



12" SHEET METAL MACHINE

MODEL G6089

INSTRUCTION MANUAL



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ONLINE MANUAL DISCLAIMER

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


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 dangers. This manual uses a series of symbols which are intended to convey the level of criticality of the safety message. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.

 **DANGER** Failure to obey a DANGER symbol and notation WILL result in serious personal injury including loss of life or body parts.

 **WARNING** Failure to obey a WARNING symbol and notation can result in serious injury to yourself and others.

 **CAUTION** Failure to obey a CAUTION symbol and notation may result in minor or moderate property damage or personal injury.

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

WARNING

Safety Instructions For Tools

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning on.
3. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or where any flammable or noxious fumes may exist. Keep work area well lighted.
5. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.
6. **MAKE WORK SHOP CHILD PROOF** with padlocks, master switches, or by removing starter keys.
7. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
8. **USE RIGHT TOOL.** Don't force tool or attachment to do a job for which it was not designed.

WARNING

Safety Instructions For Tools

- 9. WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
- 10. ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
- 11. SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.
- 12. DON'T OVERREACH.** Keep proper footing and balance at all times.
- 13. MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 14. DISCONNECT TOOLS** before servicing and changing accessories, such as blades, bits, cutters, and the like.
- 15. USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury.
- 16. 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.

WARNING

Operating this equipment has the potential for flying debris to cause eye injury. Always wear safety glasses or goggles when operating equipment. Everyday glasses or reading glasses only have impact resistant lenses, they are not safety glasses. Be certain the safety glasses you wear meet the appropriate standards of the American National Standards Institute (ANSI).

WARNING

As with all tools, there is danger associated with the Model G6089 12" Sheet Metal Machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this tool with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored serious personal injury may occur.

SECTION 2: GENERAL INFORMATION

We are proud to offer the Grizzly Model G6089 12" Sheet Metal Machine. The Model G6089 is part of a growing Grizzly family of fine metal-working machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

The Model G6089 is designed to provide the ability to shear, bend and roll metal stock up to 12" wide and thickness of 20 gauge (approximately .035"). The machine comes with die set sizes of 4", 3", 2"(x2), 1" and wire forming grooves of $\frac{3}{32}$ ", $\frac{1}{8}$ ", $\frac{5}{32}$ ", $\frac{3}{16}$ ", $\frac{7}{32}$ ", and $\frac{1}{4}$ ".

We are also pleased to provide this manual with the Model G6089. It was written to guide you through assembly, review safety considerations, and cover general operating procedures. It represents our effort to produce the best documentation possible. If you have any comments regarding this manual, please write to us at the address below:

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

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

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

The specifications, drawings, and photographs illustrated in this manual represent the Model G6089 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. Whenever possible, though, we send manual updates to all owners of a particular tool or machine. Should you receive one, we urge you to insert the new information with the old and keep it for reference.

CAUTION

To operate this, or any tool, safely and efficiently, it is essential to become as familiar with its characteristics as possible. The time you invest before you begin to use your Model G6089 will be time well spent. DO NOT operate this machine until you are completely familiar with the contents of this manual. Make sure you read and understand all of the safety procedures. If you do not understand something, DO NOT operate the machine.



Unpacking

This machine is shipped from the manufacturer in a carefully packed carton. If you discover the machine is damaged after you've signed for delivery, and the truck and driver are gone, you will need to file a freight claim with the carrier. Save the containers and all packing materials for possible inspection by the carrier or its agent. Without the packing materials, filing a freight claim can be difficult. *If you need assistance determining whether you need to file a freight claim, or with the procedure to file one, please contact our Customer Service.*

WARNING

The G6089 is a heavy machine (120 lbs. shipping weight). DO NOT over-exert yourself while unpacking or moving your machine – get assistance. In the event that your Jointer must be moved up or down a flight of stairs, be sure that the stairs are capable of supporting the combined weight of people and the machine. Serious personal injury may occur.

When you are completely satisfied with the condition of your shipment, you should carefully unpack the box.

When unpacking, there are two bolts which are used to secure the machine to its shipping crate. Remove these bolts and save them for use when mounting the machine to your workbench. For safe and accurate operation, this machine must be secured firmly to a solid surface.

WARNING

This machine should be mounted to a stand or workbench with the appropriate fasteners before using. Forming metal will require exerting force through the handle mechanism. If not securely fastened, the machine could topple and cause injury.



Piece Inventory

After all the parts have been removed from the cartons, you should have:

- Sheet Metal Machine w/ Handle
- Accessory Items
 - Guide
 - Allen® Wrench 5mm
 - Allen® Wrench 6mm

NOTICE

A full parts list and breakdown can be found toward the end of this manual. For easier assembly, or to identify missing parts, please refer to the detailed illustration at the end of the manual. Reference numbers called out in the following operations descriptions refer to the numbers on this drawing.



SECTION 3 : OPERATIONS

Handle Adjustment

The handle is shipped mounted to the right side of the machine. If left hand operation is required the handle can be moved to the opposite side of the machine:

1. Remove one of the handles.
2. Loosen the handle adjustment knob and slide the handle arm out of the slot.
3. Slide the handle arm into the opposite side and tighten the handle adjustment knob.
4. Re-attach the handle.
5. The handle arm can be positioned for the desired torque. The longer the handle arm, the greater amount of torque which can be applied.



WARNING

Operating this equipment has the potential for flying debris to cause eye injury. Always wear safety glasses or goggles when operating equipment. Everyday glasses or reading glasses only have impact resistant lenses, they are not safety glasses. Be certain the safety glasses you wear meet the appropriate standards of the American National Standards Institute (ANSI).

Shearing

For precision shearing from 2" to 10" lengthwise, first attach the back measurement assembly to the receiver holes in the back of the crossbeam:

1. To adjust the position of the back measurement assembly, first loosen the two (2) knobs.
2. Move the assembly forward and back using the handwheel. When it is at the desired position, tighten the knobs to lock it into position.
3. If a precise 90° angle is desired, attach the guide to the left side of the cutting table using the two (2) Allen® screws.
4. Using the handle assembly, raise the upper cutting die to the highest position. Slide the workpiece in between the braking die and the work surface.
5. Rotate the handle assembly to shear the workpiece at the desired location.

During shearing operations, there are two conditions which may cause uneven cuts:

1. **Shear Bow.** There is a tensioning adjustment on the shear plate which can create a bow necessary to cut certain materials. Adjust the tension on the bolt attached to the shear frame adjustment bar. Tightening the bolt will cause the ends of the shear to bow out, loosening the bolt will cause them bow in.

2. **Shear Alignment.** The two shearing bars may need to be aligned with each other across their entire length. Lower the shear assembly all of the way so the two shears are even with each other. If one side or the other does not meet, the cutting table needs to be realigned. Loosen the bolts holding the table, then tighten or loosen the adjusting screws on the front underside until it is properly aligned. Tighten the holding bolts and double check the alignment.

Tips for shearing:

- When shearing, the work should be squared against the squaring guide. The holdown should be adjusted approximately $\frac{1}{4}$ " above the table when the shear blade is in the "up" position. As you move the blade downward, the holdown should immediately rest against the workpiece and hold it in place.
- Do not reach around the machine to grab the cut-off piece. A large cut-off piece should be allowed to drop on a special table that is designated to catch cut-off pieces that are larger than the workbench.
- To prevent distortion when notching, "snap" the handle quickly to pierce the workpiece. The maximum notch that can be cut at one time is $\frac{3}{4}$ ". By progressing in $\frac{5}{8}$ " steps, a deeper notch can be cut.
- To adjust the lower shear blade, loosen the screw at the end of each table. Underneath the table, there are two adjustment screws on the left and right side. By adjusting these screws in or out, the lower blade can be brought in contact with the upper shear so a fine cut can be made.

- Have the shear blades sharpened by a professional. This will lead to accurate and quality results.
- The shear blades are interchangeable. The upper shear mount has a 5° relief angle, so the upper blade does not exactly match the lower blade when installed correctly.

CAUTION

All metal parts after shearing will have a sharp edge on them. The sharp edge may cause cuts or lacerations when handled. Please examine the edges of all cut metal parts and file or sand the edge to remove the edge before handling.



Pressing

Slide the plate brackets on the press plate assembly into the receiver holes of the upper cutting die. Make sure the press plate is facing down.

Place the workpiece so that it is centered under the press plate. Rotate the handle with sufficient force to achieve the degree of pressing desired.



Braking

For precision braking from 2" to 10" lengthwise, first attach the back measurement assembly to the receiver holes in the back of the crossbeam:

1. To adjust the position of the back measurement assembly, first loosen the two (2) knobs.
2. Move the assembly forward and back using the handwheel. When it is at the desired position, tighten the knobs to lock it into position.
3. Using the handle assembly, raise the cross beam up to its highest position.
4. Insert the workpiece in between the upper and lower braking dies.
5. Rotate the handle assembly, using the appropriate amount of force to achieve the desired bending angle.
6. To bend only certain portions of your workpiece, simply loosen the bolts that hold the upper braking die brackets in place and add or remove the dies as required. For small increments, use the fractional dies included with the machine. You should notch the material appropriately before bending to achieve the desired results. This means you will have to make a cut between the portion of the material to be bent and the portion you wish to remain straight.

The upper braking dies may become uneven. This is best handled with a wooden gauge block which is the full length of the table and is the same height all the way across. Raise the crossbeam all the way and slide the block in underneath the dies. Loosen the bolts holding the upper die bracket in place and allow the dies to drop slightly until they contact the block. Tighten the upper bracket bolts.



Rolling

In order to do rolling operations it is necessary to move the cover back and out of the way.

1. Drop the rear roll bar by loosening the adjustment knobs.
2. Insert just the leading edge of the workpiece between the upper and the lower roll bars, and tighten the roll bar gap adjustment keys until the roll bars are barely snug against the workpiece.
3. Advance the adjustment knobs as much as desired depending upon the tightness of the roll to be accomplished. The tighter the roll, the more the knobs should be advanced.
4. Rotate the handle assembly until the proper roll has been achieved. The material will feed itself through the rollers as the handle assembly is cranked.

Wire rolling is accomplished in the same manner, except the proper groove in the upper roll bar must be utilized depending upon the wire gauge being rolled.



Lubrication

Grease the crank arms as necessary using a grease gun on the installed grease fittings. Do not over grease.

A light coating of oil on the area where the upper arm slides will also assure ease of movement.



SECTION 4: CLOSURE

The following pages contain parts diagrams and reference number list and Warranty/Return information for your Model G6089 12" Sheet Metal Machine.

If you need parts or help in assembling your machine, or if you need operational information, we encourage you to call our Service Department. Our trained service technicians will be glad to help you.

If you have comments dealing specifically with this manual, please write to our Bellingham, Washington location using the address in *Section 2: General Information*. The specifications, drawings, and photographs illustrated in this manual represent the Model G6089 as supplied when the manual was prepared. However, due to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly. Whenever possible, though, we send manual updates to all owners of a particular tool or machine. Should you receive one, add the new information to this manual and keep it for reference.

We have included some important safety measures that are essential to this machine's operation. While most safety measures are generally universal, Grizzly reminds you that each workshop is different and safety rules should be considered *as they apply to your specific situation*.

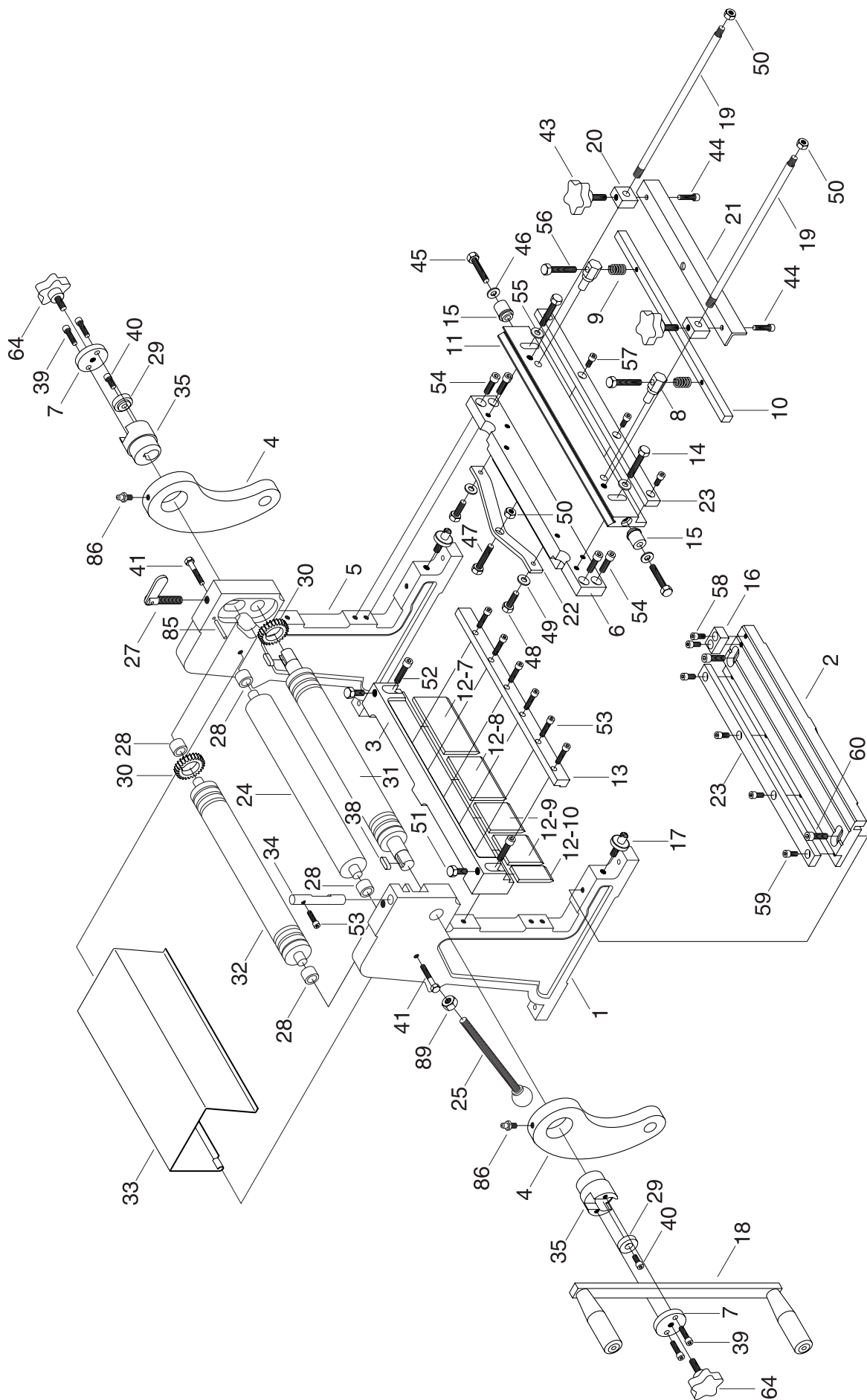
We recommend you keep a copy of our current catalog for complete information regarding Grizzly's warranty and return policy. If you need additional technical information relating to this machine, or if you need general assistance or replacement parts, please contact the Service Department listed in *Section 2: General Information*.

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

WARNING

The Model G6089 was specifically designed for metal working. do not modify and/or use this MACHINE for any other purpose. Modifications or improper use of this tool will void the warranty. If you are confused about any aspect of this machine, DO NOT use it until you have answered all your questions. Serious personal injury may occur.





REF	PART #	DESCRIPTION
1	P6089001	LEFT WALL
2	P6089002	WORK BENCH
3	P6089003	CROSSBEAM
4	P6089004	CRANK ARM
5	P6089005	RIGHT WALL
6	P6089006	REAR FRAME
7	P6089007	COVER
8	P6089008	PRESS PLATE BRACKET
9	P6089009	SPRING
10	P6089010	PRESSING PLATE
11	P6089011	MOVING CUTTER PLATE
12-7	P6089012-7	UPPER BREAKING DIE 4"
12-8	P6089012-8	UPPER BREAKING DIE 3"
12-9	P6089012-9	UPPER BREAKING DIE 2"
12-10	P6089012-10	UPPER BREAKING DIE 1"
13	P6089013	DIE CLAMPING PLATE
14	PB15M	HEX BOLT M8-1.25 X 40
15	P6089015	ARM ROLLING WHEEL
16	P6089016	POSITIONER
17	P6089017	ADJUSTABLE BOLT
18	P6089018	HANDLE ARM
19	P6089019	THREADED ROD
20	P6089020	POSITIONING PIECE
21	P6089021	POSITIONING PLATE
22	P6089022	SUPPORTING PLATE
23	P6089023	CUTTER
24	P6089024	BACK PRESSING ROLL
25	P6089025	LOCK SCREW
27	P6089027	ADJUSTABLE BOLT
28	P6089028	BUSHING
29	P6089029	PRESS COVER
30	P6089030	GEAR

REF	PART #	DESCRIPTION
31	P6089031	LOWER PRESSING ROLL
32	P6089032	UPPER PRESSING ROLL
33	P6089033	PROTECTING COVER
34	P6089034	ROTATION SHAFT
35	P6089035	ECCENTRIC SHAFT
38	PK07M	KEY 6 X 6 X 20
39	PSB01M	CAP SCREW M6-1.0 X 16
40	P6089040	CAP SCREW M6-1.0 X 8
41	P6089041	HEX BOLT M6-1.0 X 44
43	P6089043	KNOB
44	P6089044	CAP SCREW M6-1.0 X 8
45	PB15M	HEX BOLT M8-1.25 X 40
46	PW01M	FLAT WASHER 8MM
47	PB15M	HEX BOLT M8-1.25 X 40
48	PB19M	HEX BOLT M8-1.25 X 24
49	PW01M	FLAT WASHER 8MM
50	PN03M	HEX NUT M8-1.25
51	P6089051	HEX BOLT M10-1.5 X 16
52	PSB13M	CAP SCREW M8-1.25 X 30
53	P6089053	CAP SCREW M6-1.0 X 24
54	PSB11M	CAP SCREW M8-1.25 X 16
55	PW01M	FLAT WASHER 8MM
56	P6089056	HEX BOLT M6-1.0 X 45
57	PSB04M	CAP SCREW M6-1.0 X 10
58	PSB04M	CAP SCREW M6-1.0 X 10
59	PSB04M	CAP SCREW M6-1.0 X 10
60	PSB14M	CAP SCREW M8-1.25 X 20
64	P6089064	HANDLE ADJUST KNOB
85	P6089085	PIN
86	P6089086	GREASE FITTING 5/16"X3/16"
89	PN02M	HEX NUT 10MM

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 _____ PHONE NUMBER _____
STREET _____
CITY _____ STATE _____ ZIP _____
MODEL# _____ INVOICE# _____ SERIAL# _____

The following information is given on a voluntary basis. This information will be used for marketing purposes to help Grizzly develop better products. Your name will be included in our mailing **list** only. It will not be sold to other companies. of course, all information is strictly confidential.

1. How did you find out about us?

☐ Advertisement ☐ Friend ☐ Website
☐ Catalog ☐ Card deck ☐ Other _____

2. Do you think your machine represents good value? ☐ YES ☐ NO

3. Would you allow us to use your name as a reference for Grizzly customers in your area? ☐ YES ☐ NO
(Note: Your **name** will be used a maximum of three **times**.)

4. To which of the following publications do you subscribe? Check all that apply.

☐ Home Shop Machinist ☐ Rifle Magazine Other _____
☐ Projects in Metal ☐ Hand Loader Magazine
☐ Modeltec ☐ Precision Shooter
☐ Live Steam ☐ RC Modeler
☐ Shotgun News ☐ Model Airplane News

5. What is your annual household income (optional)?

☐ \$20,000-\$30,000 ☐ \$50,001-\$60,000 ☐ \$80,000-\$90,000
☐ \$30,001-\$40,000 ☐ \$60,001-\$70,000 ☐ +\$90,000
☐ \$40,001-\$50,000 ☐ \$70,001-\$80,000

6. To which age group do you belong?

☐ 20-30 ☐ 41-50 ☐ 61-70
☐ 31-40 ☐ 51-60 ☐ +70

7. Which of the following machines or accessories do you own? Check all that apply.

☐ Engine Lathe ☐ Abrasive Cutoff ☐ Sheet Metal Machine
☐ Band Saw (Metal) ☐ Arc Welder ☐ Other _____
☐ Band Saw (Wood) ☐ Oxy/Ac. Outfit
☐ Milling Machine ☐ Air Compressor
☐ Bench Grinder ☐ Drill Press

8. How many of the machines you checked in Question 7 are Grizzly machines? _____

9. Which of the following tooling and accessories do you own? Check all that apply.

☐ Milling Visers ☐ Collet Closer ☐ Digital Readout
☐ Indexing Head ☐ Taper Attachment ☐ Tool Post Grinder
☐ Rotary Table ☐ Boring Head ☐ Other _____

10. In the space below, list three tools you would like Grizzly to carry.

11. Of all the mail order metalworking company's you have purchased from, how do you rate Grizzly in terms of overall customer satisfaction?

☐ The best ☐ Above average ☐ Average
☐ Below average ☐ The worst

12. Comments _____

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