

# Power Mule II

FOR USE WITH VICTAULIC CUT GROOVING TOOLS



WARNING



## WARNING



Failure to follow instructions and warnings could result in serious personal injury, property damage, and/or product damage.

- Before operating or servicing this power mule, read all instructions in this manual and all warning labels on the tool.
- Wear safety glasses, hardhat, foot protection, and hearing protection.
- Save this operating and maintenance manual.

If you need additional copies of any literature, or if you have questions concerning the safe and proper operation of this tool, contact Victaulic, P.O. Box 31, Easton, PA 18044-0031, Phone: 1-800-PICK VIC, E-Mail: [pickvic@victaulic.com](mailto:pickvic@victaulic.com)

[www.victaulic.com](http://www.victaulic.com)

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REV\_B

victaulic

TM-PMII

**INDEX**

Hazard Identification . . . . . Inside Front Cover  
 Operator Safety Instructions. . . . . 1  
 Introduction . . . . . 2  
 Receiving The Tool . . . . . 3  
 Power Requirements . . . . . 3  
 Extension Cord Requirements . . . . . 3  
 Tool Nomenclature. . . . . 5  
 Tool Setup . . . . . 6  
 Tool Operation . . . . . 8  
 Maintenance . . . . . 10  
 Troubleshooting . . . . . 11  
 Facilities Locations. . . . . Back Cover

**HAZARD IDENTIFICATION**

Definitions for identifying the various hazard levels are provided below.



When you see this symbol, be alert to the possibility of personal injury. Carefully read and fully understand the message that follows.

**! DANGER**

- The use of the word “DANGER” identifies an immediate hazard with a likelihood of death or serious personal injury if instructions, including recommended precautions, are not followed.

**! WARNING**

- The use of the word “WARNING” identifies the presence of hazards or unsafe practices that could result in death or serious personal injury if instructions, including recommended precautions, are not followed.

**! CAUTION**

- The use of the word “CAUTION” identifies possible hazards or unsafe practices that could result in personal injury and product or property damage if instructions, including recommended precautions, are not followed.

**NOTICE**

- The use of the word “NOTICE” identifies special instructions that are important but not related to hazards.

## OPERATOR SAFETY INSTRUCTIONS

The Victaulic Power Mule II is designed to drive Victaulic Cut Grooving Tools. Use of this tool requires dexterity and mechanical skills, as well as sound safety habits. Although this tool is manufactured for safe, dependable operation, it is impossible to anticipate all combinations of circumstances that could result in an accident. The following instructions are recommended for safe operation of this tool. The operator is cautioned to always practice "safety first" during each phase of use, including setup and maintenance. It is the responsibility of the owner, lessee, or user of this tool to ensure that all operators read this manual and fully understand the operation of this tool.

Read this manual before operating or servicing this tool. Become familiar with the tool's operations, applications, and limitations. Be particularly aware of its specific hazards. Store this manual in a clean area where it is always readily available. Additional copies of this manual are available upon request.

- Avoid using the tool in dangerous environments.** Do not expose the tool to rain, and do not use the tool in damp or wet locations. Do not use the tool on sloped or uneven surfaces. Keep the work area well lit. Allow sufficient space to operate the tool properly.
- Prevent back injury.** Use proper lifting techniques when handling heavy components.
- Inspect the equipment.** Before using the tool, check all moveable parts for any obstructions. Make sure all hardware is tightened.
- Prevent accidental startups.** Always unplug the power head from the safety foot switch. This power mule's rotation control switch DOES NOT feature a "neutral" or "off" position. Depressing the safety foot switch will energize the tool immediately if it is not unplugged. **ALWAYS USE THE SAFETY FOOT SWITCH TO OPERATE THE POWER MULE.**
- Wear proper apparel.** Do not wear loose clothing, jewelry, or anything that can become entangled in moving parts.
- Wear protective items when working with tools.** Always wear safety glasses, hardhat, foot protection, and hearing protection.
- Stay alert.** Do not operate the tool if you are drowsy from medication or fatigue. Avoid horseplay around the equipment.
- Keep visitors away from the immediate work area.** All visitors should be kept a safe distance from the equipment at all times.
- Keep work areas clean.** Keep the work area around the tool clear of any obstructions that could limit the movement of the operator. Clean up any metal shavings and oil or other spills.
- Secure the work, tool, and accessories.** Refer to the "Tool Setup" section on page 6.
- Support the work.** Support the pipe in a pipe vise that is mounted to a workbench or a stand. The workbench or stand must be secured to the floor.
- OPERATE THE TOOL ON THE HANDLE SIDE ONLY.** The power mule must be operated with a safety foot switch that is located for easy operator access. Never reach across moving parts. If the power mule does not contain a safety foot switch, contact Victaulic.
- Align the power mule with the cut groover's square drive shaft.** Always position the power mule 90° to the cut groover's square drive shaft. Make sure there is no binding between the power mule's drive head and the cut groover's square drive shaft.
- Keep hands and tools away from moving parts during the grooving operation.** Grooving rolls can crush or cut fingers and hands.
- Do not reach inside the pipe end during tool operation.**

16. **Do not over-reach.** Maintain proper footing and balance at all times. Make sure the safety foot switch is easily accessible for the operator.
17. **Do not force the tool.** Do not force the tool or accessories to perform any functions beyond their capabilities. Do not overload the tool.
18. **Do not abuse the safety foot switch cord.** Keep the cord away from heat, oil, and sharp objects.
19. **Always turn off the main power supply to the tool before servicing the tool.** Only authorized personnel should attempt to perform maintenance on the tool. Always unplug the power head from the safety foot switch before servicing or adjusting the tool.
20. **Maintain tools with care.** Keep tools clean at all times to ensure proper and safe performance. Follow all maintenance instructions.
21. **Use only Victaulic or authorized replacement parts and accessories.** Use of any other parts may result in a voided warranty, improper operation, and hazardous situations.
22. **Do not remove any labels from the tool.** Replace any damaged or worn labels.

## INTRODUCTION

### NOTICE

- Drawings and/or pictures in this manual may be exaggerated for clarity.
- The tool, along with this operating and maintenance instructions manual, contains trademarks, copyrights, and/or patented features that are the exclusive property of Victaulic.

The Victaulic Power Mule II is a high-torque power drive for driving the following Victaulic Cut Grooving Tools:

- Vic-Groovers with 1-inch Square Drive Yokes
- VG-28GD
- VG-824
- Other Special Victaulic Models

For detailed instructions, refer to the operating and maintenance manual for the applicable tool.

The power mule operates at 13 amps with a no-load operating speed of 32 rpm. Under load, the power mule runs at slower speeds. This is a very desirable feature, since heavier loads and slower speeds greatly reduce tool-bit chatter.

### CAUTION

- This power mule must be used **ONLY** for driving cut grooving tools, as listed in this manual.

**Failure to follow this instruction could cause damage to the power mule.**

## RECEIVING THE TOOL

Power mules are shipped on a pallet with the power head removed from the frame. Upon receipt of the power mule, remove any packing materials, and make sure all necessary parts are included. If any parts are missing, contact Victaulic.

### PALLET CONTENTS



Qty.	Description
1	Power Mule II
1	Safety Foot Switch/Power Cord/ Plug Assembly (Located in the Storage Box)
1	Square-Drive Adapter (Installed in Power Head)
2	Operating and Maintenance Instructions Manual

## POWER REQUIREMENTS

**DANGER**

- To reduce the risk of electric shock, check the electrical source for proper grounding.
- Before performing any maintenance on the power mule, disconnect the power cord from the electrical source.

**Failure to follow these instructions could result in death or serious personal injury.**

The Power Mule II is designed to operate on a 115-volt, 20-Amp, 25 – 60 Hz, single-phase power supply (220-volt is also available). Power must be supplied to the power head through a safety foot switch to ensure safe operation. Make sure the power head is properly grounded in accordance with Article 250 of the National Electrical Code.

If an extension cord is required, refer to the “Extension Cord Requirements” section on the next page for cord sizes. In addition, refer to the power head manufacturer’s instructions prior to use.

**EXTENSION CORD REQUIREMENTS**

When pre-wired outlets are not available and an extension cord must be used, it is important to use the proper cord size (i.e. Conductor Size American Wire Gauge). Cord size selection is based upon tool rating (amps) and cord length (feet). Use of a cord size (gauge) thinner than required will cause significant voltage drop at the power head while the tool is operating. Voltage drops may cause damage to the power head and can result in improper tool operation. **NOTE:** It is acceptable to use a cord size (gauge) that is heavier than required.

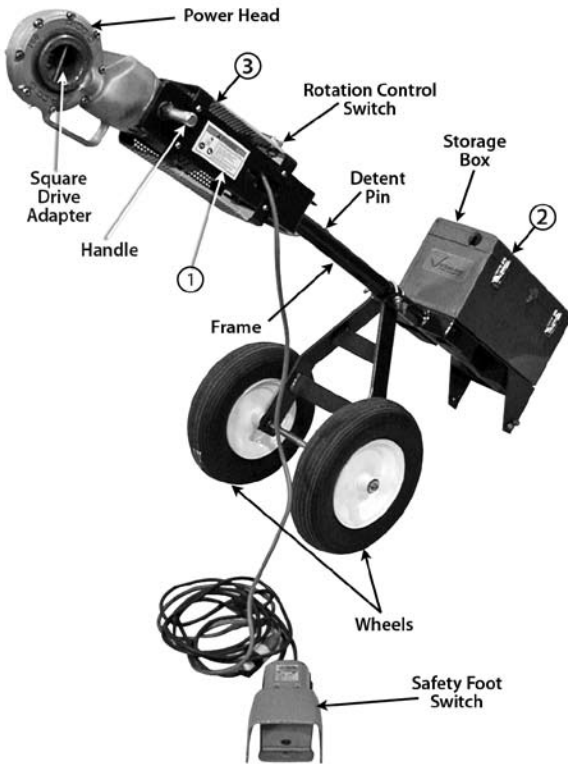
The required cord sizes (gauges) for cord lengths up to and including 100 feet/31 m are listed in the table below. Use of extension cords longer than 100 feet/31 m must be avoided.

Power Head Rating		Cord Lengths		
Volts	Amps	25 feet/ 8 m	50 feet/ 15 m	100 feet/ 31 m
115	15	12 gauge	12 gauge	10 gauge

TOOL NOMENCLATURE

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- Drawings and/or pictures in this manual may be exaggerated for clarity.
- The tool, along with this operating and maintenance instructions manual, contains trademarks, copyrights, and/or patented features that are the exclusive property of Victaulic.



1

2

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**WARNING**

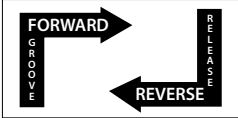
Failure to follow instructions and warnings can result in serious injury, property damage, or faulty installation.

- Before installing, operating, or servicing this tool, read and understand the Operating Instructions and all warning labels on this tool.
- Always wear safety glasses and foot protection.

If you have any questions about the safe operation of this tool, contact Victaulic Tool Company, P.O. Box 31, Exton, PA 19344-0031, 610-656-3300.

Prevent Back Injury...

Bend Knees to Lift



## TOOL SETUP

**! WARNING**

- **DO NOT plug the power head into the electrical source until instructed otherwise.**

**Failure to follow this instruction could result in serious personal injury.**

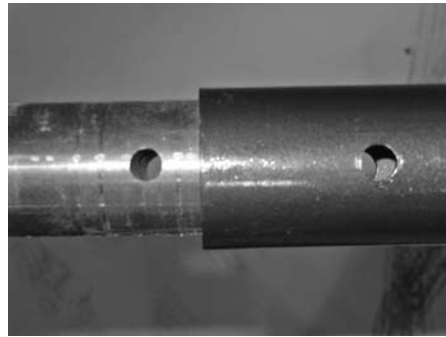
1. Remove all components from the packaging, and make sure all necessary items are included. Refer to the "Receiving the Tool" section on page 3.
2. Select a location for the grooving operation by taking into consideration the following factors:
  - 2a. The required power supply (Refer to the "Power Requirements" section on page 3 and the power drive manufacturer's instructions)
  - 2b. Adequate space to handle pipe lengths
  - 2c. A firm and level surface for the power mule



3. Remove the pallet tie-downs before attempting to set up and operate the power mule.

**! WARNING**

- **Never attempt to operate a power mule if it is bolted to a pallet or the floor.**
- **Failure to follow this instruction could result in serious personal injury and damage to the power mule, cut grooving tool, or pipe.**



4. Insert the power head assembly into the frame. Align the holes in the power head assembly with the holes in the frame, as shown above.

**! WARNING**

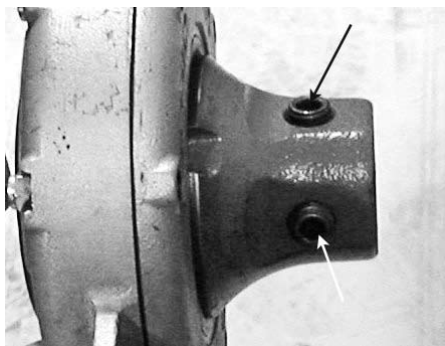
- **NEVER attempt to operate the power mule without having the detent pin installed in the power head assembly/frame.**
- **NEVER operate the power head as a hand-held tool.**

**Failure to follow these instructions could result in serious personal injury.**



5. Insert the detent pin into the holes in the power head assembly/frame. **THIS DETENT PIN MUST ALWAYS BE INSTALLED BEFORE ATTEMPTING TO OPERATE THE POWER MULE.**





6. Make sure the two set screws, located at the square-drive adapter, are tightened.

### NOTICE

- **This power mule's rotation control switch DOES NOT feature a "neutral" or "off" position. Depressing the safety foot switch will energize the tool immediately. ALWAYS USE THE SAFETY FOOT SWITCH TO OPERATE THE POWER MULE.**

7. Remove the safety foot switch/power cord from the storage box.
- 7a. Plug the power head's line cord into the safety foot switch/power cord assembly.
- 7b. Place the safety foot switch in a position that is easily accessible for the operator.
- 7c. Plug the safety foot switch cord into an internally grounded electrical outlet. The outlet must meet the requirements for the power head (refer to the "Power Requirements" section on page 3 and the power head manufacturer's instructions). If an extension cord is used, refer to the "Extension Cord Requirements" section on page 4 for requirements.

### WARNING

- **The power mule MUST be operated with a safety foot switch. If the power mule does not contain a safety foot switch, contact Victaulic.**

**Operating the power mule without a safety foot switch may result in serious personal injury.**

### ADDITIONAL TOOL SETUP INFORMATION



**NOTE:** Depending on jobsite requirements, the power head can be rotated 90° to facilitate the grooving operation.

### WARNING

- **NEVER attempt to operate the power mule without having the detent pin installed in the power head assembly/frame.**
- **NEVER operate the power head as a hand-held tool.**

**Failure to follow these instructions could result in serious personal injury.**



The square-drive adapter has been factory modified and installed for operation of the power mule on the handle side. If the square-drive adapter is ever removed, it must be re-installed, as shown above.

### TOOL OPERATION

1. Secure the pipe in a pipe vise that is mounted to a workbench or a stand. The workbench or stand must be fastened securely to the floor. Pipe must be positioned and secured in a vise to permit unobstructed tool rotation.

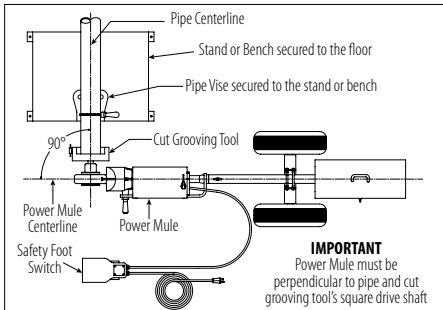
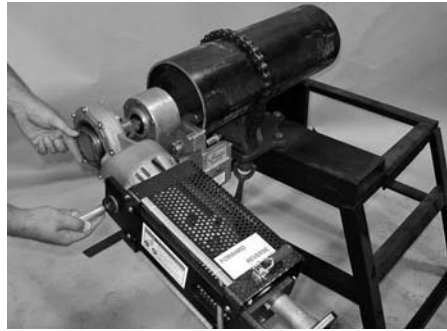
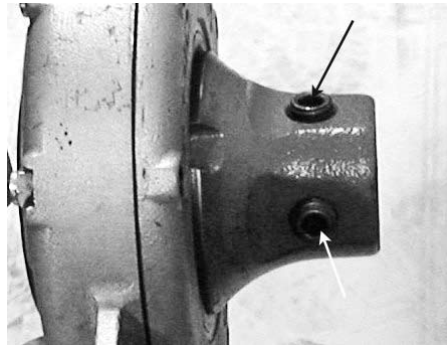


FIGURE 1 – TOP VIEW OF POWER MULE POSITIONING

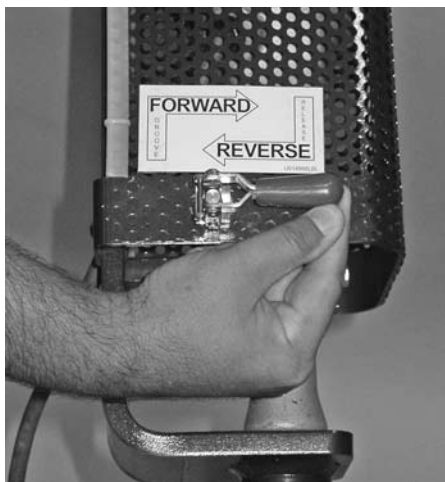
2. Position the power mule to be 90° to the cut grooving tool's square drive. Refer to Figure 1 above. The power mule can be rolled around on its two wheels and steered by use of the handle located on the power head.



3. Rotate the square-drive adapter to align the square hole with the square drive shaft of the cut grooving tool.
- 3a. Slide the power head onto the square drive shaft of the cut grooving tool.



- 3b. Tighten the two set screws on the square-drive adapter.
4. Check the floor around the power mule's wheels to make sure the area is clear of any cords or other objects that may interfere with the wheels.



- Set the rotation control switch to the FORWARD position. Victaulic cut grooving tools are designed to operate in a CLOCKWISE direction when viewed from the square drive shaft side of the tool.

### WARNING

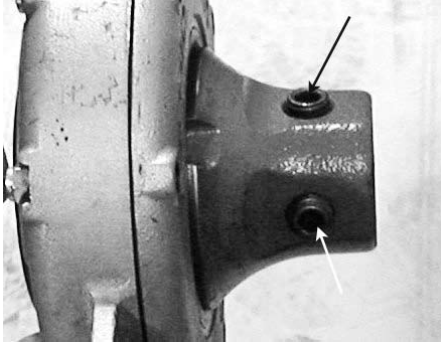
- Always maintain a light grasp on the handle of the power head during tool operation.

Failure to follow this instruction could cause the power mule to walk away from the tool, causing serious personal injury and/or product damage.



- Grasp the handle of the power head. Momentarily depress the safety foot switch, and check the rotation of the power head. Rotation should be CLOCKWISE. If the rotation is counterclockwise, place the rotation control switch to the REVERSE position.
- Groove the pipe by following the operating instructions for the applicable cut grooving tool. **NOTE:** Always maintain a light grasp on the handle of the power head during tool operation.

8. When the grooving operation is complete:



8a. Loosen the two set screws that are located at the square-drive adapter.



- 8b. Flip the rotation control switch to the opposite position.
- 8c. Momentarily engage the safety foot switch.
- 8d. Gently pull on the handle of the power head.
- 8e. Disengage the power mule from the cut groover.
- 8f. Roll the power mule to the RIGHT and out of the way.

## MAINTENANCE

<b>⚠ DANGER</b>	
	<ul style="list-style-type: none"> <li>Before performing any maintenance on the power mule, disconnect the power cord from the electrical source.</li> </ul> <p>Failure to follow these instructions could result in death or serious personal injury.</p>

Check the tire pressure on a daily basis. Make sure each tire is inflated to 30-psi/207-kPa maximum.

Refer to the power head manufacturer's operating manual for additional maintenance requirements.

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Power head will not operate.	The power head is not plugged into the safety foot switch.	Plug the power head into the safety foot switch. Refer to the "Power Requirements" section on page 3.
	The rotation control switch is not set in position.	Flip the rotation control switch to the desired direction. Refer to the "Tool Operation" section, starting on page 8.
	The circuit breaker has tripped or a fuse has blown out in the electrical circuit that supplies the power head.	Reset the breaker, or replace the fuse.
Power head turns the cut grooving tool counterclockwise.	The rotation control switch is set to the wrong position.	Flip the rotation control switch to the opposite direction. Refer to the "Tool Operation" section, starting on page 8.
Cut grooving tool does not make full contact with the pipe end, or the cut grooving tool "walks" off the pipe.	The cut grooving tool is being driven counterclockwise.	Flip the rotation control switch to the opposite direction to drive the cut grooving tool CLOCKWISE. Refer to the "Tool Operation" section, starting on page 8.
	The power mule is not positioned 90° to the pipe.	Re-position the power mule to be 90° to the pipe. Refer to Figure 1 on page 8 of the "Tool Operation" section.
	The pipe is not cut square.	Cut the pipe end squarely.
Cut grooving tool hits power mule as it rotates.	The power mule is not positioned 90° to the pipe.	Re-position the power mule to be 90° to the pipe. Refer to Figure 1 on page 8 of the "Tool Operation" section.
Circuit breaker continuously trips or a fuse repeatedly blows out in the electrical circuit that supplies the power head.	The power mule is plugged into an undersized circuit.	The power head should be connected to a 20-amp circuit by itself, or all other equipment on the circuit should be turned off while the power mule is in use.
	An extension cord that is too thin or too long is being used.	Replace the extension cord with the correct thickness (gauge) and length. Refer to the "Extension Cord Requirements" section on page 4.
	The power mule is not on its own dedicated circuit.	The power head should be connected to a 20-amp circuit by itself, or all other equipment on the circuit should be turned off while the power mule is in use.
The power head runs, but it does not drive the cut grooving tool.	There is a mechanical problem with the square-drive adapter.	Inspect the square-drive adapter for wear or a broken lug. Replace the square-drive adapter, if necessary.
		Remove the square-drive adapter, and inspect the power head drive pins for damage. Replace the power head drive pins, if necessary.

# Power Mule II

FOR USE WITH VICTAULIC CUT GROOVING TOOLS

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