

# **Grizzly** **Industrial, Inc.**®

## **MODEL T26472Z/G4011Z/T26751Z** **3-IN-1 SHEET METAL MACHINE**

### **OWNER'S MANUAL**

*(For models manufactured since 02/14)*



T26472Z



G4011Z



T26751Z

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OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**

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## **WARNING!**

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

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

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

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



## **WARNING!**

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

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

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

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# Identification

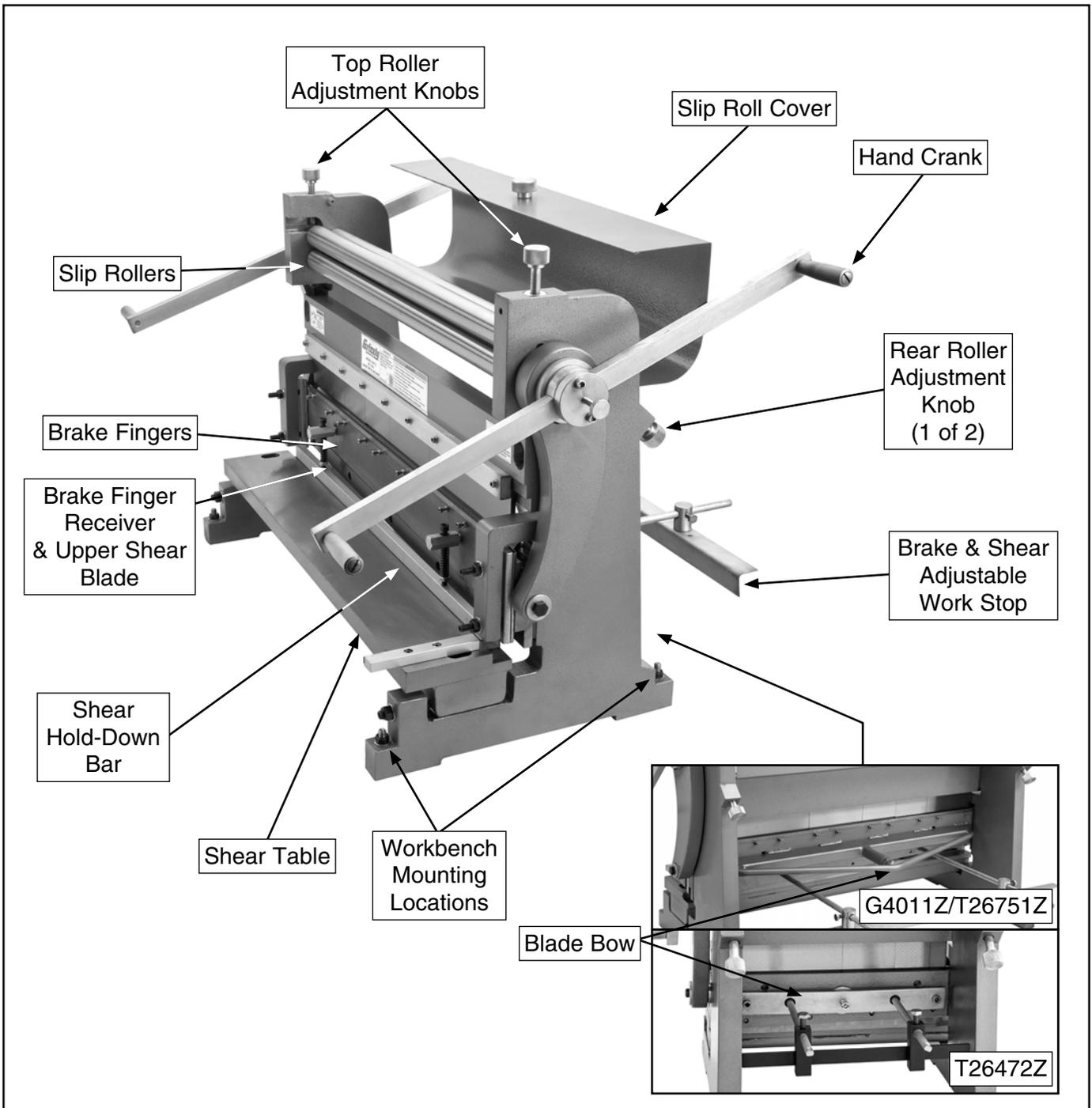


Figure 1. Model T26472Z/ G4011Z/T26751Z identification.

	<p><b>⚠ WARNING</b></p> <p>To reduce your risk of serious injury, read this entire manual <b>BEFORE</b> using machine.</p>
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# MACHINE DATA SHEET

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## MODEL G4011Z/T26472Z/T26751Z 3-in-1 Sheet Metal Machines

Model Number	T26472Z - 12"	G4011Z - 30"	T26751Z - 42"
<b>Product Dimensions</b>			
Weight	155 lbs.	452 lbs.	690 lbs.
Width (side-to-side)/Depth (front-to-back)/Height	25" x 16½" x 19"	45" x 28" x 26"	57" x 29" x 28"
Foot Print (Width/Depth)	14½" x 14½"	17½" x 33"	45¼" x 20⅞"
<b>Shipping Dimensions</b>			
Type	Wood Crate		
Weight	175 lbs.	475 lbs.	730 lbs.
Width (side-to-side)/Depth (front-to-back)/Height	26" x 17" x 23"	20" x 46" x 32"	22" x 59" x 35"
<b>Main Specifications</b>			
Maximum Width	12"	30"	42"
Maximum Thickness Mild Steel	20 Gauge	22 Gauge	20 Gauge
Minimum Reverse Bend	⅜"	½"	½"
Maximum Height of Pan/Box Sides	1¾"	2⅜"	1¾"
Number of Fingers	4	7	8
Width of Fingers	1", 2", 3", 6"	1", 2", 3", 4", 4", 6", 10"	1", 1½", 2", 2½", 4", 6", 10", 15"
Slip Roll Minimum Cylinder Diameter	1⅜"	1⅝"	1¾"
Slip Roll Roller Diameter	1¼"	1½"	1⅞"
Slip Roll Wire Sizes	⅛", ⅜", ¼"	⅜", ¼", ⅝"	⅜", ¼", ⅝"
Front Stop Scale Range	½"-7"		
Rear Stop Scale Range	½"-16"	½"-18"	½"-18"
<b>Construction</b>			
Brake	Steel		
Frame	Steel		
Rollers	Precision-Ground Hardened Steel		
Table	Steel		
Shear Blades	Precision-Ground Hardened Steel		
<b>Other Specifications</b>			
Country of Origin	China		
Warranty	1 Year		
Serial Number Location	Machine ID Label		



# SECTION 1: SAFETY

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

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

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

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

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

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

## Safety Instructions for Machinery

### **WARNING**

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

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

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

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

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

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

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



# WARNING

**WEARING PROPER APPAREL.** Do not wear clothing, apparel or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips, which could cause loss of workpiece control.

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

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

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

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

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

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

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

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

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

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

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

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

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

**CHECK DAMAGED PARTS.** Regularly inspect machine for any condition that may affect safe operation. Immediately repair or replace damaged or mis-adjusted parts before operating machine.

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

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



# Additional Safety for 3-in-1 Sheet Metal Machines

## **WARNING**

**Serious injury or death can occur from getting body parts crushed or amputated by shear blades, brake fingers, or rollers. Severe cuts can occur from contact with workpiece edges. To minimize the risk of getting hurt or killed, anyone operating this machine MUST completely heed the hazards and warnings below.**

**AMPUTATION/PINCHING HAZARD.** This machine can quickly crush or amputate fingers, hands, or body parts. Never place fingers, hands, or body parts between or near the rollers, brake fingers, clamping bar, or shear blades when operating.

**RATED CAPACITY.** Only workpieces that are within the rated gauge capacity can be processed with this machine (refer to the **Machine Data Sheet on Page 4**). DO NOT use any sort of “cheater” bar or pipe on the hand crank.

**SHARP METAL EDGES.** Sharp edges on sheet metal workpieces can easily cause deep cuts while handling. Wear leather gloves to help protect your hands, and always chamfer and debur sharp workpiece edges.

**USAGE.** To avoid personal injury or property damage, always use each component of machine for its intended purposes, and DO NOT modify machine in any way.

**SECURE MACHINE BEFORE USE.** Before using, fasten machine to a sturdy surface that can withstand the dynamic forces involved in cutting and forming sheet metal. Otherwise, machine may unexpectedly move or fall, causing serious injury or property damage.

**SHEAR BLADES/BRAKE FINGERS.** If not properly aligned, shear blades or brake fingers can ruin workpieces and machine parts or result in unexpected movement of workpieces. ALWAYS keep these parts properly adjusted and in good working condition for best results and predictable performance.

**STABLE FOOTING.** This machine requires operator to apply moderate force, especially while using shear. Without stable footing, operator could slip or fall, resulting in personal injury. Always stand with both feet comfortably on a non-slip surface during operation.

## **WARNING**

**Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.**

## **CAUTION**

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



# SECTION 2: SETUP

## Unpacking

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

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

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



## Needed for Setup

The following are needed to complete the setup process, but are not included with this machine.

Description	Qty
• Safety Glasses .....	1
• Cleaner/Degreaser .....	As Needed
• Disposable Shop Rags.....	As Needed
• Forklift.....	1
• Mounting Hardware ( <b>Page 12</b> ) ...	As Needed



# Inventory

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

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

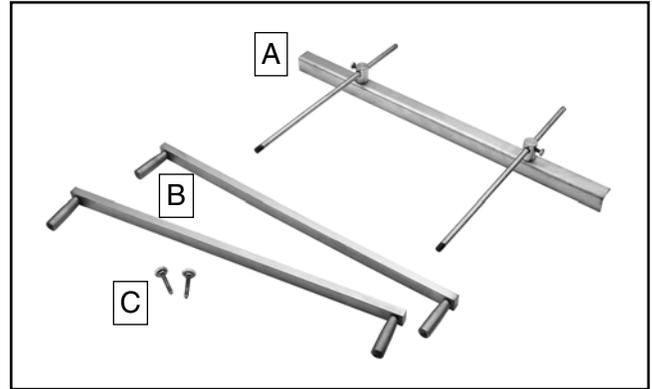


Figure 2. Component inventory.

<b>Machine Inventory (Figure 2)</b>	<b>Qty</b>
<b>A.</b> Shear & Brake Rear Work Stop .....	1
<b>B.</b> Crank Handles.....	2
<b>C.</b> Crank Handle Lock Knobs .....	2
<b>D.</b> Hex Wrenches: (Not Shown)	
—4mm.....	1
—5mm.....	1
—6mm.....	1
—8mm (T26751Z Only) .....	1
—10mm .....	1
—12mm (G4011Z Only) .....	1

## ***NOTICE***

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



# Cleanup

The unpainted surfaces of your machine are coated with a heavy-duty rust preventative that prevents corrosion during shipment and storage. This rust preventative works extremely well, but it will take a little time to clean.

Be patient and do a thorough job cleaning your machine. The time you spend doing this now will give you a better appreciation for the proper care of your machine's unpainted surfaces.

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

## Before cleaning, gather the following:

- Disposable Rags
- Cleaner/degreaser (WD-40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

## Basic steps for removing rust preventative:

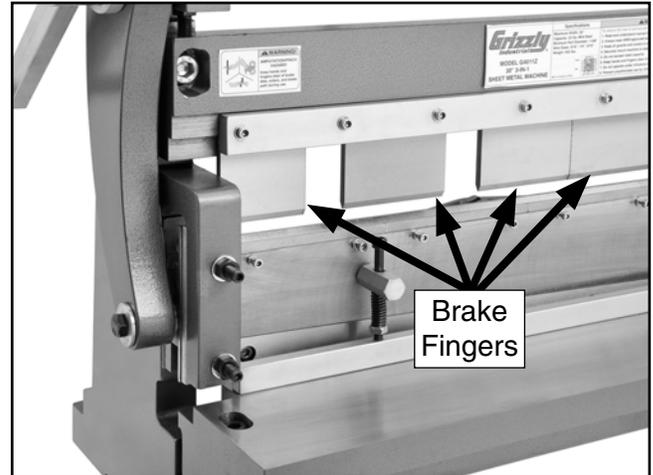
1. Put on safety glasses.
2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5–10 minutes.
3. Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.
4. Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.

## **NOTICE**

**Avoid chlorine-based solvents, such as acetone or brake parts cleaner, that may damage painted surfaces.**

# Cleaning Fingers

The brake fingers (see **Figure 3**) are coated with rust preventative that should be removed before beginning operation.



**Figure 3.** Brake fingers.

Although the rust preventative was applied only to the visible surfaces of the fingers, some may have worked in-between and underneath them. We recommend that you remove all of the fingers to thoroughly clean them. In addition to being messy, the rust preventative affects the precision of finger adjusting and spacing, which may lead to slight inaccuracies in finished workpieces.

If you do remove the fingers, make sure you properly align them as described in the **Replacing/ Seating Fingers** subsection on **Page 28** after re-installing.



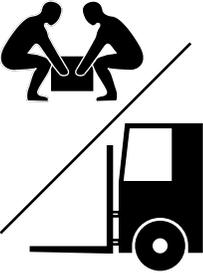
# Site Considerations

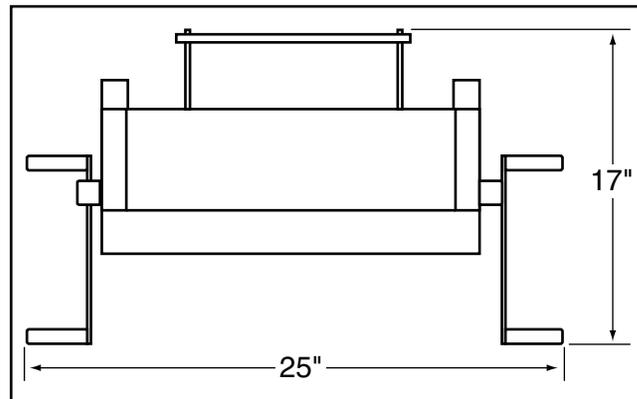
## Workbench Load

Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some workbenches may require additional reinforcement to support the weight of the machine and workpiece materials.

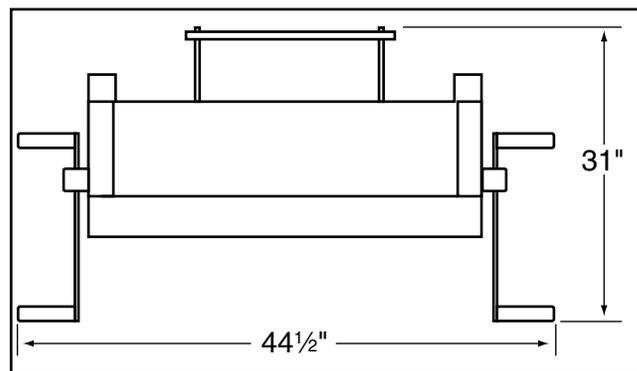
## Placement Location

Consider anticipated workpiece sizes and additional space needed for auxiliary stands, work tables, or other machinery when establishing a location for this machine in the shop. Below is the minimum amount of space needed for the machine.

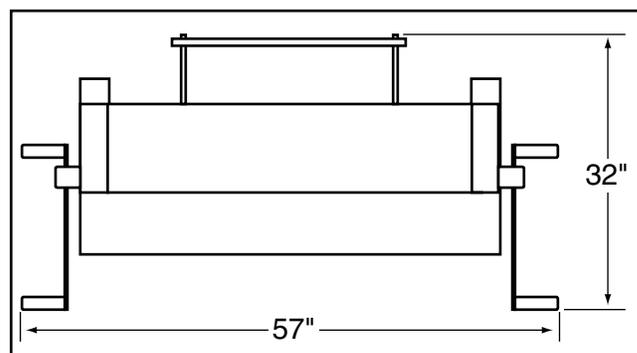
	<p><b>⚠ WARNING</b> <b>HEAVY LIFT!</b> Straining or crushing injury may occur from improperly lifting machine or some of its parts. To reduce this risk, get help from other people and use a forklift (or other lifting equipment) rated for weight of this machine.</p>
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**Figure 4.** Model T26472Z minimum working clearances.



**Figure 5.** Model G4011Z minimum working clearances.



**Figure 6.** Model T26751Z minimum working clearances.

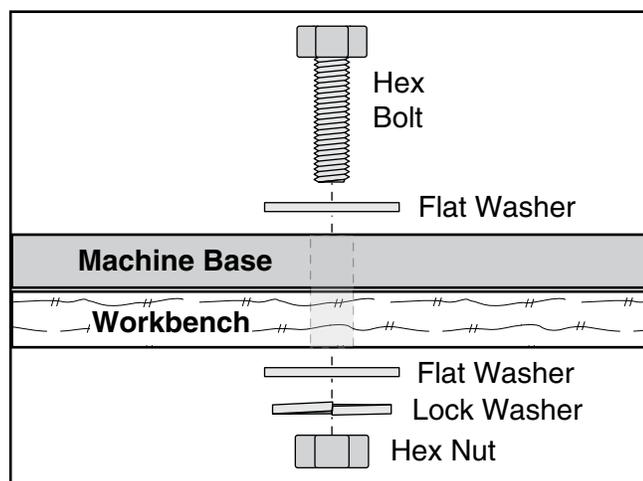


# Bench Mounting

<b>Number of Mounting Holes</b> .....	<b>4</b>
<b>Diameter of Mounting Hardware Needed:</b>	
<b>G4011Z</b> .....	$\frac{3}{8}$ "
<b>T26472Z</b> .....	$\frac{1}{4}$ "
<b>T26751Z</b> .....	$\frac{3}{8}$ "

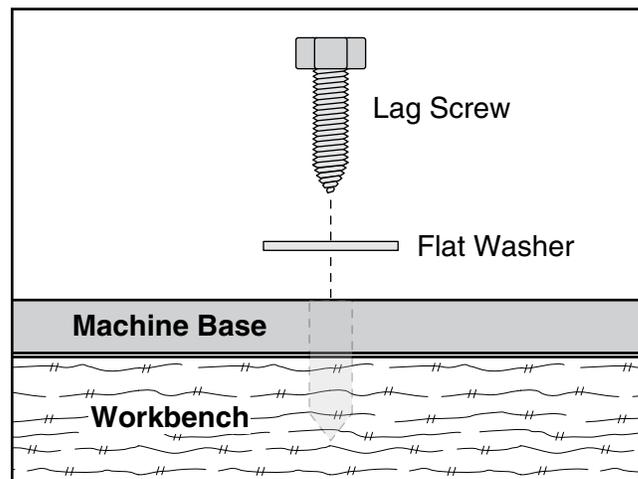
The base of this machine has mounting holes that allow it to be fastened to a workbench or other mounting surface to prevent it from moving during operation and causing accidental injury or damage.

The strongest mounting option is a "Through Mount" (see example below) where holes are drilled all the way through the workbench—and hex bolts, washers, and hex nuts are used to secure the machine in place.



**Figure 7.** Example of "Through Mount" setup.

Another option is a "Direct Mount" (see example below) where the machine is secured directly to the workbench with lag screws and washers.

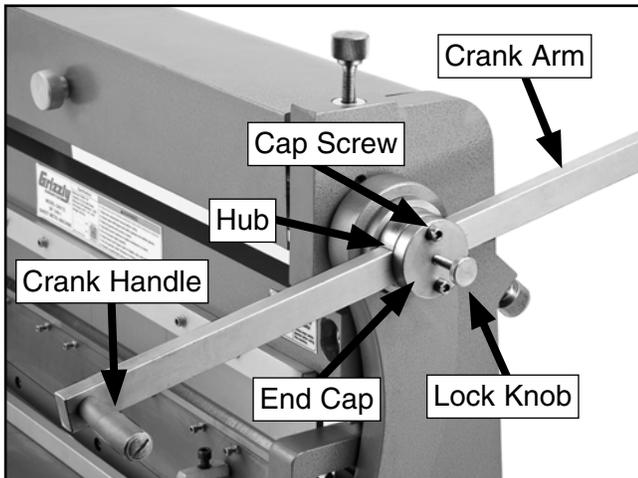


**Figure 8.** Example of "Direct Mount" setup.



# Assembly

Models T26472Z, G4011Z, and T26751Z are all packaged, shipped, and assembled the same way. The only difference during assembly is the size of cap screws used to secure the end cap on each model. Familiarize yourself with the components and fasteners shown in **Figure 9** to assist in machine assembly.

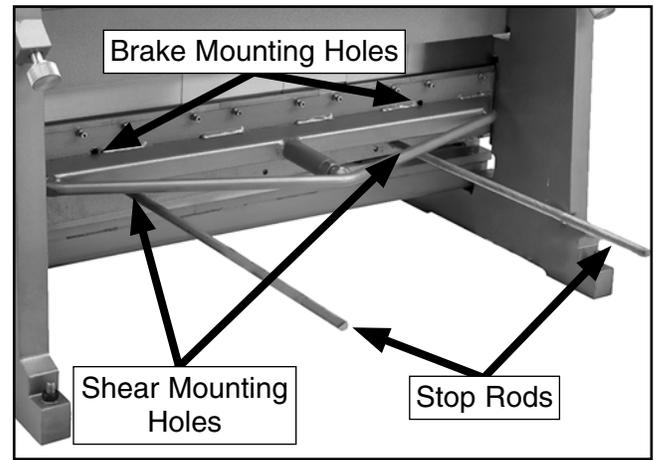


**Figure 9.** Crank assembly components and fasteners identification.

## To assemble machine:

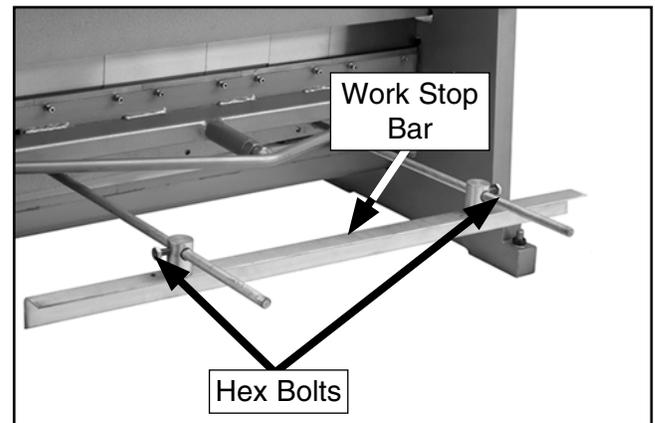
1. Remove one cap screw from end cap, loosen other cap screw, and rotate end cap out of way. Back pre-installed lock knob out so that it is flush with end cap.
2. Insert crank arm into slot in crank handle hub, rotate end cap back into place, re-install cap screw, then tighten both cap screws.
3. Tighten lock knob.
4. Repeat **Steps 1–3** to install remaining crank handle on other side of machine.

5. Thread work stop rods into either brake or shear mounting holes (see **Figure 10**), depending on operation to be performed. Only hand-tighten these rods—over-tightening will make removal difficult.



**Figure 10.** Work stop rods secured in shear mounting holes.

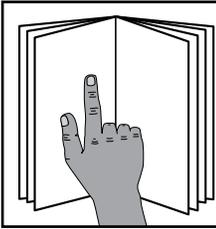
6. Loosen hex bolts threaded into rear support bracket on work stop bar. Slide work stop bar onto work stop rods.
7. Position work stop bar parallel with shear blades and tighten hex bolts to secure it (see **Figure 11**).



**Figure 11.** Workstop bar secured with hex bolts.



# SECTION 3: OPERATIONS



## ⚠️ WARNING

To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.



## ⚠️ WARNING

Damage to your eyes and hands could result from using this machine without proper protective gear. Always wear leather gloves and safety glasses, when operating this machine.



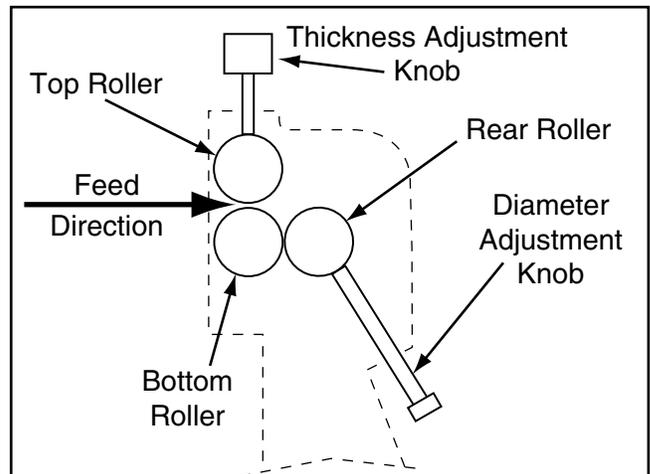
## NOTICE

If you are not experienced with this type of machine, WE STRONGLY RECOMMEND that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.

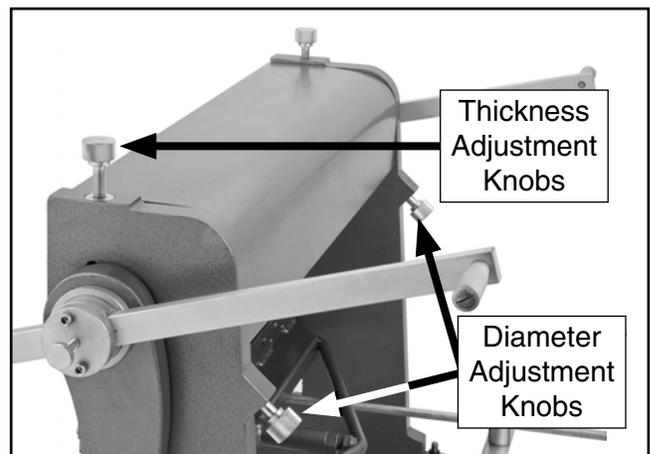
## Slip Roll Overview

The slip roll is used to flatten or form cylinders, cones, and arcs in mild sheet metal, as well as wires and rods. Refer to the **Machine Data Sheet** on **Page 4** for individual machine specifications and workpiece capacities.

The work of a slip roll is accomplished by feeding the workpiece between steel rollers to produce the desired results. Two of the three rollers can be adjusted by the operator to accept different workpiece thicknesses and produce a variety of different work results. Refer to **Figures 12–13** for identification of slip roll components and controls.



**Figure 12.** Identification of slip roll controls and main components.



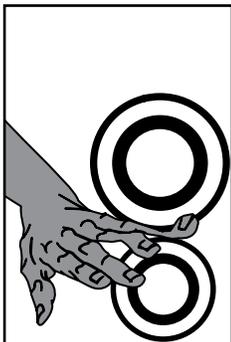
**Figure 13.** Slip roll adjustment controls.



# Slip Roll Tips

- Due to the many variables of different sheet metal types, no single configuration of the rollers will create the same curve on all materials. Rolling sheet metal to achieve an exact radius is a trial-and-error process.
- Best results are usually achieved by performing multiple passes while gradually reducing the curve radius with each pass—rather than trying to make the curve in one pass.
- To avoid pitted workpieces and damage to roller surfaces, always make sure workpiece and rollers are free of grit and any foreign material before every use.
- When creating cylindrical workpieces, always keep the rear roller parallel with front rollers by rotating the diameter adjustment knobs same amount. Otherwise, coned workpieces will be formed that are difficult to straighten out.

## Flat Rolling



### ⚠ CAUTION

The rollers present a serious pinching hazard. Always keep hands/fingers at least 6" away from rollers during operation. Failure to follow this warning may result in fingers, hair, or clothing being pulled into the machine, causing personal injury.

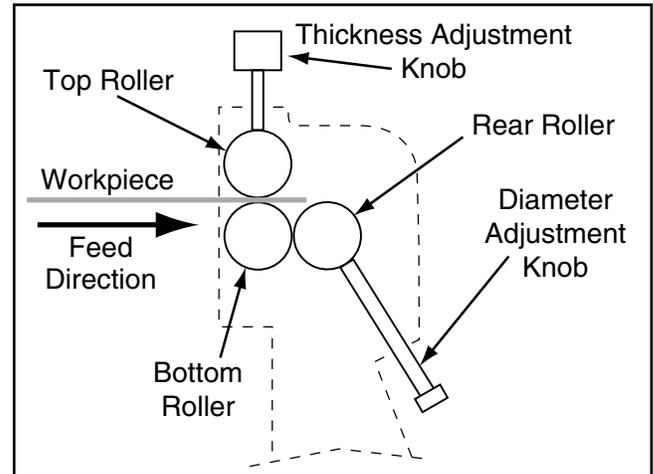
This slip roll can be used to "flat roll" sheet metal. This can be done to straighten sheet metal that is slightly out of form.

Unless otherwise instructed, make all roller adjustments the same on each side to produce symmetrical workpieces.

**Note:** Once a workpiece has been sharply creased or bent, it cannot be straightened using this slip roll.

### To flat roll a workpiece:

1. Use diameter adjustment knobs to lower rear roller until it is level with bottom roller, as illustrated in **Figure 14**.



**Figure 14.** Diameter adjustment knob.

2. Turn both thickness adjustment knobs counterclockwise until you can insert workpiece between top and bottom rollers.
3. Evenly lower thickness adjustment knobs until you feel resistance and workpiece is held firmly between rollers.
4. Remove workpiece and evenly rotate thickness adjustment knobs  $\frac{1}{4}$  turn clockwise to create additional pressure on workpiece.
5. Re-insert workpiece and use hand crank to draw workpiece through machine.  
**Note:** Have an assistant support long workpieces as they leave machine so they do not bend from sagging as they exit the rollers.
6. Repeat **Steps 3–5** until desired results are produced.



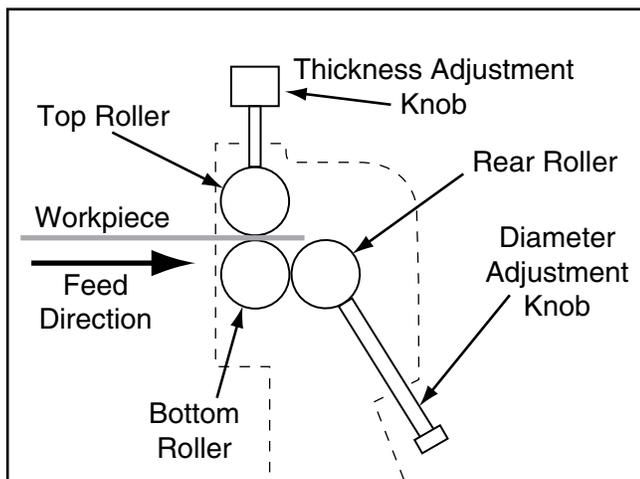
# Rolling Curves

This machine can easily create symmetrical or cone shaped curves. To create symmetrical curves, make equal adjustments with diameter adjustment knobs. For cones, rotate one adjustment knob more than the other. Refer to the **Machine Data Sheet** on **Page 4** for the maximum thickness or gauge of material your particular model can handle.

The method of creating a specific radius requires a trial-and-error process. Due to the many variations among different types of sheet metal workpieces, no single configuration of the rollers will reproduce the same curve in all materials. We recommend testing roller configurations on scrap pieces that are the same dimension and material as the final workpiece.

## To create a curve in the workpiece:

1. Use diameter adjustment knobs to lower rear roller until it is even with bottom roller (see **Figure 15**). Rotate thickness adjustment knobs counterclockwise until top roller can be lifted enough to insert workpiece.

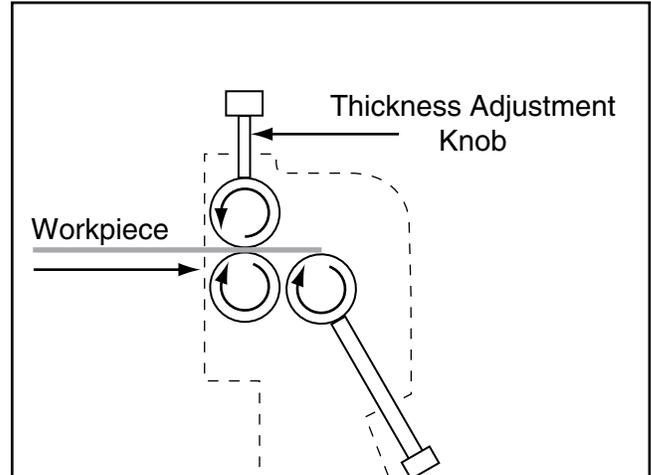


**Figure 15.** Rear roller lowered so it is even with bottom roller.

## **NOTICE**

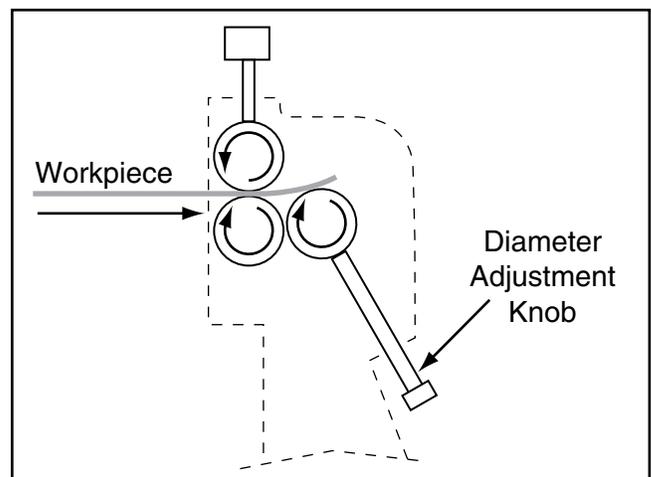
Performing multiple passes while gradually reducing curve radius produces better results than trying to make curve in just one or two passes.

2. Insert workpiece between top and bottom rollers and just over rear roller, as illustrated in **Figure 16**.



**Figure 16.** Workpiece inserted between top and bottom roller and centered over rear roller.

3. Evenly rotate both thickness adjustment knobs clockwise until workpiece is firmly secured.
4. Use diameter adjustment knobs to raise rear roller (see **Figure 17**).

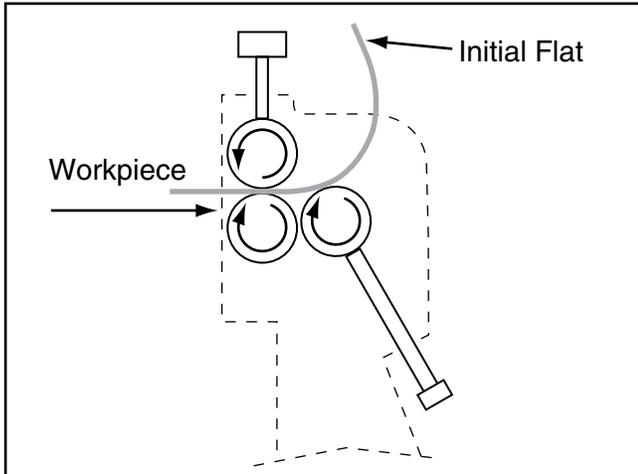


**Figure 17.** Rear roller slightly raised to start curve.



- Pass workpiece through machine using hand crank to create curve (see **Figure 18**).

**Note:** For best results, make first bend about 25% of final radius and increase bend approximately 25% each successive pass until final radius has been achieved.



**Figure 18.** Workpiece fed through rollers to create curved workpiece.

**Note:** If workpiece has an undesired initial flat, as illustrated in **Figure 18**, you can remove it by flipping workpiece around and passing it through front of machine so initial flat enters last.

- Slightly tighten diameter adjustment knobs in even amounts, then pass workpiece through rollers again.

**Note:** To make a cone, rotate one adjustment knob more than the other.

- Repeat **Step 5** until you have produced desired curve.

## Rolling Cylinders

This machine can roll flat workpieces into cylinders. Use the formula below to calculate the length of material needed to create a cylinder from a piece of flat stock.

$$C = \pi D$$

C=Circumference  
(Length of Material Needed)

$\pi$ =Pi (Approximately 3.14)

D=Diameter

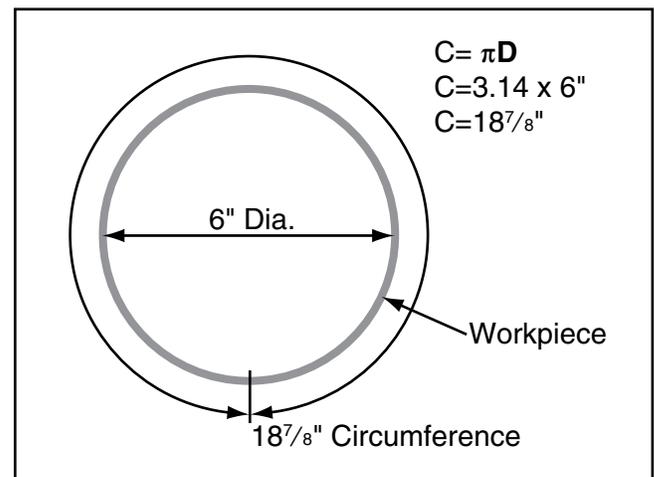
**Example:** To create a 6" diameter cylinder, use the above formula as follows:

$$C = \pi D$$

$$C = 3.14 \times 6"$$

$$C = 18\frac{7}{8}"$$

The result indicates that you need to start with a piece of sheet metal approximately 18<sup>7</sup>/<sub>8</sub>" long in order to create a 6" diameter cylinder (see **Figure 19**).



**Figure 19.** Calculating circumference example.

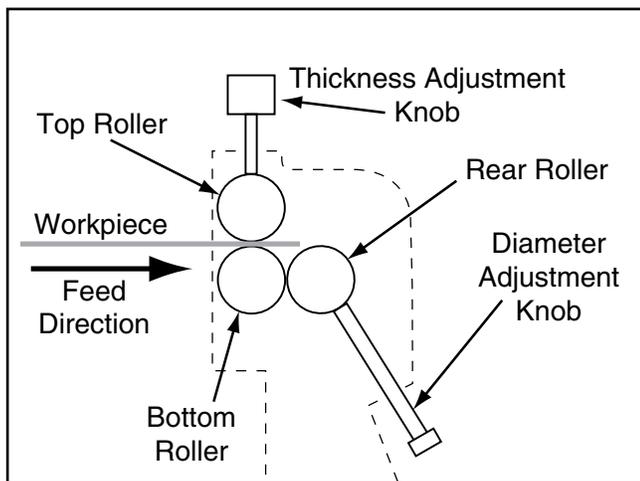


# NOTICE

Performing multiple passes while gradually reducing curve radius produces better results than trying to make curve in just one or two passes.

## To create a cylinder:

1. Use diameter adjustment knobs to lower rear roller even with bottom roller (see **Figure 20**). Rotate thickness adjustment knobs counter-clockwise until top roller is raised enough to insert workpiece.

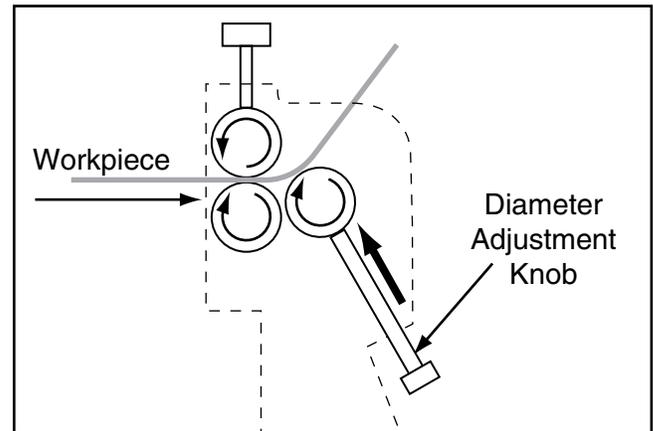


**Figure 20.** Rear roller lowered so it is even with bottom roller.

2. Evenly lower thickness adjustment knobs until you feel resistance and workpiece is firmly held between rollers.
3. Turn hand crank clockwise to feed workpiece through machine until it is approximately half way through top and bottom rollers.

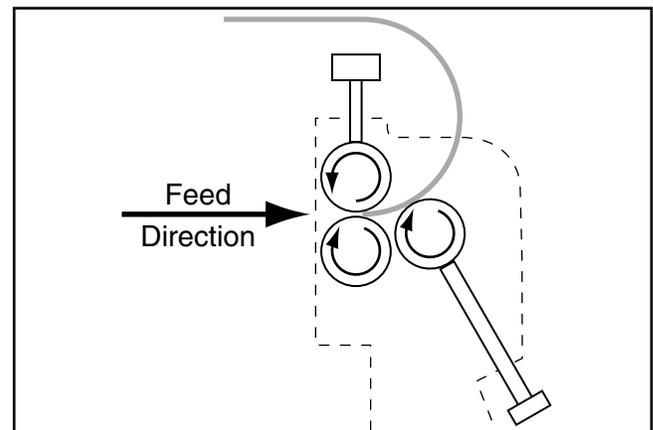
4. Turn diameter adjustment knobs clockwise to lift rear roller until desired bend radius is reached, as illustrated in **Figure 21**. Always turn diameter adjustment knobs in equal amounts so rear roller remains parallel with front rollers, or there will be a larger radius on one end of the workpiece than the other, resulting in a cone shape.

**Note:** Always err on the side of making the radius too large rather than too small. It is easy to decrease radius but very difficult to increase it later.



**Figure 21.** Making initial bend to create cylinder.

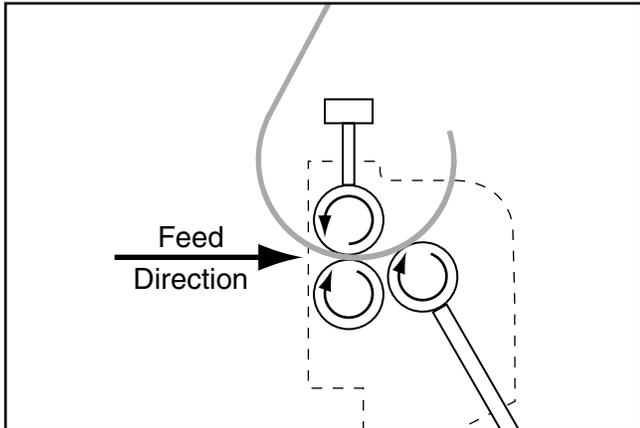
5. Turn hand crank to feed material through slip roll. Continue turning until workpiece is completely through top and bottom rollers, as illustrated in **Figure 22**.



**Figure 22.** Finishing first pass.



- Rotate workpiece 180°, insert curved end into rollers, then feed it through machine, as illustrated in **Figure 23**.

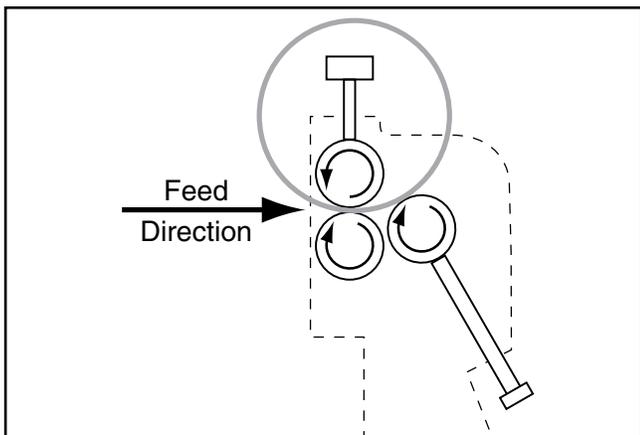


**Figure 23.** Curving workpiece by feeding opposite end first.

- Repeat **Steps 4–6** until you have produced the desired cylinder (see **Figure 24**).

—If ends of cylinder do not meet, raise rear roller equally at both ends, then feed entire cylinder through slip roll again. Repeat as necessary.

—If ends of cylinder overlap, remove cylinder as described in **Removing Workpiece From Rollers**. Then, either attempt to increase radius by manually bending it, or scrap workpiece and start procedure again with new blank.



**Figure 24.** Cylinder completed.

- When cylinder is complete, refer to **Removing Workpiece From Rollers** for detailed instructions on removing cylinder from top roller.

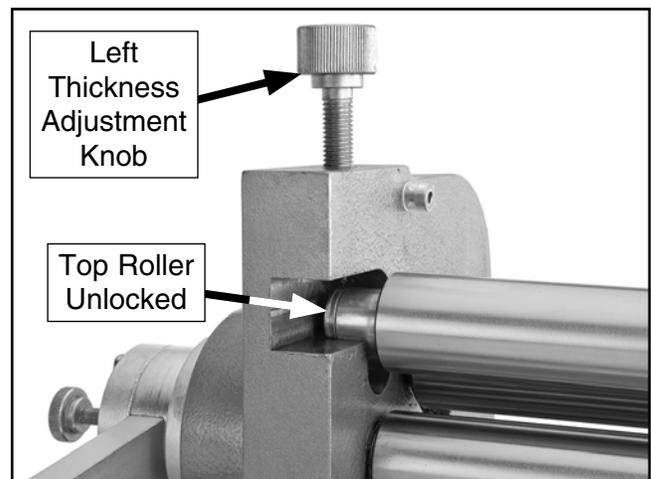
## Removing Workpiece From Rollers

Once a curved piece has been formed, it can be difficult to remove it from the top roller without deforming the created curve. Additionally, it also presents a safety hazard. To overcome this, all these machines are equipped with a quick release top roller to ease the removal of workpieces.

### To remove workpiece from top roller:

- Rotate left thickness adjustment knob counterclockwise until top roller can be released, as shown in **Figure 25**.

**Model T26472Z Only:** Both left and right thickness adjustment knobs need to be rotated counterclockwise to release/secure top roller.

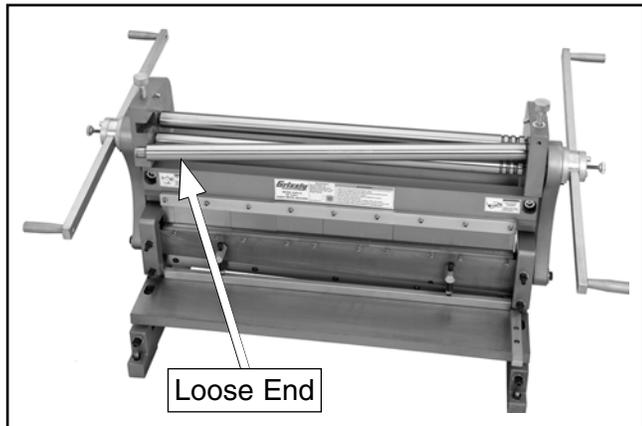


**Figure 25.** Thickness adjustment knob rotated to unlock top roller.

Continued on next page →



2. Protect your hands from sharp edges of workpiece, then grasp top roller and use moderate force to pull loose end out (see **Figure 26**).



**Figure 26.** Top roller released (shown without a workpiece for photo clarity).

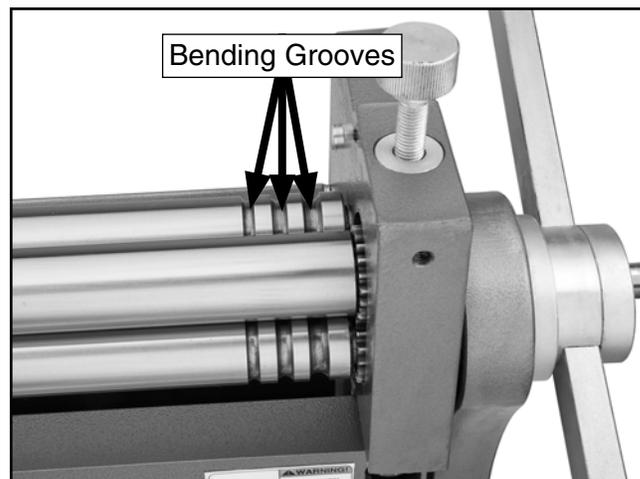
## **⚠ CAUTION**

Sharp edges of sheet metal can quickly cut your hands. Always use caution and wear heavy leather gloves when handling sheet metal.

3. Remove workpiece.
4. Slide top roller back into place, then secure roller by rotating left thickness adjustment knob clockwise until top roller cannot pull out of place.

## Bending Wire/Rods

This machine can bend wires, rods, and small-diameter tubing using built-in bending grooves on the rollers (see **Figure 27**). Check the **Machine Data Sheet** on **Page 4** to determine the bending groove sizes of your particular model.



**Figure 27.** Location of slip roller bending grooves.

To ensure even pressure on the workpiece material, place it in the smallest possible groove. For example, on Model G4011Z, an  $\frac{1}{8}$ " rod would fit into any of the bending grooves, however, you would use the  $\frac{3}{16}$ " groove since it is the smallest possible groove that rod will fit into.

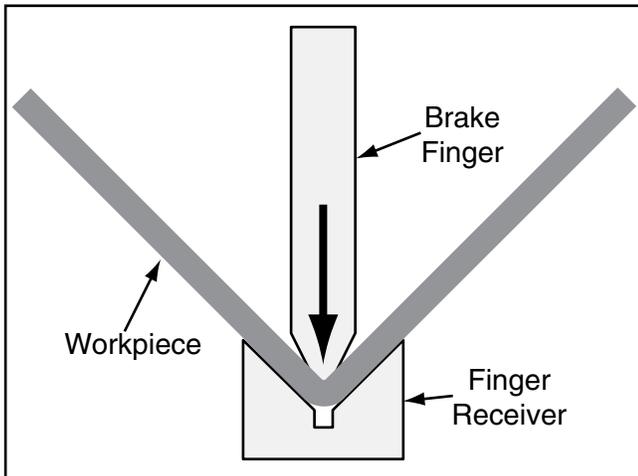
Feed the workpiece material through the machine in the same manner described on the previous pages for sheet metal.

**Note:** *The bending grooves can also be used when rolling sheet metal that has a wire bead on the side.*

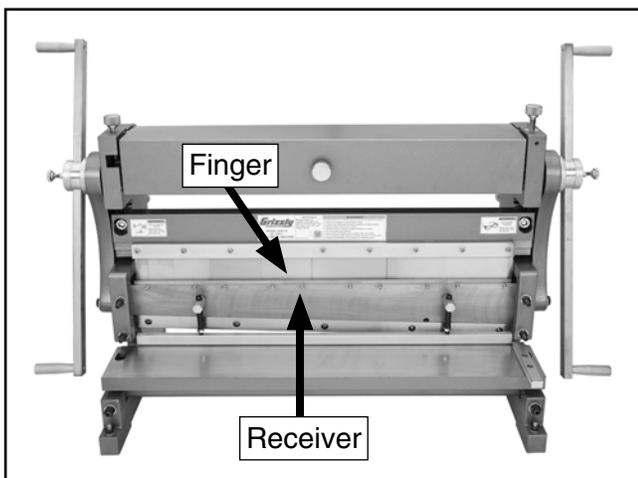


# Bending Sheet Metal

This machine can make up to 90° bends in sheet metal. Refer to the **Machine Data Sheet** on **Page 4** to determine the workpiece capacities of your particular model. When you use the hand crank, the brake fingers force the workpiece into the groove of the finger receiver to make the desired bend (see **Figures 28–29**).

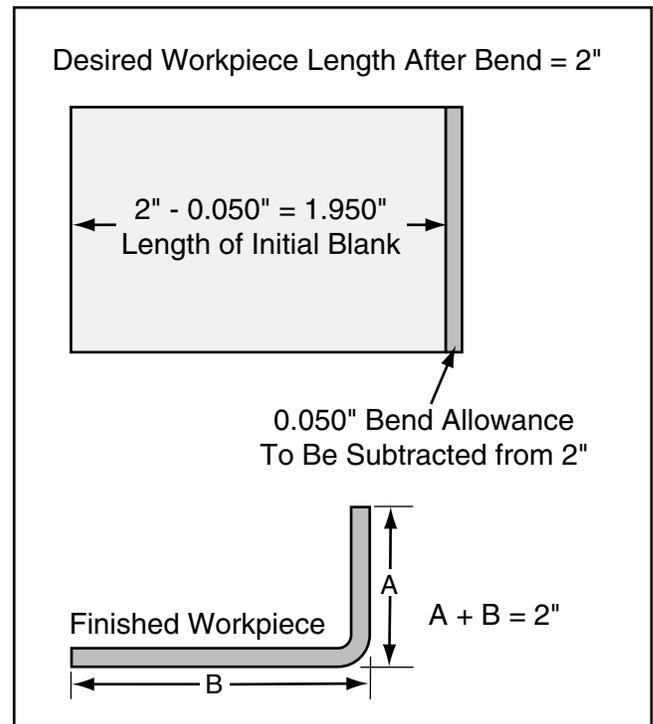


**Figure 28.** Side profile of brake fingers and receiver making 90° bend in workpiece.



**Figure 29.** Identifying brake fingers and receiver on machine (G4011Z shown).

When metal is bent, the outside overall dimension increases from its original length—this amount is called the bend allowance. A typical bend allowance for a 90° bend in a 22-gauge mild steel workpiece is approximately 0.050". That means you need to start with a workpiece that is approximately 0.050" shorter than the desired outside length of the finished workpiece, as illustrated in **Figure 30**.

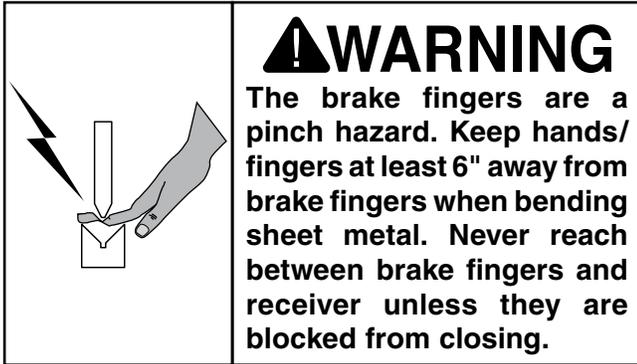


**Figure 30.** Example of accounting for bend allowance.

Calculating the bend allowance requires factoring in many variables, such as metal thickness, type of material, radius of the bend, etc. Detailed information for calculating the bend allowance can be found in metalworking handbooks and on the internet.

One way to calculate bend allowance for any workpiece is to measure a piece of scrap material that is the same material as the workpiece, create the same bend intended for the workpiece, then measure it again. The difference between the two measurements is the bend allowance, which you subtract from the dimension of the workpiece blank before the bend.





**To bend sheet metal:**

1. Mark a line on workpiece where it will be bent.
2. Insert workpiece and use hand crank to lower finger receiver, aligning line on workpiece with tips of fingers, as shown in **Figure 31**.

**Tip:** To reduce the chance of scoring the workpiece when using the brake, always keep the fingers and receivers clean, lubricated, and free of burrs or other blemishes. Also, apply a strip of sturdy tape along the top and bottom of the bend line.



**Figure 31.** Positioning workpiece for bend.

3. While holding workpiece steady, use hand crank to perform bend (see **Figure 32** for an example).

**Note:** Use rear work stop to save time when bending multiple workpieces that are the same size.



**Figure 32.** Bending workpiece.

4. If a reverse bend is required, re-install workpiece upside-down, as shown in **Figure 33**, and repeat **Steps 2–3**. (Refer to **Machine Data Sheet** on **Page 4** to determine minimum reverse bend of your particular model.)

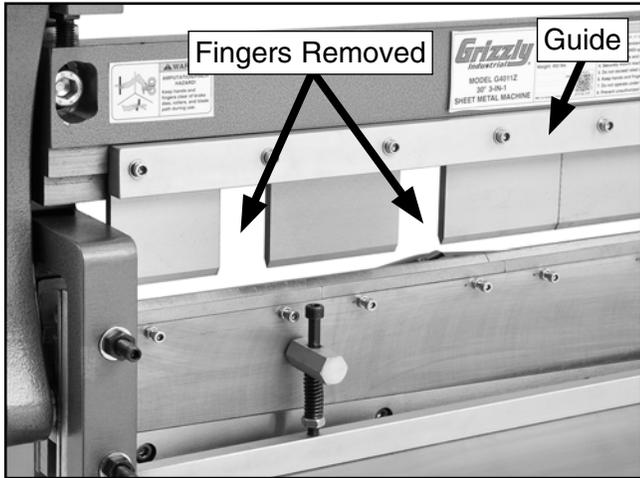


**Figure 33.** Minimum reverse bend.



# Pan/Box Bending

The fingers can be spaced apart for clearance when making pans or boxes. This requires removing one or more of the fingers so that you can space the others to match the width of the pan or box, as shown in **Figure 34**. (Refer to the **Machine Data Sheet** on **Page 4** for the maximum height of pan/box sides of your particular machine.)



**Figure 34.** Fingers spaced apart for box/pan bending.

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

**To space fingers apart:**

1. Loosen cap screws securing leaf fingers needing to be removed.
2. Pull fingers off guide and set aside.

**Note:** Mix and match finger widths to equal width of pan/box opening.

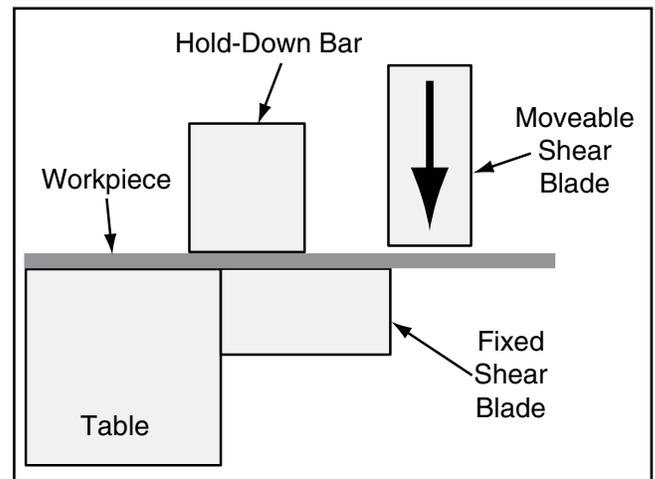
3. Loosen cap screws securing fingers needing to be moved, slide them across guide so that there is adequate room for workpiece on both sides, then retighten cap screws.

# Shearing

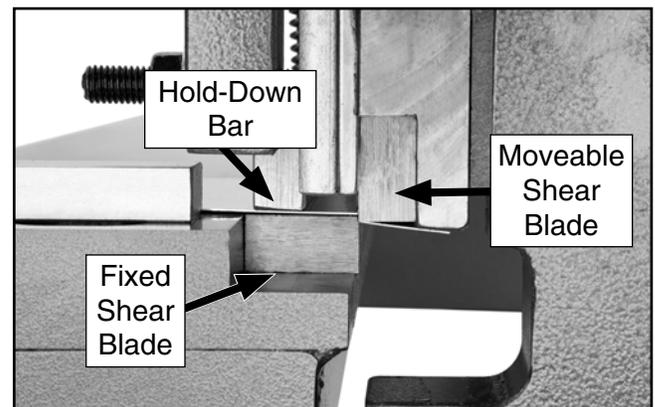
This machine has a set of reversible blades that shear mild steel. (Refer to the **Machine Data Sheet** on **Page 4** for the shearing capacity of your particular machine.)

When you use the hand crank to shear, the upper moveable shear blade lowers past the fixed shear blade, creating a shearing action (see **Figures 35–36**). For repetitive cuts, use the adjustable rear work stop.

Practice cuts should be taken on scrap-pieces before making cuts on intended workpieces to ensure correct blade gap. If the practice-piece shows signs of bending, ripping, or tearing or the blades are unable to pass by each other, the blade gap will need to be adjusted. (Refer to **Adjusting Shear Blade Gap** on **Page 30** for detailed instructions).

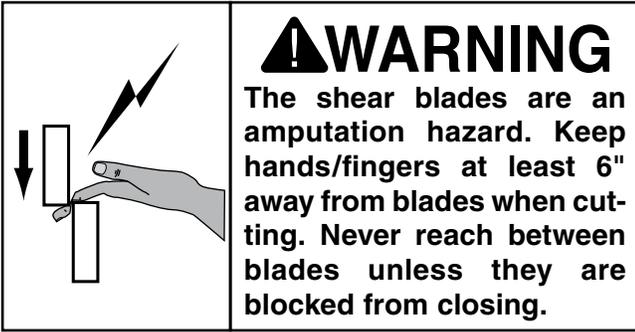


**Figure 35.** Side profile of shear components.



**Figure 36.** Example of shearing components (side view).

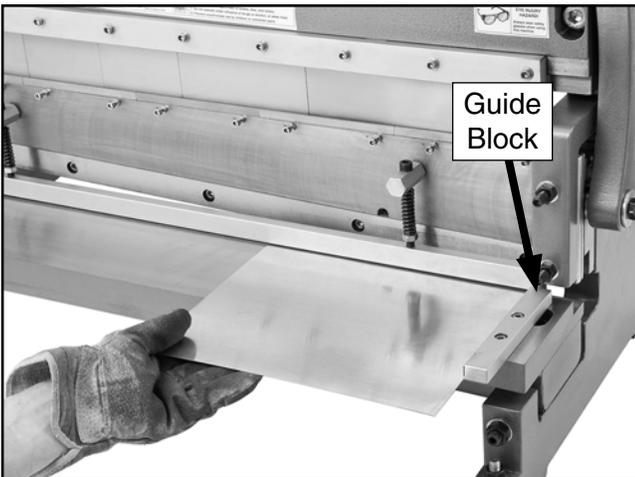




**To perform a shear cut:**

1. Mark cut line across width of workpiece.
2. Make sure gap between shear blades is correct for workpiece material
3. Position workpiece against guide block on right side of table, and align cut mark with upper shear blade, as shown in **Figure 37**.

**Note:** *Shearing action begins on right side of machine and moves to the left.*



**Figure 37.** Positioning workpiece for shearing cut.

## **NOTICE**

If the workpiece shows signs of bending, ripping, or cutting, the blade gap may need to be adjusted to accommodate the workpiece. Refer to *Adjusting Shear Blade Gap* subsection on *Page 30* for detailed instructions.

**Note:** *If using rear work stop, adjust stop so that at least one square edge of workpiece is against it.*

4. Use hold-down adjustment bolts to clamp workpiece in place with hold-down. This will prevent marking or denting workpiece.
5. Rotate hand crank with an even and steady pressure to complete cut.



# SECTION 4: ACCESSORIES

## **! WARNING**

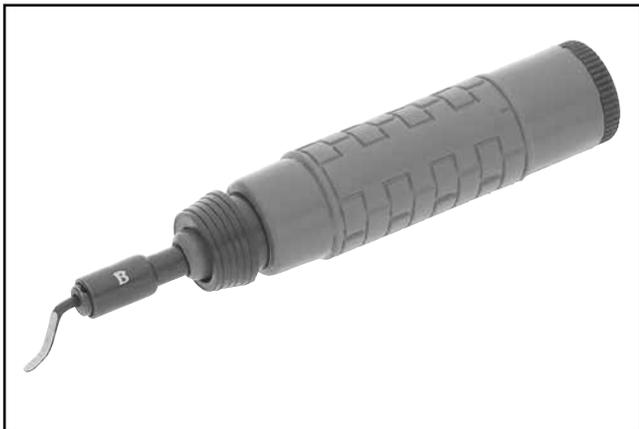
Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended for this machine by Grizzly.

## **NOTICE**

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

### **G5618—Deburring Tool with two Blades**

The quickest tool for smoothing freshly sheared metal edges. Comes with two blades, one for steel and aluminum and one for brass and cast iron.



**Figure 38.** G5618 Deburring Tool.

### **T23094—Pneumatic Sheet Metal Shear**

This heavy-duty pneumatic sheet metal shear provides long life and reliable cutting with an ergonomic grip for comfort and stability. Shears most types of plastics and all types of aluminum, tin, and steel.



**Figure 39.** T23094 Pneumatic Sheet Metal Shear.

### **H5503—Electric Sheet Metal Shear**

This Electric Sheet Metal Shear features a ½ HP, 110V, 2500 RPM, 3.8 amp motor, a 360 degree adjustable swivel head, and variable speeds from 0 to 2500 SPM. Cuts up to 14 gauge in mild steel and 18 gauge in stainless, at up to 150 inches per minute.



**Figure 40.** H5503 Electric Sheet Metal Shear.

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



# SECTION 5: MAINTENANCE

## Schedule

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

### Daily Check:

- Loose mounting bolts.
- Cracks or damage to rollers, fingers, and blades.
- Any other unsafe condition.

### Weekly Maintenance:

- Clean machine.
- Lubricate gears.
- Lubricate roller bushings.

## Cleaning

Cleaning this machine is relatively easy. Periodically wipe down all unpainted surfaces to remove dust and debris—this ensures rust-promoting material does not remain on the bare metal surfaces.

Treat all unpainted metal surfaces with quality metal protectants like G96 Gun Treatment Spray (see **Figure 41**).



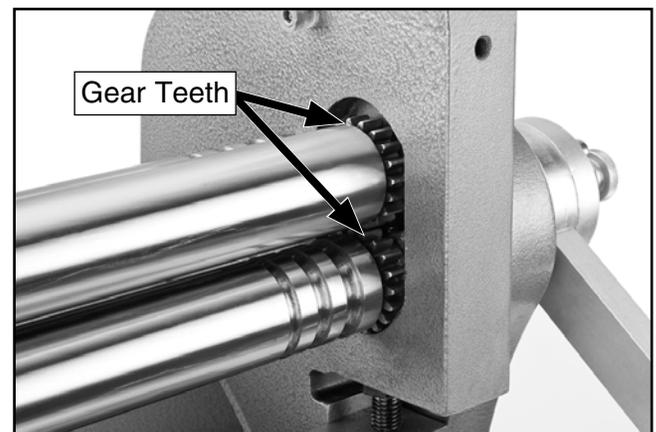
**Figure 41.** H3788 G96 Gun Treatment Spray.

## Lubrication

Keep machine properly lubricated to help ensure long life and smooth operation.

### Gears

Using a stiff brush and mineral spirits, clean away grease and built-up grime from top and bottom roller gear teeth (see **Figure 42**).



**Figure 42.** Top and bottom roller gears.

When dry, apply a small amount of NLGI#2 (see **Figure 43**) or equivalent grease to the teeth, then use the hand crank to rotate the rollers and distribute the lubricant.



**Figure 43.** T23964 Moly-D Multi-purpose NLGI#2 Grease.



# SECTION 6: SERVICE

Review the troubleshooting and procedures in this section if a problem develops with your machine. If you need replacement parts or additional help with a procedure, call our Technical Support at (570) 546-9663.

**Note:** Please gather the serial number and manufacture date of your machine before calling.

## Troubleshooting

### Slip Roll Operation

Symptom	Possible Cause	Possible Solution
Slip roll creates cones when trying to make a cylinder.	1. Top and rear rollers not parallel.	1. Use diameter adjustment knobs to make rollers parallel.
Creases or wrinkles in the workpiece.	1. Excessive pressure applied when rolling.	1. Reduce radius and perform bend in several light passes.
Workpiece is pitted or scratched.	1. Workpiece or rollers are dirty or damaged.	1. Thoroughly clean workpiece and rollers. Carefully file down any nicks/burrs that stick out from rollers, or replace them.

### Brake Operation

Symptom	Possible Cause	Possible Solution
Heavy resistance during bending.	1. Machine capacities are exceeded.	1. Operate within listed capacities of machine.
Bend radius is not consistent across workpiece.	1. Machine capacities are exceeded. 2. Fingers and receiver not aligned.	1. Operate within listed capacities of machine. 2. Properly align fingers and receiver ( <b>Page 32</b> ).
Tips of brake fingers are chipping or rolling.	1. Fingers and receiver not aligned. 2. Workpiece is too thick.	1. Properly align fingers and receiver ( <b>Page 32</b> ). 2. Operate within listed capacities of machine.
Workpiece has scoring marks.	1. Fingers or receiver scratched.	1. Polish out scratches, and apply tape at bend locations for further protection.

### Shear Operation

Symptom	Possible Cause	Possible Solution
Machine will not cut workpiece.	1. Cut exceeds machine capacities. 2. Not enough gap between blades.	1. Operate within listed capacities of machine. 2. Increase blade gap ( <b>Page 30</b> ).
Cuts are not square.	1. Work stop is not parallel with shear blades. 2. Uneven contact with guide or work stop. 3. Incorrect blade gap setup. 4. Too much bow in blade. 5. Inadequate hold-down pressure.	1. Adjust work stop parallel to shear blades. 2. Maintain proper contact with guide and work stop. 3. Properly adjust blade gap for material ( <b>Page 30</b> ). 4. Properly adjust blade bow ( <b>Page 31</b> ). 5. Properly adjust hold-down pressure.
Poor quality of cuts with ripping or tearing.	1. Dull blades. 2. Incorrect blade gap setup. 3. Loose blades. 4. Too much bow in blade.	1. Reverse/sharpen/replace blades ( <b>Page 29</b> ). 2. Properly adjust blade gap for material ( <b>Page 30</b> ). 3. Remove blades, clean thoroughly, and re-install. 4. Properly adjust blade bow ( <b>Page 31</b> ).



# Replacing/Seating Fingers

Over the life of this machine, blade fingers may become worn, damaged, or misaligned. If this happens, they will need to be replaced or reseated.

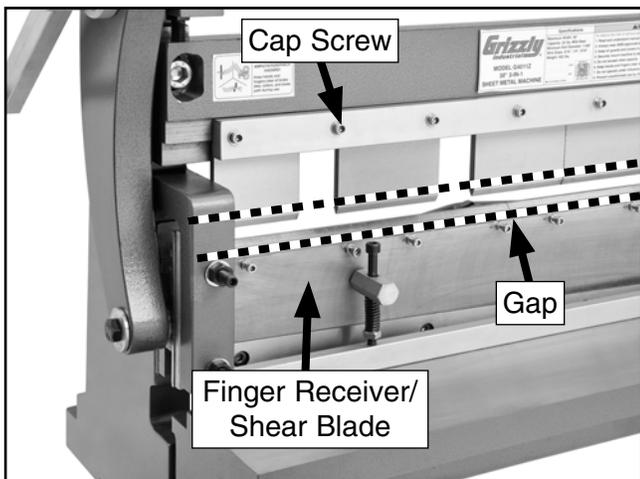
<b>T26472Z Tools Needed</b>		<b>Qty</b>
Hex Wrench 5mm.....		1
Wood Slat 1/8"-1/4" x 12" .....		1

<b>G4011Z Tools Needed</b>		<b>Qty</b>
Hex Wrench 5mm.....		1
Wood Slat 1/8"-1/4" x 30" .....		1

<b>T26751Z Tools Needed</b>		<b>Qty</b>
Hex Wrench 5mm.....		1
Wood Slat 1/8"-1/4" x 42" .....		1

## To replace/seat brake fingers:

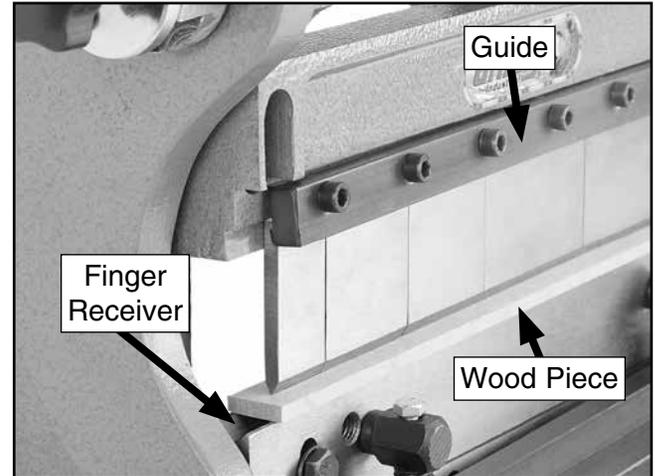
1. Lower finger receiver/shear blade to its lowest point, leaving largest gap available between fingers and finger receiver (see **Figure 44**).



**Figure 44.** Example of finger receiver fully lowered.

2. Loosen cap screws and remove finger.
3. Insert replacement finger(s) and tighten cap screw(s).

4. Place a 1/8"-1/4" piece of wood that is as long as the finger receiver onto the receiver (see **Figure 45**). Wood must be perfectly flat on each side for procedure.



**Figure 45.** Seating fingers with a piece of wood that is flat on both sides.

5. Using hand crank, raise finger receiver until wood piece is just below fingers.
6. Loosen cap screws that hold fingers in place.
7. Use hand crank to raise finger receiver, fully seating fingers against casting behind guide.
8. Retighten cap screws.



# Reversing/Replacing Shear Blade

The shear blades are reversible, so when the first cutting edge becomes dull, the blades can be rotated to use the second cutting edge.

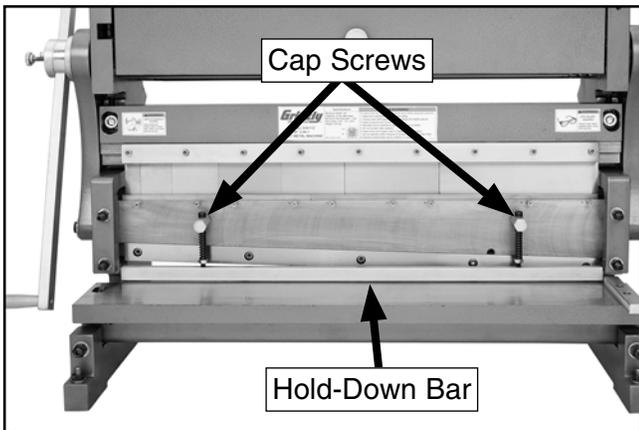
When both cutting edges of the blade become dull, use wet grinding techniques for SK-4 tool steel (or better) to sharpen the cutting face of the blade. The upper shear blade uses a 5° relief edge and the lower table blade does not.

If you are not comfortable sharpening blades yourself, or you do not have access to a professional sharpening service, replacement blades can be purchased from Grizzly. The part numbers for these blades are located in the back of the manual.

Tools Needed	Qty
Hex Wrench 6mm.....	1

## To reverse or replace either shear blade:

1. Remove cap screws and springs that secure hold-down bar (see **Figure 46**).



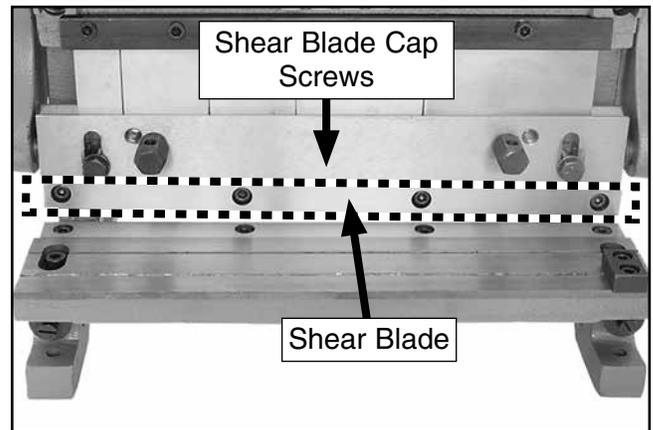
**Figure 46.** Location of cap screws securing hold-down bar.

## ⚠ CAUTION

The shear blades can easily cut your hands. Always wear heavy leather gloves when handling shear blades to avoid this cutting hazard.

2. Remove shear blade cap screws (see **Figure 47**) and carefully remove shear blade from machine.

**Tip:** When removing or installing upper shear blade, remove cap screw at one end, then insert a small hex wrench or similar tool through hole to keep blade in place as you remove the remaining cap screws.



**Figure 47.** Shear blade cap screws.

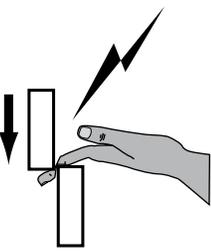
3. Inspect used shear blade cutting edge for excessive wear, nicks, or burrs.
  - If cutting edge shows excessive wear, nicks, or burrs, and the other cutting edge has not been used, rotate blade and re-install.
  - If both cutting edges are excessively worn, nicked, or have burrs, either properly sharpen or purchase a replacement blade.
4. Re-install blade and other components in the reverse order they were removed.
5. Check that shear blade gap adjustment is correct as instructed in **Adjusting Shear Blade Gap** on **Page 30**.



# Adjusting Shear Blade Gap

The gap between the upper and lower shear blades (as they pass each other) must remain even along the length of blades to produce clean cuts. Initially, this adjustment has been made at the factory. However, over time and with normal wear, you may need to re-adjust this gap.

If the blade gap is too wide, the workpiece will not cut correctly and show signs of bending, ripping, or tearing. If the blade gap is too narrow, it will be difficult to lower the upper blade past the lower blade and the cutting edges may become damaged.

	<p><b>⚠ WARNING</b> The shear blades on are an amputation hazard. Keep hands/fingers at least 6" away from blades when cutting to test blade gap. Never reach between blades unless they are blocked from closing.</p>
--	--

## Checking Shear Blade Gap

Use a piece of paper to perform a shear cut test, making cuts along the full length of the shear blades. All cuts should be sharp without bending or tearing the paper.

- If cut is clean at one end and not the other, perform the **Adjusting Shear Table** procedure.
- If paper cuts cleanly on the ends but not in the center, or it cuts cleanly in the center but not on the ends, blade bow needs to be adjusted (refer to **Adjusting Blade Bow** on **Page 31**).

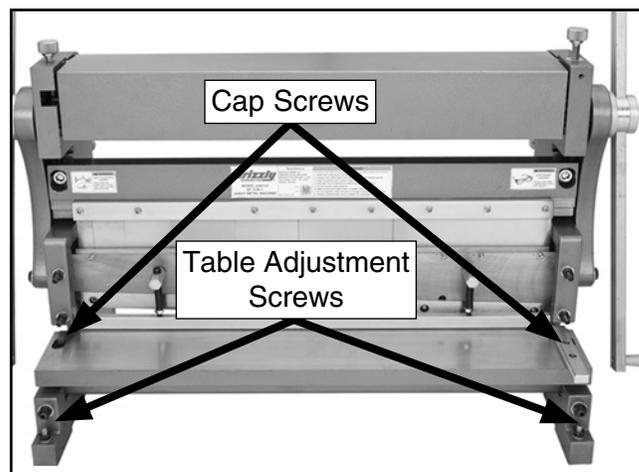
## Adjusting Shear Table

G4011Z and T26751Z Tools Needed		Qty
Hex Wrenches 5, 10mm.....	1	Each
Wrench or Socket 18mm.....	1	

T26472Z Tools Needed		Qty
Hex Wrenches 4, 10mm.....	1	Each
Wrench or Socket 13mm.....	1	

### To adjust shear table:

1. Loosen cap screws on both ends of shear table that secure it to machine (see **Figure 48**).



**Figure 48.** Table adjustment controls.

2. Evenly rotate table adjustment screws to adjust position of shear table until blade gap is even, then retighten cap screws to secure table.

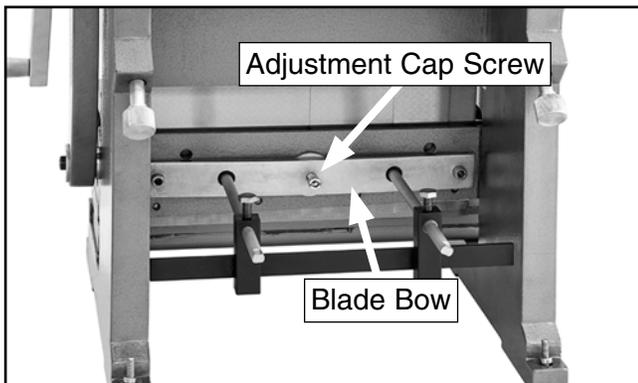
**Note:** *Rotating table adjustment screws clockwise moves table toward the upper shear blade.*

3. Perform shear test cut (refer to **Checking Blade Gap**). If necessary, repeat **Steps 1–3** until you are satisfied with shear cut test.



## Adjusting Blade Bow (T26472Z)

The blade bow is used to remove any slight bow in the cast-iron cross beam to which the brake finger receiver and upper shear blade are attached (see **Figure 49**). It should be adjusted if the shear blade does not cut evenly across its entire length. Before adjusting the blade bow, perform the shear test cut described in **Checking Blade Gap** on **Page 30**.



**Figure 49.** T26472Z blade bow adjustment screw.

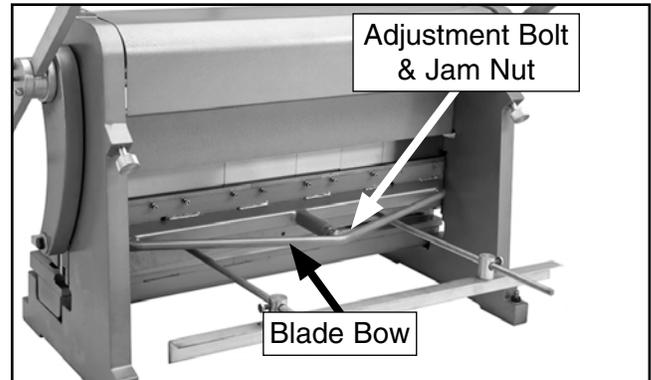
<b>T26472Z Tools Needed</b>	<b>Qty</b>
Hex Wrench 6mm.....	1

### To adjust blade gap with blade bow:

1. If shear test cut was clean on ends of shear blade but not in center, rotate adjustment cap screw (see **Figure 49**) clockwise  $\frac{1}{8}$  turn at a time, then retest and re-adjust as necessary until paper cuts cleanly along entire length of blades.
2. If shear test cut was clean in center but not on ends, rotate cap screw counterclockwise  $\frac{1}{8}$  turn at a time, then retest and re-adjust as necessary until paper cuts cleanly along entire length of blades.

## Adjusting Blade Bow (G4011Z & T26751Z)

The adjustment bolt of the blade bow is used to remove any slight bow in the cast-iron cross beam to which the brake finger receiver and upper shear blade are attached (see **Figure 50**). It should be adjusted if the shear blade does not cut evenly across its entire length. Before adjusting the blade bow, perform the shear test cut described in **Checking Blade Gap** on **Page 30**.



**Figure 50.** G4011Z and T26751Z blade bow adjustment bolt.

<b>G4011Z and T26751Z Tools Needed</b>	<b>Qty</b>
Wrench 24mm .....	1

### To adjust blade gap with blade bow:

1. If shear test cut was clean in center but not on ends, rotate jam nut (see **Figure 50**) clockwise  $\frac{1}{8}$  turn at a time, then retest and re-adjust as necessary until paper cuts cleanly along entire length of blades.
2. If shear test cut was clean on ends of shear table but not in center, rotate jam nut counterclockwise  $\frac{1}{8}$  turn at a time, then retest and re-adjust as necessary until paper cuts cleanly along entire length of blades.



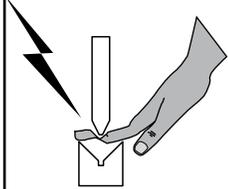
# Aligning Brake

During the life of this machine, you may need to align the brake fingers with the finger receiver from side to side.

<b>T26472Z Tools Needed</b>		<b>Qty</b>
Hex Wrench 6, 10mm.....	1	Each
Wrench 16mm .....	1	
12" Flat Bar Stock or Heavy Metal Ruler .....	1	

<b>G4011Z Tools Needed</b>		<b>Qty</b>
Hex Wrench 6, 12mm.....	1	Each
Wrench 18mm .....	1	
30" Flat Bar Stock or Heavy Metal Ruler .....	1	

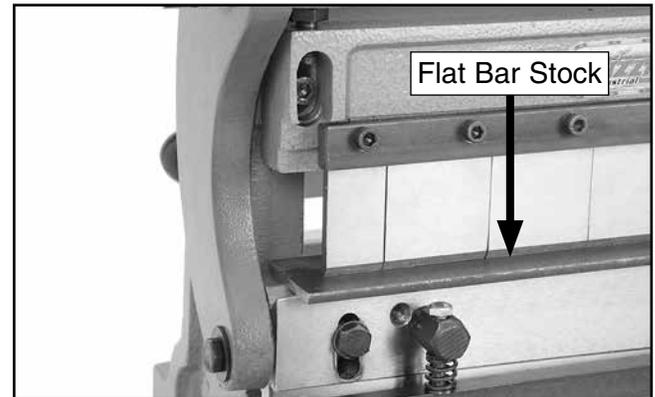
<b>T26751Z Tools Needed</b>		<b>Qty</b>
Hex Wrench 6, 10mm.....	1	Each
Wrench 18mm .....	1	
42" Flat Bar Stock or Heavy Metal Ruler .....	1	

	<h2>! WARNING</h2> <p>The brake fingers are a serious pinching hazard. Keep hands/fingers at least 6" away from brake fingers when using. Never reach between brake fingers and finger receiver unless they are blocked from closing.</p>
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### To align brake fingers:

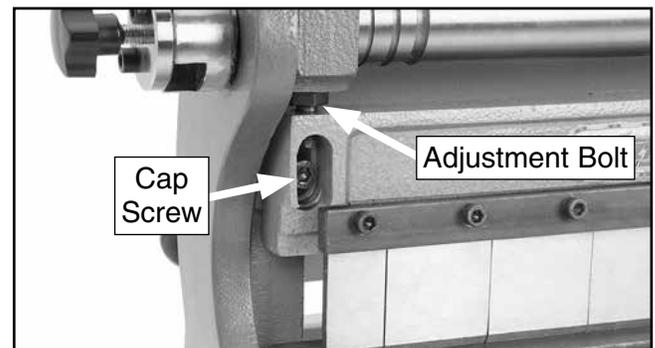
- Clean and de-burr finger tips and receiver groove. Inspect fingers and receiver for any cracks or damage.
  - If receiver brake fingers are damaged in any way, DO NOT use brake until you have replaced these parts with new ones.
- Replace fingers and properly seat them (refer to **Steps 1–7** beginning on **Page 28** for detailed instructions).

- Place a piece of flat bar stock or a heavy metal ruler across finger receiver, as shown in **Figure 51**.



**Figure 51.** Metal bar laid across receiver and making contact with fingers.

- Use hand crank to raise metal bar until making contact with fingers, as shown in **Figure 51**.
- Starting at one end, visually check gap between brake fingers and metal bar.
  - If there are no gaps, remove metal bar. No adjustments are necessary.
  - If there is a gap at one end of brake, loosen cap screw closest to that end (see **Figure 52**), then rotate adjustment bolt on that end counterclockwise until gap disappears.



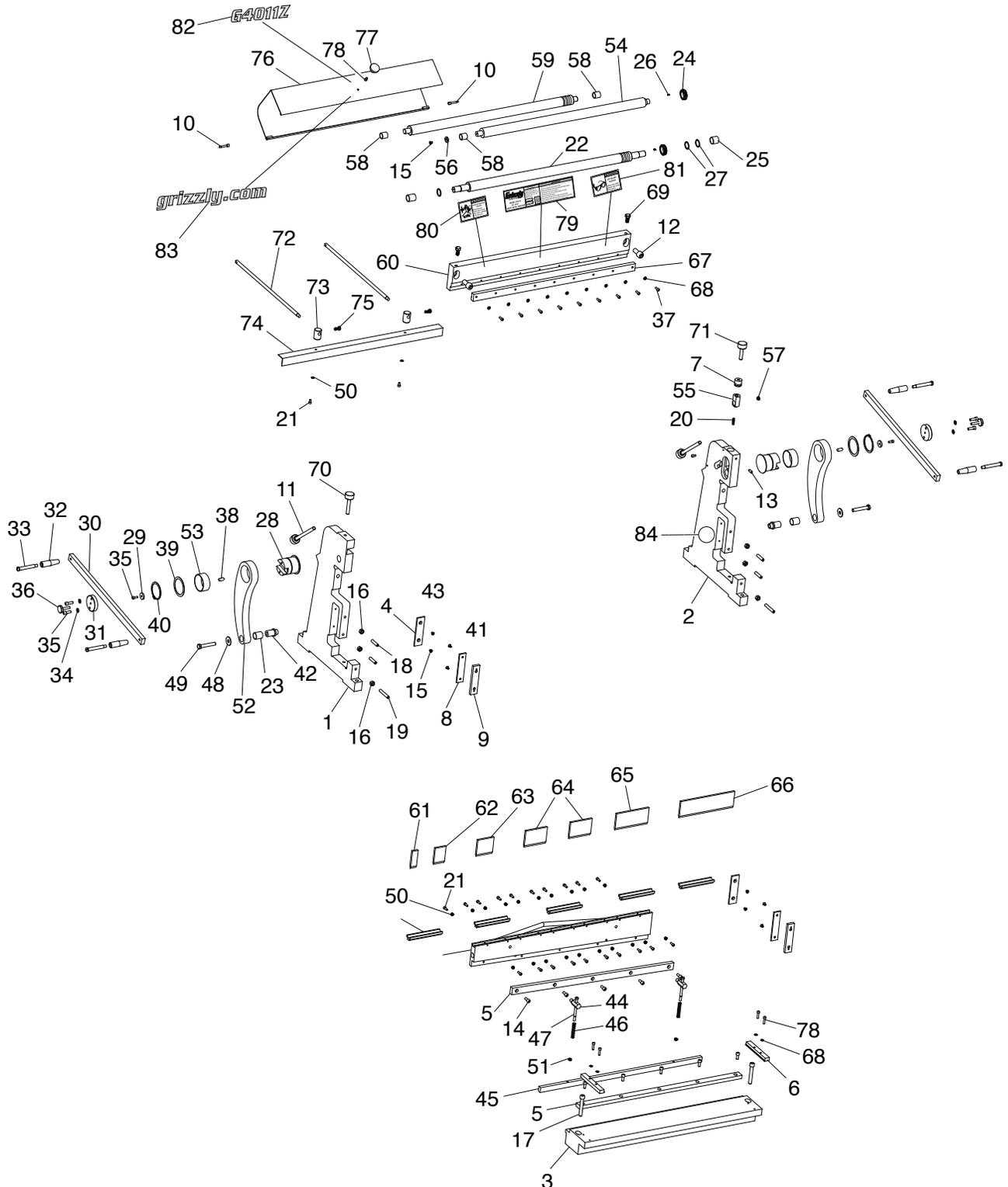
**Figure 52.** Location of adjustment bolt and cap screws securing brake fingers.

- Retighten cap screw, remove metal bar, and use hand crank to cycle machine 2–3 times.
- Repeat **Steps 3–6** until brake fingers rest evenly on metal bar along its entire length.



# SECTION 7: PARTS

## G4011Z Breakdown



**Please Note:** We do our best to stock replacement parts whenever possible, but we cannot guarantee that all parts shown here are available for purchase. Call (800) 523-4777 or visit our online parts store at [www.grizzly.com](http://www.grizzly.com) to check for availability.



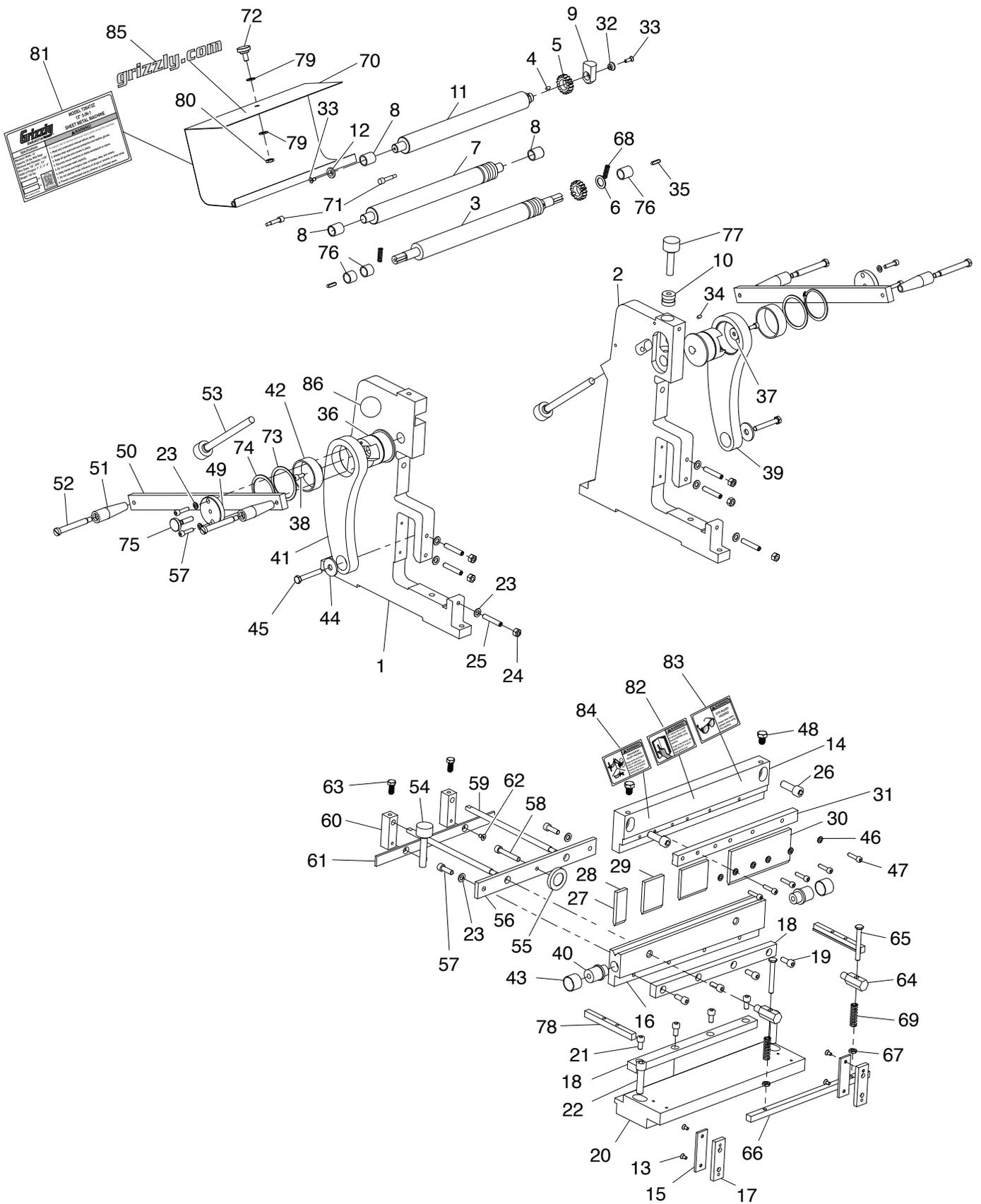
# G4011Z Parts List

REF	PART #	DESCRIPTION
1	P4011Z001	SUPPORT FRAME (LH)
2	P4011Z002	SUPPORT FRAME (RH)
3	P4011Z003	WORK TABLE
4	P4011Z004	BLADE SIDE PLATE (LOWER)
5	P4011Z005	SHEAR BLADE
6	P4011Z006	TABLE GUIDE
7	P4011Z007	BUSHING
8	P4011Z008	BLADE SIDE PLATE (UPPER)
9	P4011Z009	CONNECTING PLATE
10	P4011Z010	HINGE PIN
11	P4011Z011	KNOB BOLT M12-1.75 X 185, 14
12	P4011Z012	CAP SCREW M16-2 X 35
13	P4011Z013	SET SCREW M8-1.25 X 30
14	P4011Z014	CAP SCREW M8-1.25 X 20
15	P4011Z015	FLAT HEAD CAP SCR M6-1 X 10
16	P4011Z016	HEX NUT M10-1.5
17	P4011Z017	CAP SCREW M12-1.75 X 80
18	P4011Z018	SET SCREW M10-1.5 X 45
19	P4011Z019	SET SCREW M10-1.5 X 60
20	P4011Z020	COMPRESSION SPRING
21	P4011Z021	CAP SCREW M6-1 X 10
22	P4011Z022	ROLLER (LOWER)
23	P4011Z023	BUSHING
24	P4011Z024	GEAR 19T
25	P4011Z025	BUSHING
26	P4011Z026	KEY 4 X 4 X 8
27	P4011Z027	SPACER (COPPER)
28	P4011Z028	ECCENTRIC SHAFT
29	P4011Z029	FLAT WASHER 8MM (RUBBER)
30	P4011Z030	CRANK ARM
31	P4011Z031	CRANK ARM HUB
32	P4011Z032	CRANK HANDLE
33	P4011Z033	HANDLE STEP BOLT M10-1.5 X 95, 14
34	P4011Z034	FLAT WASHER 8MM
35	P4011Z035	CAP SCREW M8-1.25 X 25
36	P4011Z036	LOCK KNOB BOLT M8-1.25 X 50, 35
37	P4011Z037	CAP SCREW M6-1 X 16
38	P4011Z038	KEY 8 X 8 X 25
39	P4011Z039	SPACER
40	P4011Z040	EXT RETAINING RING 65MM
41	P4011Z041	SHEAR BLADE HOLDER
42	P4011Z042	THREADED BOLT BUSHING M12-1.75

REF	PART #	DESCRIPTION
43	P4011Z043	FINGER RECEIVER
44	P4011Z044	HOLD-DOWN ARM
45	P4011Z045	HOLD-DOWN
46	P4011Z046	COMPRESSION SPRING
47	P4011Z047	CAP SCREW M8-1.25 X 110
48	P4011Z048	FENDER WASHER 12MM
49	P4011Z049	HEX BOLT M12-1.75 X 70
50	P4011Z050	HEX NUT M6-1
51	P4011Z051	HEX NUT M8-1.25
52	P4011Z052	CONNECTING ARM
53	P4011Z053	BUSHING
54	P4011Z054	ROLLER (UPPER)
55	P4011Z055	THREADED SHAFT
56	P4011Z056	UPPER ROLLER SPACER
57	P4011Z057	SHAFT BUSHING
58	P4011Z058	BUSHING (COPPER)
59	P4011Z059	ROLLER (REAR)
60	P4011Z060	FINGER MOUNT
61	P4011Z061	FINGER 1"
62	P4011Z062	FINGER 2"
63	P4011Z063	FINGER 3"
64	P4011Z064	FINGER 4"
65	P4011Z065	FINGER 6"
66	P4011Z066	FINGER 10"
67	P4011Z067	FINGER RETAINER BAR
68	P4011Z068	FLAT WASHER 6MM
69	P4011Z069	HEX BOLT M12-1.75 X 25
70	P4011Z070	KNOB BOLT M12-1.75 X 90, 68
71	P4011Z071	KNOB BOLT M12-1.75 X 75, 50
72	P4011Z072	REAR SUPPORT ROD
73	P4011Z073	REAR SUPPORT BRACKET
74	P4011Z074	REAR SUPPORT
75	P4011Z075	HEX BOLT M8-1.25 X 20 (COPPER)
76	P4011Z076	ROLLER COVER
77	P4011Z077	COVER KNOB M6-1
78	P4011Z078	CAP SCREW M6-1 X 25
79	P4011Z079	ID LABEL
80	P4011Z080	PINCH/AMPUTATION WARNING LABEL
81	P4011Z081	EYE INJURY WARNING LABEL
82	P4011Z082	MODEL NUMBER LABEL P-7527C
83	P4011Z083	GRIZZLY.COM LABEL P-7527C
84	P4011Z084	GRIZZLY GREEN TOUCH-UP PAINT



# T26472Z Breakdown



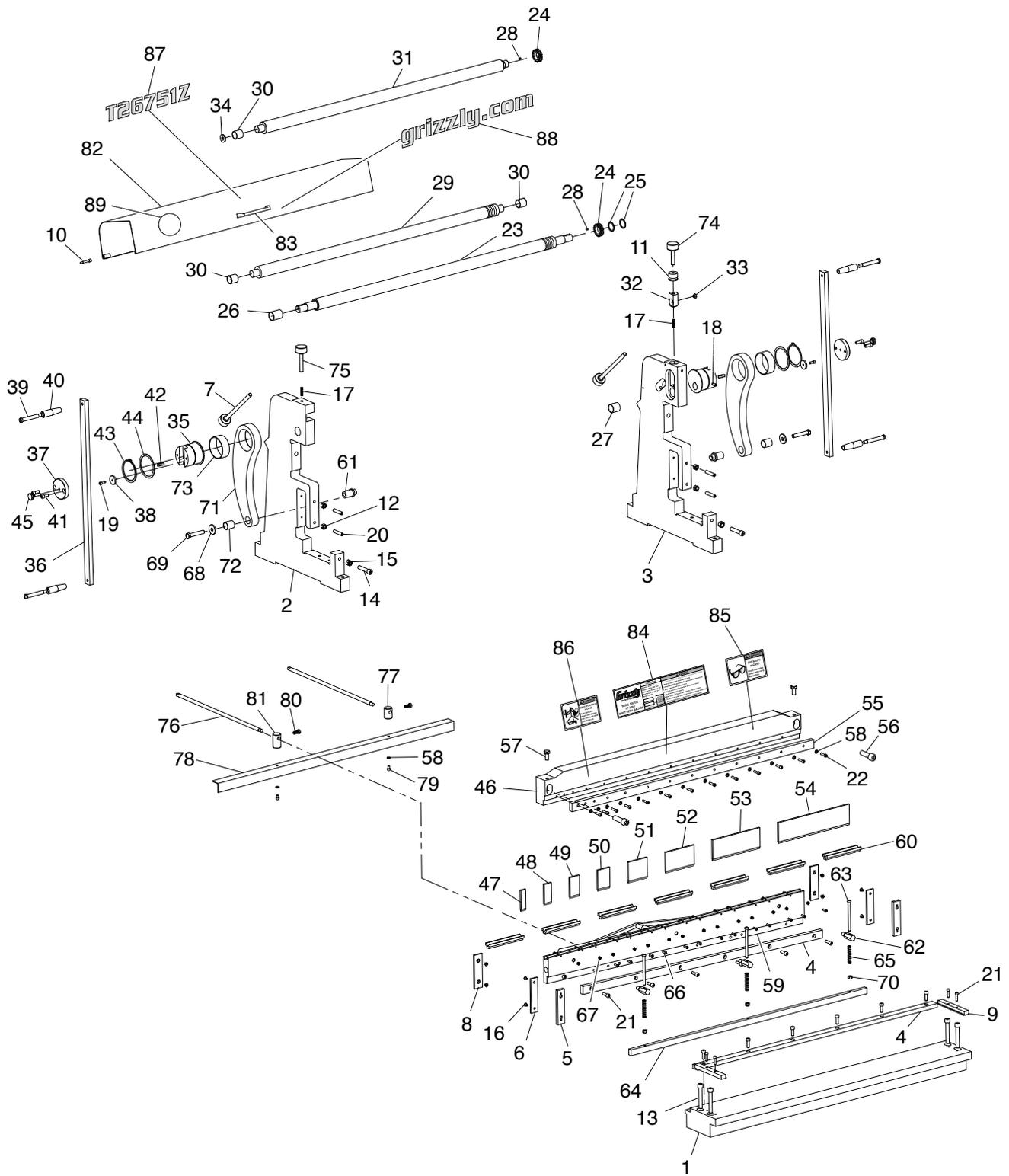
# T26472Z Parts List

REF	PART #	DESCRIPTION
1	PT26472Z001	SUPPORT FRAME (LH)
2	PT26472Z002	SUPPORT FRAME (RH)
3	PT26472Z003	ROLLER (LOWER)
4	PT26472Z004	KEY 4 X 4 X 10
5	PT26472Z005	GEAR 16T
6	PT26472Z006	SPACER (COPPER)
7	PT26472Z007	ROLLER (REAR)
8	PT26472Z008	BUSHING (COPPER)
9	PT26472Z009	UPPER ROLLER BRACKET
10	PT26472Z010	THREADED SHAFT
11	PT26472Z011	ROLLER (UPPER)
12	PT26472Z012	UPPER ROLLER SPACER
13	PT26472Z013	FLAT HD CAP SCR M5-.8 X 10
14	PT26472Z014	FINGER MOUNT
15	PT26472Z015	BLADE SIDE PLATE (BOTTOM)
16	PT26472Z016	SHEAR BLADE HOLDER
17	PT26472Z017	BLADE SIDE PLATE (TOP)
18	PT26472Z018	SHEAR BLADE
19	PT26472Z019	CAP SCREW M8-1.25 X 16 (SS)
20	PT26472Z020	WORK TABLE
21	PT26472Z021	CAP SCREW M8-1.25 X 16 (SS)
22	PT26472Z022	CAP SCREW M12-1.75 X 50
23	PT26472Z023	FLAT WASHER 8MM
24	PT26472Z024	HEX NUT M8-1.25
25	PT26472Z025	SET SCREW M8-1.25 X 45
26	PT26472Z026	CAP SCREW M12-1.75 X 35
27	PT26472Z027	FINGER 1"
28	PT26472Z028	FINGER 2"
29	PT26472Z029	FINGER 3"
30	PT26472Z030	FINGER 6"
31	PT26472Z031	FINGER RETAINER BAR
32	PT26472Z032	BUSHING
33	PT26472Z033	FLAT HD CAP SCR M5-.8 X 16
34	PT26472Z034	SET SCREW M8-1.25 X 16
35	PT26472Z035	KEY 5 X 5 X 20
36	PT26472Z036	ECCENTRIC SHAFT
37	PT26472Z037	SHAFT FLAT WASHER 6MM
38	PT26472Z038	CAP SCREW M6-1 X 16
39	PT26472Z039	CONNECTING ARM (RH)
40	PT26472Z040	THREADED BOLT BUSHING M8-1.25
41	PT26472Z041	CONNECTING ARM (LH)
42	PT26472Z042	BUSHING
43	PT26472Z043	BUSHING

REF	PART #	DESCRIPTION
44	PT26472Z044	CONNECTING ARM FLAT WASHER 8MM
45	PT26472Z045	HEX BOLT M8-1.25 X 55
46	PT26472Z046	FLAT WASHER 6MM
47	PT26472Z047	CAP SCREW M6-1 X 25
48	PT26472Z048	HEX BOLT M10-1.5 X 16
49	PT26472Z049	CRANK ARM HUB
50	PT26472Z050	CRANK ARM
51	PT26472Z051	CRANK HANDLE
52	PT26472Z052	STEP BOLT M8-1.25 X 90, 14
53	PT26472Z053	KNOB BOLT M12-1.75 X 175, 75
54	PT26472Z054	KNOB BOLT M12-1.75 X 80, 55 (LH)
55	PT26472Z055	SPACER
56	PT26472Z056	BOW ADJUSTMENT
57	PT26472Z057	CAP SCREW M8-1.25 X 25
58	PT26472Z058	CAP SCREW M8-1.25 X 50
59	PT26472Z059	REAR SUPPORT ROD
60	PT26472Z060	REAR SUPPORT BRACKET
61	PT26472Z061	REAR SUPPORT
62	PT26472Z062	FLAT HD CAP SCR M6-1 X 10
63	PT26472Z063	HEX BOLT M8-1.25 X 20
64	PT26472Z064	HOLD-DOWN ARM
65	PT26472Z065	HEX BOLT M8-1.25 X 65
66	PT26472Z066	HOLD-DOWN
67	PT26472Z067	HEX NUT M8-1.25
68	PT26472Z068	COMPRESSION SPRING
69	PT26472Z069	COMPRESSION SPRING
70	PT26472Z070	ROLLER COVER
71	PT26472Z071	HINGE PIN
72	PT26472Z072	KNOB BOLT M8-1.25 X 22, 12
73	PT26472Z073	SPACER
74	PT26472Z074	EXT RETAINING RING 55MM
75	PT26472Z075	HUB KNOB BOLT M8-1.25 X 40
76	PT26472Z076	BUSHING (COPPER)
77	PT26472Z077	KNOB BOLT M12-1.75 X 65, 42
78	PT26472Z078	TABLE GUIDE
79	PT26472Z079	FLAT WASHER 8MM
80	PT26472Z080	HEX NUT M8-1.25 THIN
81	PT26472Z081	ID LABEL
82	PT26472Z082	READ MANUAL LABEL
83	PT26472Z083	EYE INJURY WARNING LABEL
84	PT26472Z084	PINCH/AMPUTATION WARNING LABEL
85	PT26472Z085	GRIZZLY.COM LABEL P-7527C
86	PT26472Z086	GRIZZLY GREEN TOUCH-UP PAINT



# T26751Z Breakdown



# T26751Z Parts List

REF	PART #	DESCRIPTION
1	PT26751Z001	WORK TABLE
2	PT26751Z002	SUPPORT FRAME (LH)
3	PT26751Z003	SUPPORT FRAME (RH)
4	PT26751Z004	SHEAR BLADE
5	PT26751Z005	CONNECTING PLATE
6	PT26751Z006	BLADE SIDE PLATE (TOP)
7	PT26751Z007	KNOB BOLT M12-1.75 X 95, 12
8	PT26751Z008	BLADE SIDE PLATE (BOTTOM)
9	PT26751Z009	TABLE GUIDE
10	PT26751Z010	COVER HINGE PIN
11	PT26751Z011	BUSHING
12	PT26751Z012	HEX NUT M10-1.5
13	PT26751Z013	CAP SCREW M12-1.75 X 80
14	PT26751Z014	CAP SCREW M12-1.75 X 60
15	PT26751Z015	HEX NUT M12-1.75
16	PT26751Z016	FLAT HD CAP SCR M6-1 X 10
17	PT26751Z017	COMPRESSION SPRING
18	PT26751Z018	SET SCREW M8-1.25 X 20
19	PT26751Z019	CAP SCREW M6-1 X 16
20	PT26751Z020	SET SCREW M10-1.5 X 50
21	PT26751Z021	CAP SCREW M8-1.25 X 25
22	PT26751Z022	CAP SCREW M6-1 X 25
23	PT26751Z023	ROLLER (LOWER)
24	PT26751Z024	GEAR 21T
25	PT26751Z025	SPACER (COPPER)
26	PT26751Z026	BUSHING
27	PT26751Z027	BUSHING
28	PT26751Z028	KEY 4 X 4 X 8
29	PT26751Z029	ROLLER (REAR)
30	PT26751Z030	BUSHING (COPPER)
31	PT26751Z031	ROLLER (UPPER)
32	PT26751Z032	THREADED SHAFT
33	PT26751Z033	SHAFT BUSHING
34	PT26751Z034	UPPER ROLLER BUSHING
35	PT26751Z035	ECCENTRIC SHAFT
36	PT26751Z036	CRANK ARM
37	PT26751Z037	CRANK ARM HUB
38	PT26751Z038	FLAT WASHER 6MM (RUBBER)
39	PT26751Z039	STEP BOLT M10-1.5 X 95, 14
40	PT26751Z040	CRANK HANDLE
41	PT26751Z041	CAP SCREW M8-1.25 X 20
42	PT26751Z042	KEY 8 X 8 X 28
43	PT26751Z043	EXT RETAINING RING 75MM
44	PT26751Z044	SPACER
45	PT26751Z045	LOCK KNOB M8-1,25 X 50, 35

REF	PART #	DESCRIPTION
46	PT26751Z046	FINGER MOUNT
47	PT26751Z047	FINGER 1"
48	PT26751Z048	FINGER 1-1/2"
49	PT26751Z049	FINGER 2"
50	PT26751Z050	FINGER 2-1/2"
51	PT26751Z051	FINGER 4"
52	PT26751Z052	FINGER 6"
53	PT26751Z053	FINGER 10"
54	PT26751Z054	FINGER 15"
55	PT26751Z055	FINGER RETAINER BAR
56	PT26751Z056	CAP SCREW M16-2 X 55
57	PT26751Z057	HEX BOLT M12-1.75 X 25
58	PT26751Z058	FLAT WASHER 6MM
59	PT26751Z059	SHEAR BLADE HOLDER
60	PT26751Z060	FINGER RECEIVER
61	PT26751Z061	THREADED BOLT BUSHING M12-1.75
62	PT26751Z062	HOLD-DOWN ARM
63	PT26751Z063	CAP SCREW M8-1.25 X 110
64	PT26751Z064	HOLD-DOWN
65	PT26751Z065	COMPRESSION SPRING
66	PT26751Z066	CAP SCREW M5-.8 X 16
67	PT26751Z067	HEX NUT M5-.8
68	PT26751Z068	FENDER WASHER 12MM
69	PT26751Z069	HEX BOLT M12-1.75 X 70
70	PT26751Z070	HEX NUT M8-1.25
71	PT26751Z071	CONNECTING ARM
72	PT26751Z072	BUSHING
73	PT26751Z073	BUSHING
74	PT26751Z074	KNOB BOLT M12-1.75 X 80, 55
75	PT26751Z075	KNOB BOLT M12-1.75 X 95, 70
76	PT26751Z076	REAR SUPPORT ROD
77	PT26751Z077	REAR SUPPORT BRACKET (RH)
78	PT26751Z078	REAR SUPPORT
79	PT26751Z079	CAP SCREW M6-1 X 10
80	PT26751Z080	HEX BOLT M8-1.25 X 20 (COPPER)
81	PT26751Z081	REAR SUPPORT BRACKET (LH)
82	PT26751Z082	ROLLER COVER
83	PT26751Z083	COVER HANDLE
84	PT26751Z084	ID LABEL
85	PT26751Z085	EYE INJURY WARNING LABEL
86	PT26751Z086	PINCH/AMPUTATION WARNING LABEL
87	PT26751Z087	MODEL NUMBER LABEL P-7527C
88	PT26751Z088	GRIZZLY.COM LABEL P-7527C
89	PT26751Z089	GRIZZLY GREEN TOUCH-UP PAINT





# WARRANTY CARD

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 Street \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Phone # \_\_\_\_\_ Email \_\_\_\_\_  
 Model # \_\_\_\_\_ Order # \_\_\_\_\_ Serial # \_\_\_\_\_

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

1. How did you learn about us?

Advertisement                       Friend                       Catalog  
 Card Deck                                 Website                       Other:

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

<input type="checkbox"/> Cabinetmaker & FDM	<input type="checkbox"/> Popular Science	<input type="checkbox"/> Wooden Boat
<input type="checkbox"/> Family Handyman	<input type="checkbox"/> Popular Woodworking	<input type="checkbox"/> Woodshop News
<input type="checkbox"/> Hand Loader	<input type="checkbox"/> Precision Shooter	<input type="checkbox"/> Woodsmith
<input type="checkbox"/> Handy	<input type="checkbox"/> Projects in Metal	<input type="checkbox"/> Woodwork
<input type="checkbox"/> Home Shop Machinist	<input type="checkbox"/> RC Modeler	<input type="checkbox"/> Woodworker West
<input type="checkbox"/> Journal of Light Cont.	<input type="checkbox"/> Rifle	<input type="checkbox"/> Woodworker's Journal
<input type="checkbox"/> Live Steam	<input type="checkbox"/> Shop Notes	<input type="checkbox"/> Other:
<input type="checkbox"/> Model Airplane News	<input type="checkbox"/> Shotgun News	
<input type="checkbox"/> Old House Journal	<input type="checkbox"/> Today's Homeowner	
<input type="checkbox"/> Popular Mechanics	<input type="checkbox"/> Wood	

3. What is your annual household income?

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

4. What is your age group?

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

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

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

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

0-2                       3-5                       6-9                       10+

7. Do you think your machine represents a good value?     Yes                       No

8. Would you recommend Grizzly Industrial to a friend?     Yes                       No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?

**Note:** We never use names more than 3 times.     Yes                       No

10. Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

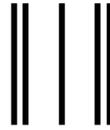
CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE

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Place  
Stamp  
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TAPE ALONG EDGES--PLEASE DO NOT STAPLE

# WARRANTY & RETURNS

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

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

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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