PMP CORPORATION

Installation Instructions

New PMP Dual-Point Hydrostatic Brine Reservoir Sensor

PMP # 63303 Dual-Point Hydrostatic Sensor
Similar to Veeder-Root® #794380-303

Contents

Disclaimer

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Related Manuals

This installation requires specific knowledge of Veeder-Root equipment and you may need to refer to the following OEM manuals to complete the installation:

576013-879   TLS-3XX Series Console Site Prep and Installation Manual
577013-879   TLS-4XX Series Console Site Prep and Installation Manual
576013-795   Hydrostatic Reservoir Sensor Installation Guide
577013-750   Sensor Product Application Guide
577013-814   Operability Testing Guide
576013-818   TLS-3XX Series Consoles Troubleshooting Guide

In addition, installation of this sensor may require that you set the brine level before putting the sensor into service. This will require knowledge on how to set the brine level for your particular tank. This will process may vary by tank manufacturer and will require that you know the, level of the fuel, temperature of the fuel and diameter of the tank.

Brine solutions: Up to 50% ethylene glycol in water; up to 50% propylene glycol in water; salt brine solution of up to 30% CaCl

Safety Symbols

The following safety symbols are used to alert you to potential hazards and precautions that should be taken. These symbols are not intended to alert you to all of the potential hazards you could be exposed to while working in a service station environment. These symbols cannot replace common sense and industry practices.

	Read and understand all of the written material related to the installation of this product. If you are un-sure of any aspect of this product, contact PMP for clarification
	Attention. Pay particular attention to the text adjacent to the use of this symbol to alert you to safety or operational issues.
	Remove / disconnect all power before proceeding with this installation.
	Potential shock hazard. Test circuit to verify power has been disconnected
	Cordon off work area with barriers to avoid contact with traffic
	Potentially explosive materials and or atmosphere. Take necessary precautions.
	Potentially flammable materials and or atmosphere. Take necessary precautions.
	Use appropriate safety equipment including equipment that may be mandated by federal, state and local regulations

BEFORE YOU BEGIN

- **Service station equipment has both electricity and hazardous, flammable and potentially explosive liquid. Failure to follow the precautions below and instructions in this guide may result in serious injury and death. Follow all rules, codes and laws that apply in your area.**

- **Veeder-Root requires training certifications for contractors who install and set up equipment related to the TLS console. Installers of this product must have a Veeder-Root® certification of Level 2/3. Be sure that you have familiarized yourself with these requirements and determined if you are qualified to perform this installation.**

- **PMP shall not be liable for errors contained herein or for incidental or consequential damages in connection with furnishing, performance or use of this publication.**

- **PMP reserves the right to change product features or the information contained in this publication.**

- **Failure to install this product in accordance with OEM instructions and warnings will result in voiding of all warranties connected with this product and may damage the environment.**

SAFETY PRECAUTIONS FOR INSTALLATION AND MAINTENANCE

- **Only a person with knowledge and experience with service station equipment should perform this work.**

- **Always make sure ALL power to the equipment you are working with is turned OFF before starting any maintenance.**

- **Note that more than one disconnect switch may be required to de-energize the equipment for maintenance and servicing. Use a voltmeter to make sure ALL circuits in the dispenser are de-energized. Failure to do so may result in serious injury.**

Description

PMP Corporation's 63303 Hydrostatic sensors are used in double walled tank brine reservoirs. The sensor, via the TLS, monitors the level of the brine solution. The alarms provided will vary by model.

Sensor Models

| PMP Number	OEM Number	Description
63303	793480-303	Dual Point Hydrostatic Sensor

*An "Interstitial Sensor Interface Module is required for TLS-350 consoles. A "Two-Wire Module" is required for ILS-350 systems

In the box

Contents	Qty
Sensor	1
12' sensor cable	1
Installation instructions	1
Cable tie wrap,	2
Wire nut, P2 blue	2
Cord-grip, 1/2 NPT	1
3M Scotchcast™ Seal Pack	1

IMPORTANT: This sensor does not include a vented riser cap. A vented cap will be required to complete the installation. If re-using the existing cap, check the integrity of the cap, fittings, seals and vent prior to installation.

3M 3570G-N

3M 3570G-N
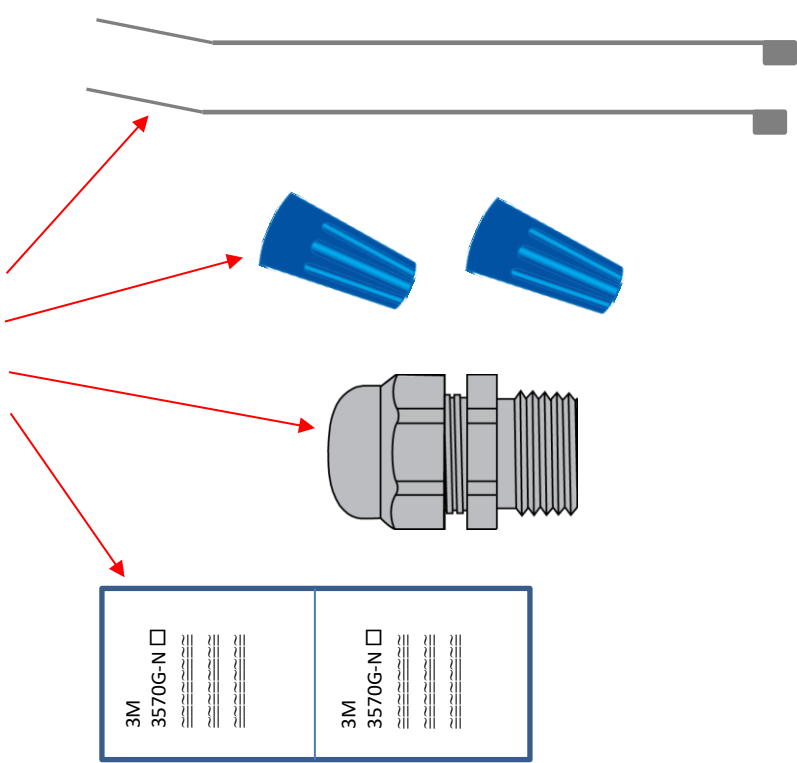
Installation Prep

Note: You must refer to the OEM manuals listed earlier in this manual for detailed instructions including console setup.

Reminder: If you are unsure of the condition of the backup battery or the last time the console was backed-up, now may be a good time to consider performing a system backup and replacing the battery prior to removing power from the console.

1. Turn-off power to the system.

2. Block off the work area.

3. Confirm you have the correct sensor for your application.

SAFETY
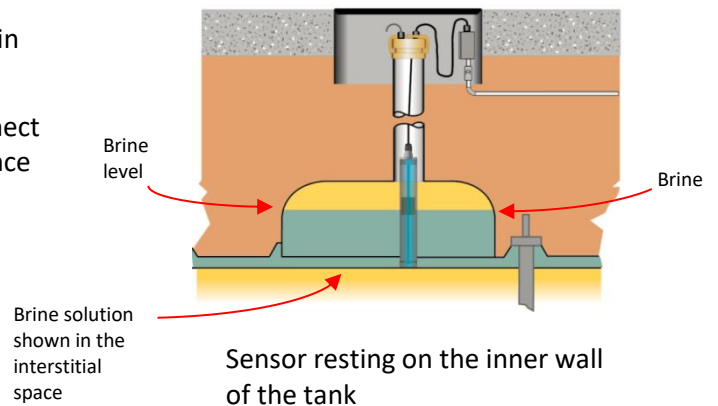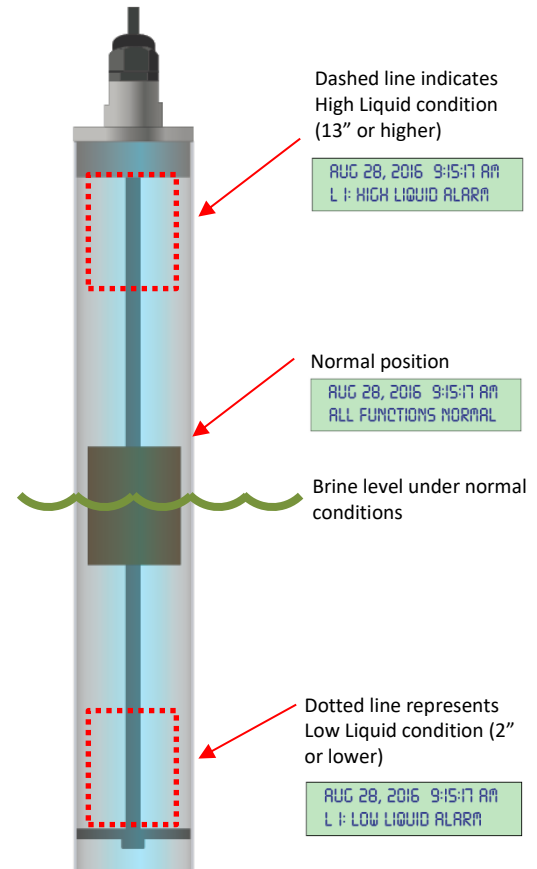EQUIPMENT

Installation of the 63303 Sensor

Before you begin: refer to the OEM manuals listed earlier in this manual for detailed instructions on the console setup. Refer to the tank manufactures instructions for setting the proper brine level.

1. The brine solution level should be approximately half the depth of the reservoir.

2. After you have confirmed the brine level is correct, lower the sensor into the riser until the sensor rests on the inner tank wall.

3. The float should rise to approximately the center of the sensor.

4. Feed the sensor cable through the cord grip on the riser cap.

5. Place the cap on the riser pipe and secure it in place.

6. Pull the wire through the cord grip to remove excess wire between the sensor and the riser cap, but not enough to raise the sensor off the bottom of the reservoir.

7. Tighten the cord grip on the riser cap.

8. Dress the wire as necessary and feed the wire in the junction box.

9. Using the wire nuts and seal kit provided, connect the sensor wires to the field wiring in accordance with applicable codes.

10. Return the cover to the junction box and secure.

11. Restore power to the console

Dashed line indicates High Liquid condition (13" or higher)

AUG 28, 2016 9:15:17 AM
L 1: HIGH LIQUID ALARM

Normal position

AUG 28, 2016 9:15:17 AM
ALL FUNCTIONS NORMAL

Brine level under normal conditions

Dotted line represents Low Liquid condition (2" or lower)

AUG 28, 2016 9:15:17 AM
L 1: LOW LIQUID ALARM

Brine level

Brine

Brine solution shown in the interstitial space

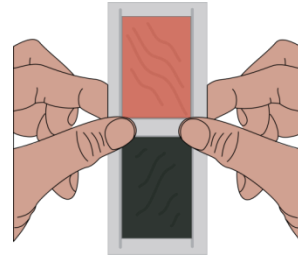Sensor resting on the inner wall of the tank
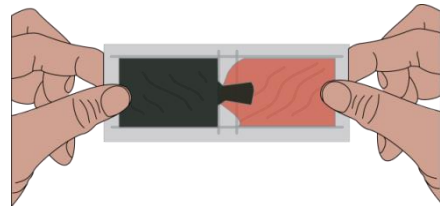
How to use the Connector Sealing Kit

1. Carefully cut the bag and remove the seal pack.
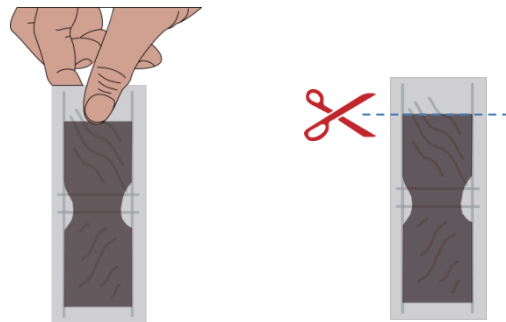
2. Remove the two part seal pack.
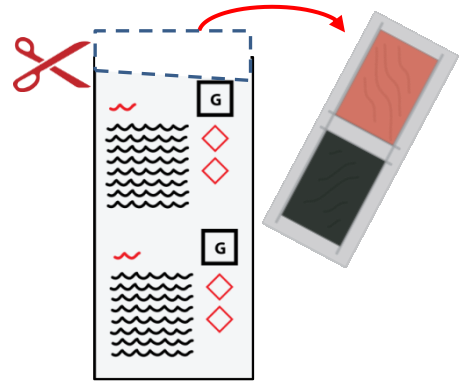
3. Grip the edges of the seal pack at the center and vigorously wiggle the plastic bag to weaken the barrier between the two halves.

4. Squeeze the resin back and forth 25-30 times to thoroughly mix the two parts.

5. Squeeze the mixed resin to one side of the packet and cut off the other side.
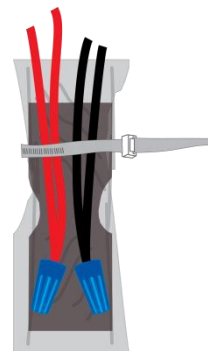

6. Insert the connections made above. **Be sure the connections are inserted to the full depth of the seal pack to ensure a watertight connection.**

7. Use the wire tie provided to cinch the packet, where shown, to secure the wires in the epoxy pack during the curing process.

Cure time is approximately 8-12 min @ 73°F.

Complete the installation

1. Enclose the wiring and seal kit in the junction box.

2. Re-install the junction box cover.

3. Check to be sure all of the cord grips have been tightened to make them water tight.

4. Restore power to the console and proceed with the setup process.

## Functional / Maintenance Test Procedure

What you will need:

- Safety equipment including (but not limited to), barricades, safety glasses, safety vests, fire extinguisher etc. per federal, state and local requirements.
- 1 container for testing with water. This container must be larger in diameter than the sensor and tall enough to hold 17" of water.

Testing Conditions

Depending on the model of sensor being tested, the alarm conditions will vary:

63303 - For Dual Point sensors, the TLS-350 will display All Functions Normal when the brine solution is at the mid-point of the sensor, Low Liquid Alarm for low brine levels and High Liquid Alarm for high brine levels
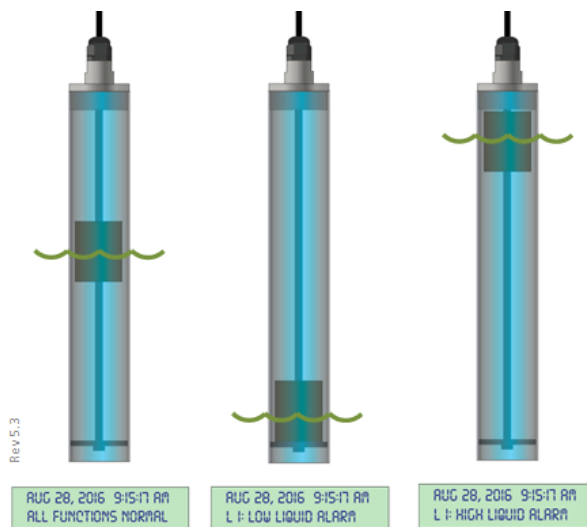
Testing Procedure

1. The testing process should begin with the console indicating All Functions Normal

2. Remove the sensor from the reservoir.

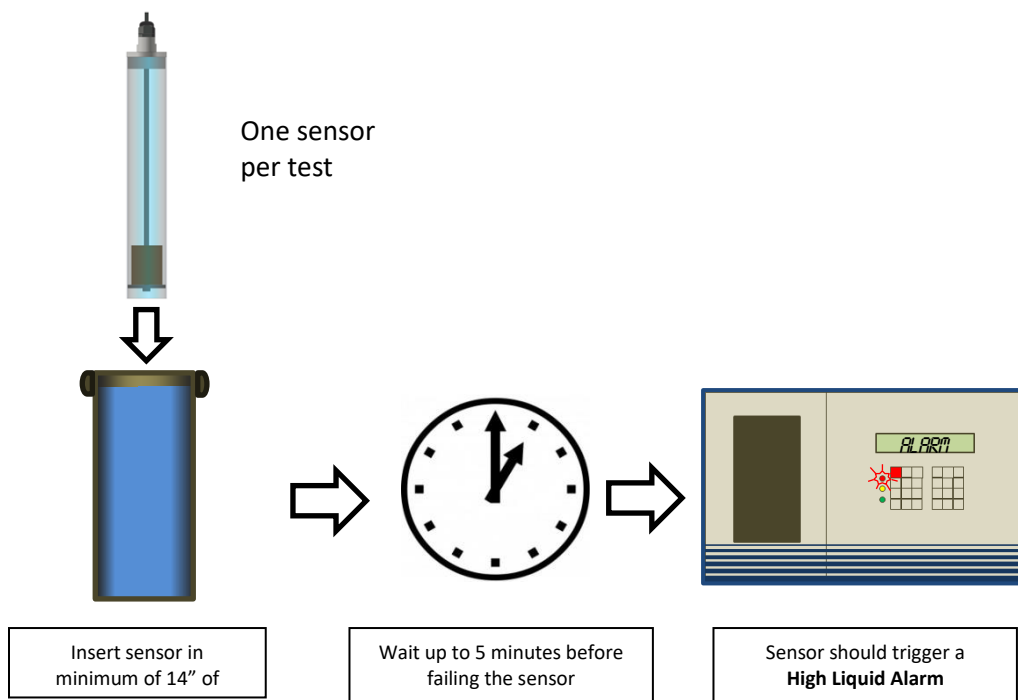3. Removing either sensor from the reservoir should trigger an alarm.

   A Dual Point 63303 sensor should trigger a Low Liquid Alarm within 5 minutes. If so, move on to step #4. **If the sensor has not triggered a Low Liquid Alarm, the sensor has failed the test**.

4. Inspect the sensor for any physical damage including cables and connections.

5. To test the High Liquid condition of the 63303 sensor, submerge the sensor in at least 14" of water or brine solution.

6. The sensor should now trigger a High Liquid alarm on the TLS. Depending on the console and site configuration, it may take up to 5 minutes to trigger an alarm.

7. Clear the alarm on the TLS-350 by pressing the Alarm / Test key or pressing the Alarm button twice on the TLS-450.

8. **If an alarm is not detected, the sensor has failed the test and it must be replaced**

9. Record the test results for your records.

One sensor per test

Insert sensor in minimum of 14" of	Wait up to 5 minutes before failing the sensor	Sensor should trigger a **High Liquid Alarm**

Quick Reference

Installation and Operation manuals

PMP provides an overview of the sensor installation with each sensor shipped. These installation overviews can also be found on the internet at www.pmp-corp.com. Refer to the OEM manuals listed above for detailed installation instructions.

Equipment Check Guidelines

No vendor specific checklist is provided for the equipment used to monitor these sensors. However, the EPA provides a useful checklist for Underground Storage Tank (UST) owners. The current checklist as of the publication of this PMP Pulse is the document EPA 510-K-16-001, Operating And Maintaining Underground Storage Tank Systems dated February, 2016. It can be downloaded from the EPA's website at http://www.epa.gov/ust.

Equipment Calibration

No calibration is required for the sensors discussed in this document.

Maintenance Procedures

Periodic maintenance may be required by local regulations. Operability test guidelines for each sensor can be obtained from PMP or be found on the internet at www.pmp-corp.com. Sensors should be tested at least annually. However, Federal, State or Local regulations may require more frequent inspections and testing.

Test Results/Reports

Third party evaluations were conducted by Ken Wilcox and Associates. Test results can be obtained from PMP.

Technical Contact

Support questions can be directed to the Engineering department at PMP. Refer to the contact information printed at the bottom of this page.