## Installation Instructions

# Remanufactured Veeder-Root® Discriminating Dispenser Pan and Containment Sump Sensors

## PMP # 62322, 62352
### Replaces Veeder-Root #794380-322, -352

# 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
576013-306    Dispenser Pan Sensors & Containment Sump Sensors Installation Guide
577013-750    Sensor Product Application Guide
577013-814    Operability Testing Guide
576013-818    TLS-3XX Series Consoles Troubleshooting Guide

## 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-350. 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.
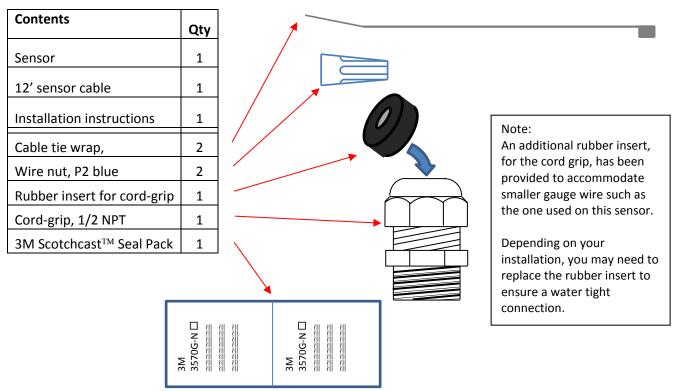
## Description

PMP Corporation's 62322 and 62352 discriminating sensors are used in dispenser pans and containment sumps. The sensor senses the presence of fluid and can differentiate between water and hydrocarbons. If the 62322 or 62352 detect water or fuel, an alarm is generated and logged in the ATG console.

## Sensor Models

| PMP Number | OEM Number | Description |
|---|---|---|
| 62322 | 793480-322 | Dispenser Pan Sensor * |
| 62352 | 793480-352 | Containment Sump 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 |
| Rubber insert for cord-grip | 1 |
| Cord-grip, 1/2 NPT | 1 |
| 3M Scotchcast™ Seal Pack | 1 |

Note:
An additional rubber insert, for the cord grip, has been provided to accommodate smaller gauge wire such as the one used on this sensor.

Depending on your installation, you may need to replace the rubber insert to ensure a water tight connection.

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. The battery can be purchased from PMP using # 80200.

1. Turn-off power to the system.

2. Block off the work area.

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

4. Confirm that there is no liquid in the sump prior to installing the sensor.
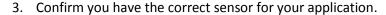
SAFETY
EQUIPMENT

## Installation of the Sensor

Note: You must refer to the OEM manuals listed earlier in this manual for detailed instructions including console setup.
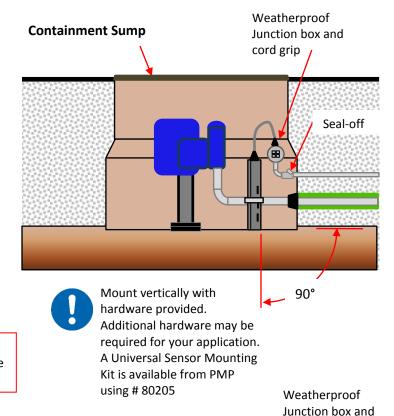
1. Mount the sensor in a spot where it can easily be removed for testing.

2. **Do not** mount on flexible product lines.

3. Sensor must be mounted vertically at the lowest point in the sump. Note: some dispensers will have a cup molded into the bottom of the sump specifically for mounting a sensor.
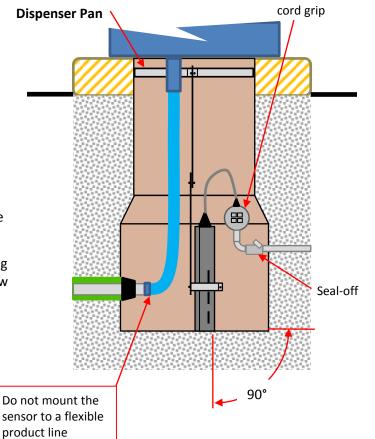
Do not mount the sensor to a flexible product line

**Containment Sump**

Weatherproof Junction box and cord grip

Seal-off

90°

Mount vertically with hardware provided. Additional hardware may be required for your application. A Universal Sensor Mounting Kit is available from PMP using # 80205

## Complete the installation

1. Install the cord grip in the junction box

2. Feed the sensor cable though the cord grip.

3. Using the wire nuts provided, connect the sensor wires to the field wiring in accordance with applicable codes.

4. Place the field wiring in the Connector Sealing Pack provided. See instructions below on how to use the Connector Sealing Pack.

5. Tighten the cord grip.

Do not mount the sensor to a flexible product line

**Dispenser Pan**

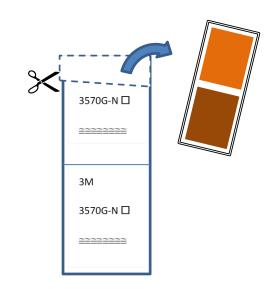Weatherproof Junction box and cord grip

Seal-off

90°

Mount vertically with hardware provided. Additional hardware may be required for your application. A Universal Sensor Mounting Kit is available from PMP using # 80205
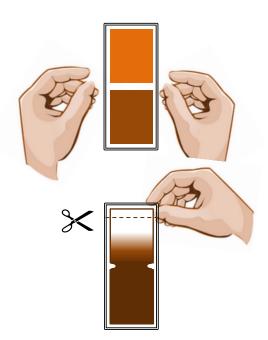
6

## How to use the Connector Sealing Kit

a. Carefully cut the bag and remove the seal pack.

b. Remove the two part seal pack.

c. Grip the edges of the seal pack at the center and vigorously wiggle the plastic bag to weaken the barrier between the two halves.

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

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

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

g. Use the wire tie provided to cinch the packet, where shown, to secure the wires in the epoxy pack during the curing process. You can also use electrical tape to secure the wires if you prefer.

h. 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 30" of water and be marked with the heights outlined below.
- 1 container suitable for use with fuel. This container must also be larger in diameter than the sensor and tall enough to hold 1" (+) of fuel and be marked with the heights outlined below.
- If you will be testing in diesel or kerosene, you will need enough Coleman® Fuel to soak the sensor.

## Testing for a Low Liquid Alarm

1. Remove the sensor from the pan or sump and move to a safe area.
2. Inspect the sensor for any physical damage including cables and connections.
3. Fill a container with a minimum of 2 inches of water.
4. Place the sensor in the container, oriented as it would be installed, until it is submerged.
5. The sensor should trigger an alarm on the TLS. Depending on the console and site configuration, it may take up to 5 minutes to trigger an alarm.
6. Clear the alarm on the TLS-350 by pressing the Alarm / Test key or pressing the Alarm button twice on the TLS-450.
7. **If an alarm is not detected, the sensor has failed the test and must be replaced**
8. If the sensor passed the test, allow the sensor to dry and reinstall per the installation instructions.
9. Record the test results for your records.

One sensor
per test

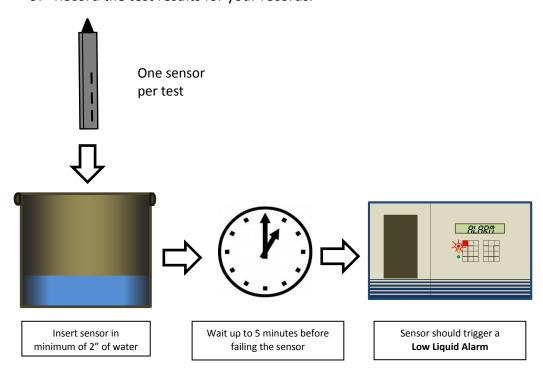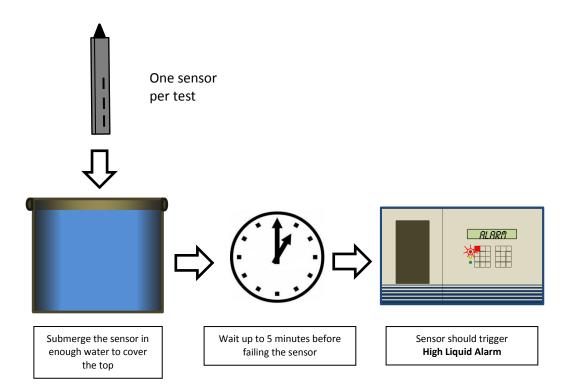| Insert sensor in minimum of 2" of water | Wait up to 5 minutes before failing the sensor | Sensor should trigger a **Low Liquid Alarm** |
|---|---|---|

## Testing for a High Liquid Alarm

1. Remove the sensor from the pan or sump and move to a safe area.

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

1. Add enough water to the test container so the sensor will be completely submerged.

2. Place the sensor in the container, oriented as it would be installed, until it is submerged.

3. The sensor should trigger an alarm on the TLS. Depending on the console and site configuration, it may take up to 5 minutes to trigger an alarm.

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

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

6. If the sensor passed the test, allow the sensor to dry and reinstall per the installation instructions.

7. Record the test results for your records.

One sensor
per test

| Submerge the sensor in enough water to cover the top | Wait up to 5 minutes before failing the sensor | Sensor should trigger **High Liquid Alarm** |

## Testing for a Fuel Alarm

**If fuel testing is required, time must be allowed for the sensor to recover prior to putting the sensor back into service. Recovery times can vary significantly depending on the fuel type, temperature and how long the sensor was exposed to fuel. Sensors exposed to gasoline must be dried off, stored in a well ventilated area and allowed to recover for up to 7 days. Sensors exposed to fuels like diesel must be soaked for 30 minutes in Coleman® Fuel before beginning the recovery period. Actual wait times may be less. However, if the sensor is put back into service prior to fully recovering, the sensor may trigger false alarms.**
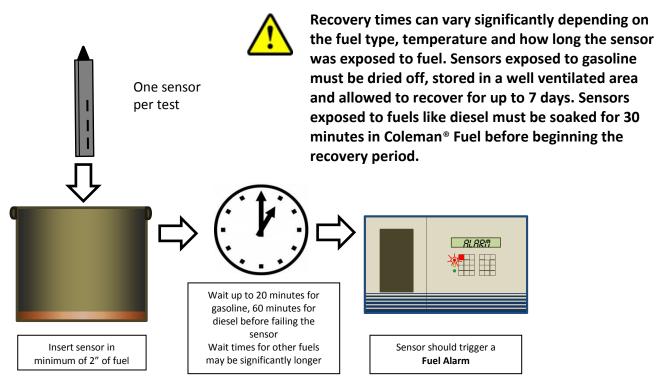
1. Remove the sensor from the pan or sump and move to a safe area.
2. Inspect the sensor for any physical damage including cables and connections.
3. Fill a second container (made of fuel resistant material) with a minimum of 1" of fuel.
4. Place the sensor in the container, oriented as it would be installed, until the sensor material is submerged.
5. The sensor should trigger an alarm on the TLS. Response time will vary significantly depending on the fuel being used and the console / site configuration. For example; in gasoline, you must wait at least 5 minutes. In diesel, you must wait at least 60 minutes. In some cases, response time could take as long as 12 hours.
6. Clear the alarm on the TLS-350 by pressing the Alarm / Test key or pressing the Alarm button twice on the TLS-450.
7. **If an alarm is not detected, the sensor has failed the test and must be replaced**
8. If the sensor passed the test, the sensor must be allowed to recover
9. After the sensor fully recovers, reinstall per the installation instructions.
10. Record the test results for your records.

**Recovery times can vary significantly depending on the fuel type, temperature and how long the sensor was exposed to fuel. Sensors exposed to gasoline must be dried off, stored in a well ventilated area and allowed to recover for up to 7 days. Sensors exposed to fuels like diesel must be soaked for 30 minutes in Coleman® Fuel before beginning the recovery period.**

One sensor per test

Insert sensor in minimum of 2" of fuel

Wait up to 20 minutes for gasoline, 60 minutes for diesel before failing the sensor
Wait times for other fuels may be significantly longer

Sensor should trigger a
**Fuel Alarm**

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.

**PMP CORPORATION**
P.O. Box 422 • 25 Security Drive
Avon, CT  06001

*A Veteran Owned and Managed Company*

Local:            860-677-9656
Toll Free:         800-243-6628
Toll Free Fax:    888-674-0196
Web:        www.pmp-corp.com
E-mail:    sales@pmp-corp.com        © PMP CORP