

SURE-FILL FFV TROUBLE SHOOTING GUIDE

SAFETY INSTRUCTIONS

**WARNING:**

Before starting installation, read and understand all safety label and warnings on the machine. Also review and understand all safety instructions in the owners, installation and service manuals.

Failure to comply could result in serious injury, death or damage to the equipment.

QUALIFIED SERVICE PERSONNEL

**WARNING:**

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit.

All wiring and plumbing must conform to national and local codes. Failure to comply could result in serious injury, death or equipment damage.

SAFETY PRECAUTIONS

This unit has been specifically designed to provide protection against personal injury. To ensure continued protection observe the following:

**WARNING:**

Disconnect power to the unit before servicing. Follow all lock out/tag out procedures established by the user. Verify all power is off to the unit before performing any work.

Failure to comply could result in serious injury, death or damage to the equipment.

**CAUTION:**

Always be sure to keep area around the unit clean and free of clutter.

Failure to keep this area clean may result in injury or equipment damage.



GUIDELINE

DEFECT TYPE	1) DEAD	2) VALVE WON'T SHUT OFF	3) VALVE NOISY (BUZZING)	4) NO TOP OFF	5) TOP OFF TIME INCORRECT	6) VALVE SHUTS OFF IMMEDIATELY	7) MODULE SMOKING	8) SINGLE TOP OFF	9) CUP FILL NOT COMPLETE
CAUSE OF PROBLEM									
1) NO 24 VAC POWER	X								
2) SHORTED POWER WIRES	X					X	X		
3) DEFECTIVE MODULE	X	X	X			X	X		
4) INTERMITTENT POWER SUPPLY LEADS	X		X						
5) SHORTED VARISTOR						X	X		
6) WATER OR SYRUP LEAKING ONTO LEVER						X			X
7) INCORRECT SWITCH		X		X	X	X			
8) POOR SWITCH SEALING						X			X
9) POTENTIOMETER NOT SET								X	X
10) INCORRECT CUP GRID TILT									X
11) ICE BUILT UP ON CUP REST						X			X
12) LEVER CONTACTING SPLASH PLATE						X			X
13) LEVER SWITCH HELD CLOSE	X	X							
14) VALVE TILTED HELD FORWARD ON DISPENSER		X							
15) LEVER RESTRICTED BY GRAY WIRE	X	X							X
16) VALVE MECHANICAL PROBLEMS	X	X	X						
17) NOZZLE OVERFLOWING						X			
18) ICE IN CUP TOUCHING LEVER									X

DETAILED DESCRIPTION OF DEFECT TYPE

- DEAD** - Lever is pushed and there is no response from valve.
- VALVE WON'T SHUT OFF** - After lever is released, the valve continues to dispense beverage.
- VALVE NOISY (BUZZING)** - Lever is pushed and valve is noisy. Beverage may or may not be dispensed.
- NO TOP OFF** - The valve dispenses liquid but does not refill cup after first dispense time and foam has settled leaving cup not completely full.
- TOP OFF TIME INCORRECT** - Time to allow foam to settle between filling cup is either too long or too short.
- VALVE SHUTS OFF IMMEDIATELY** - Lever is pushed and the valve only dispenses a drop of beverage or a very small amount.
- SMOKING MODULE** - Valve module is smoking or smells like it had shorted out and burned.
- SINGLE TOP OFF** - There is only one top off refill cycle after cup is filled the first time.

DETAILED DESCRIPTION OF CAUSE OF PROBLEM (EACH DEFECT IS LISTED AND ITEMS TO CHECK)

- NO POWER TO VALVE**

- A. Bad Transformer if more than one valve has a problem.
- B. Bad or intermittent 24 VAC connector or wire. Check using a voltmeter. Voltage higher than 26.7 volts could cause module damage.
- 2. SHORTED POWER WIRES**
 - A. Perform a continuity check to determine if a wire is shorted to the dispenser.
 - B. If continuity test can not be performed, verify by pulling lightly on each valve wire. Verify that all wires are loose and not restricted.
- 3. DEFECTIVE MODULE**

After all other "defect causes" listed on chart are checked and no problem can be found, the module would be the probable cause of the failure.
- 4. INTERMITTENT POWER SUPPLY LEADS**
 - A. Check the valve 24 VAC leads for damaged or intermittent terminals on wires leads.
 - B. Check the module white wires at the ring terminal for intermittent connections.
- 5. SHORTED VARISTOR**

Varistor failures are usually caused by shorts in dispenser wiring. Shorted wires will normally cause the input varistor burn-up which leaves a burn spot on control and burned component odor. Control module must be replaced when the varistor fails. Before replacing module find the short in the dispenser wiring.
- 6. WATER OR SYRUP LEAKING ON TO VALVE LEVER**

Verify there are no water or syrup leaks at the mounting block, valve lever mounting screw, valve solenoid assemblies, or at the flow controls. Repair any leaks found.
- 7. INCORRECT SWITCH**
 - A. The lever switch on a Sure-Fill valve is a special sealed switch which must not be replaced by the standard valve switch.
 - B. The switch for the FFV Sure-Fill valve has a lever attached to the switch. This lever must not be removed or the force to close the valve switch will be increased.
- 8. POOR SWITCH SEALING**
 - A. Check that all switch leads are sealed to prevent moisture from shorting leads. Seal any exposed switch lead wires with silastic sealant.
- 9. POTENTIOMETER IS NOT SET PROPERLY**

The top-off cycles and time are selected by adjusting the potentiometer.

Information On Potentiometer Adjustment For Top-Off:

The time delay between fill cycle and top-off is adjusted by the potentiometer at the front of the module (see "**Adjustment Of Top-Off Delay Time**" below).

Two top off cycle features can be eliminated by turning the potentiometer fully counter-clockwise to the minimum position.

Cutting the red jumper wire on the module eliminates the second top-off cycle.

Adjustment Of Top-Off Delay Time:

The time between top offs can be adjusted by using the same potentiometer which is used to eliminate the top-off. Turn the potentiometer clockwise from its fully counter-clockwise position to increase the time between top-off cycles from 0 to 6 seconds. This should be done in small increments and checked to determine which setting provides the desired height of drink in the cup.

10. INCORRECT CUP GRID TILT

Cup rest tilt should be approximately 14 degrees to assure proper cup fill and valve operation. If the angle is not correct the cup fill level may not be correct. The proper cup rest angle and 1/4 cup of ice will keep the valve energized to assure proper cup fill height without operator holding the cup against the lever.

11. ICE BUILT UP ON CUP REST

Remove any excess ice from cup rest. If the ice touches the lever it will shut off the valve. Also check that lever switch is sealed and sealing is not damaged. Correct or repair any problems found.

12. LEVER CONTACTING SPLASH PLATE

If the lever touches the splash plate, it will shutoff the valve. Correct any problem that is causing lever to touch splash plate.

13. LEVER SWITCH HELD CLOSED

- A. Check that sealed lever switch has not been replaced with a standard valve lever switch.
- B. Check that the moisture sealing on switch is in place and that it has not been damaged.

14. VALVE TILTED FORWARD HOLDING VALVE LEVER ON

The valve must be (approximately) level and must not tilt down at the front of the valve. If the valve is tilted down, the valve lever weight will be enough to keep the lever switch activated.

15. LEVER RESTRICTED BY GRAY WIRE

The gray lever wire must allow the lever to move freely. Verify that the gray wire is not restricted and free to move with lever.

16. VALVE MECHANICAL PROBLEM

- A. Valve solenoid assembly is still open when power is disconnected from valve.
- B. Valve noise still present when standard wiring harness is substituted in place of Sure-Fill wiring harness to power valve.

17. NOZZLE OVER FLOW

Verify that nozzle is tight on valve. If the nozzle is loose and over flows, it causes beverage to over flow inside the valve. The beverage then flows through the valve to the lever, which completes the flow path to shut off the valve.

18. ICE IN CUP TOUCHING LEVER

Clear ice from cup rest that is touching the lever. Ice build-up will shutoff the valve or cause intermittent operation of the valve.