# LAUNDRY JET

# Laundry Jet System Troubleshooting Guide

### Introduction

Welcome to the Laundry Jet System Troubleshooting Guide. This document is designed to help you identify and resolve potential issues that may arise with your Laundry Jet system. By following the steps outlined here, you can ensure your system operates efficiently and effectively. For any issues that are not described in this document please contact us at <u>techsupport@laundryjet.com</u> or directly by calling 1.800.867.4580.

Important Note: Most of the issues described below are the result of improper installation.

• **Recommendation**: Carefully follow the installation instructions provided at the time of purchase to ensure proper setup and optimal performance.

### **Safety Precautions**

- Always turn off the unit before performing any maintenance or inspections.
- Use appropriate personal protective equipment (PPE) when handling electrical components.
- Ensure the system is disconnected from the power source before opening panels or accessing internal components.



# Laundry Jet System Troubleshooting Guide

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# **Installation Instruction Documentation**

**Note:** The following QR Codes and links are provided as references to use as needed in conjunction with the **Trouble Shooting Guide** instructions below. At various points in the body of the instructions it will reference "See Installation Instructions". Use these provided links to source the referenced documents.







# **Common Issues and Solutions**

#### 3.1. Port Not Working

If a port on your Laundry Jet system is not functioning, consider the following potential causes and solutions.



Video - Port Trouble

Note: The most common solution for a non-functioning port is to power cycle the main unit.

- Action:
  - **Unplug the main unit** from the power source.
  - Wait 10 seconds to ensure a complete reset.
  - **Plug the main unit back in** and allow it to restart.

**Important:** Whenever a port is unplugged or plugged back into the **RJ-45 cable**, the main unit **must be powered off**.

- **Reason:** Upon startup, the **PC board** scans and detects all connected ports and their types to configure the system properly.
- **Consequence:** If a port is connected or disconnected while the main unit is powered on, the system will not recognize the change. This can result in the port not functioning correctly.

#### 3.1.1. Physical Obstructions

- **Check for Paint or Drywall Debris:** Ensure there is no paint, drywall dust, or construction materials obstructing the port's movement.
- Action: Gently clean the port area to remove any debris.

#### 3.1.2. Over-Torqued Hardware

- **Binding Due to Tightening:** Over-tightening the port hardware can cause it to bind and not function properly.
- Action: Loosen the hardware slightly to allow free movement of the port components.



#### 3.1.3. Debris in Connections

- **Inspect Connectors:** Debris can accumulate inside the male and female connectors during construction.
- Action: Disconnect the port and inspect both connectors, cleaning out any foreign materials.

#### 3.1.4. Testing Ports Directly

- Isolate House Lines: To determine if the issue is with the house lines or the port itself.
- Action:
  - Turn off the unit.
  - Connect the port directly to the top of the unit.
  - Turn the unit back on and test the port.
  - o If the port works, the issue may be with the house lines.
  - If not, proceed to test with a factory cable connected directly to the PC board to check for internal shorts.

#### 3.2. PC Board Issues

Issues with the PC board can manifest as power problems or blower functionality issues.

#### 3.2.1. No Power to the Board (No Green Light Present)

**Note:** The green indicator light is located on the PC Board. Light is located on the lower right hand corner of the board next to the blue dial.



Video - Board Issues

- Check Main Fuse:
  - **Location:** Next to the on/off switch at the top back left corner of the unit.
  - Action: Inspect the fuse and replace if necessary.
- Check PC Board Fuses:
  - Action: Use a multimeter to test the two fuses on the PC board for continuity.
- Replacement Fuses:
  - 10 Amp fuse for 220V applications.
  - 20 Amp fuse for 110V applications.



- Inspect Blower Pod Connections:
  - Action: Remove the blower pod and ensure cables in the upper left-hand corner are securely connected.

#### 3.2.2. Blower Not Turning On (Green Light Present)

- Check for Shorts:
  - Action: Inspect the power output cables going to the blower for any signs of short circuits.
- Verify Cable Connections:
  - Action: Ensure that all cables are properly connected and have not been pulled loose or disconnected.

#### 3.2.3. Board Versions and Jumpers

Note: PC Board Model Versions are marked on the board at the base of the Blower Power Out connection.

- Version 2.2 Boards:
  - **Note:** No jumpers are required to run ISense Slide Ports and Lift Ports.
- Version 1.5 Boards:
  - **Requirement:** A jumper is needed on the two pins closest to the RJ-45 connections when using ISense Ports with Slide Ports.

#### 3.3. Port Performance

Optimal port performance is crucial for the efficient operation of your Laundry Jet system.

#### 3.3.1. Air Speed Testing

- **Required Air Speed:** Minimum of 35 mph and a maximum of 55 mph at each port.
- Testing Tool: A low-cost anemometer.
- Action: Measure the wind speed at each port to ensure it meets the specifications.



#### 3.3.2. Insufficient Exhaust Clearance

- Effect on Performance: Restrictions around the exhaust vent can pressurize the outgoing air, reducing overall airflow. A minimum offset of 10 inches is required in all directions around the exhaust vent. The only exception is the offset distance towards the back of the unit.
- Action:
  - Ensure that the exhaust air exits directly into the environment without obstruction.
  - If venting through a wall or into an attic space beyond 2 feet, increase the pipe size to accommodate airflow.
  - Vent line is a minimum 6 inch ridged pipe for the first 2 feet and then must set up to an eight inch line for a maximum of 4 feet in total.

#### 3.3.3. Blockage in the System

- **Possible Causes:** Items stuck in transit, imperfections, burrs, or hardware protrusions.
- Action:
  - Use a camera or snake tool to inspect the system for blockages.
  - Remove any obstructions found to restore proper airflow.

#### 3.3.4. Poor Pipe Installation

- Leakage Issues: Gaps or breaks in the lines can cause significant air loss.
- **Common Causes**: Unglued pipe connections, poor connections between the pipe and the port.
- Action:
  - Perform a Pressure Test:

#### Materials Needed:

- Pressure testing pump or air pump
- Pressure gauge
- Test plugs or end caps (suitable for 6" PVC pipe)
- Air compressor (for pneumatic testing)
- Soap and water solution (for leak detection during pneumatic testing)
- Safety equipment (gloves, eye protection)



#### Procedure:

#### 7. Prepare the System:

- Install test plugs or end caps on all open ends of the pipe system to seal it completely.
- Ensure that all valves and ports are closed.
- 8. Connect the Pressure Source:
  - Attach the pressure testing pump or air compressor to the system via an appropriate connection point.
  - Make sure the connection is secure to prevent leaks during testing.

#### 9. Pressurize the System:

- Gradually increase the pressure to **3 to 5 pounds per square inch (psi)**.
- Avoid exceeding 5 psi to prevent damage to the pipes.

#### 10. Maintain Pressure:

- Hold the pressure steady for **20 minutes**.
- Monitor the pressure gauge closely to detect any pressure drops.
- 11. Inspect for Leaks:
  - For Air Testing:
    - Prepare a soap and water solution.
    - Apply the solution to all joints, connections, and fittings.
    - Observe for bubbles, which indicate air escaping from leaks.
  - For Water Testing:
    - Visually inspect all areas for signs of water leakage.

#### 12. Document Findings:

- Note any locations where leaks are detected.
- Assess the severity of each leak.
- •

#### Safety Precautions:

- Always wear safety equipment, including gloves and eye protection.
- Ensure that the testing area is secure and that unauthorized personnel are kept away.
- Release pressure slowly after testing to prevent sudden decompression.

#### • Secure All Pipe Connections:

- Seal Leaks:
  - Identify the source of any leaks detected during the pressure test.
  - Re-glue or tighten connections where necessary.
  - Replace faulty sections of pipe or fittings if needed.
- Verify Connections:
  - Double-check that all pipe connections are fully seated and properly aligned.



- Ensure that the connections between the pipe and the port are secure and leak-free.
- Re-Test After Repairs:
  - Perform the pressure test again after making repairs to confirm that all leaks have been resolved.
  - Only proceed with installing ports and the Jetpack once the system maintains pressure without any drops.

#### 3.4. Automatic Door Doesn't Close at Startup

If the automatic door fails to close when the system starts, consider these potential issues.

#### 3.4.1. Improper Installation

• Cabinet Installations: Precise adherence to cut-out diagrams is essential.



Video - Auto Door Issues

• Action: Verify that the installation follows the provided instructions, ensuring adequate space at the base of the unit for airflow.

#### 3.4.2. Exhaust Clearance

- Impact on Door Function: Restricted outgoing air leads to insufficient incoming air, preventing the door from closing.
- Action:
  - Provide adequate space around the exhaust port to allow the necessary volume of air during startup.
  - **Important for LJ Plus Units:** On the Laundry Jet Plus unit, proper installation of the 4 x 4 inch square PVC exhaust pipe is crucial. Missing or improperly installed exhaust pipes can lead to low airflow, affecting both port performance and the automatic door function.

#### 3.4.3. Door Alignment

- **Hinge Pin Issues:** A dislodged hinge pin can cause the door to be off-center and catch on the sides.
- Action: Check that the door is properly centered and swings freely without obstruction.



#### 3.4.4. LJ Plus Exhaust Pipe Installation

# Proper installation of the exhaust pipe on the LJ Plus unit is essential for the automatic door to function correctly. (See installation instructions)

#### • Importance of Proper Installation:

- The 4 x 4 inch square PVC exhaust pipe must be correctly installed to ensure adequate exhaust flow.
- Forgetting to install or improperly installing this pipe section can result in low airflow, which can prevent the automatic door from closing.
- Effects of Improper Installation:
  - **Automatic Door Malfunction:** Insufficient exhaust flow can prevent the door from closing properly at startup.
  - **Port Performance Issues:** Low airflow can negatively affect the suction at the ports.
- Action:
  - Verify Installation:
    - Ensure the 4 x 4 inch square PVC exhaust pipe is installed according to the installation guidelines specific to the Laundry Jet Plus unit.
    - Check that all connections are secure and there are no leaks or obstructions in the exhaust path.
  - Inspection Steps:
    - Visually inspect the exhaust pipe for correct alignment and secure fittings.
    - Confirm that the pipe is free from blockages or debris that could hinder airflow.
  - Reinstall if Necessary:
    - If the exhaust pipe is missing or improperly installed, remove and reinstall it following the manufacturer's instructions.



#### 3.5. System Turns On Randomly or at Startup

If your Laundry Jet system turns on unexpectedly or immediately at startup, the following factors might be the cause.

#### 3.5.1. Short at the Board

• Imitating a Start Signal: A short circuit on the PC board can simulate a signal that instructs the system to turn on.



Video - Random Startup

• Action: Inspect the PC board for any signs of damage or shorts. Look for burnt components, damaged traces, or loose connections.

#### 3.5.2. Short in Cables or Ports

- **Signal Feedback:** A short in a cable or at a port can send a false signal to the board, causing the unit to activate unexpectedly.
- Action: Check all cables and ports for signs of damage or shorts. Pay special attention to areas where cables may have been pinched or pierced.

#### 3.5.3. Short in Cables or Ports

• Differences Between On-Site Terminated Cables and Factory-Made Cables

Understanding the differences between cables terminated on-site by a contractor and premade factory cables is crucial for diagnosing and preventing shorts that can cause the system to turn on randomly or ports not to function.

#### **On-Site Terminated Cables (Custom Length, Contractor-Installed):**

- **Custom Termination**: Cables are cut to specific lengths and terminated with connectors (RJ45 plugs) on-site using crimping tools.
- Potential Issues:
  - Variability in quality due to manual termination.
  - Improper crimping can lead to loose connections or shorts.
  - Incorrect arrangement of wire pairs may cause cross-talk, signal loss, or incorrect pairing.
- Testing:
  - Requires thorough testing to ensure cables meet industry standards (TIA/EIA).



- Use certification testers (e.g., Fluke) to conduct tests like wiremap, length, attenuation, near-end crosstalk (NEXT), and return loss.
- Provides a pass/fail report to confirm that the installation meets performance standards.

#### Factory-Made Cables (Pre-Manufactured, Store-Bought):

- **Consistent Quality**: Manufactured in controlled environments with automated machinery, resulting in reliable terminations.
- **Standard Lengths**: Available in standard lengths with consistent internal twisted pairs.
- Testing:
  - Factory-tested to meet Cat5e or Cat6 specifications.
  - On-site testing focuses on verifying connectivity and continuity.
  - Optional certification testing can be conducted for higher assurance.

#### Key Differences in Testing Approach:

- On-Site Terminated Cables:
  - Require thorough testing due to potential errors in manual termination.
  - Focus on termination quality and signal integrity.
- Factory-Made Cables:
  - Reduced testing requirements since they are quality-controlled during manufacturing.
  - Focus on verifying connectivity and basic functionality.

#### **Recommendations:**

- Use Factory-Made Cables When Possible:
  - Reduces the potential for installation errors and shorts.
  - Ideal for standard installations where cable lengths match available sizes.
- Ensure Proper Termination of On-Site Cables:
  - Employ qualified personnel for cable terminations.
  - Use professional-grade crimping tools and testers.

#### • Conduct Appropriate Testing:

- Mandatory thorough testing for on-site terminated cables using certification testers.
- Perform basic continuity tests for factory-made cables after installation.
- Follow Installation Instructions Carefully:
  - Adhere strictly to the provided installation guidelines to prevent issues related to poor cable installation.
  - Regularly inspect cables for signs of damage or wear that could cause shorts.



#### Impact on System Performance:

- Shorts in cables or ports can send false signals to the PC board, causing the unit to activate unexpectedly or ports not to function.
- Proper cable installation and testing help prevent these issues, ensuring reliable system performance.

#### 3.6. Motion Sensors and Sensor Adjustments

#### 3.6.1. Overview of Motion Sensors

All motion sensors in the Laundry Jet system continually monitor for objects passing through their field of view in a specific sequence. (Motion sensors in this context are only found on the ISense ports in the upper righthand corner of the port and can be identified as a black circular eye.) To activate the system, the sensor requires three breaks in its visual field. Once a sensor detects an object, it temporarily disconnects the feed from all other ports. This disconnect can last mere milliseconds or longer, depending on what is passing in front of it and the sequence.



Video - Motion Sensor Adjust

#### 3.6.2. Common Problems

#### 3.6.2.1. Sensor Activated by Nearby Objects

- **Issue:** For ports mounted too close to a wall, next to a door, or inside a cabinet, the sensor may pick up objects on a semi-continuous basis but not in the correct sequence. This can leave other ports in the system unusable.
- **Example:** A port mounted behind the swing diameter of a door may have the door occasionally set off the sensor.

#### 3.6.2.2. Sensor Adjustments

- **Warning:** Adjusting the sensor without proper guidance may not resolve the issue and could potentially cause further problems.
- Never adjust the sensor without consulting Laundry Jet Technical Support.



#### 3.6.2.3. Sensor in Cabinet Installations

• **Issue:** When a port is mounted inside a cabinet, the sensor may pick up the internal frame of the cabinet, turning off other ports or unintentionally activating the main unit.

#### 3.6.3. Solutions

#### 3.6.3.1. Install Manual Port

- Action: In locations where the sensor is being triggered by nearby objects (e.g., doors, cabinet frames), consider installing a manual port to prevent false activations.
- **Benefit:** This eliminates the need to relocate the port and prevents unintended system activations.

#### 3.6.3.2. Consult Technical Support

- Action: Before making any adjustments to the sensor, contact Laundry Jet Technical Support.
- **Reason:** Technical support can provide guidance or adjustments tailored to your specific application.

#### 3.6.3.3. Custom Sensor Adjustments

- Action: Request a port with a custom sensor adjustment for your application if needed.
- Note: Adjusting the sensor does not always resolve the issue. In some cases, it may be necessary to move the port location or switch to a manual port.

#### 3.7 Port Air Speed Test

When a system is installed properly, air speed at the port should range between 35 to 55 miles per hour.

- **Testing Tool**: This test is conducted using an anemometer.
- Action: The user should approach the port, activate the system, and then, using the anemometer, move around the open face of the port until locating the fastest wind speed.



#### Video - Port Wind Speed



Important: If your wind speed is below 35 mph, please refer to
3.3 Port Performance.

#### **3.8 Test Plate Unit Performance**

If the air speed at the port is lower than 35 mph and a leak or mechanical cause cannot be determined, we recommend the following steps:

- 1. **Contact Tech Support**: Request a test plate for your unit.
- 2. Plug the Intake: Stop up the intake hole at the top of the catch chamber using a towel, plug, or whatever is available.



Video - Unit Test Plate

- 3. Tape the Automatic Door: Tape the automatic door in the open position.
- 4. **Test Plate Setup**: Hold the test plate up against the angled door frame located at the bottom of the unit.
- 5. **Measure Wind Speed**: Turn the unit on and use an anemometer to test the wind speed on the larger of the two holes on the test plate. This test will demonstrate the efficiency of the Laundry Jet unit.
- 6. **Next Steps**: If wind speeds are within manufacturer specifications, inspect the house-installed pipe work to determine the location of any potential system leak.



# POE (Power over Ethernet) Cable Issues

#### 4.1. Understanding POE Cable Shorts

Note: All cables should be Cat5 or Cat6 standard cables. Do not use cross over cables for this application

- Intermittent Shorts: Lines may test okay but develop shorts when they heat up during operation.
- Effect on Performance: Shorts can disrupt communication and power delivery to ports.

#### 4.2. Common Causes of Shorts

- Damaged Cables: Physical damage such as cuts or kinks can compromise cable integrity.
- Staples and Fasteners: Staples used during installation can pierce cables, causing shorts.
- Action:
  - Inspect all POE cables for visible signs of damage.
  - Replace any compromised cables.
  - Ensure proper installation techniques to avoid damaging cables.

#### **Cable Damage and Short Circuits**

#### 5.1. Visual Inspection

- Signs of Damage: Look for broken cables, exposed wires, or any signs of wear and tear.
- Action: Replace any damaged cables immediately.

#### 5.2. Common Causes

- Installation Hazards: Staples, nails, or screws penetrating cables.
- Environmental Factors: Rodents or pests chewing on cables.
- Action:



• Use cable protectors or conduits where necessary.

#### 5.3. Maintaining Your Laundry Jet System

Proper maintenance ensures that your Laundry Jet system remains efficient and reliable. Follow these simple guidelines to keep your system in top condition.

#### 5.3.1. Regular Cleaning

- **Safety First**: Ensure the system is **turned off** and **disconnected from the power source** before performing any cleaning.
- Clean Intake Ports and Ducts:
  - Frequency: Every 3 to 6 months.
  - Action: Clean the intake ports and the entrance to accessible ducts/pipes to prevent lint or dust/debris buildup.
  - **Method**: Use a vacuum cleaner with a brush attachment to remove dust from the system's exterior and ports.
- Clean the Jet Pack Unit:
  - Action: Periodically inspect and gently clean the collection interior surfaces and door hinges on the Laundry Jet Pack Unit.

#### 5.3.2. Maintain Normal Home Temperature

- **Temperature Range**: Keep the Laundry Jet system within the typical dry range of household temperatures (60-80°F or 16-27°C).
- Avoid Extremes:
  - **Cold**: Extreme cold can affect system components.
  - Heat: Excessive heat may cause overheating issues.
  - **Moisture**: High humidity or moisture can lead to electrical problems and component corrosion.

#### 5.3.3. Check Electrical Connections

- Inspection Frequency: Every 6 months.
- Action:
  - Inspect All Electrical Connections:
    - **Examine Wire Terminals**: Ensure all electrical connections and wire terminals are secure and free of corrosion.
    - Look for Damage: Check for any loose connections or frayed wires.
  - Immediate Repairs:
    - Disconnect Power: If you notice any loose connections or frayed wires, disconnect the power immediately.



- **Repair or Replace Components**: Repair or replace the damaged components to prevent electrical hazards and ensure optimal system performance.
- Safety Precautions:
  - **Use Appropriate Tools**: Utilize insulated tools when inspecting or working on electrical components.
  - **Wear Protective Equipment**: Always wear safety gloves and eye protection during maintenance.
  - **Professional Assistance**: If unsure about any electrical work, consult a qualified electrician or contact our technical support team.

#### 5.3.4. Inspect Pipe and Connections

- Inspection Frequency: Every few months.
- Action:
  - **Visual Inspection**: Check the piping ducts where visible and accessible for any signs of wear, leaks, or blockages.
  - Ensure Proper Sealing: Properly sealed pipe ducts ensure efficient airflow.
  - **Repair as Needed**: Replace any leaking or damaged pipe ducts or connections to maintain the system's performance.

#### 5.3.5. Test System Functionality

- Regular Testing:
  - Action: Periodically test the Laundry Jet system to ensure it is operating smoothly.
  - Listen for Unusual Sounds: Unusual noises may indicate mechanical issues.
- Performance Check:
  - Action: Run a load through the system to confirm that the laundry is being transported effectively.



## **Contacting Support**

If you've followed all the troubleshooting steps and are still experiencing issues, please contact Laundry Jet Technical Support:

- Phone: (800) 867-4580 Ext 2
- Email: techsupport@laundryjet.com
- Website: <u>www.laundryjet.com/support</u>

# Conclusion

Proper maintenance and timely troubleshooting are key to ensuring your Laundry Jet system operates smoothly. Regular inspections and adherence to installation guidelines will prevent most common issues. If you encounter persistent problems, do not hesitate to reach out to our support team for assistance.

