MODEL G0823
DRILL PRESS
w/AUTO DOWNFEED
OWNER'S MANUAL
(For models manufactured since 2/17)

#JH18727 PRINTED IN CHINA
V1.12.17

⚠ 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.

Table of Contents

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

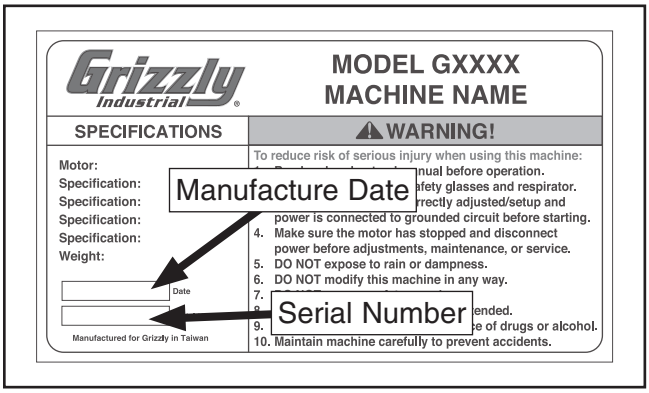
Manual Accuracy

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**.

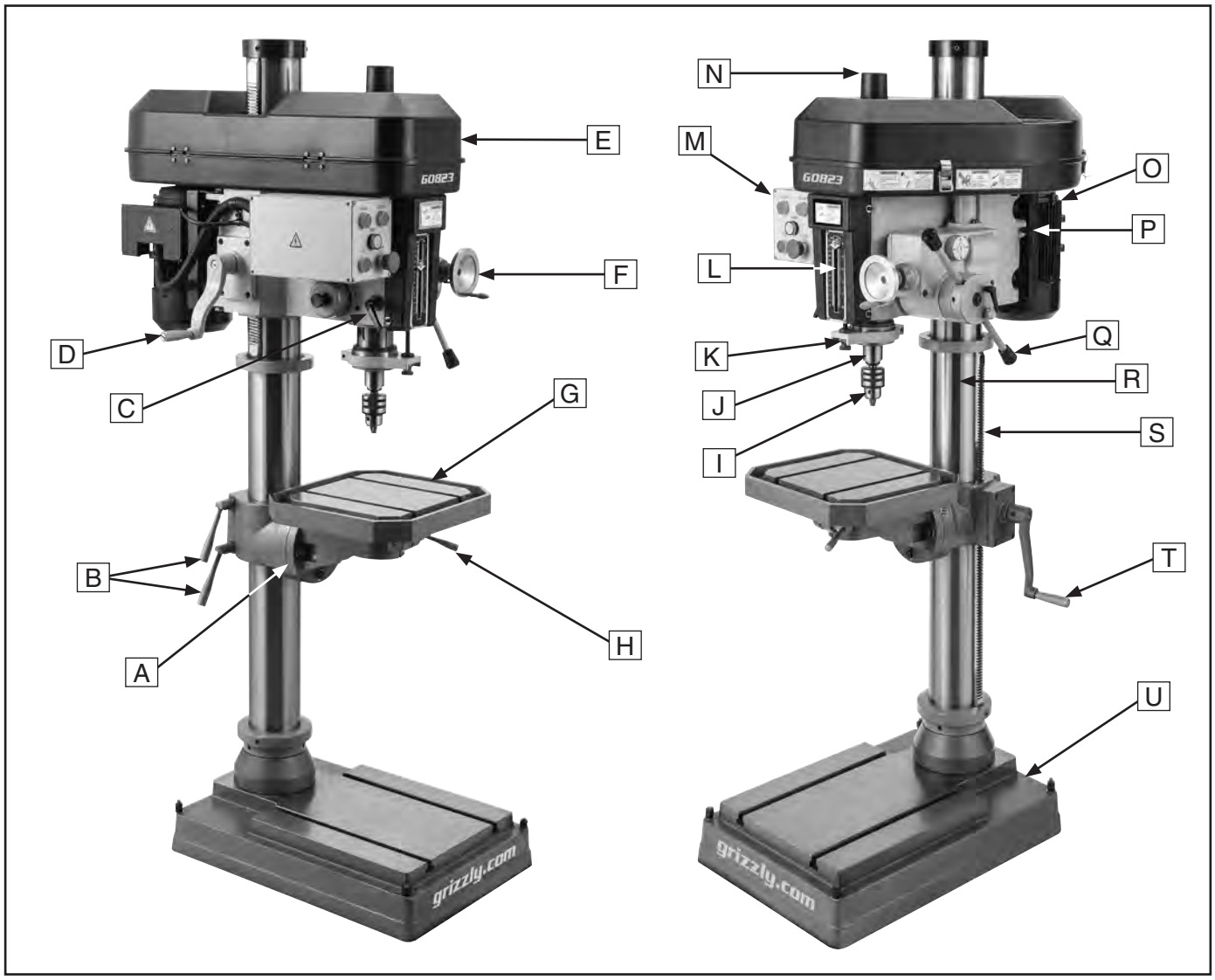
If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.grizzly.com**.

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.



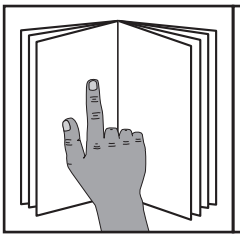
Identification

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



A. Table Tilt Clamp
B. Table Lock Handles
C. Quill Lock Handle
D. Headstock Elevation Crank
E. Belt Cover
F. Fine Downfeed Handwheel
G. Table
H. Pivot Lock Handle
I. Chuck
J. Spindle
K. Depth Stop Adjustment Knob
L. Depth Stop Scale
M. Control Panel
N. Drawbar Cap
O. Motor
P. Motor Locking Lever
Q. Coarse Downfeed Lever
R. Column
S. Rack
T. Table Elevation Crank
U. Base

Controls & Components



⚠WARNING

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

Refer to **Figures 1–4** and the following descriptions to become familiar with the basic controls of this machine.

Headstock

Figure 1. Headstock controls (right).

A. Depth Stop: Stops spindle travel at predetermined depth.

B. Depth Scale: Indicates drilling depth and position of depth stop.

C. Depth Stop Adjustment Knob: Positions depth stop height.

D. Motor Locking Lever: When loosened, allows adjustment of motor position when changing spindle speeds. When tightened, locks motor in position to maintain belt tension.

E. Fine Downfeed Handwheel: When rotated, provides fine vertical control in either direction of spindle travel. Includes graduated collar marked in 0.001" increments.

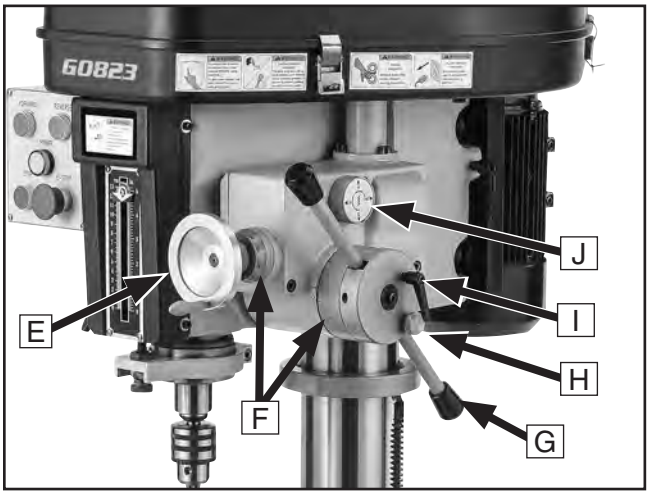


Figure 2. Downfeed controls.

F. Coarse Downfeed Graduated Collars: Adjust graduated collar for repeatable drilling operations.

G. Coarse Downfeed Levers: Provide coarse vertical control over spindle when pulled down. Automatically returns spindle to starting position when released.

H. Coarse Handle Lock-Down Thumb Screw: When tightened, secures coarse downfeed handles for operation. When loosened, allows coarse downfeed handles to pull outward, engaging the auto-downfeed function.

I. Depth Graduated Dial Collar Lock: Secures graduated dial for precise, repeatable drilling operations.

J. Auto Downfeed Rate Selector Knob: Selects speed of quill's vertical movement in increments of 0.004", 0.008", and 0.012" per rotation.

K. Headstock Elevation Crank: Raises and lowers headstock along column.

L. Quill Lock: Locks quill in position. Typically used in tandem with fine downfeed handwheel.

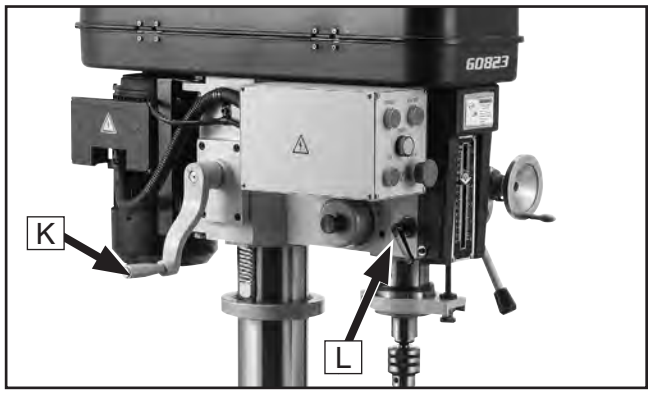


Figure 3. Headstock controls (left).

Table

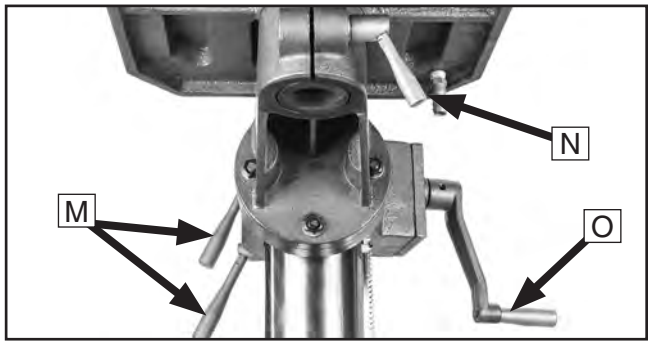


Figure 4. Table controls (from below).

M. Table Lock Handles: Secure table assembly in place along column. Loosen to raise or lower table, or to rotate table assembly around column.

N Pivot Lock Handle: Allows table to rotate freely when loosened.

O. Table Elevation Crank: Changes elevation of table assembly.

Control Panel

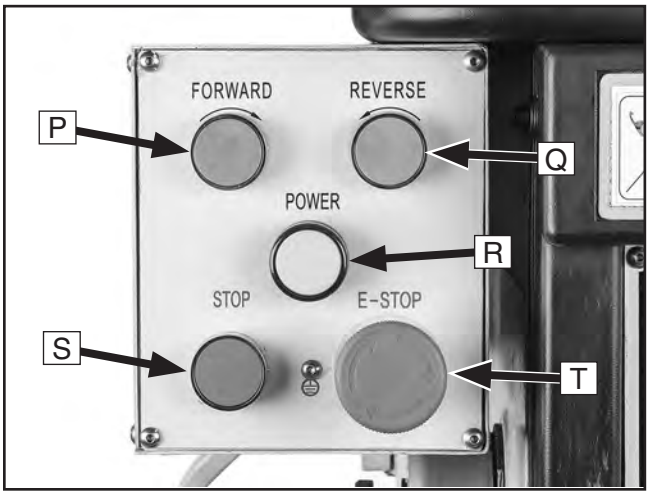


Figure 5. Control panel.

P. FORWARD Button: Rotates spindle in clockwise direction. Begins downward auto-feed function when auto-feed is engaged.

Q. REVERSE Button: Rotates spindle in counterclockwise direction. Begins upward auto-feed function when auto-feed is engaged.

R. POWER Indicator Light: Illuminates when machine is connected to power.

S. STOP Button: Stops motor function.

T. E-STOP Button: Immediately cuts power to motor and control panel when pressed. Twist button clockwise to reset.

MACHINE DATA SHEET

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

MODEL G0823 DRILL PRESS WITH AUTO DOWNFEED

Product Dimensions:

Weight	662 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	23 x 35-1/2 x 67 in.
Footprint (Length x Width)	26 x 18 in.

Shipping Dimensions:

Type	Wood Crate
Content	Machine
Weight	772 lbs.
Length x Width x Height	34 x 30 x 73 in.
Must Ship Upright	Yes

Electrical:

Power Requirement	220V, Single-Phase, 60 Hz
Full-Load Current Rating	8.6A
Minimum Circuit Size	15A
Connection Type	Cord & Plug
Power Cord Included	Yes
Power Cord Length	6-1/2 ft.
Power Cord Gauge	14 AWG
Plug Included	No
Recommended Plug Type	6-15
Switch Type	Forward/Reverse Switch

Motors:

Main

Type	TEFC Capacitor-Start Induction
Horsepower	2 HP
Phase	Single-Phase
Amps	8.6A
Speed	1720 RPM
Power Transfer	V-Belt Drive
Bearings	Shielded & Permanently Lubricated

Main Specifications:

Operation Information

Type	Floor
Swing	15 in.
Spindle Taper	R-8
Spindle Travel	5-1/8 in.
Max. Distance From Spindle to Column	7-1/2 in.
Max. Distance From Spindle to Table	28-1/4 in.
Number of Spindle Speeds	12
Range of Spindle Speeds	140 – 2436 RPM
Drilling Capacity (Mild Steel)	1-1/8 in.
Drill Chuck Type	B16
Drill Chuck Size	1/64 – 1/2 in.

Spindle Information

Distance From Spindle to Base	45-1/4 in.
Quill Diameter	75mm (2.95 in.)

Table Information

Max. Table Tilt (Left/Right)	60 deg.
Table Swivel Around Center	360 deg.
Table Swivel Around Column	360 deg.
Max. Movement of Work Table	23-1/2 in.
Table Length	15 in.
Table Width	14 in.
Table Thickness	1-5/8 in.
Vertical Table Travel	Crank Handle Operation
Number of T-Slots	2
T-Slot Size	1/2 in.
T-Slot Centers	6-5/16 in.
Floor-To-Table Height	18-1/2 – 41-3/4 in.

Construction

Table	Cast Iron
Column	Cast Iron
Spindle Housing	Cast Iron
Head	Cast Iron
Base	Cast Iron
Paint Type/Finish	Enamel

Other Related Information

Base Length	25-1/2 in.
Base Width	17-1/2 in.
Column Diameter	4-1/2 in.

Other Specifications:

Country of Origin	China
Warranty	1 Year
Serial Number Location	ID Label
ISO 9001 Factory	Yes
Certified by a Nationally Recognized Testing Laboratory (NRTL)	No

Features:

Solid Cast-Iron Construction
12 Speeds
Two T-Slots Accommodate 1/2" Clamping Kit
2 HP Motor
R-8 Spindle
Power Downfeed

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

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 Drill Presses

⚠WARNING

Serious injury or death can occur from getting clothing, jewelry, or long hair entangled in rotating spindle or bit/cutting tool. Contact with rotating bit/cutting tool can result in severe cuts or amputation of fingers. Flying metal chips can cause blindness or eye injuries. Broken bits/cutting tools, unsecured workpieces, chuck keys, or other adjustment tools thrown from rotating spindle can strike nearby operator or bystanders with deadly force. To reduce the risk of these hazards, operator and bystanders MUST completely heed hazards and warnings below.

WEARING PROPER PPE. Flying chips created by drilling can cause eye injuries or blindness. Always wear a face shield in addition to safety glasses. Always keep hands and fingers away from drill bit/cutting tool. Avoid awkward hand positions, where a sudden slip could cause hand to move into bit/cutting tool.

AVOIDING ENTANGLEMENT. DO NOT wear loose clothing, gloves, or jewelry, and tie back long hair. Keep all guards in place and secure. Always allow spindle to stop on its own. DO NOT stop spindle using your hand or any other object.

REMOVING ADJUSTMENT TOOLS. Chuck key, drawbar wrench, and other tools left on machine can become deadly projectiles when spindle is started. Remove all loose items or tools used on spindle immediately after use.

SECURING BIT/CUTTING TOOL. Firmly secure bit/cutting tool so it does not fly out of spindle during operation or startup.

SECURING TABLE AND HEADSTOCK. To avoid accidental contact with tool/bit, tighten all table and headstock locks before operating drill.

CORRECT SPINDLE SPEED. Using wrong spindle speed can cause bits/cutting tools to break and strike operator or bystanders. Follow recommended speeds and feeds for each size/type of bit/cutting tool and workpiece material.

WORKPIECE PREPARATION. To avoid loss of workpiece control, DO NOT drill material with an uneven surface on the table, unless a suitable support is used. To avoid impact injuries, make sure workpiece is free of nails or foreign objects in area to be drilled.

WORKPIECE CONTROL. An unsecured workpiece may unexpectedly shift, spin out of control, or be thrown if bit/cutting tool "grabs" during operation. Clamp workpiece to table or in table-mounted vise, or brace against column to prevent rotation. NEVER hold workpiece by hand during operation. NEVER start machine with bit/cutting tool touching workpiece; allow spindle to gain full speed before drilling.

INSPECTING BIT/CUTTING TOOL. Damaged bits/cutting tools may break apart during operation and hit operator or bystanders. Dull bits/cutting tools increase cutting resistance and are more likely to grab and spin/throw workpiece. Always inspect bits/cutting tools for sharpness, chips, or cracks before each use. Replace dull, chipped, or cracked bits/cutting tools immediately.

MAINTAINING MACHINE. Keep machine in proper working condition to help ensure that it functions safely and all guards and other components work as intended. Perform routine inspections and all necessary maintenance. Never operate machine with damaged or worn parts that can break or result in unexpected movement during operation.

CLEANING MACHINE SAFELY. To avoid contact with tool/bit, never clear chips while spindle is turning. To avoid cuts and eye injuries, DO NOT clear chips by hand or with compressed air—use a brush or vacuum instead.

DISCONNECT POWER FIRST. To reduce risk of electrocution or injury from unexpected startup, make sure drill is turned ***OFF***, disconnected from power, and all moving parts have come to a complete stop before changing bits/cutting tools or starting any inspection, adjustment, or maintenance procedure.

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.

⚠WARNING

Electrocution, fire, shock, or equipment damage may occur if machine is not properly grounded and connected to power supply.

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 220V .... 8.6 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.

Circuit Information

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.*

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 208V, 220V, 230V, 240V
Cycle ..... 60 Hz
Phase ..... Single-Phase
Power Supply Circuit ..... 15 Amps
Plug/Receptacle ..... NEMA 6-15

Grounding 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!

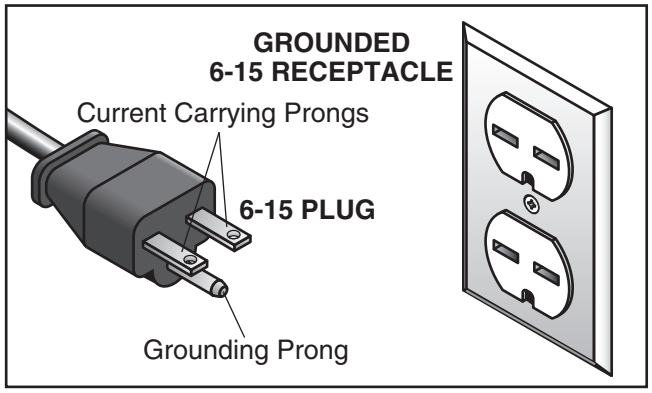
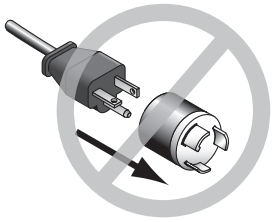


Figure 6. Typical 6-15 plug and receptacle.

⚠CAUTION



No adapter should be used with plug. If plug does not fit available receptacle, or if machine must be reconnected for use on a different type of circuit, reconnection must be performed by an electrician or qualified service personnel, and it must comply with all local codes and ordinances.

⚠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.

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

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.*

⚠WARNING

SUFFOCATION HAZARD!

Keep children and pets away from plastic bags or packing materials shipped with this machine. Discard immediately.

Needed for Setup

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

Description	Qty
• Additional People	1
• Safety Glasses	1
• Cleaner/Degreaser (**Page 14**)	As Needed
• Disposable Shop Rags	As Needed
• Forklift	1
• Lifting Sling (Rated 1000 lbs. Minimum)	2

NOTICE

If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.

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.

Box 1 (Figure 7)	Qty
A. Toolbox	1
B. Bottle for Oil	1
C. Lug Wrench 20/25mm	1
D. Open-End Wrench 17/19mm	1
E. Hex Wrenches 3, 4, 5mm	3
F. T-bolts M14-2 x 55	2
—Hex Nuts M14-2	2
—Flat Washers 14mm	2
G. Drift Key	1
H. Spindle Sleeve MT#3–MT#2	1
I. Spindle Sleeve R-8–MT#3	1
J. Drill Chuck Arbor R8-B16	1
K. Drill Chuck B16 1–13mm	1
L. Chuck Key	1

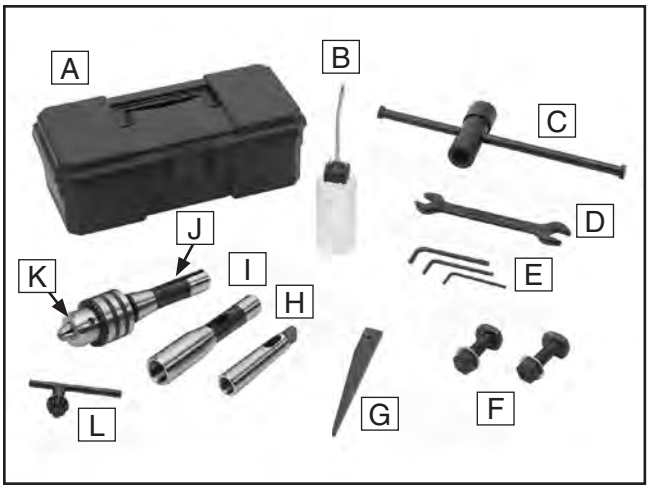


Figure 7. Toolbox inventory.

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.

⚠WARNING

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.

⚠CAUTION

Many cleaning solvents are toxic if inhaled. Only work in a well-ventilated area.

NOTICE

Avoid chlorine-based solvents, such as acetone or brake parts cleaner, that may damage painted surfaces.

T23692—Orange Power Degreaser
A great product for removing the waxy shipping grease from your machine during clean up.

Figure 8. T23692 Orange Power Degreaser.

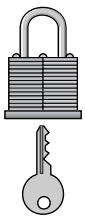
Site Considerations

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.**



⚠CAUTION

Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.

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.

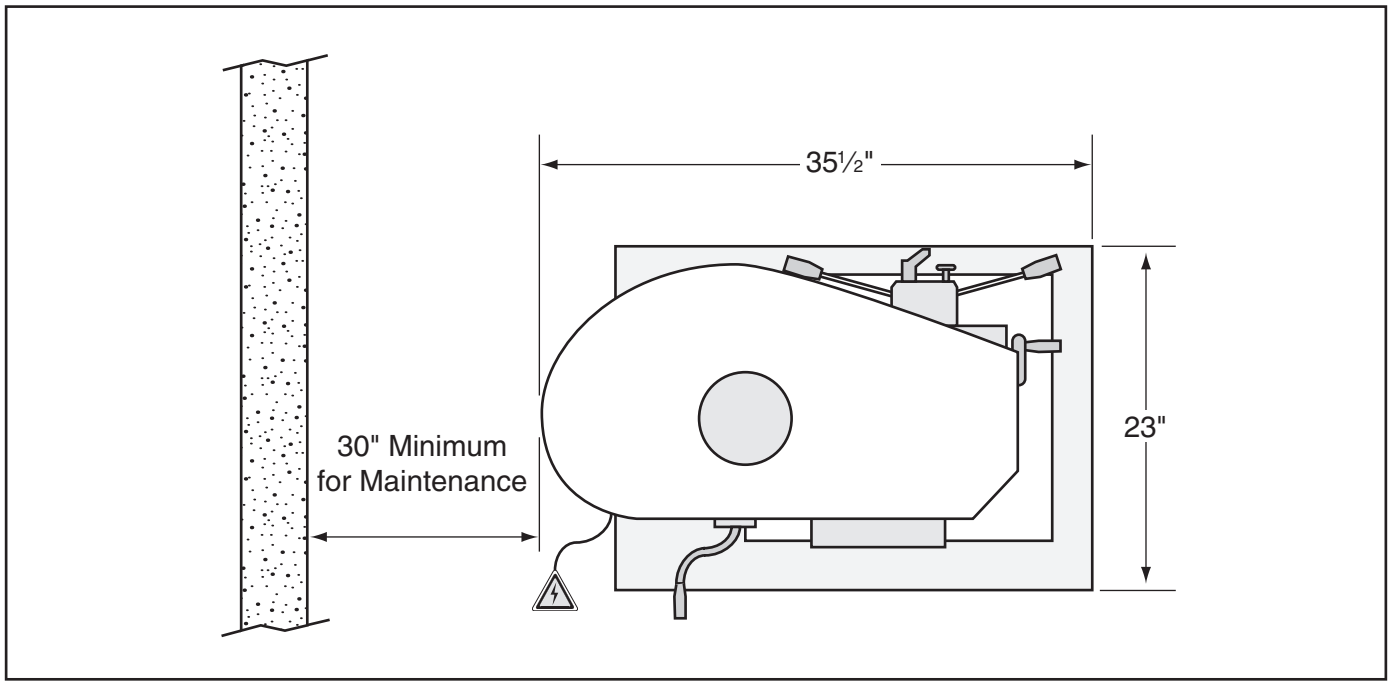
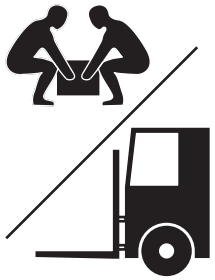


Figure 9. Minimum working clearances.

Lifting & Placing



⚠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.

To move and place drill:

1. Place shipping crate near final machine mounting location.

2. Remove top portion of crate from the shipping pallet, place lifting slings around headstock (see **Figure 10**), and attach them securely to forklift (or other power lifting equipment).

   Note: *Be sure slings are far enough apart to avoid putting pressure on belt cover; otherwise, it can become damaged from the force of the slings while lifting.*

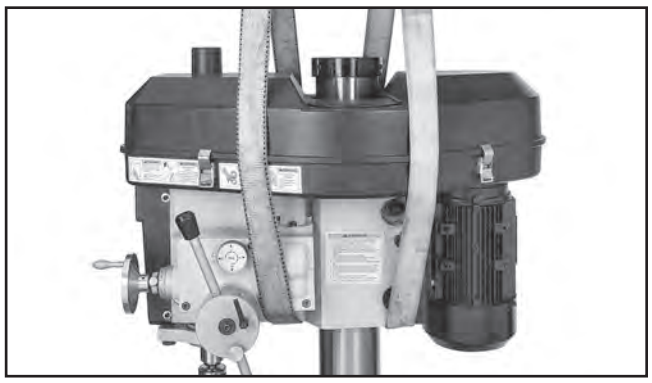


Figure 10. Lifting slings properly wrapped around headstock and positioned to avoid damage to belt cover while lifting.

3. Unbolt machine from pallet.

4. With another person to help to steady machine, lift it just enough to clear pallet and any floor obstacles, then place machine in its final position on shop floor.

Anchoring to Floor

Number of Mounting Holes 4
Diameter of Mounting Hardware..... 5/8"

Anchoring machinery to the floor prevents tipping or shifting and reduces vibration that may occur during operation, resulting in a machine that runs slightly quieter and feels more solid.

If the machine will be installed in a commercial or workplace setting, or if it is permanently connected (hardwired) to the power supply, local codes may require that it be anchored to the floor.

If not required by any local codes, fastening the machine to the floor is an optional step. If you choose not to do this with your machine, we recommend placing it on machine mounts, as these provide an easy method for leveling and they have vibration-absorbing pads.

Anchoring to Concrete Floors

Lag shield anchors with lag screws (see below) are a popular way to anchor machinery to a concrete floor, because the anchors sit flush with the floor surface, making it easy to unbolt and move the machine later, if needed. However, anytime local codes apply, you MUST follow the anchoring methodology specified by the code.

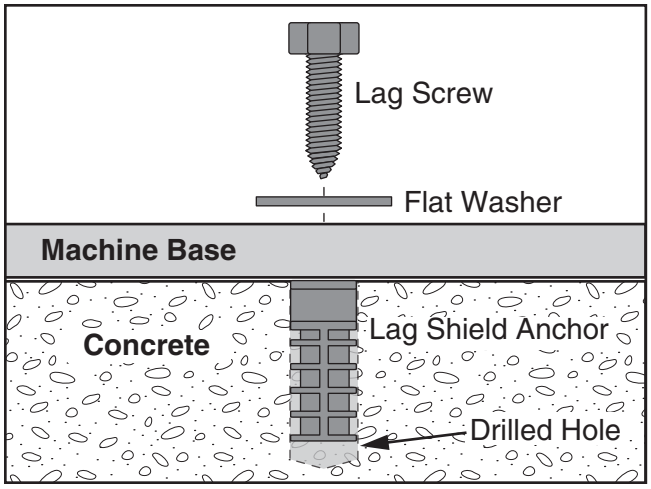


Figure 11. Popular method for anchoring machinery to a concrete floor.

Joining Drill Chuck & Arbor

An arbor is included for the drill chuck that comes with this machine. The following procedure describes how to install the arbor in the chuck.

After the arbor is installed in the drill chuck, it is very difficult to separate the assembly. If you would like to use a different chuck in the future, we recommend obtaining a new arbor.

Important: *DO NOT install the drill chuck and arbor assembly into the spindle until AFTER the test run.*

To join drill chuck and arbor:

1. Use acetone or lacquer thinner to clean drill chuck and arbor mating surfaces, especially the bore.

2. Retract chuck jaws completely into chuck.

3. Insert small end of arbor into chuck.

4. Hold assembly by the arbor and tap chuck onto a block of wood with medium force, as illustrated below.

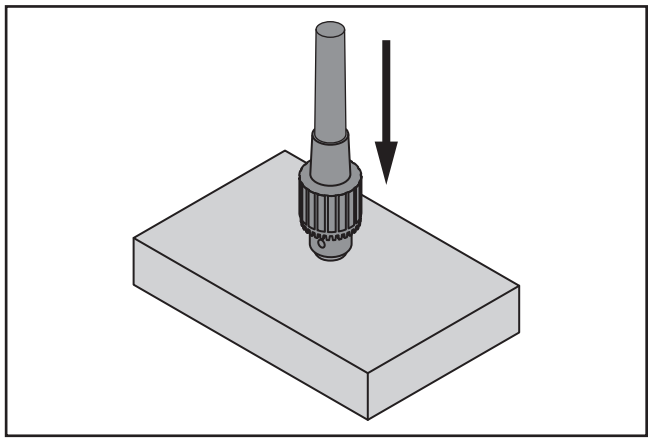


Figure 12. Joining drill chuck and arbor.

5. Attempt to separate drill chuck and arbor by hand—if they separate, repeat **Steps 3–4**.

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.

⚠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.

Continued on next page ⟶

The Test Run consists of verifying the following: 1) The motor powers up and runs correctly, and 2) the emergency stop button works correctly.

Refer to **Figures 13–14** for the locations of the various controls necessary for performing the **Test Run**.

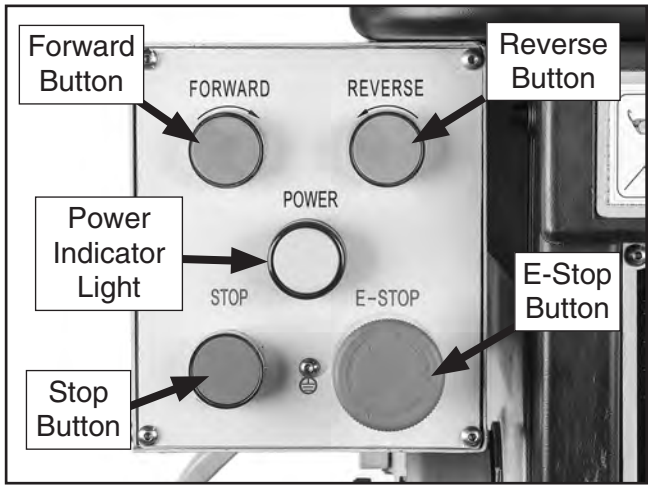


Figure 13. Location of controls necessary for Test Run.

To test run machine:

1. Clear all setup tools away from machine.

2. Connect machine to power supply.

3. Rotate E-STOP button clockwise. Button should pop outward and power indicator light should illuminate.

4. Press FORWARD button on control panel to turn machine ***ON***. The motor should run smoothly and without unusual problems or noises.

5. Press STOP button to turn spindle ***OFF***. Allow spindle to come to a complete stop.

6. Press REVERSE button to turn spindle ***ON***. The motor should run smoothly and without unusual problems or noises in the opposite direction.

7. Press STOP button to turn spindle ***OFF***. Allow spindle to come to a complete stop.

8. Press FORWARD button on control panel to turn machine ***ON***.

9. Press Emergency Stop button to turn machine ***OFF***.

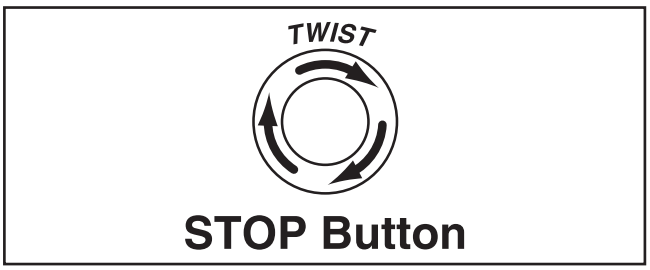


Figure 14. Resetting the switch.

10. WITHOUT resetting Emergency Stop button, try to start machine by pressing the FORWARD button. The machine should not start.

    —If the machine *does not* start, the safety feature of the Emergency Stop button is working correctly. Congratulations! The **Test Run** is complete.

    —If the machine *does* start, immediately turn it ***OFF*** and disconnect power. The safety feature of the Emergency Stop button is NOT working properly and must be replaced before further using the machine.

Spindle Break-In

The spindle break-in procedure distributes lubrication throughout the bearings to reduce the risk of early bearing failure if there are any "dry" spots or areas where lubrication has settled in the bearings. You ***must*** complete this procedure ***before*** placing operational loads on the spindle for the first time when the machine is new or if it has been sitting idle for longer than 6 months.

Always start the spindle break-in at the lowest speed to minimize wear if there *are* dry spots. Allow the spindle to run long enough to warm up and distribute the bearing grease, then incrementally increase spindle speeds and repeat this process at each speed until reaching the maximum spindle speed. Following the break-in procedure in this progressive manner helps minimize any potential wear that could occur before lubrication is fully distributed.

NOTICE

Complete the spindle bearing break-in procedure to prevent rapid wear and tear of spindle components once the drill press is placed into operation.

NOTICE

DO NOT perform this procedure independently of the Test Run section. The drill press could be seriously damaged if the controls are set differently than instructed in that section.

To perform spindle break-in:

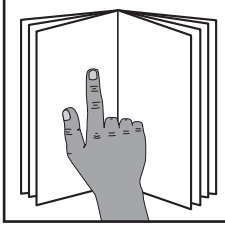
1. Make sure machine has been properly lubricated. Refer to **Lubrication** on **Page 31**.
2. Make sure spindle area is free of obstructions.
3. Configure V-belts for a spindle speed of 140 RPM. Refer to **Changing Spindle Speed** on **Page 22**.
4. Connect machine to power and run spindle in forward direction for 10 minutes. Repeat in reverse direction.
5. Turn machine ***OFF***, allow spindle to come to a complete stop, then DISCONNECT MACHINE FROM POWER!
6. Run spindle for 5 minutes in each direction at each speed listed below (refer to **Changing Spindle Speed** on **Page 22**) and in progressive order.

   a. 413 RPM
   b. 819 RPM
   c. 1450 RPM
   d. 2436 RPM

7. Turn machine ***OFF***.

Congratulations! Spindle break-in is now complete.

SECTION 4: OPERATIONS

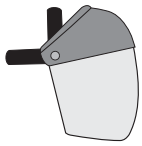


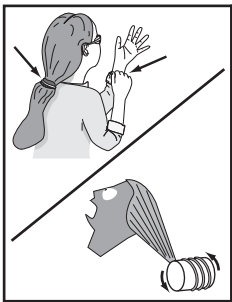
⚠WARNING

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

⚠WARNING

To reduce risk of eye or face injury from flying chips, always wear approved safety glasses and a face shield when operating this machine.





⚠WARNING

Keep hair, clothing, and jewelry away from moving parts at all times. Entanglement can result in death, amputation, or severe crushing injuries!

NOTICE

If you are not experienced with this type of machine, WE STRONGLY RECOMMEND 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.

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.

To complete a typical operation, the operator does the following:

1. Examines workpiece to make sure it is suitable for drilling.
2. Puts on required safety glasses and face shield.
3. Firmly secures workpiece to table using a vise or T-slot clamps.
4. Installs correct cutting tool for operation.
5. Adjusts table to correct height, then locks it in place.
6. Selects appropriate spindle speed according to V-belt configuration chart located inside belt cover.
7. Connects machine to power, and starts spindle rotation in proper direction for cutting tool installed.
8. Begins drilling.
9. When finished, stops spindle rotation and disconnects machine from power.

Calculating Spindle Speed for Drilling

Using the Drill Bit Speed Chart

The chart shown in **Figure 15** is intended as a guide only. Always follow the manufacturer's speed recommendations if provided with your drill bits, cutters, or hole saws. Exceeding the recommended speeds may be dangerous to the operator.

The speeds shown here are intended to get you started. The optimum speed will always depend on various factors, including tool diameter, drilling pressure, material hardness, material quality, and desired finish.

Often, when drilling materials other than wood, some type of lubrication is necessary.

Lubrication Suggestions

Wood .....None
Plastics .....Soapy Water
Brass .....Water-Based Lubricant
Aluminum..... Paraffin-Based Lubricant
Mild Steel..... Oil-Based Lubricant

⚠CAUTION

Larger bits turning at slower speeds tend to grab the workpiece aggressively. This can result in the operator's hand being pulled into the bit or the workpiece being thrown with great force. Always clamp the workpiece to the table to prevent injuries.

Twist/Brad Point Drill Bits	Soft Wood	Hard Wood	Plastic	Brass	Aluminum	Mild Steel
1/16" – 3/16"	3000	2500	2500	2500	3000	2500
13/64" – 3/8"	2000	1500	2000	1250	2500	1250
25/64" – 5/8"	1500	750	1500	750	1500	600
11/16" – 1"	750	500	1000	400	1000	350

Spade/Forstner Bits	Soft Wood	Hard Wood	Plastic	Brass	Aluminum	Mild Steel
1/4" – 1/2"	2000	1500				
9/16" – 1"	1500	1250				
1-1/8" – 1-7/8"	1000	750				
2–3"	500	350				

Hole Saws	Soft Wood	Hard Wood	Plastic	Brass	Aluminum	Mild Steel
1/2" – 7/8"	500	500	600	600	600	500
1" – 1-7/8"	400	400	500	500	500	400
2" – 2-7/8"	300	300	400	400	400	300
3" – 3-7/8"	200	200	300	300	300	200
4" – 5"	100	100	200	200	200	100

Rosette Cutters	Soft Wood	Hard Wood	Plastic	Brass	Aluminum	Mild Steel
Carbide Insert Type	350	250				
One-Piece Type	1800	500				

Tenon/Plug Cutters	Soft Wood	Hard Wood	Plastic	Brass	Aluminum	Mild Steel
3/8" – 1/2"	1200	1000				
5/8" – 1"	800	600				

Figure 15. Drill bit speed chart.

Changing Spindle Speed

The Model G0823 has 12 spindle speeds, which are selected by positioning the V-belts in various configurations on the pulleys. V-belts and pulleys are located inside the belt cover on top of the machine.

Tools Needed **Qty**
Hex Wrench 6mm..... 1

To change spindle speeds:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen motor lock lever shown in **Figure 16**, pull motor inward to relieve tension on V-belts, then re-tighten lock lever.

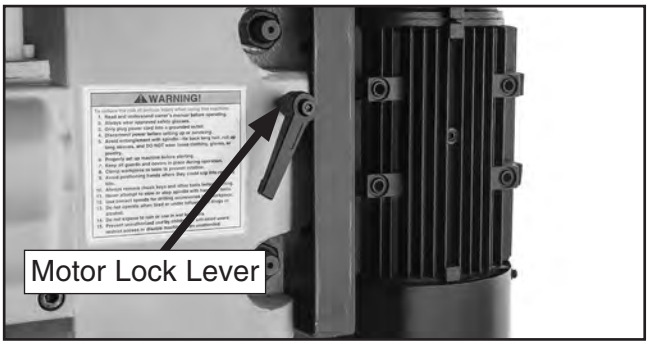


Figure 16. Use lock lever when changing V-belt positions to change spindle speed.

3. Open belt cover, then loosen two idler cap screws (see **Figure 17**) that hold idler pulley in place, so it can move freely.

Tip: *Lower headstock for easy access (see **Adjusting Headstock Position** on **Page 26**).*

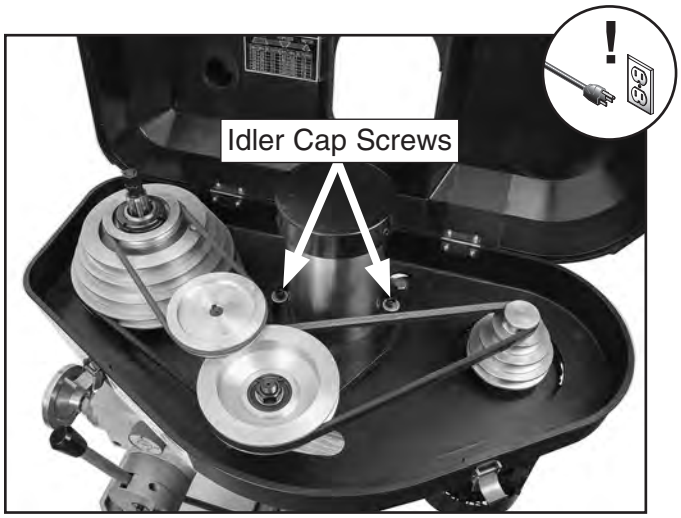


Figure 17. Spindle speed pulley system.

4. With center and rear pulleys loose, move V-belts to corresponding position for desired speed (**see chart below**).

5. Loosen motor locking lever and allow spring to tighten rear V-belt, then re-tighten motor locking lever.

6. Retighten idler cap screws, then close and latch belt cover.

RPM	Position
140	4-5
219	3-5
263	4-6
317	2-5

RPM	Position
413	3-6
475	4-7
819	1-6
1075	2-7

RPM	Position
1238	3-8
1450	1-7
1770	2-8
2436	1-8

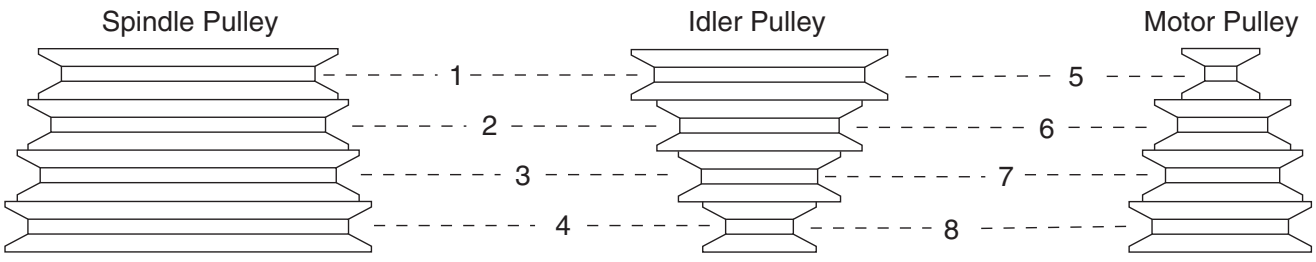


Figure 18. Spindle speed chart.

Using Downfeed

The Model G0823 features three ways to control spindle downfeed:

- Coarse Downfeed
- Fine Downfeed
- Auto Downfeed

Downfeed Controls

Use **Figure 19** and the descriptions below to identify the downfeed controls that are referred to in the following procedures.

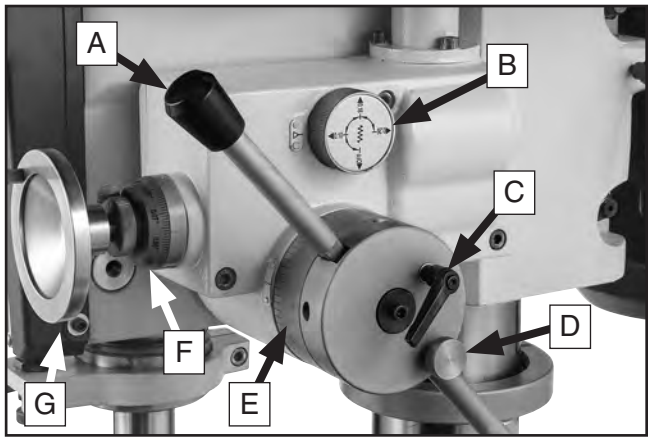


Figure 19. Identification of downfeed controls.

A. Coarse Downfeed Lever (1 of 2): Controls spindle travel in rapid, large amounts for milling or drilling.

B. Auto-Downfeed Rate Selector Knob: Adjusts speed of quill vertical movement in increments of 0.004", 0.008", and 0.012" per rotation.

C. Depth Graduated Dial Collar Lock: Secures graduated dial for precise, repeatable drilling operations.

D. Coarse Downfeed Handle Thumb Screw: When tightened, secures coarse downfeed handles for operation. When loosened, allows coarse downfeed handles to pull outward, engaging the auto-downfeed function.

E. Coarse Downfeed Graduated Dial Collar: Adjust collar to specific depth of quill travel measurements indicated on collar for repeatable drilling operations.

F. Fine Downfeed Graduated Dial Collar: Rotate knurled knob to loosen collar. Align collar depth measurement with indicator line on headstock. Fine downfeed measurements are in 0.001".

G. Fine Downfeed Handwheel: Controls spindle travel in slow, small amounts for milling/drilling. Adjusts quill height in 0.001" increments.

Coarse Downfeed

1. Make sure spindle is completely stopped.
2. Loosen depth graduated dial lock handle (**C**).
3. Rotate depth graduated dial (**E**) to limit downfeed depth, then retighten lock handle.
4. Rotate auto-downfeed rate selector knob (**B**) counterclockwise to ***OFF*** position.
5. Push coarse downfeed handles (**A**) *toward* headstock and tighten coarse handle lock-down thumb screw (**D**) to hold them in place.
6. Press FORWARD or REVERSE button on control panel to start spindle rotation, and use coarse downfeed handles to control spindle travel.

Fine Downfeed

1. Make sure spindle is completely stopped.
2. Loosen depth graduated dial lock handle (**C**).
3. Loosen coarse handle lock-down thumb screw (**D**), and pull coarse downfeed handles (**A**) *away* from headstock.
4. Rotate auto-downfeed rate selector knob (**B**) counterclockwise to ***OFF*** position.
5. Loosen knurled knob securing fine downfeed depth graduated dial collar (**F**) and reset downfeed depth, then retighten knurled knob.
6. Press FORWARD or REVERSE button on control panel to start spindle rotation, and use fine downfeed handwheel (**G**) to control spindle travel.

Auto-Downfeed

The auto-downfeed feature uses headstock gears to control powered downfeed in increments of 0.10mm, 0.18mm, and 0.26mm per spindle revolution.

NOTICE

Spindle-return is spring-loaded! Do not disengage auto-downfeed until spindle returns to top (starting) position or spindle will slam upward into quill.

To use auto-downfeed:

1. Make sure spindle is completely stopped.
2. Ensure work table height is adjusted properly to allow spindle its full range of movement.
3. Loosen depth graduated dial collar lock (**C**). This will disengage coarse downfeed graduated dial collar from operation.
4. Rotate auto-downfeed rate selector knob (**B**) clockwise to desired downfeed rate.
5. Loosen coarse handle lock-down thumb screw (**D**) and pull coarse downfeed levers (**A**) *away* from headstock.
6. Press FORWARD or REVERSE button on control panel to start spindle rotation and to engage auto-downfeed spindle travel.

NOTICE

When using auto-downfeed, the spindle WILL NOT automatically stop or reverse when it reaches the bottom depth of travel. To avoid machine damage, manually stop spindle rotation before this happens.

7. When desired depth of spindle travel is reached, stop spindle travel by pressing STOP button on control panel.
8. Firmly grip coarse downfeed handles, push handles *toward* headstock, and use handles to return spindle to top position.

Installing/Removing Tooling

The Model G0823 includes the spindle tools shown in **Figure 20** below.

A. Drill Chuck w/R-8 Arbor: Use with drill bits.

B. R-8–MT#3 Spindle Adapter Sleeve: Use with MT#3 tooling with or without a tang. Has a drift key slot for tool removal.

C. MT#3–MT#2 Spindle Adapter Sleeve: Use with the R-8–MT#3 spindle sleeve for MT#2 tooling. Has a drift key slot for tool removal.

D. Drift Key: Use for tool removal.

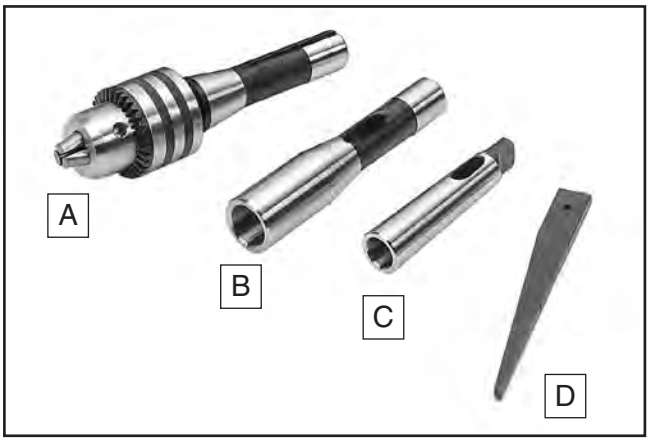


Figure 20. Drill chuck and arbors included with Model G0823.

⚠CAUTION

Cutting tools are sharp and can easily cause laceration injuries. Always protect your hands with leather gloves or shop rags when handling cutting tools.

Installing Tooling

This machine features a spindle that accepts R-8 collets and arbors. It can also use MT#3 or MT#2 tooling with the included adapter sleeves.

To install tooling:

1. DISCONNECT MACHINE FROM POWER!

2. Open belt cover.

3. Make sure tapered mating surfaces of tooling and spindle are clean and free of grease or other contaminants.

4. Align tooling alignment slot (see **Figure 21**) with pin inside spindle, then insert tooling into spindle until it contacts drawbar.

   Note: *Drawbar height inside spindle can be changed by rotating the drawbar lock nut (see **Figure 21**).*

5. Working from the top, hand-thread drawbar into tooling until finger-tight, then use a lug wrench to snug it.

   Note: *DO NOT overtighten drawbar. Overtightening makes tooling removal difficult and could damage arbor and drawbar threads.*

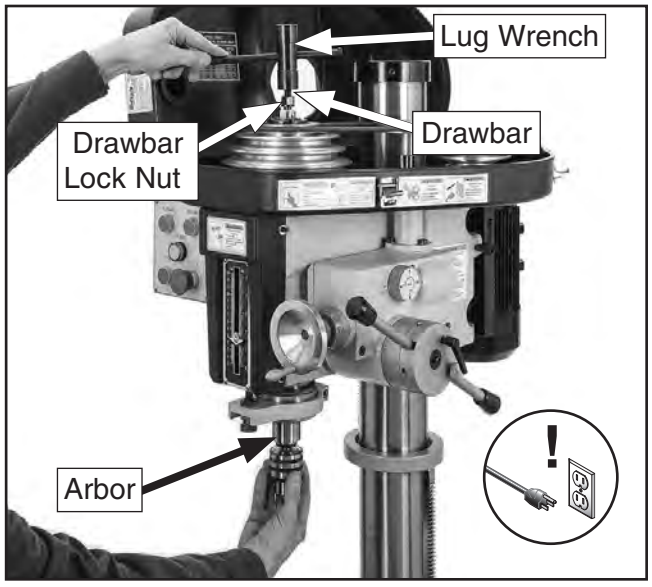


Figure 21. Threading drawbar into collet/arbor to install tooling.

6. Continue to tighten drawbar until collet and cutter (or arbor) are snugged firmly in place. Do not over-tighten drawbar, and never use power tools to tighten it.

   —If drawbar bottoms out in tooling and will not tighten further before tooling is tight in spindle, tighten drawbar lock nut (see **Figure 21**) to secure tooling in spindle.

Removing Tooling

1. DISCONNECT MACHINE FROM POWER!

2. Loosen, but do not remove, drawbar.

   Tip: *If necessary, insert included drill chuck key into chuck to hold chuck in place when tightening drawbar.*

3. Hold tooling to prevent it from dropping completely out of machine. Tap on top of drawbar with a brass hammer to loosen collet/arbor from spindle, as shown in **Figure 22**.

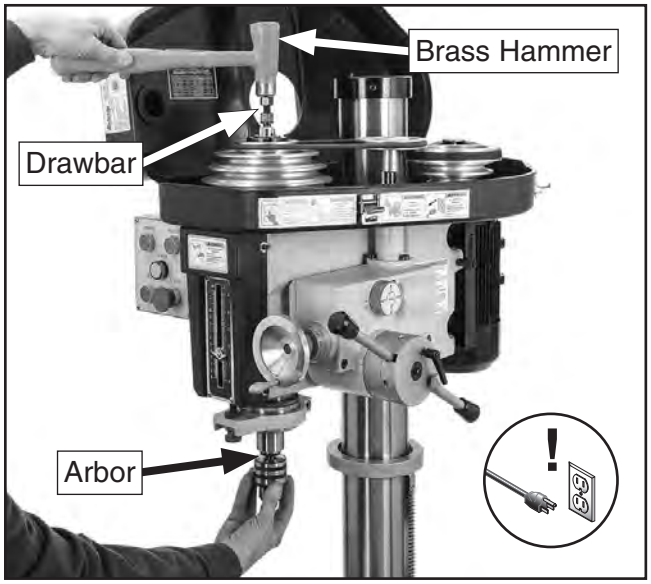


Figure 22. Tapping top of drawbar with drawbar nut already loosened to remove tooling.

4. Unthread drawbar until it is free from tooling. Remove tooling from spindle when not in use.

Adjusting Headstock Position

The headstock travels up and down the column, and rotates 360° around the column. Before adjusting headstock position, fully retract the quill and set the headstock as low as possible to increase quill rigidity and reduce vibration.

To adjust headstock position:

1. DISCONNECT MACHINE FROM POWER!

2. Use included lug wrench to loosen both headstock lock nuts shown in **Figure 23**.

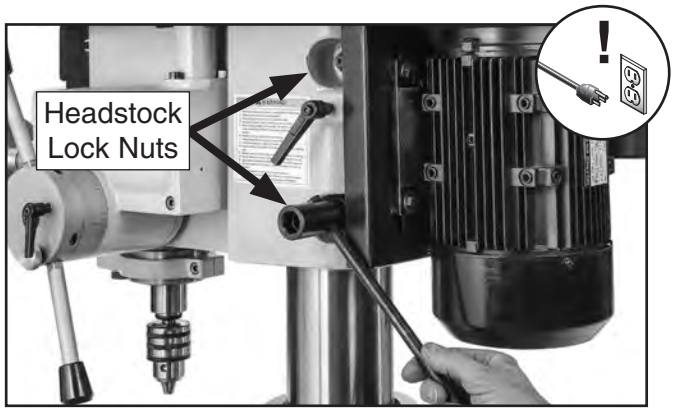


Figure 23. Loosening headstock lock nuts in order to adjust headstock position.

3. Use headstock elevation crank (see **Figure 24**) to move head up or down as desired. Use your hands to rotate headstock on column as needed.

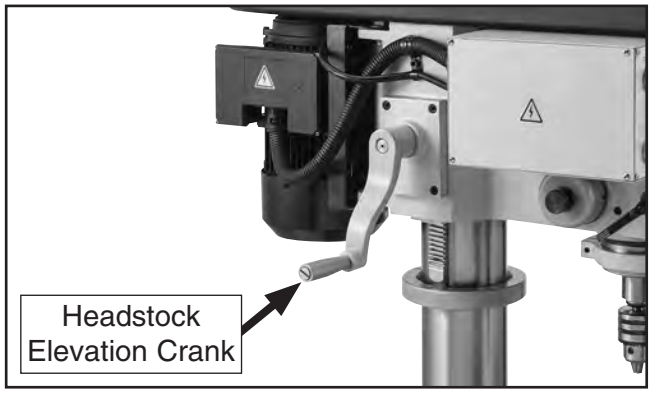


Figure 24. Location of headstock elevation crank.

4. Retighten headstock lock nuts.

Setting Depth Stop

The depth stop is used to limit the range of tooling downward movement or drilling depth. **Maximum depth is 5⅛".**

To set depth stop:

1. DISCONNECT MACHINE FROM POWER!

2. Install tooling (refer to **Page 25**), then make sure spindle is drawn all the way up into headstock.

3. Loosen headstock lock nuts (see **Figure 23**) and lower head using headstock elevation crank (see **Figure 24**) until drill bit or cutter is approximately ⅛" above workpiece, then retighten headstock lock nuts.

4. Rotate knurled knob (**Figure 25**) until *top* of indicator is level with desired depth as listed on scale.

   Note: *The depth stop scale functions as a general guide only. It is not intended for high-tolerance, precision results. To calibrate the depth stop, see* ***Calibrating Depth Stop*** *on* ***Page 36****.*

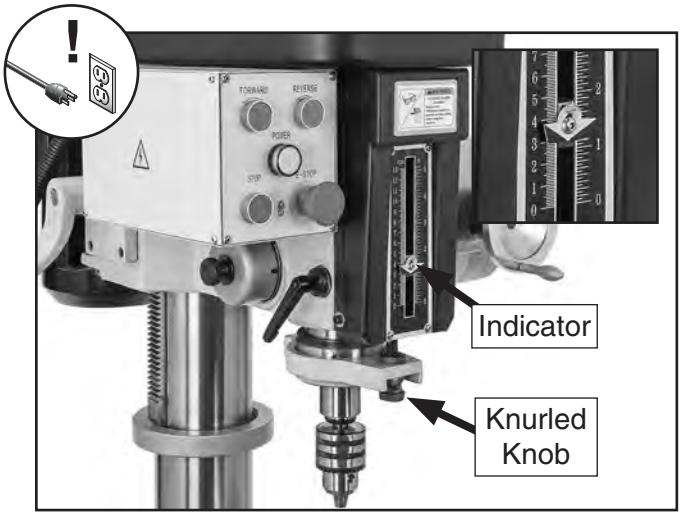


Figure 25. Depth stop controls.

Positioning Table

The table moves vertically, rotates 360°, pivots around the column, and tilts 60° left or right.

Rotating Table on Its Axis

1. Remove any loose objects from table surface.

2. Loosen pivot lock handle shown in **Figure 26**.

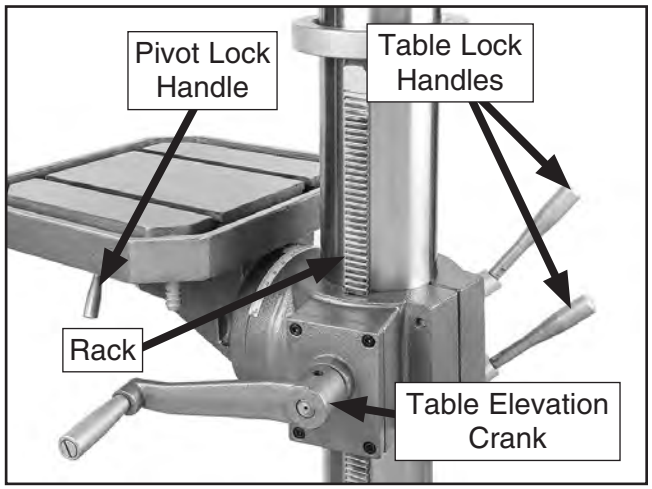


Figure 26. Table adjustment controls.

3. Rotate table to desired position, then re-tighten pivot lock handle.

Raising/Lowering Table

1. Remove any loose objects from table surface.

2. Loosen table lock handles shown in **Figure 26**.

3. Adjust table height by rotating table elevation crank (see **Figure 26**), then re-tighten table lock handles.

Pivoting Table Around Column

1. Remove any loose objects from table surface.

2. Slightly loosen table lock handles (see **Figure 26**).

3. Pivot table to desired location, making sure to guide rack, as shown in **Figure 26**.

4. Retighten lock handles.

Tilting Table

1. Remove all objects from table surface.

2. Loosen three tilt lock nuts shown in **Figure 27**.

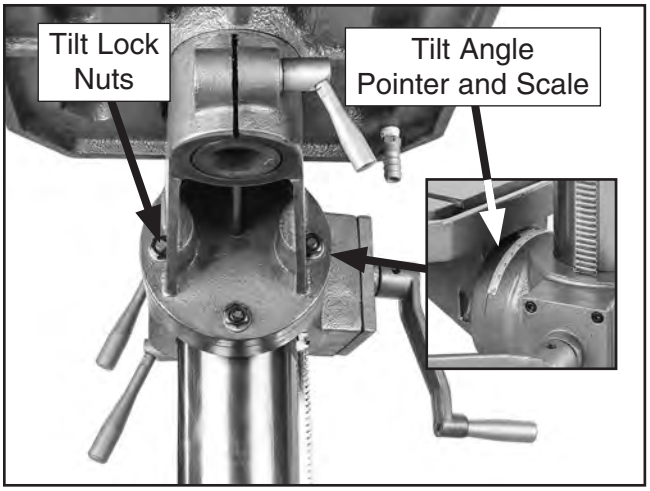


Figure 27. Table tilt controls.

3. Tilt table until pointer aligns with desired angle on scale (see **Figure 27**).

4. Retighten tilt-lock nuts.

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.

G5753— 6" Cast-Iron Drill Press Vise
If you use a drill press and value your fingers, you need one of these. Made from high-grade cast iron, these hefty horizontal vises offer support and stability, allowing you to keep your hands well away from fast moving bits and cutters. Includes a sturdy lip along both sides of the base, allowing vise to be mounted to nearly any machine table, using common T-slot clamps.

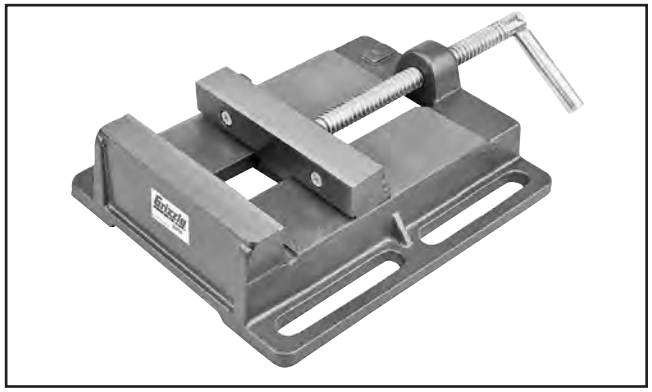


Figure 28. G5753 6" Cast-Iron Drill Press Vise.

G1075—52-Pc. Clamping Kit
This clamping kit includes 24 studs, 6 step block pairs, 6 T-nuts, 6 flange nuts, 4 coupling nuts, and 6 end hold-downs. The rack is slotted so it can be mounted close to the machine for easy access. Made for ½" T-slots.

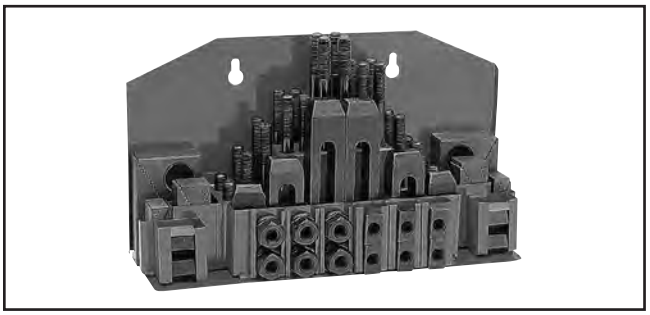


Figure 29. G1075 Clamping Kit.

T20501—Face Shield Crown Protector 4"
T20502—Face Shield Crown Protector 7"
T20503—Face Shield Window
T20451—"Kirova" Clear Safety Glasses
T20452—"Kirova" Anti-Reflective S. Glasses
H0736—Shop Fox® Safety Glasses
H7194—Bifocal Safety Glasses 1.5
H7195—Bifocal Safety Glasses 2.0
H7196—Bifocal Safety Glasses 2.5

Figure 30. Safety glasses.

G3658—Titanium Drill Bits
Titanium nitride-coated bits last up to six times as long as uncoated bits. This 115-piece set features 29 fractional bits, from 1/16" to 1/2" in increments of 1/64", letter bits from A–Z, and 60 number bits. Housed in rugged steel case.

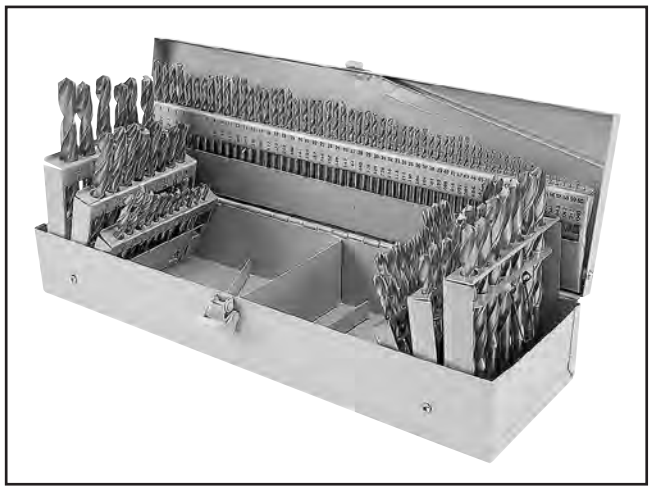


Figure 31. G3658 115-Pc. Drill Bit Set.

T26688—R-8 Quick-Change Collet 8-Pc. Set
These collets are hardened and ground for maximum holding power and ultra precision. Threaded for 7/16"-20 draw bars, this set has a maximum run-out of 0.001". Set includes collect chuck, 1/4", 5/16", 3/8", 1/2", 5/8", 3/4", and 1" collets, spanner wrench, and moulded plastic case.

Figure 32. T26688 R-8 Quick-Change Collet 8-Pc. Set.

G1064—Cross-Sliding Vise
This vise features an exclusive slide bar to prevent the jaws from tilting up or sideways when tightening. Adjustable gibs take up any slack on both top and bottom slides. Use this vise on your drill press for cutting keyways and doing light milling jobs.

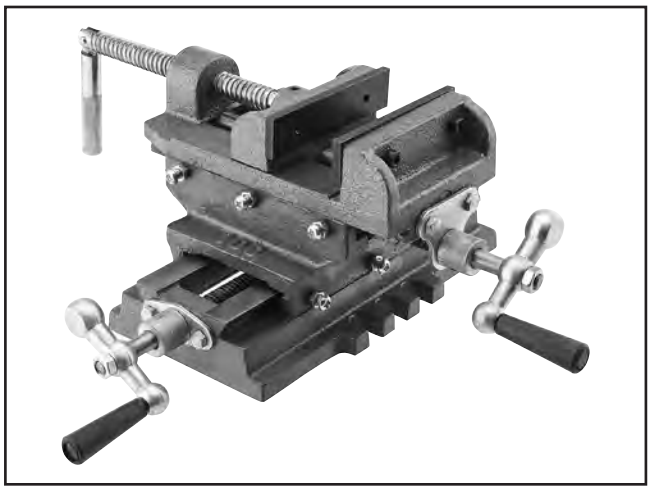


Figure 33. G1064 Cross-Sliding Vise.

T24354—6" Digital Caliper with 6" Digital Micrometer Set
This high-precision electronic Outside Micrometer features a crisp, clear, easy-to-read LCD display, and is accurate to 0.001". Hardened and ground spindle with carbide anvil ensures durability and accuracy.

Figure 34. Model T24354 6" Digital Caliper with 1" Digital Micrometer Set.

H7362—Drill Doctor DD500x Home/Shop 3/32"–1/2" Drill Sharpener

Save yourself money by sharpening you dull and broken drill bits at home! This easy-to-use system makes it simple to keep a sharp, perfectly angled cutting edge on bits you use often, and it can even be used to put an edge back on broken bits.

Figure 35. H7362 Drill Doctor drill bit sharpener.

Cutting Fluid Products

SB1366—South Bend Cutting Oil, 12 oz.
H7617—High-Pressure 5 oz. Oil Can w/Flex Nozzle
T10615—Viper's Venom Cutting Oil, 1 Qt.
T24918 & T24919—Slugger Cutting Fluid, 1 Qt. & Slugger Cutting Paste

Protect your drill press and cutting tools with superior cutting fluid products from Grizzly.com.

Figure 36. Cutting fluid options from Grizzly.

H3788—G96® Gun Treatment
G2871—Boeshield® T-9
H5486—SLIPIT®

Keep unpainted cast iron surfaces rust-free with regular applications of products like G96® Gun Treatment, SLIPIT®, or Boeshield® T-9.

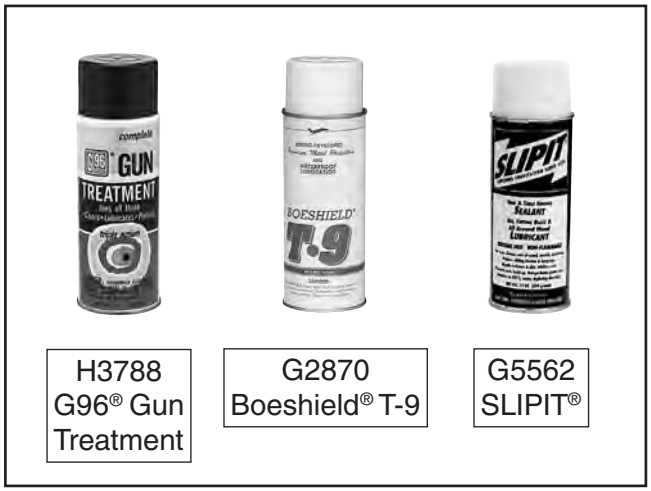


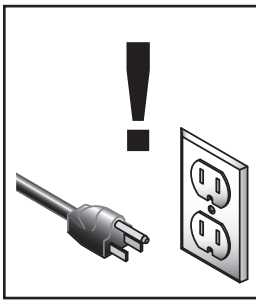
Figure 37. Lubrication options.

T26685—ISO32 Moly-D Multi-Function Oil
T26419—Syn-o-Gen High-Speed Bearing Grease Moly-D

Moly-D lubricants are some of the best we've found for maintaining the critical components of machinery because they tend to resist run-off and maintain their lubricity under a variety of conditions.

Figure 38. ISO-32 T26685 Moly-D Oil and T26419 Armor Plate NLGI#2 Moly-D Grease.

SECTION 6: MAINTENANCE



⚠WARNING

Always disconnect power to the machine before performing maintenance. Failure to do this may result in serious personal injury.

Schedule

For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section.

Daily Check

- Make sure drill is disconnected from power when not in use.
- Check for loose mounting bolts.
- Make sure drill is clean and lubricated.
- Check for worn or damaged wires.
- Check for any other unsafe condition.
- Check belts for tension and wear.

Every 90 Days

- Lubricate quill surface and column racks.

NOTICE

Follow reasonable lubrication practices as outlined in this manual. Failure to do so could lead to premature failure of your machine and will void the warranty.

Cleaning & Protecting

Sawdust, wood chips, and metal chips left on the machine will invite oxidation and a gummy residue buildup around the moving parts. Use a brush and shop vacuum to remove chips and debris from the working surfaces of the drill. Never blow off the drill with compressed air, as this will force metal chips deep into the mechanisms and may cause injury to yourself or bystanders.

Remove any rust build-up from unpainted cast-iron surfaces of your drill and treat them with a non-staining lubricant after cleaning.

Keep unpainted cast-iron surfaces rust-free with regular applications of products like G96® Gun Treatment, SLIPIT®, or Boeshield® T-9 (see **Accessories** on **Page 30**).

Lubrication

An essential part of lubrication is cleaning the components before lubricating them.

This step is critical because grime and chips build up on lubricated components, which makes them hard to move. Simply adding more lubricant will not result in smooth moving parts.

Clean all exterior components in this section with mineral spirits, shop rags, and brushes before lubricating.

DISCONNECT MACHINE FROM POWER BEFORE PERFORMING LUBRICATION.

Quill & Column Surfaces

Oil Type .....Model T23962 or ISO 68 Equivalent
Oil Amount.....Thin Coat
Lubrication Frequency.....8 Hrs. of Operation

Use the controls to access the entire smooth surfaces of the quill and column (see **Figures 39–40**), then clean them with mineral spirits and shop rags.

Note: *Avoid removing the grease from the column racks during cleaning.*

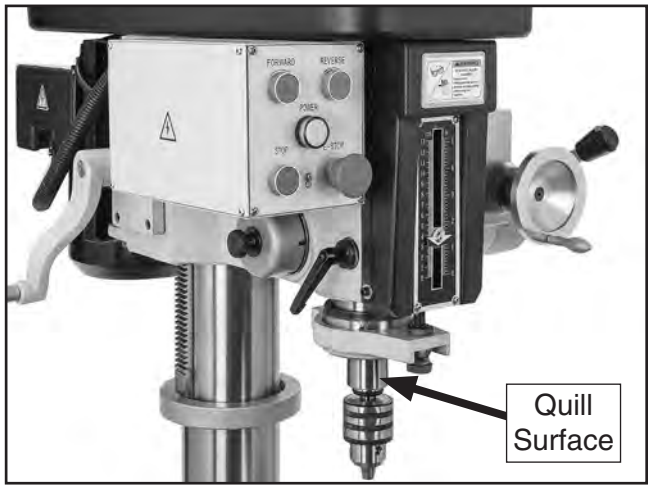


Figure 39. Quill surface location.

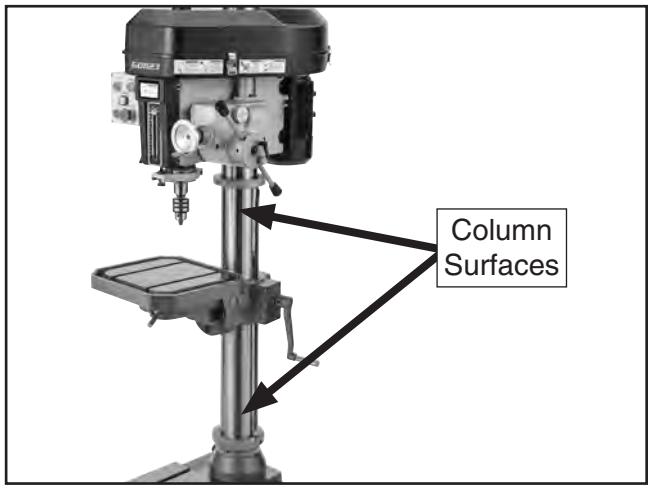


Figure 40. Column surface locations.

When dry, apply a thin coat of oil to the surfaces. Move the components through the entire path of travel to distribute the lubricant.

Column Rack, Quill Rack & Pinion

Grease Type..... NLGI#2 Grease or Equivalent
Grease Amount .....Thin Coat
Lubrication Frequency..... 90 hrs. of Operation

Move the quill up and down to gain full access to the quill rack & pinion (see **Figure 41**), then clean the teeth with mineral spirits, shop rags, and a brush.

Next, clean the column rack teeth with mineral spirits, shop rags, and a brush.

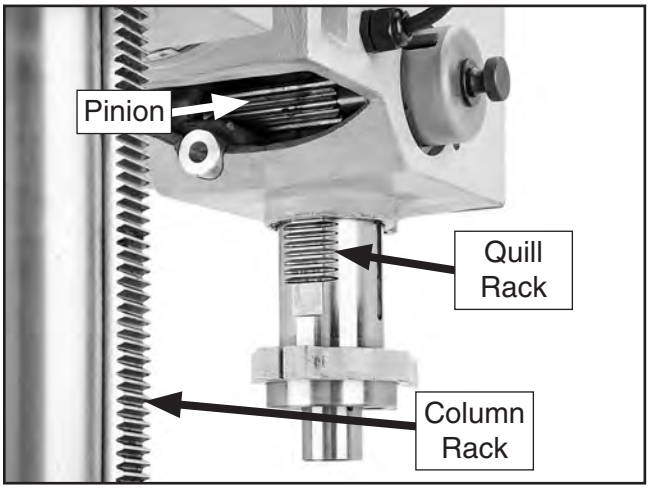


Figure 41. Quill rack & pinion locations.

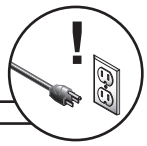
When dry, use a brush to apply a thin coat of grease to the teeth, then raise/lower the quill to distribute the grease.

Note: *Re-apply oil to the quill smooth outside surface that was removed during the cleaning process.*

SECTION 7: SERVICE

Review the troubleshooting and procedures in this section to fix or adjust your machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then feel free to call our Technical Support at (570) 546-9663.

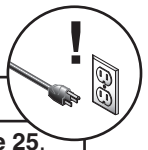
Troubleshooting



Motor & Electrical

Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips.	1. Plug/receptacle at fault/wired wrong. 2. Incorrect power supply voltage or circuit size. 3. Power supply circuit breaker tripped or fuse blown. 4. Motor wires connected incorrectly. 5. Wiring open/has high resistance. 6. Spindle direction switch at fault. 7. Start capacitor at fault. 8. Centrifugal switch at fault. 9. Motor at fault.	1. Test for good contacts; correct the wiring. 2. Ensure correct power supply voltage and circuit size. 3. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse. 4. Correct motor wiring connections. 5. Check/fix broken, disconnected, or corroded wires. 6. Replace switch. 7. Test/replace. 8. Adjust/replace centrifugal switch if available. 9. Test/repair/replace.
Machine stalls or is underpowered.	1. Incorrect/dull cutter/bit for task. 2. Feed rate/cutting speed too fast. 3. Belt(s) slipping. 4. Machine undersized for task. 5. Plug/receptacle at fault. 6. Motor overheated. 7. Run capacitor at fault. 8. Pulley slipping on shaft. 9. Centrifugal switch at fault. 10. Motor bearings at fault.	1. Use correct cutter/bit. 2. Decrease feed rate/cutting speed. 3. Ensure belts are oil free, tension/replace belt(s); ensure pulleys are aligned. 4. Perform operation with different machine. 5. Test for good contacts/correct wiring. 6. Clean motor, let cool, and reduce workload. 7. Test/repair/replace. 8. Tighten loose pulley; replace broken/missing parts. 9. Adjust/replace centrifugal switch if available. 10. Test/repair/replace.
Machine has vibration or noisy operation.	1. Motor or other drive component loose. 2. V-belt(s) worn or loose. 3. Motor fan rubbing on fan cover. 4. Pulley loose. 5. Machine incorrectly mounted to floor. 6. Motor mount loose/broken. 7. Motor bearings at fault. 8. Chuck unbalanced or cutter dull. 9. Centrifugal switch out of adjustment or at fault.	1. Inspect/replace damaged bolts/nuts, and retighten with thread-locking fluid, if necessary. 2. Inspect/replace belts with a new matched set. 3. Fix/replace fan cover; replace loose/damaged fan. 4. Re-align/replace shaft, pulley set screw, and key. 5. Tighten mounting bolts; relocate/shim machine. 6. Tighten/replace. 7. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement. 8. Replace chuck; replace/resharpen cutter. 9. Adjust or replace.

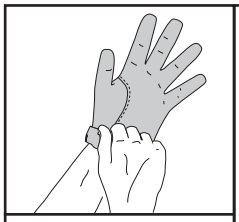
Drill Press Operations

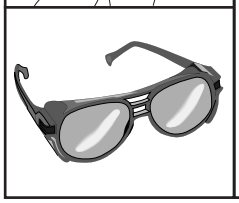


Symptom	Possible Cause	Solution
Tool loose/lack of power in spindle.	1. Tool incorrectly installed in spindle taper. 2. Debris on tool or spindle taper mating surfaces. 3. Taking too big of a cut. 4. V-belts are loose. 5. Wrong voltage.	1. Remove and re-install, as instructed on **Page 25**. 2. Clean tool and spindle taper. 3. Reduce depth of cut and allow chips to clear. 4. Properly tension V-belts. 5. Correct voltage.
Workpiece or tool vibrates or chatters during operation.	1. Table locks not tight. 2. Workpiece not secure. 3. Spindle speed/feed rate is too fast. 4. Spindle or quill extended too far down. 5. Quill lock lever not tight.	1. Tighten table locks (**Page 27**). 2. Properly clamp workpiece on table or in vise. 3. Set spindle speed correctly (**Page 22**) or use slower feed rate. 4. Fully retract spindle and lower headstock. This increases rigidity to decrease vibration. 5. Tighten quill lock lever.
Headstock is hard to raise.	1. Headstock lock nuts at fault. 2. Rack and pinion at fault or jammed with grime/debris.	1. Loosen/replace lock nuts. 2. Fix/replace broken or loose parts; clean and lubricate rack and pinion.
Bad surface finish.	1. Spindle speed too fast for workpiece material. 2. Dull or incorrect cutting tool. 3. Wrong rotation direction of cutting tool. 4. Workpiece not secure. 5. Spindle extended too far down during operation.	1. Set spindle speed correctly (**Page 22**). 2. Sharpen cutting tool or select one that better suits the operation. 3. Check for proper cutting tool rotation. 4. Properly clamp workpiece on table or in vise. 5. Fully retract spindle and lower headstock. This increases rigidity.
Spindle overheats.	1. Drill operated at high speeds for extended period.	1. Allow drill to cool.
Spindle does not return to highest position.	1. Poorly adjusted return spring. 2. Worn return spring.	1. Increase return spring tension (**Page 35**). 2. Replace return spring.
Depth stop producing inaccurate results.	1. Depth stop not calibrated.	1. Calibrate depth stop (**Page 36**).

Tensioning Return Spring

The spring tension for automatic quill recoil has been pre-set at the factory. It should not need adjustment under most normal circumstances. If it does need adjustment, the spring housing is located on the left side of the headstock.





⚠WARNING

If the return spring should come loose from the spring cap and rapidly unwind, laceration or impact injuries could occur. Always wear heavy leather gloves and safety glasses when adjusting the return spring tension.

Items Needed	Qty
Heavy Leather Gloves	1 Pair
Safety Glasses	1 Pair

To adjust spring tension:

1. DISCONNECT MACHINE FROM POWER!

2. PUT ON SAFETY GLASSES!

3. Loosen thumb knob (see **Figure 42**) 2–3 turns. DO NOT completely remove thumb knob.

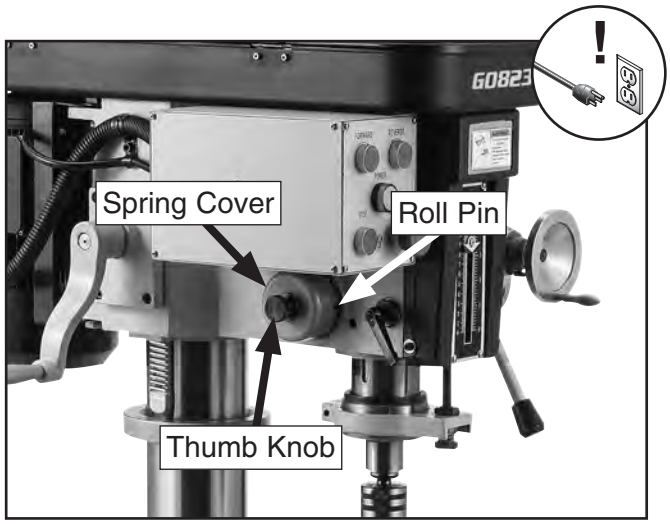


Figure 42. Spring tension components.

4. Wearing gloves, pull spring cover (see **Figure 43**) out enough so notches just clear roll pin. HOLD SPRING COVER TIGHTLY during this step, or force of spring will cause cover to spin out of your hands.

5. Rotate cover counterclockwise to increase tension, then push cover back in to engage roll pin with one of the notches, as shown in **Figure 43**.

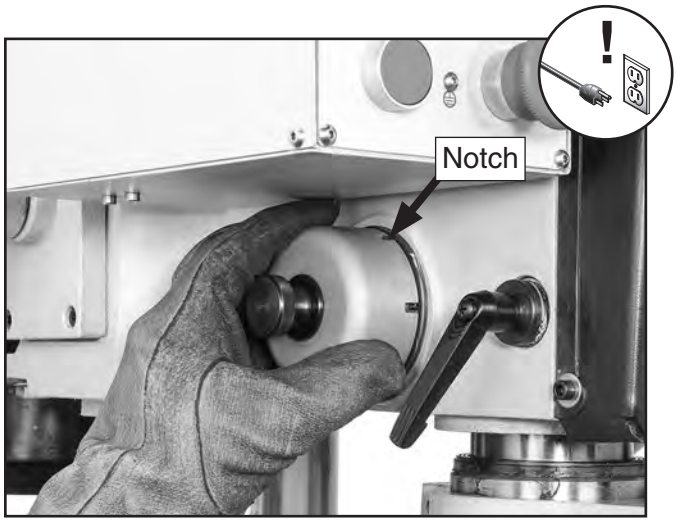


Figure 43. Adjusting spring tension by rotating spring cover to engage next notch with roll pin.

6. Tighten thumb knob.

7. Check return spring tensioning by rotating coarse downfeed handwheel. Spindle should return quickly when downward pressure is released.

   —If spindle does not retract quickly, repeat **Steps 3–6**, and re-check tension until return speed is adequate.

Calibrating Depth Stop

Depth stop accuracy may be improved by calibrating the depth stop. See **Figure 44** for depth stop components. Make sure the spindle is retracted all the way into the quill, then follow the steps below.

To ensure accuracy over time, re-check "0" of depth stop periodically.

Note: *The depth stop scale functions as a general guide only. It is not intended for high-tolerance, precision results. See* ***Accessories*** *on* ***Page 28*** *for precision depth indicator options.*

Tool Needed	**Qty**
Hex Wrench 2.5mm	1

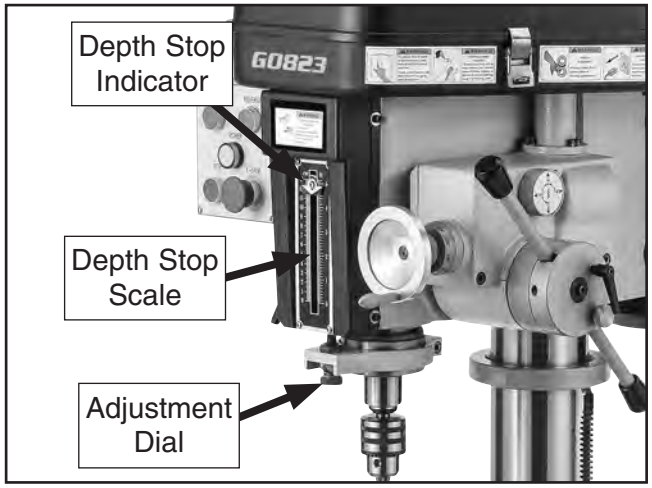


Figure 44. Depth stop components.

To calibrate depth stop:

1. Rotate depth stop adjustment knob to lower depth stop (see **Figure 45**) until indicator plate reaches bottom of its travel.

Note: *Indicator plate may extend below "0" hash mark when it reaches bottom of travel.*

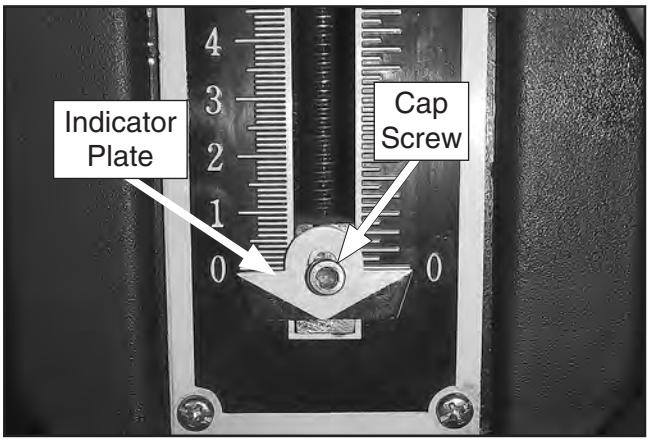


Figure 45. Depth stop set at "0" for calibration.

2. Loosen cap screw shown in **Figure 45**, and position indicator plate so upper edge of plate aligns with "0" on the scale, then re-tighten cap screw to secure setting.

V-Belts

Inspect regularly for tension and wear. Refer to **Figure 46** for proper belt tension. Belt deflection should be approximately ¼" under moderate pressure. Replacement V-belts can be found in the back of this manual in the part breakdowns. Check pulleys to ensure that they are properly aligned when installing V-belts.

To replace the V-belts, refer to **Changing Spindle Speed** on **Page 22** to loosen the belts. Remove them from the pulleys, then install new V-belts.

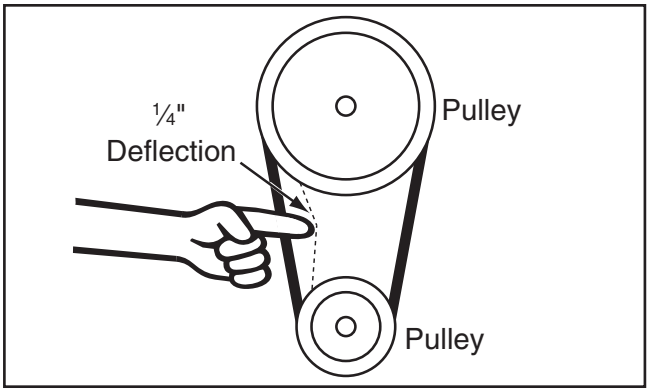


Figure 46. Inspecting belt tension.

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 aftermarket 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.

COLOR KEY

BLACK	Bk	BLUE	Bl	YELLOW	Yl	LIGHT BLUE	Lb
WHITE	Wt	BROWN	Br	YELLOW GREEN	Yg	BLUE WHITE	Bw
GREEN	Gn	GRAY	Gy	PURPLE	Pu	TURQUOISE	Tu
RED	Rd	ORANGE	Or	PINK	Pk		

Electrical Components

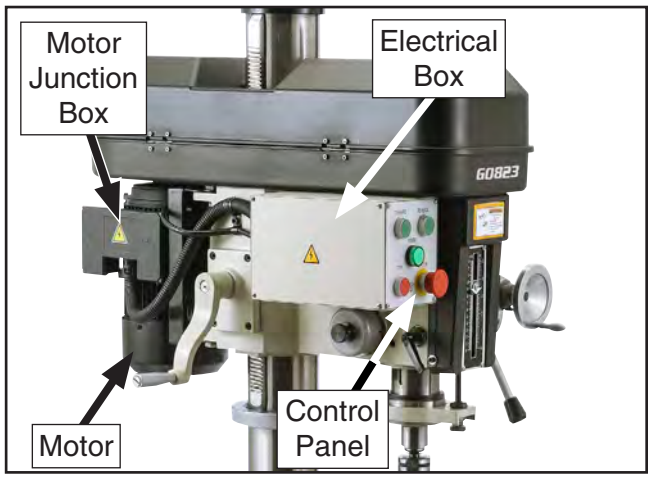


Figure 47. Electrical component overview.

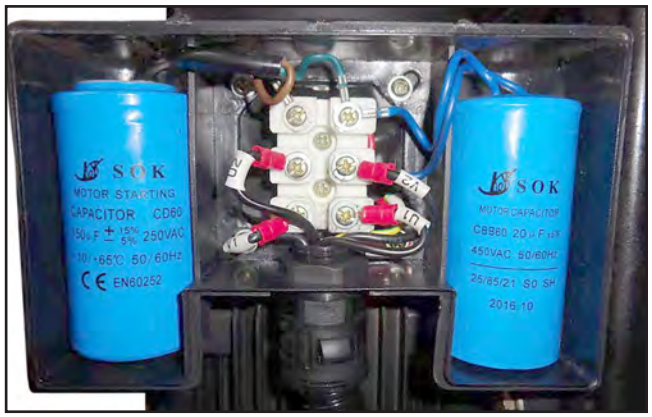


Figure 48. Motor junction box wiring.

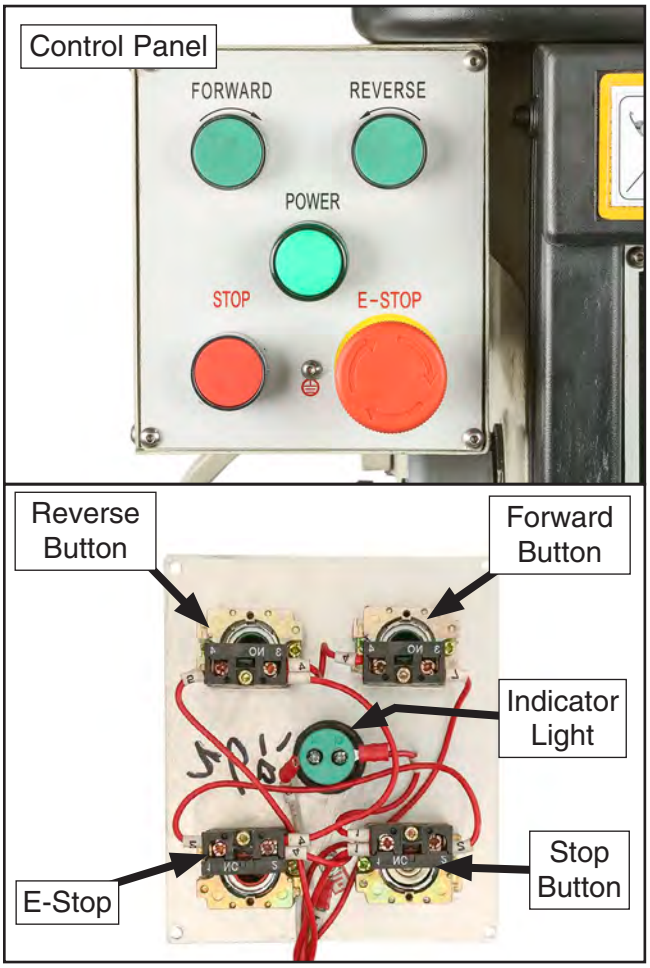


Figure 49. Control panel wiring.

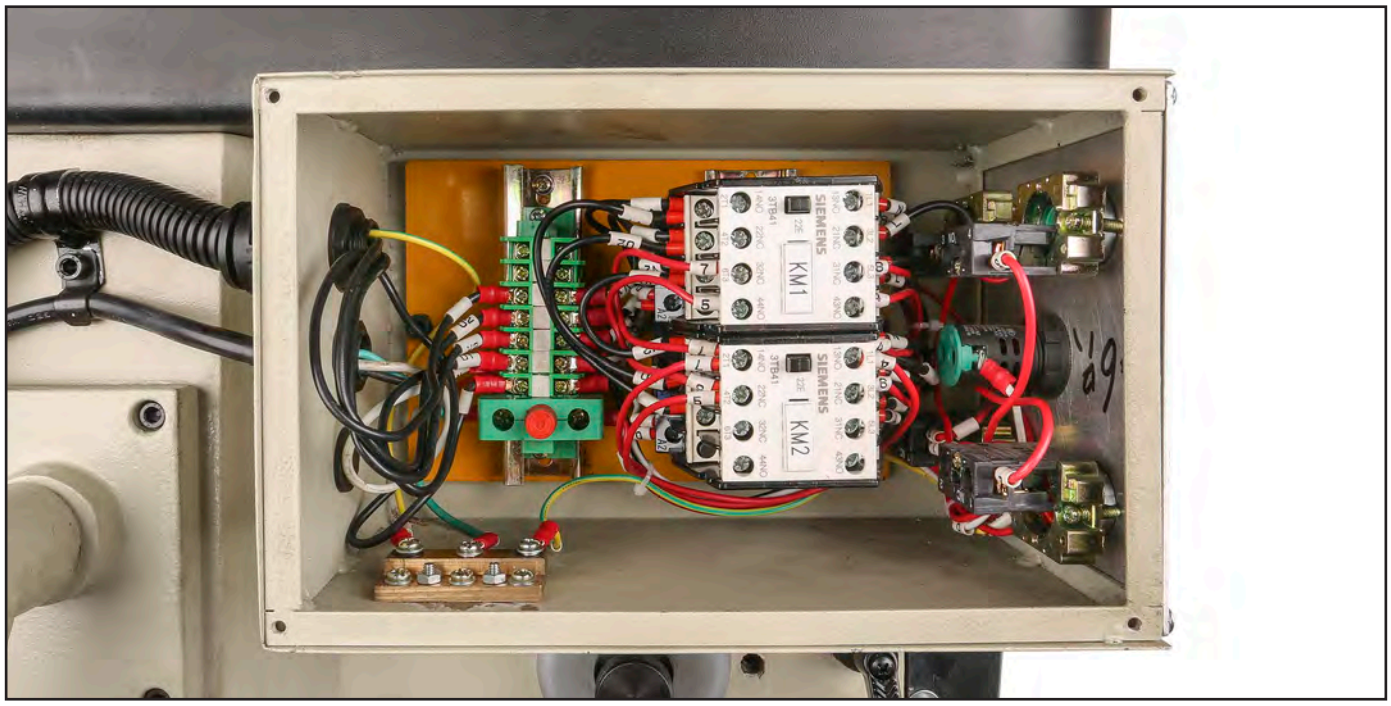
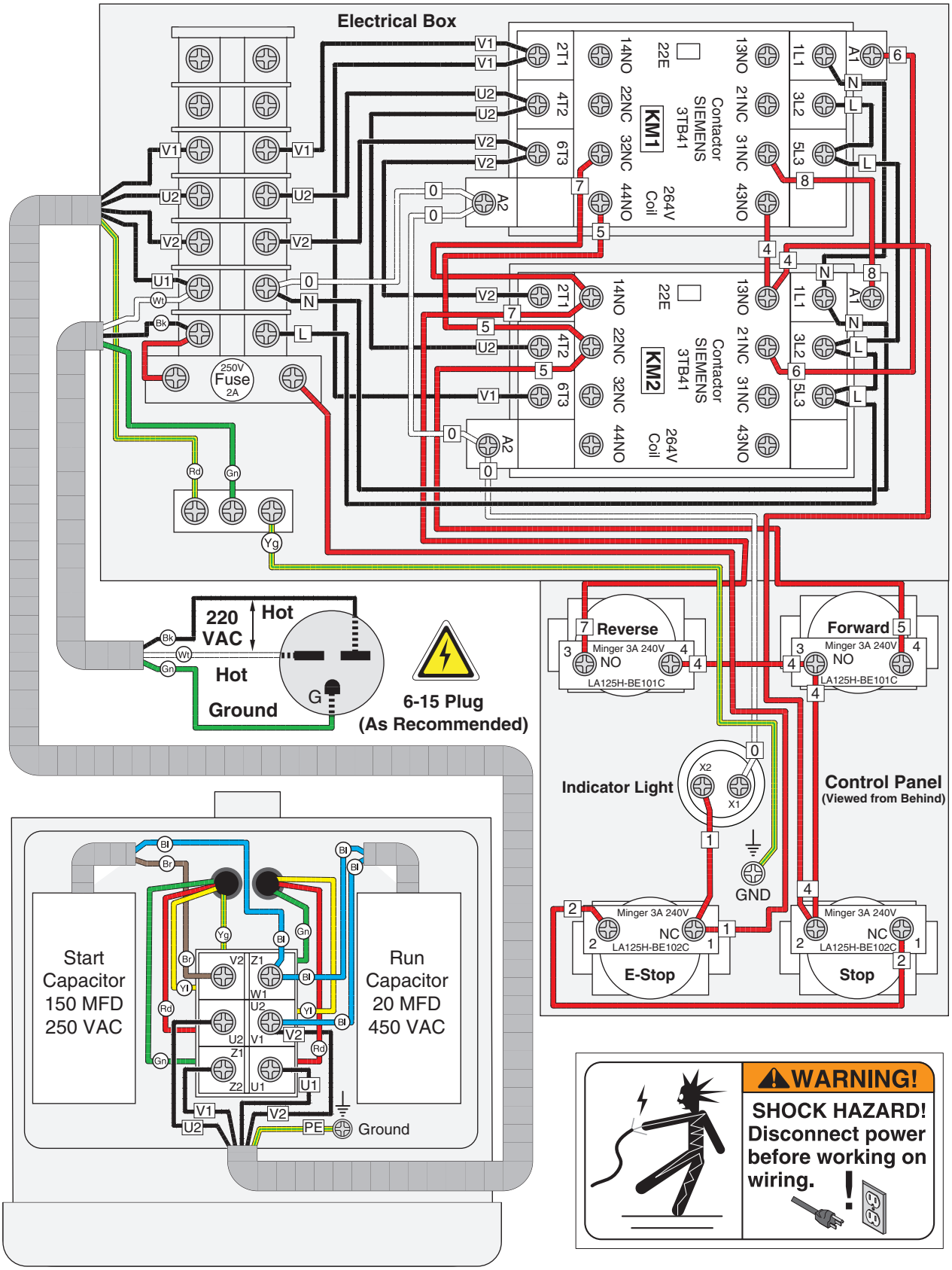


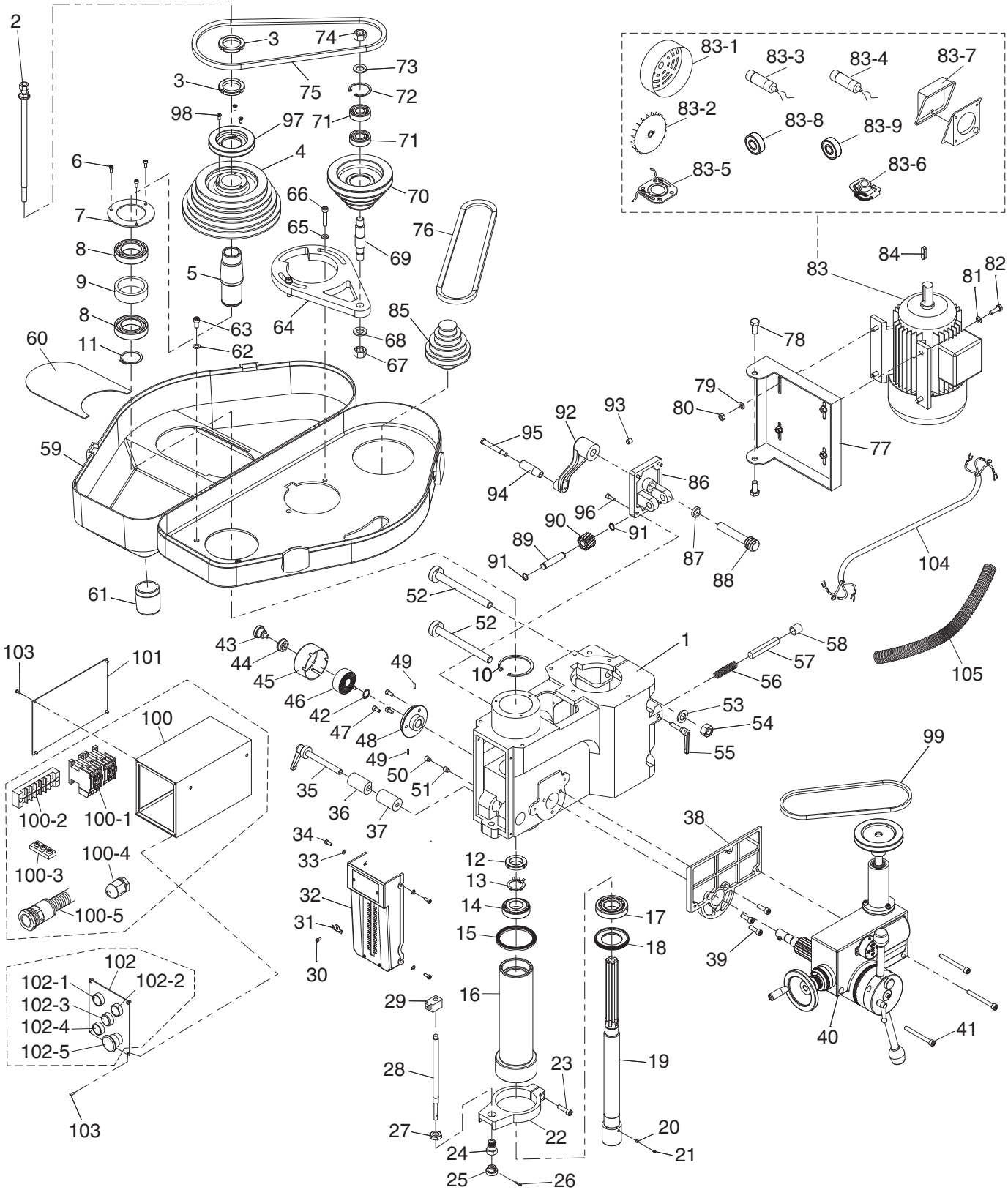
Figure 50. Electrical box wiring.

Wiring Diagram



SECTION 9: PARTS

Headstock



Headstock Parts

REF	PART #	DESCRIPTION
1	P0823001	HEAD CASTING
2	P0823002	DRAWBAR 7/16-20 X 17-3/4
3	P0823003	SPANNER NUT M42-1.5
4	P0823004	SPINDLE PULLEY
5	P0823005	SPINDLE TAPER SLEEVE
6	P0823006	CAP SCREW M5-.8 X 12
7	P0823007	OUTER BEARING PLATE
8	P0823008	BALL BEARING 6009ZZ
9	P0823009	SPACER 74MM
10	P0823010	INT RETAINING RING 75MM
11	P0823011	EXT RETAINING RING 45MM
12	P0823012	SPANNER NUT M30-1.5
13	P0823013	EXT TOOTH WASHER 30MM
14	P0823014	TAPERED ROLLER BEARING 30206
15	P0823015	RUBBER FLANGE
16	P0823016	QUILL
17	P0823017	TAPERED ROLLER BEARING 30207
18	P0823018	BEARING COVER
19	P0823019	SPINDLE R-8
20	P0823020	SET SCREW M5-.8 X 6 DOG-PT
21	P0823021	SET SCREW M5-.8 X 6
22	P0823022	QUILL CLAMP
23	P0823023	CAP SCREW M8-1.25 X 30
24	P0823024	INT THREADED BOLT M16-2 X 20
25	P0823025	KNURLED THUMB SCREW M12-1.75
26	P0823026	ROLL PIN 3 X 18
27	P0823027	HEX NUT M16-2 THIN
28	P0823028	DEPTH GAUGE LEADSCREW M12-1.75 X 230
29	P0823029	DEPTH ROD DOG
30	P0823030	BUTTON HD CAP SCR M4-.7 X 6
31	P0823031	DEPTH POINTER
32	P0823032	FRONT COVER
33	P0823033	FLAT WASHER 5MM
34	P0823034	CAP SCREW M5-.8 X 12
35	P0823035	QUILL LOCK HANDLE 116L M10-1.5 X 60
36	P0823036	OUTER QUILL CLAMP
37	P0823037	INNER QUILL CLAMP
38	P0823038	GEARBOX COVER
39	P0823039	CAP SCREW M8-1.25 X 25
40	P0823040	SPINDLE AUTO DOWNFEED ASSY
41	P0823041	CAP SCREW M8-1.25 X 85
42	P0823042	EXT RETAINING RING 18MM
43	P0823043	KNOB BOLT M8-1.25 X 12
44	P0823044	BUSHING
45	P0823045	SPRING COVER
46	P0823046	FLAT COIL SPRING
47	P0823047	CAP SCREW M6-1 X 12
48	P0823048	SPRING BASE
49	P0823049	ROLL PIN 3 X 12
50	P0823050	CAP SCREW M10-1.5 X 10
51	P0823051	SET SCREW M10-1.5 X 12
52	P0823052	CLAMPING BOLT M16-2 X 178

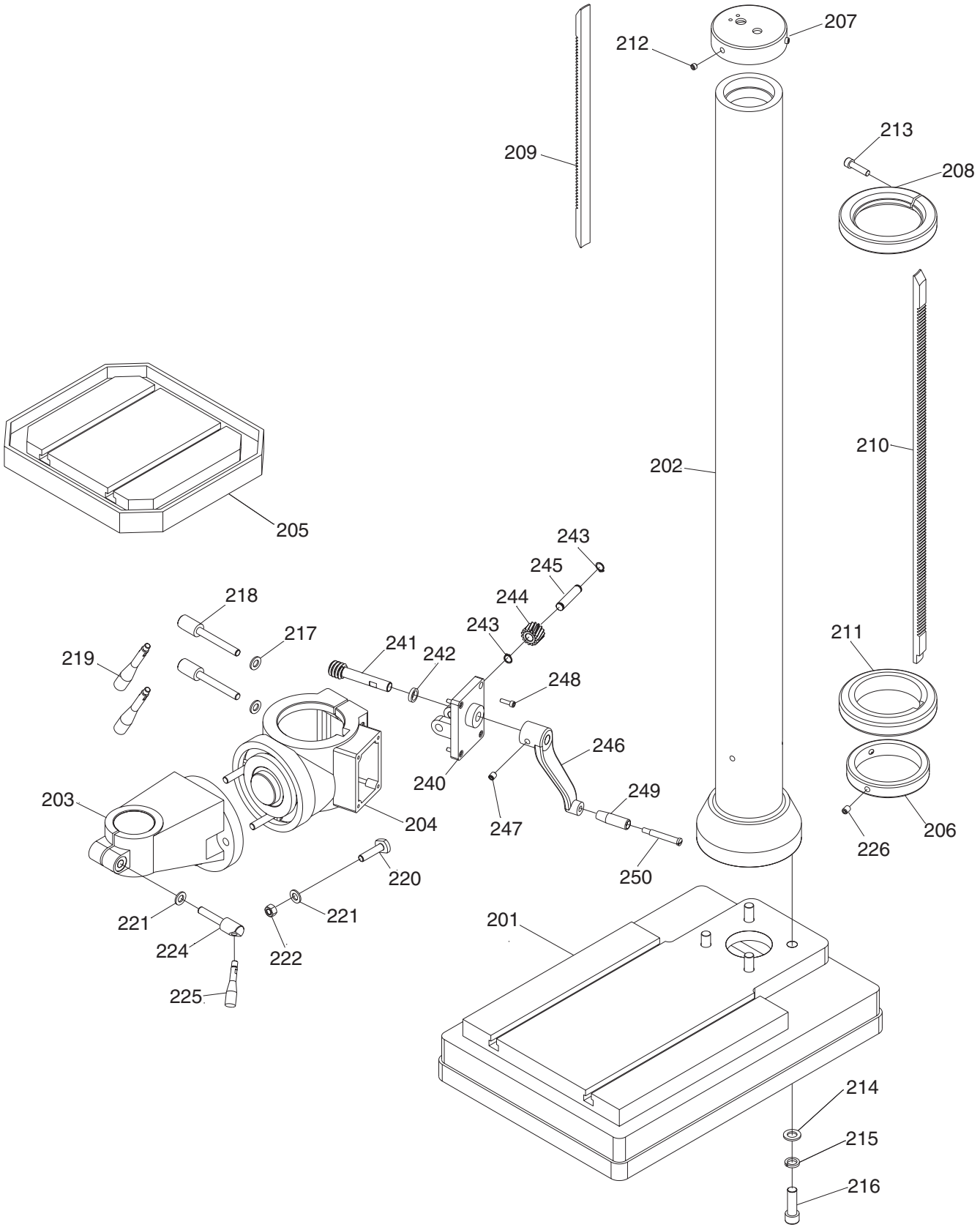
REF	PART #	DESCRIPTION
53	P0823053	FLAT WASHER 16MM
54	P0823054	HEX NUT M16-2
55	P0823055	ADJUSTABLE HANDLE 45L M8-1.25 X 36
56	P0823056	COMPRESSION SPRING
57	P0823057	BELT TENSION ROD
58	P0823058	BELT TENSION CAP (RUBBER)
59	P0823059	BELT COVER
60	P0823060	BELT COVER GUARD
61	P0823061	DRAWBAR COVER
62	P0823062	FLAT WASHER 8MM
63	P0823063	HEX BOLT M8-1.25 X 20
64	P0823064	PULLEY IDLER PLATE
65	P0823065	FLAT WASHER 8MM
66	P0823066	CAP SCREW M8-1.25 X 40
67	P0823067	HEX NUT M16-2
68	P0823068	FLAT WASHER 16MM
69	P0823069	IDLER PULLEY SHAFT
70	P0823070	IDLER PULLEY
71	P0823071	BALL BEARING 6204Z
72	P0823072	INT RETAINING RING 47MM
73	P0823073	FLAT WASHER 16MM
74	P0823074	HEX NUT M16-2
75	P0823075	V-BELT A33
76	P0823076	V-BELT A39
77	P0823077	MOTOR MOUNT
78	P0823078	HEX BOLT M12-1.75 X 25
79	P0823079	FLAT WASHER 8MM
80	P0823080	HEX NUT M8-1.25
81	P0823081	FLAT WASHER 8MM
82	P0823082	HEX BOLT M8-1.25 X 30
83	P0823083	MOTOR 2HP 220V 1-PH
83-1	P0823083-1	MOTOR FAN COVER
83-2	P0823083-2	MOTOR FAN
83-3	P0823083-3	R CAPACITOR 20M 450V 1-5/8 X 3-1/4
83-4	P0823083-4	S CAPACITOR 150M 250V 1-5/8 X 3
83-5	P0823083-5	CONTACT PLATE
83-6	P0823083-6	CETRIFUGAL SWITCH 1720 RPM
83-7	P0823083-7	MOTOR JUNCTION BOX
83-8	P0823083-8	BALL BEARING 6205Z (FRONT)
83-9	P0823083-9	BALL BEARING 6205Z (REAR)
84	P0823084	KEY 8 X 8 X 25
85	P0823085	MOTOR PULLEY SET
86	P0823086	ELEVATION CRANK BRACKET
87	P0823087	WORM SHAFT BUSHING
88	P0823088	ELEVATION WORM SHAFT
89	P0823089	ELEVATION GEAR SHAFT
90	P0823090	HELICAL GEAR 15T
91	P0823091	EXT RETAINING RING 14MM
92	P0823092	ELEVATION CRANK
93	P0823093	SET SCREW M10-1.5 X 10
94	P0823094	REVOLVING HANDLE 75L, 12 X 22
95	P0823095	SHOULDER SCR M10-1.5 X 12, 12 X 68

Headstock Parts Cont.

REF	PART #	DESCRIPTION
96	P0823096	CAP SCREW M6-1 X 20
97	P0823097	PULLEY
98	P0823098	FLAT HD SCR M5-.8 X 10
99	P0823099	ROUND BELT 8 X 670
100	P0823100	ELECTRICAL CABINET
100-1	P0823100-1	CONTACTOR SIEMENS 3TB41 22-0X 220V
100-2	P0823100-2	TERMINAL 7P
100-3	P0823100-3	GROUNDING PLATE 3P
100-4	P0823100-4	STRAIN RELIEF TYPE-3 M18-1.5
100-5	P0823100-5	STRAIN RELIEF TYPE-5 M20-1.5

REF	PART #	DESCRIPTION
101	P0823101	ELECTRICAL CABINET SIDE COVER
102	P0823102	ELECTRICAL CABINET FRONT COVER
102-1	P0823102-1	BUTTON SWITCH MING LA125H 22MM GRN
102-2	P0823102-2	BUTTON SWITCH MING LA125H 22MM GRN
102-3	P0823102-3	INDICATOR LIGHT MING A62-22D/S 22MM GRN
102-4	P0823102-4	BUTTON SWITCH MING LA125H 22MM RED
102-5	P0823102-5	E-STOP BUTTON MING LA125H 22MM
103	P0823103	BUTTON HD CAP SCR M4-.7 X 8
104	P0823104	POWER CORD 14G 3W 72"
105	P0823105	CONDUIT 21 X 420MM RIBBED

Base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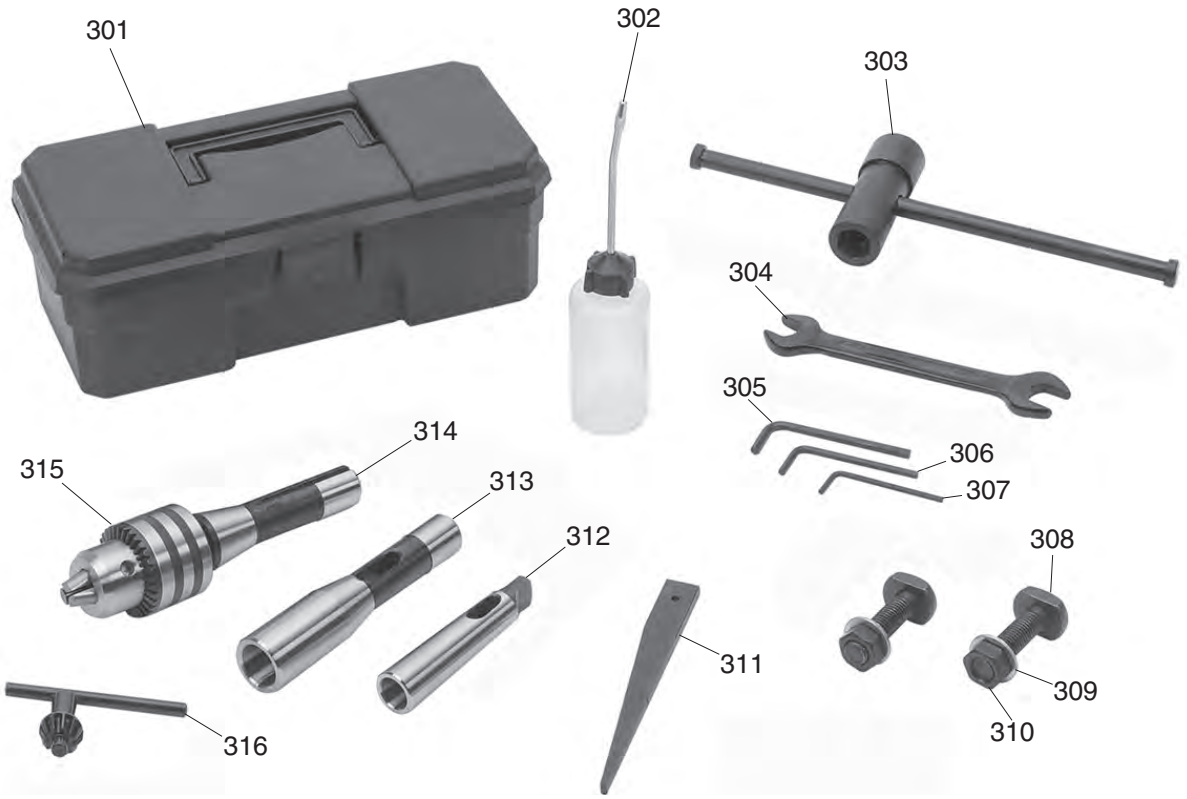
Base Parts

REF	PART #	DESCRIPTION
201	P0823201	BASE CASTING
202	P0823202	COLUMN
203	P0823203	TABLE BRACKET
204	P0823204	TABLE ELEVATION CASTING
205	P0823205	WORK TABLE
206	P0823206	COLUMN STOP COLLAR
207	P0823207	COLUMN CAP
208	P0823208	UPPER LOCKED GUIDE RING
209	P0823209	HEADSTOCK RACK
210	P0823210	TABLE RACK
211	P0823211	FIXED GUIDE RING
212	P0823212	SET SCREW M10-1.5 X 8
213	P0823213	CAP SCREW M10-1.5 X 40
214	P0823214	FLAT WASHER 16MM
215	P0823215	LOCK WASHER 16MM
216	P0823216	CAP SCREW M16-2 X 50
217	P0823217	FLAT WASHER 12MM
218	P0823218	HANDLE SHAFT M12-1.75 X 135

REF	PART #	DESCRIPTION
219	P0823219	HANDLE 130L M10-1.5 X 10
220	P0823220	T-BOLT M12-1.75 X 45
221	P0823221	FLAT WASHER 12MM
222	P0823222	HEX NUT M12-1.75
224	P0823224	HANDLE SHAFT M12-1.75 X 95
225	P0823225	HANDLE 70L M10-1.5 X 6
226	P0823226	SET SCREW M10-1.5 X 10
240	P0823240	TABLE ELEVATION BRACKET
241	P0823241	TABLE ELEVATION WORM SHAFT
242	P0823242	SPACER
243	P0823243	EXT RETAINING RING 14MM
244	P0823244	HELICAL GEAR 15T
245	P0823245	WORM GEAR SHAFT
246	P0823246	TABLE ELEVATION CRANK
247	P0823247	SET SCREW M8-1.25 X 12
248	P0823248	CAP SCREW M6-1 X 20
249	P0823249	REVOLVING HANDLE 75L, 12 X 22
250	P0823250	SHOULDER SCR M10-1.5 X 12, 12 X 68

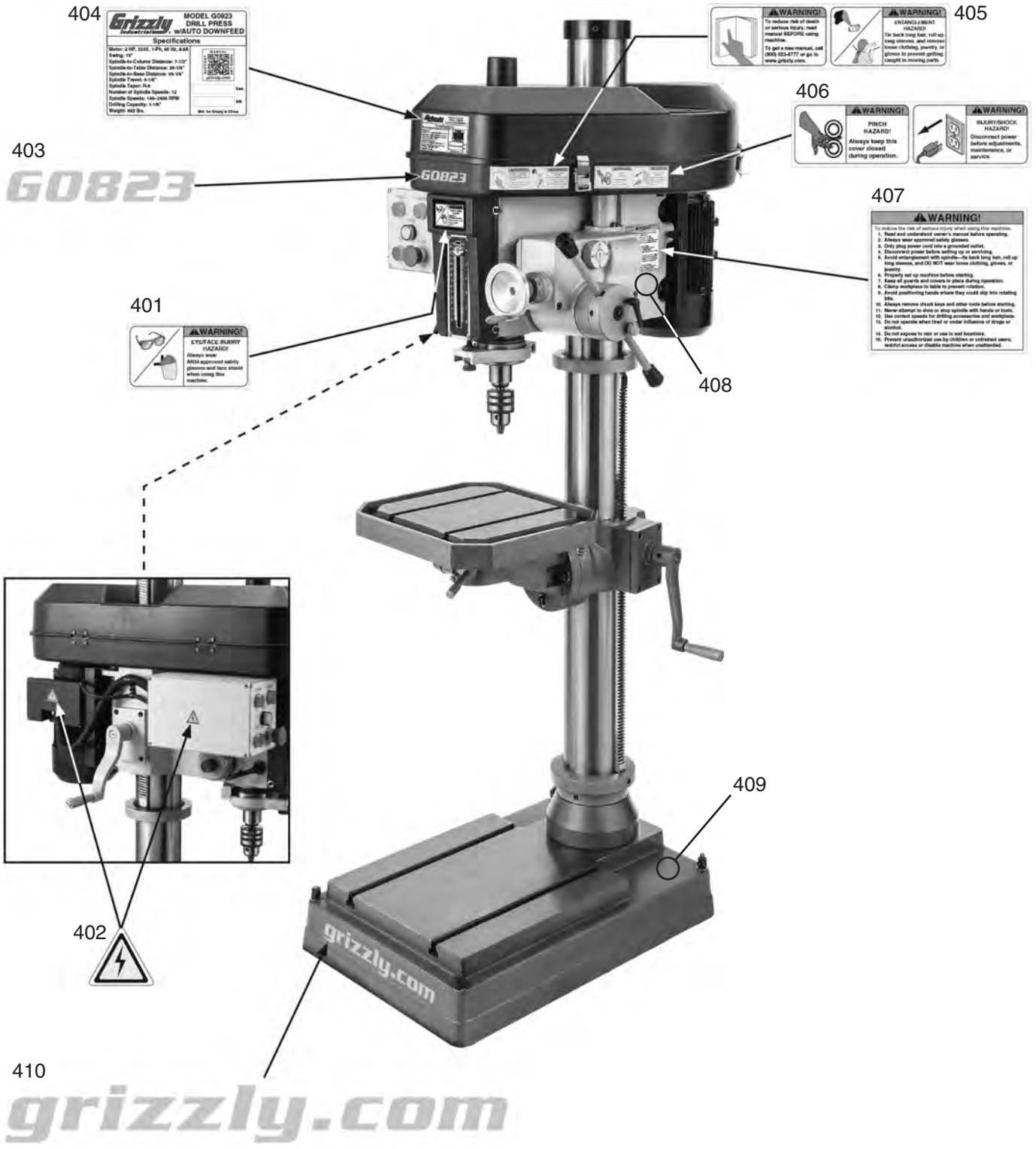
Accessories



REF	PART #	DESCRIPTION
301	P0823301	TOOLBOX (PLASTIC)
302	P0823302	BOTTLE FOR OIL
303	P0823303	LUG WRENCH 20/25MM
304	P0823304	WRENCH 17 X 19MM OPEN-ENDS
305	P0823305	HEX WRENCH 5MM
306	P0823306	HEX WRENCH 4MM
307	P0823307	HEX WRENCH 3MM
308	P0823308	T-BOLT M14-2 X 55

REF	PART #	DESCRIPTION
309	P0823309	FLAT WASHER 14MM
310	P0823310	HEX NUT M14-2
311	P0823311	DRIFT KEY
312	P0823312	SPINDLE SLEEVE MT#3 X MT#2
313	P0823313	SPINDLE SLEEVE R8 X MT#3
314	P0823314	DRILL CHUCK ARBOR R8 X B16
315	P0823315	DRILL CHUCK B16 1-13MM
316	P0823316	DRILL CHUCK KEY 8MM STD 11 SD-16MM

Labels & Cosmetics



REF	PART #	DESCRIPTION
401	P0823401	FACE SHIELD & SAFETY GLASSES LABEL
402	P0823402	ELECTRICITY LABEL
403	P0823403	MODEL NUMBER LABEL
404	P0823404	MACHINE ID LABEL
405	P0823405	MANUAL COMBINED SAFETY LABEL

REF	PART #	DESCRIPTION
406	P0823406	PINCH COMBINED SAFETY LABEL
407	P0823407	MAIN WARNINGS LABEL
408	P0823408	TOUCH-UP PAINT, GRIZZLY PUTTY
409	P0823409	TOUCH-UP PAINT, GRIZZLY GREEN
410	P0823410	GRIZZLY.COM LABEL

Grizzly Industrial, Inc. WARRANTY CARD

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Street _____

City _____ State _____ Zip _____

Phone # _____ Email _____

Model # _____ Order # _____ Serial # _____

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. ***Of course, all information is strictly confidential.***

1. How did you learn about us?

____ Advertisement ____ Friend ____ Catalog
____ Card Deck ____ Website ____ Other:

2. Which of the following magazines do you subscribe to?

____ Cabinetmaker & FDM
____ Family Handyman
____ Hand Loader
____ Handy
____ Home Shop Machinist
____ Journal of Light Cont.
____ Live Steam
____ Model Airplane News
____ Old House Journal
____ Popular Mechanics
____ Popular Science
____ Popular Woodworking
____ Precision Shooter
____ Projects in Metal
____ RC Modeler
____ Rifle
____ Shop Notes
____ Shotgun News
____ Today's Homeowner
____ Wood
____ Wooden Boat
____ Woodshop News
____ Woodsmith
____ Woodwork
____ Woodworker West
____ Woodworker's Journal
____ Other:

3. What is your annual household income?

____ $20,000-$29,000 ____ $30,000-$39,000 ____ $40,000-$49,000
____ $50,000-$59,000 ____ $60,000-$69,000 ____ $70,000+

4. What is your age group?

____ 20-29 ____ 30-39 ____ 40-49
____ 50-59 ____ 60-69 ____ 70+

5. How long have you been a woodworker/metalworker?

____ 0-2 Years ____ 2-8 Years ____ 8-20 Years ____ 20+ Years

6. How many of your machines or tools are Grizzly?

____ 0-2 ____ 3-5 ____ 6-9 ____ 10+

7. Do you think your machine represents a good value? _____Yes _____No

8. Would you recommend Grizzly Industrial to a friend? _____Yes _____No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?
Note: *We never use names more than 3 times.* _____Yes _____No

10. Comments: _____

_____

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Stamp
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GRIZZLY INDUSTRIAL, INC.
P.O. BOX 2069
BELLINGHAM, WA 98227-2069

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WARRANTY & RETURNS

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.

To take advantage of 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.

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

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

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