



GE APPLIANCES
a Haier company

Training Bulletin

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SXS / Bottom Freezer Refrigerators

XWFE Water Filter and XWFE RFID System



About the System

Most SXS and bottom freezer refrigerators now utilize an RFID (Radio Frequency Identification) water system. The RFID system is designed to alert a consumer when a filter should be replaced or if there is a leak at or around the water filter. When a leak is detected, operating voltage will not be sent to the water valve to dispense water and/or fill the icemaker. The RFID system consists of a RFID detection control board in the filter housing and a water filter with a RFID tag.

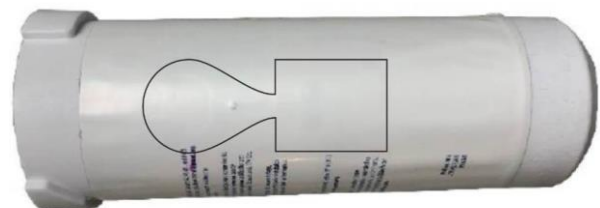
About the Water Filter

The RFID tag is an electronic chip which is built into the backside of the filter label (see images below). Each RFID filter tag has a unique serial number which the main control board will recognize and store for the life of the main control board. A wicking paper is also integrated into the label around the RFID chip to allow the chip to detect a leak.

Rear View



Chip Area Outlined



Proper Filter Orientation

The rear of the filter should be facing the RFID board cover for the RFID board to read the RFID tag.

For SXS Refrigerators:

- The front of the filter should be facing the refrigerator door.

For Bottom Freezer Refrigerators:

- The front of the filter should be facing down.

Front View



Rear View



Two Manufacturing Sites

XWFE filters have used two different manufacturing sites. A genuine XWFE filter must have a date code in one of the two locations. If the date code is not present, the filter is aftermarket or counterfeit.

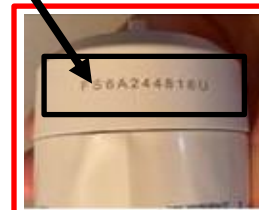
Rear View- Manufacturing Site 1

Date code located on top of filter:



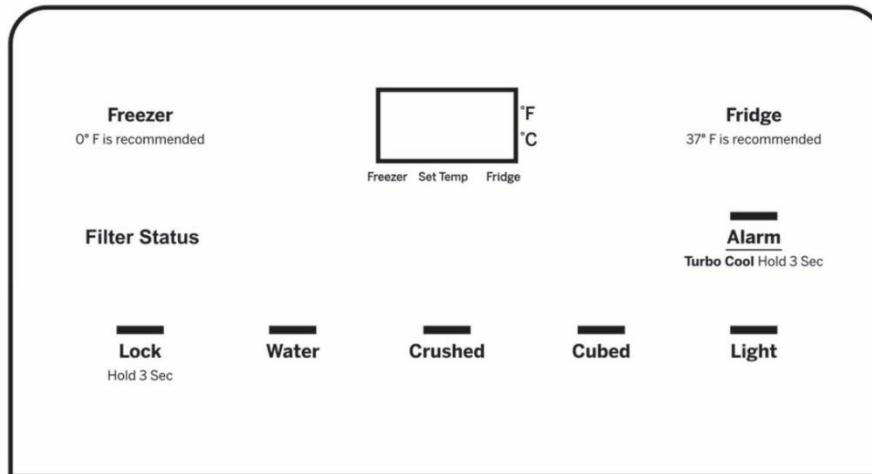
Rear View- Manufacturing Site 2

Date code located on bottom of filter:



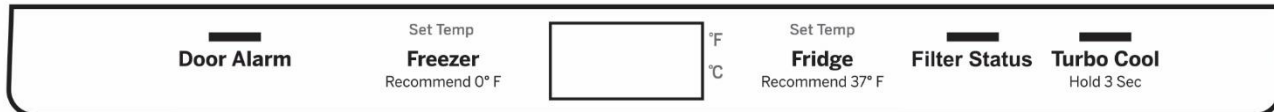
Display Meanings

Bottom Freezer (with dispenser board):



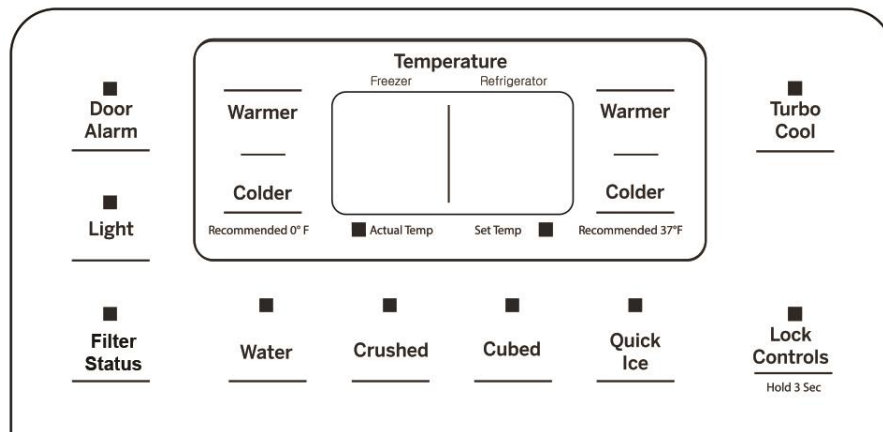
- **Usage:** Pressing the **Filter Status** pad will show the percentage of the remaining filter life on the display. When the filter has expired, a **0** will blink in the display with a **Filter Status** pad press. The filter status LED will blink once the filter is nearing expiration, then stay on after it has expired. When the dispenser paddle switch is pressed with an expired filter, water will dispense, and the filter status LED will blink.
- **No Filter or No Bypass Plug Installed:** If there is no filter or no bypass installed when the **Filter Status** pad is pressed or dispenser paddle switch is pressed, the display will show **ERR** and the filter status LED will blink. The ice and water systems are also disabled. **NOTE:** Installing a new RFID water filter or RFID bypass plug will reactivate the ice and water systems.
- **Leak Detected:** If a leak has been detected, the ice and water systems are disabled. Pressing the **Filter Status** pad when a leak has been detected will cause the display to scroll **LEAK** and blink the filter status LED. If the dispenser paddle switch is activated while the system is in a leak detected state, **LEAK** will scroll in the display and the filter status LED will blink. **NOTE:** Installing a new RFID water filter or RFID bypass plug will reactivate the ice and water systems.
- **Bypass Plug Installed:** When the **Filter Status** pad is pressed and the RFID bypass plug is installed, the display will show **bP** and cause the filter status LED to blink. When the dispenser paddle switch is pressed with a bypass installed, water will dispense, and **bP** will be shown in the display.
- **Summary (when Filter Status is pressed, or dispenser paddle switch is pressed):**
 - **0** (blinking): Expired Filter
 - **1-99:** Remaining Filter Life Percentage (only when **Filter Status** is pressed)
 - **ERR:** No Filter, Aftermarket or Counterfeit Filter Installed, or No Bypass installed (can also be a RFID board failure – use bypass plug to confirm filter not at fault)
 - **bP:** Bypass Installed
 - **LEAK** (scrolls in display): Leak Detected

Bottom Freezer (with internal temperature control board):



- **Usage:** Pressing the **Filter Status** pad will show the percentage of the remaining filter life on the display. When the filter has expired, a **0** will blink in the display with a **Filter Status** pad press. The filter status LED will blink once the filter is nearing expiration, then stay on after it has expired.
- **No Filter or No Bypass Plug Installed:** If there is no filter or no bypass installed when the **Filter Status** pad is pressed, the display will show **ERR** and the filter status LED will blink. The ice and water systems are also disabled. **NOTE:** Installing a new RFID water filter or RFID bypass plug will reactivate the ice and water systems.
- **Leak Detected:** If a leak has been detected, the ice and water systems are disabled. Pressing the **Filter Status** pad when a leak has been detected will cause the display to scroll **LEAK** and blink the filter status LED. If the internal dispenser switch is activated while the system is in a leak detected state, the **Filter Status** pad would need to be pressed in order to see **LEAK** scroll in the display and the filter status LED blink. **NOTE:** Installing a new RFID water filter or RFID bypass plug will reactivate the ice and water systems.
- **Bypass Plug Installed:** When the **Filter Status** pad is pressed and the RFID bypass plug is installed, the display will show **bP** and cause the filter status LED to blink.
- **Summary (when Filter Status is pressed):**
 - **0** (blinking): Expired Filter
 - **1-99:** Remaining Filter Life Percentage (only when **Filter Status** is pressed)
 - **ERR:** No Filter, Aftermarket or Counterfeit Filter Installed, or No Bypass installed (can also be a RFID board failure – use bypass plug to confirm filter not at fault)
 - **bP:** Bypass Installed
 - **LEAK** (scrolls in display): Leak Detected

SXS:



- **Usage:** Pressing the **Filter Status** pad will show the percentage of the remaining filter life on the display. When the filter has expired, a **0** will blink in the display with a **Filter Status** pad press. When the dispenser paddle switch is pressed with an expired filter, water will dispense, and the filter status LED will be illuminated (does not stay on unless water is being dispensed).
- **No Filter or No Bypass Plug Installed:** If there is no filter or no bypass installed when the **Filter Status** pad is pressed or dispenser paddle switch is pressed, the display will show **ERR** and the filter status LED will blink. The ice and water systems are also disabled. **NOTE:** Installing a new RFID water filter or RFID bypass plug will reactivate the ice and water systems.
- **Leak Detected:** If a leak has been detected, the ice and water systems are disabled. Pressing the **Filter Status** pad when a leak has been detected will cause the display to scroll **LEAK** and blink the filter status LED. If the dispenser paddle switch is activated while the system is in a leak detected state, **LEAK** will scroll in the display and the filter status LED will blink. **NOTE:** Installing a new RFID water filter or RFID bypass plug will reactivate the ice and water systems.
- **Bypass Plug Installed:** When the Filter Status pad is pressed and the RFID bypass plug is installed, the display will show **bP** and cause the filter status LED to blink. When the dispenser paddle switch is pressed with a bypass installed, water will dispense, and **bP** will be shown in the display.
- **Summary (when Filter Status is pressed, or dispenser paddle switch is pressed):**
 - **0** (blinking): Expired Filter
 - **1-99**: Remaining Filter Life Percentage (only when **Filter Status** is pressed)
 - **ERR**: No Filter, Aftermarket or Counterfeit Filter Installed, or No Bypass installed (can also be a RFID board failure – use bypass plug to confirm filter not at fault)
 - **bP**: Bypass Installed
 - **LEAK** (scrolls in display): Leak Detected

Diagnosing RFID System

Confirm the proper water filter is being used. A non-RFID filter can be installed into the manifold but will not allow water to flow through the system. The filter **must be a XWFE filter** (XWF will not work).

Confirm the filter orientation is correct when the filter is installed into the manifold.

- If incorrect, flip the manifold 180 degrees in the manifold bracket.

Using the proper bypass plug is essential! In order to properly test the water system or RFID system, bypass plug **WR17X33825** must be used. A pre-RFID bypass can be installed into the manifold but will not allow water to flow through the system.



WR17X33825

Using the bypass confirms whether the XWFE filter is at fault or not.

- If the water system works with bypass installed, the fault is with the water filter and the filter should be replaced.
- If the water system does not work with bypass installed, the fault may be the RFID board, main control board, or wiring connections to the boards. When suspecting a board failure, check voltage out of the main control board and to the RFID board to determine which board.

When To Replace a XWFE Filter

- A leak has been detected. **NOTE: A RFID filter that has previously gotten wet should not be reused.**
- Replacement filter status indicator light turns red. Indicator will turn red after 6 months has passed or once 170 gallons have been dispensed (whichever happens first).
- Flow of water to dispenser or icemaker decreases or if ice cubes are reduced in size/becoming hollow.