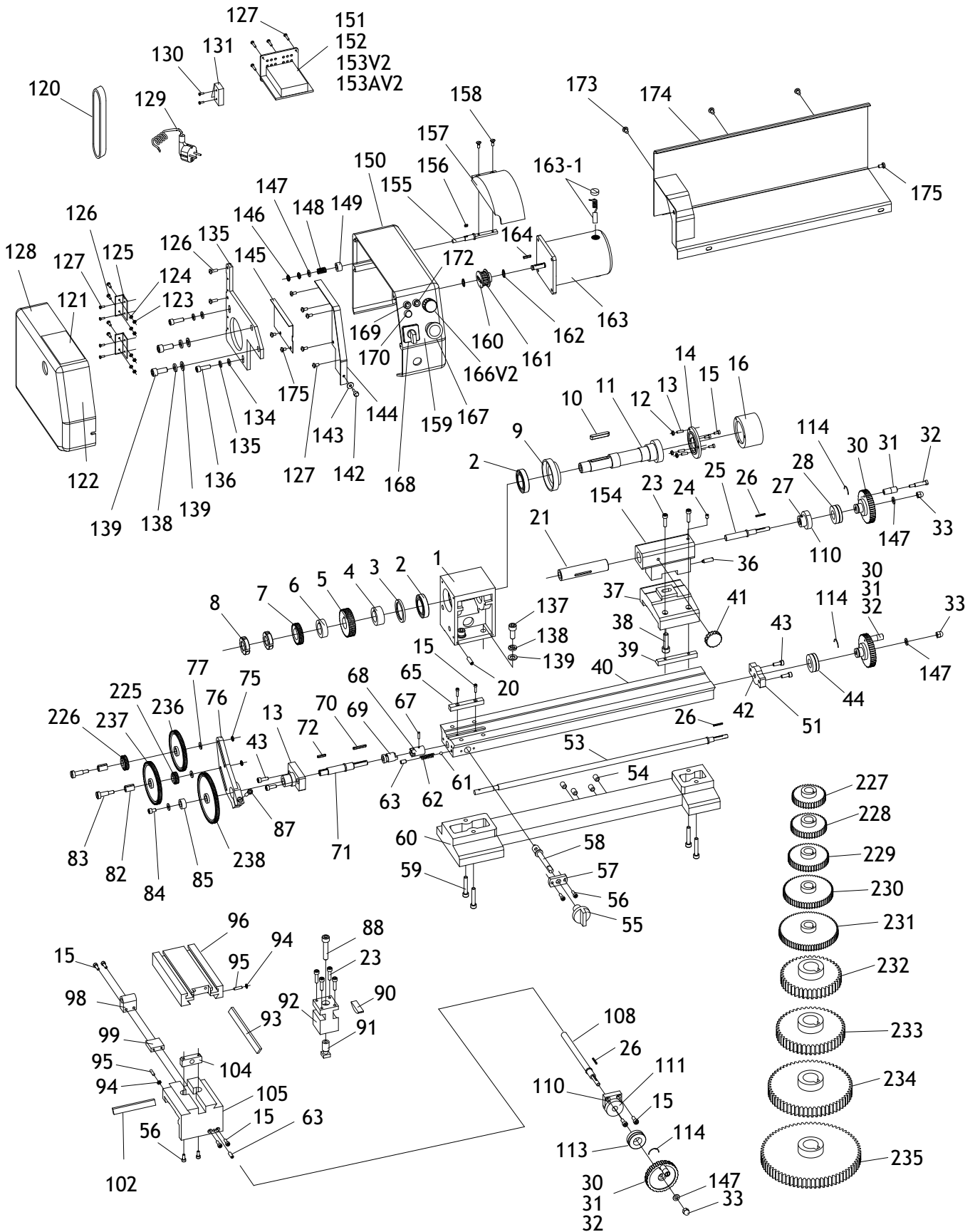


# Troubleshooting

This section covers the most common symptoms and corrections with this type of machine. **WARNING! DO NOT** make any adjustments until power is disconnected and moving parts have come to a complete stop!



| SYMPTOM                                                   | POSSIBLE CAUSE                                                                                                                                                                                                           | CORRECTIVE ACTION                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor will not start.                                     | <ol style="list-style-type: none"> <li>1. Chuck safety cover is open.</li> <li>2. No power</li> <li>3. Low voltage.</li> <li>4. Open circuit in motor or loose connections.</li> <li>5. Faulty brush.</li> </ol>         | <ol style="list-style-type: none"> <li>1. Close the chuck safety cover.</li> <li>2. Pull out the red emergency stop switch button, replace fuse or close circuit breaker.</li> <li>3. Check power supply for proper voltage.</li> <li>4. Inspect all lead connections on motor for loose or open connections.</li> <li>5. Replace brushes.</li> </ol> |
| Fuses or circuit breakers trip open.                      | <ol style="list-style-type: none"> <li>1. Short circuit in line cord or plug.</li> <li>2. Short circuit in circuit board, control, or motor.</li> <li>3. Incorrect fuses or circuit breakers in power supply.</li> </ol> | <ol style="list-style-type: none"> <li>1. Inspect cord or plug for damaged insulation and shorted wires and replace extension cord.</li> <li>2. Inspect all connections on motor for loose or shorted terminals or worn insulation and repair.</li> <li>3. Install correct fuses or circuit breakers.</li> </ol>                                      |
| Motor overheats.                                          | <ol style="list-style-type: none"> <li>1. Motor overloaded.</li> <li>2. Air circulation through the motor restricted.</li> </ol>                                                                                         | <ol style="list-style-type: none"> <li>1. Reduce load on motor.</li> <li>2. Clean out motor to provide normal air circulation.</li> </ol>                                                                                                                                                                                                             |
| Cross feed or manual feed handwheel has sloppy operation. | <ol style="list-style-type: none"> <li>1. Gibs are out of adjustment.</li> <li>2. Handwheel is loose.</li> <li>3. Lead screw mechanism worn or out of adjustment.</li> </ol>                                             | <ol style="list-style-type: none"> <li>1. Tighten gib screw(s) slightly, and lubricate bedways.</li> <li>2. Tighten handwheel fasteners.</li> <li>3. Tighten any loose fasteners on lead screw mechanism.</li> </ol>                                                                                                                                  |
| Cross feed or manual feed handwheel is hard to move.      | <ol style="list-style-type: none"> <li>1. Gibs are loaded up with shavings.</li> <li>2. Gibs are too tight.</li> <li>3. Bedways are dry.</li> </ol>                                                                      | <ol style="list-style-type: none"> <li>1. Remove gibs, clean shavings from bedways and dovetails, lubricate, and readjust gibs.</li> <li>2. Loosen gib screw(s) slightly, and lubricate bedways.</li> <li>3. Lubricate bedways and handles.</li> </ol>                                                                                                |
| Loud, repetitious noise coming from machine.              | <ol style="list-style-type: none"> <li>1. Gears not aligned in headstock or no backlash.</li> <li>2. Broken gear or bad bearing.</li> <li>3. Workpiece is hitting stationary object.</li> </ol>                          | <ol style="list-style-type: none"> <li>1. Adjust gears and establish backlash.</li> <li>2. Replace broken gear or bearing.</li> <li>3. Stop lathe immediately and correct interference problem.</li> </ol>                                                                                                                                            |
| Machine bogs down during operation.                       | <ol style="list-style-type: none"> <li>1. Excessive depth of cut.</li> <li>2. RPM or feed rate wrong for cutting operation.</li> <li>3. Dull cutter.</li> <li>4. Bad motor or brush.</li> </ol>                          | <ol style="list-style-type: none"> <li>1. Decrease depth of cut.</li> <li>2. Refer to RPM feed rate chart for appropriate rates.</li> <li>3. Sharpen or replace cutter.</li> <li>4. Replace brushes or motor.</li> </ol>                                                                                                                              |
| Tailstock quill will not feed out of tailstock.           | <ol style="list-style-type: none"> <li>1. Quill lock knob is tightened down.</li> </ol>                                                                                                                                  | <ol style="list-style-type: none"> <li>1. Turn knob counterclockwise.</li> </ol>                                                                                                                                                                                                                                                                      |
| Bad surface finish.                                       | <ol style="list-style-type: none"> <li>1. Wrong RPM or feed rate.</li> <li>2. Dull tooling or poor tool selection.</li> <li>3. Too much play in gibs.</li> </ol>                                                         | <ol style="list-style-type: none"> <li>1. Adjust for appropriate RPM and feed rate.</li> <li>2. Sharpen tooling or select a better tool for the intended operation.</li> <li>3. Tighten gibs.</li> </ol>                                                                                                                                              |
| Can't remove tapered tool from quill.                     | <ol style="list-style-type: none"> <li>1. Quill had not retracted all the way back into the tailstock.</li> <li>2. Debris was not removed from taper before inserting into quill.</li> </ol>                             | <ol style="list-style-type: none"> <li>1. Turn the quill handwheel until it forces taper out of quill.</li> <li>2. Always make sure that taper surfaces are clean.</li> </ol>                                                                                                                                                                         |



# Parts List

| REF | PART #    | DESCRIPTION                  |
|-----|-----------|------------------------------|
| 1   | XM1015001 | SPINDLE BOX                  |
| 2   | XM1015002 | TAPERED ROLLER BEARING 30205 |
| 3   | XM1015003 | OIL SEAL                     |
| 4   | XM1015004 | SPACING RING (II)            |
| 5   | XM1015005 | SPINDLE TIMING PULLEY        |
| 6   | XM1015006 | SPACING RING (I)             |
| 7   | XM1015007 | SPINDLE GEAR                 |
| 8   | XM1015008 | SPANNER NUT M8-1.5           |
| 9   | XM1015009 | FRONT OIL SEAL               |
| 10  | XM1015010 | KEY 6 X 6 X 36               |
| 11  | XM1015011 | SPINDLE                      |
| 12  | XM1015012 | HEX NUT M6-1                 |
| 13  | XM1015013 | SET SCREW M6-1 X 25          |
| 14  | XM1015014 | CHUCK FLANGE                 |
| 15  | XM1015015 | CAP SCREW M4-.7 X 12         |
| 16  | XM1015016 | 3-JAW CHUCK 80MM             |
| 20  | XM1015020 | SET SCREW M5-.8 X 20         |
| 21  | XM1015021 | TAILSTOCK QUILL              |
| 23  | XM1015023 | CAP SCREW M5-.8 X 20         |
| 24  | XM1015024 | SET SCREW M5-.8 X 25         |
| 25  | XM1015025 | TAILSTOCK LEADSCREW          |
| 26  | XM1015026 | KEY 3 X 3 X 10               |
| 27  | XM1015027 | LEADSCREW BASE               |
| 28  | XM1015028 | SPACER                       |
| 30  | XM1015030 | HANDWHEEL                    |
| 31  | XM1015031 | HANDWHEEL HANDLE             |
| 32  | XM1015032 | HANDLE STEP BOLT             |
| 33  | XM1015033 | ACORN NUT M6-1.25            |
| 36  | XM1015036 | SET SCREW M6-1 X 20          |
| 37  | XM1015037 | BASE PLATE                   |
| 38  | XM1015038 | CAP SCREW M8-1.25 X 35       |
| 39  | XM1015039 | WEDGE                        |
| 40  | XM1015040 | BED LEAD RAIL                |
| 41  | XM1015041 | LOCK HANDLE                  |
| 42  | XM1015042 | LEADSCREW BRACKET            |
| 43  | XM1015043 | CAP SCREW M5-.8 X 14         |
| 44  | XM1015044 | GRADUATED DIAL               |
| 51  | XM1015051 | SCALE LABEL (II)             |
| 53  | XM1015053 | LEADSCREW                    |
| 54  | XM1015054 | SET SCREW M8-1.25 X 12       |
| 55  | XM1015055 | CLUTCH ROTATE KNOB           |
| 56  | XM1015056 | CAP SCREW M4-.7 X 10         |
| 57  | XM1015057 | DAM-BOARD                    |
| 58  | XM1015058 | UNPLUG SHAFT                 |
| 59  | XM1015059 | CAP SCREW M6-1 X 35          |
| 60  | XM1015060 | BED BASE                     |
| 61  | XM1015061 | STEEL BALL 5MM               |
| 62  | XM1015062 | COMPRESSION SPRING           |
| 63  | XM1015063 | SET SCREW M6-1 X 10          |
| 65  | XM1015065 | GIB                          |
| 67  | XM1015067 | ROLL PIN 3 X 14              |
| 68  | XM1015068 | CLUTCH BRACKET               |
| 69  | XM1015069 | CLUTCH                       |

| REF | PART #    | DESCRIPTION                        |
|-----|-----------|------------------------------------|
| 70  | XM1015070 | KEY 3 X 3 X 22                     |
| 71  | XM1015071 | SHAFT                              |
| 72  | XM1015072 | KEY 6 X 6 X 14                     |
| 75  | XM1015075 | HEX NUT M5-.8                      |
| 76  | XM1015076 | SUPPORT PLATE                      |
| 77  | XM1015077 | FLAT WASHER 4MM                    |
| 82  | XM1015082 | GEAR SLEEVE                        |
| 83  | XM1015083 | GEAR SHAFT                         |
| 84  | XM1015084 | CAP SCREW 5/16-18 X 1              |
| 85  | XM1015085 | SPACING RING                       |
| 87  | XM1015087 | CAP SCREW M5-.8 X 25               |
| 88  | XM1015088 | CAP SCREW M8-1.25 X 40             |
| 90  | XM1015090 | CRESCENT SEAT                      |
| 91  | XM1015091 | TOOL REST SHAFT                    |
| 92  | XM1015092 | TOOL REST                          |
| 93  | XM1015093 | CROSS SLIDE WEDGE                  |
| 94  | XM1015094 | HEX NUT M4-.7                      |
| 95  | XM1015095 | SET SCREW M4-.7 X 16               |
| 96  | XM1015096 | CROSS SLIDE                        |
| 98  | XM1015098 | LEADSCREW NUT                      |
| 99  | XM1015099 | CONNECT BLOCK                      |
| 102 | XM1015102 | GIB STRIP                          |
| 104 | XM1015104 | CROSS SLIDE NUT                    |
| 105 | XM1015105 | SADDLE                             |
| 108 | XM1015108 | CROSS SLIDE LEADSCREW              |
| 110 | XM1015110 | SCALE LABEL (I)                    |
| 111 | XM1015111 | LEADSCREW BRACKET                  |
| 113 | XM1015113 | GRADUATED DIAL                     |
| 114 | XM1015114 | INDICATOR PLATE                    |
| 120 | XM1015120 | TIMING BELT 1.5 X 83 X 10          |
| 121 | XM1015121 | MACHINE ID LABEL                   |
| 122 | XM1015122 | READ MANUAL LABEL                  |
| 123 | XM1015123 | HEX NUT M4-.7                      |
| 124 | XM1015124 | FLAT WASHER 4MM                    |
| 125 | XM1015125 | HINGE                              |
| 126 | XM1015126 | CAP SCREW M4-.7 X 12               |
| 127 | XM1015127 | CAP SCREW M4-.7 X 8                |
| 128 | XM1015128 | CHANGE GEAR COVER                  |
| 129 | XM1015129 | POWER PLUG                         |
| 130 | XM1015130 | CHUCK GUARD MICRO SWITCH SCREW     |
| 131 | XM1015131 | CHUCK GUARD MICRO SWITCH           |
| 134 | XM1015134 | FLAT WASHER 6MM                    |
| 135 | XM1015135 | LOCK WASHER 6MM                    |
| 136 | XM1015136 | CAP SCREW M6-1 X 20                |
| 137 | XM1015137 | CAP SCREW M8-1.25 X 20             |
| 138 | XM1015138 | LOCK WASHER 8MM                    |
| 139 | XM1015139 | FLAT WASHER 8MM                    |
| 142 | XM1015142 | SUPPORT PLATE THUMBSCREW M4-.7 X 8 |
| 143 | XM1015143 | SUPPORT PLATE WASHER               |
| 144 | XM1015144 | SUPPORT PLATE                      |
| 145 | XM1015145 | PHLP HD SCR M5-.8 X 12             |
| 146 | XM1015146 | HEX NUT M6-1                       |

# Parts List

| REF    | PART #       | DESCRIPTION                                |
|--------|--------------|--------------------------------------------|
| 147    | XM1015147    | FLAT WASHER 6MM                            |
| 148    | XM1015148    | COMPRESSION SPRING                         |
| 149    | XM1015149    | SPACING RING                               |
| 150    | XM1015150    | SPINDLE BOX COVER                          |
| 151    | XM1015151    | PC BOARD BOX                               |
| 152    | XM1015152    | LOCK CONNECT                               |
| 153V2  | XM1015153V2  | PC BOARD XMT-1115 V2.09.08                 |
| 153AV2 | XM1015153AV2 | PC BOARD XMT-1115 W/SOLDERED DIAL V2.09.08 |
| 154    | XM1015154    | TAILSTOCK CASTING                          |
| 155    | XM1015155    | SPINDLE                                    |
| 156    | XM1015156    | KEY 3 X 3 X 6                              |
| 157    | XM1015157    | CHUCK GUARD                                |
| 158    | XM1015158    | CAP SCREW M4-.7 X 8                        |
| 159    | XM1015159    | SWITCH LABEL                               |
| 160    | XM1015160    | HUB                                        |
| 161    | XM1015161    | TIMING PULLEY                              |
| 162    | XM1015162    | CHECK RING 8MM                             |
| 163    | XM1015163    | MOTOR 1/5HP 110V 1-PH                      |
| 163-1  | XM1015163-1  | MOTOR BRUSH AND HOLDER                     |
| 164    | XM1015164    | KEY 3 X 3 X 16                             |
| 166V2  | XM1015166V2  | VARIABLE SPEED DIAL W/3 WIRES V2.09.08     |
| 167    | XM1015167    | E-STOP BUTTON                              |

| REF | PART #    | DESCRIPTION                |
|-----|-----------|----------------------------|
| 168 | XM1015168 | FORWARD/OFF/REVERSE SWITCH |
| 169 | XM1015169 | GREEN LAMP                 |
| 170 | XM1015170 | FUSE AND HOLDER            |
| 172 | XM1015172 | ORANGE LAMP ASSY           |
| 173 | XM1015173 | CAP SCREW 5/16-18 X 1      |
| 174 | XM1015174 | REAR SPLASH GUARD          |
| 175 | XM1015175 | SPACING RING               |
| 225 | XM1015225 | CHANGE GEAR 19T            |
| 226 | XM1015226 | CHANGE GEAR 24T            |
| 227 | XM1015227 | CHANGE GEAR 36T            |
| 228 | XM1015228 | CHANGE GEAR 40T            |
| 229 | XM1015229 | CHANGE GEAR 42T            |
| 230 | XM1015230 | CHANGE GEAR 45T            |
| 231 | XM1015231 | CHANGE GEAR 48T            |
| 232 | XM1015232 | CHANGE GEAR 50T            |
| 233 | XM1015233 | CHANGE GEAR 54T            |
| 234 | XM1015234 | CHANGE GEAR 57T            |
| 235 | XM1015235 | CHANGE GEAR 60T            |
| 236 | XM1015236 | CHANGE GEAR 72T            |
| 237 | XM1015237 | CHANGE GEAR 76T            |
| 238 | XM1015238 | CHANGE GEAR 90T            |

# Notes

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# Warranty

Woodstock International, Inc. warrants all SHOP FOX® machinery to be free of defects from workmanship and materials for a period of two years from the date of original purchase by the original owner. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, lack of maintenance, or reimbursement of third party expenses incurred.

Woodstock International, Inc. will repair or replace, at its expense and at its option, the SHOP FOX® machine or machine part which in normal use has proven to be defective, provided that the original owner returns the product prepaid to the SHOP FOX® factory service center or authorized repair facility designated by our Bellingham, WA office, with proof of their purchase of the product within two years, and provides Woodstock International, Inc. reasonable opportunity to verify the alleged defect through inspection. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Woodstock International Inc.'s warranty, then the original owner must bear the cost of storing and returning the product.

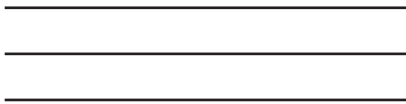
This is Woodstock International, Inc.'s sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant that SHOP FOX® machinery complies with the provisions of any law or acts. In no event shall Woodstock International, Inc.'s liability under this warranty exceed the purchase price paid for the product, and any legal actions brought against Woodstock International, Inc. shall be tried in the State of Washington, County of Whatcom. We 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.

Every effort has been made to ensure that all SHOP FOX® machinery meets high quality and durability standards. We reserve the right to change specifications at any time because of our commitment to continuously improve the quality of our products.





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BELLINGHAM, WA 98227-2309



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