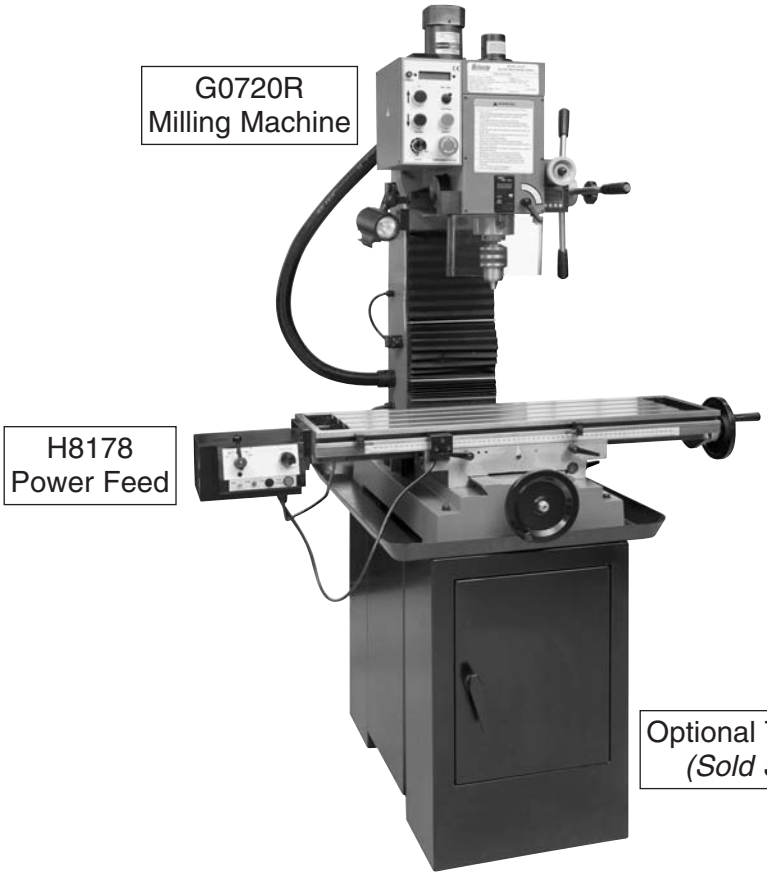
MODEL G0722
MILLING MACHINE WITH POWER FEED
MANUAL INSERT

Congratulations on your purchase of the Model G0722 Milling Machine with Power Feed!

This machine consists of the Model G0720R Milling Machine with a pre-installed Model H8178 Power Feed. Before operating your new machine, read and understand the owner's manuals for both G0720R and H8178. Doing this will help you maximize the value and function of your machine, and help you reduce any risk of injury when using the machine.

If you have any questions about your machine, please contact our Technical Support at ***(570) 546-9663*** *or email* ***techsupport@grizzly.com****.*



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#TR14987 PRINTED IN CHINA

MACHINE DATA SHEET

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

MODEL G0722 MILLING MACHINE WITH POWER FEED

Product Dimensions:

Weight	716 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	43-1/4 x 33 x 42-1/2 in.
Footprint (Length x Width)	43-1/4 x 33 in.

Shipping Dimensions:

Type	Wood
Content	Machine
Weight	849 lbs.
Length x Width x Height	49 x 40 x 82 in.

Electrical:

Power Requirement	110V, Single-Phase, 60 Hz
Full-Load Current Rating	16A
Minimum Circuit Size	20A
Switch	On Button & Emergency Stop Switch
Switch Voltage	110V
Cord Length	8 ft.
Cord Gauge	14 AWG
Plug Included	Yes
Included Plug Type	NEMA 5-15

Motors:

Spindle

Type	Brushless DC
Horsepower	2 HP
Voltage	230V
Amps	10A
Speed	0-3600 RPM
Power Transfer	Belt Drive
Bearings	Shielded and Permanently Sealed

Elevation

Type	AC Induction
Horsepower	1/12 HP
Voltage	110V
Phase	Single-Phase
Amps	1.1A
Speed	1700 RPM
Cycle	60 Hz
Power Transfer	Direct Drive
Bearings	Shielded and Permanently Sealed

The information contained herein is deemed accurate as of 4/22/2012 and represents our most recent product specifications. Due to our ongoing improvement efforts, this information may not accurately describe items previously purchased.

Main Specifications:

Operation Info

Spindle Travel	3-5/16 in.
Swing	22-3/4 in.
Longitudinal Table Travel	17-5/8 in.
Cross Table Travel	9-5/8 in.
Head Travel	13-1/8 in.
Head Tilt (Left-to-Right)	Left 45, Right 45 deg.
Distance Spindle to Column	11-3/8 in.
Distance Spindle to Table	15-3/4 in.
Drilling Capacity for Cast Iron	1-1/8 in.
Drilling Capacity for Steel	1-1/8 in.
Number of Vertical Spindle Speeds	Variable
Range of Vertical Spindle Speeds	100 – 1600 RPM
Quill Diameter	2.56 in.
Tapping Speed	50 – 800 RPM

Table Info

Table Length	32-1/4 in.
Table Width	9-1/2 in.
Table Thickness	2-5/8 in.
Table Pocket Size	25 x 11 mm
Number of T-Slots	4
T-Slots Width	1/2 in.
T-Slots Height	15/16 in.
T-Slots Centers	2-1/8 in.
Stud Size	3/8 in.

Spindle Info

Spindle Taper	R-8
Spindle Sleeve Diameter	1.96 in.
End Milling Capacity	1-1/2 in.
Face Milling Capacity	2-1/8 in.
Drawbar Diameter	7/16 in.
Drawbar TPI	7/16-20
Drawbar Length	13-1/2 in.
Spindle Bearings	Thrust/Deep Groove, Taper

Lead Screw Info

Leadscrew Diameter	20 mm (X, Y, Z axes)
Leadscrew TPI	8 TPI (X, Y axes)
Leadscrew Length	36 in. (X), 18-3/4 (Y), 21-1/2 (Z)

Construction

Spindle Housing/Quill	Cast Iron
Table	Cast Iron
Head	Cast Iron
Column	Cast Iron
Base	Cast Iron
Stand	Steel
Paint	Powder Coated

Other Specifications:

Country Of Origin	China
Warranty	1 Year
Serial Number Location	ID Label on Headstock
Customer Assembly & Setup Time	30 Minutes

Features:

Variable speed power feed with auto stops
Motorized headstock lift system
Digital head tilt angle display
Headstock and table travel on dovetailed ways
Includes 1-16mm B18 drill chuck
Dovetail column
Digital spindle scale reads metric or inches, zero set, on/off
Headstock tilts 90 deg left, 45 deg. right
Digital speed display
Reversing buttons on downfeed handles for tapping
Coolant trough
Front-mounted emergency stop button
Transparent polycarbonate chip guard with safety switch
Milling and tapping mode control

MODEL G0720R
HEAVY-DUTY BENCHTOP MILLING MACHINE
OWNER'S MANUAL

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(FOR MODELS MANUFACTURED SINCE 11/10) #CR13495 PRINTED IN CHINA

⚠ WARNING!

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

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

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

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

⚠ WARNING!

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

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

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

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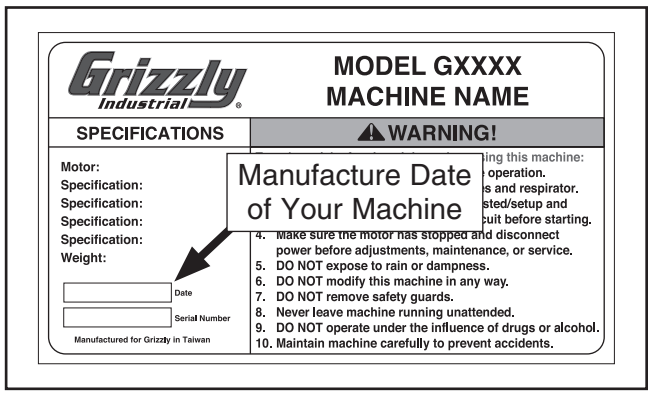
INTRODUCTION

Manual Accuracy

We are proud to offer this manual with your new machine! We've made every effort to be exact with the instructions, specifications, drawings, and photographs of the machine we used when writing this manual. However, sometimes we still make an occasional mistake.

Also, owing to our policy of continuous improvement, **your machine may not exactly match the manual**. If you find this to be the case, and the difference between the manual and machine leaves you in doubt, check our website for the latest manual update or call technical support for help.

Before calling, find the manufacture date of your machine by looking at the date stamped into the machine ID label (see below). This will help us determine if the manual version you received matches the manufacture date of your machine.



For your convenience, we post all available manuals and manual updates for free on our website at **www.grizzly.com**. Any updates to your model of machine will be reflected in these documents as soon as they are complete.

Contact Info

We stand behind our machines. If you have any questions or need help, use the information below to contact us. Before contacting, please get the serial number and manufacture date of your machine. This will help us help you faster.

Grizzly Technical Support
1203 Lycoming Mall Circle
Muncy, PA 17756
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

Machine Description

The Model G0720R Heavy-Duty Benchtop Mill removes material from workpieces to form complex shapes. The headstock can be held stationary at various angles while the spindle rotates the cutter. The operator then has the option to use the coarse or fine feed controls to move the spindle and cutter into the workpiece which is clamped to the table. The operator also has the option to move the table and workpiece into the cutter by the use of the table handwheels.

Cutting speeds are adjustable through the use of a spindle speed dial located on the control panel, where a digital tachometer is also located.

The mill has a tapping feature where when in the tapping mode, the spindle immediately reverses rotation when any of the buttons located at the end of the downfeed handles are pushed. This is an important feature for tap removal.

Identification

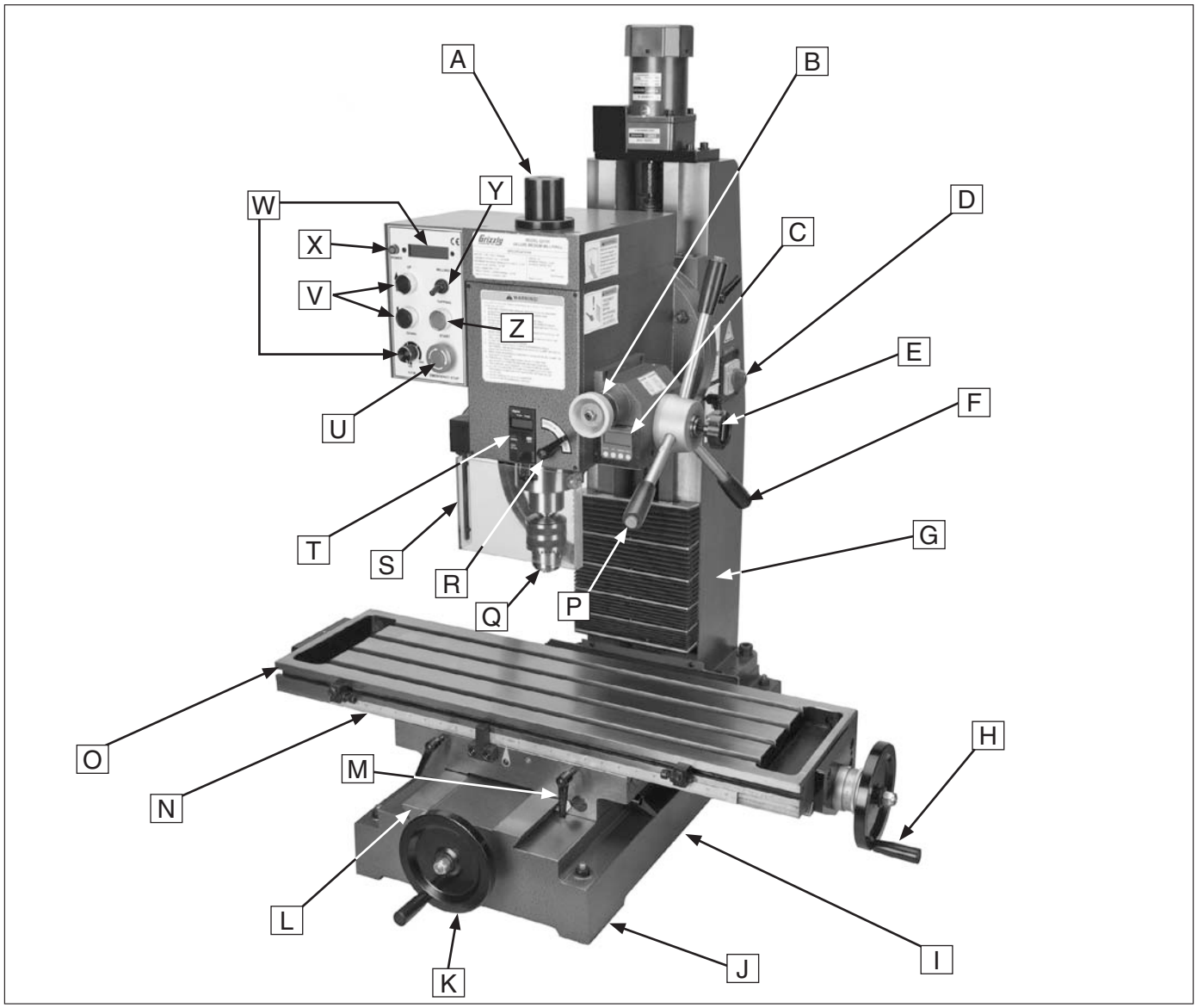


Figure 1. G0720R Identification.

A. Safety Cover and Drawbar
B. Fine Feed Knob
C. Mini Digital Protractor
D. Main Power Switch
E. Fine Feed Lock Knob w/Assist Lever
F. Downfeed Handle
G. Precision Dovetailed Column
H. Longitudinal (X-Axis) Handwheel
I. Cast-Iron Base
J. Base Mounting Boss
K. Cross (Y-Axis) Handwheel
L. Precision Dovetailed Table Ways
M. Table Locks
N. Longitudinal Scale
O. Milling Table
P. Spindle Rotation Button
Q. Drill Chuck
R. Quill Lock Lever
S. Polycarbonate Chip Guard w/Magnetic Lock
T. Digital Spindle Depth Scale
U. Emergency Stop Button
V. Headstock Power UP and DOWN Buttons
W. Spindle Speed Dial and RPM Display
X. Power Light
Y. Tapping and Milling Mode Switch
Z. Start Button

MACHINE DATA SHEET

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

MODEL G0720R HEAVY-DUTY BENCH TOP MILLING MACHINE

Product Dimensions:

Weight..... 596 lbs.
Width (side-to-side) x Depth (front-to-back) x Height..... 14-1/2 x 30-1/2 x 43 in.
Footprint (Length x Width)..... 28-1/2 x 14-1/2 in.

Shipping Dimensions:

Type..... Wood
Content..... Machine
Weight..... 641 lbs.
Length x Width x Height..... 46 x 37 x 44 in.

Electrical:

Power Requirement..... 110V, Single-Phase, 60 Hz
Full-Load Current Rating..... 16A
Minimum Circuit Size..... 20A
Switch..... On Button & Emergency Stop Switch
Switch Voltage..... 110V
Cord Length..... 8 ft.
Cord Gauge..... 14 AWG
Plug Included..... Yes
Included Plug Type..... NEMA 5-15

Motors:

Spindle

Type..... Brushless DC
Horsepower..... 2 HP
Voltage..... 230V
Amps..... 10A
Speed..... 0 – 3600
Power Transfer ..... Belt Drive
Bearings..... Shielded and Permanently Sealed

Elevation

Type..... AC Induction
Horsepower..... 1/12 HP
Voltage..... 110V
Phase..... Single-Phase
Amps..... 1.12A
Speed..... 1400/1700 RPM
Cycle..... 50 Hz / 60 Hz
Power Transfer ..... Direct Drive
Bearings..... Shielded and Permanently Sealed

Main Specifications:

Operation Info

Spindle Travel	3-5/16 in.
Swing	22-3/4 in.
Longitudinal Table Travel	17-5/8 in.
Cross Table Travel	9-5/8 in.
Head Travel	13-1/8 in.
Head Tilt (Left-to-Right)	Left 45, Right 45 deg.
Distance Spindle to Column	11-3/8 in.
Distance Spindle to Table	15-3/4 in.
Drilling Capacity for Cast Iron	1-1/8 in.
Drilling Capacity for Steel	1-1/8 in.
Number of Vertical Spindle Speeds	Variable
Range of Vertical Spindle Speeds	100 – 1600 RPM
Quill Diameter	2.56 in.
Tapping Speed	50 – 800 RPM

Table Info

Table Length	32-1/4 in.
Table Width	9-1/2 in.
Table Thickness	2-5/8 in.
Table Pocket Size	25 x 11 mm
Number of T-Slots	4
T-Slots Width	1/2 in.
T-Slots Height	15/16 in.
T-Slots Centers	2-1/8 in.
Stud Size	3/8 in.

Spindle Info

Spindle Taper	R8
Spindle Sleeve Diameter	1.97 in.
End Milling Capacity	1-1/2 in.
Face Milling Capacity	2-1/8 in.
Drawbar Diameter	7/16 in.
Drawbar TPI	7/16-20
Drawbar Length	13-1/2 in.
Spindle Bearings	Thrust/Deep Groove, Taper

Lead Screw Info

Leadscrew Diameter	20mm (X, Y, Z axes)
Leadscrew TPI	8 TPI (X, Y axes)
Leadscrew Length	36 in. (X), 18-3/4 in. (Y), 21-1/2 (Z)

Construction

Spindle Housing/Quill	Cast Iron
Table	Cast Iron
Head	Cast Iron
Column	Cast Iron
Base	Cast Iron
Paint	Powder Coated

Other Specifications:

Country Of Origin	China
Warranty	1 Year
Serial Number Location	ID Label on Headstock
Customer Assembly & Setup Time	30 Minutes

SECTION 1: SAFETY

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

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

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

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

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

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

⚠WARNING
Safety Instructions for Machinery

OWNER'S MANUAL. Read and understand this owner's manual BEFORE using machine. Untrained users can be seriously hurt.

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.

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

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 avoid accidental slips which could cause a loss of workpiece control.

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

MENTAL ALERTNESS. Be mentally alert when running machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

⚠WARNING

DISCONNECTING POWER SUPPLY. Always disconnect machine from power supply before servicing, adjusting, or changing cutting tools (bits, blades, cutters, etc.). Make sure switch is in OFF position before reconnecting to avoid an unexpected or unintentional start.

APPROVED OPERATION. Untrained operators can be seriously hurt by machinery. Only allow trained or properly supervised people to use machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

DANGEROUS ENVIRONMENTS. Do not use machinery in wet or rainy locations, cluttered areas, around flammables, or in dark areas. Keep work area clean, dry, and well-lighted.

ONLY USE AS INTENDED. Only use machine for its intended purpose. Never modify machine for a purpose not intended by the manufacturer!

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

CHILDREN & BYSTANDERS. Keep children and bystanders a safe distance away from work area. Stop using machine if children or bystanders become a distraction.

REMOVE ADJUSTING TOOLS. Never leave adjustment tools, chuck keys, wrenches, etc. in or on machine—especially near moving parts. Verify removal before starting!

SECURING WORKPIECE. When required, use clamps or vises to secure workpiece. A secured workpiece protects hands and frees both of them to operate the machine.

FEED DIRECTION. Unless otherwise noted, feed work against the rotation of blades or cutters. Feeding in the same direction of rotation may pull your hand into the cut.

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

GUARDS & COVERS. Guards and covers can protect you from accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly before using machine.

NEVER STAND ON MACHINE. Serious injury or accidental contact with cutting tool may occur if machine is tipped. Machine may be damaged.

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

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.

UNATTENDED OPERATION. Never leave machine running while unattended. Turn machine ***OFF*** and ensure all moving parts completely stop before walking away.

MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. An improperly maintained machine increases risk of injury.

CHECK DAMAGED PARTS. Regularly inspect machine for damaged parts, loose bolts, mis-adjusted or mis-aligned parts, binding, or any other conditions that may affect safe operation. Always repair or replace damaged or mis-adjusted parts before operating machine.

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 are experiencing difficulties performing the intended operation, stop using the machine! Contact our Technical Support Department at (570) 546-9663.

⚠WARNING
Additional Safety for Mills

UNDERSTANDING CONTROLS. Make sure you understand the use and operation of all controls.

SAFETY ACCESSORIES. Always use a chip guard in addition to your safety goggles when milling to prevent bodily injury.

WORK HOLDING. Before starting the machine, be certain the workpiece has been properly clamped to the table. NEVER hold the workpiece by hand when using the mill.

CHUCK KEY SAFETY. Always remove your chuck key, drawbar wrench, and any service tools immediately after use.

SPINDLE SPEEDS. Select the spindle speed that is appropriate for the type of work and material. Allow the mill to gain full speed before beginning a cut.

POWER DISRUPTION. In the event of a local power outage during use of the mill, turn ***OFF*** all switches to avoid possible sudden start up once power is restored.

STOPPING SPINDLE. DO NOT stop the mill using your hand against the chuck.

CUTTING TOOL INSPECTION. Inspect drills and end mills for sharpness, chips, or cracks before each use. Replace dull, chipped, or cracked cutting tools immediately. Handle new cutting tools with care. Leading edges are very sharp and can cause lacerations.

MACHINE CARE AND MAINTENANCE. Never operate the mill with damaged or worn parts. Maintain your mill in proper working condition. Perform routine inspections and maintenance promptly. Put away adjustment tools after use.

DISCONNECT POWER. Make sure the mill is turned ***OFF***, disconnected from its power source and all moving parts have come to a complete stop before starting any inspection, adjustment, or maintenance procedure.

AVOIDING ENTANGLEMENT. Keep loose clothing articles such as sleeves, belts or jewelry items away from the mill spindle. Never wear gloves when operating the mill.

BE ATTENTIVE. DO NOT leave mill running unattended for any reason.

TOOL HOLDING. Always use the proper tools for the material you are milling. Make sure they are held firmly in the proper tool holder for the job.

CLEAN-UP. DO NOT clear chips by hand. Use a brush, and never clear chips while the mill is turning.

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.

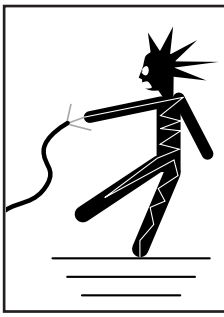
⚠CAUTION

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 a qualified electrician in accordance with all applicable codes and standards.



⚠WARNING

Electrocution, fire, or equipment damage may occur if machine is not correctly grounded and connected to the 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 110V..... 16 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 requirements in the following section.

Circuit Requirements

This machine is prewired to operate on a 110V power supply circuit that has a verified ground and meets the following requirements:

Nominal Voltage 110V/120V
Cycle ..... 60 Hz
Phase ..... Single-Phase
Minimum Circuit Size ..... 20 Amps

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

⚠CAUTION

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

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

Grounding & Plug Requirements

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.

This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug (similar to the figure below). 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.

⚠WARNING

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

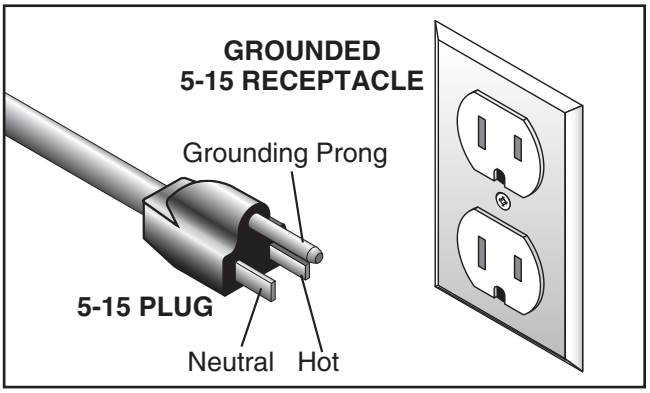
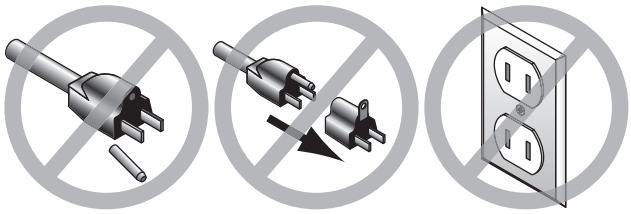


Figure 2. Typical 5-15 plug and receptacle.

⚠CAUTION



SHOCK HAZARD!

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

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

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

Extension Cords

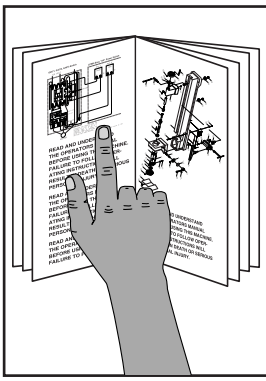
We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

Extension cords cause voltage drop, which may 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 contain a ground wire, match the required plug and receptacle, and meet the following requirements:

Minimum Gauge Size .....12 AWG
Maximum Length (Shorter is Better).....50 ft.

SECTION 3: SETUP



⚠WARNING

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

⚠WARNING

Wear safety goggles during the entire setup process!

⚠WARNING

This machine and its components are very heavy. Get lifting help or use power lifting equipment such as a forklift to move heavy items.

Needed for Setup

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

Description	Qty
• An Assistant	1
• Precision Level	1
• Safety Glasses	2 Pair
• Mineral Spirits	1 Quart
• Shop Rags	5
• Lifting Straps (1500lb Min. Capacity)	2
• Forklift or Hoisting Apparatus (1500lb Minimum Capacity)	1

Unpacking

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

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

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

⚠WARNING

SUFFOCATION HAZARD!

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

Inventory

The following is a description of the main components shipped with your machine. Lay the components out to 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: (Figures 3 & 4)		Qty
A.	Assembled Mill	1
B.	Drill Chuck	1
C.	Open End Wrench 8/10mm	1
D.	Open End Wrench 14/17mm	1
E.	Open End Wrench 19/22mm	1
F.	Spindle Lock Pin	1
G.	Chuck Key	1
H.	Fuse 1 Amp, Fast-Blow 5 x 20mm	1
I.	Fuse 2 Amp, Fast-Blow 5 x 20mm	1
J.	Hex Wrench Set 4, 5, 6, & 12mm	1 Ea
K.	Bottle for Oil	1

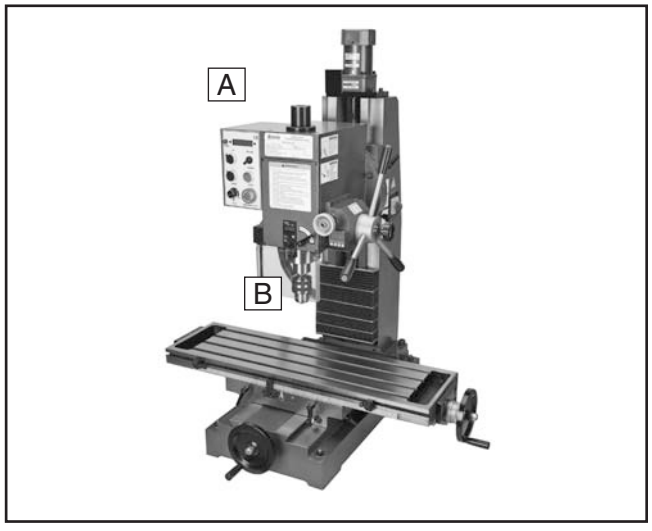


Figure 3. G0720R out of the crate.

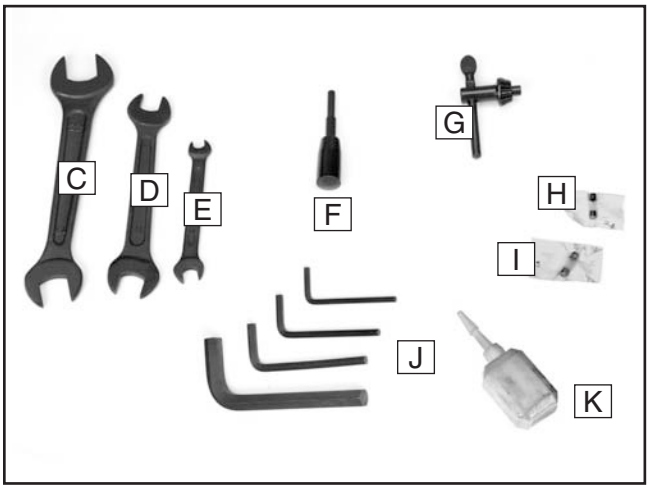


Figure 4. Inventory.

NOTICE

If you cannot find an item on this list, carefully check the machine and the packaging materials. Some of these items may be preinstalled for shipping or become misplaced during unpacking.

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.

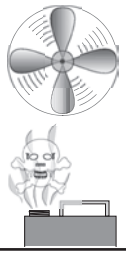
2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5–10 minutes.

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 or products with low flash points can explode or cause fire if used to clean machinery. Avoid cleaning with these products.



⚠CAUTION

Many cleaning solvents are toxic if concentrated amounts are 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. Test all cleaners in an inconspicuous area before using to make sure they will not damage paint.

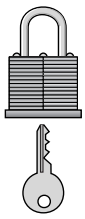
Site Considerations

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 access to a means of disconnecting the power source or engaging 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.

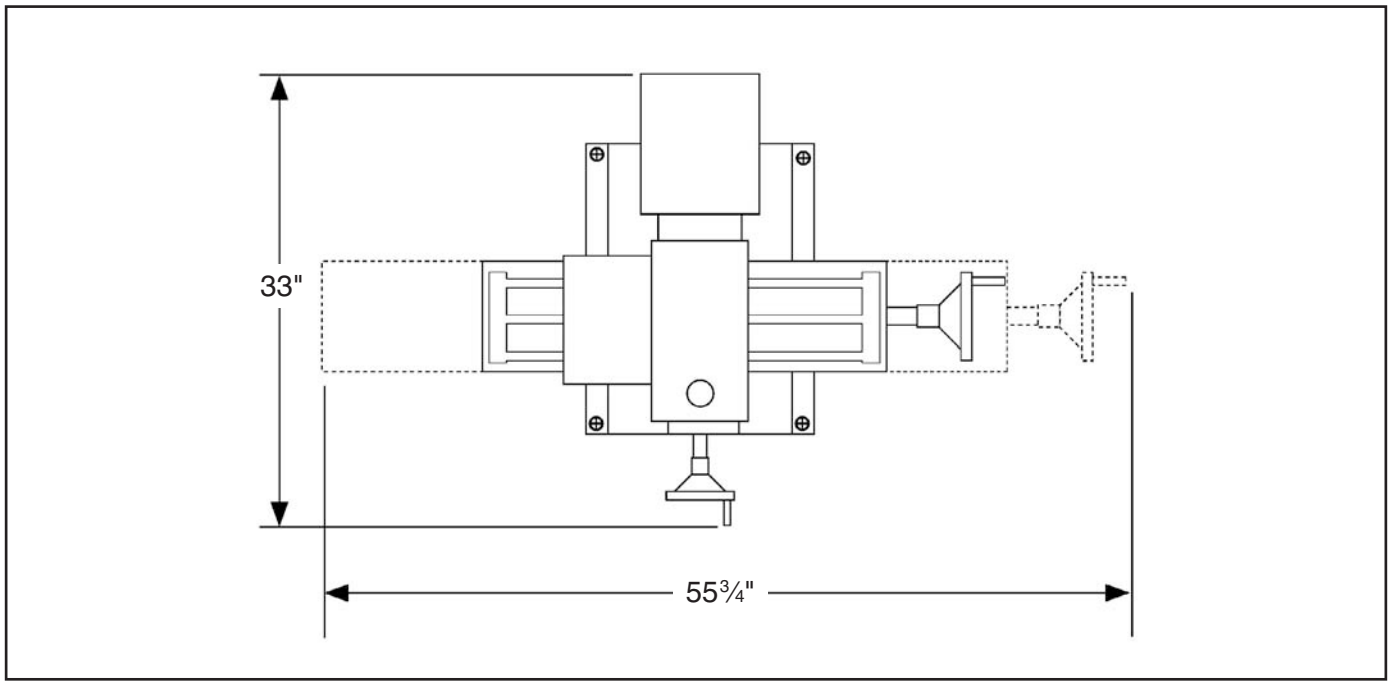


Figure 6. Minimum working clearances.

Mounting to Workbench

Your mill should be bolted to a workbench to provide maximum rigidity and safety.

Components and Hardware Needed:	**Qty**
Hex Bolts ½"-13 x (length as needed)	4
Flat Washers ½"	8
Lock Washers ½"	4
Hex Nuts ½"-13	4

To mount the mill to the workbench:

1. Determine the best position for the mill on the workbench.

   Note: *For the best performance, make sure the cross feed and the longitudinal handwheels extend out beyond the edge of the table surface. This will allow unrestricted handwheel operation.*

2. Mark your hole locations using the mounting holes in the base as a guide.

3. Drill the holes needed in the workbench.

4. Place a precision level on the mill table and shim the mill until it is level side-to-side and front-to-back.

5. Bolt the mill to the top of the workbench (see **Figure 7**).

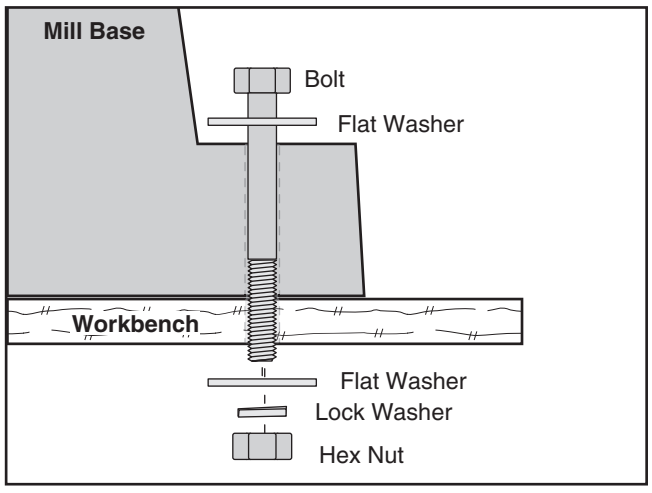


Figure 7. Example of a through mount setup.

Test Run

Once the assembly is complete, test run your machine to make sure it runs properly and is ready for regular operation. The test run consists of verifying the following: 1) The motors power up and run correctly and 2) the stop button and chip guard safety feature works correctly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review **Troubleshooting** on **Page 34**. If you cannot find a remedy, contact our Tech Support at (570) 546-9663 for assistance.

⚠WARNING

Before starting the machine, make sure you have performed the preceding assembly and adjustment instructions. You must read through the rest of the manual and understand the various functions and safety features. Failure to follow this warning could result in serious personal injury or even death!

To test run the machine:

1. Push the EMERGENCY STOP button in, and turn the main power switch to ***OFF*** (see **Figure 8**).

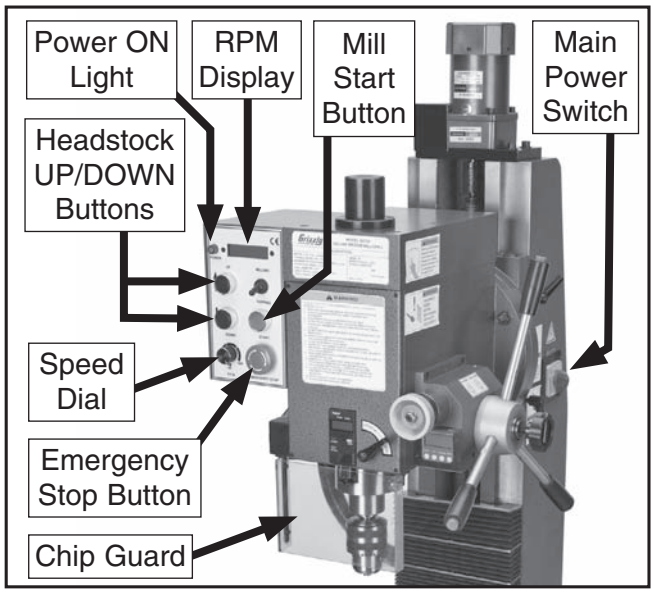


Figure 8. Machine controls.

2. Do all lubrication procedures highlighted in **Lubrication** in **SECTION 6: MAINTENANCE** on **Page 30.**

3. If there is no arbor or chuck installed in the spindle, remove the drawbar cap and the drawbar to prevent vibration.

   Note: *The drawbar cap has left-hand threads and loosens when turned clockwise.*

4. Put on safety goggles, make sure the area is clean, all tools are put away, and no entanglement hazards exist.

5. Rotate the spindle speed dial (see **Figure 8**) counterclockwise to the slowest setting.

6. Close the chip guard (see **Figure 8**) and connect the machine to power.

7. Twist the EMERGENCY STOP button clockwise so it pops out and is reset.

   Note: *The power ON light shown in **Figure 8** illuminates to indicate that all machine controls are now LIVE and ready for use.*

8. Loosen the headstock lock levers, and push the UP and DOWN buttons to test the headstock elevation motor.

9. Push the START button to start the spindle.

   —When operating correctly, the machine runs smoothly with little or no vibration or rubbing noises.

   —Investigate and correct strange or unusual noises or vibrations before operating the machine further. Always disconnect the machine from power when investigating or correcting potential problems.

10. Test the variable speed by turning the spindle speed dial up then down.

11. Press the EMERGENCY STOP button to stop the spindle.

12. WITHOUT resetting the EMERGENCY STOP switch, press the START button. The machine should **not** start.

13. Reset the EMERGENCY STOP switch, open the chip guard, and press the START button again. The machine should **not** start.

    —If the machine starts, shut it ***OFF*** and, disconnect it from power. Do not operate the machine any further until the safety features are fixed.

14. Test run is complete. Next, complete **Spindle Break-In** before putting the mill into full service.

NOTICE

Failure to follow start up and spindle break-in procedures will likely cause rapid deterioration of spindle and other related parts.

Spindle Break-In

Before putting this machine into full service, the **Test Run** must be completed and the spindle bearings must be broken in.

⚠WARNING

DO NOT leave the area while break-in procedure is under way. You must be ready to stop the machine if any problem occurs.

To break in the machine:

1. Move the MILLING & TAPPING mode switch (see **Figure 9**) to the TAPPING position.

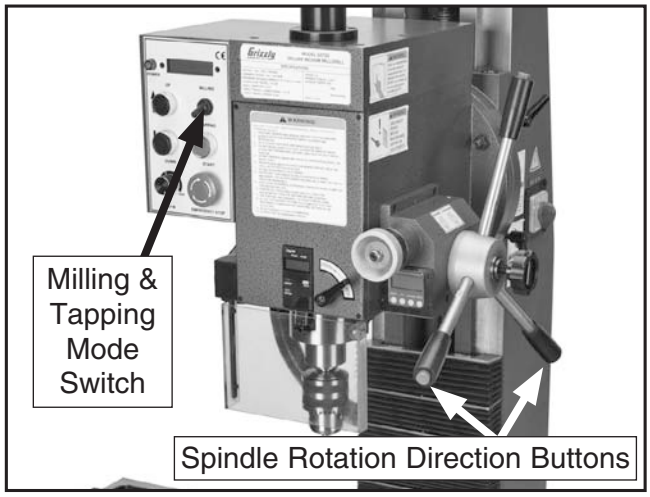


Figure 9. Tapping controls.

2. Push the START button.

   Note: *When in tapping mode, the spindle speed is reduced by half automatically, and the speed range will be 50–800 RPM. Tapping requires lower speeds than other milling operations.*

3. Rotate the spindle speed dial so the spindle runs at 500 RPM, and let it run for ten minutes.

4. Increase the speed to 800 RPM, and let it run for another ten minutes.

5. Push the EMERGENCY STOP button, and rotate the spindle speed dial counterclockwise to its minimum position.

6. Start the mill, and push one of the three buttons on the end of the downfeed handles to reverse spindle rotation.

7. Run the mill again at both speeds (as described above) to finish the break-in procedure.

8. Move the MILLING & TAPPING mode switch to the MILLING position, then run machine at a speed of 1600 RPM for ten minutes.

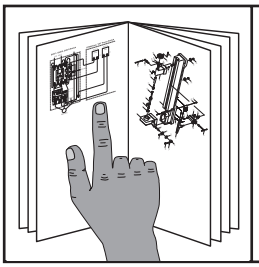
9. Run the machine at 800 RPM for another 15 minutes to allow it cool down.

SECTION 4: OPERATIONS

Operation Overview

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

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

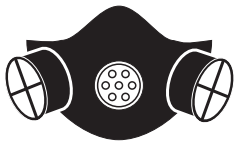


⚠WARNING

To reduce the risk of serious injury when using this machine, read and understand this entire manual before operating.

⚠WARNING

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



NOTICE

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

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

1. Examines the workpiece to make sure it is suitable for milling.
2. Puts on the required safety gear.
3. Firmly clamps the workpiece to the table.
4. Installs the correct cutting tool for the operation.
5. Uses the manual downfeed and table controls to confirm the correct positioning of the cutting tool and workpiece for the operation.
6. Sets the digital depth stop and mini digital protractor to the required units of measurement.
7. Locks the headstock and the required table locks in place.
8. Determines the feed rate and cutting speed.
9. Connects the machine to power, and turns the main power switch ***ON***.
10. Presses the start button and adjusts the spindle RPM with the spindle speed dial.
11. Begins milling, drilling, or tapping.
12. When finished, turns the mill ***OFF*** and disconnects it from power.

Controls

Review this section to locate and understand how to use the mill controls and factors for machine operation.

General Controls

The controls shown in **Figure 10** turn the main machine power ***ON*** and ***OFF***, and reverse spindle direction. Also shown are the locations of the control panel, spindle height gauge, and the digital protractor, which will be detailed in their own sub-sections

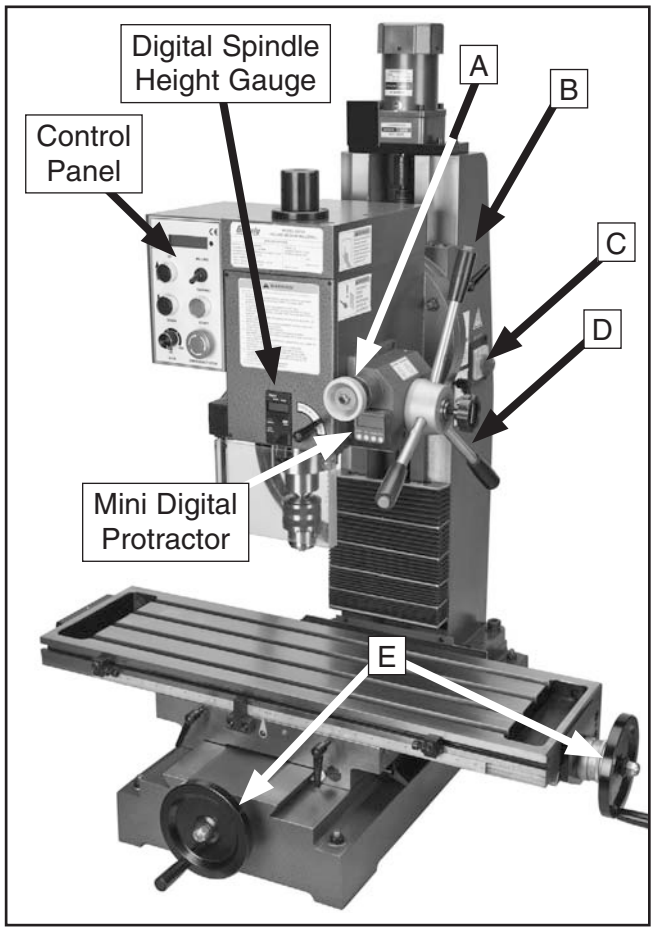


Figure 10. General controls.

A. Fine Feed knob: Raises and lowers the spindle in fine increments.

B. Spindle Rotation Buttons: When in the tapping mode, these buttons change spindle rotation direction. In this mode, spindle direction can be reversed at any RPM without having to stop the spindle first.

C. Main Power Switch: Toggles power ***ON*** and ***OFF*** to the control panel.

D. Downfeed Handle: Raises and lowers the spindle in coarse increments.

E. Handwheels: Move the table in the X- and Y-axis.

Control Panel

The controls shown in **Figure 11** start and stop the spindle, set spindle speed, and adjust the headstock height.

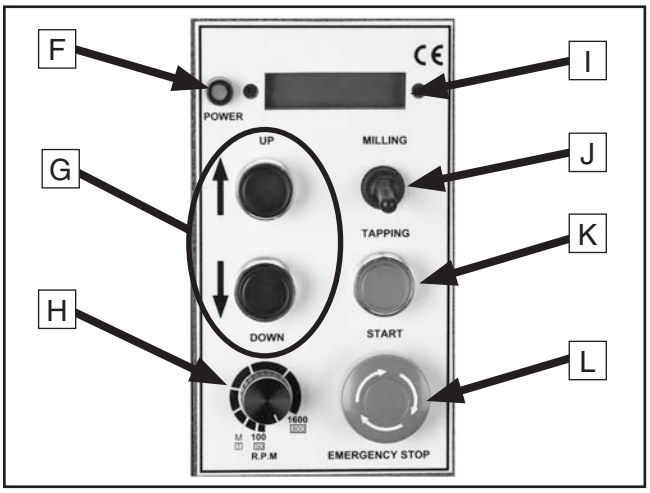


Figure 11. Control panel overview.

F. POWER Lamp: Glows when the main power switch is ***ON*** to indicate that all machine controls are LIVE and ready for use.

G. UP/DOWN Buttons: Raises and lowers the headstock.

H. RPM Dial: Adjusts spindle speed between 100–1600 RPM or tapping speed between 50–800 RPM.

I. Spindle Speed Readout: Displays the spindle speed RPM, direction, and mode.

J. MILLING & TAPPING Switch: Selects which mode the machine is in.

K. START Button: Starts the spindle motor for milling or tapping operations.

L. EMERGENCY STOP Button: Stops the mill and prevents restarting while it is in the depressed position. Rotate the button clockwise to reset it.

Digital Spindle Height Gauge

The digital spindle height scale shown in **Figure 12** displays spindle position and movement. An auto shut-off feature will turn the unit ***OFF*** after several minutes of idle time. When turned back ***ON***, the last measurement is recalled so work can be resumed. However, if the battery is changed or becomes discharged, the stored value is lost.

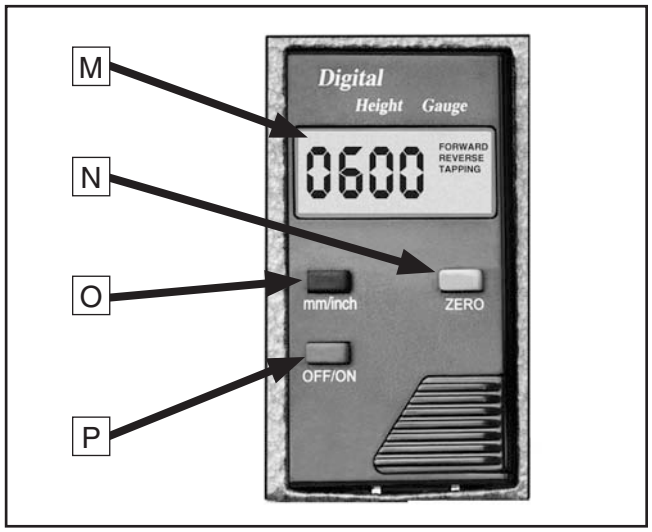


Figure 12. Digital spindle height scale.

M. Digital Spindle Height Display: Displays spindle position and movement with a resolution of 0.0005" (0.01mm).

N. ZERO Button: Zeros the digital spindle scale at any point along its stroke.

O. mm/inch Button: Toggles units of measure between metric and inch conventions.

P. OFF/ON Button: Turns the digital height gauge ***ON*** or ***OFF***.

Mini Digital Protractor

The mini digital protractor shown in **Figure 13** displays the headstock spindle angle and slope in relationship with the table surface. An auto shut-off feature will turn ***OFF*** the unit after several minutes of idle time. When turned back ***ON***, the last measurement is recalled so work can be resumed. However, if the battery is changed or becomes discharged, the stored value is lost.

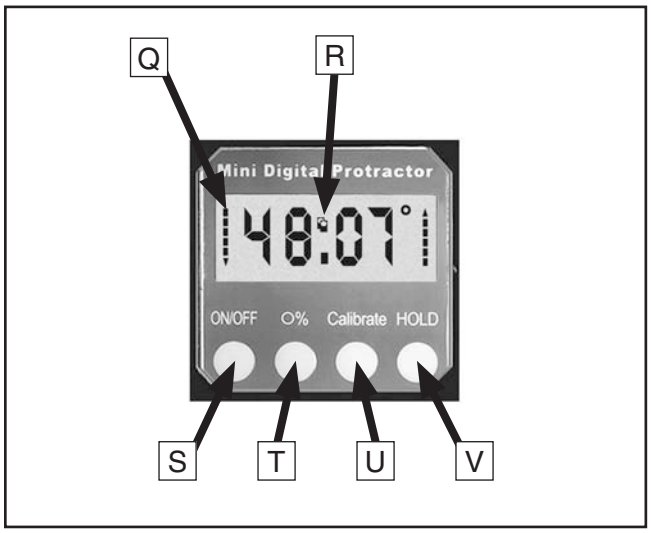


Figure 13. Mini digital protractor.

Q. Tilt Arrows: Indicate the direction of tilt.

R. Battery Life: Icon becomes viewable when batteries need replacement.

S. ON/OFF Button: Turns the protractor ***ON*** or ***OFF***. For ***OFF***, press and hold the button.

T. O%: Toggles units of measure between degrees and percent of grade conventions.

U. Calibrate: Zeros the protractor at any position within the range of headstock tilt.

V. HOLD: Locks the protractor at its current displayed value.

Selecting Spindle RPM

Closely follow the proper cutting speed and proper feed to reduce undue strain on all moving parts and increase operator safety.

Prior to milling, determine the RPM needed to cut your workpiece, then set the RPM on the machine.

To determine the needed RPM:

1. Use the table in **Figure 14** to determine the cutting speed required for your workpiece material.

2. Measure the diameter of your cutting tool in inches.

3. Use the following formula to determine the needed RPM for the milling operation:

(Cutting Speed x 4) / Tool Diameter = RPM

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

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

Figure 14. Cutting speed table for HSS cutting tools.

Setting Spindle Height

Spindle height is changed by unlocking the quill lock and using the downfeed handles or the fine feed knob (see **Figure 15**). The digital height gauge indicates the spindle height.

To change the spindle position:

1. Unlock the quill lock lever and loosen the fine feed lock knob.

   Tip: *Use the fold-out lever (*see ***Figure 15****) for additional leverage to unlock the fine feed lock knob if the knob is too tight. Do not use the fold-out lever to tighten the knob.*

2. Pull down on the downfeed handles to lower or raise the spindle. Tighten the quill lock to secure the spindle in a particular position (if desired).

   Tip: *Milling with the quill fully extended can cause tool chatter. For maximum spindle rigidity, it is better to keep the spindle retracted into the headstock as far as possible with the quill lock lever and fine feed lock knob tightened.*

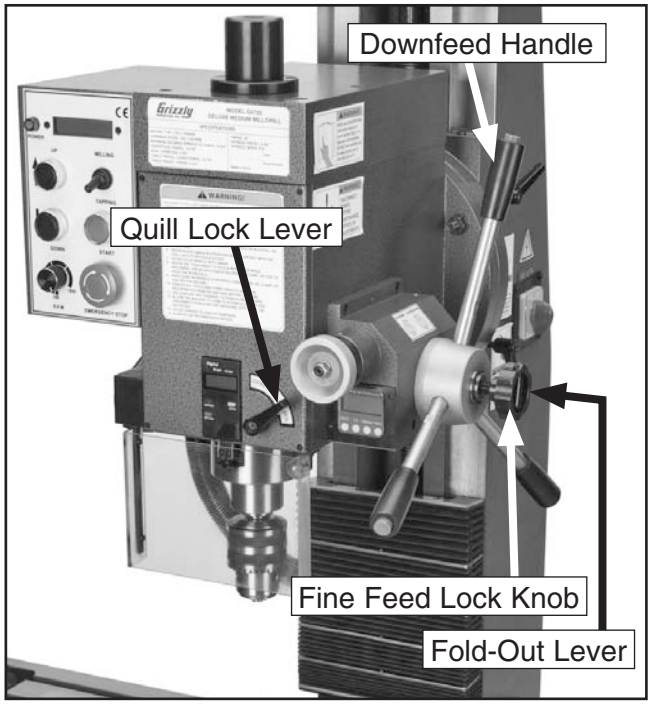


Figure 15. Spindle controls.

Drill Chuck Installation & Removal

The chuck is attached to an R-8 arbor using a B18 taper. This attachment is considered to be semi-permanent. There should be no need to separate the chuck from the arbor.

Installation

1. DISCONNECT MILL FROM POWER!

2. Insert the chuck arbor into the spindle so it engages the alignment pin inside of the spindle and makes contact with the drawbar threads.

3. Thread the drawbar into the arbor until the arbor is seated up into the spindle taper.

4. While supporting the chuck and arbor with one hand, snug the drawbar with the drawbar hex wrench.

   Note: *Do not overtighten the drawbar. Overtightening makes arbor removal difficult and will damage the arbor and threads.*

Removal

1. DISCONNECT MILL FROM POWER!

2. Lock the quill in place with the quill lock.

3. Insert the spindle lock pin into the hole in the side of the spindle (see **Figure 16**).

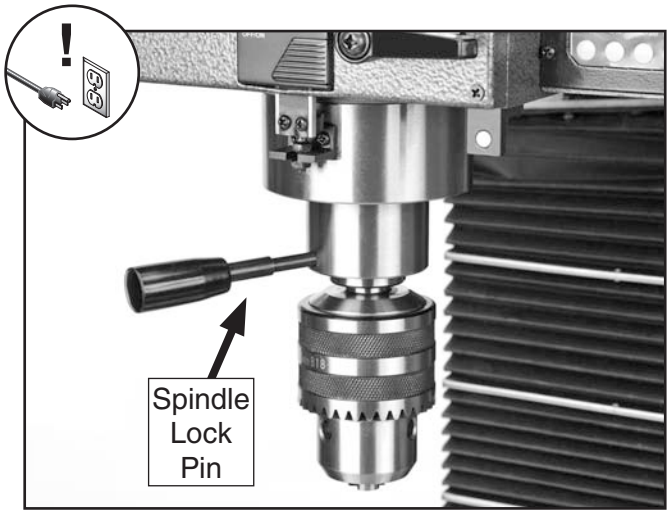


Figure 16. Spindle lock pin holding spindle.

4. Using the drawbar hex wrench, loosen the drawbar two turns. DO NOT remove the drawbar.

NOTICE

DO NOT completely unscrew the drawbar before tapping it with the hammer in the next Step. You will damage the threads on the drawbar and the arbor.

5. Put on safety goggles and tap the top of the drawbar wrench with the hammer. This will unseat the taper of the arbor from the spindle (see **Figure 17**).

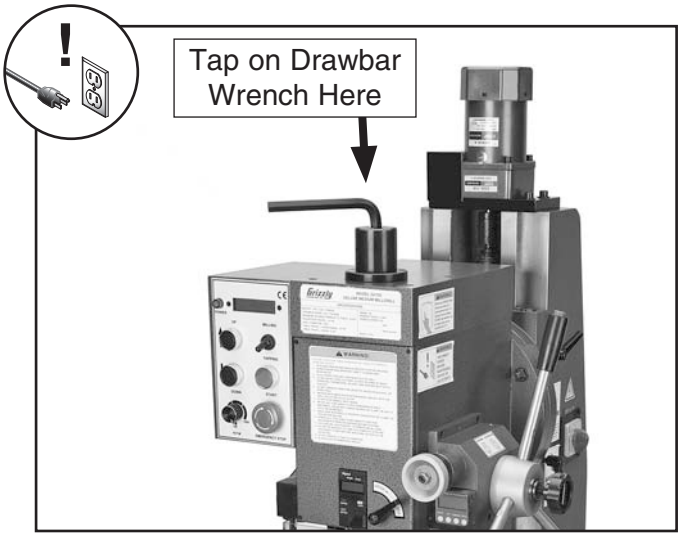


Figure 17. Drawbar wrench.

6. Hold one hand under the chuck and finish loosening the drawbar by hand until it falls out of the spindle.

R-8 Collet Installation & Removal

If you do not use the drill chuck and arbor, you need to use a collet to insert the cutting tool into the spindle. Your Model G0720R features an R-8 spindle taper, which gives the freedom to use common R-8 collets. These optional collets come in many sizes, typically ranging from 1/16" to 7/8" and 3mm to 20mm, and should be matched to your cutting tool shank size.

Installation

1. DISCONNECT MILL FROM POWER!

2. Unscrew the drawbar cap.

3. Carefully clean the surface of the collet and spindle taper. Ensure that it is free of debris and is lightly oiled.

4. Insert the cutting tool into the collet, then insert the collet into the spindle taper.

5. Rotate the collet so it engages the alignment pin inside of the spindle, then slide the collet upward until it makes contact with the drawbar threads.

6. Thread the drawbar into the collet until the collet draws up into the spindle taper.

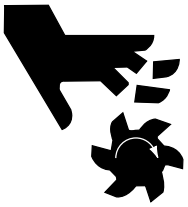
7. While supporting the tool in the collet with one hand, snug the drawbar with the drawbar hex wrench in your opposite hand.

   Note: *Do not overtighten the drawbar. Overtightening makes collet removal difficult and will damage the drawbar threads, collet, and the spindle taper. Keep in mind that the taper keeps the collet and tool in place. The drawbar simply aids in seating the taper.*

Removal

1. DISCONNECT MILL FROM POWER!

2. Tighten the headstock lock.



⚠CAUTION

LACERATION HAZARD! Leading edges of end mills and other cutting tools can be very sharp. Protect your hands with gloves or a shop towel when handling.

3. Protect the table surface with a piece of cardboard or hold the cutter/tool with a shop towel to prevent it from falling out of the collet.

4. Using the drawbar hex wrench, loosen the drawbar two turns, but DO NOT remove it.

NOTICE

DO NOT completely unscrew the drawbar before tapping it with the hammer in the next Step. You will damage the threads on the drawbar and the arbor.

5. Put on safety goggles, and tap the hex wrench to unseat the collet from the taper.

6. Unscrew the rest of the drawbar and allow the collet and tool to fall into your hand.

   Note: *When not in use, always remove collets and cutting tools from the spindle taper. Oxidation may cause the collet to seize and make it hard to remove later.*

Headstock Travel (Z-Axis & Rotation)

Your mill has a dovetailed column that allows you to reposition the headstock along the Z-axis and change tooling without losing your alignment with a hole or milling path. For angled milling operations, the headstock can be rotated left and right 45°.

Raising & Lowering

1. Unlock the headstock slide lock lever shown in **Figure 18**.

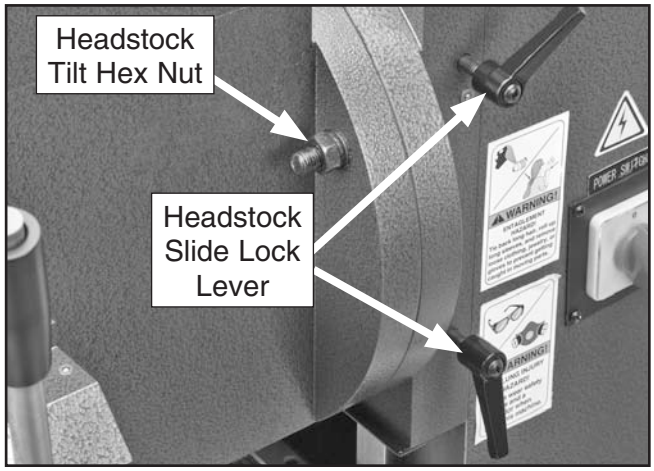


Figure 18. Headstock slide controls.

2. On the control panel push the UP or DOWN buttons (see **Figure 19**) to raise or lower the headstock with the elevation motor.

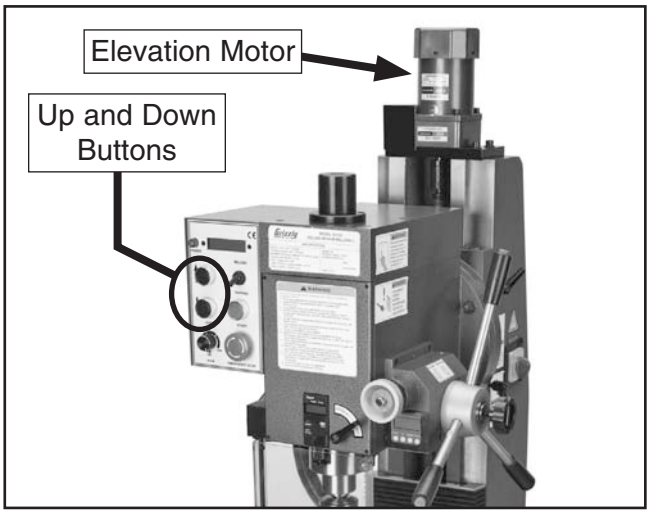


Figure 19. Z-axis control.

3. Observe the height scale on the left side column shown in **Figure 20** to determine the headstock travel. This scale is broken down in ⅛" graduations.

Note: *When the headstock reaches a point of travel where the leadscrew has run out of thread, a stop block (see **Figure 20**) contacts either the upper or lower limit switch to stop the elevation motor from over running the physical limitations of the leadscrew length, which would cause damage.*

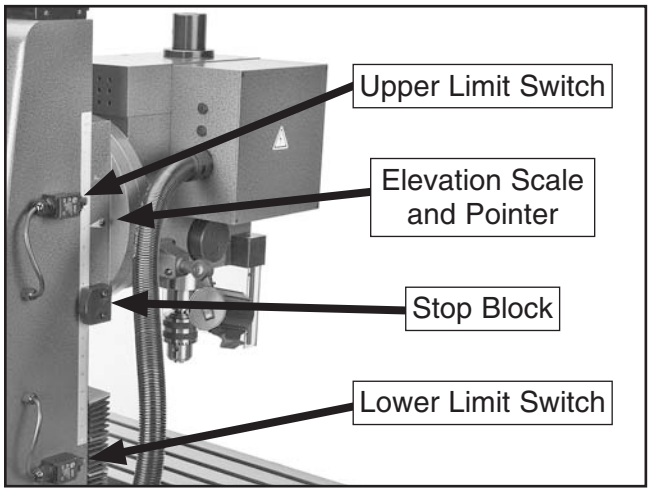


Figure 20. Column switches and scale.

Note: *For maximum spindle rigidity when milling, keep the spindle retracted into the headstock as far as possible with the quill lock lever locked and with the fine feed lock knob tightened.*

Continued on next page ⟶

Tilting

1. DISCONNECT MILL FROM POWER!

2. On the digital protractor shown in **Figure 21**, press the ON/OFF button to turn it ***ON***, and press **CALIBRATE** to set its digital display to zero.

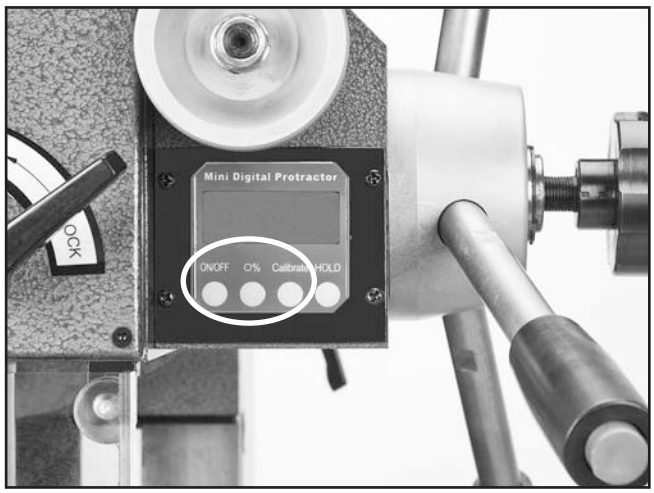


Figure 21. Digital protractor.

3. Press **0%** button to select the type of angle units shown on the digital display.

4. Located on the headstock swivel mount**,** loosen the left, right, and lower headstock tilt lock nuts shown in **Figure 22**.

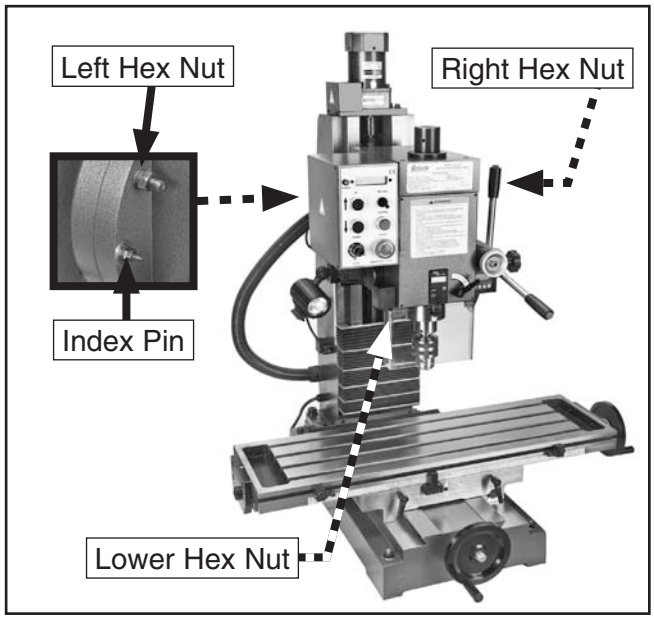


Figure 22. Headstock tilt locking hex nuts.

5. Pull and hold the spring-loaded index pin (see **Figure 22**) outward approximately ¼" to disengage it while you rotate the headstock to the desired angle as shown by the digital protractor.

   Note: *The spring-loaded index pin serves only as a quick way to return or position the headstock close to zero, or 45° to the left or right. It is not intended to be an exact angle stop.*

6. Snug the three hex nuts in place.

7. Place the appropriate angle finding tooling on the workpiece or milling table, and fine-tune your angle adjustment and alignments according to standard machine shop practices.

8. When satisfied with the position of the headstock, tighten the three hex nuts, and recheck your settings.

   Note: *As described earlier in the manual, the digital protractor is equipped with an auto-shutoff feature. So if during setup or milling operations it shuts **OFF**, your angle setting is retained in volatile memory. When the protractor is needed again, push the ON/OFF button and the digital display will retrieve and show the last angle or grade measured.*

Table Travel (X-Axis & Y-Axis)

Using the handwheels, the milling table can be moved in and out (Y-axis), and left and right (X-axis). The handwheels are fitted with a graduated dial shown in Figure **23** that reads in increments of 0.001" where one complete rotation equals ⅛" of table travel. The Y-axis handwheel can be disengaged from the leadscrew, so it can safely freewheel if a power feed is in installed and in use. Both the X and Y leadscrews are 8 TPI and 20mm in diameter.

X-Axis

Fastened to the front of the table is a 24" inch long scale (see **Figure 24**) that is broken down in increments of ⅛". This inch scale is used for general workpiece positioning, and the graduated dial on the handwheel is for precise positioning.

For milling operations where the table is moved in or out in the Y-axis, left and right X-axis movement can be prevented by using the table lock levers located on the front of the table shown in **Figure 25**.

The table also is equipped with adjustable table stops for when X-axis travel must be kept within range.

Y-Axis

For milling operations where the table is moved left or right in the X-axis, in and out Y-axis movement can be prevented by using the table lock levers located under the right-side of the table shown in **Figure 25**.

Figure 23. Handwheel scale.

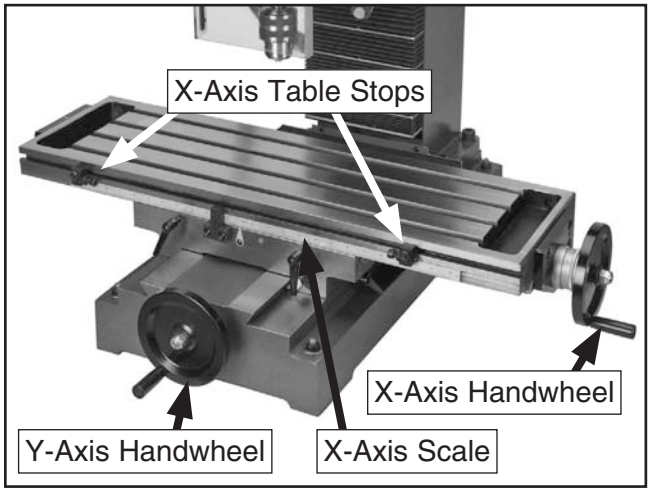


Figure 24. Table X- and Y-axis controls.

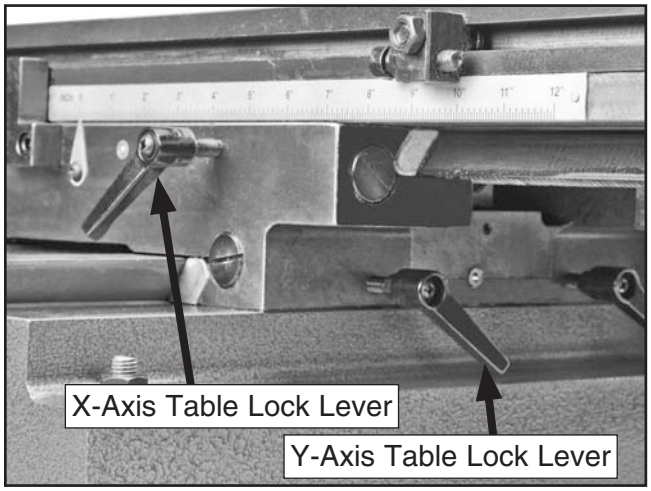


Figure 25. Table locks and scales.

Milling/Drilling Mode

This mill is designed to use end mills, taps, drill bits, and face cutters up to 2⅛" in diameter. The milling table has a coolant trough with drain for an optional cutting fluid system.

⚠WARNING

Overloading the bit, tap, or cutter or using excessive spindle speeds may threaten operator safety from ejected parts or broken tools.

To mill a workpiece:

1. Refer to **Controls** on **Page 19** to understand the functions of the machine controls.

2. Zero the spindle height scale and select units of measure, then close the chip guard.

3. Clamp the workpiece to the milling table, and adjust the headstock to the needed angle, height, depth of cut, and milling path.

   Remember: Milling with the quill fully extended can cause tool chatter. For maximum spindle rigidity, keep the spindle retracted into the headstock as far as possible with the quill lock lever locked and the fine feed lock knob tightened.

4. Refer to **Selecting Spindle RPM** on **Page 21** to find the best spindle RPM.

5. Put your safety goggles on, the turn the power switch ***ON***.

6. Select **MILLING** with the toggle switch. **FORWARD** will be shown in the digital display.

7. Press the ON button to start the mill, and turn the spindle speed dial until the required RPM is shown in the spindle speed readout.

8. Lock the appropriate table lock levers and use an X or Y handwheel to slowly feed the workpiece into the cutter.

Tapping Mode

When in the tapping mode, the spindle direction can immediately alternated between forward and reverse immediately by pressing any of the spindle direction buttons at the end of the downfeed handles. This feature is critical to back the tap out of a hole before it bottoms and snaps off. However, using this feature takes practice and cutting threads into blind holes should be avoided.

⚠WARNING

Overloading the bit, tap, or cutter or using excessive spindle speeds may threaten operator safety from ejected parts or broken tools.

To drill and thread a hole:

1. Refer to **Controls** on **Page 19** to understand the functions of the machine controls.

2. Zero the spindle height scale and select units of measure, and calculate your maximum tapping depth without bottoming-out the tap.

3. Clamp the workpiece to the milling table, and adjust the headstock to the needed height for drilling and tapping.

4. Put on safety goggles, select **MILLING** with the toggle switch. **FORWARD** will be shown in the digital display.

5. Drill your hole with the appropriate speed and drill bit size for the tap. For large holes, drill a pilot hole.

6. Install the tap, and apply tapping fluid.

7. Select **TAPPING** with the toggle switch, press the ON button, and turn the spindle speed dial to 100 RPM.

8. Begin threading, but without disengaging the tap from the threads, frequently push the spindle direction buttons to alternate spindle rotation back and forth to eject chips from the tap and hole in order to prevent chip loading and tap breakage.

SECTION 5: ACCESSORIES

⚠WARNING

Some aftermarket accessories can be installed on this machine that could cause it to function improperly, increasing the risk of serious personal injury. To minimize this risk, only install accessories recommended for this machine by Grizzly.

NOTICE

Refer to the newest copy of the Grizzly Catalog for other accessories available for this machine.

H8179—Horizontal Milling Table
Take advantage of the G0720R tilting headstock feature. Install this lifted cast-iron milling table for the correct workpiece height when making special tilted headstock milling operations.

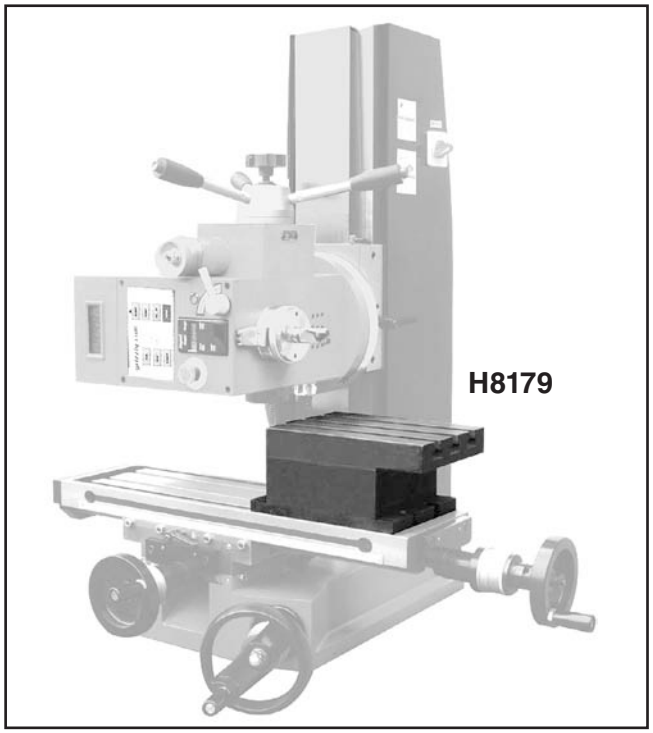


Figure 26. Horizontal milling worktable.
Note: *Model G0619 Mill/Drill Shown*.

T10057—Tapping Attachment
Safely use your benchtop milling machine to tap threads into blind holes. An internal adjustable clutch mechanism allows you to adjust slip, so if a tap bottoms in a blind hole before the spindle is reversed, the clutch slips without the tap shearing off. You can tap 3/16" to 1/2" or M5 to M12 threads. Maximum speed is 700 RPM.

Note: *To use this tapping attachment on the Model G0720R mill, you must purchase the G1427 R-8/ MT #2 Morse Taper sleeve.*

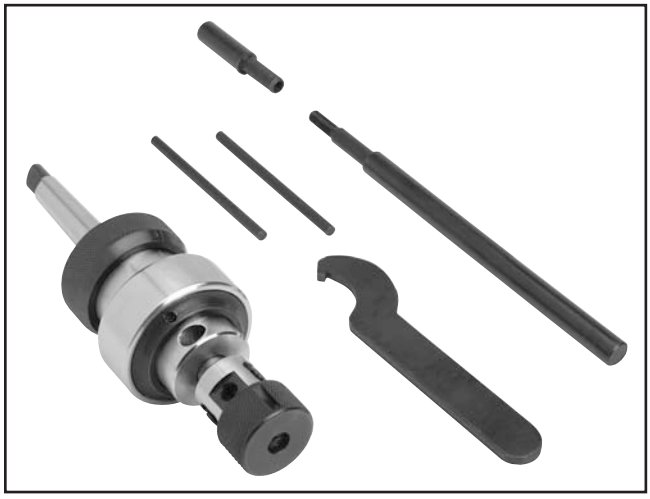


Figure 27. T10057 Tapping Attachment.

G2861—Face Mill
G4051—Carbide Insert for Face Mill
This 2 1/2" face mill accepts four carbide inserts (not included). Comes with an R-8 arbor.

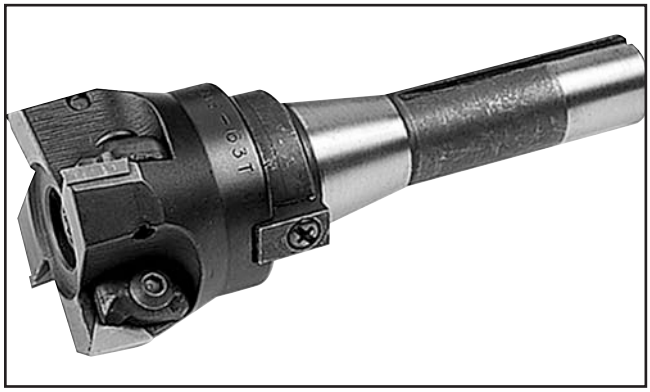


Figure 28. G2861 Face Mill.

Call 1-800-523-4777 To Order

G9760—20-PC. 2 & 4 Flute TiN End Mill Set.
Includes these sizes and styles in two and four flute styles: 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/8", 11/16", and 3/4".

Figure 29. G9760 20-PC End Mill Set.

G9765—9-PC. Ball End Mill Set
Features 2 flute ball nose end mills. Includes the following sizes: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4".

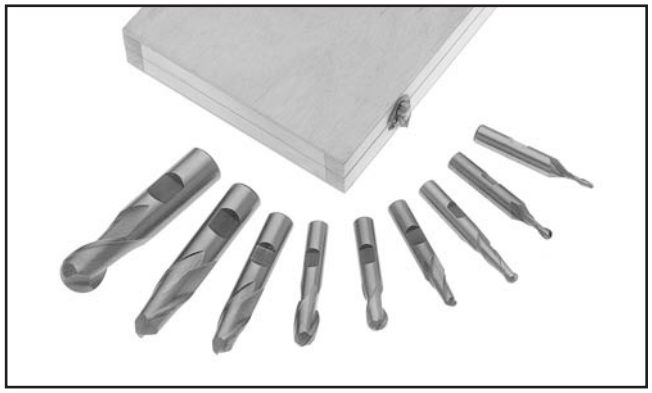


Figure 30. G9765 9 PC. Ball End Mill Set.

H3022—Measurement Tool Set
Includes magnetic base, 1" dial indicator (.001"), and 6" dial caliper (.001"). The extremely low price has made this a very popular seller!

Figure 31. H3022 Measurement Tool Set.

G5641—1-2-3 Blocks
G9815—Parallel Set

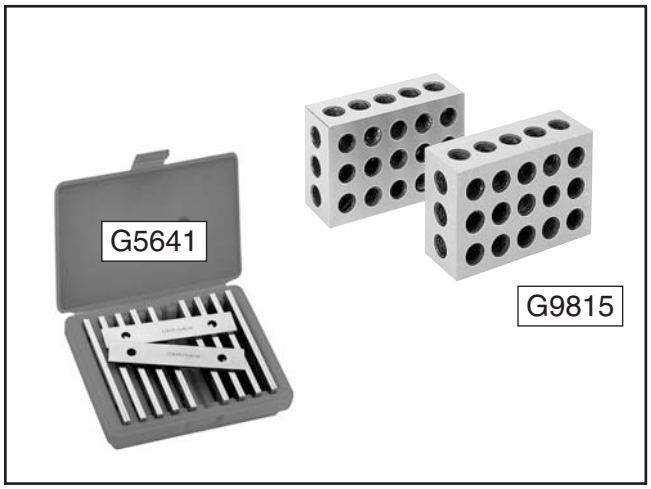


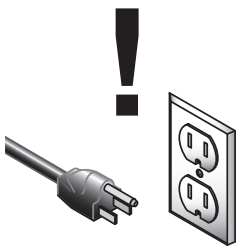
Figure 32. G5641 1-2-3 Blocks, G9815 Parallel Set, and H5556 Edge Finder Set.

G9324—Boring Head Combo Set
Hardened and ground adjusting screws along with a wide base design guarantee a long life and trouble-free use. Includes a 3" boring head, R-8 shank with 1 1/2"-18 TPI, and a 12 piece 3/4" boring bar set.

Figure 33. G9324 Boring Head Combo Set.

Call 1-800-523-4777 To Order

SECTION 6: MAINTENANCE



⚠WARNING

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

Schedule

Typically, each operator is responsible for ensuring proper care of the equipment. We strongly recommend all operators make a habit of following the daily maintenance procedures.

Ongoing

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

- Loose mounting bolts or fasteners.
- Worn, frayed, cracked, or damaged wires.
- Chip guard removed.
- EMERGENCY STOP button not working correctly or not requiring you to reset it before starting the machine again.
- Any other unsafe condition.

Daily, Before Operations

- Lubricate the ball oilers.
- Turn spindle speed dial all the way down.

Daily, After Operations

- Vacuum/clean all swarf from table, slides, and way cover.
- Wipe down all unpainted or machined surfaces with an oiled rag.
- Push the EMERGENCY STOP button and shut ***OFF*** the master power switch (to prevent accidental startup).
- Remove any rotary tables, vises, fixtures, or workpieces from the table to prevent rusting the table surface.

Monthly

- Clean/lubricate the leadscrew.
- Check gib adjustment.

Annually

- Disconnect machine from power, open electrical box, and clean with compressed air or a vacuum.

Lubrication

Regular lubrication will ensure your mill performs at its highest potential. Place two to three drops of a lathe way oil directly on the exposed table ways, the table, and any other exposed unpainted metal and work it into the metal with a clean rag.

You may also protect the unpainted cast iron surfaces with regular applications of products like G96® Gun Treatment, SLIPIT®, or Boeshield® T-9. Lubricate these before and after mill use with a high quality way oil like what is shown in **Figure 34**.

Figure 34. Primrose Armor Plate Lubricant.

Ball Oilers

This mill has nine ball oilers shown in **Figures 35–39**. Make sure to use an oil gun fitted with a rubber tip that is wide enough to seal the ball oiler inlet. This seal allows the gun to build hydraulic pressure in order to flush out contaminants and deliver fresh oil to components at the end of long passages.

Do not use oil guns equipped with a sharp steel lance tip. These narrow tips often seal poorly and oil is not pumped deep into the system. Steel tips can also dislodge the sealing ball permanently exposing the system to contamination.

Items Needed:	**Qty**
Rubber-Tipped Oil Gun Filled With Way Oil	1
Clean Rags	1

Figure 35. Headstock ball oiler locations.

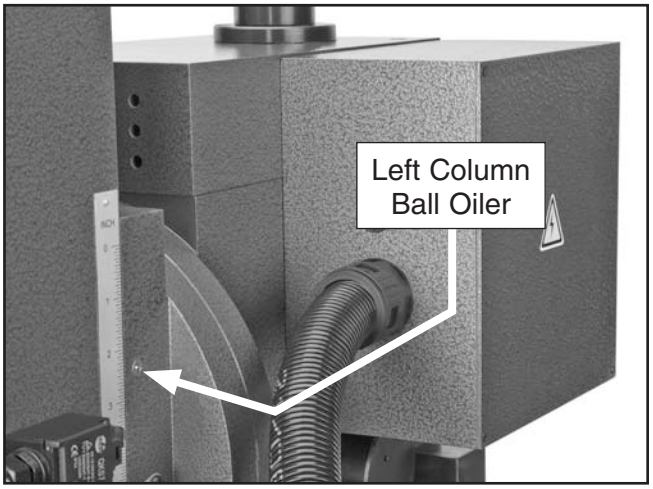


Figure 36. Left column ball oiler location.

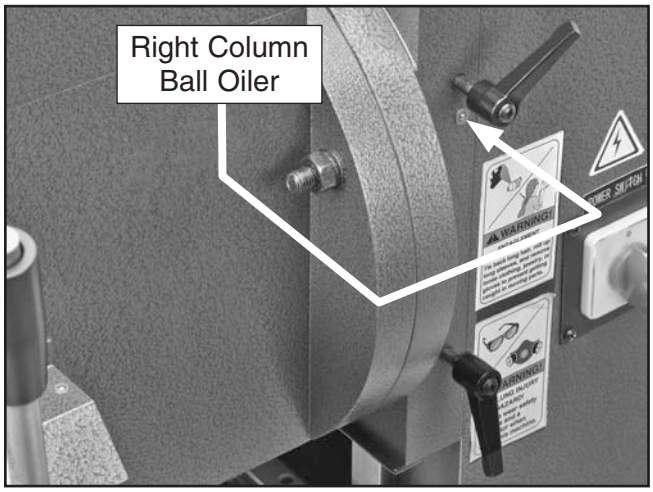


Figure 37. Right column ball oiler location.

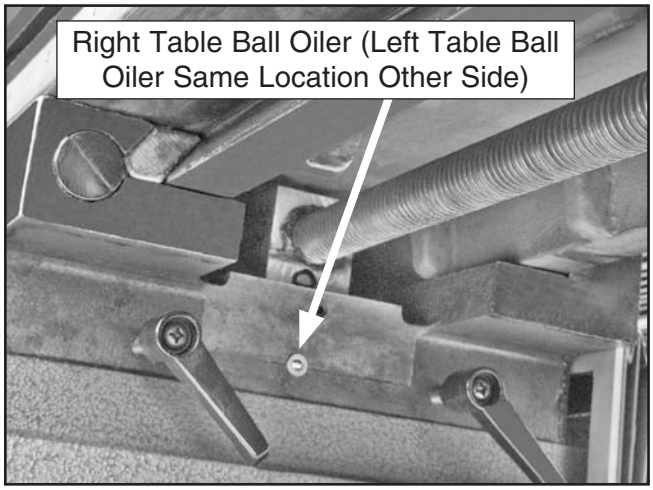


Figure 38. Table slide ball oiler locations.

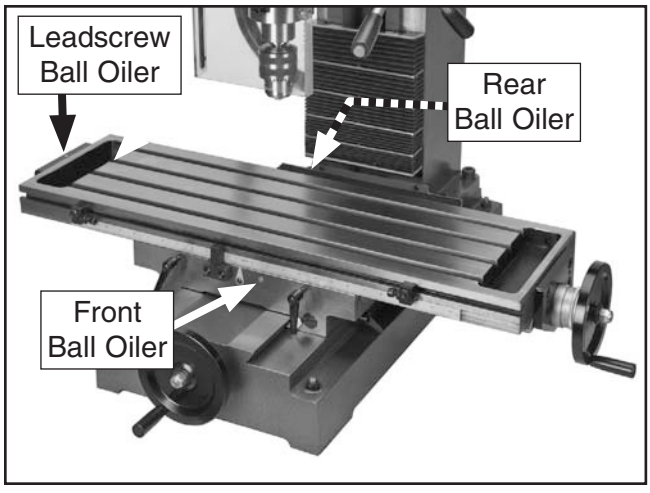


Figure 39. Table and base ball oiler locations.

Leadscrews

Clean and relubricate the leadscrews monthly. Repeat this task more frequently if the machine is under heavy use or operates in adverse conditions.

Items Needed:	Qty
Tube of White Lithium Grease	1
Paint Brush for Grease Application	1
Mineral Spirits	1 Cup

To lubricate the leadscrews:

1. Move the headstock to the highest position.
2. DISCONNECT MILL FROM POWER!
3. Remove the way cover (see **Figure 41**) for lower column leadscrew access.
4. Using mineral spirits, clean the upper and lower portions of the column leadscrew.
5. Lightly coat the entire leadscrew with lithium grease.
6. Connect the mill to power, and run the headstock up and down to spread the grease.
7. Wipe-off excess grease with a clean rag.
8. Move the table to the far right and all the way forward to expose the leadscrew, as shown in **Figure 40**.
9. Clean and lubricate the table leadscrews in the same manner as the column leadscrew.

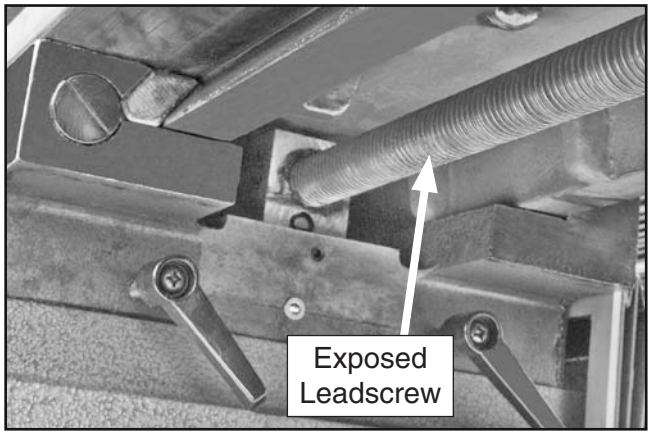


Figure 40. Table leadscrew.

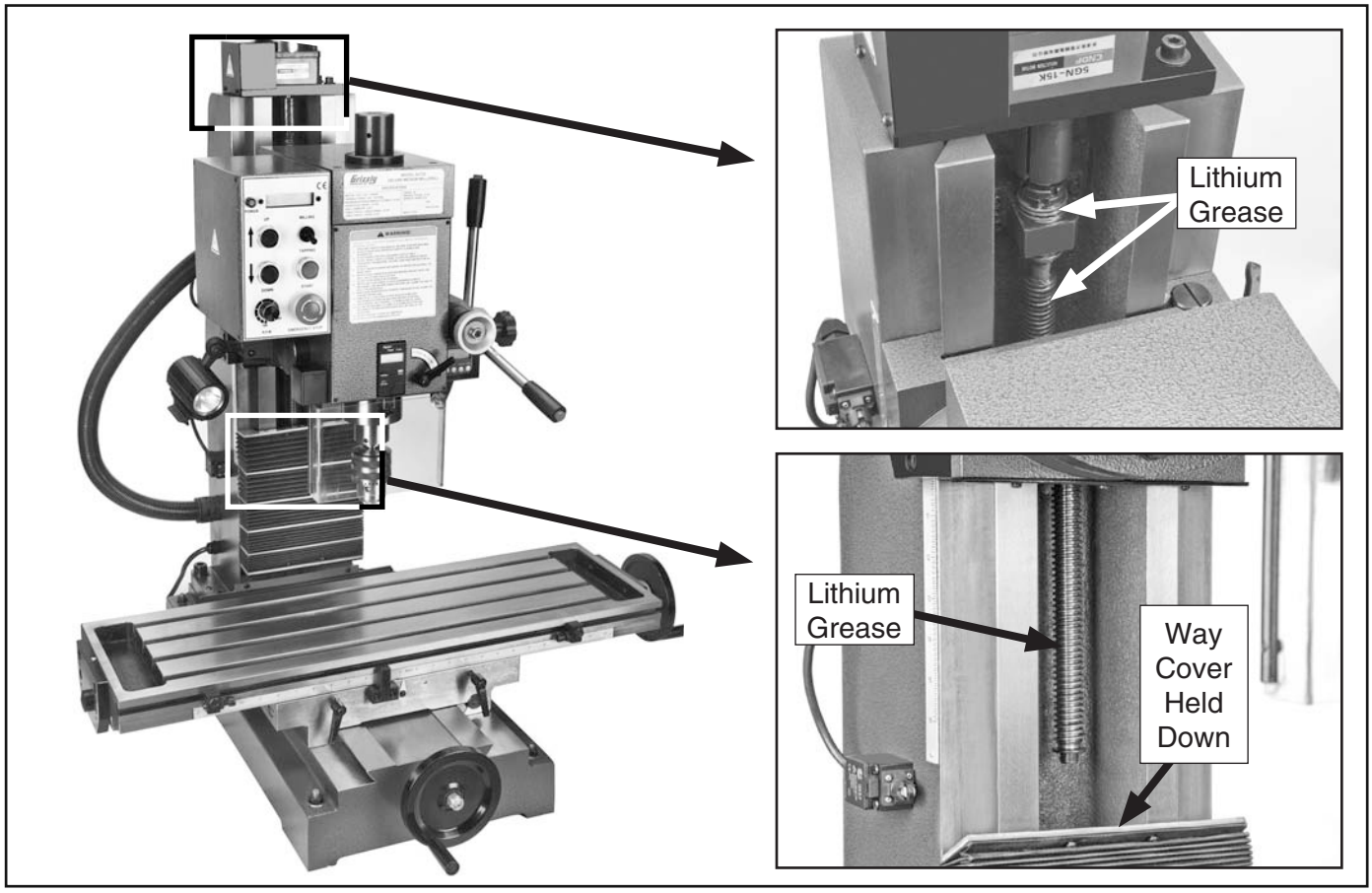


Figure 41. Headstock leadscrew access and lubrication.

Battery Replacement

When the batteries for the digital spindle scale need replacement, the display will be dim or not display at all.

When the batteries need replacement in the mini digital protractor, the battery icon shown in **Figure 42** will stay on the display until the batteries are replaced.

Only use the batteries listed or comparable replacements. Should the digital screen blink or remain blank after replacement, the battery chosen is incorrect.

Both of these digital measuring tools are equipped with volatile memory, meaning that when the battery is removed, or completely discharges, the last unit measured is lost from memory.

When putting the mill is into storage, remove the batteries to protect against damage from potential battery leakage.

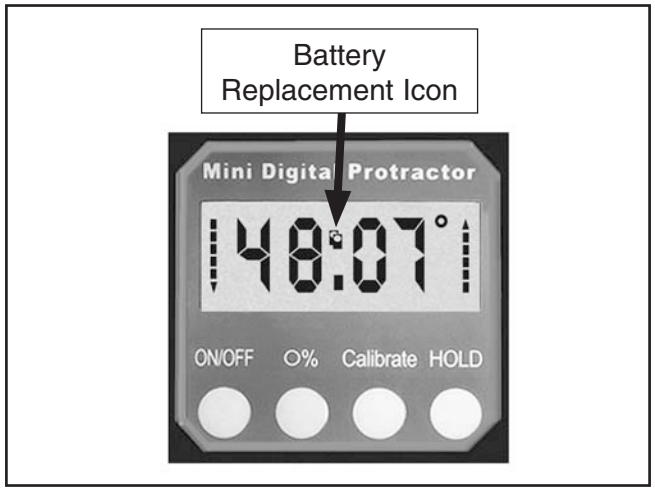


Figure 42. Battery replacement icon.

Digital Spindle Height Gauge

Items Needed: **Qty**
Battery (Silver Cell SR44)..... 1

To replace the battery:

1. Slide the battery cover to the right.

2. Replace the battery with the positive side facing out, as shown in **Figure 43**.

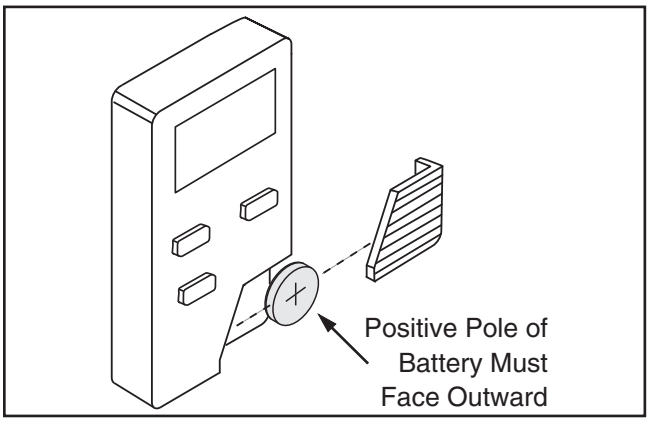


Figure 43. Digital height scale battery replacement.

Mini Digital Protractor

Items Needed: **Qty**
Battery (Lithium CR2032 3V) 3

To replace the batteries:

1. Remove the four protractor retaining screws, the retainer, and the protractor.

2. Unthread the battery cover and replace the three batteries with the positive side facing out, as shown in **Figure 44**.

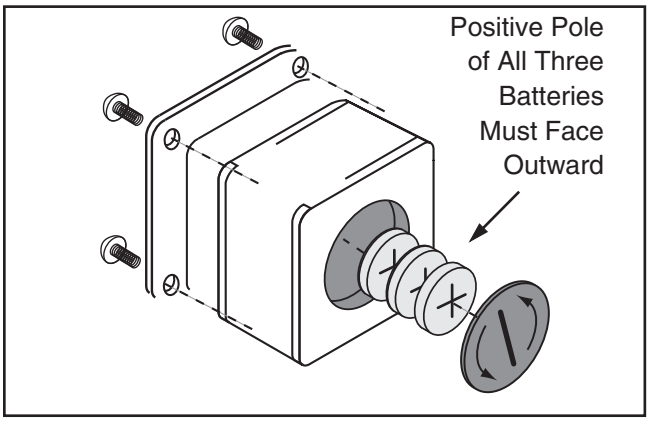


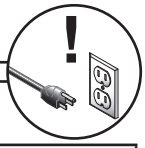
Figure 44. Digital protractor battery replacement.

3. Reassemble in reverse order.

SECTION 7: SERVICE

Review the troubleshooting and procedures in this section to fix 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



Symptom	Possible Cause	Possible Solution
Motor will not start.	1. Emergency stop button is pressed. 2. Chip guard switch at fault. 3. Main power switch at fault. 4. Blown electrical box fuse . 5. Blown inverter fuse. 6. Shorted capacitor. 7. Shorted transformer. 8. Open circuit in motor or loose connections.	1. Reset switch or replace bad switch. 2. Fully close chip guard, or replace bad switch. 3. Turn dial on, or replace bad switch. 4. Repair for overload and install a new fast-blow fuse. 5. Repair for overload and install a new fast-blow fuse. 6. Replace both capacitors. 7. Replace transformer. 8. Inspect circuit boards, wiring connections, plugs, and repair/ replace as required.
Feed handle tapping button does not work.	1. Machine is not in "Tapping Mode." 2. Tapping button slip ring switch is at fault. 3. General electrical problem.	1. Move the mode switch to the tapping position. 2. Replace tapping button slip ring switch. 3. Inspect circuit boards, wiring connections, plugs, and repair/ replace as required.
Poor surface finishes.	1. Feed rate too fast. 2. Dull cutter. 3. Lock not tightened down. 4. Gibs loose.	1. Slow feed rate. 2. Always use newly sharpened cutters. 3. Tighten column and table locks when possible to maintain rigidity. 4. Adjust gib.
Vibration when running or cutting.	1. Feed rate too high. 2. Loose table. 3. Loose gibs.	1. Slow feed rate or adjust RPM. 2. Tighten table locks. 3. Adjust gib.
Headstock lift motor struggles to lift headstock.	1. Headstock lock or gib is at fault. 2. Headstock lead screw is binding. 3. Motor or bearings at fault.	1. Loosen/replace lock lever and adjust gib. 2. Clean and relubricate headstock leadscrew and gears. 3. Replace motor or offending bearings.

Gib Adjustment

The headstock and table on this mill each use a long steel wedge called a gib that is positioned between the component and its dovetailed-ways. At the end of each gib is a screw, as shown in **Figure 45**.

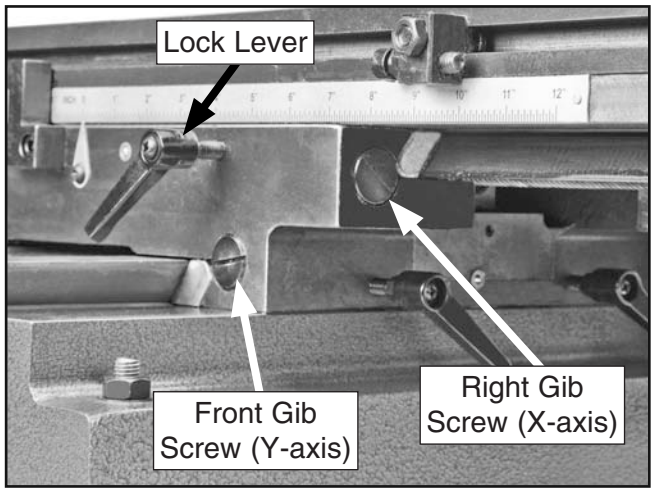


Figure 45. Table gib screws and lock levers.

The screws at each end of the gib oppose one another to move and hold the gib in a forward or aft position. Depending which direction the gib is moved and held, the space between the sliding ways is increased or decreased to control the rigidity of the headstock and table.

The leadscrew and leadscrew nuts on this machine are non-adjustable and are only replaced as a matched set. Clean and relubricate the ways, slides, and leadscrews before attempting to adjust the gibs.

NOTICE

When adjusting gibs, keep in mind that the goal of gib adjustment is to remove unnecessary sloppiness from the slide without causing binding and excessive leadscrew nut wear.

Table Gib Adjustment

1. DISCONNECT MILL FROM POWER!

2. Loosen the table lock levers (see **Figure 45**) so the table is free to slide.

3. For the X-axis gib, adjust as follows:

   —To increase slide tension, loosen the left gib screw ⅛-turn, and tighten the right gib screw ⅛-turn.

   —To decrease slide tension, loosen the right gib screw ⅛-turn, and tighten the left gib screw ⅛-turn.

4. For the Y-axis gib, remove the rear way cover and adjust as follows:

   —To increase slide tension, loosen the rear gib screw ⅛-turn, and tighten the front gib screw ⅛-turn.

   —To decrease slide tension, loosen the front gib screw ⅛-turn, and tighten the rear gib screw ⅛-turn.

5. Repeat adjustments as necessary until the gib screw drag is acceptable, and re-install the way cover.

6. When properly adjusted, there should be slight resistance felt in the handwheels when the table is moved.

Headstock Gib Adjustment

1. DISCONNECT MILL FROM POWER!

2. Loosen the headstock lock levers shown in **Figure 46.**

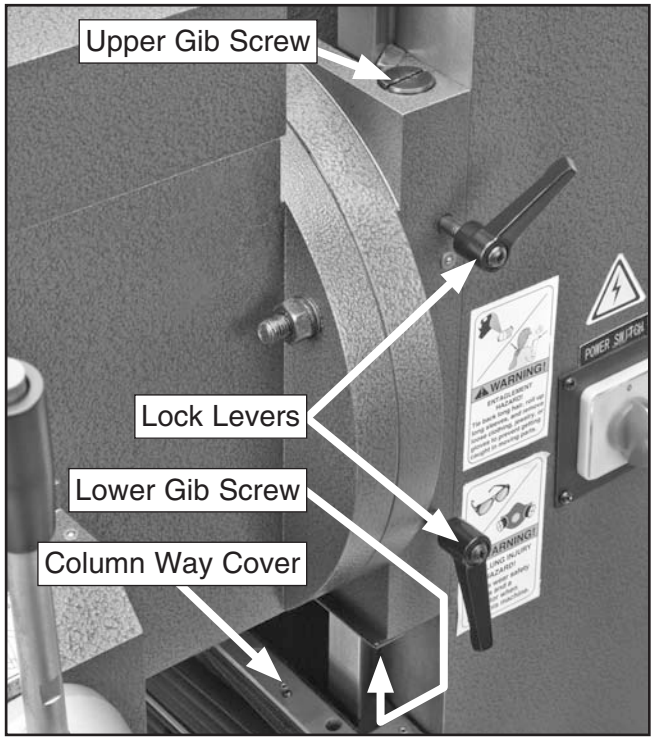


Figure 46. Headstock gib adjustment.

3. Remove the column way cover (see **Figure 46**) for lower column leadscrew access.

4. For the Z-axis or headstock gib, adjust as follows:

   —To increase the headstock slide tension, loosen the lower gib screw 1/8-turn, and tighten the upper gib screw 1/8-turn.

   —To decrease the headstock slide tension, loosen the upper gib screw 1/8-turn, and tighten the lower gib screw 1/8-turn.

   When properly adjusted, there should be a slight pre-loaded fit between the column and the headstock.

5. Reinstall the column way cover.

Machine Storage

If the machine is not properly prepared for storage, it may develop rust or corrosion. Use the recommendations in this section to ensure that the mill remains in good condition for later use.

To prepare your machine for storage:

1. Remove any residual cutting fluid from the table and machine body.

2. DISCONNECT MILL FROM POWER!

3. Remove any tooling from the spindle.

4. Thoroughly clean all unpainted, bare metal surfaces, then apply a liberal coat of way oil.

5. Lubricate the machine as outlined in the lubrication section.

6. Remove batteries from the digital depth scale and the mini digital protractor.

7. Place a few moisture-absorbing desiccant bags inside of the electrical box.

8. Cover and place the machine in a dry area that is out of direct sunlight and away from hazardous fumes, paint, solvents, or gas. Fumes and sunlight can bleach or discolor paint and make plastic guards cloudy.

9. Twice a year, depending on the ambient humidity levels in the storage environment, wipe down the machine with a rust prevention compound.

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. 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.

⚠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

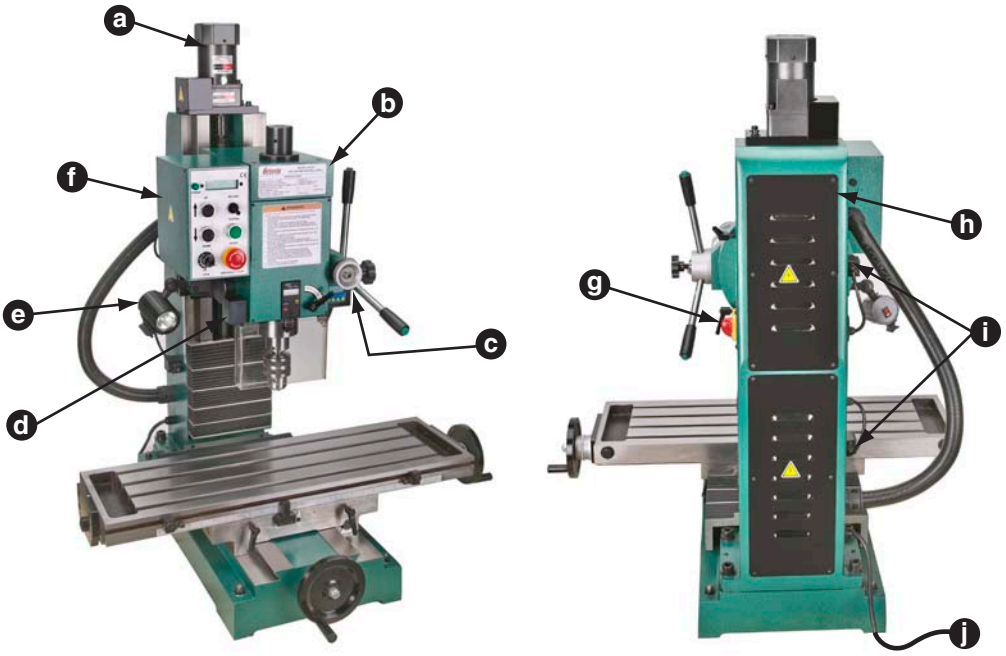
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.grizzly.com.

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		

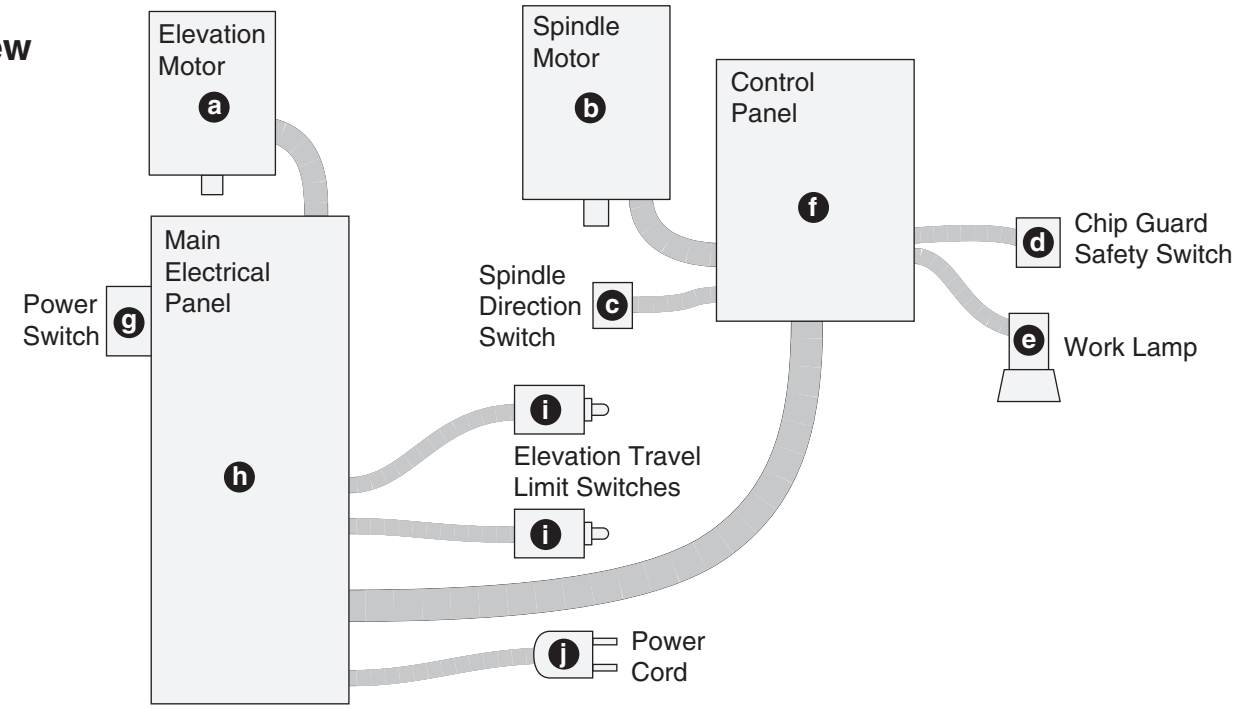
Wiring Overview

Component Locations



- **a** Elevation Motor (See **Page 39** and **Figure 54**)
- **b** Spindle Motor (See **Page 40** and **Figure 54**)
- **c** Spindle Direction Switch (See **Page 40** and **Figure 52**)
- **d** Chip Guard Safety Switch (See **Page 40** and **Figure 51**)
- **e** Work Lamp (See **Page 40** and **Figure 49**)
- **f** Control Panel (See **Page 40** and **Figure 50**)
- **g** Main Power Switch (See **Page 39** and **Figure 48**)
- **h** Main Electrical Panel (See **Page 39** and **Figure 47**)
- **i** Elevation Travel Limit Switches (See **Page 39** and **Figure 49**)
- **j** Power Cord (See **Page 39** and **Figure 49**)

System Overview



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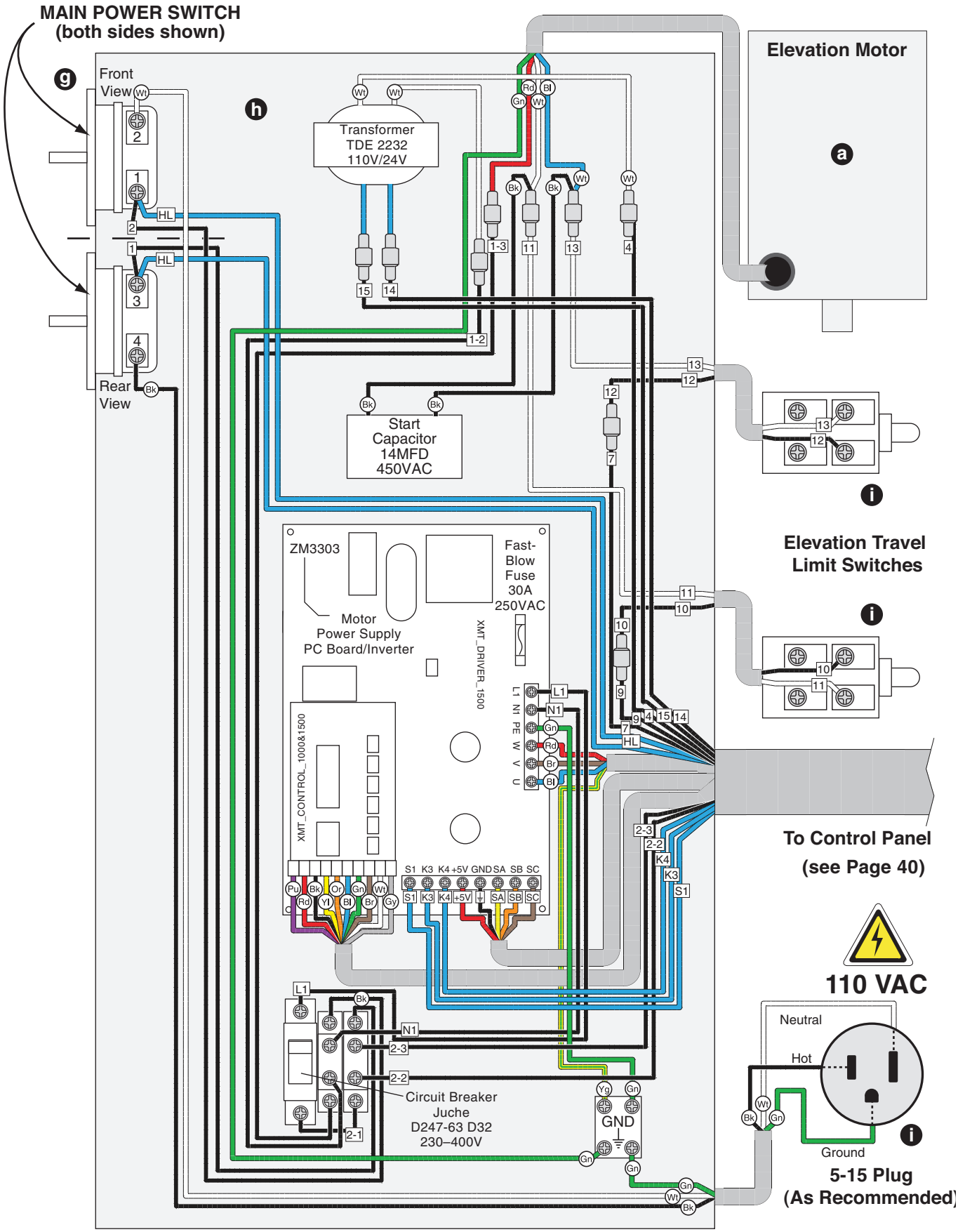
Wiring Diagram



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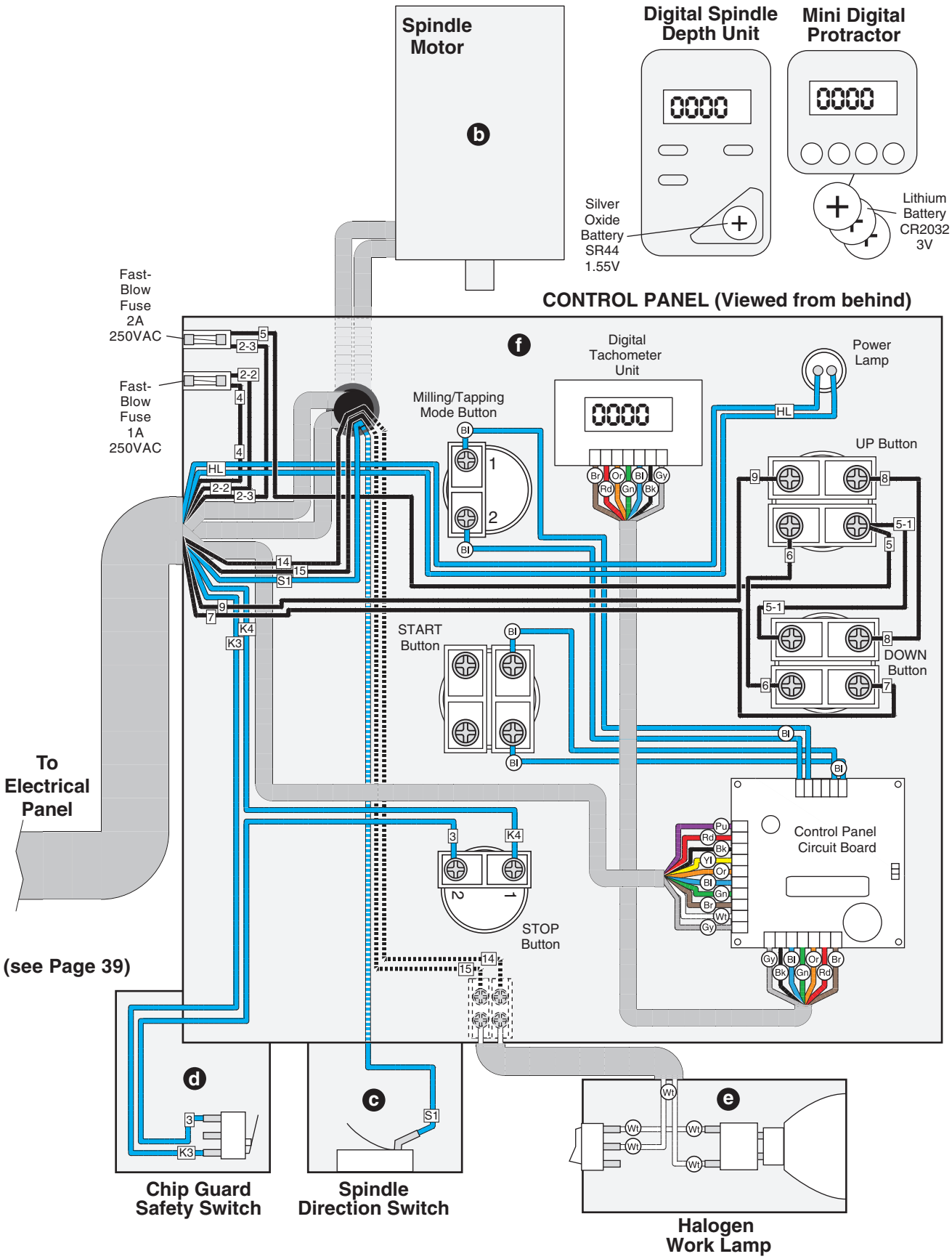
Wiring Diagram



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Electrical Components

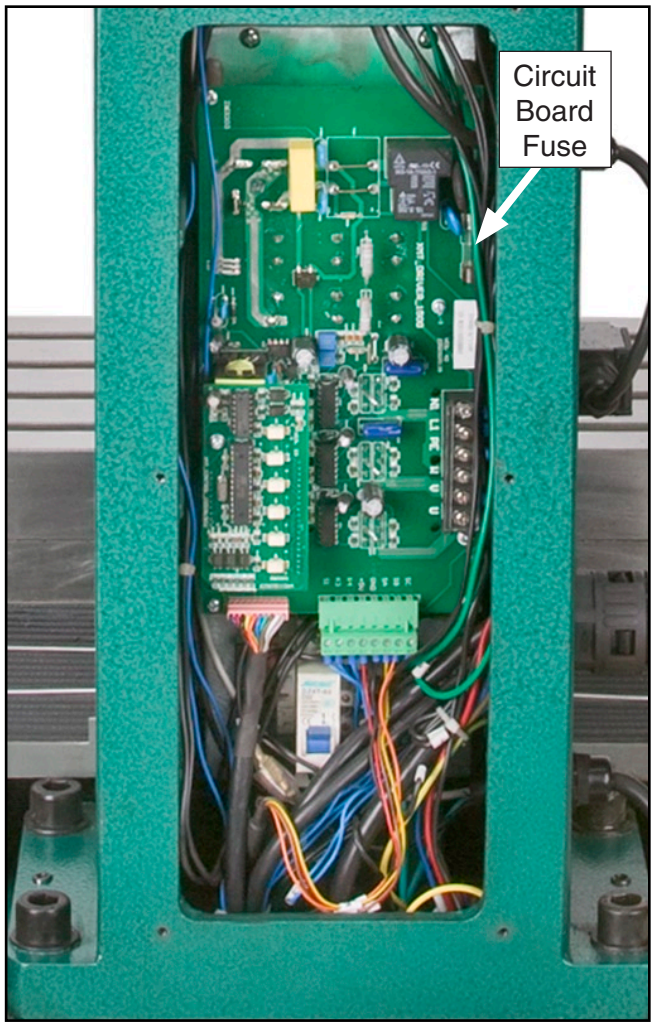

Figure 47. Motor power supply circuit board.

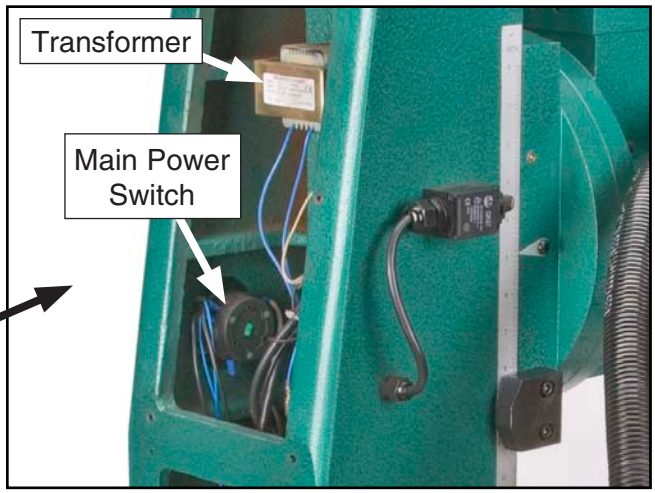

Figure 48. Main power switch and transformer.

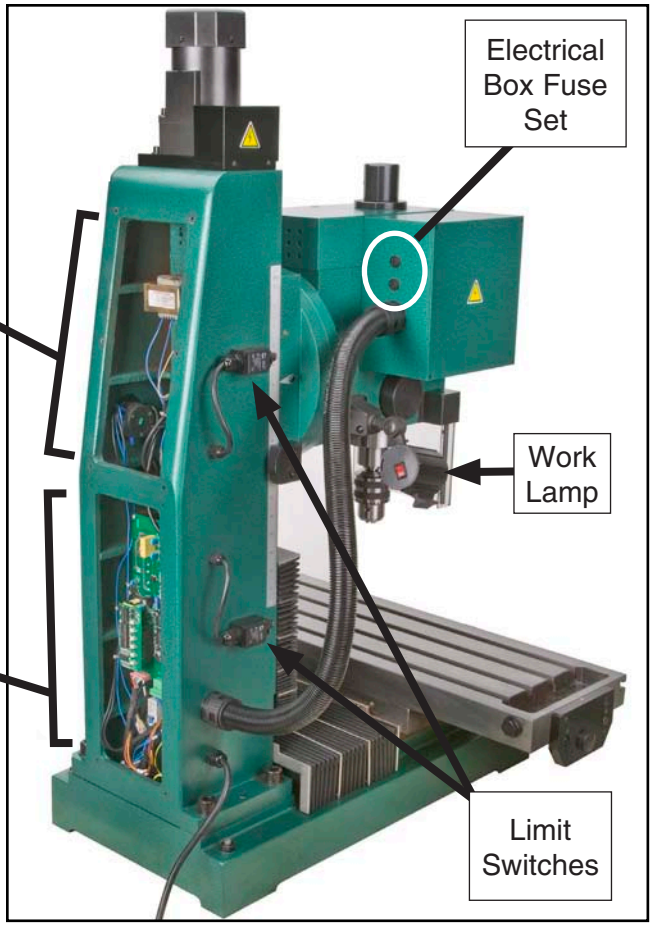

Figure 49. Rear view electrical components.

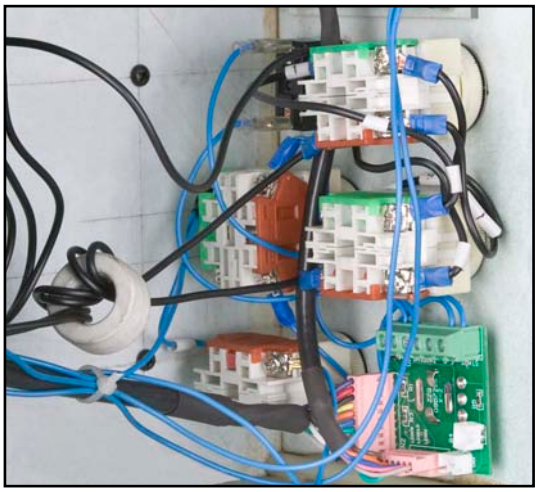

Figure 50. Control panel electrical.

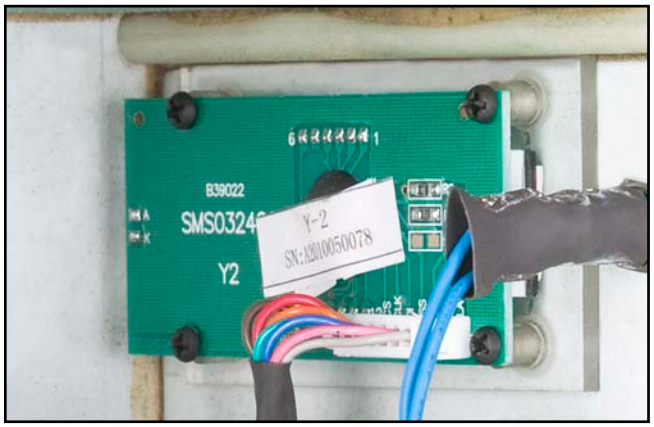

Figure 53. Tachometer electrical.

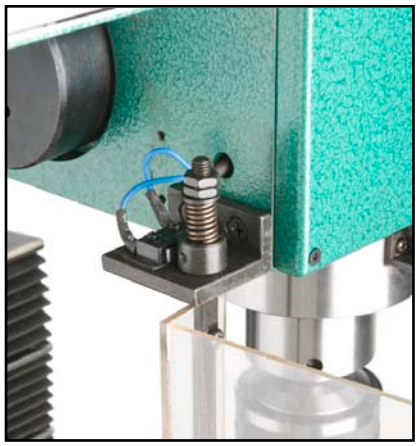

Figure 51. Chip guard safety switch.

Figure 52. Tapping button slip ring contact.

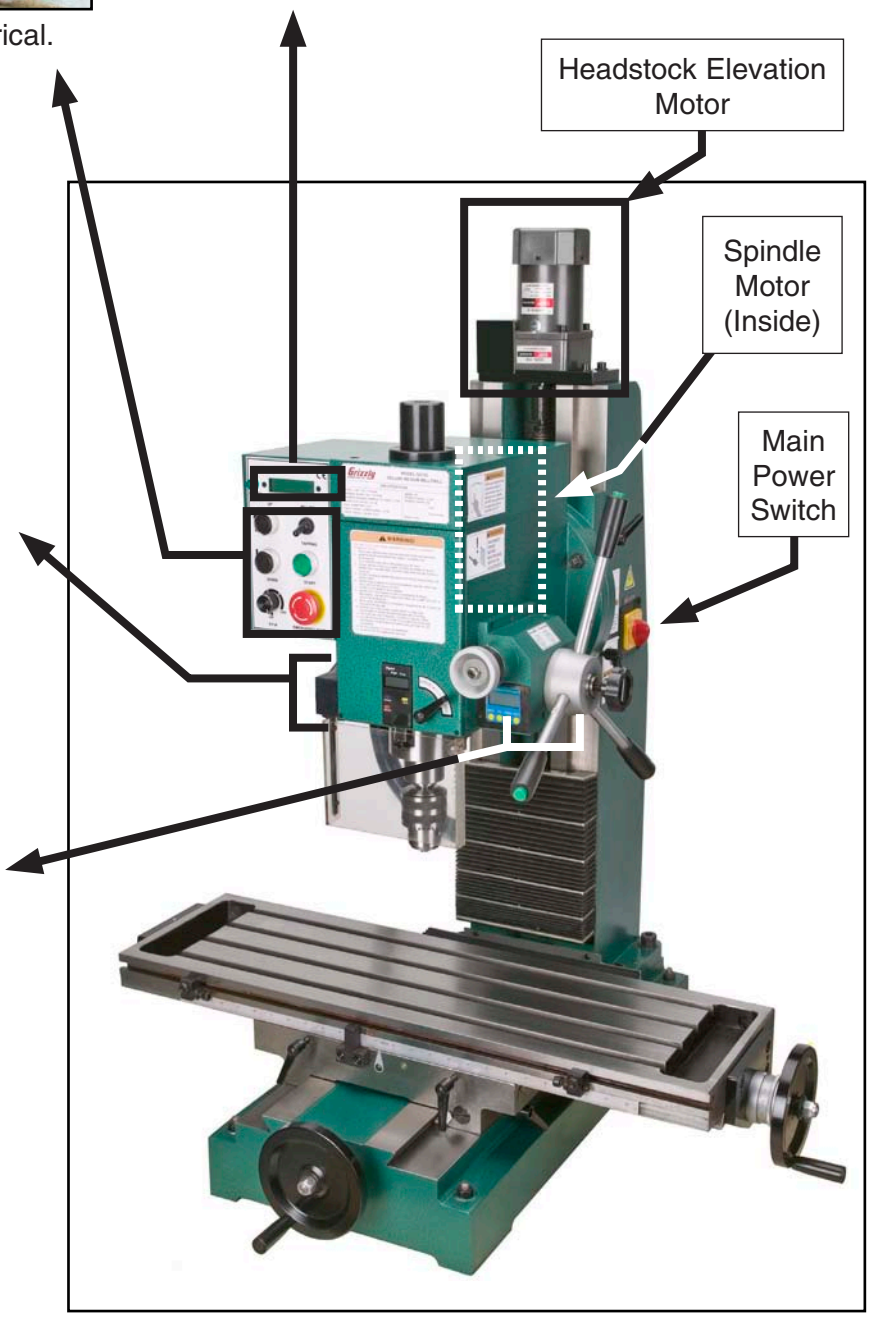

Figure 54. Front view electrical components.

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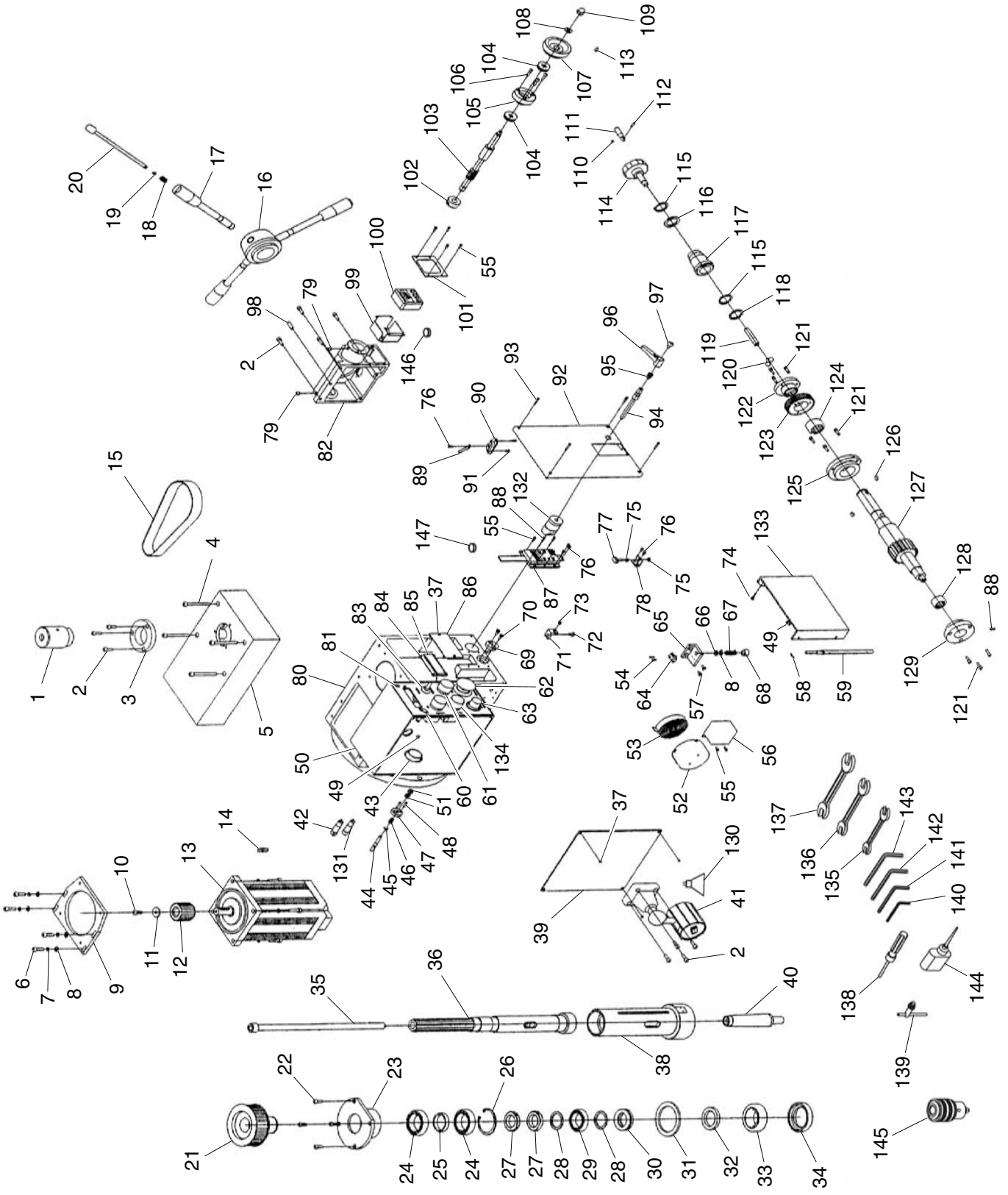
SECTION 9: PARTS

Head Breakdown



Head Parts List

REF	PART #	DESCRIPTION
1	P0720001	DRAWBAR COVER
2	PCAP24M	CAP SCREW M5-.8 X 16
3	P0720003	FLANGE
4	PCAP49M	CAP SCREW M6-1 X 60
5	P0720005	TOP HEAD COVER
6	PCAP02M	CAP SCREW M6-1 X 20
7	PLW03M	LOCK WASHER 6MM
8	PW03M	FLAT WASHER 6MM
9	P0720009	SPINDLE MOTOR MOUNTING PLATE
10	PCAP27M	CAP SCREW M6-1 X 14
11	P0720011	MOTOR FLAT WASHER 6MM
12	P0720012	MOTOR PULLEY
13	P0720013	SPINDLE MOTOR 2HP 220VDC
14	PK143M	KEY 6 X 6 X 25
15	P0720015	RIBBED BELT GATES 535-5M-25
16	P0720016	COARSE DOWNFEED LEVER HUB
17	P0720017	COARSE DOWNFEED LEVER
18	P0720018	COMPRESSION SPRING 0.8 X 6 X 25
19	PR45M	INT RETAINING RING 10MM
20	P0720020	SPINDLE ROTATION BUTTON
21	P0720021	SPINDLE PULLEY
22	PS57M	PHLP HD SCR M5-.8 X 14
23	P0720023	BEARING FLANGE
24	P6908ZZ	BALL BEARING 6908ZZ
25	P0720025	BEARING SPACER
26	PR38M	INT RETAINING RING 62MM
27	P0720027	SPANNER NUT
28	P0720028	BEARING SPACER
29	P6907ZZ	BALL BEARING 6907ZZ
30	P8107	THRUST BEARING 8107
31	P0720031	BEARING SPACER
32	P0720032	BEARING SEAL
33	P32009	TAPERED ROLLER BEARING 32009
34	P0720034	BOTTOM QUILL SEAL
35	P0720035	DRAWBAR 7/16-20 X 13-1/2
36	P0720036	SPINDLE R8
37	P0720037	TAP SCREW 2.9 X 6.5
38	P0720038	QUILL
39	P0720039	CONTROL PANEL SIDE COVER
40	P0720040	CHUCK ARBOR R8-B18
41	P0720041	WORK LIGHT ASSEMBLY
42	P0720042	FUSE 1A FAST-BLOW 5 X 20MM
43	P0720043	STRAIN RELIEF
44	P0720044	TAPER PIN
45	PEC13M	E-CLIP 5MM

REF	PART #	DESCRIPTION
46	P0720046	COMPRESSION SPRING 0.8 X 10 X 14
47	P0720047	FLANGE PLASTIC
48	PS59M	PHLP HD SCR M3-.5 X 14
49	PS74M	PHLP HD SCR M4-.7 X 14
50	P0720050	CONTROL PANEL BOX
51	PN01M	HEX NUT M6-1
52	P0720052	SPRING COVER
53	P0720053	TORSION RETURN SPRING
54	PS117M	PHLP HD SCR M2-.4 X 10
55	PS79M	PHLP HD SCR M3-.5 X 8
56	P0720056	GUARD AXLE BRACKET
57	PS38M	PHLP HD SCR M4-.7 X 10
58	PS111M	PHLP HD SCR M3-.5 X 4
59	P0720059	GUARD AXLE
60	P0720060	POWER LAMP ZD10
61	P0720061	START BUTTON LAY7
62	P0720062	EMERGENCY STOP BUTTON LAY7
63	P0720063	SPINDLE SPEED DIAL
64	P0720064	GUARD SAFETY SWITCH
65	P0720065	SAFETY SWITCH BRACKET
66	PN01M	HEX NUT M6-1
67	P0720067	COMPRESSION SPRING 1.4 X 8.2 X 24
68	P0720068	BUSHING
69	P0720069	FLANGE
70	PS02M	PHLP HD SCR M4-.7 X 12
71	P0720071	STOP DOG
72	PS38M	PHLP HD SCR M4-.7 X 10
73	P0720073	MAGNET
74	PS07M	PHLP HD SCR M4-.7 X 8
75	PN04M	HEX NUT M4-.7
76	PS37M	PHLP HD SCR M6-1 X 6
77	P0720077	SCALE SCREW
78	P0720078	DIGITAL SCALE BRACKET
79	PLUBE001M	TAP-IN BALL OILER 6MM
80	P0720080	HEAD CASTING
81	P0720081	CONTROL PANEL PLATE
82	P0720082	WORM GEAR COVER
83	P0720083	MODE TOGGLE SWITCH
84	P0720037	TAP SCREW 2.9 X 6.5
85	P0720085	LCD SCREEN Y-2
86	P0720086	SPINDLE SPEED READOUT
87	P0720087	DIGITAL SPINDLE HEIGHT SCALE
88	P0720088	PIN 3 X 12 PLASTIC
89	P0720089	BUS BAR
90	P0720090	CONTACT RACK

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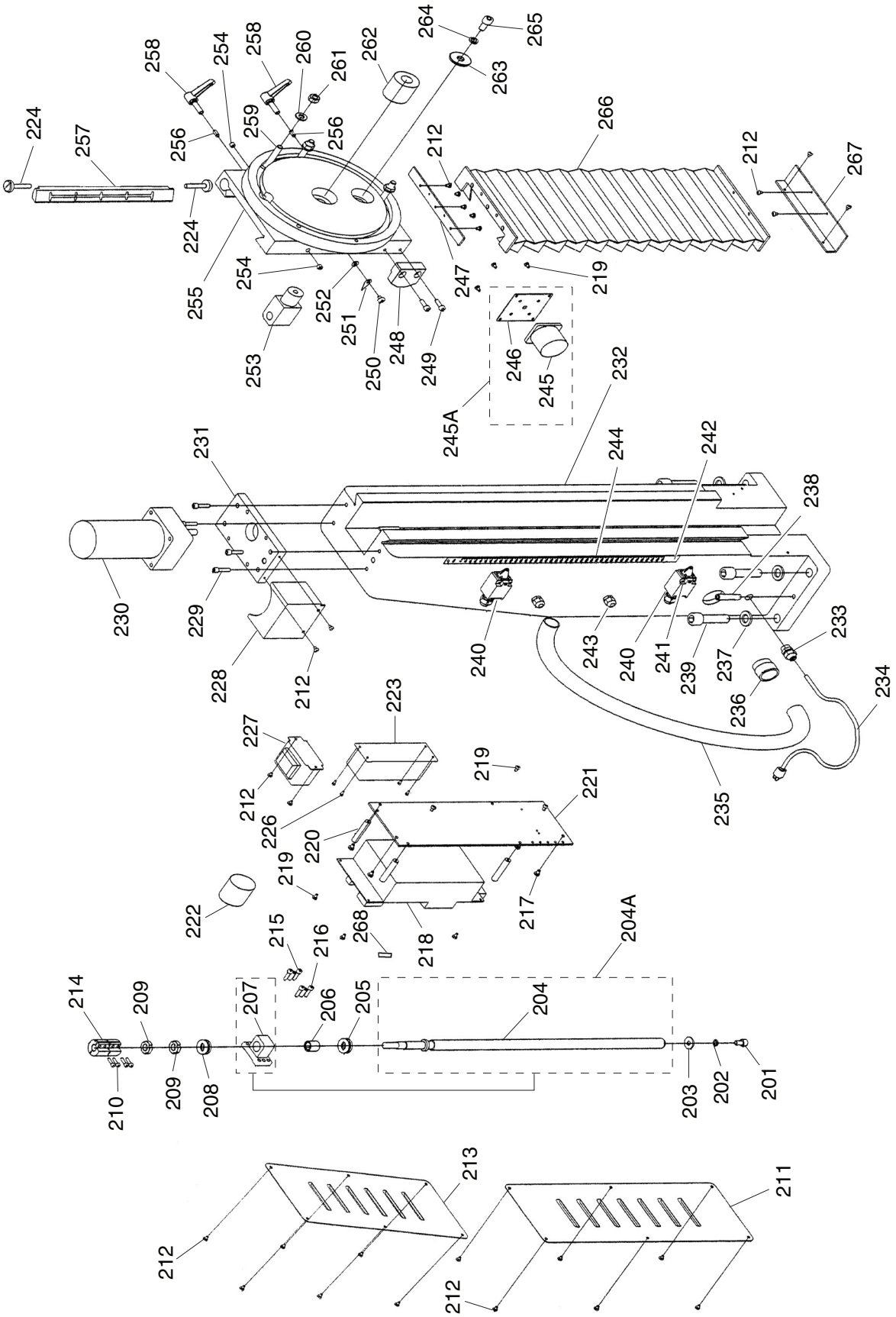
Head Parts List

REF	PART #	DESCRIPTION
91	PS79M	PHLP HD SCR M3-.5 X 8
92	P0720092	HEAD FRONT COVER
93	PS13M	PHLP HD SCR M3-.5 X 20
94	P0720094	LOCK SCREW
95	P0720095	COMPRESSION SPRING 0.8 X 10 X 14
96	P0720096	LOCK HANDLE
97	PS68M	PHLP HD SCR M6-1 X 10
98	P0720098	INT THREADED TAPER PIN 6 X 20
99	P0720099	DIGITAL PROTRACTOR BOX
100	P0720100	DIGITAL PROTRACTOR
101	P0720101	DIGITAL PROTRACTOR FRAME
102	P0720102	LOCK COLLAR
103	P0720103	WORM SHAFT
104	P8101	THRUST BEARING 8101
105	P0720105	SHAFT FLANGE
106	PS56M	PHLP HD SCR M4-.7 X 16
107	P0720107	FINE DOWNFEED HANDWHEEL
108	PW01M	FLAT WASHER 8MM
109	PN03M	HEX NUT M8-1.25
110	P0720110	MAGNET
111	P0720111	HANDWHEEL HANDLE
112	PRP37M	ROLL PIN 3 X 14
113	P0720113	FLAP KEY 4 X 10
114	P0720114	COARSE DOWNFEED HANDWHEEL
115	PR11M	EXT RETAINING RING 25MM
116	P0720116	GEAR SHAFT WASHER
117	P0720117	DIGITAL PROTRACTOR SENSOR
118	P0720118	SPACER
119	P0720119	PIN 10 X 55

REF	PART #	DESCRIPTION
120	PSTB005M	STEEL BALL 10MM
121	PS74M	PHLP HD SCR M4-.7 X 14
122	P0720122	GEAR FLANGE
123	P0720123	WORM GEAR
124	P0720124	NEEDLE ROLLER BEARING HK283520
125	P0720125	SHAFT FLANGE
126	PK06M	KEY 5 X 5 X 10
127	P0720127	WORM SHAFT
128	P0720128	NEEDLE ROLLER BEARING HK222816
129	P0720129	END FLANGE
130	P0720130	HALOGEN BULB 24V 60W W/REFLECTOR
131	P0720131	FUSE 2A FAST-BLOW 5 X 20MM
132	P0720132	LOCK PLUNGER
133	P0720133	CHIP SHIELD POLYCARBONATE
134	P0720134	ELEVATION BUTTON
135	PWR810	COMBO WRENCH 8/10MM
136	PWR1417	COMBO WRENCH 14/17MM
137	PWR1922	COMBO WRENCH 19/22
138	P0720138	SPINDLE LOCK PIN
139	P0720139	CHUCK KEY
140	PAW04M	HEX WRENCH 4MM
141	PAW05M	HEX WRENCH 5MM
142	PAW06M	HEX WRENCH 6MM
143	PAW12M	HEX WRENCH 12MM
144	P0720144	BOTTLE FOR OIL
145	P0720145	DRILL CHUCK B18
146	P0720146	PROTRACTOR BATTERY LITHIUM CR2032
147	P0720147	SCALE BATTERY ALKALINE SR44

Column Breakdown



Column Parts List

REF	PART #	DESCRIPTION
201	PS76M	PHLP HD SCR M8-1.25 X 12
202	PLW04M	LOCK WASHER 8MM
203	PW01M	FLAT WASHER 8MM
204A	P0720204A	LEADSCREW W/NUT ASSEMBLY
204	P0720204A	ELEVATION LEADSCREW
205	P8102	THRUST BEARING 8102
206	P0720206	BUSHING
207	P0720204A	LEADSCREW NUT
208	P8102	THRUST BEARING 8102
209	P0720209	SPANNER NUT
210	PS56M	PHLP HD SCR M4-.7 X 16
211	P0720211	BOTTOM COLUMN COVER
212	PS17M	PHLP HD SCR M4-.7 X 6
213	P0720213	TOP COLUMN COVER
214	P0720214	LEADSCREW COUPLER
215	PS06M	PHLP HD SCR M5-.8 X 20
216	P0720098	INT THREADED TAPER PIN 6 X 20
217	PS05M	PHLP HD SCR M5-.8 X 8
218	P0720218	CONTROL PANEL CIRCUIT BOARD
219	PS07M	PHLP HD SCR M4-.7 X 8
220	P0720220	CIRCUIT BOARD STAND-OFF SLEEVE
221	P0720221	MOTOR/INVERTER CIRCUIT BOARD
222	P0720222	S CAPACITOR 14M 450V
223	P0720223	CIRCUIT BREAKER
224	P0720224	GIB SCREW
226	PS79M	PHLP HD SCR M3-.5 X 8
227	P0720227	TRANSFORMER TDE 2232 110V/240V
228	P0720228	ELEVATION MOTOR JUNCTION BOX
229	PS47M	PHLP HD SCR M6-1 X 25
230	P0720230	ELEVATION MOTOR 1/12HP 110V 1PH
231	P0720231	ELEVATION MOTOR MOUNTING PLATE
232	P0720232	COLUMN CASTING
233	P0720233	STRAIN RELIEF M16 LT
234	P0720234	POWER CORD 14G 3C 8FT 5-15
235	P0720235	CORD CONDUIT PLASTIC LT

REF	PART #	DESCRIPTION
236	P0720236	STRAIN RELIEF LT
237	PW08M	FLAT WASHER 16MM
238	P0720238	TAPER PIN 10 X 45
239	PCAP192M	CAP SCREW M16-2 X 55
240	P0720240	ELEVATION TRAVEL LIMIT SWITCH
241	PS51M	PHLP HD SCR M4-.7 X 30
242	PRIV003M	STEEL FLUTED RIVET 2 X 4MM
243	P0720243	STRAIN RELIEF M12
244	P0720244	ELEVATION SCALE
245A	P0720245A	MAIN POWER SWITCH ASSEMBLY
245	P0720245	MAIN POWER SWITCH
246	P0720246	SWITCH PLATE
247	P0720247	TOP WAY COVER PLATE
248	P0720248	STOP BLOCK
249	PCAP02M	CAP SCREW M6-1 X 20
250	PS03M	PHLP HD SCR M6-1 X 8
251	P0720251	POINTER
252	PW03M	FLAT WASHER 6MM
253	P0720253	TILT NUT
254	PLUBE002M	TAP-IN BALL OILER 8MM
255	P0720255	HEAD MOUNTING PLATE
256	P0720256	LOCK PLUNGER
257	P0720257	COLUMN GIB
258	P0720258	LOCK HANDLE ASSEMBLY
259	P0720259	T-BOLT M10-1.5 X 50
260	PW04M	FLAT WASHER 10MM
261	PN02M	HEX NUT M10-1.5
262	P0720262	CLAMPING SLEEVE
263	P0720263	TILT FLAT WASHER 10MM
264	PLW06M	LOCK WASHER 10MM
265	PB56M	CAP SCREW M10-1.5 X 20
266	P0720266	COLUMN WAY COVER
267	P0720267	BOTTOM WAY COVER PLATE
268	P0720268	FUSE 30A FAST-BLOW 1/4" X 1"

Table Breakdown

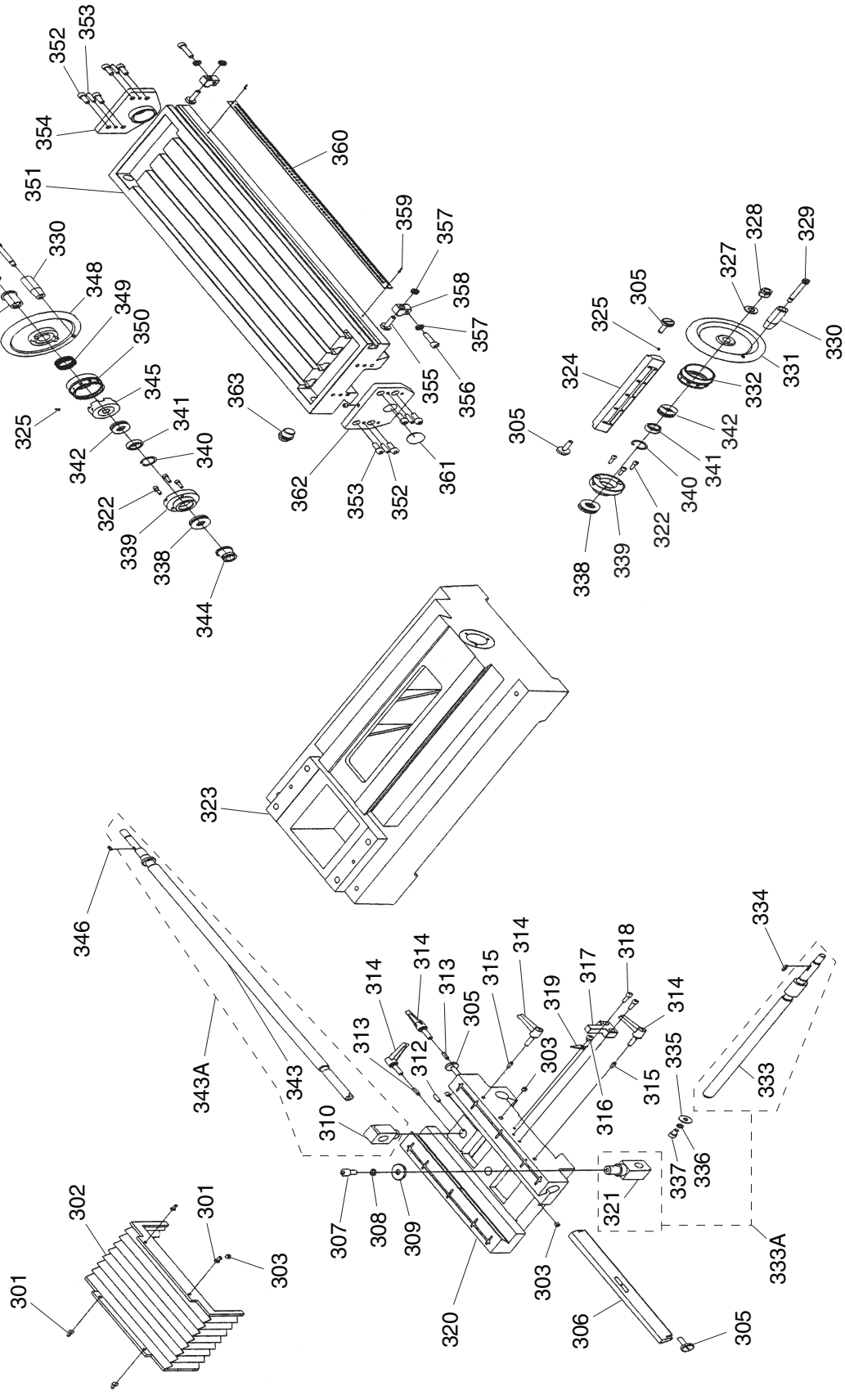
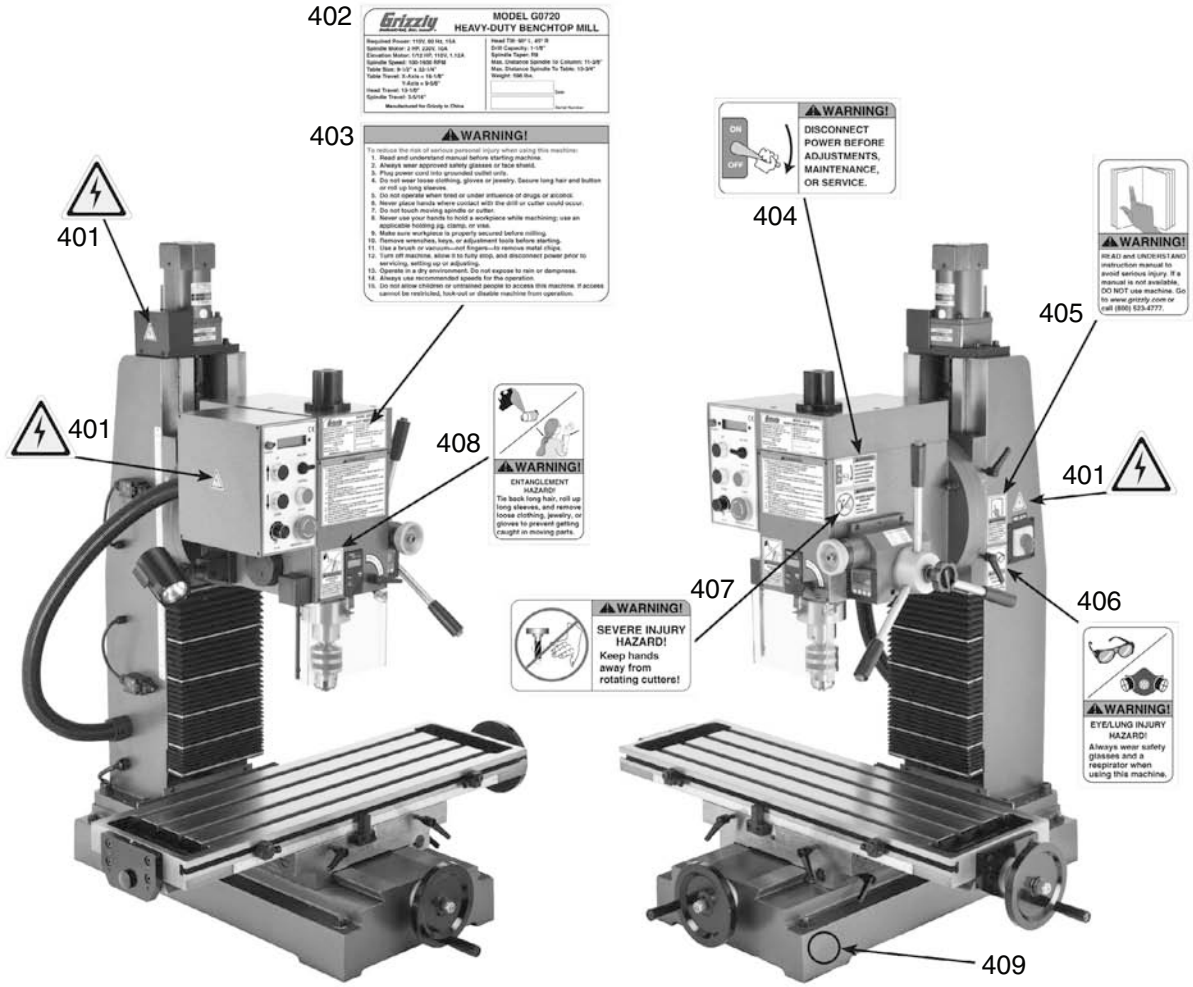


Table Parts List

REF	PART #	DESCRIPTION
301	PS08M	PHLP HD SCR M5-.8 X 12
302	P0720302	CROSS WAY COVER
303	PLUBE002M	TAP-IN BALL OILER 8MM
305	P0720305	GIB SCREW
306	P0720306	LONGINTUDINAL TABLE GIB
307	PCAP130M	CAP SCREW M10-1.5 X 16
308	PLW06M	LOCK WASHER 10MM
309	PW04M	FLAT WASHER 10MM
310	P0720310	LONGITUINAL LEADSCREW NUT
312	PSS25M	SET SCREW M6-1 X 20
313	P0720313	LOCK PLUNGER
314	P0720314	LOCK HANDLE ASSEMBLY
315	P0720315	LOCK PLUNGER
316	PS03M	PHLP HD SCR M6-1 X 8
317	P0720317	STATIONARY LIMIT BLOCK
318	PCAP02M	CAP SCREW M6-1 X 20
319	P0720319	POINTER
320	P0720320	SADDLE CASTING
321	P0720333A	CROSS LEADSCREW NUT
322	PCAP24M	CAP SCREW M5-.8 X 16
323	P0720323	BASE CASTING
324	P0720324	CROSS TABLE GIB
325	P0720325	CLIP
327	P0720327	HANDWHEEL FLAT WASHER 12MM
328	PLN09M	LOCK NUT M12-1.75
329	P0720329	HANDLE SCREW
330	P0720330	HANDWHEEL HANDLE
331	P0720331	CROSS HANDWHEEL
332	P0720332	CROSS GRADUATED DIAL
333A	P0720333A	CROSS LEADSCREW W/NUT
333	P0720333A	CROSS LEADSCREW 8 TPI

REF	PART #	DESCRIPTION
334	PK37M	KEY 4 X 4 X 16
335	PW01M	FLAT WASHER 8MM
336	PLW04M	LOCK WASHER 8MM
337	PCAP58M	CAP SCREW M8-1.25 X 12
338	P51203	THRUST BEARING 51203
339	P0720339	BEARING FLANGE
340	PR20M	INT RETAINING RING 28MM
341	P6902ZZ	BALL BEARING 6902ZZ
342	P51202	THRUST BEARING 51202
343A	P0720343A	LONGITUDINAL LEADSCREW W/NUT
343	P0720343	LONGITUDINAL LEADSCREW 8 TPI
344	P0720344	SLEEVE COPPER
345	P0720345	CLUTCH
346	PK48M	KEY 4 X 4 X 20
347	P0720347	THREADED BUSHING
348	P0720348	LONGITUDINAL HANDWHEEL
349	P0720349	COMPRESSION SPRING
350	P0720350	LONGITUDINAL GRADUATED DIAL
351	P0720351	TABLE
352	P0720352	INT THREADED TAPER PIN 6 X 26
353	PCAP14M	CAP SCREW M8-1.25 X 20
354	P0720354	RIGHT LONGITUDINAL BEARING SEAT
355	P0720355	T-NUT M8-1.25 X 30
356	PCAP40M	CAP SCREW M8-1.25 X 35
357	PN03M	HEX NUT M8-1.25
358	P0720358	ADJUSTABLE LIMIT BLOCK
359	PRIV003M	STEEL FLUTED RIVET 2 X 4MM
360	P0720360	LONGITUDINAL SCALE
361	P0720361	END CAP
362	P0720362	LEFT LONGITUDINAL BEARING SEAT
363	P0720363	PLUG DIN910

Label Placement



REF	PART #	DESCRIPTION
401	PLABEL-14	ELECTRICITY LABEL
402	P0720R402	MACHINE ID LABEL
403	P0720403	MACHINE WARNING LABEL
404	PLABEL-53C	DISCONNECT POWER WARNING
405	PLABEL-12C	READ MANUAL LABEL

REF	PART #	DESCRIPTION
406	PLABEL-57A	EYE/LUNG HAZARD LABEL
407	P0720407	ROTATING CUTTER WARNING LABEL
408	PLABEL-55A	ENTANGLEMENT HAZARD LABEL
409	PPAINT-01	GRIZZLY GREEN TOUCH-UP PAINT

⚠WARNING

Safety labels warn about machine hazards and ways to prevent injury. The owner of this machine MUST maintain the original location and readability of the labels on the machine. If any label is removed or becomes unreadable, REPLACE that label before using the machine again. Contact Grizzly at (800) 523-4777 or www.grizzly.com to order new labels.

Grizzly Industrial, Inc. WARRANTY CARD

Name _____

Street _____

City _____ State _____ Zip _____

Phone # _____ Email _____ Invoice # _____

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

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 AND 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.

grizzly.com®
TOOL WEBSITE

Buy Direct and Save with Grizzly® – Trusted, Proven and a Great Value!

~Since 1983~

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