

MODEL W1668/W1848 13¹/₄" OSCILLATING DRILL PRESS



OWNER'S MANUAL

(FOR MODELS MANUFACTURED SINCE 06/22)

Phone: (360) 734-3482 • Online Technical Support: techsupport@woodstockint.com

COPYRIGHT © MARCH, 2017 BY WOODSTOCK INTERNATIONAL, INC., REVISED OCTOBER, 2022 (CS)

WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE OR FORM WITHOUT

THE WRITTEN APPROVAL OF WOODSTOCK INTERNATIONAL, INC.



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.

Contents

| | | | |
|--|-----------|--|-----------|
| INTRODUCTION | 2 | ACCESSORIES | 39 |
| Woodstock Technical Support | 2 | Drill Press Accessories | 39 |
| W1668 Machine Specifications | 3 | MAINTENANCE | 40 |
| W1848 Machine Specifications | 5 | General | 40 |
| Controls & Components | 8 | Cleaning & Protecting | 40 |
| SAFETY | 10 | Sanding Sleeves..... | 40 |
| Standard Machinery Safety Instructions | 10 | Inspecting/Replacing Belts | 41 |
| Additional Safety for Drill Presses..... | 12 | Lubrication | 41 |
| ELECTRICAL | 13 | SERVICE | 43 |
| Circuit Requirements | 13 | General | 43 |
| Grounding Requirements..... | 14 | Tensioning Feed Shaft Return Spring..... | 43 |
| Extension Cords | 14 | Adjusting Quill Shaft Screw | 45 |
| SETUP | 15 | Troubleshooting..... | 46 |
| Unpacking | 15 | Electrical Safety Instructions..... | 48 |
| Items Needed for Setup..... | 15 | Wiring Diagram | 49 |
| Hardware Recognition Chart | 16 | PARTS | 50 |
| Inventory | 17 | W1668 Main | 50 |
| Cleaning Machine..... | 18 | W1848 Main | 53 |
| Machine Placement | 19 | Labels & Cosmetics | 56 |
| Bench Mounting (W1668)..... | 20 | WARRANTY | 57 |
| Anchoring to Floor (W1848) | 20 | | |
| Assembly..... | 21 | | |
| Dust Collection | 27 | | |
| Test Run..... | 28 | | |
| Spindle Break-In..... | 29 | | |
| OPERATIONS | 30 | | |
| General | 30 | | |
| Adjusting Table Height & Tilt | 31 | | |
| Changing Spindle Speed..... | 32 | | |
| Drill Press Speed Chart | 33 | | |
| Adjusting Depth Stop | 33 | | |
| Calculating Spindle Speed for Drilling | 35 | | |
| Changing Drill Bit/Drum..... | 36 | | |
| Using the Oscillator..... | 37 | | |





INTRODUCTION

Woodstock Technical Support

This machine has been specially designed to provide many years of trouble-free service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

Woodstock International, Inc. is committed to customer satisfaction. Our intent with this manual is to include the basic information for safety, setup, operation, maintenance, and service of this product.

We stand behind our machines! In the event that questions arise about your machine, please contact Woodstock International Technical Support at (360) 734-3482 Ext. 2 or send e-mail to: techsupport@woodstockint.com. Our knowledgeable staff will help you troubleshoot problems and process warranty claims.

If you need the latest edition, you can download it from <http://www.woodstockint.com/manuals>. If you have comments about this manual, please contact us at:

Woodstock International, Inc.
Attn: Technical Documentation Manager
P.O. Box 2309
Bellingham, WA 98227
Email: manuals@woodstockint.com

WARNING

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.

WARNING

Like all machinery, there is a 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.



MACHINE SPECIFICATIONS



© Woodstock International, Inc. • Phone #: (800) 840-8420 • Web: www.woodstockint.com

MODEL W1668 13-1/4" OSCILLATING BENCHTOP DRILL PRESS

Product Dimensions

Weight..... 113 lbs.
 Width (side-to-side) x Depth (front-to-back) x Height..... 15 x 24 x 38 in.
 Footprint (Length x Width)..... 17-1/2 x 11 in.

Shipping Dimensions

Carton #1

Type..... Cardboard Box
 Content..... Machine
 Weight..... 61 lbs.
 Length x Width x Height..... 25 x 16 x 11 in.
 Must Ship Upright..... No

Carton #2

Type..... Cardboard Box
 Content..... Base
 Weight..... 62 lbs.
 Length x Width x Height..... 32 x 19 x 9 in.
 Must Ship Upright..... No

Electrical

Power Requirement..... 110V, Single-Phase, 60 Hz
 Full-Load Current Rating..... 9A
 Minimum Circuit Size..... 15A
 Connection Type..... Cord & Plug
 Power Cord Included..... Yes
 Power Cord Length..... 108 in.
 Power Cord Gauge..... 18 AWG
 Plug Included..... Yes
 Included Plug Type..... 5-15
 Switch Type..... Paddle Safety Switch w/Removable Key

Motors

Main

Horsepower..... 3/4 HP
 Phase..... Single-Phase
 Amps..... 9A
 Speed..... 1725 RPM
 Type..... TEFC Capacitor-Start Induction
 Power Transfer..... Belt
 Bearings..... Shielded & Permanently Lubricated
 Centrifugal Switch/Contacts Type..... External



Main Specifications

Operation Information

| | |
|---|------------------|
| Type..... | Oscillating |
| Swing..... | 13-1/4 in. |
| Spindle Taper..... | JT33 |
| Spindle Travel..... | 3-1/8 in. |
| Max. Distance From Spindle to Column..... | 6-3/4 in. |
| Max. Distance From Spindle to Table..... | 17-1/4 in. |
| Number of Spindle Speeds..... | 12 |
| Range of Spindle Speeds..... | 250 - 3050 RPM |
| Max. Head Swivel..... | 360 deg. |
| Drilling Capacity (Mild Steel)..... | 5/8 in. in Steel |
| Drill Chuck Type..... | JT33 Key Chuck |
| Drill Chuck Size..... | 1 - 16 mm |
| Oscillating Stroke Length..... | 3/4 in. |

Spindle Information

| | |
|------------------------------------|-----------|
| Distance From Spindle to Base..... | 24 in. |
| Quill Diameter..... | 1.565 in. |

Table Information

| | |
|-----------------------------------|------------------------|
| Max. Table Tilt (Left/Right)..... | 90 deg. |
| Table Swing..... | 360 deg. |
| Table Swivel Around Center..... | 360 deg. |
| Table Swivel Around Column..... | 360 deg. |
| Max. Movement of Work Table..... | 11-3/4 in. |
| Table Diameter..... | 12-3/8 in. |
| Table Thickness..... | 1 in. |
| Vertical Table Travel..... | Crank Handle Operation |
| Number of T-Slots..... | 5 |
| T-Slot Size..... | 5/8 in. |
| T-Slot Centers..... | 3 in. |
| Floor-To-Table Height..... | 9-1/2 - 21-1/4 in. |

Construction

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

Other Related Information

| | |
|---------------------------|---------------------------------|
| Base Length..... | 17-1/2 in. |
| Base Width..... | 11 in. |
| Column Diameter..... | 2.79 in. |
| Depth Stop Type..... | Threaded Rod with Positive Stop |
| Number of Dust Ports..... | 1 |
| Dust Port Size..... | 2 in. |



MACHINE SPECIFICATIONS



© Woodstock International, Inc. • Phone #: (800) 840-8420 • Web: www.woodstockint.com

MODEL W1848 13-1/4" OSCILLATING FLOOR DRILL PRESS

Product Dimensions

Weight..... 122 lbs.
 Width (side-to-side) x Depth (front-to-back) x Height..... 15 x 24 x 63 in.
 Footprint (Length x Width)..... 17-1/2 x 11 in.

Shipping Dimensions

Type..... Cardboard Box
 Content..... Machine
 Weight..... 138 lbs.
 Length x Width x Height..... 58 x 22 x 11 in.
 Must Ship Upright..... Yes

Electrical

Power Requirement..... 110V, Single-Phase, 60 Hz
 Full-Load Current Rating..... 9A
 Minimum Circuit Size..... 15A
 Connection Type..... Cord & Plug
 Power Cord Included..... Yes
 Power Cord Length..... 72 in.
 Power Cord Gauge..... 18 AWG
 Plug Included..... Yes
 Included Plug Type..... 5-15
 Switch Type..... Paddle Safety Switch w/Removable Key

Motors

Main

Horsepower..... 3/4 HP
 Phase..... Single-Phase
 Amps..... 9A
 Speed..... 1725 RPM
 Type..... TEFC Capacitor-Start Induction
 Power Transfer Belt
 Bearings..... Shielded & Permanently Lubricated
 Centrifugal Switch/Contacts Type..... Internal



Main Specifications

Operation Information

| | |
|---|----------------|
| Type..... | Oscillating |
| Swing..... | 13-1/4 in. |
| Spindle Taper..... | JT33 |
| Spindle Travel..... | 3-1/8 in. |
| Max. Distance From Spindle to Column..... | 6-5/8 in. |
| Number of Spindle Speeds..... | 12 |
| Range of Spindle Speeds..... | 250 - 3050 RPM |
| Max. Head Swivel..... | 360 deg. |
| Drilling Capacity (Mild Steel)..... | 5/8 in. |
| Drill Chuck Type..... | JT33 Key Chuck |
| Drill Chuck Size..... | 3/64 - 5/8 in. |
| Oscillating Stroke Length..... | 3/4 in. |

Spindle Information

| | |
|---------------------|-----------|
| Quill Diameter..... | 1.565 in. |
|---------------------|-----------|

Table Information

| | |
|-----------------------------------|------------------------|
| Max. Table Tilt (Left/Right)..... | 90 deg. |
| Table Swivel Around Center..... | 360 deg. |
| Table Swivel Around Column..... | 360 deg. |
| Max. Movement of Work Table..... | 25-1/4 in. |
| Table Diameter..... | 12-3/8 in. |
| Table Thickness..... | 1 in. |
| Vertical Table Travel..... | Crank Handle Operation |
| Number of T-Slots..... | 5 |
| T-Slot Size..... | 1/2 in. |
| T-Slot Centers..... | 3 in. |

Construction

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

Other Related Information

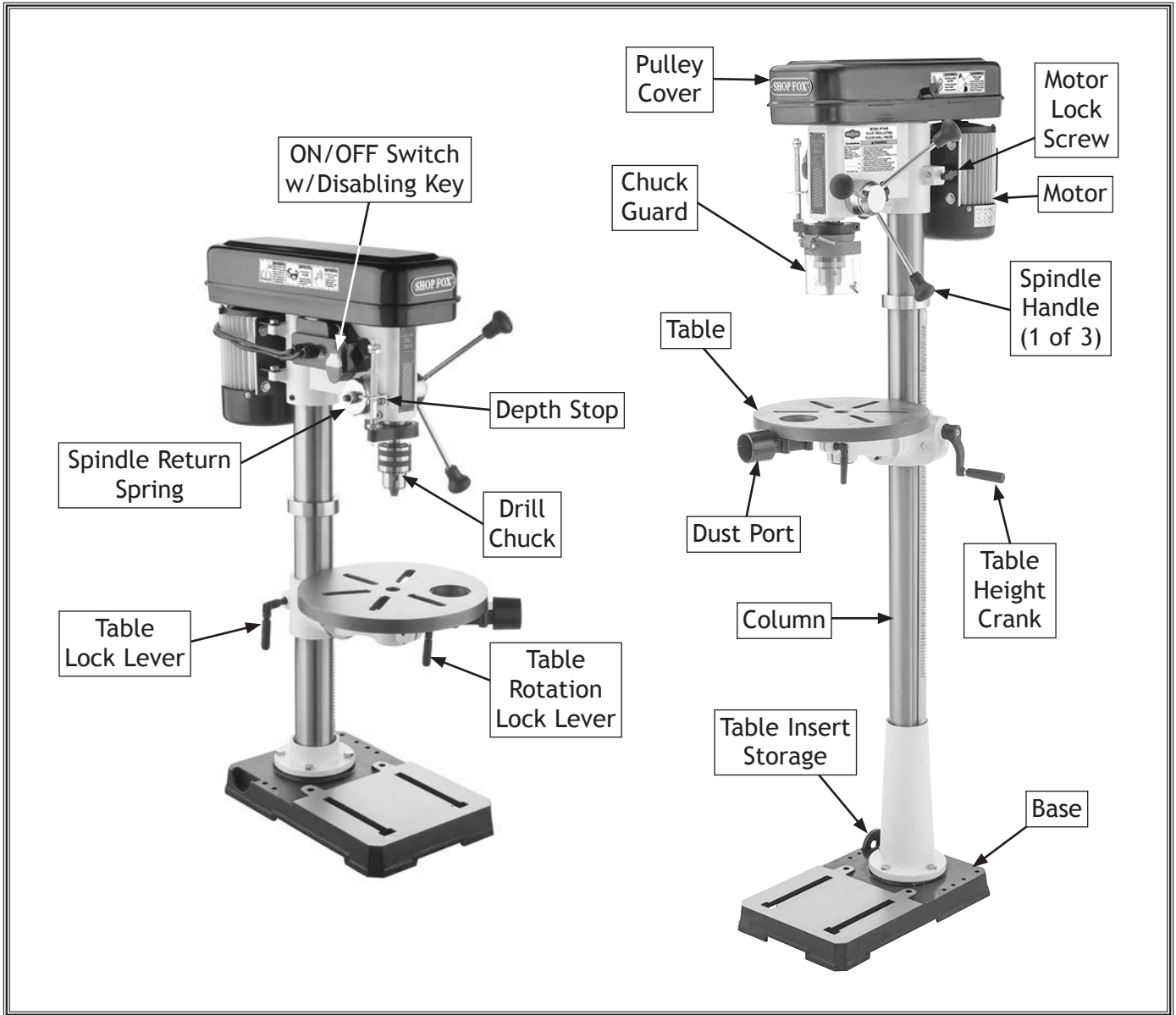
| | |
|---------------------------|------------------------------|
| Depth Stop Type..... | Threaded Rod w/Positive Stop |
| Number of Dust Ports..... | 1 |
| Dust Port Size..... | 2 in. |

Other

| | |
|---|------------|
| Country of Origin | China |
| Warranty | 2 Years |
| Approximate Assembly & Setup Time | 30 Minutes |
| Serial Number Location | ID Label |
| ISO 9001 Factory | Yes |

Identification

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



⚠️ 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

Refer to the **Figures 1-5** and the following 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 stay safe when operating this machine.

- A. **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.
- B. **Depth Stop:** Stops spindle travel at predetermined depth.
- C. **Spindle Return Spring:** Automatically returns quill into headstock.
- D. **Motor Lock Screw:** Adjusts motor position to tension and release belt.
- E. **Spindle Handle (1 of 3):** Moves spindle down when pulled down. Spindle automatically returns to top position when released.

WARNING



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

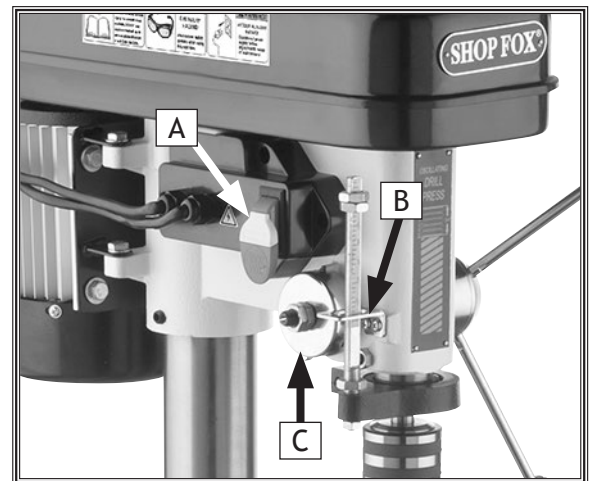


Figure 1. Left side of headstock.

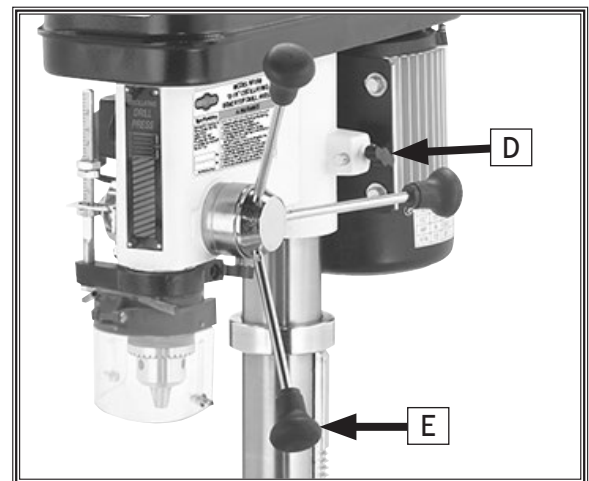


Figure 2. Right side of headstock.

- F. **Spindle Pulley:** Transfers power from idler pulley to spindle.
- G. **Oscillation Belt & Pulley:** Oscillates spindle for sanding operations.
- H. **Idler Pulley:** Transfers power from motor to spindle.
- I. **Motor Pulley:** Transfers motor power to drive belt at different speeds.
- J. **Drive Belts:** Control spindle speed.

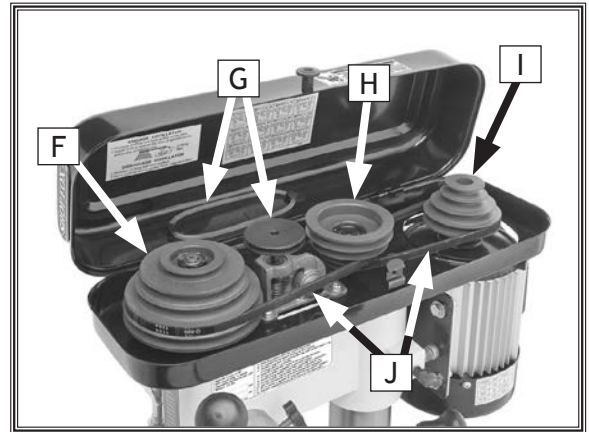


Figure 3. Inside belt cover.

- K. **Table Height Crank:** Raises/lowers table on column.
- L. **Table Lock Lever:** Locks table height and rotation in position in relation to column.

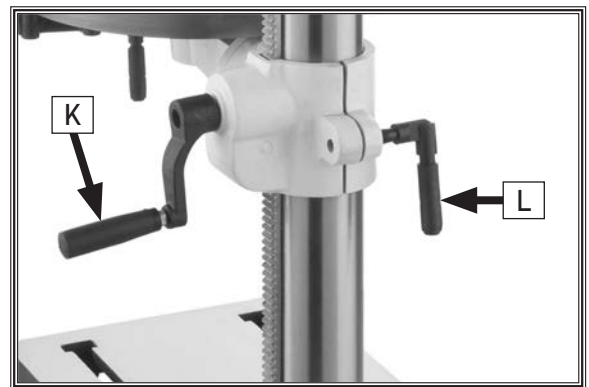


Figure 4. Table height controls.

- M. **Table Insert:** Adjusts size of hole in table for specific sanding and drilling operations.
- N. **Table Rotation Lock Lever:** Locks table rotation.

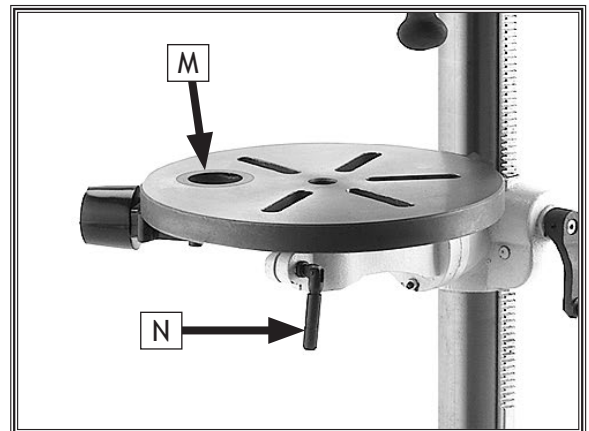


Figure 5. Other table controls.

SAFETY

For Your Own Safety, Read Manual Before Operating 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—this responsibility is ultimately up to the operator!



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



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



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the equipment or a situation that may cause damage to the machinery.

Standard Machinery Safety Instructions

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 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 an electrician or 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 eliminates the risk of injury 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.

WEARING PROPER APPAREL. Do not wear clothing, apparel, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips, which could cause loss of workpiece control.

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

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!

INTENDED USAGE. Only use machine for its intended purpose—never make modifications without prior approval from Woodstock International. Modifying machine or using it differently than intended will void the warranty and may result in malfunction or mechanical failure that leads to serious 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.

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 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.

CHECK DAMAGED PARTS. Regularly inspect machine for any condition that may affect safe operation. Immediately repair or replace damaged or mis-adjusted parts before operating machine.

MAINTAIN POWER CORDS. When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside, resulting in a short. 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 Technical Support at (360) 734-3482.

Additional Safety for Drill Presses

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 great force. To reduce the risk of these hazards, operator and bystanders **MUST** completely heed hazards and warnings below.

SAFETY

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

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

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

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

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

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

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

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

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

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

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

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

ELECTRICAL

Circuit Requirements

This machine must be connected to the correct size and type of power supply circuit, or fire or electrical damage may occur. Read through this section to determine if an adequate power supply circuit is available. If a correct circuit is not available, a qualified electrician **MUST** install one before you can connect the machine to power.

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.)

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 110V9 Amps

Circuit Requirements for 110V


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

- Circuit Type 110V/120V, 60 Hz, Single-Phase
- Circuit Size 15 Amps
- Plug/Receptacle NEMA 5-15

⚠ WARNING

The machine must be properly set up before it is safe to operate. **DO NOT** connect this machine to the power source until instructed to do so later in this manual.

⚠ WARNING



Incorrectly wiring or grounding this machine can cause electrocution, fire, or machine damage. To reduce this risk, only an electrician or qualified service personnel should do any required electrical work on this machine.

NOTICE

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

ELECTRICAL

Grounding Requirements

This machine **MUST** be grounded. In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current to travel—in order to reduce the risk of electric shock.

Improper connection of the equipment-grounding wire will increase the risk of electric shock. The wire with green insulation (with/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.

For 110V Connection

This machine is equipped with a power cord with an equipment-grounding wire and NEMA 5-15 grounding plug (see figure). The plug must only be inserted into a matching receptacle that is properly installed and grounded in accordance with local codes and ordinances.

Extension Cords

We do not recommend using an extension cord with this machine. Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases with longer extension cords and smaller gauge sizes (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle, and meet the following requirements:

- Minimum Gauge Size at 110V 14 AWG**
- Maximum Length (Shorter is Better) 50 ft.**

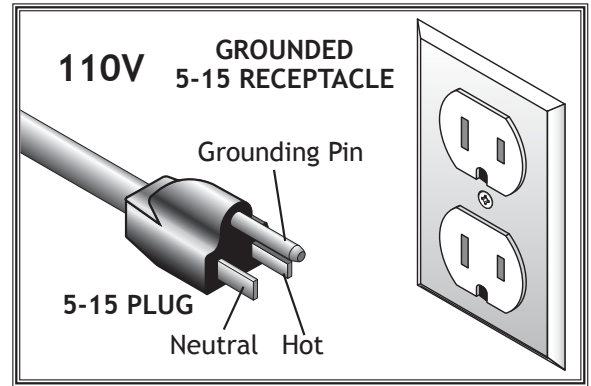
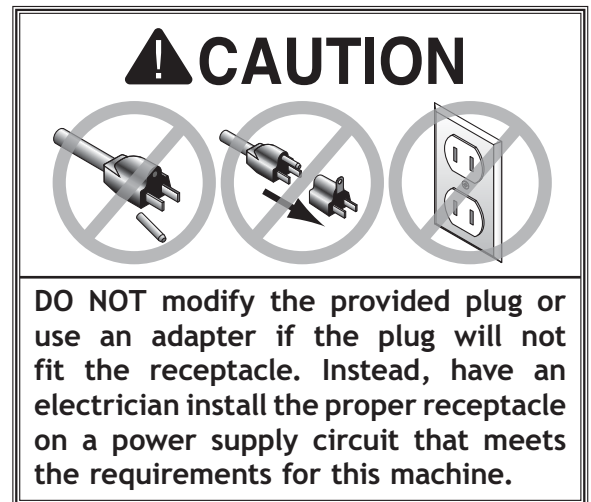


Figure 6. NEMA 5-15 plug & receptacle.



SETUP


Unpacking

This machine has been carefully packaged for safe transportation. If you notice the machine has been damaged during shipping, please contact your authorized Shop Fox dealer immediately.

Items Needed for Setup

The following items are needed, but not included, to set up your machine.

| Description | Qty |
|---|-----------|
| • Safety Glasses for Each Person | 1 |
| • Degreaser or Solvent for Cleaning | As Needed |
| • Disposable Rags for Cleaning | As Needed |
| • Disposable Gloves for Cleaning | As Needed |
| • Paint Brush | 1 |
| • Ruler (12" Minimum) | 1 |
| • Plumb Bob | 1 |
| • Dust Collection System | 1 |
| • Dust Hose 2" | 1 |
| • Hose Clamps 2" | 2 |
| • Phillips Head Screwdriver #2 | 1 |
| • Wrench or Socket 17mm | 1 |
| • Assistant for Lifting | 1 |
| • Mounting Hardware | As Needed |
| • Mineral Spirits | As Needed |
| • NLGI #2 Grease | As Needed |
| • ISO 68 Way Oil | As Needed |



!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 entire setup process!



!WARNING

USE helpers or power lifting equipment to lift this machine. Otherwise, serious personal injury may occur.

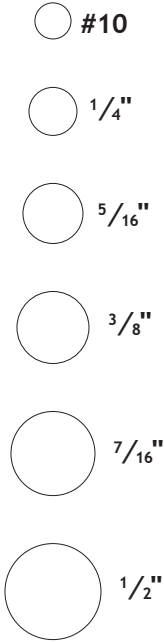
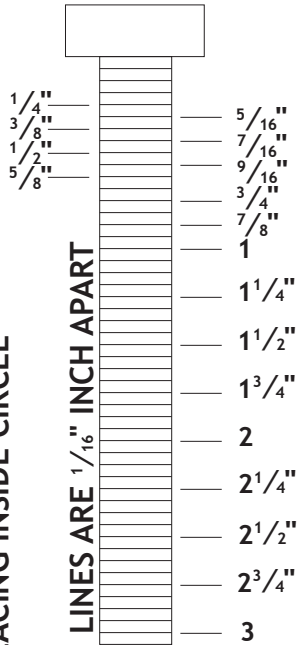
SETUP

Hardware Recognition Chart

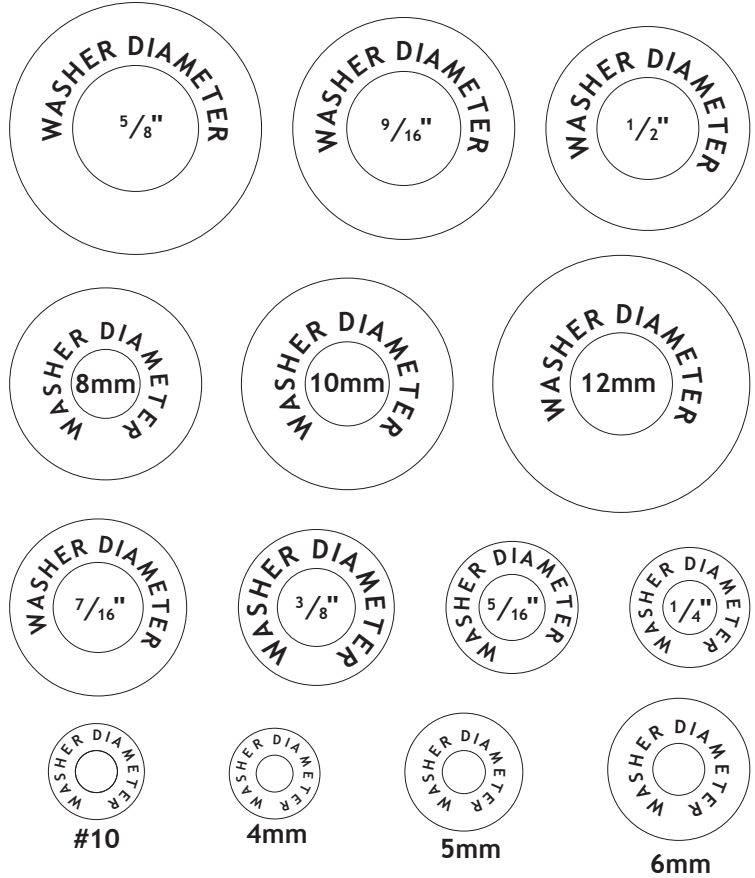
USE THIS CHART TO IDENTIFY HARDWARE DURING THE INVENTORY/ASSEMBLY PROCESS.

SETUP

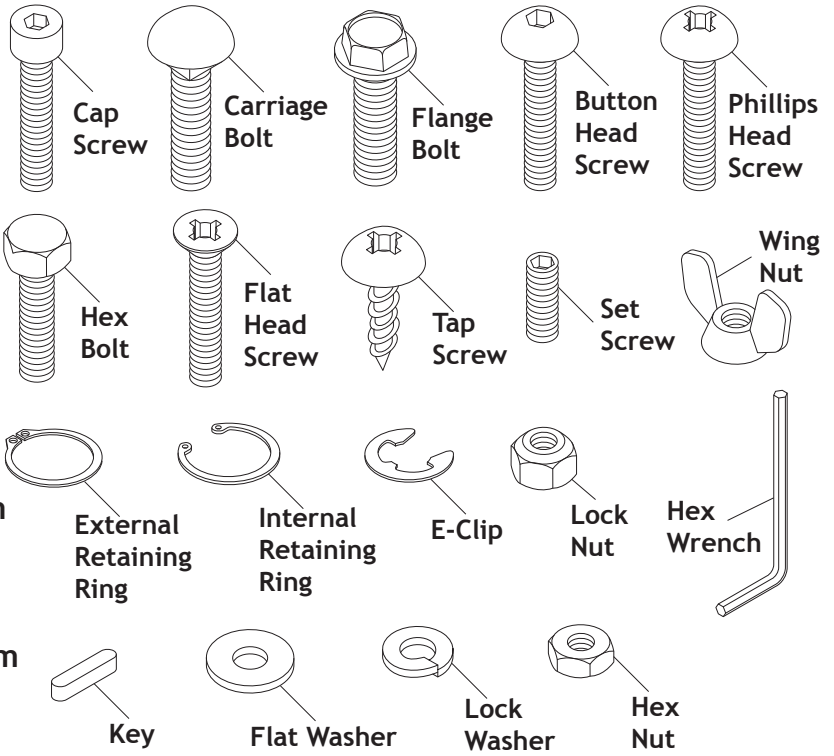
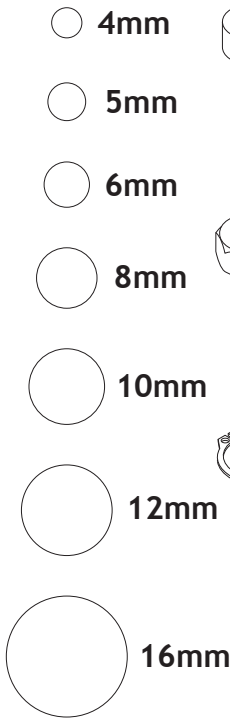
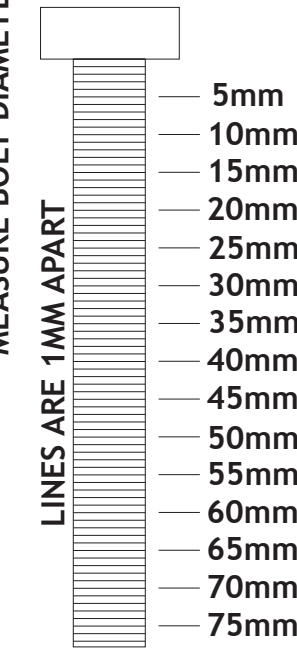
MEASURE BOLT DIAMETER BY PLACING INSIDE CIRCLE
LINES ARE 1MM APART



WASHERS ARE MEASURED BY THE INSIDE DIAMETER



MEASURE BOLT DIAMETER BY PLACING INSIDE CIRCLE
LINES ARE 1MM APART



Inventory

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

Note: 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 Inventory (Figures 7–8) | Qty |
|---|-------|
| A. Headstock Assembly..... | 1 |
| B. Table..... | 1 |
| C. Column..... | 1 |
| D. Base..... | 1 |
| E. Chuck Guard Assembly..... | 1 |
| F. Dust Port Halves..... | 2 |
| G. Table Support Bracket..... | 1 |
| H. Table Inserts (5/8", 1", 1 3/8", 1 7/8")..... | 1 ea. |
| I. Sanding Mandrel..... | 1 |
| J. Crank Handle..... | 1 |
| K. Spindle Handles..... | 3 |
| L. Drill Chuck JT33 & Chuck Key..... | 1 ea. |
| M. Pulley Cover Knob..... | 1 |
| N. Drum Sander Set D2677 (not shown)..... | 1 |
| O. Motor Lock Screw M8-1.25 X 25 (not shown)..... | 1 |
| P. Depth Lock Screw M8-1.25 X 25 (not shown)..... | 1 |

| Tools & Fasteners (Hardware Recognition Chart) | Qty |
|--|-------|
| • Combo Wrench 7 x 24mm..... | 1 |
| • Open End Wrench 13 x 14mm..... | 1 |
| • Hex Wrenches 3, 4, 5mm..... | 1 ea. |
| • Hex Nut M8-1.25 (Mandrel)..... | 1 |
| • Mandrel Washers 1 3/4" OD x 5/8" ID (Mandrel)..... | 2 |
| • Mandrel Washer 7/8" OD x 3/8" ID (Mandrel)..... | 1 |
| • Mandrel Washer 5/8" OD x 3/8" ID (Mandrel)..... | 1 |
| • Hex Bolts M10-1.5 x 25 (Column/Base)..... | 4 |
| • Flat Washers 10mm (Column/Base)..... | 4 |
| • Phillips Head Screws M4-.7 x 22 (Dust Port)..... | 4 |
| • Cap Screw M5-.8 x 20 (Chuck)..... | 1 |
| • Phillips Head Screws M4-.7 x 10 (Chuck Guard)..... | 4 |
| • Flat Washers 4mm (Chuck Guard)..... | 4 |
| • Lock Washers 4mm (Chuck Guard)..... | 4 |

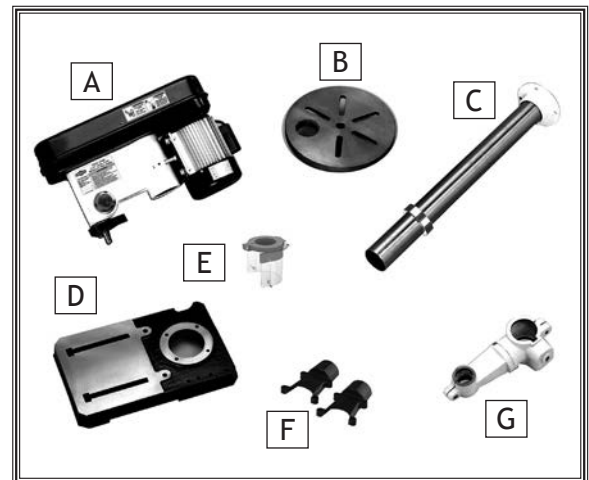
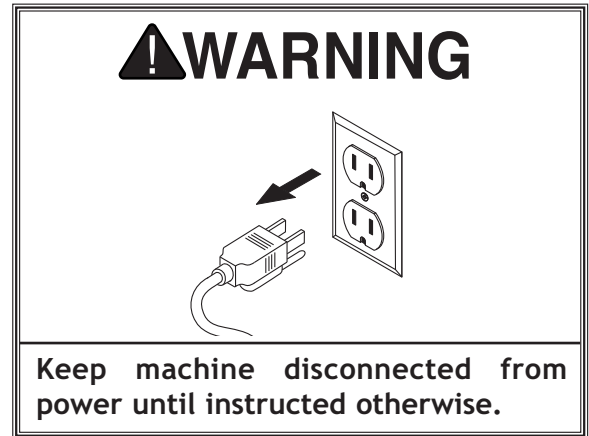


Figure 7. W1668/W1848 inventory.

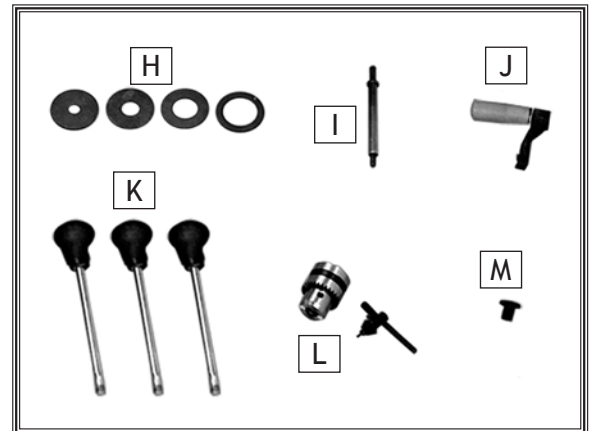


Figure 8. Additional W1668/W1848 inventory items.

SETUP

Cleaning Machine

To prevent corrosion during shipment and storage of your machine, the factory has coated the bare metal surfaces of your machine with a heavy-duty rust prevention compound.

If you are unprepared or impatient, this compound can be difficult to remove. To ensure that the removal of this coating is as easy as possible, please gather the correct cleaner, lubricant, and tools listed below:

- Cleaner/degreaser designed to remove storage wax and grease
- Safety glasses & disposable gloves
- Solvent brush or paint brush
- Disposable Rags

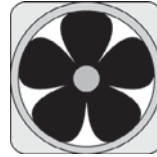
To remove rust preventative coating, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Put on safety glasses and disposable gloves.
3. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5-10 minutes.
4. Wipe off surfaces. If your cleaner/degreaser is effective, the coating will wipe off easily.

Tip: *An easier way to clean off thick coats of rust preventative from flat surfaces is to use a PLASTIC paint scraper to scrape off the majority of the coating before wiping it off with your rag. (Do not use a metal scraper or you may scratch your machine.)*

5. Repeat cleaning steps as necessary until all of the compound is removed.
6. To prevent rust on freshly cleaned surfaces, immediately coat with a quality metal protectant.

WARNING



Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. Avoid using these products to clean machinery. Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.

NOTICE

In a pinch, automotive degreasers, mineral spirits or WD•40 can be used to remove rust preventative coating. Before using these products, though, test them on an inconspicuous area of your paint to make sure they will not damage it.

Machine Placement

Weight Load

Refer to the **Machine Specifications** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/ covers as required by the maintenance and service described in this manual. **See below for required space allocation.**

Physical Environment

The physical environment where your machine is operated is important for safe operation and the longevity of its components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°-104°F; the relative humidity range exceeds 20-95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

Electrical Installation

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave access to a means of disconnecting the power source or engaging a lockout/tagout device.

Lighting

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

| | |
|--|--|
| | <p>⚠ CAUTION</p> <p>Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.</p> |
|--|--|

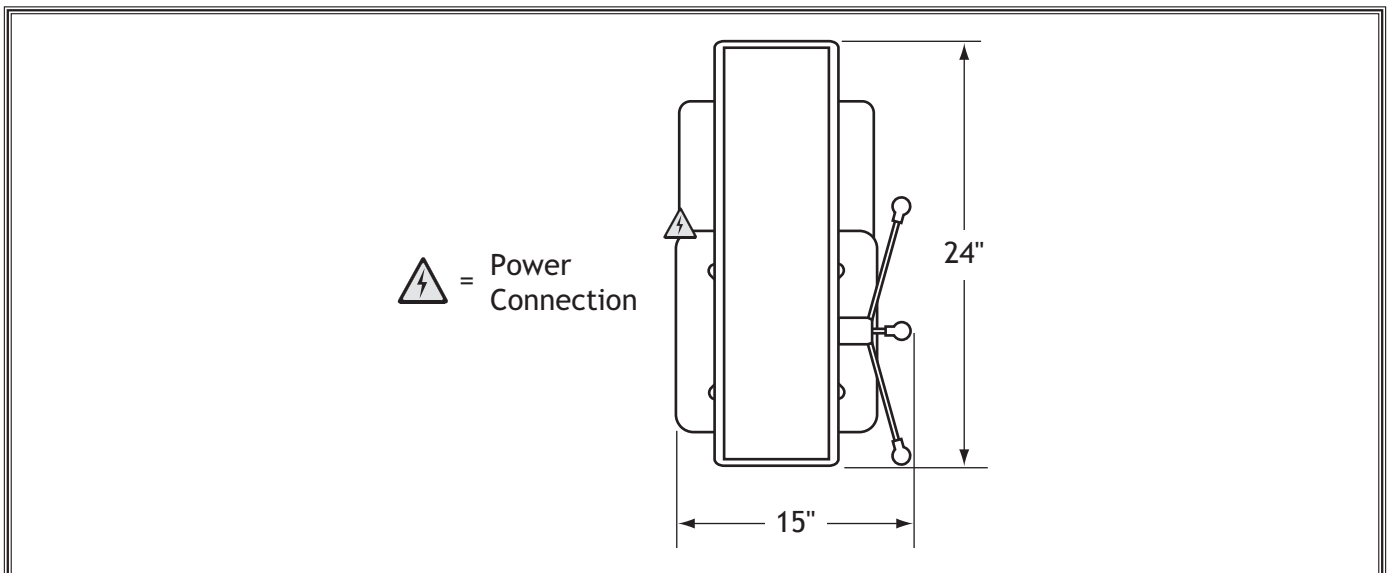


Figure 9. Working clearances.

SETUP

Bench Mounting (W1668)

Number of Mounting Holes..... 8
 Diameter of Mounting Hardware 5/16" (6) & 1/2" (2)

The base of this machine has mounting 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) 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.

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

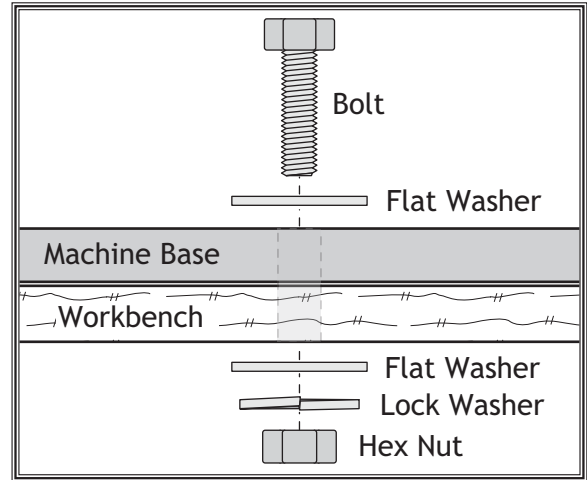


Figure 10. Typical "Through Mount" setup.

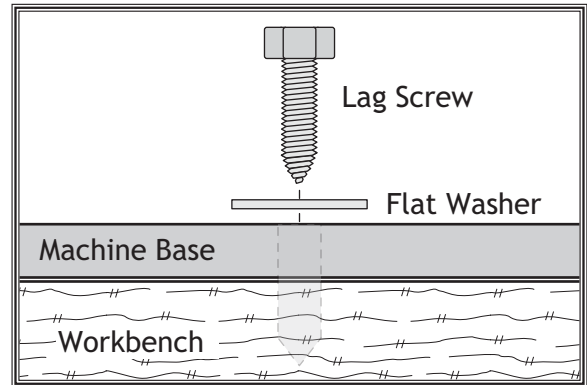


Figure 11. Typical "Direct Mount" setup.

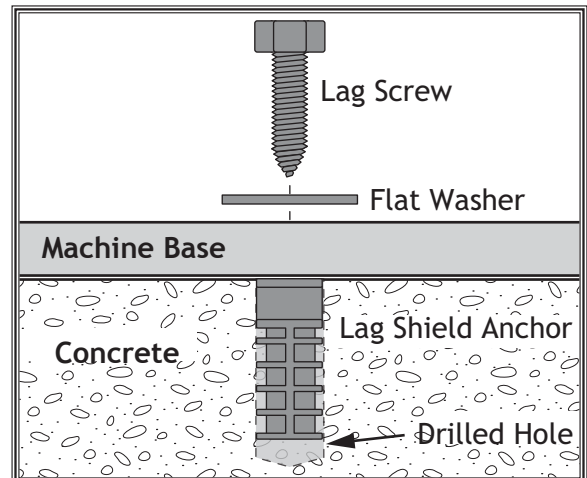


Figure 12. Popular method for anchoring machinery to a concrete floor.

Anchoring to Floor (W1848)

Number of Mounting Holes..... 8
 Diameter of Mounting Hardware 5/16" (6) & 1/2" (2)

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 Figure) 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.

SETUP

Assembly

Before beginning the assembly process, refer to **Items Needed for Setup** and gather everything you need. Ensure all parts have been properly cleaned of any heavy-duty rust-preventative applied at the factory (if applicable). Be sure to complete all steps in the assembly procedure prior to performing the **Test Run** or connecting the machine to power.

To assemble the drill press, do these steps:

1. Position the drill press base on a flat and stable surface.
2. Secure the base to the mounting surface (refer to Page 20).
3. Place the column on the base, line up the mounting holes, and secure tightly with the (4) M10-1.5 x 25 hex bolts and 10mm flat washers (see Figure 13).

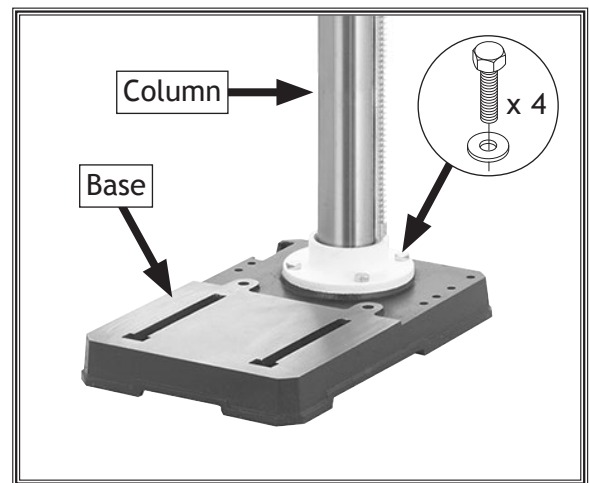


Figure 13. Column attached to base (W1668 shown).

4. Bring the dust port halves together, align the mounting holes on the dust port and table, then secure with the (4) M4-.7 x 22 Phillips head screws, as shown in Figure 14.



Figure 14. Installing the dust port.

SETUP

- Align the set screw in the crank handle with the flat on the pinion shaft and tighten, as shown in **Figure 15**.

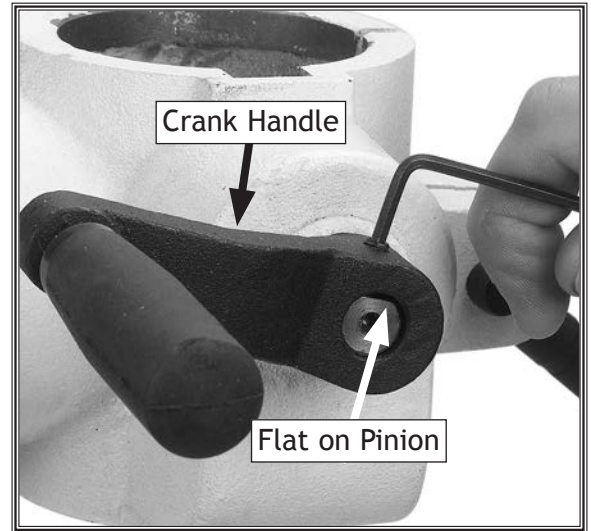


Figure 15. Crank and set screw positioning.

- Loosen the set screw on the rack ring and remove the ring from the column (see **Figure 16**).

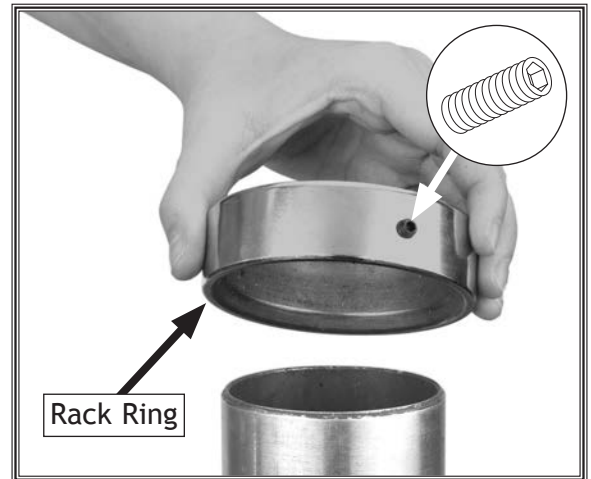


Figure 16. Removing rack ring from column.

- Position the rack so the long un-toothed end is facing upward (see **Figure 17**).
- Insert the rack into the table support bracket so the teeth face out and mesh with the pinion (see **Figure 17**).
- While holding the rack in place, slide the table support bracket onto the column.
- Allow the bracket and rack to slide down until the bottom of the rack bevel slips into the tapered shoulder on the column support.

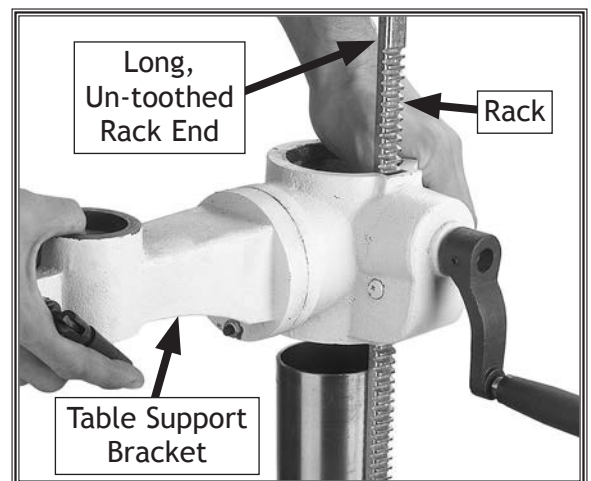


Figure 17. Rack, column, table support position.

11. Slide the rack ring onto the column with the inside bevel in the down position (see **Figure 18**).
12. Adjust the ring until the tip of the rack fits inside the bevel, and the rack rotates freely when you rotate the table support around the column.

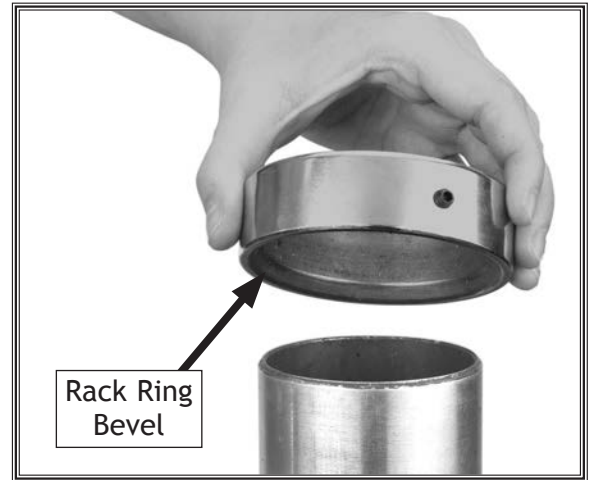


Figure 18. Column ring bevel positioning.

13. Secure the table support with the table lock lever (see **Figure 19**).

NOTICE
Use caution in the next step when tightening the set screw. Overtightening will split the column ring.

14. Carefully tighten the set screw on the rack ring.

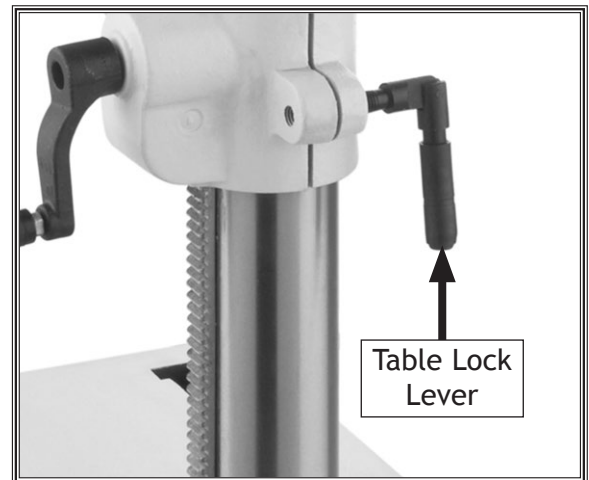


Figure 19. Location of table lock lever.

15. Align the shaft under the table with the hole on the end of the table support bracket and install (see **Figure 20**).
16. Tighten the table rotation lock lever (see **Figure 20**).

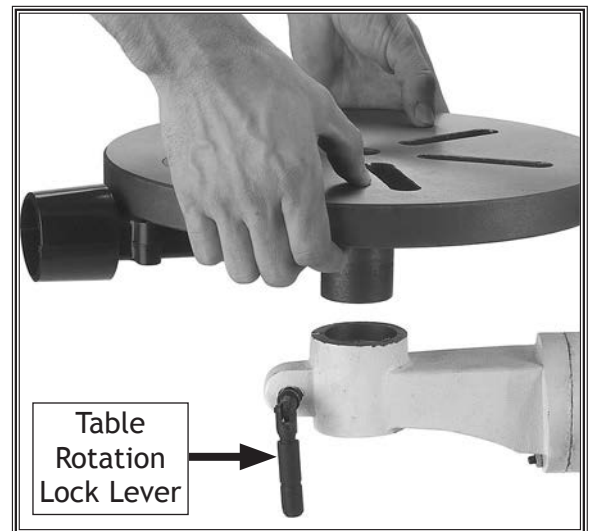


Figure 20. Table installation.

SETUP

- With an assistant, position the headstock pocket over the column (Figure 21) and allow the headstock to slide down until the column fully seats up and into the headstock (approximately 3¹/₈").

Tip: Place a few dabs of multi-purpose grease on the column to help the headstock seat more easily.

- Install the pulley cover knob with the included Phillips head screw (see Figure 21).



Figure 21. Aligning the pocket in the headstock with the column.

- Align the headstock directly over the foot of the base as viewed from the front of the drill press and center it using a plumb bob and ruler (see Figure 22).

Note: Loosen the table lock lever to rotate the table around the column and out of the way.

NOTICE

In the following step, **DO NOT** over tighten the set screws and strip the threads or bend the column.



Figure 22. Aligning headstock with base (W1668 shown).

- Tighten the (2) set screws shown in Figure 23 to secure the headstock to the column.



Figure 23. Securing the headstock to the column.

21. Slide chuck guard onto bottom of depth stop bracket, as shown in **Figure 24**.

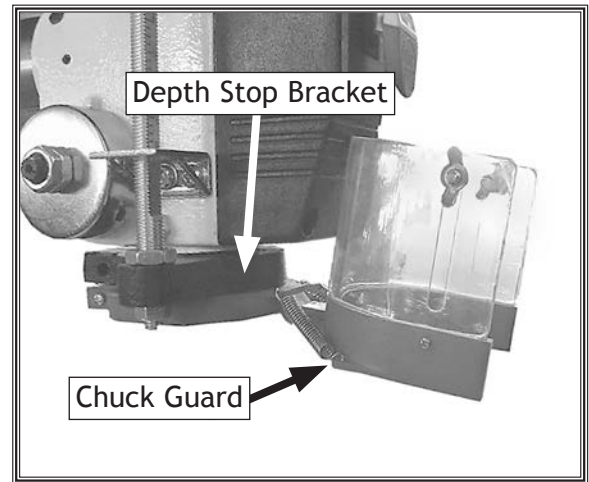


Figure 24. Chuck guard installed on depth stop bracket.

22. Secure chuck guard to bracket with (4) M4-.7 x 10 Phillips head screws, 4mm lock washers, and 4mm flat washers, as shown in **Figure 25**.
23. Clean the drill chuck and spindle with mineral spirits and follow all safety warnings on the container. Failure to clean the tapered-mating surfaces of the spindle and drill chuck will result in the chuck falling off during use.

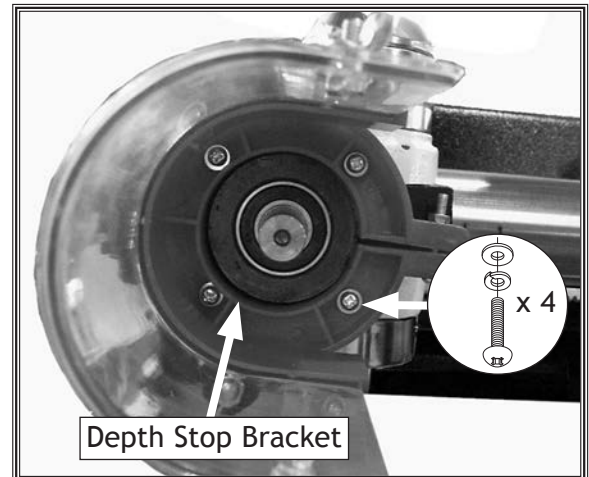


Figure 25. Chuck guard secured to depth stop bracket.

24. Use the provided chuck key to adjust the jaws of the chuck until they are well inside the drill chuck body (see **Figure 26**).

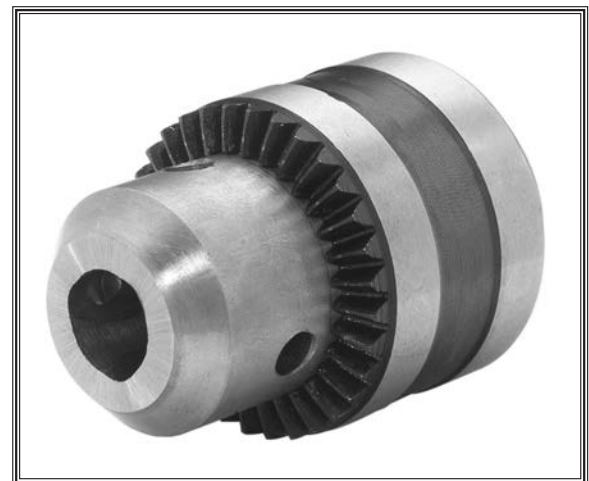


Figure 26. Jaws adjusted inside chuck body.

SETUP

25. Place the drill chuck on the spindle, and insert the cap screw into the hole of the drill chuck, as shown in **Figure 27**.
26. Tighten the screw so the drill chuck is seated securely on the spindle.
 - If the chuck fails to remain secure on the spindle, repeat **Steps 23-26**. **DO NOT** use a hammer to seat the drill chuck onto the spindle!

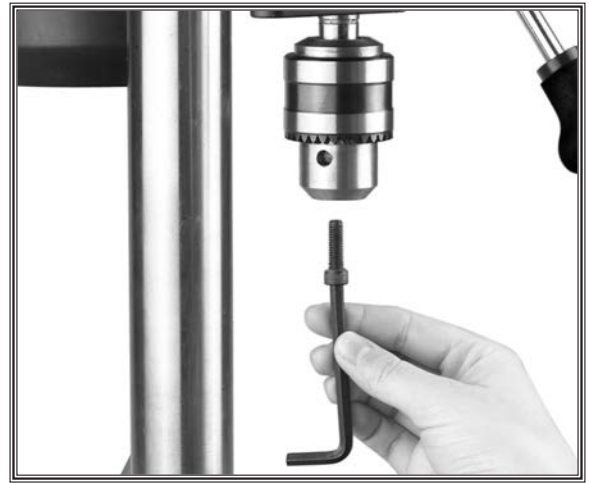


Figure 27. Inserting the hex cap screw (chuck guard removed for clarity).

27. Open pulley cover.
28. Push the motor toward the back of the headstock until the belt deflection is $1\frac{1}{2}$ " between both inner sides when the belt is pinched together between the pulleys, as shown in **Figure 28**. Refer to **Changing Spindle Speed** on **Page 32** for details.

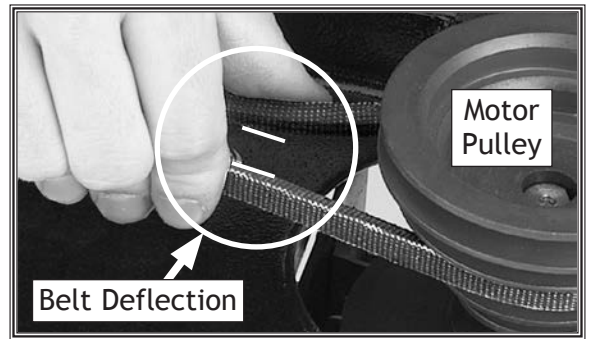


Figure 28. Measuring belt deflection.

29. Close pulley cover.
30. Secure motor position by threading the motor lock screw into tension block on headstock, as shown in **Figure 19**.



Figure 29. Installing motor lock screw.

31. Thread the spindle handles into the hub, as shown in **Figure 30**.
32. Tighten the handles with the included wrench until they are snug, **DO NOT** over-tighten.
33. Rotate the hub collar clockwise as far as it will go, then thread depth lock screw into hub, as shown in **Figure 30**.

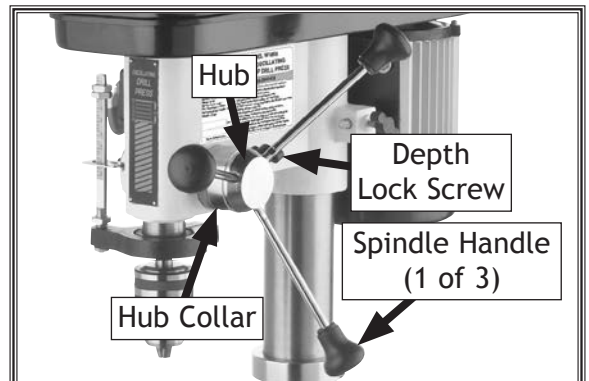


Figure 30. Spindle handles and depth lock knob installed.

Dust Collection

Recommended CFM at Dust Port: 150 CFM

Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must consider these variables: (1) CFM rating of the dust collector, (2) hose type and length between the dust collector and the machine, (3) number of branches or wyes, and (4) amount of other open lines throughout the system. Explaining how to calculate these variables is beyond the scope of this manual. Consult an expert or purchase a good dust collection “how-to” book.

CAUTION

This machine creates substantial amounts of dust during operation. Breathing airborne dust on a regular basis can result in permanent respiratory illness. Reduce your risk by wearing a respirator and capturing the dust with a dust collection system.

| Tools Needed | Qty |
|------------------------------|-----|
| Dust Collection System | 1 |
| Dust Hose 2" | 1 |
| Hose Clamps 2" | 2 |

To connect a dust collection hose, do these steps:

1. Fit a 2" dust hose over the dust port, as shown in **Figure 31**, and secure it in place with a hose clamp.
2. Tug the hose to make sure it does not come off.

Note: A tight fit is necessary for proper performance.



Figure 31. Dust port connected to dust collection system.

SETUP

Test Run

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

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, 2) the switch disabling key disables the switch properly, and 3) the pulley cover safety switch is working correctly.

To test run the machine, do these steps:

1. Clear all setup tools away from machine.
2. Connect machine to power supply.
3. Turn machine **ON**, verify motor operation, then turn machine **OFF**.

The motor should run smoothly and without unusual noises.

4. Open pulley cover, then try to start machine.
 - If machine *does not* start, belt cover safety switch is working correctly.
 - If machine *does* start, immediately stop machine. Pulley cover safety switch is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.
5. Close pulley cover and remove switch disabling key (see example).
6. Try to start machine with paddle switch.
 - If machine *does not* start, the switch disabling feature is working as designed.
 - If machine *does* start, immediately stop the machine. The switch disabling feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.

⚠ WARNING

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

⚠ WARNING

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

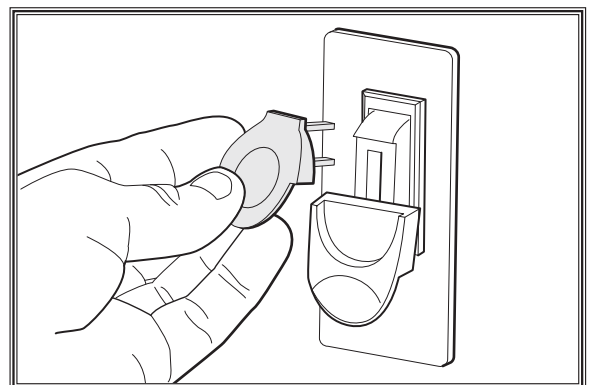


Figure 32. Removing switch key from paddle switch.

SETUP

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.

To perform spindle break-in, do these steps:

1. Make sure machine has been properly lubricated. Refer to **Lubrication** on **Page 41**.
2. Make sure spindle area is free of obstructions.
3. Set spindle speed to the lowest RPM. Refer to **Changing Spindle Speed** on **Page 32**.
4. Run spindle for 10 minutes at the slowest speed, then 5 minutes at each speed listed below, in progressive order.
 - a. 380 RPM
 - b. 640 RPM
 - c. 1530 RPM
 - d. 1870 RPM
 - e. 3050 RPM
5. Turn machine **OFF**.

Congratulations! Spindle break-in is now complete.

NOTICE

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

NOTICE

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

OPERATIONS

General

This machine will perform many types of operations that are beyond the scope of this manual. Many of these operations can be dangerous or deadly if performed incorrectly.

The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. If at any time you are experiencing difficulties performing any operation, stop using the machine!

The overview below provides 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 its generic nature, this overview is **NOT** intended to be an instructional guide.

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

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

WARNING



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

WARNING



To reduce the risk of eye injury, always wear safety glasses and a face shield while operating machine.

NOTICE

If you are an inexperienced operator, we strongly recommend that you read books or trade articles, or seek training from an experienced operator of this type of machinery before performing unfamiliar operations. Above all, safety must come first!

Adjusting Table Height & Tilt

You can adjust the table height and tilt to accommodate for workpiece height or achieve special drilling/sanding angles. You can also move the table out of the way and use the drill press base as a table for drilling/sanding.

To adjust the table, do these steps:

1. Loosen the table lock lever (see **Figure 33**).
2. Turn the hand crank to raise or lower the table (see **Figure 33**).
3. Position the table so the opening in the installed table insert is centered to the drill bit or sanding drum.

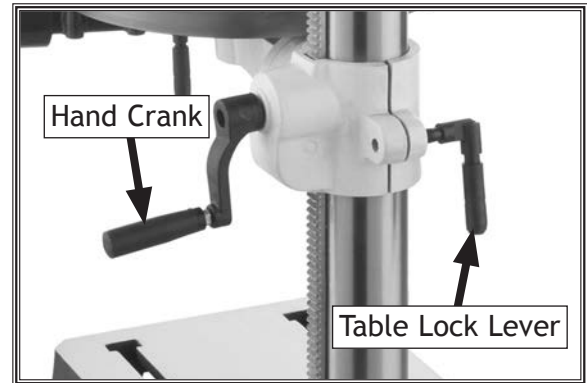


Figure 33. Location of height controls.

NOTE: If the table is not needed, pivot the table to the back side of the column (see **Figure 34**) so you can support the workpiece on the base (drilling operations only).

4. Tighten the table lock lever.
5. Loosen the table tilt lock bolt.



Figure 34. Table adjusted behind column.

6. Turn the index pin jam nut clockwise and draw the index pin out of the casting until you can rotate the table to your desired angle, and use the tilt scale to find your desired drilling or sanding angle (see **Figure 35**).

NOTE: Use this index pin only for indexing the table in the “Zero degree” position. (To index the table back to the zero position, turn the table to zero, tap the index pin back into the casting, snug the index pin jam nut, and tighten the table tilt lock bolt.)

7. Tighten the tilt table lock bolt, and double check your angle.

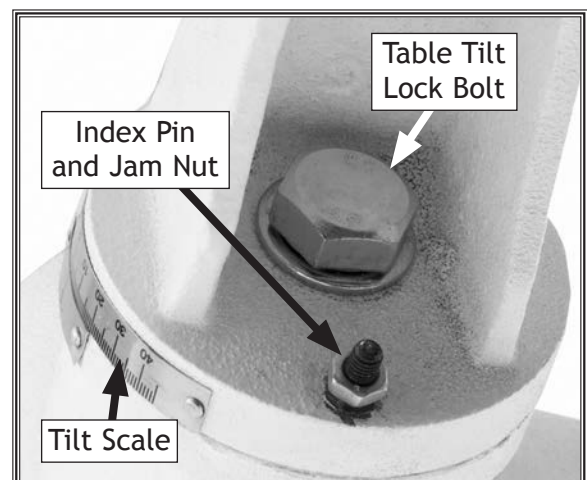


Figure 35. Table tilt lock bolt.

OPERATIONS

Changing Spindle Speed

The Model W1668 13-1/4" Oscillating Drill Press has 12 speeds ranging from 250 to 3050 RPM. Refer to the speed charts located under the belt cover or refer to the **Drill Press Speed Chart on Page 33**, while following the instructions below.

To change the spindle speed, do these steps:

1. DISCONNECT THE MACHINE FROM POWER!
2. Open pulley cover.
3. Loosen the motor lock screw (see **Figure 36**).
4. Pull the motor toward the front of the drill press to remove tension from the V-belts.
 - If a V-belt is worn or damaged, replace it (see **Inspecting/Replacing Belts on Page 41**).
5. Move the V-belts to the desired V-grooves on the motor, spindle, and idler pulleys (see **Figure 37**).
6. Push the motor toward the back of the headstock; the push rod is spring loaded and will follow the motor (see **Figure 36**).
7. Tighten the lock screw, and make sure the belt deflection is 1 1/2" between both inner sides when the belt is pinched together between the pulleys, as shown in **Figure 38**.
8. Close the cover. The motor will not start until the cover is closed.

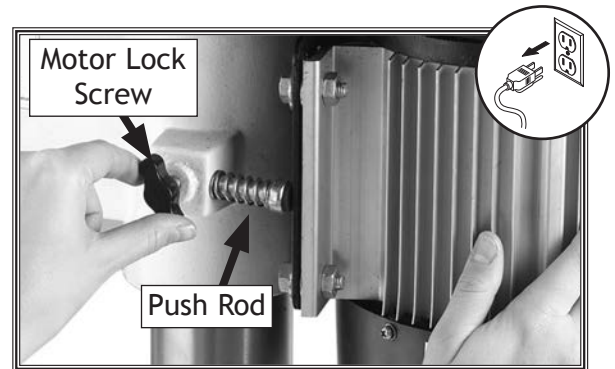
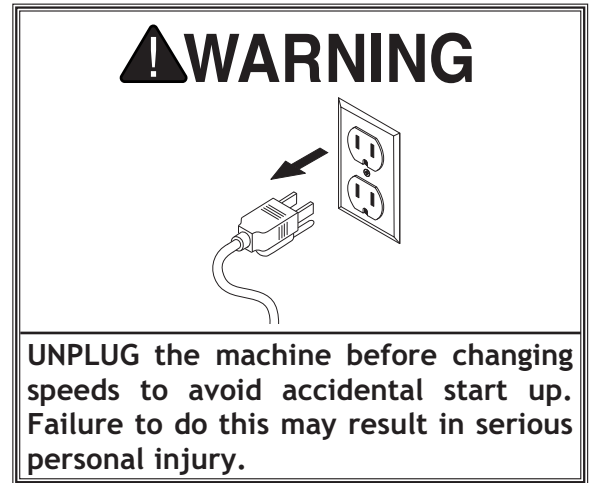


Figure 36. Loosening the lock knob.



Figure 37. Adjusting belt to desired speed.

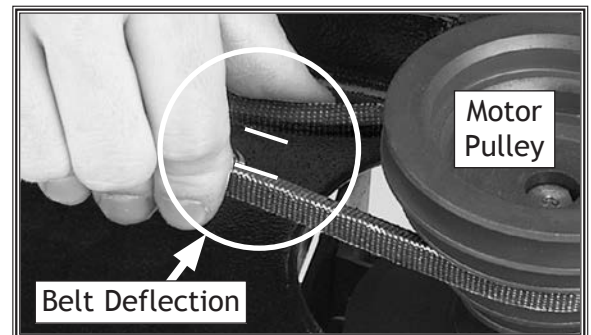


Figure 38. Measuring belt deflection.

Drill Press Speed Chart

Use **Figure 38** to select the optimum motor-to-spindle pulley ratio for drilling, cutting, and sanding operations. The belt setting in the example in **Figure 39** shows the spindle belt in the #1 spindle pulley position and the motor belt in the #7 motor pulley location. This will produce a speed of 1,870 RPM.

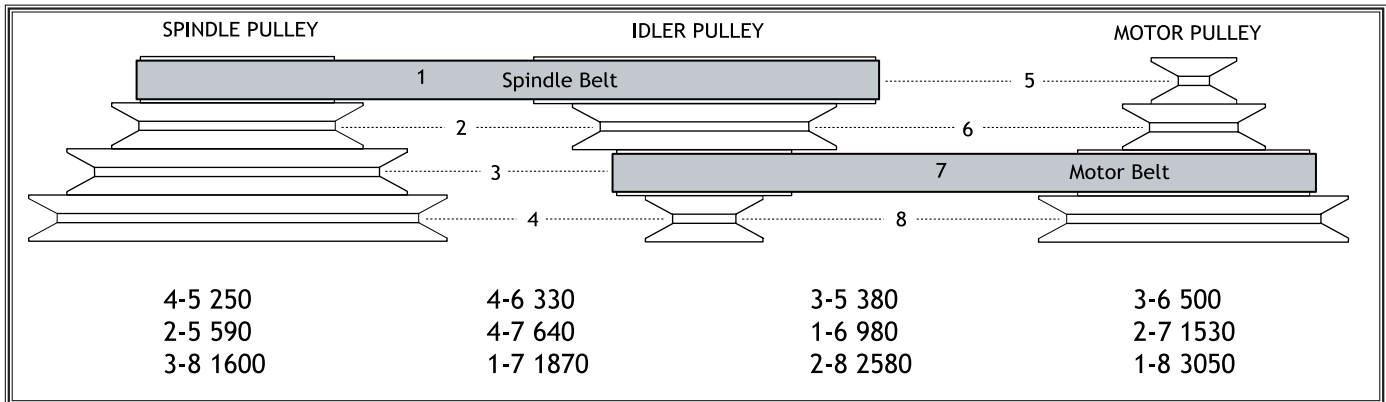


Figure 39. Drill Press Speed Chart.

Adjusting Depth Stop

Your new drill press is fitted with a depth stop that allows drilling holes at a preset depth.

| Items Needed | Qty |
|-----------------------------|-----------|
| Open-End Wrenches 18mm..... | 2 |
| Scrap Stock | As Needed |

To adjust the depth stop, do these steps:

1. DISCONNECT THE MACHINE FROM POWER!
2. Open the pulley cover.
3. Rotate the oscillator pulley (see **Figure 40**) until the depth stop reads "0" (see **Figure 40**), then close pulley cover.

NOTICE

BACK OFF the depth stop completely and secure the stop nuts before using the oscillating feature. If the depth stop is left adjusted for a shallow hole, or the nuts rattles down to the stop while in operation, the depth stop will bottom out and break the oscillator.

OPERATIONS

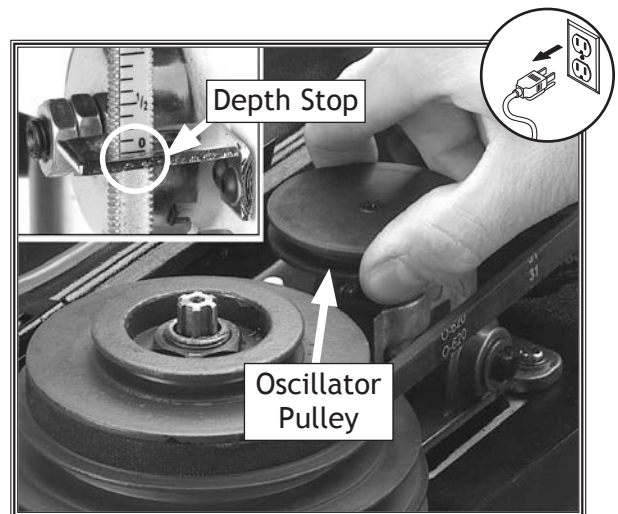


Figure 40. Retracting the oscillator for drilling.

4. Loosen the jam nut on the depth stop rod (see **Figure 41**).

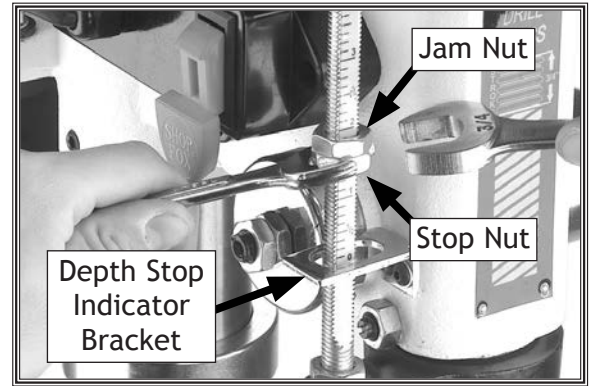


Figure 41. Actual stop depth being measured.

5. Loosen the depth lock screw (see **Figure 42**).
6. Use the spindle handles to move the spindle down, stopping spindle at the desired depth.
7. Turn the depth stop collar all the way clockwise (see **Figure 42**), then tighten the depth lock screw to keep the spindle in the lowered position.
8. With spindle at the desired depth, thread the stop nut down against the depth stop indicator bracket (see **Figure 41**).

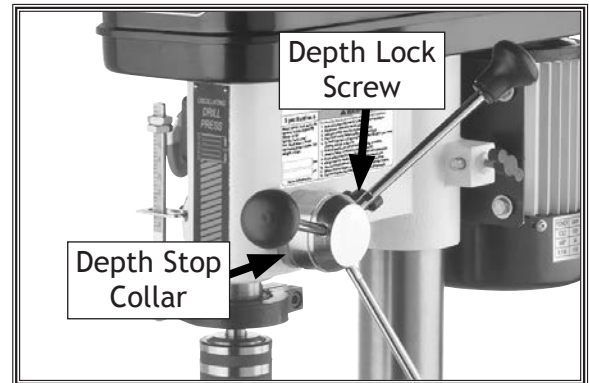


Figure 42. Location of depth stop collar and depth lock screw.

9. Tighten the jam nut against the stop nut while making sure the stop nut stays in position.
10. Hold a spindle handle in place, loosen the depth lock screw to release the spindle, then slowly release spindle handle to raise spindle back into the head-stock.
11. To make sure the depth has been set correctly, drill a hole into scrap stock before drilling into any work-piece, and readjust the depth stop if necessary.

Calculating Spindle Speed for Drilling

Using the Drill Bit Speed Chart

The chart shown in Figure 43 is intended as a guide only. Always follow the manufacturer's speed recommendations if provided with your drill bits, cutters, or hole saws. Exceeding the recommended speeds may be dangerous to the operator.

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

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

Lubrication Suggestions

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

⚠ CAUTION

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

| Twist/Brad Point Drill Bits | Soft Wood | Hard Wood | Plastic | Brass | Aluminum | Mild Steel |
|-----------------------------|-----------|-----------|---------|-------|----------|------------|
| 1/16" - 3/16" | 3000 | 2500 | 2500 | 2500 | 3000 | 2500 |
| 13/64" - 3/8" | 2000 | 1500 | 2000 | 1250 | 2500 | 1250 |
| 25/64" - 5/8" | 1500 | 750 | 1500 | 750 | 1500 | 600 |
| 11/16" - 1" | 750 | 500 | 1000 | 400 | 1000 | 350 |
| Spade/Forstner Bits | Soft Wood | Hard Wood | Plastic | Brass | Aluminum | Mild Steel |
| 1/4" - 1/2" | 2000 | 1500 | | | | |
| 9/16" - 1" | 1500 | 1250 | | | | |
| 1 1/8" - 1 7/8" | 1000 | 750 | | | | |
| 2" - 3" | 500 | 350 | | | | |
| Hole Saws | Soft Wood | Hard Wood | Plastic | Brass | Aluminum | Mild Steel |
| 1/2" - 7/8" | 500 | 500 | 600 | 600 | 600 | 500 |
| 1" - 1 7/8" | 400 | 400 | 500 | 500 | 500 | 400 |
| 2" - 2 7/8" | 300 | 300 | 400 | 400 | 400 | 300 |
| 3" - 3 7/8" | 200 | 200 | 300 | 300 | 300 | 200 |
| 4" - 5" | 100 | 100 | 200 | 200 | 200 | 100 |
| Rosette Cutters | Soft Wood | Hard Wood | Plastic | Brass | Aluminum | Mild Steel |
| Carbide Insert Type | 350 | 250 | | | | |
| One-Piece Type | 1800 | 500 | | | | |
| Tenon/Plug Cutters | Soft Wood | Hard Wood | Plastic | Brass | Aluminum | Mild Steel |
| 3/8" - 1/2" | 1200 | 1000 | | | | |
| 5/8" - 1" | 800 | 600 | | | | |

Figure 43. Drill bit speed chart.

Changing Drill Bit/Drum

To change drill bits and sanding drums, do these steps:

1. DISCONNECT THE MACHINE FROM POWER!
2. Use chuck key to open chuck wide enough to remove installed bit or drum, then open it enough to accept new bit or sanding drum mandrel (see **Figure 44**).



Figure 44. Chuck key engaged.

3. Install the bit or mandrel so chuck jaws grab as much of the bit or mandrel shank as they can (see **Figure 45**).
 - If you are installing a small drill bit, make sure it is held between three jaws instead of only two, and NEVER allow a chuck to grab the fluted body of drill bits.
 - If you are installing a sanding drum, install the paper and drum before installing the mandrel into the drill chuck.



Figure 45. Installing bit.

4. Tighten the chuck with the chuck key, using any of the three key end locations.
5. **For drilling:** Install the table insert with the smallest opening.

For sanding: Install the table insert that has an opening approximately 1/4" bigger than the sanding drum (see **Figure 46**).

Note: Table insert is not needed when using 2" sanding drum.



Figure 46. Sanding drum table insert.

Using the Oscillator

One of the great features of the Model W1668/W1848 13 1/4" Oscillating Drill Press is its sanding capability. The drill press can be converted from drilling operations to sanding operations in just a few steps.

| Tools Needed | Qty |
|-----------------------------|-----|
| Open-End Wrenches 18mm..... | 2 |
| Wrench or Socket 19mm..... | 1 |

To use the oscillating feature, do these steps:

1. DISCONNECT THE MACHINE FROM POWER!
2. Remove the spindle handles.
3. Lift the pulley cover and remove the round belt located on the storage bracket under the speed chart, as shown in Figure 47.
4. Stretch the belt onto the top groove in the spindle and oscillating pulleys, as shown in Figure 48.
5. Close the cover. The motor will not start until the cover is closed.
6. Loosen the jam nut for the depth stop and adjust both nuts until they are positioned at the top of the depth stop rod. Tighten the jam nut (see Figure 49).

⚠ WARNING

UNPLUG the machine and remove all handles before using the oscillating feature. The handles swing during operation.

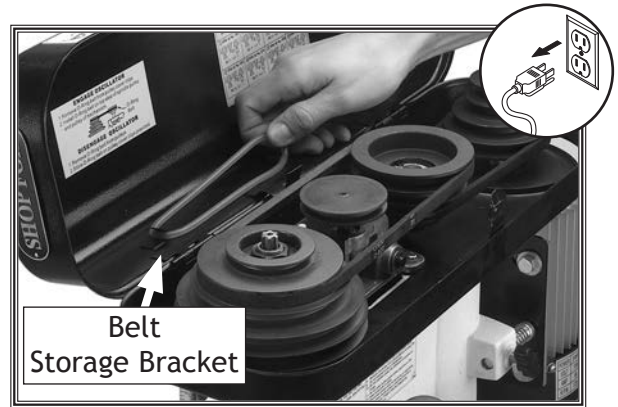


Figure 47. Oscillator belt on storage bracket.



Figure 48. Stretching belt to fit on pulleys.



Figure 49. Back off the depth stop nuts.

NOTICE

ALWAYS back off depth stop completely and secure depth stop nuts before using oscillating feature. If depth stop is left adjusted for a shallow hole, or nuts rattle down to stop while in operation, depth stop will bottom out and break oscillator.

7. Remove the mandrel nut from the mandrel.
8. Install the sanding drum, sandpaper, and top and bottom mandrel washers on the mandrel, then secure with the mandrel nut, as shown in **Figure 50**.
9. Choose the insert that has an opening which is slightly bigger than the sanding drum chosen (see **Figure 50**).
 - For general drill bits, small reamers, and miscellaneous small cutting and sanding bits, use the $\frac{5}{8}$ " and the 1" table inserts.
 - For the 1" sanding drum, use the $1\frac{3}{8}$ " table insert.
 - For the $1\frac{1}{2}$ " sanding drum, use the $1\frac{7}{8}$ " table insert.
 - For the 2" sanding drum, use no table insert.

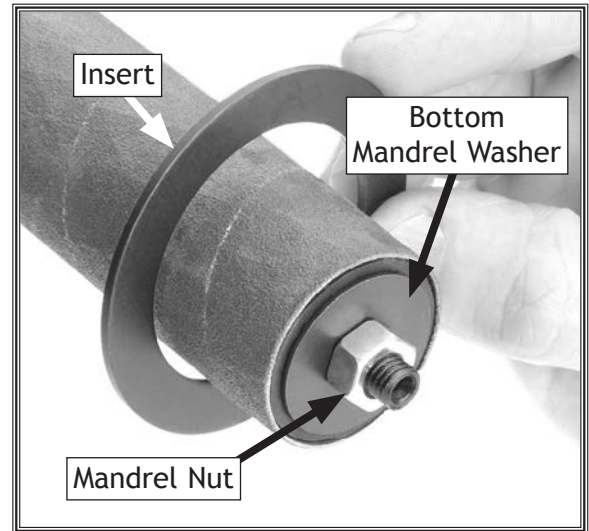


Figure 50. Sanding drum table insert.

⚠ CAUTION

NEVER sand or drill without the table in position and the workpiece secured. Serious personal injury may occur.

OPERATIONS

10. Set the chosen table insert into the pocket in the top of the table, insert the sanding drum mandrel into the chuck, then tighten chuck (see **Figure 51**).
11. Loosen table rotation lock lever and pivot the table so the opening in the installed table insert is centered to the drill bit or sanding drum.
12. Adjust the table height to use all of the grit on the paper as the paper wears.
 - If the thickness of the workpiece does not allow much table movement and the sanding drum paper is partially worn on one end, remove the drum from the sanding spindle, turn it end for end and replace it on the sanding spindle to use the newer part of the sandpaper.
13. Turn the drill press **ON**, and begin sanding.

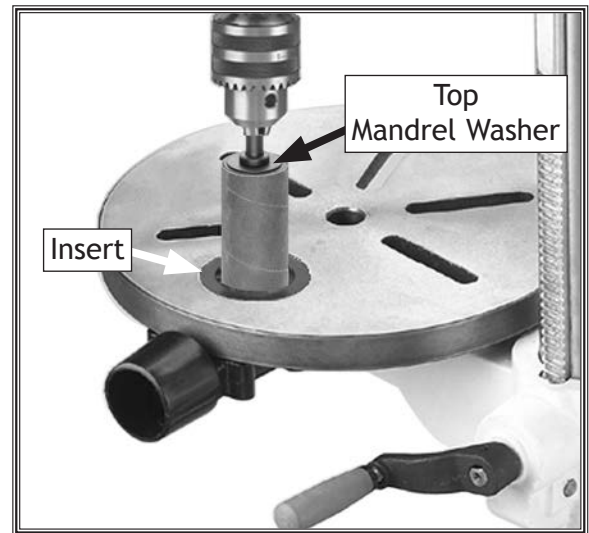


Figure 51. Sanding drum installed.

ACCESSORIES

Drill Press Accessories

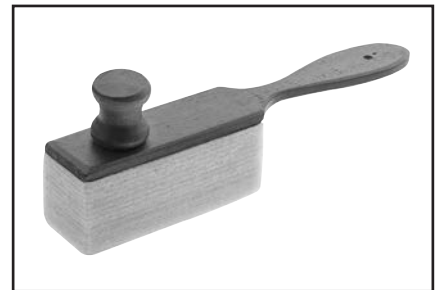
The following Drill Press accessories may be available through your local Woodstock International Inc. Dealer. If you do not have a dealer in your area, these products are also available through online dealers. Please call or e-mail Woodstock International Inc. Customer Service to get a current listing of dealers at: 1-800-840-8420 or at sales@woodstockint.com.

Sanding Sleeves are sized to fit the D2677 Spindle Sander Drum Kit. These hard Sanding Sleeves are available in 60, 80, 100, 120, and 150 grits. Keep plenty of these consumable Sanding Sleeves on hand.

| Sanding Sleeves | | | | | |
|-------------------|---------|---------|----------|----------|----------|
| Size (Dia. x Ht.) | 60 Grit | 80 Grit | 100 Grit | 120 Grit | 150 Grit |
| 1" X 4 1/4" | D2683 | D2684 | D2685 | D2686 | D2687 |
| 1 1/2" X 4 1/4" | D2688 | D2689 | D2690 | D2691 | D2692 |
| 2" X 4 1/4" | D2693 | D2694 | D2695 | D2696 | D2697 |



The **W1308 PRO-STIK® 4" Abrasive Belt/Disk Cleaner with Handle** is the easiest solution for increasing the life of sanding sleeves by removing pitch and sawdust particles from abrasive pores, which later harden in place if not removed. Simply press the cleaner lightly against the moving abrasive surface to remove clogged-up pitch and sawdust. PRO-STIK® cleaners are available in other sizes for any cleaning application that would need cleaners with handles, as blocks, or as flat pads.



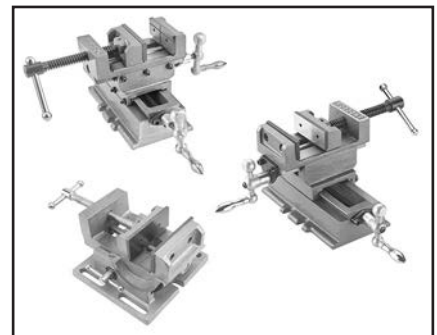
Drill Press Clamps adjust quickly and easily to lock your workpiece in any position. The clamping pad pivots to conform to any workpiece, ensuring uniform pressure.

- W1301 6" Drill Press Clamp (1 1/2" Capacity)
- D2192 10" Drill Press Clamp (3" Capacity)
- D2493 12" Drill Press Clamp (5" Capacity)



Drill Press Vises use precision ground steel guide rods, smooth-action Acme threads, ground steel jaws, with fixed jaw V-grooves for holding round stock, and dovetailed ways where applicable.

- D2933 4" Angle Vise (3 3/4" Capacity)
- D2730 3" Cross Sliding Vise (2 3/4" Capacity)
- D2731 4" Cross Sliding Vise (3 3/4" Capacity)



OPERATIONS

MAINTENANCE

General

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 or damaged wires.
- Any other unsafe condition.

Monthly Check

- V-belt tension, damage, or wear.
- Apply light machine oil to table, column, and quill.

Every 90 Days

- Lubricate quill and column racks.

Cleaning & Protecting

Cleaning the Model W1668/W1848 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.

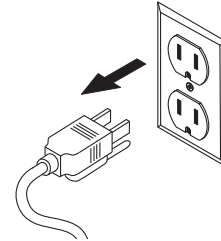
Protect the unpainted cast iron table and base by wiping them clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces. Keep your table and base rust-free with regular applications of quality lubricants.

Sanding Sleeves

As sanding drums are used, the abrasive sleeve will quickly become "loaded" with sawdust. If not removed, this sawdust will harden on the abrasive surface, rendering the sleeve useless. Routinely clean the sanding sleeve with a rubber gum abrasive cleaner like the PRO-STIK® cleaner shown on Page 39.

Always discard worn sanding sleeves. As abrasive sleeves begin to wear, grit will begin to fall off and cause gouges in the workpiece. Glue used to hold the grit to the paper will rub off on the workpiece, interfering with the finish.

WARNING



MAKE SURE that your machine is unplugged during all maintenance procedures! If this warning is ignored, serious personal injury may occur.

NOTICE

Contrary to some beliefs, worn abrasives are not equivalent to next finer grit abrasive. Discard worn sanding sleeves and avoid temptation to use them beyond their usable life.

Inspecting/Replacing Belts

Inspect the belts regularly for tension and wear. The oscillator belt tension is not adjustable. If the oscillator belt shows cracks or is slipping on the pulleys, replace the belt with a new one. Refer to **Figure 52** for proper belt tension of the V-belts. When a V-belt is pinched together with moderate force, there should be about 1½" between the belt.

To replace the V-belts, refer to **Changing Spindle Speed** on **Page 32** to release belt tension.

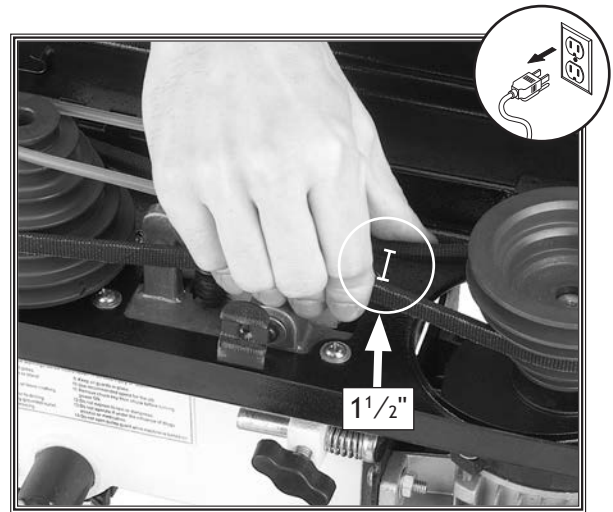


Figure 52. Measuring belt deflection.

Lubrication

Since all bearings are shielded and permanently lubricated, simply leave them alone until they need to be replaced. Do not lubricate them.

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

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

DISCONNECT MACHINE FROM POWER BEFORE PERFORMING LUBRICATION!

Quill & Column Surfaces

| | |
|-----------------------------|---------------------|
| Lubrication Type | ISO 68 Way Oil |
| Lubrication Amount..... | Thin Coat |
| Lubrication Frequency | 8 Hrs. of Operation |

Move the spindle all the way down to access the smooth surfaces of the quill (see **Figure 53**). Adjust table height as necessary to access entire length of column (see **Figure 54**). Clean both with mineral spirits and shop rags.

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

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



Figure 53. Cleaning quill surfaces.

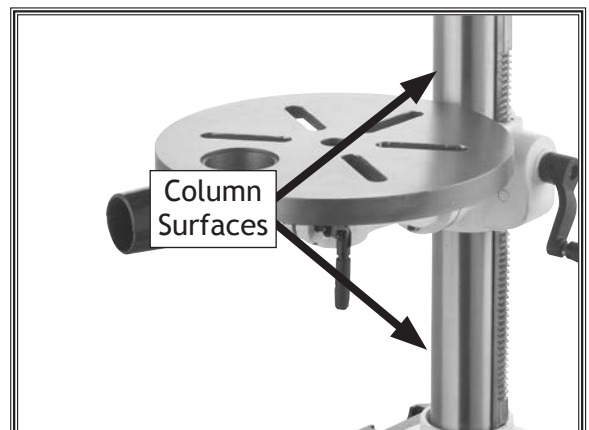


Figure 54. Location of column surfaces.

MAINTENANCE

Quill & Column Racks

Lubrication Type NLGI#2 Grease
 Lubrication Amount..... Thin Coat
 Lubrication Frequency 90 Hrs. of Operation

Move spindle all the way down to gain full access to the quill rack (see **Figure 55**), then clean teeth with mineral spirits, shop rags, and a brush.

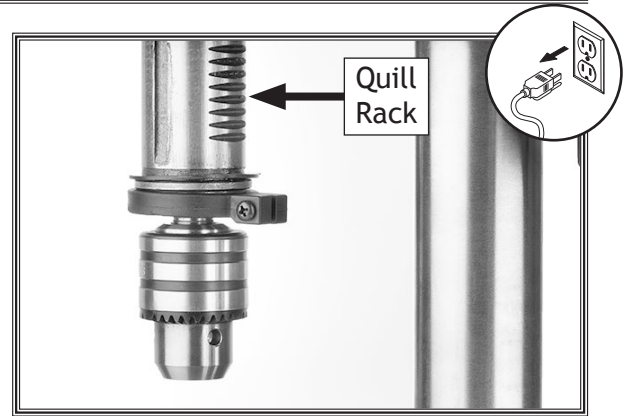


Figure 55. Example of quill rack exposed.

Next, clean the column rack teeth (see **Figure 56**) using the same method. When racks are dry, use a clean brush to apply a thin coat of grease to the rack teeth, then fully raise/lower the quill and table to distribute the grease.

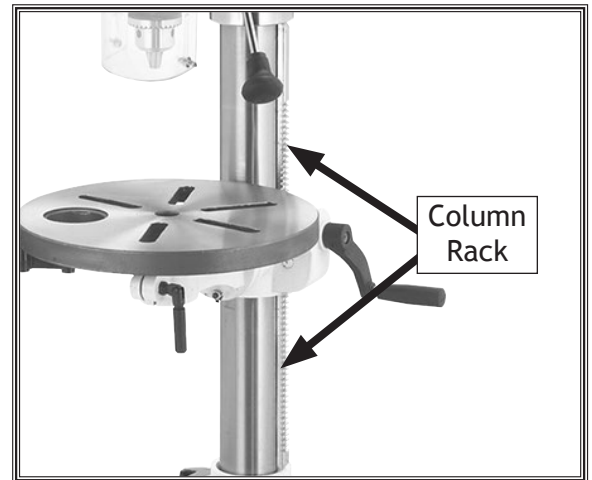


Figure 56. Location of column rack.

SERVICE

General

This section covers the most common service adjustments or procedures that may need to be made during the life of your machine.

If you require additional machine service not included in this section, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: techsupport@woodstockint.com.

Tensioning Feed Shaft Return Spring

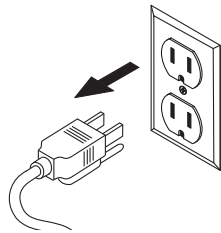
The feed shaft return spring is adjusted at the factory; however, during the life of the drill press you may want to adjust the feed shaft return spring to a stronger return pressure.

| Tools Needed | Qty |
|------------------------------|-----------|
| Safety Glasses | 1 Pr. |
| Shop Rags | As Needed |
| Heavy Leather Gloves | 1 Pr. |
| Open-End Wrenches 18mm | 2 |


To tension feed shaft return spring, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Wipe off any oil on the spring lock cover so it will not slip in your fingers when you hold the cover from spinning (see Figure 57).
3. Open the pulley cover.

! WARNING



MAKE SURE that your machine is unplugged during all service procedures! If this warning is ignored, serious personal injury may occur.



! WARNING

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

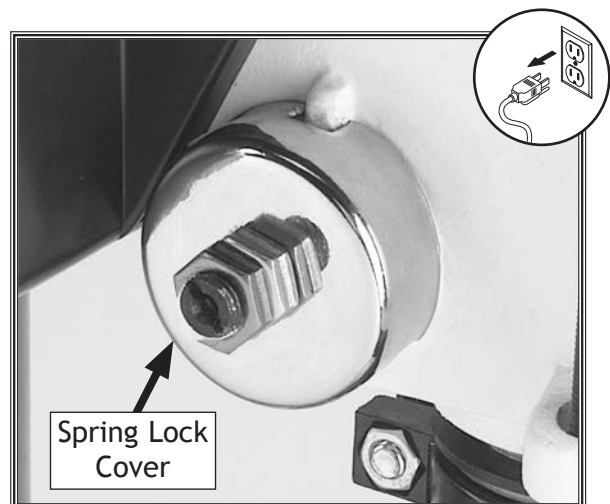


Figure 57. Location of spring lock cover.

SERVICE

4. Rotate the oscillator pulley so the depth stop reads "0" and the quill shaft is completely seated, as shown in **Figure 58**.
5. Close the pulley cover.

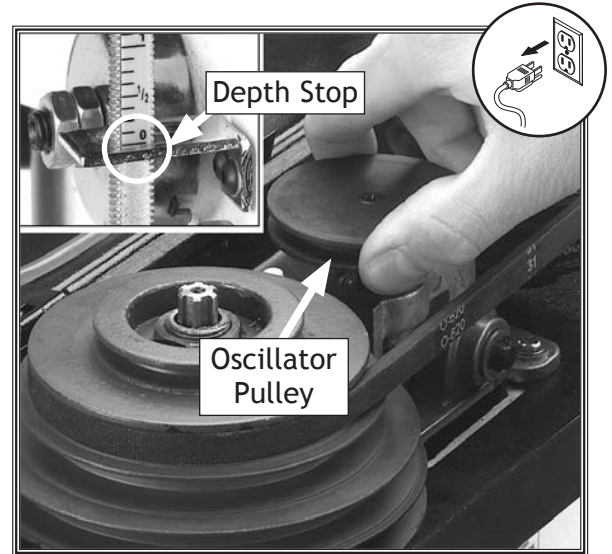


Figure 58. Fully seating quill shaft.

6. Put on thick leather gloves and hold the spring cover against the side of the headstock, so the cover stays splined with the locking lug, and remove the jam nut to loosen the cover nut approximately $\frac{1}{4}$ " (6.4mm) (see **Figure 59**).

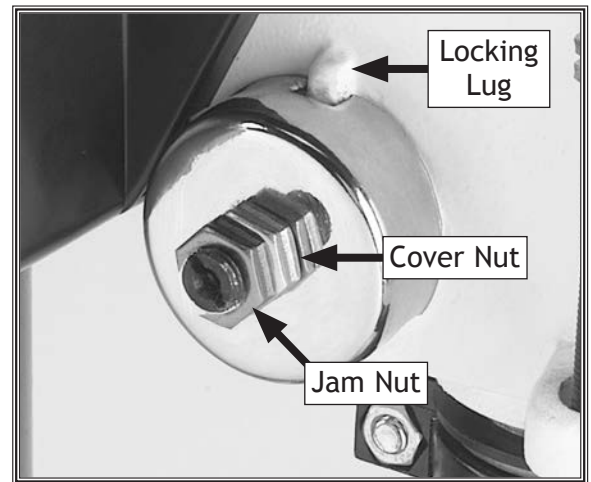


Figure 59. Return spring adjustment components.

7. Pull the cover outward just enough to disengage the spring cover lock slot from the locking lug (see **Figure 60**).
8. Rotate the cover counterclockwise to increase spring tension, or let the cover slowly unwind in the clockwise direction to reduce spring tension.
9. Engage the next available spring-cover lock slot with the locking lug, and hold the spring lock cover tightly against the side of the headstock.
10. Snug the cover nut against the spring cover just until the nut stops, and then back-off the nut approximately $\frac{1}{3}$ turn, or just enough so there is no binding anywhere along complete spindle travel.
11. Hold the cover nut and tighten the jam nut against the cover nut (see **Figure 57**).

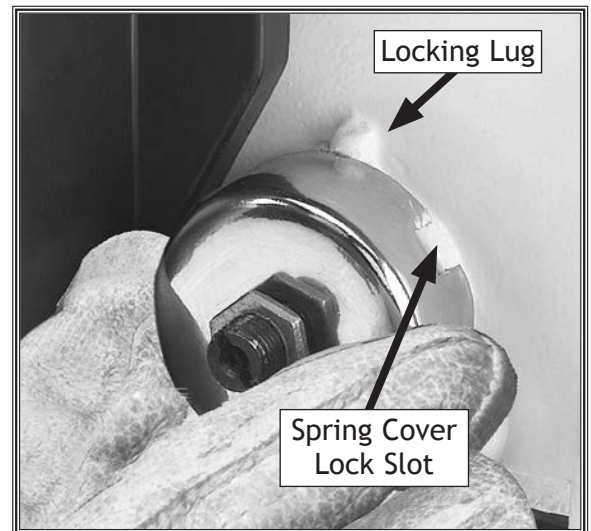


Figure 60. Typical spring cover lock slot and locking lug.

Adjusting Quill Shaft Screw

While you may never have to adjust the quill shaft screw, you should understand its function and know how to adjust it should you ever need to remove the quill for cleaning. This screw prevents the quill from rotating during drilling and sanding procedures, and if adjusted incorrectly, the quill may have lash or bind.

| Tools Needed | Qty |
|---------------------------|-----|
| Open-End Wrench 10mm..... | 1 |
| Hex Wrench 4mm | 1 |

To adjust quill shaft screw, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Clean and lubricate quill (see **Figure 61**) as described in **Lubrication** on **Page 42**. Quill should travel freely.
3. Loosen the jam nut shown in **Figure 62**.
4. Turn the quill shaft screw clockwise or counterclockwise to establish free, unbinding travel while moving the quill up and down through its entire range of travel.
5. When the quill shaft screw is screwed inward against the quill as far as the screw can go without binding the quill, hold the screw and tighten the jam nut.
6. Recheck for quill binding and looseness while moving the quill up and down through its entire range of travel and readjust as required.

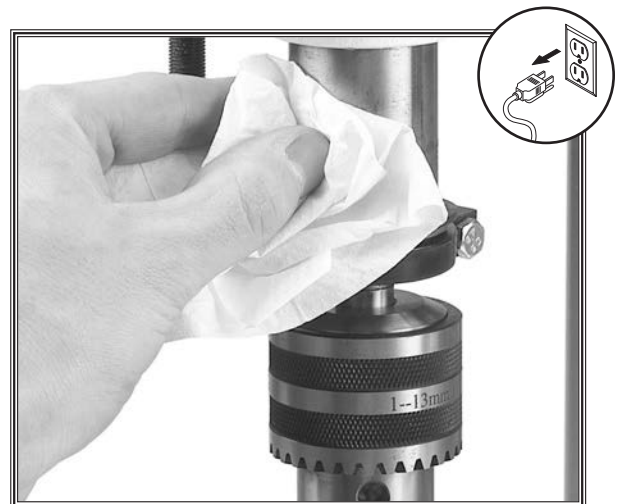


Figure 61. Cleaning quill.

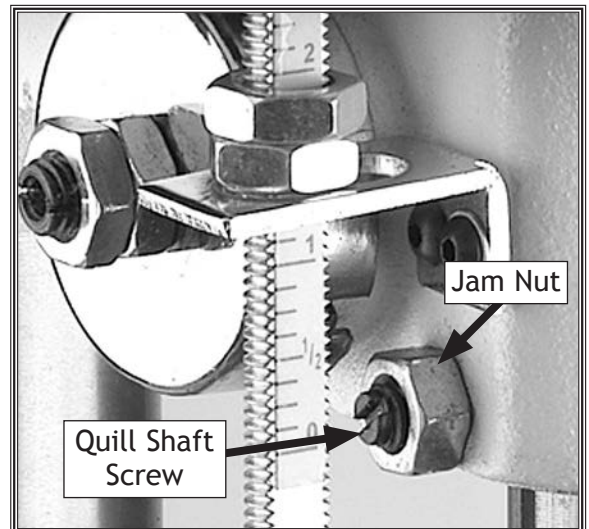


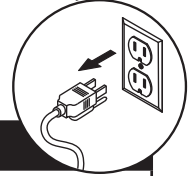
Figure 62. Typical quill-shaft screw and jam nut.

SERVICE

Troubleshooting

The following troubleshooting tables cover common problems that may occur with this machine. If you need replacement parts or additional troubleshooting help, contact our Technical Support.

Note: Before contacting Tech Support, find the machine serial number and manufacture date, and if available, your original purchase receipt. This information is required to properly assist you.



Motor and Electrical

| PROBLEM | POSSIBLE CAUSE | CORRECTIVE ACTION |
|--|--|--|
| Machine does not start, or power supply breaker trips immediately after startup. | <ol style="list-style-type: none"> 1. Switch disabling key removed. 2. Pulley cover open. 3. Incorrect power supply voltage or circuit size. 4. Power supply circuit breaker tripped or fuse blown. 5. Start capacitor at fault. 6. Centrifugal switch adjustment/contact points at fault. 7. Wiring broken, disconnected, or corroded. 8. ON/OFF switch at fault. 9. Pulley cover safety switch at fault. 10. Motor or motor bearings at fault. | <ol style="list-style-type: none"> 1. Install switch disabling key. 2. Close cover. 3. Ensure correct power supply voltage and circuit size (Page 13). 4. Ensure circuit is free of shorts. Reset circuit breaker or replace fuse. 5. Test/replace if at fault. 6. Adjust centrifugal switch/clean contact points. Replace either if at fault. 7. Fix broken wires or disconnected/corroded connections (Page 48). 8. Replace switch. 9. Replace switch. 10. Replace motor. |
| Machine stalls or is underpowered. | <ol style="list-style-type: none"> 1. Wood workpiece material unsuitable for drilling/sanding. 2. Metal workpiece material unsuitable for drilling. 3. Feed rate/cutting speed too fast. 4. Belt(s) slipping/pulleys misaligned. 5. Pulley slipping on shaft. 6. Machine undersized for task. 7. Motor overheated. 8. Extension cord too long. 9. Centrifugal switch/contact points at fault. 10. Motor or motor bearings at fault. | <ol style="list-style-type: none"> 1. Only cut/sand wood/ensure wood is below 20%. 2. Use correct size/type of metal. 3. Decrease feed rate/cutting speed (Page 32). 4. Clean/tension/replace belts (Page 41); ensure pulleys are aligned. 5. Tighten/replace loose pulley/shaft. 6. For drilling: Use sharp bits/reduce feed rate/reduce spindle RPM (Page 32). For sanding: Clean (Page 40)/replace sandpaper; reduce feed rate/sanding depth. 7. Clean motor, let cool, and reduce workload. 8. Move machine closer to power supply; user shorter extension cord. 9. Adjust centrifugal switch/clean contact points. Replace either if at fault. 10. Replace motor. |
| Machine has vibration or noisy operation. | <ol style="list-style-type: none"> 1. Motor or component loose. 2. Belts worn, loose, pulleys misaligned or belt slapping cover. 3. Pulley loose. 4. Incorrectly mounted to workbench or floor. 5. Motor mount loose/broken. 6. Workpiece loose. 7. Motor fan rubbing on fan cover. 8. Spindle bearings at fault. 9. Centrifugal switch needs adjustment/at fault. 10. Motor bearings at fault. 11. Chuck or cutter at fault. | <ol style="list-style-type: none"> 1. Replace damaged or missing bolts/nuts or tighten if loose. 2. Inspect/replace belts with a new matched set (Page 41). Realign pulleys if necessary. 3. Secure pulley on shaft. 4. Shim or tighten mounting hardware. 5. Tighten/replace. 6. Use correct holding fixture and reclamp workpiece. 7. Fix/replace fan cover; replace loose/damaged fan. 8. Test by rotating spindle; rotational grinding/loose shaft requires bearing replacement 9. Adjust/replace if at fault. 10. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement. 11. Replace unbalanced chuck; sharpen/replace cutter; use correct feed rate. |

Operation

| PROBLEM | POSSIBLE CAUSE | CORRECTIVE ACTION |
|--|--|---|
| Tool falls out or loose in chuck. | <ol style="list-style-type: none"> 1. Chuck jaws loose. 2. Debris on tool. 3. Excessive feed pressure. | <ol style="list-style-type: none"> 1. Tighten chuck jaws. 2. Clean tool, then re-install (Page 36). 3. Decrease feed pressure and allow chips to clear. |
| Breaking tools or cutters. | <ol style="list-style-type: none"> 1. Spindle speed/feed rate too fast. 2. Taking too big of a cut at one time. 3. Improper cutting technique or type of cut for tool/machine. 4. Cutting tool too small. 5. Cutting tool getting too hot. 6. Spindle extended too far down during or at beginning of operation. | <ol style="list-style-type: none"> 1. Reduce spindle speed (Page 32); reduce feed rate. 2. Decrease feed pressure and allow chips to clear. 3. Use right technique, tool, or machine for job. 4. Use larger cutting tool and slower feed rate. 5. Use coolant or oil for appropriate application; reduce cutting speed. 6. Fully retract spindle and raise table to increase rigidity. |
| Workpiece or tool vibrates or chatters during operation. | <ol style="list-style-type: none"> 1. Spindle extended too far down during or at beginning of operation. 2. Table locks not tight. 3. Workpiece not secure. 4. Spindle speed/feed rate too fast. 5. Quill shaft screw not adjusted correctly. | <ol style="list-style-type: none"> 1. Fully retract spindle and raise table to increase rigidity. 2. Tighten table locks (Page 31). 3. Properly clamp workpiece on table or in vise. 4. Reduce spindle speed (Page 32); reduce feed rate. 5. Adjust quill shaft screw (Page 45). |
| Table hard to move. | <ol style="list-style-type: none"> 1. Table locked. 2. Dirty or dry rack and pinion. | <ol style="list-style-type: none"> 1. Disengage table locks (Page 31). 2. Clean away chips/debris. Lubricate rack and pinion (Page 41). |
| Bad surface finish. | <ol style="list-style-type: none"> 1. Spindle speed/feed rate too fast. 2. Dull or incorrect cutting tool/bit. 3. Workpiece not secure. 4. Spindle extended too far down during or at beginning of operation. | <ol style="list-style-type: none"> 1. Reduce spindle speed (Page 32); reduce feed rate. 2. Sharpen cutting tool or select one that better suits the operation. 3. Properly clamp workpiece on table or in vise. 4. Fully retract spindle and raise table to increase rigidity. |
| Spindle overheats. | <ol style="list-style-type: none"> 1. Machine operated at high speeds for extended period. | <ol style="list-style-type: none"> 1. Allow drill to cool. |
| Spindle does not fully retract. | <ol style="list-style-type: none"> 1. Poorly adjusted return spring. 2. Debris on spindle/quill rack. 3. Worn return spring. 4. Oscillator not disengaged. | <ol style="list-style-type: none"> 1. Increase return spring tension (Page 43). 2. Clean and lubricate spindle/quill rack (Page 41). 3. Replace return spring. 4. Rotate oscillator pulley until quill is fully seated in headstock. |
| Drill bit drifts. | <ol style="list-style-type: none"> 1. Dull/incorrectly sharpened drill bit. 2. Tool/bit/chuck incorrectly installed. | <ol style="list-style-type: none"> 1. Correctly sharpen drill bit. 2. Correctly re-install tool/bit (Page 36)/chuck (Page 26). |
| Drill bit stuck in workpiece. | <ol style="list-style-type: none"> 1. Chuck jaws loose. 2. Workpiece squeezing drill bit, or feed rate too fast. 3. Spindle speed/feed rate too slow. | <ol style="list-style-type: none"> 1. Tighten chuck jaws. 2. Properly clamp workpiece on table or in vise; decrease feed rate. 3. Increase spindle speed (Page 32); increase feed rate. |
| Workpiece thrown from table. | <ol style="list-style-type: none"> 1. Workpiece not secure. 2. Tool/bit too large for feed speed. | <ol style="list-style-type: none"> 1. Properly clamp workpiece on table or in vise. 2. Decrease feed speed. |
| Excessive runout or wobbling in chuck/drill bit. | <ol style="list-style-type: none"> 1. Tool/bit bent. 2. Tool/bit installed incorrectly. 3. Spindle bearings worn. | <ol style="list-style-type: none"> 1. Replace with straight tool/bit. 2. Install tool/bit correctly (Page 36). 3. Replace spindle bearings. |
| Back side of workpiece splinters. | <ol style="list-style-type: none"> 1. Scrap board not installed between table and workpiece. | <ol style="list-style-type: none"> 1. Install scrap board between table and workpiece. |
| Drum wobbling in chuck. | <ol style="list-style-type: none"> 1. Mandrel bent or installed incorrectly. 2. Spindle bearings worn. | <ol style="list-style-type: none"> 1. Replace/install mandrel correctly (Page 36). 2. Replace spindle bearings. |
| Drill press does not oscillate. | <ol style="list-style-type: none"> 1. Oscillator belt broken. 2. Oscillation mechanism at fault. | <ol style="list-style-type: none"> 1. Replace oscillator belt (Page 41). 2. Remove mechanism and replace broken parts. |

Electrical Safety Instructions

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 (360) 734-3482 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

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!

QUALIFIED ELECTRICIAN. Due to the inherent hazards of electricity, only a qualified electrician should perform wiring tasks on this machine. If you are not a qualified electrician, get help from one before attempting any kind of wiring job.

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.

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 before completing the task.

MODIFICATIONS. Using aftermarket parts or modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire.

MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing, but it may not match your machine. Always 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.

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

EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-3482.

NOTICE

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

WIRING DIAGRAM 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 | TUR-QUOISE — Tu |
| RED — Rd | ORANGE — Or | PINK — Pk | |

Wiring Diagram

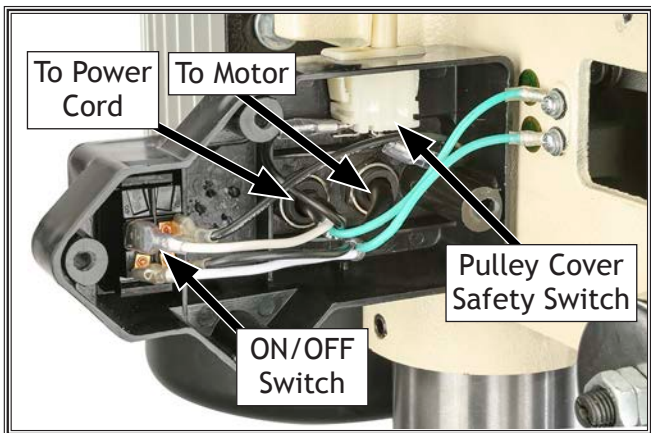
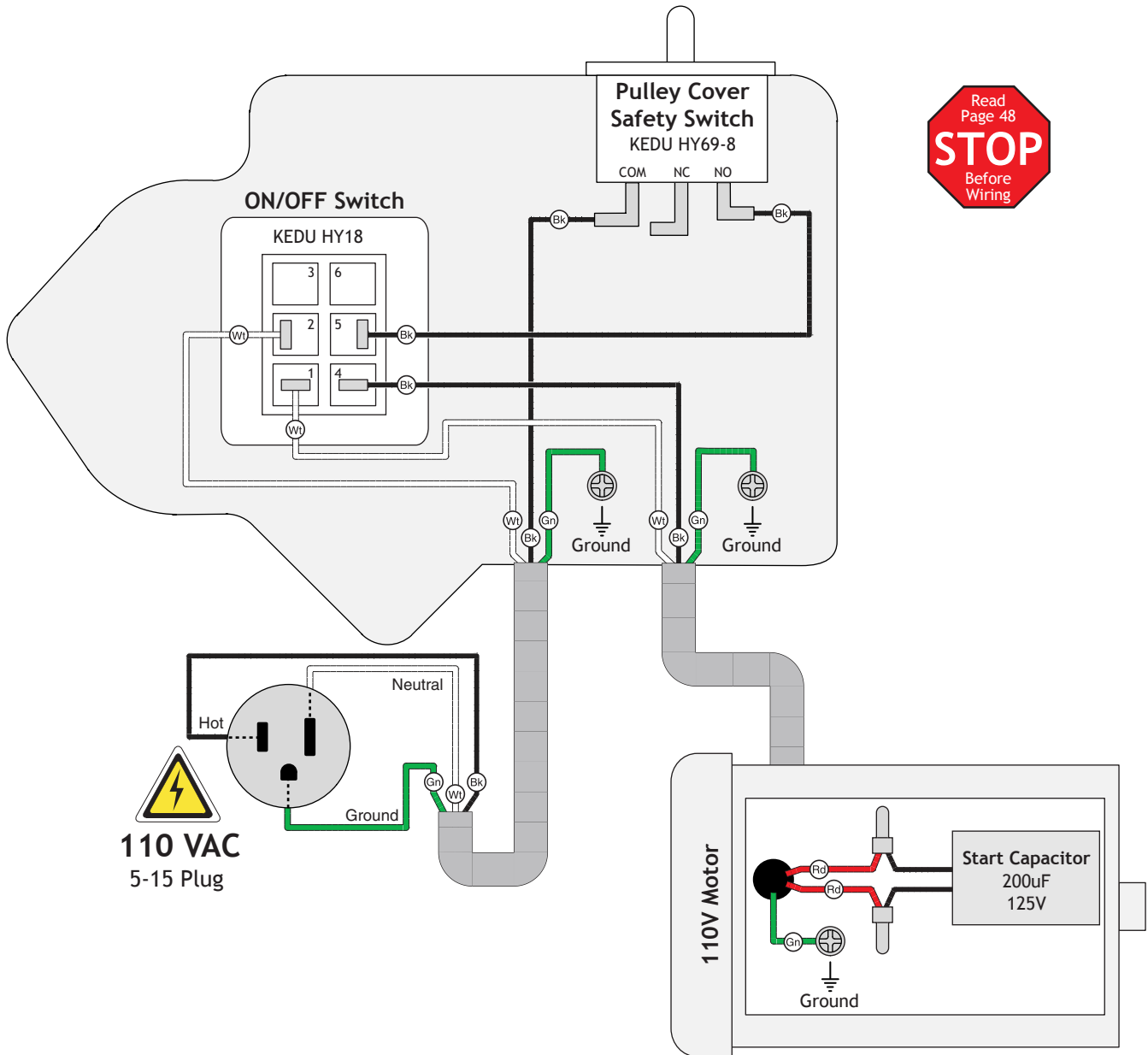


Figure 63. Headstock wiring.

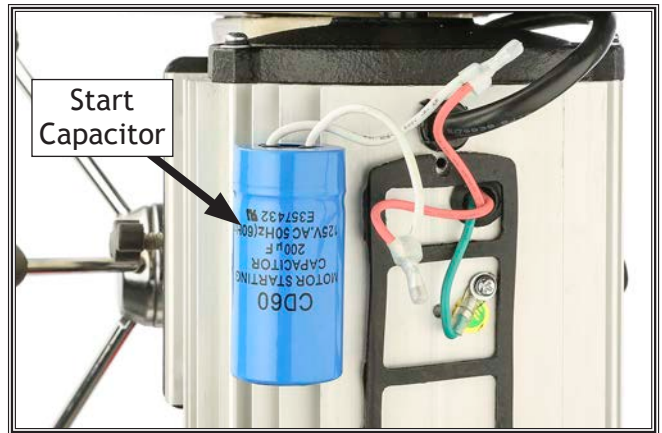
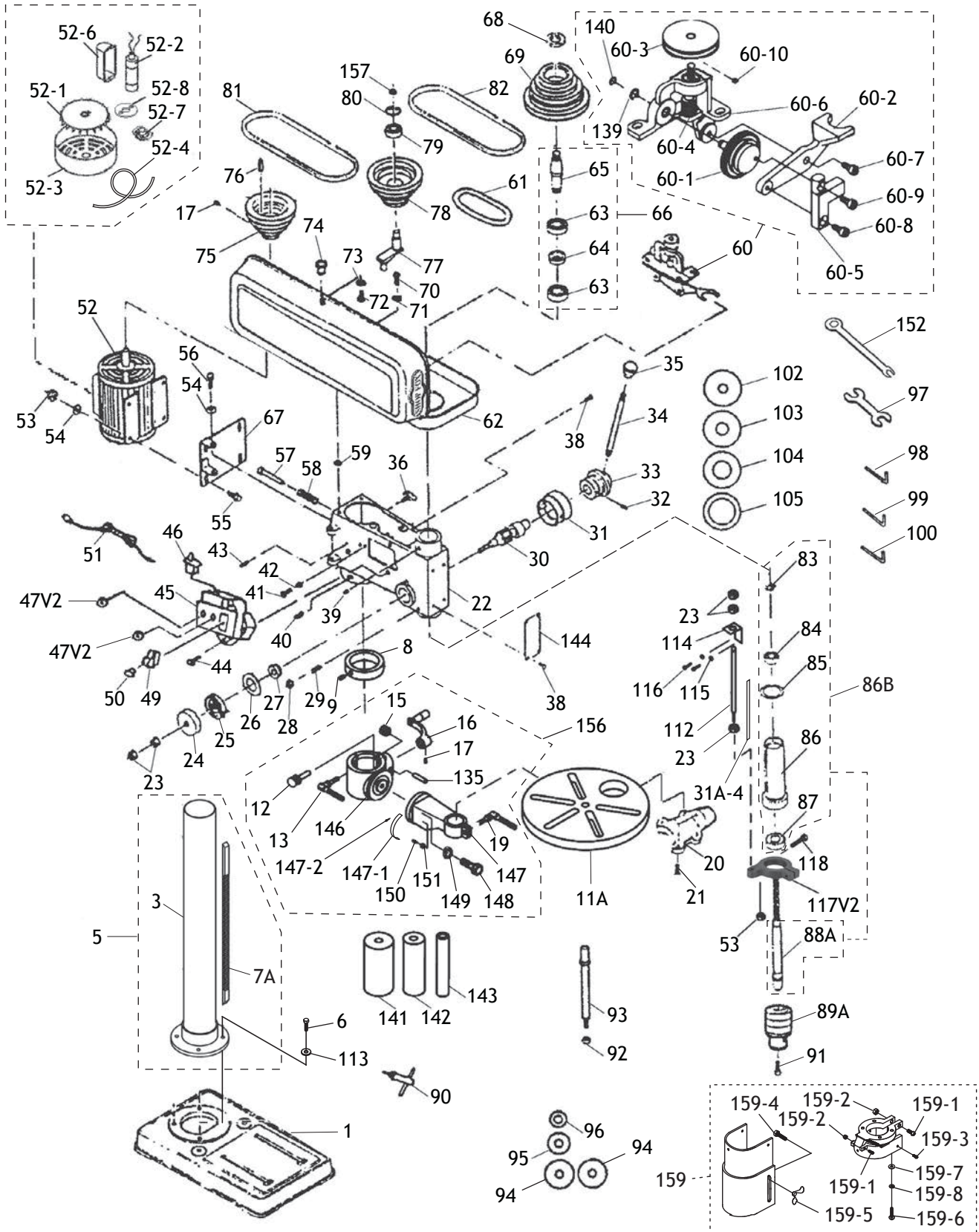


Figure 64. Motor start capacitor wiring.

SERVICE

PARTS

W1668 Main



PARTS



W1668 Main Parts List

| REF | PART # | DESCRIPTION |
|-------|-------------|-------------------------------------|
| 1 | X1668001 | BASE |
| 3 | X1668003 | COLUMN W/FLANGE |
| 5 | X1668005 | COLUMN & COLUMN FLANGE ASSEMBLY |
| 6 | X1668006 | HEX BOLT M10-1.5 X 25 |
| 7A | X1668007A | RACK 16-15/16" V2.06.06 |
| 8 | X1668008 | COLUMN RING |
| 9 | X1668009 | SET SCREW M6-1 X 10 |
| 11A | X1668011A | TABLE V2.05.03 |
| 12 | X1668012 | WORM PINION |
| 13 | X1668013 | CLAMP BOLT M12-1.75 X 50 |
| 15 | X1668015 | WORM GEAR |
| 16 | X1668016 | LIFT HANDLE |
| 17 | X1668017 | SET SCREW M6-1 X 10 |
| 19 | X1668019 | LOCK HANDLE M10-1.5 |
| 20 | X1668020 | DUST PORT |
| 21 | X1668021 | PHLP HD SCR M4-.7 X 22 |
| 22 | X1668022 | HEAD CASTING |
| 23 | X1668023 | HEX NUT M12-1.5 THIN |
| 24 | X1668024 | SPRING COVER |
| 25 | X1668025 | RETURN SPRING |
| 26 | X1668026 | SPRING WASHER |
| 27 | X1668027 | BUSHING |
| 28 | X1668028 | HEX NUT M8-1.25 |
| 29 | X1668029 | SET SCREW M8-1.15 X 25 CONE-PT |
| 30 | X1668030 | FEED SHAFT |
| 31 | X1668031 | DEPTH COLLAR |
| 31A-4 | X1668031A-4 | SCALE FOR DEPTH STOP ROD V2.04.02 |
| 32 | X1668032 | ROLL PIN 6 X 20MM |
| 33 | X1668033 | FEED COLLAR |
| 34 | X1668034 | HANDLE BAR M10-1.5 |
| 35 | X1668035 | KNOB M10-1.5 |
| 36 | X1668036 | LOCK KNOB M8-1.25 |
| 38 | X1668038 | RIVET |
| 39 | X1668039 | SET SCREW M8-1.25 X 10 |
| 40 | X1668040 | SET SCREW M10-1.5 X 12 |
| 41 | X1668041 | PHLP HD SCR M4-.7 X 10 |
| 42 | X1668042 | EXT TOOTH WASHER 4MM |
| 43 | X1668043 | ROLL PIN 6 X 20MM |
| 44 | X1668044 | PHLP HD SCR M8-1.25 X 25 |
| 45 | X1668045 | SWITCH BOX |
| 46 | X1668046 | LIMIT SWITCH |
| 47V2 | X1668047V2 | STRAIN RELIEF THREADED V2.08.09 |
| 49 | X1668049 | SHOP FOX PADDLE SWITCH |
| 50 | X1668050 | PADDLE SWITCH KEY |
| 51 | X1668051 | POWER CORD 18G 3W 108" 5-15P |
| 52 | X1668052 | MOTOR 3/4HP 110V 1-PH |
| 52-1 | X1668052-1 | MOTOR FAN |
| 52-2 | X1668052-2 | S CAPACITOR 200M 125V 1-1/2 X 2-1/4 |
| 52-3 | X1668052-3 | MOTOR FAN COVER |
| 52-4 | X1668052-4 | WIRING HARNESS |
| 52-6 | X1668052-6 | CAPACITOR COVER |
| 52-7 | X1668052-7 | CENTRIFUGAL SWITCH |

| REF | PART # | DESCRIPTION |
|-------|-------------|------------------------------|
| 52-8 | X1668052-8 | CONTACT PLATE |
| 53 | X1668053 | HEX NUT M8-1.25 |
| 54 | X1668054 | FLAT WASHER 8MM |
| 55 | X1668055 | HEX BOLT M8-1.25 X 25 |
| 56 | X1668056 | HEX BOLT M8-1.25 X 20 |
| 57 | X1668057 | PUSH ROD |
| 58 | X1668058 | SPRING |
| 59 | X1668059 | THRUST WASHER 8MM RUBBER |
| 60 | X1668060 | OSCILLATING MECHANISM |
| 60-1 | X1668060-1 | PLASTIC GEAR |
| 60-2 | X1668060-2 | OSCILLATING MECH. ARM |
| 60-3 | X1668060-3 | PULLEY |
| 60-4 | X1668060-4 | WORM GEAR |
| 60-5 | X1668060-5 | DRIVE ARM |
| 60-6 | X1668060-6 | BODY |
| 60-7 | X1668060-7 | OSC. MECH ARM BOLT M6-1 X 20 |
| 60-8 | X1668060-8 | LOWER SHOULDER CAP SCREW |
| 60-9 | X1668060-9 | CAP SCREW M5-.8 X 15 |
| 60-10 | X1668060-10 | SET SCREW M6-1 X 16 |
| 61 | X1668061 | OSCILLATOR BELT |
| 62 | X1668062 | PULLEY COVER |
| 63 | X1668063 | BALL BEARING 6203-2RS |
| 64 | X1668064 | COLLAR |
| 65 | X1668065 | INTERNAL SPLINE SLEEVE |
| 66 | X1668066 | SPLINE SLEEVE ASSEMBLY |
| 67 | X1668067 | MOTOR MOUNT |
| 68 | X1668068 | LOCK NUT |
| 69 | X1668069 | SPINDLE PULLEY |
| 70 | X1668070 | PHLP HD SCR M6-1 X 35 |
| 71 | X1668071 | LOCK WASHER 6MM |
| 72 | X1668072 | PHLP HD SCR M5-.8 X 10 |
| 73 | X1668073 | FLAT WASHER 5MM |
| 74 | X1668074 | KNOB |
| 75 | X1668075 | MOTOR PULLEY |
| 76 | X1668076 | KEY |
| 77 | X1668077 | IDLER ARM |
| 78 | X1668078 | IDLER PULLEY |
| 79 | X1668079 | BALL BEARING 6202-2RS |
| 80 | X1668080 | INT RETAINING RING 35MM |
| 81 | X1668081 | V-BELT M20 3L200 |
| 82 | X1668082 | V-BELT M26 3L260 |
| 83 | X1668083 | EXT RETAINING RING 11MM |
| 84 | X1668084 | BALL BEARING 6201-2RS |
| 85 | X1668085 | THRUST WASHER 38MM RUBBER |
| 86 | X1668086 | QUILL |
| 86A | X1668086A | QUILL ASSEMBLY V3.06.01 |
| 87 | X1668087 | BALL BEARING 6202ZZ |
| 88A | X1668088A | CHUCK SPINDLE JT33 V2.01.05 |
| 89A | X1668089A | CHUCK 1-16MM JT33 V2.06.02 |
| 90 | X1668090 | CHUCK KEY |
| 91 | X1668091 | CAP SCREW M5-.8 X 20 |
| 92 | X1668092 | HEX NUT M8-1.25 |

W1668 Main Parts List (Cont.)

| REF | PART # | DESCRIPTION |
|-------|------------|------------------------------|
| 93 | X1668093 | MANDREL |
| 94 | X1668094 | MANDREL WASHER 1-3/4" |
| 95 | X1668095 | MANDREL WASHER 7/8" |
| 96 | X1668096 | MANDREL WASHER 5/8" |
| 97 | X1668097 | WRENCH 13 X 14MM OPEN-ENDS |
| 98 | X1668098 | 3MM HEX WRENCH |
| 99 | X1668099 | 4MM HEX WRENCH |
| 100 | X1668100 | 5MM HEX WRENCH |
| 102 | X1668102 | TABLE INSERT 5/8" I.D. |
| 103 | X1668103 | TABLE INSERT 1" I.D. |
| 104 | X1668104 | TABLE INSERT 1-3/8" I.D. |
| 105 | X1668105 | TABLE INSERT 1-7/8" I.D. |
| 112 | X1668112 | DEPTH STOP ROD V2.04.02 |
| 113 | X1668113 | FLAT WASHER 10MM |
| 114 | X1668114 | LOWER DEPTH STOP ROD BRACKET |
| 115 | X1668115 | FLAT WASHER 5MM |
| 116 | X1668116 | CAP SCREW M5-.8 X 12 |
| 117V2 | X1668117V2 | DEPTH STOP BRACKET V2.12.12 |
| 118 | X1668118 | CAP SCREW M8-1.25 X 20 |
| 135 | X1668135 | AXLE |
| 139 | X1668139 | FLAT WASHER 8MM |
| 140 | X1668140 | EXT RETAINING RING 8MM |
| 141 | X1668141 | RUBBER DRUM 2" X 4-1/4" |

| REF | PART # | DESCRIPTION |
|-------|------------|------------------------------------|
| 142 | X1668142 | RUBBER DRUM 1-1/2" X 4-1/4" |
| 143 | X1668143 | RUBBER DRUM 1" X 4-1/4" |
| 144 | X1668144 | TRAVEL INDICATOR PLATE |
| 146 | X1668146 | GEARED TABLE BRACKET V2.02.04 |
| 147 | X1668147 | COLUMN SUPPORT ARM |
| 147-1 | X1668147-1 | DEGREE SCALE |
| 147-2 | X1668147-2 | RIVET |
| 148 | X1668148 | HEX BOLT M16-2 X 50 |
| 149 | X1668149 | FLAT WASHER |
| 150 | X1668150 | TABLE BRACKET PIN |
| 151 | X1668151 | HEX NUT M6-1 |
| 152 | X1668152 | WRENCH 7 X 24MM COMBO |
| 156 | X1668156 | COLUMN/TABLE BRACKET ASSY V2.02.04 |
| 157 | X1668157 | EXT RETAINING RING 15MM |
| 159 | X1668159 | CHUCK GUARD ASSY |
| 159-1 | X1668159-1 | PHLP HD SCR M4-.7 X 30 |
| 159-2 | X1668159-2 | HEX NUT M4-.7 |
| 159-3 | X1668159-3 | TAP SCREW M2.2 X 4.5 |
| 159-4 | X1668159-4 | HEX BOLT M5-.8 X 12 |
| 159-5 | X1668159-5 | WING NUT M5-.8 |
| 159-6 | X1668159-6 | PHLP HD SCR M4-.7 X 10 |
| 159-7 | X1668159-7 | FLAT WASHER 4MM |
| 159-8 | X1668159-8 | LOCK WASHER 4MM |

W1848 Main Parts List

| REF | PART # | DESCRIPTION |
|------|------------|-------------------------------------|
| 1 | X1848001 | BASE |
| 3A | X1848003A | COLUMN W/FLANGE |
| 5 | X1848005 | COLUMN & COLUMN FLANGE ASSY |
| 6 | X1848006 | HEX BOLT M10-1.5 X 35 |
| 7 | X1848007 | RACK 31-1/2" |
| 8 | X1848008 | COLUMN RING |
| 9 | X1848009 | SET SCREW M6-1 X 10 |
| 11 | X1848011 | TABLE |
| 12 | X1848012 | WORM PINION |
| 13 | X1848013 | CLAMP BOLT M12-1.75 X 50 |
| 15 | X1848015 | WORM GEAR |
| 16 | X1848016 | LIFT HANDLE |
| 17 | X1848017 | SET SCREW M6-1 X 10 |
| 19 | X1848019 | LOCK HANDLE M10-1.5 |
| 20 | X1848020 | DUST PORT |
| 21 | X1848021 | PHLP HD SCR M4-.7 X 22 |
| 22 | X1848022 | HEAD CASTING |
| 23 | X1848023 | HEX NUT M12-1.5 THIN |
| 24 | X1848024 | SPRING COVER |
| 25 | X1848025 | RETURN SPRING |
| 26 | X1848026 | SPRING WASHER |
| 27 | X1848027 | BUSHING |
| 28 | X1848028 | HEX NUT M8-1.25 |
| 29 | X1848029 | SET SCREW M8-1.15 X 25 CONE-PT |
| 30 | X1848030 | FEED SHAFT |
| 31 | X1848031 | DEPTH COLLAR |
| 32 | X1848032 | ROLL PIN 6 X 20MM |
| 33 | X1848033 | FEED COLLAR |
| 34 | X1848034 | HANDLE BAR M10-1.5 |
| 35 | X1848035 | KNOB M10-1.5 |
| 36 | X1848036 | LOCK KNOB M8-1.25 |
| 38 | X1848038 | RIVET |
| 39 | X1848039 | SET SCREW M8-1.25 X 10 |
| 40 | X1848040 | SET SCREW M10-1.5 X 12 |
| 41 | X1848041 | PHLP HD SCR M4-.7 X 10 |
| 42 | X1848042 | EXT TOOTH WASHER 4MM |
| 43 | X1848043 | ROLL PIN 6 X 20MM |
| 44 | X1848044 | PHLP HD SCR M8-1.25 X 25 |
| 45 | X1848045 | SWITCH BOX |
| 46 | X1848046 | LIMIT SWITCH |
| 47 | X1848047 | STRAIN RELIEF THREADED |
| 49 | X1848049 | SHOP FOX PADDLE SWITCH |
| 50 | X1848050 | PADDLE SWITCH KEY |
| 51 | X1848051 | POWER CORD 18G 3W 72" 5-15P |
| 52 | X1848052 | MOTOR 3/4HP 110V 1-PH |
| 52-1 | X1848052-1 | MOTOR FAN |
| 52-2 | X1848052-2 | S CAPACITOR 200M 125V 1-1/2 X 2-1/4 |
| 52-3 | X1848052-3 | MOTOR FAN COVER |
| 52-4 | X1848052-4 | WIRING HARNESS |
| 52-6 | X1848052-6 | CAPACITOR COVER |
| 52-7 | X1848052-7 | CENTRIFUGAL SWITCH |
| 52-8 | X1848052-8 | CONTACT PLATE |

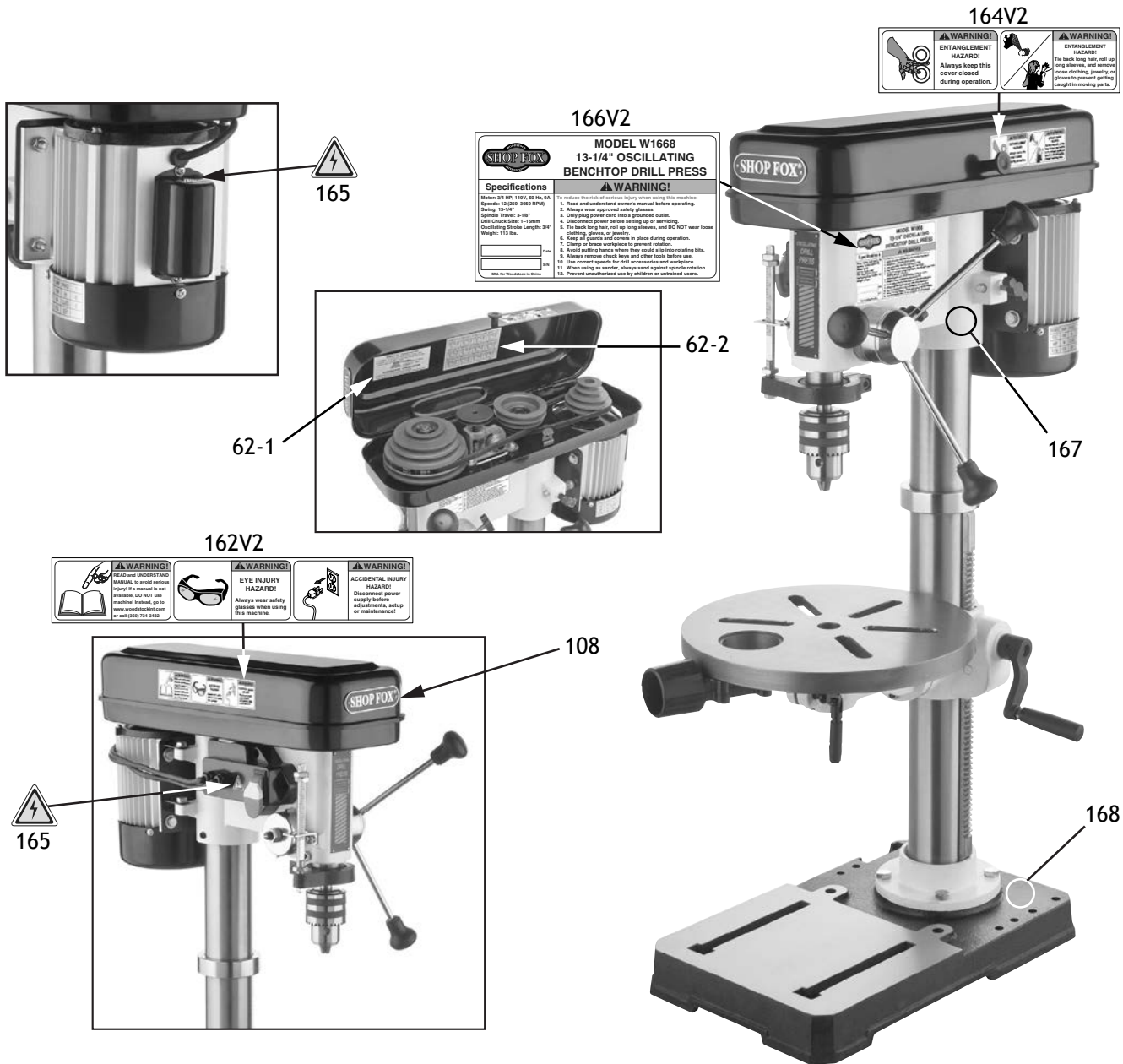
| REF | PART # | DESCRIPTION |
|-------|-------------|------------------------------|
| 53 | X1848053 | HEX NUT M8-1.25 |
| 54 | X1848054 | FLAT WASHER 8MM |
| 55 | X1848055 | HEX BOLT M8-1.25 X 25 |
| 56 | X1848056 | HEX BOLT M8-1.25 X 20 |
| 57 | X1848057 | PUSH ROD |
| 58 | X1848058 | SPRING |
| 59 | X1848059 | THRUST WASHER 8MM RUBBER |
| 60 | X1848060 | OSCILLATING MECHANISM |
| 60-1 | X1848060-1 | PLASTIC GEAR |
| 60-2 | X1848060-2 | OSCILLATING MECH. ARM |
| 60-3 | X1848060-3 | PULLEY |
| 60-4 | X1848060-4 | WORM GEAR |
| 60-5 | X1848060-5 | DRIVE ARM |
| 60-6 | X1848060-6 | BODY |
| 60-7 | X1848060-7 | OSC. MECH ARM BOLT M6-1 X 20 |
| 60-8 | X1848060-8 | LOWER SHOULDER CAP SCREW |
| 60-9 | X1848060-9 | CAP SCREW M5-.8 X 15 |
| 60-10 | X1848060-10 | SET SCREW M6-1 X 6 |
| 61 | X1848061 | OSCILLATOR BELT |
| 62 | X1848062 | PULLEY COVER |
| 63 | X1848063 | BALL BEARING 6203-2RS |
| 64 | X1848064 | COLLAR |
| 65 | X1848065 | INTERNAL SPLINE SLEEVE |
| 66 | X1848066 | SPLINE SLEEVE ASSEMBLY |
| 67 | X1848067 | MOTOR MOUNT |
| 68 | X1848068 | LOCK NUT |
| 69 | X1848069 | SPINDLE PULLEY |
| 70 | X1848070 | PHLP HD SCR M6-1 X 35 |
| 71 | X1848071 | LOCK WASHER 6MM |
| 72 | X1848072 | PHLP HD SCR M5-.8 X 10 |
| 73 | X1848073 | FLAT WASHER 5MM |
| 74 | X1848074 | KNOB |
| 75 | X1848075 | MOTOR PULLEY |
| 76 | X1848076 | KEY |
| 77 | X1848077 | IDLER ARM |
| 78 | X1848078 | IDLER PULLEY |
| 79 | X1848079 | BALL BEARING 6202-2RS |
| 80 | X1848080 | INT RETAINING RING 35MM |
| 81 | X1848081 | V-BELT M20 3L200 |
| 82 | X1848082 | V-BELT M26 3L260 |
| 83 | X1848083 | EXT RETAINING RING 11MM |
| 84 | X1848084 | BALL BEARING 6201-2RS |
| 85 | X1848085 | THRUST WASHER 38MM RUBBER |
| 86 | X1848086 | QUILL |
| 86A | X1848086A | QUILL ASSEMBLY |
| 87 | X1848087 | BALL BEARING 620ZZ |
| 88 | X1848088 | CHUCK SPINDLE JT33 |
| 89 | X1848089 | CHUCK 1-16MM JT33 |
| 90 | X1848090 | CHUCK KEY |
| 91 | X1848091 | CAP SCREW M5-.8 X 20 |
| 92 | X1848092 | HEX NUT M8-1.25 |
| 93 | X1848093 | MANDREL |

W1848 Main Parts List (Cont.)

| REF | PART # | DESCRIPTION |
|-----|----------|------------------------------|
| 94 | X1848094 | MANDREL WASHER 1-3/4" |
| 95 | X1848095 | MANDREL WASHER 7/8" |
| 96 | X1848096 | MANDREL WASHER 5/8" |
| 97 | X1848097 | WRENCH 13 X 14MM OPEN-ENDS |
| 98 | X1848098 | 3MM HEX WRENCH |
| 99 | X1848099 | 4MM HEX WRENCH |
| 100 | X1848100 | 5MM HEX WRENCH |
| 102 | X1848102 | TABLE INSERT 5/8" I.D. |
| 103 | X1848103 | TABLE INSERT 1" I.D. |
| 104 | X1848104 | TABLE INSERT 1-3/8" I.D. |
| 105 | X1848105 | TABLE INSERT 1-7/8" I.D. |
| 112 | X1848112 | DEPTH STOP ROD |
| 113 | X1848113 | FLAT WASHER 10MM |
| 114 | X1848114 | LOWER DEPTH STOP ROD BRACKET |
| 115 | X1848115 | FLAT WASHER 5MM |
| 116 | X1848116 | CAP SCREW M5-.8 X 12 |
| 117 | X1848117 | DEPTH STOP BRACKET |
| 118 | X1848118 | CAP SCREW M8-1.25 X 20 |
| 135 | X1848135 | AXLE |
| 139 | X1848139 | FLAT WASHER 8MM |
| 140 | X1848140 | EXT RETAINING RING 8MM |
| 141 | X1848141 | RUBBER DRUM 2" X 4-1/4" |
| 142 | X1848142 | RUBBER DRUM 1-1/2" X 4-1/4" |

| REF | PART # | DESCRIPTION |
|-------|------------|---------------------------|
| 143 | X1848143 | RUBBER DRUM 1" X 4-1/4" |
| 144 | X1848144 | TRAVEL INDICATOR PLATE |
| 146 | X1848146 | COLUMN SUPPORT ARM |
| 147 | X1848147 | GEARED TABLE BRACKET |
| 147-1 | X1648147-1 | DEGREE SCALE |
| 147-2 | X1648147-2 | RIVET |
| 148 | X1848148 | HEX BOLT M16-2 X 50 |
| 149 | X1848149 | FLAT WASHER 16MM |
| 150 | X1848150 | TABLE BRACKET PIN |
| 151 | X1848151 | HEX NUT M6-1 |
| 152 | X1848152 | WRENCH 7 X 24MM COMBO |
| 156 | X1848156 | COLUMN/TABLE BRACKET ASSY |
| 157 | X1848157 | EXT RETAINING RING 15MM |
| 159 | X1848159 | CHUCK GUARD ASSY |
| 159-1 | X1848159-1 | PHLP HD SCR M4-.7 X 30 |
| 159-2 | X1848159-2 | HEX NUT M4-.7 |
| 159-3 | X1848159-3 | TAP SCREW M2.2 X 4.5 |
| 159-4 | X1848159-4 | HEX BOLT M5-.8 X 12 |
| 159-5 | X1848159-5 | WING NUT M5-.8 |
| 159-6 | X1848159-6 | PHLP HD SCR M4-.7 X 10 |
| 159-7 | X1848159-7 | FLAT WASHER 4MM |
| 159-8 | X1848159-8 | LOCK WASHER 4MM |

Labels & Cosmetics



166V2

MODEL W1668
13-1/4" OSCILLATING
BENCHTOP DRILL PRESS

Specifications

Motor: 3/4 HP, 115V, 60 Hz, 5A
Speeds: 12 (200-260 RPM)
Chuck: 1/2" NPT
Chuck Size: 1-1/8"
Chuck Key Length: 3/4"
Weight: 113 lbs.

WARNING!

1. Read and understand owner's manual before operating.
2. Always wear approved safety glasses.
3. Only plug power cord into a grounded outlet.
4. Disconnect power before setting up or servicing.
5. The back long hat, roll up long sleeves, and DO NOT wear loose clothing, gloves, or jewelry.
6. Keep all hands and feet in place during operation.
7. Clamp or brace workpiece to prevent rotation.
8. Avoid putting hands where they could slip into rotating bits.
9. Always remove chuck keys and other tools before use.
10. Use correct speeds for drill accessories and workpiece.
11. When using an anvil, always angle against anvil's rotation.
12. Prevent unauthorized use by children or untrained users.

162V2

WARNING! Read and understand owner's manual to avoid serious injury. Do NOT use machine unless you are trained. See www.shopfox.com for call (360) 734-3482.

WARNING! EYE INJURY HAZARD! Always wear safety glasses when using this machine.

WARNING! ACCIDENTAL INJURY HAZARD! Disconnect power supply before adjustments, setup or maintenance!

| REF | PART # | DESCRIPTION |
|-------|------------|------------------------------|
| 62-1 | X1668062-1 | OSCILLATOR LABEL |
| 62-2 | X1668062-2 | SPINDLE SPEED CHART |
| 108 | X1668108 | SHOP FOX LABEL |
| 162V2 | X1668162V2 | COMBO WARNING LABEL V2.06.22 |
| 164V2 | X1668164V2 | CLOSE DOOR LABEL V2.06.22 |

| REF | PART # | DESCRIPTION |
|-------|------------|-----------------------------------|
| 165 | X1668165 | ELECTRICITY LABEL |
| 166V2 | X1668166V2 | MACHINE ID LABEL V2.06.22 (W1668) |
| 166V2 | X1848166V2 | MACHINE ID LABEL V2.06.22 (W1848) |
| 167 | X1668167 | TOUCH-UP PAINT, SHOP FOX WHITE |
| 168 | X1668168 | TOUCH-UP PAINT, SHOP FOX BLACK |

!WARNING

Safety labels warn about machine hazards and how to prevent serious personal injury. The owner of this machine **MUST** maintain the original location and readability of all labels on this machine. If any label is removed or becomes unreadable, **REPLACE** that label before allowing machine to be operated again. Contact us at (360) 734-3482 or www.woodstockint.com to order new labels.

WARRANTY

Woodstock International, Inc. warrants all Shop Fox machinery to be free of defects from workmanship and materials for a period of two years from the date of original purchase by the original owner. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, lack of maintenance, or reimbursement of third party expenses incurred.

Woodstock International, Inc. will repair, replace, or arrange for a dealer refund, at its expense and option, the Shop Fox machine or machine part proven to be defective for its designed and intended use, provided that the original owner returns the product prepaid to an authorized warranty or repair facility as designated by our Bellingham, Washington office with proof of their purchase of the product within two years, and provides Woodstock International, Inc. reasonable opportunity to verify the alleged defect through inspection. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Woodstock International Inc.'s warranty, then the original owner must bear the cost of storing and returning the product.

This is Woodstock International, Inc.'s sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant that Shop Fox machinery complies with the provisions of any law, acts or electrical codes. We do not reimburse for third party repairs. In no event shall Woodstock International, Inc.'s liability under this limited warranty exceed the purchase price paid for the product, and any legal actions brought against Woodstock International, Inc. shall be tried in the State of Washington, County of Whatcom. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our products.

Every effort has been made to ensure that all Shop Fox machinery meets high quality and durability standards. We are committed to continuously improving the quality of our products, and reserve the right to change specifications at any time.

To register the warranty, go to <https://www.woodstockint.com/warranty>, or scan the QR code below. You will be directed to the Warranty Registration page on www.woodstockint.com. Enter all applicable production information.



High Quality Machines and Tools

Woodstock International, Inc. carries thousands of products designed to meet the needs of today's woodworkers and metalworkers. Ask your dealer about these fine products:



PRO-STIK®
ABRASIVE BELT & DISC CLEANER

BROSNA®
PRECISION STOP BLOCK

PARROT VISE®

THE REBEL®

Aluma-Classic®

STEELEX®
FINE TOOLS

PLANER PAL®

JOINTER PAL®

STEELEX®
PLUS

Rotacator®

slickplane®

ACCU-SHARP®
BOARD BUDDIES®

WHOLESALE ONLY

WOODSTOCK®
INTERNATIONAL INC.

Phone: (360) 734-3482

Fax: (360) 671-3053

Toll Free Fax: (800) 647-8801

P.O. Box 2309, Bellingham, WA 98227

woodstockint.com