

Delavan 8900C

Delavan 8900C Cast Iron 8-Roller Pump Instruction Manual

Model: 8900C

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Delavan 8900C Cast Iron 8-Roller Pump. Please read this manual thoroughly before using the pump to ensure proper function and longevity.

2. SAFETY INFORMATION

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

- Always wear appropriate personal protective equipment (PPE) when installing, operating, or maintaining the pump.
 - Ensure the power source (e.g., PTO) is disengaged and secured before performing any installation, maintenance, or repair work.
 - Do not exceed the maximum operating pressure (150 PSI) or speed (1000 RPM) specified for this pump.
 - Verify all connections are secure and leak-free before operation.
 - Do not operate the pump with flammable liquids or in explosive atmospheres unless specifically designed for such use.
 - Keep hands, hair, and clothing clear of moving parts during operation.
 - This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm (Proposition 65 warning).
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3. PRODUCT OVERVIEW

The Delavan 8900C is a robust 8-roller cast iron pump designed for various agricultural and industrial

spraying applications. Its design emphasizes durability and ease of maintenance.



Figure 3.1: Side view of the Delavan 8900C pump, showing the main body and threaded outlet port.



Figure 3.2: Front view of the Delavan 8900C pump, highlighting the RollerPRO® 8-Roller Pump Delavan 8900C branding.

Key Features:

- **8-Roller Design:** Efficient fluid transfer.
- **Cast Iron Housing:** Durable construction for demanding environments.
- **Field Serviceable:** Rollers can be replaced quickly, typically in about 3 minutes.
- **High-Quality Components:** Features "Ultra" rollers, heavy-duty sealed bearings, Viton seal rings, and stainless steel shafts and rotors for extended life.

4. SETUP AND INSTALLATION

Proper installation is crucial for the pump's performance and longevity. Refer to the following steps for setup.

4.1 Mounting the Pump

The pump is designed for base mounting using two 3/8 -18 UNC-2B holes. Ensure the mounting surface is stable and level to prevent vibration and misalignment.

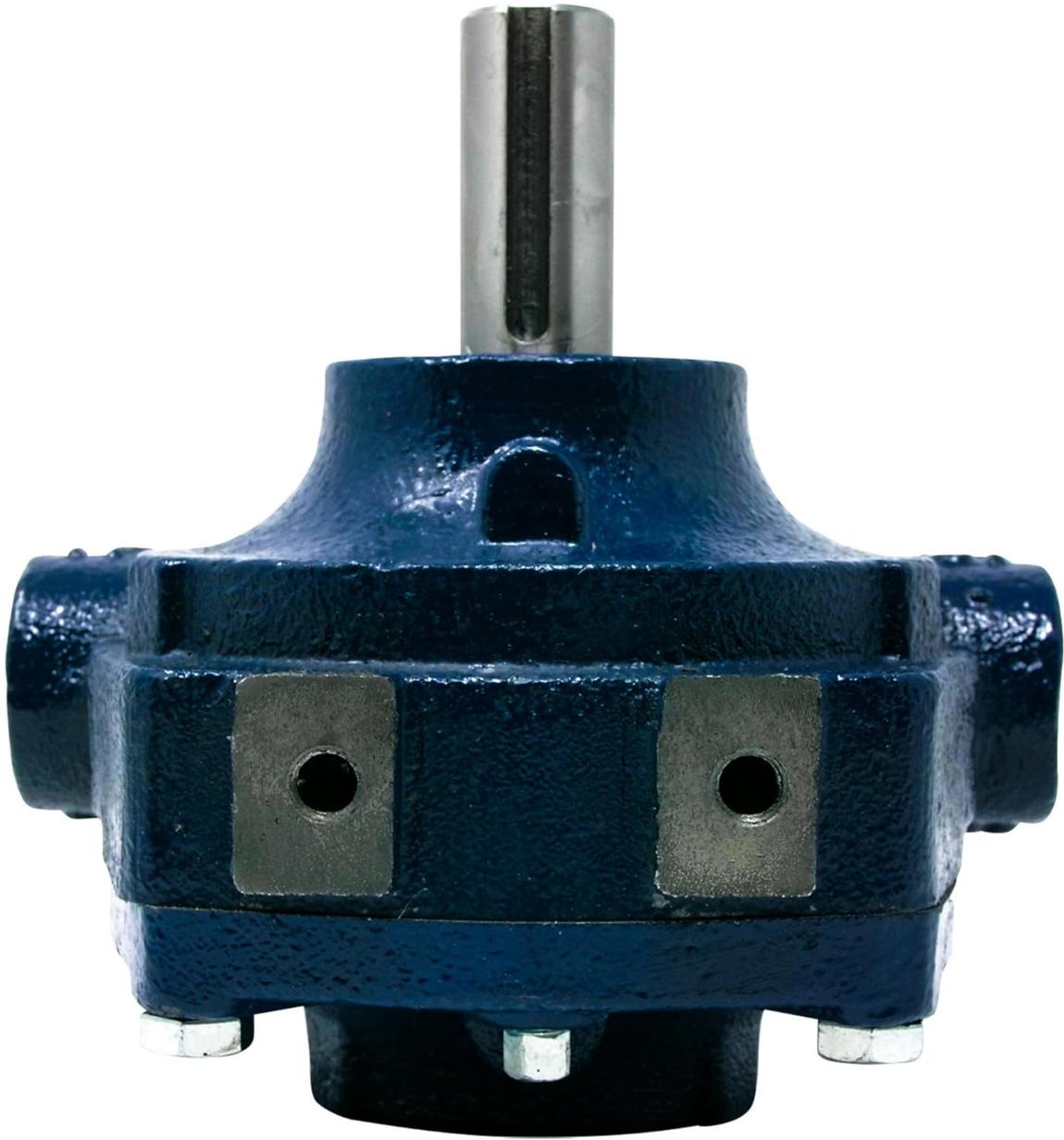


Figure 4.1: Bottom view of the pump, illustrating the base mounting holes for secure installation.



Figure 4.2: Top view of the pump, showing the 15/16" solid shaft for power take-off connection.

4.2 Connecting to Power Take-Off (PTO)

Connect the pump to your equipment's PTO using a torque bar and chain. The pump features a 15/16" solid shaft. The standard rotation is Counter-Clockwise (CCW). Ensure correct alignment and secure connection to prevent damage.

4.3 Plumbing Connections

The pump has 1" NPT (female) port sizes for both inlet and outlet. Use appropriate plumbing fittings and sealants to ensure leak-free connections. Always use a suction hose that is adequately sized and reinforced to prevent collapse under vacuum.



Figure 4.3: Angled view of the pump, clearly showing the 1" NPT threaded ports for fluid connections.

5. OPERATING INSTRUCTIONS

Follow these guidelines for safe and effective operation of your Delavan 8900C pump.

- **Priming:** Ensure the pump is adequately primed before starting. Operating a roller pump dry can cause rapid wear and damage.
 - **Operating Speed:** Do not exceed the maximum operating speed of 1,000 RPM. Monitor your PTO speed to stay within this limit.
 - **Pressure Control:** The maximum operating pressure is 150 PSI. Use a pressure regulator or bypass valve to control system pressure and prevent over-pressurization.
 - **Temperature:** The maximum recommended fluid temperature is 140°F (60°C). Operating above this temperature can reduce pump life.
 - **Fluid Compatibility:** Ensure the fluid being pumped is compatible with cast iron, Viton seals, and stainless steel components.
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6. MAINTENANCE

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

6.1 Roller Replacement

The Delavan 8900C is designed for quick roller replacement, typically taking about 3 minutes. Refer to the manufacturer's specific instructions for detailed steps on how to access and replace the "Ultra" rollers. Timely replacement of worn rollers is essential for maintaining pump efficiency and pressure.

6.2 Bearing Lubrication

The pump features permanently-lubricated, heavy-duty sealed bearings, which generally do not require additional lubrication under normal operating conditions.

6.3 Winterization and Storage

Before storing the pump for extended periods, especially in freezing temperatures, it is critical to drain all water and flush the pump with a suitable anti-freeze solution or light oil. The pump may feature a drain plug (often 1/4") for this purpose. After draining, circulate a small amount of motor oil through the pump to coat internal components and prevent corrosion.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your pump.

Problem	Possible Cause	Solution
Pump does not build pressure or low pressure.	<ul style="list-style-type: none">Worn rollers.Air leak in suction line.Clogged inlet screen or hose.Incorrect operating speed.Pump not primed.	<ul style="list-style-type: none">Inspect and replace rollers if worn.Check all suction connections for tightness.Clean inlet screen and ensure hose is clear.Verify PTO speed is within specifications (1000 RPM max).Ensure pump is properly primed before starting.
Pump leaks.	<ul style="list-style-type: none">Loose fittings.Damaged seals (Viton seal rings, shaft seals).Cracked housing (unlikely with cast iron, but possible from impact).	<ul style="list-style-type: none">Tighten all plumbing connections.Inspect and replace damaged seals.Inspect pump housing for visible damage.
Pump operates in reverse.	<ul style="list-style-type: none">PTO rotation is opposite to pump's standard CCW rotation.	<ul style="list-style-type: none">If possible, reverse PTO rotation. Otherwise, switch inlet and outlet connections on the pump to accommodate reverse flow.

8. SPECIFICATIONS

Model	8900C
Type	8-Roller design
Max. Flow	24.0 GPM
Max Operating Speed	1,000 RPM
Max Pressure	150 PSI
Max Recommended Temperature	140°F (60°C)
Port Size	1" NPT (female)
Base Mounted	3/8 -18 UNC-2B (2 holes)
PTO Connection	Use torque bar and chain
Shaft Size	15/16" solid shaft
Rotation	CCW (standard)
Housing Material	Cast Iron
Rollers	3/4" Ultra rollers (standard)
Shaft Seals	Viton cartridge type lip seals
Seal Ring	Viton
Shaft & Rotor	Extra-fine finish 404 SST
Bearings	Permanently-lubricated, heavy-duty sealed bearings
Product Dimensions	6"L x 6"W x 6"H
Item Weight	13.89 Pounds
UPC	830344004002

9. WARRANTY INFORMATION

Specific warranty details for the Delavan 8900C pump are not provided in this manual. For information regarding warranty coverage, terms, and conditions, please refer to the documentation included with your purchase or contact Delavan directly.

10. CUSTOMER SUPPORT

If you require technical assistance, replacement parts, or have questions not covered in this manual, please contact Delavan customer support. Contact information can typically be found on the manufacturer's official website or on your product packaging.

