

Power Mule II



WARNING



WARNING



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

- Before operating or servicing the power mule, read all instructions in this manual and all warning labels on the tool.
- Wear safety glasses, hardhat, foot protection, and hearing protection while working around this tool.
- Save this operating and maintenance manual in a place accessible to all operators of the tool.

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.

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HAZARD IDENTIFICATION

Definitions for identifying the various hazard levels are provided below.



This safety alert symbol indicates important safety messages. 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. These instructions shall be read and understood by each operator PRIOR to working with the Power Mule II. These instructions describe safe operation of the tool, including set up and maintenance. Each operator shall become familiar with the tool's operations, applications, and limitations. Particular care shall be given to reading and understanding the dangers, warnings, and cautions described throughout these operating instructions.

Use of this tool requires dexterity and mechanical skills, as well as sound safety habits. Although this tool is designed and manufactured for safe, dependable operation, it is difficult 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 set up and maintenance. It is the responsibility of the lessee or user of this tool to ensure that all operators read this manual and fully understand the operation of this tool.

Store this manual in a clean, dry area where it is always readily available. Additional copies of this manual are available upon request through Victaulic, or can be downloaded at victaulic.com.

DANGER

1. **Avoid using the tool in potentially 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.

WARNING

1. **Prevent back injury.** Always use proper lifting techniques when handling tool components.
2. **Wear proper apparel.** Do not wear loose clothing, jewelry, or anything that can become entangled in moving parts.
3. **Wear protective items when working with tools.** Always wear safety glasses, hardhat, foot protection, and hearing protection.
4. **Keep hands and tools away from power drive during grooving operation.** Rotation of the power drive can pinch or entangle fingers and hands.
5. **Do not reach inside pipe ends during tool operation.** Pipe edges can be sharp and can snag hands and shirt sleeves.
7. **Do not over-reach.** Maintain proper balance at all times. Verify that all controls are easily accessible to the operator.
8. **Do not make any modifications to the tool.** Do not remove any safety guarding or any components that would affect tool performance.
9. **Prevent accidental start-ups.** 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.**



1. **The Power Mule II shall be used ONLY for driving cut grooving tools, as listed in this manual.**
2. **Inspect the equipment.** Before using the tool, check moveable parts for obstructions. Ensure that tool components are installed and adjusted in accordance with setup instructions.
3. **Stay alert.** Do not operate the tool if you are drowsy from medication or fatigue.
4. **Keep visitors, trainees, and observers away from the immediate work area.** All visitors shall be kept a safe distance from the equipment at all times.
5. **Keep work areas clean.** Keep the work area around the tool clear of any obstructions that could limit movement of the operator. Clean up any spills.
6. **Secure the work, machine, and accessories.** Verify that the tool is stable. Refer to the "Tool Setup" section.
7. **Support the work.** Support pipe lengths with a pipe stand or vise.
8. **Do not force the tool.** Do not force the tool or accessories to perform any functions beyond the capabilities described in these instructions. Do not overload the tool.
9. **Maintain tool with care.** Keep the tool clean to ensure proper and safe performance. Follow the instructions for matching and lubricating tool components, if applicable.
10. **Use only Victaulic replacement parts and accessories.** Use of any other parts may result in a voided warranty, improper operation, and hazardous situations. Refer to the "Parts Ordering Information" section.
11. **Do not remove any labels from the tool.** Replace any damaged or worn labels.
12. **OPERATE THE TOOL ON THE HANDLE SIDE ONLY.** The Power Mule II 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.
13. **Align the Power Mule II with the cut groover's square drive shaft.** Always position the power mule with 90° to the cut groover's square drive shaft. Verify that there is no binding between the power mule's drive head and the cut groover's square drive shaft.
14. **Do not abuse the safety foot switch cord.** Keep the cord away from heat, oil, and sharp objects.
15. **Always turn off the main power supply to the tool before servicing the tool.** Only authorized personnel shall attempt to perform maintenance on the tool. Always unplug the power head from the safety foot switch before servicing or adjusting the tool.

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

- VG
- VG28GD
- VG28GD-ABR
- VG26GD
- VG26GD-COR
- VG824
- VG824-ABR
- VG824-COR
- VG824DG
- VG828

This heavy-duty, two-wheeled unit drives Victaulic cut grooving tools at the speed and power necessary for accurate grooving. It has a rotating head for horizontal and vertical applications. It is also equipped with a Forward-Off-Reverse control and integral foot switch.

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

The Power Mule II 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 desirable feature, since heavier loads and slower speeds reduce tool-bit chatter.

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 ensure that 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 Bag)
1	Square-Drive Adapter (installed in Power Head)
2	Operating and Maintenance Instructions Manual


RETURNING THE TOOL

Prepare tool for shipment as received. Contact Victaulic with questions.

POWER REQUIREMENTS

For proper tool operation and production of grooves that are within Victaulic specifications, the following guidelines shall be followed:

 **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 shall be supplied to the power head through a safety foot switch to ensure safe operation. Ensure 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 this page for cord sizes. In addition, refer to the power head manufacturer's instructions prior to use.

EXTENSION CORD REQUIREMENTS

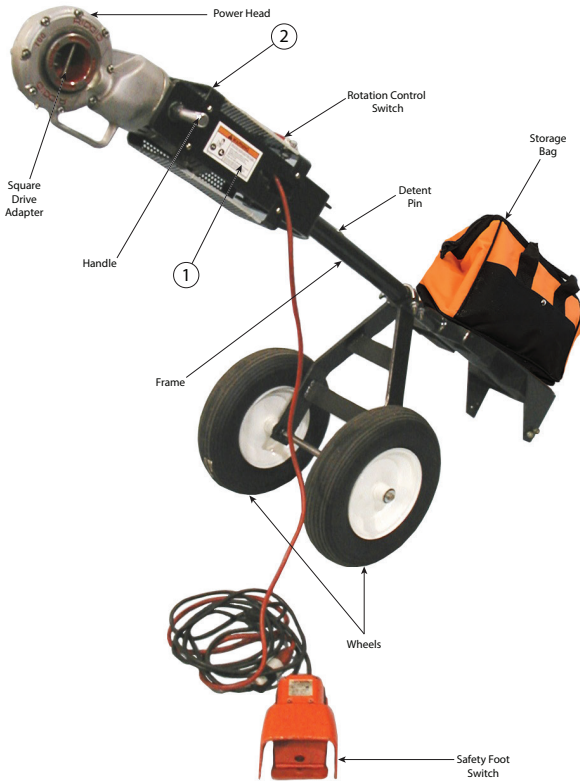
When pre-wired outlets are not available and an extension cord shall be used, it is important to use the proper cord size (i.e. Conductor Size American Wire Gauge). Cord size selection is based upon tool rating (amps) and cord length (feet). Use of a cord size (gauge) thinner than required will cause 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 shall be avoided.

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

TOOL NOMENCLATURE

NOTICE

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⚠ WARNING

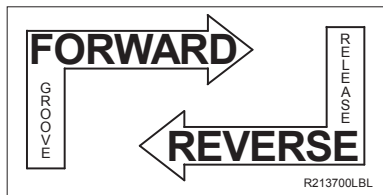
Failure to follow instructions and warnings could result in serious personal injury, property damage, and/or product damage.

- Before operating or servicing any pipe preparation tools, read all instructions in the Operating and Maintenance Instructions Manual and all labels on the tool.
- Wear safety glasses, hardhat, foot protection, and hearing protection when working around tools.

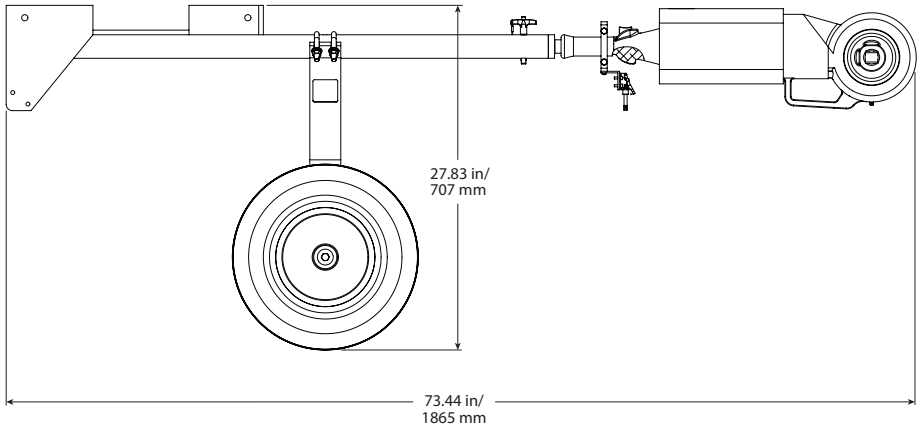
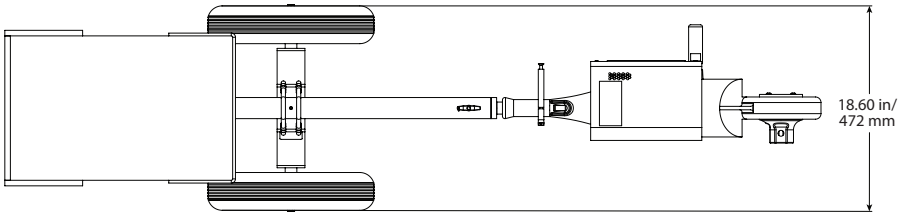
If you need additional copies of any literature, or if you have questions concerning the safe and proper operation of any pipe preparation tools, contact Victaulic, P.O. Box 31, Easton, PA 18044-0031, Phone 1-800-PICK VIC, E-Mail: pickvic@victaulic.com.

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TOOL DIMENSIONS AND SPECIFICATIONS



Tool weight is 190 pounds/86.2 kilograms.

Tool sound pressure is 98.4 dB(A).

Tool sound power is 107 dB(A).

Sound measurements are taken with a Ridgid™ Model 700 power drive.

NOTE: Noise measurements are dependent on the power drive, and will vary based on configuration. Always check the power drive manufacturer's documentation for details.

™ Ridgid is a registered trademark of Ridgid Tool Company

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.

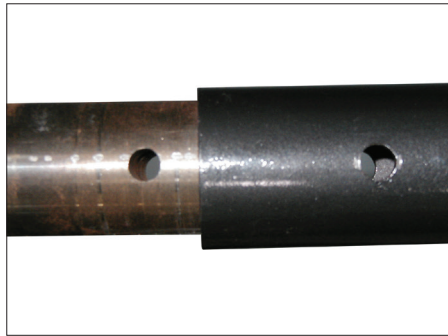
1. Remove all components from the packaging, and ensure all necessary items are included. Refer to the “Receiving the Tool” section on page 6.
2. Select a location for the grooving operation by taking into consideration the following factors:
 - 2a. The required power supply (Refer to the “Power Requirements” section on page 7 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.**

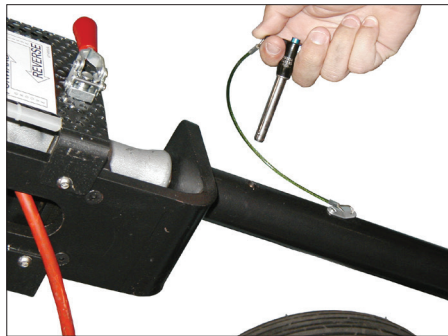


4. Insert the power head assembly into the frame. Align the holes in the power head assembly with the holes in the frame, as shown above.

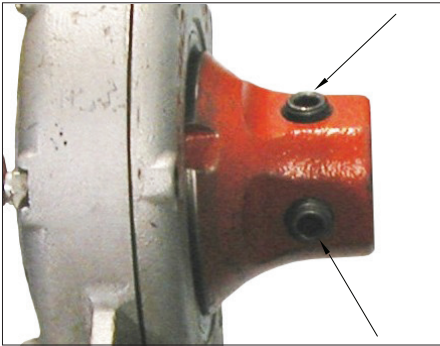
WARNING

- **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 SHALL ALWAYS BE INSTALLED BEFORE ATTEMPTING TO OPERATE THE POWER MULE.**



6. Verify that 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 shall meet the requirements for the power head (refer to the "Power Requirements" section on page 7 and the power head manufacturer's instructions). If an extension cord is used, refer to the "Extension Cord Requirements" section on page 7 for requirements.

WARNING

- **The power mule shall always 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

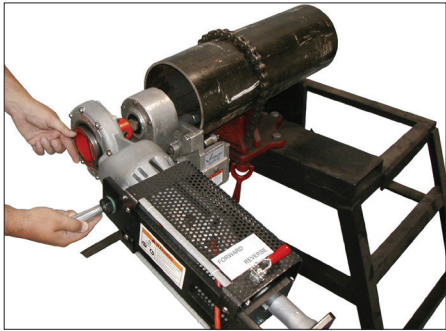
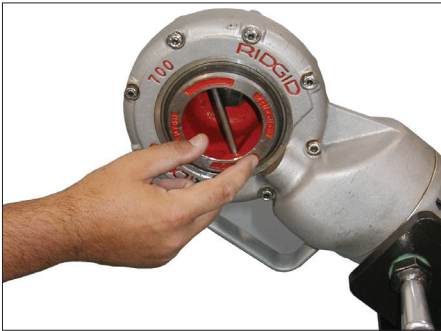


NOTE: Depending on jobsite requirements, the power head can be rotated 90° to facilitate the grooving operation.

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 shall 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 shall be fastened securely to the floor. Pipe shall be positioned and secured in a vise to permit unobstructed tool rotation.

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.

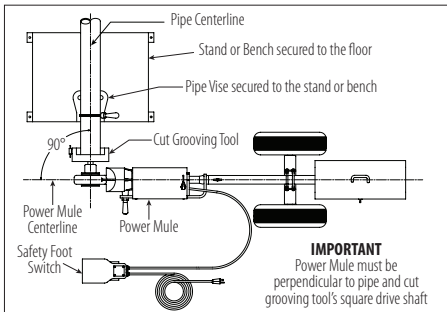
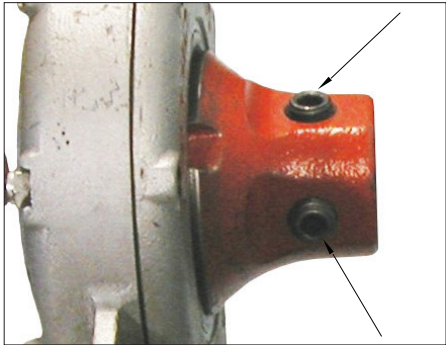


FIGURE 1 – TOP VIEW OF POWER MULE POSITIONING

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.

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



5. 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.

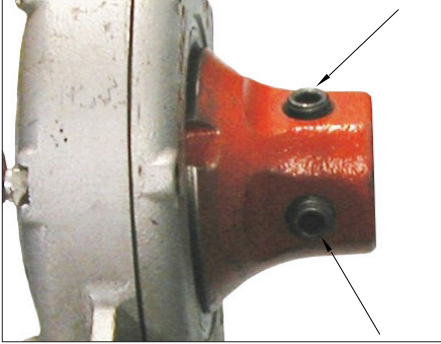
⚠ WARNING

- 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.

6. Grasp the handle of the power head. Momentarily depress the safety foot switch, and check the rotation of the power head. Rotation shall be CLOCKWISE. If the rotation is counterclockwise, place the rotation control switch to the REVERSE position.
7. 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

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

Check the tire pressure on a daily basis. Verify that 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 7.
	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 12
	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 12.
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 12
	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 12 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 12 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 shall be connected to a 20-amp circuit by itself, or all other equipment on the circuit shall 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 7.
	The power mule is not on its own dedicated circuit.	The power head shall be connected to a 20-amp circuit by itself, or all other equipment on the circuit shall 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

UPDATED 08/2020

TM-PMII 4250 REV C RM00PM2000

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