



TruTank Troubleshooting Guide

TruTank procedures

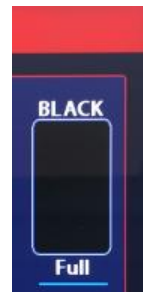
Readings between empty and full

Any time the tank has less than 10% capacity, all readings including the Vegatouch and multiplex screens will show empty. Any time the tank has greater than 90% capacity all readings including the Vegatouch and multiplex screens will read full.



Overfill scenario and initial Power-up readings (Safety readings)

In the event that the tank has been overfilled and there is no longer an air gap at the top of the tank, the sensors will not be able to display accurate information. Because the sensors report the fill level rising prior to being overfilled, all readings including the Vegatouch and multiplex screens will show that the tank is full. In addition to showing the tank level as full, the tank reading will also have a light blue line under it indicating that the value being shown is not a valid reading. Once the tank is no longer overfilled and has an air gap at the top of the tank, the invalid underline will go away and tanks will begin showing a valid and accurate reading again.



The following is how each tank will read in the event that a tank sensor is unable to work correctly due to being overfilled while there is no power to the tank module, or if the constant power wire is disconnected and the system is power cycled.

Fresh tank: Show empty with an invalid line under the reading. Once Sensors are within working parameters again, sensor readings will be displayed, and invalid line removed.

Gray tank: Show Full with an invalid line under the reading. Once Sensors are within working parameters again, sensor readings will be displayed, and invalid line removed.

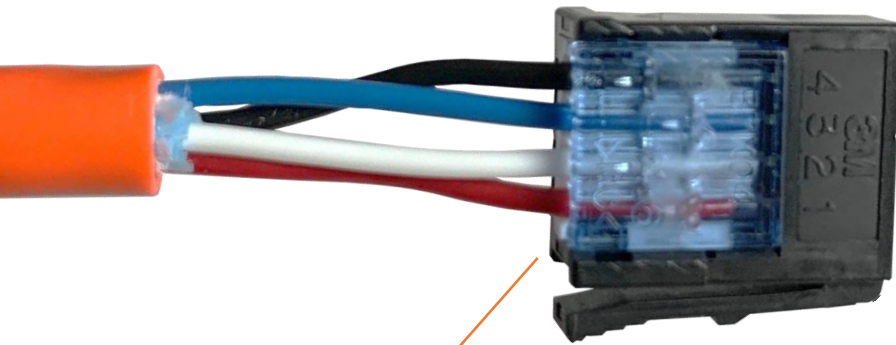
Black tank: Show Full with an invalid line under the reading. Once Sensors are in within working parameters again, sensor readings will be displayed, and invalid line removed.



Troubleshooting

Tanks not reading levels.

1. Check the RVC Network Connection at Controller/Module (If a standalone or LCD tank monitor is installed, part of the connection test should include a RVC connector and power check.)
 - a. Loose.
 - i. Tighten it up (check the crimp with pliers) and see if they start reading.
 - b. Tight
 - i. Check wiring.



RVC Network Pinout

1	Red	+12VDC
2	White	CAN High
3	Blue	CAN Low
4	Black	Ground

Fully insert the wires in the correct order and crimp forcefully.

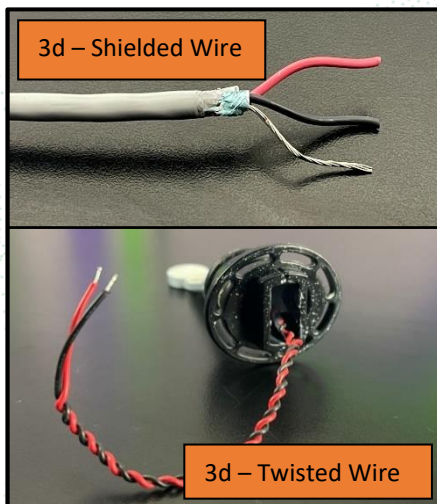
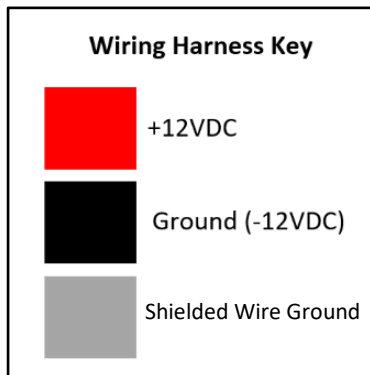
2. Check connection from tank sensor to wiring harness.
 - a. What kind of connectors are being used (Greased Bell Caps, Deutsch)
 - b. Verify that the connections are tight.
 - i. Use Greased Bell Caps if replacement connections are required. Greased Bell Caps are desired due to the voltage thresholds that are used for transporting values back to the screen.

3. Check Wiring Harness.

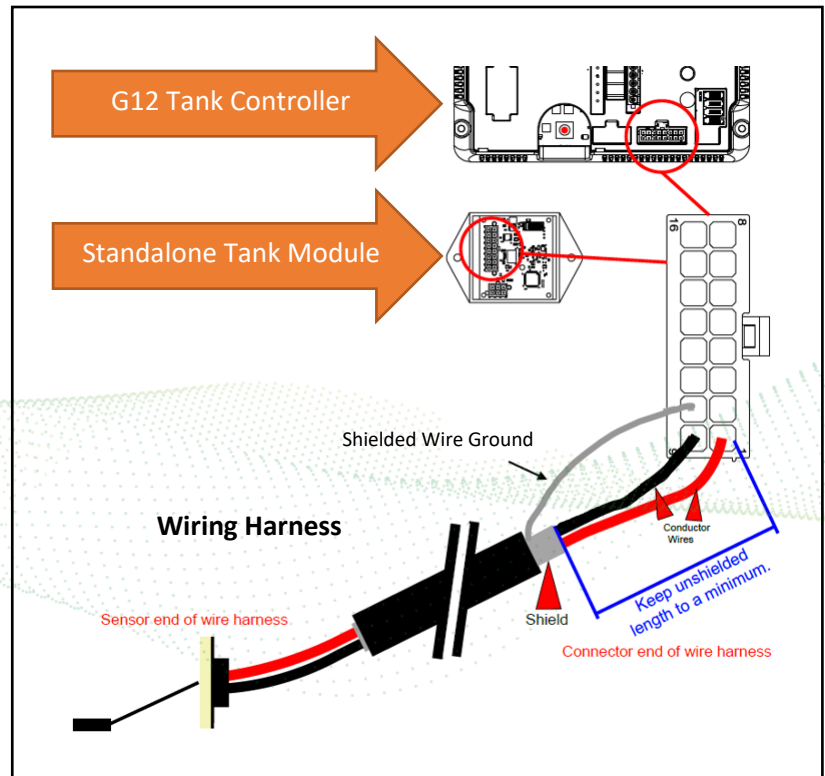
- a. Remove Tank connector from controller/module.
- b. Remove Tank sensor wires from wiring harness.
- c. Test for continuity.
 - i. With the harness disconnected, test both wires for continuity (at the same time) for a short. If the wires are making contact (shorted out), you will hear a beep when testing. It's possible there may be something making a connection between the wires (example – a staple or a screw).
- d. Verify that shielded wire has been used on all models except Riverstone units.

Riverstone units should use twisted wire.

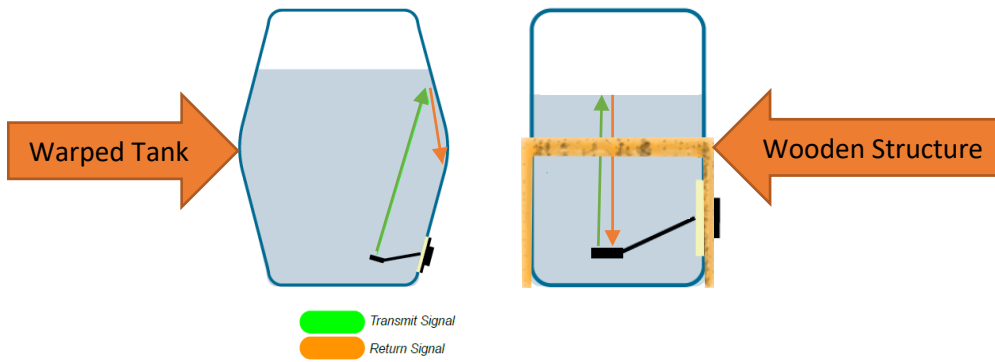
 - i. Ensure that it is wired according to the diagram with the shielded wire going to a separate pin from ground. A wiring diagram can be found on the G12 black label (located next to the G12 panel).
- e. Run new wires outside of unit from the tank controller to the sensor.



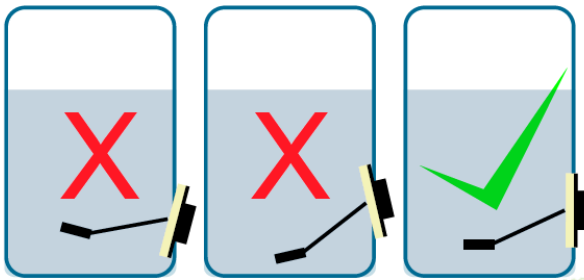
Note – only 2 wires are used for Twisted Wire.



4. Ensure that the tank is not bowing.
 - a. Build a structure to add support to the tank walls. If the sensor isn't completely vertical, the signal may bounce off the sidewall and not return to the sensor, resulting in an inaccurate reading.



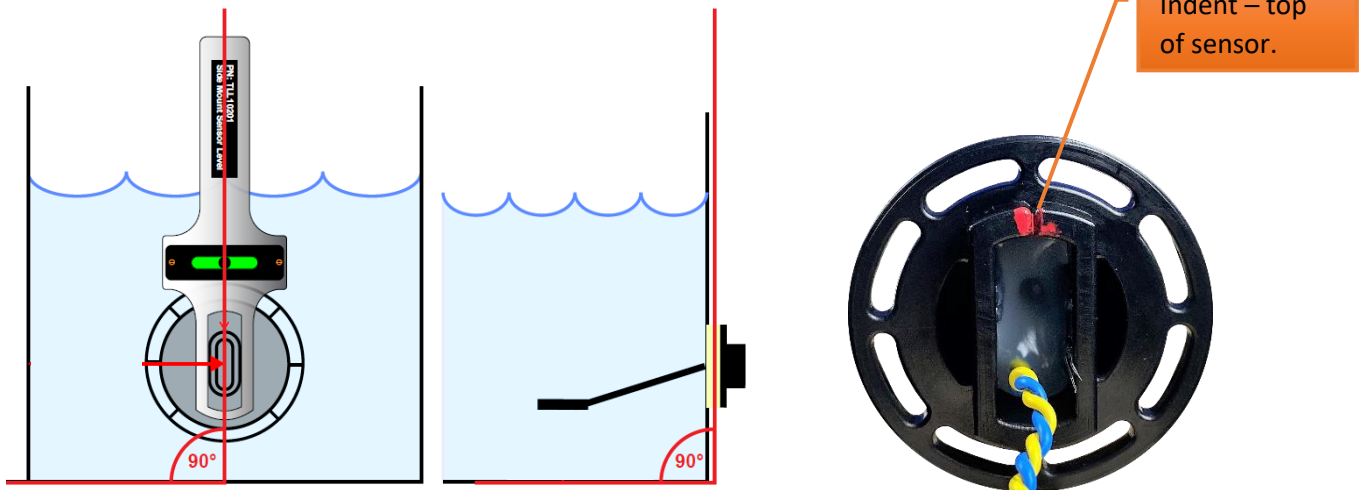
5. Verify that the sensor is level.
 - a. Contact the coach manufacturer if the sensor (spin-in fitting) has been installed incorrectly.



Sensor Alignment

The sensor must be aligned properly to ensure the signal will be sent and received correctly. With the coach levelled, verify the sensor is aligned square with the bottom of the tank. The indent on the sensor indicates the top of the sensor.

Example – Leveling sensor with Sensor Level Tool



6. Ensure that there is at least 5cm of liquid covering the sensor. The screen tank graphics will not display any values without at least 5cm of liquid covering the TruTank sensor.
 - a. Check the diagnostics page for the tank in question.
 - i. Press and hold the tank graphic in question for up to 10 seconds to navigate to the diagnostics screen.
 - ii. See the LVL value and add liquid to the tank if it is less than 5cm.

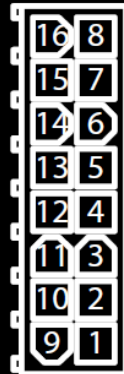


7. Test to determine if the sensor or the input pins are faulty.
 - a. Unplug the 16-pin Tanks connector. Next, identify the 3 wires from a known working sensor and plug them directly into the controller input pins for the invalid sensor (Molex depinning tool required). If the known working sensor reads correctly while plugged into the controller pins of the invalid sensor, replace the invalid sensor. If the signal still reads as invalid, replace the controller.

Example 7A – Fresh Tank Reading Invalid

Use the wiring diagram to move the known working Grey tank sensor wires (2, 10 and 15) to the invalid Fresh tank input pins on the controller (1, 9 and 14).

The black label load list can be found next to your G12 or Standalone Tank Module.



J11: TANKS

Pin 1:	Fresh
Pin 2:	Grey
Pin 3:	Black
Pin 4:	Black 2
Pin 5:	Grey 2
Pin 9:	Sensor Ground - Fresh
Pin 10:	Sensor Ground - Grey
Pin 11:	Sensor Ground - Black
Pin 12:	Sensor Ground - Black 2
Pin 13:	Sensor Ground - Grey 2
Pin 14:	Fresh Shield Wire Ground
Pin 15:	Grey 1 & 2 Shield Wire Ground
Pin 16:	Black 1 & 2 Shield Wire Ground



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