



# **48" PAN AND BOX BRAKE**

## **MODEL G0542**

### **INSTRUCTION MANUAL**



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#TR5867 PRINTED IN CHINA



# **WARNING!**

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

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

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

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

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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.

### *NOTICE*

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

## WARNING

### Safety Instructions for Metalworking Tools

1. **READ AND UNDERSTAND THE OWNERS MANUAL.**
2. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form a habit of checking to see that keys and adjusting wrenches are removed before operating.
3. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **DON'T USE IN DANGEROUS ENVIRONMENT.** DO NOT use electrical equipment 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 WORK SHOP CHILD PROOF** with padlocks, master switches, or by removing starter keys.
7. **DO NOT 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 Metalworking 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

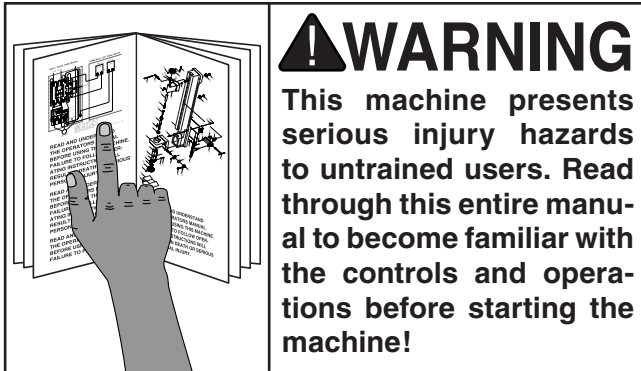
10. **WEAR PROPER APPAREL.** DO NOT wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Wear protective hair covering to contain long hair.
11. **ALWAYS USE SAFETY GLASSES.** Everyday eyeglasses are NOT safety glasses.
12. **SECURE WORK.** Use properly secured clamps or vises to hold work while performing the machining operation
13. **DO NOT OVER-REACH.** Keep proper footing and balance at all times.
14. **MAINTAIN TOOLS AND MACHINERY 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 MACHINE RUNNING UNATTENDED. TURN POWER OFF.** DO NOT leave machine until it comes to a complete stop.
19. **SOME COOLANTS/LUBRICANTS USED FOR MACHINING MAY CONTAIN HAZARDOUS CHEMICALS.** Read and understand all user information on the coolant container and protect yourself accordingly.
20. **NEVER OPERATE WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Full mental alertness is required at all times when using metalworking equipment.

# 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: INTRODUCTION

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## Commentary

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Grizzly Industrial, Inc. is proud to offer the Model G0542 48" Pan and Box Brake. This pan and box brake is part of Grizzly's growing family of fine metalworking equipment. When used according to the guidelines stated in this manual, you can expect years of trouble-free, enjoyable operation, and proof of Grizzly's commitment to customer satisfaction.

We are also pleased to provide this manual for the Model G0542 48" Pan and Box Brake. It was written to guide you through assembly, review safety considerations, and cover general operating procedures. It represents our latest effort to produce the best documentation possible.

If you have any comments or criticisms that you feel we should address in our next printing, please write to us at:

Grizzly Industrial, Inc.  
% Technical Documentation  
P.O. Box 2069  
Bellingham, WA 98227

Most important, we stand behind our equipment. We have excellent regional service departments at your disposal should the need arise.

If you have any service questions or parts requests, please call or write to 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](mailto:techsupport@grizzly.com)  
Web Site: <http://www.grizzly.com>

The specifications, drawings, and photographs illustrated in this manual represent the Model G0542 48" Pan and box Brake as supplied when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly. For your convenience, we always keep current Grizzly manuals available on our website at [www.grizzly.com](http://www.grizzly.com). Any updates to your equipment will be reflected in these manuals as soon as they are complete.



## Common Pan and Box Brake Components

## ITEMS

- 
- A detailed black and white photograph of a manual guillotine, viewed from a front-three-quarter angle. The machine is constructed from heavy-duty metal and features a large, flat cutting bed. A long, sharp blade is mounted on a sliding mechanism above the bed. The machine is supported by a sturdy, A-frame base. Two large, white, cylindrical handles are attached to the sides of the machine, connected by a long, horizontal bar. The machine is shown in a closed position, ready for use. Eight numbered callouts are present: 1 points to the left support leg; 2 points to the top blade; 3 points to the left handle; 4 points to the cutting bed; 5 points to the right handle; 6 points to the right support leg; 7 points to the front of the cutting bed; and 8 points to the blade's edge.

## G0542 48" Pan and Box Brake



## About this Section

The image shows a hand pointing to a book titled "THE BOOK OF THE DEAD". The book is open, revealing two pages. The left page features a diagram of a circuit board with various components and labels, and a list of text including "READ AND UNDERSTAND THE CONCEPTS OF THE AFTERLIFE", "FOLLOW THE INSTRUCTIONS", "READ AND UNDERSTAND THE CONCEPTS OF THE AFTERLIFE", "FOLLOW THE INSTRUCTIONS", "READ AND UNDERSTAND THE CONCEPTS OF THE AFTERLIFE", "FOLLOW THE INSTRUCTIONS", "READ AND UNDERSTAND THE CONCEPTS OF THE AFTERLIFE", "FOLLOW THE INSTRUCTIONS", "READ AND UNDERSTAND THE CONCEPTS OF THE AFTERLIFE", "FOLLOW THE INSTRUCTIONS". The right page features a diagram of a mechanical device, possibly a clock or a timer, and a list of text including "READ AND UNDERSTAND THE CONCEPTS OF THE AFTERLIFE", "FOLLOW THE INSTRUCTIONS", "READ AND UNDERSTAND THE CONCEPTS OF THE AFTERLIFE", "FOLLOW THE INSTRUCTIONS", "READ AND UNDERSTAND THE CONCEPTS OF THE AFTERLIFE", "FOLLOW THE INSTRUCTIONS", "READ AND UNDERSTAND THE CONCEPTS OF THE AFTERLIFE", "FOLLOW THE INSTRUCTIONS", "READ AND UNDERSTAND THE CONCEPTS OF THE AFTERLIFE", "FOLLOW THE INSTRUCTIONS".

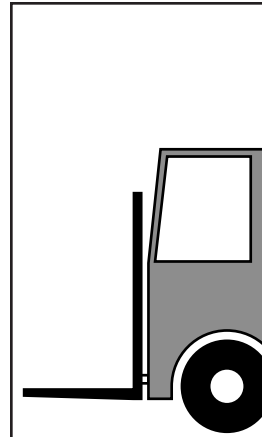
**This equipment presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the operating procedures before using this equipment!**



**Wear safety glasses during the entire setup process!**

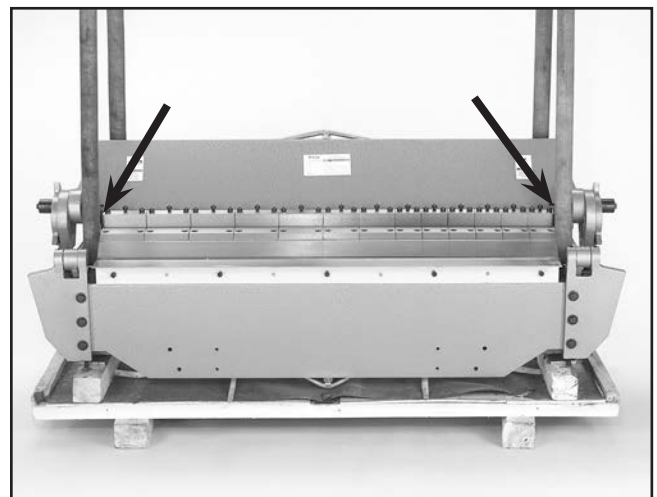


When you are completely satisfied with the condition of your shipment, you should inventory the parts.



**The Model G0542 is a heavy machine that weighs approximately 1300 lbs. Serious personal injury may occur if safe moving methods are not followed. To be safe, you will need assistance and power equipment when moving the shipping crate and removing the equipment from the crate.**

- If you are unsure of how to lift this equipment safely, consult a qualified professional.
- When lifting the pan and box brake, make sure the weight is supported evenly with two or more lifting devices.
- Make sure the body of the brake is bearing the load (**Figure 2**).



**Figure 2.** Pan and box brake supported evenly by two lifting straps.





# Piece Inventory

After removing the crate cover, you should find the following components:

## 1. Pan and Box Brake Main Body (Figure 3).

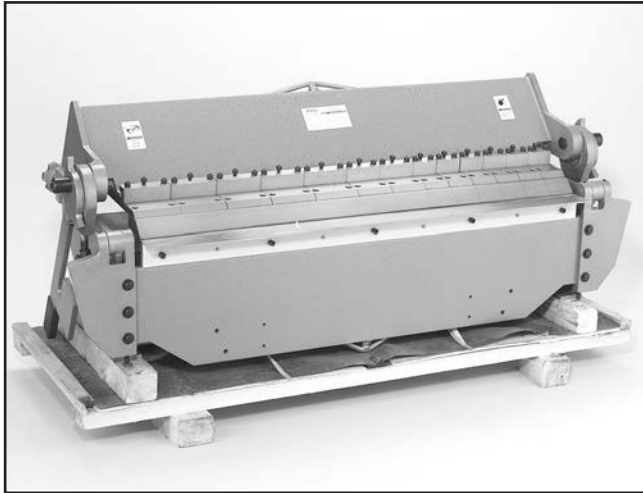


Figure 3. Pan and box brake main body.

## 2. Supports (Figure 4).

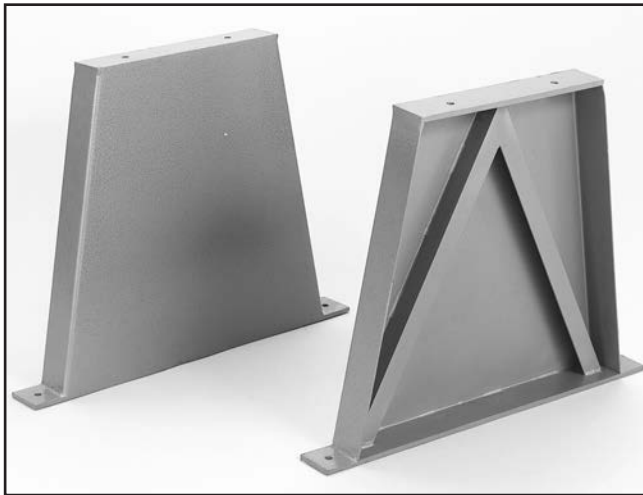


Figure 4. Supports.

- ## 3. Box (Figure 5).
- A. Counterweight Assemblies. ....2
  - B. Handlebar. ....1
  - C. Stop Rod ....1
  - D. Operating Handles ....2
  - E. Hardware Bag: ....1
    - Hex Bolts M10-1.5 x 40. ....8
    - Flat Washers 10MM ....8
    - Lock Washers 10MM. ....8
    - Hex Bolts M12-1.75 x 40. ....8
    - Flat Washers 12MM ....8
    - Lock Washers 12MM. ....8
    - Hex Nut M10-1.5. ....1
    - Hex Nut M16-2 ....2
    - Stop Hub ....1
    - Stop Collar. ....1
    - T-Bolt. ....1
    - Flat Washer 16MM ....1
    - Hex Nuts M12-1.75 ....4

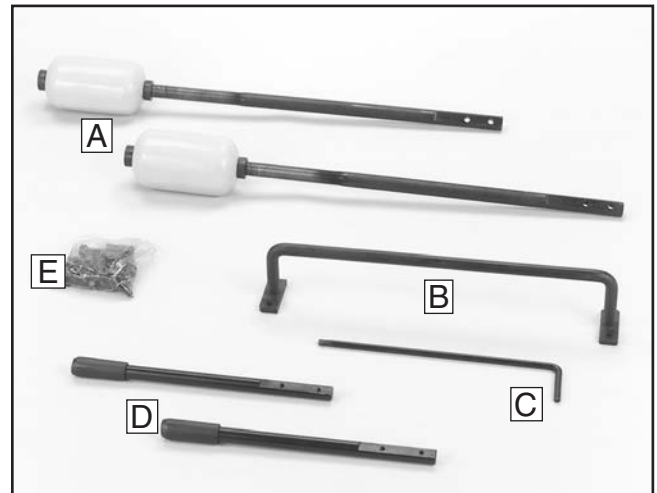


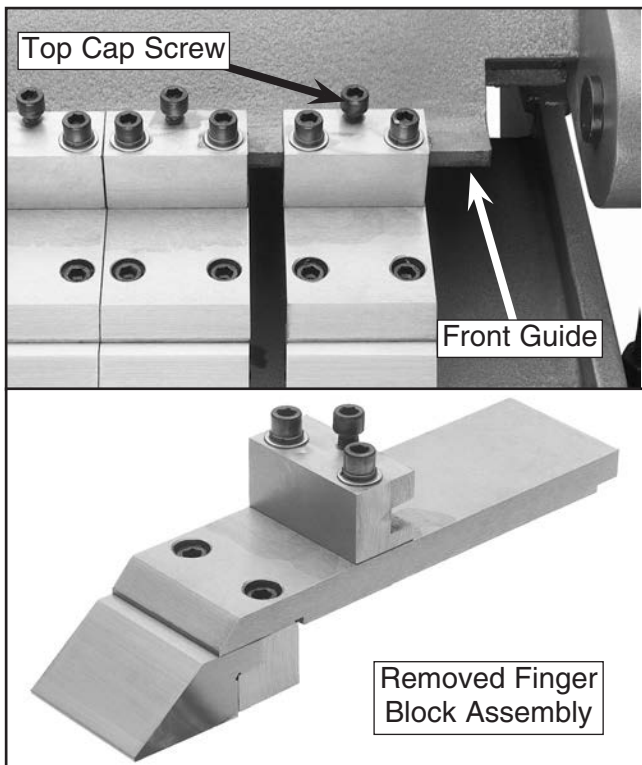
Figure 5. Contents of box.



# Clean Up

The unpainted surfaces are coated with a waxy oil to protect them from corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as Grizzly's G7895 Degreaser or with liberal amounts of WD-40®.


Remove and thoroughly clean each finger block assembly. Do this by first raising the clamping leaf to make sure there is no pressure on the finger blocks; then, for each finger block, remove the top cap screw shown in **Figure 6** and slide the entire finger block assembly off of the front guide. *This procedure is easiest if you begin with a finger block on the end.*



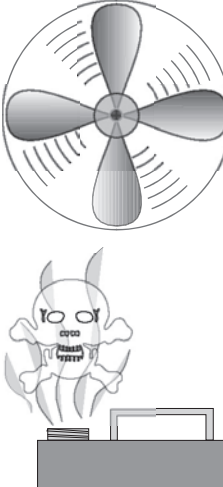
**Figure 6.** Top cap screw for loosening finger block to slide off front guide, and removed finger block assembly shown for identification.

After the finger block assemblies have been cleaned, coat them liberally with a metal protectant and reinstall. *Make sure to follow the instructions on page 14 to re-align the fingers before operating your brake!*

For metal protectants, we recommend using G96® GUN TREATMENT (Model H3788) or BOESHIELD® T-9 (Model G2871). *Check with the current Grizzly catalog for pricing and a variety of other quality metal protectants.*

	<p><b>! WARNING</b></p> <p>Do not clean with gasoline or other petroleum-based solvents. They have low flash points which make them extremely flammable. A risk of explosion and burning exists if these products are used.</p>
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	<p><b>! WARNING</b></p> <p>Do not smoke while using solvents. A risk of explosion or fire exists and may result in serious personal injury.</p>
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	<p><b>! CAUTION</b></p> <p>Many of the solvents commonly used to clean machinery can be toxic when inhaled or ingested. Always work in well-ventilated areas far from potential ignition sources when dealing with solvents. Use care when disposing of waste rags and towels to be sure they do not create fire or environmental hazards.</p>
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# Site Considerations

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## Floor and Workbench Load

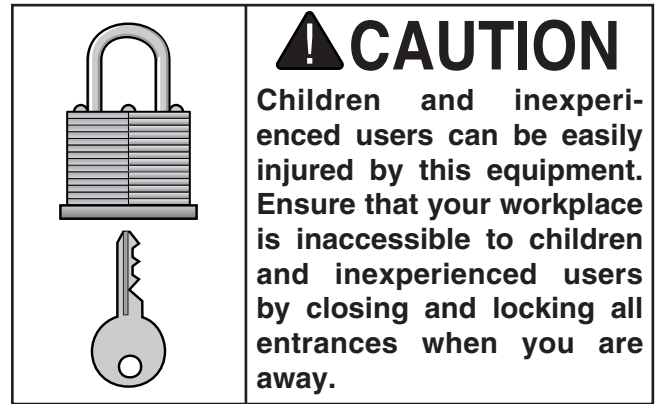
Your Model G0542 weighs approximately 1300 lbs and has a footprint of 56½" x 29". Most concrete floors should be sufficient to carry the weight. *BEFORE* moving the brake onto a wood floor, inspect it carefully to determine that it will be sufficient to carry the load of the machine, the lifting device and its operators. If you question the strength of your floor, you should consider having it inspected for possible reinforcement.

## Working Clearances

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 or work tables. Also consider the relative position of each machine to one another for efficient material handling.

## Lighting

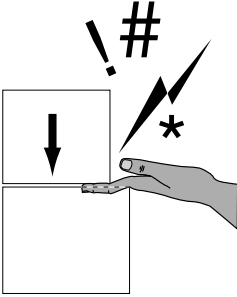
Lighting should be bright enough to eliminate shadows and prevent eye strain.



# Mounting Main Body to Supports

Components and Hardware Needed:		Qty
Pan and Box Brake Main Body .....		1
Supports .....		2
Hex Bolts M12-1.75 x 40 .....		4
Lock Washers 12MM .....		4
Flat Washers 12MM .....		4
Hex Nuts M12-1.75 .....		4

Tools Needed:	
18MM Wrench or Socket .....	2



**CAUTION**

Some components for this equipment are heavy and awkward to handle. Assembling them without proper equipment may increase the likelihood of injury.

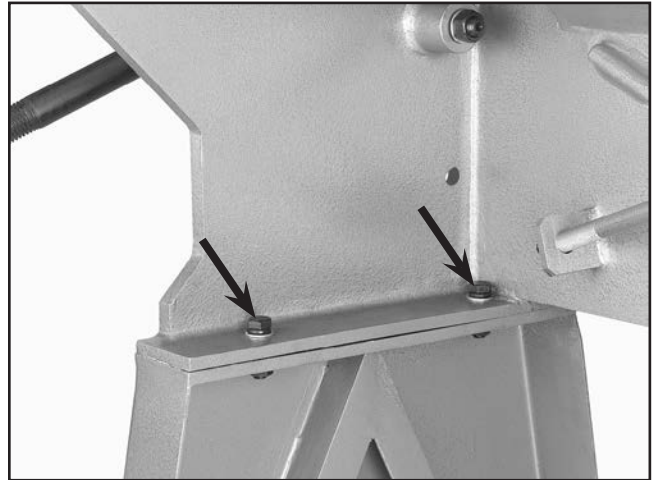
## To mount the main body to the supports:

1. Prepare for the main body placement by arranging the supports so they are standing rightside-up, are parallel with each other, and are spaced about four feet away from each other (see **Figure 7**).



**Figure 7.** Supports ready for brake placement.

2. Using lifting equipment, position the main body over the supports, then carefully lower the main body onto the supports while keeping the lifting equipment in place to prevent the main body from accidentally falling before it is secured.
3. Secure the main body to the supports with the hex bolts, flat washers, lock washers and hex nuts (see **Figure 8**).



**Figure 8.** Main body mounted to supports.



# Attaching Handles and Handlebar

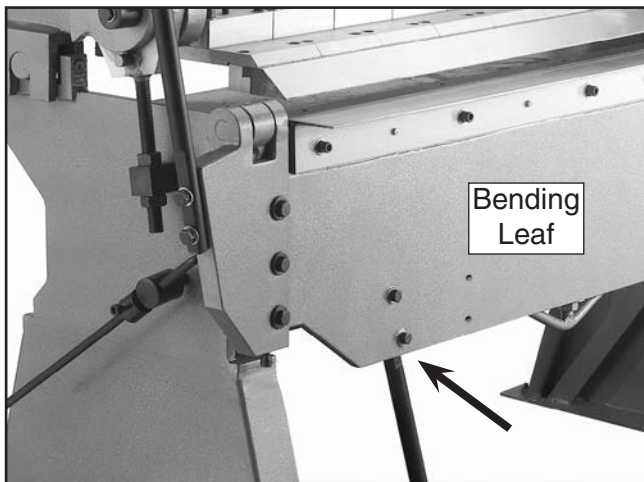
Components and Hardware Needed:	Qty
Operating Handles .....	2
Handlebar .....	1
Hex Bolts M10-1.5 x 40 .....	8
Lock Washers 10MM .....	8
Flat Washers 10MM .....	8

## Tools Needed:

16MM Wrench or Socket .....	1
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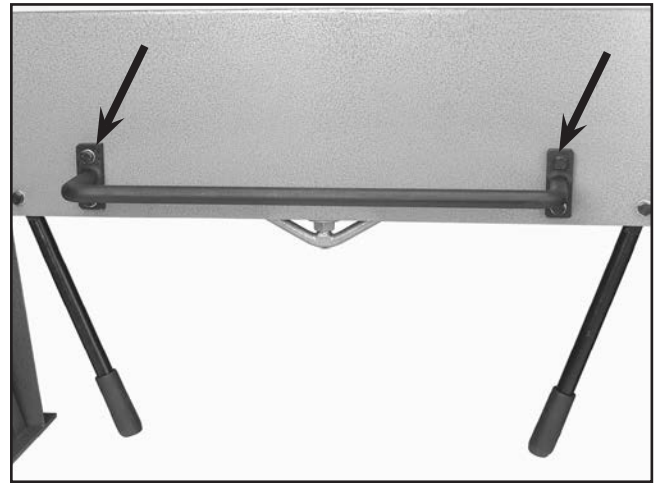
### To attach the handles and handlebar:

1. Using four of the hex bolts, lock washers, and flat washers, attach both operating handles to the underside of the bending leaf, at the outermost pair of holes (see **Figure 9**).



**Figure 9.** Operating handle attached to bending leaf at outermost pair of holes.

2. Mount the handlebar to the front of the bending leaf with the remaining four hex bolts, lock washers, and flat washers (**Figure 10**).



**Figure 10.** Handlebar attached to bending leaf.



# Installing Counterweights

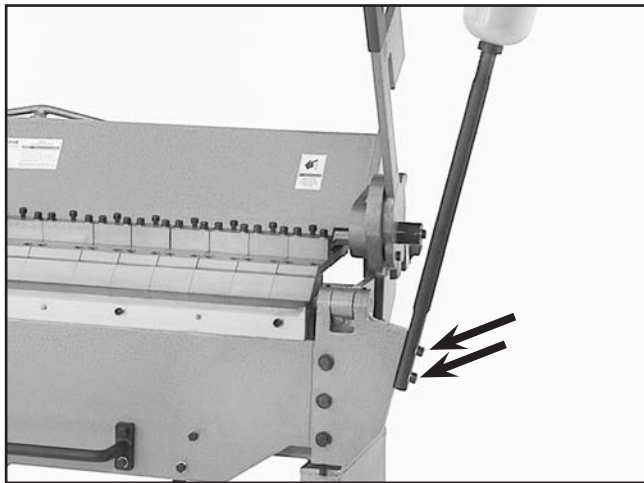
Components and Hardware Needed:	Qty
Counterweight Assemblies .....	2
Hex Bolts M12-1.75 x 40 .....	4
Lock Washers 12MM .....	4
Flat Washers 12MM .....	4

## Tools Needed:

18MM Wrench or Socket .....	1
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## To install the counterweights:

1. Have an assistant hold one of the counterweights up to the side of the brake and align the mounting holes.
2. Bolt the counterweight assembly to the side of the bending leafs, as shown in **Figure 11**, with two hex bolts, lock washers, and flat washers.
3. Repeat **steps 1 & 2** at the other side of the brake with the remaining counterweight and hardware.



**Figure 11.** Counterweight mounted to side of bending leaf.



# Mounting Stop Rod

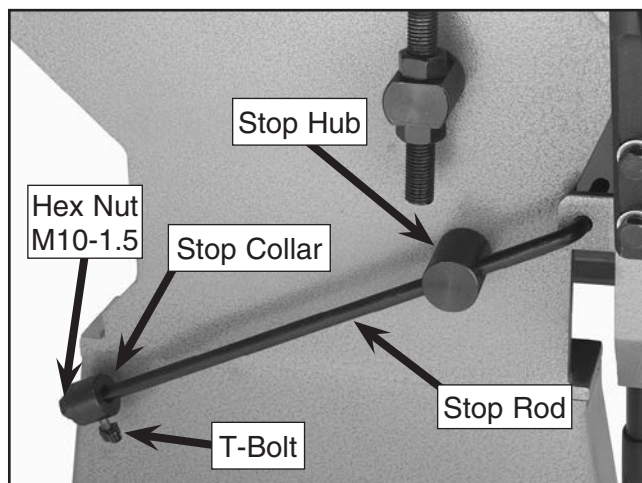
Components and Hardware Needed:	Qty
Stop Rod .....	1
Hex Nut M10-1.5 .....	1
Hex Nut M16-2 .....	2
Stop Hub .....	1
Stop Collar .....	1
T-Bolt .....	1
Flat Washer 16MM .....	1

## Tools Needed:

24MM or Adjustable Wrench .....	2
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## To mount the stop rod:

1. Insert the stop rod through the stop hub (see **Figure 12**).

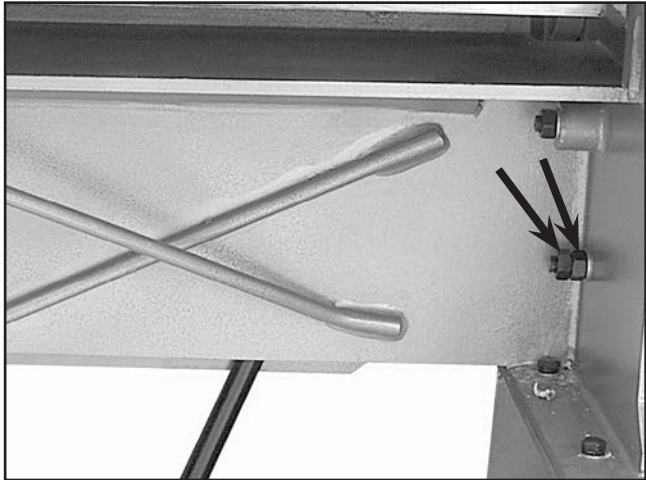


**Figure 12.** Stop rod components.

2. Insert the short end of the stop rod through the hole in the bending leaf.
3. Insert the stop hub through the hole in the side of the brake, and use one of the M16-2 hex nuts and the 16mm washer to tighten the stop hub.
4. Slide the stop collar onto the end of the stop rod, and finger tighten the M10-1.5 hex nut onto the end of the stop rod.
5. Thread the T-bolt into the stop collar.



- Back off the M16-2 hex nut a ¼ turn, and use the second M16-2 hex nut as a jam nut against the first nut, then tighten the two nuts together so that the hub can still pivot without binding when the bending leaf is in operation (**Figure 13**).



**Figure 13.** Hex nuts that keep stop hub mounted to side of bending leaf.



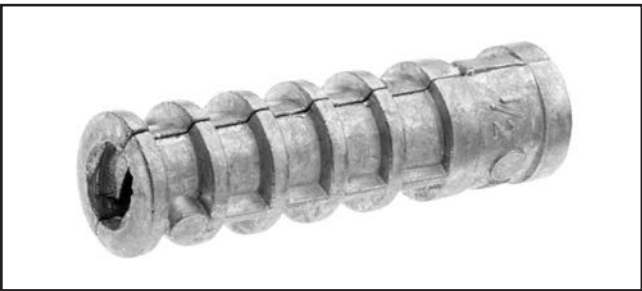
# Mounting to Floor

Although not required, we recommend that you mount your new pan and box brake to the floor.

To ensure accurate operation results, make sure your mounting location is as level as possible and that you provide adequate work room all around the pan and box brake.

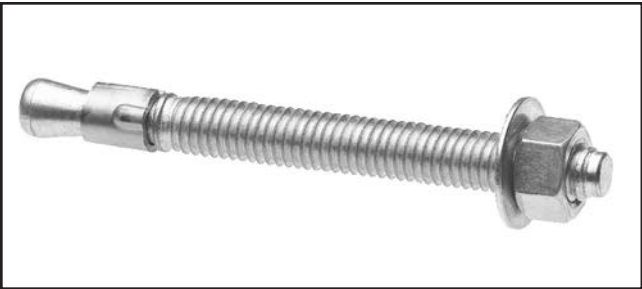
<b>Hardware Needed (not included):</b>		<b>Qty</b>
Lag Shield Anchors 5/16" x 1 3/4" ( <b>Figure 14</b> )	.....	4
Lag Bolts 5/16" x 2 1/2"	.....	4
Lock Washers 5/16"	.....	4
Flat Washers 5/16"	.....	4

<b>Tools Needed (not included):</b>		
Hammer Drill	.....	1
Punch 1/2"	.....	1
Hammer Drill Bit 1/2"	.....	1
Hammer	.....	1
Wrench or Socket 1/2"	.....	1



**Figure 14.** Typical lag shield anchor.

*Note—Anchor studs, as shown in **Figure 15** below, are stronger and more permanent alternatives to lag shield anchors; however, they will stick out of the floor, which may cause difficulties if you decide to move your brake at a later point.*



**Figure 15.** Typical anchor stud.

**To mount the Model G0542 to a concrete floor:**

- Put on safety glasses before starting!
- Use the holes in feet of the supports to act as a guide for drilling, and use the hammerdrill with the 1/2" bit to drill into the floor approximately 2 1/2" deep.
- Using compressed air and a vacuum hose, remove the concrete dust from the newly drilled holes.
- Using the hammer and punch, pound the lag shields into the concrete below the stand feet and flush with the surface of the concrete.
- Secure the brake to the floor with the 5/16" lag bolts and washers.





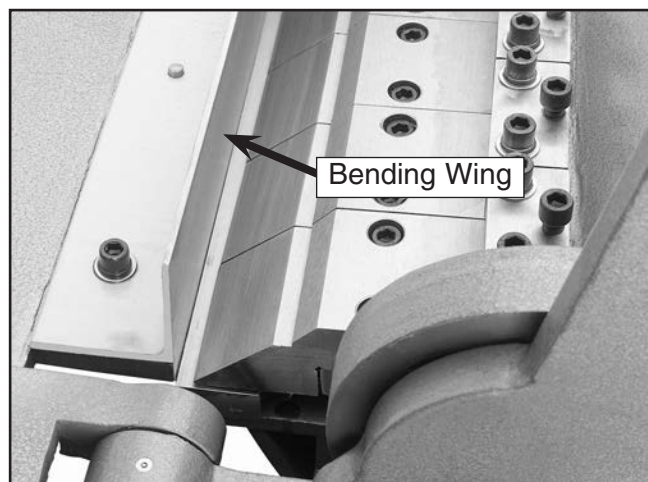
# Aligning Fingers

Finger alignment is critical to the results you will get with the bender during operation. The fingers can be aligned individually or all at once. (If you removed all the fingers for cleaning, follow the instructions for aligning all of them at once. Otherwise, just align individual fingers as needed.)

Tools Needed:	Qty
8MM Hex Wrench.....	1

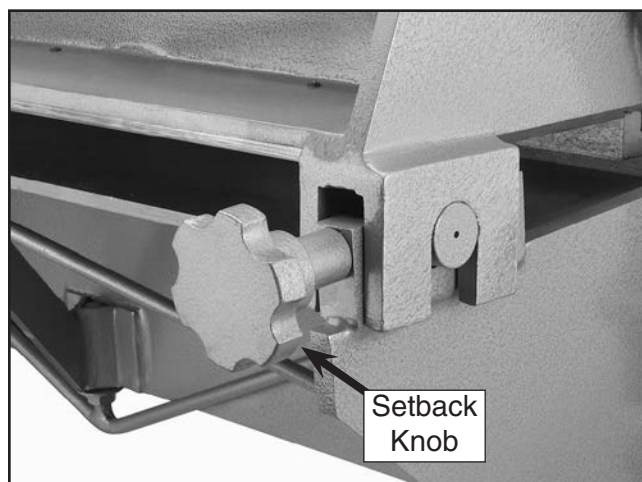
## To align the fingers:

1. Make sure the clamping handles are not engaged, so that there is no pressure on the fingers.
2. Turning both setback knobs evenly, move the bending leaf up so the bending wing is approximately perpendicular to the fingers (see **Figure 16**); this will act as a straight-edge. *Refer to page 18 to set the stop col-*



**Figure 16.** Bending wing moved approximately perpendicular to fingers to act as a straightedge.

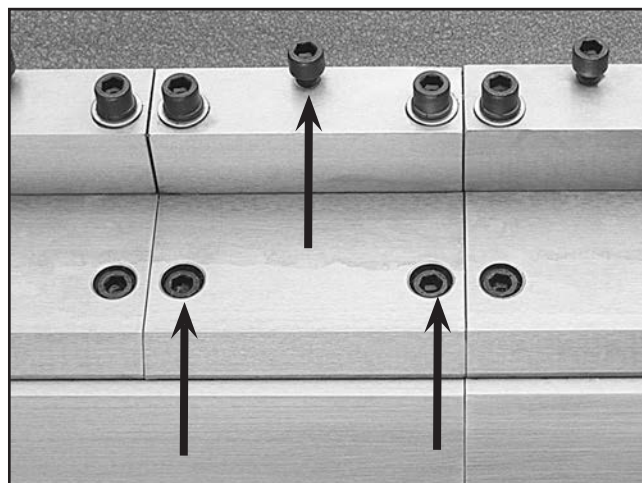
3. Using both setback knobs at the rear of the brake (**Figure 17**), adjust the fingers forward in even amounts until the forward-most finger is barely touching the bending leaf.



**Figure 17.** One of two setback knobs, which are located at the rear of the brake.

4. Loosen the three cap screws shown in **Figure 18** to align the fingers.

Note—To align all the fingers at once, loosen the three cap screws on EACH finger and adjust the setback forward until there is a small amount of pressure from the fingers to the bending wing.



**Figure 18.** Cap screws used to align fingers.

5. Tighten the cap screws when the fingers are aligned.

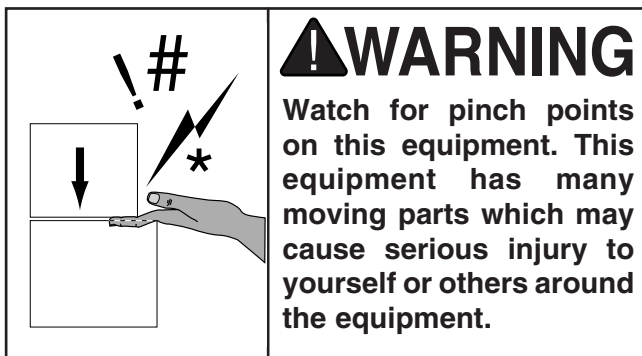
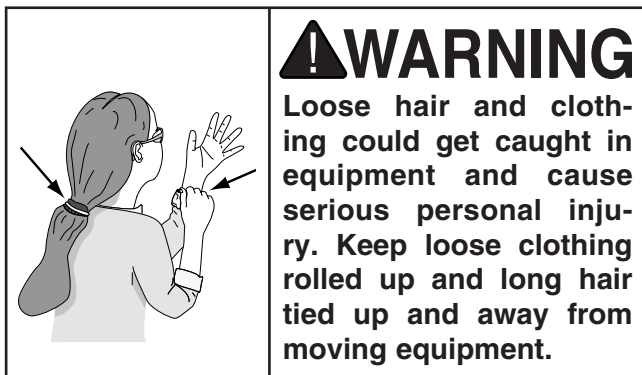


# SECTION 5: OPERATIONS

## Operation Safety

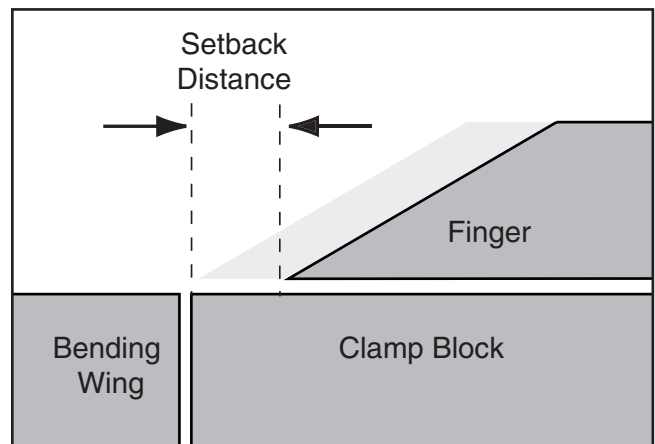
If you have never used this type of equipment before, WE STRONGLY RECOMMEND that you read books, trade magazines, or get formal training before beginning any projects.

**Your safety is important! Please follow the warnings below:**



## Adjusting Setback

The setback is the distance from the forward edge of the fingers and the edge of the clamp block (see **Figure 19**). The setback distance is determined by the gauge of the workpiece and the desired radius of the bend. Normally, setback is adjusted at least  $1\frac{1}{2}$ –2 times the thickness of the workpiece. (Thicker or tempered workpieces will need a larger setback. See material gauge capacities on the data sheet, on page 22.)



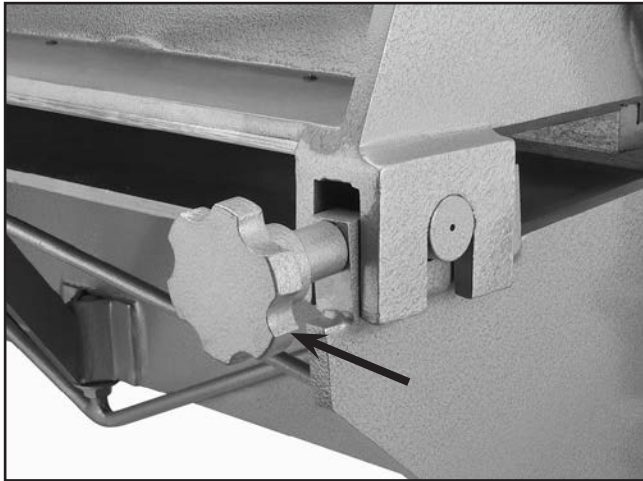
**Figure 19.** Profile view of finger and clamp blocks showing setback distance.

### To adjust the setback:

1. Make sure all the fingers are aligned with each other and that the clamping leaf is not clamped down.
2. Rotate both setback knobs evenly (**Figure 20**, on the next page) to move the front edge of the fingers toward or away from the edge of the clamp block. Note—*Make sure the finger edges are parallel with the edge of the clamp block or your bend will be distorted.*

## NOTICE

**You must include the thickness of folded edges or joints when determining the proper setback, or the brake may be damaged.**



**Figure 20.** Setback adjustment knob (one of two) for clamping leaf.



## Spacing Fingers

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 your pan or box (see **Figure 21**).

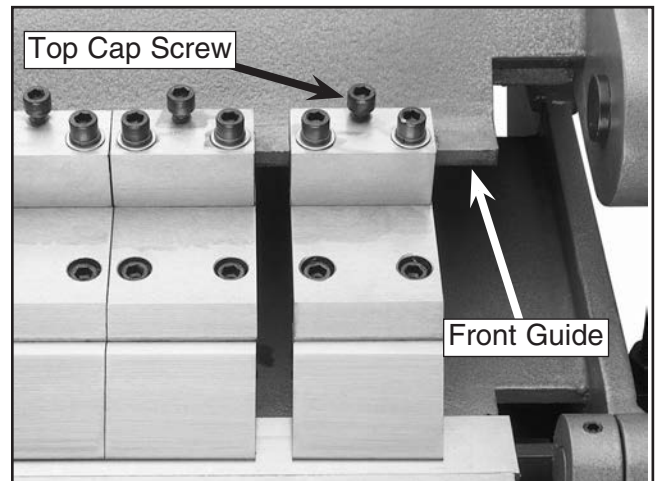


**Figure 21.** Fingers spaced apart to allow clearance of pan or box sides.

<b>Tools Needed:</b>	<b>Qty</b>
8MM Hex Wrench.....	1

### To space the fingers apart:

1. Remove one of the end fingers by loosening the top cap screw, shown in **Figure 22**, and sliding it off the front guide.



**Figure 22.** Top cap screw for loosening finger to slide off front guide.

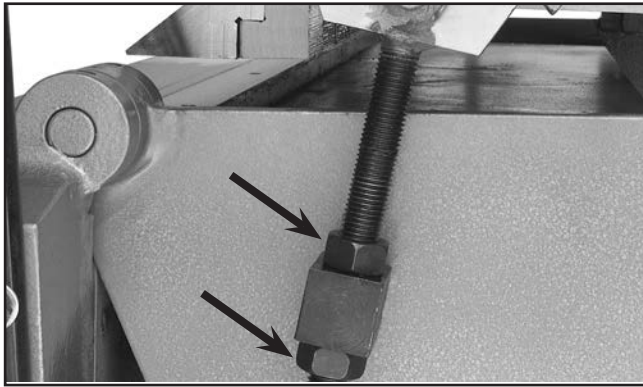
2. Loosen the top cap screws of the fingers you need to move, and slide them across the front guide so that you have adequate room for your workpiece on both sides. Note—*You may need to mix and match finger widths to equal the size of your workpiece.*
3. Align the fingers and tighten the cap screws. (See page 14 for alignment instructions.)



# Adjusting Clamping Pressure

---

The correct clamping pressure depends on the workpiece thickness. The ideal pressure will have medium/hard resistance while pulling the handle, but will lock into position easily at the end of the stroke—much like a pair of vice grips. This pressure is adjusted by moving the nuts (**Figure 23**), which are located on both sides of the brake.



**Figure 23.** Clamping pressure adjusting nuts (one side).

Tools Needed:	Qty
30MM or Adjustable Wrench.....	1

## To adjust the clamping pressure:

1. Tighten both sides of the clamping leaf with your workpiece in the brake.
  - If the clamping pressure feels right, no further adjustments are necessary.
  - If the clamping pressure feels light, move the adjusting nuts up.
  - If the clamping pressure feels hard, move the adjusting nuts down.
2. Remove the workpiece from the brake, lock the clamping leaf in place, then loosen the upper nut pressure.
3. Unlock the clamping leaf and turn the lower nut a ½ turn in the needed direction.
4. Lock the clamping leaf, tighten the upper nut, and repeat **step 1**.



# Basic Bending

---

Bending operations require the fingers to be parallel with the edge of the clamping block and require the setback and clamping pressure to be correctly adjusted for the thickness of the workpiece.

## To perform a basic bending operation:

1. Lift the clamping handle to open the clamping leaf all the way.
2. Insert the workpiece between the fingers and the clamping block.
3. Align the fingers of the clamping leaf to the bend mark on the workpiece, and clamp it in place.

*Note—Do not force the clamping handle. If the handle is hard to put in the locked position, the pressure may need to be adjusted for the sheet metal thickness. The holding pressure of the clamping leaf needs to be just tight enough to hold the sheet metal from moving when bending.*

4. Lift up on the operation handles until the workpiece has reached the desired angle.
5. Open the clamping leaf and remove the bent workpiece. *Note—If a pan or box bend is desired, choose a finger or a selection of fingers that are as close as possible to the length of pan or box side lengths.*

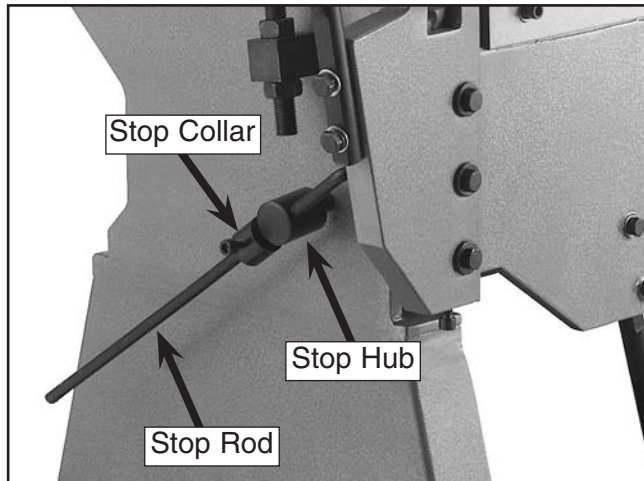




# Setting Stop Collar

---

The stop collar (**Figure 24**) limits the amount that the bending leaf can travel during bending, thereby allowing you to repeat a bend at an exact angle.



**Figure 24.** Stop collar shown tightened against stop hub on stop rod.

## To use the stop collar:

1. Completely loosen the stop collar.
2. Make the bend that you want to repeat and hold the bending leaf in place at the top of the bend.
3. Slide the stop collar up against the stop hub and tighten it in place, as shown in **Figure 24**.
4. Check the stop collar by lowering the bending leaf and then raising the bending leaf into a bend. If the stop is working correctly, the bending leaf will stop in the same position as the first bend.



# Adjusting Counterweights

---

The counterweights add leverage to ease the effort needed to bend thicker workpieces.

The gauge of the workpiece determines where on the arm the counterweight is placed. For example, the counterweight would be positioned low on the arm for bending 20 gauge steel and high on the arm for bending 12 gauge steel.

The counterweights simply slide up and down the shafts and the lock collars hold them in place.

## To adjust the counterweights:

### **DOWN**

1. Push up on the counterweight to relieve pressure, and turn the bottom lock collar down the shaft.
2. Allow the counterweight to slide down the shaft, and finger tighten the top lock collar against the counterweight.

### **UP**

1. Turn the top lock collar up the shaft.
2. Push the counterweight up against the top lock collar, and turn the bottom lock collar up the shaft and against the counterweight.



# SECTION 6: MAINTENANCE

## Lubrication

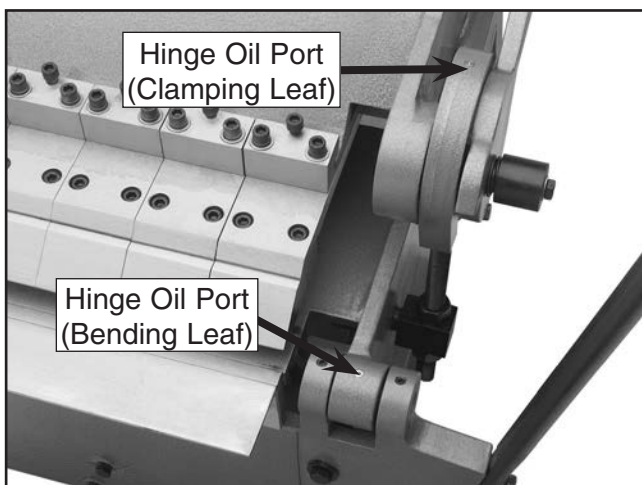
There are four main areas to keep lubricated on the Model G0542: 1) The unpainted cast iron surfaces, 2) the hinges for the hold down and bending leaf assemblies, 3) the setback knob threads, and 4) counterweight threads.

### Cast Iron Surfaces

To prevent rust, all unpainted cast iron surfaces on the Model G0542 should be regularly maintained with a surface protectant like G96® GUN TREATMENT (Model H3788) or BOESHIELD® T-9 (Model G2871). Note—*Check with the current Grizzly catalog for current pricing and a variety of other quality metal protectants.*

### Hinges

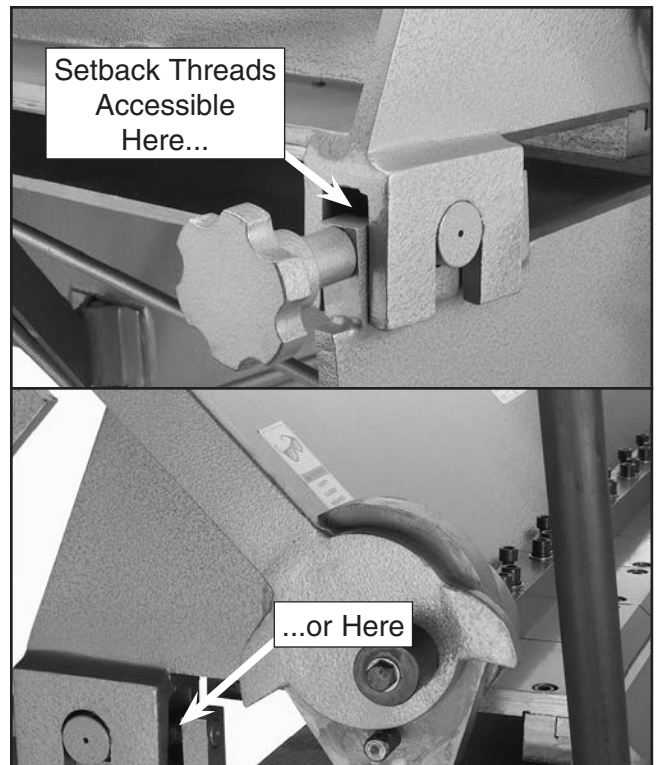
There are four hinges on the G0542—two for the clamping leaf and two for the bending leaf. These hinges are equipped with ball valve oil ports (see **Figure 25**). Use an oil can with 30W motor oil, or equivalent machine oil, and insert 5–6 drops into each port; repeat this as needed or every week, depending on use. Make sure to wipe up any excess oil to avoid build up of dust and grime.



**Figure 25.** Lubrication points for clamping and bending leaf hinges (only one side shown).

### Setback Knob Threads

The threads on the setback knobs (see **Figure 26**) may need an occasional dab of white lithium grease. The setback threads are easiest to reach if the setback is moved all the way forward or all the way backward. For best results, move the setback all the way back and forth one time after applying the grease; grease the threads as needed to maintain smooth operation from the knobs.



**Figure 26.** Accessibility to setback threads.

### Counterweight Threads

The threads on the counterweight shafts may need an occasional dab of white lithium grease to keep them in good working order. After applying grease, turn the lock collars up the length of the shaft to evenly coat the threads.



# SECTION 7: SERVICE ADJUSTMENTS

## About Service

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

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

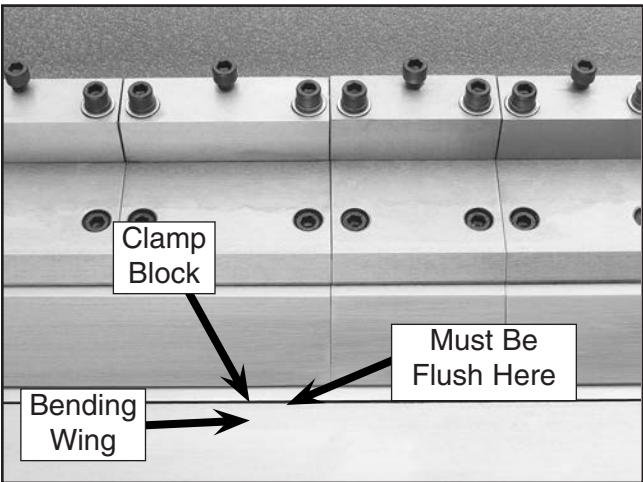
Similarly, if you are unsure of how to perform any procedure in this section, the Grizzly Service Department will be happy to guide you through the procedures or help in any other way.



## Aligning Bending Wing

In order to achieve accurate bends, the top surface of the bending leaf and the attached bending wing must be flush with the top surface of the clamp block when the bending leaf is in the down position (see **Figure 27**).

Check for proper alignment by examining how the edges of each component meet each other. Only perform the instructions below if the top surfaces of these components are NOT flush with each other.



**Figure 27.** Callouts showing where clamp block and bending wing must be flush.

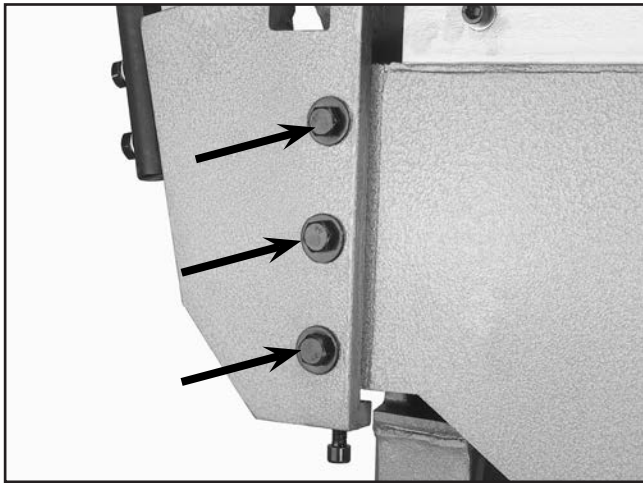
There are two adjustments that can be made to align the clamp and bending wings. First, you can adjust the ends of the bending leaf to make it even with the clamp block; and second, you can straighten the main body of the bending leaf or clamp block by tightening a large nut on the center of a truss assembly, which is mounted to each.

Tools Needed:	Qty
18MM Wrench or Socket.....	1
8MM Hex Wrench.....	1
27MM Wrench or Adjustable Wrench .....	1



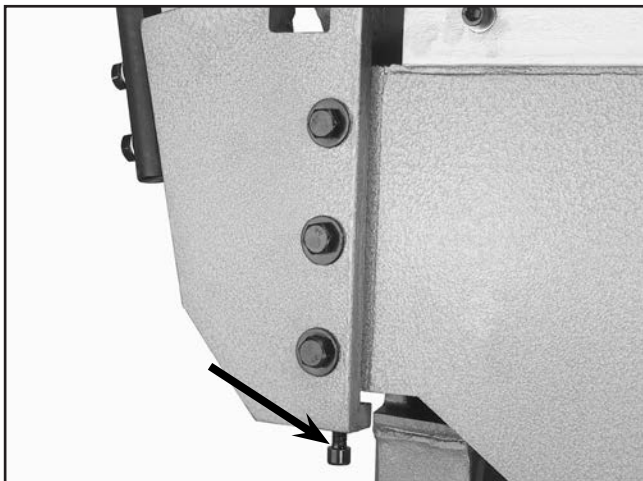
### To align the clamp and bending wings:

1. Loosen the bending leaf mounting bolts on each end of the brake (see **Figure 28**).



**Figure 28.** Bending leaf mounting bolts.

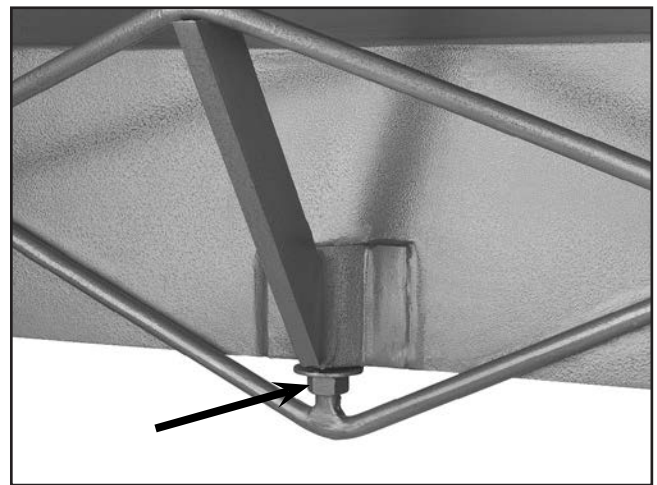
2. Use the bending leaf adjustment cap screws shown in **Figure 29** to align the bending leaf flush with the clamp bar.



**Figure 29.** Bending leaf adjustment cap screw.

3. Tighten the bending leaf mounting screws.
  - If the entire length of the bending leaf is flush with the clamp block, then no further adjustments are necessary.
  - If the bending leaf is flush with the clamp block at both ends but is not flush in the center, then proceed to **step 4**.

4. Examine the center area where the clamp block and bending wing meet.
  - If the bending wing is **lower** than the clamp block, then the truss nut under the **bending wing** needs to be tightened,
  - If the bending wing is **higher** than the clamp block, then the truss nut under the **clamp block** needs to be tightened.
5. Tighten the appropriate truss nut (**Figure 30**) as determined from **step 4** until the bending wing and the clamp block are flush with each other in the center. Note—*Make sure the truss nuts remain tight, because they help stiffen the the leaf they are attached to.*



**Figure 30.** Truss nut.



# SECTION 8: REFERENCE INFO

## General

The following pages contain the machine data sheet, parts breakdown, parts list, and the Warranty/Return information for the Model G0542.

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

If you need additional technical information relating to this machine, 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](mailto:techsupport@grizzly.com)  
Web Site: <http://www.grizzly.com>



**Grizzly**  
**Industrial, Inc.**

## MACHINE DATA SHEET

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

### MODEL G0542 48" PAN & BOX BRAKE

Design Type ..... Pan & Box

#### Overall Dimensions:

Height w/o Counterweight Attached ..... 48"  
Height w/ Counterweight Attached ..... 69"  
Finger Sizes ..... (6) 3", (2) 4", (1) 25"  
Shipping Weight ..... 1300 Lbs.  
Footprint ..... 56½" x 29"  
Crate Size ..... 69¾" L x 29½" W x 37½" H

#### Capacities:

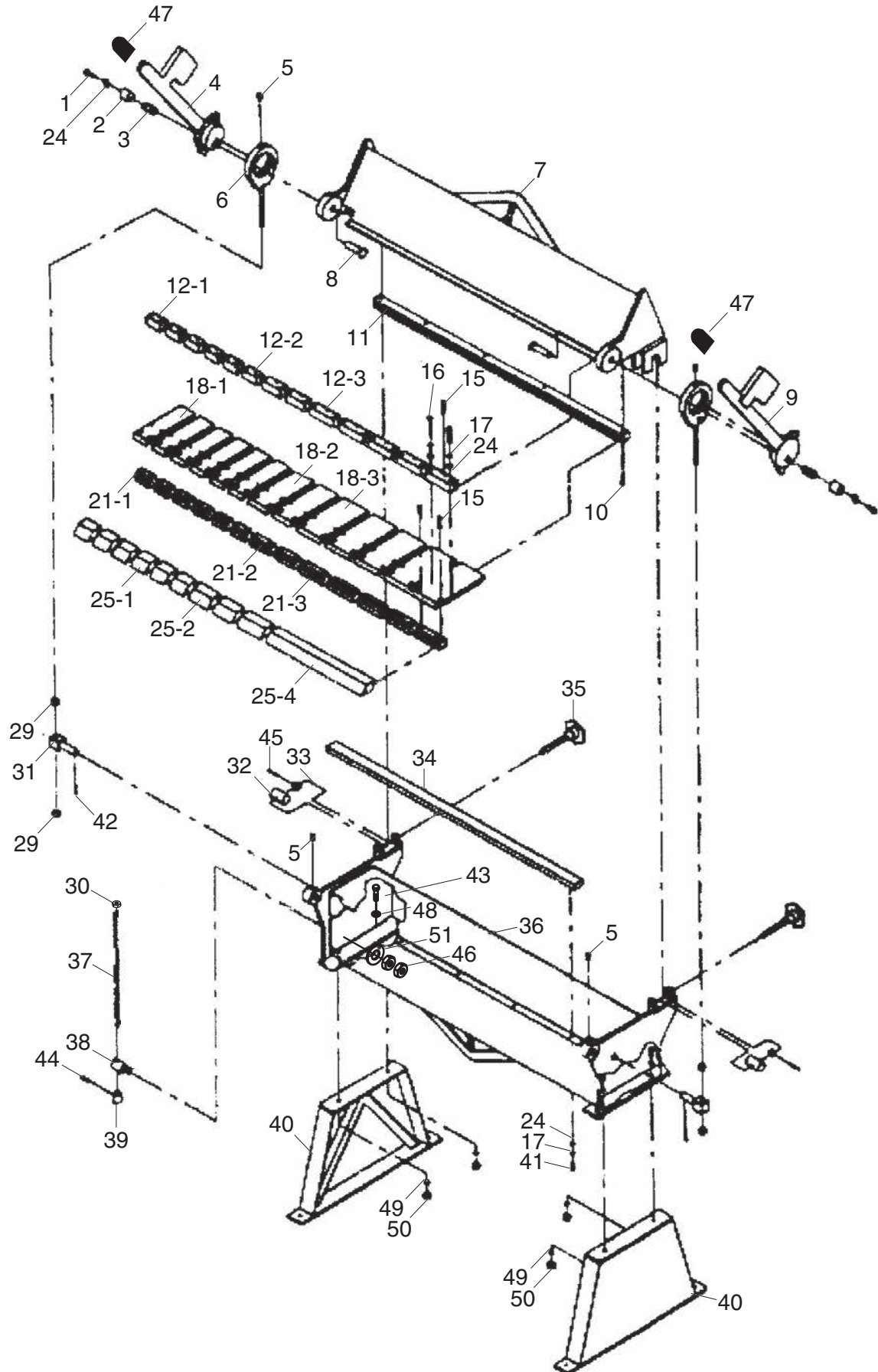
Brake Range ..... 0° - 135°  
Maximum Width ..... 48"  
Maximum Size of Pan/Box Sides ..... 6"  
Mild Steel ..... 12 gauge  
Aluminum ..... 6 gauge  
Soft Brass ..... 10 gauge  
Annealed Phosphor Bronze ..... 11 gauge  
Soft Copper ..... 10 gauge  
Hard Copper ..... 11 gauge  
ABS Plastic ..... 3 gauge

#### Construction:

Fingers ..... Precision Ground Steel, Hardened Edge  
Base ..... Steel  
Bending Leaf ..... Steel  
Clamping Leaf ..... Steel

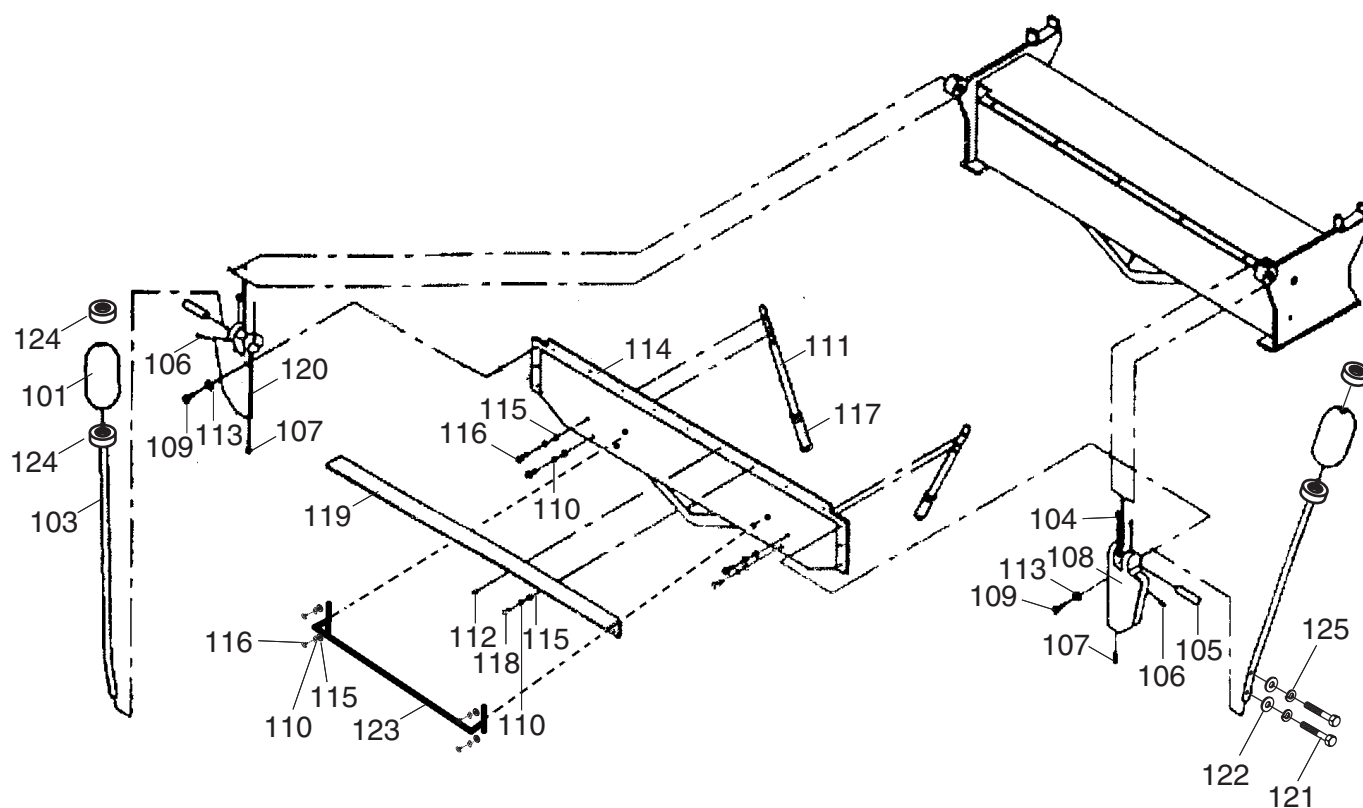
*Specifications, while deemed accurate, are not guaranteed.*

# G0542 Parts Breakdown and List



REF	PART #	DESCRIPTION
1	PB01M	HEX NUT M10-1.5 X 30
2	P0542002	SPACER
3	P0542003	SPRING
4	P0542004	CLAMPING HANDLE (L)
5	P0542005	OIL FITTING
6	P0542006	LINK
7	P0542007	CLAMPING LEAF
8	P0542008	PIN
9	P0542009	CLAMPING HANDLE (R)
10	PSB47M	CAP SCREW M10-1.5 X 40
11	P0542011	SUPPORT BLOCK
12-1	P0542012-1	3" UPPER CLAMP BAR
12-2	P0542012-2	4" UPPER CLAMP BAR
12-3	P0542012-3	5" UPPER CLAMP BAR
15	PSB72M	CAP SCREW M10-1.5 X 30
16	PSB71M	CAP SCREW M10-1.5 X 60
17	PLW06M	LOCK WASHER 10MM
18-1	P0542018-1	3" FINGER BLOCK JAW
18-2	P0542018-2	4" FINGER BLOCK JAW
18-3	P0542018-3	5" FINGER BLOCK JAW
21-1	P0542021-1	3" LOWER CLAMP BAR
21-2	P0542021-2	4" LOWER CLAMP BAR
21-3	P0542021-3	5" LOWER CLAMP BAR
24	PW04M	FLAT WASHER 10MM
25-1	P0542025-1	3" FINGER BLOCK

REF	PART #	DESCRIPTION
25-2	P0542025-2	4" FINGER BLOCK
25-4	P0542025-4	25" FINGER BLOCK
29	PN15M	HEX NUT M18-1.5
30	PN02M	HEX NUT M10-1.5
31	P0542031	PIVOT BLOCK
32	P0542032	ADJUSTING BLOCK
33	P0542033	COLLAR
34	P0542034	TOP BAR
35	P0542035	SETBACK KNOB M20 X 150
36	P0542036	BODY
37	P0542037	STOP ROD
38	P0542038	STOP HUB
39	P0542039	STOP COLLAR
40	P0542040	SUPPORT
41	PSB84M	CAP SCREW M10-1.5 X 35
42	P0542042	COTTER PIN 2.5 X 35MM
43	PB35M	HEX BOLT M12-1.5 X 40
44	P0542044	T-BOLT M8-1.25 X 20
45	P0542045	TAPER PIN 4 X 4.6 X 30M
46	PN13M	HEX NUT M16-2
47	P0542047	RUBBER HANDLE GRIP
48	PW06M	FLAT WASHER 12MM
49	PLW05M	LOCK WASHER 12MM
50	PN09M	HEX NUT M12-1.75
51	PW08M	FLAT WASHER 16MM



REF	PART #	DESCRIPTION
101	P0542101	COUNTERWEIGHT
103	P0542103	COUNTERWEIGHT SHAFT
104	PSS30M	SET SCREW M10-1.5 X 10
105	P0542105	PIVOT PIN
106	PSS77M	SET SCREW M12-1.75 X 20
107	PSB47M	CAP SCREW M10-1.5 X 40
108	P0542108	RIGHT HINGE
109	PB35M	HEX BOLT M12-1.75 X 40
110	PLW06M	LOCK WASHER 10MM
111	P0542111	OPERATING HANDLE
112	P0542112	DOWEL PIN 8 X 30MM
113	PW06M	FLAT WASHER 12MM

REF	PART #	DESCRIPTION
114	P0542114	BENDING LEAF
115	PW04M	FLAT WASHER 10MM
116	PB31M	HEX BOLT M10-1.5 X 40
117	P0542117	HANDLE GRIP
118	PSB72M	CAP SCREW M10-1.5 X 30
119	P0542119	BENDING WING
120	P0542120	LEFT HINGE
121	PB35M	HEX BOLT M12-1.75 X 40
122	PW06M	FLAT WASHER 12MM
123	P0542123	HANDLEBAR
124	P0542124	LOCK COLLAR M30-3.5
125	PLW05M	LOCK WASHER 12MM

# WARRANTY AND RETURNS

---

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

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

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

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

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

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





# WARRANTY CARD

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone # \_\_\_\_\_ Email \_\_\_\_\_ Invoice # \_\_\_\_\_

Model # \_\_\_\_\_ Order # \_\_\_\_\_ Serial # \_\_\_\_\_

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

**1. How did you learn about us?**

\_\_\_\_ Advertisement  
\_\_\_\_ Card Deck

\_\_\_\_ Friend  
\_\_\_\_ Website

\_\_\_\_ Catalog  
\_\_\_\_ Other:

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

\_\_\_\_ Cabinet Maker  
\_\_\_\_ Family Handyman  
\_\_\_\_ Hand Loader  
\_\_\_\_ Handy  
\_\_\_\_ Home Shop Machinist  
\_\_\_\_ Journal of Light Cont.  
\_\_\_\_ Live Steam  
\_\_\_\_ Model Airplane News  
\_\_\_\_ Modeltec  
\_\_\_\_ Old House Journal

\_\_\_\_ Popular Mechanics  
\_\_\_\_ Popular Science  
\_\_\_\_ Popular Woodworking  
\_\_\_\_ Practical Homeowner  
\_\_\_\_ Precision Shooter  
\_\_\_\_ Projects in Metal  
\_\_\_\_ RC Modeler  
\_\_\_\_ Rifle  
\_\_\_\_ Shop Notes  
\_\_\_\_ Shotgun News

\_\_\_\_ Today's Homeowner  
\_\_\_\_ Wood  
\_\_\_\_ Wooden Boat  
\_\_\_\_ Woodshop News  
\_\_\_\_ Woodsmith  
\_\_\_\_ Woodwork  
\_\_\_\_ Woodworker West  
\_\_\_\_ Woodworker's Journal  
\_\_\_\_ Other:

**3. What is your annual household income?**

\_\_\_\_ \$20,000-\$29,000  
\_\_\_\_ \$50,000-\$59,000

\_\_\_\_ \$30,000-\$39,000  
\_\_\_\_ \$60,000-\$69,000

\_\_\_\_ \$40,000-\$49,000  
\_\_\_\_ \$70,000+

**4. What is your age group?**

\_\_\_\_ 20-29  
\_\_\_\_ 50-59

\_\_\_\_ 30-39  
\_\_\_\_ 60-69

\_\_\_\_ 40-49  
\_\_\_\_ 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:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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