

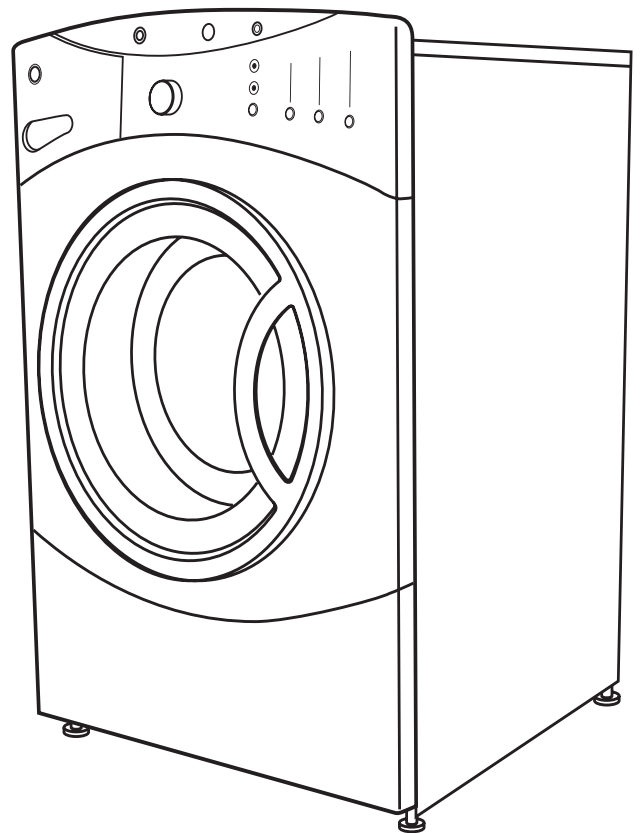
GE Consumer & Industrial

# Technical Service Guide

DECEMBER 2005

## GE Front Load Washer

**WBVH6240**  
**WCVH6260**  
**WHDVH626**



31-9135



GE Appliances  
General Electric Company  
Louisville, Kentucky 40225



## **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.

***GE Consumer & Industrial***

*Technical Service Guide*

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# Nomenclature

## Model Number

**W C V H 6 2 6 0 F 0 W W**

### Brand

W = General Electric

### Feature Packages

B = Base

C = Contract/HPS

HD = Brand Feature Pack

### Capacity/Configuration

V = Very Big

### Backsplash Control/Platform

H = Horizontal

### Control Features

### Color

WW - White

GG - Granite

### Engineering Revision Alpha or Numeric

### Model Year

F - 2005

G - 2006

H - 2007

J - 2008

K - 2009

### Fuel/Voltage

0 = US Voltage



The nomenclature tag is located on the bottom front corner on the right side of the cabinet.

**Note:** The technical sheet is located behind the control panel.

## Serial Number

The first two characters of the serial number identify the month and year of manufacture.

Example: **AH**123456S = January, 2005

<b>A</b> - JAN	2005 - H
<b>D</b> - FEB	2004 - G
<b>F</b> - MAR	2003 - F
<b>G</b> - APR	2002 - D
<b>H</b> - MAY	2001 - A
<b>L</b> - JUN	2000 - Z
<b>M</b> - JUL	1999 - V
<b>R</b> - AUG	1998 - T
<b>S</b> - SEP	1997 - S
<b>T</b> - OCT	1996 - R
<b>V</b> - NOV	1995 - M
<b>Z</b> - DEC	1994 - L

The letter designating the year repeats every 12 years.

Example:

T - 1974

T - 1986

T - 1998

# Introduction

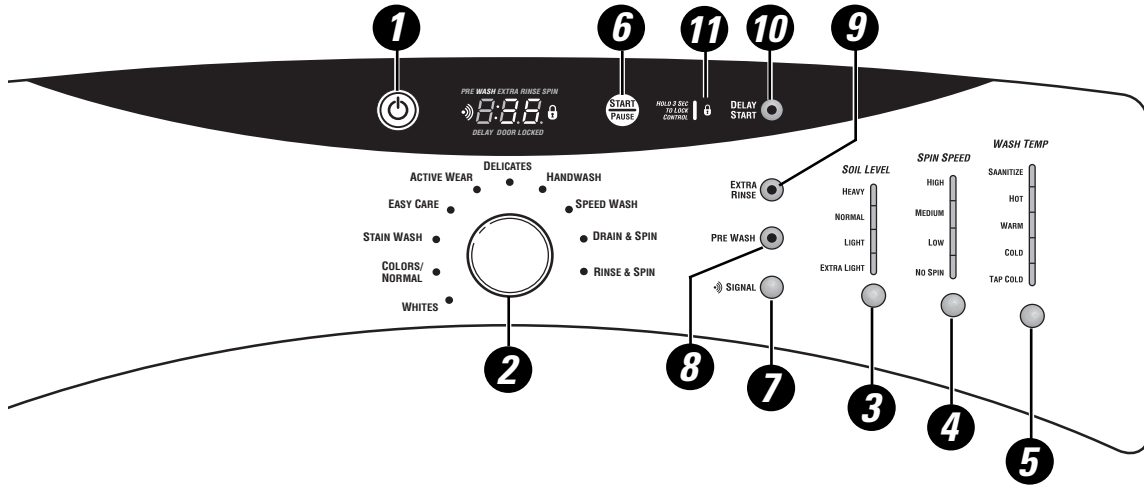
The new GE Front Load Washer has the following features:

- Energy Star Qualification assures less energy waste and lower utility bills.
- 10 wash cycles include a variety of fabric-specific settings, from Extra-Heavy Cottons to Easy-Care Colors.
- My Cycle selection saves a favorite cycle for future use.
- Dispenser adds diluted detergent, bleach, and fabric softener at the correct time during the wash or rinse cycles.
- A nozzle sprays water on the inner door glass to reduce detergent and mineral buildup.
- End-Of-Cycle Signal alerts user when the cycle is done, saving time between loads. Signal volume can be adjusted.
- Overflow protection activates the drain pump whenever water reaches overflow level.
- Service test mode built-in. Specific washer components can be operated. Error codes are recorded and accessible on the control panel's 7-segment display.
- Two piece plastic outer tub is formed from tough, lightweight polypropylene.
- The wash tub is constructed of durable stainless steel.
- Two suspension springs and four dampers provide maximum off-balance load protection with minimal vibration transfer to the floor.
- Intricate door lock keeps the door locked during operation.
- Blackout protection. Restoring power resumes cycle where it was interrupted. Eliminating restarting entire wash cycle.
- Flush door handle.
- UV stabilizers are utilized on the control panel, top cover, and door outer panel to prevent yellowing when exposed to sunlight.
- The GE dryer can be installed on top of the washer. (Stacking kit supplied with washer.)
- Pedestal available at additional cost. White (model number SBSD227FWW) and granite (model number SBSD227FGG).

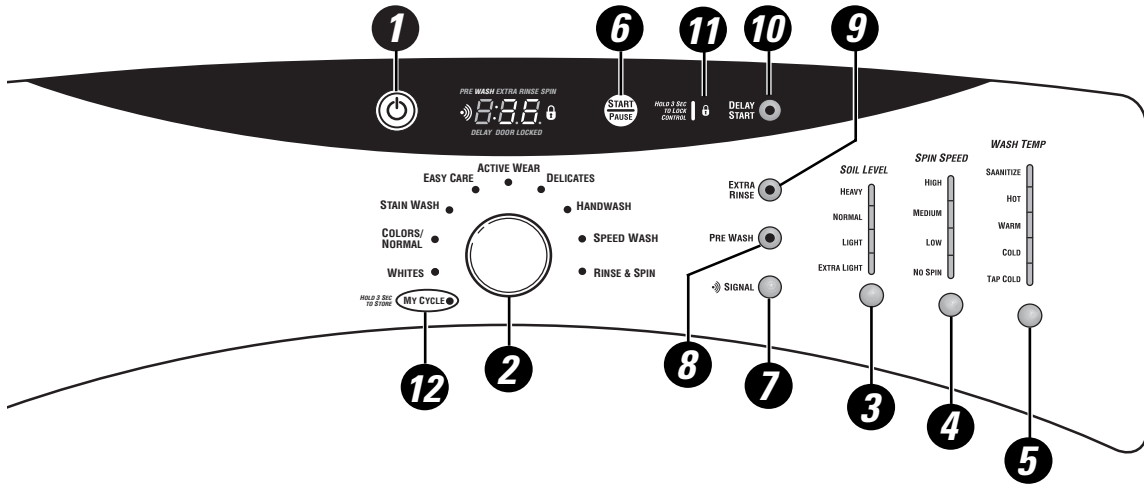


# Control Features

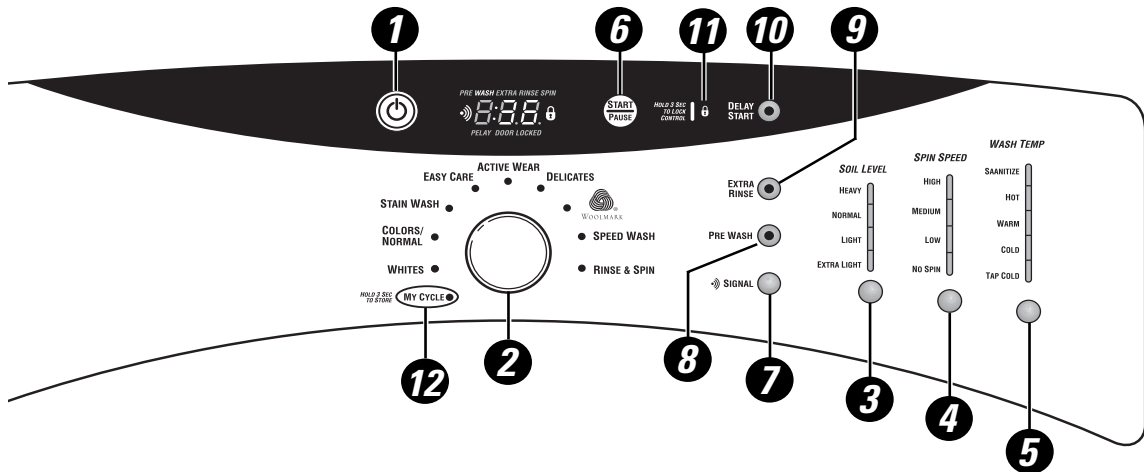
## Model WBVH6240



## Model WCVH6260



## Model WHDVH626



**1**

### **Power**


Press to “wake up” the display. If the display is active, press to put the washer into standby mode.

**NOTE:** Pressing **POWER** does not disconnect the appliance from the power supply.

**2**

### **Wash Cycles**

The wash cycles are optimized for specific types of wash loads. The chart below will help you match the wash setting with the loads.

<b>WHITES</b>	For heavily to lightly soiled white cottons, household linens, work and play clothes.
<b>COLOR/NORMAL</b>	For heavy to lightly soiled colorfast cottons, household linens, work and play clothes.
<b>STAIN WASH</b>	For heavy soiled colorfast cottons, household linens, work and play clothes.
<b>EASY CARE (PERMA PRESS)</b>	For wrinkle-free and permanent press items.
<b>ACTIVE WEAR</b>	For active sports, exercise and some casual wear clothes. Fabrics include modern technology finishes and fibers such as spandex, stretch and micro-fibers.
<b>DELICATES</b>	For lingerie and special-care fabrics with light to normal soil. Provides gentle tumbling and soak during wash and rinse.
<b>HANDWASH</b>	For items labeled hand-washable with light soils. Provides gentle rocking to mimic the handwashing action.
<b>WOOLMARK</b>	The wool wash cycle of this machine has been approved by Woolmark® for the washing of machine washable Woolmark® products provided that the products are washed according to the instructions on the garment label and those issued by the manufacturer of this washing machine.
	
<b>MY CYCLE</b>	Press to use, create, or modify custom wash cycles.
<b>SPEED WASH</b>	For lightly soiled items that are needed in a hurry. Cycle time is approximately 30 minutes, depending on selected options.
<b>DRAIN &amp; SPIN</b>	Drain and spin at any time.
<b>RINSE &amp; SPIN</b>	To quickly rinse out any items at any time.

**3**

### **Soil Level**

Changing the SOIL LEVEL increases or decreases the wash time to remove different amounts of soil.

To change the SOIL LEVEL, press the **SOIL LEVEL** button until you have reached the desired setting. You can choose between Extra Light, Light, Normal or Heavy soil.

**4**

### **Spin Speed**

Changing the SPIN SPEED changes the final spin speed of the cycles. Always follow the fabric manufacturer’s care label when changing the SPIN SPEED.

To change the SPIN SPEED, press the **SPIN SPEED** button until you have reached the desired setting. Higher spin speeds are not available on certain cycles, such as Delicates.

Higher spin speeds remove more water from the clothes and will help reduce dry time, but may also increase the possibility of setting wrinkles on some fabrics.

**5**

### **Wash Temp**

Adjust to select the proper water temperature for the wash cycle. The prewash and rinse water is always cold to help reduce energy usage and reduce setting of stains and wrinkles.

Follow the fabric manufacturer’s care label when selecting the wash temperature.

To change the wash temperature, press the **WASH TEMP** button until you have reached the desired setting. The Sanitized wash temperature is not available on certain cycles, such as Delicates.

**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.

**6**

### **START/PAUSE**

Press to start a wash cycle. If the washer is running, pressing it once will pause the washer and unlock the door. Press again to restart the wash cycle.

**NOTE:** If the washer is paused and the cycle is not restarted within 2 hours, the current wash cycle will be cancelled.

7



**Cycle Signal**

Use the **SIGNAL** button to change the volume of the end of cycle signal.

Press the button until you reach the desired volume.

8



**Prewash**

Prewash is an extra wash before the main wash. Use it for heavily soiled clothes or for clothes with a care label that recommends prewashing before washing. Be sure to add high-efficiency detergent, or the proper wash additive to the prewash dispenser.

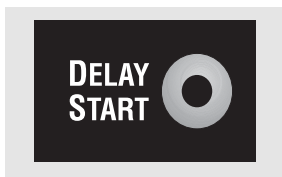
9



**Extra Rinse**

Use an extra rinse when additional rinsing is desired to remove excess dirt and detergent from soiled loads.

10



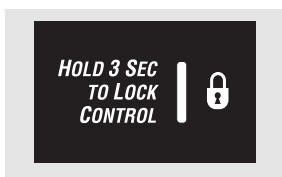
**Delay Start**

You can delay the start of a wash cycle for up to 12 hours. Press the **DELAY START** button to choose the number of hours you want to delay the start of the cycle, then press the **START** button. The machine will count down and start automatically at the correct time.

**NOTE:** If you forget to fully close the door, a reminder signal will beep reminding you to do so.

**NOTE:** If you open the door when the delay is counting down, the machine will enter the pause state. You must close the door and press **START** again in order to restart the countdown.

11



**Lock**

You can lock the controls to prevent any selections from being made. Or you can lock the controls after you have started a cycle.

To lock the washer, press and hold the lock button for 3 seconds. To unlock the washer controls, press and hold the lock button for 3 seconds.

*Children cannot accidentally start the washer by touching pads with this option selected.*

The control lock icon on the display will light up when it is on.

**NOTE:** The **POWER** button can still be used when the machine is locked.

12



**MY CYCLE**

To save a favorite cycle, set the desired settings and hold down the **MY CYCLE** button for 3 seconds. A beep will sound to indicate the cycle has been saved.

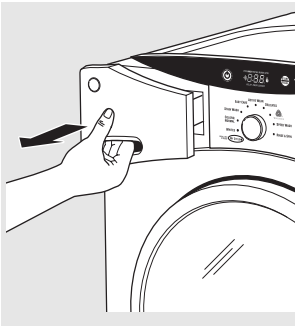
**NOTE:** When using **MY CYCLE**, wash options cannot be modified after the cycle has been started.

To use your custom cycle, press the **MY CYCLE** button before washing a load.

**NOTE:** If you change wash options with **MY CYCLE** before starting the cycle, the **MY CYCLE** light will turn off and you will be returned to the base cycle.

To change the saved cycle, set the desired settings and hold down the **MY CYCLE** button for 3 seconds.



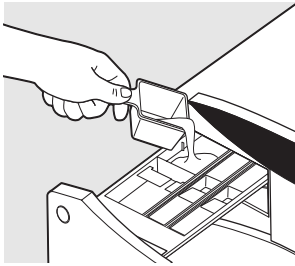


### The Dispenser Drawer

Slowly open the dispenser drawer by pulling it out until it stops.

After adding laundry products, slowly close the dispenser drawer. Closing the drawer too quickly could result in early dispensing of the bleach, fabric softener or detergent.

You may see water in the bleach and fabric softener compartments at the end of the cycle. This is a result of the flushing/siphoning action and is part of the normal operation of the washer.

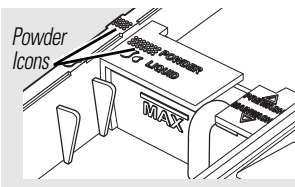


### The Prewash Compartment

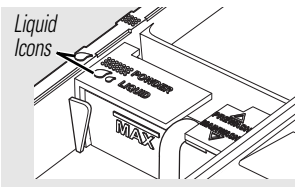
- Only use the Prewash Compartment if you are selecting the Prewash cycle for heavily soiled clothes. Add measured detergent or prewash additive to the back left prewash compartment of the dispenser drawer.
- Detergent or prewash additive is flushed from the dispenser in the prewash cycle (if selected).

**NOTE:** Liquid detergent will drain into the washer drum as it is added.

- 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 your washer as it can lead to over sudsing and detergent residue being left on the clothes.



Insert in rear position for powder detergent



Insert in forward position for liquid detergent

### The Detergent Compartment

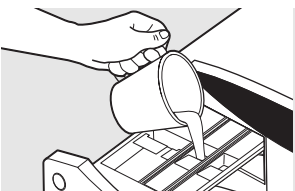
- High efficiency detergent is recommended for this washer. Use the detergent manufacturer's recommended amount.

The detergent selection insert must be placed in the detergent compartment in a specific position according to what type of detergent you are using.


- **Powder Detergent** – Place the insert in the rear position. The Powder Icons ☼☼☼ must line up on center when the insert is in the powder position.
- **Liquid Detergent** – Place the insert in the forward position. The Liquid Icons ☞ must line up on center when the insert is in the liquid position.

Move the insert by pulling it up and replace it by sliding it down between either the rear or front detergent compartment molded rails, as desired, for powder or liquid detergent.

- Add measured detergent to the front left detergent compartment of the dispenser drawer.
- Detergent is flushed from the dispenser at the beginning of the wash cycle. Either powdered or liquid detergent can be used.
- 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 your washer as it can lead to oversudsing and detergent residue being left on the clothes.

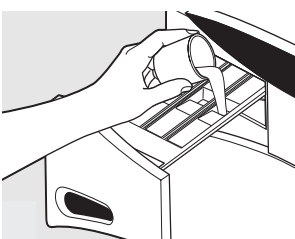


### The Liquid Bleach Compartment

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

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 in the dispenser.



### The 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.

Dilute with water to the maximum fill line.

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.



## Sorting Wash Loads

Sort laundry into loads that can be washed together.

<b>Colors</b>	<b>Soil</b>	<b>Fabric</b>	<b>Lint</b>
Whites	Heavy	Delicates	Lint Producers
Lights	Normal	Easy Care	Lint Collectors
Darks	Light	Sturdy Cottons	

- *Combine large and small items in a load. Load large items first. Large items should not be more than half the total wash load.*
- *Washing single items is not recommended. This may cause an out-of-balance load. Add one or two similar items.*
- *Pillows and comforters should not be mixed with other items. This may cause an out-of-balance load.*



## Loading the Washer

Wash drum may be fully loaded with loosely added items. **Do not wash fabrics containing flammable materials (waxes, cleaning fluids, etc.).**

To add items after washer has started, press **START/PAUSE** and wait until the door is unlatched. The washer may take up to 30 seconds to unlock the door after pressing **START/PAUSE** depending on the machine conditions. Do not try to force open the door when it is locked. After the door unlocks, open gently. Add items, close the door and press **START/PAUSE** to restart.



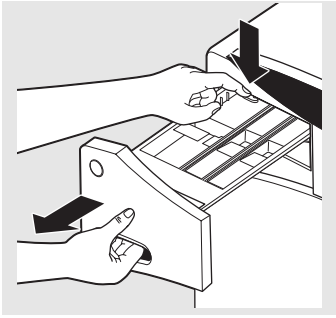
## Care and Cleaning

**Exterior:** Immediately wipe off any spills. Wipe with damp cloth. Do not hit surface with sharp objects.

**Interior:** Dry around the washer door opening, flexible gasket and door glass. These areas should always be clean to ensure a water tight seal.

**Moving and Storage:** Ask the service technician to remove water from drain pump and hoses. Do not store the washer where it will be exposed to the weather. When moving the washer, the tub should be kept stationary by using the shipping bolts removed during installation. If these parts are not available, they can be ordered by visiting our Website at [www.GEAppliances.com](http://www.GEAppliances.com) or by calling 800.GE.CARES.

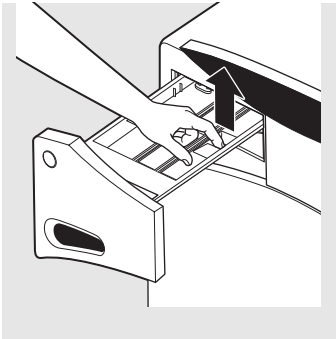
**Long Vacations:** Be sure water supply is shut off at faucets. Drain all water from hoses if weather will be below freezing.



*Lock tab is visible only after drawer has been pulled out*

**Dispenser Drawer Area:** Detergent and fabric softener may build up in the dispenser drawer. Residue should be removed once or twice a month.

- Remove the drawer by first pulling it out until it stops. Then reach back into the left rear corner of the drawer cavity and press down firmly on the lock tab, pulling out the drawer.



- Remove the inserts from the bleach and fabric softener compartments and the detergent insert. Rinse the inserts and the drawer with hot water to remove traces of accumulated laundry products.



- To clean the drawer opening, use a small brush to clean the recess. Remove all residue from the upper and lower parts of the recess.
- Return inserts to the proper compartments. Replace the dispenser drawer.

# Pedestal Installation (Washer and Dryer)

Optional 12-in. high storage drawer pedestals with dividers are available to provide convenience and extra storage space for detergent, dryer sheets and other cleaning supplies. The pedestal installation kit includes 4 support pads, 4 mounting screws, and 4 leveling legs with locknuts.

## Kit Contents

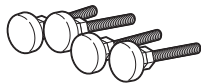
4 Support Pads



4 Mounting Screws



4 Leveling Legs with Locknuts



## Tools Needed

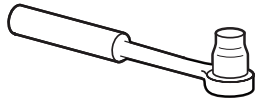
Phillips-head Screwdriver



9/16" Open End Wrench or Adjustable Wrench



8-mm Socket Wrench



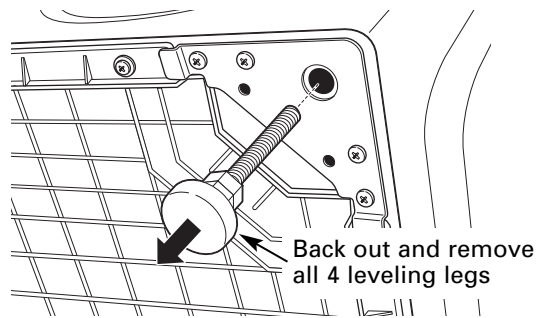
**WARNING:** Due to the size and weight of the washer or dryer, and to reduce the risk of personal injury or damage, 2 people are required for proper installation.

## **Note:**

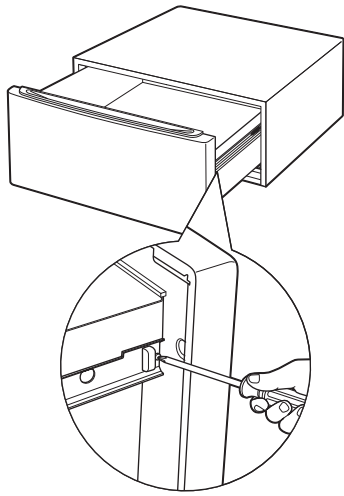
- DO NOT remove washer shipping bolts prior to pedestal installation. Shipping bolts MUST be reinstalled, if previously removed.
- Care should always be taken when laying the washer or dryer on its side to prevent component damage.
- Do not lay washer or dryer on its back. Use a pad or protective surface when laying washer or dryer on its side.

## **To install the pedestal:**

1. Lay the washer or dryer on its side.
2. Remove the 4 leveling legs.

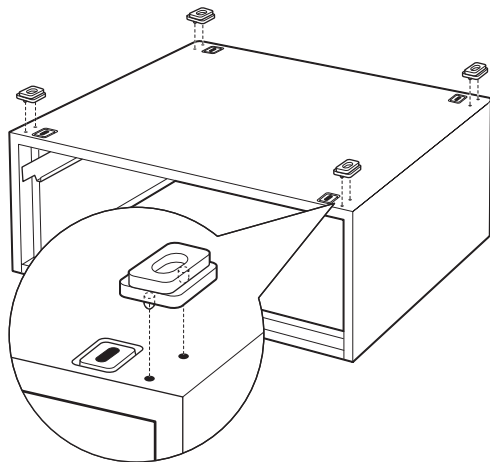


3. Pull the drawer out to its stop position.
4. Remove the screws from the drawer slides.
5. Slide the drawer out of the base and set it aside.

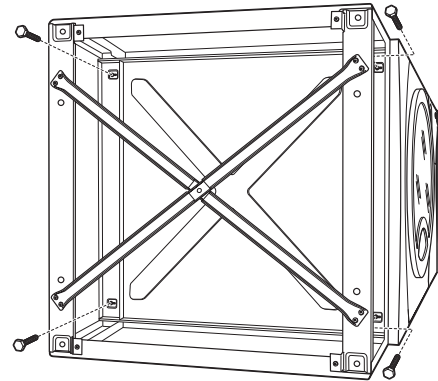


**Note:** The support pads should be installed on the dryer only. **DO NOT INSTALL THE PADS ON THE WASHER PEDESTAL.**

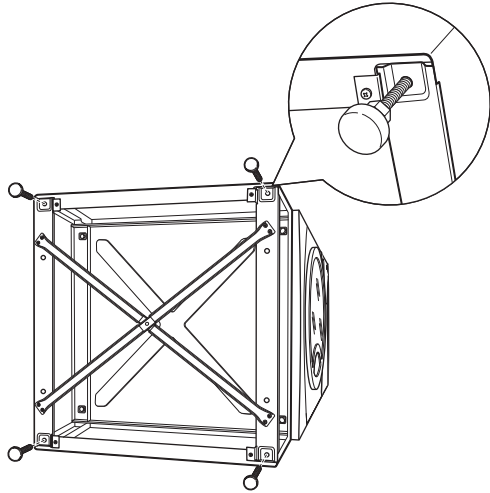
6. Install a support pad at each top corner of the pedestal. Ensure both protrusions on each pad are inserted in the holes on top of the pedestal.



7. Place the pedestal against the bottom of the washer or dryer. Ensure that the drawer front is at the front of the washer or dryer.
8. Align the holes in the pedestal with the holes in the bottom of the washer or dryer base.
9. Use a Phillips-head screwdriver to install the 4 (8-mm) bolts through the pedestal and into the unit. **DO NOT** tighten the bolts.
10. Align the pedestal with the unit. Use an 8-mm socket wrench to securely tighten the bolts.

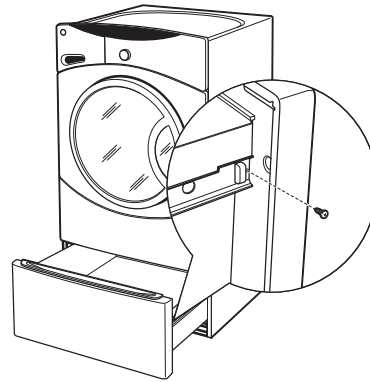


11. Screw locknuts onto the supplied leveling legs. Turn the nuts toward the bottom and against the rubber part of the leg.
12. Install the leveling legs, with locknuts, in each corner support. Screw the legs all the way into the pedestal. Do not tighten.



16. Ensure that the slides are closed, then slide the drawer into the opening.
17. Align the drawer supports to the slides on each side.
18. Reinstall the original screws in each drawer slide.

**Note:** The drawer should slide smoothly when you push it closed.

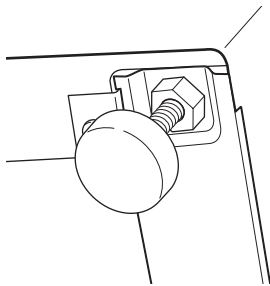


13. Stand the washer or dryer upright. Move it close to its final location.
14. Make sure that the washer or dryer is level by placing a spirit level on top. Check side to side and front to back.
15. Use an open end or adjustable wrench to adjust the legs in or out. Tighten the locknuts against the bottom of the pedestal.

19. Remove the 4 shipping screws from the back of the washer.

**Note:** Refer to the washer or dryer installation instructions to complete the installation.

**Note:** To minimize vibration, the locknuts must be tight.



# Stacking Instructions

The GE front load washer is designed to allow certain models of the GE dryer to be placed on top (stacking). Dryer models that currently qualify for stacking are:

- DBVH512
- DCVH515
- DHDVH52

The parts and instructions necessary to convert the separate units to a stack unit are included with the washer installation parts.

**Note:** The stacking parts and instructions are NOT included with the GE dryers listed above, but can be ordered separately. (Part # WE25X10018)

**Note:** Reverse the dryer door swing (if desired) BEFORE stacking. The washer door swing is NOT reversible.

## WARNING!

- Make sure the dryer is unplugged.
- More than 2 people are recommended to safely lift the dryer into position.
- Avoid damage to the existing utility services.
- DO NOT place the washer on top of the dryer.
- Stacking of a gas dryer is NOT permitted in a mobile home or a manufactured home.

### Location Requirements

When installed in a location other than an alcove or closet, the minimal clearances to combustible surfaces and for air opening are: 0 inches on both sides, and 1 inch at the rear.

**Note:** If your dryer is approved for installation in an alcove or a closet, it will be stated on a label on the back.

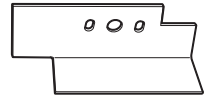
When installed in an alcove or closet:

- Minimum clearance between dryer cabinet and adjacent walls or other surfaces is 0 inches either side, and 3 inches front and rear.

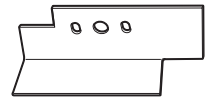
- Minimum vertical space from floor to overhead cabinets, ceiling, etc. is 43 inches without pedestal, 55 inches with pedestal, and 84 inches stacked. Closet doors must be louvered or otherwise ventilated and must contain a minimum of 120 square inches of open area, equally distributed.
- The dryer MUST be vented to the outdoors. (Refer to dryer installation instructions for details.)

### Kit Contents

Right Bracket



Left Bracket



4 Rubber Pads



4 #12 x 1" Screws

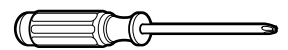


4 #8 x 1/2" Screws



### Tools Needed

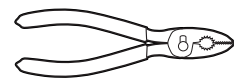
Phillips Screwdriver



Open End Wrench



Pliers



Gloves



Level

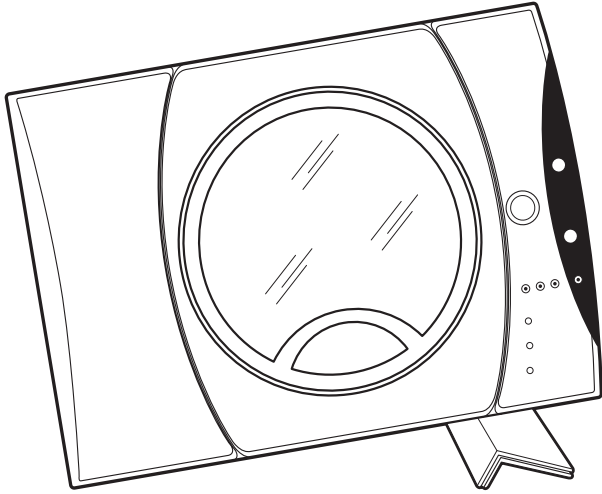


(Continued Next Page)

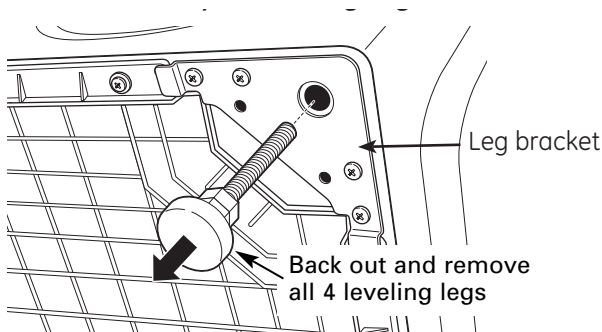
**To stack the dryer:**

**Caution:** Do not lay dryer on its back. Use the packing material or a protective surface when laying dryer on its side.

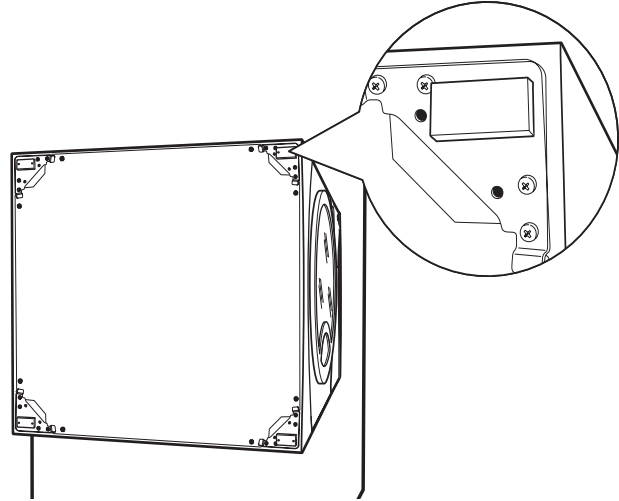
1. Carefully lay the dryer on its side.



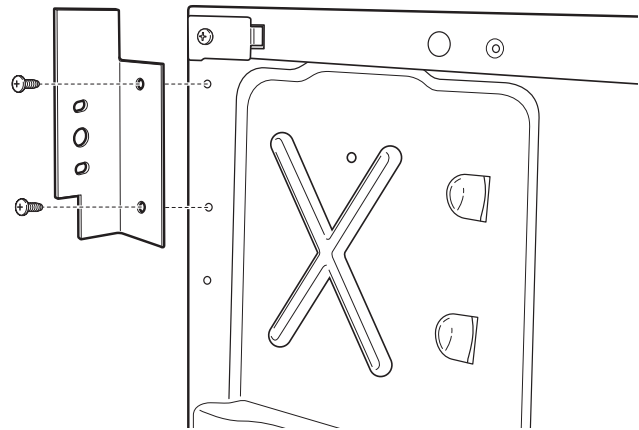
2. Use an open end wrench or pliers to remove the 4 dryer leveling legs from the leg brackets.



3. Remove the adhesive backing and firmly place the 4 rubber pads over the leg brackets.



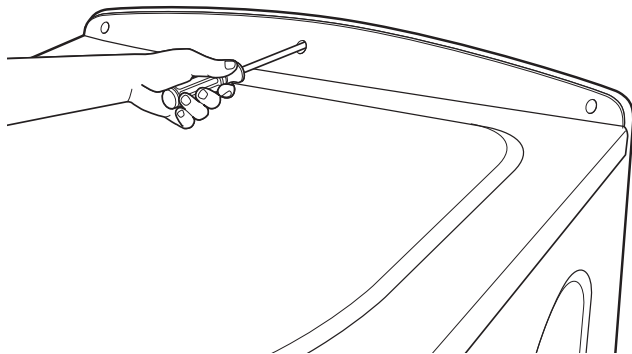
4. Align the holes in the left bracket with the holes in the bottom left corner of the dryer. Attach the bracket using 2 (#12 x 1-in.) Phillips-head screws.



5. Align the holes in the right bracket with the holes in the bottom right corner of the dryer. Attach the bracket using 2 (#12 x 1-in.) Phillips-head screws.

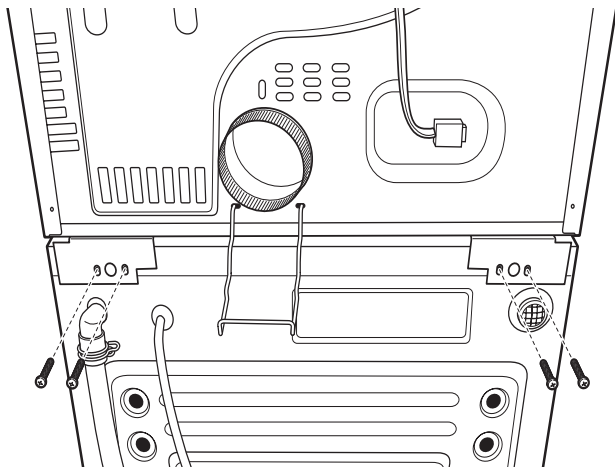


6. Set the dryer upright using packing material or a protective surface that ensures the brackets do not damage the floor.
7. Place and level the washer in the approximate location. (Refer to washer installation instructions for details.)
8. Remove the 3 Phillips-head screws that attach the top cover, then pull the cover rearward.



**Caution:** Protect the washer control panel with cardboard or other protection to prevent damage caused by contact with the dryer brackets.

9. Lift the dryer high enough to clear the washer control panel and place the dryer on top of the washer.
10. Align the holes in the brackets with the holes in the back of the washer. Attach the brackets to the washer using 4 (#8 x ½-in.) Phillips-head screws.



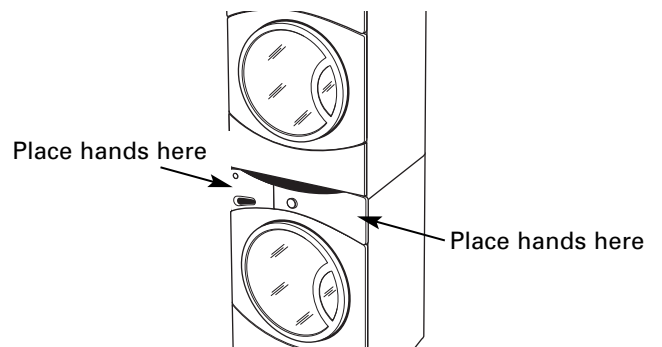
## **WARNING!**

Do not push on the dryer after it is stacked on the washer. Pushing on the dryer may result in pinched fingers.

**Caution:** Use felt pads or other sliding device to assist moving and to protect flooring.

**Note:** Ensure that the washer and the dryer are in compliance with their respective installation instructions.

11. Carefully slide or walk the stacked washer and dryer into place.



# Operation Overview

## Basic Wash Cycle

**Note:** See **Component Locator Views** for identification and location of washer components.

After a load is placed in the wash basket, the user opens the dispenser drawer and positions the detergent selector for the type of detergent to be used.

Detergent is added to the detergent compartment. Detergent is added to the prewash compartment only if prewash cycle is selected.

**Note:** The prewash compartment is only flushed with water when the PRE WASH option is selected on the control.

If desired, add a measured amount (1/3 cup or less) of bleach into the bleach compartment.

If desired, add the recommended amount of fabric softener in the fabric softener compartment and dilute with water to the maximum fill line.

After adding laundry products, slowly close the dispenser drawer.

The user presses the POWER button to activate the display. If the display is active, press POWER button to put washer into standby mode.

Rotate the cycle knob to the desired wash setting. When selecting Whites, Colors/Normal, Active Wear, or Delicates cycles, the following control default settings can be changed:

- EXTRA RINSE
- PRE WASH
- SOIL LEVEL
- SPIN SPEED
- WASH TEMP

Select EXTRA RINSE and PRE WASH options. Use the SIGNAL button to change the volume level of the end of cycle signal.

Select the SOIL LEVEL to increase or decrease wash time needed to remove different amounts of soil.

Select the SPIN SPEED to change the final spin speed of the cycles. Follow the fabric manufacturer's care label when selecting spin speed.

Select the WASH TEMP to adjust the proper water temperature for the wash cycle. Follow the fabric manufacturer's care label when selecting wash temperature.

Press START/PAUSE to start the wash cycle. Each time the washer starts, a wake up routine is initiated:

1. The door locks.
2. The wash basket briefly tumbles in both directions.
3. The door unlocks.
4. The door locks.
5. The fill cycle begins.

## Water Fill

The washer automatically fills before tumbling, and maintains the proper fill level using a programmed adaptive fill. The machine will not tumble while filling.

## Wash Water Temperature

The first 10 seconds of fill is tap cold water only. If needed, the control board will cycle the water valves (water tempering) to achieve the target wash water temperature selected. Water tempering only occurs during the main wash cycle.

## Tap Cold:

- Cold water valve energized.
- Tap cold never involves water tempering.
- Water temperature determined by supply temperature.
- All fills except main wash are tap cold.

**Cold:**

- Cold water valve energized.
- Cold selection is tempered by default for main wash.
- Cold can be tempered by cycling of hot water valve to achieve target temperature of 80°F (27°C).

**Warm:**

- Hot and cold water valves energized.
- Warm can be tempered by cycling of hot and cold valves to achieve target temperature of 105°F (40.5°C).
- Warm selection is tempered by default for main wash.

**Hot:**

- Hot water valve energized.
- Hot can be tempered by cycling of cold water valve to achieve target temperature of 120°F (49°C).
- Hot selection is tempered by default main wash.

**Sanitize:**

- Hot water valve energized.
- Sanitize can be tempered by cycling of cold water valve, or heater operation, to achieve target temperature of 160°F (71°C).

**Tumble Wash**

Wash routines are programmed by cycle. The only adjustment to the tumble routine is through cycle selection.

The basket rotates clockwise for a predetermined period of time at a predetermined speed. The basket pauses for a predetermined period of time. The basket rotates counterclockwise for a predetermined period of time at a predetermined speed. The length of tumble wash time is adaptive to the soil level programmed into the machine at the start of the cycle.

**Spin**

The spin is designed to extract as much water and detergent as possible without harming fabrics. Speeds can be as slow as 90 rpm (out of balance default) to as high as 1000 rpm.

The available selection of spin speeds is controlled by cycle selection.

For example:

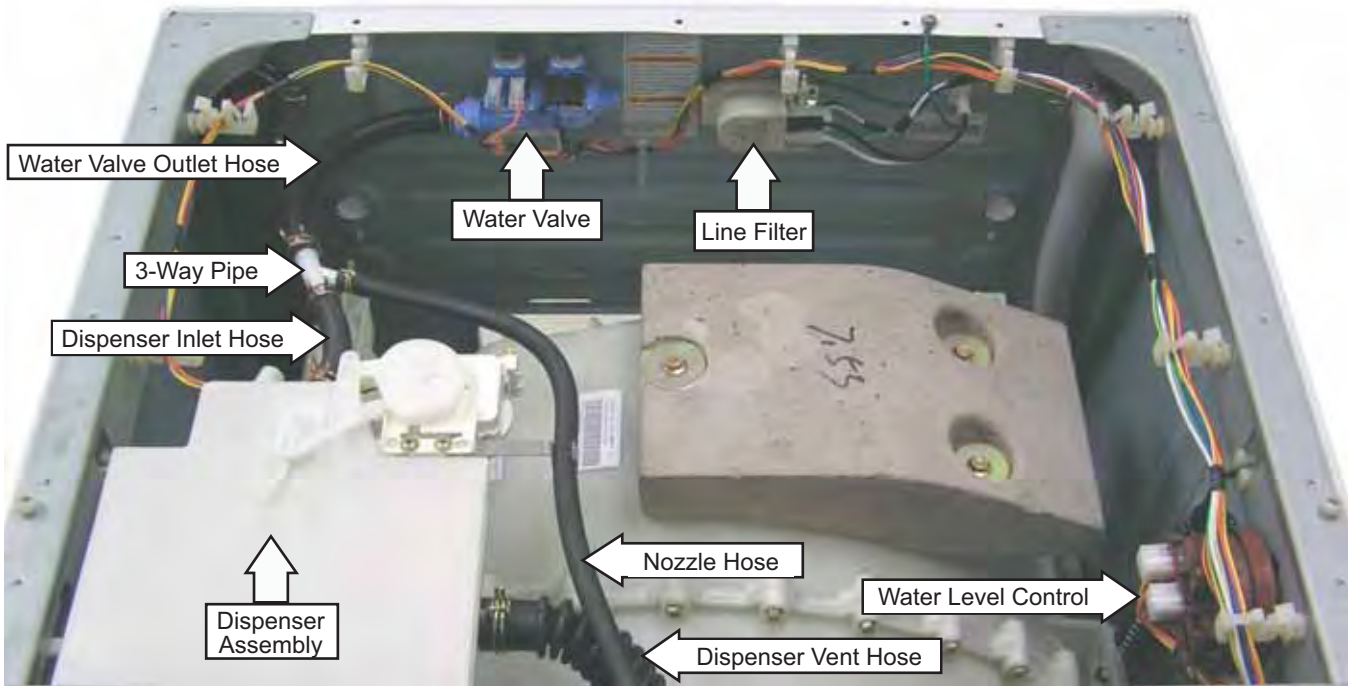
Spin Speed	Whites	Delicates
High	1000 rpm	525 rpm
Medium	750 rpm	450 rpm
Low	525 rpm	350 rpm

Selecting a spin speed modifies final spin only and must be made before final spin takes place. The length of time required to achieve spin rpm is monitored by the control via the motor sensor. With a balanced load, if the selected spin speed cannot be achieved, the washer will default to highest speed attained and will increase spin time.

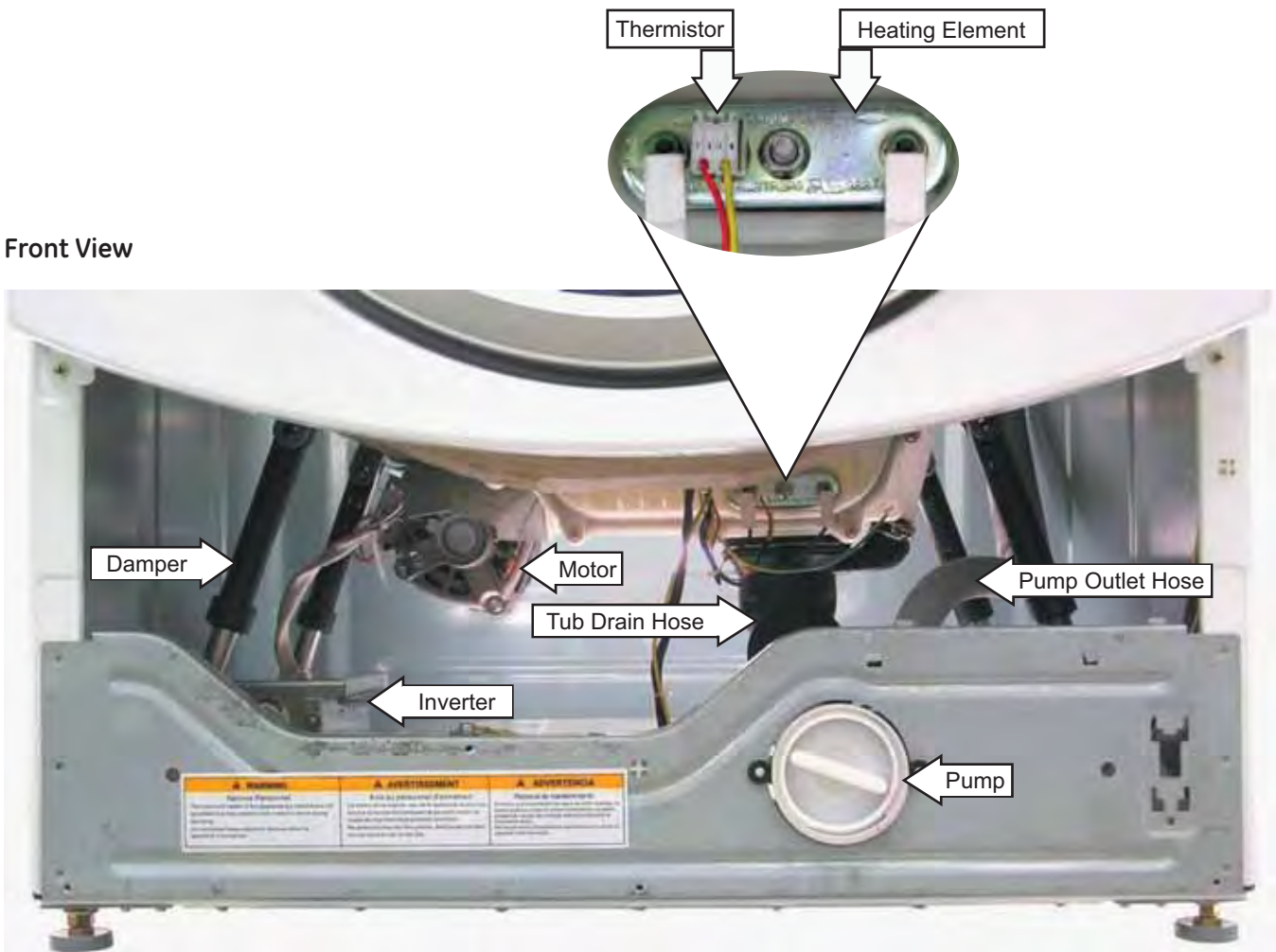
Off-balance load protection is programmed into the control board. If speed is not achieved, the spin routine halts. The washer tumbles to redistribute the load and attempts to spin again. After 5 attempts, if an off-balance load remains detected, spin speed defaults to the highest speed attained or 90 rpm (whichever is greater) for the remainder of the cycle.

# Component Locator Views

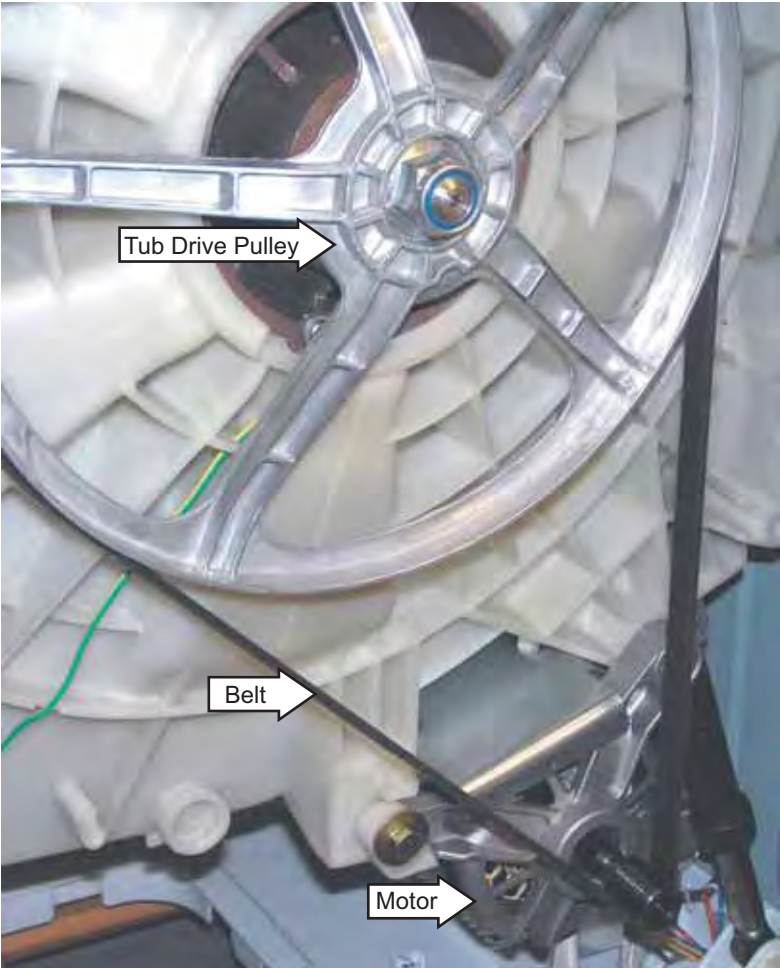
Top View



Front View

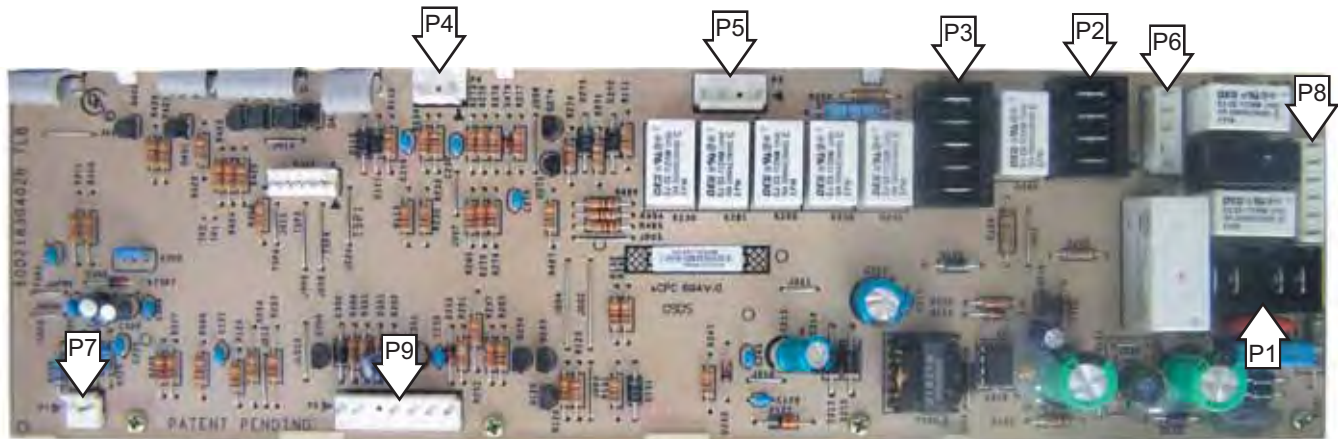


Component Locator Views (Con't)



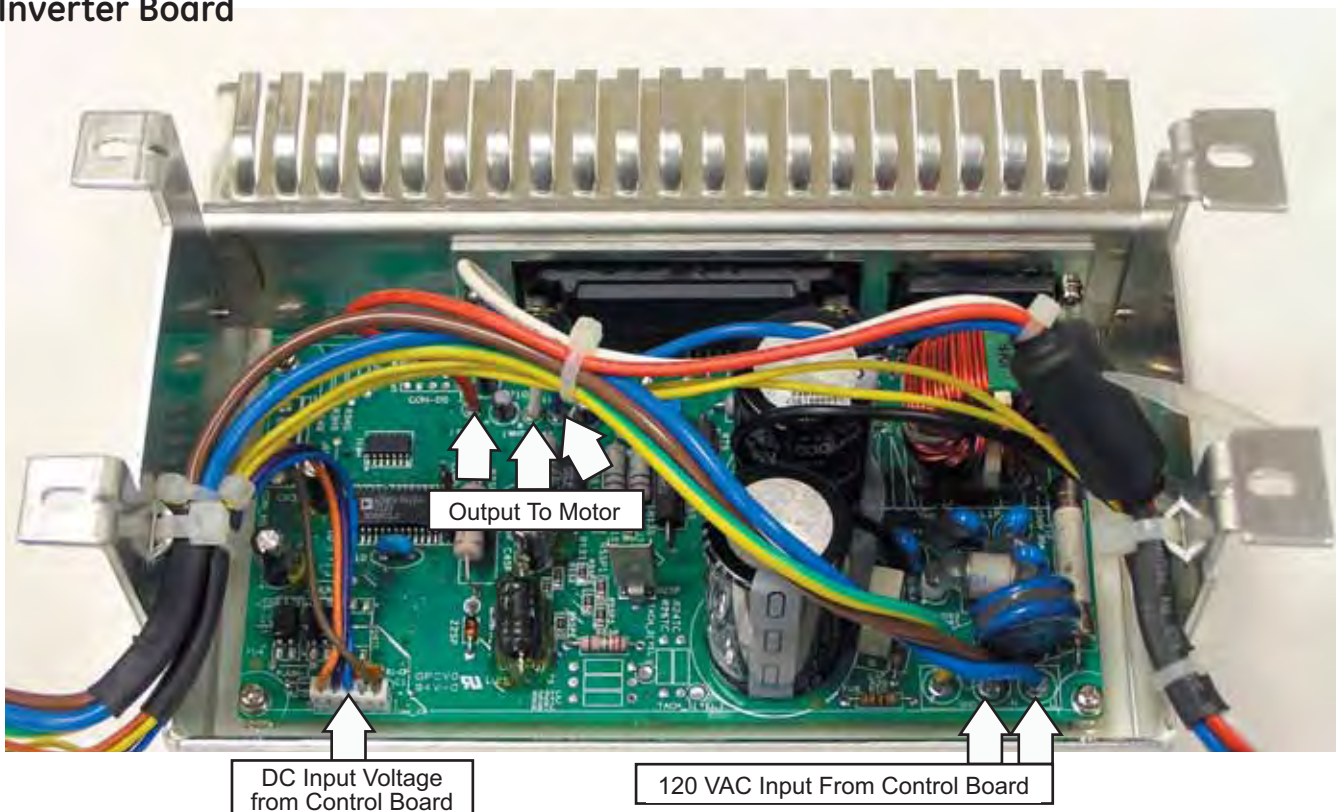
# Control and Inverter Board Connections

## Control Board



P1	Door lock and line filter
P2	Door lock, heater, 120 VAC output to inverter, dispenser motor, hot and cold water valves
P3	WCL main level and overflow switches, heater, neutral output to inverter, and door lock
P4	Dispenser switch
P5	Hot and cold water valves and dispenser motor
P6	WCL foam switch and door switch
P7	Thermistor
P8	WCL overflow switch, pump, door lock, and unlock solenoids
P9	Motor sensor and DC voltage output to inverter

## Inverter Board



# Washer Components

## Top Panel

**WARNING:** Sharp edges may be exposed when servicing washer. Use caution to avoid injury and wear Kevlar gloves or equivalent protection.

**Note:** Combined Phillips-head/square-drive recess screws can be utilized throughout this appliance. Either Phillips or square-drive screwdrivers can be used to extract or install these screws.

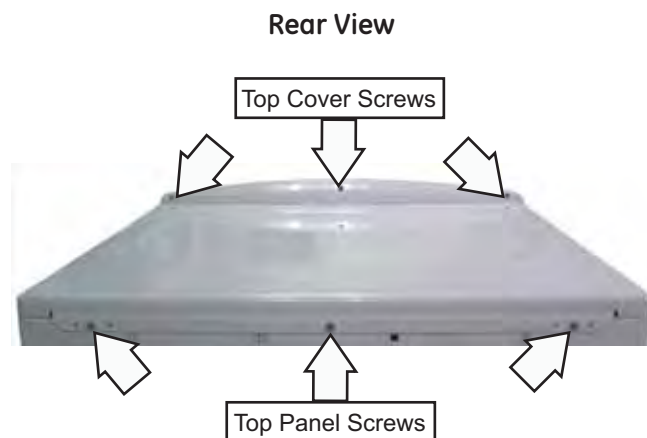
Removal of the top panel provides access to the control panel, dispenser, water valve, water level control, and line filter. The top panel is held in place by a top cover and 3 screws on the back.

### To remove the top panel:

1. Remove the 3 Phillips-head screws that attach the top cover, then pull the cover rearward.

**Note:** It may be helpful to place a putty knife along the top seam between the cover and control panel, then tap lightly rearward.

2. Remove the 3 (7-mm) hex-head screws that attach the rear of the top panel to the cabinet.



3. Slide the top panel rearward 1 inch then lift the panel.

## Service Panel

Removal of the service panel provides access to the pump cleanout, pump, tub drain hose, heater assembly, inverter, wire junction box, front dampers, and the door lock release ring.

### To remove the service panel:

1. Remove the 3 Phillips-head screws that hold the service panel to the cabinet.
2. Pull the service panel down.



## Control Panel

The control panel is held in place with 5 Phillips-head screws and 5 tabs.

### To remove the control panel assembly:

1. Remove the top panel. (See *Top Panel*.)
2. Pull the dispenser out to the stop position. Press down on the lock tab. Pull the dispenser out.



3. Remove the single Phillips-head screw from the control panel dispenser recess.

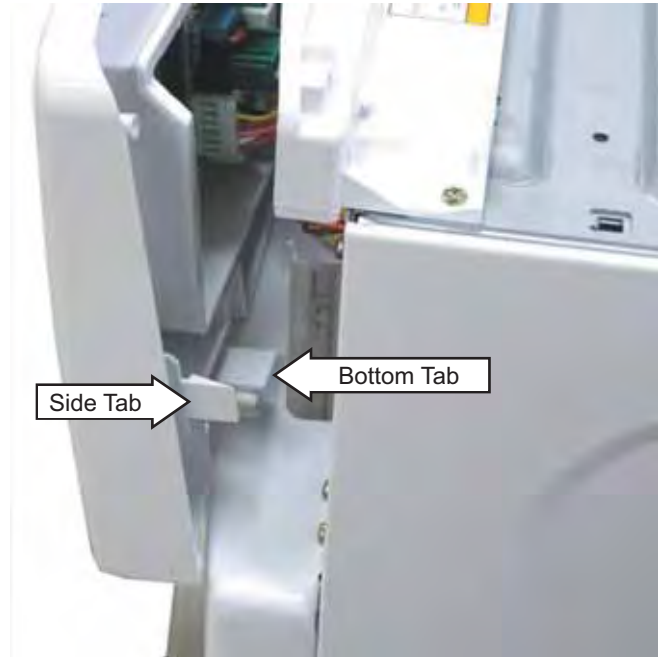


4. Remove the 4 Phillips-head screws that attach the top of the control panel to the control panel cover.

Rear View



5. From inside the cabinet, lift and push forward to release the bottom tab from the front bracket.



6. Lift the top edge of the panel to disengage the 3 tabs that hold the top of the panel in place.



7. Push the control panel towards the left, then release the side tab.
8. Disconnect the 9 wire harnesses from the control panel.



## Control Board

The control board is mounted in a housing that is attached to the inside of the control panel. The control board and housing are replaced as an assembly. The control board assembly is held in place by 4 Phillips-head screws and 3 tabs. The control board is programmed to recognize 6 modes of operation.

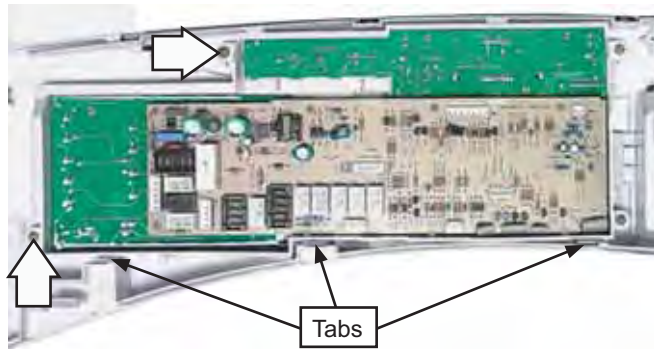
Mode Name	Description
Idle	No cycle is selected. All LEDs, 7-segment display on front panel, load selections and options are off. The door is unlocked. The control board is ready to take input from user.
Standby	A cycle is selected with the appropriate load selections and options. LEDs and 7-segment display on front panel are on. The door is unlocked. The control board is ready to take user input to either modify cycle selections or start a selected cycle.
Run	The control board is executing the currently selected cycle. The door is locked.
Pause	The control is stopped by user during the execution of a cycle. LEDs and 7-segment display on front panel stay on, all loads are turned off. The door is unlocked. The control board is ready to take user input to either modify, resume, or cancel the cycle.
End of Cycle	A cycle is completed. LEDs and 7-segment display on front panel stay on, all loads are turned off. The door is unlocked. The control board remains in this mode until the door is opened or after 2 hours have passed.
Fault	The control board detected a critical failure condition. The 7-segment display shows the fault code, all loads are turned off. The fault code can only be removed in the service test mode. (See <b>Service Test Mode</b> .)

Operation of the control board can be checked by using the service test mode. (See **Service Test Mode**.)

Specific failures associated with the control board can initiate error codes E52, E57, E58, E70, and E71. (See **Service Test Mode**.)

## To remove the control board assembly:

1. Remove the control panel. (See **Control Panel**.)
2. Pull the cycle knob off.
3. Remove the 4 Phillips-head screws that hold the control board assembly to the control panel.
4. Release the 3 tabs at the bottom of the control panel.



5. Remove the control board assembly from the control panel.
6. Remove the cycle selection buttons.

### Note:

- The replacement control board will always enter into test mode t01 on initial power-up.
- If replacing the control board, the washer will not function until the replacement control board has been programmed.

## Programming the Control Board

### To program the replacement control board:

1. Reconnect power to the washer. (The display will now show "---", which means no model has been selected.)
2. Rotate the cycle knob until the correct model number is displayed:
  - Select 1 for model WHDVH626F
  - Select 2 for model WCVH6260F
  - Select 3 for model WBVH6240F
3. Press and hold the Start key for 3 seconds (or until a second beep is sounded).
4. Press the Power key to reset the control.

**Note:** If an error is made in programming the control, enter test mode and select t01. Then repeat steps 2 thru 4.

## Door Lock

The door lock contains a door switch and solenoid operated locking and unlocking mechanism. A release ring, located at the bottom, allows for manual unlocking of the door.

The door locks when a cycle is entered (Wake-up routine) and during every cycle. The door unlocks at the completion of a cycle.

The door will not open when:

- The foam switch is open
- Water temperature is above 130°F (54°C)
- Wash basket is rotating

Specific failures associated with the door lock can initiate error codes E60 thru E64. (See **Service Test Mode**.)

The door lock is held to the front panel with 3 Phillips-head screws. The door lock is accessed from the front of the washer when the right side of the gasket is partially pulled back.

### To remove the door lock :

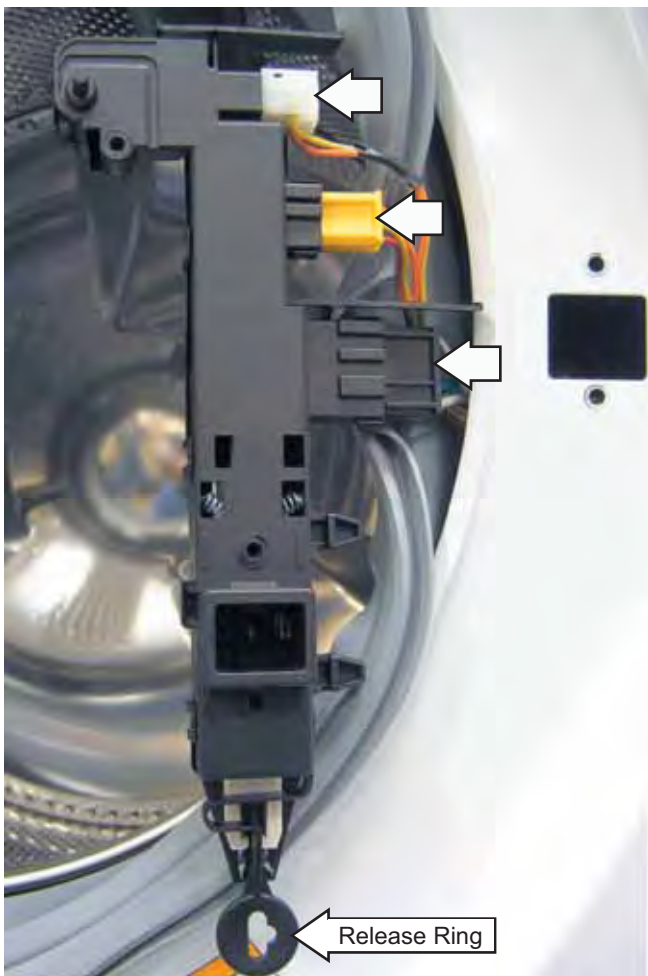
1. Remove the 3 Phillips-head screws that hold the door lock to the front panel.



2. Use a long-nose pliers to grasp the wire loop at the spring location and expand it to clear the gasket.



3. Remove the spring and wire from the gasket.
4. Pull the right side of the gasket away from the front panel.
5. Pull the door lock to the opening and remove the 3 wire harnesses.



**Note:** The door latch is solenoid activated. It can remain locked after power is removed.

#### To manually unlock door:

1. Disconnect the washer from electrical supply.

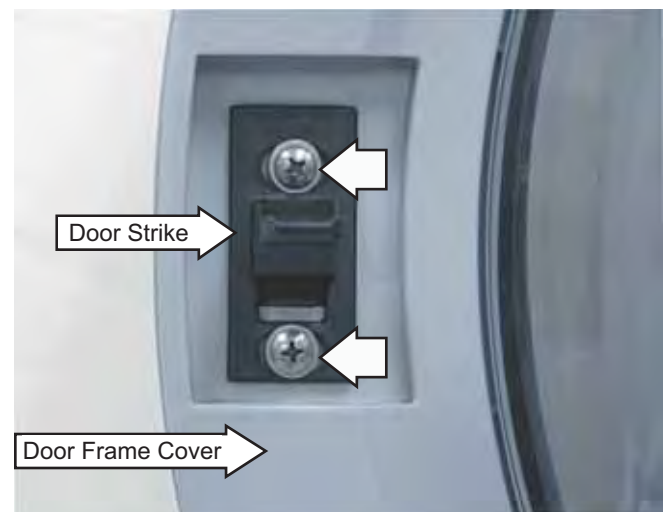
**WARNING:** To avoid injury, ensure all mechanical movement has stopped.

2. Remove the service panel. (See **Service Panel**.)
3. Reach behind and up the right side of the front panel, pull the release ring down, then open the door.

#### Door Strike

#### To remove the door strike:

1. Open the door.
2. Remove the 2 Phillips-head screws that hold the door strike to the door frame cover.



3. Remove the door strike.

**Note:** The door strike position on the door can be horizontally adjusted  $\frac{1}{8}$ -inch. Adjust position of the door strike for best door closure.

## Front Panel

The front panel is hung on 2 hooks attached to the cabinet and held in place with 4 Phillips-head screws. A gasket provides a watertight seal between the front panel and outer tub. The front of the gasket is secured to the front panel flange by a spring and wire located in the fold of the gasket. The door lock and wiring is attached to the front panel.

### To remove the front panel:

1. Remove the control panel. (See **Control Panel**.)
2. Remove the service panel. (See **Service Panel**.)
3. Open the door. Remove the 3 Phillips-head screws that hold the door lock to the front panel. (See **Door Lock**.)
4. Remove the spring and wire from the gasket. (See **Door Lock**.)
5. Position the gasket behind the front panel door opening. Close the door.
6. Remove the 4 Phillips-head screws that attach the front panel to the cabinet.



7. Lift up then remove the front panel from the 2 hooks.

## Line Filter

The line filter helps to smooth out any fluctuations in voltage, protecting the control board and providing more reliable operation. The line filter is installed on the interior side of the rear panel, and is located left of the water valve.

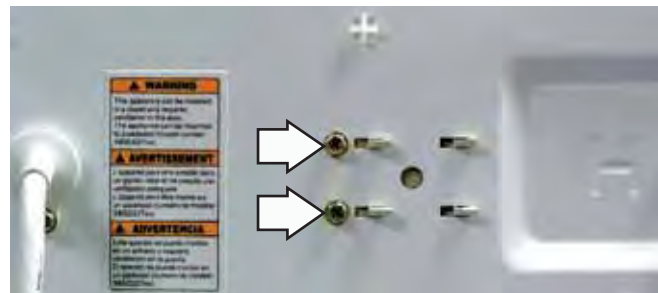
To check the line filter, look for the outer surface to be burnt by heat or a power surge. The filter resistance should be approximately  $0\ \Omega$  between the black (top) wire terminals and  $0\ \Omega$  between the white (bottom) wire terminals.

### To remove the line filter:

1. Remove the single black (top) and single white (bottom) wires.
2. Disconnect the wire harness by pressing the tab and pulling outward.
3. Press the locking tab and remove the ground wire.



4. Remove the 2 (7-mm) hex-head screws that hold the filter to the frame.

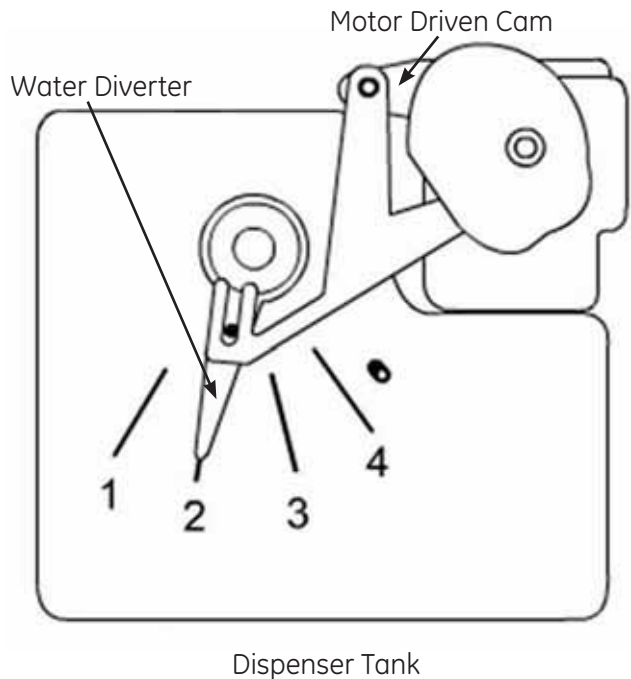


5. Move the filter to the right.

## Dispenser Assembly

The dispenser assembly provides automatic dispensing of detergent, 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 a water diverter that sprays a controlled jet of water into the proper compartment at the correct time. The water diverter movement is provided by a motor driven cam located on the dispenser tank. The diverter motor and water valve are operated by the control board. At the start of a cycle, after the wake-up routine is completed, the dispenser always moves into position before fill takes place.



Position	Dispenser Function
1	Pre Wash
2	Wash
3	Bleach
4	Fabric Softener

Operation of the dispenser can be checked by using service test mode t12. (See **Service Test Mode**.)

Specific failures associated with the dispenser can initiate error codes E38, E39, and E62. (See **Service Test Mode**.)

**Caution:** When testing the dispenser motor, DO NOT remove the wiring harness from the dispenser motor unless replacing the motor assembly. The motor assembly has a special locking connector and the wiring harness will not stay reconnected if removed and reinstalled on the same motor.

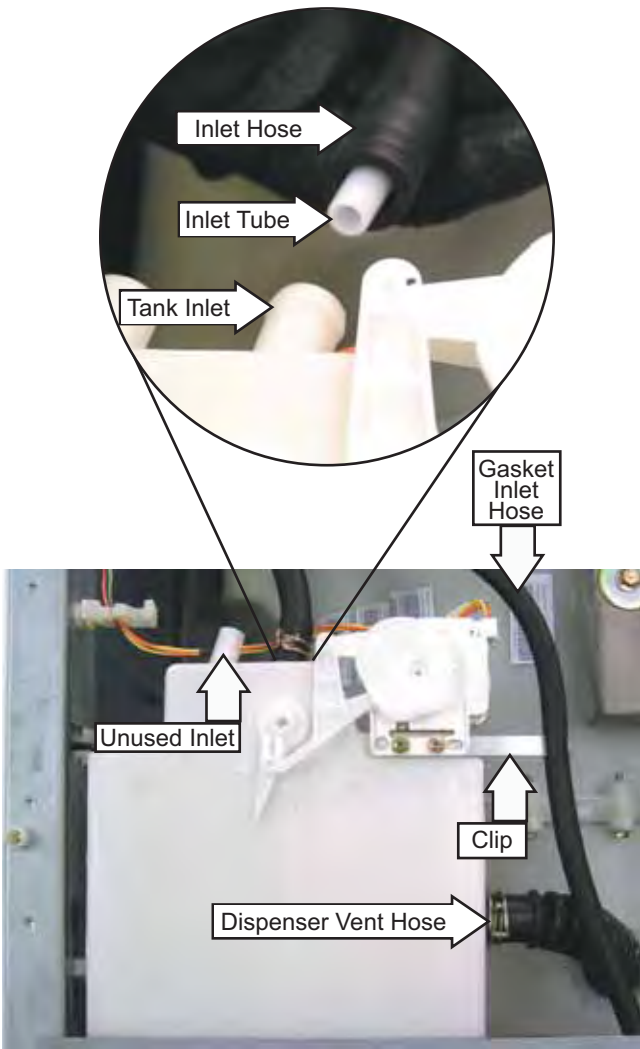
### To remove the dispenser assembly:

1. Remove the top and control panels. (See **Top and Control Panels**.)
2. Remove the gasket from the front panel. (See **Gasket**.)
3. Remove the gasket inlet hose from the clip attached to the dispenser.
4. Remove the inlet and the dispenser vent hoses from the dispenser:

**Note:** The inlet and the dispenser vent hoses are difficult to remove.

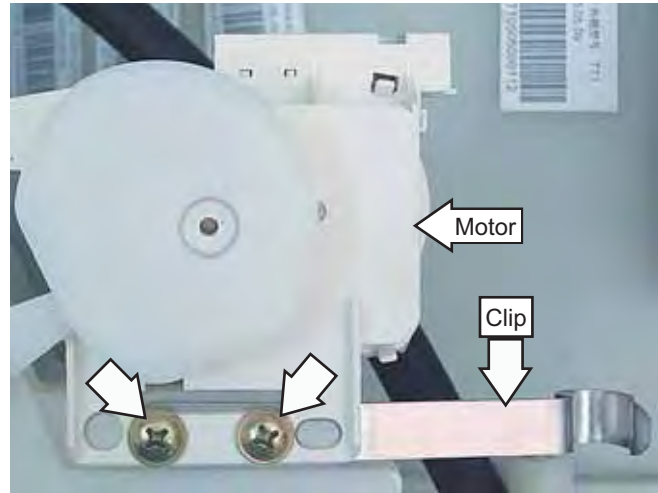
- a. Squeeze each clamp and slide it back.
- b. Carefully break each hose loose by inserting a small flat-blade screwdriver under the hose to break the seal.
- c. Remove the hoses.

**Note:** An inlet tube is placed between the inlet hose and the dispenser tank. The inlet tube provides proper water pressure to the dispenser and nozzle. When removing the inlet hose, the inlet tube may remain in the hose. Ensure the inlet tube is fully inserted into the tank inlet upon reassembly.



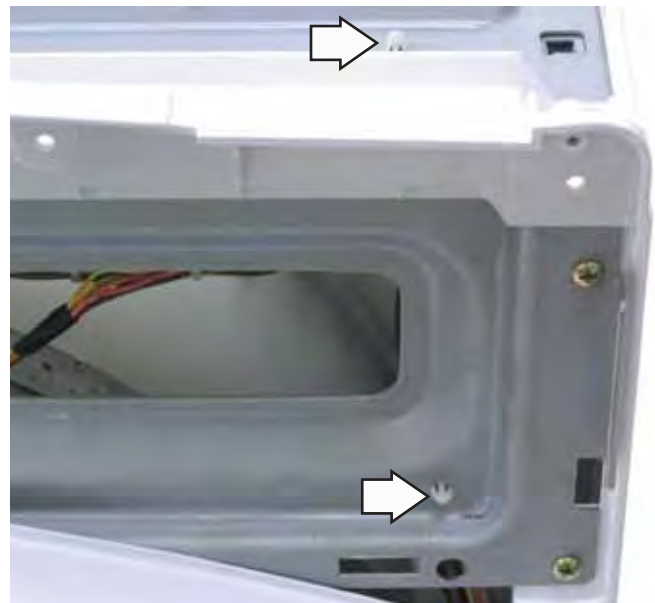
**Caution:** A small retainer for the dispenser motor wiring, located underneath the unused inlet, is fragile. To avoid breakage, use minimal outward pressure when releasing wiring.

5. Release the dispenser motor wiring from the retainer.
6. Remove the 2 Phillips-head screws that attach the motor and clip to the dispenser tank. Place the motor and clip aside.



7. Disengage the 2 plastic wire retainers from the front bracket by pressing the lock tabs inward.

**Note:** Reinstall dispenser vent hose with notch aligned on dispenser tank and ensure seam remains aligned with the pointer on the outer tub.



8. Remove the 2 Phillips-head screws that hold the dispenser to the front bracket.



9. Remove the 8 Phillips-head screws that attach the control rear cover and the front bracket.



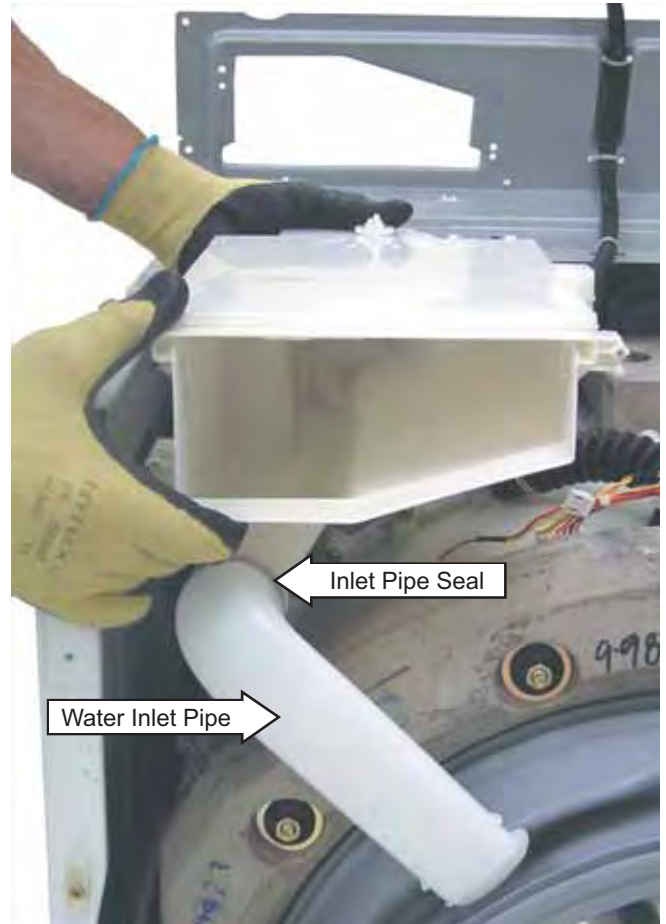
10. Raise the control rear cover and the front bracket vertically and set them towards the top rear of washer.



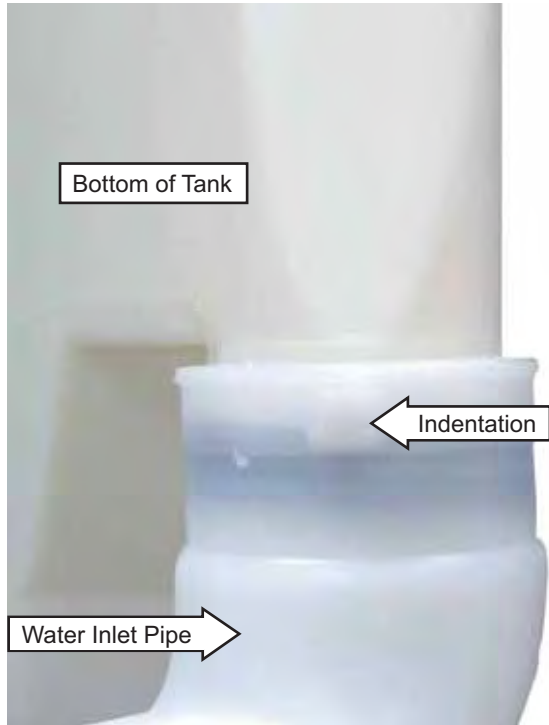
11. Remove the dispenser from the cabinet.

**Caution:** The water inlet pipe is firmly attached to the dispenser tank. Care must be taken to avoid damage to the dispenser tank.

12. Remove the water inlet pipe by twisting and pulling outward.



**Note:** The inlet pipe seal is difficult to install, place a small amount of liquid soap on the seal. Install the inlet pipe in alignment with the indentation at the bottom of the dispenser tank.



Note: Ensure the dispenser guide pin is inserted into the slot in the side of the cabinet left side top brace.



## Dispenser Motor

The dispenser is operated by a 120 VAC, 60 HZ. motor. The dispenser motor receives commands from the control board and controls dispenser operation.

Operation of the dispenser motor can be checked by using the Service Test Mode t12. (See **Service Test Mode**.)

Specific failures associated with the dispenser motor can initiate error codes E38, E39, and E62. (See **Service Test Mode**.)

### To remove the dispenser motor:

Access the dispenser assembly. (See **Dispenser Assembly**.)

**Caution:** Lock tabs on dispenser motor wiring harnesses are fragile. Tab breakage can occur if excessive release pressure is applied.

1. Disconnect the 2 wire harnesses from the dispenser motor.

**Note:** It can be helpful to insert a small flat-bladed screwdriver (as shown) to remove the wire harnesses.

### Harness Removal



2. Remove the 2 Phillips-head screws that attach the motor and gasket inlet hose clip to the dispenser tank. (See **Dispenser Assembly**.)
3. Lift dispenser motor vertically from dispenser tank.

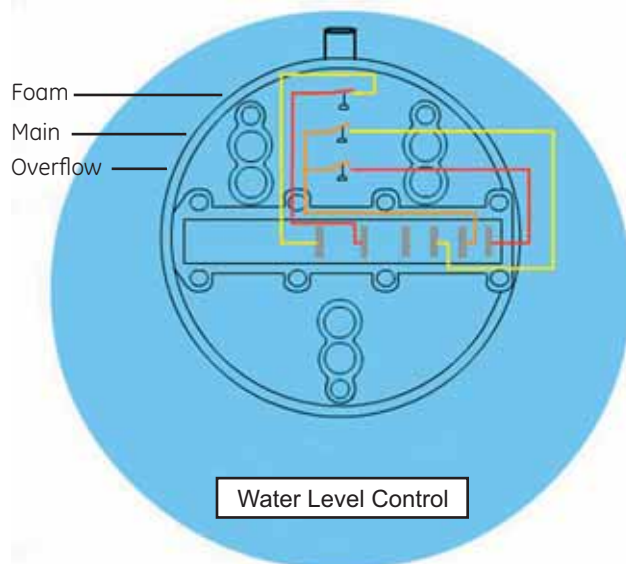


## Water Level Control

The water level control is installed on the cabinet right side top brace. The water level control is connected by a hose to an air chamber attached to the bottom of the outer tub. The water level control consists of 3 internal switches that monitor 4 water level conditions.

- When the water level rises in the outer tub, air is trapped in the air chamber.
- As the water level rises, the air pressure in the air chamber increases.
- The increased pressure operates the 3 internal switches.
- The washer has overflow protection and will automatically pump out regardless of whether the washer is on or off, as long as the unit is plugged in. This action supersedes all other commands.
- The 3 internal switches are identified as foam, main, and overflow. The 4 water level conditions monitored are empty, foam, main, and overflow.

Level	Switch Position		
	Foam	Main	Overflow
Empty	Closed	Open	Open
Foam	Open	Open	Open
Main	Open	Closed	Open
Overflow	Open	Closed	Closed



## Water Level Control Operation

When the machine is empty, the foam switch is closed and the motor circuit is disabled. When the main wash cycle is activated, the fill valve begins operating. The machine fills to the foam water level, the foam switch opens, and tumble begins. Water temperature is read by the thermistor and fill valve percentage of operation (water tempering) is calculated for the main wash. When calculated, and/or when the load absorbs water, the tumbling will pause. Fill will continue until the main water level is reached (Adaptive fill), the main switch closes, and main wash tumbling begins.

## Water Levels

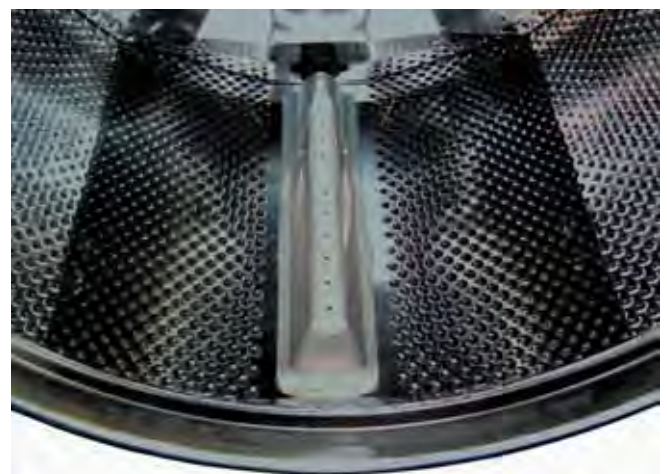
The foam water level is approximately 2½ inches below the door opening and approximately ¾ inch deep at the bottom center of the wash basket.

### Foam Water Level



The main water level is approximately 1½ inches below the door opening and approximately 2⅛ inches deep at the bottom center of the wash basket.

### Main Water Level



(Continued Next Page)

The overflow water level is approximately 6½ inches above the door opening. Overflow protection will occur at this water level.

### Overflow Water Level



Operation of the water level control can be checked by using service test mode t06. (See **Service Test Mode**.)

Specific failures associated with the water level control can initiate error codes E23 and E62. (See **Service Test Mode**.)

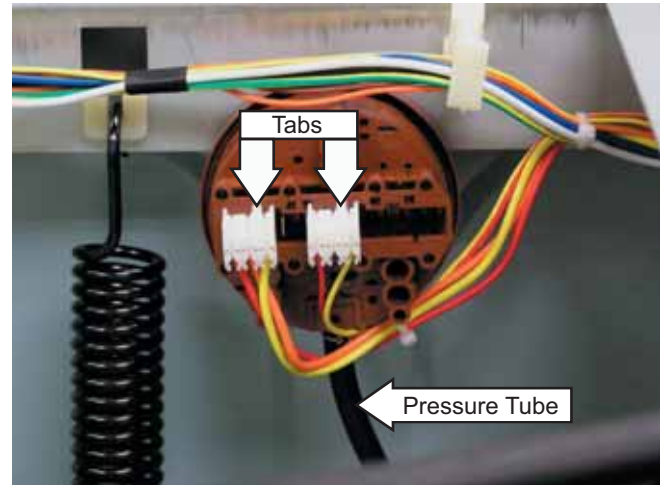
### To remove the water level control:

1. Remove the top panel. (See **Top Panel**.)
2. Press down the single tab, then disconnect each of the 2 wire harnesses.
3. Remove the pressure tube.

**Note:** The pressure tube is difficult to remove.

- a. Squeeze the clamp and slide it back.
- b. Carefully break the hose loose by inserting a small flat-blade screwdriver under the hose to break the seal.
- c. Remove the hose.

Pull the bottom of the water level control outward, rotate it ¼-turn clockwise to clear the suspension spring.



### Water Valve

The water valve assembly consists of a valve body and two solenoid coils. The water valve has a flow rate of 2.1 gallons (8 liters) per minute. It is inserted and retained in a cutout in the rear of the cabinet and held in place by a single 6-mm hex-head screw. It is only available as a complete assembly.

Each solenoid coil has an approximate resistance value of 1.1K Ω.

Operation of the water valve can be checked by using service test modes t08 and t09. (See **Service Test Mode**.)

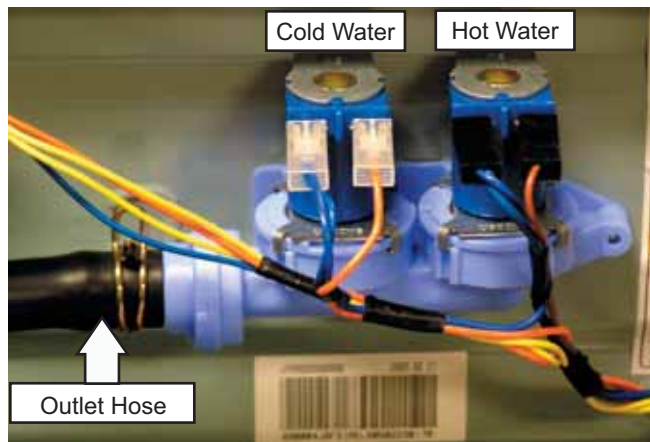
Specific failures associated with the water valve can initiate error codes E22 and E62. (See **Service Test Mode**.)

### To remove the water valve:

1. Disconnect the 2 blue wires and the orange wire from the cold water (C) solenoid.
2. Disconnect the 2 blue wires and the brown wire from the hot water (H) solenoid.
3. Disconnect the valve outlet hose:

**Note:** The valve outlet hose is difficult to remove.

- a. Squeeze the clamp and slide it back.
- b. Carefully break the hose loose by inserting a small flat-blade screwdriver under the hose to break the seal.
- c. Remove the hose.



4. Remove the single (6-mm) hex-head screw that holds the valve to the cabinet.



5. Move the valve horizontally to the right.

### Pump

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

- The pump runs whenever the washer is in the spin function of a cycle.
- The pump runs if the water level control overflow switch is closed and the washer is plugged in. (Overflow protection)
- The pump is capable of eliminating 17 gallons (64 liters) per minute.
- Recommended minimum standpipe diameter is 1¼ inches.
- Standpipe maximum height is 96 inches, measured from the floor at the washer location.
- The pump motor has an approximate resistance value of 10.6  $\Omega$ .

Operation of the pump can be checked by using service test mode t05. (See **Service Test Mode.**)

Specific failures associated with the pump can initiate error codes E30 and E31. (See **Service Test Mode.**)

## To remove the pump:

1. Remove the service panel.

**Caution:** Under normal conditions, approximately 1 quart of water will drain out when the pump cleanout is removed.

2. Place a shallow pan under the drain cleanout.
3. Turn the pump cleanout counterclockwise approximately 2 turns, then pull outward.



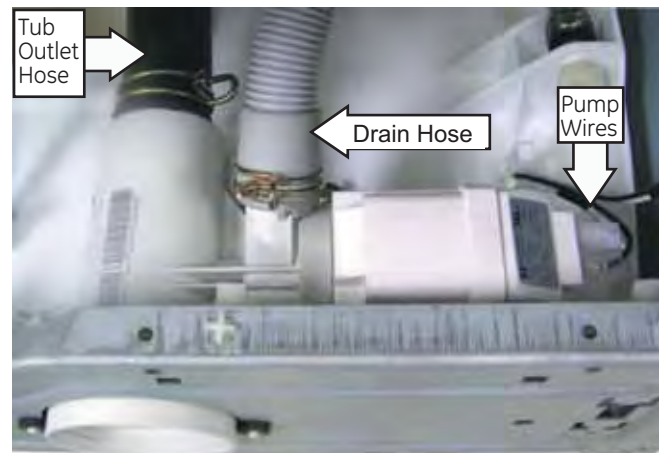
**Note:** Remove any debris or foreign objects from the strainer and interior of the pump before reinstalling.

4. Remove the drain hoses from the pump:

**Note:** The drain hoses are difficult to remove.

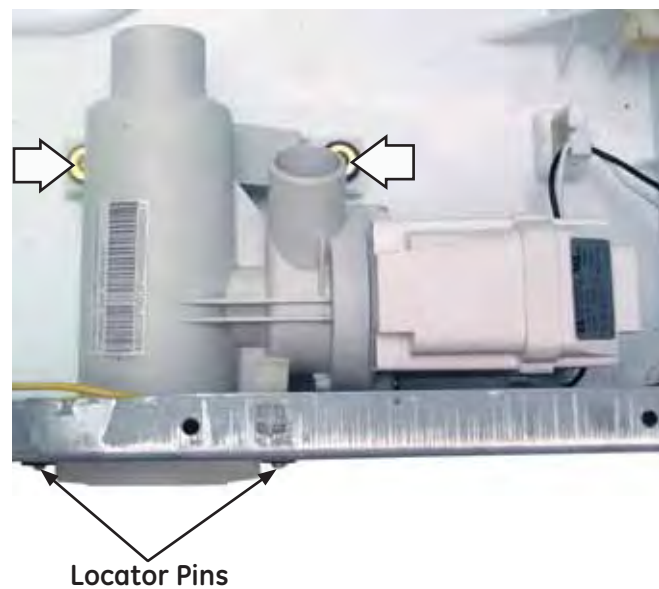
- a. Squeeze each clamp and slide it back.
- b. Carefully break each hose loose by inserting a small flat-blade screwdriver under the hose to break the seal.
- c. Remove the tub outlet hose from the pump inlet.
- d. Remove the drain hose from the pump outlet.

5. Disconnect the 2 wires from the pump.



6. Remove the 2 Phillips-head screws that hold the pump to the chassis.

7. Pull the pump rearward to clear the 2 locator pins from the 2 grommets in the front frame.



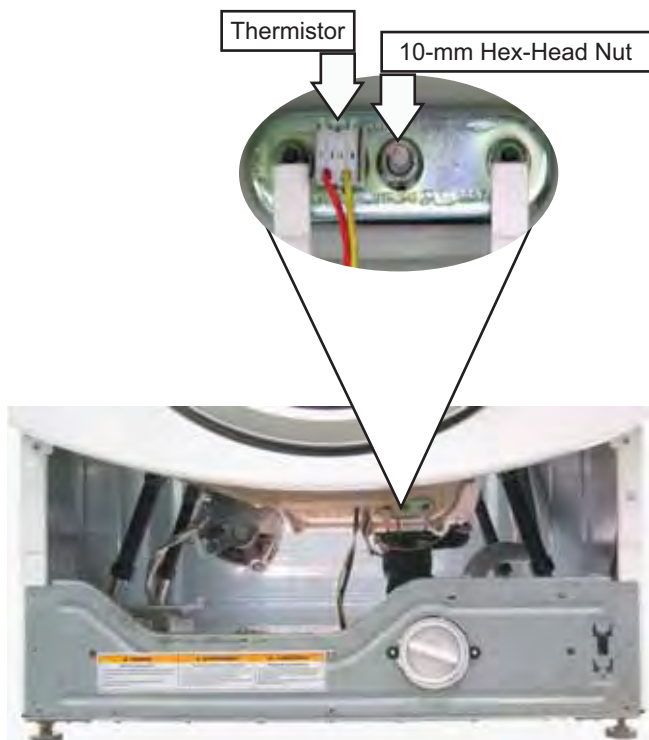
8. Remove the pump thru the enlarged opening on the left side of the front frame.

## Heater Assembly

- The heater assembly is located above the pump, and is accessed from the front of the washer.
- The heater assembly consists of a heating element and a water temperature thermistor.
- The heater can operate in whites, or stain wash cycles, and when sanitize wash temperature is selected.
- The heater assembly is held in place by a bracket attached to the inside of the outer tub and a 10-mm nut which compresses a rubber gasket to the tub opening.
- When the 10-mm hex nut is tightened, it squeezes the rubber gasket between 2 mounting plates to seal the heater assembly to the opening of the tub.
- The hex nut is set from the factory at 31 in. lbs of torque.

Operation of the heater assembly can be checked by using service test mode t07. (See **Service Test Mode**.)

Specific failures associated with the heater assembly can initiate error codes E62, E66, and E67. (See **Service Test Mode**.)



## Heating Element Specifications:

- 120 VAC
- 970 Watts
- Approximately 8 Amps
- Approximately 15  $\Omega$

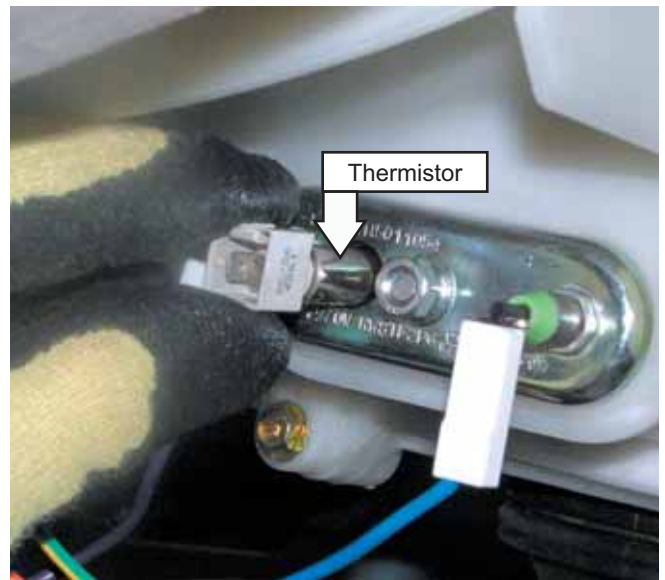
## Thermistor Specifications:

- 12 K $\Omega$  at 75°F (24°C).
- Resistance goes down as temperature goes up.

## To remove the thermistor:

1. Remove the service panel. (See **Service Panel**.)
2. Drain the washer using the pump cleanout. (See **Pump**.)
3. Disconnect the wire harness from the thermistor.
4. Loosen the 10-mm hex nut until it is flush with the end of the stud.
5. Push inward on the 10-mm hex nut to relax the rubber gasket.
6. Grasp the thermistor and pull outward.

## Thermistor Removal



### To replace the thermistor:

1. Push the thermistor into the rubber gasket until fully seated.

**Note:** Ensure heater assembly is fully seated in the tub.

2. Use a torque wrench to tighten the 10-mm hex nut to 31 in. lbs of torque.



**CAUTION:** Proper torque must be applied to the 10-mm hex nut to assure a proper seal. Under torquing could cause water leakage; over torquing could cause the tub to crack.

3. Reconnect the wire harness to the thermistor.

### To remove the heater assembly:

1. Remove the service panel. (See **Service Panel**.)
2. Drain the washer using the pump cleanout. (See **Pump**.)
3. Disconnect the blue and the purple wires from the heater and the wire harness from the thermistor.
4. Loosen the 10-mm hex nut until it is flush with the end of the stud.

#### Heater Assembly Removal



5. Push inward on the 10-mm hex nut to relax the rubber gasket.
6. Grasp the heater assembly and pull outward.

(Continued Next Page)

### To reinstall the heater assembly:

1. Slide the heater assembly into the tub opening and inside the bracket attached to the outer tub.



2. Seat the heater assembly in the tub opening.
3. Use a torque wrench to tighten the 10-mm hex nut to 31-in. lbs of torque.

**CAUTION:** Proper torque must be applied to the 10-mm hex nut to assure a proper seal. Under torquing could cause water leakage; over torquing could cause the tub to crack.

4. Reconnect the wire harness to the thermistor and the blue and the purple wires to the heater.

## Inverter

The inverter receives commands from the control board and controls motor operation. The inverter is enclosed in a protective housing and is located on the chassis, under the left side of the outer tub. It is inserted in 2 guides at the rear and held in place by a single Phillips-head screw at the front.

For the inverter to operate the motor correctly requires a supply voltage of 120 VAC, DC input from the control board, and the three motor windings intact.

Specific failures associated with the inverter can initiate error codes E43, E4A, E4B, E4C, E4E, E4F, and E53. (See **Service Test Mode**.)

To check the inverter:

1. Remove the service panel. (See **Service Panel**.)
2. Press the 4 tabs inward and remove the junction box cover.
3. Enter test mode t10, t11, or t14.
4. Check for 120 VAC between the blue and red wires at the AC input harness.

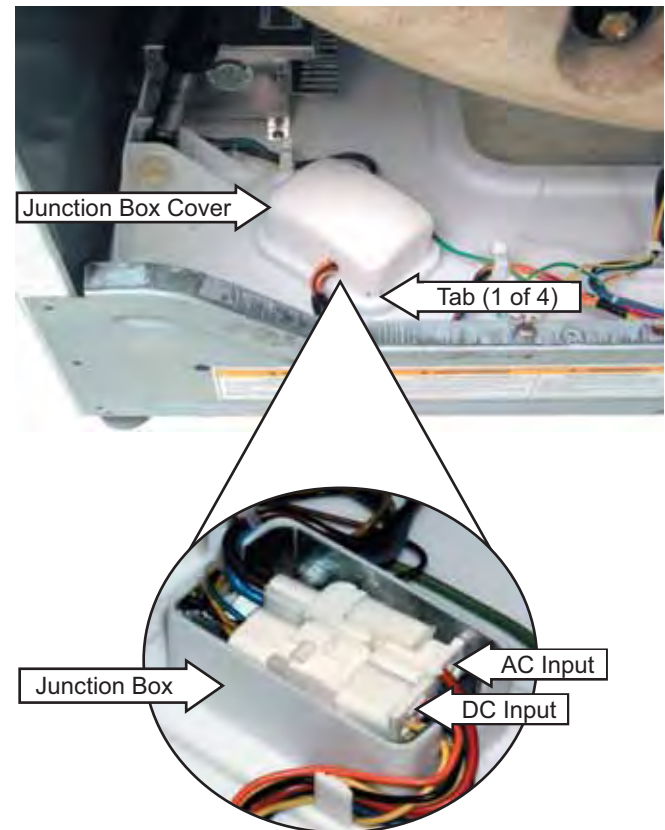
**Note:** The 120 VAC inverter supply voltage is present only when the motor is supposed to be operating.

5. Unplug washer, then check motor resistance. (See **Motor Assembly**.)
6. If 120 VAC is present at the AC input harness and motor resistance is correct, replace the inverter.

**Note:** If the inverter overheats, the washer will stop for 5 minutes.

## To remove the inverter:

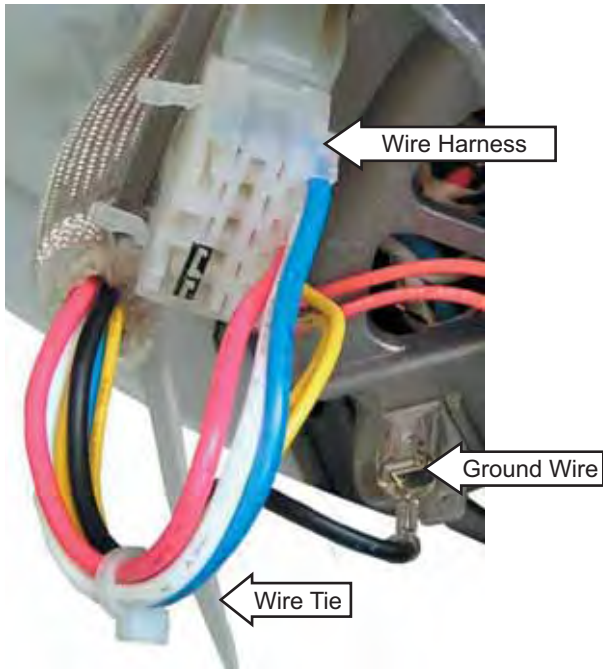
1. Remove the service panel. (See **Service Panel**.)
2. Press the 4 tabs inward and remove the junction box cover.
3. Disconnect the AC and DC input wire harnesses contained in the junction box.



4. Disconnect the motor wire harness.

**Note:** The motor wire harness is soldered to the inverter. Any fault in the inverter or motor wire harness requires inverter replacement.

5. Press the lock tab and remove the motor ground wire.
6. Remove the plastic wire tie that holds the motor wiring in place.



7. Remove the single Phillips-head screw that holds the right front leg of the inverter to the base pan.



8. Slide the inverter rearward to clear the guides that hold the rear of the inverter to the chassis.
9. Remove the inverter thru the enlarged opening on the left side of the front frame.

## Motor Assembly

The motor assembly consists of a reversible, variable speed, 3-phase induction DC motor, and sensor. The motor drives the tub drive pulley with a 7-rib belt. The sensor monitors motor rpm and is connected to the control board. The motor assembly is checked from the front of the washer and removed from the rear.

There are 2 methods to check the motor assembly.

### Method A:

1. Remove the service panel. (See **Service Panel**.)
2. Disconnect the motor wire harness.

On the motor plug, check for an approximate resistance value of 6 ohms between any two of the three wires:

- Blue to white - 6  $\Omega$
- Blue to red - 6  $\Omega$
- White to red - 6  $\Omega$
- The sensor has a resistance value of approximately 118  $\Omega$  between the two orange wires.

Operation of the motor assembly can be checked by using service test modes t10, t11, and t14. (See **Service Test Mode**.)

Specific failures associated with the motor assembly can initiate error codes E42, E48, and E49. (See **Service Test Mode**.)

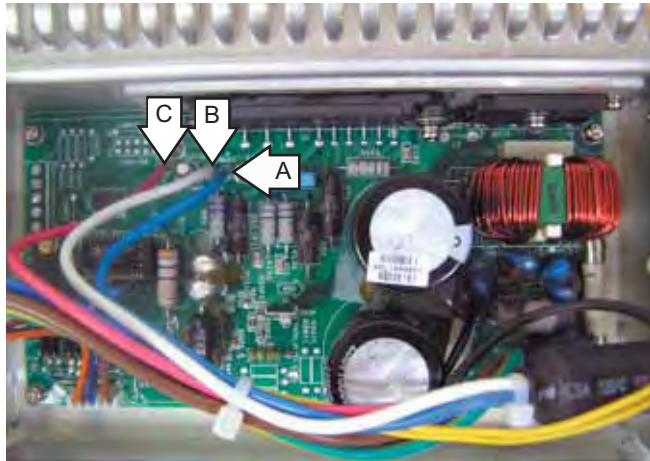
### Method B:

1. Remove the service panel. (See **Service Panel**.)
2. Remove the single Phillips-head screw that holds the right front leg of the inverter to the base pan.
3. Slide the inverter rearward to clear the guides that hold the rear of the inverter to the base pan.
4. Position the inverter to access the inverter board.



5. On the inverter board, check for an approximate resistance value of 6 ohms between any two of the three terminals:

- A to B (Blue to white) - 6  $\Omega$
- A to C (Blue to red) - 6  $\Omega$
- B to C (White to red) - 6  $\Omega$



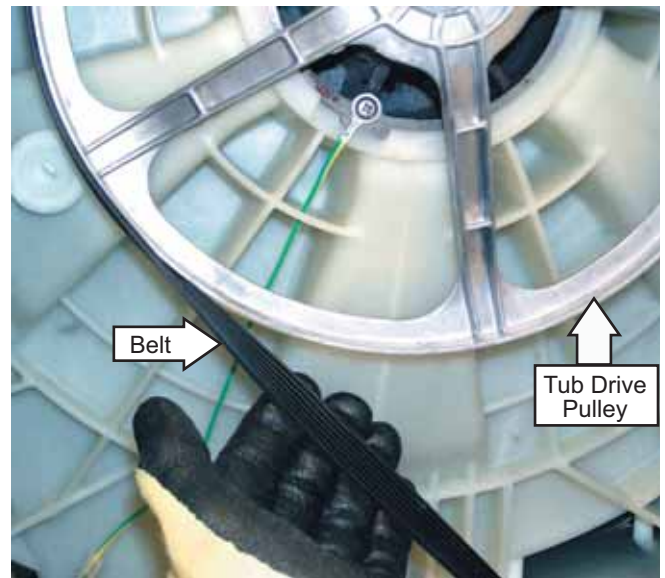
**Note:** The sensor and sensor wiring can be checked at the control board. Check for a resistance value of approximately 118  $\Omega$  resistance between the 2 yellow wires located on the wire harness located at P9.



**To remove the motor:**

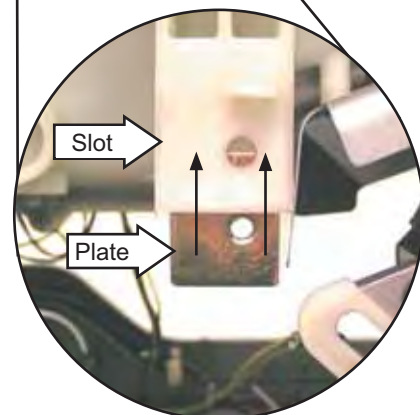
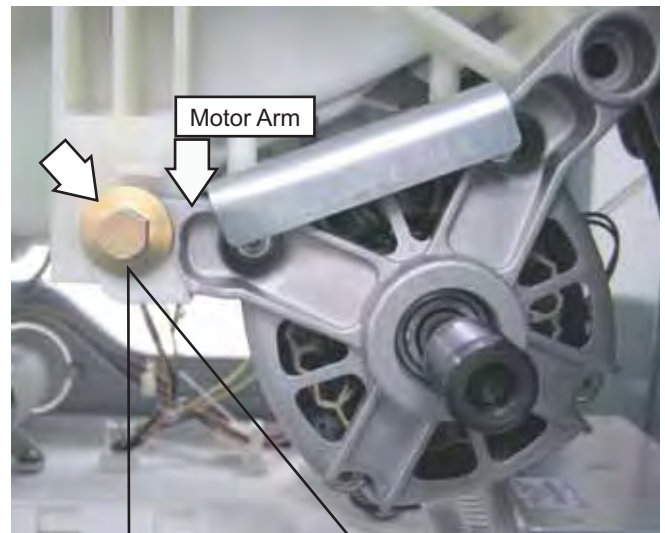
1. Remove the 4 Phillips-head screws from the cabinet rear cover.
2. Pull the cover outward from the middle.

3. Remove the belt by turning the tub drive pulley and rolling the belt off the pulley.



**Note:** The belt is elastic and is designed to be removed and installed in this manner.

4. Remove the 1/2-in. bolt from the threaded plate that holds the motor arm to the outer tub.



**Note:** The threaded plate can fall out of the recessed slot in the motor mount. Ensure this plate is reinserted in the slot upon reassembly.

**Note:** When reinstalling bolt, apply Loctite (Part # WX5X1005) to bolt threads. Ensure motor arm is at lowest position under motor bolt before tightening.

5. Rock motor rearward to clear the motor mounts from the outer tub. Place the motor on the washer chassis.
6. Disconnect the motor wire harness.
7. Press the lock tab and remove the motor ground wire.
8. Remove the plastic wire tie that holds the motor wire harness and ground wire to the motor.
9. Remove the motor.

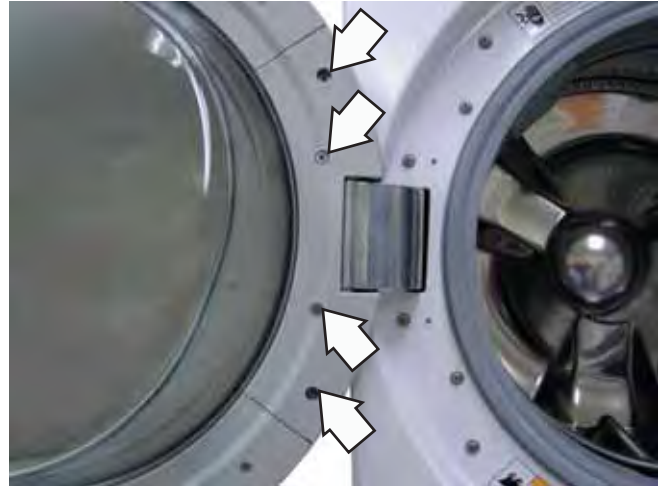
**Note:** When reinstalling the belt, ensure the belt is positioned to track in the 7 outer grooves of the motor pulley.



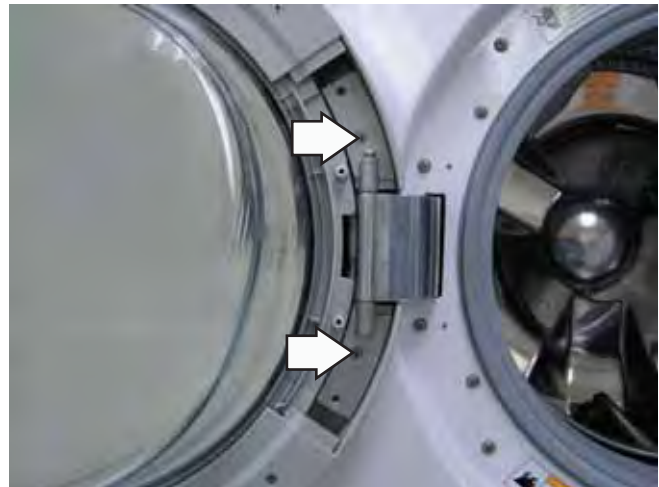
## Door

### To remove the door components:

1. Remove the 4 Phillips-head screws that hold the hinge cover to the door. Lift the hinge cover from the door.



2. Remove the 2 Phillips-head screws that hold the door to the hinge door plate.



**Note:** Place the door on a soft protected flat surface so that the door glass faces up. (The door should rest on the handle side)

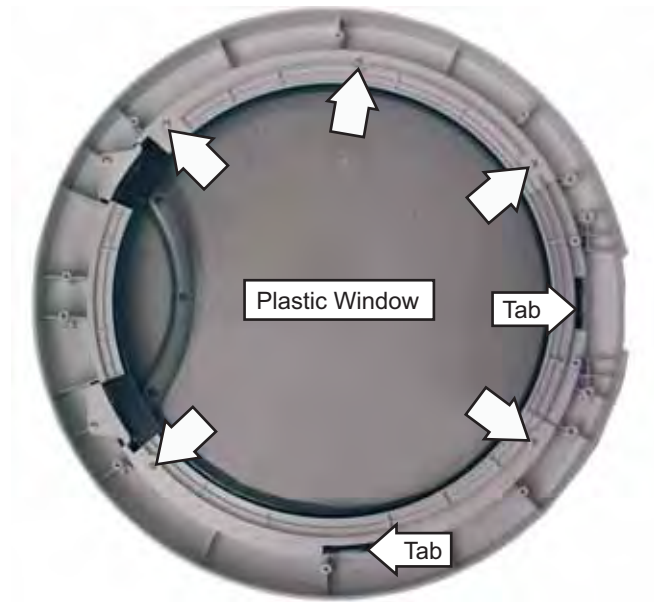
3. Remove the 8 Phillips-head screws that hold the door cover and door strike to the door frame.



4. Grasp and unsnap the door cover from the door frame.
5. Lift the door glass out of the door frame.

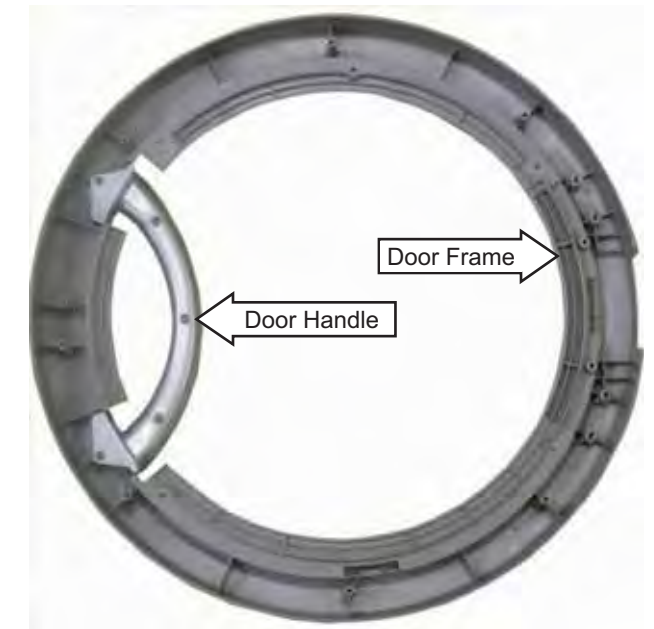


6. Remove the 5 Phillips-head screws from the protect cover and ring.
7. Release the 2 tabs that hold the protect cover and ring from the door frame.



8. Slide the protect cover and ring away from the handle side of the door frame.

**Note:** The door handle and door frame are replaced as an assembly. (Part # WH46X10125)

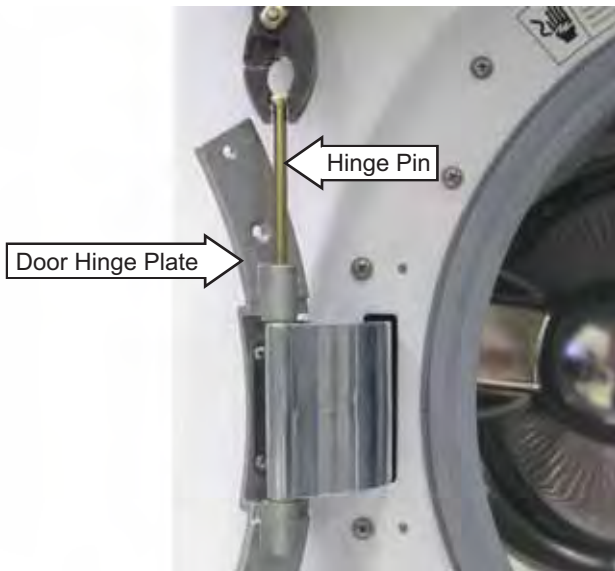


## Door Hinge

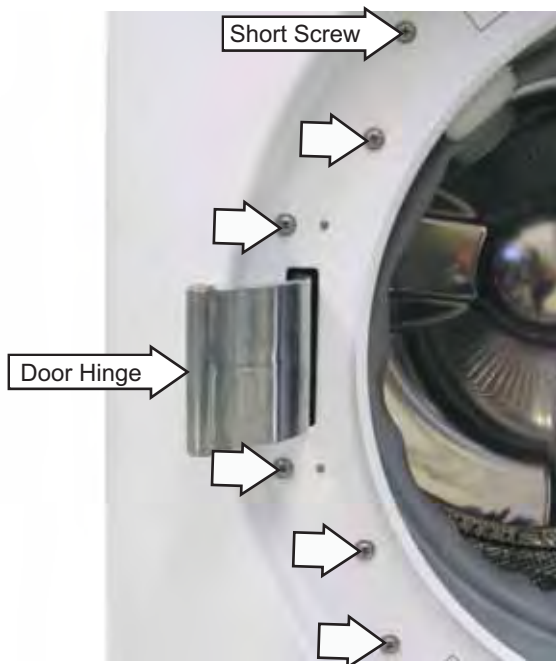
To remove the door hinge:

1. Remove the door. (See **Door**.)
2. Grasp the hinge pin with a pair of pliers and pull the pin out of the hinge. Remove the door hinge plate.

**Note:** It may be helpful to drive hinge pin upward using a punch.



3. Remove the gasket from the front panel. (See **Front Panel**.)
4. Push and fold the gasket inside the wash basket.
5. Remove the 6 Phillips-head screws that hold the door hinge to the front panel.



**Caution:** When reinstalling the door hinge, be sure to use the short screw on the top. Damage to the dispenser inlet may result if the wrong screw length is used.

6. Push the tub assembly back while pressing the hinge arm inward and carefully remove the door hinge through the opening.

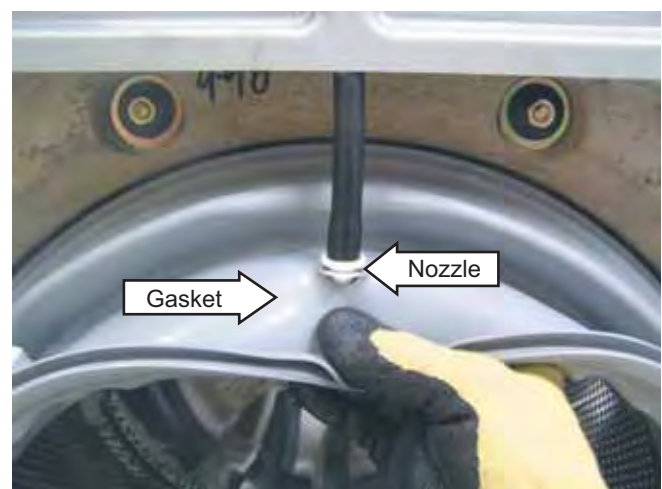


## Tub Gasket (Boot)

The tub gasket provides a watertight seal between the front and the 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 back of the tub gasket is attached to the outer tub lip with a wire and bolt assembly.

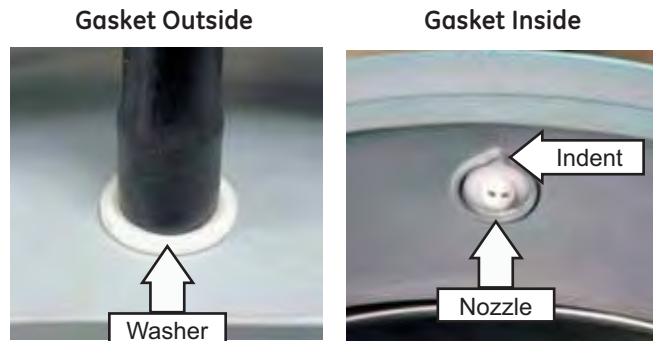
**To remove the tub gasket:**

1. Remove the front panel. (See **Front Panel**.)
2. Pull down and disengage the gasket from the nozzle.

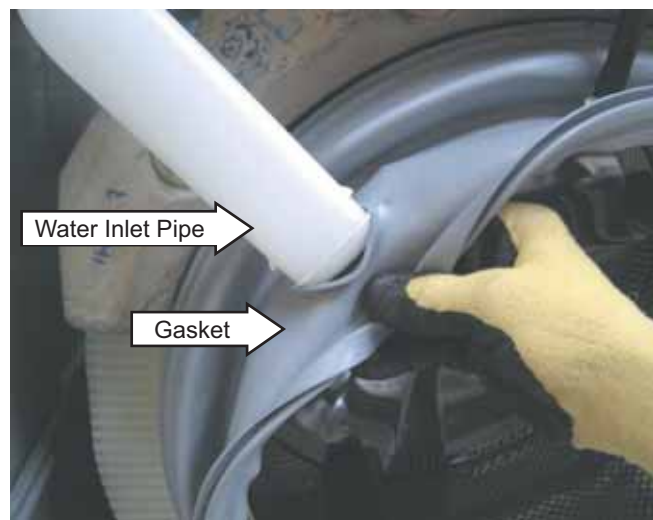


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**Note:** When reinstalling the nozzle to the gasket, it may be helpful to remove the nozzle from the hose. Ensure that the washer is placed on the outside and that the nozzle is aligned with the indent on the inside of the gasket.

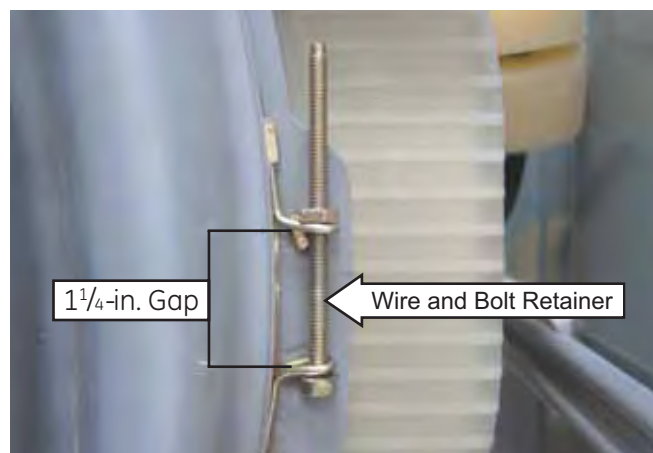


3. Disengage the gasket from the water inlet pipe.

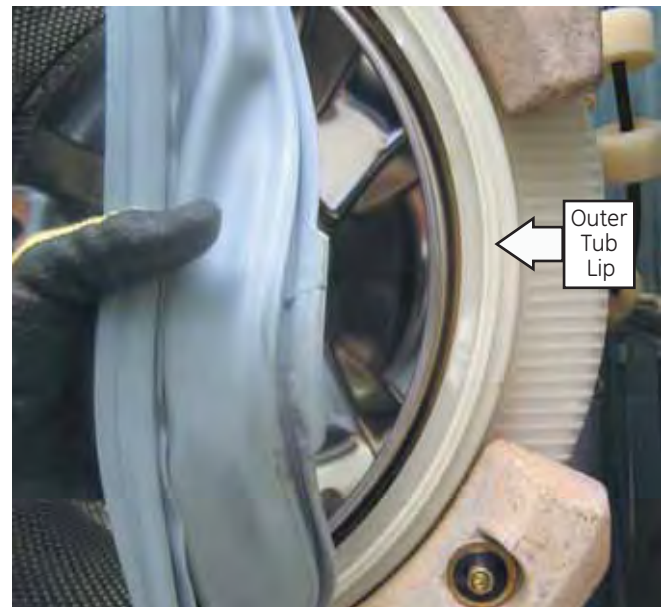


4. Loosen the 7-mm bolt that holds the wire and bolt assembly to the outer tub lip. Remove the wire and bolt assembly from the tub gasket.

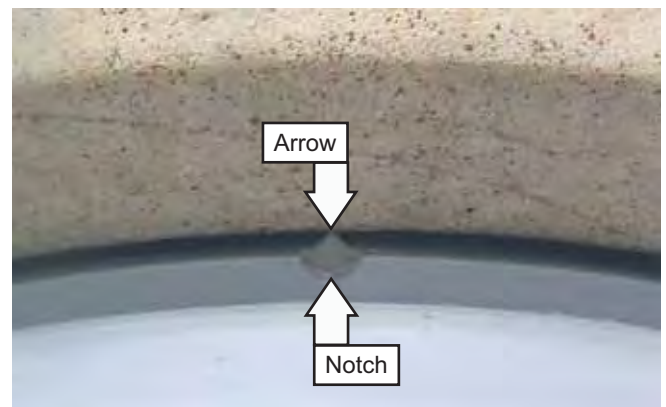
**Note:** When reinstalling the wire and bolt, tighten to a gap of approximately 1<sup>1</sup>/<sub>4</sub> inches (as shown). Do not overtighten.



5. Pull the tub gasket off the outer tub lip.



**Note:** When reinstalling the tub gasket on the outer tub, align the notch in the gasket with the arrow located on the top of the outer tub lip before tightening the wire and bolt assembly.



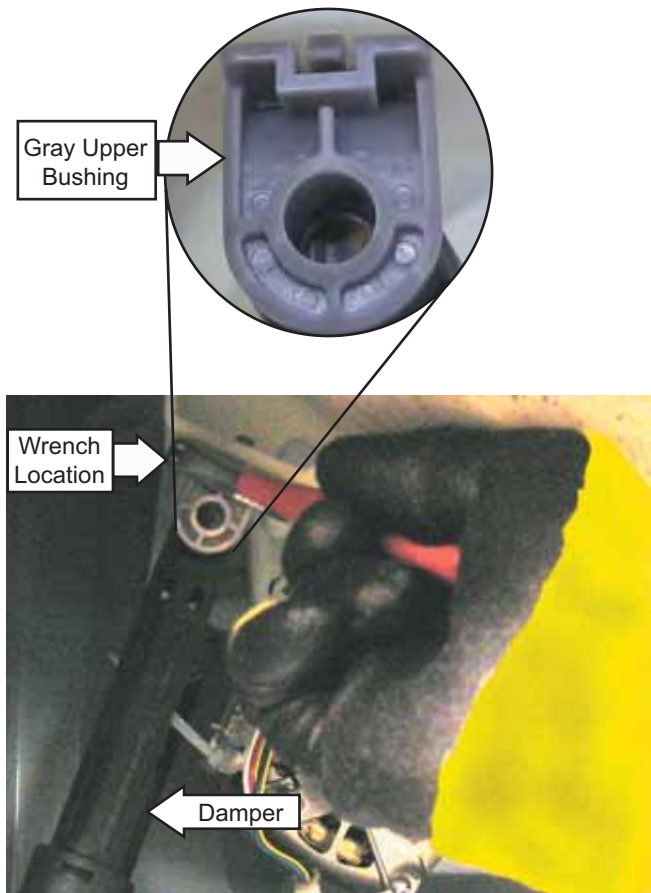
## Dampers

Each of the 4 dampers are secured to the outer tub by a gray upper bushing that locks in a slot in the outer tub. Each damper is held to the chassis with a plastic pin.

### To remove the dampers:

**Caution:** Do not twist the damper cylinder by hand to remove. Stress may result in the damper developing noise at a later date.

1. Rotate the gray upper bushing a quarter-turn clockwise (as viewed from the top) using a 6-in. adjustable crescent wrench with a jaw opening of approximately  $\frac{7}{8}$  inch.
2. Compress and remove the damper from the slot in the outer tub.



3. Remove the pin that secures each damper to the chassis by pressing the lock tab while pulling the pin out.

**Note:** It may be helpful to tap the pins out with a small hammer while pressing on the lock tabs.



### To replace the dampers:

**Note:** The pin will be damaged when removed from the chassis. Be sure to install the new pin supplied with the replacement damper.

1. Insert and fully seat the pin that secures each damper to the chassis.

**Note:** It may be helpful to tap the pins into the chassis with a small hammer.

2. Extend and fully insert the damper into the slot in the outer tub.
3. Rotate the gray upper bushing a quarter-turn counterclockwise (as viewed from the top), using a 6-in. adjustable crescent wrench with a jaw opening of approximately  $\frac{7}{8}$  inch.

**Note:** Ensure the 2 lock tabs on the gray upper bushing are in the square holes in the outer tub.

## Wash Basket

The wash basket is contained inside the outer tub. The wash basket is rotated by a belt driven tub drive pulley. A drive nut attaches the tub drive pulley to the wash basket. To remove the wash basket it will become necessary to separate the outer tub halves.

### To remove the wash basket:

1. Drain the washer using the pump cleanout. (See **Pump**.)
2. Remove the top, control, service, and front panels. (See **Top, Control, Service, and Front Panels**.)
3. Remove the cabinet rear cover, then remove the belt. (See **Motor**.)
4. Remove the 24-mm drive nut that holds the tub drive pulley to the wash basket. Remove the pulley.



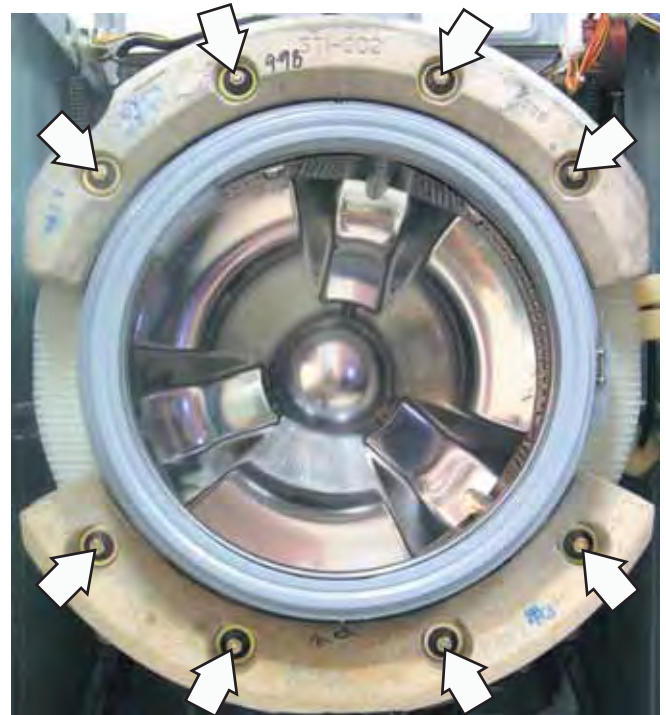
**Caution:** The nylon locking material used inside the drive nut will be damaged upon removal. Use replacement drive nut (Part # WH02X10211) when reinstalling the tub drive pulley. Use a torque wrench to tighten the 24-mm hex nut to 44 ft. lbs of torque.

5. Remove the dispenser vent hose from the outer tub, and the gasket inlet hose from the clip. (See **Dispenser**.)
6. Remove the control rear cover and the front bracket and set them towards the top rear of the washer. (See **Dispenser**.)
7. Set the dispenser aside.

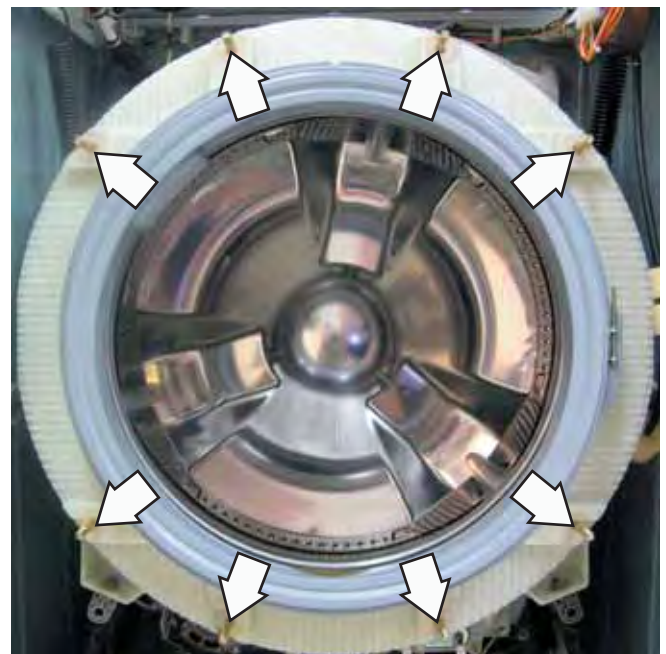
8. Remove the 3 (10-mm) hex-head screws and washers that hold the top counterweight to the outer tub. Lift the counterweight.

**Note:** When reinstalling the top counterweight, use a torque wrench to tighten the 3 (10-mm) screws to 80 in. lbs of torque.

9. Remove the 8 (13-mm) nuts and washers from the bolts that hold the front top and bottom counterweights to the front of the outer tub.



10. Remove the counterweights and the 8 bolts from the slots in the outer tub.



11. Disconnect the heater assembly wires.
12. Remove the plastic wire tie that holds the heater assembly wiring and the tub ground wire to the outer tub.
13. Remove the front dampers from the outer tub. (See **Dampers**.)
14. Remove the 26 (8-mm) hex-head screws from the perimeter of the outer tub.



15. Press the 2 tabs located on the sides of the outer tub inward and remove the outer tub front half.

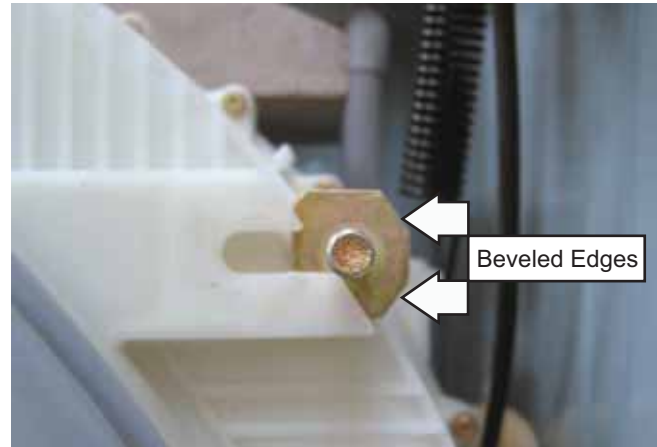
**Note:**

- Install new outer tub seal (Part # WH08X10023) whenever tub halves have been separated. Use a torque wrench to tighten the 26 tub screws to 45 in. lbs of torque.
  - When installing outer tub front half, ensure heater is inserted inside the bracket attached to the rear half of the outer tub. (See **Heater Assembly**.)
16. Pull the wash basket out of the outer tub rear half.

### Installing Front Counterweights

When installing the front counterweights, make sure the short bolts are used to attach the top counterweight and the long bolts are used to attach the bottom counterweight. Insert the bolts into the slots with beveled edges outward.

Use a torque wrench to tighten the 8 (10-mm) nuts to 142 in. lbs of torque.



**Note:** To make installation of the front bottom counterweight easier, secure the placement of the bottom bolts with electrical tape.





## Outer Tub Assembly and Suspension

The outer tub assembly is constructed in two halves and contains the wash basket. The bearing and seal assembly is part of the outer tub rear half. The outer tub assembly is supported by 2 suspension springs and 4 dampers. Each spring is located between the top of the tub assembly and a cabinet top brace, one on each side. Washer stabilization is achieved by the use of 4 dampers that are located between the bottom of the tub assembly and chassis, 2 per side.

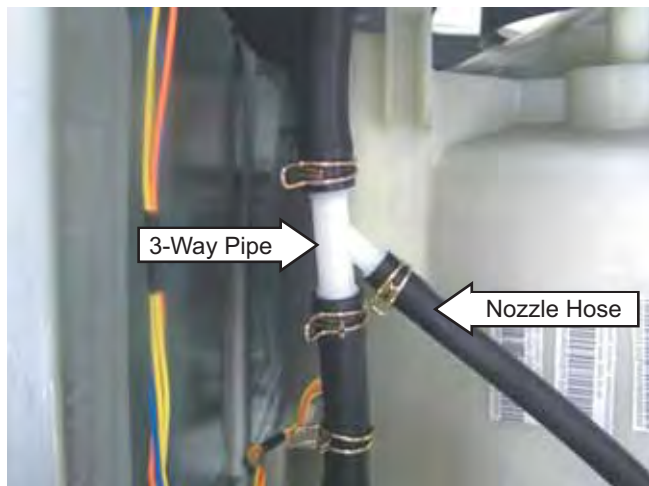
### To remove the outer tub assembly:

**WARNING:** The outer tub assembly is heavy and requires two people to remove it from the washer cabinet. Care should be taken when removing and installing the outer tub assembly.

1. Drain the washer using the pump cleanout. (See *Pump*.)
2. Remove the top, control, service, and front panels. (See *Top Panel*, *Control Panel*, *Service Panel*, and *Front Panel*.)
3. Remove the dispenser. (See *Dispenser*.)
4. Remove the nozzle hose from the 3-way pipe:

**Note:** The nozzle hose is difficult to remove.

- a. Squeeze the clamp and slide it back.
- b. Carefully break the nozzle hose loose by inserting a small flat-blade screwdriver under the hose to break the seal.
- c. Remove the hose.

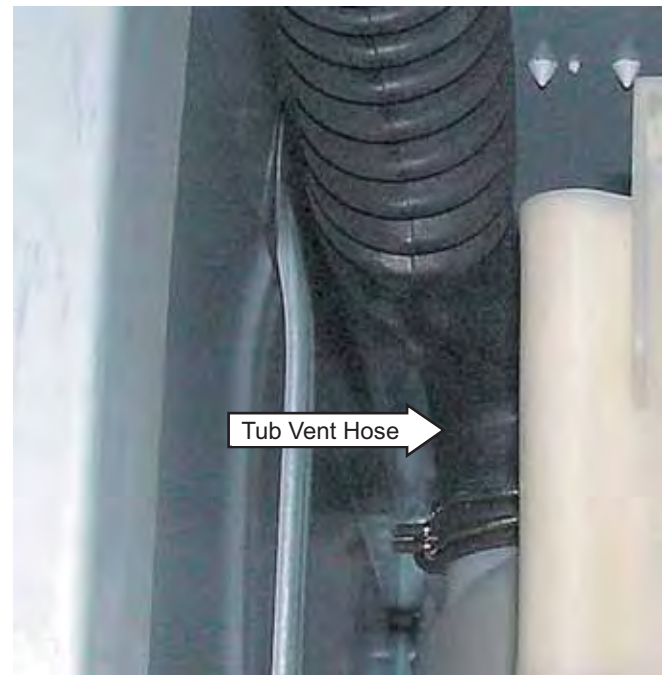


5. Set the front bracket aside.

6. Remove the tub vent hose from the left rear of the outer tub:

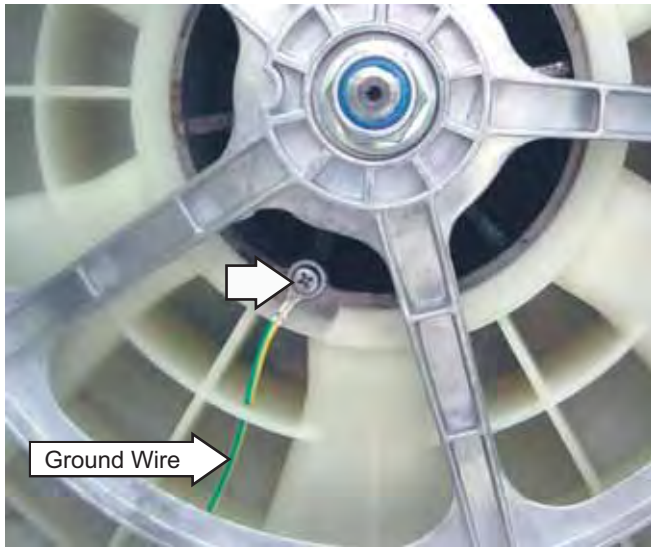
**Note:** The tub vent hose is difficult to remove.

- a. Squeeze the clamp and slide it back.
- b. Carefully break the tub vent hose loose by inserting a small flat-blade screwdriver under the hose to break the seal.
- c. Remove the hose.

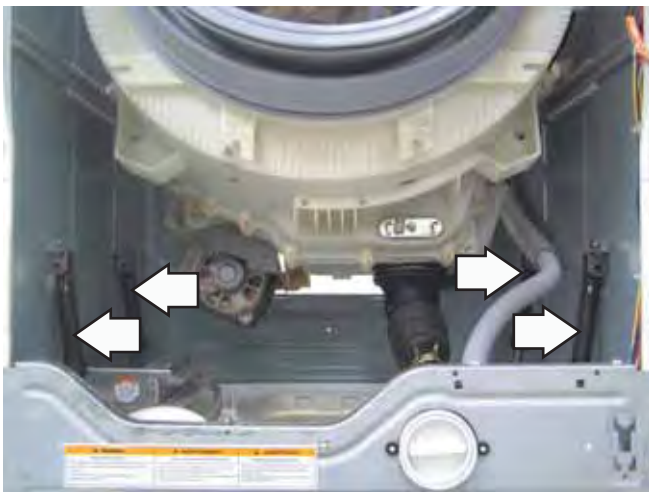


7. Remove the air pipe from the water level control.
8. Disconnect the heater assembly wires.
9. Remove the plastic wire tie that holds the heater assembly wiring and the tub ground wire to the outer tub.
10. Disconnect the motor wire harness, ground wire, and the plastic wire tie that holds the wiring to the motor.
11. Remove the tub drain hose from the pump.
12. Remove the 4 Phillips-head screws from the cabinet rear cover.
13. Pull the cover outward from the middle.

14. Remove the Phillips-head screw that holds the tub ground wire. Remove the ground wire from the outer tub wire guides.

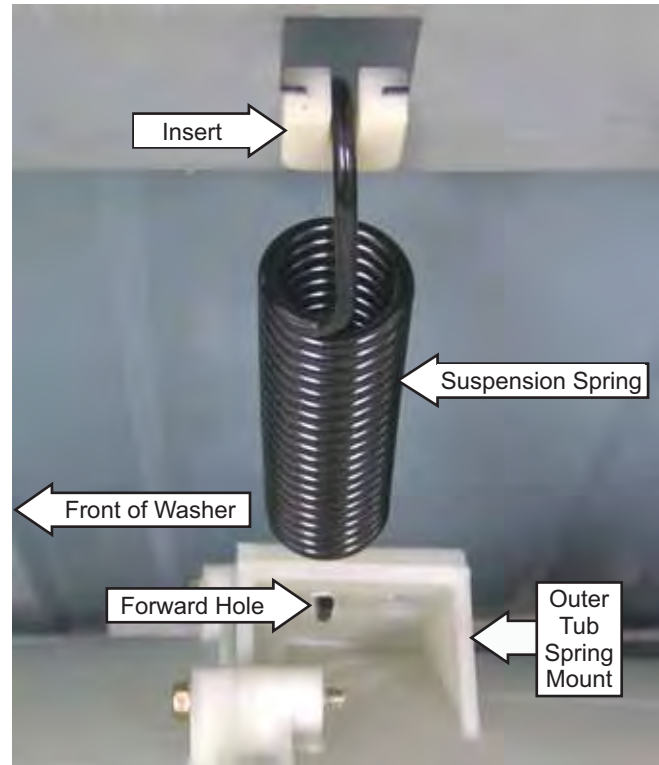


15. Remove the top, front top, and bottom counterweights. (See *Wash Basket*.)
16. Remove the 4 dampers from the outer tub. (See *Dampers*.)
17. Compress the dampers and position them towards the outside of the cabinet.



18. Lift the outer tub assembly up, then release the 2 suspension springs from the slotted plastic inserts in the cabinet top braces.
19. Carefully remove the tub assembly out the front of the cabinet.

**Note:** When reinstalling the tub assembly, hook each of the suspension springs in the forward hole of the outer tub spring mounts.



# Service Test Mode

The washer control has a service test mode that can be utilized by the service technician in order to test critical components and to access error codes. This test mode will help the service technician to quickly identify failed or improper operation of washer components.

**Caution:** Testing is accomplished through built-in test procedures. Unplugging components for testing can damage component connections.

Machine must be in idle mode before entering test. Idle mode occurs when the washer has completed a cycle. If the cycle is interrupted, the washer will drain water when the power is re-applied. The water level switch must reset BEFORE the test mode can be entered. If water remains in the washer, manually drain the washer to reset the water level switch. A failed water level switch can cause an inability to enter the test mode.

To enter the test mode:	To exit the test mode:
<ol style="list-style-type: none"> <li>1. Press power button to clear any current cycles. <b>Note:</b> The display must be blank to proceed.</li> <li>2. Disconnect the power for 30 seconds.</li> <li>3. Reconnect power and within 30 seconds of reconnecting power:               <ol style="list-style-type: none"> <li>a. Press signal button.</li> <li>b. Press delay start button.</li> <li>c. Press signal button.</li> <li>d. Press delay start button. (The door will lock, then will display t01.)</li> </ol> </li> </ol> <p><b>Note:</b> A washer left in the test mode will exit the test mode and unlock the door after a period of 2 hours.</p>	<ol style="list-style-type: none"> <li>1. Press signal button.</li> <li>2. Press delay start button.</li> <li>3. Press signal button.</li> <li>4. Press delay start button.</li> </ol> <p><b>Note:</b> Attempting to exit the service mode by disconnecting the power will result in a locked washer.</p>

Test Mode	Description
t01 Model ID	Verifies (or sets on new board) the proper model id
t02 Error Codes	Lists up to 10 control-detected problems
t03 Software ID	Verifies using latest control-EEPROM-inverter software
t04 LED Illumination and Button Test	Verifies that all displays and buttons work
t05 Pump Test	Operates pump
t06 Pressure Switch Test	Fills to all 3 fill levels, then pumps out water
t07 Thermistor/Heater Test	Verifies that both the thermistor and heater work
t08 Hot Water Test	Verifies hot water valve works
t09 Cold Water Test	Verifies cold water valve works
t10 Tumble Test	Verifies washer tumbles (i.e. wash cycle)
t11 Spin Test	Verifies washer spins
t12 Dispenser Test	Verifies dispenser fill works—for all four fill modes
t13 EOL Test	Performs factory end-of-line test sequence
t14 Spin Test	Verifies washer spin speeds

(Continued Next Page)

Test Mode	Press	Displays	Exit
t01	Start/ Pause	Display defines model id (01-03). Always displays"---" when control board replaced. Proper model must be set when control board replaced. Rotate knob until desired selection is displayed (01-03), then press and hold Start/Pause until beep.	Press Power. Returns to t01
t02	Start/ Pause	Displays the most recent error code. (E00=none) Repeat pressing Start/Pause to display up to previous 10 error codes. Press and hold Start/Pause to clear all error codes. (Will then display E00.)	Press Power. Returns to t02
t03	Start/ Pause	Displays software revision numbers. Press Start/Pause to alternate between COD (Control software version), EE (EEPROM version), and InV (Inverter software version).	Press Power. Returns to t03
t04	Start/ Pause	Displays and tests loops on lighting of LED'S and cycle lights. Buttons beep when pressed.	Press Power. Returns to t04
t05	Start/ Pause	Displays P and operates pump for 60 seconds, then returns to t05.	Press Power. Returns to t05
t06	Start/ Pause	Water level control test. Pump runs and displays E at start (no water in tub). Press Start/Pause to advance. Water valve begins fill. Displays F when reaches FOAM level. Displays nI when reaches MAIN level, and briefly displays oF when reaches overflow level, then pumps water out. Displays E when empty.	Press Power. Pump runs. Returns to t06
t07	Start/ Pause	Water heater/thermistor test. ( <b>Note:</b> Main level switch must be functional.) Fills with water to main level, then operates heater for up to 5 minutes. Displays temperature of water, as heated, in degrees F. After 5 minutes, water pumps out, then returns to t07.	Press Power. Pump runs. Returns to t07
t08	Start/ Pause	Water valve test. Displays hOt and pump runs. Fills with hot water. Maximum level is main level switch setting. Pumps out water and returns to t08.	Press Power. Pump runs. Returns to t08
t09	Start/ Pause	Water valve test. Displays Cld and pump runs. Fills with cold water. Maximum level is main level switch setting. Pumps out water and returns to t09.	Press Power. Pump runs. Returns to t09
t10	Start/ Pause	Tumble test. Displays tt. Wash basket spins in one direction for 5 seconds, pauses, then spins in the opposite direction for 5 seconds. Repeats until exit initiated. ( <b>Note:</b> Beginning direction is random.)	Press Power. Pump runs. Returns to t10
t11	Start/ Pause	Spin speed-low spin/high spin test. Display shows rpm. Pump runs, displays 0, then wash basket ramps to 400 rpm. Press Start/Pause a second time to ramp to 1000 rpm. (May display 999 or 0 for 1000 rpm.) Then motor is unpowered, displays 0, pump runs, and returns to t11.	Press Power. Pump runs. Returns to t11
t12	Start/ Pause	Dispenser motor/mechanism test. Press Start/Pause to advance. Displays Pdt and fills via prewash compartment. Displays ddt and fills via wash compartment. Displays bdt and fills via bleach compartment. Displays Fdt and fills via fabric softener compartment. ( <b>Note:</b> If main level reached during test, dispenser operation stops, pump runs, and returns to t12.)	Press Power. Pump runs. Returns to t12
t13	Start/ Pause	EOL test sequence. Not used for service.	Press Power. Returns to t13
t14	Start/ Pause	Spin speed ramp up test. Display shows rpm. Pump runs, displays 0, then wash basket ramps to 100 rpm, pauses, ramps to 350 rpm, pauses, then ramps to and holds at 1000 rpm. (May display 999 or 0 for 1000 rpm.)	Press Power. Pump runs. Returns to t14

# Error Codes

Error Code	Description	Problem	Possible Cause/Action
E22	Fill timeout - No fill/slow fill	Fill time exceeds 8 minutes.	<ul style="list-style-type: none"> <li>• Ensure manual water supply valves are fully open.</li> <li>• Inspect inlet hoses for kinks/obstructions.</li> <li>• Inspect water valve screens for restriction.</li> <li>• Check water valve functions - t08 for hot water, t09 for cold water.</li> </ul> <p>If above steps do not clear the problem replace solenoid water valve.</p>
E23	Flood protect drain	Foam switch closes in idle state.	<ul style="list-style-type: none"> <li>• Check water valve functions - t08 for hot water, t09 for cold water.</li> <li>• Check pressure switch foam contacts - t06 - first display should be E.</li> <li>• Off balance loads with heavy vibration can cause code - retry before replacing any component.</li> </ul>
E30	Drain pump not present	Drain problems - no electrical signal from drain pump.	<ul style="list-style-type: none"> <li>• Check drain pump - t05.</li> <li>• Check drain pump motor for open.</li> <li>• Check power to drain pump.</li> <li>• Check drain pump for stalling.</li> </ul>
E31	Drain timeout	Slow drain - machine will have water - not full.	<ul style="list-style-type: none"> <li>• Check drain pump - t05.</li> <li>• Check drain pump for restriction.</li> <li>• Check for drain restriction.</li> <li>• Drain height over 96-in. can cause code.</li> </ul>
E38	Dispenser error	Correct reservoir is not found and 8 switches are seen when motor is running.	<ul style="list-style-type: none"> <li>• Check dispenser - t12 (<b>Note:</b> Do not unplug connectors from dispenser motor unless replacing.)</li> </ul>
E39	Dispenser timeout	No switches found in 45 seconds.	<ul style="list-style-type: none"> <li>• Check dispenser - t12 (<b>Note:</b> Do not unplug connectors from dispenser motor unless replacing.)</li> </ul>
E42	Drive motor - instantaneous current	Motor excess current draw.	<ul style="list-style-type: none"> <li>• Check drive motor - t10 tumble, t11 spin, t14 spin.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry. If code reoccurs, check drive motor windings. If motor windings OK, replace inverter. (You may see a burned spot on inverter.) (<b>Note:</b> Cannot occur with open motor winding.)</li> </ul>

Error Code	Description	Problem	Possible Cause/Action
E43	DC Fault - Inverter	Inverter failure.	<ul style="list-style-type: none"> <li>• Non-recoverable error.</li> <li>• Replace inverter control board.</li> </ul>
E45	Drive motor - overload current	Load too heavy.	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, T14 spin.</li> <li>• Check mechanical faults - check belt, basket, bearing - rotate basket by hand.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - if reoccurs, replace inverter. (<b>Note:</b> Cannot occur with open winding.)</li> </ul>
E46	Drive motor - over temperature	Inverter over temperature.	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, T14 spin.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - use whites cycle sanitize temperature - if reoccurs, replace drive motor. (<b>Note:</b> Cannot occur with open winding.)</li> </ul>
E47	Heat sink - over temperature	Inverter over temperature.	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, T14 spin.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - use whites cycle sanitize temperature - if reoccurs, replace drive motor. (<b>Note:</b> Cannot occur with open winding.)</li> </ul>
E48	Drive motor - open	Open motor phase.	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, T14 spin.</li> <li>• Check motor for open winding - if OK, replace inverter. (<b>Note:</b> Occurs with open winding.)</li> </ul>
E49	Drive motor - overload power	Load too heavy.	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, T14 spin.</li> <li>• Check mechanical faults (binding) - belt, basket, bearing - rotate basket by hand.</li> <li>• Check motor for shorted winding - if OK, replace inverter.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - if reoccurs, replace inverter. (<b>Note:</b> Cannot occur with open winding.)</li> </ul>
E4A	Under volts	Under volts - DC bus voltage (inverter).	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, T14 spin.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - if reoccurs, replace inverter. (<b>Note:</b> Cannot occur with open winding.)</li> </ul>
E4B	Power up problems	Software/hardware problems.	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, T14 spin.</li> <li>• Check motor windings - internal short</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - if reoccurs, replace inverter. (<b>Note:</b> Cannot occur with open winding.)</li> </ul>
E4C	Over volts	Over volts - DC bus (inverter).	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, t14 spin.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - if reoccurs, replace inverter. (<b>Note:</b> Cannot occur with open winding.)</li> </ul>

Error Code	Description	Problem	Possible Cause/Action
E4E	Under volts after start	Initial minimum voltage not received - motor does not run. DC bus (inverter).	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, t14 spin.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - if reoccurs, replace inverter. <b>(Note:</b> Cannot occur with open winding.)</li> </ul>
E4F	EEProm fault	EEProm reading error occurs.	<ul style="list-style-type: none"> <li>• Non-recoverable error.</li> <li>• Replace inverter control board.</li> </ul>
E52	Main control wake-up error	Lost communication between control and drive motor after initial success.	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, t14 spin.</li> <li>• Check connections/cables between main control and inverter.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - if reoccurs, replace inverter. <b>(Note:</b> Cannot occur with open winding.)</li> <li>• Main control board can cause code in limited circumstances, as loose plug on board.</li> </ul>
E53	Buffer error	Internal software buffer error.	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, t14 spin.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - if reoccurs, replace inverter. <b>(Note:</b> Cannot occur with open winding.)</li> </ul>
E54	No motor response	Lost communication between control and drive motor.	<ul style="list-style-type: none"> <li>• Check Motor - t10 tumble, t11 spin, t14 spin.</li> <li>• Check connections/cables between controls.</li> <li>• Power down (unplug) washer, wait 30 seconds and retry - if reoccurs, replace inverter.</li> </ul>
E57	Checksum failure	Software error occurs - checksum failure.	<ul style="list-style-type: none"> <li>• Non-recoverable error.</li> <li>• Main control board must be replaced.</li> </ul>
E58	Communication failure	Communication error occurs.	<ul style="list-style-type: none"> <li>• Non-recoverable error.</li> <li>• Main control board must be replaced.</li> </ul>
E60	Door lock switch failure	Switch failure occurs during lock.	<ul style="list-style-type: none"> <li>• Power down (unplug) machine, wait 30 seconds and retry.</li> <li>• Check wiring and connections between door lock and main control.</li> <li>• Check door lock switches and solenoid.</li> <li>• Replace main control if wiring, switches, and solenoid test functional.</li> </ul>

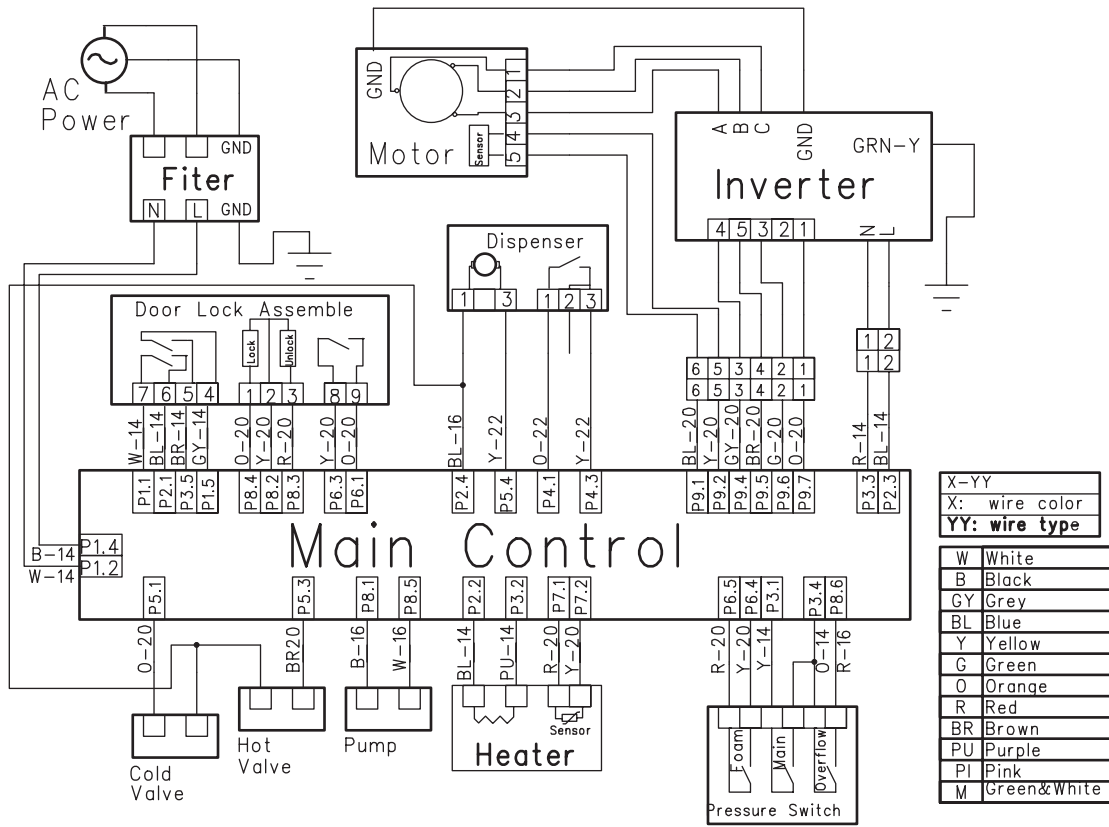
Error Code	Description	Problem	Possible Cause/Action
E61	Door unlock switch failure	Switch failure occurs during unlock.	<ul style="list-style-type: none"> <li>• Power down (unplug) machine, wait 30 seconds and retry.</li> <li>• Check wiring and connections between door lock and main control.</li> <li>• Check door lock switches and solenoid.</li> <li>• Replace main control if wiring, switches, and solenoid test functional.</li> </ul>
E62	System contact failure	Load failure occurs. Heater/pump/pressure switch/door lock/water valves/dispenser motor.	<ul style="list-style-type: none"> <li>• Power down (unplug) machine, wait 30 seconds and retry.</li> <li>• This error code found a shorted component.</li> <li>• Check integrity of wiring and connections - replace harness if necessary.</li> <li>• Check integrity and connections of all loads and replace as necessary.</li> <li>• Replace main control if actions do not resolve.</li> </ul>
E63	Unexpected open door	Switch failure occurs during wake-up.	<ul style="list-style-type: none"> <li>• Power down (unplug) machine, wait 30 seconds and retry.</li> <li>• Check wiring and connections between door lock and main control.</li> <li>• Check door lock switches and solenoid.</li> <li>• Replace main control if wiring, switches, and solenoid test functional.</li> </ul>
E64	Unexpected open door while running	Switch failure occurs during cycle.	<ul style="list-style-type: none"> <li>• Power down (unplug) machine, wait 30 seconds and retry. Check wiring and connections between door lock and main control.</li> <li>• Check door lock switches and solenoid.</li> <li>• Replace main control if wiring, switches, and solenoid test functional.</li> </ul>
E65	Water level sensor failure - foam	Main level switch is satisfied before foam level switch.	<ul style="list-style-type: none"> <li>• Check integrity of wiring and connections between main control and water level sensor.</li> <li>• Check integrity of water level sensor t06 - replace if necessary.</li> <li>• Replace main control if actions do not resolve.</li> </ul>
E66	Water temperature sensor open	Water temperature sensor open.	<ul style="list-style-type: none"> <li>• Check water temperature sensor - t07</li> <li>• Check integrity of wiring and connections between main control and water temperature sensor.</li> <li>• Check integrity of water temperature sensor - replace if necessary.</li> </ul>

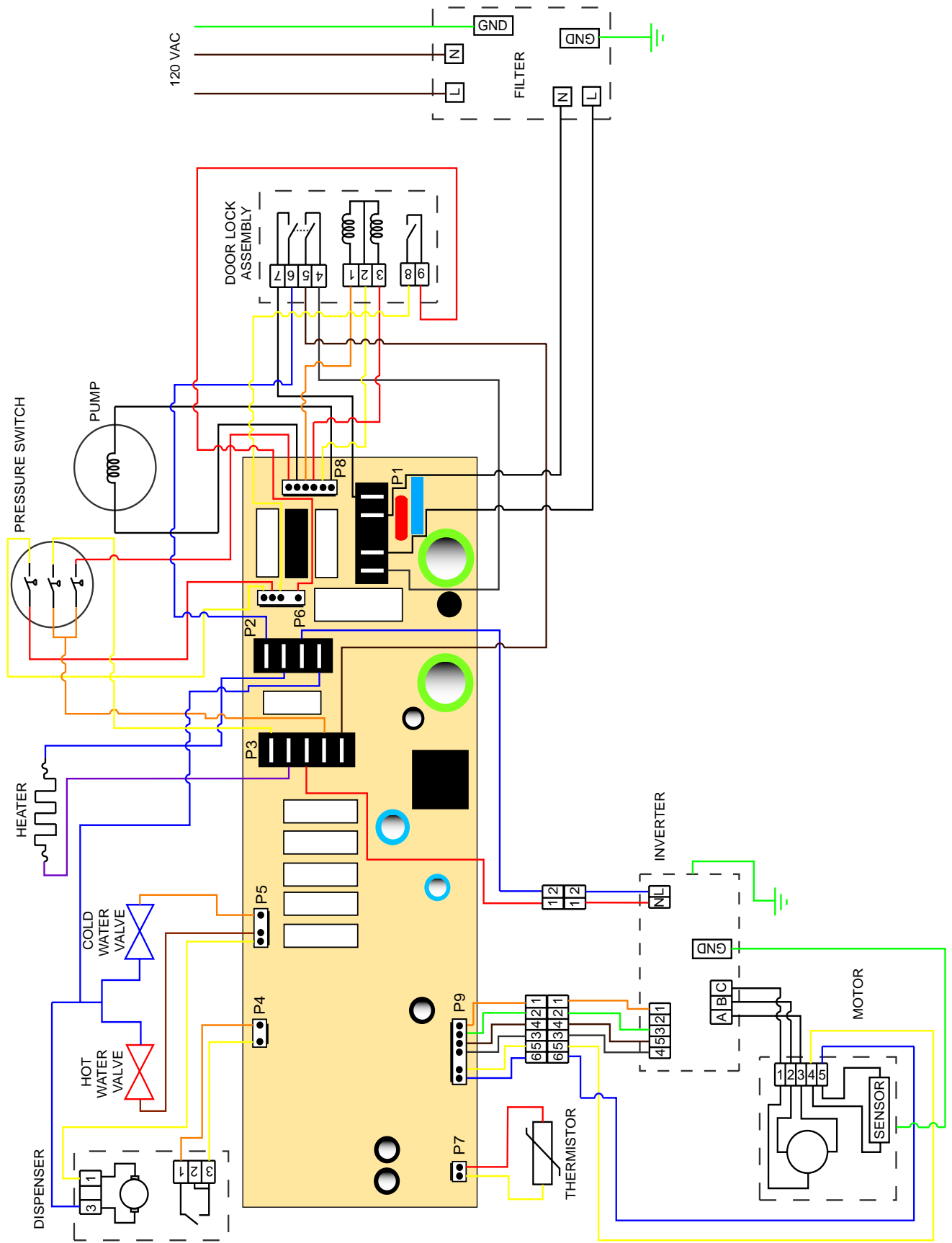


Error Code	Description	Problem	Possible Cause/Action
E67	Water temperature sensor shorted	Water temperature sensor shorted.	<ul style="list-style-type: none"> <li>• Check water temperature sensor - t07.</li> <li>• Check integrity of wiring and connections between main control and water temperature sensor.</li> <li>• Check integrity of water temperature sensor - replace if necessary.</li> </ul>
E70	Stuck key	Continuous key read for 60 seconds.	<ul style="list-style-type: none"> <li>• Power down (unplug) machine, wait 30 seconds and retry.</li> <li>• Use t04 test to test keys.</li> <li>• Separate control and control housing from front panel - clean and remove foreign debris.</li> <li>• Ensure all keys can be operated freely without sticking.</li> <li>• Replace control panel if actions do not resolve.</li> </ul>
E71	Key fault	Communication error occurs between control and keys.	<ul style="list-style-type: none"> <li>• Power down (unplug) washer, wait 30 seconds and retry - if reoccurs, replace main control.</li> </ul>

**NOTE:** It's important to note error codes should only be used to help identify those components which require testing. Never replace a part based solely on an error code. The control can generate a false error if the right conditions exist. Use the code only as a reference and always check the component before replacing.

# Schematic





# Warranty for 2005 Product

All warranty service provided by our Factory Service Centers, or an authorized Customer Care<sup>®</sup> technician. To schedule service, on-line, 24 hours a day, visit us at [ge.com](http://ge.com), or call 800.GE.CARES (800.432.2737).

<b>For The Period Of:</b>	<b>We Will Replace:</b>
<b>One Year</b> From the date of the original purchase	<b>Any part</b> of the washer which fails due to a defect in materials or workmanship. During this <b>full one-year warranty</b> , GE will also provide, <b>free of charge</b> , all labor and related service costs to replace the defective part.
<b>Second through Fifth Year</b> From the date of the original purchase	<b>The suspension strut assembly or motor</b> , if any of these parts should fail due to a defect in materials or workmanship. GE will also replace the <b>washer door or door panel</b> , if they should rust under normal operating conditions. During this <b>additional four-year limited warranty</b> , you will be responsible for any labor and related service costs.
<b>Second through Tenth Year</b> From the date of the original purchase	<b>The outer tub</b> , if it should fail due to a defect in materials or workmanship. During this <b>additional nine-year limited warranty</b> , you will be responsible for any labor and related service costs.
<b>Second through Twentieth Year</b> From the date of the original purchase	<b>The inner wash basket</b> , if it should fail due to a defect in materials or workmanship. During this <b>additional nineteen-year limited warranty</b> , you will be responsible for any labor and related service costs.

## What Is Not Covered (in the United States):

- Service trips to your home to teach you how to use the product.
- Improper installation, delivery or maintenance.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Damage after delivery.
- Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage caused by possible defects with this appliance.

*This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. In Alaska, the warranty excludes the cost of shipping or service calls to your home.*

*Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.*

Warrantor: General Electric Company, Louisville, KY 40225

# Warranty for 2006 and Later Product

## **GE Washer Warranty.** (For customers in the United States)



All warranty service provided by our Factory Service Centers, or an authorized Customer Care® technician. To schedule service, on-line, 24 hours a day, visit us at [ge.com](http://ge.com), or call 800.GE.CARES (800.432.2737). Please have serial number and model number available when calling for service.

Staple your receipt here.  
Proof of the original purchase date is needed to obtain service under the warranty.

### **For The Period Of:**

**One Year**  
From the date of the original purchase

### **We Will Replace:**

**Any part** of the washer which fails due to a defect in materials or workmanship. During this **limited one-year warranty**, GE will also provide, **free of charge**, all labor and related service costs to replace the defective part.

### **What Is Not Covered (in the United States):**

- Service trips to your home to teach you how to use the product.
- Improper installation, delivery or maintenance.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Damage after delivery.
- Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage caused by possible defects with this appliance.
- Product not accessible to provide required service.

**EXCLUSION OF IMPLIED WARRANTIES—Your sole and exclusive remedy is product repair as provided in this Limited Warranty. Any implied warranties, including the implied warranties of merchantability or fitness for a particular purpose, are limited to one year or the shortest period allowed by law.**

*This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. If the product is located in an area where service by a GE Authorized Servicer is not available, you may be responsible for a trip charge or you may be required to bring the product to an Authorized GE Service location for service. In Alaska, the warranty excludes the cost of shipping or service calls to your home.*

*Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.*

**Warrantor: General Electric Company, Louisville, KY 40225**