

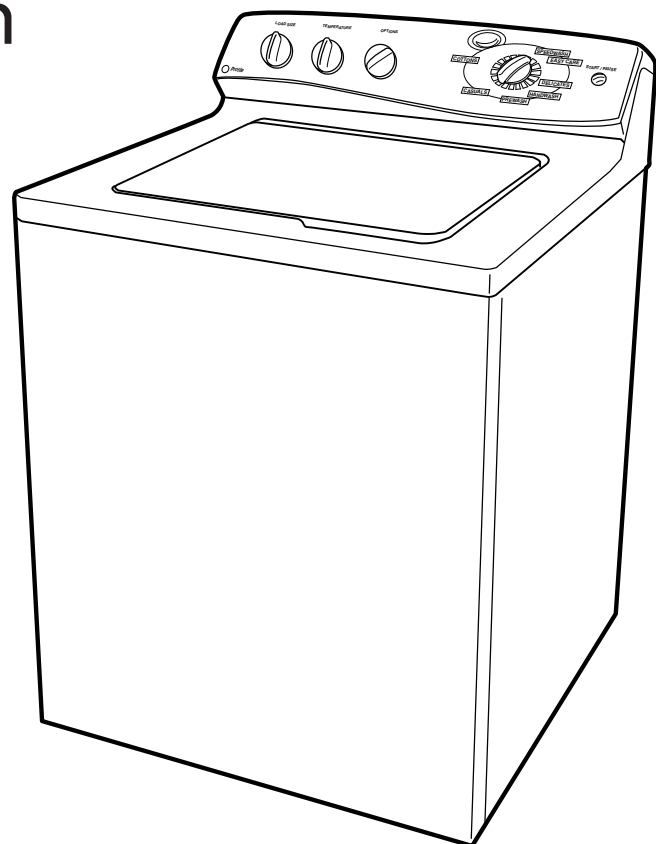
GE Consumer & Industrial

Technical Service Guide

AUGUST 2009

Profile Washers With Infusor Wash System

WCRE6270K
WHRE5550K
WJRE5500K
WJRE5550K
WKRE5550K
WPRE6150K
WPRE8150K



31-9188



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.

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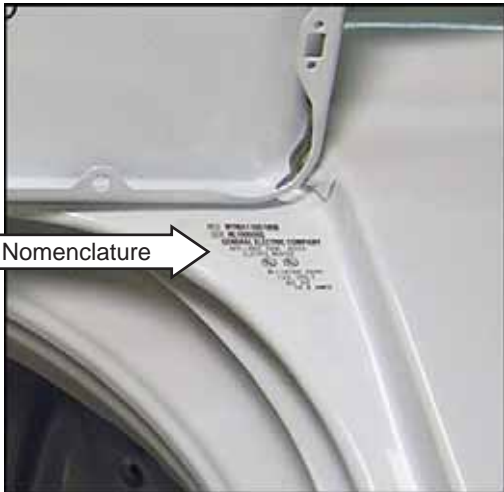
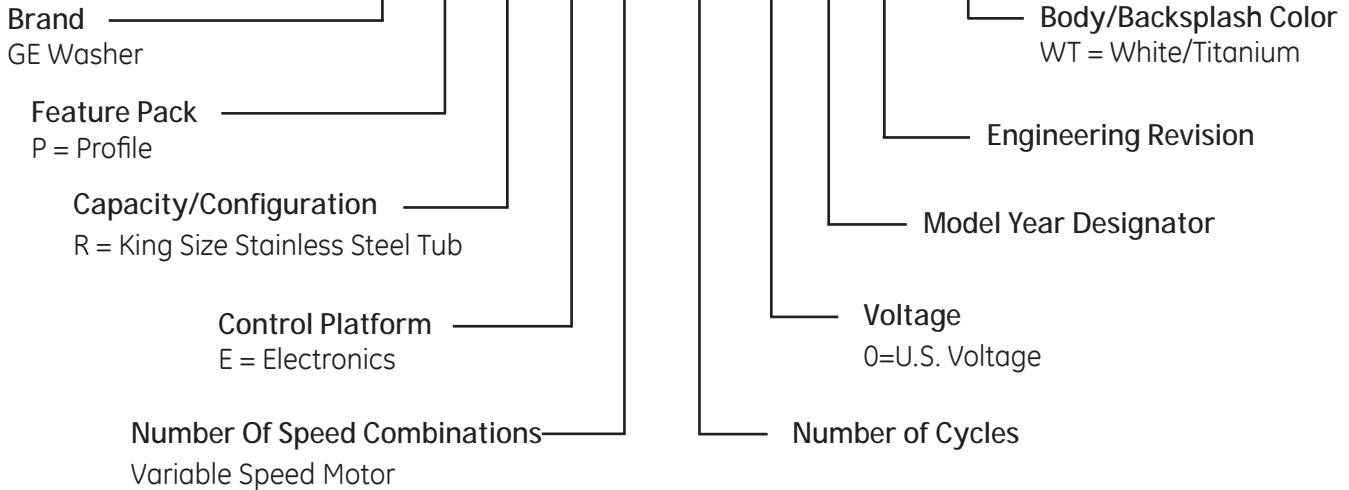
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Nomenclature

W P R E 8 1 5 0 K 2 W T



Nomenclature →

The nomenclature tag is located under the lid in the right rear corner.

The mini-manual is located inside the control panel.

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 Profile washers have the following features:

- HydroWave™ with Infusor™ wash system gently pulls fabric through the water using up to a 630-degree reversing arc motion for a gentle, yet thorough, clean.
- 4.1 cu. ft. colossal capacity handles king-size items and family-size loads, which results in fewer loads and less time.
- ENERGY STAR® qualified meets or exceeds 2009 federal guidelines for year-round energy efficiency and money savings.
- Auto fill system - Automatically measures the load and fills the appropriate amount of water.
- Enhanced load size control - Load size position to enable auto fill feature.
- Variable speed inverter/motor assembly - Provides multiple speeds for delicate to heavy clothes.
- Multiple wash/spin speed combinations - Speeds are matched to fabric type for better clothes care.
- Field Service Mode for electronic diagnostic testing.
- New flow controlled water valve provides constant flow rate of water for the auto fill feature.
- Counterweight (5 lbs.) has been added for better balance control (available as a replacement part).



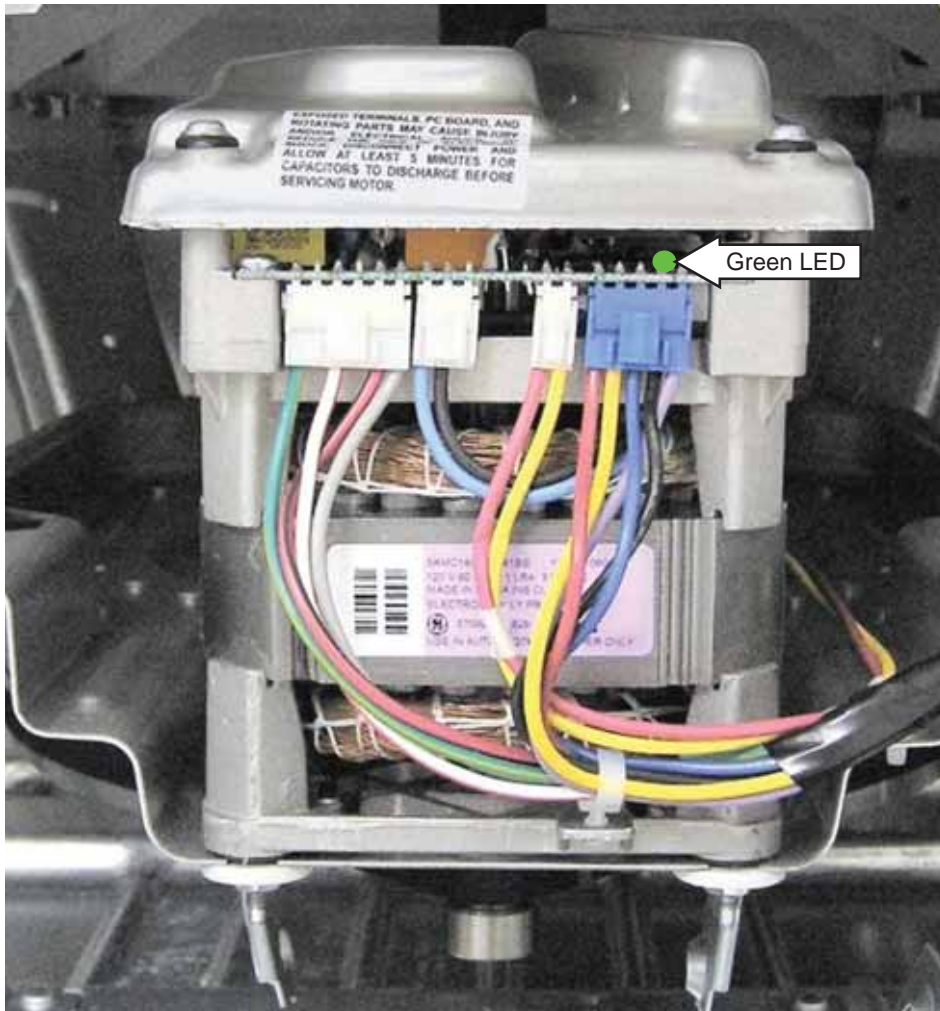
Infusor with Fabric Softener Dispenser



Motor and Drive System

The new Profile washer incorporates a new motor and drive system. The 120-VAC input powers a 3-phase induction inverter/motor assembly. The inverter produces approximately 340 VDC, which is pulse width modulated (PWM) to control motor speed. There is no location to check inverter output voltage to the motor. Voltage given is for information only. The motor is bidirectional, constantly reversing it's direction to provide agitation. The motor is connected by a belt to the shaft and mode shifter assembly. By energizing or de-energizing a coil, the mode shifter assembly engages or disengages the shaft and tube. This allows for agitation and spin cycle modes.

Motor status is displayed through a series of flash codes from a green LED located on the front side of the inverter just above the motor. These codes are stored in memory until cleared. (See *Inverter Motor Error Codes*.)



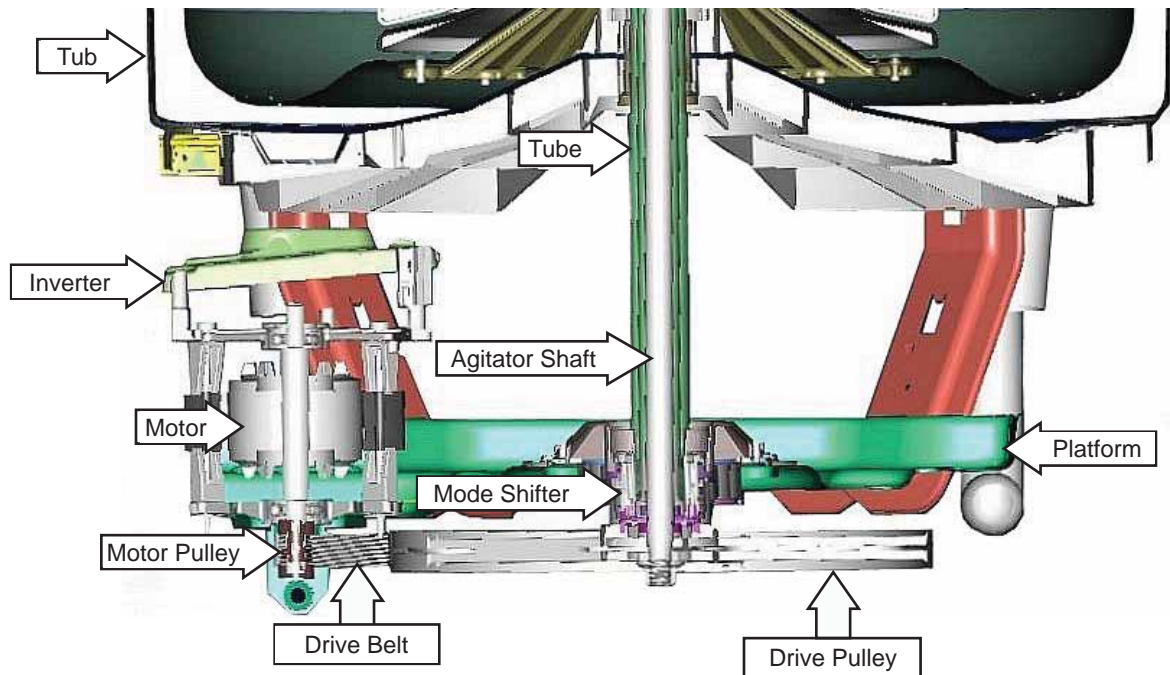
Inverter/Motor

Shaft and Mode Shifter Overview

The shaft and mode shifter assembly consists of the shaft and tube, mode shifter cam, and mode shifter coil. It operates in 2 distinct modes, spin and agitation.

The shaft and tube transfers power to the wash system. Motor power is transmitted to the shaft and tube from the drive belt to the drive pulley. The drive pulley is attached to one end of the infusor shaft and the infusor is attached to the other. The tube is fixed to the washer basket at all times.

The mode shifter changes the shaft and tube from spin to agitation. In agitation mode, the tube is fixed to the platform and the infusor shaft rotates freely. In spin mode, the infusor shaft is fixed to the tube and both rotate together.

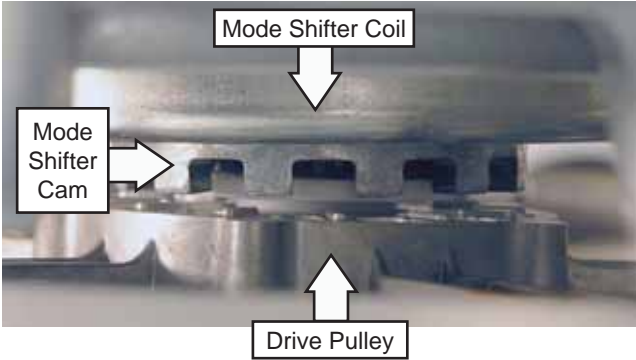


View from Right Side

Shaft and Mode Shifter Assembly

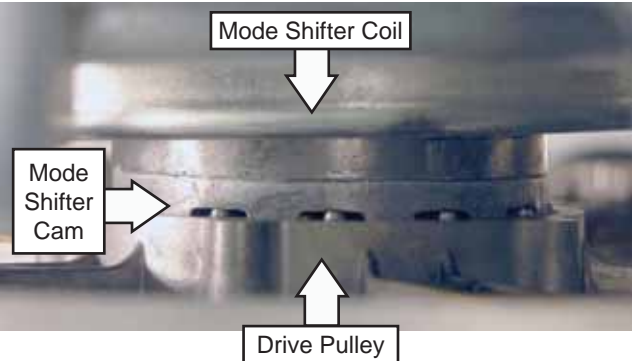


Agitate Position



Note: Mode shifter coil energized for agitate mode; cam teeth disengaged from drive pulley.

Spin/Idle Position



Note: Mode shifter coil de-energized for spin/idle mode; cam teeth engaged in drive pulley.

Mode Shifter Operation - Agitation

The mode shifter is controlled by the motor inverter circuit. When the washer starts the agitation cycle, the inverter energizes the mode shifter coil. The magnetic field of the coil lifts the mode shifter cam, disengaging it from the drive pulley. Without the cam engaged, the drive pulley rotates only the agitator shaft.



At the beginning of the agitation cycle, the inverter energizes the mode shifter coil with 135 VDC (PWM) for approximately 18 seconds. This high voltage pulls the mode shifter cam up from the drive pulley. During this time, the motor also rotates clockwise and counterclockwise in short strokes to ensure the mode shifter cam has been released from the drive pulley. This operation is called the **Mode Shifter Agitate Program**. It is normal to hear metal-to-metal "clunking" sounds during this time as the cam and drive pulley disengage. The washer runs this program when the agitation cycle first starts, when power is restored if lost during agitation or when the user restarts the washer if paused during agitation.

Once the Mode Shifter Agitate Program has completed (18 seconds), agitation begins. During agitation, the inverter continues to supply 30 VDC (PWM) to the mode shifter coil. This voltage is sufficient to hold the mode shifter cam away from the drive pulley throughout the remainder of the agitation cycle.

The inverter motor controls the speed of agitation. The agitator stroke rate is approximately 30 strokes per minute. This rate is the same for all cycles. The speed of the motor controls the arc. At fast speed, the arc is approximately 630 degrees. At slower speeds, the arc is substantially less. It is the distance of the arc that determines normal or gentle wash cycles.

Mode Shifter Operation - Spin



At the beginning of the spin cycle, the inverter runs a short sequence (approximately 30 seconds) to make certain the mode shifter cam is engaged with the drive pulley. The inverter does not supply voltage to the mode shifter coil during this sequence. Since the coil is not energized, the spring loaded cam drops down into the teeth of the drive pulley. During this time, the motor also rotates clockwise and counterclockwise in short strokes to ensure the cam has engaged with the drive pulley. This 30 second operation is called the **Mode Shifter Spin Program**. It is normal to hear metal-to-metal "clunking" sounds during this time as the cam and drive pulley engage.

Notes:

If the washer is paused while in agitation, it is NORMAL to hear sounds for an additional 30 seconds as the inverter control runs the Mode Shifter Spin Program to de-energize the coil and enter a pause state.

If the washer is in agitation and power is lost, the inverter control will run the Mode Shifter Agitate Program when power is restored.

If the washer is in spin and power is lost, the inverter control will run the Mode Shifter Spin Program when power is restored.

To help prevent out-of-balance conditions, the last 10 seconds of agitation on certain cycles will be short, fast strokes to help redistribute the clothes load prior to entering the spin cycle.

Clothes Movement – Infusor vs Agitator



Agitator

- Clothes move down the center and up the sides.
- Clothes movement requires sufficient water to “float” the clothes.
- Agitator moves the water and the water movement moves the clothes.
- Water Level Range: 11 – 24 gallons per fill.
- Stroke Profile – Cottons Cycle
 - Speed = 80 rpm
 - Arc Length = ~1.0 revolutions

Infusor

- Clothes move up the center and down the sides.
- Clothes movement requires less water than is required to “float” the clothes.
- Infusor moves the clothes directly. Clothes contact with the Infusor moves the clothes through the water without them having to float, in turn requiring less water.
- Water Level Range: 10-15.5 gallons per fill.
- Stroke Profile – Cottons Cycle
 - Speed = 135 rpm
 - Arc Length = ~ 1.8 revolutions

Precise Fill

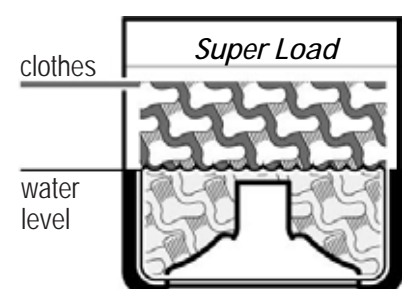
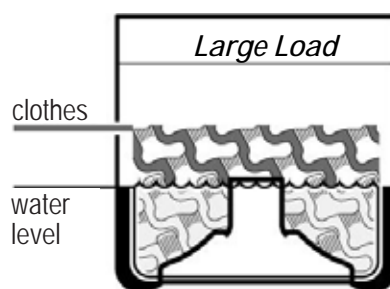
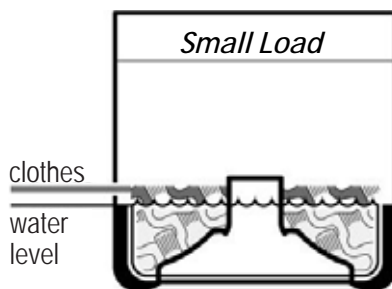
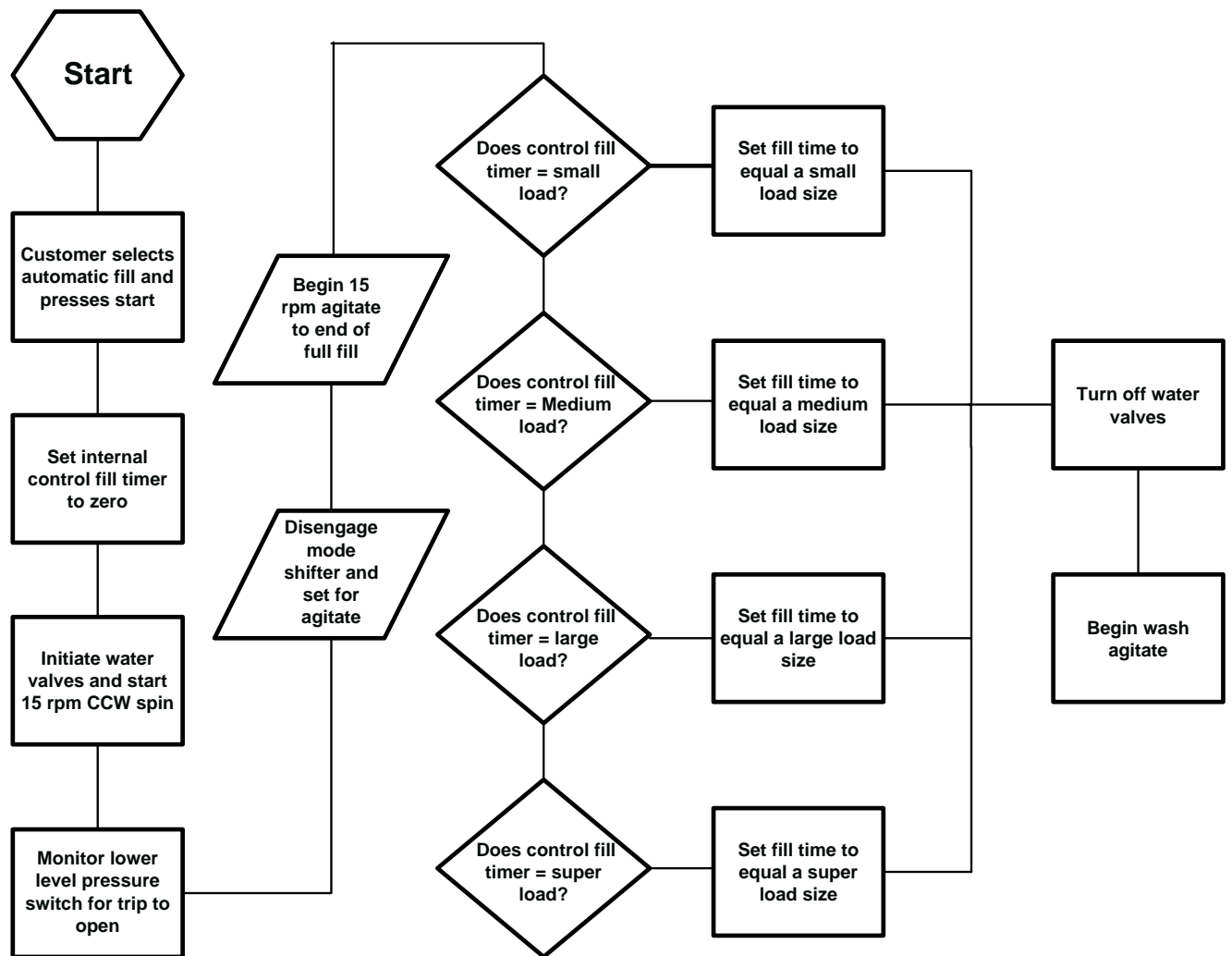
The manual load size settings selected by the consumer are fixed time fills, the pressure switch does not control fill timing.

When Automatic Load sensing is selected the machine determines how long the fill timing will be by monitoring the lower level pressure switch, the control receives the input from the lower switch and then determines the load size and fill timing for that load.

The washer will not fill with water when automatic load sensing is selected if the lid is opened.

When the lid is closed the machine is able to begin filling with water in order to sense the load size.

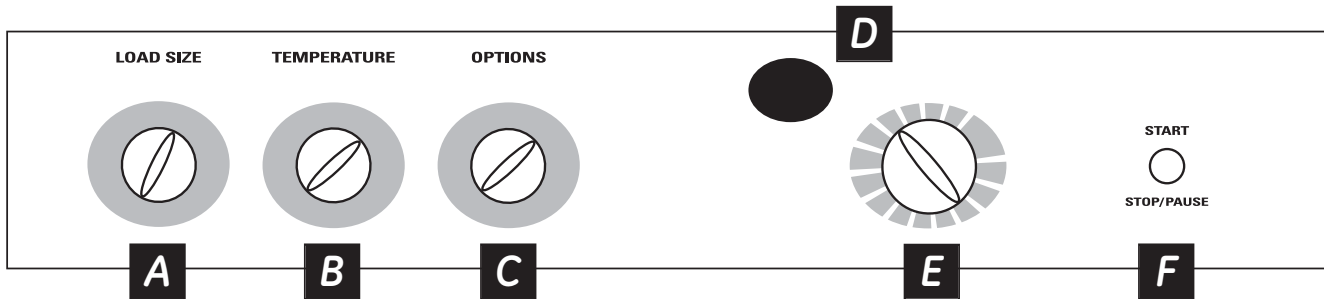
Precise Fill - how it works



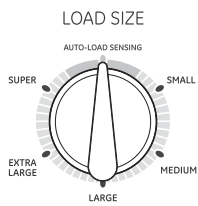
Control Features

Features and appearance may vary between models.


Profile Models



Controls



A Load Size

- Add  detergent to the bottom of the basket and fabric softener to the dispenser prior to loading clothes.
- Loosely load clothes no higher than the top row of holes in the basket. For optimal performance, load items around the outside of the basket.
- Make the load selection from **SMALL**, **MEDIUM**, **LARGE**, **EXTRA LARGE**, **SUPER** and **AUTOMATIC LOAD SENSING**:
 - For convenience, best performance and optimal efficiency, select **AUTOMATIC LOAD SENSING**. This selection automatically provides the correct amount of water suited to the size and type of load placed in the unit.
 - If you prefer to manually select the water level, select **SMALL** through **SUPER**. While **AUTOMATIC LOAD SENSING** is best for most loads and general washing, you may want to manually select the load size for specialty items such as bulky, lightweight comforters or pillows, where you want to ensure a larger water level is applied. Manual load size selections should be made for wet items placed in the washer, such as soaked towels or garments.
 - The washer will not fill with water when automatic load sensing is selected if the lid is opened. When the lid is closed the machine is able to begin filling with water in order to sense the load size.

NOTE: This is a high-efficiency washing machine with Infusor™ wash action. This system requires less water while providing effective cleaning action. You may notice that the water level is lower than on your previous washer. This is normal for an Infusor™-equipped washer. The water level will be just above the top of the Infusor™ when the SUPER WASH size is selected.

B Temperature

Select the water temperature for the wash and rinse cycles. Always follow fabric manufacturer's care label or instructions when laundering.

PerfecTemp senses the incoming water temperature and adjusts the fill water to obtain a more precise temperature range for all wash temperatures. For example, in a COLD wash selection, some warm water may be added to reach a temperature needed to better dissolve detergents. Often, detergents are not completely dissolved in very cold water, especially in cooler climates.

During winter months, when the water entering your home is colder, or for locations with very cold water year round, use the **PerfectTemp** plus COLD to help dissolve powdered detergents and to improve the cleaning of your clothes. The **TAP COLD** feature turns the **PerfectTemp** feature on your washer off and uses your household tap water temperature for a COLD wash. This can provide energy savings by reducing the amount of hot water used in your wash.

C Options

Autosoak Option (on some models)

This option begins with a brief agitation, soaks for a specified period of time, then moves through the rest of the cycle automatically. On some models, this option is located on the Cycle Selector knob.

2nd Rinse Option (on some models)

When you use extra detergent or bleach to clean heavily soiled clothes, you may want to use the 2nd Rinse option. It provides a second deep cold rinse.

Extended Spin Option (on some models)

Use this option to extract more water from your clothes. Clothes will be drier when this option is selected and will dry more quickly in your dryer.

Fabric Softener

Set this option when adding fabric softener to the washer.

NOTE: Do not use fabric softener dispensing balls with this washer. They do not work correctly in high-efficiency washers.

D Estimated Time Remaining Display

- Displays the **approximate** time remaining until the end of the cycle.
- If the estimated time remaining is more than 60 minutes, "1H" will flash in the display followed by the additional remaining minutes. When the time remaining is less than 60 minutes, the timer will count down.
- Cycle time is affected by how long it takes the washer to fill. This depends on the water pressure in your home. The "smart" timer "learns" the amount of time it takes to fill your washer and adjusts the total time accordingly.

E Wash Cycle—Cycle Selector Knob

The wash cycle controls the length of the washing process. The knob can be turned in either direction. Turning the Cycle Selector knob after starting a cycle will stop the washer and reset the cycle to the new selection. Press **START** to begin the new cycle selection.

The chart below will help you match the wash cycle setting with your clothing.

COTTONS	For heavy to lightly soiled cottons, household linens, work and play clothes. This cycle provides the best overall cleaning and should be used for most everyday items. Provides a high speed spin.
PREWASH	For removing surface dirt from heavily soiled clothes. Make sure to follow with a regular wash cycle.
CASUALS	For wrinkle-free and permanent press items and knits. Provides a low speed spin.
EASY CARE	For wrinkle-free and permanent press items and knits. Provides a high speed spin.
DELICATES	For lingerie and special-care fabrics with light to normal soil. Provides a low speed spin.
HAND WASH	For items labeled handwashable with light soils. Provides an extra low speed spin.
SPEED WASH	For small loads of lightly-soiled items that are needed in a hurry. Provides a high speed spin.
DRAIN & SPIN	For draining the tub and spinning water out of clothes. Provides a high speed spin.
TOWELS & SHEETS	This cycle provides periods of agitation and soak tailored for washing towels and sheets. Provides a high speed spin.
JEANS	For washing medium to lightly soiled jeans. For heavily soiled work jeans, use COTTONS HEAVY cycle. Provides a high speed spin.
QUICK RINSE	Rinses and spins non-soiled items where a rinse only is desired. Provides a high speed spin.

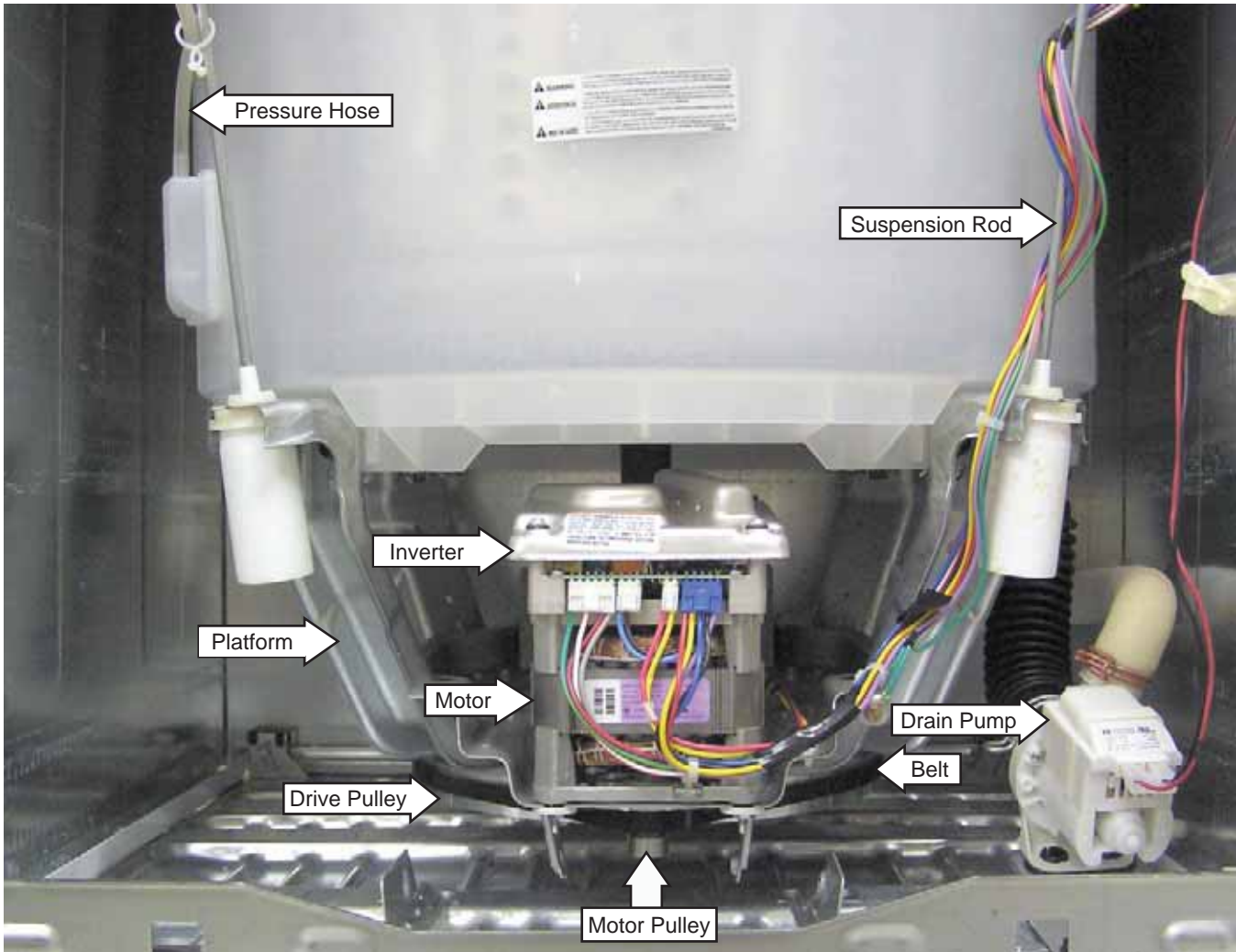
F START

Press **START** to begin the cycle. **NOTE:** The lid must be closed for the washer to fill and the cycle to start. Pressing **START** again will **PAUSE** the cycle and the cycle indicator light will blink.

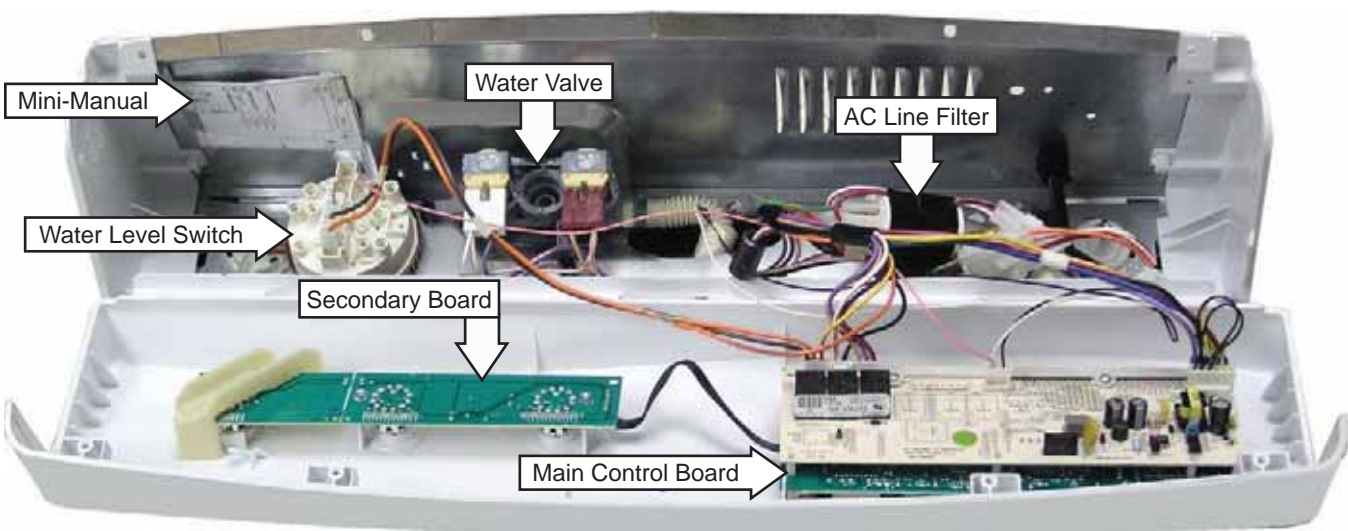
To continue the cycle, press **START** again. If machine is paused more than 24 hours, the cycle will be cancelled. To stop the cycle, hold the button for 3 seconds. If water remains in the machine, select the **DRAIN & SPIN** cycle to drain tub and spin water out of the washer tub.

Component Locator Views

Front View



Control Panel (in service position)

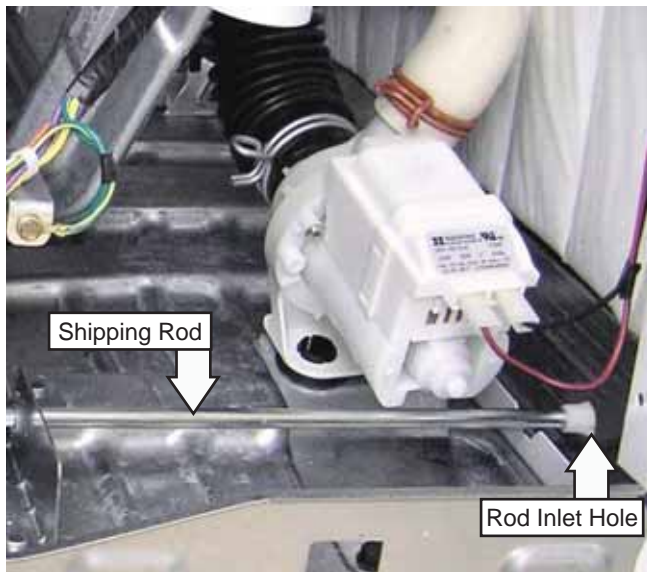


Washer Components

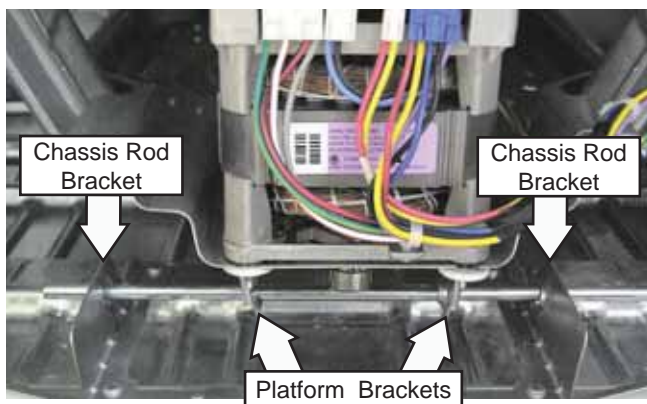
WARNING: Sharp edges may be exposed when servicing. Use caution to avoid injury. Wear Kevlar gloves or equivalent protection.

Shipping Rod

There is a new location for the shipping rod. The rod is inserted and removed through a hole located on the lower right side of the cabinet and now passes in front of the drain pump.



The shipping rod passes through the chassis rod brackets and the platform brackets.



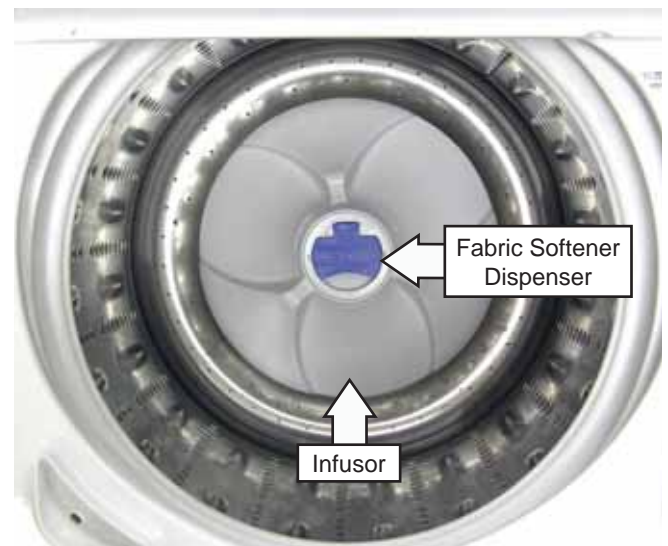
Leveling Legs

The front legs are screw type and are adjusted by turning the legs counterclockwise to increase height. The rear leveling legs are contained in an assembly and will level the rear of the washer left to right.

To level the washer, tilt the washer forward to lift the rear legs off the floor, then gently set it back down. Adjust the front leveling legs to level the washer front to back and left to right across the front.

Infusor

The infusor is attached to the top of the infusor drive coupling with a 7/16-in. hex-head bolt. It is necessary to remove the fabric softener dispenser to access the hex-head bolt.



To remove the infusor:

1. Lift the dispenser top tab. Using the 2 turning tabs, turn the top approximately 1¼ inches counterclockwise.



2. Lift the dispenser out of the infusor.

Note: In the following step, there are 3 O-rings on the hex-head bolt. They are needed for proper operation of the fabric softener dispenser. Make certain the O-rings are in place on the hex-head bolt when reassembling.

3. Remove the 7/16-in. hex-head bolt that attaches the infusor to the drive coupling.



4. Lift the infusor out of the washer.

Note: There are 2 O-rings on the softener dispenser. These must be intact and not damaged. If either O-ring is leaking, softener will be dispensed during the wash cycle.

Control Panel

It is necessary to remove the control panel from the backguard and place it in the service position to access:

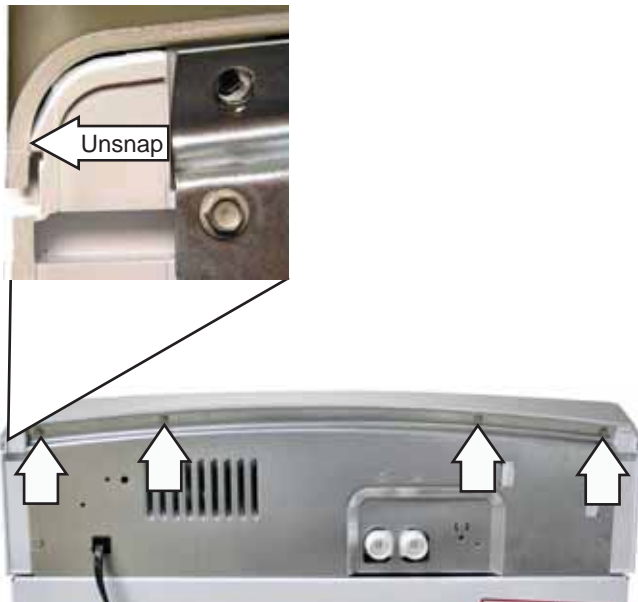
- Control circuit board
- Water level switch
- Water valve
- AC line filter
- ATC Thermistor

To place the control panel in the service position:

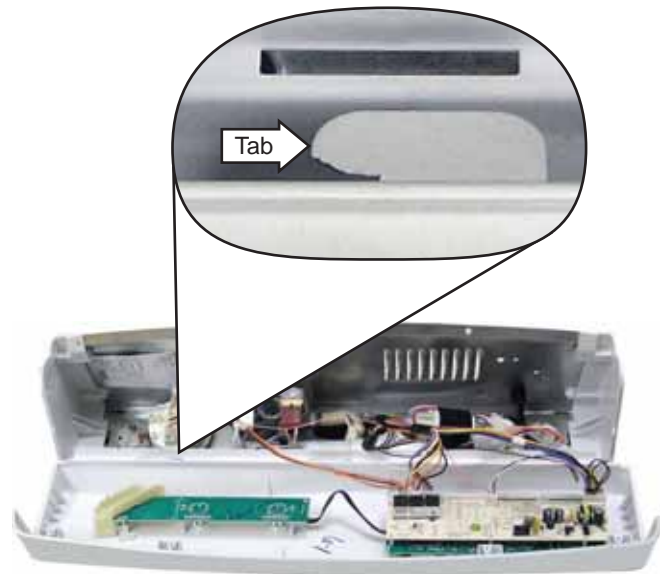
Caution: To prevent damage to the control panel, place a protective pad on the cover/lid assembly.

Note: The control panel is attached to the washer with four 1/4-in hex-head screws at the top and 3 tabs that engage 3 slots in the cover/lid assembly.

1. Disconnect power.
2. Remove the four 1/4-in. hex-head screws from the rear of the control panel.
3. Gently pull out each top rear corner to unsnap the control panel from the sides of the unit.



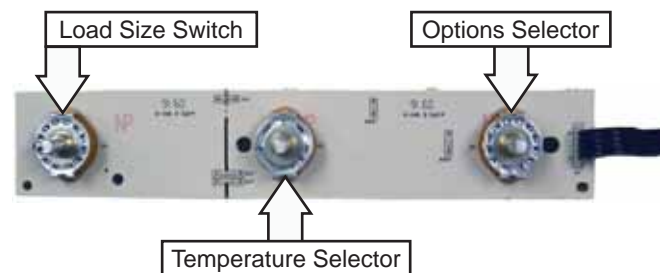
4. Rotate the top of the control panel forward approximately 1 inch and slide to the right to unlock the 3 bottom locking tabs.
5. Lift the panel up and off the cover panel and rotate down.



Service Position

Control Board Assembly

The control board assembly is mounted on the inside of the control panel. It is inserted in 3 panel slots and held in place by 5 screws. It consists of a secondary board permanently connected to the main board with a ribbon. The secondary board contains the water temperature control and the options selector.



Note: The options selector has detents between some of the settings. The washer will function if the knob is inadvertently set at one of the unmarked detents. Following a clockwise direction, all unmarked detents have the same value as the marked detent before it. The highlighted areas below show an example of what settings would be selected.

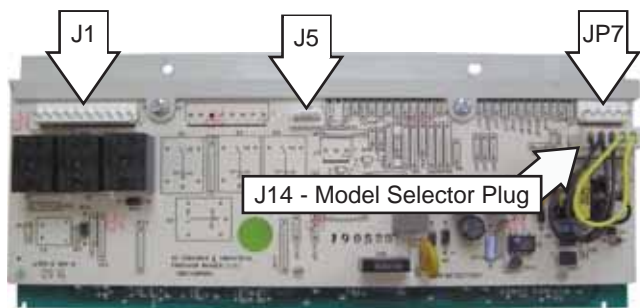


The main control board has harness connections at locations J1, J5, and JP7, and a model selector plug located at J14. When the control receives power, it checks for the presence of the model selector plug.

If no plug is detected, all LEDs will flash. Pressing the start button has no effect on control operation. All LEDs will stop flashing once a plug is installed.

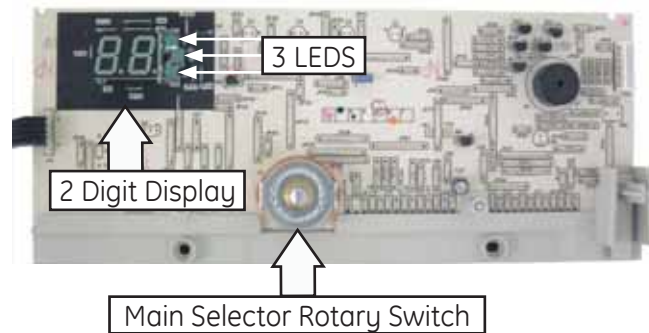
Note: The model selector plug must be transferred when control board is replaced.

Main Control Board - Rear View



Note: The LEDs in the 2 digit display can be as much as 1/8-in. lower than the description on the backslash.

Main Control Board - Front View

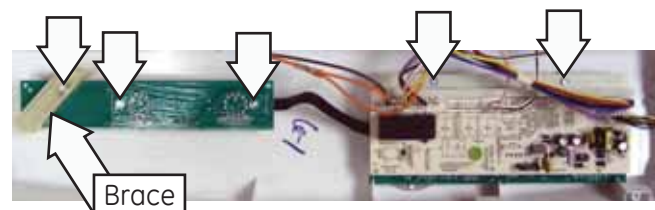


To remove the control board assembly:

1. Disconnect power.
2. Place the control panel in the service position. (See *Control Panel*.)

Note: The knobs are **NOT** mounted to the controls or switches. Each knob rests and rotates on a collar imbedded in the control panel. The collar protects the component from damage if something hits the knob. A locking on the back of the knob secures the knob to the collar.

3. Remove the control, temperature, and options knobs by gently pulling each outward.
4. Disconnect wire harnesses J1, J5, and JP7 from the main control board.
5. Remove the two 1/4-in. hex-head screws from the main control board and the three 1/4-in. hex-head screws and the brace from the secondary board.



Water Valve

The water valve is a 120 VAC, dual solenoid type, and is accessed by placing the control panel in the service position. It is inserted and retained in a cutout in the rear of the backguard and held in place by 2 hex-head screws. It is only available as a complete assembly.

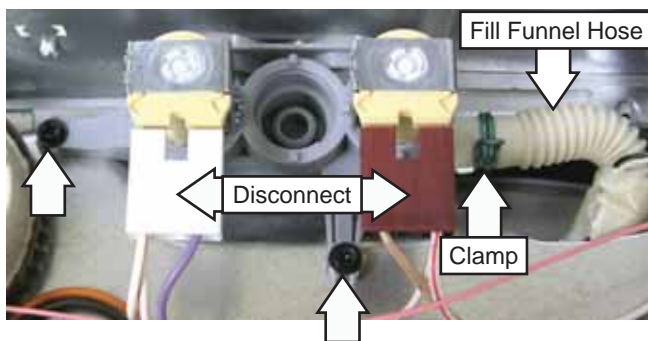
- The water valve has a flow rate of 2.8 gallons per minute on the cold side and 1.8 gallons hot side.
- If the pressure switch is not satisfied within 20 minutes, a fill error code will be recorded. If the pressure switch has not opened in 45 minutes, the main control will de-energize the water valve and place the washer in pause mode.
- Each solenoid coil has an approximate resistance value of 1.1K Ω .

To remove the water valve:

1. Disconnect power.
2. Place the control panel in the service position. (See *Control Panel*.)
3. Remove the fill hoses from the water valve.
4. Disconnect the white wire harness from the hot water (H) solenoid valve.
5. Disconnect the red wire harnesses from the cold water (C) solenoid valve.

Note: The fill funnel hose is difficult to remove.

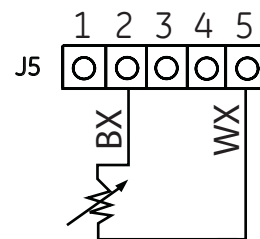
6. Remove the fill funnel hose. Squeeze the clamp and slide it back. Carefully break the hose loose by inserting a small flat-blade screwdriver under the hose to break the seal.
7. Remove the two 1/4-in. hex-head screws that hold the valve to the cabinet.



Automatic Temperature Control (ATC)

- The automatic temperature control (ATC) is a feature that utilizes a thermistor to regulate the water fill temperature.
- The thermistor has a negative temperature coefficient (as temperature increases, resistance decreases).
- The thermistor is located in the outlet of the fill funnel and will measure 50K Ω at room temperature (77°F / 25°C).
- If the thermistor reads outside the expected range (10K - 120K Ω), the main control will default to the following pre-programmed fill temperature settings:
 - Top Cold = cold water valve only
 - Cold = cold water valve only
 - Cool = hot and cold water valves
 - Colors = hot and cold water valves
 - Warm = hot and cold water valves
 - Hot = hot water valve only
- When both valves are energized, the internal orifices in the valves meter the flow to a 60% cold and 40% hot ratio.
- With the lid open, ATC will remain activated. The temperature of the water entering the washer with the lid open may vary greatly from customer expectations due to the cycling of the fill valve solenoids.
- Extreme water temperatures at low pressure can cause the ATC to use its maximum number of activations and revert to a preset fill routine. The main control will not allow the water valve to cycle more than 25 times per fill.

Resistance can be measured at the wire harness located on the control board location J5. Make sure to unplug the connector to isolate the thermistor before taking resistance readings.



To determine the temperature of the incoming water, the main control measures the difference between the voltage sent and the voltage returned from the thermistor. The main control then makes temperature adjustments accordingly.

(Continued next page)

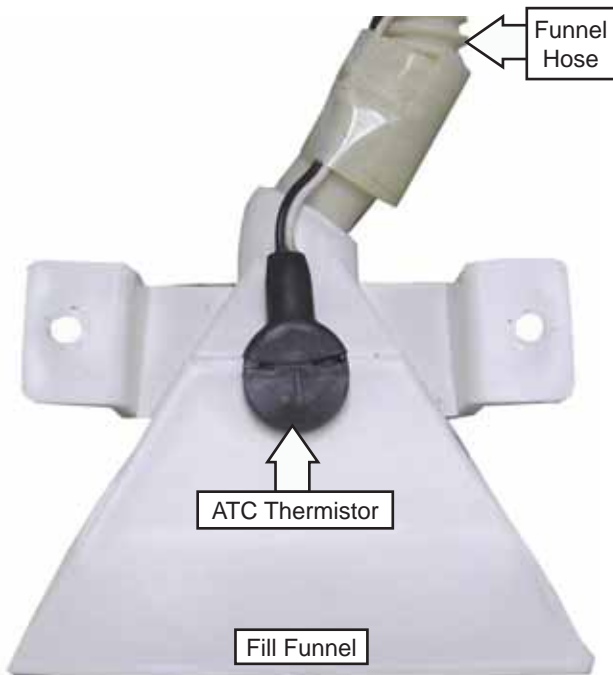
The main control should fill the tub with water within +/- 10 to 15°F of set temperature by opening or closing the hot and cold water valves.

ATC Temperature Chart	
Temperature Setting	Water Temperature
Tap Cold	Cold Tap Water
Cold	62°F (+/- 10°F)
Cool	70°F (+/- 10°F)
Colors	80°F (+/- 10°F)
Warm	90°F (+/- 10°F)
Hot	110°F (+/- 15°F)

To remove the ATC thermistor:

1. Remove the control panel. (See *Control Panel*.)
2. Disconnect the thermistor wire harness from the water level switch. (See *Precise Fill Pressure Switch*.)
3. Remove the funnel hose from the water valve.
4. From inside the tub, remove the two 1/4-in. hex-head screws that attach the fill funnel to the washer.
5. Pull the fill funnel and wires down through the opening.
6. Remove the tape, pull and unsnap the thermistor from the top of the fill funnel.

Note: Make certain the gray rubber gasket is in place on the thermistor when reassembling.

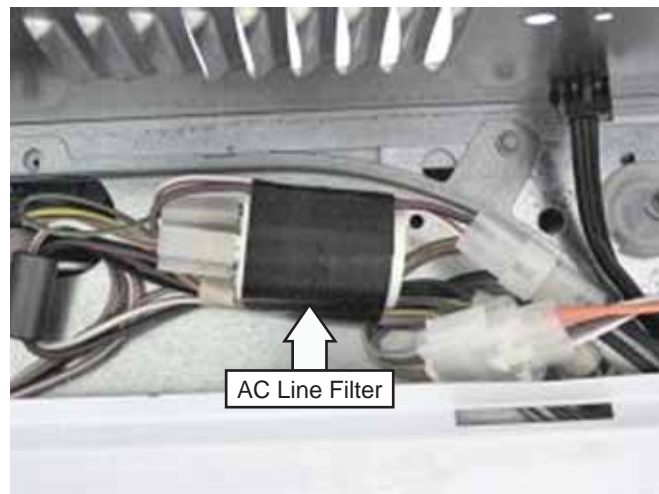


AC Line Filter

The potential exists for the washer to cause electronic devices in the vicinity to experience disruption. In addition, electrical devices in the area could cause erratic behavior in the washer electronic control. To eliminate the likelihood of disruption, the washer is equipped with a conductive noise filter. Should interference with electronic devices or erratic control behavior be reported, suspect a problem with the filter. The ground wire attached to the filter must have a good connection for the filter to operate properly. Check to make certain that the ground wire is connected properly before replacing the filter.

The filter is accessed by placing the control panel in the service position. (See *Control Panel*.)

Note: When untaping and disconnecting the wires from the AC line filter, note wire locations.



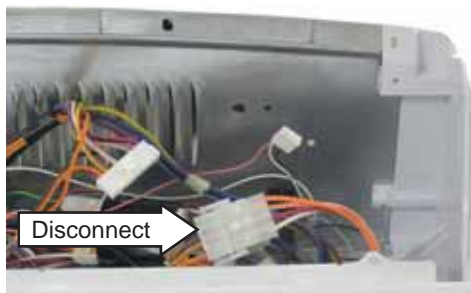
Cover/Lid Assembly

The cover/lid assembly is fastened at the front by 2 screws, on the sides by 4 metal catches, and at the back by 3 locking tabs that protrude from the bottom of the control panel. (See *Control Panel*.)

Note: Do not allow lid to swing open when cover/lid assembly is removed. Damage may result.

To remove the cover/lid assembly:

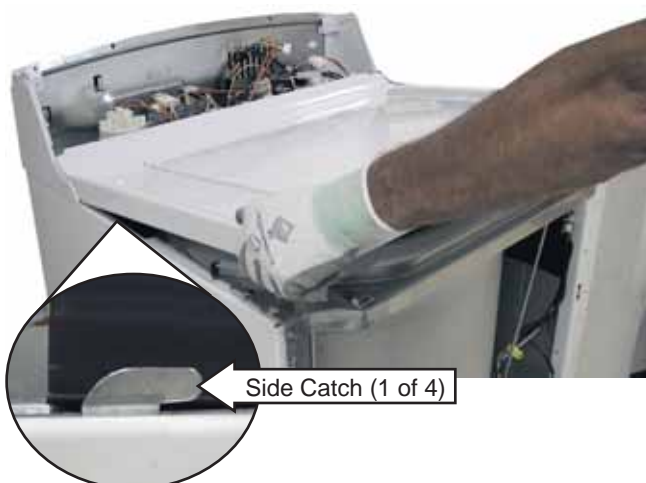
1. Remove the control panel. (See *Control Panel*.)
2. Disconnect the lid switch wire harness.



3. Remove the two 1/4-in. hex screws securing the front of the cover/lid assembly to the cabinet.



4. Pull the cover/lid toward you while lifting up the front edge to release the 4 side catches.



Precise Fill Pressure Switch

The precise fill pressure switch is a 2-stage switch, consisting of upper and lower level switches.

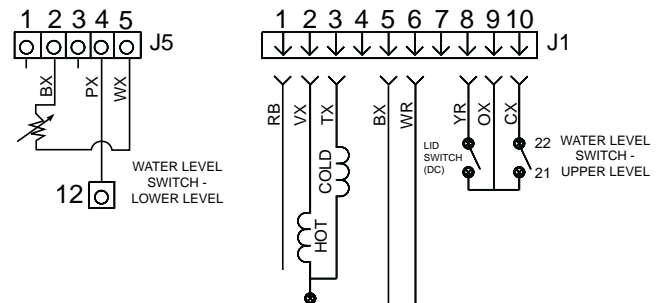
The lower level switch is used to control fill timing through the control software for auto load sensing.

The upper level switch is not used. It is a safety switch, which will tell the control to turn off the water valves in case of a lower pressure switch failure.

In case of a siphoning condition or leaking/plugged pressure dome port/hose, the control will turn off the water valves after 40 minutes.

The lower level pressure switch is a normally closed contact and will open when there is approximately 4" of water depth in the wash basket. Continuity or DC voltage can be read from pink to orange on the main control or 12 to 21 on the pressure switch.

CONTROL CIRCUIT BOARD



(Continued next page)

Fill Levels and Testing

The minimum fill volume on the setting of **SMALL** is 10 gallons. The water level will measure approximately 6" above the bottom of the basket or just above the fourth row of holes.*

On the **SUPER** setting the fill volume is 15.5 gallons. The water level will measure approximately 9" above the bottom of the basket or just above the eighth row of holes.*

SUPER setting is the only setting where the water will come up to the top of the Infusor.

Minimum Fill Level



* Measured water levels are approximate and can vary +/- 1".

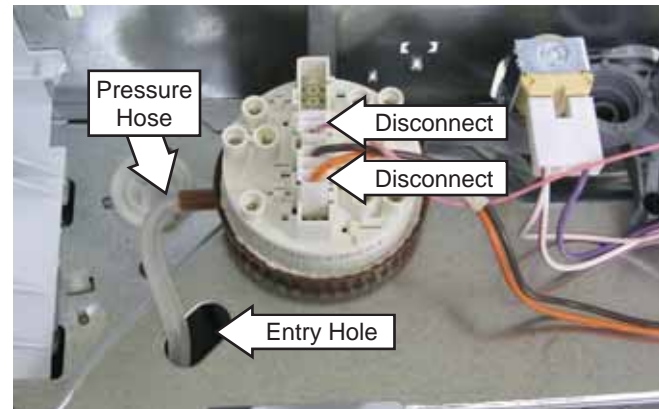
A quick check of pressure switch operation is to monitor the mode shifter. When the lower pressure switch opens, the mode shifter disengages the 15 rpm fill/spin and the shifter resets for wash agitate. It will slow agitate at 15 rpm until the fill time is reached.

This opening of the lower switch contact occurs at approximately 4 inches water depth or just above the bottom section of the Infusor.

Due to fill timing, water pressure is critical. These units will not fill to proper levels with water pressure under 20 psi or clogged valve inlet screens.

To remove the precise fill pressure switch:

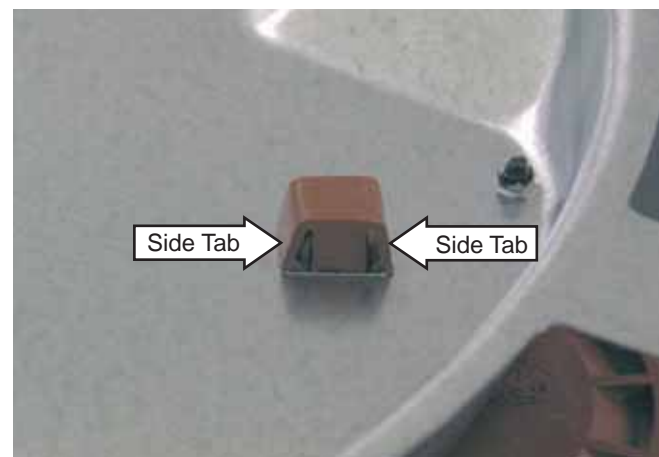
1. Remove the cover/lid. (See *Cover/Lid Assembly*.)
2. Disconnect the 2 wire harnesses and remove the pressure hose attached to the pressure switch.
3. Push the disconnected end of the pressure hose through the entry hole in the back frame.



4. Remove the four 1/4-in. hex-head screws that attach the back frame to the cabinet.



5. Turn the back frame over, compress the side tabs, and remove the precise fill pressure switch.



Lid Switch Assembly

The lid switch assembly consists of 2 magnetically operated switches, enclosed in a plastic housing. One switch controls AC voltage and the other DC voltage.

The lid switch assembly is located under the cover/lid assembly at the right front corner of the lid recess. The switch assembly is held to the underside of the cover by a latch plate and a Phillips-head screw.

The switch assembly is a safety feature that prevents washing or spinning when the lid is open. Both switches are closed by a magnet attached to the lid. When the lid is shut, the magnet will cause both switches to close, allowing normal functions to occur. When the lid is opened, both switches will open, which will prevent washing or spinning.

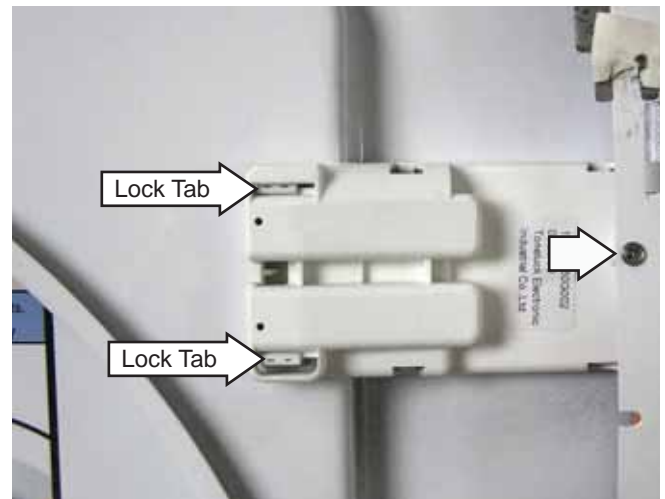
If the lid switch:

- Is closed, it will provide 120 VAC to the inverter/motor assembly at pin 6 of the C2 connector.
- Is open, agitation and spin will not occur, the control will beep and display lid to signal the lid should be closed.
- Was opened during a cycle, left open and the timer finished the cycle, when the lid is closed again, the inverter completes a spin algorithm to ensure the mode shifter is de-energized.
- Is open, the ATC will be disabled during the time the lid is open.
- Opens during agitation, the control will keep the mode shifter energized. When the lid switch closes while still in agitation, the washer will resume agitation.
- Opens during the execution of the mode shifter agitate program, the control will stop the agitate program and drop the mode shifter voltage to 0 VDC. When the lid switch is closed again, the control will run the mode shifter spin program and then re-run the agitate program from the beginning.
- Opens during the mode shifter spin program, the control will stop the spin program. When the lid is closed again, the control will run the spin program from the beginning.

Note:

- Lid switch openings are not retained in memory if power is interrupted.
- As a safety measure, the inverter control monitors lid openings by recording motor run sequences. If the control runs 4 continuous agitation/spin cycles (usually 2 complete wash cycles) WITHOUT seeing the lid switch open, it will shut down the motor and initiate a lid switch error code. This error will prevent the motor from operating until the problem is repaired.

To access the lid switch assembly, it is necessary to remove the cover/lid assembly. (See *Cover/Lid Assembly*.) To release the switch assembly from the cover/lid assembly requires opening the lid and pressing the lock tabs on the latch plate outward and removing the Phillips-head screw. A plastic compression tab attaches the switch wire harness to the cover/lid assembly. The switch assembly can then be removed from the cover/lid.



Front Panel

The front panel is a removable, galvanized sheet metal section. The front panel is fastened at the top by 2 metal spring clips, and at the bottom by 2 metal tabs, which protrude from the base of the unit into slots in the panel bottom.

Most major mechanical components can be accessed by removing the front panel.

To remove the front panel:

1. Locate 2 spring clips between the top cover and front panel by aligning a putty knife with left or right edge of lid.
2. Insert the putty knife and push forward to release clips.



3. Rotate the front panel forward and lift off the bottom tabs.



Drain Pump

The drain pump is coupled to a 120 VAC, 60 Hz, 85 watt motor. The pump motor has an approximate resistance value of 12 Ω .

The main control monitors the pump for proper operation. If no current is detected, or current detected is stable, exhibiting no change during pump out, the control will initiate a field service error code.

Note: If a wash cycle has started and the customer stops the washer by holding the Start/Pause button for 3 seconds, the pump will not drain any water from the tub. The washer will go through a spin algorithm to de-energize the mode shifter and shut down. The water stays in the tub.

Adaptive Drain

The adaptive drain consists of the board sampling the drain pump current during pump out. The control will then turn off the drain pump during the spin cycle. The control will periodically turn the pump back on and resample the pump current draw. If the control does not sense the higher sampled current draw, indicating pumped water, the control will turn off the drain pump.

This feature has benefits for suds lock control and less energy consumption.

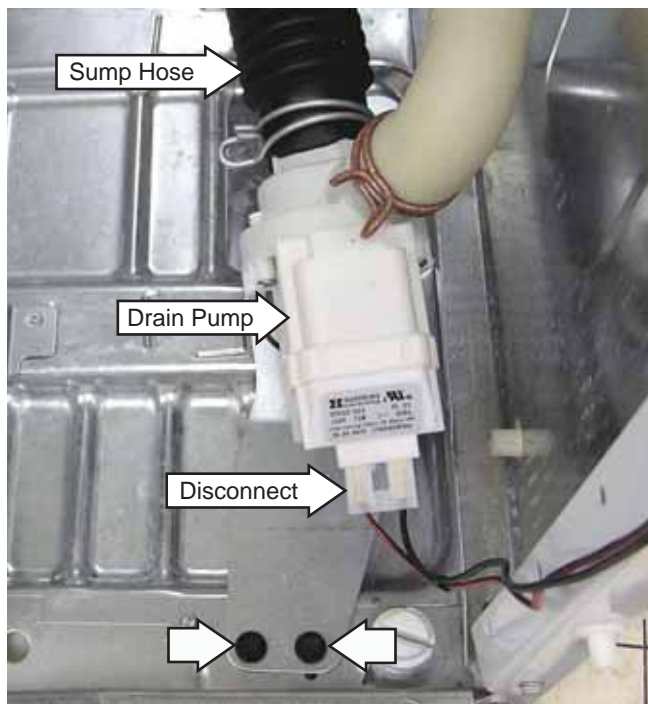
Do **NOT** replace the drain pump or control for this symptom!

It is normal operation (on some models), for the drain pump to turn off in the spin cycle.

To remove the pump:

Note: Water will remain in hoses even when the tub appears empty. Use care to avoid water spills.

1. Disconnect power to the machine.
2. Lower the drain hose into a small bucket to remove any water remaining in hose.
3. Remove the front panel. (See *Front Panel*.)
4. Disconnect the pump wire harness.
5. Pinch off the black sump hose to prevent water spills.
6. Remove hose clamps and hoses from the pump.
7. Remove two 3/8-in. hex-head screws.



Belt

- Since the belt provides constant tension, there is no need for adjustments (an adjustment method is not provided).
- A worn or damaged belt can result in excessive brake time and will initiate a motor inverter slipping belt error code. This code will prevent the motor/inverter from operating.
- To replace the drive belt it may be helpful to use the belt install tool (part number WX05X10102).

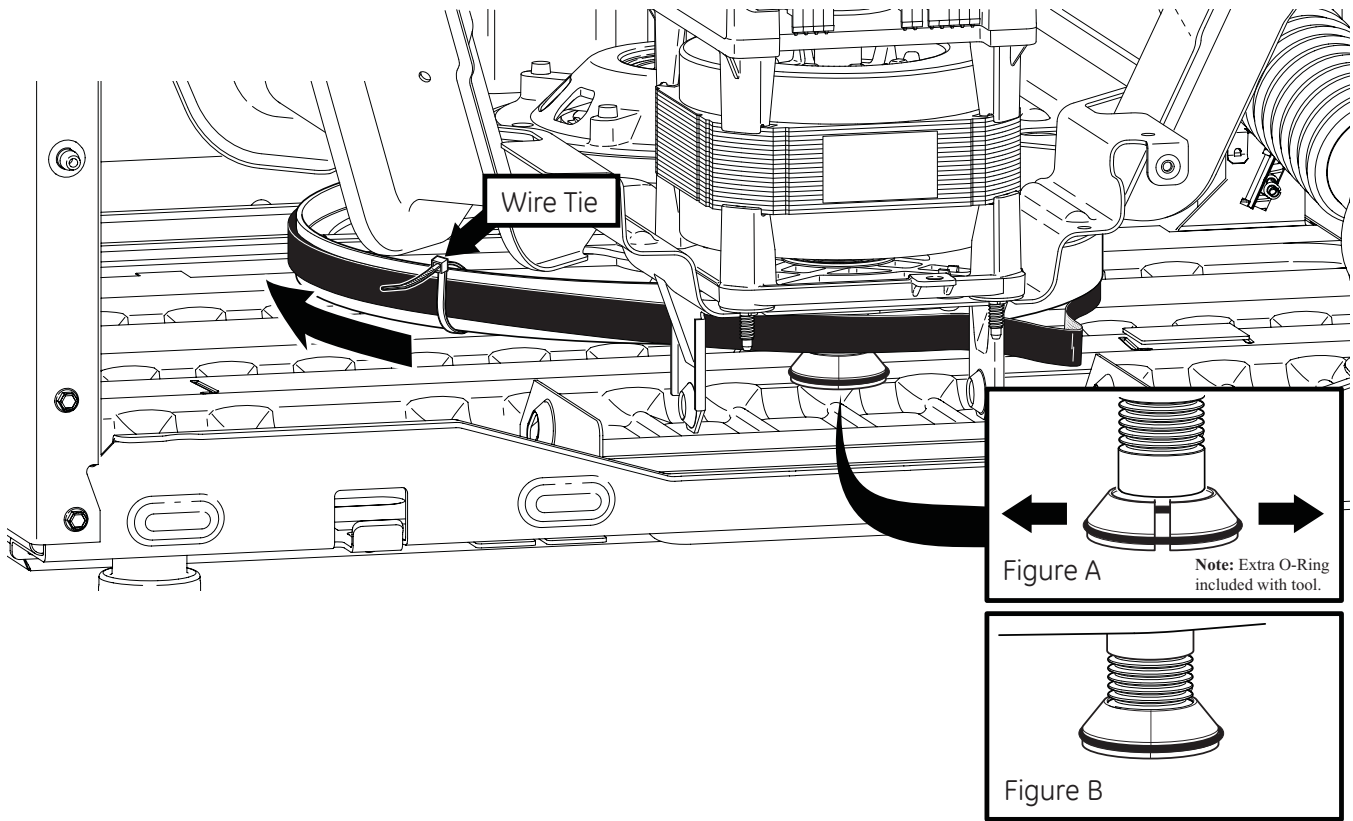
Belt Install Tool Kit



To replace the drive belt using the tool kit:

Note: If not using the belt install tool, follow steps 1 through 3, and 6 through 7. Remove wire tie after step 7.

1. Disconnect power.
2. Remove the front panel. (See *Front Panel*.)
3. Center belt on drive pulley and secure tightly with wire tie as shown on following page. Align wire tie as shown.
4. Stretch the belt install tool to fit over the end of the motor shaft. (See Figure A.)
5. Slide belt install tool upward until it snaps into the first groove of the motor shaft. (See Figure B.)
6. Center belt on motor shaft grooves and slowly turn drive pulley clockwise.
7. Continue rotating drive pulley until belt is fully engaged.
8. Remove wire tie and belt install tool.



Note:

- A new belt will be slightly smaller than the drive pulley.
- A belt that has been installed on the drive pulley will stretch to the diameter of the pulley over time. This is normal and does not indicate a bad belt.



New Belt on Pulley

Inverter/Motor

The inverter/motor assembly receives 120 VAC, which the inverter converts to approximately 340 VDC. The inverter then uses pulse width modulation (PWM) to supply the motor with an AC varying frequency to control speed.

Note: There is no location to check inverter output voltage to the motor. Voltage given is for information only.

The inverter/motor assembly consists of a motor and inverter board. A brake resistor is molded into the underside of the inverter cover and absorbs energy from the reversing of the motor during the braking cycle. A Hall effect sensor mounted on the inverter board measures motor speed (RPM).

The motor and inverter are available only as an assembly.

WARNING: Do not attempt to remove the inverter cover to service the board or brake resistor.

Note:

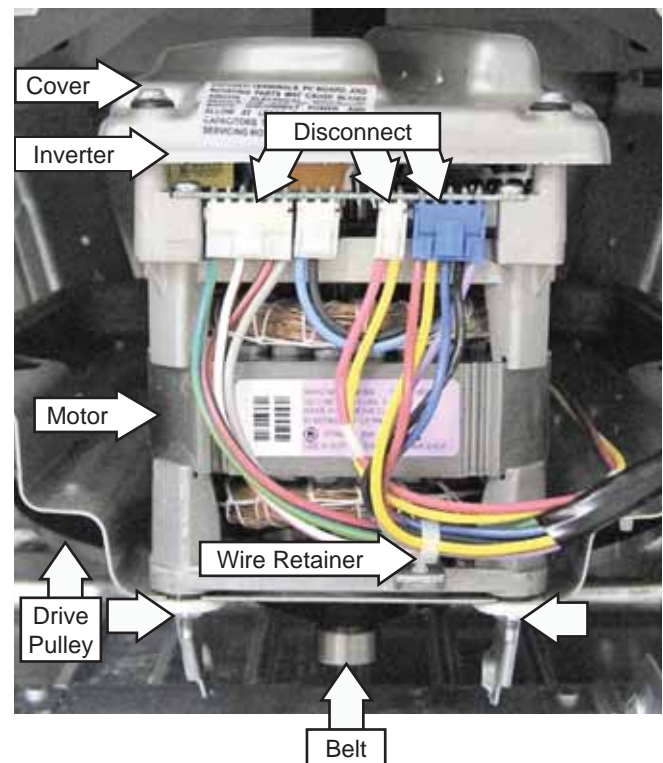
- There is a non re-settable fuse, located in the motor harness along the right side of the cabinet. If the fuse is open, agitate, spin, and mode shifting will not occur.
- If the motor speed sensor fails, the motor will not run.
- Since the electronic control receives no feedback from the inverter motor assembly, if the motor is not operating, the washer will still fill with water, count down on the display, and drain.
- If during an agitation cycle, water leaks from the tub and resets the pressure switch, the main control stops the motor, the inverter goes through the mode shifter spin program to de-energize the cam and the washer starts to refill with water. The motor will not run again until the pressure switch is satisfied, at which time the inverter control will run the mode shifter agitate program.
- If the mode shifter circuit fails or the coil opens, the tub will move back and forth with the infusor during the wash cycle.

To remove the inverter/motor:

1. Disconnect power.

WARNING: Exposed terminals, PC board, and rotating parts may cause injury and/or electrical shock. To reduce the risk of electrical shock, disconnect power and allow at least 5 minutes for capacitors to discharge before servicing motor. An audible clicking sound will be heard when the inverter capacitor discharges (inrush relay closing).

2. Remove the front panel. (See *Front Panel*.)
3. Disconnect 3 wire harnesses from the motor.
4. Release the compression tabs that attach the wire retainer to the front of the platform.
5. Remove the belt by rolling it off the bottom of the motor pulley.
6. Remove the front two 3/8-in. motor nuts and loosen the rear 2 nuts.



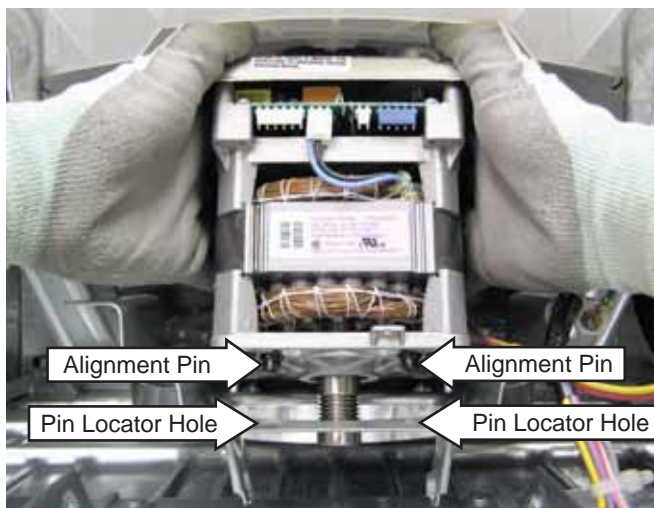
Note: Minimal clearance exists between the 2 rear 3/8-in. motor nuts, isolators, and the drive pulley.

7. Raise the front of the motor high enough to disengage the motor alignment pin from the pin locator hole, then slide the motor forward so that the 2 rear spacers clear the drive pulley.
8. Remove the rear two 3/8-in. motor nuts.
9. Tilt the top of the motor towards the shaft and tube. Lift and remove the motor from the platform.

WARNING: The motor casing is NOT at chassis ground potential. Voltage may be present on the motor casing. To prevent electrical shock, do not touch the motor when connected to power.

Caution: To prevent motor, inverter, or main control board damage, make certain all isolators are in place when reinstalling motor to platform.

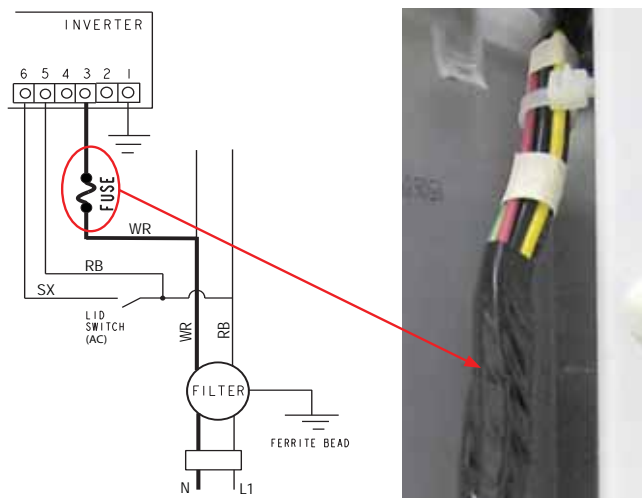
Note: When replacing the motor, ensure the motor alignment pins are fully inserted in the pin locator holes in the platform before tightening motor nuts.



Note: When replacing a motor, check its brake operation. Place washer in a spin cycle and lift the lid after it has reached full speed. The basket should stop within 7 seconds. If time exceeds 7 seconds, check the lid switch operation, and check the belt for worn ribs or slippage due to residue on the belt or pulleys.

Harness Fuse

A non re-settable 10-amp fuse is wired into the neutral side of the line. The fuse is wrapped in the line in the motor harness located along the right side of the cabinet.



If the fuse is open, agitate, spin, and mode shifting do not occur. Check the fuse connections and wiring harness.

Caution: Bending the harness can damage the fuse.

If the harness is OK, check the inverter/motor. A shorted brake resistor or internal motor problem can cause fuse failure.

Note: If the fuse is open, use harness fuse kit (part number WH49X10041). Instructions are included with the kit.

Suspension

The tub and motor assembly (spin basket, outer tub, inverter motor, shaft and mode shifter assembly and platform) is suspended by four rod and spring assemblies. The rod and spring assemblies are attached to each corner of the cabinet. They extend down and connect to the platform. This arrangement provides limited movement to the tub and motor assembly, independent of the cabinet when agitating and spinning, thus reducing cabinet travel and vibration. Front and rear suspension rod compressions vary to compensate for different model characteristics. The rods are color-coded to ensure that they are replaced in the correct position.

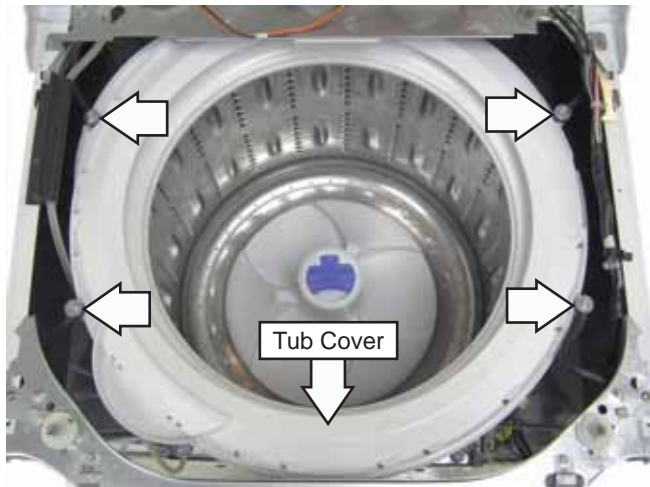
The outer tub has 4 dampening straps attached to the four corners of the cabinet. These straps prevent excessive outer tub rotation and movement during the wash cycle.

Tub Cover

Note: The tub cover can be replaced without removing the tub.

To remove the tub cover:

1. Remove the front panel. (See *Front Panel*.)
2. Remove the cover/lid assembly. (See *Cover/Lid Assembly*.)
3. Disconnect 4 dampening straps from the tub cover by removing four 5/16-in. hex-head screws.



4. Release the cover from the outer tub by lifting the 8 tabs.
5. Raise the front of the cover to clear the front cabinet brace and tilt the tub forward.
6. Carefully lift and remove the cover from the tub.



Tub Assembly

Note: The motor can be replaced without removing the tub. (See *Inverter/Motor*.) The tub assembly must be removed when replacing the spin basket, outer tub, or certain speed drive components.

To remove the tub assembly:

1. Disconnect power.
2. Lower the drain hose into a small bucket to remove any water remaining in the tub.
3. Remove the front panel. (See *Front Panel*.)
4. Remove the cover/lid assembly. (See *Cover/Lid Assembly*.)
5. Remove the tub cover. (See *Tub Cover*.)
6. Remove the infusor. (See *Infusor*.)
7. Pull the drive coupling straight up from the infusor shaft.



Caution: Use only a rubber mallet, dead blow hammer, or impact wrench to remove the hub nut. Use of a steel head hammer may result in damage to the spin basket.

Note: The word “LOOSEN” and an arrow appear on the hub nut. Turn clockwise to remove.

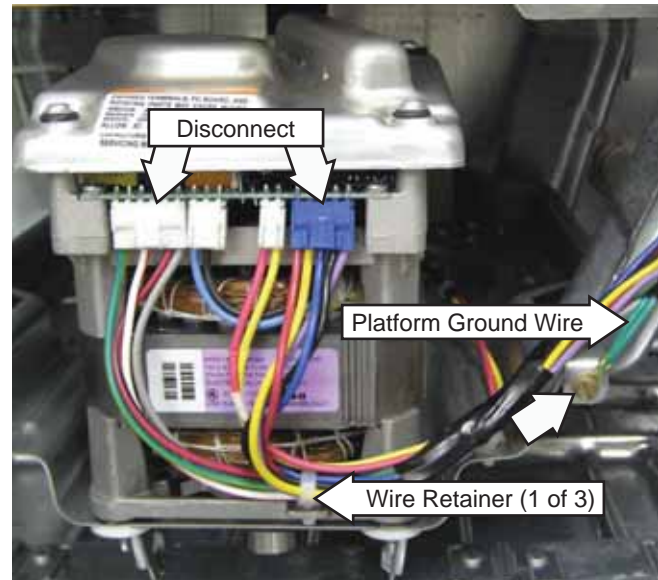
8. Remove the left-hand thread, 1¹¹/₁₆-in. nut using an impact wrench or a hub nut wrench (WX5X1325) and rubber mallet or dead blow hammer.



The hub nut must be torqued to 75 ft. lbs. To ensure the hub nut is tightened sufficiently when using a hub nut wrench, align the wrench with the holes in the basket and use them as a guide to determine when the nut will not move any farther. Impact wrenches are set to more than 75 ft. lbs. and should tighten the nut sufficiently.

WARNING: Exposed terminals, inverter board and rotating parts may cause injury and/or electrical shock. To reduce the risk of electrical shock, disconnect power and allow at least 30 seconds for capacitors to discharge before servicing motor. A distinct click can be heard from the relay on the inverter when the capacitor is discharged.

9. Disconnect the 2 outer motor harness connectors, and the 1/4-in. hex-head screw that attaches the platform ground wire.
10. Release the compression tabs that attach the 3 motor wire harness retainers to the front of the platform.



11. Remove the water pressure switch hose from the outer tub.
12. Pinch off the black sump hose to prevent water spills.
13. Loosen the 5/16-in. screw-type hose clamp and remove the sump hose at the tub.

Note: The front and rear rod and spring assemblies have different spring compressions and should not be interchanged. The rods are color-coded to ensure they are replaced in the correct position. Note the color location before removing.

14. Disengage the front rod and spring assemblies by raising the tub and removing the spring assemblies from the platform.



Note: The tub assembly will now lean forward. This allows clearance to reach behind the tub and access the rear rod and spring assemblies.

15. Disengage the rear rod and spring assemblies by raising the rear of the tub and removing the spring assemblies from the platform.
16. Pull the top of the tub assembly toward the front of the cabinet, then remove the basket from the tub.



17. Remove the tub assembly from the cabinet and place it on a protected surface.

Shaft and Mode Shifter Assembly

The shaft and mode shifter assembly consists of the shaft and tube, mode shifter cam, and mode shifter coil. These parts come only as an assembly.

WARNING: Do not attempt to disassemble the shaft and mode shifter assembly.

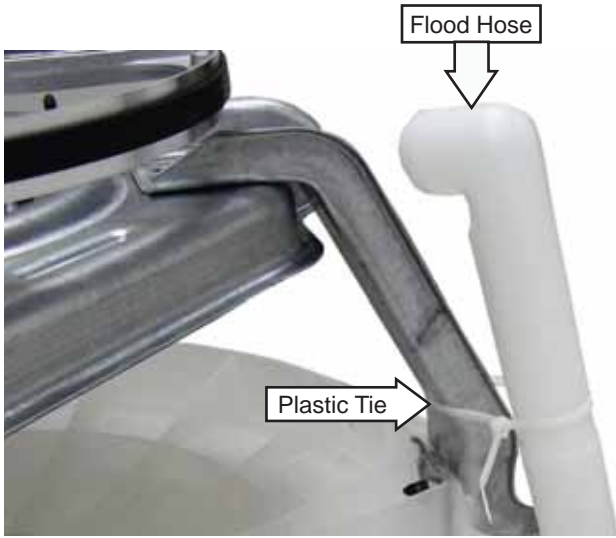
To remove the shaft and mode shifter assembly:

1. Remove the tub assembly from the cabinet. (See *Tub Assembly*.)
2. Remove the split ring and flat washers from the drive assembly.

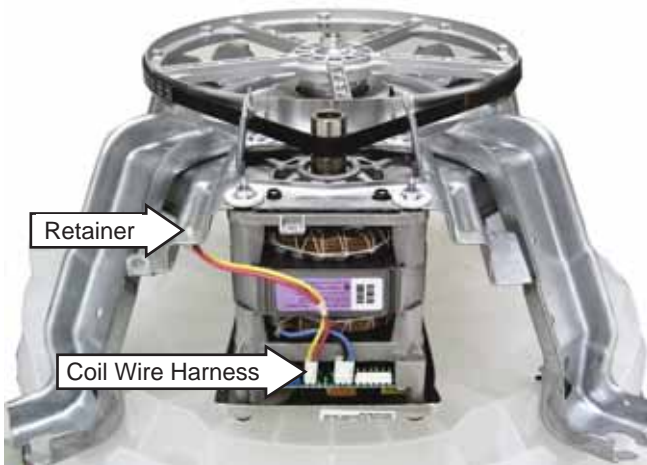


Note: A new seal (part number WH02X10032) is included with a replacement tub or shaft and mode shifter assembly. Replace the seal when the tub has been separated from the shaft and mode shifter assembly.

- Invert the tub assembly on a protected surface and remove the plastic tie that holds the flood hose to the platform.



- Disconnect the mode shifter coil wire harness from the motor.
- Release the compression tab that attaches the mode shifter coil wire harness retainer to the front of the platform.



- Run the belt off the drive pulley and remove the 3/4-in. pulley nut.



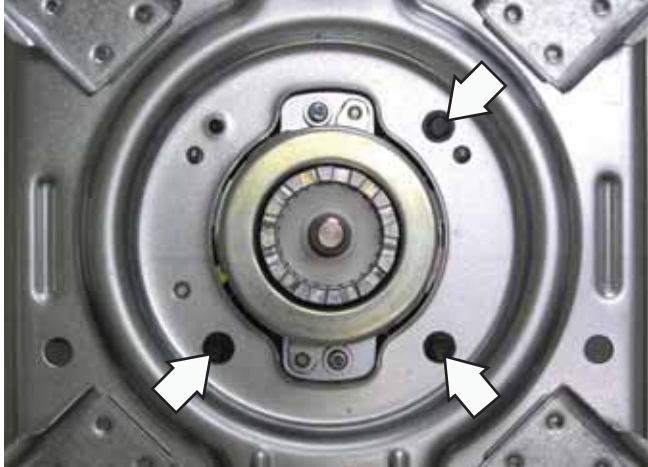
Note: When replacing pulley, tighten pulley nut to 275 in. lbs. of torque.

Note: In the following step, after removing the pulley nut, it may be helpful to grab the center core of the drive pulley with one hand and gently tap one of the drive pulley arms with a hammer. The drive pulley will "pop" off the tapered shaft.

- Remove the drive pulley from the shaft and mode shifter assembly.



8. Remove the three 3/8-in. hex-head bolts from the bottom of the platform.



9. Remove the four 1/2-in. hex-head bolts that attach the platform to the tub. Two of 4 shown below.



10. Lift the platform from the tub.

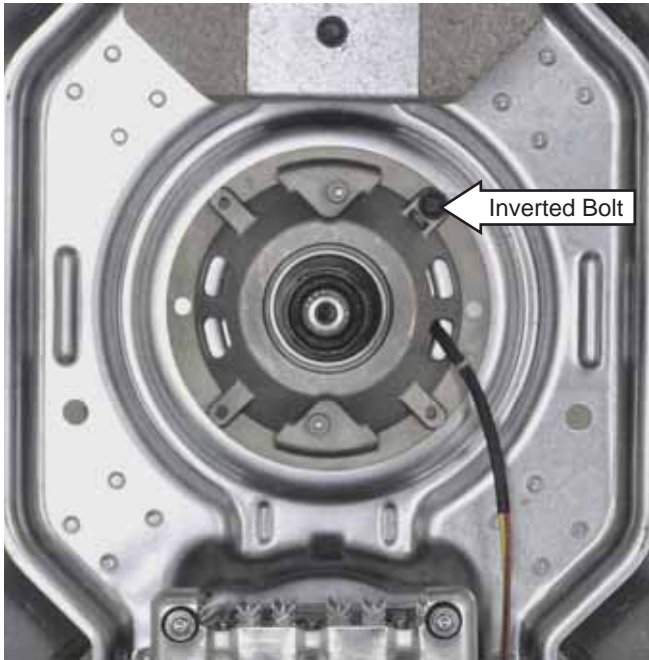


11. Place the platform upright on a protected surface and remove the tub bearing washer from the tube.

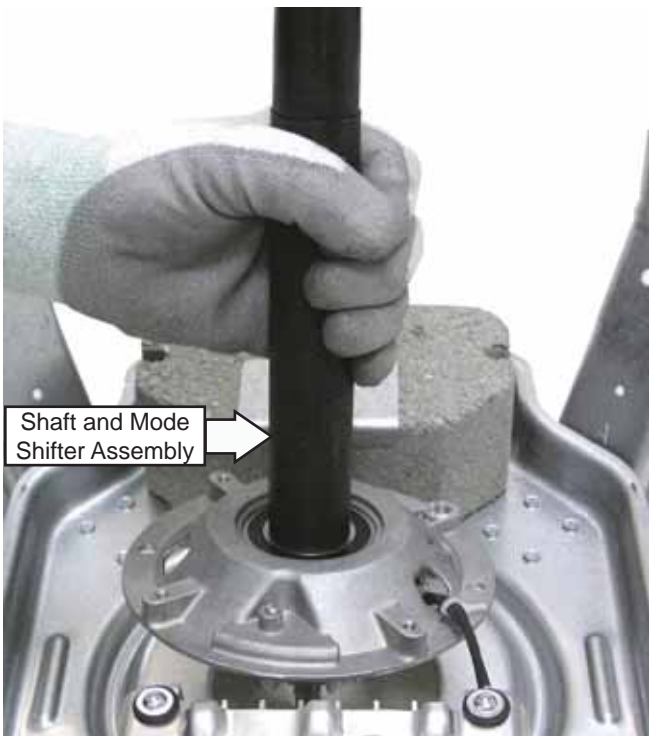


12. Remove the inverted 3/8-in. hex-head bolt from the top of the platform.

Note: Torque the four 3/8-in. hex-head bolts to 90 in. lbs. when reinstalling.



13. Lift the shaft and mode shifter assembly from the platform.



Diagnostics and Service Information

Field Service Mode

Entering the Field Service Mode

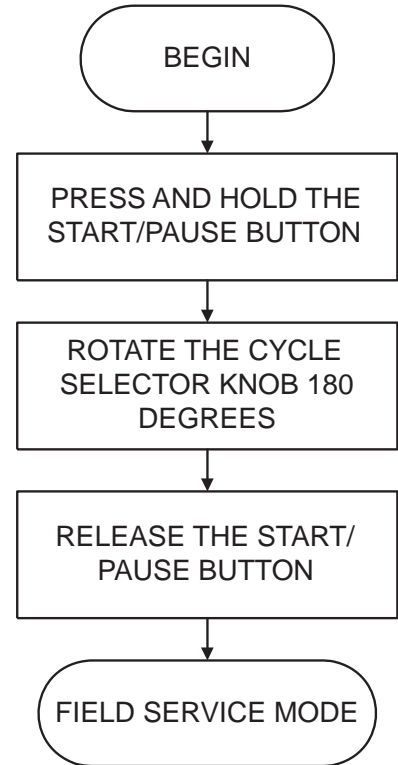
The washer control has a field service mode that can be utilized by the service technician in order to test critical components and to access error codes. This field service mode will help the service technician to quickly identify failed or improper operation of these components.

To enter the field service mode, press and hold the START/PAUSE button while rotating the Cycle Selector Knob 180° (8 detents on the control), then release the START/PAUSE button.

The field service mode can be entered at any time. The washer power does not have to be cycled before entering service mode.

The starting position of the Cycle Selector Knob will not affect entrance into the field service mode.

Immediately following the release of the START/PAUSE button all LED's will activate. This is Knob Position "0 - Initial" on the field service mode chart. Rotating the Cycle Selector Knob clockwise will result in the washer performing different functions at each position as shown in the chart.



Understanding the Field Service Mode Chart

The field service mode chart contained in the mini-manual (shown at right) is designed for both Profile and GE washers. The Profile washers have a 2-digit display with 3 LEDs. The GE models use 5 LEDs rather than a display to note cycle progression.

The large chart below indicates only those areas of the chart that will be displayed for Profile models.

The display column refers to the 2-digit display (88). The Soak, Wash and Rinse columns refer to the 3 LEDs to the right of the 2-digit display.

The "1" in each column indicates what LED may be lit (Soak, Wash or Rinse).

The "2" in the Rinse column indicates the Rinse LED will be lit while the knob is in position 4-10 if the pressure switch is open.

	DISPLAY	FILL	SOAK	WASH	RINSE	SPIN	
LED NUMBER		0	1	2	3	4	
KNOB POSITION		LED ACTIVE MODE					FUNCTION
0-INITIAL	88	1	1	1	1	1	LED CHECK
1	*						MODEL CODE
2						1	ERROR CODE - EEPROM
2				1			ERROR CODE THERMISTOR
2			1				ERROR CODE - SLOW PUMP
3					1		ERROR CODE - NO FILL
3				1			ERROR CODE - NO PUMP
3			1				ERROR CODE - PUSH BUTTON
4	H				1	2	HOT WATER VALVE ACTIVE
5	C				1	2	COLD WATER VALVE ACTIVE
6	AL		1			2	SLOW AGITATE (DRY) #
7	AH	1				2	FAST AGITATE (DRY) #
8	P		1			2	PUMP
9	SP			1		2	SPIN
10	3F				1	2	3 Ft Pump Time
10	8F	1	1	1	1	2	8 Ft Pump Time

88 : SOAK
: WASH
: RINSE

	DISPLAY	SOAK	WASH	RINSE	
LED NUMBER		1	2	3	
KNOB POSITION		LED ACTIVE MODE			FUNCTION
0-INITIAL	88	1	1	1	LED CHECK
1	*				MODEL CODE
2				1	ERROR CODE - EEPROM
2			1		ERROR CODE THERMISTOR
2		1			ERROR CODE - SLOW PUMP
3				1	ERROR CODE - NO FILL
3			1		ERROR CODE - NO PUMP
3		1			ERROR CODE - PUSH BUTTON
4	H			2	HOT WATER VALVE ACTIVE
5	C			2	COLD WATER VALVE ACTIVE
6	AL			2	SLOW AGITATE (DRY) #
7	AH			2	FAST AGITATE (DRY) #
8	P			2	PUMP
9	SP			2	SPIN
10	3F			2	3 Ft Pump Time
10	8F			2	8 Ft Pump Time

- * MODEL DEPENDANT
- 1 LED ON
- # DEPRESS START BUTTON WILL CHANGE DRY TO WET
- 2 LED ON IF TUB FULL (PRESS SW. SATISFIED)

(Continued next page)

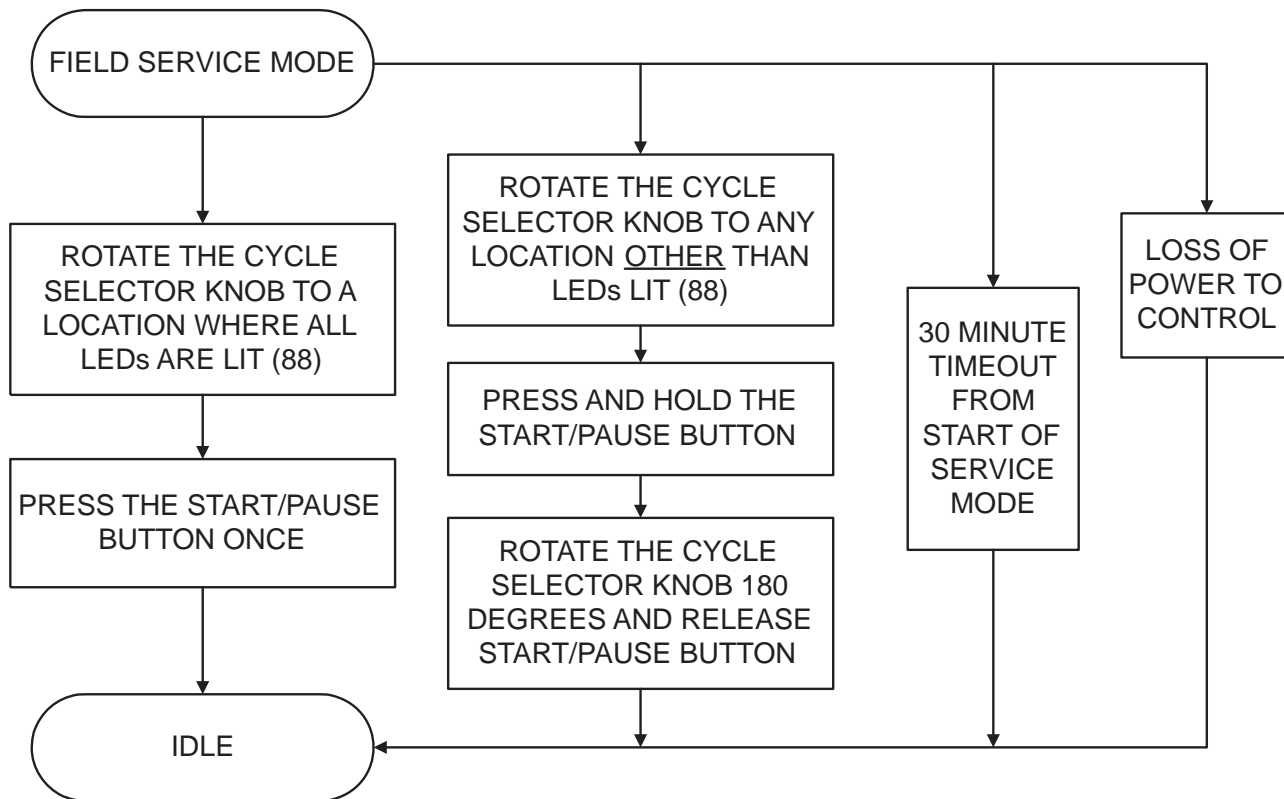
Knob Position	Function	Description
Position 0	LED Check	Lights all LEDs on display.
Position 1	Model Code	Factory code setting for main control.
Position 2* (Rinse LED On)	EEPROM Error	Control memory check. Error requires main control replacement.
Position 2* (Wash LED On)	Thermistor Error	At the start of each wash cycle (except in the tap cold temperature setting), the control will check whether the sensor is open or shorted. If open or shorted, the control will complete the wash cycle without relying on temperature feedback. In determining an open or shorted thermistor, the control looks for an out of range reading, which is 10K at the lower limit and 120K at the upper limit.
Position 2* (Soak LED On)	Slow Pump Error	If the pressure switch does not reset (closed/empty tub) within 3 minutes of the control starting the drain pump, the slow pump error will be recorded.
Position 3* (Rinse LED On)	No Fill Error	If the tub takes longer than 20 minutes to fill, the no fill error will be recorded.
Position 3* (Wash LED On)	No Pump Error	If the pump detection circuit indicates no water is being pumped while the pump is energized and the pressure switch is open (water in tub), the no pump error will be recorded. The control uses current amplitude of the drain pump motor to determine whether water is being pumped.
Position 3* (Soak LED On)	Push Button Error	If any button is closed for 1 minute or longer, the push-button error code will be recorded.
Positions 4 - 9	Activates the listed component.	Position 4 = Hot water valve active Position 5 = Cold water valve active Position 6 = Slow agitate (dry)** Position 7 = Fast agitate (dry)** Position 8 = Pump Position 9 = Spin
Position 10	Pump Time	Hold Start/Pause button for 3 seconds to toggle setting. Changing the setting from 3 ft. to 8 ft. adds 30 seconds to the drain pump out time before each spin cycle begins. Default pump out is 3 minutes. Changing to 8ft changes the pump out time to 3 1/2 minutes.

NOTE:

* To clear any recorded errors in Positions 2 or 3, press the Start/Pause button while in the appropriate position.

** Depress and hold the Start/Pause button for 3 seconds for wet agitation. Energizes the water valves based on temperature control setting.

Exiting the Field Service Mode



Inverter/Motor Error Codes

Inverter/Motor Signal LED



- An LED beneath the inverter cover can be viewed for diagnostic testing.
- When motor is operating normally, and running, the LED blinks at a constant rate of 1/2-second on and 1/2-second off.
- When motor is operating normally, and idle, the LED blinks at a constant rate of 1-second on and 1-second off.
- Motor/Control error condition – LED is on for .25-seconds and off for .25-seconds for a specified number of times, during a 6-second period. The 6-second cycle repeats continuously.

(Continued next page)

Inverter/Motor Signal LED Errors

NUMBER OF FLASHES	DESCRIPTION	ACTION
1 SECOND ON 1 SECOND OFF	NORMAL STANDBY	NORMAL STANDBY
.5 SECOND ON .5 SECOND OFF	NORMAL RUNNING	NORMAL RUNNING
1 FLASH	LONG STOP TIME	REPLACE MOTOR
2 FLASH	SLIPPING BELT	CHECK BELT*
3 FLASH	CORRUPTED SOFTWARE	REPLACE MOTOR
4 FLASH	MODE SHIFT CIRCUIT FAILED	CHECK MODE SHIFTER COIL*
5 FLASH	NOT IMPLEMENTED	REPLACE MOTOR
6 FLASH	LOCKED ROTOR	MAKE SURE SYSTEM IS FREE*
7 FLASH	LID SWITCH DID NOT OPEN	CHECK LIDSWITCH*
8 FLASH	MOTOR OVERHEATED	MAKE SURE SYSTEM IS FREE*
9 FLASH	BRAKE RESISTOR OPEN	REPLACE MOTOR
ON 2, 4, 6, 7 & 8 FLASH ERRORS IF NO SYSTEM FAILURES ARE FOUND, REPLACE MOTOR		

- When excessive stop time more than 25-seconds is encountered, the LED blinks once for 1/4-second and then off for the remainder of a 6-second period.
- When a broken coupling or slipping belt is detected, the LED blinks twice at a rate of 1/4-second on and 1/4-second off for the remainder of a 6-second period.
- When an inverter ROM checksum error is detected, the LED blinks 3 times at a rate of 1/4-second on and 1/4-second off for the remainder of a 6-second period.
- When a mode shifter error occurs, the LED blinks 4 times at a rate of 1/4-second on and 1/4-second off for the remainder of a 6-second period. The motor continues to operate with this error.
- When a locked rotor is detected, the washer will sit idle for 15-seconds and retry. If the motor does not operate after 3 tries, the LED blinks 6 times at a rate of 1/4-second on and 1/4-second off for the remainder of a 6-second period.
- When a lid error is detected by the lid switch counter, 4 agitate/spin pairs with no change in state of lid switch, the LED blinks 7 times at a rate of 1/4-second on and 1/4-second off for the remainder of a 6-second period.
- When an over-temperature condition is detected in the motor, the LED blinks 8 times at a rate of 1/4-second on and 1/4-second off for the remainder of a 6-second period. The motor continues to operate at reduced performance levels.
- When a brake resistor circuit error is detected in the motor, the LED blinks 9 times at a rate of 1/4-second on and 1/4-second off for the remainder of a 6-second period. Maximum spin speed is limited to 50 RPM.
- Critical Errors, #1, #2, & #7 as shown, will prevent inverter/motor from operating.

To clear errors, disconnect power until an audible clicking sound is heard when the inverter capacitor discharges (approximately 15-seconds). Open and close the lid 5 or more times in any 12-second period within the first 30-seconds of power-up. Errors will not clear if washer is in either agitate or spin mode.

Inverter/Motor Test

Note: All electrical testing is done at harness plugs.

Voltage readings:

C2 Pin 1 = Gnd

C2 Pin 3 = N

C2 Pin 5 to Pin 3 = 120 VAC

C2 Pin 6 to Pin 3 = 120 VAC with lid switch closed

C7 Pin 1 to Pin 2 = 135 VDC**

C7 Pin 1 to Pin 2 = 30 VDC**

C4 Pin 5 to Pin 1 = 0 VDC*

C4 Pin 5 to Pin 2 = 0 VDC*

C4 Pin 5 to Pin 3 = 12 VDC*

C4 Pin 5 to Pin 4 = 12 VDC*

* Place washer in field service mode spin test (Knob Position 9). If 12 VDC is present at specified pins, main control is OK. If motor runs in spin test, inverter, motor and wiring harness are OK.

** 135 VDC is present for approximately 15 seconds at the beginning of the agitate program. 30 VDC is present during the remainder of the agitate cycle.

Caution: If the mode shifter coil is open, C7 Pin 1 to Pin 2 can measure as high as 300 VDC.

Voltage readings in field service mode agitate low test (Knob Position 6):

C4 Pin 5 to Pin 1 = 12 VDC

C4 Pin 5 to Pin 2 = 12 VDC

C4 Pin 5 to Pin 3 = 0 VDC

C4 Pin 5 to Pin 4 = 0 VDC

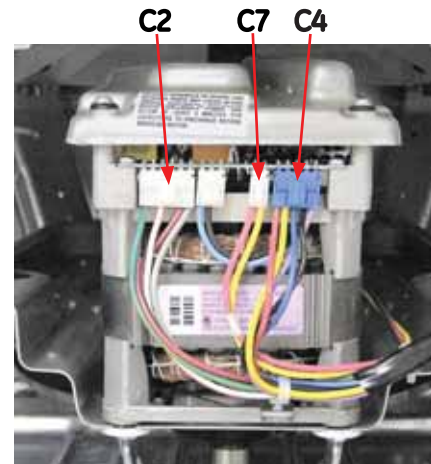
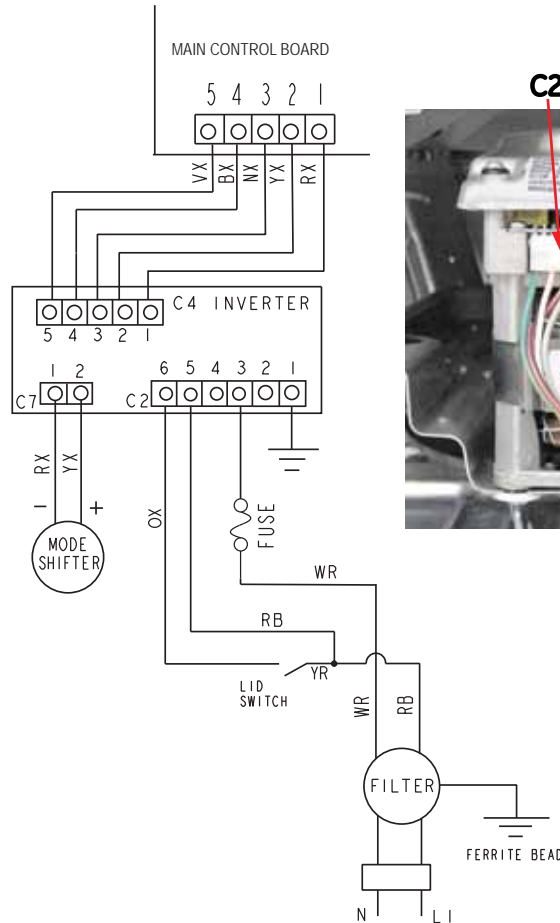
Voltage readings in field service mode agitate high test (Knob Position 7):

C4 Pin 5 to Pin 1 = 12 VDC

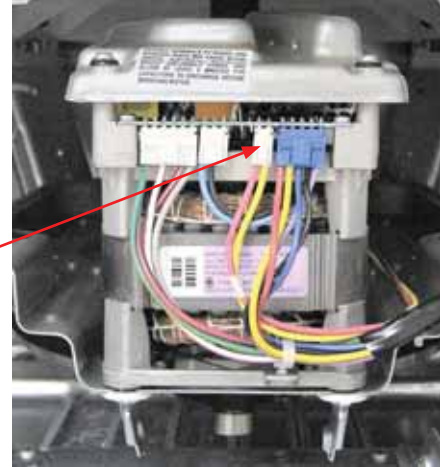
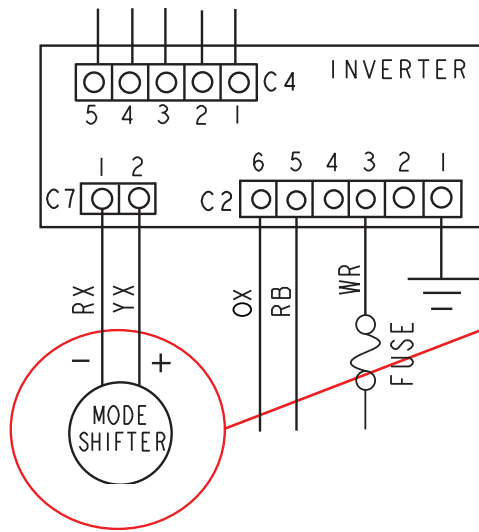
C4 Pin 5 to Pin 2 = 0 VDC

C4 Pin 5 to Pin 3 = 12 VDC

C4 Pin 5 to Pin 4 = 0 VDC



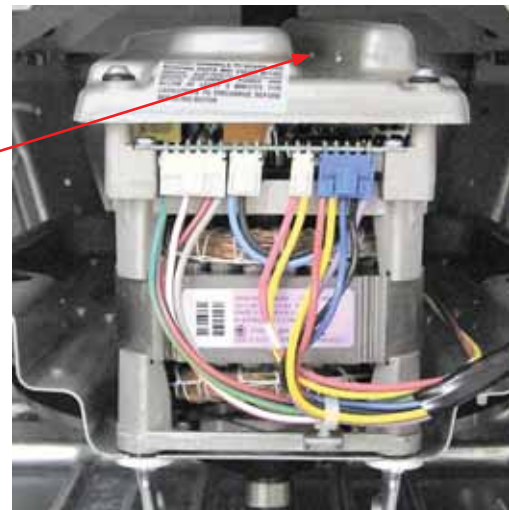
Mode Shifter Coil Test



Note: The mode shift coil connects to C7 connector on inverter/motor assembly. Unplug C7 connector and check continuity. Mode shift coil resistance value is approximately 98Ω @ room temperature (77°F).

Brake Test

The brake resistor is permanently molded into the underside of the inverter cover.



- Tub should stop spinning 7 seconds after lid is lifted.
- If the tub takes approximately 10 seconds to stop, check drive belt for wear.
- If tub coasts to stop, brake resistor has failed and inverter/motor assembly must be replaced.
- If the tub takes longer than 25 seconds to stop, the inverter will initiate a brake resistor error code. (See *Inverter/Motor Error Codes*.)

Warranty

GE Washer Warranty.



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

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

For The Period Of: 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.

Second through Fifth Year

From the date of the original purchase

The suspension rod and spring assembly, and main electronic control board, if any of these parts should fail due to a defect in materials or workmanship. GE will also replace the **washer lid or cover**, if they should rust under operating conditions. During this **additional four-year limited warranty**, you will be responsible for any labor or related service costs.

Second through Tenth Year

From the date of the original purchase

The shaft and tube assembly and outer washer tub, if any of these parts should fail due to a defect in materials or workmanship. During this **additional nine-year limited warranty**, you will be responsible for any labor or related service costs.

Lifetime of Product

From the date of the original purchase

The washer basket, if it should fail due to a defect in materials or workmanship. During this **product lifetime limited warranty**, you will be responsible for any labor or related service costs.

What Is Not Covered:

- 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.
- 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.
- Damage caused after delivery.
- 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.