Appendix B

71SO Overfill Valve In Tank Shut Off Level Worksheet

Important: This is meant to be a supplemental worksheet and not a substitute to following the installation manual instructions. All length measurements are in inches. Please contact the Authority Having Jurisdiction (AHJ) and review local, state, and national codes to determine the regulatory requirements governing shut-off capacity in your region, as well as take into account other considerations such as extreme tank tilt.

With valve installed in the tank take the following measurements:

Distance from the 71SO inlet tube flange to the cast lug in the 71SO body (see figures), upper tube length. Note: the Upper Tube Length must be at least 16" to include the protective bend in the tube.
(D) = _____

Distance from the 71SO inlet tube flange to the top and bottom of lower tube, valve length.
(W) = _____
(U) = _____

Distance from the 71SO inlet tube flange to the bottom of the tank. Note: If a tank bottom protector is present it may be necessary to add this thickness to dimension (OPW 6111 & 61TP models add 0.6")
(B) = _____

From the tank calibration chart provided by tank manufacturer find the dipstick number (Y) which corresponds to the 100% volume.
(Y) = _____

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1. To determine shut-off percentage:
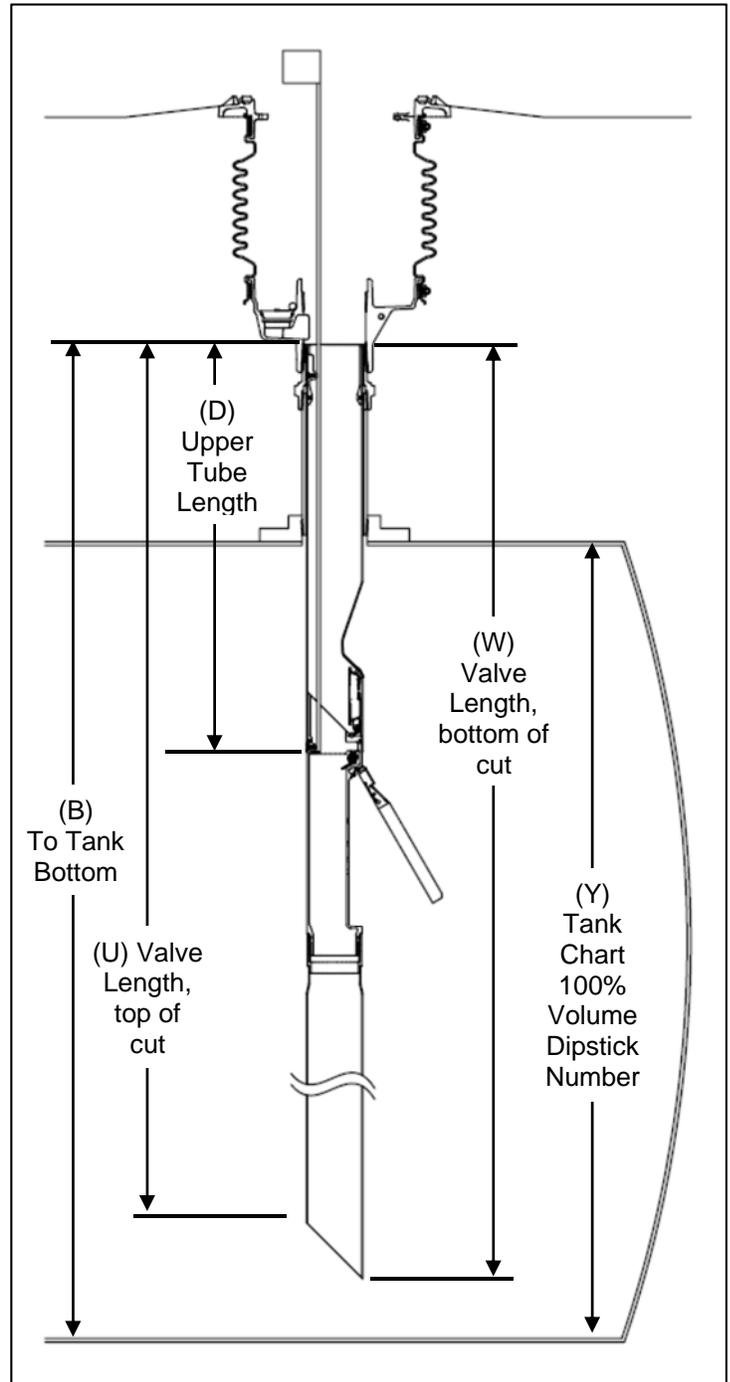Subtract upper tube length (D) from distance to tank bottom (B)
(X) = (B) − (D) - 2" =_____

Using the tank calibration chart provided by the tank manufacturer determine the tank capacity at the calculated (X) dimension and the 100% volume (Y) tank capacity.

(X) tank capacity in gallons = _____

(Y) tank capacity in gallons = _____

SO% = (X) capacity / (Y) capacity x 100 = _____

(D) Upper Tube Length

(W) Valve Length, bottom of cut

(B) To Tank Bottom

(U) Valve Length, top of cut

(Y) Tank Chart 100% Volume Dipstick Number

Note: The overfill valve must be installed per AHJ requirements and all applicable local, state, and national codes. If overfill valve is set above the allowable shut-off percentage the overfill valve must be removed and replaced. For reference 40 CFR part 280 Subpart B Section 280.20 overfill valves should be set to a maximum of 95%.

2. To determine lower tube distance from tank bottom to bottom of cut:

Subtract valve length (W) from distance to tank bottom (B)
(V) = (B) − (W) = _____

Note: Lower tube clearance must meet tank manufacturer requirements and all AHJ, local, state, and national codes. Typical clearance is about 4". If lower tube clearance is not met valve must be removed and adjusted to meet these requirements.

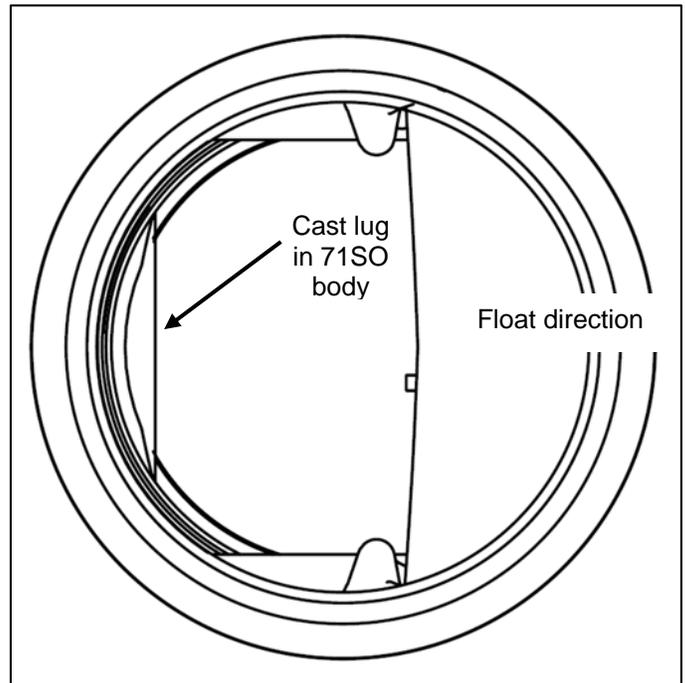**3. To determine lower tube distance from tank bottom to top of cut:**

Subtract valve length (U) from distance to tank bottom (B)
(T) = (B) − (U) = _____

Note: Lower tube distance from tank bottom to top of cut must meet all AHJ, local, state, and national codes. For reference per 40 CFR 63 subpart CCCCCC / NESHAP the lower tube can be more than 6" from the bottom of the tank. If lower tube distance is not met valve must be removed and adjusted to meet these requirements.

4. To determine float alignment:

Looking into upper tube (see figure) the float should be aligned along the length of the tank. If float is not aligned properly adjustments need to be made.

Cast lug in 71SO body

Float direction

View into drop tube from above