VEEDER-ROOT

HydrX™ Fuel Conditioning System
Site Inspection Guide

This guide will help you determine if the HydrX Fuel Conditioning System can be implemented into your current fuel management system. Review and fill out this document in order to pinpoint the HydrX part numbers required. If any issues are encountered during your site inspection, please contact Veeder-Root Technical Support for further assistance.

RECOMMENDED MATERIALS

1. "True to Size" Fit Test Model
2. Tape Measure
3. Tank Stick
4. Camera or Smartphone

FUELING EQUIPMENT

EQUIPMENT REQUIREMENTS

ATG Information:
- TLS-450PLUS Automatic Tank Gauge (ATG) with software version 9R or higher
- If upgrading from a TLS-350 to a TLS-450PLUS ATG, collect a printout of all ATG Setup Information, including CPU/ECPU, VLLD, Pressurized Line Leak Detection (PLLD), Wireless Pressurized Line Leak Detection (WPLLD), Continuous Statistical Leak Detection (CSLD), Business Inventory Reconciliation (BIR)*
- If upgrading from a TLS-350 to a TLS-450PLUS ATG, PLLD will have to be upgraded to DPLLD

**Ensure you have everything needed for the ATG upgrade (where applicable)*

STP Information:
- STP Manufacturer: Veeder-Root or FE Petro®
- Compatible with 4" STPs up to 4HP
- Veeder-Root Compatible STP Models: The Red Jacket®, The Red Jacket AG, and The Red Armor®
- FE Petro® Compatible STP Models: Compatible with MagShell™ fixed speed and variable speed STPs with MagVFC™
- Manifolded STPs are not supported
- STP must have a spare port available
  - Confirm that siphon plug can be loosened
  - A one-way check valve will be provided with the Fuel Conditioner installation kit

Site Information:
- Ability to pull 4 wires in the high voltage conduit (2 high power wires, 1 neutral wire and 1 ground wire)
- There must be space in the control room for the wall-mounted Fuel Conditioning Controller (FCC), 8" H x 8.3" W x 6" D
- If there is Isotrol/DHI at the site, 1 spare input is required
- There must be the ability to bring AC power to the FCC on its own branch and breaker, and completed by a licensed electrician
- There must be a water/fuel waste stream to accept the water that is removed by the Fuel Conditioner and disposed of in accordance with local regulations

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DIESEL TANKS

TANK REQUIREMENTS

Tank Information:

- Diesel Underground Storage Tanks (USTs) less than or equal to 30,000 gallons
- Fiberglass Tanks; *Consult Veeder-Root for Steel Tanks*
- Tank diameter must be between 8' (96") and 10' (120")
- Manifolded tanks are not supported

The following information will be required to configure the HydrX™ Water Intake Device (WID).

Please select the options that correspond with your site configuration. There will also be lines to write your "fill in the blank" answers.

1 Who is your tank manufacturer?

- ◯ Xerxes
- ◯ Containment Solutions
- ◯ Other: _____

A If Xerxes, what is the tank model?

- ◯ US (red tank)
- ◯ Canada (green tank)

2 Type of tank?

- ◯ Single tank
- ◯ Compartment tank

A If a compartment tank, how many compartments are there?

- ◯ 2
- ◯ 3
- ◯ 4

3 What is the manufacturer's tank diameter (in inches)?

_____ in.

4 If a single tank, what is the manufacturer's tank volume capacity (i.e., 8,000 gallons)?

_____ gal.

5 If a compartment tank, what is the manufacturer's tank volume for each compartment (i.e., Regular: 12,000 gallons and Diesel: 8,000 gallons)?

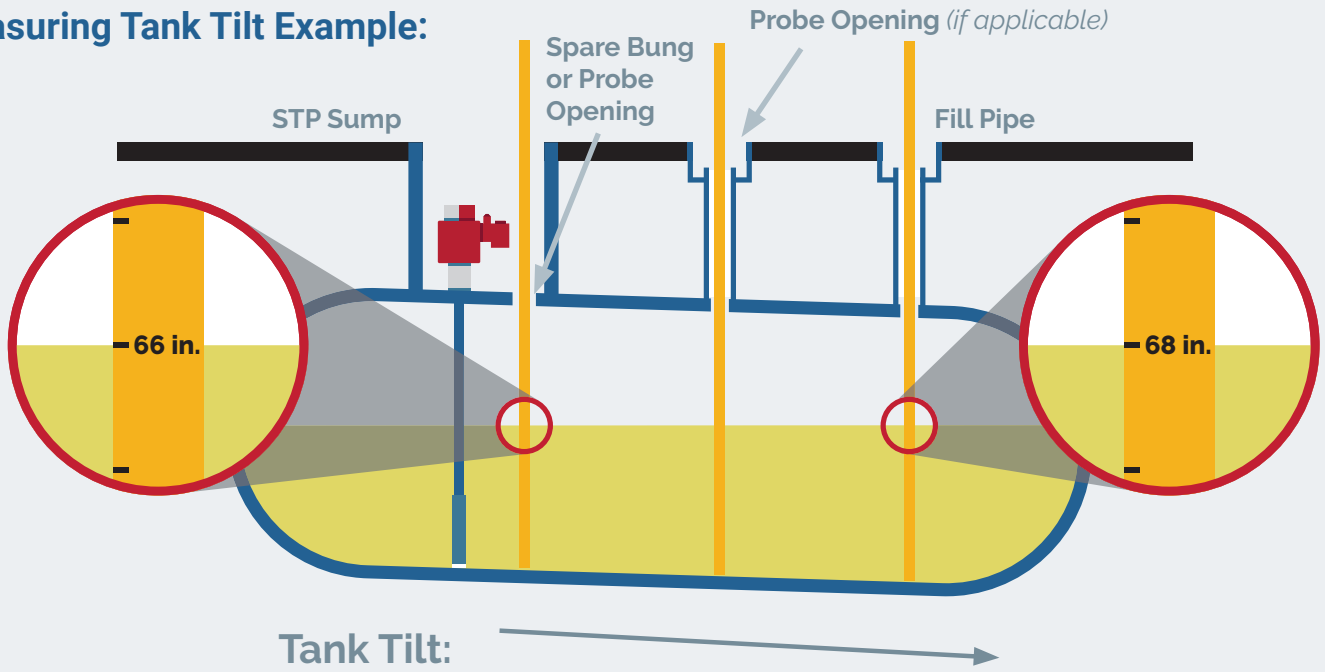
_____ gal.

TANK MEASUREMENTS

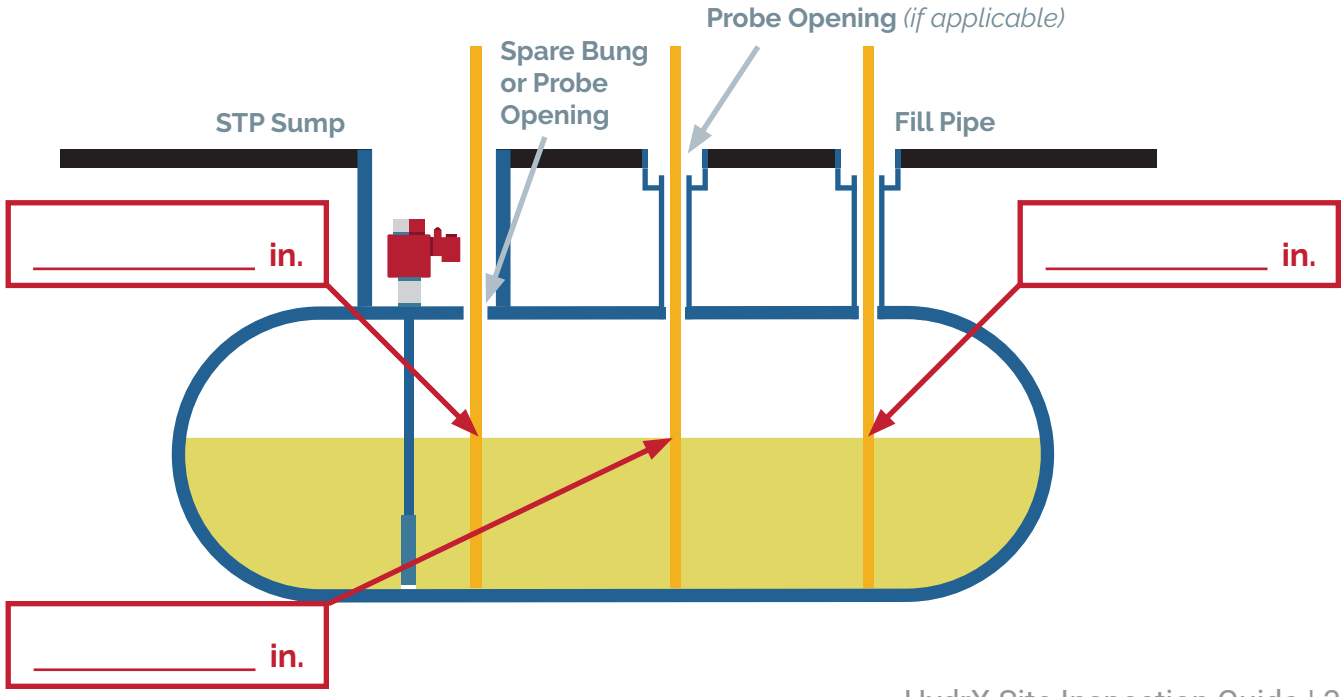
The components of the HydrX™ Fuel Conditioning System are customized based on the unique configuration of your tank. In order to optimize the functionality of the Water Intake Device, precise tank measurements are required. Please follow the instructions below.

6 **Please include a precise measurement for the fuel line on the stick in order to interpret any possible tank tilt that might be occurring:**

Measuring Tank Tilt Example:

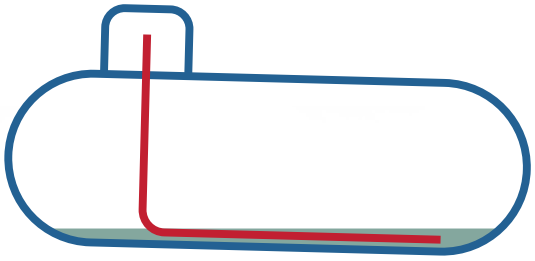


Stick the tank at the **Probe Opening** in the **STP Sump**, at the **Fill Pipe**, and at the separate **Probe Opening** *(if applicable)* to determine tank tilt. Place the stick heights on the tank diagram below next to each location. Please be as precise as possible.



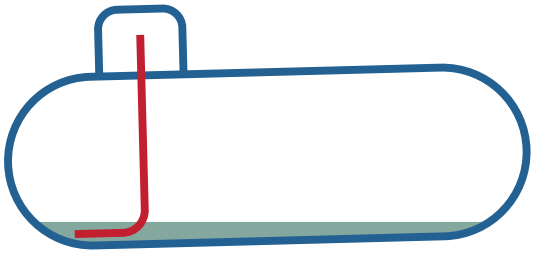
7 **The components of the HydrX™ Fuel Conditioning System are customized based on the unique configuration of your tank. The WID must be installed with the tilt of the tank. Please select the configuration below that best matches your WID installation based on tank tilt:**

○ **Configuration 1**



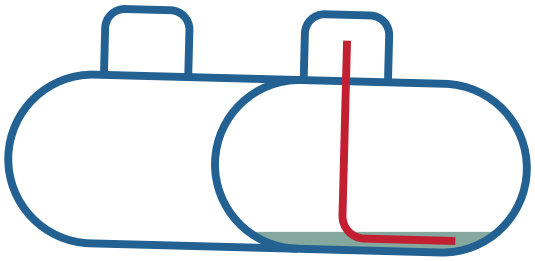
Tank Tilt: →

○ **Configuration 2**



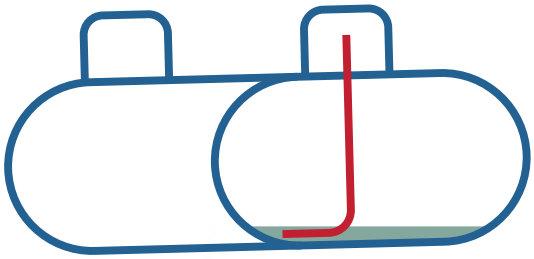
Tank Tilt: ←

○ **Configuration 3**



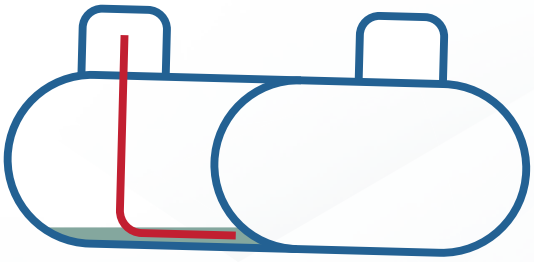
Tank Tilt: →

○ **Configuration 4**



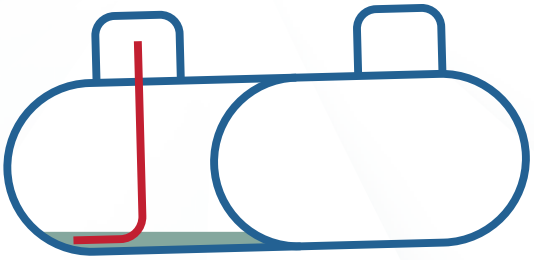
Tank Tilt: ←

○ **Configuration 5**



Tank Tilt: →

○ **Configuration 6**



Tank Tilt: ←

○ **Other**

Illustrate your tank tilt situation in the space to the right and select your tank tilt direction below

Tank Tilt: ○ → ○ ←

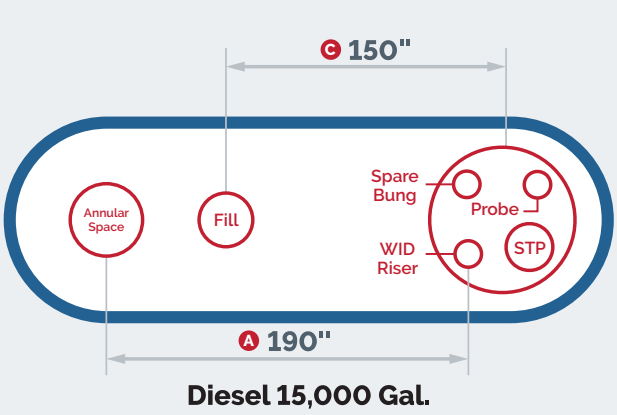
8 Please illustrate your tank configuration using hand drawn and appropriately labeled tank top openings, as well as complete measurements in the empty tank diagram below:

If further support is required, please include a photo of the STP Sump with available bungs, as well as the following measurements available in order for Technical Support to best assist you.

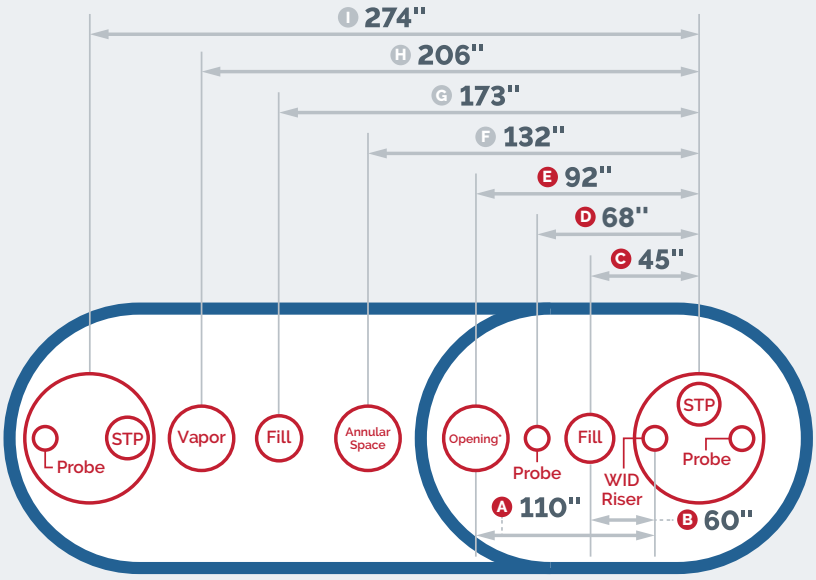
A through E are primary measurements, and F through I are secondary measurements.

A. The center of the **WID Riser** to the center of the **Opening***
B. The center of the **WID Riser** to the center of the **Fill Pipe**
C. The center of the **STP Sump** to the center of the **Fill Pipe**
D. The center of the **STP Sump** to the center of the **Probe Sump** (if applicable)
E. The center of the **STP Sump** to the center of the **Opening***
F. The center of the **STP Sump** to the center of the **Annular Space**
G. The center of the **STP Sump** to the center of the other compartment's **Fill Pipe**
H. The center of the **STP Sump** to the center of the other compartment's **Vapor Sump**
I. The center of the **STP Sump** to the center of the other compartment's **STP Sump**

If you have a situation where the probe and fill tube are down the centerline, the Fuel Conditioner should be in a bung that is offset from the centerline. **Observe the measurements** between each tank top openings from center to center, as shown in the examples below.



Diesel 15,000 Gal.



Regular 12,000 Gal. **Diesel 8,000 Gal.**

** Last opening in the compartment*

Use the tank outline on the right to draw in your tank configuration details with measurements like the examples above

DIESEL STP SUMPS

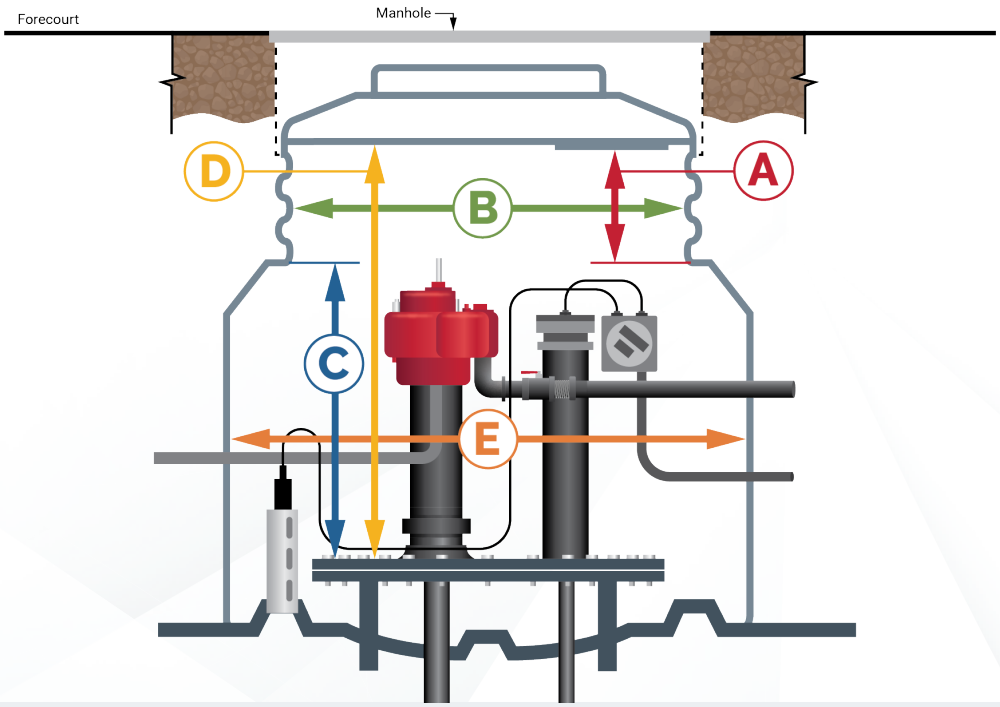
SUMP REQUIREMENTS

- A sump diameter greater than or equal to 42" generally will have enough clearance. If smaller than 42", pay close attention to the Fuel Conditioner space requirements defined in step 10.
- The Fuel Conditioner is 30" tall and will require 10" of clearance above the system to any fixed, immovable portion of the sump to service the filters. If the Fuel Conditioner fits in the center of the sump, directly under the sump lid, a 6" clearance to the sump lid is sufficient.
- Spare 4" bung in tank top with clearance for a riser (and space for the Fuel Conditioner required).
- Ability to pull 4 wires in the high voltage conduit (2 high power wires, 1 neutral wire and 1 ground wire).

SUMP MEASUREMENTS

The HydrX Fuel Conditioning System will require a certain amount of clearance in the STP Sump. Therefore, precise sump measurements are required. Please follow the instructions below.

9 **Please fill in your sump measurements based off of the required dimensions listed in the lines below:**



A **Tapered Opening to Fiberglass Lid Opening** _____ in.

B **Upper Ring Diameter** _____ in.

C **Bulkhead Cover to Tapered Opening** _____ in.

D **Bulkhead Cover to Upper Opening** _____ in.

E **Inside Sump Diameter** _____ in.

10 **Ensure that you have enough space in the sump for the Fuel Conditioner by measuring from the intended riser, where it would be mounted, to other possible interferences:**

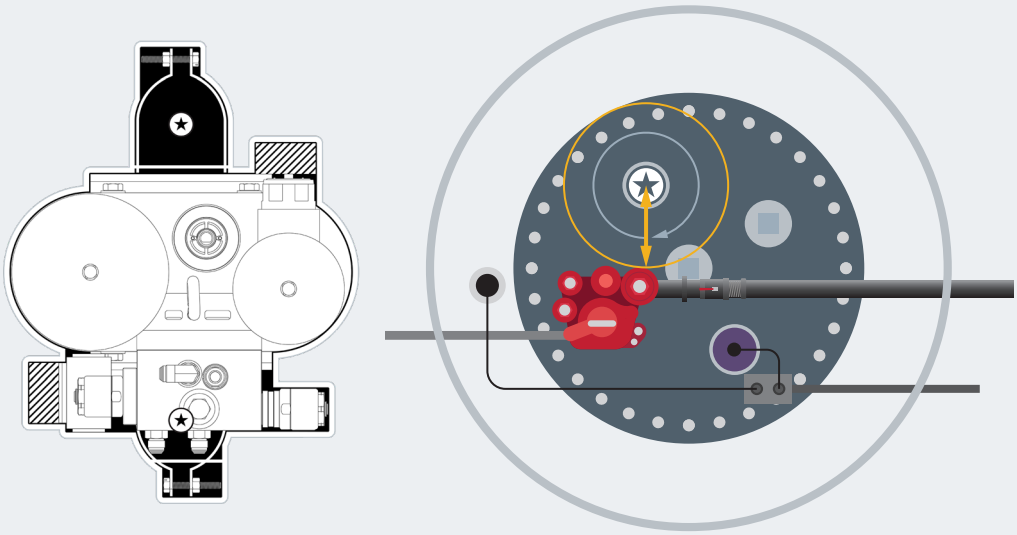
Note: The probe riser is represented by the purple circle.

USING THE "TRUE TO SIZE" FIT TEST MODEL

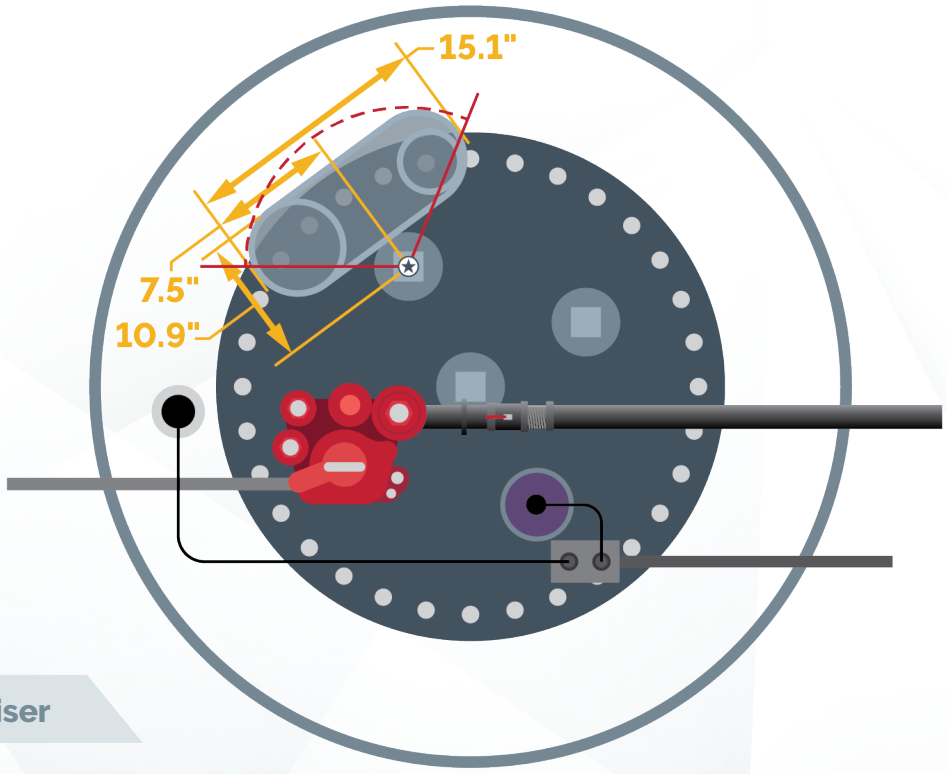
The "True to Size" Fit Test Model can be used to assist in finding possible interferences which could get in the way of your future Fuel Conditioner installation.

Note: The star on the model is an indication to where the center of the riser is located.

Circle the model (using the star as a pivot center point) around the riser to check for any interferences that the Fuel Conditioner might come in contact with when installed in the sump. The Fuel Conditioner can be mounted to a riser from either side, so the clamps on the fit test model can be bent out of the way to determine the preferred mounting position.



Observe the Fuel Conditioner measurements in the example below:



Center of Riser

- If you have questions regarding this Site Inspection Guide, contact Veeder-Root Technical Support by phone at **1.800.323.1799** or email at **technicalsupport@veeder.com**
- Your completed Site Inspection Guide should be submitted to Customer Service at **customerservice@veeder.com**