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› Cavagna 52-A-490-0003B Two-Stage LP Gas Regulator User Manual

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Cavagna 52-A-490-0003B Two-Stage LP Gas Regulator User Manual

Model: 52-A-490-0003B | Brand: Cavagna

1. INTRODUCTION

This manual provides instructions for the safe installation, operation, and maintenance of the Cavagna 52-A-490-0003B Two-Stage LP Gas Regulator. This regulator is designed to reduce cylinder outlet pressure to a stable working pressure for LP gas appliances, primarily in Recreational Vehicle (RV) applications. Please read this manual thoroughly before installation or use to ensure proper function and safety.

2. SAFETY INFORMATION

WARNING: LP gas is flammable and explosive. Improper installation, use, or maintenance can result in fire, explosion, property damage, serious injury, or death. All installations must comply with local codes and regulations, and be performed by a qualified technician.

- Always perform a leak test after installation and before each use.
- Ensure adequate ventilation when using LP gas appliances.
- Do not use open flames to check for leaks. Use an approved leak detection solution.
- This regulator is equipped with an **Excess Flow Device** which limits gas flow in the event of a hose rupture or accidental disconnection, enhancing safety.
- An **Overpressure Protection Device** is integrated to limit environmental propane release in case of regulator malfunction to a value less than 2 psi.
- Do not modify the regulator or its components.
- Replace the regulator if it shows signs of damage, corrosion, or malfunction.

3. PRODUCT FEATURES

- Two-Stage Regulation: Reduces cylinder pressure to 10 psi in the first stage, then to a stable 11 inch water column in the second stage.

- Excess Flow POL Inlet: Provides protection against uncontrolled gas release.
- 3/8 inch Female Pipe Thread Outlet: Standard connection for LP gas systems.
- Horizontal Vent: Designed for specific installation orientations.
- Capacity: 160,000 BTU/hour.
- Suitable for RVs with single vertical or horizontal LP gas tanks.

4. SETUP AND INSTALLATION

The Cavagna 52-A-490-0003B regulator is designed for use on Recreational Vehicles (RVs) with single vertical or horizontal LP gas tanks. Installation should only be performed by a qualified service technician in accordance with all applicable codes and standards.

4.1 Unboxing and Inspection

Carefully remove the regulator from its packaging. Inspect the unit for any signs of shipping damage, such as dents, cracks, or loose components. Do not install a damaged regulator.



Figure 1: Cavagna Two-Stage Regulator in retail packaging. This image shows the regulator enclosed in clear plastic packaging, highlighting its compact design and the POL inlet connection.

4.2 Connection Steps

1. **Prepare the Tank Connection:** Ensure the LP gas tank valve is closed. Clean the POL inlet connection on the tank and the regulator to remove any debris.
2. **Connect Regulator to Tank:** Thread the Excess Flow POL inlet of the regulator onto the LP gas tank valve. Tighten securely with a wrench. Do not overtighten.
3. **Connect to Appliance System:** Connect the 3/8 inch Female Pipe Thread outlet of the regulator to the RV's LP gas distribution system. Use appropriate pipe sealant or thread tape suitable for LP gas on the male pipe threads. Ensure all connections are tight.

4. **Mounting:** Securely mount the regulator in a position that allows the horizontal vent to remain unobstructed and oriented correctly as per manufacturer guidelines.



Figure 2: Cavagna Two-Stage Regulator. This image displays the regulator's main body, showing the POL inlet connection on the left and the two-stage design.

4.3 Leak Testing

IMPORTANT: Never use an open flame to check for gas leaks.

1. After all connections are made, slowly open the LP gas tank valve.
2. Apply an approved non-corrosive leak detection solution (soap and water solution) to all connections.
3. Look for bubbles. The presence of bubbles indicates a leak.
4. If a leak is detected, close the tank valve immediately. Retighten the connection and re-test. If the leak persists, replace the faulty component or seek professional assistance.

5. OPERATION

Once properly installed and leak-tested, the Cavagna two-stage regulator automatically maintains a stable operating pressure for your LP gas appliances.

- Ensure the LP gas tank valve is fully open during operation.
- The first stage of the regulator reduces the high tank pressure to an intermediate pressure of approximately 10 psi.
- The second stage further reduces this intermediate pressure to a stable working pressure of 11 inches water column (approximately 0.4 psi), which is suitable for most RV LP gas appliances.
- Monitor your LP gas supply and refill tanks before they are completely empty to avoid interruption of service.

6. MAINTENANCE

Regular inspection and maintenance are crucial for the safe and efficient operation of your LP gas system.

- **Visual Inspection:** Periodically inspect the regulator, hoses, and connections for signs of damage, corrosion, cracks, or wear. Replace any damaged components immediately.
- **Leak Checks:** Perform a leak test on all connections at least annually, or whenever the system has

been disconnected or disturbed.

- **Vent Clearance:** Ensure the regulator's vent remains clear of obstructions (dirt, debris, insect nests) to allow proper operation.
- **Replacement:** LP gas regulators have a finite lifespan. Consult local regulations and manufacturer recommendations for replacement intervals, typically every 5-10 years, or sooner if damage is observed.

7. TROUBLESHOOTING

If you experience issues with your LP gas system, consider the following common troubleshooting steps:

- **No Gas Flow or Low Pressure:**
 - Check if the LP gas tank valve is fully open.
 - Verify that the LP gas tank is not empty.
 - Check for kinks or obstructions in the gas lines.
 - The Excess Flow Device may have activated. Close the tank valve, disconnect the regulator, wait a few minutes, then reconnect and slowly open the tank valve. If the problem persists, the device may be faulty or there's a significant leak downstream.
 - Perform a leak test on all connections.
- **Gas Odor:**
 - Immediately shut off the LP gas supply at the tank.
 - Evacuate the area and ventilate thoroughly.
 - Do not operate any electrical switches or ignition sources.
 - Perform a thorough leak test. If a leak is found, do not use the system until it is repaired by a qualified technician.

If troubleshooting steps do not resolve the issue, or if you suspect a regulator malfunction, contact a qualified LP gas service technician for assistance.

8. SPECIFICATIONS

Model Number	52-A-490-0003B
Brand	Cavagna
Inlet Connection	Excess Flow POL
Outlet Connection	3/8 inch Female Pipe Thread (FPT)
Vent Orientation	Horizontal
First Stage Outlet Pressure	10 psi
Second Stage Outlet Pressure	11 inch Water Column (WC)
Capacity	160,000 BTU/hour
Dimensions (Approx.)	6.25 x 6.25 x 5.5 inches
Weight (Approx.)	1 pound

9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your Cavagna 52-A-490-0003B Two-Stage LP Gas Regulator, please contact Cavagna customer service directly. Retain your proof of purchase for warranty claims.

Contact information can typically be found on the manufacturer's official website or product packaging.