Mastercool 62010

Mastercool 62010 30 lb Refrigerant Recovery Cylinder User Manual

1. Introduction

This manual provides essential information for the safe and effective use of your Mastercool 62010 30 lb Refrigerant Recovery Cylinder. This cylinder is designed for the storage and transport of recovered refrigerant gases, ensuring compliance with safety standards and environmental regulations. Please read this manual thoroughly before operating the cylinder.

Figure 1: Mastercool 62010 30 lb Refrigerant Recovery Cylinder

2. Product Features

- **Durable Construction:** Made from robust HP295 steel for long-lasting performance.
- **Corrosion Resistance:** Features a powder-coated finish in yellow/gray for enhanced durability and protection against corrosion.
- **Y-Valve Design:** Equipped with a Y-valve for separate control of liquid and vapor recovery, improving efficiency and safety.
- **Secure Connections:** Includes 1/4" FL-M (7/16-20) fittings for reliable and leak-free connections.
- **Easy Handling:** Designed with a collar for convenient handling and transport.
- **Wide Refrigerant Compatibility:** Suitable for all types of refrigerants, including CFCs, HFCs, HCFCs, and blends such as R12, R22, R134a, and R410A.

- **Pre-Charged:** Cylinder is pre-charged to ensure a clean, dry interior upon delivery.
- **Safety Certifications:** Conforms to DOT-4BA400 specifications, ARI guidelines, and TC Canadian approved for safe transport. Valve & float switch are UL listed.
- **Quality Assurance:** All cylinders are pressure and leak tested directly at the factory headquarters.

Figure 2: Powder-Coated Finish, Roll Core Base, and Collar Style Handle

Figure 3: Y-Valve Design with 1/4" FL-M Fittings

Figure 4: Refrigerant Compatibility

3. Specifications

Specification	Value
Size (W x H)	9.125" x 17.52"
Tare Weight	17.99 lb.
Standard Specification	DOT-4BA400
Nominal Water Capacity	26.2 lb. / 11.9 L
Service Pressure	400 PSI / 2.7 MPa
Tank Test Pressure	800 PSI / 5.5 MPa
Relief Valve Pressure	600 PSI / 4.1 MPa

Specification	Value
Air Tightness Pressure	400 PSI / 2.7 MPa
Body Material	HP295 Steel

Figure 5: Cylinder Dimensions and Capacity

4. Safety Information

Always prioritize safety when handling refrigerant recovery cylinders. Failure to follow safety guidelines can result in serious injury or property damage.

- **DOT-4BA400 Certified:** This cylinder meets Department of Transportation (DOT) standards for safe transport of pressurized gases.
- **TC Canadian Approved:** Complies with Transport Canada standards for safety.
- **Pressure Ratings:** Do not exceed the specified service pressure of 400 PSI. The tank test pressure is 800 PSI, and the relief valve activates at 600 PSI.

- **Flammable Refrigerants:** Exercise extreme caution when handling flammable refrigerants. Ensure adequate ventilation and eliminate ignition sources.
- **Personal Protective Equipment (PPE):** Always wear appropriate PPE, including safety glasses and gloves, when working with refrigerants and pressurized cylinders.
- **NOT FOR USE WITH NITROGEN:** This cylinder is specifically designed for refrigerants and is NOT suitable for use with nitrogen.
- **Overfilling:** Avoid overfilling the cylinder. The 3/4" NPT opening accepts an 80% fill float switch shut-off device to prevent overfilling.
- **Ventilation:** Perform all recovery operations in a well-ventilated area.
- **Handling:** Use the integrated collar for safe and secure handling. Avoid dropping or subjecting the cylinder to impact.

Figure 6: Safety Certifications

5. Setup

Proper setup is crucial for efficient and safe refrigerant recovery. This section provides general guidance;

always refer to your recovery machine's manual for specific connection procedures.

1. **Inspect Cylinder:** Before each use, visually inspect the cylinder for any signs of damage, corrosion, or leaks. Ensure all valves are closed.
2. **Position Cylinder:** Place the recovery cylinder on a stable, level surface. If using a refrigerant scale, ensure the cylinder is centered and secure.
3. **Connect Hoses:** Connect the appropriate hoses from your refrigerant recovery machine to the Y-valve fittings on the cylinder. The Y-valve allows for separate liquid and vapor connections.
4. **Purge Air:** Utilize the 1/4" opening for the air purge valve to remove non-condensable gases from the cylinder before recovery, if necessary.
5. **Open Valves:** Slowly open the liquid and/or vapor valves on the cylinder as required by your recovery procedure.

Video: Mastercool Recovery Cylinders Overview

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Video 1: An overview of Mastercool Recovery Cylinders, demonstrating their features and general use in a professional setting.

Video: Worthington Industries Recovery Tank Usage

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Video 2: Demonstrates the general process of using a recovery tank for refrigerant recovery, including connections and operation.

6. Operating Instructions (Refrigerant Recovery)

The following steps outline a typical refrigerant recovery process using the Mastercool 62010 cylinder. Always follow the specific instructions provided with your refrigerant recovery machine.

1. **Connect Recovery Machine:** Ensure your recovery machine is properly connected to the system being serviced and to the Mastercool 62010 cylinder as described in the Setup section.
2. **Verify Valves:** Confirm that the appropriate liquid and/or vapor valves on the cylinder are open for the recovery process.
3. **Start Recovery:** Initiate the recovery process on your recovery machine. Monitor the pressure gauges on the recovery machine and the cylinder (if equipped with a scale) to track the amount of refrigerant being recovered.
4. **Monitor Fill Level:** If using an 80% fill float switch, the recovery machine should automatically shut off when the cylinder reaches 80% capacity. If not, monitor the weight using a refrigerant scale to prevent overfilling.
5. **Complete Recovery:** Once recovery is complete and the system pressure is stable, close the cylinder valves and then shut off the recovery machine.
6. **Disconnect Hoses:** Carefully disconnect the hoses from the cylinder and the system, ensuring minimal refrigerant release.

Video: Complete Recovery System in Action

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Video 3: Shows a complete refrigerant recovery system, including a cylinder, being used for automotive AC service.

7. Maintenance

- **Visual Inspection:** Regularly inspect the cylinder for any signs of physical damage, rust, or leaks.
- **Valve Inspection:** Check the Y-valve and other fittings for proper operation and ensure they seal tightly.
- **Hydrostatic Testing:** As per DOT regulations, refrigerant recovery cylinders must be re-tested every five years from the date of manufacture or the last re-test. Refer to local regulations for specific requirements.
- **Cleaning:** Keep the exterior of the cylinder clean and free from debris.

8. Storage

- **Secure Storage:** Store cylinders in an upright position in a secure, well-ventilated area away from direct sunlight, heat sources, and corrosive materials.
- **Temperature:** Avoid storing cylinders in areas where temperatures can exceed 125°F (52°C).
- **Valve Protection:** Ensure valve caps are securely in place during storage and transport to protect the valves from damage.
- **Empty Cylinders:** Even empty cylinders may contain residual pressure and should be handled with care.

9. Troubleshooting

- **Slow Recovery:** Check for kinks in hoses, ensure all valves are fully open, and verify the recovery machine is operating correctly. Ensure the correct liquid/vapor port is being used.
- **No Recovery:** Confirm power to the recovery machine, check all connections for leaks, and ensure the system being recovered from has refrigerant.
- **Cylinder Overfilling:** If not using an automatic shut-off, ensure a refrigerant scale is used to monitor weight and prevent overfilling.
- **Leaks:** If a leak is suspected, immediately cease operation, ventilate the area, and use a leak detector to pinpoint the source. Tighten connections or replace faulty components.

10. Warranty and Support

For warranty information, technical support, or replacement parts, please contact Mastercool customer service or visit the official Mastercool website. Keep your purchase receipt for warranty claims.

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