

2AM16

Generic ROPER PUMPS 2AM16 A Series Petroleum Transfer Gear Pump User Manual

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Generic ROPER PUMPS 2AM16 A Series Petroleum Transfer Gear Pump. This pump is designed for transferring petroleum products and similar liquids within its specified operating parameters. Adherence to these instructions will ensure optimal performance and longevity of the equipment.

2. SAFETY INFORMATION

Always prioritize safety when working with industrial equipment. Failure to follow these safety guidelines can result in serious injury or equipment damage.

2.1 General Safety Precautions

- Always wear appropriate personal protective equipment (PPE), including eye protection, gloves, and protective clothing, when handling, installing, or maintaining the pump.
- Ensure the pump is properly grounded before operation to prevent electrical hazards.
- Do not operate the pump with damaged components or if any leaks are detected.
- Refer to local regulations, industry standards, and material safety data sheets (MSDS) for specific requirements related to the fluids being pumped.
- Keep hands, hair, and loose clothing away from moving parts.

2.2 Electrical Safety

- Disconnect all power to the pump and motor before performing any maintenance, service, or inspection.
- Ensure all electrical connections are secure, properly insulated, and conform to local electrical codes.
- Only qualified personnel should perform electrical wiring and troubleshooting.

2.3 Fluid Handling Safety

- Be aware of the properties of the fluid being pumped, including flammability, toxicity, and corrosiveness. Use appropriate containment and spill response procedures.
- Do not exceed the pump's maximum temperature or pressure ratings.
- Ensure proper ventilation when pumping volatile liquids.

3. PRODUCT OVERVIEW

The ROPER PUMPS 2AM16 is an A Series petroleum transfer gear pump designed for reliable fluid transfer applications.

3.1 Key Features

- **Integral Relief Valve:** Provides protection against overpressure.
- **Cast Iron Construction:** Ensures durability and resistance to wear.
- **Steel Helical Gears:** Designed for smooth operation and efficient fluid transfer.
- **Bronze Bushings:** Offer reliable bearing support.
- **Buna Mechanical Seal:** Provides effective sealing for petroleum products.
- **1 1/4 inch NPT Ports:** Standardized connections for easy integration into existing systems.
- **Max Ratings:** 30.8 GPM (Gallons Per Minute) flow, 150 PSI (Pounds per Square Inch) pressure, 212°F (100°C) temperature.

3.2 Components



Figure 1: Generic ROPER PUMPS 2AM16 A Series Petroleum Transfer Gear Pump. This image shows the overall structure of the pump, highlighting its robust cast iron construction and the location of its 1 1/4 inch NPT ports.

4. SETUP AND INSTALLATION

Proper installation is critical for the pump's performance and safety. If unsure, consult a qualified technician.

4.1 Unpacking and Inspection

- Carefully remove the pump from its packaging.
- Inspect the pump for any visible shipping damage. Report any damage to the carrier immediately.
- Verify that all components listed in the packing slip are present.

4.2 Mounting

- Mount the pump on a stable, level, and rigid surface capable of supporting the pump's weight, the motor's weight, and the weight of connected piping and fluid.
- Ensure adequate space around the pump for ventilation, routine maintenance, and inspection.
- Use appropriate fasteners to secure the pump firmly to its mounting base.

4.3 Piping Connections

- Connect 1 1/4 inch NPT piping to the inlet (suction) and outlet (discharge) ports of the pump.
- Use appropriate thread sealants (compatible with the fluid being pumped) to ensure leak-free connections.
- Ensure that piping is properly supported to prevent stress on the pump casing. Misaligned or unsupported piping can lead to premature pump failure.
- Install isolation valves on both suction and discharge lines for maintenance purposes.

4.4 Electrical Connections

- All electrical wiring must be performed by a qualified electrician in accordance with local and national electrical codes.
- Ensure the motor (if supplied separately) is correctly wired for the intended voltage, phase, and rotation direction. Incorrect rotation will prevent the pump from operating effectively.
- Verify proper grounding of both the pump and motor to prevent electrical shock.

5. OPERATING INSTRUCTIONS

Follow these steps for safe and effective pump operation.

5.1 Pre-Operation Checklist

- Verify all piping connections are secure and leak-free.
- Ensure the suction line is fully submerged in the fluid and free of obstructions.
- Confirm that all necessary valves in the suction and discharge lines are in the correct position (open for flow).
- Check the fluid level in the supply tank.
- Confirm electrical connections are correct and power is available.

5.2 Starting the Pump

- Open all necessary valves in the suction and discharge lines.
- Slowly start the pump motor.
- Monitor the pump for unusual noises, vibrations, or immediate leaks. If any issues are observed, shut down the pump immediately and investigate.
- Allow the pump to reach stable operating conditions.

5.3 Stopping the Pump

- Close the discharge valve (if applicable) to prevent backflow.
- Turn off the pump motor.
- Close the suction valve (if applicable) to isolate the pump.

6. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your pump.

6.1 Regular Inspection

- Periodically inspect the pump for any signs of leaks, wear, corrosion, or damage.
- Check all fasteners for tightness. Loose fasteners can lead to vibration and misalignment.
- Monitor pump performance for any changes in flow, pressure, or noise levels.

6.2 Lubrication

- The pump's bronze bushings are typically lubricated by the pumped fluid. Ensure the fluid is clean and compatible with the bushing material.
- Refer to the motor manufacturer's instructions for specific motor lubrication requirements.

6.3 Seal Replacement

- The Buna mechanical seal may require replacement if leaks occur around the shaft.
- Seal replacement should be performed by a qualified service technician to ensure proper installation and prevent damage.

7. TROUBLESHOOTING

This section provides solutions to common operating problems. For issues not listed, contact technical support.

Problem	Possible Cause	Solution
Pump not priming or losing prime	Air leaks in suction line; Suction line not submerged; Clogged suction strainer; Insufficient fluid in supply tank.	Check and seal all suction line connections; Ensure suction line is fully submerged; Clean suction strainer; Replenish fluid in supply tank.
Reduced flow or pressure	Blockages in suction or discharge lines; Excessive wear on pump gears; Incorrect motor speed or rotation; Partially closed valves.	Inspect and clear lines; Inspect and replace worn gears; Verify motor wiring and rotation; Ensure all valves are fully open.
Excessive noise or vibration	Cavitation (insufficient suction head); Misalignment between pump and motor; Worn bearings or gears; Loose mounting bolts.	Increase suction head or reduce flow; Check and correct alignment; Inspect and replace worn components; Tighten mounting bolts.
Fluid leakage from pump	Worn mechanical seal; Loose pipe connections; Cracked casing.	Replace mechanical seal; Tighten pipe connections; Inspect casing for damage and replace if necessary.

8. SPECIFICATIONS

Detailed technical specifications for the ROPER PUMPS 2AM16.

Feature	Detail
Model Number	2AM16
Brand	Generic (ROPER PUMPS)
Construction Material	Cast Iron (Housing), Steel (Helical Gears), Bronze (Bushings)
Port Size	1 1/4 inch NPT
Maximum Flow Rate	30.8 Gallons Per Minute (GPM)
Maximum Pressure	150 PSI
Maximum Temperature	212°F (100°C)
Seal Type	Buna Mechanical Seal
Approximate Item Weight	40 Pounds

9. WARRANTY AND SUPPORT

For warranty information, technical assistance, or to order replacement parts, please contact your supplier or the manufacturer directly. Keep your purchase receipt and the pump's model number (2AM16) readily available for reference when contacting support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

