

American Iron Works WC-4

# WC-4 Cable Hose Restraints Instruction Manual

Manufactured by American Iron Works

## 1. PRODUCT OVERVIEW

The American Iron Works WC-4 Cable Hose Restraints, commonly known as Whip Checks, are essential safety devices designed to prevent hose whip in the event of accidental separation of coupling or clamp device. These strong steel cables provide a critical safeguard in high-pressure hose applications, ensuring a safer working environment.

This manual provides detailed instructions for the proper installation, operation, and maintenance of your WC-4 Cable Hose Restraints.

## 2. PRODUCT SPECIFICATIONS

| Specification                  | Detail                        |
|--------------------------------|-------------------------------|
| Model                          | WC-4                          |
| Cable Diameter                 | 3/8 inches                    |
| Hose Diameter Compatibility    | 4 to 5 inches                 |
| Maximum Working Pressure (Air) | 200 PSI                       |
| Material                       | Strong Steel Cable            |
| Item Weight                    | 47 Pounds (for package of 20) |

## 3. SAFETY INFORMATION

**WARNING: Failure to properly install and maintain hose restraints can result in serious injury or death. Always follow all safety guidelines and industry best practices.**

Whip Checks are designed to prevent hose whip, which occurs when a pressurized hose or coupling separates, causing the hose to flail violently. While Whip Checks significantly reduce this risk, they do not prevent coupling separation itself.

Ensure the maximum working pressure of your application does not exceed the 200 PSI rating for air when using these Whip Checks. For higher pressure applications, consult with American Iron Works for appropriate restraint solutions.

Always inspect Whip Checks before each use for any signs of wear, damage, or corrosion. Replace immediately if any defects are found.

Your browser does not support the video tag.

Video: Demonstrates the importance of Whip Checks in preventing hose whip. This video shows a hose under pressure and the effect of a coupling failure with and without a whip check. Note the 200 PSI rating for air applications.

## 4. INSTALLATION INSTRUCTIONS

Proper installation is crucial for the effectiveness of the WC-4 Cable Hose Restraints. Follow these steps carefully:

1. **Identify Connection Points:** The WC-4 Whip Check is designed for hose-to-hose connections with diameters between 4 and 5 inches. Identify the two hose sections or the hose and equipment connection points that require restraint.
2. **Loop Placement:** Each end of the Whip Check cable has a spring-loaded loop. Open one loop and pass it over the hose fitting or coupling on one side of the connection. Ensure the loop is securely seated around the hose or fitting, providing a firm grip.



Image: A WC-4 Whip Check properly installed on a hose connection, showing the cable looped around the hose near the



coupling.

3. **Secure Second Loop:** Open the second spring-loaded loop and pass it over the hose fitting or coupling on the other side of the connection. The cable should be installed in the extended position (no slack) to effectively restrain the hose in case of separation.

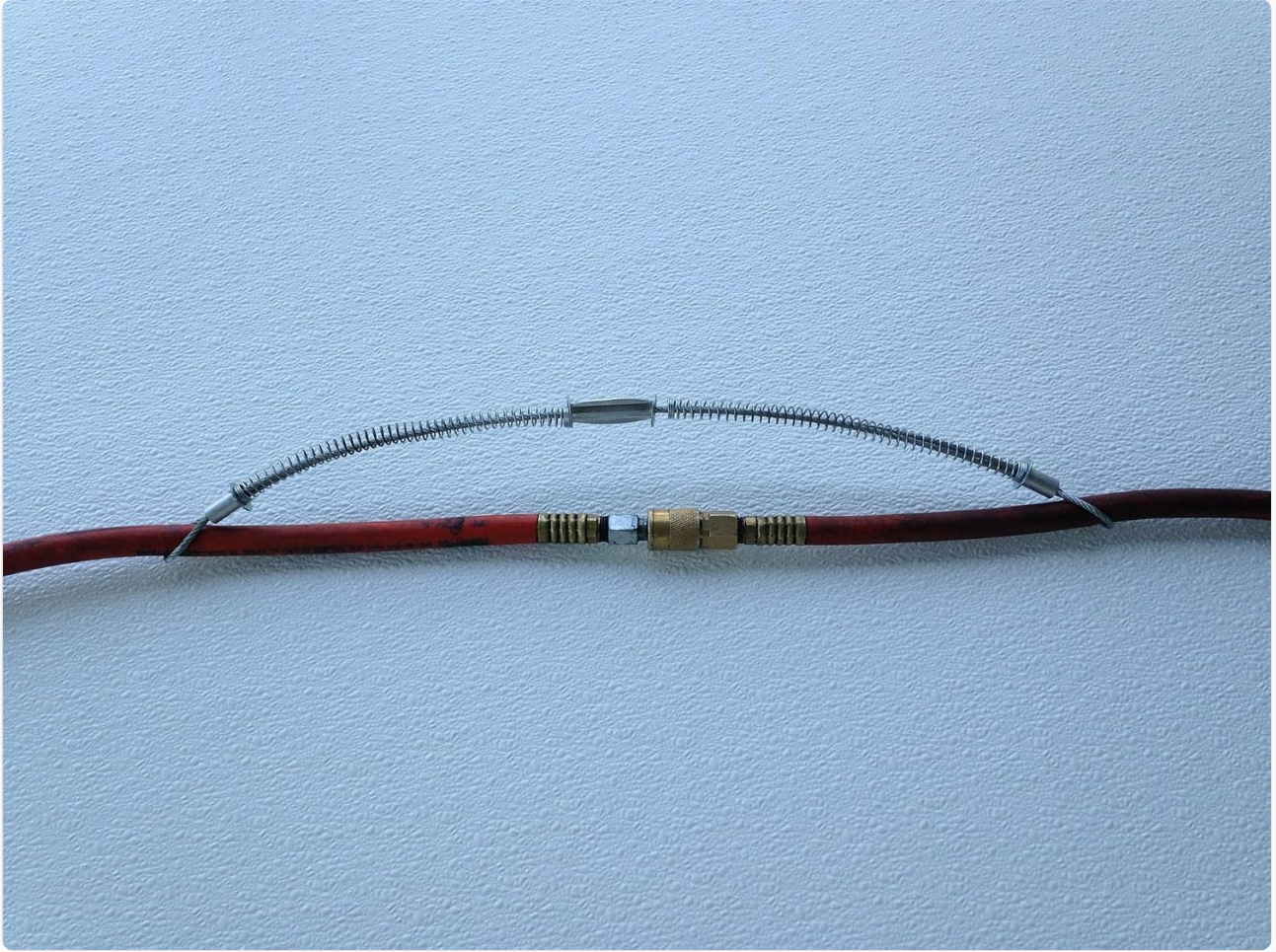


Image: Two hose sections connected and secured by a WC-4 Whip Check, demonstrating the cable's extended position.

4. **Verify Installation:** Gently pull on the Whip Check to ensure it is firmly attached and there is no excessive slack. The cable should be taut but not overly strained.



Image: A single WC-4 Cable Hose Restraint, showing its overall design with spring-loaded loops at each end.

## 5. OPERATING PRINCIPLES

---

Once installed, the WC-4 Cable Hose Restraint acts as a secondary safety measure. In the event of a primary coupling or clamp failure, the Whip Check cable will catch the flailing hose, preventing it from whipping dangerously and causing injury or damage. The spring-loaded design allows for easy installation and removal while maintaining tension during operation.

## 6. MAINTENANCE AND INSPECTION

---

Regular inspection and maintenance are vital to ensure the continued effectiveness of your Whip Checks:

- **Pre-Use Inspection:** Before each use, visually inspect the entire length of the cable, the spring-loaded loops, and the end fittings for any signs of wear, fraying, kinks, corrosion, or deformation.
- **Damage Assessment:** If any damage is observed, no matter how minor, immediately remove the Whip Check from service and replace it with a new one. Do not attempt to repair damaged Whip Checks.
- **Cleanliness:** Keep Whip Checks clean and free from excessive dirt, grease, or corrosive substances.
- **Storage:** Store Whip Checks in a dry, clean environment away from direct sunlight and extreme temperatures when not in use.

## 7. TROUBLESHOOTING

---

Given the simple mechanical nature of Whip Checks, extensive troubleshooting is rarely required. However, consider the following:



- **Whip Check Appears Loose:** Ensure the Whip Check is installed in its fully extended position with no slack. If the hose diameter is smaller than the recommended 4-5 inches, the WC-4 may not be suitable, and a different size Whip Check (e.g., WC-3 for 2-3.5 inch hoses) might be required.
- **Visible Damage:** Any visible damage (fraying, kinks, bent springs, corrosion) means the Whip Check has compromised integrity and must be replaced immediately.
- **Hose Whip Still Occurs:** If hose whip occurs despite proper installation, verify that the Whip Check's PSI rating is appropriate for your application's pressure. For pressures exceeding 200 PSI (air), a different type of restraint or a higher-rated Whip Check is necessary.

## 8. WARRANTY AND SUPPORT

---

American Iron Works stands behind the quality of its products. For warranty information, technical support, or assistance in selecting the correct hose restraint for your specific application, please contact American Iron Works directly.

### Contact Information:

**Brand:** American Iron Works

**Location:** Yukon, OK

**Phone:** 405-577-2877

**Website:** [www.hose-safety.com](http://www.hose-safety.com)

© 2023 American Iron Works. All rights reserved.