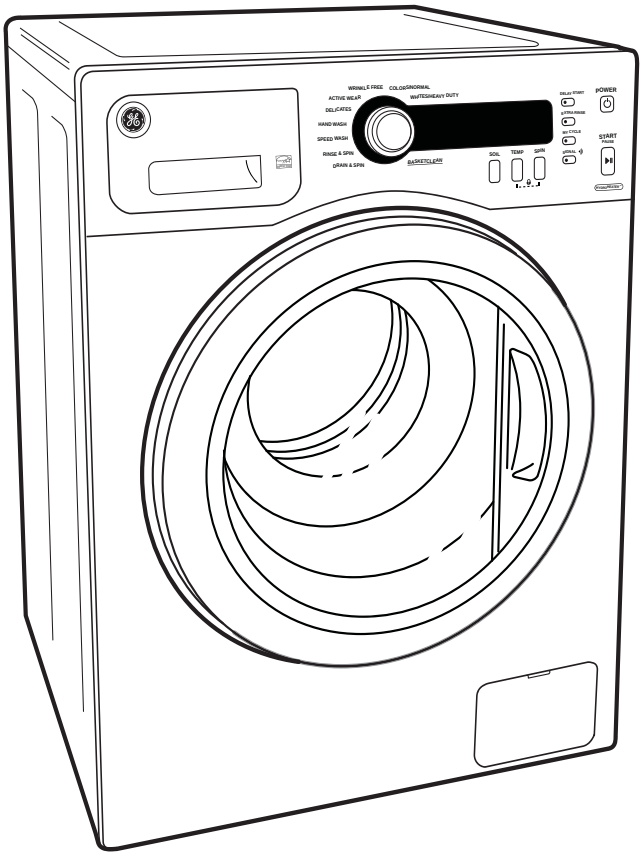
GE Consumer & Industrial

Technical Service Guide

November 2009

24-in. HA Washer



WCVH4800K
WCVH4815K

31-9195

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 4 8 0 0 K 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**
- **Fuel/Voltage**
  0 = US Voltage
- **Model Year**
  F - 2005
  G - 2006
  H - 2007
  J - 2008
  K - 2009
- **Engineering Revision**
  Alpha or Numeric
- **Color**
  WW - White
  MS - Metallic Silver

The nomenclature tag is located behind the door on the upper left side and also on the back of the washer to the left of the water valves.

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

Serial Number

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

Example: *AS123456S = January, 2009*

A - JAN	2009 - S
D - FEB	2008 - R
F - MAR	2007 - M
G - APR	2006 - L
H - MAY	2005 - H
L - JUN	2004 - G
M - JUL	2003 - F
R - AUG	2002 - D
S - SEP	2001 - A
T - OCT	2000 - Z
V - NOV	1999 - V
Z - DEC	1998 - T

The letter designating the year repeats every 12 years.

Example:
T - 1974
T - 1986
T - 1998

Introduction

The new GE 24-in. HA washer has the following features:

- ENERGY STAR® Qualified - Meets or exceeds federal guidelines for energy efficiency for year-round energy and money savings
- HydroMotion™ Wash Action - Reversing wash action offers great cleaning performance with gentle wash motion
- HydroHeater™ - Increases wash temperature to reduce bacteria and provide better cleaning for the really tough stains
- 5 Wash/Spin Speed Combinations - Washer alternates speeds for great clothes care
- Multiple Wash Cycles - Choose from various wash actions for optimal cleaning and clothes care
- 5 Wash/Rinse Temperatures with Sanitize - Multiple settings and a Sanitize wash offer a greater degree of control over fabric cleaning and care
- Automatic Water Levels - Reduce water waste per cycle by filling only enough water to match the load size
- Delay Start - Set the washer to begin cycles anytime in the next 18 hours
- Model WCVH4800KWW – White on white
- Model WCVH4815KMS – Metallic Silver

Control Features

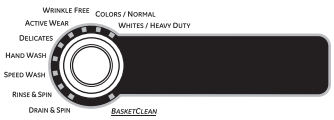
⚠ *WARNING!* *To reduce the risk of fire, electric shock, or injury to persons, read the IMPORTANT SAFETY INSTRUCTIONS before operating this appliance.*

Quick Start

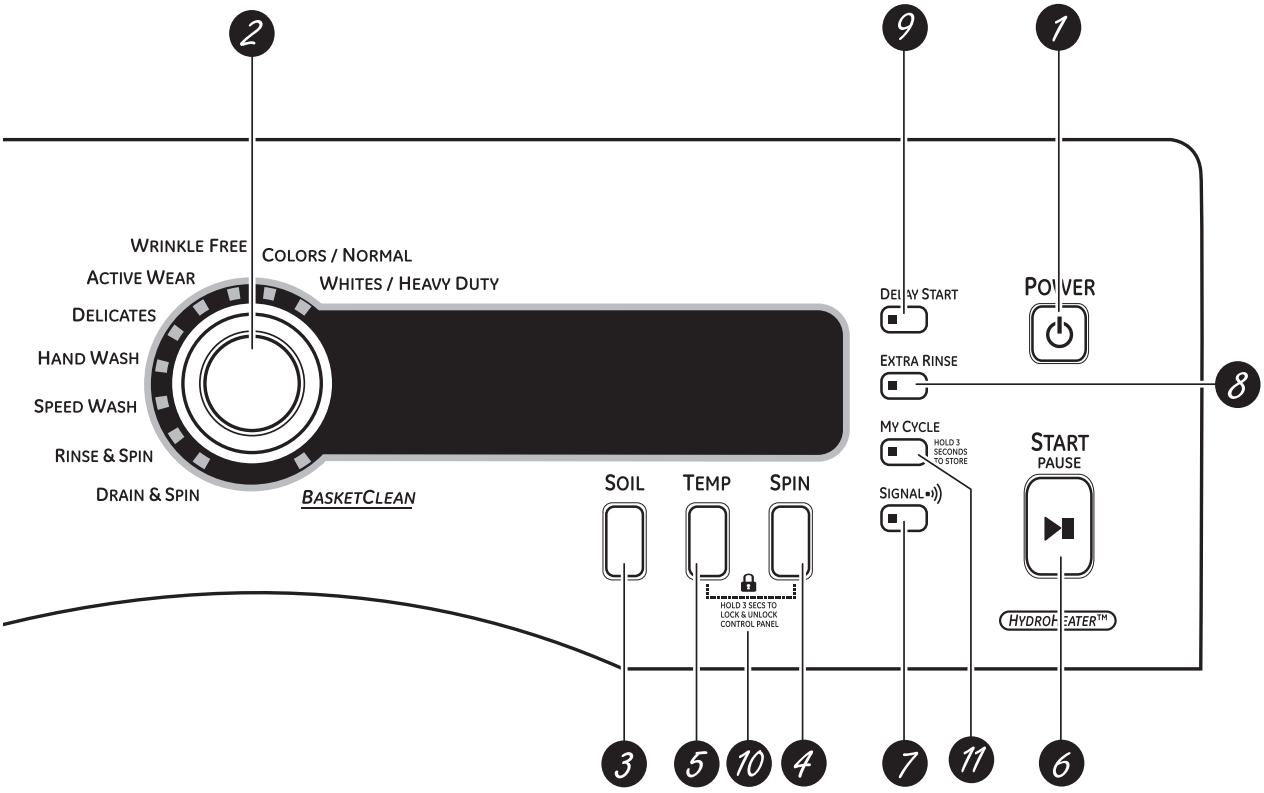
If the screen is dark, press the ***POWER*** button to "wake up" the display.

1. Press the ***POWER*** button.

2. Select a wash cycle. (Defaults are set for each wash cycle. These default settings can be changed. See *Control settings* for more information.)



3. If you selected a wash cycle, press the ***START/PAUSE*** button.



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.*

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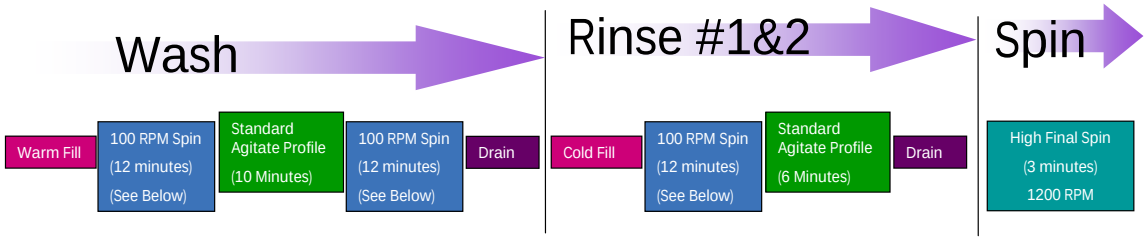
2 *Wash Cycles*

The wash cycles are optimized for specific types of wash loads. The chart below will help you match the wash setting with the loads. The Gentle Wash™ lifters lightly tumble the clothes into the water and detergent solution to clean the load.

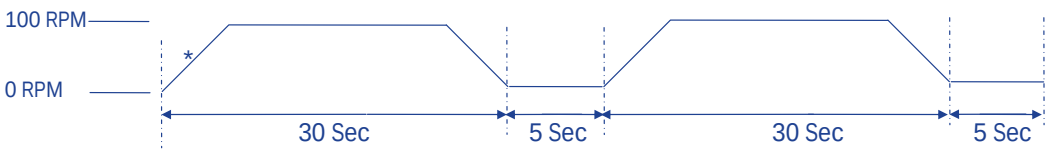
WHITES/ HEAVY DUTY	For heavily to lightly soiled white cottons, household linens, work and play clothes.
COLORS/NORMAL	For heavy to lightly soiled colorfast cottons, household linens, work and play clothes.
WRINKLE FREE (PERMA PRESS)	For Easy Care and permanent press items.
ACTIVE WEAR	For active sports, exercise and some casual wear clothes. Fabrics include modern technology finishes and fibers such as spandex, stretch and microfibers.
DELICATES	For lingerie and special-care fabrics with light to normal soil. Provides gentle tumbling and soak during wash and rinse.
HANDWASH	For items labeled hand-washable with light soils. Provides gentle rocking to mimic the handwashing action.
SPEED WASH	For lightly soiled items that are needed in a hurry. Cycle time is approximately 30 minutes, depending on selected options.
RINSE & SPIN	To quickly rinse out any items at any time.
DRAIN & SPIN	Drain and spin at any time.
BASKET CLEAN	To clean drum and reduce odor. **NOTE:** Basket Clean is a special cycle used to clean the washer drum and reduce odor. DO NOT add garments to this cycle. Remove detergent cup and add one cup of bleach or other commercially available product manufactured for this purpose, such as Tide® Washing Machine Cleaner.

Basket Clean - Cycle Definition

- Customer adds 1 cup of bleach into the basket
- Customer activates the Basket clean Cycle
- One cleaning cycle with bleach followed by 2 rinse cycles and final spin
- Total cycle time 1 hour 26 minutes



100 RPM Profile



* Ramp up to 100rpm and down from 100RPM as fast as possible

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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, Heavy or Extra Heavy soil.

4 *Spin Speed*

Changing the ***SPIN*** setting changes the final spin speed of the cycles. Always follow the garment manufacturer's care label when changing the ***SPIN*** setting.

To change the ***SPIN*** setting, press the ***SPIN*** setting button until you have reached the desired setting. You can choose between No Spin, Low, Medium, High or Extra High Spin. 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 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 ***TEMP*** button until you have reached the desired setting. You can choose between Tap Cold, Cold, Warm, Hot or Sanitize. The Sanitized wash temperature is not available on certain cycles, such as Delicates.

When selecting the Sanitize wash temperature, the washer increases the water temperature to sanitize and kill more than 99% of many common bacteria found in home laundry. The sanitize wash temperature is only available on the Whites/Heavy Duty wash cycle. For best results, select the heavy soil setting when using the Sanitize wash temperature setting.

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. This function can be used to add garments during a cycle. 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.*

NOTE: *In some cases the washer will drain first, then unlock the door when it is paused.*

NOTE: *The control will turn off 15 minutes after the cycle has completed.*

NOTE: *The washer performs automatic system checks after pressing the* ***START/PAUSE*** *button. Water will flow in 45 seconds or less. You may hear the door lock and unlock before water flows; this is normal.*

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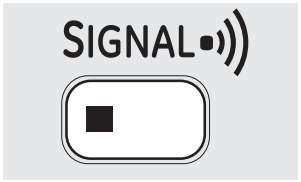

Signal

When the light is "on," the washer will beep at the end of the cycle and every time you press a button on the control panel.

To turn the signal off, press the ***SIGNAL*** button and the light will go off.

8

Extra Rinse

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

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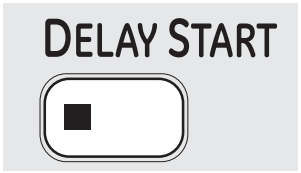

Delay Start

Use to delay the start of your washer.

1. Choose your wash cycle and any options.
2. Press ***DELAY START*** button. You can change the delay time in 1-hour increments (up to 18 hours) each time you press the ***DELAY START*** button. Stop pressing the button when your desired time is displayed.
3. Press the ***START/PAUSE*** button to start the countdown.

The countdown time will be shown in the ***ESTIMATED TIME REMAINING*** display.

NOTES:

- *If the door is opened while the washer is in **DELAY**, the countdown time will not restart unless the door is closed and **START/PAUSE** button has been pressed again.*
- *You can delay the start of a washer cycle up to 18 hours.*

The light on the button will light up when ***DELAY START*** is on.

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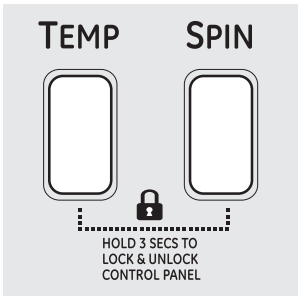

Lock

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

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

To lock the washer, press and hold the ***TEMP*** and ***SPIN*** buttons together for 3 seconds.

To unlock the washer controls, press and hold the ***TEMP*** and ***SPIN*** buttons together for 3 seconds. A sound is made to indicate the lock/unlock status.

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

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

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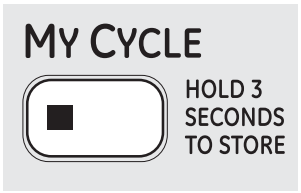


My Cycle

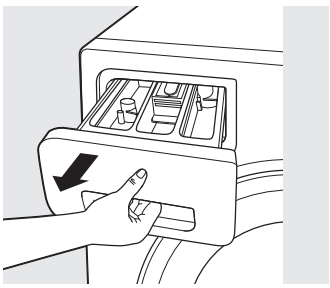
To save a favorite cycle, set the desired settings for wash cycle, soil level, spin speed and wash temp settings and hold down the ***MY CYCLE*** button for 3 seconds. A beep will sound to indicate the cycle has been saved.

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

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

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

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.*



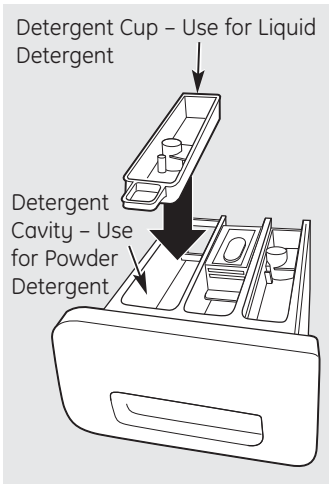
The Dispenser Drawer

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.

Use only HE High-Efficiency detergent.

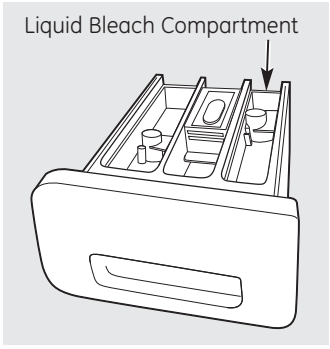


The Detergent Compartment

- **Only use high-efficiency detergent in this washer. Use the detergent manufacturer's recommended amount. DO NOT fill above the MAX line.**

The detergent compartment is in the left side of the dispenser drawer. The detergent cavity (cup removed) is used for powder detergent, and the detergent cup is used for liquid detergent.

- ***Powder Detergent*** – Remove the detergent cup and pour the suggested amount of powder detergent into the detergent cavity.
- ***Liquid Detergent*** – Leave the detergent cup in the drawer and pour liquid detergent into the cup. Do not fill above the MAX line.
- Add measured detergent to the left detergent compartment of the dispenser drawer.
- Detergent is flushed from the dispenser at the beginning of the wash cycle. Either powdered or liquid high-efficiency 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 since it can lead to oversudsing and detergent residue being left on the clothes.



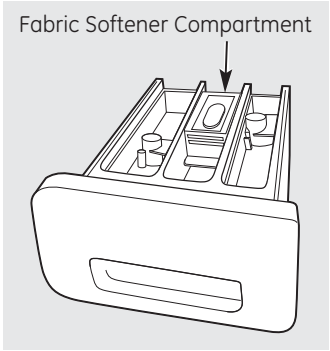
The Liquid Bleach Compartment

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

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

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

NOTE: *Do not use powdered bleach 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

Colors	*Soil*	*Fabric*	*Lint*
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.*
- *Sort dark-colored clothes from light-colored clothes to prevent dye transfer. This is a high-efficiency washer, so it uses less water, making dye transfer more common.*

Loading the Washer

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

To add items after the 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/General Maintenance

Exterior: Immediately wipe off any spills. Wipe with damp cloth. Wipe or dust spills or washing compounds with a damp cloth. Washer control panel and finishes may be damaged by some laundry pretreatment and stain remover products. Apply these products away from the washer. The fabric may then be washed and dried normally. Damage to your washer caused by these products is not covered by your warranty. Do not hit surface with sharp objects.

Interior: Dry around the washer door opening, flexible gasket (including attached hoses) and door glass. These areas should always be clean to ensure a watertight seal.

It is recommended to rinse the washer at least once per month with 1 cup of bleach (or other commercially available product manufactured for this purpose, such as Tide® Washing Machine Cleaner) poured into the bleach section of the dispenser (no clothes) using the ***BASKET CLEAN*** cycle (found in the ***WASHER*** cycles menu).

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. See Installation Instructions in this manual. If these parts are not available, they can be ordered by visiting our Website at 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.

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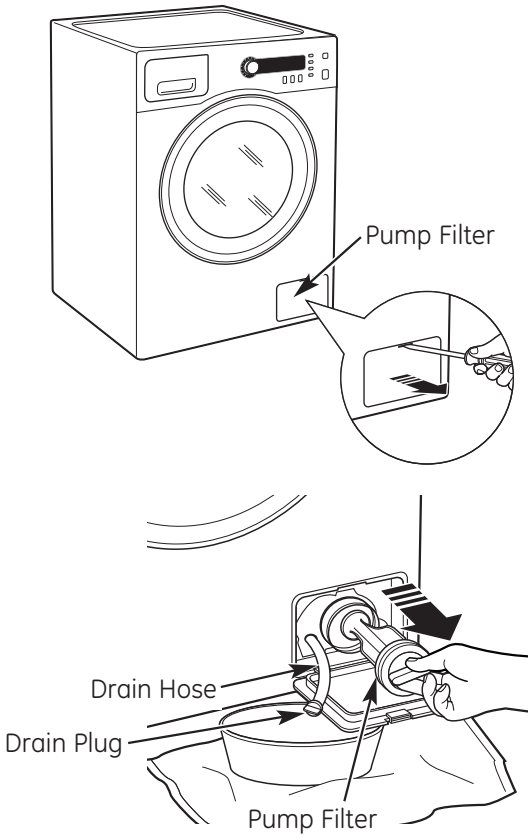
Clean Pump Filter

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

1. With a knife or slotted screwdriver, pry open the door on the bottom right of the front of the unit.
2. Twist the small white cap counterclockwise a quarter turn and unhook the small rubber hose. Pull the hose out of the hole and remove the white drain hose plug above a small pan to capture any water that may drain. Drain the excess water. Replace.
3. Unscrew the pump filter. Rinse. Replace.
4. Close the access door.



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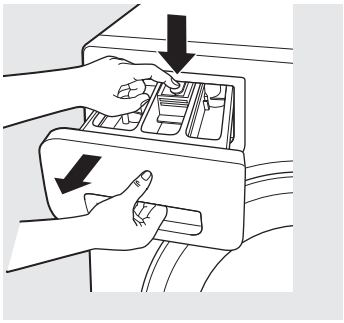
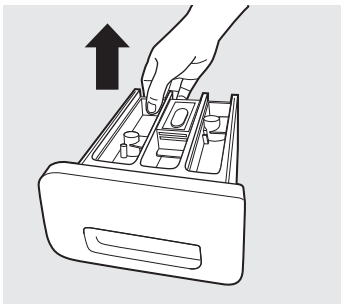
Clean Dispenser Drawer Area



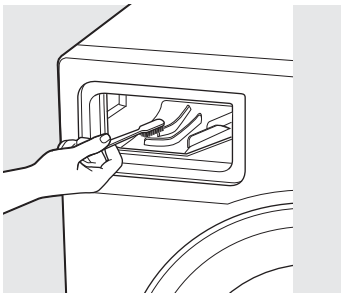
Lock tab is visible only after drawer has been pulled out

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 rear center of the drawer cavity and press down firmly on the lock tab, pulling out the drawer.



- Remove all cups and inserts from the dispenser drawer. Rinse the inserts, cups and 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.

- To reduce buildup in the Dispenser Drawer area:

Use only HE High-Efficiency detergent.

Demo Mode

In demo mode, the only components that will function are the control LEDs. No other components will operate. The count down display will run much faster than normal.

To Enter Demo Mode	To Exit Demo Mode
1. Unplug the washer. 2. Open the door. 3. Wait 30 seconds. 4. Restore power to washer. 5. Press *START/PAUSE* 4 times within 30 seconds of applying power.	Use same procedure as entering demo mode. Note: Removing power from washer will not exit demo mode.

Wash Cycle Defaults

When a cycle is initially set, the default cycle settings are displayed. The following table displays the default selections for each cycle.

No.	Cycles	Soil	Spin	Temp	Extra Rinse	Signal	Delay Start	Default cycle time
1	Whites/Heavy Duty	Heavy	High	Hot	N/A	On/Off	N/A	1:15
2	Colors/Normal	Normal	High	Warm	N/A	On/Off	N/A	56
3	Wrinkle Free	Normal	Mid	Warm	N/A	On/Off	N/A	52
4	Active Wear	Normal	Mid	Warm	N/A	On/Off	N/A	50
5	Delicates	Normal	Low	Warm	N/A	On/Off	N/A	40
6	Hand Wash	Normal	Low	Warm	N/A	On/Off	N/A	32
7	Speed Wash	Light	High	Warm	N/A	On/Off	N/A	30
8	Rinse/Spin	N/A	High	N/A	N/A	On/Off	N/A	19
9	Drain/Spin	N/A	High	N/A	N/A	On/Off	N/A	14
10	Basket Clean	N/A	N/A	N/A	N/A	On/Off	N/A	1:26

Note: Washer incorporates an adaptive fill algorithm which fills with only the amount of water to match the load size.

Wash Cycle Options

Depending upon the selected wash cycle, not all of the wash cycle selections shall be accessible. The following table outlines allowable cycle ranges.

No	Cycles	Soil	Spin	Temp	Extra Rinse	Signal	Delay Start
1	Whites/Heavy Duty	All	All	All	Selectable	On/Off	Selectable
2	Colors/Normal	All	All	Tap Cold, Cold, Warm, Hot	Selectable	On/Off	Selectable
3	Wrinkle Free	Extra Light, Light, Normal, Heavy	No Spin, Low, Medium, High	Tap Cold, Cold, Warm, Hot	Selectable	On/Off	Selectable
4	Active Wear	Extra Light, Light, Normal, Heavy	No Spin, Low, Medium, High	Tap Cold, Cold, Warm, Hot	Selectable	On/Off	Selectable
5	Delicates	Extra Light, Light, Normal, Heavy	No Spin, Low, Medium	Tap Cold, Cold, Warm	Selectable	On/Off	Selectable
6	Hand Wash	Extra Light, Light, Normal	No Spin, Low	Tap Cold, Cold, Warm	N/A	On/Off	Selectable
7	Speed Wash	Extra Light, Light, Normal	No Spin, Low, Medium, High	Tap Cold, Cold, Warm	Selectable	On/Off	Selectable
8	Rinse/Spin	N/A	All	N/A	Selectable	On/Off	Selectable
9	Drain/Spin	N/A	All	N/A	N/A	On/Off	Selectable
10	Basket Clean	N/A	N/A	N/A	N/A	On/Off	N/A

Note: Washer incorporates an adaptive fill algorithm which fills with only the amount of water to match the load size.

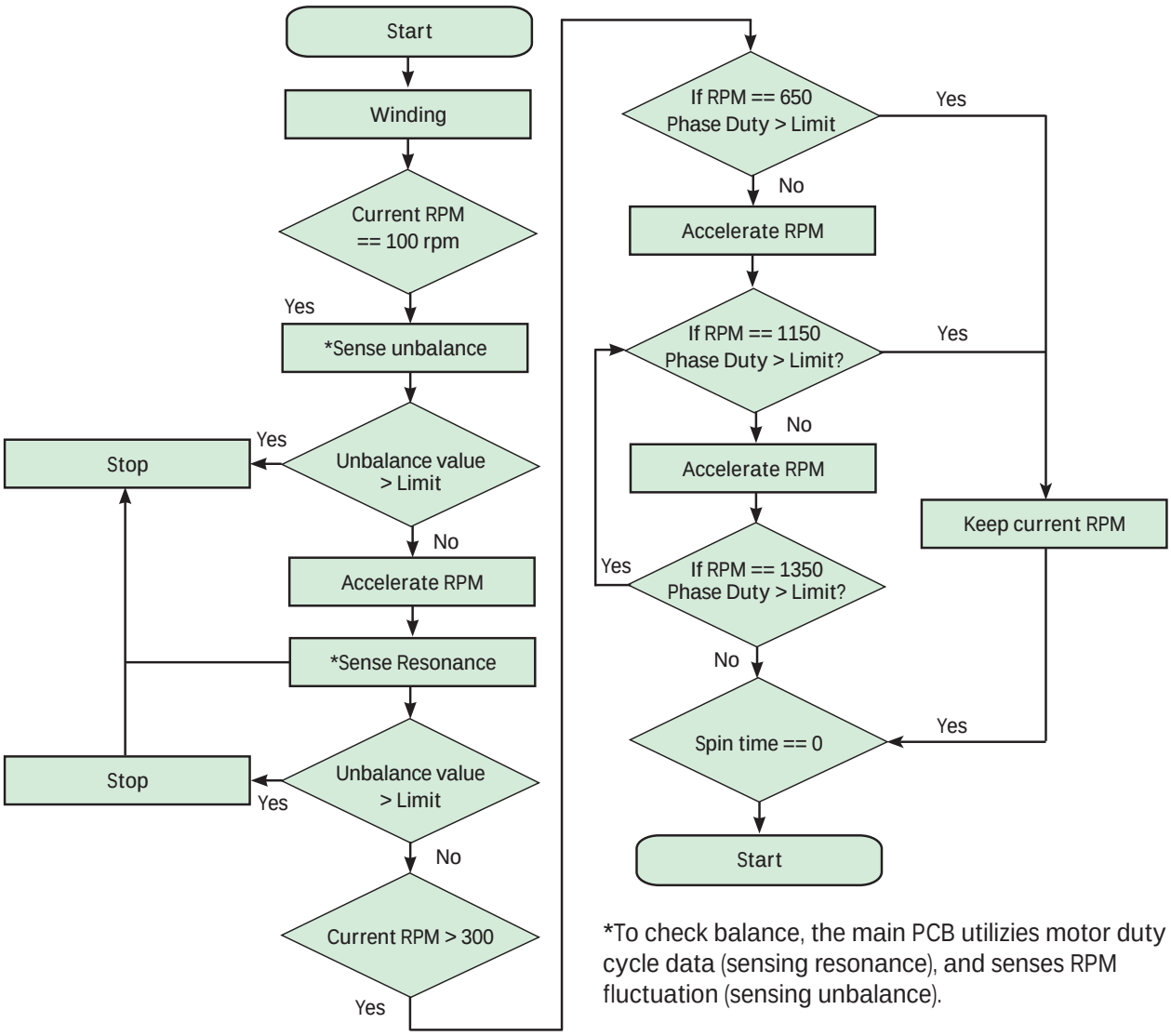
The spin cycle is designed to extract as much water and detergent as possible without harming fabrics. The available selection of spin speeds is controlled by cycle selection.

Speed Selected	Basket RPM
No Spin	0
Low	400 +/- 50 RPM
Medium	650 +/- 50 RPM
High	1200 +/- 50 RPM
Extra High	1400 +/- 50 RPM

	Wash										Rinse1						Rinse2				Spin				Reverse	DISPLAY	
	Filling		Wash		Drain		Spin1		Spin2		Stop		Filling		Rinse		Drain		Spin1		Spin2		Stop				
	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Hour	Min
White/Heavy duty	2	0	37	0	1	0	2	17	2	15	0	30	2	0	3	0	1	0	2	17	2	15	0	30	2	0	1	15
colors/normal	2	0	18	0	1	0	2	17	2	15	0	30	2	0	3	0	1	0	2	17	2	15	0	30	2	0	0	56
wrinkle free	2	0	16	0	1	0	2	17	2	15	0	30	2	0	3	0	1	0	2	17	2	15	0	30	2	0	0	52
Active Wear	2	0	15	0	1	0	2	17	1	45	0	30	2	0	3	0	1	0	2	17	1	45	0	30	2	0	0	50
Delicate	2	0	13	0	1	0	2	17	0	30	0	30	2	0	3	0	1	0	2	17	0	30	0	30	2	0	0	40
Handwash	2	0	14	0	1	0	0	0	0	0	0	0	2	0	2	0	1	0	0	0	0	0	0	0	2	17	0	32
speed wash	2	0	7	0	1	0	2	17	0	0	0	30	1	0	2	0	1	0	2	17	0	0	0	30	1	0	0	30
Basket clean	2	0	34	0	1	0	0	0	0	0	0	0	2	0	18	0	1	0	0	0	0	0	0	0	2	0	18	0	1	26
Rinse+Spin																									2	0	3	0	1	19
Drain + Spin																									1	0	2	17	8	14

Note: Total cycle times (grey shaded areas) are cycles times without the second rinse (yellow shaded areas).

Out of Balance Mode



*To check balance, the main PCB utilizies motor duty cycle data (sensing resonance), and senses RPM fluctuation (sensing unbalance).

Out of Balance Protection

1. Before spinning, control will initiate a short agitate cycle to re-distribute clothes.
2. Spin cycle begins. At 100 RPM, control will sense for an unbalanced load.
3. If an unbalance is sensed, the control will go back to step #1, add time to timer and try again. If no unbalance is sensed, accelerate to 300 RPM.
4. At 300 RPM, control will again sense for an unbalanced load.
5. If an unbalance is sensed, the control will go back to step #1, add time to timer and try again. If no unbalance is sensed, accelerate to 650 RPM.

Note: Control will keep trying steps 1 through 5 until it is successful in accelerating past 300 RPM or until a total of 12 minutes for the middle spins or 34 minutes for the last spin has been added to the timer. At the 12 or 34 minute point, the control will quit trying and move to the next cycle or stop operation if it was the last spin.

6. At 650 RPM, if OoB phase is greater than set limit, the control will finish out the spin cycle at this speed. If it is within limits, it will accelerate to 1150 RPM.
7. At 1150 RPM, if OoB phase is greater than set limit, the control will finish out the spin cycle at this speed. If it is within limits, it will accelerate to 1350 RPM.
8. At 1350 RPM, if the OoB phase is above the set limit, it will de-accelerate to 1150 RPM and continue at that speed until cycle times out.

Note: Control will execute the above scenario for each spin in wash cycle. If 34 minutes needs to be added to timer after the final spin the control will log an “UE” error code to the service mode.

Stacking Instructions

The GE 24-in. washer is designed to allow certain models of the GE 24-in. dryer to be placed on top (stacking). Dryer models that currently qualify for stacking are:

- DCVH480EK
- DCVH485EK
- PCVH480EK
- PCVH485EK

Note: If you are planning to stack the washer and dryer, order Stacking Kit number GE24STACK to be used for this dryer. Kit sold separately.

- IMPORTANT – Save these instructions for local electrical inspector's use.
- IMPORTANT – Observe all governing codes and ordinances.
- Note to Installer – Be sure to leave these instructions with the Consumer.
- Stacking installations may require a power cord up to six feet in length.

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.

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 3 inches front and rear. Consideration must be given to provide adequate clearance for installation and service.

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

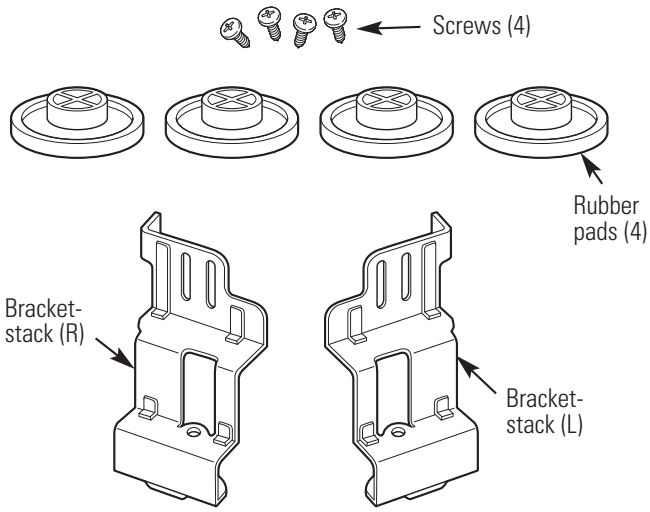
When installed in an alcove or closet:

- The dryer MUST be vented to the outdoors.
- 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 shelves, cabinets, ceilings, etc., is 67.7 inches.
- Closet doors must be louvered or otherwise ventilated and have at least 60 square inches of open area equally distributed. If the closet contains both a washer and a dryer, doors must contain a minimum of 120 square inches of open area equally distributed.

Note: WHEN THE EXHAUST DUCT IS LOCATED AT THE REAR OF THE DRYER, MINIMUM CLEARANCE FROM THE WALL IS 5.5 INCHES.

(*Continued Next Page*)

Kit Contents (GE Kit #GE24STACK)



Tools Needed

Phillips-head Screwdriver

Level

Gloves

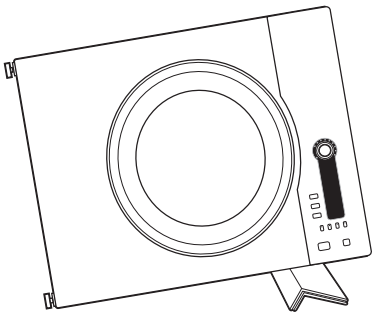
Installation Preparation

Remove the packaging.

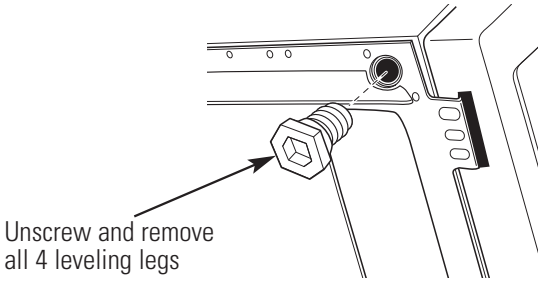
Flatten the product carton to use as a pad to lay the dryer down on its side. Continue using the carton to protect the finished floor in front of the installation location.

Installing the Stack Bracket Kit

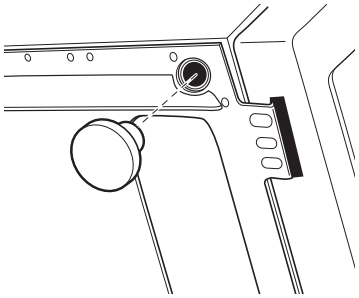
1. Carefully lay the dryer on its side. Use the packing material so you don't scratch the finish on the dryer.



2. Remove the dryer leveling legs.



3. Locate the 4 rubber pads in the parts package. Insert rubber pads into the leveling leg holes.



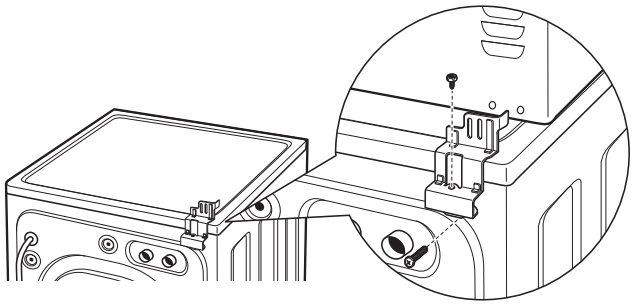
4. Set the dryer upright.

(Continued Next Page)

5. Remove washer top cap screw from the rear left. Align left bracket holes with top cap screw hole on rear left of the unit and replace screw. Note: Leave screws loose so dryer hole alignment will be easier.

6. Drive next screw through the bracket into the rear of the washer.

7. Repeat the above steps with the right side.

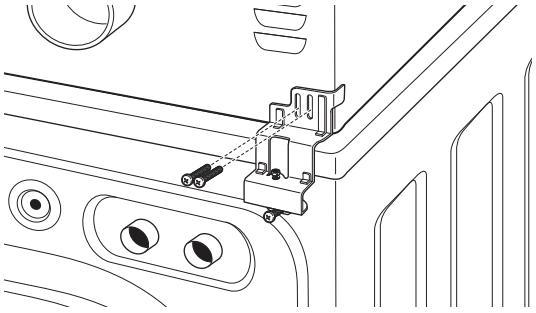


8. Lift the dryer on top of the washer. Protect the washer control panel with cardboard or other protection. Be sure to lift the dryer high enough to clear the washer control panel.

WARNING – Potential Personal Injury. More than two people are recommended to lift the dryer into position because of its weight and size. Failure to do so could result in personal injury or death.

9. Align the holes in the bracket with the holes in the back of the dryer. Using a Phillips screwdriver, attach the 2 #8 x 1/2 inch tapping screws.

10. Tighten the dryer bracket screws; then tighten all stacking kit screws.

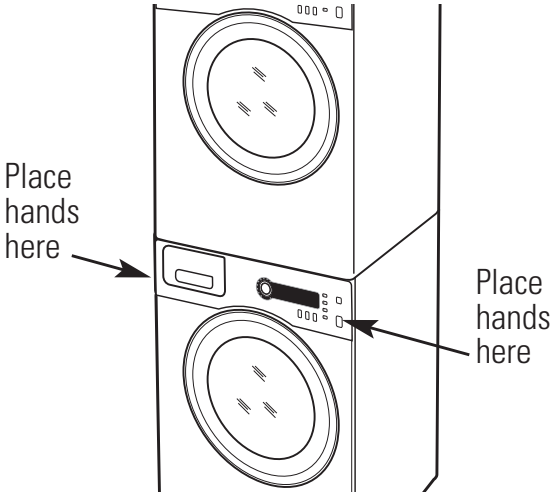


11. Refer to the washer Installation Instructions to complete the washer installation.

12. Refer to the dryer Installation Instructions to complete the dryer installation.

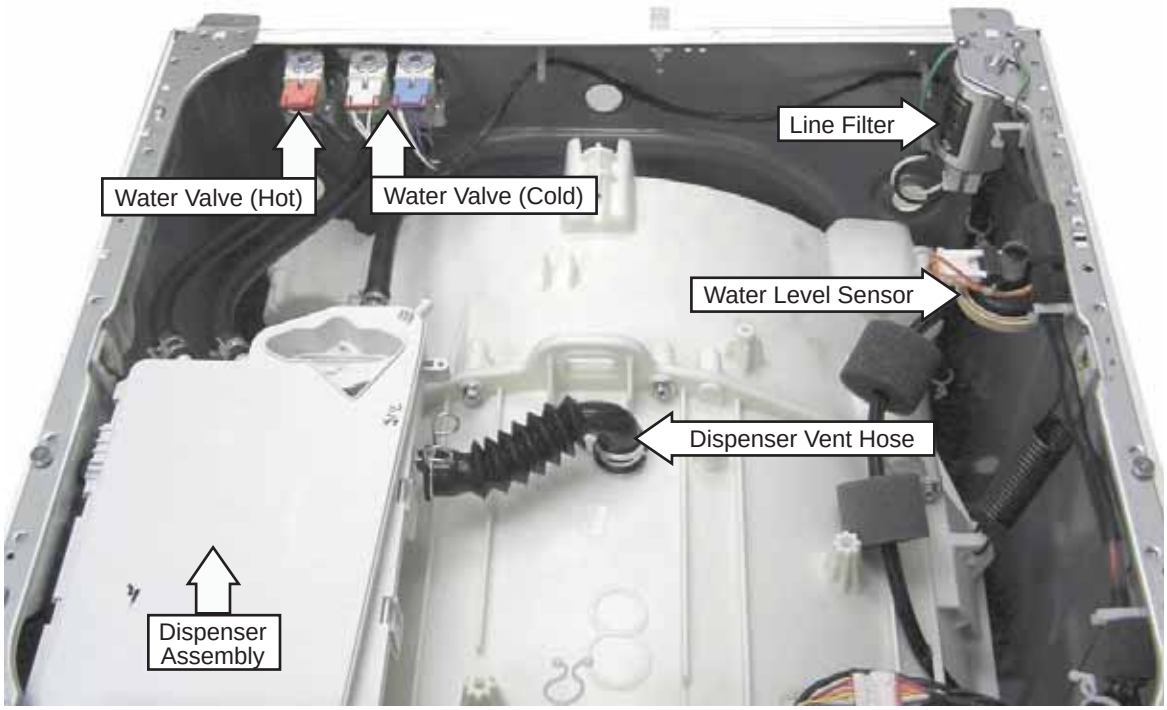
13. Carefully slide or walk the stacked washer and dryer into place. Use felt pads or other sliding device to assist moving and to protect flooring.

WARNING – Potential Personal Injury. Do not push on the dryer once installed to top of the washer. Pushing on the dryer may result in pinched fingers.

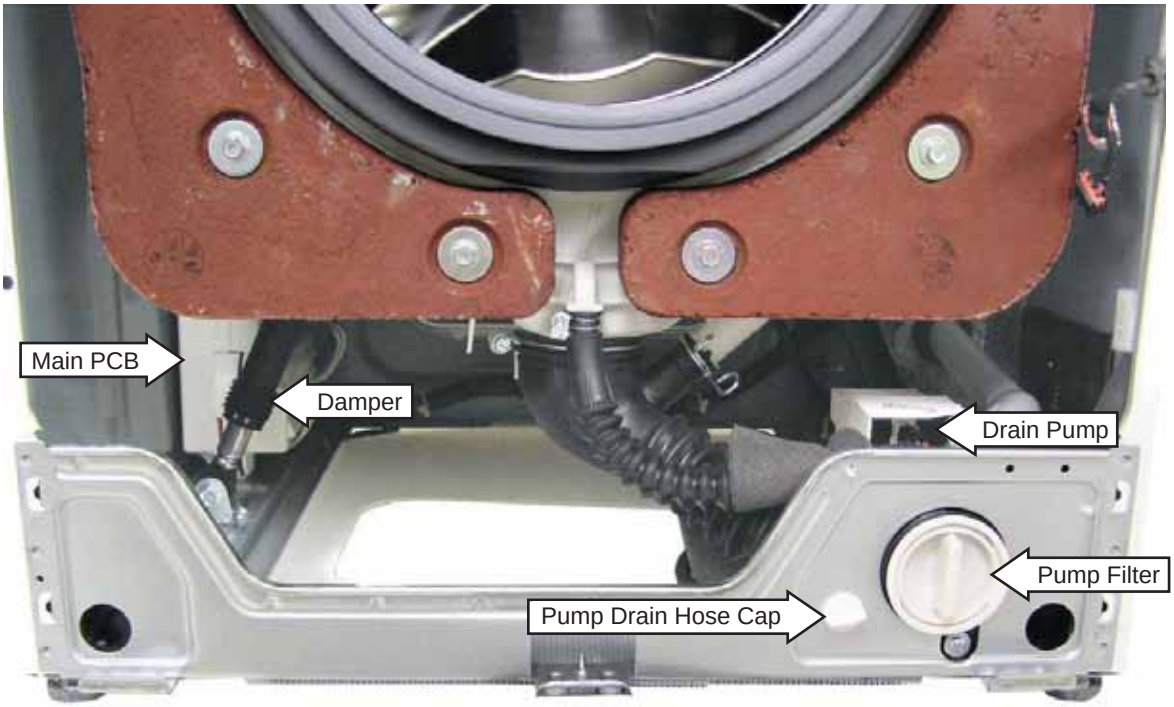


Component Locator Views

Top View



Front View



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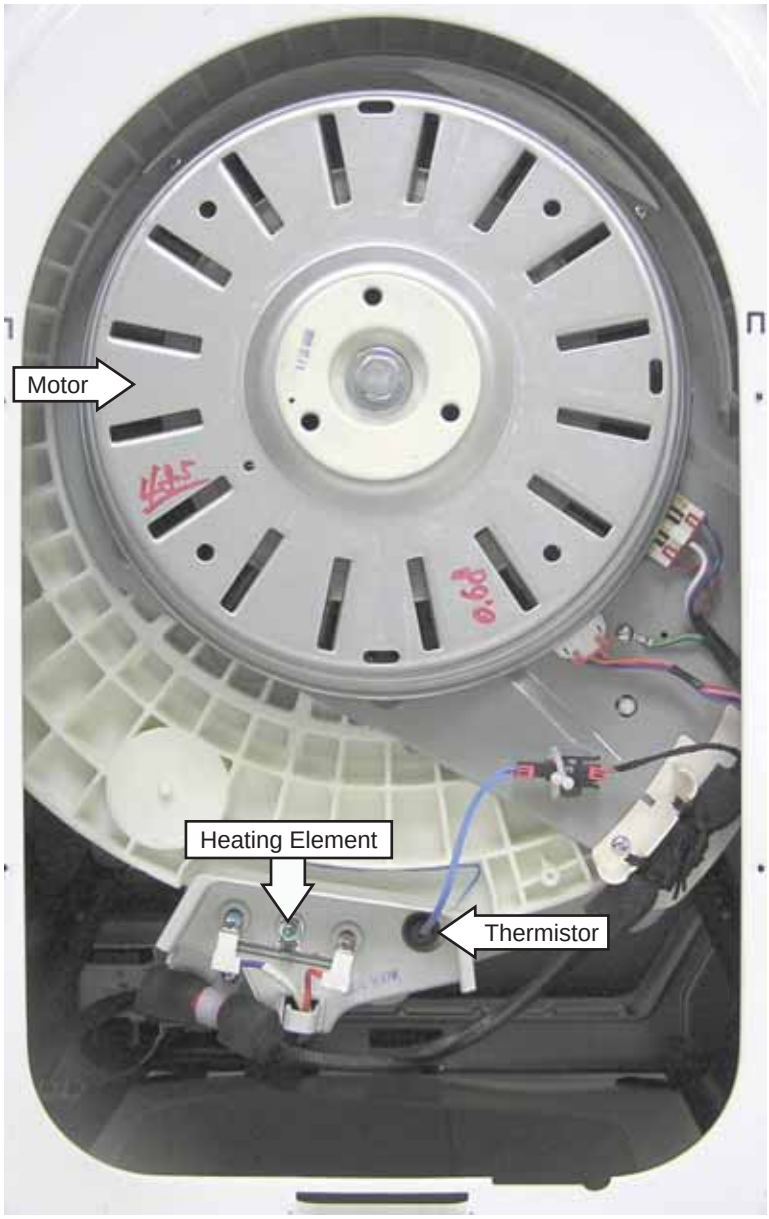
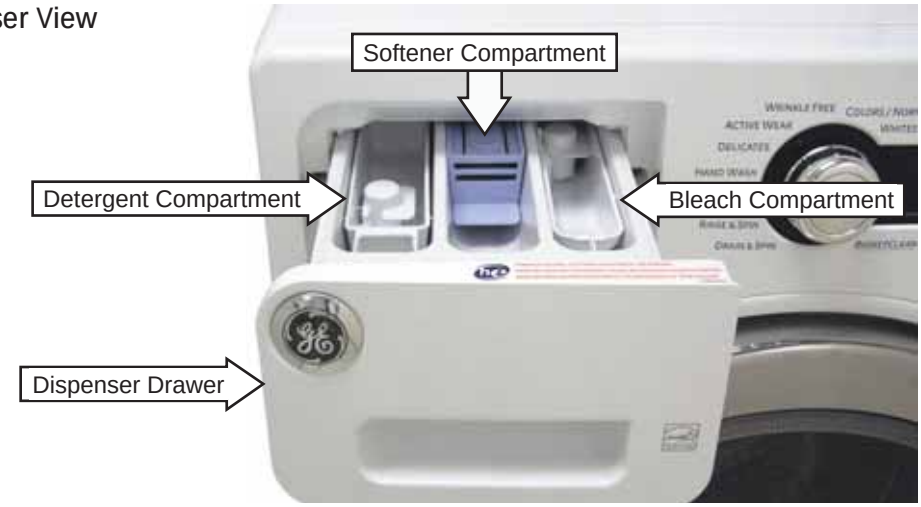
Component Locator Views (Con't)

Rear View

(Shown with back cover removed.)

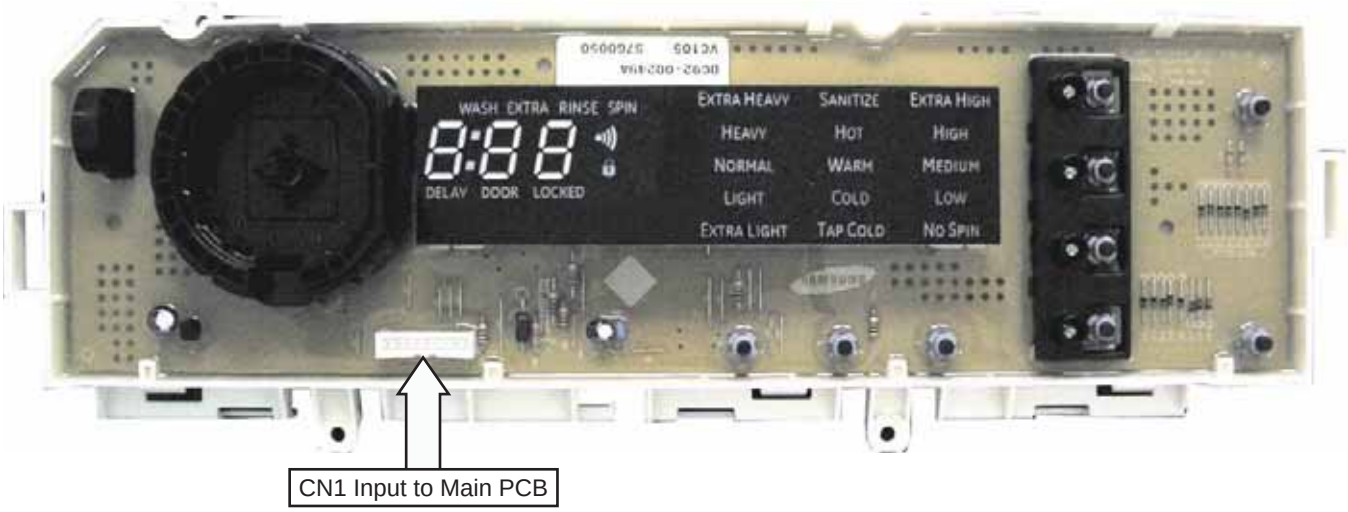


Dispenser View



Control Board Connections

Control Board (Sub PCB)



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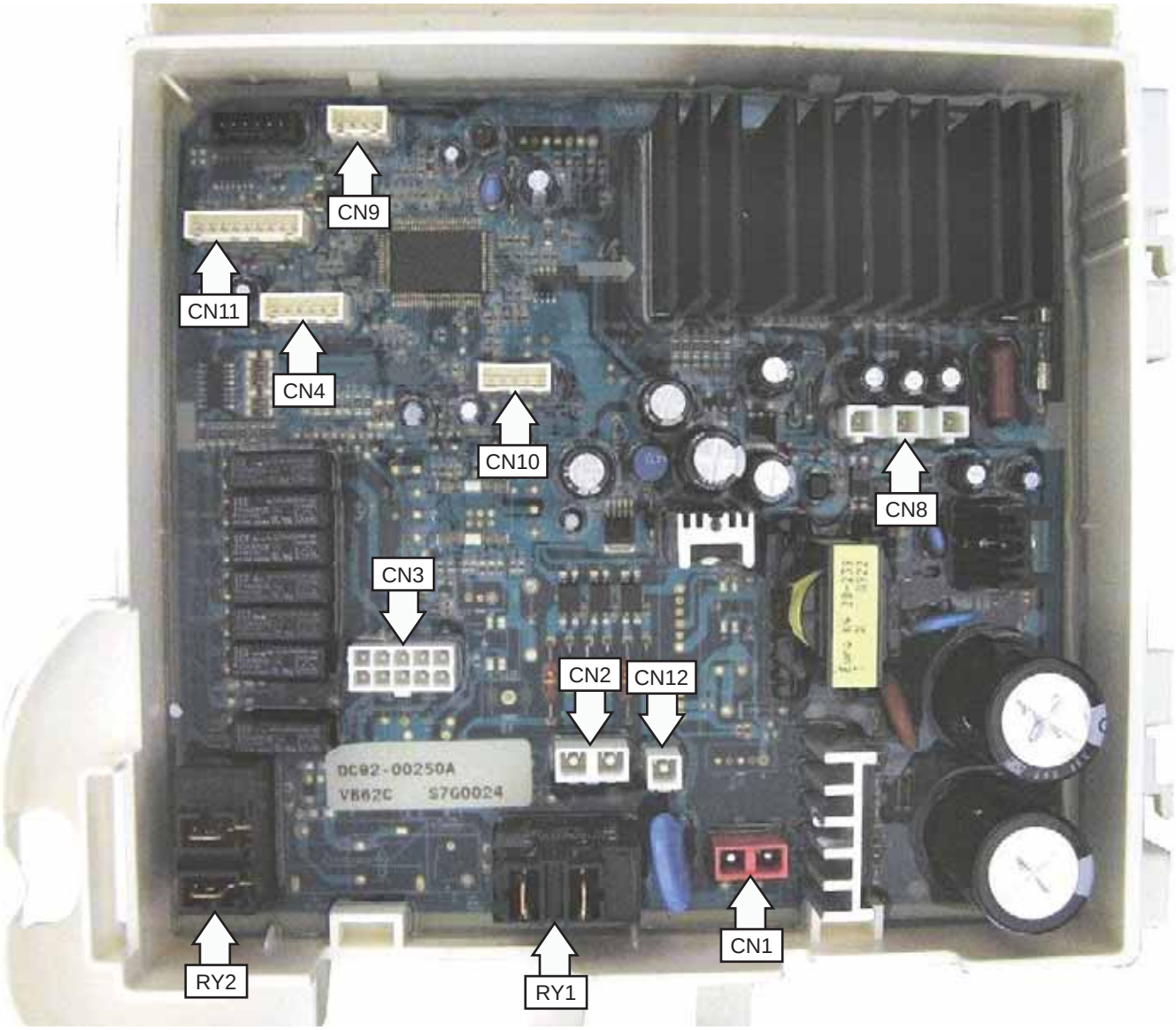
Main PCB



CN1	Line Filter (Reactor)
CN2	Door Lock Switches
CN3	Door Lock Solenoids, Drain Pump, Water Valves
CN4	Control Board
CN8	Motor Power
CN9	Hall Sensor
CN10	Door Sensing Switch, Control Board
CN11	Thermistor, Water Level Sensor
CN12	L1 Input
RY1	Heater/Neutral
RY2	Heater/L1

Washer Components

Top Cover

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 and metric hex-head screws can be utilized throughout this appliance. Either a Phillips screwdriver or metric wrench can be used to extract or install these screws.

Removal of the top cover provides access to the control panel, dispenser, water valves, water level sensor, and line filter. Two Phillips-head screws are located at the rear of the top cover.

Top View

After removal of the screws, the cover can then be slid rearward 1 inch, then lifted to disengage it from the cabinet.

Control Panel

The control panel is held in place with 4 Phillips-head screws and 4 tabs. Two tabs engage the front brace and 2 tabs engage the cabinet front.

To remove the control panel:

1. Remove the top panel. (See *Top Cover*.)
2. Pull the dispenser out to the stop position.
3. Press down on the lock tab, then pull the dispenser out from the control panel.

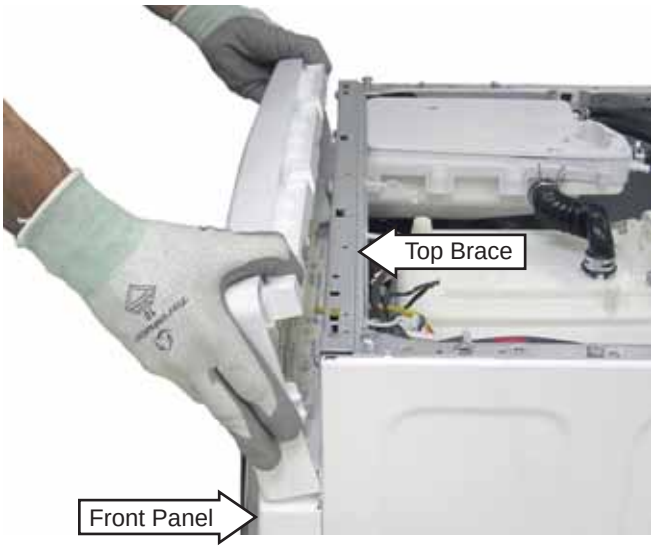
4. Remove the 2 Phillips-head screws from the control panel dispenser recess.

(Continued Next Page)

5. Disconnect the control panel wire harness and remove it from the wire retainer.

6. Remove the 2 Phillips-head screws that attach the top of the control panel to the front brace.

7. Pull the top of the panel up and out from the top brace, then lift the control panel off the front panel.



To remove the control board assembly:

1. Remove the control panel. (See *Control Panel*.)

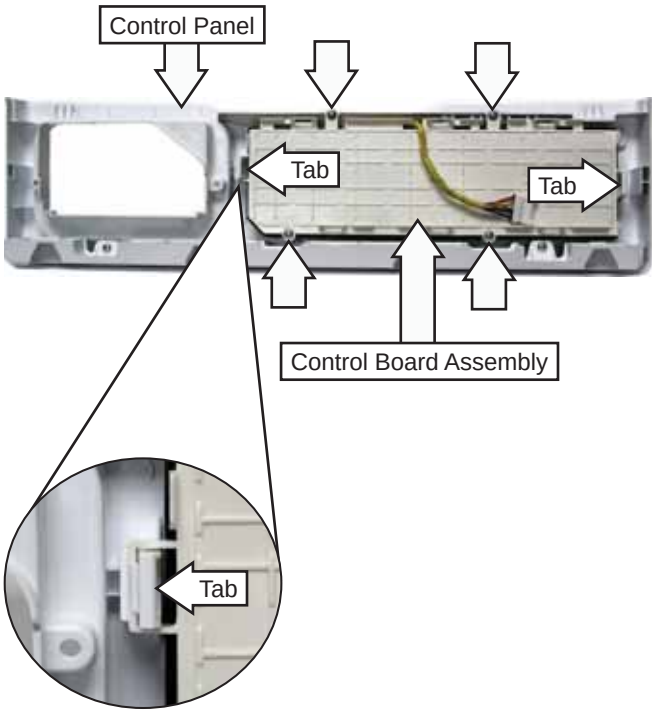
2. Pull the cycle knob off.

3. Place the control panel, face down, on a protective surface.

4. Remove the 4 Phillips-head screws that attach the control board assembly to the control panel.

5. Release the control board assembly from the dispenser-side tab.

6. Lift the dispenser side of the control board assembly, then disengage the assembly from the opposite tab on the control panel.



Note: The replacement control board assembly includes the wire harness. The wire harness can be ordered as a separate part.

Door Lock

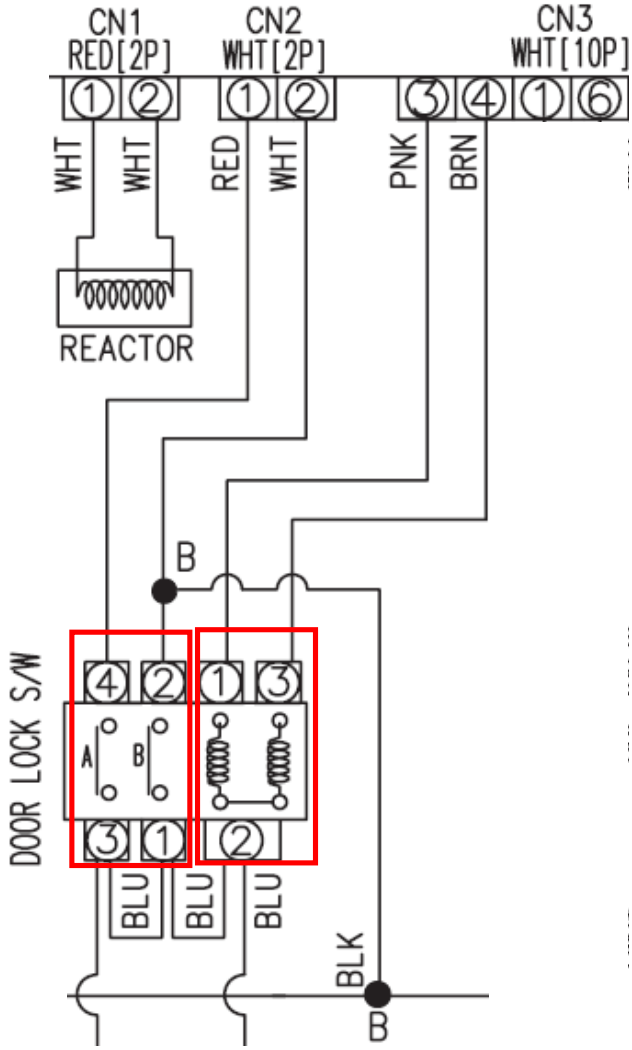
The door lock contains a solenoid-operated locking and unlocking mechanism.

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:

- Water temperature is above 130°F (54°C)
- Wash basket is rotating

Switch "A" (Pins 3 and 4) is closed when the door is closed. Cycle will not start if switch "A" is open when the door is closed.

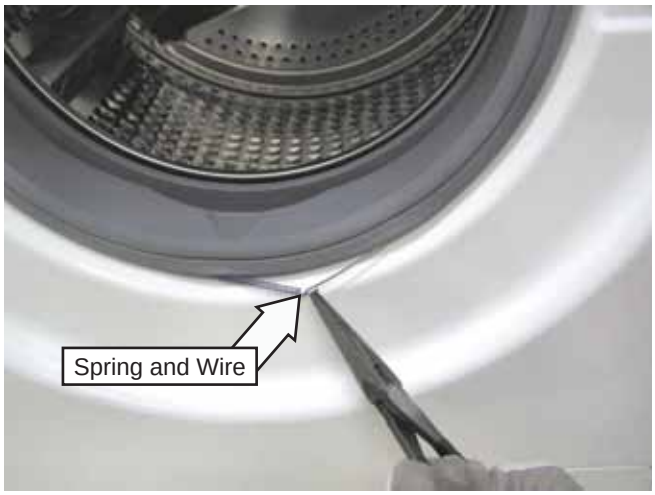


Specific failures associated with the door lock can initiate error codes dE, dE1, dE3 and DE3. (See *Error Codes*.)

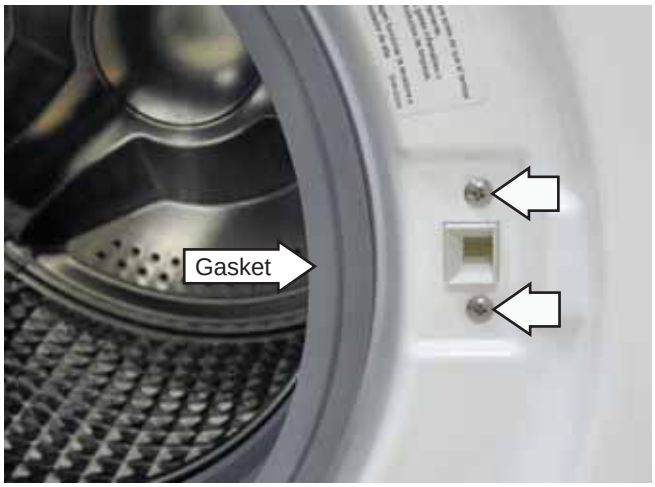
The door lock is attached to the front panel with 2 Phillips-head screws. The door lock is accessed from the front of the washer when the right side of the gasket is partially pulled back.

To remove the door lock:

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



3. Pull the right side of the gasket away from the front panel.
4. Remove the 2 Phillips-head screws that attach the door lock to the front panel.



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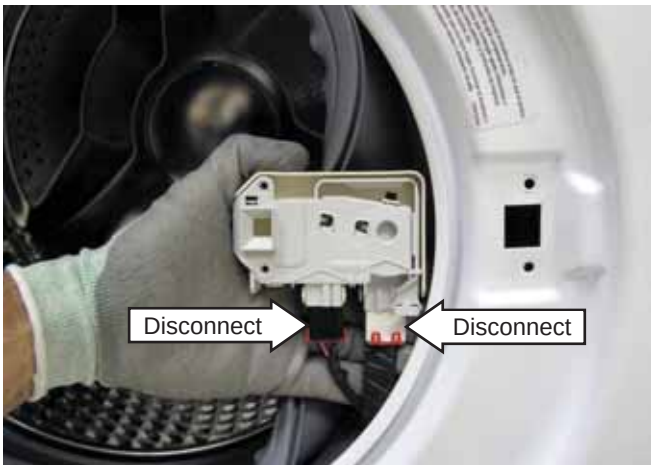
5. Pull the door lock to the opening and disconnect the 2 wire harnesses.



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 control panel. (See *Control Panel*.)
3. Remove the 2 Phillips-head/10-mm hex-head screws (1 on each side), that attach the top of the front panel to the cabinet. (See *Front Panel*.)
4. Tilt the top of the front panel out approximately 3 inches.

Note: The door lock release is located on the front of the door lock above the white wire harness.

Front View of Door Lock (Removed)

5. Reach down from the top with the back of your hand against the front panel.
6. With your index finger between the front panel and lock mechanism, push down on the protruding horizontal part of the lock release and simultaneously open the door.

Door Sensing Switch

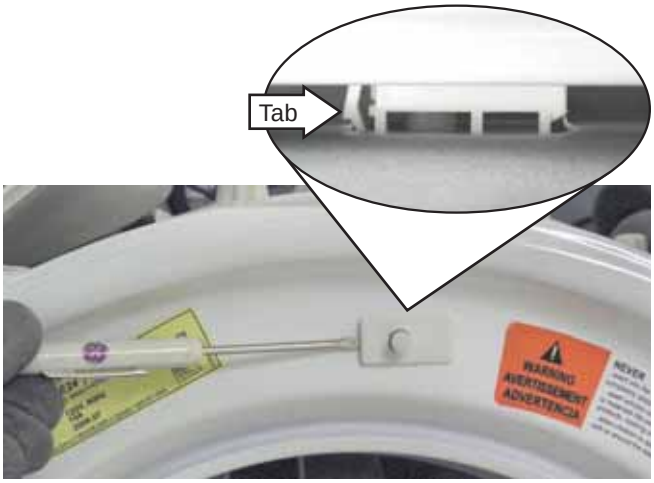
The door sensing switch provides feedback to the main control board as to the status of the washer door. If the switch fails to close, the cycle will not start.

Specific failures associated with the door switch can initiate error codes dE, dE1, and dE3. (See *Error Codes*.)

The door sensing switch is fastened to the front panel with a locking tab.

To remove the door sensing switch:

1. Open the door.
2. Using a small flat blade screwdriver, carefully pry out the left-side of the switch to locate the locking tab.
3. Press the locking tab in and pull the switch from the front panel.



4. Disconnect the switch wire harness.

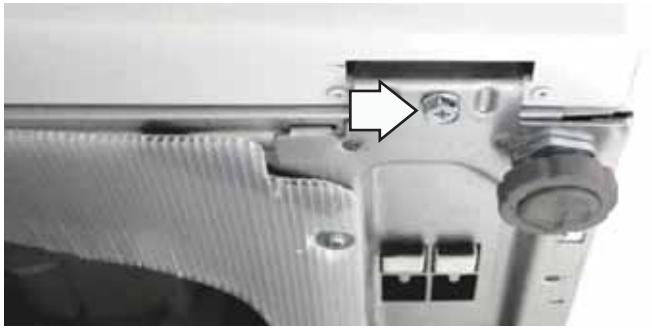
Front Panel

The front panel is inserted into 3 hooks attached to the bottom of 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 door sensing switch are attached to the front panel.

To remove the front panel:

Note: The following step will require raising the front of the washer approximately 2 inches. It may be helpful to use prop block (PN# WX05X10016), to safely raise the washer.

1. Raise the front of the washer approximately 2 inches.
2. Remove the 2 Phillips-head/10-mm hex-head screws (1 on each side), that attach the front panel to the right and left side hooks.



3. Lower the front of the washer to floor level.
4. Remove the control panel. (See *Control Panel*.)
5. Disconnect the wire harness from the door sensing switch. (See *Door Sensing Switch*.)
6. Remove the door lock. (See *Door Lock*.)

(Continued Next Page)

7. Position the gasket behind the front panel door opening. Close the door.

8. Remove the 2 Phillips-head/10-mm hex-head screws that attach the top of the front panel to the cabinet.

9. Lift up, then remove the front panel from the 3 hooks at the bottom of the cabinet.

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 inside the cabinet and is attached to the right side cabinet brace.

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 Ω between the black wire terminals and 0 Ω between the white wire terminals.

To remove the line filter:

1. Remove the top panel. (See *Top Cover*.)

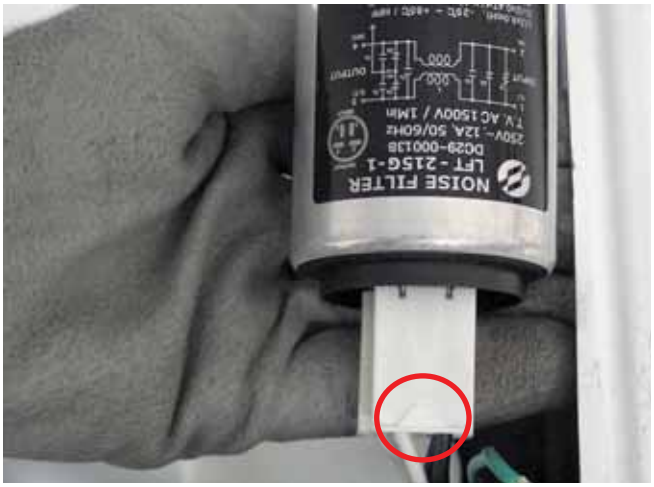
2. Remove the 1/2-in. hex nut that attaches the line filter to the right side cabinet brace.

Note: A lockwasher is located on top of the filter.

3. Lower the line filter from the brace and remove the lockwasher.

4. Disconnect the input and output wire harness.

Note: Install both wire harnesses with the triangular indicator facing outward from the filter.



Dispenser Assembly

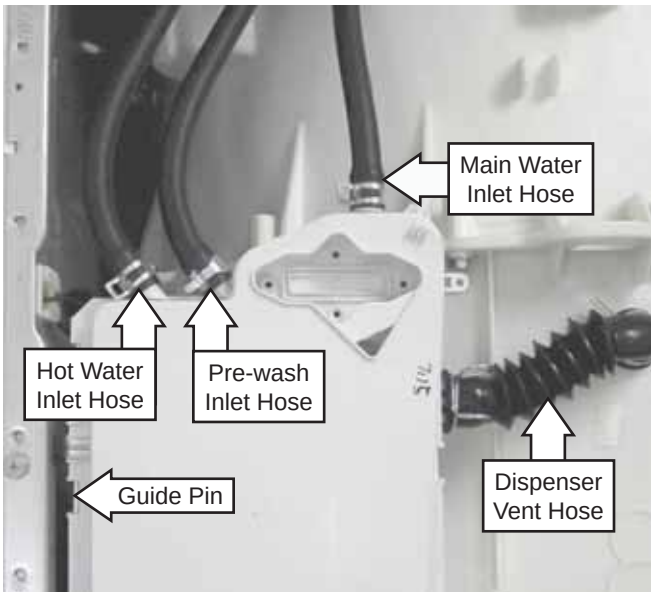
The dispenser assembly provides automatic dispensing of detergent, bleach, and fabric softener as long as the user fills the compartments prior to starting the washer.

The products added to the dispenser are diluted with water before they are dispensed into the wash tub. This is accomplished by the water valves and a plastic conveyer snapped to the top of the dispenser to direct the outputs from the valves to the detergent, bleach, and softener chambers.

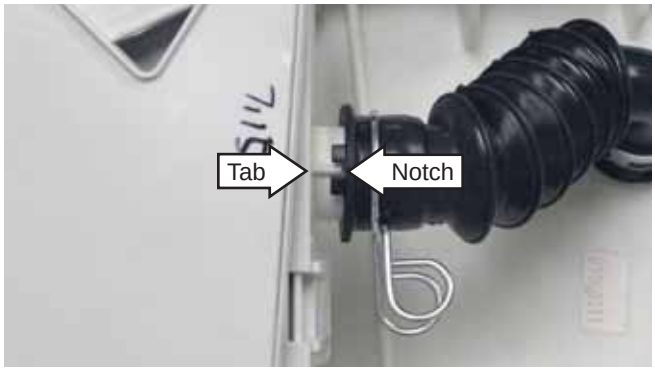
The dispenser assembly utilizes 3 tabs that position the assembly to the left and front braces. A Phillips-head screw attaches the dispenser to the front brace.

To remove the dispenser assembly:

1. Remove the top and control panels. (See *Top Cover* and *Control Panel*.)
2. Remove the inlet and the dispenser vent hoses from the dispenser:
   a. Squeeze each clamp and slide it back.
   b. If necessary, carefully break each hose loose by inserting a small flat blade screwdriver under the hose to break the seal.
   c. Remove the hoses.



Note: When installing the vent hose, engage the notch on the hose with the tab on the dispenser body before fastening the clamp.



3. Note the location of the 3 tabs, then remove the Phillips-head screw that attaches the dispenser to the front brace.

(Continued Next Page)

4. Remove the dispenser from the front and left side braces.

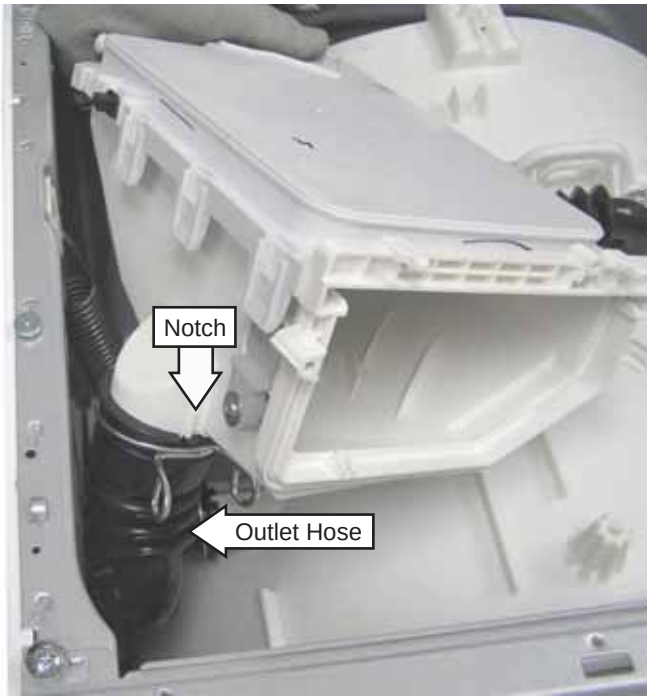
5. Tilt the dispenser clockwise and remove the outlet hose:

   a. Squeeze the clamp and slide it back.

   b. If necessary, carefully break the hose loose by inserting a small flat blade screwdriver under the hose to break the seal.

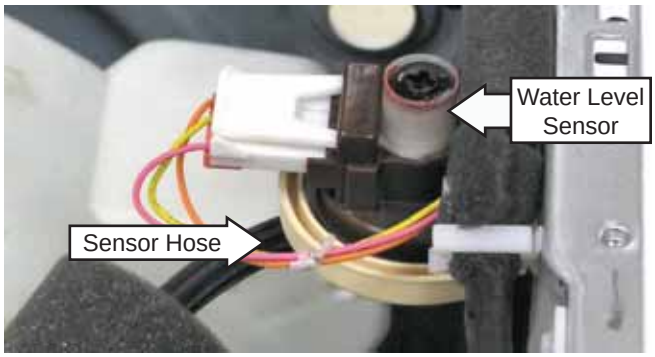
   c. Remove the hose.

Note: Install dispenser outlet hose with notch cutout engaged with notch on the dispenser body.



Water Level Sensor

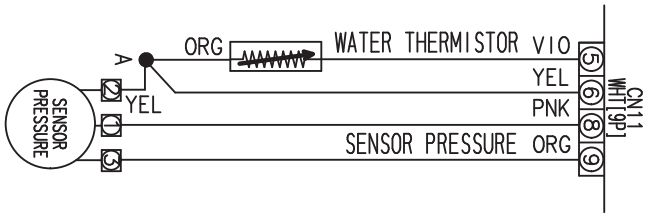
The water level sensor is connected by a hose to an air chamber near the bottom of the outer tub and operates by a frequency (kHz) signal to the main PCB.



The frequency is monitored by the main PCB, which turns off the water valves when the desired water level is achieved.

The water level sensor wires (orange, pink and yellow) are connected at pins 9, 8, and 6 at the 4-pin red connector CN11 on the main PCB. (See *Control Board Connections*).

The approximate resistance value of the transducer, measured between the pink and orange wires, is 23.6 Ω.



- When the water level rises in the washer tub, air is trapped in the air chamber. As the water level rises, the air pressure in the air chamber increases.
- The pressure is translated into an electrical signal (frequency) by the water level sensor.
- The frequency will vary, depending upon water level, from approximately 26 kHz (empty tub), 25.3 kHz (reset level), 24.8 kHz (heater safety level), 24.2 kHz (wash level), to 22 kHz (overflow level).
- This frequency can be measured at the water level sensor between the pink and yellow wires.

(Continued Next Page)

Drain pump will be activated when main PC board detects frequency under 22KHz. (Flood Protection) In flood protection mode, pump will run until reset level is reached. Flood protection is active even in the idle mode, as long as door is closed.

Operation of the water level sensor can be checked by using service test mode t05. (See *Service Mode*.)

Specific failures associated with the water level sensor can initiate error codes OE and 1E. (See *Error Codes*.)

Water Levels

The wash water level is approximately 1 ¼ inches deep at the bottom center of the wash basket.

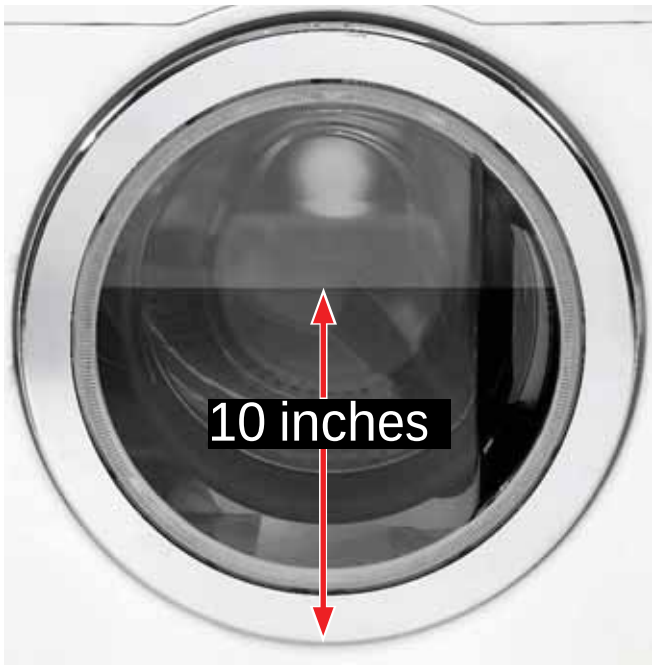
Wash Water Level

The reset water level is approximately 3/16 inches deep at the bottom center of the wash basket.

Reset Water Level

The overflow water level is approximately 10 inches above the bottom of the door opening. Overflow protection will occur at this water level.

Overflow Water Level

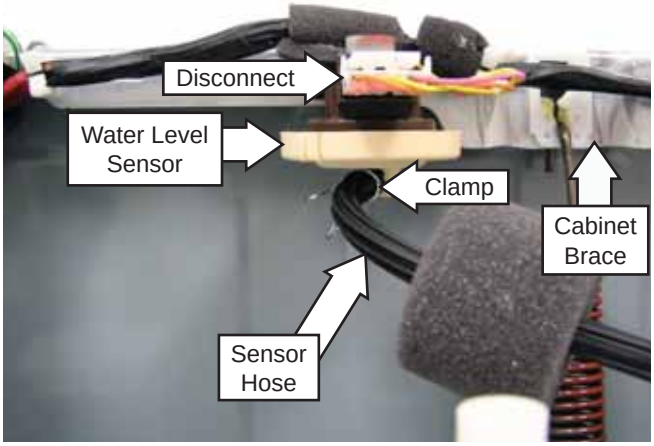


(Continued Next Page)

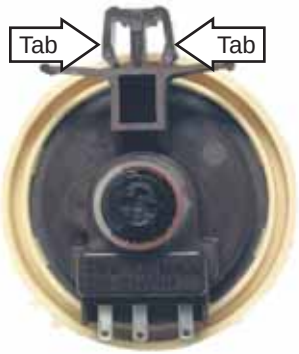
The water level sensor is located inside the cabinet. The sensor is held in place with 2 tabs that are inserted into a rectangular cutout in the right side cabinet brace.

To remove the water level sensor:

1. Remove the top panel. (See *Top Cover*.)
2. Disconnect the sensor wire harness.
3. Squeeze the clamp and remove the sensor hose from the water level sensor.



4. Reach up behind the cabinet brace with a pair of needle-nose pliers.
5. Squeeze the 2 tabs holding the sensor to the brace and simultaneously pull the sensor out from the brace.



Water Valves

There are 2 water valve assemblies, a single hot water valve and a dual cold water valve.

The hot water valve consists of a valve body and 1 solenoid coil.

The dual water valve consists of a valve body, a cold water solenoid coil, and a cold water solenoid coil for bleach dispenser operation.

Both valves are located at the rear of the cabinet and each is held in place with 2 Phillips-head screws. Each valve is only available as a complete assembly.

The hot water valve has a flow rate of 2.6 gallons per minute.

The cold water valve has a flow rate of 2.6 gallons per minute. The cold water valve for bleach dispenser operation has a flow rate of 1.1 gallons per minute.

Each solenoid coil has an approximate resistance value of 1.2K Ω.

Operation of the water valves can be checked by using service test modes t04. (See *Service Mode*.)

Specific failures associated with the water valves can initiate error code 4E. (See *Error Codes*.)

(Continued Next Page)

To remove the water valve:

1. Remove the top panel. (See *Top Cover*.)

Note: In the following step the connection of the red and blue wire harnesses are each identified with a similarly colored tag located on top of the solenoid.

2. Disconnect the wire harness(es) from the solenoid coil(s).

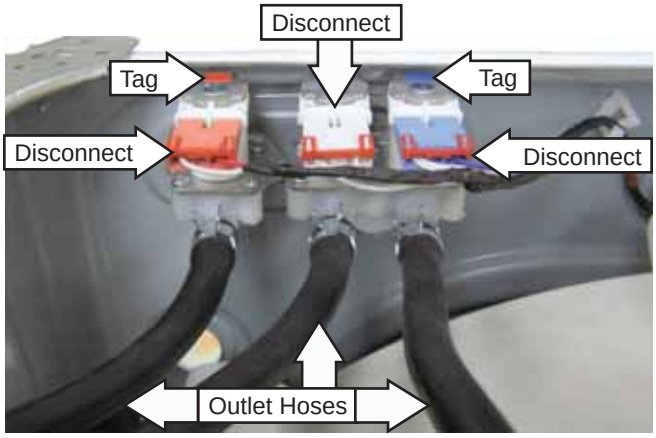
3. Note the location of the valve outlet hoses and disconnect the hose(s):

Note: The valve outlet hose(s) can be difficult to remove.

   a. Squeeze the clamp and slide it back.

   b. If necessary, 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 2 Phillips-head screws that attach the valve to the cabinet.

Note: Red arrows indicate hot water valve screws.

Drain 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 sensor detects frequency under 22KHz (overflow level), and the washer is plugged in. (See *Water Level Sensor*.)
- The pump is capable of eliminating 7.8 gallons per minute.
- Recommended minimum standpipe diameter is $1^{1}/_{4}$ inches.
- Standpipe minimum height is 30 inches, measured from the floor at the washer location.
- Standpipe maximum height is 96 inches, measured from the floor at the washer location.
- The pump motor has an approximate resistance value of 14.2 Ω.

Operation of the drain pump can be checked by using service test mode t06. (See *Service Mode*.)

Specific failures associated with the drain pump can initiate error code 5E. (See *Error Codes*.)

(Continued Next Page)

The drain pump is attached to the front of the chassis with a Phillips-head screw and to the bottom of the chassis with 2 locator tabs.

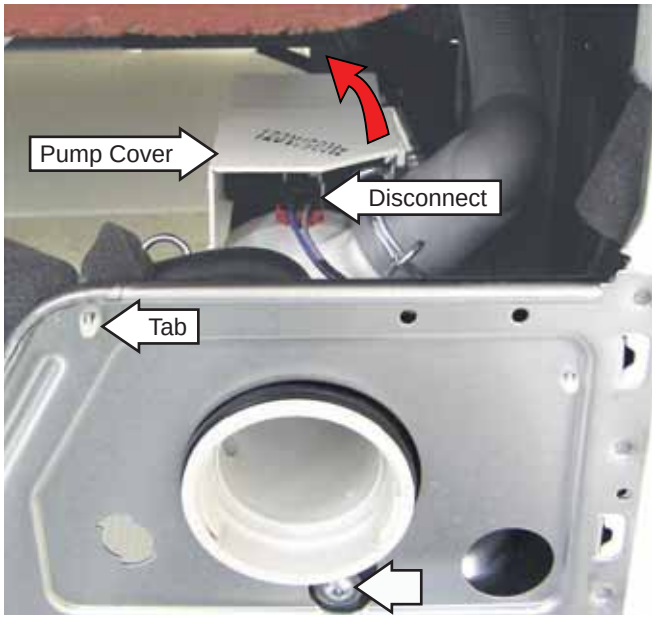
To remove the drain pump:

1. Remove the front panel. (See *Front Panel*.)

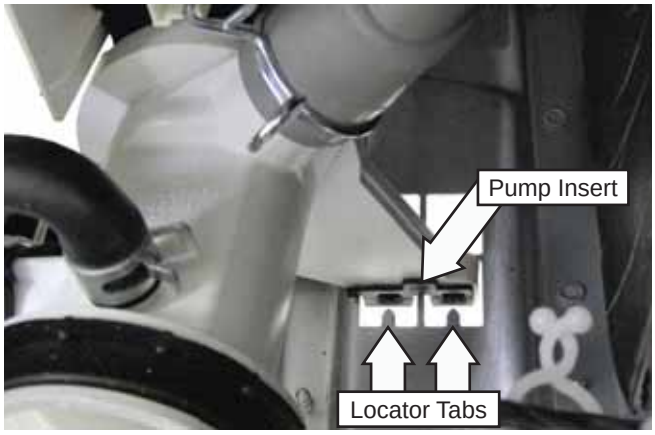
Caution: Under some conditions, up to 1 quart of water may drain out when the pump drain hose plug is removed.

2. Twist the pump drain hose cap counterclockwise 1/4- turn and unhook the pump drain hose.

3. Pull the hose out approximately 6 inches from the frame.
4. Remove the drain hose plug above a small pan to capture any water that may drain.
5. Drain the excess water.
6. Push the hose back inside the frame.
7. Turn the drain pump filter counterclockwise approximately 2 turns, then pull it out.
8. Remove any debris or foreign objects from the filter and interior of the drain pump.
9. Lift right side of pump cover top, then disconnect wire harness.
10. Release the compression tab that attaches the air inlet hose to the front of the chassis.
11. Remove the Phillips-head screw that attaches the drain pump to the front of the chassis.



12. Pull the drain pump toward the rear of the washer to release the pump insert from the 2 locator tabs, then lift drain pump to access the hoses.



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13. Remove the hoses from the drain pump:

    a. Squeeze each clamp and slide it back.

    b. If necessary, carefully break each hose loose by inserting a small flat blade screwdriver under the hose to break the seal.

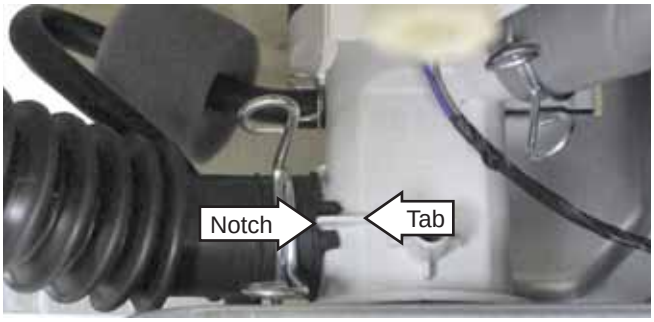
14. Remove the drain pump thru the enlarged opening on the left side of the chassis.

Note: Before installing the drain pump, make sure that the front gasket, bottom insert, and one-way check valve are in place.

* One-way check valve prevents drain water from reentering pump from drain hose or house drain system.

** Air inlet port helps reduce cavitation noise.

Note: When installing the tub outlet hose, engage the notch on the hose with the tab on the pump body before fastening the clamp.



Back Cover

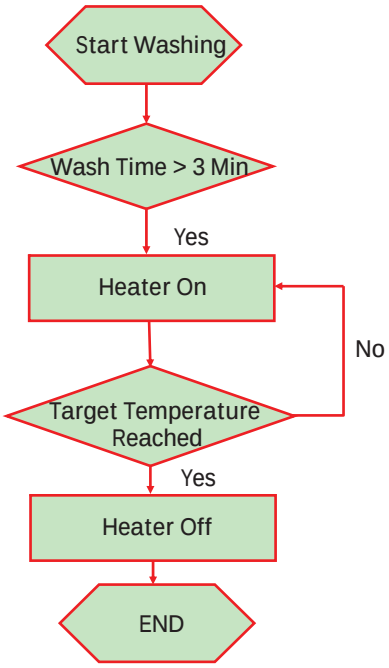
The back cover must be removed to access the heater, thermistor, main PCB, and motor.

The back cover is attached to the washer with 4 Phillips-head screws and 2 tabs that are inserted into slots in the cabinet. After removing the screws, it is necessary to slide the cover up, then pull the bottom away from the washer to release the bottom tab. The cover can then be lowered to release the top tab from the cabinet.

Heater Assembly

- The heater operates only when sanitize wash temperature (153°F.) is selected.
- Control does not pause to allow heater to heat the wash water to the sanitize temperature.

Heater Algorithm



- The heater assembly is located below the motor, and is accessed from the rear of the washer.
- The heater assembly is held in place by a bracket attached to the outside of the outer tub, and a 10-mm hex nut which presses a rubber gasket against 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 10-mm hex nut is set from the factory at 35 to 40 in. lbs. of torque.

Heating Element Specifications:

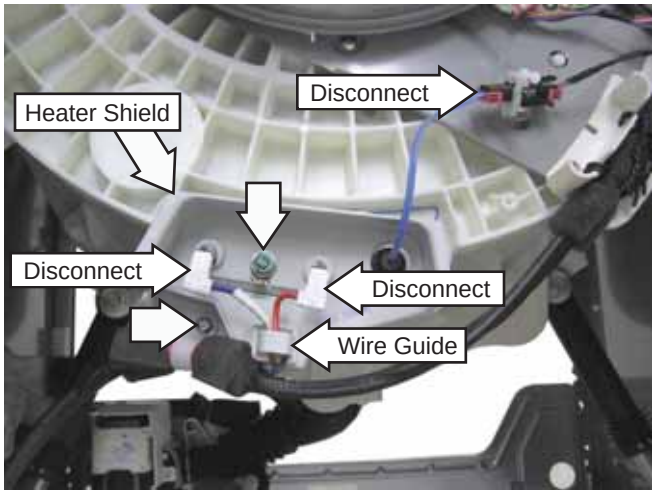
- 120 VAC
- 900 Watts
- Approximately 7.5 Amps
- Approximately 16 Ω

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

Specific failures associated with the heater assembly can initiate error codes HE and HE1. (See *Error Codes*.)

To remove the heater:

1. Drain the washer using the pump drain hose. (See *Using The Washer*.)
2. Remove the back cover. (See *Back Cover*.)
3. Disconnect the thermistor wire harness.
4. Disconnect the blue and red wires from the heater. Remove both wires from the wire guide.
5. Remove the Phillips-head screw that attaches the motor wire harness clamp to the heater shield.
6. Loosen the 10-mm hex nut until it is flush with the end of the stud.
7. Push inward on the 10-mm hex nut to relax the rubber gasket.
8. Remove the 10-mm hex nut from the heater shield.
9. Maneuver the heater shield from the heater terminals and remove thermistor wire harness from the hole in the shield.



10. Grasp and pull the heater straight out from the outer tub.

Heater Assembly Removal

(Continued Next Page)

To install the heater:

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. Place the thermistor wire thru the hole in the shield and place shield over the element terminals and against the outer tub.
4. Install the 10-mm hex nut and use a torque wrench to tighten the 10-mm hex nut to 35 to 40-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.

5. Connect the thermistor wire harness.
6. Connect the blue and red wires to the heater. Place the heater wires inside the wire guide.

Note: Wire terminal under hex nut is not used.

7. Install the Phillips-head screw and the motor wire harness clamp to the heater shield.

Thermistor

The control uses a water temperature sensor (thermistor) to regulate the wash water temperature.

To determine the temperature of the incoming water, the washer control measures the difference between the voltage sent and the voltage returned from the water temperature sensor. The washer control then makes temperature adjustments by activating the appropriate water valve.

Temperature Setting	Water Temperature
Tap Cold	No control
Cold	60°F +/- 5°F
Warm	90°F +/- 5°F
Hot	110°F +/- 5°F
Sanitize	153°F +/- 5°F

The thermistor has a negative temperature coefficient (as temperature increases, resistance decreases).

Resistance can be measured at the thermistor wire harness. Make sure to disconnect the wire harness to isolate the thermistor before taking resistance readings.

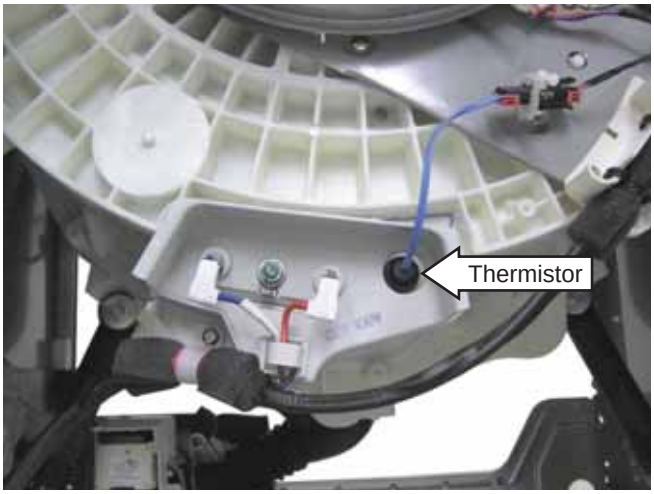
TEMP (°F)	MIN (KΩ)	AVG (KΩ)	MAX (KΩ)
14	54.874	58.722	62.57
23	42.961	45.778	48.596
32	33.9	35.975	38.05
41	26.977	28.516	30.055
50	21.616	22.763	23.91
59	17.421	18.279	19.137
68	14.128	14.772	15.417
77	11.497	11.981	12.464
86	9.421	9.786	10.15
95	7.772	8.047	8.322
104	6.444	6.653	6.861
113	5.365	5.523	5.68
122	4.489	4.608	4.726
131	3.767	3.856	3.945
140	3.178	3.243	3.308
149	2.681	2.744	2.808
158	2.273	2.332	2.392
167	1.934	1.99	2.045
176	1.653	1.704	1.755
185	1.416	1.464	1.511
194	1.218	1.262	1.305
203	1.053	1.093	1.133
212	0.913	0.95	0.987

(Continued Next Page)

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

Specific failures associated with the thermistor can initiate error code tH. (See *Error Codes*.)

The thermistor is inserted in a grommet that is located below the motor, and is accessed from the rear of the washer.



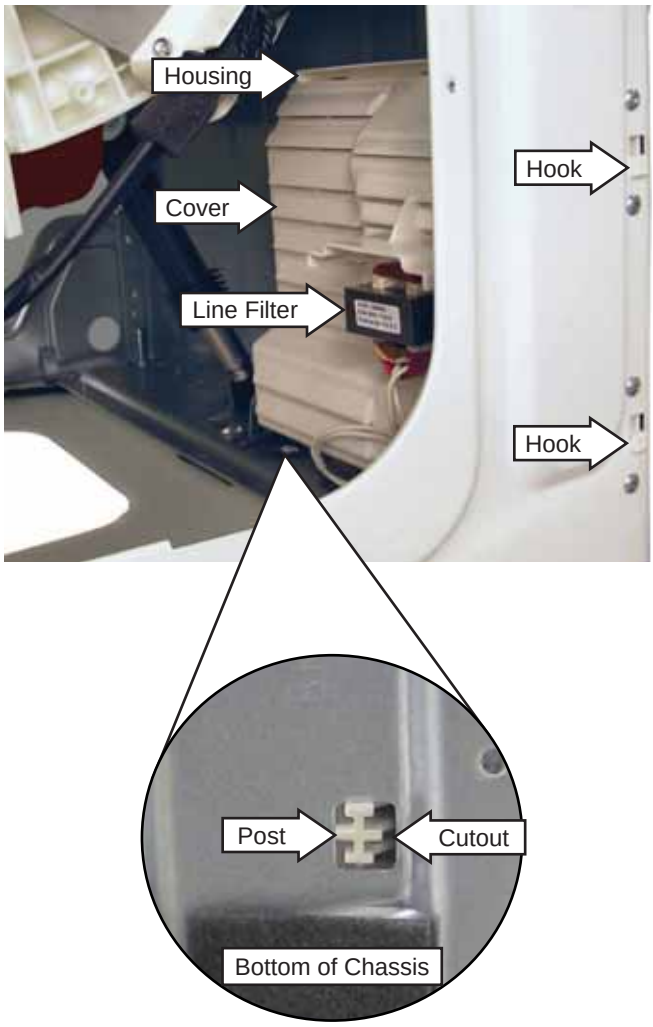
To remove the thermistor:

1. Remove the back cover. (See *Back Cover*.)
2. Disconnect the thermistor wiring harness.
3. Grasp and pull the thermistor straight out from the grommet.

Main PCB

The main PCB receives commands from the control board and controls washer operation. The main PCB is enclosed in a protective housing and cover located inside the cabinet, under the left side of the outer tub. The bottom of the protective housing has a post that is inserted in a cutout in the bottom of the chassis. The right side of the protective housing is attached to the rear of the cabinet with 2 hooks and 4 Phillips-head screws.

A line filter (reactor), is attached to the protective housing cover with 2 Phillips-head screws.



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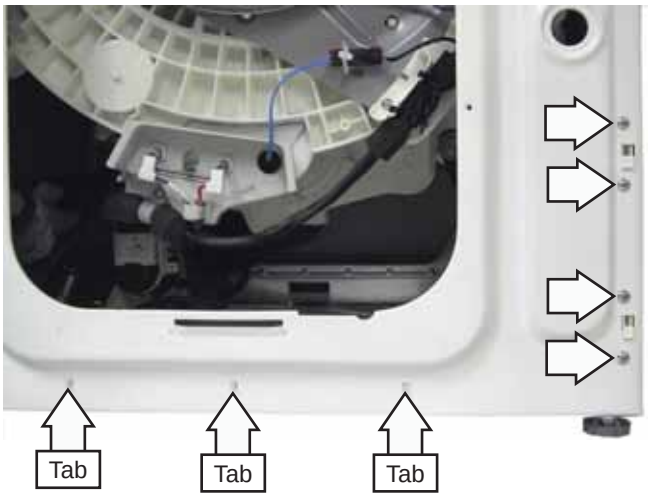
To remove the main PCB:

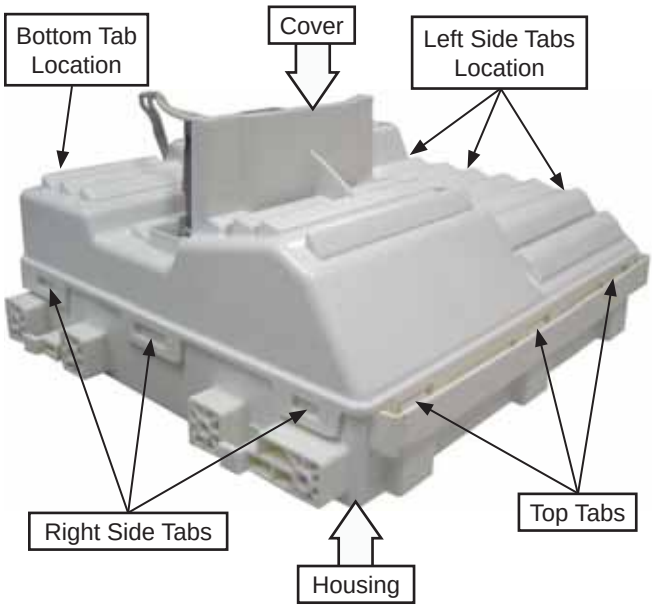
1. Remove the back cover. (See *Back Cover*.)
2. Remove the 3 compression tabs that attach the main PCB wire harness to the bottom rear of the cabinet.
3. Remove the 4 Phillips-head screws that attach the main PCB to the rear of the cabinet.



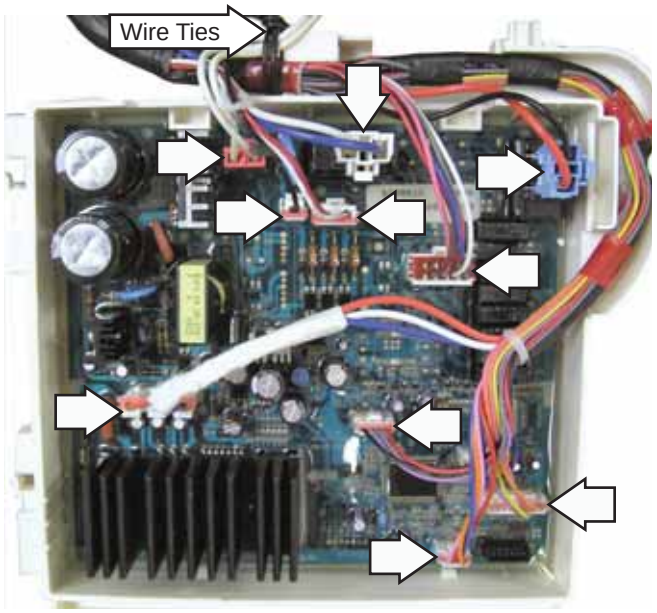
4. Lift up the main PCB to unhook it from the rear of the cabinet and to clear the post from the cutout in the bottom of the chassis.
5. Rotate the main PCB 90° clockwise and maneuver it out from the cabinet.

Note: The protective housing cover is attached to the main PCB housing with 3 recessed tabs located across the top, 3 tabs on the right side, 3 tabs on the left side, and 1 tab on the bottom.

6. Release the tabs and remove the protective housing cover.

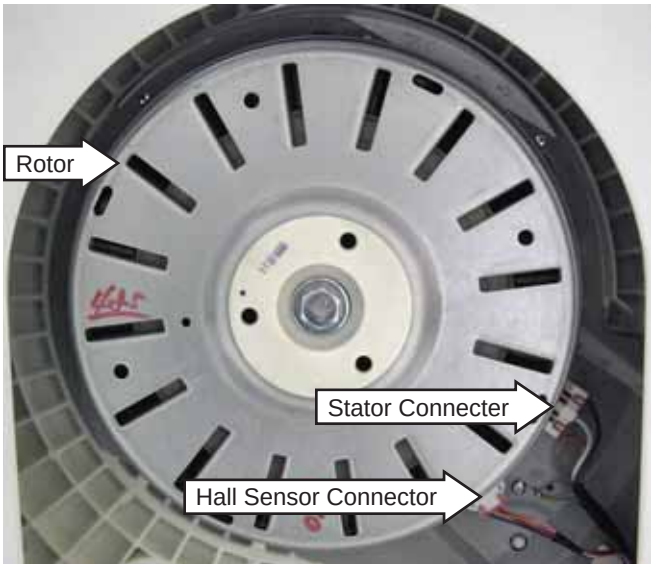


7. Note wire routing, then remove the wire ties and disconnect the wire harnesses from the main PCB.



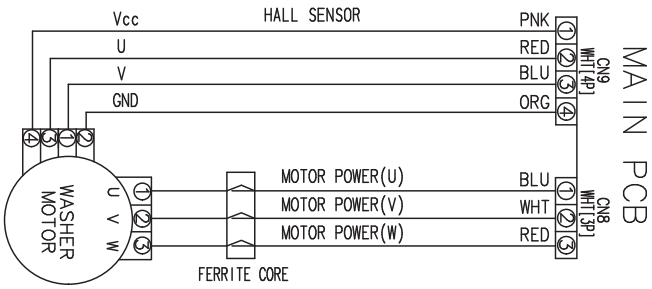
Motor Assembly

- The washer has a direct-drive, pulse-width modulation motor that does not utilize a belt, transmission, or mechanical brake.
- The motor assembly is composed of a coil-wound stator, Hall sensor, and permanent-magnet rotor.
- The motor speed and torque varies when the pulse width modulated voltage from the inverter changes frequency.
- The motor turns in the opposite direction when the main PCB reverses electrical polarity to the motor.



Resistance can be measured at the stator wire connector. The stator windings have an approximate resistance value of 9.5 Ω between any two of the three wires:

- Red to white - 9.5 Ω
- Red to blue - 9.5 Ω
- White to blue - 9.5 Ω



To remove the motor assembly:

WARNING: The rotor is not grounded. Unplug the washer before servicing to avoid electrical shock.

1. Remove the back cover. (See *Back Cover*.)
2. Disconnect the wiring to the stator and the Hall sensor.
3. Remove the 19-mm (3/4-in. SAE equivalent) rotor bolt with a socket wrench. (Rotate rotor bolt counterclockwise to remove.)

Note:

- If necessary, to lock the rotor in place while removing rotor bolt, utilize a large Phillips screwdriver inserted into one of the three round openings as shown.
- Use a rubber mallet, if needed, to tap the wrench to break the bolt free.

Note: When re-tightening, the bolt should be snug plus a quarter of a turn.

4. Pull the rotor away from the drive shaft.

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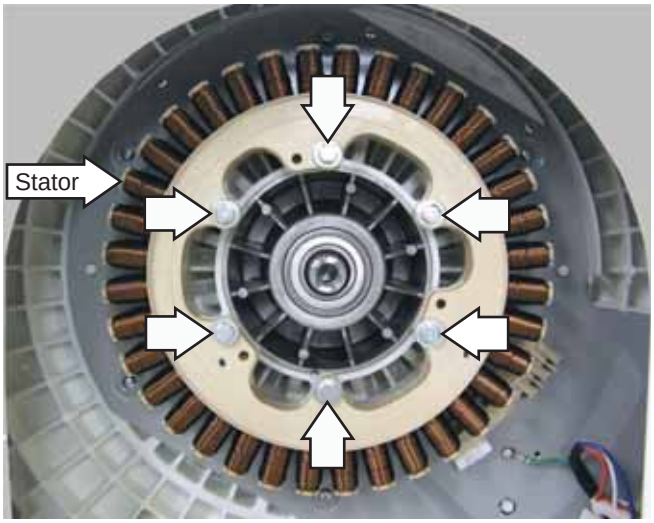
5. Remove the six 10-mm hex-head screws and washers that hold the stator in place.



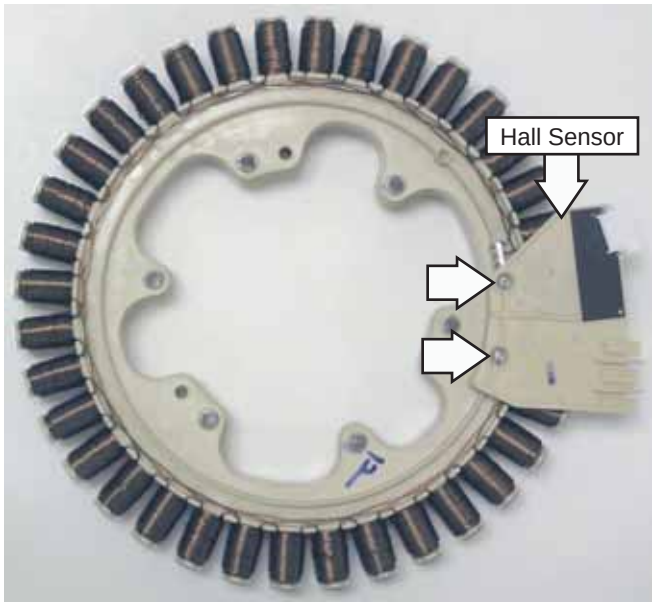
6. Carefully pull the stator away from the outer tub.

Note: The stator is to be installed with the Hall sensor towards the back of the outer tub and located at the 4 o'clock position.

Hall Sensor

- The Hall effect sensor measures the motor rpm.
- Four wires connect the Hall sensor to the main PCB at connector CN9. (See *Control Board Connections*.)
- Resistance can be measured at the Hall sensor wire connector. The Hall sensor measures approximately 4.7K Ω between the pink and blue wires and the pink and red wires, and 9.4K Ω between the blue and red wires.
- If the sensor has failed, the motor will not operate.
- The Hall sensor is part of the stator assembly. It is available as a separate part.

The Hall sensor it is attached to the back of the stator assembly with 2 Phillips-head screws and 2 small locking tabs. It is necessary to remove the stator assembly and the 2 Phillips-head screws. The Hall sensor can then be lifted straight up to release it from the stator assembly.



Hall Sensor Removed

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

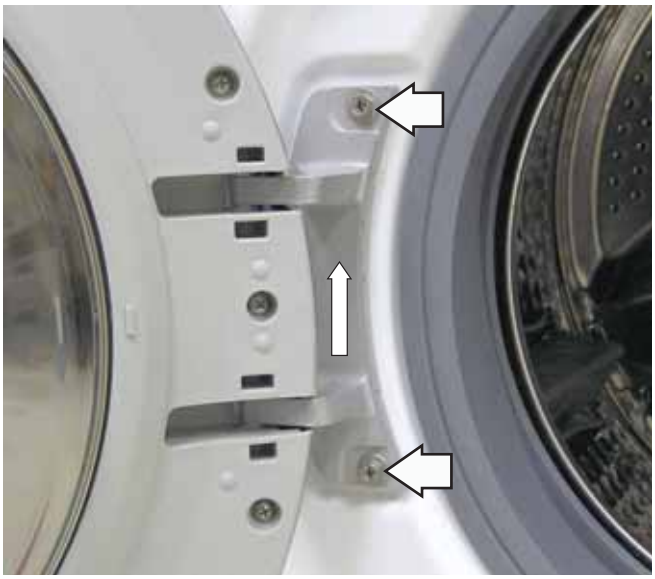
Specific failures associated with the motor assembly can initiate error codes 9E1, 9E2, 3E1, 3E2, and 3E3. (See *Error Codes*.)

Door

The door hinge is attached to the front panel with 2 Phillips-head screws and 3 hooks that engage 3 cutouts in the front panel.

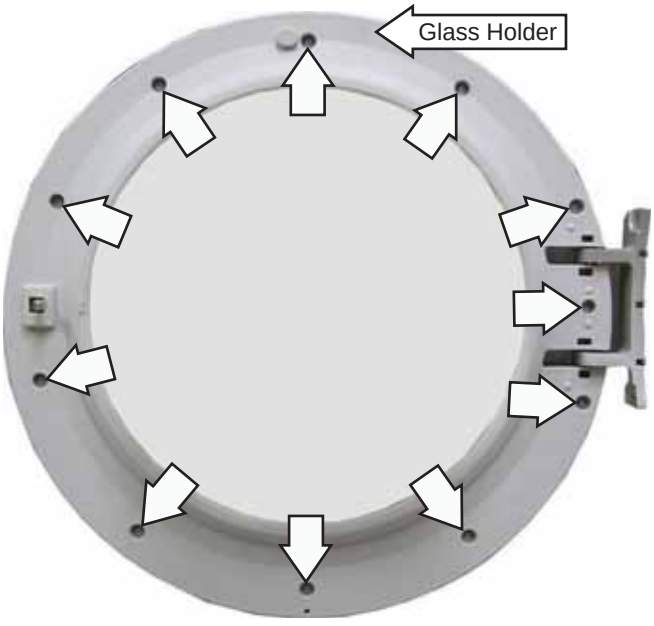
To remove the door components:

1. Remove the 2 Phillips-head screws that hold the hinge to the front panel. Grasp the door and lift the hinge 1/4-inch to disengage it from the front panel.



2. Place the door on a soft, protected flat surface so that the door lever faces up. (The door should rest on the handle side.)

3. Remove the 11 Phillips-head screws that hold the glass holder to the door frame.

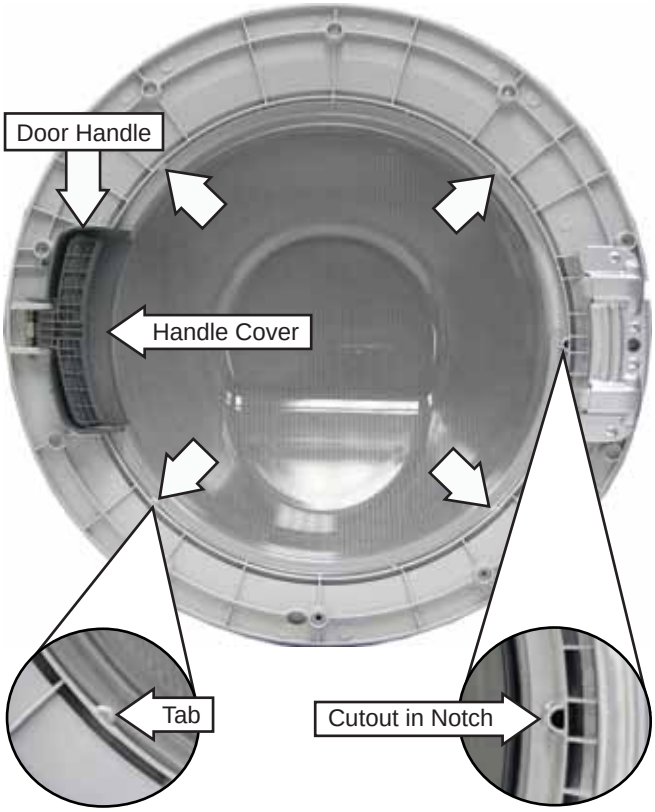


4. Grasp and unsnap the glass holder and glass from the door frame.

5. Turn the door over so that the door handle and door cover face up.

Note: The glass is inserted underneath the door handle cover and held in place with 4 tabs that are equally spaced along the inner circumference of the glass holder. To provide correct glass-to-glass holder orientation, a cutout on the edge of the glass engages a notch in the glass holder.

6. Push hinge side of glass holder down, then slide glass away from the handle cover.



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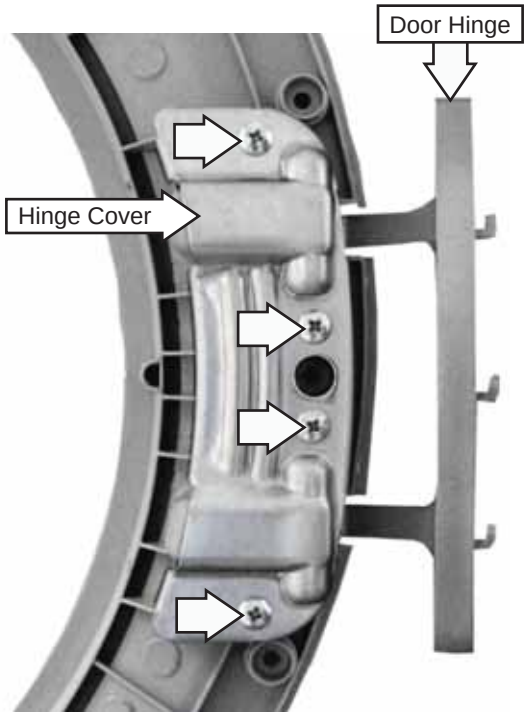
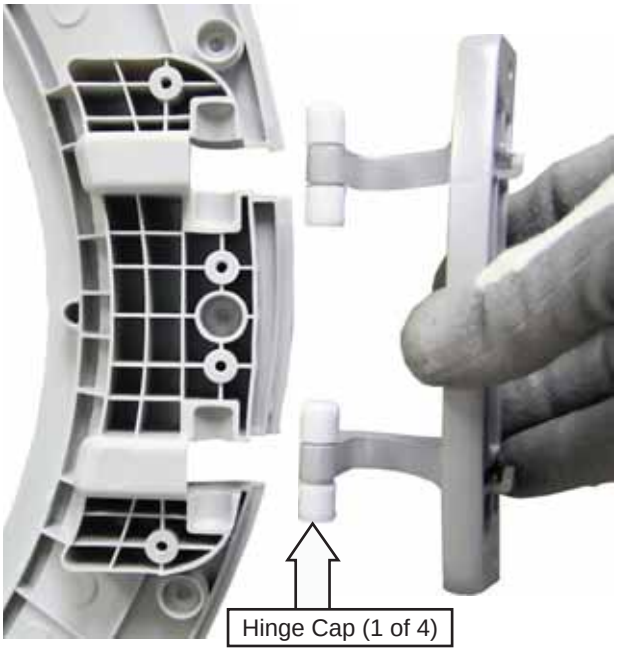
7. Remove the 4 Phillips-head screws that attach the hinge cover to the glass holder.



8. Pull the door hinge out of the recess in the glass holder.



Note: Make sure all 4 hinge caps are installed on the hinge pins before placing hinge in the recess in the glass holder.

Tub Gasket

The tub gasket provides a watertight seal between the front panel 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 gasket clamp.

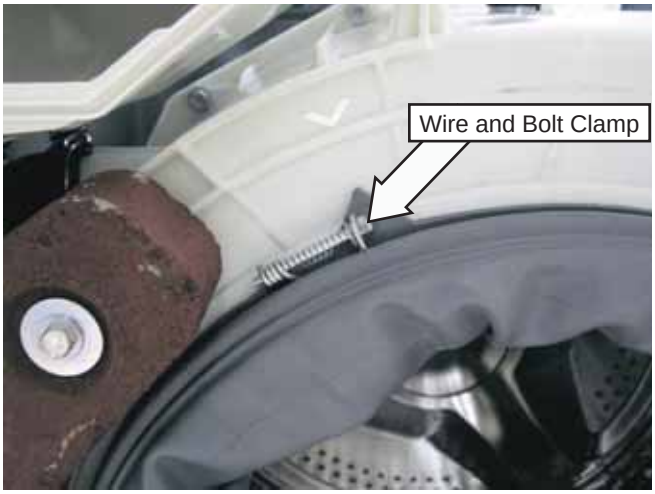
To remove the tub gasket:

1. Remove the front panel. (See *Front Panel*.)

Note: The 7-mm gasket clamp bolt uses reverse rotation to tighten or loosen the gasket.

2. Turn the 7-mm bolt clockwise to loosen the clamp that secures the tub gasket to the outer tub lip.

3. Remove the wire and bolt clamp from the tub gasket.



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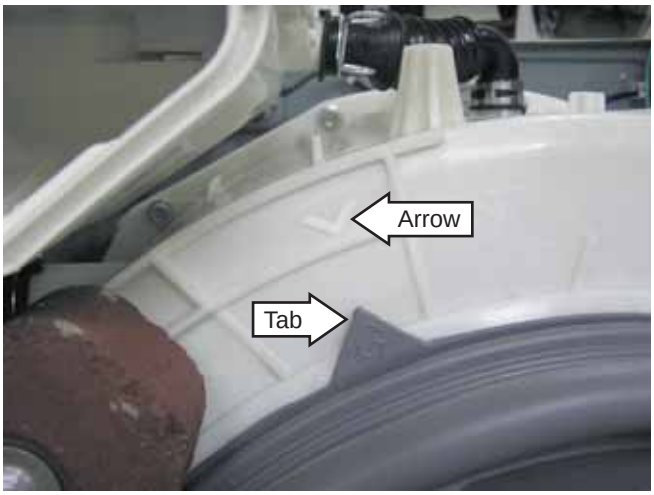
4. Pull the tub gasket off the outer tub lip.

Note: When installing the tub gasket on the outer tub, align the tab on the gasket with the arrow located on the front of the outer tub before installing and tightening the clamp bolt.



Dampers

Each of the 2 dampers are attached to the outer tub with a 10-mm hex head screw and secured to 2 flanges in the bottom of the chassis with a 13-mm hex head bolt.

To remove the dampers:

1. Remove the back cover. (See *Back Cover*.)
2. Remove the front panel. (See *Front Panel*.)

Note: Before removing the right side damper, to gain extra clearance, it may be necessary to remove the drain pump. (See *Drain Pump*.)

3. Remove the 13-mm hex head bolt from the bottom of the damper.
4. Compress and remove the damper from the 2 flanges in the chassis.

(Continued Next Page)

5. Remove the 10-mm hex head screw and washer from the top of the damper.

6. Pull the damper straight out from the outer tub.

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 2 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 2 dampers that are located between the bottom of the tub assembly and chassis, 1 on each side.

To remove the outer tub assembly:

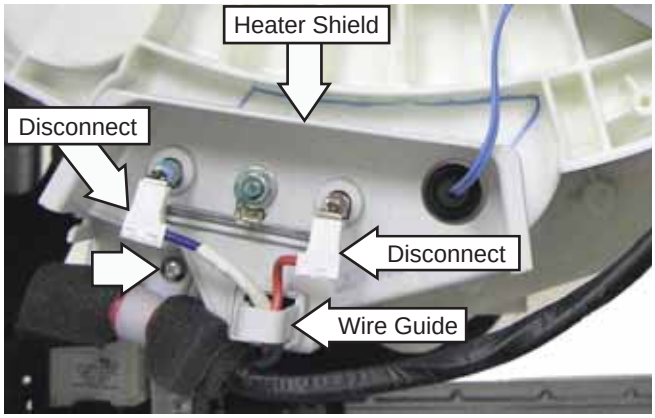
WARNING: The outer tub assembly is heavy and requires two people to remove it from the washer cabinet. Care should be taken when removing and installing the outer tub assembly.

1. Drain the washer using the pump drain hose. (See *Using The Washer*.)

2. Remove the front panel and back cover. (See *Front Panel,* and *Back Cover*.)

3. Disconnect the blue and red wires from the heater. Remove both wires from the wire guide.

4. Remove the Phillips-head screw that attaches the motor wire harness clamp to the heater shield.



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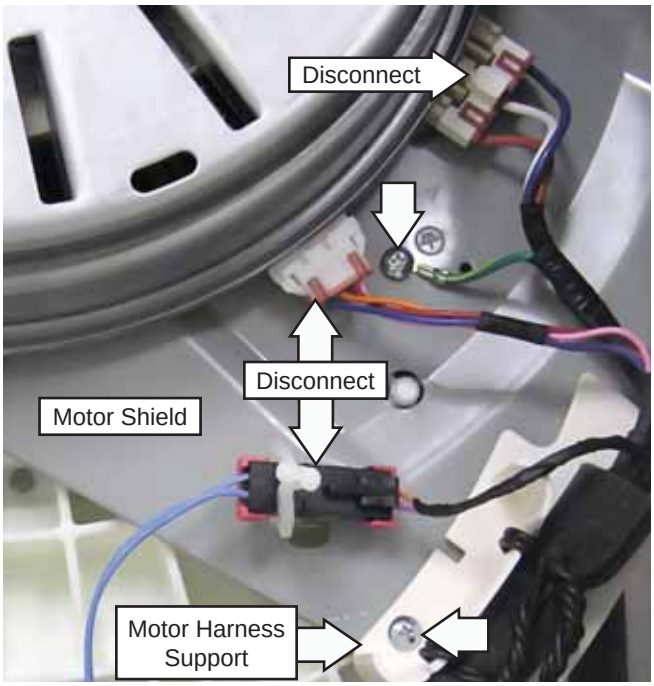
5. Disconnect the thermistor wire harness.

6. Disconnect the stator and Hall sensor wire harnesses from the motor.

7. Remove the Phillips-head screw that attaches the ground wire to the motor shield.

8. Remove the Phillips-head screw from the motor harness support, then slide the support up and pull it out from the motor shield.



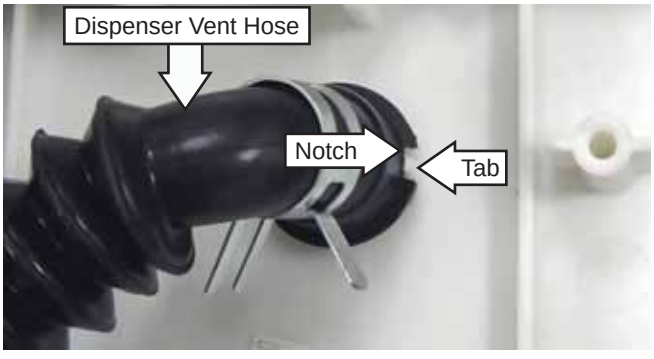
9. Remove the dispenser vent hose from the outer tub:

   a. Squeeze the clamp and slide it back.

   b. Carefully break the vent hose loose by inserting a small flat blade screwdriver under the hose to break the seal.

   c. Remove the hose.

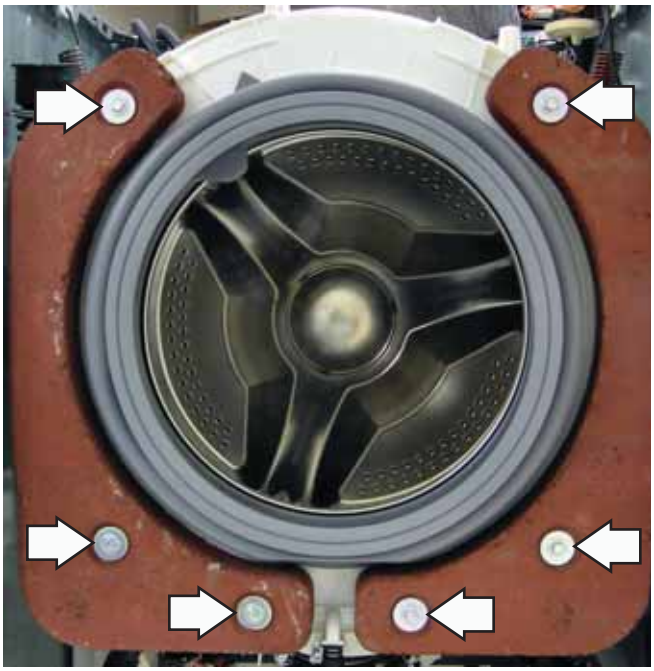
Note: When installing the dispenser vent hose, ensure the notch cutout is engaged with the right-side tab on the tub inlet.



10. Remove the dispenser from the front and left side braces, then remove the dispenser outlet hose from the dispenser. (See *Dispenser Assembly*.)

11. Place the dispenser assembly over the left rear corner of the washer.

12. Remove the three 10-mm hex head bolts and washers that attach each of the 2 counterweights to the front of the outer tub.



13. Remove the water level sensor hose from the water level sensor. (See *Water Level Sensor*.)

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Note: The Phillips-head clamp screw on the tub outlet hose uses reverse rotation to tighten or loosen the hose. It is necessary to turn the Phillips-head clamp screw **clockwise** to loosen the clamp.

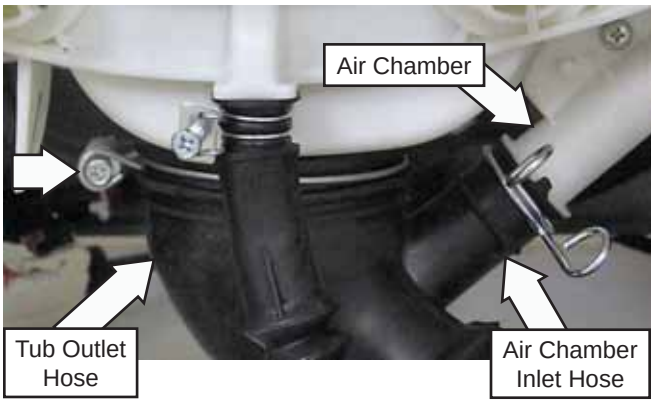
14. Turn the Phillips-head clamp screw **clockwise** to loosen the clamp that secures the tub outlet hose to the outer tub.

15. Remove the tub outlet hoses from the tub and the air chamber inlet hose:

    a. Loosen the clamps and slide them back.

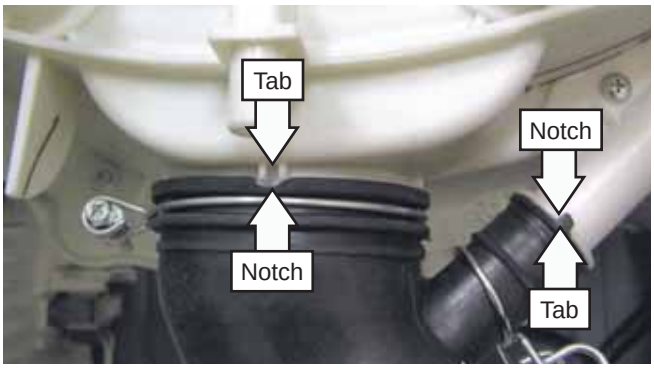
    b. Carefully break each hose loose by inserting a small flat blade screwdriver under the hose to break the seal.

    c. Remove the hoses.



Note:

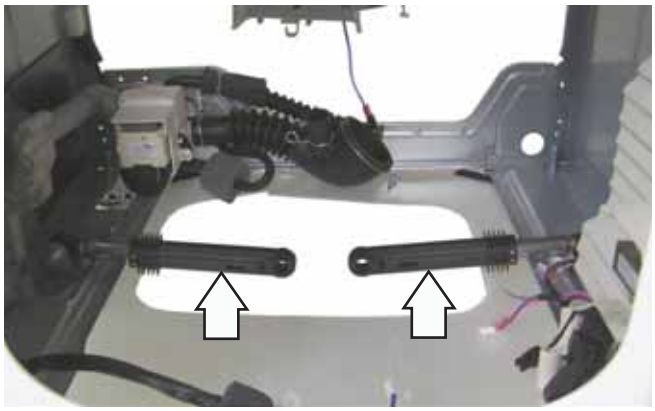
- When installing the tub outlet hose, engage the notch on the hose with the tab on the outer tub before fastening the clamp.
- When installing the air chamber inlet hose, engage the tab on the hose with the notch on the air chamber before fastening the clamp.



16. Remove the 10-mm hex head screw and washer from the top of each damper. (See *Dampers*.)

17. Lift the rear of the tub assembly to maintain a level position, then pull each damper straight out from the outer tub.

18. Position the dampers parallel to the bottom of the washer.



Dampers in Parallel Position

19. Lift the outer tub assembly up, then release the 2 suspension springs from the slotted plastic inserts in the cabinet top braces.

20. Carefully remove the tub assembly out the front of the cabinet, then place the tub assembly on a protective surface with the air chamber at the 2 o'clock position, as shown below.

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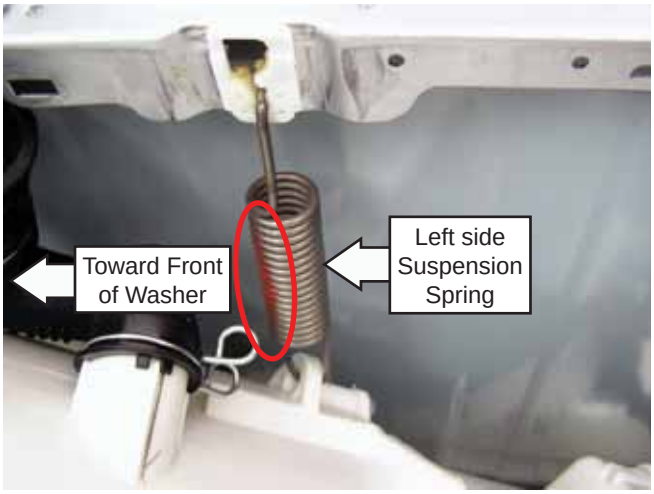
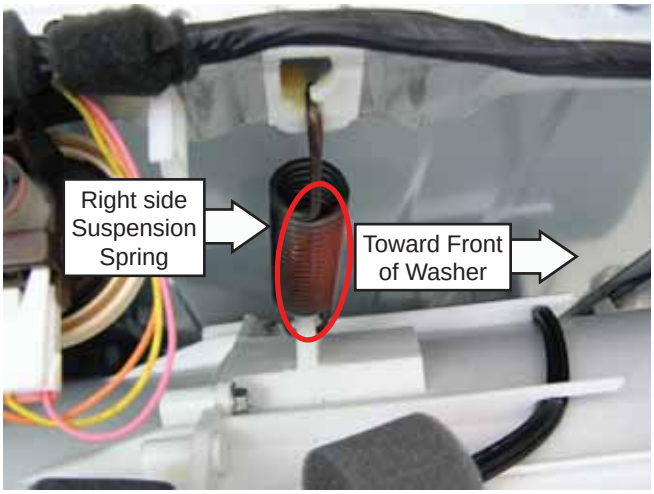
Note: When installing the outer tub assembly, install each suspension spring with the red paint facing toward the front of the washer.



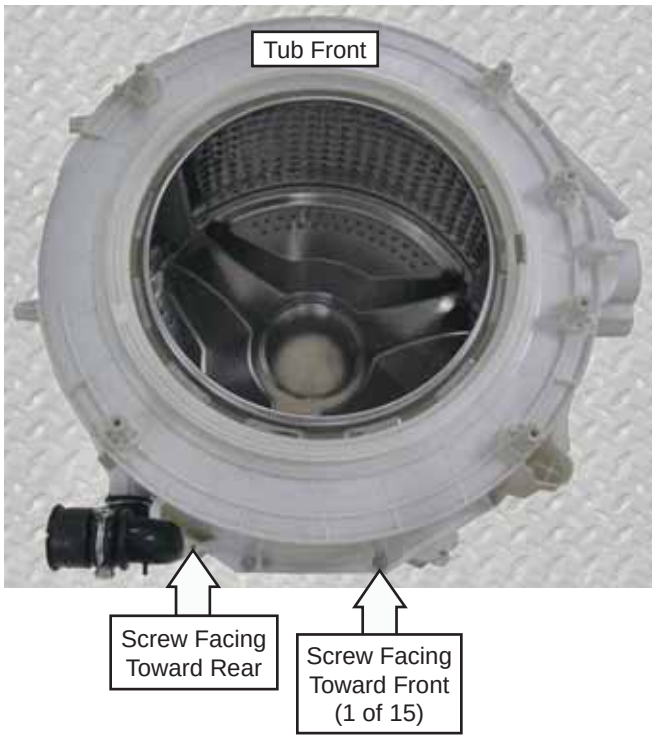


Wash Basket

The wash basket is contained inside the outer tub. The wash basket is rotated by a direct-drive DC motor. A drive bolt attaches the wash basket to the motor rotor. To remove the wash basket, it will become necessary to separate the outer tub halves.

To remove the wash basket:

1. Remove the outer tub assembly. (See *Outer Tub Assembly and Suspension*.)
2. Remove the suspension springs from the tub front.
3. Remove the tub gasket. (See *Tub Gasket*.)
4. Remove the motor rotor. (See *Motor Assembly*.)
5. Carefully position the tub assembly motor side down, on a clean, protective surface.
6. Remove the single 10-mm hex head screw, located near the dispenser inlet, that faces the tub rear assembly.
7. Remove the fifteen 10-mm hex head screws that hold the tub front and tub rear assembly together.



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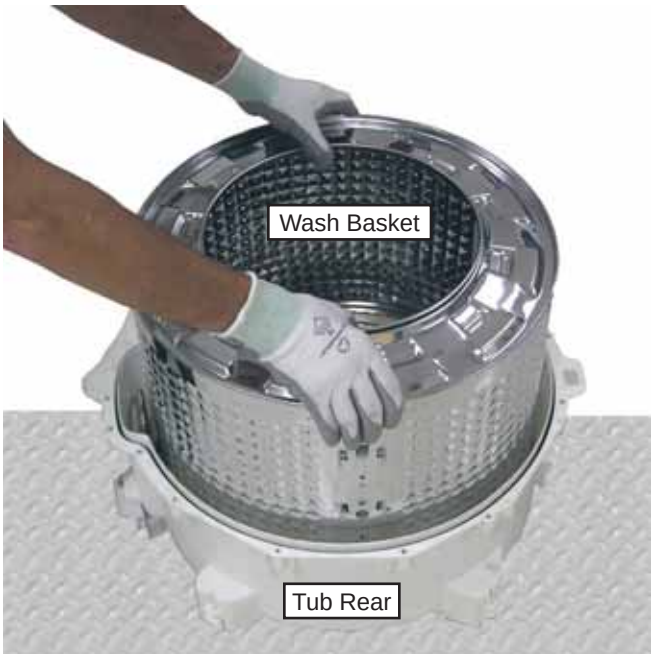
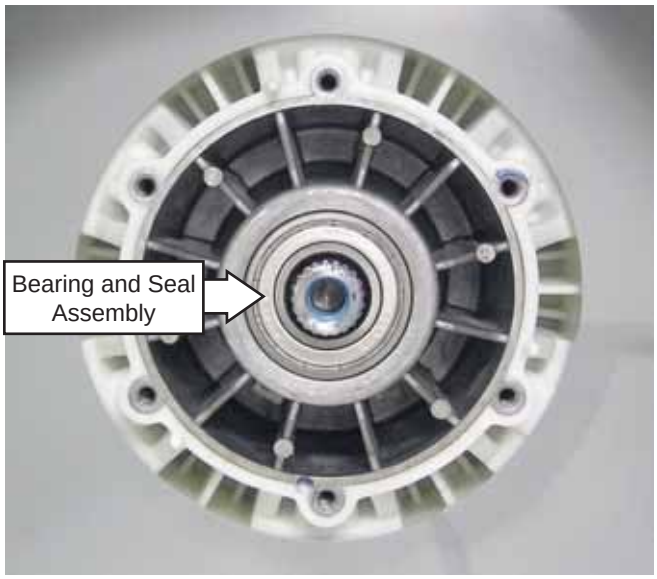
8. Separate and remove the tub front from the tub rear assembly.

9. Pull the wash basket out from the tub rear assembly.



Note:

- The basket can be ordered as a complete assembly.
- The bearing and seal assembly is part of the tub rear assembly, and is not available separately.



Service Mode

The washer control has a service mode that can be utilized by the service technician in order to test critical components and to access error codes. This service 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.

Washer must be in the idle mode to enter service mode. Idle mode means the washer is turned off and the display is blank.

To ENTER service mode: Press (while the unit is idle): *SIGNAL - EXTRA RINSE - SIGNAL - EXTRA RINSE*.

To EXIT service mode: Press *POWER* button or service mode will time out 15 minutes after last button is pressed.

General Navigation:

- Upon entering the service mode, the SSD will display the first test number t01.
- Rotating the knob counterclockwise (CCW) decrements the test number in the display.
- Rotating the knob clockwise (CW) increments the test numbers in the display.
- Once the test number is selected, pressing *START/PAUSE* begins the selected test.

Service Mode	Description
t01 Software version number test (UI, MC)	Check the software version.
t02 Error codes	Check for any error codes reported by the controls.
t03 User interface test	Verifies all LEDs operate correctly.
t04 Water valve and dispenser test	Verifies operation of the individual water valves.
t05 Water level sensor test	Fills to overflow water level, then pumps out water.
t06 Drain Pump test	Test drain pump.
t07 Heater and Thermistor Test	Test the heater and thermistor. The estimated temperature by Fahrenheit is displayed to SSD.
t08 Tumble Test	Verifies washer tumbles (i.e., Wash Cycle).
t09 Spin Test	Verifies washer spins. Note: No out of balance detection will be performed here, so the washer will spin up regardless of the out of balance that is placed in the drum.

(Continued Next Page)

Service Mode Test		Sequence	
t01	Version Display	Enter	Displays software version
		Power	Returns to service mode screen
t02	Error Codes	Enter	Displays error codes
		Start/Pause	Clears highlighted error code from washer
		Power	Returns to service mode screen
t03	User interface test	Enter	Turns all remaining LED on
		Power	Returns to service mode screen
		Enter	Display “U”
t04	Water valve and dispenser test	Soil Button On	Turns on cold water valve and All Soil Level LEDs turn on
		Soil Button Off	Turns off cold water valve and All Soil Level LEDs turn off
		Temp Button On	Turns on hot water valve and All Temp LEDs turn on
		Temp Button Off	Turns off hot water valve and All Temp LEDs turn off
		Spin Button On	Turns on bleach valve and All Spin speed LEDs turn on
		Spin Button Off	Turns off bleach valve and All Spin speed LEDs turn off
		Signal Button On	Turns on bleach valve + cold valve together and signal LED turns on
		Signal Button Off	Turns off bleach valve + cold valve together and Signal LED turns off
		Power	Returns to service mode screen
t05	Water level sensor test	Enter	Turns on the cold water valve, the water level frequency continue updating on SSD
		Power	Drains and returns to service mode screen
t06	Drain Pump test	Enter	Turns on the drain pump
		Power	Returns to service mode screen
t07	Heater and Thermistor test	Enter	On entry, the control will display the estimated temperature (0°F), and turns on the cold valve and the heater is turned on. The water temperature sensor test displays the water temperature trend in the display. If the sensor is reading falling temperature from the baseline it will blink the numbers in the display. If it senses raising temperatures it will solid the numbers in the display.
		Power	Returns to service mode screen
t08	Tumble test	Enter	Unit tumbles
		Power	Returns to service mode screen
t09	Spin test	Enter	Displays “estimated” and “current” rpm
		Power	Returns to service mode screen

Error Codes

Error Code	Description	Action
E00	No errors	
4E	Water valve problem	• Check whether the faucet is closed, the water supply has been suspended or is frozen. • Check whether the filter screen in the water supply hose connector is clogged by dirt. • Check whether the cold water is connected. • The display will show 4E when only the hot water is connected.
5E	Drain pump problem	• The water does not drain due to a clogged drain hose. • Check whether the drain hose is frozen. • Clean the filter of debris. • Check integrity of the drain pump motor. Replace if necessary.
OE	Overflow level was reached	• Check fill valves for any signs of leak thru when not energized. • Check integrity of the water level sensor. Replace if necessary.
HE	Heater relay error	• Replace the main PCB.
HE1	Heater problem	• Check integrity of the main PCB. Replace if necessary.
1E	Water level sensor error	• Check integrity of the water level sensor. Replace if necessary.
LE	Leakage error	• Check integrity of the tub.
9E1	Under voltage error	• Measure AC outlet voltage; ensure the correct range (120 to 132 VAC). • Check electrical connections at the motor. • Check harness integrity between the main control and motor drive. • Unplug the unit, wait 30 seconds and restart the unit. • If the fault persists and re-appears, replace the main PCB. • If the fault persists and re-appears, replace the trans reactor or harness. • If the fault persists and re-appears, replace the motor.
9E2	Over voltage error	
3E1	Motor start up failure	• Measure AC outlet voltage; ensure the correct range (120 to 132 VAC). • Check electrical connections at the motor. • Check harness integrity between the main control and motor. • Unplug the unit, wait 30 seconds and restart the unit. • If the fault persists and re-appears, replace the motor. • If the fault persists and re-appears, replace the main PCB or harness.
3E2	Over current error	
3E3	Hall sensor error (input the hall sensor under 30 in the running state)	

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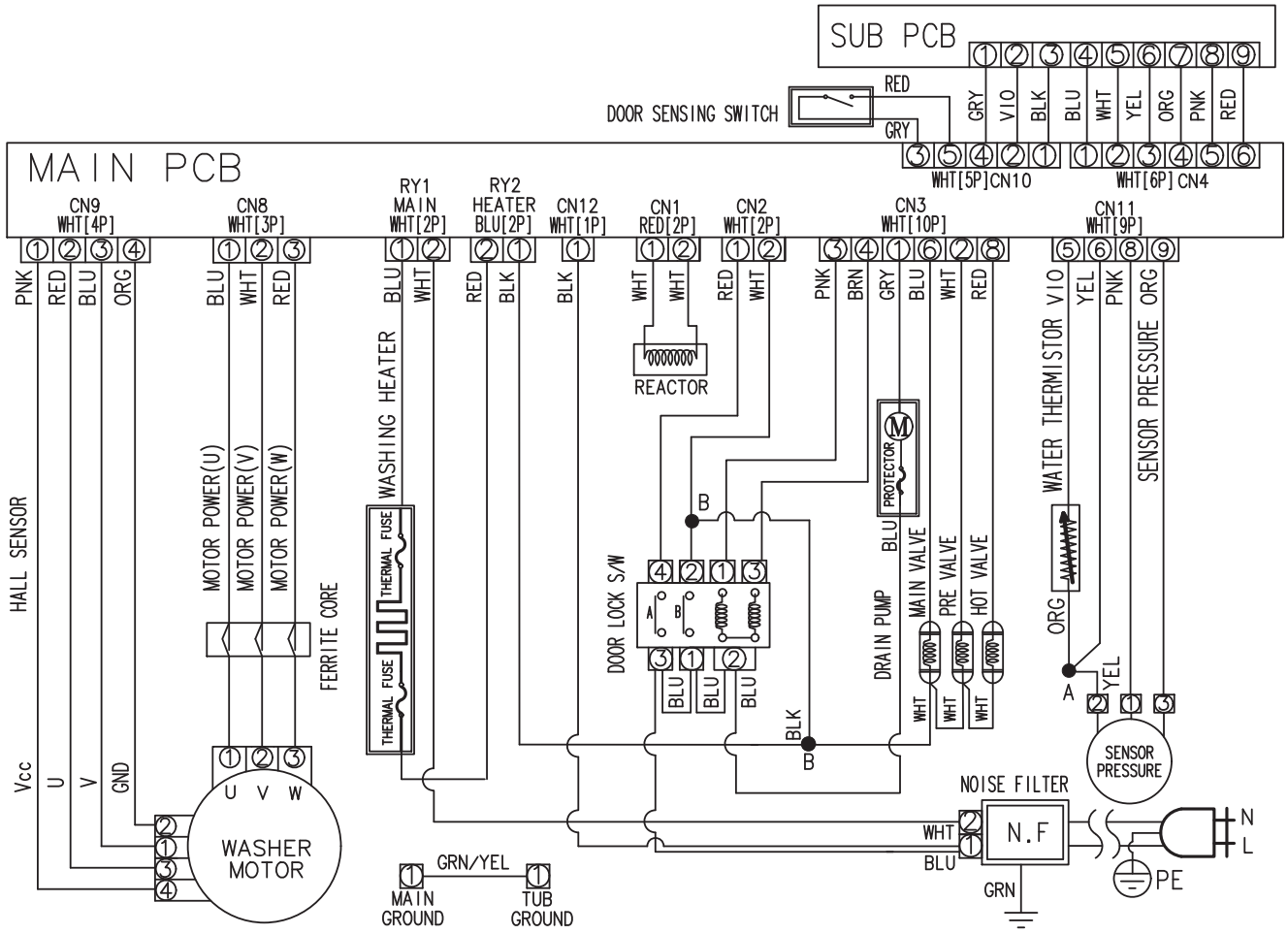
Error Code	Description	Action
3E4	IPM over heating error	• Check integrity of the main PCB. Replace if necessary.
tE	Water thermistor error	• Check integrity of the thermistor. Replace if necessary.
dE	Door open error	• The door is not closed. • - Please close the door again as the washer will not function correctly when the door is left open. • Check the door DC switch. Replace if necessary.
dE1	Door lock error	• The door is not closed. • - Please close the door again as the washer will not function correctly when the door is left open. • If the fault persists and re-appears, replace the door lock switch.
dE3	Door unlock error	• The door is not closed. • - Please close the door again as the washer will not function correctly when the door is left open. • If the fault persists and re-appears, replace the door lock switch. • If the fault persists and re-appears, replace the main PCB.
bE2	Button error	• Check button operation. • If the fault persists and re-appears, replace the sub PCB.
AE	Communication error between Main and Sub PBA	• Check the integrity of the wiring between the main PCB and sub PCB. • Clear the fault and run the cycle. If fault persists and reappears, replace the main PCB.
SF	System Failure error	• Replace the main PBA.
DE2	Door Protection	• This occurs if power to the door circuit is on and off continually and excessive heat is generated.
UE	Out of Balance Error	• Washer was unsuccessful in recovering from an out of balance condition during the final spin and 34 minutes was added to the cycle timer.

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

All warranty service provided by our Factory Service Centers, or an authorized Customer Care® technician. To schedule service on-line, visit us at GEAppliances.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:	*We Will Replace:*
One Year *From the date of the original purchase*	***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