

Quick Troubleshooting Guide

NOTICE

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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 troubleshoot the equipment discussed in this manual:

Installer Certification: Contractors holding valid Installer Certification are approved to perform wiring and conduit routing, equipment mounting, probe and sensor installation, tank and line preparation, and line leak detector installation.

Safety Warnings

FAILURE TO COMPLY WITH THE FOLLOWING WARNINGS AND SAFETY PRECAUTIONS COULD RESULT IN SERIOUS INJURY OR DEATH, AND COULD 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.

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. Before installing pipe threads apply an adequate amount of fresh, UL classified for petroleum, non-setting thread sealant. For E85AG applications, Loctite 564 is recommended for all field serviceable pipe threads.
4. When servicing unit, use non-sparking tools and use caution when removing or installing equipment to avoid generating a spark.
5. Substitution of components may impair intrinsic safety.
6. Do not modify or use service parts other than those provided by Veeder-Root.

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Safety Precautions

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

 <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>	

Problem - Failure to sense 3 GPH @ 10psi leak during certification test

On-Site Information: Document test equipment utilized including model numbers and calibration records.

Reference Documents: This procedure references the following manuals 042-106-1 and C051-272.

Safety Precautions: Review The Red Jacket FXV Leak Detectors Installation Manual (042-106-1) for safety precautions, warnings, and detailed procedures.

Troubleshooting Steps:

1. Verify that all air has been purged from the system.
2. Confirm installation of test setup is correct per manufacturers recommendations. Validate that the pump pressure and orifice size correlate to the 3 GPH leak rate at 10 psi. Please document for tech support if needed.
3. Note the pump model and horsepower as well as fuel being used for additional background.
4. Confirm leak detector is in leak sensing mode per C051-272. Review to assure detector is in leak sensing mode at 11-16 psi line downstream prior to opening up.
5. Confirm actual induced leak is at least 3 GPH equivalent. Calculate as necessary.
6. Review FX leak detector tests per C051-272. Compare actual test procedure to approved Veeder-Root test procedure.
7. Replace unit if minimum leak detected is greater than 3 GPH or if it exceeds your company's specifications.
8. Call Veeder-Root tech support at 800-323-1799 if new unit does not resolve concerns.

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Problem - Slow flow complaint (~3 GPM flow)

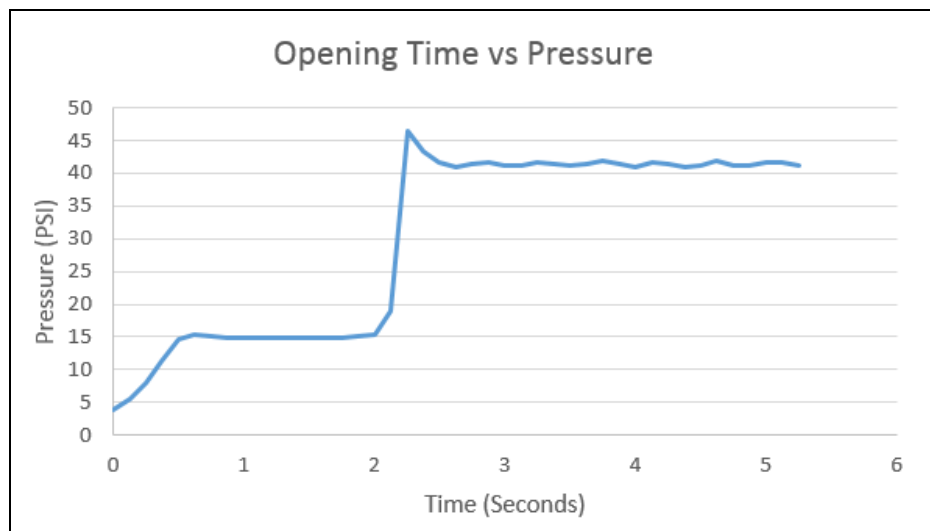
On-Site Information: Determine the reason for the service call. Determine the frequency and time of day that the slow flow condition occurs. This information will be required for discussion with Technical Support.

Reference Documents: This procedure references the following manuals 042-106-1, 577014-342, 577013-830, D042-153 & C051-272.

Safety Precautions: Review The Red Jacket FXV Installation Manual (042-106-1) for Safety Precautions, Warnings, and detailed procedures.

Troubleshooting Steps:

1. Conduct a visual site inspection for any external leakage (dispenser pans/sumps, STP sumps, etc.).
2. Verify system is tight per the Red Jacket Submersible Turbine Pump for Pressure Loss Troubleshooting Guide 577014-342 or equivalent. This will confirm there are no leaks present in the system (in which the FX is performing as designed).
3. Check system filters preventative maintenance history. Assure clogged filter is not the issue.
4. Review pump pressure to assure pump is properly functioning. See pump IOS manuals 577013-830 or D042-153 (standard pump manual).
5. Verify that all air has been purged from system; if not resolve per manuals listed in step 4.
6. Verify FX leak detector vent line is installed per 042-106-1.
7. Confirm the concern is not due to thermal contraction. See Thermal Contraction Troubleshooting Guide 577014-345 for details.
8. Review MLD time delay on dispenser (4-5 seconds expected) per dispenser installation manual.
9. Install pressure gauge/sensor on line downstream of FX per pump manuals 577013-830, D042-153 and D042-106. Reduce line pressure to 0 psi.
10. Monitor pressure when pump is energized. Does pump pressure match line pressure? Pressure should be measuring over 25 psi when leak detector is open. Typical metering pressure is between 11-16 psi. Assure pressure buildup is similar to curve shown below:



11. Device should open (full pump pressure) in approx. 3-5 seconds. If it still doesn't open replace the FX with a new unit.
12. Contact Red Jacket tech support at 800-323-1799 if new unit does not resolve concerns.