Technical Service Guide

April 2020

UltraFresh Front Load Washer

GFW510SCN*

GFW510SCV*

GFW550SPN*

GFW550SPR*

GFW550SSN*

GFW650SPN*

GFW650SSN*

GFW655SPV*

GFW655SSV*

GFW850SPN*

GFW850SSN*

PFW870SPV*

PFW870SSV*

PFW950SPT*

PFW955SPW*



31-9327
Rev. 3 ~ *4/17/2026*

Safety Information



IMPORTANT SAFETY NOTICE

The information in this service guide is intended for use by individuals possessing adequate backgrounds of electrical, electronic, and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

WARNING

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks.

RECONNECT ALL GROUNDING DEVICES

If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

Warranty Information

GE / Profile

geappliances.com

1. Search for model number.
2. Click “Owner Support” tab.
3. Click “Use and Care Manual.”
4. Locate Warranty page.

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Safety Requirements

Factory service employees are REQUIRED to use safety glasses with side shields, safety gloves, and safety shoes for all repairs.



Plano-type Safety Glasses



Prescription Safety Glasses
Must be ANSI Z87.1-2003 compliant



Cut-resistant Gloves



Cut-resistant Sleeves



Electrically Rated Gloves and Cut-resistant Gloves



Composite or Steel-toed Work Shoes

WARNING

Prior to disassembly of the appliance to access components, factory service technicians are REQUIRED to follow this Lockout/Tagout (LOTO) six-step process:

Step 1: Plan and prepare
Step 2: Shut down the appliance
Step 3: Isolate the appliance
Step 4: Apply LOTO device and lock
Step 5: Control (discharge) stored energy
Step 6: Verify the appliance is locked out

Nomenclature

Model Number

P F W 9 5 0 S P W 0 D S

Brand
G: GE
P: Profile

Configuration
F: Front Load

Platform
W: Washer

Series / Features

Product Type
S: Standard / Stationary

Partner Type
C: Contract Only
P: Premium (Color Adder)
S: Standard / Core Partner

Model Year
N: 2019
R: 2021
T: 2022
V: 2023
W: 2024

Engineering Revision

Color
DG: Diamond Grey
GN: Forest Green
DS: Dark Slate
RS: Royal Sapphire Blue
SN: Satin Nickel
WW: White

Model number nomenclature can be used to determine features and specifications of the appliance.

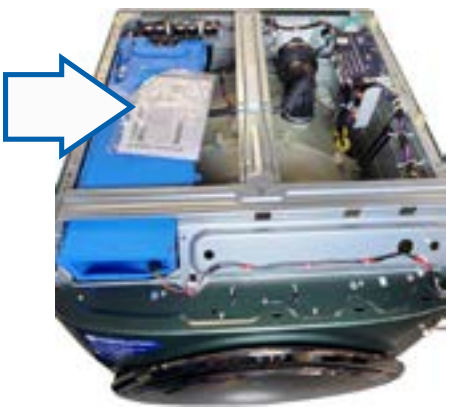
Serial Number

The first two characters of the serial number identify the month and year of manufacture. The letter designating the year repeats every 12-years.

Example: LZ123456S = June 2024

A: JAN	2024: Z
D: FEB	2023: V
F: MAR	2022: T
G: APR	2021: S
H: MAY	2020: R
L: JUN	2019: M
M: JUL	2018: L
R: AUG	2017: H
S: SEP	2016: G
T: OCT	2015: F
V: NOV	2014: D
Z: DEC	2013: A

The Mini Manual is located under the top cover, inside a plastic envelope, taped to the top of the dispenser assembly.



The Model Serial ID Tag is located on the front panel, behind the door, at the lower center of the door opening.



Common Icons and Terminology

Icons

Back Button:

This interactive button appears at the bottom-left of every page in the Service Guide. Click or press the Back Button to return to the previously viewed page (PDF only).

NOTE: This feature is useful when clicking a hyperlink to consult a different section; however, be aware that it also applies when scrolling through pages. Examples:

- If clicking a hyperlink on page 34 to jump to page 57, click the Back Button to return to page 34.
- If clicking a hyperlink on page 34 to jump to page 57, then scrolling to page 58, clicking the Back Button will return to page 57.

Diagnosing:

Removal:

Warnings:









Terms / Measurements

VAC	Volts Alternating Current (ex: 120 VAC)
VDC	Volts Direct Current (ex: 12.5 VDC)
ohm (Ω)	unit of electrical resistance (ex: 16 Ω)
kΩ	kilo-ohm (ex: 0.41 kΩ)
mm.	millimeters (180-mm)
in.	inches (12-in.)
°F	degrees Fahrenheit (ex: 170°F)
°C	degrees Celsius (ex: 80°C)
CW	clockwise (CW)
CCW	counter-clockwise (CCW)
N.O.	Normally Open (N.O.)
N.C.	Normally Closed (N.C.)

Common Tools

multimeter: Used to test voltage, current, and resistance of electrical components or circuits; also called an **ohmmeter**

Phillips-head: Type of screw head, driver, or bit with four points in a cross-shaped pattern

flat-head: Type of screw head, driver, or bit with one straight, flat side; also known as **flat-head** or **slotted**

hex-head: Type of screw head, driver, bolt, or bit with a six-point hexagon pattern

star bit: Type of screwdriver bit with six points instead of flat sides; also called a Torx-head

Allen wrench: Used to remove or tighten specific types of bolts; also called a **hex key**

tongue-and-groove pliers: Type of plumbing pliers with an adjustable pivot; also called **water pump pliers**, **multi-grips**, or **Channellocks®**

putty-knife: Wide, flat metal tool used for applying putty or prying apart components

Specifications

⚠ WARNING **Electrical Shock Hazard**

Death or serious injury can result from failure to follow these instructions:

- **Service on this appliance must be conducted by a qualified service technician only.**
- Disconnect power before servicing this appliance.
- Reconnect all grounding devices after servicing this appliance.
- Replace all parts and panels before operating this appliance.

Product Specifications

Overall Depth	32-in. (GFW655/650/550/510) 34-in. (PFW955/950/870/GFW850)
Overall Height	39 3/4-in. (Leveling Legs Retracted)
Overall Height	40 5/8-in. (Leveling Legs Extended)
Overall Width	28-in.

Electrical Specifications

Drive Motor	3.5 Ω ± 7%
Water Valve Coil	1,070 Ω ± 10%
Door Lock Coil	120 Ω ± 8%
Vent Damper Motor	4.3k Ω ± 30 Ω
Over Night Ready / ONR Fan	Fan resistance cannot be measured
Drain Pump Motor	19.5 Ω ± 10%
Heater	14.85 Ω ± 5%

Thermistor Resistance Table

Temperature (°C)	Temperature (°F)	Resistance (Ω)
-10	14	548,722
-5	23	45,778
0	32	35,975
5	41	28,516
10	50	22,763
15	59	18,279
20	68	14,772
25	77	11,981
30	86	9,786
35	95	8,047
40	104	6,653
45	113	5,523
50	122	4,608
55	131	3,856
60	140	3,243
65	149	2,744
70	158	2,332
75	167	1,990
80	176	1,704
85	185	1,464
90	194	1,262
95	203	1,093
100	212	949.9

Installation

Location Requirements

The washer should be installed on a floor strong enough to support it fully loaded.

It should NOT be installed in the following locations:

- In an area exposed to dripping water or outside weather conditions. The ambient temperature should never fall below 60°F (15.6°C) for proper washer operation.
- On carpet. The floor MUST be a hard surface with a maximum slope of 1/2-in. per foot (1.27-cm per 30-cm). To make sure the washer does not vibrate or move, the floor may need to be reinforced.

NOTE: If floor is in poor condition, use 3/4-in. impregnated plywood sheet solidly attached to existing floor covering.

Leveling

With the washer in its final position, place a level on top of the washer (if the washer is installed under a counter, the washer should not be able to rock). Adjust the front leveling legs up or down to ensure the washer is resting solidly. Turn the lock nuts on each leg up toward the base of the washer and snug with a wrench.

NOTE: Keep the leg extension at a minimum to prevent excessive vibration. The farther out the legs are extended, the more the washer will vibrate.

Water Supply Requirements

- The faucets MUST be 3/4-in. (1.9-cm) garden hose-type so inlet hoses can be connected.
- Water pressure MUST be between 10- and 120-pounds per square inch. The local water department can advise the consumer of their water pressure.
- The hot water temperature should be set to deliver water at 120° to 140°F (48°to 60°C) to provide proper Automatic Temperature Control (ATC) performance.

Additional Specifications

- A 115-volt, 60-Hz, 15- or 20-amp power supply is required.
- An individual properly grounded branch circuit or circuit breaker is recommended.

WARNING **Electrical Shock Hazard**

- It is required that the appliance be plugged into a grounded 3-prong outlet.
- Ground prong should not be removed.
- Use of a 2-prong adapter or an extension cord is prohibited.
- A frayed or damaged power cord should be replaced immediately.

Drain Requirements

- Drain capable of eliminating 10-gallons (38-L) per minute.
- Standpipe diameter of 1 1/4-in. (3.18-cm) minimum.
- The standpipe height above the floor should be:
  - **Minimum Height**: 24-in. (61-cm)
  - **Maximum Height**: 96-in. (244-cm)

  NOTE: Placing the drain hose too far down the drain pipe can cause a siphoning action. No more than 7-inches of hose should be in the drain pipe. There must be an air gap around the drain hose. A snug fit can cause a siphoning action.

Drain Hose Extension

There is a drain hose extension kit to allow for additional length to the washer drain hose. Only one should be used. The washer drain hose extension kit part number is **WH49X316**. The drain hose extension is approximately 44-in. long. The maximum height the drain will pump out is 96-inches.

Clearances

- If the appliance is being installed next to a wall, leave sufficient space on the hinge side to allow the door to fully open.
- **Minimum Clearances**:
  - **Sides**: 0-in.
  - **Top**: 0-in.
  - **Rear**: 0-in.*
  - **Sides**: 0-in.
- Consideration must be given to provide adequate clearance for installation and service.
- Closet doors must be louvered or otherwise ventilated and have at least 60 square inches (387.1 cm^2) of open area. If the closet contains both a washer and a dryer, doors must contain a minimum of 120 square inches (774.2 cm^2) of open area.

*To enable 0-in. clearance on the back of the washer, use 90° elbow hoses. Otherwise, the washer may require some additional clearance to prevent the hoses from rubbing against the back wall.

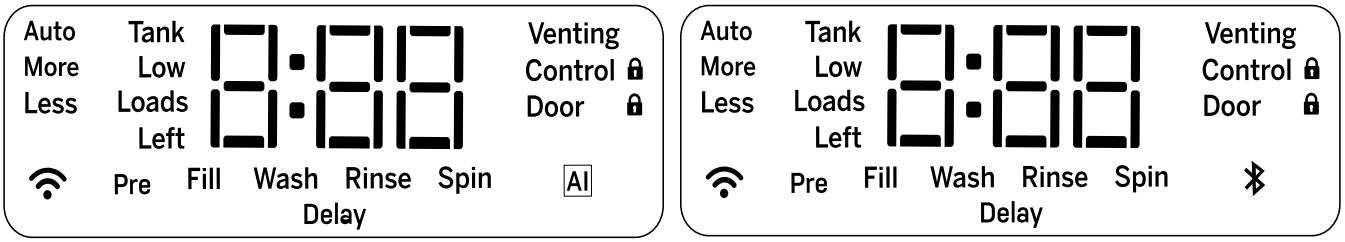
Accessories

WX14X10011	6-ft Stainless Steel Washer Hoses with 90° Elbows; 2-Pack
WH1X2267	Rubber Washer and Screen
GFR0728SNWW	White Riser
GFR0728PNSN	Satin Nickel Riser
GFR0728PNRS	Royal Sapphire Riser
GFR0728PNDG	Diamond Gray Riser
GFR0728PTDS	Metallic Carbon Riser
GFP1528SNWW	White Pedestal
GFP1528PNSN	Satin Nickel Pedestal
GFP1528PNRS	Royal Sapphire Pedestal
GFP1528PNDG	Diamond Gray Pedestal
GFP1528PTDS	Metallic Carbon Pedestal
GFA28KITN	Stacking Kit for Dryer Over Washer
WH49X316	Washer Drain Hose Extension Kit (approximately 44-in.)
PM7X2	Universal Low-profile Washer Floor Tray

Reversing Door Swing

The door swing is reversible, but it is optional on only some models (see **Door Reversal**).

Control Panel Operation



NOTE: Display features and appearance will vary.

Display and Status Lights

- **Wi-Fi ( ):** Allows the appliance to communicate with a smartphone for remote appliance monitoring, control, and notifications. It stays lit whenever the washer is on and connected. It will blink during the commissioning process or if it loses connection to the network.
- **Venting (Some Models):** Venting will blink to indicate that the "**UltraFresh Vent**" feature can be selected at the end of the cycle. Once selected, it stays illuminated until venting is complete.
- **Control Lock (Control):** The controls on the washer are locked when this icon is illuminated. Press and hold **Control Lock** to unlock the controls.
- **Door Lock (Door):** This icon will illuminate while the door is locked, and will blink while the washer is in the process of pausing and then unlocking.
- **Smart AI:** This icon will illuminate when the Smart AI features of the washer are active.
- **Auto, More, Less (Some Models):** The SmartDispense will automatically dose detergent according to the weight and soil level of the clothes. This feature can be adjusted to dose "MORE" or "LESS" detergent or turn it OFF to manually dose detergent.
- **Tank Low (Some Models):** At startup, the washer displays when the SmartDispense tank needs to be re-filled. Typically, this first lights up when there are approximately 8 to 10 loads of detergent remaining.
- **Loads Left (Some Models):** Displays the estimated number of wash loads left for the amount of detergent in the SmartDispense tank.
- **Delay (Some Models):** When selecting a delayed start to the wash, this will be indicated by either a light next to the pad or with the word “Delay” in the center of the options window. The display will also count down the hours until the cycle begins.

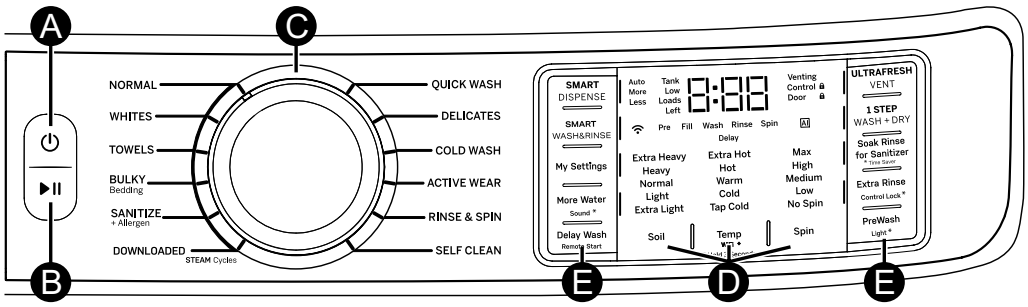
On some models, the display shows the approximate time remaining until the end of the cycle and the washer cycle status (Prewash, Fill, Wash, Rinse and Spin).

NOTE: The cycle time is affected by how long it takes the washer to fill. This depends on the water pressure in the home. The “smart” timer “learns” the amount of time it takes to fill the washer and adjusts the total time accordingly.

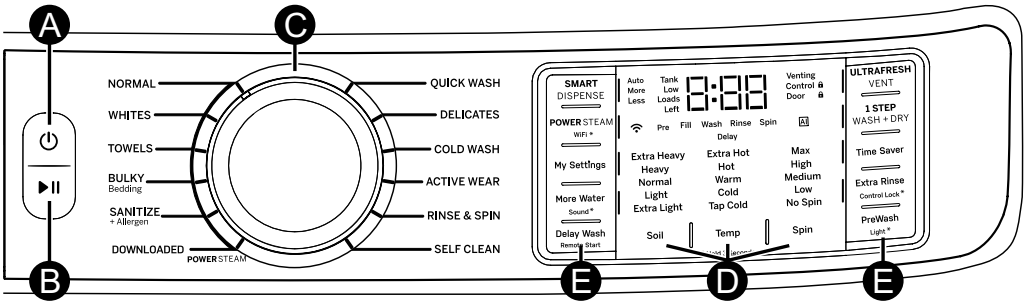
On some models, if an out-of-balance condition is detected by the washer, the Spin status light or Spin option selection light will blink during the remaining portion of the cycle and will stay illuminated for a short time after cycle completion. When this occurs, the washer is taking actions to correct the out-of-balance condition and complete the cycle normally. In some cases, the washer may not be able to balance the load and spin up to full speed.

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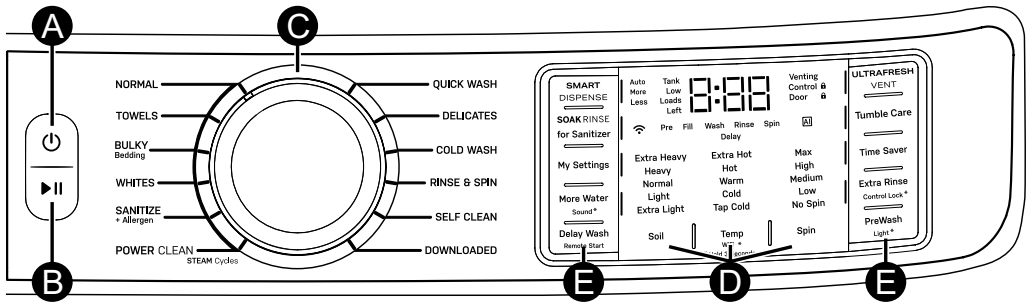
- **Model: PFW955**



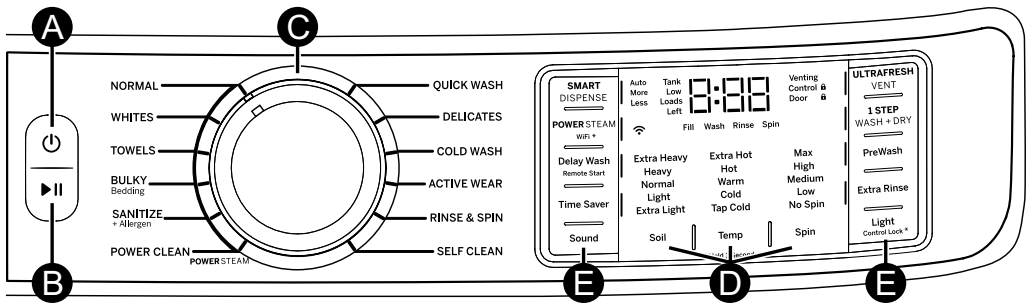
- **Model: PFW950**



- **Model: PFW870**

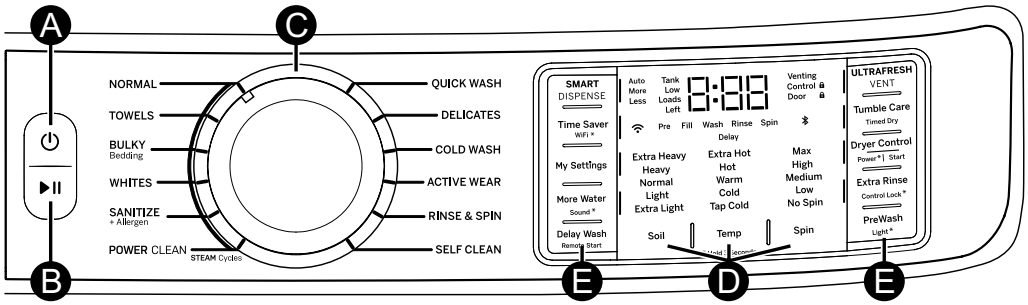


- **Model: GFW850**

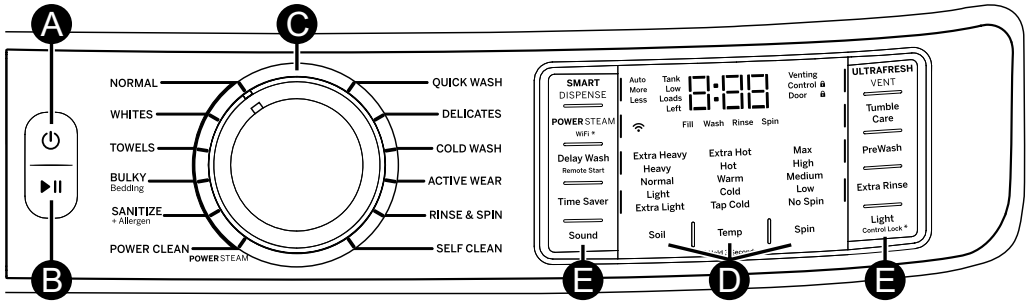


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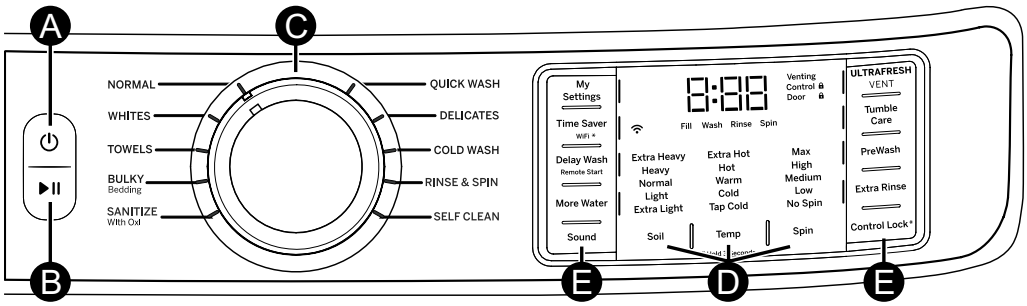
- **Model: GFW655**



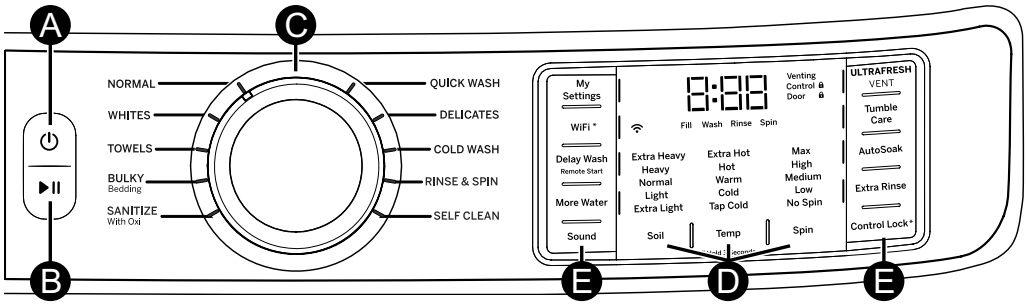
- **Model: GFW650**



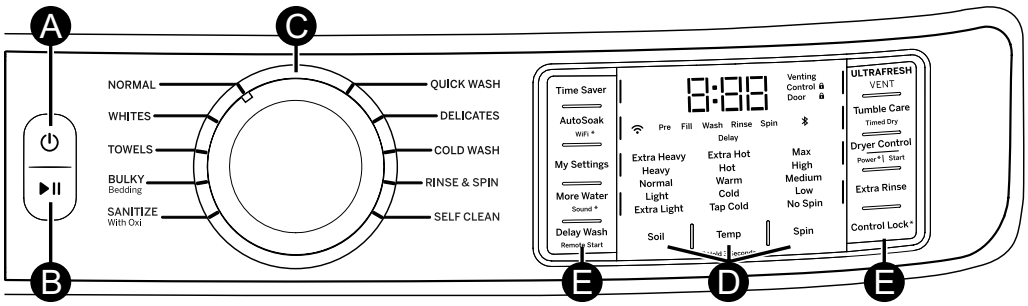
- **Model: GFW550**



- **Model: GFW510SCN**



- **Model: GFW510SCV**



(*Continued next page*)

Ⓐ Power

Press **Power** to "wake up" the display. If the display is active, press **Power** to put the washer in standby mode. **NOTE:** Pressing **Power** does not disconnect the appliance from the power supply.

Ⓑ Start / Pause

Press **Start / Pause** to start a cycle. If the washer is running, pressing **Start / Pause** once will pause the washer and unlock the door. It will take a few seconds for the door to unlock after pressing the button. Press **Start / Pause** again to restart the wash cycle.

NOTE: If the washer is paused and the cycle has not restarted within 15-minutes, the current wash cycle will be cancelled.

NOTE: The washer performs automatic system checks after pressing **Start / Pause**. Water will flow in 45-seconds or less. The door may lock and unlock and the pump activate before water flows.

Ⓒ Wash Cycles

The cycles are optimized for specific types of loads.

Ⓓ Settings

Individual settings for soil level (**Soil**), water temperature (**Temp**), and spin speed (**Spin**) can be set from the minimum to maximum.

- **Soil:** Adjust to increase or decrease the wash time to remove different amounts of soil. To change the soil level, press **Soil** until the desired setting is displayed. Choose between **Extra Light**, **Light**, **Normal**, **Heavy**, or **Extra Heavy** soil levels on most cycles.
- **Temp:** Adjust to select the proper water temperature for the cycle. The **AutoSoak** and **PreWash** rinse water is always cold to help reduce energy usage and reduce setting of stains and wrinkles. To change the wash temperature, press **Temp** until the desired setting is displayed. Choose between **Tap Cold**, **Cold**, **Warm**, **Hot**, or **Extra Hot** on most cycles.

  By design, to protect fabrics, not all wash temperatures are available for certain wash cycles. Extra Hot temperatures are enabled by the internal heater on models equipped with steam capabilities. **NOTE:** The first 10-seconds of the wash fill is always cold. This feature assists in conditioning the fabric and preventing stains from setting on garments.
- **Spin:** Adjust to change the final spin speed of the cycles. Higher spin speeds are <u>not</u> available on certain cycles, such as **Delicates** and **Active Wear**.

  NOTE: This washer features a dBT™ (Dynamic Balancing Technology) system. This patented onboard sensing technology enables real-time balancing of the spin cycle for each load, saving time and providing a quiet wash. This should lead to more consistent wash times and an overall reduction in noise and vibration. If the washer should experience any excessive noise, vibration, or shaking, simply press **Start / Pause** to pause the washer, then open the door and manually redistribute the load before restarting the cycle.

(Continued next page)

Options

SMARTDISPENSE™ (Some Models):

When selected, this feature will automatically add detergent to the wash, eliminating the need to add detergent for each load.

My Settings (Some Models):

To save favorite settings for a given cycle, set the desired options for Soil, Spin, and Temp levels, extra rinse, and other settings. Hold down **My Settings** for 3-seconds. A beep will sound to indicate the selections for this cycle have been saved. The user can choose to create **My Settings** for other cycles.

STEAM/POWER STEAM (Some Models):

The steam feature adds steam into the washer before the wash cycle begins to assist with loosening stains on the NORMAL, WHITES, TOWELS, BULKY Bedding, SANITIZE+Allergen, and POWER CLEAN cycles.

To Use:

1. Press **Power** to “wake up” the washer and select a wash cycle.
2. Use the SmartHQ App or press **Power Steam** (on some models) to activate steam.
3. Press **Start / Pause**.

Wi-Fi (May Be Shared with Other Options)**:**

Press and hold **Wi-Fi** for 3-seconds to activate.

Smart Wash (Some Models):

When enabled, the **Smart Wash** option will automatically sense the soil level of the load and adjust the wash cycle accordingly (adding or removing agitation and soaking times) to achieve excellent wash performance while minimizing wear.

Smart Rinse (Some Models):

The **Smart Rinse** feature senses the amount of soil and detergent in the current laundry cycle and determines whether additional water is needed to ensure a thorough rinse keeping fabrics performing like new for longer.

Delay Wash/Remote Start:

The user can delay the start of a wash cycle for up to 24-hours or remote start the washer by using the **Delay Wash/Remote Start** feature. Press this button to cycle by hours (or hold to scroll) to set the desired amount of time to delay the start of the wash cycle. If the washer is connected to Wi-Fi, the first selection ("**AP**”) can be selected to enable remote start from the GE Appliances smartphone app. Or, if desired, the user can select a delay time in hours; the machine will count down and start automatically following this period. Press **Start / Pause** once the **Delay Wash** setting is configured to the proper setting to enable this feature. To cancel this option, simply power off and power on the controls.

(Continued next page)

NOTE: If the door is not fully closed, a reminder signal will beep.

NOTE: If the door is opened when the delay is counting down, the machine will enter the pause state. Close the door and press Start again in order to restart the countdown.

Time Saver (Some Models):

This option reduces the overall washer cycle time by optimizing the wash, rinse, and spin actions and/or gently raising the wash temperature to get clothes cleaned faster. **Time Saver** is available on NORMAL, WHITES, TOWELS, DELICATES, BULKY Bedding, and ACTIVE WEAR cycles. Total wash time will vary based on the cycle chosen and options selected.

To Use:

1. Press **Power** to "wake up" the washer and select a wash cycle that includes **Time Saver**.
2. Press **Time Saver** to reduce the overall wash time.
3. Press **Start / Pause**.

More Water (Some Models):

This option adds approximately 3 gallons to the wash and rinse portions of the cycle. If selected before the cycle starts, water will be added from the beginning of the wash cycle and later to the rinse. If selected during the wash portion, more water will be added during wash and later to the rinse. If selected after the wash portion has completed, the washer will add more water to the rinse only. If wash and rinse have completed, the **More Water** pad will no longer be active.

ULTRAFRESH VENT System with ODORBLOCK™ (on GE Appliances and Profile Models Only):

The **ULTRAFRESH VENT** System with OdorBlock was designed to eliminate excess moisture in the washer following a wash cycle to help prevent odors from developing. This washer was designed to drain water at the end of the cycle more effectively. Following the wash cycle, the user can then choose to leave the door open or select the **ULTRAFRESH VENT** feature to assist with drying out the gasket and other areas of the washer.

The OdorBlock system features multiple components that are manufactured with Microban® antimicrobial technology.* Microban is a safe and effective antimicrobial technology that will last the life the washer.

ULTRAFRESH VENT is available after the wash cycle is complete and have removed cleaned laundry. Once the door is closed, a notification tune will play and the **ULTRAFRESH VENT** pad LED will blink. Upon pressing the pad, **ULTRAFRESH VENT** will begin.

To select **ULTRAFRESH VENT** at any other point, power on the washer, ensure a cycle is not actively running, remove any garments from the basket, and then press and release the **ULTRAFRESH VENT** pad so that the notification tune plays and the **ULTRAFRESH VENT** pad LED begins to blink. Then, press the **ULTRAFRESH VENT** pad again to start the feature. During the operation of **ULTRAFRESH VENT**, the door will remain locked and the washer will intermittently spin at low speeds for up to 8 hours. (Profile models utilize a sensor to determine end time.) If garments are detected in the basket during **ULTRAFRESH VENT**, the washer will instead run **TUMBLE CARE** or **1 STEP WASH + DRY** based on option availability for the model.

The **ULTRAFRESH VENT** feature may be cancelled at any time by pressing **Power**, turning the cycle knob, or pressing the **ULTRAFRESH VENT** pad.

(Continued next page)

SmartHQ App Enabled:

There are several options that support the Wi-Fi connected washer available through the SmartHQ App. Not only does this App enable the washer to receive over the air upgrades and updates to the washer's software, but it unlocks special features for the washer. Among those features are **Adaptive SmartDispense**, **Adaptive My Settings** and **Stain Removal Guide**.

1 STEP WASH + DRY (Some Models):

This option is available on all cycles except **Self Clean**. The **1 STEP WASH + DRY** option is intended to be used for small loads only. and/or when clothes need to be washed, dried, and ready to wear or finished the next morning. This feature will tumble clothes and introduce a constant stream of air into the washer compartment upon completion of select wash cycles. Although the drying portion is set to 8-hours, the clothes can be removed at any time by pressing **Start / Pause** or **Power** to cancel the cycle.

Tumble Care (Some Models):

This option tumbles garments periodically for up to 8-hours after the wash cycle is complete, which helps to lessen the setting of wrinkles and creases when the clothing cannot be moved to the dryer right away. At the end of the cycle, the display will scroll "**END**" and after 10-minutes the **Tumble Care** will begin. It can be stopped at any time by pressing **Power**.

PreWash (Some Models):

PreWash is an extra wash before the main wash, best used for heavily soiled clothes or garments with a care label that recommends prewashing before washing. Be sure to add liquid or powder high-efficiency detergent, or the proper wash additive to the prewash dispenser. Washers equipped with **SmartDispense** will automatically add the proper amount of detergent for prewash based on the load size.

PreWash must be selected prior to pressing **Start / Pause**. The PreWash feature will fill the washer (adding the prewash detergent), tumble the clothes, drain, and spin. Then, the washer will run the selected wash cycle. **NOTE:** In some special cycles, **PreWash** is selected automatically as the default. It can be turned off at any time. The main wash will use new detergent from the manual detergent compartment and from the SmartDispense tank (on some models).

AutoSoak (Some Models):

This option is used to soak garments prior to the wash cycle. It begins with a brief tumble and then proceeds to soak the clothes with water and detergent for a specified period of time. Once complete, the cycle will continue automatically. **AutoSoak** must be selected prior to pressing **Start / Pause**. The **AutoSoak** time will add an additional 15-minutes, 30-minutes, 1-hour, or 2-hours to the overall wash time. High-efficiency detergent from the main wash compartment in the dispenser is used for the **AutoSoak** period and main wash cycle.

(Continued next page)

Soak Rinse (Some Models):

Select Soak Rinse when laundry sanitizer is used. This option is recommended for special case loads only, not for typical use. Press **Soak Rinse for Sanitizer** to enable. An additional chime will occur and the cycle time will increase due to additional soaking time to activate the laundry sanitizer. To cancel the option, press **Soak Rinse for Sanitizer** again. **NOTE:** Fill the fabric softener compartment in the dispenser drawer with the recommended amount of laundry sanitizer.

Extra Rinse:

This option allows for an extra rinse during a cycle to remove excess dirt and detergent from soiled loads. Press **Extra Rinse** to select. **NOTE:** On the **RINSE and SPIN** cycle, press **Extra Rinse** until the LED is no longer illuminated to achieve a **DRAIN and SPIN** cycle.

Light (Some Models):

The basket light will turn on and remain on for 5-minutes when the door opens, when **Start / Pause** is pressed, or by pressing the **Light** pad. The basket light can be turned off by pressing the **Light** pad.

Sound:

To change the loudness of the end-of-cycle signal and the volume when pressing pads, press **Sound** as many times as needed to reach the desired setting. On some models, there are four sound levels, including Off. Other models include Off/On with a press-and-hold function.

Control Lock / Light-Control Lock (Depends on Model):

The user can lock the controls to prevent any selections from being made, or lock/unlock the controls after a cycle has started. When this option is selected, children cannot accidentally start the washer by touching pads.

To lock/unlock the washer, press and hold **Control Lock / Light-Control Lock** for 3-seconds. A sound is made to indicate the lock/unlock status. The control lock icon on the display will light up when it is on. **NOTE:** The **Power** pad can still be used when the machine is locked.

Dryer Control – Bluetooth® Pairing (Some models):

1. Power on both the washer and dryer, but do not start any cycles.
2. Press and hold **Tumble Care** on the washer for 5-seconds until the Bluetooth® LED ( ) starts to flash and an audible tone is heard.
3. Open and close dryer door three times within 10-seconds to make it discoverable to the washer. The washer will attempt to discover the dryer, the Bluetooth® icon will flash, and both displays will blink "**- - -**".
4. The Bluetooth® icon on the washer should illuminate solid, signifying that the washer and dryer are now paired. The washer will display "**bt**" once pairing is complete.
5. If the Bluetooth® units fail to pair, repeat Steps 1 through 4 above.
6. To unpair, press and hold **Tumble Care** for 10-seconds or open and close the dryer door three times within 10-seconds.

(Continued next page)

How to Use the Dryer Control Feature (Some Models):

1. Power on the washer.
2. Press and hold **Dryer Control** on the washer for 3-seconds to power on the dryer.
3. The dryer's cycle selection will flash to display the recommended sensor cycle that pairs to the last completed washer cycle as the washer display reads "**drY**".
4. To use this cycle, press **Dryer Control** to start the dryer. The dryer can be paused by opening its door or pressing **Dryer Control** again. To restart the dryer with its door closed, press **Dryer Control** once again.
5. To select **Timed Dry** instead of the sensor dry cycle, press **Timed Dry** on the washer while the display reads "**drY**". Repeated presses of this button will step through preset **Timed Dry** times (default is 10-minutes).
6. After selected the **Timed Dry** cycle's duration, press **Dryer Control** within 10-seconds to start the dryer.

NOTE: The dryer's control panel is fully functional even when using **Dryer Control** through the washer. Powering off the washer will not power off the dryer when a dry cycle is in progress.

SmartDispense™ (Some Models)

When selected, this feature will automatically add detergent to the wash, eliminating the need to add detergent for each load.

The detergent amount selection on the control panel will default to **AUTO** when first powering up the washing machine. When **AUTO** is selected, the amount of detergent needed for each laundry load will automatically be determined based on the size of the load the machine senses.

For **AUTO**, the washer will dispense approximately 1.5 oz of detergent for an 8 lb. normal load. For other loads, it will adjust proportionally based on the size of load and garment type. If **LESS** is selected, the amount of detergent will be reduced by 40%. This may be desired for higher concentrate detergents or if the home has very soft water. For heavily soiled loads, the user may want to select **MORE** to add 40% more detergent than the **AUTO** level. The user can set the brand/type of detergent in the SmartHQ App so that the washer can make adjustments based on detergent manufacturer's recommendations.

NOTE: Not all cycles will allow the use of the SmartDispense feature. If the light is not illuminated and pressing the **SMART DISPENSE** pad results in a beeping tone, then SmartDispense is not allowed for the cycle that has been selected. Detergent will need to be added directly to the detergent compartment for these cycles.

Manually Adding Detergent

If it is desired to manually add detergent for a particular load:

1. Press the **SMART DISPENSE** pad on the control panel until its light turns off, which indicates the SmartDispense feature has been turned off.
2. Set the flap in the detergent compartment to the type of detergent to be used: Powder or Liquid.
3. Add the desired amount of detergent into the detergent compartment.

NOTE: If the display indicates that the SmartDispense tank estimates there is insufficient detergent to wash a load, the SmartDispense light will flash. The washer can still run a cycle, but it is recommended to add detergent in the manual detergent compartment or refill the SmartDispense tank.

Prewash Compartment (Some Models)

Only use the prewash compartment if selecting the **PreWash** cycle for heavily soiled clothes. Add measured detergent or prewash additive to the back left prewash compartment of the dispenser drawer.

- Detergent or prewash additive is flushed from the dispenser in the **PreWash** (if selected).
- Detergent usage may need to be adjusted for water temperature, water hardness, size, and soil level of the load. Using too much detergent in the washer can lead to over-sudsing and detergent residue being left on the clothes.

Detergent Compartment

Only use high-efficiency detergent in this washer. Do NOT fill high-efficiency detergent over the MAX line. Use the detergent manufacturer’s recommended amount.

(Continued next page)

- **Powder Detergent:** Lift flap up for powder detergent. This must be done to dissolve and flush detergent properly. Follow the detergent manufacturer's instructions when measuring the amount of powder detergent to use.
- **Liquid Detergent:** Keep flap down for liquid detergent. This retains the liquid detergent until it automatically flushes at the start of the wash cycle. Follow the detergent manufacturer's instructions when measuring the amount of liquid detergent to use.

Detergent usage may need to be adjusted for water temperature, water hardness, size, and soil level of the load. Avoid using too much detergent in the washer, as it can lead to over-sudsing, detergent residue being left on the clothes, and could extend wash times.

Do not put clumped detergent in the dispenser; this can cause a leak.

Do NOT put detergent packets in the dispenser drawer.

Liquid Bleach Compartment

If desired, measure out the recommended amount of liquid bleach, not to exceed 1/3 cup (80 ml), and pour into the compartment labeled "LIQUID BLEACH".

It is recommended to use High-Efficiency (HE) bleach in this front-load washer.

Do not exceed the maximum fill line. Overfilling can cause early dispensing of the bleach, which could result in damaged clothes.

NOTE: Do not use powdered bleach or laundry detergent/additive packets in the dispenser.

Fabric Softener Compartment

If desired, pour the recommended amount of liquid fabric softener into the compartment labeled "FABRIC SOFTENER".

Use only liquid fabric softener in the dispenser.

Do not exceed the maximum fill line. Overfilling can cause early dispensing of the fabric softener, which could stain clothes.

NOTE: Do not pour fabric softener directly on the wash load.

NOTE: The fabric softener compartment will be siphoned in the final rinse of the wash cycle. This compartment can also be used to accommodate other liquid rinse aids, such as sanitizers and fabric enhancing liquids. The use of these other products must be certified by the liquid manufacturer for safety in the use of a residential washing machine and combination washer/dryer. Please check carefully, as certain liquids may invalidate the warranty on the washer.

Drain Pump Filter

Clean EVERY MONTH to remove any items that may have been caught in the filter or housing.

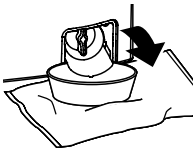
Due to the nature of the front-load washer, it is sometimes possible for small articles to pass to the pump. The washer has a filter to capture lost items so they are not dumped to the drain. To retrieve lost items, clean out the pump filter.

1. Using a small flat-head screwdriver or coin, open the access door.

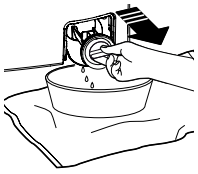


2. Place a shallow pan or dish under the pump access door. Also place towels on the floor in front of the washer to protect the floor. It is normal to catch about a cup of water when the filter is removed.

3. Pull down the pour spout.



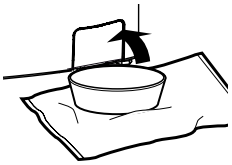
4. Turn the pump filter counter-clockwise (CCW) and remove the filter slowly, controlling the flow of the draining water.



5. Remove the filter and clean the debris from the filter.

6. Replace the filter and turn clockwise (CW). Tighten securely.

7. Flip up the pour spout.



8. Close the access door by hooking the bottom tabs first, then rotating the access door shut.

Stacking Instructions

If stacking the washer and dryer, order stacking kit part # **GFA28KITN** to be used for this dryer.

Kit sold separately.

Stack dryer only on washer. Do not stack washer on dryer, washer on washer, or dryer on dryer.

Do not modify this installation kit. Any modification will void the product warranty.

Disconnect power before installing.

Two or more people are recommended to safely lift the dryer into and out of position.

Avoid damage to the existing utility services.

DO NOT place the washer on top of the dryer.

Location Requirements

When installed in a location other than an alcove or closet, the minimum clearance to combustible surfaces and for air opening are:

- 0-in. both sides*
- 0-in. rear
- 0-in. top

The rear of the dryer should face a wall. Consideration must be given to provide adequate clearance for installation and service.

When installed in an alcove or closet:

- The dryer MUST be vented to the outdoors.
- Minimum clearance between dryer cabinet and adjacent walls or other surfaces is:

  0-in. either side*

  0-in. front

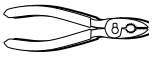
  0-in. rear

  0-in. top

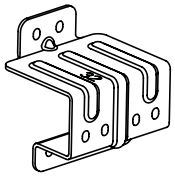
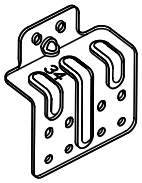
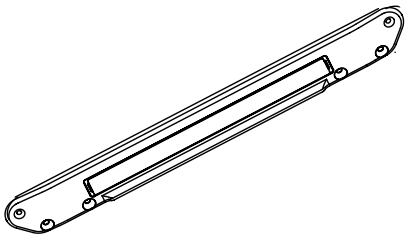
*For improved performance, a 1/2-in. clearance is suggested on either side.

- The rear of the dryer should face a wall.
- Closet doors must be louvered or otherwise ventilated and have at least 60 square inches of open area. If the closet contains both a washer and a dryer, doors must contain a minimum of 120 square inches of open area.

Tools Needed:

- Phillips-head Screw-driver 
- Level 
- Gloves 
- Open End Wrench 
- Pliers 

Stacking Kit Contents:

- Bracket 32 (2) 
- Bracket 34 (2) 
- Spacer (2) 
- #8 1/2-in. Screws (16) 

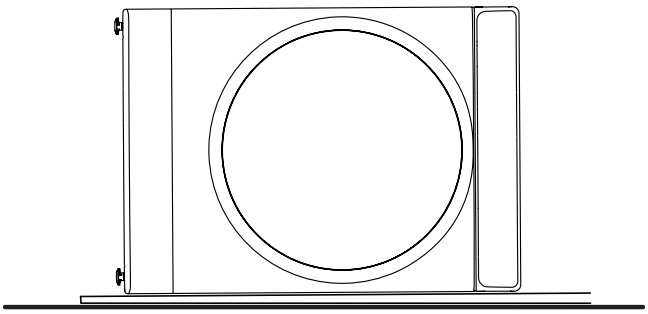
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Installation Preparation:

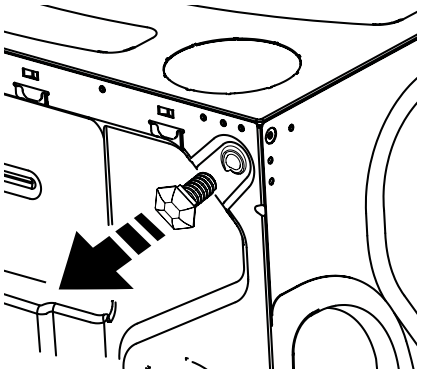
1. Remove the packaging.
2. Flatten the product carton to use as a pad to lay the dryer down on its back or side. Continue using the carton to protect the finished floor in front of the installation location.

Installation:

1. Carefully lay the dryer on its back or side. Use the packing material to prevent scratching the finish on the dryer.

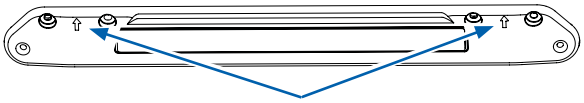


2. Use an open-end wrench or pliers to remove the dryer leveling legs. **NOTE:** Retain the leveling legs for future use.



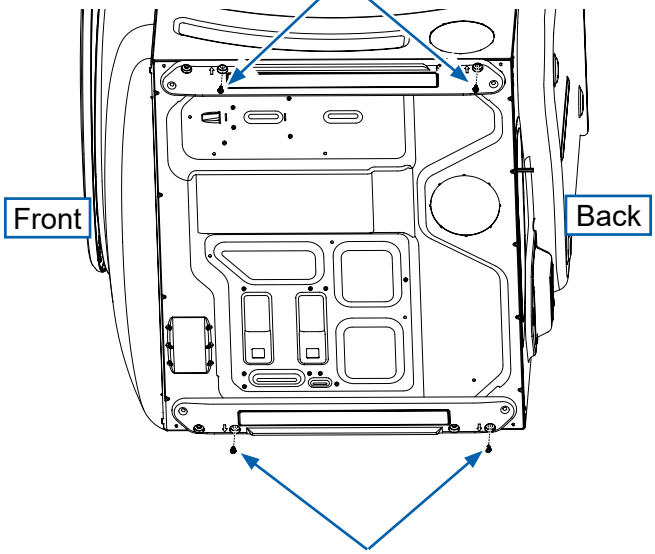
3. Locate a spacer on the bottom side with its holes over the leveling leg holes. Attach spacer using two #8 1/2-in. Phillips-head screws. Attach the second spacer on the other bottom side using two screws.

NOTE: The arrows on the spacers should point to the outside.



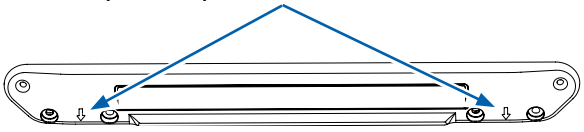
Make sure the arrows on the spacers point to the outside.

Attach spacer using two screws



Attach spacer using two screws

Make sure the arrows on the spacers point to the outside.



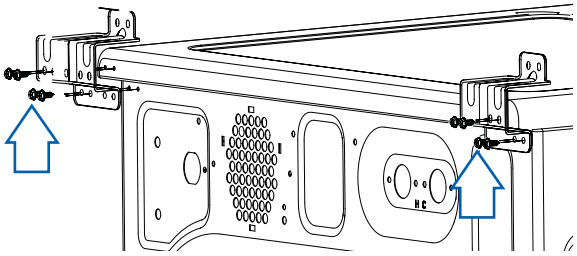
Washer Depth	Dryer Depth	Bracket Number
32-inch	32-inch	32
34-inch	32-inch	34

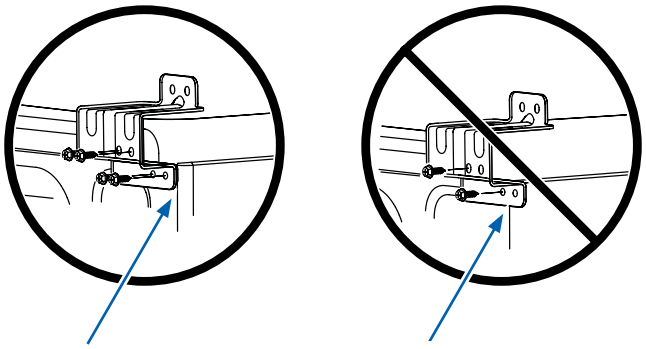
4. Select the appropriate brackets for the model sizes. Using the outside holes in the bracket, attach it to the top-left corner of the washer back using four screws. Repeat on the top-right corner of the washer back.

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32 Brackets for 32-Inch Washer and Dryer Combinations

Attach brackets to washer using four screws on each side.





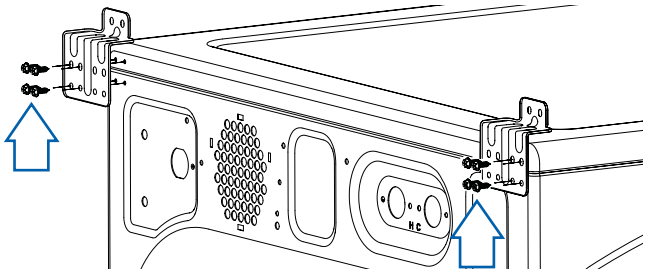
Install brackets flush at washer's edges

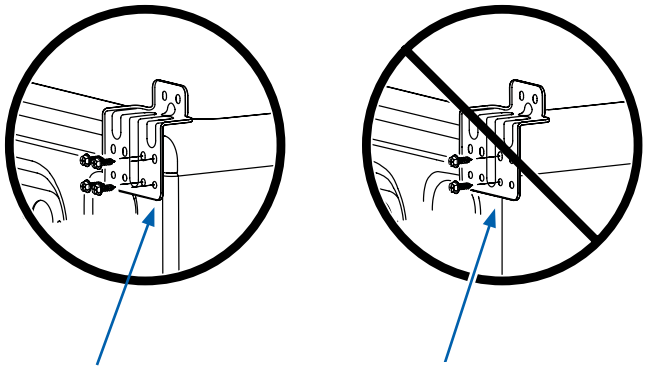
Do not install brackets overhanging washer's edges

OR

34 Brackets for 34-Inch Washer and 32-Inch Dryer Combinations

Attach brackets to washer using four screws on each side.





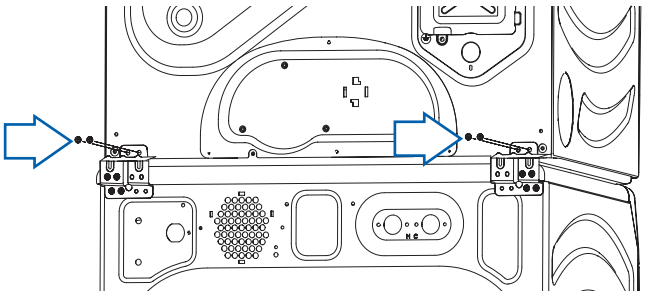
Install brackets flush at washer's edges.

Do not install brackets overhanging washer's edges.

5. Place the washer in the approximate final installation location.
6. Make sure the washer is level. Refer to the washer's **Installation Instructions** for details.
7. Upright the dryer.
8. Reverse the washer and dryer door swings, if desired, before stacking the dryer on the washer. Refer to the washer and dryer's **Installation Instructions** for details.
9. Lift the dryer onto the top of the washer. Be sure to lift the dryer high enough to clear the washer control panel. Be careful not to scratch the top of the washer with the spacers. Protect the washer control panel with cardboard or other protection.
10. Align the holes in the back of the dryer with the holes in the bracket sticking up from the washer. Attach both brackets to the dryer with two screws on each side.

32 Brackets for 32-Inch Washer and Dryer Combinations

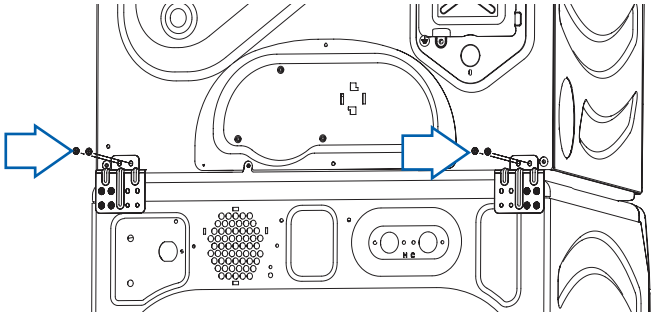
Attach brackets to washer using two screws on each side.



OR

34 Brackets for 34-Inch Washer and 32-Inch Dryer Combinations

Attach brackets to washer using two screws on each side.



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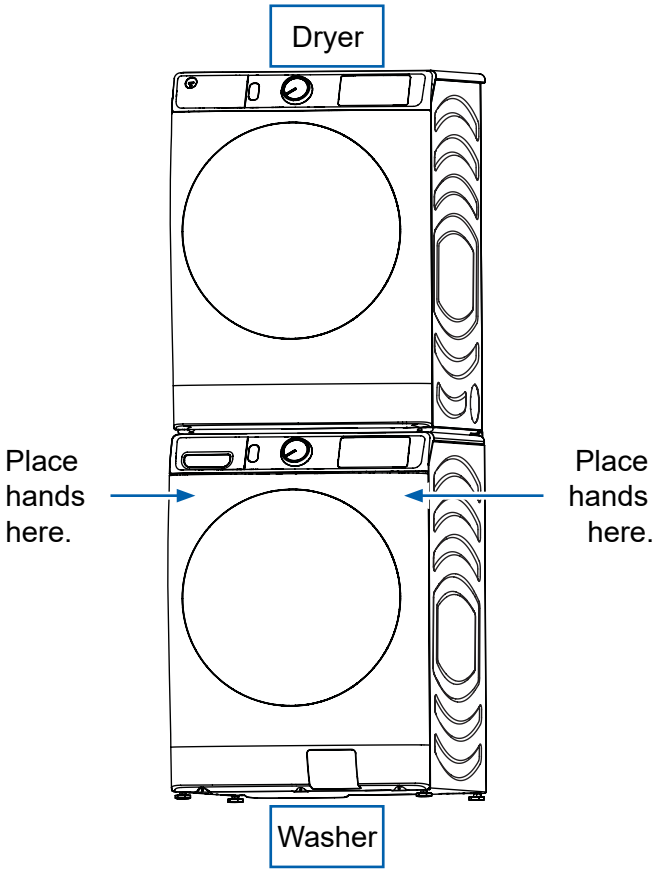
CAUTION: Do not push on the dryer once installed to top of the washer. Pushing on the dryer may result in pinched fingers.

11. Refer to the washer's **Installation Instructions** to complete the washer installation.

12. Refer to the dryer's **Installation Instructions** to complete the dryer installation.

13. Carefully slide or walk the stacked washer and dryer into place. Use felt pads or other sliding device to assist moving and to protect flooring.

14. Verify the units are level. Make adjustments to the washer feet if necessary to level. It is always best to set the washer feet to the minimum height necessary to level the washer and dryer properly.



Cabinet and Structure

Cabinet Component Locator



Control Panel

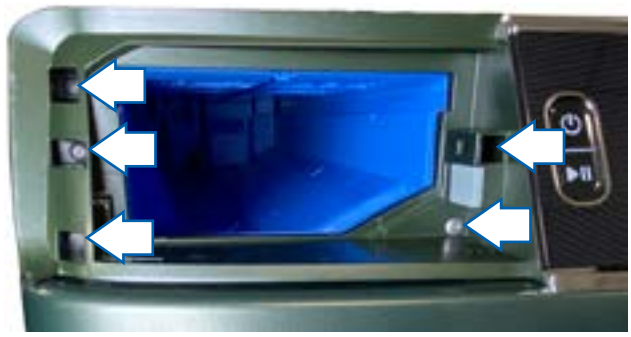
The control panel is held in place with five Phillips-head screws behind the dispenser drawer and two tabs on the right side of the control panel. When the dispenser drawer is removed, the RJ45 connector can be accessed.

Control Panel Removal

1. Pull the dispenser out to the stop position.
2. Press down on the lock tab, then pull the dispenser drawer out from the control panel.



3. Remove five Phillips-head screws from the control panel dispenser recess.



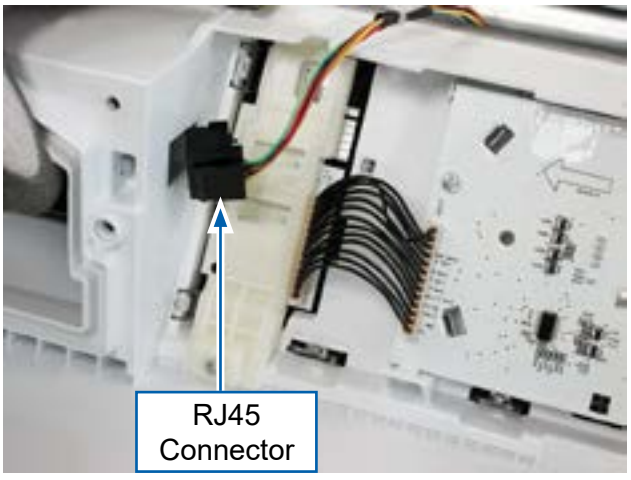
4. Pull control panel out slightly and raise the left side of the control panel upward. This will disengage the top left side tab.



5. Pull control panel up and off from the front panel and disconnect the harness.



6. Push in on the tab that secures the RJ45 connector to the control panel.



User Interface (UI) Board

The user interface (UI) board is mounted to the control panel assembly under the plastic cover. It consists of the display board, cycle select board, and the Start / Pause button board. They are all connected together and come all as one part.

NOTE: The cycle select knob does not need to be removed as it will stay with the control panel.

User Interface (UI) Board Diagnosing

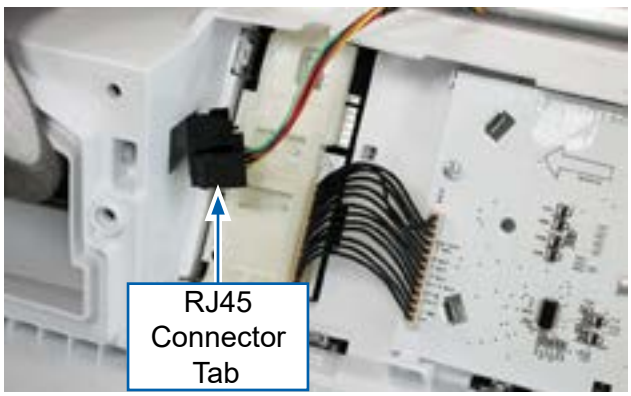
The user interface (UI) board is powered by the main board from the CN1 connector. If the user interface board is not working, check for approximately 12 VDC from pin 1 to pin 3 on the 7-pin connector from the main board to the user interface board. If voltage is present at the UI board, replace the UI board. If no voltage, check harness and connectors. If good, replace the main board.

User Interface (UI) Board Removal

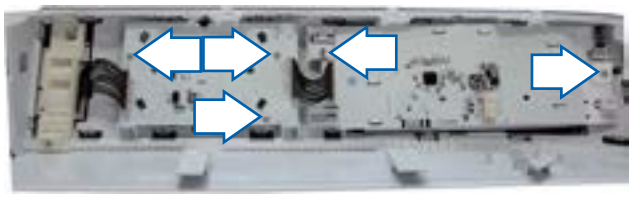
1. Remove control panel (see Control Panel Removal).
2. Remove harness supplying DC voltage to UI board.



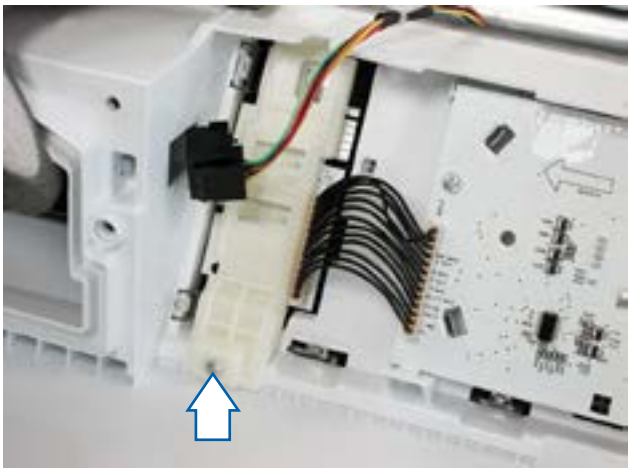
3. Disconnect RJ45 connector by pushing in the tab on the connector. Then rotate connector from control panel.



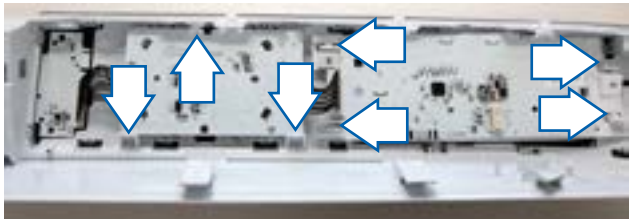
4. Remove the cycle select knob by pulling outward or carefully using a putty knife or flat-head screwdriver to pry the knob outward, away from the control panel.
5. Remove five Phillips-head screws securing the two larger parts of the UI board to the control panel.



6. Remove one Phillips-head screw securing the power/pause button to the control panel.



7. While pushing in on the seven clips that holds the UI board to the control panel assembly, pull upward on the UI board. If the board is not held with an upward pressure on it, the clips will refasten, not letting the board to disengage from the control panel assembly.



Top Panel

Removal of the top panel provides access to the dispenser assembly, water valves, water level sensor, main board, humidity sensor board, accelerometer, overnight dry fan, overnight filter.

Top Panel Removal

1. Remove control panel (see Control Panel Removal).
2. Remove three Phillips-head screws at the front of the top cover.

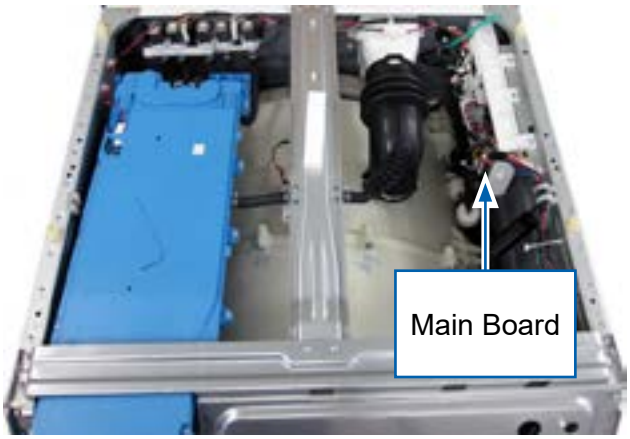


3. Pull top panel forward to disengage rear guide posts and then lift up.



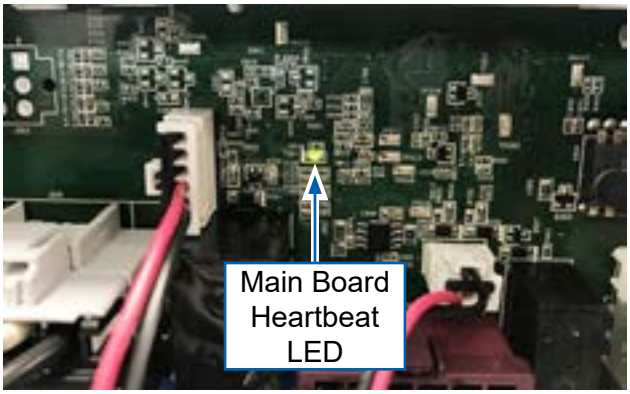
Main Board

The main board powers the user interface (UI) and inverter boards. The main board receives commands from the user interface board and controls washer operation, communicating with the UI and inverter through low voltage pulses. The main board is enclosed in a protective housing and cover located inside the cabinet, at the top-right side of the washer cabinet.



Main Board Diagnosing

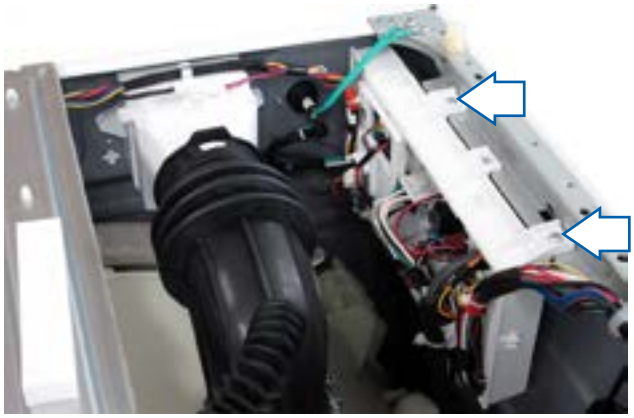
- Verify 120 VAC at the house supply outlet.
- If voltage is present at supply outlet, verify 120 VAC between pin 1 (**black**) to pin 2 (**white**) at main board connector J101.
- If no voltage is present at main board connector J101, check the power cord, wire harness, and connector.
- If voltage is present at main board connector J101, but no heartbeat LED is flashing on the main board, replace the main board.



(Continued next page)

Main Board Removal

1. Remove control panel (see **Control Panel Removal**).
2. Remove top panel (see **Top Panel Removal**).
3. Remove two Phillips-head screws securing main board housing to cabinet.



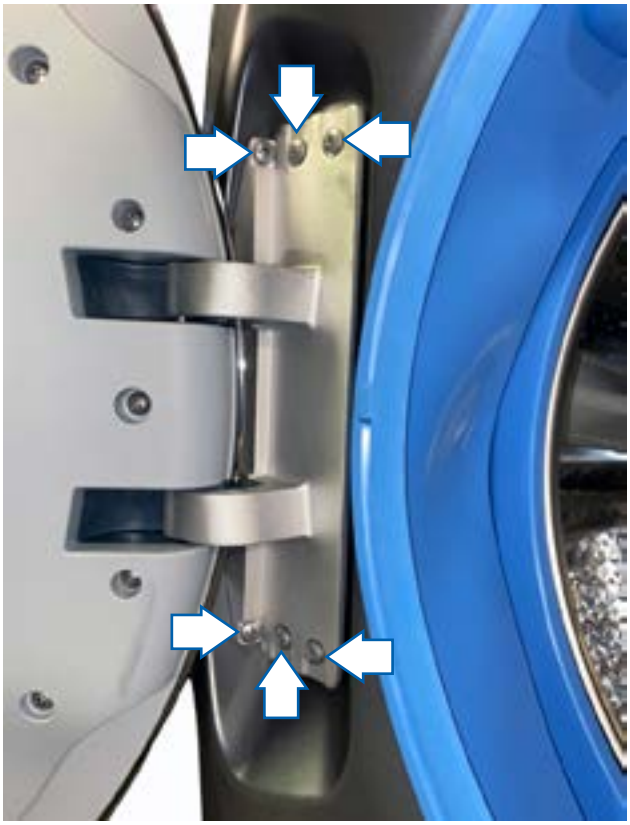
4. Slide main board housing toward front of cabinet to disengage main board housing tabs from the cabinet.
5. Disconnect wiring connectors from main board.

Door

The door is reversible and can be ordered as a complete assembly (hinge included). The door hinge is attached to the front panel with six Phillips-head screws and two hooks that engage the two cutouts in the front panel.

Door Removal

1. Remove six (6) Phillips-head screws that hold the hinge to the front panel. **NOTE:** The door hinge is attached to the front panel with six (6) Phillips-head screws and two hinge hooks that engage two cutouts in the front panel. The door will stay in place when the screws are removed.

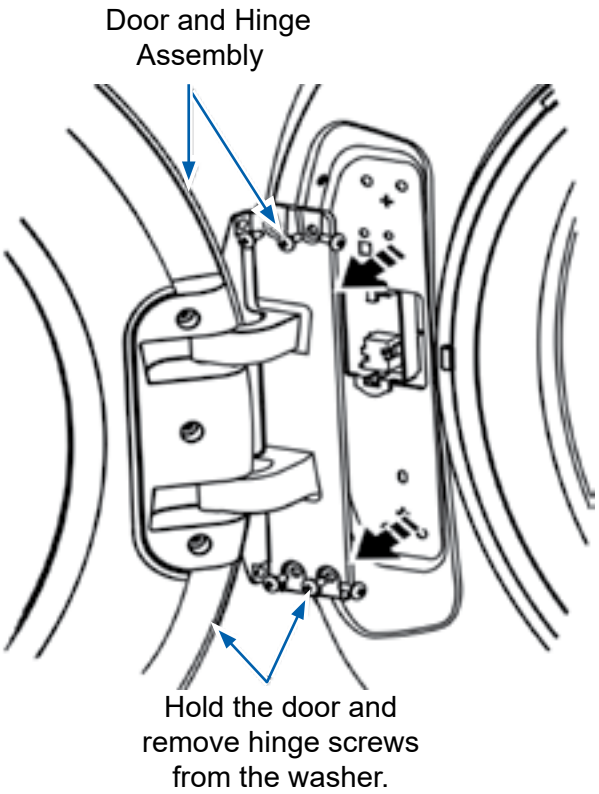




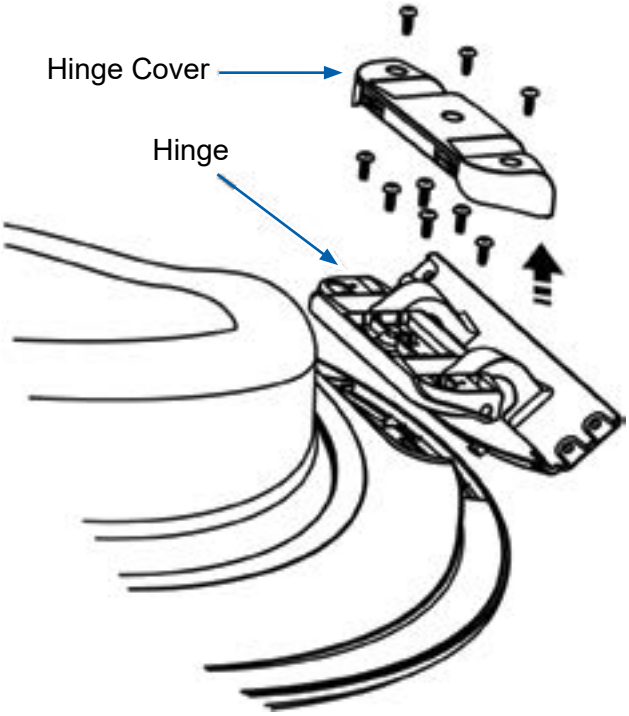
2. Lift the door and hinge 1/4-inch to disengage the hinge hooks from the front panel, and pull outward to remove the door.

Door Reversal

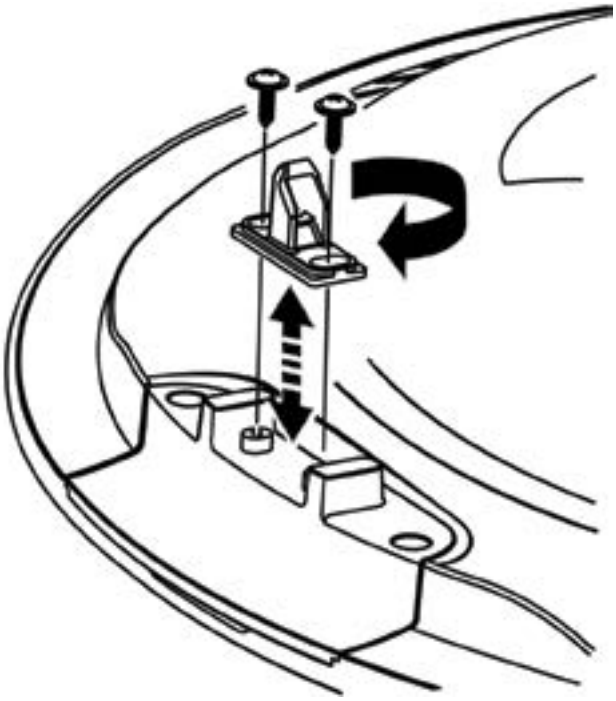
1. Remove door assembly
   - Open washer door.
   - While supporting door, remove six screws from the hinge in the washer face.
   - Lift door assembly to remove it from the washer face and set it on a protective surface.



2. Remove hinge cover and door hinge.
   - Remove three Phillips-head screws from the hinge cover and remove the cover.
   - Remove six screws from the hinge and remove the hinge from the door.

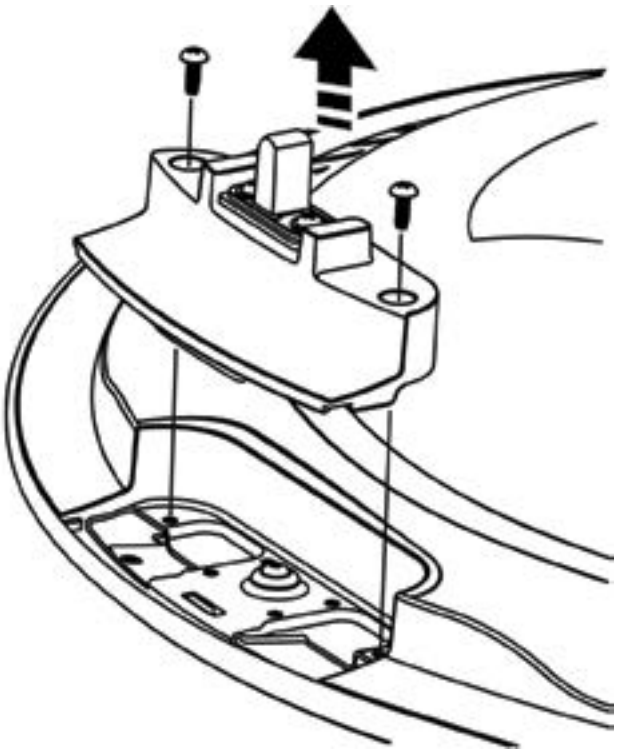


3. Remove, reverse, and replace door striker.
   - Remove two Phillips-head screws from the striker. Rotate striker 180° and reinstall striker with its screws.

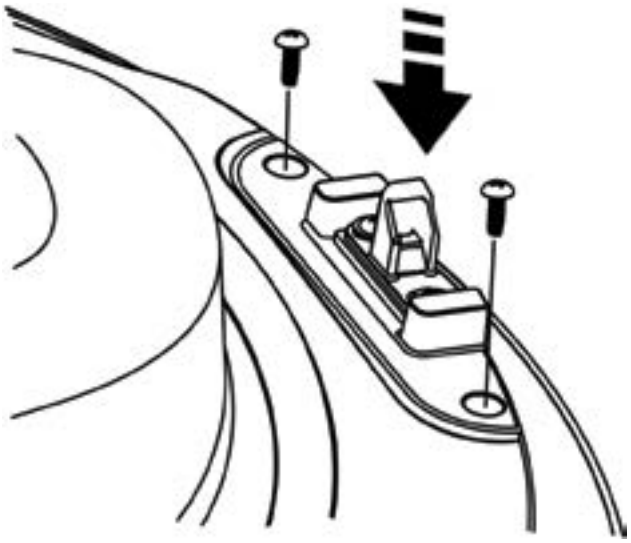


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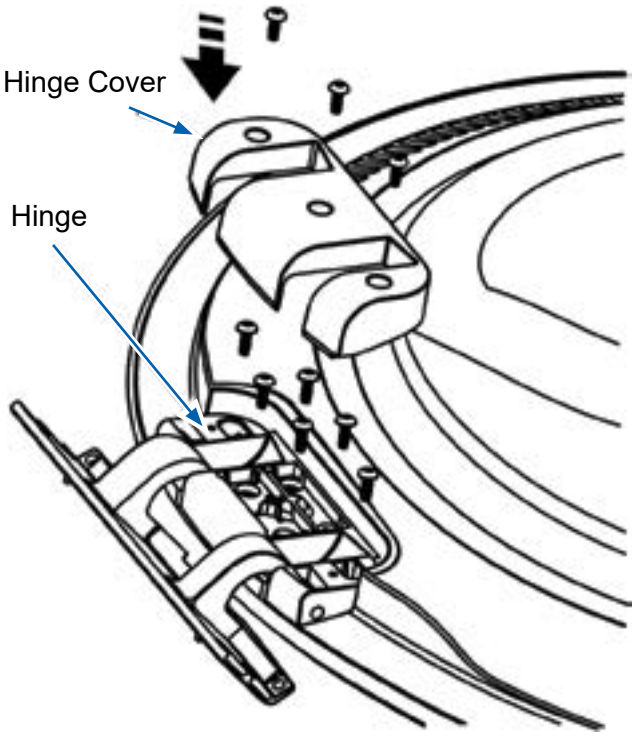
4. Remove, reverse, and replace door striker.
    - Remove two Phillips-head screws from the striker assembly and remove the assembly by pulling it toward the center, pushing it up and pulling it out.



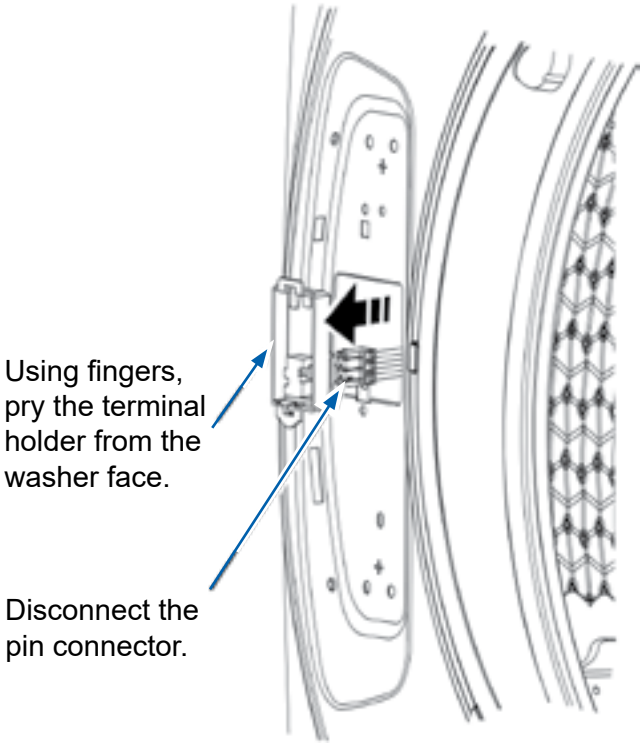
    - Rotate the striker assembly and replace it on the opposite side with its screws.



5. Replace door hinge and cover on the opposite side.
    - Rotate the door hinge and replace it on the opposite side with its screws.
    - Rotate the door hinge cover and replace it on the opposite side with its screws.



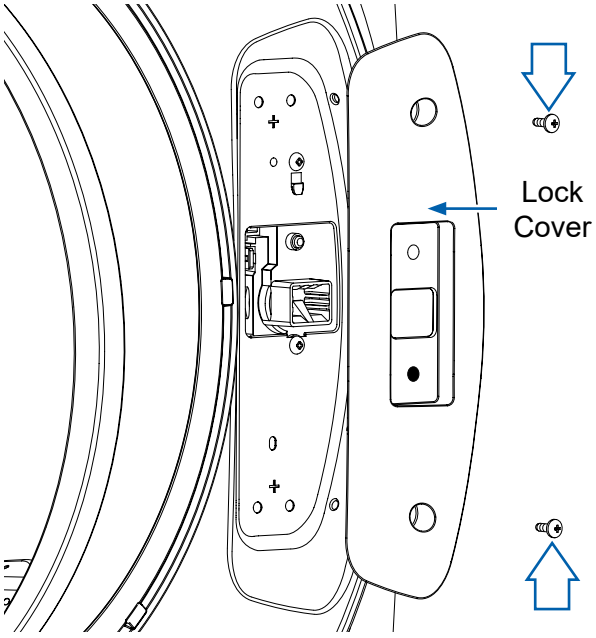
6. Remove terminal holder and disconnect pin connector from the washer



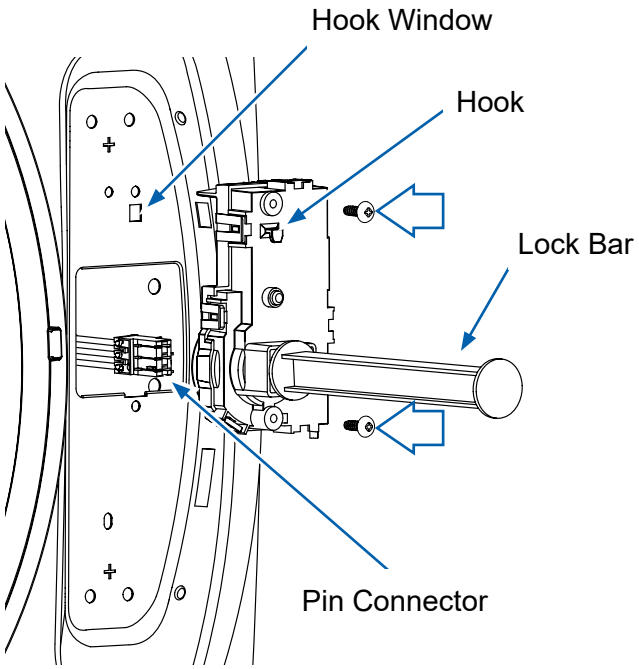
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7. Remove lock assembly and install on the other side of washer.

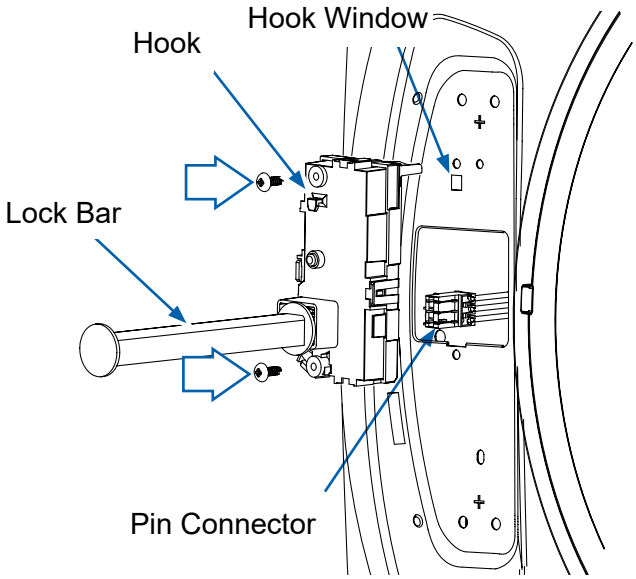
   ○ Remove two Phillips-head screws from the lock cover and remove it from the washer face.



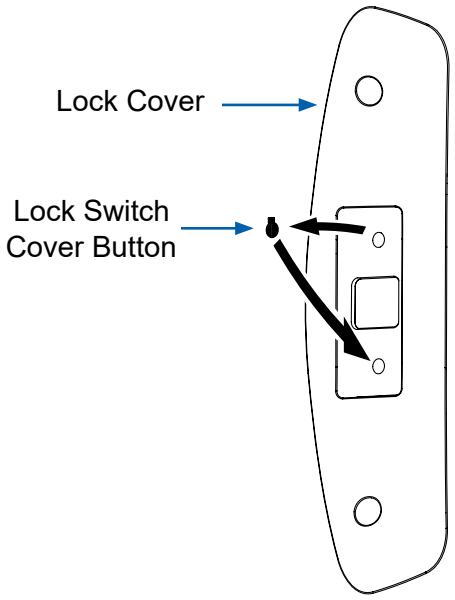
   ○ Insert the provided lock bar into the lock mechanism in the washer face. Remove the lock assembly by removing two Phillips-head screws, using the lock bar to lift it up to unhook, tilting and pulling it out of the washer face. Disconnect its pin connector by unsnapping its locks.



   ○ DO NOT rotate lock assembly. Move it to the opposite side of the washer and connect the pin connector making sure it is fully snap locked together. Tilt and insert the lock assembly into the washer face, lift it up and latch its hook into its window. Replace its screws. Remove the lock bar from the assembly and retain for future use.



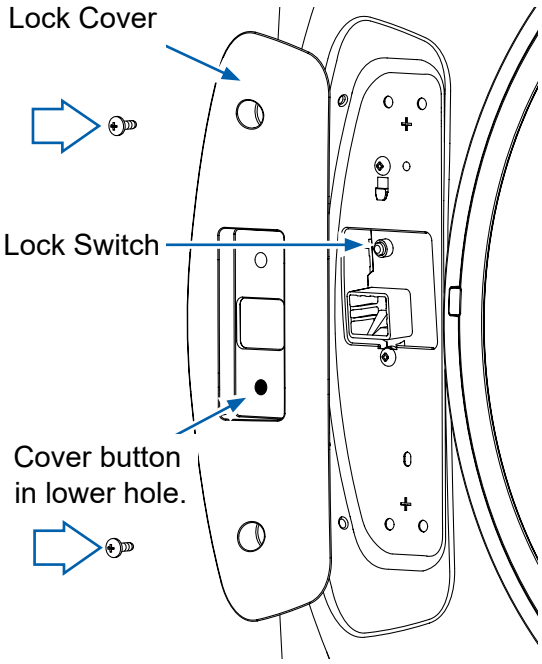
   ○ Remove the lock switch cover button from the back of the lock cover plate and replace it in the opposite hole in the lock cover plate. **NOTE:** The cover button must be reinstalled into the lower hole in the lock cover plate as shown.



Front Side View

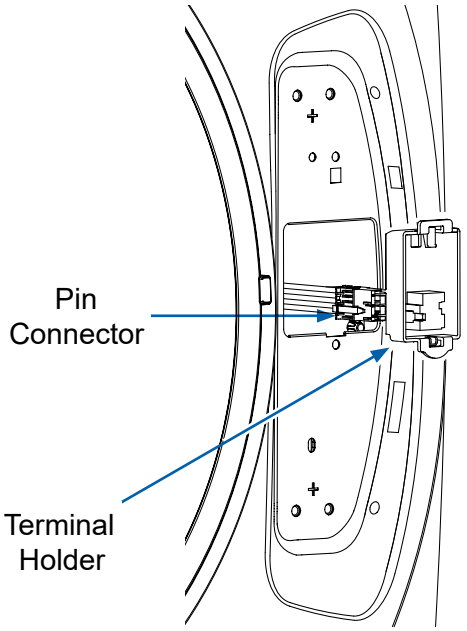
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- Install the lock cover over the lock assembly, making sure the locating post fits into the locating hole and that the lock switch operates freely. Replace two Phillips-head screws.



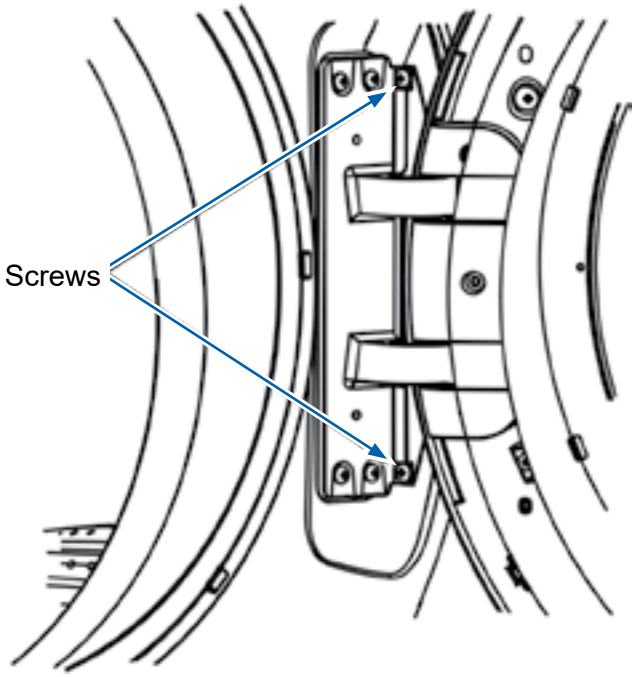
8. Reconnect pin connector from washer and replace terminal holder.

   - Reconnect the pin connector and press the terminal holder back into the washer face on the opposite side.



9. Replace door assembly.

   - Lift the door assembly into place and secure it onto the washer face with six Phillips-head screws.



   - Close washer door.

NOTE: Make sure the door opens and closes correctly. If not, repeat all steps making sure all parts and screws are securely seated.

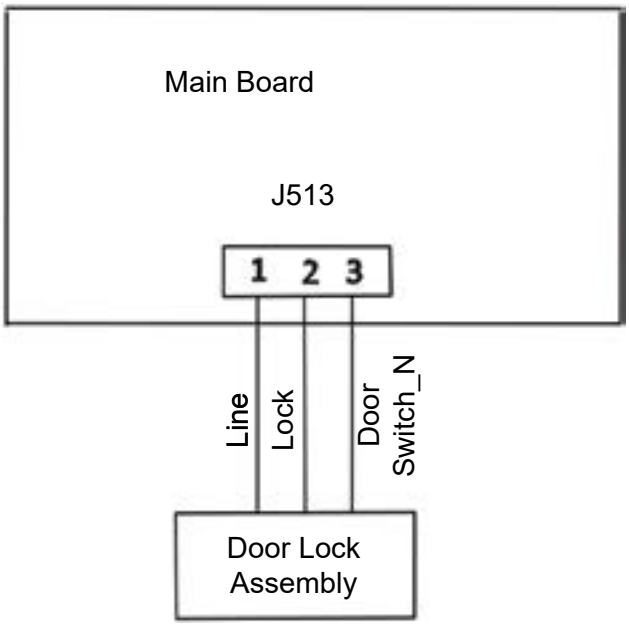
   - Connect power cord and turn on the breaker.
   - Run the washer through a complete cycle to verify proper operation.

Door Lock

The door lock assembly consists of the door switch and locking mechanism. The lock mechanism functions are as follows:

- To transition the lid lock solenoid, the control shall drive the lock coil for exactly 5 AC half-cycles (40 milli-seconds ± 10 ms.).
- The control shall wait 1-second before reading the lock feedback to see if the transition is successful.
- The control shall wait at least 1.5-seconds between retries if a lock transition fails.
- The control shall try up to three times if the lock transition fails (a minimum 1.5-seconds delay between each try is required).
- If the lock is not successful after three tries, it shall provide a 30-second cool down period before trying again.
- After cool down the control will try an additional four times (with delay). If the four tries are unsuccessful, a 180-second cool down will be applied and a "Critical Lid Lock Fault" will be set.

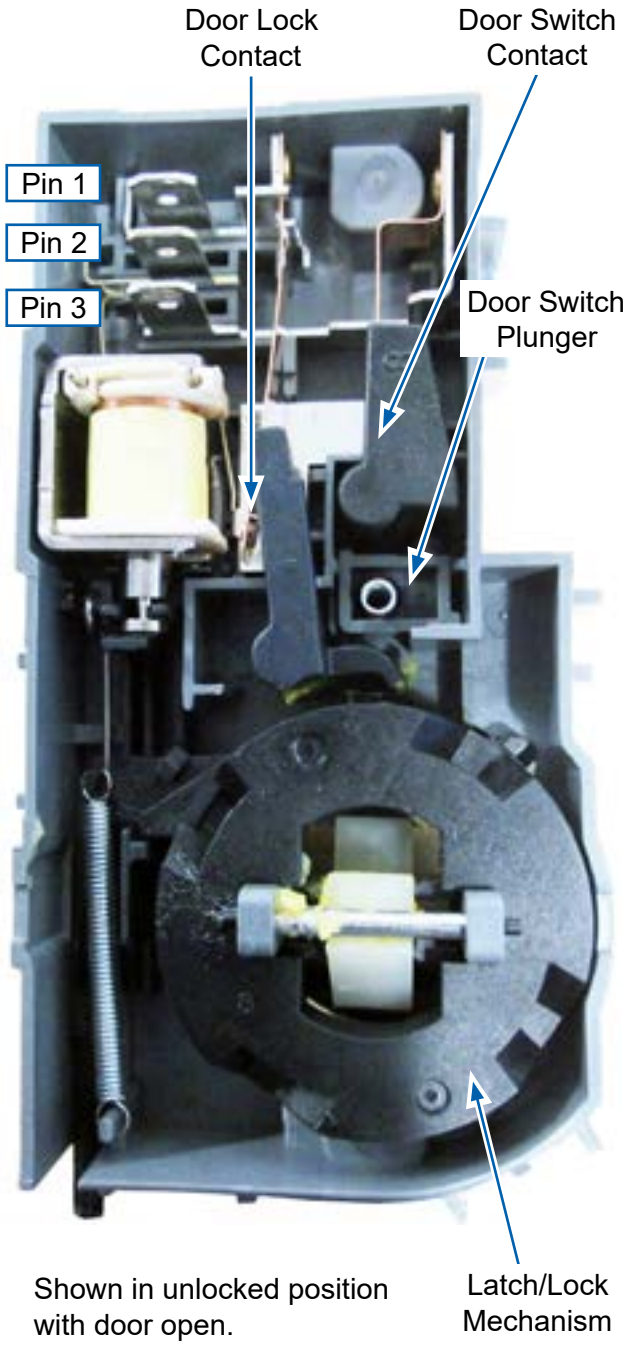
Retry logic should reset on successful lock attempt or on critical lid lock fault.



When locked J513 pin 2 is line

Door Lock Assembly Diagnosing

1. To check door switch, with the door closed, pins 1 to 2 will read open/no continuity, and pins 2 to 3 will read 120 ohms ± 8%. If no reading from pins 2 to 3, replace door lock assembly.
2. To check door lock, with the door closed, pins 1 to 2 will read open/no continuity and pins 2 to 3 will read 120 ohms ± 8%. If no reading from pins 2 to 3, replace door lock assembly.
3. With door unlocked and open, pins 1 to 2 and pins 2 to 3 will read open/no continuity. If there is a reading, replace door lock assembly.



Shown in unlocked position with door open.

(Continued next page)

The image below shows the door lock assembly in the locked position. If the door is locked with clothes in the washer, remove the top panel, reach inside down to the bottom of the lock assembly, and push the button in.



When reversing the door assembly, the lock assembly will need to be moved to the opposite side as well. Using the latch tool will assist with removing the lock assembly.

Lock Assembly Removal/Reversal

1. Remove two Phillips-head screws securing the door latch cover to the front panel.



2. Remove door lock by utilizing latch tool, supplied to the consumer with the washer, to hold the door lock assembly while removing two Phillips-head screws securing the door lock assembly to the panel.



NOTE: The lock assembly can be removed without removing the gasket.



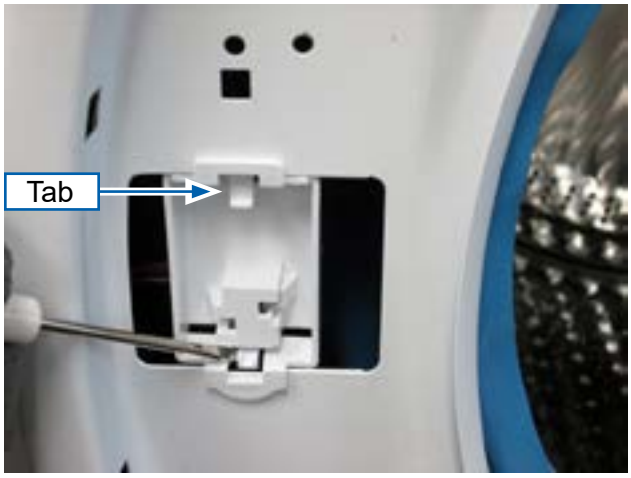
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3. Remove lock assembly from front panel and disconnect harness from door lock assembly and set aside.

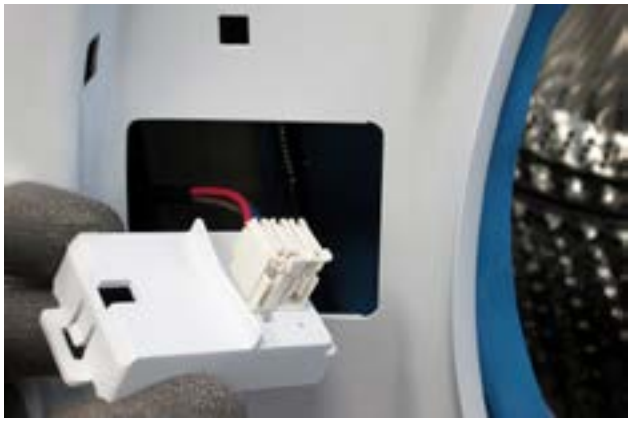


4. Remove door assembly (see **Door Removal**) to reveal and remove the door latch harness holder.

5. Push the tab securing the harness holder to the front panel and remove. Disconnect the harness connector from the holder.



6. Disconnect the harness connector from the holder.



7. If just reversing the door, reconnect the lock assembly to the harness connector on the opposite side.

Front Panel

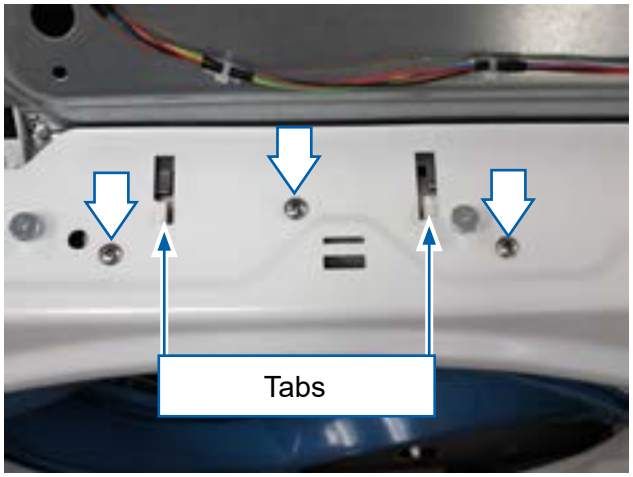
The front panel is inserted onto four posts that are attached to each side of the cabinet and held in place with four Phillips-head screws. A tub gasket provides a watertight seal between the front panel and outer tub. The front of the tub gasket is secured to the front panel flange by a spring and wire located in the fold of the gasket. The door, door lock assembly, and vent damper are attached to the front panel.

Front Panel Removal

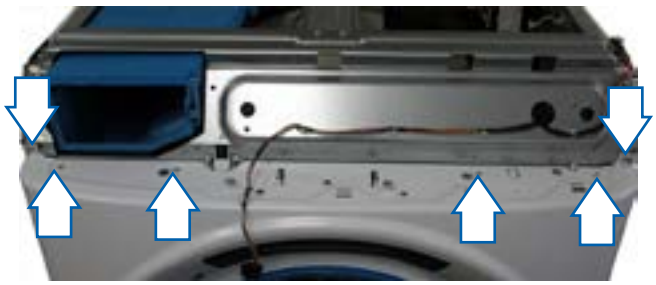
1. Remove control panel (see **Control Panel Removal**).

2. Remove tub gasket (see **Tub Gasket Removal**).

3. Remove three Phillips-head screws securing the vent damper to the front panel, located top-center of the front panel. Slide the damper toward the back to release the vent damper mounting tabs from the front panel.



4. Remove six Phillips-head screws at the top of the front panel. The far right screw is a post screw.

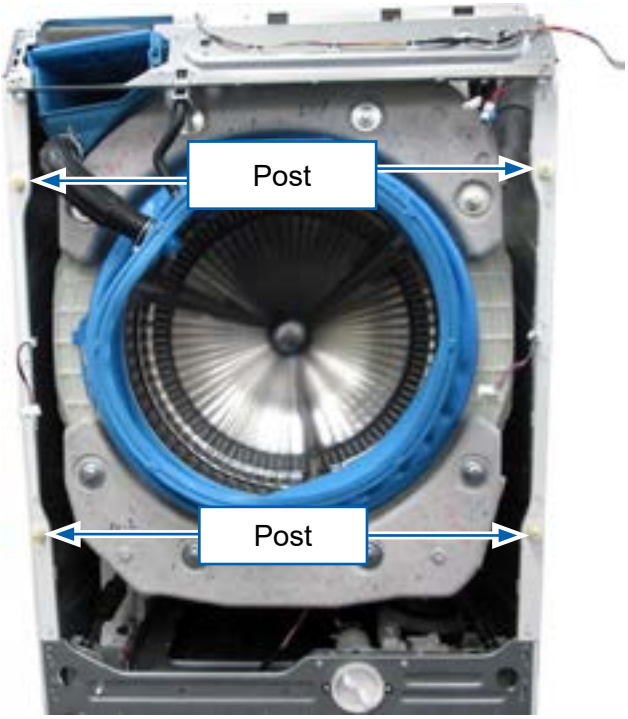


NOTE: The drain filter funnel and access door do NOT need to be removed to remove the front panel.

5. Remove three Phillips-head screws from the bottom of the front panel.



6. Lift up and pull out to disengage the front panel from the four posts on the cabinet.



7. Disconnect wiring connector from the door lock assembly.



8. Remove front panel.

NOTE: If reinstalling the original front panel, protect from damage and scratches.

Rear Cover

The rear cover must be removed to access the belt, pulley, pressure chamber, drive motor, and turbidity sensor (on PFW955 models).

Rear Cover Removal

1. Remove eight Phillips-head screws.



2. Pull the bottom of the panel outward slightly and slide downward to remove from the underside.

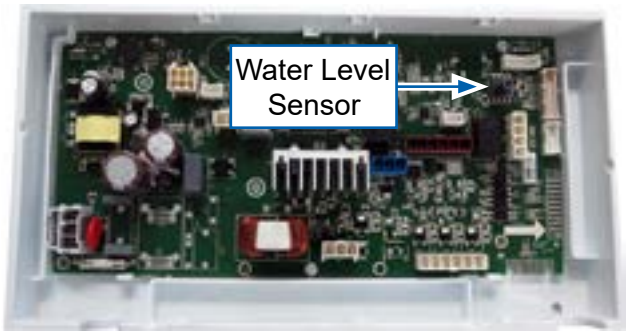


Fill System Components Locator



Water Level Pressure Sensor

The water level sensor is located on the main board. A pressure hose connects to the water level sensor at the main board and pressure chamber at the bottom-rear of the outer tub.

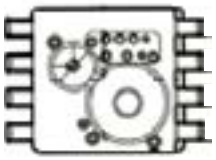


Water Level Sensor Diagnosing

The DC voltage is monitored by the main board, which turns off the water valves when the desired water level is achieved.

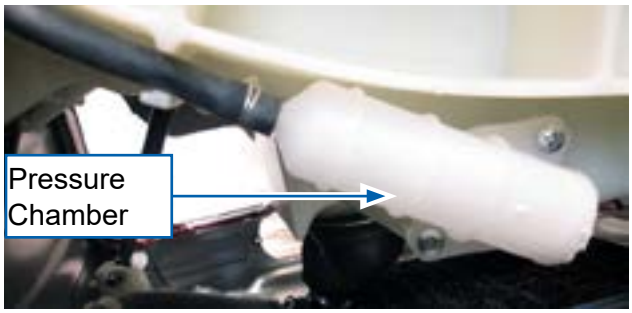
Sensor output voltage can be read from the pressure sensor between pins 3 and 4. If shorted between pin 2 and pin 3, it will cause the board to shut down. The board will come back on when the short is removed.

1. Not usable
2. Power supply[+]
3. Ground
4. Output



5. Not usable
5. Not usable
5. Not usable
5. Not usable

When the water level rises in the washer tub, air is trapped in the pressure chamber located at the bottom-rear of the outer tub.



As the water level rises, the air pressure in the pressure chamber increases. The pressure is translated into a DC voltage signal by the water level sensor.

The DC voltage will vary, depending upon water level, as seen in the **Pressure Sensor Inches To Voltage** table as shown in the next column.

Pressure Sensor Inches To Voltage		
Course	**Water Height (Inches)**	**Voltage (DC)**
Empty	0"	0.5
Normal Wash	1.86"	0.81
Normal Rinse	2.4"	0.9
Quick Wash	1.86"	0.81
Quick Wash Rinse	2.4"	0.9
Bulky Bedding Wash	2.75"	0.96
Bulky Bedding Rinse	3"	1
Rinse Spin Rinse	2.4"	0.9
Self-Clean Wash	4"	1.16
Self-Clean Rinse	4"	1.16
Door Open	7.25"	1.7
Overflow	11"	2.32
Lowest Point In Basket	0.8"	0.63

Water Levels

The wash water level is approximately 1.86-inches deep at the bottom center of the wash basket. **NOTE:** Only approximately 1-in. of water is actually visible.

The drain pump will be activated when the main board detects over 2.32 VDC (Overflow). In flood protection mode (Overflow), the pump will run until reset level is reached. Flood protection is active even in idle state, as long as the door is closed.

Operation of the water level sensor can be checked by using Service Mode test 10 (see Service Mode).

Specific failures associated with the water level sensor can initiate fault codes 6, 8, 20, 25, and 65 (see Fault Codes).

Water Valves

Depending on the washer being serviced, a one and two solenoid valves (GFW510 models), four solenoid valve (GFW550), or five solenoid (GFW650 and up) water valve assembly will be present.

The water valve assembly is located at the rear of the cabinet and held in place with four Phillips-head screws.

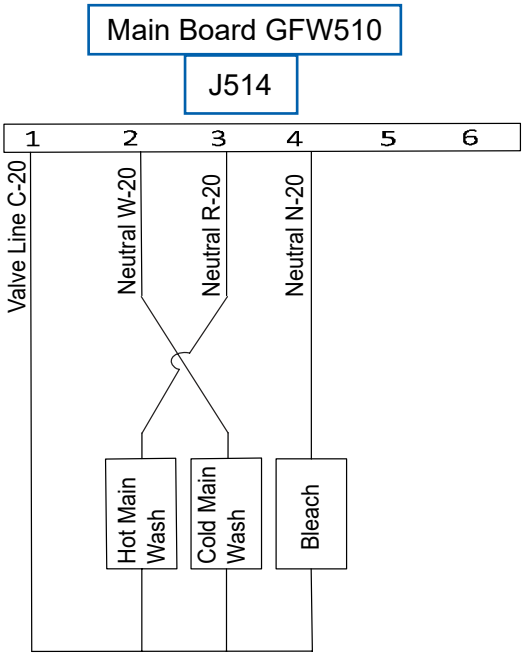
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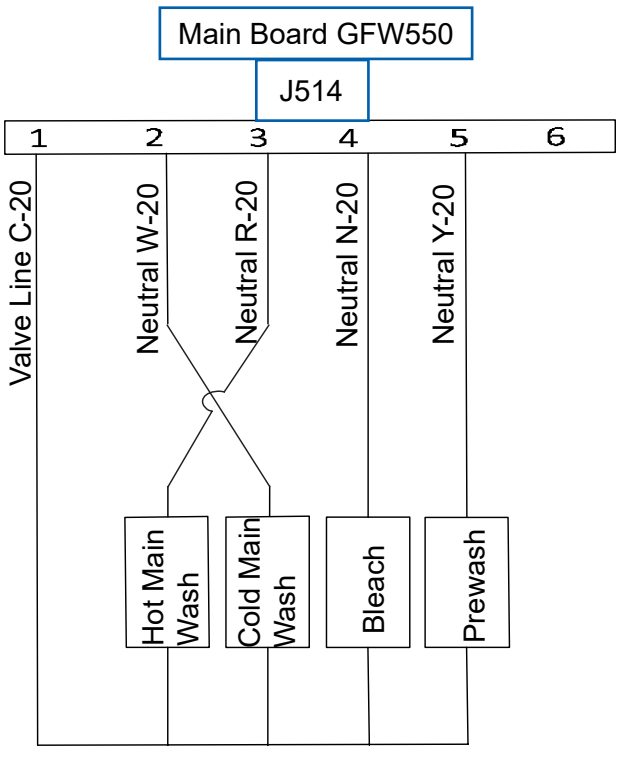
Water Valve Diagnosing

Each solenoid coil has an approximate resistance value of 1,070 ohms ± 10%.

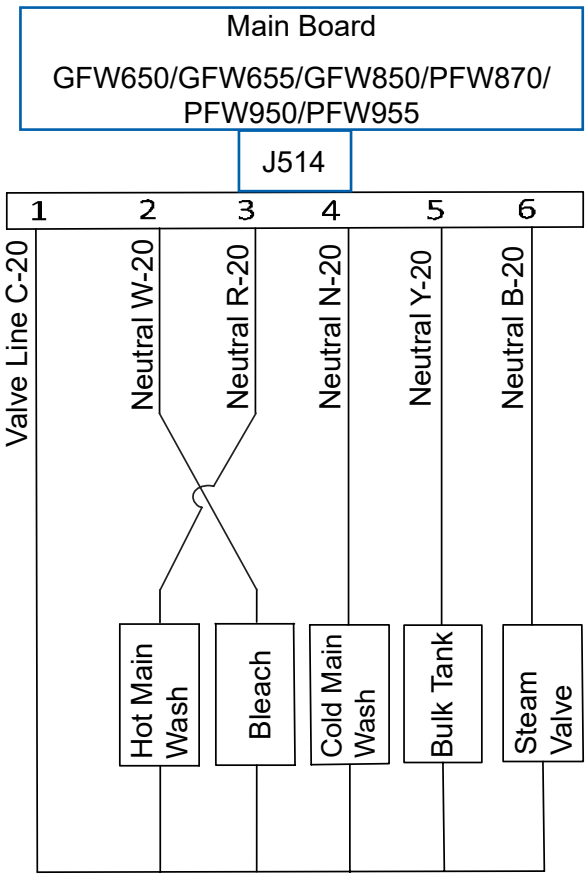
Operation of the water valves can be checked by using Service Mode tests: 6, 7, 8, 19, 21, 22, and 23 (see **Service Mode**).

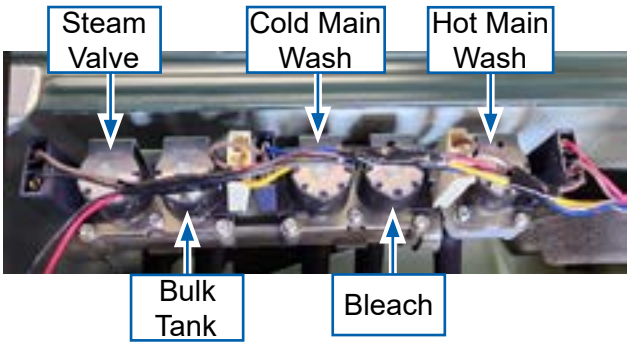
Failures associated with the water valves can initiate the Consumer Help Indicator, "H2O SUPPLY", if no water enters or is turned off at the house supply. Or any of the following fault codes: 6, 8, 19, 20, 25, 27, or 65 (see **Fault Codes**).





NOTE: Prewash is only on the GFW550 Model.





Water Valve Assembly

GFW650/GFW655/GFW850/PFW870/
PFW950/PFW955

(*Continued next page*)

Flow Rate Diagnosing

To ensure proper flow rate (supply water pressure), Service Mode test 10: Pressure Sensor test should complete in less than 3-minutes and 15-seconds. If it takes longer, check to ensure the incoming water pressure is 20 psi minimum at the washer while the washer is filling. Verify the inlet fill screens are clear of debris and that the supply water faucets are turned on completely.

Water Valve Removal

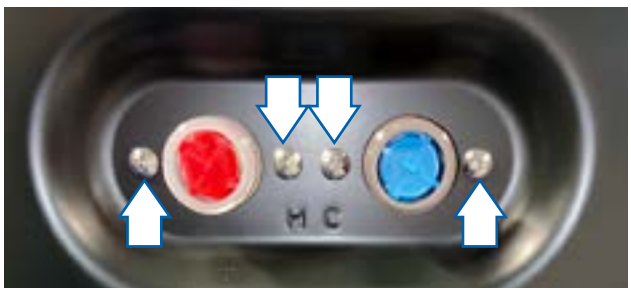
1. Remove top panel (see Top Panel Removal).
2. Disconnect wire harnesses from solenoid coils.
3. Note the location of the water valves outlet hoses and disconnect the hoses.



NOTE: The valve outlet hoses can be difficult to remove.

- Squeeze the clamp and slide it back.
- If necessary, carefully break the hose loose by inserting a small flat-head screwdriver under the hose to break the seal.
- Remove the hose.

4. Remove four Phillips-head screws securing the water valves to the cabinet.



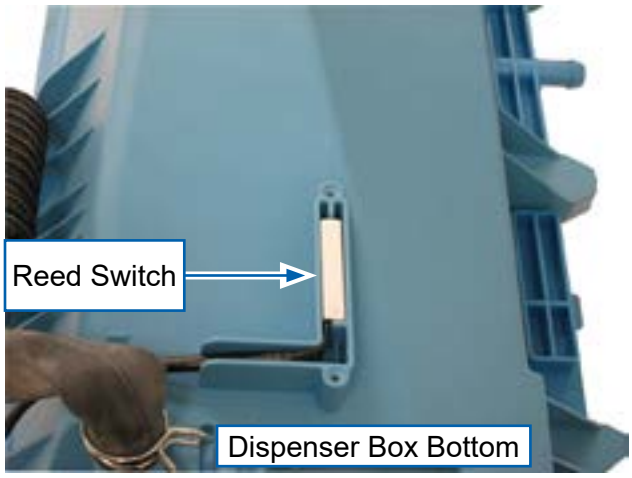
Bulk Dispenser Assembly

The dispenser assembly provides automatic dispensing of detergent, prewash, bleach, and fabric softener as long as the user fills the compartments prior to starting the washer.

The products added to the dispenser are diluted with water before they are dispensed into the wash tub. This is accomplished by the water valves and a plastic conveyer snapped to the top of the dispenser that directs the outputs from the valves to the detergent, prewash, bleach, and softener chambers. The bulk tank uses water pressure to pull detergent from the tank utilizing a check valve inside the dispenser assembly. There is also a float that has a magnet on the bottom of it. When the detergent level is low, it activates the reed switch on the bottom of the dispenser box alerting the tank is low.



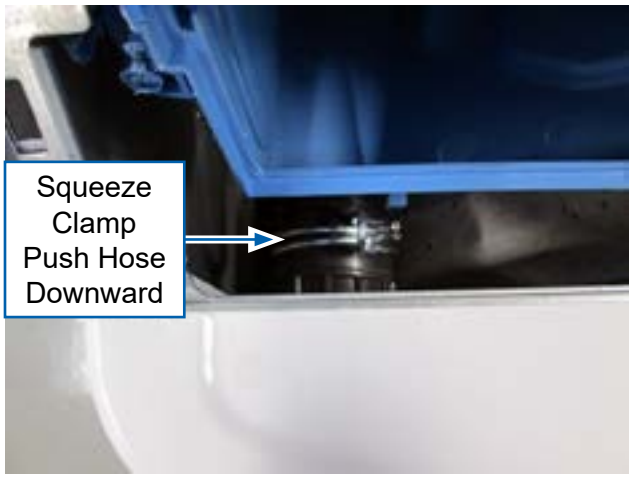
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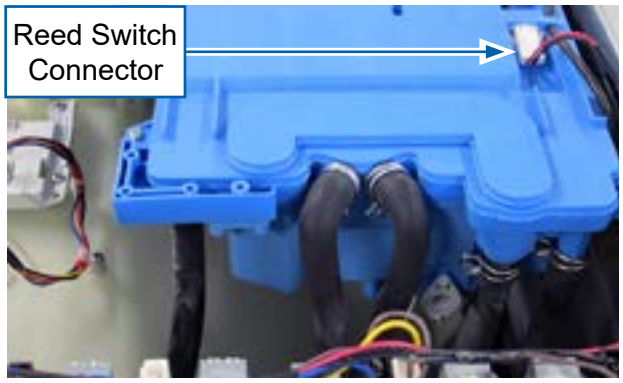
The bleach cup will always and automatically flush with water near the end of every wash cycle before going into rinse. There is not a consumer selectable function.

Dispenser Assembly Removal

1. Remove control panel (see **Control Panel Removal**).
2. Remove top panel (see **Top Panel Removal**).
3. Squeeze the large hose clamp and slide it down onto the tub fill hose.
4. Remove the tub fill hose from dispenser box.



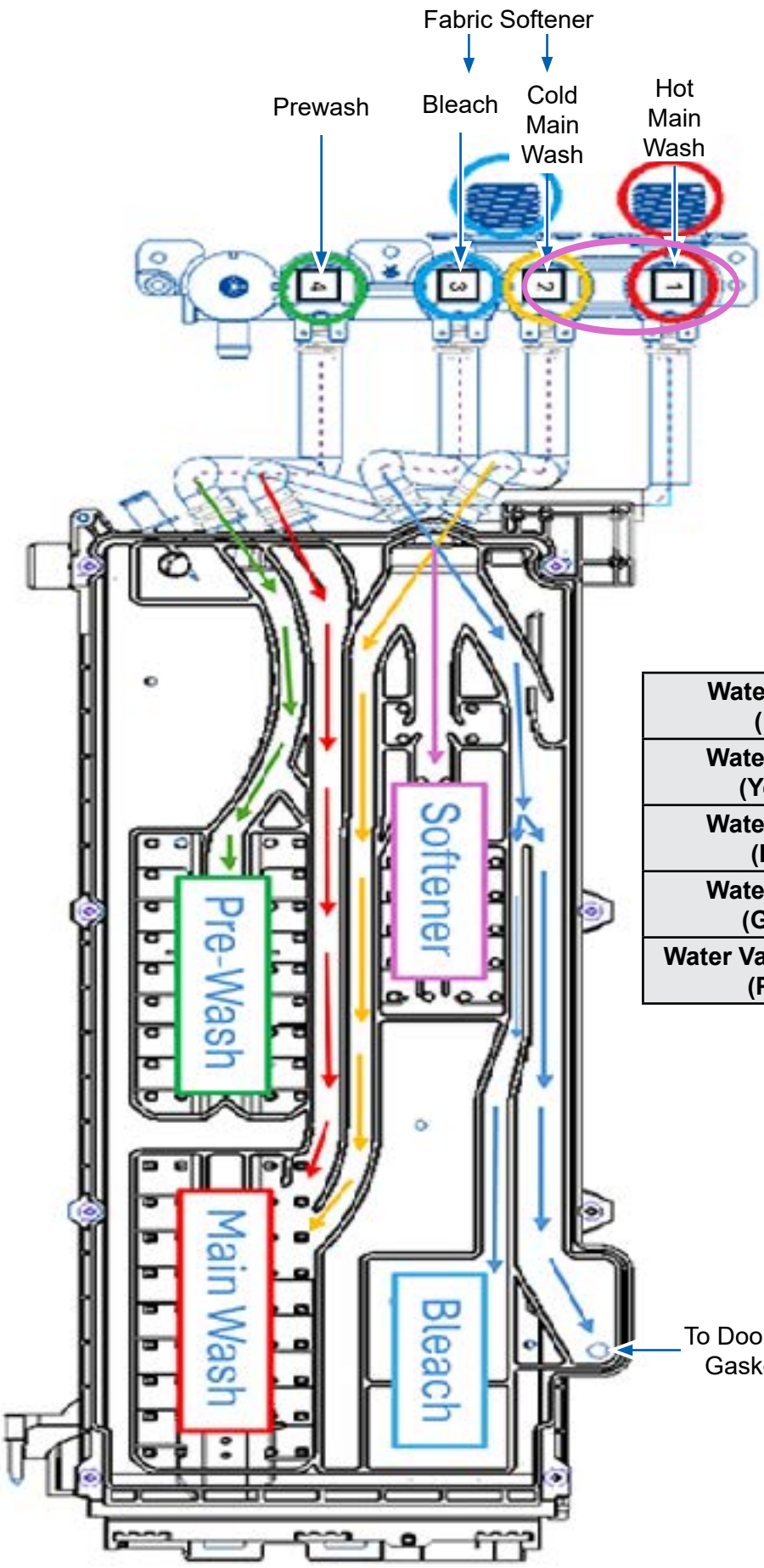
5. Remove the inlet and the dispenser vent hoses from the dispenser:
   - Squeeze each clamp and slide it back.
   - If necessary, carefully break each hose loose by inserting a small flat-head screwdriver under the hose to break the seal.
   - Remove the hoses.
   - Disconnect the reed switch harness connector.



6. Slide box toward the rear to disengage tab from the side rail.

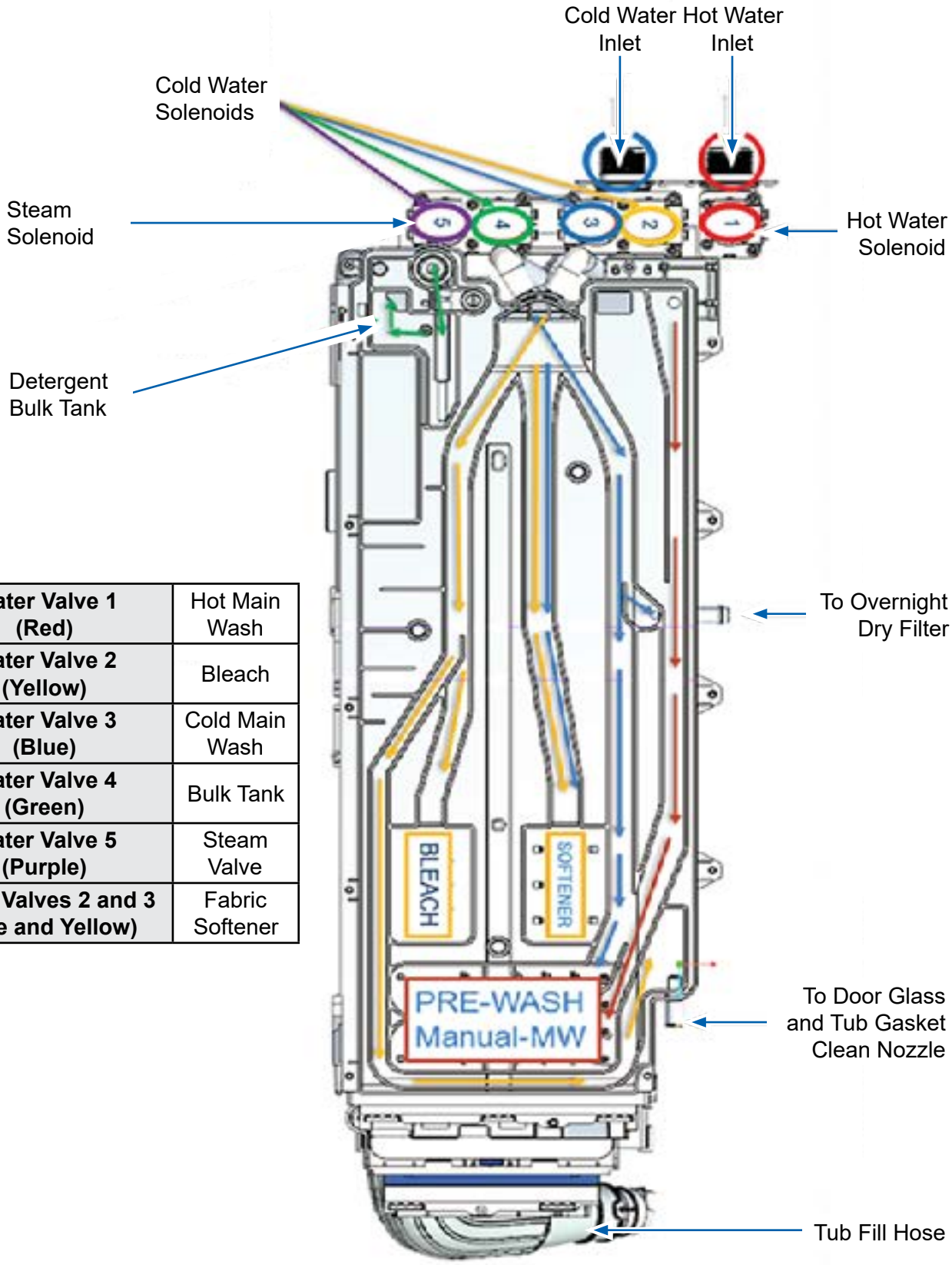


Dispenser Water Flow (Manual Dispense Models GFW510* and GFW550*)



Water Valve 1 (Red)	Hot Main Wash
Water Valve 2 (Yellow)	Cold Main Wash
Water Valve 3 (Blue)	Bleach
Water Valve 4 (Green)	Prewash
Water Valves 2 and 3 (Plum)	Fabric Softener

Dispenser Water Flow (Smart Dispense Models GFW650*, GFW655*, GFW850*, PFW870*, PFW950*, PFW955*)



Water Valve 1 (Red)	Hot Main Wash
Water Valve 2 (Yellow)	Bleach
Water Valve 3 (Blue)	Cold Main Wash
Water Valve 4 (Green)	Bulk Tank
Water Valve 5 (Purple)	Steam Valve
Water Valves 2 and 3 (Blue and Yellow)	Fabric Softener

Drain System



Drain Pump Assembly

Drain Filter

The drain pump comes with a consumer cleanable filter. It is accessible through an access door at the bottom of the front panel. To access the filter:

1. Use a coin or small flat-head screwdriver to open the access door.



2. Fold the drain pump funnel down, turn the filter counter-clockwise (CCW) and pull it from the drain pump.



CAUTION: Under some conditions, up to one quart of water may drain out when the pump drain filter is removed. Ensure to have a shallow pan to catch the excess water.

Drain Pump

The pump consists of a 120 VAC, 60 Hz motor, impeller, impeller housing, and a removable filter that helps prevent foreign objects from entering the pump impeller and drain outlet.

Drain Pump Diagnosing

- The pump runs whenever the washer is in the spin function of a cycle.
- The pump runs if the water level sensor detects voltage over 2.32 VDC (Overflow level), and the washer is plugged in (see **Water Level Pressure Sensor**).
- The pump is capable of eliminating up to 10-gallons per minute.
- Recommended minimum standpipe diameter is 1 1/4-inches.
- Standpipe minimum height is 24-inches, measured from the floor at the washer location.
- Standpipe maximum height is 96-inches, measured from the floor at the washer location.
- The pump motor has an approximate resistance value of 19.5 Ω ± 10%.

The resistance can be checked from the main board, connector J512 pin 2 to pin 3.

Operation of the drain pump can be checked by using Service Mode test 12 (see **Service Mode**).

Specific failures associated with the drain pump can initiate Fault Code 18 (see **Fault Codes**).

The drain pump is attached to the chassis bottom with two Phillips-head screws. The front of the pump has two stabilizing posts that go through two rubber grommets in the chassis front.

BACK

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Drain Pump Removal

1. Ensure water is drained from the washer as explained in the **Drain Filter** section.
2. Remove the front panel (see **Front Panel Removal**).
3. Remove the tub to pump hose and drain hose from the drain pump.



4. Disconnect the harness connectors from the drain pump.
5. Remove two Phillips-head screws securing the drain pump to the chassis bottom.



6. Slide drain pump toward the rear. This will release the two stabilizing posts that go through two rubber grommets in the chassis front. Lift the pump out from the cabinet.

