READ THIS FIRST



Model G5913Z/G7215Z ***IMPORTANT UPDATE***

For Machines Mfd. Since 08/24 and Owner's Manual Revised 03/07

For questions or help with this product contact Tech Support at (570) 546-9663 or techsupport@grizzly.com

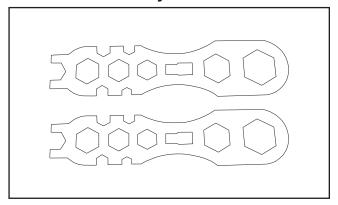
The following change was recently made since the owner's manual was printed:

Inventory change.

Aside from this information, all other content in the owner's manual applies and MUST be read and understood for your own safety. **IMPORTANT: Keep this update with the owner's manual for future reference.**

For questions or help, contact our Tech Support at (570) 546-9663 or techsupport@grizzly.com.

Revised Inventory



Mo	del G5913Z/G7215Z Inventory	G	lty
•	Multi-Wrenches 10, 12, 13, 14, 19, 21, 2	23,	26,
	20 28mm		2

READ THIS FIRST



Model G5913Z/G7215Z ***IMPORTANT UPDATE***

For Machines Mfd. Since 03/06 and Owner's Manual Revised 03/07

For questions or help with this product contact Tech Support at (570) 546-9663 or techsupport@grizzly.com

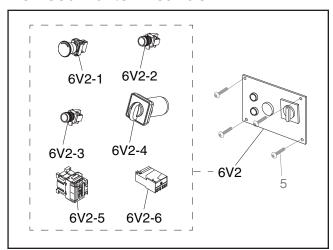
The following change was made since the owner's manual was printed:

Switch assembly changed.

Aside from this information, all other content in the owner's manual applies and MUST be read and understood for your own safety. **IMPORTANT: Keep this update with the owner's manual for future reference.**

For questions or help, contact our Tech Support at (570) 546-9663 or techsupport@grizzly.com.

Revised Parts Breakdown



REF	PART #	DESCRIPTION
6V2	P5913Z006V2	SWITCH ASSY 5 HP V2.03.06
6V2-1	P5913Z006V2-1	E-STOP BUTTON
6V2-2	P5913Z006V2-2	ROUND GREEN ON SWITCH
6V2-3	P5913Z006V2-3	ROUND RED OFF SWITCH
6V2-4	P5913Z006V2-4	F/O/R SWITCH KEDU ZH-HC-31-BY (G5913Z)
6V2-4	P7215Z006V2-4	F/O/R SWITCH KEDU ZH-HC-433-BY (G7215Z)
6V2-5	P5913Z006V2-5	CONTACTOR (G5913Z)
6V2-5	P7215Z006V2-5	CONTACTOR (G7215Z)
6V2-6	P5913Z006V2-6	OVERLOAD RELAY (G5913Z)
6V2-6	P7215Z006V2-6	OVERLOAD RELAY (G7215Z)

SECTION 8: WIRING

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

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

AWARNING Wiring Safety Instructions

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

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

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

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

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

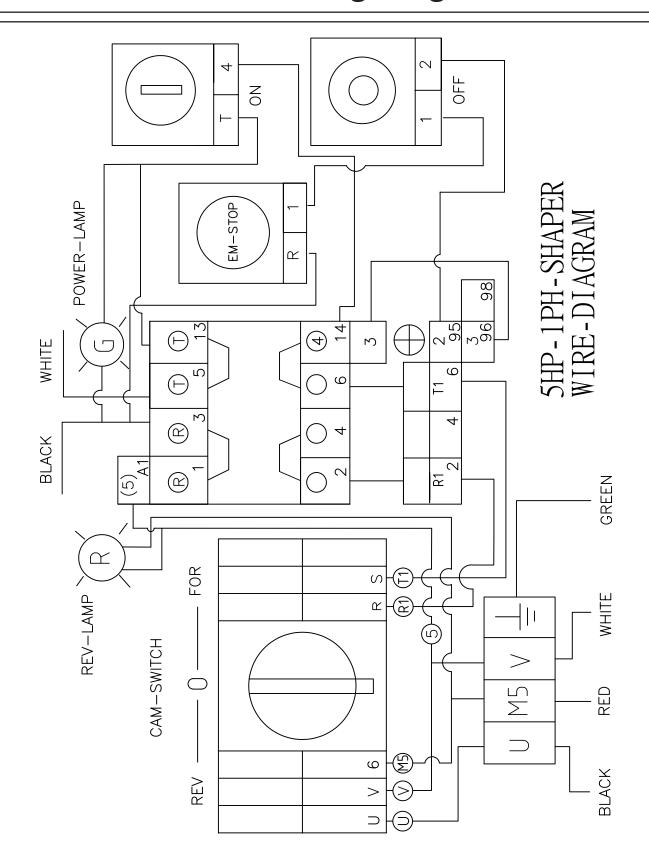
MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing but may not match your machine. If you find this to be the case, use the wiring diagram inside the motor junction box.

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

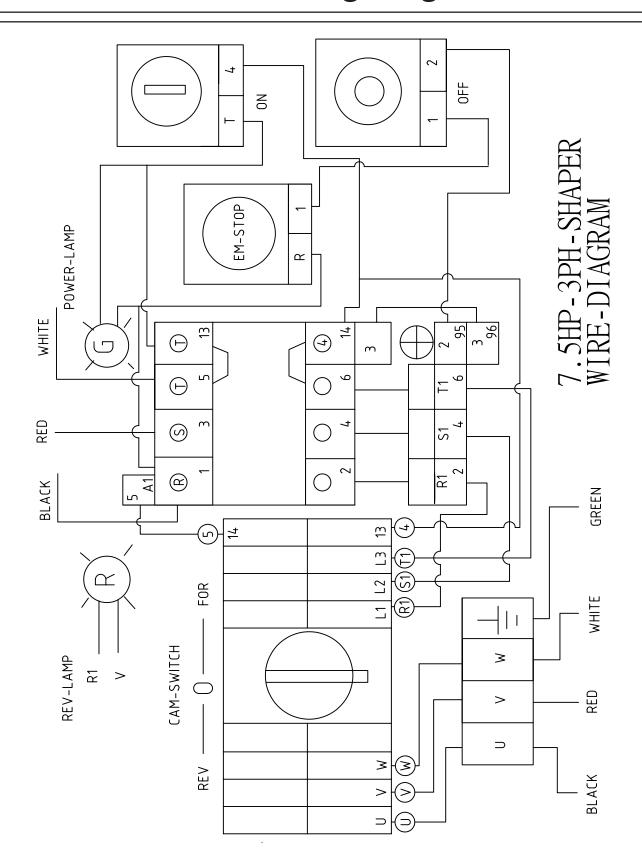
EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (570) 546-9663.



G5913Z Wiring Diagram



G7215Z Wiring Diagram



READ THIS FIRST



Model G5913Z/G7215Z/G8622 ***IMPORTANT UPDATE***

For Machines Mfd. Since 1/17 and Owner's Manual Printed 2001

For questions or help with this product contact Tech Support at (570) 546-9663 or techsupport@grizzly.com

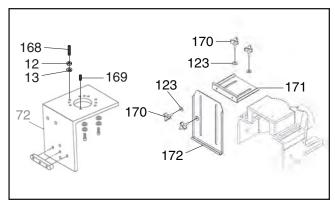
The following changes were recently made to this machine since the owner's manual was printed:

- Added an additional spindle enclosure guard.
- Changed spindle cartridge support fasteners.

Aside from this information, all other content in the owner's manual applies and MUST be read and understood for your own safety. **IMPORTANT: Keep this update with the owner's manual for future reference.**

For questions or help, contact our Tech Support at (570) 546-9663 or techsupport@grizzly.com.

New Parts

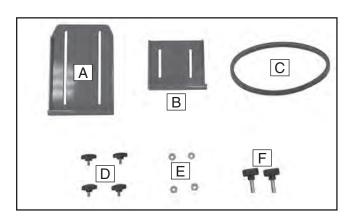


REF PART # DESCRIPTION

12	P5913Z012	HEX NUT 3/8-16
13	P5913Z013	LOCK WASHER 3/8
123	P5913Z123	LOCK WASHER 1/4
168	P5913Z168	SET SCREW 3/8-16 X 1
169	P5913Z169	SET SCREW 3/8-16 X 1/2
170	P5913Z170	KNOB BOLT 1/4-20 X 1/2
171	P5913Z171	FRONT GUARD EXTENSION PLATE
172	P5913Z172	FRONT SPINDLE ENCLOSURE GUARD

New Inventory

Inv	Inventory Qt		
A.	Front Spindle Enclosure Guard	1	
B.	Front Guard Extension Plate	1	
C.	V-Belt A28 (G8622)	1	
D.	Knob Bolts 1/4"-20 x 1/2"	2	
E.	Flat Washers 1/4"	4	
F.	Knob Bolts 3/8"-16 x 1" (G5913Z, G7215	Z). 2	
F.	Knob Bolts 3/8"-16 x 1" (G8622)	4	
G.	Spacer Set (G8622—Not Shown)	22	



Attaching Spindle Enclosure Guard

Before attaching the spindle enclosure guard, follow instructions in the Owner's Manual for installing the cutter guard and attaching the safety guard (for G5913Z/G7215Z, see Pages 18–19; for G8622, see Pages 14–15).

To attach spindle enclosure guard:

- 1. Attach front guard extension plate to threaded holes on front of safety guard with (2) 1/4"-20 x 1/2" knob bolts and (2) 1/4" flat washers (see **Figure 1**).
- 2. Attach front spindle enclosure guard to extension plate with (2) ½"-20 x ½" knob bolts and (2) ½" flat washers (see **Figure 1**).

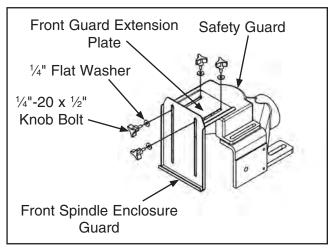


Figure 1. Front guard extension plate and spindle enclosure guard attached to safety guard.

Spindle Enclosure Guard Positioning

The spindle enclosure guard protects the user from exposure to the cutter and chips thrown by it. To minimize the risk of injury, the spindle enclosure 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 front guard is positioned to just clear the top of the workpiece.

To position the spindle enclosure guard, loosen the top knob bolts and slide the extension plate in or out, then loosen the front knob bolts and raise or lower the spindle enclosure guard as needed. Tighten the knob bolts to secure the setting.



AWARNING

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.





MODEL G5913Z/G7215Z HEAVY-DUTY SHAPER

OWNER'S MANUAL



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#TR3250 PRINTED IN TAIWAN



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

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

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

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



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

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

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

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INTRODUCTION

Foreword

We are proud to offer the Model G5913Z/G7215Z Name of Machine. This machine is part of a growing Grizzly family of fine woodworking machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

The specifications, drawings, and photographs illustrated in this manual represent the Model G5913Z/G7215Z when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly.

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

Contact Info

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

Grizzly Industrial, Inc.

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

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

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

E-Mail: techsupport@grizzly.com Web Site: http://www.grizzly.com





MACHINE DATA SHEET

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

MODEL G5913Z 5 HP PROFESSIONAL TILTING SPINDLE SHAPER - Z SERIES

Product Dimensions:	
Weight	
3	
Foot Print (Length/Width)	
Shipping Dimensions:	
Type	
Content	
Weight	
Length/Width/Height	
Electrical:	
	Push Button On/Off, Emergency Stop, Lever for Forward/Reverse
	220V
Plug	
Motors:	
Main	
Туре	TEFC Capacitor Start Induction
Horsepower	5 HP
3	220V
	220V
	Single
'	25A
•	3450 RPM
•	60 Hz
·	1
	Belt Drive
Bearings	Shielded and Lubricated
Main Specifications:	
Operation Info	
Max. Cutter Height	
Max. Cutter Dia	5-7/8 in.
Spindle Sizes	
Spindle Lengthgths	6-7 in.
Exposed Spindle Length	
Spindle Cap Under The Nut	4-1/4, 4-5/8, 5-1/8 in.
Spindle Speeds	3600, 5100, 8000, 10000 RPM
Spindle Travel	
•	
Spindle Openings	6 in.

The information contained herein is deemed accurate as of 3/15/2007 and represents our most recent product specifications. Due to our ongoing improvement efforts, this information may not accurately describe items previously purchased.



Table Info Table Size Thickness.......2-3/8 in. Table Fence Height4-1/4 in. Miter Gauge Info Miter Angle.....Left and Right 60 deg. Miter Gauge Slot Type.......T-Slot Construction Spindle Bearings......Sealed and Lubricated Other Mobile Base.......G7315 Other Specifications:

Features:

Cast Iron Miter Gauge, Adjustable 60 deg. Left to 60 deg. Right

4 Spring Steel Hold-Down Assemblies

Fence Adjustment Includes Built-In Ratchets and Knob-Equipped Adjusters

3 Table Inserts

Spindles Include Spacer and Nuts

Tilting Spindle Allows For Infinite Profile Possibilities with Your Existing Shaper Cutters





The information contained herein is deemed accurate as of 3/15/2007 and represents our most recent product specifications. Due to our ongoing improvement efforts, this information may not accurately describe items previously purchased.



MACHINE DATA SHEET

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

MODEL G7215Z 7-1/2 HP 3-PHASE TILTING SPINDLE SHAPER

Product Dimensions:	
Weight	
Length/Width/Height	
Foot Print (Length/Width)	26 x 27 in.
Shipping Dimensions:	
Type	Wood Crate
Content	Machine
Weight	
Length/Width/Height	39 x 44 x 43 in.
Electrical:	
Switch	Magnetic with Thermal Overload Protector
Switch Voltage	220V
Recommended Breaker Size	30 amp
Plug	No
Conversion To 440V	
Phase Converter	G7979
Motors:	
Main	
Type	TEFC Induction
Horsepower	7-1/2 HP
Voltage	220/440V
Prewired	220V
Phase	Three
Amps	20/10A
Speed	3450 RPM
Cycle	
Number Of Speeds	1
Power Transfer	
Bearings	Shielded and Lubricated
Main Specifications:	
Operation Info	
Max. Cutter Height	2-3/4 in
Max. Cutter Dia	
Spindle Sizes	
Spindle Lengthgths	
Exposed Spindle Length	
Spindle Cap Under The Nut	
Spindle Speeds	· · · · · · · · · · · · · · · · · · ·
Spindle Travel	
Spindle Tilt	0 - 45 deg.
Spindle Openings	6 in.

The information contained herein is deemed accurate as of 3/15/2007 and represents our most recent product specifications. Due to our ongoing improvement efforts, this information may not accurately describe items previously purchased.



Table Info Table Fence Height4-1/4 in. Miter Gauge Info Miter Angle.....Left and Right 60 deg. Miter Gauge Slot Type......T-Slot Construction Spindle Bearings......Sealed and Lubricated Other Mobile Base.......G7315 Other Specifications:

Features:

Cast Iron Miter Gauge, Adjustable 60 deg. Left to 60 deg. Right

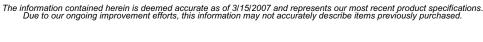
4 Spring Steel Hold-Down Assemblies

Fence Adjustment Includes Built-In Ratchets and Knob-Equipped Adjusters

3 Table Inserts

Spindles Include Spacer and Nuts

Tilting Spindle Allows For Infinite Profile Possibilities with Your Existing Shaper Cutters





SECTION 1: SAFETY

AWARNING

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

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



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

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



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

NOTICE

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

AWARNING Safety Instructions for Machinery

- 1. READ THE ENTIRE MANUAL BEFORE STARTING MACHINERY. Machinery presents serious injury hazards to untrained users.
- 2. ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY. Everyday eyeglasses only have impact resistant lenses—they are NOT safety glasses.
- 3. ALWAYS WEAR A NIOSH APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST. Wood dust can cause severe respiratory illnesses.

- 4. ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY. Machinery noise can cause permanent hearing loss.
- 5. WEAR PROPER APPAREL. DO NOT wear loose clothing, gloves, neckties, rings, or jewelry that can catch in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
- 6. NEVER OPERATE MACHINERY WHEN TIRED OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL. Be mentally alert at all times when running machinery.



▲WARNING Safety Instructions for Machinery

- ONLY ALLOW TRAINED AND PROP-ERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY. Make sure operation instructions are safe and clearly understood.
- 8. KEEP CHILDREN AND VISITORS AWAY. Keep all children and visitors a safe distance from the work area.
- MAKE WORKSHOP CHILDPROOF. Use padlocks, master switches, and remove start switch keys.
- **10. NEVER LEAVE WHEN MACHINE IS RUNNING.** Turn power *OFF* and allow all moving parts to come to a complete stop before leaving machine unattended.
- **11. DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.
- 12. KEEP WORK AREA CLEAN AND WELL LIGHTED. Clutter and dark shadows may cause accidents.
- 13. USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.
 Grounded cords minimize shock hazards.
 Undersized cords create excessive heat.
 Always replace damaged extension cords.
- 14. ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY. Make sure switch is in OFF position before reconnecting.
- **15. MAINTAIN MACHINERY WITH CARE.** Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 16. MAKE SURE GUARDS ARE IN PLACE AND WORK CORRECTLY BEFORE USING MACHINERY.

- **17. REMOVE ADJUSTING KEYS AND WRENCHES.** Make a habit of checking for keys and adjusting wrenches before turning machinery *ON*.
- 18. CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY. Check for binding or misaligned parts, broken parts, loose bolts, and any other conditions that may impair machine operation. Repair or replace damaged parts before operation.
- 19. USE RECOMMENDED ACCESSORIES. Refer to the instruction manual for recommended accessories. Improper accessories increase risk of injury.
- **20. DO NOT FORCE MACHINERY.** Work at the speed for which the machine or accessory was designed.
- 21. SECURE WORKPIECE. Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.
- **22. DO NOT OVERREACH.** Maintain stability and balance at all times.
- 23. MANY MACHINES CAN EJECT WORKPIECES TOWARD OPERATOR. Know and avoid conditions that cause the workpiece to "kickback."
- 24. ALWAYS LOCK MOBILE BASES (IF USED) BEFORE OPERATING MACHINERY.
- 25. CERTAIN DUST MAY BE HAZARDOUS to the respiratory systems of people and animals, especially fine dust. Be aware of the type of dust you are exposed to and always wear a respirator designed to filter that type of dust.



AWARNING

Additional Safety Instructions for Shapers

- HAND POSITIONING. Never place hands directly over or in front of the cutter. As one hand approaches the cutter, move it in an arc motion away from the cutter to the outfeed side. Always keep hand at least 6" away from the cutter while operating.
- SAFETY DEVICES. Use a fixture, jig, push stick or hold-down device to decrease the chances of injury.
- SAFETY GUARDS. DO NOT remove the retractable guard on the fence. Use a guard or other type of protective device at all times. Use overhead guard when the fence is removed.
- **4. CUTTER HEIGHT.** Keep any unused portion of the cutter below the table surface.
- 5. STOCK LENGTH. Do not use stock shorter than 6 inches without special fixtures or jigs. Where practical, shape longer stock and cut to size.
- 6. STOCK CONDITION. The danger of kick-back is increased when the stock has knots, holes, or foreign objects in it. Warped stock should be run through a jointer before you run it through a shaper.

- BLIND CUT WHEN POSSIBLE. Blind cuts keep the cutters on the underside of the workpiece and provide a distance guard for the operator.
- **8. TEST ROTATION.** With the machine unplugged, rotate the spindle to test any new setup to ensure proper cutter clearance before starting the machine.
- **9. DEPTH OF CUT.** Never remove too much material in one pass. Several light passes are safer and produce a cleaner finish.
- 10. SHAPING CONTOURED WORK. Always use a rub collar and a template. DO NOT start out at a corner. See the rub collar section further on in the manual.
- 11. FEEDING THE WORKPIECE. Always feed the workpiece against the rotation of the cutter. Never force materials through the shaper. Let the cutters do the work. Excessive force is likely to result in poor cutting results and will cause dangerous kickback conditions.
- 12. SECURING NUTS AND KNOBS. Never operate the shaper without the second locking nut in place over the spindle nut. Always ensure that the cutters, fence, and spindle elevator knob have been tightened properly before beginning any operation.

WARNING

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

CAUTION

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



SECTION 2: CIRCUIT REQUIREMENTS

AWARNING

Serious personal injury could occur if you connect the machine to the power source before you have completed the setup process. DO NOT connect the machine to the power source until instructed to do so.

Full Load Amperage Draw

G5913Z 5 HP 220V Singl	e-Phase25 Amps
G7215Z 7.5 HP 220V 3-P	hase20 Amps
G7215Z 7.5 HP 440V 3-P	hase 10 Amps

Circuit Requirements

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

G5913Z 220V	Single-Phase	40	Amp
	3-Phase		
G7215Z 440V	3-Phase	.15	Amp

Connection to Power

Have a qualified electrician hardwire this machine to a dedicated locking shut-off switch that is connected to the main power source.

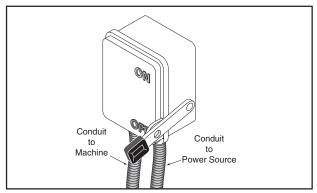


Figure 1. Hardwired locking disconnect switch.



AWARNING

Electrocution or fire could result if this machine is not grounded correctly or if your electrical configuration does not comply with local and state codes. Ensure compliance by checking with a qualified electrician!



Rewiring to 440V

The Model G7215Z can be rewired for 440V operation. This rewiring job consists of disconnecting the saw from the power source, replacing the existing electrical components with those included in the 440V conversion kit, then rewiring the motor.

The Model G7215Z 440V Conversion Kit can be purchased by calling our customer service number at (800) 523-4777 and ordering item# P7215Z300A.

We strongly recommend having a qualified electrician perform this task. At the very least, the resulting conversion job MUST be approved by a qualified electrician before the saw is connected to the power source.

To rewire the Model G7215Z for 440V operation:

- DISCONNECT SHAPER FROM POWER!
- 2. Remove the control panel cover and carefully rotate it to expose the electrical components attached to the backside.
- 3. Replace the existing magnetic switch assembly (**Figure 2**) with the magnetic switch assembly from the 440V conversion kit.

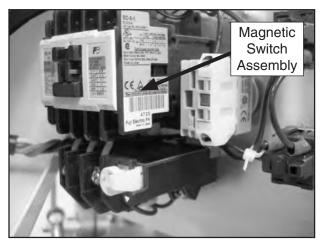


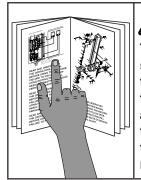
Figure 2. Magnetic switch assembly

- 4. Replace the control panel cover.
- **5.** Remove the cabinet cover to gain access to the motor inside the cabinet.
- Remove the junction box cover from the motor, and review the diagram on the inside of that cover.
- 7. Wire the motor as indicated on the diagram for 440V (or high voltage).
- Replace the junction box cover and cabinet covers.



SECTION 3: SETUP

Setup Safety



AWARNING

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!



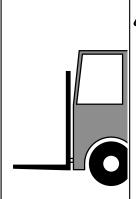
AWARNING

Wear safety glasses during the entire set up process!



WARNING

Some machine components are very heavy. DO NOT over-exert yourself while unpacking or moving your machine—get assistance.



AWARNING

The G5913Z/G7215Z is a heavy machine, 700/770 lbs. shipping weight. DO NOT over-exert yourself while unpacking or moving your machine – use power equipment to move the machine. Serious personal injury may occur if safe moving methods are not followed.

Items Needed for Setup

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

Des	scription	Qty
•	Straightedge 4' (or longer)	1
•	Safety Glasses (for each person)	1
•	Dust Collection System	1
•	4" Dust Hose (length as needed)	1
•	4" Hose Clamp	1
•	Open-End Wrench 12mm	
•	Open-End Wrench 14mm	
•	Open-End Wrench 15mm	
•	Hex Wrench 4mm	

Unpacking

The Model G5913Z/G7215Z was carefully packed for safe transporting. If you discover the machine is damaged after you have signed for delivery, please immediately call Customer Service at (570) 546-9663 for advice.

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

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



Piece Inventory

When you are completely satisfied with the condition of your shipment, you should inventory its parts.

In the event that any nonproprietary parts are missing (e.g. a nut or a washer), we would be glad to replace them, or, for the sake of expediency, replacements can be obtained at your local hardware store.

After all the parts have been removed from the carton, you should have:

- Shaper Unit
- Miter Gauge Kit
- Hardware

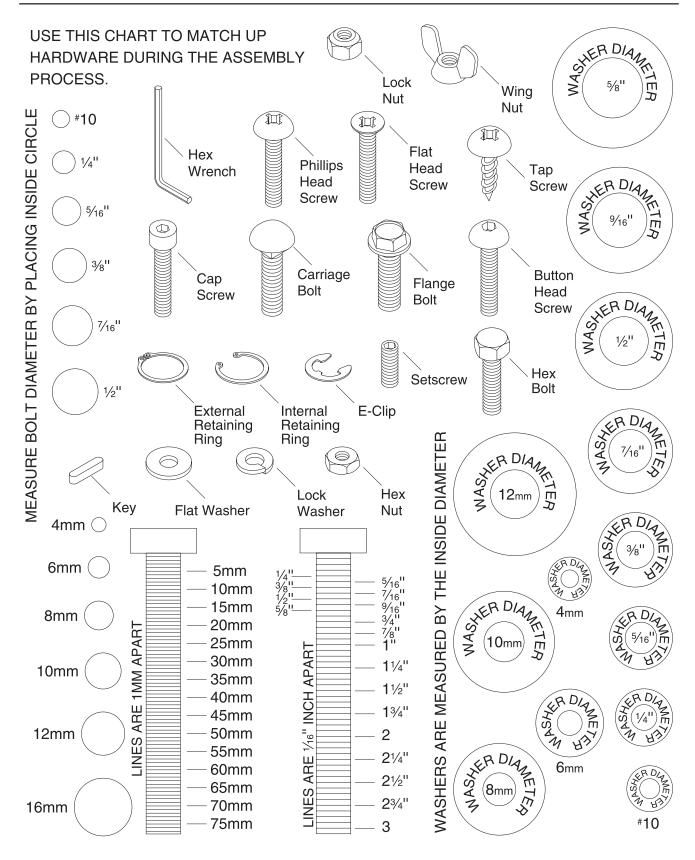


Figure 3. Shaper hardware.

M	odel G5913Z/G7215Z Hardware	Qty
•	³ / ₄ " Spindle	
•	1" Spindle	
•	11/4" Spindle	
•	3/4" Spindle Nut	
•	1" Spindle Nut	
•	11/4" Spindle Nut	
•	Spacer Set	
•	Hold-Downs	
•	Hold-Down Bars	
•	Hold-Down Brackets	
•	Fence Pieces	
•	Fence Mounts	
•	Dust Port	
•	Safety Guard	
•	Multi Wrench 10, 19, 23, 26, 37mm	
•	Hex Wrench 3mm	
•	Hex Wrench 4mm	
•	Box Wrench 1½"	1
•	Box Wrench 1"	1
•	Stainless Wheel Handles	
•	Round Knobs	
•	Plastic Adjustment Wheels	
•	4" Threaded Stud Knobs	
•	47/8" Threaded Stud Knobs	
•	4" Double Threaded-End Bars	
•	Draw Bar w/Nut	
•	Shaft Guide Bar w/Setscrew	
•	Fence-Bracket Adjustment Handles	
•	Hold-Down Adjustment Handles	
•	Adjustment Guide Bar	
•	Threaded Spacers	
•	Lock Washers 5/16"	
•	5/16"-18 x 15/16" Flat Head Screws	
•	5/16" Flat Washers	
•	½" Flat Washers	
•	5/16" Hex Nuts	
•	T-Type Nuts	
•	V-Belt A28	1



Hardware Recognition Chart



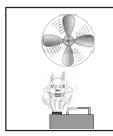
Clean Up

The unpainted surfaces are coated with a waxy oil to prevent corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as Grizzly's G7895 Citrus Degreaser. To clean thoroughly, some parts must be removed. For optimum performance from your machine, clean all moving parts or sliding contact surfaces. Avoid chlorine-based solvents, such as acetone or brake parts cleaner that may damage painted surfaces. Always follow the manufacturer's instructions when using any type of cleaning product.



AWARNING

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



ACAUTION

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

G7895—Grizzly Citrus Degreaser

This natural, citrus-based degreaser is a great solution for removing export grease, and it's much safer to work around than nasty solvents.



Figure 4. Grizzly citrus degreaser.

Site Considerations

Floor Load

Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some residential floors may require additional reinforcement to support both the machine and operator.

Placement Location

Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your new machine. See **Figure 5** for the minimum working clearances.

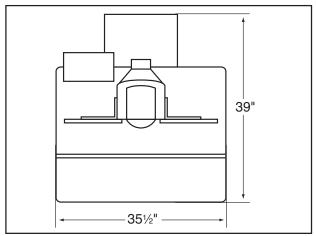
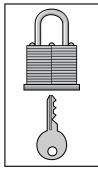


Figure 5. Minimum working clearances.



ACAUTION

Children and visitors may be seriously injured if unsupervised. Lock all entrances to the shop when you are away. DO NOT allow unsupervised children or visitors in your shop at any time!



Switch Pedestal

Turn the switch pedestal upright to install it on the back of the shaper. Have another person hold it in place, then reach inside and thread the nuts onto the bolts.

Spindle

The Model G5913Z/G7215Z comes with three interchangeable spindles like those in **Figure** 6. The spindles must be inserted correctly and remain stable 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.

To install a spindle:

DISCONNECT SHAPER FROM POWER!

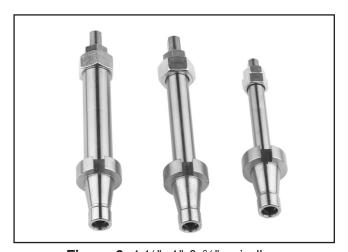


Figure 6. 1 1/4", 1" & 3/4" spindles.

- 2. Thread the drawbar approximately 10-15 turns into the bottom of the spindle. The drawbar has two threaded ends. One of them will remain exposed.
- 3. Drop the spindle/drawbar into the spindle cartridge at the top of the table. Line up the notches at the top of the spindle cartridge with those in the spindle as shown in Figure 7. You will feel the spindle seat itself.

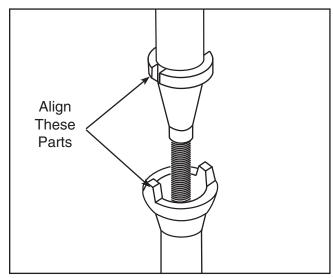


Figure 7. Installing spindle into the cartridge.

 Thread the drawbar nut, tapered side up, onto the bottom of the drawbar, as illustrated in Figure 8.

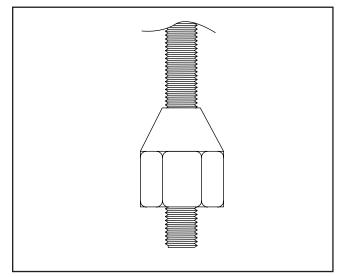


Figure 8. Drawbar nut on spindle.

- 5. Place the spindle wrench on top of the spindle, so it fits over the head of the spindle. Place a 15mm wrench on the drawbar nut.
- **6.** Hold the spindle in place and tighten the drawbar nut. **DO NOT** use excessive force.



Handles

The guard adjuster is used to secure the guard to the table and allow the guard to be loosened for adjustment.

To assemble the guard adjuster:

- 1. Install the bar into the shaft guide as shown in **Figure 9**.
- **2.** Line up the groove in the bar with the setscrew.

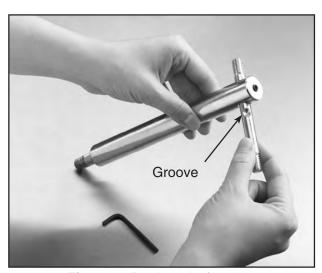


Figure 9. Bar into shaft guide.

3. Tighten the shaft setscrew into the groove to lock the bar in place as shown in **Figure 10**.



Figure 10. Tightening setscrew with hex key.

Install the round knobs shown in Figure 11 onto both ends of the bar.



Figure 11. Round knobs onto bar.

The wheel shown in **Figure 12** fits on the adjustment shaft. This locks in place by tightening the setscrew into the groove on the shaft. There is a threaded hole on the wheel that allows for the optional installation of a crank (not included).

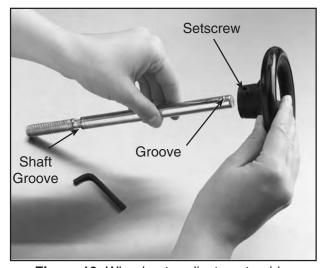


Figure 12. Wheel onto adjustment guide.



Guard

To mount the cutter guard to the table:

- Place the guard over the threaded holes on the table.
- 2. Insert the shaft guide with a washer into the guard as shown in **Figure 13**, and thread the shaft guide clockwise to secure the guard to the table.

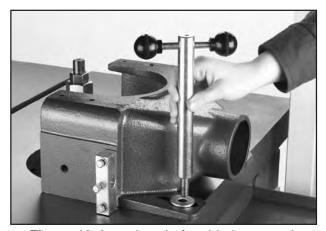


Figure 13. Inserting shaft guide into guard.

3. Insert the adjustment guide into the screw bracket. Line up the shaft groove shown in Figure 12 with the center bolt and screw the bolt into the groove as shown in Figure 14. Do not completely tighten the bolt. This will allow the shaft to spin without coming out.



Figure 14. Tightening bolt into shaft groove.

Fence Assembly

To mount the fence brackets to the guard body:

1. Thread the adjustment shaft into the fence bracket as shown in **Figure 15**.

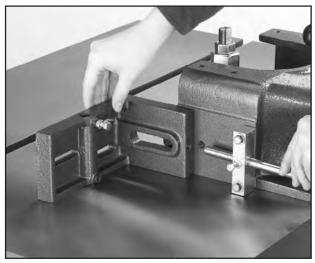


Figure 15. Adjustment guide to fence bracket.

Insert the adjustment handle (Figure 16) into the fence bracket, and thread it into the guard body.

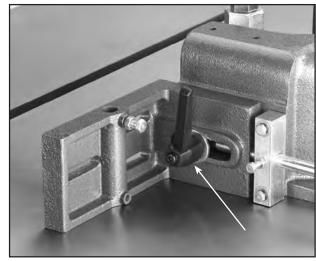


Figure 16. Adjustment handle.



-18-

To install the wood facing:

- 1. Secure the wooden fence pieces (as shown in **Figure 17**) with the ⁵/₁₆"- 18 x 1" Phillips screws, washers, and hex nuts provided.
- 2. If using your own wood pieces, make sure the countersunk holes in your fence material are deep enough so the entire screw head is below the fence surface.

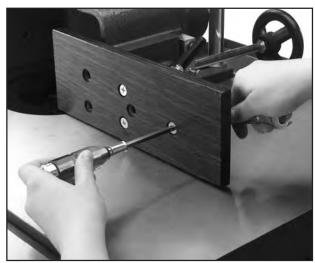


Figure 17. Attach wooden fence assembly.

Guard Cover

To mount the guard cover:

- 1. Place the guard cover over the threaded holes on top of the guard body as shown in Figure 18.
- 2. Thread the knobs into the guard body and secure the cover.

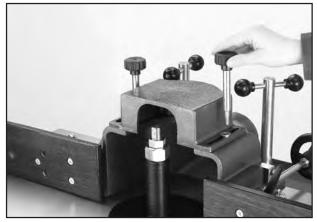


Figure 18. Installing guard cover.

Handwheel Handle

Thread the crank handle onto the handwheel.



Figure 19. Handwheel mounted to shaper.



Hold-Downs

Hold-downs are used to hold the workpiece flat on the table and snug against the fence as shown in **Figure 20.**

To assemble the hold-downs:

- 1. Slide a hold-down bar into each of the cast iron hold-down brackets.
- 2. Insert the bracket pole into the fence bracket and hold-down bracket.
- **3.** Partially screw the handle into the hold-down brackets.
- 4. Slide two hold-down brackets into the miter slot. Position these so they are across from the fence mounted hold-downs similar to those in Figure 21. Tighten these in place with the knob on top of each miter holddown.
- **5.** Position the hold-downs according to the size of your workpiece.
- **6.** Tighten the handles to secure the hold-downs.

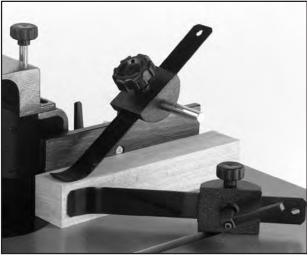


Figure 20. Hold-downs on workpiece.



Figure 21. Overview of hold-downs in place.

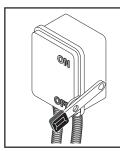


SECTION 4: ADJUSTMENTS



WARNING

Keep clothing rolled up and out of the way of machinery and keep hair pulled back.



AWARNING

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



WARNING

Wear safety glasses during the entire adjustment process. Failure to comply may result in serious personal injury.

Pulleys & V-Belt

Improper pulley alignment sharply reduces the effectiveness of power transmission and belt life expectancy.

To align the pulleys:

- DISCONNECT SHAPER FROM POWER!
- Remove the motor cover from the back of the shaper cabinet to expose the motor and pulleys.
- Check the alignment with a straightedge. If the pulleys are in alignment, the straightedge should touch two sides of each pulley evenly as in Figure 22.
- 4. If the pulleys are parallel with each other, but not in line, the motor needs to be adjusted.

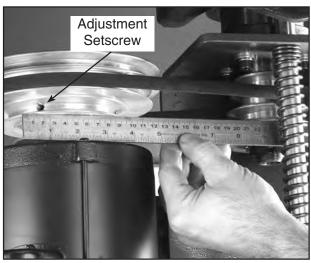


Figure 22. Inspecting pulley alignment.

- 5. This process is easiest with the help of another person. Loosen the four bolts that attach the motor to the motor base. One person should slide the motor either up or down while the other person measures the alignment of the motor pulley and the spindle pulley with a straightedge.
- 6. When the motor pulley and the spindle pulley alignment are correct, tighten the motor to the motor base.
- 7. Inspect your results. If satisfactory, double-check that the mounting bolts are tight.
- 8. You can also make small adjustments in the motor pulley alignment by raising or lowering it along the motor shaft. To do this, loosen the two setscrews (one is shown in Figure 22) which are in the lowest groove of the motor pulley and move the pulley into position. Tighten the setscrews when the alignment is satisfactory.



V-Belt Tension

You should be able to deflect the belt ½" with moderate finger pressure, as shown in **Figure 23**. This may seem tight compared to most other V-belts, but since the belt is small and runs fast, this amount of tension is necessary. The V-belt will slip if too loose, and will squeal or cause vibration if too tight. Adjust the tension if necessary.

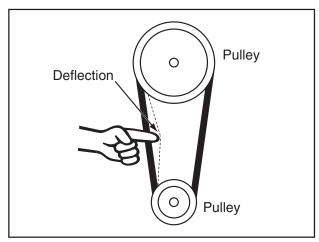


Figure 23. Checking belt deflection.



To adjust V-belt tension:

- 1. DISCONNECT SHAPER FROM POWER!
- 2. Make sure the pulleys are properly aligned.
- 3. Loosen the two motor mount plate bolts and slide the motor left or right to modify the belt tension. Keep the pulleys aligned.
- **4.** Tighten the motor mount plate bolts, test the tension, and check the pulleys.
- **5.** Repeat **steps 2-3** until tension is correct and the pulleys are aligned.

Speed Changes

The Model G5913Z/G7215Z is equipped with a V-belt drive system that controls the speeds.

To change spindle speeds:

- 1. DISCONNECT SHAPER FROM POWER!
- Loosen the two motor plate bolts, and slide the motor toward the spindle assembly. DO NOT take the bolts out.
- Select the desired speed. There are four speeds: 3600 RPM, 5100 RPM, 8000 RPM, 10,000 RPM. Figure 24 shows the belt positions for each available speed.

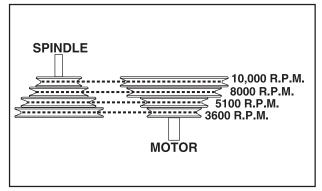


Figure 24. Spindle speed adjustment.

- **4.** Align the belt along the appropriate pulley grooves.
- 5. Slide the motor back into position and tighten the belt. When the belt is properly tensioned, there should be approximately ½" of deflection in the center of the belt when you press it with moderate pressure.
- 6. Tighten all the adjusting bolts.
- Spin the pulley to ensure proper tracking.



Fence Adjustment

The fence is a two-piece adjusting system. Each fence is independently adjustable to compensate for different cutting thicknesses and special shaping applications. Without any play, one turn of the knob moves the split fence approximately 5/64" (.078").

To adjust the fence:

- 1. Loosen the fence lock handle.
- **2.** Turn the fence adjustment knob until the fence is set to the desired position.
- 3. Tighten the fence lock handle.

Aligning Fences

To ensure that the fence is parallel with itself and square with the table:

- Check that the bolts through the wood facing are tight on each side and adequately countersunk.
- To align the wood facing, adjust one or both fence halves so they are in close alignment. Micro-adjust and check the alignment with a straightedge as shown in Figure 25.
- 3. If the wood fences are not parallel with each other, shim the incorrect side with shim washers. Normal washers may work, but shim washers allow for fine adjustments.



Figure 25. Aligning fences with straightedge.

Tilting Spindle

The Model G5913Z/7215Z has a tilting spindle feature to allow a wider variety of profiles. Spindles can be tilted as needed as long as the cutterheads do not hit the table insert or table during operation. ALWAYS adjust and check the spindle tilt BEFORE you turn the shaper on.

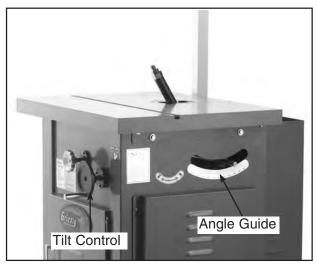


Figure 26. Spindle tilt control and gauge.

Figure 26 shows the tilt wheel that controls the tilting feature. Notice that on the other side of the shaper, there is an angle guide located below the vertical adjustment wheel. This will show you the present angle of spindle tilt.

WARNING

Never adjust the spindle tilt when the shaper is running. The cutterhead may come in contact with the table or table insert and break apart, throwing shards of metal through the air. These metal chunks will be flying extremely fast and could cause death or severe injury.



Table Inserts

The Model G5913Z/G7215Z is supplied with a specially cutout table insert that allows the spindle to be tilted. When deciding whether or not to utilize the table insert, use the smallest opening that a particular cutter will allow. This offers more support for the workpiece and reduces the amount of chips that can fall into the machine. The correct spindle opening also allows any unused portion of the cutter to remain below the table surface—increasing operator protection.

The cast iron table insert must be flush with the top of the table.

To adjust the insert:

- 1. Remove the three Phillips® head screws that hold the cast iron insert in place.
- Using a straightedge and a screwdriver, turn the barrel screws clockwise or counterclockwise to level the larger table insert with the table (Figure 27).

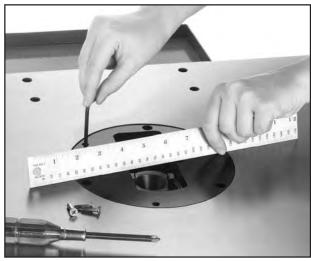


Figure 27. Leveling table insert.

3. Inspect the table insert with the straightedge from both side-to-side and front-to-back to ensure it is flush with the table. Replace and secure the Phillips® head screws.

Test Run

Once assembly is complete and adjustments are done to your satisfaction, inspect the machine for loose nuts, bolts, tools or any unsafe condition. Correct as necessary, then connect the machine to the power source.

DO NOT have a cutter installed when you test run the shaper. Turn on the power supply at the main panel. Press the START button. Make sure that your finger is poised on the STOP button, just in case there is a problem. The shaper should run smoothly with little or no vibration or rubbing noises. Strange or unnatural noises should be investigated and corrected before operating the machine further.

If the shaper seems to be running correctly, check the directional switch. The spindle should be rotating in a counterclockwise direction when the switch is in the FORWARD position. Run the Model G5913Z/G7215Z for a short time to ensure that the moving parts are working properly with no excessive vibration. If any problem develops, correct it before attempting to use the machine.

If you cannot locate the source of unusual noises, immediately contact our service department for help.



AWARNING

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

WARNING

Never use the Model G5913Z/G7215Z for applications other than those for which it was intended. DO NOT overload the machine or use excessive force when shaping materials. Severe personal injury, damage to the machine, or damage to your workpiece could occur.



SECTION 5: OPERATION



WARNING

Keep loose clothing rolled up and out of the way of machinery and keep hair pulled back.



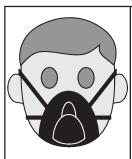
AWARNING

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



WARNING

Wear safety glasses during all operations on the shaper. Failure to comply may result in serious personal injury.



ACAUTION

Always wear a dust mask when operating the shaper. Using this machine produces sawdust which may cause allergic reactions or respiratory problems.

NOTICE

The following section was designed to give instructions on the basic operations of this shaper. However, it is in no way comprehensive of every shaper application. There are many different jigs that can be built to increase safety, accuracy, and types of cuts. WE STRONGLY RECOMMEND that you read books, trade magazines, or get formal training to maximize the potential of your shaper.

Rotation

Your shaper is equipped with a FORWARD/REVERSE switch as shown in **Figure 28.** In many instances, you will find it necessary to flip the cutter over and reverse cutter rotation. Whenever possible, mount the cutter so the board is milled on the bottom side. This method does a better job and is safer for the operator.

ACAUTION

Always check the direction of cutter rotation before beginning any shaping operation.

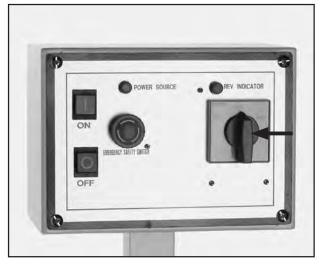


Figure 28. FORWARD/REVERSE switch.

NOTICE

This machine was designed to be started and stopped with the ON/OFF buttons—not the reversing switch.



Cutter Installation

Your shaper operates at speeds of 3600, 5100, 8000 and 10,000 RPM. ($3\frac{1}{2}$ " or larger cutters must be operated at the slowest speed.)

Always use the largest spindle size possible, and never use more than one bushing size to gain two spindle sizes. "Stacking" two cutter bushings to decrease the inside diameter of the cutter and will cause the cutter to perform incorrectly when placed under a load.

To install a cutter:

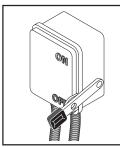
- 1. DISCONNECT SHAPER FROM POWER!
- **2.** Place an appropriate spacer or collar at the base of the spindle for support.
- **3.** Place the cutter on the spindle. Make sure the rotation is correct for your application.
- **4.** Use spacers or collars to suit your particular application.
- **5.** Place the spindle washer under the nut. Screw on the nut and locknut.
- 6. Tighten the nuts while holding the spindle stationary. Use a wrench on the notches at the top of the spindle for leverage as shown in Figure 29.

AWARNING

Always use a spindle lock nut during operation. If this warning is ignored, the cutter may fly off the spindle during use and cause severe personal injury.



Figure 29. Tightening spindle nuts.



AWARNING

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



Spindle Height

To adjust the cutter height:

- 1. Loosen the spindle lock shown in Figure 30.
- Move the spindle up or down with the handwheel until the desired position is obtained.
- **3.** Lock the spindle into position.

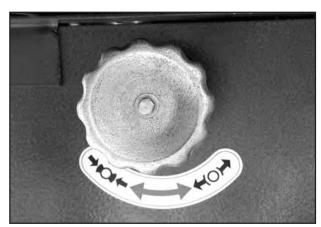
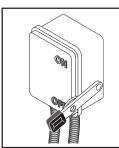


Figure 30. Location of spindle lock.



AWARNING

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

NOTICE

The lock knob keeps the spindle in a fixed position during shaper operation. Do not over-tighten the lock knob. A snug fit is all that is needed to keep the spindle from moving during shaper use.

Straight Shaping



AWARNING

Read the entire manual before making any cuts with your shaper. Serious personal injury may result if safety or operational information is not understood or followed.

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. The outfeed fence can also be set in-line for partial face removal.

If removing material from the whole face, observe the following steps:

Loosen the locking handles shown in Figure
 that hold the fences in place.

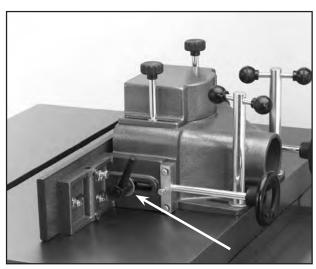


Figure 31. Location of fence locking handles.

- Adjust the infeed fence by turning the adjustment knobs until the workpiece contacts the cutter in the desired location.
- 3. Lock the infeed fence in position with the locking handle. Use a test piece to determine the best setting.



- 4. Loosen the mounting screws on the fence faces and set the face ends to barely clear the cutter. This allows the maximum support possible for the workpiece while passing the cutter. Remember to tighten the wood facing before starting the shaper.
- **5.** A test sample of the desired cut should be advanced about 8" then stopped.
- 6. Once the shaper is turned off and the cutter has come to a complete stop, adjust the outfeed fence to support the new profiled edge (Figure 32).

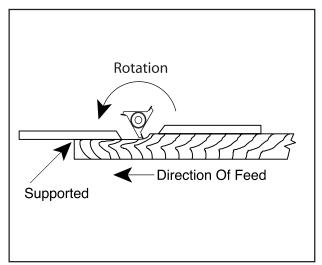


Figure 32. Fence adjusted to support workpiece.

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

- Adjust the infeed fence to approximately the desired depth of cut. Lock the infeed fence in place.
- 2. Use a straightedge to adjust the outfeed fence to the same plane as the infeed fence. Lock the outfeed fence in place.
- 3. Set the right and left wood faces so the ends barely clear the cutter. This allows the maximum support possible for the workpiece while passing the cutter. Remember to tighten down the wood facing before starting the shaper.

4. Run a test piece through the shaper as shown in **Figure 33.**

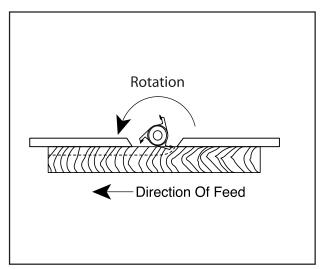


Figure 33. Fence adjustment for blind cuts.

5. Always cut the end grain first when putting an edge around the perimeter of your workpiece (Figure 34).

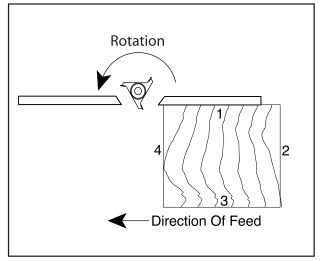


Figure 34. Fence adjustment for multiple cuts.



Rub Collars

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

There are two types of rub collars—solid and ball-bearing. We recommend against the use of solid rub collars. Grizzly carries an extensive line of ball bearing rub collars designed for use with Grizzly shapers. See the current catalog for listings.

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

1. Rub collar below the cutter: When the rub collar is used below the cutter as shown n Figure 35, the progress of the cut can be observed. However, any unintentional movement may lift the workpiece into the cutter, damaging your work and creating a dangerous situation. We DO NOT recommend this type of setup!

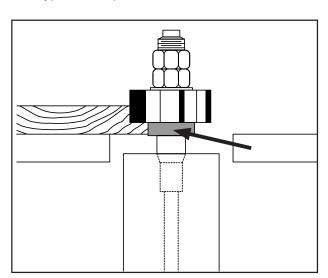


Figure 35. Rub collar installed below cutter.

ACAUTION

Whenever the cutterhead is above the workpiece, or you can see cutterhead spinning during use, you must take extreme caution to keep your hands away from the cutterhead. Failure to do so may cause serious personal injury.

2. Above the cutter: When the rub collar is used above the cutter as seen in Figure 36, the cut cannot be seen. This offers some advantage: the stock is not affected by slight variations in thickness and accidental lifting will not damage the workpiece. If lifting occurs, simply correct the mistake by repeating the operation.

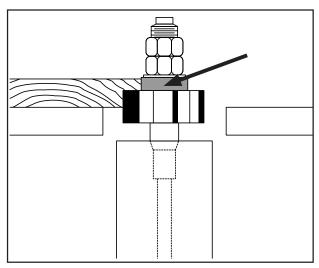


Figure 36. Rub collar installed above cutter.

3. Between two cutters: Using a rub collar between two cutters, as in Figure 37, has the distinct advantage of performing two cuts at once or eliminating the need to change cutters for two different operations. Notice that part of the edge is left uncut. The uncut portion rides on the rub collar.

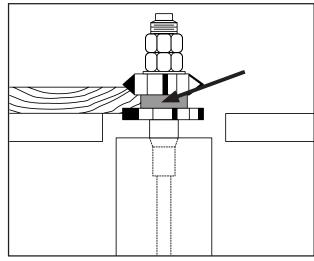


Figure 37. Rub collar between two cutters.



Pattern Work

When using a pattern, the rub collar 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 or oversize pieces and then shaping the edge in a simple two-step operation. A pattern can be incorporated into a jig by way of adding toggle clamps, hand holds or other safety devices.

You have greater flexibility when choosing the correct diameter rub collar for pattern work than for non-pattern work. If you look at **Figure 38**, you will notice that the position of the pattern determines the depth of cut. In other words, your pattern size is dependent upon the interrelationship of the cutting circle, the desired amount of material removed, and the rub collar size. Changing one or more of these will change the amount of material removed. Planning ahead, you can most effectively decide which rub collars are best suited for your application.

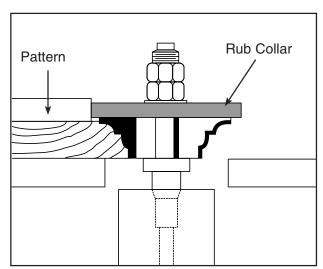


Figure 38. Rub collar determines depth of cut.

When making a pattern jig here are a few things to consider:

1. Build your jig from a material that will smoothly follow the rub collar or fence.

- 2. Make the jig stable, using proven methods and materials, and fasten the hand holds for operator comfort and safety.
- Secure your workpiece on the three sides that will not be cut with toggle clamps, or fasten the workpiece to the jig with wood screws.
- **4.** Ensure that clamps and hidden screws do not come into contact with the cutter.
- Design your jig so that all cutting occurs underneath the workpiece as shown in Figure
 Notice the operator is not exposed to the cutting edge of the cutter!
- Always consider the cutting circle and rub collar diameter for the correct cutting depth when designing your pattern.
- **7.** Make sure the workpiece rests flat on the table, not on the fixture.

ACAUTION

Workpieces must be solid, stable, and secured to the jig; or kickback may occur, causing personal injury.



Figure 39. Pattern jig for making curved pieces.

Irregular or freehand shaping takes a high degree of skill and dexterity. The fence assembly is not used during irregular shaping, so rub collars must be used. Also, unless your jig is designed to touch the rub collar before contacting the blade, a starting fixture MUST be used to begin your cut.



Starting Fixures

The purpose of the starting fixture is to support the workpiece during the beginning of the cut. The workpiece is typically placed in the starting position using the starting fixture for support, then swung into the cutter while holding the workpiece firmly against the starting fixture. After the cut has been started, the work is swung away from the starting fixture and is supported only by the rub collar. Always feed against the rotation of the cutter and do not start cuts at corners.

To use your pattern jig:

- Remove the fence assembly. Choose the appropriate cutter and rub collar for your application and lock them in place. Secure your workpiece to the pattern jig.
- Check cutter rotation, and adjust the spindle height to align the cutter to your workpiece. Clamp a starting fixture to the table surface, using the location that best supports your work.
- **3.** If everything is correct and the cutter is tight, turn the shaper *ON*.
- 4. Place your jig/workpiece against the starting fixture. Using firm pressure, pivot the workpiece into the cutter and make sure the jig is touching the rub collar. Keep your jig in contact with the rub collar and slowly follow the pattern, moving against the cutter rotation

Freehand Shaping

Freehand methods are one of the most dangerous operations performed on a shaper. Although this machine is capable of performing freehand operations, we do not recommend that you attempt to do so. If you MUST perform freehand operations, get formal training and read a book that details freehand operations, their inherent dangers, and ways to avoid those dangers!

Shop Made Shaper Accessories

There are many accessories that can be built or purchased to increase operator. Many experienced shaper users regularly use proven shopmade fences and safety guards to augment their shaping operations. In addition, many production shops routinely use power feeders with their shapers to streamline their operations.

Here are some basic accessories and their uses:

- Zero Clearance Fence—A shop-made fence with an opening only as large as the cutter, so that only the part of the cutter being used is exposed.
- Box Fence—A shop-made box that completely surrounds the cutter. A one-piece fence is attached that allows only the thickness of the board to pass underneath, thereby completely shielding the operator from exposure to the spinning cutter. A clear plexiglass window on top of the box allows the operator to view the workpiece during cutting.

Because of the wide range of fences and guards that can be built in the shop, explaining their construction is beyond the scope of this manual. We strongly recommend that you read shaper books, trade magazines, or get formal training to learn more about these.



SECTION 6: ACCESSORIES

G1786—Rub Collar 1-1/4" x 2-1/4" G1787—Rub Collar 1-1/4" x 2-1/2" G1788—Rub Collar 1-1/4" x 2-3/4" G1789—Rub Collar 1-1/4" x 3" G1790—Rub Collar 1-1/4" x 3-1/4" G1791—Rub Collar 1-1/4" x 3-1/2" G1792—Rub Collar 1-1/4" x 4"

If you do any kind of irregular shaping, these ball bearing 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 the depth of cut (same principle as router bits with guide bearings). Use them below, in between, or above cutters.



Figure 40. Rub collars.

G3030—Shaper Handbook

Roger Cliffe and Michael Holtz show you the potential of your shaper. Hundreds of techniques are explored in vivid detail and clear step-by-step instructions. There are tips on freehand shaping as well as jig and fixture shaping. 256 pages.

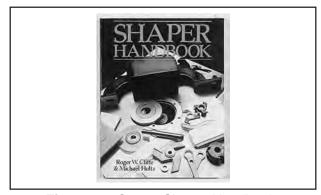


Figure 41. G3030 Shaper Handbook.

Call 1-300-523-4777 To Order

H6175—Power Respirator H6892—3M Pre-Filter, 10-Pack H6893—Filter Cartridge, 10-Pack

Say goodbye to foggy safety glasses and labored breathing, this battery powered respirator supplies a constant breeze of fresh air all day long. Comes with its own plastic case for clean, sealed storage. Finally, a respirator you can look forward to wearing—at an affordable price!



Figure 42. H6175 Power Respirator.

G7984—Face Shield H1298—Dust Sealed Safety Glasses H1300—UV Blocking, Clear Safety Glasses H2347—Uvex® Spitfire Safety Glasses H0736—Shop Fox® Safety Glasses

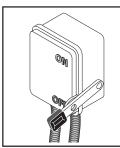
Safety Glasses are essential to every shop. If you already have a pair, buy extras for visitors or employees. You can't be too careful when it comes to shop safety!



Figure 43. Our most popular safety glasses.



SECTION 7: MAINTENANCE



AWARNING

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

Schedule

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

Daily Check:

- Loose mounting bolts.
- Damaged spindle.
- Worn or damaged wires.
- Apply anti-rust protection to table.
- Any other unsafe condition.

Weekly Maintenance:

- · V-belt tension, damage, or wear.
- Clean/vacuum dust buildup from inside cabinet and off motor.

Monthly Check:

- V-belt tension, damage, or wear.
- Lubricate worm gears, elevation slide, and quill.

Cleaning

Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin dissolving cleaner to remove it.

Unpainted Cast Iron

Protect the unpainted cast iron surfaces on the table by wiping the table clean after every use—this will ensure that moisture from wood dust will not remain on bare metal surfaces.

To avoid rust, do not use water or water-based products on the unpainted cast iron surfaces.

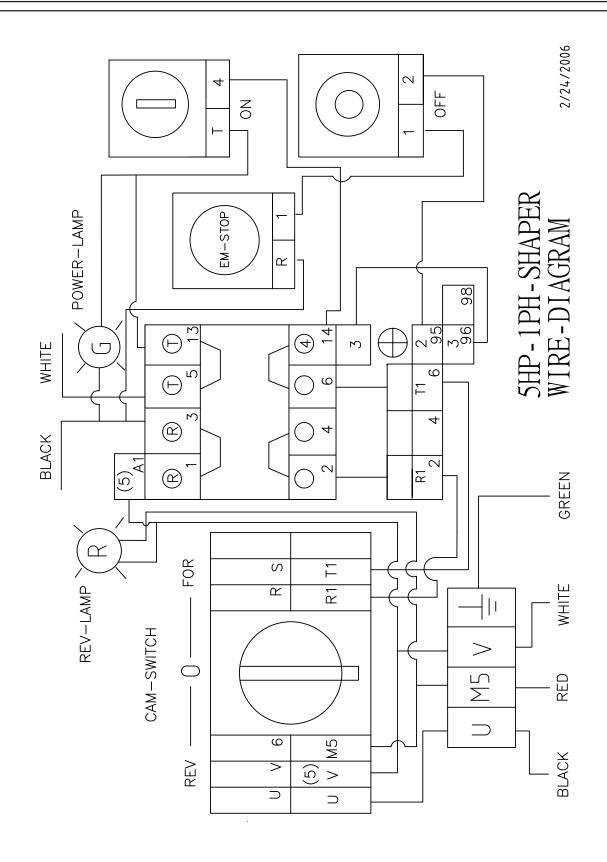
Keep tables rust-free with regular applications of products like G96® Gun Treatment, SLIPIT®, or Boeshield® T-9.

V-Belt

Avoid getting grease or oil on the V-belt or pulleys. Check the V-belt, as part of a monthly inspection for proper tension and belt condition. Cracking and glazing could result in belt failure. Replace the belt if such conditions appear.

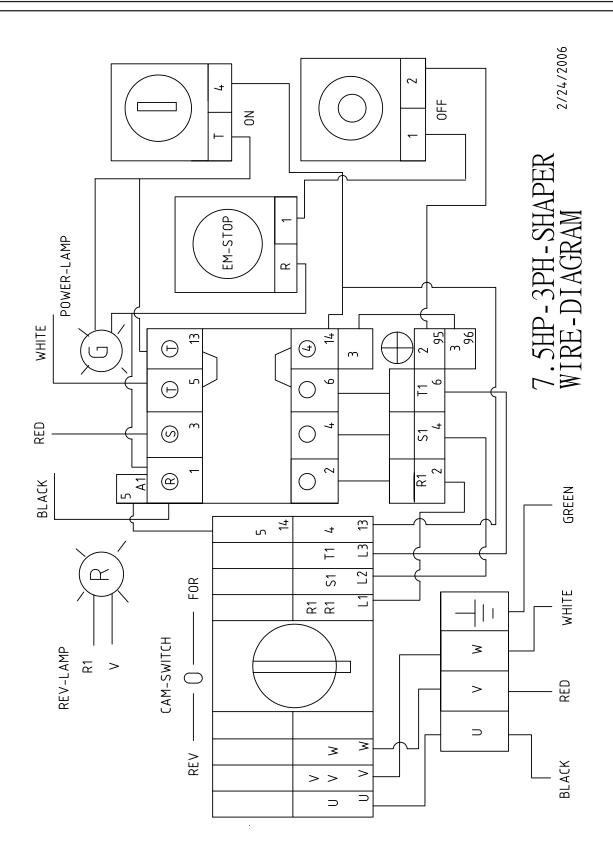


G5913Z Wiring Diagram

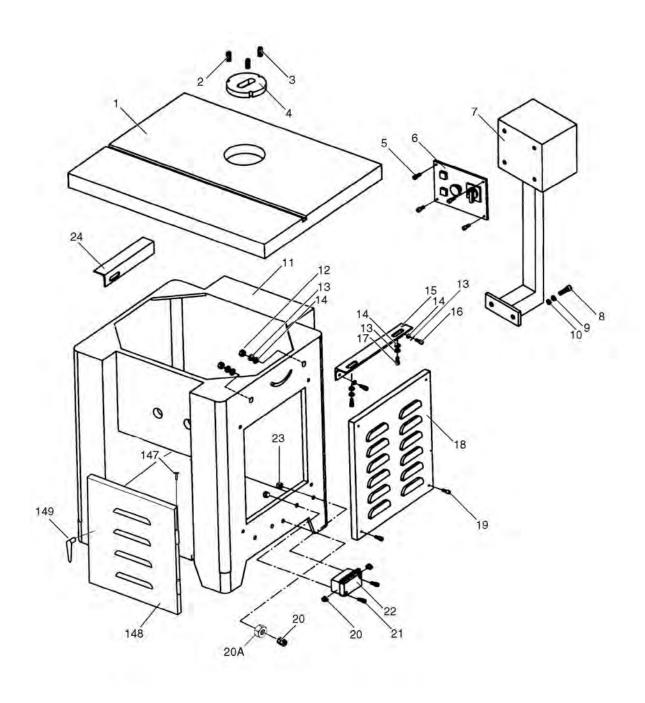




G7215Z Wiring Diagram



Cabinet Parts Breakdown





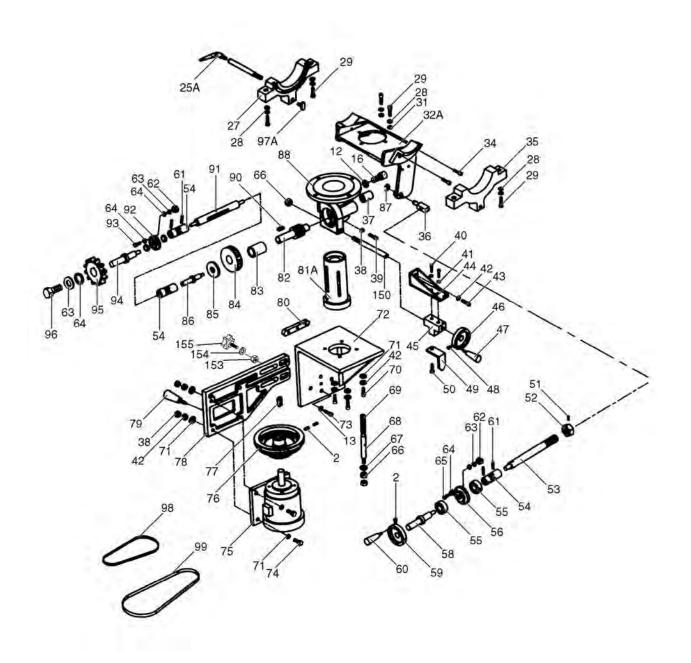
Cabinet Parts List

REF	PART #	DESCRIPTION
1	P5913Z001	TABLE
2	PSS23	SET SCREW 5/16-24 X 5/8
3	PS08	PHLP HD SCR 10-20 X 3/4
4	P5913Z004	TABLE INSERT
5	PS04	PHLP HD SCR 1/4-20 X 1/2
6	P5913Z006	SWITCH ASSY 5 HP (G5912Z)
6	P7215Z006	SWITCH ASSY 7.5 HP (G7215Z)
7	P5913Z007	SWITCH PEDESTAL ARM
8	PB16	HEX BOLT 3/8-16 X 1-1/2
9	PW02	FLAT WASHER 3/8
10	PN08	HEX NUT 3/8-16
11	P5913Z011	STAND ASSEMBLY
12	PN08	HEX NUT 3/8-16
13	PLW04	LOCK WASHER 3/8
14	PW02	FLAT WASHER 3/8

REF	PART #	DESCRIPTION
15	P5913Z015	TABLE BRACE (R)
16	PB18	HEX BOLT 3/8-16 X 1
17	PB21	HEX BOLT 3/8-16 X 3/4
18	P5913Z018	MOTOR COVER
19	PS02	PHLP HD SCR 1/4-20 X 3/4
20	P5913Z020	CONNECTOR
20A	P5913Z020A	CONNECTOR NUT
21	PS08	PHLP HD SCR 10-24 X 3/4
22	P5913Z022	ELECTRICAL BOX
23	PN07	HEX NUT 10-24
24	P5913Z024	TABLE BRACE (L)
147	P5913Z147	PIN
148	P5913Z148	COVER
149	P5913Z149	COVER HANDLE



Motor Parts Breakdown





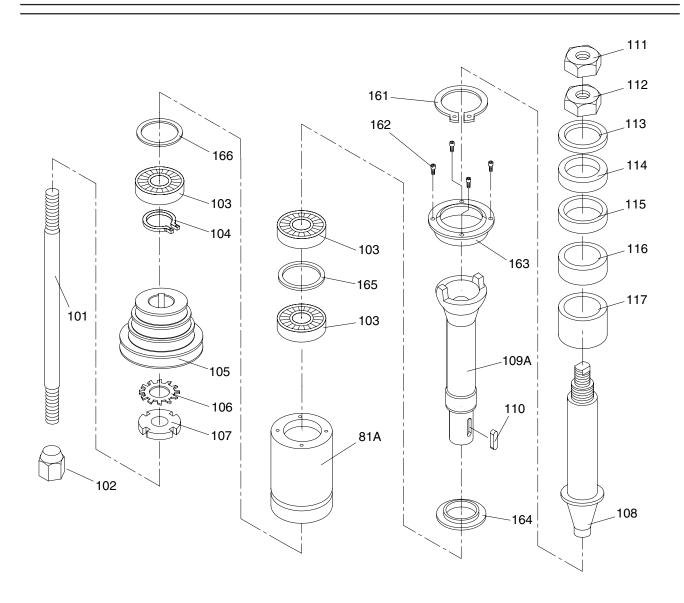
Motor Parts List

REF	PART #	DESCRIPTION
2	PSS23	SET SCREW 5/16-24 X 5/8
12	PN08	HEX NUT 3/8-16
13	PLW04	LOCK WASHER 3/8
16	PB18	HEX BOLT 3/8-16 X 1
25A	P5913Z025A	HANDLE LOCK
27	P5913Z027	TRUNNION SUPPORT (L)
28	PLW04	LOCK WASHER 3/8
29	PSB19	CAP SCREW 3/8-16 X 1-1/4
31	PW02	FLAT WASHER 3/8
32A	P5913Z032A	TRUNNION BRACKET
34	PSB19	CAP SCREW 3/8-16 X 1-1/4
35	P5913Z035	TRUNNION SUPPORT (R)
36	P5913Z036	HEX SHAFT 5/8-11
37	P5913Z037	COLLAR
38	PN02	HEX NUT 5/16-18
39	PB03	HEX BOLT 5/16-18 X 1
40	PB02	HEX BOLT 1/4-20 X 5/8
41	PW06	FLAT WASHER 1/4
42	PW07	FLAT WASHER 5/16
43	PB07	HEX BOLT 5/16-18 X 3/4
44	P5913Z044	FIXED SOCKET
45	P5913Z045	FIXED T-SOCKET
46	P5913Z046	HANDWHEEL
47	P1023009	HANDLE
48	PSS08	SET SCREW 5/16-18 X 1/2
49	P5913Z049	POINTER
50	PS18	PHLP HD SCR 10-24 X 1/4
51	PSS11	SET SCREW 1/4-20 X 1/4
52	P5913Z052	HEX NUT 5/8-11
53	P5913Z053	WORM SHAFT
54	P5913Z054	UNIVERSAL JOINT
55	P5913Z055	THRUST BEARING 15 X 32 X 12
56	P5913Z056	BASE GEAR SHAFT
58	P5913Z058	BAR LOCK
59	P5913Z059	HANDWHEEL
60	P5913Z060	HANDLE
61	PK12M	KEY 5 X 5 X 30
62	PN05	HEX NUT 1/4-20
63	PLW02	LOCK WASHER 1/4
64	PW06	FLAT WASHER 1/4

65 PB13 HEX BOLT 1/4-20 X 1-1/4 66 PN06 HEX NUT 1/2-13 67 PW01 FLAT WASHER 1/2 68 P5913Z068 SHAFT SPRING 3/8 x 340 69 P5913Z069 SPRING - HELICAL 3.4 X 20.3 70 PSB03 CAP SCREW 5/16-18 X 1 71 PW07 FLAT WASHER 5/16 72 P5913Z072 MOTOR PLATE 73 PB21 HEX BOLT 3/8-16 X 3/4 74 PB12 HEX BOLT 5/16-18 X 1-1/4 75 P5913Z075 MOTOR 5 HP (G5913Z) 75 P7215Z075 MOTOR PULLEY 76 P5913Z076 MOTOR PULLEY 77 PK41M KEY 8 X 8 X 40 78 P5913Z078 MOTOR BASE 79 P5913Z078 MOTOR BASE 79 P5913Z078 MOTOR BASE 80 P5913Z080 KEY 3/4 X 3/4 X 1 81A P5913Z081 QUILL 82 P5913Z082 GEAR WASHER 86 P5913Z084 GEAR	REF	PART #	DESCRIPTION
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76 P5913Z076 MOTOR PULLEY 77 PK41M KEY 8 X 8 X 40 78 P5913Z078 MOTOR BASE 79 P5913Z079 KNOB 80 P5913Z080 KEY 3/4 X 3/4 X 1 81A P5913Z081A QUILL 82 P5913Z082 GEAR SHAFT 83 P5913Z083 COLLAR 84 P5913Z084 GEAR 85 P5913Z085 GEAR WASHER 86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA28	75	P5913Z075	MOTOR 5 HP (G5913Z)
77 PK41M KEY 8 X 8 X 40 78 P5913Z078 MOTOR BASE 79 P5913Z079 KNOB 80 P5913Z080 KEY 3/4 X 3/4 X 1 81A P5913Z081A QUILL 82 P5913Z082 GEAR SHAFT 83 P5913Z084 GEAR 84 P5913Z084 GEAR 85 P5913Z085 GEAR WASHER 86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28	75	P7215Z075	MOTOR 7-1/2 HP (G7215Z)
78 P5913Z078 MOTOR BASE 79 P5913Z079 KNOB 80 P5913Z080 KEY 3/4 X 3/4 X 1 81A P5913Z081A QUILL 82 P5913Z082 GEAR SHAFT 83 P5913Z083 COLLAR 84 P5913Z084 GEAR 85 P5913Z085 GEAR WASHER 86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z1	76	P5913Z076	MOTOR PULLEY
79 P5913Z079 KNOB 80 P5913Z080 KEY 3/4 X 3/4 X 1 81A P5913Z081A QUILL 82 P5913Z082 GEAR SHAFT 83 P5913Z083 COLLAR 84 P5913Z084 GEAR 85 P5913Z085 GEAR WASHER 86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07<	77	PK41M	KEY 8 X 8 X 40
80 P5913Z080 KEY 3/4 X 3/4 X 1 81A P5913Z081A QUILL 82 P5913Z082 GEAR SHAFT 83 P5913Z083 COLLAR 84 P5913Z084 GEAR 85 P5913Z085 GEAR WASHER 86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	78	P5913Z078	MOTOR BASE
81A P5913Z081A QUILL 82 P5913Z082 GEAR SHAFT 83 P5913Z083 COLLAR 84 P5913Z084 GEAR 85 P5913Z085 GEAR WASHER 86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	79	P5913Z079	KNOB
82 P5913Z082 GEAR SHAFT 83 P5913Z083 COLLAR 84 P5913Z084 GEAR 85 P5913Z085 GEAR WASHER 86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	80	P5913Z080	KEY 3/4 X 3/4 X 1
83 P5913Z083 COLLAR 84 P5913Z084 GEAR 85 P5913Z085 GEAR WASHER 86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	81A	P5913Z081A	QUILL
84 P5913Z084 GEAR 85 P5913Z085 GEAR WASHER 86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	82	P5913Z082	GEAR SHAFT
85 P5913Z085 GEAR WASHER 86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	83	P5913Z083	COLLAR
86 P5913Z086 LOCK SCREW 87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	84	P5913Z084	GEAR
87 PR05M EXT RETAINING RING 15MM 88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	85	P5913Z085	GEAR WASHER
88 P5913Z088 SPINDLE BASE 90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	86	P5913Z086	LOCK SCREW
90 PK37M KEY 4 X 4 X 16 91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	87	PR05M	EXT RETAINING RING 15MM
91 P5913Z091 LOCK BAR 92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	88	P5913Z088	SPINDLE BASE
92 P5913Z092 BASE GEAR 93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	90	PK37M	KEY 4 X 4 X 16
93 PB31 HEX BOLT 1/4-20 X 1 94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	91	P5913Z091	LOCK BAR
94 P5913Z094 LOCK SCREW 95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	92	P5913Z092	BASE GEAR
95 P5913Z095 HANDWHEEL 96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	93	PB31	HEX BOLT 1/4-20 X 1
96 PB02 HEX BOLT 1/4-20 X 5/8 97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	94	P5913Z094	LOCK SCREW
97A P5913Z097A T-TYPE NUT 3/8-16 98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	95	P5913Z095	HANDWHEEL
98 PVA30 V-BELT A-30 4L300 99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	96	PB02	HEX BOLT 1/4-20 X 5/8
99 PVA28 V-BELT A-28 4L280 150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	97A	P5913Z097A	T-TYPE NUT 3/8-16
150 P5913Z150 SHAFT GEAR 152 PLW07 LOCK WASHER 1/2	98	PVA30	V-BELT A-30 4L300
152 PLW07 LOCK WASHER 1/2	99	PVA28	V-BELT A-28 4L280
	150	P5913Z150	SHAFT GEAR
	152	PLW07	LOCK WASHER 1/2
153 PW01 FLAT WASHER 1/2	153	PW01	FLAT WASHER 1/2
155 P5913Z155 KNOB	155	P5913Z155	KNOB



Spindle Parts Breakdown





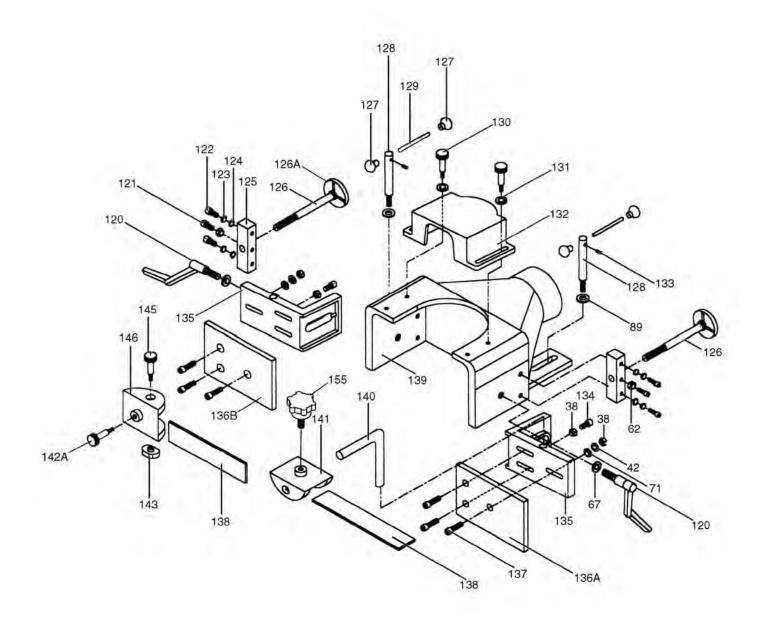
Spindle Parts List

REF	PART #	DESCRIPTION
81A	P5913 081A	QUILL
101	P5913 101	LOCK BOLT 5/8
102	P5913 102	LOCK NUT 5/8-11
103	P6008	BALL BEARING 6008 -K
104	PR23M	INT RETAINING RING 40MM
105	P5913 105	SPINDLE PULLEY
106	PTLW15M	EXT TOOTH WASHER 30MM
107	P5913 107	SPANNER NUT
108	P5912 036	SPINDLE 1 1/4"
109A	P5913 109A	SPINDLE CARTRIDGE
110	PK55M	KEY 7 X 7 X 40
111	PN03-1	HEX NUT 3/4-16 (LH)

REF	PART #	DESCRIPTION
112	PN32	HEX NUT 1-14
113	P5913 113	COLLAR 1-1/4 X 1/4 1PC
114	P5913 114	COLLAR 1-1/4 X 3/8 1PC
115	P5913 115	COLLAR 1-1/4 X 1/2 2PCS
116	P5913 116	COLLAR 1-1/4 X 3/4 2PCS
117	P5913 117	COLLAR 1-1/4 X 1 2PCS
161	PR43M	EXT RETAINING RING 50MM
162	PSB17M	CAP SCREW M47 X 10
163	P5913 163	OUTER DUST COVER
164	P5913 164	INNER DUST COVER
165	P5913 165	ALTERNATING RING
166	P5913 166	WAVY RING



Fence Guard Breakdown





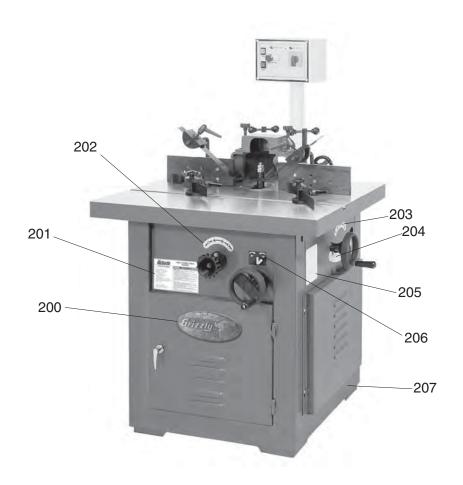
Fence Guard Parts List

REF	PART #	DESCRIPTION
38	PN02	HEX NUT 5/16-18
42	PW07	FLAT WASHER 5/16
62	PN05	HEX NUT 1/4-20
67	PW01	FLAT WASHER 1/2
71	PW07	FLAT WASHER 5/16
89	PW01	FLAT WASHER 1/2
120	P5913Z120	HANDLE LOCK
121	PB05	HEX BOLT 1/4-20 X 3/4
122	PB19	HEX BOLT 1/4-20 X 1/2
123	PLW02	LOCK WASHER 1/4
124	PW06	FLAT WASHER 1/4
125	P5913Z125	GUIDESCREW BRACKET
126	P5913Z126	GUIDESCREW
126A	P5913Z126A	HANDWHEEL
127	P5913Z127	KNOB
128	P5913Z128	GUIDE SHAFT
129	P5913Z129	BAR
130	P5913Z130	KNOB

REF	PART #	DESCRIPTION
131	PW07	FLAT WASHER 5/16
132	P5913Z132	GUARD PLATE
133	PSS11	SET SCREW 1/4-20 X 1/4
134	PB07	HEX BOLT 5/16-18 X 3/4
135	P5913Z135	FENCE BRACKET ASSY RH
136A	P5913Z136A	WOODEN FENCE (R)
136B	P5913Z136B	WOODEN FENCE (L)
137	PS11	PH SCREW 5/16-18 X 1-1/4
138	P5912Z118	HOLD-DOWN PLATE
139	P5912Z119	GUARD
140	P5912Z120	HOLD-DOWN BAR
141	P5912Z121	HOLD-DOWN BRACKET
142A	P5912Z167	KNOB BOLT 3/8-16 X 1
143	P5912Z123	HEX NUT
144	P5913Z144	FENCE BRACKET ASSY LH
145	P5912Z125	KNOB
146	P5912Z124	HOLD-DOWN BRACKET
155	P5913Z155	KNOB



Safety Label Parts Breakdown



REF	PART #	DESCRIPTION		
200	G8589	GRIZZLY LOGO PLATE		
201	P5913Z201	MACHINE ID LABEL		
202	P5913Z202	LOCK/UNLOCK LABEL		
203	P5913Z203	ROTATION LABEL		

KEF	PARI#	DESCRIPTION			
204	P5913Z204	TILT ANGLE SCALE			
205	P5913Z205	PULLEY SPEED LABEL			
206	P5913Z206	TILT HANDWHEEL LABEL			
207	P5913Z207	"GRIZZLY GREEN" TOUCH-UP PAINT			

AWARNING

Safety labels warn about machine hazards and ways to prevent injury. The owner of this machine MUST maintain the original location and readability of the labels on the machine. If any label is removed or becomes unreadable, REPLACE that label before using the machine again. Contact Grizzly at (800) 523-4777 or www.grizzly.com to order new labels.



WARRANTY AND RETURNS

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

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

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

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

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

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





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Grizzy WARRANTY CARD

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9.	Would you allow us to use yo Note: We never use names	our name as a reference for Grizzly more than 3 times.	-
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