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PHASE-TWO™
Mag Plus Probe Float Kits
For Phase Separation Detection

Assembly Guide

VEEDER-ROOT

Notice

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Veeder-Root reserves the right to change system options or features, or the information contained in this publication.

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DAMAGE CLAIMS / LOST EQUIPMENT

Thoroughly examine all components and units as soon as they are received. If any cartons are damaged or missing, write a complete and detailed description of the damage or shortage on the face of the freight bill. The carrier's agent must verify the inspection and sign the description. Refuse only the damaged product, not the entire shipment.

Veeder-Root must be notified of any damages and/or shortages within 30 days of receipt of the shipment, as stated in our Terms and Conditions.

VEEDER-ROOT'S PREFERRED CARRIER

1. Contact Veeder-Root Customer Service at 800-873-3313 with the specific part numbers and quantities that were missing or received damaged.
2. Fax signed Bill of Lading (BOL) to Veeder-Root Customer Service at 800-234-5350.
3. Veeder-Root will file the claim with the carrier and replace the damaged/missing product at no charge to the customer. Customer Service will work with production facility to have the replacement product shipped as soon as possible.

CUSTOMER'S PREFERRED CARRIER

1. It is the customer's responsibility to file a claim with their carrier.
2. Customer may submit a replacement purchase order. Customer is responsible for all charges and freight associated with replacement order. Customer Service will work with production facility to have the replacement product shipped as soon as possible.
3. If "lost" equipment is delivered at a later date and is not needed, Veeder-Root will allow a Return to Stock without a restocking fee.
4. Veeder-Root will NOT be responsible for any compensation when a customer chooses their own carrier.

RETURN SHIPPING

For the parts return procedure, please follow the appropriate instructions in the "General Returned Goods Policy" pages in the "Policies and Literature" section of the Veeder-Root **North American Environmental Products** price list. Veeder-Root will not accept any return product without a Return Goods Authorization (RGA) number clearly printed on the outside of the package.

Figures

Tables

Introduction

This manual describes how to identify and assemble the components of the Mag Plus Probe Phase-Two Float Kit on either a new Mag Plus probe or an existing Mag Plus probe (for retrofit restrictions, see Note 2 in the "Important Requirements 4-Inch Phase-Two Float Kits" paragraph below).

Instructions are included for assembling the Phase-Two Float Kit components onto the probe's shaft, attaching spacer rings to the probe's canister, and attaching the probe's cable to the canister.

For guidelines on site preparation, instructions on installing the probe into a tank, and instructions on connecting wiring from the probe to the console, you must refer to the appropriate Veeder-Root Site Preparation and Installation manual. For Setup information, you must refer to the appropriate Veeder-Root Setup manual.

Important Requirements 4-Inch Phase-Two Float Kits

1. The 4-Inch Phase-Two Float Kit requires V30B software or later in the TLS-350 and V3A software or later in the TLS-450PLUS/TLS4 Series consoles.
2. You can retrofit existing Mag Plus probes with the 4-Inch Phase-Two Float Kit under the following conditions:
   - Only probes having Form Numbers 8463xx-1xx, -2xx, or -3xx are compatible with the Phase-Two Float Kit.
   - Existing canister spacers, floats and boot must be discarded.
3. The float selection entered during in-tank setup must be as follows:

Console	Probe Float Setup Location	Selection
TLS-350	Mode: Setup, Function: In-Tank Setup, Step: Float Size	4.0 IN. PS
TLS-450	Setup button, Devices button, Probes tab, Float Type field	4.0 IN Phase Separation

4. The minimum tank water level measured by the Mag Plus Probe with the Four-Inch Phase-Two Float Kit is 0.38 inches.

Important Requirements 2-Inch Phase-Two Float Kits

1. The 2-Inch Phase-Two Float Kit requires V9W software or later in the 450PLUS/TLS4 Series consoles.
2. You can retrofit existing Mag Plus probes with the 2-Inch Phase-Two Float Kit under the following conditions:
   - Only probes having Form Numbers 8463xx-1xx, -2xx, or -3xx are compatible with the Phase-Two Float Kit.
   - Existing canister spacers, floats and boot must be discarded.
3. The float selection entered during in-tank setup must be as follows:

Console	Probe Float Setup Location	Selection
TLS-450PLUS/TLS4	Setup button, Devices button, Probes tab, Float Type field	2.0 IN Phase Separation

4. The minimum tank water level measured by the Mag Plus Probe with the 2-Inch Phase-Two Float Kit is 0.86 inches.

Contractor Certification Requirements

Veeder-Root requires the following minimum training certifications for contractors who will install and setup 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.

TLS-3xx Technician Certification: Contractors holding valid TLS-350 Technician Certifications are approved to perform installation checkout, startup, programming and operations training, troubleshooting and servicing for all Veeder-Root TLS-300 or TLS-350 Series Tank Monitoring Systems, including Line Leak Detection and associated accessories.

TLS-4xx Technician Certification: Contractors holding valid TLS-450 Technician Certifications are approved to perform installation checkout, startup, programming and operations training, troubleshooting and servicing for all Veeder-Root TLS-450 Series Tank Monitoring Systems, including Line Leak Detection and associated accessories.

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 this and any related documents, and any other Federal, State or Local requirements.

Warranty Registrations may only be submitted by selected Distributors.

Related Manuals

After assembly, consult the appropriate Site Prep and Installation Manual for your console prior to installing the probe in the tank:

- 576013-879 TLS-3XX Site Prep and Installation Manual
- 576013-623 TLS-3XX Setup Manual
- 577013-879 TLS-4XX Site Prep and Installation Manual

Safety Precautions

Retain and follow all product safety and operating instructions. Observe all warnings on the product and in the operating instructions.

⚠WARNING FAILURE TO COMPLY WITH THE FOLLOWING WARNINGS AND SAFETY PRECAUTIONS COULD CAUSE DAMAGE TO PROPERTY, ENVIRONMENT, RESULTING IN SERIOUS INJURY OR DEATH.

Heed service markings: Opening or removing the console cover may expose you to electric shock. Servicing of Veeder-Root equipment must be done by Veeder-Root authorized service contractors.

Use product with approved equipment. This product should be used only with Veeder-Root components.

Safety Symbols

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

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.

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.

NO PEOPLE IN THE AREA
Unauthorized people in the area during service can create a potential for personal injury to you and them.

WEAR EYE PROTECTION
Wear eye protection when working with pressurized fuel lines or epoxy sealant to avoid possible eye injury.

GLOVES
Wear gloves to protect hands from irritation or injury.

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

⚠WARNING **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.

Phase-Two Float Kit Contents

The Mag Plus Probe 4-Inch Phase-Two Float Kit contents are listed in Table 1 and the kit components can be identified in Figure 1. The Mag Plus Probe 2-inch Phase-Two Float Kit contents are listed in Table 2 and the kit components can be identified in Figure 3.

Table 1. 4-Inch Phase-two Float Kit (With Seal Kit) - P/N 886100-0X0

Qty.	Description	Part Number
1	Cable	330272-00X
1	Gasoline Float - 4 inch	331719-001
1	Phase-Two 4-inch Water Float	333168-001
1	White Boot	333246-001
2	Canister Spacers	331555-001
1	Cable Seal Kit	330020-067

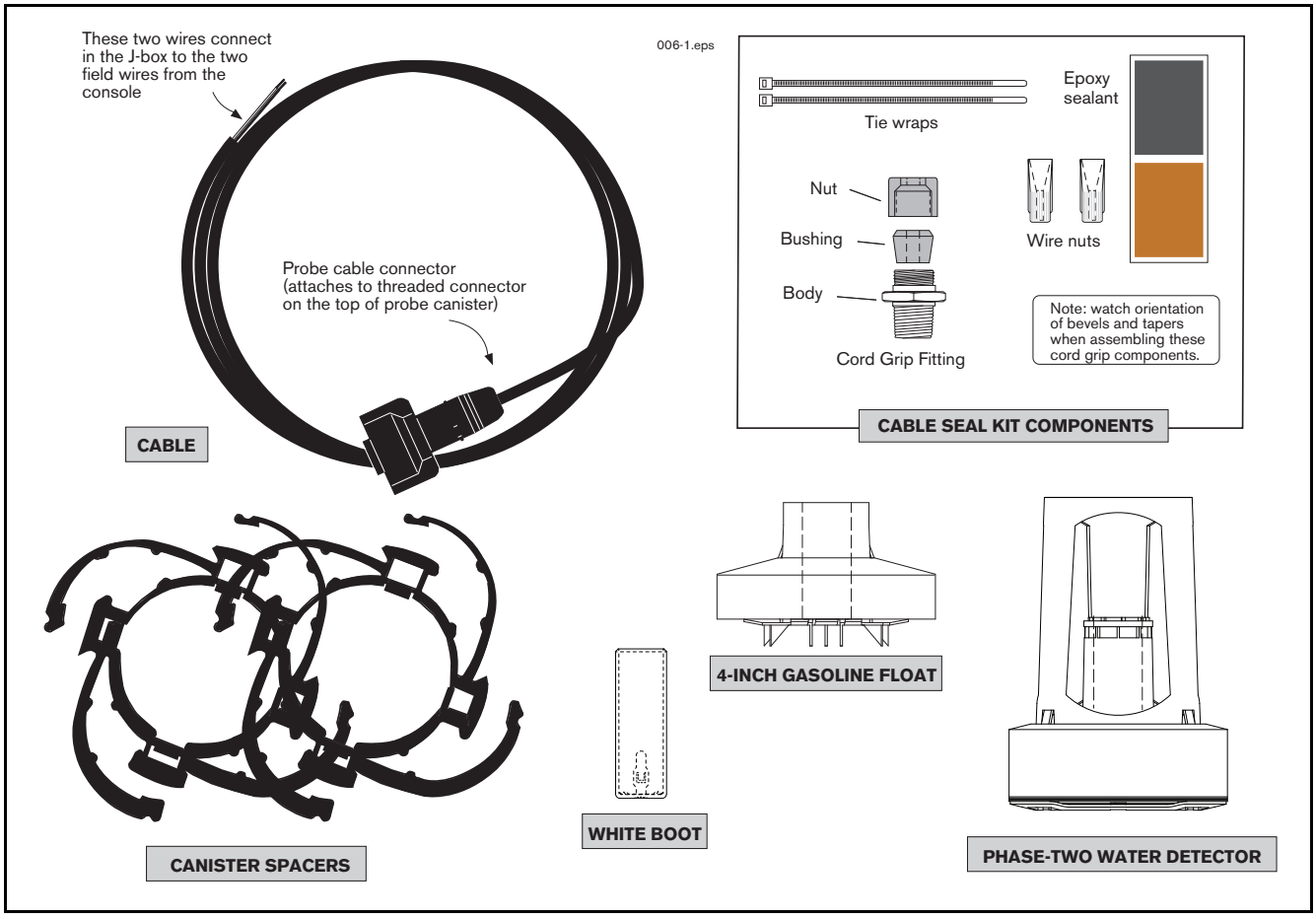

Figure 1. Identifying 4-Inch Phase-Two Float Kit Components

Table 2. 2-Inch Phase-two Float Kit (With Seal Kit) - P/N 886102-100

Qty.	Description	Part Number
1	Cable	330272-001
1	Product Float - 2inch	331627-001
1	Phase-Two 2-inch Water Float	334066-001
1	Boot Group	333202-001
2	Canister Spacers (3- & 4-inch risers)	331555-001
2	Canister Spacers (2-inch risers)	332457-001
1	Cable Seal Kit	330020-067

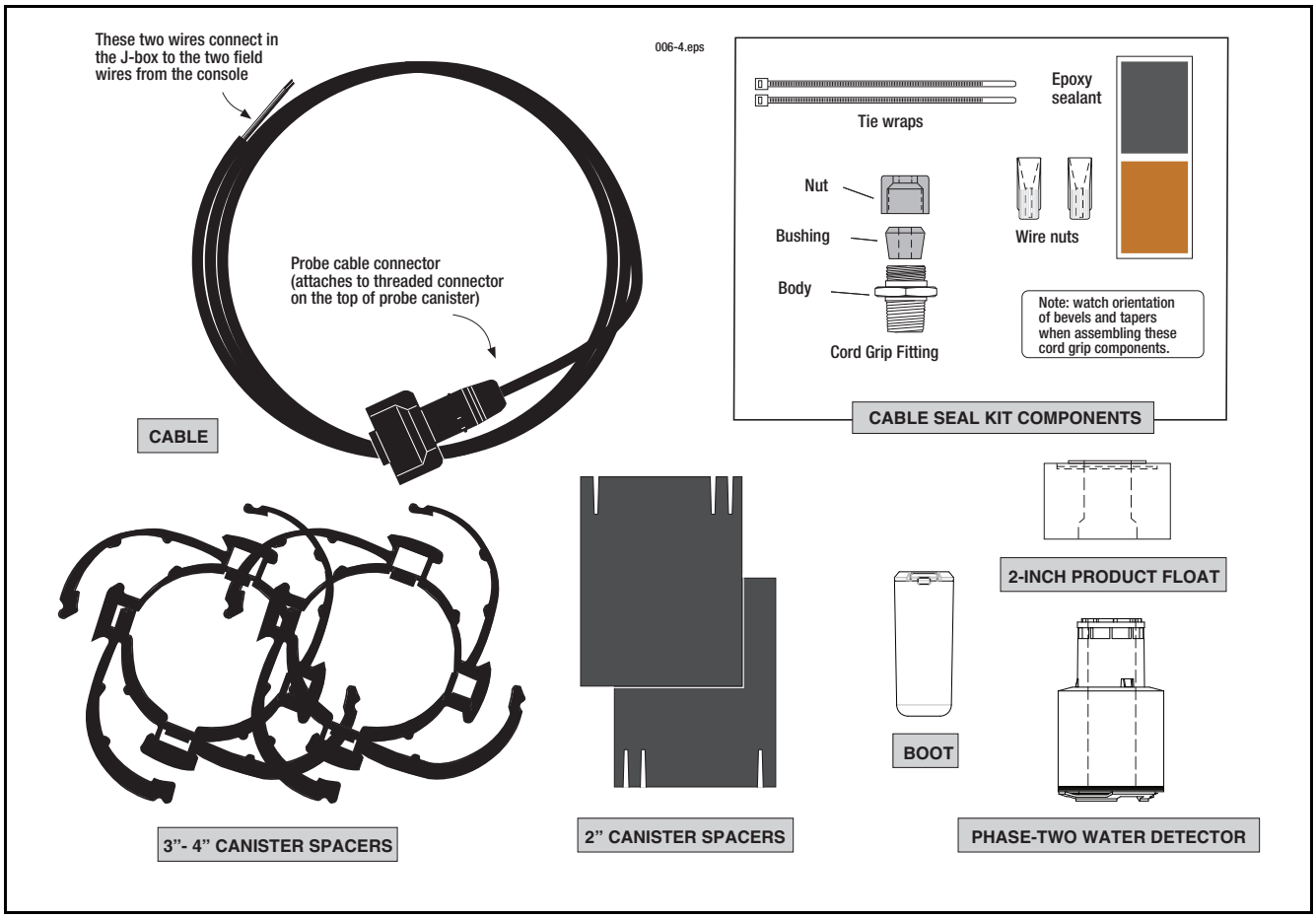

Figure 2. Identifying 2-Inch Phase-Two Float Kit Components

Assembling Kit Components onto Probe

Attaching Probe Canister Spacer Rings (3” & 4” Risers)

1. Remove a new probe from it’s shipping container, or remove a probe to be retrofitted from its tank. Lay the probe on the surface in an area of the site protected from vehicle traffic. If you are retrofitting a probe, remove and discard the existing canister spacers, floats and boot.

NOTICE **<u>Only</u> the white boot is compatible with the 4” Phase-Two Float Kit. Four-inch float kits require a 4” riser.**

2. Open the Phase-Two Float Kit. Set the adjustable arms of the rings for either a 4-inch riser or a 3-inch riser (see Figure 3) as required. Install the two rings onto the probe canister as shown.

NOTICE **You must slide the bottom ring up over the probe shaft and onto the lower end of the canister.**

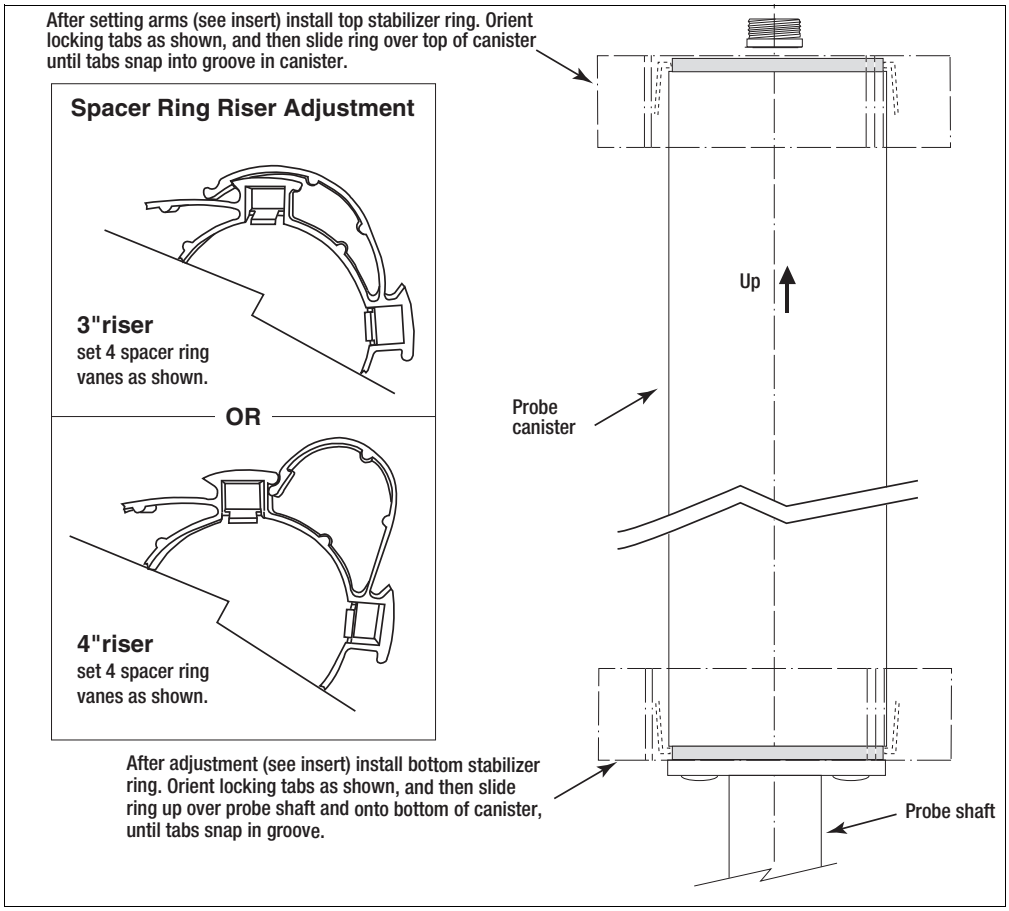

Figure 3. Installing Probe Canister Spacer Rings

Attaching Probe Canister Spacers (2" Risers)

1. Remove a new probe from it's shipping container, or remove a probe to be retrofitted from its tank. Lay the probe on the surface in an area of the site protected from vehicle traffic. If you are retrofitting a probe, remove and discard the existing canister rings, floats and boot.
2. Open the 2-inch Phase-Two Float Kit. Install the two 2-inch canister spacers onto the probe canister as shown in Figure 4.

NOTICE **You must slide the bottom spacer up over the probe shaft and onto the lower end of the canister.**

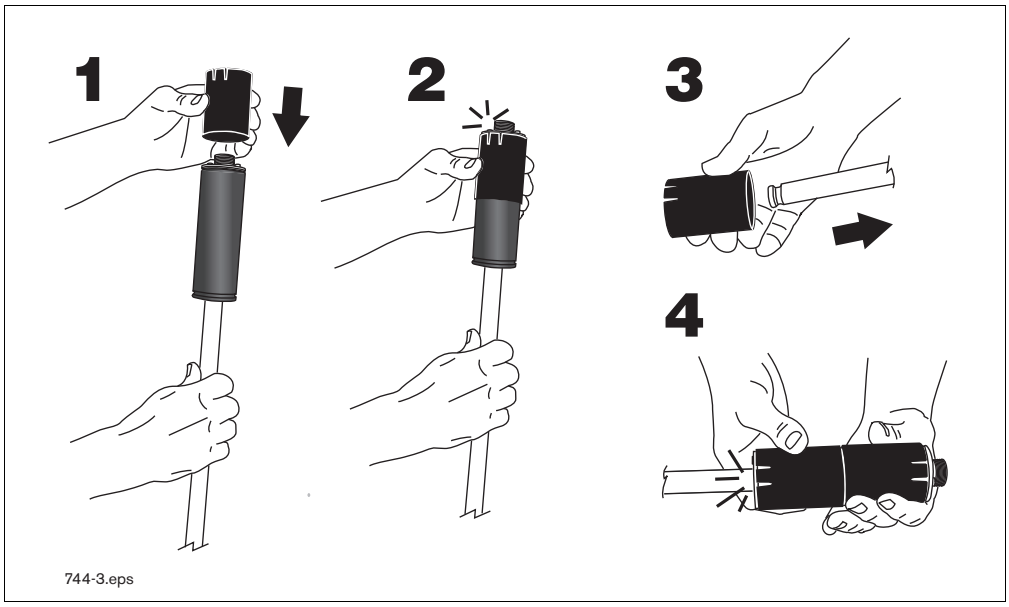

Figure 4. Installing Probe 2" Canister Spacers

Assembling 4-Inch Floats onto Probe Shaft

The Gasoline Float, Phase-Two Water Detector and the White Boot must be assembled on the probe shaft in the exact sequence and orientation shown in Figure 5.

NOTICE **Failure to push the boot as far as possible onto the probe shaft could cause the boot and float(s) to fall into the tank. The boot must be pushed on until it "locks" onto the probe shaft.**

Handle the probe carefully. Striking or dropping the probe will result in loss of calibration and could cause permanent damage.

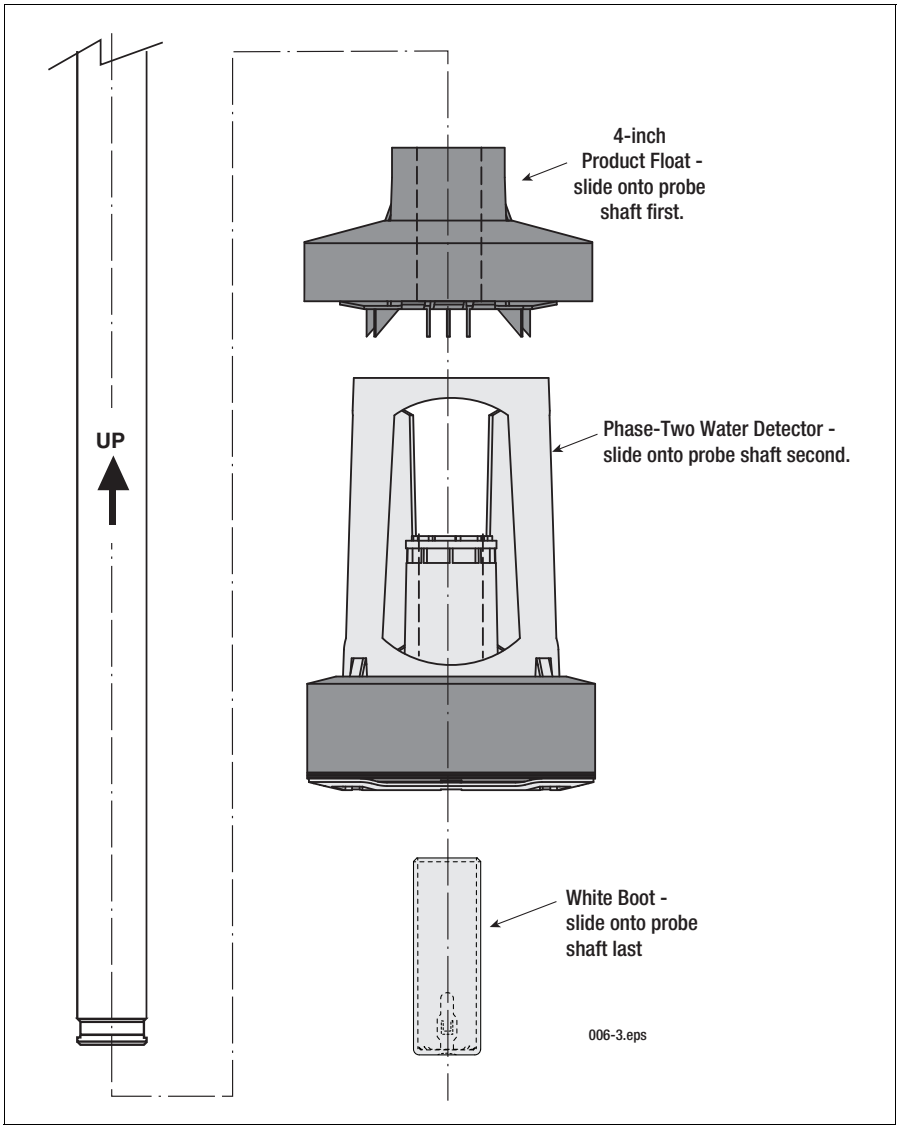

Figure 5. Example installation of 4-Inch Probe Floats and White Boot

Assembling 2-Inch Floats onto Probe Shaft

The Product Float, Phase-Two Water Detector and the Boot must be assembled on the probe shaft in the exact sequence and orientation shown in Figure 5.

NOTICE **Failure to push the boot as far as possible onto the probe shaft could cause the boot and float(s) to fall into the tank. The boot must be pushed on until it "locks" onto the probe shaft.**

Handle the probe carefully. Striking or dropping the probe will result in loss of calibration and could cause permanent damage.

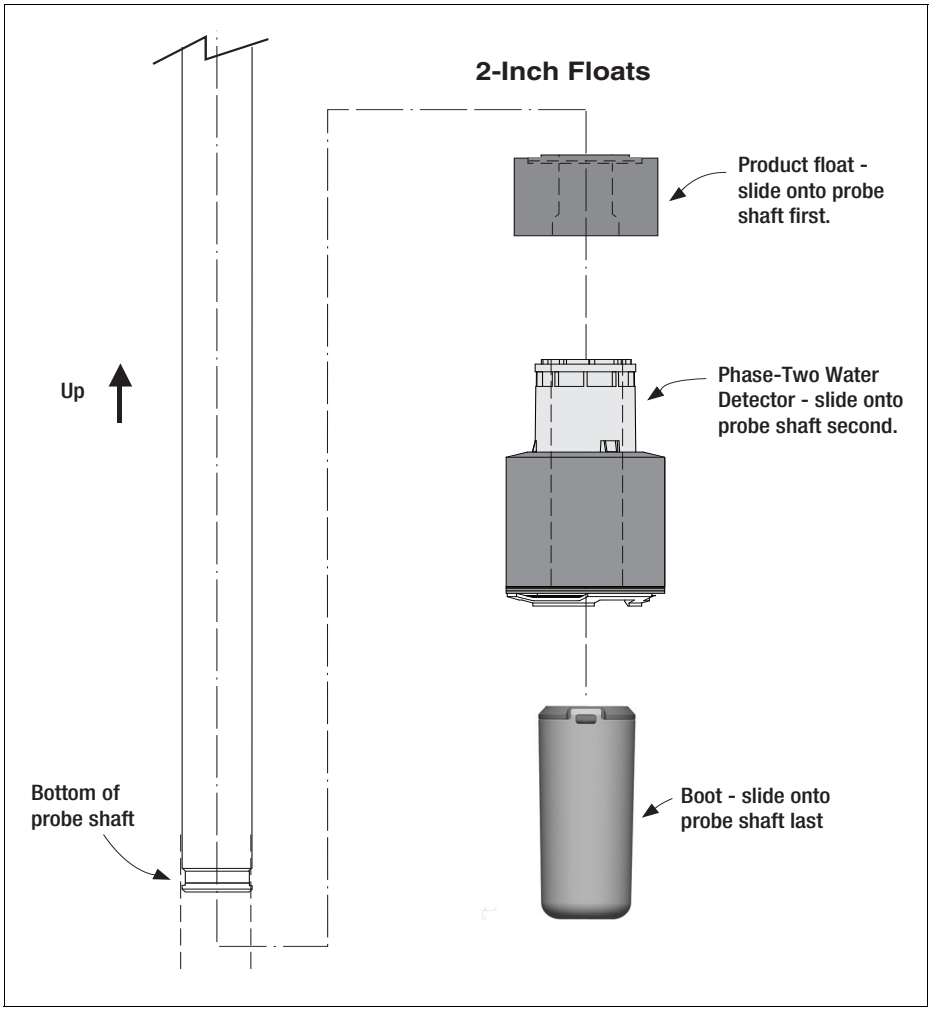

Figure 6. Example installation of 2-Inch Probe Floats and Boot

Installing Probe in the Tank

NEW INSTALLATIONS

1. Insert the probe into the tank. Align the groove in the cable connector with the ridge in the canister connector and push the cable connector down onto the canister connector pins, then tighten down the integral nut.

NOTICE **Do not wiggle the cable connector as you are pushing it into the canister connector or damage to the pins in the canister connector may occur. Tightening the integral nut on the cable connector will properly seat it.**

2. Save the remaining wiring kit components and refer to the console's Site Prep manual for instructions on connecting the probe cable to the field wiring from the console.

3. Refer to the TLS-350 Setup manual or to the TLS-450PLUS/TLS4 Series console's Online help to program the float size selection in the console as per Step 3 in "Important Requirements 4-Inch Phase-Two Float Kits" on page 1.

RETROFIT INSTRUCTIONS

1. Insert the probe into the tank. Align the groove in the cable connector with the ridge in the canister connector and push the cable connector down onto the canister connector pins, then tighten down the integral nut.

NOTICE **Do not wiggle the cable connector as you are pushing it into the canister connector or damage to the pins in the canister connector may occur. Tightening the integral nut on the cable connector will properly seat it.**

2. Refer to the TLS-350 Setup manual or to the TLS-450PLUS/TLS4 Series console's Online help to reprogram the float size selection in the console as per Step 3 in "Important Requirements 2-Inch Phase-Two Float Kits" on page 1.

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For technical support, sales or other assistance, please visit:
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