

**6177-20**

# Instruction Manual

## 6177-20 FITS MILWAUKEE 14 IN. ABRASIVE CUT-OFF MACHINE

Brand: Generic | Model: 6177-20

### 1. INTRODUCTION

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This manual provides important information regarding the safe operation, maintenance, and troubleshooting of your 6177-20 14-inch Abrasive Cut-Off Machine. Please read this manual thoroughly before operating the machine to ensure proper use and to prevent injury or damage.

The 6177-20 Abrasive Cut-Off Machine is designed for fast and efficient cutting of various metal materials such as drywall track in bundles, angle iron, conduit, pipe, channels, tubing, and rebar. It features a powerful 15-amp motor, adjustable fence for miter cuts, and a quick-adjust vise clamp for secure material handling.



Figure 1.1: Overall view of the 14-inch Abrasive Cut-Off Machine.

## 2. SAFETY INFORMATION

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**WARNING:** Read all safety warnings, instructions, illustrations, and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.

### 2.1 General Power Tool Safety Rules

- **Work Area Safety:** Keep work area clean and well lit. Cluttered or dark areas invite accidents. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- **Electrical Safety:** Power tool plugs must match the outlet. Never modify the plug in any way. Do not expose power tools to rain or wet conditions.
- **Personal Safety:** Always wear eye protection (safety glasses or goggles) and hearing protection. Use dust mask if operation is dusty. Dress properly; avoid loose clothing or jewelry.
- **Tool Use and Care:** Do not force the power tool. Use the correct power tool for your application. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.

### 2.2 Specific Safety Rules for Abrasive Cut-Off Machines

- Always use the correct type and size of abrasive wheel for the material being cut. Ensure the wheel is rated for the machine's RPM.
- Ensure the wheel guard is properly in place and securely fastened before operation.
- Secure the workpiece firmly with the vise clamp. Unsecured workpieces can cause kickback or loss of control.
- Allow the wheel to reach full speed before beginning a cut.
- Do not apply excessive pressure. Let the wheel do the cutting.
- Be aware of sparks and hot debris during cutting. Keep bystanders away and ensure no flammable materials are nearby.
- Never attempt to cut materials that exceed the machine's maximum capacity.

### 3. COMPONENTS AND PARTS IDENTIFICATION

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Familiarize yourself with the various parts of your cut-off machine before operation.



Figure 3.1: Top-down view highlighting the motor housing and handle.



Figure 3.2: Detailed view of the motor and the sturdy base structure.



Figure 3.3: View of the abrasive wheel and its protective guard, essential for safety.



Figure 3.4: Ergonomic handle designed for comfortable and secure grip during operation.



Figure 3.5: The quick-adjust vise clamp for securing various material sizes.

Key components include:

- **Motor Housing:** Contains the powerful 15-amp motor.
- **Handle:** Ergonomic grip with power trigger.
- **Abrasive Wheel:** The cutting disc.
- **Wheel Guard:** Protects against sparks and debris.
- **Base:** Provides stability for the machine.
- **Vise Clamp:** Secures the workpiece for cutting.
- **Adjustable Fence:** Allows for angle adjustments for miter cuts.
- **Spindle Lock Button:** For easy blade changes.

## 4. SETUP

### 4.1 Unpacking

Carefully remove the cut-off machine and all accessories from the packaging. Inspect for any damage that may

have occurred during shipping. Retain packaging for future storage or transport.

## 4.2 Mounting the Machine

For optimal stability and safety, it is recommended to bolt the cut-off machine to a sturdy workbench or stand. Use appropriate bolts and washers through the mounting holes provided in the base of the machine.

## 4.3 Installing/Changing the Abrasive Wheel

1. Ensure the machine is unplugged from the power source.
2. Press and hold the spindle lock button.
3. Using the appropriate wrench (often included), loosen and remove the arbor nut and outer flange.
4. Carefully remove the old abrasive wheel.
5. Place the new abrasive wheel onto the spindle, ensuring it is seated correctly against the inner flange. The wheel's rotation arrow should match the machine's rotation direction.
6. Replace the outer flange and arbor nut. Tighten the nut securely while holding the spindle lock button. Do not overtighten.
7. Release the spindle lock button and manually rotate the wheel to ensure it spins freely and is properly seated.

## 4.4 Adjusting the Fence for Miter Cuts

The adjustable fence allows for miter cuts up to 45 degrees. To adjust:

1. Loosen the fence locking bolts.
2. Pivot the fence to the desired angle, aligning it with the angle markings on the base.
3. Securely tighten the fence locking bolts.

# 5. OPERATING INSTRUCTIONS

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## 5.1 Before Operation

- Ensure all safety guards are in place and functional.
- Verify the abrasive wheel is correctly installed and not damaged.
- Wear appropriate personal protective equipment (PPE): safety glasses, hearing protection, and gloves.
- Clear the work area of any obstructions and ensure adequate ventilation.
- Secure the workpiece firmly in the vise clamp. Ensure the material is stable and will not shift during cutting.

## 5.2 Making a Cut

1. Plug the machine into a suitable 120V AC/DC power outlet.
2. Hold the handle firmly and depress the power trigger to start the machine. Allow the abrasive wheel to reach full operating speed (3900 RPM) before beginning the cut.
3. Slowly and steadily lower the cutting head into the workpiece. Do not force the cut; let the wheel's speed and abrasive action do the work.
4. Maintain a consistent, controlled downward pressure.
5. Once the cut is complete, release the power trigger and allow the wheel to come to a complete stop before raising the cutting head.
6. Remove the cut material and clear any debris.



Figure 5.1: Demonstrating the machine in use, cutting a metal pipe with sparks.

## 6. MAINTENANCE

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Regular maintenance ensures the longevity and safe operation of your cut-off machine.

### 6.1 Cleaning

- Always unplug the machine before cleaning.
- Use a dry cloth or soft brush to remove dust and debris from the motor vents and housing.
- Periodically clean the vise clamp and base to ensure smooth operation and prevent material buildup.
- Do not use solvents or harsh chemicals, as they may damage plastic parts.

### 6.2 Abrasive Wheel Replacement

Replace the abrasive wheel when it becomes worn down, chipped, or damaged. Refer to Section 4.3 for detailed instructions on changing the wheel.

## 6.3 Brush Inspection/Replacement

The motor uses carbon brushes that wear over time. If the motor performance decreases or excessive sparking occurs, the brushes may need inspection or replacement. Consult a qualified service technician for brush maintenance.

## 6.4 Storage

Store the machine in a clean, dry place, out of reach of children and away from moisture. Ensure the power cord is neatly coiled and not kinked.

## 7. TROUBLESHOOTING

This section addresses common issues you might encounter with your cut-off machine.

Problem	Possible Cause	Solution
Machine does not start.	No power supply; Faulty power cord/plug; Tripped circuit breaker; Worn carbon brushes.	Check power connection and outlet; Inspect cord for damage; Reset circuit breaker; Have brushes inspected/replaced by technician.
Excessive sparks during cutting.	Worn or incorrect abrasive wheel; Forcing the cut; Improper material.	Replace abrasive wheel; Reduce cutting pressure; Ensure material is suitable for cutting.
Motor overheats.	Overloading the machine; Blocked ventilation slots; Worn carbon brushes.	Reduce load; Clean ventilation slots; Have brushes inspected/replaced.
Inaccurate cuts.	Workpiece not secured; Fence not properly adjusted/tightened; Worn abrasive wheel.	Secure workpiece firmly; Re-adjust and tighten fence; Replace abrasive wheel.

For issues not listed above, or if solutions do not resolve the problem, please contact customer support.

## 8. SPECIFICATIONS

Feature	Detail
Model Number	6177-20
Brand	Generic
Voltage	120 AC/DC
Amperage	15 Amps
No Load RPM	3900 RPM
Horsepower	4.0 hp (maximum)
Wheel Diameter	14 inches

Feature	Detail
Arbor Size	1 inch
Maximum Capacity	Up to 5 inches (e.g., 4-5/8 X 4-5/8 in.)
Maximum Bevel Capacity	45 degrees
Spindle Lock	Yes
Material	Iron
Length	16 inches

## 9. WARRANTY AND SUPPORT

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### 9.1 Warranty Information

This Generic 14-inch Abrasive Cut-Off Machine (Model 6177-20) comes with a **5-year tool warranty** from the date of purchase. This warranty covers defects in material and workmanship under normal use. It does not cover damage due to misuse, abuse, alteration, or normal wear and tear. Please retain your proof of purchase for warranty claims.

### 9.2 Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact our customer support team:

**Email:** [support@generictools.com](mailto:support@generictools.com) (example)

**Phone:** 1-800-XXX-XXXX (example)

**Website:** [www.generictools.com](http://www.generictools.com) (example)

Please have your model number (6177-20) and date of purchase ready when contacting support.