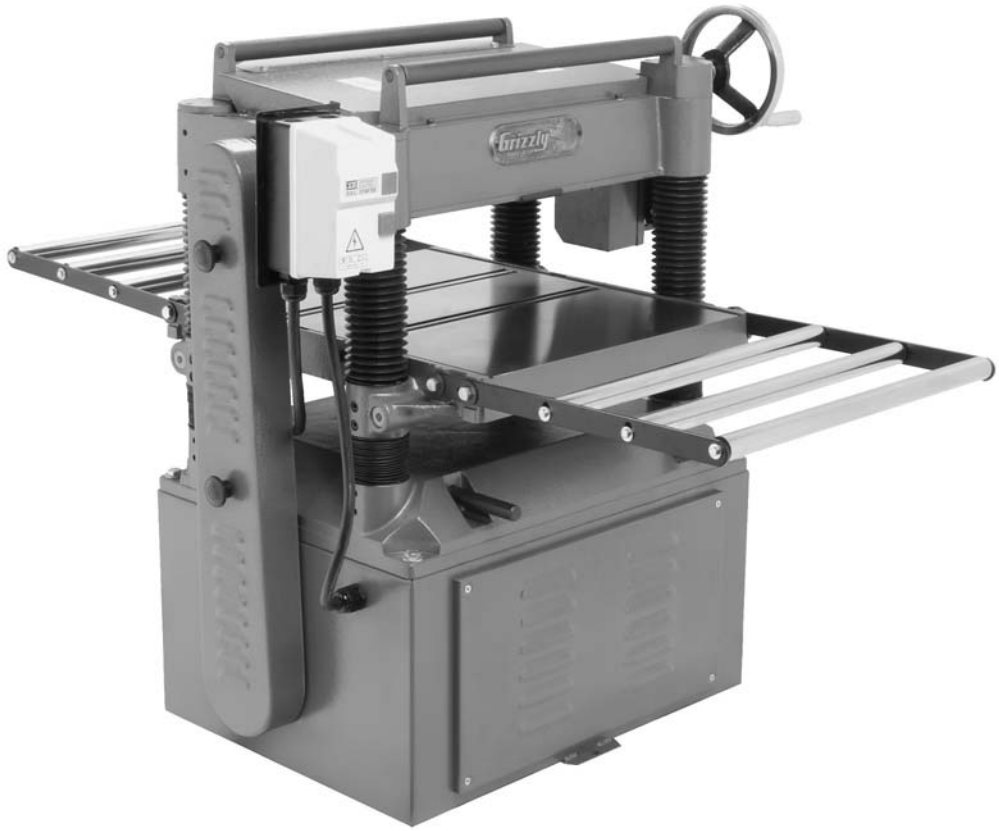
Grizzly Industrial, Inc.®

20" SPIRAL CUTTERHEAD PLANER

MODEL G1033ZX

INSTRUCTION MANUAL



#TR7005 PRINTED IN TAIWAN

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.

Table of Contents

INTRODUCTION

Foreword

We are proud to offer the Model G1033ZX 20" Spiral Cutterhead Planer. 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.

We are pleased to provide this manual with the Model G1033ZX. It was written to guide you through assembly, review safety considerations, and cover general operating procedures. It represents our effort to produce the best documentation possible.

The specifications, drawings, and photographs illustrated in this manual represent the Model G1033ZX as supplied 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

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

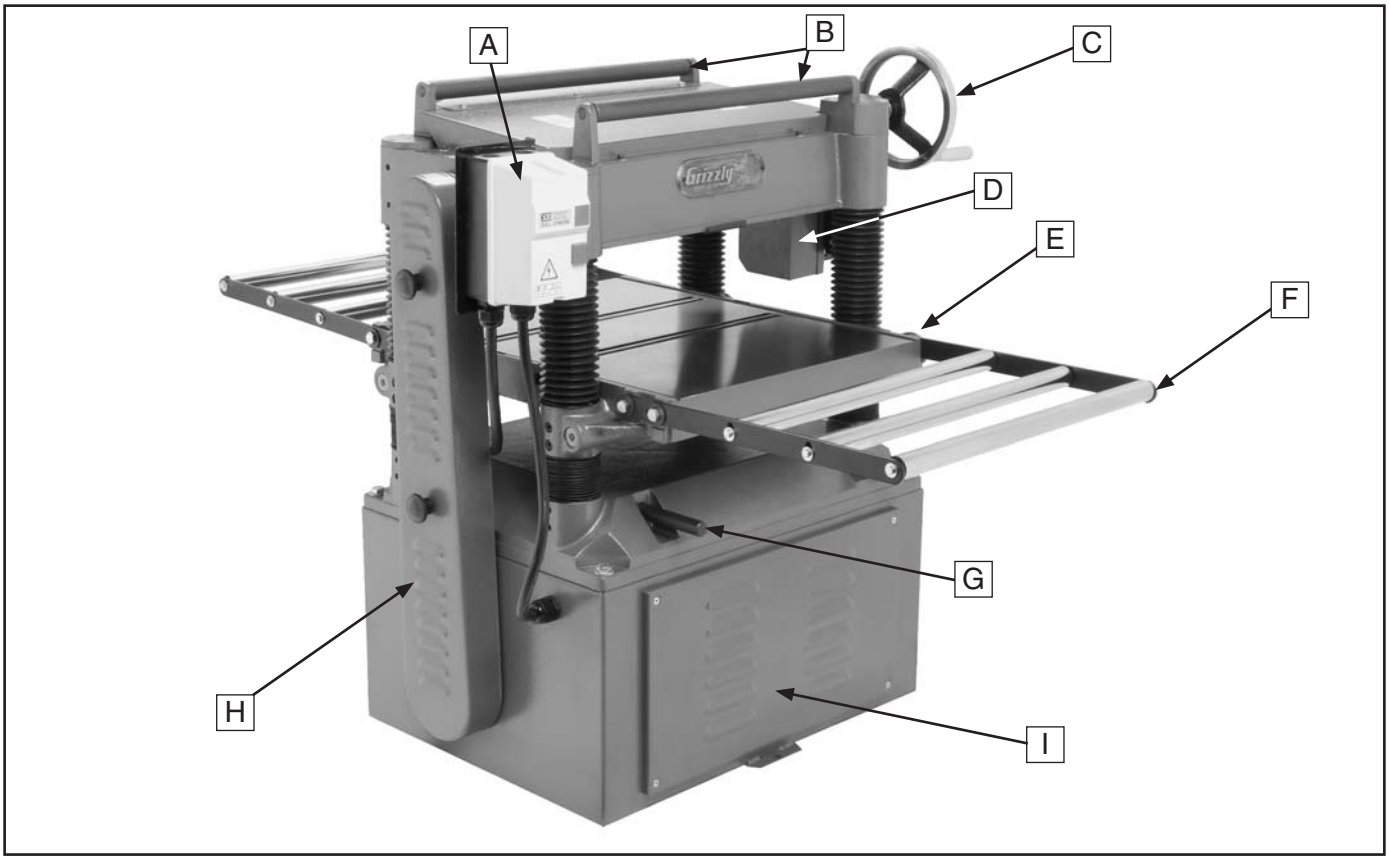
Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

MODEL G1033ZX
20" SPIRAL CUTTERHEAD PLANER

Design Type	Floor Model
Overall Dimensions:	
Table Size	25¾" x 20"
Height	41"
Overall Depth	58"
Overall Width	39"
Shipping Weight	785 lbs.
Base Dimensions	27½" L x 23" W x 13¾" H
Crate Size	29" L x 40" W x 44" H
Footprint	22" x 28"
Capacities:	
Maximum Depth of Cut	5/64"
Maximum Width of Cut	20"
Maximum Cutting Height	8⅝"
Minimum Stock Thickness	¼"
Minimum Stock Length	7"
Cutterhead Diameter	3⅛"
Cutterhead Speed	4800 RPM
Cuts per Minute	19,200
Feed Rates	16 FPM & 20 FPM
Cuts Per Inch (Effective)	25 & 20
Construction:	
Table	Precision-Ground Cast Iron
Infeed Roller	Spiral Serrated / Steel
Outfeed Roller	Rubber
Stand	Formed Steel
Cutterhead	4 Row Spiral, 96 Inserts
Carbide Insert Size	14mm x 14mm x 2mm
Motor:	
Type	TEFC Capacitor-Start Induction
Horsepower	5 HP
Phase / Voltage	Single-Phase / 220V
Amps	30
Cycle / RPM	60 Hertz / 3450 RPM
Switch	Magnetic with Thermal Overload Protector
Power Transfer	Triple V-Belt Drive
Bearings	Shielded & Lubricated Ball Bearings
Features:	
Roller Extension Tables	Chrome
Table Locks	Two
Dust Port	5"
Measurement Scale	Inch & Metric
Bed Rollers	2 Adjustable
	Board Return Rollers

Specifications, while deemed accurate, are not guaranteed.

Identification



A. Magnetic Switch
B. Return Rollers
C. Table Height Handwheel
D. Gearbox
E. Table Lock Knob
F. Extension Rollers
G. Lifting Bar (1 of 4)
H. V-Belt Cover
I. Motor Access Panel

SECTION 1: SAFETY

⚠WARNING

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

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

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

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

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

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

⚠WARNING

Safety Instructions for Machinery

1. **READ THROUGH 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 AN ANSI APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST.** Wood dust is a carcinogen and can cause cancer and severe respiratory illnesses.
4. **ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY.** Machinery noise can cause permanent hearing damage.
5. **WEAR PROPER APPAREL.** DO NOT wear loose clothing, gloves, neckties, rings, or jewelry which may get caught in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
6. **NEVER OPERATE MACHINERY WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Be mentally alert at all times when running machinery.

⚠WARNING
Safety Instructions for Machinery

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

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

9. **MAKE WORKSHOP CHILD PROOF.** 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 LIT.** Clutter and dark shadows may cause accidents.

13. **USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.** Undersized cords overheat and lose power. Replace extension cords if they become damaged. DO NOT use extension cords for 220V machinery.

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 and alignment of parts, broken parts, part mounting, loose bolts, and any other conditions that may affect machine operation. Repair/replace damaged parts.

19. **USE RECOMMENDED ACCESSORIES.** Refer to the instruction manual for recommended accessories. The use of improper accessories may cause 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.** Keep proper footing and balance at all times.

23. **MANY MACHINES WILL EJECT THE WORKPIECE TOWARD THE OPERATOR IF OPERATED IMPROPERLY.** Know and avoid conditions that cause workpiece "kickback."

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

25. **BE AWARE THAT CERTAIN WOODS MAY CAUSE AN ALLERGIC REACTION** in people and animals, especially when exposed to fine dust. Make sure you know what type of wood dust you will be exposed to and always wear an approved respirator.

⚠WARNING
Additional Safety for Planers

1. **INSTRUCTION MANUAL:** This machine presents significant safety hazards to untrained users. Read/understand this entire manual before starting the planer.

2. **INFEED CLEARANCE SAFETY:** The infeed roller is designed to pull material into the cutterhead. Always keep hands, clothing, and long hair away from the infeed roller during operation to prevent serious injury.

3. **BODY POSITION WHILE OPERATING:** The workpiece may kick out during operation. To avoid getting hit, stand to the side of the planer during the entire operation.

4. **PLANING CORRECT MATERIAL:** Planing materials not designed for this planer creates a hazard for yourself and the machine. Only plane natural wood stock with this planer. DO NOT plane MDF, plywood, laminates, or other synthetic or man-made products.

5. **GRAIN DIRECTION:** Planing across the grain is hard on the planer and may cause the workpiece to kick out. Always plane in the same direction or at a slight angle with the wood grain.

6. **CLEAN STOCK:** Planing stock with nails, staples, or loose knots MAY cause debris to kick out at the operator and WILL damage your cutters when they contact the cutterhead. Always thoroughly inspect and prepare stock to avoid these hazards.

7. **CUTTING LIMITATIONS:** The planer may kick out a workpiece at the operator or be damaged if pushed beyond these limits:
   - Maximum Depth of Cut ..... 5/64"
   - Minimum Board Length ..... 12"
   - Minimum Board Thickness ..... 1/4"
   - Maximum # of Boards at One Time 1

8. **LOOKING INSIDE PLANER:** Wood chips fly around inside the planer at a high rate of speed. DO NOT look inside the planer or remove guards/covers during operation.

9. **REMOVING JAMMED WORKPIECES:** Attempting to remove jammed workpieces while the planer is running may cause serious injury to the operator. Always stop the planer and disconnect power before removing jams.

10. **DULL/DAMAGED CUTTERS:** The planer may kick out a workpiece at the operator or give poor finish results if it is operated with dull or damaged cutters.

11. **UNPLUGGING DURING ADJUSTMENTS:** When connected to power, the planer can be accidentally turned **ON**. Always disconnect power when servicing or adjusting the components of the planer.

⚠WARNING

Like all machines there is potential danger associated with the Model G1033ZX. 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

220V Single-Phase

⚠WARNING

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

Amperage Draw

The motor on the Model G1033ZX will draw the following amps:

5 HP Motor, 220V.....30 Amps

Minimum Circuit Requirements

Only connect your machine to a circuit that meets the requirements below. Always check to see if the wires and circuit breaker in your circuit are capable of handling the amperage draw from your machine, as well as any other machines that could be operating on the same circuit. If you are unsure, consult a qualified electrician.

Minimum Circuit Requirement.....35 Amp

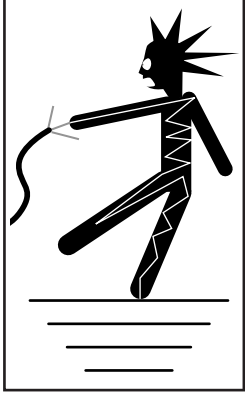
Plug Type

We recommend using the following type of plug and receptacle to connect your machine to power:

Recommended Plug Type..... L6-30

Grounding

In the event of an electrical short, grounding reduces the risk of electric shock. This tool is equipped with a power cord that has a grounding wire, which must be properly connected to the grounding prong on the plug; likewise, the outlet must be properly installed and grounded. All electrical connections must be made in accordance with local codes and ordinances.



⚠WARNING

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!

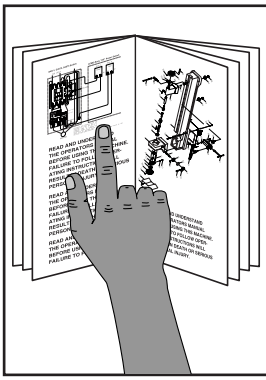
Extension Cords

We do not recommend the use of extension cords on 220V equipment. Instead, arrange the placement of your equipment and the installed wiring to eliminate the need for extension cords.

If you find it absolutely necessary to use an extension cord at 220V with your machine, check with a qualified electrician for the correct sizing, type, and maximum possible length for your needs.

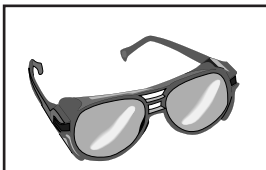
SECTION 3: SET UP

Set Up Safety



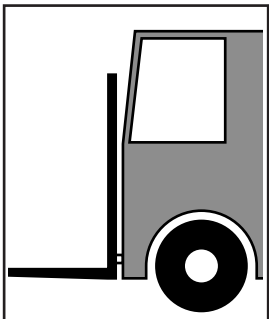
⚠WARNING

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



⚠WARNING

Wear safety glasses during the entire set up process!



⚠WARNING

This planer is a heavy machine (785 lbs. shipping weight). DO NOT over-exert yourself while unpacking or moving your machine—use power lifting equipment.

Unpacking

The Model G1033ZX was carefully packed when it left our warehouse. 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, you should inventory the contents.

Items Needed for Set Up

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

Description	Qty
• Straightedge 4' (or longer)	1
• Rotacator (see **Page 21**)	1
• Phillips Screwdriver	1
• Flat Head Screwdriver	1

Inventory

Box Inventory (Figure 1)	Qty
A. Planer Unit	1
B. Dust Hood 5"	1
C. Magnetic Switch Assembly	1
D. Table Extension Roller Assemblies	2
E. Handwheel	1
F. Hardware and Tools	
—Hex Bolts M6-1 x 12	6
—Flat Washers 6mm	6
—Hex Bolts M10-1.5 x 25	8
—Flat Washers ½"	8
—Torx T-Handle Wrench	1
—Flat Hd Torx Screws M6-1 x 15	20
—Torx Bits T-20	10
—Indexable Carbide Inserts	5
—Hex Wrenches 3, 4, 5, 6mm	4
—Wrenches 8/10, 12/14, 17/19	3

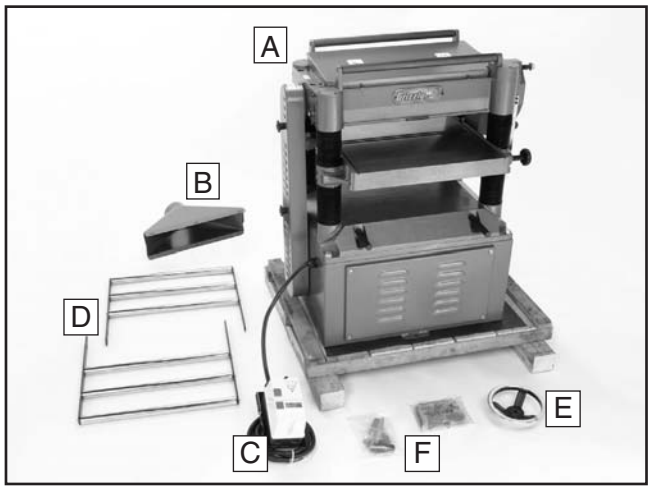


Figure 1. Planer box inventory.

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.

Clean Up

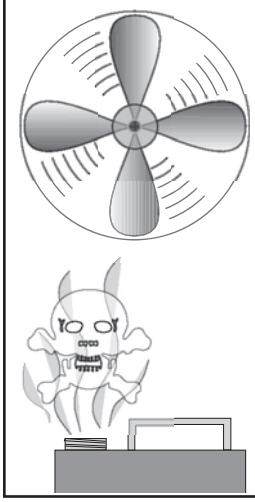
The unpainted surfaces are coated with a waxy oil to protect them from corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as Grizzly's G7895 Degreaser. To clean thoroughly, some parts may need to be removed. **For optimum performance from your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

These items are coated and must be cleaned:

1. Cutterhead
2. Table
3. Infeed/Outfeed Rollers

⚠WARNING

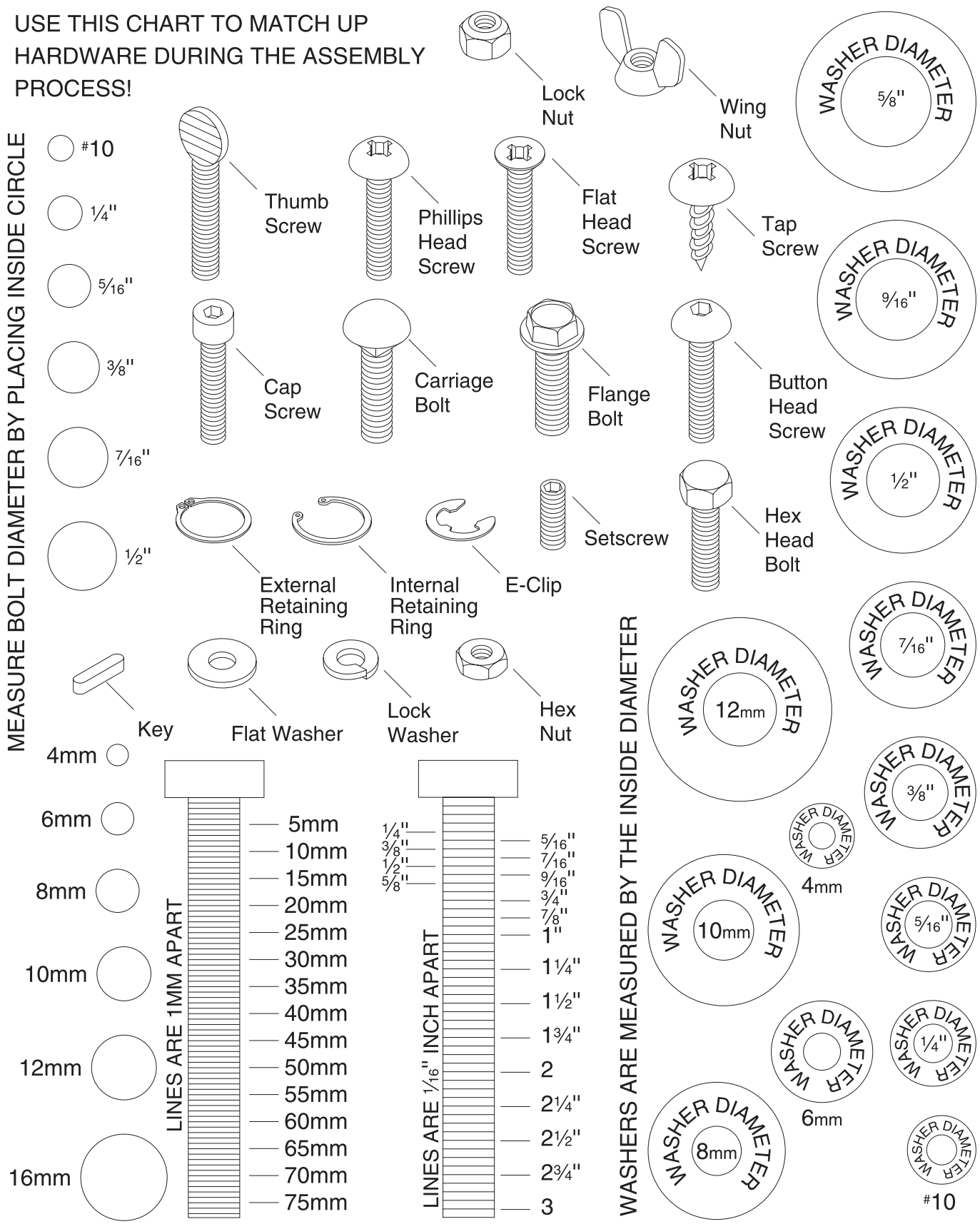
Gasoline and petroleum products have low flash points and could cause an explosion or fire if used to clean machinery. DO NOT use gasoline or petroleum products to clean the machinery.



⚠CAUTION

Many of the solvents commonly used to clean machinery can be toxic when inhaled or ingested. Lack of ventilation while using these solvents could cause serious personal health risks or fire. Take precautions from this hazard by only using cleaning solvents in a well ventilated area.

Hardware Recognition Chart



Site Considerations

Floor Load

The Model G1033ZX has a shipping weight of 785 lbs. and has a base footprint of 22" W x 28" D. Most floors are suitable for your machine. Some residential floors may require additional reinforcement to support both the machine and operator.

Working Clearances

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 planer. See **Figure 2** for the minimum working clearances of the Model G1033ZX.

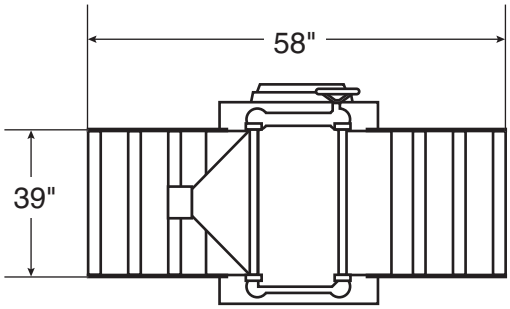
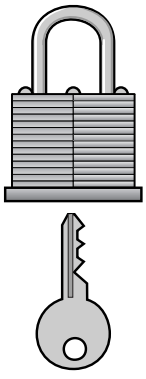


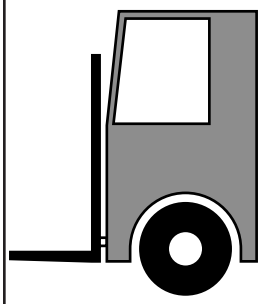
Figure 2. Minimum working clearances.



⚠CAUTION

Unsupervised children and visitors inside your shop could cause serious personal injury to themselves. Lock all entrances to the shop when you are away and DO NOT allow unsupervised children or visitors in your shop at any time!

Moving & Placing Base Unit



⚠WARNING

This planer is a heavy machine with a shipping weight of 785 lbs. Serious personal injury may occur if safe moving methods are not followed. To be safe, you will need assistance and power equipment when moving the shipping crate and removing the machine from the crate.

The cabinet stand on the Model G1033ZX is equipped with lifting bars (see **Page 5**) to lift and place the planer.

When lifting the planer with a forklift, place shop rags or cardboard between the forks and cabinet base so you do not scratch the paint.

Figure 3 shows the planer being lifted correctly with a forklift.

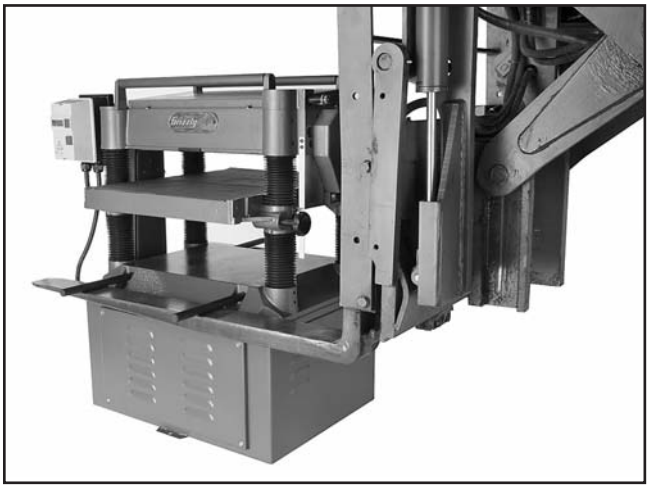


Figure 3. Lifting planer with forklift.

Extension Rollers

Components and Hardware Needed: **Qty**
Table Extension Roller Assemblies 2
Hex Bolts M10-1.5 x 25 8
Flat Washers ½" 8

Tools Needed: **Qty**
Wrench or Socket 14mm 1
Straightedge 1

To attach the table extension rollers:

1. Attach the table extension rollers to the planer table with the hex bolts and flat washers, as shown in **Figure 4**, but do not fully tighten the bolts at this time.

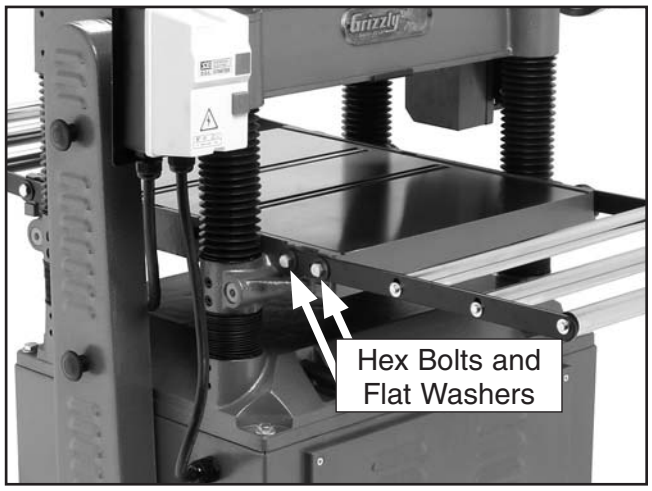


Figure 4. Extension roller attached to bed.

2. Using the straightedge as a guide, position the rollers even with the table and fully tighten the hex bolts.

Handwheel

Components and Hardware Needed: **Qty**
Handwheel 1

Tools Needed: **Qty**
Wrench or Socket 17mm 1

To install the handwheel:

1. Remove the hex nut and flat washer already mounted on the handwheel shaft, located on the right side of the head casting.

2. Place the handwheel on the shaft and secure it with the hex nut and flat washer, as shown in **Figure 5**.

Figure 5. Installing handwheel on shaft.

Dust Hood

Components and Hardware Needed: **Qty**
Dust Hood 1
Hex Bolts M6-1 x 12 6
Flat Washers 6mm 6

Tools Needed: **Qty**
Wrench or Socket 10mm 1

⚠CAUTION

DO NOT attach the dust hood if you do not intend to connect your planer to a dust collection system. Accumulated wood chips could cause a malfunction, resulting in personal injury or damage to the planer.

To install the dust hood:

1. Attach the dust hood to the top of the planer with the hex bolts and flat washers, as shown in **Figure 6**.

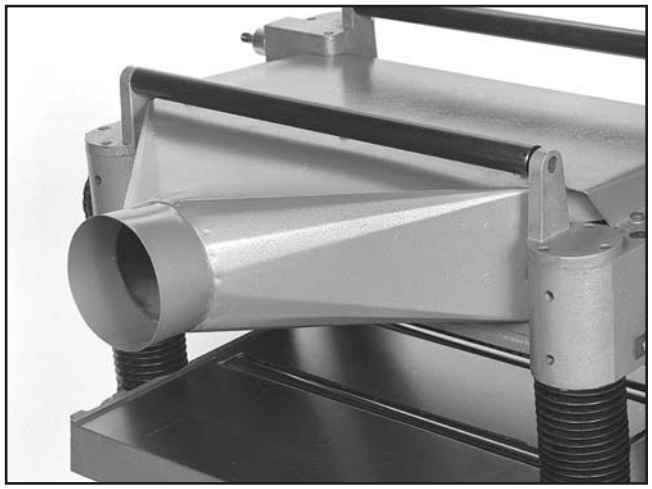


Figure 6. Dust hood attached.

Switch

Components and Hardware Needed: **Qty**
Starter Switch Assembly 1

Tools Needed: **Qty**
Hex Wrench 5mm 1

The starter switch assembly is pre-wired to the motor, but must be mounted to the head casting.

To mount the starter switch:

1. Remove the two cap screws already installed on the left-hand side of the head casting.

2. Attach the switch bracket with the two cap screws, as shown in **Figure 7**.

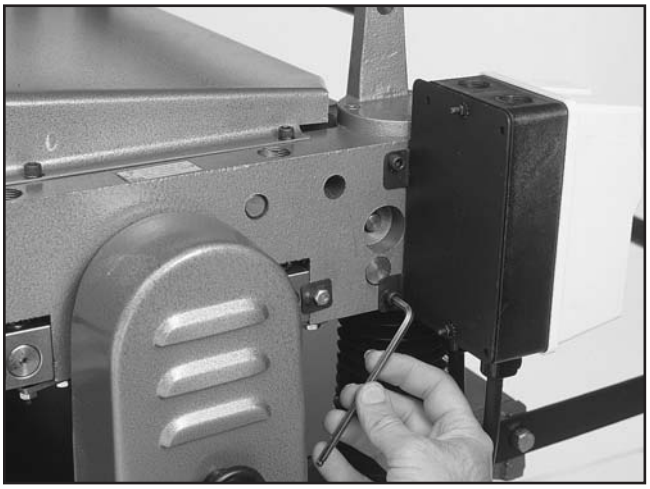


Figure 7. Attaching switch.

Gearbox Oil Level

Tools Needed:	Qty
Hex Wrench 6mm	1
Wrench or Socket 10mm	1
Wrench or Socket 14mm	1

Before starting your machine for the first time, make sure the gearbox has oil.

To check the gearbox oil level:

1. Remove the gearbox fill plug (**Figure 8**).

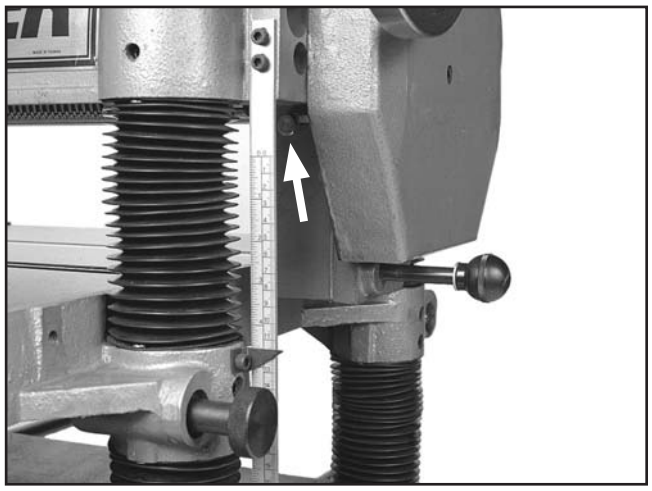


Figure 8. Gearbox fill plug location.

2. Using the short end of the hex wrench, dip it inside the fill hole and remove it.

—If the end of the hex wrench is coated with oil, then the gearbox oil level is okay. Replace the fill plug and skip to the next section.

—If the end of the hex wrench is not coated with oil, then you need to add more oil. Refer to **Page 24** for instructions on how to do this.

Connecting to Power

Now is the time to connect your planer to the power source. Make sure you have read Circuit Requirements on **Page 9**, before doing so.

Test Run

⚠WARNING

Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing rolled up and long hair tied up and away from machinery.

To perform a test run:

1. Read the entire instruction manual, and make sure oil is in the gearbox.

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

3. Put on safety glasses, and secure loose clothes or long hair.

4. Press the green button to turn the machine **ON**. The planer should run smoothly with little or no vibration.

—If you suspect any problems, immediately stop the planer by pushing the red button. Troubleshoot/fix any problems before starting the planer again.

—If you need any help with your planer call our Tech Support at (570) 546-9663.

Tighten V-Belts

The final step in the set up process must be done after approximately 16 hours of operation. During this first 16 hours the V-belts will stretch and seat into the pulley grooves. After this 16 hours, the V-belts must be tensioned or your planing results will suffer. Refer to **Page 23** when you are ready to perform this important adjustment.

Note: Pulleys and belt run very hot. This is a normal condition. Allow them to cool before making adjustments.

Note: A collection of black belt dust at the bottom of the belt housing is a normal during the life of the machine.

Recommended Adjustments

For your convenience, the adjustments listed below have been performed at the factory and no further setup is required to operate your machine.

However, because of the many variables involved with shipping, some of these adjustments may need to be repeated to ensure optimum cutting results. Keep this in mind as you start to use your new planer.

Step-by-step instructions for these adjustments can be found in SECTION 7: SERVICE ADJUSTMENTS.

1. Table Parallelism (**Page 26**).
2. Chain Drive Tension (**Page 26**).
3. Infeed/Outfeed Roller Height (**Page 28**).
4. Spring Tension (**Page 30**).
5. Chip Breaker Height (**Page 28**).
6. Pressure Bar Height (**Page 28**).
7. Chip Deflector Positioning (**Page 31**).

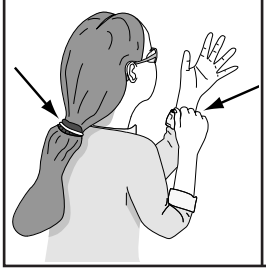
SECTION 4: OPERATIONS

Operation Safety

⚠WARNING

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





⚠WARNING

Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing and long hair away from moving machinery.

NOTICE

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

Basic Operation

The basic steps of operating the planer are as follows:

1. Put on safety glasses.

2. Unless your workpiece starts very flat, surface plane the workpiece on a jointer until it is flat.

3. Start the planer.

4. Adjust table height to slightly lower than your workpiece height to ensure the first cut is as light as possible.

5. Place the flat side of the board down on the table, and feed the workpiece through the planer, making sure not to stand directly in front or behind the workpiece.

—If the cut is too heavy and bogs down the planer, turn the planer **OFF** immediately, allow it to come to a complete stop, remove the workpiece, and repeat **Steps 4 & 5**.

6. Measure your workpiece thickness and adjust the table height as necessary to take a lighter or heavier pass, depending on your needs.

Operation Tips

- Inspect lumber for defects, warping, cupping, twisting, and for foreign objects (nails, staples, imbedded gravel, etc,). If you have any question about the quality of your lumber, do not use it. Remember, wood stacked on a concrete floor can have small pieces of stone or concrete pressed into the surface.
- Use the full width of the planer. Alternate between the left, the right, and the middle when feeding lumber into the planer. Your cutters will remain sharp much longer.
- Scrape all glue off of joined boards before planing.
- Plane ONLY natural wood fiber. No wood composites.
- Plane wood with the grain. Never feed end-cut or end-grained lumber into your planer.
- Do not use boards with knots, splits, cross-grain or other obvious blemishes or defects. They can damage the machine and pose the possibility of operator injury.
- Keep your work area clear.
- When making multiple passes through the planer on long stock, use the stock return rollers on the top of the machine to move the material back to the infeed side of the machine.
- Avoid planing wood with a high water content. Wood with more than 20% moisture content or wood exposed to rain or snow, will plane poorly and cause excessive wear to the cutters and motor. Excess moisture can also hasten rust and corrosion.

Feed Speed

The infeed and outfeed rollers power the stock through the planer while keeping boards flat and providing a consistent rate of movement.

The power feed features 16 FPM and 20 FPM feed rates. The speed should be changed when the machine is running.

Figure 9 illustrates the three different positions of the feed control knob. Moving the knob toward the machine (Position B) produces the 20 FPM feed speed; moving away from the machine (Position D) produces 16 FPM; and moving the knob to the center position (Position C) places the gearbox in neutral.

NOTICE

Change the speeds when the planer is running, but DO NOT attempt to change speeds during any cutting operations or damage to the gearbox will result.

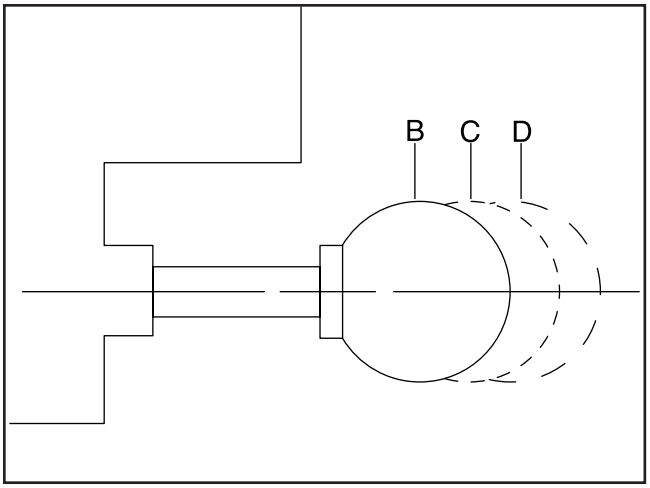


Figure 9. Feed control knob positions.

Bed Rollers

Adjustment Height Range .....0.002"–0.020"

Tools Needed:	**Qty**
Hex Wrench 3mm	1
Open End Wrench 14mm	1
Rotacator (optional, **Page 21**)	1

The height of the bed rollers will vary, depending on the type of material you intend to plane, but as a general rule keep the roller height within 0.002"–0.020" above the table. When planing rough stock, set the rollers high to keep the lumber from dragging along the bed. When planing milled lumber, set the rollers low to help minimize snipe.

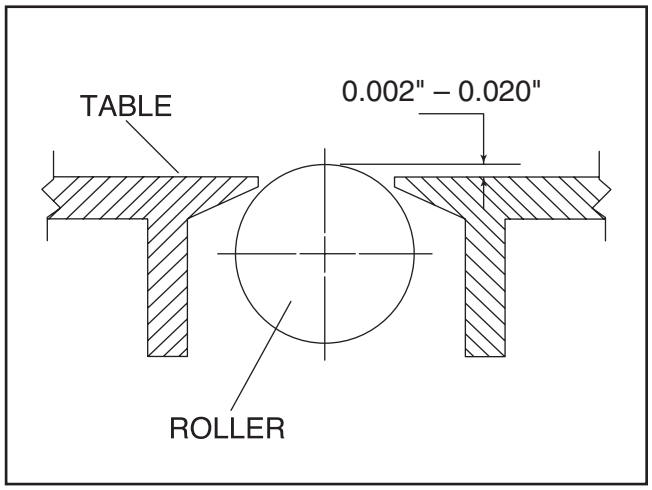


Figure 10. Bed roller height range.

To ensure accurate results and make the adjustment process quicker and easier, we recommend using a Rotacator (see **Page 21**) to gauge the bed roller height from the table. If a Rotacator is not available, a straightedge and feeler gauges can be used, but care must be taken to achieve satisfactory results.

Note: Misaligned bed rollers can be the root of many planing problems.

To adjust the bed rollers:

1. Lower the table to give yourself at least 4" of working room below the cutterhead.

2. Loosen the locking set screws (**Figure 11**) above the roller adjusters (4 total).

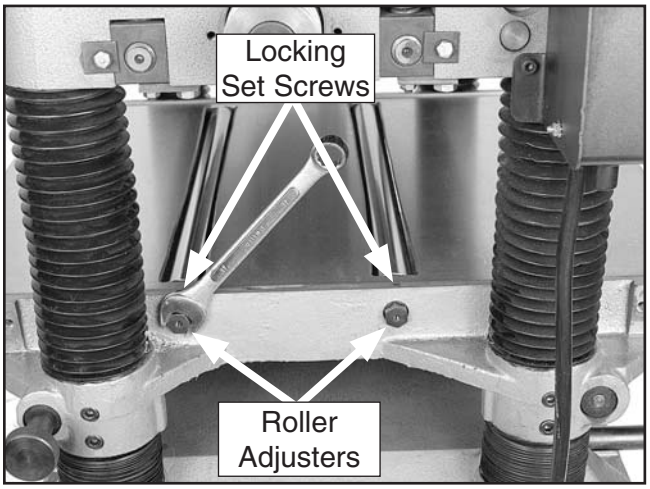


Figure 11. Bed roller controls (only one side shown).

3. Raise or lower the rollers by rotating the adjusters to reach your desired height.

4. Verify both sides of the bed roller are at the same height and lock them in position with the locking set screws.

5. Double check the roller heights to make sure they did not move when you locked them (if they did, repeat the procedure).

SECTION 5: ACCESSORIES

G1738—Rotacator™ Precision Planer Tool
The Rotacator is a dial indicator on a magnetic base and is designed for quickly and accurately setting the critical tolerances needed when adjusting any planer, so that nasty surprises such as non-parallel and chattered cuts can be eliminated. Helps adjust infeed/outfeed rollers, pressure bars, chip breakers, and bed rollers. Also a great setup tool for other machines! Accurate to 0.001". Indicator rotates 360˚.

Figure 12. Rotacator™ Precision Planer Tool.

H5307—10 Pack of Indexable Carbide Inserts
Replacement carbide inserts for G1033ZX.

G7315—Heavy-Duty SHOP FOX® Mobile Base
Make your machine mobile with this popular patented mobile base. The unique outrigger type supports increase stability and lower machine height. This super heavy duty mobile base is rated for up to a 1200 lb. capacity.

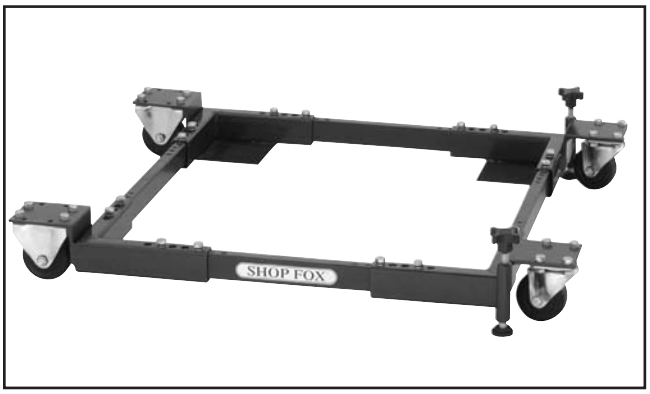


Figure 13. G7315 SHOP FOX® Mobile Base.

G3639—Power Twist® V-Belt - 3/8" x 48"
Smooth running with less vibration and noise than solid belts. The Power Twist® V-belts can be customized in minutes to any size—just add or remove sections to fit your needs. Requires four Power Twist® V-belts to replace the stock V-belts on your Model G1033ZX.

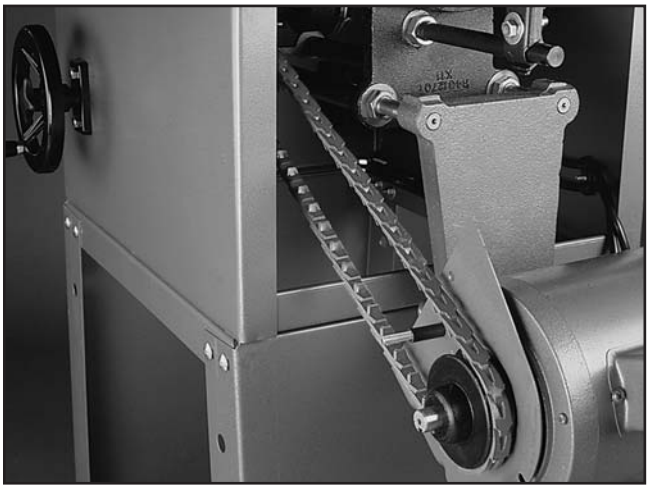


Figure 14. G8127 Power Twist® V-Belt.

G9256—6" Dial Caliper
G9257—8" Dial Caliper
G9258—12" Dial Caliper
Essential for planing, jointing, or sanding to critical tolerances. These traditional dial calipers are accurate to 0.001" and can measure outside surfaces, inside surfaces, and heights/depths. Features stainless steel, shock resistant construction and a dust proof display. An absolute treat for the perfectionist!

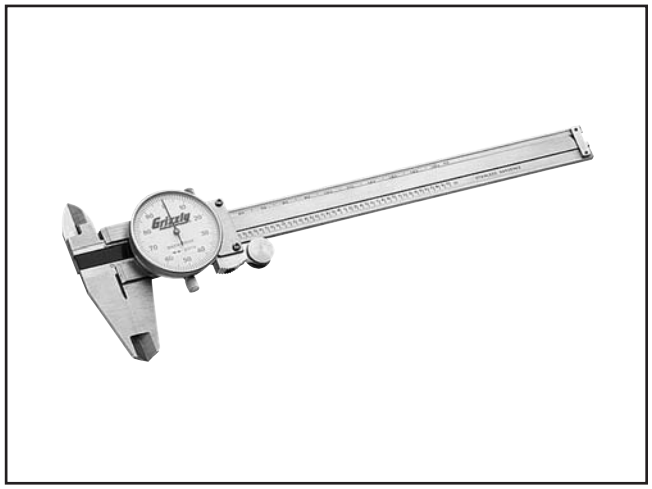


Figure 15. Grizzly® Dial Calipers.

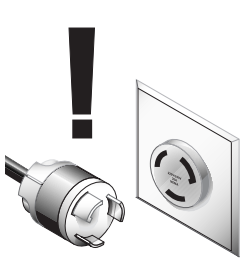
H1302—Standard Earmuffs
H4979—Deluxe Twin Cup Hearing Protector
H4977—Work-Tunes Radio Headset Earmuffs
Protect yourself comfortably with a pair of cushioned earmuffs. Especially important if you or employees operate for hours at a time.

Figure 16. Our most popular earmuffs.

G5562—SLIPIT® 1 Qt. Gel
G5563—SLIPIT® 12 oz Spray
G2871—Boeshield® T-9 12 oz Spray
G2870—Boeshield® T-9 4 oz Spray
H3788—G96® Gun Treatment 12 oz Spray
H3789—G96® Gun Treatment 4.5 oz Spray

Figure 17. Recommended products for protecting unpainted cast iron/steel parts on machinery.

SECTION 6: MAINTENANCE



⚠WARNING

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

Schedule

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

Daily:
- Clean unpainted cast iron part of table
- Lubricate feed rollers

Weekly Maintenance:
- Clean cutterhead
- Lubricate four columns

Monthly Check:
- Inspect V-belt tension, damage, or wear
- Clean/vacuum dust buildup from inside cabinet and off motor
- Lubricate worm gear
- Lubricate chain
- Lubricate drive chain

Yearly:
- Change gear box oil (should be performed after the first 20 hrs when planer is new)

Cleaning

Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth—this ensures moisture from wood dust does not remain on bare metal surfaces. Treat all unpainted cast iron and steel with a non-staining lubricant after cleaning. We recommend products like SLIPIT®, G96® Gun Treatment, or Boeshield® T-9 (see **Page 22** for more details).

V-Belts

Adjust/replace belts by using the motor mount bolts (**Figure 18**) to control the tension. The correct tension for the V-belts is 1/4" deflection when pushed in the center with moderate pressure. After the first 16 hours of belt life, retension them, as they will stretch and seat during this time.

Always replace the V-belts with a matched set of 3 belts, or belt tension may not be even among the 3 belts and this cause premature belt failure.

Consider replacing stock belts with Power Twist V-belts (see **Page 21**) to reduce vibration and noise, and increase belt lifespan.

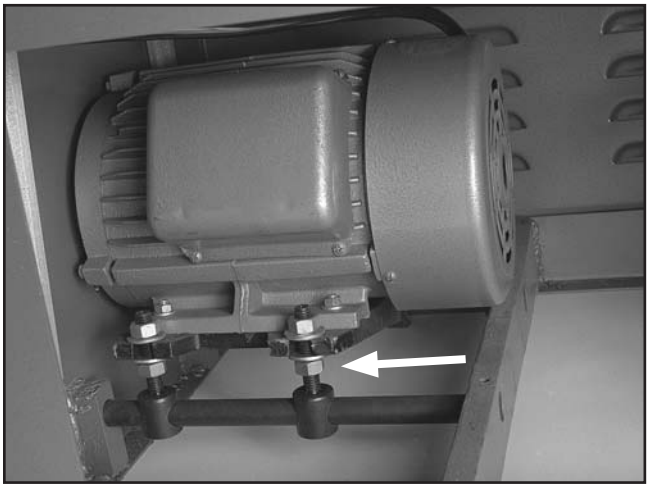
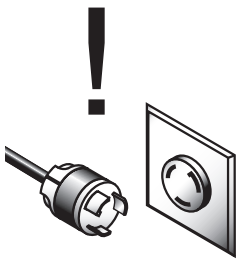


Figure 18. Motor mount bolts for adjusting belt tension.

Lubrication

The Model G1033ZX features factory-sealed bearings. A sealed bearing requires no lubrication during its lifetime. Should a bearing fail, your planer will probably develop a noticeable rumble/vibration, which will increase when the machine is put under load. Bearings are standard sizes and can be replaced through Grizzly.

Proper lubrication of other planer components are essential for long life and trouble-free operation. Below is a list of components that require periodic lubrication. Schedules are based on daily use. Adjust accordingly for your level of use.



⚠WARNING

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

Columns/Lead Screws: The four columns should be lubricated weekly with light oil. Unfasten dust covers to gain access. The four lead screws should be lubricated with general purpose grease once a month.

Worm Gear: The worm gear should be inspected monthly and lubricated when needed. Remove the worm gear box to inspect. See parts diagram for location.

Chain: The table height adjustment chain should be inspected monthly and lubricated when needed. A good quality bicycle chain lubricant works well for periodic lubrication.

Gear Box: Gear box oil should be changed after the first 20 hours of operation (see **Figure 19**). It is not necessary to remove the chain drive cover to access the fill/drain plugs, but doing so will give you easier access.

Replace with 80W-90W gear oil. Inspect levels periodically and change yearly. Replace gear oil more frequently under heavy use. Fill until oil reaches the top of the filler plug port for correct oil level.

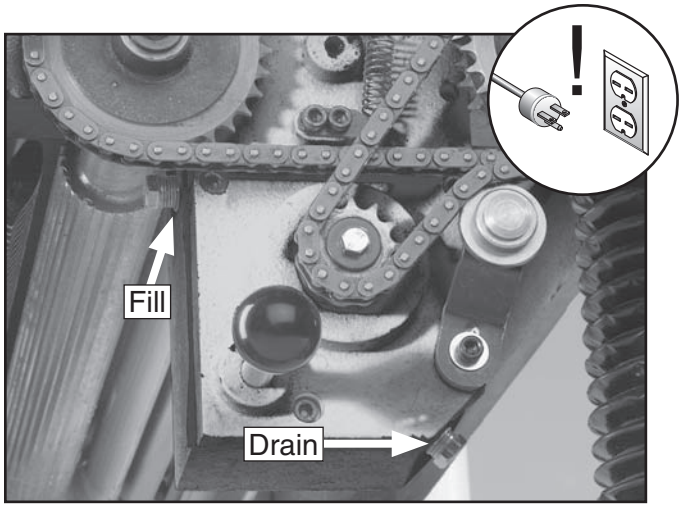


Figure 19. Gearbox oil drain/fill locations.

Drive Chain: The drive chain should be inspected and lubricated monthly. Check sprocket, chain and cotter pin during inspection. Use a general purpose grease. Some chains will have master links instead of cotter pins.

Feed Rollers: Daily lubrication of feed rollers is crucial to the operation of your planer. Lubricate before start-up. Each end of each power feed roller has an oiling port located on the top of the head casting (**Figure 20**)**.** Apply a light oil, making sure that the lubricant penetrates the bearing.

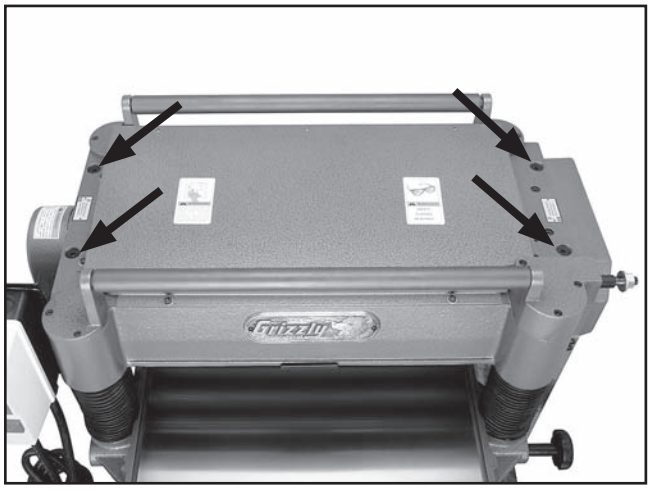
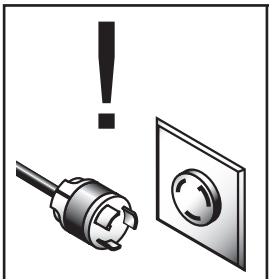


Figure 20. Tension screw locations.

SECTION 7: SERVICE



⚠WARNING

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

About Service

This section is designed to help the operator with adjustments that were made at the factory and that might also need to be made during the life of the machine.

This section is provided for your convenience—it is not a substitute for the Grizzly Service Department. If any adjustments arise that are not described in this manual, then feel free to call Tech Support at (570) 546-9663.

Similarly, if you are unsure of how to perform any procedure in this section, Tech Support will be happy to guide you through the procedures or help in any other way.

Rotating/Changing Carbide Cutters

Tools Needed: **Qty**
T-Handle Wrench w/T-20 Torx Bit..... 1

The cutterhead is equipped with 96 indexable carbide cutters. Each cutter can be rotated to reveal any one of its four cutting edges. Therefore, if one cutting edge becomes dull or damaged, simply rotate it 90˚ to reveal a fresh cutting edge (**Figure 21**).

In addition, each cutter has a reference dot on its corner. As the cutter is rotated, the reference dot location can be used as an indicator of which edges are used and which are new. When the reference dot revolves back around to its starting position, the cutter should be replaced.

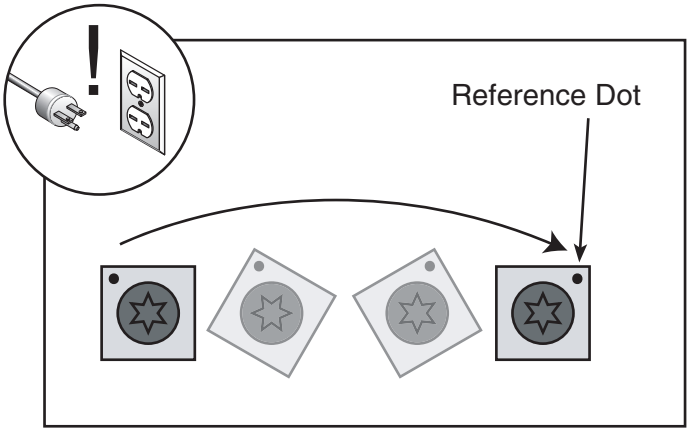


Figure 21. Cutter rotating sequence.

To rotate or change a carbide cutter:

1. **Disconnect the planer from the power source!**

2. Remove any sawdust from the head of the carbide cutter Torx screw.

3. Remove the Torx screw and carbide cutter.

4. Clean all dust and dirt off the cutter and the cutterhead pocket from which the cutter was removed, and replace the cutter so a fresh, sharp edge is facing outward.

   Note: Proper cleaning is critical to achieving a smooth finish. Dirt or dust trapped between the cutter and cutterhead will slightly raise the cutter, and make a noticeable marks on your workpieces the next time you plane.

5. Lubricate the Torx screw threads with a light machine oil, wipe the excess oil off the threads, and torque the Torx screw to 48-50 inch/pounds.

   Note: Excess oil may squeeze between the cutter and cutterhead, thereby lifting the cutter slightly and affecting workpiece finishes.

Chain Tension

Tools Needed:	Qty
Phillips Screwdriver #2	1
Wrench or Socket 12mm	1

The chain drive transfers movement from the handwheel to elevate the table. The chain drive can be adjusted to remove slack if the chain stretches over time or during table leveling procedures.

To adjust the chain tension:

1. **Disconnect the planer from the power source!**

2. Remove the two stand access panels.

3. Loosen the two locking bolts and move the idler sprocket until chain play has been eliminated (**Figure 22**).

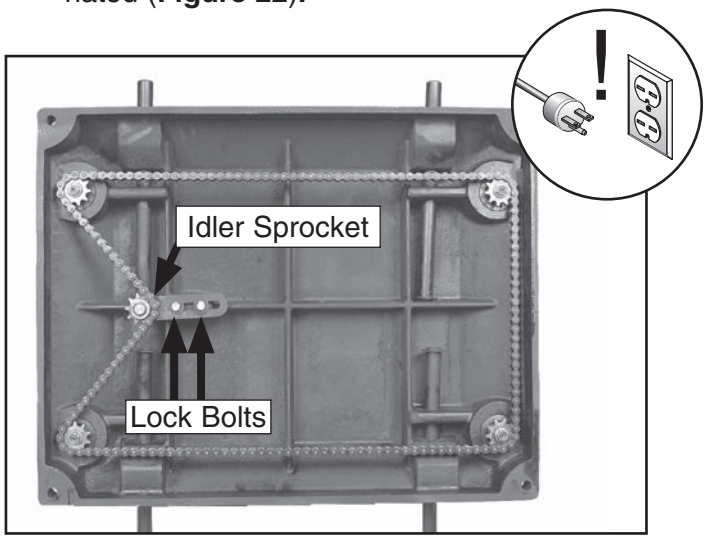


Figure 22. Underside of table.

4. Re-tighten the two locking bolts.

5. Check chain lubrication. Refer to **SECTION 6: MAINTENANCE** on **Page 23** for further details.

NOTICE

DO NOT let the chain fall off the sprockets—returning it to its proper location without changing the table adjustments can be very difficult.

Table Parallelism

Maximum Allowable Tolerances:	
Cutterhead/Table Side-to-Side	0.002"
Head Casting/Table Front/Back	0.020"

Table parallelism is critical to the operation of the machine. As such, it is essential that the table is parallel with the cutterhead (within 0.002") from side-to-side, as illustrated in Figure **23.**

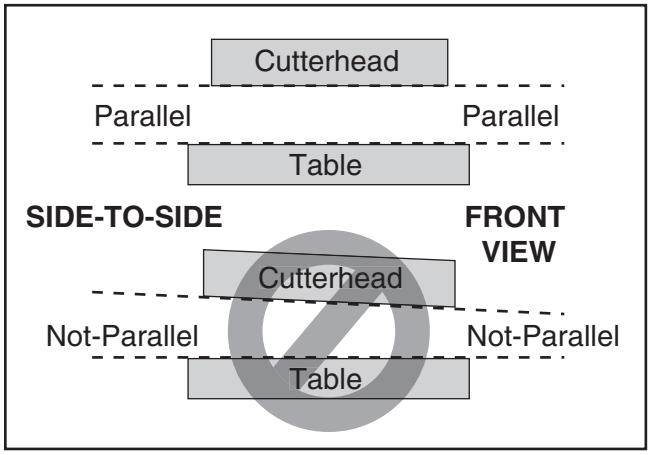


Figure 23. Side-to-side parallelism of table and cutterhead.

How the table sits in relation to the head casting from front-to-back is also important (see **Figure 24**). Because the feed rollers, pressure bar, and chip breaker will be adjusted off the table position, the tolerances on the front-to-back positioning are not as critical as the cutterhead/table side-to-side positioning. Therefore, the maximum allowable tolerance for the front-to-back parallelism is not more than 0.020".

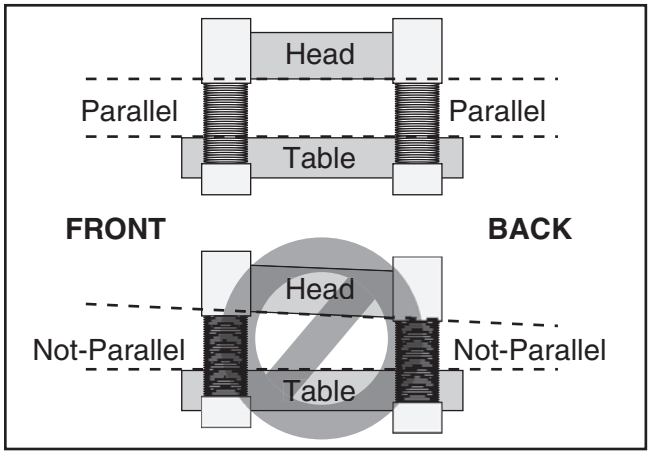


Figure 24. Front-to-back parallelism.

Table Parallelism Inspection

Use your Rotacator to inspect the table parallelism. If you do not have a Rotacator, a wood block and feeler gauges may be used, but extra care must be taken to ensure accuracy. If the table is not within the maximum allowable tolerances, it must be adjusted.

Table Parallelism Adjustments

The table is adjusted by turning the chain sprockets underneath the table for movements over 0.016" or by adjusting how the table is mounted on the columns for movements under 0.016".

NOTICE

When making adjustments, tighten fasteners after each step to ensure the accuracy of your tests. When adjusting the chain sprockets, keep in mind that if the chain becomes too loose, it will fall off of all the sprockets. Returning it to its proper location can be frustrating.

To adjust the table parallelism:

1. **Disconnect the planer from the power source!**

2. Remove the cabinet panel and locate the chain on the underside of the table.

3. Loosen the chain tensioner (see **Chain Tension** instructions on **Page 26**).

4. Move the chain away from only the sprocket you want to adjust so only that sprocket can be turned independent of the chain.

   Note: If the left side of the table is too high, the left two sprockets will need to be adjusted. Each tooth on the sprocket represents .016" of vertical movement as the cogs are turned. Make sure, as you turn the sprockets, to keep an accurate tooth count to ensure that the table is adjusted equally.

5. Mark the location of one tooth in the sprocket that you are adjusting.

6. Carefully turn the sprocket (clockwise to lower the table; counterclockwise to raise the table) just enough to position the next tooth at the marked location, then fit the chain around sprocket again.

7. Repeat **Steps 4–6** with each sprocket that needs to be adjusted until the table-to-cutterhead clearance is within 0.016" from one side to the other.

8. Make sure the chain is properly fitted on the sprockets and tighten the idler sprocket and lock bolts.

9. Micro-adjust the table position by loosening the cap screws shown in **Figure 25** and lifting the table upward or downward until the table and cutterhead are in alignment.

   Note: This process may require adjusting the columns on both the left and right hand sides until you find the correct combination.

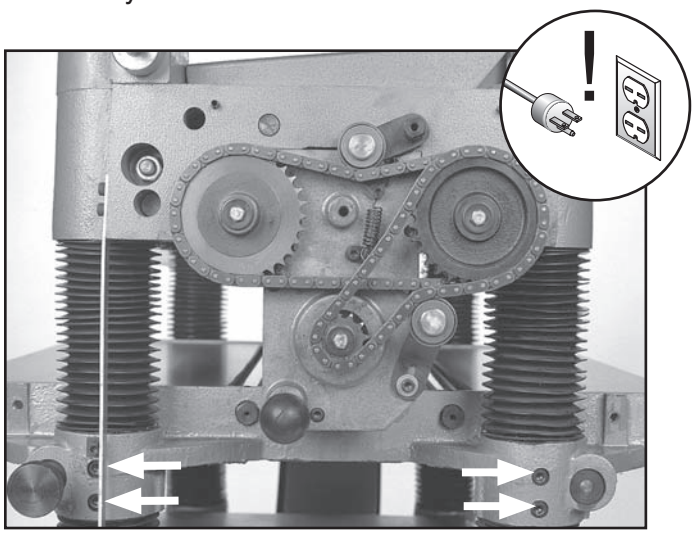


Figure 25. Table micro-adjustment screws.

Rollers, Chip Breaker & Pressure Bar Heights

Distance Below Cutter Edge at *BDC

Infeed Roller	0.040"
Chip Breaker	0.040"
Pressure Bar	0.040"
Outfeed Roller	0.040"

Tools Needed:	**Qty**
Hex Wrench 3mm	1
Hex Wrench 5mm	1
Wrench or Socket 10mm	1
Rotacator (optional, **Page 21**)	1

*BDC = Bottom Dead Center (see **Figure 26**).

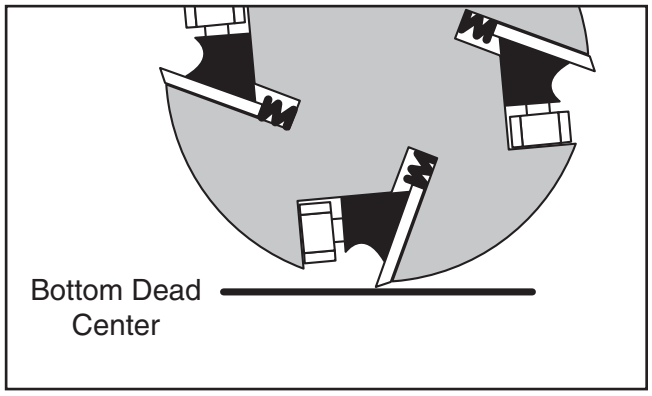


Figure 26. Cutter edge at bottom dead center (same concept with carbide inserts).

To ensure accurate results and make the adjustment process quicker and easier, we recommend using a Rotacator (see **Page 21**) for these adjustments.

If a Rotacator is not available, a 6' 2x4 cut into two even sized pieces and a 0.40" feeler gauge can be used, but care must be taken when jointing the blocks to achieve accurate results.

To set the height of the infeed and outfeed rollers, chip breaker, and pressure bar using a Rotacator:

1. **Disconnect the planer from the power source!**

2. Make sure the cutters are set correctly.

3. Lower the table at least 4" below the head casting and lock the table in place.

4. Remove the dust port, top cover, and belt cover.

5. Using your Rotacator, find BDC of any carbide insert edge by slowly rocking the cutterhead pulley back and forth, and set the Rotacator dial to zero, as shown in **Figure 27**.

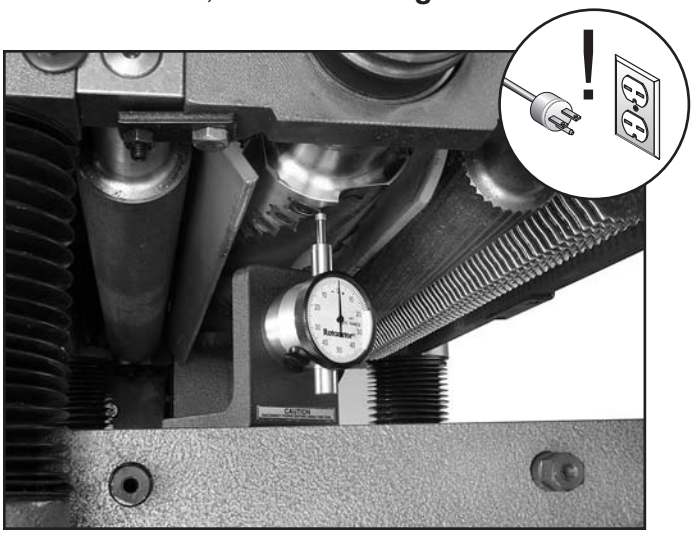


Figure 27. Finding BDC with the Rotacator.

6. Move the feed speed knob to neutral to allow the infeed roller to rotate by hand.

7. Place the Rotacator under the right-hand side of the infeed roller and find bottom dead center on a serrated edge by rocking the infeed roller back and forth.

8. Adjust the height of the infeed roller on the same side as the Rotacator to the specification given at the beginning of this procedure, using the zero setting of the Rotacator as a reference point. **Figure 28** shows the jam nut and set screw for adjusting the roller height.

9. Repeat **Steps 7–8** on the left-hand side of the infeed roller.

10. Double-check and micro-adjust both sides of the infeed roller, then carefully lock both sides in place.

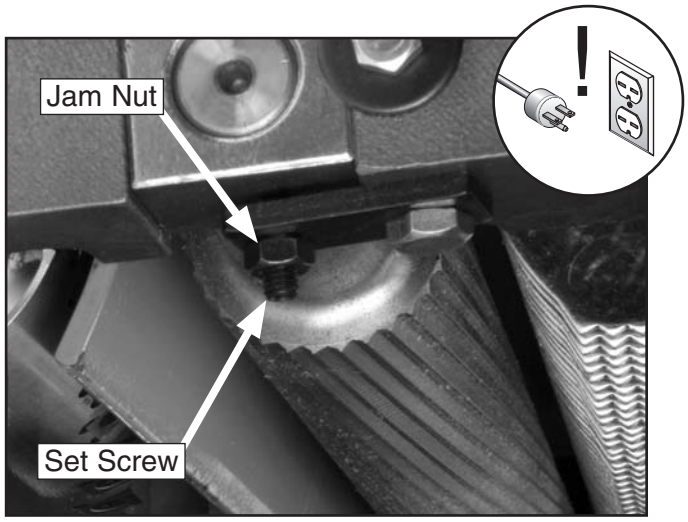


Figure 28. Roller height adjustment controls.

11. Using the same zeroed reference on the Rotacator, adjust the height of the chip breaker, pressure bar, and outfeed roller to their given specifications. The adjustment controls for each are shown in **Figures 29 & 30**.

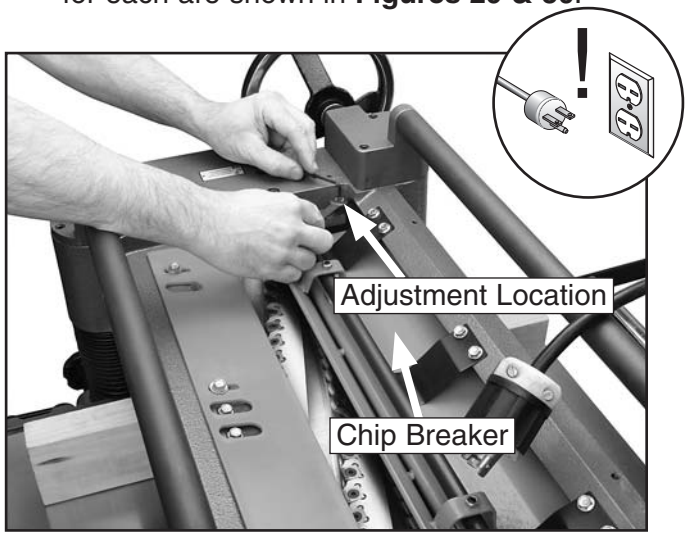


Figure 29. Adjusting chip breaker height.

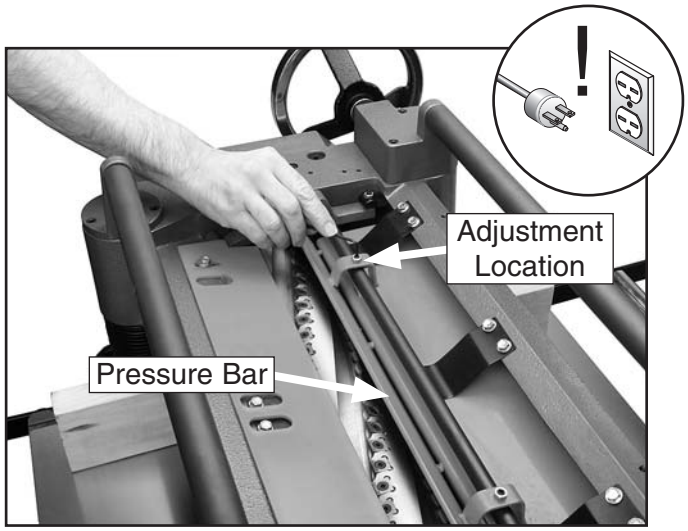


Figure 30. Adjusting pressure bar height.

To adjust the height of the infeed and outfeed rollers, chip breaker and pressure bar using wood blocks and a feeler gauge:

1. Build the wood blocks by cutting a STRAIGHT 6' long 2x4 in half.

Note: Having the wood blocks at an even height is critical to the accuracy of your overall adjustments. For best results, remove board warpage by squaring the narrow sides of the 2x4 with a jointer and table saw before cutting in half.

2. Disconnect the planer from the power source!

3. Lower the bed rollers below the table.

4. Place one wood block along the left side of the table, and place the other wood block along the right side of the table, as illustrated in **Figure 31**.

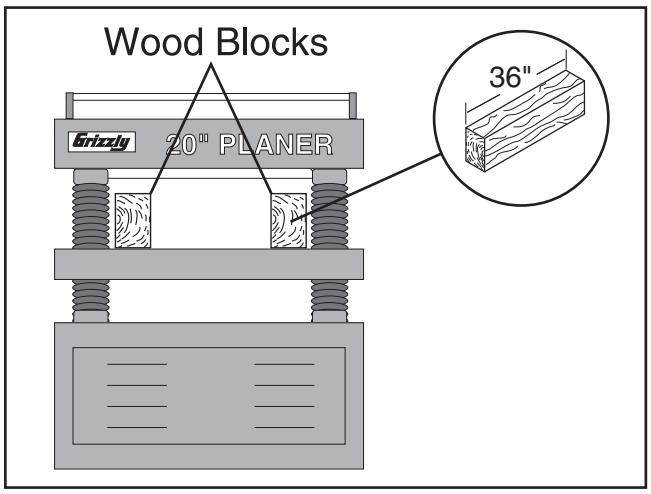


Figure 31. Wood blocks on table.

5. Remove the dust port, top cover, belt cover, and gearbox cover.

6. Adjust the table and use the feeler gauge until you have a 0.040" gap between the edge of a carbide insert at bottom dead center (find by rocking cutterhead pulley) and the wood blocks.

7. Lock the table height in place, as the wood blocks will now be your reference points for the rest of the adjustments.

8. Loosen the feed roller adjustment screws (**Figure 28**) and turn the adjustment bolts on each end to raise the feed roller above the wood block (if necessary), then bring it back down so it just touches the wood block on both sides.

9. Lock the infeed roller adjustment screws in place with the jam nuts, making sure they do not move while tightening.

10. Without moving the table, adjust the chip breaker (**Figure 29**), pressure bar (**Figure 30)**, and outfeed roller in the same manner, using the wood blocks as your reference point.

11. When you are finished with the adjustments, replace the top cover, dust port, belt cover, and the chain drive cover.

Spring Tension

Tools Needed: **Qty**
5mm Hex Wrench..... 1

Roller spring tension must be adjusted so that roller pressure is uniform.

To adjust roller spring tension:

1. Locate the four adjustment screws located on the top of the planer, as shown **Figure 32**.

2. Adjust screws #1–#3 so that they protrude ⅛" above the head casting.

3. Adjust screw #4 so that it protrudes 5⁄16" above the head casting.

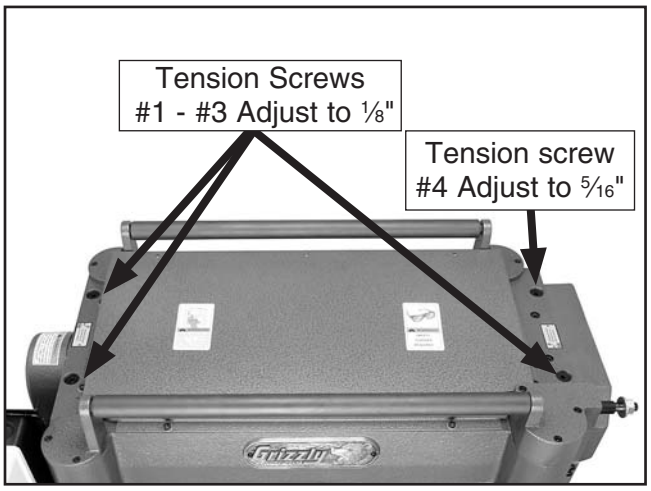


Figure 32. Tension screw locations and adjustments.

Chip Deflector Positioning

Chip Deflector Gap Setting	Qty
If Planer Used w/Dust Collector	¼"
If Planer Used w/o Dust Collector	1/16"

Tools Needed:	Qty
Wrench or Socket 10mm	1
Hex Wrench 5mm	

The chip deflector keeps chips from falling onto the outfeed roller.

To adjust the deflector position:

1. **Disconnect the planer from the power source!**

2. Remove the dust port and top cover.

3. Loosen the chip deflector mounting bolts (see **Figure 33).**

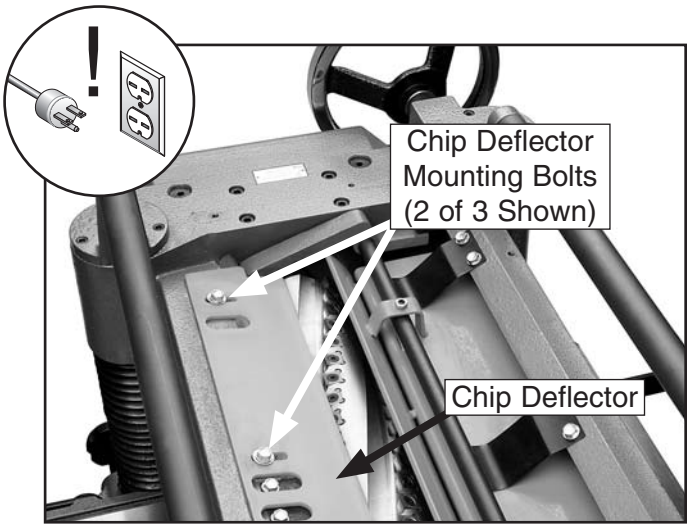


Figure 33. Chip deflector and mounting bolts.

4. Make sure the deflector is beveled toward the cutterhead. Move the deflector until the edge is the correct distance (given above) from the closest carbide insert. Use the cutterhead pulley to rotate the cutterhead to ensure clearance.

5. Re-tighten the mounting bolts and return the top cover to the planer.

Static Chain Adjuster

Tools Needed:	Qty
Hex Wrench 6mm	1
Hex Wrench 5mm	1
Wrench 10mm	1

Once the rollers, chip breaker and pressure bar are properly adjusted, you will need to reset the static chain tensioner. Proper tensioner adjustment is crucial to your planer's operation. Not only will it have a direct effect on the quality of your work, incorrect tension on the drive chain may cause the rollers to jam, or cause the chain to break.

To adjust the static chain tensioner:

1. **Disconnect the planer from the power source!**

2. Remove the chain drive cover.

3. Place a wood block under the right side of the outfeed roller, and adjust the table so the block and the roller are in slight contact.

4. Note the height of the table on the metric portion of the scale below the handwheel. Crank the handwheel until the table moves one millimeter towards the head casting. The outfeed roller will have lifted 0.040".

Continued on next page →

5. Rotate the static chain tensioner (**see Figure 34**) into its respective chain until that chain is tight, then lock the static chain tensioner in place**.**

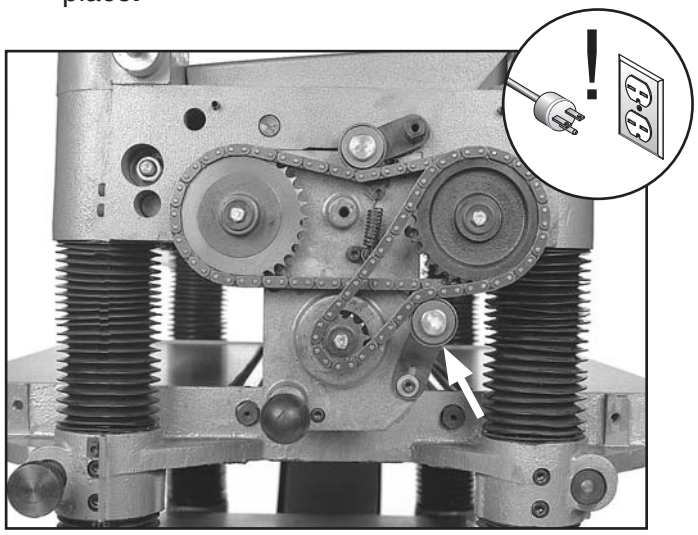


Figure 34. Static chain tensioner.

6. Lower the table until you can remove the block.

7. Replace the backing plate and the chain drive cover.

Scale Calibration

Tools Needed:	**Qty**
Hex Wrench 3mm	1
Calipers	1

The scale can be adjusted for accuracy. The machine will need to be run to make proper adjustments.

To calibrate the scale:

1. Set the table to the approximate thickness of your test lumber. Measure the lumber with calipers to determine its exact thickness.

2. Move the table to 1/16" under the thickness of your lumber and feed your test board through the planer.

3. Turn the handwheel one full rotation and run the board through once more. Turn the board over and repeat.

4. Re-measure the board and compare your results with the scale. If there is a discrepancy, loosen the screws (see **Figure 35)** and adjust as necessary.

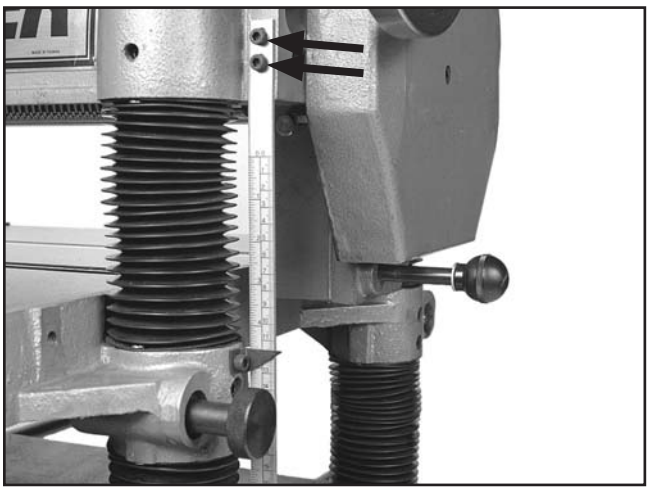


Figure 35. Depth scale adjustment screws.

Anti-Kickback Fingers

The Model G1033ZX provides an anti-kickback system as a safety feature. The anti-kickback fingers hang from a rod suspended across the cutterhead casting. The anti-kickback fingers should be inspected regularly.

Check the fingers (**Figure 36**) to ensure that they swing freely and easily. If the fingers do not swing freely and easily, clean them with a wood resin solvent.

Do not apply oil or other lubricants to the anti-kickback fingers. Oil or grease will attract dust, restricting the free movement of the fingers.

⚠WARNING

Proper operation of the anti-kickback fingers are essential for the safe operation of this machine. Failure to ensure that they are working properly could result in serious operator injury.

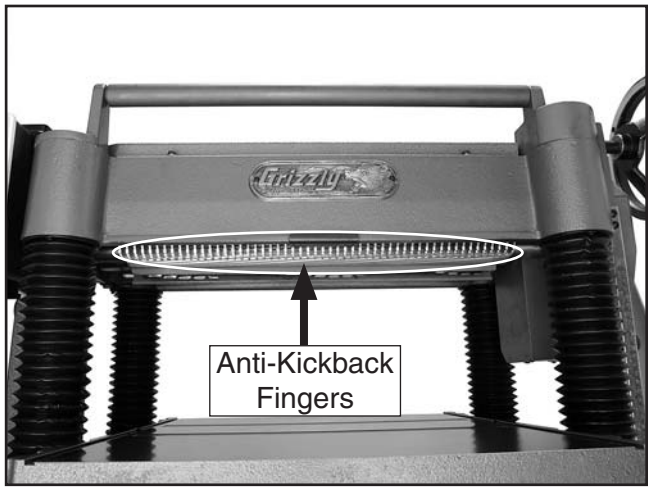


Figure 36. Anti-kickback fingers.

Pulley Alignment

Tools Needed:	**Qty**
Straightedge	1
Wrench 17mm	2
Wrench 14mm	2
Phillips Screwdriver #2	1

Proper pulley alignment (see **Figure 37**) prevents premature belt wear. The pulleys are properly aligned when they are parallel and in the same plane as each other. Use a straightedge on the edge of the pulleys to judge alignment.

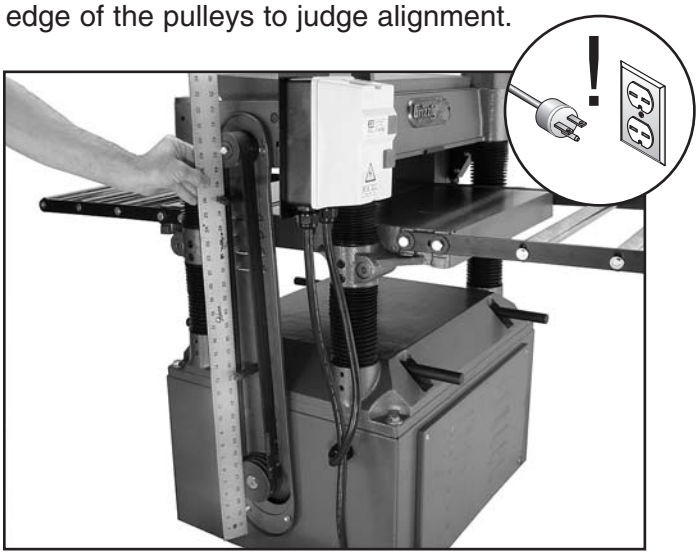
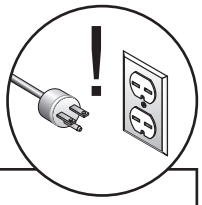


Figure 37. Checking belt alignment.

Should you find that the pulleys are out of alignment:

1. **Disconnect the planer from the power source!**
2. Loosen the belt tension.
3. Loosen the four motor mount bolts just enough to allow the motor to be repositioned.
4. Slide the motor as required to align the pulleys.
5. Re-tighten the motor mount bolts carefully to assure that the tightening process does not move the motor.
6. Re-tension the belt.
7. Replace the belt cover.

Troubleshooting Guide

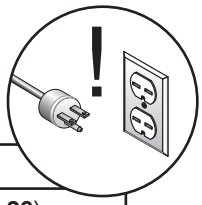


Motor & Machine Operation

Symptom	Possible Cause	Possible Solution
Motor will not start.	1. Thermal overload relay inside magnetic switch has tripped. 2. Low voltage. 3. Open circuit in motor or loose connections.	1. Press the RESET button on the thermal overload relay; investigate reason it tripped to prevent future problems. 2. Check power line for proper voltage. 3. Inspect all lead connections on motor for loose or open connections.
Fuses or circuit breakers blow.	1. Short circuit in line cord or plug.	1. Repair or replace cord or plug for damaged insulation and shorted wires.
Motor fails to develop full power (output of motor decreases rapidly with decrease in voltage at motor terminals).	1. Power line overloaded with lights, appliances, and other motors. 2. Undersized wires or circuits too long. 3. Motor run capacitor at fault.	1. Reduce load on power line. 2. Increase wire sizes or reduce length of the circuit. 3. Replace run capacitor.
Motor overheats.	1. Motor overloaded during operation. 2. Air circulation through the motor restricted.	1. Reduce cutting load; take lighter cuts. 2. Clean out motor to provide normal air circulation.
Motor stalls or shuts off during a cut.	1. Motor overloaded during operation. 2. Thermal overload protection tripped in magnetic switch. 3. Short circuit in motor or loose connections. 4. Circuit breaker tripped.	1. Reduce cutting load; take lighter cuts. 2. Press the RESET button on the thermal overload relay, located inside the magnetic switch. 3. Repair or replace connections on motor for loose or shorted terminals or worn insulation. 4. Install correct circuit breaker; reduce # of machines running on that circuit.
Cutterhead slows or squeals when cutting, especially on start-up.	1. V-belt loose. 2. V-belt worn out.	1. Tighten V-belt (**Page 23**). 2. Replace V-belt (**Page 23**).
Loud repetitious noise coming from machine.	1. Pulley setscrews or keys are missing or loose. 2. Motor fan is hitting the cover. 3. V-belts are damaged.	1. Inspect keys and setscrews. Replace or tighten if necessary. 2. Adjust fan cover mounting position, tighten fan, or shim fan cover. 3. Replace V-belts (**Page 23**).
Vibration when running or cutting.	1. Loose or damaged blade. 2. Damaged V-belt. 3. Worn cutterhead bearings.	1. Tighten or replace blade. 2. Replace. 3. Check/replace cutterhead bearings.

Table

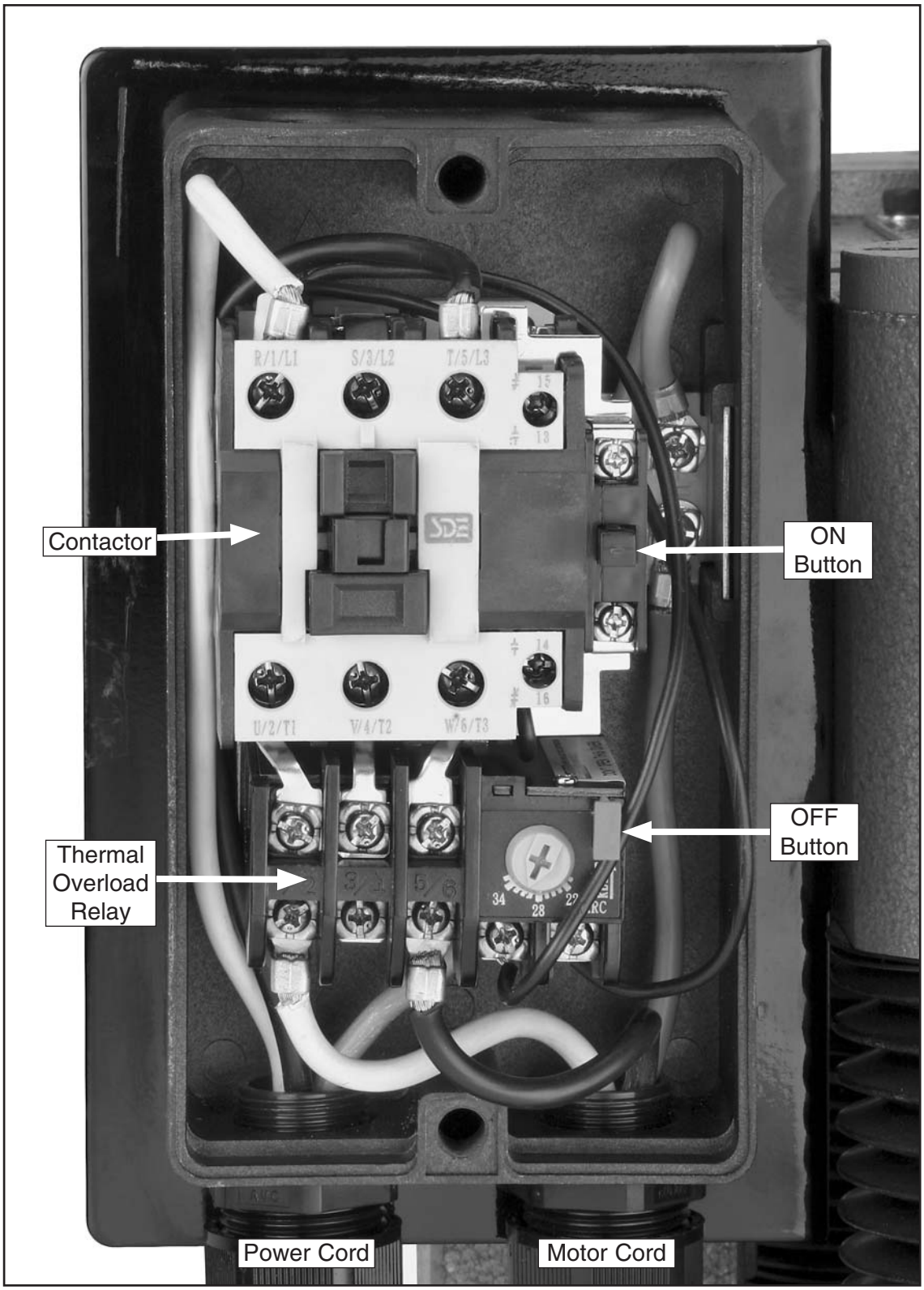
Symptom	Possible Cause	Possible Solution
Table is hard to adjust	1. Table lock is engaged or partially engaged. 2. Drive chain is dirty.	1. Completely loosen the table lock. 2. Clean and lubricate the drive chain (see **Page 23** and **Page 26**).



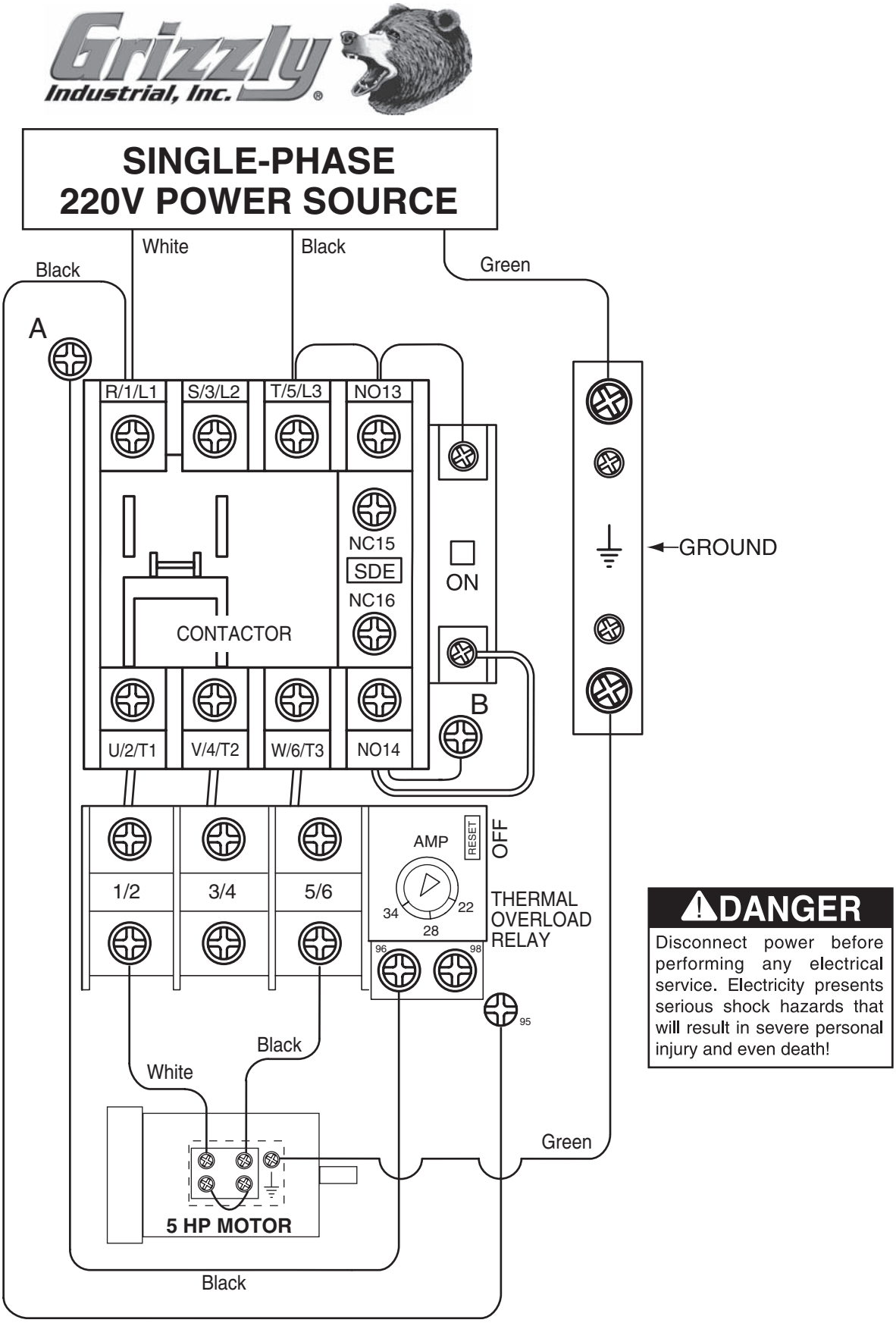
Cutting

Symptom	Possible Cause	Possible Solution
Excessive snipe (gouge in the end of the board that is uneven with the rest of the cut). **Note**: A small amount of snipe is inevitable with all types of planers. The key is minimizing it as much as possible.	1. One or both of the bed rollers are set too high. 2. Outfeed extension rollers set too low. 3. Chipbreaker or pressure bar set too low. 4. Workpiece is not supported as it leaves the planer.	1. Lower the bed rollers (**Page 20**). 2. Raise the outfeed extension rollers (**Page 14**); sometimes raising outfeed extension roller slightly higher than the table helps. 3. Raise the height of the chipbreaker or pressure bar (**Page 28**). 4. Hold the workpiece up slightly as it leaves the outfeed end of the planer.
Workpiece stops/slows in the middle of the cut.	1. Taking too heavy of a cut. 2. One or both of the bed rollers are set too low or too high. 3. Chipbreaker or pressure bar set too low. 4. Feed rollers set too low or too high. 5. Table not parallel with head casting. 6. Pitch and glue build up on planer components.	1. Take a lighter cut. 2. Lower/raise the bed rollers (**Page 20**). 3. Raise the height of the chipbreaker or pressure bar (**Page 28**). 4. Adjust the feed rollers to the correct height (**Page 28**) 5. Adjust the table so it is parallel to the head casting. 6. Clean the internal cutterhead components with a pitch/resin dissolving solvent.
Chipping (consistent pattern).	1. Knots or conflicting grain direction in wood. 2. Nicked or chipped carbide cutter. 3. Feeding workpiece too fast. 4. Taking too deep of a cut. 5. Misaligned chipbreaker.	1. Inspect workpiece for knots and grain direction; only use clean stock. 2. Rotate or replace the affected cutter (**Page 25**). 3. Slow down the feed rate (**Page 19**). 4. Take a smaller depth of cut. (Always reduce cutting depth when surface planing or working with hard woods.) 5. Adjust both sides of the chipbreaker to the correct height (**Page 28**).
Fuzzy grain.	1. Wood may have high moisture content or surface wetness. 2. Dull cutters.	1. Check moisture content and allow to dry if moisture is too high. 2. Rotate/replace the cutters (**Page 25**).
Long lines or ridges that run along the length of the board	1. Nicked or chipped cutter(s).	1. Rotate/replace the cutters (**Page 25**).
Uneven cutter marks, wavy surface, or chatter marks across the face of the board.	1. Feeding workpiece too fast. 2. Chipbreaker or pressure bar set unevenly. 3. Carbide cutters not installed evenly. 4. Worn cutterhead bearings.	1. Slow down the feed rate. 2. Adjust the height of the chipbreaker or pressure bar (**Page 28**). 3. Make sure carbide cutters do not have debris under them; make sure cutters are torqued down evenly. 4. Replace cutterhead bearings.
Glossy surface.	1. Carbide cutters are dull. 2. Feed rate too slow. 3. Cutting depth too shallow.	1. Rotate/replace the cutters (**Page 25**). 2. Increase the feed rate (**Page 19**). 3. Increase the depth of cut.
Chip Marks (inconsistent pattern).	1. Chips aren't being properly expelled from the cutterhead.	1. Use a dust collection system; adjust the chip deflector in or out depending on your setup (**Page 31**).

G1033ZX Magnetic Switch



G1033ZX Wiring Diagram

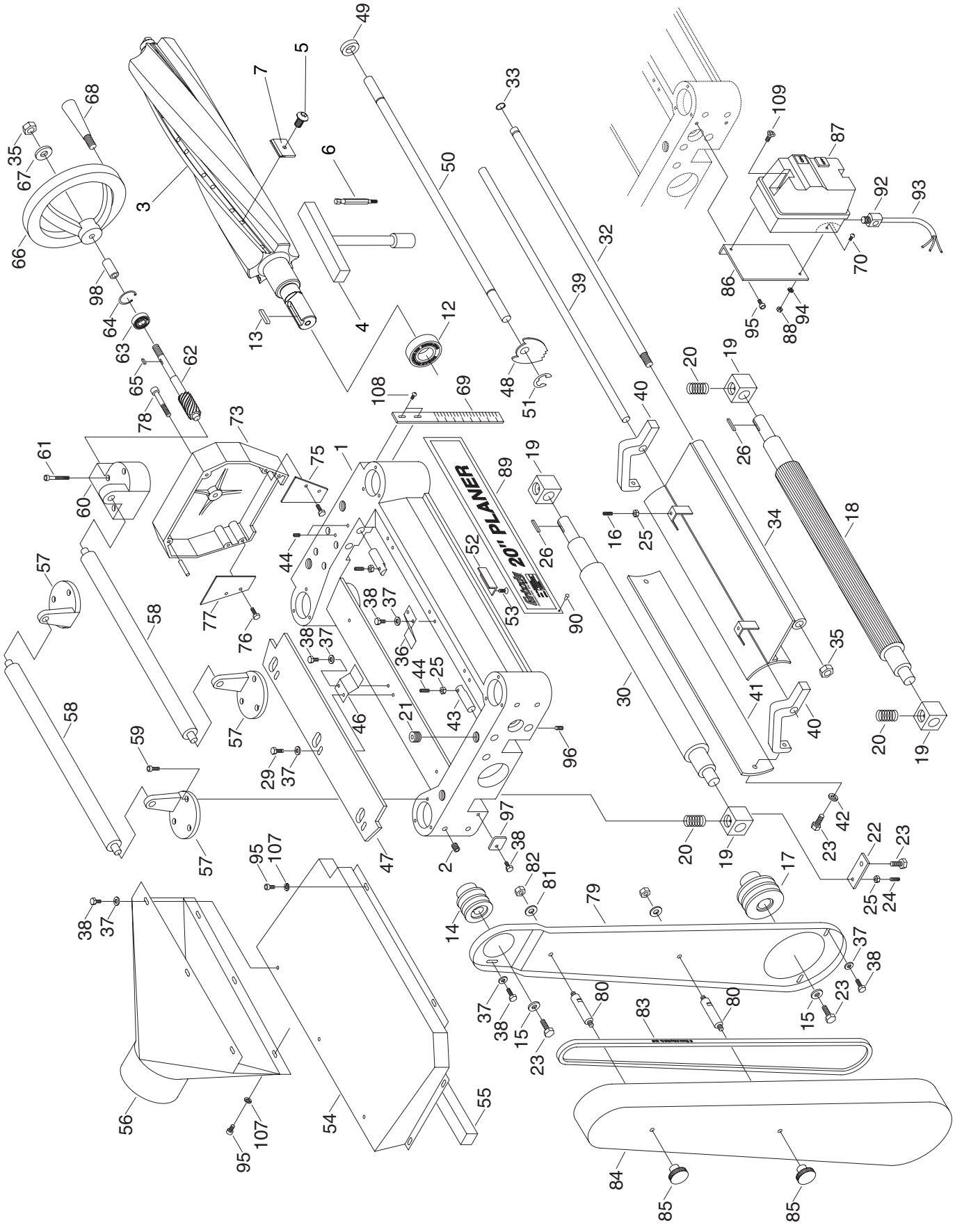


⚠DANGER

Disconnect power before performing any electrical service. Electricity presents serious shock hazards that will result in severe personal injury and even death!

SECTION 8: PARTS

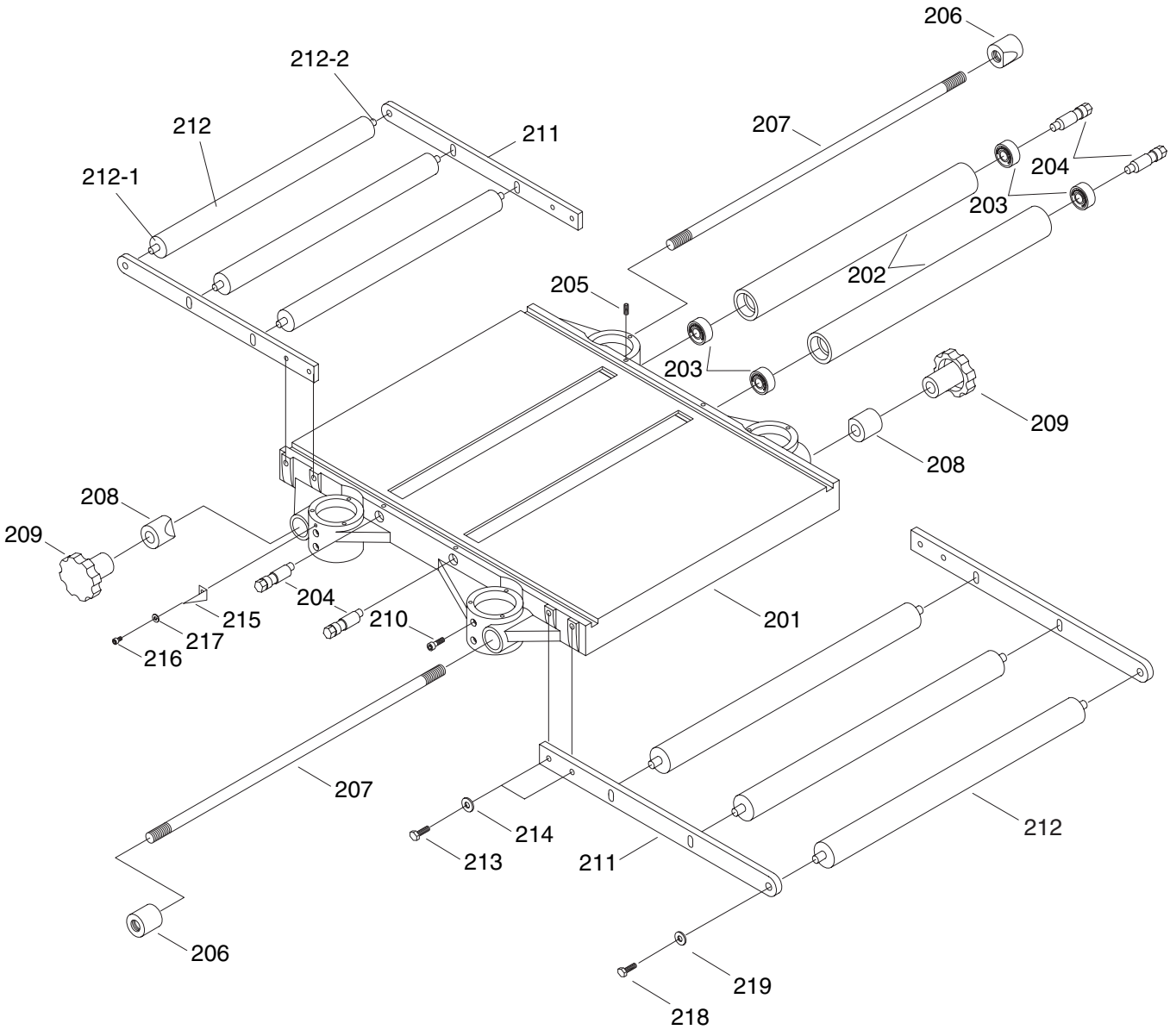
G1033ZX Headstock



REF	PART #	DESCRIPTION
1	P1033001	HEAD CASTING
2	PSS13M	SETSCREW M10-1.5 X 12
3	P1033ZX003	SPIRAL CUTTERHEAD
4	P1033ZX004	T-HANDLE WRENCH
5	PFH35M	FLAT HD TORX M6-1 X 15
6	P1033ZX006	TORX BIT T-20
7	P1033ZX007	INDEXABLE CARBIDE INSERT
12	P6206	BEARING 6206
13	PK09M	KEY 8 X 8 X 36
14	P1021007	CUTTERHEAD PULLEY
15	P1033015	WASHER 5/16" X 1-3/16"
16	PSS12M	SETSCREW M6-1.0 X 25
17	P1033Z017	MOTOR PULLEY
17-1	PSS04M	SET SCREW M6-1 X 12
18	P1033018	INFEED ROLLER
19	P1021153	BUSHING BLOCK
20	P1021152	COMPRESSION SPRING
21	P1033021	SPECIAL OILER SETSCREW
22	P1021092	PLATE
23	PB09M	HEX BOLT M8-1.25 X 20
24	PSS11M	SETSCREW M6-1.0 X 16
25	PN01M	HEX NUT M6-1.0
26	PK21M	KEY 5 X 5 X 23
29	PB18M	HEX BOLT M6-1.0 X 15
30	P1033030	OUTFEED ROLLER
32	P1033032	LOCKING ROD
33	PR03M	EXT RETAINING RING 12MM
34	P1033034	CHIP BREAKER
35	PN09M	HEX NUT M12-1.75
36	P1021028	CHIP BREAKER SPRING PLATE
37	PW03M	FLAT WASHER 6MM
38	PB02M	HEX BOLT M6-1 X 12
39	P1033039	SHAFT
40	P1033040	BRACKET
41	P1033041	PRESSURE BAR
42	PLW04M	LOCK WASHER 8MM
43	P1033043	SHAFT
44	PSS11M	SETSCREW M6-1.0 X 16
46	P1033046	SPRING PLATE
47	P1033047	CHIP DEFLECTOR
48	P1021161	ANTI-KICKBACK FINGER
49	P1021160	SPACER
50	P1033050	SHAFT
51	PEC06M	E-CLIP 20MM
52	P1033052	DEPTH LIMITER

REF	PART #	DESCRIPTION
53	PFH02M	FLT HD SCR M6-1 X 12
54	P1033054	TOP COVER
55	P1033055	GASKET
56	P1033056	DUST HOOD 5"
57	P1033057	ROLLER STAND
58	P1033058	ROLLER
59	PSB01M	CAP SCREW M6-1.0 X 16
60	P1033060	WORM GEAR BOX
61	PSB37M	CAP SCREW M6-1.0 X 50
62	P1033062	WORM
63	P6201	BEARING 6201
64	PR29M	INT RETAINING RING 32MM
65	PK05M	KEY 4 X 4 X 10
66	P1033066	HANDWHEEL
67	P1033067	WASHER 1/2" X 1-1/8"
68	P1021032	HANDLE
69	P1033069	SCALE
70	PS08M	PHLP HD SCR M5-0.8 X 12
73	P1033073	CHAIN DRIVE COVER
75	P1033075	LEFT BACKING PLATE
76	PB04M	HEX BOLT M6-1.0 X 10
77	P1033077	RIGHT BACKING PLATE
78	PSB12M	CAP SCREW M8-1.25 X 16
79	P1033079	PULLEY GUARD
80	P1033080	STUD
81	PW07	FLAT WASHER 5/16"
82	PN02	HEX NUT 5/16" X 18
83	PVM58	V-BELT M58 3L580
84	P1033084	PULLEY COVER
85	P1033085	ROUND KNOB 5/16-18
86	P1033Z086	SWITCH BRACKET
87	P1033Z087	MAGNETIC SWITCH MA-30
88	PN06M	HEX NUT M5-0.8
89	P1033089	NAME PLATE
90	P1183108	RIVET
92	P1033Z092	STRAIN RELIEF MG25A
93	P1033Z093	MOTOR CORD 10AWG X 3C
94	PTLW01	EXT TOOTH WASHER #10
95	PSB04M	CAP SCREW M6-1.0 X 10
96	PSS14M	SETSCREW M8-1.25 X 12
97	P1033097	RETAINER
98	P1033098	COLLAR
107	PLW03M	LOCK WASHER 6MM
108	PS09M	PHLP HD SCR M5-0.8 X 10
109	PSW01-1	SWITCH BOX PLASTIC SCREW

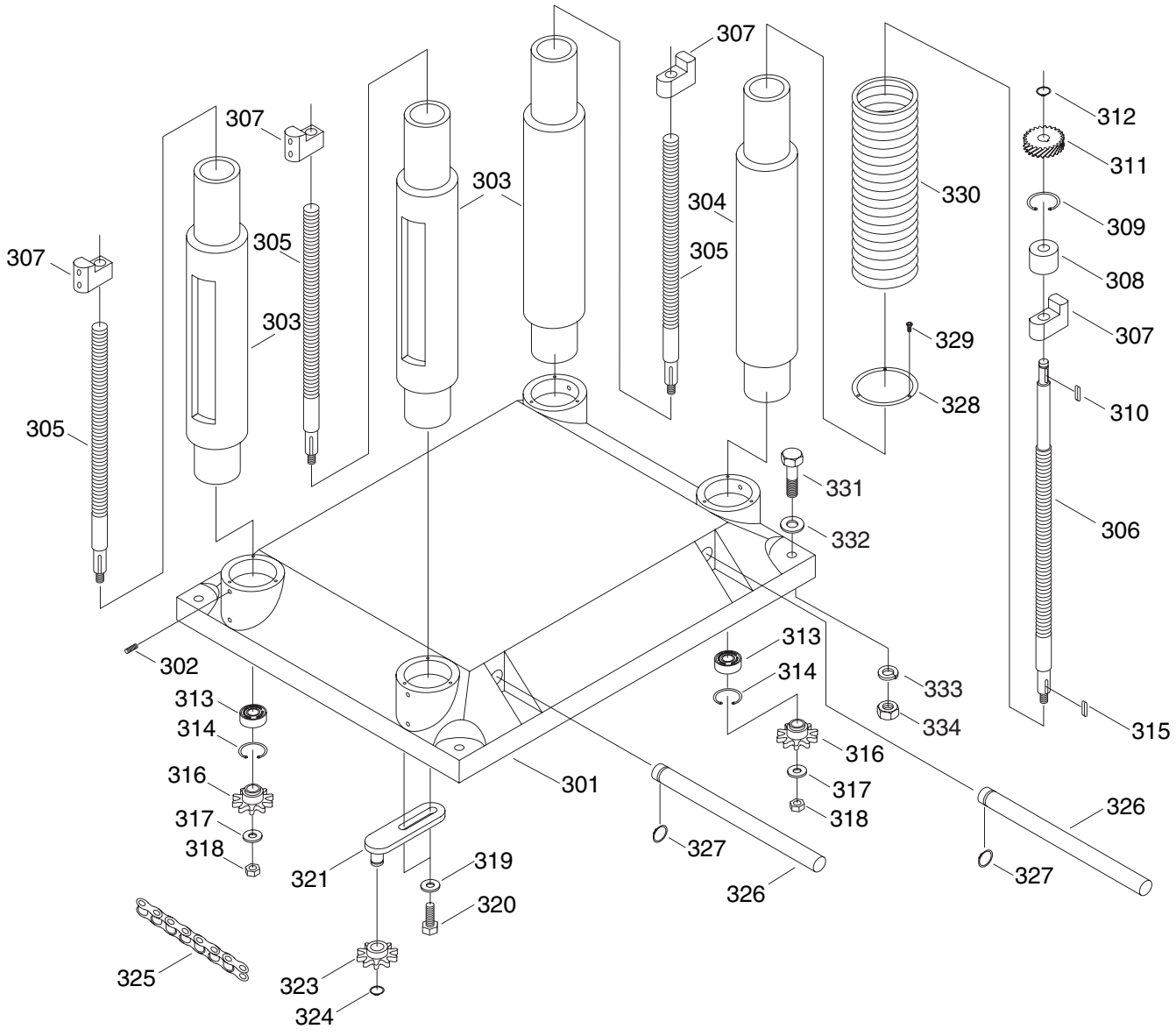
G1033ZX Table



REF	PART #	DESCRIPTION
201	P1033201	TABLE
202	P1033202	BED ROLLER
203	P6201	BEARING 6201
204	P1033204	ECCENTRIC SHAFT
205	PSS04M	SETSCREW M6-1.0 X 12
206	P1021143	THREADED GIB
207	P1033207	LOCK ROD
208	P1021146	GIB
209	P1021145	8 PT STAR KNOB M12-1.75
210	PSB14M	CAP SCREW M10-1.25 X 20
211	P1033211A	3-HOLE ROLLER BRACKET

REF	PART #	DESCRIPTION
212	P1033212A	CHROME EXT ROLLER
212-1	P1033Z212-1	PLASTIC BUSHING
212-2	P1033Z212-2	ROLLER ROD
213	PB32M	HEX BOLT M10-1.5 X 25
214	PW04M	FLAT WASHER 10MM
215	P1033071	POINTER
216	PSB04M	CAP SCREW M6-1.0 X10
217	PLW03M	LOCK WASHER 6MM
218	PB02M	HEX BOLT M6-1 X 12
219	PW03M	FLAT WASHER 6MM

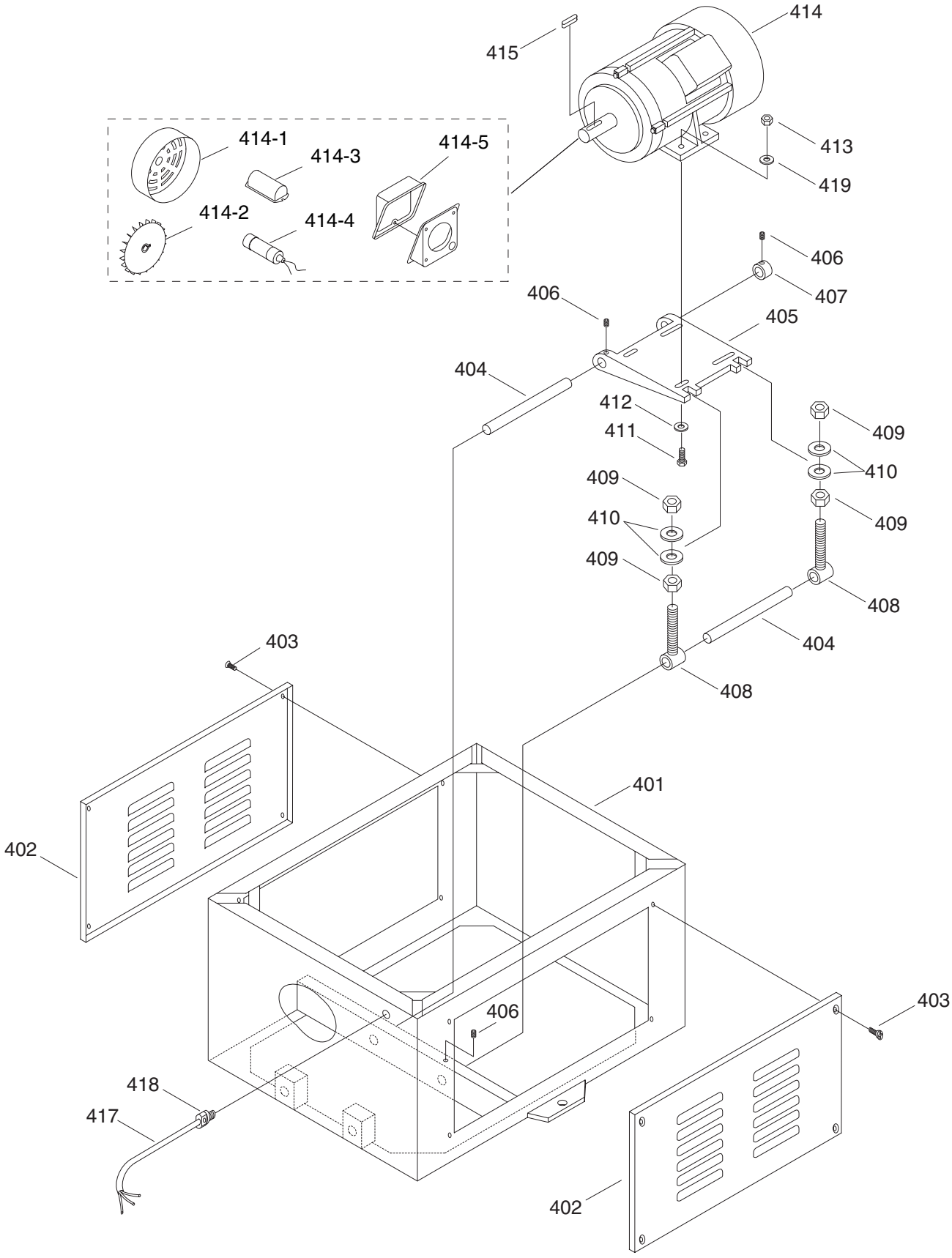
G1033ZX Base/Column



REF	PART #	DESCRIPTION
301	P1033301	BASE
302	PSS13M	SETSCREW M10-1.5 X 12
303	P1033303	COLUMN
304	P1033304	COLUMN
305	P1033305	LEADSCREW
306	P1033306	LEADSCREW
307	P1033307	LEADSCREW NUT
308	P1033308	BUSHING
309	PR22M	INT RETAINING RING 38MM
310	PK10M	KEY 5 X 5 X 12
311	P1033311	GEAR
312	PR03M	EXT RETAINING RING 12MM
313	P6202	BALL BEARING 6202
314	PR21M	INT RETAINING RING 35MM
315	PK08M	KEY 5 X 5 X 16
316	P1033316	SPROCKET
317	PW04M	FLAT WASHER 10MM

REF	PART #	DESCRIPTION
318	PN08M	HEX NUT M10-1.25
319	PW01M	FLAT WASHER 8MM
320	PB07M	HEX BOLT M8-1.25 X 25
321	P1033321	BRACKET W/ SHAFT
323	P1033323	SPROCKET
324	PR05M	EXT RETAINING RING 15MM
325	P1033325	CHAIN
326	P1033326	LIFTING POST
327	PR08M	EXT RETAINING RING 19MM
328	P1033328	PIPE BAND
329	P1033329	TAP SCREW M5 X 10
330	P1033330	EXPANSION BAND
331	PB33M	HEX BOLT M12-1.75 X 50
332	PW06M	FLAT WASHER 12MM
333	PLW05M	LOCK WASHER 12MM
334	PN09M	HEX NUT M12-1.75

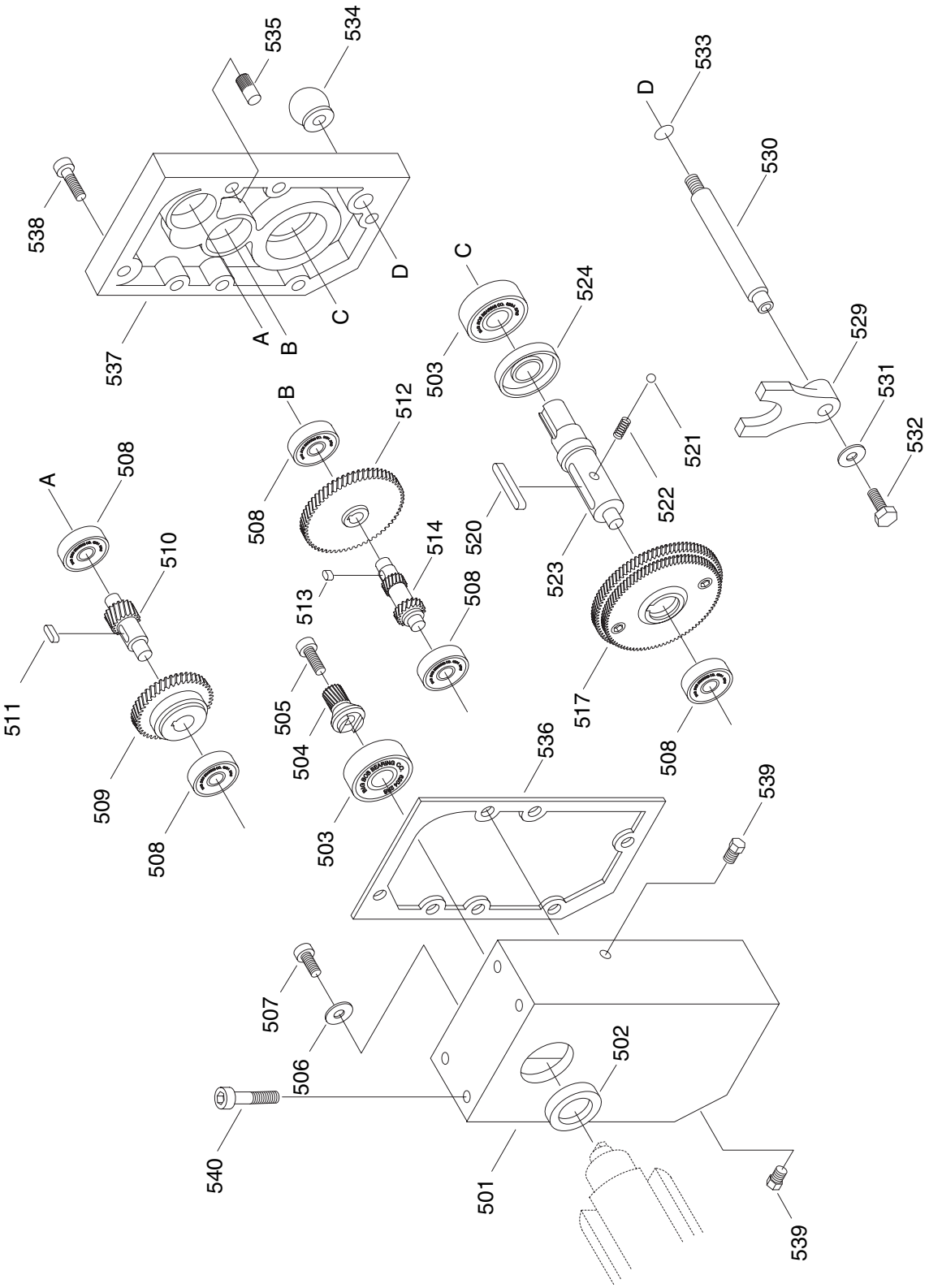
G1033ZX Stand and Motor



REF	PART #	DESCRIPTION
401	P1033Z401	STAND
402	P1033402	COVER
403	PFH06M	FLAT HD SCREW M6-1.0 X 20
404	P1033404	BAR
405	P1033Z405	MOTOR MOUNT
406	PSS20M	SETSCREW M8-1.25 X 8
407	P1033407	COLLAR
408	P1033408	ADJUSTABLE BOLT
409	PN09M	HEX NUT M12-1.75
410	PW01	FLAT WASHER 1⁄2"
411	PB07M	HEX BOLT M8-1.25 X 25
412	P1033412	WASHER 5⁄16" X 7⁄8"

REF	PART #	DESCRIPTION
413	PN03M	HEX NUT M8-1.25
414	P1033Z414	5 HP MOTOR
414-1	P1033Z414-1	MOTOR FAN COVER
414-2	P1033Z414-2	MOTOR FAN
414-3	P1033Z414-3	CAPACITOR COVER
414-4	P1033Z414-4	S CAP. 800M 250V 1-3/8 X 3-3/4
414-5	P1033Z414-5	JUNCTION BOX
415	PK36M	KEY 8 X 7 X 55
417	P1033417	POWER CORD 10AWG X 3C
418	P1033Z092	STRAIN RELIEF MG25A
419	PW01M	FLAT WASHER 8MM

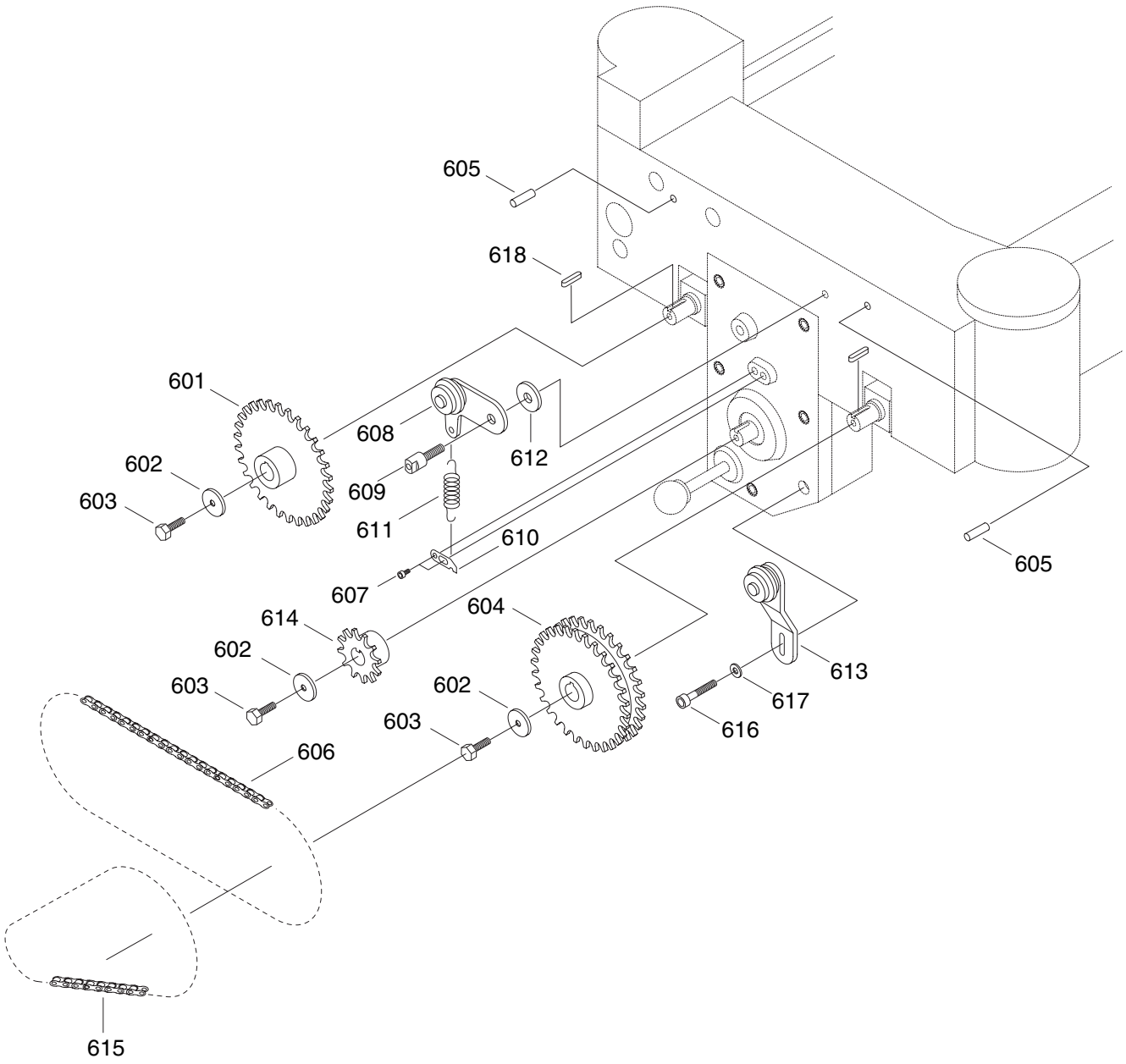
G1033ZX Gearbox



REF	PART #	DESCRIPTION
501	P1021109	GEAR BOX
502	P1021108	OIL SEAL 28-40-8
503	P6204	BALL BEARING 6204
504	P1021112	GEAR
505	PSB02M	CAP SCREW M6-1.0 X 20
506	P1033028	FLAT WASHER 1/4" X 7/8"
507	PSB28M	CAP SCREW M6-1.0 X 15
508	P6201	BALL BEARING 6201
509	P1021115	GEAR
510	P1021117	GEAR AND SHAFT
511	PK10M	KEY 5 X 5 X 12
512	P1021120	GEAR
513	PK06M	KEY 5 X 5 X 10
514	P1021119	GEAR, 2-SPEED
517	P1021121	DOUBLE GEAR
520	PK11M	KEY 6 X 6 X 40

REF	PART #	DESCRIPTION
521	P1021128	BALL 6MM
522	P1021127	COMPRESSION SPRING
523	P1021122	SHAFT
524	P1021125	OIL SEAL 25 X 47 X 7
529	P1021129	SHIFTER
530	P1021131	SHIFTING SHAFT HANDLE
531	PW03M	FLAT WASHER 6MM
532	PB02M	HEX BOLT M6-1.0 X 12
533	P1021132	O-RING 12MM
534	P1021134	BALL KNOB 3/8-16
535	P1021136	PIN
536	P1021110	GASKET
537	P1021133	GEAR CASE
538	PSB06M	CAP SCREW M6-1.0 X 25
539	P1021107	OIL PLUG
540	PSB05M	CAP SCREW M8-1.25 X 50

G1033ZX Chain Drive



REF	PART #	DESCRIPTION
601	P1021164	SPROCKET
602	P1033028	WASHER 1/4" X 7/8"
603	PSB68M	CAP SCREW M6-1 X 8
604	P1021149	SPROCKET
605	PRP07M	ROLL PIN 6X20
606	P1033091	CHAIN 33 LINKS
607	PSB04M	CAP SCREW M6-1.0 X 10
608	P1033099	CHAIN TENSIONER
609	P1033102	SHAFT
610	P1033103	HANGER
611	P1033104	EXTENSION SPRING
612	P1033105	SPACER

REF	PART #	DESCRIPTION
613	P1033106	OUTER CHAIN TENSIONER
614	P1021137	SPROCKET
615	P1033527	CHAIN 25 LINKS
616	PSB48M	CAP SCREW M6-1.0 X 35
617	PW03M	FLAT WASHER 6MM
618	PK21M	KEY 5 X 5 X 23
700	P1033ZX700	MACHINE ID LABEL
701	PLABEL-12	READ MANUAL LABEL
702	PLABEL-11	SAFETY GLASSES LABEL
703	PLABEL-14	ELECTRICITY LABEL
704	P1033ZX704	COVER LABEL
705	PLABEL-36	UNPLUG 220V LABEL

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.

Grizzly Industrial, Inc. WARRANTY CARD

Name _____

Street _____

City _____ State _____ Zip _____

Phone # _____ Email _____ Invoice # _____

Model # _____ Order # _____ Serial # _____

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

1. How did you learn about us?

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

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

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

3. What is your annual household income?

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

4. What is your age group?

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

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

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

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

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

7. Do you think your machine represents a good value? _____Yes _____No

8. Would you recommend Grizzly Industrial to a friend? _____Yes _____No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?
Note: We never use names more than 3 times. _____Yes _____No

10. Comments: _____

_____

_____

_____

CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE

Place
Stamp
Here

GRIZZLY INDUSTRIAL, INC.
P.O. BOX 2069
BELLINGHAM, WA 98227-2069

FOLD ALONG DOTTED LINE

Send a Grizzly Catalog to a friend:

Name_____

Street_____

City_____State_____Zip_____

TAPE ALONG EDGES--PLEASE DO NOT STAPLE