

# Mag Retrofit Probe

## Installation Guide

# Notice

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# Introduction

This manual describes how to remove a Standard Mag probe and replace it with a Mag Retrofit probe.

## Contractor Certification Requirements






Veeder-Root requires the following minimum training certifications for contractors who will install and setup the equipment discussed in this manual:



- Level 1** Contractors holding valid Level 1 Certification are approved to perform wiring and conduit routing, equipment mounting, probe and sensor installation, tank and line preparation, and line leak detector installation.
- Level 2/3** Contractors holding valid Level 2 or 3 Certifications are approved to perform installation checkout, startup, programming and operations training, troubleshooting and servicing for all Veeder-Root Tank Monitoring Systems, including Line Leak Detection and associated accessories.

**Warranty Registrations** may only be submitted by selected Distributors.

## Safety Precautions

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

 <p><b>ELECTRICITY</b> High voltage exists in, and is supplied to, the device. A potential shock hazard exists.</p>	 <p><b>TURN POWER OFF</b> 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><b>GLOVES</b> Wear gloves to protect hands from irritation or injury.</p>	 <p><b>INJURY</b> Careless or improper handling of materials can result in bodily injury.</p>
 <p><b>WEAR EYE PROTECTION</b> Wear eye protection when working with pressurized fuel lines or epoxy sealant to avoid possible eye injury.</p>	

<b>⚠ WARNING</b>	
 	<p><b>The console contains high voltages which can be lethal. It is also connected to low power devices that must be kept intrinsically safe.</b></p> <p><b>Turn power Off at the circuit breaker. Do not connect the console AC power supply until all devices are installed.</b></p> <p><b>Touching a live circuit can cause electrical shock that may result in serious injury or death.</b></p>

# Installation

## Attaching Probe Canister Spacer Rings

1. Open the installation kit and remove the two canister spacers (see Figure 1).
2. After setting the spacer segments for a 3- or 4-inch riser as required, install the two spacer rings onto the replacement probe's canister. Note: you must slide the bottom spacer over the probe shaft and onto the lower end of the canister

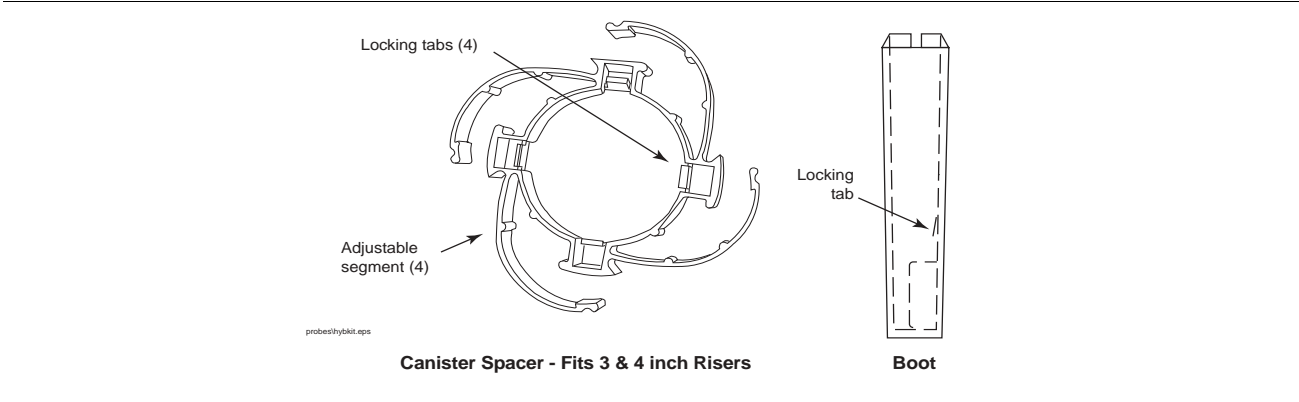


Figure 1. Canister spacer and boot from the installation kit

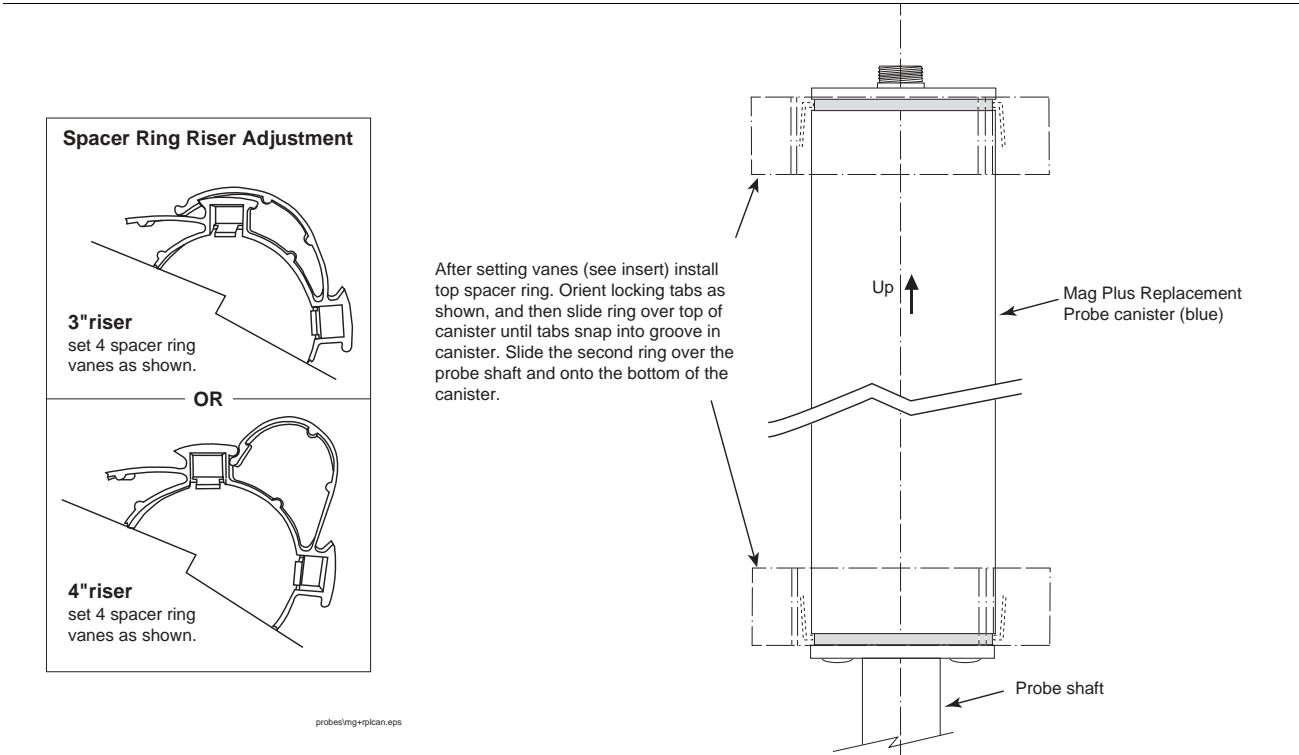


Figure 2. Installing Canister Spacer Rings

### Remove Existing Probe



1. Turn OFF power to the console.

2. Loosen the cord grip on the riser cap of the probe being replaced.



3. Remove the riser cap from the riser and unscrew the cable connector from the top of the probe canister and set aside.

4. Remove the probe from the tank and lay the probe down.

5. Remove the boot from the old probe and discard it. Note that the new and old boots look alike but are **NOT** interchangeable. Remove the product float and water float (if present) from the old probe. Slide the existing float(s) and the **NEW BOOT** from the installation kit (see Figure 1) onto the Mag Retrofit probe shaft in the **exact** sequence shown in Figure 3.

**IMPORTANT!** Carefully slide the new boot onto the probe shaft until the locking tab in the boot snaps into the groove on the shaft (see Figure 4). **DO NOT FORCE THE BOOT BEYOND THIS POINT!**

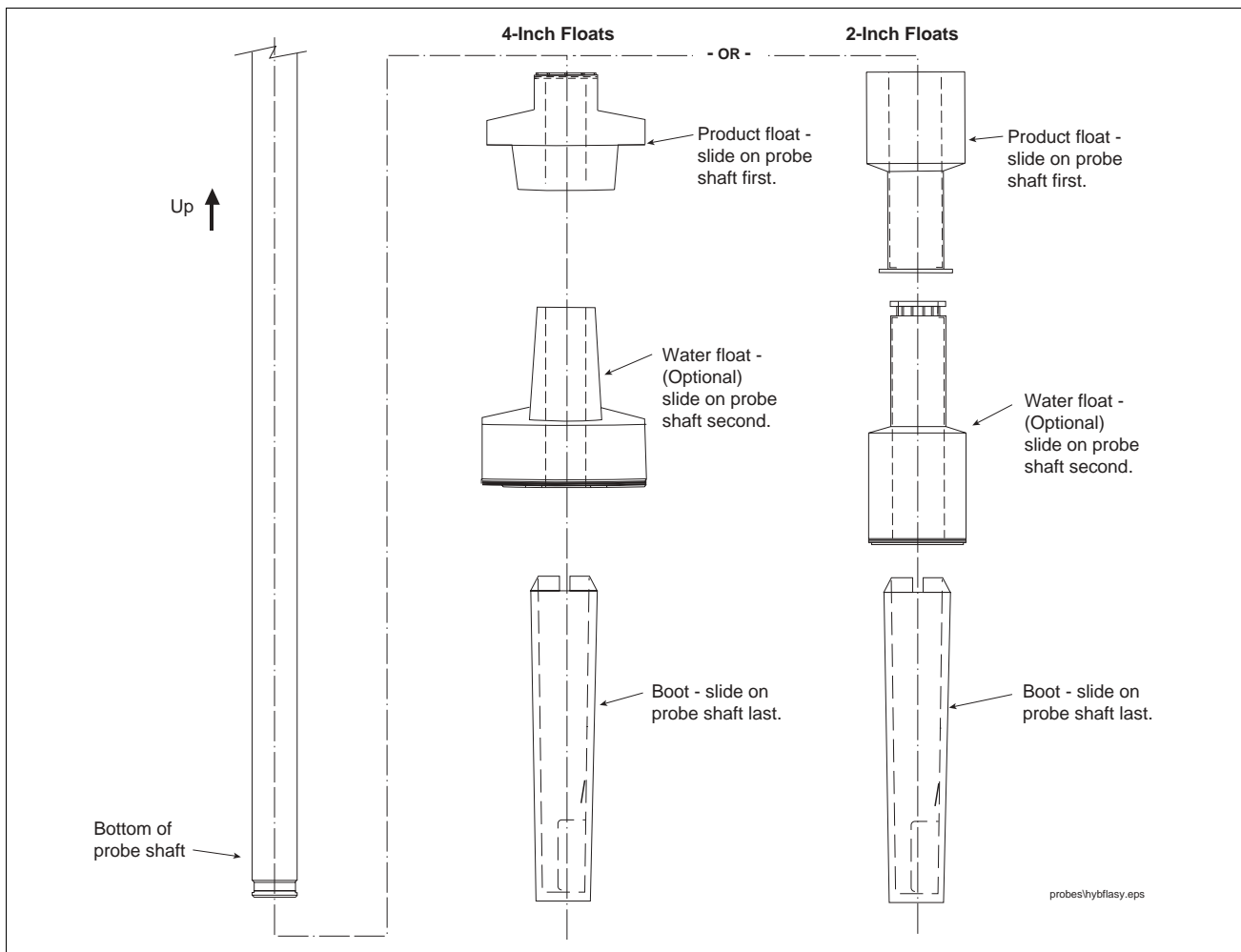


Figure 3. Probe float installation

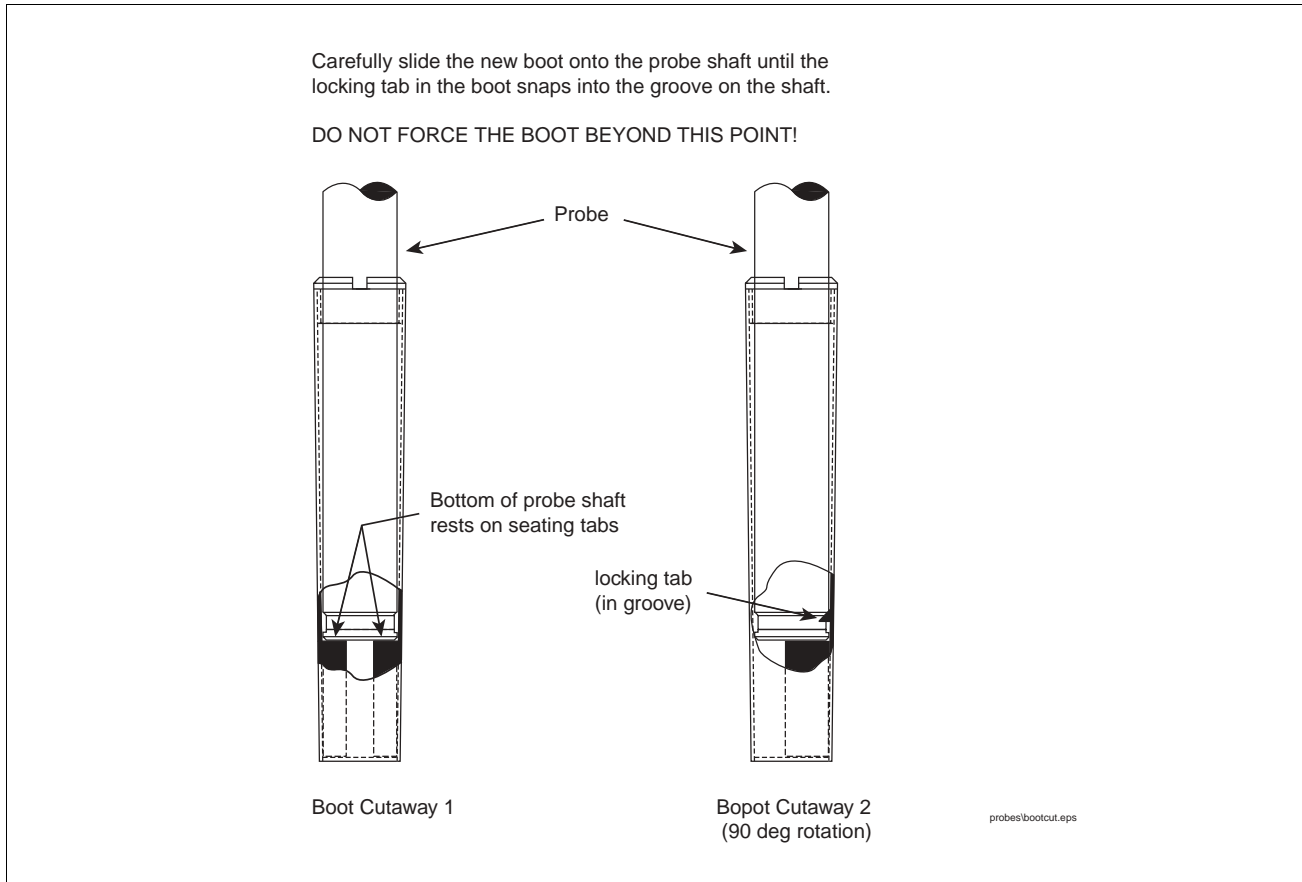


Figure 4. Correctly installing boot

## Lowering Probe into Tank

1. Turn OFF power to the console.
2. Remove any sludge from the bottom of the tank.
3. Verify that floats and boot are assembled correctly on the Mag Retrofit probe.
4. Gently slide the float(s) to the bottom of the probe shaft before raising the probe. Carefully lower the probe into the riser pipe until it rests on the bottom of the tank.
5. Attach the connector end of the existing probe cable to the threaded connector on top of the new probe canister until it is tight. Replace the riser cap and tighten it. Tighten cord grip on top of riser cap.

If the existing cable does not reach the canister's connector you will have to replace the existing cable with the cable in the installation kit.

## Replacing Probe Cable

1. Open the junction box, and cut off the sensor pack where the wires exit. Loosen the cord grip through which the existing cable enters the junction box. Discard the existing cable.



2. Attach the new cable's connector end to the canister's connector. Route the non-connector end of the new probe cable through the loosened cord grip in the riser cap, through the loosened cord grip in the junction box, and into the junction box. Adjust the length of the new cable from the probe to the junction box as required and tighten the cord grip.
3. Using the wire nuts in the installation kit, connect the two wires from the probe cable to the two wires coming from the console. The probe connections must maintain polarity to the console. The black wire in the probe cable is - polarity and the white wire in the probe cable is + polarity. Be sure to observe color codes or tags when making these connections so that the probe outputs are attached to the correct terminals in the console.
4. Seal wire nuts with epoxy sealant following the instructions in Figure 5.



**CAUTION:** 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.

5. Do NOT terminate shield or drain wire in the field junction box, ground shield and drain wires at console only.
6. Place the bag with the resin sealed wiring connections in the junction box. Replace and tighten the junction box cover.

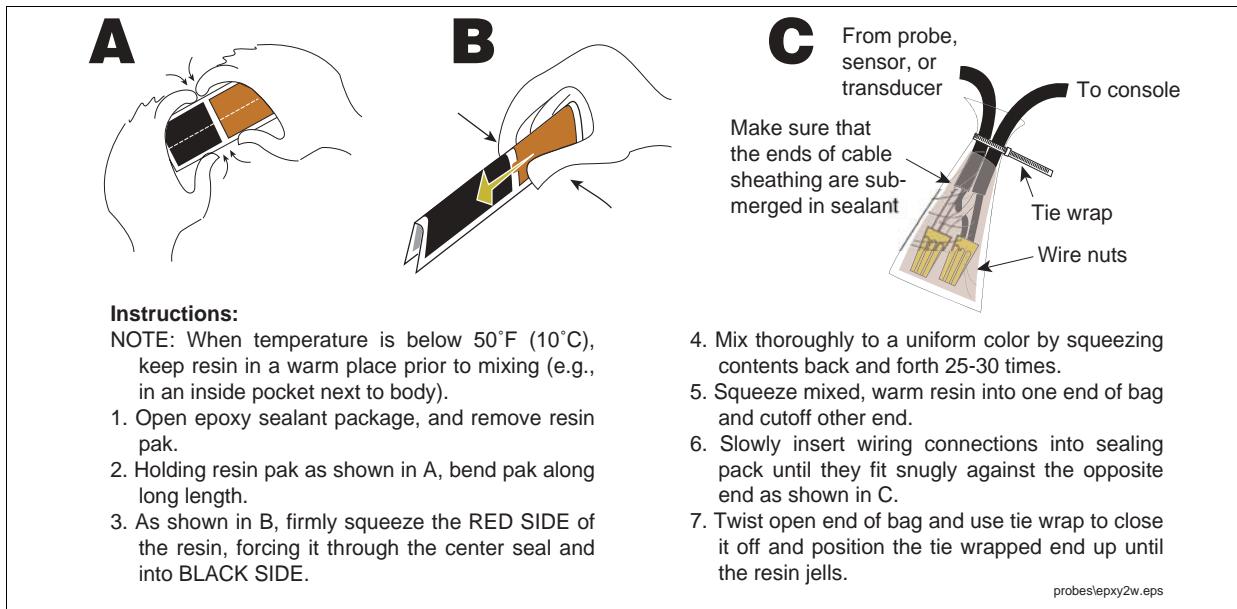


Figure 5. Epoxy Sealing Probe Field Connections

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