# MODEL T33901/T33902
# 14" DRILL PRESS w/LED & LASER GUIDE
## OWNER'S MANUAL
***(For models manufactured since 07/23)***



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#CS22848 PRINTED IN CHINA V1.12.23

******Keep for Future Reference******

# ⚠ WARNING!

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

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

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

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

# ⚠ WARNING!

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

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

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

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# INTRODUCTION

## Contact Info

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

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

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

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

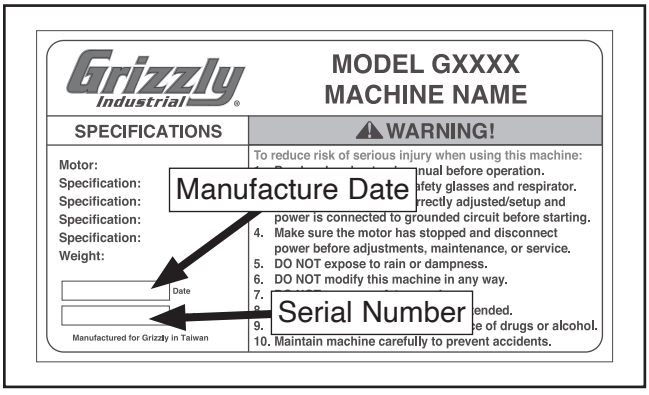
## Manual Accuracy

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

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

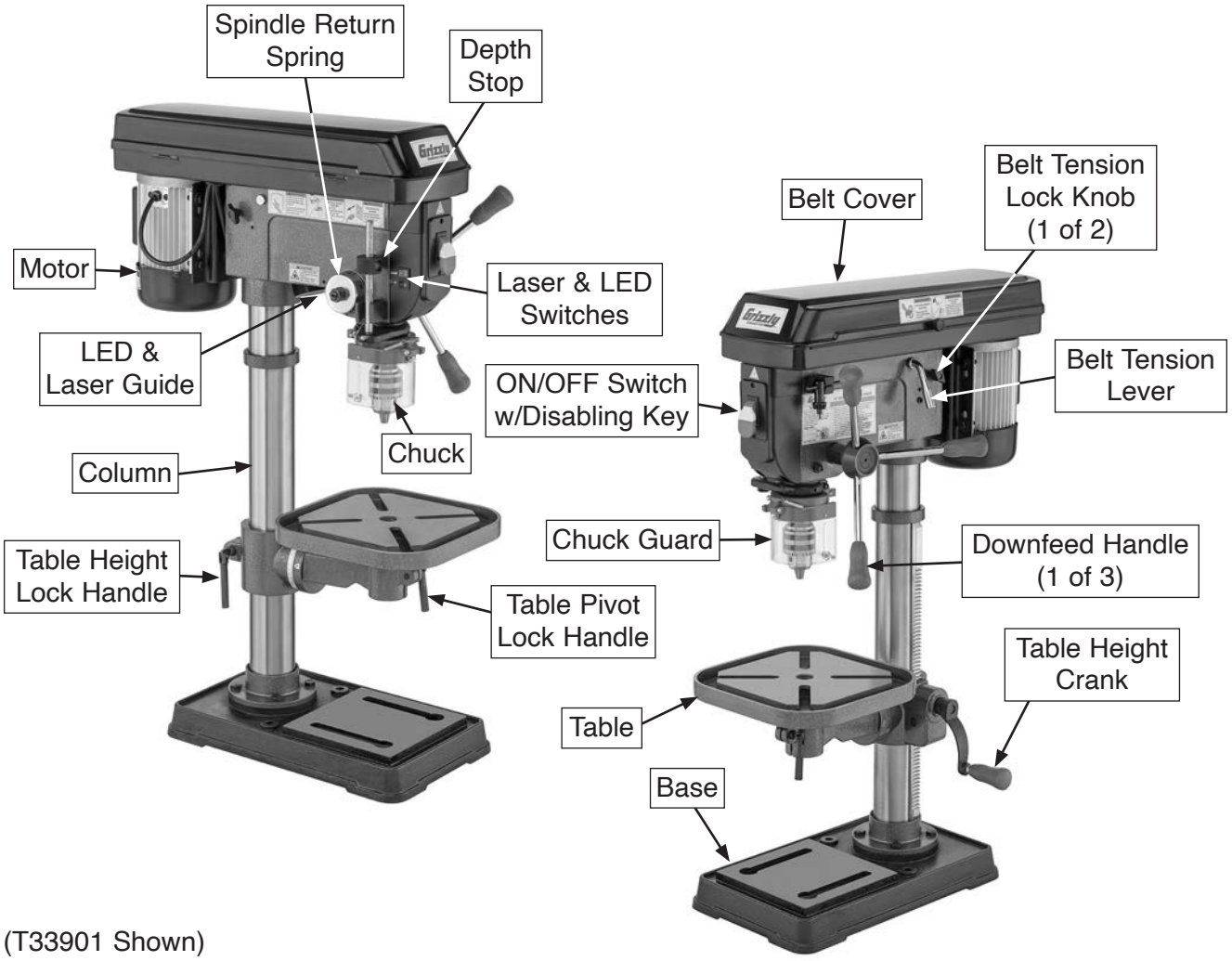
If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.grizzly.com**.

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



# Identification

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



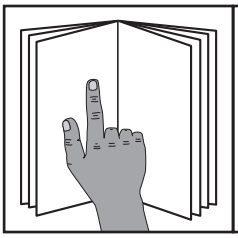

(T33901 Shown)

## ⚠WARNING

**For Your Own Safety Read Instruction Manual Before Operating Drill Press**

**a) Wear eye protection.**
**b) Do not wear gloves, necktie, or loose clothing.**
**c) Clamp workpiece or brace against column to prevent rotation.**
**d) Use recommended speed for drill accessory and workpiece material.**

# Controls & Components



**⚠WARNING**

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

Refer to the following figures and descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and minimize your risk of injury when operating this machine.

## Power Controls

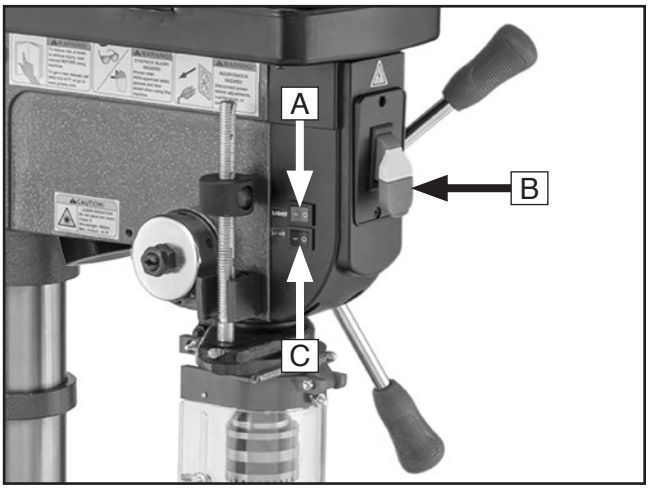



**Figure 1.** Power controls.

**A. LED Switch:** Turns LED ***ON*** or ***OFF***.

**B. ON/OFF Switch w/Disabling Key:** Turns motor ***ON*** when moved up; turns motor ***OFF*** when moved down. Removal of yellow key disables switch so motor cannot start.

**C. Laser Switch:** Turns laser guide ***ON*** or ***OFF***.

## Spindle Speed

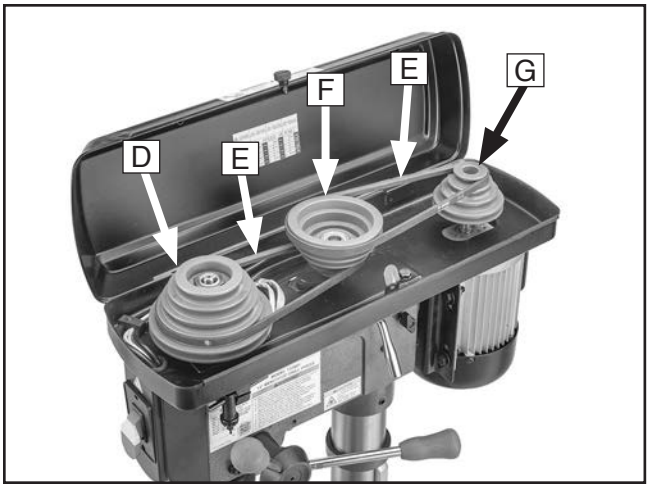



**Figure 2.** Spindle speed components.

**D. Spindle Pulley:** Holds V-belt and transfers motor power from idler pulley to spindle.

**E. V-Belts:** Control spindle speed.

**F. Idler Pulley:** Holds V-belts and transfers motor power from motor pulley to spindle pulley.

**G. Motor Pulley:** Holds V-belt and transfers motor power to idler pulley.

## Headstock

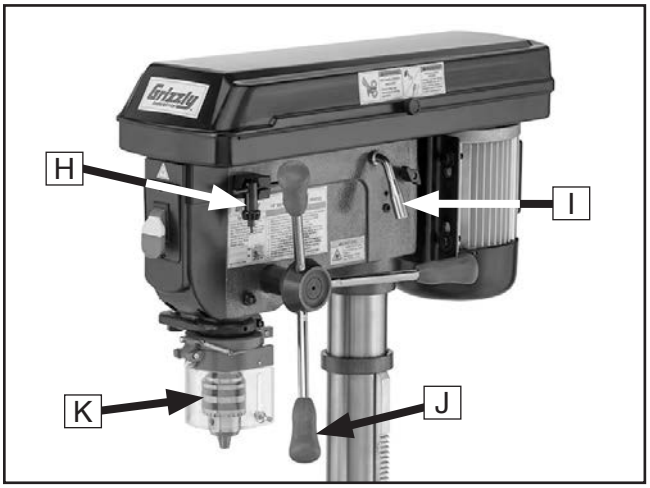



**Figure 3.** Right headstock components.

**H. Chuck Key:** Adjusts jaws on chuck for drill bit changes.

**I. Belt Tension Lever:** Adjusts motor position to tension and release belts for changing spindle speed, and for servicing.

**J. Downfeed Handle (1 of 3):** Moves spindle down when pulled down. Spindle automatically returns to top position when released.

**K. Chuck:** Accepts drill bits with shanks from 1/8"–5/8".

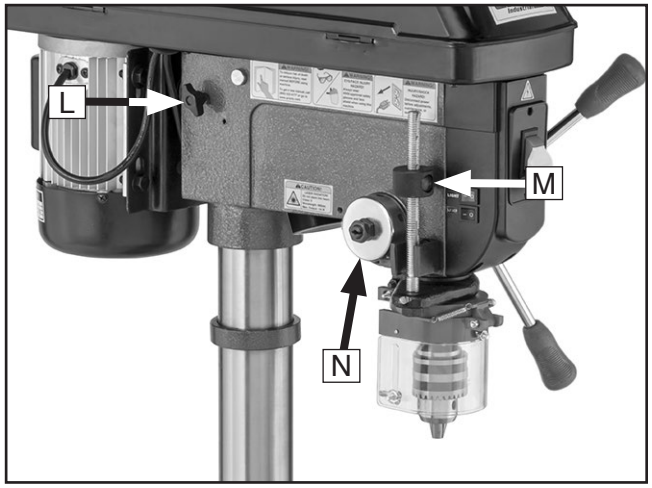



**Figure 4.** Left headstock components.

**L. Belt Tension Lock Knob (1 of 2):** Locks motor position.

**M. Depth Stop:** Stops spindle travel at predetermined drilling depth. Top of depth stop nut indicates depth on scale.

**N. Spindle Return Spring:** Automatically returns quill into headstock.

## LED & Laser Guide

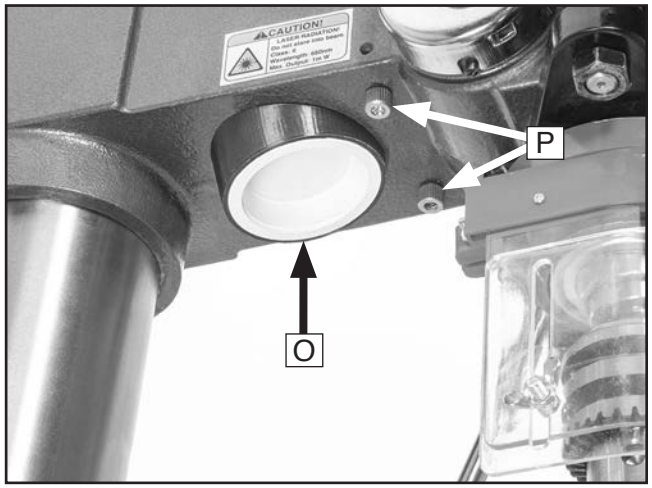



**Figure 5.** LED and laser guide.

**O. LED:** Illuminates work area.

**P. Laser Guide:** Projects crosshairs on table to align workpiece to drill bit.

## Table

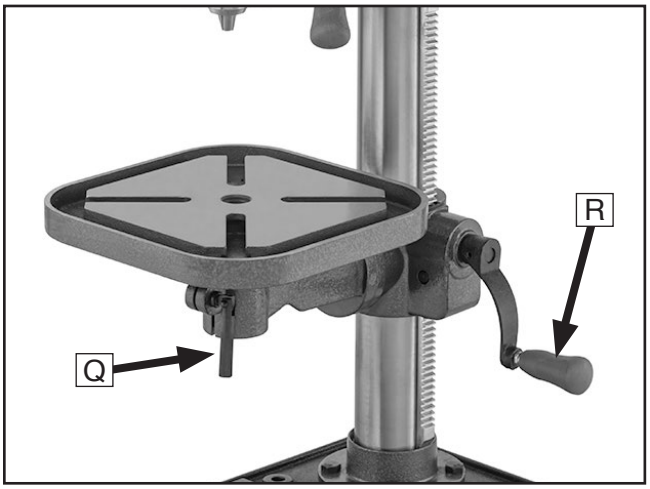



**Figure 6.** Right table components.

**Q. Table Pivot Lock Handle:** Loosens to allow rotation of table; tightens to lock table rotation.

**R. Table Height Crank:** Adjusts table up and down.

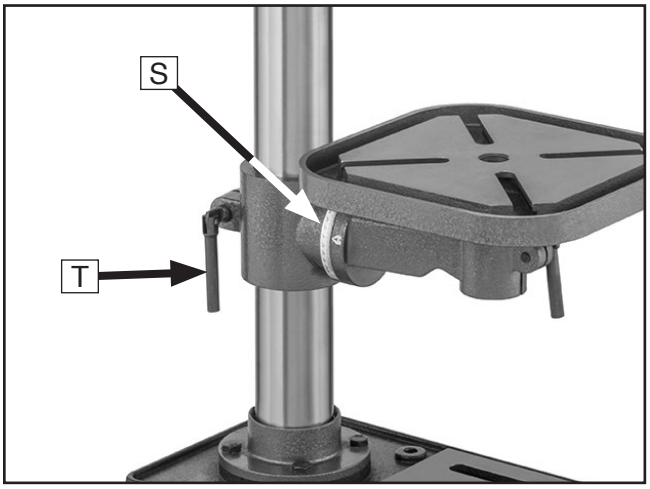



**Figure 7.** Left table components.

**S. Tilt Scale:** Displays current table tilt angle.

**T. Table Height Lock Handle:** Loosens to allow adjustment of table position on column; tightens to lock table position.

# MACHINE DATA SHEET

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

## MODEL T33901
## 14" BENCHTOP DRILL PRESS W/LED & LASER GUIDE

**Product Dimensions:**

Weight..... 108 lbs.
Width (side-to-side) x Depth (front-to-back) x Height..... 15 x 25-1/2 x 39 in.
Footprint (Length x Width)..... 18 x 10-1/2 in.

**Shipping Dimensions:**

Type..... Cardboard
Content..... Machine
Weight..... 116 lbs.
Length x Width x Height..... 36 x 23 x 14 in.
Must Ship Upright..... Yes

**Electrical:**

Power Requirement..... 120V, Single-Phase, 60 Hz
Full-Load Current Rating..... 7.5A
Minimum Circuit Size..... 15A
Connection Type..... Cord & Plug
Power Cord Included..... Yes
Power Cord Length..... 70 in.
Power Cord Gauge..... 16 AWG
Plug Included..... Yes
Included Plug Type..... 5-15
Switch Type..... Paddle Safety Switch w/Disabling Key

**Motors:**

**Main**

Horsepower..... 3/4 HP
Phase..... Single-Phase
Amps..... 7.5A
Speed..... 1720 RPM
Type..... TEFC Capacitor-Start Induction
Power Transfer ..... Direct
Bearings..... Shielded & Permanently Lubricated

**Main Specifications:**

**Operation Information**

Type..... Bench
Swing..... 14 in.
Spindle Taper..... MT#2
Spindle Travel..... 3-1/4 in.
Max. Distance From Spindle to Column..... 7 in.
Max. Distance From Spindle to Table..... 15-7/8 in.
Number of Spindle Speeds..... 12
Range of Spindle Speeds..... 340 - 2860 RPM
Drilling Capacity (Mild Steel)..... 5/8 in.
Drilling Capacity (Cast Iron)..... 3/4 in.
Drill Chuck Type..... JT3 Key Chuck
Drill Chuck Size..... 1/8 - 5/8 in.

**Spindle Information**

| | |
|---|---|
| Distance From Spindle to Base | 23-3/8 in. |
| Quill Diameter | 1.85 in. |

**Table Information**

| | |
|---|---|
| Max. Table Tilt (Left/Right) | 0 - 45 deg. |
| Table Swing | 360 deg. |
| Table Swivel Around Center | 360 deg. |
| Table Swivel Around Column | 360 deg. |
| Table Length | 11-1/4 in. |
| Table Width | 11-1/4 in. |
| Table Thickness | 1-1/16 in. |
| Vertical Table Travel | 14-3/8 in. |
| Number of T-Slots | 4 |
| T-Slot Size | 9/16 in. |
| Floor-To-Table Height | 9-5/8 - 24 in. |

**Construction**

| | |
|---|---|
| Table | Precision-Ground Cast Iron |
| Column | Steel |
| Spindle Housing | Cast Iron |
| Head | Cast Iron |
| Base | Cast Iron |
| Paint Type/Finish | Powder Coated |

**Other Related Information**

| | |
|---|---|
| Base Length | 18 in. |
| Base Width | 10-1/2 in. |
| Column Diameter | 3-1/8 in. |
| Quill Flange/Collar Diameter | 2-1/8 in. |
| Quill Hold Type | Slotted Set Screw |
| Depth Stop Type | Threaded Rod w/Positive Stop |
| Has Work Light | Yes |
| Light Socket Type | LED 12V |
| Maximum Bulb Wattage | 3W |
| Has Laser Guide | Yes |
| Laser Classification | Class II |
| Laser Wavelength | 650 nm |
| Laser Maximum Output | 1mW |

**Other Specifications:**

| | |
|---|---|
| Country of Origin | China |
| Warranty | 1 Year |
| Approximate Assembly & Setup Time | 30 Minutes |
| Serial Number Location | Machine ID Label |
| ISO 9001 Factory | Yes |

**Features:**

Hand-Crank Enabled Rack and Pinion Table Elevation
11-1/4" x 11-1/4" Cast Iron Table w/Four 9/16" T-Slots
Built-In LED Light
Adjustable Class II Laser Sights
3-1/4" Spindle Travel
360 Deg. Table Positioning Around Column
Cast Iron Base w/Two 5/8" T-Slots, 5-1/4" on Center
12 Speed Settings: 340, 500, 530, 660, 740, 790, 1380, 1420, 1680, 1860, 2200, 2860 RPM
JT3 Key Chuck 1/8" - 5/8"

# MACHINE DATA SHEET

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

## MODEL T33902
## 14" FLOOR DRILL PRESS W/LED & LASER GUIDE

**Product Dimensions:**

Weight..... 126 lbs.
Width (side-to-side) x Depth (front-to-back) x Height..... 15 x 25-1/2 x 61-1/2 in.
Footprint (Length x Width)..... 18 x 10-1/2 in.

**Shipping Dimensions:**

Type..... Cardboard Box
Content..... Machine
Weight..... 133 lbs.
Length x Width x Height..... 46 x 23 x 14 in.
Must Ship Upright..... Yes

**Electrical:**

Power Requirement..... 120V, Single-Phase, 60Hz
Full-Load Current Rating..... 7.5A
Minimum Circuit Size..... 15A
Connection Type..... Cord & Plug
Power Cord Included..... Yes
Power Cord Length..... 70 in.
Power Cord Gauge..... 16 AWG
Plug Included..... Yes
Included Plug Type..... 5-15
Switch Type..... Paddle Safety Switch w/Disabling Key

**Motors:**

**Main**

Horsepower..... 3/4 HP
Phase..... Single-Phase
Amps..... 7.5A
Speed..... 1720 RPM
Type..... TEFC Capacitor-Start Induction
Power Transfer ..... Belt
Bearings..... Shielded & Permanently Lubricated

**Main Specifications:**

**Operation Information**

Type..... Floor
Swing..... 14 in.
Spindle Taper..... MT#2
Spindle Travel..... 3-1/4 in.
Max. Distance From Spindle to Column..... 7 in.
Max. Distance From Spindle to Table..... 26-3/8 in.
Number of Spindle Speeds..... 12
Range of Spindle Speeds..... 340 - 2860 RPM
Drilling Capacity (Mild Steel)..... 5/8 in.
Drilling Capacity (Cast Iron)..... 3/4 in.
Drill Chuck Type..... JT3 Key Chuck
Drill Chuck Size..... 1/8 - 5/8 in.

**Spindle Information**

| | |
|---|---|
| Distance From Spindle to Base | 45-3/4 in. |
| Quill Diameter | 1.847 in. |

**Table Information**

| | |
|---|---|
| Max. Table Tilt (Left/Right) | 0 - 45 deg. |
| Table Swing | 360 deg. |
| Table Swivel Around Center | 360 deg. |
| Table Swivel Around Column | 360 deg. |
| Max. Movement of Work Table | 22-1/4 in. |
| Table Length | 11-1/4 in. |
| Table Width | 11-1/4 in. |
| Table Thickness | 1-1/16 in. |
| Vertical Table Travel | Crank Handle |
| Number of T-Slots | 4 |
| T-Slot Size | 9/16 in. |
| Floor-To-Table Height | 21-1/2 - 43-3/4 in. |

**Construction**

| | |
|---|---|
| Table | Precision-Ground Cast Iron |
| Column | Steel |
| Spindle Housing | Cast Iron |
| Head | Cast Iron |
| Base | Cast Iron |
| Paint Type/Finish | Powder Coated |

**Other Related Information**

| | |
|---|---|
| Base Length | 18 in. |
| Base Width | 10-1/2 in. |
| Column Diameter | 3-1/8 in. |
| Quill Hold Type | Slotted Set Screw |
| Depth Stop Type | Threaded Rod w/Positive Stop |
| Has Work Light | Yes |
| Light Socket Type | LED 12V |
| Maximum Bulb Wattage | 3W |
| Has Laser Guide | Yes |
| Laser Classification | Class II |
| Laser Wavelength | 650 nm |
| Laser Maximum Output | 1mW |

**Other Specifications:**

| | |
|---|---|
| Country of Origin | China |
| Warranty | 1 Year |
| Approximate Assembly & Setup Time | 30 Minutes |
| Serial Number Location | Machine ID Label |
| ISO 9001 Factory | Yes |

**Features:**

Hand-Crank Enabled Rack and Pinion Table Elevation
11-1/4" x 11-1/4" Cast Iron Table w/Four 9/16" T-Slots
Built-In LED Light
Adjustable Class II Laser Sights
3-1/4" Spindle Travel
360 Deg. Table Positioning Around Column
Cast Iron Base w/Two 3/4" T-Slots, 5-1/4" on Center
12 Speed Settings: 340, 500, 530, 660, 740, 790, 1380, 1420, 1680, 1860, 2200, 2860 RPM
JT3 Key Chuck 1/8" - 5/8"

# SECTION 1: SAFETY

## For Your Own Safety, Read Instruction Manual Before Operating This Machine

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

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

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

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

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

## Safety Instructions for Machinery

### ⚠WARNING

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

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

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

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

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

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

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

# ⚠WARNING

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

# Additional Safety for Drill Presses

## ⚠WARNING

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

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

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

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

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

**SECURING BIT/CUTTING TOOL.** Firmly secure bit/cutting tool in chuck so it cannot fly out of spindle during operation or startup.

**DRILLING PREPARATION.** To avoid loss of drilling control or bit breakage, only drill into a flat surface that is approximately perpendicular to bit. Clear table of all objects before starting spindle. Never start spindle with bit pressed against workpiece.

**SECURING TABLE AND HEADSTOCK.** To avoid loss of control leading to accidental contact with tool/bit, tighten all table and headstock locks before operating drill press.

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

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

## ⚠WARNING

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

## ⚠CAUTION

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

# SECTION 2: POWER SUPPLY

## Availability

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



**⚠WARNING**

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

## Full-Load Current Rating

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

**Full-Load Current Rating at 120V .... 7.5 Amps**

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

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

**⚠WARNING**

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

## 120V Circuit Requirements

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

**Nominal Voltage ..... 110V, 115V, 120V**
**Cycle ..... 60 Hz**
**Phase ..... Single-Phase**
**Power Supply Circuit ..... 15 Amps**
**Plug/Receptacle ..... NEMA 5-15**

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

**⚠CAUTION**

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

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

## Grounding & Plug Requirements

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

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

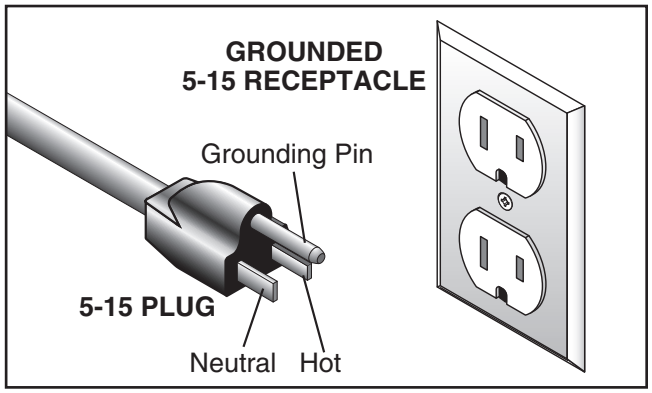
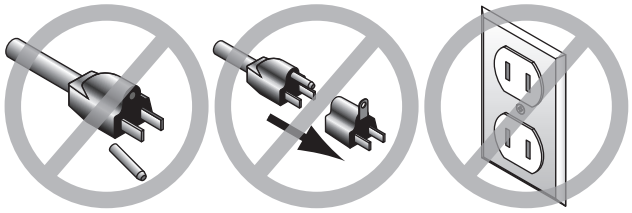



**Figure 8.** Typical 5-15 plug and receptacle.

**⚠CAUTION**



**SHOCK HAZARD!**

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

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

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

## Extension Cords

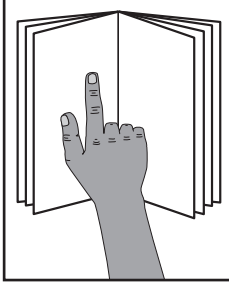
We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

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

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

**Minimum Gauge Size.....16 AWG**
**Maximum Length (Shorter is Better).....50 ft.**

# SECTION 3: SETUP



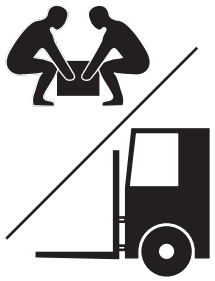
**⚠WARNING**

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



**⚠WARNING**

**Wear safety glasses during the entire setup process!**



**⚠WARNING**

**HEAVY LIFT!**

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

## Needed for Setup

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

| Description | Qty |
|---|---|
| • Safety Glasses (for each person) | 1 Pr. |
| • Cleaner/Degreaser | As Needed |
| • Acetone/Lacquer Thinner | As Needed |
| • Disposable Rags | As Needed |
| • Disposable Gloves | As Needed |
| • Lifting Equipment (Rated for at least 175 lbs.) | 1 |
| • Another Person | 1 |
| • Wrench or Socket 17mm | 1 |
| • Open-End Wrench 7mm | 1 |
| • Phillips Head Screwdriver #2 | 1 |
| • Plumb Bob | 1 |
| • Ruler or Measuring Tape | 1 |
| • Marker | 1 |
| • Block of Wood | 1 |
| • Mounting Hardware | As Needed |

## Unpacking

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

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

# Inventory

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

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

## *NOTICE*

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

| Box 1 (Figure 9) | | Qty |
|---|---|---|
| **A.** | Headstock | 1 |
| **B.** | Column Assembly (T33902) | 1 |
| **C.** | Column Assembly (T33901) | 1 |
| **D.** | Table | 1 |
| **E.** | Table Support Bracket | 1 |
| **F.** | Base (T33901) | 1 |
| **G.** | Base (T33902) | 1 |
| **H.** | Downfeed Handles | 3 |
| **I.** | Table Height Crank | 1 |
| **J.** | Chuck Guard | 1 |
| **K.** | Combo Wrench 24mm | 1 |
| **L.** | Drill Chuck JT3 1/8"–5/8" | 1 |
| **M.** | Arbor MT#2 x JT3 | 1 |
| **N.** | Drift Key | 1 |
| **O.** | Drill Chuck Key | 1 |
| **P.** | Hex Wrenches 3, 4, 5mm | 1 Ea. |
| **Q.** | Hex Bolts M10-1.5 x 25 (T33901) | 4 |
| | Hex Bolts M10-1.5 x 30 (T33902) | 4 |

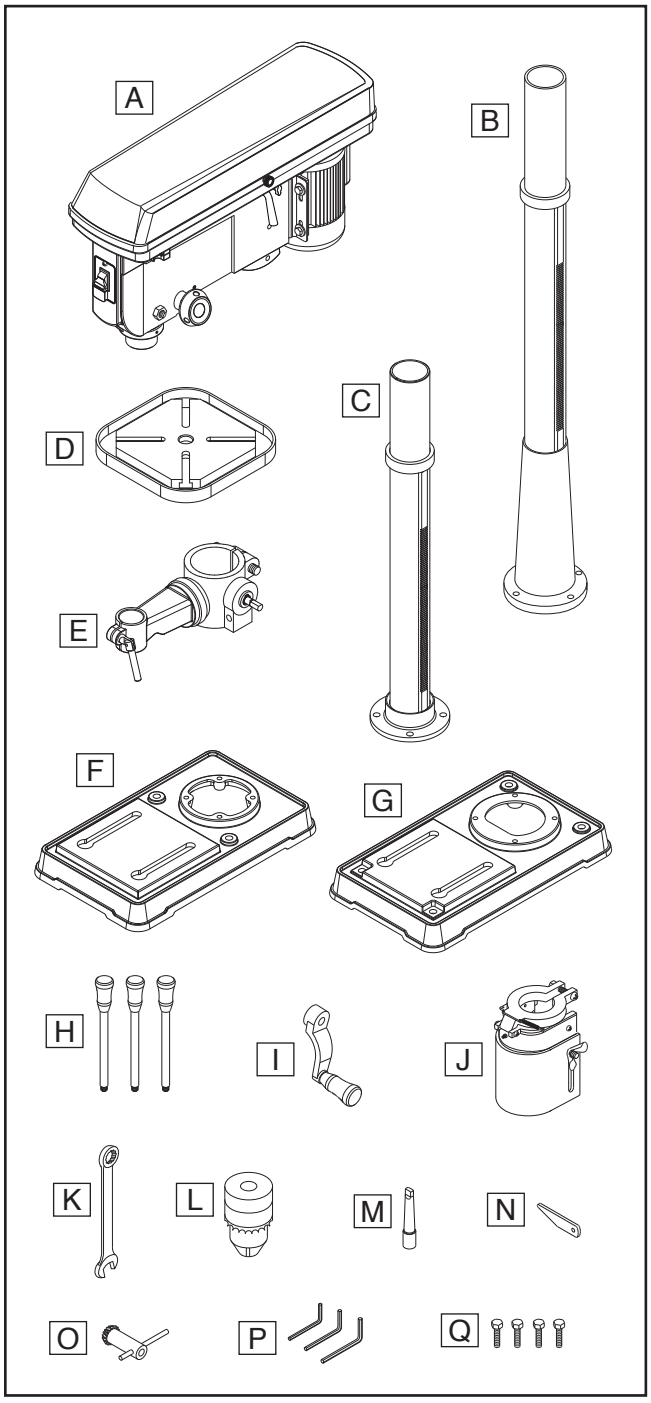



**Figure 9.** Inventory.

# Cleanup

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

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

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

**Before cleaning, gather the following:**
- Disposable rags
- Cleaner/degreaser (WD•40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

**Basic steps for removing rust preventative:**

**1.** Put on safety glasses.

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

**3.** Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.

**4.** Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.

***NOTICE***

**Avoid harsh solvents like acetone or brake parts cleaner that may damage painted surfaces. Always test on a small, inconspicuous location first.**

# Site Considerations

## Workbench Load

Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some workbenches may require additional reinforcement to support the weight of the machine and workpiece materials.

## Placement Location

Consider anticipated workpiece sizes and additional space needed for auxiliary stands, work tables, or other machinery when establishing a location for this machine in the shop. Below is the minimum amount of space needed for the machine.

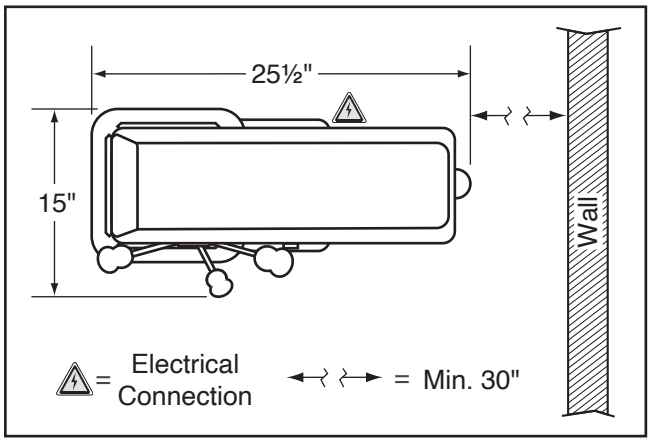
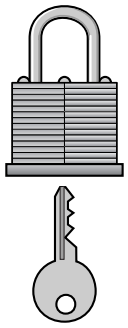



**Figure 10.** Minimum working clearances.



**CAUTION**

**Children and visitors may be seriously injured if unsupervised around this machine. Lock entrances to the shop or disable start switch or power connection to prevent unsupervised use.**

# Bench Mounting (T33901)

**Number of Mounting Holes ..... 2**
**Diameter of Mounting Hardware Needed .. ½"**

The T33901 base has holes that allow it to be fastened to a workbench or other mounting surface to prevent it from moving during operation and causing accidental injury or damage.

The strongest mounting option is a "Through Mount" (see example below) where holes are drilled all the way through the workbench—and hex bolts, washers, and hex nuts are used to secure the machine in place.

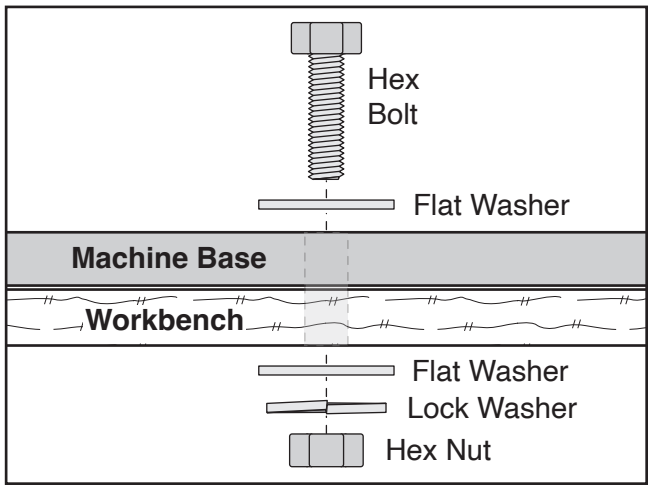



**Figure 11.** "Through Mount" setup.

Another option is a "direct mount" (see example below) where the machine is secured directly to the workbench with lag screws and washers.

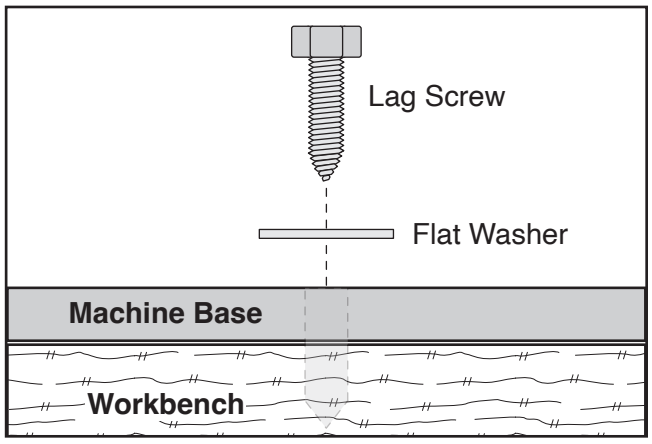



**Figure 12.** "Direct Mount" setup.

# Anchoring to Floor (T33902)

**Number of Mounting Holes ..... 4**
**Diameter of Mounting Hardware..... ½"**

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

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

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

## Anchoring to Concrete Floors

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

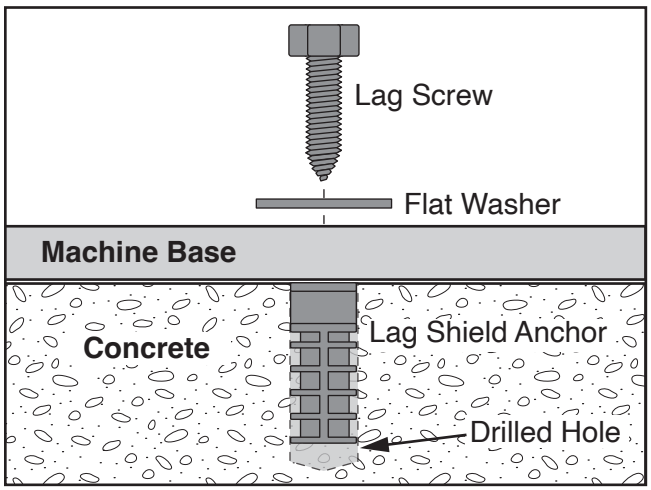
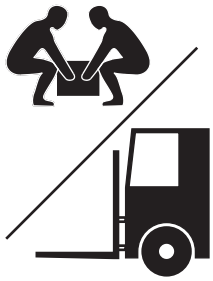



**Figure 13.** Popular method for anchoring machinery to a concrete floor.

# Assembly

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



**⚠WARNING**

**HEAVY LIFT!**

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

**To assemble machine:**

1. **T33901:** Attach column assembly to base with (4) M10-1.5 x 25 hex bolts (see **Figure 14**).

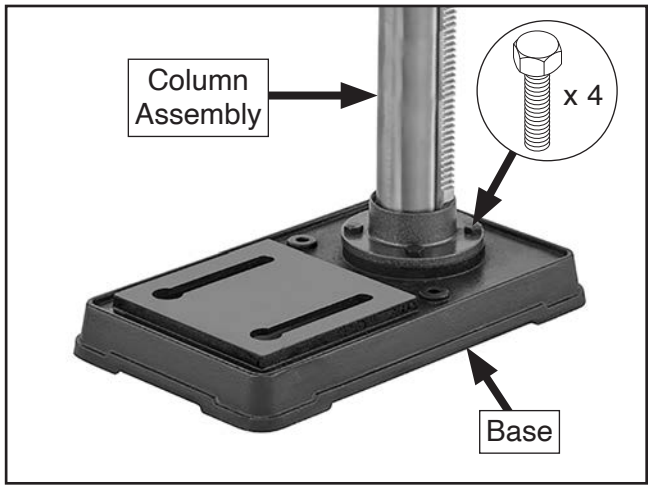



**Figure 14.** T33901 column assembly attached to base.

**T33902:** Attach column assembly to base with (4) M10-1.5 x 30 hex bolts (see **Figure 15**).

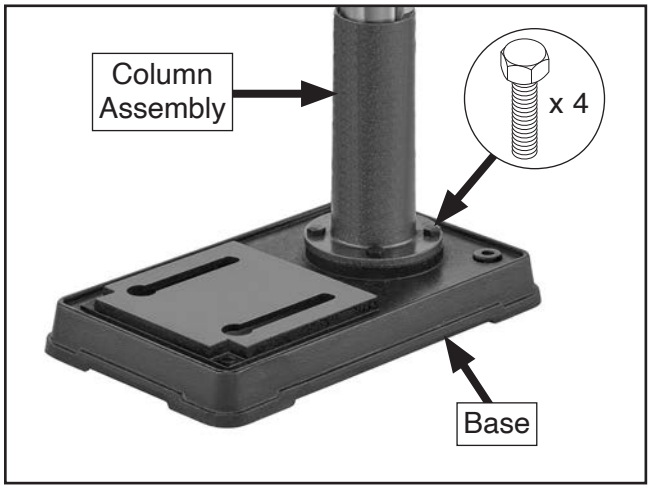



**Figure 15.** T33902 column assembly attached to base.

2. Mark top of rack, as shown in **Figure 16**, to keep track of which end is up.

3. Loosen set screw shown in **Figure 16** to remove column collar.

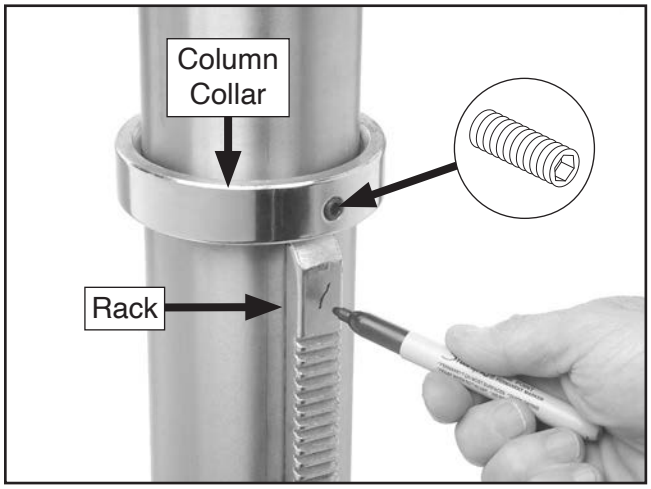



**Figure 16.** Example of marking top of rack.

4. Place rack inside of table support bracket, mesh it with pinion, and slide bracket over column, as shown in **Figure 17**.

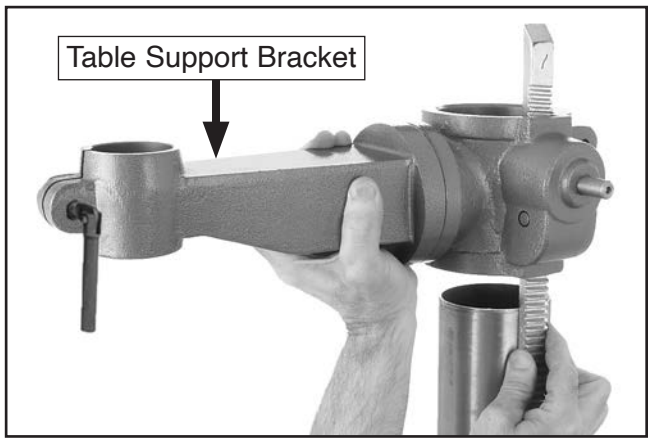



**Figure 17.** Example of sliding table support bracket and rack over column.

5. Slide column collar over column with beveled edge facing down, as shown in **Figure 18**, then fit beveled edge of collar over rack and tighten set screw to secure.

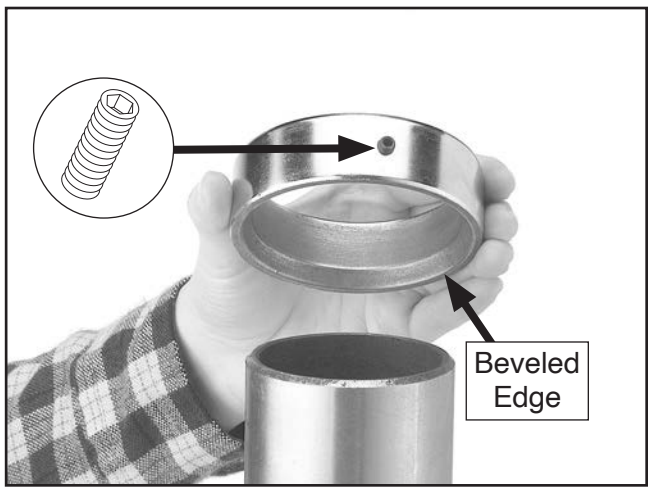



**Figure 18.** Correct column collar orientation.

**Note:** *Do not overtighten screw or you may split collar. Also make sure rack is seated firmly between collar and column base.*

6. With lifting help, carefully lift headstock and slide it onto column (see **Figure 19**).

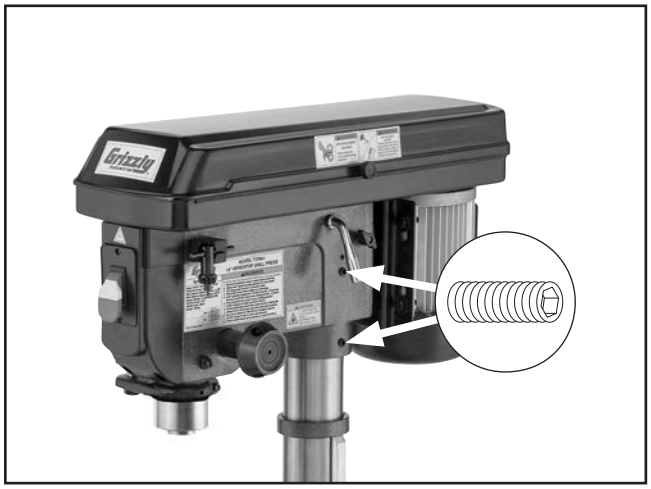


**Figure 19.** Headstock placed on column and location of headstock set screws.

7. Use measuring tape or ruler to find and mark center of base, then suspend plumb bob from center of headstock spindle over base, as shown in **Figure 20**.

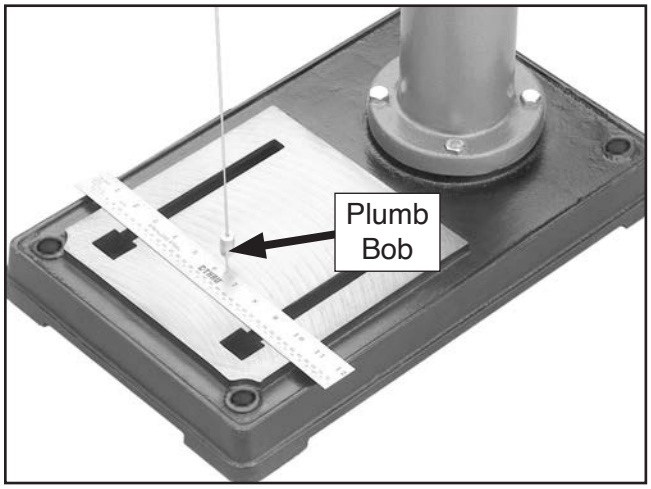



**Figure 20.** Example of aligning headstock with center of base.

8. Adjust headstock on column until it is directly over center of base, as indicated by plumb bob, then secure headstock by tightening (2) set screws shown in **Figure 19**.

9. Install table height crank over worm shaft shown in **Figure 21**, then tighten set screw in crank against flat part of shaft to secure.

10. Install table in table support bracket, then tighten table pivot lock handle to secure (see **Figure 21**).

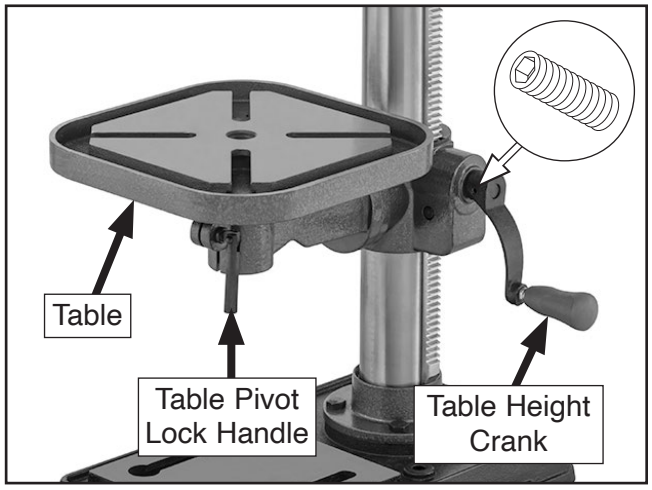



**Figure 21.** Table and table height crank installed.

11. Place chuck guard over quill and secure by tightening Phillips head screw and hex nut (see **Figure 22**).

12. Thread downfeed handles into spindle hub (see **Figure 22**).

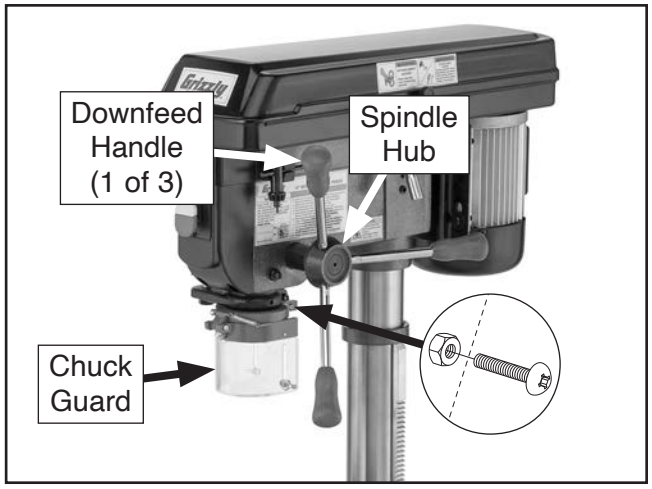



**Figure 22.** Chuck guard and downfeed handles installed.

# Joining Drill Chuck & Arbor

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

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

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

**To join drill chuck and arbor:**

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

2. Retract chuck jaws completely into chuck.

3. Insert small end of arbor into chuck.

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

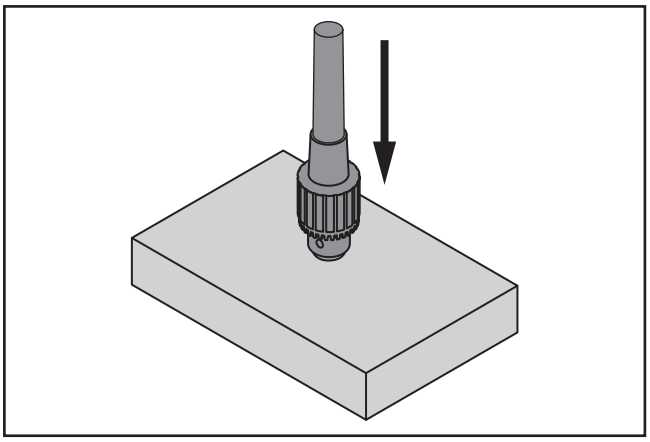


**Figure 23.** Tapping drill chuck/arbor on block of wood.

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

# Test Run

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

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

The Test Run consists of verifying the following: 1) The motor powers up and runs correctly, and 2) the switch disabling key disables the switch properly.

**⚠WARNING**

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

**⚠WARNING**

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

**To test run machine:**

1. Clear all setup tools away from machine.

2. Connect machine to power supply.

3. Turn machine ***ON***, verify motor operation, and then turn machine ***OFF***.

   Motor should run smoothly and without unusual problems or noises.

4. Remove switch disabling key, as shown in **Figure 24**.

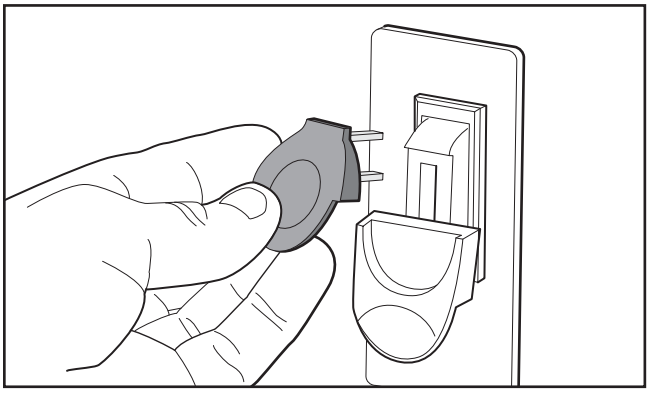


**Figure 24.** Removing switch key from ON/OFF switch.

5. Try to start machine with ON/OFF switch. Machine should not start.

   — If machine *does not* start, switch disabling feature is working correctly. Congratulations! Test Run is complete. Complete **Spindle Break-in** on **Page 23** before proceeding with operations.

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

# Spindle Break-In

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

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

## *NOTICE*

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

**To perform spindle break-in:**

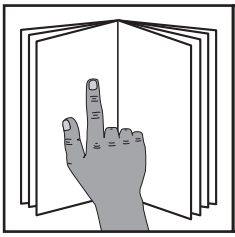
1. Make sure spindle area is free of obstructions.
2. Configure V-belts for a spindle speed of 340 RPM. Refer to **Changing Spindle Speed** on **Page 28**.
3. Connect machine to power and run spindle for 10 minutes.
4. Turn machine ***OFF***, allow spindle to come to a complete stop, then DISCONNECT MACHINE FROM POWER!
5. Configure V-belts for spindle speed of 530 RPM (refer to **Changing Spindle Speed** on **Page 28**), then connect machine to power.
6. Run spindle for 5 minutes at 530 RPM.
7. Repeat Steps **4**–**6** for each speed listed below in progressive order.

   **a.** 1380 RPM
   **b.** 1860 RPM
   **c.** 2860 RPM

8. Turn machine ***OFF***.

Congratulations! Spindle break-in is now complete.

# SECTION 4: OPERATIONS



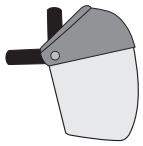
**⚠WARNING**

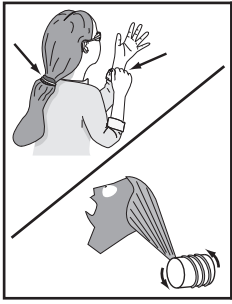
**To reduce your risk of serious injury, read this entire manual BEFORE using machine.**

**⚠WARNING**

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







**⚠WARNING**

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

***NOTICE***

**If you are not experienced with this type of machine, WE STRONGLY RECOMMEND that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.**

## Operation Overview

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

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

1. Examines workpiece to make sure it is suitable for drilling.
2. Puts on required safety glasses and face shield.
3. Firmly secures workpiece to table using a vise or T-slot clamps.
4. Installs correct drill bit for operation.
5. Adjusts table to correct height, then locks it in place.
6. Selects appropriate spindle speed according to drill bit speed chart located on **Page 27**, and adjusts belts to required pulley sheaves.
7. Connects machine to power, and turns machine ***ON***.
8. Performs drilling operation.
9. When finished, turns machine ***OFF*** and disconnects it from power.

# Installing/Removing Arbor

Usually, once the chuck and arbor have been properly mounted together, they are considered semi-permanent connections. If you would like to install a different chuck, we recommend getting a new arbor for that chuck.

## Installing Arbor in Spindle

| Items Needed | Qty |
|---|---|
| Phillips Head Screwdriver #2 | 1 |
| Open-End Wrench 7mm | 1 |
| Acetone or Lacquer Thinner | As Needed |
| Rubber Mallet | 1 |

**To install arbor in spindle:**

1. DISCONNECT MACHINE FROM POWER!

2. Loosen screw and hex nut shown in **Figure 25** to slide chuck guard off of quill and remove.

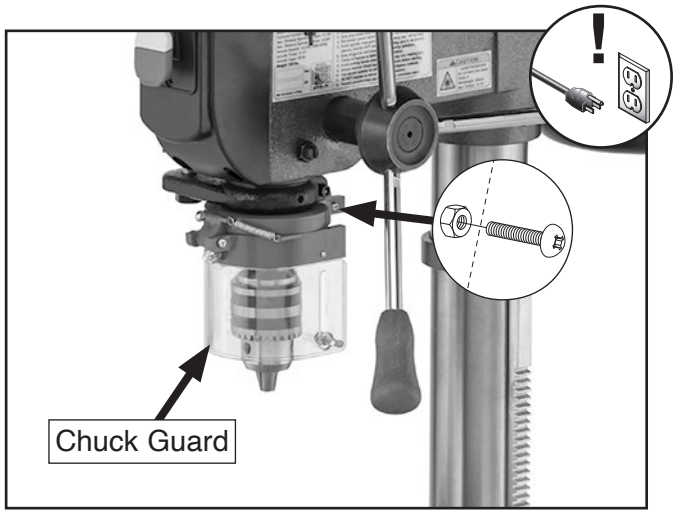



**Figure 25.** Location of chuck guard fasteners.

3. Join chuck and arbor (refer to **Joining Drill Chuck & Arbor** on **Page 21**).

4. Rotate chuck on arbor until chuck jaws retract into drill chuck body.

5. Use acetone or lacquer thinner to clean mating surfaces of arbor and spindle socket.

6. Slide arbor into spindle socket while slowly rotating chuck to line up tang on arbor with slot in socket (see **Figure 26**).

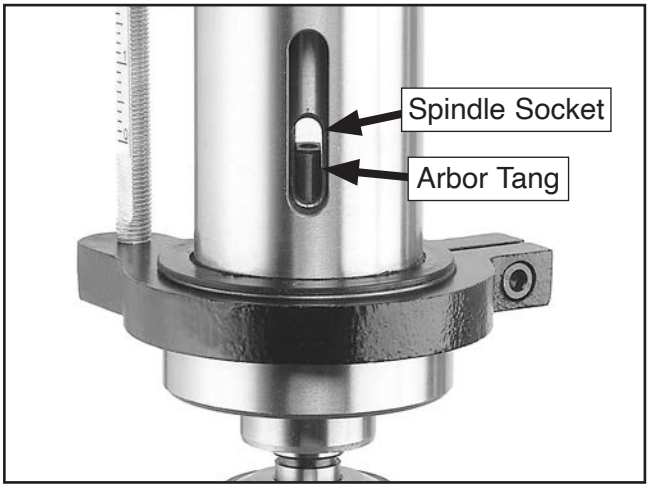



**Figure 26.** Example of arbor tang aligned with spindle socket.

7. Strike face of chuck from below with rubber-faced mallet to seat arbor in spindle.

8. Check seat by gently pulling down on chuck.

9. Install chuck guard, then tighten screw and hex nut from **Step 2** to secure.

   **Tip:** *Use table to hold guard in place while you tighten fasteners.*

**Scan this code to see a video of this installation process!**

## Removing Arbor from Spindle

The arbor can be removed to install other Morse Taper #2 tooling in the spindle. A drift key is included to help remove the arbor or other tooling from the spindle.

| Items Needed | Qty |
|---|---|
| Drift Key | 1 |
| Metal Hammer | 1 |
| Towel or Cloth | As Needed |

**To remove arbor from spindle:**

1. DISCONNECT MACHINE FROM POWER!

2. Rotate downfeed handles until drift key slot is exposed in side of quill (see **Figure 27**).

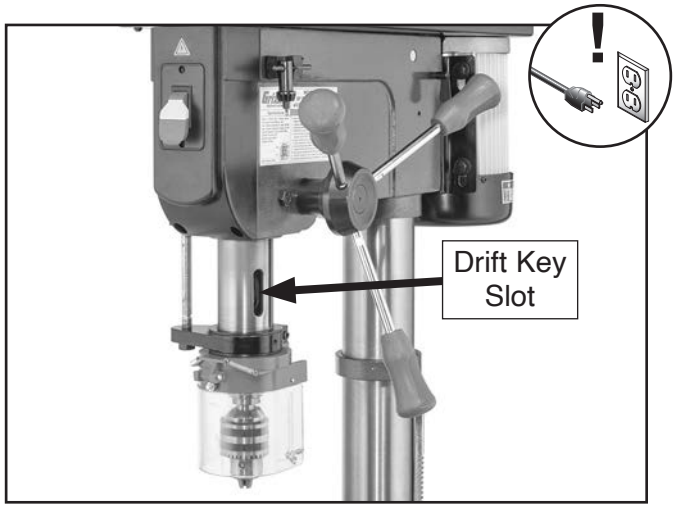



**Figure 27.** Example of drift key slot exposed.

3. Move table up until it is ¼" below bottom of chuck, and place towel or cloth under chuck.

4. Rotate spindle until inner drift key slot is aligned with outer slot (see **Figure 28**). You will see through spindle when slot is properly aligned.

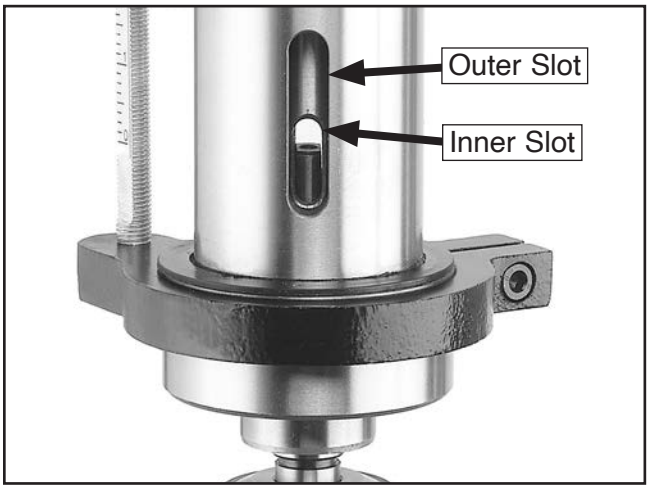



**Figure 28.** Example of inner and outer drift key slots aligned.

5. Insert drift key into drift key slot, then tap drift key with metal hammer (see **Figure 29**) until chuck releases.

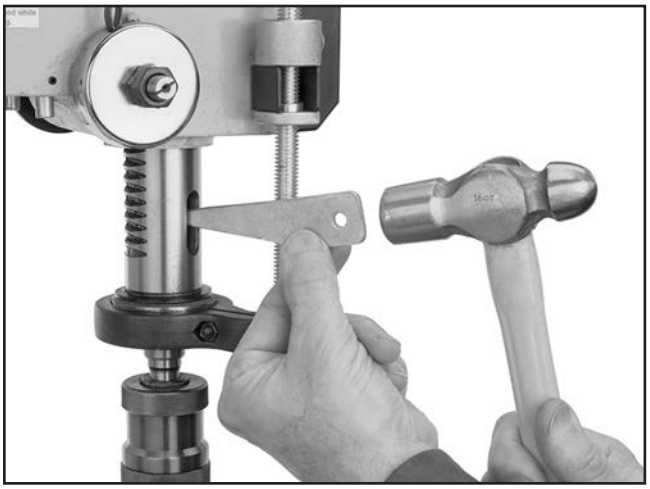


**Figure 29.** Example of using drift key to remove arbor from spindle.

6. Use downfeed handles to retract quill back into headstock.

# Choosing Spindle Speed

## Using Drill Bit Speed Chart

The chart shown in **Figure 28** is intended as a generic guide only. Always follow the manufacturer's speed recommendations if provided with your drill bits, cutters, or hole saws. Exceeding the recommended speeds may be dangerous to the operator.

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

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

## Lubrication Suggestions

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

**⚠CAUTION**

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

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

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

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

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

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

**Figure 30.** Drill bit speed chart (RPMs).

# Changing Spindle Speed

The spindle has twelve speeds that operate between 340–2860 RPM. Spindle speed is controlled by the configuration of V-belts and pulleys located inside the belt cover (refer to the speed chart located under the belt cover).

**⚠CAUTION**

**Use care when changing V-belts as they could pinch your fingers. They may also get hot after extended use so wait to change speeds if drill has been in use.**

| Tools Needed | Qty |
|---|---|
| Open-End Wrenches 14mm | 2 |

**To change spindle speed:**

1. DISCONNECT MACHINE FROM POWER!
2. Open belt cover.
3. Determine correct spindle speed for operation (see **Choosing Spindle Speed** on **Page 27**).
4. Loosen (2) belt tension lock knobs (see **Figure 31**).
5. Adjust hex nut shown in **Figure 31** away from headstock, then tighten hex bolt shown in **Figure 31** into headstock.

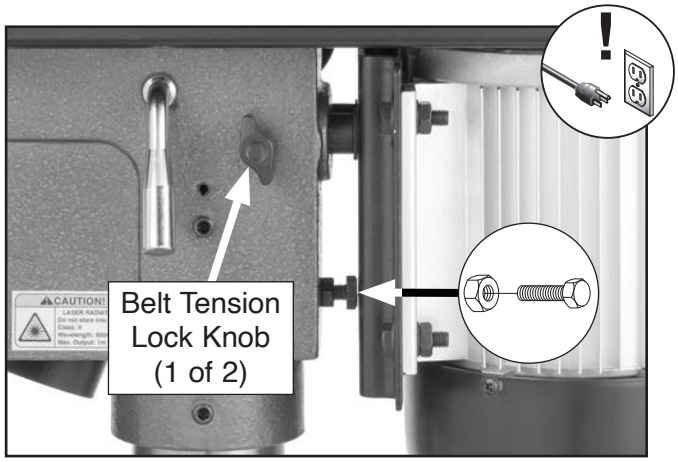



**Figure 31.** Location of belt tension controls.

6. Rotate belt tension lever counterclockwise to take tension off V-belts (see **Figure 32**).

   — If V-belt is cracked, torn, excessively worn, or damaged, replace it.

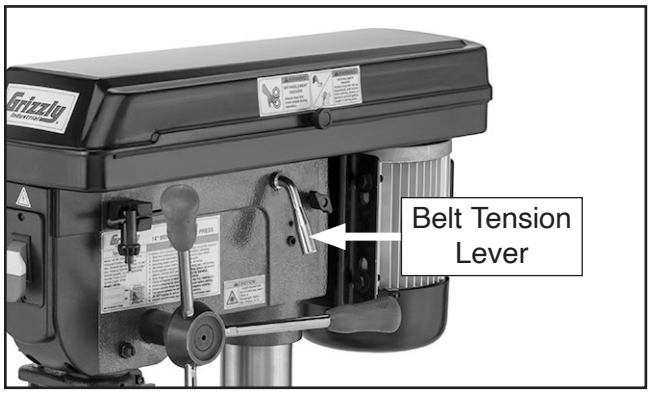



**Figure 32.** Location of belt tension lever.

7. Move V-belts onto desired sheaves on motor, idler, and spindle pulleys (see **Figure 33**).

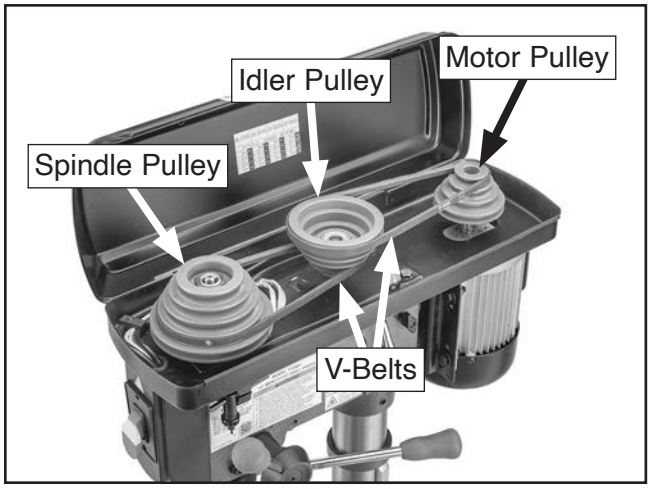



**Figure 33.** V-belt components.

**For Example:** As indicated on speed chart inside belt cover, a belt combination of **B-3** creates **790 RPM**. "**B**" refers to belt position between spindle and idler pulley. "**3**" refers to belt position between idler and motor pulley.

8. Rotate belt tension lever clockwise until V-belts are tight, then tighten belt tension lock knobs.
9. Loosen hex bolt from **Step 5** until it contacts motor mount, then adjust hex nut against headstock to secure.
10. Close belt cover.

# Installing/Removing Drill Bit

Any drill bit you install in the chuck must be tight enough that it will not come loose during operation.

| Items Needed | Qty |
|---|---|
| Chuck Key | 1 |
| Rag | 1 |

## Installing Drill Bit

1. DISCONNECT MACHINE FROM POWER!

2. Open drill chuck wide enough to accept shank of drill bit.

3. Insert drill bit as far as possible into chuck WITHOUT allowing chuck jaws to touch fluted portion of bit, then hand-tighten chuck.

   **Note:** *Make sure small bits are not trapped between edges of two jaws; if they are, re-install drill bit or it will not be secure enough to use for drilling.*

4. Tighten chuck firmly with chuck key (see **Figure 34**), then remove chuck key from chuck.



**Figure 34.** Example of tightening chuck with chuck key.

## Removing Drill Bit

1. DISCONNECT MACHINE FROM POWER!

2. Use chuck key to open drill chuck, and catch drill bit with rag to protect your hands.

# Adjusting Depth Stop

The Model T33901/T33902 has a depth stop that allows you to drill repeat non-through holes to the same depth every time. The scale on the front of the depth stop shows the depth in inches.

The depth stop consists of a threaded rod attached to the quill with a depth stop nut that can be lowered or raised against a stop bracket to control drilling depth. **Figure 35** shows the various components of the depth stop.

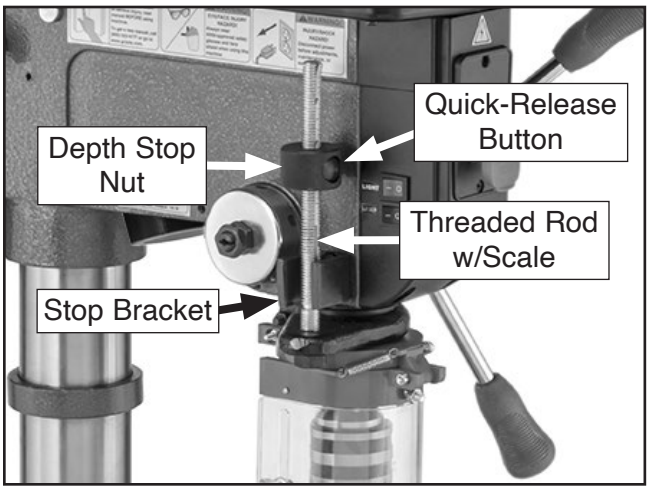



**Figure 35.** Depth stop components.

**To adjust depth stop:**

1. Lower drill bit to required height.

2. Thread depth stop nut down against stop bracket.

   **Tip:** *Press quick-release button on depth stop nut to quickly adjust nut up or down on rod.*

   **Note:** *Scale on depth stop can be calibrated if it gets moved or has changed since the factory setting. Refer to* ***Calibrating Depth Stop*** *on* ***Page 40*** *for instructions on how this is done.*

# Positioning Table

The table moves vertically, rotates 360° around its center, rotates 360° around the column, and tilts 45° left or right. Remove any loose objects from the table surface before adjusting the table position using the controls shown in **Figure 36**.

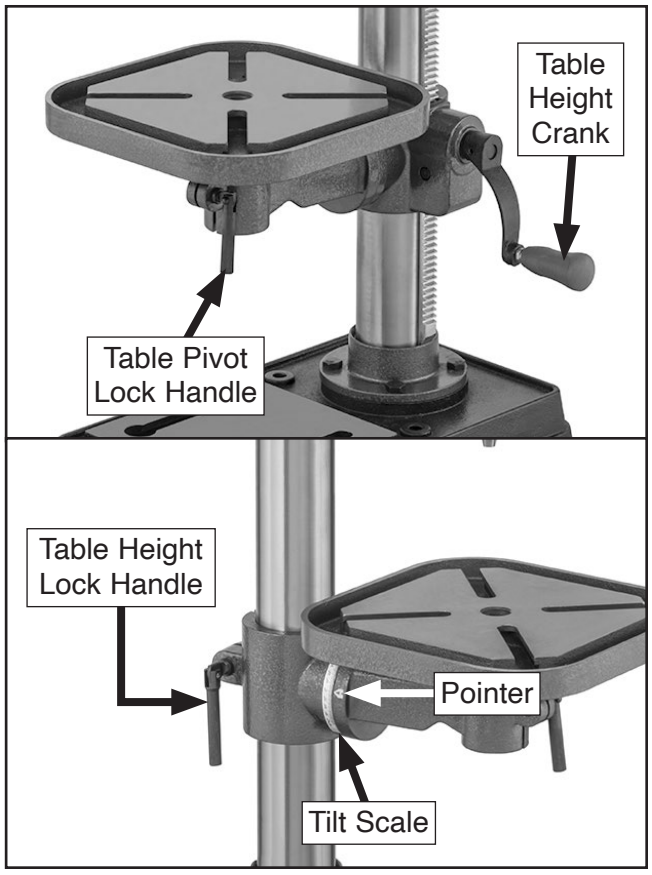



**Figure 36.** Table adjustment components.

## Raising/Lowering Table

1. Loosen table height lock handle (see **Figure 36**).

2. Raise or lower table by rotating table height crank (see **Figure 36**), then tighten table height lock handle to secure.

## Rotating Table Around Center

1. Loosen table pivot lock handle (see **Figure 36**).

2. Rotate table to desired position, then tighten table pivot lock handle to secure.

## Rotating Table Around Column

1. Loosen table lock handle (see **Figure 36**).

2. Rotate table to desired location on column, making sure to guide column rack with table (see **Figure 37**), then tighten table lock handle to secure.

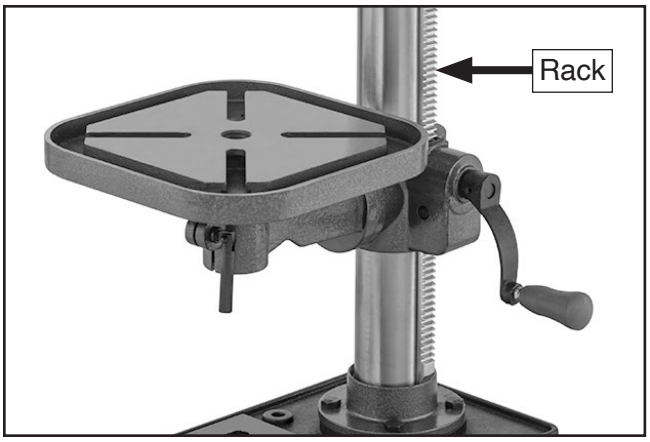



**Figure 37.** Location of column rack.

## Tilting Table

| **Tool Needed** | **Qty** |
|---|---|
| Wrench or Socket 24mm | 1 |

**To tilt table:**

1. Loosen hex bolt shown in **Figure 38**.

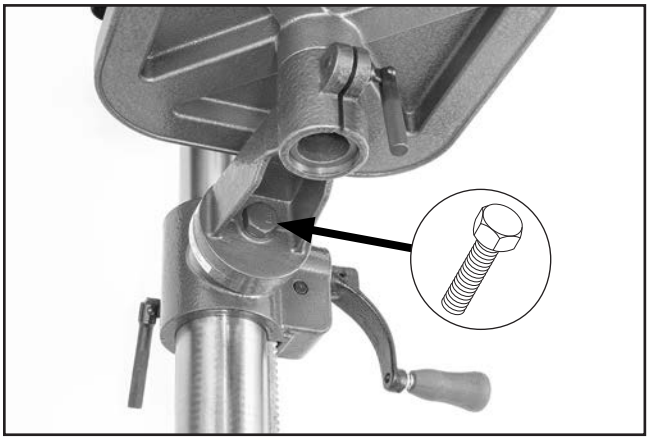


**Figure 38.** Location of tilt lock hex bolt.

2. Tilt table until pointer aligns with desired angle on scale (see **Figure 36**).

3. Tighten hex bolt from **Step 1** to secure table angle.

# Adjusting Laser Guide

The laser guide should be checked and adjusted for accuracy when you change drill bits, raise or lower the table, or change workpiece thickness.

**⚠CAUTION**

**DO NOT look directly into laser. Eye injury may result.**

| Tool Needed | Qty |
|---|---|
| Hex Wrench 3mm | 1 |

**To adjust laser guide:**

**1.** DISCONNECT MACHINE FROM POWER!

**2**. Install drill bit in chuck (see **Installing/ Removing Drill Bit** on **Page 29**).

**3**. Clamp workpiece to table.

**4**. Adjust table so workpiece is just below drill bit, then lock table in position.

**5**. Lower drill bit so it touches workpiece, making slight indentation in surface, then raise bit.

**6**. Connect drill press to power. Use laser switch to turn laser guide ***ON*** (see **Figure 39**).

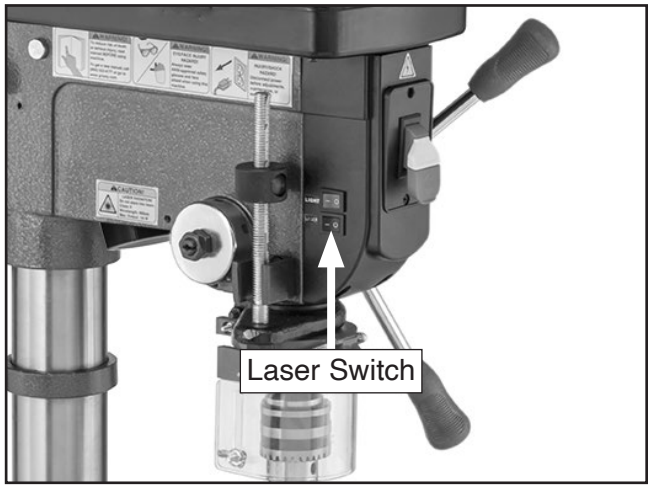



**Figure 39.** Location of laser switch.

— If laser crosshairs align with indentation you made in **Step 5** (see **Figure 40**), no adjustment is necessary.

— If laser crosshairs *do not* align with indentation you made in **Step 5** (see **Figure 40**), proceed to **Step 7**.

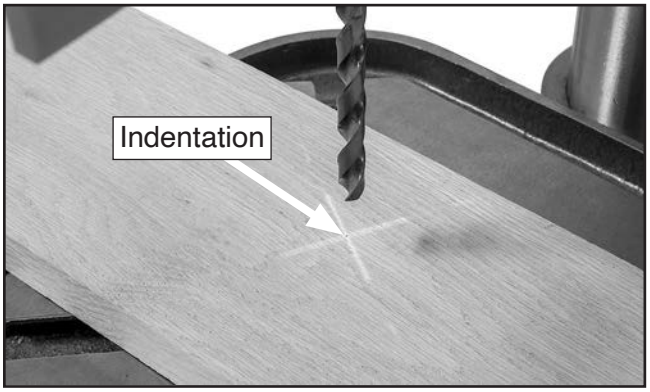



**Figure 40.** Example of laser crosshairs aligned with indentation on workpiece.

**7**. Loosen (2) set screws shown in **Figure 41,** then adjust laser modules by hand, positioning them so crosshairs align with indentation you made in **Step 5**.

— Turning each laser module will adjust each crosshair line angle.

— Adjusting laser module position in seat will adjust crosshair line positions.

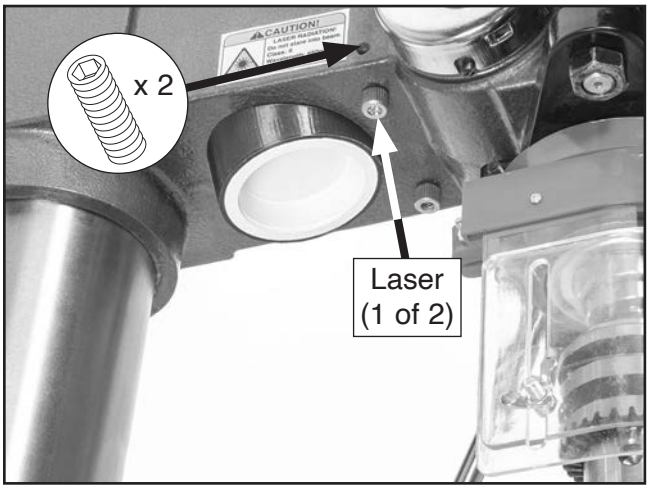



**Figure 41.** Laser module adjustment components.

**8**. Once crosshairs are aligned with indentation in workpiece, tighten screws loosened in **Step 7** to secure laser module positions.

# SECTION 5: ACCESSORIES

**⚠WARNING**

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

***NOTICE***

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

**SB1365—South Bend Way Oil-ISO 68**
**T26419—Syn-O-Gen Synthetic Grease**




**Figure 42.** Recommended lubrication products.

**G5562—SLIPIT® 1 Qt. Gel**
**G5563—SLIPIT® 11 Oz. Spray**




**Figure 43.** Recommended products for protecting unpainted cast-iron and steel.

**G9513—T-Slot Nuts, 4-Pk., 9/16" Slot, 3/8"-16**
**G9514—T-Slot Nuts, 4-Pk., 9/16" Slot, 1/2"-13**
Heat-treated steel T-slot nuts with black oxide finish feature an imperfect thread in the base of the nut to eliminate any danger of screwing the clamping stud through and damaging the table slot.

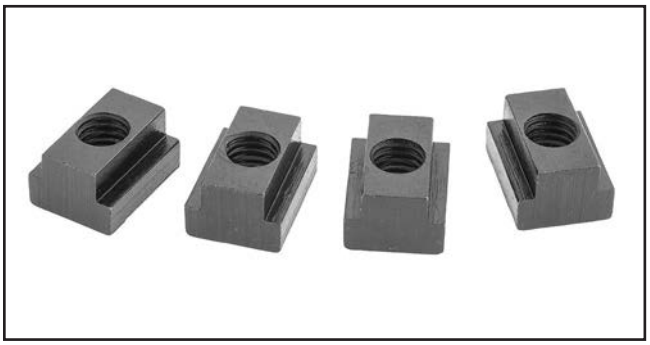


**Figure 44.** G9514 T-Slot Nuts.

**T30015—HSS M35 Cobalt 115-Pc. Drill Bit Set**
The bits in this 115-piece set all have 135° split points and fully ground flutes. Fractional sizes 1/16"–1/2" in increments of 1/64", letter bits from A–Z, and 60 number bits.

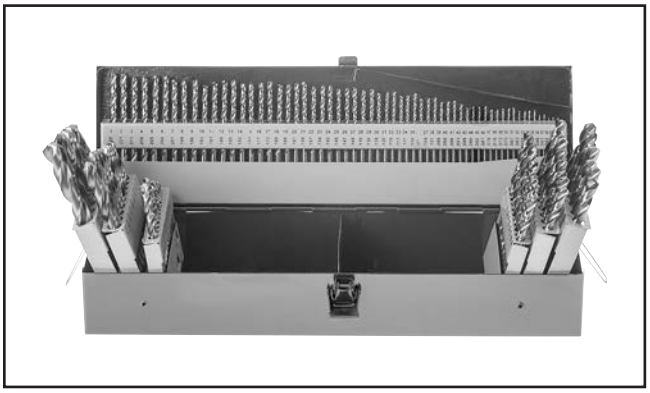
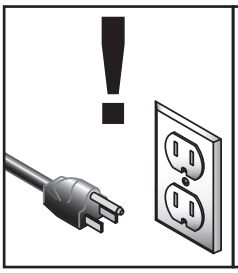


**Figure 45.** T30015 115-Pc. HSS M35 Cobalt Drill Bit Set.

# SECTION 6: MAINTENANCE



**⚠WARNING**
**To reduce risk of shock or accidental startup, always disconnect machine from power before adjustments, maintenance, or service.**

## Schedule

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

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

- Loose mounting bolts.
- Worn switch.
- Worn or damaged wires.
- Damaged V-belt.
- Any other unsafe condition.

**Weekly Maintenance**
- Lubricate quill and column surfaces (**Page 34**).

**Monthly Maintenance**
- Check V-belt for damage or wear.
- Lubricate column rack and quill rack and pinion (**Page 34**).
- Clean/vacuum dust buildup off motor.

## Cleaning & Protecting

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

Protect the unpainted cast iron table and base by wiping it clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces. Keep the table and base rust-free with regular applications of metal protectant products like SLIPIT® (see **Figure 43** in **Accessories** on **Page 32**).

## Lubrication

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

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

Lubricate components with recommended products like those shown in **Figure 42** in **Accessories** on **Page 32**.

DISCONNECT MACHINE FROM POWER BEFORE PERFORMING LUBRICATION!

## Quill & Column Surfaces

Oil Type .... Grizzly SB1365 or ISO 68 Equivalent
Oil Amount.....Thin Coat
Lubrication Frequency.....8 Hrs. of Operation

| Items Needed | Qty |
|---|---|
| Mineral Spirits | As Needed |
| Shop Rags | As Needed |

Move the spindle all the way down to access the smooth surfaces of the quill. Adjust the table height as necessary to access the entire length of the column (see **Figures 46–47**). Clean both with mineral spirits and shop rags.

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

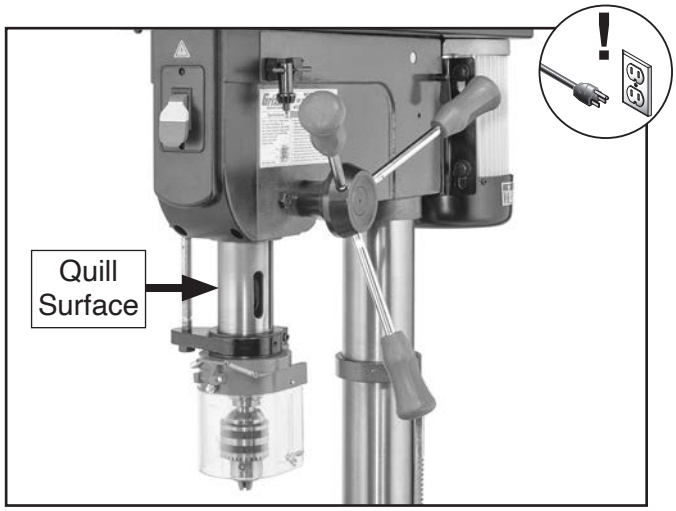



**Figure 46.** Example of spindle moved down to expose quill surface.

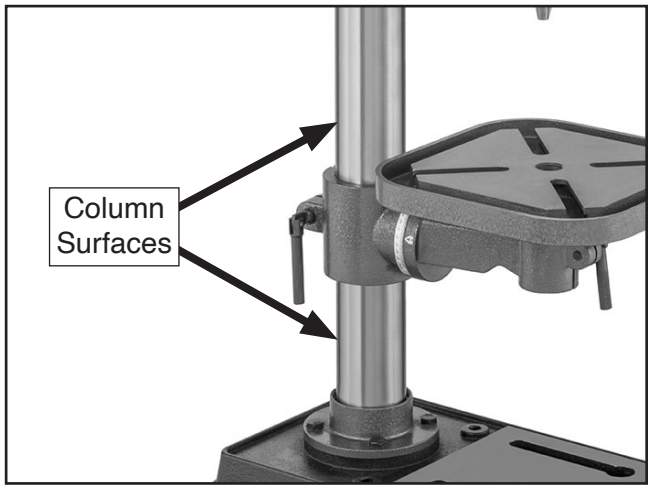



**Figure 47.** Column surface locations.

After cleaning, allow mineral spirits to dry, then apply a thin coat of oil to the surfaces.

## Column Rack, Quill Rack & Pinion

Grease Type.... Grizzly T26419 or NLGI#2 Equiv.
Grease Amount .....Thin Coat
Lubrication Frequency..... 90 hrs. of Operation

| Items Needed | Qty |
|---|---|
| Mineral Spirits | As Needed |
| Shop Rags | As Needed |
| Stiff Brushes | 2 |

Move spindle all the way down to gain access to quill rack (see **Figure 48**), then clean teeth with mineral spirits, shop rags, and a brush.

Clean the column rack teeth (see **Figure 48**) in a similar manner with mineral spirits, shop rags, and a brush.

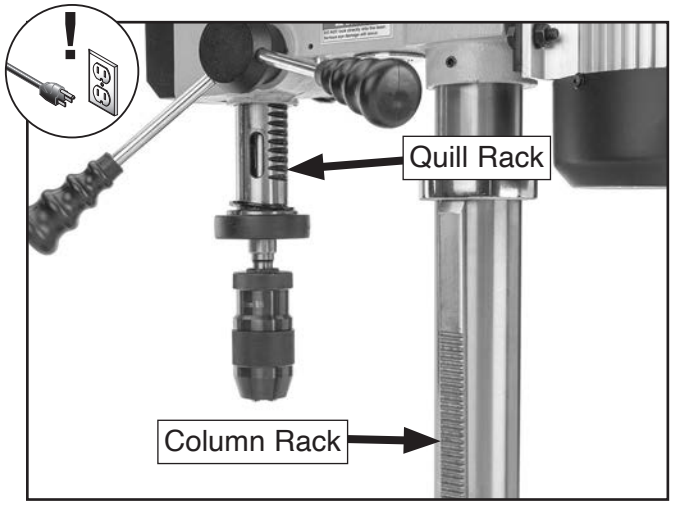


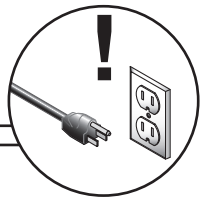

**Figure 48.** Example of quill and column racks exposed.

Allow mineral spirits to dry, then use a brush to apply a thin coat of grease to the rack teeth, then fully raise/lower the quill and table to distribute the grease.

# SECTION 7: SERVICE

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

## Troubleshooting



### Motor & Electrical

| Symptom | Possible Cause | Possible Solution |
|---|---|---|
| Machine does not start, or power supply breaker immediately trips after startup. | 1. Switch disabling key removed.<br>2. Incorrect power supply voltage or circuit size.<br>3. Power supply circuit breaker tripped or fuse blown.<br>4. Wiring broken, disconnected, or corroded.<br>5. ON/OFF switch at fault.<br>6. Motor or motor bearings at fault. | 1. Install switch disabling key.<br>2. Ensure correct power supply voltage and circuit size (**Page 13**).<br>3. Ensure circuit is free of shorts. Reset circuit breaker and replace fuse.<br>4. Fix broken wires or disconnected/corroded connections (**Page 43**).<br>5. Replace switch.<br>6. Replace motor. |
| Machine stalls or is underpowered. | 1. Workpiece material unsuitable for machine.<br>2. Feed rate/cutting speed too fast.<br>3. Belt(s) slipping/pulleys misaligned.<br>4. Motor wires connected incorrectly.<br>5. Pulley slipping on shaft.<br>6. Machine undersized for task.<br>7. Motor overheated.<br>8. Run capacitor at fault.<br>9. Extension cord too long.<br>10. Motor or motor bearings at fault. | 1. Only cut wood with moisture below 20% and correct type/size of metal.<br>2. Decrease feed rate/cutting speed (**Page 28**).<br>3. Clean/tension/replace belt(s) (**Page 28**); ensure pulleys are aligned (**Page 39**).<br>4. Correct motor wiring connections (**Page 43**).<br>5. Tighten/replace loose pulley/shaft.<br>6. Use sharp bits/reduce feed rate/reduce spindle RPM (**Page 28**).<br>7. Clean motor, let cool, and reduce workload.<br>8. Test/repair/replace.<br>9. Move machine closer to power supply; use shorter extension cord (**Page 14**).<br>10. Replace motor. |
| Machine has vibration or noisy operation. | 1. Motor or component loose.<br>2. V-belt(s) worn, loose, pulleys misaligned or belt slapping cover.<br>3. Pulley loose.<br>4. Motor mount loose/broken.<br>5. Spindle loose, improperly installed or damaged.<br>6. Workpiece loose.<br>7. Chuck or cutter at fault.<br>8. Motor fan rubbing on fan cover.<br>9. Spindle bearings at fault.<br>10. Motor bearings at fault. | 1. Replace damaged or missing bolts/nuts or tighten if loose.<br>2. Inspect/replace belts with a new matched set (**Page 28**). Realign pulleys if necessary (**Page 39**).<br>3. Secure pulley on shaft.<br>4. Tighten/replace.<br>5. Tighten loose spindle, re-install spindle ensuring mating surfaces are clean, replace spindle if damaged.<br>6. Use correct holding fixture and reclamp workpiece.<br>7. Replace out-of-round chuck, dull, or bent cutter.<br>8. Fix/replace fan cover; replace loose/damaged fan.<br>9. Test by rotating spindle; rotational grinding/loose shaft requires bearing replacement.<br>10. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement. |

## Motor & Electrical (Cont.)

| Symptom | Possible Cause | Possible Solution |
|---|---|---|
| LED does not illuminate. | 1. Lens covered with dust.<br>2. Wiring broken, disconnected, or corroded.<br>3. LED or LED driver damaged/at fault.<br>4. LED switch at fault. | 1. Clean lens.<br>2. Fix broken wires or disconnected/corroded connections (**Page 43**).<br>3. Replace LED and driver assembly (**Page 41**).<br>4. Replace switch. |
| Laser guide does not illuminate. | 1. Lens covered with dust.<br>2. Wiring broken, disconnected, or corroded.<br>3. Laser module(s) damaged/at fault.<br>4. Laser switch at fault.<br>5. Laser LED driver at fault. | 1. Clean lens.<br>2. Fix broken wires or disconnected/corroded connections (**Page 43**).<br>3. Replace laser module(s) (**Page 41**).<br>4. Replace switch.<br>5. Replace laser LED driver. |

## Operation

| Symptom | Possible Cause | Possible Solution |
|---|---|---|
| Tool falls out or loose in chuck. | 1. Chuck jaws loose.<br>2. Excessive feed pressure. | 1. Tighten chuck jaws.<br>2. Decrease feed pressure and allow chips to clear. |
| Chuck and arbor fall out or loose in spindle. | 1. Debris on chuck, arbor, or in spindle taper.<br>2. Excessive feed pressure. | 1. Clean chuck, arbor, and spindle taper, then re-install (**Page 25**).<br>2. Decrease feed pressure and allow chips to clear. |
| Breaking tools or cutters. | 1. Spindle speed/feed rate too fast.<br>2. Taking too big of cut at one time.<br>3. Improper cutting technique or type of cut for tool/machine.<br>4. Cutting tool too small.<br>5. Cutting tool getting too hot.<br>6. Spindle extended too far down during or at beginning of operation. | 1. Reduce spindle speed (**Page 28**); reduce feed rate.<br>2. Decrease feed pressure and allow chips to clear.<br>3. Use right technique, tool, or machine for job.<br>4. Use larger cutting tool and slower feed rate.<br>5. Use coolant or oil for appropriate application; reduce cutting speed (**Page 28**).<br>6. Fully retract spindle and raise table to increase rigidity. |
| Workpiece or tool vibrates or chatters during operation. | 1. Spindle extended too far down during or at beginning of operation.<br>2. Table lock handles not tight.<br>3. Workpiece not secure.<br>4. Spindle speed/feed rate too fast.<br>5. Quill shaft lock screw not adjusted correctly. | 1. Fully retract spindle and raise table to increase rigidity.<br>2. Tighten table lock handles (**Page 30**).<br>3. Properly clamp workpiece on table or in vise.<br>4. Reduce spindle speed (**Page 28**); reduce feed rate.<br>5. Adjust quill shaft lock screw (**Page 42**). |
| Table hard to move. | 1. Table locked.<br>2. Dirty or dry rack and pinion. | 1. Disengage table locks (**Page 30**).<br>2. Clean away chips/debris. Lubricate rack and pinion (**Page 34**). |
| Bad surface finish. | 1. Spindle speed/feed rate too fast.<br>2. Dull or incorrect cutting tool/bit.<br>3. Workpiece not secure.<br>4. Spindle extended too far down during or at beginning of operation. | 1. Reduce spindle speed (**Page 28**); reduce feed rate.<br>2. Sharpen cutting tool or select one that better suits operation.<br>3. Properly clamp workpiece on table or in vise.<br>4. Fully retract spindle and raise table to increase rigidity. |
| Spindle overheats. | 1. Machine operated at high speeds for extended period. | 1. Allow drill to cool. |
| Spindle does not fully retract. | 1. Poorly adjusted return spring.<br>2. Debris on spindle/quill rack.<br>3. Worn return spring. | 1. Increase return spring tension (**Page 38**).<br>2. Clean and lubricate spindle/quill rack (**Page 34**).<br>3. Replace return spring. |

## Operation (Cont.)

| Symptom | Possible Cause | Possible Solution |
|---|---|---|
| Drill bit drifts. | 1. Dull/incorrectly sharpened drill bit.<br>2. Tool/bit/chuck incorrectly installed. | 1. Correctly sharpen drill bit.<br>2. Correctly install tool/bit (**Page 29**)/chuck (**Page 21**). |
| Drill bit slips in chuck or stuck in workpiece. | 1. Chuck jaws loose.<br>2. Workpiece squeezing drill bit.<br>3. Feed rate too fast.<br>4. Spindle speed/feed rate to slow. | 1. Tighten chuck jaws.<br>2. Properly clamp workpiece on table or in vise.<br>3. Decrease feed rate.<br>4. Increase spindle speed (**Page 28**)/feed rate. |
| Workpiece thrown from table. | 1. Workpiece not secure.<br>2. Tool/bit too large for feed speed. | 1. Properly clamp workpiece in table or in vise.<br>2. Use smaller tool/bit or decrease feed speed. |
| Excessive runout or wobbling in chuck/drill bit. | 1. Debris on chuck, arbor, or in spindle taper.<br>2. Tool/bit bent.<br>3. Tool/bit installed incorrectly.<br>4. Spindle bearings worn. | 1. Remove chuck and arbor, clean chuck, arbor, and spindle taper, then re-install (**Page 25**). Deburr mating surfaces, if necessary.<br>2. Replace with straight tool/bit.<br>3. Install tool/bit correctly (**Page 29**) or replace.<br>4. Replace spindle bearings. |
| Backside of workpiece splinters. | 1. Scrap board not installed between table and workpiece. | 1. Install scrap board between table and workpiece. |

# Adjusting Return Spring Tension

The spring tension for automatic quill recoil has been pre-set at the factory. In most cases, it will never need to be re-adjusted during the life of the machine. However, if the quill stops automatically recoiling, the spring may need to be adjusted for additional tension. If it does need adjustment, the spring housing is located on the left side of the headstock (see **Figure 49**).

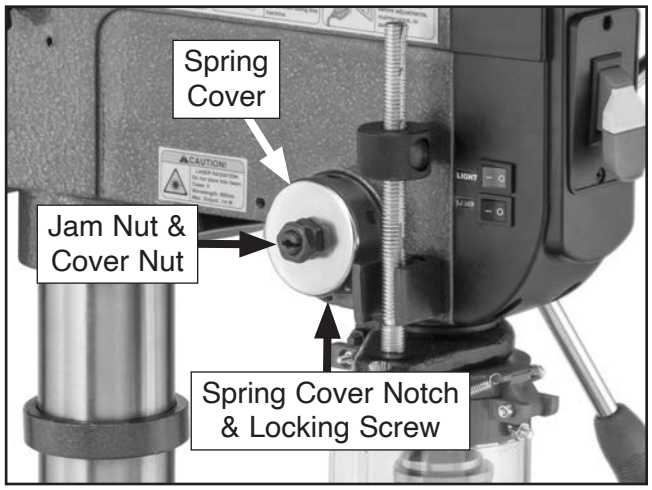



**Figure 49.** Spring adjustment components.



**⚠WARNING**

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

| Items Needed | Qty |
|---|---|
| Heavy Leather Gloves | 1 Pr. |
| Safety Glasses | 1 Pr. |
| Shop Rags | As Needed |
| Open-End Wrenches 19mm | 2 |

**To adjust spring tension:**

**1.** DISCONNECT MACHINE FROM POWER!

**2.** Wipe any oil off spring cover so it does not slip in your fingers in following steps (see **Figure 49**).

**3.** Hold spring cover against side of headstock so cover stays splined with locking screw, then loosen jam nut and cover nut approximately ¼" each (see **Figure 49**).

**IMPORTANT:** Hold spring cover tightly during **Step 4**, or force of spring will cause cover to spin out of your hands.

**4.** Wearing gloves, pull spring cover outward just enough to disengage spring cover notch from locking screw (see **Figure 49**).

**5.** Rotate cover counterclockwise to increase tension, or clockwise to reduce spring tension.

**6.** Engage next available spring cover notch with locking screw (see **Figure 50**) and hold spring cover tightly to side of headstock.

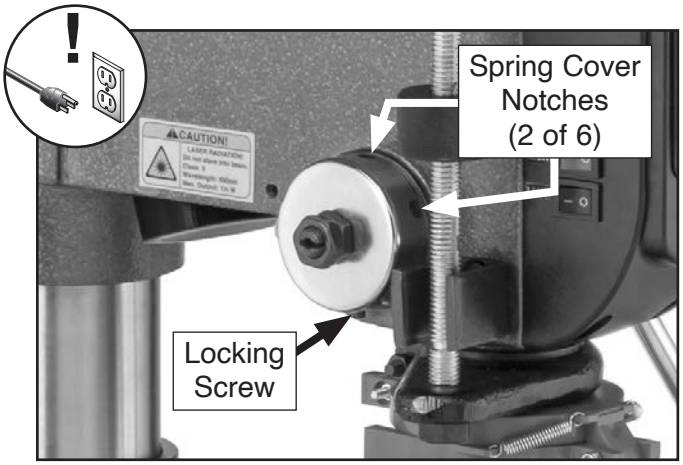



**Figure 50.** Location of spring cover notches and locking screw.

**7.** Tighten cover nut against spring cover just until nut stops, then back off nut approximately ⅓ turn.

**8.** Hold cover nut and tighten jam nut against cover nut.

**9.** Check tension adjustment by downfeeding spindle. Spindle should return quickly when downward pressure is released.

— If spindle does not retract quickly, repeat **Steps 3–8**, and re-check tension until return speed is adequate.

# Aligning Motor Pulley

Pulley alignment is an important factor in power transmission and belt life. The pulleys should be parallel to each other and in the same plane (coplanar) for optimum performance.

Use a straightedge to check the pulley alignment, as shown in **Figure 51**. The motor pulley can be adjusted by loosening the set screw that secures it to its shaft.

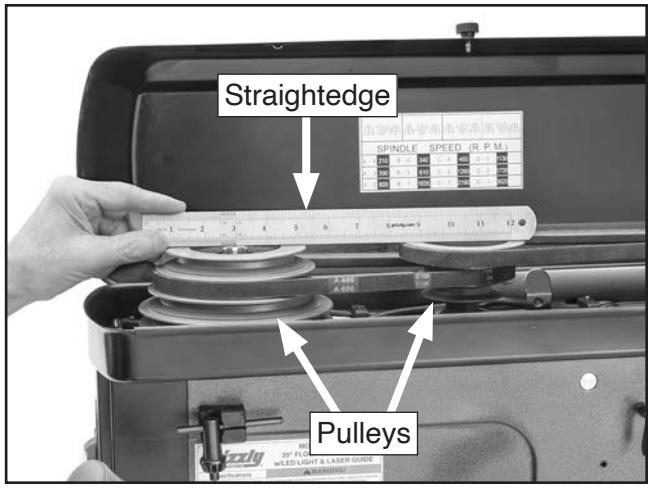



**Figure 51.** Example of checking pulley alignment.

| Tools Needed | Qty |
|---|---|
| Hex Wrench 4mm | 1 |
| Straightedge 12" | 1 |

**To align motor pulley:**

**1.** DISCONNECT MACHINE FROM POWER!

**2.** Open belt cover.

**3.** Place straightedge against motor and idler pulleys (see **Figure 52**) and check that they are aligned. There should be no space anywhere between straightedge and pulleys.

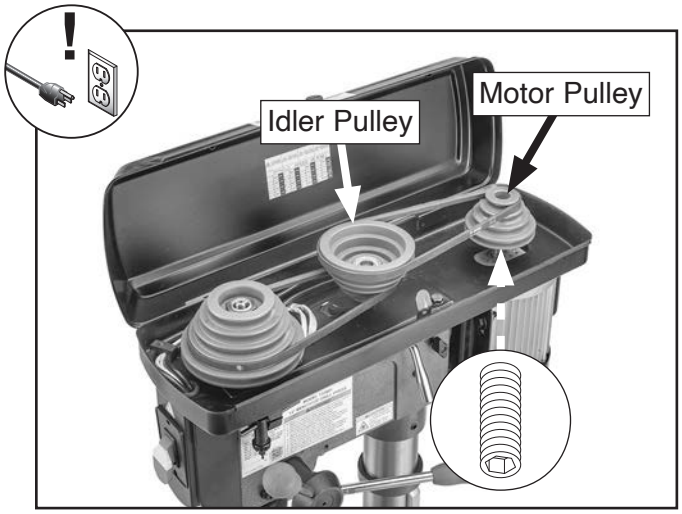



**Figure 52.** Location of alignment pulleys and motor pulley set screw.

— If pulleys *are* aligned, no adjustment is necessary. Close belt cover.

— If pulleys *are not* aligned, proceed to **Step 4**.

**⚠CAUTION**

**Use care when handling V-belts as they could pinch your fingers. They may also get hot after extended use so wait to handle if drill has been in use.**

**4.** Loosen set screw on motor pulley, adjust pulley on shaft until it aligns with idler pulley, then tighten set screw (see **Figure 52**).

**5.** Close belt cover.

# Calibrating Depth Stop

The depth stop allows you to drill multiple holes at the same depth. The scale on this depth stop can be calibrated if it ever becomes incorrect.

| Tool Needed | Qty |
|---|---|
| Wrench or Socket 19mm | 1 |

**To calibrate depth stop:**

**1.** DISCONNECT MACHINE FROM POWER!

**2.** Adjust depth stop nut all the way down so it sits against stop bracket (see **Figure 53**).

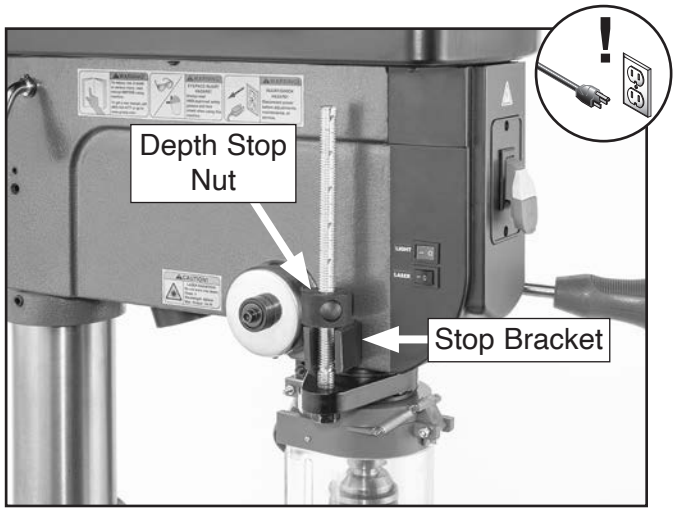



**Figure 53.** Example of depth stop nut adjusted all the way down.

— If top of depth stop nut indicates 0" on scale, no adjustment is necessary.

— If top of depth stop nut *does not* indicate 0" on scale, proceed to **Step 3**.

**3.** Loosen hex nut shown in **Figure 54**.

**4.** Adjust depth rod up in depth collar a couple turns (see **Figure 54**).

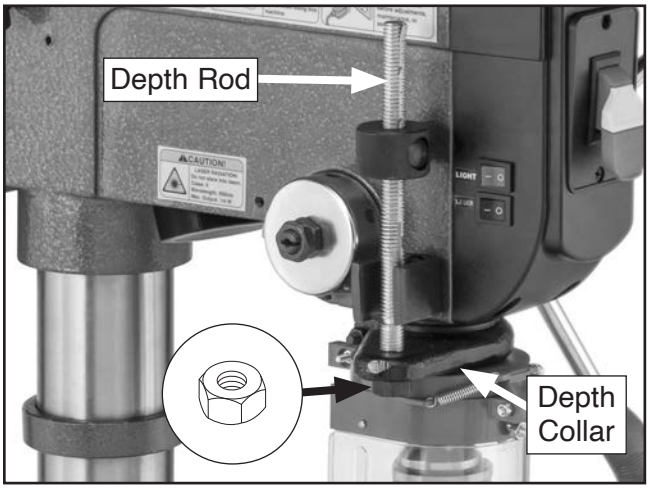



**Figure 54.** Depth stop calibration components.

**5.** Adjust depth stop nut until top of nut indicates 0" on scale.

**6.** Adjust depth rod until depth stop nut sits against stop bracket and scale is visible.

**7.** While holding depth rod in place, tighten hex nut from **Step 3** to secure setting.

**8.** Test depth stop by measuring how far spindle moves with respect to where you set depth stop nut.

# Replacing Laser Modules & LED

If either one of the laser modules or the LED burns out and needs to be replaced, use the following sections. A wiring diagram is provided on **Page 44** for your reference.

## Replacing Laser Module

| Items Needed | Qty |
|---|---|
| Hex Wrench 3mm | 1 |
| Replacement Laser Module (#PT33901097) | 1 |
| Electrical Tape | As Needed |
| Cable Ties | As Needed |

**To replace laser module:**

1. DISCONNECT MACHINE FROM POWER!

2. Loosen set screw securing faulty laser module and pull laser module just enough to remove it from headstock (see **Figure 55**).

3. Turn light seat counterclockwise to release LED assembly and pull it down through headstock hole to reveal laser module and LED wires (see **Figure 55**).

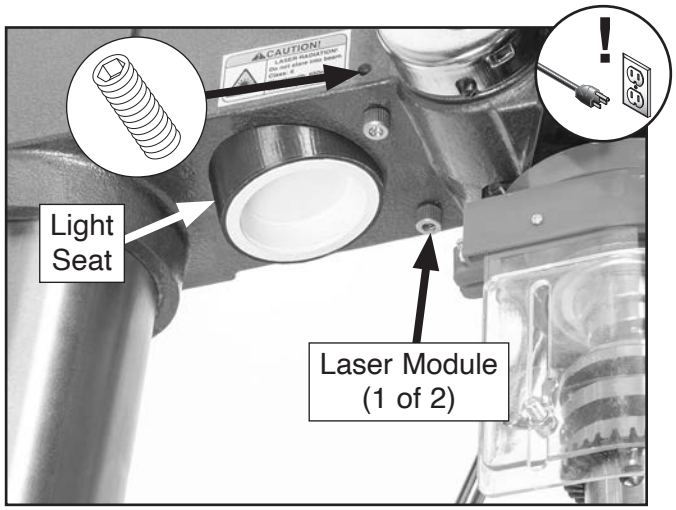



**Figure 55.** Location of laser modules and light seat.

4. Disconnect faulty laser module wires from their wire nut connections (see **Figure 56**), then fully remove laser module from headstock, pulling wires with it.

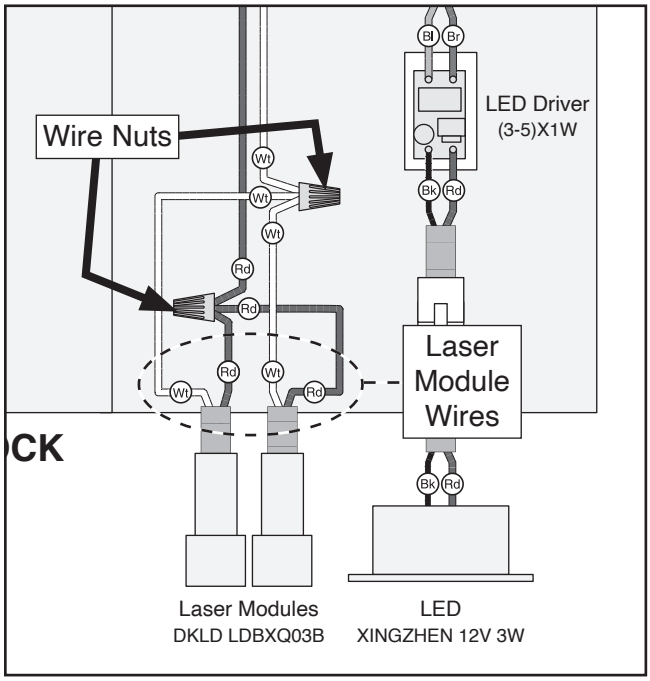



**Figure 56.** Laser module wiring.

5. Insert new laser module wires up through hole in headstock, and attach wires to wire nuts as they were connected in **Step 4**. Wrap wires at wire nuts with electrical tape so they will not come loose during operation.

6. Bind any stray laser module or LED wires and cords together with electrical tape or cable ties to keep electrical components from being caught in moving headstock parts.

7. Feed laser module and LED wires and cords back into headstock, install light seat in headstock, then turn clockwise to secure.

8. Refer to **Adjusting Laser Guide** on **Page 31** to secure and adjust laser module.

## Replacing LED

| Items Needed | Qty |
|---|---|
| Replacement LED (#PT33901099-1) | 1 |
| Electrical Tape or Cable Ties | As Needed |

**To replace LED:**

1. DISCONNECT MACHINE FROM POWER!

2. Turn light seat counterclockwise to release seat and pull it down through headstock hole (see **Figure 57**).

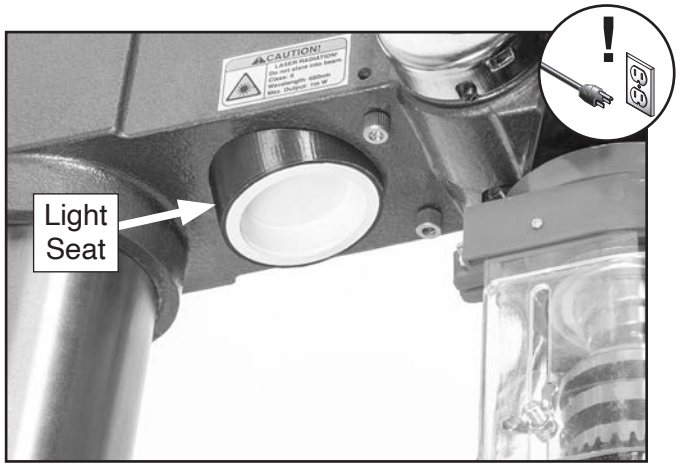



**Figure 57.** Location of light seat.

3. Move light seat tabs away from LED to remove LED from light seat (see **Figure 58**).

4. Disconnect LED from wire connector shown in **Figure 58** and replace with new LED.

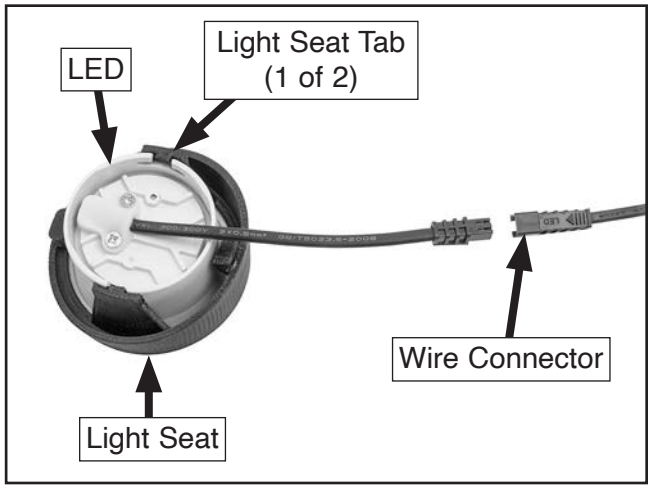



**Figure 58.** LED disconnect components.

5. Install new LED in light seat.

6. Bind any stray laser module or LED wires and cords together with electrical tape or cable ties to keep electrical components from being caught in moving headstock parts.

7. Feed laser module and LED wires and cords back into headstock, install light seat in headstock, then turn clockwise to secure.

# Adjusting Quill Shaft Lock Screw

While you may never have to adjust the quill shaft lock screw (see **Figure 59**), you should understand its function and know how to adjust it should you ever need to remove the quill for cleaning. This screw can prevent the quill from rotating or from retracting into the headstock. If it is adjusted incorrectly, the quill may lash or bind.

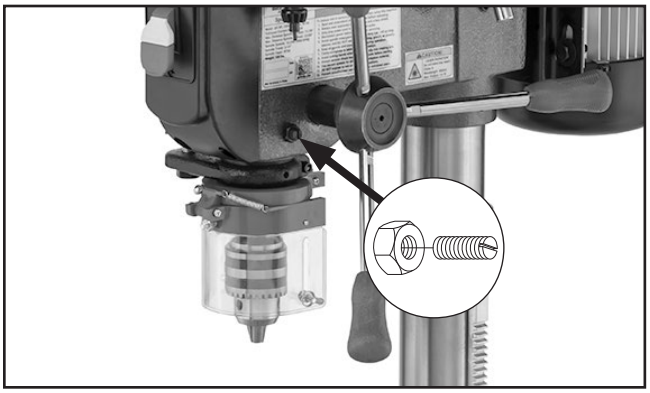


**Figure 59.** Location of quill shaft lock screw and jam nut.

| Tools Needed | Qty |
|---|---|
| Open-End Wrench 14mm | 1 |
| Flat Head Screwdriver ¼" | 1 |

**To adjust quill shaft lock screw:**

1. DISCONNECT MACHINE FROM POWER!

2. Clean and lubricate quill as described in **Lubrication** on **Page 33**. Quill should travel freely.

3. Loosen jam nut shown in **Figure 59**.

4. Turn quill shaft lock screw (see **Figure 59**) clockwise or counterclockwise to establish free, unbinding travel while moving quill up and down through its entire range of travel.

5. When lock screw is screwed inward as far as the screw can go without binding quill, hold screw in place and tighten jam nut.

6. Check for quill binding and looseness while moving quill up and down through its entire range of travel and readjust as required.

# SECTION 8: WIRING

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

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

## ⚠WARNING
## Wiring Safety Instructions

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

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

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

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

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

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

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

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

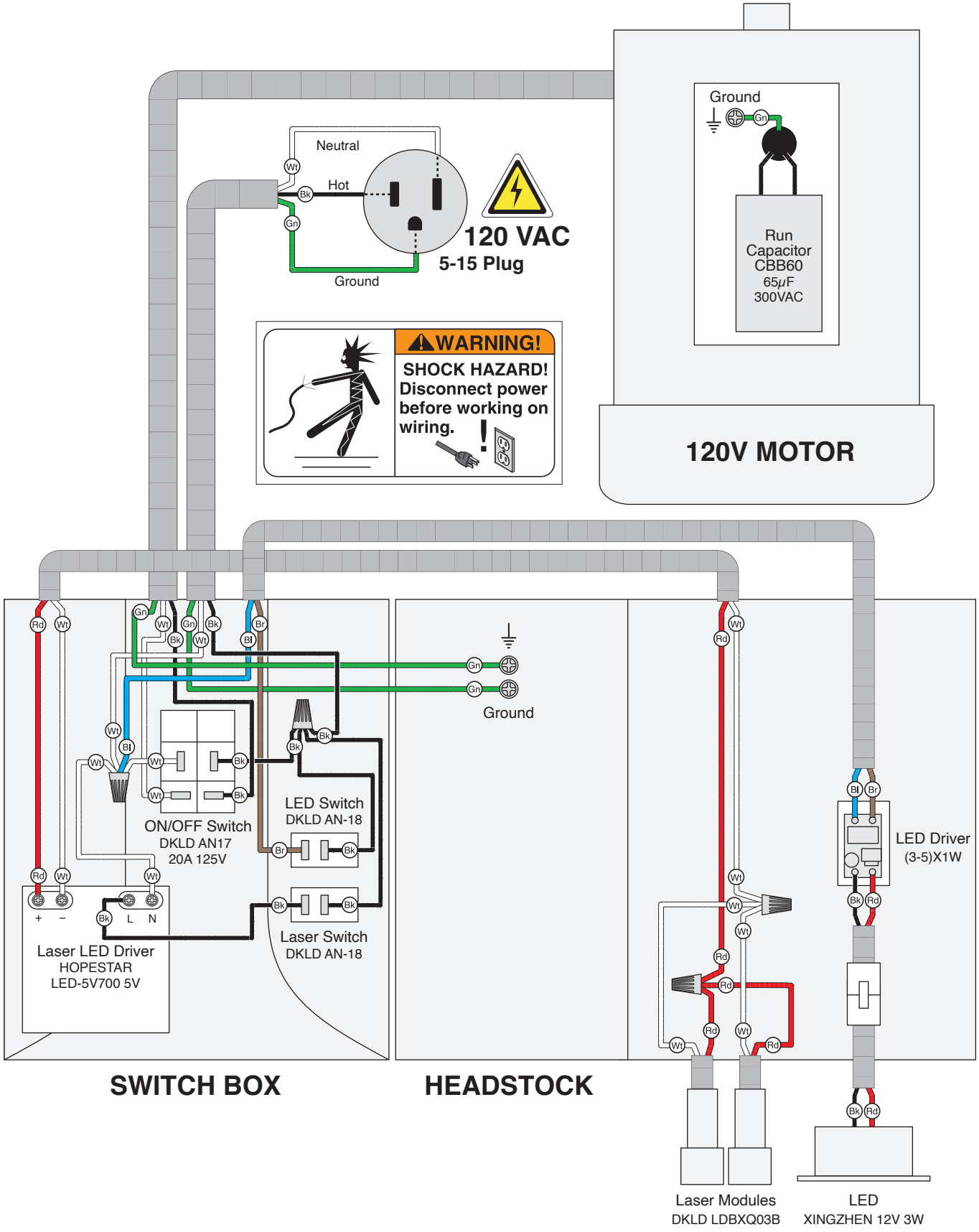
**NOTICE**

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

**COLOR KEY**

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

# Wiring Diagram






STOP *READ ELECTRICAL SAFETY ON PAGE 43!*

# Electrical Component Photos

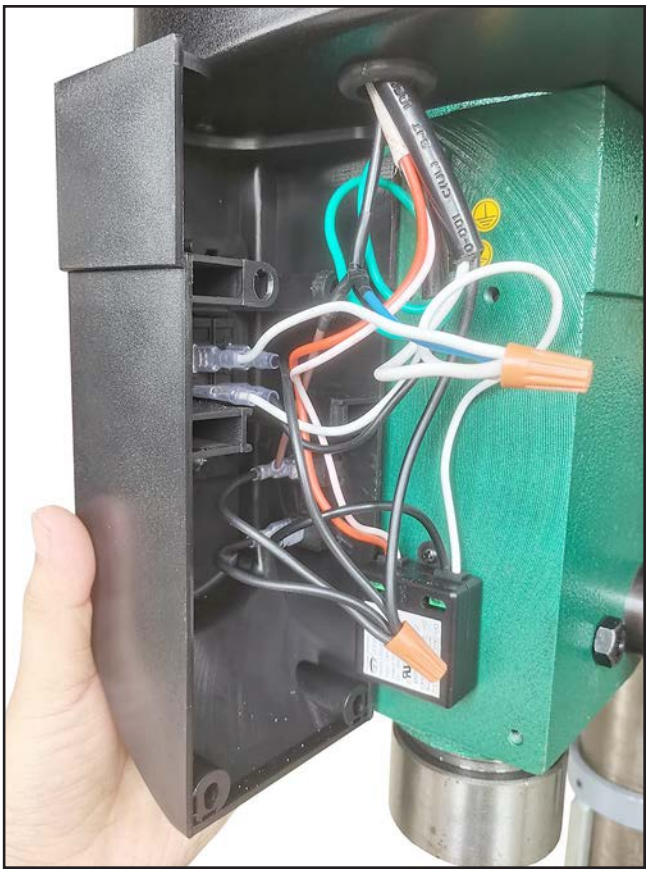


**Figure 60.** Switch box wiring.




**Figure 62.** Capacitor wiring.



**Figure 61.** LED & laser module wiring.

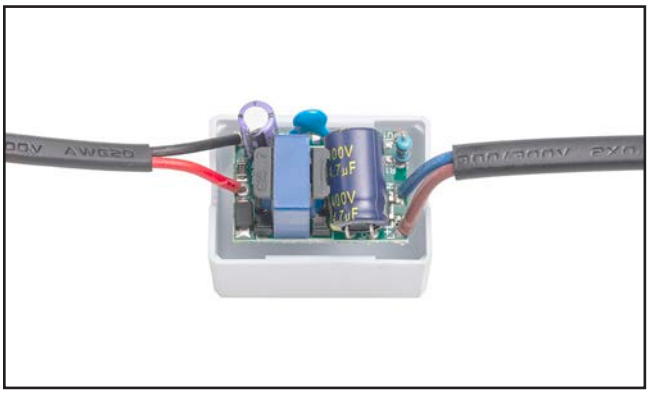
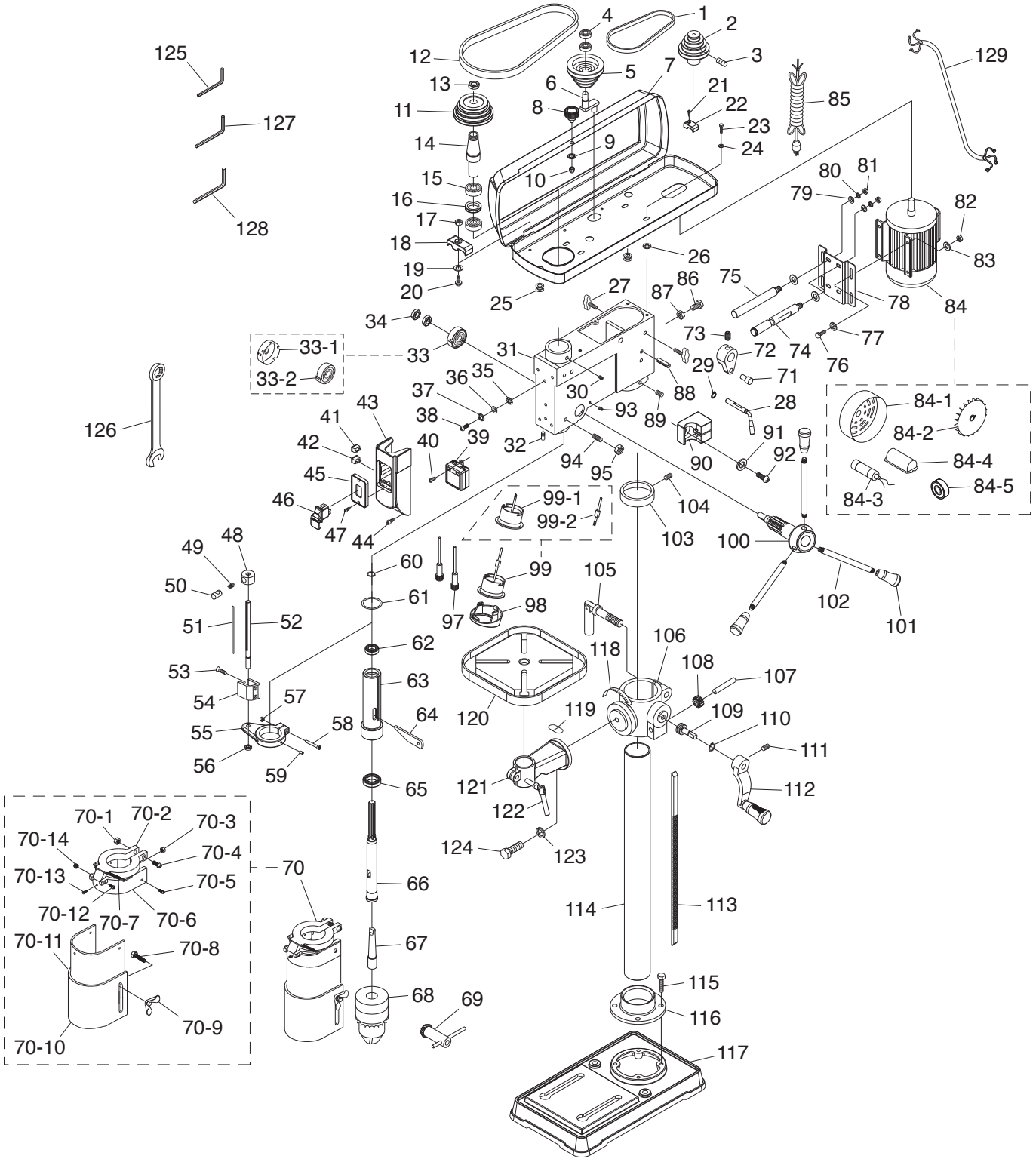


**Figure 63.** LED driver wiring.

# SECTION 9: PARTS

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

## T33901 Main






**BUY PARTS ONLINE AT GRIZZLY.COM!**
Scan QR code to visit our Parts Store.

# T33901 Main Parts List

| REF | PART # | DESCRIPTION |
|---|---|---|
| 1 | PT33901001 | V-BELT A-565 |
| 2 | PT33901002 | MOTOR PULLEY |
| 3 | PT33901003 | SET SCREW M8-1.25 X 10 |
| 4 | PT33901004 | BALL BEARING 6202-2RS |
| 5 | PT33901005 | IDLER PULLEY |
| 6 | PT33901006 | CRANKSHAFT |
| 7 | PT33901007 | BELT COVER |
| 8 | PT33901008 | KNOB BOLT M5-.8 X 8, D20, ROUND KD |
| 9 | PT33901009 | INT TOOTH WASHER 5MM |
| 10 | PT33901010 | ACORN NUT M5-.8 |
| 11 | PT33901011 | SPINDLE PULLEY |
| 12 | PT33901012 | V-BELT A-565 |
| 13 | PT33901013 | HEX NUT M24-1.5 LH THIN |
| 14 | PT33901014 | SPINDLE SLEEVE |
| 15 | PT33901015 | BALL BEARING 6005-2RS |
| 16 | PT33901016 | SPACER 41 X 47 X 12MM |
| 17 | PT33901017 | HEX NUT M5-.8 |
| 18 | PT33901018 | CORD CLAMP LARGE |
| 19 | PT33901019 | FLAT WASHER 5MM |
| 20 | PT33901020 | PHLP HD SCR M5-.8 X 16 |
| 21 | PT33901021 | TAP SCREW M4.2 X 12 |
| 22 | PT33901022 | CORD CLAMP SMALL |
| 23 | PT33901023 | HEX BOLT M8-1.25 X 12 |
| 24 | PT33901024 | FLAT WASHER 8MM |
| 25 | PT33901025 | GROMMET 5/8" RUBBER |
| 26 | PT33901026 | SPACER 9 X 18 X 2.5MM RUBBER |
| 27 | PT33901027 | KNOB BOLT M10-1.5 X 25, D33, WING |
| 28 | PT33901028 | BELT TENSION LEVER |
| 29 | PT33901029 | EXT RETAINING RING 15MM |
| 30 | PT33901030 | SET SCREW M8-1.25 X 8 |
| 31 | PT33901031 | HEADSTOCK |
| 32 | PT33901032 | STUD-SE M4-.7 X 8, 13.5 SLOTTED |
| 33 | PT33901033 | RETURN SPRING ASSEMBLY |
| 33-1 | PT33901033-1 | RETURN SPRING COVER |
| 33-2 | PT33901033-2 | FLAT COIL SPRING |
| 34 | PT33901034 | HEX NUT M12-1.75 THIN |
| 35 | PT33901035 | EXT TOOTH WASHER 5MM |
| 36 | PT33901036 | FLAT WASHER 5MM |
| 37 | PT33901037 | LOCK WASHER 5MM |
| 38 | PT33901038 | PHLP HD SCR M5-.8 X 8 |
| 39 | PT33901039 | TRANSFORMER HOPESTAR LED-5V700 5V |
| 40 | PT33901040 | PHLP HD SCR M4-.7 X 8 |
| 41 | PT33901041 | LIGHT ON/OFF SWITCH DKLD AN-18 RED |
| 42 | PT33901042 | LASER ON/OFF SWITCH DKLD AN-18 BLACK |
| 43 | PT33901043 | SWITCH BOX |
| 44 | PT33901044 | CAP SCREW M6-1 X 12 |
| 45 | PT33901045 | SWITCH PLATE |
| 46 | PT33901046 | ON/OFF SWITCH DKLD AN17 |
| 47 | PT33901047 | TAP SCREW M3.5 X 10 |
| 48 | PT33901048 | DEPTH STOP NUT M12-1.75 |
| 49 | PT33901049 | COMPRESSION SPRING 1.2 X 14 X 11.5 |
| 50 | PT33901050 | QUICK-RELEASE BUTTON |
| 51 | PT33901051 | DEPTH SCALE |
| 52 | PT33901052 | THREADED DEPTH ROD |
| 53 | PT33901053 | FLAT HD SCR M6-1 X 12 |
| 54 | PT33901054 | DEPTH STOP BRACKET |

| REF | PART # | DESCRIPTION |
|---|---|---|
| 55 | PT33901055 | DEPTH COLLAR |
| 56 | PT33901056 | HEX NUT M12-1.75 |
| 57 | PT33901057 | HEX NUT M6-1 |
| 58 | PT33901058 | CAP SCREW M6-1 X 45 |
| 59 | PT33901059 | SET SCREW M6-1 X 10 |
| 60 | PT33901060 | EXT RETAINING RING 17MM |
| 61 | PT33901061 | SPACER 47 X 59 X 2.5MM RUBBER |
| 62 | PT33901062 | BALL BEARING 6203-2RS |
| 63 | PT33901063 | QUILL |
| 64 | PT33901064 | DRIFT KEY |
| 65 | PT33901065 | BALL BEARING 6204-2RS |
| 66 | PT33901066 | SPINDLE MT#2 |
| 67 | PT33901067 | DRILL CHUCK ARBOR MT#2 X JT3 |
| 68 | PT33901068 | DRILL CHUCK JT3 X 1/8-5/8 |
| 69 | PT33901069 | DRILL CHUCK KEY 5/16" SE 12T SD-11/16" |
| 70 | PT33901070 | CHUCK GUARD ASSEMBLY |
| 70-1 | PT33901070-1 | HEX NUT M4-.7 |
| 70-2 | PT33901070-2 | CHUCK GUARD COLLAR |
| 70-3 | PT33901070-3 | HEX NUT M6-1 |
| 70-4 | PT33901070-4 | PHLP HD SCR M4-.7 X 30 |
| 70-5 | PT33901070-5 | TAP SCREW M2.6 X 6 |
| 70-6 | PT33901070-6 | HINGE BRACKET |
| 70-7 | PT33901070-7 | EXTENSION SPRING 0.8 X 6.5 X 30 |
| 70-8 | PT33901070-8 | HEX BOLT M5-.8 X 16 |
| 70-9 | PT33901070-9 | WING NUT M5-.8 |
| 70-10 | PT33901070-10 | GUARD LOWER |
| 70-11 | PT33901070-11 | GUARD UPPER |
| 70-12 | PT33901070-12 | PHLP HD SCR M4-.7 X 35 |
| 70-13 | PT33901070-13 | HEX BOLT M6-1 X 20 |
| 70-14 | PT33901070-14 | LOCK NUT M4-.7 |
| 71 | PT33901071 | PIVOT PIN 7 X 12, 10.5 X 19MM |
| 72 | PT33901072 | BELT TENSION BLOCK |
| 73 | PT33901073 | SET SCREW M8-1.25 X 10 |
| 74 | PT33901074 | SLIDE BAR LEFT |
| 75 | PT33901075 | SLIDE BAR RIGHT |
| 76 | PT33901076 | HEX BOLT M8-1.25 X 20 |
| 77 | PT33901077 | FLAT WASHER 8MM |
| 78 | PT33901078 | MOTOR MOUNT |
| 79 | PT33901079 | FLAT WASHER 12MM |
| 80 | PT33901080 | LOCK WASHER 12MM |
| 81 | PT33901081 | HEX NUT M12-1.75 |
| 82 | PT33901082 | HEX NUT M8-1.25 |
| 83 | PT33901083 | FLAT WASHER 8MM |
| 84 | PT33901084 | MOTOR 3/4HP 120V 1-PH |
| 84-1 | PT33901084-1 | MOTOR FAN COVER |
| 84-2 | PT33901084-2 | MOTOR FAN |
| 84-3 | PT33901084-3 | R CAPACITOR 65M 300V 1-5/8 X 2-7/8 |
| 84-4 | PT33901084-4 | CAPACITOR COVER |
| 84-5 | PT33901084-5 | BALL BEARING 6203-2RS |
| 85 | PT33901085 | POWER CORD 16G 3W 70" 5-15P |
| 86 | PT33901086 | HEX BOLT M8-1.25 X 25 |
| 87 | PT33901087 | HEX NUT M8-1.25 |
| 88 | PT33901088 | ROLL PIN 6 X 20 |
| 89 | PT33901089 | SET SCREW M10-1.5 X 12 |
| 90 | PT33901090 | CHUCK KEY SEAT |
| 91 | PT33901091 | FLAT WASHER 5MM |



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# T33901 Main Parts List (Cont.)

| REF | PART # | DESCRIPTION |
|---|---|---|
| 92 | PT33901092 | PHLP HD SCR M5-.8 X 10 |
| 93 | PT33901093 | SET SCREW M6-1 X 6 |
| 94 | PT33901094 | SET SCREW M10-1.5 X 25 SLOTTED |
| 95 | PT33901095 | HEX NUT M10-1.5 |
| 97 | PT33901097 | LASER MODULE DKLD LDBXQ03B |
| 98 | PT33901098 | LIGHT SEAT |
| 99 | PT33901099 | LED ASSEMBLY |
| 99-1 | PT33901099-1 | LED XINGZHEN 12V 3W |
| 99-2 | PT33901099-2 | LED DRIVER (3-5)X1W |
| 100 | PT33901100 | PINION SHAFT |
| 101 | PT33901101 | KNOB M12-1.75, D35 |
| 102 | PT33901102 | STUD-DE M12-1.75 X 178, 15 |
| 103 | PT33901103 | COLUMN COLLAR |
| 104 | PT33901104 | SET SCREW M6-1 X 10 |
| 105 | PT33901105 | FOLDING HANDLE M12-1.75 X 50, 90L |
| 106 | PT33901106 | COLUMN BRACKET |
| 107 | PT33901107 | GEAR SHAFT |
| 108 | PT33901108 | GEAR 14T |
| 109 | PT33901109 | WORM SHAFT |
| 110 | PT33901110 | EXT RETAINING RING 14MM |

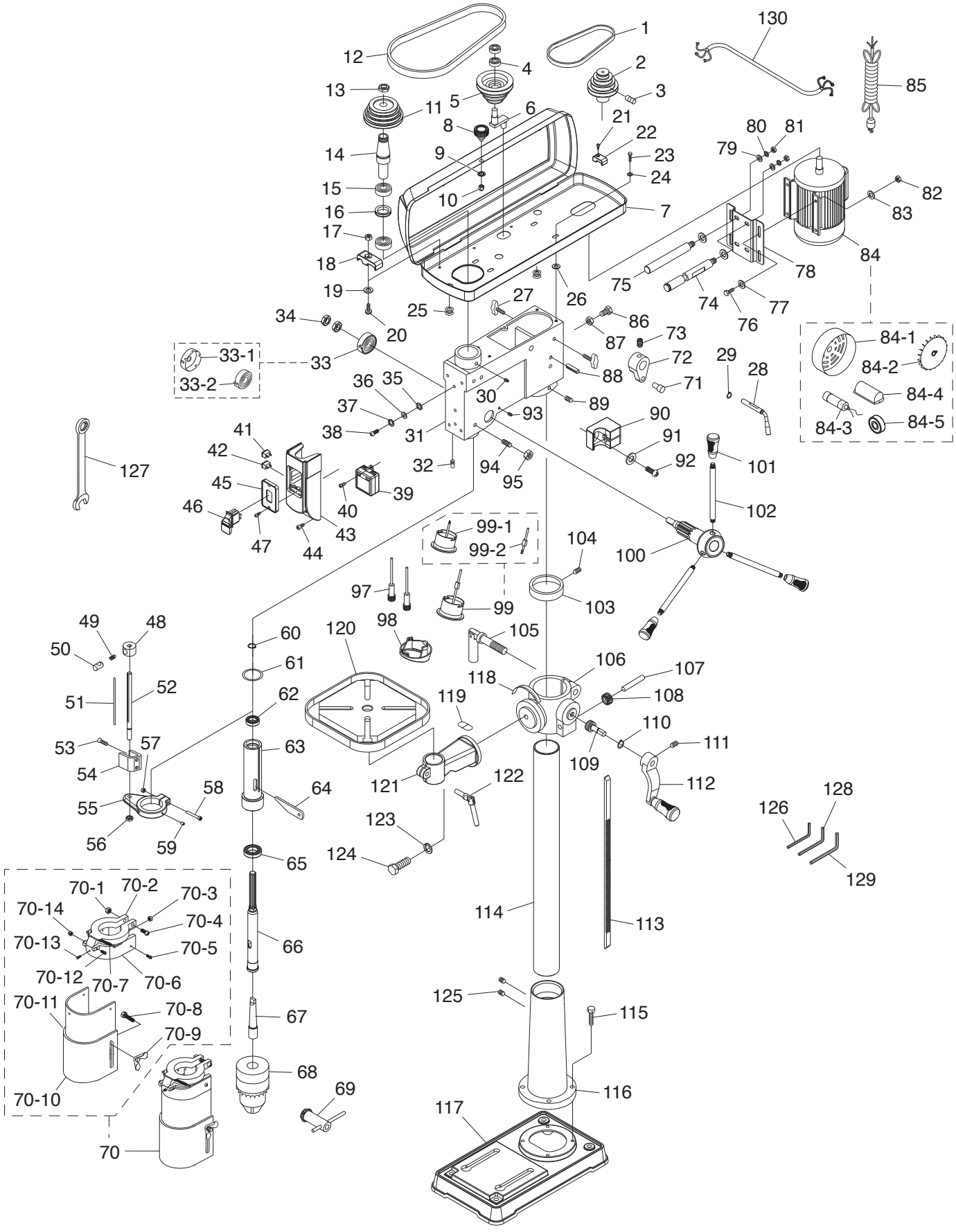
| REF | PART # | DESCRIPTION |
|---|---|---|
| 111 | PT33901111 | SET SCREW M8-1.25 X 10 |
| 112 | PT33901112 | TABLE HEIGHT CRANK |
| 113 | PT33901113 | RACK |
| 114 | PT33901114 | COLUMN |
| 115 | PT33901115 | HEX BOLT M10-1.5 X 25 |
| 116 | PT33901116 | COLUMN BASE |
| 117 | PT33901117 | BASE |
| 118 | PT33901118 | TABLE TILT SCALE |
| 119 | PT33901119 | TABLE TILT POINTER |
| 120 | PT33901120 | TABLE |
| 121 | PT33901121 | TABLE MOUNTING ARM |
| 122 | PT33901122 | FOLDING HANDLE M10-1.5 X 28, 70L |
| 123 | PT33901123 | LOCK WASHER 16MM |
| 124 | PT33901124 | HEX BOLT M16-2 X 30 |
| 125 | PT33901125 | HEX WRENCH 3MM |
| 126 | PT33901126 | WRENCH 24MM COMBO |
| 127 | PT33901127 | HEX WRENCH 4MM |
| 128 | PT33901128 | HEX WRENCH 5MM |
| 129 | PT33901129 | MOTOR CORD 16G 3W 35" |



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# T33902 Main






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# T33902 Main Parts List

| REF | PART # | DESCRIPTION |
|---|---|---|
| 1 | PT33902001 | V-BELT A-565 |
| 2 | PT33902002 | MOTOR PULLEY |
| 3 | PT33902003 | SET SCREW M8-1.25 X 10 |
| 4 | PT33902004 | BALL BEARING 6202-2RS |
| 5 | PT33902005 | IDLER PULLEY |
| 6 | PT33902006 | CRANKSHAFT |
| 7 | PT33902007 | BELT COVER |
| 8 | PT33902008 | KNOB BOLT M5-.8 X 8, D20, ROUND KD |
| 9 | PT33902009 | INT TOOTH WASHER 5MM |
| 10 | PT33902010 | ACORN NUT M5-.8 |
| 11 | PT33902011 | SPINDLE PULLEY |
| 12 | PT33902012 | V-BELT A-565 |
| 13 | PT33902013 | HEX NUT M24-1.5 LH THIN |
| 14 | PT33902014 | SPINDLE SLEEVE |
| 15 | PT33902015 | BALL BEARING 6005-2RS |
| 16 | PT33902016 | SPACER 41 X 47 X 12MM |
| 17 | PT33902017 | HEX NUT M5-.8 |
| 18 | PT33902018 | CORD CLAMP LARGE |
| 19 | PT33902019 | FLAT WASHER 5MM |
| 20 | PT33902020 | PHLP HD SCR M5-.8 X 16 |
| 21 | PT33902021 | TAP SCREW M4.2 X 12 |
| 22 | PT33902022 | CORD CLAMP SMALL |
| 23 | PT33902023 | HEX BOLT M8-1.25 X 12 |
| 24 | PT33902024 | FLAT WASHER 8MM |
| 25 | PT33902025 | GROMMET 5/8" RUBBER |
| 26 | PT33902026 | SPACER 9 X 18 X 2.5MM RUBBER |
| 27 | PT33902027 | KNOB BOLT M10-1.5 X 25, D33, WING |
| 28 | PT33902028 | BELT TENSION LEVER |
| 29 | PT33902029 | EXT RETAINING RING 15MM |
| 30 | PT33902030 | SET SCREW M8-1.25 X 8 |
| 31 | PT33902031 | HEADSTOCK |
| 32 | PT33902032 | STUD-SE M4-.7 X 8, 13.5 SLOTTED |
| 33 | PT33902033 | RETURN SPRING ASSEMBLY |
| 33-1 | PT33902033-1 | RETURN SPRING COVER |
| 33-2 | PT33902033-2 | FLAT COIL SPRING |
| 34 | PT33902034 | HEX NUT M12-1.75 THIN |
| 35 | PT33902035 | EXT TOOTH WASHER 5MM |
| 36 | PT33902036 | FLAT WASHER 5MM |
| 37 | PT33902037 | LOCK WASHER 5MM |
| 38 | PT33902038 | PHLP HD SCR M5-.8 X 8 |
| 39 | PT33902039 | TRANSFORMER HOPESTAR LED-5V700 5V |
| 40 | PT33902040 | PHLP HD SCR M4-.7 X 8 |
| 41 | PT33902041 | LIGHT ON/OFF SWITCH DKLD AN-18 RED |
| 42 | PT33902042 | LASER ON/OFF SWITCH DKLD AN-18 BLACK |
| 43 | PT33902043 | SWITCH BOX |
| 44 | PT33902044 | CAP SCREW M6-1 X 12 |
| 45 | PT33902045 | SWITCH PLATE |
| 46 | PT33902046 | ON/OFF SWITCH DKLD AN17 |
| 47 | PT33902047 | TAP SCREW M3.5 X 10 |
| 48 | PT33902048 | DEPTH STOP NUT M12-1.75 |
| 49 | PT33902049 | COMPRESSION SPRING 1.2 X 14 X 11.5 |
| 50 | PT33902050 | QUICK-RELEASE BUTTON |
| 51 | PT33902051 | DEPTH SCALE |
| 52 | PT33902052 | THREADED DEPTH ROD |
| 53 | PT33902053 | FLAT HD SCR M6-1 X 12 |
| 54 | PT33902054 | DEPTH STOP BRACKET |

| REF | PART # | DESCRIPTION |
|---|---|---|
| 55 | PT33902055 | DEPTH COLLAR |
| 56 | PT33902056 | HEX NUT M12-1.75 |
| 57 | PT33902057 | HEX NUT M6-1 |
| 58 | PT33902058 | CAP SCREW M6-1 X 45 |
| 59 | PT33902059 | SET SCREW M6-1 X 10 |
| 60 | PT33902060 | EXT RETAINING RING 17MM |
| 61 | PT33902061 | SPACER 47 X 59 X 2.5MM RUBBER |
| 62 | PT33902062 | BALL BEARING 6203-2RS |
| 63 | PT33902063 | QUILL |
| 64 | PT33902064 | DRIFT KEY |
| 65 | PT33902065 | BALL BEARING 6204-2RS |
| 66 | PT33902066 | SPINDLE MT#2 |
| 67 | PT33902067 | DRILL CHUCK ARBOR MT#2 X JT3 |
| 68 | PT33902068 | DRILL CHUCK JT3 X 1/8-5/8 |
| 69 | PT33902069 | DRILL CHUCK KEY 5/16" SE 12T SD-11/6" |
| 70 | PT33902070 | CHUCK GUARD ASSEMBLY |
| 70-1 | PT33902070-1 | HEX NUT M4-.7 |
| 70-2 | PT33902070-2 | CHUCK GUARD COLLAR |
| 70-3 | PT33902070-3 | HEX NUT M6-1 |
| 70-4 | PT33902070-4 | PHLP HD SCR M4-.7 X 30 |
| 70-5 | PT33902070-5 | TAP SCREW M2.6 X 6 |
| 70-6 | PT33902070-6 | HINGE BRACKET |
| 70-7 | PT33902070-7 | EXTENSION SPRING 0.8 X 6.5 X 30 |
| 70-8 | PT33902070-8 | HEX BOLT M5-.8 X 16 |
| 70-9 | PT33902070-9 | WING NUT M5-.8 |
| 70-10 | PT33902070-10 | GUARD LOWER |
| 70-11 | PT33902070-11 | GUARD UPPER |
| 70-12 | PT33902070-12 | PHLP HD SCR M4-.7 X 35 |
| 70-13 | PT33902070-13 | HEX BOLT M6-1 X 20 |
| 70-14 | PT33902070-14 | LOCK NUT M4-.7 |
| 71 | PT33902071 | PIVOT PIN 7 X 12, 10.5 X 19MM |
| 72 | PT33902072 | BELT TENSION BLOCK |
| 73 | PT33902073 | SET SCREW M8-1.25 X 10 |
| 74 | PT33902074 | SLIDE BAR LEFT |
| 75 | PT33902075 | SLIDE BAR RIGHT |
| 76 | PT33902076 | HEX BOLT M8-1.25 X 20 |
| 77 | PT33902077 | FLAT WASHER 8MM |
| 78 | PT33902078 | MOTOR MOUNT |
| 79 | PT33902079 | FLAT WASHER 12MM |
| 80 | PT33902080 | LOCK WASHER 12MM |
| 81 | PT33902081 | HEX NUT M12-1.75 |
| 82 | PT33902082 | HEX NUT M8-1.25 |
| 83 | PT33902083 | FLAT WASHER 8MM |
| 84 | PT33902084 | MOTOR 3/4HP 120V 1-PH |
| 84-1 | PT33902084-1 | MOTOR FAN COVER |
| 84-2 | PT33902084-2 | MOTOR FAN |
| 84-3 | PT33902084-3 | R CAPACITOR 65M 300V 1-5/8 X 2-7/8 |
| 84-4 | PT33902084-4 | CAPACITOR COVER |
| 84-5 | PT33902084-5 | BALL BEARING 6203-2RS |
| 85 | PT33902085 | POWER CORD 16G 3W 70" 5-15P |
| 86 | PT33902086 | HEX BOLT M8-1.25 X 25 |
| 87 | PT33902087 | HEX NUT M8-1.25 |
| 88 | PT33902088 | ROLL PIN 6 X 20 |
| 89 | PT33902089 | SET SCREW M10-1.5 X 12 |
| 90 | PT33902090 | CHUCK KEY SEAT |
| 91 | PT33902091 | FLAT WASHER 5MM |



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# T33902 Main Parts List (Cont.)

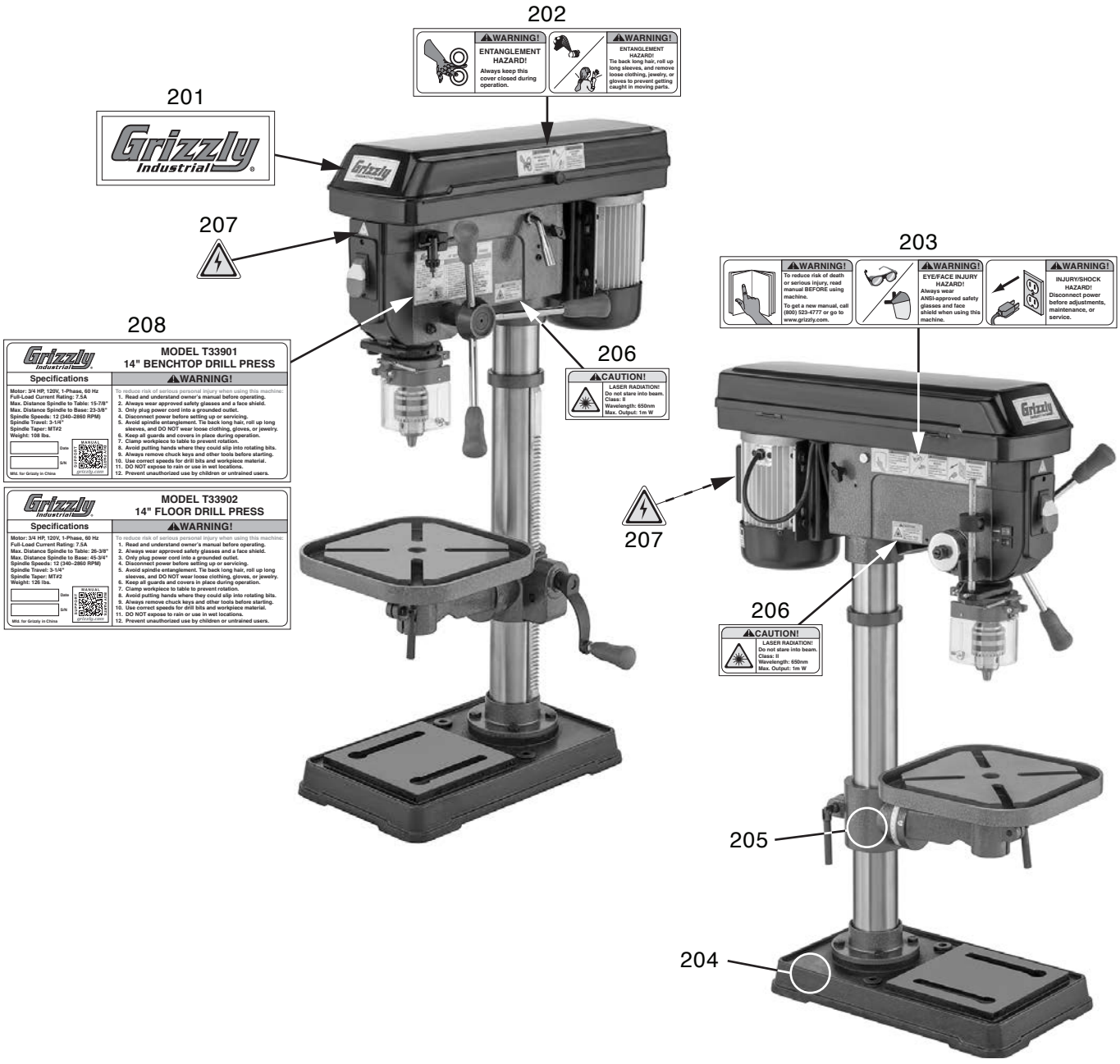
| REF | PART # | DESCRIPTION |
|---|---|---|
| 92 | PT33902092 | PHLP HD SCR M5-.8 X 10 |
| 93 | PT33902093 | SET SCREW M6-1 X 6 |
| 94 | PT33902094 | SET SCREW M10-1.5 X 25 SLOTTED |
| 95 | PT33902095 | HEX NUT M10-1.5 |
| 97 | PT33902097 | LASER MODULE DKLD LDBXQ03B |
| 98 | PT33902098 | LIGHT SEAT |
| 99 | PT33902099 | LED ASSEMBLY |
| 99-1 | PT33902099-1 | LED XINGZHEN 12V 3W |
| 99-2 | PT33902099-2 | LED DRIVER (3-5)X1W |
| 100 | PT33902100 | PINION SHAFT |
| 101 | PT33902101 | KNOB M12-1.75, D35 |
| 102 | PT33902102 | STUD-DE M12-1.75 X 178, 15 |
| 103 | PT33902103 | COLUMN COLLAR |
| 104 | PT33902104 | SET SCREW M6-1 X 10 |
| 105 | PT33902105 | FOLDING HANDLE M12-1.75 X 50, 90L |
| 106 | PT33902106 | COLUMN BRACKET |
| 107 | PT33902107 | GEAR SHAFT |
| 108 | PT33902108 | GEAR 14T |
| 109 | PT33902109 | WORM SHAFT |
| 110 | PT33902110 | EXT RETAINING RING 14MM |

| REF | PART # | DESCRIPTION |
|---|---|---|
| 111 | PT33902111 | SET SCREW M8-1.25 X 10 |
| 112 | PT33902112 | TABLE HEIGHT CRANK |
| 113 | PT33902113 | RACK |
| 114 | PT33902114 | COLUMN |
| 115 | PT33902115 | HEX BOLT M10-1.5 X 30 |
| 116 | PT33902116 | COLUMN BASE |
| 117 | PT33902117 | BASE |
| 118 | PT33902118 | TABLE TILT SCALE |
| 119 | PT33902119 | TABLE TILT POINTER |
| 120 | PT33902120 | TABLE |
| 121 | PT33902121 | TABLE MOUNTING ARM |
| 122 | PT33902122 | FOLDING HANDLE M10-1.5 X 28, 70L |
| 123 | PT33902123 | LOCK WASHER 16MM |
| 124 | PT33902124 | HEX BOLT M16-2 X 30 |
| 125 | PT33902125 | SET SCREW M8-1.25 X 8 |
| 126 | PT33902126 | HEX WRENCH 3MM |
| 127 | PT33902127 | WRENCH 24MM COMBO |
| 128 | PT33902128 | HEX WRENCH 4MM |
| 129 | PT33902129 | HEX WRENCH 5MM |
| 130 | PT33902130 | MOTOR CORD 16G 3W 35" |



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# Labels & Cosmetics




| REF | PART # | DESCRIPTION |
|---|---|---|
| 201 | PT33901201 | GRIZZLY LOGO LABEL |
| 202 | PT33901202 | ENTANGLEMENT HAZARD LABEL |
| 203 | PT33901203 | COMBO WARNING LABEL |
| 204 | PT33901204 | TOUCH-UP PAINT, GRIZZLY BLACK |
| 205 | PT33901205 | TOUCH-UP PAINT, GRIZZLY GREEN |

| REF | PART # | DESCRIPTION |
|---|---|---|
| 206 | PT33901206 | LASER LABEL |
| 207 | PT33901207 | ELECTRICITY LABEL |
| 208 | PT33901208 | MACHINE ID LABEL (T33901) |
| 208 | PT33902208 | MACHINE ID LABEL (T33902) |

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