MODEL G8690
VARIABLE SPEED WOOD LATHE
OWNER'S MANUAL

#DS3299 PRINTED IN CHINA.

⚠ WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

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

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

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

⚠ 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.

Table of Contents

INTRODUCTION

Foreword

We are proud to offer the Model G8690 Variable Speed Wood Lathe. This machine is part of a growing Grizzly family of fine woodworking machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

The specifications, drawings, and photographs illustrated in this manual represent the Model G8690 when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly. For your convenience, we always keep current Grizzly manuals available on our website at **www.grizzly.com**. Any updates to your machine will be reflected in these manuals as soon as they are complete. Visit our site often to check for the latest updates to this manual!

Contact Info

We stand behind our machines. If you have any service questions, parts requests or general questions about the machine, please call or write us at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com

If you have any comments regarding this manual, please write to us at the address below:

Grizzly Industrial, Inc.
C/O Technical Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

Functional Overview

A wood lathe is used to turn wood stock. The primary components of the wood lathe are the headstock, the tailstock, and the tool rest.

For most turning procedures, a round or nearly-round workpiece is clamped between the headstock spur center and the tailstock live center. The tool rest is positioned to provide stability to the chisel or other cutting tool while it is pressed into the workpiece. The lathe is turned **ON**, which causes the spindle to rotate. Pressing the cutting tool into the workpiece while it is turning cuts grooves around the circumference of the stock. Moving the cutting tool along the length of the workpiece allows the user to shape the workpiece into perfect cylinders, tapers, and intricate designs.

Another option is faceplate turning. Faceplate turning is be used to create plates, bowls, and other shallow or open-faced forms. In this method, the tailstock is moved completely out of the way and the workpiece is attached to the faceplate on the headstock. Again, the tool rest is positioned to provide support to the cutting tool.

Once a rough shape is created on the lathe, it can be sanded smooth by moving the tool rest out of the way and carefully sanding along the length of the workpiece while the lathe is rotating.

To allow for greater versatility, the spindle speed can be adjusted by turning the speed adjustment knob on the control panel.

MACHINE DATA SHEET

Customer Service #: (570) 546-9663 · To Order Call: (800) 523-4777 · Fax #: (800) 438-5901

MODEL G8690 VS WOOD LATHE

Product Dimensions:

Weight..... 35 lbs.
Length/Width/Height.....37-1/4 x 9-3/4 x 9-1/4 in.
Foot Print (Length/Width)..... 37 x 9-1/4 in.

Shipping Dimensions:

Type..... Cardboard
Content..... Machine
Weight..... 40.65 lbs.
Length/Width/Height..... 11 x 27 x 11 in.

Electrical:

Switch..... Push Button with Variable Speed Dial
Switch Voltage..... 110V
Cord Length..... 6 ft.
Cord Gauge.....18 gauge
Recommended Breaker Size..... 10 amp
Plug..... Yes

Motors:

Main

Type..... TEFC Capacitor Start Induction
Horsepower.....1/3 HP
Voltage.....110V
Prewired.....110V
Phase..... Single
Amps.....3.1A
Speed.....0 - 3025 RPM
Cycle.....60 Hz
Number Of Speeds..... Variable
Power Transfer ..... Belt Drive
Bearings..... Shielded and Lubricated

Main Specifications:

Operation Information

Swing Over Bed..... 6-1/4 in.
Dist Between Centers.....20 in.
Swing Over Gap.....6-1/4 in.
Swing Over Tool Rest..... 3-1/8 in.
Range Of Spindle Speeds..... 0 - 3025 RPM
Floor To Center Height.....6-5/8 in.

Spindle Information

Spindle Type..... Right Hand
Spindle Taper.....MT#1
Spindle Size..... 3/4 in.
Spindle Center.....Spur
Spindle TPI.....10

Tailstock Information

Tailstock Taper	MT#1
Tailstock Center	Live

Construction

Bed Construction	1.26" Precision Steel Tubing
Frame Construction	Cast Iron
Headstock Construction	Cast Iron
Tailstock Construction	Cast Iron
Paint	Epoxy

Other Related Information

Bed Width	3-1/4 in.
Faceplate Size	4 in.

Other Specifications:

Country Of Origin	China
Warranty	1 Year
Serial Number Location	Top of Headstock
Assembly Time	20 minutes

Features:

Variable Speed
Tubular Steel Bed
Cast Headstock and Tailstock

Accessories Included:

Live Center
Spur Center
Tool Rest

SECTION 1: SAFETY

⚠WARNING

For Your Own Safety, Read Instruction Manual Before Operating this Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.

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

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

⚠CAUTION **Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.**

NOTICE **This symbol is used to alert the user to useful information about proper operation of the machine.**

⚠WARNING

Safety Instructions for Machinery

1. **READ THE ENTIRE MANUAL BEFORE STARTING MACHINERY.** Machinery presents serious injury hazards to untrained users.
2. **ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY.** Everyday eyeglasses only have impact resistant lenses—they are NOT safety glasses.
3. **ALWAYS WEAR A NIOSH APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST.** Most types of dust (wood, metal, etc.) can cause severe respiratory illnesses.
4. **ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY.** Machinery noise can cause permanent hearing loss.
5. **WEAR PROPER APPAREL.** DO NOT wear loose clothing, gloves, neckties, rings, or jewelry that can catch in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
6. **NEVER OPERATE MACHINERY WHEN TIRED OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Be mentally alert at all times when running machinery.

⚠WARNING
Safety Instructions for Machinery

7. **ONLY ALLOW TRAINED AND PROPERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY.** Make sure operation instructions are safe and clearly understood.

8. **KEEP CHILDREN AND VISITORS AWAY.** Keep all children and visitors a safe distance from the work area.

9. **MAKE WORKSHOP CHILDPROOF.** Use padlocks, master switches, and remove start switch keys.

10. **NEVER LEAVE WHEN MACHINE IS RUNNING.** Turn power ***OFF*** and allow all moving parts to come to a complete stop before leaving machine unattended.

11. **DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.

12. **KEEP WORK AREA CLEAN AND WELL LIGHTED.** Clutter and dark shadows may cause accidents.

13. **USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.** Grounded cords minimize shock hazards. Undersized cords create excessive heat. Always replace damaged extension cords.

14. **ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY**. Make sure switch is in OFF position before reconnecting.

15. **MAINTAIN MACHINERY WITH CARE.** Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16. **MAKE SURE GUARDS ARE IN PLACE AND WORK CORRECTLY BEFORE USING MACHINERY.**

17. **REMOVE ADJUSTING KEYS AND WRENCHES.** Make a habit of checking for keys and adjusting wrenches before turning machinery ***ON***.

18. **CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY.** Check for binding or misaligned parts, broken parts, loose bolts, and any other conditions that may impair machine operation. Repair or replace damaged parts before operation.

19. **USE RECOMMENDED ACCESSORIES.** Refer to the instruction manual for recommended accessories. Improper accessories increase risk of injury.

20. **DO NOT FORCE MACHINERY.** Work at the speed for which the machine or accessory was designed.

21. **SECURE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.

22. **DO NOT OVERREACH.** Maintain stability and balance at all times.

23. **MANY MACHINES CAN EJECT WORKPIECES TOWARD OPERATOR.** Know and avoid conditions that cause the workpiece to "kickback."

24. **ALWAYS LOCK MOBILE BASES (IF USED) BEFORE OPERATING MACHINERY**.

25. **CERTAIN DUST MAY BE HAZARDOUS** to the respiratory systems of people and animals, especially fine dust. Be aware of the type of dust you are exposed to and always wear a respirator designed to filter that type of dust.

⚠WARNING
Additional Safety for Wood Lathes

1. **KEEPING GUARDS IN PLACE.** Make sure all guards are in place and that the lathe sits on a flat, stable surface.

2. **EYE/FACE PROTECTION.** Always wear eye protection or a face shield when operating the lathe.

3. **RESPIRATORY PROTECTION.** Always wear a respirator when using this machine. Wood dust may cause allergies or long-term respiratory health problems.

4. **MOUNTING WORKPIECE.** Before starting, be certain the workpiece has been properly imbedded on the headstock and tailstock centers and that there is adequate clearance for the full rotation.

5. **ADJUSTING TOOL REST.** Adjust tool rest to provide proper support for the turning tool you will be using. Test tool rest clearance by rotating workpiece by hand before turning lathe ***ON***.

6. **TURNING SPEED.** Select the correct turning speed for your work, and allow the lathe to gain full speed before using.

7. **USING SHARP CHISELS.** Keep lathe chisels properly sharpened and held firmly in position when turning.

8. **OPERATING DAMAGED LATHE.** Never operate the lathe with damaged or worn parts.

9. **WORKPIECE CONDITION.** Always inspect the condition of your workpiece. DO NOT turn pieces with knots, splits, and other potentially dangerous conditions. Make sure joints of glued-up pieces have high quality bonds and won't fly apart during operation.

10. **ADJUSTMENTS/MAINTENANCE.** Make sure your wood lathe is turned ***OFF***, disconnected from its power source, and all moving parts have come to a complete stop before starting any inspection, adjustment, or maintenance procedure.

11. **STOPPING LATHE.** DO NOT stop the lathe by using your hand against the workpiece. Allow the lathe to stop on its own.

12. **AVOIDING ENTANGLEMENT.** Keep long hair and loose clothing articles such as sleeves, belts, and jewelry items away from the lathe spindle.

13. **FACEPLATE TURNING.** When faceplate turning, use lathe chisels on the downward spinning side of the workpiece only.

14. **SANDING/POLISHING.** Remove the tool rest when performing sanding or polishing operations on the rotating spindle.

15. **MATERIAL REMOVAL RATE.** Attempting to remove too much material at once may cause workpiece to fly out of the lathe.

⚠WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

⚠CAUTION

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

SECTION 2: CIRCUIT REQUIREMENTS

110V Operation

⚠WARNING

Serious personal injury could occur if you connect the machine to power before completing the setup process. DO NOT connect the machine to the power until instructed later in this manual.

⚠WARNING

Electrocution or fire could result if machine is not grounded and installed in compliance with electrical codes. Compliance MUST be verified by a qualified electrician!

Full Load Amperage Draw

This machine draws the following amps under maximum load:

Amp Draw.....9 Amps

Power Supply Circuit Requirements

You MUST connect your machine to a grounded circuit that is rated for the amperage given below. Never replace a circuit breaker on an existing circuit with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes. **If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, consult a qualified electrician.**

Minimum Circuit Size.....15 Amps

Power Connection Device

The Model G8690 comes with a 5-15 plug, similar to **Figure 1**, to connect the machine to power.

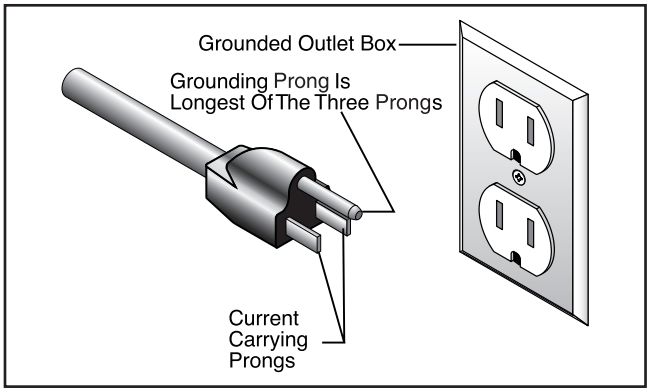
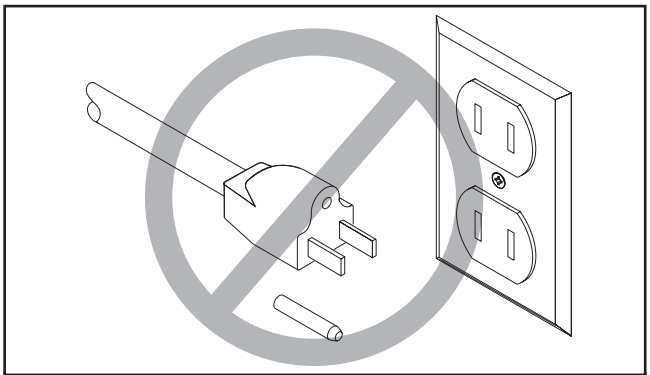


Figure 1. Typical 5-15 plug and receptacle.



⚠CAUTION

This machine MUST have a ground prong in the plug to help ensure that it is grounded. DO NOT remove ground prong from plug to fit into a two-pronged outlet! If the plug will not fit the outlet, have the proper outlet installed by a qualified electrician.

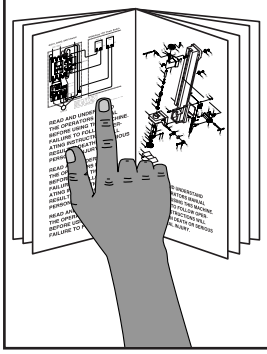
Extension Cords

We do not recommend using extension cords, but if you find it absolutely necessary:

- Use at least a 14 gauge cord that does not exceed 50 feet in length!
- The extension cord must have a ground wire and plug pin.
- A qualified electrician MUST size cords over 50 feet long to prevent motor damage.

SECTION 3: SETUP

Setup Safety



⚠WARNING

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!

⚠WARNING

Wear safety glasses during the entire setup process!

Items Needed for Setup

The following items are needed to complete the setup process, but are not included with your machine:

Description	Qty
• Metric Socket Set	1
• Safety Glasses (for each person)	1
• 6" Adjustable Wrench	1
• Phillips Head Screwdriver	1

Unpacking

Your machine was carefully packaged for safe transportation. Remove the packaging materials from around your machine and inspect it. If you discover the machine is damaged, *please immediately call Customer Service at (570) 546-9663 for advice.*

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of your shipment, inventory the contents.

Inventory

The following is a description of the main components shipped with your machine. Lay the components out to inventory them.

Note: *If you can't find an item on this list, check the mounting location on the machine or examine the packaging materials carefully. Occasionally we pre-install certain components for shipping purposes.*

G8690 Inventory	Qty
A. Lathe Assembly	1
B. Stand Assembly	3
C. Tool Rest	1
D. Tailstock	1
E. MT#1 Live Center	1
F. MT#1 Spur Center	1
G. Faceplate	1
H. Hardware Bag	1

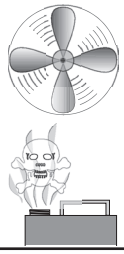
If any nonproprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

Clean Up

The unpainted surfaces are coated with a waxy oil to prevent corrosion during shipment. Remove this protective coating with a solvent cleaner or degreaser shown in **Figure 2**. For thorough cleaning, some parts must be removed. **For optimum performance from your machine, clean all moving parts or sliding contact surfaces.** Avoid chlorine-based solvents, such as acetone or brake parts cleaner that may damage painted surfaces. Always follow the manufacturer's instructions when using any type of cleaning product.

⚠WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. DO NOT use these products to clean the machinery.



⚠CAUTION

Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.

G2544—Solvent Cleaner & Degreaser
A great product for removing the waxy shipping grease from your machine during clean up.

Call
1-800-523-4777
To Order

Figure 2. Cleaner/degreaser available from Grizzly.

Site Considerations

Bench Load

Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some workbenches may require additional reinforcement to support the machine.

Placement Location

Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your new machine. See **Figure 3** for the minimum working clearances.

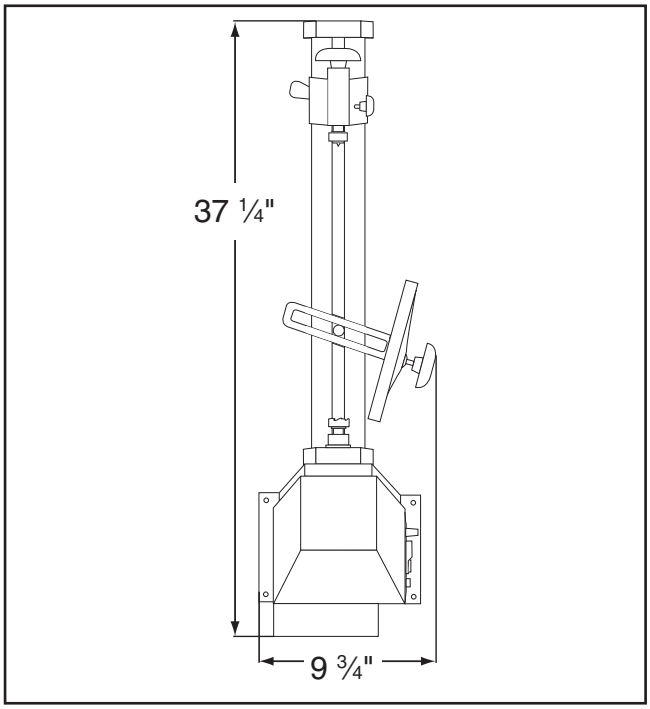
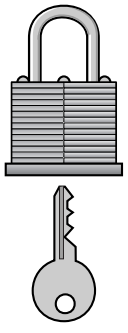


Figure 3. Minimum working clearances.



⚠CAUTION

Children and visitors may be seriously injured if unsupervised around this machine. Lock entrances to the shop or disable start switch or power connection to prevent unsupervised use.

Mounting

Once you have confirmed that your machine is running properly, you may decide to mount it to a workbench. Simply remove the adjustable feet and mount it through the holes in the base.

The strongest mounting option is a "Through Mount" where holes are drilled all the way through the workbench, and hex bolts, washers, and hex nuts are used to secure the drill press to the workbench.

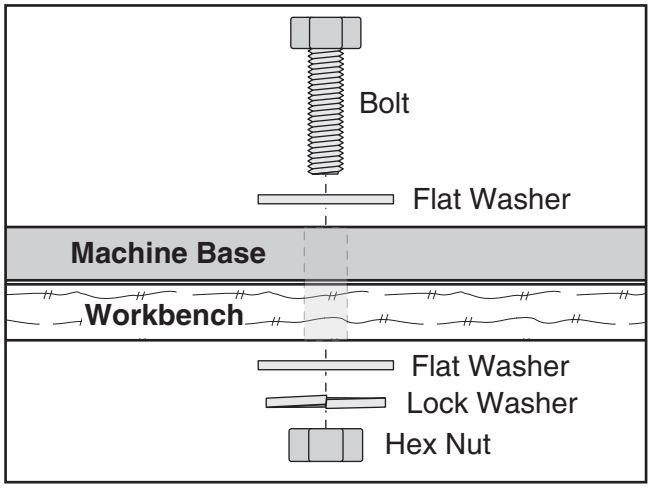


Figure 4. Example of a through mount setup.

Another option for mounting is a "Direct Mount" where the machine is simply secured to the workbench with a lag screw.

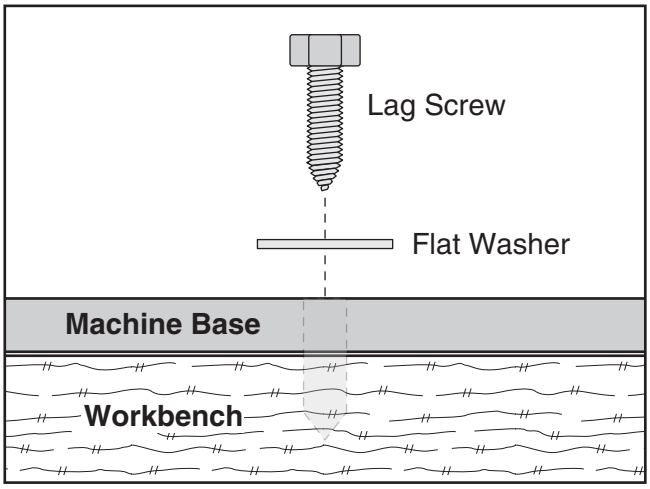


Figure 5. Example of a direct mount setup.

Whichever method you choose, it is crucial that the workbench is perfectly flat. Mounting the lathe to a surface that is not flat may cause the lathe bed to warp. Make sure all four corners are sitting firmly on the workbench and, if necessary, use shims to level the lathe and prior to mounting.

Do not overtighten the mounting fasteners as this may crack the cast iron base

Assembly

Most of your Model G8690 has been assembled at the factory, but some parts must be assembled or installed after delivery.

To assemble your machine:

1. Install the two guide rails between the two foot assemblies and secure in place using the four setscrews (M6-1 x 10) as shown in **Figure 6**.

Figure 6. Guide rails installed.

2. Install the tool rack brackets and the tool rack base onto the guide rails using the hex bolt (M12-1.75 x 65), washer and handle. See **Figure 7.**

Figure 7. Tool rack mounted to guide rails.

3. The tool rest fits into the tool rack shaft and is tightened in place with a setscrew (M6-1 x 8). The tool rack shaft drops into the tool rack base and is secured with the tightening knob, as shown in **Figure 8.**

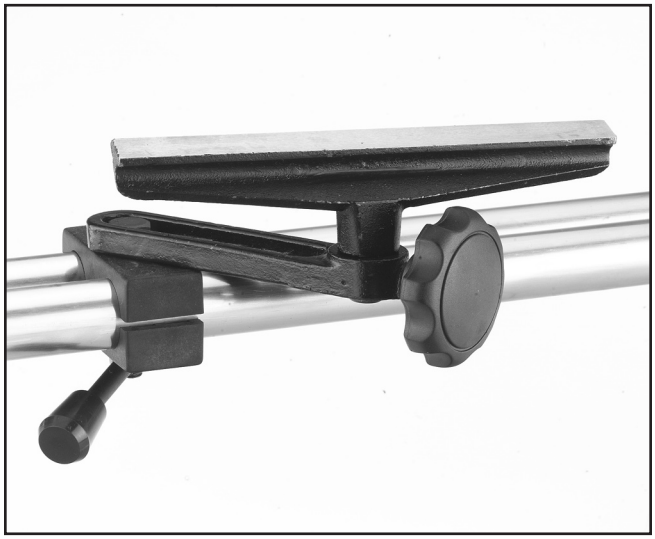


Figure 8. Tool rest mounted in bracket.

4. The tailstock rests on the guide rails and is held in place by the tailstock bracket using a double end screw (M12-1.75 x 65), washer and handle. There are two ways to adjust the tailstock. The handle located under the lathe bed can be loosened, allowing the tailstock to slide up and down the length of the guide rails; or the hand wheel can be loosened, allowing the threaded spindle to move back and forth in the tailstock for fine adjustment. See **Figure 9.**

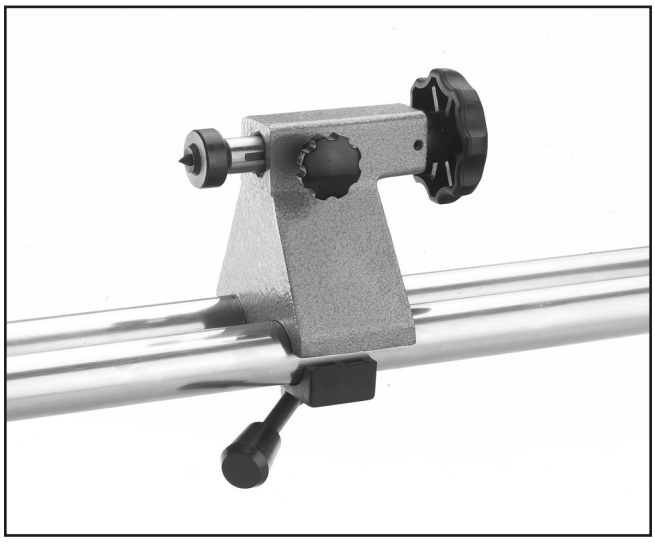


Figure 9. Tailstock mounted to guide rails.

5. The live center is installed by inserting the end of the shaft into the tailstock assembly. While holding in place, turn the handwheel on the tailstock clockwise until snug.

6. The Model G8690 is supplied with a #1 Morse Taper spur center for use when spindle turning. The spur center is used in conjunction with the tailstock live center. Install the spur center by inserting it into the hole in the headstock spindle end. To remove the spur center from the headstock, insert a pin into the spindle hole and turn the hex nut counterclockwise with a wrench until the spur center is ejected. See **Figure 10.**

⚠WARNING

We recommend cleaning the spur center taper with mineral spirits. Refer to the safety warnings on the container of the mineral spirits. Failure to clean the mating surfaces may result in separation, and an unsafe condition. Separation is usually a result of oil or grease on the taper.

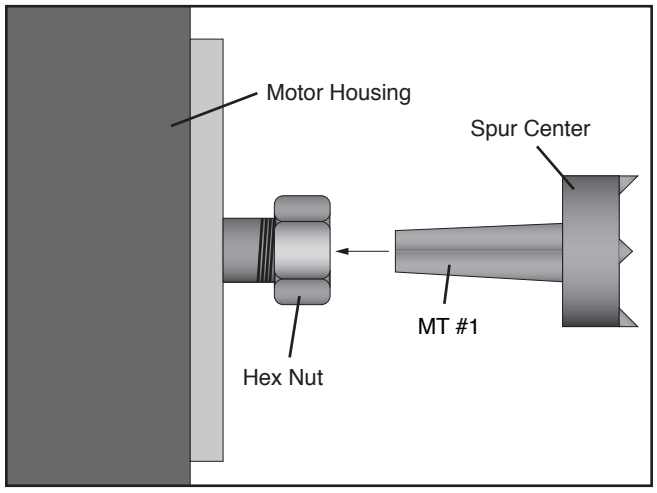


Figure 10. Hex nut installed before inserting spur center.

7. The faceplate is used for turning plates and bowls. To install the faceplate, remove the spur center. Insert a pin in the spindle shaft to hold the spindle, and thread the faceplate onto the spindle threads, as seen in **Figure 11**. Tighten securely with your fingers, and use the mounting holes on the faceplate to attach wood stock with wood screws.

Figure 11. Installing the faceplate.

Test Run

⚠WARNING

Never start the lathe with the indexing pin inserted in the indexing hole. Serious personal injury may occur.

⚠WARNING

The tailstock quill lock handle must always be locked down while the lathe is in use. The workpiece can be thrown from the lathe if this step is not observed. Also, the tailstock quill should not protrude from the tailstock housing more than 2'' or the quill will not be supported enough. Failure to follow these warnings may result in personal injury.

⚠CAUTION

Never operate the lathe with the quick release lever loose. Serious personal injury may occur.

NOTICE

Always remove unlock the headstock spindle before starting the machine or damage may occur to the motor or other components of the late.

Once the assembly is complete, test run your machine to make sure it runs properly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review the **Troubleshooting** on **Page 35**.

If you still cannot remedy a problem, contact our Tech Support at (570) 546-9663 for assistance.

To test run the machine:

1. Connect the machine to the power source.

2. Make sure you have read the safety instructions at the beginning of the manual and that the machine is setup properly.

3. Make sure all tools and objects used during setup are cleared away from the machine.

4. Turn the variable speed all the way down (counterclockwise).

5. Turn the machine ***ON***.

6. Listen to and watch for abnormal noises or actions. The machine should run smoothly with little or no vibration or rubbing noises.

   —Strange or unusual noises should be investigated and corrected before operating the machine further. Always disconnect the machine from power when investigating or correcting potential problems.

7. Slowly, turn the variable speed dial all the way up (clockwise), then all the way down.

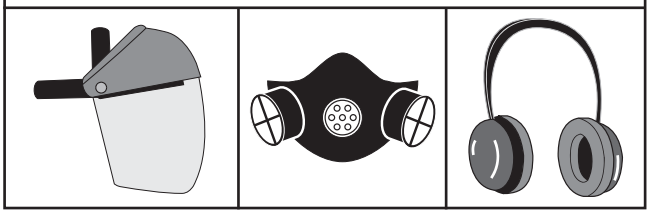
8. Turn the machine ***OFF***.

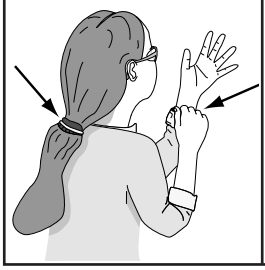
SECTION 4: OPERATIONS

Operation Safety

⚠WARNING

Damage to your eyes, lungs, and ears could result from using this machine without proper protective gear. Always wear a face shield, respirator, and hearing protection when operating this machine.





⚠WARNING

Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing and long hair away from moving machinery.

NOTICE

If you have never used this type of machine or equipment before, WE STRONGLY RECOMMEND that you read books, trade magazines, or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.

Spindle Turning

⚠WARNING

Make sure the live center in the tailstock lines up with the spur center in the headstock before turning anything between centers. Failure to observe this step could result in the workpiece being thrown from the lathe. Serious personal injury may occur.

To mount a workpiece between centers:

1. Locate the center point on both ends of the workpiece by carefully drawing diagonal lines from corner to corner. The point of intersection is the center of the work. Find the center of round wood stock by using a center finder instrument.

2. When turning stock with a diameter greater than 2", remove the corner length edges with a hand plane or similar operation as shown in **Figure 12.**

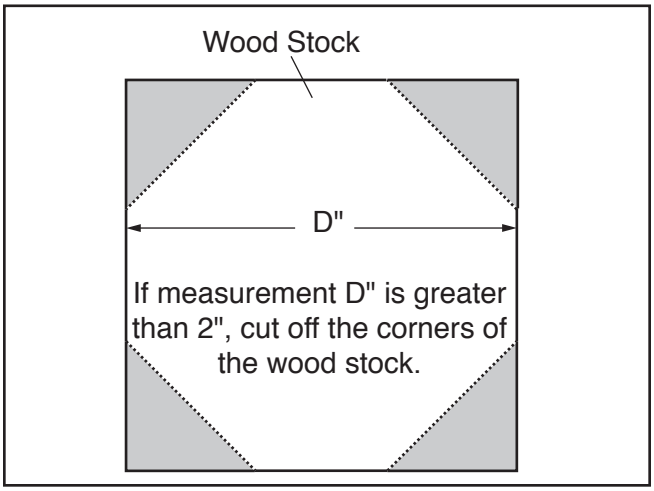


Figure 12. Cross-section of turning stock.

⚠WARNING

Do not press the workpiece too firmly with the tailstock or the bearings will bind and overheat. Likewise, do not adjust too loosely or the workpiece will spin off the lathe. Use good judgement. Serious personal injury could result if care is not taken.

3. Hold the spindle vertically and support it on a solid surface. Line up the spur center with the center of the workpiece. Drive the spur center into the stock about ¼" using a dead blow hammer. Be careful not to split the workpiece. See **Figure 13.** Wood with splits along the grain may fly off during the operation. With dense wood, drill a hole at the centers and score lines with a saw blade for the spur.

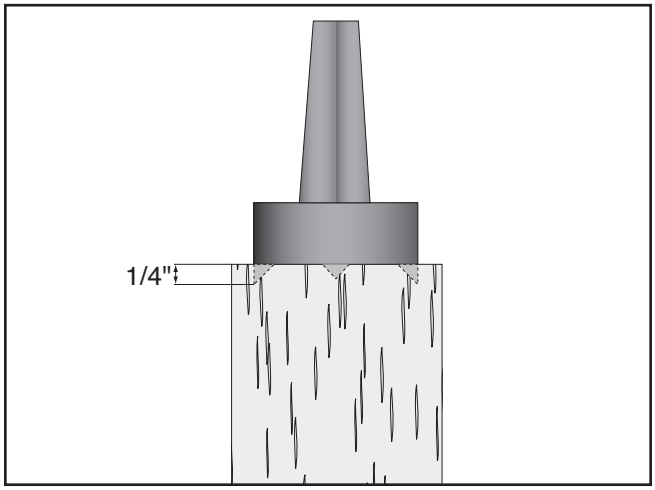


Figure 13. Spur center set into wood stock.

4. Once the spur center is firmly attached to the workpiece, insert the spur center (with the attached workpiece) into the headstock spindle. Be certain the hex nut is threaded onto the spindle before tapping the spur center in.

5. While supporting the workpiece, slide the tailstock close to the end of the workpiece and lock it into place.

6. Line up the live center with the workpiece center. Turn the handwheel to press the point of the live center into the workpiece.

7. Lock the tailstock in place.

Speed Selector

⚠CAUTION

Remember to choose the correct speed for your particular turning project. As a general rule, the larger the workpiece diameter, the slower the speed. Always start on slow speed.

The variable speed selector allows the adjustment of the spindle RPM. Before turning the lathe on, make sure the speed selector knob is set at the lowest RPM (turn counterclockwise). See **Figure 14.**

Once the lathe is turned on, slowly increase the RPM of the lathe by turning the speed selector knob clockwise. Make sure that your finger is poised on the STOP button, just in case there's a problem. The lathe should run smoothly, with little or no vibration or rubbing noises. Strange or unnatural noises should be investigated and corrected before operating the machine further.

If you cannot easily locate the source of an unusual noise or vibration, contact our service department for help.

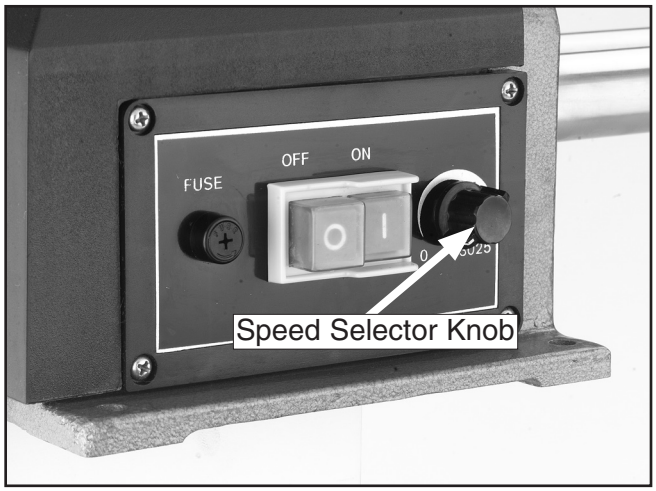


Figure 14. Operating controls.

Tool Rest

Position the tool rest approximately ¼" away from the workpiece and approximately ⅛" above the center line, as shown in **Figure 15**.

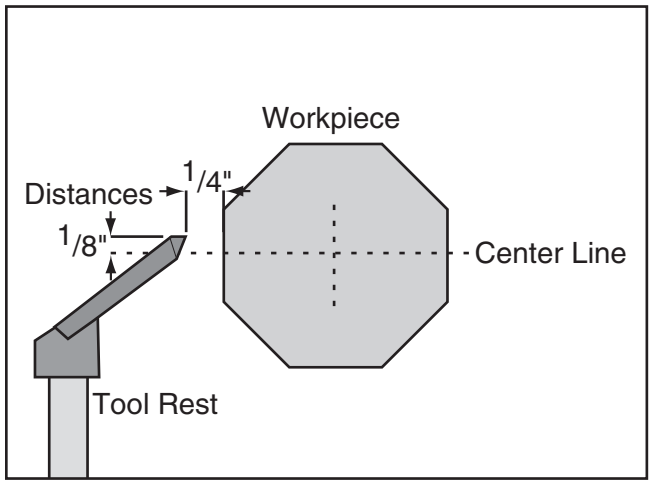


Figure 15. Tool rest position.

Test by hand-turning the workpiece before turning the lathe on. Ensure that the lathe chisel is fully supported by the tool rest. Support the lathe chisel on the tool rest with one hand, while the other hand controls the chisel. See **Figure 16.**

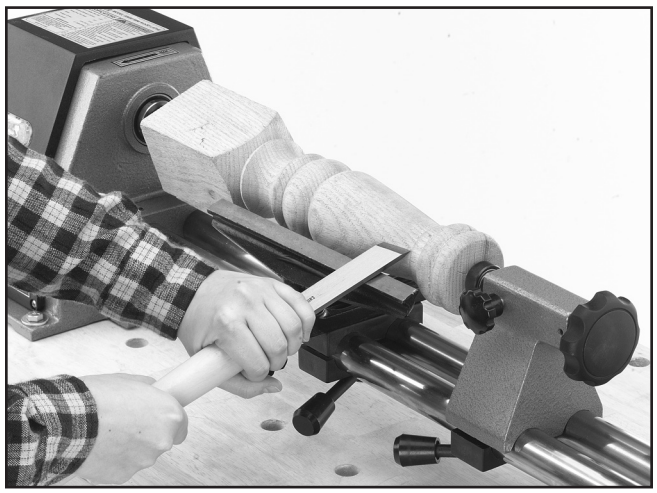


Figure 16. Correct hand placement for operation.

Faceplate Turning

⚠WARNING

The contact area between the workpiece and the faceplate must be flush with one another. Failure to do this could result in the faceplate distorting or breaking, causing injury or death.

⚠WARNING

The joints of glued-up workpieces should be high quality to prevent them from breaking under the extreme forces of lathe turning. Consult in-depth trade manuals and instructional books for correct techniques when gluing up a workpiece from multiple pieces. If a joint fails during a lathe turning operation, serious injury or death could occur.

Faceplate turning (**Figure 17**) is when a workpiece is mounted to the faceplate, which is mounted to the headstock spindle. This type of turning is usually done with open-faced workpieces like bowls.

If screws cannot be placed in the workpiece, then a backing block can be glued to the workpiece and attached to the faceplate with screws.

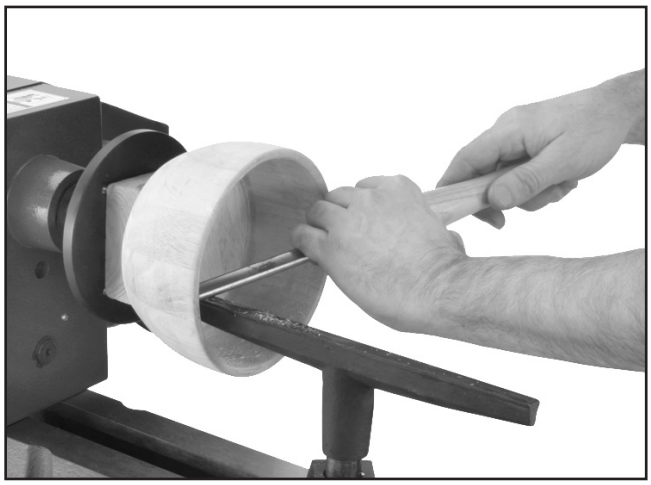


Figure 17. Typical faceplate turning operation.

To mount your workpiece to the faceplate:

1. Find the center of your workpiece in the same manner as when spindle turning.

2. Cut off the corners of the workpiece.

3. Center the faceplate on the workpiece and attach it through the faceplate holes with non-tapered head wood screws as shown in **Figure 18**.

4. Thread the faceplate onto the headstock spindle and tighten securely.

NOTICE: *Only use tap screws or wood screws with non-tapered heads (**Figure 18**) to attach the faceplate to the workpiece. Do NOT use drywall screws or screws with tapered heads because these can split the faceplate, or the screws may snap off during operation.*

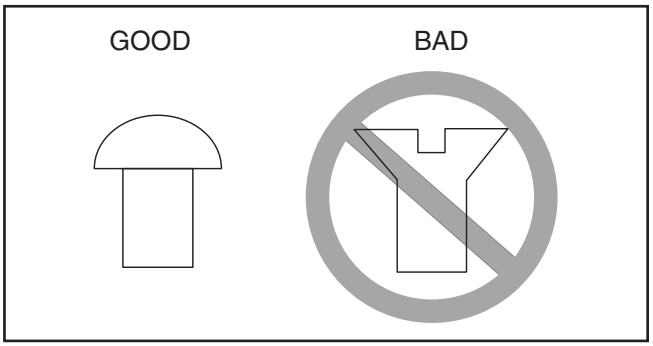


Figure 18. Correct and incorrect screw types for mounting faceplate to workpiece.

To mount your workpiece to a backing block:

1. Make the backing block (**Figure 19**) from a piece of scrap wood that is flat on both sides.

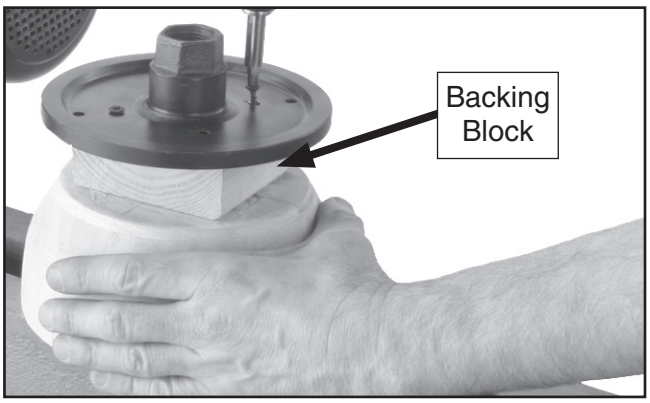


Figure 19. Example of backing block mounting.

2. Locate and mark the center of both the workpiece and the backing block.

3. Drill a ¼" diameter hole through the center of the backing block.

4. Glue the center of the backing block to the center of the workpiece (look through the drilled hole to line up centers), clamp the backing block to the workpiece, and wait for the glue to cure according to the manufacturer's recommendation.

Sanding/Finishing

After turning, the workpiece can be sanded, as shown in **Figure 20**, and finished (in the same manner) before removing it from the lathe.

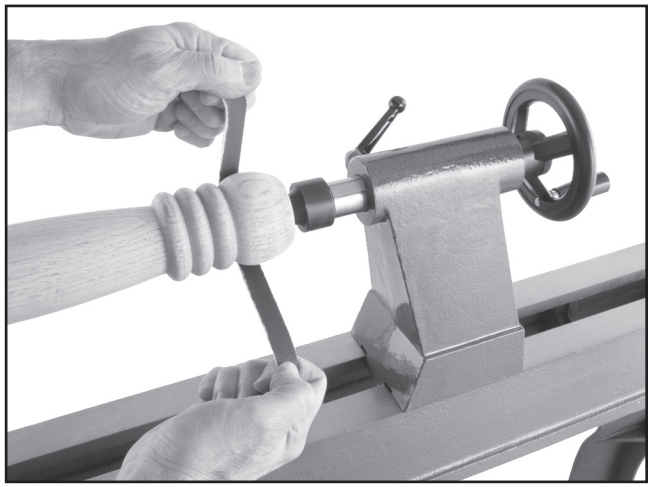
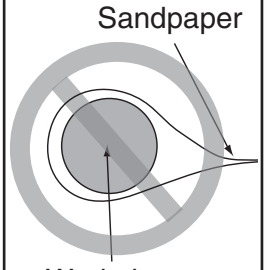


Figure 20. Typical sanding operation.



⚠CAUTION

Wrapping the sandpaper completely around the workpiece will pull your hands into the moving workpiece and may cause injury. Never wrap sandpaper completely around the workpiece!

Whenever sanding or finishing, move the tool rest holder out of the way to increase personal safety and gain adequate working room.

SECTION 5: ACCESSORIES

H9586—Lathe Fundamentals
With more than 300 color photos, this fourth authoritative Popular Mechanics Workshop tool book helps woodworkers take full advantage of this most essential piece of equipment. No guide will give them a better start. 192 pages.

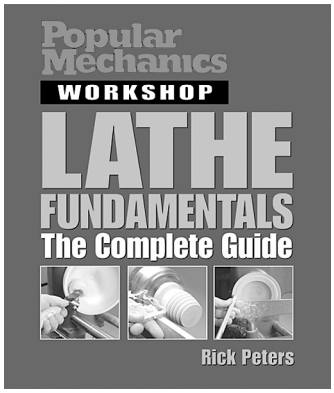


Figure 21. Model H9586 Lathe Fundamentals guide book.

H5934—Mini Lathe Chuck With Arbors

Figure 22. Model G1082 4-Jaw Chuck.

Call 1-800-523-4777 To Order

H7828—Tool Table Plus
The new Tool Table Plus was designed in response to customer requests for a slightly wider and taller table to accommodate small planers, wood lathes, sanders and a variety of other bench-top machines.

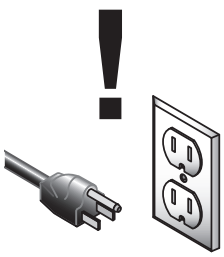
Figure 23. Model H7828 Tool Table Plus.

H6542—Robert Sorby HSS 8-PC Turning Set
H3102, H3103, H3104—Gouge Slipstones
H1064—6-PC Deluxe HSS Lathe Chisel Set
G9863—8-PC HSS Lathe Chisel Set
H0507—20" Swan Neck Hollowing Tool
H0508—24" Swan Neck Hollowing Tool

Figure 24. Model H6542 Robert Sorby 8-PC Set.

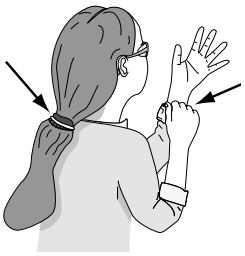
SECTION 6: MAINTENANCE

General



⚠WARNING

Disconnect power to the machine when performing any maintenance, assembly or adjustments. Failure to do this may result in serious personal injury.



⚠WARNING

Keep loose clothing rolled up and out of the way of machinery and keep hair pulled back.

⚠WARNING

Wear safety glasses during the entire maintenance process. Failure to comply may result in serious personal injury.

Regular periodic maintenance on your Model G8690 will ensure its optimum performance. Make a habit of inspecting your lathe each time you use it. Check for the following conditions and repair or replace when necessary:

1. Loose mounting bolts.
2. Worn switch.
3. Worn or damaged cords and plugs.
4. Damaged cog tooth belt.

The non-painted surfaces on the Model G8690 should be protected against rust and pitting. Wiping the lathe clean after every use ensures that wood dust isn't allowed to trap moisture against bare metal surfaces.

Some woodworkers recommend using automotive paste wax on exposed steel and cast iron surfaces. The wax provides a layer of protection. Avoid waxes that contain silicone or other synthetic ingredients. These materials can find their way into lumber that's being worked, and can make staining and finishing difficult. If you use paste wax, make sure that it's 100% Carnauba wax.

Lubrication

Since all bearings are shielded and permanently lubricated, simply leave them alone until they need to be replaced. Do not lubricate them.

Lubricate the locations shown in **Figure 25** with light machine oil or G96® Gun Treatment.

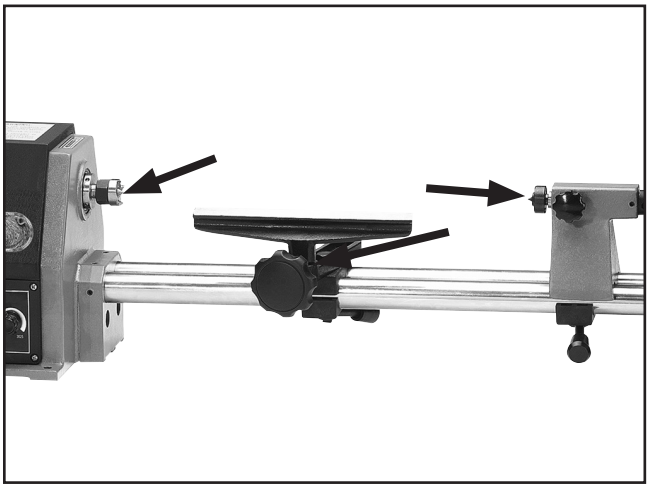
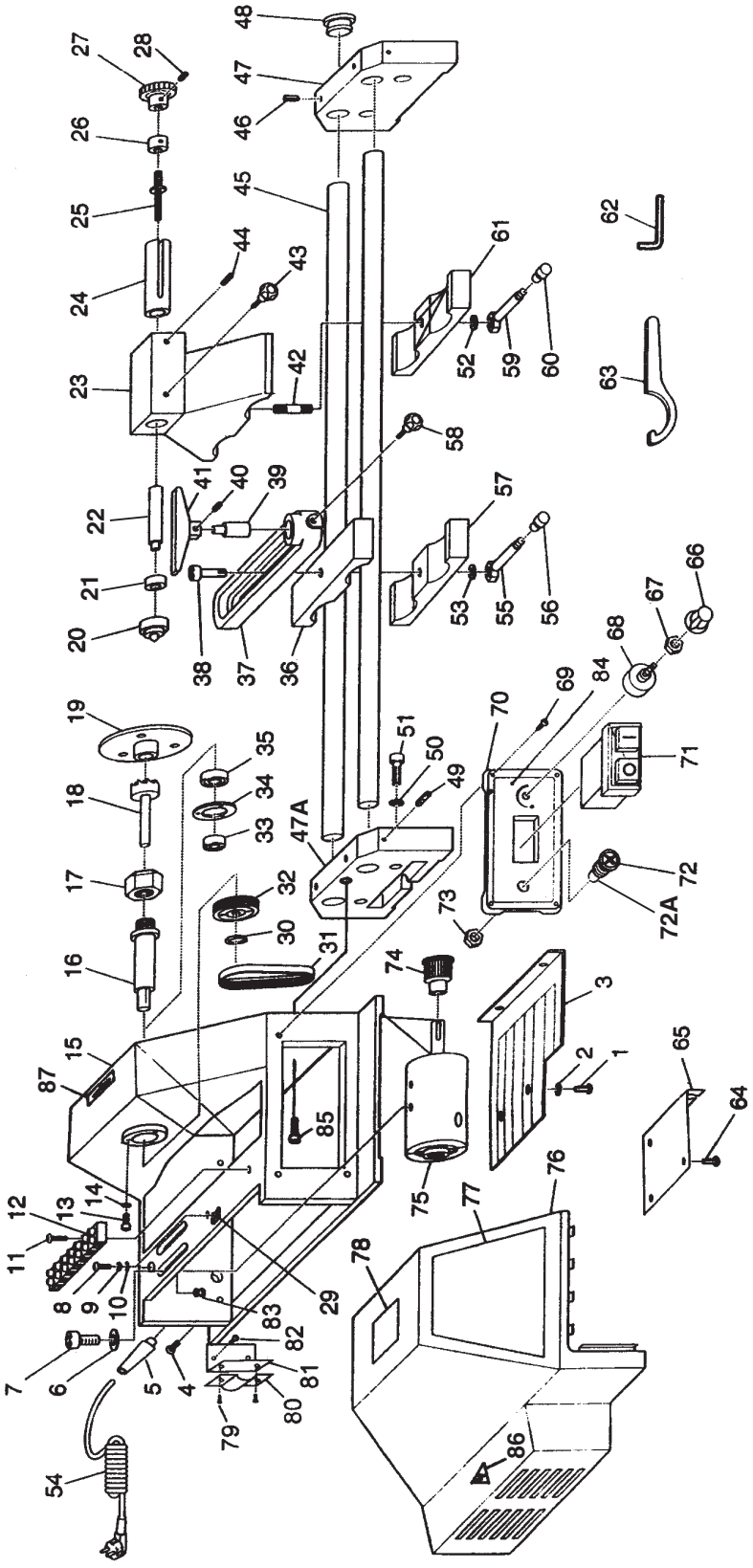


Figure 25. Lubrication locations.

SECTION 7: SERVICE

Parts Breakdown



Parts List

REF	PART #	DESCRIPTION
1	PS05M	PHLP HD SCR M5-.8 X 8
2	PW02M	FLAT WASHER 5MM
3	P8690003	PROTECTING PLATE
4	PS08M	PHLP HD SCR M5-.8 X 12
5	P8690005	RUBBER SHEATH
6	PW03M	FLAT WASHER 6MM
7	PSB01M	CAP SCREW M6-1 X 16
8	PS05M	PHLP HD SCR M5-.8 X 8
9	PLW01M	LOCK WASHER 5MM
10	PW03M	FLAT WASHER 6MM
11	PS34	PHLP HD SCR M3-.5 X 25
12	P8690012	CONNECTING POST
13	PS11M	PHLP HD SCR M6-1 X 16
14	PW03M	FLAT WASHER 6MM
15	P8690015	HEADSTOCK
16	P8690016	SPINDLE
17	P8690017	SPECIAL SPINDLE NUT M18 X 1.5
18	G2521	MT #1 SPUR CENTER
19	P8690019	FACE PLATE 4"
20	G1192	LIVE CENTER
21	P80028	BALL BEARING 80028
22	P8690022	TAPER SHAFT
23	P8690023	TAILSTOCK
24	P8690024	TAPER CASE
25	P8690025	GUIDE SCREW M8-1.25 X 70
26	P9247062	COLLAR
27	P8690027	HAND WHEEL
28	PSS03M	SET SCREW M6-1 X 8
29	P8690029	GROUNDING MARK
30	PR03M	EXT RETAINING RING 12MM
31	P8690031	TIMING BELT
32	P8690032	SPINDLE PULLEY
33	P6202	BALL BEARING 6202ZZ
34	P8690034	BEARING COVER
35	P6204	BALL BEARING 6204ZZ
36	P8690036	UPPER TOOL REST BRACKET
37	P8690037	TOOL REST BASE
38	PSB160M	CAP SCREW M12-1.75 X 65
39	P8690039	TOOL REST SHAFT
40	PSS03M	SET SCREW M6-1 X 8
41	P8690041	TOOL REST
42	P8690042	STUD SCR M12-1.75 X 65
43	P8690043	STAR KNOB
44	PSS02M	SET SCREW M6-1 X 8
45	P8690045	GUIDE BAR

REF	PART #	DESCRIPTION
46	PSS01M	SET SCREW M6-1 X 10
47	P8690047	FOOT
47A	P8690047A	FOOT-MOTOR SIDE
48	P8690048	COVER
49	PSS01M	SET SCREW M6-1 X 10
50	PLW06M	LOCK WASHER 10MM
51	PSB64M	CAP SCREW M10-1.5 X 25
52	PW06M	FLAT WASHER 12MM
53	PW06M	FLAT WASHER 12MM
54	PWRCRD110L	POWER CORD 16-GAUGE 3-WIRE 73"
55	P8690055	TOOL REST HANDLE
56	P8690056	HANDLE END
57	P8690057	LOWER TOOL REST BRACKET
58	P8690058	STAR KNOB
59	P8690059	TAILSTOCK BRACKET HANDLE
60	P8690060	HANDLE END
61	P8690061	TAILSTOCK BRACKET
62	PAW03M	HEX WRENCH 3MM
63	P8690063	SPECIAL WRENCH
64	PHTEK11M	TAP SCREW M3-.5 X 8
65	P8690065	ELECTRONIC CIRCUIT
66	P8690066	SPEED KNOB
67	P8690067	SPECIAL NUT M8-1.25 X 4
68	P8690068	POTENTIAL DEVICE
69	PS08M	PHLP HD SCR M5-.8 X 12
70	P8690070	TOP PLATE
71	G8992	POWER SWITCH
72	P8690072	FUSE HOLDER
72A	P8690072A	FUSE 3.5A
73	P8690073	SPECIAL NUT M12 X 5
74	P8690074	MOTOR PULLEY
75	P8690075	MOTOR D.C.
76	P8690076	COVER
77	P8690077	NAME PLATE
78	P8690078	WARNING LABEL
79	PS02M	PHLP HD SCR M4-.7 X 12
80	P8690080	PRESS PLATE
81	P8690081	SUPPORT
82	PS02M	PHLP HD SCR M4-.7 X 12
83	P8690083	PROTECTING COVER
84	P8690084	SPEED CONTROL LABEL
85	PSB31M	CAP SCREW M8-1.25 X 25
86	PLABEL-14	ELECTRICITY LABEL
87	P8690087	DIRECTIONAL LABEL

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____ Journal of Light Cont.
____ Live Steam
____ Model Airplane News
____ Modeltec
____ Old House Journal
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____ Popular Science
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____ Shop Notes
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____ Wooden Boat
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____ Woodsmith
____ Woodwork
____ Woodworker West
____ Woodworker's Journal
____ Other:

3. What is your annual household income?

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____ $50,000-$59,000 ____ $60,000-$69,000 ____ $70,000+

4. What is your age group?

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____ 50-59 ____ 60-69 ____ 70+

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10. Comments: _____

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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.

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The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.