

Grizzly **Industrial, Inc.**®

MODEL T10057 MT#2 TAPPING ATTACHMENT OWNER'S MANUAL



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#CRTR11351 PRINTED IN INDIA



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.

SAFETY

WARNING

For Your Own Safety Read Instruction Manual Before Operating This Equipment

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



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



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



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

NOTICE

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

WARNING

Safety Instructions for Tapping Attachments

- 1. UNDERSTANDING CONTROLS.** Make sure you understand the use and operation of all controls.
- 2. SAFETY ACCESSORIES.** Always use a chip guard in addition to your safety glasses when drilling or tapping to prevent bodily injury.
- 3. WORK HOLDING.** Before starting the machine, be certain the workpiece has been properly clamped to the table. **NEVER** hold the workpiece by hand when drilling or tapping.
- 4. CHUCK KEY SAFETY.** Always remove the chuck key, arbor wedge, or any tools immediately after use.
- 5. SPINDLE SPEEDS.** Select the spindle speed that is appropriate for the type of work and material. Allow the machine to gain full speed before using the tapping attachment.
- 6. POWER DISRUPTION.** In the event of a local power outage during use of the drill press, turn **OFF** all switches to avoid possible sudden start up once power is restored.

WARNING

Safety Instructions for Tapping Attachments

7. **SPINDLE DIRECTION CHANGES.** Never reverse spindle direction when drilling or tapping a workpiece.
8. **TOOL HOLDING.** Always use the proper tools for the material you are drilling or tapping. Make sure they are held firmly in the chuck or tapping attachment jaws.
9. **CLEAN-UP.** DO NOT clear chips by hand. Use a brush or vacuum, and never clear chips while the machine is running.
10. **MACHINE MAINTENANCE.** Never operate the drill press with damaged or worn parts. Keep your machine and tapping attachment in proper working condition. Perform routine inspections and maintenance promptly. Put away adjustment tools after use.
11. **DISCONNECT POWER.** Make sure the drill press is turned **OFF**, disconnected from its power source and all moving parts have come to a complete stop before starting any inspection, adjustment, or maintenance procedure on the tapping attachment.
12. **AVOIDING ENTANGLEMENT.** Keep loose clothing articles such as sleeves, belts or jewelry items away from the drill press spindle and tapping attachment. Never wear gloves when operating the drill press.
13. **BE ATTENTIVE.** DO NOT leave the machine running unattended.
14. **STOPPING SPINDLE.** DO NOT stop the machine using your hand against the chuck or tapping attachment.
15. **CUTTING TOOL INSPECTION.** Inspect drills and cutters for sharpness, chips, or cracks before each use. Replace dull, chipped, or cracked cutting tools immediately. Handle new cutting tools with care. Leading edges are very sharp and can cause lacerations.
16. **EXPERIENCING DIFFICULTIES.** If you are experiencing difficulties in setup or operation, stop using the machine! Contact our Technical Support at (570) 546-9663.

WARNING

No list of safety guidelines can be complete. Every shop environment is different. Like all machines there is danger associated with the drill press and tapping attachment. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this tapping attachment with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

INTRODUCTION

Foreword

We are proud to offer the Grizzly Model T10057 Tapping Attachment. This model is part of a growing Grizzly family of fine tools. 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.

It is our pleasure to provide this manual with the Model T10057. It was written to encourage safety considerations and guide you through general operating procedures and maintenance.

The specifications, details, and photographs in this manual represent the Model T10057 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.

Tool Data

Arbor.....	MT#2
Jaw Type.....	Spring Loaded
Maximum Speed.....	700 RPM
Construction.....	High Carbon Steel
Steel Hardness.....	46-56 HRC
Overall Length.....	9" (225mm)
Stop Lever Length.....	8 ³ / ₄ " (220mm)
Reverse Type.....	Auto Reversing
Typical Concentricity.....	± 0.001"
Head Diameter.....	2.750" (70mm)
Tapping Capacity (Metric).....	M3 to M12
Tapping Capacity (SAE).....	1/8" to 1/2"
Drill Chuck Capacity.....	1 ³ / ₃₂ " (10mm)
Oil Type.....	ISO 68 Way Oil

Model T10057 MT#2 Tapping Attachment

Contact Info

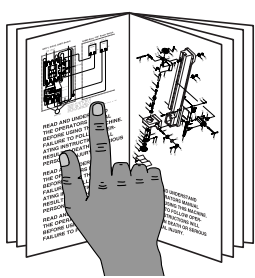
If you have any comments regarding this manual, please contact us:

Grizzly Industrial, Inc.
C/O Technical Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

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

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

⚠ WARNING



Read the manual before operation. Become familiar with this tapping attachment, its safety instructions, and its operation before beginning any work. Serious personal injury may result if safety or operational information is not understood or followed.

SETUP

Unpacking

Your new item was carefully packaged for safe shipping. If you discover any damage after you have signed for delivery, *immediately call Customer Service at (570) 546-9663 for advice.*

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

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

Inventory

After you open the tapping attachment box, you should find the following.

Model T10057 Inventory (Figure 1)

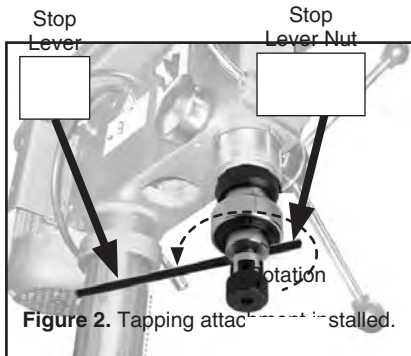
- A. Tapping Attachment..... 1
- B. Cheater Rods 2
- C. Stop Lever..... 1
- D. Stop Lever Nut..... 1
- F. Hex Wrench 4mm 1
- E. Drill Chuck Spanner Wrench 1



Figure 1. Model T10057 inventory.

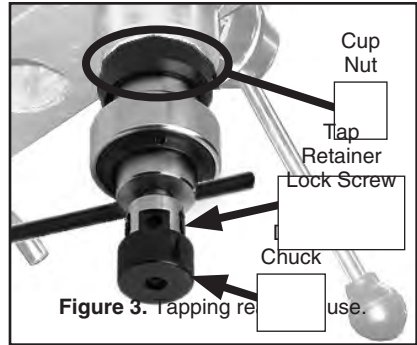
Installation

1. DISCONNECT THE DRILL PRESS FROM POWER.
2. Insert the tapping attachment MT-2 arbor into the drill press as normal.
3. Insert the threaded end of the stop lever into the tapping attachment, and secure it with the stop lever nut (**Figure 2**).
4. Insert the handle so it rests against the left side of the drill press column (**Figure 2**). This lever must be held stationary during tapping operations.



Note: Any fixed object can be used providing that the object allows the drill press spindle to raise and lower.

5. For tapping, insert the tap into the tapping attachment (**Figure 3**) until it stops and the tap flats are aligned with the two tap retainer jaws. Next snug the drill chuck with your finger tips to center the tap.
6. Tighten the tap retainer (**Figure 3**) with a 4mm hex wrench so the tap retaining jaws clamp against the flats on the tap.



7. Loosen the drill chuck 1/4-turn. The tap will now have some slight wobble or "float" to it. This lateral play is mandatory to prevent the tap from shearing during tapping procedures.
8. Adjust the drill press depth stop so the tap will not bottom out in the hole.
9. Using an oil gun, add two or three drops of HP Milcot 52 or an equivalent oil into the ball oiler on the tapping attachment.
10. Rotate the cup nut (**Figure 3**) to increase or decrease the clutch tension depending on the tap size, thread pitch, material to be tapped.

Note: The numbers stamped on the side of the clutch nut (**Figure 3**) are for your personal reference and do not correlate to any specific tap size or thread pitch. You may want to make some test passes to get an idea about which setting will work best for your needs.

For small taps, loosen the clutch nut to decrease the clutch spring tension. For large taps, tighten the clutch nut to increase the clutch spring tension.

The tapping attachment is now ready for use. Follow all drill press safety precautions.

OPERATIONS

CAUTION

To reduce the risk of personal injury or property damage when using taps and drill bits, take the following precautions:

- When using the tapping attachment for drilling, do not exceed 700 RPM.
- Always wear safety glasses or a face shield when using a tap or drill bit.
- Use the correct size drill bit for each tap. Attempting to cut threads in an incorrectly sized hole can cause the tap to snap and eject steel splinters.
- Be sure to use the correct lubricant when drilling and cutting threads.
- Always keep drill bits and taps sharpened to ensure that drill bits cut properly sized holes and that tap threads do not bind and cause the tap to break.
- Never allow children to play with drill bits or taps.



WARNING

Cutting lubricants can be a potent and extremely poisonous solution to humans and animals. Use personal protective equipment when handling coolant to prevent infections or poisoning.

General Operation

This tapping attachment allows you to first install a drill bit into the taper attachment chuck, and then drill a hole. Next, without the inconvenience of losing spindle-to-workpiece registration, the drill bit is removed with the spanner wrench, and then the tap is installed into the tapping attachment. The tap is held by the tap retainer, which is tightened by means of a 4mm hex wrench. Set the tapping speed on the drill press, apply thread cutting lubricant if required (**Figure 4**). When threading is complete, pull up on the rack handle and the tapping attachment automatically reverses. The tap rotates out of the workpiece twice as fast as the initial threading pass.

Tapping Speed and Lubricant Chart

Always follow the tap and drill bit manufacturer's speed recommendations. However, to avoid injury, do not exceed the maximum tapping attachment speed of 700 RPM.

The chart shown in **Figure 4** is only intended as a guide. The optimum speed will always depend on various factors, including tap diameter, threading pressure, material hardness, material quality, and desired finish. Often, when tapping, different types of lubrication is required. Use the formula below and the table in **Figure 4** to find a close spindle speed and suggested lubricant.

$$\text{Spindle RPM} = \frac{\text{Feed Speed (SFM)}}{(0.26 \times \text{Tap Diameter})}$$

Material to be Tapped	Feed Speed (SFM)	Tapping Lubricants
Plastics/Fiberglass	50-70	Dry, Freezing Spray, Liquid Soap
Aluminum	70-90	Soluble Oil
Aluminum Alloys	50-70	Soluble Oil, Light Base Oil, Lard Oil
Brass	60-100	Neat Cutting Oils
Bronze	30-40	
Copper	60-80	
Gun Grade Metal	50-60	Soluble Oil, Light Base Oil, Lard Oil
Grey Cast Iron	30-60	Dry
Malleable Iron	20-40	Soluble Oil, Paraffin-Based Lubricant
Magnesium Alloy	50-70	
Nimonic Alloy	10-12	High Pressure Cutting Oil
Alloy Cast Iron	15-30	
Mild Steel	30-50	Cutting Oils (Sulfur-Based)
Carbon Steel up to 4%	20-40	
Carbon Steel up to 7%	20-30	
Carbon Steel 7% and Higher	15-25	
Steel Alloys 60T	15-25	
Steel Alloys 60T and Higher	10-15	
Stainless Steel	10-20	
Tool Steels	15-25	

Figure 4. Tapping speed and lubricant chart.

ACCESSORIES

H1412—4 Oz. Cutting & Tapping Fluid

H1413—16 Oz. Cutting & Tapping Fluid

H1414—1 Gal. Cutting & Tapping Fluid

This cutting and tapping fluid is non-ozone depleting and is safe for ferrous and non-ferrous metals. The engineered formula clings to cutting tools and provides phenomenal lubrication during cutting and tapping operations.



Figure 5. Grizzly® Cutting & Tapping Fluid.

H5781—Optical Punch Set

This unique tool is indispensable when doing critical layout work. Just look down the magnifying lens and align the cross hairs with the mark on your workpiece. Replace the magnifier with the supplied punch and give it a tap. Includes a bull's eye and cross hair lens, a 150° and 60° center punch and wooden case.



Figure 6. H5781 Optical Punch Set.

T20640—Machinery's Handbook

For more than 90 years, this handbook has been the benchmark by which machinists' and engineering texts have been judged. Includes a wealth of information on mathematics, mechanics, measurements, and materials. A must have for the amateur or professional.

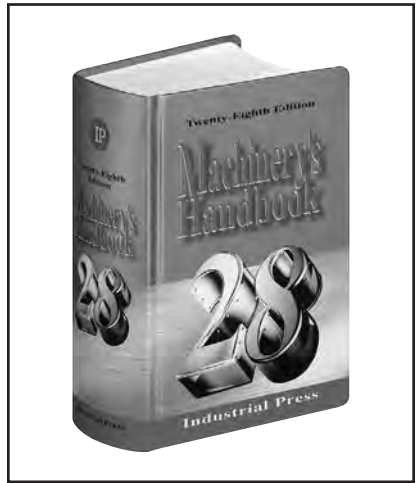
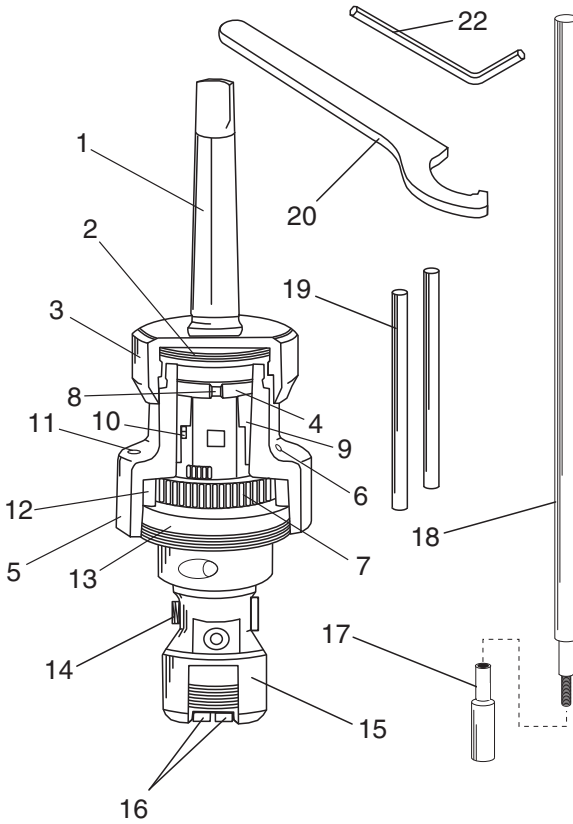


Figure 7. Model T20640 Machinery's Handbook.

Call
1-800-523-4777
To Order

PARTS



REF PART # DESCRIPTION

1	PT10057001	ARBOR MT#2
2	PT10057002	CLUTCH PACK
3	PT10057003	CUP NUT
4	PT10057004	CAM
5	PT10057005	CAM PIN
6	PT10057006	MAIN BODY
7	PT10057007	GEAR WHEEL
8	PT10057008	WHEEL PIN
9	PT10057009	CLUTCH SLEEVE
10	PT10057010	CLUTCH PIN
11	PT10057011	BALL OILER

REF PART # DESCRIPTION

12	PT10057012	GUIDE BUSHING
13	PT10057013	SPINDLE
14	PT10057014	SPECIAL SCREW
15	PT10057015	CHUCK NUT
16	PT10057016	JAW SET
17	PT10057017	STOP LEVER NUT
18	PT10057018	STOP LEVER
19	PT10057019	CHEATER ROD
20	PT10057020	SPANNER WRENCH
22	PT10057022	HEX WRENCH 4MM

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 Authorization 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.

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Web Site: <http://www.grizzly.com>

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