CAT Pumps 67DX39G1I

CAT Pumps 67DX39G1I Direct Drive Plunger Pump Instruction Manual

Model: 67DX39G1I

Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your CAT Pumps 67DX39G1I Direct Drive Plunger Pump. The 67DX39G1I is a triplex plunger pump designed for high-pressure applications, featuring durable construction with concentric solid ceramic plungers and specially formulated seals for extended life. Please read this manual thoroughly before attempting to install or operate the pump.

Safety Information

WARNING: Failure to follow these safety instructions could result in serious personal injury, death, or property damage.

- Always wear appropriate personal protective equipment (PPE), including eye protection, when operating or servicing the pump.
- Ensure all connections are secure and leak-free before operation. High-pressure leaks can cause severe injury.
- Never direct the high-pressure stream at people, animals, or electrical equipment.
- Disconnect power to the drive unit before performing any maintenance or service.
- Ensure the pump is installed in a well-ventilated area.
- Do not operate the pump with damaged or missing guards.
- Use only genuine CAT Pumps replacement parts.

Setup

Proper setup is crucial for optimal performance and longevity of your pump.

1. Mounting the Pump

The 67DX39G1I is a direct drive pump designed to be mounted directly to a power source (e.g., an electric motor or gasoline engine) with a matching shaft and flange. Ensure the mounting surface is stable, level, and capable of

supporting the combined weight of the pump and its drive unit.

1. Align the pump shaft with the drive unit shaft carefully to prevent misalignment, which can cause premature wear.
2. Secure the pump to the drive unit using appropriate bolts and hardware. Refer to the drive unit's manual for specific mounting instructions.

Figure 1: Side view of the CAT Pumps 67DX39G1I Direct Drive Plunger Pump, showing the brass manifold and the blue pump body connected to the drive flange.

2. Water Inlet Connection

Connect the water supply line to the pump's inlet port. Ensure the water source provides sufficient flow (at least 3.9 GPM) and is clean and free of debris. A filter should be installed on the inlet line to protect the pump.

1. Use a hose with an adequate diameter to prevent cavitation.
2. Ensure all inlet connections are airtight to prevent air from entering the pump.

3. High-Pressure Outlet Connection

Connect the high-pressure hose to the pump's outlet port. Ensure the hose and fittings are rated for the maximum operating pressure of 4000 PSI.

4. Priming the Pump

Before initial startup, the pump must be primed to remove all air from the system.

1. Ensure the water supply is turned on.
2. With the drive unit off, open the high-pressure discharge valve or trigger gun to allow water to flow through the pump and expel air.
3. Once a steady stream of water flows from the discharge, close the valve/trigger and proceed to operation.

Figure 2: Top-down view of the CAT Pumps 67DX39G1I Direct Drive Plunger Pump, highlighting the brass manifold and the pressure regulator.

Operating Instructions

Follow these steps for safe and effective operation of your CAT pump.

1. Starting the Pump

1. Ensure the pump is properly primed and all connections are secure.
2. Turn on the water supply.
3. Start the drive unit (motor/engine) according to its manufacturer's instructions.
4. Slowly open the high-pressure discharge valve or activate the trigger gun to begin flow.

2. Adjusting Pressure

Pressure adjustment is typically performed via an external pressure regulator or unloader valve connected to the pump's discharge. Refer to the instructions for your specific pressure regulating device.

3. Shutting Down the Pump

1. Release any pressure in the system by activating the trigger gun or opening a discharge valve.
2. Turn off the drive unit (motor/engine).
3. Turn off the water supply.
4. If storing for an extended period or in freezing temperatures, drain the pump completely.

Maintenance

Regular maintenance ensures reliable performance and extends the life of your CAT pump.

1. Oil Changes

The crankcase oil should be changed after the first 50 hours of operation, and then every 3 months or 500 hours, whichever comes first. Use CAT Pumps specified crankcase oil.

1. Place a drain pan beneath the pump.
2. Remove the oil drain plug and allow the oil to drain completely.
3. Replace the drain plug and refill the crankcase with new oil to the center of the oil sight glass. Do not overfill.

2. Seal and Valve Inspection/Replacement

Periodically inspect the high-pressure seals and inlet/discharge valves for wear or damage. Replace components as needed using genuine CAT Pumps repair kits.

3. Inlet Filter Maintenance

Regularly clean or replace the inlet filter to prevent debris from entering the pump and causing damage.

4. Winterization

If the pump will be stored in an area where temperatures may drop below freezing, it must be winterized to prevent damage from ice expansion.

1. Drain all water from the pump by disconnecting inlet and outlet lines and running the pump briefly (10-15 seconds) without water.
2. Alternatively, flush the pump with an RV antifreeze solution.

Troubleshooting

This section addresses common issues you might encounter.

Problem	Possible Cause	Solution
No pressure or low pressure	• Air in pump/inlet line • Clogged inlet filter • Worn seals or valves • Insufficient water supply	• Prime the pump • Clean/replace filter • Inspect and replace seals/valves • Ensure adequate water flow
Water leaks from pump	• Loose fittings • Worn seals • Cracked manifold	• Tighten fittings • Replace seals • Contact service for manifold replacement
Pump is noisy/vibrates excessively	• Cavitation (air in pump) • Low oil level • Worn bearings • Misalignment with drive unit	• Check water supply, prime pump • Check and add oil • Contact service for bearing replacement • Re-align pump and drive unit

Specifications

Specification	Value
Brand	CAT Pumps
Model Number	67DX39G1I
Maximum Flow Rate	3.9 Gallons Per Minute (GPM)
Maximum Pressure	4000 PSI
Material	Metal (Brass manifold, Ceramic plungers)
Power Source	Requires external Corded Electric or Gas Engine Drive
Style	Industrial
Color	Blue (Pump Body)

Warranty

CAT Pumps products are manufactured to high standards and are backed by a manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty documentation included with your purchase or visit the official CAT Pumps website. Keep your proof of purchase for warranty claims.

Support

For technical assistance, replacement parts, or service inquiries, please contact CAT Pumps customer support or an authorized service center. When contacting support, please have your pump model number (67DX39G1I) and serial number available.

You can find contact information on the official CAT Pumps website or through your product distributor.