

Grizzly ***Industrial, Inc.***®

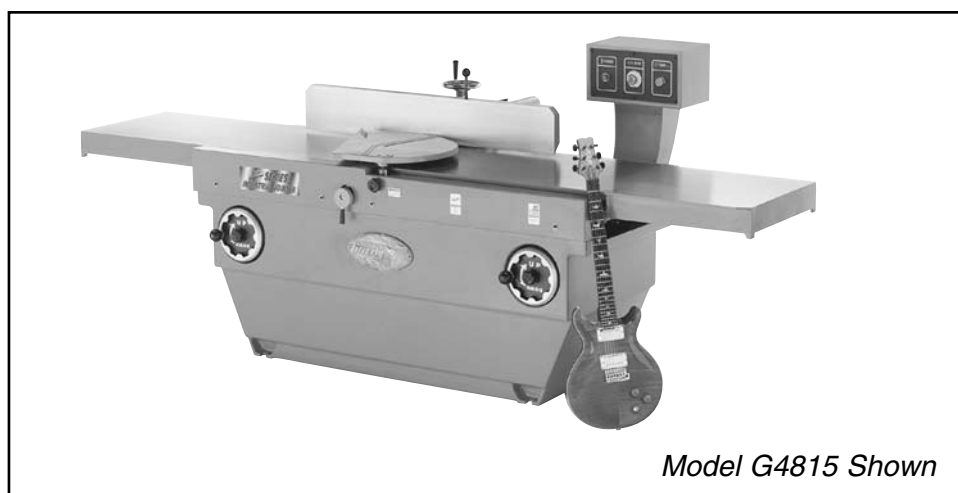
ULTIMATE SERIES JOINTERS

MODELS G9953/G9953ZX/G9953ZXF/G4815

INSTRUCTION MANUAL



Model G9953 Shown



Model G4815 Shown

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ONLINE MANUAL DISCLAIMER

THE INFORMATION IN THIS MANUAL REPRESENTS THE CONFIGURATION OF THE MACHINE AS IT IS CURRENTLY BEING SHIPPED. THE MACHINE CONFIGURATION CAN CHANGE AS PRODUCT IMPROVEMENTS ARE INCORPORATED. IF YOU OWN AN EARLIER VERSION OF THE MACHINE, THIS MANUAL MAY NOT EXACTLY DEPICT YOUR MACHINE. CONTACT CUSTOMER SERVICE IF YOU HAVE ANY QUESTIONS ABOUT DIFFERENCES. PREVIOUS VERSIONS ARE NOT AVAILABLE ONLINE.

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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SECTION 1: SAFETY

WARNING

For Your Own Safety Read Instruction Manual Before Operating This Equipment

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



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

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

WARNING

Safety Instructions For Power Tools

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form a habit of checking to see that keys and adjusting wrenches are removed from tool before turning on.
3. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **NEVER USE IN DANGEROUS ENVIRONMENT.** DO NOT use power tools in damp or wet locations, or where any flammable or noxious fumes may exist. Keep work area well lighted.
5. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept at a safe distance from work area.
6. **MAKE WORKSHOP CHILD PROOF** with padlocks, master switches, or by removing starter keys.
7. **NEVER FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
8. **USE RIGHT TOOL.** DO NOT force tool or attachment to do a job for which it was not designed.

WARNING

Safety Instructions For Power Tools

- 9. USE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. Conductor size should be in accordance with the chart below. The amperage rating should be listed on the motor or tool nameplate. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Your extension cord must also contain a ground wire and plug pin. Always repair or replace extension cords if they become damaged.

Minimum Gauge for Extension Cords

AMP RATING	LENGTH		
	25ft	50ft	100ft
0-6	16	16	16
7-10	16	16	14
11-12	16	16	14
13-16	14	12	12
17-20	12	12	10
21-30	10	10	No

- 10. WEAR PROPER APPAREL.** DO NOT wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
- 11. ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
- 12. SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.
- 13. DO NOT OVER-REACH.** Keep proper footing and balance at all times.
- 14. MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

- 15. USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury.
- 16. REDUCE THE RISK OF UNINTENTIONAL STARTING.** On machines with magnetic contact starting switches there is a risk of starting if the machine is bumped or jarred. Always disconnect from power source before adjusting or servicing. Make sure switch is in OFF position before reconnecting.
- 17. CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
- 18. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** DO NOT leave tool until it comes to a complete stop.
- 19. NEVER OPERATE A MACHINE WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Full mental alertness is required at all times when running a machine.
- 20. NEVER ALLOW UNSUPERVISED OR UNTRAINED PERSONNEL TO OPERATE THE MACHINE.** Make sure any instructions you give in regards to machine operation are approved, correct, safe, and clearly understood.
- 21. IF AT ANY TIME YOU ARE EXPERIENCING DIFFICULTIES** performing the intended operation, stop using the machine! Then contact our service department or ask a qualified expert how the operation should be performed.

WARNING

Additional Safety Instructions For Jointers

1. **JOINTING SAFETY BEGINS** with your lumber. Inspect your stock carefully before you feed it over the cutterhead. If you have any doubts about the stability or structural integrity of your stock, **DO NOT JOINT IT!**
2. **MAINTAIN PROPER RELATIONSHIPS** of infeed and outfeed table surfaces and cutterhead knife path.
3. **ALWAYS USE A PUSH BLOCK** when jointing. Never place your hands directly over the cutterhead.
4. **SUPPORT THE WORKPIECE** adequately at all times during operation, and maintain control over the work at all times.
5. **WHEN JOINTING**, DO NOT stand directly at the end of either table. Position yourself just to the side of the infeed table to protect yourself from possible kickbacks.
6. **NEVER MAKE JOINTING CUTS** deeper than $\frac{1}{8}$ ".
7. **NEVER JOINT A BOARD** that has loose knots. All defects should be cut out of the board before it is planed or jointed.
8. **NEVER JOINT** end grain.
9. **JOINT WITH THE GRAIN.** Jointing against the grain is dangerous and could produce chatter or excessive chip out, which could lead to loss of control over the workpiece.
10. **WITH THE EXCEPTION OF RABBETING**, all operations must be performed with the guard in place. After rabbeting, be sure to replace the guard.
11. **NEVER BACK THE WORK** toward the infeed table. If a cut must be interrupted, lift the workpiece clear of the cutterhead.
12. **HABITS — GOOD AND BAD** — are hard to break. Develop good habits in your shop and safety will become second-nature to you.
13. **"KICKBACK"** is when the workpiece is thrown off the jointer table by the force of the cutterheads. Always use pushblocks and safety glasses to reduce the likelihood of injury from "kickback." If you do not understand what kickback is, or how it occurs, **DO NOT** operate this machine.
14. **PROLONGED EXPOSURE TO WOOD DUST IS KNOWN TO CAUSE CANCER IN HUMANS.** Always wear an OSHA-approved respirator when working in an environment that could contain wood dust.

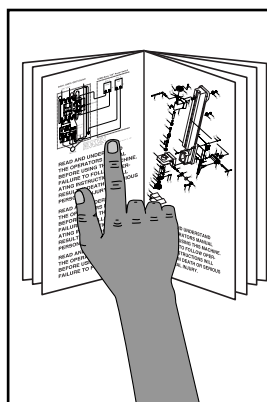
CAUTION

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.

WARNING

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

SECTION 2: INTRODUCTION



WARNING

Lack of familiarity with this manual could cause serious personal injury. Become familiar with the contents of this manual, including all the safety warnings.

We are proud to offer the Model G9953 16" Ultimate Series Jointers and the Model G4815 20" Ultimate Series Jointer. These jointers are part of a growing Grizzly family of fine woodworking machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

The main differences in the models are shown in the chart below. All three machines are built to withstand the rigors of heavy-duty production use. For more complete information about each machine, see *Section 9: Reference Info*.

We are pleased to provide this manual with the Model G9953 16" Ultimate Series Jointers and the Model G4815 20" Ultimate Series Jointer. It was written to guide you through assembly, review safety considerations, and cover general operating procedures. It represents our effort to produce the best documentation possible.

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

Grizzly Industrial, Inc.
c/o Technical Documentation
P.O. Box 2069
Bellingham, WA 98227-2069

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

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com
Web Site: <http://www.grizzly.com>

The specifications, drawings, and photographs illustrated in this manual represent the Model G9953 16" Ultimate Series Jointers and the Model G4815 20" Ultimate Series Jointer as supplied when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly. Current Grizzly machine manuals can be viewed and printed at: www.grizzly.com.



Description	G9953	G9953ZX	G9953ZXF	G4815
Motor Size	5 HP	5 HP	5 HP	7½ HP
Motor Phase	Single	Single	Three	Three
Cutterhead	4 Knife	Spiral Cutterhead	Spiral Cutterhead	Spiral Cutterhead

SECTION 3: CIRCUIT REQUIREMENTS

Model G9953/G9953ZX

Voltage & Amperage Draw

The Model G9953/G9953ZX features a 5 HP motor and is wired to operate on a single-phase, 220V circuit. The motor will draw the following load:

Motor Load28 Amps

Plug Type

The cord set enclosed does not have a plug as the style of plug you require will depend on the type of service you currently have or plan to install. We recommend using the following plugs for your machine on a dedicated circuit only (see **Figure 1** for an example).

Recommended Plug6-30 or L6-30

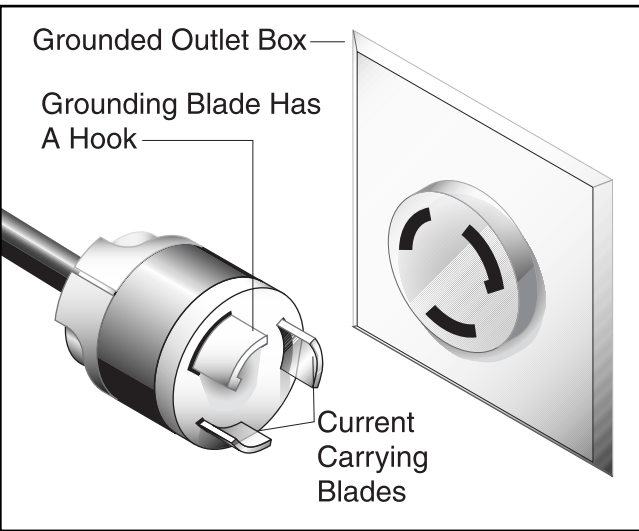


Figure 1. NEMA-style L6-20 plug and outlet.

Circuit Breaker Requirements

Use the following guidelines when choosing a circuit breaker (circuit breakers rated any higher are not adequate to protect the circuit):

Circuit Breaker30 Amp, 2 Pole

Your Circuit Capacity

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

If the circuit breaker trips or the fuse blows regularly, your machine may be operating on a circuit that is close to its amperage draw capacity. However, if an unusual amperage draw does not exist and a power failure still occurs, contact a qualified electrician or our service department at (570) 546-9663.

!WARNING

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



Model G9953ZXF

Voltage & Amperage Draw

The Model G9953ZXF features a 5 HP motor and is wired to operate on a 3-phase, 220V circuit. The motor will draw the following load:

Motor Load14 Amps

Plug Type

The cord set enclosed does not have a plug as the style of plug you require will depend on the type of service you currently have or plan to install. We recommend using the following plugs for your machine on a dedicated circuit only (see **Figure 2** for an example).

Recommended PlugL15-20

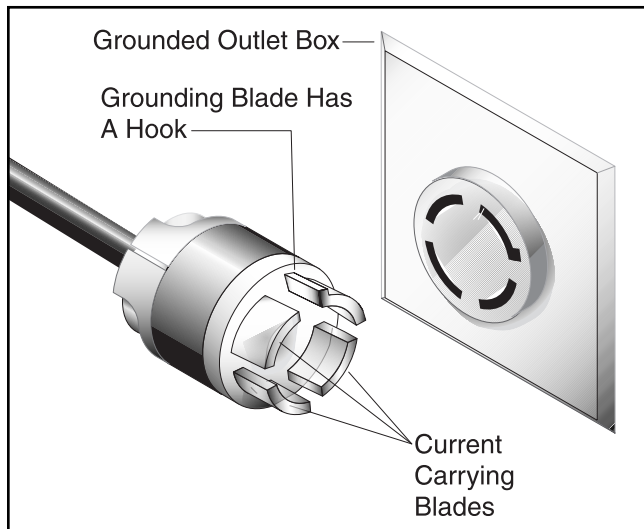


Figure 2. NEMA-style L15-20 plug and outlet.

Circuit Breaker Requirements

Use the following guidelines when choosing a circuit breaker (circuit breakers rated any higher are not adequate to protect the circuit):

Circuit Breaker15 Amp, 3 Pole

Your Circuit Capacity

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

If the circuit breaker trips or the fuse blows regularly, your machine may be operating on a circuit that is close to its amperage draw capacity. However, if an unusual amperage draw does not exist and a power failure still occurs, contact a qualified electrician or our service department (570) 546-9663.

!WARNING

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



Model G4815

Voltage & Amperage Draw

The Model G4815 features a 7½ HP motor and is wired to operate on a 3-phase, 220V circuit. The motor will draw the following load:

Motor Load20 Amps

Plug Type

The cord set enclosed does not have a plug as the style of plug you require will depend on the type of service you currently have or plan to install. We recommend using the following plugs for your machine on a dedicated circuit only (see **Figure 3** for an example).

Recommended PlugL15-30

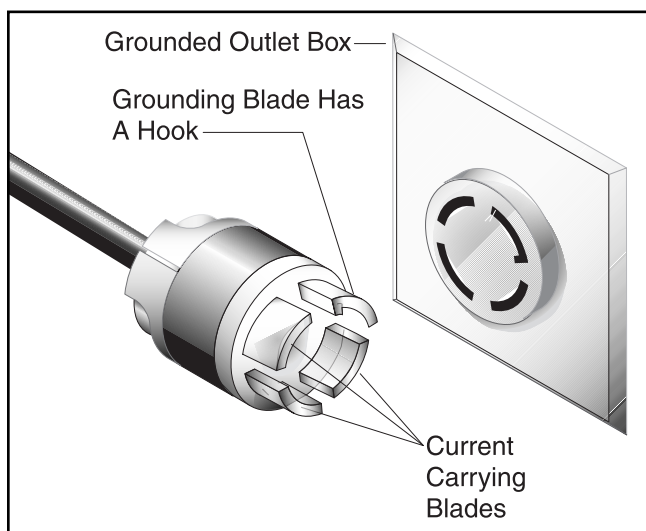


Figure 3. NEMA-style L15-30 plug and outlet.

Circuit Breaker Requirements

Use the following guidelines when choosing a circuit breaker (circuit breakers rated any higher are not adequate to protect the circuit):

Recommended Circuit Breaker ..25 Amp, 3 Pole

Your Circuit Capacity

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

If the circuit breaker trips or the fuse blows regularly, your machine may be operating on a circuit that is close to its amperage draw capacity. However, if an unusual amperage draw does not exist and a power failure still occurs, contact a qualified electrician or our service department (570) 546-9663.

!WARNING

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



Minimum Cord Size

For 220V single-phase operation, use the following power cord:

G9953Z/G9953ZX—220V, Single-Phase

Cord2 Pole, 3 Wire

Gauge10

For 220V 3-phase operation, use the following power cord:

G9953ZXF—220V, 3-Phase

Cord3 Pole, 4 Wire

Gauge10


G4815—220V, 3-Phase

Cord3 Pole, 4 Wire

Gauge10



Grounding



! WARNING

Electrocution or a fire can result if the machine is not grounded correctly. Make sure all electrical circuits are grounded. **DO NOT** use the machine if it is not grounded.

In the event of an electrical short, grounding reduces the risk of electric shock by providing a path of least resistance to disperse electric current. This machine is equipped with a power cord that has an equipment-grounding prong. The outlet must be properly installed and grounded in accordance with all local codes and ordinances.



Extension Cords

We do not recommend the use of extension cords with 220V single or 3-phase equipment. Instead, arrange the placement of your equipment and the installed wiring to eliminate the need for extension cords.



! CAUTION

No single list of electrical guidelines can be comprehensive for all shop environments. Operating this machinery may require additional electrical upgrades specific to your machine and shop environment. It is your responsibility to make sure your electrical systems comply with all local electrical codes and ordinances.

Rewire To 440V (G9953ZXF Only)

To rewire the Model G9953ZXF to 440V:

1. Disconnect the sander from the power source!
2. Replace the power indicator light in the pedestal switch to one suitable for 440V operation
3. Remove the RHN-18 overload relay and replace it with a RHN-10 (5.5-8.5A) type, with the dial set to 7A (Figure 4).

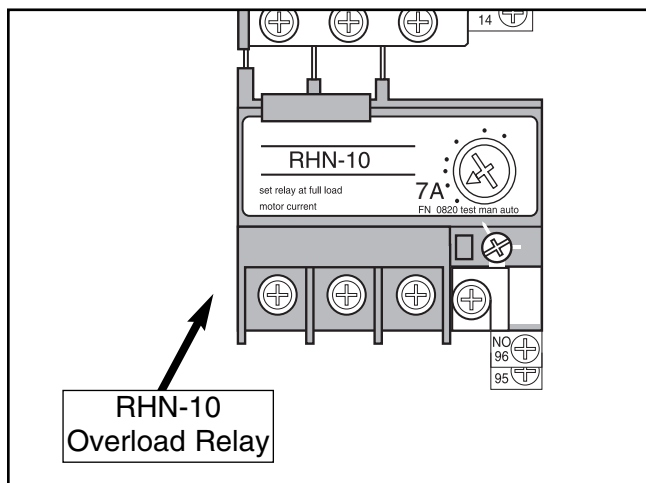


Figure 4. Overload relays.

4. Remove the CN-18 magnetic contact overload relay and replace it with a CN-11 type (Figure 5).

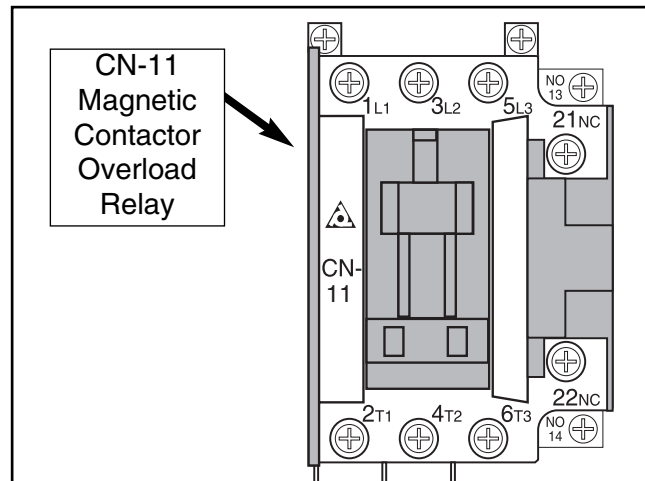


Figure 5. Overload relays.

5. Wire the motor as shown on the diagram on the inside of the motor wire cover. Note—The circled references on the diagrams represent labels on the wires. Also, Figure 6 below has been provided for your reference and are current at the time that this manual is being written. However, always use the diagram on the wire cover that comes with your motor!

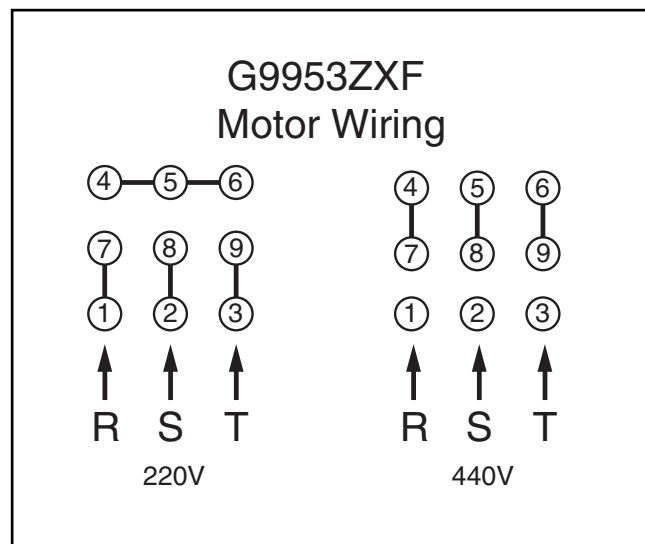


Figure 6. 440V motor wiring.



Rewire To 440V (G4815 Only)

To rewire the Model G4815 to 440V:

1. Disconnect the sander from the power source!
2. Replace the power indicator light in the pedestal switch to one suitable for 440V operation
3. Remove the RHN-18 overload relay and replace it with a RHN-10 (8.5-12.5A) type, set to 10A (Figure 7).

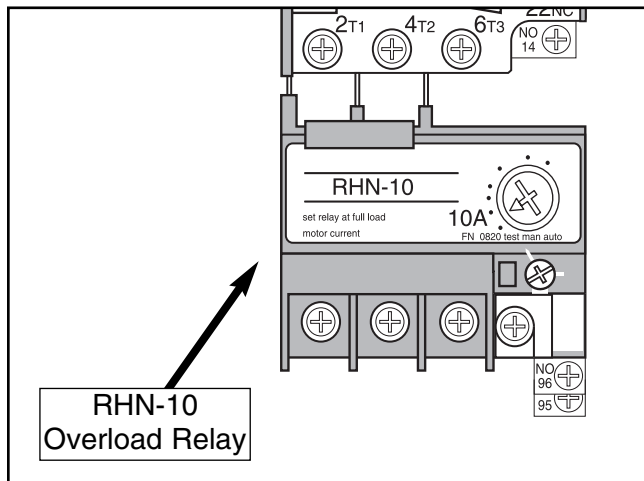


Figure 7. Overload relay.

4. Remove the CN-18 magnetic contact overload relay and replace it with a CN-16 type (Figure 8).

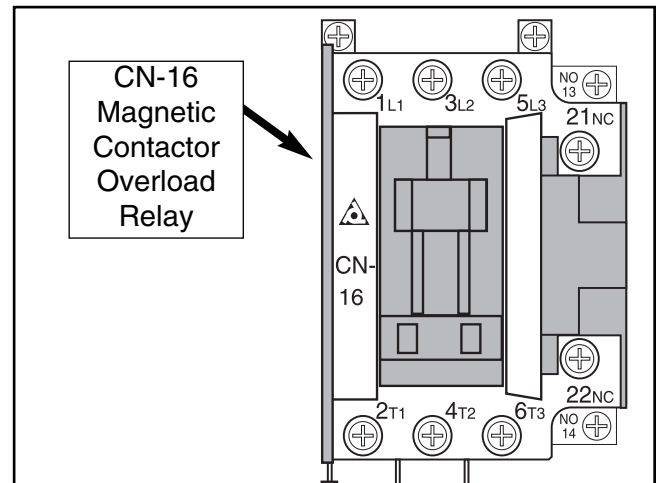


Figure 8. Overload relay.

5. Wire the motor as shown on the diagram on the inside of the motor wire cover. Note—The circled references on the diagrams represent labels on the wires. Also, Figure 9 below has been provided for your reference and are current at the time that this manual is being written. However, always use the diagram on the wire cover that comes with your motor!

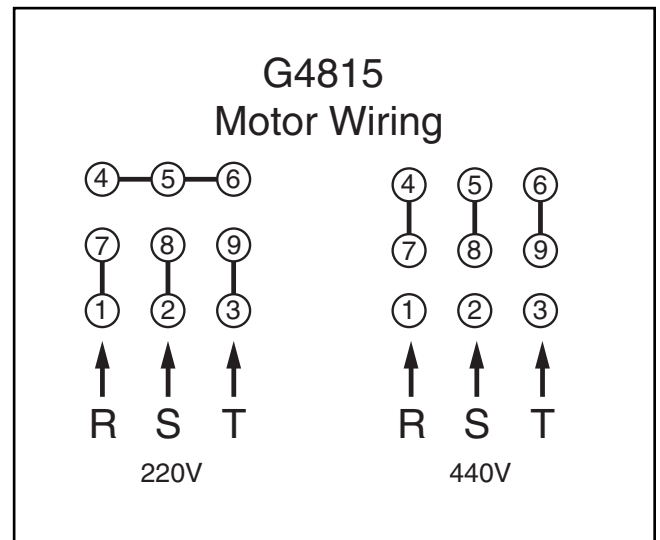
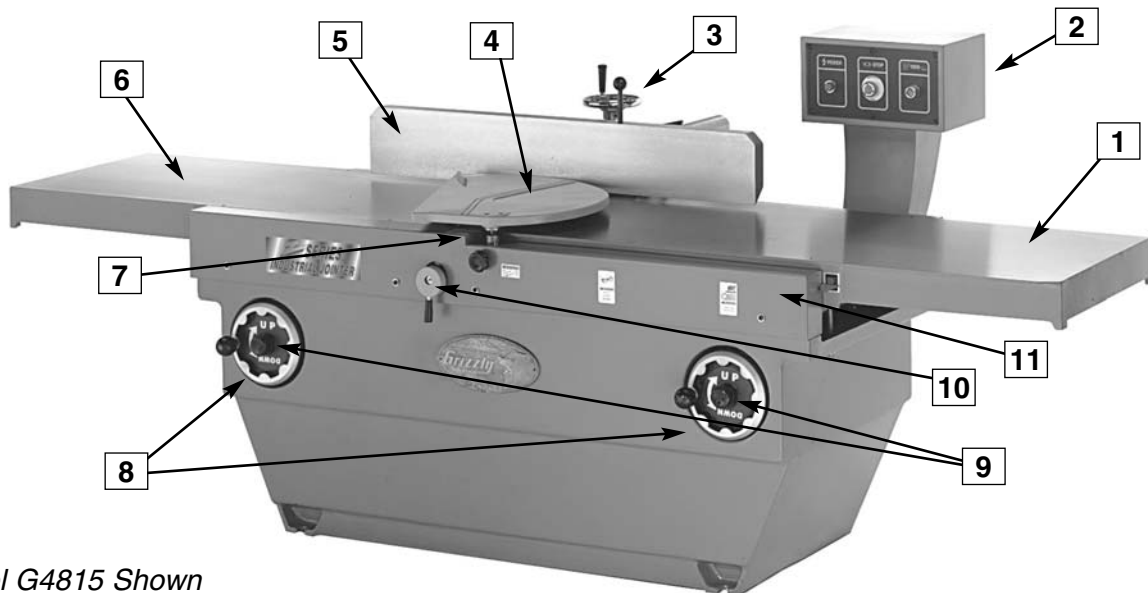


Figure 9. 440V motor wiring.



SECTION 4: MAIN COMPONENTS

1. **Infeed Table:** Facing the front of the jointer, the infeed table is located to the right of the cutterhead. The infeed table is where the workpiece is placed at the beginning of the cutting operation. The wood travels right to left; from the infeed table, across the cutterhead, and onto the outfeed table.
2. **Pedestal Switch:** Location of the power indicator light, the *START* button, and the *EMERGENCY STOP* button.
3. **Fence Adjustment Handwheel:** Controls the back-and-forth location of the fence across the top of the tables.
4. **Cutterhead Guard:** Orange, spring-loaded safety cover that retracts over the cutterhead when the workpiece is NOT passing over the jointer.
5. **Fence:** Surface the workpiece guides along when jointing or surface planing. The fence can be positioned 45° and 90° to the surface of the tables to accommodate either bevel or right-angle jointing operations.
6. **Outfeed Table:** Facing the front of the jointer, the outfeed table is located to the left of the cutterhead. The outfeed table is where the workpiece is lifted from the jointer after the cutting operation is complete. The wood travels right to left; from the infeed table, across the cutterhead, and onto the outfeed table.
7. **Cutterhead:** The cutterhead is the cylindrical assembly that holds each of the three jointer knives or indexable carbide cutters. It spins on a horizontal axis between the infeed and outfeed table, and is covered by the cutterhead guard when the jointer is not in use.
8. **Table Height Handwheels:** Controls the height positioning of the infeed and outfeed tables in relation to the cutterhead.
9. **Table Height Lock Knobs:** Knobs that tighten to prevent accidental rotation of the table height handwheels.
10. **Stop Lever:** Shuts off the power source to the jointer and slows the cutterhead to a stop.
11. **Cam Adjustment (Behind Cover):** The infeed table is fully adjustable with 4 cams to allow perfect alignment with the outfeed table.



Model G4815 Shown

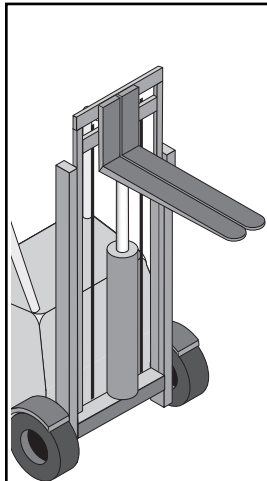
SECTION 5: SET UP

Unpacking

NOTICE

The photos shown in this manual are of the Model G4815 unless otherwise noted.

The Model G9953 16" Ultimate Series Jointers and the Model G4815 20" Ultimate Series Jointer are shipped from the manufacturer in a carefully packaged crate. If there are any signs of crate damage after you have signed for delivery, immediately call our customer service for advice.



WARNING

The Ultimate Series Jointers are heavy machines. DO NOT over-exert yourself while unpacking or moving your machine — you will need assistance and power equipment. Serious personal injury may occur if safe moving methods are not followed.



CAUTION

Sharp edges on metal parts may cause personal injury. Examine the edges of all metal parts before handling.



Parts Inventory

Models G9953ZX, G9953ZXF, & G4815:	Qty
• Fence Assembly	1
• Air Pressure Gauge	1
• Air Pressure Regulator	1
• Push Blocks	2
• Air Wrench	1
• T-20 Torx® Screwdriver	5
• Extra Carbide Cutters - 14 x 14 x 2mm	10
• T-Handle For Torx® Bits	1
• Hardware Bag Contents:	
—Regulator Mounting Bracket	1
—Air Quick Disconnect	1
—Phillips Head Bits	2
—T-20 Torx® Bits	15
—Cap Screws M6-1.0 x 14	30

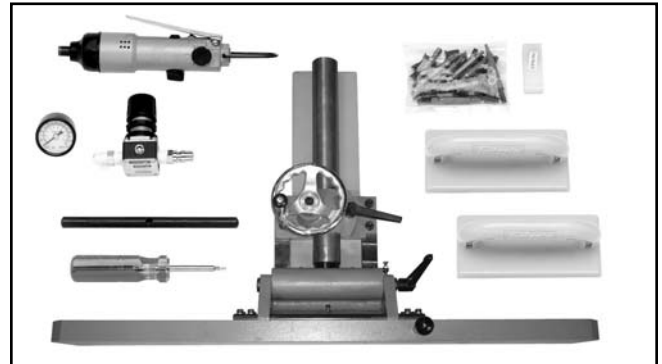


Figure 10. Spiral Cutterhead Accessories.

Model G9953:	Qty
• Fence Assembly	1
• Push Blocks	2
• Allen Wrench Set	1
• Knife Setting Gauge	1
• Open End Wrench	1

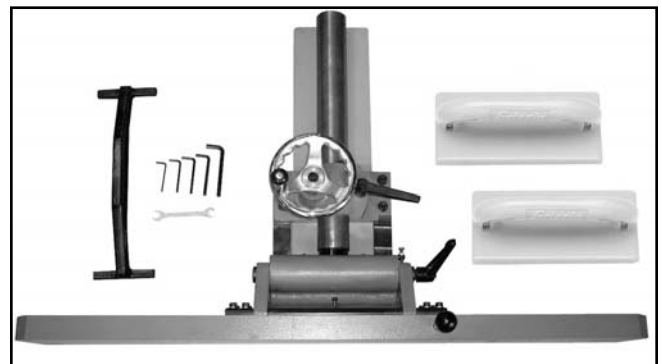


Figure 11. Model G9953 accessories.

Hardware Recognition Chart

USE THIS CHART TO MATCH UP
HARDWARE DURING THE ASSEMBLY
PROCESS!

MEASURE BOLT DIAMETER BY PLACING INSIDE CIRCLE

#10

1/4"

5/16"

3/8"

7/16"

1/2"

5/8"

4mm

6mm

8mm

10mm

12mm

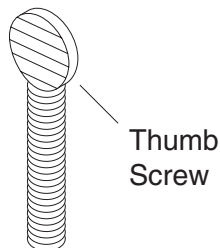
16mm

LINES ARE 1MM APART

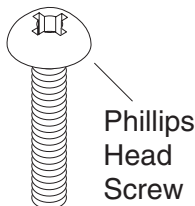
5mm
10mm
15mm
20mm
25mm
30mm
35mm
40mm
45mm
50mm
55mm
60mm
65mm
70mm
75mm

LINES ARE 1/16" INCH APART

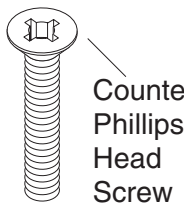
1/4"
3/8"
1/2"
5/8"
5/16"
7/16"
9/16"
3/4"
7/8"
1"
1 1/4"
1 1/2"
1 3/4"
2
2 1/4"
2 1/2"
2 3/4"
3



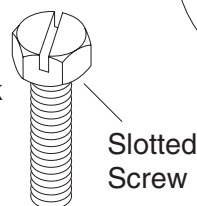
Thumb
Screw



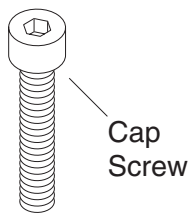
Phillips
Head
Screw



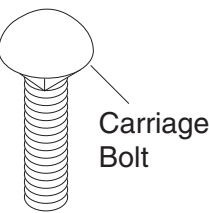
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Phillips
Head
Screw



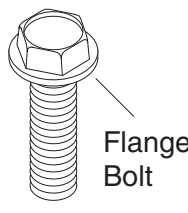
Slotted
Screw



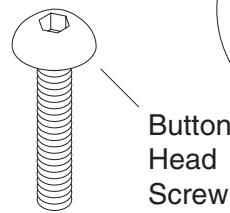
Cap
Screw



Carriage
Bolt



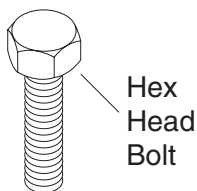
Flange
Bolt



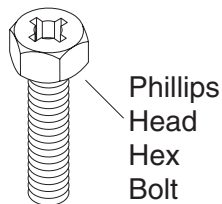
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Head
Screw



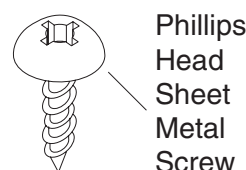
Setscrew



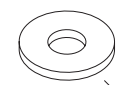
Hex
Head
Bolt



Phillips
Head
Hex
Bolt



Phillips
Head
Sheet
Metal
Screw



Washer

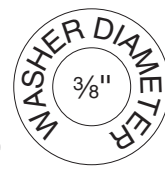
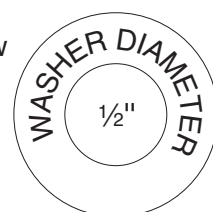
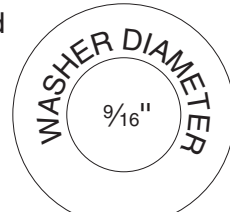
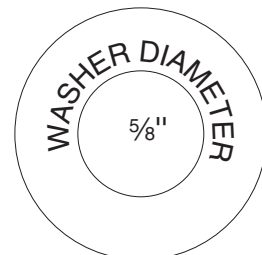
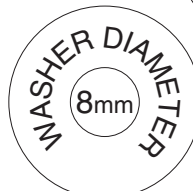
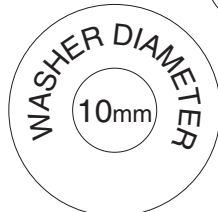
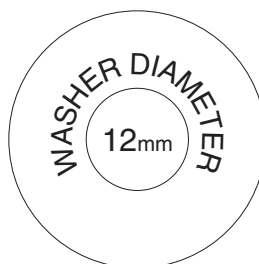


Lock
Washer



Hex
Nut



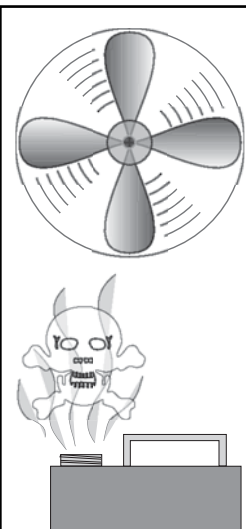
WASHERS ARE MEASURED BY THE INSIDE DIAMETER



#10

Clean Up

Unpainted surfaces may be coated with a waxy oil to protect them from corrosion during shipment. Remove this waxy oil with a solvent cleaner or citrus-based degreaser such as Grizzly's G7895 Degreaser. To clean thoroughly, some parts may need to be removed. **The machine will operate best when the waxy oil is removed from all moving and sliding parts.** Chlorine-based cleaners and solvents will damage the painted surfaces of the machine. Follow the manufacturer's instructions when using any type of cleaning product.

	!WARNING Gasoline and petroleum products have low flash points and could explode if used to clean machinery. DO NOT use gasoline or petroleum products to clean the machinery.
	!WARNING Smoking near solvents could ignite an explosion or fire and cause serious injury. DO NOT smoke while using solvents.
	!WARNING Lack of ventilation while using solvents could cause serious personal health risks, fire, or environmental hazards. Always work in a well ventilated area to prevent the accumulation of dangerous fumes. Supply the work area with a constant source of fresh air.



Site Considerations

Weight Load

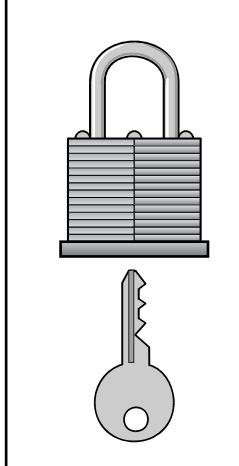
The Model G9953 16" Ultimate Series Jointers and the Model G4815 20" Ultimate Series Jointer represent a large weight load. Most shop floors should be sufficient to carry the weight of the machine. Reinforce the floor if you question its ability to support the weight.

Working Clearance

Working clearances can be thought of as the distances between machines and obstacles that allow safe operation of every machine without limitation. Consider existing and anticipated machine needs, size of material to be processed through each machine, and space for auxiliary stands and/or work tables. Also consider the relative position of each machine to one another for efficient material handling.

Lighting And Outlets

Lighting should be bright enough to eliminate shadow and prevent eye strain. Electrical circuits should be dedicated or large enough to handle the amperage draw. Outlets should be located near each machine so power or extension cords are clear of high-traffic areas. Observe local electrical codes for proper installation of new lighting, outlets, or circuits.

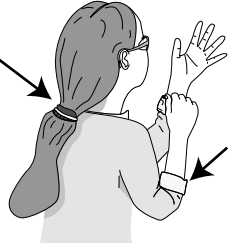
	!WARNING Unsupervised children and visitors inside your shop could receive serious personal injury. Ensure child and visitor safety by keeping all entrances to the shop locked at all times. DO NOT allow unsupervised children or visitors in the shop at any time.
--	--

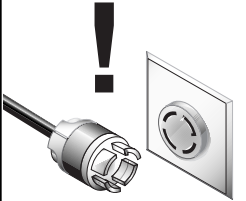



Beginning Assembly

This section will cover the basic assembly and adjustment instructions needed to begin operation. Complete the assembly in the order provided in this manual and then read the remaining portion of the manual before attempting any type of operation.

Your safety is important! Please follow the warnings below during this entire section:


	<p>! WARNING</p> <p>Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing rolled up and long hair tied up and away from machinery.</p>
---	--

	<p>! WARNING</p> <p>Serious personal injury could occur if you connect your machine to the power source before you have completed the assembly process. DO NOT connect the machine to the power source until instructed to do so.</p>
---	---

	<p>! CAUTION</p> <p>Sharp edges on metal parts may cause personal injury. Examine the edges of all metal parts before handling.</p>
---	--



Fence

	<p>! CAUTION</p> <p>The fence assembly is a heavy part. Seek assistance when lifting it onto the fence base support.</p>
--	---

<p>NOTICE</p> <p>The fence can easily scratch the table surface of the jointer. Use extreme care when making adjustments to the fence assembly</p>

To install the fence assembly:

1. Carefully lift the fence assembly onto the fence base support. Note—*Avoid letting the fence slide across the jointer tables as scratching will occur.*
2. Attach the fence assembly to the jointer assembly with (6) M8-1.25 x 45 cap screws and (6) M8 lock washers (**Figure 12**).

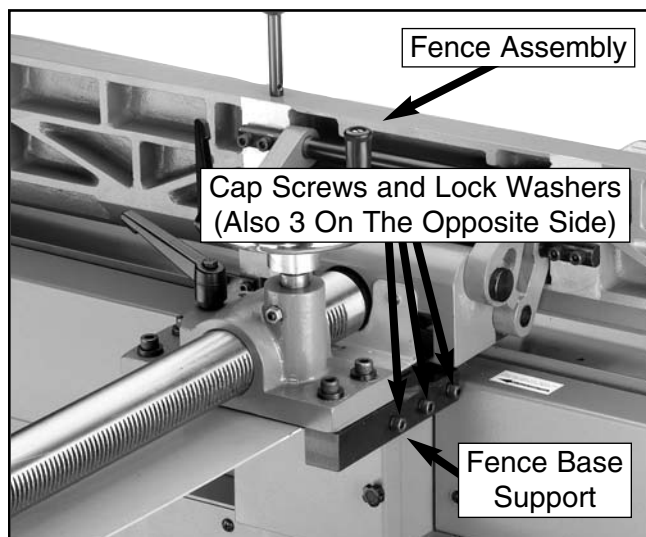


Figure 12. Fence assembly installed.



Pedestal Switch

To mount the pedestal switch:

Attach the pedestal switch (**Figure 13**) to the back of the base with (4) M10-1.5 x 25 cap screws and (4) M10 flat washers.

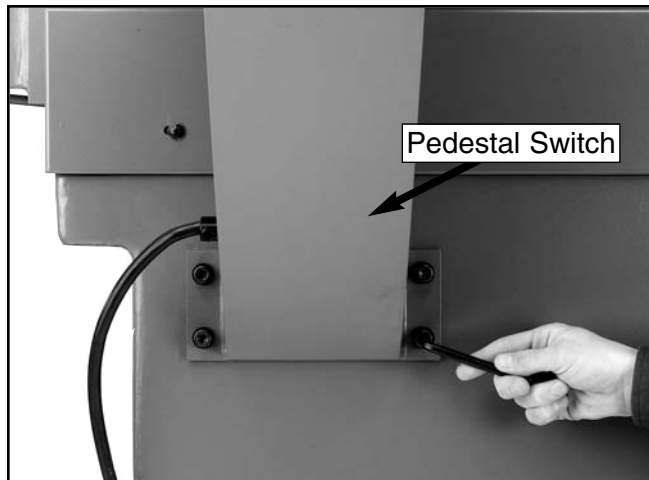


Figure 13. Attaching pedestal switch.



Dust Collection

To attach dust collection hose to the dust port:

Attach a 5" hose from your dust collection system to the dust port (**Figure 14**).

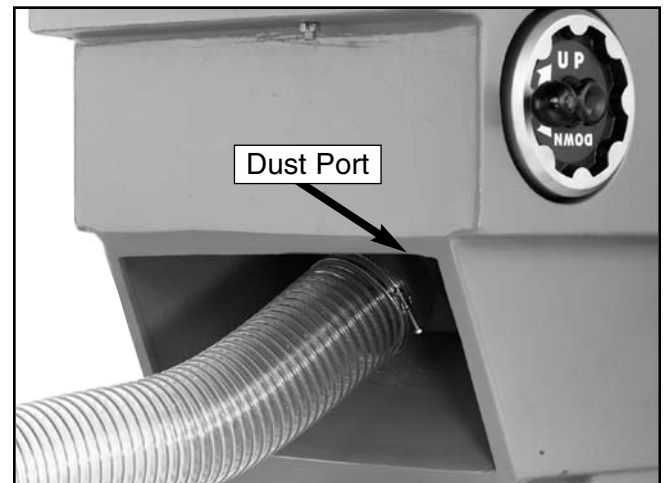


Figure 14. Dust collection hook-up.



NOTICE

The remaining instructions in this section cover factory settings which should already be adjusted correctly; however, we recommend checking the settings to be sure they were not bumped out of adjustment during the shipping process. If it is determined that a setting is out of correct adjustment, please refer to *Section 8: Service Adjustments*.

Knife To Outfeed Table Alignment

(Model G9953 Only)

The outfeed table must be perfectly level with the full length of each cutterhead knife.

To verify the factory setting:

1. **Unplug the machine from the power source!**
2. Open the access door (**Figure 15**) on the back of the machine, just below the fence adjustments.

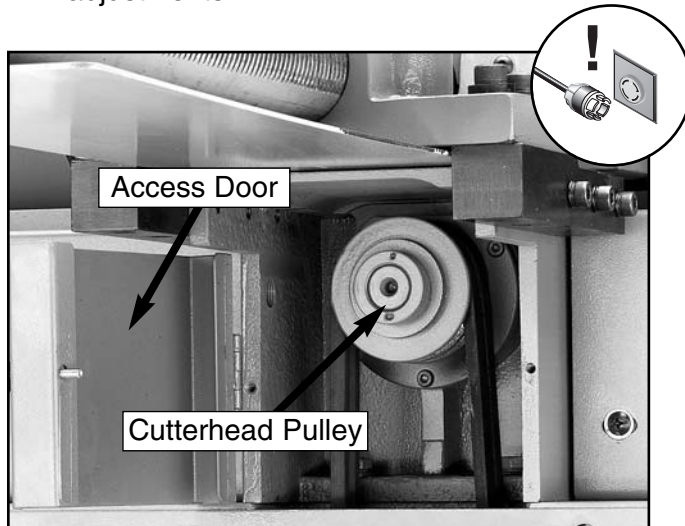


Figure 15. Accessing the cutterhead pulley.

3. Position the knife setting gauge on the outfeed table so that it extends over the cutterhead (**Figure 16**).

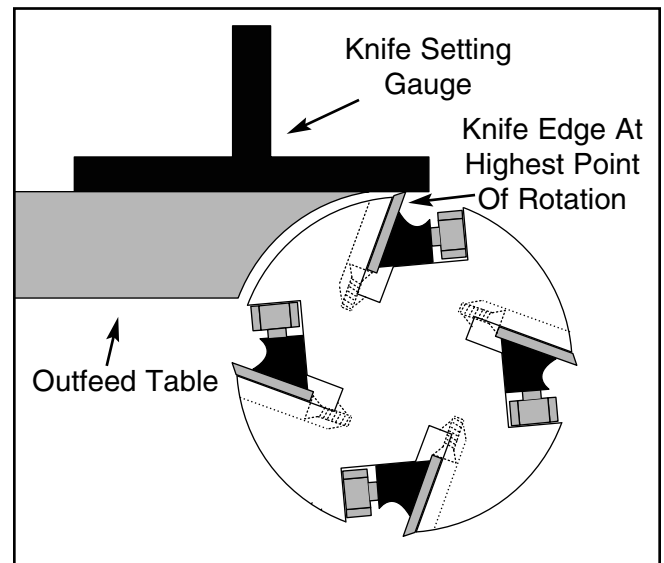


Figure 16. Checking knife height with the knife setting gauge.

4. Rotate the cutterhead by turning the cutterhead pulley (**Figure 15**).
5. Watch as each knife passes under the knife setting gauge. The full length of each knife should just touch the knife setting gauge **WITHOUT** lifting the gauge off the outfeed table. If this condition is not present, refer to *Section 8: Service Adjustments*.



Carbide Cutter To Outfeed Table Alignment

(Models G9953ZX, G9953ZXF and G4815)

The outfeed table must be perfectly level with the carbide cutters. Note—*You only need to verify the outfeed table height with one of the carbide cutters.*

To verify the factory setting:

1. **Unplug the machine from the power source!**
2. Open the access door (**Figure 17**) on the back of the machine, just below the fence adjustments .

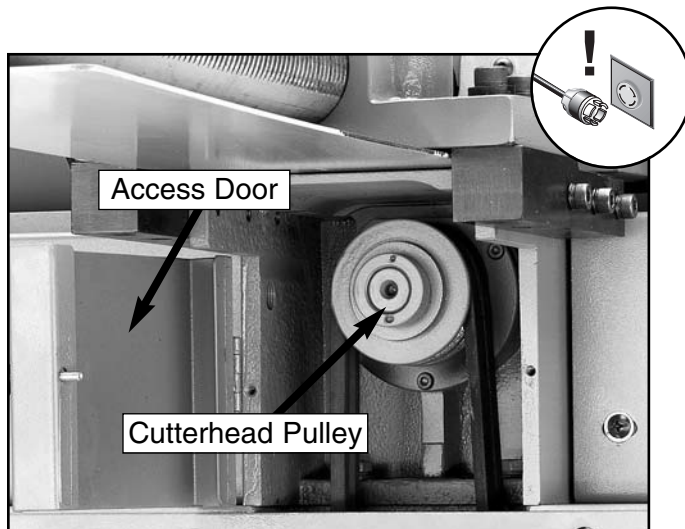


Figure 17. Accessing the cutterhead pulley.

3. Position the edge of a straightedge on the outfeed table so that it extends over the cutterhead (**Figure 18**).

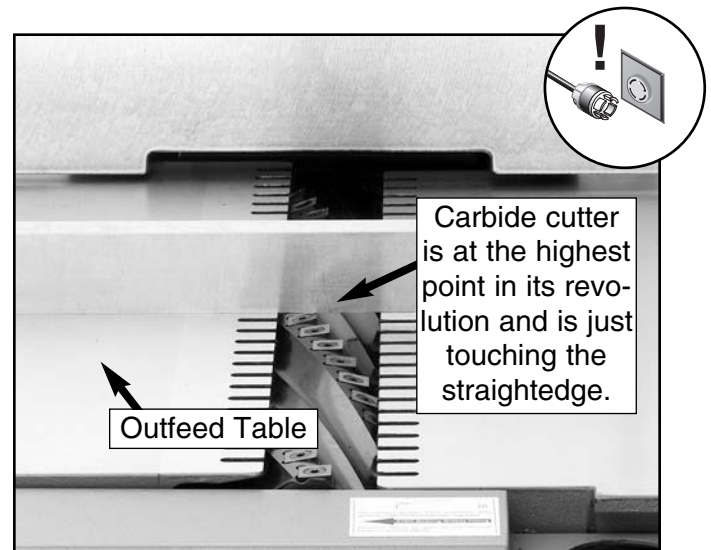


Figure 18. Verifying outfeed table height with straightedge.

4. Rotate the cutterhead by turning the cutterhead pulley (**Figure 17**).
5. Watch as one of the carbide cutters passes under the straightedge. The carbide cutter should just touch the straightedge **WITHOUT** lifting the it off the outfeed table. If this condition is not present, refer to *Section 8: Service Adjustments*.



Infeed Table To Outfeed Table Alignment

NOTICE

Review the "Knife To Outfeed Table Alignment" and the "Carbide Cutter To Outfeed Table Alignment" sub-sections on the previous pages before continuing.

The surface of the infeed table must be perfectly level with the surface of the outfeed table.

To verify the factory setting:

1. Position the edge of a steel straightedge on the outfeed table so that it extends over the cutterhead and onto the infeed table (**Figure 19**).

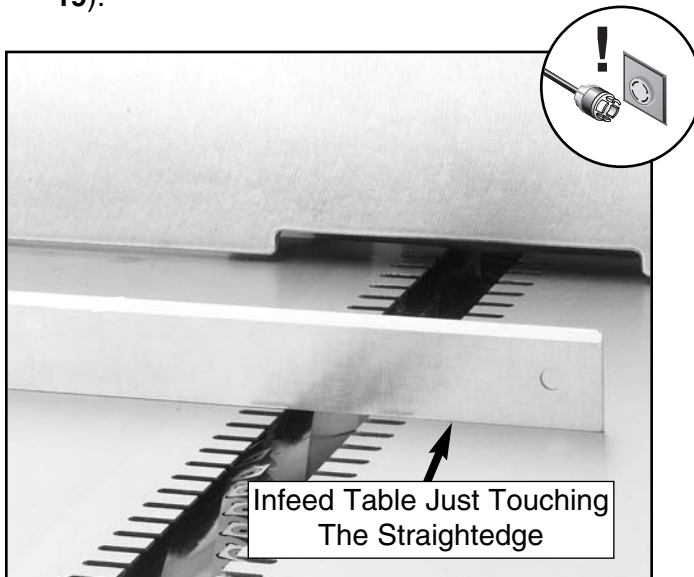


Figure 19. Verifying that the infeed table is even with the outfeed table.

2. Loosen the infeed table height lock knob (**page 10, #9**).
3. Turn the infeed table height handwheel (**page 10, #8**) to raise the infeed table until it just touches the straightedge WITHOUT lifting it off the outfeed table.
4. Tighten the infeed table lock knob.
5. Check the alignment of the tables with the straightedge at the various points shown in **Figure 20**. Again, the straightedge should sit perfectly flat across both the infeed and outfeed tables with no gaps.

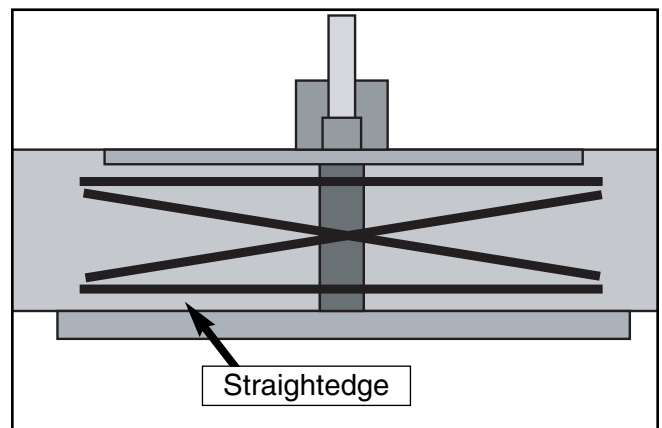


Figure 20. Positions for straightedge.

6. If all the table adjustments are set correctly, the depth-of-cut scale should read "0" as shown in **Figure 21**. If these conditions are not present, refer to *Section 8: Service Adjustments*.



Figure 21. Depth of cut scale.



Fence Stops

There is a 90° and a 45° fence stop designed to allow the fence to quickly and accurately be moved to the 90° and 45° position.

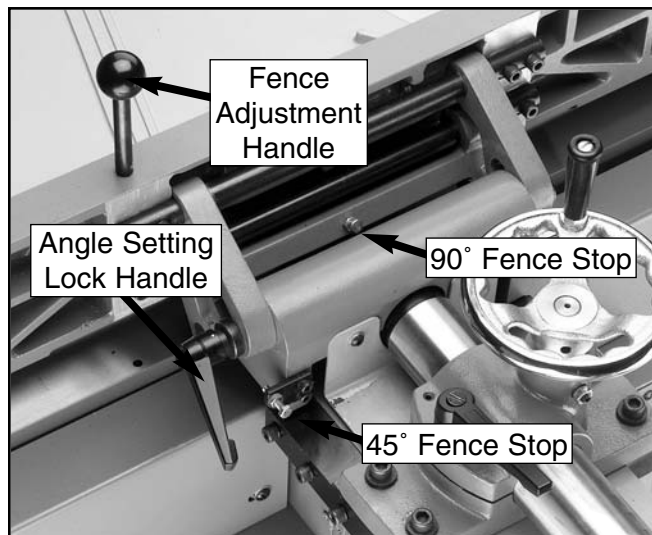


Figure 22. 90° and 45° fence stops.

To verify the 90° fence stop:

1. Loosen the angle setting lock handle (**Figure 22**) while holding the fence adjustment handle with your other hand.
2. Move the fence to the 90° position. Note—*The 90° fence stop should engage against the fence bracket to assist in correctly positioning the fence in the 90° position.*
3. Tighten the angle setting lock handle.
4. Place a square against the fence face and the outfeed table as shown in **Figure 23**. There should be no gaps between the square and the fence or the outfeed table. If this condition is not present, refer to *Section 8: Service Adjustments*.

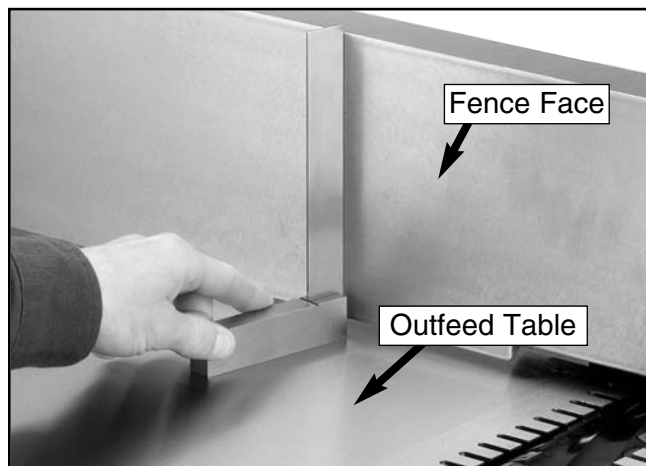


Figure 23. Using a square to align fence.

To verify the 45° fence stop:

1. Loosen the angle setting lock handle (**Figure 22**) while holding the fence adjustment handle with your other hand.
2. Move the fence to the 45° position. Note—*The 45° fence stop should engage against the fence bracket to assist in correctly positioning the fence in the 45° position.*
3. Tighten the angle setting lock handle.
4. Place a bevel gauge against the fence face and the outfeed table as shown in **Figure 24**. There should be no gaps between the square and the fence or the outfeed table. If this condition is not present, refer to *Section 8: Service Adjustments*.

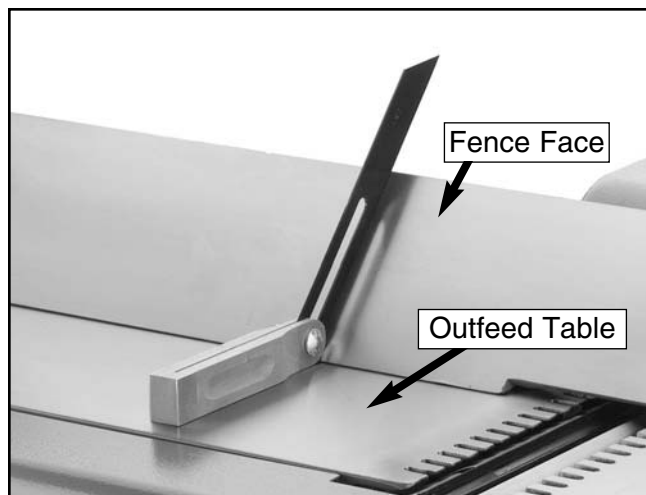


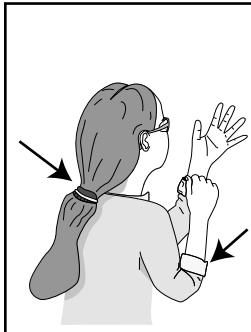
Figure 24. Using a bevel gauge to align fence.



Start Up

!WARNING

Serious personal injury could result if the machine is connected to the power source during assembly or adjustment. Wait until the machine is turned off, unplugged and all working parts have come to a complete stop before attempting to assemble or adjust the machine!



!WARNING

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



!WARNING

Projectiles from the machine could cause serious eye injury. Wear safety glasses at all times.

Before starting the machine:

1. Read this manual and make sure you follow all safety precautions before operating this machine.
2. Make sure the cutterhead guard is installed.
3. Make sure all tools and foreign objects have been removed from the machine.
4. Review and understand *Section 3: Circuit Requirements* beginning on **page 6**.

Starting the machine:

1. **Wear safety glasses at all times while the jointer is running!**
2. Plug the jointer into the power source.

3. Push the **ON** button shown in **Figure 25**.
Note—*Make sure the cutterhead moves in a clockwise direction as viewed with the infeed table to the left. If the cutterhead moves in a counter-clockwise direction, then the power needs to be disconnected and any two power wires need to be switched at the circuit breaker in the electrical box.*

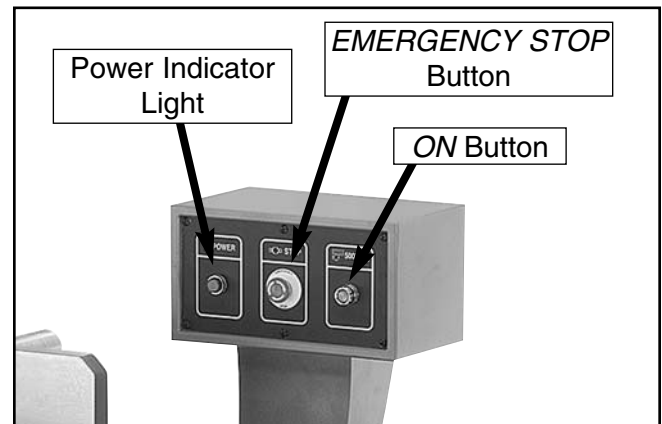


Figure 25. Pedestal switch.

Main **STOP** lever

Routine stops on the jointer should be performed using the STOP lever shown in **Figure 26**. Power is disconnected when the lever is activated, and with continued activation, the lever triggers a brake that slows the cutterhead to a stop.

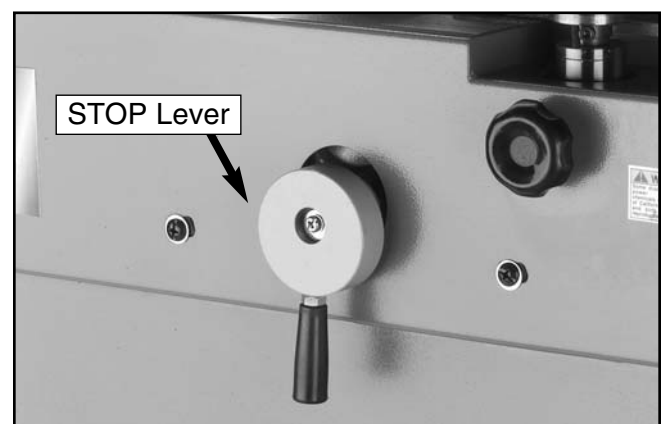


Figure 26. **STOP** lever.



SECTION 6: OPERATIONS

Operation Safety

Your safety is important! Please follow the warnings below during this entire section:

!WARNING

To avoid serious personal injury, read and become familiar with the entire instruction manual before using the jointer.

!WARNING

Damage to your eyes, lungs, and ears could result from failure to wear safety glasses, a dust mask, and hearing protection while using with this machine.



!WARNING

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



Stock Inspection & Requirements

Here are some rules to follow when choosing and cutting stock:

- **DO NOT joint or surface plane stock that contains knots.** Injury to the operator or damage to the workpiece can occur if the knots become dislodged during the cutting operation.
- **DO NOT joint or surface plane “against” the grain direction.** Cutting “against” the grain increases the likelihood of stock kick-back (See **Warning #13** on **page 4**), as well as tear-out on the workpiece.
- **Jointing and surface planing “with” the grain produces a better finish and is safer for the operator.** Cutting “with” the grain is best described as feeding the stock on the jointer so the grain points down and toward you as viewed on the edge of the stock (**Figure 27**). Note—If the grain changes direction along the edge of the board, your best bet for improving cut quality is to decrease the cutting depth and make additional passes.

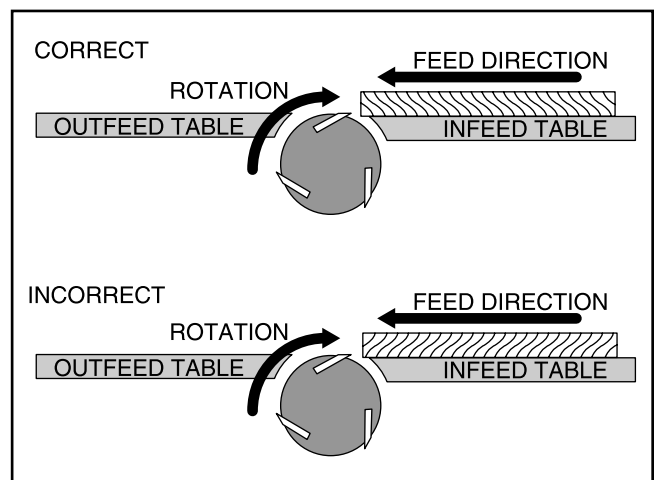


Figure 27. Correct and incorrect grain alignment to cutterhead.

- **Remove foreign objects from the stock.** Make sure that any stock you process with the jointer is clean and free of any dirt, nails, staples, tiny rocks or any other foreign objects that may damage the jointer blades.
- **Only process natural wood fiber through your jointer.** Never joint MDF, particle board, plywood, laminates or other synthetically made materials.
- **Make sure all stock is sufficiently dried before jointing.** Wood with a moisture content over 20% will cause unnecessary wear on the knives and will produce undesirable results.
- **Make sure the stock meets the minimum dimension requirement (Figure 28 and 29) before edge jointing or surface planing.**

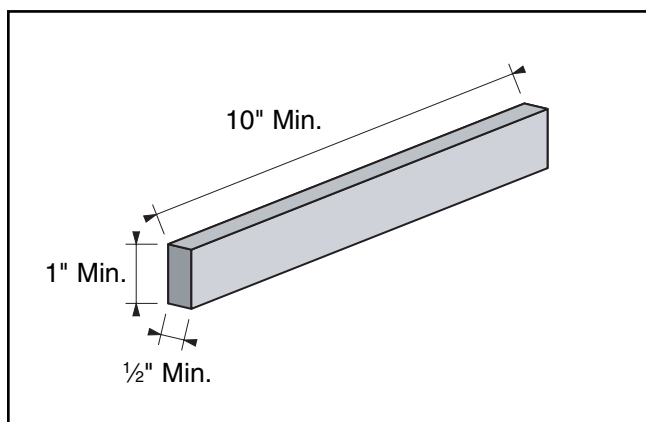


Figure 28. Minimum dimensions for edge jointing.

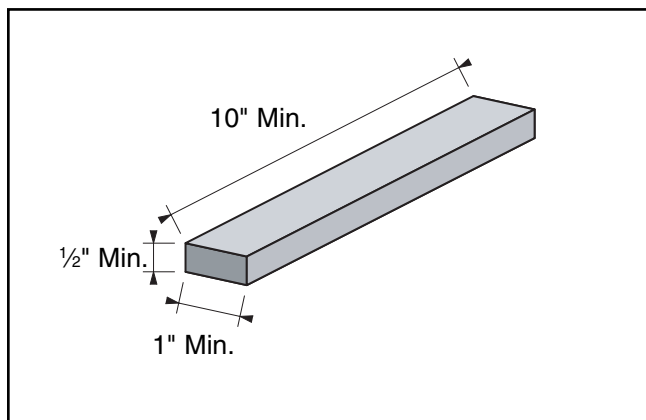
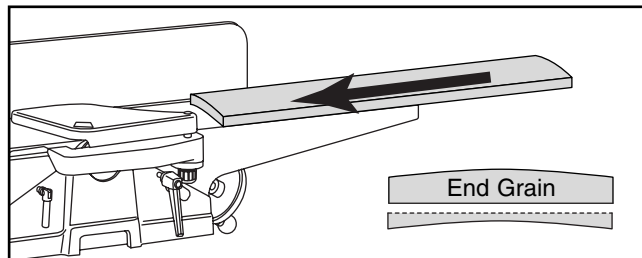


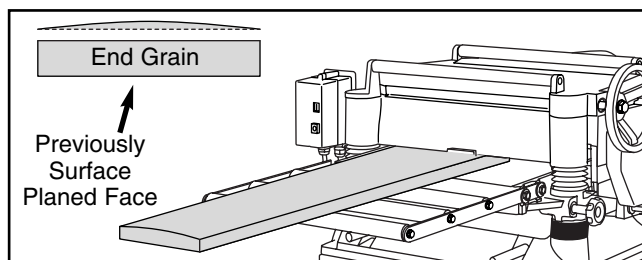
Figure 29. Minimum dimensions for surface planing.

Squaring Stock

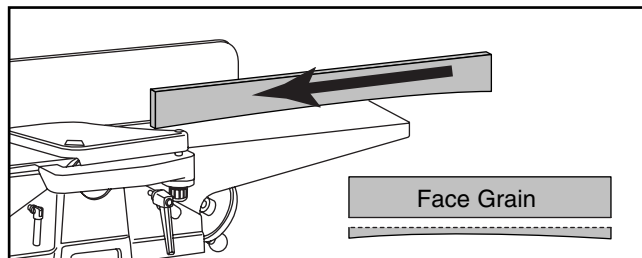
Squaring stock involves four steps that should be performed in the order below. The following pages will go into more detail.



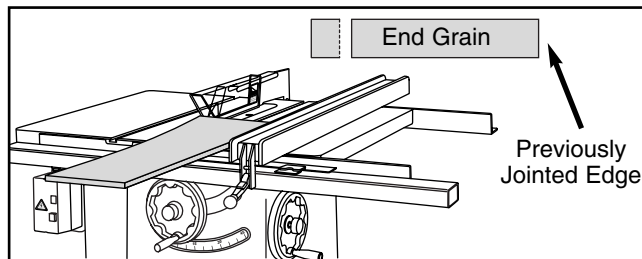
1. Surface Plane On The Jointer—The concave face of the workpiece is surface planed flat with the jointer.



2. Surface Plane On A Thickness Planer—The opposite face of the workpiece is surface planed flat with a thickness planer.



3. Edge Joint On The Jointer—The concave edge (viewed from end-to-end) of the workpiece is edge jointed flat with the jointer.



4. Rip Cut On A Table Saw—Place the jointed edge of the workpiece against a table saw fence and rip the opposite edge off.



Surface Planing

The purpose of surface planing on the jointer is to make one flat face on a piece of stock (**Figure 30**) to prepare it for surface planing on a thickness planer.

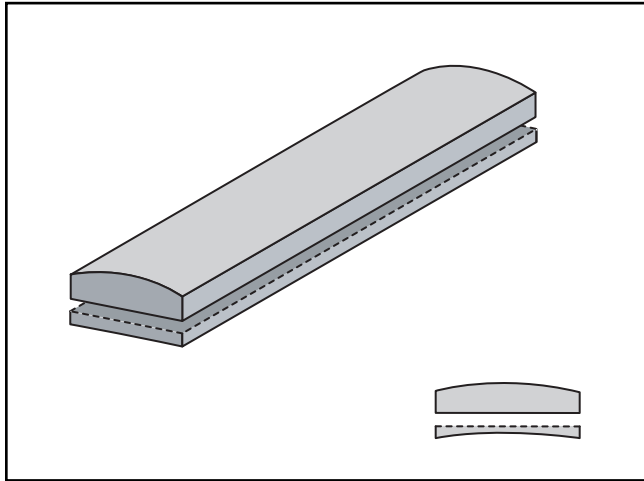


Figure 30. Illustration of surface planing results.

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 below. This procedure will better prepare you for the actual operation.

To surface plane on the jointer:

1. Read and understand *Section 1: Safety* beginning on **page 2**.
2. Make sure your stock has been inspected for dangerous conditions as described in the "Stock Inspection" instructions beginning on **page 23**.

3. Set the cutting depth for your operation. (We suggest $\frac{1}{32}$ " for surface planing, using a more shallow depth for harder wood species or for wider stock.)
4. Make sure your fence is set to 90°
5. If your workpiece is cupped (warped), place it so the concave side is face down on the surface of the infeed table.
6. Start the jointer.
7. With a push block in each hand, press the workpiece against the table and fence with firm pressure.
8. Feed the workpiece over the cutterhead. Note—*When your leading hand (with push block) gets within 4" of the cutterhead, lift it up and over the cutterhead, and place the push block on the portion of the workpiece that is over the outfeed table. At this point, focus your pressure on the outfeed end of the workpiece while feeding, and repeat the same action with your trailing hand when it gets within 4" of the cutterhead. To keep your hands safe, DO NOT let them get closer than 4" from the cutterhead when it is moving!*
9. Repeat **steps 7-8** until the entire surface is flat.



Edge Jointing

The purpose of edge jointing is to produce a finished, flat-edged surface (**Figure 31**) that is suitable for joinery or finishing. It is also a necessary step in the squaring process of rough or warped stock.

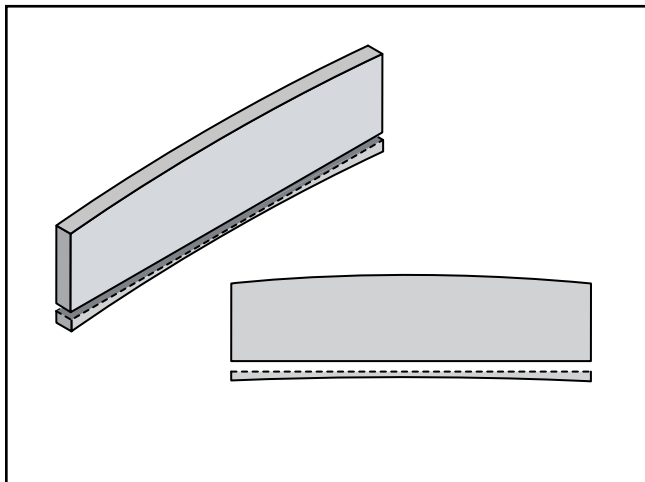


Figure 31. Illustration of edge jointing results.

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 below. This procedure will better prepare you for the actual operation.

To edge joint on the jointer:

1. Read and understand *Section 1: Safety* beginning on **page 2**.
2. Make sure your stock has been inspected for dangerous conditions as described in the "Stock Inspection" instructions beginning on **page 23**.
3. Set the cutting depth for your operation. (We suggest between $\frac{1}{16}$ " and $\frac{1}{8}$ " for edge jointing, using a more shallow depth for harder wood species or for wider stock.)
4. Make sure the fence is set to 90°.
5. If your workpiece is cupped (warped), place it so the concave side is face down on the surface of the infeed table.
6. Start the jointer.
7. Press the workpiece against the table and fence with firm pressure. Use your trailing hand to guide the workpiece through the cut.
8. Feed the workpiece over the cutterhead. Note—*If your leading hand gets within 4" of the cutterhead, lift it up and over the cutterhead, and place it on the portion of the workpiece that is over the outfeed table. At this point, focus your pressure on the outfeed end of the workpiece while feeding, and repeat the same action with your trailing hand when it gets within 4" of the cutterhead. To keep your hands safe, DO NOT let them get closer than 4" from the cutterhead when it is moving!*
9. Repeat **steps 7-8** until the entire edge is flat.



Bevel Cutting

The purpose of bevel cutting is to cut a specific angle into the edge of a workpiece (**Figure 32**).

The Ultimate Series Jointers have preset fence stops at 45° to the left and 45° to the right. If your situation requires a different angle, the preset fence stops can be easily adjusted for your needs.

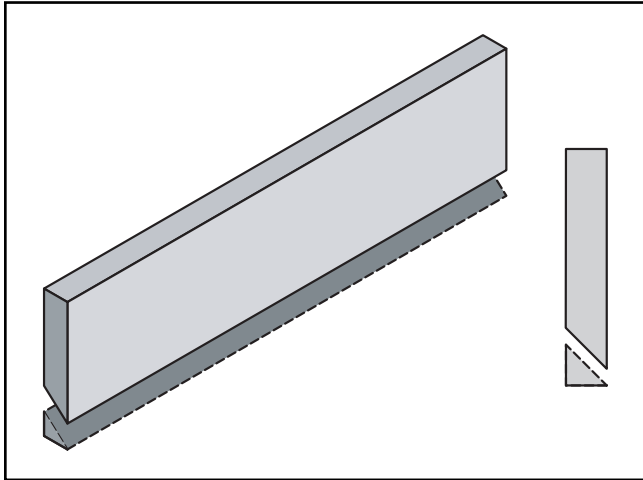


Figure 32. Illustration of bevel cutting results.

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 below. This procedure will better prepare you for the actual operation.

To bevel cut on the jointer:

1. Read and understand *Section 1: Safety* beginning on **page 2**.

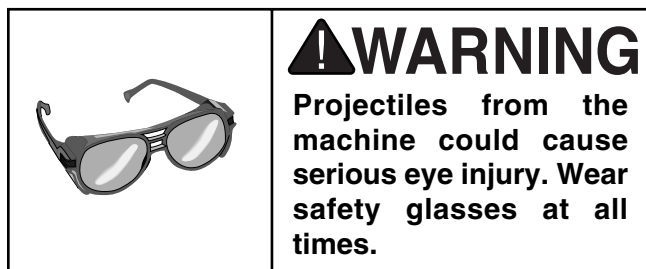
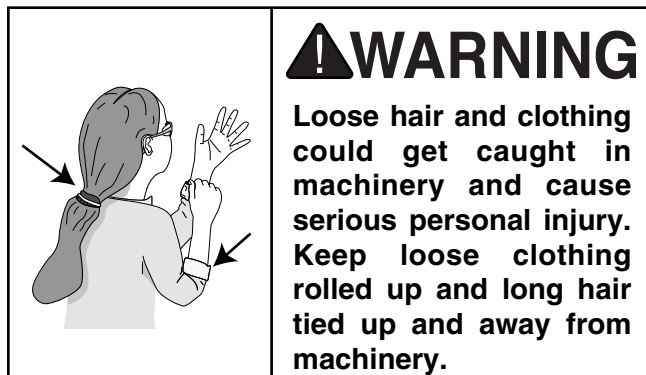
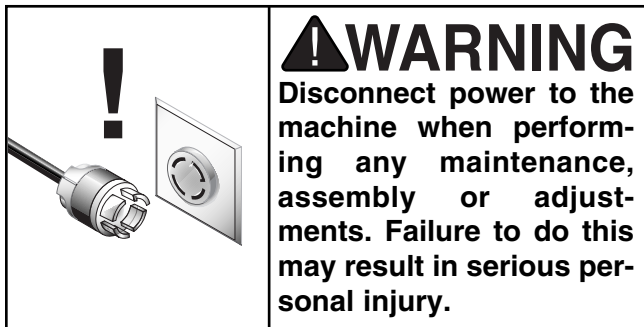
2. Make sure your stock has been inspected for dangerous conditions as described in the "Stock Inspection" instructions beginning on **page 23**.
3. Set the cutting depth for your operation. (We suggest between $\frac{1}{16}$ " and $\frac{1}{8}$ " for bevel cutting, using a more shallow depth for harder wood species or for wider stock.)
4. Make sure your fence is set to the angle of your desired cut.
5. If your workpiece is cupped (warped), place it so the concave side is face down on the surface of the infeed table.
6. Start the jointer.
7. With a push block in your leading hand, press the workpiece against the table and fence with firm pressure.
8. Feed the workpiece over the cutterhead. *Note—If your leading hand gets within 4" of the cutterhead, lift it up and over the cutterhead, and place the push block on the portion of the workpiece that is over the outfeed table. At this point, focus your pressure on the outfeed end of the workpiece while feeding, and repeat the same action with your trailing hand when it gets within 4" of the cutterhead. To keep your hands safe, DO NOT let them get closer than 4" from the cutterhead when it is moving!*
9. Repeat **steps 7-8** until the angled cut is satisfactory to your needs.



SECTION 7: MAINTENANCE

Maintenance Safety

Your safety is important! Please follow the warnings below during this entire section:



General

Regular periodic maintenance on your Ultimate Series Jointers will ensure optimum performance. Make a habit of inspecting your machine each time you use it.

Before each use, perform the following checks:

1. Loose mounting bolts.
2. Worn switch.
3. Worn or damaged cords and plugs.
4. Damaged V-belt.
5. Any other condition that could hamper the safe operation of this machine.



Table

The table and other non-painted surfaces on your machine should be protected against rust and pitting. Wiping the table clean after every use ensures that moisture from wood dust does not remain on bare metal surfaces.

Tables can be kept rust-free with regular applications of products like SLIPIT® or Boeshield® T-9. For long term storage you may want to consider products like Kleen Bore's Rust Guardit™.



Knives

(Model G9953 Only)

Using sharp knives is one of the most important factors involved with the operation of the jointer. A good maintenance procedure is to hone the knives to keep them in top shape. A knife hone will polish and finely sharpen jointer knives quickly and easily without removing them.

For damaged or extra dull knives, have them resharpened by a professional grinder. To avoid downtime from resharpening, we recommend having an extra set of knives on hand.



Carbide Cutters

(Models G9953ZX, G9953ZXF and G4815)

The carbide cutters are typically rotated at the same time when they become dull; however, the cutters can also be rotated individually when one becomes nicked or damaged. Refer to *Section 8: Service Adjustments* for instructions on rotating or replacing the carbide cutters.



Lubrication

Most of the ball bearings are permanently sealed and lubricated so they will require no attention until they need to be replaced. The following locations should be lubricated after approximately 80 hours of continuous use.

Cutterhead

The cutterhead has two bearings that require grease. There are white stickers with arrows pointing to their general location. There are two grease fittings—one located at each end of the cutterhead, on the top of the cutterhead axle collars. The grease fitting on the front side of the jointer is located in a small hole cut into the top of the front base housing. The grease fitting on the back side of the machine is located on the top of the jointer base, just under the bottom edge of the fence.

Handwheels

Each handwheel is lubricated via an oil cup located just behind the handwheel body, on the axle collar. Remove the handwheel lock knob and slide the handwheel off the axle. This will reveal the oil cup. Apply a small amount of light machine oil.

Table Elevation Mechanism

The table elevation screw and gear mechanism for each handwheel can be accessed by removing the left and right rear base housings. Apply a generous amount of grease to the elevation screws and gears.



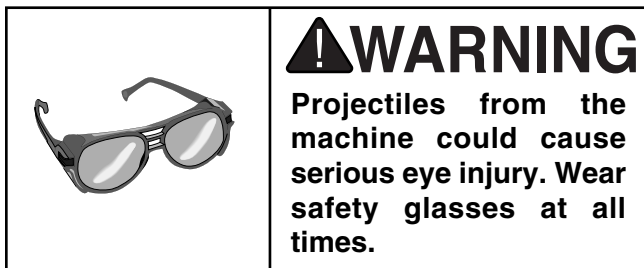
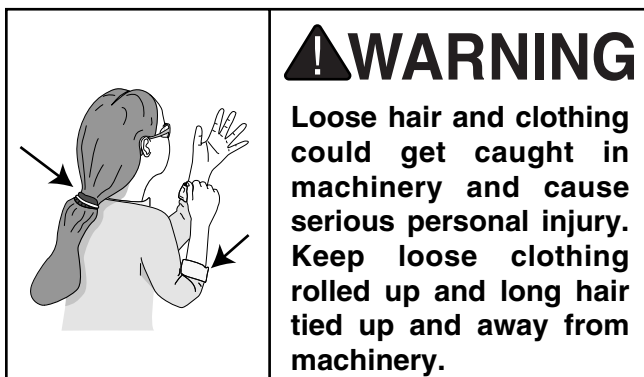
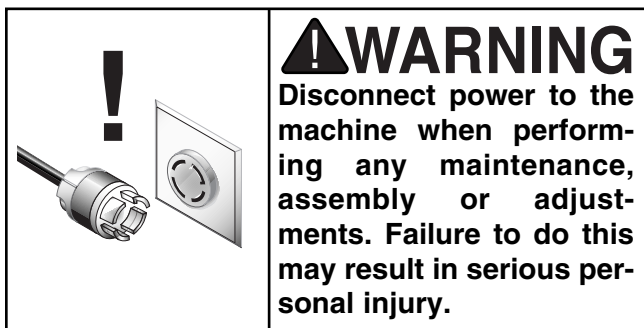
Maintenance Log

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SECTION 8: SERVICE ADJUSTMENTS

Adjustment Safety

Your safety is important! Please follow the warnings below during this entire section:



Outfeed Table

To set the outfeed table:

1. Unplug the machine from the power source!
2. Open the access door on the back of the machine, just below the fence adjustments.
3. Turn the cutterhead pulley to position the knife or carbide cutter close to the highest point in its revolution.
4. Set a straightedge on the outfeed table so that it extends over the cutterhead (**Figure 33**).

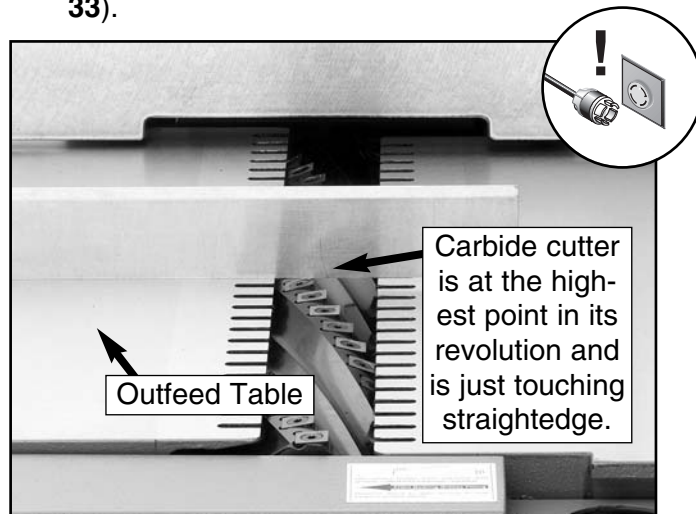


Figure 33. Setting the outfeed table.

5. Rock the cutterhead back-and-forth, using the cutterhead pulley to position the cutter edge at the highest point in its revolution.
6. Loosen the outfeed table lock knob.
7. Turn the outfeed table handwheel to raise or lower the outfeed table until the carbide cutter or knife just touches the straightedge **WITHOUT** lifting it off the outfeed table.
8. Tighten the outfeed table lock knob.



Knives

(Model G9953 Only)

Setting the knives correctly 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. Note—*The cutterhead knives should protrude above the cutterhead 2mm (0.079"). The knife jig included with the jointer is designed to set the knives with-in this height.*

To set the knives:

1. **Unplug the machine from the power source!**
2. Open the access door on the back of the machine, just below the fence adjustments.
3. Turn the cutterhead pulley until the surface of the cutterhead is at top dead center.
4. Adjust the outfeed table to a height of 2mm above the surface of the cutterhead.
5. Turn the cutterhead pulley to reveal one of the knives.
6. Loosen the cutterhead gib bolts, starting in the middle, and alternating back and forth until all of the gib bolts are loose, but not falling out (**Figures 34 and 35**). Note—*The gib bolts turn clockwise to loosen and counterclockwise to tighten (when facing the head of the bolt).*

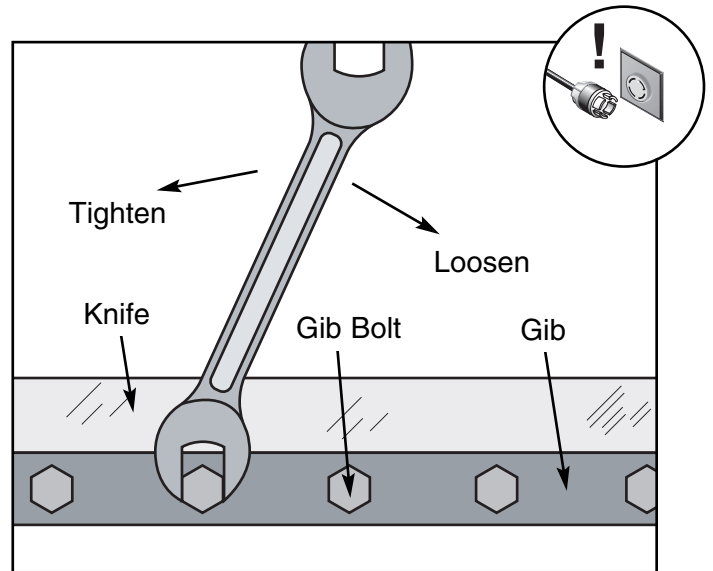


Figure 34. Loosening the gib bolts.

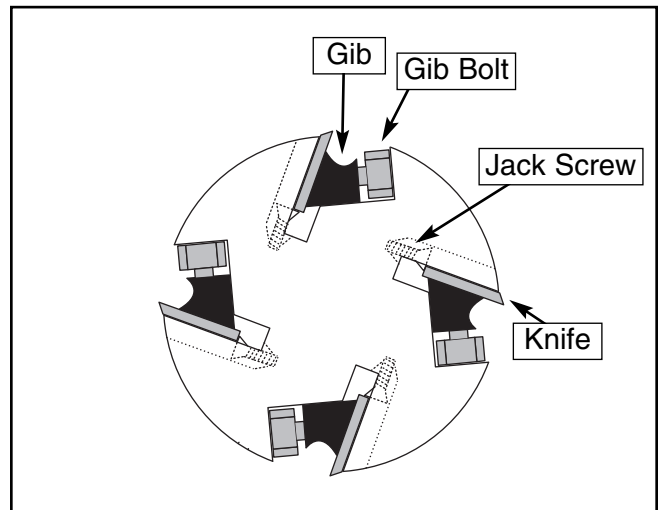


Figure 35. Components of the cutterhead.

7. Position the knife setting gauge on the outfeed table so that it extends over the cutterhead as shown in **Figure 36**, and loosen the gib bolts until the knife is completely loose.

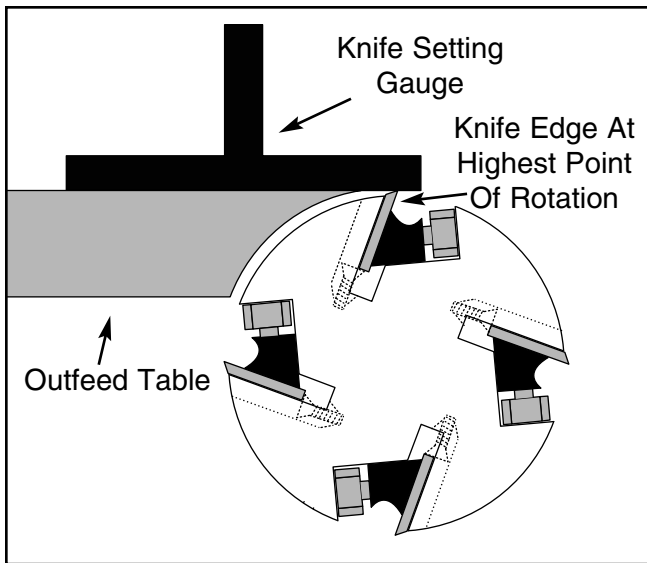


Figure 36. Checking knife with the knife setting gauge.

8. Rock the cutterhead back-and-forth, using the cutterhead pulley to position the knife edge at the highest point in its revolution.
9. Using a 3mm allen wrench, find the jack screws through the access holes in the cutterhead and rotate the jack screws to raise or lower the knife. When the knife is set correctly, it will barely touch bottom of the knife setting gauge **WITHOUT** lifting the gauge off the outfeed table. Note—*The knife height should be level with the outfeed table to within .002". A dial indicator can be used to check variation in thousandths of an inch; however, the knife setting gauge is an adequate setup instrument.*
10. Snug the gib bolts tight enough to just hold the knife in place.
11. Repeat **steps 5-10** with the rest of the knives.
12. Repeat **step 10**, but final tighten each gib bolt.



Carbide Cutters

(Models G9953ZX, G9953ZXF and G4815)

The dot on each cutter is used as a reference point when determining which cutter edges are used, or dull, and which are sharp. Be sure to always rotate the cutters in the same direction as shown in **Figure 37**. Otherwise, the dot will not be an effective reference for determining which cutting surfaces are sharp. The carbide cutter dimensions are 14mm x 14mm x 2mm, with a 6.5mm bore and 30° relief angles.

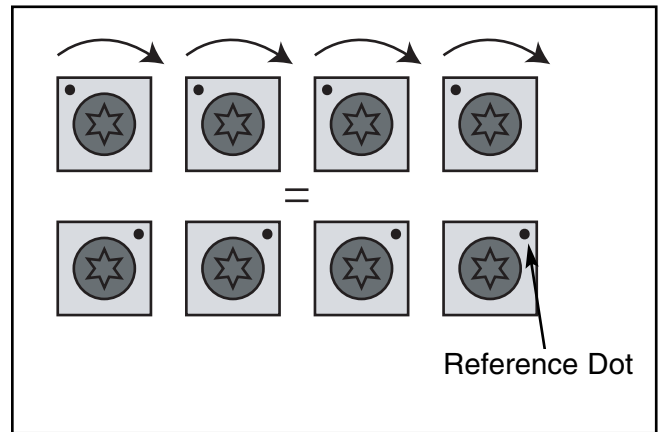


Figure 37. Always rotate carbide cutters in the same direction to keep track of the dull or damaged edges.

The models with spiral cutterheads are supplied with an air wrench for loosening and tightening the carbide cutter Torx® screws. This tool is very valuable if you have to rotate or change many of the cutters at one time. T-20 Torx® bits are included.

Installing or adjusting the carbide cutters:

1. Connect the air wrench to your regulated air compressor.
2. Adjust the air pressure (torque) setting dial on the side of the air wrench to the "2" position. Note—*The "1, 2, 3" dial on the air wrench adjusts the torque, relative to the compressor air pressure. The "1" setting will produce the highest amount of torque possible at a given compressor air pressure, while the "3" setting will produce the least torque.*
3. Install a T-20 Torx® bit into the air wrench.

4. Sparingly oil the threads of the carbide cutter Torx® screws with a light machine oil.
5. Adjust the compressor air pressure to 30 PSI. *Note—The low pressure (torque) setting will reduce the chance of cross threading the Torx® screw threads as well as seat the carbide cutters correctly.*
6. Once all the Torx® screws have been seated, turn the compressor air pressure to 85 PSI. Further tighten the Torx® screws to their final torque setting of 48-50 Inch-Pounds.

Removing the carbide cutters:

Torx® screws that are difficult to remove with the air wrench can be removed with the supplied T-handle. Carefully insert a Torx® bit into the hole on the side of the “cheater bar.” This should allow you enough leverage to loosen the Torx® screws.

NOTICE

Remove sawdust from the heads of the Torx® screws before attempting to remove them from the cutterhead. The head of the Torx® screws could become stripped if this is not done.



Infeed Table Cam

Under each corner of the infeed table is an eccentric that can be turned with a wrench—lifting or lowering that corner of the table. A coordinated adjustment of all four eccentrics allows the infeed table surface to be adjusted perfectly level with the outfeed table.

To adjust the infeed table:

1. Remove the four hex bolts and flat washers (**Figure 38**) that secure the front eccentric cover to the jointer. Carefully remove the front eccentric cover and set it aside.

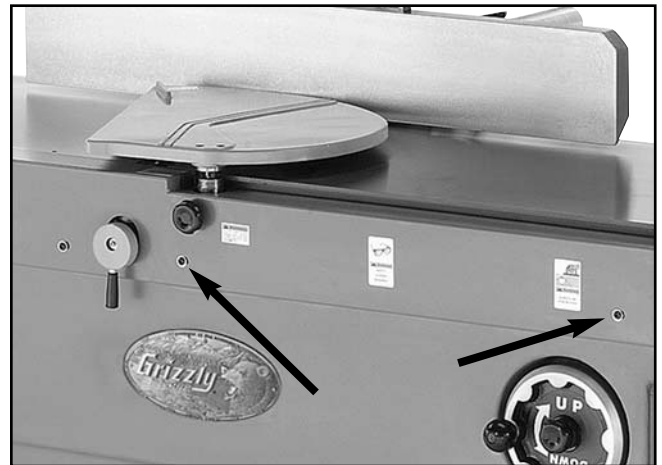


Figure 38. Hex bolts and flat washers used to secure the front eccentric cover to the jointer base.

2. Remove the two hex bolts and flat washers that secure the back eccentric cover behind the infeed table. Carefully remove the back eccentric cover and set it aside.
3. Using a 4mm Allen wrench, loosen the set screw located on the side of each eccentric (**Figure 39**).

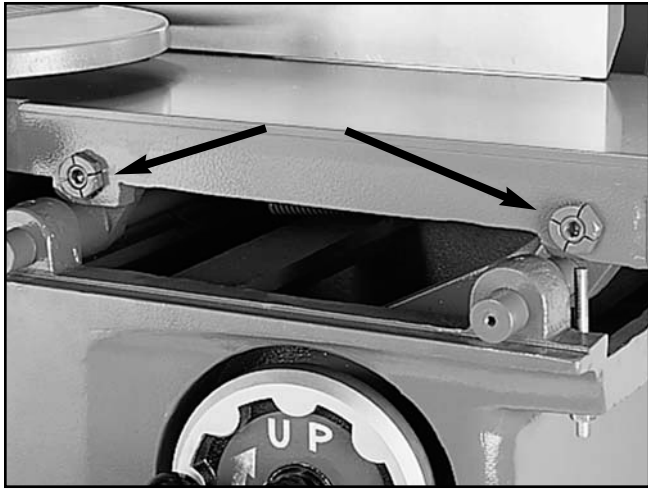


Figure 39. Front eccentric locations.

4. Using a 10mm Allen wrench, loosen the cap screw located in the center of each eccentric (**Figure 39**).
5. Set the edge of a straightedge across the outfeed and infeed tables (**Figure 40**). The goal is to eliminate any gaps between the straightedge and the surface of the tables.

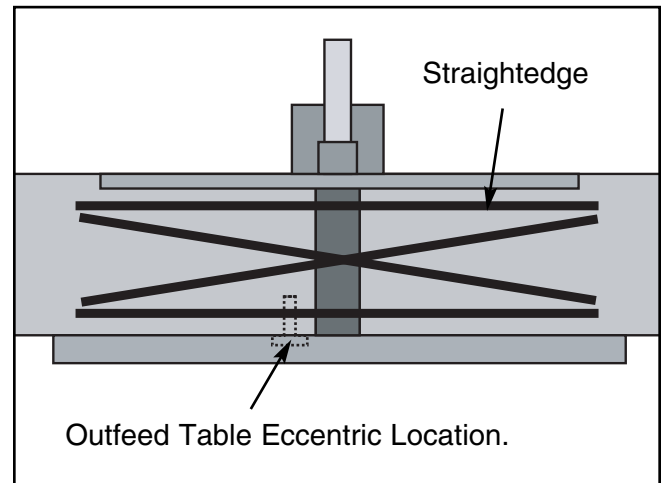


Figure 40. Straightedge positioning points.

6. Move the straightedge across the tables to various positions and make note of which corners of the infeed table need adjustment, whether the adjustment should be up or down, and how much.
7. Using an adjustable wrench, turn the necessary eccentrics until the straightedge sits flush across the infeed and outfeed tables. Note—*In the unlikely event that the tables cannot be aligned by adjusting the infeed eccentrics, there is an eccentric also located on the corner of the outfeed table closest to the operator and the cutterhead.*
8. Secure the cams and re-attach the front and back eccentric covers by reversing **steps 1-4**.



Fence Stops

To set the 90° stop:

1. Place a square on the outfeed table fairly close to the cutterhead as shown in **Figure 41**.



Figure 41. Use of square to align fence.

2. While holding the fence adjusting handle, loosen the check nut on the 90° stop screw (**Figure 42**). Turn the stop screw against the bracket until the fence contacts the edge of the square evenly.

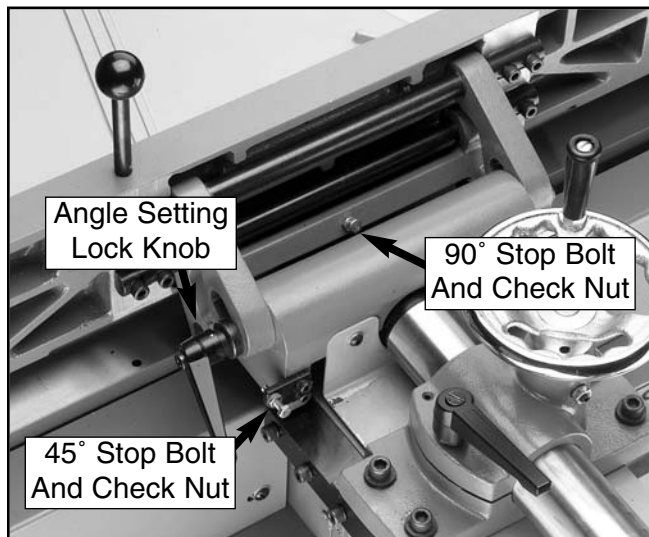


Figure 42. 90° and 45° fence stops.

3. Tighten the check nut on the stop bolt and tilt the fence back, then forward against the stop bolt.
4. Recheck with the square. Tightening the check nut will move the stop bolt slightly, so some trial-and-error may be necessary to perfect your settings.

To set the 90° stop:

The process for setting the 45° fence stop is the same as for the 90° stop, with the exception of using a bevel gauge set to 45° (**Figure 43**) and adjusting the fence mechanism against the 45° stop (**Figure 42**).



Figure 43. Using a bevel square to align fence.



Depth-Of-Cut Scale

The depth-of-cut scale indicates the amount of material that will be removed with each pass over the jointer.

To set the depth-of-cut scale:

1. **Unplug the machine from the power source!**
2. Open the access door on the back of the machine, just below the fence adjustments.
3. Place a straightedge on the outfeed table so it hangs over the infeed table.
4. Turn the cutterhead pulley so the knives or carbide cutters are NOT directly beneath the straightedge.
5. Loosen the infeed table lock knob.
6. Turn the infeed table handwheel to raise or lower the outfeed table until it just touches the straightedge as shown in **Figure 44**.

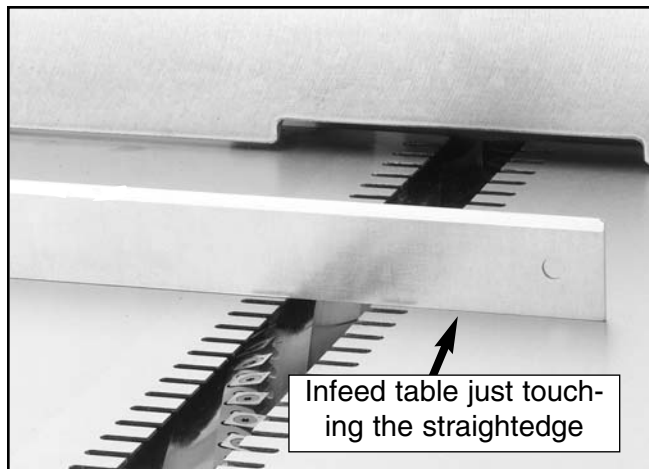


Figure 44. Properly adjusting the infeed table before setting the depth-of-cut scale.

7. Tighten the infeed table lock knob.
8. Loosen the depth-of-cut pointer screw and adjust the depth pointer to the “0” position as shown in **Figure 45**.

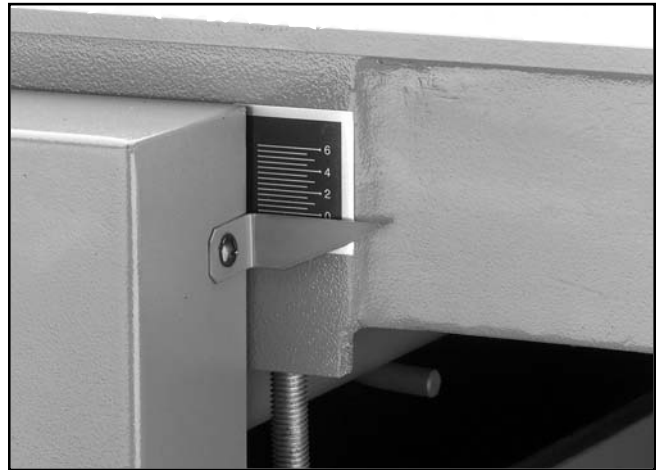


Figure 45. Depth-of-cut pointer adjusted to “0” position.

9. Tighten the depth-of-cut pointer screw.



Service Log

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SECTION 9: REFERENCE INFO

If you need parts or help in assembling your machine, or if you need operational information, call the service department at (570) 546-9663. Trained service technicians will be glad to help you.

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

Grizzly Industrial, Inc.
c/o Technical Documentation
P.O. Box 2069
Bellingham, WA 98227-2069

Important safety measures that are essential to the operation of this machine have been explained in *Section 1: Safety*. While most safety measures are generally universal, Grizzly reminds you that each workshop is different and safety rules should be considered as they apply to your specific situation.

We recommend you keep a copy of our current catalog for complete information regarding Grizzly's warranty and return policy. If you need additional technical information relating to this machine, or if you need general assistance or replacement parts, please contact the Service Department at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com
Web Site: <http://www.grizzly.com>.

Additional information sources are necessary to realize the full potential of this machine. Trade journals, woodworking magazines, and your local library are good places to start.





MACHINE DATA SHEET

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

MODEL G9953 16" ULTIMATE SERIES JOINTER

Design TypeFloor Model

Overall Dimensions:

Table Size99¼" x 16¼"
Height (from floor to Table)30¾"
Overall Length99¼"
Overall Width45½"
Fence6⅝" x 43¼"
Net Weight1254 lbs.
Shipping Weight1386 lbs.

Capacities:

Maximum Depth of Cut5/16"
Maximum Width of Cut16"
Cutterhead Speed5000 RPM
Cuts Per Minute20,000
Bevel Jointing90° - 45°
Cutterhead Diameter4½"
Knife Size16" x 1⅝" x 1/8"
Dust Hood Size4"

Construction:

TablePrecision Ground Cast Iron
Fence AssemblyAluminum & Cast Iron
Body AssemblyCast Iron
BaseCast Iron
Cutterhead4 Knife Slots w/ Shielded Ball Bearings and Grease Fittings
GuardCast Aluminum

Motor:

TypeTEFC Capacitor Start Induction
Horsepower5HP
Phase / Voltage / AmpsSingle-Phase, 220V / 28A
Cycle / RPM60 Hertz, 3450 RPM
SwitchMagnetic W/ Thermal Overload Protector
Power TransferTwin V-Belt
BearingsShielded & Permanently Lubricated

Features:

FenceCenter Mounted, Positive Stops at 45° and 90°
Table MovementIndependently Adjustable, Handwheel Precision
.....Pedestal Mounted ON/OFF Switch
.....Noise Dampening System

Specifications, while deemed accurate, are not guaranteed.



MACHINE DATA SHEET

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

MODEL G9953ZX 16" ULTIMATE SERIES JOINTER

Design TypeFloor Model

Overall Dimensions:

Table Size99 $\frac{1}{4}$ " x 16 $\frac{1}{4}$ "
Height (from floor to Table)30 $\frac{3}{4}$ "
Overall Length99 $\frac{1}{4}$ "
Overall Width45 $\frac{1}{2}$ "
Fence6 $\frac{5}{8}$ " x 43 $\frac{1}{4}$ "
Net Weight1254 lbs.
Shipping Weight1386 lbs.

Capacities:

Maximum Depth of Cut $\frac{5}{16}$ "
Maximum Width of Cut16"
Cutterhead Speed5000 RPM
Bevel Jointing90° - 45°
Cutterhead Diameter4 $\frac{1}{2}$ "
Carbide Cutter Insert Size (H2334)14 x 14 x 2mm, 30° Relief Angle, 6.5mm Bore
Dust Hood Size4"

Construction:

TablePrecision Ground Cast Iron
Fence AssemblyAluminum & Cast Iron
Body AssemblyCast Iron
BaseCast Iron
Cutterhead6 Spiral Ways, 120 Carbide Inserts, Ball Bearing w/Grease Fittings
GuardCast Aluminum

Motor:

TypeTEFC Capacitor Start Induction
Horsepower5 HP
Phase, Voltage / AmpsSingle-Phase, 220V / 28A
Cycle, RPM60 Hertz, 3450 RPM
SwitchMagnetic W/ Thermal Overload Protector
Power TransferTwin V-Belt
BearingsShielded & Permanently Lubricated

Features:

FenceCenter Mounted, Positive Stops at 45° and 90°
Table MovementIndependently Adjustable, Handwheel Precision
.....Pedestal Mounted ON/OFF Switch
.....Noise Dampening System

Specifications, while deemed accurate, are not guaranteed.



MACHINE DATA SHEET

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

MODEL G9953ZXF 16" ULTIMATE SERIES JOINTER

Design TypeFloor Model

Overall Dimensions:

Table Size99 $\frac{1}{4}$ " x 16 $\frac{1}{4}$ "
Height (from floor to Table)30 $\frac{3}{4}$ "
Overall Length99 $\frac{1}{4}$ "
Overall Width45 $\frac{1}{2}$ "
Fence6 $\frac{5}{8}$ " x 43 $\frac{1}{4}$ "
Shipping Weight.....1386 lbs.

Capacities:

Maximum Depth of Cut $\frac{5}{16}$ "
Maximum Width of Cut16"
Cutterhead Speed5000 RPM
Bevel Jointing90° - 45°
Cutterhead Diameter4 $\frac{1}{2}$ "
Carbide Cutter Insert Size (H2334)14 x 14 x 2mm, 30° Relief Angle, 6.5mm Bore
Dust Hood Size4"

Construction:

TablePrecision Ground Cast Iron
Fence AssemblyAluminum & Cast Iron
Body Assembly.....Cast Iron
BaseCast Iron
Cutterhead6 Spiral Ways, 120 Carbide Inserts, Ball Bearing w/Grease Fittings
GuardCast Aluminum

Motor:

Type.....TEFC Induction
Horsepower5HP
Phase/Voltage/Amps3-Phase/220V/14A
.....3-Phase/440V/7A
Cycle/RPM60 Hertz/3450 RPM
SwitchMagnetic W/ Thermal Overload Protector
Power Transfer.....Twin V-Belt
Bearings.....Shielded & Permanently Lubricated

Features:

Fence.....Center Mounted, Positive Stops at 45° and 90°
Table MovementIndependently Adjustable, Handwheel Precision
.....Pedestal Mounted ON/OFF Switch
.....Noise Dampening System

Specifications, while deemed accurate, are not guaranteed.



MACHINE DATA SHEET

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

MODEL G4815 20" ULTIMATE SERIES JOINTER

Design TypeFloor Model

Overall Dimensions:

Table Size111 $\frac{1}{4}$ " x 20 $\frac{1}{4}$ "
Height (from Floor to Table)30 $\frac{1}{2}$ "
Overall Length111 $\frac{1}{4}$ "
Overall Width (Including Fence Post At Widest Position)55"
Fence6 $\frac{11}{16}$ " x 43 $\frac{1}{4}$ "
Net Weight1600 lbs.
Shipping Weight1765 lbs.

Capacities:

Maximum Depth of Cut $\frac{5}{16}$ "
Maximum Width of Cut19 $\frac{11}{16}$ "
Cutterhead Speed5000 RPM
Bevel Jointing90° - 45°
Cutterhead Diameter4"
Carbide Cutter Insert Size (H2334)14 x 14 x 2mm, 30° Relief Angle, 6.5mm Bore
Dust Hood Size5"

Construction:

TablePrecision Ground Cast Iron
Fence AssemblyAluminum & Cast Iron
Body AssemblyCast Iron
BaseCast Iron
Cutterhead6 Spiral Ways, 140 Carbide Inserts, Ball Bearing w/Grease Fittings
GuardCast Aluminum

Motor:

TypeTEFC
Horsepower7 $\frac{1}{2}$ HP
Phase / Voltage / Amps3-phase / 220V / 20A
.....3-Phase/440V/10A
Cycle / RPM60 Hertz / 3450 RPM
SwitchMagnetic W/ Thermal Overload Protector
Power TransferTwin V-Belt
BearingsShielded & Permanently Lubricated

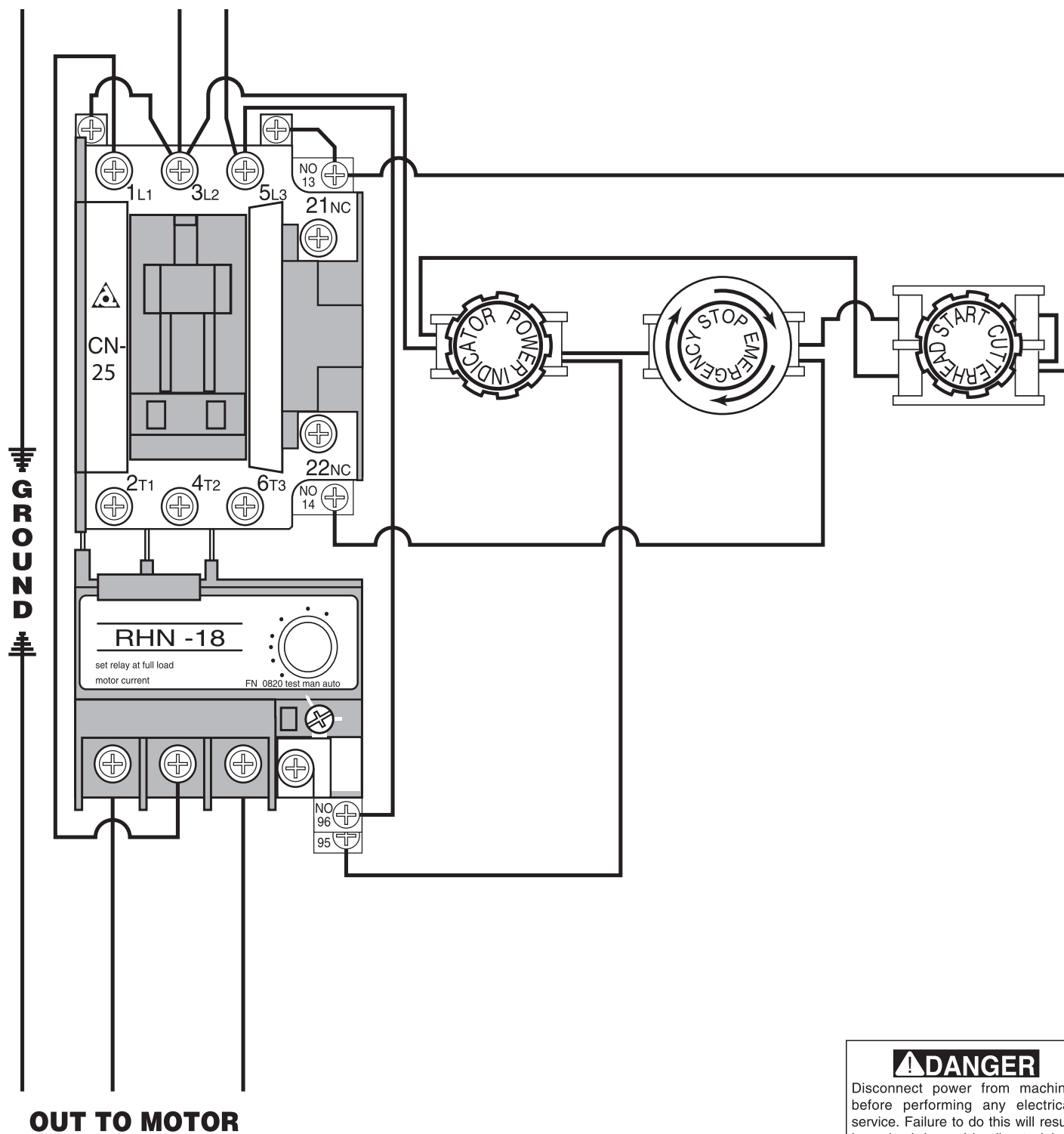
Features:

FenceCenter Mounted, Positive Stops at 45° and 90°
Table MovementIndependently Adjustable, Handwheel Precision
.....Pedestal Mounted ON/OFF Switch
.....Noise Dampening System

Specifications, while deemed accurate, are not guaranteed.

G9953 & G9953ZX 16" Jointer Wiring Diagram 5 HP 220V Single-Phase

**IN FROM
POWER SOURCE**

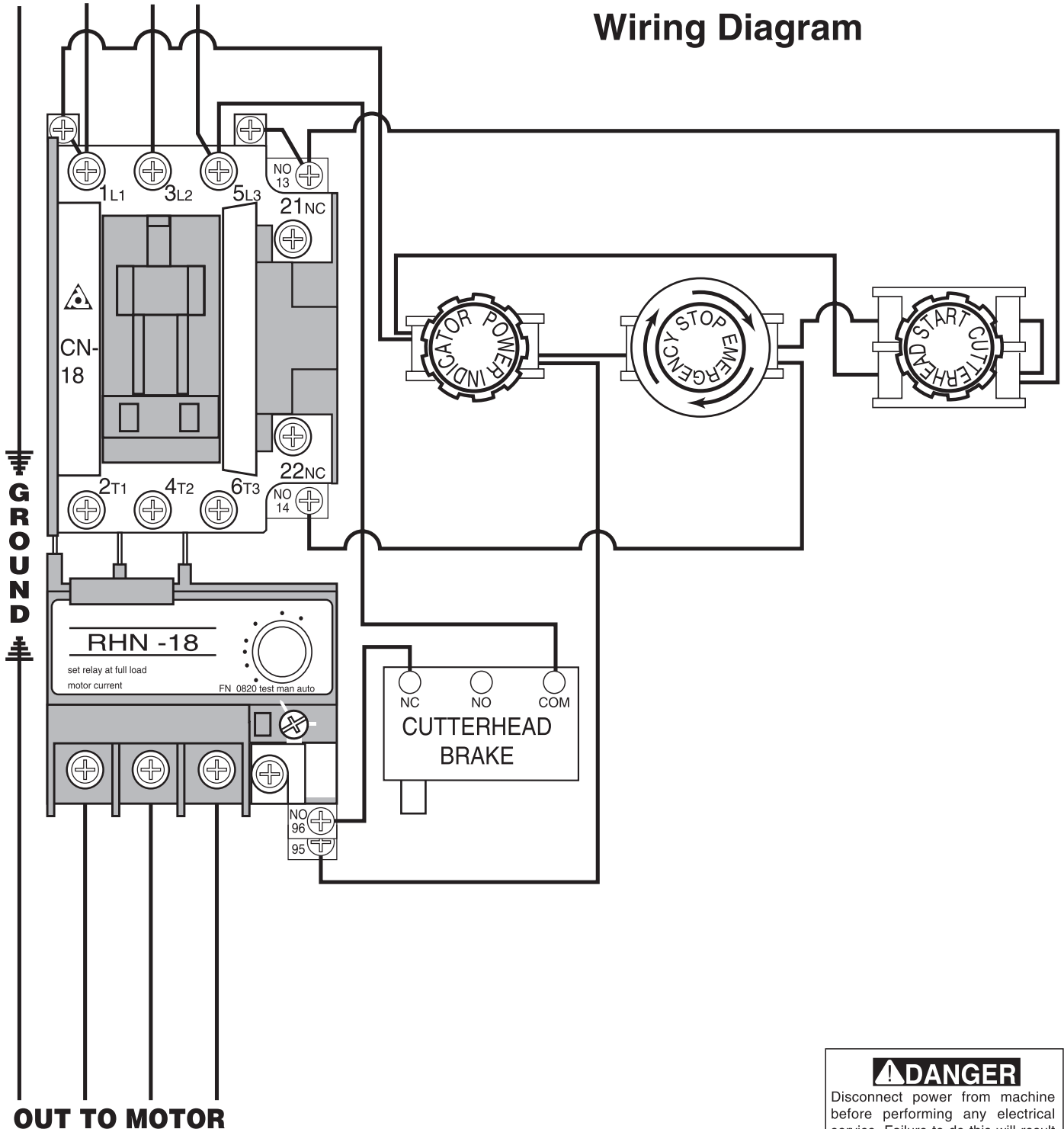


⚠ DANGER

Disconnect power from machine before performing any electrical service. Failure to do this will result in a shock hazard leading to injury or death.

**G4815 20" Jointer
7-1/2 HP 220V 3-Phase
Wiring Diagram
&
G9953ZXF 16" Jointer
5 HP 220V 3-Phase
Wiring Diagram**

**IN FROM
POWER SOURCE**

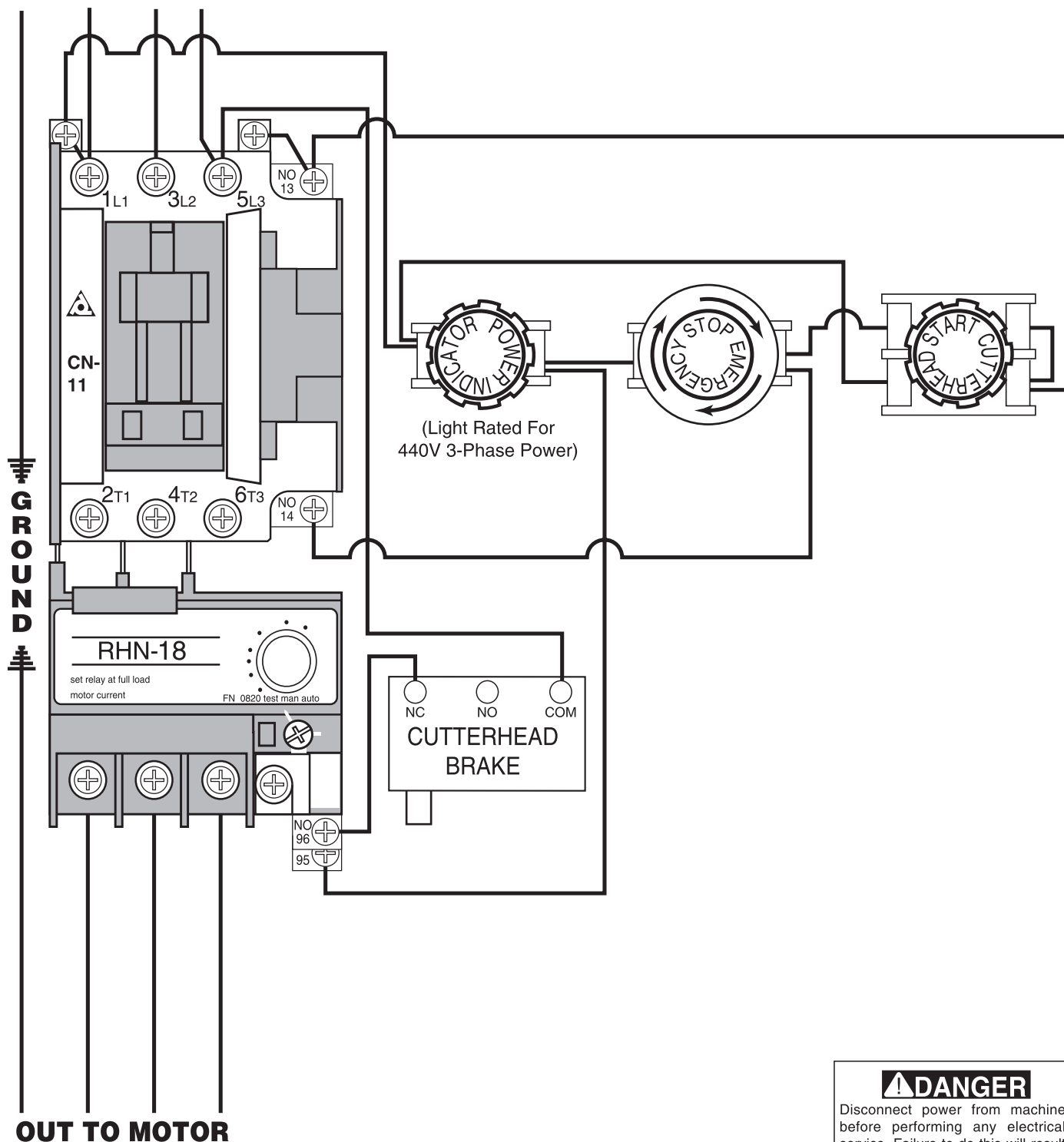


⚠ DANGER

Disconnect power from machine before performing any electrical service. Failure to do this will result in a shock hazard leading to injury or death.

G9953ZX 16" Jointer Wiring Diagram 5 HP 440V 3-Phase

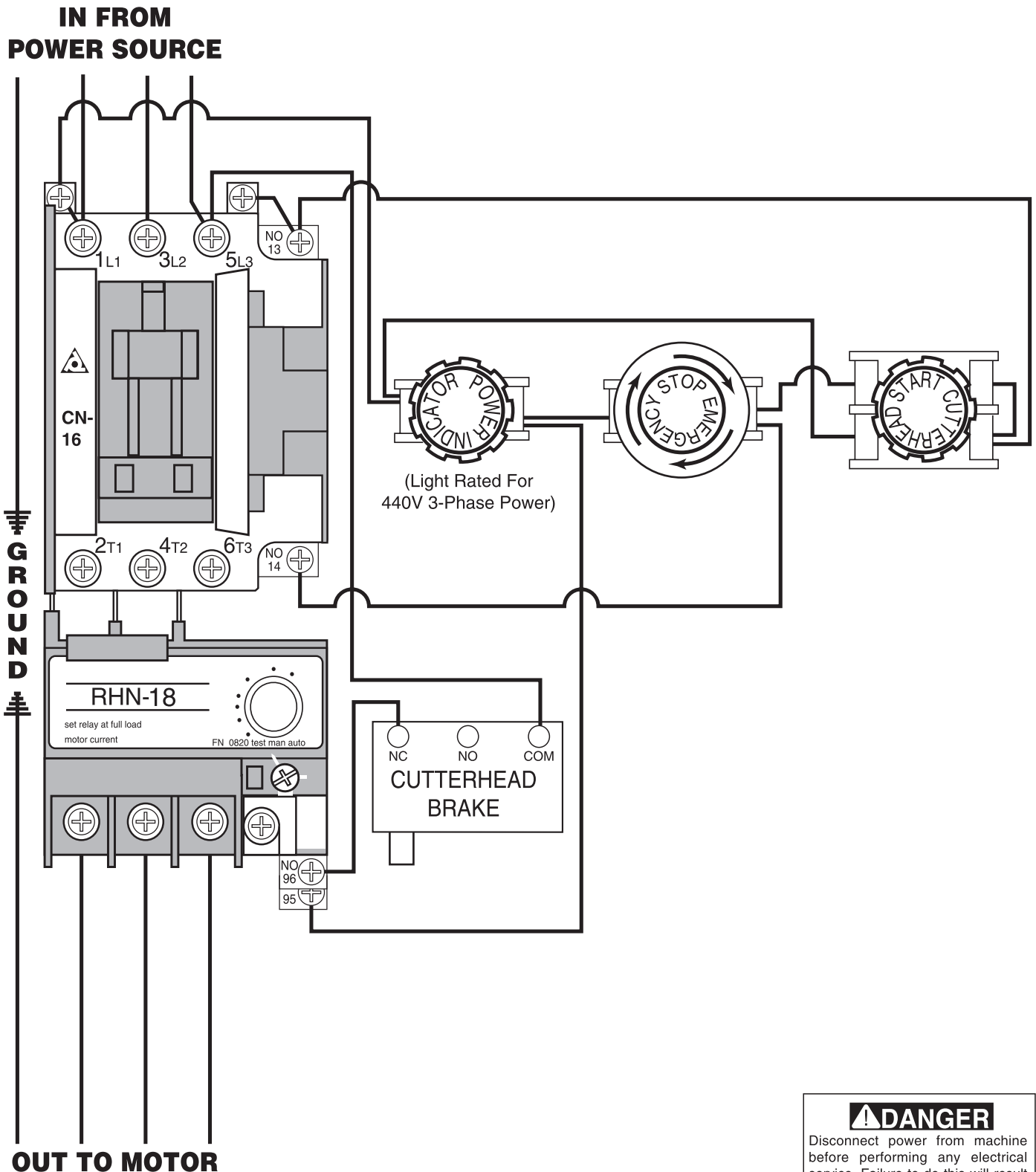
**IN FROM
POWER SOURCE**



⚠ DANGER

Disconnect power from machine before performing any electrical service. Failure to do this will result in a shock hazard leading to injury or death.

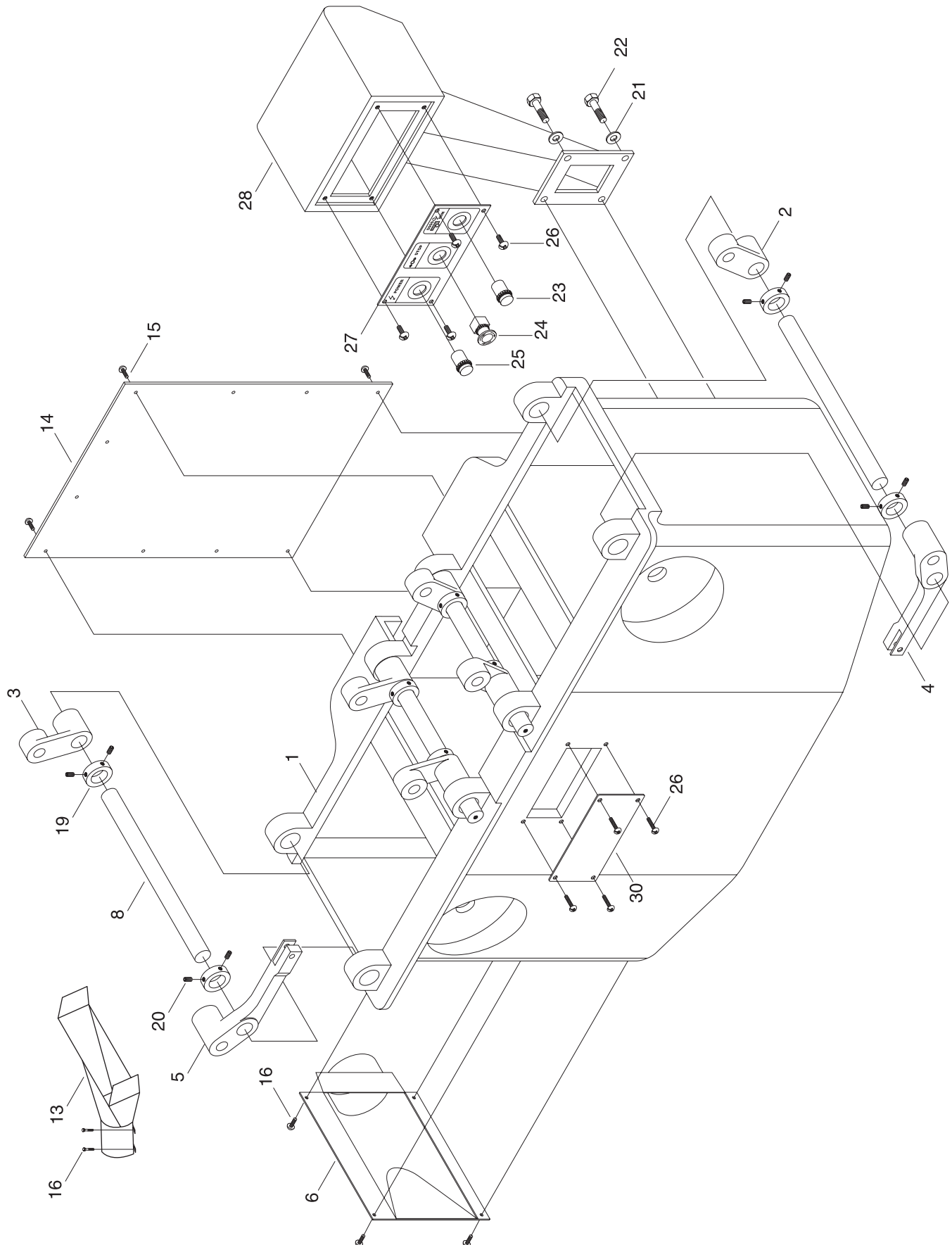
G4815 20" Jointer Wiring Diagram 7-1/2 HP 440V 3-Phase



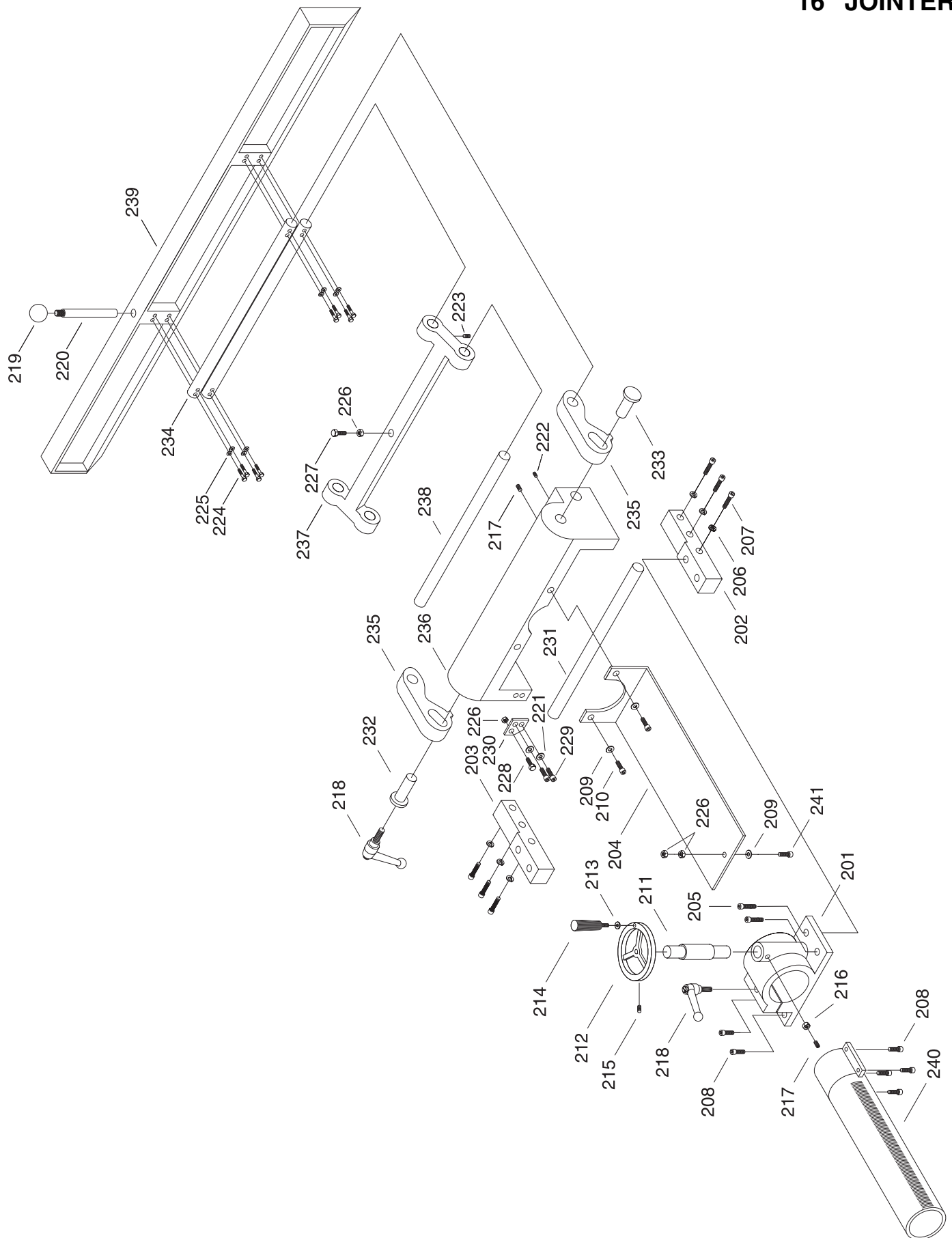
⚠ DANGER

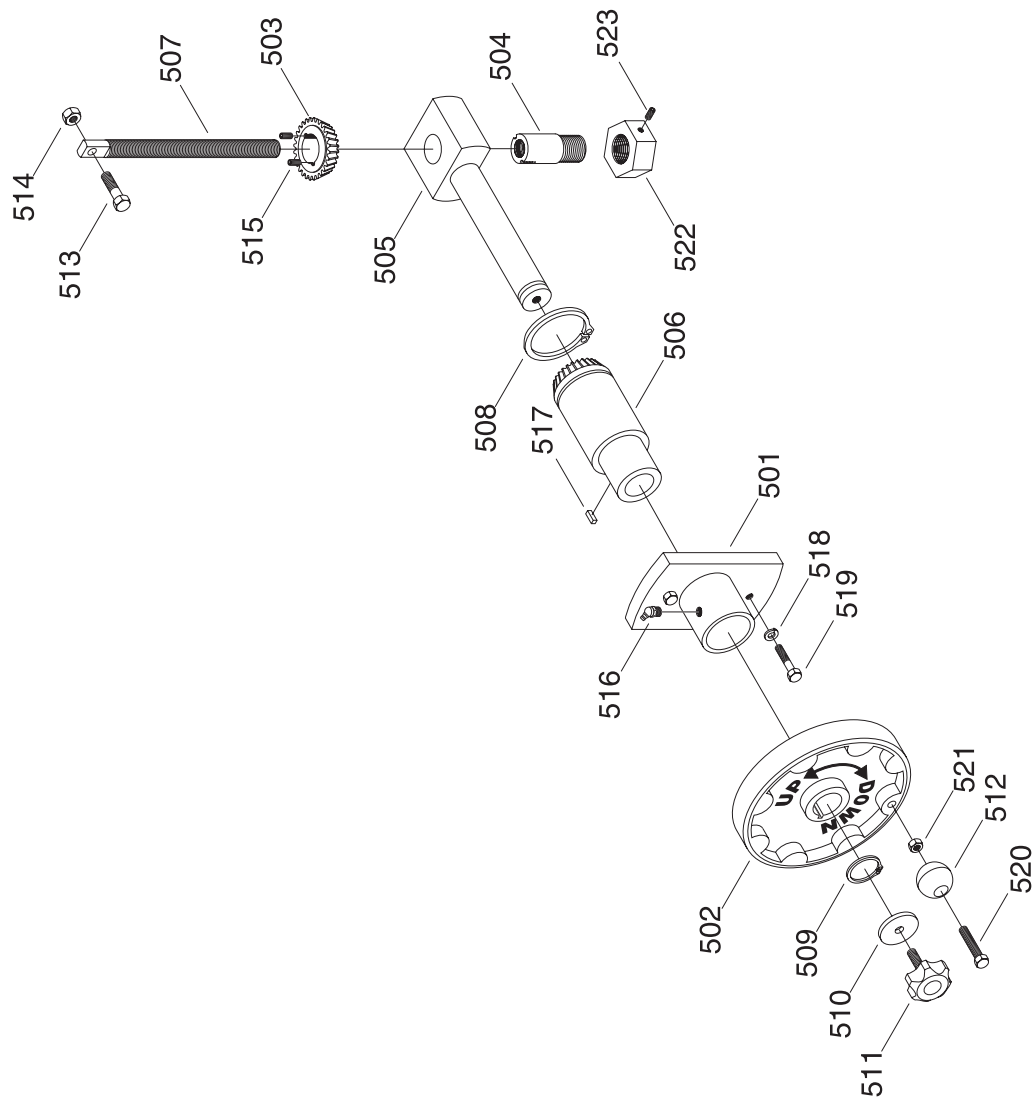
Disconnect power from machine before performing any electrical service. Failure to do this will result in a shock hazard leading to injury or death.

16" JOINTER

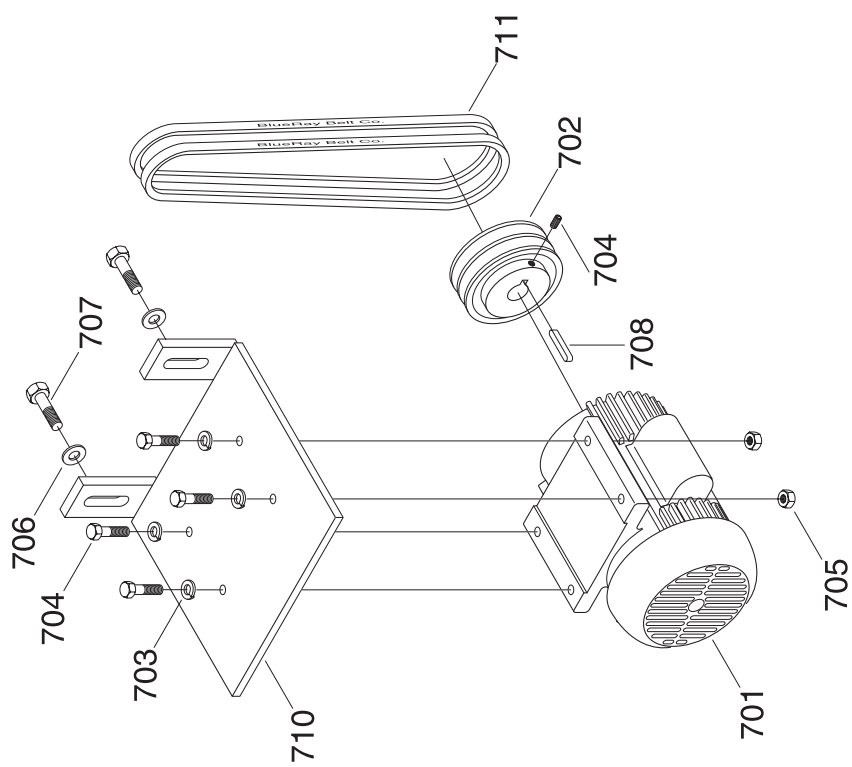


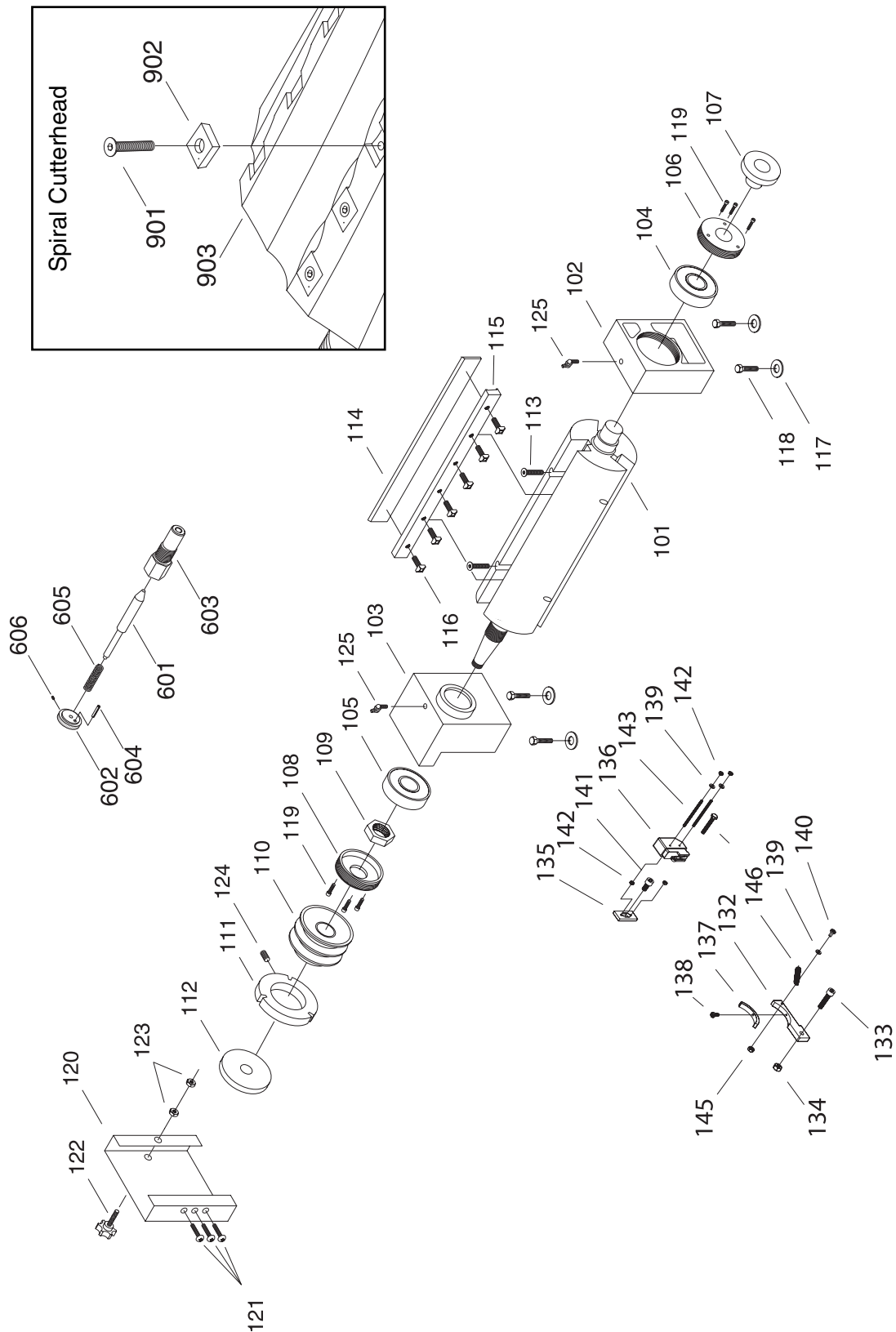
16" JOINTER





16" JOINTER





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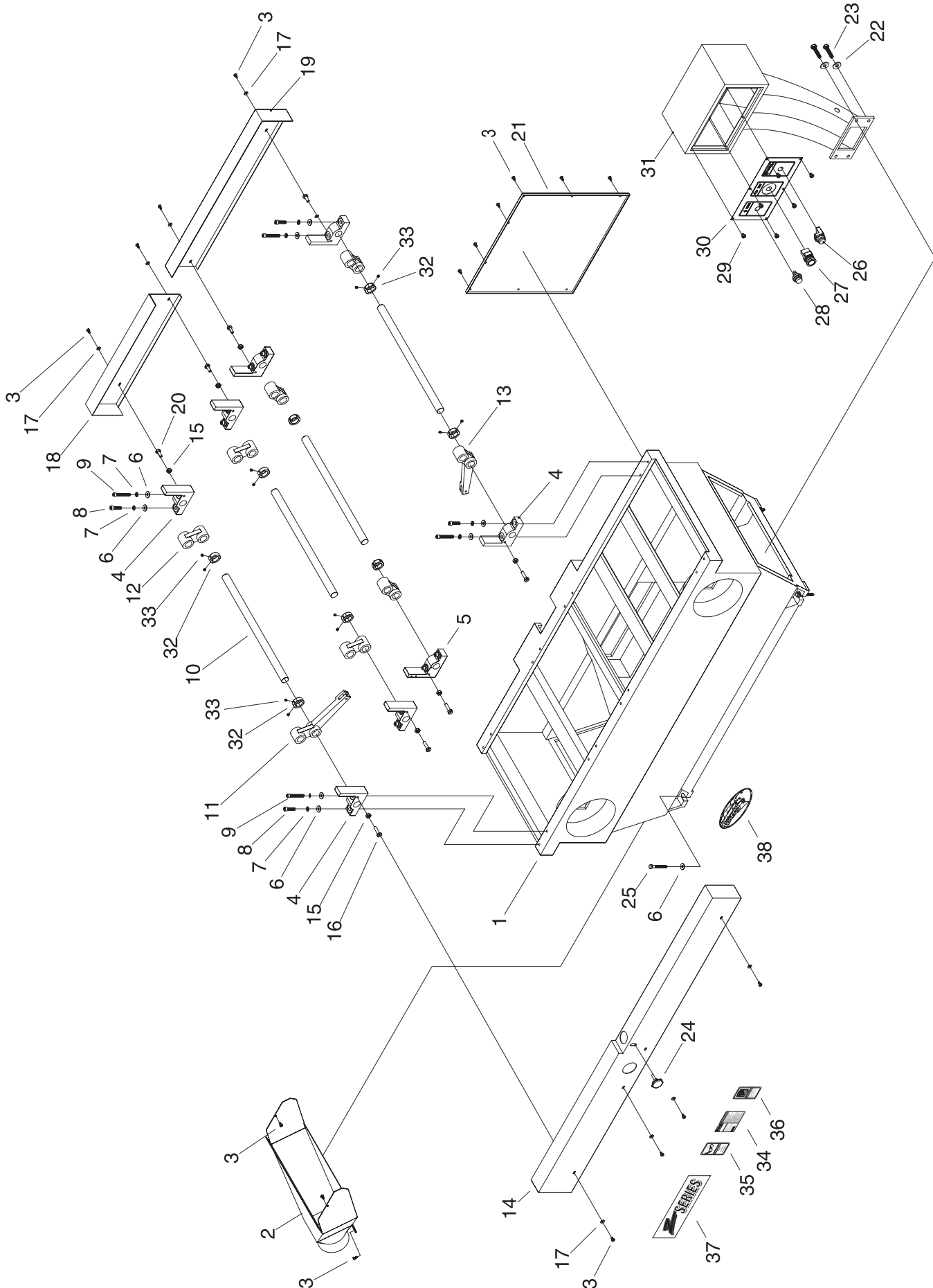
Ref#	Part#	Description
1	P9953001	BASE
2	P9953002	FENCE SEAT
3	P9859005	TABLE SUPPORT
4	P9859004	TABLE LIFTING ARM
5	P9859010	LIFTING ARM
6	P9953006	DUST HOOD
7	P9953007	LEFT REAR HOUSING
8	P9953008	TABLE SPINDLE
9	P9953009	RIGHT REAR HOUSING
10	P9953010	FRONT HOUSING
11	PW07	FLAT WASHER $\frac{5}{16}$ "
12	PB09M	HEX BOLT M8-1.25 X 20
13	P9953013	DUST CHUTE
14	P9859011	BASE REAR COVER
15	PS24M	PHLP HD SCR M6-1.0 X 10
16	PSB26M	CAP SCREW M6-1.0 X 12
17	PW02	FLAT WASHER $\frac{3}{8}$ "
18	P9859029	LOCK KNOB
19	P9859033	STOP COLLAR
20	PSS20M	SET SCREW M8-1.25 X 8
21	PW01	FLAT WASHER $\frac{1}{2}$ "
22	PB12M	HEX BOLT M12-1.75 X 55
23	P9859014	SWITCH (GREEN)
24	P9859015	SWITCH (RED)
25	P9859016	SWITCH (WHITE)
26	PS14M	PHLP HD SCR M6-1 X 12
27	P9953027	SWITCH PLATE
28	P9953028	SWITCH BOX
39	P9953039	MAG. CONT. CN-25 220V
39	P9953ZXF039	MAG. CONT. CN-18 220V
40	P9953040	OVLD. RELAY RHN-18/32A
40	P9953ZXF040	OVLD. RELAY RHN-18/17A
41	P9953041	LIGHT BULB 220V
42	P9953ZXF042	440V CONVERSION KIT
101	P9953101	CUTTERHEAD
102	P9953102	HEAD AXLE BOX (R.H.)
103	P9953103	HOUSING
104	P9953104	BEARING 6206-VV
105	P9953105	BEARING 6208-VV
106	P9953106	DUST COVER
107	P9953107	BRAKE NUT
108	P9953108	DUST COVER
109	P9953109	BEARING LOCK NUT
110	P9953110	PULLEY
111	P9953111	BRAKE PLATE
112	P9953112	WHEEL PLATE
112	P9953ZX112	PULLEY LOCK NUT
113	PS11M	PHLP HD SCR M6-1.0 X 16
114	P9953114	CUTTER

Ref#	Part#	Description
115	P9953115	GIB
116	P9859121	SPECIAL SCREW
117	PLW04	LOCK WASHER $\frac{3}{8}$ "
118	PB01M	HEX BOLT M10-1.5 X 30
119	PSB24M	CAP SCREW M5-0.8 X 16
120	P9953120	CUTTER DOOR
121	PS21M	PHLP HD SCR M4-0.7 X 15
122	P9953122	LOCK KNOB
123	PN06M	HEX NUT M5-0.8
124	PSS09M	SET SCREW M8-1.25 X 20
125	P9953125	NPT OIL FITTING $\frac{1}{8}$ "
132	P9953132	BRAKE PLATE
133	PSB40M	CAP SCREW M8-1.25 X 35
134	PN03M	HEX NUT M8-1.25
135	P9953135	BRAKE PLATE
136	P9953136	FIGURE SWITCH
137	P9953137	BRAKE PLATE
138	PS01	PHLP HD SCR #10-24 X $\frac{1}{2}$ "
139	PW03	FLAT WASHER #10]
140	PS06	PHLP HD SCR #10-24 X $\frac{3}{8}$ "
141	PSB11M	CAP SCREW M8-1.25 X 16
142	PN04M	HEX NUT M4-0.7
143	PS64M	PHLP HD SCR M4-0.7 X 65
144	PB47M	HEX BOLT M6-1.0 X 40
145	PN01M	HEX NUT M6-1.0
146	P9953146	SPRING
201	P9953201	TUBE SEAT
202	P9953202	BASE (LEFT)
203	P9953203	BASE (RIGHT)
204	P9953204	PLATE
205	PSB71M	CAP SCREW M10-1.5 X 60
206	PLW01	LOCK WASHER $\frac{5}{16}$ "
207	PSB05M	CAP SCREW M8-1.25 X 50
208	PSB72M	CAP SCREW M10-1.5 X 30
209	PW06	FLAT WASHER $\frac{1}{4}$ "
210	PSB04M	CAP SCREW M6-1.0 X 10
211	P9953211	GEAR SHAFT
212	P9953212	HANDWHEEL
213	PN02	HEX NUT $\frac{5}{16}$ "-18
214	P9953214	HANDLE
215	PSS01	SET SCREW $\frac{5}{16}$ "-18 X 1"
216	PN03M	HEX NUT M8-1.25
217	PSS21M	SET SCREW M8-1.25 X 25
218	P9953218	LOCK LEVER
219	P9859221	KNOB
220	P9859220	ADJUSTMENT ROD
221	PW03M	FLAT WASHER M6
222	PSS01M	SET SCREW M6-1.0 X 10
223	PSS03M	SET SCREW M6-1.0 X 8

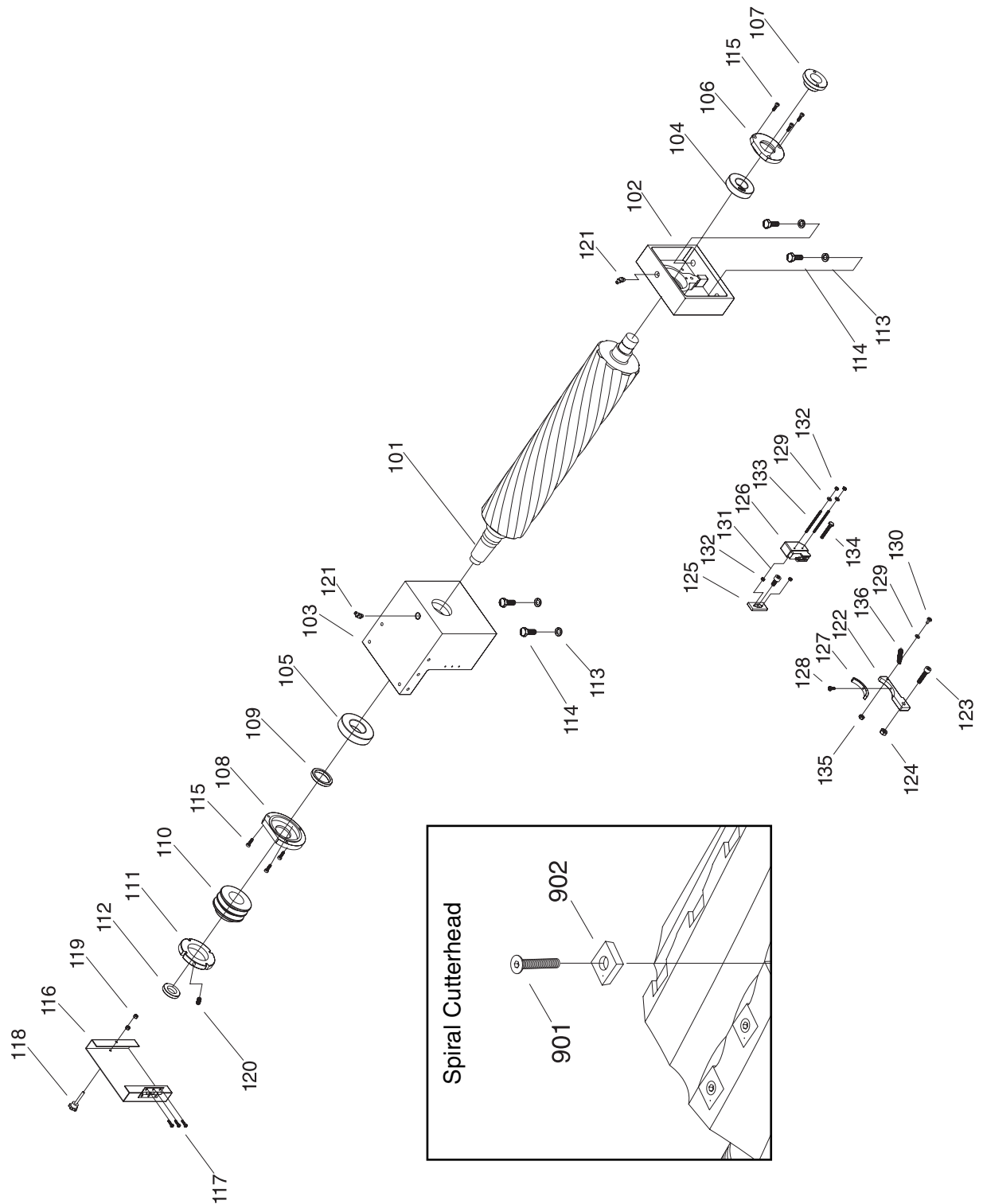
Ref#	Part#	Description
224	P9953224	SPECIAL HEX BOLT
225	PW07	FLAT WASHER 5/16"
226	PN01M	HEX NUT M6-1.0
227	PB73M	HEX BOLT M6-1.0 X 40
228	PB74M	HEX BOLT M6-1.0 X 35
229	PSB48M	CAP SCREW M6-1.0 X 35
230	P9953230	PLATE
231	P9953231	ANCHOR ROD
232	P9953232	SUPPORT SHAFT (RIGHT)
233	P9953233	SUPPORT SHAFT (LEFT)
234	P9953234	FENCE SHAFT (LONG)
235	P9953235	FENCE ANGLE ARM
236	P9953236	FENCE ANGLE SEAT
237	P9953237	FENCE SUPPORT SEAT
238	P9953238	SUPPORT SHAFT (DOWN)
239	P9953239	FENCE
240	P9953240	FENCE ROD
241	PSB06M	CAP SCREW M6-1.0 X 25
301	P9953301	BED (LEFT)
302	P9953302	NOISE DAMPENER
303	P9953303	PLATE
304	P9953304	TABLE SPINDLE
305	PSS16M	SET SCREW M8-1.25 X 10
306	PSB31M	CAP SCREW M8-1.25 X 25
307	PSB26M	CAP SCREW M6-1.0 X 12
308	P9953308	ROD (SHORT)
309	P9953309	SPRING
310	PN08	HEX NUT 3/8"-16
311	PW01	FLAT WASHER 1/2"
312	PW02	FLAT WASHER 3/8"
313	P9953313	BED (RIGHT)
314	P9953314	BED PIVOT PIN
315	PSB70M	CAP SCREW M12-1.75 X 30
316	P9953316	ROD (LONG)
401	P9953401	CUTTERHEAD GUARD
402	PSB06M	CAP SCREW M6-1.0 X 25
403	P9859403	SPRING SHAFT HOUSING
404	P9859404	SPRING SHAFT
405	PSB70M	CAP SCREW M12-1.75 X 30
501	P9953501	LIFT ROD COLLAR
502	P9859502	HANDWHEEL
503	P9859503	GEAR
504	P9859504	COLLAR
505	P9859505	LIFT ROD
506	P9859506	GEAR
507	P9859507	LIFT ROD
508	P9859508	SPECIAL RETAINER RING
509	P9859509	SPECIAL RETAINER RING
510	P9859510	SPECIAL WASHER

Ref#	Part#	Description
511	P9859511	LOCK KNOB
512	P9859512	HANDWHEEL KNOB
513	PSB47M	CAP SCREW M10-1.5 X 40
514	PN03M	HEX NUT M8-1.25
515	PSS23M	SET SCREW M4-0.7 X 10
516	P9859516	OIL CUP 3/16"
517	PK20M	KEY 5 X 5 X 15
518	PLW01	LOCK WASHER 5/16"
519	PB07M	HEX BOLT M8-1.25 X 25
520	PB58	HEX BOLT 3/8"-16 X 2"
521	PN08	HEX NUT 3/8"-16
522	P9953522	SPECIAL NUT
523	PSS02M	SET SCREW M6-1.0 X 6
601	P9953601	ROD
602	P9953602	HANDLE
603	P9953603	BRAKE CASING
604	P9953604	SPRING PIN
605	P9859607	SPRING
606	PSS02M	SET SCREW M6-1.0 X 6
701	P9953701	MOTOR 5 HP (1-PHASE)
701	P9953ZXF701	MOTOR 5 HP (3-PHASE)
702	P9859702	PULLEY
703	PLW04	LOCK WASHER 3/8"
704	PB01M	HEX BOLT M10-1.5 X 30
705	PN02M	HEX NUT M10-1.5
706	PW01	FLAT WASHER 1/2"
707	PB25M	HEX BOLT M12-1.75 X 25
708	PK57M	KEY 7 X 7 X 65
709	PSS08	SET SCREW 5/16"-18 X 1/2"
710	P9953710	MOTOR MOUNT PLATE
711	PVA50	V-BELT (A-50")
712	PLABEL-24	Z SERIES LABEL
713	PLABEL-11	SAFETY GLASSES LABEL
714	P9953714	MACHINE ID LABEL G9953
714	P9953ZX714	MACHINE ID LABEL G9953ZX
714	P9953ZXF714	MACHINE ID LABEL G9953ZXF
715	P9859715	PUSH BLOCK LABEL
716	PLABEL-8	CAST LOGO
801	P9953801	STOP COLLAR
802	P9953802	STOP COLLAR ROD
803	PSB10M	CAP SCREW M5-0.8 X 15
804	P9953804	HANDLE
805	PN20	HEX NUT 5/16"-24
806	PW06	FLAT WASHER 1/4"
807	PLW02	LOCK WASHER 1/4"
901	P9860ZX801	CAP SCREW M6-1.0 x 13
902	H2334	INDEXABLE CUTTER
903	P9953ZX903	SPIRAL CUTTERHEAD

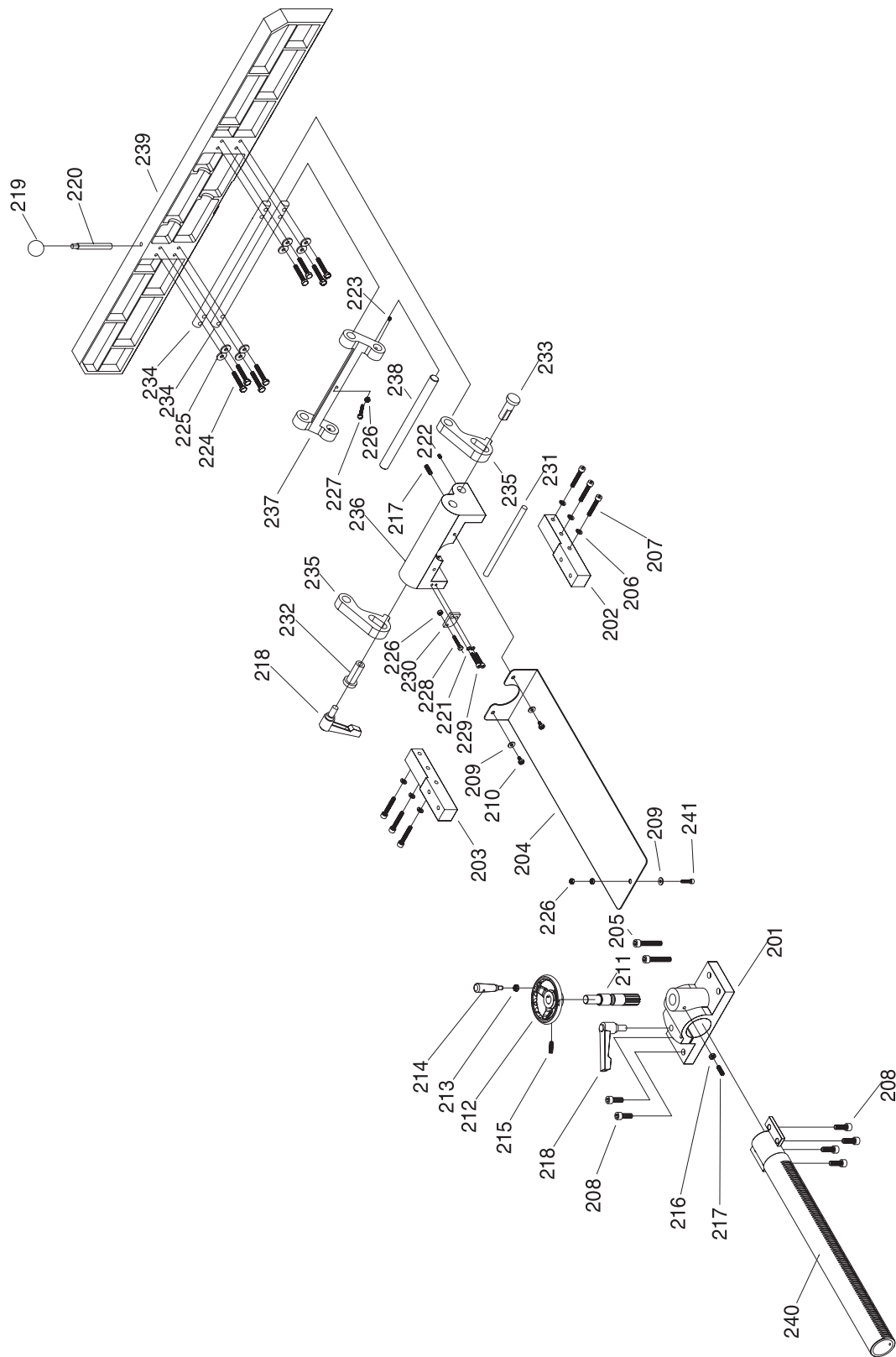
20" JOINTER



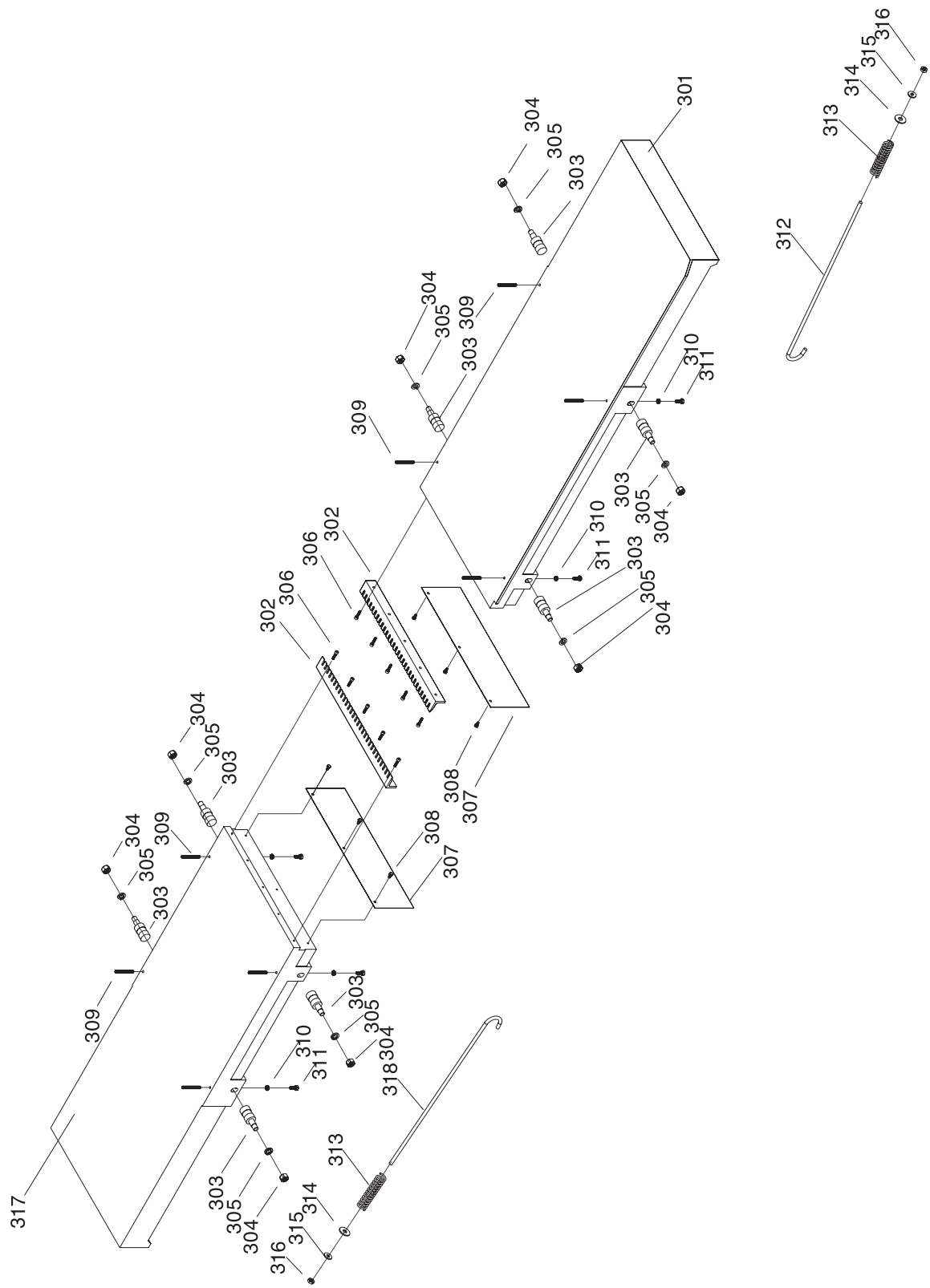
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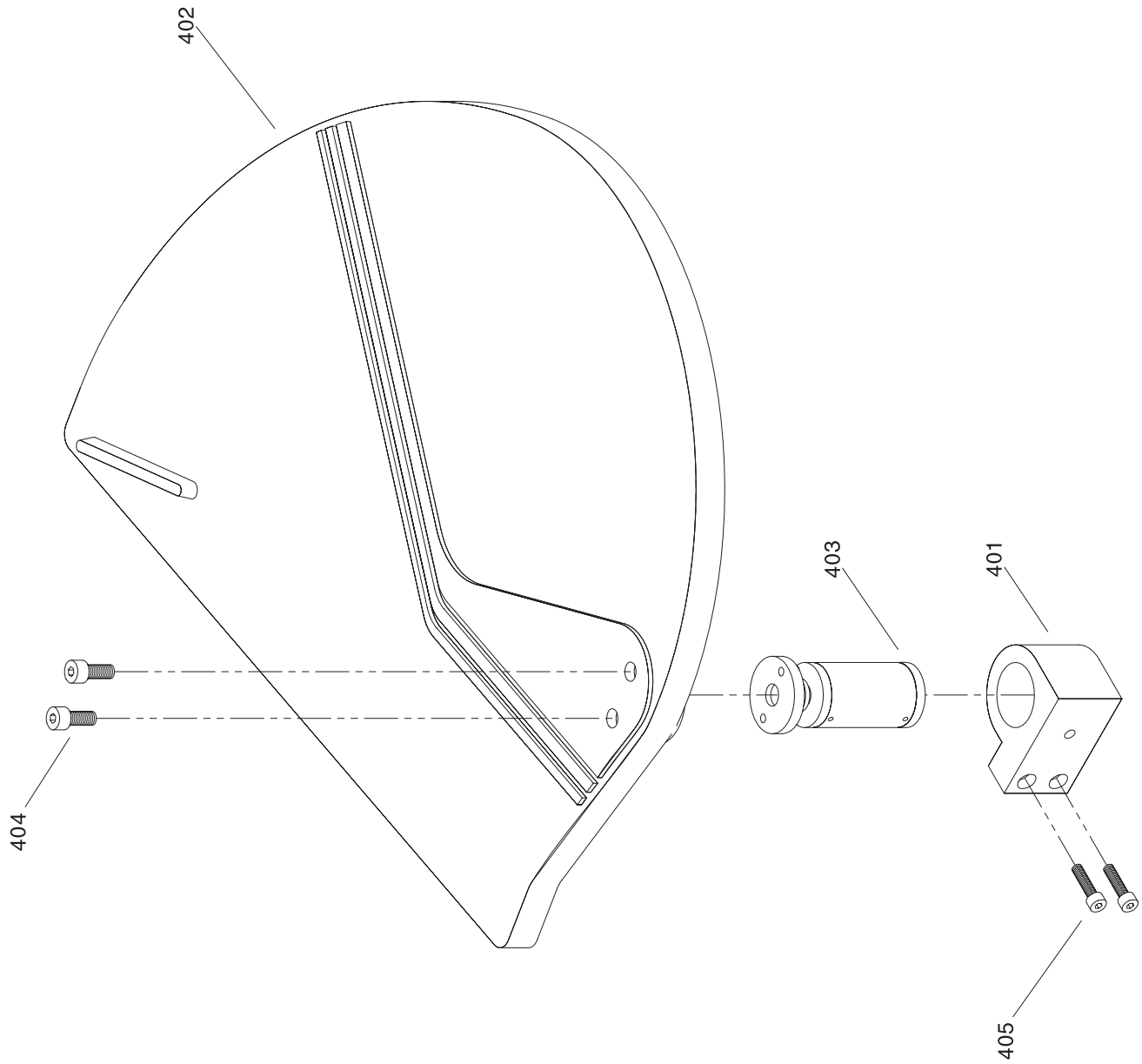
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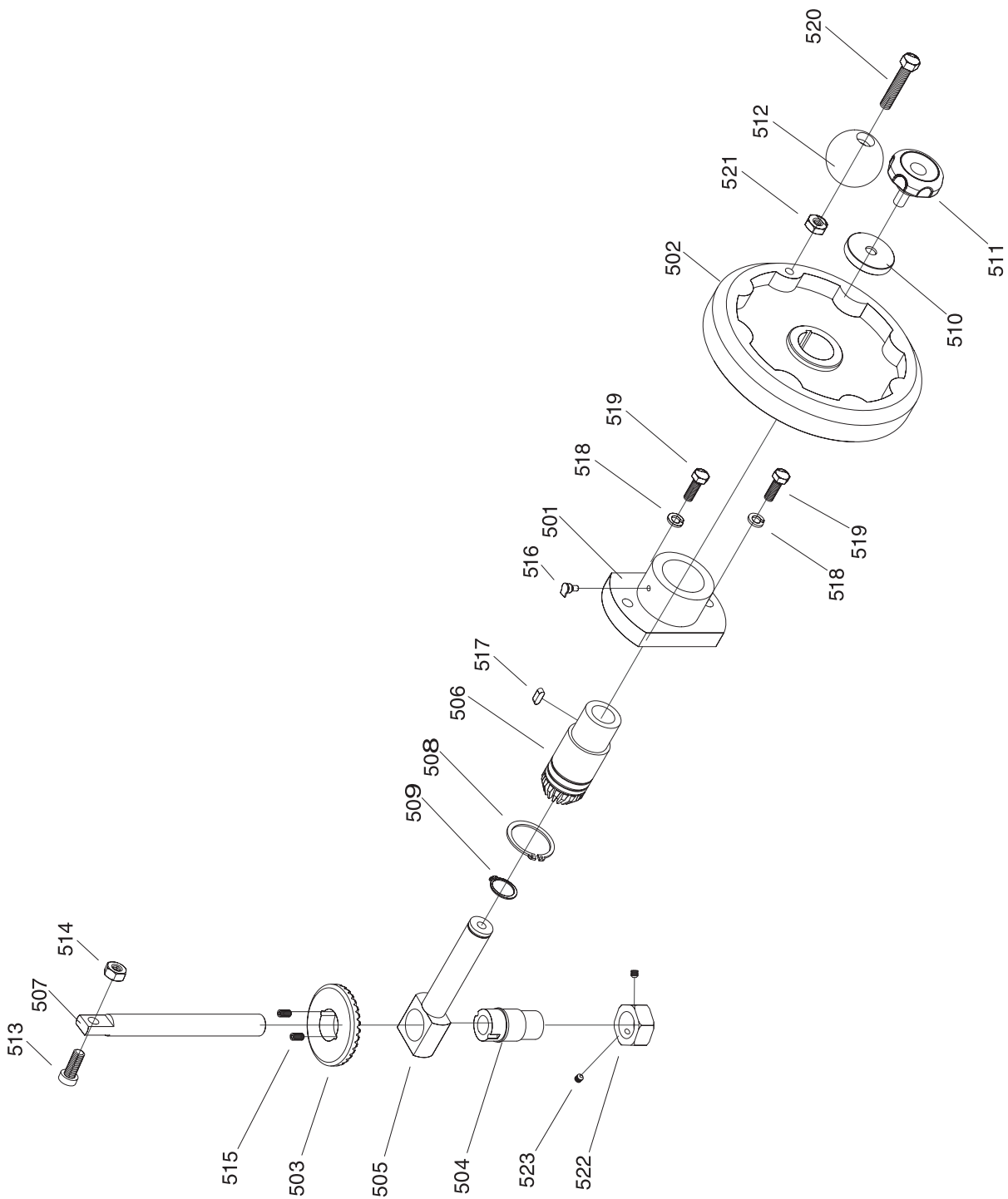
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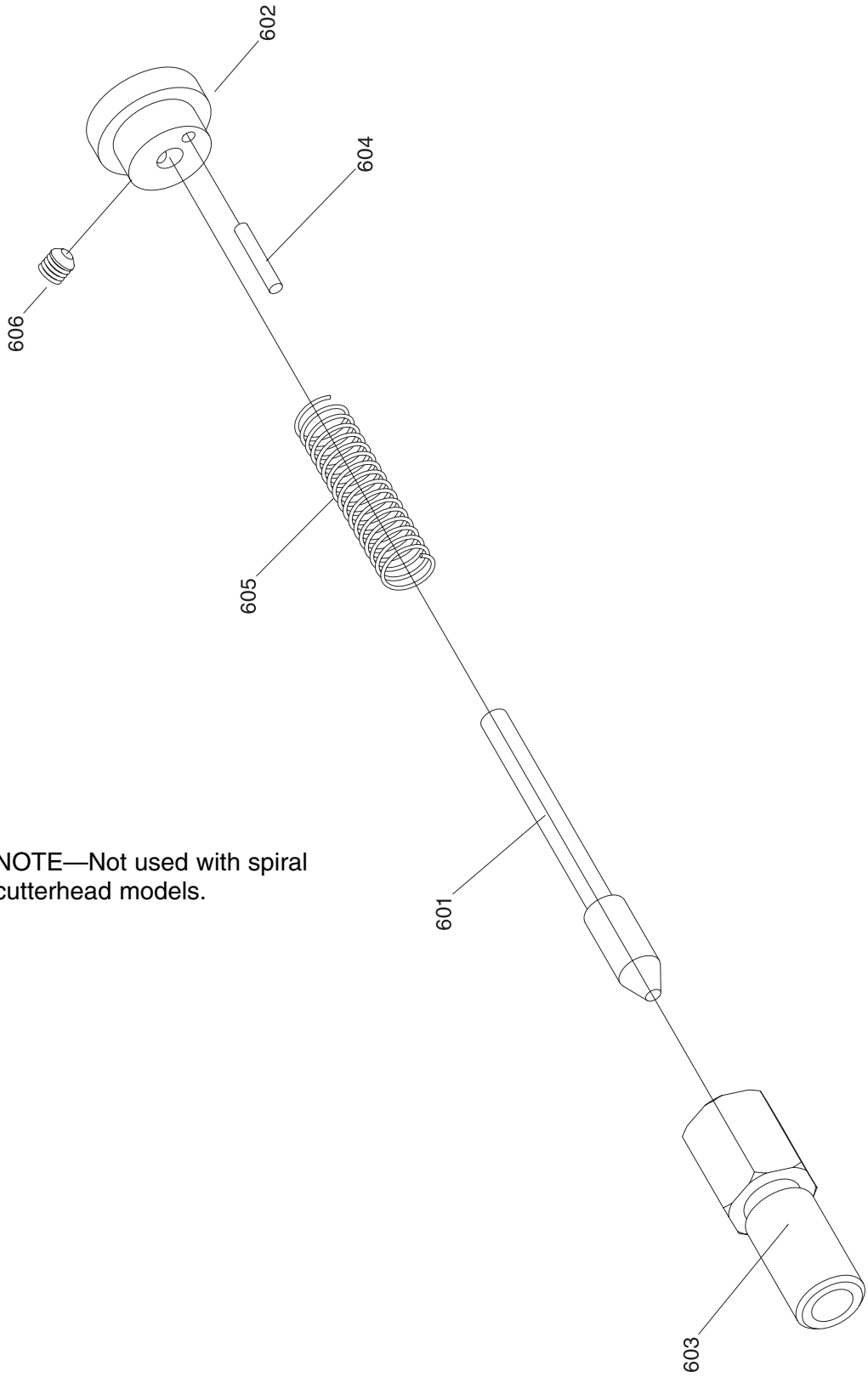
20" JOINTER



20" JOINTER

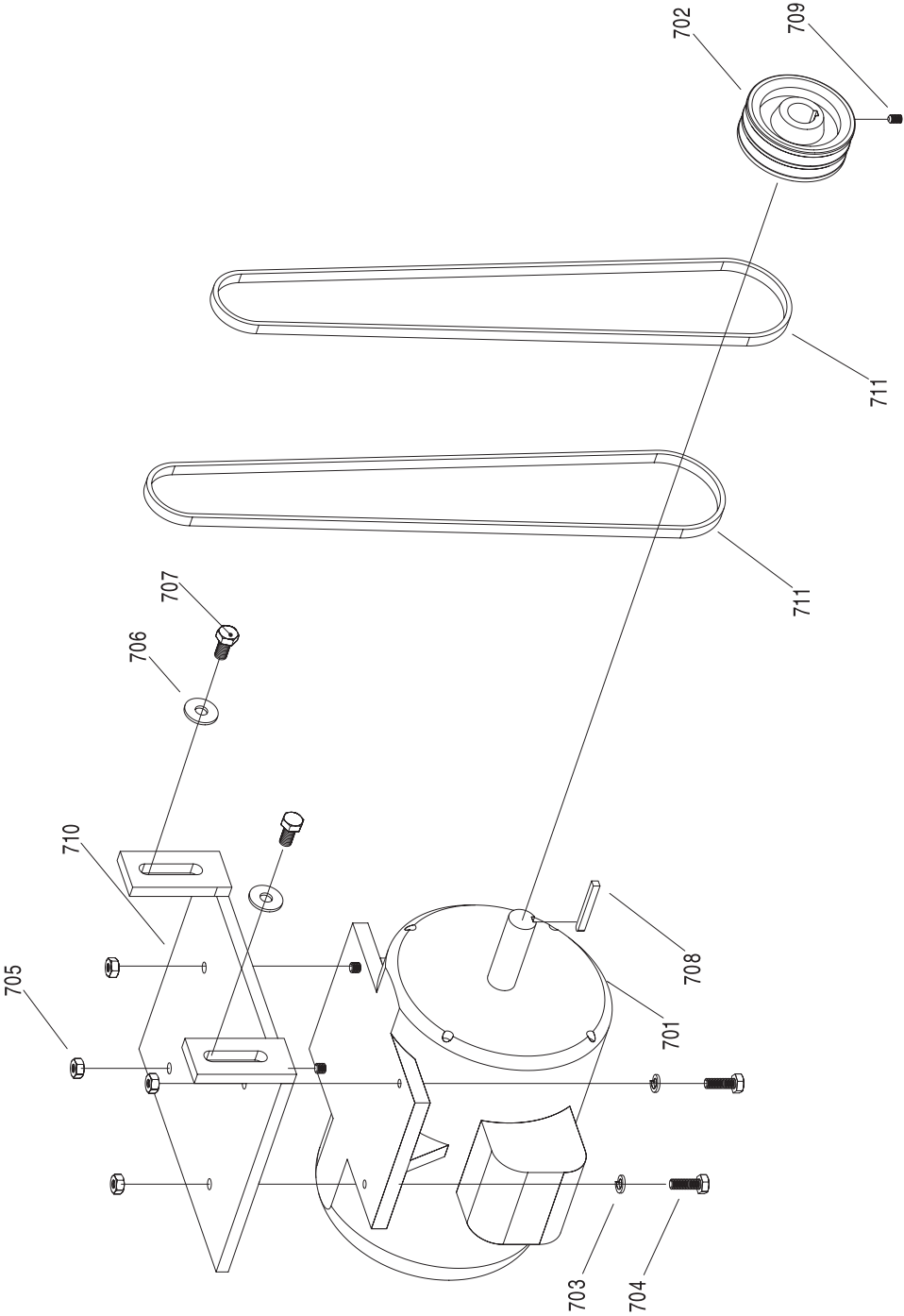


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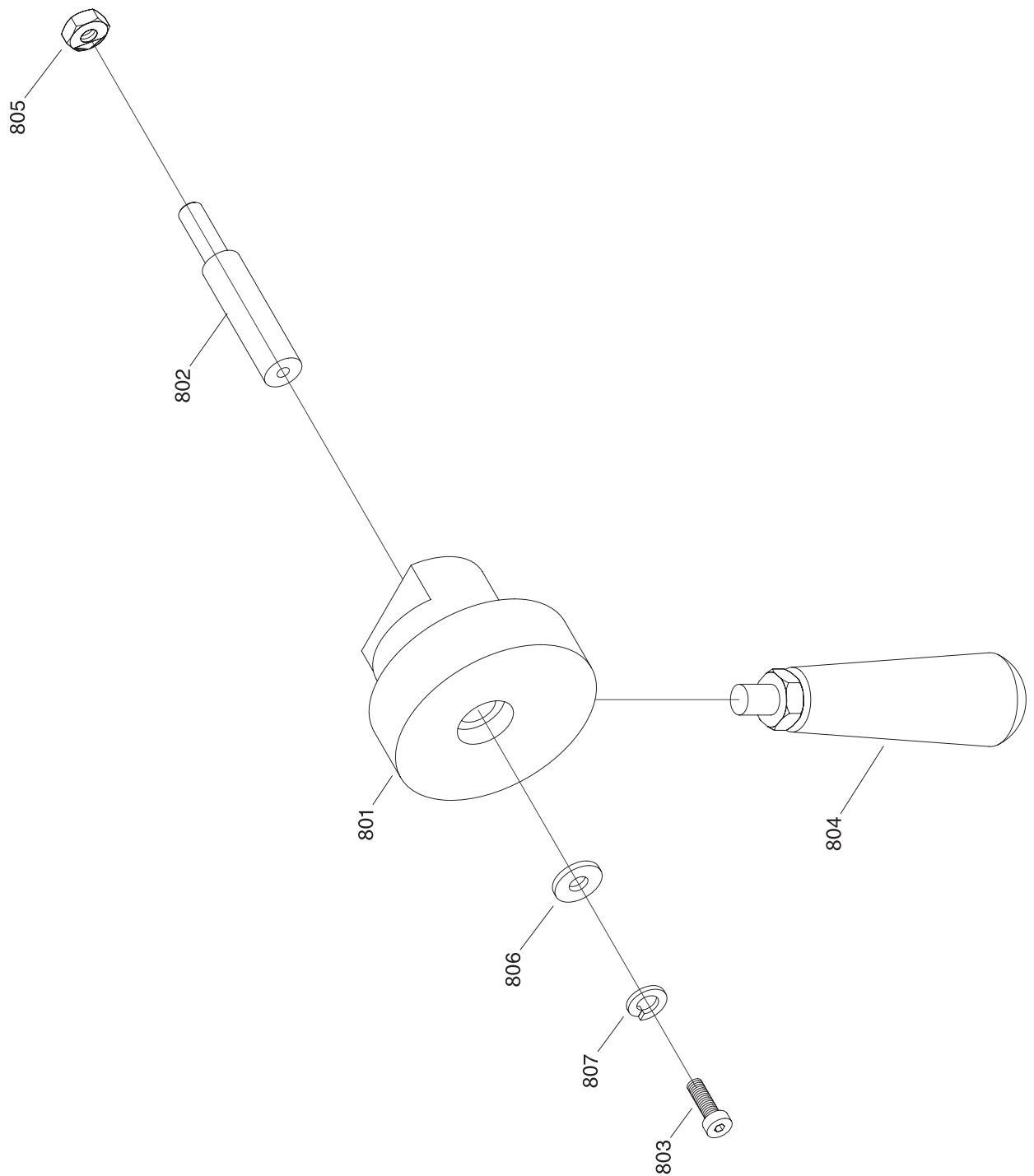


NOTE—Not used with spiral
cutterhead models.

20" JOINTER



20" JOINTER



Ref#	Part#	Description
1	P4815001	BASE
2	P4815002	DUST HOOD
3	PS24M	PHLP HD SCR M6-1.0 X 10
4	P4815004	BRACKET
5	P4815005	BRACKET
6	PW04M	FLAT WASHER 10MM
7	PLW06M	LOCK WASHER 10MM
8	PSB70M	CAP SCREW M10-1.5 X 45
9	PSB65M	CAP SCREW M10-1.5 X 70
10	P4815010	LONG SHAFT
11	P4815011	LIFTING BRACKET (LEFT)
12	P4815012	SUPPORT BRACKET
13	P4815013	LIFTING BRACKET (RIGHT)
14	P4815014	FRONT PLATE
15	PN02M	HEX NUT M10-1.5
16	P4815016	FRONT COVER KNOB
17	PW03M	FLAT WASHER 6MM
18	P4815018	LEFT REAR PLATE (SHORT)
19	P4815019	RIGHT REAR PLATE (LONG)
20	P4815020	REAR COVER FIXING KNOB
21	P4815021	BASE REAR COVER
22	PW06M	FLAT WASHER 12MM
23	PB12M	HEX BOLT M12-1.75 X 55
24	P4815024	START HANDLE
25	PB60	HEX BOLT $\frac{3}{8}$ -16 X 3
26	P4815026	SWITCH (GREEN)
27	P4815027	SWITCH (RED)
28	P4815028	SWITCH (WHITE)
29	PS14M	PHLP HD SCR M6-1 X 12
30	P4815030	SWITCH PLATE
31	P4815031	ELECTRIC BOX
32	P4815032	STOP CLAW FIXED RING
33	PSS20M	SET SCREW M8-1.25 X 8
34	P4815034	MACHINE ID LABEL
35	PLABEL-11	SAFETY GLASSES LABEL
36	P4815036	PUSH BLOCK LABEL
37	PLABEL-24	Z SERIES LABEL
38	PLABEL-8	CAST IRON LOGO
39	P4815039	MAG. CONT. CN-18 220V
40	P4815040	OVLD. RELAY RHN-18/23A
41	P4815041	LIGHT BULB 220V
42	P4815042	440V CONVERSION KIT
101	P4815101	CUTTERHEAD
102	P4815102	MOUNTING BRACKET
103	P4815103	MOUNTING BRACKET
104	P6206	BEARING 6206
105	P6208	BEARING 6208
106	P4815106	DUST COVER
107	P4815107	BRAKE COLLAR

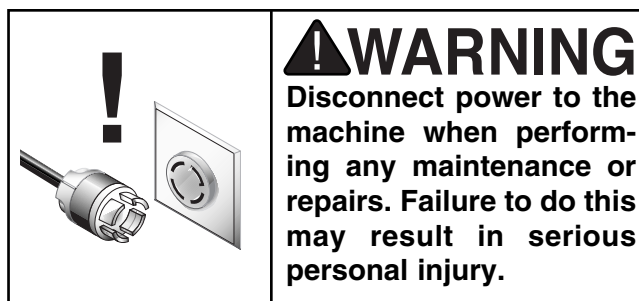
Ref#	Part#	Description
108	P4815108	DUST COVER
109	P4815109	BEARING LOCK COLLAR
110	P4815110	CUTTERHEAD PULLEY
112	P4815112	PULLEY LOCK NUT
113	PLW04	LOCK WASHER $\frac{3}{8}$ "
114	PB01M	HEX BOLT M10-1.5 X 30
115	PSB24M	CAP SCREW M5-.8 X 16
116	P4815116	REAR CUTTERHEAD DOOR
117	PS21M	PHLP HD SCR M4-.7 X 15
118	P4815118	HANDLE
119	PN06M	HEX NUT M5-0.8
120	PSS09M	SET SCREW M8-1.25 X 20
121	P4815121	OIL FEEDER
122	P4815122	BRAKE PLATE
123	PSB40M	CAP SCREW M8-1.25 X 35
124	PN03M	HEX NUT M8-1.25
125	P4815125	BRAKE PLATE
126	P4815126	FIGURE SWITCH
127	P4815127	BRAKE PLATE
128	PS01	PHLP HD SCR #10-24 X $\frac{1}{2}$ "
129	PW03	FLAT WASHER #10
130	PS06	PHLP HD SCR #10-24 X $\frac{3}{8}$ "
131	PSB11M	CAP SCREW M8-1.25 X 16
132	PN04M	HEX NUT M4-0.7
133	PS64M	PHLP HD SCR M4-.7 X 65
134	PB47M	HEX BOLT M6-1.0 X 40
135	PN01M	HEX NUT M6-1.0
136	P4815136	SPRING
201	P4815201	FENCE TUBE BRACKET
202	P4815202	BASE SPINDLE (LEFT)
203	P4815203	BASE SPINDLE (RIGHT)
204	P4815204	CUTTERHEAD TOP PLATE
205	PSB71M	CAP SCREW M10-1.5 X 60
206	PLW01	LOCK WASHER $\frac{5}{16}$ "
207	PSB05M	CAP SCREW M8-1.25 X 50
208	PSB72M	CAP SCREW M10-1.5 X 30
209	PW06	FLAT WASHER $\frac{1}{4}$ "
210	PS24M	PHLP HD SCR M6-1.0 X 10
211	P4815211	ROTARY GEAR SHAFT
212	P4815212	HANDWHEEL
213	PN02	HEX NUT $\frac{5}{16}$ -18
214	P4815214	KNOB $\frac{5}{16}$ -18
215	PSS01	SET SCREW $\frac{5}{16}$ -18 X 1
216	PN03M	HEX NUT M8-1.25
217	PSS21M	SET SCREW M8-1.25 X 25
218	P4815218	KNOB BOLT $\frac{1}{2}$ -12 X 25
219	P4815219	THREADED KNOB $\frac{3}{8}$ "-16
220	P4815220	ADJUST SHAFT
221	PW03M	FLAT WASHER 6MM

Ref#	Part#	Description
222	PSS01M	SET SCREW M6-1.0 X 10
223	PSS03M	SET SCREW M6-1.0 X 8
224	PB22M	HEX BOLT M8-1.25 X 50
225	PW07	FLAT WASHER 5/16"
226	PN01M	HEX NUT M6-1.0
227	PB47M	HEX BOLT M6-1.0 X 40
228	PB52M	HEX BOLT M6-1.0 X 35
229	PSB48M	CAP SCREW M6-1. X 35
230	P4815230	PLATE
231	P4815231	ROD
232	P4815232	SUPPORT COLLAR (RIGHT)
233	P4815233	SUPPORT COLLAR (LEFT)
234	P4815234	ROD
235	P4815235	FENCE ADJUSTMENT ARM
236	P4815236	FENCE BRACKET BASE
237	P4815237	FENCE SUPPORT SEAT
238	P4815238	ROD
239	P4815239	FENCE
240	P4815240	ROTARY GEAR TUBE
241	PSB06M	CAP SCREW M6-1. X 25
301	P4815301	INFEED TABLE
302	P4815302	RIGHT SOUND DAMPENER
303	P4815303	TABLE SUPPORT ROD
304	PN32M	HEX NUT M14-2.0
305	PLW08M	LOCK WASHER 14MM
306	PSB06M	CAP SCREW M6-1. X 25
307	P4815307	DUST COVER
308	PB02M	HEX BOLT M6-1. X 12
309	PSB66M	CAP SCREW M8-1.25 X 65
310	PN03M	HEX NUT M8-1.25
311	PB09M	HEX BOLT M8-1.25 X 20
312	P4815312	ROD (LONG)
313	P4815313	ROD SPRING
314	PW01	FLAT WASHER 1/2"
315	PW02	FLAT WASHER 3/8"
316	PN08	HEX NUT 3/8-16
317	P4815317	OUTFEED TABLE
318	P4815318	ROD (SHORT)
401	P4815401	RETURN CASING
402	P4815402	CUTTERHEAD GUARD
403	P4815403	RETURN SHAFT
404	PSB14M	CAP SCREW M8-1.25 X 20
405	PSB06M	CAP SCREW M6-1. X 25
501	P4815501	LIFTING FIXING SEAT
502	P4815502	LIFTING HANDWHEEL
503	P4815503	GEAR
504	P4815504	LIFTING COLLAR
505	P4815505	LIFTING ROD
506	P4815506	GEARED COLLAR

Ref#	Part#	Description
507	P4815507	LIFTING GEAR
508	P4815508	RING
509	P4815509	RING
510	P4815510	HANDWHEEL PLATE
511	P4815511	KNOB BOLT M10-1.5 X 20
512	P4815512	HANDLE
513	PB32M	HEX BOLT M10-1.5 X 25
514	PN02M	HEX NUT M10-1.5
515	PSS23M	SET SCREW M4-0.7 X 10
516	P4815516	OILER 3/16"
517	PK20M	KEY 5 X 5 X 15
518	PLW01	LOCK WASHER 5/16"
519	PB07M	HEX BOLT M8-1.25 X 25
520	PB58	HEX BOLT 3/8-16 X 2
521	PN08	HEX NUT 3/8-16
522	P4815522	HEX COLLAR
523	PSS02M	SET SCREW M6-1.0 X 6
601	P4815601	ROD
602	P4815602	HANDLE
603	P4815603	BRAKE CASING
604	P4815604	SPRING PIN
605	P4815605	SPRING
606	PSS02M	SET SCREW M6-1.0 X 6
701	P4815701	MOTOR 7 1/2 HP (3-PHASE)
702	P4815702	PULLEY
703	PLW04	LOCK WASHER 3/8"
704	PB01M	HEX BOLT M10-1.5 X 30
705	PN02M	HEX NUT M10-1.5
706	PW01	FLAT WASHER 1/2"
707	PB102M	HEX BOLT M12-1.75 X 25
708	PK57M	KEY 7 X 7 X 65
709	PSS08	SET SCREW 5/16-18 X 1/2
710	P4815710	MOTOR PLATE
711	PVA50	V-BELT A-50 4L500
801	P9953801	STOP RING
802	P9953802	STOP RING ROD
803	PSB24M	CAP SCREW M5-.8 X 16
804	P9953804	THREADED KNOB 3/8"
805	PN02	HEX NUT 5/16-18
806	PW06	FLAT WASHER 1/4"
807	PLW02	LOCK WASHER 1/4"
901	P9860ZX801	CAP SCREW M6-1.0 x 13
902	H2334	INDEXABLE CUTTER

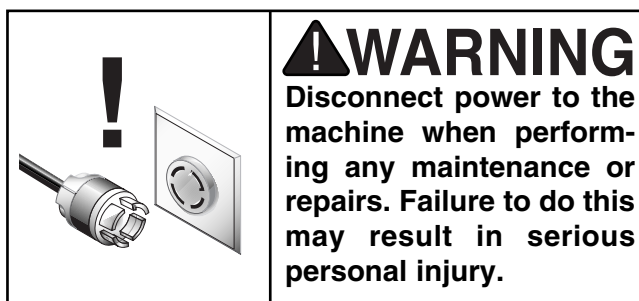
Troubleshooting Guide

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Motor will not start.	<ol style="list-style-type: none"> 1. Low voltage. 2. Open circuit in motor or loose connections. 	<ol style="list-style-type: none"> 1. Check power line for proper voltage. 2. Inspect all lead connections on motor for loose or open connections.
Motor will not start; fuses or circuit breakers blow.	<ol style="list-style-type: none"> 1. Short circuit in line cord or plug. 2. Short circuit in motor or loose connections. 3. Incorrect fuses or circuit breakers in power line. 	<ol style="list-style-type: none"> 1. Inspect cord or plug for damaged insulation and shorted wires. 2. Inspect all connections on motor for loose or shorted terminals or worn insulation. 3. Install correct fuses or circuit breakers.
Motor overheats.	<ol style="list-style-type: none"> 1. Motor overloaded. 2. Air circulation through the motor restricted. 	<ol style="list-style-type: none"> 1. Reduce load on motor. 2. Clean out motor to provide normal air circulation.
Motor stalls (resulting in blown fuses or tripped circuit).	<ol style="list-style-type: none"> 1. Short circuit in motor or loose connections. 2. Low voltage. 3. Incorrect fuses or circuit breakers in power line. 4. Motor overloaded. 	<ol style="list-style-type: none"> 1. Inspect connections on motor for loose or shorted terminals or worn insulation. 2. Correct the low voltage conditions. 3. Install correct fuses or circuit breakers. 4. Reduce load on motor.
Cutterhead slows when operating.	<ol style="list-style-type: none"> 1. Applying too much pressure to workpiece. 	<ol style="list-style-type: none"> 1. Feed workpiece slower. 2. Tighten V-belts.
Snipe (gouge in the end of the board that is uneven with the rest of the cut).	<ol style="list-style-type: none"> 1. Outfeed table is set too low. 	<ol style="list-style-type: none"> 1. Align outfeed table with cutterhead knife or carbide cutters at top dead center. See page 29.
Workpiece stops in the middle of the cut.	<ol style="list-style-type: none"> 1. Outfeed table is set too high. 	<ol style="list-style-type: none"> 1. Align outfeed table with cutterhead knife or carbide cutters at top dead center. See page 29.
Chipping.	<ol style="list-style-type: none"> 1. Knots or conflicting grain direction in wood. 2. Dull knives. 3. Feeding too fast. 4. Taking too deep of a cut. 	<ol style="list-style-type: none"> 1. Inspect stock for knots and grain. 2. Inspect and sharpen cutterhead knives. 3. Slow down the rate that you feed the wood into the cutterhead. 4. Raise the infeed table to take a smaller depth of cut. Never exceed $\frac{1}{8}$" per pass when edge jointing or $\frac{1}{32}$" when surface planing. Reduce cutting depth for harder woods.
Fuzzy grain.	<ol style="list-style-type: none"> 1. Wood may have high moisture content or surface wetness. 2. Dull knives. 	<ol style="list-style-type: none"> 1. Check moisture content and allow to dry if moisture is too high. 2. Inspect and sharpen cutterhead knives.



Troubleshooting Guide

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Lines or ridges in on board.	1. Nicked knife or carbide cutter.	1. Sharpen the knife or rotate the carbide cutter.
Uneven knife marks on board.	1. One or more knives out of alignment.	1. Reset the knives in the cutterhead, using the knife setting gauge. See pages 30-31 .
Wavy surface or chatter marks on board.	1. Board being fed too fast. 2. Knives set incorrectly.	1. Slow down the feed rate and feed consistently. DO NOT stop or hesitate during feeding. 2. Inspect and sharpen the cutterhead knives. Reset knives in cutterhead, using the knife setting jig. See pages 30-31 .
Board edge is concave or convex after jointing.	1. Board not held with even pressure on infeed and outfeed table. 2. Board was too uneven start. 3. Board has excessive bow or twist along its length. 4. Insufficient number of passes. 5. Board length exceeds jointer capacity.	1. Hold board with even pressure as it moves through the cutterhead. See page 24 for more details about the proper method for edge jointing. 2. Take partial cuts to remove the extreme high spots before doing a full pass. 3. Surface plane one face so there is a good surface to position against the fence. 4. It may take 3 to 5 passes to achieve a perfect edge, depending on the starting condition of the board and the depth of cut. 5. Shorten the board to a length no more than 3X the combined length of the jointer tables.
Tables are difficult to adjust.	1. Table lock is partially engaged.	1. Completely loosen the table lock.



Notes



Warranty & Returns

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

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

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

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

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

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

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

1. How did you learn about us?

___ Advertisement	___ Friend
___ Catalog	___ Card Deck
___ World Wide Web	
___ Other _____	
2. Which of the following magazines do you subscribe to.

___ American Woodworker	___ Practical Homeowner
___ Cabinetmaker	___ Shop Notes
___ Family Handyman	___ Today's Homeowner
___ Fine Homebuilding	___ WOOD
___ Fine Woodworking	___ Wooden Boat
___ Home Handyman	___ Woodshop News
___ Journal of Light Construction	___ Woodsmith
___ Old House Journal	___ Woodwork
___ Popular Mechanics	___ Woodworker
___ Popular Science	___ Woodworker's Journal
___ Popular Woodworking	___ Workbench
___ Other _____	
3. Which of the following woodworking/remodeling shows do you watch?

___ Backyard America	___ The New Yankee Workshop
___ Home Time	___ This Old House
___ The American Woodworker	___ Woodwright's Shop
___ Other _____	
4. What is your annual household income?

___ \$20,000-\$29,999	___ \$60,000-\$69,999
___ \$30,000-\$39,999	___ \$70,000-\$79,999
___ \$40,000-\$49,999	___ \$80,000-\$89,999
___ \$50,000-\$59,999	___ \$90,000 +
5. What is your age group?

___ 20-29	___ 50-59
___ 30-39	___ 60-69
___ 40-49	___ 70 +
6. How long have you been a woodworker?

___ 0 - 2 Years	___ 8 - 20 Years
___ 2 - 8 Years	___ 20+ Years
7. How would you rank your woodworking skills?

___ Simple	___ Advanced
___ Intermediate	___ Master Craftsman
8. What stationary woodworking tools do you own? Check all that apply.

___ Air Compressor	___ Panel Saw
___ Bandsaw	___ Planer
___ Drill Press	___ Power Feeder
___ Drum Sander	___ Radial Arm Saw
___ Dust Collector	___ Shaper
___ Horizontal Boring Machine	___ Spindle Sander
___ Panel Saw	___ Table Saw
___ Lathe	___ Vacuum Veneer Press
___ Mortiser	___ Wide Belt Sander
___ Other _____	
9. How many of your woodworking machines are Grizzly? _____
10. Which benchtop tools do you own? Check all that apply.

___ 1" x 42" Belt Sander	___ 6" - 8" Grinder
___ 5" - 8" Drill Press	___ Mini Lathe
___ 8" Table Saw	___ 10" - 12" Thickness Planer
___ 8" - 10" Bandsaw	___ Scroll Saw
___ Disc/Belt Sander	___ Spindle/Belt Sander
___ Mini Jointer	
___ Other _____	
11. How many of the machines checked above are Grizzly? _____
12. Which portable/hand held power tools do you own? Check all that apply.

___ Belt Sander	___ Orbital Sander
___ Biscuit Joiner	___ Palm Sander
___ Circular Saw	___ Portable Planer
___ Detail Sander	___ Saber Saw
___ Drill/Driver	___ Reciprocating Saw
___ Miter Saw	___ Router
___ Other _____	
13. What machines/supplies would you like Grizzly Industrial to carry?

14. What new accessories would you like Grizzly Industrial to carry?

15. What other companies do you purchase your tools and supplies from?

16. Do you think your purchase represents good value?
___ Yes _____ No
17. Would you recommend Grizzly Industrial to a friend?
___ Yes _____ No
18. Would you allow us to use your name as a reference for Grizzly customers in your area? **Note: We never use names more than three times.**
___ Yes _____ No
19. Comments: _____

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