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Ritchie 77940

Ritchie Engineering Co., Inc. / YELLOW JACKET 77940 Max-Flow Combination Oil Pump

INSTRUCTION MANUAL

Product Overview

The YELLOW JACKET 77940 Max-Flow Combination Oil Pump is designed for efficient and clean oil management in various systems. It facilitates both the removal of oil for recovery and conversion, and the addition of new oil to existing systems. This pump is engineered for durability and ease of use, featuring a comfort-grip handle and a universal stopper for compatibility with common oil container sizes.



Image of the YELLOW JACKET 77940 Max-Flow Combination Oil Pump, showing its long black body, comfort-grip handle, and connection point. This pump is designed for efficient oil transfer.

Setup

1. **Unpack Components:** Carefully remove the oil pump, suction transfer hose, and any included fittings from the packaging.
2. **Attach Suction Hose:** Connect the suction transfer hose to the bottom of the pump unit. Ensure a secure and leak-free connection.
3. **Prepare Oil Container:** The universal stopper on the pump automatically adjusts to standard openings in 1, 2-1/2, and 5-gallon oil containers. Insert the pump into the desired oil container, ensuring the stopper creates a seal.
4. **Connect to System (for oil removal/addition):** Depending on the application, connect the appropriate fitting from the suction hose to the system from which oil will be removed or to which oil will be added.

Operating Instructions

The Max-Flow Combination Oil Pump is designed for both oil removal and addition. It pumps approximately 2.6 oz. (78 ml) per stroke and can pump against pressures up to 200 psi.

- **Oil Removal:**

Ensure the suction hose is connected to the equipment from which oil is to be removed. Position the pump in a suitable waste oil container. Operate the pump by moving the comfort-grip handle up and down in a steady motion. Continue pumping until the desired amount of oil is transferred or the equipment is sufficiently drained.

- **Oil Addition:**

Ensure the pump is securely placed in the new oil container. Connect the suction hose to the system where oil needs to be added. Operate the pump by moving the comfort-grip handle up and down. Monitor the oil level in the system to avoid overfilling.

- **Compatible Oils:**

This pump is suitable for use with alkyl-benzene, ester-based, polyol ester, mineral, and synthetic oils.

Maintenance

Proper maintenance ensures the longevity and optimal performance of your oil pump.

- **Cleaning:** After each use, especially when switching between different types of oils, clean the pump and hose thoroughly to prevent cross-contamination. Use an appropriate cleaning agent compatible with the oils handled.
- **Inspection:** Regularly inspect the suction transfer hose and all fittings for signs of wear, cracks, or damage. Replace any worn or damaged components immediately to prevent leaks and ensure efficient operation.
- **Storage:** Store the pump in a clean, dry place, away from extreme temperatures and direct sunlight. Ensure the hose is not kinked during storage.

Troubleshooting

Problem	Possible Cause	Solution
Pump not drawing oil	<ul style="list-style-type: none">• Suction hose not fully submerged in oil.• Air leak in hose or fittings.• Pump mechanism clogged or damaged.	<ul style="list-style-type: none">• Ensure hose end is below oil level.• Check all connections for tightness; replace worn seals or hose.• Disassemble and clean pump, inspect for damage.
Low pumping efficiency/pressure	<ul style="list-style-type: none">• Partial clog in hose or pump.• Worn internal pump seals.• Operating against excessive back pressure.	<ul style="list-style-type: none">• Clean hose and pump thoroughly.• Contact manufacturer for replacement parts or service.• Ensure system pressure is within pump's operating limits (max 200 psi).
Oil leakage	<ul style="list-style-type: none">• Loose fittings.• Damaged hose or seals.	<ul style="list-style-type: none">• Tighten all connections.• Inspect and replace damaged hose or seals.

Specifications

- **Model Number:** 77940
- **Manufacturer:** Yellow Jacket (Ritchie Engineering Co., Inc.)
- **Pumping Capacity:** 2.6 oz. (78 ml) per stroke
- **Maximum Pressure:** Pumps against 200 psi pressure
- **Compatible Oil Containers:** Universal stopper adjusts to 1, 2-1/2, and 5-gallon openings
- **Compatible Oils:** Alkyl-benzene, ester-based, polyol ester, mineral, and synthetic oils
- **Product Dimensions:** Approximately 22 x 6 x 4 inches
- **Weight:** Approximately 2.56 ounces
- **Origin:** Made in the USA

Warranty and Support

Specific warranty information for the YELLOW JACKET 77940 Max-Flow Combination Oil Pump is not provided in this manual. For details regarding warranty coverage, technical support, or replacement parts, please contact Ritchie Engineering Co., Inc. / Yellow Jacket directly through their official website or customer service channels. You may find contact information on the product packaging or by visiting the [Yellow Jacket website](#).

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This manual is for informational purposes only. Specifications are subject to change without notice.