

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.
- The information contained in this publication is merely for the consideration of a qualified professional, which should make their own determination of how to address any issues based on the situation.
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- Contact TLS Systems Technical Support for additional troubleshooting information at 800-323-1799.

Contractor Certification Requirements

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

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.

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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 warnings.
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.

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|  <p>EXPLOSIVE Fuels and their vapors are extremely explosive if ignited.</p> |  <p>FLAMMABLE Fuels and their vapors are extremely flammable.</p> |
|  <p>ELECTRICITY High voltage exists in, and is supplied to, the device. A potential shock hazard exists.</p> |  <p>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.</p> |
|  <p>WARNING Indicates a hazardous situation which, if not avoided, could result in death or serious injury.</p> |  <p>WEAR EYE PROTECTION Wear eye protection when working with pressurized fuel lines to avoid possible eye injury.</p> |
|  <p>USE SAFETY BARRICADES 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>APPROVED CONTAINERS Use nonbreakable, clearly marked containers, suitable for collecting and transporting hazardous fuels during service.</p> |
|  <p>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.</p> | |

NOTICE Follow all safety procedures, local and federal guidelines.

Suggested Equipment: Screwdriver, multimeter, wire cutters, wire nuts and pipe wrench.

Reference Documents: This document references the following manuals 577014-072, -073, -075, -076 and -077.

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Troubleshooting Steps:

1. Interview site manager for details of issue.
2. Backup your system following the System/Database Backup procedure (manual P/N 577014-076).
3. Ensure that all programming is correct for the module and all devices have been discovered.
 - a. If all devices have not been discovered, power down the system, wait 60 seconds and power the system back on.
 - b. Allow the system to discover all devices which may take up to 5 minutes.
4. Check the firmware on the device to make sure it is the latest revision.
 - a. Diagnostic/Module/Hardware Configuration
 - b. Rev C or higher
 - c. If not, perform Firmware Upgrade
5. Review alarm history to decide if the alarm is on single or multiple devices.
 - a. If multiple, go to Step 6.
 - b. If single, go to Step 7.
6. If the device out is on all channels on a single module, remove power and:
 - a. Inspect the terminal connectors to insure they are fully seated.
 - b. Remove the module and inspect the backplane connector. Inspect the modules edge connection (gold fingers) to make sure it is clean.
 - c. Reseat the module.
 - d. Confirm console is grounded properly.
 - e. Confirm devices are wired using shielded cable and that the shields are grounded at the TLS only.
 - f. Reapply power after verifying above.
 - g. If the issue is not resolved, replace the module.
7. If the device out is on a single channel.
 - a. Check for proper polarity on the device wiring and/or redo connections on the module.
 - b. Power must be removed before disconnecting and reconnecting wires.
 - c. Confirm console is grounded properly.
 - d. Confirm devices are wired using shielded cable and that the shields are grounded at the TLS only.
 - e. Disconnect the device and connect it to a known good channel. Program the new channel to match the device. If the problem follows the device, then go to your device troubleshooting guide.
 - f. Disconnect all the devices from the connector and reconnect one at a time. Power up after each connection. A bad or intermittent device or wire may affect other sensor channels.
 - g. If the problem persists replace the module.
8. Verify that the intrinsically safe wiring and the probe wiring do not share the conduit with any other wiring and that the intrinsic wiring is isolated from the AC voltage circuit.
 - a. Inspect the wiring trough where the probe wires come into the building.
 - b. If the probe wires are sharing the trough with any other device (high voltage or non Veeder-Root wires), they will have to be isolated using rigid metal conduit or metal shielding plates.
9. For additional assistance, please contact Veeder-Root Technical Support at 800-323-1799 or technicalsupport@veeder.com.