

Grizzly **Industrial, Inc.**®

MODEL G0900 **5 HP DELUXE SPINDLE SHAPER** **OWNER'S MANUAL** *(For models manufactured since 11/23)*




C US
175370

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**WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE
OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**
#CS20545 PRINTED IN TAIWAN

V3.11.23

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

 **WARNING!**

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

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

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

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

 **WARNING!**

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

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

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

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INTRODUCTION

Contact Info

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

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

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

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

CAUTION

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

CAUTION

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

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.

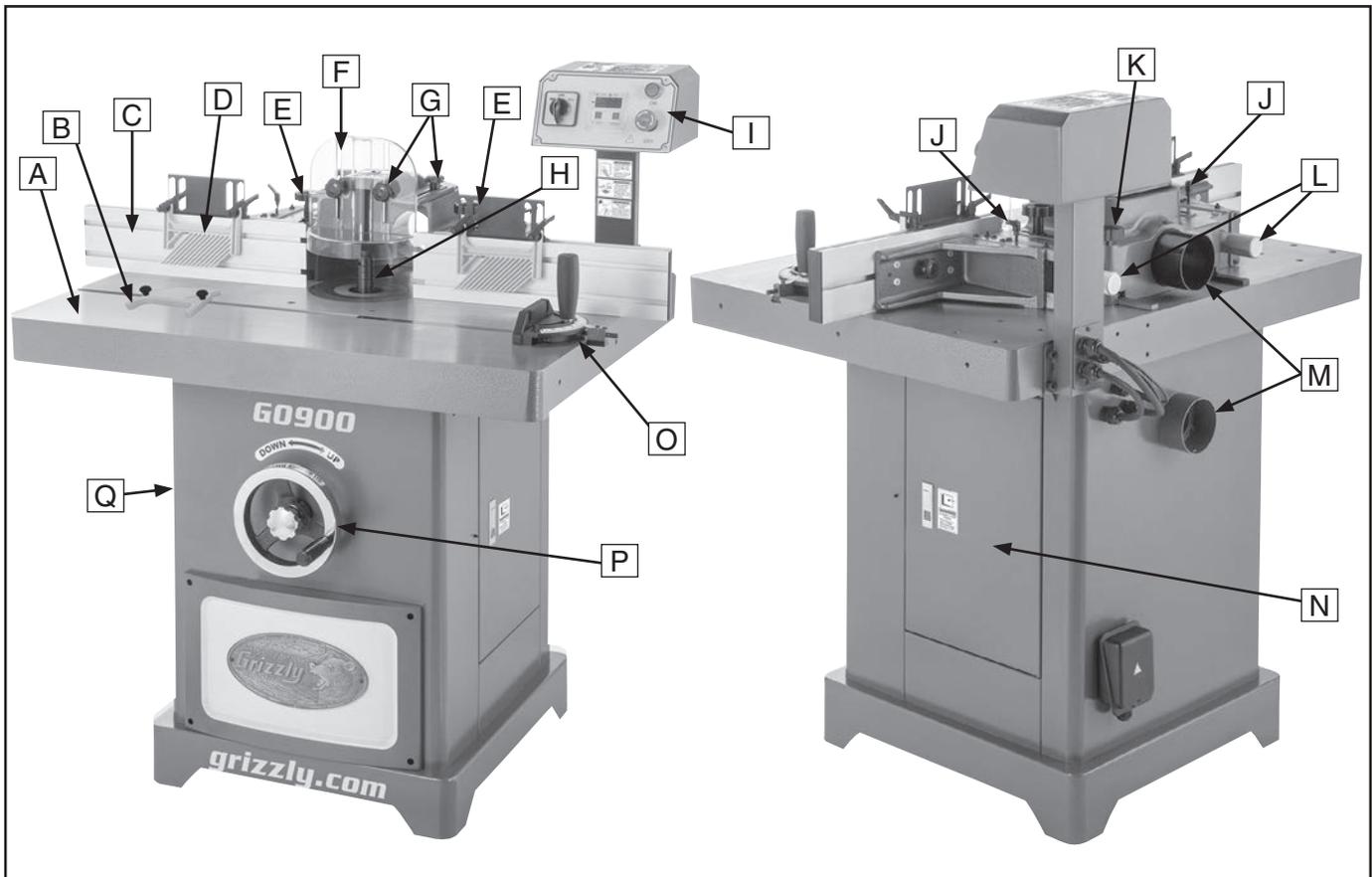
		MODEL GXXXX MACHINE NAME
SPECIFICATIONS		 WARNING!
Motor:	To reduce risk of serious injury when using this machine:	
Specification:	manual before operation.	
Specification:	safety glasses and respirator.	
Specification:	rectly adjusted/setup and	
Specification:	power is connected to grounded circuit before starting.	
Weight:	4. Make sure the motor has stopped and disconnect	
	power before adjustments, maintenance, or service.	
	5. DO NOT expose to rain or dampness.	
	6. DO NOT modify this machine in any way.	
	7.	
	8.	
	9. ended.	
	10. Maintain machine carefully to prevent accidents.	

Manufactured for Grizzly in Taiwan



Identification

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



- | | |
|---------------------------------------|--|
| A. Work Table | J. Fence Lock Knobs |
| B. Table Featherboard (1 of 2) | K. Fence Assembly Adjustment Knob |
| C. Fence (1 of 2) | L. Fence Micro-Adjustment Knobs |
| D. Fence Featherboard (1 of 2) | M. Dust Ports |
| E. Guard Lock Knobs | N. Cabinet Access Door |
| F. Cutterhead Guard | O. Miter Gauge |
| G. Guard Adjustment Knobs | P. Spindle Elevation Handwheel |
| H. Spindle Assembly | Q. Motor Access Panel |
| I. Control Panel | |

!WARNING

For Your Own Safety Read Instruction Manual Before Operating Shaper

- a) Wear eye protection.
- b) Be sure two-piece keyed washer is installed directly under cap screw and cap screw is tight.
- c) Feed workpiece against rotation of cutter.
- d) Do not use awkward hand positions.
- e) Keep fingers away from revolving cutter—use fixtures when necessary.
- f) Use overhead guard when adjustable fence is not in place.



Controls & Components



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

Control Panel

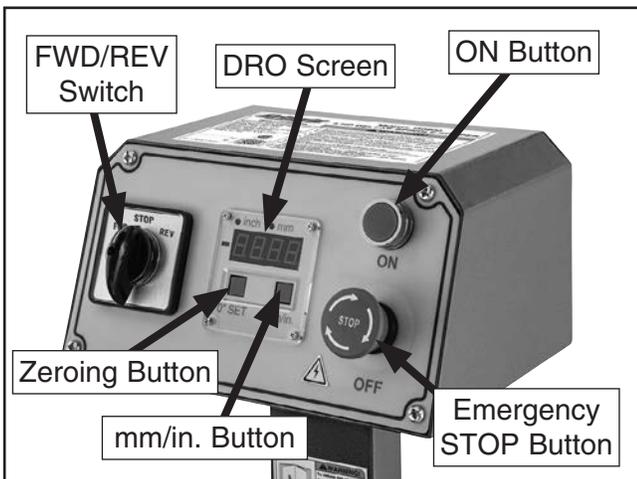


Figure 1. Control panel functions.

ON Button: Turns machine **ON**.

Emergency STOP Button: Turns machine **OFF** and prevents it from starting.

Forward/Reverse (FWD/REV) Switch: Starts, stops, and reverses spindle rotation.

Digital Readout (DRO) Screen: Displays height of the spindle in either inches or millimeters.

Zeroing Button: Adjusts height to 0 in./mm.

mm/in. Button: Displays cutter height in either inches or millimeters.

Inside Cabinet Controls

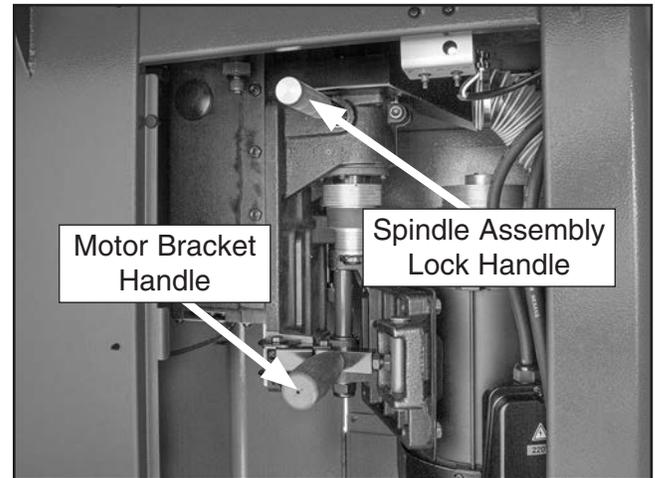


Figure 2. Cabinet control functions.

Spindle Assembly Lock Handle: Locks/unlocks spindle seat to change spindle size.

Motor Bracket Handle: Engages and releases V-belt tension.

Work Area Controls

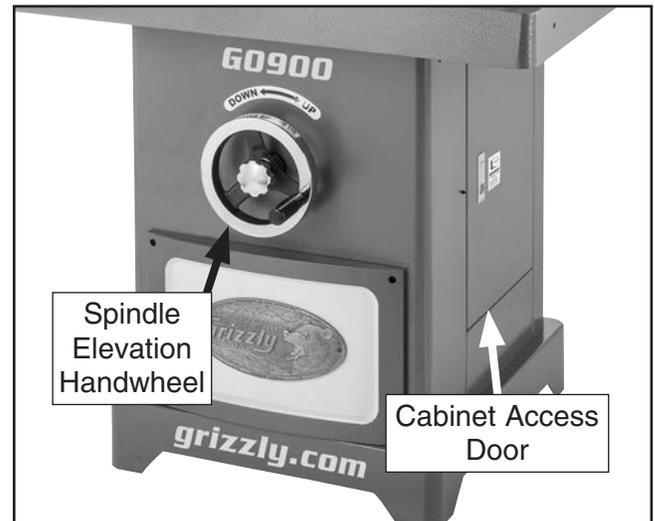


Figure 3. Cabinet components.

Spindle Elevation Handwheel: Raises and lowers spindle and cutter to desired height.

Cabinet Access Door: Allows access to inside cabinet to change spindle speed and size.



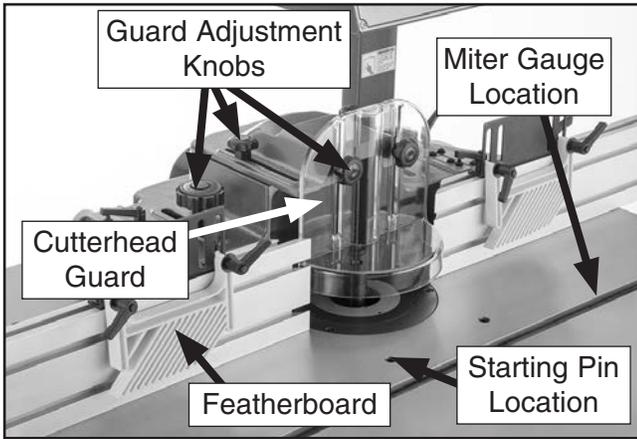


Figure 4. Guard and table components.

Featherboards: Guide and support workpiece as it moves past cutterhead.

Cutterhead Guard: Adjusts to protect user from accidental cutter contact or chips thrown by cutterhead.

Guard Adjustment Knobs: Adjust guard position/height.

Miter Gauge (not shown): Supports workpiece for controlled straight or angled cuts as it slides along the work table miter slot.

Starting Pin (not shown): Supports workpiece during beginning of freehand cuts until workpiece contacts rub collar (refer to **Page 31**).

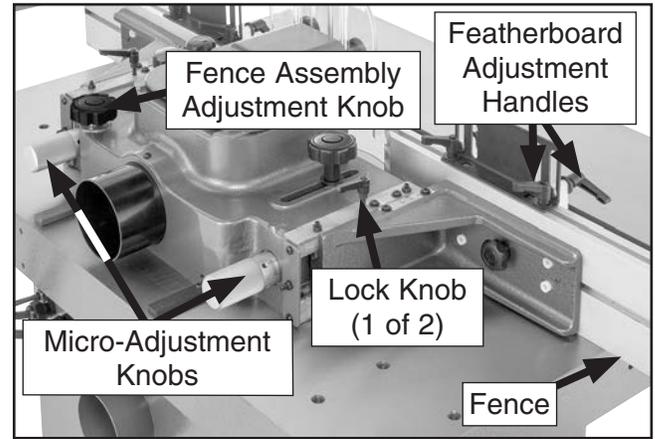


Figure 5. Fence components.

Fence: Each fence is independently adjustable side to side and front to back. Also removable for easy replacement with a zero-clearance or other custom-made fence.

Fence Lock Knobs: Tighten to lock fence position on table.

Fence Micro-Adjustment Knobs: Move each fence independently relative to cutterhead. One turn moves each fence approximately $\frac{1}{64}$ " (.015").

Fence Assembly Adjustment Knob: Moves entire fence and guard assembly on table using rack and pinion. One turn is approximately $1\frac{5}{8}$ " of movement across table.

Featherboard Adjustment Handles: Adjusts featherboard position.





MACHINE DATA SHEET

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

MODEL G0900 5 HP DELUXE SPINDLE SHAPER

Product Dimensions:

Weight..... 657 lbs.
 Width (side-to-side) x Depth (front-to-back) x Height..... 39-1/2 x 35-1/2 x 50-1/2 in.
 Footprint (Length x Width)..... 23-1/2 x 25-1/2 in.

Shipping Dimensions:

Type..... Wood Crate
 Content..... Machine
 Weight..... 812 lbs.
 Length x Width x Height..... 44 x 39 x 61 in.

Electrical:

Power Requirement..... 220V, Single-Phase, 60 Hz
 Full-Load Current Rating..... 18A
 Minimum Circuit Size..... 30A
 Connection Type..... Cord & Plug
 Power Cord Included..... Yes
 Power Cord Length..... 10 ft.
 Power Cord Gauge..... 12 AWG
 Plug Included..... Yes
 Included Plug Type..... L6-30
 Switch Type..... Control Panel w/Magnetic Switch Protection

Motors:

Main

Horsepower..... 5 HP
 Phase..... Single-Phase
 Amps..... 18A
 Speed..... 3450 RPM
 Type..... TEFC Capacitor Start/Run
 Power Transfer Belt
 Bearings..... Shielded & Permanently Lubricated
 Centrifugal Switch/Contacts Type..... External

Main Specifications:

Operation Info

Max. Cutter Height..... 5 in.
 Max. Cutter Diameter..... 7 in.
 Spindle Sizes..... 3/4, 1-1/4 in.
 Spindle Lengths..... 3-7/8, 5-7/8 in.
 Exposed Spindle Length..... 3-7/8, 5-7/8 in.
 Spindle Cap. Under the Nut..... 3-1/2, 5-1/8 in.
 Spindle Speeds..... 5,000, 7,000, 10,000 RPM
 Spindle Travel..... 4 in.
 Spindle Openings..... 2-1/2, 4-1/8, 5-1/4, 7 in.



Table Info

Number of Table Inserts.....	3
Table Insert Sizes I.D.....	2-1/2, 4-1/8, 5-3/4 in.
Table Insert Sizes O.D.....	4-5/8, 6-1/4, 8-3/8 in.
Table Counterbore Diameter.....	5-3/4 in.
Table Counterbore Depth.....	5/8 in.
Table Size Length.....	39-1/4 in.
Table Size Width.....	31-1/2 in.
Table Size Thickness.....	3-1/4 in.
Floor to Table Height.....	35-1/4 in.
Table Fence Length.....	44-1/2 in.
Table Fence Width.....	1-1/4 in.
Table Fence Height.....	4-3/4 in.

Miter Gauge Info

Miter Angle.....	0 - 60 deg. L/R
Miter Gauge Slot Type.....	T-Slot
Miter Gauge Slot Width.....	3/4 in.
Miter Gauge Slot Height.....	3/8 in.

Construction

Table.....	Precision-Ground Cast Iron
Cabinet.....	Formed Steel
Fence.....	Aluminum
Miter Gauge.....	Aluminum
Guard.....	Polycarbonate
Spindle Bearings.....	Sealed & Lubricated
Paint Type/Finish.....	Powder Coated

Other

Number of Dust Ports.....	2
Dust Port Size.....	4 in.

Other Specifications:

Country of Origin	Taiwan
Warranty	1 Year
Approximate Assembly & Setup Time	30 Minutes
Serial Number Location	ID Label
Sound Rating	85 dB
ISO 9001 Factory	Yes
Certified by a Nationally Recognized Testing Laboratory (NRTL)	Yes

Features:

- Dual 4" Dust Ports
- DRO for Height Positioning
- Rack & Pinion Fence Adjustment
- 4-3/4" Aluminum Fence w/Featherboard Attachments
- Various Power Feeder Attachment Locations
- 3 Speeds: 5000, 7000, 10,000 RPM
- Fence Micro-Adjustment Knobs
- Quick-Release Belt Tensioner
- Poly-V Belt Drive
- 4" of Fence Travel
- 7" Maximum Cutter Diameter
- 3/4", 1-1/4" Spindles Included
- Fully Adjustable Clear Guard

Accessories Included:

- Open-End Wrenches 14 x 17mm, 22 x 24mm
- Spindle Wrench 50mm
- Hex Wrenches 3, 6mm
- Combo Screwdriver #1
- Starting Pin
- Featherboards for Table and Fence



SECTION 1: SAFETY

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

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

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

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

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

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

Safety Instructions for Machinery

⚠ WARNING

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

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

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

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

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

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

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



WARNING

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



Additional Safety for Shapers

WARNING

Serious cuts, amputation, entanglement, or death can occur from contact with rotating cutter. Cutters or other parts improperly secured to spindle can fly off and strike nearby operators with great force. Flying debris can cause eye injuries or blindness. To minimize risk of getting hurt or killed, anyone operating shaper MUST completely heed hazards and warnings below.

AVOIDING CUTTER CONTACT: Keep unused portion of cutter below table. Use smallest table insert possible. Adjust fences and guards as close as practical to cutter, or use a zero-clearance fence or box guard. *Always keep some type of guard or other protective device between your hands and cutter at all times!*

PROTECT HANDS/FINGERS: While feeding workpiece, avoid awkward hand positions. Never pass hands directly over, or in front of, cutter. As one hand approaches a 6-inch radius point from cutter, move it in an arc motion away from cutter, and reposition it on the outfeed side.

FEEDING WORKPIECE: To reduce risk of accidental cutterhead contact, always use push blocks or some type of fixture, jig, or hold-down device to safely feed workpiece while cutting. Use an outfeed support table if shaping long workpieces to ensure proper support throughout entire cutting procedure. ALWAYS feed workpiece AGAINST rotation of cutter. NEVER start shaper with workpiece contacting cutter!

CUTTING DEPTH: Never attempt to remove too much material in one pass. Doing this increases risk of workpiece kickback. Instead, make several light passes—this is a safer way to cut and it leaves a cleaner finish.

WORKPIECE CONDITION: Shaping a workpiece with knots, holes, or foreign objects increases risk of kickback and cutter damage/breakage. Thoroughly inspect and prepare workpiece before shaping. Always “square up” a workpiece before shaping or flatten workpiece edges with a jointer or planer. Rough, warped, or wet workpieces increase risk of kickback.

CUTTER POSITIONING: Whenever possible, make shaping cuts with cutter on *underside* of workpiece to reduce operator exposure to cutter.

SMALL WORKPIECES: There is a high risk of accidental cutter contact with small workpieces, because they are closer to cutter and more difficult to control. To reduce your risk, only feed small workpieces using jigs or holding fixtures that allow your hands to stay safely away from cutter. When possible, shape longer stock and cut to size.

SAFE CUTTER CLEARANCES: Operator or bystanders may be hit by flying debris if cutter contacts fence, guard, or table insert upon startup. Always ensure any new cutter setup has proper cutter rotational clearance before startup.

SAFE CUTTER INSTALLATION: Improperly secured knives/inserts, cutters, or rub collars may become dangerous projectiles if they come loose. Always ensure keyed washer is directly under cap screw and that cap screw is very secure. If spindle does not use a keyed washer, always tighten two spindle nuts together, and ensure BOTH are very secure. Never use cutters/bits rated for an RPM lower than spindle speed.

AVOIDING CLIMB CUTS: Feeding workpiece in same direction of cutter rotation is a “climb cut.” Climb cutting can aggressively pull workpiece—and hands—into cutter. Always first verify direction of cutter rotation before starting, and always feed workpiece AGAINST cutter rotation.

SAFETY GUARDS. To reduce risk of unintentional contact with cutter, always ensure included cutter guard, or a properly dimensioned box guard, or some other type of guard is installed and correctly positioned before operation.

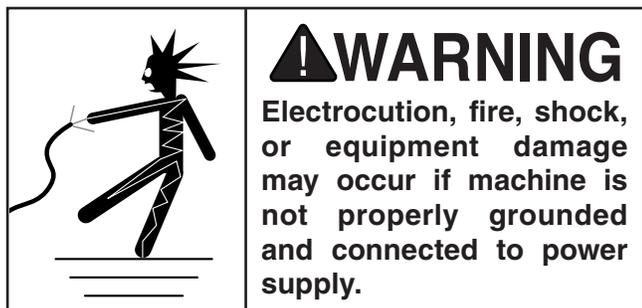
CONTOUR SHAPING: To reduce risk of unintentional cutter contact while freehand shaping or using a rub collar as a guide, always use an overhead or “ring” type guard. To reduce kickback risk, always use starting pin or pivot board when starting the cut. NEVER start shaping at a corner!



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.



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 220V 18 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.)

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

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

Circuit Requirements

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

Nominal Voltage 208V, 230V, 220V, 240V
Cycle 60 Hz
Phase Single-Phase
Power Supply Circuit 30 Amps
Plug/Receptacle L6-30



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.

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

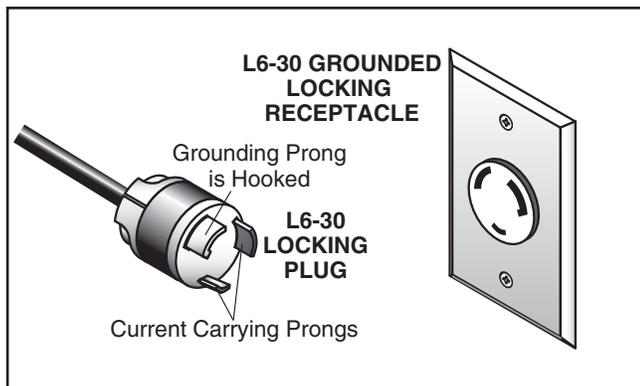
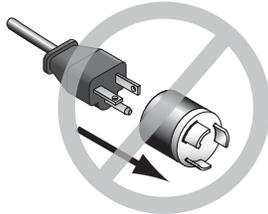


Figure 6. Typical L6-30 plug and receptacle.

CAUTION



No adapter should be used with plug. If plug does not fit available receptacle, or if machine must be reconnected for use on a different type of circuit, reconnection must be performed by an electrician or qualified service personnel, and it must comply with all local codes and ordinances.

WARNING

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

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.

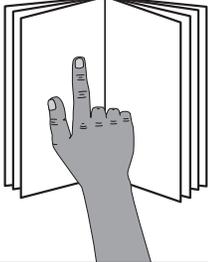
Extension cords cause voltage drop, which can damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

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 12 AWG
Maximum Length (Shorter is Better).....50 ft.



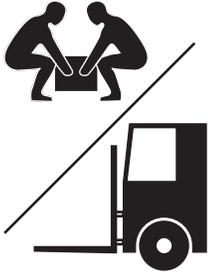
SECTION 3: SETUP



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



!WARNING
Wear safety glasses during the entire setup process!



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

Needed for Setup

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

Description	Qty
• Precision Level	1
• Safety Glasses (for each person).....	1
• Solvent/Cleaner	1
• Shop Rags.....	1
• Lifting Straps (rated for at least 750 lbs.) ...	2
• Lifting Equipment (rated for at least 750 lbs.).....	1
• Dust Hose 4"	2
• Dust Hose Clamp 4"	4
• Another Person	1

Unpacking

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

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



Inventory

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

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

NOTICE

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

Box 1 (Figure 7)

A. Shaper Unit 1

Qty



Figure 7. Shaper unit.

Box 2 (Figure 8) Inside Cabinet

Qty

- B. Miter Gauge..... 1
- C. Drawbar..... 1
- D. Starting Pin..... 1
- E. Table Featherboards 2
 - Knob Bolts M5-.8 x 25..... 2
 - Flat Washers 5mm..... 2
 - Sliding Blocks 2
- F. Spindles 3/4" w/Spacers 1
- G. Spindles 1 1/4" w/Spacers..... 1
- H. Spindle Wrench 50mm..... 1
- I. Combo Screwdriver..... 1
- J. Hex Wrenches 3, 6mm..... 1 Ea.
- K. Open-End Wrench 22 x 24mm..... 1
- L. Open-End Wrench 14 x 17mm 1

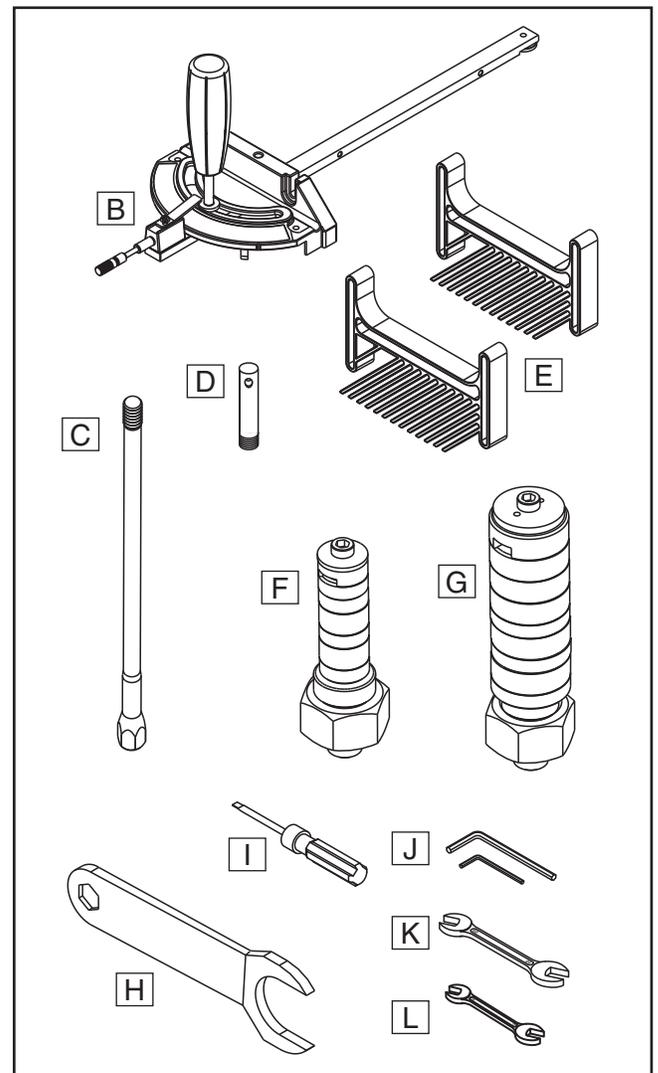


Figure 8. Small parts inventory.



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.

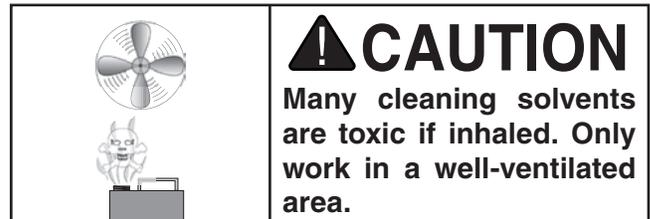
There are many ways to remove this rust preventative, but the following steps work well in a wide variety of situations. Always follow the manufacturer's instructions with any cleaning product you use and make sure you work in a well-ventilated area to minimize exposure to toxic fumes.

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.



T23692—Orange Power Degreaser

A great product for removing the waxy shipping grease from the *non-painted* parts of the machine during clean up.



Figure 9. T23692 Orange Power Degreaser.



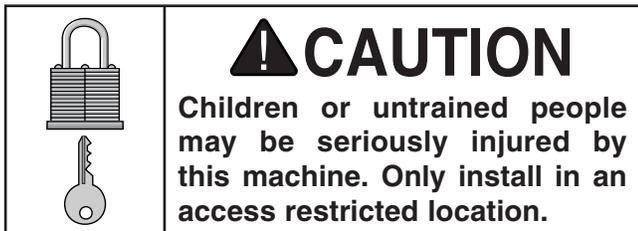
Site Considerations

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.**



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.

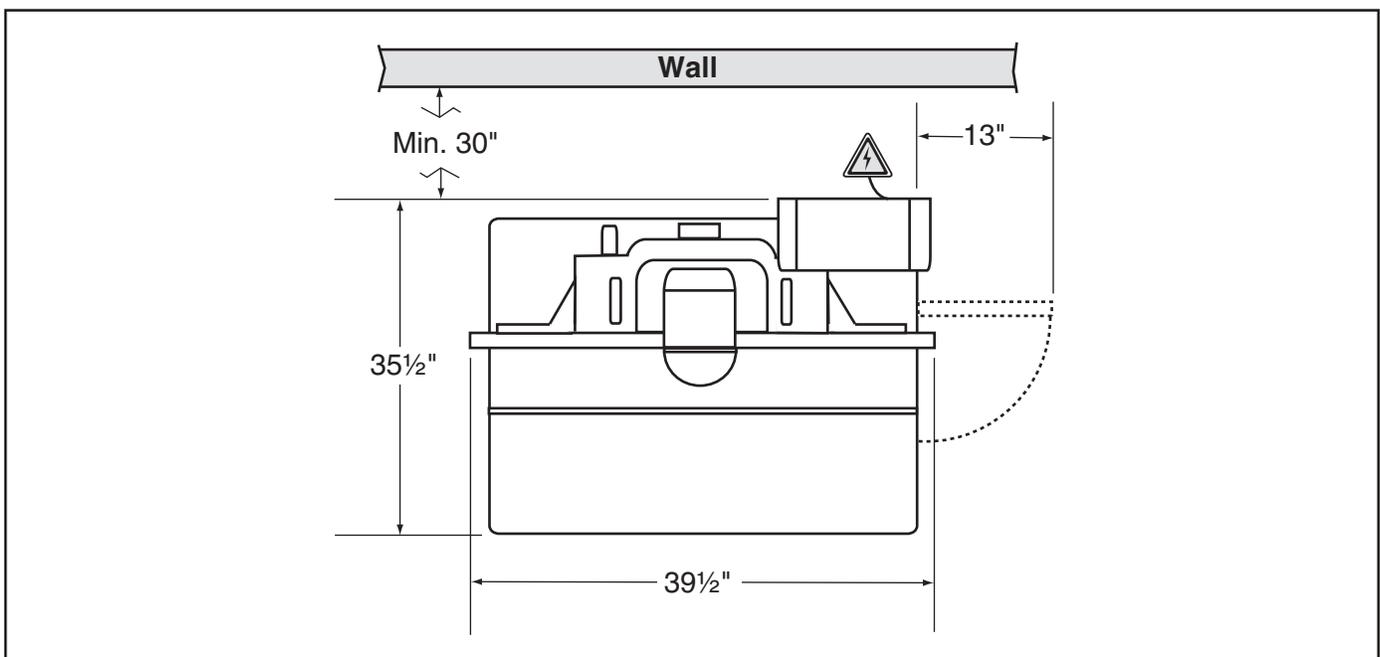


Figure 10. Minimum working clearances.



Lifting & Placing Shaper

	<p>! WARNING</p> <p>The Model G0900 is a heavy machine. Serious personal injury may occur if safe moving methods are not used. To be safe, get assistance and use power equipment rated for at least 1500 lbs. to move the shipping crate and remove the machine from the crate.</p>
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The Model G0900 can be lifted with one of the following methods:

- **Lifting Straps & Safety Hooks:** Connect two safety hooks to chains or web straps that are capable of securely hooking underneath the table edge at the locations shown in **Figure 11**. Then attach the chains or web straps to a center safety chain secured to the power lifting equipment.
- **Forklift Forks:** Position the forks under the table and close to the cabinet (see **Figure 11**). Use cardboard to protect the table and cabinet from the forks.

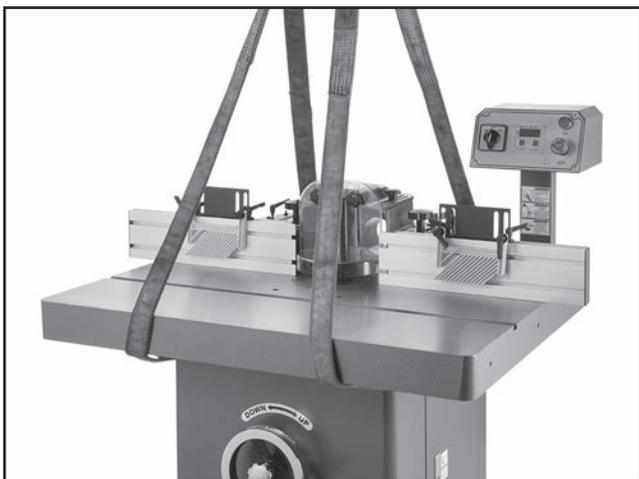


Figure 11. Locations for lifting.

Anchoring to Floor

Number of Mounting Holes 4
 Diameter of Mounting Hardware..... 1/2"

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

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

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

Anchoring to Concrete Floors

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

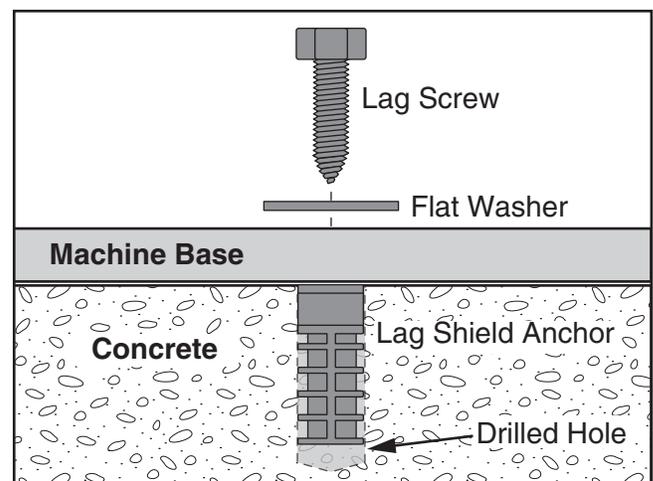


Figure 12. Popular method for anchoring machinery to a concrete floor.



Assembly

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

Most of your Model G0900 has been assembled at the factory, but some parts must be assembled or installed after delivery.

In order to perform a test run, verify the following:

1. Table insert flushness (**this page**).
2. Spindle and drawbar assembly (**Page 19**).
3. Dust collection system connection (**Page 20**).

Adjusting Table Inserts

The Model G0900 is supplied with three table inserts which give you four possible opening diameters in the shaper table surface. Use the smallest opening that a particular cutter will allow to support the workpiece and reduce the amount of chips that can fall into the machine.

The correct spindle opening will also allow any unused portion of the cutter to remain below the table surface—increasing operator protection.

There are two removable table inserts and one semi-permanent table insert. The semi-permanent table insert *must* be flush with the top of the table.

To adjust insert:

1. Remove two smaller inserts from table opening.
2. Lay straightedge across semi-permanent insert and table surface in pattern shown in **Figure 13**.

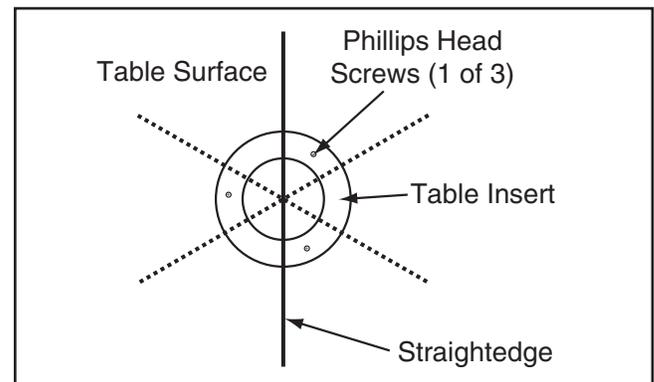


Figure 13. Straightedge and surface pattern.

3. Adjust phillips head screws so that ends of straightedge lay flat on table surface at all positions of pattern above.

IMPORTANT: Table insert and surface must be aligned evenly to ensure workpiece does not catch on table insert or surface and kick back.



Preparing Spindle for Test Run

Each of the two spindles that come with the Model G0900 is sized to work efficiently with different sized cutters and spacers. The spindles must be inserted correctly and remain securely locked in the machine in order to produce quality work. When installing and changing spindles, make sure the spindle seats snugly and that there is enough drawbar threaded into the bottom of the spindle to safely secure it in place.

!WARNING

Incorrect assembly can allow the spindle and cutter to fly off the machine, which could cause injury or death. Make certain the spindle is properly assembled before operating the shaper. If you are uncertain of any aspect of this assembly, please review these instructions again or contact our Customer Service.

To install a spindle:

1. Unlock spindle seat by pulling spindle assembly lock handle and turning $\frac{1}{4}$ turn (see **Figure 14**). Turn V-belt and pulleys until click can be heard.

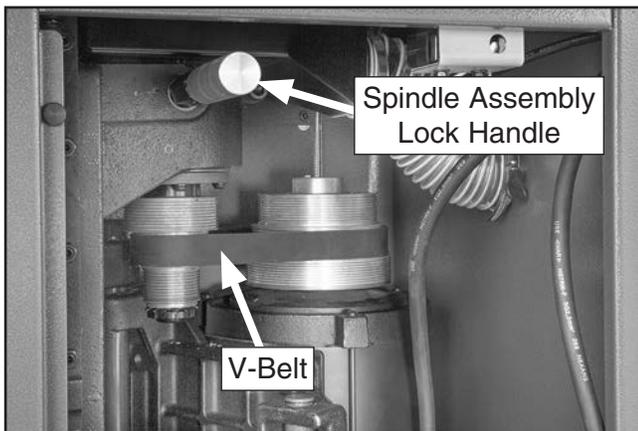


Figure 14. Spindle seat and pulleys.

2. Insert spindle base into spindle cartridge (see **Figure 15**). Thread the spindle nut onto the cartridge approximately 1 turn.

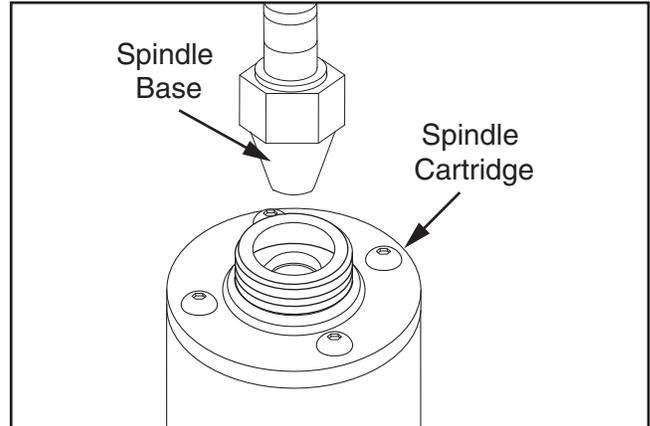


Figure 15. Inserting spindle into place.

3. Insert drawbar approximately 10-15 turns into the bottom of the spindle base assembly, up through spindle pulley and assembled parts (see **Figure 16**).

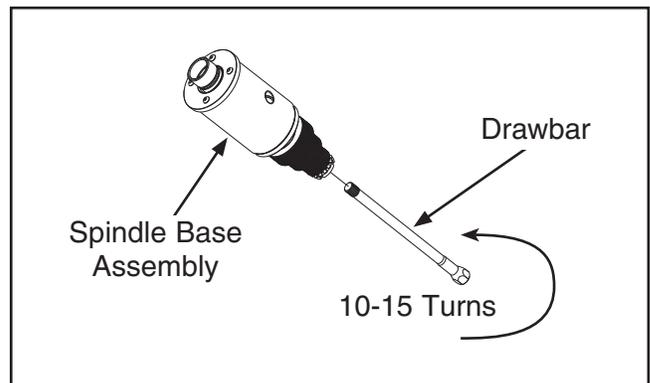


Figure 16. Inserting drawbar into place (spindle housing removed for clarity).

!CAUTION

Make sure the spindle and drawbar are aligned and properly seated before tightening the drawbar nut. Improper assembly can create an unsafe condition and possible injury to the operator.



- Secure spindle nut with spindle wrench and tighten drawbar nut (see **Figure 17**). **DO NOT** use excessive force.

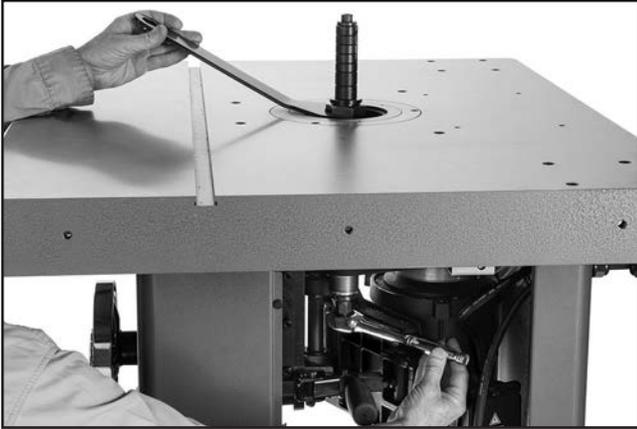


Figure 17. Tightening drawbar nut (fence removed for clarity).

- Lock spindle seat by returning spindle assembly lock handle to original position. Spindle should rotate freely in both directions securely.

Dust Collection

⚠ CAUTION

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

Minimum CFM at Dust Port: 400 CFM

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

To connect dust collection system to machine:

- Fit 4" dust hoses over two dust ports and secure in place with hose clamps (see **Figure 18**).

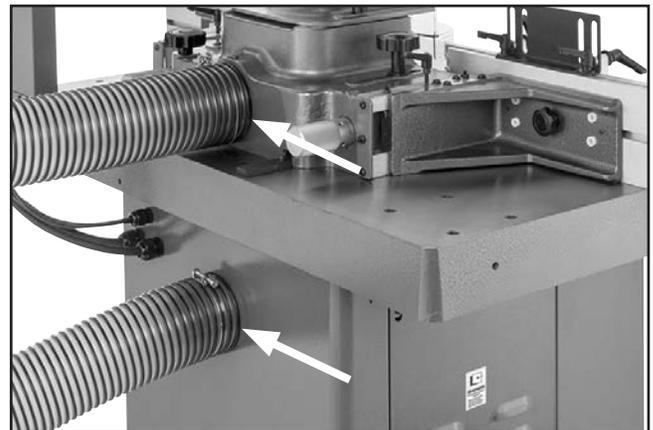


Figure 18. Attached dust hoses.

- Tug hoses to make sure they do not come off. **Note:** A tight fit is necessary for proper performance.



Test Run

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

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

The Test Run consists of verifying the following:

- 1) The motor powers up and runs correctly, and
- 2) the Emergency STOP button disables the machine properly.

WARNING

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

WARNING

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

To test run machine:

1. Clear all setup tools away from machine.
2. Press Emergency STOP button.
3. Move FWD/REV switch to STOP position.
4. Connect machine to power by inserting power cord plug into a matching receptacle.

5. Twist Emergency STOP button clockwise until it springs out (see **Figure 19**). This resets the switch so the machine can start.

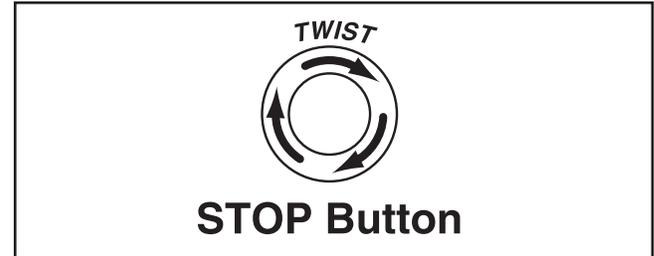


Figure 19. Resetting the switch.

6. Press ON button to turn machine **ON**.
7. Move FWD/REV switch to FWD position. Verify motor starts up and runs smoothly without any unusual problems or noises.
8. Move FWD/REV switch to STOP position and allow spindle to come to a complete stop.
9. Move FWD/REV switch to REV position. Verify motor starts up and runs smoothly without any unusual problems or noises.
10. Press Emergency STOP button to turn machine **OFF**.
11. **WITHOUT** resetting Emergency STOP button, try to start machine by pressing the ON button. The machine should not start.

— If the machine *does not* start, the safety feature of the Emergency STOP button is working correctly. Congratulations! The Test Run is complete.

— If the machine *does* start, immediately move FWD/REV switch to STOP and disconnect power. The safety feature of the Emergency STOP button is **NOT** working properly and must be replaced before further using the machine.

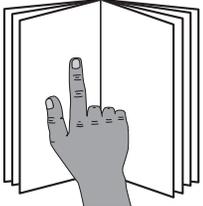


SECTION 4: OPERATIONS

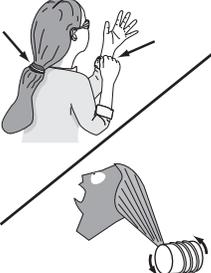
Operation Overview

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.

	<p>! WARNING To reduce your risk of serious injury, read this entire manual BEFORE using machine.</p>
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<p>! WARNING Eye injuries, respiratory problems, or hearing loss can occur while operating this tool. Wear personal protective equipment to reduce your risk from these hazards.</p>		
		

	<p>! WARNING Keep hair, clothing, and jewelry away from moving parts at all times. Entanglement can result in death, amputation, or severe crushing injuries!</p>
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<p>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.</p>
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To complete a typical operation, the operator does the following:

1. Examines the workpiece to make sure it is suitable for cutting.
2. Installs the cutter onto the spindle and adjusts the spindle height for the operation.
3. Correctly adjusts the safety guard and fence for the operation and locks them in place.
4. Checks the outfeed side of the machine for proper support and to make sure the workpiece can safely move past the cutter without interference.



5. Places the workpiece on the infeed side of the machine and stabilizes it with hold-downs, jigs, or other safety workpiece holding devices.
6. Removes any clothing, apparel, or jewelry that may become entangled in shaper.
7. Puts on safety glasses and a respirator, and locates push sticks if needed.
8. Starts dust collector, then turns machine **ON**.
9. Verifies cutter rotation and feed directions.
10. Feeds workpiece through the cut while maintaining firm pressure on workpiece against both table and fence, while always keeping hands and fingers out of the cutting path.
11. Stops shaper, then turns **OFF** dust collector.

CAUTION

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

Workpiece Inspection

Some workpieces are not safe to cut or may require modification before they are safe to cut.

Before cutting, inspect all workpieces for the following:

- **Material Type:** This machine is intended for cutting natural and man-made wood products, laminate covered wood products, and some plastics. Cutting drywall or cementitious backer board creates extremely fine dust and may reduce the life of the bearings. This machine is NOT designed to cut metal, glass, stone, tile, etc.; cutting these materials with a shaper may lead to injury.
- **Foreign Objects:** Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While cutting, these objects can become dislodged and hit the operator, cause kickback, or break the blade, which might then fly apart. Always visually inspect your workpiece for these items. If they can't be removed, DO NOT cut the workpiece.
- **Large/Loose Knots:** Loose knots can become dislodged during the cutting operation. Large knots can cause kickback and machine damage. Choose workpieces that do not have large/loose knots or plan ahead to avoid cutting through them.
- **Wet or "Green" Stock:** Cutting wood with a moisture content over 20% causes unnecessary wear on the blades, increases the risk of kickback, and yields poor results.
- **Excessive Warping:** Workpieces with excessive cupping, bowing, or twisting are dangerous to cut because they are unstable and often unpredictable when being cut. DO NOT use workpieces with these characteristics!
- **Minor Warping:** Workpieces with slight cupping can be safely supported if the cupped side is facing the table or the fence. On the contrary, a workpiece supported on the bowed side will rock during a cut and could cause kickback or severe injury.



Using Featherboards

Featherboards are used to hold the workpiece flat on the table and snug against the fence. The G0900 includes two different types of featherboards: one for use with the table and one for use with the fence.

Using Table Featherboards

1. To install table featherboards, slide (2) T-slot nuts into T-slot on table (see **Figure 20**). Tighten knobs at desired position. Adjust guard and fence to achieve anywhere from 0" to 8" of clearance.

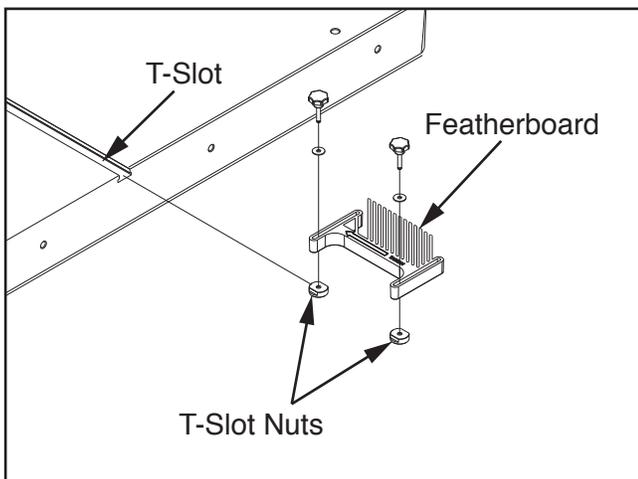


Figure 20. Table featherboard installation.

Note: Position a featherboard for both infeed and outfeed of workpiece to fully support throughout cut. Arrow on featherboard indicates workpiece travel.

Using Fence Featherboards

Fence featherboards come pre-installed on fence faces, allowing clearance with table between 1" and 5³/₄". However, for 0" clearance and up to 2³/₄" clearance, you may remove the featherboard from the L-bracket it comes installed on.

To move featherboard to upper slot on fence:

1. Remove hardware securing featherboard to bracket (see **Figure 21**).

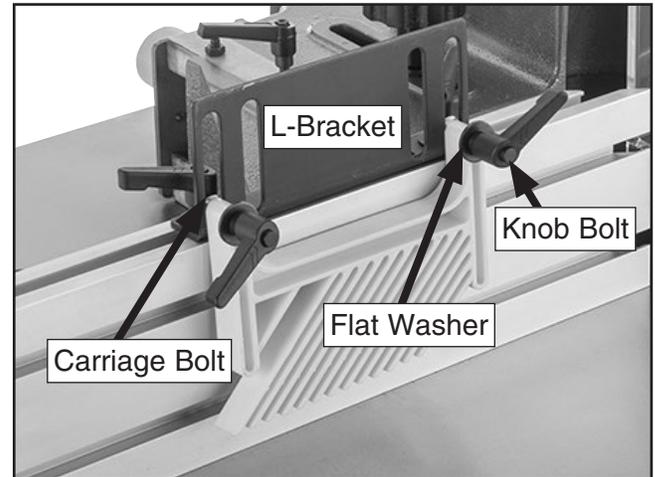


Figure 21. L-bracket and securing hardware.

2. Re-install hardware removed in **Step 1** to featherboard, then slide carriage bolts into upper slot on fence face (see **Figure 22**).

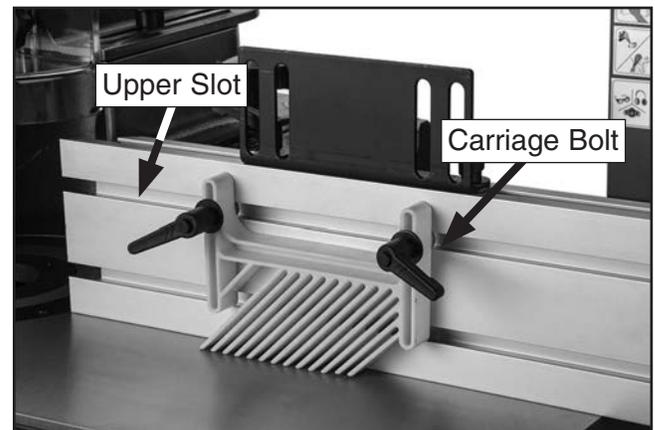


Figure 22. 0" to 2³/₄" clearance placement.

Note: Position a featherboard for both infeed and outfeed of workpiece to fully support throughout cut. Arrow on featherboard indicates workpiece travel.



Changing Cutter Rotation

IMPORTANT: Always verify the direction of the cutter rotation before any shaping operation. The cutting operation should feed AGAINST direction of cutter rotation.

The G0900 is equipped with a FWD/REV (forward/reverse) switch, as shown in **Figure 23**. In most cases, the shaper should be run in the FWD direction.



Figure 23. Location of FWD/REV switch.

In some instances, it will be necessary to flip the cutter over and reverse the cutter rotation.

Whenever possible, mount the cutter so the stock is milled on the bottom side (the side away from the operator). This does a better job and it is safer for the operator. Refer to **Using Rub Collars**, Page 30.

Changing Spindle Speed

The Model G0900 Shaper is equipped with a special high-speed V-belt. It is designed to withstand the vibration and sudden shock loads associated with the operation of a shaper.

To change spindle speeds:

1. DISCONNECT MACHINE FROM POWER!

Model G0900 (Mfd. Since 11/23)

2. Open cabinet access door, then release belt tension by pulling the motor bracket handle (see **Figure 24**).

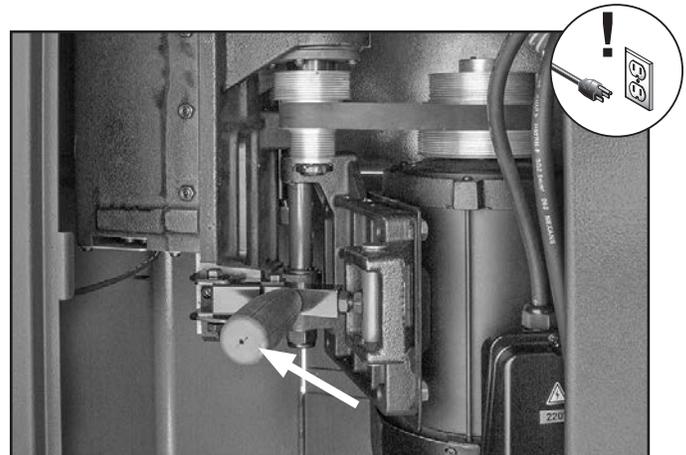


Figure 24. Location of motor bracket handle.

3. Move V-belt to a sheave on motor and spindle pulleys to select desired speed (see **Figure 25**.)

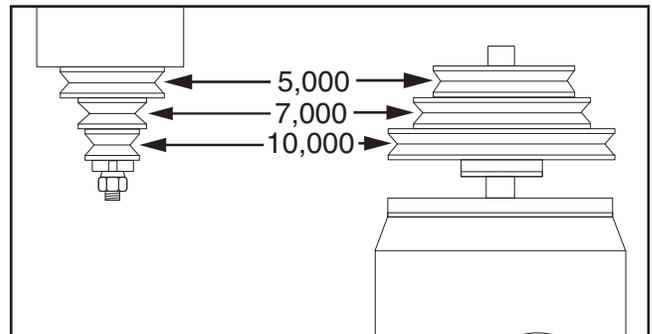


Figure 25. Speed change belt positions.

4. Tighten belt by locking motor bracket handle. When belt is properly tensioned, there should be approximately 1/4" of deflection in the center of the belt when you press it with your thumb. Refer to **V-Belt Tension & Replacement** on Page 45.
5. Spin pulley by hand to ensure proper tracking.
6. Close access door.



Installing Cutters

Large cutters (3½" or greater) must be operated at 5,000 or 7,000 RPM; smaller cutters can be operated at 10,000 RPM. Cutters are advertised with and should not exceed their rated RPM. Always use the largest spindle size possible, and never use a cutter bore more than one size larger than the spindle size.

Tools Needed:	Qty
Spindle Wrench 50mm.....	1
Hex Wrench 8mm.....	1

To install a cutter:

1. DISCONNECT MACHINE FROM POWER!
2. Raise safety guard out of the way and raise spindle to maximum height.
3. Remove spindle cap screw and remove any unneeded spacers.
4. Place the cutter on the spindle. Make sure the rotation is correct for your application.
5. Use spacers to suit your particular application.
6. Place the corresponding spindle two-piece keyed washer above the cutter and tighten the cap screw (see **Figure 26**).

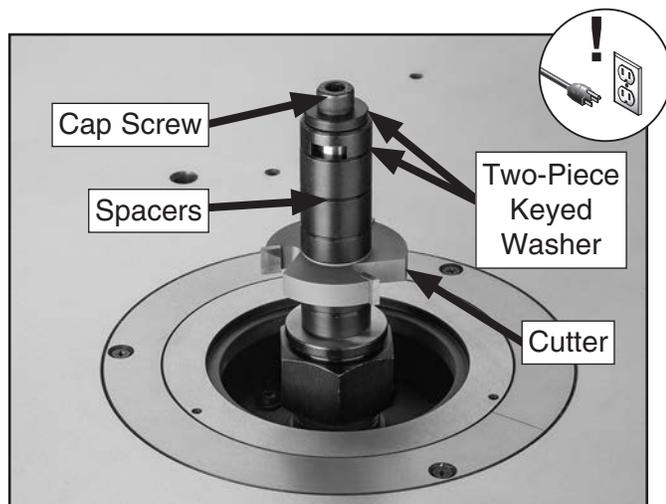


Figure 26. Cutter and fasteners installed.

7. Tighten cap screw with hex wrench while holding spindle stationary with spindle wrench (see **Figure 27**).



Figure 27. Tightening spindle cap screw.

8. Replace safety guard and lower spindle to desired height.

Adjusting Spindle Height

To adjust cutter height:

1. Move spindle up or down with elevation handwheel until desired position is achieved (see **Figure 28**).



Figure 28. Spindle elevation handwheel.

2. Return spindle elevation to 0" by pressing zeroing button on control panel.



Adjusting Cutterhead Guard

The cutterhead guard (see **Figure 29**) protects the user from exposure to the cutter and chips thrown by it. To minimize the risk of injury, the guard must be adjusted so it encloses as much of the spindle area as possible, while still allowing the workpiece to pass through the cut. Typically, this means the guard is positioned to just clear the top of the workpiece.

To position cutterhead guard:

1. Loosen knob bolts and position guard as needed. Tighten knob bolts to secure settings (see **Figure 29**).

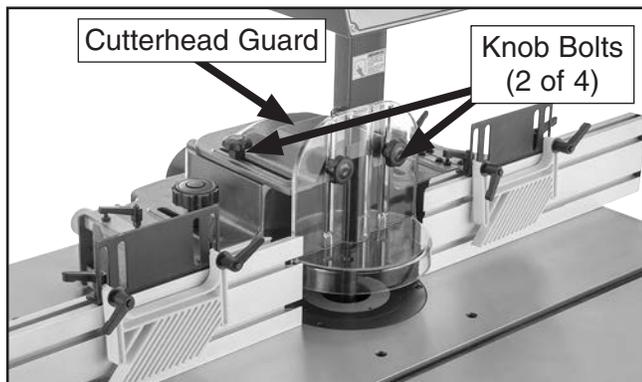
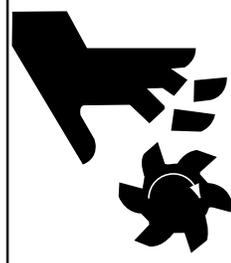


Figure 29. Location of cutterhead guard.

	<p>! WARNING</p> <p>All guards MUST be installed on your shaper before operating it. Shapers can quickly cause serious injury if some kind of guard is not used. To reduce your risk of injury, read and follow the entire Owner's Manual carefully and do additional research on shop-made guards and safety jigs.</p>
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Note: To make your own box guard, see **Making Box Guards** on **Page 38** to find instructions and tips.

Adjusting Fence

The fence is a two-piece adjusting system. Each fence is independently adjustable to compensate for different cutting thicknesses and special shaping applications. One full turn of the knurled micro-adjustment knob moves the split fence approximately $\frac{1}{64}$ " (.015"). The fence support assembly can also be adjusted as a whole by turning the fence assembly adjustment knob, with each full revolution equalling approximately $1\frac{5}{8}$ " of movement.

To adjust individual fence:

1. Loosen fence lock handle (see **Figure 30**).
2. Turn fence micro-adjustment knob (see **Figure 30**) until fence is set to desired position.

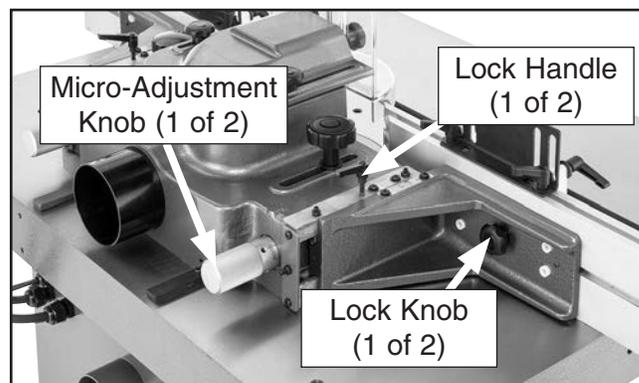


Figure 30. Location of fence controls.

3. Tighten fence lock handle.
4. Loosen fence lock knob to move fence closer and further from the cutter. Tighten when desired position is achieved.

Note: More detailed information concerning fence adjustments is covered in **Straight Shaping** on **Page 28**.



Straight Shaping

The fence assembly is a two-piece, independently adjustable system. When removing material from the whole face of your workpiece, the outfeed fence can be adjusted to provide support for the workpiece as it passes over the cutter, or it can be set up for partial face removal.

!WARNING

Attempting to operate the shaper without proper knowledge of the machine could cause serious injury or death! Read through the entire manual carefully before attempting to make any cuts with your shaper.

When removing material from the entire board face, observe the following steps:

1. Unlock both fences with lock handles (see **Figure 31**).
2. Set both fences to 0" by turning micro-adjustment knob counterclockwise (see **Figure 31**).
3. Lock both fences in position with lock handle.
4. Adjust infeed fence by turning fence assembly adjustment knob (see **Figure 31**) until workpiece contacts cutter in desired location.

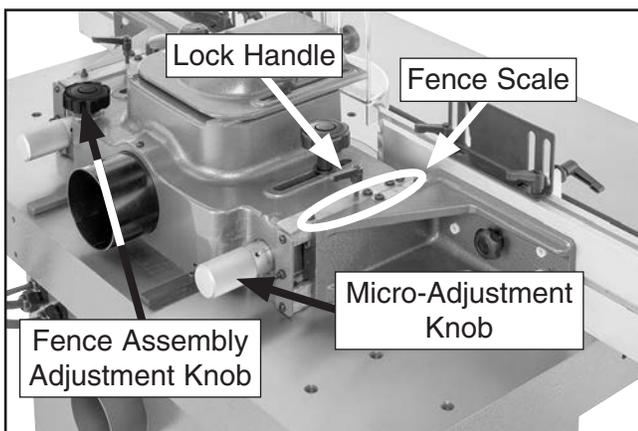
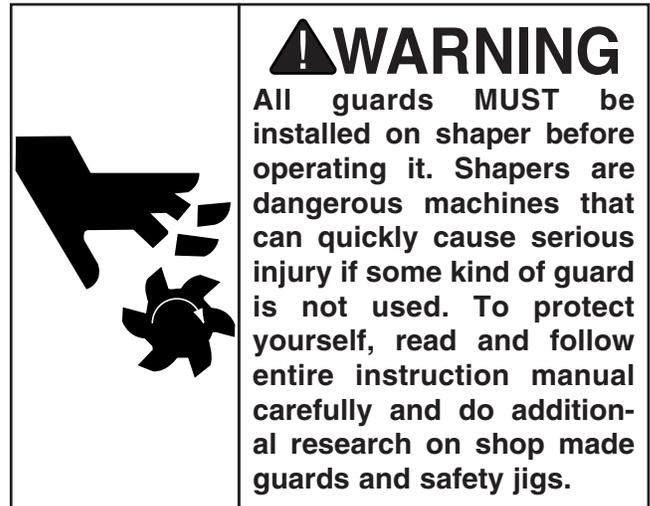


Figure 31. Fence adjustments.

5. Turn shaper **ON** and advance a test sample (at least 24" long) of desired cut about 8", then stop. Swing test piece away from cutter and turn machine **OFF**.



6. When cutter comes to complete stop, adjust outfeed fence using technique used in **Steps 1–2** to support new profiled edge (see **Figure 32**).

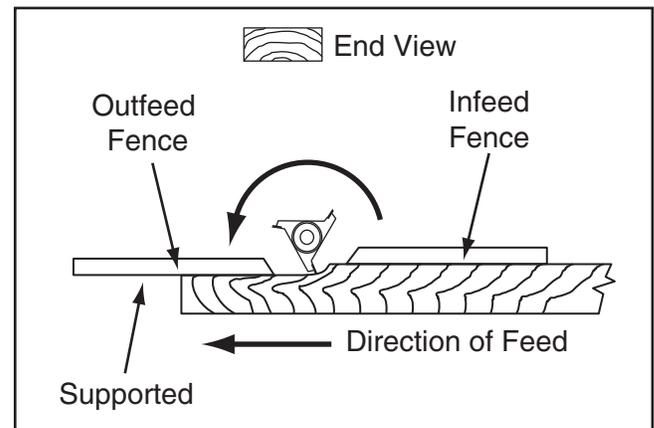


Figure 32. Support workpiece as it is fed through the cut.

!WARNING

The miter gauge should not be used to feed material along the fence face when edge shaping. Use a push stick and hold-downs to keep the workpiece in position. The fence may not always be perfectly parallel to the miter slot; therefore, using the miter gauge can cause binding and possible kickback of the workpiece towards the operator. Serious personal injury could occur if this happens.



If the face of the workpiece will only be partially removed, observe the following steps:

1. Follow **Steps 1–4** on **Page 28**.
2. Set fence faces so they barely clear cutter. This allows maximum support possible for workpiece when passing the cutter.
3. Adjust outfeed fence face to same plane as infeed fence. Remember to tighten fence facing before starting shaper.
4. Turn shaper **ON**.
5. Run a test piece through shaper (see **Figure 33**).

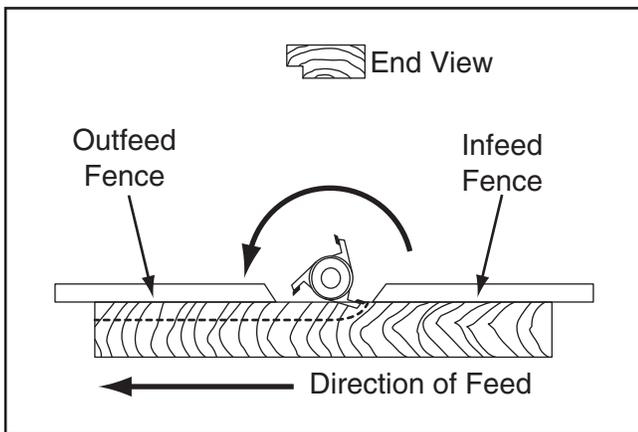


Figure 33. Partial feed fence adjustment.

6. Turn shaper **OFF**.

⚠ WARNING

The sound of this machine when it is running may be less than that of other devices such as a dust collector, which may be running at the same time. Because of this, it may be difficult to determine if the machine is **ON** merely by listening. It is necessary to make certain that this machine is **OFF** before attempting any setup or adjustments. Otherwise, serious personal injury could occur.

NOTICE

Always cut the end grain first when putting an edge around the perimeter of your workpiece to minimize tearout (see **Figure 34**).

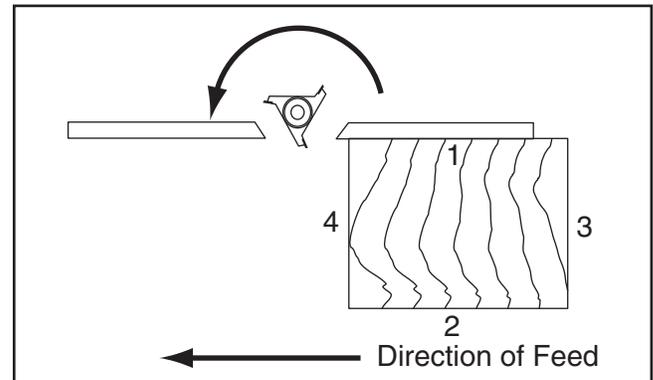


Figure 34. Cut end grain first.

Digital Readout Operation

To use digital readout:

1. Use 0" SET button to precisely return spindle elevation height to 0" (see **Figure 35**).
2. Press mm/in. button to display height in either inches or millimeters. Selected unit will be illuminated (see **Figure 35**).
3. Use spindle handwheel to change spindle height, observing DRO screen until desired height is achieved (see **Figure 35**).

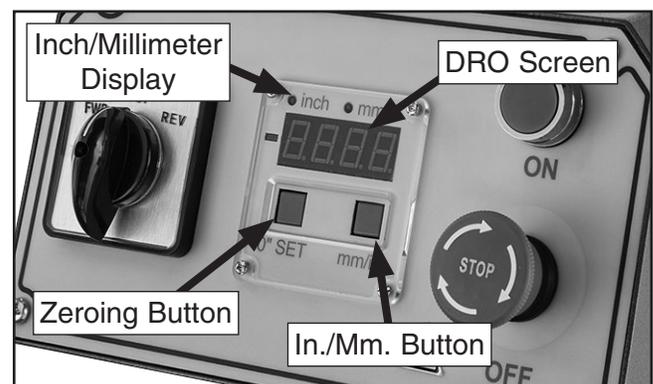


Figure 35. DRO components.



Using Rub Collars

Rub collars are used when shaping curved or irregular workpieces, such as arched doors or round table tops, and to limit the depth of your cut.

There are two types of rub collars—solid and ball-bearing. We recommend using ball bearing collars and we carry an extensive line that is designed for use with Grizzly shapers. See our current catalog or website for listings.

Rub collars may be used in any of the following positions:

1. **Rub collar below cutter:** When rub collar is placed below cutter, as shown in **Figure 36**, progress of the cut can be observed. However, any unintentional movement may lift workpiece into the cutter, damaging your work and creating a dangerous situation. *We DO NOT recommend using rub collar in this position.*

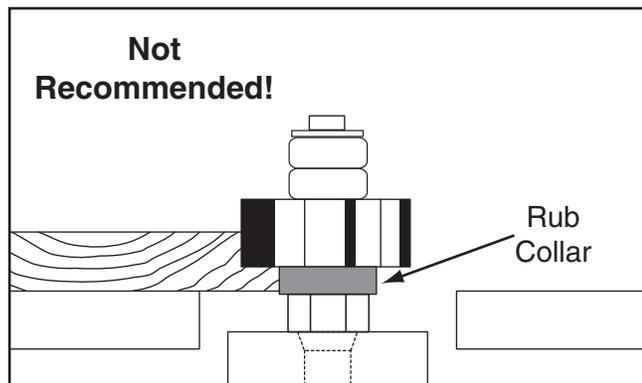


Figure 36. Cutting with rub collar below cutter.

2. **Above the cutter:** When rub collar is used above cutter, cut cannot be seen (see **Figure 37**). This offers some advantage—stock is not affected by slight variations in thickness and accidental lifting will not damage workpiece. Simply correct any change in height by repeating operation.

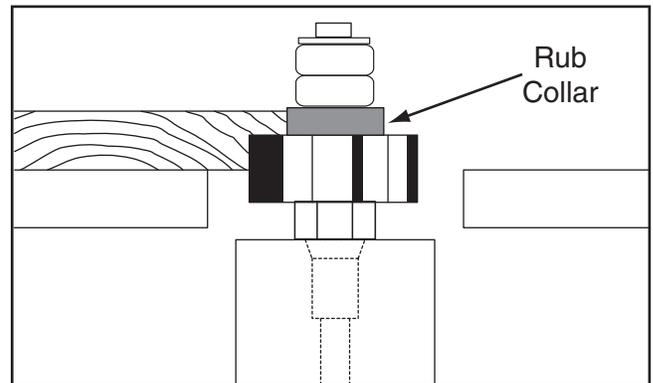


Figure 37. Cutting with rub collar above cutter.

3. **Between two cutters:** Using a rub collar between two cutters has the distinct advantage of performing two cuts at once or eliminating the need to change cutters for two different operations (see **Figure 38**). Notice that part of the edge is left uncut. The uncut portion rides on the rub collar.

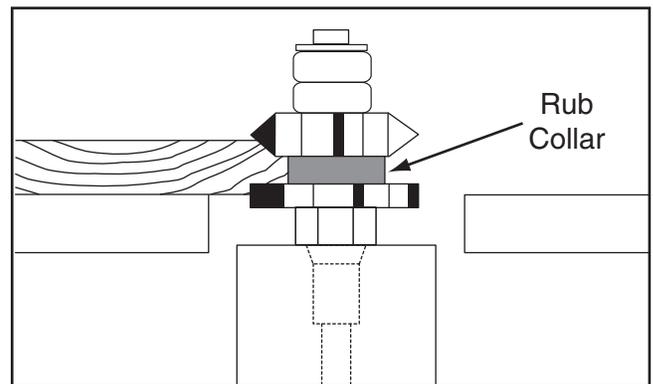


Figure 38. Using rub collar between cutters.



Irregular Shaping

!WARNING

Freehand shaping greatly increases the chance that the operator may lose control of the workpiece, which could result in serious personal injury. Therefore, a starting pin or support **MUST** be used to start an irregular shaping operation.

Irregular or freehand shaping takes a high degree of skill and dexterity. The fence assembly is not used in irregular shaping, so rub collars must be used (see **Rub Collars** on **Page 30**).

When doing freehand work, a starting pin must be used. The purpose of the starting pin is to support the workpiece during the beginning of the cut. Your shaper is supplied with a starting pin that can be placed in one of the holes located in the shaper table. The work should be placed in the starting position using the starting pin for support, as shown in **Figure 39**.

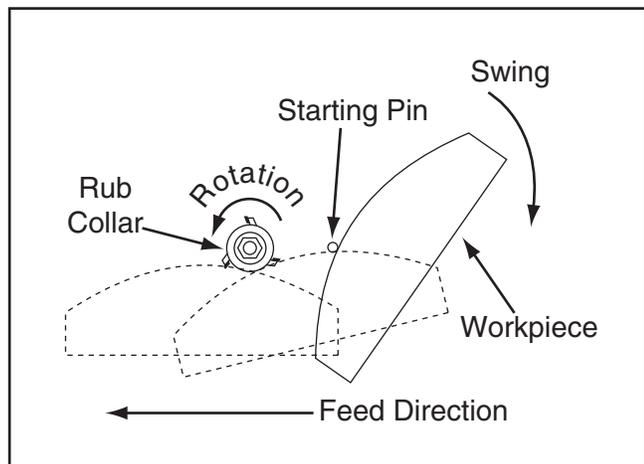


Figure 39. Using a starting pin for irregular shaping.

Next, swing the work into the cutter while holding the workpiece firmly against the starting pin. After the cut has been started, the work should be swung away from the starting pin and is supported just by the rub collar, as shown by the broken line positions shown in **Figure 39**.

ALWAYS FEED AGAINST THE ROTATION OF THE CUTTER.

!WARNING



All guards MUST be installed on your shaper before operating it. Shapers are dangerous machines that can quickly cause serious injury if some kind of guard is not used. To protect yourself, read and follow the entire manual carefully and do additional research on shop made guards and safety jigs.

To use starting pin:

1. DISCONNECT MACHINE FROM POWER!
2. Remove fence assembly.
3. Install appropriate cutter for your application (see **Installing Cutters** on **Page 26**).
4. Check cutter rotation (see **Changing Cutter Rotation** on **Page 25**).
5. Adjust spindle height to align cutter to workpiece.



6. Insert a starting pin (see **Figure 40**) into table surface, using the pin location that best supports your work.



Figure 40. Inserting starting pin.

7. Use some type of hold-down fixture and guard when doing freehand work (see **Figure 41**).

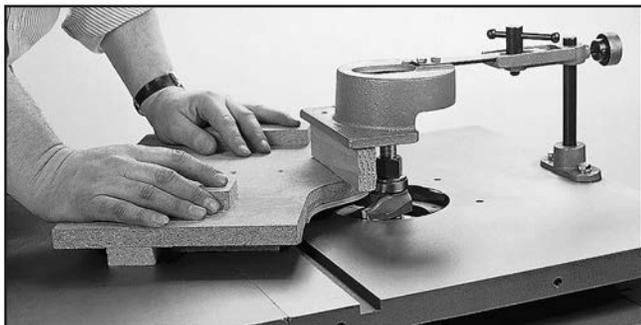


Figure 41. Example of using guard when doing freehand work. (Portion of guard removed for clarity.)

8. Make a sample cut on a piece of scrap wood.
9. If everything is correct, feed your workpiece along the cutter, using firm pressure to keep your work against the rub collar. Only feed against cutter rotation.

! CAUTION

Incorrectly feeding stock—feeding with the rotation of the cutter—creates a potentially uncontrollable feed situation and may pull stock from your hands. This can result in serious personal injury.

Sometimes the starting pin will not be in the most advantageous position. If so, firmly clamp a board in the desired position to act as a starting pin (see **Figure 42**). Some type of pivot point **must be** used. Notice in **Figures 41 & 42** the operator is not exposed to the cutting edge of the cutter. Cutters are removing material from the bottom of the workpiece.



Figure 42. Example of using starting pin substitute when needed (guard removed for clarity.)



Pattern Work

When using a pattern, a rub collar or ball bearing can be positioned either above, below, or between cutters.

The pattern is usually used when the entire edge is to be shaped or when many duplicate pieces are needed. Pattern work is particularly useful when rough cutting irregular shapes oversize and then shaping the edge in a simple two-step operation. A pattern, when attached to a workpiece by adding toggle clamps, hand-holds, or other safety devices, make a fixture. **Figure 43** shows proper setup of pattern and bearing rub collar.

You have greater flexibility when choosing the correct diameter rub collar for pattern work than for non-pattern work. If you look at **Figure 43**, you will notice that the position of the pattern determines the depth of cut. In other words, your pattern size is dependent upon the inter-relationship of the rub collar cutting diameter, and the desired amount of material removed. Changing either the cutter or the rub collar will change the amount of material removed. Planning ahead, you can best decide which rub collars are best suited for your application.

Always perform test cuts on scrap stock to ensure pattern works as required.

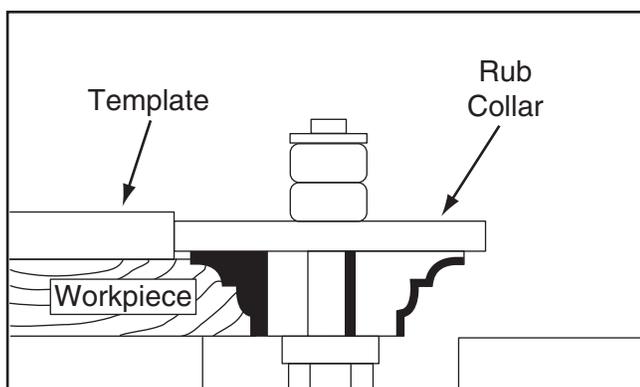


Figure 43. Position of pattern on workpiece and bearing size determine depth of cut.

Things to consider when making a pattern or fixture:

- Use a material that will smoothly follow rub collar, ball bearing or fence.
- Secure workpiece to a pattern (on sides that will not be cut) with toggle clamps, or fasten with wood screws.
- Make your fixture stable! Use proven methods and materials, and attach hand-holds for operator comfort and safety.
- Ensure clamps and hidden screws do not come into contact with cutter.
- Design your fixture so that all cutting occurs beneath workpiece.
- Always consider rub collar diameter for correct depth-of-cut when designing your pattern.
- Make sure your workpiece rests flat on work table, *not* on work fixture.
- Remember, there are tremendous cutting forces involved. Fixtures *must* be solid and stable, and any workpiece must be firmly secured.

NOTICE

Use care in designing and making fixtures. Clamps and screws cannot touch the cutter, and the fixtures must be stable in use, with the workpiece resting on the shaper table, not on the fixture. The workpiece must be fixed securely to the jig.



Shaping Small Stock

Feeding small stock through a shaper is always dangerous. If you must shape small stock, use a zero-clearance fence. This will provide greater protection for the operator, better workpiece support, and reduced tearout on narrow or fragile stock.

CAUTION

ALWAYS use hold-downs or featherboards and push sticks when shaping small or narrow stock. These devices keep your hands away from the spinning cutter and sufficiently support the stock to allow a safe and effective cut, reducing the risk of personal injury.

To shape small stock:

1. DISCONNECT MACHINE FROM POWER!
2. Create zero-clearance fence suitable for your application (see **Making a Zero Clearance Fence** on **Page 35**) and install on shaper.
3. Position safety guard as low as possible while still clearing cutter or create custom box guard (see **Making Box Guards** on **Page 38**).

4. Adjust infeed and outfeed table featherboards to width of workpiece, positioning them as close to cutter as possible to support workpiece against fence through cut.

Note: *When using zero-clearance fence, the fence-mounted featherboards that come with the G0900 must either be clamped/mounted to zero-clearance fence or appropriate featherboards must be constructed. The same is true if the size or positioning of included table featherboards will not appropriately support a small workpiece. For both of these scenarios, please refer to **Making Featherboards** on **Page 36** for instructions on making shop-made featherboards.*

5. Mount/clamp shop-made or included fence featherboards to zero-clearance fence. Adjust to width of workpiece, positioning them as close to cutter as possible to support workpiece against fence through cut.
6. Connect machine to power.
7. Use push sticks to push workpiece through cut (see **Making Push Sticks** on **Page 37** to make your own).



SECTION 5: SHOP-MADE SAFETY ACCESSORIES

Making a Zero-Clearance Fence

A shop-made zero-clearance fence provides more support than a standard fence and reduces tearout on narrow or fragile stock. Using a zero-clearance fence is the best way to reduce the risk associated with shaping inherently dangerous small stock.

To make a zero-clearance fence:

1. DISCONNECT MACHINE FROM POWER!
2. Remove fence faces and mounting brackets from fence supports by loosening fence lock knobs (see **Figure 44**).

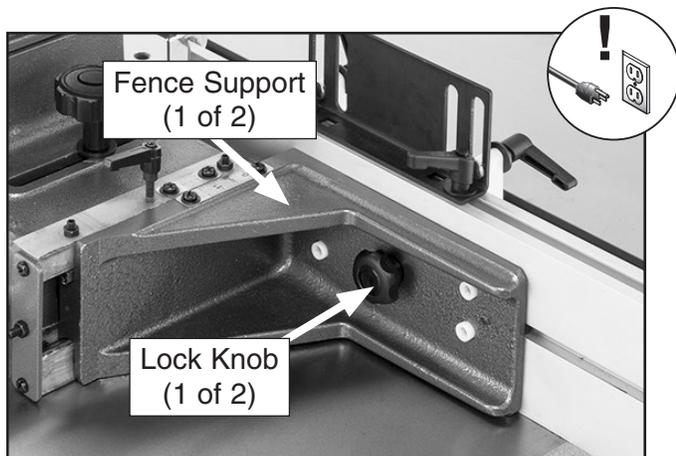


Figure 44. Fence lock knob location.

3. Remove bracket cap screws (see **Figure 45**).



Figure 45. Bracket cap screw location.

4. Select piece of straight and smooth stock that is same height and thickness as fence faces and approximately 30" long.
5. Position board over length of guard/fence assembly and mark mounting holes and outline cutter and spindle profile.
6. Cut an outline of spindle and cutter from center of stock, as illustrated in **Figure 46**.

Note: Make outline as close as possible to cutter and spindle without interfering with rotation.

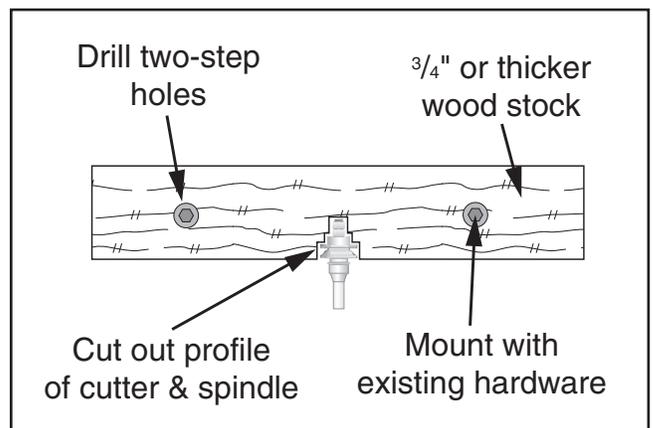


Figure 46. Example of a zero-clearance fence.



7. Drill countersunk mounting holes in zero-clearance fence so fasteners from split fences can be used to secure it to fence supports in the same manner.

Note: *Drilling the holes is a two-step process. Drill the first holes all the way through the board with a diameter a little larger than the shaft of the mounting screw. Drill the second holes halfway through the boards with a diameter a little larger than the screw head. Drill these second holes deep enough that the screw heads will be well below the surface of the board.*

8. Secure zero-clearance fence to fence supports, check for proper clearance, then run test piece through the cutter to verify results.

Making Featherboards

Featherboards flex with minor height or width variations from stock as it passes through. Because of the consistent pressure featherboards place on the stock, cuts are more consistent, the risk of kickback is greatly reduced, and the operator's hands do not need to get near the cutter to maintain feeding pressure. If a kickback does occur, featherboards will also slow down or stop the workpiece.

Figure 47 shows the dimensions of a basic featherboard. The ultimate size is flexible and should be built around the size of stock you are shaping. The fingers can be cut with a bandsaw or table saw.

To install a featherboard, feed a piece of stock half-way through the machine, then turn the machine **OFF**. Place the featherboard against the stock so all the fingers touch the edge of the stock, then use T-slot mounting hardware to secure the featherboard. For best results, place featherboards just before and just after the cutter.

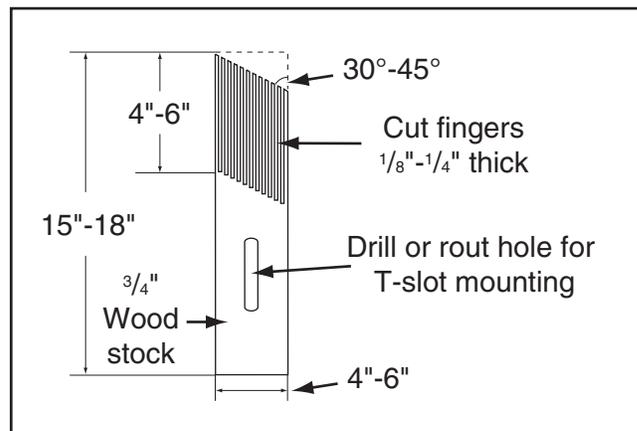


Figure 47. Basic featherboard construction.

IMPORTANT: Cuts made across the grain result in weak fingers that easily break when flexed. When made correctly, the fingers should withstand flexing from moderate pressure. To test the finger flexibility, push firmly on the ends with your thumb. If the fingers do not flex, they are likely too thick (the cuts are too far apart).

As the G0900 includes featherboards for use with both the table and the fence, simply use the hardware included with these to affix shop-made featherboards to your shaper (see **Figure 48**).

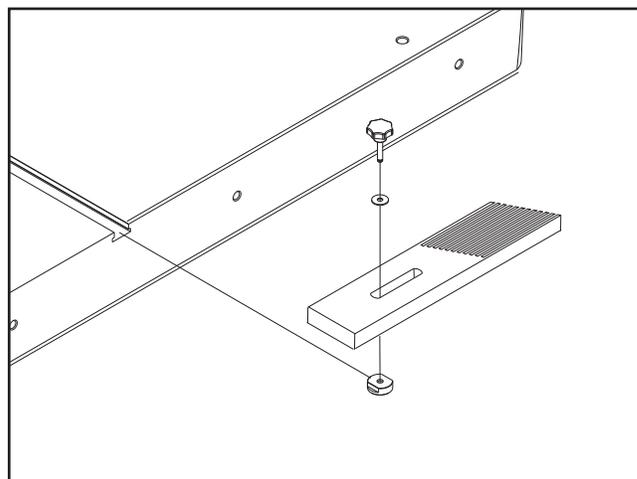


Figure 48. Shop-made table featherboard using included T-mount hardware.



Making Push Sticks

When used correctly, push sticks reduce the risk of injury by keeping hands away from the cutter. In the event of an accident, a push stick can absorb damage that would have otherwise happened to hands or fingers. Use push sticks whenever your hands will get within 12" of the cutter. To maintain control when shaping large workpieces, start by feeding with your hands then use push sticks to finish the operation, so your hands are not on the end of the workpiece as it passes through the cutter.

Feeding: Place the notched end of the push stick against the end of the workpiece (see **Figure 50**), and move the workpiece into the cutter with steady downward and forward pressure.

Supporting: A second push stick can be used to keep the workpiece firmly against the fence while cutting. When using this method, only apply pressure before the cutter; otherwise, pushing the workpiece against or behind the cutter will increase the risk of kickback.

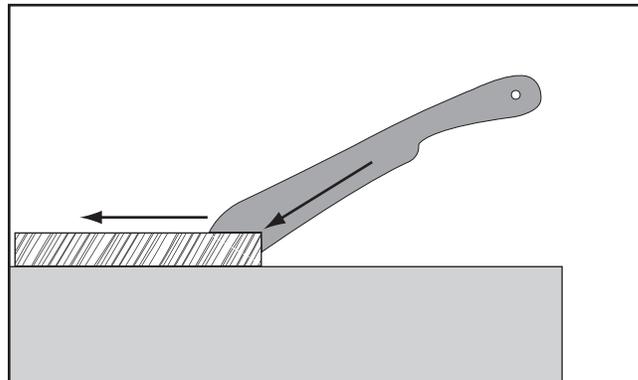


Figure 49. Side view of push stick in use.

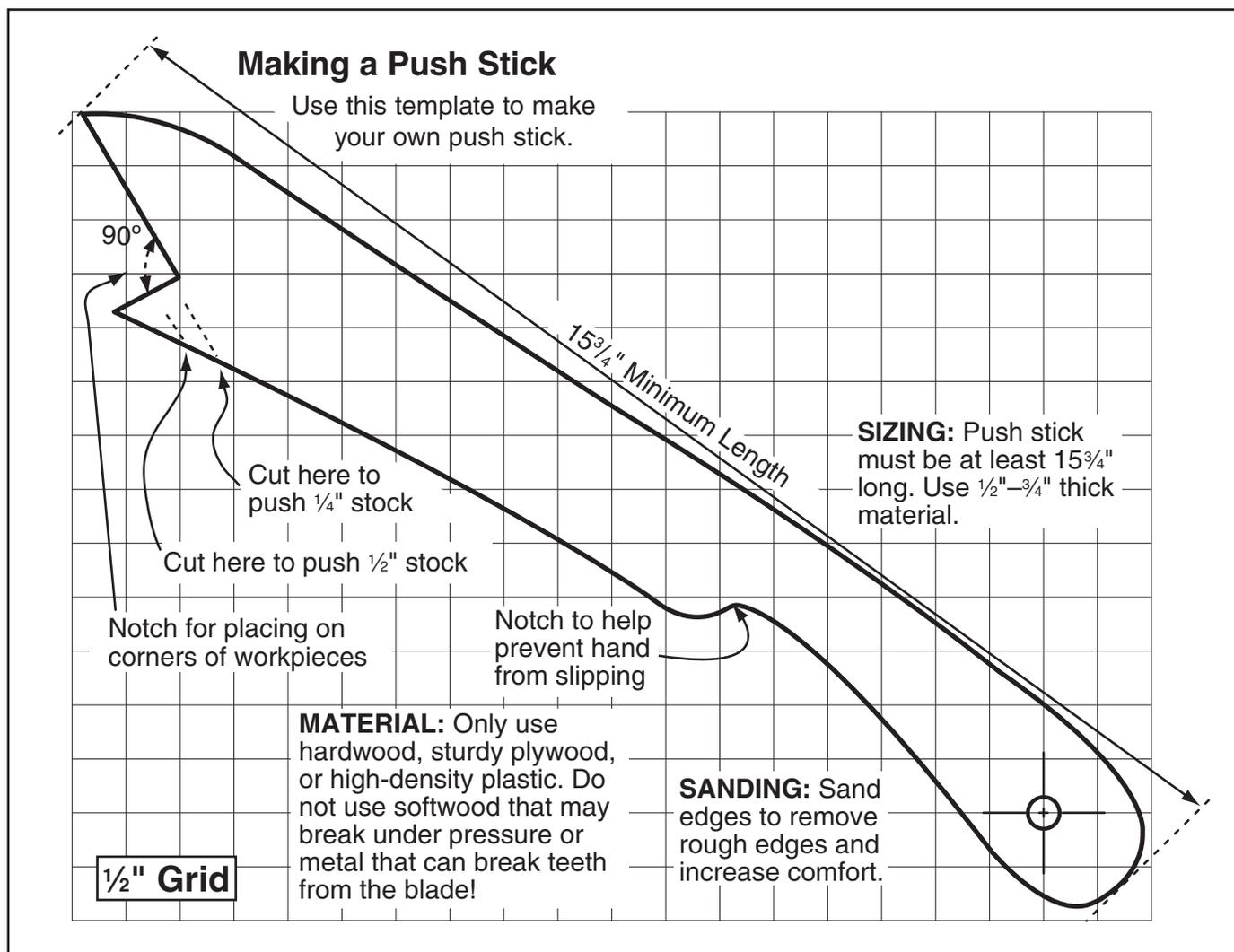


Figure 50. Template for a basic shop-made push stick (not shown at actual size).



Making Box Guards

Shop-made box guards are an excellent way to enclose the cutter to virtually eliminate accidental contact with the cutter during operation. Having the cutter enclosed also helps increase the efficiency of dust collection. The drawback to box guards is that one size does not fit all. Often, professional woodworkers who use box guards make multiple guards that are different sizes.

Figure 51 shows one way to make and attach a box guard to the Model G0900. This guard replaces the vertical clear plastic guard that is included with the shaper. For durability and strength, use a hardwood when making box guards. When installing the box guard, adjust the box guard approximately $\frac{1}{4}$ " above the stock you will shape and use featherboards on both sides.

Note: *DO NOT use the box guard as a hold-down or featherboard; instead, use the provided featherboard that has the ability to flex with the minor height variations of your stock.*

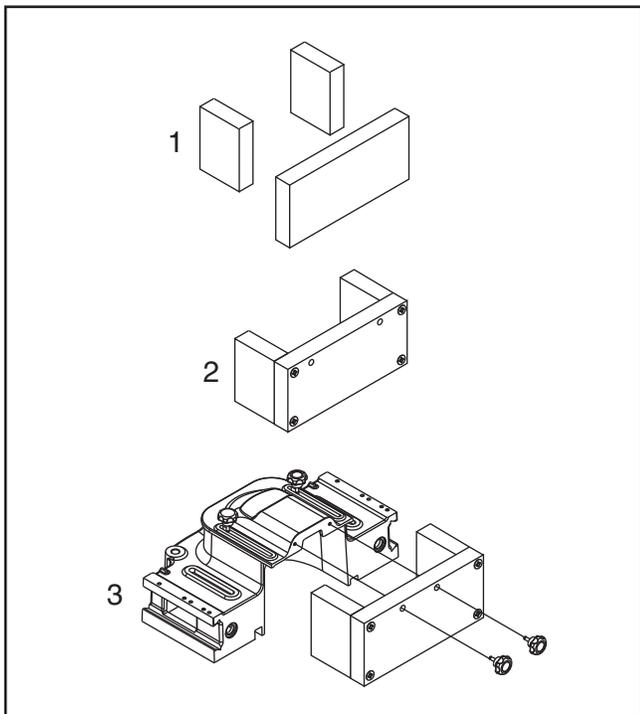


Figure 51. Box guard attached instead of included clear plastic guard (fence and guard components removed for clarity).

Tips for making a custom box guard:

The thickness of your workpiece will determine the height of the box guard. Therefore, you will need to build a separate box guard for each workpiece of a different thickness. A box guard can be used with or without a zero-clearance fence (see **Making Zero-Clearance Fence** on **Page 35** for instructions).

The box guard can either attach directly to wooden fence boards (or board) with screws (as shown in **Figure 52**) or attach directly to the guard fence assembly with the plastic guard hardware (as shown in **Figure 51**). In either case, featherboards should also be used on either side to support the workpiece. Construct the box guard in a way that it extends out over the cutter area while leaving enough distance between the guard and the table for the workpiece to easily pass by the cutter. Refer to **Figure 52** for an example.

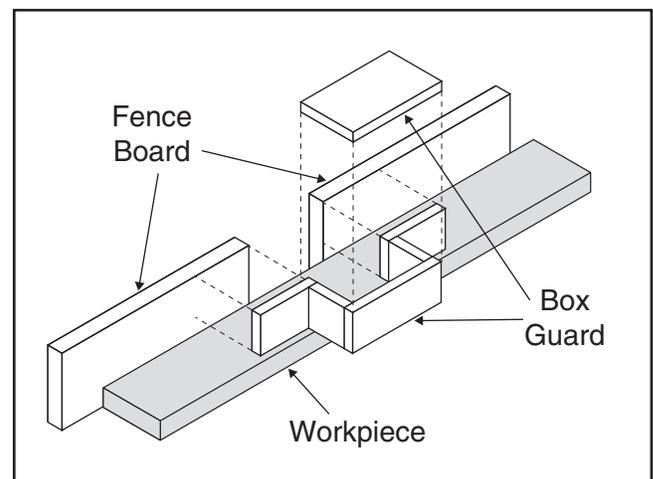


Figure 52. Example of custom box guard attached to wooden fence boards.



SECTION 6: ACCESSORIES

! WARNING

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

NOTICE

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

G4179—1/2 HP Power Feeder

If you do any kind of hand ripping or milling, you know what a big chore it can be especially with longer and wider stock. For those of you who want to increase production, upgrade or add on an extra stock feeder, we have one that will match virtually any application and budget.



Figure 53. G4179 Power Feeder.

W1164—Spacer 3/4" Bore, 1-1/4" OD, 1/4" High
W1165—Spacer 3/4" Bore, 1-1/4" OD, 3/8" High
W1166—Spacer 3/4" Bore, 1-1/4" OD, 1/2" High
W1167—Spacer 3/4" Bore, 1-1/4" OD, 3/4" High
W1168—Spacer 3/4" Bore, 1-1/4" OD, 1" High
Spacers allow you to position your shaper cutter anywhere on the spindle. Use them between cutters or stack them above the cutter to bear against the spindle nut. Every shaper owner needs a set of these on-hand.



Figure 54. Shaper spindle spacers.

W1114—3/4" Rub Collar, 1 5/8" Outside Dia.
W1116—3/4" Rub Collar, 1 3/4" Outside Dia.
W1118—3/4" Rub Collar, 1 7/8" Outside Dia.
W1119—3/4" Rub Collar, 2" Outside Dia.
W1120—3/4" Rub Collar, 2 1/8" Outside Dia.
W1122—3/4" Rub Collar, 2 5/8" Outside Dia.

If you do any kind of irregular shaping, rub collars are a must! Rub collars are used for shaping curved work such as cathedral doors, as well as many custom shapes. They are also used for limiting depth-of-cut, like guide bearings on router bits.



Figure 55. Ball bearing rub collars.

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



G0860—1.5 HP Portable Cyclone Dust Collector

The G0860 1.5 HP Cyclone Dust Collector is part of our new lineup of affordable, high-efficiency cyclones, and it's sure to be a perfection addition to your shop!



Figure 56. Model G0860 1.5 HP Portable Cyclone Dust Collector.

T28172—14" x 39" Heavy-Duty Roller Table

T28369—14" x 78" Heavy-Duty Roller Table

T28370—14" x 118" Heavy-Duty Roller Table

Increase material handling and processing efficiency with one or more of these Heavy-Duty Roller Tables. Ideal for easily positioning material for cross cutting or cutting to length using a chop saw or metal cutting bandsaw. Simply place a roller table on one or both sides of your saw and production time is automatically improved!



Figure 57. Heavy-duty roller tables.

D4206—Clear Flexible Hose 4" x 10'

D4256—45° Elbow 4"

D4216—Black Flexible Hose 4" x 10'

W1034—Heavy-Duty Clear Flex Hose 4" x 10'

D2107—Hose Hanger 4 1/4"

W1015—Y-Fitting 4" x 4" x 4"

W1017—90° Elbow 4"

W1019—Hose Coupler (Splice) 4"

W1317—Wire Hose Clamp 4"

W1007—Plastic Blast Gate 4"

W1053—Anti-Static Grounding Kit

We've hand picked a selection of commonly used dust collection components for machines with 4" dust ports.

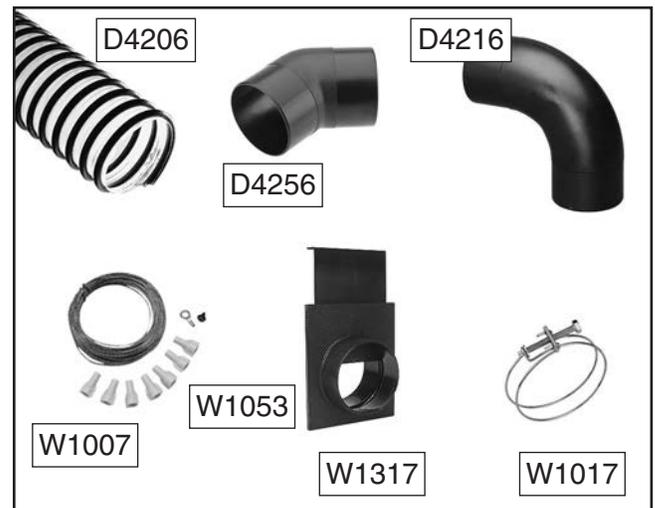


Figure 58. Dust collection accessories.

T28000—"Bear Crawl" Mobile Base

We took years of input and months of testing and design to come out with the Grizzly "Bear Crawl" Mobile Base. Its 1200 lb. capacity, steel and rubber heavy-duty ball bearing wheels, and toe flip-stops are only a few of the features that will make this mobile base a staple under your machines for years to come. Adjusts from 19" x 21" to 29 1/2" x 29 1/2"!

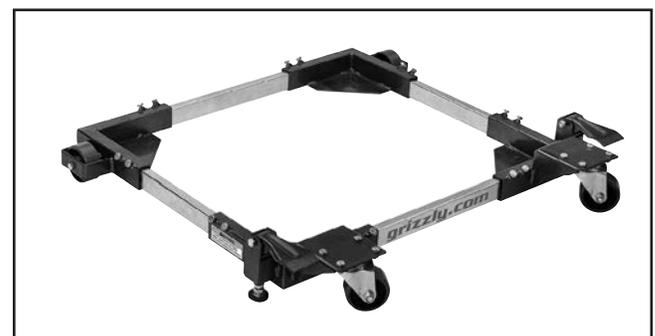


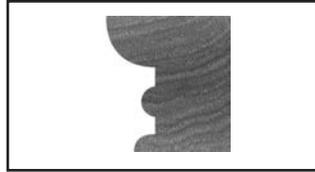
Figure 59. T28000 Bear Crawl Mobile Base.

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



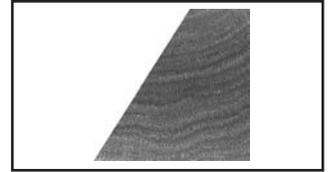
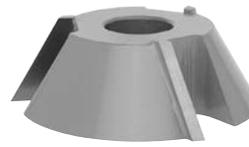
C2026— $\frac{1}{8}$ " & $\frac{3}{8}$ " Quarter Round & $\frac{1}{4}$ " Bead

$\frac{3}{4}$ " Bore, $2\frac{5}{8}$ " Diameter, 1" Cutting Height



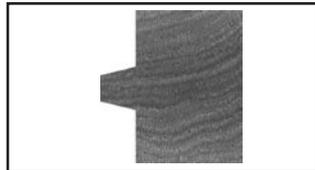
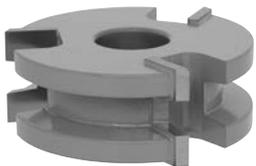
C2089—30° Bevel

$\frac{3}{4}$ " Bore, 3" Diameter, 1" Cutting Height



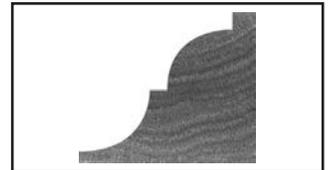
C2028—Tongue & Groove

$\frac{3}{4}$ " Bore, $2\frac{5}{8}$ " Diameter, 1" Cutting Height



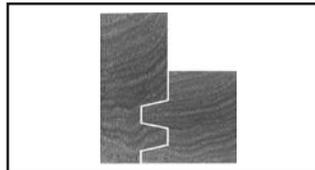
C2091—Bead & Cove

$\frac{3}{4}$ " Bore, $3\frac{1}{4}$ " Diameter, $\frac{7}{8}$ " Cutting Height



C2042—Drawer Joint

$\frac{3}{4}$ " Bore, $2\frac{5}{8}$ " Diameter, $\frac{3}{4}$ " Cutting Height



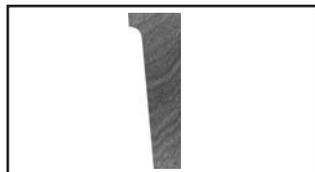
C2092—Double Flute

$\frac{3}{4}$ " Bore, $2\frac{5}{8}$ " Diameter, $\frac{7}{8}$ " Cutting Height



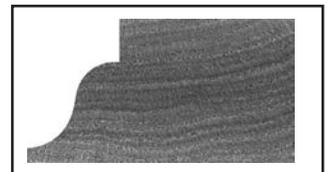
C2083—Vertical Panel Raising

$\frac{3}{4}$ " Bore, $2\frac{5}{8}$ " Diameter, $\frac{1}{2}$ " Cutting Height



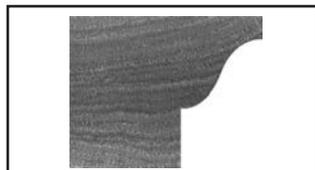
C2098—Ogee

$\frac{3}{4}$ " Bore, $2\frac{5}{8}$ " Diameter, $\frac{1}{2}$ " Cutting Height



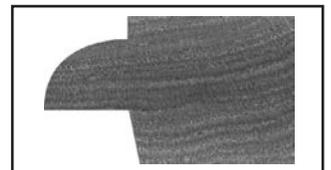
C2085—Female Sash

$\frac{3}{4}$ " Bore, $2\frac{5}{8}$ " Diameter, $\frac{5}{8}$ " Cutting Height



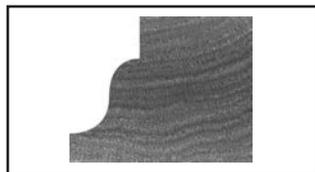
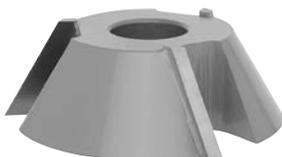
C2101—Door Lip

$\frac{3}{4}$ " Bore, $2\frac{5}{8}$ " Diameter, $1\frac{3}{16}$ " Cutting Height



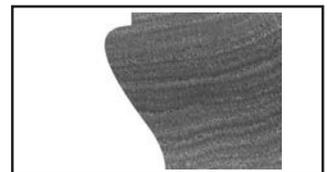
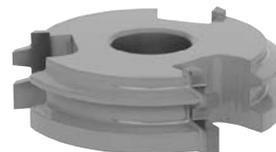
C2086—Male Sash

$\frac{3}{4}$ " Bore, $2\frac{5}{8}$ " Diameter, $\frac{5}{8}$ " Cutting Height



C2103—Door Edge

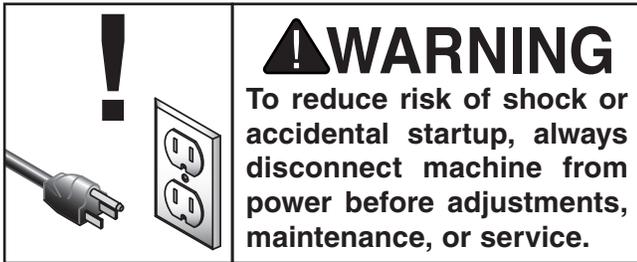
$\frac{3}{4}$ " Bore, $2\frac{5}{8}$ " Diameter, 1" Cutting Height



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SECTION 7: MAINTENANCE



Schedule

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

Ongoing

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

- Loose mounting bolts.
- Worn or damaged cutters.
- Clean/lubricate table and miter gauge.
- Worn or damaged wires.
- Any other unsafe condition.

Weekly Check

- Clean/vacuum dust buildup from in and around cabinet and off of motor.

Monthly Check

- Check/lubricate spindle slide and leadscrew (**Page 43**).
- Check V-belt condition and tension (**Page 45**).

Annually Check

- Replace V-belt.

Cleaning & Protecting

Cleaning the Model G0900 is relatively easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. Blow out any hard-to-reach areas with compressed air, and keep the spindle clear of wood dust and chips. If any resin has built up, use a resin dissolving cleaner to remove it.

Protect the unpainted cast iron table by wiping it clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces. Keep the table rust-free with regular applications of products like SLIPIT® or Boeshield® T-9.

G5562—SLIPIT® 1 Qt. Gel

G5563—SLIPIT® 12 Oz. Spray



Figure 60. Recommended products for protecting unpainted cast iron/steel parts on machinery.



Lubrication

Since all bearings on the G0900 are sealed and permanently lubricated, simply leave them until they need to be replaced. DO NOT lubricate them.

Below is a list of components that require periodic lubrication. Do not over-lubricate these components. Large amounts of lubricant will attract sawdust, causing the metal components to gum up and bind.

Items Needed	Qty
Hex Wrench 4mm.....	1
Mineral Spirits.....	As Needed
Shop Rags.....	As Needed
Lubrication Type ... T26419 or NLGI#2 Equivalent	
—Amount.....	Thin Coat
—Frequency.....	As Needed

T26419—Syn-O-Gen Synthetic Grease



Figure 61. T26419 Syn-O-Gen Synthetic Grease.

Elevation Leadscrew & Spindle Slides

1. DISCONNECT MACHINE FROM POWER!
2. Lower spindle housing assembly fully by turning handwheel counterclockwise.
3. Use rag and mineral spirits to clean away grease and built up grime from surfaces of both slides and threads of leadscrew (see **Figure 62**).

4. Use rag and mineral spirits to clean away grease and built up grime from surfaces of both slides and threads of leadscrew (see **Figure 62**).

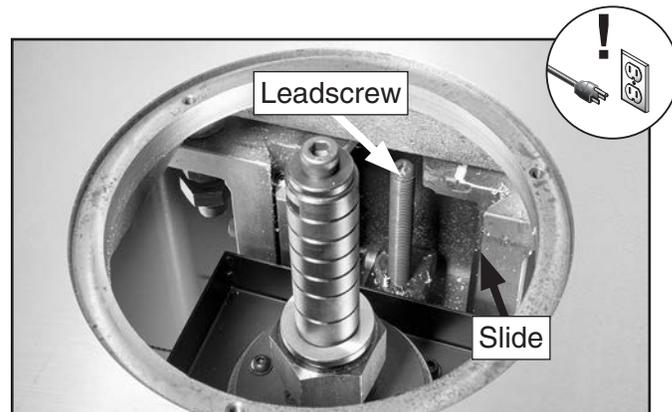


Figure 62. Spindle slide and leadscrew location.

5. Apply a thin coat of lubricant to slides and leadscrew.
6. Use handwheel to fully raise and lower spindle housing to distribute grease.

Fence Rack & Pinion

1. DISCONNECT MACHINE FROM POWER!
2. Unlock guard and fence assembly from table by loosening lock knobs pictured below in **Figure 63**.

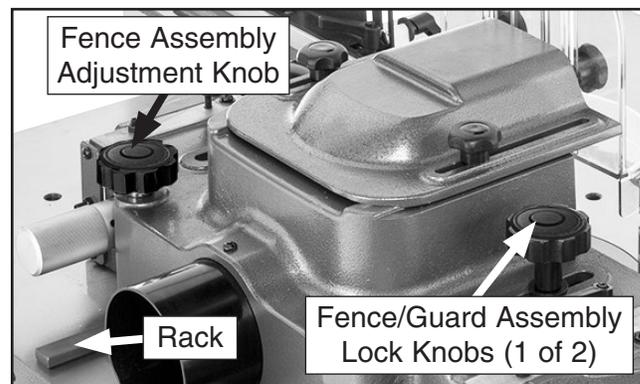


Figure 63. Fence rack and assembly location.



3. Adjust fence assembly fully forward with fence assembly adjustment knob then push assembly off of end of rack to fully reveal rack.
4. Remove cap screws securing sliding blocks and rack to table.
5. Use a rag and mineral spirits to wipe off any grease and sawdust build-up on rack.
6. Apply a thin coat of lubricant to rack.
7. Replace fence and guard assembly to table, seat on rack and sliding blocks. Use fence assembly adjustment knob to adjust assembly forward and back to distribute grease.

4. Loosen hex bolt on spindle cartridge bracket (see **Figure 64**).

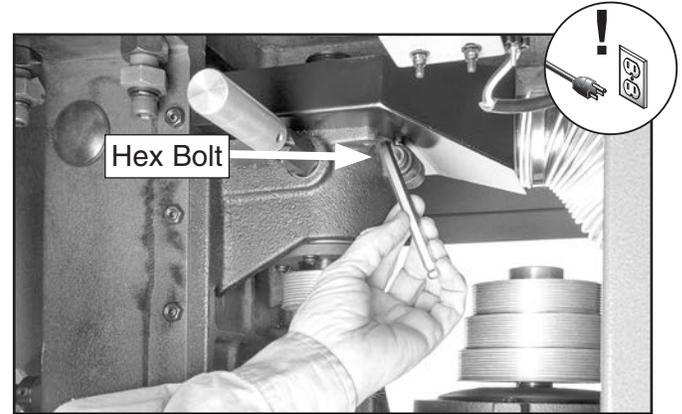


Figure 64. Loosening spindle cartridge bracket.

Replacing Spindle Bearings

Should a bearing fail, your shaper will develop a noticeable rumble, worse so when the machine is put under load. If the bad bearing is not replaced, it will eventually seize—possibly doing damage to the machine. Bearings are standard sizes and can be replaced through Grizzly.

Tools Needed	Qty
Hex Wrench 8mm.....	1

To replace spindle bearings:

1. DISCONNECT MACHINE FROM POWER!
2. Open cabinet access door.
3. Remove V-belt (refer to **V-Belt Tension & Replacement** on **Page 45**).

⚠ CAUTION

Carefully spread the casting to reduce the risk of the bearing housing falling and pinching fingers. To reduce damage, place a pad underneath the housing. The casting will break if too much pressure is applied.

5. Bearing housing will drop down. If you need to spread spindle slide casting more, use a flat head screwdriver.
6. Remove spindle and replace bearings inside bearing housing. If you need pointers regarding bearing replacement, call Technical Support.
7. To slide housing back in, reverse the procedure. Make sure hex bolt is tightened securely.
8. Close access door.



V-Belt Tension & Replacement

The V-belt transfers power from the motor to the spindle. If the V-belt does not have the proper tension or is damaged in any way, the shaper will not operate optimally, and unnecessary wear on the moving parts will occur. Regularly check the V-belt tension and replace it when necessary.

Tools Needed	Qty
Open-End Wrench or Socket 19mm	1

To tension V-belt:

1. DISCONNECT MACHINE FROM POWER!
2. Open cabinet access door, then release belt tension by pulling motor bracket handle (see **Figure 65**).

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

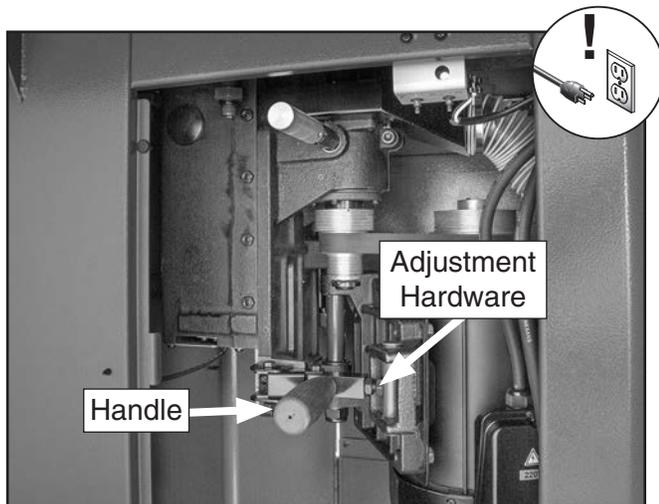


Figure 65. Handle for motor tension.

3. Move V-belt to sheave on motor and spindle pulleys to select desired speed (see **Figure 66**.)

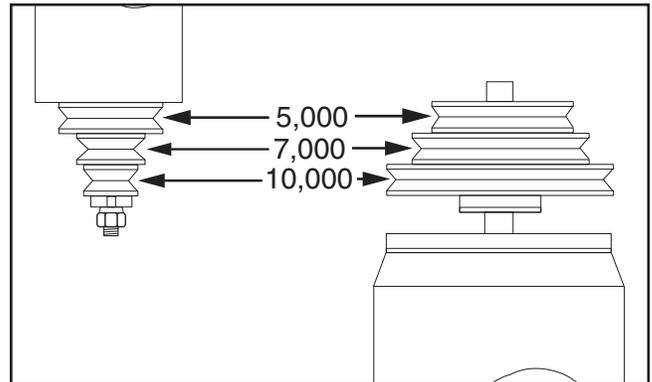


Figure 66. Different speed options.

4. Tighten belt by replacing motor bracket handle. When belt is properly tensioned, there should be approximately $\frac{1}{4}$ " of deflection in the center of the belt when you press it with your thumb, as shown in **Figure 67**.

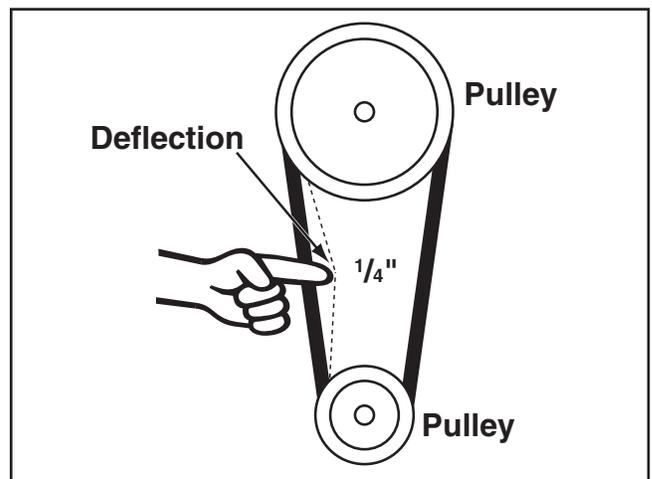


Figure 67. Checking V-belt tension.

5. If there is not $\frac{1}{4}$ " of deflection, adjust belt tension by loosening/tightening adjustment hardware on motor bracket handle until proper tension achieved, see **Figure 65**.
6. Spin pulley by hand to ensure proper tracking.
7. Close access door.



SECTION 8: SERVICE

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

Troubleshooting



Motor & Electrical

Symptom	Possible Cause	Possible Solution
Machine does not start, or power supply breaker immediately trips after startup.	<ol style="list-style-type: none"> 1. E-Stop button depressed/at fault. 2. Incorrect power supply voltage or circuit size. 3. Cabinet door open/door safety switch at fault. 4. Power supply circuit breaker tripped or fuse blown. 5. Overload relay has tripped/at fault. 6. Motor wires connected incorrectly. 7. Start capacitor at fault. 8. Contactor not energized/at fault. 9. Wiring broken, disconnected, or corroded. 10. ON button or spindle rotation switch at fault. 11. Motor at fault. 	<ol style="list-style-type: none"> 1. Twist E-Stop button to reset. Replace if at fault. 2. Ensure correct power supply voltage and circuit size (Page 11). 3. Close door/replace switch. 4. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse. 5. Reset. Adjust/replace if at fault. 6. Correct motor wiring connection (Page 54). 7. Test/replace if at fault. 8. Test all legs for power; replace if necessary. 9. Fix broken wires or disconnected/corroded connections. 10. Test/replace button/switch. 11. Test/repair/replace.
Machine stalls or is underpowered.	<ol style="list-style-type: none"> 1. Workpiece material not suitable for machine. 2. Feed rate/cutting speed too fast. 3. Machine undersized for task. 4. Workpiece crooked; fence loose or misadjusted. 5. Belt slipping/pulleys misaligned. 6. Run capacitor at fault. 7. Contactor not energized/at fault. 8. Motor at fault. 	<ol style="list-style-type: none"> 1. Only cut wood /ensure moisture is below 20%. 2. Decrease feed rate/cutting speed. 3. Use correct cutter/reduce feed rate or depth of cut. 4. Straighten or replace workpiece/adjust fence (Page 27). 5. Tension/replace belt; ensure pulleys aligned (Pages 45, 52). 6. Test/repair/replace. 7. Test all legs for power; repair/replace if at fault. 8. Test/repair/replace.
Machine has vibration or noisy operation	<ol style="list-style-type: none"> 1. Shaper cutter at fault. 2. Motor or component loose. 3. V-belt worn, loose, or pulleys misaligned. 4. Pulley loose. 5. Elevation housing loose or damaged. 6. Spindle loose, improperly installed, or damaged. 7. Motor fan rubbing on fan cover. 8. Spindle bearings at fault. 9. Motor bearings at fault. 	<ol style="list-style-type: none"> 1. Replace cutter. 2. Replace damaged or missing bolts/nuts or tighten if loose. 3. Inspect/replace belt with a new one; realign pulleys if necessary (Pages 45, 52). 4. Secure pulley on shaft (Page 52). 5. Tighten the elevation housing gibs; replace cracked elevation housing (Page 53). 6. Tighten loose spindle, reinstall spindle ensuring mating surfaces are clean, replace spindle if damaged. 7. Fix/replace fan cover, replace loose/damaged fan. 8. Replace spindle bearings (Page 44). 9. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.



Machine Operation

Symptom	Possible Cause	Possible Solution
Workpiece is burned when cut.	<ol style="list-style-type: none"> 1. Dull cutter. 2. Too slow of a feed rate. 3. Pitch build-up on cutter. 4. Cutter rotating in wrong direction/stock fed in wrong direction. 5. Taking too deep of cut. 	<ol style="list-style-type: none"> 1. Replace cutter, or have it professionally sharpened. 2. Increase feed speed (Page 25). 3. Clean cutter with blade and bit cleaning solution. 4. Reverse direction of cutter rotation/reverse feed direction (Page 25). 5. Make several passes of light cuts.
Fuzzy grain.	<ol style="list-style-type: none"> 1. Wood may have high moisture content or surface wetness. 2. Dull cutter. 	<ol style="list-style-type: none"> 1. Check moisture content and allow to dry if moisture is more than 20%. 2. Replace cutter, or have it professionally sharpened.
Chipping.	<ol style="list-style-type: none"> 1. Cutting against grain of wood. 2. Nicked or chipped cutter. 3. Feeding workpiece too fast. 4. Taking too deep of a cut. 5. Knots in wood. 	<ol style="list-style-type: none"> 1. Cut with grain of wood. 2. Replace cutter, or have it professionally sharpened. 3. Decrease feed rate. 4. Take a smaller depth of cut. (Always reduce cutting depth when working with hard woods.) 5. Inspect workpiece. Use a different workpiece if necessary.
Divots in edge of cut.	<ol style="list-style-type: none"> 1. Inconsistent feed speed. 2. Inconsistent pressure against fence and rub collar. 3. Fence not adjusted correctly. 	<ol style="list-style-type: none"> 1. Move smoothly or use a power feeder. 2. Apply constant pressure. 3. Adjust fence (Page 27).
Workpiece kicks back toward operator.	<ol style="list-style-type: none"> 1. Taking too deep of a cut. 2. Workpiece is warped, rough, has high moisture content, or large/loose knots. 3. Workpiece pinched between cutter and table or between cutter and guard. 	<ol style="list-style-type: none"> 1. Make several passes of light cuts. 2. Inspect workpiece; only use smooth, dry stock without large/loose knots. 3. Ensure proper clearance between cutter, guard, and table.
Workpiece pulls forward/ejects from operator's hands.	<ol style="list-style-type: none"> 1. Feeding workpiece in same direction of cutter rotation (climb cut). 	<ol style="list-style-type: none"> 1. Feed workpiece in opposite direction of cutterhead rotation.
Workpiece hits outfeed fence.	<ol style="list-style-type: none"> 1. Fence not adjusted correctly. 	<ol style="list-style-type: none"> 1. Adjust fence (Page 27). Align fence boards with straightedge, verify parallelism (Page 50).
Excessive snipe (gouge in end of board that is uneven with rest of cut).	<ol style="list-style-type: none"> 1. Fence not adjusted correctly. 2. Incorrect workpiece pressure. 	<ol style="list-style-type: none"> 1. Adjust outfeed/infeed fence parallelism to support workpiece as it passes cutterhead (full face removal) (Page 50). 2. Apply even pressure to workpiece throughout cut and use featherboards or power feeder.



Adjusting Table Inserts

The removable table inserts are held in place by a semi-permanent insert ring, which should be adjusted level with the table top. This is necessary to avoid the workpiece catching on the insert or ring during operation, causing an unsafe condition and poor cutting results.

Tools Needed	Qty
Flat Head Screwdriver #1	1
Hex Wrench 2mm.....	1
Precision Straightedge	1

To make insert and insert rings level with table top:

1. DISCONNECT MACHINE FROM POWER!
2. Remove two smaller table insert.
3. Lay straightedge across semi-permanent insert and table surface in pattern shown in **Figure 68**.

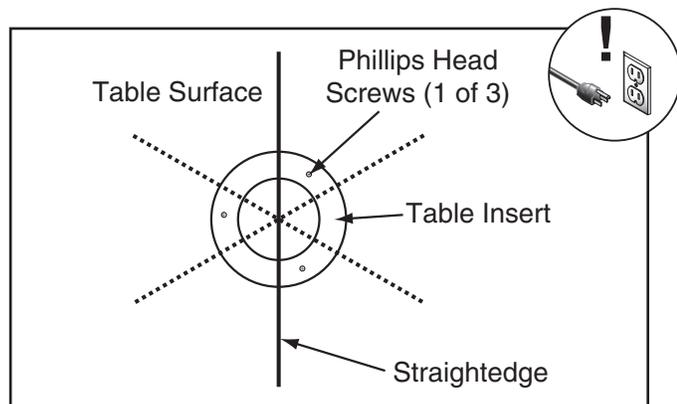


Figure 68. Straightedge pattern.

4. Adjust flat head screws (see **Figure 69**) so that ends of straightedge lay flat on table surface at all positions of pattern in **Figure 68**.



Figure 69. Example of table insert adjustment.

IMPORTANT: Table insert and surface must be aligned evenly to ensure workpiece does not catch on table insert or surface and kick back.

5. Replace smaller table inserts, one at a time, then use the straightedge to re-check the inserts. If necessary, adjust set screws in inserts to seat them level with table in all directions using the same technique as **Step 4**.



Zeroing Out Fence

The G0900 features forward and backward spindle rotation; either fence face can function as the infeed or outfeed fence. However, the scales indicating the fence face placement on the fence assembly need to be accurately calibrated to allow for accurate micro-adjusting. The factory made these adjustments during production, but you may need to adjust the settings if they have been altered.

Tools Needed	Qty
Hex Wrench 3mm.....	1
Socket or Wrench 10mm.....	1

To calibrate scales:

1. Unlock both fence lock handles and turn both microadjustment knobs fully counterclockwise (see **Figure 70**).
 - If fence scales both indicate 0", no calibration is required.
 - If fences display different measurements on scales, proceed to the following steps to calibrate.

2. Loosen gib adjustment set screws and hex nuts on fence or fences that do not display "0" (see **Figure 70**).

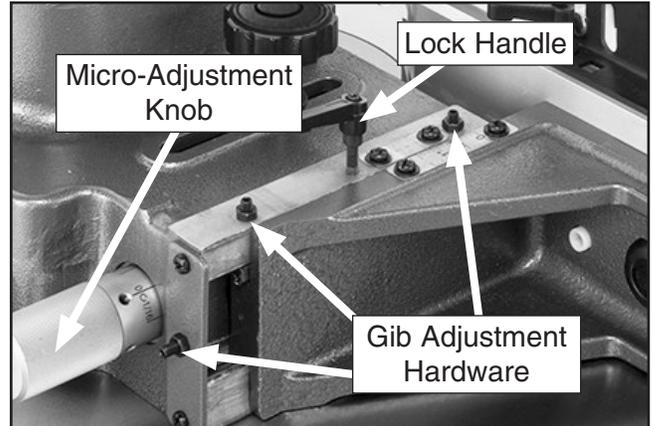


Figure 70. Gib adjustment settings location.

3. Use fence micro-adjustment knobs to adjust fences until 0" measurement is achieved on both sides.
4. Tighten gib adjustment hardware to secure setting.
5. Proceed to **Aligning Fence Faces** to ensure fence faces are parallel.



Aligning Fence Faces

For safe and accurate shaping, the fence boards must be parallel with one another so that they properly support the workpiece through the entire cutting operation.

Tools Needed	Qty
Hex Wrench 6mm.....	1
Precision Straightedge 24"	1

To make fence boards parallel:

1. DISCONNECT MACHINE FROM POWER!
2. Raise and lock guard so it's out of the way.
3. Set both fences to 0" by turning micro-adjustment knobs fully counterclockwise, lock them, then place straightedge against both fence faces, as shown in **Figure 71**.

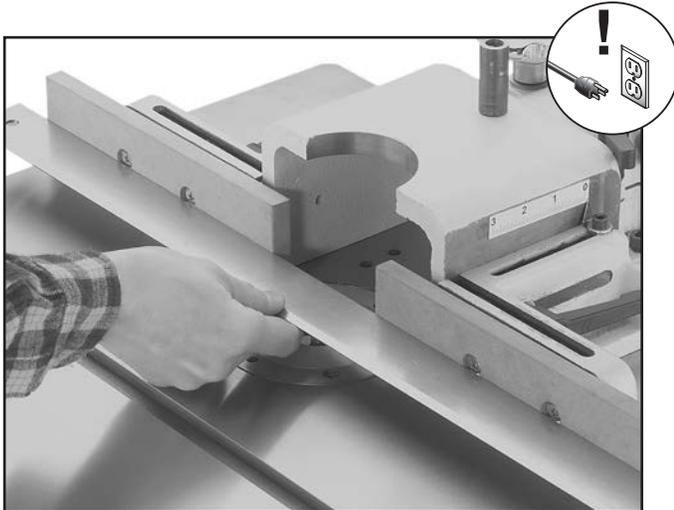


Figure 71. Example of aligning fence boards.

— If fence scales do not display 0" when knob is fully turned, refer to the **Zeroing Out Fence** section on **Page 49**.

4. Check to see if straightedge is flat against fence faces and that there are no gaps along its length.
 - If there are no gaps anywhere between the straightedge and the fence faces, fences are parallel.
 - If there is a gap between the straightedge and the fence boards, continue to the following step.
5. With straightedge against fence faces, adjust fence set screws in small increments until any gaps are bridged (see **Figure 72**).

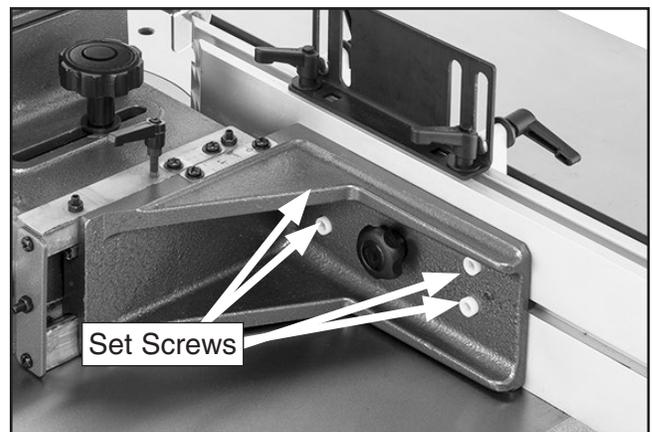


Figure 72. Fence face set screw locations.



Truing Wooden Fence

A flat and properly aligned fence creates a safer, smoother cutting operation. A damaged or worn fence should be replaced. If choosing to replace or use wooden boards as fence faces, follow the instructions below to ensure each is properly flattened and aligned correctly.

To align wooden fences:

1. Ensure bolts through wood fence facing on each side are tight and adequately countersunk.
2. To align fence faces, follow **Steps 1–5 of Aligning Fence Faces** on **Page 50**.
3. If fences are not coplanar with each other, remove both fences and resurface as one unit. You can perform this operation on a jointer as shown in **Figure 73**.

NOTICE

Make sure screws are countersunk deep enough so workpiece will not come in contact with heads of screws! Check screw depth after each pass to ensure that screws will not contact knives!

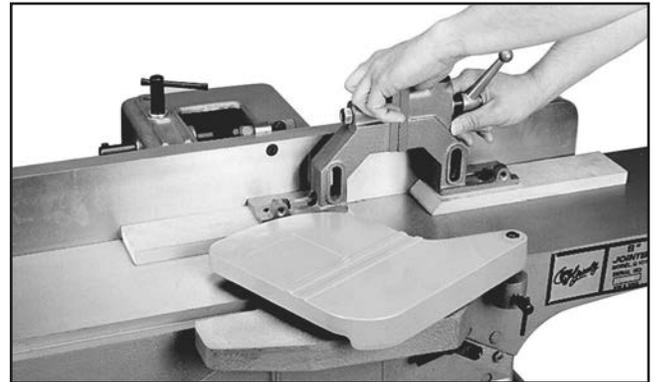


Figure 73. Example of resurfacing fences on a jointer.



Aligning Pulleys

Pulley alignment is important to the performance of your shaper. If the pulleys are just slightly out of alignment, the shaper may suffer from power loss and decreased V-belt life. When the pulleys are parallel and aligned with each other, they are said to be coplanar—in the same plane.

Checking Pulley Coplanarity

Tools Needed	Qty
Precision Straightedge	1

To check alignment of pulleys:

1. DISCONNECT MACHINE FROM POWER!
2. Open cabinet access door.
3. Hold straightedge up to pulleys to determine if they are both aligned and parallel, as shown in **Figure 74**.

— If pulleys are not parallel or aligned with each other, perform appropriate steps in following procedures.



Figure 74. Example of straightedge used to check pulley alignment.

Aligning Pulleys

Tools Needed	Qty
Precision Straightedge	1
Precision Level	1
Open-End Wrench or Socket 16mm	1

To align pulleys:

1. DISCONNECT MACHINE FROM POWER!

2. Remove motor access panel, then loosen the four motor mounting hex bolts, as shown in **Figure 75**. It may be easier to access back bolts from cabinet access door.

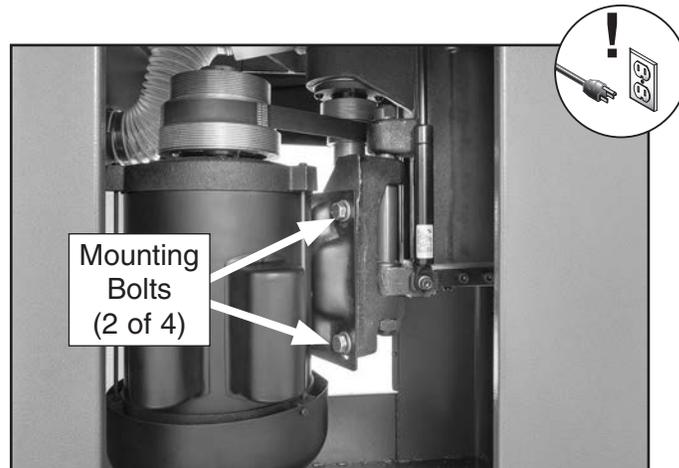


Figure 75. Motor mounting bolts location.

3. Using straightedge as a guide, adjust height of motor until pulleys are aligned, then re-tighten hex bolts.

Note: When adjusting spindle alignment, take not only spindle height into account, but also consider motor and motor pulley angle in relation to spindle (see **Figure 76**).

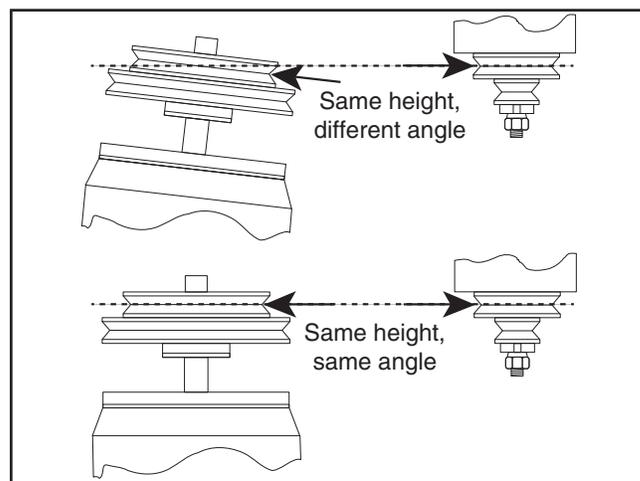


Figure 76. Spindle alignment height and angle.

4. Use level to check pulley angles, and adjust hex bolts until parallel.
5. Replace motor access panel and ensure V-belt is properly seated for desired speed (see **Speed Changes** on **Page 25**) before reconnecting machine to power.



Adjusting Spindle Gib

The gib controls the smoothness of the slide movement, as well as the run-out or end play of the spindle. Tightening the gib too much will make it hard to adjust the height of the spindle and cause excessive wear on the slide. Loosening the gib too much will introduce spindle end play and cause poor cutting results and excessive wear on the spindle bearings.

Checking Gib Adjustment

1. DISCONNECT MACHINE FROM POWER!
2. Use spindle height handwheel to raise spindle to its highest position.
— If it is difficult to turn handwheel or you feel resistance from spindle slide, gib may need to be loosened.
3. Attempt to wiggle top of spindle. If there is movement, gib may need to be tightened.

Adjusting Gib

Tools Needed	Qty
Open-End Wrench 30mm	1
Hex Wrench 10mm.....	1

To adjust gib:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen jam nuts on gib adjustment set screws (see **Figure 77**).

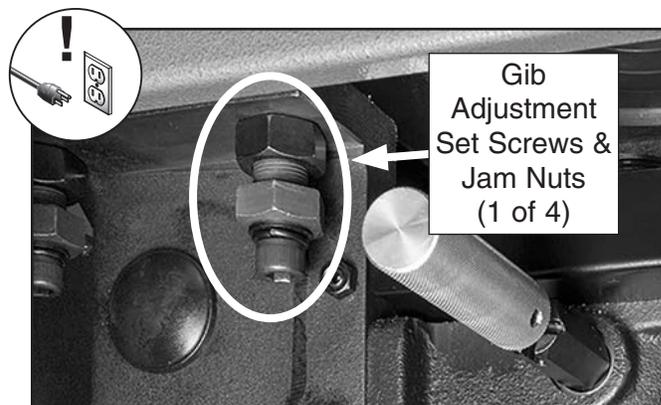


Figure 77. Location of gib set screws and jam nuts.

3. Evenly adjust set screws small amounts, then test results.
4. When you are satisfied with gib adjustment, re-tighten jam nuts without turning set screws.
5. Re-check gib adjustment. If necessary, repeat **Steps 2–4**.



SECTION 9: WIRING

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

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

WARNING

Wiring Safety Instructions

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

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

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

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

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

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

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

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

NOTICE

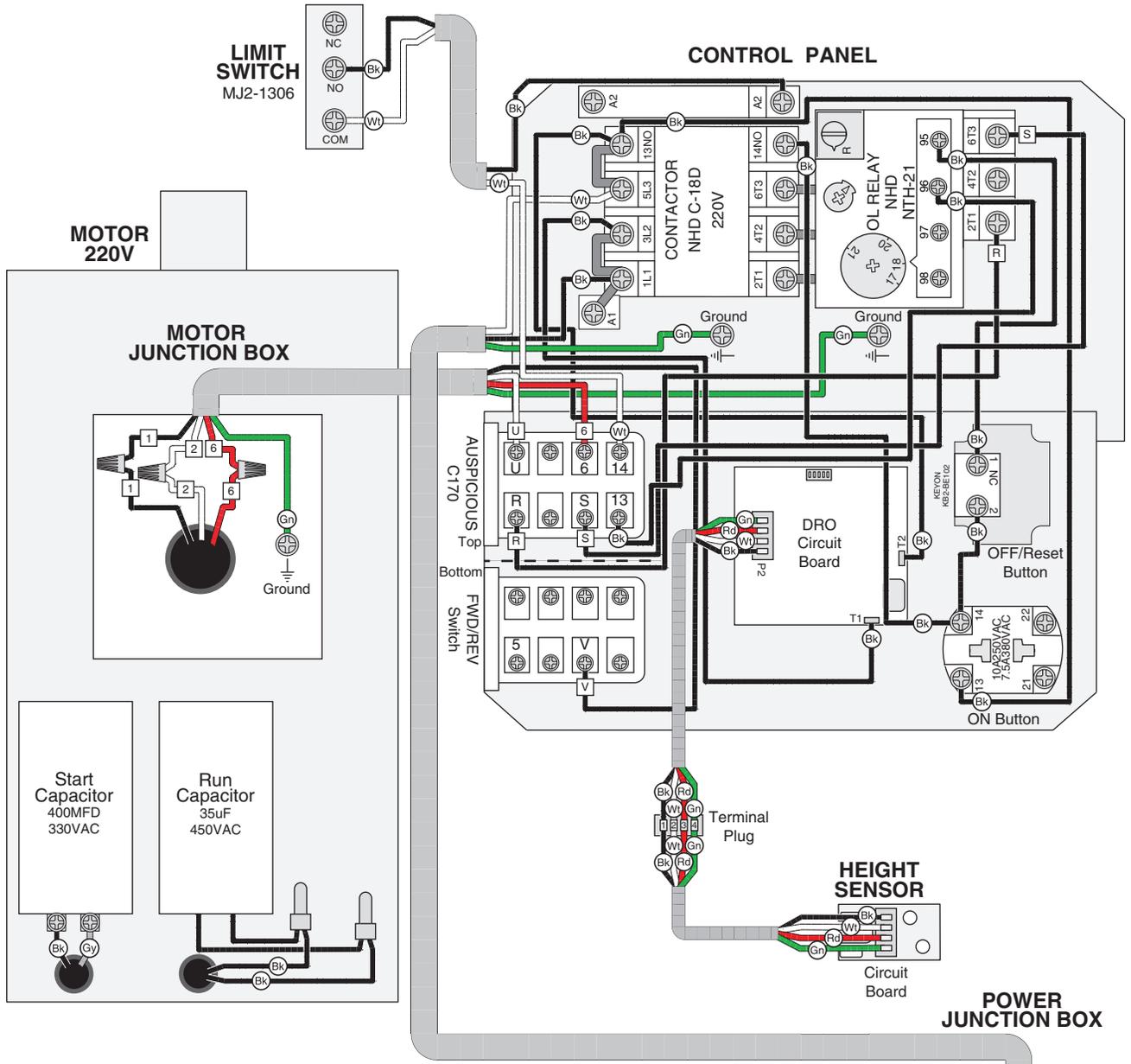
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.grizzly.com.

COLOR KEY

BLACK 	BLUE 	YELLOW 	LIGHT BLUE 
WHITE 	BROWN 	YELLOW GREEN 	BLUE WHITE 
GREEN 	GRAY 	PURPLE 	TURQUOISE 
RED 	ORANGE 	PINK 	



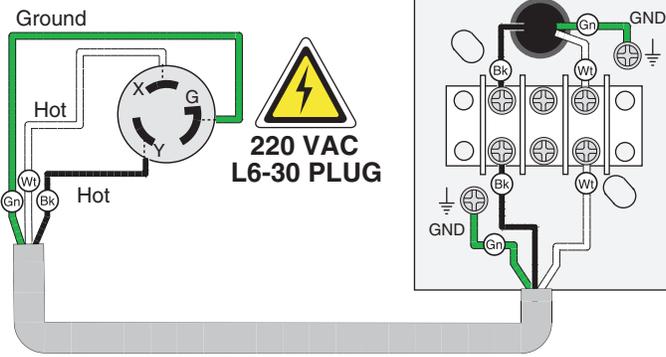
Wiring Diagram





⚠️ WARNING!
SHOCK HAZARD!
 Disconnect power before working on wiring.





Electrical Components

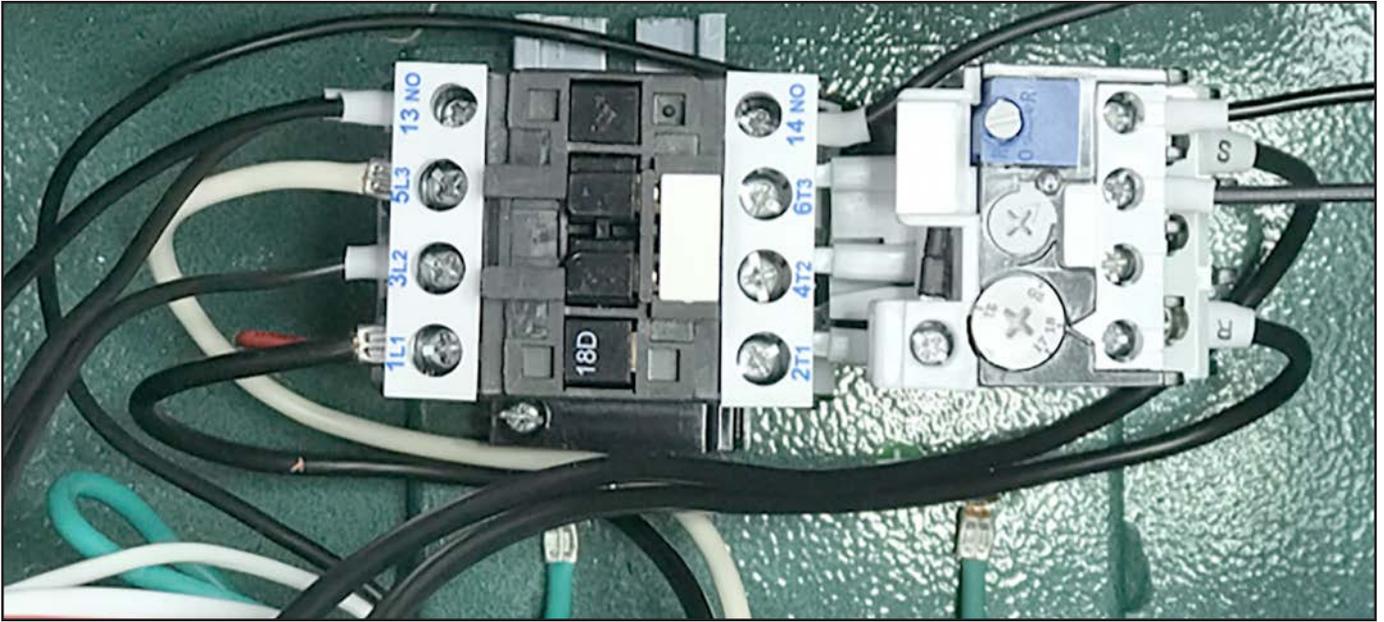


Figure 78. Contactor and overload relay.



Figure 79. Power junction box.



Figure 81. Motor junction box.

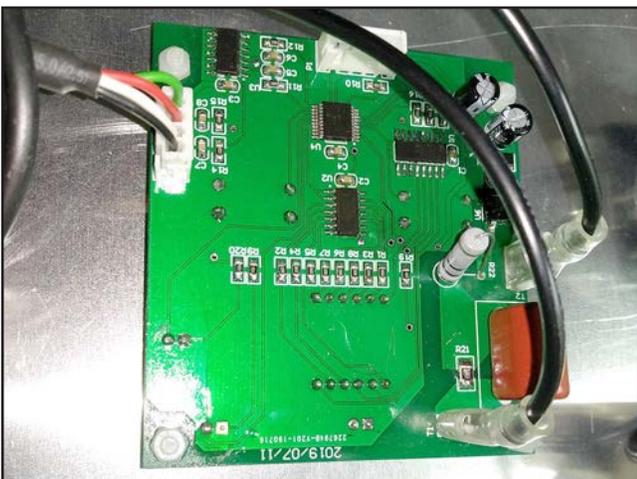


Figure 80. DRO circuit board.



Figure 82. Height sensor circuit board.



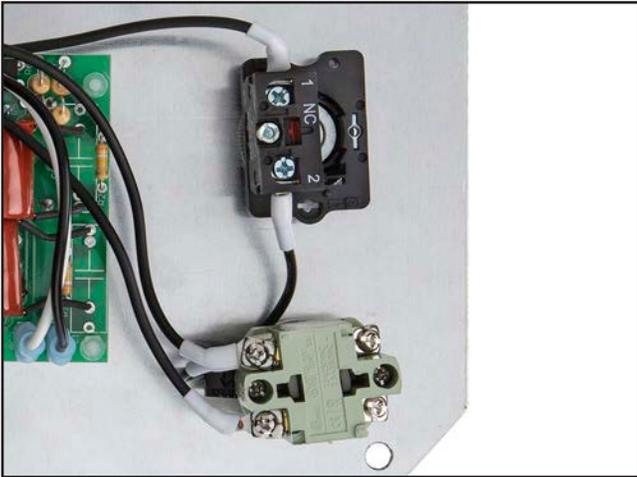


Figure 83. ON/OFF buttons.

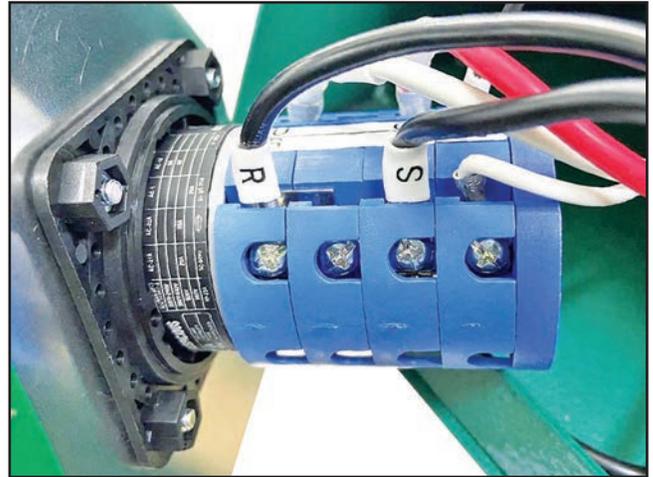


Figure 86. Spindle rotation switch.



Figure 84. Start capacitor.



Figure 87. Limit switch.



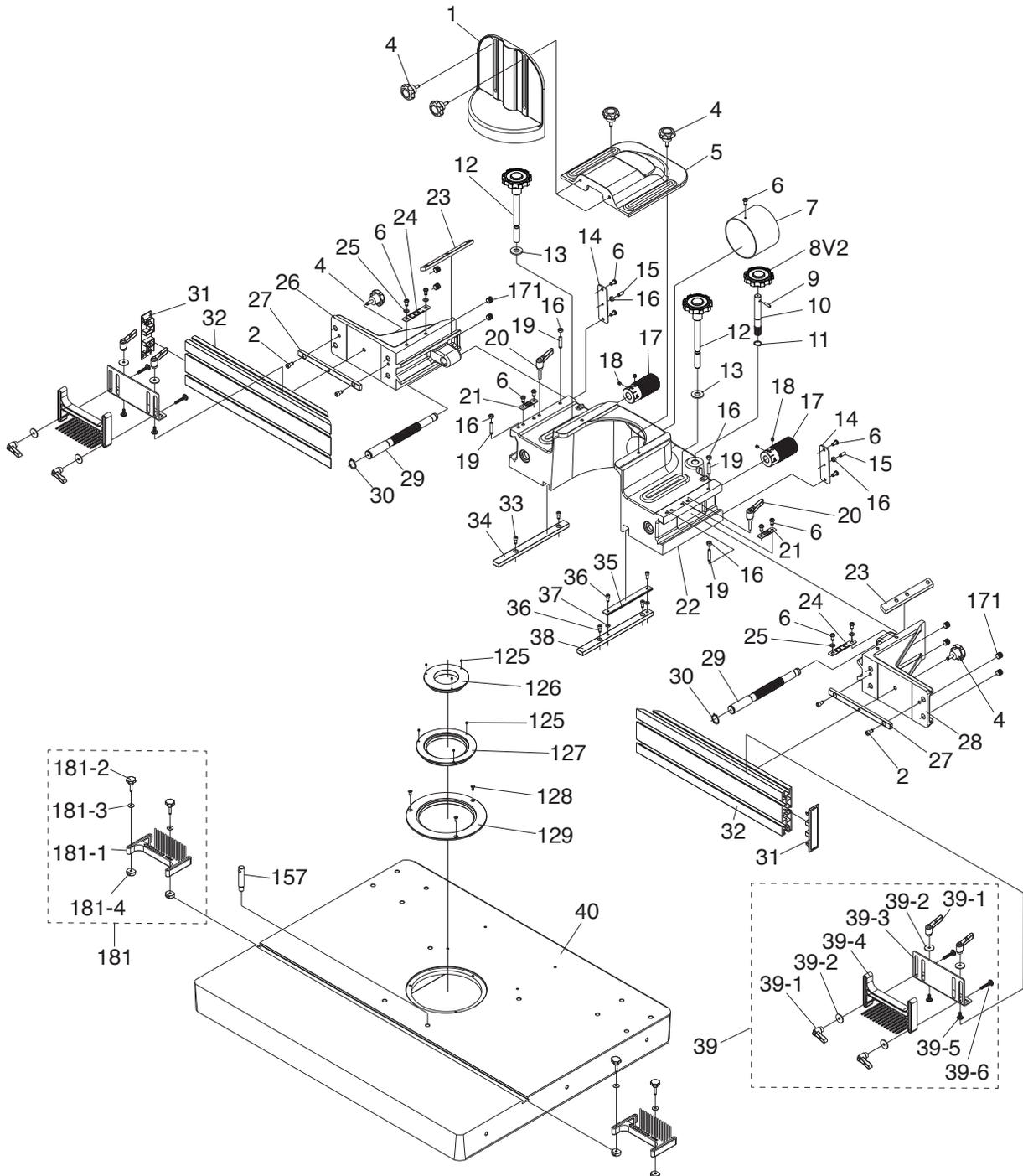
Figure 85. Run capacitor.



SECTION 10: PARTS

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

Guard, Fence & Table



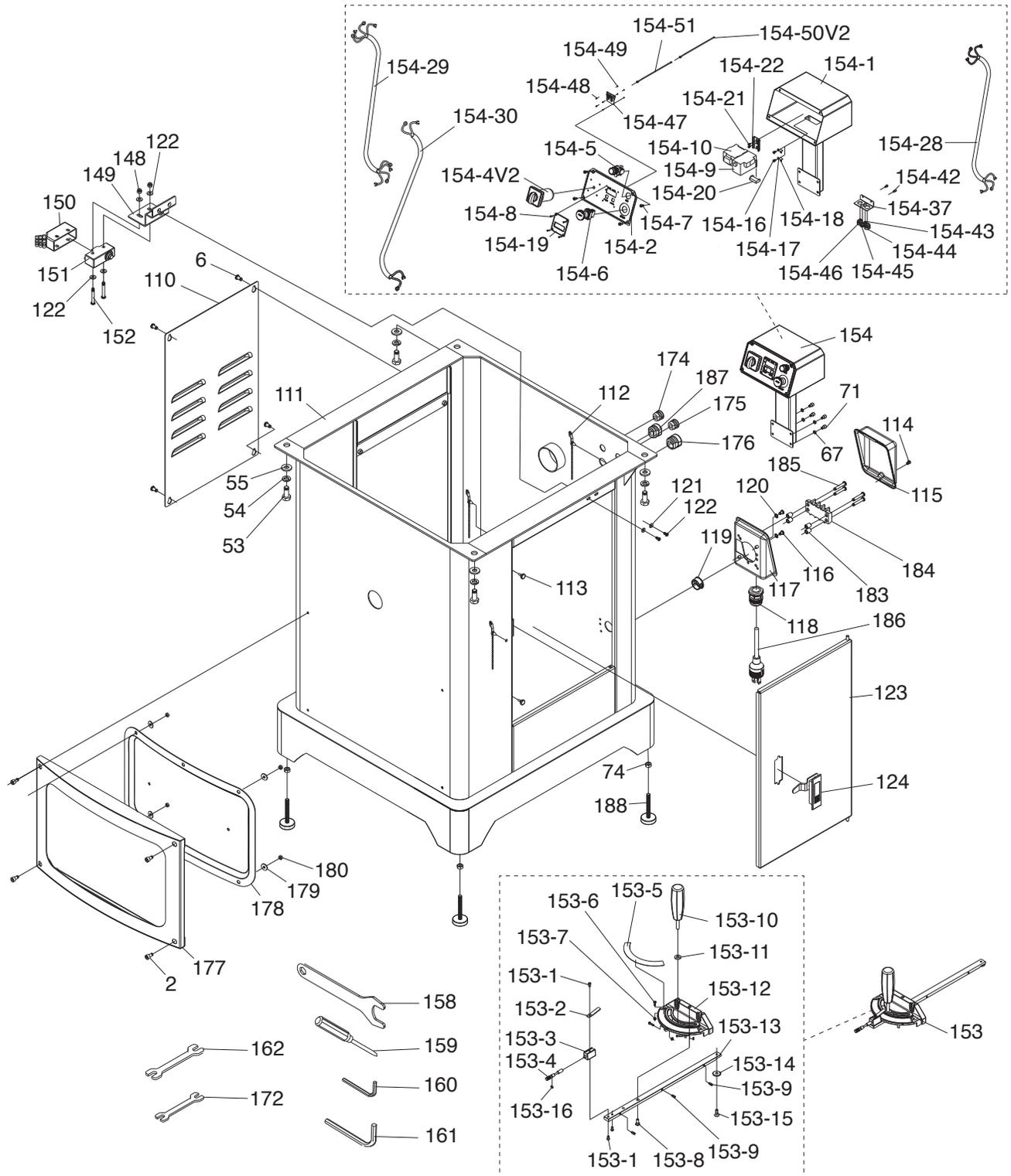
Guard, Fence & Table Parts List

REF	PART #	DESCRIPTION
1	P0900001	FRONT CUTTER GUARD
2	P0900002	CAP SCREW M6-1 X 12
3	P0900003	LOCK WASHER 6MM
4	P0900004	KNOB BOLT M6-1 X 20, 6-LOBE, D40
5	P0900005	TOP CUTTER GUARD
6	P0900006	PHLP HD SCR M6-1 X 12
7	P0900007	SPINDLE DUST PORT 4"
8V2	P0900008V2	KNOB M12-1.75, 9-LOBE, D63 V2.11.23
9	P0900009	ROLL PIN 4 X 18
10	P0900010	SHAFT
11	P0900011	EXT RETAINING RING 15MM
12	P0900012	KNOB BOLT M12-1.75 X 42, 9-LOBE, D80
13	P0900013	FLAT WASHER 12MM
14	P0900014	FENCE BRACKET STOP PLATE
15	P0900015	SET SCREW M6-1 X 20
16	P0900016	HEX NUT M6-1
17	P0900017	KNOB 3/4-16, 1-5/8D, ROUND KD
18	P0900018	SET SCREW M6-1 X 8
19	P0900019	SET SCREW M6-1 X 30
20	P0900020	ADJUSTABLE HANDLE M6-1 X 32, 50L
21	P0900021	SCALE INDICATOR
22	P0900022	FENCE SUPPORT
23	P0900023	GIB
24	P0900024	FENCE SCALE
25	P0900025	FLAT WASHER 6MM
26	P0900026	FENCE BRACKET (L)
27	P0900027	SLIDING BLOCK
28	P0900028	FENCE BRACKET (R)
29	P0900029	FENCE ADJUSTMENT SHAFT

REF	PART #	DESCRIPTION
30	P0900030	EXT RETAINING RING 20MM
31	P0900031	FENCE SIDE COVER
32	P0900032	FENCE
33	P0900033	CAP SCREW M5-.8 X 16
34	P0900034	FENCE BASE SLIDE BLOCK
35	P0900035	RACK
36	P0900036	CAP SCREW M5-.8 X 12
37	P0900037	FLAT WASHER 5MM
38	P0900038	FENCE BASE RACK SLIDE BLOCK
39	P0900039	FENCE FEATHERBOARD ASSEMBLY
39-1	P0900039-1	ADJUSTABLE HANDLE M5-.8, 44L
39-2	P0900039-2	FENDER WASHER 5MM
39-3	P0900039-3	FEATHERBOARD MOUNTING BRACKET
39-4	P0900039-4	FEATHERBOARD
39-5	P0900039-5	CARRIAGE BOLT M5-.8 X 16
39-6	P0900039-6	CARRIAGE BOLT M5-.8 X 30
40	P0900040	TABLE
125	P0900125	SET SCREW M4-.7 X 4
126	P0900126	TABLE INSERT RING 2-1/2" ID
127	P0900127	TABLE INSERT RING 4-1/8" ID
128	P0900128	FLAT HD SCR M5-.8 X 12
129	P0900129	TABLE INSERT RING 5-3/4" ID
157	P0900157	STARTING PIN
171	P0900171	SET SCREW M12-1.75 X 12 PLASTIC
181	P0900181	TABLE FEATHERBOARD ASSEMBLY
181-1	P0900181-1	FEATHERBOARD
181-2	P0900181-2	KNOB BOLT M5-.8 X 25
181-3	P0900181-3	FLAT WASHER 5MM
181-4	P0900181-4	SLIDING BLOCK



Cabinet, Controls & Tools



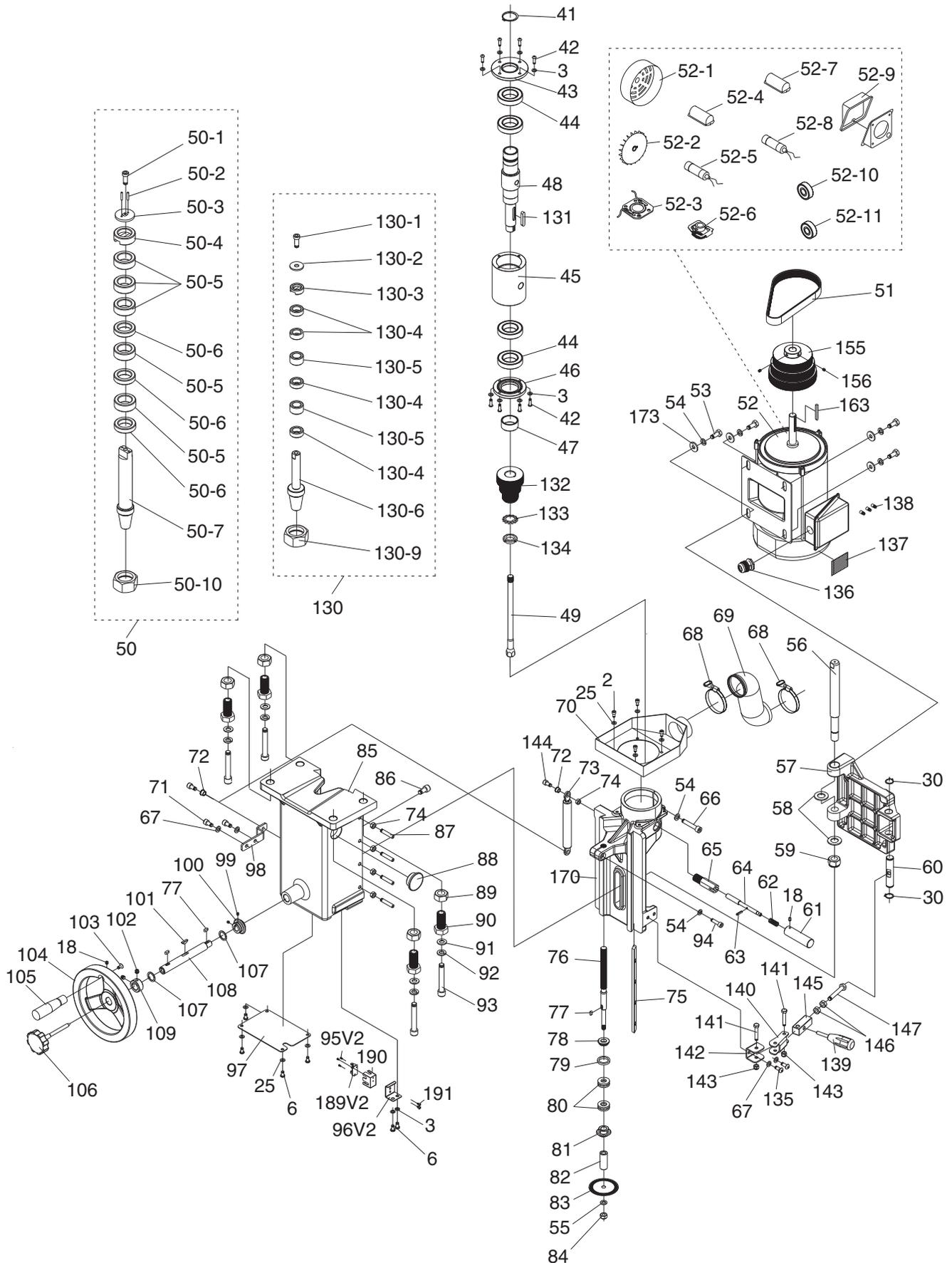
Cabinet, Controls & Tools Parts List

REF	PART #	DESCRIPTION
2	P0900002	CAP SCREW M6-1 X 12
6	P0900006	PHLP HD SCR M6-1 X 12
53	P0900053	HEX BOLT M10-1.5 X 25
54	P0900054	LOCK WASHER 10MM
55	P0900055	FENDER WASHER 10MM
67	P0900067	LOCK WASHER 8MM
71	P0900071	CAP SCREW M8-1.25 X 16
74	P0900074	HEX NUT M8-1.25
110	P0900110	SIDE COVER
111	P0900111	CABINET
112	P0900112	CABLE CHAIN
113	P0900113	DOOR STOP
114	P0900114	PHLP HD SCR 3/16-24 X 1/4
115	P0900115	JUNCTION BOX
116	P0900116	PHLP HD SCR M5-.8 X 10
117	P0900117	JUNCTION BOX BASE
118	P0900118	STRAIN RELIEF TYPE-3 PG16
119	P0900119	STRAIN RELIEF TYPE-1 1
120	P0900120	EXT TOOTH WASHER 5MM
121	P0900121	PHLP HD SCR M4-.7 X 8
122	P0900122	FLAT WASHER 4MM
123	P0900123	CABINET DOOR
124	P0900124	LATCH
148	P0900148	LOCK NUT M4-.7
149	P0900149	LIMIT SWITCH MOUNTING BRACKET
150	P0900150	LIMIT SWITCH COVER
151	P0900151	LIMIT SWITCH MOUJEN MJ2-1306
152	P0900152	PHLP HD SCR M4-.7 X 35
153	P0900153	MITER GAUGE ASSEMBLY
153-1	P0900153-1	PHLP HD SCR 3/16-24 X 3/8
153-2	P0900153-2	POINTER
153-3	P0900153-3	POINTER MOUNTING BLOCK
153-4	P0900153-4	POINTER SHAFT
153-5	P0900153-5	SCALE
153-6	P0900153-6	PHLP HD SCR 5/32-32 X 5/8
153-7	P0900153-7	HEX NUT 5/32-32
153-8	P0900153-8	SHOULDER SCR 1/4-20 X 7/16, 5/16 X 3/16
153-9	P0900153-9	SET SCREW M5-.8 X 12
153-10	P0900153-10	FIXED HANDLE 38 X 110, M10-1.5 X 38
153-11	P0900153-11	FLAT WASHER 8MM
153-12	P0900153-12	MITER GAUGE BODY
153-13	P0900153-13	MITER BAR
153-14	P0900153-14	T-SLOT WASHER 7.8 X 22.5 X 3MM
153-15	P0900153-15	FLAT HD SCR M6-1 X 8
153-16	P0900153-16	O-RING 4.8 X 1.9 P5
154	P0900154	CONTROL PANEL ASSEMBLY
154-1	P0900154-1	CONTROL BOX

REF	PART #	DESCRIPTION
154-2	P0900154-2	CONTROL PLATE
154-4V2	P0900154-4V2	FORWARD/REVERSE SWITCH AUS C170 V2.04.23
154-5	P0900154-5	ON BUTTON YK A600 25MM GRN
154-6	P0900154-6	E-STOP BUTTON KEYON KB2-ESS42+KB2 BE102
154-7	P0900154-7	PHLP HD SCR M6-1 X 12
154-8	P0900154-8	PHLP HD SCR M3-.5 X 12
154-9	P0900154-9	OVERLOAD RELAY NTH-21 17-21A
154-10	P0900154-10	CONTACTOR SHERN DIAN C-18D10 (220V)
154-16	P0900154-16	PHLP HD SCR M5-.8 X 8
154-17	P0900154-17	EXT TOOTH WASHER 5MM
154-18	P0900154-18	GROUND LABEL
154-19	P0900154-19	DRO COVER
154-20	P0900154-20	PLATE ATBS, PF-B GIKOKA
154-21	P0900154-21	PHLP HD SCR M4-.7 X 6
154-22	P0900154-22	RAIL TS-35 X 55MM
154-28	P0900154-28	CONTROL PANEL CORD 12G 3W 78.5"
154-29	P0900154-29	MOTOR CORD 12G 4W 67"
154-30	P0900154-30	LIMIT SWITCH CORD 18G 2W 55"
154-37	P0900154-37	FIX PLATE
154-42	P0900154-42	CAP SCREW M5-.8 X 8
154-43	P0900154-43	STRAIN RELIEF TYPE-1 1/2
154-44	P0900154-44	STRAIN RELIEF TYPE-1 7/8
154-45	P0900154-45	STRAIN RELIEF TYPE-1 5/8
154-46	P0900154-46	STRAIN RELIEF TYPE-1 3/4
154-47	P0900154-47	SENSOR BOARD
154-48	P0900154-48	STANDOFF-HEX MF M3-.5 X 8, M3-.5 PLASTIC
154-49	P0900154-49	HEX NUT M3-.5 PLASTIC
154-50	P0900154-50	SENSOR CORD 22G 5W 75" V1
158	P0900158	SPINDLE WRENCH 50MM
159	P0900159	COMBO SCREWDRIIVER #1 X 1/4"
160	P0900160	HEX WRENCH 3MM
161	P0900161	HEX WRENCH 6MM
162	P0900162	WRENCH 22 X 24MM OPEN-ENDS
172	P0900172	WRENCH 14 X 17MM OPEN-ENDS
174	P0900174	STRAIN RELIEF TYPE-1 1/2
175	P0900175	STRAIN RELIEF TYPE-1 5/8
176	P0900176	STRAIN RELIEF TYPE-1 7/8
177	P0900177	FRONT COVER
178	P0900178	PLATE
179	P0900179	FLAT WASHER 5MM
180	P0900180	HEX NUT M5-.8
183	P0900183	SPACER 5.5ID X 9OD X 11L
184	P0900184	TERMINAL BAR 5P M5 X 30 X 14.2 TM4
185	P0900185	PHLP HD SCR M5-.8 X 30
186	P0900186	POWER CORD 12G 3W 138" L6-30P
187	P0900187	STRAIN RELIEF TYPE-1 3/4
188	P0900188	FOOT M8-1.25 X 130



Motor, Handwheel & Spindles

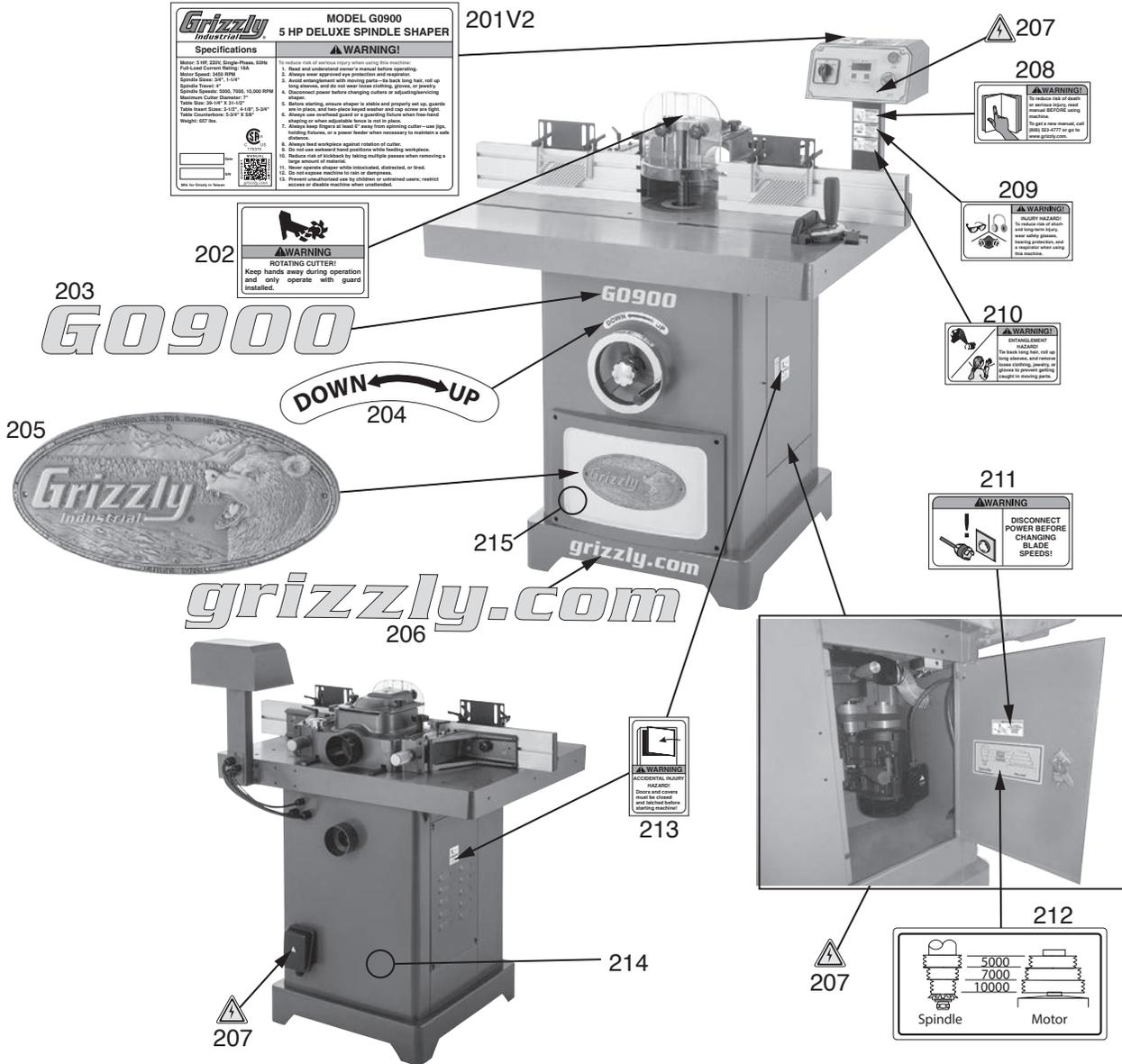


Motor, Handwheel & Spindles Parts List

REF	PART #	DESCRIPTION	REF	PART #	DESCRIPTION
2	P0900002	CAP SCREW M6-1 X 12	80	P0900080	THRUST BEARING 51202
3	P0900003	LOCK WASHER 6MM	81	P0900081	BEVEL GEAR
6	P0900006	PHLP HD SCR M6-1 X 12	82	P0900082	BUSHING
18	P0900018	SET SCREW M6-1 X 8	83	P0900083	SENSOR PLATE
25	P0900025	FLAT WASHER 6MM	84	P0900084	LOCK NUT M10-1.25
30	P0900030	EXT RETAINING RING 20MM	85	P0900085	SUPPORT
41	P0900041	EXT RETAINING RING 40MM	86	P0900086	CAP SCREW M10-1.5 X 20
42	P0900042	BUTTON HD CAP SCR M6-1 X 20	87	P0900087	SET SCREW M8-1.25 X 35
43	P0900043	UPPER BEARING HOUSING	88	P0900088	CAP
44	P0900044	BALL BEARING 6008-2RS	89	P0900089	HEX NUT M20-1.5
45	P0900045	QUILL	90	P0900090	ADJUSTMENT BOLT M20-1.5
46	P0900046	LOWER BEARING HOUSING	91	P0900091	FLAT WASHER 12MM
47	P0900047	BUSHING	92	P0900092	LOCK WASHER 12MM
48	P0900048	SPINDLE BASE	93	P0900093	CAP SCREW M12-1.75 X 80
49	P0900049	DRAWBAR 5/8-11 X 10-5/16	94	P0900094	CAP SCREW M10-1.5 X 40
50	P0900050	SPINDLE ASSEMBLY 1-1/4"	95V2	P0900095V2	PHLP HD SCR M2-.6 X 6 V2.03.20
50-1	P0900050-1	CAP SCREW M10-1.5 X 30	96V2	P0900096V2	BRACKET V2.03.20
50-2	P0900050-2	ROLL PIN 4 X 20	97	P0900097	PLATE
50-3	P0900050-3	SPINDLE WASHER 10.5 X 45 X 5	98	P0900098	BRACKET
50-4	P0900050-4	SPINDLE LOCK COLLAR	99	P0900099	SET SCREW M5-.8 X 5
50-5	P0900050-5	SPACER 1-1/4"ID X 2"OD X 3/4"L	100	P0900100	BEVEL GEAR
50-6	P0900050-6	SPACER 1-1/4"ID X 2"OD X 1/2"L	101	P0900101	WOODRUFF KEY 5 X 20
50-7	P0900050-7	SPINDLE 1-1/4"	102	P0900102	SET SCREW 5/16-18 X 5/16
50-10	P0900050-10	HEX NUT M36-4	103	P0900103	FLAT HD CAP SCR M6-1 X 12
51	P0900051	POLY V-BELT 9V X 25L	104	P0900104	HANDWHEEL TYPE-24 200D X 20B-N X M10-1.5
52	P0900052	MOTOR 5HP, 220V, 1-PH	105	P0900105	FOLDING HANDLE 30 X 90, M6-1 X 12
52-1	P0900052-1	MOTOR FAN COVER	106	P0900106	KNOB BOLT M10-1.5 X 25, 8-LOBE, D60
52-2	P0900052-2	MOTOR FAN	107	P0900107	FLAT WASHER 19MM
52-3	P0900052-3	CONTACT PLATE 25MM X 37.5MM INT	108	P0900108	SHAFT
52-4	P0900052-4	S CAPACITOR COVER	109	P0900109	COLLAR
52-5	P0900052-5	S CAPACITOR 400M 330V 2 X 4	130	P0900130	SPINDLE ASSEMBLY 3/4"
52-6	P0900052-6	CENTRIFUGAL SWITCH 3/4 3600	130-1	P0900130-1	CAP SCREW M10-1.5 X 30
52-7	P0900052-7	R CAPACITOR COVER	130-2	P0900130-2	SPACER 2/5"ID X 1-1/10"OD X 1/5"
52-8	P0900052-8	R CAPACITOR 35M 450V 2 X 3-1/2	130-3	P0900130-3	SPINDLE LOCK COLLAR
52-9	P0900052-9	MOTOR JUNCTION BOX	130-4	P0900130-4	SPACER 3/4"ID X 1-1/4"OD X 1/2"
52-10	P0900052-10	BALL BEARING 6206-2RS	130-5	P0900130-5	SPACER 3/4"ID X 1-1/4"OD X 3/4"
52-11	P0900052-11	BALL BEARING 6204-2RS	130-6	P0900130-6	SPINDLE 3/4"
53	P0900053	HEX BOLT M10-1.5 X 25	130-9	P0900130-9	HEX NUT M36-4
54	P0900054	LOCK WASHER 10MM	131	P0900131	KEY 8 X 7 X 43 RE
55	P0900055	FLAT WASHER 10MM	132	P0900132	SPINDLE PULLEY
56	P0900056	SHAFT	133	P0900133	EXT TOOTH WASHER 25MM
57	P0900057	MOTOR BRACKET	134	P0900134	LOCK NUT M25-1.5
58	P0900058	FLAT WASHER 21MM	135	P0900135	BUTTON HD CAP SCR M8-1.25 X 20
59	P0900059	LOCK NUT M20-1.5	136	P0900136	STRAIN RELIEF TYPE-3 PG16
60	P0900060	SHAFT	137	P0900137	MOTOR LABEL
61	P0900061	FIXED HANDLE 25 X 90	138	P0900138	WIRE NUT
62	P0900062	COMPRESSION SPRING 1 X 12 X 38	139	P0900139	FIXED HANDLE 38 X 110, M10-1.5 X 15
63	P0900063	ROLL PIN 4 X 20	140	P0900140	BRACKET
64	P0900064	SPINDLE LOCK SHAFT	141	P0900141	HEX BOLT M8-1.25 X 45
65	P0900065	SPINDLE LOCK SHAFT SEAT	142	P0900142	BRACKET
66	P0900066	CAP SCREW M10-1.5 X 55	143	P0900143	LOCK NUT M8-1.25
67	P0900067	LOCK WASHER 8MM	144	P0900144	CAP SCREW M8-1.25 X 30
68	P0900068	HOSE CLAMP 4"	145	P0900145	SHAFT
69	P0900069	DUST CHUTE 4"	146	P0900146	HEX NUT M10-1.5
70	P0900070	DUST TRAY	147	P0900147	HEX BOLT M10-1.5 X 55
71	P0900071	CAP SCREW M8-1.25 X 16	155	P0900155	MOTOR PULLEY
72	P0900072	BUSHING	156	P0900156	SET SCREW M6-1 X 8
73	P0900073	GAS STRUT	163	P0900163	KEY 5 X 5 X 50 1RE
74	P0900074	HEX NUT M8-1.25	170	P0900170	SPINDLE HOUSING
75	P0900075	GIB	173	P0900173	FLAT WASHER 10MM
76	P0900076	ELEVATION LEADSCREW	189V2	P0900189V2	MAGNETIC HEAD V2.03.20
77	P0900077	KEY 5 X 5 X 12 RE	190	P0900190	SENSOR BOX
78	P0900078	BUSHING	191	P0900191	PHLP HD SCR M3-1 X 8
79	P0900079	GASKET			



Labels & Cosmetics



Grizzly Industrial		MODEL G0900
5 HP DELUXE SPINDLE SHAPER		201V2
Specifications		
Motor: 5 HP, 208V, Single-Phase, 60Hz	Full Load Current Rating: 16A	
Motor Speed: 1725 RPM	Spindle Speed: 247, 1,134	
Spindle Travel: 4"	Spindle Taper: 1/2"	
Spindle Sprocket: 200, 700, 10,000 RPM	Maximum Cutter Diameter: 2"	
Table Size: 18" x 21 1/2"	Table T-slot: 1/2" x 1 1/2"	
Table Cast Iron: 5-1/2" x 6-1/2" x 5-3/4"	Table Cast Iron: 5-2" x 5-2"	
Weight: 657 lbs.		

REF	PART #	DESCRIPTION
201V2	P0900201V2	MACHINE ID LABEL V2.11.23
202	P0900202	CUTTER HAZARD LABEL
203	P0900203	MODEL NUMBER LABEL
204	P0900204	SPINDLE ELEVATION HEIGHT LABEL
205	P0900205	GRIZZLY NAMEPLATE-LARGE
206	P0900206	GRIZZLY.COM LABEL
207	P0900207	ELECTRICITY LABEL
208	P0900208	READ MANUAL LABEL

REF	PART #	DESCRIPTION
209	P0900209	EYE/EAR/LUNG INJURY HAZARD LABEL
210	P0900210	ENTANGLEMENT HAZARD LABEL
211	P0900211	DISCONNECT POWER 220V
212	P0900212	SPINDLE SPEEDS LABEL
213	P0900213	CLOSE DOOR LABEL
214	P0900214	TOUCH-UP PAINT, GRIZZLY GREEN
215	P0900215	TOUCH-UP PAINT, GRIZZLY BEIGE

⚠ WARNING

Safety labels help reduce the risk of serious injury caused by machine hazards. If any label comes off or becomes unreadable, the owner of this machine **MUST** replace it in the original location before resuming operations. For replacements, contact (800) 523-4777 or www.grizzly.com.

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




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.

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.

In the event you need to use 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.

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.

To take advantage of this warranty, you must register it at <https://www.grizzly.com/forms/warranty>, or you can scan the QR code below to be automatically directed to our warranty registration page. Enter all applicable information for the product.



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