

## Quick Troubleshooting Guide

### NOTICE

- Veeder-Root makes no representation or warranty about the information in this publication. A qualified professional is required for service of the components addressed in this publication.
- The information in this publication cannot be used as a substitution for the knowledge and experience of a qualified professional.
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- Contact TLS Systems Technical Support for additional troubleshooting information at 800-323-1799.

### Contractor Certification Requirements

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Veeder-Root requires the following minimum training certifications for contractors who will install and setup the equipment discussed in this manual:

**Installer Certification (Level 1):** Contractors holding valid Installer Certification are approved to perform wiring and conduit routing; equipment mounting; probe, sensor and carbon canister vapor polisher installation; wireless equipment installation; tank and line preparation; and line leak detector installation.

**Technician Certification (Level 2/3):** Contractors holding valid Technician Certifications are approved to perform installation checkout, startup, programming and operations training, system tests, troubleshooting and servicing for all Veeder-Root Series Tank Monitoring Systems, including Line Leak Detection. In addition, Contractors with the following sub-certification designations are approved to perform installation checkout, startup, programming, system tests, troubleshooting, service techniques and operations training on the designated system.

- Wireless 2
- Tall Tank

**VR Vapor Products Certification:** Contractors holding a certification with the following designations are approved to perform installation checkout, startup, programming, system tests, troubleshooting, service techniques and operations training on the designated system.

- ISD – In Station Diagnostics
- PMC – Pressure Management Control
- CCVP - Veeder-Root Vapor Polisher
- Wireless – ISD/PMC Wireless
- A current Veeder-Root Technician Certification is a prerequisite for the VR Vapor Products course.

**Warranty Registrations** may only be submitted by selected Distributors.

### Safety Warnings

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**FAILURE TO COMPLY WITH THE FOLLOWING WARNINGS AND SAFETY PRECAUTIONS COULD RESULT IN SERIOUS INJURY OR DEATH, AND/OR CAUSE DAMAGE TO PROPERTY, AND THE ENVIRONMENT.**

**EXPLOSIVE:** Fuels and their vapors are extremely explosive if ignited.

**FLAMMABLE:** Fuels and their vapors are extremely flammable.

## Quick Troubleshooting Guide

**ELECTRICITY:** High voltage exists in, and is supplied to, the device. A potential shock hazard exists.

**TURN POWER OFF:** Live power to a device creates a potential shock hazard. Turn Off power to the device and associated accessories when servicing the unit.

**WARNING:** Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

**READ ALL RELATED MANUALS:** Knowledge of all related procedures before you begin work is important. Read and understand all manuals thoroughly. If you do not understand a procedure, ask someone who does.










***This system operates near highly combustible fuel storage tanks.***

To ensure proper installation, operation, and continued safe use of this product:

1. Read and follow all instructions in this manual, including all safety procedures, local and federal guidelines.
2. Have equipment installed by a contractor trained in its proper installation and in compliance with all applicable codes including: National Electrical Codes 70 and 30A; federal, state, and local codes; and other applicable safety codes.
3. Substitution of components may impair intrinsic safety.
4. Do not modify or use service parts other than those provided by Veeder-Root.

## Safety Precautions

The following safety symbols are used throughout this manual to alert you to important safety hazards and precautions.

 <p><b>EXPLOSIVE</b> Fuels and their vapors are extremely explosive if ignited.</p>	 <p><b>FLAMMABLE</b> Fuels and their vapors are extremely flammable.</p>
 <p><b>ELECTRICITY</b> High voltage exists in, and is supplied to, the device. A potential shock hazard exists.</p>	 <p><b>TURN POWER OFF</b> Live power to a device creates a potential shock hazard. Turn Off power to the device and associated accessories when servicing the unit.</p>
 <p><b>WARNING</b> Indicates a hazardous situation which, if not avoided, could result in death or serious injury.</p>	 <p><b>WEAR EYE PROTECTION</b> Wear eye protection when working with pressurized fuel lines to avoid possible eye injury.</p>
 <p><b>USE SAFETY BARRICADES</b> Unauthorized people or vehicles in the work area are dangerous. Always use safety cones or barricades, safety tape, and your vehicle to block the work area.</p>	 <p><b>APPROVED CONTAINERS</b> Use nonbreakable, clearly marked containers, suitable for collecting and transporting hazardous fuels during service.</p>
 <p><b>READ ALL RELATED MANUALS</b> Knowledge of all related procedures before you begin work is important. Read and understand all manuals thoroughly. If you do not understand a procedure, ask someone who does.</p>	

**Suggested Equipment:** Proper PPE, screwdriver, pressure gauge, multimeter, epoxy packs, wire cutters, wire nuts, pipe wrench.

**Reference Documents:** Manuals 577013-344, -465, -727, -814, -933, and 576013-879, -818

## Quick Troubleshooting Guide

### Troubleshooting Steps for DPLLD (8590 Series), PLLD (8484 Series) or WPLLD (8494 Series) transducers

1. Interview Site Manager for details of issue:
    - a. Dispenser showing error codes.
    - b. Leaky nozzles.
    - c. Pre-pay overrun.
  2. Verify there is enough product in tank to run a line test.
  3. Inspect sumps and dispenser pans for leaks.
  4. Check the TLS console for other alarms.
  5. If there is a Sensor Comm alarm continue with steps a-e below. If no Sensor Comm alarm go to Step 6
    - a. Check wire connection and shielding (drain wire) at the screw terminals on the TLS connectors.
    - b. Verify console grounding.
    - c. Check wire splice between transducer and field wiring.
    - d. If ok, remove transducer and connect directly to console. Make sure power to the STP is removed before performing this step.
    - e. If that does not fix the issue, replace transducer.
  6. Verify piping type and console setup options.
  7. Verify line pressure in console diagnostic mode.
  8. Run 3.0 gph test
    - a. If test pressure is normal, confirm dispenser handle signal voltage is coming into console from all positions. (Normal means that the line pressure jumps up to full operating pressure when the pump turns on, and drops to and seats at 15 to 22 psi when the pump turns off).
    - b. IF NO CHANGE IN PRESSURE
      1. Did pump come ON?

**No?** Confirm voltage of PO position on pump controller module/IOM relay channel, confirm pump circuit breaker is on and that pump is running.
      - c. **Yes?** Pressure >40 or unchanging?
  9. If TLS-4xx console skip to relieve line pressure step 14.
- TLS-350 CONSOLE ONLY (Steps 10-13)
10. Disconnect PLLD wire from TLS PLLD module.
  11. If pressure is greater than zero (0) replace module or move to open position.
  12. Reconnect field wiring, cut off seal pack, read pressure.
  13. If pressure is greater than zero (0), investigate field wiring issue.
  14. Reconnect transducer.
  15. Relieve line pressure.
  16. Install pressure gauge in shear valve to verify pressures.
  17. Run 3.0 gph test.
  18. If pressure differential >  $\pm 5$  psi replace transducer (PLLD).
  19. If the problem is failure to detect a leak during an operability test, ensure that all air has been purged from the system.
  20. For additional assistance, please contact Veeder-Root Technical Support by phone at 800-323-1799 or by email to [technicalsupport@veeder.com](mailto:technicalsupport@veeder.com).