⚠️ WARNING!

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

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

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

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

⚠️ WARNING!

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

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

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

Foreword

We are proud to offer the Model G0517 Mill/Drill. This machine is part of a growing Grizzly family of fine woodworking and metalworking machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly’s commitment to customer satisfaction.

We are pleased to provide this manual with the Model G0517. It was written to guide you through assembly, review safety considerations, and cover general operating procedures. It represents our effort to produce the best documentation possible.

The specifications, drawings, and photographs illustrated in this manual represent the Model G0517 as supplied when the manual was prepared. However, owing to Grizzly’s policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly. For your convenience, we always keep current Grizzly manuals available on our website at www.grizzly.com. Any updates to your machine will be reflected in these manuals as soon as they are complete. Visit our site often to check for the latest updates to this manual!

Contact Info

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

Grizzly Industrial, Inc.
c/o Technical Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069

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

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com
Web Site: http://www.grizzly.com
MODEL G0517 MILL/DRILL W/ STAND

Product Dimensions:
- Weight: 331 lbs.
- Length/Width/Height: 29-1/2 x 27-1/8 x 77-5/8 in.
- Foot Print (Length/Width): 17-3/4 x 14-1/2 in.

Shipping Dimensions:
- Carton #1
  - Type: Wood Crate
  - Content: Machine
  - Weight: 330 lbs.
  - Length/Width/Height: 27 x 23 x 23 in.
- Carton #2
  - Type: Cardboard
  - Content: Stand
  - Weight: 77 lbs.
  - Length/Width/Height: 37 x 20 x 16 in.

Electrical:
- Switch: Toggle
- Switch Voltage: 110V
- Cord Length: 6 ft.
- Cord Gauge: 18 gauge
- Recommended Breaker Size: 15 amp
- Plug: Yes

Motors:
- Main
  - Type: TEFC Capacitor Start Induction
  - Horsepower: 1/2 HP
  - Voltage: 110V
  - Prewired: 110V
  - Phase: Single
  - Amps: 8.5A
  - Speed: 1725 RPM
  - Cycle: 60 Hz
  - Number Of Speeds: 1
  - Power Transfer: V-Belt Drive
  - Bearings: Shielded, Permanently Lubricated
Main Specifications:

Operation Info

Spindle Travel............................................................................................................................................ 3-1/8 in.
Swing.................................................................................................................................................. 14-1/2 in.
Longitudinal Table Travel.............................................................. 9-1/4 in.
Cross Table Travel........................................................................... 5-3/4 in.
Head Swivel................................................................................... 360 deg.
Max. Dist Spindle To Column........................................... 7-1/4 in.
Max. Dist Spindle To Table........................................................... 14 in.
Drilling Cap For Cast Iron............................................................ 5/8 in.
Drilling Cap For Steel........................................................................ 5/8 in.
No. Of Vert. Spindle Speeds..................................................................... 12
Range Of Vert. Spindle Speeds.... 300, 400, 540, 720, 900, 1040, 1500, 1740, 2100, 2260, 3100, 3840 RPM
Quill Dia .................................................................................... 1-7/8 in.

Table Info

Table Length........................................................................................ 16-1/2 in.
Table Width.............................................................................. 6-1/8 in.
Table Thickness........................................................................... 1-1/8 in.
No. Of T Slots............................................................................. 2
T Slots Width.................................................................................. 1/2 in.
T Slots Height................................................................................ 5/8 in.
T Slots Centers.......................................................................... 3-3/8 in.
Stud Size................................................................................. 1/2 in.

Lead Screw Info

Lead Screw Diameter........................................................................... 0.740 in.
Lead Screw TPI................................................................................ 6
Lead Screw Length........................................................................... 23 in.

Construction

Spindle Housing Const..................................................................................... Cast Iron
Table Const............................................................................................... Precision Ground Cast Iron
Head Const............................................................................................... Cast Iron
Column Const............................................................................................. Cast Iron
Base Const............................................................................................... Precision Ground Cast Iron
Stand Const................................................................................................ Welded Steel
Paint.............................................................................................................. Enamel

Other

Collars Calibrated................................................................................... 0.001 in.
Column Dia............................................................................................ 2-7/8 in.
Mobile Base...................................................................................... G8683

Spindle Info

Spindle Taper............................................................................................ MT#3
End Milling Cap.................................................................................. 1/4 in.
Face Milling Cap.................................................................................. 3/4 in.
Draw Bar Diameter............................................................................. 12 mm
Draw Bar TPI......................................................................................... M12 - 1.75
Draw Bar Length.................................................................................. 11-7/8 in.
Spindle Bearings.................................................................................... Ball Bearing

Other Specifications:

ISO Factory ............................................................................................... ISO 9001
Country Of Origin .................................................................................. China
Warranty ................................................................................................. 1 Year
Serial Number Location ........................................................................ ID Label on Head Casting
Assembly Time..................................................................................... 1-1/2 hours

The information contained herein is deemed accurate as of 5/12/2006 and represents our most recent product specifications.
Due to our ongoing improvement efforts, this information may not accurately describe items previously purchased.
A. ON/OFF Switch w/Safety Key
B. Belt Tension Handle
C. Belt Tension Locks
D. Headstock Clamp Handle
E. Head Elevation Crank (Z Axis, Major)
F. Column Lock
G. Longitudinal Handwheels (X Axis)
H. Splash Tray
I. Cross Feed Handwheel (Y Axis)
J. Cabinet Stand
K. Quill Lock
L. Quill
M. Arbor
N. Drill Chuck
O. Downfeed Handle (Z Axis, Minor)
P. Vise
Q. Milling Table
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 which are intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.

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

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

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

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

⚠️ WARNING

Safety Instructions for Machinery

1. READ THROUGH THE ENTIRE MANUAL BEFORE STARTING MACHINERY. Machinery presents serious injury hazards to untrained users.

2. ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY. Everyday eyeglasses only have impact resistant lenses—they are NOT safety glasses.

3. ALWAYS WEAR A NIOSH APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST. Wood dust is a carcinogen and can cause cancer and severe respiratory illnesses.

4. ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY. Machinery noise can cause permanent hearing damage.

5. WEAR PROPER APPAREL. DO NOT wear loose clothing, gloves, neckties, rings, or jewelry which may get caught in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.

6. NEVER OPERATE MACHINERY WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL. Be mentally alert at all times when running machinery.
WARNING

Safety Instructions for Machinery

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

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

9. MAKE WORKSHOP CHILD PROOF. Use padlocks, master switches, and remove start switch keys.

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

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

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

13. USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE. Undersized cords overheat and lose power. Replace extension cords if they become damaged. DO NOT use extension cords for 220V machinery.

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

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

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

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

18. CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY. Check for binding and alignment of parts, broken parts, part mounting, loose bolts, and any other conditions that may affect machine operation. Repair or replace damaged parts.

19. USE RECOMMENDED ACCESSORIES. Refer to the instruction manual for recommended accessories. The use of improper accessories may cause risk of injury.

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

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

22. DO NOT OVERREACH. Keep proper footing and balance at all times.

23. MANY MACHINES WILL EJECT WORKPIECE TOWARD OPERATOR. Know and avoid conditions that cause the workpiece to "kickback."

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

25. BE AWARE THAT CERTAIN WOODS MAY CAUSE AN ALLERGIC REACTION in people and animals, especially when exposed to fine dust. Make sure you know what type of wood dust you will be exposed to and always wear an approved respirator.
1. **EYE/FACE/HAND PROTECTION.** Wear safety glasses or face shield when using this machine. Always keep hands and fingers away from cutting tool. DO NOT wear gloves when operating the machine.

2. **SECURING BIT.** Properly tighten the cutting tool before using this machine.

3. **BE ATTENTIVE.** DO NOT leave machine running unattended for any reason.

4. **ADJUSTING KEYS AND WRENCHES.** Remove all adjusting keys and wrenches before starting machine.

5. **WORKHOLDING.** Before starting machine, be certain the workpiece has been properly clamped to the table. Position work so you avoid drilling into the table. NEVER hold the workpiece by hand during operation.

6. **HEADSTOCK LOCK.** Make sure the headstock lock is tightened before starting the machine.

7. **SURFACE/WORKPIECE PREP.** Clear the table of all objects (tools, scrap wood, etc.) before starting machine. Unless a suitable support is used, DO NOT drill material that does not have a flat surface.

8. **DAMAGED TOOLS.** Never use cutting tools in poor condition. Dull or damaged cutting tools are hard to control and may cause serious injury.

9. **OPERATION.** Never start the machine with the cutting tool pressed against the workpiece. Feed the cutting tool evenly into the workpiece. Back the drill bit out of deep holes to clear chips when drilling.

10. **AVOIDING ENTANGLEMENT.** When operating machine, keep loose clothing articles such as sleeves, belts or jewelry items away from the spindle and DO NOT wear gloves.

11. **OPERATING SPEED.** Always operate your mill/drill at speeds that are appropriate for the bit size and the workpiece material.

12. **MAINTENANCE/SPEED CHANGES.** Never perform maintenance or speed changes with the machine connected to power.

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

---

**WARNING**

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

---

**CAUTION**

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.
SECTION 2: CIRCUIT REQUIREMENTS

Operation

**WARNING**
Serious personal injury could occur if you connect the machine to the power source before you have completed the set up process. DO NOT connect the machine to the power source until instructed to do so.

Amperage Draw
The Model G0517 motor draws the following amps under maximum load:

Motor Draw ........................................... 8.5 Amps

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

110V Circuit ........................................... 15 Amps

Plug/Receptacle Type
Included Plug Type............................. NEMA 5-15

- Grounded Outlet Box
- Grounding Prong is Longest Of The Three Prongs
- Current Carrying Prongs

Figure 1. Typical 5-15 plug and receptacle.

**WARNING**
Electrocution or fire could result if this machine is not grounded correctly or if your electrical configuration does not comply with local and state codes. Ensure compliance by checking with a qualified electrician!

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

Extension Cords
We do not recommend the use of extension cords, but if you find it absolutely necessary:

- Use at least a 16 gauge cord that does not exceed 50 feet in length!
- The extension cord must also contain a ground wire and plug pin.
- A qualified electrician MUST size cords over 50 feet long to prevent motor damage.
SECTION 3: SET UP

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!

Items Needed for Set Up

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

**Description** | **Qty**
--- | ---
Degreaser | Varies
Throw-Away Rags | Varies
Wrench/Socket 17mm | 1
Wrench/Socket 19mm | 1
Flat Head Screwdriver | 1
Another Person for Lifting Help | 1

Unpacking

The Model G0517 was carefully packed when it left our warehouse. If you discover the machine is damaged after you have signed for delivery, 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, you should inventory the contents.

Inventory

After all the parts have been removed from the two boxes, you should have the following items:

**Description** | **Qty**
--- | ---
A. Stand | 1
B. Base Assembly | 1
C. Headstock | 1
D. Splash Tray | 1
E. T-Bolts and Washers | 2
F. Milling Vise w/Handle | 1
G. Downfeed Handle Shafts w/Ball Knobs | 3
H. Handwheel Handles | 3
I. Drill Chuck Arbor | 1
J. Drawbar M12-1.75 | 1
K. MT #2/#3 & MT#1/#2 Sleeves | 1 Each
L. Wrenches and Drift Key | 1 Each
M. Mounting Bolts, Washers, Nuts | 4 Each
N. Drill Chuck & Key | 1 Each

---

**Figure 2.** Main parts inventory.

**Figure 3.** Component inventory.
Clean Up

The unpainted surfaces are coated with a waxy oil to protect them from corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as Grizzly’s G7895 Degreaser.

Some parts may need to be removed before they can be thoroughly cleaned.

For optimum performance from your machine, make sure you clean all moving parts or sliding contact surfaces that are coated.

Avoid chlorine-based solvents, such as acetone or brake parts cleaner, as they may damage painted surfaces should they come in contact. Always follow the manufacturer’s instructions when using any type of cleaning product.

WARNING
Gasoline and petroleum products have low flash points and could cause an explosion or fire if used to clean machinery. DO NOT use gasoline or petroleum products to clean the machinery.

CAUTION
Many of the solvents commonly used to clean machinery can be toxic when inhaled or ingested. Lack of ventilation while using these solvents could cause serious personal health risks or fire. Take precautions from this hazard by only using cleaning solvents in a well ventilated area.

Site Considerations

Floor Load
Refer to the Machine Data Sheet for the weight and footprint specifications of your machine. Some residential floors may require additional reinforcement to support the machine, workpiece, and operator.

Minimum Working Clearances
Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your new machine. See Figure 4 for the minimum working clearances.

Unsupervised children and visitors inside your shop could cause serious personal injury to themselves. Lock all entrances to the shop when you are away and DO NOT allow unsupervised children or visitors in your shop at any time!

Figure 4. Overhead view of minimum working clearances.

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Refer to the Machine Data Sheet for the weight and footprint specifications of your machine. Some residential floors may require additional reinforcement to support the machine, workpiece, and operator.

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Figure 4. Overhead view of minimum working clearances.
Assembly

Before assembling your new mill/drill, determine if you will bolt your stand to the floor or use machine mounts. Machine mounts, shown in Figure 5, give the advantage of fast leveling and vibration reduction. For the Model G0517, we recommend using four Grizzly Model G7159 machine mounts.

1. Mount the stand to the floor in your desired location.

2. Place the splash tray on top of the stand, as shown in Figure 8, and align the mounting holes.

   Note: Take care to install the splash tray in the same orientation as shown in Figure 8. Installing the splash tray backwards will limit column movement.

3. With the help of an assistant, place the base assembly on top of the splash tray and align the mounting holes.

4. Fasten the base assembly to the stand with the mounting bolts, flat washers, and hex nuts provided (see Figure 9).

Figure 5. Machine mount example.

Bolting the machine to the floor is the strongest option, but also the most permanent.

Lag shield anchors with lag bolts (Figure 6) and anchor studs (Figure 7) are two popular methods for anchoring an object to a concrete floor.

Figure 6. Typical lag shield anchor and lag bolt.

Figure 7. Typical anchor stud.

Figure 8. Splash tray placed on the stand in the correct orientation.

Figure 9. Base assembly attached to stand.
5. With the help of an assistant, place the mill/drill headstock onto the column, as shown in Figure 10.

6. Center the headstock over the table and tighten the lock handle shown in Figure 11.

7. Thread the handwheel handles into the handwheels, as shown in Figure 12.

8. Thread the ball knobs onto one end of the downfeed handle shafts (the knobs go on the end of the shaft with the shorter threads).

9. Thread the downfeed handle shaft assemblies into the pinion hub (Figure 13).

Congratulations, your mill/drill is now assembled. For further information about installing the drill chuck or spindle sleeves, refer to the Operations section after performing the Test Run.
Test Run

The purpose of a test run is to make sure your machine and its safety components are functioning correctly. The machine should remain disconnected from power until instructed otherwise.

To test run the machine:

1. Loosen the lock knobs on both sides (Figure 14), tighten the V-belts by pulling and holding tension on the belt tension lever, then tighten the lock knobs.

2. Clear all tools and other components away from the mill/drill, and ensure that the belt cover is closed.

3. Make sure you are familiar with the machine safety and controls.

4. Connect the drill press to the power source.

5. Turn the machine ON. The mill/drill should run smoothly, with little or no vibration or rubbing noises.

   — If you notice anything unusual about the operation, turn the machine OFF, disconnect power, and investigate/correct the problem before operating further.

   — If you cannot easily locate the source of a potential problem, refer to Troubleshooting on Page 26 or contact our Technical Support at (570) 546-9663.

6. Remove the switch key (yellow portion of the main switch), and try to turn the switch ON.

   — If the machine does NOT turn ON with the key removed, then the safety feature is working as intended.

   — If the machine turns ON with the key removed, then the safety feature is malfunctioning. Disconnect power to the machine and contact Tech Support immediately.
NOTICE

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

Head/Quill Travel

The headstock can be raised/lowered with the elevation handle and column lock for Z-axis movement (Figure 15). The quill can be raised/lowered with the downfeed handles and locked in place with the quill lock (Figure 16).

Table Travel

The mill/drill table can be moved in the X and Y axis.

Longitudinal Feed

The longitudinal feed (X-axis) is moved by either handwheel (Figure 17) at the end of the table. One complete handwheel revolution moves the table 0.167". The longitudinal feed can be locked in position by locks located on the front of the table.

Cross Feed

The cross feed (Y-axis) is moved with the handwheel on the front of the table base (Figure 18). One complete revolution of the handwheel moves the cross feed table 0.167". The cross feed can be locked into position with the table locks.
Installing/Removing Morse Taper Sleeves

The Model G0517 includes an MT#1/#2 sleeve and an MT#2/#3 sleeve. Always DISCONNECT MACHINE FROM POWER when installing or removing tooling.

To install a sleeve:

1. Make sure the spindle and sleeve tapers are clean and free of any debris or grease.

2. Insert the sleeve into the spindle with the tang side up (Figure 19) and rotate with upward pressure until it fits into place.

3. Using a rubber mallet or brass hammer (do not use steel), tap the sleeve up into the spindle to lock it in place (Figure 20).

To remove a sleeve:

1. Lower the quill with the downfeed handle and lock it in place with the quill lock (Figure 21).

2. Insert the drift key into the quill slot as shown in Figure 22.

3. Hold the sleeve with one hand and gently tap the drift key with a hammer to knock the sleeve out.

Figure 19. Installing a morse taper sleeve.

Figure 20. Tapping the sleeve into the spindle.

Figure 21. Location of quill lock.

Figure 22. Drift key inserted in quill slot.
Installing/Removing Drawbar Tooling

The Model G0517 includes an M12-1.75 drawbar. Use the drawbar to connect the included drill chuck arbor or an aftermarket end mill holder. See Page 23 for recommended end mill holders.

Always DISCONNECT MACHINE FROM POWER when installing or removing tooling.

To install the drawbar with attached tooling:

1. Make sure the spindle and tooling tapers are clean and free of any debris or grease.
2. Make sure the drawbar is firmly threaded into the tooling (Figure 23).
3. Insert the drawbar into the spindle and lodge the tooling and spindle tapers together, as shown in Figure 24.
4. Hand tighten the hex nut and flat washer on the drawbar threads that project out of the spindle pulley, as shown in Figure 25.
5. Snug the drawbar hex nut down ½ a turn.

To remove the drawbar and tooling:

1. Loosen the drawbar hex nut and unthread it to the top of the drawbar without removing it (Figure 26).
2. Using a brass hammer, tap the drawbar from the top, as shown in Figure 27, with light blows until the tooling and spindle tapers release.
3. Hold the tooling with one hand and remove the drawbar hex nut with the other hand.
4. Remove the drawbar and tooling assembly from the spindle.
Installing Drill Chuck

The drill chuck fits on the arbor with a taper fit.

To install the drill chuck:

1. **UNPLUG THE MILL/DRILL!**

2. Prepare the mating surfaces on the arbor taper and the chuck by cleaning them thoroughly.

3. Retract the chuck jaws all the way inside of the chuck.

4. Push the chuck onto the arbor taper, and using a wood block and hammer or mallet as shown in **Figure 28**, hit the chuck once with moderate force to secure it on the arbor.

   **Note:** *Hitting the chuck directly with a steel hammer may damage the chuck, making it unsafe to use.*

---

Changing Speeds

Belt positions on the pulleys govern the spindle speed. A chart under the belt cover shows the belt positions needed for each available speed.

To change speeds:

1. **UNPLUG THE MILL/DRILL!**

2. Loosen the lock knobs on each side of the headstock (**Figure 29**), and use the belt tension lever to take tension off of the V-belts.

   ![Belt Tension Lever](Figure 29. Loosening lock knob.)

3. Find your desired speed on the speed chart (**Figure 30**) and move the V-belts to the indicated positions in the pulley grooves.

   ![Belt Tension Handle](Figure 30. Speed chart.)

4. Use the belt tension handle to tighten the V-belts, then tighten the lock knob and close the belt cover.
**Drilling**

The basic operation when drilling is lining up your drill bit with the intended hole location, clamping the workpiece to the table, turning the mill/drill **ON**, and using the downfeed handles to move the spinning drill bit into the workpiece.

For safe operation and optimum results, it is very important to follow these guidelines when drilling:

**CLEARING CHIPS:** Raise the drill bit often to clear chips and cool the drill bit. This will ease the work of the mill/drill motor and extend the life of your drill bits.

**SECURING WORKPIECE TO TABLE:** Secure the workpiece to the table or in a vise that is secured to the table before drilling.

**PROTECTING TABLE:** Protect the table by placing the workpiece on scrap wood, or center the location of the hole to be drilled over the pocket in the table when through drilling. Also, use the depth stop to ensure that the drill bit goes no deeper than necessary.

**USING CORRECT SPEEDS:** Use the correct speed for the diameter of the drill bit being used and the type of material being drilled. Refer to the Drill Bit Speed Chart on Page 20 to help you choose the correct speed for your application.

**LARGE DIAMETER BITS:** Large diameter drill bits require slower spindle speeds.

**SMALL DIAMETER BITS:** Smaller diameter drill bits require faster spindle speeds.

**HARD MATERIAL:** The harder the material, (steel vs. wood) the slower the spindle speed.

**SOFT MATERIAL:** The softer the material, the faster the spindle may turn. However, plastics can melt at too high of a spindle speed.

**LUBRICANT:** Use some form of lubricant on all materials except wood or cast iron. Refer to Lubrication Suggestions on Page 20 to find the correct lubrication for your application.

**DRILLING ACCURACY:** To prevent drill bit wandering and ensure accurate placement of holes, mark the hole location with a center punch before drilling. Also consider using a center-point drill to start the hole.

**PLUG/ROSETTE CUTTERS:** Plug cutters and rosette cutters are for wood only. However, carbide-tipped bits and cutters cut at a higher speed and can cut materials other than wood, depending on the cutter type.

**5-FLUTE/2-FLUTE CUTTERS:** Use a 5-flute cutter when cutting into plastics, brass, aluminum, and mild steel. A 2-flute cutter can aggressively grab the workpiece and damage the tool if used with materials other than wood.

**SPADE BITS AND PLASTIC:** When drilling plastic with a spade bit, use a spade bit with spurs.

**HOLE SAWs:** When using hole saws, apply firm and even pressure, so the saw teeth contact the surface all at the same time—not at an angle. You can also flip the workpiece and finish drilling from the other side to prevent tear-out.

---

**CAUTION**

If the workpiece is not clamped down, the operator’s hand could get pulled into the bit or the workpiece can be thrown with great force. Clamp the workpiece to the table before drilling.
Drilling Speeds

Using the Drill Bit Speed Chart
The chart shown in Figure 31 is intended as a guide only. Always follow the manufacturer's speed recommendations if provided with your drill bits, cutters, or hole saws. Exceeding the recommended speeds by large amounts may be dangerous to the operator.

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

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

### Lubrication Suggestions
Wood or Cast Iron........................................None
Plastics..............................................Soapy Water
Brass ................................................Water-Based Lubricant
Aluminum........................................Paraffin-Based Lubricant
Mild Steel.................................Oil-Based Lubricant

CAUTION
If the workpiece is not clamped down, the operator's hand could get pulled into the bit or the workpiece can be thrown with great force. Clamp the workpiece to the table before drilling.

<table>
<thead>
<tr>
<th>Twist/Brad Point Drill Bits</th>
<th>Soft Wood</th>
<th>Hard Wood</th>
<th>Plastic</th>
<th>Brass</th>
<th>Aluminum</th>
<th>Mild Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/16&quot; – 3/16&quot;</td>
<td>3000</td>
<td>2500</td>
<td>2500</td>
<td>2500</td>
<td>3000</td>
<td>2500</td>
</tr>
<tr>
<td>13/64&quot; – 3/8&quot;</td>
<td>2000</td>
<td>1500</td>
<td>2000</td>
<td>1250</td>
<td>2500</td>
<td>1250</td>
</tr>
<tr>
<td>25/64&quot; – 5/8&quot;</td>
<td>1500</td>
<td>750</td>
<td>1500</td>
<td>750</td>
<td>1500</td>
<td>600</td>
</tr>
<tr>
<td>11/16&quot; – 1&quot;</td>
<td>750</td>
<td>500</td>
<td>1000</td>
<td>400</td>
<td>1000</td>
<td>350</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Spade/Forstner Bits</th>
<th>Soft Wood</th>
<th>Hard Wood</th>
<th>Plastic</th>
<th>Brass</th>
<th>Aluminum</th>
<th>Mild Steel</th>
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<tbody>
<tr>
<td>1/4&quot; – 1/2&quot;</td>
<td>2000</td>
<td>1500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/16&quot; – 1&quot;</td>
<td>1500</td>
<td>1250</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-1/8&quot; – 1-7/8&quot;</td>
<td>1000</td>
<td>750</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2–3&quot;</td>
<td>500</td>
<td>350</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<table>
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<th>Hole Saws</th>
<th>Soft Wood</th>
<th>Hard Wood</th>
<th>Plastic</th>
<th>Brass</th>
<th>Aluminum</th>
<th>Mild Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; – 7/8&quot;</td>
<td>500</td>
<td>500</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>500</td>
</tr>
<tr>
<td>1&quot; – 1-7/8&quot;</td>
<td>400</td>
<td>400</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>400</td>
</tr>
<tr>
<td>2&quot; – 2-7/8&quot;</td>
<td>300</td>
<td>300</td>
<td>400</td>
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<td>3&quot; – 3-7/8&quot;</td>
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<td>200</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td>4&quot; – 5&quot;</td>
<td>100</td>
<td>100</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>100</td>
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<th>Rosette Cutters</th>
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<th>Plastic</th>
<th>Brass</th>
<th>Aluminum</th>
<th>Mild Steel</th>
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<tbody>
<tr>
<td>Carbide Insert Type</td>
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<td>250</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>One-Piece Type</td>
<td>1800</td>
<td>500</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tenon/Plug Cutters</th>
<th>Soft Wood</th>
<th>Hard Wood</th>
<th>Plastic</th>
<th>Brass</th>
<th>Aluminum</th>
<th>Mild Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot; – 1/2&quot;</td>
<td>1200</td>
<td>1000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/8&quot; – 1&quot;</td>
<td>800</td>
<td>600</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 31. Drill bit speed chart.
Milling Speed

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

Prior to machining, you need to determine the best speed to cut your workpiece, and then set that speed on the machine.

To determine the needed speed for milling:
1. Use the table in Figure 32 to determine the cutting speed required for the material of your workpiece.

<table>
<thead>
<tr>
<th>Workpiece Material</th>
<th>Cutting Speed (SFM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum &amp; alloys</td>
<td>300</td>
</tr>
<tr>
<td>Brass &amp; Bronze</td>
<td>150</td>
</tr>
<tr>
<td>Copper</td>
<td>100</td>
</tr>
<tr>
<td>Cast Iron, soft</td>
<td>80</td>
</tr>
<tr>
<td>Cast Iron, hard</td>
<td>50</td>
</tr>
<tr>
<td>Mild Steel</td>
<td>90</td>
</tr>
<tr>
<td>Cast Steel</td>
<td>80</td>
</tr>
<tr>
<td>Alloy Steel, hard</td>
<td>40</td>
</tr>
<tr>
<td>Tool Steel</td>
<td>50</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>60</td>
</tr>
<tr>
<td>Titanium</td>
<td>50</td>
</tr>
<tr>
<td>Plastics</td>
<td>300-800</td>
</tr>
<tr>
<td>Wood</td>
<td>300-500</td>
</tr>
</tbody>
</table>

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 32. Cutting speed table for HSS cutting tools.

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

3. Use the formula in Figure 33 to determine the needed speed for your operation:

\[
\text{Cutting Speed (SFM) x 4} \quad \frac{\text{Tool Diameter (in inches)}}{\text{RPM}}
\]

Figure 33. Speed formula for milling.

Note: Always round to the closest RPM given on the spindle speed chart.

Example 1
You have a piece of aluminum stock, and you are using a \( \frac{1}{2} \)" diameter HSS cutting tool.

\[
\text{Step 1:} \quad 300 \times 4 = 1200
\]

\[
\text{Step 2:} \quad 1200 / .5" = 2400 \text{ RPM}
\]

Result:
The best speed for this workpiece is 2400 RPM.

Example 2
You have a piece of stainless steel, and you are using a 1" diameter carbide cutting tool.

\[
\text{Step 1:} \quad 60 \times 2 = 120
\]

\[
\text{Step 2:} \quad 120 \times 4 = 480
\]

\[
\text{Step 3:} \quad 480 / 1" = 480 \text{ RPM}
\]

Result:
The best speed for this workpiece is 480 RPM.
SECTION 5: ACCESSORIES

G2500—20-PC Regular Sanding Drum Set
This kit consists of 5 drums in popular $\frac{1}{2}'' \times \frac{1}{2}''$, $\frac{3}{4}'' \times 1''$, $1'' \times 1''$, $1\frac{1}{2}'' \times 1\frac{1}{2}''$, and $2'' \times 1\frac{1}{2}''$ sizes. Comes with 50, 80 and 120 grit sizes for each drum.

Figure 34. Model G2500 20-PC Sanding Drum Set.

G8865—Cobalt Alloy Drill Bits 13-PC. Set
G8866—Steelex® Cobalt Alloy Drill Set 21-PC
G8867—Steelex® Cobalt Alloy Drill Set 29-PC
Cobalt Alloy bits will retain their edge sharpness longer than normal HSS bits, resulting in a significant saving of time and money in the workshop. Includes a heavy-gauge steel index case for storing. G8865: $\frac{1}{16}'' - \frac{1}{4}''$; G8866: $\frac{1}{16}'' - \frac{3}{8}''$; G8867: $\frac{1}{16}'' - 1''$.

Figure 35. Model G8865 13-PC Alloy Drill Bits.

H5685—4'' Rotary Table
The perfect rotary table for all you model makers and those doing smaller precision work. Comes with clamping kit.

Figure 36. H5685 4'' Rotary Table.

G3640—Power Twist® V-Belt $\frac{1}{2}'' \times 48''$
Smooth running with less vibration and noise than solid belts. The Power Twist® V-belts can be customized in minutes to any size—just add or remove sections to fit your needs. Size: $\frac{1}{2}'' \times 48''$; replaces all "A" sized V-belts. Requires two Power Twist® V-belts to replace the stock V-belt on your Model G0517. Well worth it. A very nice upgrade!

Figure 37. G3640 Power Twist® V-Belt installed.

Call 1-800-523-4777 To Order
G9765—9-PC. Ball End Mill Set

Figure 38. 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 39. H3022 Measurement Tool Set.

G2861—2½" Face Mill w/R-8 Arbor
G2863—MT#3 Arbor for Face Mill
This 2½" Face Mill accepts four carbide inserts. The Model G2863 must be purchased with this face mill for use on this mill/drill.

Figure 40. G2861 Face mill.

G5608—MT#3, 3/16" Shank End Mill Holder
G5609—MT#3, ⅛" Shank End Mill Holder
G0510—MT#3, ⅜" Shank End Mill Holder
G0511—MT#3, ½" Shank End Mill Holder
G0512—MT#3, ¾" Shank End Mill Holder
All the above use an M12-1.75 drawbar.

Figure 41. End mill holder.

G9760—20-PC. 2 & 4 Flute TiN End Mill Set.

Figure 42. G9760 20-PC End Mill Set.

G1076—52-PC. Clamping Kit
This clamping kit includes 24 studs, 6 step block pairs, 6 T-nuts, 6 flange nuts, 4 coupling nuts, and 6 end hold-downs. The rack is slotted so it can be mounted close to the machine for easy access.

Figure 43. G1076 52-PC. Clamping Kit.
SECTION 6: MAINTENANCE

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

Lubrication

Ways
Place two to three drops of ISO 68 or SAE 20W non-detergent oil or similar lubricant directly on the ways of the cross feed and longitudinal table.

Rack & Pinion
Brush a small amount of multi-purpose grease on the column rack near the pinion. Move the column up and down to distribute the grease.

Schedule

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

Daily Check:
- Mill/drill is completely powered down at the end of use.
- Excess cutting fluids and chips have been removed and unpainted surfaces are dry and protected.
- Loose mounting bolts.
- Mill/drill is clean and lubricated.
- Worn or damaged wires.
- Any other unsafe condition.

Monthly Check:
- Gibs are adjusted properly.

Unpainted Cast Iron

Protect the unpainted cast iron surfaces on the table by removing vises and fixtures daily and by wiping the table clean after every use—this ensures moisture does not remain on bare metal surfaces.

Keep tables rust-free with regular applications of products like G96® Gun Treatment or Boeshield® T-9. See below for Grizzly model numbers:

G2871—Boeshield® T-9 12 oz Spray
G2870—Boeshield® T-9 4 oz Spray
H3788—G96® Gun Treatment 12 oz Spray
H3789—G96® Gun Treatment 4.5 oz Spray

Figure 44. Cross feed and longitudinal ways.

Figure 45. Rack & pinion greasing location.
Oil Fittings

Oil fittings are located on the tops of each handwheel and on each side of the base. Lubricate these fittings with ISO 68 or SAE 20W oil by depressing the ball with an oil can nozzle and squirting once or twice.

Adjusting Gibs

The gibbs control play in the longitudinal and cross feed table movement; they are pre-adjusted at the factory and typically need no adjustments until the machine is well used. If table movement is too tight, make sure the locks are fully released. Next, make sure the bedways are thoroughly cleaned of rust preventative and lubricated with oil.

Both the longitudinal table and the cross feed table have gib adjustment screws (see Figure 49 for the location). Turn the gib adjustment screw clockwise to tighten the gib or turn counterclockwise to loosen the gib.

To adjust the gibbs:

1. Turn the gib screw one full turn in the necessary direction for tightening or loosening.

2. Test the gib tension by turning the handwheel and moving the table back and forth. Repeat Step 1 as necessary.

NOTICE

When adjusting gibbs, the goal is to remove unnecessary sloppiness without causing the slides to bind. Loose gibbs may cause poor finishes on the workpiece and may cause undue wear on the slide. Over-tightened gibbs may cause premature wear.
## SECTION 7: SERVICE

### About Service

This section is provided for your convenience—it is not a substitute for the Grizzly Service Department. If you need help troubleshooting, you need replacement parts, or you are unsure of how to perform the procedures in this section, then feel free to call our Technical Support at (570) 546-9663.

### Troubleshooting

#### Motor & Electrical

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Possible Solution</th>
</tr>
</thead>
</table>
| Machine does not start or a breaker trips. | 1. Plug or receptacle is at fault or wired incorrectly.  
2. Cable or wiring is open or has high resistance.  
3. Power supply is faulty, or is switched **OFF**.  
4. Safety switch key is at fault.  
5. ON/OFF switch at fault.  
6. Motor connection is wired incorrectly.  
7. Motor is at fault. | 1. Test power plug and receptacle for good contact and correct wiring.  
2. Troubleshoot wires for internal or external breaks, check for disconnected or corroded connections and repair or replace wiring, as necessary.  
3. Make sure all hot lines and grounds are operational and have correct voltage on all legs.  
4. Install or replace safety key, or replace switch assembly.  
5. Replace faulty switch.  
6. Correct motor wiring (see **Page 28**).  
7. Test, repair or replace motor. |
| Machine stalls or is underpowered. | 1. Incorrect spindle speed or feed rate.  
2. Machine is undersized for the task.  
3. Bit or cutter is too large for machine.  
4. Belts are slipping.  
5. Plug or receptacle is at fault.  
6. Pulley is slipping on shaft.  
7. Low power supply voltage.  
8. Motor bearings are at fault.  
9. Motor has overheated.  
10. Motor connection is wired incorrectly.  
11. Motor is at fault. | 1. Decrease spindle speed or feed rate.  
2. Use smaller drill bits/cutters and reduce the feed rate and spindle speed.  
3. Use a smaller bit.  
4. Replace bad belts, align pulleys, and re-tension.  
5. Test power plug and receptacle for good contact and correct wiring.  
6. Replace loose pulley and shaft.  
7. Make sure hot lines and grounds are operational with correct voltage.  
8. Rotate motor shaft for noisy or burnt bearings, repair/replace as required.  
9. Clean dust off motor, let it cool, and reduce workload on machine.  
10. Correct motor wiring (see **Page 28**).  
11. Test, repair or replace motor. |
### Machine Vibrates Excessively or is Unusually Noisy

<table>
<thead>
<tr>
<th>Possible Cause</th>
<th>Possible Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Motor fan is rubbing on fan cover.</td>
<td>1. Replace/repair dented fan cover, and replace loose or damaged fan.</td>
</tr>
<tr>
<td>2. Motor or component is loose.</td>
<td>2. Replace component fasteners and re-tighten with thread locking fluid.</td>
</tr>
<tr>
<td>3. Belt is slapping belt cover.</td>
<td>3. Replace, realign, or re-tension belt (refer to Page 18).</td>
</tr>
<tr>
<td>4. V-belt is worn.</td>
<td>4. Replace belt.</td>
</tr>
<tr>
<td>5. Pulley is loose.</td>
<td>5. Remove pulley, replace with key as required, and re-install securely.</td>
</tr>
<tr>
<td>6. Machine is incorrectly mounted to the stand, stand is incorrectly mounted to the floor, or the stand is uneven.</td>
<td>6. Make sure the mounting hardware is tight; place shims under machine.</td>
</tr>
<tr>
<td>7. Chuck or cutter is at fault.</td>
<td>7. Replace out-of-round chuck, replace or resharpen cutter, use appropriate feed rate and cutting RPM.</td>
</tr>
<tr>
<td>8. Motor bearings are at fault.</td>
<td>8. Check bearings, replace motor or bearings as required.</td>
</tr>
</tbody>
</table>

### Mill/Drill Operations

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Possible Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling stops, but the motor still operates.</td>
<td>1. The belt is loose, worn, or broken. 2. Bit slips in chuck.</td>
<td>1. Replace or adjust the belt. 2. Tighten bit; inspect bit for burrs or other obstructions that might interfere with clamping surface.</td>
</tr>
<tr>
<td>The chuck wobbles or is loose on the spindle shaft.</td>
<td>1. Foreign material is stuck between the chuck-to-spindle mating surface. 2. Damaged chuck.</td>
<td>1. Remove the chuck, clean, and de-burr the tapered chuck and spindle mating surfaces, then reassemble. 2. Replace.</td>
</tr>
<tr>
<td>The spindle does not retract completely in the upper-most position or it binds.</td>
<td>1. The quill shaft is gummy with sawdust and oil. 2. The quill lock is locked or not fully released. 3. The feed shaft return spring is weak.</td>
<td>1. Clean shaft and lubricate with a light coat of oil. 2. Fully release the quill lock. 3. Increase the feed shaft return spring tension.</td>
</tr>
<tr>
<td>The quill has excessive deflection.</td>
<td>1. The quill bearings are worn or damaged. 2. The quill shaft is at fault.</td>
<td>1. Replace the bearings. 2. Replace the quill shaft.</td>
</tr>
<tr>
<td>Drill bit wobbles, holes are oversized.</td>
<td>1. Drill bit installed incorrectly.</td>
<td>1. Remove drill bit and reinstall.</td>
</tr>
</tbody>
</table>
Electrical Components

Figure 50. Power switch assembly.

Figure 51. Motor wiring inside junction box.

Wiring Diagram

TOGGLE SWITCH
(viewed from behind)

MODEL G0517

COLOR KEY
BLACK
WHITE
GREEN
YELLOW
BROWN

5-15 Plug
110 VAC

MOTOR

HEADSTOCK

WARNING!
SHOCK HAZARD! Disconnect power before working on wiring.

Capacitor 300 MFD 125 VAC

Ground

Hot

Neutral
Stand/Base Parts Breakdown
<table>
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<tr>
<th>REF</th>
<th>PART #</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>1</td>
<td>P0517001</td>
<td>BASE</td>
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<tr>
<td>2</td>
<td>P0517002</td>
<td>DOOR</td>
</tr>
<tr>
<td>3</td>
<td>P0517003</td>
<td>HINGE</td>
</tr>
<tr>
<td>4</td>
<td>P0517004</td>
<td>KNURLED THUMB SCREW M6-1 X 20</td>
</tr>
<tr>
<td>5</td>
<td>P0517005</td>
<td>OIL PLATE</td>
</tr>
<tr>
<td>6</td>
<td>P0517006</td>
<td>BASE</td>
</tr>
<tr>
<td>7</td>
<td>P0517007</td>
<td>CAP SCREW M12-1.75 X 150</td>
</tr>
<tr>
<td>8</td>
<td>P0517008</td>
<td>SADDLE</td>
</tr>
<tr>
<td>9</td>
<td>P0517009</td>
<td>NUT TR20 X 4-9H</td>
</tr>
<tr>
<td>10</td>
<td>PW01M</td>
<td>FLAT WASHER 8MM</td>
</tr>
<tr>
<td>11</td>
<td>PS16M</td>
<td>PHLP HD SCR M8-1.25 x 16</td>
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<tr>
<td>12</td>
<td>P0517012</td>
<td>NUT TR20 X 4-9H</td>
</tr>
<tr>
<td>13</td>
<td>P0517013</td>
<td>TABLE</td>
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<tr>
<td>14</td>
<td>P0517014</td>
<td>LONG BEVEL IRON</td>
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<td>15</td>
<td>P0517015</td>
<td>ADJUST SCREW M8-69</td>
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<tr>
<td>16</td>
<td>P0517016</td>
<td>LONGITUDINAL LEAD SCREW</td>
</tr>
<tr>
<td>17</td>
<td>P0517017</td>
<td>SUPPORT</td>
</tr>
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<td>18</td>
<td>PSB01M</td>
<td>CAP SCREW M6-1 X 16</td>
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<tr>
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⚠️ **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.
### Headstock Parts List

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### WARNING

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Grizzly Industrial, Inc. warrants every product it sells for a period of 1 year to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly’s liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

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.
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?
   - Cabinet Maker
   - Family Handyman
   - Hand Loader
   - Handy
   - Home Shop Machinist
   - Journal of Light Cont.
   - Live Steam
   - Model Airplane News
   - Modeltec
   - Old House Journal
   - Popular Mechanics
   - Popular Science
   - Popular Woodworking
   - Practical Homeowner
   - Precision Shooter
   - Projects in Metal
   - RC Modeler
   - Rifle
   - Shop Notes
   - Other:

3. What is your annual household income?
   - $20,000-$29,000
   - $30,000-$39,000
   - $40,000-$49,000
   - $50,000-$59,000
   - $60,000-$69,000
   - $70,000+

4. What is your age group?
   - 20-29
   - 30-39
   - 40-49
   - 50-59
   - 60-69
   - 70+

5. How long have you been a woodworker/metalworker?
   - 0-2 Years
   - 2-8 Years
   - 8-20 Years
   - 20+ Years

6. How many of your machines or tools are Grizzly?
   - 0-2
   - 3-5
   - 6-9
   - 10+

7. Do you think your machine represents a good value?  
   - Yes
   - No

8. Would you recommend Grizzly Industrial to a friend?  
   - Yes
   - No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?  
   Note: We never use names more than 3 times.  
   - Yes
   - No

10. Comments:

_____________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________
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Street________________________________________
City______________State______Zip________

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