

# *Grizzly* *Industrial, Inc.*®

## MODEL G0842 WOOD LATHE w/COPY ATTACHMENT

### OWNER'S MANUAL

*(For models manufactured since 2/21)*



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**WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE  
OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**

#WKBLJH19739 PRINTED IN CHINA

V3.02.21

 **WARNING!**

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

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

**The owner of this machine/tool 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, cutting/sanding/grinding tool 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.**

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# INTRODUCTION

## Contact Info

We stand behind our machines! If you have questions or need help, contact us with the information below. Before contacting, make sure you get the **serial number** and **manufacture date** from the machine ID label. This will help us help you faster.

Grizzly Technical Support  
1815 W. Battlefield  
Springfield, MO 65807  
Phone: (570) 546-9663  
Email: techsupport@grizzly.com

We want your feedback on this manual. What did you like about it? Where could it be improved? Please take a few minutes to give us feedback.

Grizzly Documentation Manager  
P.O. Box 2069  
Bellingham, WA 98227-2069  
Email: manuals@grizzly.com

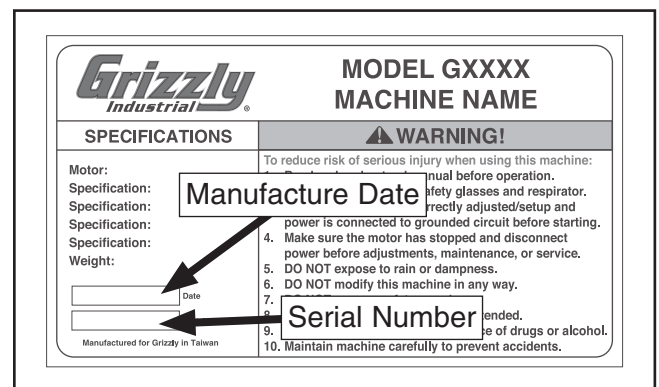
## Manual Accuracy

We are proud to provide a high-quality owner's manual with your new machine!

We made every effort to be exact with the instructions, specifications, drawings, and photographs in this manual. Sometimes we make mistakes, but our policy of continuous improvement also means that **sometimes the machine you receive is slightly different than shown in the manual.**

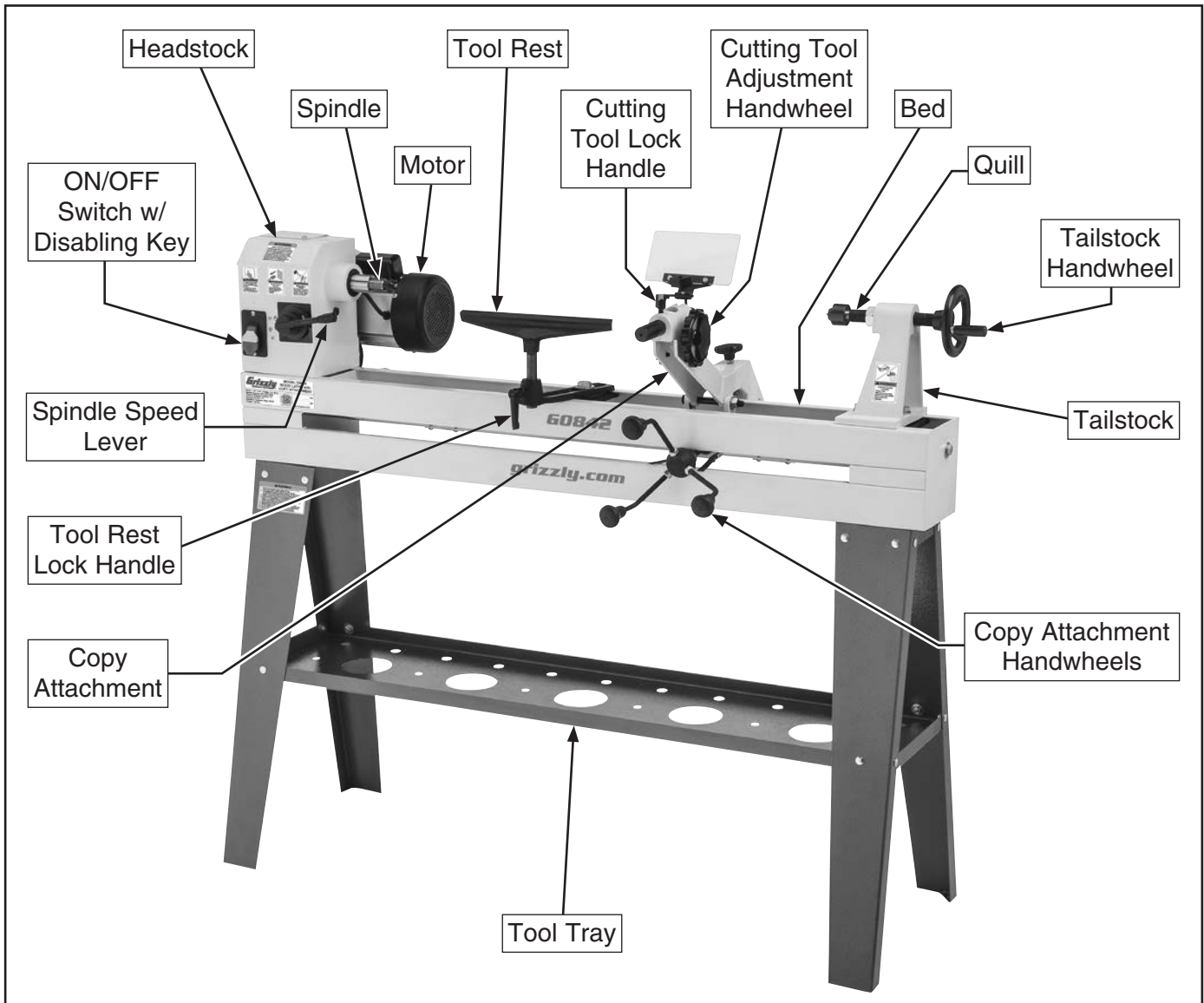
If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at [www.grizzly.com](http://www.grizzly.com).

Alternatively, you can call our Technical Support for help. Before calling, make sure you write down the **Manufacture Date** and **Serial Number** from the machine ID label (see below). This information is required for us to provide proper tech support, and it helps us determine if updated documentation is available for your machine.



# Identification

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



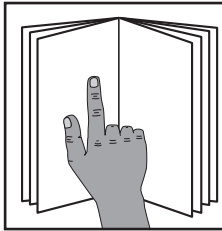
## **⚠ CAUTION**

**For Your Own Safety Read Instruction Manual Before Operating Lathe**

- a) Wear eye protection.
- b) Do not wear gloves, necktie, or loose clothing.
- c) Tighten all locks before operating.
- d) Rotate workpiece by hand before applying power.
- e) Rough out workpiece before installing on faceplate.
- f) Do not mount split workpiece or one containing knot.
- g) Use lowest speed when starting new workpiece.



# Controls & Components



## ! WARNING

To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.

Refer to **Figures 1–5** and the following descriptions to become familiar with the basic controls of this machine.

## Headstock

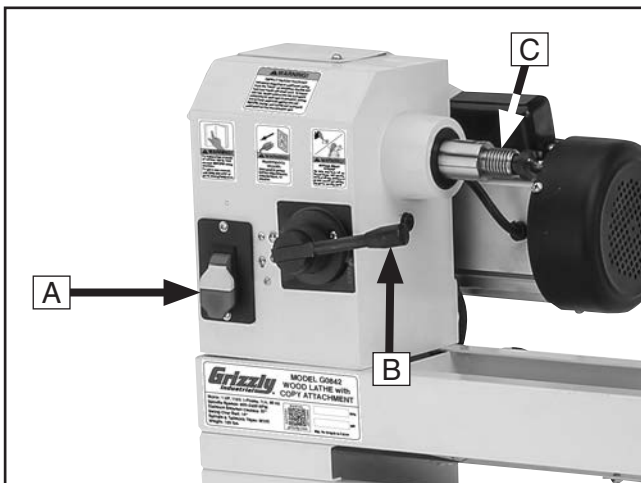


Figure 1. Headstock controls.

- A. ON/OFF Switch w/Disabling Key:** Turns motor **ON** when flipped up; turns motor **OFF** when pressed down. Remove yellow key to disable switch so motor cannot start.
- B. Spindle Speed Lever:** Adjusts spindle speed from low to high within range governed by pulley belt position (see **Page 33** for more information).
- C. Spindle:** Accepts MT#2 centers or 1" x 8 TPI (RH) tooling for mounting workpieces. Rotates counterclockwise (down, toward front of machine).

## Tailstock

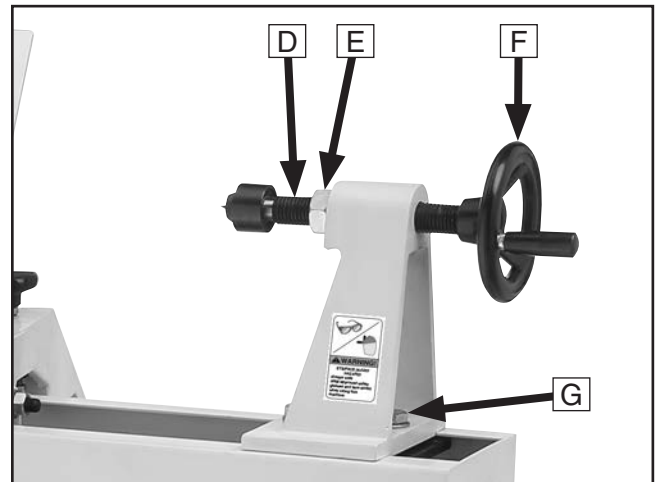


Figure 2. Tailstock controls.

- D. Quill:** Holds MT#2 centers or tooling. Moves toward and away from spindle.
- E. Quill Locking Nut:** Secures quill in position.
- F. Tailstock Handwheel:** Rotates to move quill toward and away from spindle.
- G. Tailstock Clamp Bolts (2):** Secure position of tailstock along bed.

## Tool Rest

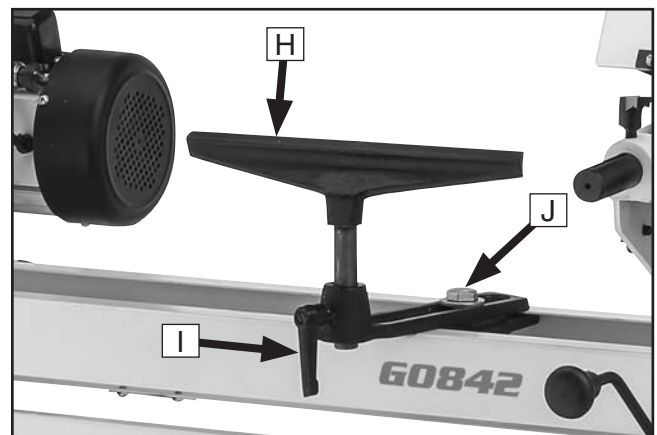


Figure 3. Tool rest controls.

- H. Tool Rest:** Provides stable platform for cutting tools.
- I. Tool Rest Lock Handle:** Secures tool rest in position.
- J. Tool Rest Base Locking Bolt:** Secures tool rest base in position along bed.



## Copy Attachment

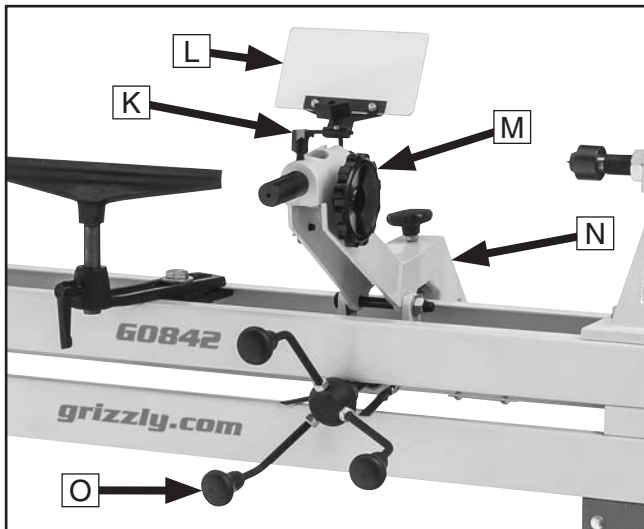


Figure 4. Front copy attachment controls.

- K. Cutting Tool Lock Handle:** Secures copy attachment cutting tool in position.
- L. Copy Attachment Safety Shield:** Tilts up or down as needed to shield user from flying chips while using copy attachment.
- M. Cutting Tool Adjustment Handwheel:** Moves cutting tool toward or away from workpiece.
- N. Copy Attachment:** Mounts to lathe bed and "traces" premade template or master spindle during turning operations to allow user to make identical finished workpieces.
- O. Copy Attachment Handwheel:** Rotates clockwise to move copy attachment left. Rotates counterclockwise to move copy attachment right.

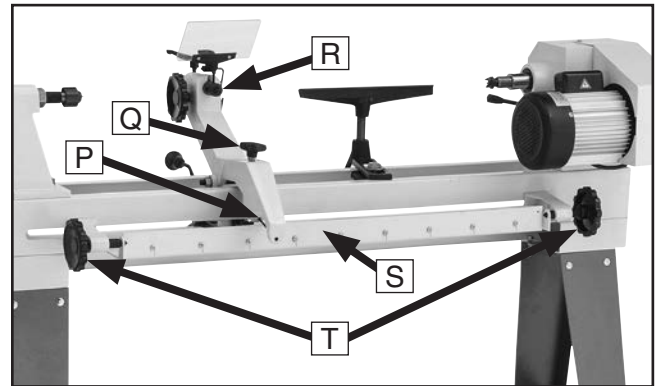


Figure 5. Rear copy attachment controls.

- P. Stylus:** Controls depth of cut by "tracing" contour of template or master spindle.
- Q. Stylus Tension Adjustment Knob:** Increases or decreases pressure applied by stylus on template or master spindle.
- R. Copy Attachment Cutting Tool:** Performs cutting action on workpiece when using copy attachment.
- S. Hinged Template Support:** Mounts a flat template with the desired profile when secured in UP position.
- T. Template Support/Master Spindle Centers:** Secure template support or master spindle.





# MACHINE DATA SHEET

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

## MODEL G0842 14" X 37" WOOD LATHE WITH COPY ATTACHMENT

### Product Dimensions:

Weight..... 155 lbs.  
 Width (side-to-side) x Depth (front-to-back) x Height..... 62 x 24 x 48 in.  
 Footprint (Length x Width)..... 54 x 18-1/2 in.

### Shipping Dimensions:

Type..... Cardboard  
 Content..... Machine  
 Weight..... 164 lbs.  
 Length x Width x Height..... 60 x 17 x 19 in.  
 Must Ship Upright..... Yes

### Electrical:

Power Requirement..... 110V, Single-Phase, 60Hz  
 Full-Load Current Rating..... 11A  
 Minimum Circuit Size..... 15A  
 Connection Type..... Cord & Plug  
 Power Cord Included..... Yes  
 Power Cord Length..... 8 ft.  
 Power Cord Gauge..... 14 AWG  
 Plug Included..... Yes  
 Included Plug Type..... NEMA 5-15  
 Switch Type..... Paddle Safety Switch w/Removable Key

### Motors:

#### Main

Horsepower..... 3/4 HP  
 Phase..... Single-Phase  
 Amps..... 11A  
 Speed..... 1700 RPM  
 Type..... TEFC Capacitor-Start Induction  
 Power Transfer ..... Belt Drive  
 Bearings..... Sealed & Permanently Lubricated

### Main Specifications:

#### Operation Information

Swing Over Bed..... 14 in.  
 Swing Over Tool Rest Base..... 12 in.  
 Distance Between Centers..... 37 in.  
 Max. Distance Tool Rest to Spindle Center..... 4-1/2 in.  
 No of Spindle Speeds..... 10  
 Spindle Speed Range..... 600-2400 RPM  
 Floor to Center Height..... 44-5/8 in.





**Spindle Information**

Spindle Thread Size..... 1 in. x 8 TPI  
Spindle Thread Direction..... Right Hand  
Type of Included Spindle Center..... MT#2

**Tool Rest Information**

Tool Rest Width..... 12 in.  
Tool Rest Post Diameter..... 1 in.  
Tool Rest Post Length..... 4 in.  
Tool Rest Base Height..... 1 in.

**Tailstock Information**

Tailstock Taper..... MT#2  
Type of Included Tailstock Center..... MT#2

**Construction**

Bed..... Steel  
Stand..... Steel  
Headstock..... Cast Iron  
Tailstock..... Cast Iron  
Paint Type/Finish..... Powder Coated

**Other Related Information**

Bed Width..... 6-1/2 in.  
Faceplate Size..... 6 in.

**Other Specifications:**

Country of Origin ..... China  
Warranty ..... 1 Year  
Approximate Assembly & Setup Time ..... 1 Hour  
Serial Number Location ..... Machine ID Label  
ISO 9001 Factory ..... Yes

**Features:**

- 37" Distance Between Centers
- 14" Swing Over Bed
- 9" Swing Over Tool Rest
- Copy Device for Workpieces Up to 8" Diameter and 32" Long
- 12" Tool Rest
- Includes 6" Faceplate, MT#2 Live Center, and MT#2 Spur Center
- Faceplate Spanner Wrenches and Tooling Removal Pin Included



# SECTION 1: SAFETY

## 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. Always use common sense and good judgment.

**⚠ 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** Alerts the user to useful information about proper operation of the machine to avoid machine damage.

## Safety Instructions for Machinery

### ⚠ WARNING

**OWNER'S MANUAL.** Read and understand this owner's manual **BEFORE** using machine.

**TRAINED OPERATORS ONLY.** Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make your workshop kid proof!

**DANGEROUS ENVIRONMENTS.** Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

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

**ELECTRICAL EQUIPMENT INJURY RISKS.** You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

**DISCONNECT POWER FIRST.** Always disconnect machine from power supply **BEFORE** making adjustments, changing tooling, or servicing machine. This prevents an injury risk from unintended startup or contact with live electrical components.

**EYE PROTECTION.** Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are **NOT** approved safety glasses.



# WARNING

**WEARING PROPER APPAREL.** Do not wear clothing, apparel or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to reduce risk of slipping and losing control or accidentally contacting cutting tool or moving parts.

**HAZARDOUS DUST.** Dust created by machinery operations may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material. Always wear a NIOSH-approved respirator to reduce your risk.

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

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

**USE CORRECT TOOL FOR THE JOB.** Only use this tool for its intended purpose—do not force it or an attachment to do a job for which it was not designed. Never make unapproved modifications—modifying tool or using it differently than intended may result in malfunction or mechanical failure that can lead to personal injury or death!

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

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

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

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

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

**STABLE MACHINE.** Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

**USE RECOMMENDED ACCESSORIES.** Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

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

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

**DAMAGED PARTS.** Regularly inspect machine for damaged, loose, or mis-adjusted parts—or any condition that could affect safe operation. Immediately repair/replace **BEFORE** operating machine. For your own safety, **DO NOT** operate machine with damaged parts!

**MAINTAIN POWER CORDS.** When disconnecting cord-connected machines from power, grab and pull the plug—**NOT** the cord. Pulling the cord may damage the wires inside. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

**EXPERIENCING DIFFICULTIES.** If at any time you experience difficulties performing the intended operation, stop using the machine! Contact our Technical Support at (570) 546-9663.



# Additional Safety for Wood Lathes

## WARNING

Serious injury or death can occur from getting entangled in, crushed between, or struck by rotating parts on a lathe! Rotating workpieces can come loose and strike operator or bystanders with deadly force if they are improperly secured, rotated too fast, or are not strong enough for the rotational forces required for turning. Improper tool setup or usage can cause tool kickback or grabbing, resulting in impact injury or entanglement. To reduce the risk of operator (or bystander) injury or death, anyone operating this machine **MUST** completely heed the hazards and warnings below.

**VERIFY WORKPIECE INTEGRITY.** Verify each workpiece is free of knots, splits, nails, or foreign material to ensure it can safely rotate on spindle without breaking apart or causing tool kickback.

**PROPERLY PREPARE WORKPIECE.** Before mounting, cut off waste portions to balance workpiece for safe rotation and removal of large edges that can catch on tooling.

**SECURE LOCKS.** Verify tool rest, headstock, and tailstock are secure before turning lathe **ON**.

**SECURE WORKPIECE.** Use proven setup techniques and always verify workpiece (and centers/tooling holding workpiece) are well-secured before starting lathe. Only use high-quality fasteners with non-tapered heads for faceplate attachment.

**ADJUST TOOL SUPPORT.** An improperly supported tool may be grabbed or ejected. Adjust tool rest approximately  $\frac{1}{4}$ " away from workpiece and  $\frac{1}{8}$ " above workpiece center line to provide proper support for turning tool. Firmly hold turning tool with both hands against tool rest.

**REMOVE ADJUSTMENT TOOLS.** Remove all chuck keys, wrenches, and adjustment tools before turning lathe **ON**. These items can become deadly projectiles when spindle is started.

**CHECK CLEARANCES.** Before starting spindle, verify workpiece has adequate clearance by hand-rotating it through its entire range of motion.

**TEST NEW SETUPS.** Test each new setup by starting spindle rotation at lowest speed and standing to side of lathe until workpiece reaches full speed and you can verify safe rotation.

**WEAR PROPER PPE.** Always wear a face shield and safety glasses when operating lathe. Do not wear gloves, necktie or loose clothing. Keep long hair away from rotating spindle.

**USE CORRECT SPEEDS.** Select correct spindle speed for workpiece size, type, shape, and condition. Use low speeds when roughing or when turning large, long, or non-concentric workpieces. Allow spindle to reach full speed before turning.

**AVOID TOOL KICKBACK.** This occurs when turning tool is grabbed or ejected from workpiece with great force. Commonly caused by poor workpiece selection/preparation, improper tool usage, or improper machine setup or tool rest adjustment.

**SAFELY PERFORM ROUGHING.** Use correct tool. Take light cuts, use low speeds, and firmly support tool with both hands.

**USE SHARP TOOLS.** Sharp tools cut with less resistance than dull tools. Using dull tools increases the risk of tool kickback or grabbing.

**SAFELY STOPPING ROTATION.** Always allow rotating workpiece to stop on its own. Never put hands or another object on workpiece to stop it.

**SAFELY MEASURE WORKPIECE.** Only measure mounted workpiece after it has completely stopped. Trying to measure a spinning workpiece increases entanglement risk.

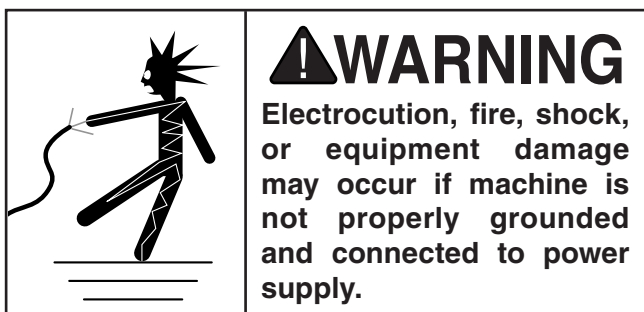
**SANDING/POLISHING.** To reduce entanglement risk, remove tool rest before sanding. Never completely wrap sandpaper around workpiece.



# SECTION 2: POWER SUPPLY

## Availability

Before installing the machine, consider the availability and proximity of the required power supply circuit. If an existing circuit does not meet the requirements for this machine, a new circuit must be installed. To minimize the risk of electrocution, fire, or equipment damage, installation work and electrical wiring must be done by an electrician or qualified service personnel in accordance with all applicable codes and standards.



## Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

### Full-Load Current Rating at 110V..... 11 Amps

The full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating.

If the machine is overloaded for a sufficient length of time, damage, overheating, or fire may result—especially if connected to an undersized circuit. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the specified circuit requirements.

## **! WARNING**

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

## 110V Circuit Requirements

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

Nominal Voltage ..... 110V, 115V, 120V  
Cycle .....60 Hz  
Phase ..... Single-Phase  
Power Supply Circuit ..... 15 Amps

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

## **! CAUTION**

**For your own safety and protection of property, consult an electrician if you are unsure about wiring practices or electrical codes in your area.**

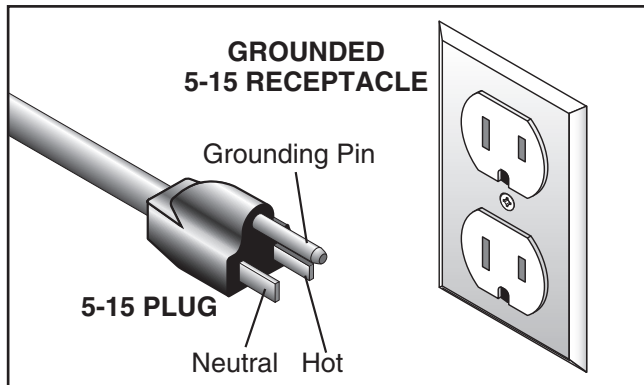
**Note:** *Circuit requirements in this manual apply to a dedicated circuit—where only one machine will be running on the circuit at a time. If machine will be connected to a shared circuit where multiple machines may be running at the same time, consult an electrician or qualified service personnel to ensure circuit is properly sized for safe operation.*



## Grounding & Plug Requirements

This machine **MUST** be grounded. In the event of certain malfunctions or breakdowns, grounding reduces the risk of electric shock by providing a path of least resistance for electric current.

This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug. Only insert plug into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances. **DO NOT** modify the provided plug!



**Figure 6.** Typical 5-15 plug and receptacle.

**⚠ CAUTION**

**SHOCK HAZARD!**

**Two-prong outlets do not meet the grounding requirements for this machine. Do not modify or use an adapter on the plug provided—if it will not fit the outlet, have a qualified electrician install the proper outlet with a verified ground.**

Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

## Extension Cords

We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

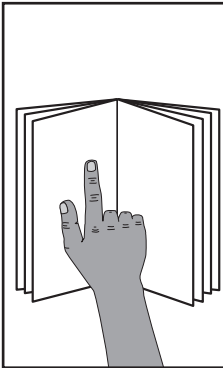
Extension cords cause voltage drop, which can damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must be in good condition and contain a ground wire and matching plug/receptacle. Additionally, it must meet the following size requirements:

**Minimum Gauge Size .....14 AWG**  
**Maximum Length (Shorter is Better).....50 ft.**

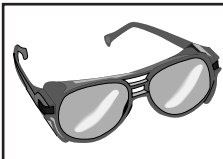


# SECTION 3: SETUP



## **!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!



## **!WARNING**

### **HEAVY LIFT!**

Straining or crushing injury may occur from improperly lifting machine or some of its parts. To reduce this risk, get help from other people and use a forklift (or other lifting equipment) rated for weight of this machine.

## Needed for Setup

The following items are needed, but not included, for the setup/assembly of this machine.

Description	Qty
• Additional People .....	As Needed
• Safety Glasses (for each person).....	1
• Level.....	1
• Cleaner/Degreaser ( <b>Page 16</b> ) ....	As Needed
• Disposable Shop Rags.....	As Needed

## Unpacking

This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. ***If items are damaged, please call us immediately at (570) 546-9663.***

**IMPORTANT:** Save all packaging materials until you are completely satisfied with the machine and have resolved any issues between Grizzly or the shipping agent. ***You MUST have the original packaging to file a freight claim. It is also extremely helpful if you need to return your machine later.***

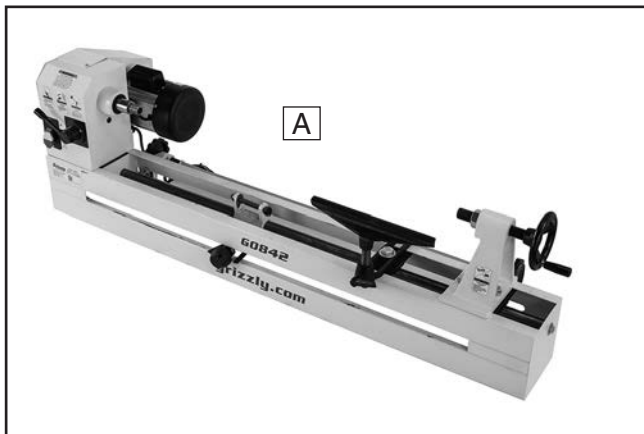


# Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

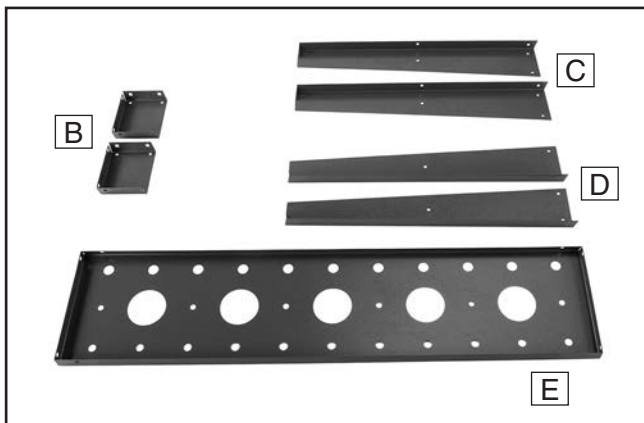
If any non-proprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

Inventory (Figures 7–10)	Qty
<b>A.</b> Lathe Assembly	
—Headstock (mounted) .....	1
—Tool Rest Base (mounted) .....	1
—Tool Rest (mounted).....	1
—Tailstock (mounted).....	1



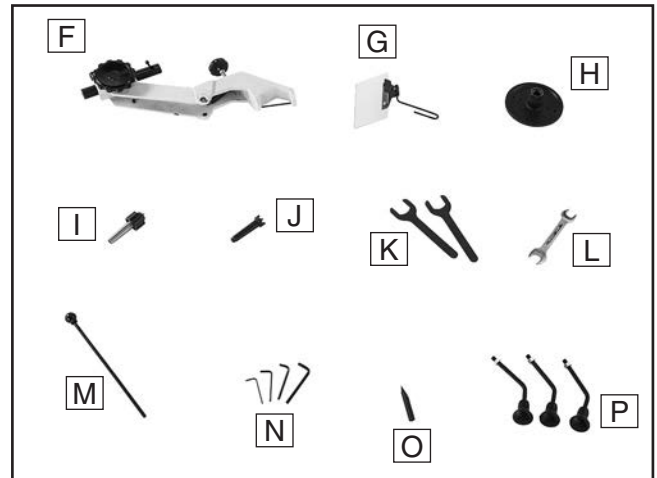
**Figure 7.** Lathe assembly.

<b>B.</b> End Supports .....	2
<b>C.</b> Stand Legs (Front Right/Rear Left) .....	2
<b>D.</b> Stand Legs (Front Left/Rear Right) .....	2
<b>E.</b> Tool Tray .....	1



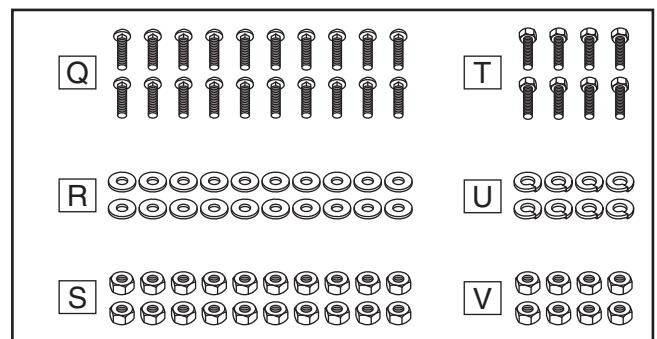
**Figure 8.** Stand components.

<b>F.</b> Copy Attachment.....	1
<b>G.</b> Copy Attachment Safety Shield .....	1
<b>H.</b> Faceplate 6" .....	1
<b>I.</b> Live Center MT#2 .....	1
<b>J.</b> Spur Center MT#2 .....	1
<b>K.</b> Flat Wrenches 32mm .....	2
<b>L.</b> Combo Wrench 22mm/24mm .....	1
<b>M.</b> Knockout Tool.....	1
<b>N.</b> Hex Wrenches 3, 4, 5, 6mm.....	1 Ea
<b>O.</b> Cutting Tool .....	1
<b>P.</b> Copy Attachment Handles w/Jam Nuts.....	3



**Figure 9.** Loose inventory components.

<b>Q.</b> Carriage Bolts M8-1.25 x 16 (Stand) .....	20
<b>R.</b> Flat Washers 8mm (Stand) .....	20
<b>S.</b> Hex Nuts M8-1.25 (Stand) .....	20
<b>T.</b> Hex Bolts M8-1.25 x 16 (Lathe/Stand) .....	8
<b>U.</b> Lock Washers 8mm (Lathe/Stand).....	8
<b>V.</b> Hex Nuts M8-1.25 (Lathe/Stand).....	8



**Figure 10.** Inventory fasteners.



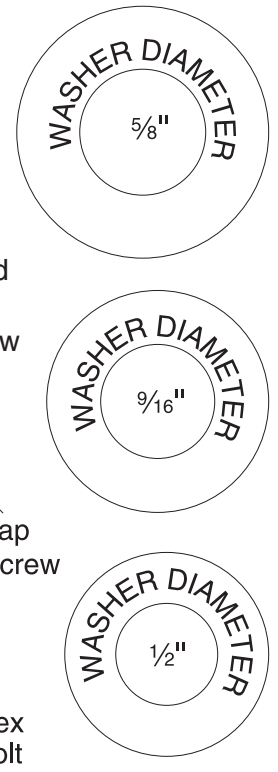
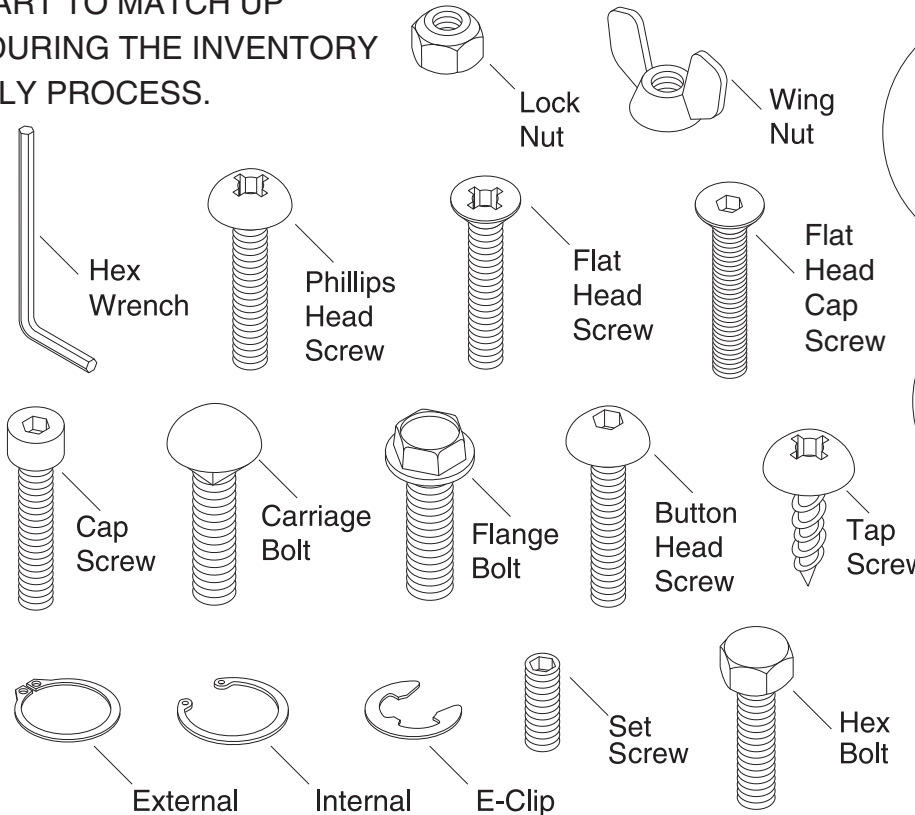


# Hardware Recognition Chart

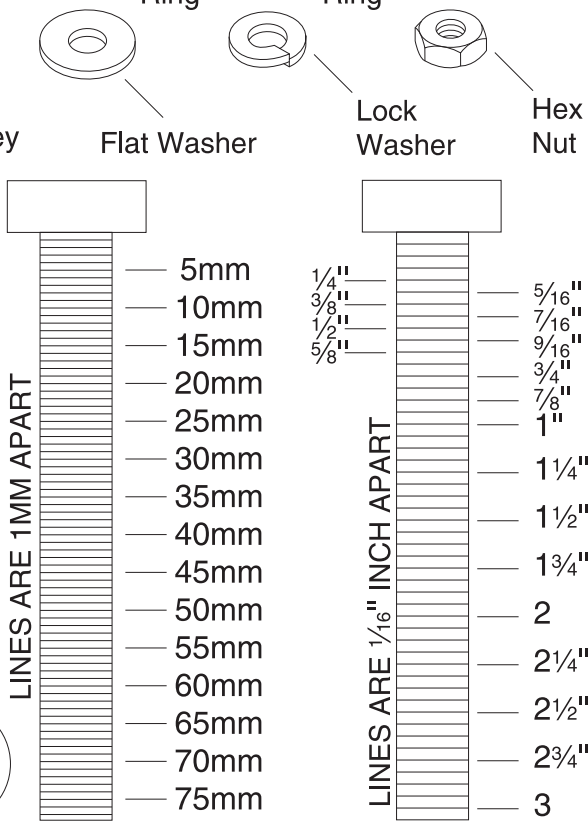
USE THIS CHART TO MATCH UP HARDWARE DURING THE INVENTORY AND ASSEMBLY PROCESS.

MEASURE BOLT DIAMETER BY PLACING INSIDE CIRCLE

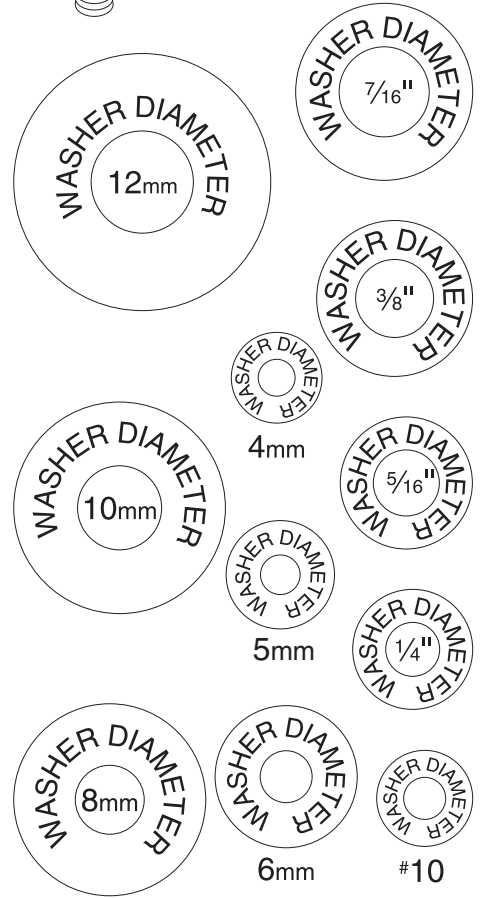
- #10
- 1/4"
- 5/16"
- 3/8"
- 7/16"
- 1/2"



- 4mm
- 5mm
- 6mm
- 8mm
- 10mm
- 12mm
- 16mm



WASHERS ARE MEASURED BY THE INSIDE DIAMETER



# Cleanup

The unpainted surfaces of your machine are coated with a heavy-duty rust preventative that prevents corrosion during shipment and storage. This rust preventative works extremely well, but it will take a little time to clean.

Be patient and do a thorough job cleaning your machine. The time you spend doing this now will give you a better appreciation for the proper care of your machine's unpainted surfaces.


There are many ways to remove this rust preventative, but the following steps work well in a wide variety of situations. Always follow the manufacturer's instructions with any cleaning product you use and make sure you work in a well-ventilated area to minimize exposure to toxic fumes.


## Before cleaning, gather the following:

- Disposable rags
- Cleaner/degreaser (WD-40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

## Basic steps for removing rust preventative:

1. Put on safety glasses.
2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5–10 minutes.
3. Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.
4. Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.

	<b>⚠ WARNING</b> Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. Avoid using these products to clean machinery.
--	--

	<b>⚠ CAUTION</b> Many cleaning solvents are toxic if inhaled. Only work in a well-ventilated area.
--	---

<b>NOTICE</b> Avoid harsh solvents like acetone or brake parts cleaner that may damage painted surfaces. Always test on a small, inconspicuous location first.
---

## T23692—Orange Power Degreaser

A great product for removing the waxy shipping grease from the *non-painted* parts of the machine during clean up.

<p>Call <b>1-800-523-4777</b> To Order</p>	
--	---

Figure 11. T23692 Orange Power Degreaser.



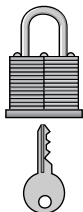
# Site Considerations

## Weight Load

Refer to the **Machine Data Sheet** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

## Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual. **See below for required space allocation.**

	<p><b>CAUTION</b></p> <p>Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.</p>
---	--

## Physical Environment

The physical environment where the machine is operated is important for safe operation and longevity of machine components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°–104°F; the relative humidity range exceeds 20%–95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

## Electrical Installation

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave enough space around machine to disconnect power supply or apply a lockout/tagout device, if required.

## Lighting

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

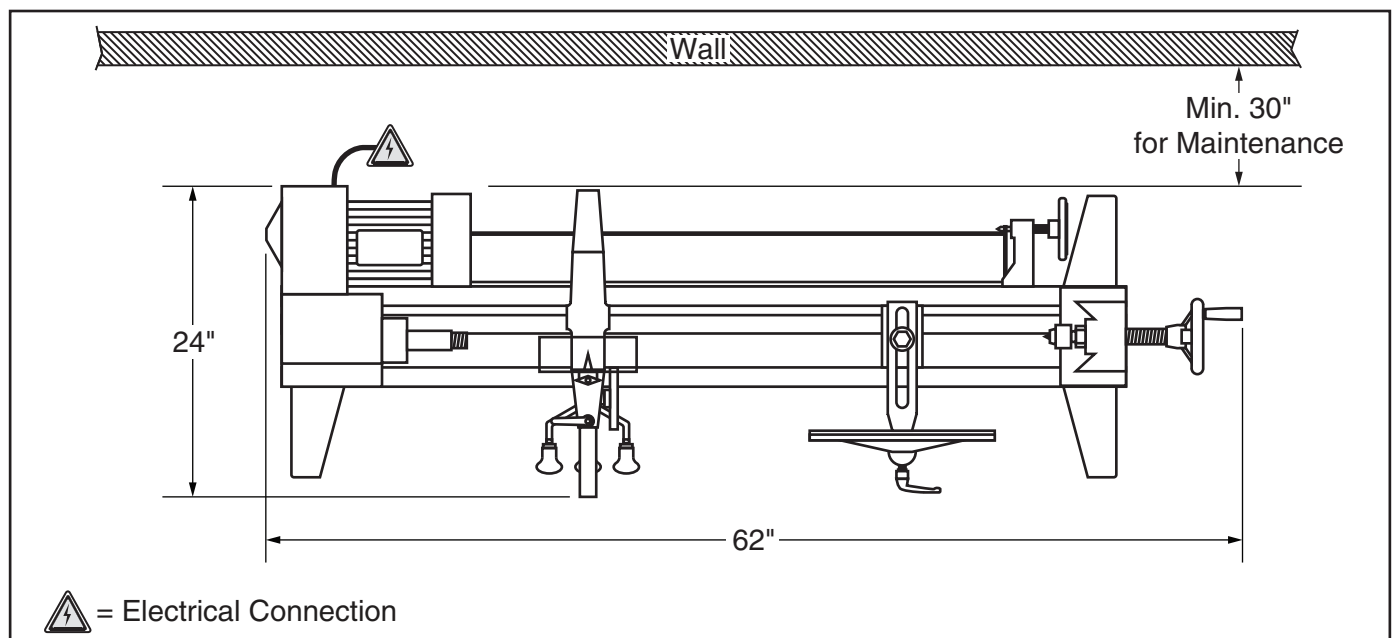


Figure 12. Minimum working clearances.



# Assembly

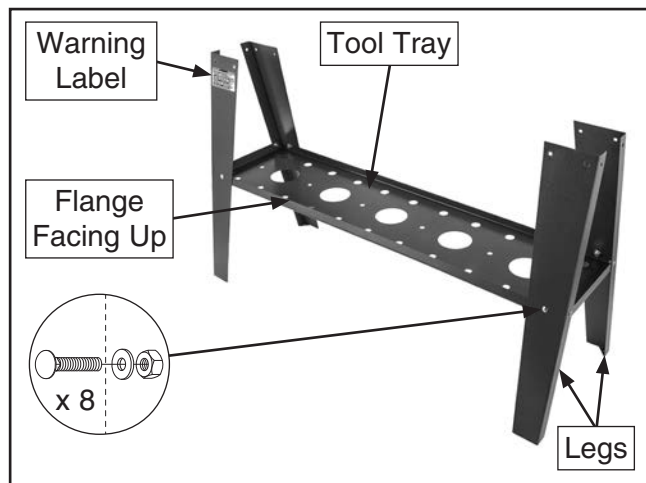
The machine must be fully assembled before it can be operated. Before beginning the assembly process, refer to **Needed for Setup** and gather all listed items. To ensure the assembly process goes smoothly, first clean any parts that are covered or coated in heavy-duty rust preventative (if applicable).

## To assemble lathe:

1. Attach (4) legs to tool tray with (8) M8-1.25 x 16 carriage bolts, (8) 8mm flat washers, and (8) M8-1.25 hex nuts (see **Figure 13**). Fingertighten hex nuts for now.

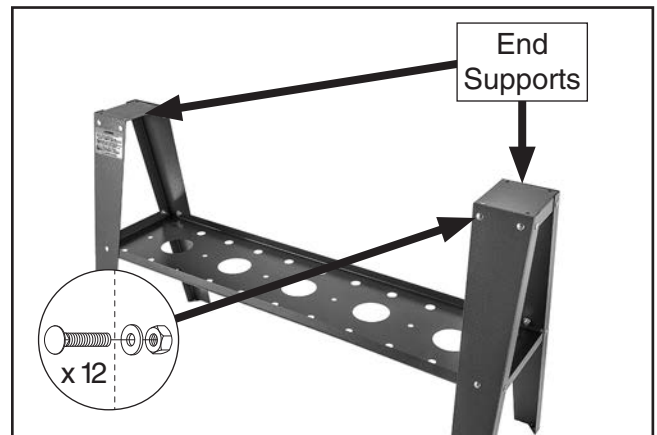
**Note:** Leg with warning label attaches to front left corner of tool tray; flanged side of tray faces up.

**Tip:** Fasten legs to tool tray over a clean piece of cardboard on floor to avoid scratching paint.



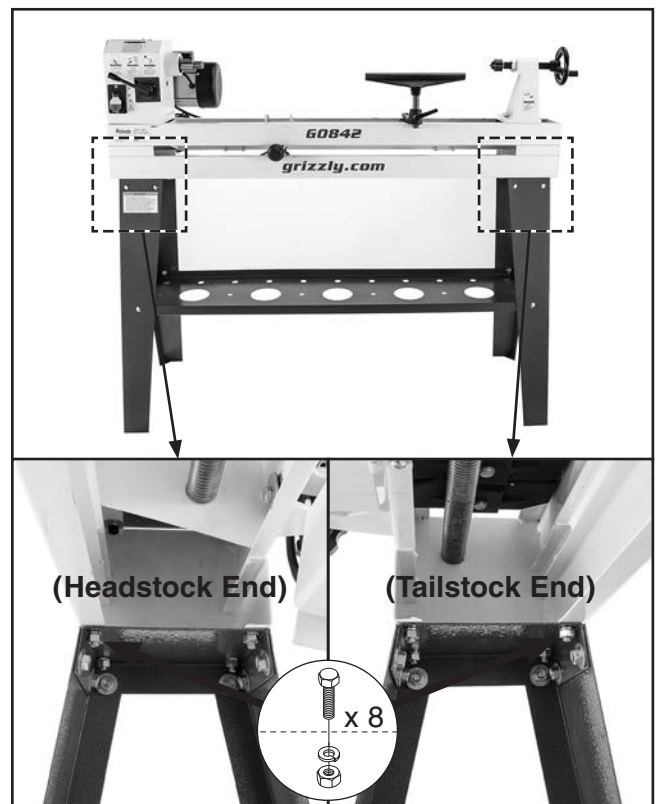
**Figure 13.** Legs attached to tool tray.

2. Position end supports between tops of legs and attach each support with (6) M8-1.25 x 16 carriage bolts, (6) 8mm flat washers, and (6) M8-1.25 hex nuts (see **Figure 14**). Fingertighten hex nuts for now.



**Figure 14.** End supports installed onto legs.

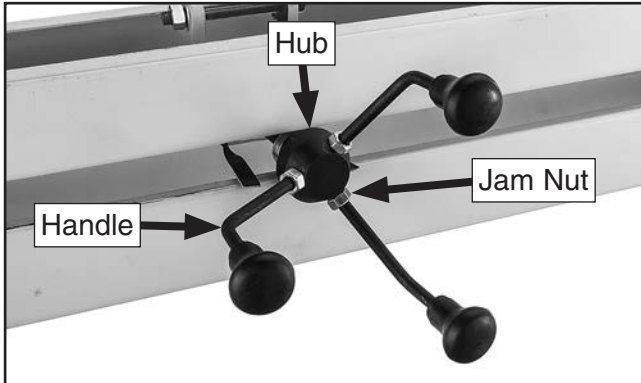
3. With help of an assistant, lift lathe and align mounting holes in bottom of lathe with holes in tops of end supports (see **Figure 15**).
4. Attach lathe to end supports with (8) M8-1.25 x 16 hex bolts, (8) 8mm lock washers, and (8) M8-1.25 hex nuts (see **Figure 15**). Tighten all fasteners installed in **Steps 1–4**.



**Figure 15.** Lathe attached to end supports.



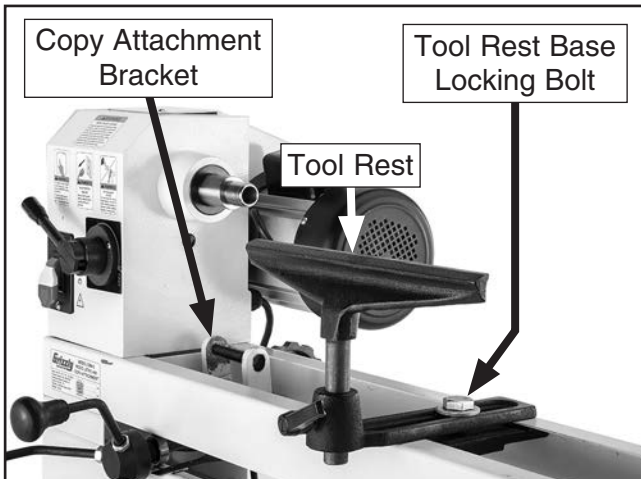
- Attach each of (3) copy attachment handwheel handles to the hub, then tighten pre-installed jam nuts against hub (see **Figure 16**).



**Figure 16.** Copy attachment handwheel handles attached to hub.

— *If you plan to use the lathe for spindle or faceplate turning operations, loosen tool rest base locking bolt, rotate tool rest so it faces front of lathe, then retighten bolt (see **Figure 17**). Move copy attachment bracket and handles all the way left against headstock so they are out of the way. Now, proceed to **Test Run**.*

**Important:** *The tool rest is installed backwards for shipping purposes and must be properly repositioned (refer to **Page 28**) before starting turning operations.*



**Figure 17.** Tool rest positioned for operations and copy attachment bracket moved out of way.

— *If you plan to use lathe to make spindle copies, proceed to **Test Run** and complete all steps, then proceed to **Copy Attachment Operation** on **Page 24**.*

## Test Run

Once assembly is complete, test run the machine to ensure it is properly connected to power and safety components are functioning correctly.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem **BEFORE** operating the machine again. The **Troubleshooting** table in the **SERVICE** section of this manual can help.

The test run consists of verifying the following:  
 1) The motor powers up and runs correctly, and  
 2) the safety disabling mechanism on the switch works correctly.

### **!WARNING**

**Serious injury or death can result from using this machine BEFORE understanding its controls and related safety information. DO NOT operate, or allow others to operate, machine until the information is understood.**

### **!WARNING**

**DO NOT start machine until all preceding setup instructions have been performed. Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.**

**To test run machine:**

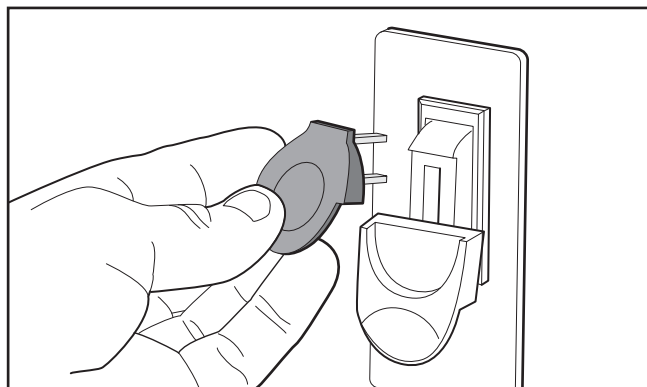
- Clear all setup tools away from machine.
- Connect machine to power supply.



3. Verify machine is operating correctly by turning machine **ON**.
  - When operating correctly, machine runs smoothly with little or no vibration or rubbing noises.
  - Investigate and correct strange or unusual noises or vibrations before operating machine further. Always disconnect machine from power when investigating or correcting potential problems.

4. Turn machine **OFF**.

5. Remove switch disabling key, as shown in **Figure 18**.



**Figure 18.** Example of removing switch key from paddle switch.

6. Try to start machine with paddle switch. The machine should not start.

- If the machine *does not* start, the switch disabling feature is working correctly.

- If the machine *does start*, immediately stop the machine. The switch disabling feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.

7. Re-insert switch disabling key.

8. Turn machine **ON**.

## **NOTICE**

**The spindle speed lever adjusts pulley width to change spindle speed. To prevent damage to this mechanism, lathe MUST be running before using variable speed lever.**

9. Test spindle speed by pulling shift lever out (see **Figure 19**) and slowly adjusting it left and right.



**Figure 19.** Location of spindle speed lever.

- The machine should speed up and slow down as you move the lever. If this is the case, then Test Run is over and your machine is ready for normal operations.

- If machine has problems changing speeds, turn machine **OFF**, disconnect it from power, and refer to Troubleshooting chart on **Page 42**, or call Tech Support for help.

Congratulations! The Test Run is complete!




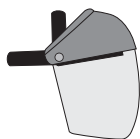
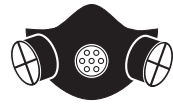
# SECTION 4: OPERATIONS

## Operation Overview

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/components discussed later in this manual are easier to understand.

Due to the generic nature of this overview, it is **not** intended to be an instructional guide. To learn more about specific operations, read this entire manual, seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.

	<p><b>! WARNING</b> To reduce your risk of serious injury, read this entire manual <b>BEFORE</b> using machine.</p>
--	---

<p><b>! WARNING</b> Eye injuries or respiratory problems can occur while operating this machine. Wear personal protective equipment to reduce your risk from these hazards.</p>		
		

<p><b>NOTICE</b> If you are not experienced with this type of machine, <b>WE STRONGLY RECOMMEND</b> that you seek additional training outside of this manual. Read books/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.</p>
--

## Typical Turning (Non-Copy) Operations

1. Operator examines workpiece to make sure it is suitable for turning. No extreme bows, knots, or cracks should exist.
2. Prepares and trims workpiece with a bandsaw or table saw to make it roughly concentric.
3. Installs workpiece between centers, or attaches it to faceplate or chuck.
4. Adjusts tool rest according to type of operation, and sets minimum clearance between workpiece and lip of tool rest to ¼" gap.
5. Rotates workpiece by hand to verify spindle and workpiece rotate freely throughout full range of motion.
6. Ties back long hair and clothing and puts on safety glasses, face shield, and respirator.
7. Starts lathe, pulls variable speed lever out, and adjusts lathe speed for type of wood and size of workpiece installed and carefully begins turning operation, keeping chisel against tool rest entire time it is cutting.
8. Turns lathe **OFF** when cutting operation is complete.



## Typical Copy Operations

1. Operator examines workpiece to make sure it is suitable for cutting. No extreme bows, knots, or cracks should exist.
2. Prepares and trims workpiece with a bandsaw or table saw to make it roughly concentric.
3. Installs workpiece between centers, and installs template or master spindle.
4. Adjusts cutting tool and stylus to just touch workpiece and template or master spindle.
5. Ties back long hair and clothing and puts on safety glasses, face shield, and respirator.
6. Starts lathe and advances cutting tool into workpiece approximately  $\frac{1}{16}$ " per pass, moving from right to left using the copy attachment handwheel and using "downhill" cutting technique. Repeats this process over multiple passes until workpiece is complete.
7. Turns lathe **OFF** immediately after turning is complete and waits for workpiece to completely stop before removing it.
8. Repeats **Steps 1–6** to complete all copies.
9. Removes copy attachment and re-installs tool rest.
10. Uses lathe chisels to sharpen details and smooth turned surfaces on each copy, then sands smooth.

## Workpiece Inspection

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Some workpieces are not safe to turn or may require modification before they are safe to turn. **Before turning, inspect all workpieces for the following:**

- **Workpiece Type:**  
This machine is intended for turning natural wood products. Never attempt to turn any composite wood materials, plastics, metal, stone, or rubber workpieces; turning these materials can lead to machine damage or severe injury.
- **Foreign Objects:**  
Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While cutting, these objects can become dislodged and hit the operator, cause tool grab, or break the turning tool, which might then fly apart. Always visually inspect your workpiece for these items. If they can't be removed, **DO NOT** turn the workpiece.
- **Large/Loose Knots:**  
Loose knots can become dislodged during the turning operation. Large knots can cause a workpiece to completely break in half during turning and cause machine damage and injury. Choose workpieces that do not have large/loose knots.
- **Excessive Warping:**  
Workpieces with excessive bowing or twisting are unstable and unbalanced. Never turn these workpieces at high speed, or instability will be magnified and the workpiece can be ejected from the lathe causing injury. Only turn concentric workpieces!





# Installing/Removing Copy Attachment

The copy attachment needs to be installed for copy operations, but once these are complete you should remove the copy attachment since it can interfere with typical turning operations.

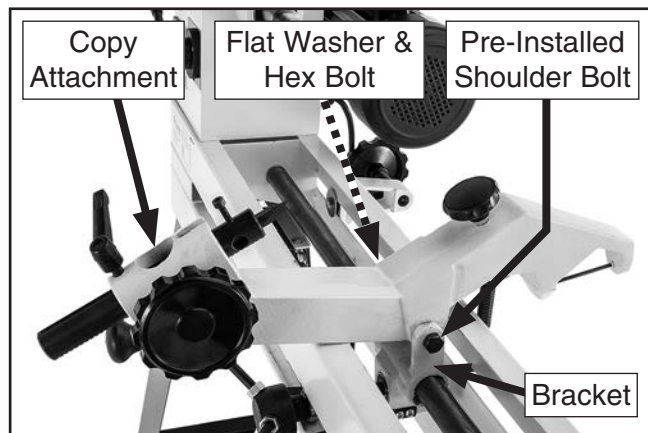
Follow the instructions in this section to install the copy attachment onto the copy attachment bracket (see **Figure 20**). To remove the copy attachment, repeat **Steps 1–4** of this section in reverse, then move the bracket against the headstock so it does not interfere with positioning of the tool rest.

Alternatively, the copy attachment can also be positioned at the right end of the bed so it does not interfere with the tool rest or tailstock during turning operations. However, this will reduce the maximum workpiece size due to the shorter distance between centers.

Items Needed	Qty
Wrench or Socket 18mm.....	2
Hex Wrench 6mm.....	1
Hex Wrench 5mm.....	1

## To install copy attachment:

1. Remove tool rest (refer to **Removing/Installing Tool Rest** on **Page 29**).
2. Secure copy attachment to bracket shown in **Figure 20** with pre-installed shoulder bolt, flat washer, and hex nut.



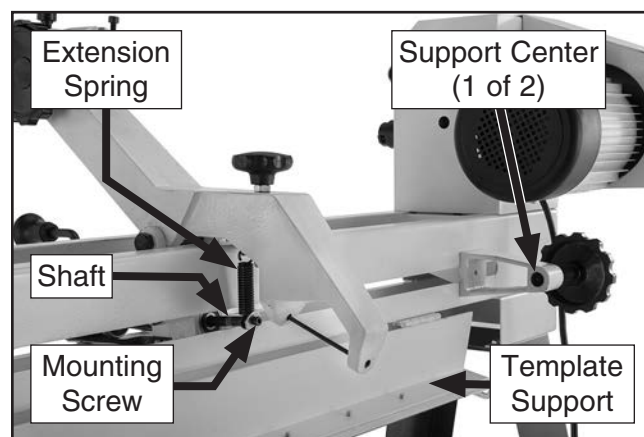
**Figure 20.** Copy attachment secured to bracket.

3. Loosen template support centers and allow template support to drop down (see **Figure 21**).

4. Remove pre-installed mounting screw and use it to attach extension spring to shaft, as shown in **Figure 21**.

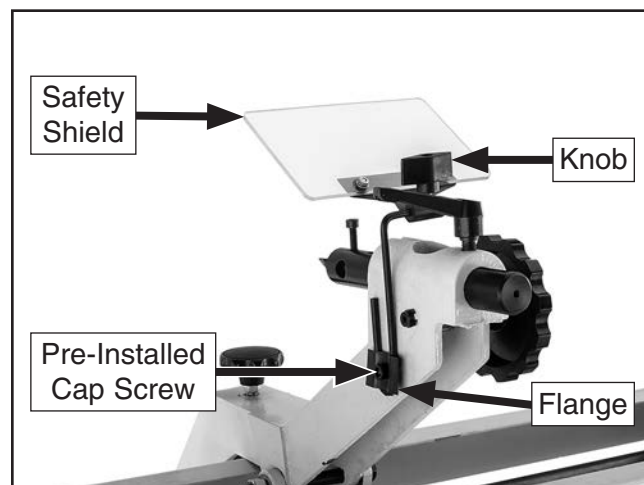
— If you plan to use a *template* during copy operations, re-install template support in *up* position.

— If you plan to use a *master spindle* during copy operations, leave template support in *down* position.



**Figure 21.** Extension spring attached to shaft with mounting screw.

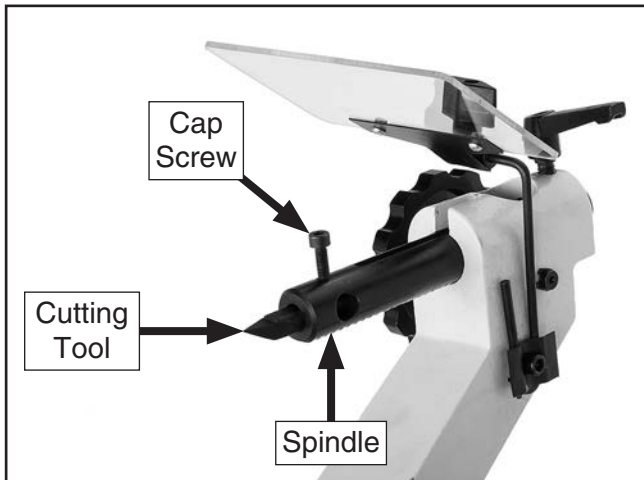
5. Secure safety shield with pre-installed cap screw and flange. Loosen safety shield knob (see **Figure 22**), adjust shield as needed, then retighten knob.



**Figure 22.** Safety shield assembly installed onto copy attachment.



- Loosen cap screw shown in **Figure 23**, insert cutting tool into tool spindle with point facing out and flat side facing up, then tighten cap screw to secure cutting tool.



**Figure 23.** Cutting tool inserted into tool spindle.

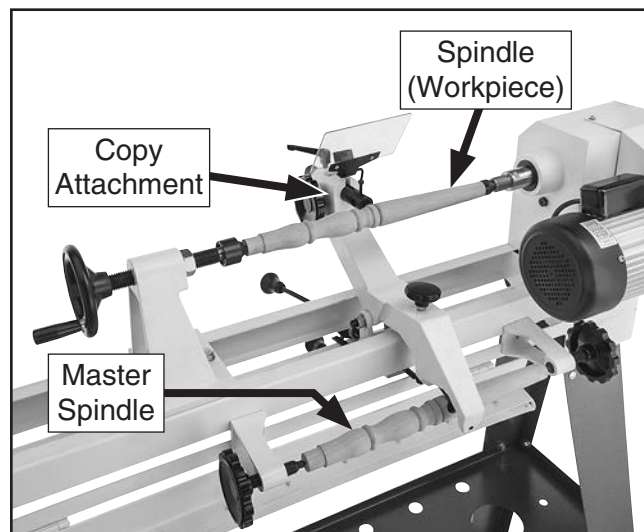
## **NOTICE**

Copy attachment can interfere with regular (non-copy) turning operations, causing damage to workpiece or machine. Always remove copy attachment or position it at end of bed, to the right of tailstock before performing regular turning operations to prevent interference and reduce risk of damage to workpiece and/or machine.

# Copy Attachment Operation

**Max. Workpiece Dimensions.....32" x 8"**  
**Minimum Workpiece Width: .....1"**

The Model G0842 copy attachment enables you to easily reproduce stair spindles or chair/table legs using a template or master spindle, as shown in **Figure 24**.



**Figure 24.** Typical copy operation setup.

Before using the copy attachment, create a 2-dimensional template or roughed-out, 3-dimensional master spindle. Then remove the tool rest, mount the workpiece between centers, and mount the master spindle or template (refer to **Step 4** on **Page 25** for detailed instructions).

The pressure and back-and-forth motion of the stylus will erode the features on any template eventually. However, a hardwood template will last longer than one made from softwood.

Start simple and practice with scrap pieces when first using the copy attachment, and always move stylus in a "downhill" direction (refer to **Step 10** on **Page 26**).

As with any other surfacing operation, always take multiple passes, rather than trying to remove too much wood at one time. This is much safer and will improve cutting results. It will take some trial-and-error to properly set up and learn to use the copy attachment and achieve the best results.



**Tip:** Save time during duplication by removing the corners from all of the spindles you plan on creating (see **Figure 45** on **Page 34**) before operating the copy attachment. You will need to make the cuts with a lathe chisel on your tool rest, prior to installing the copy attachment.

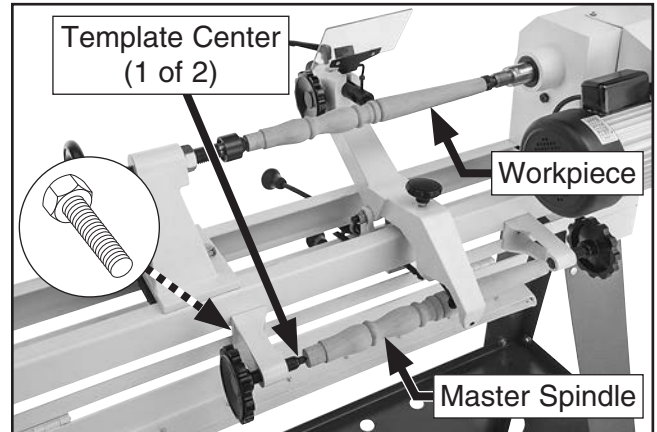
Items Needed	Qty
Phillips Head Screwdriver #2 .....	1
Wrench or Socket 13mm .....	1

**To operate copy attachment:**

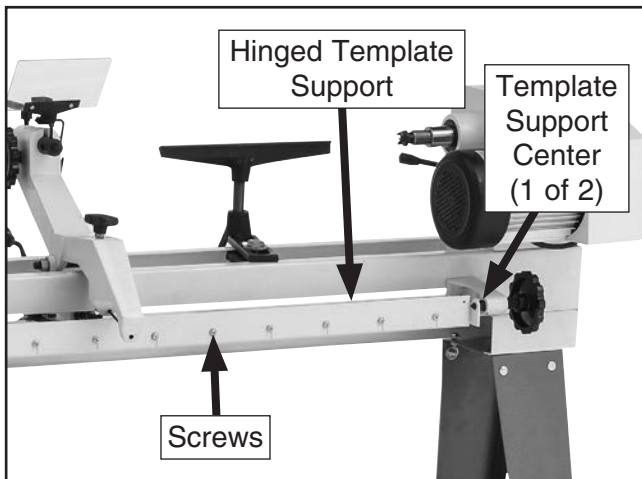
1. DISCONNECT MACHINE FROM POWER!
2. Install copy attachment (refer to **Installing/Removing Copy Attachment** on **Page 23**).
3. Mount workpiece between centers (see **Spindle Turning** on **Page 34**).
4. Mount template or master spindle onto machine.

— If you are using a *template*, secure the hinged template support between the support centers (see **Figure 25**). Loosen the screws on the template support enough to insert the template between the halves and align the template profile with the desired location on the workpiece, then tighten the screws.

— If you are using a *master spindle*, loosen hex bolt on each template center, let template support drop down out of the way, then mount master spindle between template support centers (see **Figure 26**). Position centers with master spindle as needed so master profile lines up with desired location on workpiece, then tighten support centers.



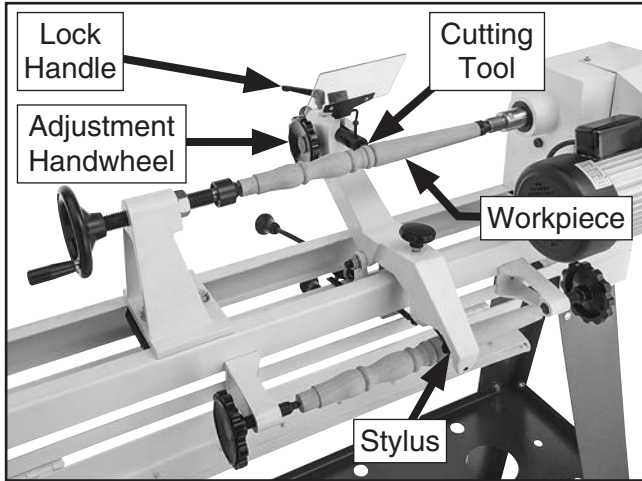
**Figure 26.** Master spindle installed between template centers.



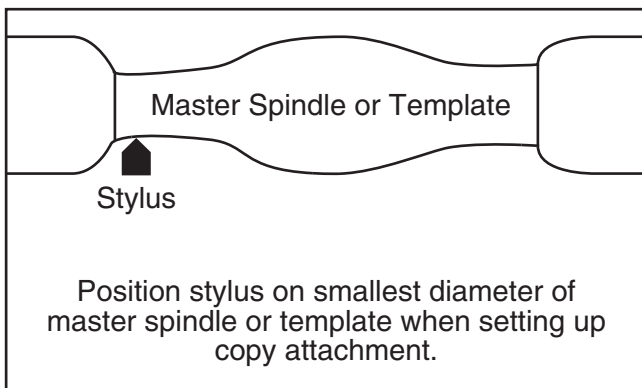
**Figure 25.** Location of hinged template support and related components.



- Position stylus (see **Figure 27**) on smallest diameter of master spindle or template (see **Figure 28**).



**Figure 27.** Copy attachment controls and main components.

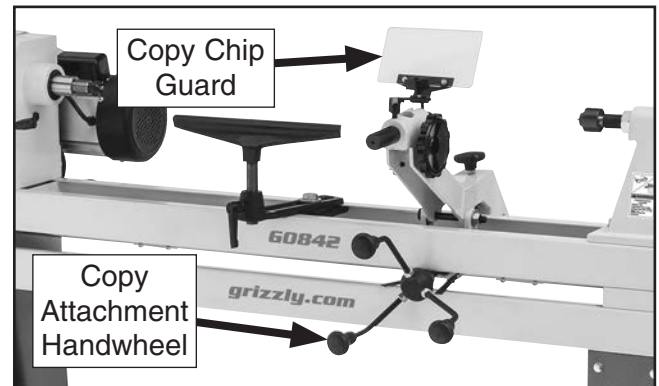


**Figure 28.** Location of stylus on master spindle or template for initial setup of copy attachment.

- Loosen cutting tool lock handle (see **Figure 27**) and use adjustment handwheel to move cutting tool so it just contacts workpiece.

**Note:** *It is essential for accurate copying that cutting tool tip and stylus always remain at same positions in relation to workpiece and template.*

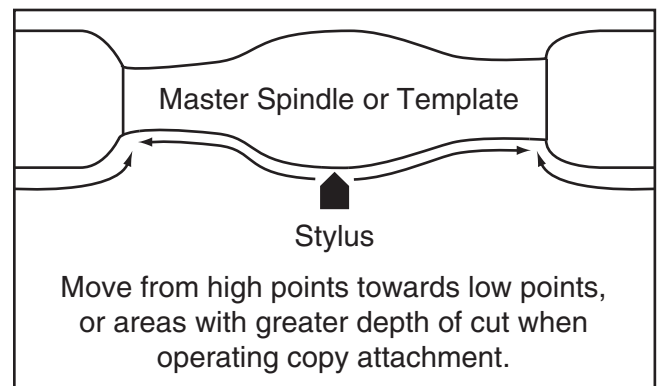
- Use copy attachment handwheel to move cutting tool clear of workpiece (see **Figure 29**).
- Adjust copy attachment chip guard (see **Figure 29**) as necessary so it does not make contact with workpiece or interfere with turning operation.



**Figure 29.** Location of copy attachment handles.

- Turn lathe **ON** at its slowest speed (see **Adjusting Spindle Speed** on **Page 33**).
- Slowly advance cutting tool and perform first cutting pass, moving stylus along template or master spindle from high points to areas with greater depth of cut (see **Figure 30**).

**Note:** *Always move stylus so it follows the master spindle or template "downhill". Trying to move "uphill" along either one will cause the stylus and cutting tool to dig into the master spindle or template and the workpiece (see **Figure 30**).*



**Figure 30.** Example of recommended "downhill" direction of stylus travel.



11. After each pass, extend cutting tool another  $\frac{1}{16}$ " (maximum), and repeat with another pass.

— If cutting tool tends to bite or gouge workpiece, back off cutting tool slightly and try again. Be conservative when removing stock.

12. Turn lathe **OFF** and inspect results.

13. If you are satisfied, continue to remove material from workpiece, using "downhill" cutting method illustrated in **Figure 30** until workpiece is complete.

14. **DISCONNECT MACHINE FROM POWER!**

15. After completing initial copy, continue following **Steps 3–14** until all spindles are completed.

16. When all spindles are complete, remove master spindle or template.

— If using master spindle, remove master spindle from support centers and re-install template support between support centers.

— If using template, remove template from template support halves and tighten screws to secure.

17. Remove copy attachment (refer to **Installing/Removing Copy Attachment** on **Page 23**) and re-install tool rest (refer to **Adjusting Tool Rest** on **Page 28**).

18. Use appropriate lathe chisels to sharpen details and smooth turned surfaces of each copy, then sand smooth.

## Adjusting Tailstock

The tailstock on this lathe is equipped with a two-piece clamping plate. When the two tailstock clamp bolts (see **Figure 31**) above the plate are tightened, the plate lifts up underneath the bed and secures the tailstock in place. The tailstock can be positioned anywhere along the lathe bed to accommodate typical turning operations.

The tailstock can be removed and repositioned left of the copy attachment for turning operations. However, doing this will reduce the maximum workpiece size due to the shorter distance between centers.

### **!WARNING**

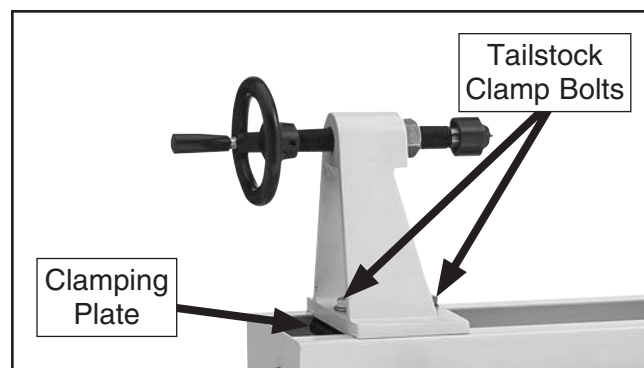
**Always operate lathe with tailstock firmly locked to bed. Otherwise, serious personal injury may occur by tailstock moving during operation and workpiece being ejected at high speed.**

Items Needed	Qty
Wrench or Socket 24mm.....	1
Phillips Head Screwdriver #2 .....	1

### Positioning Tailstock Along Bed

To position the tailstock along the bed, loosen the tailstock clamp bolts shown in **Figure 31**, move the tailstock to the desired position along bed, then retighten the clamp bolts.

**Note:** *Be careful when loosening clamp bolts, as over-loosening them can cause clamping plate to fall, damaging clamping plate or floor.*

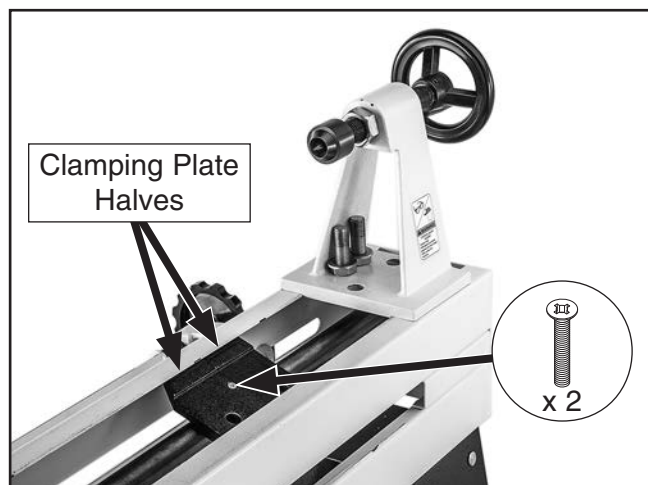


**Figure 31.** Location of tailstock clamp bolts and clamping plate.



## Removing Tailstock

1. Loosen tailstock clamp bolts shown in **Figure 31** on **Page 27**, remove clamping plate, clamp bolts, and flat washers from tailstock, then move tailstock out of the way.
2. Remove (2) flat head screws that secure clamping plate halves together (see **Figure 32**), then remove plate halves and tailstock from bed.



**Figure 32.** Clamping plate halves.

## Re-installing Tailstock

1. Place clamping plate halves (**Figure 32**) under bedway in location where tailstock is needed for desired operation, then secure halves with (2) flat head screws.
2. Re-install tailstock on clamping plate using clamp bolts and flat washers from **Step 1** of **Removing Tailstock**. Check to make sure tailstock slides smoothly along bedway.

## Adjusting Tool Rest

The tool rest assembly consists of two components: the tool rest base (or banjo) and the tool rest. The tool rest base moves forward/backward and left/right along the length of the lathe bed. The tool rest rotates and moves up and down in the tool rest base. Locks for both components allow you to secure the tool rest in position after making these adjustments.

When adjusting the tool rest, position it as close as possible to the workpiece without actually touching it. This maximizes support where the cutting occurs and minimizes leverage, reducing the risk of injury if a "catch" occurs.

Many woodturners typically set the height of the tool rest  $\frac{1}{8}$ " above or below the centerline of the workpiece, depending on their height, the type of tool they're using, and the type of operation they're performing.

**As a rule of thumb:** For most (spindle) turning operations, the cutting tool should contact the workpiece slightly above centerline. For most inside (bowl) turning operations, the cutting tool should contact the workpiece slightly below centerline.

Keeping all these factors in mind, your main goal when adjusting the tool rest should be to provide maximum support for the type of tool being used, in a position that is safe and comfortable for you.

### **⚠️ WARNING**

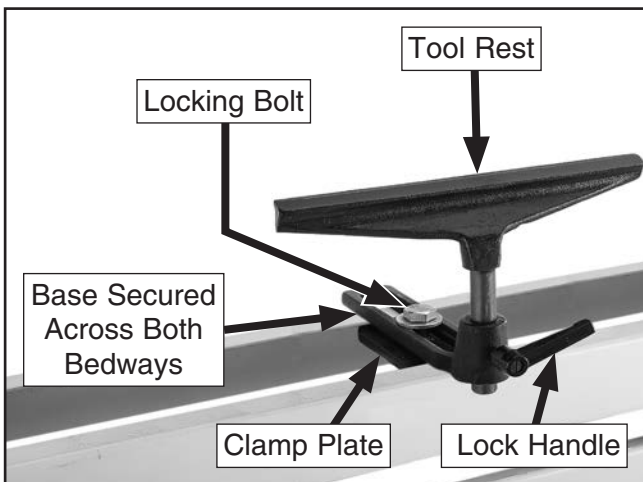
Improperly supported or positioned cutting tools can "catch" on workpiece, ejecting tool from your hands with great force. To reduce this risk, always ensure tool rest is properly positioned for each type of operation, cutting tool is firmly supported against tool rest **BEFORE** cutting, and cutting tool is properly positioned to cut at the correct angle for tool and operation type.



### To adjust tool rest:

1. Loosen tool rest base locking bolt shown in **Figure 33** and move tool rest assembly to desired position on lathe bed.
2. Tighten tool rest base locking bolt (see **Figure 33**) to secure tool rest assembly in position. Ensure tool rest base is tightly secured and makes full contact with both bedways to help prevent tool rest assembly from coming loose during operation.

**! WARNING**  
Serious personal injury may occur if tool rest base comes loose during operation. When tightening tool rest base, always ensure base has full contact with BOTH bedways, clamping plate is properly squared (not at an angle), and locking bolt is firmly tightened.



**Figure 33.** Tool rest controls.

3. Loosen tool rest lock handle (see **Figure 33**).
4. Position tool rest in desired location, then retighten lock handle to secure tool rest in position.

### Removing/Installing Tool Rest

To remove the tool rest assembly, loosen the tool rest base locking bolt shown in **Figure 33** on **Page 28**, rotate the clamp plate clockwise so it is perpendicular to the tool rest base, then remove the tool rest assembly and store it for later use.

To re-install the tool rest assembly, place the assembly on the lathe bedway, rotate the clamping plate counterclockwise so it is parallel to the tool rest base, then tighten tool rest base locking bolt to secure clamping plate.

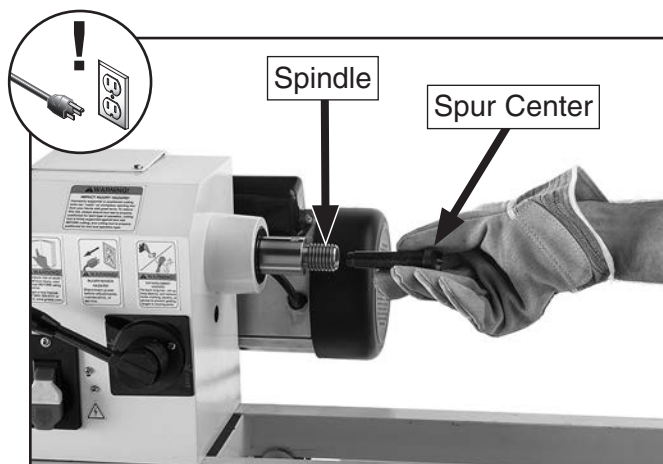
## Installing/Removing Headstock Center

The included spur center installs in the headstock spindle with an MT#2 tapered fit.

Items Needed	Qty
Leather Gloves .....	1 Pair
Clean Rag .....	1
Knockout Tool.....	1

### Installing Headstock Center

1. DISCONNECT MACHINE FROM POWER!
2. Make sure mating surfaces of center and spindle are free of debris and oily substances before inserting center to ensure a good fit and reduce runout.
3. Insert tapered end of center into spindle, and push it in with a quick, firm motion, as shown in **Figure 34**.



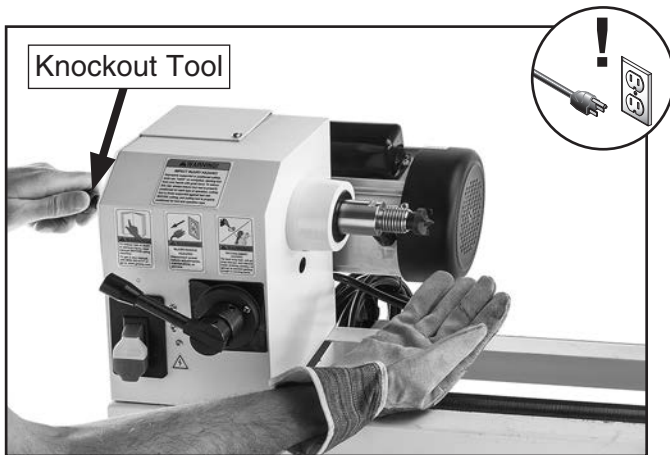
**Figure 34.** Installing center in headstock spindle.



4. Make sure center is securely installed by attempting to pull it out by hand—a properly installed center will not pull out easily.

### Removing Headstock Center

1. DISCONNECT MACHINE FROM POWER!
2. Hold a clean rag under spindle or wear leather glove to catch center when you remove it.
3. Insert knockout tool through outbound end of spindle and firmly tap back of center, catching it as it falls, as shown in **Figure 35**.



**Figure 35.** Removing headstock center with knockout tool.

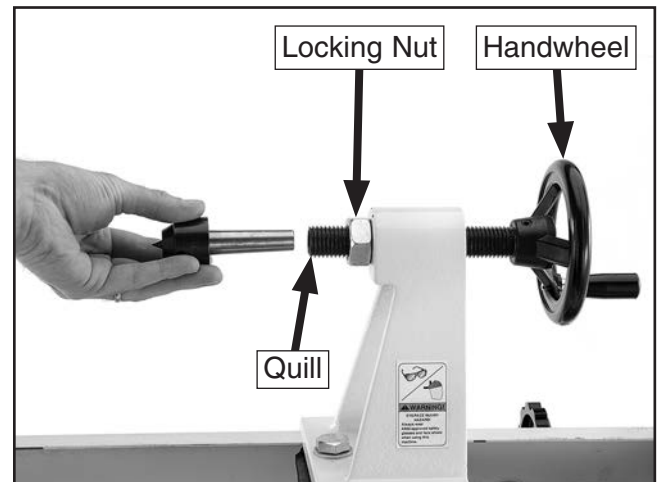
## Installing/Removing Tailstock Center

The included live center installs into the tailstock quill with an MT#2 tapered fit.

Items Needed	Qty
Leather Glove/Clean Rag .....	1
Adjustable Wrench .....	1

### Installing Tailstock Center

1. Loosen quill locking nut and rotate handwheel until quill extends about 1", as shown in **Figure 36**.



**Figure 36.** Installing center into tailstock quill.

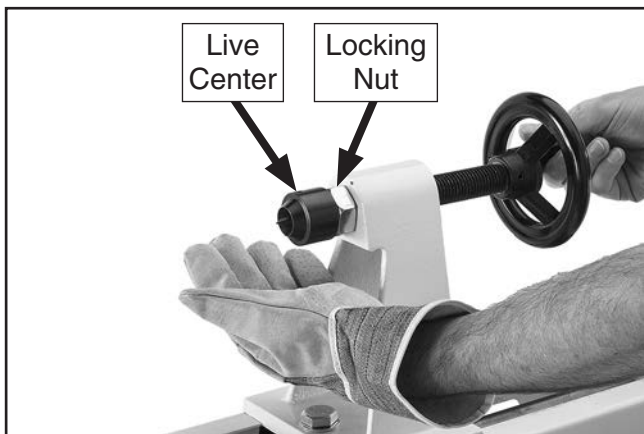
2. Make sure mating surfaces of center and quill are free of debris and oily substances before inserting center to ensure a good fit and reduce runout.
3. Firmly insert tapered end of center into tailstock quill, as shown in **Figure 36**.
4. Make sure center is securely installed by attempting to pull it out by hand—a properly installed center will not pull out easily.
5. Secure quill by tightening quill locking nut against tailstock.





## Removing Tailstock Center

1. Loosen quill locking nut and rotate it up to just touch back of live center (see **Figure 37**).
2. Hold a clean rag under spindle or wear a glove to catch center when you remove it (see **Figure 37**).
3. Rotate quill handwheel counterclockwise to force center out of quill.

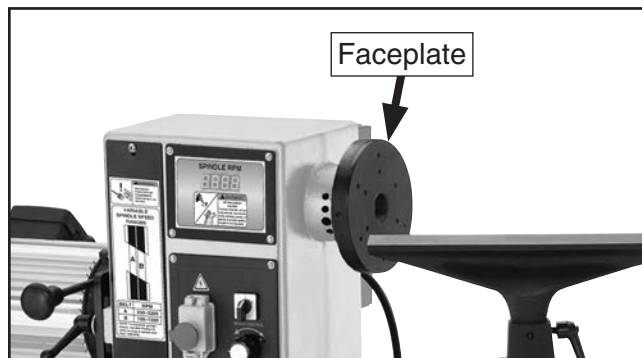


**Figure 37.** Removing center from tailstock.

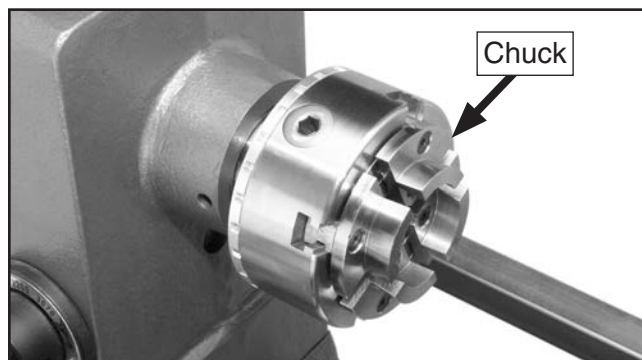
## Installing/Removing Faceplate or Chuck

Use the faceplate or a chuck (see **Figures 38–39**) when you need to remove material from the face of the workpiece, such as during hollowing operations.

**Note:** A chuck is not included with this machine. Refer to **Accessories** on **Page 39** for available chucks compatible with this machine.



**Figure 38.** Example of faceplate installed on spindle.



**Figure 39.** Example of chuck installed on spindle.

The included faceplate or a chuck can be installed only if the spur center is removed from the spindle.

These instructions cover installing and removing the faceplate or chuck. To mount a workpiece to your faceplate, refer to **Faceplate Turning** on **Page 36**. To mount a workpiece to your chuck, refer to the instructions that came with your chuck.



## Installing/Removing Faceplate

Items Needed	Qty
Open-End Wrenches 32mm (Included).....	2
Lightly Oiled Rag.....	1

### To install faceplate:

1. DISCONNECT MACHINE FROM POWER!
2. If spur center is installed, remove it (refer to **Page 29** for detailed instructions).
3. Make sure internal threads of faceplate and threads of spindle are free of debris, then wipe threads with a lightly oiled rag to aid in installation and removal.
4. Thread faceplate onto spindle clockwise.
5. Use two included 32mm flat wrenches to tighten faceplate, as shown in **Figure 40**.



**Figure 40.** Example of tightening faceplate onto spindle.

### To remove faceplate:

1. DISCONNECT MACHINE FROM POWER!
2. Perform **Steps 4–5** on this page, in reverse.

## Installing/Removing Chuck (Not Included)

The following instructions refer to typical chuck installation, such as with Grizzly Model T25646 4" Easy Chuck (see **Page 39**). Before installing a chuck on your machine, consult the instructions that came with your chuck to ensure proper installation.

Items Needed	Qty
Open-End Wrench 32mm (Included).....	1
Lightly Oiled Rag.....	1
Lathe Chuck Key (Not Included) .....	1

### To install chuck:

1. DISCONNECT MACHINE FROM POWER!
2. If spur center is installed, remove it (refer to **Page 30** for detailed instructions).
3. Make sure internal threads of chuck and threads of spindle are free of debris, then wipe threads with a lightly oiled rag to aid in installation and removal.
4. Thread chuck onto spindle and hand-tighten until it seats evenly against spindle shoulder.
5. With one hand, use included 32mm flat wrench to prevent spindle from turning. With other hand, loosen chuck slightly, then quickly tighten it to firmly seat chuck onto spindle.

## NOTICE

**An improperly installed chuck can cause damage to machine and workpiece, and provide poor turning results. For best results and to reduce risk of damage, always ensure chuck firmly seats evenly against spindle shoulder with no wobble or free play.**

### To remove chuck:

1. DISCONNECT MACHINE FROM POWER!
2. With one hand, use included 32mm flat wrench to prevent spindle from turning. With other hand, use lathe chuck key to break chuck loose by rotating it counterclockwise, then remove it the rest of the way by hand.



# Adjusting Spindle Speed

## NOTICE

Spindle speed must be adjusted while lathe is running. Adjusting spindle speed while machine is not in operation could result in permanent damage to the machine, which is not covered under warranty.

### Spindle Speed Range: 600–2400 RPM

Users can select one of 10 speeds within this range by pulling out the spindle speed lever and moving it right to increase RPM or left to decrease the RPM (see **Figure 41**).



**Figure 41.** Spindle speed shift lever shown at low setting.

- When a lot of material must be removed and a rough finish does not matter, use *low* range (lever positioned left of center).
- When making light cuts or when a clean finish is required, use *high* range (lever positioned right of center).
- For general turning operations, or as a compromise between the two ranges, use *mid* range (lever in center position).

Refer to the chart in **Figure 42** to choose the appropriate RPM for your operation.

## ⚠ WARNING

Always use correct spindle speed for your operation. Using wrong speed may lead to workpiece breaking loose or being thrown from lathe at a high rate of speed, causing fatal or severe impact injuries.

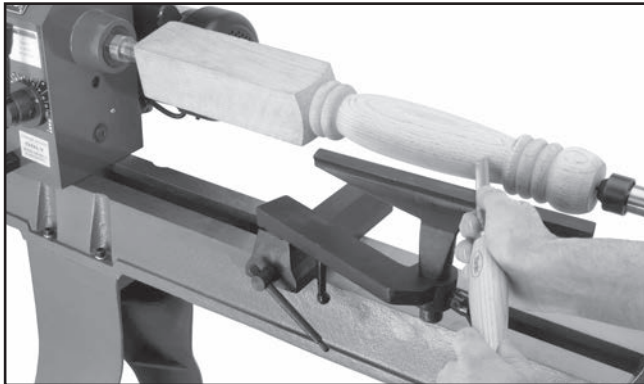
Turning Diameter	Roughing RPM	General Cutting RPM	Finishing RPM
Under 2"	1520	2400	Fastest available
2–4"	760	1600	Fastest available
4–6"	Slowest available	1080	1650
6–8"	Slowest available	810	1240

**Figure 42.** Typical spindle speed recommendations.



# Spindle Turning

Spindle turning is the operation performed when a workpiece is mounted between centers in the headstock and tailstock, as shown in **Figure 43**. Bowls, table legs, tool handles, and candlesticks are typical projects where this operation is used.



**Figure 43.** Typical spindle turning operation.

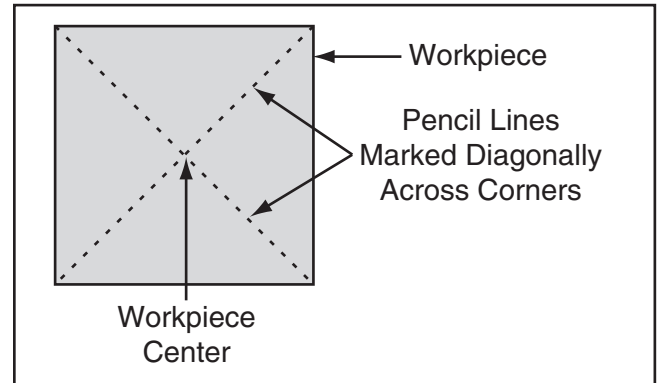
## **!WARNING**

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

Items Needed	Qty
Precision Ruler .....	1
Wood Mallet.....	1
Drill Bit 1/4".....	1
Tablesaw/Bandsaw.....	1

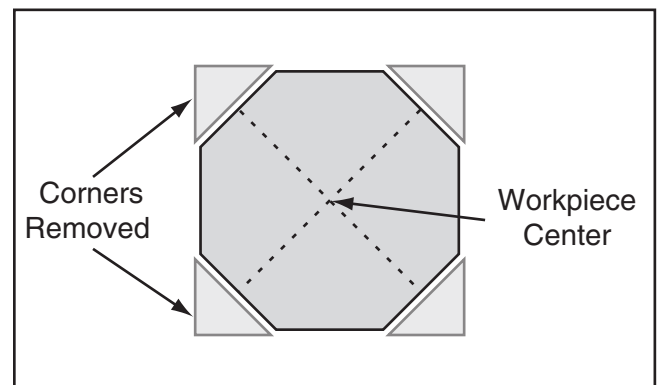
To set up a spindle turning operation:

1. Find center point of both ends of your workpiece by drawing diagonal lines from corner to corner across end of workpiece, as shown in **Figure 44**.



**Figure 44.** Workpiece marked diagonally from corner to corner to determine the center.

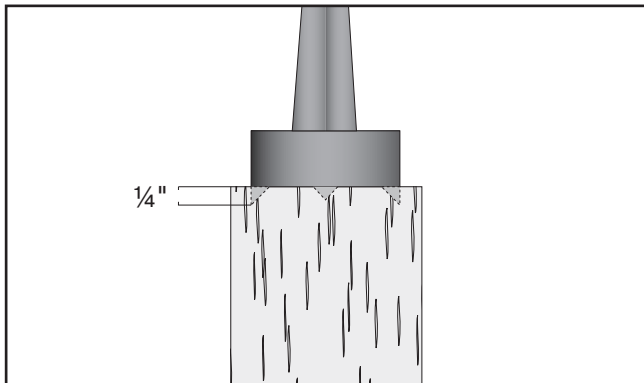
2. Make a center mark by using a wood mallet and tapping point of spur center into center of workpiece on both ends.
3. Using a 1/4" drill bit, drill a 1/4" deep hole at center mark on end of the workpiece to be mounted on headstock spur center.
4. To help embed spur center into workpiece, cut 1/8" deep saw kerfs in headstock end of workpiece along diagonal lines marked in **Step 1**.
5. If your workpiece is over 2" x 2", cut corners off workpiece lengthwise to make turning safer and easier (see **Figure 45**).



**Figure 45.** Corners of workpiece removed.



6. Drive spur center into end center mark of workpiece with wood mallet to embed center at least  $\frac{1}{4}$ " into workpiece, as shown in **Figure 46**.



**Figure 46.** Spur center properly embedded.

7. With workpiece still attached, insert spur center into headstock spindle (refer to **Installing/Removing Headstock Center** on **Page 29** for additional instructions).

**Note:** Use tool rest to support opposite end of workpiece so that workpiece and spur center do not separate during installation.

8. Install live center into tailstock quill and tighten quill lock nut to lock quill in position (refer to **Page 30** for additional instructions).
9. Slide tailstock toward workpiece until point of live center touches workpiece center mark, then lock tailstock in this position.
10. Loosen quill lock nut and rotate tailstock handwheel to push live center into workpiece at least  $\frac{1}{4}$ ", then tighten quill lock nut.

## **!WARNING**

Do not press the workpiece too firmly with the tailstock or the bearings will bind and overheat. Do not adjust the tailstock too loosely or the workpiece will spin off the lathe. Use good judgment and care, otherwise, serious personal injury could result from the workpiece being ejected at high speeds.

11. Properly adjust tool rest to workpiece (see **Adjusting Tool Rest** on **Page 28**).

12. Rotate workpiece by hand to ensure there is safe clearance on all sides. If necessary, re-adjust tool rest until there is proper clearance on all sides of workpiece.

## **!WARNING**

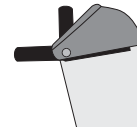
Keep lathe tool resting on tool rest the **ENTIRE** time it is in contact with workpiece or when preparing to make contact between lathe tool and workpiece. Otherwise, spinning workpiece could force lathe tool out of your hands or entangle your hands with workpiece. Failure to heed this warning could result in serious personal injury.

### Spindle Turning Tips:

- When turning the lathe **ON**, stand away from the path of the spinning workpiece until the spindle reaches full speed and you can verify that the workpiece will not come loose.
- Use the slowest speed when starting or stopping the lathe.
- Select the right speed for the size of workpiece that you are turning (refer to **Page 33**).
- Keep the turning tool on the tool rest the **ENTIRE** time that it is in contact with the workpiece.
- Learn the correct techniques for each tool you will use. If you are unsure about how to use the lathe tools, read books or magazines about lathe techniques, and seek training from experienced and knowledgeable lathe users.

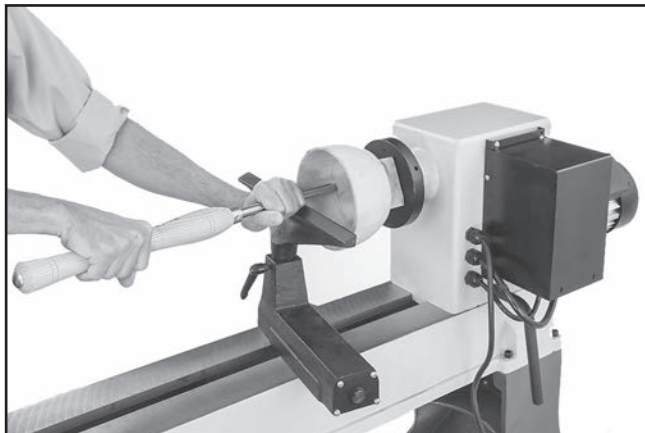
## **!WARNING**

Eye injuries or respiratory problems can occur while operating this machine. Wear personal protective equipment to reduce your risk from these hazards.



# Faceplate Turning

Faceplate turning is when a workpiece is mounted to the faceplate, which is then mounted to the headstock spindle, as shown in **Figure 47**. This type of turning is usually done with open-faced workpieces like bowls or plates.



**Figure 47.** Typical faceplate turning operation.

## Mounting Workpiece on Faceplate

Items Needed	Qty
Precision Ruler .....	1
Wood Screws .....	1
Drill .....	1
Tablesaw/Bandsaw.....	1

### To mount workpiece on faceplate:

1. Mark workpiece center in same manner as described in **Spindle Turning** (see **Page 34**).

**Note:** *Cut off corners of workpiece to make it as close to "round" as possible, as described in **Spindle Turning, Step 5** (see **Page 34**).*

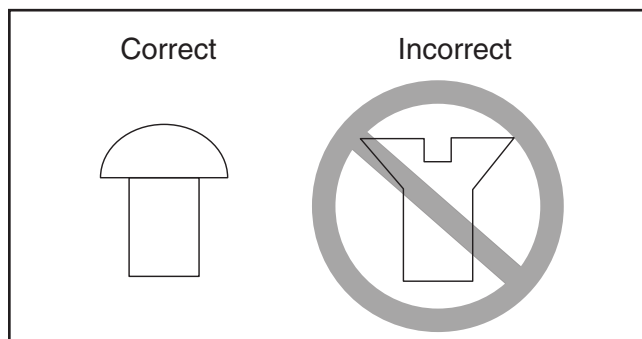
2. Center faceplate on workpiece and attach it (see **Figure 48**) with wood screws.



**Figure 48.** Typical attachment of faceplate to workpiece.

## NOTICE

Only use screws with non-tapered heads (see **Figure 49**) to attach faceplate to the workpiece. Screws with tapered heads can split faceplate or snap off during operation.



**Figure 49.** Correct and incorrect screw types.

3. Thread and secure faceplate onto headstock spindle (refer to **Installing Faceplate** on **Page 31**).

— If wood screws cannot be placed in workpiece, faceplate can be mounted to a backing block attached to workpiece (see **Mounting Workpiece on Backing Block**).



## Mounting Workpiece on Backing Block

Items Needed	Qty
Piece of Scrap Wood.....	1
Precision Ruler .....	1
Drill Bit 1/4" .....	1
Glue .....	As Needed
Clamp .....	1

### To mount workpiece on backing block:

1. Make backing block from a suitable size piece of scrap wood.

**Important:** *Faces of backing block must be flat and parallel to each other, or uneven surfaces will cause workpiece to spin eccentrically, causing unnecessary vibration and runout. It is best to mount backing block to faceplate and turn other surface flat prior to mounting.*

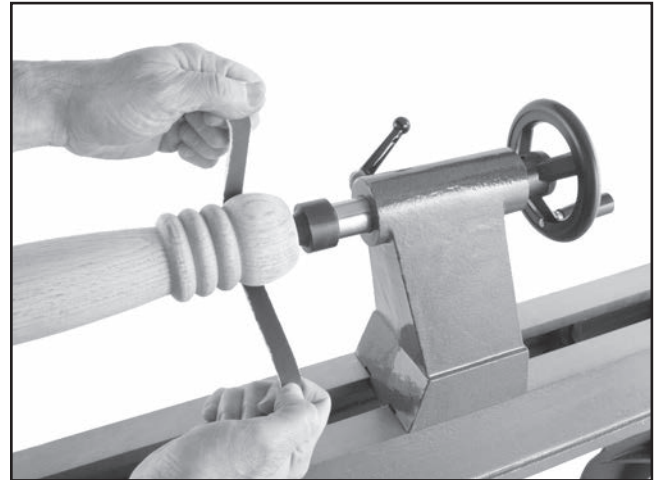
2. Locate and mark center of workpiece and backing block.
3. Drill a 1/4" hole through center of backing block.
4. Look through hole in backing block to line up center with workpiece and glue and clamp backing block to workpiece.

**Note:** *Allow glue to cure according to manufacturer's instructions.*

5. Follow **Steps 1–3** under **Mounting Workpiece on Faceplate** (see **Page 36**) to attach backing block to faceplate.

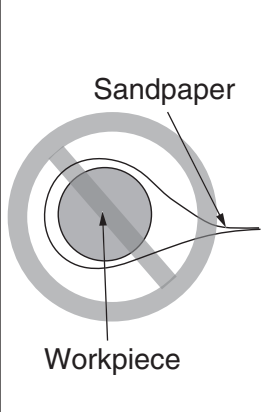
## Sanding/Finishing

After the turning operations are complete, the workpiece can be sanded and finished before removing it from the lathe, as shown in **Figure 50**.



**Figure 50.** Typical sanding operation.

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

	<p><b>⚠ WARNING</b> Wrapping sandpaper completely around workpiece could pull your hands into moving workpiece and may cause serious injury. Never wrap sandpaper or finishing materials completely around workpiece.</p>
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# Selecting Turning Tools

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Lathe tools come in a variety of shapes and sizes, and usually fall into five major categories.

- **Gouges**—Mainly used for rough cutting, detail cutting, and cove profiles. The rough gouge is a hollow, double-ground tool with a round nose, and the detail gouge is a hollow, double-ground tool with either a round or pointed nose.

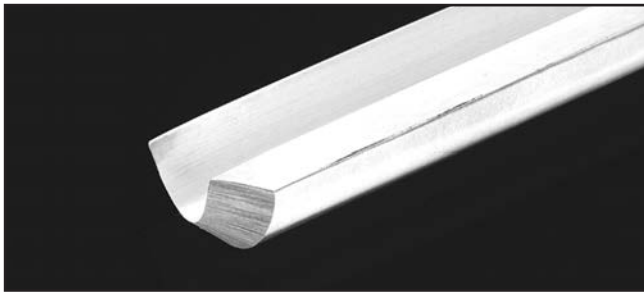


Figure 51. Example of a gouge.

- **Skew Chisel**—A very versatile tool that can be used for planing, squaring, V-cutting, beading, and parting off. The skew chisel is flat, double-ground with one side higher than the other (usually at an angle of 20°–40°).



Figure 52. Example of a skew chisel.

- **Scrapers**—Typically used where access for other tools is limited, such as hollowing operations. This is a flat, double-ground tool that comes in a variety of profiles (round nose, spear point, square nose, etc.) to match many different contours.



Figure 53. Example of a round nose scraper.

- **Parting Tools**—Used for sizing and cutting off work. This is a flat tool with a sharp pointed nose that may be single- or double-ground.



Figure 54. Example of a parting tool.

- **Specialty Tools**—These are the unique, special function tools to aid in hollowing, bowl making, cutting profiles, etc.





# SECTION 5: ACCESSORIES

## **!WARNING**

Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended for this machine by Grizzly.

## **NOTICE**

Refer to our website or latest catalog for additional recommended accessories.

### **Sovereign Turning System**

Sovereign is a new handle and tool system allowing turners to customize the tools they need for the type of turning they do. Sold with or without  $\frac{3}{8}$ " and  $\frac{1}{2}$ " collet options, plus the gamut of tool tips will make you wonder how you managed without a Sovereign. All tools are high-speed-steel construction for long life and dependable use. Below are just some of the options available with this system.

**T21644—16" Sovereign System w/Collets**

**T21647—22" Sovereign Handle**

**T21648—Sovereign  $\frac{3}{8}$ " Collet Adapter**

**T21655— $\frac{1}{4}$ " Fingernail Bowl Gouge**

**T21656— $\frac{3}{8}$ " Bowl Gouge**

**T21660— $\frac{3}{4}$ " Bowl Gouge**



**Figure 55.** Sovereign 16" and 22" handles.

**T10808— $2\frac{3}{4}$ " Wood Lathe Chuck Set**

**T10809— $3\frac{3}{4}$ " Wood Lathe Chuck Set**

These wood lathe chuck sets each include a 4-jaw self-centering chuck and interchangeable dovetail, step, internal/external grip, and flat jaws for bowls, spindles, and hard-to-hold projects.

T10808 Chuck diameter is  $2\frac{3}{4}$ " and includes an indexed backplate with 24 positions. T10809 Chuck diameter is  $3\frac{3}{4}$ " and includes an indexed backplate with 24 and 36 positions.



**Figure 56.** Model T10809  $3\frac{3}{4}$ " Wood Lathe Chuck Set.

**T25646—4" Easy Chuck 1"-8 TPI**

The Easy Jaw™ System allows you to change from one set of jaws to the next in about 30 seconds. Simply use the supplied jaw key to depress a keeper latch in the jaw and slide each jaw right out. You then slide in the next jaw type until you hear the "snap."

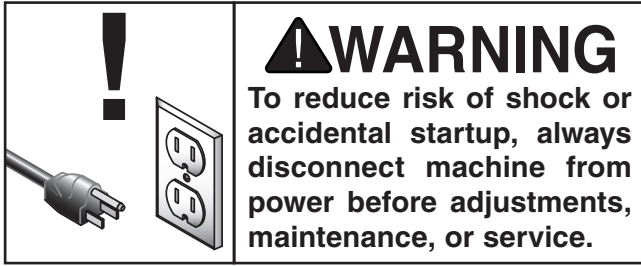


**Figure 57.** Model T25646 4" Easy Chuck.

**order online at [www.grizzly.com](http://www.grizzly.com) or call 1-800-523-4777**



# SECTION 6: MAINTENANCE



## Schedule

For optimum performance from this machine, this maintenance schedule must be strictly followed.

### Ongoing

To minimize your risk of injury and maintain proper machine operation, shut down the machine immediately if you ever observe any of the items below, and fix the problem before continuing operations:

- Loose faceplate or mounting bolts.
- Damaged center or tooling.
- Worn or damaged wires.
- Loose machine components.
- Any other unsafe condition.

### Weekly Maintenance

- Clean/vacuum dust buildup off of motor and lathe bed, and lubricate spindle and quill.

### Monthly Check

- Belt tension, damage, or wear.

## Cleaning & Protecting

Cleaning this lathe is relatively easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin-dissolving cleaner to remove it.

Protect the unpainted cast-iron surfaces by wiping them clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces. Keep the surfaces rust-free with regular applications of products like G96® Gun Treatment, SLIPIT®, or Boeshield® T-9 (see below for more details).

**G5562—SLIPIT® 1 Qt. Gel**

**G5563—SLIPIT® 12 Oz. Spray**

**G2871—Boeshield® T-9 12 Oz. Spray**

**G2870—Boeshield® T-9 4 Oz. Spray**

**H3788—G96® Gun Treatment 12 Oz. Spray**

**H3789—G96® Gun Treatment 4.5 Oz. Spray**

**G4682—Dry Coating Lube**



**Figure 58.** Recommended products for protecting unpainted cast iron/steel parts on machinery.



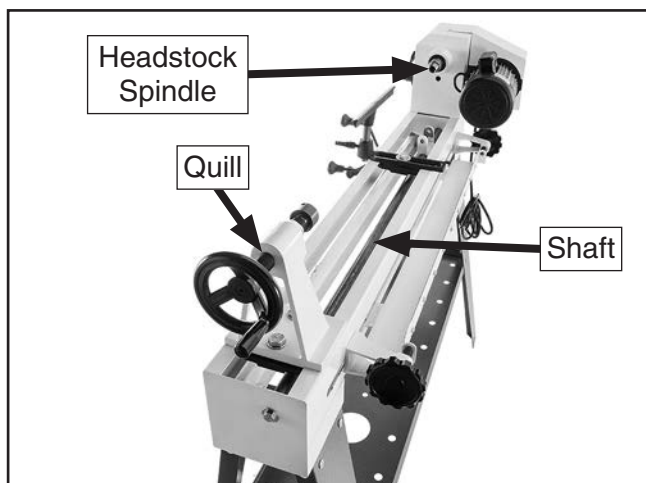
# Lubrication

All bearings on this lathe are lubricated and permanently sealed at the factory, and do not need additional lubrication.

Wipe a lightly oiled shop rag on the outside of the headstock spindle (see **Figure 59**). DO NOT allow any oil to get on the inside mating surfaces of the spindle.

Use the tailstock handwheel to extend the quill out to the furthest position and apply a thin coat of dry lube, such as Grizzly Model G4682 (refer to **Cleaning and Protecting** on **Page 40**) to the outside of the quill (see **Figure 59**). DO NOT allow any oil or grease to get on the inside mating surfaces of the quill.

Use mineral spirits and a shop rag to clean the central shaft (see **Figure 59**) that runs the length of the lathe. When dry, use apply a thin coat of dry lube to the shaft and rack teeth on bottom of the shaft.



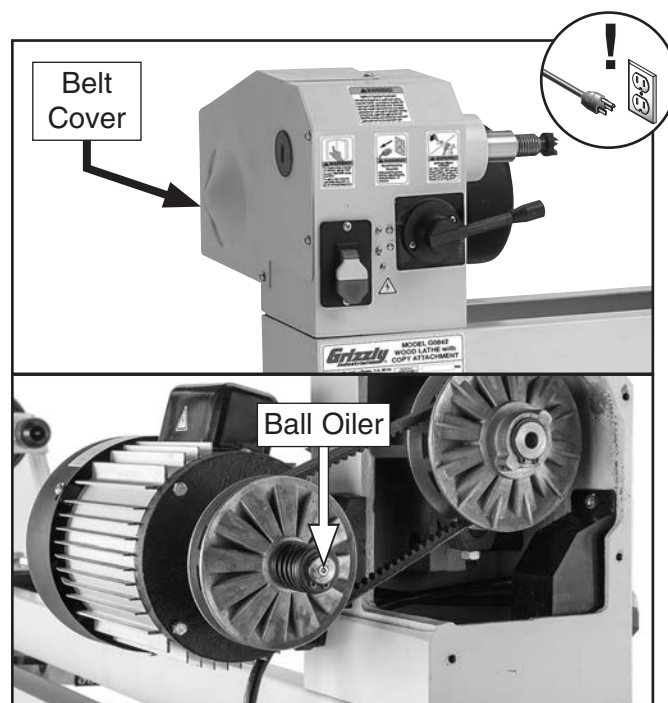
**Figure 59.** Lubrication locations.

## Motor Shaft Lubrication

The motor shaft must be properly lubricated to ensure the variable-speed pulley assembly can open and close smoothly when adjusted. Any common machine oil is acceptable for this purpose, but we recommend using a "dry" type lubricant, such as Grizzly model G2545 or G4682, to avoid attracting dust and prevent a build-up of grime.

### To lubricate motor shaft:

1. DISCONNECT MACHINE FROM POWER!
2. Remove belt cover shown in **Figure 60** to access motor shaft ball oiler.



**Figure 60.** Location to access ball oiler.

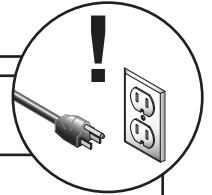
3. Push tip of oil can nozzle against ball oiler, then pump can once or twice. Alternatively, if using a spray-type lubricant, place the end of the straw against the ball oiler and give it a quick squirt. Do not over-lubricate.
4. Turn machine **ON** and while remaining a safe distance from the V-belt, run for approximately one minute. Pull spindle speed shift lever out and move and rotate left to right to distribute oil.
5. Turn machine **OFF** and re-install belt cover.



# SECTION 7: SERVICE

Review the troubleshooting procedures in this section if a problem develops with your machine. If you need replacement parts or additional help with a procedure, call our Technical Support. **Note:** *Please gather the serial number and manufacture date of your machine before calling.*

## Troubleshooting



### Motor & Electrical

Symptom	Possible Cause	Possible Solution
Machine does not start, or power-supply fuse/breaker trips immediately after startup.	<ol style="list-style-type: none"> <li>1. Switch disabling key removed.</li> <li>2. Incorrect power supply voltage or circuit size.</li> <li>3. Power supply circuit breaker tripped or fuse blown.</li> <li>4. Motor/power cord wires disconnected, damaged, or connected incorrectly.</li> <li>5. Wiring open/has high resistance.</li> <li>6. ON/OFF switch at fault.</li> <li>7. Start capacitor at fault.</li> <li>8. Centrifugal switch at fault.</li> <li>9. Motor at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Install switch disabling key.</li> <li>2. Ensure correct power supply voltage and circuit size.</li> <li>3. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse.</li> <li>4. Fix or replace damaged, disconnected, or misconnected wires.</li> <li>5. Check/fix broken, disconnected, or corroded wires.</li> <li>6. Replace switch.</li> <li>7. Test/replace.</li> <li>8. Adjust/replace centrifugal switch if available.</li> <li>9. Test/repair/replace.</li> </ol>
Machine stalls or is underpowered.	<ol style="list-style-type: none"> <li>1. Machine undersized for task.</li> <li>2. Workpiece material not suitable for machine.</li> <li>3. Motor overheated.</li> <li>4. Belt slipping; oil/grease on belt.</li> <li>5. Using excessive force with cutting tool.</li> <li>6. Motor wired incorrectly.</li> <li>7. Plug/receptacle at fault.</li> <li>8. Pulley slipping on shaft.</li> <li>9. Centrifugal switch at fault.</li> <li>10. Motor bearings at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use sharp cutting tools; reduce force of cutting tool/depth of cut.</li> <li>2. Only cut wood/ensure moisture content is below 20%.</li> <li>3. Allow motor to cool and reduce depth of cut.</li> <li>4. Inspect and clean/tension/replace belt (<b>Page 44</b>).</li> <li>5. Decrease force of cutting tool.</li> <li>6. Wire motor correctly.</li> <li>7. Test for good contacts/correct wiring.</li> <li>8. Tighten/replace loose pulley/key/shaft.</li> <li>9. Adjust/replace centrifugal switch if available.</li> <li>10. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> </ol>
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> <li>1. Motor or component loose.</li> <li>2. Machine incorrectly mounted or sits unevenly on floor.</li> <li>3. V-belt worn, loose, or slapping cover.</li> <li>4. Pulley(s) loose.</li> <li>5. Motor fan rubbing on fan cover.</li> <li>6. Motor mount loose/broken.</li> <li>7. Motor bearings at fault.</li> <li>8. Workpiece, faceplate, or chuck at fault.</li> <li>9. Centrifugal switch at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect/replace damaged bolts/nuts, and retighten with thread locking fluid.</li> <li>2. Tighten mounting bolts; relocate/shim machine.</li> <li>3. Inspect and tension/replace belt (<b>Page 44</b>).</li> <li>4. Tighten pulley set screws; re-align/replace shaft, pulley set screws, and keys.</li> <li>5. Fix/replace fan cover; replace loose/damaged fan.</li> <li>6. Tighten/replace.</li> <li>7. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> <li>8. Center workpiece in faceplate/chuck; reduce RPM; re-install/replace defective faceplate/chuck.</li> <li>9. Replace.</li> </ol>



## Wood Lathe Operation

Symptom	Possible Cause	Possible Solution
Bad surface finish.	<ol style="list-style-type: none"> <li>1. Dull tooling or wrong tool used for task.</li> <li>2. Tool height not 1/8" above spindle centerline.</li> <li>3. Spindle speed wrong.</li> <li>4. Excessive vibration.</li> </ol>	<ol style="list-style-type: none"> <li>1. Sharpen tooling, select correct tool for operation.</li> <li>2. Adjust tool rest so tool is 1/8" above spindle centerline.</li> <li>3. Adjust for appropriate spindle speed (<b>Page 33</b>).</li> <li>4. Troubleshoot possible causes/solutions in this table.</li> </ol>
Excessive vibration upon startup (when workpiece is installed).	<ol style="list-style-type: none"> <li>1. Workpiece mounted incorrectly.</li> <li>2. Workpiece warped, out of round, or flawed.</li> <li>3. Spindle speed too fast for workpiece.</li> <li>4. Workpiece hitting stationary object.</li> <li>5. Tailstock or tool rest not securely clamped to lathe bed.</li> <li>6. Quill locking nut not tightened against tailstock.</li> <li>7. Lathe resting on an uneven surface.</li> <li>8. Motor mount bolts are loose.</li> <li>9. Belt worn or damaged.</li> <li>10. Spindle bearings worn or damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remount workpiece, making sure that centers are embedded in true center of workpiece.</li> <li>2. Cut workpiece to correct, or use a different workpiece.</li> <li>3. Reduce spindle speed (<b>Page 33</b>).</li> <li>4. Stop lathe and fix interference problem.</li> <li>5. Check clamp bolts and tighten if necessary (<b>Pages 27–29</b>).</li> <li>6. Tighten quill locking nut against tailstock (<b>Page 27</b>).</li> <li>7. Adjust feet to eliminate wobbles.</li> <li>8. Tighten motor mount bolts.</li> <li>9. Replace belt (<b>Page 44</b>).</li> <li>10. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> </ol>
Chisel grabs or digs into workpiece.	<ol style="list-style-type: none"> <li>1. Wrong chisel/tool being used.</li> <li>2. Chisel/tool too dull.</li> <li>3. Tool rest height not set correctly.</li> <li>4. Tool rest set too far from workpiece.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use correct chisel/tool.</li> <li>2. Sharpen or replace chisel/tool.</li> <li>3. Correct tool rest height (<b>Page 28</b>).</li> <li>4. Move tool rest closer to workpiece.</li> </ol>
Tailstock moves under load.	<ol style="list-style-type: none"> <li>1. Tailstock lock bolt(s) loose.</li> <li>2. Bed or clamping surface excessively oily or greasy.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten tailstock lock bolt(s).</li> <li>2. Clean bed or clamping surface to remove excess oil/grease.</li> </ol>
Spindle lacks turning power or starts up slowly.	<ol style="list-style-type: none"> <li>1. Belt slipping.</li> <li>2. Pulleys loose.</li> <li>3. Workpiece too heavy for spindle.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten/adjust belt (<b>Page 44</b>).</li> <li>2. Tighten pulley set screw; re-align/replace shaft, pulley set screw, and key.</li> <li>3. Remove excess material before remounting; use lighter workpiece.</li> </ol>
Quill does not move when handwheel is turned.	<ol style="list-style-type: none"> <li>1. Quill locking nut tightened against tailstock.</li> </ol>	<ol style="list-style-type: none"> <li>1. Loosen quill locking nut (<b>Page 27</b>).</li> </ol>



# Tensioning & Replacing Belt

The pulley system that allows the Model G0842 to operate at multiple speeds also keeps the V-belt properly tensioned. However, if the V-belt shows signs of cracking, splitting, or any other damage, we recommend you replace it to ensure optimum power transmission.

## Tool Needed

Phillips Head Screwdriver #2 ..... 1

## To tension and replace V-belt:

1. DISCONNECT MACHINE FROM POWER!
2. Remove belt access cover (see **Figure 61**).



**Figure 61.** Location of belt access cover.

3. Move spindle speed lever all the way right to loosen spindle pulley plates (see **Figure 62**).



**Figure 62.** Spindle lever turned right.

4. Pull outer motor pulley plate away from motor so V-belt slips down to motor arbor, as shown in **Figure 63**.
5. While keeping tension off V-belt, roll it off spindle pulley and remove it (see **Figure 63**).



**Figure 63.** Removing V-belt from spindle pulley.

6. Install new V-belt by reversing **Steps 4–5**.
7. Re-install belt access cover before reconnecting machine to power.



# SECTION 8: WIRING

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Compare the manufacture date of your machine to the one stated in this manual, and study this section carefully.

If there are differences between your machine and what is shown in this section, call Technical Support at (570) 546-9663 for assistance BEFORE making any changes to the wiring on your machine. An updated wiring diagram may be available. **Note:** *Please gather the serial number and manufacture date of your machine before calling. This information can be found on the main machine label.*

## WARNING

### Wiring Safety Instructions

**SHOCK HAZARD.** Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

**MODIFICATIONS.** Modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire. This includes the installation of unapproved after-market parts.

**WIRE CONNECTIONS.** All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

**CIRCUIT REQUIREMENTS.** You MUST follow the requirements at the beginning of this manual when connecting your machine to a power source.

**WIRE/COMPONENT DAMAGE.** Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components.

**MOTOR WIRING.** The motor wiring shown in these diagrams is current at the time of printing but may not match your machine. If you find this to be the case, use the wiring diagram inside the motor junction box.











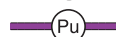

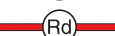

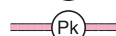
**CAPACITORS/INVERTERS.** Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

**EXPERIENCING DIFFICULTIES.** If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (570) 546-9663.

#### NOTICE

The photos and diagrams included in this section are best viewed in color. You can view these pages in color at [www.grizzly.com](http://www.grizzly.com).

#### COLOR KEY

BLACK 	BLUE 	YELLOW 	LIGHT BLUE 
WHITE 	BROWN 	YELLOW GREEN 	BLUE WHITE 
GREEN 	GRAY 	PURPLE 	TURQUOISE 
RED 	ORANGE 	PINK 	



# Wiring Diagram

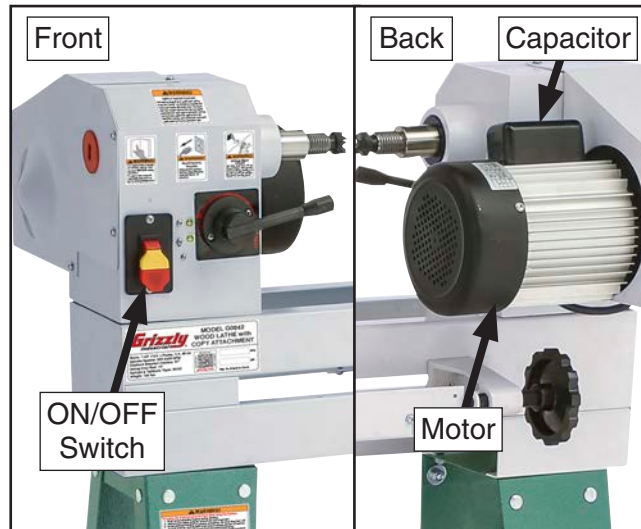
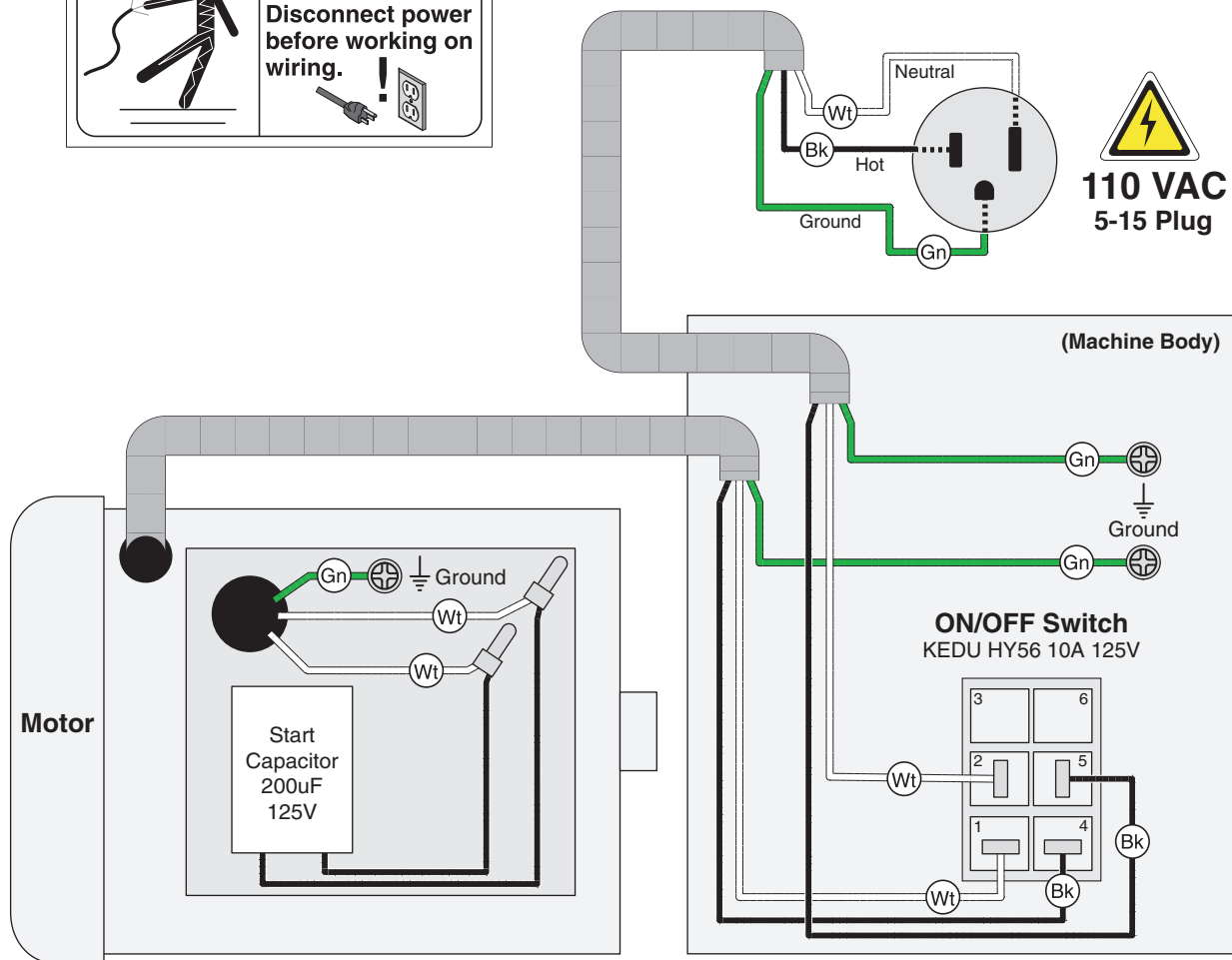


Figure 64. Electrical component locations.

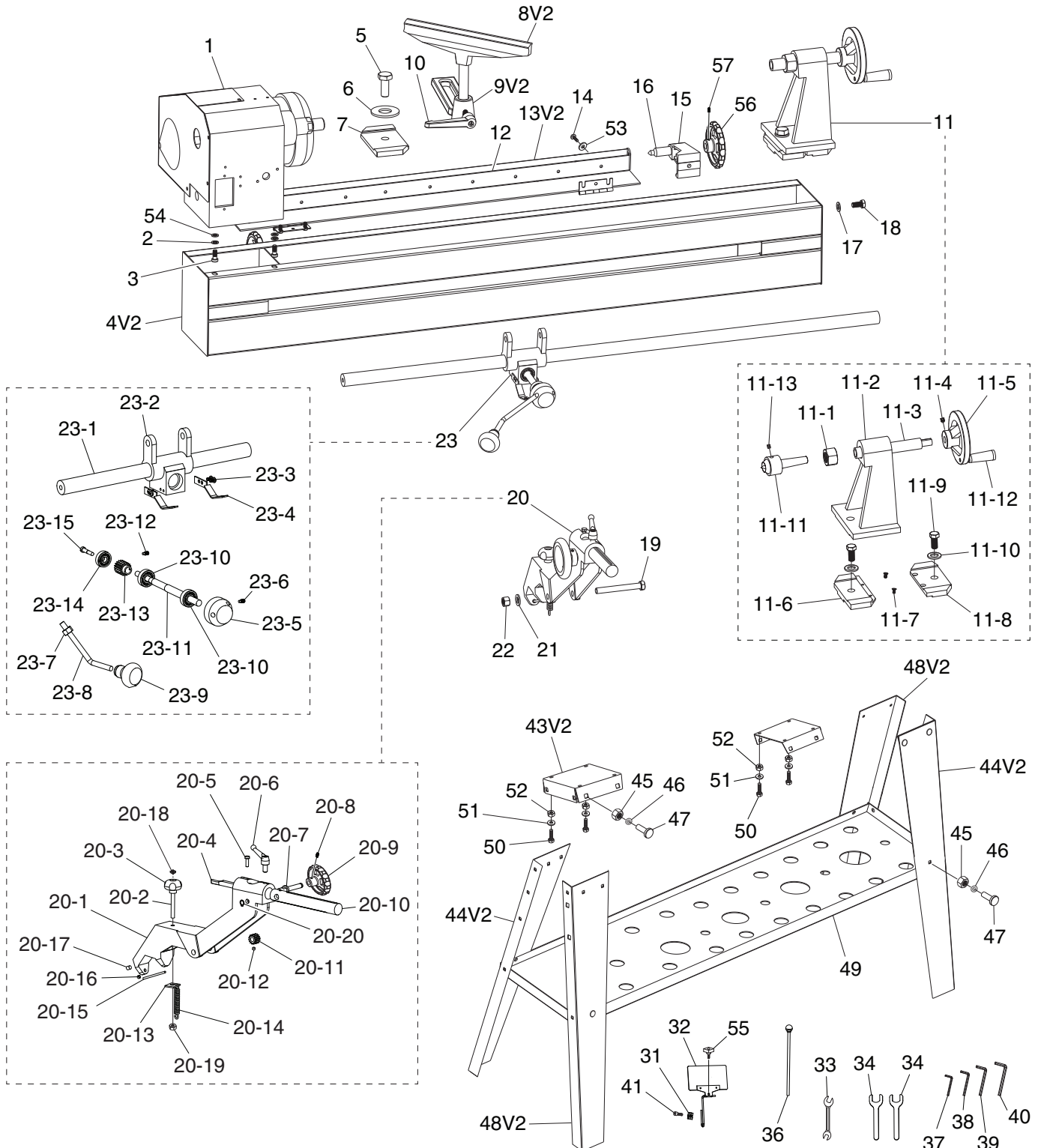




# SECTION 9: PARTS

We do our best to stock replacement parts when possible, but we cannot guarantee that all parts shown are available for purchase. Call (800) 523-4777 or visit [www.grizzly.com/parts](http://www.grizzly.com/parts) to check for availability.

## Main



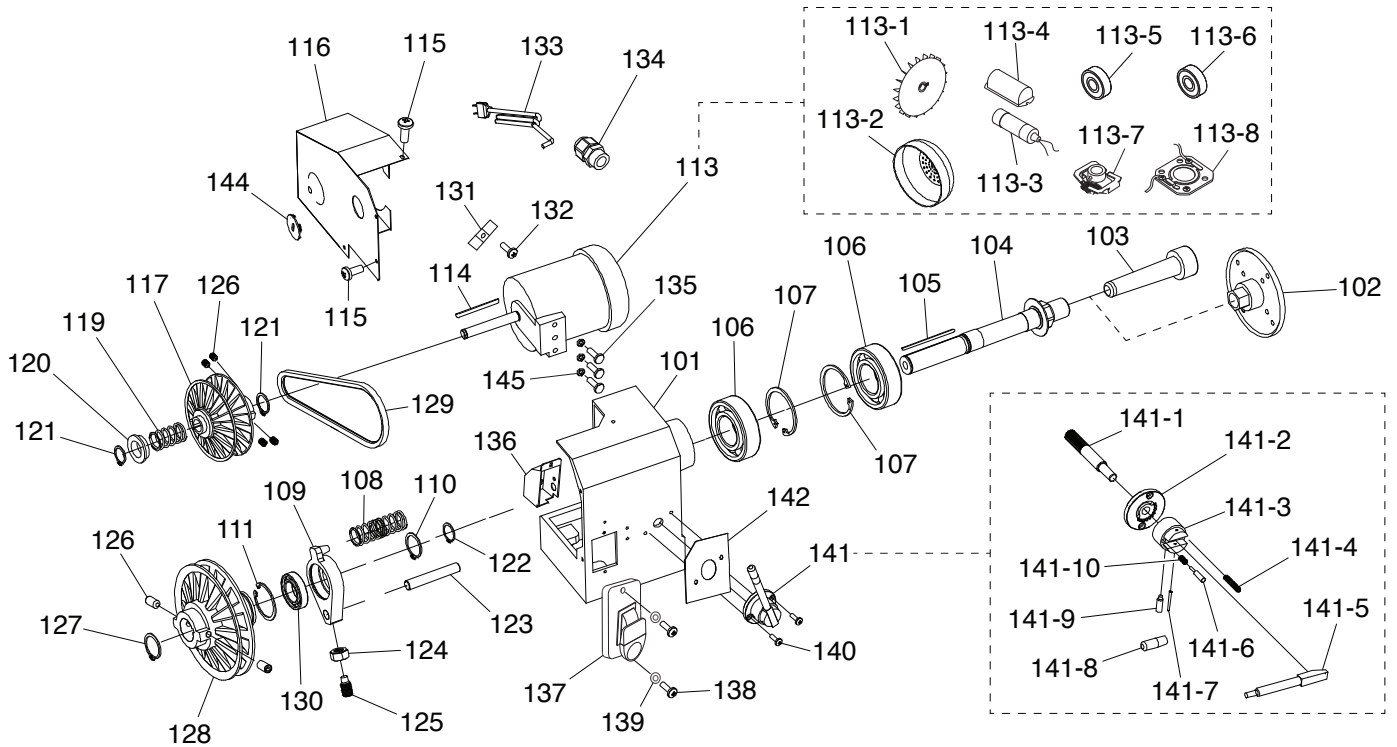
# Main Parts List

REF	PART #	DESCRIPTION
1	P0842001	HEADSTOCK ASSEMBLY
2	P0842002	LOCK WASHER 8MM
3	P0842003	CAP SCREW M8-1.25 X 20
4V2	P0842004V2	BED V2.02.21
5	P0842005	HEX BOLT M16-2 X 40
6	P0842006	FENDER WASHER 16MM
7	P0842007	TOOL REST CLAMP PLATE
8V2	P0842008V2	TOOL REST 12" (1" POST) V2.11.20
9V2	P0842009V2	TOOL REST BASE (1" HOLE) V2.11.20
10	P0842010	ADJUSTABLE HANDLE 65L, M10-1.5 X 18
11	P0842011	TAILSTOCK ASSEMBLY
11-1	P0842011-1	HEX NUT 1-8
11-2	P0842011-2	TAILSTOCK CASTING
11-3	P0842011-3	TAILSTOCK QUILL
11-4	P0842011-4	SET SCREW M8-1.25 X 10 CONE-PT
11-5	P0842011-5	HANDWHEEL TYPE-19 122D X 15B-S X M8-1.25
11-6	P0842011-6	TAILSTOCK CLAMP PLATE A
11-7	P0842011-7	FLAT HD SCR M5-.8 X 10
11-8	P0842011-8	TAILSTOCK CLAMP PLATE B
11-9	P0842011-9	HEX BOLT M16-2 X 40
11-10	P0842011-10	FLAT WASHER 16MM
11-11	P0842011-11	LIVE CENTER MT2
11-12	P0842011-12	REVOLVING HANDLE 20 X 55 M8-1.25 X 13
11-13	P0842011-13	SET SCREW M6-1 X 10
12	P0842012	HINGED TEMPLATE SUPPORT BRACKET
13V2	P0842013V2	TEMPLATE SUPPORT PLATE V2.02.21
14	P0842014	PHLP HD SCR M6-1 X 10
15	P0842015	COPY ATTACHMENT DEAD CENTER BRACKET
16	P0842016	COPY ATTACHMENT DEAD CENTER
17	P0842017	FENDER WASHER 10MM
18	P0842018	HEX BOLT M10-1.5 X 20
19	P0842019	SHOULDER BOLT M12-1.75 X 20, 12 X 90
20	P0842020	COPY ATTACHMENT ASSEMBLY
20-1	P0842020-1	COPY ATTACHMENT CASTING
20-2	P0842020-2	HEX BOLT M8-1.25 X 75
20-3	P0842020-3	KNOB 9-LOBE D54 WITH REMOVABLE CAP
20-4	P0842020-4	CUTTING TOOL
20-5	P0842020-5	CAP SCREW M6-1 X 25
20-6	P0842020-6	ADJUST. HANDLE 65L, M10-1.5 X 20 DOG-PT
20-7	P0842020-7	GEAR SHAFT
20-8	P0842020-8	SET SCREW M6-1 X 10
20-9	P0842020-9	HANDWHEEL 100D X 12B-S X M6-1
20-10	P0842020-10	CUTTING TOOL SHAFT
20-11	P0842020-11	GEAR 13T
20-12	P0842020-12	SET SCREW M6-1 X 8
20-13	P0842020-13	SPRING RETAINER NUT M8-1.25 X 30 X 23 X 2.5
20-14	P0842020-14	EXTENSION SPRING 2.5 X 14.5 X 72
20-15	P0842020-15	STEEL PIN 4 X 87

REF	PART #	DESCRIPTION
20-16	P0842020-16	BUSHING
20-17	P0842020-17	SET SCREW M8-1.25 X 8
20-18	P0842020-18	HEX NUT M8-1.25
20-19	P0842020-19	LOCK NUT M8-1.25
20-20	P0842020-20	EXT RETAINING RING 10MM
21	P0842021	FLAT WASHER 12MM
22	P0842022	HEX NUT M12-1.75
23	P0842023	COPY ATTACHMENT DRIVE ASSEMBLY
23-1	P0842023-1	RACK
23-2	P0842023-2	PINION HOUSING
23-3	P0842023-3	PHLP HD SCR M5-.8 X 8
23-4	P0842023-4	WAY WIPER
23-5	P0842023-5	HANDWHEEL HUB
23-6	P0842023-6	SET SCREW M6-1 X 12 DOG-PT
23-7	P0842023-7	HEX NUT M10-1.5
23-8	P0842023-8	ANGLE STUD 60-DEG DE M10-1.5 X 140, 18
23-9	P0842023-9	KNOB M10-1.5, D50
23-10	P0842023-10	BALL BEARING 6201-2RS
23-11	P0842023-11	PINION SHAFT
23-12	P0842023-12	SET SCREW M6-1 X 8 DOG-PT
23-13	P0842023-13	PINION GEAR 15T
23-14	P0842023-14	BALL BEARING 6200-2RS
23-15	P0842023-15	SHOULDER SCREW M5-.8 X 7, 6.5 X 15
31	P0842031	SAFETY SHIELD MOUNTING BRACKET
32	P0842032	SAFETY SHIELD
33	P0842033	WRENCH 22 X 24MM OPEN-ENDS
34	P0842034	FLAT WRENCH 32MM
36	P0842036	KNOCKOUT ROD
37	P0842037	HEX WRENCH 3MM
38	P0842038	HEX WRENCH 4MM
39	P0842039	HEX WRENCH 5MM
40	P0842040	HEX WRENCH 6MM
41	P0842041	CAP SCREW M8-1.25 X 16
43V2	P0842043V2	END SUPPORT V2.02.21
44V2	P0842044V2	STAND LEG A V2.02.21
45	P0842045	HEX NUT M8-1.25
46	P0842046	FLAT WASHER 8MM
47	P0842047	CARRIAGE BOLT M8-1.25 X 16
48V2	P0842048V2	STAND LEG B V2.02.21
49	P0842049	TOOL TRAY
50	P0842050	HEX BOLT M8-1.25 X 16
51	P0842051	FLAT WASHER 8MM
52	P0842052	HEX NUT M8-1.25
53	P0842053	FLAT WASHER 6MM
54	P0842054	FLAT WASHER 8MM
55	P0842055	KNOB BOLT M6-1 X 10, D39, DIAMOND
56	P0842056	HANDWHEEL 100D X 12B-S X M6-1
57	P0842057	SET SCREW M6-1 X 10



# Headstock

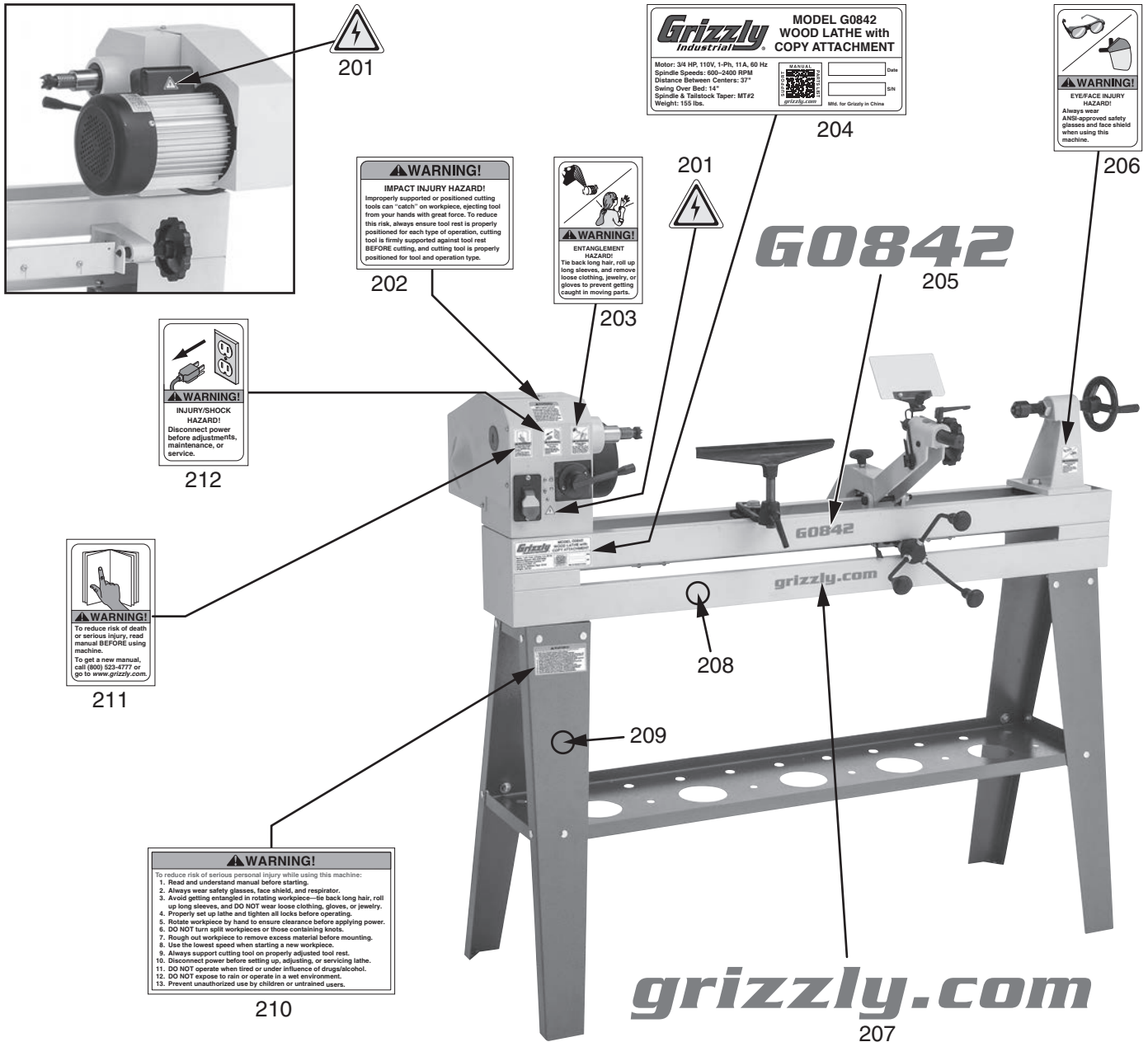


REF	PART #	DESCRIPTION
101	P0842101	HEADSTOCK CASTING
102	P0842102	FACEPLATE 6"
103	P0842103	SPUR CENTER MT#2
104	P0842104	SPINDLE MT#2
105	P0842105	KEY 4 X 4 X 80
106	P0842106	BALL BEARING 6205ZZ
107	P0842107	INT RETAINING RING 52MM
108	P0842108	COMPRESSION SPRING 2.5 X 22.5 X 107
109	P0842109	SPINDLE SPEED SHIFT BRACKET
110	P0842110	EXT RETAINING RING 35MM
111	P0842111	INT RETAINING RING 62MM
113	P0842113	MOTOR 3/4HP 110V 1-PH
113-1	P0842113-1	MOTOR FAN
113-2	P0842113-2	MOTOR FAN COVER
113-3	P0842113-3	S CAPACITOR 200M 125V 1-5/16 X 3-1/8
113-4	P0842113-4	CAPACITOR COVER
113-5	P0842113-5	BALL BEARING 6202ZZ (FRONT)
113-6	P0842113-6	BALL BEARING 6203ZZ (REAR)
113-7	P0842113-7	CENTRIFUGAL SWITCH
113-8	P0842113-8	CONTACT PLATE
114	P0842114	KEY 4 X 4 X 80
115	P0842115	PHLP HD SCR M5-.8 X 8
116	P0842116	MOTOR PULLEY COVER
117	P0842117	MOTOR PULLEY (2PC)
119	P0842119	COMPRESSION SPRING 2.5 X 28 X 65
120	P0842120	SLEEVE
121	P0842121	EXT RETAINING RING 16MM
122	P0842122	EXT RETAINING RING 25MM
123	P0842123	SPINDLE SPEED SHIFTING RACK
124	P0842124	HEX NUT M8-1.25

REF	PART #	DESCRIPTION
125	P0842125	SET SCREW M8-1.25 X 25 DOG-PT
126	P0842126	SET SCREW M6-1 X 10
127	P0842127	EXT RETAINING RING 24MM
128	P0842128	SPINDLE PULLEY (2PC)
129	P0842129	V-BELT M24.5 3L245, COGGED
130	P0842130	BALL BEARING 6007ZZ
131	P0842131	CORD CLAMP
132	P0842132	PHLP HD SCR M4-.7 X 22
133	P0842133	POWER CORD 14G 3W 96" 5-15P
134	P0842134	STRAIN RELIEF TYPE-3 M20-1.5
135	P0842135	HEX BOLT M8-1.25 X 30
136	P0842136	SWITCH BOX
137	P0842137	SAFETY PADDLE SWITCH HY-18
138	P0842138	PHLP HD SCR M4-.7 X 8
139	P0842139	FLAT WASHER 4MM
140	P0842140	PHLP HD SCR M5-.8 X 12
141	P0842141	SPINDLE SPEED SHIFT LEVER ASSEMBLY
141-1	P0842141-1	GEAR SHAFT 14T
141-2	P0842141-2	SHIFT LEVER SEAT
141-3	P0842141-3	SHIFT LEVER HUB
141-4	P0842141-4	COMPRESSION SPRING 0.9 X 5.9 X 25
141-5	P0842141-5	SHIFT LEVER SHAFT M10-1.5 X 15, 110L
141-6	P0842141-6	LOCATING PIN
141-7	P0842141-7	ROLL PIN 3 X 32
141-8	P0842141-8	KNOB M10-1.5 D19, 38L
141-9	P0842141-9	SET SCREW M8-1.25 X 20 DOG-PT
141-10	P0842141-10	COMPRESSION SPRING 0.9 X 5.9 X 16
142	P0842142	SPINDLE SPEED SHIFT LEVER PLATE
144	P0842144	RED PLASTIC COVER
145	P0842145	LOCK WASHER 8MM



# Labels & Cosmetics



REF	PART #	DESCRIPTION
201	P0842201	ELECTRICITY LABEL
202	P0842202	IMPACT INJURY HAZARD LABEL
203	P0842203	ENTANGLEMENT WARNING LABEL
204	P0842204	MACHINE ID LABEL
205	P0842205	MODEL NUMBER LABEL
206	P0842206	EYE/FACE INJURY WARNING LABEL

REF	PART #	DESCRIPTION
207	P0842207	GRIZZLY.COM LABEL
208	P0842208	TOUCH-UP PAINT, GRIZZLY BEIGE
209	P0842209	TOUCH-UP PAINT, GRIZZLY GREEN
210	P0842210	WOOD LATHE WARNING LABEL
211	P0842211	READ MANUAL WARNING LABEL
212	P0842212	DISCONNECT POWER LABEL

**⚠️ WARNING**

Safety labels help reduce the risk of serious injury caused by machine hazards. If any label comes off or becomes unreadable, the owner of this machine **MUST** replace it in the original location before resuming operations. For replacements, contact (800) 523-4777 or [www.grizzly.com](http://www.grizzly.com).







# WARRANTY & RETURNS

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Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly'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 or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly 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.

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.

In the event you need to use this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

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.

To take advantage of this warranty, you must register it at <https://www.grizzly.com/forms/warranty>, or you can scan the QR code below to be automatically directed to our warranty registration page. Enter all applicable information for the product.



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