Electrolux

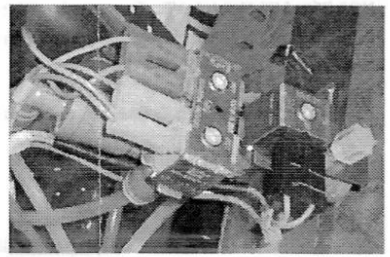
DIAGNOSTIC PROCEDURE FOR TRIPLE AND QUADRUPLE WATER VALVE

When water is not supplied to the water dispenser or ice maker, the water valve is frequently suspected to be defective. This procedure is intended to provide a quick method to determine if the water valve is indeed defective and to avoid unnecessary replacement.

This procedure does not constitute a comprehensive ice and water troubleshooting guide. In addition to diagnosing the water valve, the entire system must be diagnosed to determine the root cause of ice and water issues. Refer to the Service Manual for additional information.

Before You Begin

- ✓ During this procedure, on models equipped with water dispenser, all solenoids will be diagnosed using the YELLOW dispenser connector. This connector will provide 120V to the solenoid when dispenser paddle is pressed and "WATER" is selected on the UI.
- ✓ On models without a water dispenser the ice maker mechanism must be used to initiate water flow through the valve. See steps I - VI at the end of this procedure.
- ✓ When performing valve test,
  PASS = valve flow water when energized and stops water flow when de-energized.
- ✓ Prepare to contain water dispensed, dripped or spilled.

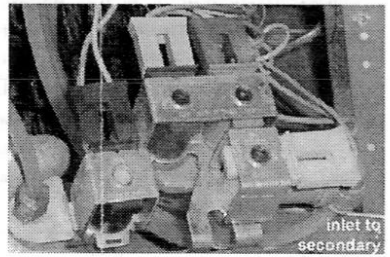


Triple Valve on Side-by-Side Model
Figure 1

Water System

In a system equipped with a Triple or Quadruple Valve the water follows the path:

supply → *BROWN* → *water filter* → *(water tank)* → *secondary: YELLOW or GREEN or BLUE*



Quadruple Valve on French Door Dispenser Model
Figure 2

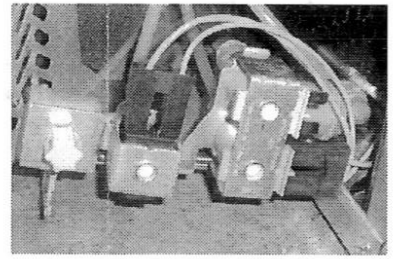
BROWN – Primary Valve

YELLOW – to Dispenser
YELLOW solenoid present, but not used on Non-Dispenser French Door Models.

GREEN – to Primary Ice Maker
FFIM is primary when present. Otherwise, FZ IM is primary.

BLUE – to Secondary Ice Maker
FZ IM is secondary if FF IM is present.

Water from the household connection flows from the BROWN solenoid to the filter, to water tank if equipped, and then back to the inlet of the secondary valve body. From there, the YELLOW solenoid sends water to the dispenser, the GREEN and BLUE solenoids send it to their respective ice makers.



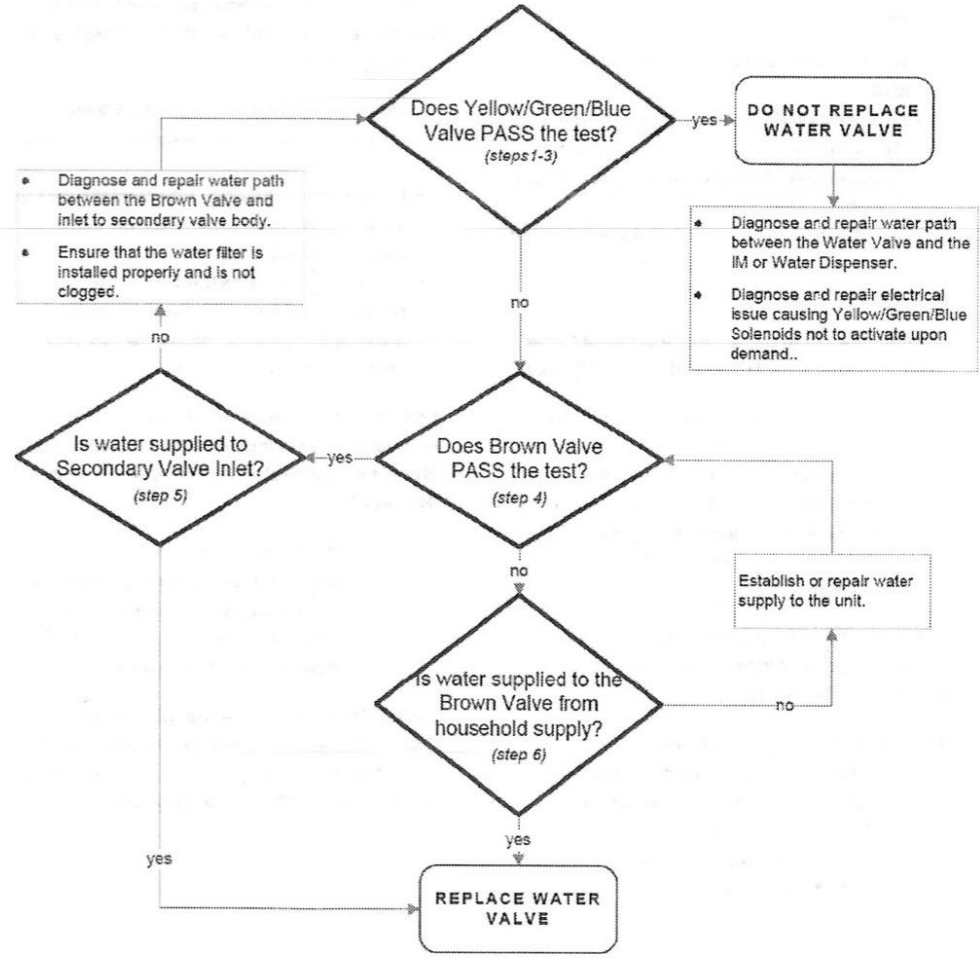
Triple Valve on French Door Non-Dispenser Model
Figure 3

We strive to provide clear and accurate service instructions. If you found any portion of this document to be unclear or inaccurate, or if you have suggestions for improvements please let us know. Contact us at 1-888-842-3660 or suggestions@electrolux.com

Quick Method To Determine If The Valve Is Defective

The following procedure allows for quick diagnosis to determine if the water valve is defective. If water valve is found to be good, do not replace. Instead, focus on other potential root causes preventing the valve from operating correctly, such as kinked water lines, clogged or poorly inserted water filter, frozen tubes or water tank, electrical connections, diodes, dispenser module, ice maker, controls, etc.

The procedure provides detailed instruction on how to perform steps outlined in the following chart.



1. Gain access to the water valve. *Fig. 1, 2, 3.*
2. Disconnect the YELLOW connector from the YELLOW solenoid. Measure the voltage at the YELLOW connector when the dispenser paddle is pressed (*be sure that "WATER" is selected on the UI*). It should be line voltage.

   If there is no voltage to YELLOW connector when paddle is pressed and "WATER" is selected on the UI, diagnose and repair electrical issue (wiring, dispenser module, control board, UI board, etc.)

3. **Test Secondary Valve – YELLOW, GREEN or BLUE.**

   3.1. Connect the YELLOW connector to the SECONDARY valve, and remove the tube from the outlet port of the SECONDARY valve. Direct the outlet port into the cup.

   3.2. Activate the solenoid briefly by pressing and releasing the dispenser paddle (*be sure that "WATER" is selected on the UI*).

If **water flows from the suspect SECONDARY valve**, then the test passed. **DO NOT REPLACE THE VALVE.**

→ Diagnose other reasons why water is not delivered from the water valve outlet to the water dispenser or ice maker. Possibilities include kinked water line, ice in the tube, disconnected fitting, electrical issues preventing the valve from becoming energized, etc.

If **no water flows from the SECONDARY valve**, the test failed. **DO NOT REPLACE THE VALVE yet.** Continue to diagnose the water valve.

4. **Test the Primary BROWN valve.**

   4.1. Remove the BROWN electrical connector from the BROWN solenoid. Remove the BROWN water tube from the bottom of the BROWN solenoid. Be ready to collect water from the BROWN tube.

   4.2. Connect the YELLOW electrical connector to the BROWN solenoid and direct the outlet port of the solenoid into a cup.

   4.3. Activate the solenoid briefly by pressing and releasing the dispenser paddle (*be sure that "WATER" is selected on the UI*).

If **water flows from the PRIMARY valve**, then the test passed. **DO NOT REPLACE THE VALVE yet.** Go to step 5.

If **water does not flow from the PRIMARY valve,** then the test failed. **DO NOT REPLACE THE VALVE yet.** Go to step 6.

5. **Check that there is flow from the BROWN valve to the inlet of the secondary valve body.** Fig. 2

   5.1. Disconnect the white tube from the inlet to the secondary valve body. Place the end of the white tube into the cup.

   5.2. Activate the BROWN solenoid with the YELLOW connector by briefly pressing and releasing the dispenser paddle (*be sure that "WATER" is selected on the UI*).

If **no water flows out of the white tube**, then the issue has to do with the tubing, water tank or the filter between the valve bodies. **DO NOT REPLACE THE VALVE.**

→ Make corrections to the water path obstruction between the BROWN valve and the supply to secondary valve inlet. Ensure that the water filter is installed properly and is not clogged.

If **water flows out of the white tube** into the SECONDARY valve body, but does not flow out of the SECONDARY valve in question, then the valve is defective. **REPLACE THE WATER VALVE.**

6. Complete only if water does not flow from the Primary BROWN valve in step 4.
   Check that water is supplied to the water valve from the household supply.

   6.1. Disconnect the supply line from the valve and run water directly from it into the cup.

If **no water flows from the supply line**, then **DO NOT REPLACE THE VALVE.** The issue is with the water supply. Instruct consumer to establish or repair water supply.

If **water flows from supply line**, but does not flow from the Primary BROWN valve outlet, then **REPLACE THE VALVE.**

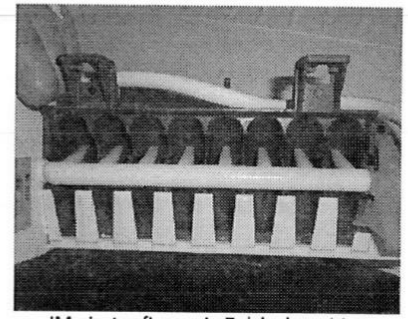
Note: The problem could be that the internal screen in the valve is clogged. The foreign material in the customer's water supply clogged the screen and may clog it in the new valve eventually as well. Suggest that an inline filter be added in front of the valve.

7. If valve is proven to be good and need not be replaced, be sure that all the electrical connectors and tubes have been reconnected properly.

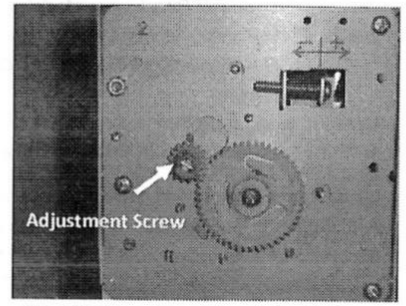
   If valve is proven defective, replace the valve.

To activate the water valve with the FZ IM apparatus:

I. Unplug and remove IM from the unit.
II. Run warm water over the mold for approximately 1-2 minutes to remove ice and warm up the mold.
   → Mold must reach 47F in order for the mold thermostat to open and allow water fill.
   → Use caution not to submerge or wet electrical components during this procedure.
III. Pull the fill tube from the back of the unit and insert the end of it into a container.
IV. Position ice ejector fingers in 7 o'clock position to allow time to observe water fill into the container. Fig. I & II
V. Reconnect the IM to the unit and be ready to collect water from the fill tube.
   → The IM mechanism will provide power to the valve about 15 seconds before it returns back to the home/off position (9 o'clock).



IM ejector fingers in 7o'clock position
(viewed from front of IM)
Figure I



Use adjustment screw to rotate ejector fingers into position.
Figure II