

HydrX™ Fuel Conditioner Pressure Sensor



Replacement Instructions

Introduction

This document focuses on maintenance alerts that occur with the HydrX System and what to do about them.

- 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.
- **Veeder-Root shall not be liable for errors contained herein or for any type of damages in connection with the furnishing, performance, or use of this publication.**
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- This publication contains proprietary information which is protected by copyright. All rights reserved. No part of this publication may be photocopied, reproduced, or translated to another language without the prior written consent of Veeder-Root.
- 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 program the equipment discussed in this manual:

Service Technician Certification (Previously known as 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. This certification includes TLS-3xx and TLS-4xx certification training.

In-Station Diagnostics (ISD-PMC) Technician Certification: ISD PMC Contractors holding a valid ISD/PMC Certification are approved to perform (ISD/PMC) installation checkout, startup, programming, and operations training. This training also includes troubleshooting and service techniques for the Veeder-Root In-Station Diagnostics system. A current Veeder-Root Technician Certification is a prerequisite for the ISD/PMC course.

All service personal on site must comply with all recommended safety practices identified by OSHA and your employer.

Review and comply with all the safety warnings in the manuals listed in this document above and any other Federal, State or Local requirements.

Warranty Registrations may only be submitted by selected Distributors.

Safety Warnings and Precautions

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.

THIS SYSTEM OPERATES NEAR HIGHLY COMBUSTIBLE FUEL STORAGE TANKS.

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

FLAMMABLE: Fuels and their vapors are extremely flammable.

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.

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.

APPROVED CONTAINER: Use a non-breakable, clearly marked container, suitable for collecting and transporting hazardous fuels during service.

NOTICE: NOTICE is used to address practices not related to physical injury.

EPOXY SEALANT: is irritating to eyes, respiratory system, and skin. Can cause allergic skin reaction. Contains: epoxy resin and Cycloaliphatic epoxy-carboxylate. **Precautions:** Wear suitable protective clothing, gloves, eye, and face protection. Use only in well ventilated areas. Wash thoroughly before eating, drinking, or smoking.

General Precautions

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.

Reference Documents: Manual 577014-466, 577014-446

Suggested Equipment: V-R kit# 330020-872, approved 5-gallon container to receive diesel fuel; siphon pump; petroleum jelly; UL classified for petroleum, non-setting thread sealant; wire strippers; an adjustable wrench capable of opening to 2.275" to remove sensor; a 1/2" drive ratchet and extension.

Procedure

WARNING



Tag, lockout power to the STP.

1. Close the STP Adapter ball valve to isolate the Fuel Conditioner unit from the pump (see Figure 1).

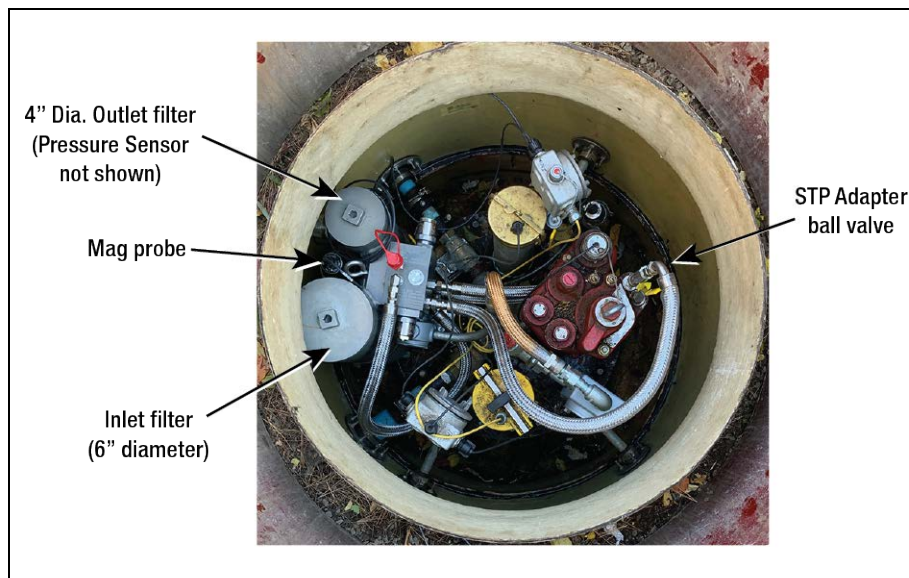


Figure 1. HydrX Sump

2. Using a 1/2" drive ratchet and extension remove the Outlet Filter cap.
3. Remove filter and set aside. Allow fluid in the Outlet Filter housing to drain below the level of the Pressure Sensor before proceeding. (The Pressure Sensor port is in the back side of the Outlet Filter housing and is not visible in Figure 1.)
4. Disable the HydrX Pressure Sensor on the TLS-4xx console then open the intrinsically safe junction box to disconnect the Pressure Sensor cable from the field wiring.
5. Using the 2.275" wrench, remove the old Pressure Sensor from the Outlet Filter housing.
6. Get the new Pressure Sensor and parts from the kit.

7. Apply a coating of non-setting thread sealant to the threads of the new Pressure Sensor and screw it into the Outlet Filter Pressure Sensor port. Tighten securely.
8. Connect the new Pressure Sensor cable wires to the field wires and seal wire connections in the epoxy pack as shown in Figure 2.

NOTICE Observe polarity when connecting Pressure Sensor wires!

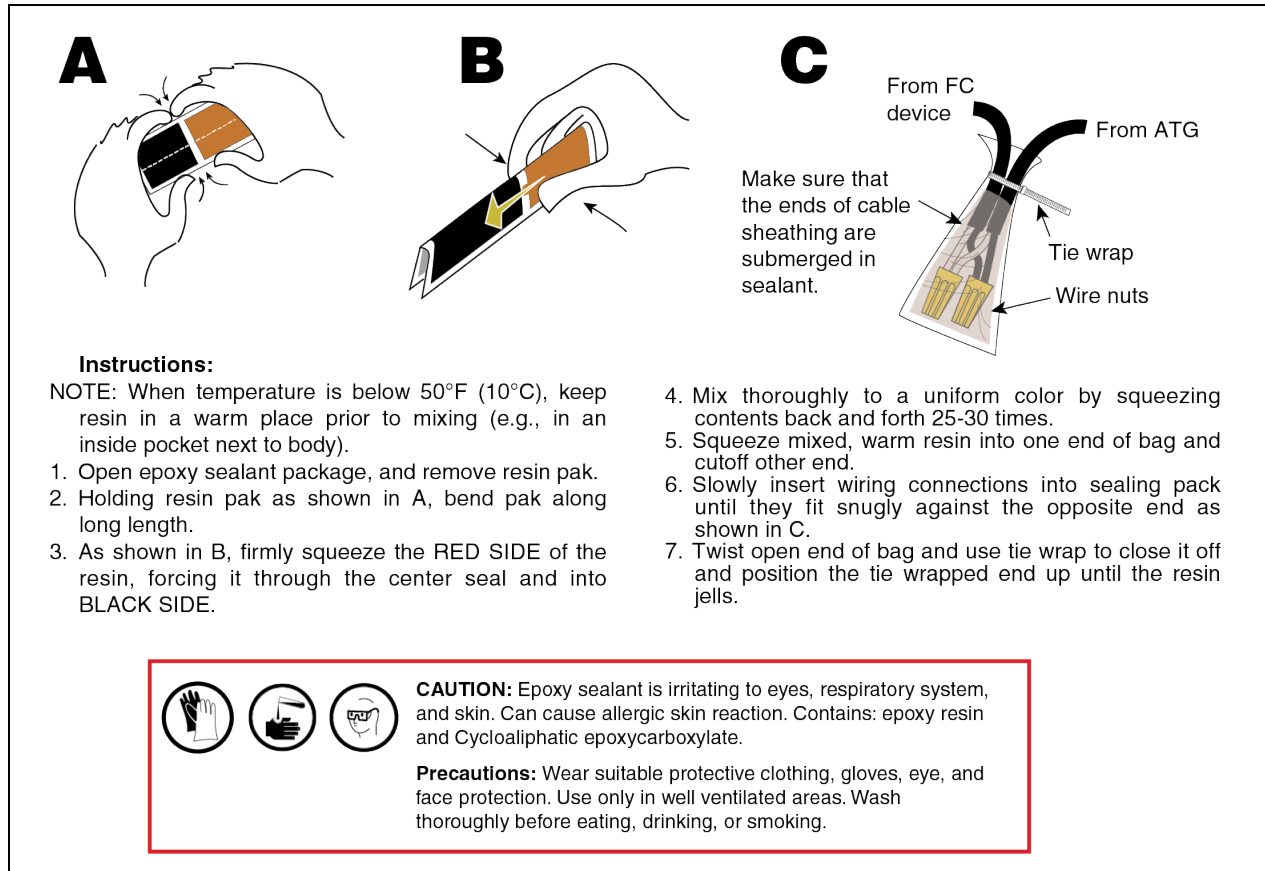


Figure 2. Epoxy Sealing Pressure Sensor Field Wiring

9. Replace the HydrX Outlet Filter and cap. Tighten filter cap nut until snug.
10. Turn on power the STP.
11. Re-open the pump STP Adapter ball valve (see Figure 1).
12. Enable the HydrX Pressure Sensor that was disabled in Step 4.
13. Run a Fill Cycle to refill HydrX with fuel from the tank as outlined below for ATG and FCC controlled HydrX systems.

FILL CYCLE - ATG CONTROLLED HYDRX

1. Touch **Menu>Diagnostics>Hydrx>Overview** (Item 1, Figure 3) to open the HydrX Diagnostic Overview screen (see Figure 4).

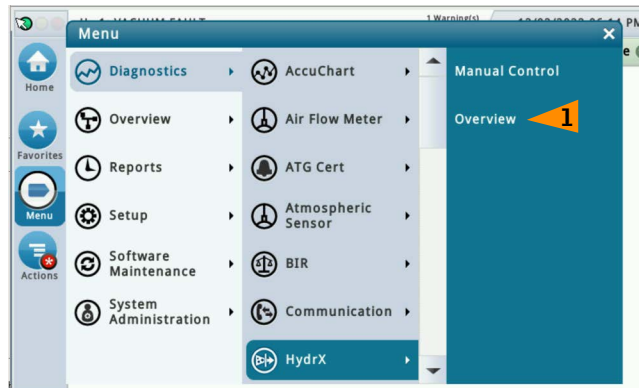


Figure 3. Accessing HydrX Diagnostic Overview Screen

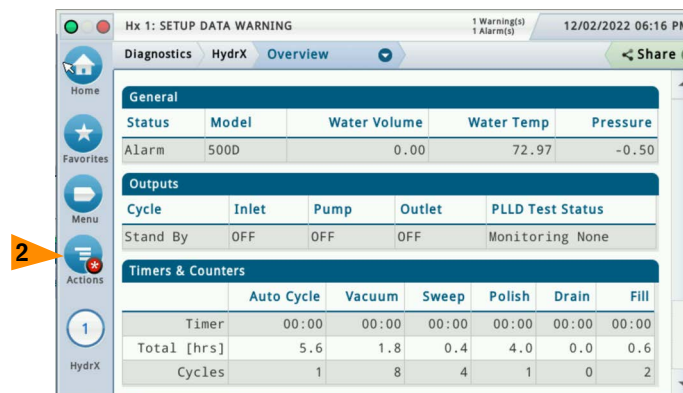


Figure 4. HydrX Diagnostic Overview Screen

2. Touch the **Actions** button (Item 2, Figure 4) to open the HydrX diagnostic service buttons menu. Note: Gray Action buttons are disabled.

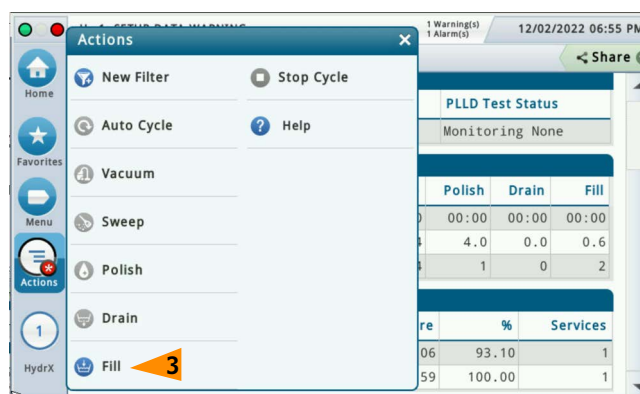


Figure 5. HydrX Diagnostic Service Menu

3. Touch **Fill** (Item 3, Figure 5) to refill the HydrX filter compartments with fuel from the tank.

FILL CYCLE - FCC CONTROLLED HYDRX

1. At the Fuel Conditioning Controller Display Home screen, touch the Service button (Figure 6) to open the FCC Service Home screen (see Figure 7).

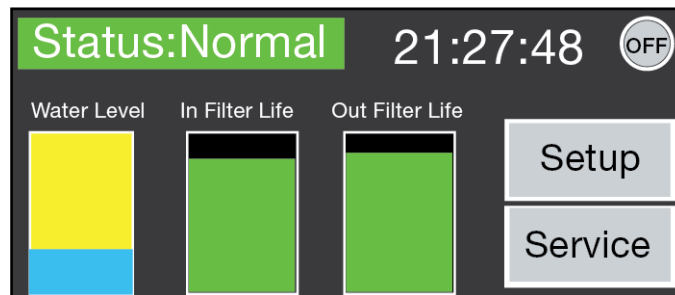
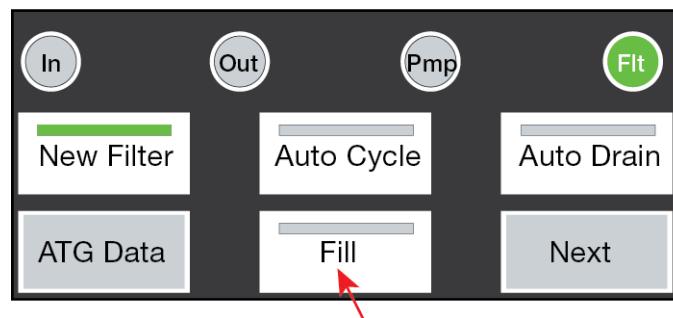


Figure 6. FCC Display Home Screen

2. Touch the **Fill** button to refill the Fuel Conditioner filter compartments with fuel from the tank.



Touch to refill the
FC tank with fuel

Figure 7. FCC Service Home Screen

For additional assistance, please contact Veeder-Root Technical Support by phone at 800-323-1799 or by email to technical-support@veeder.com.