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Item #33307

TG1800 TUNGSTEN GRINDER

INSTRUCTIONS



This **EASTWOOD TG1800 TUNGSTEN GRINDER** features a long-lasting, double-sided, Diamond Grinding wheel capable of providing over 200 tungsten sharpening's before requiring replacement. The high-speed electric motor allows the user to produce a finely sharpened point in the ideal 10° or 22.5° preferred angle within seconds. The uniquely designed tungsten guide accepts both 1/16" and 3/32" diameter tungsten electrodes for both breaking deformed tips and prepping new tungsten rods.

CONTENTS

- (1) Tungsten Grinder with two-sided Diamond Grinding Wheel installed
- (1) Collet Wrench



SPECIFICATIONS

- Input Voltage:** 120 VAC, 60 Hz
- Motor:** 1.8 Amp
- Plug Type:** 2-prong, polarized
- Cord:** 18 Ga., 6' [1.8m]
- Certification:** ETL
- No-Load Speed:** 10,000-40,000 RPM (Variable Speed)

SAFETY INFORMATION

The following explanations are displayed in this manual, on the labeling, and on all other information provided with this product:

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

⚠ NOTICE

NOTICE is used to address practices not related to personal injury.

SAFETY INFORMATION



⚠️ READ INSTRUCTIONS

- Thoroughly read and understand these product instructions before using this tool. Failure to follow all warnings can result in tool damage or serious physical injury.
- Keep these product instructions for future reference.



⚠️ WARNING HEALTH HAZARD!

- Dust and fine particles are generated while grinding which can contain hazardous or toxic substances. Breathing this dust can cause many serious respiratory health conditions. Always use NIOSH approved respiratory protection while using this tool.
- During the grinding of 2% thoriated tungsten electrodes, radioactive dust is created, posing the potential hazard of internal radiation exposure by inhalation or ingestion unless care is taken to control the dust. If grinding 2% thoriated tungsten, properly control and collect the dust; have an adequate ventilation system at the grinding station; and follow the manufacturer's warnings, instructions, and MSDS.



⚠️ WARNING EYE INJURY HAZARD!

- Rapidly rotating surfaces can eject metal particles and dust at high velocity. Always wear ANSI approved eye protection when operating this tool.



⚠️ WARNING HEARING DAMAGE HAZARD!

- The Eastwood Tungsten Grinder emits elevated sound levels while operating. Use ANSI approved ear protection when operating this tool.



⚠️ WARNING INJURY HAZARD!

- DO NOT attempt to operate the Tungsten Grinder without the Grinding Guide in place as severe cuts or finger removal can occur.



⚠ CAUTION INJURY HAZARD!

- This tool has high-speed, highly abrasive cutting surfaces which can quickly cause severe injury. Keep fingers and hands away from moving parts when operating. Wear thick, well-fitting work gloves and keep loose clothing, sleeves, cords, jewelry and hair away from moving parts.
- Always turn off Power Switch and disconnect tool from electrical supply when breaking off tungsten tips to prevent pieces of tungsten from falling into and being ejected from cutting area and potential severe injury.
- DO NOT exert excess force on Tungsten while grinding as it can break and suddenly eject sharp pieces at high velocity.
- Always turn off Power Switch and disconnect tool from electrical supply when flipping or changing Grinding Wheels to prevent accidental tool starting and potential severe injury.
- This tool could eject a trail of sparks at high speed which can ignite flammable materials or injure others nearby. Do not operate near flammable materials and keep all persons and pets away from the work area.
- Always hold the tungsten with open fingers while grinding as it can suddenly kick back causing hand puncture wounds. Wear thick, well-fitting work gloves.
- Always make sure the tool is securely held to avoid sudden movements which could result in injury.
- Frequently inspect Grinding Wheel and tool condition. If cracks or chips develop, discontinue tool use immediately and replace damaged Wheel. ONLY USE replacement Wheels rated at 40,000 RPM or greater. Severe injury can result in the event of Grinding Wheel failure.



⚠ CAUTION VIBRATION INJURY HAZARD!

- This tool will vibrate during use! Repeated exposure to vibration may cause physical injury.

⚠ NOTICE

- Use care not to cover motor cooling slots with a gloved hand while in operation to avoid overheating.

GENERAL SAFETY

1) WORK AREA SAFETY

- a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

2) ELECTRICAL SAFETY

- a) Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- e) When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.

3) PERSONAL SAFETY

- a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- b) Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) Avoid accidental starting. Ensure the switch is in the off-position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
- d) Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- f) Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust-related hazards.

GENERAL SAFETY

4) POWER TOOL USE AND CARE

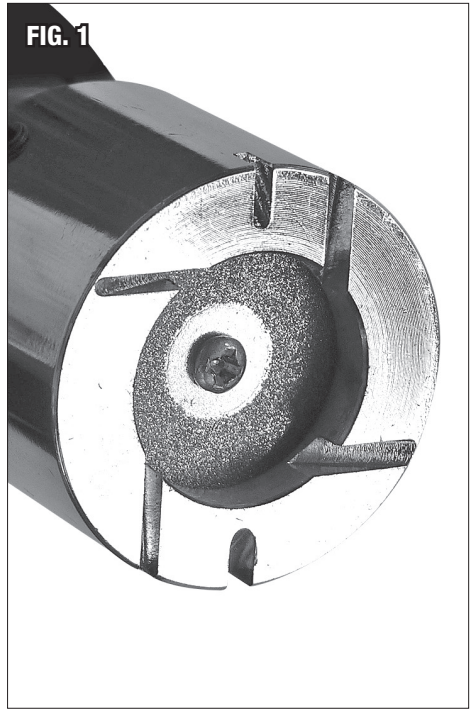
- a) Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- b) Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c) Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- e) Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

FUNCTIONS

The Eastwood Tungsten Grinder head features six machined slots:

- Two 1/16" slots; one angled at 10° and one at 22.5° to direct the tungsten at the preferred angle against the Diamond Grinding Wheel (**FIG 1**).
- Two 3/32" slots; one angled at 10° and one at 22.5° to direct the tungsten to the preferred angle against the Diamond Grinding Wheel (**FIG 1**).
- Two notches (1/16" & 3/32") cut into the top, outside edge of the Grinding Head. These slots are designed to grip the burned end of tungsten rods for clean breakage (**FIG 1**).



OPERATION

- Move the On-Off Switch located on the underside of the Housing to the “OFF” position.
- Plug the power cord into a 120VAC, 60HZ outlet.
- While holding the Eastwood Tungsten Grinder securely, move the On-Off Switch to the “On” position.
- Rotate the Speed Control Wheel located at the top of the Housing to the 4th position (FIG 2). This is the ideal speed setting for tungsten grinding.

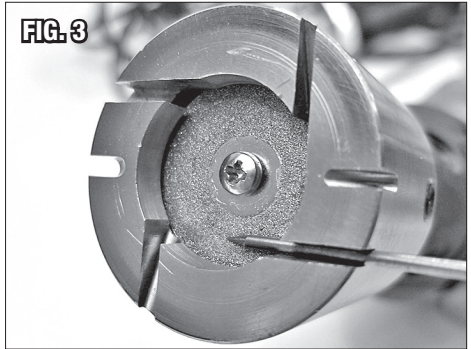
⚠ CAUTION INJURY HAZARD!
Always hold the tungsten with open fingers while grinding as it can suddenly kick back causing hand puncture wounds.

⚠ NOTICE
Use care not to cover motor cooling slots with a gloved hand while in operation to avoid overheating.

- To begin grinding, allow several seconds for the motor to reach full speed then gently place the tungsten into the proper width slot (FIG 3).

⚠ CAUTION INJURY HAZARD!
DO NOT exert excess force on Tungsten while grinding as it can break and suddenly eject sharp pieces at high velocity.

- Slowly and steadily allow the tungsten to contact the face of the Diamond Grinding Wheel while rolling the tungsten to create a sharpened tip. DO NOT force the tungsten but allow the abrasive of the Diamond Grinding Wheel to do the work.
- When the grinding is complete, withdraw the tungsten and move the On-Off Switch to the “OFF” position.



BREAKING OFF BURNED TIPS ON TUNGSTEN

⚠ CAUTION INJURY HAZARD!
Always turn off Power Switch and unplug tool from electrical supply when breaking off tungsten tips to prevent pieces of tungsten from falling into and being ejected from cutting area and potential severe injury.

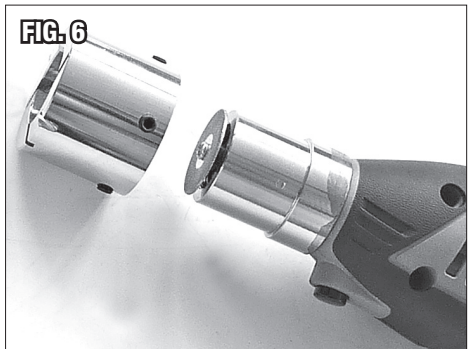
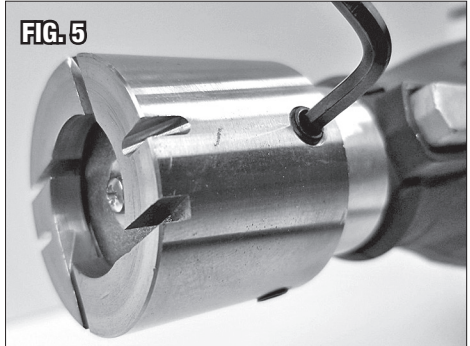
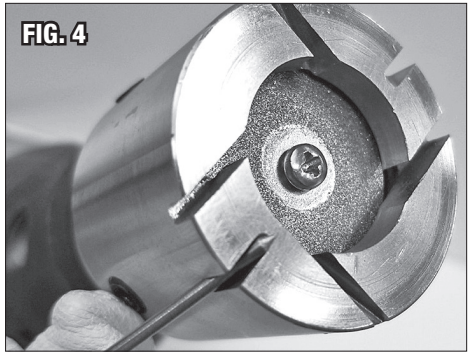
- Place the burned end of the tungsten into the proper width slot and quickly move the tungsten to the side to snap it off (FIG 4).

FLIPPING AND REPLACING DIAMOND GRINDING WHEEL

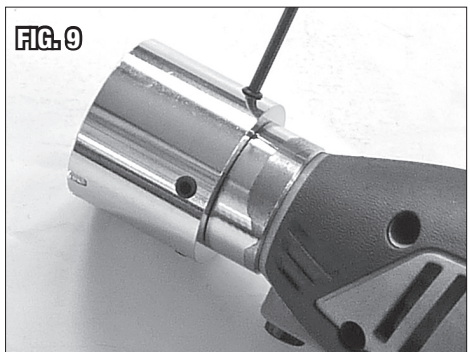
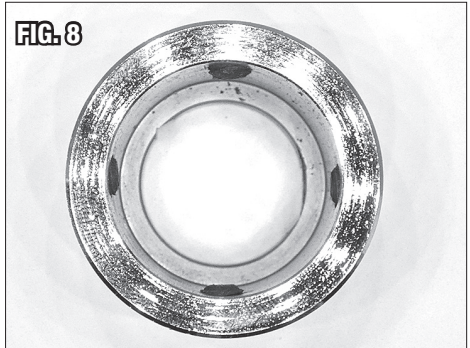
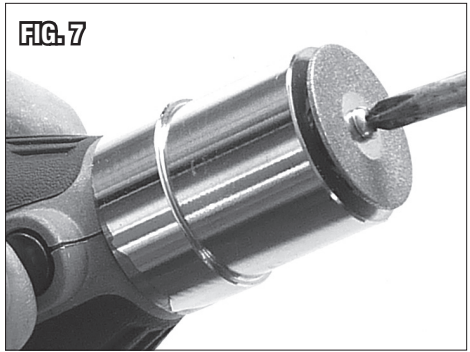
⚠ WARNING INJURY HAZARD!
DO NOT attempt to operate the Tungsten Grinder without the Grinding Guide in place as severe cuts or finger removal can occur.

⚠ CAUTION INJURY HAZARD!
Always turn off Power Switch and unplug tool from electrical supply when flipping or changing Grinding Wheels to prevent accidental tool starting and potential severe injury.

- Using a 3mm Hex Key (not included), loosen the four Retaining Set-Screws (FIG 5).
- Remove the Grinding Head and set it aside (FIG 6).



- Depress the Armature Lock Button and using a #1 Phillips screwdriver (not included), remove the Diamond Grinding Wheel Retaining Screw (**FIG 7**).
- Remove and flip the existing Diamond Grinding Wheel to reveal the fresh abrasive surface or replace with a new one.
- Re-install the Retaining Screw and tighten in place.
- Back out all four of the Retaining Set-Screws so that the ends are flush with the I.D. of the Grinding Guide (**FIG 8**).
- Slip the Grinding Guide back over the Arbor Housing.
- Tighten all four of the Retaining Set-Screws an equal amount so that the Grinding Guide opening is fully concentric with the Retaining Screw at the center of the Diamond Grinding Wheel (**FIG 9**).
- The Eastwood Tungsten Grinder is now ready for use.



MAINTENANCE

IMPORTANT NOTE: The following maintenance should be performed before each use:

- Inspect Diamond Grinding Wheel for cracks, damage or premature wear.
- Clean dirt and debris from motor air cooling slots.
- Check Diamond Grinding Wheel Retaining Screw and Grinding Guide Retaining Set-Screws for tightness.

TROUBLESHOOTING

| PROBLEM | CAUSE | CORRECTION |
|---|--|---|
| Does not run when switch is on | No electrical power to Grinder | Check 120 VAC input plug connection. |
| | | Check for tripped circuit breaker. |
| Motor runs too slow/develops low power | Undersized or too long of an extension cord | Use only 18 gauge or larger cord. Limit length to 25'. |
| | Grinding Wheel contacting I.D. of Grinding Guide and binding | Adjust 4 Set Screws of Grinding Guide to center over Grinding Wheel. |
| Excessive Noise and/or Vibration | Diamond Grinding Wheel is damaged | ⚠ WARNING This is an extremely dangerous condition! Stop Use and replace Diamond Grinding Wheel! |
| Tungsten overheats | Excessive pressure being applied to tungsten | Allow Diamond Grinding Wheel to cut by rotation alone. Do Not Force. |
| | Dirt and debris buildup in motor cooling air slots | Use a brush or compressed air to remove debris. |

ADDITIONAL ITEMS

#33308 Replacement Diamond Grinding Wheels, 6 Pack

#33309 Replacement Diamond Grinding Wheels, 2 Pack

#20177 3/32" x 7" E3 Purple Tungsten Rods, 2 Pack

#20176 1/16" x 7" E3 Purple Tungsten Rods, 2 Pack

If you have any questions about the use of this product, please contact

The Eastwood Technical Assistance Service Department: 800.343.9353 >> email: techelp@eastwood.com

PDF version of this manual is available at eastwood.com

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