Yellow Jacket 42007

Yellow Jacket 42007 Series 41 Manifold Gauge Set

Instruction Manual

This manual provides detailed instructions for the proper setup, operation, and maintenance of your Yellow Jacket 42007 Series 41 Manifold Gauge Set. Designed for use with R-12, R-22, and R-134A refrigerants, this tool is essential for accurate HVAC system servicing.

Product Overview

The Yellow Jacket 42007 Series 41 Manifold Gauge Set is engineered for precision and durability in HVAC and automotive air conditioning applications. It features a robust forged brass body, large 3-1/8" color-coded gauges with 1% accuracy, and high-pressure Plus II hoses. This set is designed to provide exact readings for critical charge systems and withstand demanding professional use.

Figure 1: Yellow Jacket 42007 Series 41 Manifold Gauge Set. This image displays the central brass manifold, the blue low-pressure gauge, the red high-pressure gauge, and the color-coded blue, yellow, and red hoses with their respective fittings.

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1. Setup and Component Identification

Before operating the manifold gauge set, familiarize yourself with its components and ensure proper assembly.

1.1 Components:

- **Manifold Body:** Forged brass body with full porting for maximum capacity and flow.
- **Gauges:** Two 3-1/8" color-coded gauges (blue for low pressure, red for high pressure) with 1% accuracy (Class 1) and polycarbonate crystals. Compatible with R-12, R-22, and R-134A refrigerants.
- **Hoses:** Three 60" Plus II hoses (blue, yellow, red) with standard 1/4" flare fittings. UL recognized for 4000 psi (275 bar) burst pressure and 800 psi (55 bar) working pressure.
- **Valves:** Hand wheels for controlling refrigerant flow through the manifold.

1.2 Initial Assembly:

1. **Inspect Components:** Carefully unpackage all components and inspect for any signs of damage. Ensure all fittings are

clean and free of debris.

2. **Connect Gauges:** The blue gauge connects to the low-pressure port on the manifold, and the red gauge connects to the high-pressure port. Hand-tighten securely.
3. **Connect Hoses:**
    - Connect the **blue hose** to the low-side service port of the manifold (typically on the left).
    - Connect the **red hose** to the high-side service port of the manifold (typically on the right).
    - Connect the **yellow hose** to the central service port of the manifold. This hose is typically used for vacuum pumps, refrigerant tanks, or recovery units.

    Ensure all hose connections are hand-tightened, then use a wrench to snug them an additional quarter turn to prevent leaks. Do not overtighten.

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2. Operating Instructions

The Yellow Jacket 42007 Manifold Gauge Set is used for various HVAC/R tasks, including checking system pressures, evacuating systems, and charging refrigerant.

2.1 Pressure Reading:

1. Ensure both manifold valves are closed (turned clockwise until snug).
2. Connect the blue hose to the low-side service port of the system and the red hose to the high-side service port.
3. The gauges will display the static pressures of the system. For dynamic pressure readings, start the system and allow it to stabilize.

2.2 System Evacuation:

1. Connect the blue and red hoses to the system's low and high-side service ports, respectively.
2. Connect the yellow hose to a vacuum pump.
3. Open both the low-side and high-side manifold valves (turn counter-clockwise).
4. Start the vacuum pump. Monitor the low-pressure gauge; it should drop into a deep vacuum.
5. Once the desired vacuum level is reached, close both manifold valves and shut off the vacuum pump. Observe the low-pressure gauge for any rise, indicating a leak.

2.3 Refrigerant Charging:

1. Ensure the system is evacuated or has residual pressure.
2. Connect the blue and red hoses to the system's low and high-side service ports.
3. Connect the yellow hose to the refrigerant tank.
4. Purge the yellow hose by slightly opening the refrigerant tank valve and then briefly loosening the yellow hose connection at the manifold to release any air, then retighten.
5. Open the refrigerant tank valve.
6. To charge, slowly open the appropriate manifold valve (low-side for vapor charging, high-side for liquid charging with caution, or both for recovery/large systems). Monitor the gauges and the system's performance.
7. Once charging is complete, close the manifold valves and the refrigerant tank valve. Disconnect hoses carefully.

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3. Maintenance

Proper maintenance ensures the longevity and accuracy of your Yellow Jacket manifold gauge set.

- **Cleaning:** After each use, wipe down the manifold body, gauges, and hoses with a clean, damp cloth. Avoid using harsh chemicals that could damage the gauges or hose material.
- **Hose Inspection:** Regularly inspect hoses for cracks, cuts, or signs of wear. Replace any damaged hoses immediately to prevent refrigerant leaks and ensure safety.
- **Gasket and O-ring Check:** Periodically check the gaskets and O-rings in the hose fittings for wear or damage. Replace them if they appear flattened, cracked, or show signs of leakage.
- **Gauge Calibration:** While the gauges are designed for long-term accuracy, if you suspect a reading is incorrect, consult a professional for calibration or consider replacing the gauge.
- **Storage:** Store the manifold set in a clean, dry environment, preferably in a protective case, to prevent damage from impacts or exposure to contaminants. Keep valves closed during storage.

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4. Troubleshooting

This section addresses common issues you might encounter with your manifold gauge set.

Problem	Possible Cause	Solution
Inaccurate Gauge Readings	Damaged gauge, incorrect refrigerant scale, extreme temperature changes.	Verify correct refrigerant scale. Allow gauges to acclimate to ambient temperature. If persistent, replace the gauge.
Refrigerant Leakage	Loose fittings, worn O-rings/gaskets, damaged hoses, faulty manifold valve.	Tighten all connections. Replace worn O-rings/gaskets. Inspect and replace damaged hoses. If valve is faulty, service or replace manifold.
Difficulty Turning Valves	Debris in valve mechanism, overtightening, lack of lubrication.	Do not force. Disassemble and clean if comfortable, or seek professional service. Apply appropriate lubricant if necessary.
Vacuum Not Holding	Leak in system, manifold, or hoses; faulty vacuum pump.	Perform leak detection on system, manifold, and hoses. Ensure vacuum pump is functioning correctly.

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5. Specifications

Feature	Detail
Model Number	42007
Brand	Yellow Jacket
Gauge Size	3-1/8 inches
Gauge Accuracy	1% (Class 1)
Compatible Refrigerants	R-12, R-22, R-134A
Manifold Body Material	Forged Brass

Feature	Detail
Hose Length	60 inches
Hose Fittings	Standard 1/4" Flare
Hose Burst Pressure	4000 psi (275 bar)
Hose Working Pressure	800 psi (55 bar)
Product Dimensions (L x W x H)	2 x 2 x 2 inches
Item Weight	4.03 Pounds
Manufacturer	Fotronic Corporation
Country of Origin	China

6. Warranty and Support

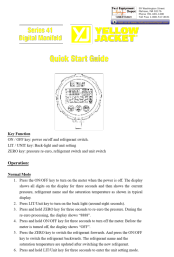
For specific warranty information regarding your Yellow Jacket 42007 Series 41 Manifold Gauge Set, please refer to the documentation included with your purchase or contact the manufacturer directly. Yellow Jacket products are known for their quality and reliability.

For technical support, service, or parts inquiries, please contact Fotronic Corporation, the manufacturer of Yellow Jacket products. Contact details can typically be found on their official website or on the product packaging.

Disclaimer: This manual is for informational purposes only. Always follow local regulations and safety procedures when working with refrigerants.

Related Documents - 42007

	Yellow Jacket RecoverXLT and RecoverX Refrigerant Recovery Machines Comprehensive guide to Yellow Jacket's RecoverXLT and RecoverX refrigerant recovery machines, detailing features, specifications, operation, and comparison charts for HVAC/R professionals.
	Yellow Jacket HVAC/R Charging Systems & Diagnostic Tools Catalog This catalog showcases Yellow Jacket's comprehensive range of HVAC/R charging systems and diagnostic tools, including the YJACK™ Series wireless sensors, P51 TITAN® Digital Manifolds, ManTooth® Wireless Gauges, and various BRUTE II® and Series 41 manifolds. The products are designed for accurate measurements, efficient system analysis, and enhanced user experience in HVAC/R applications.

	[Yellow Jacket TitanMax Digital Manifold - Features and Specifications] Explore the Yellow Jacket TitanMax Digital Manifold, a 4-valve system offering fast and accurate measurements for refrigeration and A/C systems. Features include a high-resolution touchscreen, wireless connectivity via Bluetooth to YJACK VIEW® and measureQuick® apps, on-board data logging, and compatibility with A2L refrigerants.
	[YELLOW JACKET TITANMAX™ User Manual] Comprehensive user manual for the YELLOW JACKET TITANMAX™ digital manifold, detailing its features, operation, settings, maintenance, and troubleshooting for HVAC professionals. Includes model numbers P/N 40880, 40881, 40885, 40887.
	[Yellow Jacket TITANMAX™ Digital Manifold Quick Start Guide] Quick start guide for the Yellow Jacket TITANMAX™ Digital Manifold, covering setup, connections, main features, and settings for HVAC technicians. Learn how to power on, connect probes, navigate menus, and configure settings for pressure, temperature, vacuum, and psychrometric measurements.
	[Yellow Jacket Series 41 Digital Manifold Quick Start Guide] A quick start guide for the Yellow Jacket Series 41 Digital Manifold, detailing its key functions, operation modes, unit settings, battery capacity, and supported refrigerants.