

Mag-FLEX Probe Low Level Water Float Kit

Installation Guide

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DAMAGE GOODS/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.

VR 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. Fax Bill of Lading to V/R Customer Service at 800-234-5350.
2. Call V/R Customer Service at 800-873-3313 with the specific part numbers and quantities that were received damaged or lost.
3. VR 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.

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Introduction

Instructions for installing the Low Level Water Float (LLWF) kit onto a Mag-FLEX probe are described in this document.

NOTE For retrofit installations, the Mag-FLEX probe must be removed from the tank following the instructions in Veeder-Root manual 577014-042 before installing the Low Level Water Float kit.

Recommended Tank Opening Sizes

The Mag-FLEX Probe has a weight and magnet at the base of the probe to provide stability, suitable for use in a wide range of products and available with or without water detection. The Mag-FLEX Probe with standard water float uses a process connection requiring a 1-1/2" tank entry point with a BSP thread. Table 1 lists the minimum tank openings required for the Veeder-Root Mag-FLEX probe with the standard water float and with the optional low level water float.

Table 1. Dimensions for Mag-FLEX Probe Tank Opening

V-R Water Float	V-R Water Float OD inch (mm)	Recommended Tank Opening Size	
		inch	mm
Standard	1.7 (43)	2	50
Low Level	3.8 (96.52)	4	100

Float Kits

V-R LLWF Kit P/N	Fuel Compatibility	Included Items
330020-776	GASOLINE / E10	Gasoline/E10 LLWF Assembly, Probe Tank Wall Guide Assembly and Installation Guide
330020-777	DIESEL	Diesel LLWF Assembly, Probe Tank Wall Guide Assembly and Installation Guide
330020-824	BIO-DIESEL	Bio-Diesel SS water float, LLWF Assembly, Probe Tank Wall Guide Assembly and Installation Guide

Related Manuals

- 577013-623 TLS-3XX Consoles Setup Manual
- TLS-450 Online Help - Touch Screen Path To Probe Float Setup: Home>Setup>Devices>Probes
- TLS4 Online Help - Touch Screen Path To Probe Float Setup: Home>Menu>Setup>Devices>Probe
- 577014-042 Mag-FLEX Probe Installation Manual

LLWF Installation Procedure - Gasoline/Diesel Kits

NOTE The Low Level Water Float must be installed on the Mag-FLEX probe before the Probe Tank Wall Guide.

1. Remove the LLWF housing and two piece adapter from the shipping carton.
2. Slide the LLWF housing over the Mag-FLEX probe's weight (views 1 and 2 in Figure 1).

3. Place half of the adapter around the ss water float. Take the remaining half of the adapter and place it around the opposite side of the water float making sure to align the pins and holes on the two adapter halves. Once aligned, squeeze the two halves together securing the ball float inside the adapter (views 3 and 4 in Figure 1).
4. Slide the ss water float assembly down into the top of the LLWF housing until the six latches around the adapter snap into the top of the LLWF housing (view 5 in Figure 1).

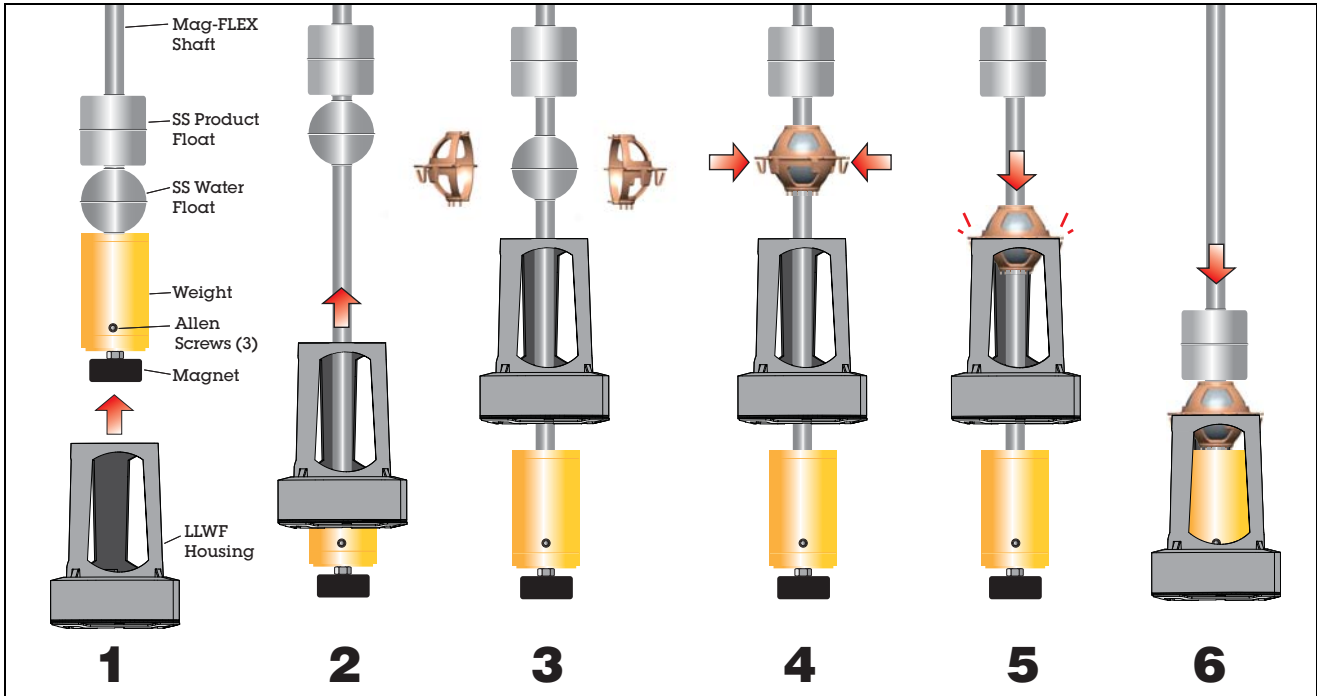


Figure 1. Installing The Low Level Float Assembly

5. Visually inspect the six latches on the adapter to ensure they are fully seated under the flange of the LLWF housing. Failure to do so could result in loss of low level water detection (see Figure 2).

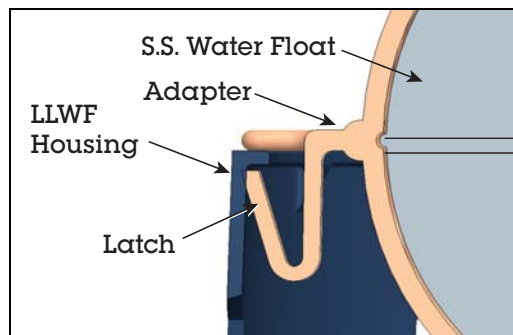


Figure 2. Correct Adapter Latch Position Under LLWF Housing Flange

6. Pull up on the adapter. The adapter should not separate from the LLWF housing.
7. Gently lower the LLWF assembly down against the weight (view 6 in Figure 1). Notice the six standoff pins beneath the adapter that prevent the float from contacting the weight.

LLWF Installation Procedure - Bio-Diesel Kit

NOTE The Low Level Water Float assembly must be installed on the Mag-FLEX probe before the Probe Tank Wall Guide.

1. Remove the bio-diesel ss water float, the LLWF housing and the two adapter halves from the shipping carton. The ss water float that is shipped with the Mag-FLEX must be replaced with the bio-diesel ss water float in this kit.
2. If available, use a felt pen to mark a line on the probe shaft at the top of the weight and to mark an X on the existing ss water float (to differentiate it from the bio-diesel water float). Using a 3 mm Allen wrench, loosen the three screws around the base of the weight until the weight/magnet assembly can be slid off of the probe shaft (view 1 in Figure 3). Set the weight/magnet assembly aside being careful not to lose any of the three Allen screws from the weight or to damage the magnet.

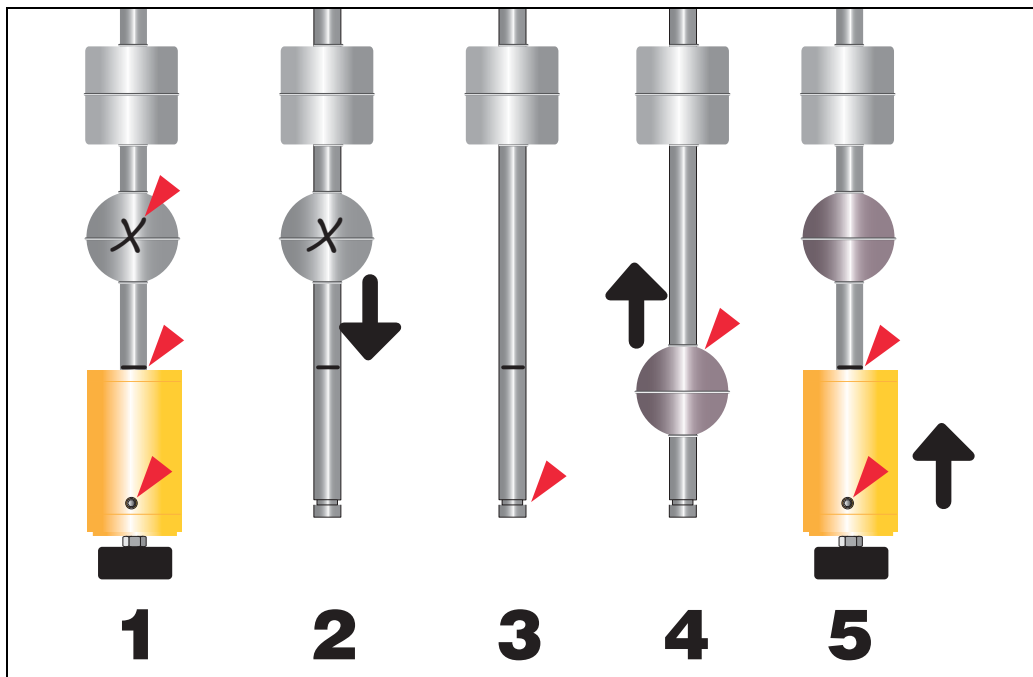


Figure 3. Installing The Bio-Diesel SS Water Float

3. Slide the old ss water float off of the shaft and discard it (view 2).
4. Notice the undercut groove at the base of the probe shaft (view 3). When the end of the probe's shaft is resting on the bottom of the weight, the Allen screws in the weight will be aligned with the groove in the shaft. Once the screws are tightened, they press against the undercut of the groove and prevent the weight from sliding off the probe shaft.
5. Get the bio-diesel ss water float from the kit and slide it onto the probe shaft (view 4).
6. Slide the weight/magnet assembly onto probe shaft as far as it will go (view 5). Loosen the three Allen screws to ensure the weight is completely onto the shaft (If a line was marked on the shaft before the weight was removed it should touch it). Tighten the Allen screws until they are snug. Firmly pull on the weight to ensure it is securely attached to the probe shaft



WARNING! The end of the probe shaft must rest against the bottom of the weight for the Allen screws to align properly with the groove in the shaft or the weight/magnet assembly may separate from the probe shaft once it is in the tank.

7. With the bio-diesel water float installed, follow all of the steps (1 - 7) in the “LLWF Installation Procedure - Gasoline/Diesel Kits” on page 1 to install the two adapter halves and LLWF housing from the bio-diesel kit onto the probe shaft.

Tank Wall Guide Installation Procedure

1. Remove the existing black cup from around the magnet beneath the Mag-FLEX probe’s weight. Be careful not to damage the magnet in doing so.
2. Remove the probe tank wall guide assembly from the shipping container (Figure 4).

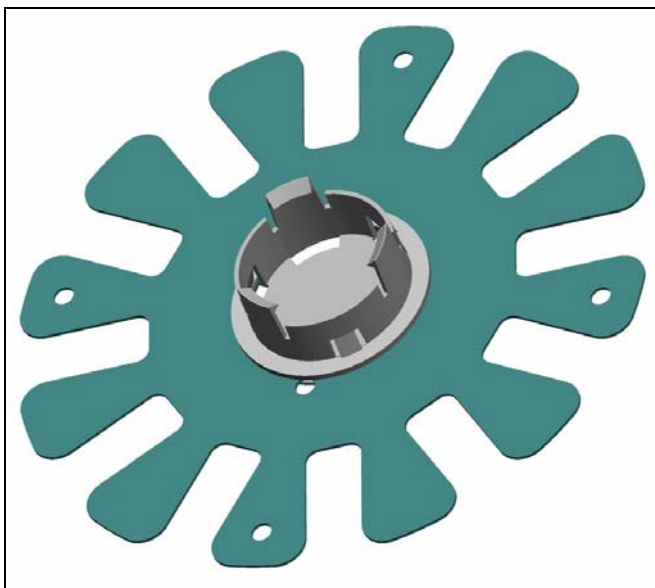


Figure 4. Probe Tank Wall Guide Assembly

3. Slide the cup of the probe tank wall guide assembly up onto the magnet ensuring the three flanged extensions of the cup snap over the top of the magnet.
4. The newly assembled LLWF and tank wall guide can now be lowered into the tank. Please refer to the Veeder-Root manual 577014-042 for the correct installation and handling procedures. NOTE: The resistance felt between the Tank Wall Guide and the riser pipe is normal.

TLS Console Setup Procedure

Under In-Tank Setup, go to **Float Size** and choose **Custom** then enter each setting from the table below:

Water Offset	Fuel Offset	Invalid Fuel	Water Minimum
-6.9 inches (-175mm)	-0.88 inches (-22.35 mm)	3.04 inches (77.22 mm)	1.378 inches (35.00 mm)

NOTE Custom float sizes are not supported in the TLS2 console.

