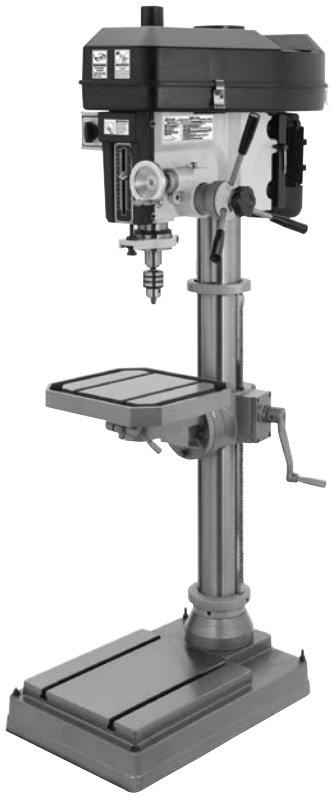
MODEL G0784
15" HEAVY-DUTY
FLOOR DRILL PRESS
OWNER'S MANUAL
(For models manufactured since 03/15)



#WKBLMN17372 PRINTED IN CHINA
V1.04.15

⚠ 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

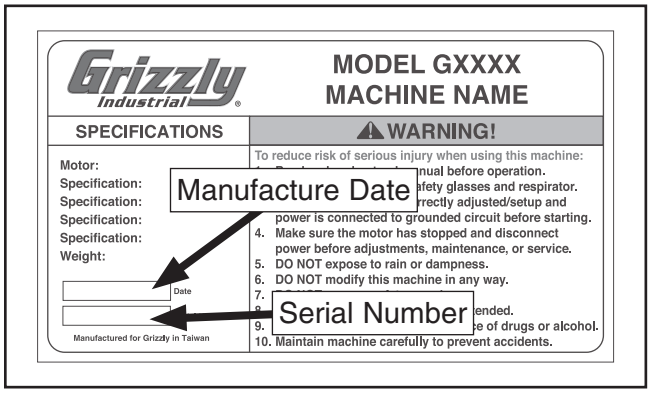
Manual Accuracy

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**.

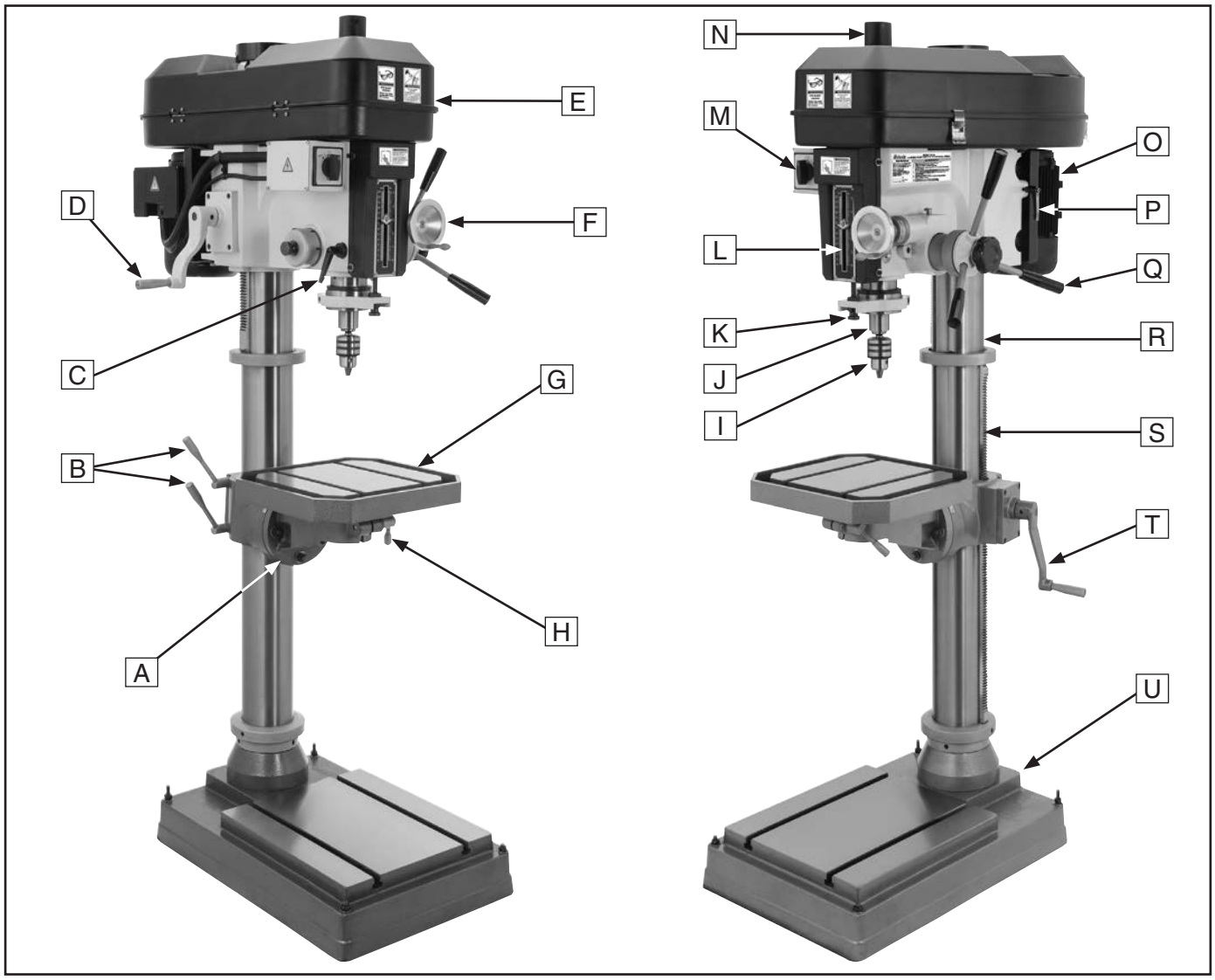
If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.grizzly.com**.

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.



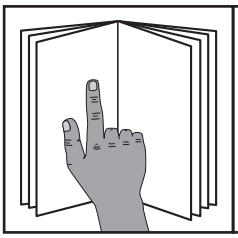
Identification

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. Spindle Direction Switch
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 1–3** and the following descriptions to become familiar with the basic controls of this machine.

Headstock

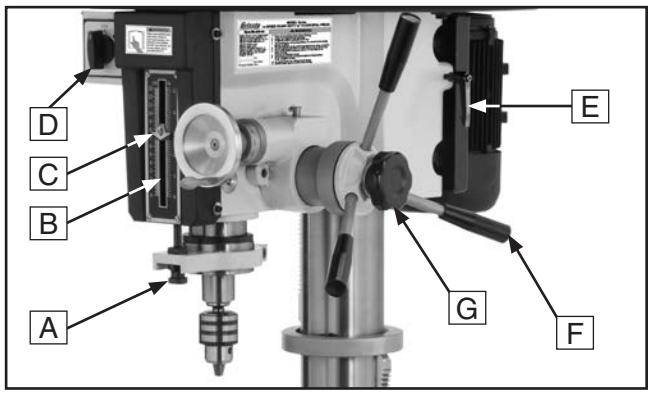


Figure 1. Headstock controls (right).

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

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

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

D. Spindle Direction Switch: Turns spindle ***ON*** and ***OFF***, and controls direction of spindle rotation.

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

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

G. Downfeed Selector Knob: Engages/disengages fine downfeed handwheel.

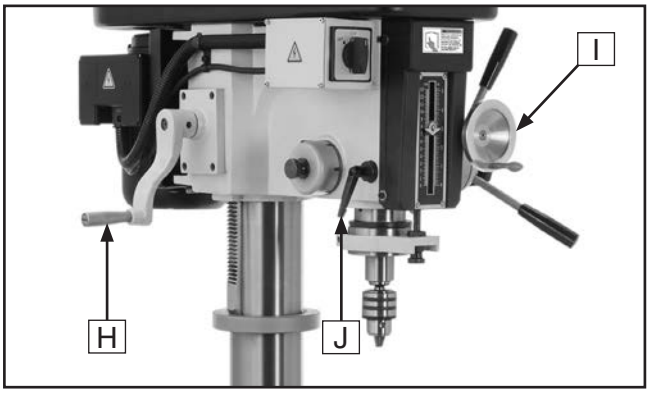


Figure 2. Headstock controls (left).

H. Headstock Elevation Crank: Changes elevation of entire headstock along column.

I. Fine Downfeed Handwheel: When rotated, provides fine vertical control in either direction of spindle travel.

J. Quill Lock: Locks quill in position.

Table

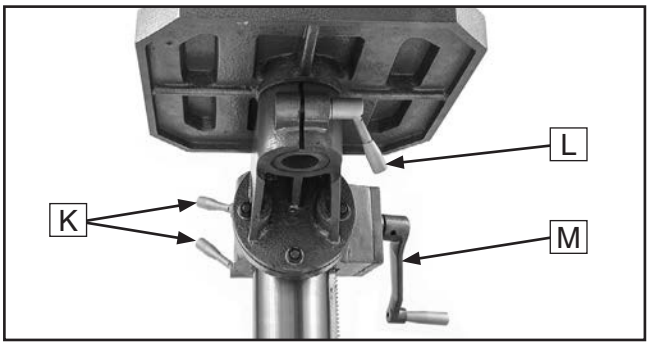


Figure 3. Table controls (from below).

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

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

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

MACHINE DATA SHEET

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

MODEL G0784 15" HEAVY-DUTY FLOOR DRILL PRESS

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 Capicitor-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	10-13/16 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 on Head
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 taper

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

EYE/FACE/HAND PROTECTION. A face shield used with safety glasses is recommended. Always keep hands and fingers away from the drill bit. Never hold a workpiece by hand while drilling! DO NOT wear gloves when operating the drill.

SECURING BIT. Properly tighten and securely lock the drill bit in the chuck.

CORRECT BIT. Use only round, hex, or triangular shank drill bits.

ADJUSTING KEYS AND WRENCHES. Remove all adjusting keys and wrenches before turning the machine ***ON***.

DRILLING SHEET METAL. Never drill sheet metal unless it is securely clamped to the table.

SURFACE/WORKPIECE PREP. Never turn the drill press ***ON*** before clearing the table of all objects (tools, scrap wood, etc.) DO NOT drill material that does not have a flat surface, unless a suitable support is used.

DAMAGED TOOLS. Never use drill bits in poor condition. Dull or damaged drill bits are hard to control and may cause serious injury.

DRILL OPERATION. Never start the drill press with the drill bit pressed against the workpiece. Feed the drill bit evenly into the workpiece. Back the bit out frequently to clear deep holes.

CLEARING CHIPS. Turn the machine ***OFF*** and clear chips and scrap pieces with a brush. Disconnect power, remove drill bit, and clean table before leaving the machine.

OPERATING SPEED. Always operate your drill press at speeds that are appropriate for the drill bit size and the material that you are drilling.

MOUNTING WORKPIECES. Use clamps or vises to secure workpiece before drilling. Position work so you avoid drilling into the table.

TABLE LOCK. Make sure the table lock is tightened before starting the drill press.

MAINTENANCE/SPEED CHANGES. Never change speeds or do maintenance with the machine connected to power.

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

⚠WARNING

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

⚠CAUTION

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

SECTION 2: 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 ..... 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 Requirements for 220V

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 1-Phase
Power Supply Circuit ..... 15 Amps
Plug/Receptacle ..... NEMA 6-15

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

⚠CAUTION

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

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

Grounding Instructions

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.

The power cord and plug specified under "Circuit Requirements for 220V" on the previous page has an equipment-grounding wire and a grounding prong. The plug must only be inserted into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances (see figure below).

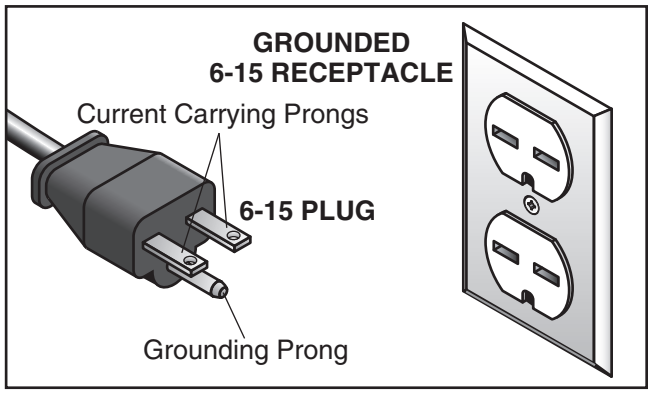
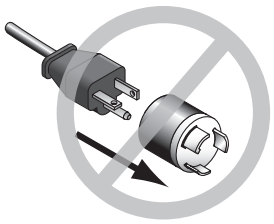


Figure 4. Typical 6-15 plug and receptacle.

⚠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.

⚠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 13**)	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 5)		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

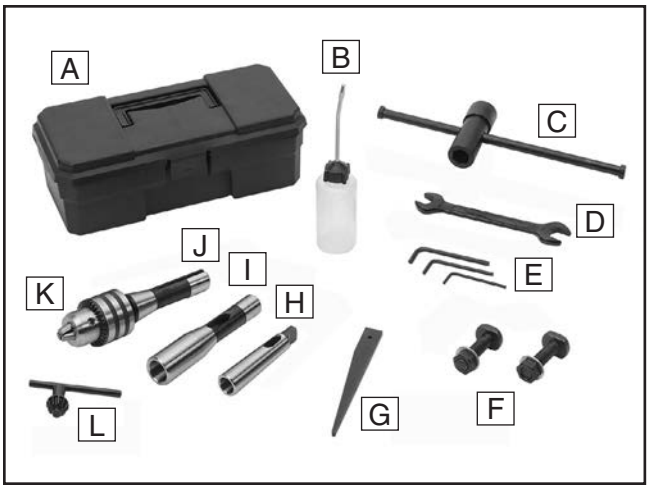


Figure 5. Toolbox inventory.

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 6. T23692 Orange Power Degreaser.

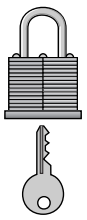
Site Considerations

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.

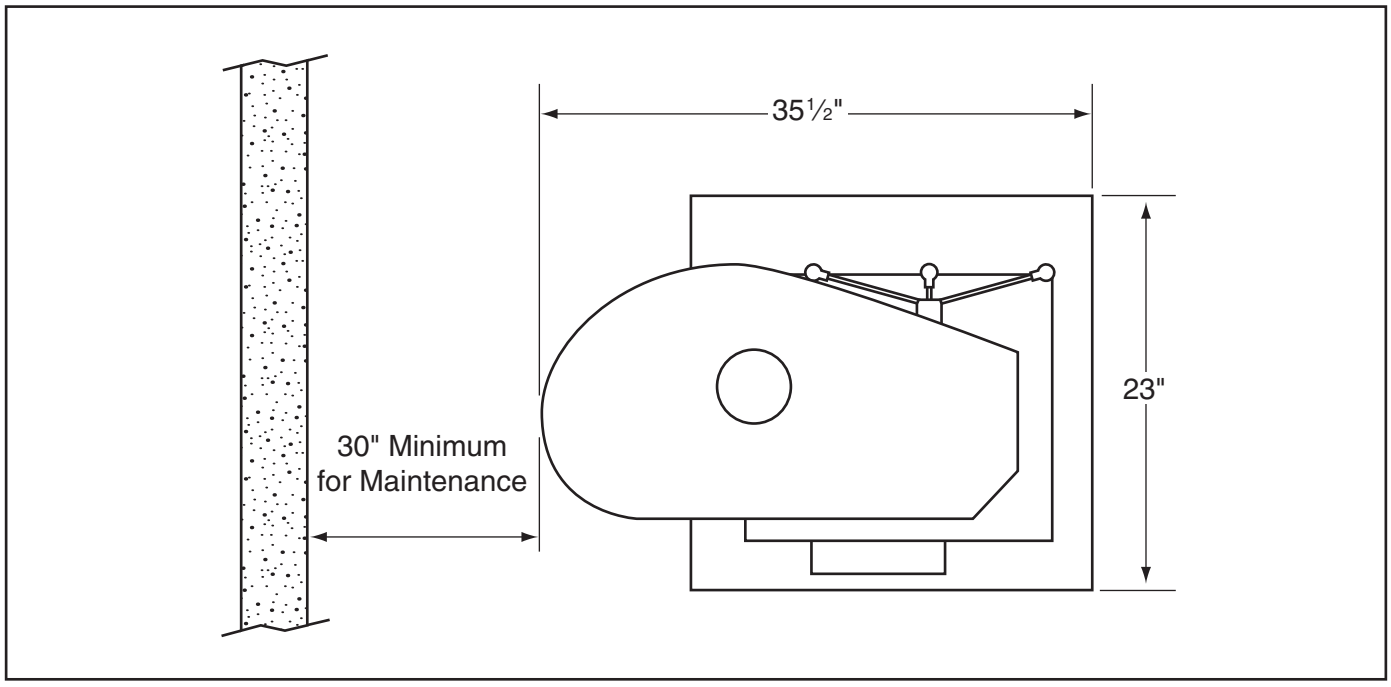
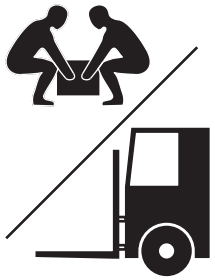


Figure 7. Minimum working clearances.

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 8**), 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.*

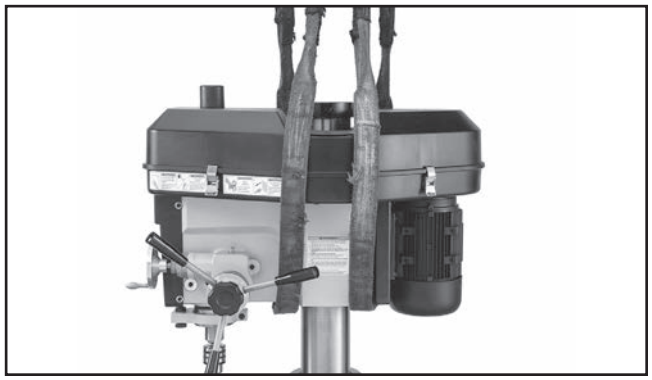


Figure 8. Lifting slings properly wrapped around headstock and positioned to avoid damage to belt cover while lifting.

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 it 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.

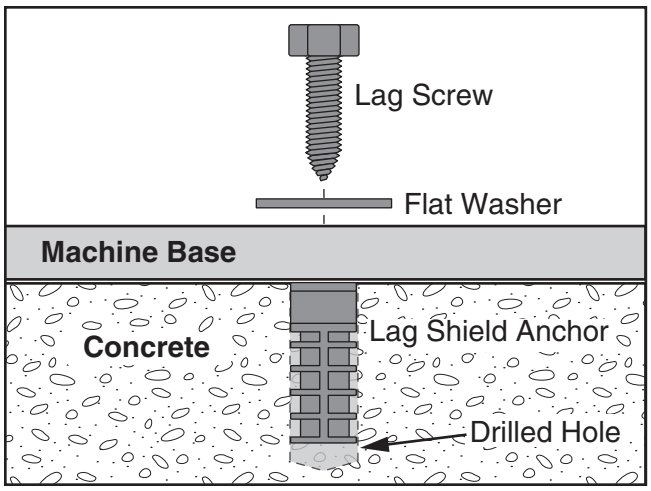


Figure 9. Popular method for anchoring machinery to a concrete floor.

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.

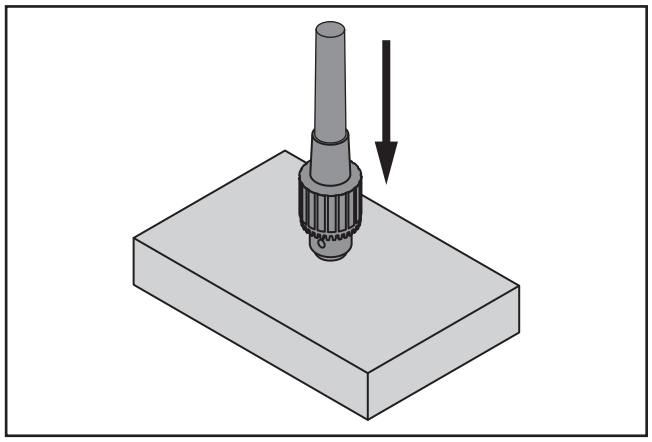
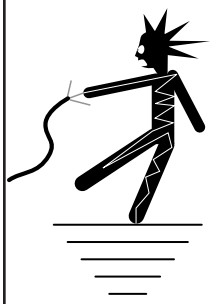


Figure 10. Joining drill chuck and arbor.

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

Power Connection



⚠WARNING

Electrocution or fire may occur if machine is ungrounded, incorrectly connected to power, or connected to an undersized circuit. Use an electrician or a qualified service personnel to ensure a safe power connection.

Before the machine can be connected to the power supply, there must be an electrical circuit that meets the **Circuit Requirements** on **Page 10**, and the correct plug must be installed according to the instructions and wiring diagrams provided by the plug manufacturer.

If the plug manufacturer did not include instructions, the wiring of a generic NEMA 6-15 plug is illustrated in the **Wiring** section on **Page 35**.

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.

Note About Extension Cords: *Using an incorrectly sized extension cord may decrease the life of electrical components on your machine. Refer to* ***Extension Cords*** *on* ***Page 11*** *for more information.*

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.

To test run machine:

1. Clear all setup tools away from machine.
2. Connect machine to power supply.
3. Rotate spindle switch to RIGHT position to turn spindle ***ON***. The motor should run smoothly and without unusual problems or noises.
4. Rotate spindle switch to STOP position to turn spindle ***OFF***. Allow spindle to come to a complete stop.
5. Turn spindle switch to LEFT position to turn spindle ***ON***. The motor should run smoothly and without unusual problems or noises.
6. Rotate spindle switch to STOP position to turn spindle ***OFF***. Allow spindle to come to a complete stop.

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 29**.

2. Make sure spindle area is free of obstructions.

3. Set spindle speed to the lowest RPM. Refer to **Speed Changes** on **Page 21**.

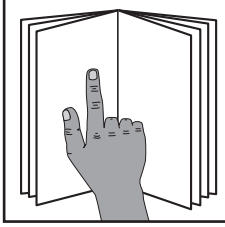
4. Run spindle for 5 minutes in each direction at each speed listed below (refer to **Speed Changes** on **Page 21**) and in progressive order.

   a. 140 RPM
   b. 413 RPM
   c. 819 RPM
   d. 1450 RPM
   e. 2436 RPM

5. Turn machine ***OFF***.

Congratulations! Spindle break-in is now complete.

SECTION 4: OPERATIONS

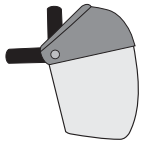


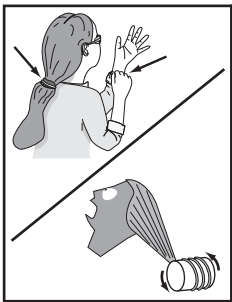
⚠WARNING

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 11** 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 11. Drill bit speed chart.

Changing Spindle Speed

The Model G0784 is capable of twelve different spindle speed RPMs. Spindle speed is controlled by the configuration of V-belts and pulleys 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 12**, pull motor inward to relieve tension on V-belts, then re-tighten lock lever.

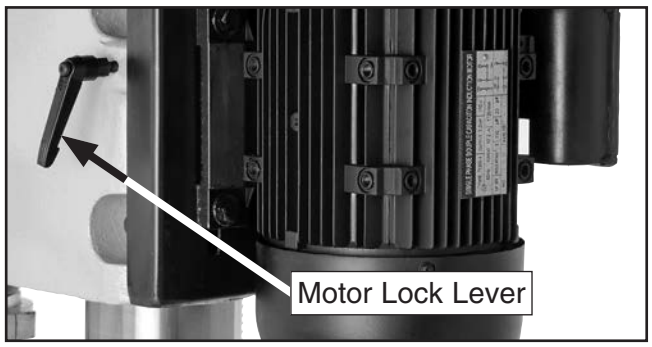


Figure 12. Location of motor lock lever, used when changing V-belt positions to select desired spindle speed.

3. Open belt cover, then loosen two idler cap screws (see **Figure 13**) that hold idler pulley in place, so it can move freely.

   Tip: *Lower headstock for easy access (see **Headstock Position** on **Page 24**).*

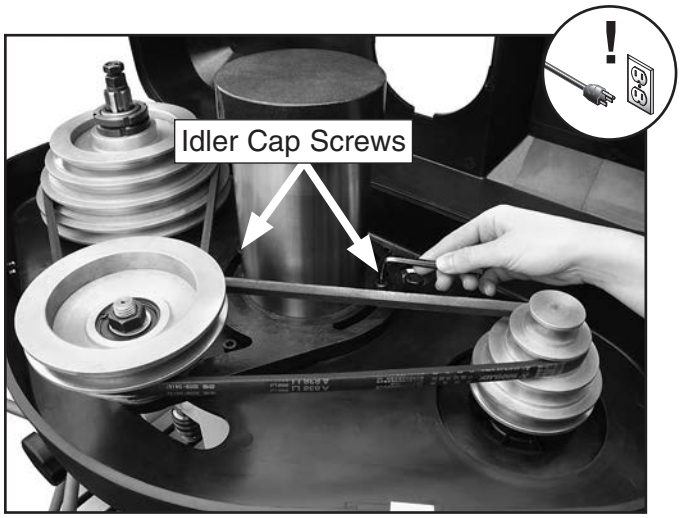


Figure 13. Spindle speed pulley system.

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	RPM	Position
140	4-5	819	1-6
219	3-5	1075	2-7
263	4-6	1238	3-8
317	2-5	1450	1-7
413	3-6	1770	2-8
475	4-7	2436	1-8

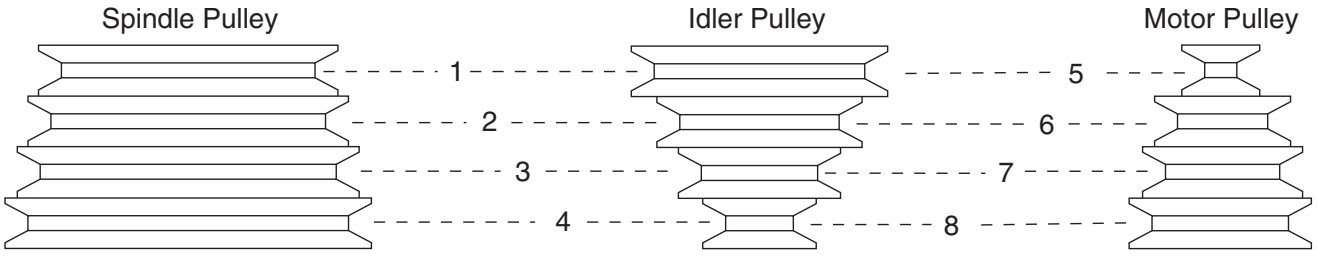


Figure 14. Spindle speed chart.

Using Spindle Downfeed Controls

This machine has coarse downfeed levers and a fine downfeed handwheel.

To operate the downfeed levers, simply pull forward and down on the lever nearest you. The spindle will go down as far as it can until you stop pulling or until it hits the depth stop, then it will automatically return to the top when you release pressure on the handle.

Note: *Do not let go of the handle until the spindle returns to the top position or the spindle will slam upward into the quill.*

Use the fine downfeed handwheel to control the spindle travel up or down in slow, small amounts. If necessary, you can lock the quill/spindle in a lower position with the quill lock lever (see **Figure 15**).

To operate fine downfeed handwheel:

1. Tighten dowfeed selector knob, shown in **Figure 15**. This transfers control from downfeed levers to fine downfeed handwheel.

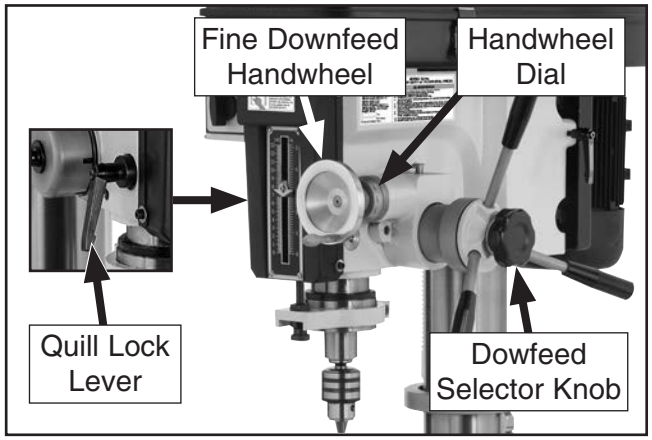


Figure 15. Fine downfeed controls.

2. Loosen thumb screw on rim surface of handwheel dial, turn dial until "0" lines up with index line, then retighten thumb screw.

3. Rotate handwheel to move quill/spindle up or down. Each complete revolution equals 0.108".

Installing/Removing Tooling

The Model G0784 includes the following spindle tools (see **Figure 16**):

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.

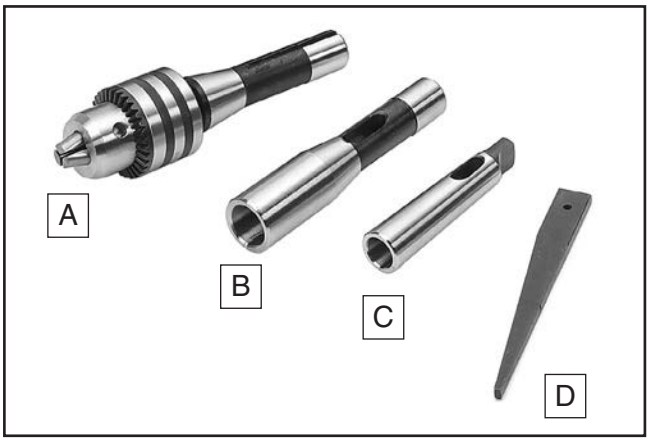


Figure 16. Drill chuck and arbors included with Model G0784.

⚠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. Insert tooling arbor/collet into spindle housing, then rotate arbor/collet to align keyway with matching pin in spindle opening.

5. Using lug wrench included with machine, rotate top of drawbar clockwise (see **Figure 17**) until drawbar threads mesh with female threads arbor/collet.

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

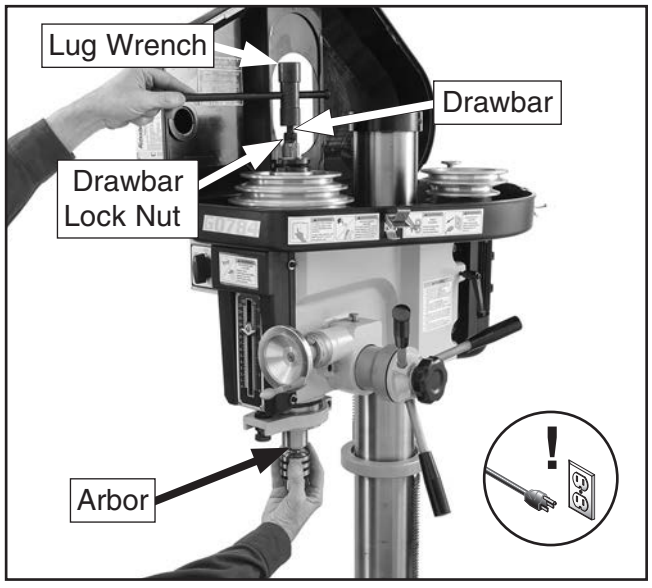


Figure 17. Threading drawbar into collet/arbor to install tooling.

   Note: *If using a collet, insert tooling into collet before tightening drawbar. Be sure to protect your hands from sharp tooling with leather gloves or a shop rag.*

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 17**) 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 18**.

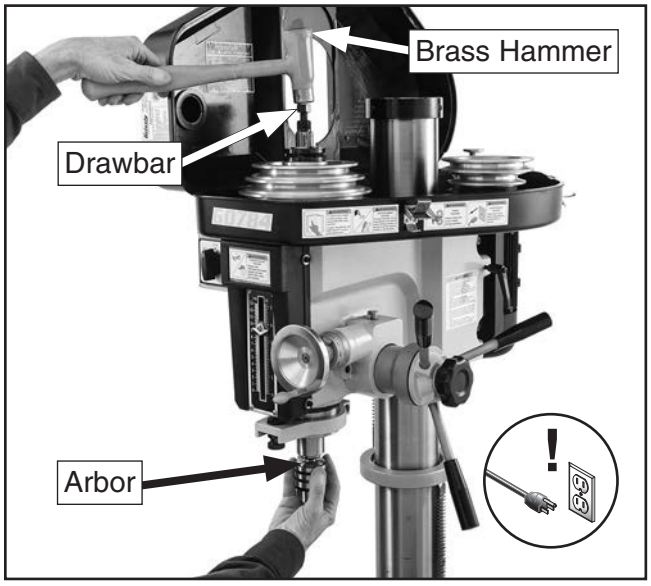


Figure 18. Tapping top of drawbar with drawbar nut already loosened to remove tooling.

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

Adjusting Headstock Position

The headstock height and rotation can be adjusted as needed for various applications. For the best results, 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. Using included lug wrench, loosen both headstock lock nuts shown in **Figure 19**.

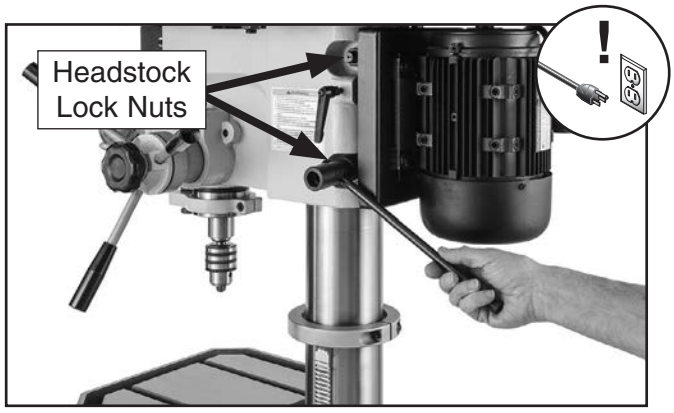


Figure 19. Loosening headstock lock nuts in order to adjust headstock position.

3. Use headstock elevation crank (see **Figure 20**) to move head up or down as desired. Use your hands to rotate headstock on column as needed.

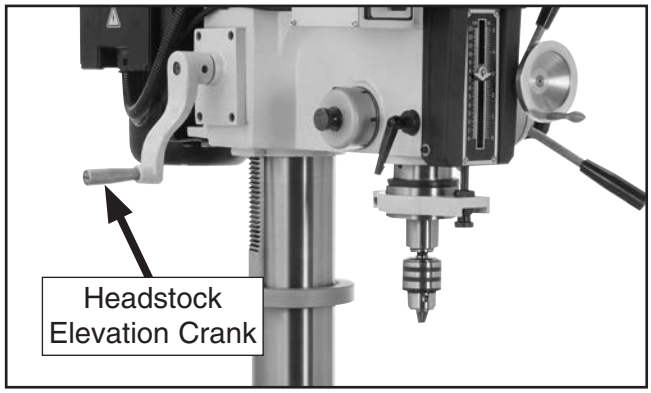


Figure 20. Location of headstock elevation crank.

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 23**), then make sure spindle is drawn all the way up into headstock.

3. Loosen headstock lock nuts (see **Figure 19**) and lower head until drill bit or cutter is approximately ⅛" above workpiece, then retighten headstock lock nuts.

4. Rotate knurled knob (**Figure 21**) 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 32****.*

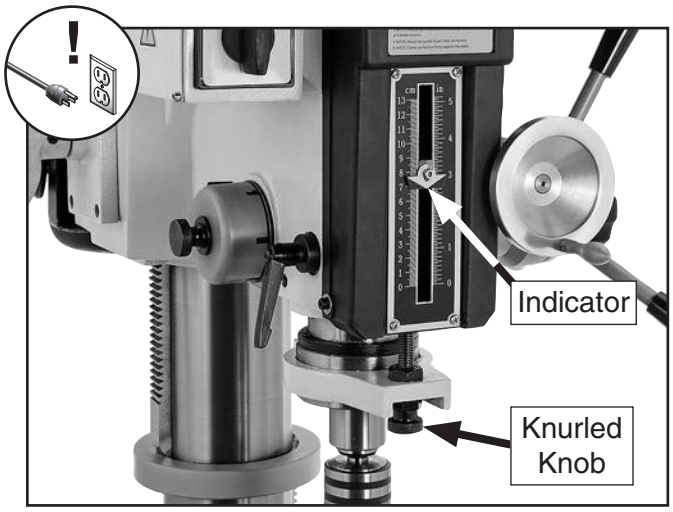


Figure 21. Depth stop controls.

Positioning Table

The table rotates on its axis, moves vertically, pivots 360 degrees around the column to accommodate larger workpieces, and tilts 60° left to right.

Rotating Table on its Axis

1. Remove any loose objects from table surface.

2. Loosen rotation lock handle shown in **Figure 22**.

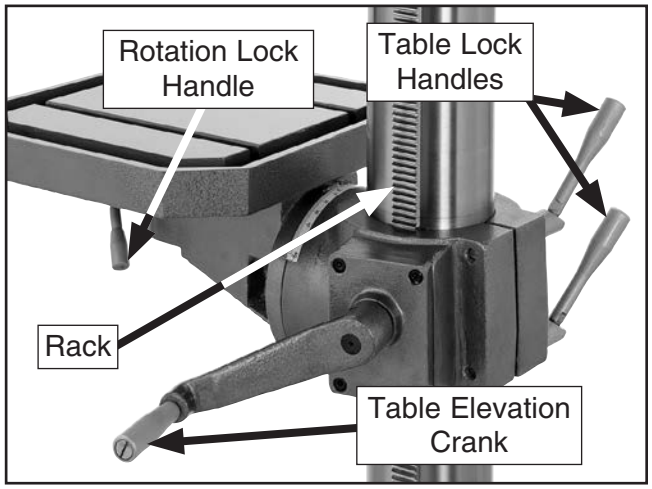


Figure 22. Table adjustment controls.

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

Raising/Lowering Table

1. Remove any loose objects from table surface.

2. Loosen table lock handles shown in **Figure 22**.

3. Adjust table height by rotating table elevation crank (see **Figure 22**), 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 22**).

3. Pivot table to desired location, making sure to guide rack shown in **Figure 22**.

4. Retighten lock handles.

Tilting Table

1. Remove all objects from table surface.

2. Loosen three tilt-lock nuts shown in **Figure 23**.

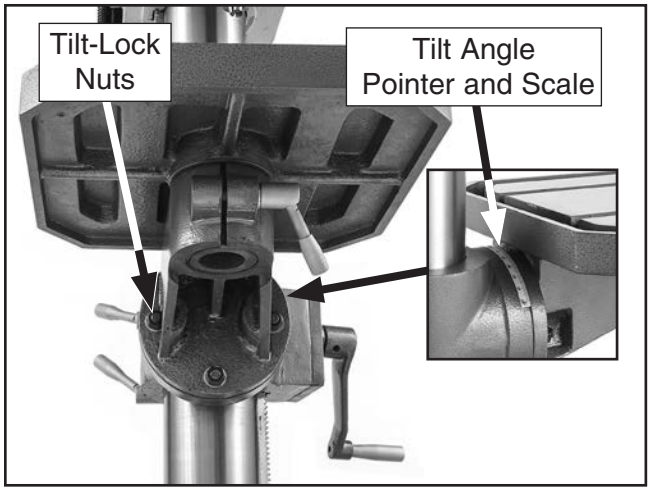


Figure 23. Table tilt controls.

3. Tilt table until pointer aligns with desired angle on scale (see **Figure 23**).

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.

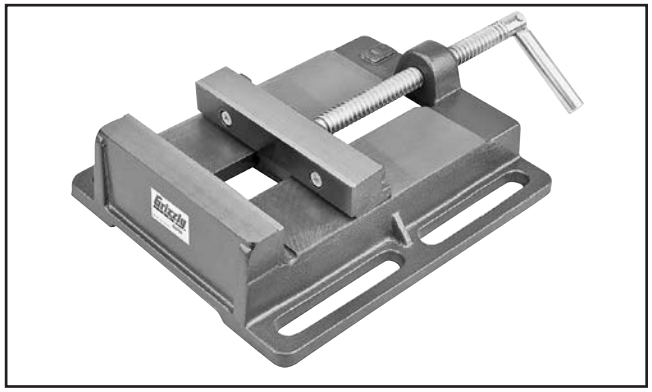


Figure 24. 6" Cast-iron drill press vise.

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.

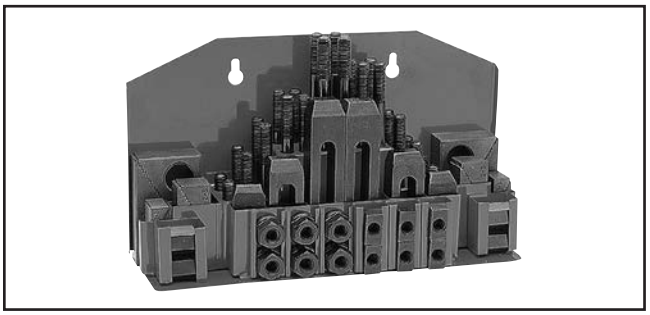


Figure 25. Clamping Kit.

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 26. 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 1/8" to 1/2" in increments of 1/64", letter bits from A–Z, and 60 number bits. Housed in rugged steel case.

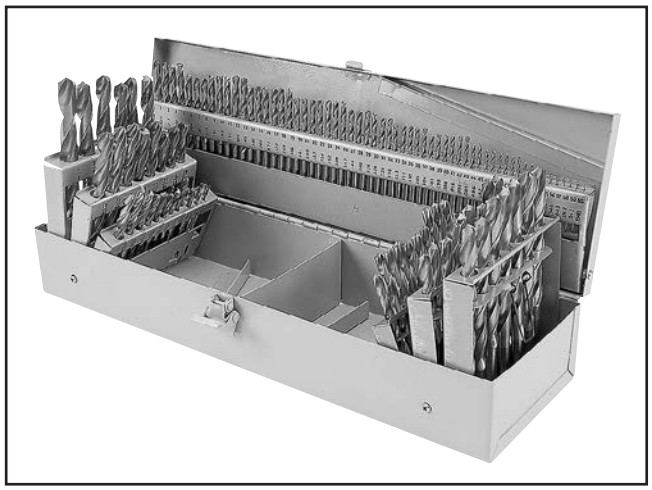


Figure 27. 115 piece drill bit set.

T26688—R-8 Quick Change Collet 8-Pc. Set
These collets are hardened and ground for maximum holding power and ultra precision. Threaded fro 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 28. 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.

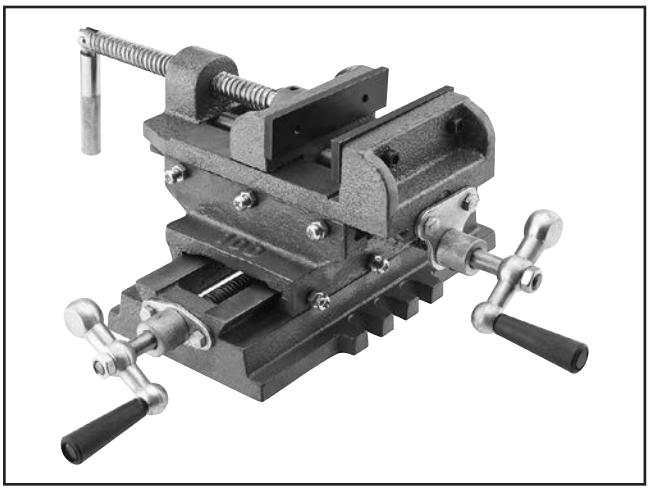


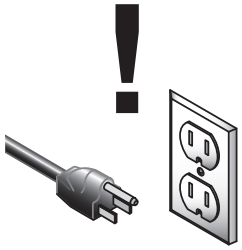
Figure 29. G1064 Cross-Sliding Vise.

T26685—Moly-D Multi Function Oil-ISO 32
T23964—Armor Plate with Moly-D Grease
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.

T26685 T26934

Figure 30. T26685 Moly-D Oil-ISO 32 and T23964 Armor Plate with 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 and column racks.

Cleaning and 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 mill. Never blow off the mill 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 mill 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 **Figure 31** and the Grizzly catalog or website).

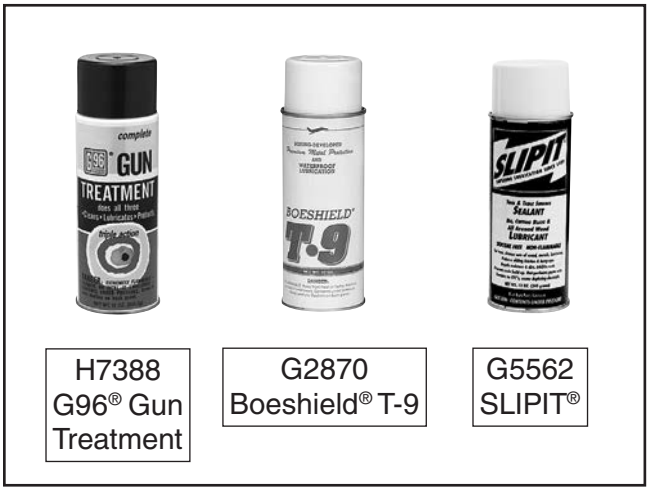


Figure 31. Products to clean and protect unpainted cast iron surfaces.

Lubrication

For the quill, table, and column, an occasional application of light machine oil is all that is necessary. For the quill and column racks, lubricate with NLGI #2 grease every 90 days. Before applying lubricant, clean off any dust or metal chips.

Your goal is to achieve adequate lubrication. Too much lubrication will attract dirt and dust, which could cause various parts of your machine to lose their freedom of movement.

Downfeed Gears

Oil Type .....Model T26685 or ISO 32 Equivalent
Oil Amount..... Fill Oil Cup
Lubrication Frequency.....8 Hrs. of Operation

Lift the oil cup cap (see **Figure 32**) to fill the cup with oil. The oil will slowly drain into the downfeed gears over time.

Figure 32. Location of oil cup.

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.

V-Belts

Inspect regularly for tension and wear. Refer to **Figure 33** 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 **Speed Changes** on **Page 21** to loosen the belts. Remove them from the pulleys, then install new V-belts.

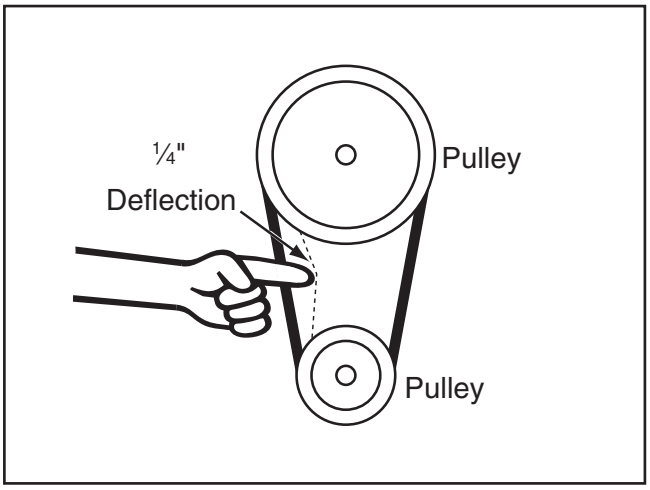
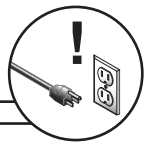


Figure 33. Belt tension.

SECTION 7: SERVICE

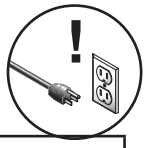
Review the troubleshooting and procedures in this section to fix or adjust your machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then feel free to call our Technical Support at (570) 546-9663.

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.

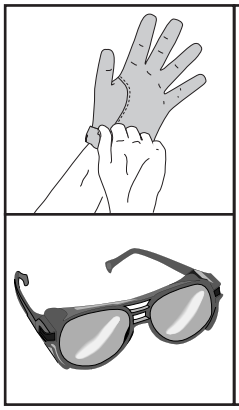


Drill Press Operations

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 23**. 2. Clean tool and spindle taper. 3. Lessen 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 25**). 2. Properly clamp workpiece on table or in vise. 3. Set spindle speed correctly (**Page 21**) or use slower feed rate. 4. Fully retract spindle and lower headstock. This increases rigidity to decrease vibration. 5. Tighten quill lock lever (**Page 22**).
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 21**). 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 32**). 2. Replace return spring.
Depth stop producing inaccurate results.	1. Depth stop not calibrated.	1. Calibrate depth stop (**Page 32**).

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.

To adjust spring tension:

1. DISCONNECT MACHINE FROM POWER!
2. PUT ON SAFETY GLASSES!
3. Loosen thumb knob shown in **Figure 34** 2–3 turns (DO NOT completely remove thumb knob).

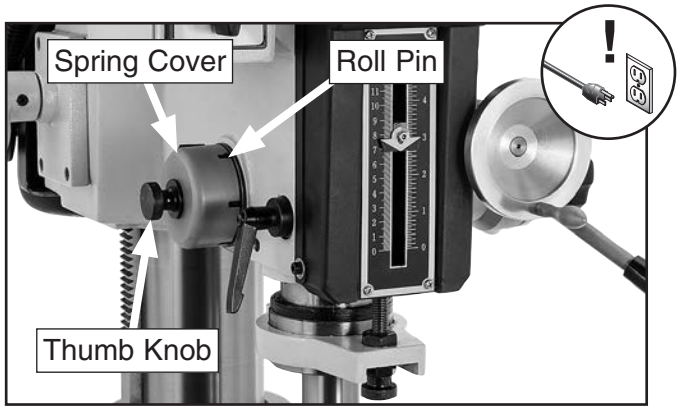


Figure 34. Spring tension components.

4. Wearing gloves, pull spring cover (**Figure 35**) 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 35**.

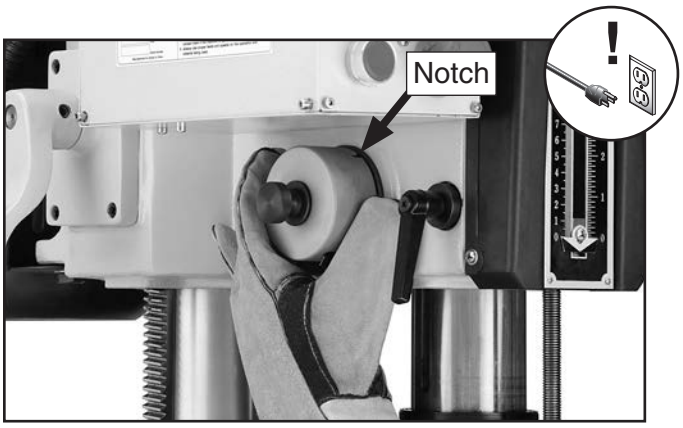


Figure 35. Adjusting spring tension by rotating spring cover to engage next notch with roll pin.

6. Tighten thumb knob.

Calibrating Depth Stop

The depth stop accuracy may be improved by calibrating the depth stop. Make sure the spindle is retracted all the way into the quill, then follow the steps below.

To calibrate depth stop:

1. Lower depth stop (see **Figure 36**) until indicator plate reaches bottom of its travel.
2. Using a 3mm hex wrench, loosen cap screw shown in **Figure 36**, and position plate so its upper edge aligns with zero, then re-tighten cap screw.

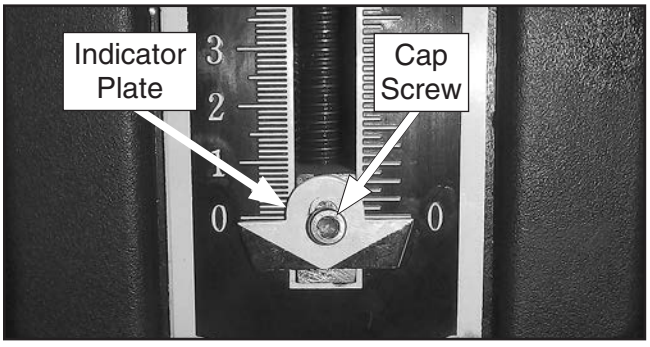


Figure 36. Calibrating depth stop.

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

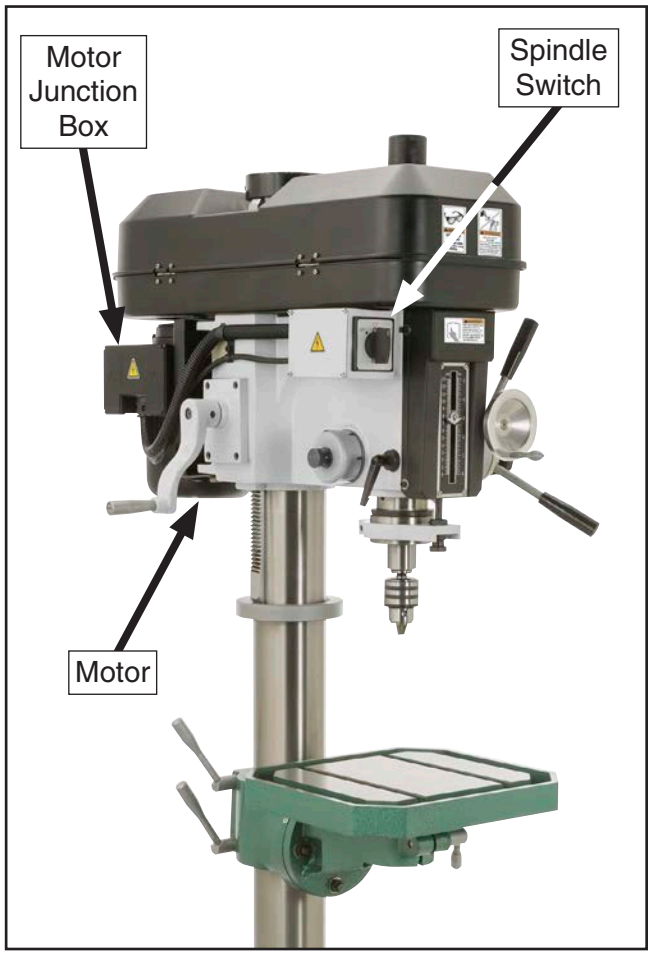


Figure 37. Electrical component wiring overview.

Figure 38. Switch box wiring (right side).

Figure 39. Switch box wiring (left side).

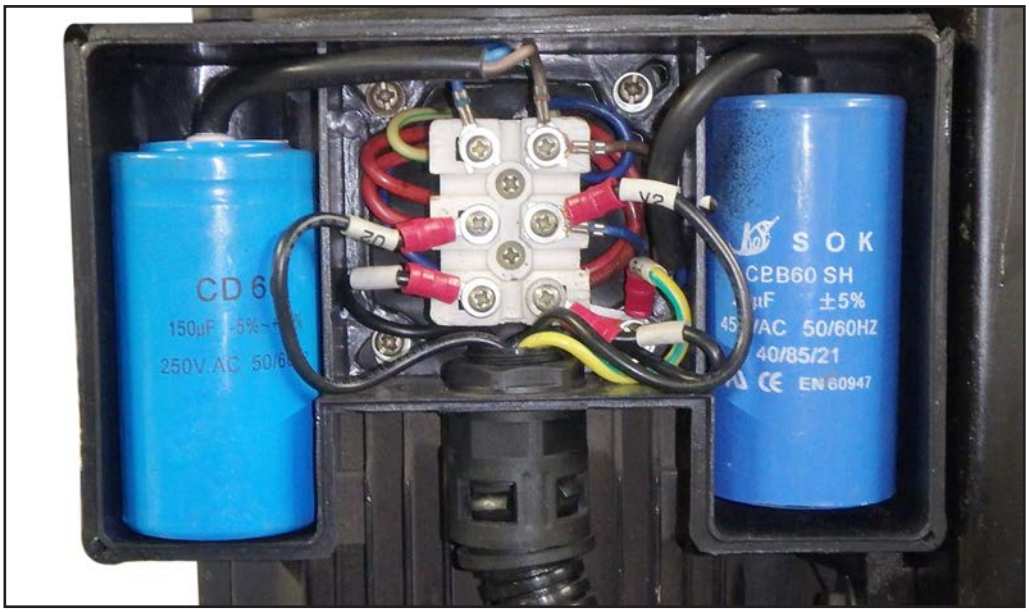
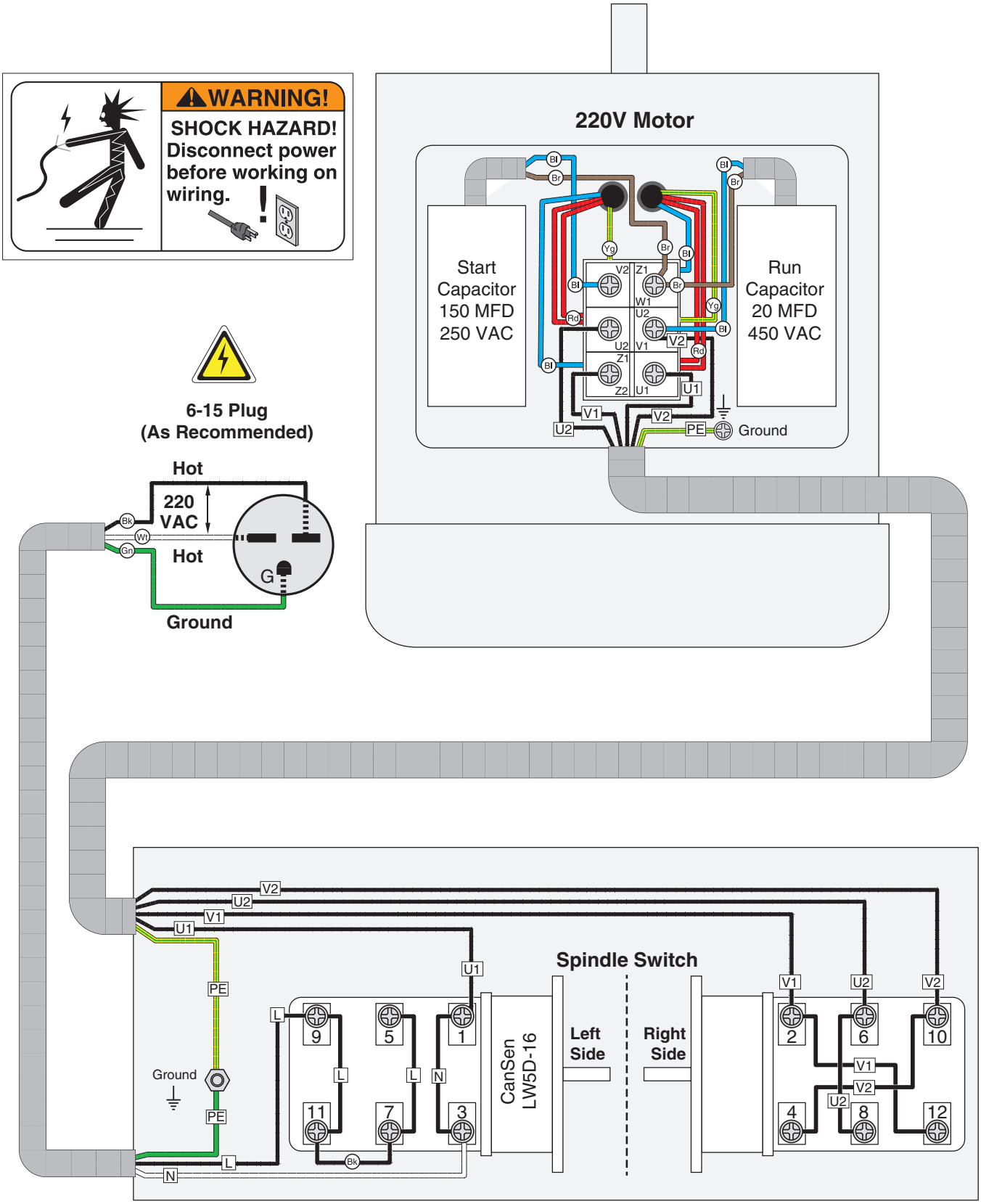


Figure 40. Motor junction box wiring.

STOP *READ ELECTRICAL SAFETY ON PAGE 33!*

Wiring Diagram



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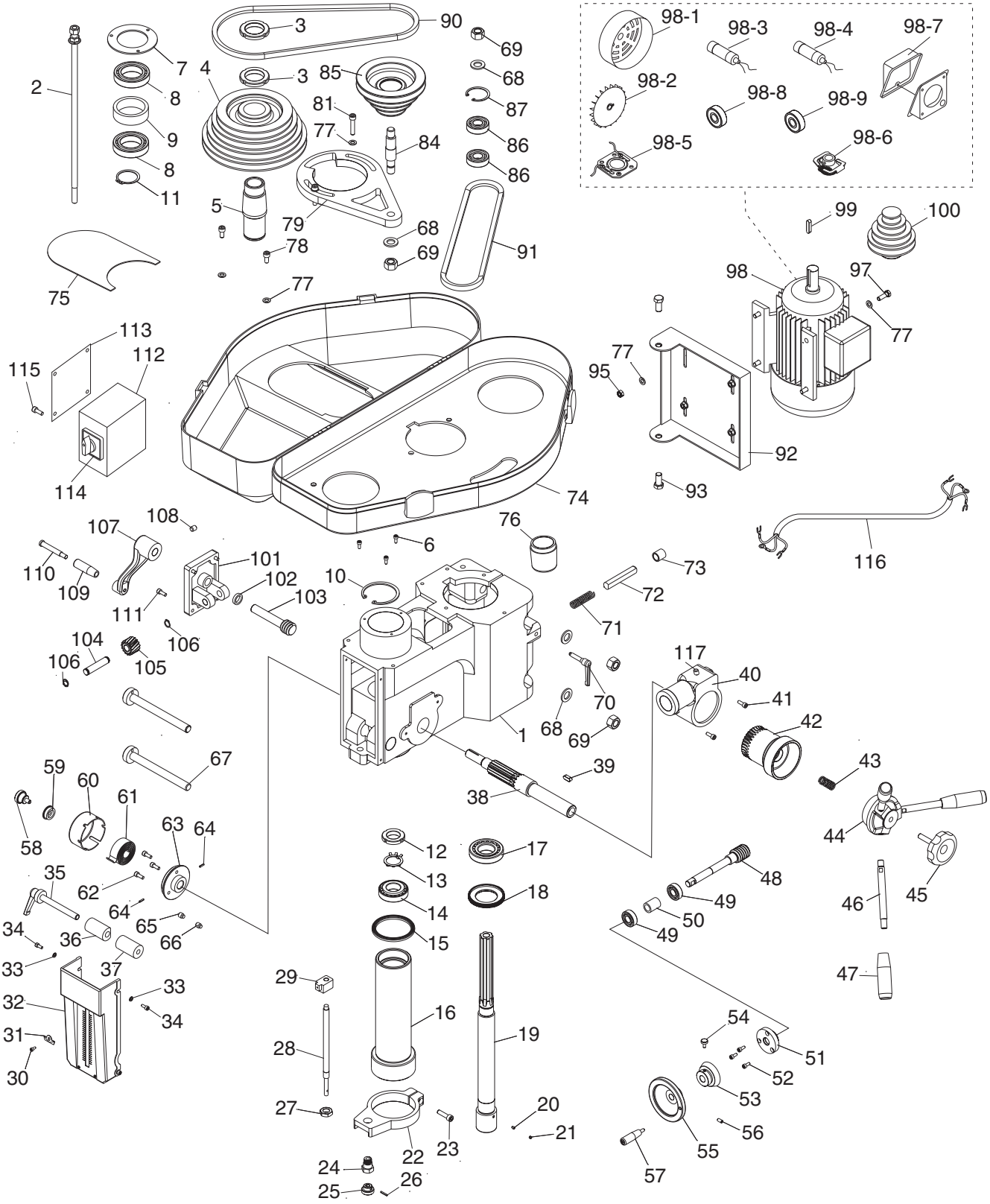
SECTION 9: PARTS

Main Breakdown



Main Parts List

REF	PART #	DESCRIPTION
1	P0784001	HEAD CASTING
2	P0784002	DRAWBAR 7/16-20 X 17-3/4
3	P0784003	SPANNER NUT M42-2.5
4	P0784004	SPINDLE PULLEY
5	P0784005	SPINDLE TAPER SLEEVE
6	P0784006	CAP SCREW M5-.8 X 12
7	P0784007	OUTER BEARING PLATE
8	P0784008	BALL BEARING 6009ZZ
9	P0784009	SPACER 74MM
10	P0784010	INT RETAINING RING 75MM
11	P0784011	EXT RETAINING RING 45MM
12	P0784012	SPANNER NUT M30-1.5
13	P0784013	EXT TOOTH WASHER 30MM
14	P0784014	TAPERED ROLLER BEARING 30206
15	P0784015	RUBBER FLANGE
16	P0784016	QUILL
17	P0784017	TAPERED ROLLER BEARING 30207
18	P0784018	BEARING COVER
19	P0784019	SPINDLE R-8
20	P0784020	SET SCREW M5-.8 X 6 DOG-PT
21	P0784021	SET SCREW M5-.8 X 6
22	P0784022	QUILL CLAMP
23	P0784023	CAP SCREW M8-1.25 X 30
24	P0784024	INT THREADED BOLT M16-2 X 20
25	P0784025	KNURLED THUMB SCREW M12-1.75 X 230
26	P0784026	ROLL PIN 3 X 18
27	P0784027	HEX NUT M16-2 THIN
28	P0784028	DEPTH GAUGE LEADSCREW
29	P0784029	DEPTH ROD DOG
30	P0784030	CAP SCREW M4-.7 X 8
31	P0784031	DEPTH POINTER
32	P0784032	FRONT COVER
33	P0784033	FLAT WASHER 5MM
34	P0784034	CAP SCREW M5-.8 X 12
35	P0784035	QUILL LOCK HANDLE
36	P0784036	OUTER QUILL CLAMP
37	P0784037	INNER QUILL CLAMP
38	P0784038	PINION SHAFT
39	P0784039	KEY 8 X 8 X 20
40	P0784040	QUILL WORM GEAR CASE
41	P0784041	CAP SCREW M6-1 X 20
42	P0784042	QUILL WORM GEAR
43	P0784043	COMPRESSION SPRING
44	P0784044	LEVER BASE
45	P0784045	KNOB BOLT M10-1.5 X 45
46	P0784046	LEVER M12-1.75 X 145
47	P0784047	TAPERED KNOB M12-1.75
48	P0784048	QUILL WORM SHAFT
49	P0784049	BALL BEARING 6202ZZ
50	P0784050	SPACER 29MM

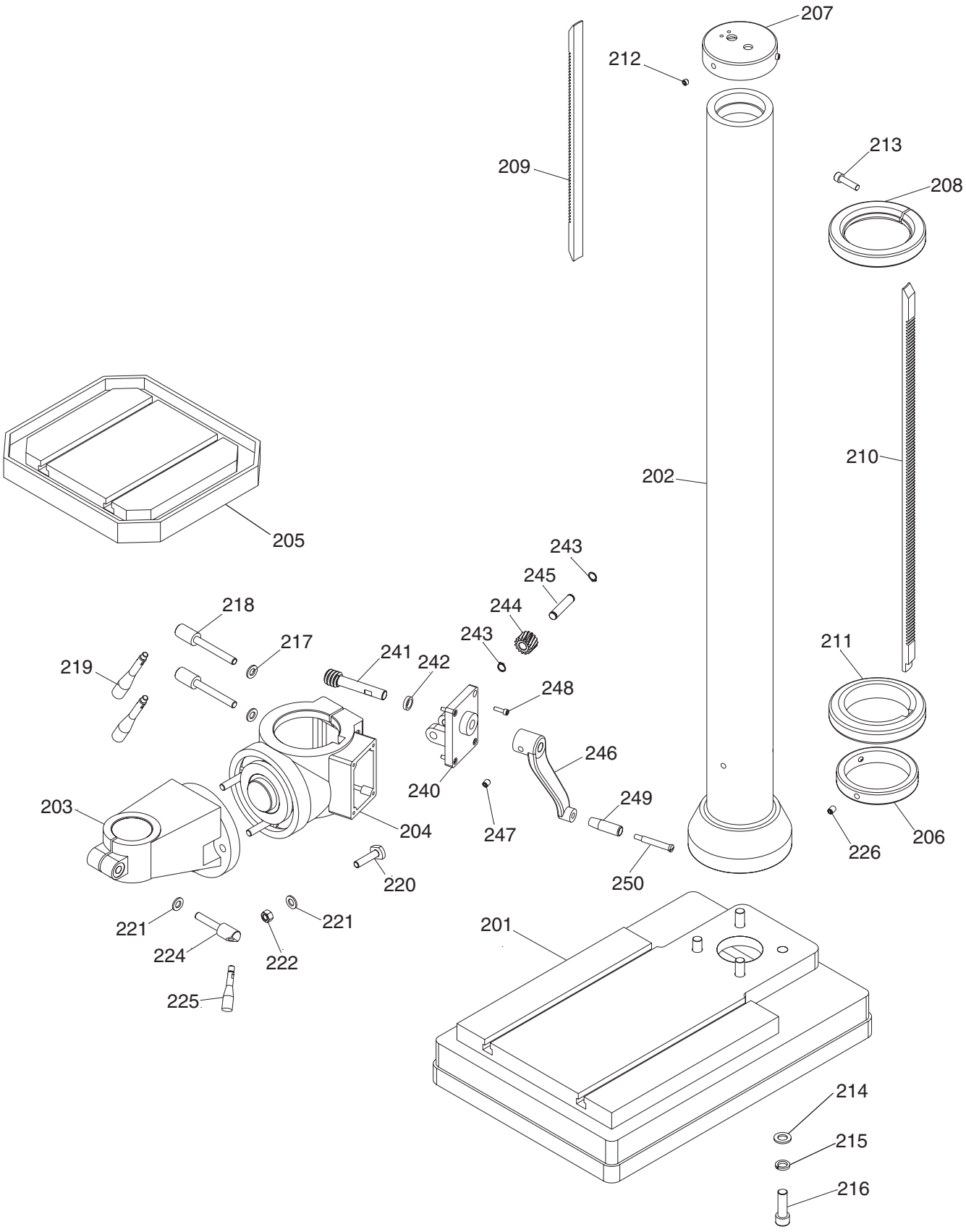
REF	PART #	DESCRIPTION
51	P0784051	QUILL WORM SHAFT COVER
52	P0784052	CAP SCREW M5-.8 X16
53	P0784053	FINE DOWNFEED INDEX
54	P0784054	KNURLED THUMB SCREW M5-.8 X 12
55	P0784055	HANDWHEEL DISHED 100MM
56	P0784056	SET SCREW M6-1 X 12
57	P0784057	HANDWHEEL HANDLE M6-1 X 6, 52 L
58	P0784058	KNOB BOLT M8-1.25 X 12
59	P0784059	BUSHING
60	P0784060	SPRING COVER
61	P0784061	FLAT COIL SPRING
62	P0784062	CAP SCREW M6-1 X 12
63	P0784063	SPRING BASE
64	P0784064	ROLL PIN 3 X 12
65	P0784065	CAP SCREW M10-1.5 X 12
66	P0784066	SET SCREW M10-1.5 X 12
67	P0784067	CLAMPING BOLT M16-2 X 178
68	P0784068	FLAT WASHER 16MM
69	P0784069	HEX NUT M16-2
70	P0784070	LOCK HANDLE M8-1.25 X 25
71	P0784071	COMPRESSION SPRING
72	P0784072	BELT TENSION ROD
73	P0784073	BELT TENSION CAP (RUBBER)
74	P0784074	BELT COVER
75	P0784075	BELT COVER GUARD
76	P0784076	DRAWBAR COVER
77	P0784077	FLAT WASHER 8MM
78	P0784078	HEX BOLT M8-1.25 X 20
79	P0784079	PULLEY IDLER PLATE
81	P0784081	CAP SCREW M8-1.25 X 40
84	P0784084	IDLER PULLEY SHAFT
85	P0784085	IDLER PULLEY
86	P0784086	BALL BEARING 6204Z
87	P0784087	INT RETAINING RING 47MM
90	P0784090	V-BELT A33
91	P0784091	V-BELT A39
92	P0784092	MOTOR MOUNT
93	P0784093	HEX BOLT M12-1.75 X 20
95	P0784095	HEX NUT M8-1.25
97	P0784097	HEX BOLT M8-1.25 X 30
98	P0784098	MOTOR 2HP 220V 1-PH
98-1	P0784098-1	MOTOR FAN COVER
98-2	P0784098-2	MOTOR FAN
98-3	P0784098-3	R CAPACITOR 20M 450V 1-5/8 X 3-1/4
98-4	P0784098-4	S CAPACITOR 150M 250V 1-5/8 X 3
98-5	P0784098-5	CONTACT PLATE
98-6	P0784098-6	CETRIFUGAL SWITCH
98-7	P0784098-7	MOTOR JUNCTION BOX
98-8	P0784098-8	BALL BEARING 6205Z (FRONT)
98-9	P0784098-9	BALL BEARING 6205Z (REAR)

Main Parts List Cont.

REF	PART #	DESCRIPTION
99	P0784099	KEY 8 X 8 X 25
100	P0784100	MOTOR PULLEY SET
101	P0784101	ELEVATION CRANK BRACKET
102	P0784102	WORM SHAFT BUSHING
103	P0784103	ELEVATION WORM SHAFT
104	P0784104	ELEVATION GEAR SHAFT
105	P0784105	HELICAL GEAR 15T
106	P0784106	EXT RETAINING RING 14MM
107	P0784107	ELEVATION CRANK
108	P0784108	CAP SCREW M10-1.5 X 12

REF	PART #	DESCRIPTION
109	P0784109	ELEVATION CRANK HANDLE 80MM L
110	P0784110	SHOULDER SCREW M10-1.5 X 10, 11 X 45
111	P0784111	CAP SCREW M6-1 X 20
112	P0784112	SWITCH BOX
113	P0784113	SWITCH BOX COVER
114	P0784114	ROTARY SWITCH CANSEN LW5D-16
115	P0784115	CAP SCREW M4-.7 X 6
116	P0784116	POWER CORD 14G 3W 72"
117	P0784117	OIL CUP 3/8" NPT X 6MM X 17MM ST

Base Breakdown



Base Parts List

REF	PART #	DESCRIPTION
201	P0784201	BASE CASTING
202	P0784202	COLUMN
203	P0784203	TABLE BRACKET
204	P0784204	TABLE ELEVATION CASTING
205	P0784205	WORK TABLE
206	P0784206	COLUMN COLLAR
207	P0784207	COLUMN CAP
208	P0784208	LOCKED GUIDE RING
209	P0784209	HEAD RACK
210	P0784210	TABLE RACK
211	P0784211	FIXED GUIDE RING
212	P0784212	SET SCREW M10-1.5 X 8
213	P0784213	CAP SCREW M10-1.5 X 40
214	P0784214	FLAT WASHER 16MM
215	P0784215	LOCK WASHER 16MM
216	P0784216	CAP SCREW M16-2 X 50
217	P0784217	FLAT WASHER 12MM
218	P0784218	LOCKING HANDLE BASE M12-1.75 X 135

REF	PART #	DESCRIPTION
219	P0784219	LOCKING HANDLE M10-1.5 X 10
220	P0784220	T-BOLT M12-1.75 X 45
221	P0784221	FLAT WASHER 12MM
222	P0784222	HEX NUT M12-1.75
224	P0784224	TABLE HANDLE BASE M12-1.75 X 95
225	P0784225	TABLE HANDLE M10-1.5 X 6
226	P0784226	SET SCREW M10-1.5 X 10
240	P0784240	TABLE ELEVATION BRACKET
241	P0784241	TABLE ELEVATION WORM SHAFT
242	P0784242	SPACER
243	P0784243	EXT RETAINING RING 14MM
244	P0784244	HELICAL GEAR 15T
245	P0784245	WORM GEAR SHAFT
246	P0784246	TABLE ELEVATION CRANK
247	P0784247	SET SCREW M10-1.5 X 12
248	P0784248	CAP SCREW M6-1 X 20
249	P0784249	TABLE ELEVATION HANDLE 80MM L
250	P0784250	SHOULDER SCREW M10-1.5 X 10, 11 X 45

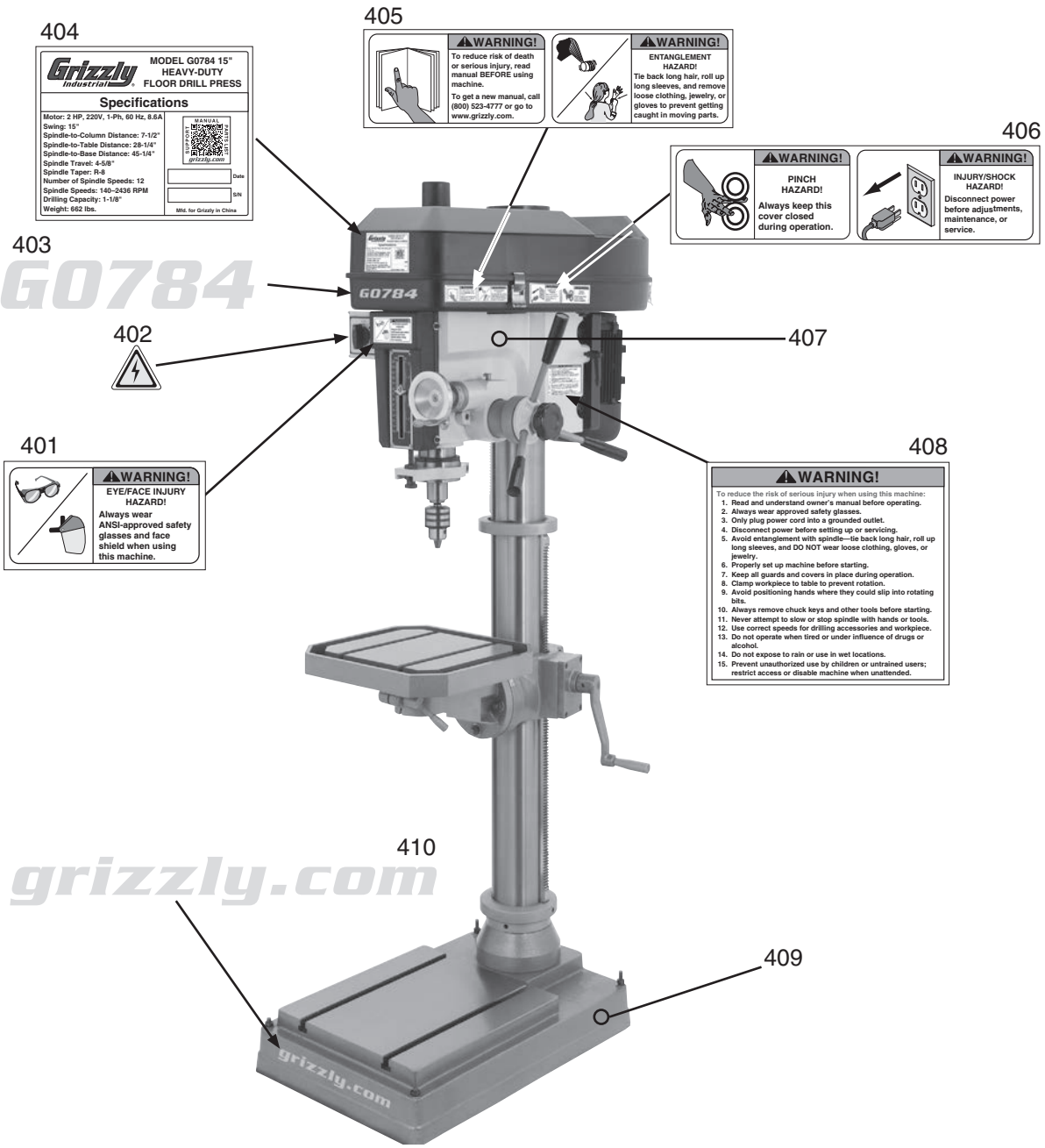
Please Note: *We do our best to stock replacement parts whenever possible, but we cannot guarantee that all parts shown here are available for purchase. Call* ***(800) 523-4777*** *or visit our online parts store at* ***www.grizzly.com*** *to check for availability.*

Accessories

REF	PART #	DESCRIPTION
301	P0784301	TOOLBOX, PLASTIC
302	P0784302	BOTTLE FOR OIL
303	P0784303	LUG WRENCH 20/25MM
304	P0784304	WRENCH 17 X 19MM OPEN-ENDS
305	P0784305	HEX WRENCH 5MM
306	P0784306	HEX WRENCH 4MM
307	P0784307	HEX WRENCH 3MM
308	P0784308	T-BOLT M14-2 X 55

REF	PART #	DESCRIPTION
309	P0784309	FLAT WASHER 14MM
310	P0784310	HEX NUT M14-2
311	P0784311	DRIFT KEY
312	P0784312	SPINDLE SLEEVE MT#3 X MT#2
313	P0784313	SPINDLE SLEEVE R-8 X MT#3
314	P0784314	DRILL CHUCK ARBOR R8 X B16
315	P0784315	DRILL CHUCK B16 1-13MM
316	P0784316	DRILL CHUCK KEY 8MM STD 11 SD-16MM

Labels & Cosmetics



REF	PART #	DESCRIPTION
401	P0784401	FACE SHIELD & SAFETY GLASSES LABEL
402	P0784402	ELECTRICITY LABEL
403	P0784403	MODEL NUMBER LABEL
404	P0784404	MACHINE ID LABEL
405	P0784405	MANUAL COMBINED SAFETY LABEL

REF	PART #	DESCRIPTION
406	P0784406	PINCH COMBINED SAFETY LABEL
407	P0784407	PUTTY TOUCH-UP PAINT
408	P0784408	MAIN WARNINGS LABEL
409	P0784409	GRIZZLY GREEN TOUCH-UP PAINT
410	P0784410	GRIZZLY.COM LABEL

⚠WARNING

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

Grizzly Industrial, Inc. WARRANTY CARD

Name _____

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: _____

_____

_____

_____

CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE

Place
Stamp
Here

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

FOLD ALONG DOTTED LINE

Send a Grizzly Catalog to a friend:

Name_____

Street_____

City_____State_____Zip_____

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

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.