

# READ THIS FIRST



Model G9860/ZX, G9953ZX/ZXF

**\*\*\*IMPORTANT UPDATE\*\*\***

For Machines Mfd. Since 05/24  
and Owner's Manual Revised 10/20

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

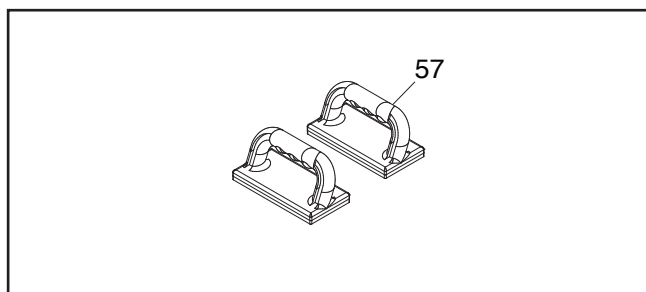
The following changes were recently made since the owner's manual was printed:

- Parts have changed.
- Inventory has changed.
- Steps in **Installing Fence** have been updated.
- Steps in **Adjusting Cutterhead Guard Tension** have been updated.

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.**

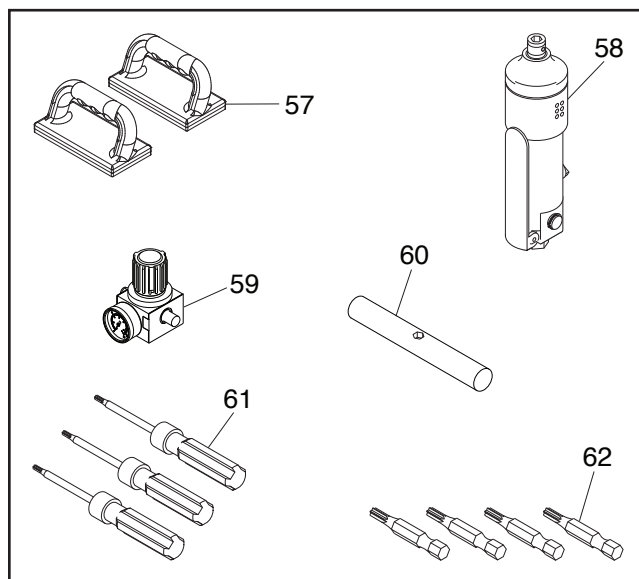
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## G9860 Revised Parts



REF	PART #	DESCRIPTION
57	P9860057	PUSH BLOCK

## G9860ZX, G9953ZX/ZXF Revised Parts



REF	PART #	DESCRIPTION
57	P9860ZX057	PUSH BLOCK
58	P9860ZX058	PNEUMATIC TORQUE WRENCH
59	P9860ZX059	AIR REGULATOR W/GAUGE
60	P9860ZX060	BREAKER BAR BIT HOLDER
61	P9860ZX061	TORX DRIVER T-20
62	P9860ZX062	TORX BIT T-20

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## Revised Inventory

Inventory (Figure 1)	Qty
A. Fence Assembly.....	1
B. Push Blocks.....	2
C. Fence Support (G9860/ZX).....	1
D. Fence Lock Assembly (G9860/ZX).....	1
E. Fence Tilt Handle.....	1
F. Lock Washers 12mm.....	2
G. Cap Screws M12-1.75 x 30.....	2

## Hardware & Tools (Not Shown)

- Combo Wrench 10mm ..... 1
- Open-End Wrench 11/13mm ..... 1
- Hex Wrenches 3, 4, 5, 6, 8mm..... 1 Ea.
- Knife Cutterhead Models:
  - Knife Setting Gauge..... 1
- Spiral Cutterhead Models:
  - Pneumatic Torque Wrench Assembly..... 1
  - Air Regulator w/Gauge..... 1
  - Torx Drivers T-20..... 3
  - Torx Bits T-20..... 4
  - Breaker Bar Bit Holder..... 1
  - Indexable Inserts 14 x 14 x 2mm..... 3
  - Flat Hd Torx Screws T-20 M6-1 x 15 ..... 8

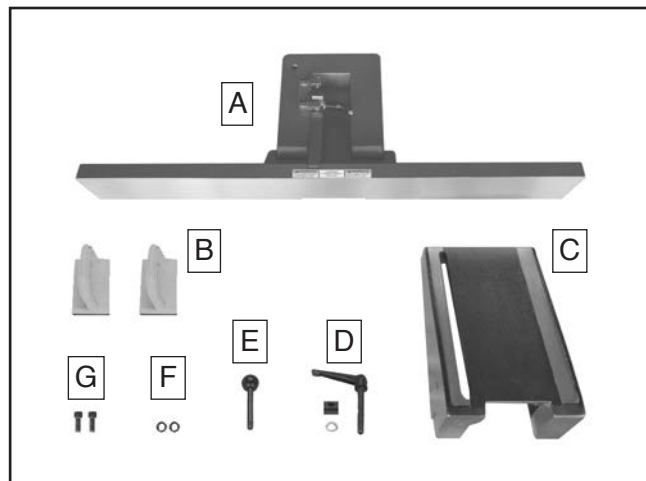


Figure 1. Inventory.

## Revised Installing Fence (G9860/G9860ZX)

1. Remove motor access panel on back of machine.
2. With assistance, secure fence support to jointer with (2) M12-1.75 x 30 cap screws and (2) 12mm lock washers (see Figure 2).

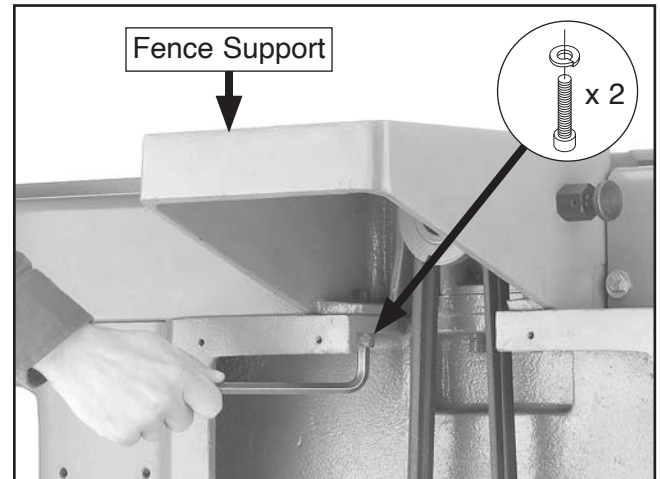


Figure 2. Installing fence support.

3. Place fence assembly on top of fence support, as shown in Figure 3.
4. Slide flat washer onto fence lock shaft, insert shaft into hole on top of fence assembly and through slot of support (see Figure 3).
5. Thread T-slot nut onto bottom of lock shaft so nut fits up into slot of fence support (see Figure 3).

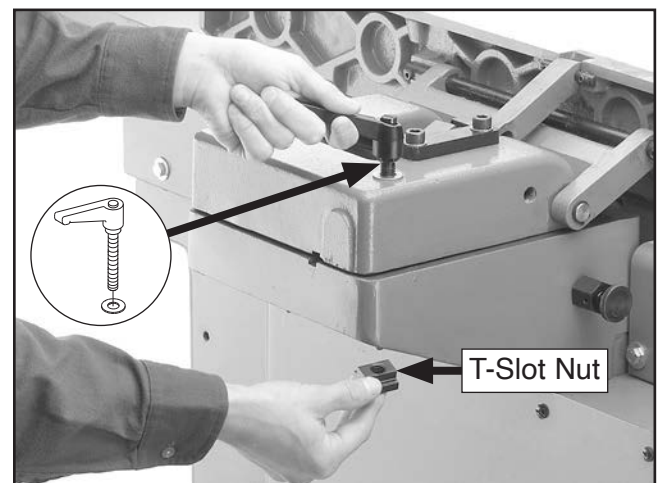


Figure 3. Installing fence lock.



# Adjusting Cutterhead Guard Tension

## **!WARNING**

The cutterhead guard is a critical safety feature of this jointer. You **MUST** verify its operation before using the jointer! Failure to properly install this guard will greatly increase risk of serious personal injury.

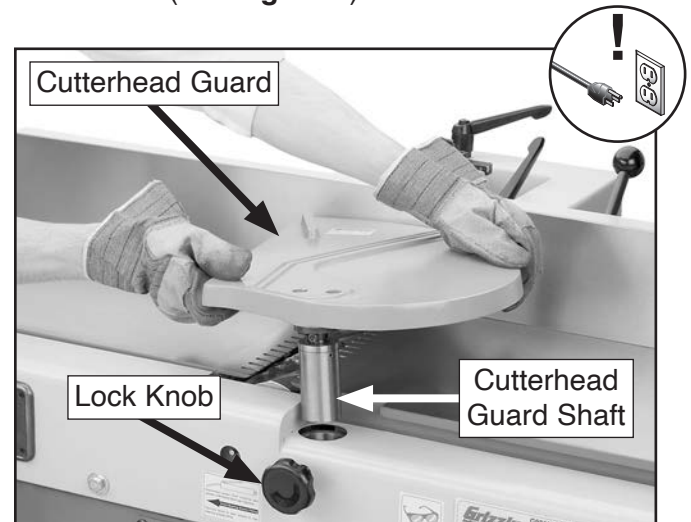
The cutterhead guard is designed to reduce the risk of accidental contact with hands or fingers with the spinning cutterhead. When properly installed and functioning correctly, the guard automatically rotates clear of the cutterhead during the cutting operation and then springs back over the cutterhead as soon as the operation is complete.

In order to function as intended, the guard must be installed as low as possible over the infeed table without actually touching it (approximately  $\frac{1}{16}$ " above infeed table), and it must have enough spring tension at the mounting shaft to quickly reposition itself against the fence after it is rotated away from the cutterhead and released.

### To adjust cutterhead guard tension:

1. DISCONNECT MACHINE FROM POWER!
2. Set fence to 90° and move it all the way back.

3. Pull cutterhead guard away from fence and let it go.
  - If cutterhead guard *does* spring back over cutterhead, *contacts* fence, and *does not* drag across infeed table, then cutterhead guard is properly adjusted.
  - If cutterhead guard *does not* spring back over cutterhead, *does not* contact fence, or *drags* across infeed table, proceed to **Step 4**.
4. Loosen lock knob securing cutterhead guard shaft (see **Figure 4**).
5. Lift cutterhead guard so shaft clears hole, rotate guard clockwise towards fence, then re-install guard and tighten lock knob to secure (see **Figure 4**).



**Figure 4.** Adjusting cutterhead guard.

6. Repeat **Step 3** and, if necessary, repeat **Steps 4–5** until cutterhead guard is properly adjusted.



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Model G9860/ZX, G9953ZX/ZXF

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## Old Dust Port



## New Dust Port

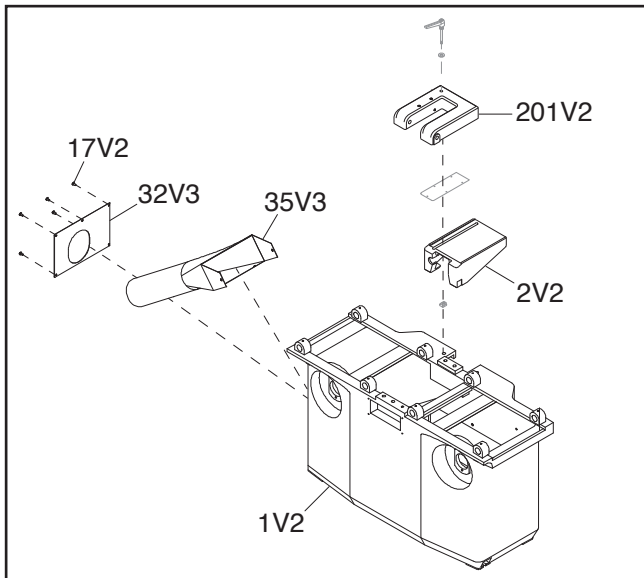


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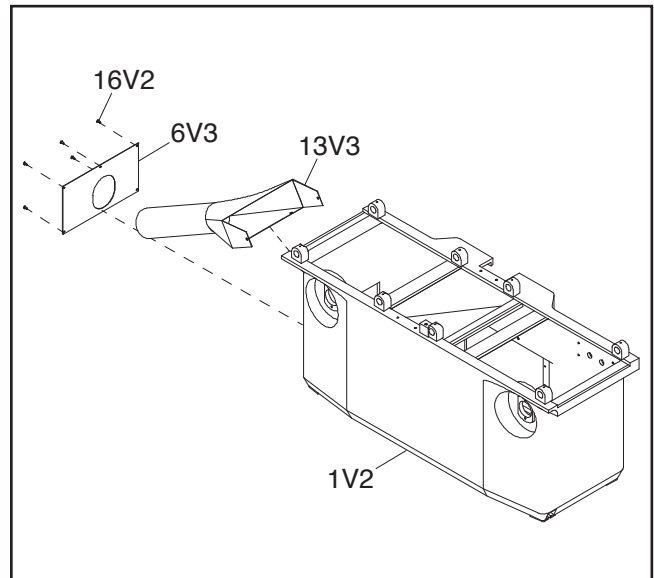
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## G9860/ZX Revised Parts



REF	PART #	DESCRIPTION
1V2	P9860001V2	BASE V2.01.21
2V2	P9860002V2	FENCE SEAT V2.03.23
17V2	P9860017V2	HEX BOLT M6-1 X 12 V2.01.21
32V3	P9860032V3	DUST PORT PANEL 5" V3.01.21
35V3	P9860035V3	DUST CHUTE 5" V3.01.21
201V2	P9860201V2	FENCE BASE V2.03.23

## G9953ZX/ZXF Revised Parts



REF	PART #	DESCRIPTION
1V2	P9953ZX001V2	BASE V2.01.21
6V3	P9953ZX006V3	DUST HOOD 5" V3.01.21
13V3	P9953ZX013V3	DUST CHUTE 5" V3.01.21
16V2	P9953ZX016V2	HEX BOLT M6-1 X 12 V2.01.21



# *Grizzly* **Industrial, Inc.**®

## **MODEL G9860, G9860ZX, G9953ZX, & G9953ZXF EXTREME SERIES JOINTER OWNER'S MANUAL** *(For models manufactured since 10/20)*



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V6.10.20



## **WARNING!**

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

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

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

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



## **WARNING!**

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

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

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

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** WARNING**

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk 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.

# INTRODUCTION

## Manual Accuracy

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

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

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

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

**Grizzly Industrial** MODEL GXXXX  
MACHINE NAME

SPECIFICATIONS	WARNING!
Motor:	To reduce risk of serious injury when using this machine:
Specification:	1. Read manual before operation.
Specification:	2. Use safety glasses and respirator.
Specification:	3. Make sure the machine is properly adjusted/setup and
Specification:	4. Make sure the motor has stopped and disconnect power before adjustments, maintenance, or service.
Weight:	5. DO NOT expose to rain or dampness.
	6. DO NOT modify this machine in any way.
	7.
	8.
	9. Do not use while under the influence of drugs or alcohol.
	10. Maintain machine carefully to prevent accidents.

Manufacture Date: [Date]

Serial Number: [Serial Number]

Manufactured for Grizzly in Taiwan

## Contact Info

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

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

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

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

## Machine Description

A jointer is used to flatten the face or edge of a workpiece, which is required when properly “squaring up” a workpiece for later construction or jointing. A jointer can also cut bevels and other specialized cuts with various jigs or fixtures.

A typical cut on a jointer is made by firmly holding a workpiece against the infeed table and fence, then moving the workpiece over the cutterhead while using the fence as a guide. As the workpiece moves over the cutterhead, the knives or cutters make many shallow cuts that “shave” off the surface of the workpiece. Since only a small amount of the workpiece is removed during a jointer cut, most jointer cuts are repeated many times to yield a desired result.



# Identification

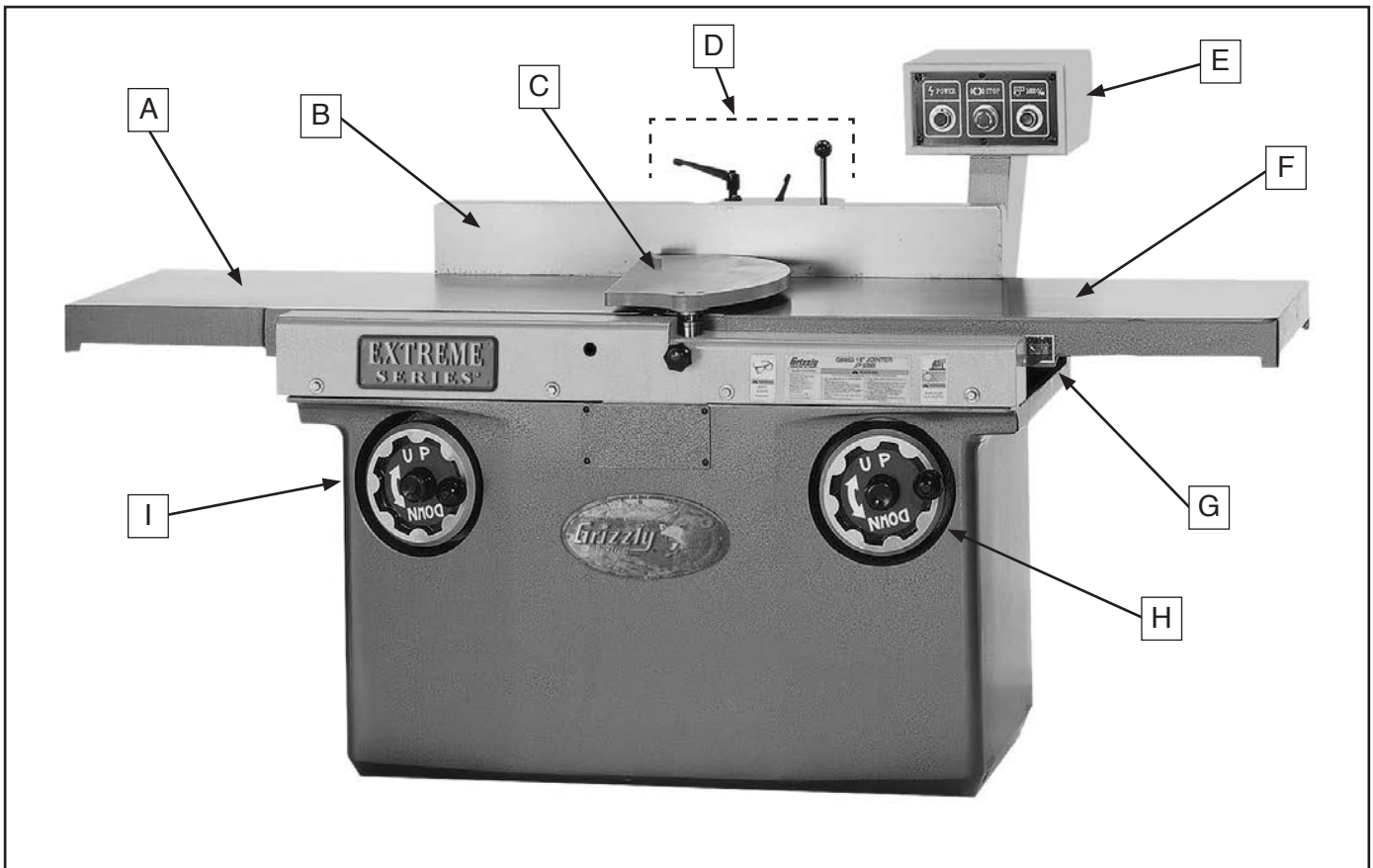


Figure 1. Model G9860/G9860ZX identification.

- A. Outfeed Table
- B. Fence
- C. Cutterhead Guard
- D. Fence Controls (refer to **Fence Controls** on **Page 25** for detailed Information)
- E. Control Panel (refer to **Control Panel** on **Page 24** for detailed information).
- F. Infeed Table
- G. Depth of Cut Scale & Pointer
- H. Infeed Table Handwheel & Lock
- I. Outfeed Table Handwheel & Lock

## WARNING

**For Your Own Safety Read Instruction Manual Before Operating Jointer**

- a) Wear eye protection.
- b) Always keep cutterhead and drive guards in place and in proper operating condition. If removed, **ALWAYS** replace cutterhead guard immediately after rabbeting operations.
- c) Never make cuts deeper than  $\frac{1}{8}$ " per pass.
- d) Always use hold-down or push blocks when jointing material narrower than 3" or planing material thinner than 3".
- e) Never perform jointing, planing, or rabbeting cuts on pieces shorter than 12" in length.



# Model Specification Comparison

	G9860	G9860ZX	G9953ZX	G9953ZXF
Motor HP	3	3	5	5
Motor Voltage	220V	220V	220V	220V/440V
Motor Phase	Single	Single	Single	3-Phase
Table Dimension	12 <sup>1</sup> / <sub>2</sub> "W x 80"L	12 <sup>1</sup> / <sub>2</sub> "W x 80"L	16 <sup>1</sup> / <sub>4</sub> "W x 99 <sup>1</sup> / <sub>4</sub> "L	16 <sup>1</sup> / <sub>4</sub> "W x 99 <sup>1</sup> / <sub>4</sub> "L
Cutterhead Type	Knife	Spiral	Spiral	Spiral
Number of Knives	4	N/A	N/A	N/A
Number of Cutter Inserts	N/A	84	120	120
Number of Cutter Spirals	N/A	6	6	6
Cutterhead Speed	5900 RPM	5900 RPM	5000 RPM	5000 RPM
Number of Cuts/Min.	23600	Effective 35400	Effective 30000	Effective 30000
Max. Width of Cut	11 <sup>13</sup> / <sub>16</sub> "	11 <sup>13</sup> / <sub>16</sub> "	16"	16"
Max. Depth of Cut	<sup>5</sup> / <sub>16</sub> "	<sup>5</sup> / <sub>16</sub> "	<sup>5</sup> / <sub>16</sub> "	<sup>5</sup> / <sub>16</sub> "
Table Length x Width	80" x 12 <sup>1</sup> / <sub>2</sub> "	80" x 12 <sup>1</sup> / <sub>2</sub> "	99 <sup>1</sup> / <sub>4</sub> " x 16 <sup>1</sup> / <sub>4</sub> "	99 <sup>1</sup> / <sub>4</sub> " x 16 <sup>1</sup> / <sub>4</sub> "
Fence Length x Height	39 <sup>1</sup> / <sub>4</sub> " x 4 <sup>3</sup> / <sub>4</sub> "	39 <sup>1</sup> / <sub>4</sub> " x 4 <sup>3</sup> / <sub>4</sub> "	43 <sup>1</sup> / <sub>4</sub> " x 6 <sup>5</sup> / <sub>8</sub> "	43 <sup>1</sup> / <sub>4</sub> " x 6 <sup>5</sup> / <sub>8</sub> "
Fence Stops	45° & 90°			
Floor-to-Table Height	30 <sup>3</sup> / <sub>4</sub> "			
Table Movement	Parallelogram			
Cabinet & Fence Construction	Cast Iron			
Table Construction	Precision Ground Cast Iron			
Dust Port	1 @ 5"			
Country of Origin	Taiwan (ISO 9001 Factory)			
Weight	1200 lbs.	1200 lbs.	1650 lbs.	1650 lbs.

Figure 2. Model specification comparison chart.



# SECTION 1: SAFETY

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

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



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



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**

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

## Safety Instructions for Machinery

### **WARNING**

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

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

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

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

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

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

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



# WARNING

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



# Additional Safety Instructions for Jointers

## **WARNING**

Serious cuts, amputation, entanglement, or death can occur from contact with rotating cutterhead or other moving components! Flying chips from cutting operations can cause eye injuries or blindness. Workpieces or inserts/knives thrown by cutterhead (kickback) can strike nearby operator or bystanders with deadly force. To reduce the risk of serious personal injury from these hazards, operator and bystanders **MUST** completely heed the hazards and warnings below.

**KICKBACK.** Occurs when workpiece is ejected from machine at a high rate of speed. Kickback injuries occur from getting struck by workpiece or hands being pulled into cutterhead. To reduce the risk of kickback, only use proper workpieces, safe feeding techniques, and proper machine setup or maintenance.

**GUARD REMOVAL.** Operating jointer without guards unnecessarily exposes operator to knives/inserts and other hazardous moving parts. Except when rabbeting, never operate jointer or allow it to be connected to power if any guards are removed. Turn jointer **OFF** and disconnect power before clearing any shavings or sawdust from around cutterhead. After rabbeting or maintenance is complete, immediately replace all guards and ensure they are properly installed/adjusted before resuming regular operations.

**DULL OR DAMAGED KNIVES/INSERTS.** Dull or damaged knives/inserts increase risk of kickback and cause poor workpiece finish. Only use sharp, undamaged knives/inserts.

**OUTFEED TABLE ALIGNMENT.** Setting outfeed table too high can cause workpiece to hit table or get stuck while feeding. Setting outfeed table too low may cause workpiece to rock or shift while feeding. Both of these results will increase risk of kickback. Always keep outfeed table even with knives/inserts at highest point during rotation.

**INSPECTING STOCK.** Impact injuries or kickback may result from using improper workpieces. Thoroughly inspect and prepare workpiece before cutting. Verify workpiece is free of nails, staples, loose knots or other foreign material. Always joint warped workpieces with cupped side facing down.

**MAXIMUM CUTTING DEPTH.** To reduce risk of kickback, never cut deeper than 1/8" per pass.

**GRAIN DIRECTION.** Jointing against the grain or end grain can increase risk of kickback. It also requires more cutting force, which produces chatter or excessive chip out. Always joint or surface plane **WITH** the grain.

**CUTTING LIMITATIONS.** Cutting workpieces that do not meet minimum dimension requirements can result in kickback or accidental contact with cutterhead. Never perform jointing, planing, or rabbeting cuts on pieces smaller than specified in machine data sheet.

**PUSH BLOCKS.** Push blocks reduce risk of accidental cutterhead contact with hands. Always use push blocks when planing materials less than 3" high or wide. Never pass your hands directly over cutterhead without a push block.

**WORKPIECE SUPPORT.** Poor workpiece support or loss of workpiece control while feeding will increase risk of kickback or accidental contact with cutterhead. Support workpiece with fence continuously during operation. Support long stock with auxiliary tables if necessary.

**FEED WORKPIECE PROPERLY.** Kickback or accidental cutterhead contact may result if workpiece is fed into cutterhead the wrong way. Allow cutterhead to reach full speed before feeding. Never start jointer with workpiece touching cutterhead. Always feed workpiece from infeed side to outfeed side without stopping until cut is complete. Never move workpiece backwards while feeding.

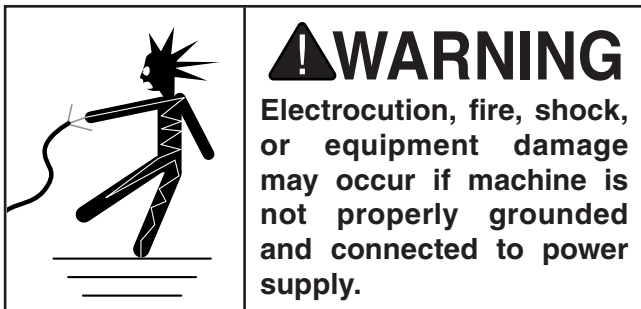
**SECURE KNIVES/INSERTS.** Loose knives or improperly set inserts can be thrown from cutterhead with dangerous force. Always verify knives/inserts are secure and properly adjusted before operation. Straight knives should never project more than 1/8" (0.125") from cutterhead body.



# SECTION 2: POWER SUPPLY

## Availability

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



## Full-Load Current Rating

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

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

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

## Circuit Information

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



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

## Circuit Requirements for G9860/G9860ZX

Full-Load Current Rating..... 16 Amps  
Nominal Voltage ..... 220V/240V  
Cycle.....60 Hz  
Phase..... 1-Phase  
Circuit Rating..... 20 Amps  
Plug/Receptacle ..... NEMA 6-20  
Cord.....3-Wire, 12 AWG, 300VAC, “S”-Type

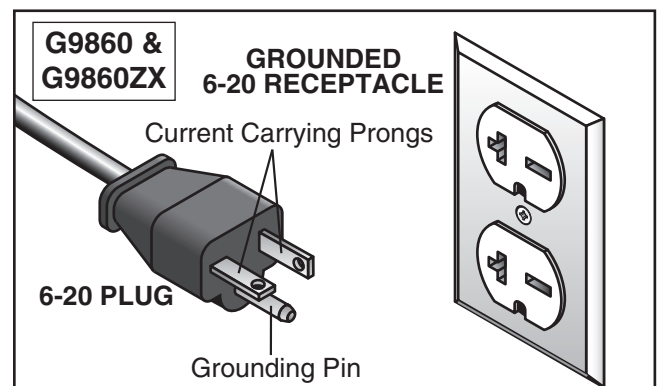


Figure 3. Typical 6-20 plug and receptacle.



## Circuit Requirements for G9953ZX

Full-Load Current Rating .....	25 Amps
Nominal Voltage .....	220V/240V
Cycle .....	60 Hz
Phase .....	1-Phase
Circuit Rating .....	30 Amps
Plug/Receptacle .....	NEMA L6-30
Cord .....	3-Wire, 10 AWG, 300VAC, "S"-Type

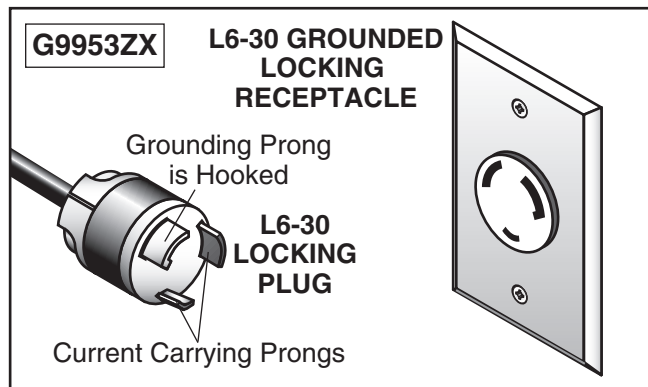


Figure 4. Typical L6-30 plug and receptacle.

## G9953ZXF Circuit Requirements for 220V Operation

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

Full-Load Current Rating .....	14 Amps
Nominal Voltage .....	220V/240V
Cycle .....	60 Hz
Phase .....	3-Phase
Circuit Rating .....	20 Amps
Connection.....	Hardwire with Locking Switch

## G9953ZXF Circuit Requirements for 440V Operation

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

Full-Load Current Rating .....	7 Amps
Nominal Voltage .....	440V/480V
Cycle .....	60 Hz
Phase .....	3-Phase
Rated Size .....	15 Amps
Connection.....	Hardwire with Locking Switch

A permanently connected (hardwired) power supply is typically installed with wires running through mounted and secured conduit. A disconnecting means, such as a locking switch (see following figure), must be provided to allow the machine to be disconnected (isolated) from the power supply when required. This installation must be performed by an electrician in accordance with all applicable electrical codes and ordinances.

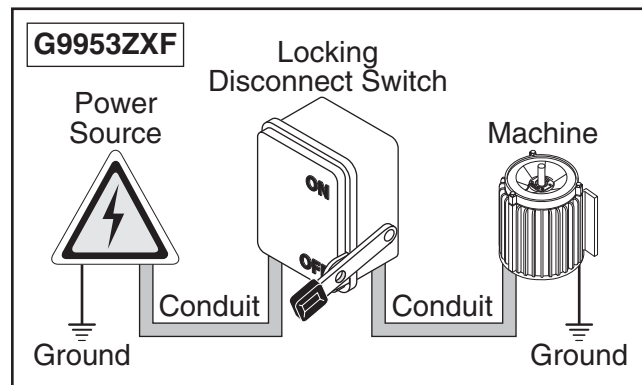


Figure 5. Typical setup of a permanently connected machine.

## ⚠ WARNING

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

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



## Grounding Requirements

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

### **NOTICE**

**No adapter is available or should be used with this machine. If the machine must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the machine must comply with all local codes and ordinances.**

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

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

### **Extension Cords (G9860, G9860ZX, & G9953ZX Only)**

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

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

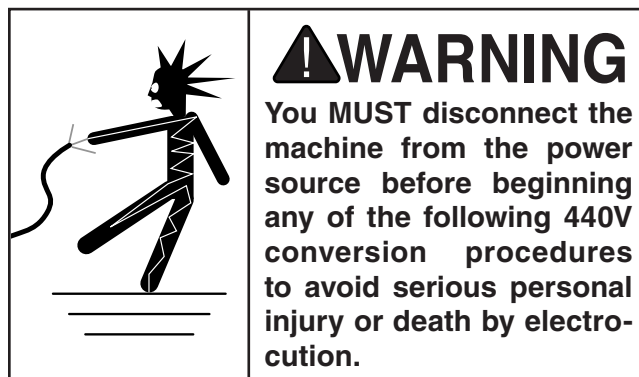
Any extension cord used with this machine must be in good condition and contain a ground wire and matching plug/receptacle. Additionally, it must meet the following size requirements:

**Minimum Gauge Size .....12 AWG**  
**Maximum Length (Shorter is Better).....50 ft.**

## Model G9953ZXF 440V Conversion

To operate your jointer with 440V power, you must: 1) replace the magnetic switch contactor, 2) replace the overload relay, 3) replace the power lamp and ON button light bulbs, 4) re-wire the motor, and 5) have an electrician hardwire the machine to a locking disconnect switch.

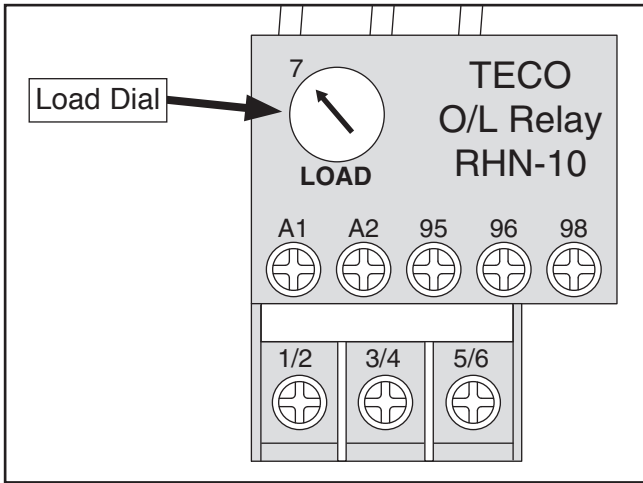
Refer to **Page 52** for the full **440V Wiring Diagram**.



### **Replacing Contactor & Overload Relay**

1. DISCONNECT JOINTER FROM POWER!
2. Remove the control panel from the electrical pedestal to access the contactor and overload relay.
3. Replace the existing contactor and overload relay with those from the 440V Conversion Kit (Part Number P9953ZXF042) (refer to **Pages 51– 52** for detailed illustrations), then set the overload relay load dial to 7, as shown in **Figure 6** on the next page.



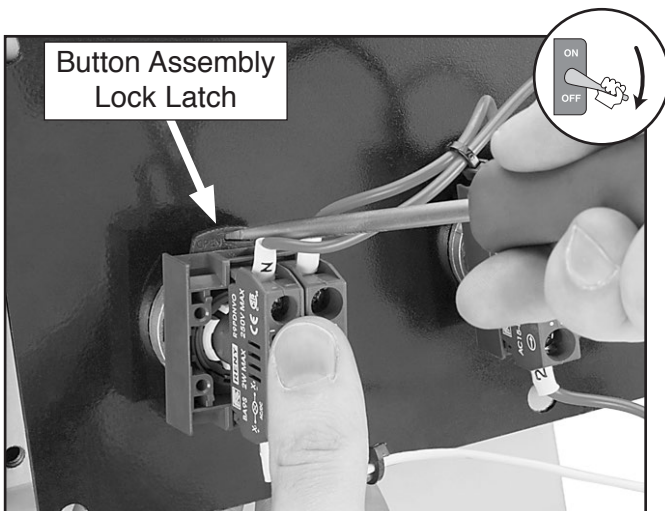


**Figure 6.** 440V overload relay set at 7 amps.

4. Replace the control panel before connecting the jointer to power.

### Replacing Control Panel Light Bulbs

1. DISCONNECT JOINTER FROM POWER!
2. Remove the control panel from the electrical pedestal to access the rear of the power lamp and ON button assemblies (see **Figure 7**).

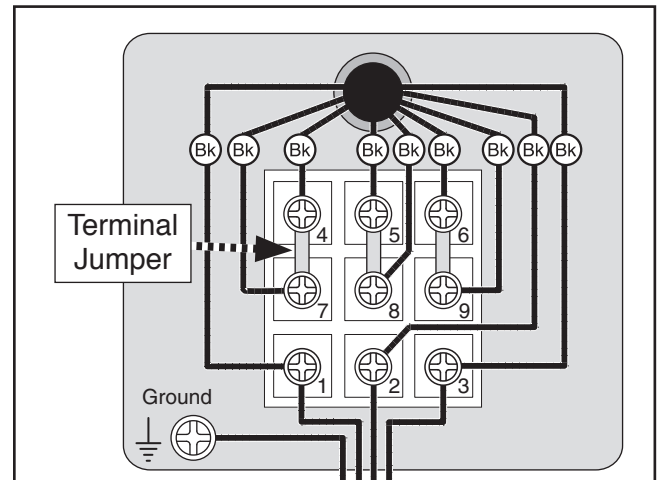


**Figure 7.** Accessing the light bulb from the rear of the control panel.

3. Use a small, flat screwdriver to move the power lamp assembly lock latch to the left, as shown in **Figure 7**, pull the assembly loose from the panel, then replace the light bulb.
4. Re-install the lamp assembly, move the lock latch to the right to secure it.
5. Repeat **Steps 3–4** for the ON button, then re-install the control panel onto the electrical pedestal.

### Rewiring Motor

1. DISCONNECT JOINTER FROM POWER!
2. Remove the rear motor access panel, then remove the motor wiring junction box cover.
3. Configure the terminal jumpers as shown in **Figure 8**.

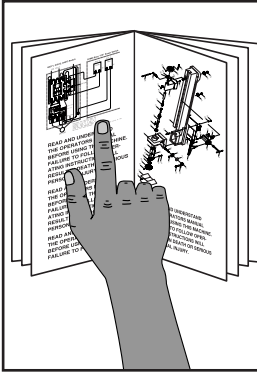


**Figure 8.** Illustration of motor wired for 440V operation.

4. Replace the motor junction box cover and access panel before connecting the jointer to power.

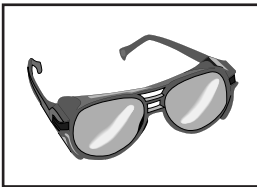


# SECTION 3: SETUP



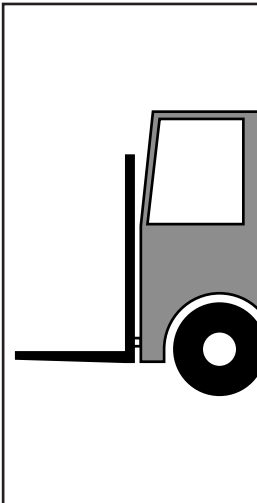
## **!WARNING**

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



## **!WARNING**

Wear safety glasses during the entire setup process!



## **!WARNING**

The Extreme Series Jointer is a heavy machine. Serious personal injury may occur if safe moving methods are not used. To be safe, get assistance and use power equipment rated for at least 1500 lbs. to move the shipping crate and remove the machine from the crate.

## Needed for Setup

Read through the entire **SETUP** section to understand the procedures and items required to correctly move, place, and assemble your machine.

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

Description	Qty
• Forklift or Hoist (rated for 1500 lbs).....	1
• Lifting Straps (rated for 1000 lbs. each) .....	2
• Assistants .....	At Least 1
• Safety Glasses .....	1 Pair per Person
• Precision Level .....	1
• Metal Floor Shims .....	As Needed
• Floor Mounting Hardware.....	As Needed
• Cleaning Solvent & Shop Rags..	As Needed
• Precision Straightedge 6' .....	1
• Phillips Screwdriver #2.....	1
• Hex Wrench 10mm.....	1
• Wrench 18mm .....	1

## Unpacking

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

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

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



# Inventory

The following is a description of the main components shipped with your machine. Lay the components out to inventory them.

**Note:** *If you can't find an item on this list, check the mounting location on the machine or examine the packaging materials carefully. Occasionally we pre-install certain components for shipping purposes.*

Inventory: (Figure 9)	Qty
A. Fence Assembly.....	1
B. Cutterhead Guard.....	1
C. Push Blocks.....	2
D. Fence Support (G9860/G9860ZX).....	1
E. Fence Lock Assembly (G9860/G9860ZX) .	1
F. Fence Tilt Handle .....	1

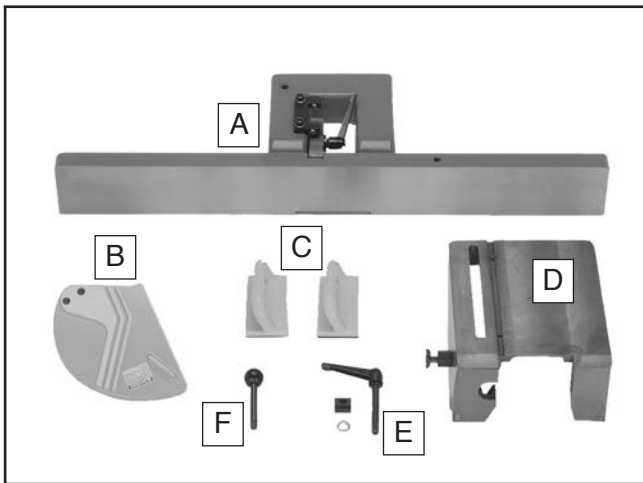
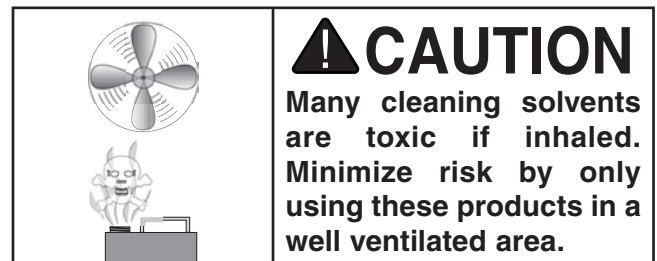


Figure 9. Inventory.

Hardware & Tools: (not shown)	Qty
• Combo Wrench 10mm .....	1
• Open-End Wrench 11/13mm .....	1
• Hex Wrenches 3, 4, 5, 6, 8mm.....	1 Each
• Knife Cutterhead Models:	
—Knife Setting Gauge .....	1
• Spiral Cutterhead Models:	
—Pneumatic Torque Wrench Assembly.....	1
—T-Handle Driver.....	1
—Torx Bits T-20.....	15
—Indexable Inserts 14 x 14 x 2mm.....	10
—Flat Head Torx Screws T-20 M6-1 x 15..30	

# Clean Up

The unpainted surfaces are coated with a waxy oil to prevent corrosion during shipment. Remove this protective coating with a solvent cleaner or degreaser, such as shown in **Figure 10**. For thorough cleaning, some parts must be removed. **For optimum performance, clean all moving parts or sliding contact surfaces.** Avoid chlorine-based solvents, such as acetone or brake parts cleaner that may damage painted surfaces. Always follow the manufacturer's instructions when using any type of cleaning product.



G2544—Solvent Cleaner & Degreaser

H9692—Orange Power Degreaser

Great products for removing shipping grease.



Figure 10. Cleaner/degreasers available from Grizzly.



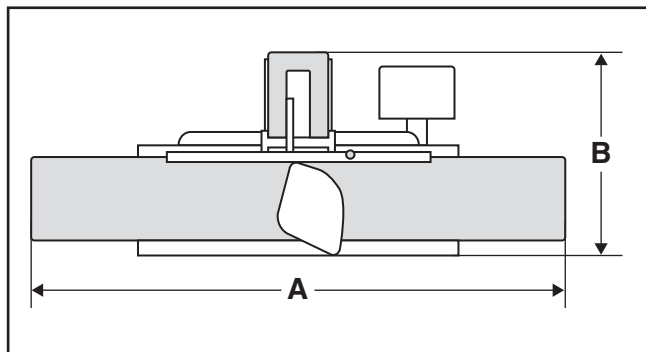
# Site Considerations

## Floor Load

Refer to the **Model Specification Comparison** chart on **Page 5** 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

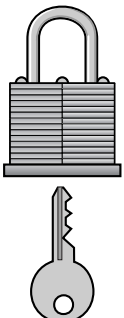
Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your new machine. See **Figures 11–12** for the minimum working clearances.



**Figure 11.** Minimum working clearances.

Model	A	B
G9860	80"	35"
G9860ZX	80"	35"
G9953ZX	99½"	45½"
G9953ZXF	99½"	45½"

**Figure 12.** Minimum working clearances by model.



**⚠ CAUTION**

Children and visitors may be seriously injured if unsupervised around this machine. Lock entrances to the shop or disable start switch or power connection to prevent unsupervised use.

# Mounting to Shop Floor

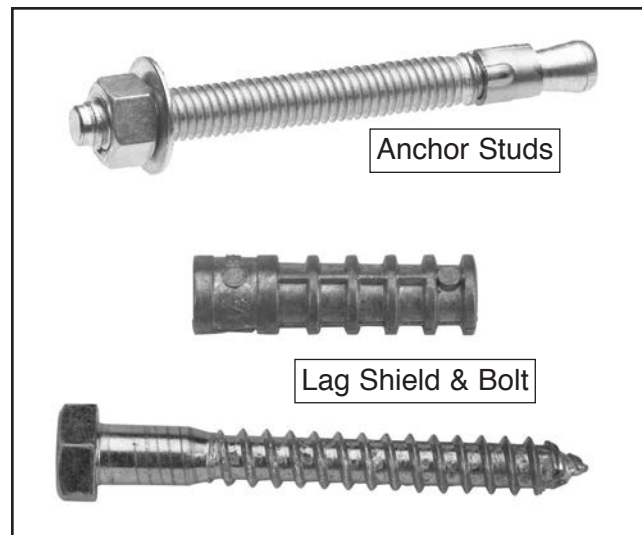
Although not required, we recommend that you mount your new machine to the floor. Because this is an optional step and floor materials may vary, floor mounting hardware is not included. Generally, you can either bolt your machine to the floor or mount it on machine mounts. Both options are described below. Whichever option you choose, it is necessary to level your machine with a precision level.

## Bolting to Concrete Floors

Anchor studs and lag shield anchors with lag bolts (**Figure 13**) are two popular methods for anchoring an object to a concrete floor. We suggest you research the many options and methods for mounting your machine and choose the best that fits your specific application.

### **NOTICE**

**Anchor studs are stronger and more permanent alternatives to lag shield anchors; however, they will stick out of the floor, which may cause a tripping hazard if you decide to move your machine.**



**Figure 13.** Typical fasteners for mounting to concrete floors.



## Using Machine Mounts

Using machine mounts, shown in **Figure 14**, gives the advantage of fast leveling and vibration reduction. The large size of the foot pads distributes the weight of the machine to reduce strain on the floor.

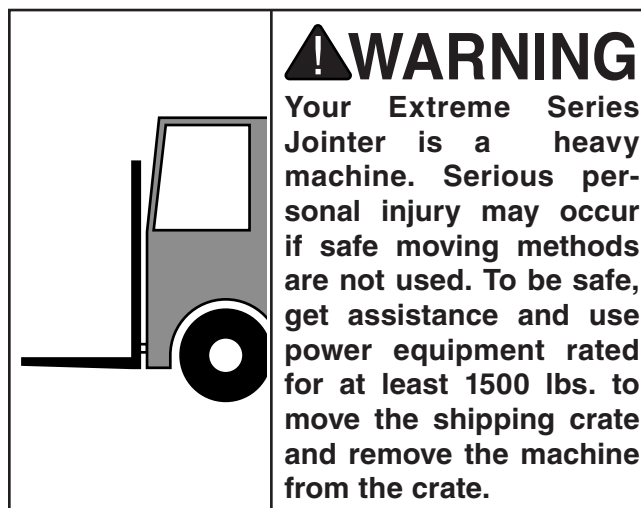


**Figure 14.** Machine mount example.

### **NOTICE**

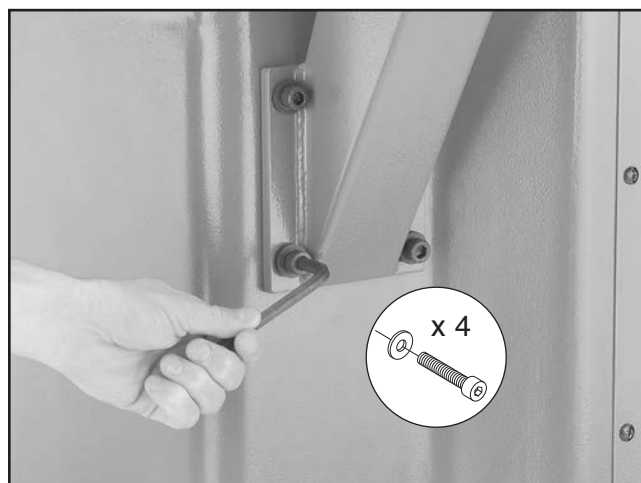
**We strongly recommend securing your machine to the floor if it is hardwired to the power source. Consult with your electrician to ensure compliance with local codes.**

## Moving & Assembling Jointer



### Moving & Placing Jointer

1. Review the **Power Supply** section beginning on **Page 9** and **Mounting to Shop Floor** on **Page 15**, then prepare the permanent location for your jointer.
2. Remove the top and sides of the shipping crate, then place the small items aside in a safe location.
3. Remove the four pre-installed cap screws from the back of the jointer, then, with assistance, secure the pedestal to the jointer with these cap screws, as shown in **Figure 15**.



**Figure 15.** Installing control panel pedestal.



## NOTICE

Make sure the straps do not touch the control panel pedestal in the next step. Also, make sure they stay under the base and do not slip to the infeed or outfeed tables to avoid damaging the machine.

4. Position the lifting straps under the ends of the cast iron base, as shown in **Figure 16**, then secure them to the power lifting equipment.



**Figure 16.** Lifting straps properly positioned.

5. Tension the lifting straps with the forklift to make sure they stay in place, then unbolt the jointer from the shipping pallet.
6. With assistance to steady the load, raise the jointer just enough to clear the shipping pallet and any floor obstacles, then move it to the prepared location.

**Note:** In the next step, use shims between the base mounting points and the floor to avoid warping or cracking the cast iron.

7. As you mount the jointer to the floor, use the precision level to make sure the table is level from side-to-side and from front-to-back.

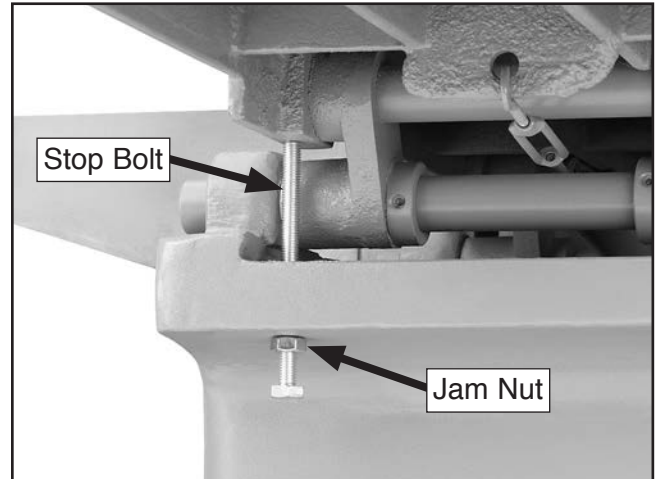
**Note:** Before the jointer was shipped from the factory, the infeed table was fully raised and the stop bolt was threaded up against the bottom of it to safely secure it during transit.

To prevent damaging the table elevation gearing, you **MUST** adjust the position of the infeed stop bolt to the operating position before attempting to lower the infeed table.

## NOTICE

To prevent damage to the table elevation gearing, **NEVER** force the table handwheels if you feel resistance. Check the positions of the stop bolts or for obstructions.

8. Loosen the jam nut (see **Figure 17**) on the infeed stop bolt, then unthread the stop bolt until the distance from the top of the bolt and the bottom of the infeed table is the same as the maximum depth of cut specified for your jointer (refer to the **Model Specification Comparison** chart for your model on **Page 5**).

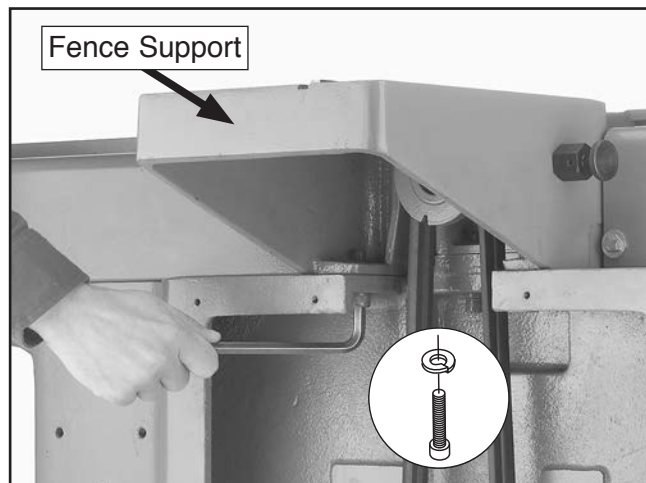


**Figure 17.** Infeed table stop bolt (viewed from underneath the table).



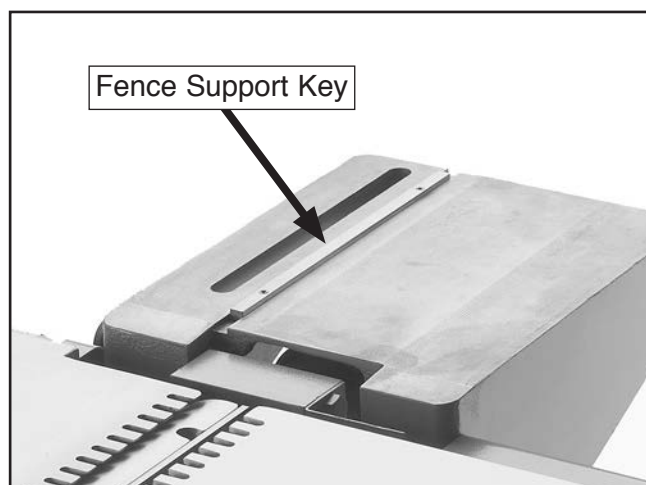
## Installing Fence (G9860/G960ZX)

1. Remove the motor access panel on the back of the machine.
2. Remove the cap screws and lock washers that are pre-installed on the bottom of the fence support, then, with assistance, secure the support to the jointer with these cap screws and lock washers, as shown in **Figure 18**.



**Figure 18.** Installing the fence support.

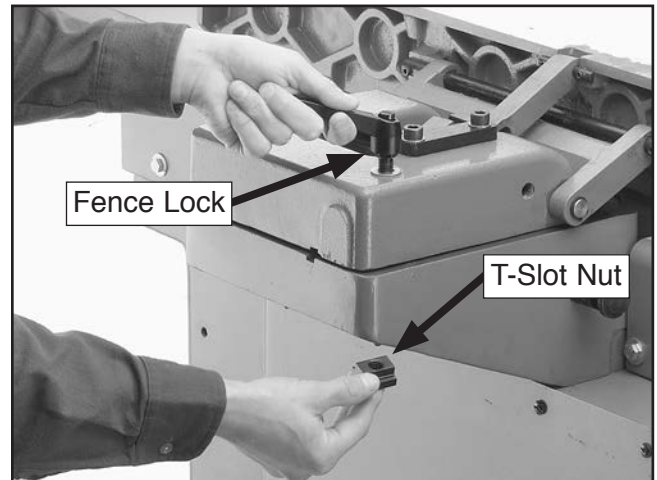
3. Align the keyway underneath the fence support key (see **Figure 19**), then place the fence assembly on top of the support.



**Figure 19.** Fence support key.

4. Slide the flat washer onto the fence lock shaft, insert the shaft into the hole on the top of the fence assembly and through the slot of the support.

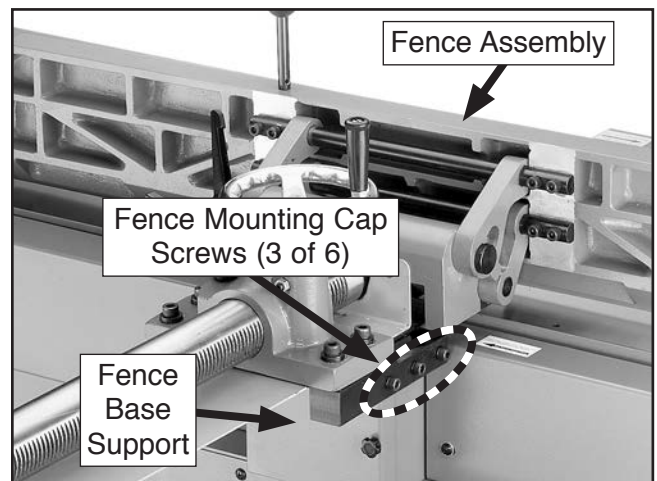
5. To secure the fence assembly, thread the T-slot nut onto the bottom of the lock shaft so that nut fits up into the slot of the fence support, as shown in **Figure 20**.



**Figure 20.** Installing the fence lock.

## Installing Fence (G9953ZX/G9953ZXF)

1. Remove the six pre-installed cap screws and lock washers on either side of the fence base support (see **Figure 21**).
2. With assistance, place the fence assembly onto the fence base support.



**Figure 21.** Fence assembly installed.

3. Secure the fence assembly with the six cap screws and lock washers removed in **Step 1**.



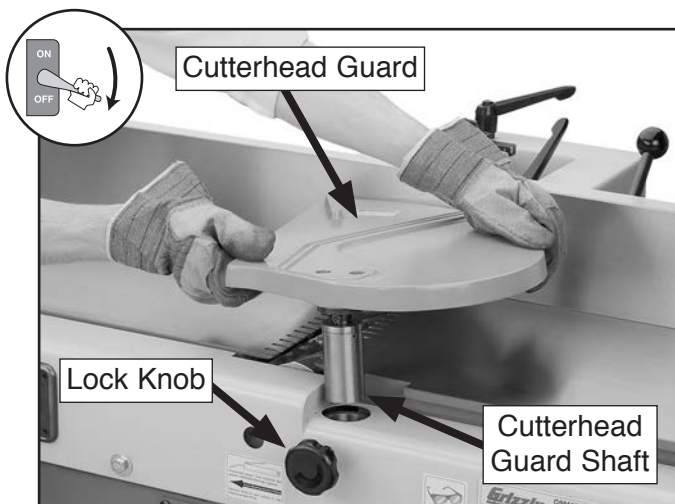
# Adjusting Cutterhead Guard Tension

## **WARNING**

The cutterhead guard is a critical safety feature of this jointer. You **MUST** install and verify its operation before using the jointer! Failure to properly install this guard will greatly increase the risk of serious personal injury.

To adjust the cutterhead guard tension:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen the lock knob shown in **Figure 22** that secures the cutterhead guard shaft.



**Figure 22.** Installing the cutterhead guard.

3. Install the guard shaft into the mounting hole, then tighten the lock knob.
4. Lock the fence out of the way toward the back, then test the return tension of the guard by swinging it counterclockwise and releasing it.

—If the guard does not return swiftly toward the fence, loosen the lock knob, lift the guard so the shaft clears the hole, rotate the guard clockwise, then re-install it and lock it in place.

5. Re-test and, if necessary, repeat **Step 4** until the guard has the correct tension.

Extreme Series Jointer (Mfd. Since 10/20)



# Setting Outfeed Table Height

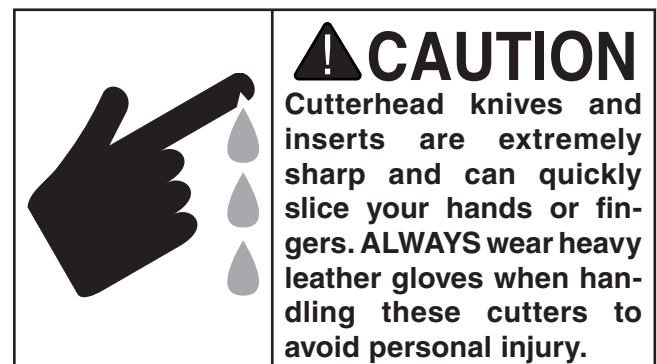
The outfeed table height **MUST** be even with the knives/cutters when they are at top-dead-center (TDC) to ensure safe operation and good results.

If the outfeed table is set too low, the workpiece will have increased snipe. If the outfeed table is set too high, the workpiece will hit the edge of the outfeed table and increase the risk of kickback.

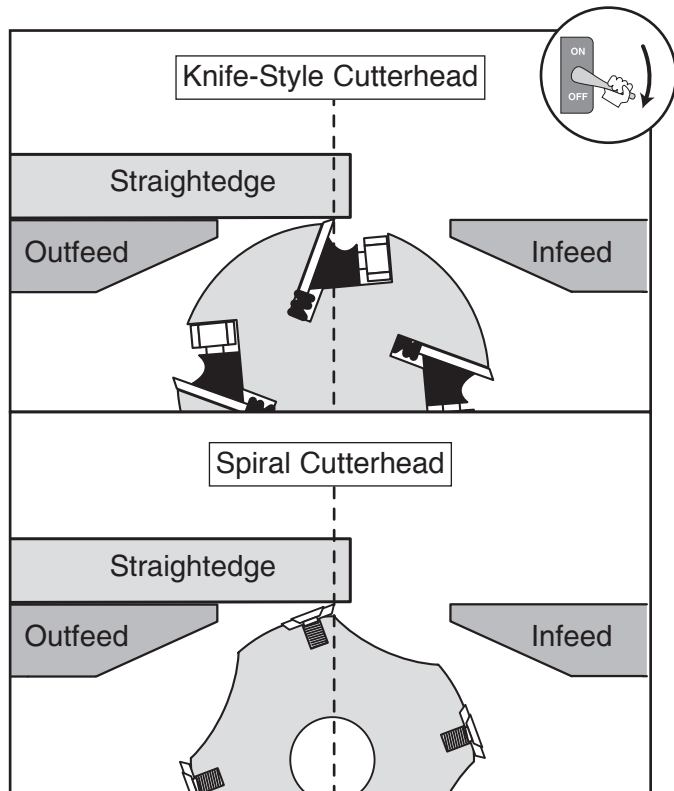
To set the outfeed table height:

1. DISCONNECT JOINTER FROM POWER!
2. **Models G9860 & G9860ZX:** Remove the cutterhead guard, fence assembly, and rear motor access cover to access the cutterhead pulley.

**Models G9953ZX, & G9953ZXF:** Remove the cutterhead guard and fence assembly, then open the rear cutterhead cover to access the cutterhead pulley.

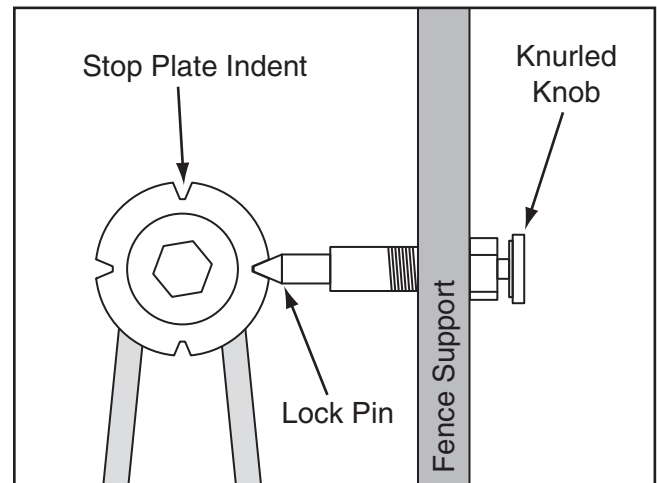


- Place the straightedge on the center of the outfeed table and over the cutterhead, then use the cutterhead pulley to rotate the cutterhead until the cutter edge is at the top-dead-center, as shown in **Figure 23**.



**Figure 23.** Cutter edge at top-dead-center.

**Note:** On the knife-style cutterhead models, rotate the knurled knob on the cutterhead lock pin underneath the back of the fence assembly until it pops in toward the cutterhead. As you rotate the cutterhead pulley, the pin will engage one of the four indents on the stop plate and lock the cutterhead in the correct position for this procedure (see **Figure 24**). To disengage the pin, pull it out and rotate it  $\frac{1}{2}$  turn.



**Figure 24.** Cutterhead lock pin engaged.

- When the outfeed table height is correctly set and the cutter is at the top of its rotation, the cutter edge will just touch the straightedge without lifting it.

**Note:** Use the cutterhead pulley to rock the cutterhead back-and-forth to make sure the cutter is at TDC.

- If your outfeed table height is correctly set, no further adjustments are necessary. Continue with **Step 6**.
- If the height setting is not correct, continue with **Step 5**.



5. Loosen the outfeed table lock and rotate the handwheel until the cutter edge just touches the straightedge when at TDC, then tighten the table lock.

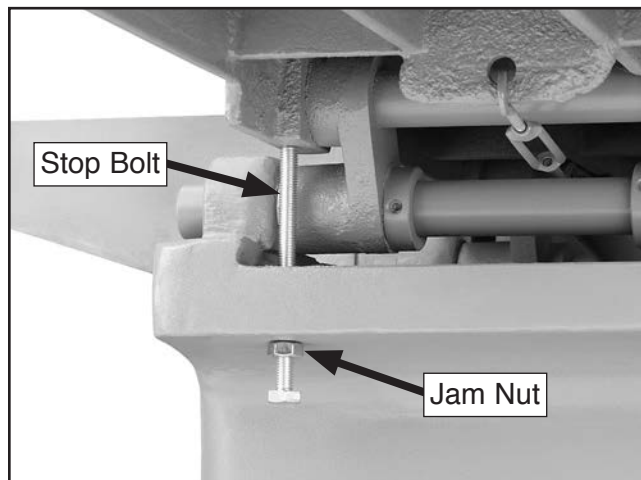
## CAUTION

The outfeed table **MUST** be even with the cutter edges to reduce the risk of kickback and to help ensure good cutting results.

**Tip:** Some advanced woodworkers have found that they can virtually eliminate snipe by setting the outfeed table in the following manner: Perform **Steps 1–5**. Then lower the outfeed table slightly so the knife or insert lifts the straightedge off the table. Place a ruler next to the straightedge and rotate the cutterhead, watching how far the carbide insert pulls the straightedge. Adjust the outfeed table and recheck until the knife or insert moves the straightedge only  $\frac{5}{32}$ ".

6. Loosen the jam nut and adjust the outfeed stop bolt underneath the table so that it just touches the bottom of the tables, as shown in **Figure 25**, then re-tighten the jam nut.

**Note:** When adjusted to the correct outfeed table height, use the stop bolt for a convenient method of ensuring the outfeed table is set at the proper height.



**Figure 25.** Table stop bolt (viewed from underneath the table).

7. Re-install the motor access cover, fence assembly, and cutterhead guard.



# Dust Collection

## ⚠ CAUTION

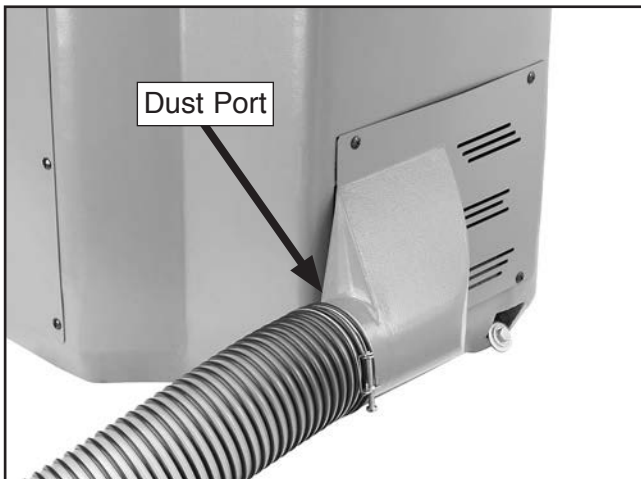
**DO NOT** operate your jointer without an adequate dust collection system. This machine creates substantial amounts of wood dust while operating. Failure to use a dust collection system can result in short and long-term respiratory illness.

### Recommended CFM at Dust Port: 400 CFM

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

### To connect a dust collection hose:

1. Fit a 5" dust hose over the dust port, as shown in **Figure 26**, then secure it in place with a hose clamp.



**Figure 26.** Dust hose attached to dust port.

2. Tug the hose to make sure it does not come off. **Note:** A tight fit is necessary for proper performance.

# Test Run

Once the assembly is complete, test run your machine to make sure it runs properly and is ready for regular operation. The test run consists of verifying the following: 1) The motor powers up and runs correctly, 2) the stop button safety feature works correctly, and, if equipped, 3) the cutterhead brake works properly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review **Troubleshooting on Page 36**.

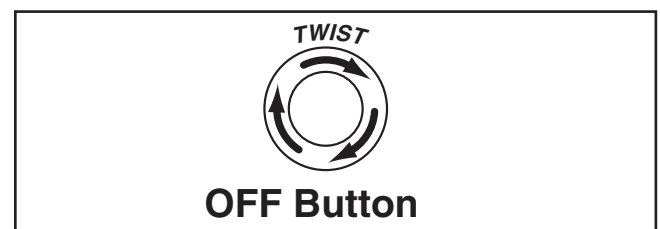
If you cannot find a remedy, contact our Tech Support at (570) 546-9663 for assistance.

## ⚠ WARNING

**Before starting the jointer, make sure you have performed the preceding assembly and adjustment instructions, and you have read through the rest of the manual and are familiar with the various functions and safety features on this machine. Failure to follow this warning could result in serious personal injury or even death!**

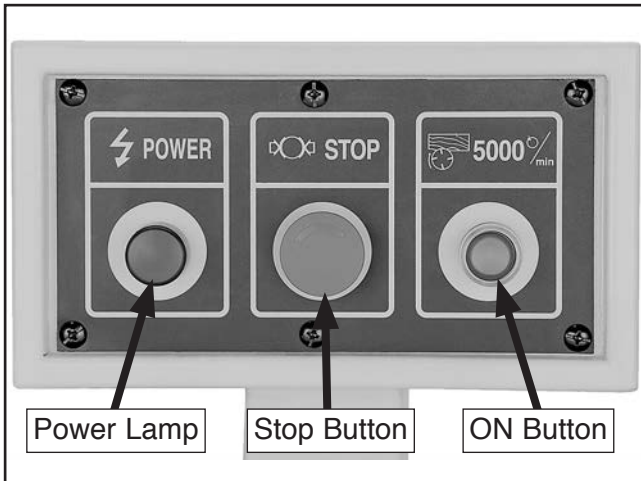
### To test run the machine:

1. Make sure you understand the safety instructions at the beginning of the manual and that the machine is set up properly.
2. Make sure all tools and objects used during setup are cleared away from the machine.
3. Push the stop button in, then twist it clockwise so it pops out. When the stop button pops out, the switch is reset and ready for operation (see **Figures 27–28**).



**Figure 27.** Resetting the stop button.





**Figure 28.** Control panel.

4. Verify that the outfeed table height is properly set (refer to **Setting Outfeed Table Height** on **Page 19**).
5. Connect the machine to the power source.
6. Verify that the machine is operating correctly by pushing the ON button.

—When operating correctly, the machine runs smoothly with little or no vibration or rubbing noises.

—Investigate and correct strange or unusual noises or vibrations before operating the machine further. Always disconnect the machine from power when investigating or correcting potential problems.

7. If equipped on your jointer, rotate the cutterhead brake handle to stop the machine and cutterhead.

—If the machine does not turn **OFF**, use the stop button to turn it **OFF** and immediately disconnect power to the machine. The cutterhead brake feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.

8. **Model G9953ZXF Only:** Press the stop button to turn the machine **OFF** and observe the cutterhead rotation.

—If the cutterhead is rotating counterclockwise (from right-to-left), the motor is wired out of phase. Disconnect the jointer from power, then switch any two hot leads coming from the power source.

9. If not already done, use the stop button to turn the machine **OFF**.
10. **WITHOUT** resetting the stop switch, press the ON button. The machine should not start.

—If the machine does not start, the stop button safety feature is working correctly. The **Test Run** is complete.

—If the machine does start (with the stop button pushed in), immediately disconnect power to the machine. The stop button safety feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support at (570) 546-9663 for help.

## 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, we recommend that you at least verify the following adjustments to ensure the best possible results from your new machine.

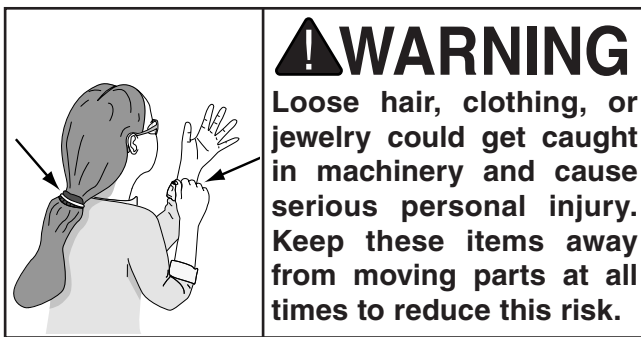
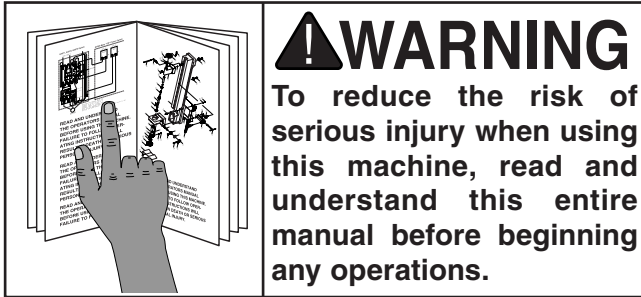
Step-by-step instructions for these adjustments can be found in the **SERVICE** section, beginning on **Page 36**.

### Factory adjustments that should be verified:

- Table Parallelism (**Page 44**).
- Model G9860 Knife Height (**Page 39**).



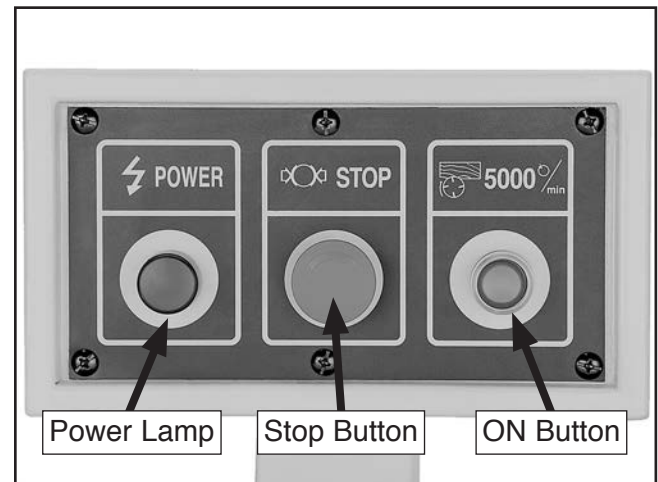
# SECTION 4: OPERATIONS



## Basic Controls

Refer to **Figures 29–33** and the following descriptions to become familiar with the functions of the control panel, table controls, and fence controls.

### Control Panel



**Figure 29.** Control panel.

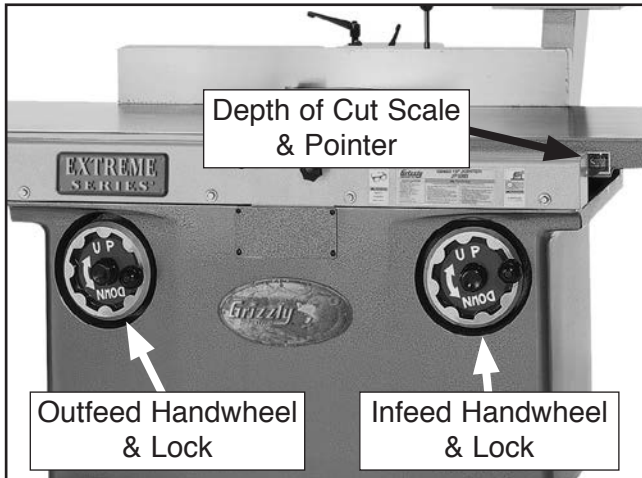
**Power Lamp:** Lights when the machine is connected to power.

**Stop Button:** Turns the motor **OFF**. This button does NOT disconnect the machine from power!

**ON Button:** Turns the motor **ON**. The stop button must be reset before this button will work.



## Table Controls

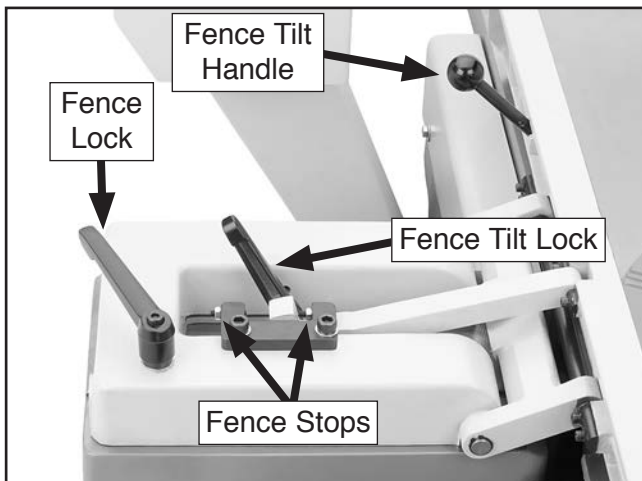


**Figure 30.** Table controls.

**Depth of Cut Scale & Pointer:** Indicates the amount of workpiece surface that will be removed. Marked in  $\frac{1}{16}$ " increments.

**Infeed & Outfeed Handwheels & Locks:** Raises and lowers the respective table. Rotate the handwheels clockwise to raise and counterclockwise to lower the table. Tighten the lock knob in the center of the handwheel to secure the setting.

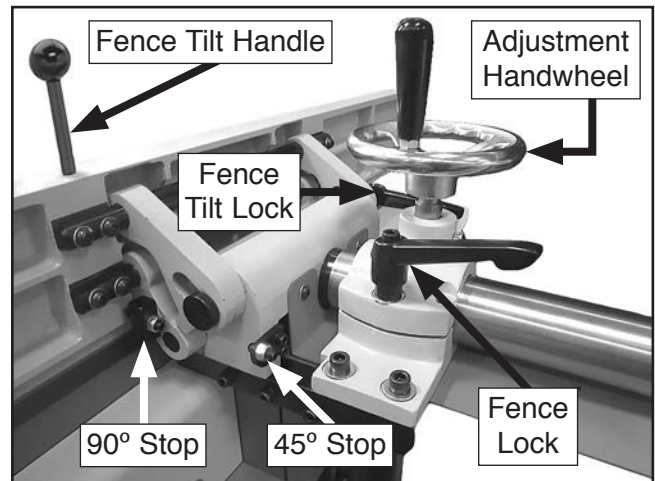
## Fence Controls



**Figure 31.** Fence controls (Model G9860 and G9860ZX).

**Fence Lock:** Locks the fence assembly in place.

**Fence Tilt Handle:** Tilts the fence when the tilt lock is loose.



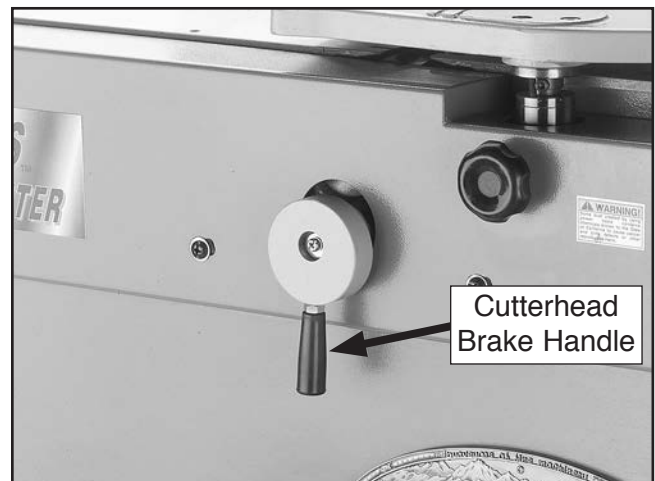
**Figure 32.** Fence controls (Models G9953ZX, and G9953ZXF).

**Fence Tilt Lock:** Locks the fence tilt angle in place when tightened.

**Fence Stops:** Provide positive stops for the fence at  $90^\circ$  and  $45^\circ$ .

**Fence Adjustment Handwheel (Model 9953ZX/ G9953ZXF):** Moves the fence forward and back when rotated.

## Cutterhead Brake (Model G9953ZX/ G9953ZXF Only)



**Figure 33.** Cutterhead brake.

**Cutterhead Brake:** Turns the machine **OFF** and brings the cutterhead to a rapid stop when the handle is rotated.

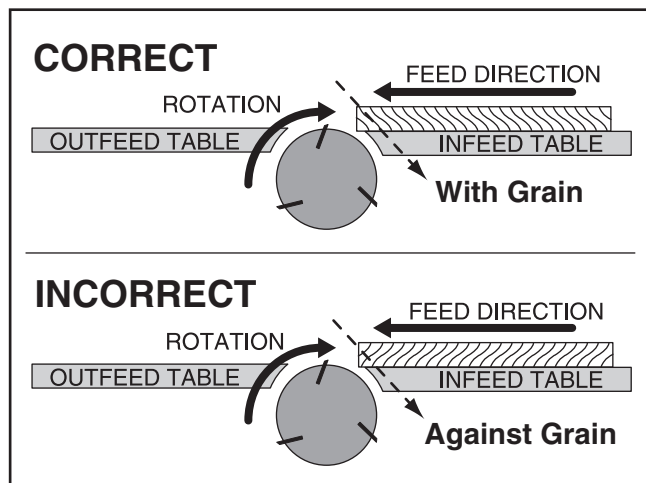


# Stock Inspection & Requirements

Follow these rules when choosing and jointing stock:

- **DO NOT joint or surface plane stock that contains large or loose knots.** Injury to the operator or damage to the workpiece can occur if a knot becomes dislodged during the cutting operation.
- **Jointing and surface planing with the grain is safer for the operator and produces a better finish.** Cutting against the grain increases the likelihood of kickback and workpiece tear-out. **DO NOT** cut against the grain! Cutting with the grain is feeding the stock across the cutterhead so the grain points down and toward you, as viewed from the edge of the stock (see **Figure 34**).

**Note:** If the grain changes direction along the edge of the workpiece, decrease the depth of cut and make additional passes.



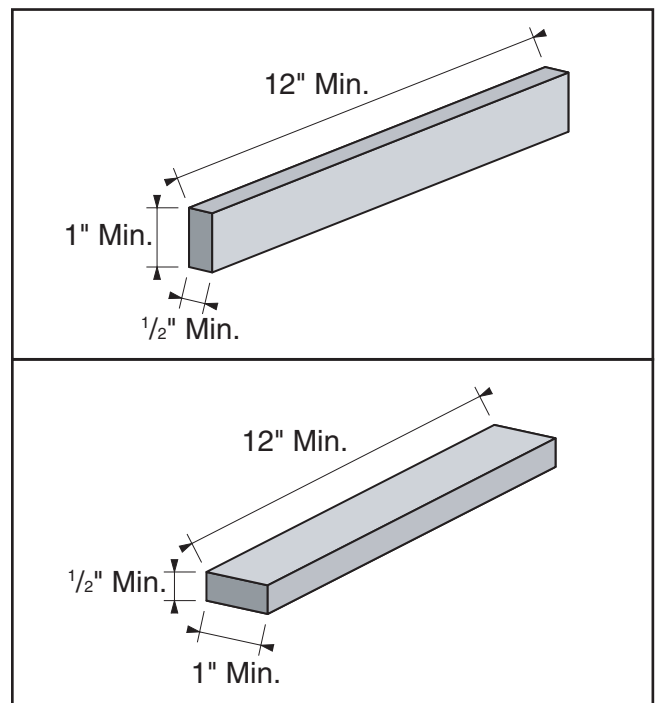
**Figure 34.** Proper grain alignment with the cutterhead.

- **Only process natural wood fiber through your jointer.** Your jointer is designed to cut only natural wood stock. Attempting to process any other synthetic or natural material will damage the cutterhead and cause injury hazards for the operator.

- **Scrape all glue off the workpiece before jointing.** Glue deposits on the workpiece, hard or soft, will gum up the cutterhead and produce poor results.
- **Remove foreign objects from the workpiece.** Make sure that any stock you process with the jointer is clean and free of dirt, nails, staples, tiny rocks or any other foreign objects, that could damage the cutterhead. These particles could also cause a spark as they strike the cutterhead and create a fire hazard.

**Note:** Wood stacked on a concrete or dirt surface can have small pieces of concrete or stone pressed into the surface.

- **Make sure all stock is sufficiently dried before jointing.** Wood with a moisture content over 20% will cause unnecessary wear on the cutters and poor cutting results. Excess moisture can also hasten rust and corrosion.
- **Make sure your workpiece exceeds the minimum dimension requirements, as shown in Figure 35, before processing it through the jointer, or the workpiece may break or kick back during the operation.**



**Figure 35.** Minimum stock dimensions for the jointer.



## **!WARNING**

Before turning the jointer *ON*, make sure the outfeed table height is properly set (refer to Page 19 for detailed instructions) to avoid workpiece kickback and to ensure good results. Kickback of the workpiece could cause serious personal injury!

# Squaring Stock

Squaring stock involves four steps performed in the following order:

1. **Surface Plane on the Jointer:** The concave face of the workpiece is surface planed flat with the jointer (see Figure 36).

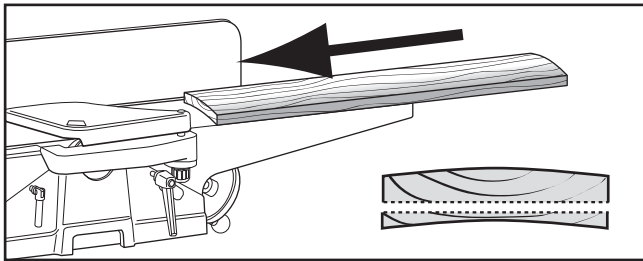


Figure 36. Surface planing on the jointer.

2. **Surface Plane on a Thickness Planer:** The opposite face of the workpiece is surface planed flat with a thickness planer (see Figure 37).

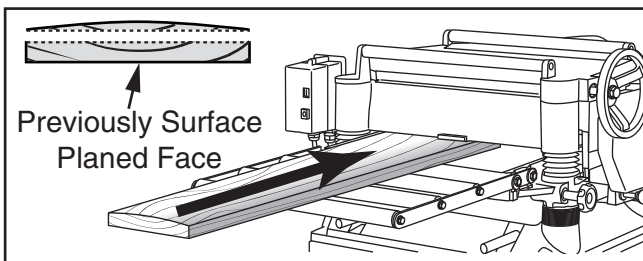


Figure 37. Surface planing on a thickness planer.

3. **Edge Joint on the Jointer:** The concave edge of the workpiece is jointed flat with the jointer (see Figure 38).

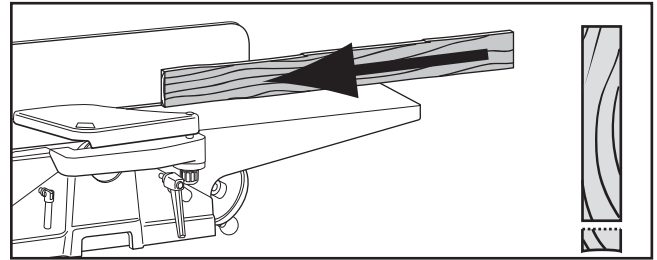


Figure 38. Edge jointing on the jointer.

4. **Rip Cut on a Table Saw:** The jointed edge of the workpiece is placed against the table saw fence and the opposite edge is cut off (see Figure 39).

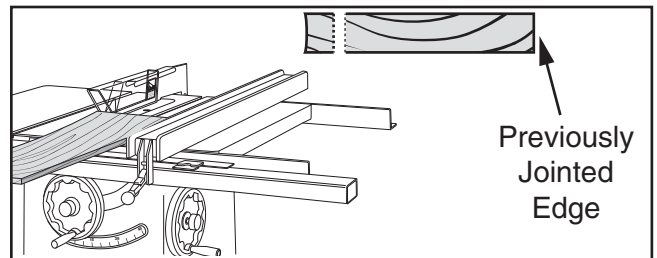


Figure 39. Rip cutting on a table saw.

## **!WARNING**

Making adjustments to the jointer while the machine is *ON* greatly increases the risk to the operator from the rotating cutterhead. **ALWAYS** make sure the jointer is *OFF* and disconnected from power before performing adjustments, maintenance, or service on the machine!



# Surface Planning

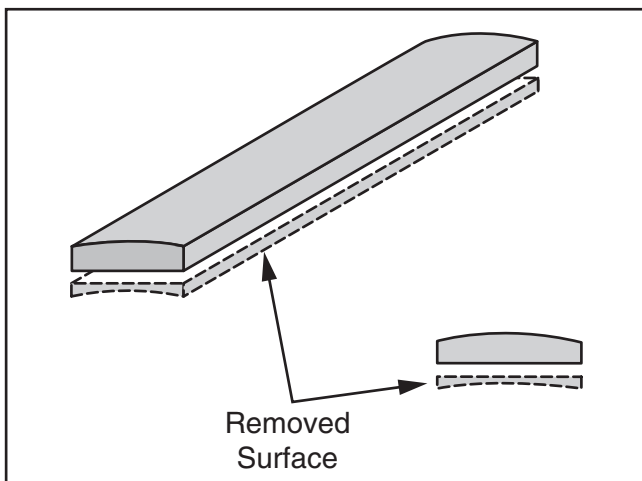
The purpose of surface planing on the jointer is to make one face of the workpiece flat (see **Figures 40–41**). This is a necessary step when squaring a workpiece for a thickness planer.

## NOTICE

If you are not experienced with a jointer, set the depth of cut to 0" and practice feeding the workpiece across the tables as described for each of the jointing procedures. This process will better prepare you for the actual operation.



**Figure 40.** Example of surface planing with the jointer.



**Figure 41.** Illustration of surface planing results.

To surface plane the workpiece on the jointer:

1. DISCONNECT JOINTER FROM POWER!
2. Make sure you read and follow the **Safety Instructions** beginning on **Page 6** and the **Stock Inspection & Requirement** rules beginning on **Page 26**.
3. Verify that the outfeed table height is properly set (refer to **Setting Outfeed Table Height** on **Page 19**).
4. Set the depth of cut for your operation and the fence to 90°.

**Note:** We suggest a  $\frac{1}{32}$ " depth of cut for surface planing, and a more shallow depth for hardwood species or for wide stock.

5. If your workpiece is cupped or warped, place it so the concave side is face down on the infeed table.
6. Connect the jointer to power and turn it **ON**.

## ⚠ WARNING

Failure to use push blocks when surface planing could result in your hands contacting the rotating cutterhead, which will cause serious personal injury. **ALWAYS** use push blocks when surface planing on the jointer!

7. With a push block in each hand, press the workpiece against the infeed table and the fence with firm pressure, then feed the workpiece over the cutterhead.

**Note:** When your leading hand comes within 4" of the cutterhead, lift that push block up and place it on the workpiece portion that is on the outfeed table. Now, focus the downward pressure with the leading hand while feeding, then repeat the same action with your trailing hand when it comes within 4" of the cutterhead. Keep your hands safe! **DO NOT** allow them to get any closer than 4" to the cutterhead.

8. Repeat **Step 7** until the entire workpiece surface is flat.

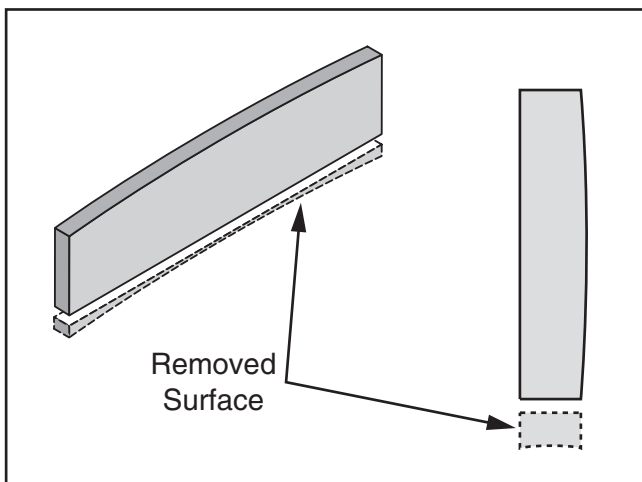


# Edge Jointing

The purpose of edge jointing is to produce a finished, flat-edged workpiece surface that is suitable for joinery or finishing (see **Figures 42–43**). It is also a necessary step when squaring rough or warped stock.



**Figure 42.** Example of edge jointing operation.



**Figure 43.** Illustration of edge jointing results.

To edge joint on the jointer:

1. DISCONNECT JOINTER FROM POWER!
2. Make sure you read and follow the **Safety Instructions** beginning on **Page 6** and the **Stock Inspection & Requirement** rules beginning on **Page 26**.
3. Verify that the outfeed table height is properly set (refer to **Setting Outfeed Table Height** on **Page 19**).
4. Set the depth of cut for your operation and the fence to 90°.

**Note:** We suggest  $\frac{1}{16}$ "– $\frac{1}{8}$ " depth of cut for edge jointing, and a more shallow depth for hardwood species or for wide stock.

5. If your workpiece is cupped or warped, place it so the concave side is face down on the infeed table.
6. Connect the jointer to power and turn it **ON**.
7. With a push block in each hand, press the workpiece against the infeed table and the fence with firm pressure, then feed the workpiece over the cutterhead.

**Note:** When your leading hand comes within 4" of the cutterhead, lift that push block up and place it on the workpiece portion that is on the outfeed table. Now, focus the downward pressure with the leading hand while feeding, then repeat the same action with your trailing hand when it comes within 4" of the cutterhead. Keep your hands safe! **DO NOT** allow them to get any closer than 4" to the cutterhead.

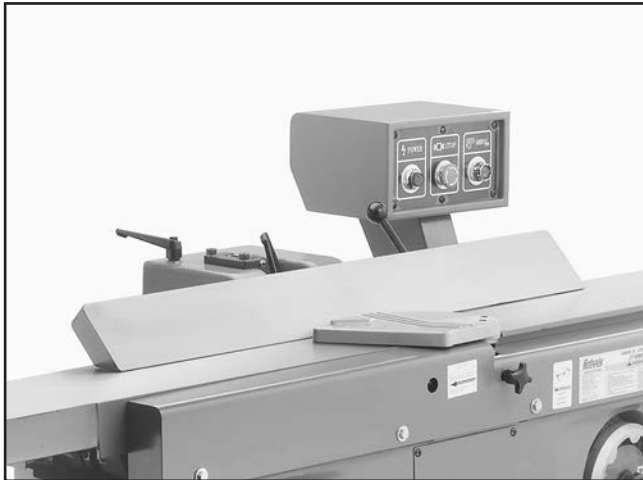
8. Repeat **Step 7** until the entire workpiece edge is flat.



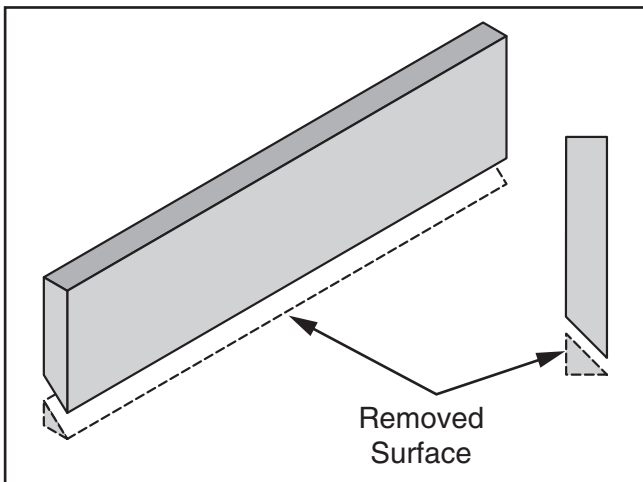
# Bevel Cutting

The purpose of bevel cutting on the jointer is to cut a specific angle of the workpiece edge (see **Figures 44–45**).

Your jointer has fence stops that can be set at 90° or 45°. If your operation requires a different angle, the fence can be locked in place anywhere between these angles.



**Figure 44.** Fence setup for a bevel cut of 45°.



**Figure 45.** Illustration of bevel cutting results.

## To bevel cut on the jointer:

1. DISCONNECT JOINTER FROM POWER!
2. Make sure you read and follow the **Safety Instructions** beginning on **Page 6** and the **Stock Inspection & Requirement** rules beginning on **Page 26**.
3. Verify that the outfeed table height is properly set (refer to **Setting Outfeed Table Height** on **Page 19**).

4. Set the depth of cut for your operation and the fence to the required angle.

**Note:** We suggest  $\frac{1}{16}$ "– $\frac{1}{8}$ " depth of cut for bevel cutting, and a more shallow depth for hardwood species or for wide stock.

5. If your workpiece is cupped or warped, place it so the concave side is face down on the infeed table.
6. Connect the jointer to power and turn it **ON**.
7. With a push block in each hand, press the workpiece against the infeed table and the fence with firm pressure, then feed the workpiece over the cutterhead.

**Note:** When your leading hand comes within 4" of the cutterhead, lift that push block up and place it on the workpiece portion that is on the outfeed table. Now, focus the downward pressure with the leading hand while feeding, then repeat the same action with your trailing hand when it comes within 4" of the cutterhead. Keep your hands safe! **DO NOT** allow them to get any closer than 4" to the cutterhead.

8. Repeat **Step 7** until the bevel cut is satisfactory.



# SECTION 5: ACCESSORIES

## **! WARNING**

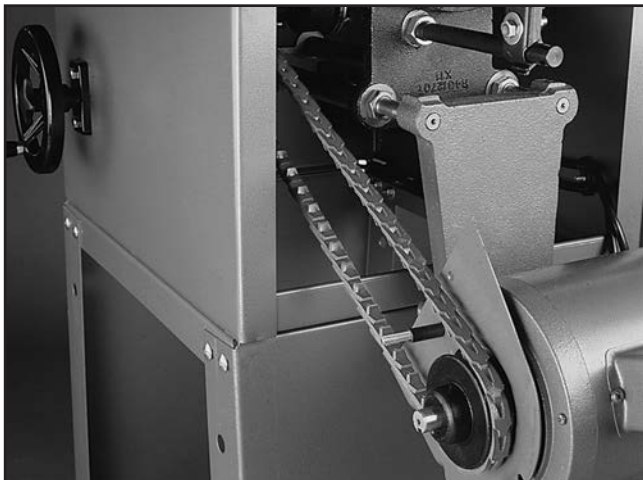
Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended for this machine by Grizzly.

## **NOTICE**

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

### **T21992—Power Twist® V-Belt ½" x 4'**

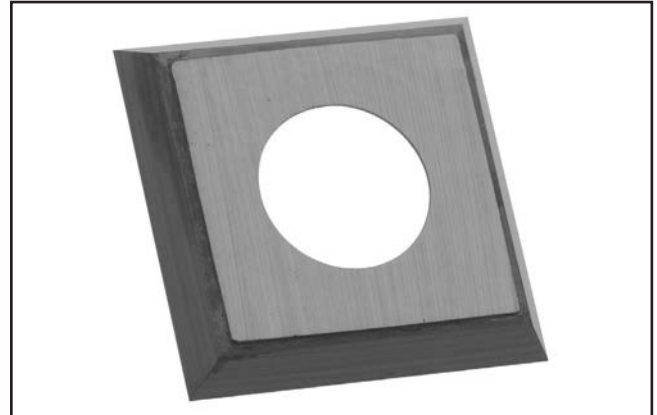
Smooth running with less vibration and noise than solid belts. The Power Twist® V-belt can be customized in minutes to any size—just add or remove sections to fit your needs. Size: ½" x 4'; replaces all "A" sized V-belts (Requires two Power Twist® V-belts to replace the stock V-belt on Models G9953ZX, and G9953ZXF).



**Figure 46.** Model T21992 Power Twist® V-Belt.

### **H7319—Indexable Carbide Inserts, 10 Pk.**

These indexable carbide inserts can be rotated to provide four factory sharp edges before replacement. 14mm x 14mm x 2mm.

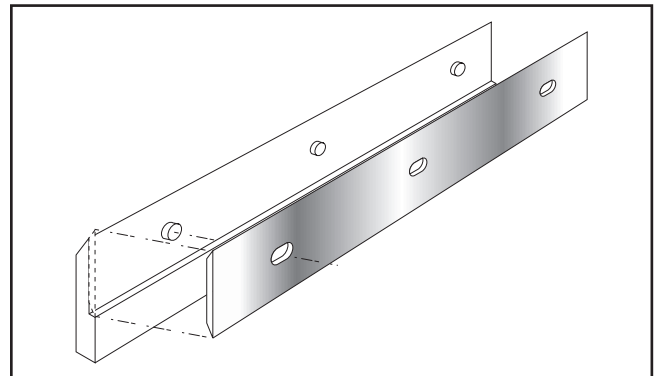


**Figure 47.** Model H7319 indexable carbide insert for spiral cutterheads.

### **T21152—12" HSS Dispoz-A-Blade® Self-Set System (Includes 4 Holders & Knife Inserts)**

#### **H7287—12" Cobalt Dispoz-A-Blade® Knife Inserts (Set of 4)**

Effortless knife changes with precision accuracy every time. Includes one set of reusable Self-Set® knife holders and one set of disposable double edge HSS Dispoz-A-Blade® knives that are correctly sized for your machine. All that is required for future knife changes is the purchase of inexpensive Dispoz-A-Blade® double edge replacement knives in HSS or Cobalt steel.



**Figure 48.** Dispoz-A-Blade® Holder and Knife.

**order online at [www.grizzly.com](http://www.grizzly.com) or call 1-800-523-4777**



## Basic Eye Protection

- T20501—Face Shield Crown Protector 4"
- T20502—Face Shield Crown Protector 7"
- T20503—Face Shield Window
- T20451—"Kirova" Clear Safety Glasses
- T20452—"Kirova" Anti-Reflective S. Glasses
- T20456—DAKURA Safety Glasses, Black/Clear



Figure 49. Eye protection assortment.

- 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 50. Recommended products for protecting unpainted cast iron/steel part on machinery.

## G4181—Power Feeder, 1 HP Single-Phase

## G7873—Power Feeder, 1 HP 3-Phase

These industrial power feeders feature 4 speeds forward or reverse, X-, Y-, Z-axis adjustment, and three synthetic rubber rollers. 220V.

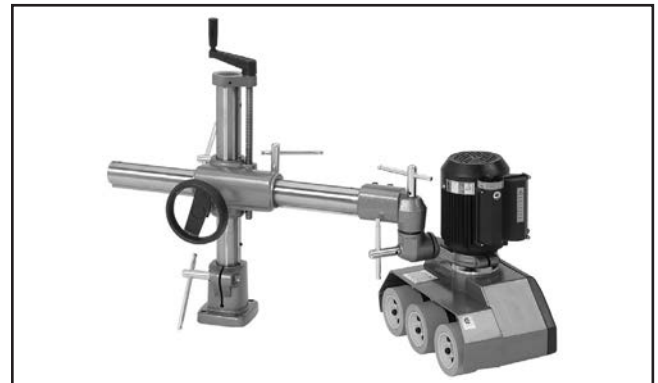


Figure 51. Model G4181/G7873 Power Feeder.

## G0862—3 HP Portable Cyclone Dust Collector

The capstone of our new line of affordable, high-quality cyclones, the G0862 features a 3 HP motor, a whopping 1941 CFM of airflow capacity, and a 55-gallon collection capacity. It's packed with features like a quick-release collection drum, latching system, high-efficiency, two-stage separation driven by a 15" welded steel impeller, durable powder coated finish, and a heavy-duty steel frame and housing.



Figure 52. Model G0862 3 HP Portable Cyclone Dust Collector.

order online at [www.grizzly.com](http://www.grizzly.com) or call 1-800-523-4777



# SECTION 6: MAINTENANCE

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## Schedule

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

### Daily Maintenance:

- Check for loose mounting bolts.
- Check/replace/sharpen damaged or dull cutters.
- Check/repair/replace worn or damaged wires.
- Check/resolve any other unsafe condition.
- Clean the tables and exterior of machine.

### Every 40 Hours of Operation:

- Check for V-belt tension, damage, or wear (**Page 35**).
- Clean/vacuum dust buildup from inside the cabinet and off the motor.
- Lubricate the pivot points of the fence assembly (**Page 34**).
- Lubricate the cutterhead bearing blocks (**Page 34**).

### Every 160 Hours of Operation:

- Lubricate the table elevation gears and leadscrew (**Page 34**).

**Note:** *This maintenance schedule is based on average usage. Adjust the maintenance schedule to match your actual usage to keep your jointer running smoothly and to protect your investment.*

## Cleaning & Protecting

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Use a brush and shop vacuum to remove chips and debris from the jointer. Wipe the tables clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces.

Remove any rust from the unpainted cast iron surfaces of your jointer, then treat them with regular applications of products such as G96® Gun Treatment, SLIPIT®, or Boeshield® T-9 (see **Section 5: Accessories** on **Page 32** for more details).



# Lubrication

Other than lubrication points covered in this section, all other bearings are internally lubricated and sealed at the factory. Simply leave them alone unless they need to be replaced.

An essential step for lubrication is cleaning the components before lubricating them. This idea is critical because dust and chips build up on lubricated components and make them hard to move. Simply adding more grease to the components with built-up grime on them will not yield smooth moving components.

Clean the components in this section with an oil/grease solvent or mineral spirits. Make sure the surfaces are dry before applying additional lubricant.

**DISCONNECT THE MACHINE FROM POWER BEFORE PERFORMING LUBRICATION!**

## Fence Assembly Pivot Points

Lubricant	Frequency	Qty
ISO 68 Oil or Equivalent	Every 40 Hours of Operation	1–2 Drops

The fence assembly has many metal-to-metal pivot points. Use a shop rag and mineral spirits to clean away debris and grime from these points. Add a small amount of lubricant, then move the component to distribute the lubricant.

## Cutterhead Bearing Blocks

Lubricant	Frequency	Qty
NLGI #2 or Equivalent	Every 40 Hours of Operation	1 Pump

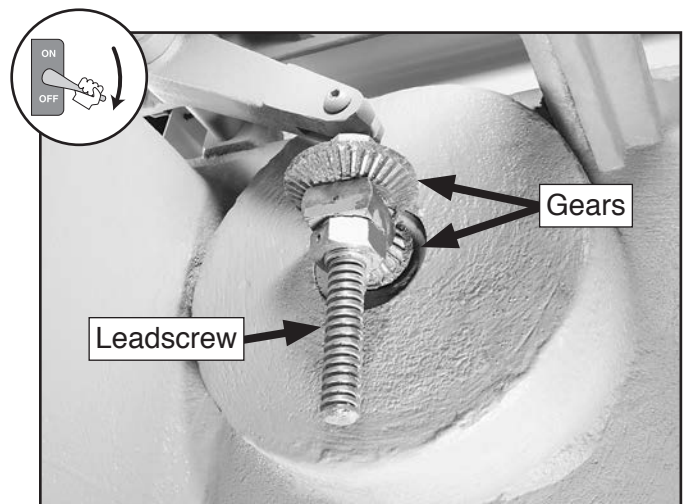
The cutterhead bearing blocks are located on either end of the cutterhead (refer to **Cutterhead Breakdown** on **Pages 54 & 61** for detailed illustrations). The grease fitting for the front bearing block is accessed through a hole in the front table cover. To access the grease fitting for the back bearing block, you must remove the fence.

Clean debris and grime from the grease fitting and the surrounding area, then use a grease pump to add lubricant.

## Table Elevation Gears & Leadscrew

Lubricant	Frequency	Qty
NLGI #2 or Equivalent	Every 160 Hours of Operation	1 Pump

Remove the rear motor access cover to access the elevation gears for the infeed and outfeed tables (see **Figure 54**). Use shop rags, a stiff brush, and mineral spirits to clean away the built-up grime from the gears and elevation leadscrew, then brush on a thin coat of lubricant to these parts.



**Figure 54.** Table elevation gears and leadscrew.



# V-Belts

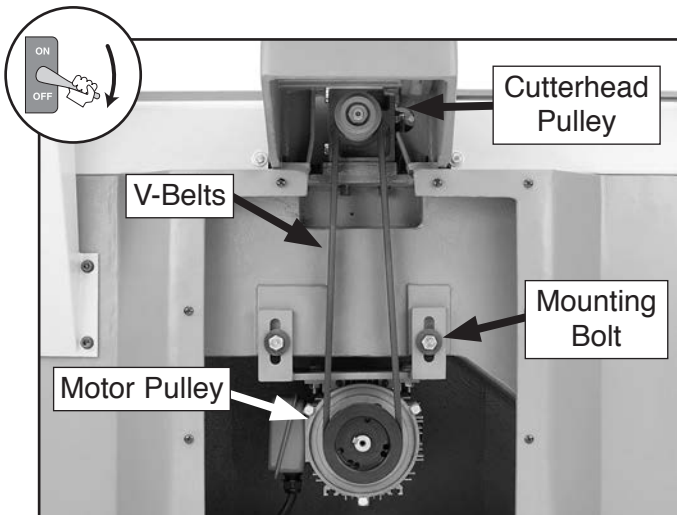
V-belts will wear and stretch with extended use. Maintaining proper tension of V-belts and making sure they are in good condition will increase the efficiency of the cutterhead and reduce wear on the bearings.

When a V-belt can no longer be properly tensioned or is cracked/damaged, replace both V-belts as a matched set.

Tools Needed	Qty
Phillips Screwdriver .....	1
Wrench or Socket 19mm .....	1

## To properly tension the V-belts:

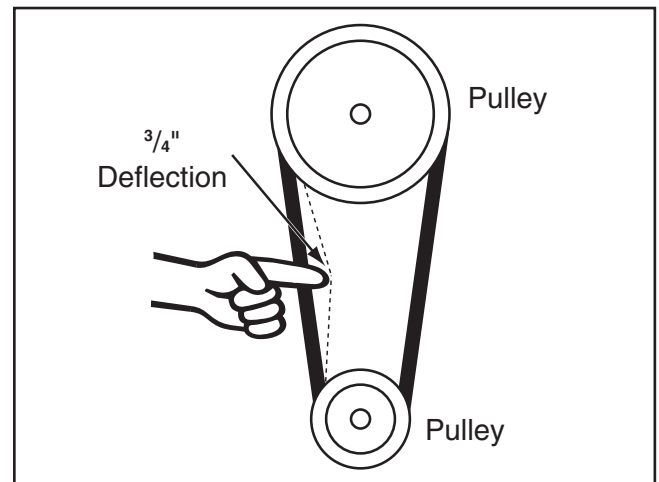
1. DISCONNECT JOINTER FROM POWER!
2. Remove the rear access motor cover to access the V-belts (see **Figure 55**).



**Figure 55.** V-belts and pulleys.

3. Loosen the two motor mounting bolts, then, with assistance, raise or lower the motor assembly until there is the proper tension on the V-belts.

**Note:** *The V-belts are properly tensioned when there is approximately 3/4" of deflection between the pulleys when moderate pressure is applied with your finger, as shown in **Figure 56**.*



**Figure 56.** The correct amount of V-belt deflection between the pulleys.

4. When you have properly tensioned the V-belts, re-tighten the motor mounting bolts and re-install the motor access cover.

## To replace the V-belts:

1. DISCONNECT JOINTER FROM POWER!
2. Remove the rear access motor cover, then loosen the motor mounting bolts.
3. With assistance, raise the motor assembly up until you can roll the V-belts off the pulleys.
4. Replace the V-belts with a new, matched set, then properly tension them as instructed above.

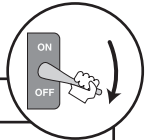


# SECTION 7: SERVICE

Review the troubleshooting and procedures in this section to fix or adjust your machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then feel free to call our Technical Support at (570) 546-9663.

## Troubleshooting

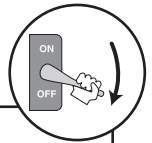
### Motor & Electrical



Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips.	<ol style="list-style-type: none"> <li>1. Stop push-button engaged/faulty.</li> <li>2. Power supply switched OFF or at fault.</li> <li>3. Plug/receptacle at fault/wired wrong.</li> <li>4. Motor connection wired wrong.</li> <li>5. Thermal overload relay has tripped.</li> <li>6. Wall circuit breaker tripped.</li> <li>7. Contactor not energized/has poor contacts.</li> <li>8. Wiring open/has high resistance.</li> <li>9. Motor ON/OFF switch at fault.</li> <li>10. Brake switch at fault (G9953ZX &amp; G9953ZXF only).</li> <li>11. Motor at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rotate button to reset/replace it.</li> <li>2. Ensure power supply is on/has correct voltage.</li> <li>3. Test for good contacts; correct the wiring.</li> <li>4. Correct motor wiring connections (<b>Page 48</b>).</li> <li>5. Reset; adjust trip load dial if necessary; replace.</li> <li>6. Ensure circuit size is correct/replace weak breaker.</li> <li>7. Test all legs for power/replace if faulty.</li> <li>8. Check/fix broken, disconnected, or corroded wires.</li> <li>9. Replace switch.</li> <li>10. Inspect/replace switch.</li> <li>11. Test/repair/replace.</li> </ol>
Machine stalls or is underpowered.	<ol style="list-style-type: none"> <li>1. Feed rate/cutting speed too fast.</li> <li>2. Workpiece material not suitable for machine.</li> <li>3. Dust collection ducting problem.</li> <li>4. V-belt(s) slipping.</li> <li>5. Motor wired incorrectly.</li> <li>6. Plug/receptacle at fault.</li> <li>7. Pulley/sprocket slipping on shaft.</li> <li>8. Motor bearings at fault.</li> <li>9. Machine undersized for task.</li> <li>10. Contactor not energized/has poor contacts.</li> <li>11. Motor overheated.</li> <li>12. Motor at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Decrease feed rate/cutting speed.</li> <li>2. Only cut wood/ensure moisture is below 20%.</li> <li>3. Clear blockages, seal leaks, use smooth wall duct, eliminate bends, close other branches.</li> <li>4. Tension/replace belt(s); ensure pulleys are aligned (<b>Page 35</b>).</li> <li>5. Wire motor correctly (<b>Page 48</b>).</li> <li>6. Test for good contacts/correct wiring.</li> <li>7. Replace loose pulley/shaft.</li> <li>8. Test/repair/replace.</li> <li>9. Use sharp knives/inserts; reduce feed rate/depth of cut.</li> <li>10. Test all legs for power/replace if faulty.</li> <li>11. Clean motor, let cool, and reduce workload.</li> <li>12. Test/repair/replace.</li> </ol>
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> <li>1. Motor or component loose.</li> <li>2. Knives/gibs at fault.</li> <li>3. V-belt(s) worn or loose.</li> <li>4. Pulley loose.</li> <li>5. Machine incorrectly mounted.</li> <li>6. Motor fan rubbing on fan cover.</li> <li>7. Motor bearings at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect/replace damaged bolts/nuts, and re-tighten with thread locking fluid.</li> <li>2. Resharpen/replace knives; set knife alignment/height correctly.</li> <li>3. Inspect/replace belts with a new matched set.</li> <li>4. Realign/replace shaft, pulley, setscrew, and key.</li> <li>5. Tighten mounting bolts; relocate/shim machine.</li> <li>6. Fix/replace fan cover; replace loose/damaged fan.</li> <li>7. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> </ol>



# Operations

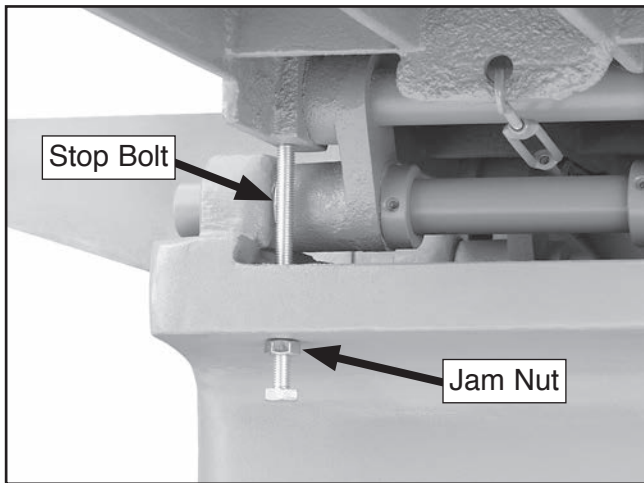


Symptom	Possible Cause	Possible Solution
Tables are hard to adjust.	<ol style="list-style-type: none"> <li>1. Table lock is engaged.</li> <li>2. Table stop bolts blocking movement.</li> </ol>	<ol style="list-style-type: none"> <li>1. Loosen the table lock.</li> <li>2. Adjust table stop bolts (<b>Page 46</b>).</li> </ol>
Excessive snipe or gouge in the workpiece end that is uneven with the rest of the cut.	<ol style="list-style-type: none"> <li>1. Outfeed table is set too low.</li> <li>2. Too much downward pressure on workpiece end.</li> </ol>	<ol style="list-style-type: none"> <li>1. Align outfeed table height with cutterhead TDC (<b>Page 44</b>).</li> <li>2. Reduce downward pressure on that end of the workpiece.</li> </ol>
Workpiece stops in the middle of the cut.	<ol style="list-style-type: none"> <li>1. Outfeed table is set too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Align outfeed table height with cutterhead TDC (<b>Page 44</b>).</li> </ol>
Chipping or stuttering patterns in workpiece.	<ol style="list-style-type: none"> <li>1. Knots or conflicting grain direction in stock.</li> <li>2. Nicked or chipped knife or insert.</li> <li>3. Feeding workpiece too fast.</li> <li>4. Depth of cut too much.</li> <li>5. Poor dust collection, chips not being cleared from workpiece.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect workpiece for defects, cut with grain (<b>Page 26</b>).</li> <li>2. Replace/rotate knives/inserts (<b>Pages 38–39</b>).</li> <li>3. Reduce feed rate.</li> <li>4. Reduce the depth of cut.</li> <li>5. Check dust collection for proper operation; clear blockages; reconfigure ducting system.</li> </ol>
Fuzzy grain left in workpiece.	<ol style="list-style-type: none"> <li>1. Wood moisture too high.</li> <li>2. Dull knives or inserts.</li> </ol>	<ol style="list-style-type: none"> <li>1. Stock moisture content should be less than 20%; sticker and let dry if necessary.</li> <li>2. Replace/rotate knives/inserts (<b>Pages 38–39</b>).</li> </ol>
Long lines or ridges along the length of workpiece.	<ol style="list-style-type: none"> <li>1. Nicked or chipped knife or insert.</li> <li>2. Loose or incorrectly installed insert.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace/rotate knives/inserts (<b>Pages 38–39</b>).</li> <li>2. Remove/replace insert and install properly (<b>Page 38</b>).</li> </ol>
Wavy finish or chatter marks.	<ol style="list-style-type: none"> <li>1. Feed workpiece too fast.</li> <li>2. Knives set unevenly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce feed rate.</li> <li>2. Check/adjust all knives for correct installation and height (<b>Page 39</b>).</li> </ol>
Workpiece surface is concave/convex after jointing.	<ol style="list-style-type: none"> <li>1. Board not held with even pressure during cut.</li> <li>2. Stock has excessive bow or warp.</li> <li>3. Insufficient number of passes.</li> </ol>	<ol style="list-style-type: none"> <li>1. Maintain even downward pressure on workpiece during operation.</li> <li>2. Surface plane one face to use against the jointer fence.</li> <li>3. Increase number of passes until the workpiece face is flat.</li> </ol>



# Infeed Table Stop Bolt

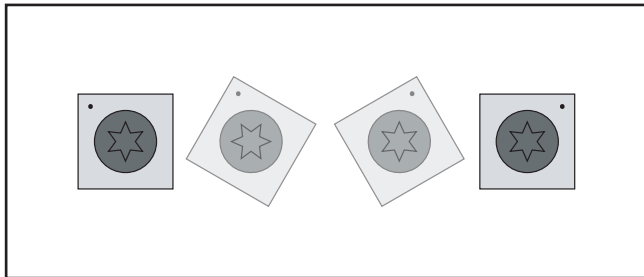
The infeed table has a stop bolt that can be set to limit the how much the infeed table can be lowered (see **Figure 57**). We recommend that this stop bolt be set for the recommended maximum depth of cut specified for your jointer.



**Figure 57.** Table stop bolt (viewed from underneath the table).

# Rotating/Replacing Cutterhead Inserts

The spiral cutterhead is equipped with indexable carbide inserts that can be rotated to reveal any one of their four cutting edges. If one edge of the insert becomes dull or damaged, simply rotate it 90° to reveal a fresh cutting edge, as shown in **Figure 58**.



**Figure 58.** Insert rotating sequence.

Tools Needed	Qty
T-Handle Wrench w/T-20 Torx Bit .....	1
Precision Straightedge .....	1

## To rotate or replace a spiral cutterhead insert:

1. DISCONNECT JOINTER FROM POWER!
2. Put on heavy leather gloves to protect your fingers and hands.
3. Remove any sawdust or debris from the head of the insert, Torx screw, and the surrounding area.
4. Remove the Torx screw and the insert, then clean all dust and debris from both parts and the pocket they were removed from.

**Note:** Proper cleaning of the insert, Torx screw, and the cutterhead pocket is critical to achieving a smooth finish. Dirt or dust trapped between the insert and cutterhead will slightly raise the insert, and make noticeable marks on your workpiece the next time you cut.

**Tip:** Use low-pressure compressed air or a vacuum nozzle to clean out the cutterhead pocket.

5. Replace the insert so that a fresh cutting edge faces outward.
  - If all four insert cutting edges have been used, replace it with a new one. Always position the reference dot in the same position when installing a new insert to aid in the rotational sequencing.
6. Lubricate the Torx screw threads with a small amount of light machine oil, wipe the excess off, and torque the screw to 50–55 inch/pounds.

**Note:** If you use the included air pressure torque wrench, refer to the detailed instructions on the next page for its use.



7. Position the straightedge on the outfeed table and over the insert to make sure that it is installed correctly and at the same height as the other inserts.

—If the insert is raised above the correct height, remove it and repeat the above procedure until it is properly installed.

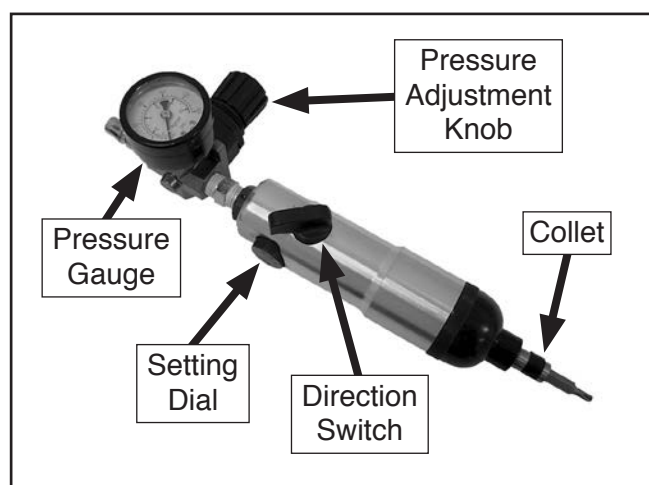
6. While carefully holding the insert in position, insert the bit into the Torx screw and press the operation lever to seat the insert. Repeat this step with all remaining inserts.

7. Adjust the air pressure to 40 PSI, then fully tighten the Torx screw to a final torque setting of approximately 50–55 inch/pounds. Repeat with all remaining inserts.

## Air Pressure Torque Wrench

To fully tighten the Torx screws with the included air pressure torque wrench:

1. Insert a Torx bit into the collet of the wrench.
2. Make sure the pressure gauge is fully threaded onto the wrench, as shown in **Figure 59**.



**Figure 59.** Components of the air pressure torque wrench.

3. Add two drops of pneumatic tool oil to the incoming valve of the wrench to keep the internal components lubricated.
4. Connect the wrench to a source of 90 PSI air pressure, then use the adjustment knob of the pressure gauge to initially set the air pressure to 20 PSI on the gauge.
5. Set the direction switch for clockwise rotation and the setting dial to 2.

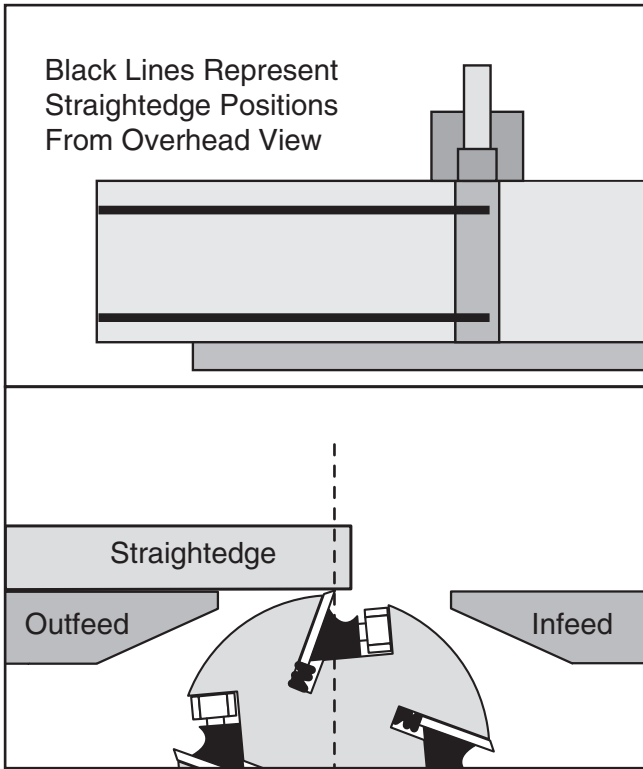
## Adjusting/Replacing Cutterhead Knives

If your jointer has a knife-style cutterhead, correctly setting the height of the knives is crucial to the proper operation of the jointer and is very important in keeping the knives sharp. If one knife is higher than the others, it will do the majority of the work, and thus, dull much faster than the others.

There are several methods for setting the knives. The Jointer Pal<sup>®</sup> included with your jointer is simple to use and is designed to hold the knives at the correct setting while you secure them. If you choose to use the Jointer Pal<sup>®</sup>, follow the instructions that are included with it.

The straightedge method is described below and produces the same results as the Jointer Pal<sup>®</sup>. This method uses a high-quality, precision straightedge held flat against the outfeed table and over the cutterhead, then the knife heights are set to the bottom of the straightedge, as shown in **Figure 60**.





**Figure 60.** Checking knife height with a straightedge.

**Tools Needed**

	<b>Qty</b>
Precision Straightedge .....	1
Hex Wrench 4mm.....	1
Wrench 10mm .....	1

**To adjust or replace the knives:**

1. DISCONNECT JOINTER FROM POWER!

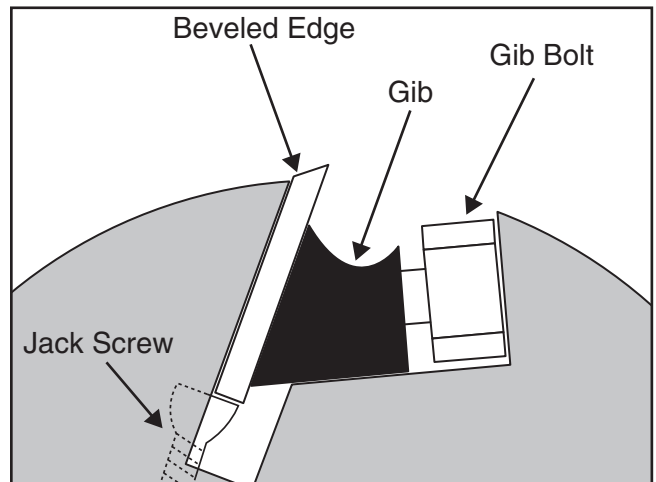
**Note:** Since the height of the knives is set from the outfeed table height, the next step is crucial to correctly adjusting the knives.

2. Make sure the outfeed table is parallel to the cutterhead body and the table height is correct (refer to **Adjusting Outfeed Table Parallelism** on **Page 44** for detailed instructions).



**! CAUTION**  
Cutterhead knives are extremely sharp and can quickly slice your hands or fingers. **ALWAYS** wear heavy leather gloves when handling these cutters to avoid personal injury.

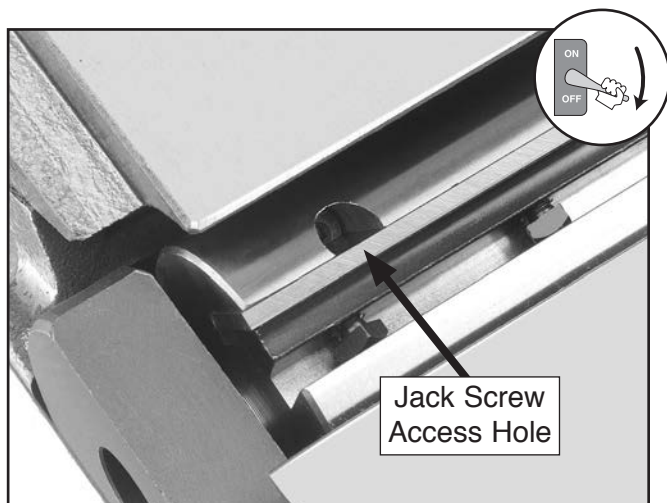
3. Remove the cutterhead guard, fence assembly, and rear motor access cover to access the cutterhead pulley.
4. Use the cutterhead pulley to rotate the cutterhead and gain access to one of the knives, then lock the cutterhead in place with the cutterhead lock pin (refer to **Page 20** for detailed instructions).
5. Turn the cutterhead gib bolts clockwise, starting in the middle, then alternating back and forth until the gib is loose (see **Figure 61**).



**Figure 61.** Knife correctly positioned in the cutterhead.

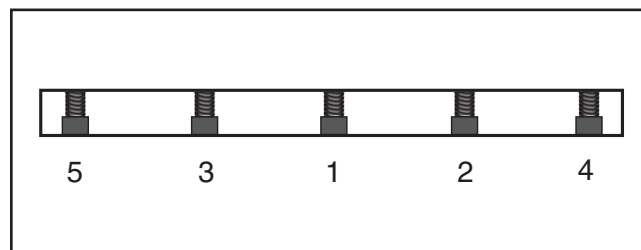


6. Carefully remove the knife and gib.
7. If the knife is dull or damaged, replace it with a new one.
8. Clean the knife, gib, and inside the cutterhead slot to remove all the pitch or sawdust. Coat the knife and gib with a metal protectant (refer to **Page 32**), then fit the gib back into the cutterhead with the knife.
9. Make sure the beveled side of the knife is against the cutterhead, as shown in **Figure 61**.
10. Position the straightedge on the outfeed table and over one end of the knife, then use magnets or an assistant to make sure the straightedge stays in full contact with the outfeed table along its full length.
11. Insert the 3mm hex wrench through the access holes in the cutterhead, then rotate the jack screws to raise or lower the knife (see **Figure 62**). When the knife is set correctly, it will just touch the bottom of the straightedge without lifting it.



**Figure 62.** Jack screw access hole.

12. Rotate all of the gib bolts counterclockwise just enough so the gib holds the knife in place.
13. Repeat **Steps 11–12** on the other end of the cutterhead, then repeat **Steps 4–12** with the rest of the knives.
14. Rotate the cutterhead to the first knife you started with.
15. Slightly tighten all the gib bolts, starting in the middle and working your way to the ends by alternating left and right, as illustrated in **Figure 63**. Repeat this step with the rest of the knives.



**Figure 63.** Knife gib bolt tightening sequence.

16. Repeat **Step 15**.
17. Repeat **Step 15** again, but final tighten each gib bolt.
18. Replace the motor access cover, the fence assembly, and the cutterhead guard.



# Setting Fence Stops

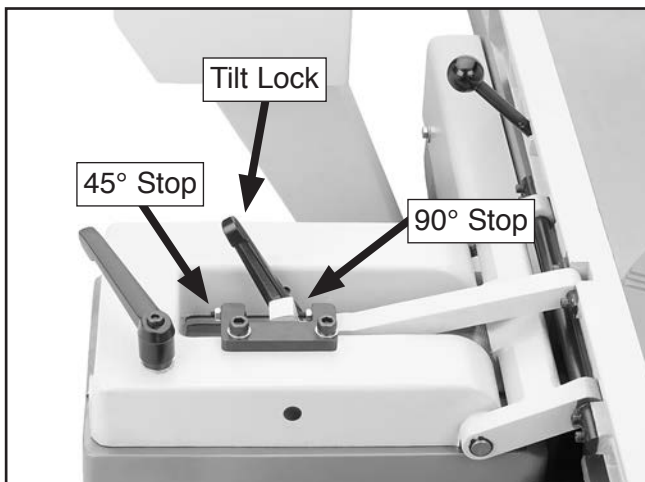
The fence stops simplify the task of setting the fence to 90° and 45° (135°).

## Models G9860 & G9860ZX

Tools Needed	Qty
Machinist's Square .....	1
Bevel Square .....	1
Hex Wrench 3mm.....	1
Wrench 10mm .....	1

### To set the 90° fence stop:

1. DISCONNECT JOINTER FROM POWER!
2. Loosen the fence tilt lock and the jam nut on the 90° stop, then back off the set screw (see **Figure 64**).



**Figure 64.** Fence stop controls.

3. Place the machinist's square flat on the outfeed table fairly close to the cutterhead, as shown in **Figure 65**, adjust the fence to the square, then tighten the fence tilt lock to secure the setting.



**Figure 65.** Setting the fence to 90° (cutterhead guard moved away for clarity).

4. Adjust the 90° set screw until it just touches the tilting arm, then re-tighten the jam nut.

### To set the 45° fence stop:

1. DISCONNECT JOINTER FROM POWER!
2. Loosen the fence tilt lock and the jam nut on the 45° stop, then back off the set screw (see **Figure 64** on the previous page).
3. Place the bevel square set at 135° flat against the outfeed table close to the cutterhead, as shown in **Figure 66**, adjust the fence to match the angled face of the square, then re-tighten the tilt lock.



**Figure 66.** Setting the fence to 45° (135°), with the cutterhead guard removed for clarity.

4. Adjust the 45° set screw until it just touches the tilting arm, then re-tighten the jam nut.

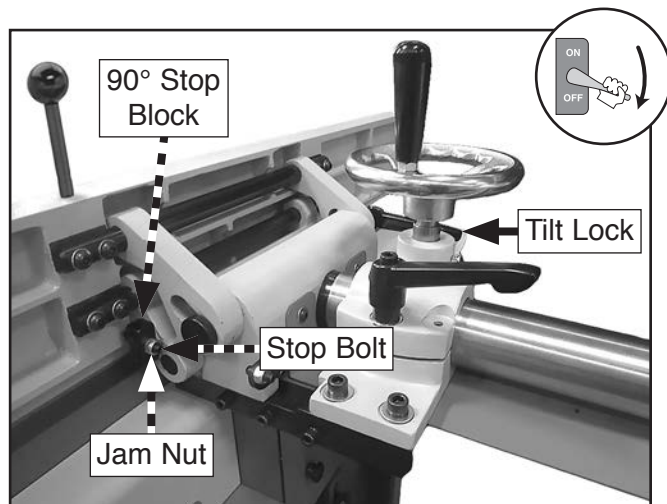


## Models G9953ZX, G9953ZXF

Tools Needed	Qty
Machinist's Square .....	1
Bevel Square .....	1
Open-End Wrench 12mm.....	1
Hex Wrench 8mm.....	1

### To set 90° fence stop:

1. DISCONNECT JOINTER FROM POWER!
2. Loosen fence tilt lock and 90° stop jam nut, then back off stop bolt (see **Figure 67**).

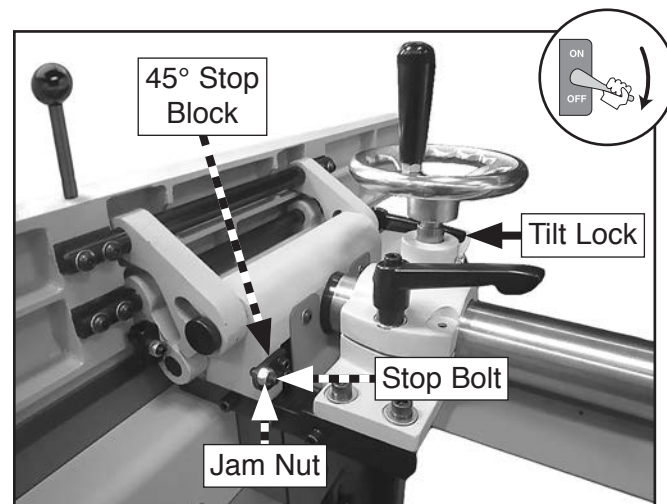


**Figure 67.** Fence 90° stop block components.

3. Place machinist's square flat on outfeed table near cutterhead, as shown in **Figure 65** on **Page 42**, adjust fence to the square, then tighten fence tilt lock to secure setting.
4. Tighten stop bolt toward fence assembly until it becomes snug, then tighten jam nut.

### To set 45° fence stop:

1. DISCONNECT JOINTER FROM POWER!
2. Loosen fence tilt lock and 45° stop jam nut, then back off stop bolt (see **Figure 68**).
3. Place bevel square (set at 135°) flat against outfeed table near cutterhead, as shown in **Figure 66** on **Page 42**, adjust fence to match angled face of square, then tighten tilt lock.
4. Tighten stop bolt toward fence assembly until it becomes snug, then tighten jam nut.

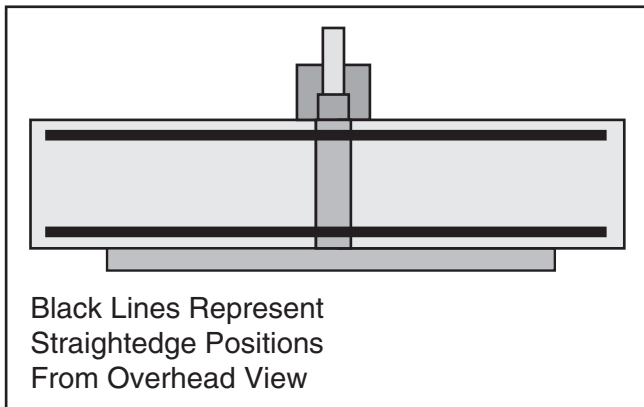


**Figure 68.** Fence 45° stop block components.



# Adjusting Table Parallelism

The tables of your jointer MUST be parallel with the cutterhead and each other (see **Figure 68**) to ensure good cutting results and to reduce the risk of workpiece kickback.



**Figure 69.** Illustration of table parallelism concept.

Adjusting table parallelism is a task of precision, time, and patience. Fortunately, this is considered a permanent adjustment that should not need to be repeated for the life of the machine.

Due to the complex nature of this task, we recommend that you carefully double-check the current table parallelism to be sure that adjustments need to be made.

**Note:** Typically, a tolerance of 0.005" or less in parallelism between the tables is considered acceptable.

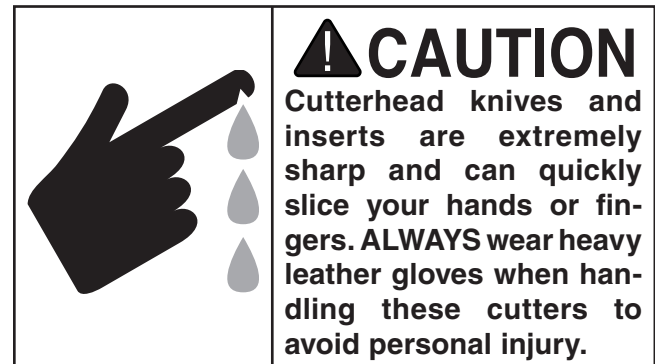
When adjusting table parallelism, you must do the following: 1) Properly adjust the outfeed table height and parallelism in relation to the cutterhead, and 2) adjust the infeed table parallel to the outfeed table.

**Note:** If your jointer uses a knife-style cutterhead, you will also have to adjust the knives as the last procedure to bring the outfeed table surface and cutting edges of the knives to the same height.

Tools Needed	Qty
Precision Straightedge 6'L .....	1
Feeler Gauge $\frac{3}{64}$ " (1.3mm).....	1
Phillips Screwdriver .....	1
Hex Wrench 4mm.....	1
Hex Wrench 13mm.....	1
Wrench or Socket 13mm.....	1
Wrench or Socket 32mm.....	1

## Adjusting Outfeed Table Parallelism

1. DISCONNECT JOINTER FROM POWER!



2. **Models G9860 & G9860ZX:** Remove the cutterhead guard, fence assembly, and rear motor access cover to access the cutterhead pulley.

**Models G9953ZX, & G9953ZXF:** Remove the cutterhead guard and fence assembly, then open the rear cutterhead cover to access the cutterhead pulley.

**Note:** The cutterhead pulley is used in the following steps to rotate the cutterhead.

3. Lower the outfeed table stop bolt and loosen the table lock so that they do not interfere with adjustments.



4. Make sure the precision straightedge and the table surface are free of debris, then place the straightedge on the back of the outfeed table and across the cutterhead.

**Note:** In the following steps, the process of checking the outfeed table for the correct height above the cutterhead is different between knife-style and spiral cutterheads.

**Knife-Style Cutterhead:** The correct outfeed table height is  $\frac{3}{64}$ " (1.3mm) above the cutterhead BODY, as measured with a feeler gauge (see **Figure 69**). Rotate the cutterhead to make sure the knives do not interfere with proper measurement.

**Spiral Cutterhead:** The outfeed table is at the correct height above the cutterhead when an insert is at the top-dead-center or at its highest point of rotation just touches the straightedge without lifting it, as shown in **Figure 69**. Rotate the cutterhead pulley to properly position an insert below the straightedge.

5. If the outfeed table surface is not at the right height, use the handwheel to bring the table to the correct height above the cutterhead, then tighten the table lock to secure the setting.

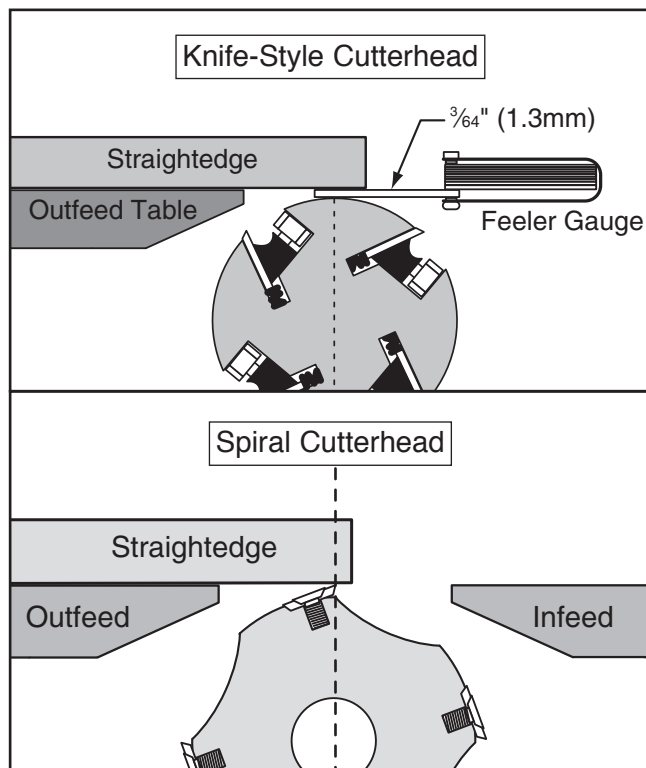
6. To check the outfeed table parallelism with the cutterhead body, place the straightedge on the front of the table and measure the height above the cutterhead, as instructed in **Step 4**.

—If the measurements of the front and back of the table are within 0.002" or less of each other, no further adjustments to the outfeed table are required. Proceed to **Step 12**.

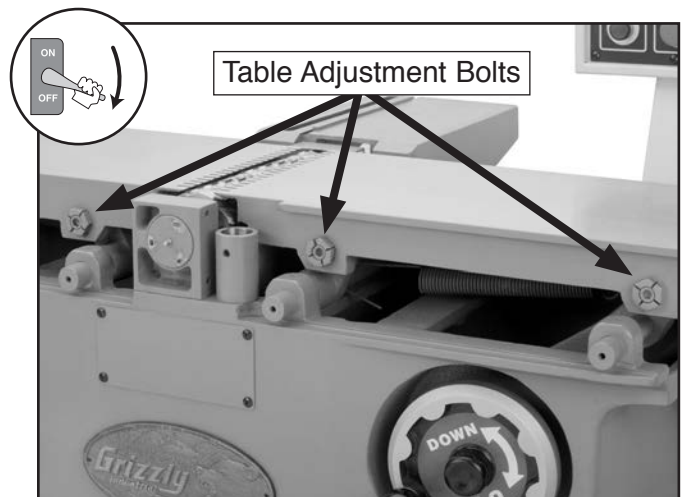
—If the front table measurement is NOT correct and within the tolerance of the back measurement, continue to **Step 7**.

7. Remove the front table cover to expose the table adjustment bolts, as shown in **Figure 70**.

**Note:** For Models G9953ZX, and G9953ZXF, you will need to remove the brake handle and hub before removing the cover.



**Figure 70.** Checking the outfeed table for the correct height above the cutterhead.

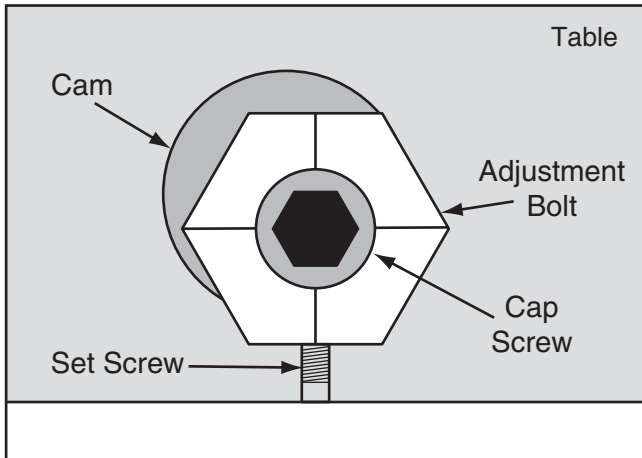


**Figure 71.** Front table cover removed to expose the table adjustment bolts.



8. Loosen the cap screw in the center of the outfeed table adjustment bolt three full turns, then loosen the set screw that is directly underneath the adjustment bolt (see **Figure 71**).

**Note:** Both of these screws are used to lock the adjustment bolt in place.



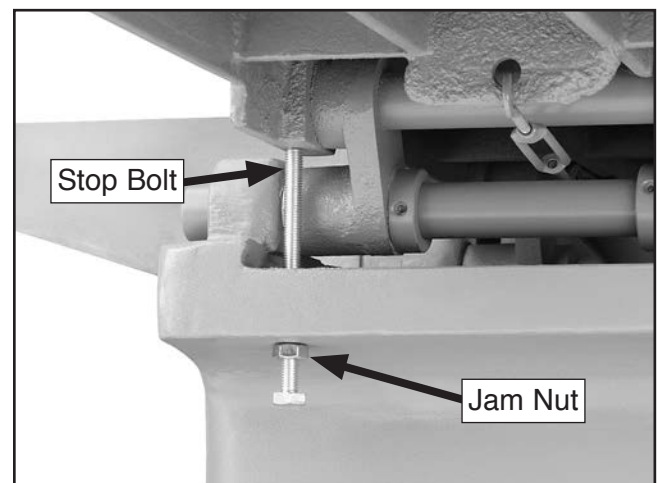
**Figure 72.** Illustration of the table adjustment bolt components.

**Note:** The goal of the next step is to bring the outfeed table parallel to the cutterhead body from front-to-back by raising or lowering the front corner of the outfeed table.

9. The adjustment bolt shaft is cam-shaped, as shown in **Figure 71**, and connects the table to the lifting arm. Rotate the adjustment bolt in very small increments to raise or lower the front corner of the outfeed table until the surface is the correct height above the cutterhead, as instructed in **Step 4**.
10. Re-check the table height at the back edge of the table, as instructed in **Step 4**.
  - If the table height is correct from front-to-back, no further adjustments are necessary. Go to **Step 11** to finish this procedure.
  - If the table height from front-to-back is not correct and the same, loosen the table lock and use the handwheel to bring the back of the table to the correct height above the cutterhead body, then repeat **Step 9**. Continue this process until the table height is correct and the same from front-to-back.

11. When the outfeed table height is correct and parallel to the cutterhead, re-tighten the adjustment bolt cap screw and set screw (see **Figure 71**), then make sure the table lock is tightened.
12. Loosen the jam nut and adjust the outfeed stop bolt underneath the table so that it just touches the bottom of the tables, as shown in **Figure 72**, then re-tighten the jam nut.

**Note:** When adjusted to the correct outfeed table height, use the stop bolt for a convenient method of ensuring the outfeed table is set at the proper height.



**Figure 73.** Outfeed table stop bolt (viewed from underneath the table).

13. When the **Adjusting Outfeed Table Parallelism** procedure is successfully completed, proceed to **Adjusting Infeed Table Parallelism**.

### Adjusting Infeed Table Parallelism

1. Make sure that all steps in the **Adjusting Outfeed Table Parallelism** procedure have been successfully completed and that the jointer is still disconnected from power.
2. Make sure the table surfaces and the precision straightedge are free from any debris that would interfere with taking measurements, then place the straightedge equally over the back of the outfeed and infeed tables.

**Note:** Make sure the straightedge is not in contact with a knife or insert.



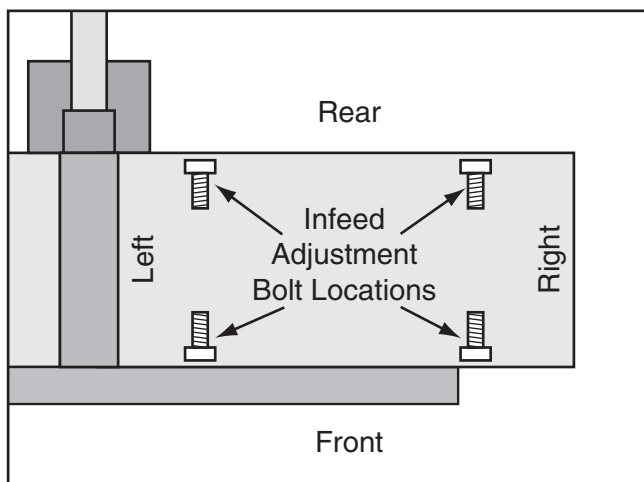
3. With the use of a magnet or an assistant, make sure that the straightedge stays flat against the full length of its contact with the outfeed table during the following steps.
4. Use the handwheel to adjust the infeed table as close as possible to the straightedge, then look closely for any gaps between the infeed table and the straightedge. Repeat this process on the front of the infeed table.

—If there are no gaps as the straightedge is positioned on both the back and front of the tables, then the infeed table is parallel with the outfeed table and the cutterhead—thus, no further adjustments are required. Proceed to **Step 7**.

—If there are gaps between the straightedge and the infeed table, make a note of how much and where the gaps are, then proceed to **Step 5**.

**Note:** To access the table adjustment bolts on the back side of the infeed table, remove the back table cover.

5. Use the same process you performed in **Step 9 on Page 46** to raise or lower the left or right end of the infeed table to eliminate the gaps. Adjust the adjustment bolts equally on each side for the targeted end of the table, one after the other, in very small increments (see **Figure 73**).



**Figure 74.** Locations of the infeed table adjustment bolts.

6. Repeat **Steps 4–5** until the infeed table is completely parallel to the outfeed table, which will also make it parallel to the cutterhead.
7. If the table adjustment cap and set screws are loose, re-tighten them and re-install the previously removed parts.
8. Loosen the screw that secures the depth of cut pointer (see **Figure 74**), adjust the pointer to "0", then re-tighten the screw.



**Figure 75.** Depth of cut scale and pointer.

9. If your jointer uses a knife-style cutterhead, re-adjust the knife heights as instructed in the **Adjusting/Replacing Cutterhead Knives** subsection on **Page 39**.



# SECTION 8: WIRING

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

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

## WARNING

### Wiring Safety Instructions

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

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

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

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

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

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











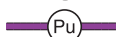



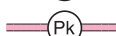
**CAPACITORS/INVERTERS.** Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

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

#### NOTICE

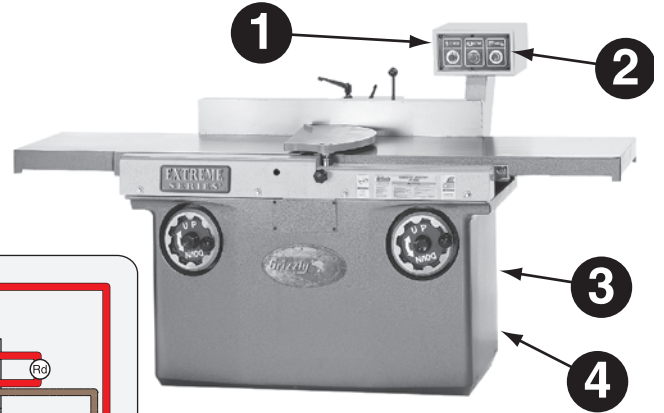
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at [www.grizzly.com](http://www.grizzly.com).

#### COLOR KEY

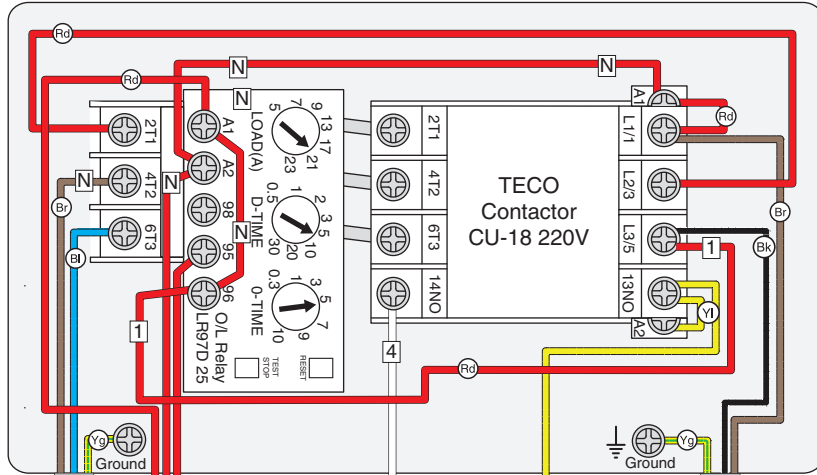
BLACK		BLUE		YELLOW		LIGHT BLUE	
WHITE		BROWN		YELLOW GREEN		BLUE WHITE	
GREEN		GRAY		PURPLE		TURQUOISE	
RED		ORANGE		PINK			



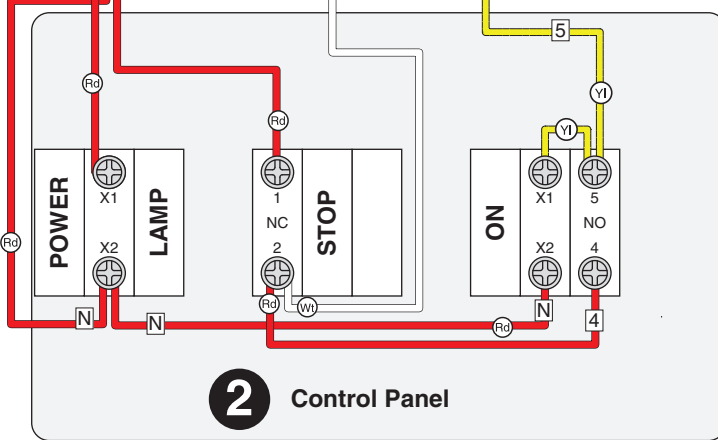
# G9860 & G9860ZX Wiring Diagram



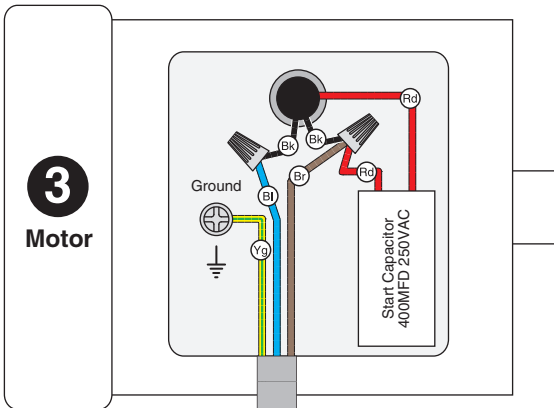
**1** Electrical Pedestal



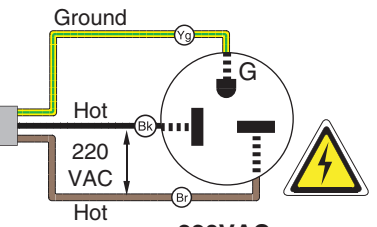
**2** Control Panel



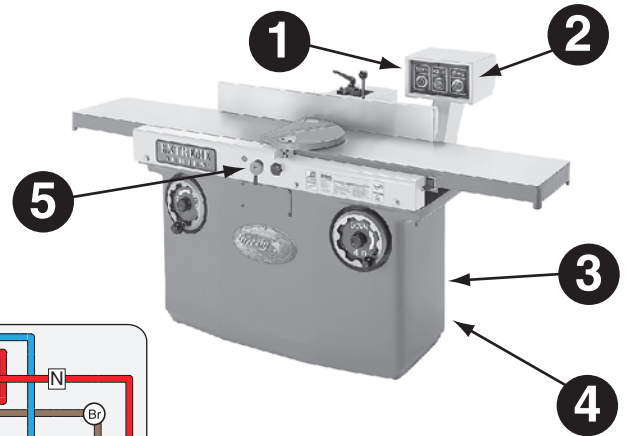
**3** Motor



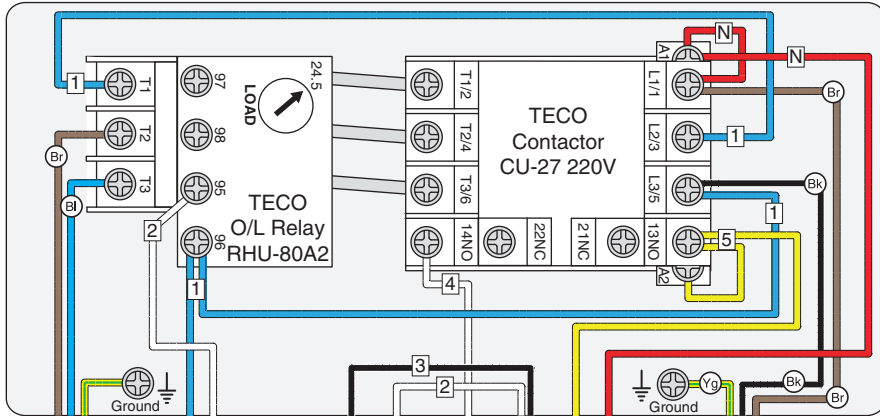
**4** 220VAC NEMA 6-20 Plug (As Recommended)



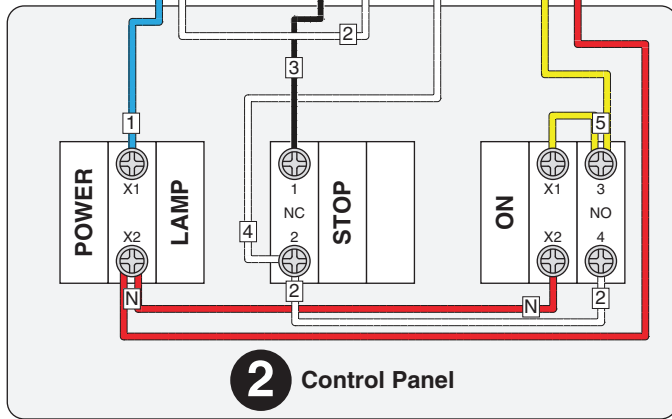
# G9953ZX Wiring Diagram



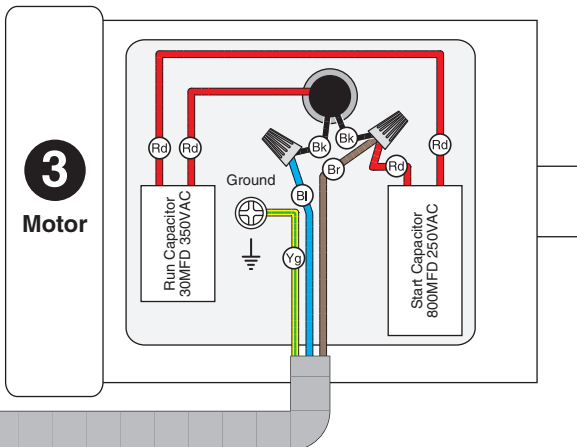
**1** Electrical Pedestal



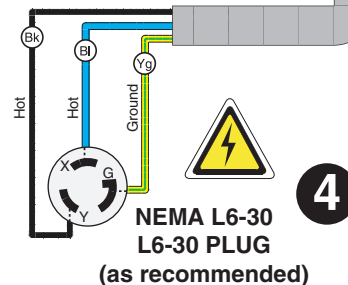
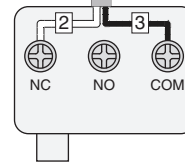
**2** Control Panel



**3** Motor



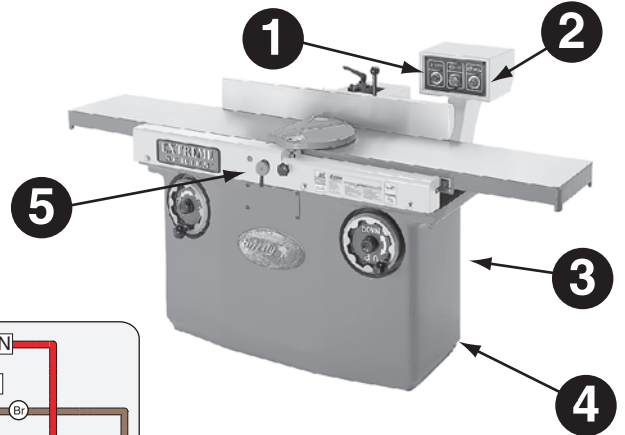
**5** Cutterhead Brake Switch



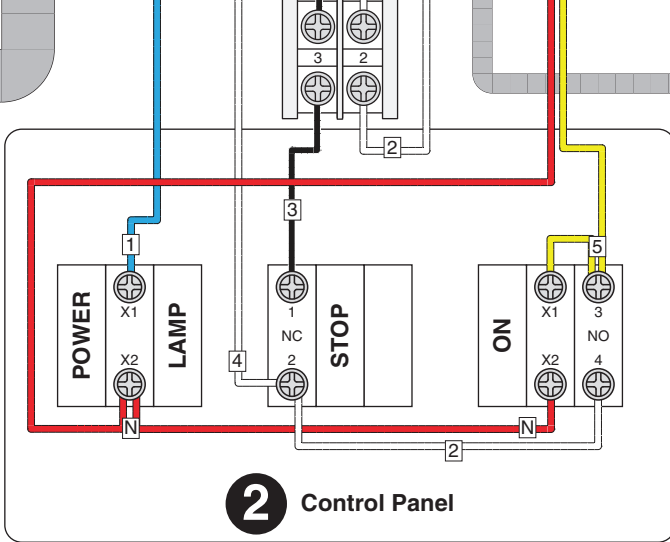
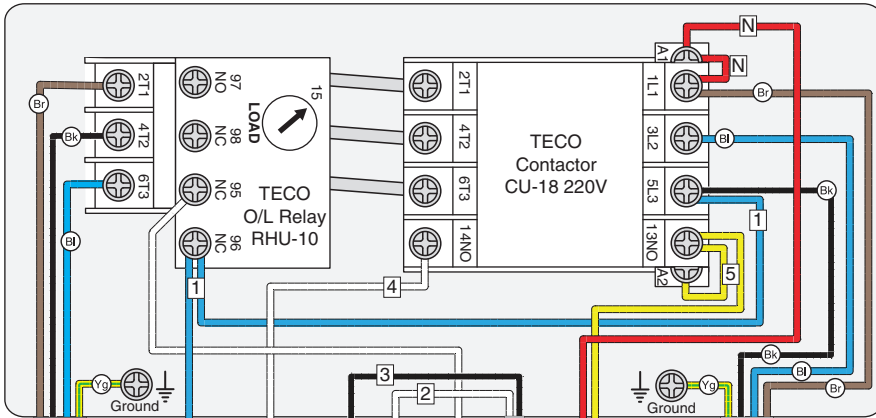
# G9953ZXF 220V Wiring Diagram



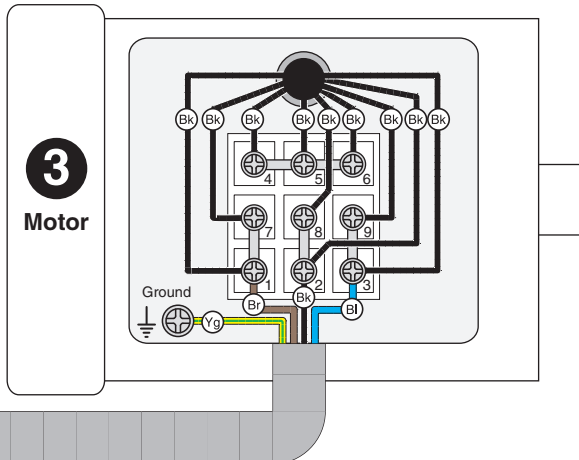
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**SHOCK HAZARD!**  
 Disconnect power  
 before working on  
 wiring.



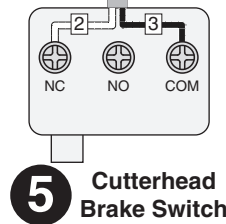
**1** Electrical Pedestal



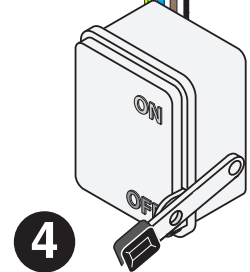
**2** Control Panel



**3** Motor



**5** Cutterhead Brake Switch



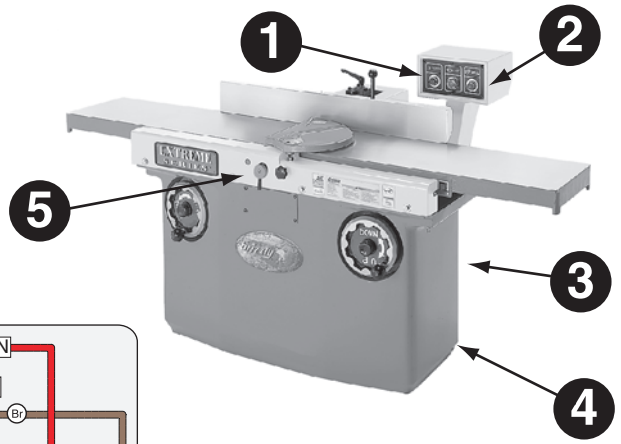
**4** 220VAC 3-Phase Locking Disconnect Switch (As Recommended)



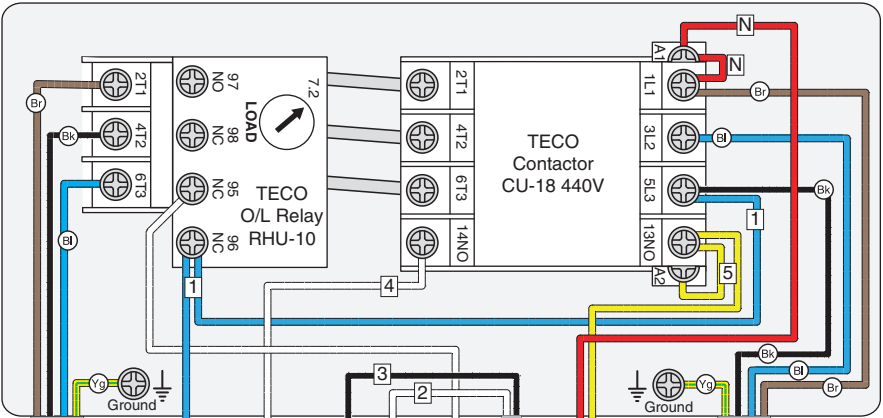
# G9953ZXF 440V Wiring Diagram



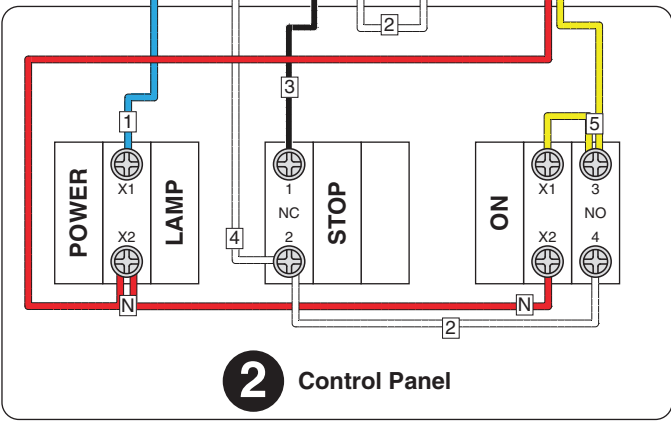
**⚠️ WARNING!**  
**SHOCK HAZARD!**  
 Disconnect power before working on wiring.



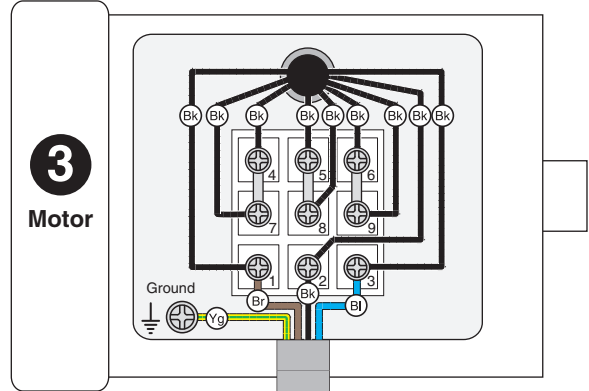
**1** Electrical Pedestal



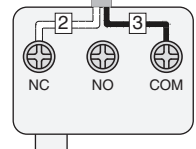
**2** Control Panel



**3** Motor



**5** Cutterhead Brake Switch

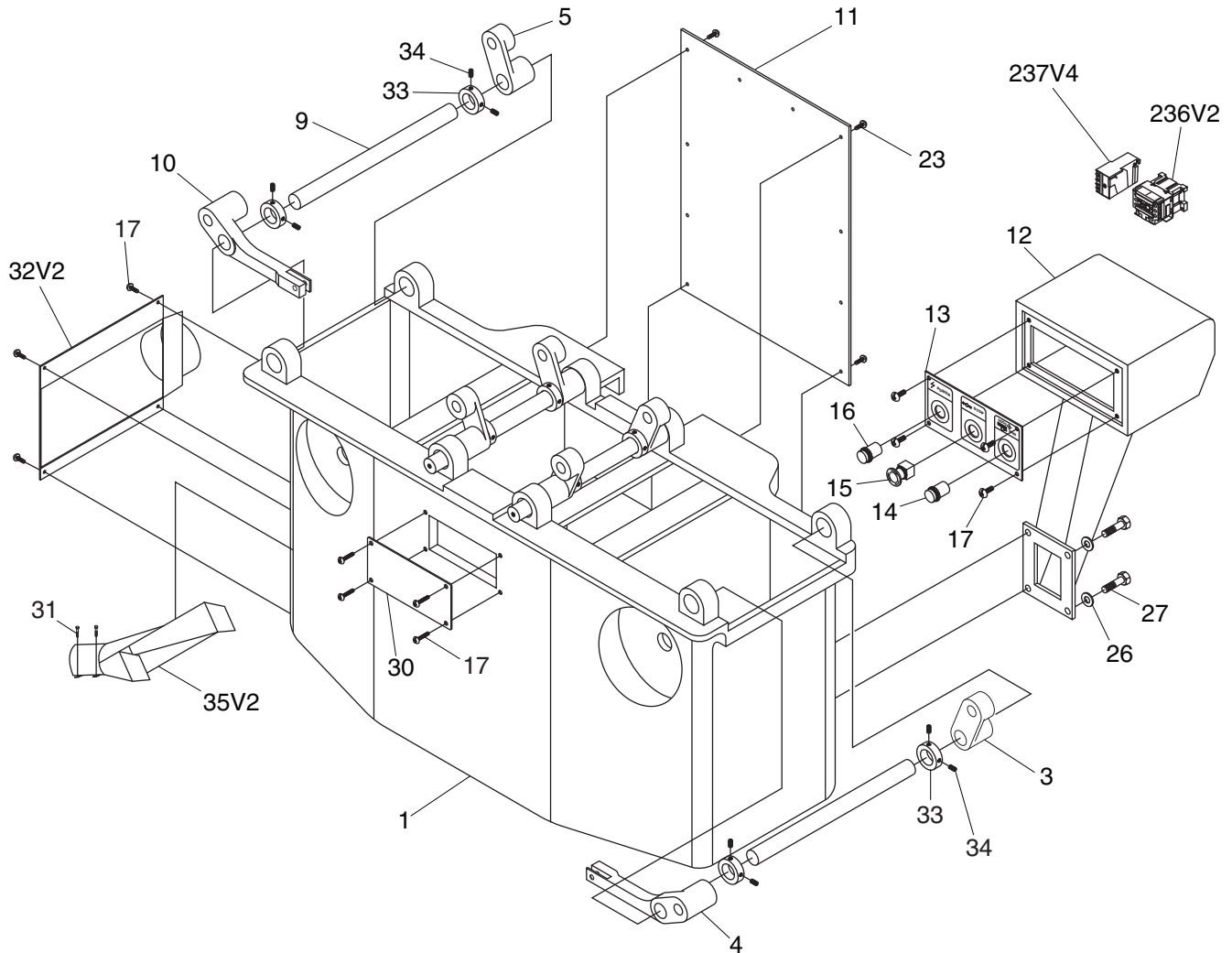


**4** 440VAC 3-Phase Locking Disconnect Switch (As Recommended)



# SECTION 9: PARTS

## G9860/ZX Cabinet

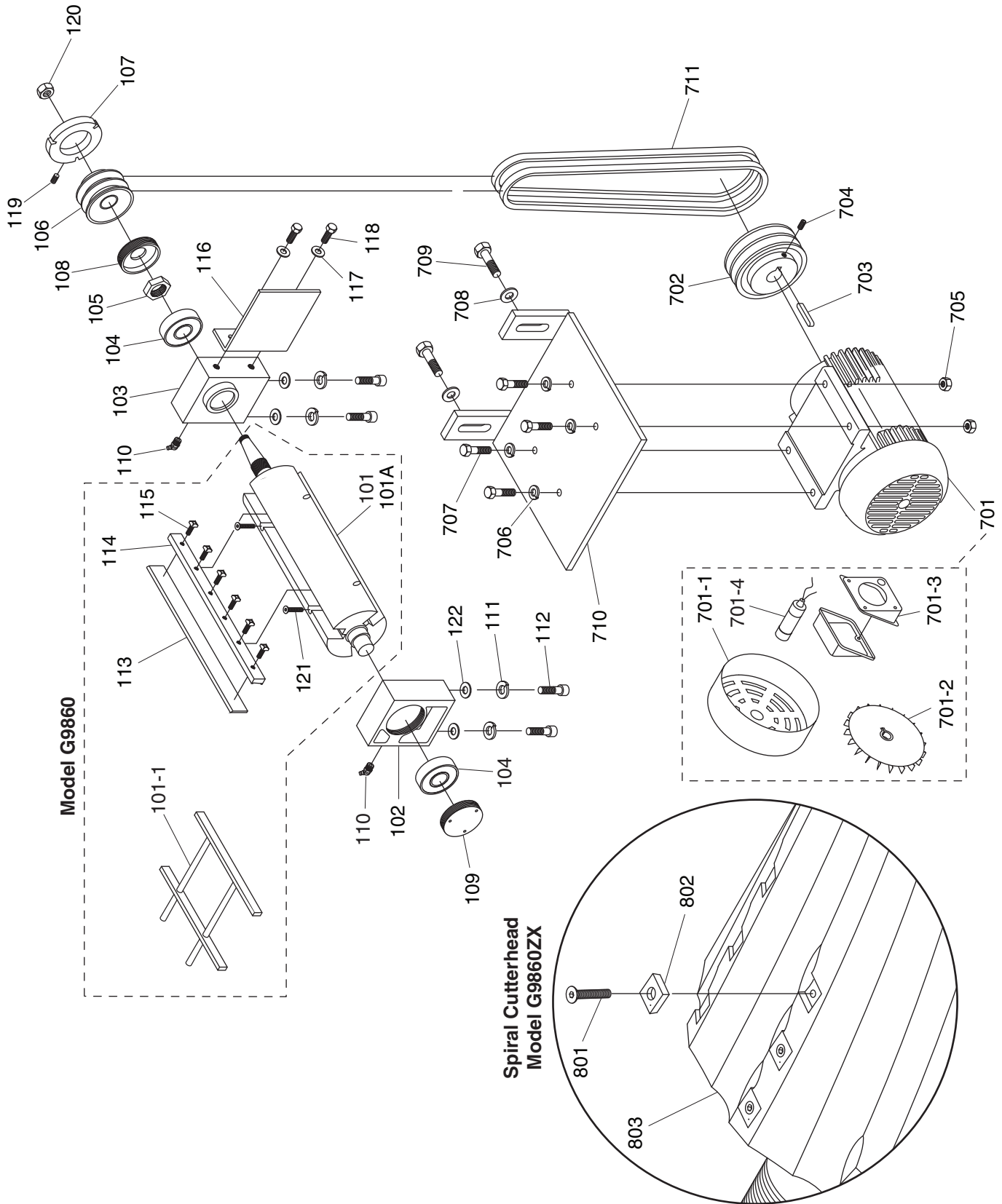


REF	PART #	DESCRIPTION
1	P9860001	BASE
3	P9860003	INFEED TABLE SUPPORT
4	P9860004	INFEED TABLE LIFTING ARM
5	P9860005	OUTFEED TABLE SUPPORT
9	P9860009	TABLE HEIGHT SPINDLE
10	P9860010	OUTFEED TABLE LIFTING ARM
11	P9860011	MOTOR ACCESS COVER
12	P9860012	CONTROL PANEL PEDESTAL
13	P9860013	CONTROL PANEL
14	P9860014	ON BUTTON
15	P9860015	STOP BUTTON
16	P9860016	POWER LAMP

REF	PART #	DESCRIPTION
17	P9860017	PHLP HD SCR M6-1 X 10
23	P9860023	PHLP HD SCR M6-1 X 10
26	P9860026	FLAT WASHER 10MM
27	P9860027	CAP SCREW M10-1.5 X 25
30	P9860030	FRONT CABINET ACCESS COVER
31	P9860031	HEX BOLT M6-1 X 12
32V2	P9860032V2	DUST PORT 5" V2.10.20
33	P9860033	LOCK COLLAR
34	P9860034	SET SCREW M8-1.25 X 8
35V2	P9860035V2	DUST CHUTE 5" V2.10.20
236V2	P9860236V2	CONTACTOR TECO CU-18 220V V2.05.08
237V4	P9860237V4	OL RELAY TE LR97D25M7 5-25A V4.09.11



# G9860/ZX Cutterhead & Motor



# G9860 Cutterhead & Motor Parts List

REF	PART #	DESCRIPTION
101-1	P9860101-1	JOINTER PAL CARBIDE JIG
101	P9860101	CUTTERHEAD 3 KNIFE V1.08.02
101A	P9860101A	CUTTERHEAD 4 KNIFE V2.03.05
102	P9860102	FRONT BEARING HOUSING
103	P9860103	REAR BEARING HOUSING
104	P9860104	BALL BEARING 6305VV
105	P9860105	SPANNER NUT M21-1.5
106	P9860106	CUTTERHEAD PULLEY
107	P9860107	CUTTERHEAD STOP PLATE
108	P9860108	REAR BEARING CAP
109	P9860109	FRONT BEARING CAP
110	P9860110	GREASE FITTING
111	P9860111	LOCK WASHER 10MM
112	P9860112	CAP SCREW M10-1.5 X 45
113	P9860113	KNIFE 1-3/16" X 12" X 1/8"
114	P9860114	KNIFE GIB 12"
115	P9860115	GIB BOLT M8-1.25 X 10
116	P9860116	BRACKET
117	P9860117	FLAT WASHER 10MM
118	P9860118	HEX BOLT M10-1.5 X 16

REF	PART #	DESCRIPTION
119	P9860119	SET SCREW M8-1.25 X 20
120	P9860120	SPECIAL HEX NUT M17-1.5
121	P9860121	JACK SCREW M6-1 X 16
122	P9860122	FLAT WASHER 10MM
701	P9860701	MOTOR 3HP 220V 1PH
701-1	P9860701-1	MOTOR FAN COVER
701-2	P9860701-2	MOTOR FAN
701-3	P9860701-3	MOTOR WIRING JUNCTION BOX
701-4	P9860701-4	S CAP. 400M 250V 1-3/4 X 3-1/2
702	P9860702	MOTOR PULLEY
703	P9860703	KEY 7 X 7 X 35
704	P9860704	SET SCREW 5/16-18 X 1/2
705	P9860705	HEX NUT M10-1.5
706	P9860706	LOCK WASHER 10MM
707	P9860707	HEX BOLT M10-1.5 X 40
708	P9860708	FLAT WASHER 1/2
709	P9860709	HEX BOLT M12-1.75 X 40
710	P9860710	MOTOR MOUNT PLATE
711V2	P9860711V2	V-BELT A47

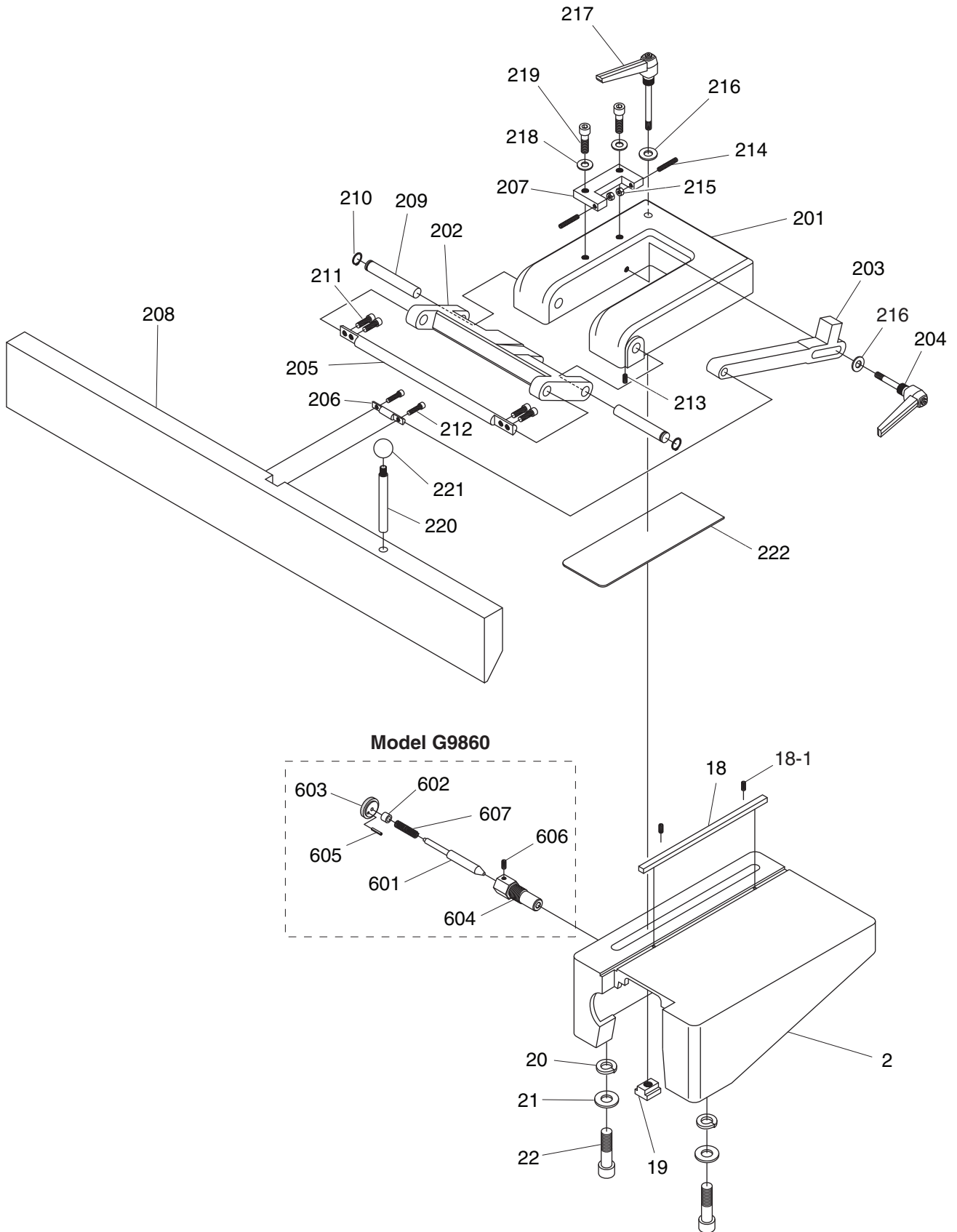
# G9860ZX Cutterhead & Motor Parts List

REF	PART #	DESCRIPTION
102	P9860ZX102	FRONT BEARING HOUSING
103	P9860ZX103	REAR BEARING HOUSING
104	P9860ZX104	BALL BEARING 6305VV
105	P9860ZX105	SPANNER NUT M21-1.5
106	P9860ZX106	CUTTERHEAD PULLEY
107	P9860ZX107	CUTTERHEAD STOP PLATE
108	P9860ZX108	REAR BEARING CAP
109	P9860ZX109	FRONT BEARING CAP
110	P9860ZX110	GREASE FITTING
111	P9860ZX111	LOCK WASHER 10MM
112	P9860ZX112	CAP SCREW M10-1.5 X 45
116	P9860ZX116	BRACKET
117	P9860ZX117	FLAT WASHER 10MM
118	P9860ZX118	HEX BOLT M10-1.5 X 16
119	P9860ZX119	SET SCREW M8-1.25 X 20
120	P9860ZX120	SPECIAL HEX NUT M17-1.5
122	P9860ZX122	FLAT WASHER 10MM
701	P9860ZX701	MOTOR 3HP 220V 1PH

REF	PART #	DESCRIPTION
701-1	P9860ZX701-1	MOTOR FAN COVER
701-2	P9860ZX701-2	MOTOR FAN
701-3	P9860ZX701-3	MOTOR WIRING JUNCTION BOX
701-4	P9860ZX701-4	S CAP. 400M 250V 1-3/4 X 3-1/2
702	P9860ZX702	MOTOR PULLEY
703	P9860ZX703	KEY 7 X 7 X 35
704	P9860ZX704	SET SCREW 5/16-18 X 1/2
705	P9860ZX705	HEX NUT M10-1.5
706	P9860ZX706	LOCK WASHER 10MM
707	P9860ZX707	HEX BOLT M10-1.5 X 40
708	P9860ZX708	FLAT WASHER 1/2
709	P9860ZX709	HEX BOLT M12-1.75 X 40
710	P9860ZX710	MOTOR MOUNT PLATE
711V2	P9860ZX711V2	V-BELT A47
801	P9860ZX801	FLAT HD TORX T20 M6-1 X 15
802	P9860ZX802	INDEXABLE INSERT 14 X 14 X 2MM
803	P9860ZX803	SPIRAL CUTTERHEAD 12"



# G9860/ZX Fence



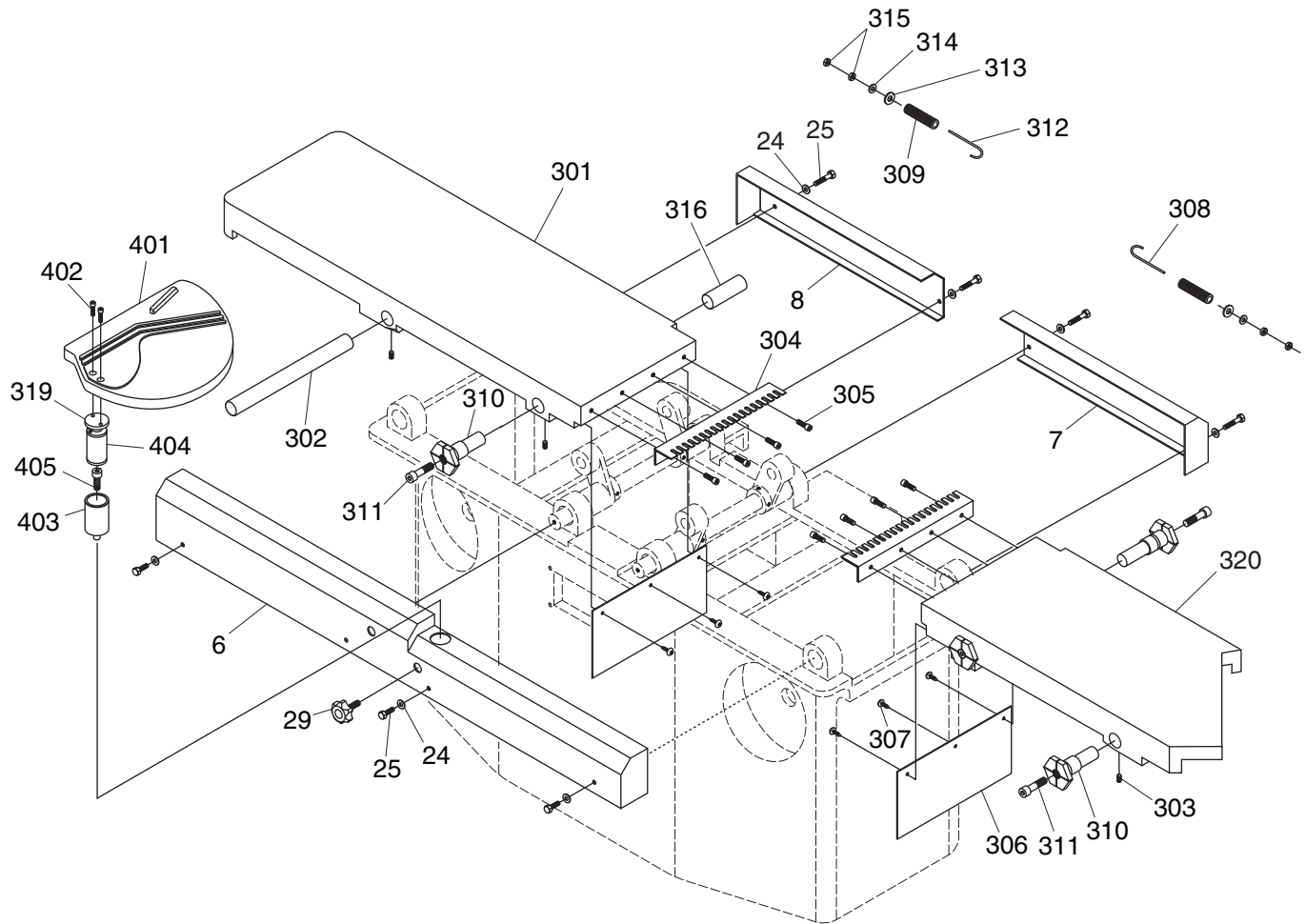
# G9860/ZX Fence Parts List

REF	PART #	DESCRIPTION
2	P9860002	FENCE SEAT
18	P9860018	KEY 10 X 8 X 300
18-1	P9860018-1	ROLL PIN 5 X 25
19	P9860019	FENCE LOCK T-NUT
20	P9860020	LOCK WASHER 16MM
21	P9860021	FLAT WASHER 16MM
22	P9860022	CAP SCREW M12-1.75 X 30
201	P9860201	FENCE BASE
202	P9860202	PIVOT BRACKET
203	P9860203	CONNECTOR BRACKET
204	P9860204	TILT LOCK LEVER ASSY
205	P9860205	LOWER FENCE ROD
206	P9860206	CLAMP ROD
207	P9860207	STOP BRACKET
208	P9860208	FENCE
209	P9860209	UPPER FENCE ROD
210	P9860210	EXT RETAINING RING 16MM
211	P9860211	CAP SCREW M5-.8 X 20

REF	PART #	DESCRIPTION
212	P9860212	CAP SCREW M5-.8 X 16
213	P9860213	SET SCREW M6-1 X 12
214	P9860214	SET SCREW M6-1 X 35
215	P9860215	HEX NUT M6-1
216	P9860216	FLAT WASHER 1/2
217	P9860217	FENCE LOCK LEVER ASSY
218	P9860218	FLAT WASHER 10MM
219	P9860219	CAP SCREW M10-1.5 X 25
220	P9860220	FENCE ADJUSTMENT HANDLE
221	P9860221	KNOB 3/8"-16
222	P9860222	DUST COVER
601	P9860601	ROD
602	P9860602	COLLAR
603	P9860603	KNURLED KNOB
604	P9860604	BRAKE CASING
605	P9860605	ROLL PIN 3 X 18
606	P9860606	SET SCREW M6-1 X 6
607	P9860607	COMPRESSION SPRING



# G9860/ZX Table

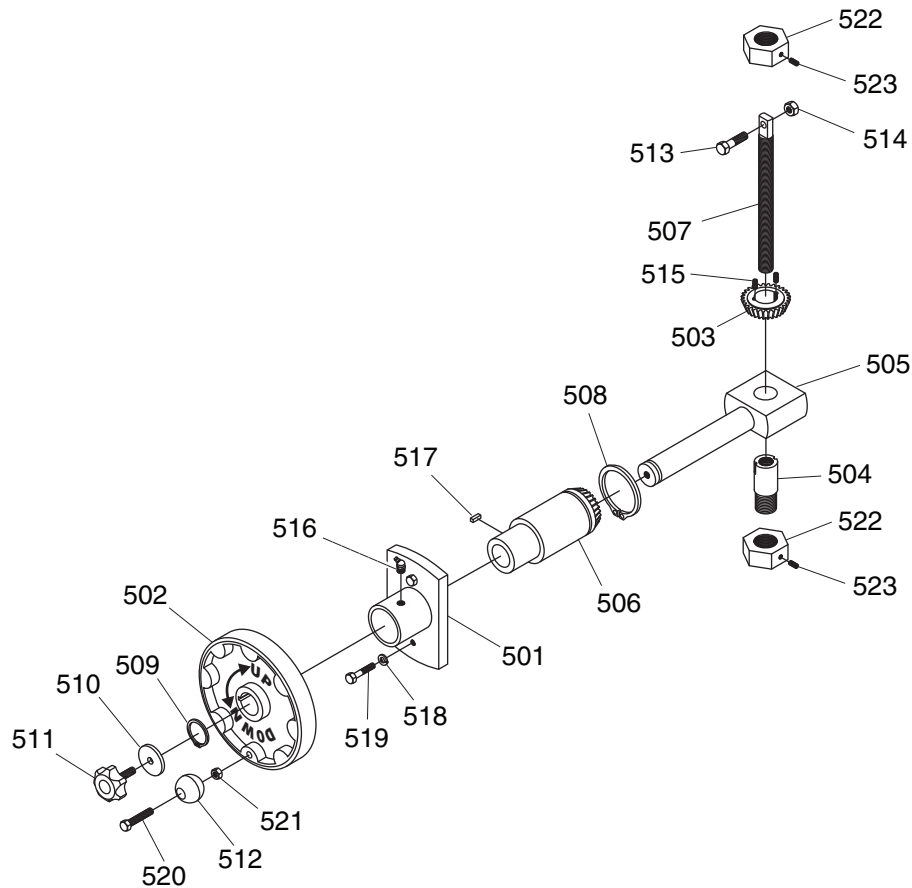


REF	PART #	DESCRIPTION
6	P9860006	FRONT TABLE COVER
7	P9860007	INFEED TABLE REAR COVER
8	P9860008	OUTFEED TABLE REAR COVER
24	P9860024	FLAT WASHER 8MM
25	P9860025	HEX BOLT M8-1.25 X 16
29	P9860029	KNOB M10-1.5 X 30
301	P9860301	OUTFEED TABLE
302	P9860302	TABLE PIVOT ROD LONG
303	P9860303	SET SCREW M8-1.25 X 10
304	P9860304	NOISE DAMPER
305	P9860305	CAP SCREW M6-1 X 12
306	P9860306	COVER
307	P9860307	PHLP HD SCR M6-1 X 12
308	P9860308	J-ROD LONG
309	P9860309	TENSION SPRING

REF	PART #	DESCRIPTION
310	P9860310	BED PIVOT PIN
311	P9860311	CAP SCREW M10-1.5 X 45
312	P9860312	J-ROD SHORT
313	P9860313	FLAT WASHER 1/2
314	P9860314	FLAT WASHER 3/8
315	P9860315	HEX NUT M12-1.75
316	P9860316	TABLE PIVOT ROD SHORT
319	P9860319	SPRING SHAFT COVER
320	P9860320	INFEED TABLE
401	P9860401	CUTTERHEAD GUARD
402	P9860402	CAP SCREW M8-1.25 X 25
403	P9860403	SPRING SHAFT HOUSING
404	P9860404	SPRING SHAFT
405	P9860405	CAP SCREW M12-1.75 X 20



# G9860/ZX Handwheel

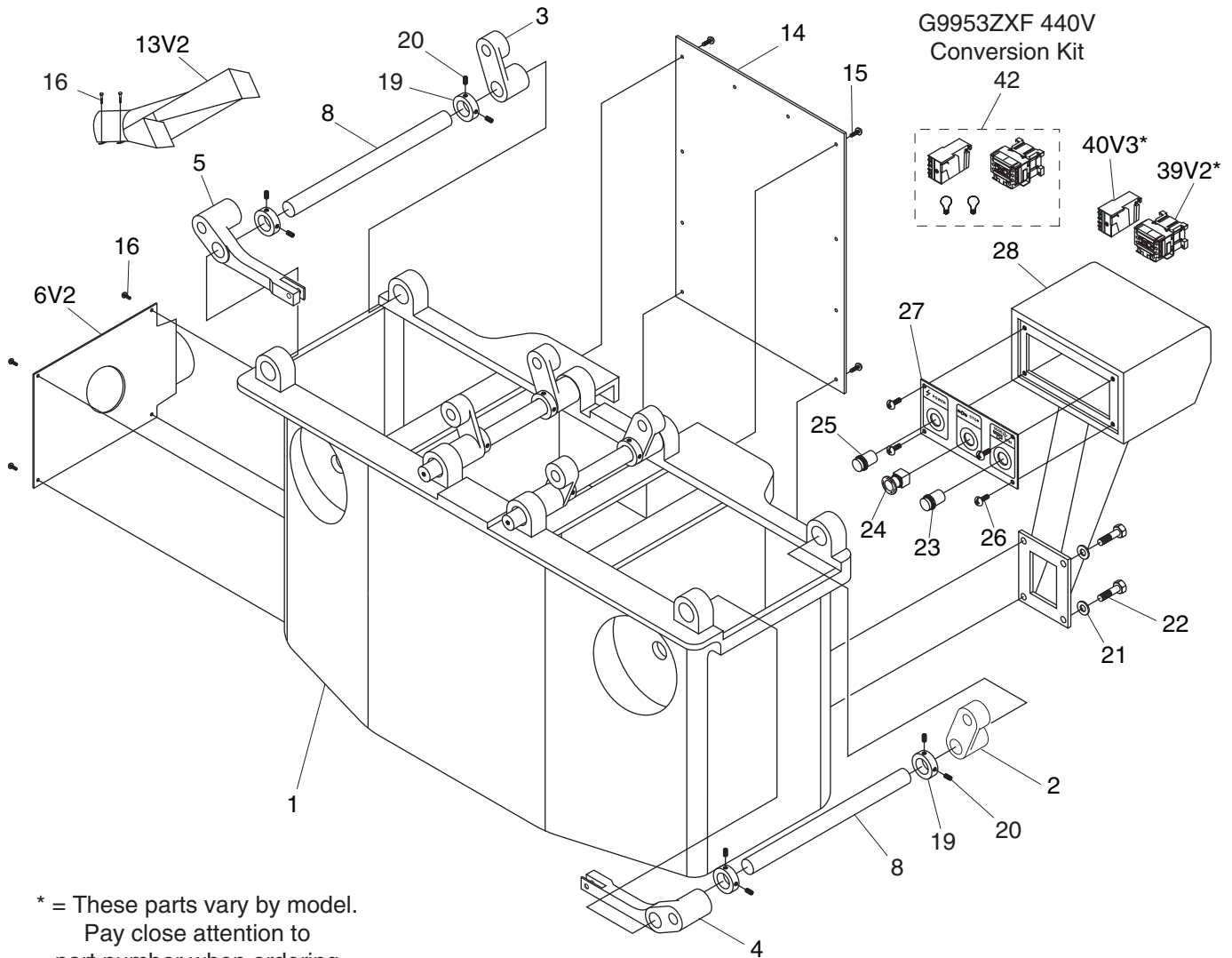


REF	PART #	DESCRIPTION
501	P9860501	LIFT ROD BRACKET
502	P9860502	HANDWHEEL
503	P9860503	BEVEL GEAR
504	P9860504	SLEEVE
505	P9860505	LIFT ROD
506	P9860506	GEAR SHAFT
507	P9860507	LIFT CONNECTOR
508	P9860508	SPECIAL EXT RETAINER RING
509	P9860509	EXT RETAINING RING 22MM
510	P9860510	SPECIAL FLAT WASHER D12 X 8MM
511	P9860511	LOCK KNOB M10-1.5 X 20MM
512	P9860512	HANDWHEEL KNOB 3/8"-16

REF	PART #	DESCRIPTION
513	P9860513	CAP SCREW M10-1.5 X 40
514	P9860514	HEX NUT M10-1.5
515	P9860515	SET SCREW M4-.7 X 10
516	P9860516	GREASE FITTING
517	P9860517	KEY 5 X 5 X 15
518	P9860518	LOCK WASHER 8MM
519	P9860519	HEX BOLT M8-1.25 X 25
520	P9860520	HEX BOLT 3/8-16 X 2
521	P9860521	HEX NUT 3/8"-16
522	P9860522	SPECIAL NUT M25-1.5
523	P9860523	SET SCREW M6-1 X 6



# G9953ZX/ZXF Cabinet



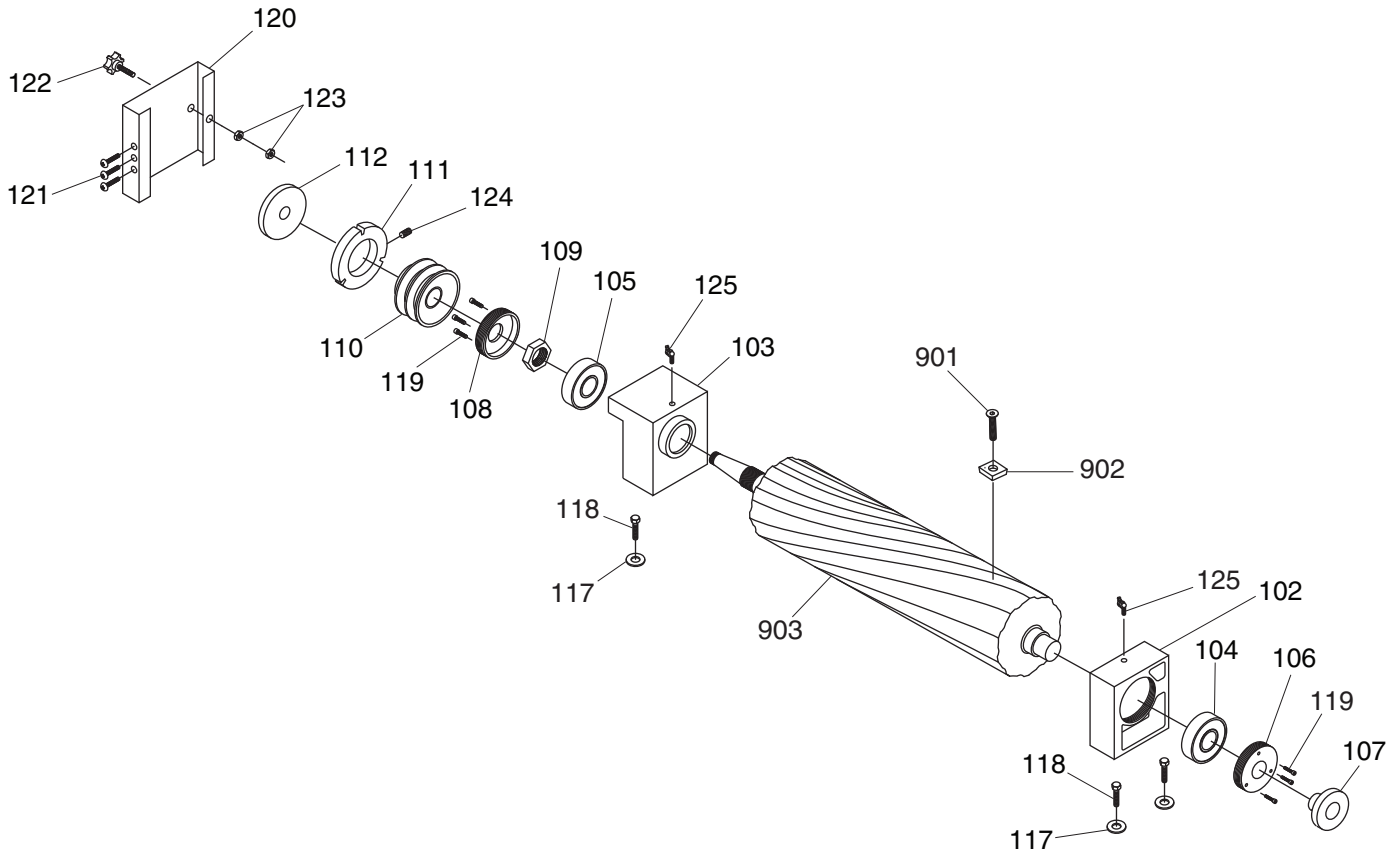
\* = These parts vary by model.  
Pay close attention to  
part number when ordering.

REF PART #	DESCRIPTION
1	P9953ZX001 BASE
2	P9953ZX002 INFEEED TABLE SUPPORT
3	P9953ZX003 OUTFEED TABLE SUPPORT
4	P9953ZX004 INFEEED TABLE LIFTING ARM
5	P9953ZX005 OUTFEED TABLE LIFTING ARM
6V2	P9953ZX006V2 DUST HOOD 5" V2.10.20
8	P9953ZX008 TABLE HEIGHT SPINDLE
13V2	P9953ZX013V2 DUST CHUTE 5" V2.10.20
14	P9953ZX014 MOTOR ACCESS COVER
15	P9953ZX015 PHLP HD SCR M6-1 X 10
16	P9953ZX016 PHLP HD SCR M6-1 X 12
19	P9953ZX019 STOP COLLAR
20	P9953ZX020 SET SCREW M8-1.25 X 8

REF PART #	DESCRIPTION
21	P9953ZX021 FLAT WASHER 10MM
22	P9953ZX022 CAP SCREW M10-1.5 X 25
23	P9953ZX023 ON BUTTON
24	P9953ZX024 STOP BUTTON
25	P9953ZX025 POWER LAMP
26	P9953ZX026 PHLP HD SCR M6-1 X 12
27	P9953ZX027 CONTROL PANEL
28	P9953ZX028 CONTROL PANEL PEDESTAL
39V2	P9953ZX039V2 CONTACTOR TECO CU-18 220V V2.05.08
39V2	P9953ZXF039V2 CONTACTOR TECO CU-18 440V V2.05.08
40V3	P9953ZX040V3 OL RELAY TECO RHU-10 15-20A V3.01.11
40V3	P9953ZXF040V3 OL RELAY TECO RHU-10 15-20A V3.01.11
42	P9953ZXF042 440V CONVERSION KIT



# G9953ZX/ZXF Cutterhead

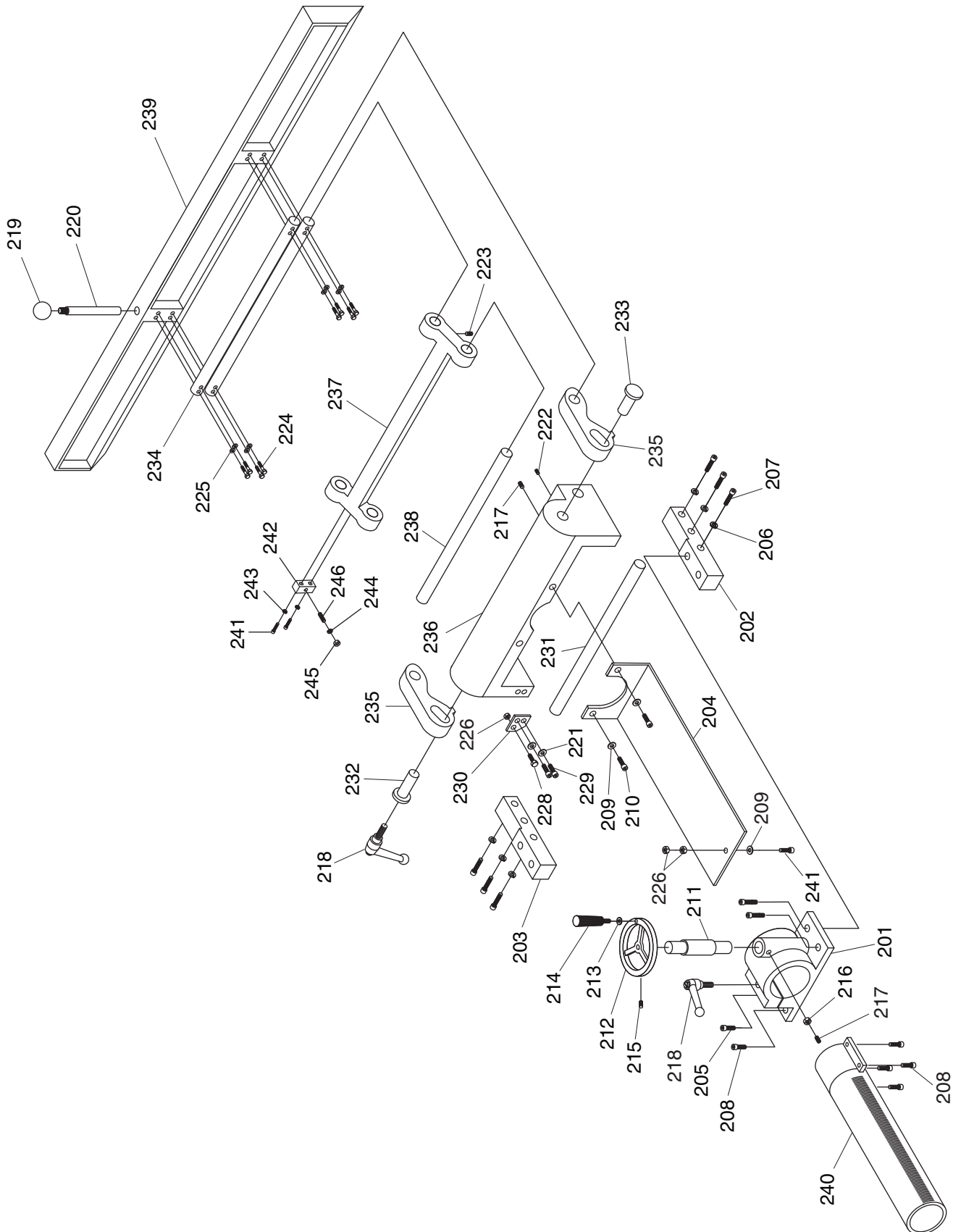


REF	PART #	DESCRIPTION
102	P9953ZX102	BEARING HOUSING FRONT
103	P9953ZX103	BEARING HOUSING REAR
104	P9953ZX104	BALL BEARING 6206ZZ
105	P9953ZX105	BALL BEARING 6208ZZ
106	P9953ZX106	BEARING END CAP
107	P9953ZX107	BRAKE NUT M30-1.5
108	P9953ZX108	BEARING CAP
109	P9953ZX109	SPANNER NUT M40-1.5P
110	P9953ZX110	CUTTERHEAD PULLEY
111	P9953ZX111	CUTTERHEAD STOP PLATE
112	P9953ZX112	END CAP
117	P9953ZX117	LOCK WASHER 10MM

REF	PART #	DESCRIPTION
118	P9953ZX118	HEX BOLT M10-1.5 X 30
119	P9953ZX119	CAP SCREW M5-.8 X 16
120	P9953ZX120	CUTTERHEAD REAR COVER
121	P9953ZX121	PHLP HD SCR M4-.7 X 15
122	P9953ZX122	STAR KNOB
123	P9953ZX123	HEX NUT M5-.8
124	P9953ZX124	SET SCREW M8-1.25 X 20
125	P9953ZX125	GREASE FITTING
901	P9953ZX901	FLAT HD TORX T20 M6-1 X 15
902	P9953ZX902	INDEXABLE INSERT 14 X 14 X 2
903	P9953ZX903	SPIRAL CUTTERHEAD BODY



# G9953ZX/ZXF Fence



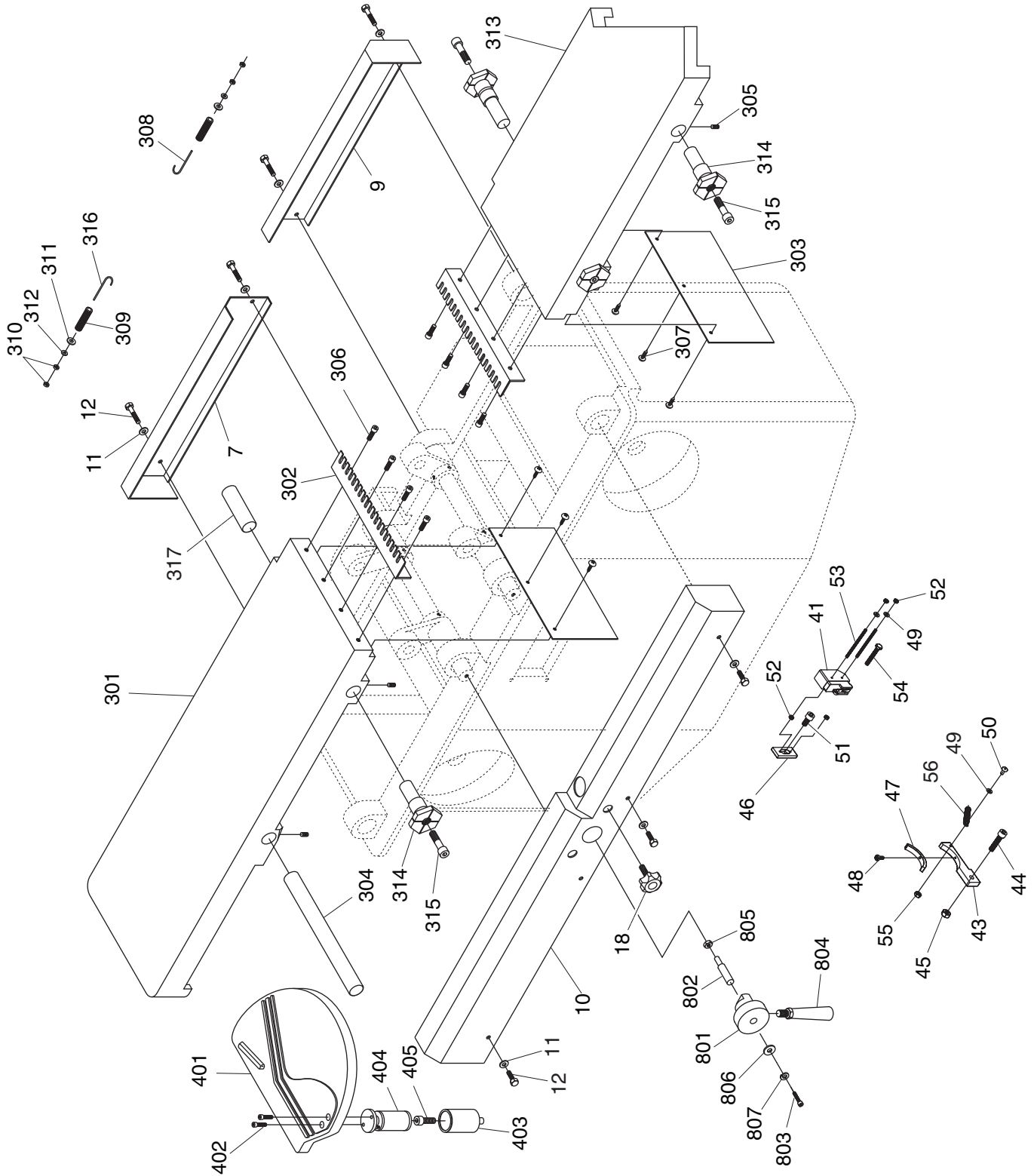
# G9953ZX/ZXF Fence Parts List

REF	PART #	DESCRIPTION
201	P9953ZX201	TUBE ROD BRACKET
202	P9953ZX202	CONNECTOR LEFT
203	P9953ZX203	CONNECTOR RIGHT
204	P9953ZX204	BASE PLATE
205	P9953ZX205	CAP SCREW M10-1.5 X 60
206	P9953ZX206	LOCK WASHER 8MM
207	P9953ZX207	CAP SCREW M8-1.25 X 50
208	P9953ZX208	CAP SCREW M10-1.5 X 25
209	P9953ZX209	FLAT WASHER 6MM
210	P9953ZX210	CAP SCREW M6-1 X 10
211	P9953ZX211	GEAR SHAFT
212	P9953ZX212	HANDWHEEL
213	P9953ZX213	FLAT WASHER 3/8
214	P9953ZX214	HANDLE 3/8-16
215	P9953ZX215	SET SCREW M8-1.25 X 10
216	P9953ZX216	HEX NUT M8-1.25
217	P9953ZX217	SET SCREW M8-1.25 X 25
218	P9953ZX218	LOCK LEVER 1/2 X 50MM
219	P9953ZX219	KNOB 3/8"
220	P9953ZX220	FENCE ADJUSTMENT HANDLE
221	P9953ZX221	FLAT WASHER 6MM
222	P9953ZX222	SET SCREW M6-1 X 10
223	P9953ZX223	SET SCREW M6-1 X 8

REF	PART #	DESCRIPTION
224	P9953ZX224	HEX BOLT M8-1.25 X 30
225	P9953ZX225	FLAT WASHER 8MM
226	P9953ZX226	HEX NUT M10-1.5
228	P9953ZX228	HEX BOLT M8-1.25 X 25
229	P9953ZX229	CAP SCREW M6-1 x 16
230	P9953ZX230	BRACKET
231	P9953ZX231	ANCHOR ROD
232	P9953ZX232	PIVOT PIN RIGHT
233	P9953ZX233	PIVOT PIN LEFT
234	P9953ZX234	FENCE ROD
235	P9953ZX235	PIVOT ARM
236	P9953ZX236	FENCE ANGLE SEAT
237	P9953ZX237	FENCE ROD BRACKET
238	P9953ZX238	PIVOT ROD
239	P9953ZX239	FENCE
240	P9953ZX240	FENCE ROD
241	P9953ZX241	CAP SCREW M6-1 X 25
242	P9953ZX242	FENCE STOP BLOCK
243	P9953ZX243	FLAT WASHER 1/4
244	P9953ZX244	FLAT WASHER 5/16
245	P9953ZX245	HEX NUT M8-1.25
246	P9953ZX246	SET SCREW M8-1.25 X 40



# G9953ZX/ZXF Table



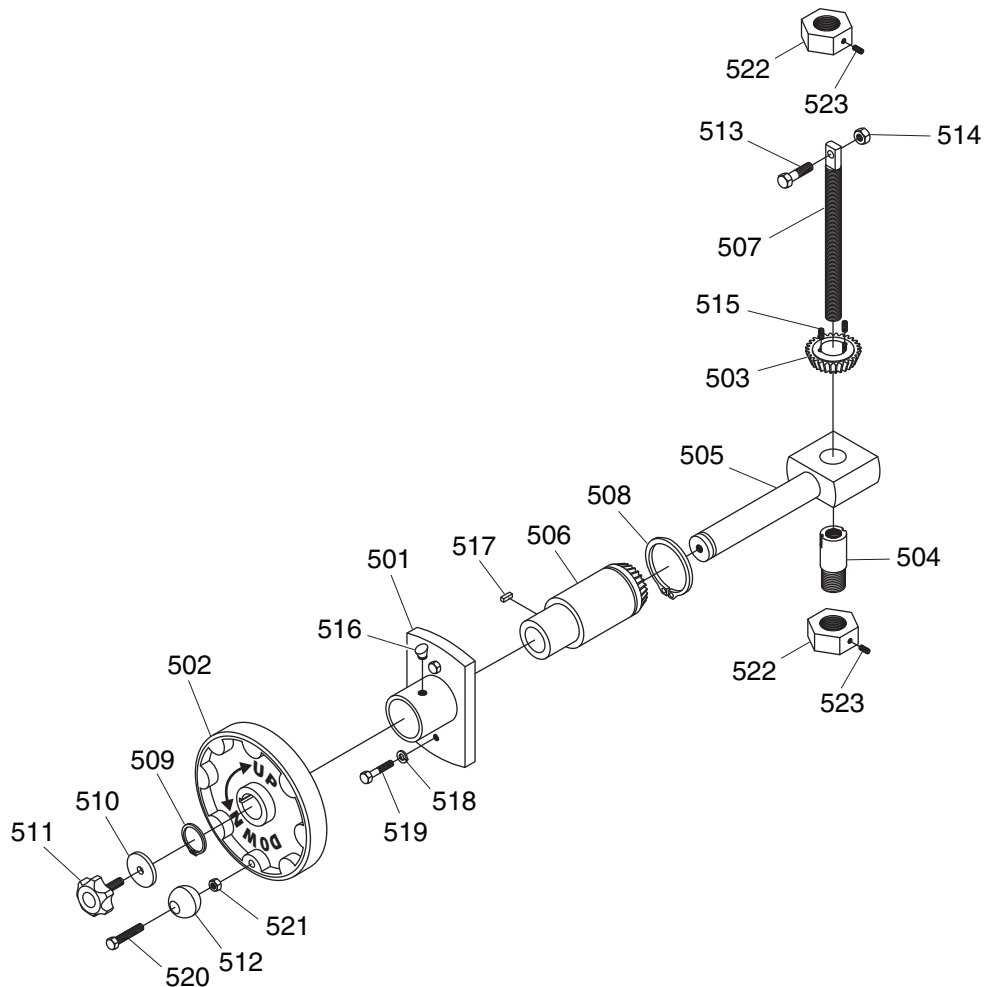
# G9953ZX/ZXF Table Parts List

REF	PART #	DESCRIPTION
7	P9953ZX007	OUTFEED TABLE REAR HOUSING
9	P9953ZX009	INFEED TABLE REAR HOUSING
10	P9953ZX010	FRONT TABLE COVER
11	P9953ZX011	FLAT WASHER 8MM
12	P9953ZX012	HEX BOLT M8-1.25 X 16
18	P9953ZX018	KNOB 3/8-16 X 1-1/2
41	P9953ZX041	BRAKE SWITCH
43	P9953ZX043	BRAKE PLATE
44	P9953ZX044	CAP SCREW M8-1.25 X 35
45	P9953ZX045	HEX NUT M8-1.25
46	P9953ZX046	BRAKE BRACKET
47	P9953ZX047	BRAKE PAD
48	P9953ZX048	PHLP HD SCR 10-24 X 1/2
49	P9953ZX049	FLAT WASHER #10
50	P9953ZX050	PHLP HD SCR 10-24 X 3/8
51	P9953ZX051	CAP SCREW M8-1.25 X 16
52	P9953ZX052	HEX NUT M4-.7
53	P9953ZX053	SET SCREW M4-.7 X 65
54	P9953ZX054	HEX BOLT M6-1 X 45
55	P9953ZX055	HEX NUT M6-1
56	P9953ZX056	TENSION SPRING
301	P9953ZX301	OUTFEED TABLE
302	P9953ZX302	NOISE DAMPER
303	P9953ZX303	COVER
304	P9953ZX304	TABLE PIVOT ROD (LONG)

REF	PART #	DESCRIPTION
305	P9953ZX305	SET SCREW M8-1.25 X 10
306	P9953ZX306	CAP SCREW M6-1 X 16
307	P9953ZX307	PHLP HD SCR M6-1 X 12
308	P9953ZX308	J-ROD (LONG)
309	P9953ZX309	TENSION SPRING
310	P9953ZX310	HEX NUT M12-1.75
311	P9953ZX311	FLAT WASHER 1/2
312	P9953ZX312	FLAT WASHER 3/8
313	P9953ZX313	INFEED TABLE
314	P9953ZX314	BED PIVOT PIN
315	P9953ZX315	CAP SCREW M10-1.5 X 45
316	P9953ZX316	J-ROD (SHORT)
317	P9953ZX317	TABLE PIVOT ROD (SHORT)
401	P9953ZX401	CUTTERHEAD GUARD
402	P9953ZX402	CAP SCREW M6-1 X 25
403	P9953ZX403	SPRING SHAFT HOUSING
404	P9953ZX404	SPRING SHAFT
405	P9953ZX405	CAP SCREW M12-1.75 X 20
801	P9953ZX801	HANDLE HUB
802	P9953ZX802	SHAFT
803	P9953ZX803	CAP SCREW M5-.8 X 15
804	P9953ZX804	HANDLE
805	P9953ZX805	HEX NUT 5/16"-24
806	P9953ZX806	FLAT WASHER 5MM
807	P9953ZX807	LOCK WASHER 5MM



# G9953ZX/ZXF Handwheel

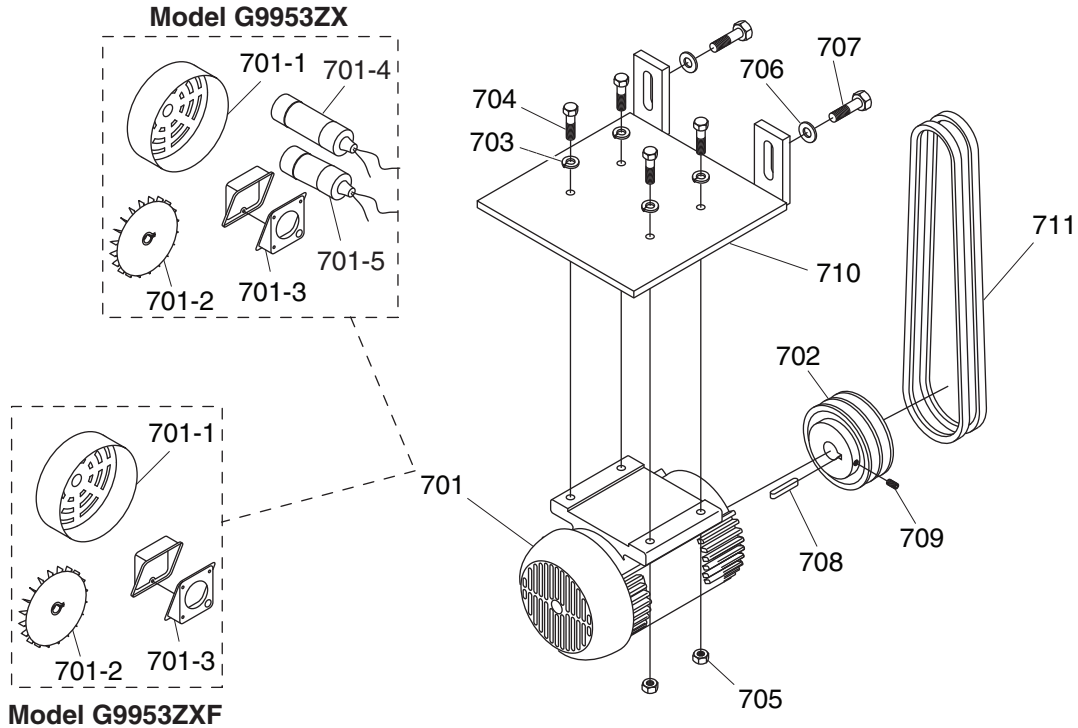


REF	PART #	DESCRIPTION
501	P9953ZX501	LIFT ROD BRACKET
502	P9953ZX502	HANDWHEEL
503	P9953ZX503	BEVEL GEAR
504	P9953ZX504	SLEEVE
505	P9953ZX505	LIFT ROD
506	P9953ZX506	GEAR SHAFT
507	P9953ZX507	LIFT CONNECTOR
508	P9953ZX508	SPECIAL EXT RETAINER RING
509	P9953ZX509	EXT RETAINING RING 22MM
510	P9953ZX510	SPECIAL FLAT WASHER D12 X 8MM
511	P9953ZX511	LOCK KNOB M10-1.5 X 20MM
512	P9953ZX512	HANDWHEEL KNOB 3/8"-16

REF	PART #	DESCRIPTION
513	P9953ZX513	CAP SCREW M10-1.5 X 40
514	P9953ZX514	HEX NUT M10-1.5
515	P9953ZX515	SET SCREW M4-.7 X 10
516	P9953ZX516	GREASE FITTING
517	P9953ZX517	KEY 5 X 5 X 15
518	P9953ZX518	LOCK WASHER 8MM
519	P9953ZX519	HEX BOLT M8-1.25 X 25
520	P9953ZX520	HEX BOLT 3/8-16 X 2
521	P9953ZX521	HEX NUT 3/8"-16
522	P9953ZX522	SPECIAL NUT M25-1.5
523	P9953ZX523	SET SCREW M6-1 X 6



# G9953ZX/ZXF Motor



## G9953ZX Motor Parts List

REF	PART #	DESCRIPTION
701	P9953ZX701	MOTOR 5 HP 220V 1PH
701-1	P9953ZX701-1	MOTOR FAN COVER
701-2	P9953ZX701-2	MOTOR FAN
701-3	P9953ZX701-3	MOTOR WIRING JUNCTION BOX
701-4	P9953ZX701-4	S CAP. 800MFD 250V 2-7/8 X 3-1/4
701-5	P9953ZX701-5	R CAP. 30M 350V 3 X 2
702	P9953ZX702	MOTOR PULLEY
703	P9953ZX703	LOCK WASHER 10MM

REF	PART #	DESCRIPTION
704	P9953ZX704	HEX BOLT M10-1.5 X 40
705	P9953ZX705	HEX NUT M10-1.5
706	P9953ZX706	FLAT WASHER 12MM
707	P9953ZX707	HEX BOLT M12-1.75 X 25
708	P9953ZX708	KEY 7 X 7 X 65
709	P9953ZX709	SET SCREW M8-1.25 X 20
710	P9953ZX710	MOTOR MOUNT PLATE
711	P9953ZX711	V-BELT A50

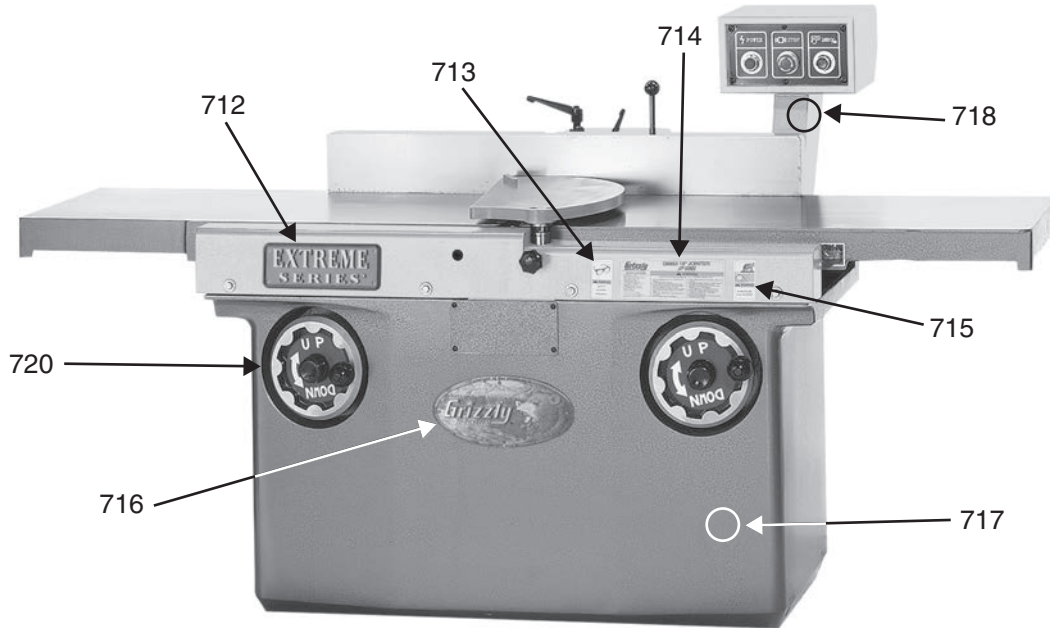
## G9953ZXF Motor Parts List

REF	PART #	DESCRIPTION
701	P9953ZXF701	MOTOR 5 HP 220V 3PH
701-1	P9953ZXF701-1	MOTOR FAN COVER
701-2	P9953ZXF701-2	MOTOR FAN
701-3	P9953ZXF701-3	MOTOR WIRING JUNCTION BOX
702	P9953ZXF702	MOTOR PULLEY
703	P9953ZXF703	LOCK WASHER 10MM
704	P9953ZXF704	HEX BOLT M10-1.5 X 40

REF	PART #	DESCRIPTION
705	P9953ZXF705	HEX NUT M10-1.5
706	P9953ZXF706	FLAT WASHER 12MM
707	P9953ZXF707	HEX BOLT M12-1.75 X 40
708	P9953ZXF708	KEY 7 X 7 X 65
709	P9953ZXF709	SET SCREW M8-1.25 X 20
710	P9953ZXF710	MOTOR MOUNT PLATE
711	P9953ZXF711	V-BELT A50



# Labels & Cosmetics



REF	PART #	DESCRIPTION
712	P9860712	EXTREME SERIES NAMEPLATE
713	P9860713	EYE HAZARD LABEL
714	P9860714	MACHINE ID LABEL (G9860)
714	P9860ZX714	MACHINE ID LABEL (G9860ZX)
714	P9953ZX714	MACHINE ID LABEL (G9953ZX)
714	P9953ZXF714	MACHINE ID LABEL (G9953ZXF)
715	P9860715	PUSH BLOCK WARNING
716	P9860716	GRIZZLY NAMEPLATE-LARGE

REF	PART #	DESCRIPTION
717	P9860717	GRIZZLY GREEN TOUCH-UP PAINT
718	P9860718	GRIZZLY PUTTY TOUCH-UP PAINT
719*	P9860719	MODEL NO. LABEL (G9860)
719*	P9860ZX719	MODEL NO. LABEL (G9860ZX)
719*	P9953ZX719	MODEL NO. LABEL (G9953ZX)
719*	P9953ZXF719	MODEL NO. LABEL (G9953ZXF)
720	P9860720	HANDWHEEL UP/DOWN LABEL

\* Not Shown

## WARNING

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



# WARRANTY & RETURNS

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

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

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

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

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

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

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



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