MODEL G4176 ¼ HP POWER FEEDER

OWNER'S MANUAL

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#CR10815 PRINTED IN TAIWAN

⚠ WARNING!

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

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

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

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

⚠ WARNING!

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

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

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

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INTRODUCTION

Foreword

We are proud to offer the Model G4176 ¼ HP Power Feeder. This machine is part of a growing Grizzly family of fine woodworking machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

The specifications, drawings, and photographs illustrated in this manual represent the Model G4176 when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly.

For your convenience, we always keep current Grizzly manuals available on our website at **www.grizzly.com**. Any updates to your machine will be reflected in these manuals as soon as they are complete. Visit our site often to check for the latest updates to this manual!

Contact Info

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

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com

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

Grizzly Industrial, Inc.
C/O Technical Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

Functional Overview

This power feeder greatly simplifies repetitive operations on table saws, jointers, and shapers by automating how workpieces are fed into the cut.

Since the power feeder is typically positioned between the blade and the operator during operations, the operator's hands do not need to get near the blade when feeding the workpiece, so the danger of an accidental cutting injury is greatly reduced.

Additionally, the power feeder provides more consistent results than hand fed operations, because it moves the workpiece at an even speed and maintains consistent workpiece pressure against the table and fence throughout the cut.

The power feeder works by simply attaching rubber rollers to a motor through a series of gears designed to control the roller speed.

Since the rubber rollers must be positioned correctly to maintain even workpiece pressure against the table and fence, the power feeder is mounted on a stand that allows it to be moved and locked at an array of heights an angles within the range of the stand.

The power feeder stand is typically mounted to the desired machine by clamping it to the machine's table, or mounting it directly into the machine's table via drilled and tapped holes.

MACHINE DATA SHEET

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

MODEL G4176 1/4 HP POWER FEEDER

Product Dimensions:

Weight..... 73 lbs.
Length/Width/Height..... 34 x 13 x 24 in.
Foot Print (Length/Width)..... N/A x N/A

Shipping Dimensions:

Type..... Cardboard
Content..... Machine
Weight..... 79 lbs.
Length/Width/Height..... 23 x 23 x 11 in.

Electrical:

Switch..... Forward/Reverse Barrel
Switch Voltage..... 110V
Cord Length..... 9 ft.
Cord Gauge..... 18 gauge
Recommended Breaker Size..... 15 amp
Plug..... Yes

Motors:

Main

Type..... TEFC Capacitor Start Induction
Horsepower..... 1/4 HP
Voltage..... 110V
Prewired..... 110V
Phase..... Single
Amps..... 2.5A
Speed..... 1660 RPM
Cycle..... 60 Hz
Number Of Speeds..... 1
Power Transfer ..... Gear Box
Bearings..... Lubricated for Life

Main Specifications:

Workpiece Capacities

Min. WorkPiece Len..... 5 in.

Operation Info

No. Of Feed Speeds..... 4
Feed Speeds..... 18, 25, 30, 41 FPM
Swing..... 360 deg.
Vertical Movement..... 6-1/2 in.
Horizontal Movement..... 10 in.
Rotation..... Forward, Reverse

Roller Info

No. Of Rollers	3
Roller Width	1-3/16 in.
Roller Diameter	3-1/8 in.
Roller Suspension	3/4 in.
Max Height Rollers Parallel Table Surface	6 in.
Centers Between Rollers	3-3/8, 4-3/8 in.

Other

Column Diameter	1-1/2 in.

Construction Info

Roller Construction	Synthetic Rubber
Housing Construction	Cast Aluminum
Supports Construction	Cast Iron
Column Construction	Steel
Paint	Epoxy

Other Specifications:

ISO Factory	ISO 9001
Country Of Origin	Taiwan
Warranty	1 Year
Serial Number Location	"Checked" Sticker, On In-feed Portion Of Housing's Roller Cover Side
Assembly Time	30 minutes

Features:

Rollers are Spring Tensioned
Heavy-Duty Gear Reduction with Hardened Gears
Universal Positioning with Handle Locks

Identification

Refer to **Figure 1** and your power feeder to familiarize yourself with the controls, features, and terminology used in this manual. Doing so will make setup, use, and any future maintenance easier.

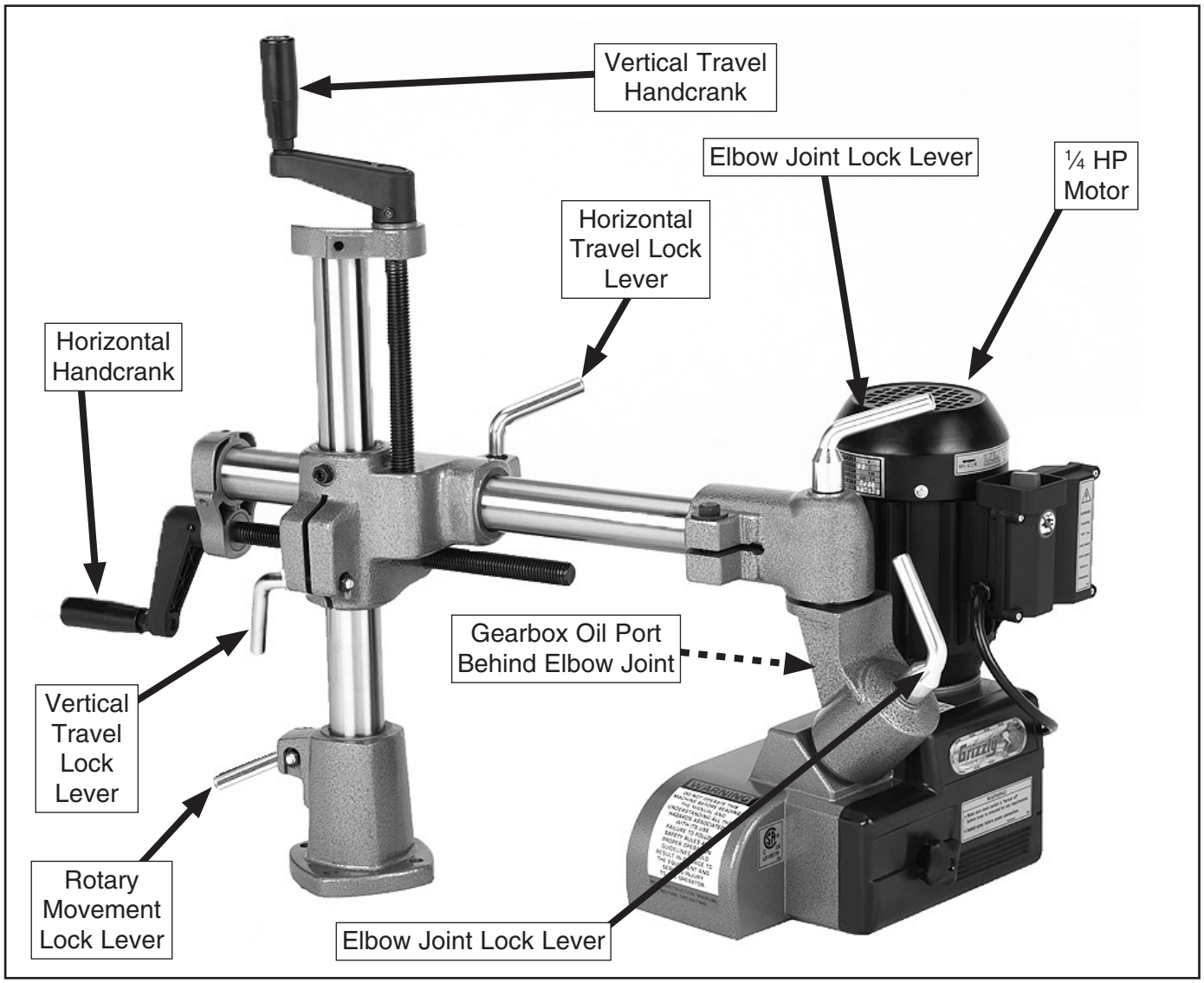


Figure 1. Controls and features.

SECTION 1: SAFETY

⚠WARNING

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

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

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

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

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

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

⚠WARNING

Safety Instructions for Machinery

1. **READ THE ENTIRE MANUAL BEFORE STARTING MACHINERY.** Machinery presents serious injury hazards to untrained users.
2. **ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY.** Everyday eyeglasses only have impact resistant lenses—they are NOT safety glasses.
3. **ALWAYS WEAR A NIOSH APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST.** Most types of dust (wood, metal, etc.) can cause severe respiratory illnesses.
4. **ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY.** Machinery noise can cause permanent hearing loss.
5. **WEAR PROPER APPAREL.** DO NOT wear loose clothing, gloves, neckties, rings, or jewelry that can catch in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
6. **NEVER OPERATE MACHINERY WHEN TIRED OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Be mentally alert at all times when running machinery.

⚠WARNING
Safety Instructions for Machinery

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

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

9. **MAKE WORKSHOP CHILDPROOF.** Use padlocks, master switches, and remove start switch keys.

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

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

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

13. **USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.** Grounded cords minimize shock hazards. Undersized cords create excessive heat. Always replace damaged extension cords.

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

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

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

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

18. **CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY.** Check for binding or misaligned parts, broken parts, loose bolts, and any other conditions that may impair machine operation. Repair or replace damaged parts before operation.

19. **USE RECOMMENDED ACCESSORIES.** Refer to the instruction manual for recommended accessories. Improper accessories increase risk of injury.

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

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

22. **DO NOT OVERREACH.** Maintain stability and balance at all times.

23. **MANY MACHINES CAN EJECT WORKPIECES TOWARD OPERATOR.** Know and avoid conditions that cause the workpiece to "kickback."

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

25. **CERTAIN DUST MAY BE HAZARDOUS** to the respiratory systems of people and animals, especially fine dust. Be aware of the type of dust you are exposed to and always wear a respirator designed to filter that type of dust.

⚠WARNING
Additional Safety for Power Feeders

1. **SAFETY ACCESSORIES.** Always use appropriate machine guards.

2. **TOOL SPEED.** Make sure all cutting tools are rotating at the operating speed before feeding the workpiece.

3. **FEEDING SPEED.** DO NOT overload the cutting tool by feeding too quickly. The cutting tool will perform better and be safer to work with at the rate for which it was designed.

4. **HAND SAFETY.** Keep hands away from rotating parts on the feeder and the cutting tool. Do not allow hands or clothing to be pinched beween the rollers and workpiece.

5. **WORKPIECE SUPPORT.** DO NOT feed long workpieces without providing adequate support at the outfeed end of the table.

6. **STOPPING FEEDER.** Always stop the feeder before stopping the cutting tool.

7. **ADJUSTMENTS.** Disconnect the feeder from its power source before cleaning, repairing, or making adjustments.

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

⚠WARNING

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

⚠CAUTION

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

SECTION 2: CIRCUIT REQUIREMENTS

110V Operation

⚠WARNING

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

⚠WARNING

Electrocution or fire could result if machine is not grounded and installed in compliance with electrical codes. Compliance MUST be verified by a qualified electrician!

Full Load Amperage Draw

This machine draws the following amps under maximum load:

Amp Draw.....2.9 Amps

Power Supply Circuit Requirements

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

Minimum Circuit Size..... 15 Amps

Power Connection Device

The Model G4176 comes with a 5-15 plug, similar to **Figure 2**, to connect the machine to power.

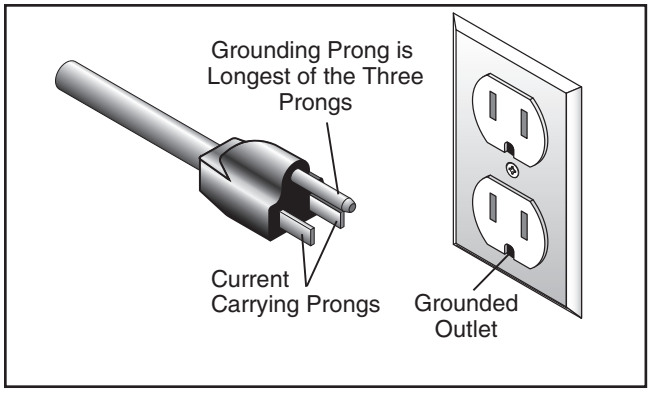
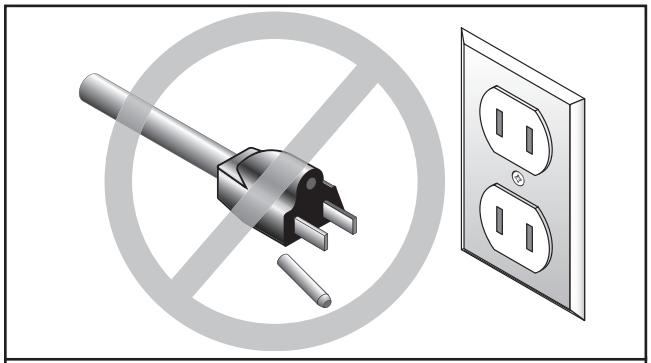


Figure 2. Typical 5-15 plug and receptacle.



⚠CAUTION

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

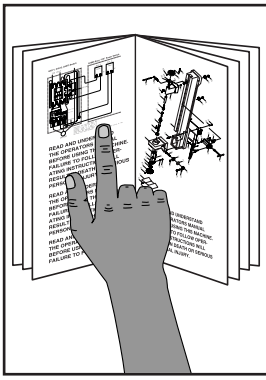
Extension Cords

We do not recommend using extension cords, but if you find it absolutely necessary:

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

SECTION 3: SETUP

Setup Safety



⚠WARNING

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

⚠WARNING

Wear safety glasses during the entire setup process!

Items Needed for Setup

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

Description	Qty
• Safety Glasses	1
• Light Machine Oil	As Required
• Mineral Spirits	As Required
• Medium-Grade Thread Locking Liquid	1
• Clean Rags	As Required

Unpacking

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

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

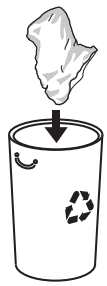
When you are completely satisfied with the condition of your shipment, inventory the contents.

Inventory

The following is a description of the main components shipped with your machine. Lay the components out to inventory them.

Note: *If you can't find an item on this list, check the mounting location on the machine or examine the packaging materials carefully. Occasionally we pre-install certain components for shipping purposes.*

Box Inventory (Figures 3 & 4)	Qty
A. Elbow Joint Assembly	1
B. Power Feeder Assembly	1
C. Arm Assembly	1
D. Column Assembly	1
E. Handles	2
F. Crank Arms	2
G. Base Bolt Pattern Template	1
H. Base Assembly	1
I. Change Gear Set, 26/24-Tooth	1



⚠WARNING

SUFFOCATION HAZARD!

Immediately discard all plastic bags and packing materials to eliminate choking/suffocation hazards for children and animals.

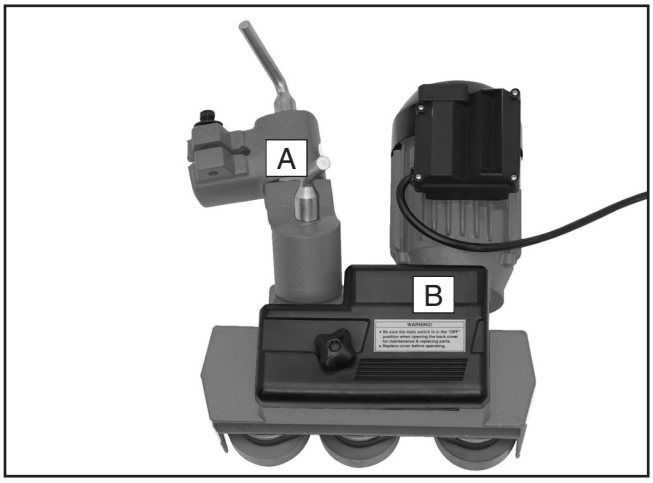


Figure 3. Power feeder inventory.

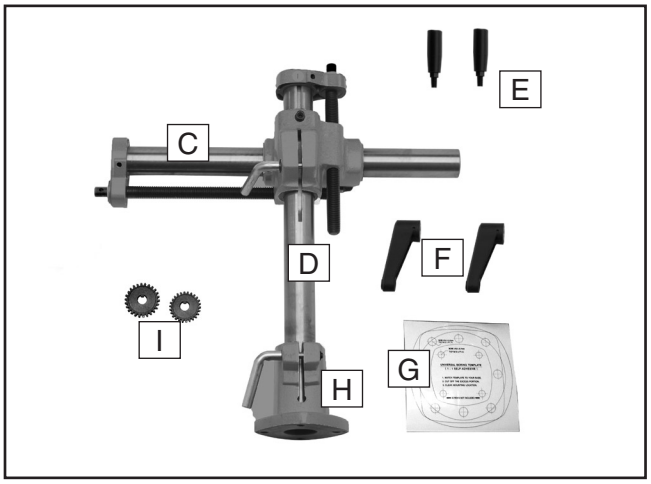
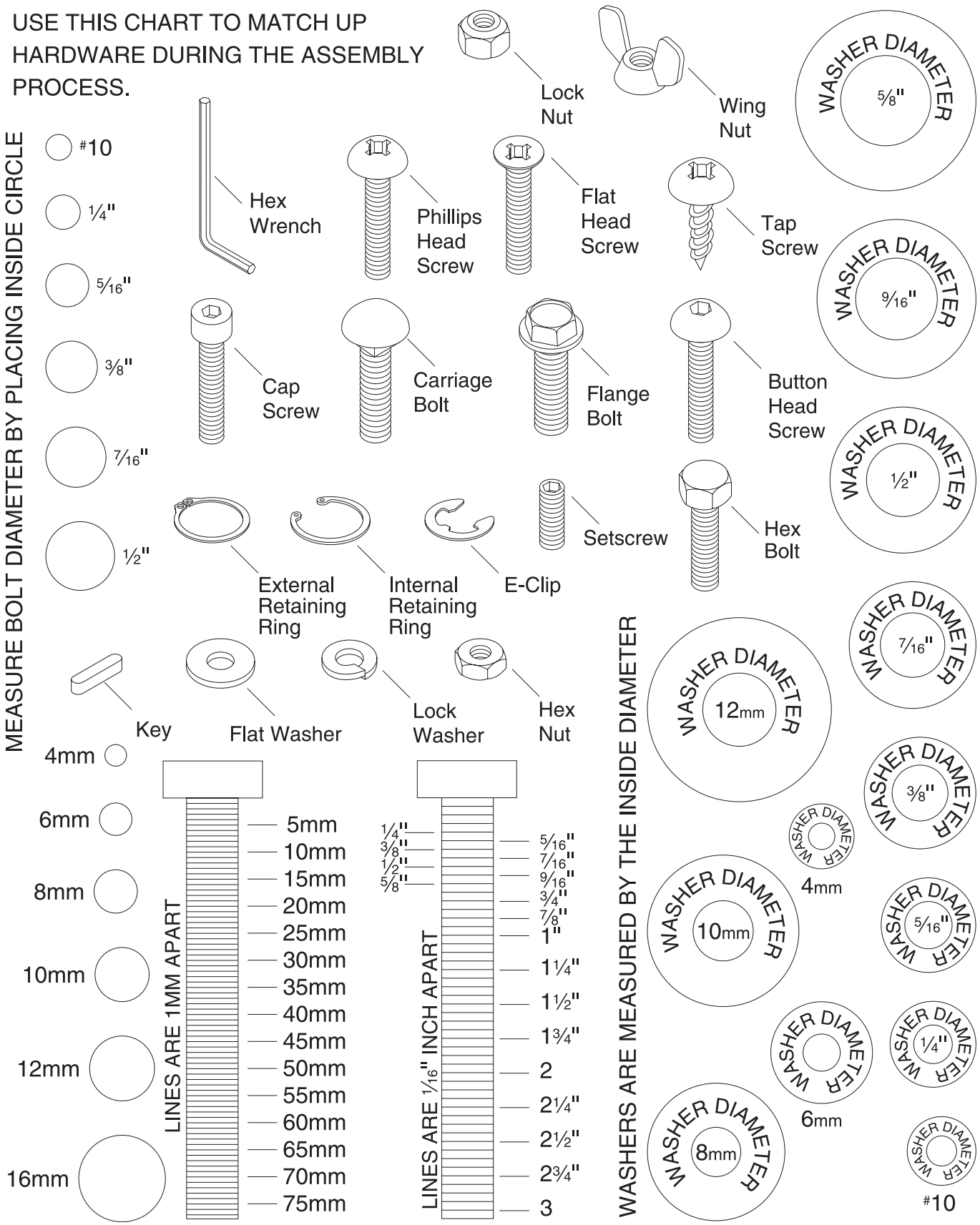


Figure 4. Base inventory.

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

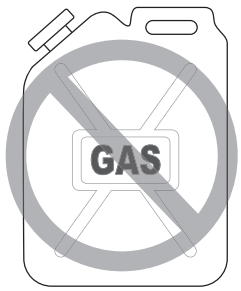
Hardware Recognition Chart

USE THIS CHART TO MATCH UP HARDWARE DURING THE ASSEMBLY PROCESS.



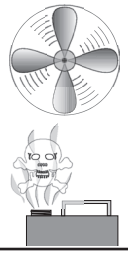
Clean Up

The unpainted surfaces are coated with a waxy oil to prevent corrosion during shipment. Remove this protective coating with a solvent cleaner or degreaser, such as shown in **Figure 5**. For thorough cleaning, some parts must be removed. **For optimum performance, clean all moving parts or sliding contact surfaces.** Avoid chlorine-based solvents, such as acetone or brake parts cleaner that may damage painted surfaces. Always follow the manufacturer's instructions when using any type of cleaning product.



⚠WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. DO NOT use these products to clean the machinery.



⚠CAUTION

Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.

G2544—Solvent Cleaner & Degreaser
A great product for removing the waxy shipping grease from your machine during clean up.

Call
1-800-523-4777
To Order

Figure 5. Cleaner/degreaser available from Grizzly.

Assembly

⚠WARNING

You MUST assemble all guards, fences, and holdowns before starting your machine or power feeder. Failure to heed this warning could result in serious personal injury.

To correctly position this power feeder on your table top, completely assemble the power feeder first in the order of **A**, **B** and **C** as shown in **Figures 6** and **7.** Next, refer to **Base Mounting** on **Page 14**. With the power feeder unit completely assembled, it will be easier to locate where on the table top you will need to drill your base mounting holes, so you can take advantage of the full range of power feeder swing and adjustments.

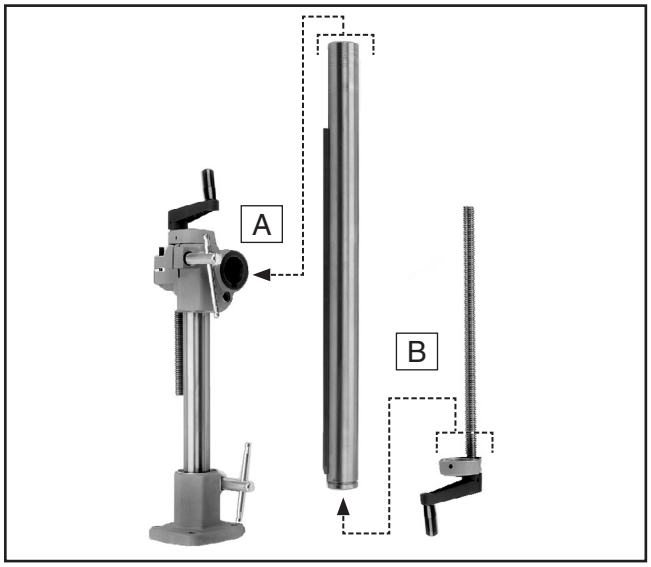


Figure 6. Stand assembly.

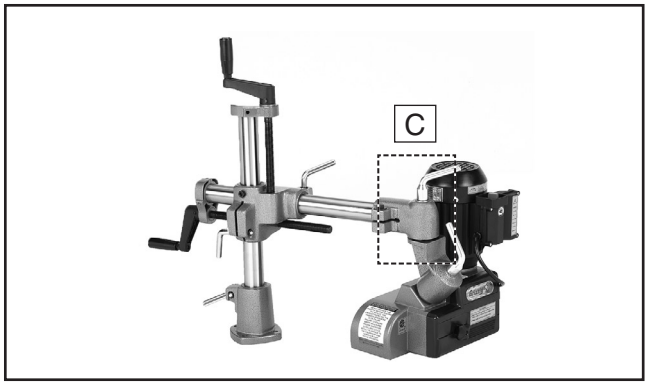


Figure 7. Assembled unit.

Base Mounting

Position the power feeder on the table top to determine where to drill your base mounting holes, so you can maximize power feeder swing and adjustment options.

There are two mounting options available: ***Through Bolt Mounting*** and ***Direct Mounting*** (discussed on **Page 15**). Choose an option that suits your requirements.

Whichever way you mount your power feeder, you must be able to use the handcranks and lock levers to position the rubber wheels parallel with the table surface and ⅛" lower than the thickness of your workpiece.

Also, you must be able to point the power feeder slightly towards the machine fence (**Figure 8**). In other words, the tracking of the power feeder must be toed-in approximately 1° to 1.5° degrees toward the machine fence so the rubber wheels slightly push the workpiece against the fence during cutting operations.

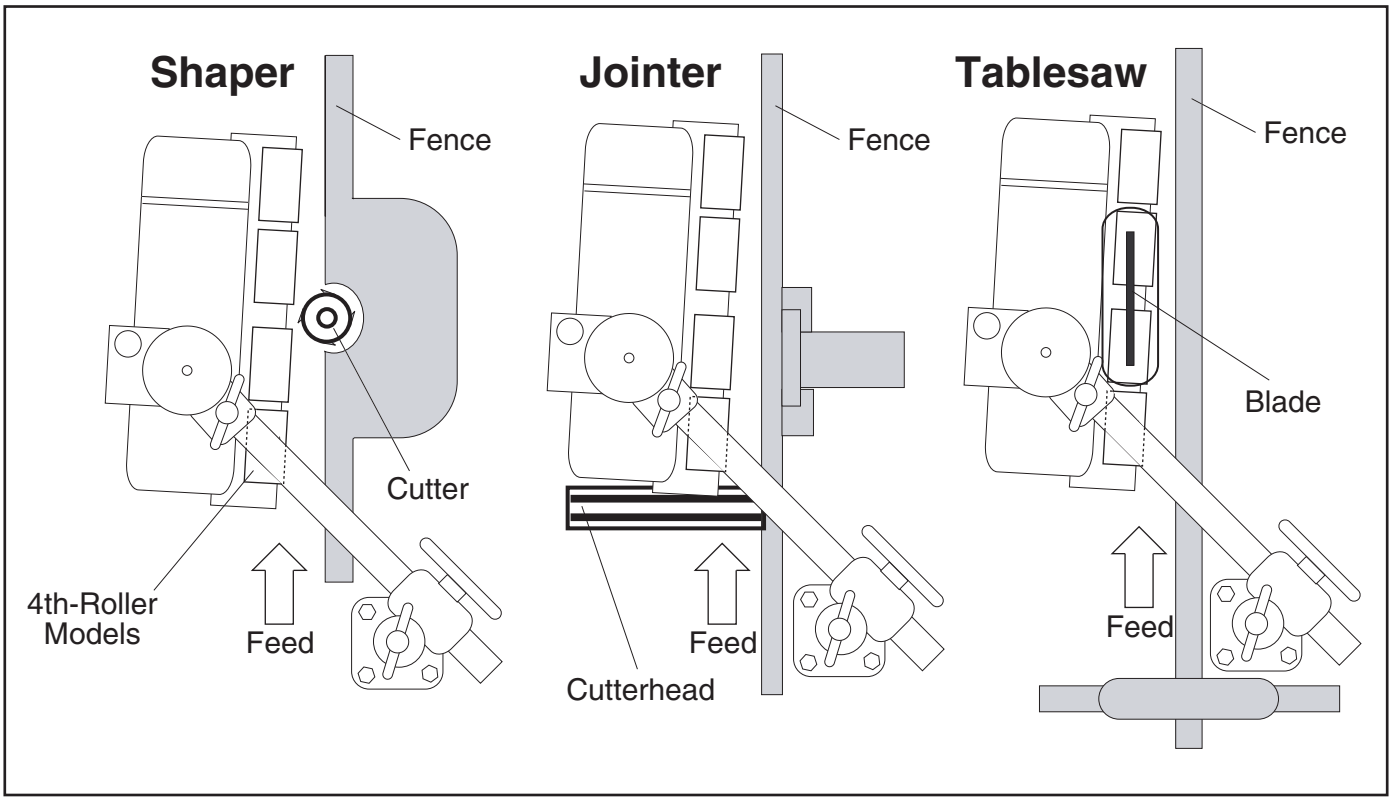


Figure 8. Typical power feed mounting on a shaper, jointer, and tablesaw.

Mounting Options

To correctly position this power feeder on your table top, completely assemble the power feeder first, then refer to this section and mount your base to the table using one of the two methods below. The reason for this order is that with the power feeder unit completely assembled, it will be easier to locate where on the table top you will need to drill your base mounting holes, so you can take advantage of the full range of power feeder swing and adjustments.

Through-Bolt Mounting

We recommend that you mount your new power feeder to the machine table with through bolts, nuts, and washers (**Figure 9**). This option will give the most rigidity and clamping strength to prevent the feeder base from twisting out of alignment during use. However, if under-table support webs interfere with washer or nut locations under the table, you must use an optional clamping kit, or drill and thread holes directly into the table as described in ***Direct Mounting***.

Direct Mounting

Use the included mounting template to drill and tap your table, so the power feeder base can be directly mounted to the table surface (**Figure 10**). If the table is thinner than ⅜" thick where the threaded holes would be drilled and tapped, or if support webbing is in the way, the threads may strip or loosen as the power feeder is used. Thread locking compound will not cure this situation. Revert to the ***Through-Bolt Mounting*** option. In any case, make sure to use a medium-grade liquid thread locking compound on all threads.

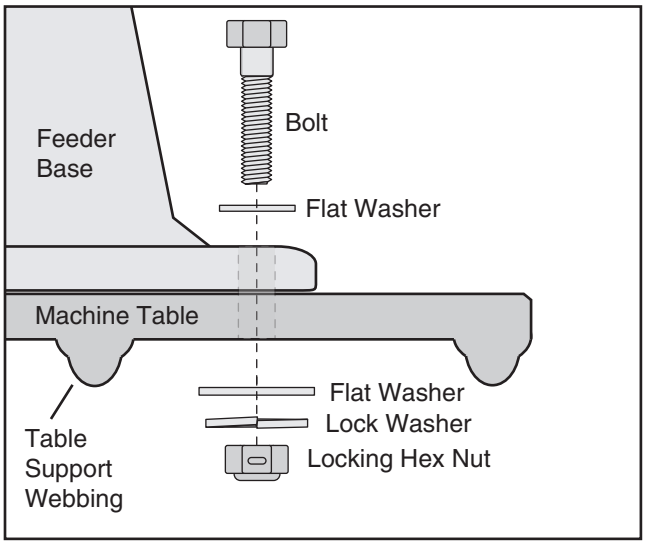


Figure 9. Through-bolt mounting.

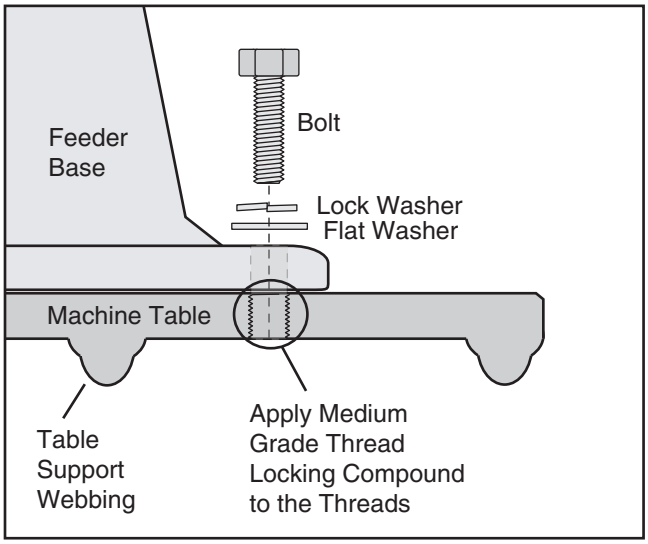


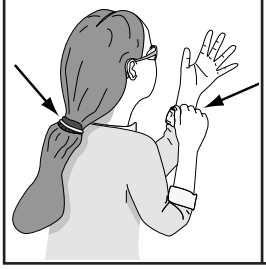
Figure 10. Direct mounting.

Test Run

Once the power feeder assembly is complete and it is mounted on the table, you must test run your power feeder to make sure it runs properly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the power feeder immediately, then review the **Troubleshooting** table on **Page 21**.

If you still cannot remedy a problem, contact our Technical Support at (570) 546-9663 for assistance.



⚠WARNING

Loose hair, clothing, or jewelry could get caught in machinery and cause serious personal injury. Keep these items away from moving parts at all times to reduce this risk.

To test run the power feed:

1. Read the entire instruction manual first!

2. Make sure all tools and foreign objects have been removed from the tabletop area.

3. Make sure that the power feeder gearbox oil level is full, the oil level should be 1" below the oil fill port. See **Figure 1** on **Page 5** for oil fill port location.

4. Ensure that all tools and objects used during set up are cleared away from the machine.

5. Adjust and lock the power feeder so the wheels are held approximately one inch above the table and nothing will interfere with wheel rotation.

6. Connect the power feeder to the power supply and use the feed direction switch (**Figure 11**) to test operation in both **FOR** and **REV** directions.

   — Listen and watch for abnormal noises or vibrations. The power feeder should run smoothly.

   —Correct for any unusual noises or vibrations before operating the power feeder any further. Always disconnect the power feeder from power when investigating or correcting potential problems.

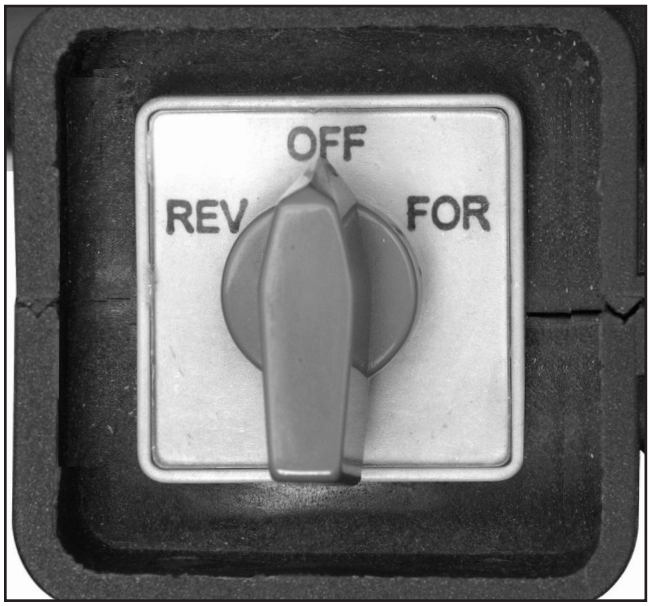
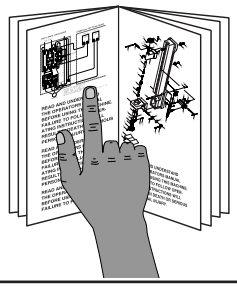


Figure 11. Feed direction switch.

SECTION 4: OPERATIONS

Operation Safety

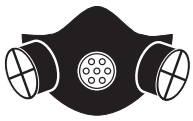


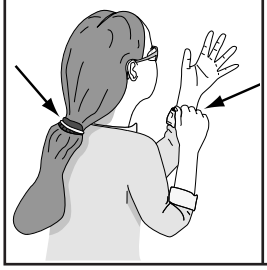
⚠WARNING

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

⚠WARNING

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





⚠WARNING

Loose hair, clothing, or jewelry could get caught in machinery and cause serious personal injury. Keep these items away from moving parts at all times to reduce this risk.

NOTICE

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

Basic Use and Care

⚠WARNING

You MUST assemble all guards, fences, and hold-downs before starting your machine or power feeder. Failure to heed this warning could result in amputation or death!

Power feeders reduce kickback hazards and improve cutting results by feeding in a consistent and stable manner. Remember, do not to stand in the path of potential kickback.

When not in use, support the power feeder with a wooden block so the rubber wheels are raised above the table and do not compress from the weight of the power feeder.

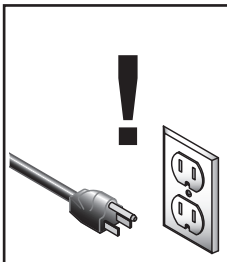
The universal joints on this power feeder allow you to adjust the power feeder tracking and height to accommodate many workpiece sizes. Before loosening any lock lever, always support the power feeder with a block of wood, so the power feeder does not drop and cause damage.

Adjust the power feeder so it is toed-in approximately 1° to 1.5° degrees towards the machine fence. This adjustment will ensure that the power feeder wheels slightly push the workpiece against the fence during cutting operations (**Figure 8**).

Next, adjust the power feeder so the rubber wheels are parallel with the table surface, and are ⅛" lower than the thickness of your workpiece. This adjustment ensures that the workpiece will not slip or hang in the middle of a cut. Always double check that the power feeder wheels are ⅛" lower than the workpiece before you begin feeding operations. Otherwise, the workpiece may slip and kickback.

Changing Feed Speed

Your power feeder has the option to feed a workpiece at six different feed rates: 13, 18, 25, 30, 41, and 62 feet per minute. These rates are achieved by changing the combination of change gears in the power feeder gear box.



⚠WARNING

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

To change the feed rate of your power feeder:

1. Move the switch to the OFF position.
2. DISCONNECT THE POWER FEEDER FROM POWER!
3. Refer to the change gear chart on the inside of the chain cover (**Figure 12**) or the table (**Figure 13**) to find the gear combination required for your chosen feed rate.

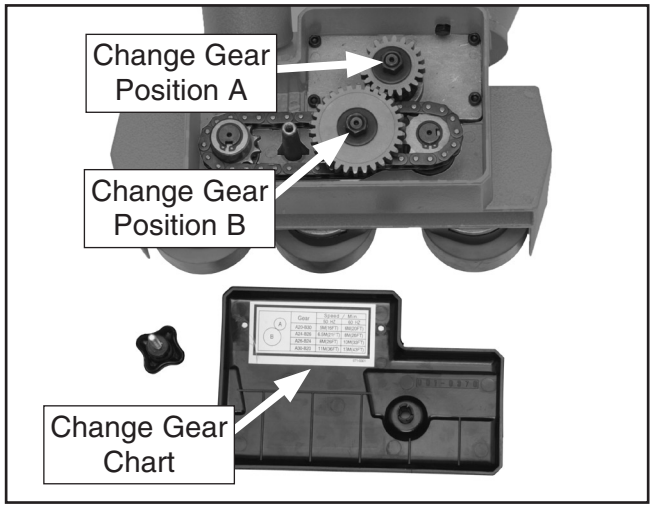


Figure 12. Change gear locations.

Installed Change Gears:
- **A**, 20 Tooth + **B**, 30 Tooth = 18 Ft/Per Min
- **A**, 30 Tooth + **B**, 20 Tooth = 41 Ft/Per Min

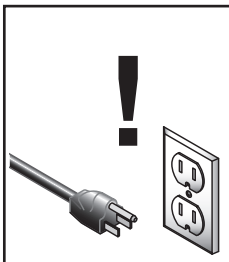
Included Accessory Change Gears:
- **A**, 24 Tooth + **B**, 26 Tooth = 25 Ft/Per Min
- **A**, 26 Tooth + **B**, 24 Tooth = 30 Ft/Per Min

Optional Model H3236 Slow Speed Kit Gears:
- **A**, 16 Tooth + **B**, 34 Tooth = 13 Ft/Per Min
- **A**, 34 Tooth + **B**, 16 Tooth = 62 Ft/Per Min

Figure 13. Change gear table.

4. Remove the chain cover and the two 14mm hex nuts securing the position **A** & **B** change gears to the shafts.
5. Swap the required gears in positions **A** & **B** shown in **Figure 12**.
6. Reinstall the hex nuts and the chain cover.

SECTION 5: MAINTENANCE



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

Schedule

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

Daily Check:
- Loose mounting bolts.
- Worn switch.
- Worn or damaged cords and plugs.
- Damaged wheel rubber.
- Any other condition that could hamper the safe operation of this machine.

Cleaning

Frequently blow-off sawdust with compressed air. This is especially important for the internal working parts and motor. Dust build-up around the motor is a sure way to decrease its life span. If the wheels become loaded up with pitch, oil, or other residues, wipe them clean using a clean rag and a mild solvent. Avoid touching the plastic or paint with mineral spirits or you may damage the surfaces.

Lubrication

- To prevent surface rust and binding, periodically clean and oil all lock lever and lead screw threads with a light machine oil.
- After the first 200 hours of use, or after the first month, change the gearbox oil with 3.5 fluid ounces of a good automotive grade 80-90W gear oil. For the remaining life of the power feeder, change the oil every 1000 hours, or every 6 months. **Note:** *To drain the unit, remove the fill plug labeled "OIL" and invert the power feeder.*
- Every 40 hours of use, or once every two weeks, wipe clean and lubricate the wheel grease fittings (**Figure 14**) with one pump from a grease gun filled with automotive grade GL-2 grease.

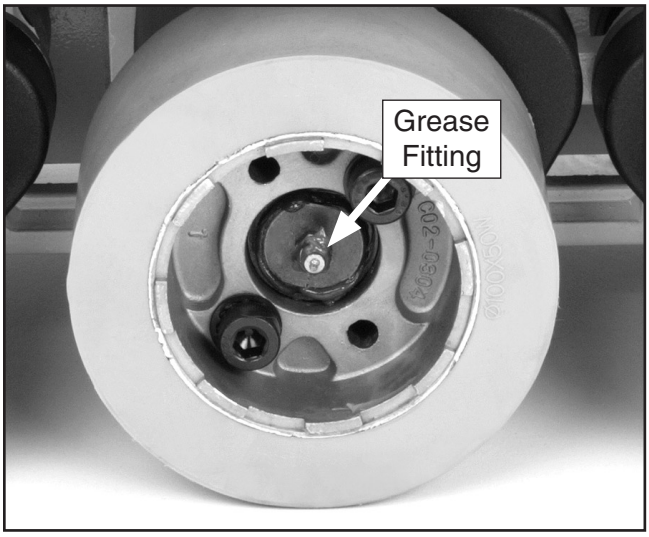


Figure 14. Wheel lubrication.

- As required to prevent rust, binding, and dry spots, brush the sprockets, chain, and change gears (**Figure 15**) with a light film of an automotive grade GL-2 grease.

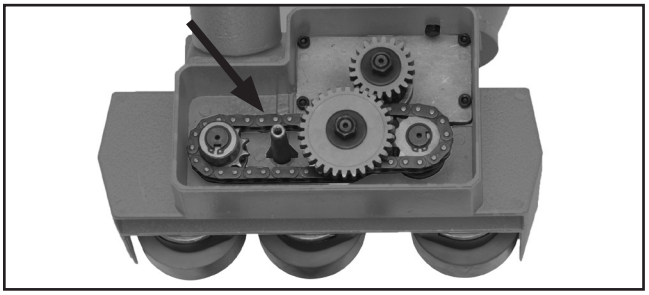
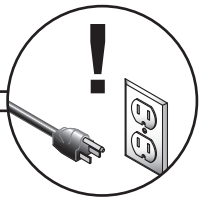


Figure 15. Sprockets, chain, and change gears.

SECTION 6: SERVICE

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

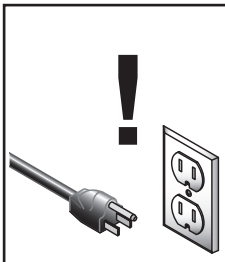
Troubleshooting



Motor & Electrical

Symptom	Possible Cause	Possible Solution
Motor will not start.	1. Low voltage. 2. Open circuit in motor or loose connections. 3. Blown fuse tripped circuit breaker. 4. Capacitor at fault. 5. Motor switch or motor is at fault.	1. Check power supply for proper voltage. 2. Inspect all lead connections on motor and circuit board for loose or open connections. 3. Repair for cause of overload and replace fuse or reset circuit breaker. 4. Replace capacitor. 5. Replace switch, or motor.
Fuses or circuit breakers trip.	1. Short circuit in line cord or plug. 2. Short circuit in motor or loose connections. 3. Power feeder rollers are jammed.	1. Inspect cord or plug for damaged insulation and shorted wires and replace extension cord. 2. Inspect all connections on motor for loose or shorted terminals or worn insulation. 3. Disconnect all machinery from power and correct for cause of jamming.
Motor overheats.	1. Motor overloaded. 2. Air circulation through the motor restricted.	1. Reduce power feeder feed rate. 2. Clean out motor fan cover to provide normal air circulation.
Workpiece jams when feeding under rollers.	1. Rollers set too low. 2. Feeder at wrong angle.	1. Raise feeder. 2. Adjust angle.
Workpiece slips while passing beneath rollers.	1. Rollers positioned too high, no traction. 2. Feeding too fast. 3. Rollers are dirty or oily. 4. Worn roller(s).	1. Lower feeder. 2. Slow feed speed. 3. Clean roller surface with a mild solvent. 4. Replace roller(s) (**Page 21**).
Workpiece cut is burnt.	1. Wrong feed speed. 2. Cutter is at fault.	1. Adjust feed speed. 2. Sharpen or replace dull blade or cutter.
Rough finish or chipped grain on workpiece.	1. Feed speed too fast. 2. Dull cutter or blade. 3. Power feeder angle is not toed in to keep workpiece against the fence.	1. Slow speed. 2. Replace with sharp cutter or blade. 3. Adjust power feeder so it is toed-in 1° to 1.5° toward the fence.
Fuzzy grain occurs when planing or moulding.	1. Lumber has high moisture content. 2. Dull knives/cutter.	1. If moisture content is higher than 20%, sticker and allow to dry. 2. Sharpen or replace knives.
Workpiece hangs and does not enter the machine.	1. Power feeder roller height is set incorrectly.	1. Lower the power feeder roller ⅛" lower than the height of the workpiece.

Wheel Replacement



⚠WARNING

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

If you damage one or more wheels or they are worn, you can easily replace the wheels.

Tools Needed **Qty**

- Hex Wrench 5mm..... 1

To replace a wheel:

1. DISCONNECT THE POWER FEEDER FROM POWER!
2. Using a 5mm hex wrench, remove the two wheel retaining cap screws (**Figure 16**).

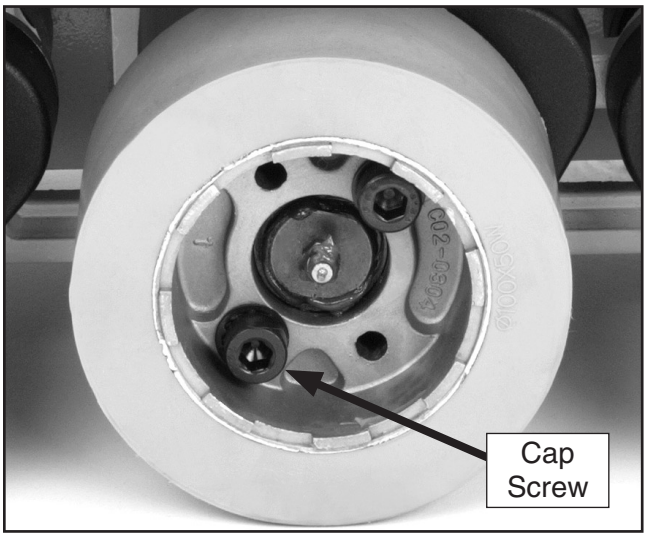


Figure 16. Wheel replacement.

3. Swap the old wheel with the new.
4. Reinstall the two cap screws, and tighten in an alternating pattern until the wheel is secure**.**

SECTION 7: WIRING

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Study this diagram carefully. If you notice differences between your machine and these wiring diagrams, call Technical Support at (570) 546-9663 for assistance.

⚠WARNING
Electrical Safety Instructions

1. **CIRCUIT REQUIREMENTS.** You MUST follow the **CIRCUIT REQUIREMENTS** given on **Page 9**. **If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, consult a qualified electrician.**

2. **SHOCK HAZARD.** Disconnect the power from the machine before servicing electrical components. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death.

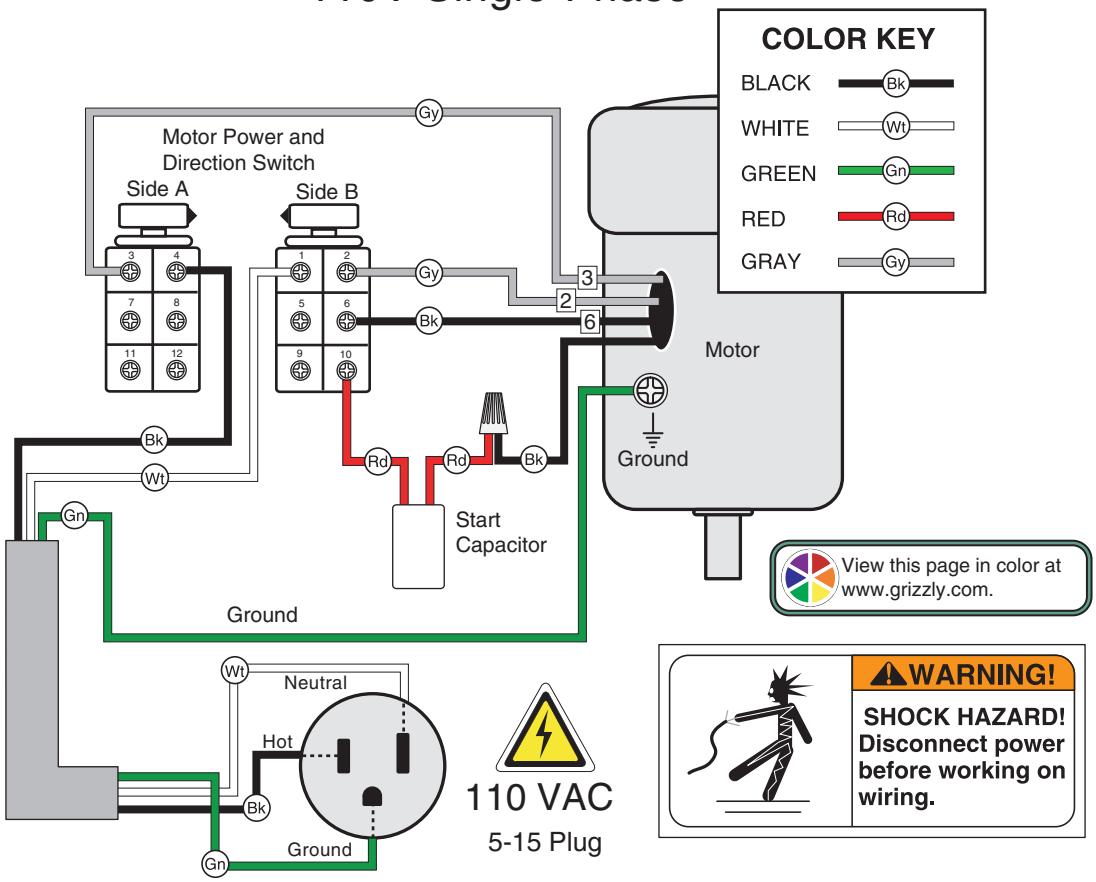
3. **MOTOR WIRING.** The motor wiring shown in these diagrams are current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.

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

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

Wiring Diagram

Model G4176 Power Feeder
110V Single-Phase



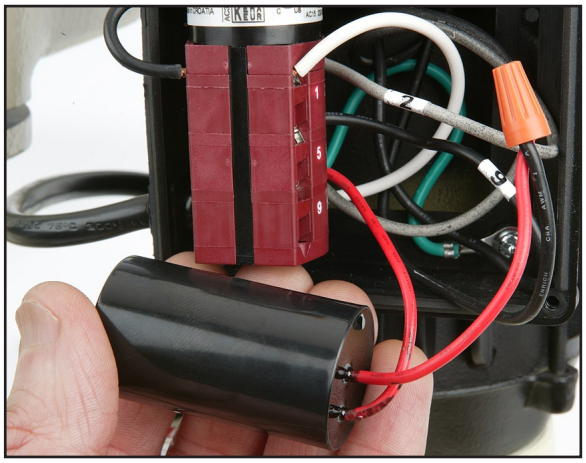


Figure 17. Motor capacitor.

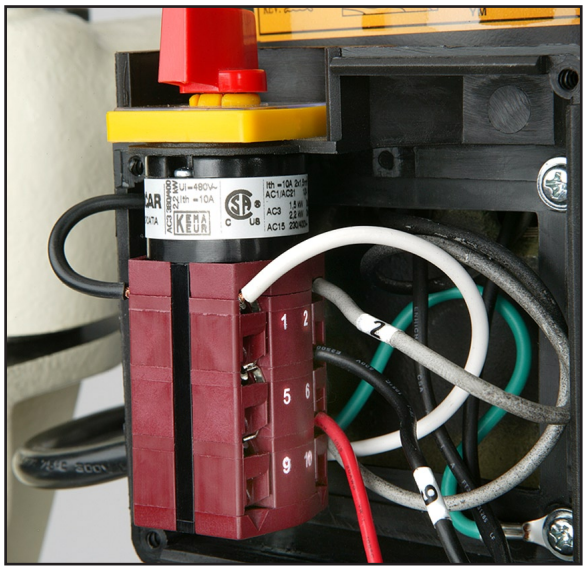
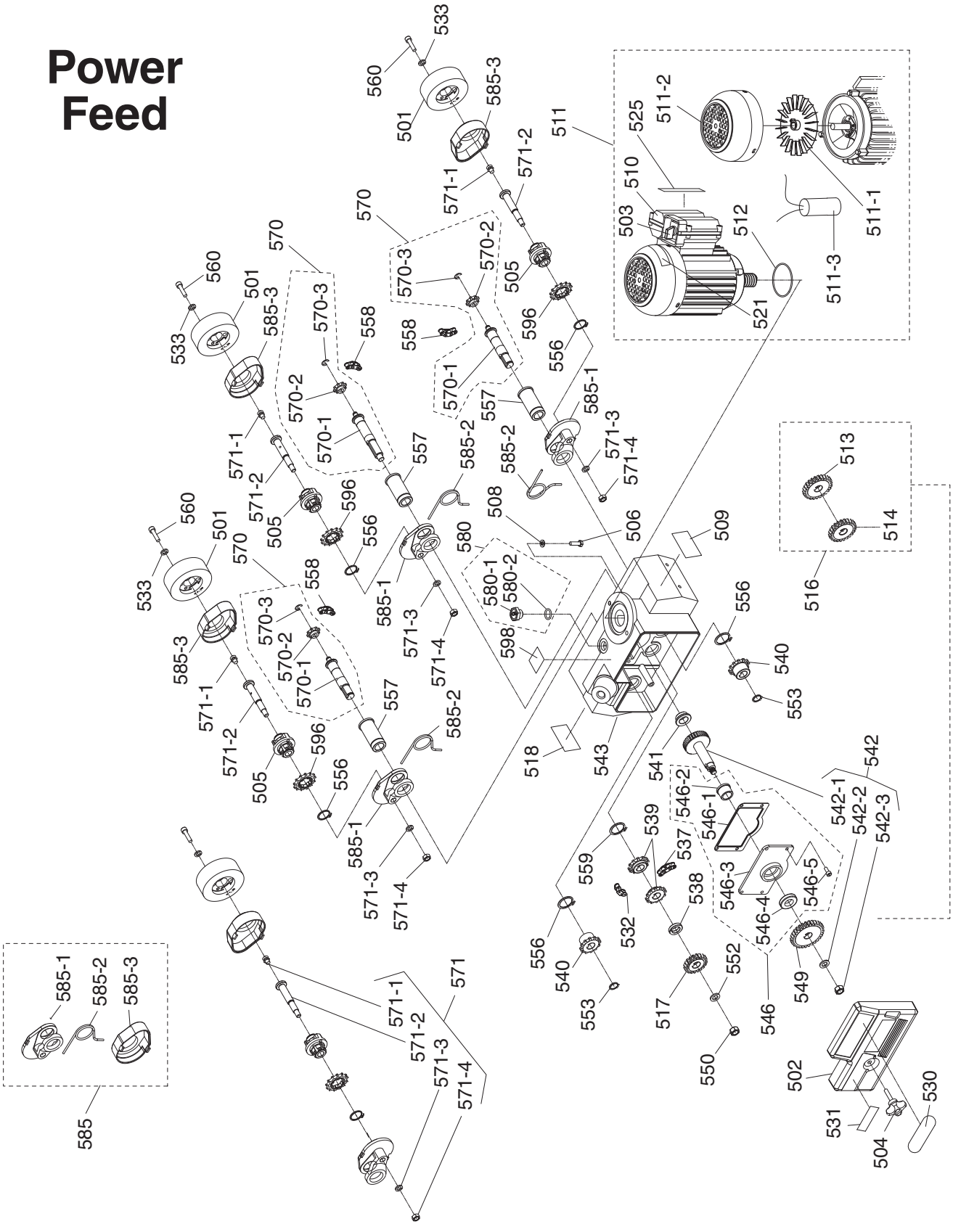


Figure 18. Motor power and direction switch.

SECTION 8: PARTS

Power Feed

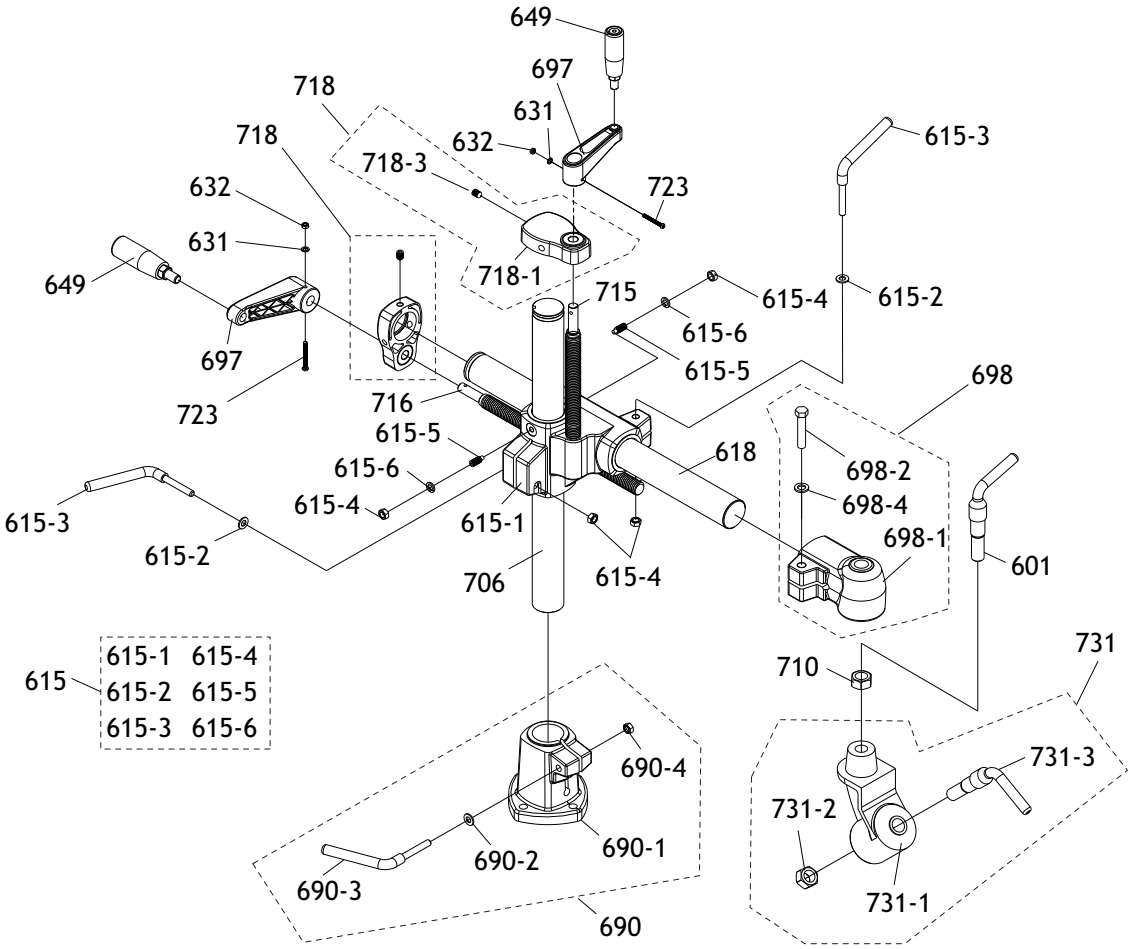


Power Feed Parts List

REF	PART #	DESCRIPTION
501	P4176501	RUBBER WHEEL
502	P4176502	GEAR COVER
503	P4176503	SWITCH ASSEMBLY
504	P4176504	KNOB BOLT
505	P4176505	SPROCKET BUSHING
506	PB08M	HEX BOLT M6-1 X 20
508	PW03M	FLAT WASHER 6MM
509	P4176509	QC LABEL
510	P4176510	SWITCH BOX ASSEMBLY
511	P4176511	MOTOR 1/4HP 110V
511-1	P4176511-1	MOTOR FAN
511-2	P4176511-2	FAN COVER
511-3	PC020A	CAPACITOR 20MFD 250V
512	P4176512	SEAL
513	P4176513	GEAR 24T
514	P4176514	GEAR 26T
516	P4176516	GEAR SET 24T, 26T
517	P4176517	GEAR 20T
518	P4176518	GENERAL WARNING LABEL
521	P4176521	SWITCH DIRECTION LABEL
525	P4176525	ELECTRICITY WARNING LABEL
530	P4176530	DOMED GRIZZLY LABEL
531	P4176531	COVER WARNING LABEL
532	P4176532	CHAIN
533	PLW03M	LOCK WASHER 6MM
537	P4176537	CHAIN
538	P4176538	BUSHING
539	P4176539	SPROCKET
540	P4176540	SPROCKET
541	P4176541	BUSHING
542	P4176542	WORM GEAR SHAFT ASSEMBLY
542-1	P4176542-1	WORM GEAR SHAFT
542-2	PW02	FLAT WASHER 3/8
542-3	PN02M	HEX NUT M10-1.5

REF	PART #	DESCRIPTION
543	P4176543	FRAME
546	P4176546	WORM GEAR BOX COVER ASSEMBLY
546-1	P4176546-1	GASKET
546-2	P4176546-2	BUSHING
546-3	P4176546-3	COVER
546-4	P4176546-4	OIL SEAL
546-5	PSB33M	CAP SCREW M5-.8 X 12
549	P4176549	GEAR 30T
550	PN02M	HEX NUT M10-1.5
552	PW04M	FLAT WASHER 10MM
553	PR47M	EXT RETAINING RING 13MM
556	PR58M	EXT RETAINING RING 24MM
557	P4176557	TUBE
558	P4176558	CHAIN ASSEMBLY (18S)
559	PR58M	EXT RETAINING RING 24MM
560	PSB06M	CAP SCREW M6-1 X 25
570	P4176570	SPROCKET SHAFT ASSEMBLY
570-1	P4176570-1	SPROCKET SHAFT
570-2	P4176570-2	SPROCKET
570-3	PEC04M	E-CLIP 13MM
571	P4176571	SPROCKET SHAFT ASSEMBLY
571-1	P4176571-1	GREASE NIPPLE
571-2	P4176571-2	SHAFT
571-3	PLW04M	LOCK WASHER 8MM
571-4	PN03M	HEX NUT M8-1.25
580	P4176580	OIL CAP ASSEMBLY
580-1	P4176580-1	OIL CAP
580-2	PORP016	O-RING 15.8 X 2.4 P16
585	P4176585	SPROCKET CASE ASSEMBLY
585-1	P4176585-1	SPROCKET CASE
585-2	P4176585-2	SPRING 36 X 6
585-3	P4176585-3	CASE COVER
596	P4176596	SPROCKET
598	P4176598	LUBRICATION LABEL

Base



Base Parts List

REF	PART #	DESCRIPTION
601	P4176601	LEVER
615	P4176615	ELEVATING BRACKET ASSEMBLY
615-1	P4176615-1	ELEVATING BRACKET
615-2	PW01M	FLAT WASHER 8MM
615-3	P4176615-3	LEVER M8-1.25
615-4	PN03M	HEX NUT M8-1.25
615-5	P4176615-5	DOG POINT SET SCREW
615-6	PLW04M	LOCK WASHER 8MM
618	P4176618	OVER ARM SHAFT
631	PLW02M	LOCK WASHER 4MM
632	PN04M	HEX NUT M4-.7
649	P4176649	HANDLE
690	P4176690	BASE ASSEMBLY
690-1	P4176690-1	BASE
690-2	PW01M	FLAT WASHER 8MM
690-3	P4176690-3	LEVER M8-1.25
690-4	PN03M	HEX NUT M8-1.25

REF	PART #	DESCRIPTION
697	P4176697	HAND CRANK
698	P4176698	OVER ARM CONE ASSEMBLY
698-1	P4176698-1	OVERARM CONE
698-2	PB73M	HEX BOLT M10-1.5 X 50
698-4	PLW06M	LOCK WASHER 10MM
706	P4176706	ELEVATING SHAFT
710	PN13M	HEX NUT M16-2
715	P4176715	ELEVATING SCREW
716	P4176716	LEADSCREW
718	P4176718	COLUMN CAP ASSEMBLY
718-1	P4176718-1	COLUMN CAP
718-3	PSS16M	SET SCREW M8-1.25 X 10
723	PS25M	PHLP HD SCR M4-.7 X 35
731	P4176731	SWIVEL CONE ASSEMBLY
731-1	P4176731-1	SWIVEL CONE
731-2	PN13M	HEX NUT M16-2
731-3	P4176731-3	LEVER M16-2

Grizzly Industrial, Inc. WARRANTY CARD

Name _____

Street _____

City _____ State _____ Zip _____

Phone # _____ Email _____ Invoice # _____

Model # _____ Order # _____ Serial # _____

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. ***Of course, all information is strictly confidential.***

1. How did you learn about us?

____ Advertisement ____ Friend ____ Catalog
____ Card Deck ____ Website ____ Other:

2. Which of the following magazines do you subscribe to?

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

3. What is your annual household income?

____ $20,000-$29,000 ____ $30,000-$39,000 ____ $40,000-$49,000
____ $50,000-$59,000 ____ $60,000-$69,000 ____ $70,000+

4. What is your age group?

____ 20-29 ____ 30-39 ____ 40-49
____ 50-59 ____ 60-69 ____ 70+

5. How long have you been a woodworker/metalworker?

____ 0-2 Years ____ 2-8 Years ____ 8-20 Years ____ 20+ Years

6. How many of your machines or tools are Grizzly?

____ 0-2 ____ 3-5 ____ 6-9 ____ 10+

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

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

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

10. Comments: _____

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WARRANTY AND RETURNS

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

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

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number,'' which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.

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