

# *Grizzly* *Industrial, Inc.*®

## MODEL G4173 1/8 HP POWER FEEDER OWNER'S MANUAL



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#CR10760 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

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## Foreword

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We are proud to offer the Model G4173 1/8 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 G4173 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

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

## Functional Overview

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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 and 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 G4173 BABY POWER FEEDER

### Product Dimensions:

Weight..... 20 lbs.  
 Length/Width/Height..... 31 x 11 x 12 in.  
 Foot Print (Length/Width)..... N/A x N/A

### Shipping Dimensions:

Type..... Cardboard  
 Content..... Machine  
 Weight..... 26.70 lbs.  
 Length/Width/Height..... 11 x 22 x 9 in.

### Electrical:

Switch..... On/Off Variable Speed  
 Switch Voltage..... 110V  
 Cord Length..... 9 ft.  
 Cord Gauge..... 18 gauge  
 Recommended Breaker Size..... 15 amp  
 Plug..... Yes

### Motors:

#### Main

Type..... Universal Variable Speed  
 Horsepower..... 1/8 HP  
 Voltage..... 110V  
 Prewired..... 110V  
 Phase..... Single  
 Amps..... 1.2A  
 Speed..... 550 - 3300 RPM  
 Cycle..... 60 Hz  
 Number Of Speeds..... Variable  
 Power Transfer ..... Gear Box  
 Bearings..... Lubricated for Life

### Main Specifications:

#### Workpiece Capacities

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

#### Operation Info

No. Of Feed Speeds..... Variable  
 Feed Speeds..... 6-1/2 - 39 FPM  
 Swing..... 360 deg.  
 Vertical Movement..... 10-1/4 in.  
 Horizontal Movement..... 10-1/4 in.  
 Rotation..... Forward, Reverse



**Roller Info**

No. Of Rollers.....3  
 Roller Width.....1-3/16 in.  
 Roller Diameter..... 3 in.  
 Roller Suspension..... 5/16 in.  
 Max Height Rollers Parallel Table Surface..... 6 in.  
 Centers Between Rollers..... 3-3/4 in.

**Other**

Column Diameter.....15/16 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 ..... Serial Number Sticker On Motor Specification Plate Outside The Motor  
 Assembly Time ..... 20 minutes

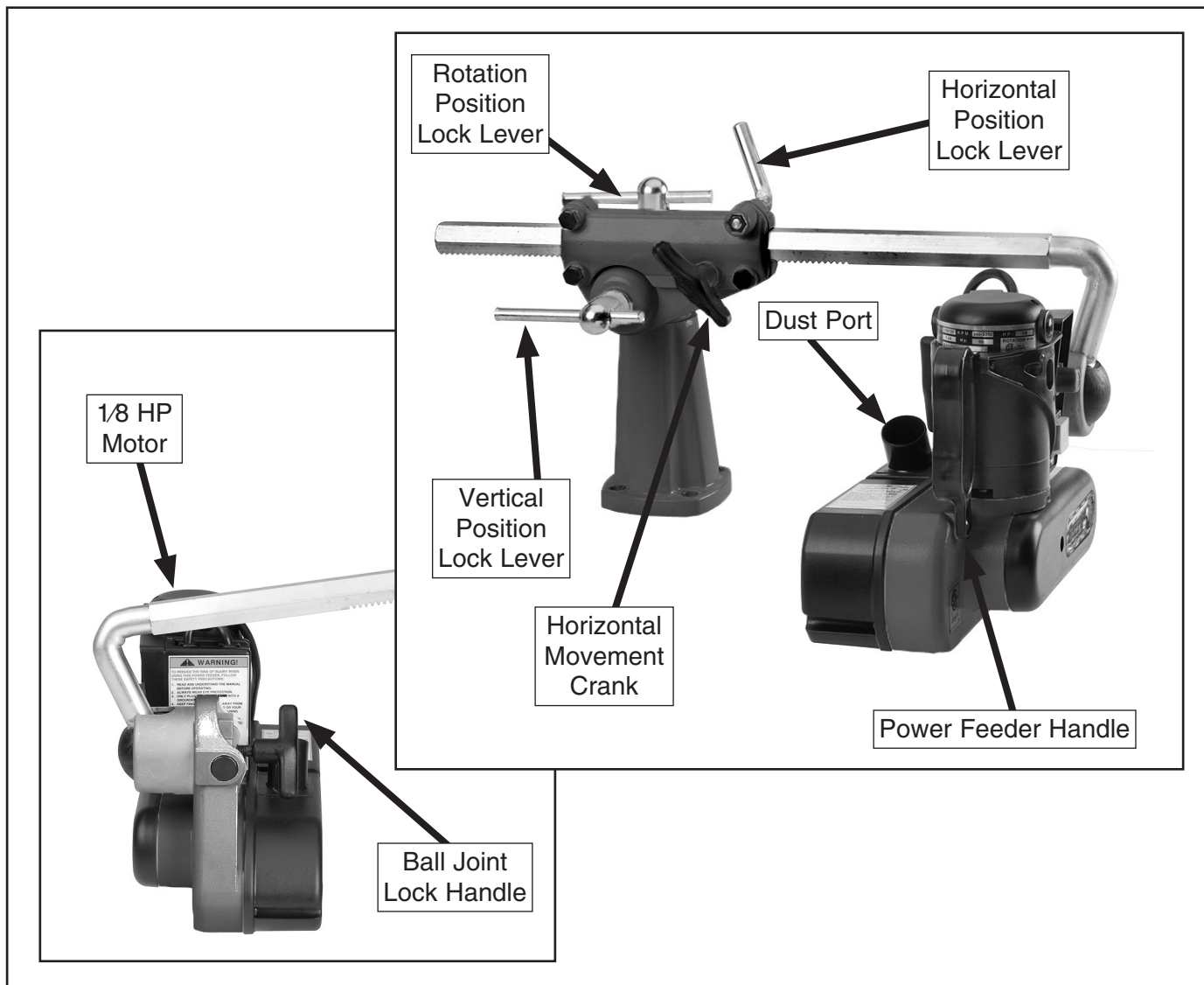
**Features:**

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.



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. 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 working 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 between 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..... 1.2 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 G4173 comes with a 5-15 plug, similar to **Figure 2**, to connect the machine to power.

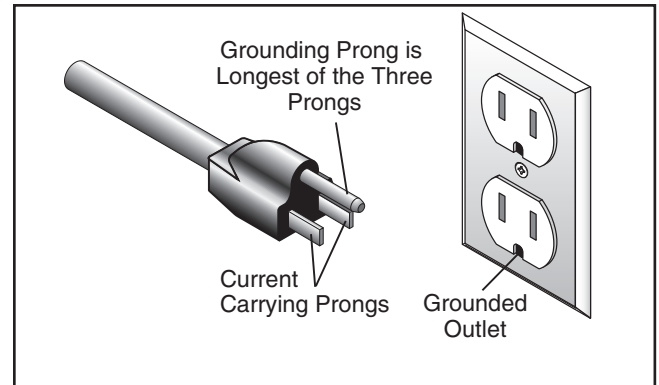
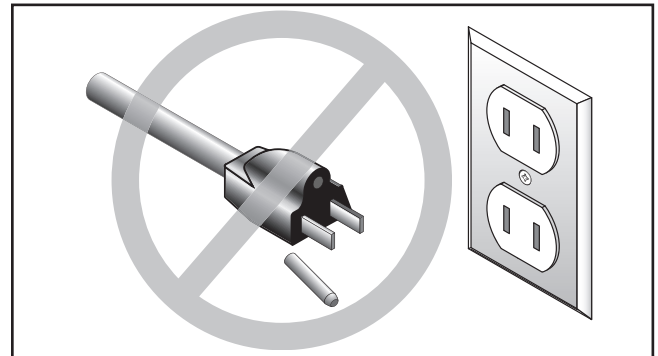


Figure 2. Typical 5-15 plug and receptacle.



### **⚠️ 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

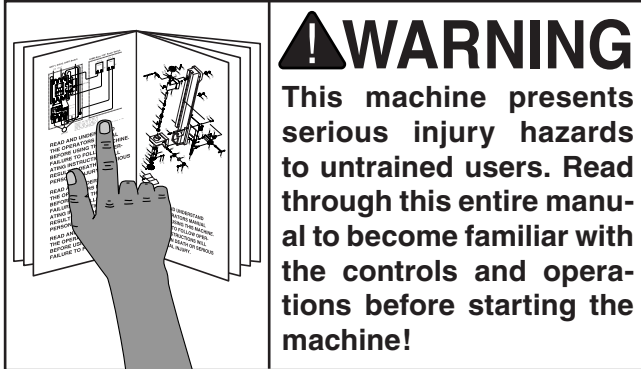
We do not recommend using extension cords, but if you find it absolutely necessary:

- 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



## Items Needed for Setup

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

Description	Qty
• Straightedge 24" .....	1
• Safety Glasses .....	1
• Shop Vacuum or Dust Collection System ..	1
• 1 $\frac{3}{8}$ " ID Shop Vacuum Hose .....	1
• Combination Wrench 14mm .....	1
• Hex Wrench 8mm .....	1
• Standard Screwdriver #2 .....	1

## Unpacking

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

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

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



# 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. Base .....	1
B. Arm Bracket.....	1
C. Power Feeder Unit.....	1
D. Arm.....	1
E. Base Mounting Template.....	1
F. Elbow Clamp Assembly.....	1
G. Ball Joint Assembly .....	1
H. Hardware Bag (Figure 4).....	1
—Cap Screw M10-1.5 x 25mm (Elbow Clamp).....	1
—Hex Bolt M10-1.5 x 50mm ...(Elbow Clamp).....	3
—Lock Lever (Arm Bracket Clamp).....	1
—Hex Nut M8-1.25mm (Arm Bracket Clamp).....	1
—Flat Washer 8mm (Arm Bracket Clamp) .....	1
—T-Handle and Pivot Bar (Ball Joint Assembly).....	1
—Hex Bolt M10-1.5 x 35mm (Base) .....	4
—Lock Washer 10mm (Base) .....	4
—Hex Nut M10-1.5mm (Base).....	4

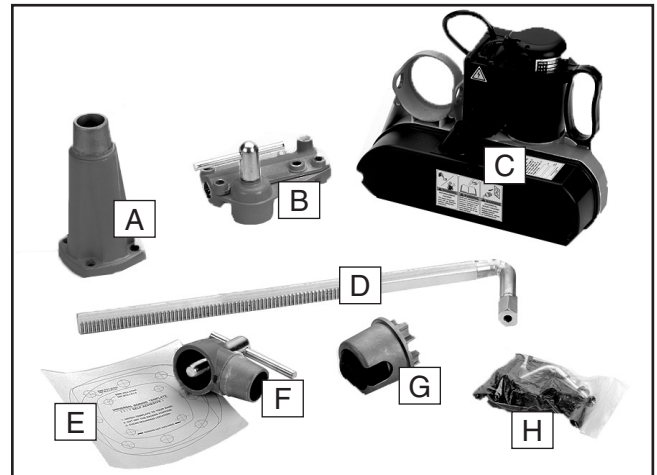


Figure 3. Box inventory.

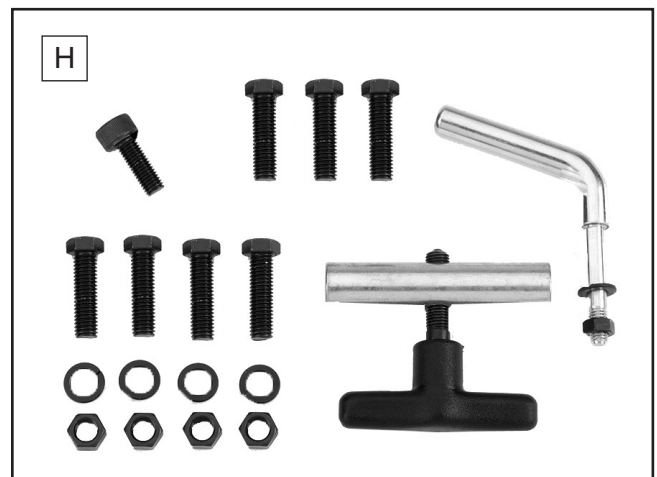



Figure 4. Hardware inventory.

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.



**⚠ WARNING**

**SUFFOCATION HAZARD!**

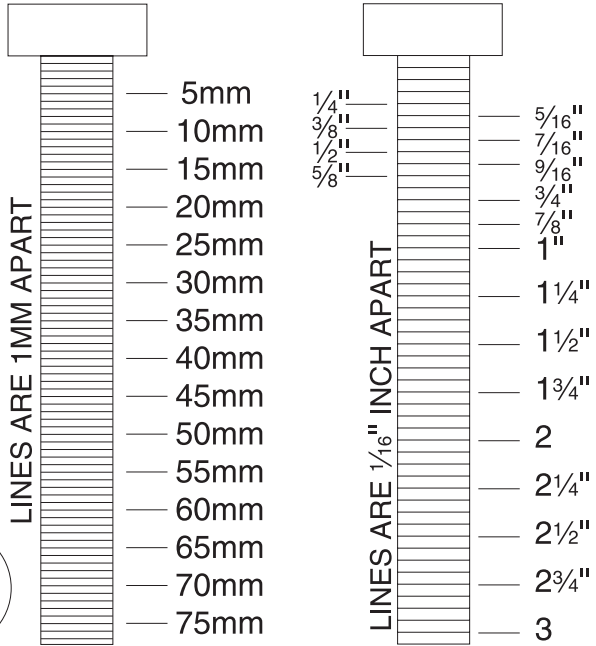
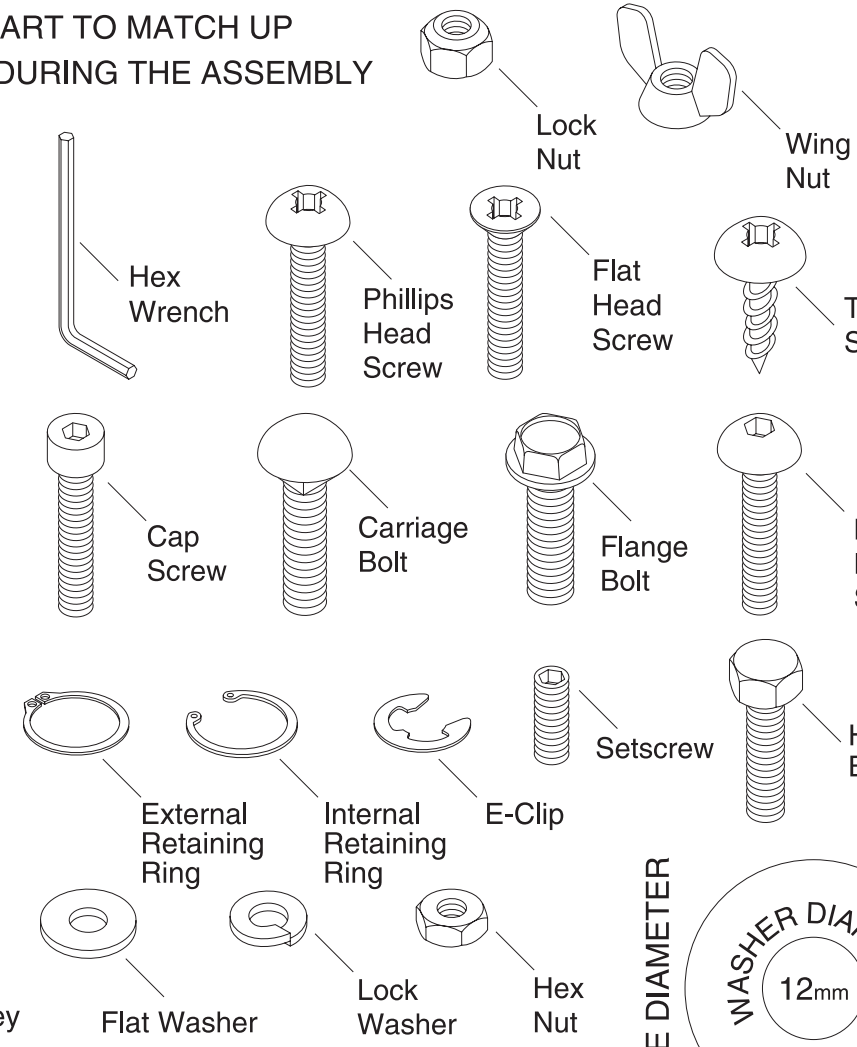
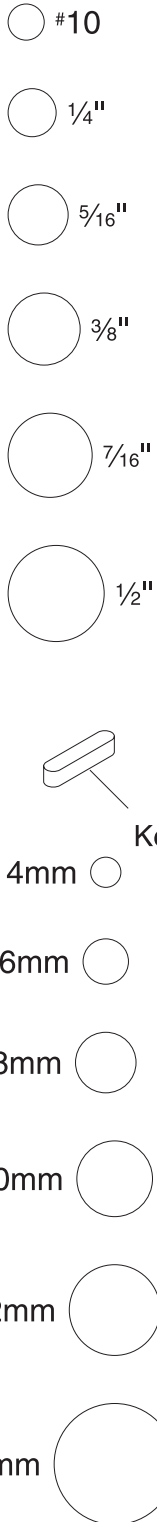
Immediately discard all plastic bags and packing materials to eliminate choking/suffocation hazards for children and animals.



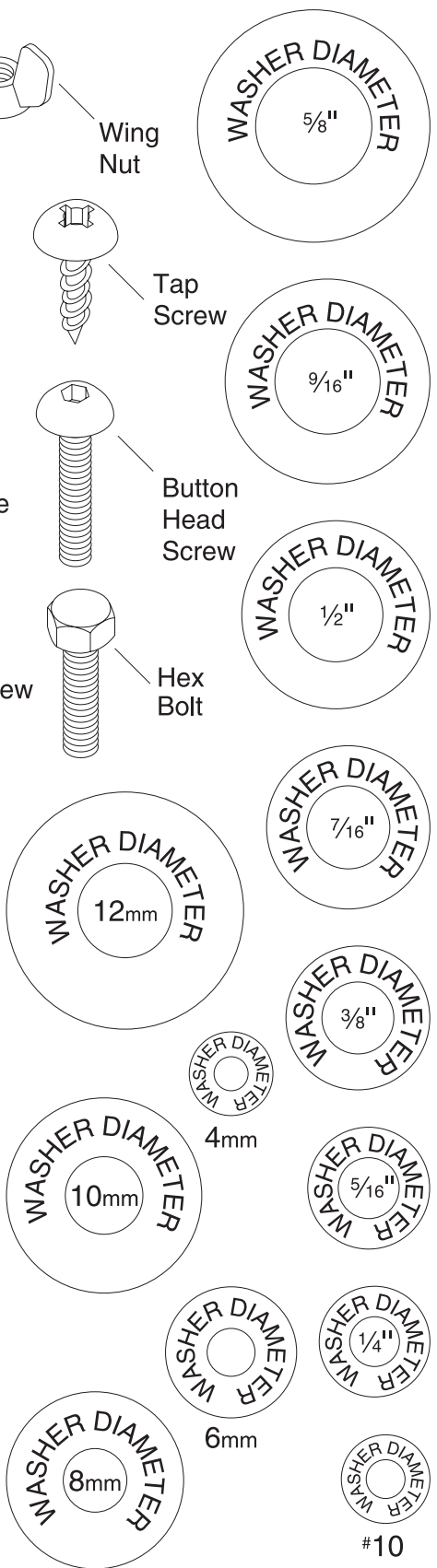
# Hardware Recognition Chart

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

MEASURE BOLT DIAMETER BY PLACING INSIDE CIRCLE

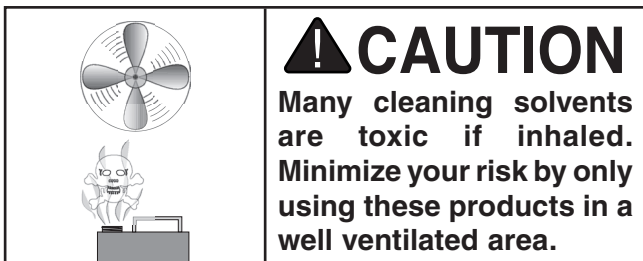
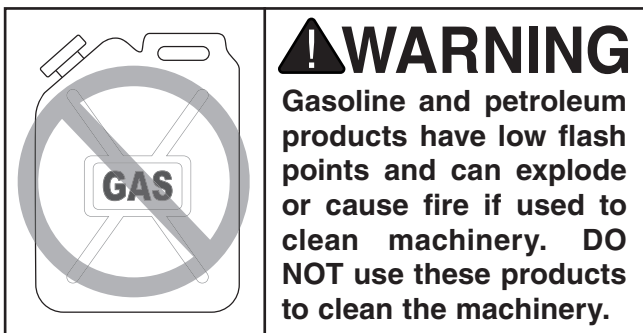


WASHERS ARE MEASURED BY THE INSIDE DIAMETER



# 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.



## G2544—Solvent Cleaner & Degreaser

A great product for removing the waxy shipping grease from your machine during clean up.



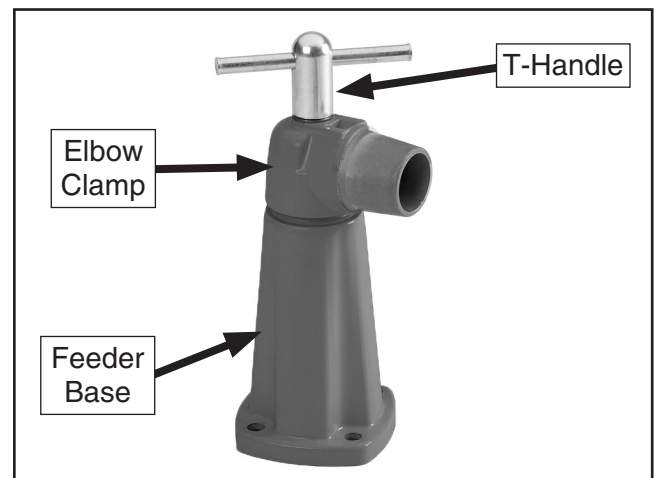
**Figure 5.** Cleaner/degreaser available from Grizzly.

# Assembly

To correctly position this power feeder on your table top, completely assemble the power feeder first, then refer to Base Mounting on Page 17. 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.

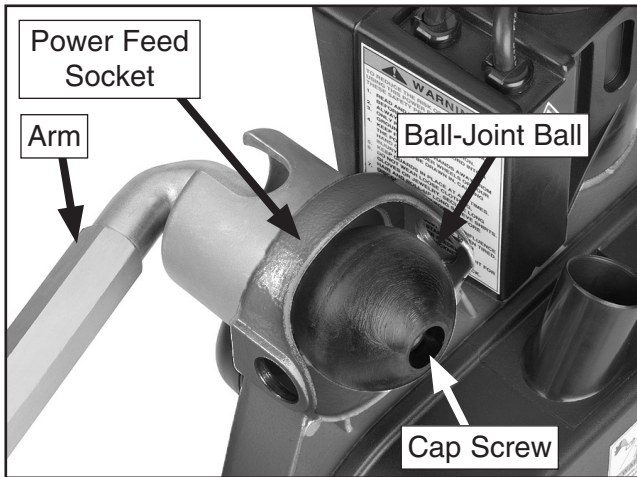
To assemble the power feeder:

1. Oil the T-handle threads and position the elbow clamp assembly onto the feeder base as shown in **Figure 6**.



**Figure 6.** Assembled elbow clamp assembly.

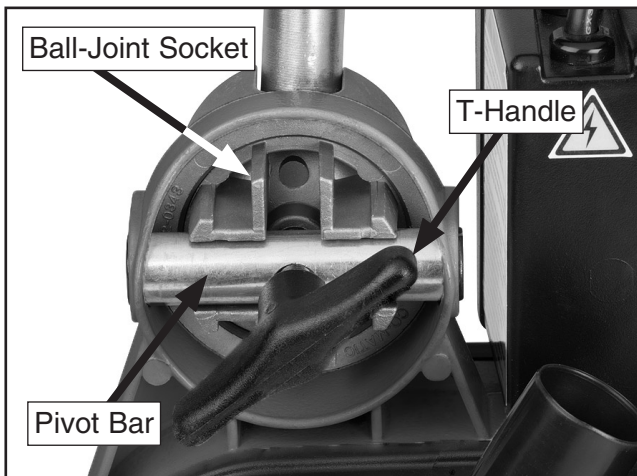
2. Thread the T-handle into the feeder base until the elbow is snug.
3. Insert the arm into the ball-joint ball and secure both together with the M10-1.5 x 25mm cap screw shown in **Figure 7**.
4. Insert the ball joint assembly into the power feed socket shown in **Figure 7**.



**Figure 7.** Arm, ball joint and socket assembly.

5. Insert the ball-joint socket into the power feed socket as shown in **Figure 7**, so it rests against the ball-joint ball.

**Note:** Lubrication is not necessary for the ball joint assembly.

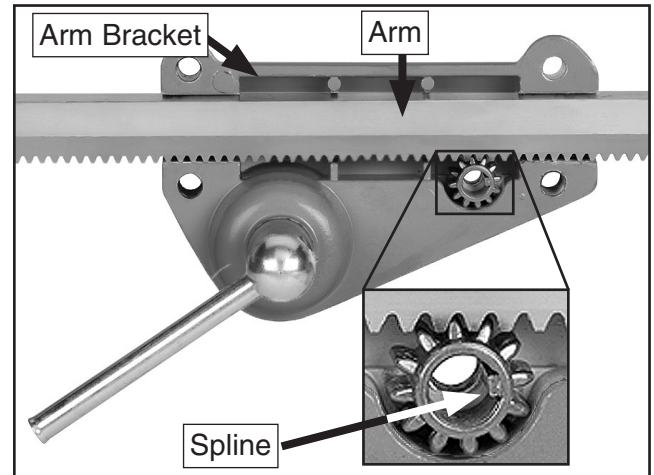


**Figure 8.** Assembled ball joint assembly.

6. Align the ball-joint socket with the power feeder socket and insert the pivot bar as shown in **Figure 8**.
7. Lightly oil the T-handle threads.
8. Thread the T-handle through the pivot bar so the end of the T-handle bolt presses against the ball-joint socket firmly (see **Figure 8**).

9. Place the arm into the arm bracket so the teeth of the gear and arm mesh as shown in **Figure 9**.

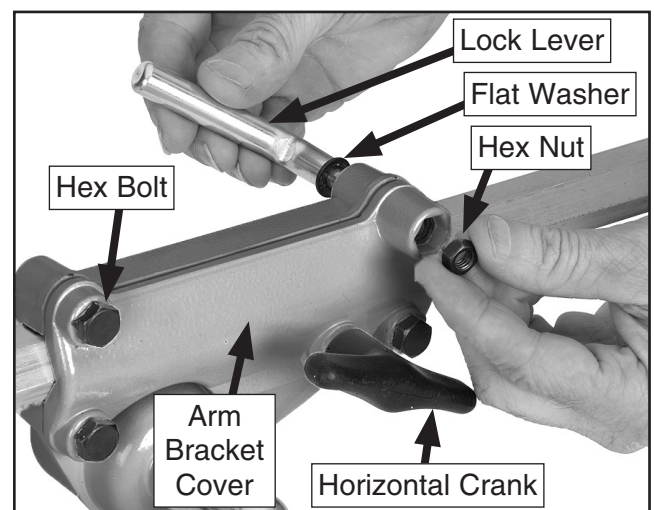
**Note:** No lubrication is required for the gear or rack teeth. Oil or grease will gather debris, making the horizontal adjustment of the power feeder difficult.



**Figure 9.** Arm bracket gearing.

10. Install the arm bracket cover and lock lever with the remaining hex bolts washers and nut as shown in **Figure 10**.

**Note:** Make sure that you do not tighten the hex bolts so much as to prevent the arm from sliding in and out of the arm bracket when the horizontal crank is turned.

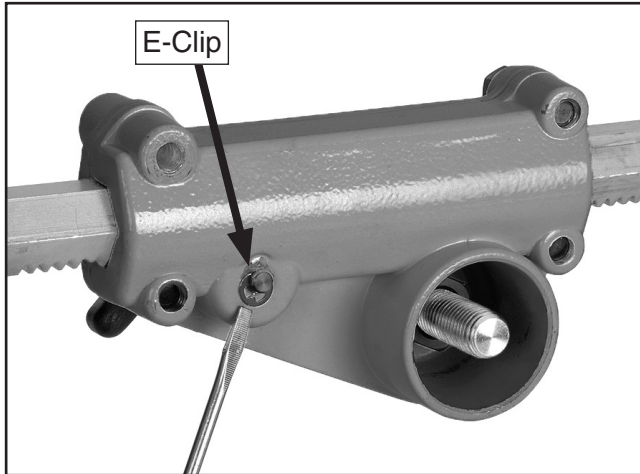


**Figure 10.** Assembling arm bracket.

11. Insert the horizontal crank (**Figure 10**) completely so it engages the spline in the gear (**Figure 9**).



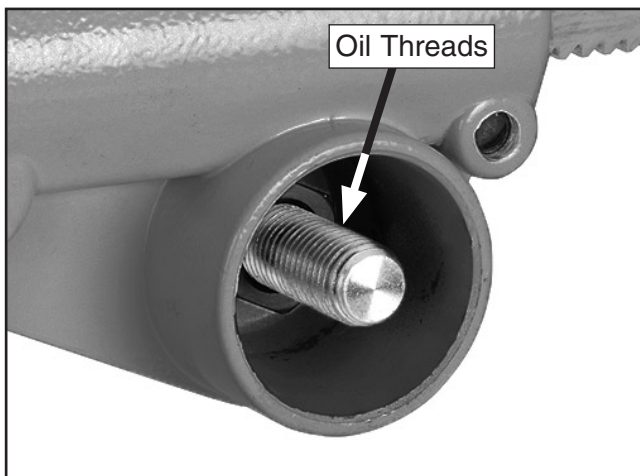
12. Place the E-clip on the end of the horizontal crank to retain the crank as shown in **Figure 11**.



**Figure 11.** Horizontal crank handle E-clip.

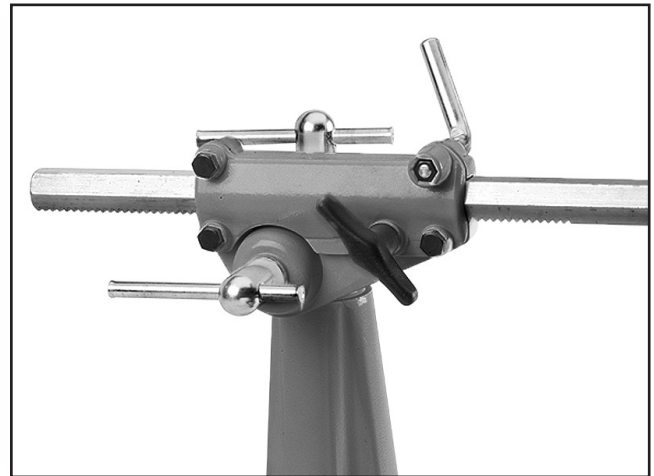
13. Turn the horizontal crank to make sure that the cover bolts are not too tight or too loose. Adjust the three cover hex bolts as required to achieve a slight drag between the arm and arm bracket.
14. Lightly oil the T-handle threads shown in **Figure 12**.

**Note:** No lubrication is required for the arm bracket and the elbow clamp connection.



**Figure 12.** Arm bracket handle threads.

15. Position the arm bracket onto the elbow clamp as shown in **Figure 13**.



**Figure 13.** Arm bracket and elbow clamp assembly.

16. Thread the T-handle into the elbow clamp so both assemblies are secure as shown in **Figure 13**.
17. Use the levers to lock the power feeder into position, such as the example shown in **Figure 14**.



**Figure 14.** Typical power feed mounting using an optional Model G4175 Quick Holder.

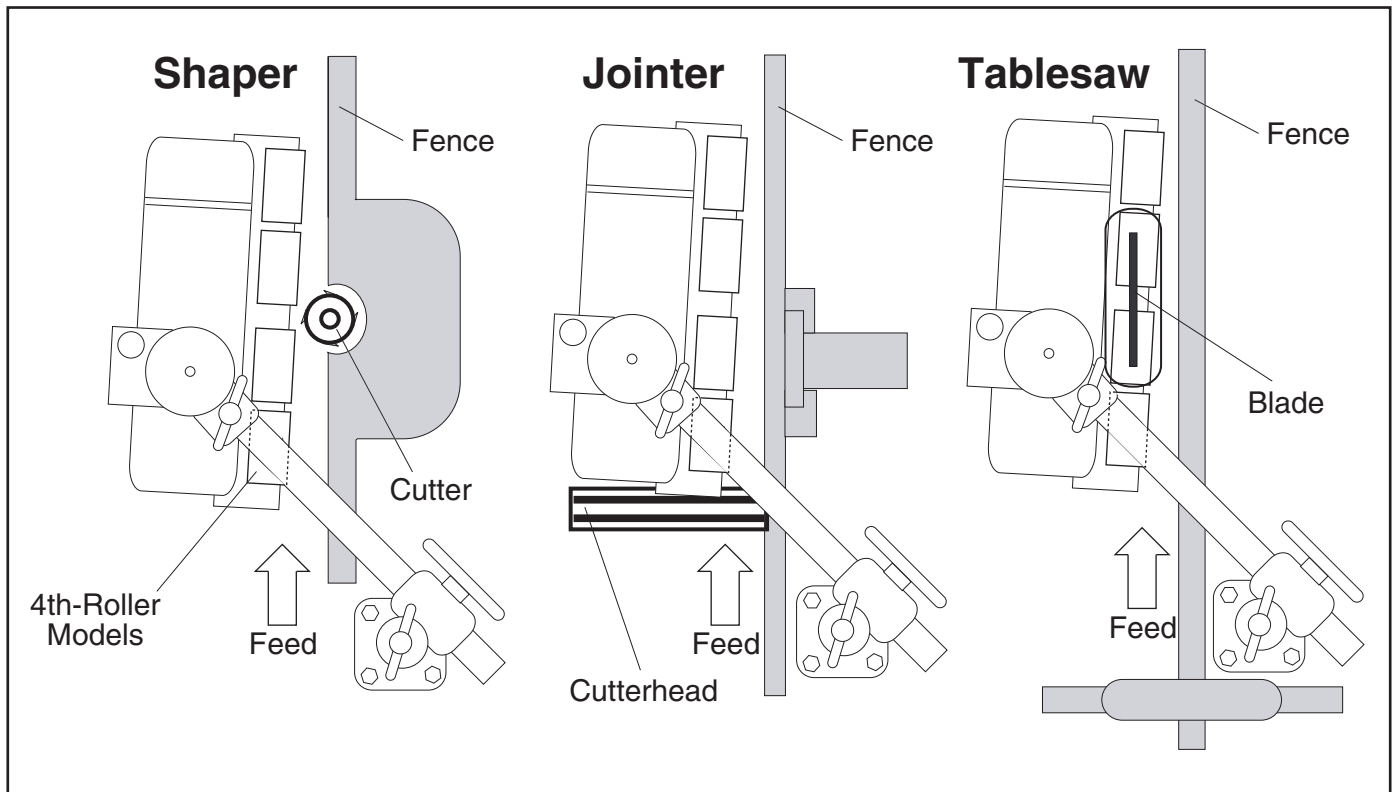
# Base Mounting

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 three mounting options available: **Through Bolt Mounting**, **Direct Mounting**, and **Quick Holder Kit Mounting** (discussed on **Page 17**). Choose an option that suits your requirements.

Whichever way you mount your power feeder, you must be able to use the handwheels and lock levers to position the rubber wheels parallel with the table surface and  $\frac{1}{8}$ " lower than the thickness of your workpiece.

Also, you must be able to point the power feeder slightly towards the machine fence (**Figure 15**). In other words, the tracking of the power feeder must be toed-in approximately  $1^\circ$  to  $1.5^\circ$  degrees toward the machine fence so the rubber wheels slightly push the workpiece against the fence during cutting operations.



**Figure 15.** 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 this section and mount your base to the table using one of the three 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

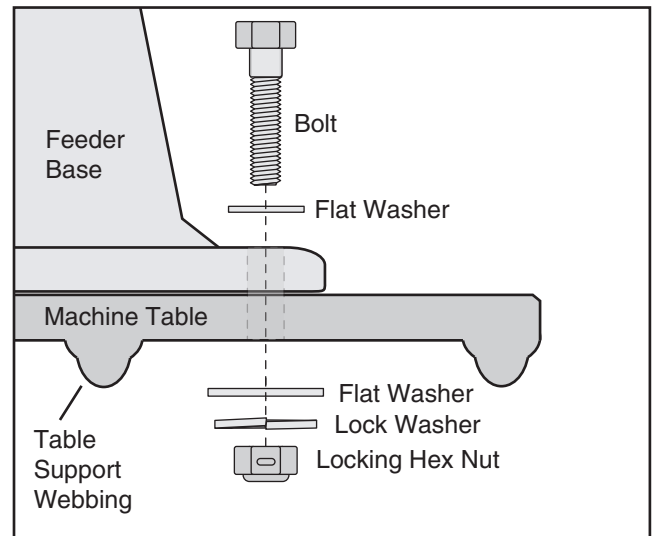
We recommend that you mount your new power feeder to the machine table with through bolts, nuts, and washers (**Figure 16**). This option will give the most rigidity and clamping strength to prevent the feeder base from twisting out of alignment during use. However, if under-table support webs interfere 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

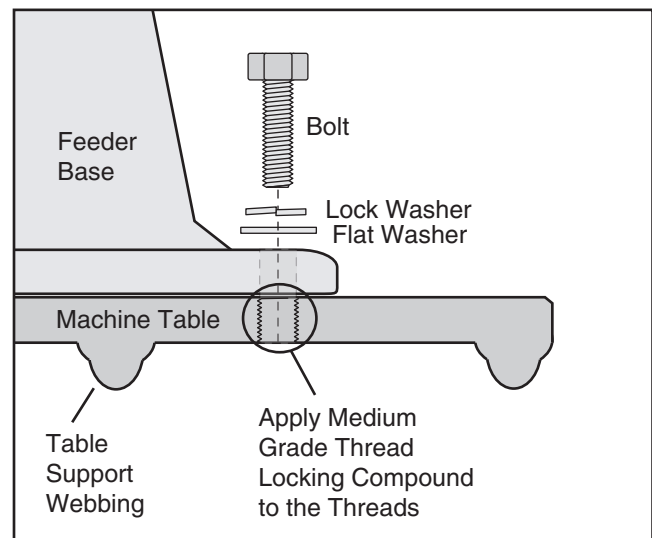
Use the included mounting template to drill and tap your table, so the power feeder base can be directly mounted to the table surface (**Figure 17**). If the table is thinner than  $\frac{3}{8}$ " thick where the threaded holes would be drilled and tapped, or if support webbing is in the way, the threads 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.

## Quick Holder Kit Mounting

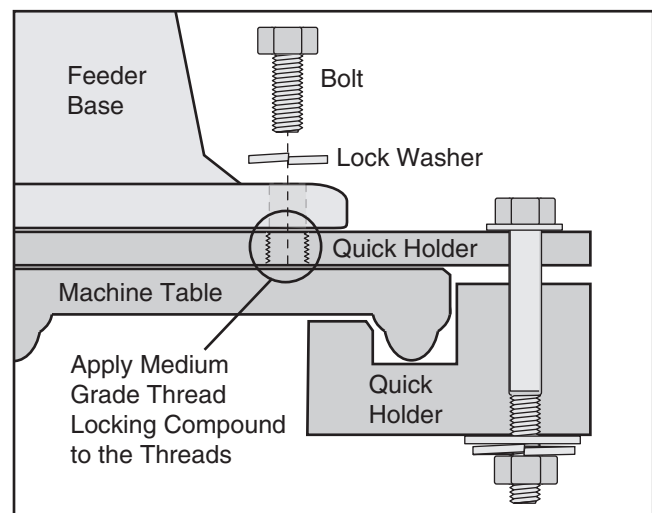
For temporary or permanent installation of your power feeder without drilling into the table, you can purchase and install the Model G4175 Quick Holder Kit (**Figure 18**). These kits, while not as rigid as the through-bolt or direct mount options, require no drilling or tapping, and are adequate for most power feeder applications. Make sure to use an automotive-grade liquid thread locking compound on all threads.



**Figure 16.** Through-bolt mounting.

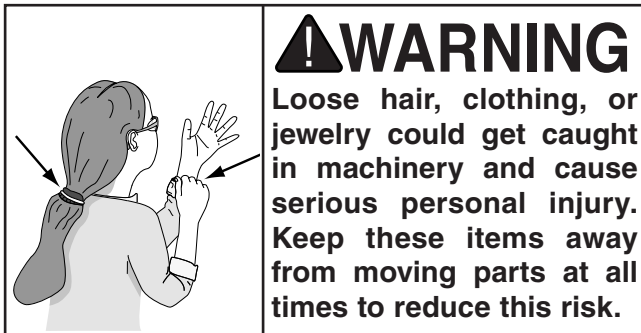


**Figure 17.** Direct mounting.



**Figure 18.** Quick holder mounting.

# Test Run



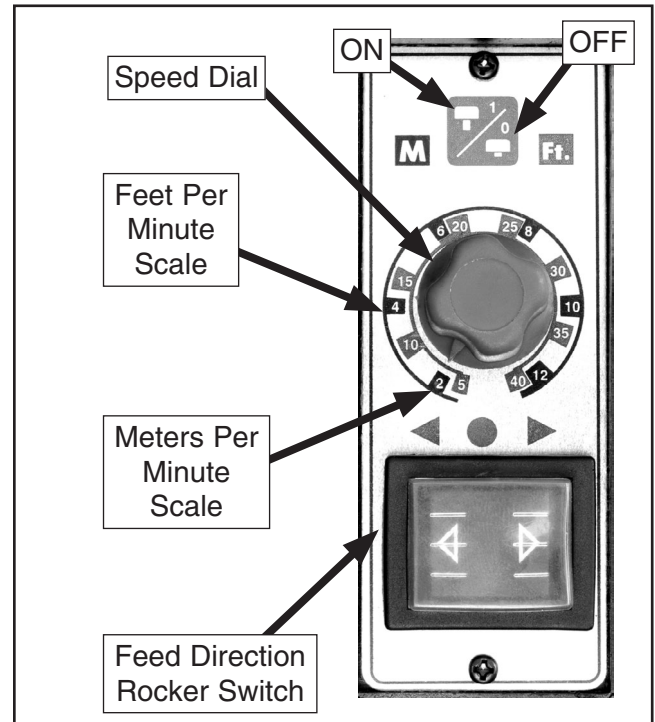
Once the assembly is complete, test run your power feeder to make sure it runs properly and is ready for regular operation. The test run consists of verifying that the motor powers up and runs correctly, and that the rollers operate.

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

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

## 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 the speed dial (**Figure 19**) is pushed IN and turned all the way to the left.
4. Make sure the feed direction rocker switch (**Figure 19**) is in the central position.



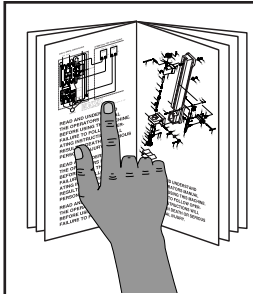
**Figure 19.** Feed direction and speed dial.

5. Adjust the power feeder so all wheels are approximately 1" above the table surface.
6. Connect the power feeder to the power source.
7. Push the feed direction rocker switch to the left or right.
8. Pull the speed dial out until it stops and the power feeder will slowly turn. The power feed should run slowly and smoothly with little or no vibration.
9. Slowly turn the speed dial clockwise. The speed of the wheels should increase respectively.
10. Turn the speed dial back to zero, push the rocker switch to the other direction, and turn the speed dial clockwise again until the wheels turn. The wheels should turn the opposite direction from before.
11. Turn the power feeder **OFF** and move the rocker switch to the central position. The test run is complete.



# SECTION 4: OPERATIONS

## Operation Safety

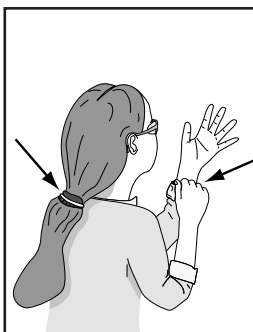
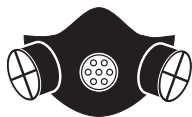


### **!WARNING**

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 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.

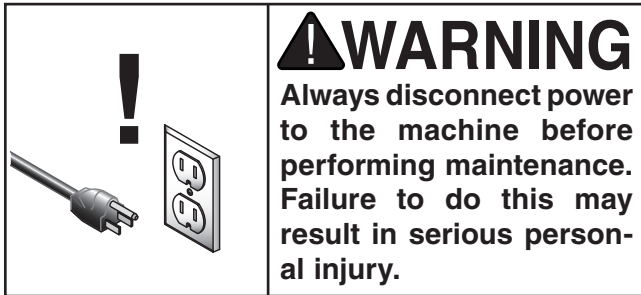
Adjust the power feeder so it is toed-in approximately  $1^{\circ}$  to  $1.5^{\circ}$  degrees towards the machine fence. This adjustment will ensure that the power feeder wheels slightly push the workpiece against the fence during cutting operations (**Figure 15**).

Next, adjust the power feeder so the rubber wheels are parallel with the table surface, and are  $\frac{1}{8}$ " 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 slightly lower than the workpiece before you begin feeding operations. Otherwise, the workpiece may slip and kickback. For machine operations that generate a lot of dust, this power feeder is equipped with a dust port. Simply remove the plastic knock-out plug at the bottom of the port and connect a  $1\frac{3}{8}$ " inside diameter shop vacuum hose.

# SECTION 5: MAINTENANCE

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## Schedule

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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

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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

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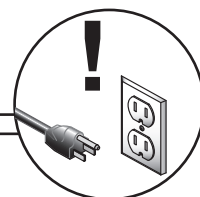
Since all bearings are sealed and permanently lubricated, simply leave them alone until they need to be replaced. Do not lubricate them. However, periodically oil the lock lever and T-handle threads to ensure free operation. Wipe down the adjustment arm with a thin film of oil as required to prevent surface rust but not enough to attract dirt.



# 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.	<ol style="list-style-type: none"> <li>1. Low voltage.</li> <li>2. Open circuit in motor or loose connections.</li> <li>3. Blown fuse.</li> <li>4. Motor brushes are at fault.</li> <li>5. Motor switch or motor is at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power supply for proper voltage.</li> <li>2. Inspect all lead connections on motor and circuit board for loose or open connections.</li> <li>3. Replace fuse on circuit board.</li> <li>4. Replace brushes (<b>Page 22</b>).</li> <li>5. Replace switch, or motor.</li> </ol>
Fuses or circuit breakers trip.	<ol style="list-style-type: none"> <li>1. Short circuit in line cord or plug.</li> <li>2. Short circuit in motor or loose connections.</li> <li>3. Power feeder rollers are jammed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect cord or plug for damaged insulation and shorted wires and replace extension cord.</li> <li>2. Inspect all connections on motor for loose or shorted terminals or worn insulation.</li> <li>3. Disconnect all machinery from power and correct for cause of jamming.</li> </ol>
Motor overheats.	<ol style="list-style-type: none"> <li>1. Motor overloaded.</li> <li>2. Motor brushes are at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce power feeder feed rate.</li> <li>2. Replace brushes (<b>Page 22</b>).</li> </ol>
Workpiece jams when feeding under rollers.	<ol style="list-style-type: none"> <li>1. Rollers set too low.</li> <li>2. Feeder at wrong angle.</li> </ol>	<ol style="list-style-type: none"> <li>1. Raise feeder.</li> <li>2. Adjust angle.</li> </ol>
Workpiece slips while passing beneath rollers.	<ol style="list-style-type: none"> <li>1. Rollers positioned too high, no traction.</li> <li>2. Feeding too fast.</li> <li>3. Rollers are dirty or oily.</li> <li>4. Worn roller(s).</li> </ol>	<ol style="list-style-type: none"> <li>1. Lower feeder.</li> <li>2. Slow feed speed.</li> <li>3. Clean roller surface with a mild solvent.</li> <li>4. Replace roller(s) (<b>Page 22</b>).</li> </ol>
Workpiece cut is burnt.	<ol style="list-style-type: none"> <li>1. Wrong feed speed.</li> <li>2. Cutter is at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust feed speed.</li> <li>2. Sharpen or replace dull blade or cutter.</li> </ol>
Rough finish or chipped grain on workpiece.	<ol style="list-style-type: none"> <li>1. Feed speed too fast.</li> <li>2. Dull cutter or blade.</li> <li>3. Power feeder angle is not toed in to keep workpiece against the fence.</li> </ol>	<ol style="list-style-type: none"> <li>1. Slow speed.</li> <li>2. Replace with sharp cutter or blade.</li> <li>3. Adjust power feeder so it is toed-in 1° to 1.5° toward the fence.</li> </ol>
Fuzzy grain occurs when planing or moulding.	<ol style="list-style-type: none"> <li>1. Lumber has high moisture content.</li> <li>2. Dull knives/cutter.</li> </ol>	<ol style="list-style-type: none"> <li>1. If moisture content is higher than 20%, sticker and allow to dry.</li> <li>2. Sharpen or replace knives.</li> </ol>
Workpiece hangs and does not enter the machine.	<ol style="list-style-type: none"> <li>1. Power feeder roller height is set incorrectly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Lower the power feeder roller 1/8" lower than the height of the workpiece.</li> </ol>



# Wheel Replacement

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

Tools Needed	Qty
• Phillips Screwdriver #2 .....	1
• Small Pin-Type Retaining Ring Pliers.....	1
• Safety Glasses .....	1

## To replace a wheel:

1. DISCONNECT THE POWER FEEDER FROM POWER!
2. Remove the three cover screws and the cover (**Figure 20**).



**Figure 20.** Wheel replacement.

3. Put on your safety glasses and remove the retaining ring (**Figure 20**), using external retaining ring pliers.
4. Replace the wheel and reassemble the power feeder.

# Brush Replacement

After a long period of time you may notice the motor lose some power or begin to growl during operation. This indicates that the motor brushes are worn and need replacement. The brushes can be easily replaced.

Tools Needed	Qty
• Standard Screwdriver #2.....	1
• Safety Glasses .....	1

## To replace the brush set:

1. DISCONNECT THE POWER FEEDER FROM POWER!
2. Unscrew both brush caps (**Figure 21**).



**Figure 21.** Brush set replacement.

3. Replace the brush set (**Figure 21**) and re-install the caps.





# SECTION 7: WIRING

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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](http://www.grizzly.com).



# Wiring Diagram



## Model G4173 Power Feeder 110V Single-Phase Wiring Diagram

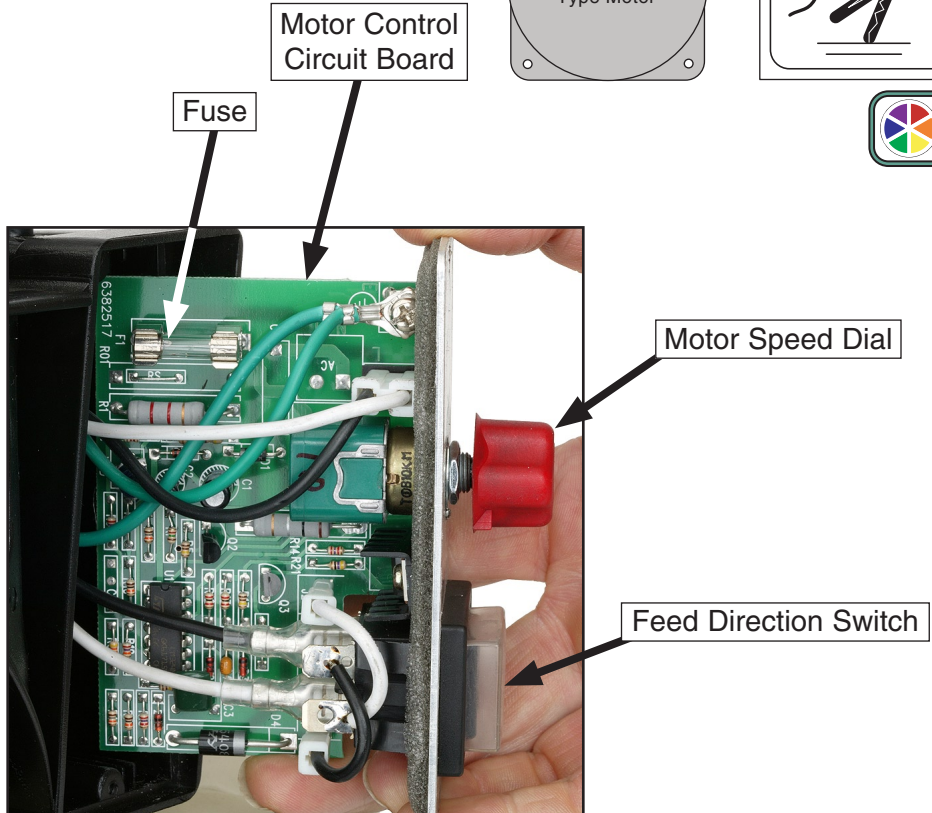
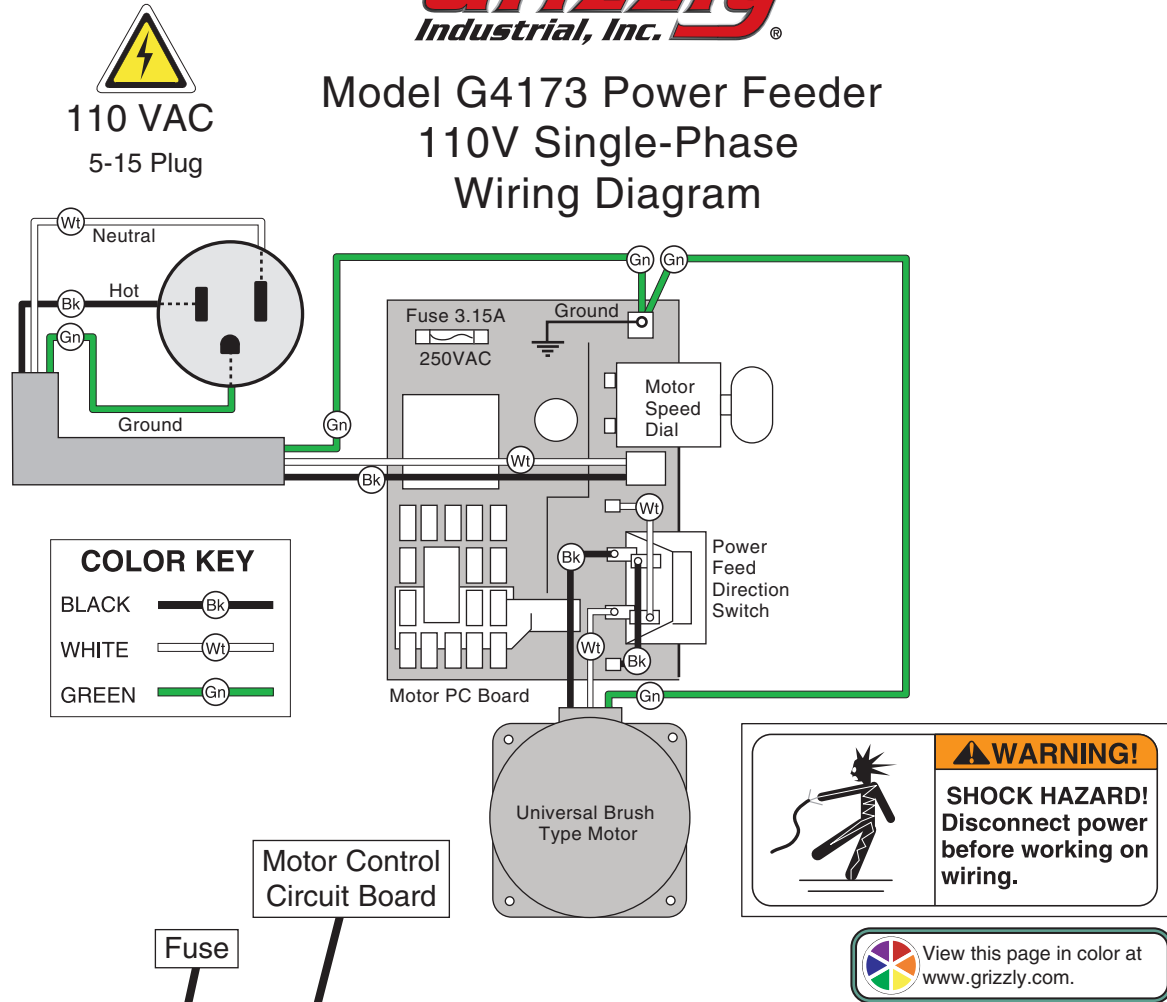
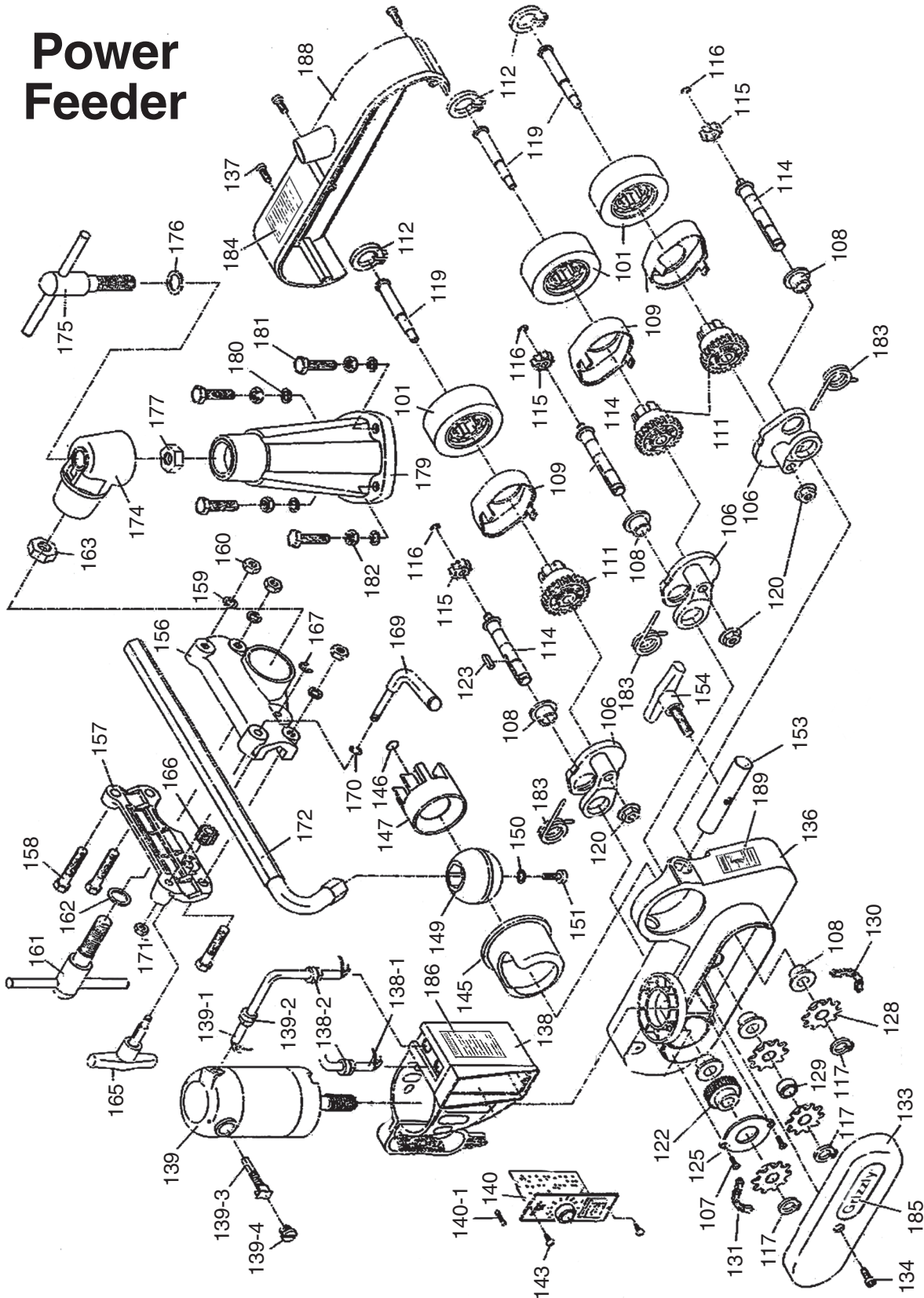


Figure 22. Feeder Control System.



# SECTION 8: PARTS

## Power Feeder



# Power Feeder Parts List

REF	PART #	DESCRIPTION
101	G4174	ROLLER
106	P4173106	SPROCKET CASE
107	PFH31M	FLAT HD SCR M4-.7 X 8
108	P4173108	BUSHING
109	P4173109	CASE CAP
111	P4173111	GEAR ASSEMBLY 25T
112	PR10M	EXT RETAINING RING 22MM
114	P4173114	DRIVE SHAFT
115	P4173115	GEAR 10-T
116	P4173116	E-CLIP 6.4MM
117	PR03M	EXT RETAINING RING 12MM
119	P4173119	SHAFT
120	PN03M	HEX NUT M8-1.25
122	P4173122	BEVEL GEAR
123	PK34M	KEY 5 X 5 X 20
125	P4173125	BEVEL GEAR CAP
128	P4173128	SPROCKET 10T
129	P4173129	BUSHING 14 X 21 X 10.5
130	P4173130	CHAIN 18S
131	P4173131	CHAIN 24S
133	P4173133	CHAIN COVER
134	PS40M	PHLP HD SCR M5-.8 X 16
136	P4173136	MAIN CASE
137	PS40M	PHLP HD SCR M5-.8 X 16
138	P4173138	CONTROL BOX
138-1	P4173138-1	CONTROL BOX POWER CORD
138-2	P4173138-2	CONTROL BOX GROMMETS
139	P4173139	UNIVERSAL DC MOTOR 1/8HP
139-1	P4173139-1	MOTOR POWER CORD
139-2	P4173139-2	STRAIN RELIEF
139-3	P4173139-3	BRUSH ASSEMBLY
139-4	P4173139-4	BRUSH CAP
140	P4173140	COMPLETE MOTOR CONTROL SYSTEM
140-1	P4173140-1	FUSE 3.15A 250VAC
143	PHTEK11M	TAP SCREW M3-.5 X 8
145	P4173145	LOWER BALL HOUSING

REF	PART #	DESCRIPTION
146	P4173146	STOPPER
147	P4173147	UPPER BALL HOUSING
149	P4173149	BALL
150	PLW06M	LOCK WASHER 10MM
151	PSB64M	CAP SCREW M10-1.5 X 25
153	P4173153	FRAME SHAFT
154	P4173154	T-HANDLE
156	P4173156	OVER ARM BODY
157	P4173157	OVER ARM CLAMP
158	PB73M	HEX BOLT M10-1.5 X 50
159	PLW06M	LOCK WASHER 10MM
160	PN02M	HEX NUT M10-1.5
161	P4173161	T-HANDLE
162	PW18M	FLAT WASHER 18MM
163	PN13M	HEX NUT M16-2
165	P4173165	T-HANDLE
166	P4173166	PINION
167	PEC13M	E-CLIP 5MM
169	P4173169	CLAMP LEVER
170	PW07	FLAT WASHER 5/16
171	PN03M	HEX NUT M8-1.25
172	P4173172	ARM
174	P4173174	SWIVEL CONE
175	P4173175	T-HANDLE
176	PW18M	FLAT WASHER 18MM
177	PN13M	HEX NUT M16-2
179	P4173179	BASE
180	PLW06M	LOCK WASHER 10MM
181	PB14M	HEX BOLT M10-1.5 X 35
182	PN02M	HEX NUT M10-1.5
183	P4173183	TORSION SPRING
184	P4173184	DATA LABEL
185	P4173185	GRIZZLY LOGO LABEL
186	P4173186	GENERAL WARNING LABEL
188	P4173188	WHEEL COVER
189	P4173189	ENTANGLEMENT LABEL





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- \$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+

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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

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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.

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