

# MODEL G0561

# 7" x 12" METAL CUTTING BANDSAW OWNER'S MANUAL

(For models manufactured since 01/08)



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V2.07.17

# WARNING!

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

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

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

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



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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### **Machine Description**

The Model G0561 Metal Cutting Bandsaw has a flexible continuous blade that is used to make straight cuts in metal stock.

The clamping vise adjusts for cuts between 0° and 45°. There are four blade speeds (90, 135, 195, and 255 FPM), with an adjustable feed rate for the correct blade pressure on the workpiece. The pump-controlled coolant system helps provide optimum working results and extended longevity of blades.

## **Contact Info**

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

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

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

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

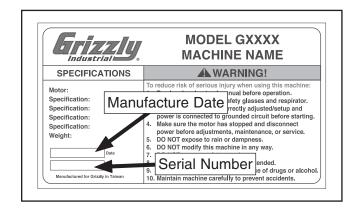
### **Manual Accuracy**

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

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

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

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





# Identification

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

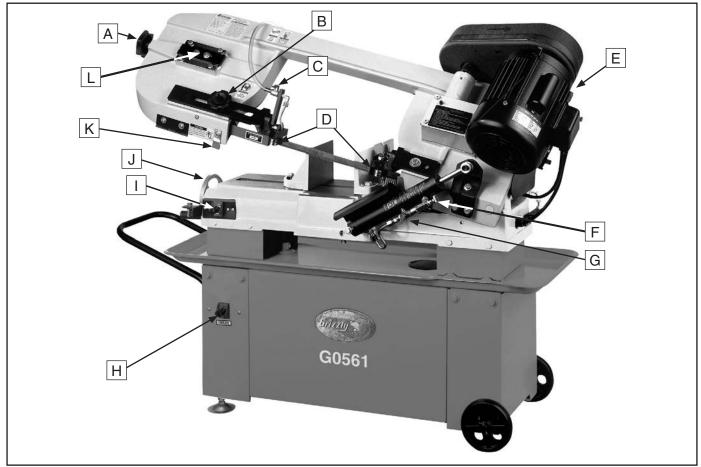


Figure 1. Main view of machine features.

- A. Blade Tension Handle
- B. Blade Guide Adjustment Knob
- **C.** Coolant Control Valve
- **D.** Blade Guides
- E. 1 HP Motor
- F. Feed Rate Control Knob

- G. Feed ON/OFF Valve Lever
- H. Pump ON/OFF Switch
- I. Motor ON/OFF Switch
- J. Vise Handwheel
- K. Automatic Shut-Off Tab
- L. Blade Tracking Controls







MACHINE DATA SHEET

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

### MODEL G0561 7" X 12" METAL CUTTING BANDSAW

#### **Product Dimensions:**

Weight	
Width (side-to-side) x Depth (front-to-back) x Height	
Footprint (Length x Width)	
Shipping Dimensions:	
Туре	Wood Slat Crate
Type Content	
51	Machine

Must Ship Upright...... Yes

#### Electrical:

Power Requirement Prewired Voltage	· · ·
Full-Load Current Rating	
Minimum Circuit Size	15A at 110V, 15A at 220V
Connection Type	Cord & Plug
Power Cord Included	Yes
Power Cord Length	7 ft.
Power Cord Gauge	14 AWG
Plug Included	
Included Plug Type	5-15 for 110V
Recommended Plug Type	
Switch Type Seal	

#### Motors:

#### Main

Horsepower	1 HP
Phase	Single-Phase
Amps	
Amps Speed.	1720 RPM
Type Power Transfer	TEFC Capacitor-Start Induction
Power Transfer	Belt Drive
Bearings	Shielded & Permanently Lubricated

#### Main Specifications:

#### **Operation Info**

Blade Speeds	
Std. Blade Length	
Blade Size Range	





#### **Cutting Capacities**

Angle Cuts	5 deg.
Vise Jaw Depth9	-3/4 in.
Vise Jaw Height	4 in.
Max. Capacity Rectangular Height at 90 Deg	7 in.
Max. Capacity Rectangular Width at 90 Deg	. 12 in.
Max. Capacity Round at 90 Deg	7 in.
Max. Capacity Rectangular Height at 30 Deg 7-	-3/4 in.
Max. Capacity Rectangular Width at 30 Deg	8 in.
Max. Capacity Round at 30 Deg	7 in.
Max. Capacity Rectangular Height at 45 Deg 4-	-3/4 in.
Max. Capacity Rectangular Width at 45 Deg 4-	-1/2 in.
Max. Capacity Round at 45 Deg	5 in.

#### Construction

Table	Cast Iron
Upper Wheel	Cast Iron
Lower Wheel	Cast Iron
Body	Cast Iron
Base	Stamped Steel
Wheel Cover	Pre-formed Steel
Paint Type/Finish	Ероху

#### Other

Wheel Size	11-1/2 in.
Blade Guides Upper	Ball Bearing
Blade Guides Lower	
Coolant Cap	

#### Table Info

Table Size Length	
Table Size Width	
Floor To Cutting Area Height	21 in.

#### **Other Specifications:**

Country of Origin	China
Warranty	
Approximate Assembly & Setup Time	30 Minutes
Serial Number Location	ID Label on Body Frame
ISO 9001 Factory	Yes
Certified by a Nationally Recognized Testing Laboratory (NRTL)	No

#### Features:

Hydraulic Feed Control Quick-Release Vise Automatic Shut off Coolant System Includes Blade

# **SECTION 1: SAFETY**

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

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



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

**AWARNING** 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.

# **Safety Instructions for Machinery**

# **A**WARNING

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

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

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

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

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

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

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



# 

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

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

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

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

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

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

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

**GUARDS & COVERS.** Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly BEFORE operating machine. **FORCING MACHINERY.** Do not force machine. It will do the job safer and better at the rate for which it was designed.

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

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

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

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

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

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

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

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



# **Additional Safety for Metal Bandsaws**

# WARNING

**BLADE CONDITION.** Do not operate with dull, cracked or badly worn blade that can break during operation or decrease the performance of the bandsaw. Inspect blades for cracks and missing teeth before each use.

**BLADE REPLACEMENT.** Wear gloves to protect hands and safety glasses to protect eyes when replacing the blade. Make sure teeth face workpiece, in direction of blade travel.

**WORKPIECE HANDLING.** Always support workpiece with table, vise, or some type of support fixture. Flag long pieces to avoid a tripping hazard. Never hold workpiece with hands during horizontal cutting operations. Keep hands a safe distance away from moving blade during vertical cutting operations.

**FIRE HAZARD.** Use EXTREME CAUTION if cutting magnesium. Using the wrong cutting fluid will lead to chip fire and possible explosion.

**HOT SURFACES.** Be aware that touching hot workpieces or chips can cause burns.

**CUTTING FLUID SAFETY.** Cutting fluids are poisonous. Always follow manufacturer's cutting-fluid safety instructions. Pay particular attention to contact, contamination, inhalation, storage and disposal warnings. Spilled cutting fluid invites slipping hazards.

**ENTANGLEMENT HAZARDS.** Always keep the blade guard in place when bandsaw is in operation. Loose clothing, jewelry, long hair and work gloves could be pulled into the blade or moving parts, resulting in lacerations or amputation.

**UNSTABLE WORKPIECES.** Workpieces that cannot be supported or stabilized without a vise or jig should not be cut in vertical position, because they can unexpectedly move while cutting and draw the operator's hands into the blade causing serious personal injury. Examples are chains, cables, round or oblong-shaped workpieces, and those with internal or built-in moving or rotations parts, etc.

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

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

**LEAVING WORK AREA.** Never leave machine running unattended. Allow bandsaw to come to a complete stop before you leave it unattended.

**AVOID SUDDEN STARTUP.** In the event of a local power outage during operation, immediately press Emergency Stop button to avoid a sudden startup once power is restored.

# WARNING

No list of safety guidelines can be complete. Every shop environment is different. Like all machines there is danger associated with the Model G0561. 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.



# **SECTION 2: POWER SUPPLY**

### Availability

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



### 

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

### **Full-Load Current Rating**

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

### Full-Load Current Rating at 110V..... 12 Amps Full-Load Current Rating at 220V...... 6 Amps

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

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

### **Circuit Information**

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

# 

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

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

### **Circuit Requirements for 110V**

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

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

### **Circuit Requirements for 220V**

This machine can be converted to operate on a power supply circuit that has a verified ground and meets the requirements listed below. (Refer to **Voltage Conversion** instructions for details.)

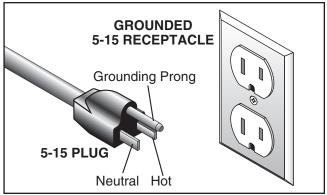
Nominal Voltage	208V, 220V, 230V, 240V
Cycle	60 Hz
Phase	Single-Phase
Power Supply Circuit.	
Plug/Receptacle	NEMA 6-15



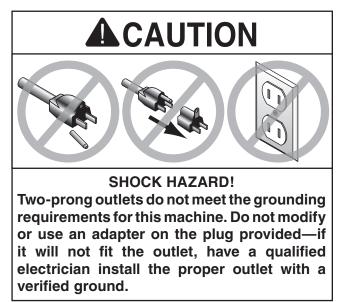
### **Grounding Requirements**

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

**For 110V operation:** This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug (see following figure). The plug must only be inserted into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances.







**For 220V operation:** The plug specified under "Circuit Requirements for 220V" on the previous page has a grounding prong that must be attached to the equipment-grounding wire on the included power cord. The plug must only be inserted into a matching receptacle (see following figure) that is properly installed and grounded in accordance with all local codes and ordinances.

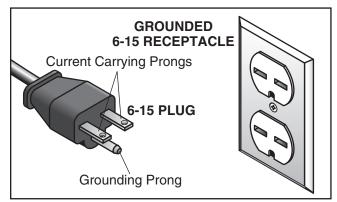


Figure 3. Typical 6-15 plug and receptacle.

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

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

### **Extension Cords**

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

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

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

Minimum Gauge Size ......14 AWG Maximum Length (Shorter is Better)......50 ft.



### **Voltage Conversion**

The voltage conversion MUST be performed by an electrician or qualified service personnel.

The voltage conversion procedure consists of rewiring the main and coolant motors and installing the correct plug. A wiring diagram is provided on **Page 48** for your reference.

**IMPORTANT:** If the diagram included on either motors conflicts with the one on **Page 48**, the motor may have changed since the manual was printed. Use the diagram included on the applicable motor junction box cover instead.

Items Needed	Qty
--------------	-----

- Wrench 7mm ......1
- Electrical Tape...... As Needed

- Wire Stripper ..... As Needed

### To convert Model G0561 to 220V:

- 1. DISCONNECT MACHINE FROM POWER!
- 2. Cut off the included plug.
- **3.** Open the main and coolant motor junction boxes, remove the wire nuts on the main motor, and loosen the terminal nut on the coolant motor, as indicated in **Figure 4**.

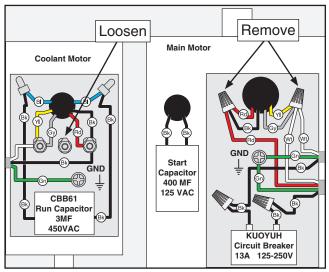


Figure 4. Location of components to be removed and loosened.

4. Connect the main motor wires, as shown in **Figure 5**, with wire nuts. Once snug, wrap electrical tape around each wire nut and the connected wires, to reduce the likelihood of the wire nut vibrating loose during motor operation.

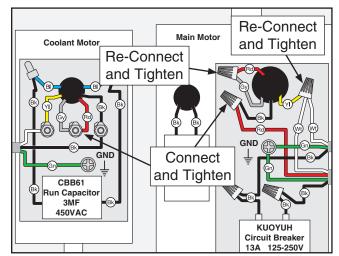


Figure 5. Motor wires repositioned for 220V.

- 5. Connect the wires on the coolant motor as shown in **Figure 5** at the center terminal nut.
- 6. Close and secure the motor junction boxes.
- **7.** Install a 6-15 plug on the end of the cord, according to the instructions and wiring diagrams provided by the plug manufacturer.
  - —If the plug manufacturer did not include instructions, the wiring of a generic NEMA 6-15 plug is illustrated in the Wiring section on Page 48.



# **SECTION 3: SETUP**

# Unpacking

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

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



### 

SUFFOCATION HAZARD! Keep children and pets away from plastic bags or packing materials shipped with this machine. Discard immediately.

### **Needed for Setup**

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

### Description

• Wrench <sup>3</sup>/<sub>4</sub>"......1

Qty

- Safety Glasses (for each person)......1



## Inventory

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

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

### NOTICE

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

Box	c Contents (Figure 6)	Qty
Α.	Pulley Cover	1
В.	Collar	1
С.	Wheels	2
D.	Axle	1
Ε.	Leveling Feet with Hex Nuts	2
F.	Chip Screen	1
G.	Work Stop	1
Н.	Work Stop Rod	1
	Vertical Work Table	
J.	Table Bracket	1
Κ.	V-Belt 3V270 (Not Shown)	1

### Hardware Bag (Not Shown)

•	Flat Washers <sup>3</sup> / <sub>8</sub> " (Leveling Feet)	2
•	Cotter Pins 3 x 30mm (Wheels)	2
•	Flat Washers 5/8" (Wheels)	4
•	Wire Nuts (for 220V Wiring)	2
•	Flat Head Screw 1/4"-20 x 1/2" (Table)	
•	Hex Nut 1/4"-20 (Table)	
•	Knob <sup>1</sup> / <sub>4</sub> "-20 x <sup>5</sup> / <sub>8</sub> " (Pulley Cover)	
•	Hex Nuts 3/8"-16	2
•	Hose Clamp 5/8" (Coolant Hose)	1
•	Hex Bolts <sup>5</sup> / <sub>16</sub> "-18 x 1" (Motor)	4
•	Hex Nuts 5/16"-18 (Motor)	
•	Flat Washers 5/16" (Motor)	

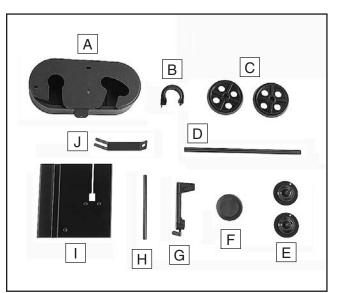


Figure 6. Loose parts inventory.

## Cleanup

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

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

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

### Before cleaning, gather the following:

- Disposable rags
- Cleaner/degreaser (WD•40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

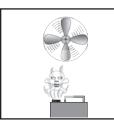
#### Basic steps for removing rust preventative:

- 1. Put on safety glasses.
- 2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5–10 minutes.
- 3. Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.
- 4. Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.



### 

Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. Avoid using these products to clean machinery.



## 

Many cleaning solvents are toxic if inhaled. Only work in a well-ventilated area.

NOTICE

Avoid chlorine-based solvents, such as acetone or brake parts cleaner, that may damage painted surfaces.

#### T23692—Orange Power Degreaser

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



Figure 7. T23692 Orange Power Degreaser.

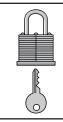


### Weight Load

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

### **Space Allocation**

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



# **A**CAUTION

Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.

### **Physical Environment**

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

### **Electrical Installation**

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave enough space around machine to disconnect power supply or apply a lockout/tagout device, if required.

### Lighting

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

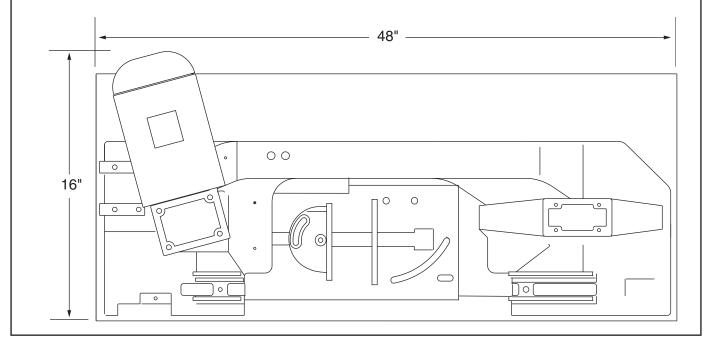


Figure 8. Minimum working clearances.

# **Shipping Bracket**

A shipping bracket has been installed on the bandsaw to protect the alignment of the bow during shipment. After removal, store the bracket in a safe place until you need to move or ship the bandsaw in the future.

#### To remove shipping bracket:

- **1.** Use a #2 Phillips head screwdriver to remove top screw and flat washer.
- 2. Use a 14mm wrench to loosen bottom hex nut and remove shipping bracket shown in Figure 9.



Figure 9. Location of shipping bracket.

### Work Stop

Components and Hardware Needed:	Qty
Work Stop	1
Work Stop Rod	

### To install work stop:

1. Insert work stop rod through hole in base and lock in place with hex bolt (see **Figure 10**).

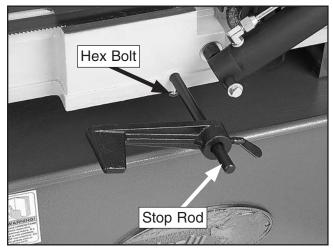


Figure 10. Work stop installed.

- 2. Slide work stop over rod.
- **3.** Measuring from outside of blade, tighten thumbscrew to set work stop at desired length.



### Wheels & Leveling Feet

The wheels may be installed to make it easier to move the G0561 bandsaw.

Components and Hardware Needed:	
Wheels	2
Axle	1
Cotter Pins 3 x 30mm	2
Flat Washers 5/8"	4
Leveling Feet with Hex Nuts	2

#### To install wheels and leveling feet:

- 1. Slide axle through holes in bottom of cabinet.
- 2. Slide one flat washer onto the axle, followed by a wheel and another washer. Secure with cotter pins, as shown in **Figure 11**.

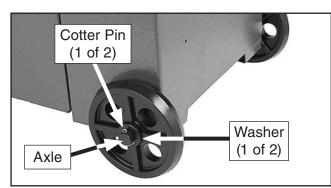


Figure 11. Wheels secured with cotter pin.

**3.** Attach threaded portion of leveling feet with flat washer and hex nut into the base of cabinet, as shown in **Figure 12**.

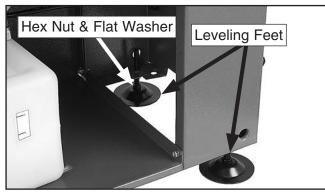


Figure 12. Leveling feet attached.

4. Adjust the feet to level bandsaw as needed.

## **Chip Screen**

The chip screen is designed to prevent chips and cutoffs from entering the coolant tank.

Components and Hardware Needed:	Qty
Chip Screen	1

#### To install chip screen:

1. Place chip screen into opening shown in Figure 13.

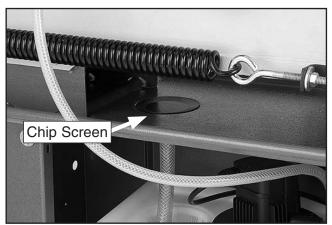


Figure 13. Chip screen installed.

## Motor

The motor is placed inside the machine cabinet for shipping purposes and must be installed in order for the machine to operate.

### Components and Hardware Needed: Qty

Motor	. 2
V-Belt 3V270	. 1
Hex Bolts <sup>5</sup> / <sub>16</sub> "-18 x 1"	. 4
Hex Nuts <sup>5</sup> / <sub>16</sub> "-18	. 2
Flat Washers 5/16"	. 2

### To install motor:

- 1. Remove motor from cabinet.
- Slide motor mount plate into motor mount bracket (see Figure 14).

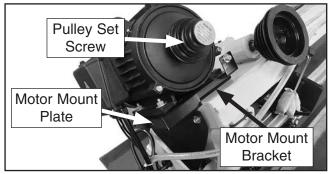


Figure 14. Motor installed on motor mount bracket.

Thread (2) <sup>5</sup>/<sub>16</sub>"-18 x 1" hex bolts with <sup>5</sup>/<sub>16</sub>" hex nuts into side of motor mount plate, then thread (2) <sup>5</sup>/<sub>16</sub>"-18 x 1" hex bolts with <sup>5</sup>/<sub>16</sub>" flat washers into motor mount bracket (see Figure 15).

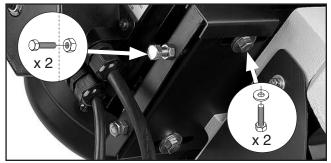


Figure 15. Motor mounting fasteners installed.

 Install V-belt onto pulleys, then use a straightedge to check pulley alignment. If pulleys are not aligned, loosen motor pulley set screw (see Figure 14), adjust pulley, then re-tighten set screw.

# **Coolant Tank**

The coolant tank hose is not installed onto the coolant tank for shipping purposes, so these must be connected prior to operating the machine.

Components and Hardware Needed:	Qty
Coolant Tank	1
Hose Clamp <sup>5</sup> / <sub>8</sub> "	1

### To install coolant tank:

- 1. Move coolant tank into cabinet.
- 2. Push hose over coolant tank fitting and secure with hose clamp (see Figure 16).

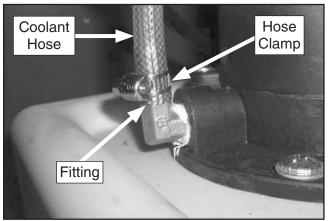


Figure 16. Coolant hose installed.



### V-Belt

The V-belt needs to be tensioned or repositioned for your desired RPM.

#### To tension or reposition V-belt:

- 1. DISCONNECT MACHINE FROM POWER!
- Loosen the two hex bolts on motor mount bracket (see Figure 17).

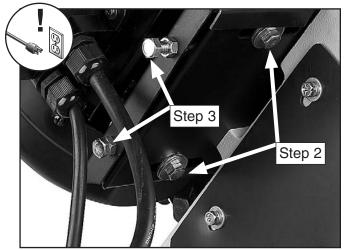


Figure 17. Location of V-belt tension hex bolts.

- **3.** Adjust the two hex bolts on motor mount plate to loosen belt (see **Figure 17**).
- 4. Slip V-belt over combination of pulleys to get desired RPM. Make sure belt is on parallel sheaves. See chart on inside of pulley cover for RPM choices.
- 5. Retension belt. Apply enough tension so belt deflects about <sup>1</sup>/<sub>4</sub>" with moderate pressure when pinched together between center of pulleys.

Components and Hardware Needed:	
Pulley Cover	1
Collar	1
Hex Bolts <sup>1</sup> / <sub>4</sub> "-20 x <sup>1</sup> / <sub>2</sub> "	2
Flat Washers 1/4"	2
Knob <sup>1</sup> /4"-20 x <sup>5</sup> /8"	1

#### To install the pulley cover:

1. Slide the collar onto the bottom side of the pulley cover and snap in place, as shown in **Figure 18**.

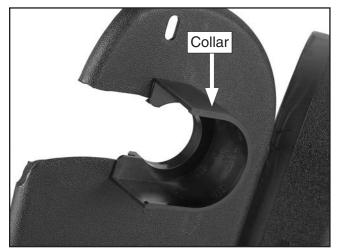


Figure 18. Collar installed.



**Entanglement** Hazard! You MUST install the pulley cover before operating or severe injury may occur.

- Remove (2) pre-installed <sup>1</sup>/<sub>4</sub>"-20 x <sup>1</sup>/<sub>2</sub>" hex bolts and (4) <sup>1</sup>/<sub>4</sub>" flat washers.
- Slide pulley cover over pulleys (see Figure 19).



Figure 19. Pulley cover installed.

4. Align holes and secure with fasteners you removed in Step 2 (see Figure 19).

5. Close pulley cover lid and secure with knob (see Figure 20).



Figure 20. Secured pulley cover lid.



# **Vertical Assembly**

The Model G0561 can be set up for vertical cutting operations.

### Components and Hardware Needed: Qty

Vertical Work Table	.1
Table Bracket	.1
Flat Head Screw 1/4"-20 x 1/2"	1
Hex Nut <sup>1</sup> / <sub>4</sub> "-20	1

### To assemble bandsaw for vertical cutting:

1. Remove the two flat head screws and blade guide cover (see Figure 21).

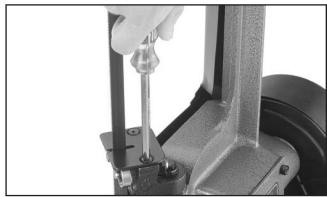


Figure 21. Location of flat head screws holding blade guide cover.

- 2. Install vertical work table and replace the two flat head screws removed in **Step 1**.
- **3.** Install table bracket using pre-installed bolt already in casting (see **Figure 22**).

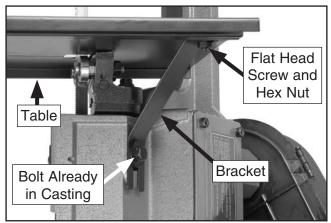


Figure 22. Table and bracket installed.

4. Set a square on table to side of blade, as shown in **Figure 23**, and adjust table bracket to square table to blade.

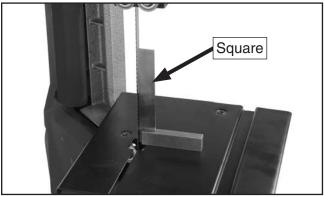


Figure 23. Squaring table to blade.

Place a level on the table, as shown in Figure 24, and turn the adjustment bolt shown in Figure 25 until table is level.

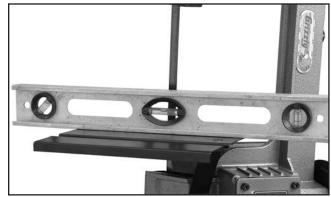


Figure 24. Adjusting table level.

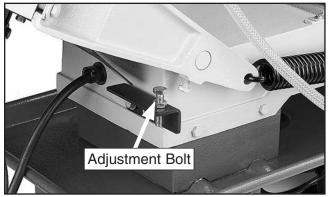


Figure 25. Location of adjustment bolt.



6. Close feed ON/OFF valve to lock bow in position (see Figure 26).

# Test Run

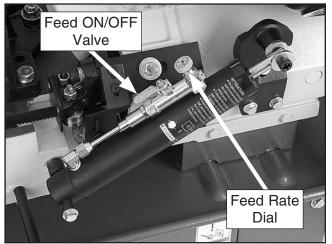


Figure 26 Location of feed ON/OFF valve and feed rate dial.

# Inspections & Adjustments

The following list of adjustments were performed at the factory before the machine was shipped:

- Blade Tension & Tracking ......Page 43
- Squaring the Blade.....Page 44
- Blade Guide Bearings ..... Page 45

Be aware that these can change during the shipping process. Pay careful attention to these adjustments when first operating the machine. If you find that the adjustments are not set to your personal preferences, re-adjust them.

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

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

# WARNING

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

# WARNING

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

### To test run machine:

- 1. Clear all setup tools away from machine.
- 2. Connect machine to power supply.
- **3.** Turn machine *ON*. Verify motor operation, and then turn machine *OFF*. The motor should run smoothly and without unusual problems or noises.

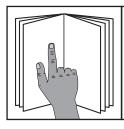


# **SECTION 4: OPERATIONS**

### **Operation Overview**

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

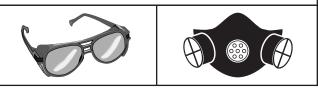
Due to the generic nature of this overview, it is **not** intended to be an instructional guide. To learn more about specific operations, read this entire manual, seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books,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



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

# 

To reduce risk of eye injury from flying chips or lung damage from breathing dust, always wear safety glasses and a respirator when operating this machine.



### NOTICE

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

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

- 1. Examines workpiece to make sure it is suitable for cutting.
- 2. Adjusts blade tilt, if necessary, to correct angle of desired cut.
- **3.** Adjusts fence to desired width of cut, then locks it in place.
- 4. Checks outfeed side of machine for proper support and to make sure workpiece can safely pass all the way through blade without interference.
- 5. Puts on personal protective equipment, and locates push sticks if needed.
- 6. Starts saw.
- 7. Feeds workpiece all the way through blade while maintaining firm pressure on workpiece against table and fence, and keeping hands and fingers out of blade path and away from blade.
- 8. Stops machine.



### Vise

The vise can hold material up to six inches wide and be set to cut angles from 0 to 45 degrees.

### To square blade to vise:

1. Loosen lock nut shown in **Figure 27** with <sup>3</sup>/<sub>4</sub>" wrench or socket.

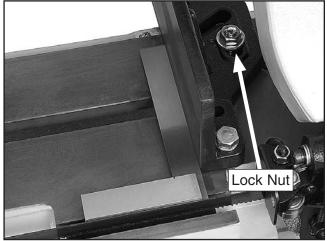


Figure 27. Location of lock nut.

- 2. Use scale as a guide to set your angle, or a machinist's square to square blade to vise.
- 3. Tighten lock nut.

### To adjust angle on vise:

1. Loosen lock nut on rear jaw with a <sup>3</sup>/<sub>4</sub>" hex wrench, as shown in **Figure 28**.

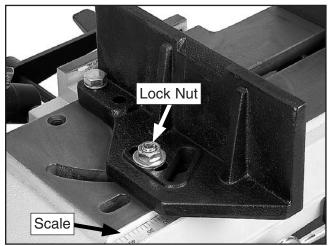


Figure 28. Location of scale.

- **2.** Use scale to set your angle.
- 3. Tighten lock nut.
- 4. Loosen lock nut in Figure 29 on opposite jaw so jaw can float, and match angle of workpiece.

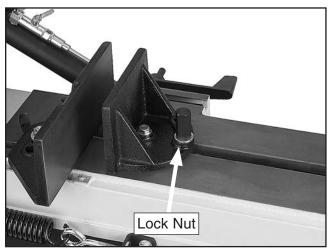
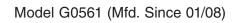


Figure 29. Vise jaw lock nut.

5. Tighten vise against workpiece.





# **Blade Terminology**

Selecting the right blade for the cut requires a knowledge of various blade characteristics.

### Blade Terminology

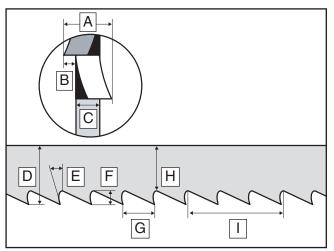


Figure 30. Bandsaw blade terminology.

- **A. Kerf:** Amount of material removed by blade during cutting.
- **B.** Tooth Set: Amount each tooth is bent left or right from blade.
- C. Gauge: Thickness of blade.
- **D. Blade Width:** Widest point of blade measured from tip of the tooth to back edge of the blade.
- E. Tooth Rake: Angle of tooth from a line perpendicular to length of blade.
- F. Gullet Depth: Distance from tooth tip to bottom of curved area (gullet).
- G. Tooth Pitch: Distance between tooth tips.
- H. Blade Back: Distance between bottom of gullet and back edge of blade.
- I. **TPI:** Number of teeth per inch measured from gullet to gullet.



### Blade Size

The Model G0561 uses 93" x  $\frac{3}{4}$ " bandsaw blades. Grizzly is proud to offer a variety of selections that can be found in the current catalog and in **SECTION 5: ACCESSORIES** on **Page 36**.

### **Tooth Pitch**

Usually measured as TPI (teeth per inch), tooth pitch determines the size/number of the teeth. More teeth per inch (fine pitch) will cut slower, but smoother; while fewer teeth per inch (coarse pitch) will cut rougher, but faster.

As a general rule, choose blades that will have at least three teeth in the material at all times. Use fine pitched blades on harder metals and coarse pitched blades on softer metals. When selecting blades, refer to **Figures 34–35** on **Pages 27–28** for recommended blade tooth (TPI) and speed (FPM) based on the workpiece material.

### **Tooth Style**

When selecting blades, another option to consider is the shape, gullet size, teeth set and teeth angle—otherwise known as "Tooth Style." Many blade manufacturers offer variations of the four basic styles shown in **Figure 31**.

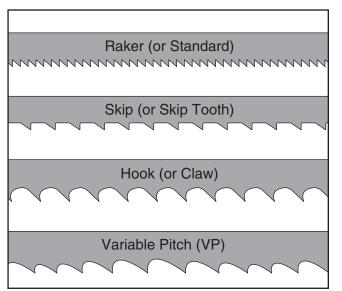


Figure 31. Bandsaw blade tooth types.

**Standard:** This style is considered to be the standard because the tooth size and shape are the same as the tooth gullet. The teeth on these blades usually are very numerous, have no angle, and produce cuts by scraping the material; these characteristics result in very smooth cuts, but do not cut fast and generate more heat than other types while cutting.

**Skip:** This style is similar to a raker blade that is missing every other tooth. Because of the design, skip toothed blades have a much larger gullet than raker blades, and therefore, cut faster and generate less heat. However, these blades also leave a rougher cut than raker blades.

**Hook:** The teeth on this style have a positive angle (downward) which makes them dig into the material, and the gullets are usually rounded for easier waste removal. These blades are excellent for the tough demands of resawing and ripping thick material.

*Variable Pitch:* These blades typically feature combinations of tooth styles that provide qualities of both.

### Tooth Set

Three of the most common tooth sets are alternate, wavy, and raker (see **Figure 32**).

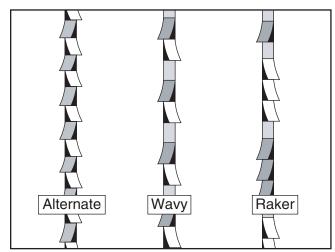


Figure 32. Bandsaw tooth sets.



# **Choosing Blade TPI**

Selecting the right blade for the job depends on a variety of factors, such as type, hardness, and shape of the material being cut, machine capability, and operator technique.

The chart in **Figure 34** is a basic starting point for choosing blade type based on teeth per inch (TPI) for variable tooth pitch blades and for standard raker type bi-metal blades/HSS blades. As a general rule, there should be at least 3 teeth in contact with the workpiece at all times. However, for exact specifications of bandsaw blades, contact the blade manufacturer.

When cutting structural shapes such as angle iron or I-beams, workpieces should be positioned to maintain the same material width throughout the cut, as illustrated in **Figure 33**.

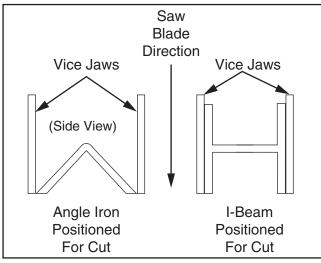


Figure 33. Structural workpieces positioned in vise for cut.

### To select correct blade TPI:

- 1. Measure material thickness. This measurement is the length of cut taken from where the tooth enters the workpiece, sweeps through, and exits the workpiece.
- 2. Refer to "Material Width" row of blade selection chart in **Figure 34** and read across to find workpiece thickness you need to cut.
- **3.** In the center row, find the TPI that corresponds to the workpiece thickness.

Mater	ial Wid	th				Teeth	Per	Inch									
	TO	~	SELE	ECTIC	)N 2		50	)	100		150		200		250		300
		] 1	0-14	8-12	6-10	5-8		3-4		2	2-3			1.4	-2.5		
		1/8	1/2	4 1 4 2	/2	1 1½	2	3	4	5	6	7	8	9	10	11	12

Figure 34. Material width and recommended teeth per inch.

### Choosing Blade Cutting Speeds

Selecting the right blade speed for cutting depends on the type of material being cut. Selecting the correct blade speed prolongs the life of your blade and provides the best possible cutting results. The "Cutting Speed Rate Recommendation Chart" in **Figure 35** offers guidelines for various metals, given in feet per minute (speed FPM) and meters per minute in parenthesis. Choose the speed closest to the number shown in the chart.

Follow the directions in the **Changing Blade Speed** section on **Page 29** to set the machine to the closest available speed.

		CUTTIN	G SPEED R	ATE RECOMI	MENDATION	N	
Material	Speed FPM (M/Min)	Material	Speed FPM (M/Min)	Material	Speed FPM (M/Min)	Material	Speed FPM (M/Min)
Carbon	196~354	Tool Steel	203	Alloy	111~321	Free Machining	150~203
Steel	(60) (108)		(62)	Steel	(34) (98)	Stainless Steel	(46) (62)
Angle	180~220	High-Speed	75~118	Mold Steel	246	Gray	108~225
Steel	(54) (67)	Tool Steel	(25) (36)		(75)	Cast Iron	(33) (75)
Thin Tube	180~220 (54) (67)	Cold-Work Tool Steel	95~213 (29) (65)	Water Hardened Tool Steel	242 (75)	Ductile Austenitic Cast Iron	65~85 (20) (26)
Aluminum	220~534	Hot-Work	203	Stainless	85	Malleable	321
Alloy	(67) (163)	Tool Steel	(62)	Steel	(26)	Cast Iron	(98)
Copper	229~482	Oil-Hardened	203~213	CR Stainless	85-203	Plastics	220
Alloy	(70) (147)	Tool Steel	(62) (65)	Steel	(26) (62)		(67)

Figure 35. Recommended cutting speed chart.





### Changing Blade Speed

#### To change blade speeds:

- 1. DISCONNECT MACHINE FROM POWER!
- 2. Determine blade speed for your cut. The table in **Figure 35** on **Page 28** is provided as a rough guideline. Material thickness and type of blade used will factor into FPM selection.
- **3.** Slacken V-belt and position on pulley for desired FPM (see **Figure 36**).

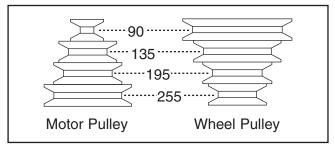


Figure 36. Illustration of V-belt placement for FPM selection.

4. Tension V-belt as described in the V-Belt section on Page 19

### **Blade Guides**

The blade guides should be positioned approximately <sup>1</sup>/<sub>4</sub>" away from workpiece if possible. This will help ensure straight cuts by keeping the blade from twisting and drifting off the cut line.

#### To adjust blade guides:

 Loosen blade guide knob shown in Figure 37.

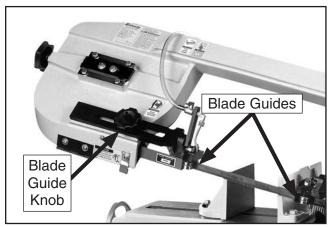


Figure 37. Location of blade guide knob.

- 2. Slide rear blade guide as close to workpiece as possible.
- 3. Tighten knob.



# **Cutting Fluid System**



ELECTROCUTION HAZARD! Never plug or unplug machine with wet hands or while standing on wet floor.

This bandsaw has a built-in cutting fluid system that extends the life of your bandsaw blades by lowering the cutting temperature and washing away chips.

See **Cutting Fluid** on **Page 31** for more information.

### To use cutting fluid system:

- 1. Thoroughly clean and remove any foreign material that may have fallen inside reservoir during shipping.
- 2. Place filter screen and drain tube in reservoir, as shown in **Figure 38**.

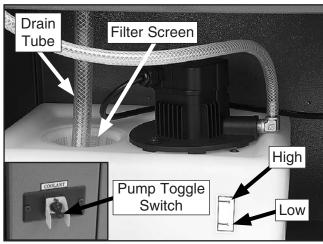


Figure 38. Identification of coolant components.

3. Fill reservoir to "High" mark with cutting fluid.



FIRE HAZARD! DO NOT cut magnesium when using oilwater solutions as a cutting fluid! Always use a cutting fluid intended for magnesium. The water in the solution will cause a magnesium-chip fire.

4. Adjust valve on coolant hose to control flow of coolant (see **Figure 39**). Make sure that pressure is not so high that coolant spills on floor and creates a slipping hazard.

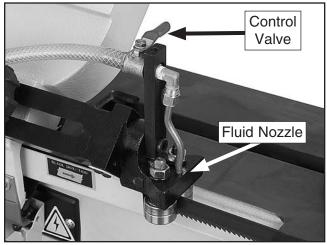


Figure 39. Location of coolant control valve.

5. Turn pump toggle switch *ON* before making your cut.

### NOTICE

Keep tray chip screen clear so coolant can recycle to pump reservoir. NEVER operate pump with reservoir below low mark or you will over-heat pump and void warranty!



# **Cutting Fluid**

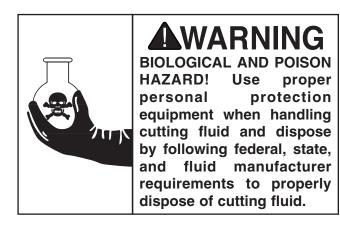
**Feed Rate** 

While simple in concept and function, many issues must be taken into account to find and use the correct cutting fluid. Always follow all product warnings and contact the fluid manufacturer for unanswered questions.

### Use selections below to choose appropriate cutting fluid:

- For cutting low alloy, low carbon, and general-purpose category metals with a bi-metal blade—use water soluble cutting fluid.
- For cutting stainless steels, high carbon, and high alloy metals, brass, copper and mild steels—use "Neat Cutting Oil" (commonly undiluted mineral oils) that have extreme pressure additives (EP additives).
- For cutting cast iron, cutting fluid is not recommended.
- For cutting magnesium, use only cutting fluid that is designed for cutting magnesium.

**Remember:** Too much flow at the cutting fluid nozzle will make a mess and can make the work area unsafe; and not enough fluid at the cut will heat the blade, causing the blade teeth to load up and break.



The speed at which the saw blade will cut through a workpiece is controlled by blade type, feed rate, and feed pressure.

**Note:** If a lubricant is used on the cut, the feed rate can be increased by approximately 15%.

#### To set feed rate:

- 1. Raise bow to maximum height to remove spring tension. Close ON/OFF valve to lock bow in place.
- Using a <sup>9</sup>/<sub>16</sub>" wrench, adjust feed pressure tension spring by rotating adjustment nut (see Figure 40). Tighten enough to remove play but not enough to apply tension to spring.

**Note:** This spring adjustment is an initial setting. Depending on cutting circumstances, you will have to fine-tune the feed pressure with this adjustment. Increasing the spring tension will reduce the feed pressure.

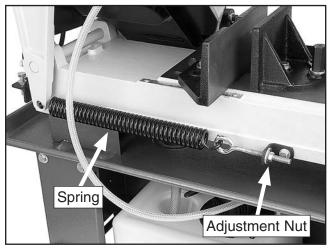


Figure 40. Location of adjustment nut.

3. Clamp workpiece in table vise.



4. Close feed ON/OFF valve shown in Figure 41, to lock bow and blade a few inches above workpiece.

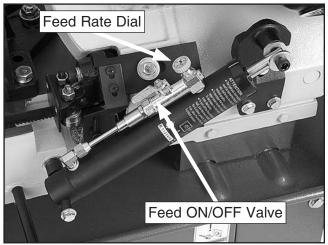


Figure 41. Location of feed ON/OFF valve.

- 5. With correct saw blade and blade speed selected, turn saw and lubricant pump *ON*.
- 6. Open the ON/OFF valve, then slowly rotate the feed rate dial clockwise to a slow feed rate until saw begins to cut workpiece (see Figure 41).
- **7.** Observe the chips that exit the cut, and increase or decrease the feed rate according to chip characteristics.
  - —If the chips are tightly curled, warm shavings, brown to black in color, there is too much downward pressure.
  - -If the chips are blue looking chips, the blade speed is too high.
  - -If the chips are thin and powder-like, there is insufficient feed pressure. This will dull your blade rapidly.
  - -The best cut and feed rate will give you evenly shaped spiraled curls with very little color change, if any at all.

# Blade Breakage

Many conditions may cause a bandsaw blade to break. Blade breakage is unavoidable, in some cases, since it is the natural result of the peculiar stresses that bandsaw blades must endure. Blade breakage is also due to avoidable circumstances. Avoidable blade breakage is most often the result of poor care or judgement on the part of the operator when mounting or adjusting the blade or support guides.

### The most common causes of blade breakage are:

- Faulty alignment or adjustment of the blade guides.
- Feeding workpiece too fast.
- Dull or damaged teeth.
- Over-tensioned blade.
- Blade guide assembly set too far away from workpiece. Adjust the blade guide assembly approximately 1/4" away from workpiece.
- Using a blade with a lumpy or improperly finished braze or weld.
- Continuously running bandsaw when not in use.
- Leaving blade tensioned when not in use.
- Using wrong pitch (TPI) for the workpiece. The general rule of thumb is to have at least three teeth in contact with the workpiece at all times during cutting.



### Blade Care & Break-In

### **Blade Care**

A bandsaw blade is a delicate piece of steel that is subjected to tremendous strain. You can obtain longer use from a bandsaw blade if you give it fair treatment and always use the appropriate feed rate for your operation.

Be sure to select blades with the proper width, set, type, and pitch for each application. The wrong choice of blades will often produce unnecessary heat and will shorten the life of your blade.

A clean blade will perform much better than a dirty blade. Dirty or gummed up blades pass through the cutting material with much more resistance than clean blades. This extra resistance also causes unnecessary heat.

### Blade Break-In

The sharp teeth tips and edges of a new blade are extremely sharp, and cutting at full feed rate may cause fracturing of the beveled edges of the teeth and premature blade wear.

### To properly break in a new blade:

1. Choose correct speed for blade and material of operation.

**Note:** We strongly recommend using mild steel if cutting metal during break-in phase.

- **2.** Reduce feed pressure by ½ for first 50–100 square inches of material cut.
- **3.** To avoid twisting blade when cutting, adjust feed pressure when total width of blade is in material.
- 4. Use Chip Inspection Chart on Page 35 to check blade efficiency for metal cutting.



# **Operation Tips**

The following tips will help you safely and effectively operate your bandsaw, and help you get the maximum life out of your saw blades.

### Tips for horizontal cutting:

- Use work stop to quickly and accurately cut multiple pieces of stock to same length.
- Clamp material firmly in vise jaws to ensure a straight cut through the material.
- Let blade reach full speed before engaging workpiece (see **Figure 42**). Never start a cut with blade in contact with workpiece.

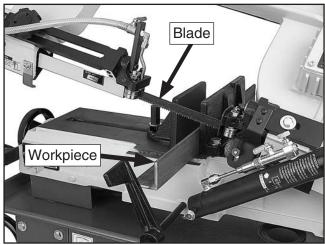


Figure 42. Correct blade starting position.



- Wait until blade has completely stopped before removing workpiece from vise, and avoid touching cut end—it could be very hot!
- Support long workpieces so they won't fall when cut, and flag ends of workpieces to alert passers-by of potential danger.
- Position blade guides approximately <sup>1</sup>/<sub>4</sub>" from workpieces to minimize side-to-side blade movement.
- Use coolant when possible to increase blade life.

### Tips for vertical cutting:

- Workpieces that cannot be properly supported or stabilized without a vise should not be cut in vertical position. Examples are chains, cables, round or oblong-shaped workpieces, workpieces with internal or built-in moving or rotating parts, etc.
- Make sure that vertical table assembly is securely fastened to bandsaw frame so it will adequately support workpiece.
- Always keep your fingers away from blade and always hold workpiece securely with appropriate clamping device.
- Adjust blade guides as close as possible to workpiece to minimize side-to-side blade movement.



The best method of evaluating the performance of your metal cutting operation is to inspect the chips that are formed from cutting. Refer to the chart below for chip inspection guidelines.

Chip Appearance	Chip Description	Chip Color	Blade Speed	Feed Pressure	Additional Actions
0	Thin & Curled	Silver	Good	Good	
~/~	Hard, Thick & Short	Brown or Blue	Decrease	Decrease	Lubricate with a small amount of oil
5	Hard, Strong & Thick	Brown or Blue	Decrease	Decrease	Lubricate with a small amount of oil
Ø	Hard, Strong & Thick	Silver or Light Brown	Good	Decrease Slightly	Check Blade Pitch
( ) )	Hard & Thin	Silver	Increase	Decrease	Check Blade Pitch
	Straight & Thin	Silver	Good	Increase	
	Powdery	Silver	Decrease	Increase	
	Curled Tight & Thin	Silver	Good	Decrease	Check Blade Pitch

Figure 43. Chip inspection chart.

# **SECTION 5: ACCESSORIES**

# 

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

### NOTICE

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

G5124—93 x 3/4 x .032 10 TPI Raker G5125—93 x 3/4 x .032 14 TPI Raker G5126—93 x 3/4 x .032 18 TPI Raker G5127—93 x 3/4 x .035 4-6 Variable Pitch G5128—93 x 3/4 x .035 5-8 Variable Pitch G5129—93 x 3/4 x .035 6-10 Variable Pitch G5130—93 x 3/4 x .035 8-12 Variable Pitch G5131—93 x 3/4 x .035 10-14 Variable Pitch

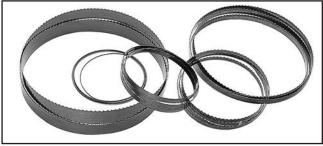


Figure 44. Metal-cutting blade assortment.

#### G5618—Deburring Tool w/ 2 Blades G5619—Extra Aluminum Blades G5620—Extra Brass and Cast Iron Blade

The quickest tool for smoothing freshly machined metal edges. Comes with two blades—one for steel/aluminum and one for brass/cast iron.



Figure 45. G5618 Deburring Tool.

#### H5408—Lenox Blade Tensioning Gauge

The Blade Tensioning Gauge ensures long blade life, reduced blade breakage, and straight cutting by indicating correct tension. A precision dial indicator provides you with a direct readout in PSI.



Figure 46. H5408 Blade Tensioning Gauge.

T20502—Face Shield Crown Protector 7" T20503—Face Shield Window T20451—"Kirova" Clear Safety Glasses T20452—"Kirova" Anti-Reflective S. Glasses T20456—DAKURA Safety Glasses, Black/Clear



Figure 47. Eye protection assortment.

order online at www.grizzly.com or call 1-800-523-4777



#### T10499—1.2 KVA Blade Welder

Make your own bandsaw blades from inexpensive band stock, or repair what you already have with this blade welder. Features blade shear, grinder, and annealing. Operates on 115V, 15A power supply. For  $\frac{1}{8}$ "- $\frac{1}{2}$ " blade widths.



Figure 48. T10499 Blade Welder.

#### D2273—Single Roller Stand D2274—5 Roller Stand

These roller stands are invaluable when working solo in any shop for outfeeding and support tasks. With  $157/_8$ " wide rollers, adjustable  $26"-445/_8$ " height, and all steel construction make them convenient and rugged.



Figure 49. D2273 and D2274 Single and 5-Roller Stands.

#### H0731—Plate Shear - 5" H0732—Plate Shear - 6"

These excellent quality shears will slice through sheet metal, cut rebar and round stock too. Features ground and hardened knives with an extended length handle for maximum leverage. Mounts directly to your workbench.

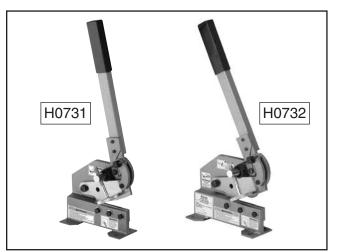


Figure 50. H0731 and H0732 5" and 6" Plate Shears.

G9256—6" Dial Caliper G9257—8" Dial Caliper G9258—12" Dial Caliper

These traditional dial calipers are accurate to 0.001" and can measure outside surfaces, inside surfaces, and heights/depths. Features stainless steel, shock-resistant construction and a dust proof display.

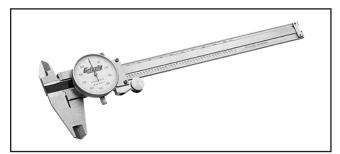
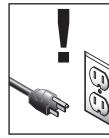


Figure 51. Grizzly dial calipers.

order online at www.grizzly.com or call 1-800-523-4777

# **SECTION 6: MAINTENANCE**



### 

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

# 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.
- Damaged saw blade.
- Worn or damaged wires.
- Any other unsafe condition.
- Clean after each use.
- Proper blade tension.

#### Monthly Check:

- Lubricate vise screw.
- Check gear box lubrication.

# Cleaning

Cleaning the Model G0561 is relatively easy. Use a brush and a shop vacuum to remove chips and other debris from the machine. Keep the nonpainted surfaces rust-free with regular applications of a high-quality rust preventative like G96<sup>®</sup> Gun Treatment, SLIPIT<sup>®</sup>, or Boeshield<sup>®</sup> T-9.

Periodically, remove the blade and thoroughly clean all metal chips or built-up grease from the wheel surfaces and blade housing.



## Lubrication

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

This step is critical because grime and chips build up on lubricated components over time, which makes them hard to move.

Clean all exterior components in this section with mineral spirits, shop rags, and brushes before lubricating.

DISCONNECT MACHINE FROM POWER BEFORE PERFORMING LUBRICATION!

## NOTICE

Follow reasonable lubrication practices as outlined in this manual. Failure to do so could lead to premature failure of machine and will void warranty.

#### Vise Leadscrew

Lube Type.. Model SB1365 or ISO 68 Equivalent Lube Amount......Thin Coat Lubrication Frequency....... 40 hrs. of Operation

#### To lubricate vise leadscrew:

- 1. DISCONNECT MACHINE FROM POWER!
- **2.** Using vise handwheel, move vise as far forward as possible.
- 3. Use mineral spirits and a brush to clean existing grease and debris off of vise leadscrew shown in **Figure 52**. Allow leadscrew to dry.

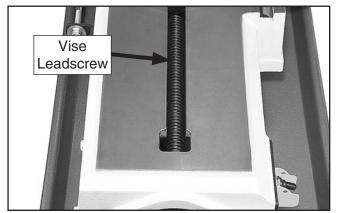


Figure 52. Location of vise leadscrew. Model G0561 (Mfd. Since 01/08)

4. Apply thin coat of ISO 68 machine oil to exposed leadscrew threads, then move vise through its full range of motion several times to disperse oil along full length of leadscrew.

#### Gears

Lube TypeModel T23964 or NLGI#2	Equivalent
Lube Amount	Thin Coat
Lubrication Frequency 90 hrs. of	Operation

#### To lubricate gears:

1. Remove cover on gearbox (see Figure 53).



Figure 53. Location of gearbox cover.

- **2.** Using small brush, apply thin coat of grease to headstock gears.
- 3. Operate saw to work grease through gears.
- 4. Re-install gearbox cover removed in Step 1.

# **SECTION 7: SERVICE**

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

## Troubleshooting

#### **Motor & Electrical**

Symptom	Possible Cause	Possible Solution
Symptom		
Machine does not start	1. Plug/receptacle is at fault/ wired incorrectly.	1. Test for good contacts; correct wiring.
or a breaker trips.	2. Power supply is at fault/switched OFF.	2. Ensure hot lines have correct voltage on all
		legs and main power supply is switched ON.
	3. Motor wired incorrectly.	3. Correct motor wiring.
	4. Start capacitor is at fault.	4. Test/replace.
	5. Wall fuse/circuit breaker is blown/tripped.	5. Ensure correct size for machine load; replace weak breaker.
	6. Motor ON/OFF switch is at fault.	6. Replace faulty ON/OFF switch.
	7. Wiring open/has high resistance.	<ol> <li>Check/fix broken, disconnected, or corroded wires.</li> </ol>
	8. Motor is at fault.	8. Test/repair/replace.
Machine stalls or is	1. Wrong blade for workpiece material.	1. Use blade with correct properties for your type
underpowered.		of cutting.
	2. Wrong workpiece material.	2. Use metal with correct properties for your type
		of cutting.
	3. Feed rate/cutting speed too fast for task.	3. Decrease feed rate/cutting speed.
	4. Blade is slipping on wheels.	4. Adjust blade tracking and tension.
	5. Low power supply voltage.	5. Ensure hot lines have correct voltage on both legs.
	6. Motor bearings are at fault.	6. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.
	7. Plug/receptacle is at fault.	7. Test for good contacts; correct the wiring.
	8. Motor connection is wired incorrectly.	8. Correct motor wiring connections.
	9. Motor has overheated.	<ol> <li>Clean off motor, let cool, and reduce workload.</li> </ol>
	10. Motor is at fault.	10. Test/repair/replace.
Machine has vibration or noisy operation.	1. Motor fan is rubbing on fan cover.	1. Replace dented fan cover; replace loose/ damaged fan.
	2. Blade is at fault.	2. Replace/resharpen blade.
	3. Gearbox is at fault.	3. Rebuild gearbox for bad gear(s)/bearing(s).
	4. Wrong blade and/or speed too slow.	4. Change blade and/or speed.



### Bandsaw Operations

Bandsaw Operatio		
Symptom	Possible Cause	Possible Solution
Machine is loud when cutting or bogs down in the cut.	<ol> <li>Excessive feed rate.</li> <li>Blade TPI is too great, or material is too coarse.</li> </ol>	<ol> <li>Refer to Feed Rate on Page 31, or Changing Blade Speed on Page 29, and adjust as required.</li> <li>Refer to Blade Selection on Page 26 and adjust as required.</li> </ol>
Blades break often.	1. Blade is not tensioned correctly.	1. Check to see that blade is not excessively tight or too loose.
	2. Workpiece is loose in vise.	<ol> <li>Clamp workpiece more tightly, or use a jig to hold workpiece.</li> </ol>
	3. Excessive feed rate.	3. Refer to Feed Rate on Page 31, or Changing Blade Speed on Page 29, and adjust as required.
	4. Blade TPI is too great, or material is too coarse.	4. Refer to <b>Blade Selection</b> on <b>Page 26</b> , and adjust as required.
	5. Blade is rubbing on wheel flange.	<ol> <li>Refer to Blade Tension &amp; Tracking on Page 43, and adjust as required.</li> </ol>
	6. Bandsaw is being started with blade resting on workpiece.	<ol> <li>Start bandsaw and then slowly lower bow by setting feed rate.</li> </ol>
	7. Guide bearings are misaligned.	7. Refer to <b>Blade Guides</b> on <b>Page 29</b> , and adjust as required.
	8. Blade is too thick, or blades are of low quality.	8. Use a higher quality blade.
Blade dulls prematurely.	1. Cutting speed is too fast.	1. Refer to <b>Changing Blade Speed</b> on <b>Page 29</b> , and adjust as required.
	2. Blade TPI is too great, or material is too coarse.	<ol> <li>Refer to Blade Selection on Page 26, and adjust as required.</li> </ol>
	3. Excessive feed rate.	<ol> <li>Refer to Feed Rate on Page 31, or Changing Blade</li> <li>Speed on Page 29, and adjust as required.</li> </ol>
	4. Workpiece has hard spots, welds, or scale is on material.	<ol> <li>Increase feed pressure, and reduce cutting speed.</li> </ol>
	5. Blade is twisted.	5. Replace blade.
	6. Blade is slipping on wheels.	6. Refer to Blade Tension & Tracking on Page 43,
		and adjust as required.
Teeth are ripping from the	1. Feed pressure is too heavy and	1. Refer to Blade Selection on Page 26 and decrease
blade.	blade speed is too slow; or blade	feed pressure. Refer to Feed Rate on Page 31, and
	TPI is too coarse for workpiece.	adjust as required.
	2. Workpiece is vibrating in vise.	2. Reclamp workpiece in vise, and use a jig if required.
	3. Blade gullets are loading up with chips.	3. Use a coarser-tooth blade.
Cuts are crooked.	1. Feed pressure is too high.	1. Refer to <b>Feed Rate</b> on <b>Page 31</b> , and adjust as required.
	<ol> <li>Guide bearings are out of adjustment, or too far away from workpiece.</li> </ol>	2. Refer to <b>Blade Guides</b> on <b>Page 29</b> and replace or adjust.
	3. Blade tension is low.	<ol> <li>Refer to Blade Tension &amp; Tracking on Page 43, and adjust as required.</li> </ol>
	4. Blade is dull.	4. Refer to <b>Blade Change</b> on <b>Page 42</b> and replace blade.
	5. Blade speed is wrong.	5. Refer to <b>Changing Blade Speed</b> on <b>Page 29</b> , and adjust as required.

# **Blade Change**

Blades should be changed when they become dull, damaged, or when you are using materials that require a blade of a certain type or tooth count.

#### To change blade on bandsaw:

- 1. DISCONNECT MACHINE FROM POWER!
- 2. Raise bow of bandsaw to vertical position, close feed ON/OFF valve, and remove wheel access cover.
- 3. Remove blade guards.
- 4. Loosen tension handle shown in **Figure 54** and slip blade off of wheels.

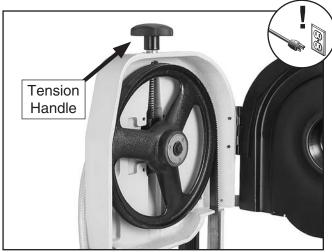


Figure 54. Location of tension handle.

# 

CUTTING HAZARD! Bandsaw blades are sharp and awkward to hold. Protect your hands with heavy gloves when handling blade.

- **5.** Install new blade around bottom wheel and through both blade guide bearings.
- 6. With blade around bottom wheel, slip it around top wheel as shown in **Figure 55**, keeping blade between blade guide bearings.



Figure 55. Installing blade.

**Note:** It is possible to flip blade inside out, in which case the blade will be installed in the wrong direction. Check to make sure blade teeth are facing toward workpiece, as shown in **Figure 56**. Some blades have a directional arrow as a guide.

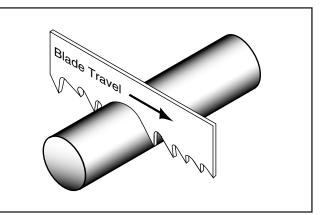


Figure 56. Blade teeth facing workpiece.

- 7. When blade is around both wheels, adjust so back of blade is against shoulder of wheels.
- 8. Complete blade change by following steps in Blade Tension & Tracking.



### Blade Tension & Tracking

Proper blade tension is essential to long blade life, straight cuts, and efficient cutting. The Model G0561 features a blade tension indicator to assist you with blade tensioning.

Two major signs that you do not have proper blade tension are: 1) the blade stalls in the cut and slips on the wheels, and 2) the blade frequently breaks from being too tight.



Loosen blade tension at end of each day to prolong blade life.

#### To tension blade on bandsaw:

- 1. Turn blade tension handle clockwise to tension blade.
- 2. Tension blade until blade tension guide indicator is in green zone (see **Figure 57**).

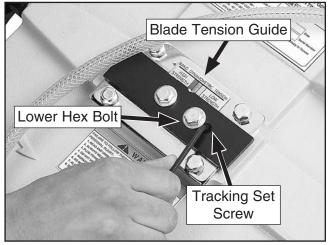


Figure 57. Blade tension controls.

 To fine tune blade tension, use a blade tensioning gauge, like one found in SECTION 5: ACCESSORIES on Page 36. Follow instructions included with your gauge and blade manufacturer's recommendations on blade tension.

The blade tracking has been properly set at the factory. The tracking will rarely need to be adjusted if the bandsaw is used properly.

#### To adjust blade tracking on bandsaw:

- 1. DISCONNECT MACHINE FROM POWER!
- 2. Position bandsaw in vertical position.
- 3. Open wheel access cover.
- **4.** Loosen, but do not remove lower hex bolt in blade wheel tilting mechanism.
- 5. Relax blade tension.
- 6. Adjust set screw with a 4mm hex wrench (shown in Figure 57), then tighten hex bolt loosened in Step 4.
  - -Tightening set screw will move blade closer to shoulder of wheel.
  - -Loosening set screw will move blade away from shoulder.
- 7. Tension blade.
- 8. Reconnect machine to power and turn *ON* bandsaw.
  - -If blade tracks along shoulder of wheel (without rubbing), blade is tracking properly and this adjustment is completed.
  - —If blade walks away from shoulder of wheel or hits shoulder, repeat **Steps 4-7** until blade tracks properly.
- 9. Turn OFF bandsaw.
- 10. Replace blade guard and wheel access cover.



# **Squaring Blade**

It is always a good idea during the life of your saw to check and adjust this setting. This adjustment will improve your cutting results and extend the life of your blade.

#### To square blade to bed of table:

- 1. DISCONNECT MACHINE FROM POWER!
- 2. Lower head of the bandsaw until it contacts horizontal stop.
- 3. Place a square on table bed and against edge of blade (see **Figure 58**), and check different points along length of table between blade guides.

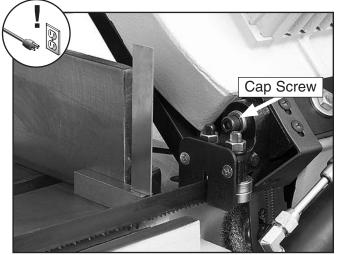


Figure 58. Square placed on table bed against edge of blade.

4. Loosen cap screw shown in **Figure 58**, and rotate blade guide until blade is vertical to bed.

**Note:** Both blade guides can be adjusted to achieve the results you want.

**5.** Tighten cap screw.



## Blade Guide Bearings

The blade guide bearings come adjusted from the factory and the need for adjustment should rarely occur. Uneven blade wear and crooked cuts may be the result of improper adjustment. Each bearing assembly has an eccentric bushing (see **Figure 59**) that allows the distance between the blade and bearings to be adjusted. The bearings are secured in place by a hex nut and a lock washer.

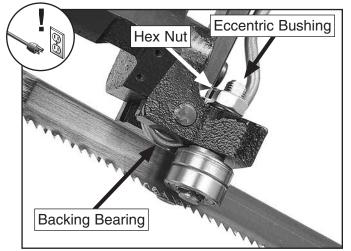


Figure 59. Guide bearing components.

Before adjusting the blade guide bearings, make sure that you have squared the blade to the table as discussed in the previous section.

#### To adjust blade guide bearings:

- 1. DISCONNECT MACHINE FROM POWER!
- **2.** Position vise to 90°, then lock in place.
- **3.** Put a machinist's square against face of vise and move it over to blade. The square should evenly touch both the face of vise and blade. If it does, skip ahead to **Step 6**.
  - -If the square does not evenly touch blade, but it does evenly touch vise, continue with next step.
- 4. Loosen hex nuts that secure eccentric bushings attached to guide bearings.
- Adjust bearings as necessary to force blade 90° to vise, then tighten hex nuts attached to bearings that are forcing the blade to 90°.
- 6. Check to see if any bearings are not touching blade evenly. If so, loosen hex nuts and adjust eccentric bushing so contact surface of bearing touches blade evenly.

**Note:** Since the bearings twist the blade into position, it is acceptable if there is 0.001"-0.002" gap between the blade and the front or back of the bearing. Just make sure not to squeeze the blade too tightly with the bearings. After the guide bearings are set, you should be able to rotate guide bearings (although they will be stiff) with your fingers.

The backing bearing is not adjustable and should make light contact with blade.



# **SECTION 8: WIRING**

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

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

# AWARNING Wiring Safety Instructions

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

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

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

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

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

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

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

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

#### NOTICE

BLACK I Bk BLUE (BI) LIGHT The photos and diagrams YELLOW BLUE included in this section are YELLOW WHITE = (Wt) BROWN (Br) BLUE GREEN best viewed in color. You WHITE GREEN (Gn) GRAY (Gy) PURPLE can view these pages in TUR-QUOISE (Or) color at www.grizzly.com. RED (Rd) ORANGE PINK Pk

**COLOR KEY** 



## **Electrical Components**



Figure 60. Main motor and capacitor (110V).

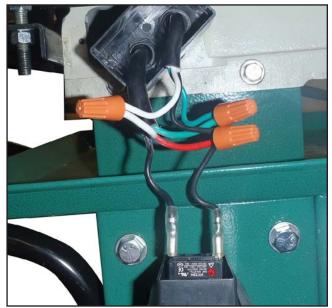


Figure 61. Power switch.



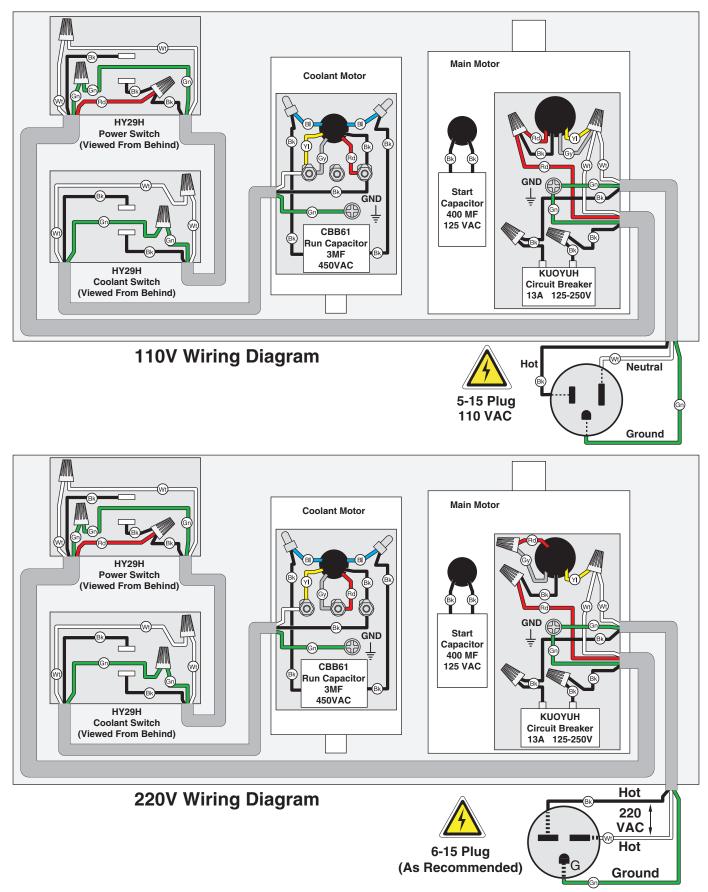
Figure 62. Pump motor (110V).



Figure 63. Coolant pump ON/OFF switch.

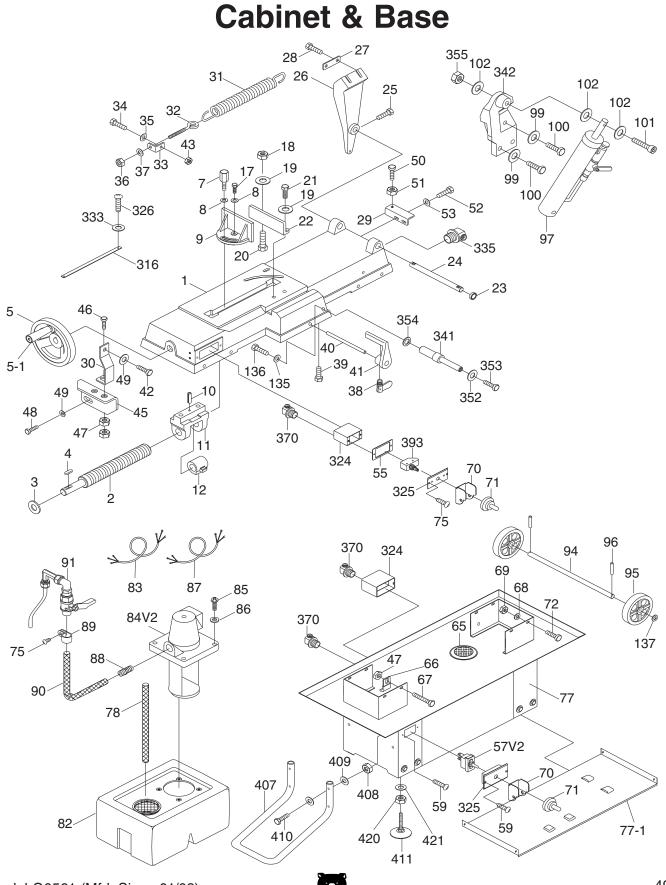


## G0561 110V & 220V Wiring Diagrams





# **SECTION 9: PARTS**

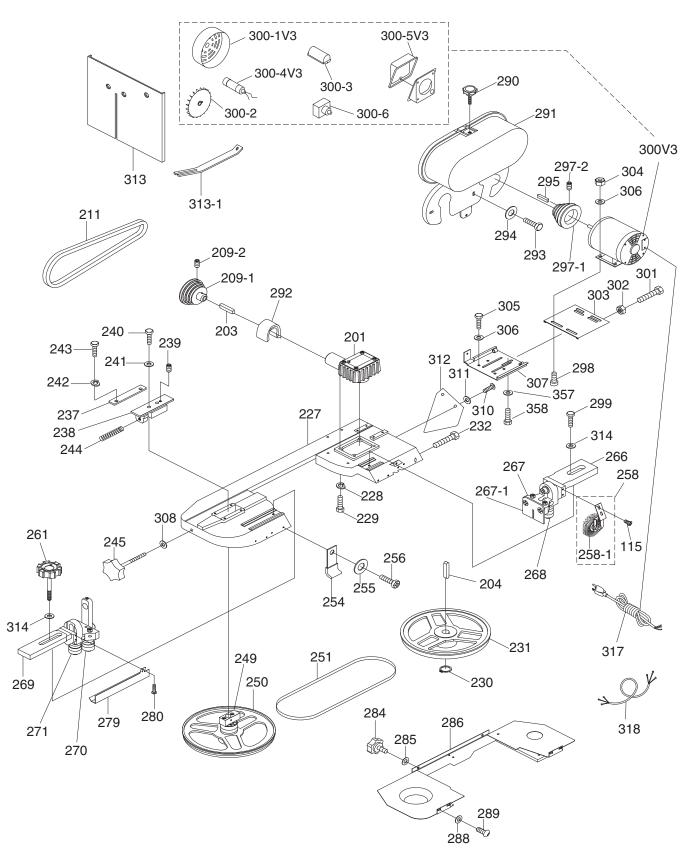


### **Cabinet & Base Parts List**

18         POS61018         HEX NUT 11-12           19         POS61019         FLAT WASHER 1/2           20         POS61020         CARRIAGE BOLT 1/2-12 X 2           21         POS61021         HEX BOLT 1/2-12 X 2           22         POS61022         VISE JAW, REAR           32         POS61023         BUSHING           24         POS61024         SUPPORT ROD           25         POS61025         HEX BOLT 3/2-18 X 3/4           26         POS61026         PUOT BRACKET           27         POS61027         SPRING BRACKET 75 X 25.4           28         POS61028         HEX BOLT 3/8-18 X 3/4           29         POS61029         HCX BOLT 3/8-16 X 1-1/2           29         POS61020         HCX BOLT 3/8-16 X 1-1/2           29         POS61020         BUPORT PLATE           30         POS61031         TENSION SPRING 32 X 282           31         POS61033         FIRING HANDLE BRACKET           32         POS61034         HEX BOLT 5/16-18 X 3/4           33         POS61037         FLAT WASHER 3/8           34         POS61037         FLAT WASHER 3/8           34         POS61037         FLAT WASHER 3/8           34	REF	PART #	DESCRIPTION	REF	PART #	DESCRIPTION
3         POS61003         FLAT WASHER 1/2         B8         POS61008         FLAT WASHER 5/16           5         POS61005         HANDWHELL         70         POS61007         KNOR BOLT 38-16         70         POS61007         KNOR BOLT 38-16         71         POS61007         KNOR BOLT 38-16         72         POS61007         KNOR BOLT 38-16         77         POS61070         FNLP HD SCR 10-24 X 38         77         POS61071         STAND SSEMBLY         77         POS61017         STAND SSEMBLY         77         POS61017         FNLP HD SCR 10-24 X 38         82         POS61082         COOLANT FUMP SWITCH CORD 163 39/267           12         POS61010         ROLLE PIN S X 34         77.1         POS61082         COOLANT FUMP SWITCH CORD 163 39/267         84         POS61082         COOLANT FUMP SWITCH CORD 163 39/27         86         POS61082         COOLANT FUMP SWITCH CORD 163 39/27         86         POS6	1	P0561001	BASE	66	P0561066	SWITCH SHUT-OFF TIP
4         Designed         KEY 5 X 5 X 15         50         Position         Hex NUT 5/15-18           51         Position         HANDWHEEL HANDLE         70         Position         71         Position         72           7         Position         FLAT WASHER 3/8         75         Position         72         Position         71         Position	2	P0561002	ACME SCREW 22 X 5 X 480	67	P0561067	HEX BOLT 3/8-16 X 1-1/4
5         PO561005         HANDWHEEL           5-1         PO561007         KNOB BOLT 3/8-16         71           7         PO561008         FLAT WASHER 3/8         75           8         PO561009         FLAT WASHER 3/8         75           9         PO561007         SWITCH BRACKET         77           10         PO561010         ROLL PIN 5 X 34         77           11         PO561011         BRACKET         78           12         PO561012         ACME NUT ASSY 22 X 5         78           14         PO561018         HAXDWHEEL         71           17         PO561018         HAXDWHEEL         71           18         PO561018         HAXDWHEEL         71           19         PO561018         HAXDWHEEL         82           10         PO561018         HAXDWHEEL         82           21         PO561020         CARRIAGE BOLT 1/2-12 X 2         85           22         PO561023         BUSHING         88         PO561086         FLAT WASHER 1/4           21         PO561026         SUPPORT ROD         90         PO561089         HOSE CUPPLER 3/8 MOMME           22         PO561026         SPPORT POT         S	3	P0561003	FLAT WASHER 1/2	68	P0561068	FLAT WASHER 5/16
5.1         P0581005.1         HANDWHEEL HANDLE         71         P058107         TCGGLE SWITCH COVER           7         P0561007         KN0B BOLT 3/8-16         75         P0561075         HLX BOLT 5/16-18 X 1           9         P0561009         VISE JAW, FRONT         77         P0561075         STAND SKEULY           10         P0561010         ROLE, FIN X SAS         77         P0561075         STAND SKEULY           11         P0561017         KAND SKEWLY         77         P0561082         COLANT TAND SKEULY           12         P0561017         HEX BOLT 3/8-16 X 1-1/2         B4/V2         P0561082         COLANT PUMP CORD V2 0/09           18         P0561020         CARRIAGE BOLT 1/2-12 X 2         B5         P0561085         FPLIP HD SCR 1/4-20 X 5/8           20         P0561021         HEX BOLT 5/16-18 X 3/4         B7         P0561086         FLAT WASHER 1/2           21         P0561022         VISE JAW, REAR         B8         P0561086         FLAT WASHER 1/2           22         P0561022         VISE JAW, REAR         B8         P0561086         FLAT WASHER 1/4           23         P0561022         VISE JAW, REAR         B8         P0561086         FLAT WASHER 1/4           24         P0561022<	4	P0561004	KEY 5 X 5 X 15	69	P0561069	HEX NUT 5/16-18
7         PO561007         KNOB BOLT 38-16         72         PO561072         HEX BOLT 57-18 X1           8         P0561009         VISE JAW, FRONT         75         P0561075         PHLP HD SCR 10-24 X 3/8           10         P0561010         BOLL PIN 5 X 34         77         P0561077         STAND ASSEMBLY           11         P0561011         BRACKET         78         P0561082         COLANT PUMP MOTOR V2.07.09           12         P0561012         ACME NUT ASY 22 X 5         82         P0561082         COLANT PUMP MOTOR V2.07.09           18         P0561018         HEX NUT 12-12         84/V2         P0561086         PLUT WASHER 1/2           20         P0561020         CARRIAGE BOLT 1/2-12 X 2         87         P0561086         PLUT WASHER 1/4           21         P0561020         CARRIAGE BOLT 1/2-12 X 2         87         P0561086         PLUT WASHER 1/4           22         P0561020         SUPPORT ROD         89         P0561086         PLUT WASHER 1/4           24         P0561020         SUPPORT RDD         90         P0561096         HOSE CUP-P3/8 WT S/16           24         P0561026         HEX BOLT 57/6-18 X 3/4         91         P0561036         STAND WHEEL           26         P0561026 <td>5</td> <td>P0561005</td> <td>HANDWHEEL</td> <td>70</td> <td>P0561070</td> <td>SWITCH BRACKET</td>	5	P0561005	HANDWHEEL	70	P0561070	SWITCH BRACKET
PO561008         FLAT WASHER 3/8         P           9         P0561008         VISE JAW, FRONT         77         P056107         STAND ASSEMBLY           11         P0561010         ROLL PIN 5 X 34         77         P056107         STAND ASSEMBLY           12         P0561012         ACKE NUT ASSY 22 X 5         B8         P056108         HOSE 12 X 8 X 200MM           12         P0561013         HEX BULT 3/8-16 X 1-1/2         B8         P0561083         COOLANT TANK           18         P0561019         FLAT WASHER 1/2         B4/V2         P0561085         COOLANT PUMP WOTCH VORD V2.07.09           11         P0561020         CARRIAGE BOLT 12-12 X 2         B7         P0561086         FLAT WASHER 1/4           12         P0561021         HEX BULT 12-12 X 2         B7         P0561088         HOSE CUP ER 3/8 NPT X 5/16           23         P0561024         SUPPORT POD         B8         P0561088         HOSE CUP ER 3/8 NPT X 5/16           24         P0561024         SUPPORT POD         B9         P0561039         VALVE ASSEMBLY B7/2           26         P0561031         TENSION SPRING 32 X 28.2         B9         P0561039         TAND WHEEL AXLE           27         P0561032         FLAT WASHER 3/16         B9	5-1	P0561005-1	HANDWHEEL HANDLE	71	P0561071	TOGGLE SWITCH COVER
9         PO561009         VISE JAW, FRONT           10         PO561010         ROLL PIN 5 X 34           11         PO561010         BRALKET           12         PO561012         ACME NUT ASSY 22 X 5           12         PO561012         ACME NUT ASSY 22 X 5           12         PO561013         FLAT WASHER 1/2           13         PO561018         HEX NUT 1/2-12           14         PO561018         FLAT WASHER 1/2           15         PO561020         CARAIAGE BOLT 1/2-12 X 2           16         PO561020         CARAIAGE BOLT 1/2-12 X 2           17         PO561037         COCLANT PUMP SWITCH CORD 16G 3W 26'           18         PO561020         CARAIAGE BOLT 1/2-12 X 2           10         PO561023         BUSHING           21         PO561023         BUSHING           22         PO561023         HEX BOLT 3/16-18 X 3/4           10         PO561030         HOSE 12 X 8 X 2000MM           21         PO561030         HOSE 12 X 8 X 2000MM           22         PO561024         HEX BOLT 3/16-18 X 3/4           10         PO561030         HOSE 12 X 8 X 2000MM           21         PO561030         FLAT WASHER 1/4           22<	7	P0561007	KNOB BOLT 3/8-16	72	P0561072	HEX BOLT 5/16-18 X 1
10         PO561010         BOLL PIN 5 X 34         77.1         PO561077-1         STAND SHELF           11         PO561011         BRACKET         77.4         PO561078         HOSE 12 X 8 X 200MM           17         PO561017         HEX BOLT 3/8-16 X 1-1/2         B3         PO561083         COOLANT TANK           18         PO561018         HEX NUT 12-12         B4         PO561038         COOLANT PUMP WOTCR V2.07.09           19         PO561021         HEX BOLT 1/2-12 X 2         B4         PO561083         COOLANT PUMP WOTCR V2.07.09           20         PO561021         HEX BOLT 1/2-12 X 2         B4         PO561088         PULP HO SC 11/4-20 X 5/8           21         PO561021         HEX BOLT 1/2-12 X 2         B7         PO561089         POSE 10.49         STAND WHECH CORD 18G 3W 23"           22         PO561023         BUSHING         B8         PO561088         HOSE CLIP 5/8"         B9           24         PO561024         SUPPORT ROD         B9         PO561039         HOSE CLIP 5/8"         B9           25         PO561026         PIVOT BRACKET         S 25.4         B9         PO561039         HOSE CLIP 5/8"         B9           26         PO561026         PIVOT BRACKET         S 25.4 <td< td=""><td>8</td><td>P0561008</td><td>FLAT WASHER 3/8</td><td>75</td><td>P0561075</td><td>PHLP HD SCR 10-24 X 3/8</td></td<>	8	P0561008	FLAT WASHER 3/8	75	P0561075	PHLP HD SCR 10-24 X 3/8
11         P0561011         BRACKET         78         P0561078         HOSE 12 X 8 X 200MM           12         P0561012         ACME NUT ASSY 22 X 5         B         P0561082         COOLANT TANK           12         P0561018         HEX NUT 1/2:12         B         P0561084/2         COOLANT PUMP MOTOR V2.07.09           19         P0561020         CARRIAGE BOLT 1/2:12 X 2         B         P0561087         COOLANT PUMP MOTOR V2.07.09           20         P0561020         CARRIAGE BOLT 1/2:12 X 2         B         P0561087         COOLANT PUMP COORD 18G 3W 23"           21         P0561022         VISE JAW, REAR         B         P0561087         COOLANT PUMP CORD 18G 3W 23"           22         P0561023         BUSHING         B9         P0561089         HOSE CUP-ER 36 NPT X 5/16           23         P0561024         SUPPORT ROD         90         P0561090         HOSE 12 X 8 X 200MM           26         P0561027         SPRING BRACKET 75 X 25.4         95         P0561096         STAND WHEEL           28         P0561028         HEX BOLT 38-16 X 1/1/2         96         P0561096         COTTEN PIN 3 X 25MM STANDARD           30         P0561033         FIXED PLATE         97         P0561037         CYLINDER ASSEMBLY RF-712N	9	P0561009	VISE JAW, FRONT	77	P0561077	STAND ASSEMBLY
12         PO561012         ACME NUT ASY 22 X 5           17         P0561012         ACME NUT A28-16 X 1-1/2         B2         P0561083         COOLANT TANK           18         P0561019         FLAT WASHER 1/2         B4         P0561085         COOLANT PUMP MOTOR V2.07.09           19         P0561021         HEX BOLT 1/2-12 X 2         B5         P0561085         PHLP HD SCR 1/4-20 X 5/8           20         P0561021         HEX BOLT 1/2-12 X 2         B6         P0561086         PLAT WASHER 1/4           21         P0561021         HEX BOLT 1/2-12 X 2         B6         P0561086         PLAT WASHER 1/4           22         P0561022         UISE JAW, REAR         B7         P0561089         HOSE CUIP 5/8'           24         P0561024         SUPPORT RDD         B9         P0561099         HOSE SECUP 5/8'           26         P0561027         SPRING BRACKET 75 X 25.4         B6         P0561096         STAND WHEEL AXLE           27         P0561027         SPRING BRACKET 75 X 25.4         B6         P0561096         COTTER PIN 3 X 25MM STANDARD           29         P0561031         FLXED NFLATE         B9         P0561039         FLAT WASHER 5/16           31         P0561033         FLAT WASHER 5/16         B14	10	P0561010	ROLL PIN 5 X 34	77-1	P0561077-1	STAND SHELF
17         P0551017         HEX BOLT 3/6-16 X 1-1/2         B3         P0551083         COOLANT PUMP SWITCH CORD 16G 3W 26'           18         P0551018         FLX TWASHER 1/2         B4V2         P0561084/2         COOLANT PUMP SWITCH CORD 16G 3W 23'           20         P0551020         CARRIAGE BOLT 1/2-12 X 2         B6         P0551086         FLAT WASHER 1/4           21         P0551020         CARRIAGE BOLT 1/2-12 X 2         B7         P0551086         FLAT WASHER 1/4           22         P0561023         USE JAW, REAR         B6         P0561086         FLAT WASHER 1/4           23         P0561024         SUPORT ROD         B9         P0561091         HOSE COUPLER 3/8 NPT X 5/16           24         P0561025         HEX BOLT 3/6-18 X 3/4         B1         P0561031         YALVE ASSEMBLY           26         P0561030         FLX DLT 3/6-16 X 1-1/2         B7         P0561037         STAND WHEEL         STAND WHEEL           27         P0561032         SUPNOR BRACKET 75 X 25.4         B6         P0561036         STAND WHEEL         STAND WHEEL </td <td>11</td> <td>P0561011</td> <td>BRACKET</td> <td>78</td> <td>P0561078</td> <td>HOSE 12 X 8 X 200MM</td>	11	P0561011	BRACKET	78	P0561078	HOSE 12 X 8 X 200MM
IB         POS61018         HEX NUT 1/2-12           19         POS61019         FLAT WASHER 1/2           20         POS61020         CARRIAGE BOLT 1/2-12 X 2           21         POS61021         HEX BOLT 1/2-12 X 2           22         POS61022         VISE JAW, REAR           23         POS61023         BUSHING           24         POS61024         SUPPORT FOD           25         POS61025         HEX BOLT 3/2-18 X 3/4           26         POS61026         PIVOT BRACKET           27         POS61027         SPRING BRACKET 75 X 25.4           28         POS61028         BLK DOLT 3/6-18 X 3/4           29         POS61029         SUPPORT PLATE           29         POS61029         SUPPORT PLATE           20         POS61030         FIXED PLATE           30         POS61031         TENSION SPRING 32 X 282           31         POS61033         SPRING HANDLE BRACKET           32         POS61034         HEX BOLT 3/16-18 X 3/4           34         POS61035         FLAT WASHER 3/16           35         POS61037         FLAT WASHER 3/8           38         POS61037         FLAT WASHER 3/8           38         POS61038 <td>12</td> <td>P0561012</td> <td>ACME NUT ASSY 22 X 5</td> <td>82</td> <td>P0561082</td> <td>COOLANT TANK</td>	12	P0561012	ACME NUT ASSY 22 X 5	82	P0561082	COOLANT TANK
19         P0561019         FLAT WASHER 1/2           20         P0561020         CARRIAGE BOLT 1/2-12 X 2           21         P0561020         CARRIAGE BOLT 1/2-12 X 2           22         P0561022         VISE JAW, REAR           23         P0561023         BUSHING           24         P0561024         SUPPORT ROD           25         P0561025         HEX BOLT 3/-16 X 3/4           26         P0561026         PUYOT BRACKET           27         P0561027         SPINING BRACKET 75 X 25.4           29         P0561029         SUPPORT PDATCE           29         P0561029         SUPPORT PLATE           29         P0561020         FIXED PLATE           29         P0561030         FIXED PLATE           30         P0561031         TENSION SPRING 32 X 282           31         P0561033         SPRING HANDLE BRACKET           32         P0561034         HEX BOLT 3/-18 X 4 -1/2           33         P0561035         FLAT WASHER 5/16           34         P0561036         HEX BOLT 3/-18 X 3/4           35         P0561038         LEAF SCREW 5/16-18           39         P0561039         FLAT WASHER 5/16           36         P056	17	P0561017	HEX BOLT 3/8-16 X 1-1/2	83	P0561083	COOLANT PUMP SWITCH CORD 16G 3W 26"
20         P0561020         CARRIAGE BOLT 1/2-12 X 2           21         P0561021         HEX BOLT 1/2-12 X 2           22         P0561021         HEX BOLT 1/2-12 X 2           23         P0561023         BUSHING           24         P0561024         SUPPORT ROD           25         P0561026         PUOT BRACKET           26         P0561026         PUVOT BRACKET 75 X 25.4           27         P0561027         SPRING BRACKET 75 X 25.4           28         P0561028         HEX BOLT 3/8-18 X 1-1/2           29         P0561027         SPRING BRACKET 75 X 25.4           28         P0561030         FIXED PLATE           29         P0561031         TENSION SPRING 82 X 282           100         P0561030         FIXED PLATE           30         P0561033         SPRING HANCKET 75 X 3/4           31         P0561034         HEX BOLT 5/16-18 X 3/4           32         P0561035         FLAT WASHER 5/16           31         P0561035         FLAT WASHER 5/16           35         P0561035         FLAT WASHER 5/16           36         P0561036         HEX BOLT 5/16-18 X 3/4           36         P0561037         FLAT WASHER 5/16	18	P0561018	HEX NUT 1/2-12	84V2	P0561084V2	COOLANT PUMP MOTOR V2.07.09
21         P0561021         HEX BOLT 1/2-12 X 2         B7           22         P0561023         UISE JAW, REAR         B8         P0561087         COOLANT PUMP CORD 18G 3W 23"           24         P0561024         SUPPORT ROD         B9         P0561089         HOSE CUPLER 3% NPT X 5/16           24         P0561024         SUPPORT ROD         B9         P0561099         HOSE CUPLE 3%           26         P0561026         PIVOT BRACKET         B9         P0561091         VALVE ASSEMBLY           27         P0561027         SPRING BRACKET 75 X 25.4         B5         P0561094         STAND WHEEL           28         P0561029         SUPPORT PLATE         B9         P0561097         CYLINDER ASSEMBLY RF-712N           30         P0561030         FIXED PLATE         B9         P0561097         CYLINDER ASSEMBLY RF-712N           31         P0561031         TENSION SPRING 32 X 282         100         P0561097         CYLINDER ASSEMBLY RF-712N           32         P0561032         FLAT WASHER 5/16         110         P0561010         HEX BOLT 5/16-18 X 3/4           34         P0561033         SPRING HANDLE BRACKET         124         P0561135         FLAT WASHER 5/16           35         P0561038         LEAF SCREW 5/16-18 <td>19</td> <td>P0561019</td> <td>FLAT WASHER 1/2</td> <td>85</td> <td>P0561085</td> <td>PHLP HD SCR 1/4-20 X 5/8</td>	19	P0561019	FLAT WASHER 1/2	85	P0561085	PHLP HD SCR 1/4-20 X 5/8
22         P0561022         VISE JAW, REAR         88         P0561028         HOSE CUP LER 3/8 NPT X 5/16           23         P0561024         SUPPORT ROD         90         P0561089         HOSE CLIP 5/8"           24         P0561025         HEX BOLT 5/16-18 X 3/4         90         P0561090         HOSE LIP 5/8"           26         P0561026         PIVOT BRACKET         X 25.4         94         P0561090         HOSE LIZ 8 X 2000MM           27         P0561027         SPRING BRACKET 75 X 25.4         94         P0561095         STAND WHEEL         X 25.4           28         P0561028         SUPPORT PLATE         96         P0561096         COTTER PIN 3 X 25.4M STANDARD           30         P0561030         FIXED VASHER 5/16         100         P056109         FLAT WASHER 5/16           31         P0561033         SPRING HANDLE BRACKET         101         P0561100         HEX BOLT 5/16-18 X 1-1/2           34         P0561034         HEX MOLT 5/16-18 X 3/4         136         P0561102         FLAT WASHER 5/16           36         P0561037         FLAT WASHER 3/8         136         P0561326         FLAT WASHER 5/16           37         P0561038         LEAF SCREW S/16-18 X 1-1/2         136         P0561326         FLAT WAS	20	P0561020	CARRIAGE BOLT 1/2-12 X 2	86	P0561086	FLAT WASHER 1/4
23         P0561023         BUSHING           24         P0561024         BUPORT ROD           25         P0561025         HEX BOLT 5/16-18 X 3/4           26         P0561025         HEX BOLT 5/16-18 X 3/4           27         P0561027         SPRING BRACKET 75 X 25.4           28         P0561028         BUPORT PLATE           29         P0561030         FIXED PLATE           29         P0561031         TENSION SPRING 32 X 282           20         P0561033         FIXED PLATE           30         P0561034         HEX BOLT 5/16 X 4-1/2           31         P0561035         FLAT WASHER 5/16           32         P0561035         FLAT WASHER 5/16           34         P0561036         HEX NUT 3/8-16           35         P0561038         LEAF SCREW 5/16-18           36         P0561038         LEAF SCREW 5/16-18           39         P0561041         WORK STOP           41         P0561042         HEX BOLT 5/16-18 X 3/4           39         P0561035	21	P0561021	HEX BOLT 1/2-12 X 2	87	P0561087	COOLANT PUMP CORD 18G 3W 23"
24         P0561024         SUPPORT ROD           25         P0561025         HEX BOLT 5/16-18 X 3/4           26         P0561026         PV070 BRACKET           27         P0561027         SPRING BRACKET 75 X 25.4           28         P0561028         SPRING BRACKET 75 X 25.4           29         P0561028         SPRING PORT PLATE           29         P0561030         FIXED PLATE           20         P0561031         TENSION SPRING 32 X 282           31         P0561032         EYE BOLT 3/8-16 X 1-1/2           32         P0561033         SPRING HANDLE BRACKET           32         P0561034         HEX BOLT 5/16-18 X 3/4           34         P0561035         FLAT WASHER 5/16           35         P0561037         FLAT WASHER 5/16           36         P0561038         LEAF SCREW 5/16-18           39         P0561039         HEX BOLT 5/16-18 X 3/4           36         P0561034         HEX NUT 3/8-16           37         P0561035         FLAT WASHER 5/16           38         P0561038         LEAF SCREW 5/16-18           39         P0561040         WORK STOP ROD           41         P0561044         HEX BOLT 5/16-18 X 3/4           <	22	P0561022	VISE JAW, REAR	88	P0561088	HOSE COUPLER 3/8 NPT X 5/16
25         P0561025         HEX BOLT 5/16-18 X 3/4         91         P0561091         VALVE ASSEMBLY           26         P0561027         SPING BRACKET 75 X 25.4         95         P0561095         STAND WHEEL         AXLE           28         P0561027         SPING BRACKET 75 X 25.4         95         P0561095         STAND WHEEL         AXLE           28         P0561027         SPING BRACKET 75 X 25.4         95         P0561095         STAND WHEEL         96           29         P0561030         FIXED PLATE         97         P0561097         CYLINDER ASSEMBLY RF-712N           30         P0561030         FIXED PLATE         90         P0561099         FLAT WASHER 5/16           31         P0561033         SPING HANDLE BRACKET         100         P0561100         HEX BOLT 5/16-18 X 3/4           36         P0561034         HEX BOLT 5/16-18 X 3/4         135         P0561135         FLAT WASHER 5/16           37         P0561035         FLAT WASHER 3/8         324         P0561324         ELECTRICAL BOX           38         P0561043         HEX BOLT 5/16-18 X 3/4         325         P0561325         FILAT WASHER 5/16           316         P0561040         WORK STOP         335         P0561333         FLAT WASHER 5/1	23	P0561023	BUSHING	89	P0561089	
25         P0561025         HEX BOLT 5/16-18 X 3/4         91         P0561091         VALVE ASSEMBLY           26         P0561027         SPING BRACKET 75 X 25.4         95         P0561095         STAND WHEEL         AXLE           28         P0561027         SPING BRACKET 75 X 25.4         95         P0561095         STAND WHEEL         AXLE           28         P0561027         SPING BRACKET 75 X 25.4         95         P0561095         STAND WHEEL         96           29         P0561030         FIXED PLATE         97         P0561097         CYLINDER ASSEMBLY RF-712N           30         P0561030         FIXED PLATE         90         P0561099         FLAT WASHER 5/16           31         P0561033         SPING HANDLE BRACKET         100         P0561100         HEX BOLT 5/16-18 X 3/4           36         P0561034         HEX BOLT 5/16-18 X 3/4         135         P0561135         FLAT WASHER 5/16           37         P0561035         FLAT WASHER 3/8         324         P0561324         ELECTRICAL BOX           38         P0561043         HEX BOLT 5/16-18 X 3/4         325         P0561325         FILAT WASHER 5/16           316         P0561040         WORK STOP         335         P0561333         FLAT WASHER 5/1	24	P0561024	SUPPORT ROD	90	P0561090	HOSE 12 X 8 X 2000MM
27         P0661027         SPRING BRACKET 75 X 25.4         95         P0661095         STAND WHEEL           28         P0561029         HEX BOLT 3/8-16 X 1-1/2         96         P0561096         COTTER PIN 3 X 25MM STANDARD           29         P0561030         FIXED PLATE         97         P0561096         COTTER PIN 3 X 25MM STANDARD           30         P0561031         TENSION SPRING 32 X 282         100         P0561109         FLAT WASHER 5/16           31         P0561032         EYE BOLT 3/8-16 X 4-1/2         101         P0561100         HEX BOLT 5/16-18 X 1           32         P0561033         SPRING HANDLE BRACKET         101         P0561101         CAP SCREW 3/8-16 X 2-1/4           34         P0561035         FLAT WASHER 5/16         101         P0561102         FLAT WASHER 3/8           35         P0561036         HEX NUT 3/8-16         136         P0561136         FLAT WASHER 3/8           36         P0561037         FLAT WASHER 3/8         136         P0561324         ELECTRICAL BOX           38         P0561043         HEX BOLT 5/16-18 X 3/4         136         P0561325         SWITCH COVER           39         P0561040         WORK STOP         133         P0561335         STRAIN RELIEF 5/8 NPT NYLON	25		HEX BOLT 5/16-18 X 3/4	91	P0561091	VALVE ASSEMBLY
28         P0561028         HEX BOLT 3/8-16 X 1-1/2         96         P0561096         COTTER PIN 3 X 25MM STANDARD           29         P0561030         FIXED PLATE         97         P0561097         CYLINDER ASSEMBLY RF-712N           30         P0561031         TENSION SPRING 32 X 282         100         P0561010         HEX BOLT 5/16-18 X 1           32         P0561032         EYE BOLT 3/8-16 X 4-1/2         101         P0561101         CAP SCREW 3/8-16 X 2-1/4           33         P0561033         SPRING HANDLE BRACKET         102         P0561102         FLAT WASHER 5/16           34         P0561035         FLAT WASHER 5/16         135         P0561036         HEX NUT 3/8-16           35         P0561037         FLAT WASHER 3/8         135         P0561136         SCALE           36         P0561037         FLAT WASHER 3/8         324         P0561324         ELECTRICAL BOX           38         P0561039         HEX BOLT 5/16-18 X 3/4         326         P0561326         SWITCH COVER           39         P0561041         WORK STOP ROD         335         P0561335         STRAIN RELIEF 5/8 NPT NYLON           41         P0561047         HEX BOLT 3/6-18 X 1-3/4         352         P0561335         STRAIN RELIEF 5/16	26	P0561026	PIVOT BRACKET	94	P0561094	STAND WHEEL AXLE
29         P0561029         SUPPORT PLATE         97         P0561097         CYLINDER ASSEMBLY RF-712N           30         P0561030         FIXED PLATE         99         P0561099         FLAT WASHER 5/16           31         P0561032         EYE BOLT 3/8-16 X 4-1/2         100         P0561100         HEX BOLT 5/16-18 X 1           32         P0561032         EYE BOLT 3/8-16 X 4-1/2         101         P0561100         HEX BOLT 5/16-18 X 1           34         P0561035         FLAT WASHER 5/16         102         P0561135         FLAT WASHER 5/16           35         P0561036         HEX NUT 3/8-16         316         P0561135         FLAT WASHER 5/16           36         P0561037         FLAT WASHER 3/8         324         P0561326         SWITCH COVER           39         P0561040         WORK STOP ROD         332         P0561326         PHLP HD SCR 10-24 X 3/8           41         P0561040         HEX NUT 5/16-18 X 1-1/2         341         P0561333         FLAT WASHER 5/16           42         P0561043         HEX NUT 5/16-18 X 1-1/2         332         P0561333         FLAT WASHER 5/16           43         P0561044         HEX BOLT 5/16-18 X 3/4         342         P0561342         CYLINDER SUPPORT, LOWER <t< td=""><td>27</td><td>P0561027</td><td>SPRING BRACKET 75 X 25.4</td><td>95</td><td>P0561095</td><td>STAND WHEEL</td></t<>	27	P0561027	SPRING BRACKET 75 X 25.4	95	P0561095	STAND WHEEL
30         P0561030         FIXED PLATE         99         P0561099         FLAT WASHER 5/16           31         P0561032         EYE BOLT 3/8-16 X 4-1/2         100         P0561100         HEX BOLT 5/16-18 X 1           32         P0561033         SPRING HANDLE BRACKET         101         P0561101         CAP SCREW 3/8-16 X 2-1/4           33         P0561033         SPRING HANDLE BRACKET         102         P0561103         FLAT WASHER 5/16           34         P0561035         FLAT WASHER 5/16         135         PLAT WASHER 5/16         136           36         P0561036         HEX NUT 3/8-16         316         P0561316         SCALE           37         P0561037         FLAT WASHER 5/16         316         P0561326         SWITCH COVER           38         P0561039         HEX SOLT 5/16-18 X 3/4         326         P0561326         SWITCH COVER           39         P0561040         WORK STOP ROD         333         P0561326         PHLP HD SCR 10-24 X 3/8           41         P0561041         WORK STOP         333         P0561335         STRAIN RELIEF 5/8 NPT NYLON           42         P0561043         HEX NUT 5/16-18 X 1-1/2         341         P0561320         CYLINDER SUPPORT, LOWER           43 <t< td=""><td>28</td><td>P0561028</td><td>HEX BOLT 3/8-16 X 1-1/2</td><td>96</td><td>P0561096</td><td>COTTER PIN 3 X 25MM STANDARD</td></t<>	28	P0561028	HEX BOLT 3/8-16 X 1-1/2	96	P0561096	COTTER PIN 3 X 25MM STANDARD
31         P0561031         TENSION SPRING 32 X 282           32         P0561032         EYE BOLT 3/8-16 X 4-1/2           33         P0561032         EYE BOLT 3/8-16 X 4-1/2           34         P0561033         SPRING HANDLE BRACKET           34         P0561034         HEX BOLT 5/16-18 X 3/4           35         P0561035         FLAT WASHER 5/16           36         P0561036         HEX NUT 3/8-16           37         P0561037         FLAT WASHER 5/16           38         P0561038         LEAF SCREW 5/16-18           39         P0561039         HEX BOLT 5/16-18 X 3/4           34         P0561040         WORK STOP ROD           314         P0561041         WORK STOP ROD           315         P0561325         STRAIN RELIEF 5/8 NPT NYLON           326         P0561333         FLAT WASHER #10           331         P0561043         HEX NUT 5/16-18 X 1-1/2           342         P0561043         HEX NUT 5/16-18 X 1-1/2           343         P0561043         HEX NUT 5/16-18 X 1-1/2           344         P0561044         HEX BOLT 5/16-18 X 3/4           350         P0561352         FLAT WASHER 5/16           351         P0561045         SUPPORT PLATE	29	P0561029	SUPPORT PLATE	97	P0561097	CYLINDER ASSEMBLY RF-712N
32         P0561032         EYE BOLT 3/8-16 X 4-1/2           33         P0561033         SPRING HANDLE BRACKET           34         P0561034         HEX BOLT 5/16-18 X 3/4           35         P0561035         FLAT WASHER 5/16           36         P0561036         HEX NUT 3/8-16           37         P0561037         FLAT WASHER 3/8           38         P0561038         LEAF SCREW 5/16-18           39         P0561039         HEX BOLT 5/16-18 X 3/4           30         P0561039         HEX BOLT 5/16-18 X 3/4           316         P0561325         SWITCH COVER           39         P0561040         WORK STOP ROD           317         P0561041         WORK STOP ROD           318         P0561333         FLAT WASHER #10           319         P0561042         HEX BOLT 5/16-18 X 1-1/2           320         P0561033         FLAT WASHER #10           331         P0561333         FLAT WASHER #10           332         P0561334         CYLINDER SUPPORT, LOWER           333         P0561335         STRAIN RELIEF 5/8 NPT NYLON           342         P0561342         CYLINDER SUPPORT, LOWER           352         P0561353         HEX NUT 3/8-16 <tr< td=""><td>30</td><td>P0561030</td><td>FIXED PLATE</td><td>99</td><td>P0561099</td><td>FLAT WASHER 5/16</td></tr<>	30	P0561030	FIXED PLATE	99	P0561099	FLAT WASHER 5/16
33         P0561033         SPRING HANDLE BRACKET           34         P0561034         HEX BOLT 5/16-18 X 3/4           35         P0561035         FLAT WASHER 5/16           36         P0561036         HEX NUT 3/8-16           37         P0561037         FLAT WASHER 3/8           38         P0561038         LEAF SCREW 5/16-18           39         P0561039         HEX BOLT 5/16-18 X 3/4           30         P0561039         HEX BOLT 5/16-18 X 3/4           40         P0561040         WORK STOP ROD           41         P0561041         WORK STOP           42         P0561042         HEX BOLT 5/16-18 X 1-1/2           43         P0561040         WORK STOP           42         P0561041         WORK STOP           43         P0561043         HEX NUT 5/16-18 X 1-1/2           44         P0561044         HEX BOLT 5/16-18 X 1-1/2           45         P0561045         SUPPORT PLATE           45         P0561046         HEX BOLT 5/16-18 X 1-3/4           46         P0561046         HEX BOLT 5/16-18 X 3/4           47         P0561047         HEX MUT 3/8-16           48         P0561048         HEX BOLT 5/16-18 X 3/4           49	31	P0561031	TENSION SPRING 32 X 282	100	P0561100	HEX BOLT 5/16-18 X 1
34         P0561034         HEX BOLT 5/16-18 X 3/4         135         P0561135         FLAT WASHER 5/16           35         P0561036         HEX NUT 3/8-16         136         P0561136         HEX BOLT 5/16-18 X 3/4           36         P0561037         FLAT WASHER 3/8         324         P0561324         ELECTRICAL BOX           37         P0561038         LEAF SCREW 5/16-18         324         P0561324         ELECTRICAL BOX           38         P0561039         HEX BOLT 5/16-18         324         P0561326         SWITCH COVER           39         P0561040         WORK STOP ROD         325         P0561333         FLAT WASHER #10           41         P0561041         WORK STOP         333         P0561335         STRAIN RELIEF 5/8 NPT NYLON           42         P0561043         HEX NUT 5/16-18 X 1-1/2         341         P0561341         CYLINDER SUPPORT, LOWER           43         P0561044         HEX NUT 3/8-16         352         P0561352         FLAT WASHER 5/16           44         P0561047         HEX NUT 3/8-16         354         P0561354         SPACER 8 X 16 X 2           48         P0561048         HEX BOLT 5/16-18 X 3/4         355         P0561355         HEX NUT 3/8-16           50         P0561	32	P0561032	EYE BOLT 3/8-16 X 4-1/2	101	P0561101	CAP SCREW 3/8-16 X 2-1/4
34         P0561034         HEX BOLT 5/16-18 X 3/4         135         P0561135         FLAT WASHER 5/16           35         P0561036         HEX NUT 3/8-16         136         P0561136         HEX BOLT 5/16-18 X 3/4           36         P0561037         FLAT WASHER 3/8         324         P0561324         ELECTRICAL BOX           37         P0561038         LEAF SCREW 5/16-18         324         P0561324         ELECTRICAL BOX           38         P0561039         HEX BOLT 5/16-18         324         P0561326         SWITCH COVER           39         P0561040         WORK STOP ROD         325         P0561333         FLAT WASHER #10           41         P0561041         WORK STOP         333         P0561335         STRAIN RELIEF 5/8 NPT NYLON           42         P0561043         HEX NUT 5/16-18 X 1-1/2         341         P0561341         CYLINDER SUPPORT, LOWER           43         P0561044         HEX NUT 3/8-16         352         P0561352         FLAT WASHER 5/16           44         P0561047         HEX NUT 3/8-16         354         P0561354         SPACER 8 X 16 X 2           48         P0561048         HEX BOLT 5/16-18 X 3/4         355         P0561355         HEX NUT 3/8-16           50         P0561	33	P0561033	SPRING HANDLE BRACKET	102	P0561102	FLAT WASHER 3/8
36         P0561036         HEX NUT 3/8-16           37         P0561037         FLAT WASHER 3/8           38         P0561038         LEAF SCREW 5/16-18           39         P0561039         HEX BOLT 5/16-18 X 3/4           40         P0561040         WORK STOP ROD           41         P0561040         WORK STOP           42         P0561042         HEX BOLT 5/16-18 X 1-1/2           43         P0561042         HEX BOLT 5/16-18 X 1-1/2           44         P0561042         HEX BOLT 3/16-18 X 1-1/2           45         P0561045         SUPPORT PLATE           45         P0561046         HEX BOLT 3/8-16 X 1-3/4           47         P0561047         HEX NUT 3/8-16           48         P0561049         FLAT WASHER 5/16           50         P0561050         HEX BOLT 5/16-18 X 3/4           45         P0561050         HEX BOLT 5/16-18 X 3/4           46         P0561049         FLAT WASHER 5/16           51         P0561050         HEX BOLT 5/16-18 X 3/4           52         P0561050         HEX BOLT 3/8-16 X 1-3/4           53         P0561050         HEX BOLT 5/16-18 X 3/4           54         P0561050         HEX BOLT 3/8-16 X 1-3/4      <	34	P0561034	HEX BOLT 5/16-18 X 3/4	135		FLAT WASHER 5/16
37         P0561037         FLAT WASHER 3/8         324         P056132         ELECTRICAL BOX           38         P0561038         LEAF SCREW 5/16-18         325         P0561325         SWITCH COVER           39         P0561040         WORK STOP ROD         326         P0561326         PHLP HD SCR 10-24 X 3/8           40         P0561040         WORK STOP ROD         333         P0561333         FLAT WASHER #10           41         P0561041         WORK STOP ROD         335         P0561335         STRAIN RELIEF 5/8 NPT NYLON           42         P0561042         HEX BOLT 5/16-18 X 1-1/2         341         P0561341         CYLINDER SUPPORT, LOWER           43         P0561045         SUPPORT PLATE         342         P0561352         FLAT WASHER 5/16           45         P0561046         HEX BOLT 3/8-16 X 1-3/4         353         P0561353         HEX BOLT 5/16-18 X 1/2           47         P0561047         HEX NUT 3/8-16         354         P0561354         SPACER 8 X 16 X 2           48         P0561048         HEX BOLT 5/16-18 X 3/4         355         P0561370         STRAIN RELIEF 1/2 NPT NYLON           50         P0561050         HEX BOLT 3/8-16 X 1-3/4         393         P0561393         TOGGLE SWITCH KEDU HY29H <t< td=""><td>35</td><td>P0561035</td><td>FLAT WASHER 5/16</td><td>136</td><td>P0561136</td><td>HEX BOLT 5/16-18 X 3/4</td></t<>	35	P0561035	FLAT WASHER 5/16	136	P0561136	HEX BOLT 5/16-18 X 3/4
38         P0561038         LEAF SCREW 5/16-18           39         P0561039         HEX BOLT 5/16-18 X 3/4           40         P0561040         WORK STOP ROD           41         P0561041         WORK STOP           42         P0561042         HEX BOLT 5/16-18 X 1-1/2           43         P0561043         HEX NUT 5/16-18 X 1-1/2           44         P0561045         SUPPORT PLATE           45         P0561045         SUPPORT PLATE           46         P0561046         HEX BOLT 5/16-18 X 1-3/4           47         P0561046         HEX BOLT 5/16-18 X 3/4           48         P0561048         HEX BOLT 5/16-18 X 3/4           49         P0561050         HEX BOLT 5/16-18 X 3/4           49         P0561050         HEX BOLT 3/8-16 X 1-3/4           50         P0561050         HEX BOLT 5/16-18 X 3/4           51         P0561050         HEX BOLT 3/8-16 X 1-3/4           52         P0561052         HEX BOLT 5/16-18 X 3/4           53         P0561051         HEX MUT 3/8-16           52         P0561052         HEX BOLT 5/16-18 X 3/4           53         P0561053         LOCK WASHER 5/16           54         P05610407         CABINET HANDLE	36	P0561036	HEX NUT 3/8-16	316	P0561316	SCALE
39         P0561039         HEX BOLT 5/16-18 X 3/4         326         P0561326         PHLP HD SCR 10-24 X 3/8           40         P0561040         WORK STOP ROD         333         P0561333         FLAT WASHER #10           41         P0561041         WORK STOP         335         P0561333         STRAIN RELIEF 5/8 NPT NYLON           42         P0561042         HEX BOLT 5/16-18 X 1-1/2         341         P0561335         STRAIN RELIEF 5/8 NPT NYLON           43         P0561043         HEX NUT 5/16-18         1-3/4         342         P0561342         CYLINDER SUPPORT, LOWER           45         P0561046         HEX BOLT 3/8-16 X 1-3/4         352         P0561352         FLAT WASHER 5/16           46         P0561047         HEX NUT 3/8-16         353         P0561354         SPACER 8 X 16 X 2           47         P0561048         HEX BOLT 5/16-18 X 3/4         355         P0561355         HEX NUT 3/8-16           49         P0561050         HEX BOLT 5/16-18 X 3/4         393         P0561393         TOGGLE SWITCH KEDU HY29H           51         P0561051         HEX NUT 3/8-16         407         P0561408         HEX NUT 5/16-18           52         P0561052         HEX BOLT 5/16-18 X 3/4         408         P0561408         HEX NUT	37	P0561037	FLAT WASHER 3/8	324	P0561324	ELECTRICAL BOX
40         P0561040         WORK STOP ROD           41         P0561041         WORK STOP           42         P0561042         HEX BOLT 5/16-18 X 1-1/2           43         P0561043         HEX NUT 5/16-18 X 1-1/2           45         P0561045         SUPPORT PLATE           46         P0561046         HEX BOLT 3/8-16 X 1-3/4           47         P0561047         HEX NUT 3/8-16           48         P0561048         HEX BOLT 5/16-18 X 3/4           49         P0561050         HEX BOLT 3/8-16 X 1-3/4           50         P0561050         HEX BOLT 3/8-16 X 1-3/4           51         P0561050         HEX BOLT 3/8-16 X 1-3/4           52         P0561050         HEX BOLT 3/8-16 X 1-3/4           51         P0561051         HEX NUT 3/8-16           52         P0561052         HEX BOLT 5/16-18 X 3/4           53         P0561053         LOCK WASHER 5/16           52         P0561053         LOCK WASHER 5/16           53         P0561055         ELECTRICAL BOX GASKET, RUBBER           57V2         P0561057V2         TOGGLE SWITCH KEDU HY29H V2.01.08           59         P0561059         PHLP HD SCR 10-24 X 3/8	38	P0561038	LEAF SCREW 5/16-18	325	P0561325	SWITCH COVER
41       P0561041       WORK STOP         42       P0561042       HEX BOLT 5/16-18 X 1-1/2         43       P0561043       HEX NUT 5/16-18         45       P0561045       SUPPORT PLATE         46       P0561046       HEX BOLT 3/8-16 X 1-3/4         47       P0561047       HEX NUT 3/8-16         48       P0561048       HEX BOLT 5/16-18 X 3/4         49       P0561049       FLAT WASHER 5/16         50       P0561050       HEX BOLT 3/8-16 X 1-3/4         51       P0561051       HEX NUT 3/8-16         52       P0561052       HEX BOLT 5/16-18 X 3/4         53       P0561053       LOCK WASHER 5/16         53       P0561053       LOCK WASHER 5/16         55       P0561055       ELECTRICAL BOX GASKET, RUBBER         57V2       P0561057       Z TOGGLE SWITCH KEDU HY29H V2.01.08         59       P0561059       PHLP HD SCR 10-24 X 3/8	39	P0561039	HEX BOLT 5/16-18 X 3/4	326	P0561326	PHLP HD SCR 10-24 X 3/8
42       P0561042       HEX BOLT 5/16-18 X 1-1/2         43       P0561043       HEX NUT 5/16-18         45       P0561045       SUPPORT PLATE         46       P0561046       HEX BOLT 3/8-16 X 1-3/4         47       P0561047       HEX NUT 3/8-16         48       P0561048       HEX BOLT 5/16-18 X 3/4         49       P0561049       FLAT WASHER 5/16         50       P0561050       HEX BOLT 3/8-16 X 1-3/4         51       P0561051       HEX NUT 3/8-16         52       P0561052       HEX BOLT 5/16-18 X 3/4         53       P0561053       LOCK WASHER 5/16         54       P0561055       ELECTRICAL BOX GASKET, RUBBER         57V2       P0561057       PLECTRICAL BOX GASKET, RUBBER         57V2       P0561059       PHLP HD SCR 10-24 X 3/8	40	P0561040	WORK STOP ROD	333	P0561333	FLAT WASHER #10
43       P0561043       HEX NUT 5/16-18         45       P0561045       SUPPORT PLATE         46       P0561046       HEX BOLT 3/8-16 X 1-3/4         47       P0561047       HEX NUT 3/8-16         48       P0561048       HEX BOLT 5/16-18 X 3/4         49       P0561049       FLAT WASHER 5/16         50       P0561050       HEX BOLT 3/8-16 X 1-3/4         51       P0561051       HEX NUT 3/8-16         52       P0561052       HEX BOLT 5/16-18 X 3/4         53       P0561052       HEX BOLT 5/16-18 X 3/4         53       P0561053       LOCK WASHER 5/16         54       P0561055       ELECTRICAL BOX GASKET, RUBBER         57V2       P0561057V2       TOGGLE SWITCH KEDU HY29H V2.01.08         59       P0561059       PHLP HD SCR 10-24 X 3/8	41	P0561041	WORK STOP	335	P0561335	STRAIN RELIEF 5/8 NPT NYLON
45       P0561045       SUPPORT PLATE         46       P0561046       HEX BOLT 3/8-16 X 1-3/4         47       P0561047       HEX NUT 3/8-16         48       P0561048       HEX BOLT 5/16-18 X 3/4         49       P0561049       FLAT WASHER 5/16         50       P0561050       HEX BOLT 3/8-16 X 1-3/4         51       P0561051       HEX NUT 3/8-16         52       P0561052       HEX BOLT 5/16-18 X 3/4         53       P0561053       LOCK WASHER 5/16         53       P0561055       ELECTRICAL BOX GASKET, RUBBER         57V2       P0561059       PHLP HD SCR 10-24 X 3/8	42	P0561042	HEX BOLT 5/16-18 X 1-1/2	341	P0561341	CYLINDER SUPPORT, LOWER
46       P0561046       HEX BOLT 3/8-16 X 1-3/4         47       P0561047       HEX NUT 3/8-16         48       P0561048       HEX BOLT 5/16-18 X 3/4         49       P0561049       FLAT WASHER 5/16         50       P0561050       HEX BOLT 3/8-16 X 1-3/4         51       P0561051       HEX NUT 3/8-16         52       P0561052       HEX BOLT 5/16-18 X 3/4         53       P0561053       LOCK WASHER 5/16         54       P0561047       HEX NUT 3/8-16         55       P0561052       HEX BOLT 5/16-18 X 3/4         55       P0561055       ELECTRICAL BOX GASKET, RUBBER         57V2       P0561057V2       TOGGLE SWITCH KEDU HY29H V2.01.08         59       P0561059       PHLP HD SCR 10-24 X 3/8	43	P0561043	HEX NUT 5/16-18	342	P0561342	CYLINDER SUPPORT, UPPER
47       P0561047       HEX NUT 3/8-16         48       P0561048       HEX BOLT 5/16-18 X 3/4         49       P0561049       FLAT WASHER 5/16         50       P0561050       HEX BOLT 3/8-16 X 1-3/4         51       P0561051       HEX NUT 3/8-16         52       P0561052       HEX BOLT 5/16-18 X 3/4         53       P0561053       LOCK WASHER 5/16         55       P0561055       ELECTRICAL BOX GASKET, RUBBER         57V2       P0561059       PHLP HD SCR 10-24 X 3/8	45	P0561045	SUPPORT PLATE	352	P0561352	FLAT WASHER 5/16
48         P0561048         HEX BOLT 5/16-18 X 3/4         355         P0561355         HEX NUT 3/8-16           49         P0561049         FLAT WASHER 5/16         370         P0561370         STRAIN RELIEF 1/2 NPT NYLON           50         P0561050         HEX BOLT 3/8-16 X 1-3/4         393         P0561393         TOGGLE SWITCH KEDU HY29H           51         P0561051         HEX NUT 3/8-16         407         P0561407         CABINET HANDLE           52         P0561052         HEX BOLT 5/16-18 X 3/4         408         P0561408         HEX NUT 5/16-18           53         P0561053         LOCK WASHER 5/16         409         P0561409         FLAT WASHER 5/16           55         P0561057V2         TOGGLE SWITCH KEDU HY29H V2.01.08         410         P0561410         HEX BOLT 5/16-18 X 1-1/4           59         P0561059         PHLP HD SCR 10-24 X 3/8         420         P0561420         HEX NUT 3/8-16	46	P0561046	HEX BOLT 3/8-16 X 1-3/4	353	P0561353	HEX BOLT 5/16-18 X 1/2
49         P0561049         FLAT WASHER 5/16         370         P0561370         STRAIN RELIEF 1/2 NPT NYLON           50         P0561050         HEX BOLT 3/8-16 X 1-3/4         393         P0561393         TOGGLE SWITCH KEDU HY29H           51         P0561051         HEX NUT 3/8-16         393         P0561407         CABINET HANDLE           52         P0561052         HEX BOLT 5/16-18 X 3/4         408         P0561407         CABINET HANDLE           53         P0561053         LOCK WASHER 5/16         409         P0561408         HEX NUT 5/16-18           55         P0561055         ELECTRICAL BOX GASKET, RUBBER         410         P0561410         HEX BOLT 5/16-18 X 1-1/4           57V2         P0561059         PHLP HD SCR 10-24 X 3/8         420         P0561420         HEX NUT 3/8-16	47	P0561047	HEX NUT 3/8-16	354	P0561354	SPACER 8 X 16 X 2
50         P0561050         HEX BOLT 3/8-16 X 1-3/4         393         P0561393         TOGGLE SWITCH KEDU HY29H           51         P0561051         HEX NUT 3/8-16         407         P0561407         CABINET HANDLE           52         P0561052         HEX BOLT 5/16-18 X 3/4         408         P0561408         HEX NUT 5/16-18           53         P0561053         LOCK WASHER 5/16         409         P0561409         FLAT WASHER 5/16           55         P0561057V2         TOGGLE SWITCH KEDU HY29H V2.01.08         410         P0561410         HEX BOLT 5/16-18 X 1-1/4           57V2         P0561059         PHLP HD SCR 10-24 X 3/8         420         P0561420         HEX NUT 3/8-16	48	P0561048	HEX BOLT 5/16-18 X 3/4	355	P0561355	HEX NUT 3/8-16
51         P0561051         HEX NUT 3/8-16           52         P0561052         HEX BOLT 5/16-18 X 3/4           53         P0561053         LOCK WASHER 5/16           55         P0561055         ELECTRICAL BOX GASKET, RUBBER           57V2         P0561059         PHLP HD SCR 10-24 X 3/8	49	P0561049	FLAT WASHER 5/16	370	P0561370	STRAIN RELIEF 1/2 NPT NYLON
52         P0561052         HEX BOLT 5/16-18 X 3/4         408         P0561408         HEX NUT 5/16-18           53         P0561053         LOCK WASHER 5/16         409         P0561409         FLAT WASHER 5/16           55         P0561055         ELECTRICAL BOX GASKET, RUBBER         410         P0561410         HEX BOLT 5/16-18 X 1-1/4           57V2         P0561057V2         TOGGLE SWITCH KEDU HY29H V2.01.08         411         P0561411         LEVELING FOOT 3/8-16 x 3           59         P0561059         PHLP HD SCR 10-24 X 3/8         420         P0561420         HEX NUT 3/8-16	50	P0561050	HEX BOLT 3/8-16 X 1-3/4	393	P0561393	TOGGLE SWITCH KEDU HY29H
53         P0561053         LOCK WASHER 5/16           55         P0561055         ELECTRICAL BOX GASKET, RUBBER           57V2         P0561057V2         TOGGLE SWITCH KEDU HY29H V2.01.08           59         P0561059         PHLP HD SCR 10-24 X 3/8	51	P0561051	HEX NUT 3/8-16	407	P0561407	CABINET HANDLE
55         P0561055         ELECTRICAL BOX GASKET, RUBBER         410         P0561410         HEX BOLT 5/16-18 X 1-1/4           57V2         P0561057V2         TOGGLE SWITCH KEDU HY29H V2.01.08         411         P0561411         LEVELING FOOT 3/8-16 x 3           59         P0561059         PHLP HD SCR 10-24 X 3/8         420         P0561420         HEX NUT 3/8-16	52		HEX BOLT 5/16-18 X 3/4	408	P0561408	HEX NUT 5/16-18
55         P0561055         ELECTRICAL BOX GASKET, RUBBER         410         P0561410         HEX BOLT 5/16-18 X 1-1/4           57V2         P0561057V2         TOGGLE SWITCH KEDU HY29H V2.01.08         411         P0561411         LEVELING FOOT 3/8-16 x 3           59         P0561059         PHLP HD SCR 10-24 X 3/8         420         P0561420         HEX NUT 3/8-16	53	P0561053	LOCK WASHER 5/16	409	P0561409	FLAT WASHER 5/16
57V2         P0561057V2         TOGGLE SWITCH KEDU HY29H V2.01.08         411         P0561411         LEVELING FOOT 3/8-16 x 3           59         P0561059         PHLP HD SCR 10-24 X 3/8         420         P0561420         HEX NUT 3/8-16	55	P0561055	ELECTRICAL BOX GASKET, RUBBER	410	P0561410	HEX BOLT 5/16-18 X 1-1/4
	57V2	P0561057V2	TOGGLE SWITCH KEDU HY29H V2.01.08	411	P0561411	LEVELING FOOT 3/8-16 x 3
	59	P0561059	PHLP HD SCR 10-24 X 3/8	420	P0561420	HEX NUT 3/8-16
100 1000 1000 10 10 10 10 10 10 10 10 10	65	P0561065	DRAIN SCREEN	421	P0561421	FLAT WASHER 3/8



### **Bow & Motor**



**Please Note:** We do our best to stock replacement parts whenever possible, but we cannot guarantee that all parts shown here are available for purchase. Call (800) 523-4777 or visit our online parts store at www.grizzly.com to check for availability.

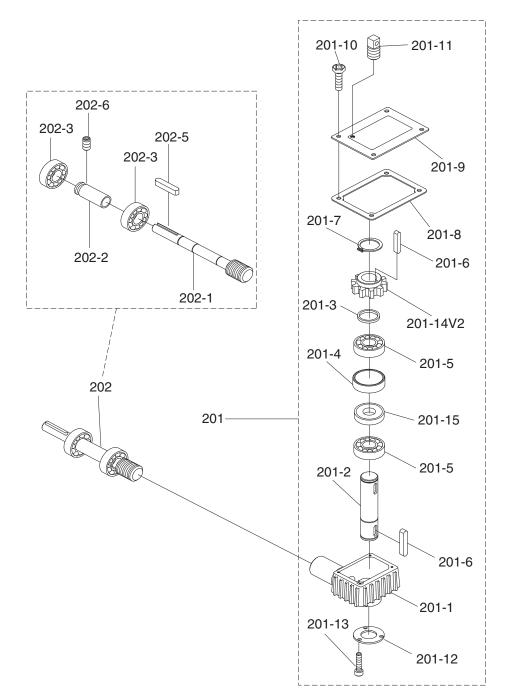


### **Bow & Motor Parts List**

REF	PART #	DESCRIPTION	REF	PART #	DESCRIPTION
115	P0561115	PHLP HD SCR M58 X 8	284	P0561284	KNOB BOLT M6-1 X 12
201	P0561201	GEARBOX ASSY	285	P0561285	FLAT WASHER 1/4
203	P0561203	KEY 5 X 5 X 30	286	P0561286	BLADE BACK COVER
204	P0561204	KEY 6 X 6 X 20	288	P0561288	FLAT WASHER 1/4
209-1	P0561209-1	SPINDLE PULLEY	289	P0561289	PHLP HD SCR 1/4-20 X 1/2
209-2	P0561209-2	SET SCREW M6-1 X 10	290	P0561290	KNOB BOLT M6-1 X 12
211	P0561211	V-BELT M27 3L270	291	P0561291	MOTOR PULLEY COVER
227	P0561227	BODY FRAME	292	P0561292	SHAFT COVER
228	P0561228	LOCK WASHER 3/8	293	P0561293	HEX BOLT 1/4-20 X 1/2
229	P0561229	HEX BOLT 3/8-16 X 1-1/4	294	P0561294	FLAT WASHER 1/4
230	P0561230	EXT RETAINING RING 25MM	295	P0561295	KEY 5 X 5 X 30
231	P0561231	DRIVE WHEEL	297-1	P0561297-1	MOTOR PULLEY
232	P0561232	HEX BOLT 5/16-18 X 3/4	297-2	P0561297-2	SET SCREW 1/4-20 X 3/8
237	P0561237	SLIDING PLATE	298	P0561298	CARRIAGE BOLT 5/16-18 X 1
238	P0561238	BLADE TENSION SLIDING BLOCK	299	P0561299	HEX BOLT 3/8-16 X 1-1/4
239	P0561239	SET SCREW 5/16-18 X 3/4	300V3	P0561300V3	MOTOR 1HP 115/230V 1-PH V3.01.08
240	P0561240	HEX BOLT 5/16-18 X 1-1/2	300-1V3	P0561300-1V3	MOTOR FAN COVER, PLASTIC V3.01.08
241	P0561241	FLAT WASHER 5/16	300-2	P0561300-2	MOTOR FAN
242	P0561242	LOCK WASHER 5/16	300-3	P0561300-3	CAPACITOR COVER
243	P0561243	HEX BOLT 5/16-18 X 3/4	300-4V3	P0561300-4V3	CAPACITOR 400MFD 125VAC V3.01.08
244	P0561244	COMPRESSION SPRING 115 X 4	300-5V3	P0561300-5V3	JUNCTION BOX V3.01.08
245	P0561245	KNOB BOLT M10-1.5 X 50	300-6	P0561300-6	CIRCUIT BREAKER 13A
249	P0561249	WHEEL SHAFT ASSEMBLY	301	P0561301	HEX BOLT 5/16-18 X 1-1/2
250	P0561250	IDLER WHEEL	302	P0561302	HEX NUT 5/16-18
251	P0561251	BLADE 0.032 X 3/4 X 93 X 8T	303	P0561303	MOTOR MOUNT
254	P0561254	SWITCH SHUT-OFF LATCH	304	P0561304	HEX NUT 5/16-18
255	P0561255	FLAT WASHER 1/4	305	P0561305	HEX BOLT 5/16-18 X 3/4
256	P0561256	PHLP HD SCR 1/4-20 X 1/2	306	P0561306	FLAT WASHER 5/16
258	P0561258	BRUSH ASSEMBLY	307	P0561307	MOTOR MOUNT BRACKET
258-1	P0561258-1	BRUSH	308	P0561308	FLAT WASHER 3/8
261	P0561261	KNOB BOLT M10-1.5 X 35	310	P0561310	PHLP HD SCR 1/4-20 X 1/2
266	P0561266	ADJUST BRACKET, REAR	311	P0561311	FLAT WASHER 1/4
267	P0561267	GUIDE PIVOT ASSEMBLY	312	P0561312	SUPPORT PLATE
267-1	P0561267-1	DEFLECTOR PLATE	313	P0561313	VERTICAL SAW TABLE
268	P0561268	BEARING SHAFT ASSY, REAR	313-1	P0561313-1	TABLE BRACKET
269	P0561269	ADJUST BRACKET, FRONT	314	P0561314	FLAT WASHER 3/8
270	P0561270	GUIDE PIVOT ASSEMBLY	317	P0561317	POWER CORD 14G 3W 84" 5-15 V3.01.08
271	P0561271	BEARING SHAFT ASSY, FRONT	318	P0561318	POWER SWITCH CORD 14G 3W 54"
279	P0561279	BLADE COVER, FRONT	357	P0561357	FLAT WASHER 5/16
280	P0561280	PHLP HD SCR 8-32 X 1/4	358	P0561358	HEX BOLT 5/16-18 X 1



### Gearbox



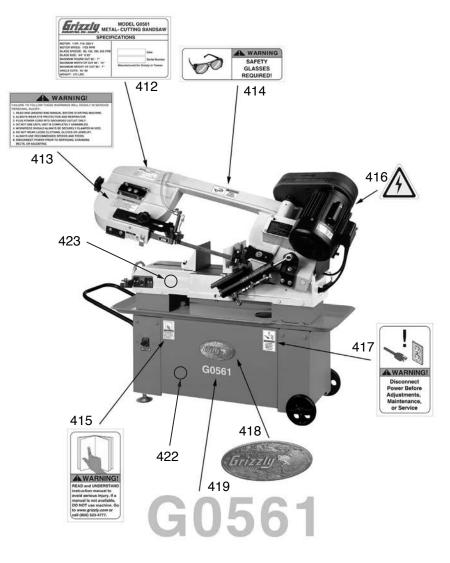
REF	PART #	DESCRIPTION
201	P0561201	GEARBOX ASSY
201-1	P0561201-1	GEARBOX HOUSING
201-2	P0561201-2	TRANSMISSION WHEEL SHAFT
201-3	P0561201-3	SPACER
201-4	P0561201-4	SPACER
201-5	P0561201-5	BALL BEARING 6205ZZ
201-6	P0561201-6	KEY 6 X 6 X 20
201-7	P0561201-7	EXT RETAINING RING 25MM
201-8	P0561201-8	GEARBOX GASKET
201-9	P0561201-9	GEARBOX COVER
201-10	P0561201-10	FLAT HD SCR 1/4-20 X 1/2

REF	PART #	DESCRIPTION
201-11	P0561201-11	VENT PLUG
201-12	P0561201-12	BEARING COVER
201-13	P0561201-13	PHLP HD SCR 10-24 X 3/8
201-14V2	P0561201-14V2	WORM GEAR STEEL V2.10.11
201-15	P0561201-15	OIL SEAL 25 X 52 X 10
202	P0561202	WORM GEAR SHAFT ASSEMBLY
202-1	P0561202-1	WORM SHAFT
202-2	P0561202-2	BEARING BUSHING
202-3	P0561202-3	BALL BEARING 6003ZZ
202-5	P0561202-5	KEY 5 X 5 X 30
202-6	P0561202-6	SET SCREW 5/16-18 X 1/2

Model G0561 (Mfd. Since 01/08)



### Labels



REF	PART #	DESCRIPTION
412	P0561412	MACHINE ID LABEL
413	P0561413	MACHINE WARNING LABEL
414	P0561414	SAFETY GLASSES LABEL
415	P0561415	READ MANUAL LABEL
416	P0561416	ELECTRICITY LABEL

REF	PART #	DESCRIPTION
417	P0561417	UNPLUG BANDSAW LABEL
418	P0561418	GRIZZLY NAMEPLATE, SMALL
419	P0561419	MODEL NUMBER LABEL
422	P0561422	GRIZZLY GREEN TOUCH-UP PAINT
423	P0561423	GRIZZLY PUTTY TOUCH-UP PAINT





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Pho	one #	_ Email	
Мо	del #	_ Order #	Serial #
		a voluntary basis. It will be used for ma Irse, all information is strictly confide	
1.	How did you learn about us? Advertisement Card Deck	Friend Website	Catalog Other:
2.	Which of the following magaz	zines do you subscribe to?	
	<ul> <li>Cabinetmaker &amp; FDM</li> <li>Family Handyman</li> <li>Hand Loader</li> <li>Handy</li> <li>Home Shop Machinist</li> <li>Journal of Light Cont.</li> <li>Live Steam</li> <li>Model Airplane News</li> <li>Old House Journal</li> <li>Popular Mechanics</li> </ul>	<ul> <li>Popular Science</li> <li>Popular Woodworking</li> <li>Precision Shooter</li> <li>Projects in Metal</li> <li>RC Modeler</li> <li>Rifle</li> <li>Shop Notes</li> <li>Shotgun News</li> <li>Today's Homeowner</li> <li>Wood</li> </ul>	<ul> <li>Wooden Boat</li> <li>Woodshop News</li> <li>Woodsmith</li> <li>Woodwork</li> <li>Woodworker West</li> <li>Woodworker's Journal</li> <li>Other:</li> </ul>
3.	What is your annual househo \$20,000-\$29,000 \$50,000-\$59,000	old income? \$30,000-\$39,000 \$60,000-\$69,000	\$40,000-\$49,000 \$70,000+
4.	What is your age group? 20-29 50-59	30-39 60-69	40-49 70+
5.	How long have you been a w 0-2 Years	oodworker/metalworker? 2-8 Years8-20 Yea	rs20+ Years
6.	How many of your machines	or tools are Grizzly? 3-56-9	10+
7.	Do you think your machine re	epresents a good value?	YesNo
8.	Would you recommend Grizz	ly Industrial to a friend?	/esNo
9.	Would you allow us to use yo Note: We never use names	our name as a reference for Grizzly of more than 3 times.	
10	Comments:		

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# **WARRANTY & 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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