

Eastwood[®]

DO THE JOB RIGHT.[®]

Item #31664

ELECTRIC MINI METAL SAW

INSTRUCTIONS



The **EASTWOOD ELECTRIC MINI METAL SAW** is great for use on many project metals including mild steel, aluminum, brass and more. Cut bar stock or tubing up to 1-5/8" [41mm] cleanly. Cuts wood, fiberglass and other materials with ease.

Not recommended for harder metals such as high-carbon, and stainless-steels. The compact design allows access to tight places where larger saws can't go. ON/OFF trigger control.

INCLUDES

- (1) Compact Circular Saw
- (1) 4-1/2" Blade
- (1) Hex Key Wrench (5 mm)
- (1) 7" Capacity Guide Fence

SPECIFICATIONS

Input Voltage: 120 VAC, 60 Hz

Input Amperage: 5.8 Amps

Plug type: 2-prong, polarized

Cord length: 7'- 6"

Certification: ETL

No-Load RPM: 3,500

Cutting Capacity: 1-5/8" [41mm] mild steel, aluminum or copper stock

NOTE: Not recommended for harder material such as high carbon, and stainless-steel. Use on harder metals may result in blade chipping.



IMPORTANT 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 used with the safety alert symbol, 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.

IMPORTANT SAFETY INFORMATION

GENERAL SAFETY RULES

WARNING

Read all instructions Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term “power tool” in all of the warnings listed below refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

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.

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.
- g) 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.

5) SERVICE

- a) Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

ADDITIONAL SAFETY INFORMATION



⚠ WARNING HEALTH HAZARD!

- Dust and fine particles are generated while cutting which can contain hazardous or toxic substances. Breathing this dust can cause serious respiratory health conditions. Always use NIOSH approved respiratory protection while using this Sander.



⚠ WARNING CUT HAZARD!

- Sharp metal edges can cut. Always wear protective work gloves while handling workpiece.



⚠ WARNING HEARING DAMAGE HAZARD!

- Operating this Saw can generate excessive noise. Wear appropriate hearing protection while using.



⚠ WARNING INJURY HAZARD!

- This Saw will eject particles, dust and sparks at high velocity during operation. Wear approved eye and skin protection at all times while operating.
- The rotating Blade of this Saw can quickly catch loose clothing, long hair or jewelry causing serious personal injury. Keep all loose clothing, long hair and jewelry away from operating Saw.
- This Saw can quickly start up when handling while plugged in to electrical supply causing serious personal injury. Always unplug the tool from the electrical supply before changing the Blade, making adjustments to the tool or performing maintenance.
- This Saw can quickly and violently propel workpiece objects while operating causing injury and or property damage. Do not apply excessive force to Saw while in use. Always make sure the workpiece or material being cut is held securely and work is done only on the downward rotating edge of the Saw.
- Damaged blades can disintegrate at high-speed causing personal injury or property damage. If excessive vibration is felt, discontinue use immediately and disconnect tool from electrical supply. Inspect abrasive Blade for damage. Do not resume use until resolution is found.
- Incorrectly rated blades can disintegrate at high RPM causing serious personal injury. Always use replacement blades rated for 3500 RPM operation or greater.



ADDITIONAL SAFETY INFORMATION



⚠ CAUTION FIRE HAZARDS!

- This Saw will eject a trail of sparks at high speed which can ignite flammable materials or injure others nearby. Do not operate in the vicinity of flammable materials and keep all persons and pets away from the work area.

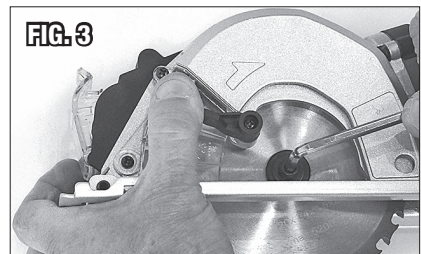
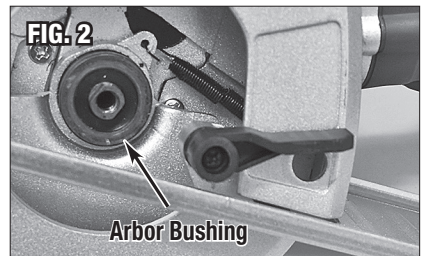
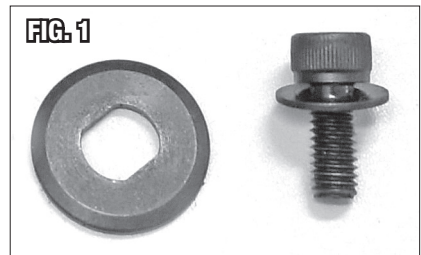


⚠ CAUTION SHOCK HAZARDS!

- Never operate or store Saw in damp or wet conditions.
- Plug into a minimum 15 amp circuit. If using an extension cord, it must be AWG 16 or greater, no longer than 25'.

BLADE INSTALLATION

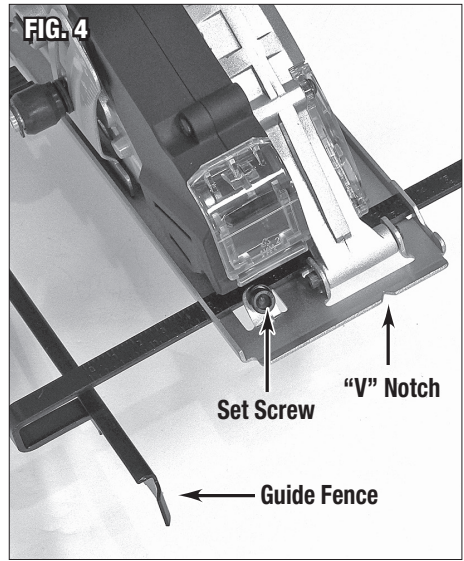
- Using the included Hex Key, loosen and remove the REVERSE THREADED Socket Head Cap Screw (with captured Flat Washer), and the Beveled Washer and set them aside for reinstallation (**FIG 1**). Leave the thicker Arbor Bushing in place on the Arbor Shaft.
- With the flat side of the thicker Arbor Bushing in place on the Arbor Shaft and the stepped side facing outward, Install the Blade onto the Arbor Shaft (**FIG 2**).
- Arrange the Blade with the teeth facing forward at the bottom. Note the direction of rotation arrow cast into the Blade Guard Housing (**FIG 3**).
- Align the flats of the thinner Beveled Washer (with beveled edge facing outward) with the flats of the Arbor Shaft (**FIG 3**).
- Replace the Socket Head Cap Screw by threading it into the Arbor Shaft.
IMPORTANT NOTE: This is a left hand thread. Rotate in a Counter-clockwise direction to tighten (**FIG 3**).



SET-UP

GUIDE FENCE

- If using the Guide Fence, it may be installed by sliding the flat bar through the notch in the right or left side of the Base Plate with the number embossed gauge surface facing upward (FIG 4).
- Align the desired distance dimension with the center of the “V” notch in the leading edge of the Base Plate (FIG 4).
NOTE: For more precise width cuts, check this setting with a scale or by making a test cut before making the final cut.
- Using the included 5mm Hex Key, tighten the Set-Screw to lock the Guide Fence in place.

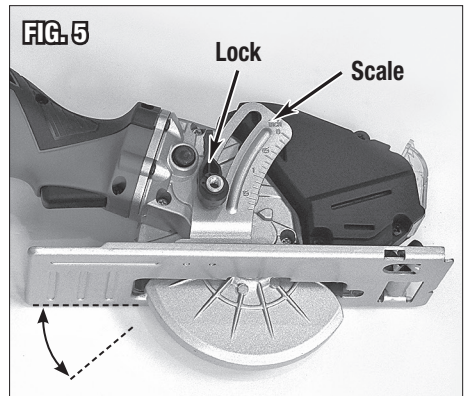


⚠ NOTICE

The handy Hex Key retainer molded into the cord Strain Relief provides safe, convenient storage for the Hex Key when not in use (Fig 4).

BLADE DEPTH

- Loosen the Lock Lever attached to and located on the right side of the Base Plate. Raise it to align the cast in pointer the desired depth as embossed on the gauge surface of the slotted Swing Arm (FIG 5).
- Set the Blade depth to match the thickness of the material to be cut with an additional .06” [1.5mm] for chip clearance.
- Re-tighten the Lock Lever securely.



OPERATION

- Line up your planned cut-line with the center of the “V” notch in the leading edge of the Base Plate (FIG 5).

▲ NOTICE

The “V” notch is directly in line with the Blade.

- While holding the Saw securely, depress the Trigger Safety Lock Button located on the left side of the Saw body, immediately above the Trigger Switch (FIG 6) then depress the Trigger Switch to start the saw motor.
- To begin cutting, allow several seconds for the motor to reach full speed then gently feed the leading edge of the blade into the workpiece. The Blade Guard which is spring-loaded will automatically be pushed back by feeding into the workpiece and will only expose the portion of the blade required to cut through the material.

▲ WARNING

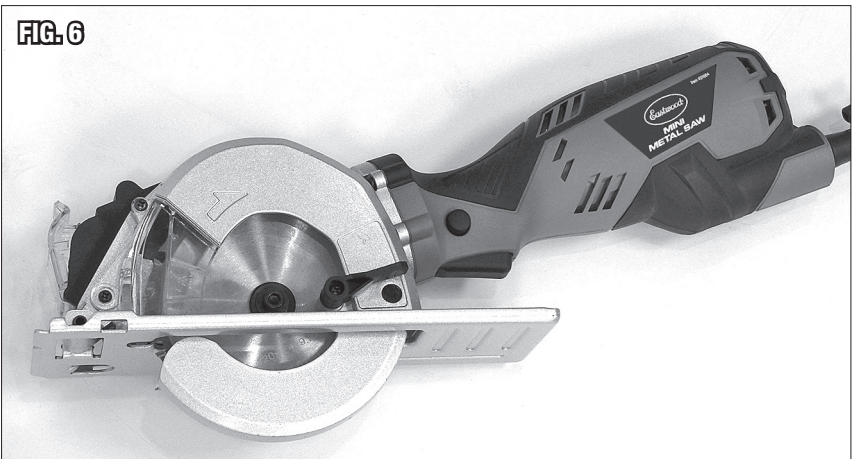
DO NOT interfere with Blade Guard function or severe injury may occur!

- Slowly and steadily allow the blade to do the cutting.

▲ WARNING

DO NOT force the Saw forward blade or kickback could quickly occur causing severe injury!

- When the cutting is complete, release trigger and allow blade to stop rotating before pulling the blade away from the workpiece.



BLADE REPLACEMENT

⚠ WARNING

This Saw can quickly start up when handling while plugged into an electrical supply causing serious personal injury. Always unplug the Saw from the electrical supply before changing blades or performing maintenance.

⚠ WARNING

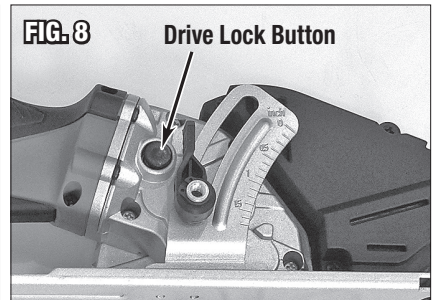
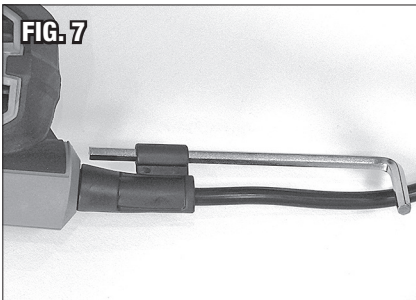
Sharp blade edges can cut. Always wear protective work gloves while handling.

⚠ NOTICE

The handy Hex Key retainer molded into the cord Strain Relief provides safe, convenient storage for the Hex Key when not in use (Fig 7).

REMOVAL

- Depress the Drive Lock Button on the right side of the Gearcase (**FIG 8**).
- Place the included 5mm Hex Key Wrench into the Socket Head Cap Screw on the left side of the Drive Armature (**FIG 3**).
- **IMPORTANT NOTE:** This is a left hand thread. Rotate in a Clockwise direction to loosen.
- Rotate the Blade Guard to expose the Blade.
- Remove the Socket Head Cap Screw (with captured Flat Washer), Beveled Washer and Blade.
- **DO NOT** remove the thicker Arbor Bushing. Leave it in place on the Arbor Shaft (**FIG 2**).



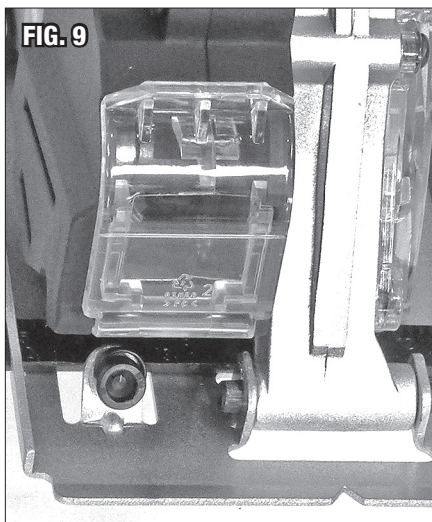
REPLACEMENT

- With the flat side of the thicker Arbor Bushing in place on the Arbor Shaft and the stepped side facing outward, Install the Blade onto the Arbor Shaft (**FIG 3**).
- Arrange the Blade with the teeth facing forward at the bottom. Note the direction of rotation arrow cast into the Blade Guard Housing (**FIG 3**).
- Align the flats of the thinner Beveled Washer (with beveled edge facing outward) with the flats of the Arbor Shaft (**FIG 3**).
- Replace the Socket Head Cap Screw by threading it into the Arbor Shaft.
IMPORTANT NOTE: This is a left hand thread. Rotate in a Counter-clockwise direction to tighten (**FIG 3**).

MAINTENANCE

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

- Check tightness of all hardware including Blade Mounting Screw.
- Check operation and alignment of Blade Guard.
- Inspect Blade for cracks, damage or premature wear.
- Clean dirt and debris from motor air cooling slots.
- Clean chips from Chip Receptacle by lifting the Clear Plastic Chip Receptacle (**FIG 9**) and emptying it.



TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
Does Not Run When Switch is Depressed	No Electric Power to Saw	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 14 gauge or larger cord.
		Limit length to 25'
Excessive Noise and/or Vibration	Blade is Loose	WARNING: This is an extremely dangerous condition! Stop use and tighten Blade!
	Blade is Damaged	WARNING: This is an extremely dangerous condition! Stop use and replace Blade!
Motor Overheats	Excessive Pressure Being Applied to Blade	Allow Blade 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.
Teeth Chipping on Blade	Material being cut is too thick	Cutting Capacity: 1-5/8" [41mm] diameter mild steel, aluminum or copper stock.
	Material being cut is too hard	For mild steel, aluminum or copper stock. Not recommended for harder material such as high carbon, and stainless-steel.

ADDITIONAL ITEMS

- #31664 Replacement 4-1/2" Metal Cutting Blade
- #28038 Sheet Metal Gauge
- #13475 Electric Metal Cutting Shears
- #28187 Bead Roller Kit
- #51088 Shrinker/Stretcher Set

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

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

PDF version of this manual is available at eastwood.com

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