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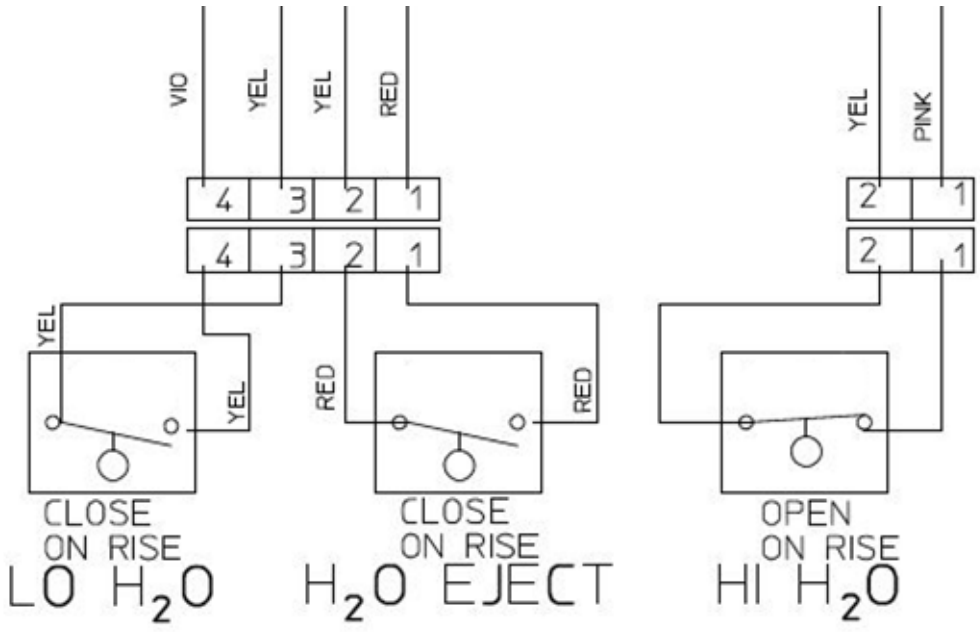
Smart Tech Air Dryer Float Switch Troubleshooting

Issue:

- Smart Tech air dryer is shutting down for high or low water when water level is normal.
- Dryer is not shutting down when water level is above the top float switch or below the low float switch.
- Dryer is not ejecting water.

Operation: The water sight tube and the three float switches located inside control the water level in the dryer and sense if the water level becomes too high or too low causing the dryer to shut down in order to prevent damage. The plastic float contains an internal magnet that when moved up or down activates a mechanical reed switch inside of the brass tube opening or closing the connection which is detected by the sensor board.



FLOAT SWITCH WIRING DIAGRAM

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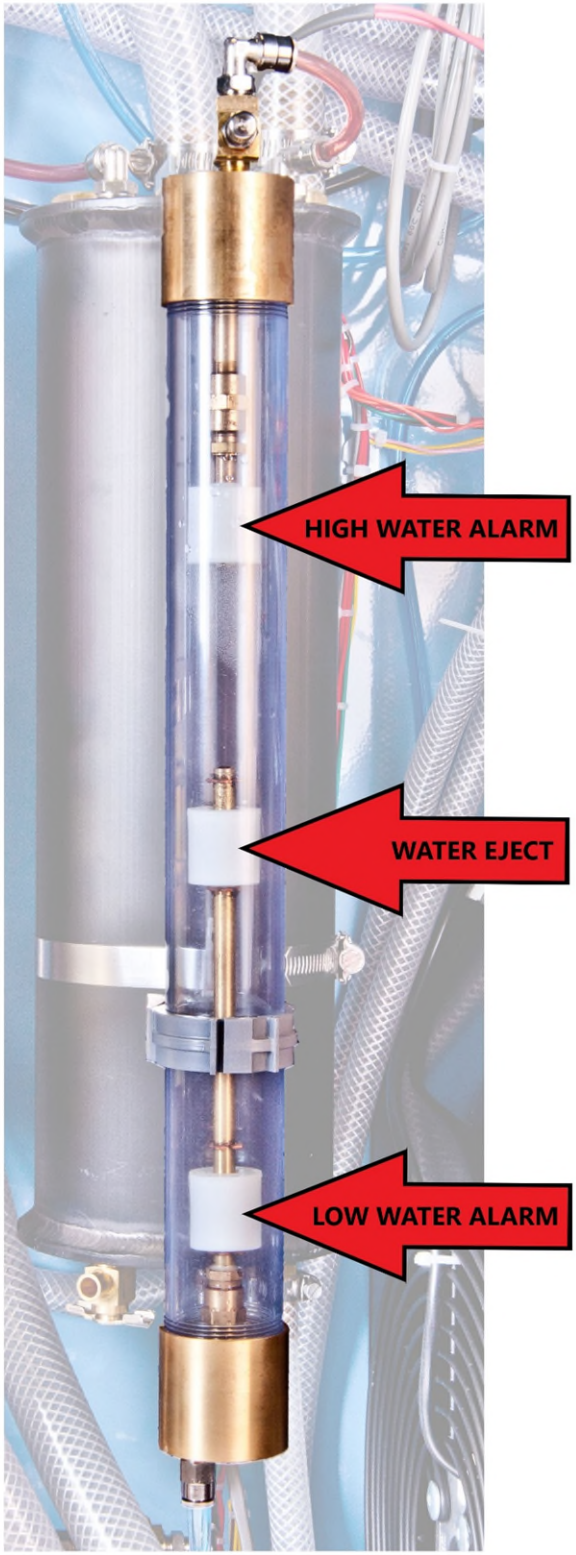
Complete sight tube & float switch assembly P/N 41806



The **high-water** float switch is located at the top of the sight tube and has a closed connection that opens when the water level rises enough lift the float. To test the switch, disconnect the two-wire plug from the wire harness and use a multi-meter to test for continuity across the two red wires. You should read a short across the wires indicating the switch is closed. If the connection reads open while the switch is resting on its lower retainer clip, then replace the upper high water float switch. (P/N 45348). If the float switch tests good but the dryer reads a high-water alarm, there may be a wire harness issue. Inspect the wire harness and plug for damage.

The **water eject** float switch sends water level feedback to the sensor board to turn on and off the water eject solenoid valve. To test the water ejection system first press the manual water eject button while the dryer is running. If the water does not eject then replace the water eject valve. (P/N 36785). If water is ejecting manually with the switch but does not eject when the middle float is underwater, perform a continuity test using a multi-meter to verify the switch is closed. Disconnect the 4-wire plug at the bottom of the sight tube from the wire harness and measure across the two red wires. With the middle float raised up to its top retainer clip you should read a short. Corrosion can build up on the center brass shaft and prevent the float switch from moving freely causing intermittent issues. Unscrew the bottom float switch assembly and clean any debris away ensuring the switches move freely. Replacement water eject and low water float switch assembly (P/N 45347)

The **low-water** float switch is located at the bottom of the sight tube and should always be submerged. The most common failure for the low water float switch is a faulty float seal allowing the float to fill with water and sink. If the dryer is shutting down for low water when the water level is above the bottom float switch, disconnect the bottom 4 wire plug from the sight glass and continuity test the two yellow wires. You should read a short when the water level is above the bottom float and the float is pushed up to its top retainer clip. If the connection tests open, replace the bottom half of the float assembly. (P/N 45347)

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