

GE Consumer & Industrial

Technical Service Guide

SEPTEMBER 2009

GE Compact Washer

WSLP1500J

WSLS1500J



31-9189



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
Copyright © 2009

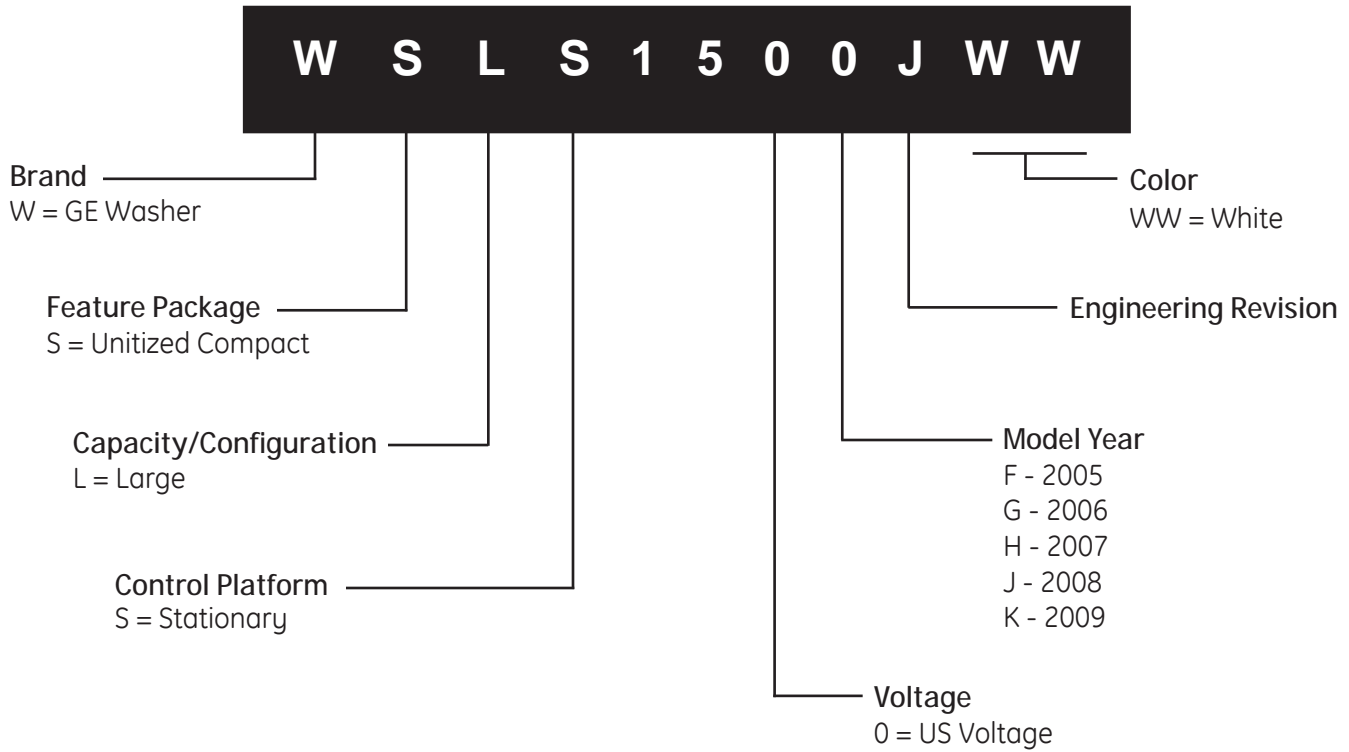
All rights reserved. This service guide may not be reproduced in whole or in part in any form without written permission from the General Electric Company.

Table of Contents

Back Cover.....	19
Brake Control Motor	32
Circuit Board Connections.....	17
Component Locator Views.....	15
Control Features.....	9
Control Panel and PCB	18
Dispenser Assembly.....	25
Drain Pump	25
Error Codes.....	34
Fuse.....	24
Installation	6
Introduction.....	5
Lid Switch and Harness	23
Nomenclature	4
Outer Tub and Suspension Assembly.....	29
Pressure Sensor.....	21
Schematic.....	36
Service Test Mode.....	35
Shaft Assembly.....	33
Shaft Assembly and Brake Overview	31
Special Features.....	8
Top Cover.....	24
Troubleshooting	34
Unbalance Switch.....	22
Warranty	37
Wash Basket.....	28
Washer Components.....	18
Washing Motor and Belt.....	27
Water Valve.....	20

Nomenclature

Model Number



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	The letter designating the year repeats every 12 years.
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	

Example:
T - 1974
T - 1986
T - 1998

The nomenclature plate is located on the back below the top cover.

The mini-manual is placed in an envelope located under the control panel.

Introduction

The new GE Compact Washer has the following features:

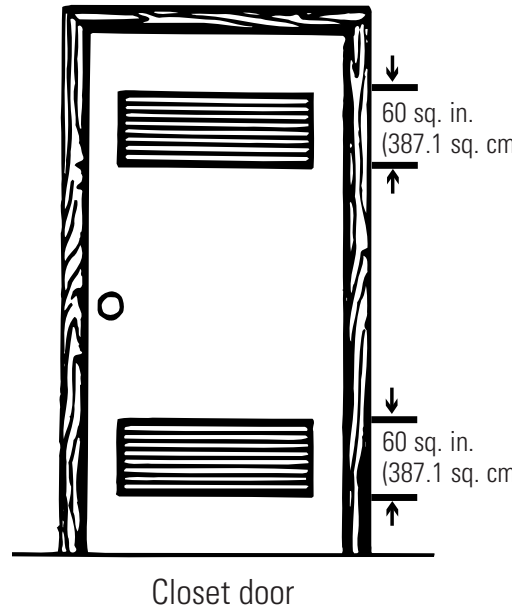
- Electronic One-Touch Controls with LED readout simplify cycle selection and provide accurate cycle times.
- One-Touch Loading Sensing eliminates guesswork and helps reduce water waste.
- Ten wash cycles provide a setting for almost every load, from heavy cottons to casual synthetics; includes settings for light- to heavy-soil regular, whites, colors, casual and delicate fabrics.
- Three wash/rinse temperatures — A variety of temperatures provides great wash results and longer fabric life.
- Four water levels match the water level to each load to reduce water waste per cycle.
- One Wash/Spin Speed — Provides reliable cleaning performance for regular clothes.
- Custom Wash Cycle — Saves a favorite cycle for future use.
- Dispenser adds diluted detergent and fabric softener at the correct time during the wash or rinse cycles.
- Overflow Protection — Activates the drain pump whenever water reaches overflow level during a temporary stop, waiting action, or spin action. Overflow also sensed 3 times during a wash or rinse cycle.
- Built-in Status indicators display certain associated error codes.
- The wash tub is constructed of durable stainless steel.
- UV stabilizers are utilized on the control panel, top cover, and lid to prevent yellowing when exposed to sunlight.



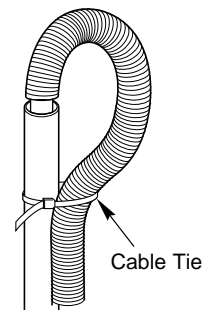
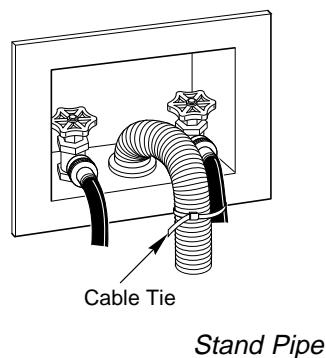
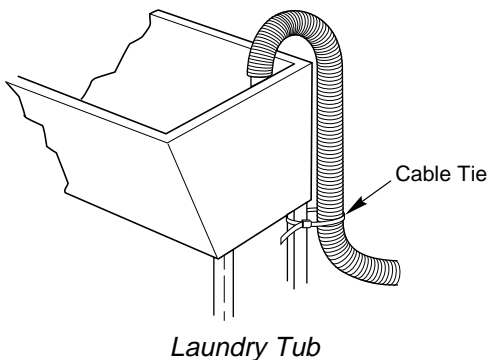
Installation

Location

- Washer must be installed on firm flooring. Concrete flooring is best, but wood base is sufficient, providing floor support meets FHA standards.
- Washer should not be installed on rugs or exposed to the weather.
- Install or store washer where it will not be exposed to temperatures below freezing.
- Minimum clearances between washer and adjacent walls or other surfaces are: 2" either side, 2" front, and 3" rear.
- Minimum vertical space from floor to overhead shelves, cabinets, ceilings, etc., is 96".
- Closet doors must be louvered or otherwise ventilated and have at least 60 square inches open area for washer only, or if the closet contains both a washer and dryer, doors must contain at least 120 square inches of open area, equally distributed.



Note: The clearances stated are minimums. Consideration must be given to providing adequate clearances for installation and servicing.



Plumbing

- Water pressure must be 10 psi minimum to 150 psi maximum dynamic pressure measured at faucet.
- Water temperature on household water heater should be set to deliver water at 120° to 150°F (50° to 66°C) in the washer when HOT wash is selected.
- Shut-off valves should be supplied for both hot and cold water lines.
- Drain water into a standpipe or laundry tub. The discharge height must not be less than 30" nor more than 8' above the base of the washer. The standpipe must be 1½" minimum inside diameter and must be open to the atmosphere.

Electrical Wiring

- National Electrical Codes or prevailing local codes and ordinances must be followed.
- 120V, 60Hz must be supplied and connected to an individual, properly grounded branch circuit, protected by a 15- or 20-amp circuit breaker or time delay fuse.
- Wiring must be 2-wire with ground.



Electrical Rating

Voltage AC.....	120
Hertz	60
Total connected load amperage	10.0

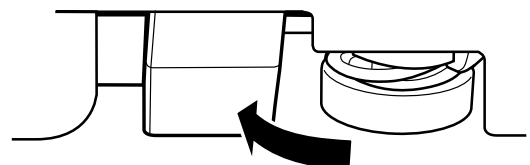
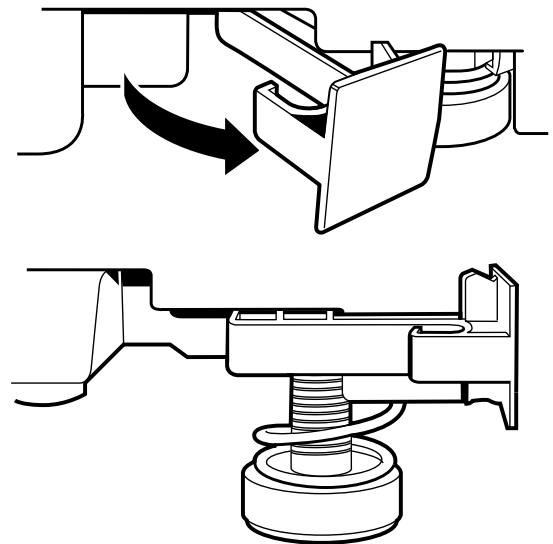
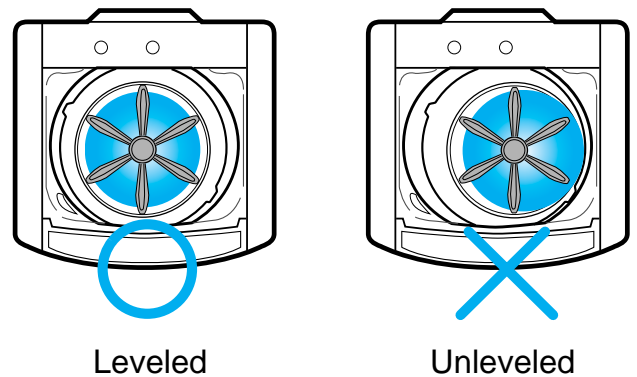
For use on adequately wired 120-volt, 15-amp circuit having 2-wire service with a separate ground wire. This appliance must be grounded for safe operation.

Leveling the Washer

Excessive vibration will occur if the washer is not leveled. This will also trip the unbalance switch and stop the washer. Check to ensure the washer is level. With the door open, the spin basket should be centered in the opening as shown in the “leveled” view. If the spin basket is not in the center or “unleveled” as shown at far right, level the washer as follows:

Note: Be careful not to kick or step on the leveling locks.

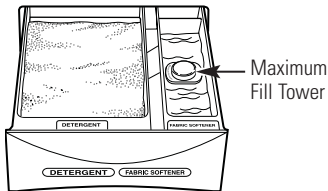
- Pull out the leveling locks located at the bottom front of the left and right sides of the washer. This releases the spring loaded leveling feet.
- The washer will attempt to automatically level itself.
- Check level at body panel line and adjust as necessary.
- Push leveling locks back in.
- Manually level the rear feet (side to side).



Special Features

Before starting the washer:

- Load the laundry in the washer.
- Add the detergent and fabric softener to the dispenser drawer.



Detergent and Fabric Softener Dispenser Drawer

The detergent and fabric softener dispensers will automatically release their contents at the proper time during the cycle.

To Use the Detergent Dispenser:

Add measured detergent to the dispenser. Make sure detergent is spread evenly and is level.

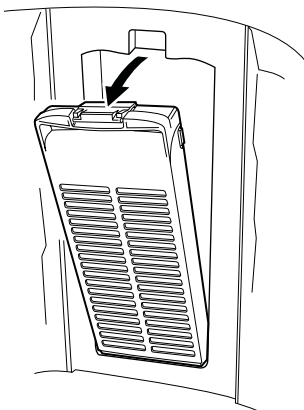
To Use the Fabric Softener Dispenser:

Use only liquid fabric softener. Pour into dispenser, using amount recommended on package.

- Do not fill any higher than the top of the maximum fill tower.
- Never pour fabric softener directly on clothes. It may stain them.

Cleaning the Detergent and Fabric Softener Dispenser Drawer

1. Remove the drawer by opening it fully then tilting the front of the door up. Pull out.
2. Rinse the drawer with water. If necessary use a soft cloth to wipe off any debris.
3. Line up the drawer with the opening and push the dispenser drawer straight in.



Lint Filter

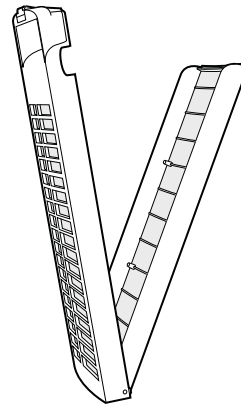
Clean the lint filter inside the wall of the wash basket once a week for best filtering results.

To remove:

Press the tab at the top of the filter and pull out.

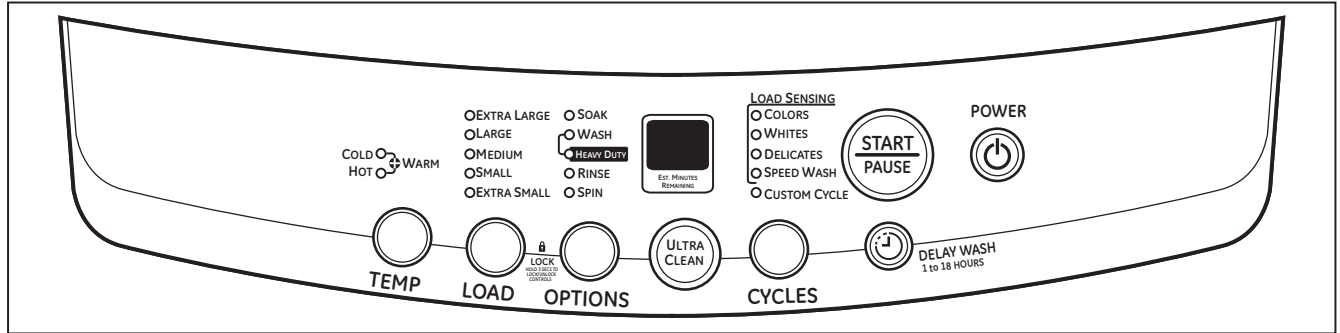
To clean:

Open the filter. Clean the filter with a toothbrush.



Control Features

About the control and indicator settings.



Before starting the washer:

- Load the laundry in the washer.
- Add the detergent and fabric softener to the dispenser drawer.

**START
PAUSE**

To Use Automatic One-Touch Washing

The **LOAD SENSING** feature automatically senses the size of your load, tub fills with the appropriate amount of water, and calculates the amount of wash time required to complete the cycle.

NOTE: When using the **LOAD SENSING** feature, it is normal for the pulsator to rotate before water fills in the tub.

- To choose the automatic **LOAD SENSING** feature, press **POWER ON/OFF**. **LOAD SENSING** is the default water setting. Manually selecting a load size cancels **LOAD SENSING**.
- Select the desired **CYCLE**, **OPTION** and water **TEMP** setting.
- Then press **START/PAUSE**.
- The **COLORS** indicator light will light up automatically unless you have selected one of the other **LOAD SENSING** cycles such as **WHITES**, **DELICATES**, **SPEED WASH**, **CUSTOM CYCLE** or **ULTRA CLEAN**.
- Then simply press **START/PAUSE**.

NOTE: When the cycle is operating, the **OPTIONS** LED flashes. When the washer is in **PAUSE**, the LED does not flash.

To Choose Your Own Cycle Selections

POWER ON/OFF

- 1 Press the **POWER ON/OFF** button to turn on the control panel.

WASH OPTIONS

- 2 Choose the wash options you would like to include in the cycle. Press the **WASH OPTIONS** button until all the options you want to include are lit. More than one option can be selected.

Cycle	Soak+Wash +Rinse+Spin	Soak+Wash+Heavy Duty+Rinse+Spin	Wash+Rinse +Spin	Wash+Heavy Duty+Rinse+Spin	Wash +Rinse	Rinse +Spin	Wash Only	Rinse Only	Spin Only
COLORS	X	X	X	X	X	X	X	X	X
WHITES	X	X	X	X	X	X	X	X	X
DELICATES	X	X	X	X	X	X	X	X	X
SPEED WASH	X	X	X	X	X	X	X	X	X
CUSTOM CYCLE	X	X	X	X	X	X	X	X	X
ULTRA CLEAN			X						

LOAD SIZE

- 3 The water level should just cover the clothes. Adjust the load size accordingly. Loosely load clothes no higher than the top row of holes in the washer basket.

WASH CYCLE

- 4 These wash cycles control the length of the washing process. The chart on the following page will help match the **WASH CYCLE** setting to your specific laundry needs. When a cycle is selected, the automatic temperature that the machine defaults to can be changed to whatever temperature you desire.

The control can add an additional 4 wash cycles to each washing process. Each additional wash cycle adds approximately 16 minutes.

To add additional wash cycles:

- Select a cycle using Automatic One-Touch Washing.
- Press the **START/PAUSE** pad.
- Anytime after the **START** pad is pressed, if the **OPTIONS** pad is pressed, the display will show 1.
- Pressing the **OPTIONS** pad again will change the display to 2. Selections from 1 to 5 are available.

NOTE: Once a selection is made, the control will automatically add additional time to the *Est Minutes Remaining* display. 1 is the normal wash cycle without additional time added.

When the **SPIN** (only) option is selected, spin cycle time can be adjusted by pressing the **OPTIONS** pad after the cycle has started. The display will show the actual minutes remaining in any **SPIN** (only) cycle.

		<i>Default Wash/Rinse Temperatures</i>
Colors	For easy care and wrinkle-resistant items.	WARM/COLD
Whites	For heavy to lightly soiled cotton, household linens, towels, work and play clothes.	HOT/COLD
Delicates	For lingerie and delicate fabrics with light to normal soils.	COLD/COLD
Speed Wash	For one or two lightly soiled items that are needed quickly.	WARM/COLD
Custom	Manually selected options of water temperature and wash options saved for future uses. (See NOTE 1 .)	WARM/COLD
Ultra Clean	Maximizes detergent efficiency by adding water in steps and slowly diluting the detergent to the standard level. (See NOTE 2 .)	WARM/COLD

NOTE 1. To use **CUSTOM CYCLE**, set the **CYCLES** selection to **CUSTOM CYCLE**. Select **TEMP** and **OPTIONS** choices. Press **START/PAUSE** pad. Control remembers, and the next time **CUSTOM CYCLE** is selected, the most recent settings will be displayed. **CUSTOM CYCLE** always utilizes **LOAD SENSING**. Load size cannot be locked in.

NOTE 2. The washer partially fills, (approximately 75%) then begins to agitate for approximately 30 seconds. The washer will then pause and continue to fill for about 10 seconds, then agitate. It repeats this process, in varying degrees and stages, 4 times before the tub is at the correct water level and the machine completes the wash cycle.

Time-Table of Function

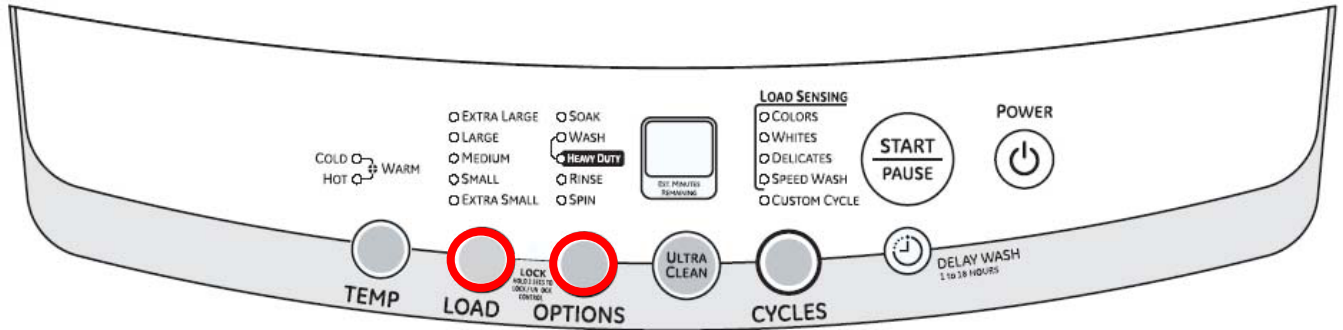
COURSE	WATER LEVEL	WASH				RINSE1						RINSE2						SPIN					Display Time		
		FILL	SOAK	WASH	WASH TOTAL	DRAIN	I/SPIN	SPIN	STOP	FILL	RINSE	RINSE1 TOTAL	DRAIN	I/SPIN	SPIN	STOP	FILL	RINSE	RINSE2 TOTAL	DRAIN	I/SPIN	SPIN		STOP	SPIN TOTAL
COLORS (CUSTOM CYLCE)	Extra Large	5'		18'	23'	2'10"	3'	2'	1'	5'	4'	17'10"								2'10"	3'	6'	1'	12'10"	53
	Large	4'30"		15'	19'30"	2'	3'	2'	1'	4'30"	4'	16'30"								2'	3'	6'	1'	12'	48
	Mid	4'		12'	16'	1'50"	3'	2'	1'	4'	4'	15'50"								1'50"	3'	6'	1'	11'50"	44
	Small	3'30"		10'	13'30"	1'40"	3'	2'	1'	3'30"	4'	14'70"								1'40"	3'	6'	1'	11'40"	41
	Extra Small	3'		10'	13'	1'30"	3'	2'	1'	3'	4'	14'30"								1'30"	3'	6'	1'	11'30"	39
WHITES	Extra Large	5'		18'	23'	2'10"	3'	2'	1'	5'	4'	17'10"								2'10"	3'	6'	1'	12'10"	53
	Large	4'30"		18'	22'30"	2'	3'	2'	1'	4'30"	4'	16'30"								2'	3'	6'	1'	12'	51
	Mid	4'		18'	22'	1'50"	3'	2'	1'	4'	4'	15'50"								1'50"	3'	6'	1'	11'50"	50
	Small	3'30"		18'	21'30"	1'40"	3'	2'	1'	3'30"	4'	14'70"								1'40"	3'	6'	1'	11'40"	49
	Extra Small	3'		18'	21'	1'30"	3'	2'	1'	3'	4'	14'30"								1'30"	3'	6'	1'	11'30"	47
DELICATES	Extra Large	5'		12'	17'	2'10"	3'	30"	1'	5'	2'	13'40"								2'10"	3'	3'	1'	9'10"	40
	Large	4'30"		12'	16'30"	2'	3'	30"	1'	4'30"	2'	12'60"								2'	3'	3'	1'	9'	39
	Mid	4'		12'	16'	1'50"	3'	30"	1'	4'	2'	11'80"								1'50"	3'	3'	1'	8'50"	38
	Small	3'30"		12'	15'30"	1'40"	3'	30"	1'	3'30"	2'	10'100"								1'40"	3'	3'	1'	8'40"	36
	Extra Small	3'		12'	15'	1'30"	3'	30"	1'	3'	2'	10'60"								1'30"	3'	3'	1'	8'30"	35
SPEED WASH	Extra Large	5'		8'	13'	2'10"	3'	2'	1'	5'	3'	16'10"								2'10"	3'	3'	1'	9'10"	39
	Large	4'30"		8'	12'30"	2'	3'	2'	1'	4'30"	3'	15'30"								2'	3'	3'	1'	9'	37
	Mid	4'		8'	12'	1'50"	3'	2'	1'	4'	3'	14'50"								1'50"	3'	3'	1'	8'50"	36
	Small	3'30"		8'	11'30"	1'40"	3'	2'	1'	3'30"	3'	13'70"								1'40"	3'	3'	1'	8'40"	35
	Extra Small	3'		8'	11'	1'30"	3'	2'	1'	3"	3'	13'30"								1'30"	3'	3'	1'	8'30"	33
ULTRA CLEAN	Extra Large	5'		20'	25'	2'10"	3'	2'	1'	5'	2'	15'10"	2'10"	3'	2'	1'	5'	2'	15'10"	2'10"	3'	5'	1'	11'10"	67
	Large	4'30"		20'	24'30"	2'	3'	2'	1'	4'30"	2'	14'30"	2'	3'	2'	1'	4'30"	2'	14'30"	2'	3'	5'	1'	11'	65
	Mid	4'		20'	24'	1'50"	3'	2'	1'	4'	2'	13'50"	1'50"	3'	2'	1'	4'	2'	13'50"	1'50"	3'	5'	1'	10'50"	63
	Small																								
	Extra Small																								

1. Twenty minute SOAK function occurs only when selected. This time has not been added to the ALL TIME column.
2. When one or more additional rinse cycles are selected, this shorter ADDITIONAL RINSE SPIN time is used for all rinse cycles except the final rinse cycle. The final rinse cycle uses the FINAL SPIN time. The time from this ADDITIONAL RINSE SPIN column has not been added to the ALL TIME column.
3. The actual fill time is a function of water flow rate and may be more or less than the time specified. If more time is needed, the countdown will pause. If less time is needed, the control deletes the remaining fill time.
4. The rinse water valve flushes fabric softener from dispenser for 75 seconds ((10' on / 5' off) -5 times) at the beginning of the last rinse cycle only.

About the control lock.

The control lock feature only locks the control **during** a cycle. Control lock does not lock the control in the standby mode.

To activate control lock, press and hold **LOAD** and **OPTIONS** pads simultaneously for 3 seconds while the washer is in a cycle. The display will alternate between CL and **time remaining**.



Water System and Filtering

Weight Recognition Function (Load Sensing)

- The weight recognition function measures the washing load before water is supplied.
- The weight recognition function is canceled when water level key is pressed prior to the completion of weight recognition function.
- If the current water level is above the lowest level at the beginning of weight sensing, it is automatically set as a high level.
- If you change wash cycle after sensing weight, the high water level is automatically selected regardless of the water level decided by the sensing of weight.

Water Supply Function

- Relations between water level, frequency, and water supply capacity are as follows:

Water Level Frequency Chart

LEVEL	GALLONS	FREQUENCY (kHz)
EMPTY	0	25.2
EXTRA SMALL	8.00	24.1
SMALL	10.6	23.43
MEDIUM	12.4	23.03
LARGE	13.2	22.80
EXTRA LARGE	19.6	22.13

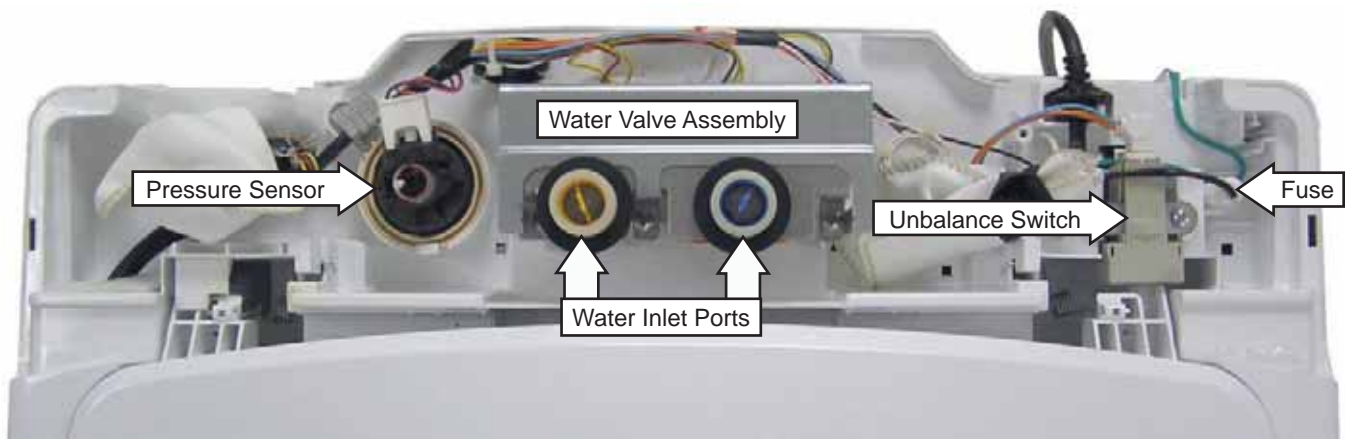
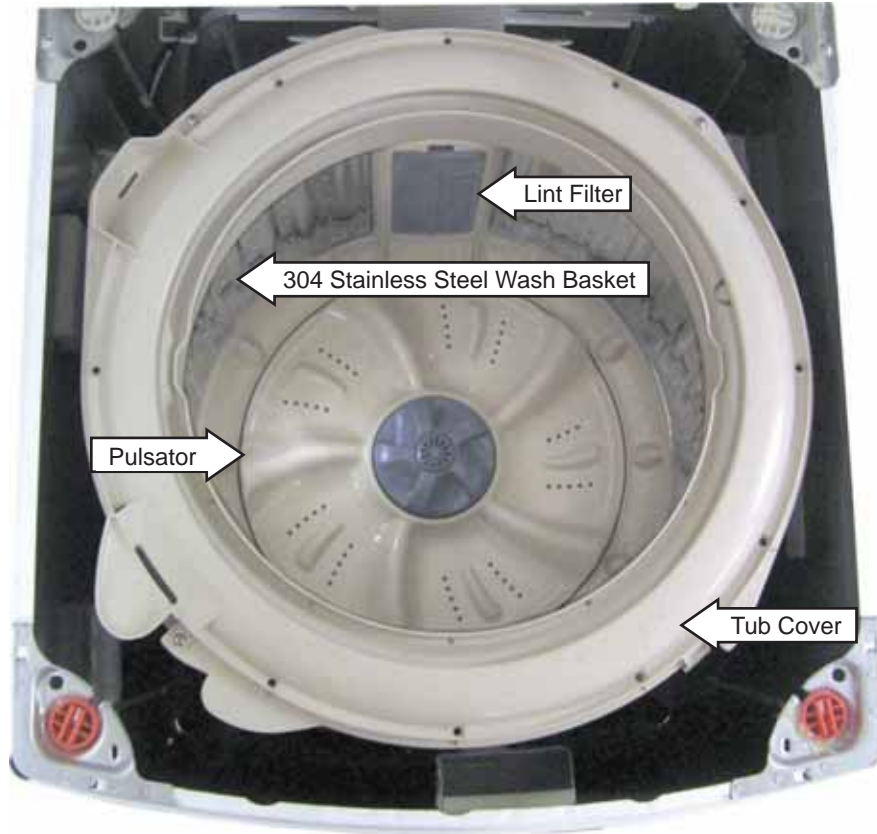
- If the water level does not reach the selected level within 60 minutes after starting water supply, the Water Supply Error (7E) is displayed.

Supplementary water supply is performed during every washing or rinsing operation. The steps are as follows:

- Supply water to the water level selected.
- Perform the ACTIVATE operation for 1.5 minutes.
- Sense the present water level after stopping motor.
- Compare the present water level to the water level selected.
- If present water level is less than the water level selected, supply water to the water level selected. If present water level is greater than the water level selected, continue the washing or rinsing operation.
- Total time of supplementary water supplying is not over 30 seconds.

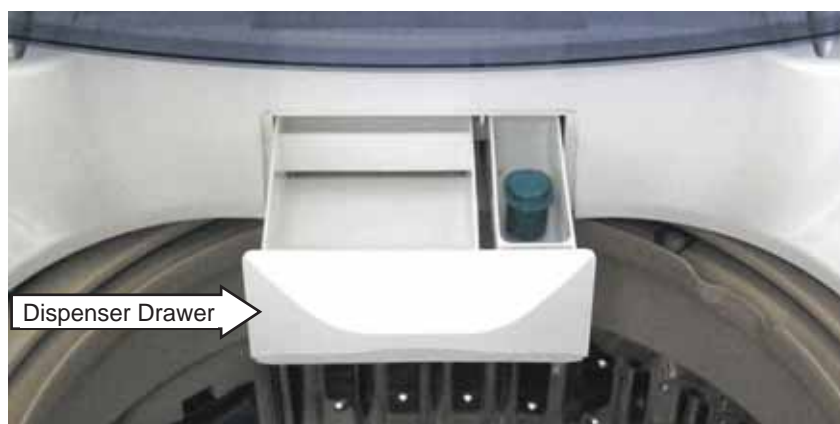
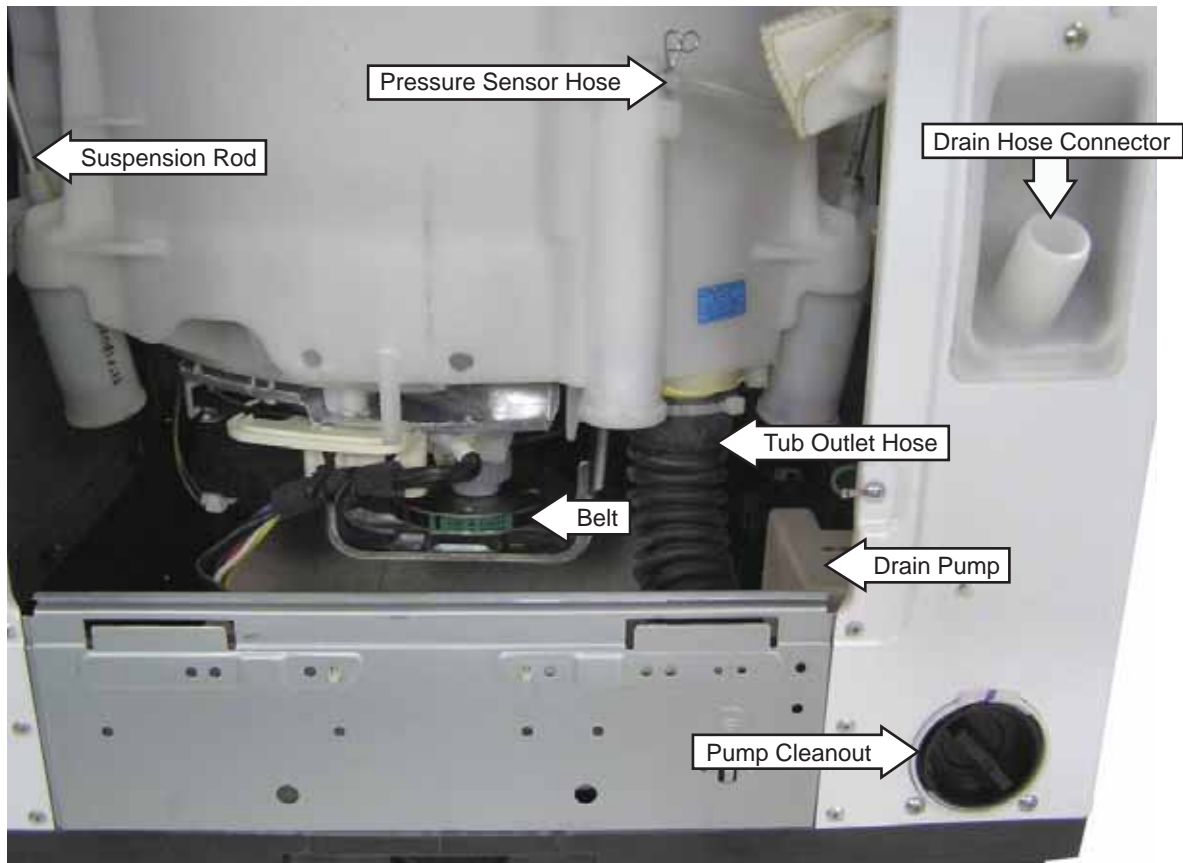
Component Locator Views

Top View



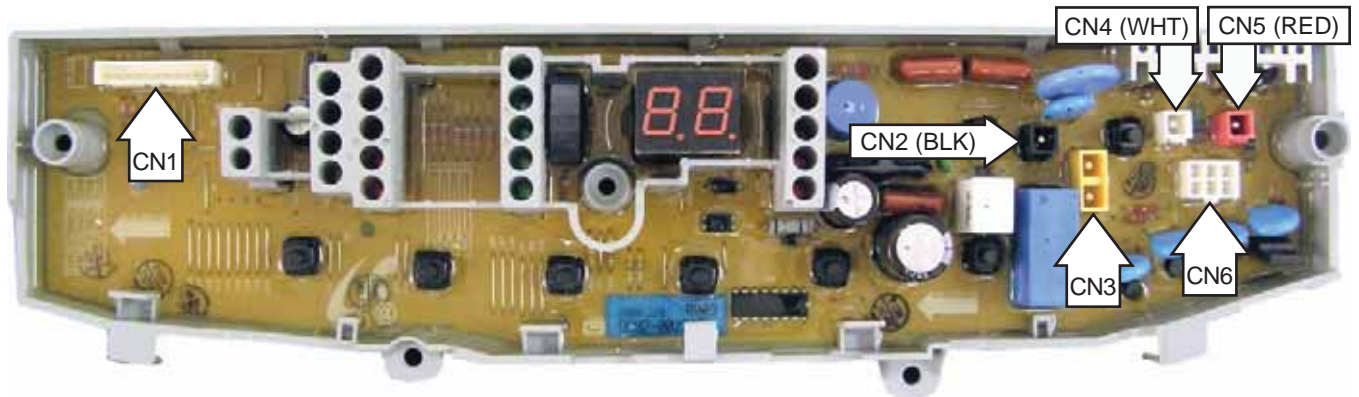
Component Locator Views (Con't)

Rear View



Circuit Board Connections

PCB (Printed Circuit Board)



CN1 - Door Switch, Unbalance Switch, Pressure Sensor

CN2 - Line Voltage

CN3 - Neutral, Neutral to Water Valve Solenoids

CN4 - Washing Motor

CN5 - Washing Motor, Washing Motor Condenser

CN6 - Water Valve Solenoids, Brake Control Motor, Drain Pump Motor

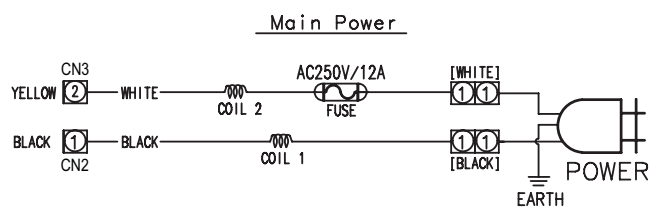
Washer Components

Control Panel and PCB

The control panel is located on the front of the top cover. The control panel consists of an LED display, and an 8 push-button keypad that operates a printed circuit board (PCB).

The PCB is supplied with 120 VAC at PCB locations CN2 pin 1 to CN3 pin 2.

A 12-amp fuse is installed in the white neutral line and is located under the rear cover. (See *Fuse*.)

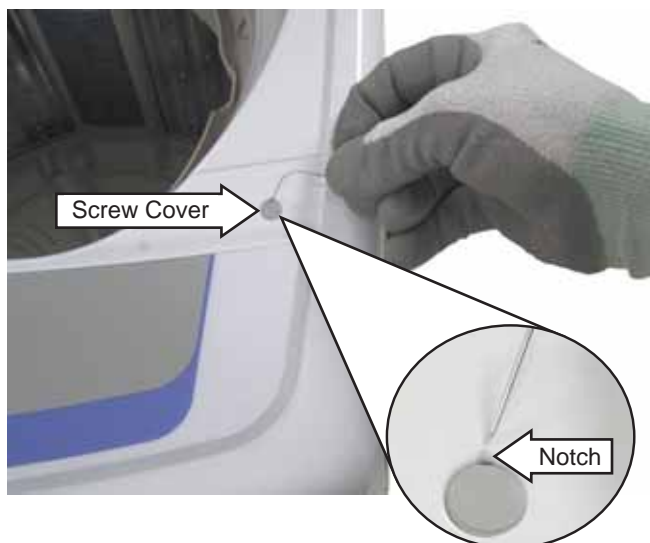


WARNING: Sharp edges may be exposed when servicing washer. Use caution to avoid injury and wear Kevlar gloves or equivalent protection.

To remove the control panel and PCB:

The control panel is attached to the top cover with 2 recessed Phillips-head screws (1 on each side). It is necessary to remove 2 screw covers to access the screws.

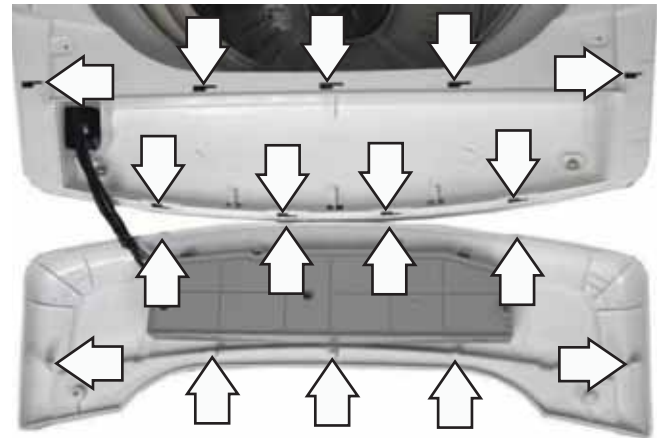
1. Open the lid.
2. In the notch provided, insert a straightened paper clip or small flat blade screwdriver, then pry and lift the 2 screw covers (1 on each side), from the top of the control panel.



3. Remove the 2 Phillips-head screws that attach the control panel to the top cover.

Note: In the following step, 9 tabs located inside the control panel are engaged in 9 corresponding slots in the top cover.

Control Panel Removed from Top Cover



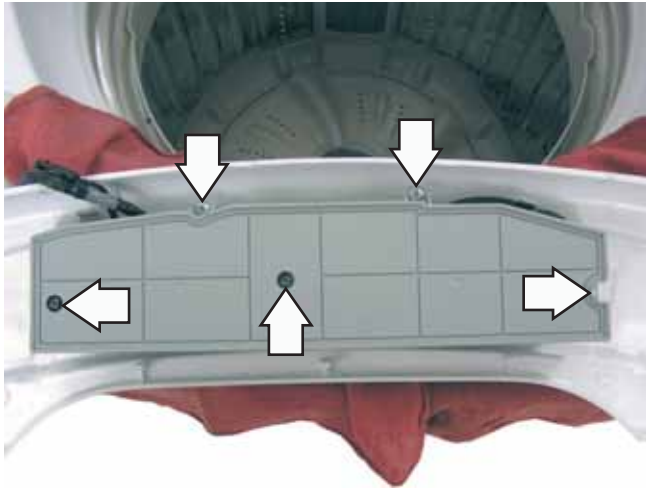
4. Slide the control panel to the left, then lift the panel from the top cover.



Caution: To prevent damage to the control panel, place a cloth or towel over the front of the top cover.

5. Place the control panel face down on the protected top cover.

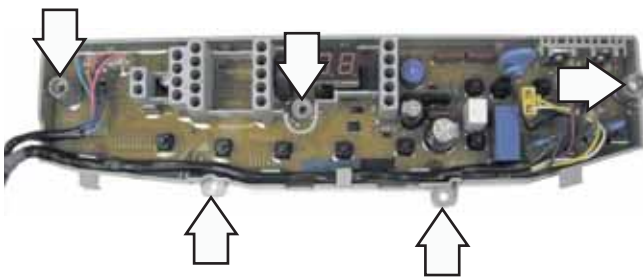
- Remove the 5 Phillips-head screws that attach the PCB to the control panel. Place the control panel and the cloth or towel aside.



- Place the PCB wiring side up and note the wiring locations and routing, then disconnect the wiring from the PCB.

Caution:

- To prevent misalignment of the control panel selector buttons to the PCB, when installing the PCB to the control panel route the wiring as shown below.
- Make sure all screw locations on the PCB fully contact the control panel before installing the screws.



- Before reapplying power, check for proper button operation, press each button and listen for an audible click.
- When installing the control panel to the top cover, before sliding the panel toward the right, make sure all panel tabs are engaged with slots in the cover.

Back Cover

Removal of the back cover provides access to the water valve, pressure sensor, unbalance switch, fuse, and lid springs.

The back cover is held to the rear of the top cover with 2 Phillips-head screws and 4 tabs. The tabs are located inside the back cover. After removal of the screws, the back cover can be lifted straight up.

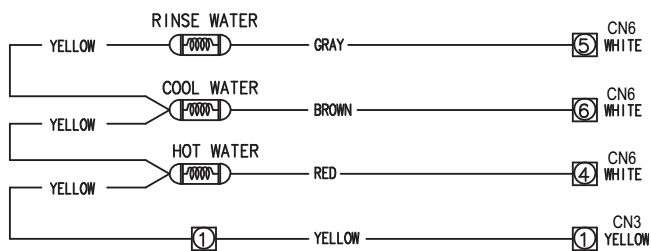


Water Valve

The water valve consists of a valve body and 3 solenoid coils. It is only available as a complete assembly. Each solenoid controls a specific water function.

- Each coil on the water valve assembly has an approximate resistance value of 1.2K Ω .
- The water valves receive power from the PCB.
- When energized, there should be approximately 120 VAC at the appropriate coil.

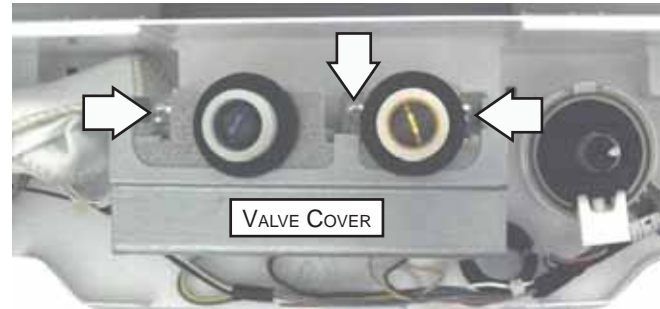
Rinse, Cold Water, and Hot Water Valve



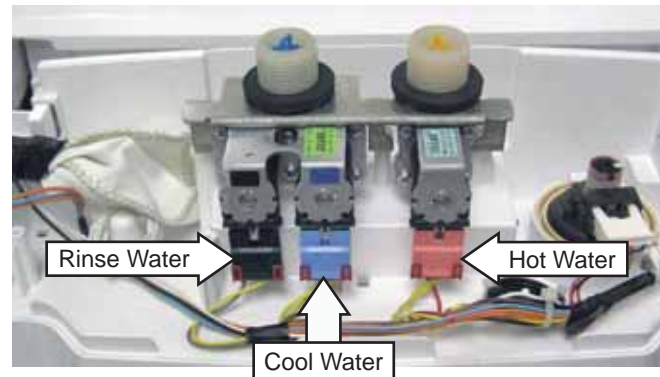
The water valve is located at the rear center of the top cover.

To remove the water valve:

1. Remove the back cover. (See *Back Cover*.)
2. Remove the 3 Phillips-head screws and lift the valve cover from the valve.



3. Disconnect the 3 wire harnesses from the valve.



4. Lift the water valve straight up and remove the valve from the top cover.



Pressure Sensor

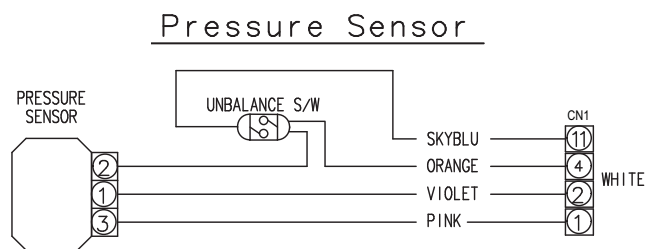
The pressure sensor is connected by a clear hose to an air reservoir near the bottom of the outer tub and operates by a frequency (kHz) signal to the inverter board.

The pressure sensor wires (violet, orange, and pink) are connected at pins 1, 2, and 3 at CN1 on the PCB. (See *Circuit Board Connections*.)

The approximate resistance value of the transducer, measured between the pink and violet wires, is approximately 23 Ω .

When the water level rises in the washer tub, air is trapped in the reservoir. As the water level rises, the air pressure in the reservoir increases.

- The pressure is translated into an electrical signal (frequency) by the pressure sensor.
- The frequency will vary from approximately 27 kHz (empty tub) to 22 kHz (full tub).
- This frequency can be measured at the pressure sensor between the orange and violet wires.



LEVEL	GALLONS	FREQUENCY (kHz)
EMPTY	0	25.2
EXTRA SMALL	8.00	24.1
SMALL	10.6	23.43
MEDIUM	12.4	23.03
LARGE	13.2	22.80
EXTRA LARGE	19.6	22.13

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

Note: The water level will vary slightly depending on the load size, which is measured by the weight recognition function and any supplementary water needed. This information is sent to the PCB, which then determines the appropriate water level.

Pressure Sensor Test

If the pressure sensor is not operating correctly, perform the following test:

Operate the washer on the spin cycle until all remaining water is drained from the washer.

Clear the pressure switch air tube of any obstructions such as lint, detergent or fabric softener deposits, or foreign objects.

Check the approximate water levels at each load selection. Water levels are measured from the bottom of the wash basket:

EXTRA SMALL - 5 ½ inches

SMALL - 6 ¾ inches

MEDIUM - 7 ½ inches

LARGE - 8 ¾ inches

EXTRA LARGE - 11 ¾ inches



Extra Small Water Level Shown

The pressure sensor is located on the top cover, left of the water valve.

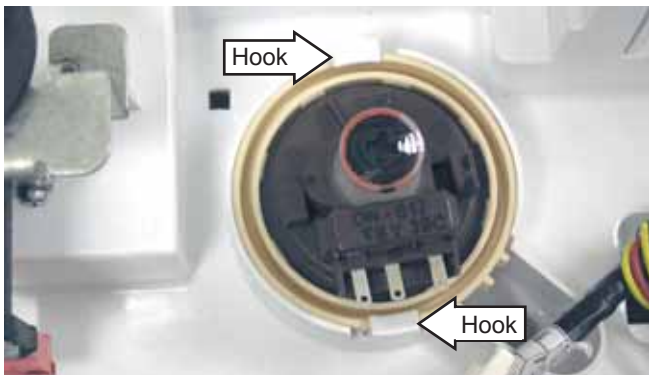
To remove the pressure sensor:

Note: Before disconnecting the hose from the pressure sensor, be sure the water level is below the bottom of the spin basket.

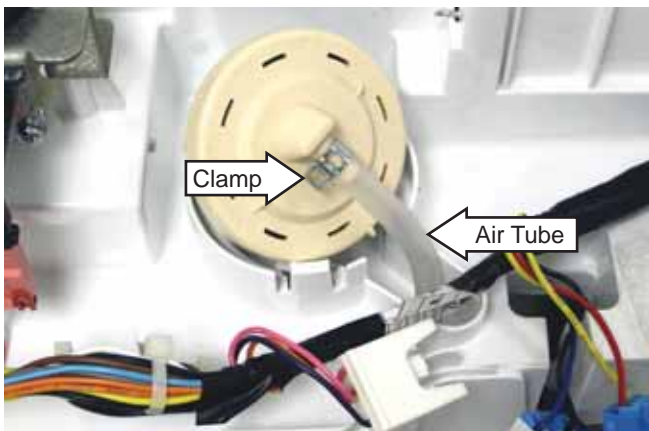
1. Remove the back cover. (See *Back Cover*.)
2. Disconnect the pressure sensor wire harness.



3. Carefully push both hooks slightly outward, then lift the pressure sensor.



4. Using pliers, squeeze the clamp and pull the air tube off the pressure sensor.



Unbalance Switch

The unbalance switch is located at the right rear corner of the top cover. The switch actuator is inserted through a hole in the top cover. The normally open contacts will close when the lid is closed. With the lid closed, the contacts will momentarily open when an out of balance load allows the outer tub to push the actuator approximately 3/4-inch toward the rear of the cabinet.

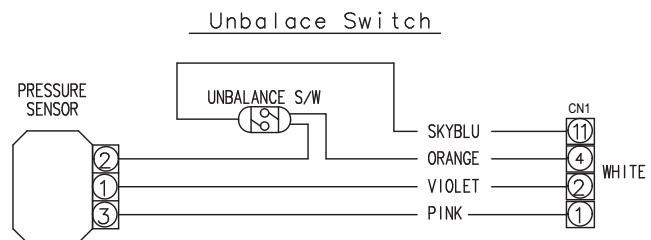
The first two times the switch is tripped, the washer stops, time is added to the display, tub fills with water, agitates, then spins again.

If the switch is tripped a third time, **Ub** will appear in the display. With **Ub** displayed, the lid will need to be opened, the clothing redistributed, and **START** selected to complete the cycle.

The continuity of the switch can be checked at the switch terminals or at the PCB location, CN1 pin 4 and pin 11.

An open unbalance switch will:

- Cause **Lo**, lid open, to appear in the display
- Not stop the fill function
- Stop the wash cycle
- Stop the drain pump
- Stop the spin cycle
- Not stop the drain pump operating during overflow protection.



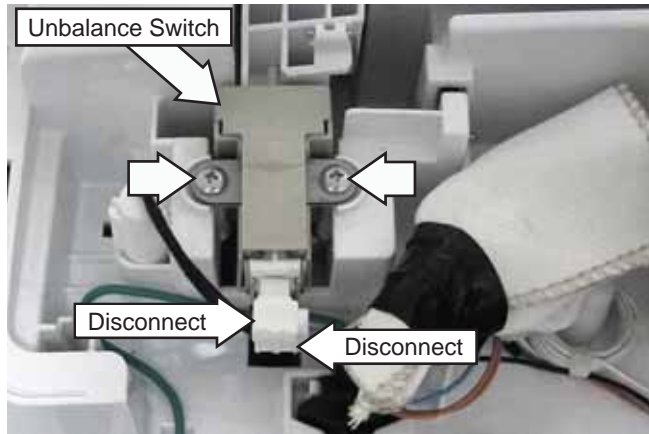
Note: **Lo**, lid open, shown in the display can be caused by an open lid switch or open unbalance switch. Test each switch separately to determine which one is at fault.

The unbalance switch and actuator are replaced as an assembly.

(Continued next page)

To remove the unbalance switch:

1. Remove the back cover. (See *Back Cover*.)
2. Disconnect the 2 wires from the switch.
3. Remove the 2 Phillips-head screws that attach the switch to the top cover.

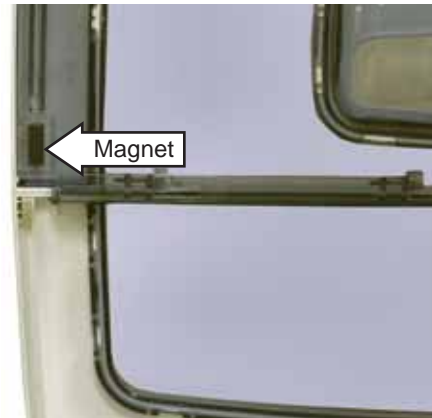


4. Lift and remove the unbalance switch from the washer.



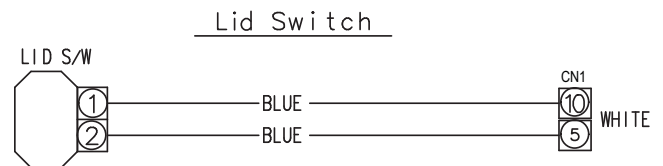
Lid Switch and Harness

When the lid is in the closed position, a magnet located inside the front half of the lid will activate and close the lid switch contacts.

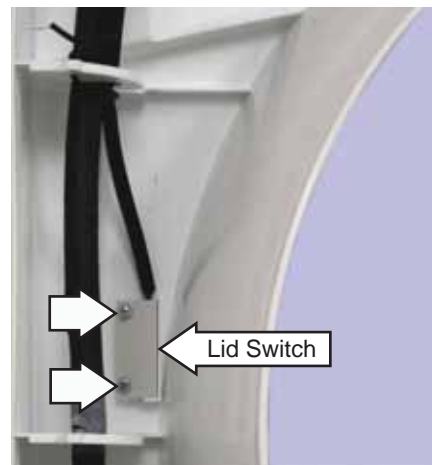


An open lid switch affects washer operation the same as an open unbalance switch. (See *Unbalance Switch*.)

Note: Lo, lid open, shown in the display can be caused by an open lid switch or open unbalance switch. Test each switch separately to determine which one is at fault.



The lid switch is attached to the inside of the top cover with 2 Phillips-head screws. The top cover must be lifted to access the lid switch. (See *Top Cover*.)



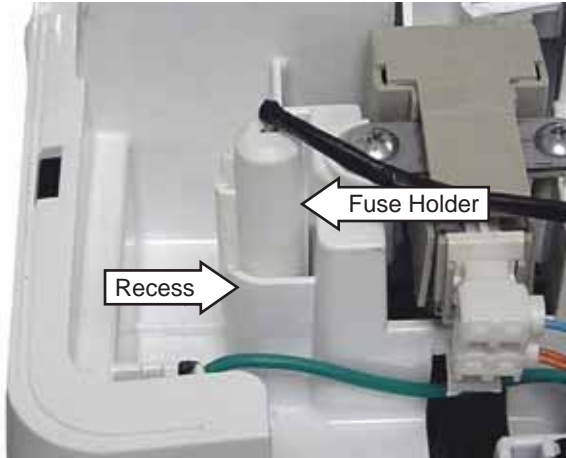
Note: When replacing the lid switch, note the routing of the wire harness.

Fuse

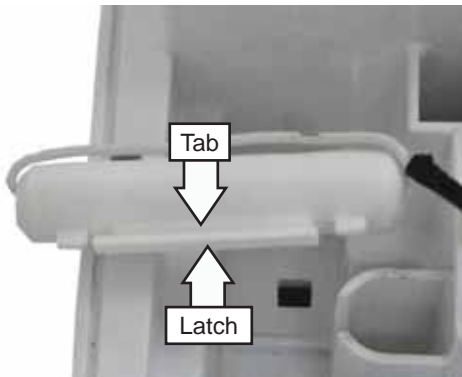
The washer utilizes a fuse connected in the neutral line of the top cover wire harness. The fuse is rated at 250 VAC and 12 amps. The fuse and fuse holder are located at the right rear corner of the top cover.

To remove the fuse:

1. Remove the back cover. (See *Back Cover*.)
2. Lift the fuse holder from the recess in the top cover.



3. Disengage the latch from the tab and open the fuse holder.



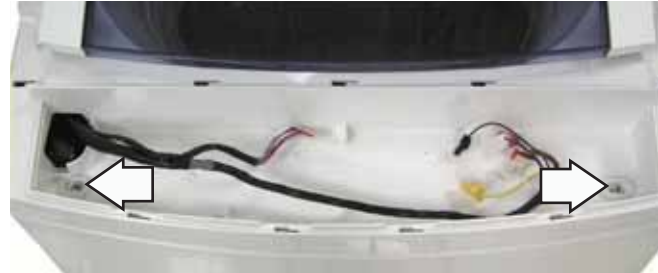
4. Remove fuse from fuse clips.



Top Cover

To remove the top cover:

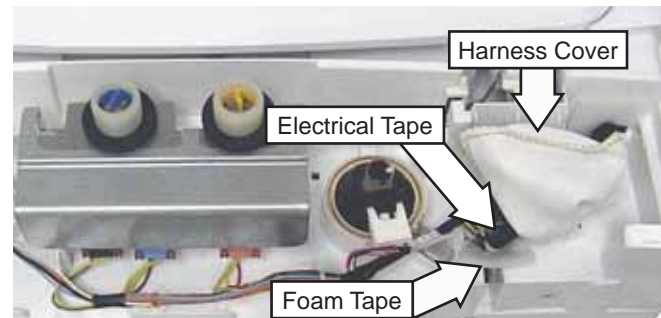
1. Remove the control panel and PCB. (See *Control Panel and PCB*.)
2. Remove the 2 Phillips-head screws that attach the front of the top cover to the cabinet.



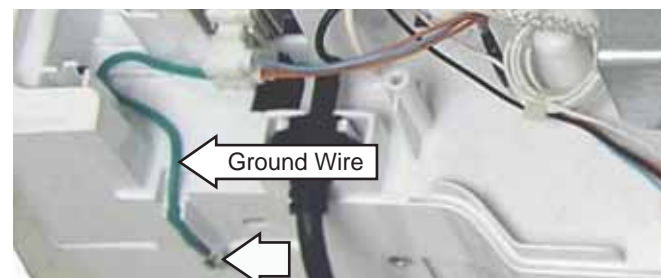
3. Remove the back cover. (See *Back Cover*.)
4. Remove the foam tape.

Note: In the following step, 2 wire harnesses are located inside the wire harness cover.

5. Unwrap the electrical tape and remove the wire harness cover.
6. Disconnect the 2 wire harnesses.



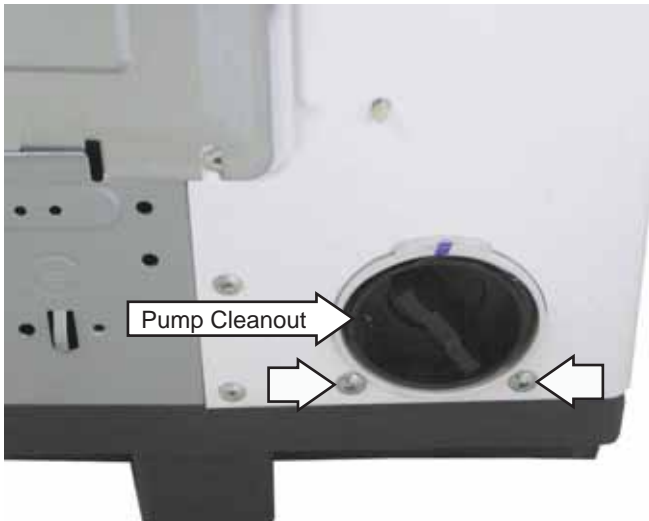
7. Remove the pressure sensor and air tube clamp. (See *Pressure Sensor*.)
8. Remove the Phillips-head screw that attaches the ground wire to the cabinet.



9. Lift the top cover from the cabinet.

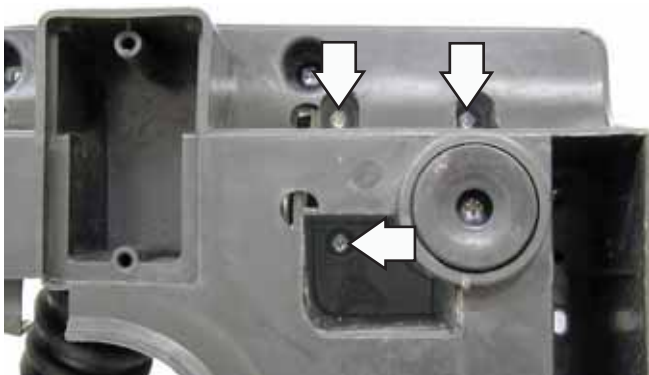
To remove the drain pump:

1. Remove the 2 Phillips-head screws and the access panel from the back of the washer.
2. Drain any remaining water from the washer. (See **To clean the impeller and impeller housing**, this section.)
3. Remove the 2 Phillips-head screws, located below the cleanout, that attach the pump to the back of the cabinet.



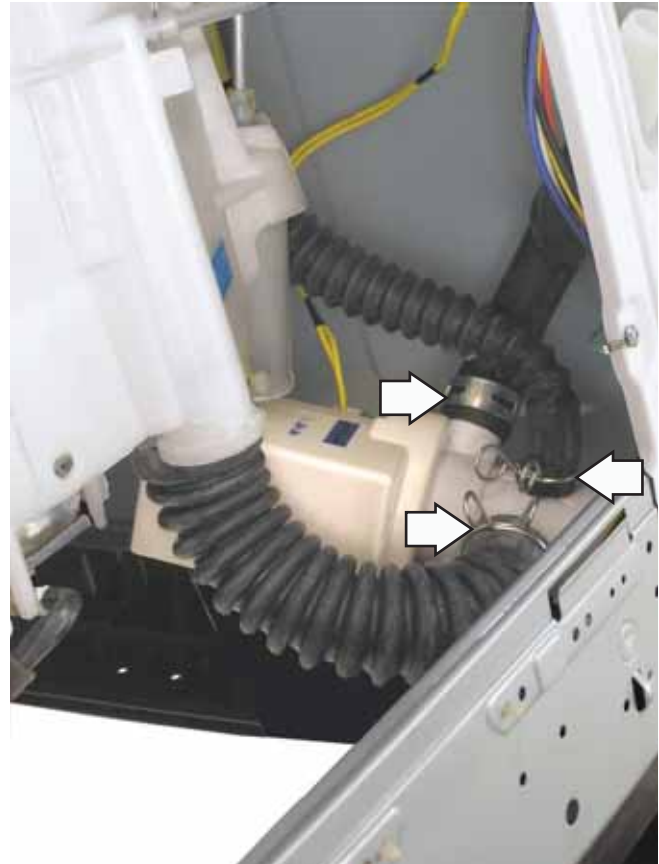
Caution: To remove the drain pump, the washer must be carefully placed on its front or side. To prevent scratches to the surface of the washer, place a towel or blanket on the floor.

4. Remove the 3 Phillips-head screws that attach the pump to the bottom of the washer base.

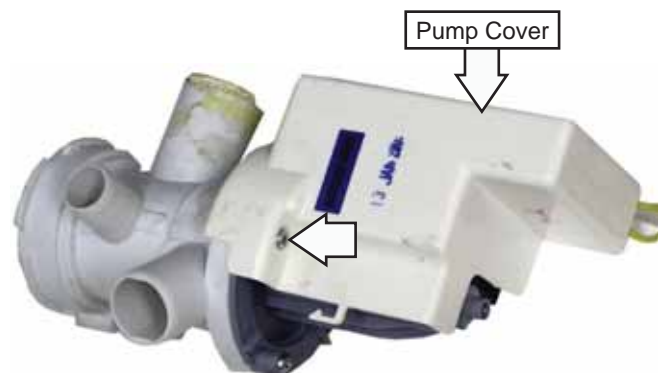


Note: In the following step, the tub outlet hose is difficult to remove due to a sealing compound used at the factory.

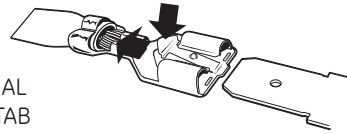
- a. Squeeze the clamp and slide it back.
 - b. Carefully break the tub outlet hose loose by inserting a small flat-blade screwdriver under the hose to break the seal.
 - c. Remove the hose.
5. Remove the 3 hoses from the pump.



6. Remove the Phillips-head screw and the pump cover from the pump.

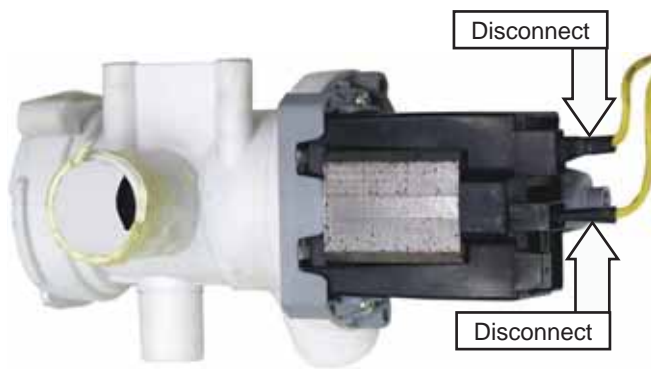


Note: The electrical terminal ends, which attach to the drain pump, have locking tabs on them. These tabs cannot be seen because they are encased in plastic. To remove these terminals, grasp the releasing locking tab of the terminal with needle-nose pliers. Gently squeeze the pliers' jaws together while pulling the electrical terminal from the drain pump.



ELECTRICAL TERMINAL
RELEASE/LOCKING TAB
SHOWN WITH PLASTIC
COVERING REMOVED

7. Disconnect the 2 wires from the pump.



Caution: To ensure there is no water leakage, care must be taken when reinstalling and sealing the hoses to the drain pump.

When installing, apply a thin coat of sealing compound (part no. WH60X15) to the inner surface of the drain hoses.

Washing Motor and Belt

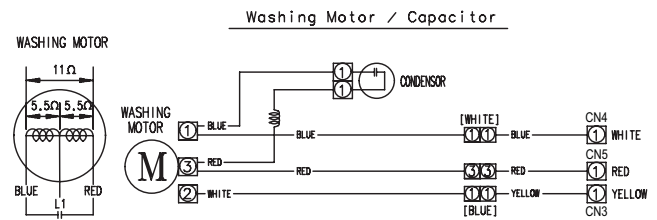
The motor assembly consists of a reversible, AC motor. The motor drives the shaft assembly pulley with a V-belt.

On the motor plug, check for approximate resistance values:

Blue to white and yellow - 5.5 Ω

Red to white and yellow - 5.5 Ω

Blue to red - 11 Ω (Can also be measured at PCB CN4 to CN5.)

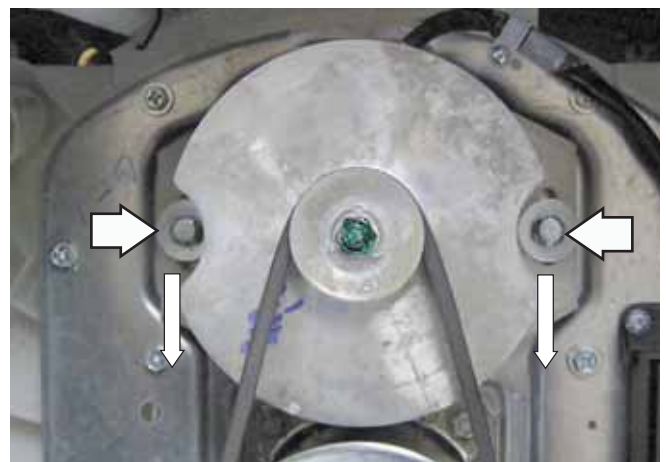


Caution: If the outer tub is not removed as an assembly, to access the belt, the washer can be carefully placed on its front or side. To prevent scratches to the surface of the washer, place a towel or blanket on the floor.

The washing motor is attached to the platform with two 13-mm bolts. To replace it requires removing the belt, two 13-mm (33/64" SAE equivalent) bolts, and the Phillips-head screw that attaches the motor wire harness to the platform. The motor can then be lifted from the platform.

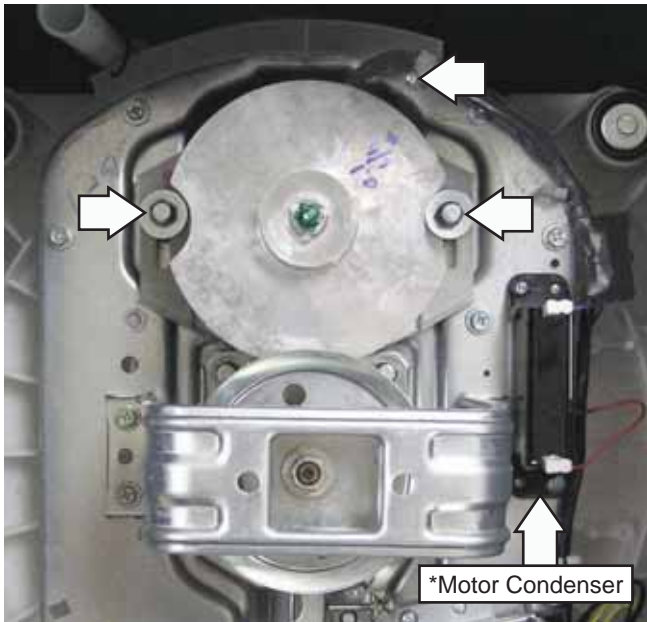
To remove the washing motor and belt:

1. Loosen the two 13-mm bolts that attach the washing motor to the platform, then slide the motor toward the shaft assembly.
2. Rotate the belt off the motor and shaft assembly pulleys.

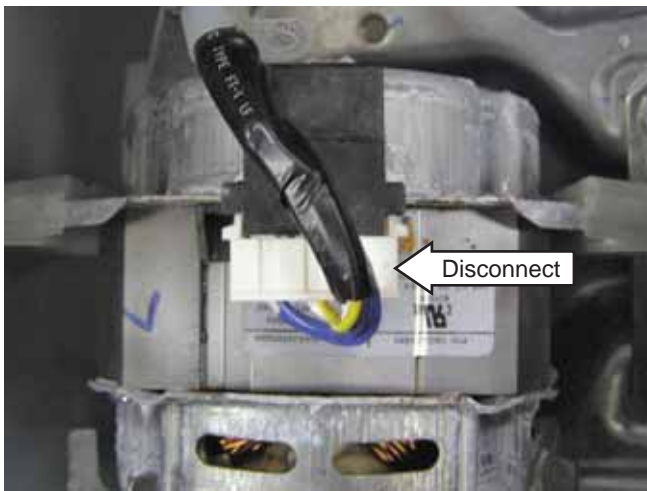


(Continued next page)

3. Remove the two 13-mm bolts from the motor.
4. Remove the Phillips-head screw that attaches the motor wire harness to the platform.



5. Lift the motor, then place it harness-side up on the platform.
6. Disconnect the wire harness from the motor.



7. Remove the 13-mm hex-nut that attaches the motor pulley to the motor shaft.

* The washing motor utilizes a 42 μF condenser. The condenser is a start capacitor. If the condenser is open, the motor will hum, but not start.

The condenser is attached to the platform with 2 Phillips-head screws. (For location of condenser, see photo after step 4.) Two wires are connected to the condenser.

Wash Basket

The wash basket is contained inside the outer tub. The wash basket is rotated by a belt-driven shaft assembly. A 36-mm (1 $\frac{7}{16}$ -in. SAE equivalent) nut attaches the wash basket to the shaft.

To remove the wash basket:

1. Drain the washer using the pump cleanout. (See *Drain Pump*.)
2. Remove the top cover. (See *Top Cover*.)
3. Remove the 4 Phillips-head screws that attach the tub cover to the outer tub. Remove the cover.



(Continued next page)

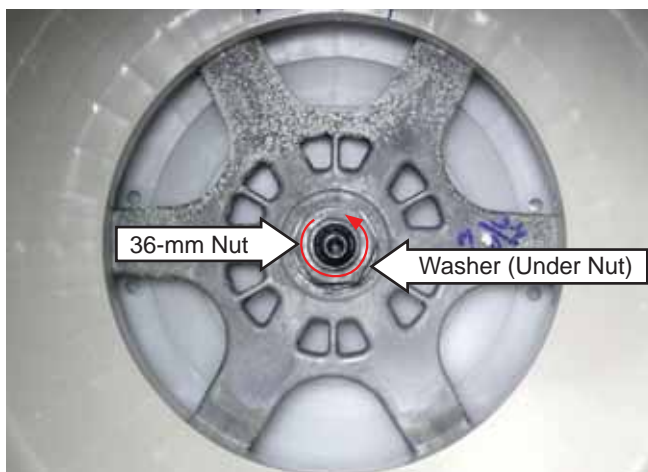
- Place a flat blade screwdriver in the slot under the pulsator cap. Gently pry up and remove the pulsator cap.



- Remove the 10-mm (13/32" SAE equivalent) bolt that attaches the pulsator assembly to the shaft.



- Pull the pulsator assembly up and out.
- Remove the 36-mm hex-head nut (loosen counterclockwise), and wave washer that attach the wash basket to the shaft.



- Lift the wash basket out of the outer tub.

Outer Tub and Suspension Assembly

The wash basket, outer tub, motor, and shaft assembly are suspended by four rod and spring assemblies. The rod and spring assemblies are attached to each corner of the washer cabinet. They extend down and connect to the bottom of the outer tub.



To remove the outer tub:

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

- Remove the top cover. (See *Top Cover*.)
- Remove the 2 Phillips-head screws and the access panel from the back of the washer
- Disconnect the 2 wires from the drain pump.
- Remove the Phillips-head screw and the ground wire from the cabinet.
- Compress and release the tabs on the 5 wire retainers attached to the back of the cabinet.

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

- Remove the tub outlet and tub overflow hoses from the outer tub:
 - Cut the plastic clamp and remove it.
 - Carefully break the hose loose.
 - Remove the hose.

7. Lift the outer tub up and disengage the suspension rod assemblies from each corner of the outer tub.



8. Pull the outer tub assembly out of the washer cabinet.

Caution: To ensure there is no water leakage, care must be taken when reinstalling and sealing the hoses to the outer tub.

Note: Factory installed plastic hose clamps are non-reusable. When installing an outer tub assembly, replace the plastic clamps with new screw-type hose clamps provided with the new part. The screw-type hose clamps are also available separately.

Clamp Part Number	Size
WD01X10322	15/16" to 1½"
WD01X10323	1¾" to 1¾"
WD01X10324	1/2" to 29/32"

Shaft Assembly and Brake Overview

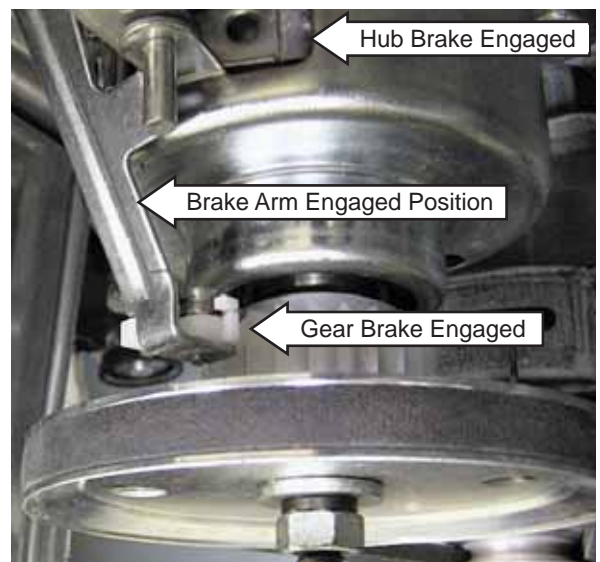
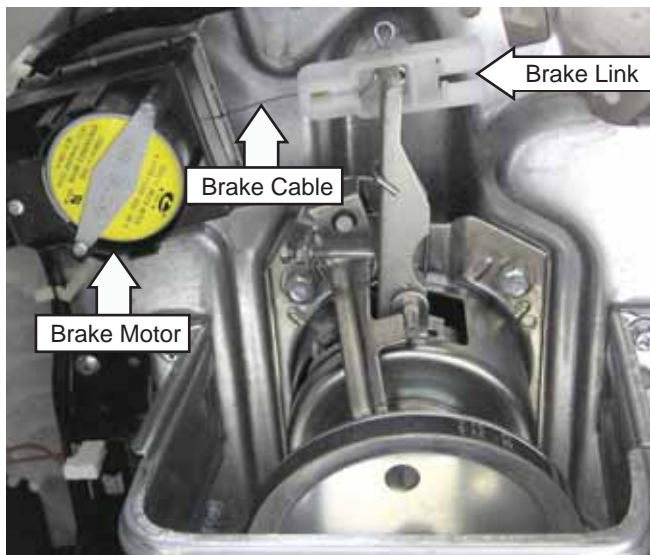
The shaft assembly consists of the pulsator shaft, wash basket hub, and a brake system.

The shaft assembly operates in 2 distinct modes, spin and agitation.

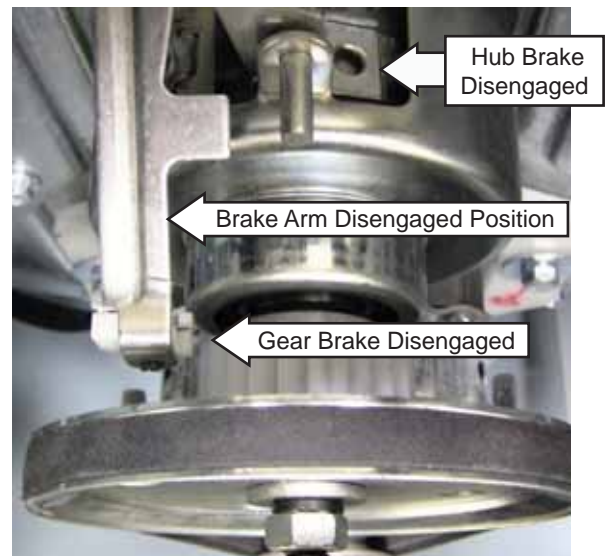
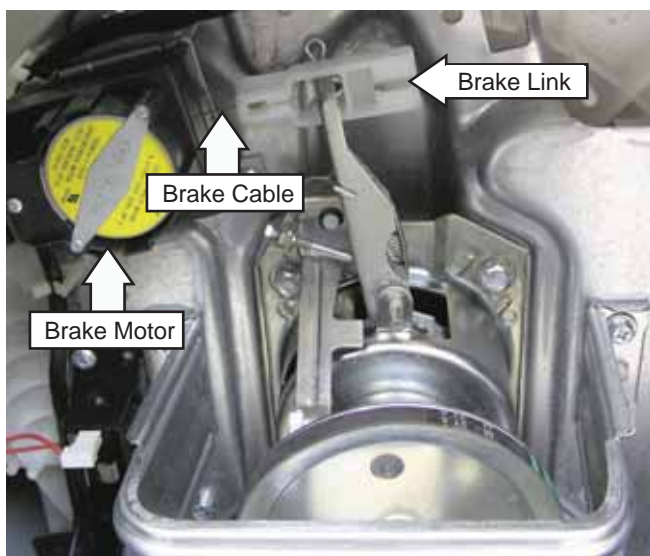
The pulsator shaft transfers power to the wash system. Motor power is transmitted to the pulsator shaft from the drive belt to the drive pulley. The drive pulley is attached to one end of the pulsator shaft and the pulsator is attached to the other. The wash basket hub is fixed to the washer basket at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

Brake action is applied to the wash basket hub located inside the shaft assembly and to a gear located at the bottom of the assembly. The brake motor extends or retracts a cable connected to the brake arm with a brake link. The position of the brake arm operates the brake that changes the shaft assembly mode from spin to agitation. In agitation mode, the wash basket hub is fixed to the platform and the pulsator shaft rotates when driven by motor. In spin mode, the pulsator shaft is fixed to the hub and both rotate together.

Agitation Mode - No 120 VAC applied to brake motor. Brake cable extended and brake system engaged.



Spin Mode - 120 VAC applied to brake motor. Brake cable retracted and brake system disengaged.



Brake Control Motor

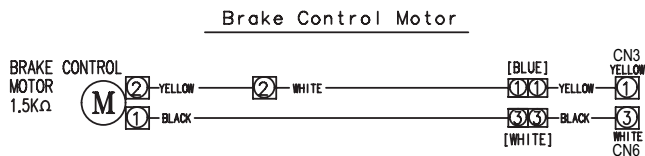
During a normal spin mode that is not interrupted, the basket will coast to a slow stop without the use of the brake control motor.

However, if the lid is opened during a spin cycle, the 120 VAC to the brake control motor is stopped, the gear engaged, and the basket stops immediately.

Diagnostic tip: The brake control motor and pump are always energized at the same time. Therefore, if the pump is running, the board is working properly and supplying 120 VAC to the brake control. An open brake control motor will allow the pulsator to turn during spin, but the basket will remain stationary. This will result in wet clothes at the end of the cycle.

Caution: To access the brake control motor, the washer can be carefully placed on its front or side. To prevent scratches to the surface of the washer, place a towel or blanket on the floor.

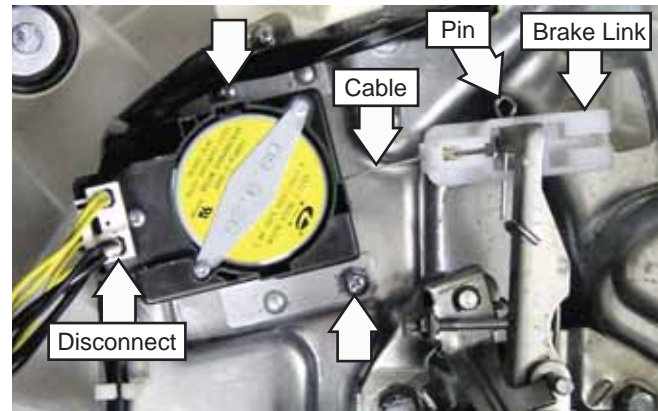
The brake control motor has an approximate resistance value of 1.4K Ω .



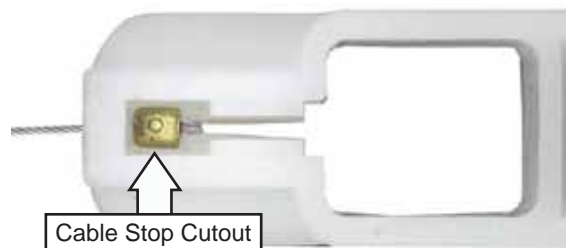
The brake control motor is attached to the platform with 2 Phillips-head screws.

To remove the brake control motor:

1. Pull out the pin, then remove the brake link from the shaft assembly brake lever.
2. Remove the brake link from the cable.
3. Disconnect the brake control motor wire harness.
4. Remove the 2 Phillips-head screws that attach the brake control motor to the platform.



Note: To prevent the brake cable from dislodging from the brake link, ensure brake link is installed with cable stop cutout facing away from the platform.



Shaft Assembly

Manual Shaft Assembly Checks:

- To manually check activation, unplug washer and turn the drive pulley to the right. The activator should easily turn in the same direction at a ratio of 5.33:1. Turn the pulley to the left; the activator should easily turn in that direction.
- To check spin, manually move the brake lever toward the brake motor to release brake and engage clutch. Rotate pulley to the right; tub should rotate to the right.

Note: Failure to operate as described requires shaft assembly replacement.

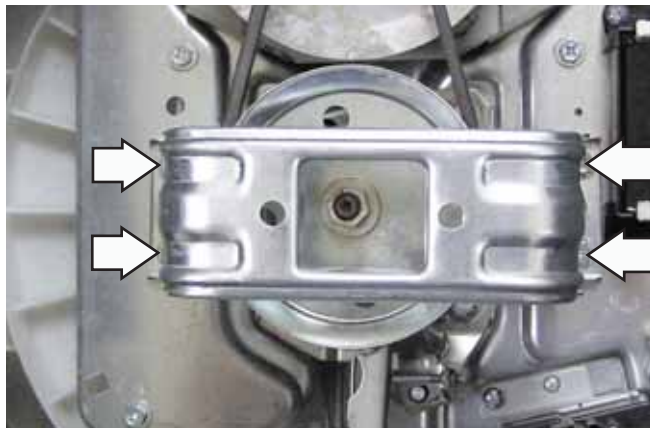
The shaft assembly is attached to the platform with four 13-mm (33/64" SAE equivalent) bolts. To replace it requires removing the wash basket, belt, and support saddle.

To remove the shaft assembly:

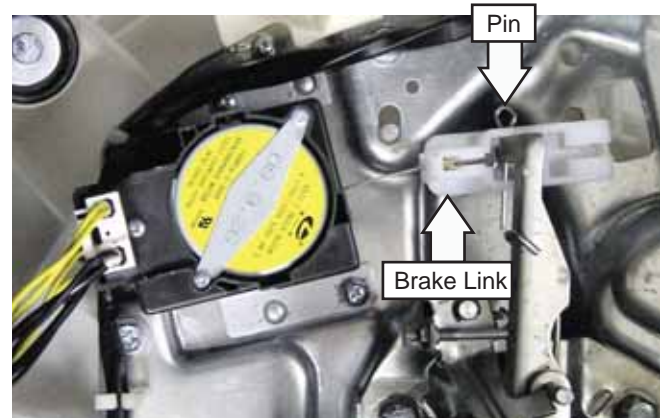
1. Remove the wash basket. (See *Wash Basket*.)

Caution: If the outer tub is not removed as an assembly, to access the shaft assembly, the washer can be carefully placed on its front or side. To prevent scratches to the surface of the washer, place a towel or blanket on the floor.

2. Remove the four 10-mm (13/32" SAE equivalent) bolts that attach the support saddle to the platform.



3. Remove the belt. (See *Washing Motor and Belt*.)
4. Remove the pin and brake link from the shaft assembly.



5. Remove the four 13-mm bolts that attach the shaft assembly to the platform.



6. Lift the shaft assembly off the platform.

Troubleshooting

Error Codes

NOTE: It's important to note error codes should only be used to help identify 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.

Error	Condition	Solution	Fault
Water Level Sensor error : "1E"	Water level sensor fails to send signal for longer than 5 seconds.	Press "POWER" button. No other buttons work.	Bad PCB or Pressure Sensor S/W.
Water Supply error : "FF"	This occurs when the water supply is not finished in 1 hour or there is no change in the water level 4 minutes after the water supply has started.	Press "POWER" button or "START/PAUSE" button. No other buttons work.	Bad PCB or Pressure Sensor S/W, or Water-Valve
Drain Pump error : "dr"	Water level does not decrease to reset point within 15 minutes from draining water from washer.	Press "POWER" button. No other buttons work.	Bad PCB or Pump Moter.
Lid Open error : "Lo"	Lid is opened during wash cycle.	Close lid.	Bad PCB, Lid S/W, or Unbalance S/W.
Unbalance S/W error : "Ub"	Unbalanced load is sensed three times during a wash cycle.	Open lid. Rebalance laundry load and close lid.	Bad PCB or Unbalance S/W.
Water Leakage error : "LE"	This occurs when it detects that the water level has fallen below the reset water level for the third time.	Press "POWER" button.	Bad PCB, Pressure sensor S/W, Pump motor.
Overflow error : "OE"	This occurs when overflow is sensed during temporary stop, waiting action or spin action, otherwise overflow is sensed three times during a wash or rinse cycle.	Press "POWER" button.	Bad Drain hose, water valve, Pressure sensor S/W.

Service Test Mode

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

Machine must be in idle mode before entering test. Idle mode occurs when the washer has completed a cycle.

To enter the service test mode, press simultaneously the **OPTIONS**, **CYCLES**, and **POWER** pads for 1 second. All LEDs will briefly illuminate, then the display will alternately show MICOM number and MICOM version every 2 seconds. Repeated pressing of the **START/PAUSE** pad initiates specific tests. See table below. To exit test mode press **POWER** pad.

SERVICE MODE TEST	DISPLAY	ACTION
Water level sensor-test #1	H	Fills to extra large level, starts wash. To pump out, repeatedly press START/PAUSE pad until 5 appears in the display.
Water level sensor-test #2	HH	Fills to small level, starts wash. To pump out, repeatedly press START/PAUSE pad until 5 appears in the display.
Water level sensor-test #3	L	Fills to extra large level. To pump out, repeatedly press START/PAUSE pad until 5 appears in the display.
Drain and spin, lid open, and unbalance switch test	S	Starts drain and initiates spin. After 4 failed spin attempts, 3E error, is displayed and error sound is audible. If 3E appears and motor is not operating, replace it. If 3E appears and the motor is operating properly, replace the PCB. If washer drains and spins; lid switch, unbalance switch, and motor OK.
Weight sensing test (See Note)	HA	Weight sensing begins, then display shows weight sensing data.
Water valve test	HL	Press TEMP pad repeatedly to test cool, rinse, and hot water functionality: First press = Cool, Second press = Rinse, Third press = Hot, Fourth press = Off.
Motor test	HL	Press LOAD pad repeatedly to test motor/pulsator rotation: First press = Motor rotates pulsator CW, Second press = Off, Third press = Motor rotates pulsator CCW, Fourth press = Off.
Drain pump test	HL	Press OPTIONS pad repeatedly to test drain pump: First press = Pump out, Second press = Off

Note: Before weight sensing test is initiated, make sure that no water remains in the washer. If water is remaining in the washer, inaccurate data will be displayed, or the test will not proceed. To pump out, repeatedly press **START/PAUSE** pad until 5 appears in the display.

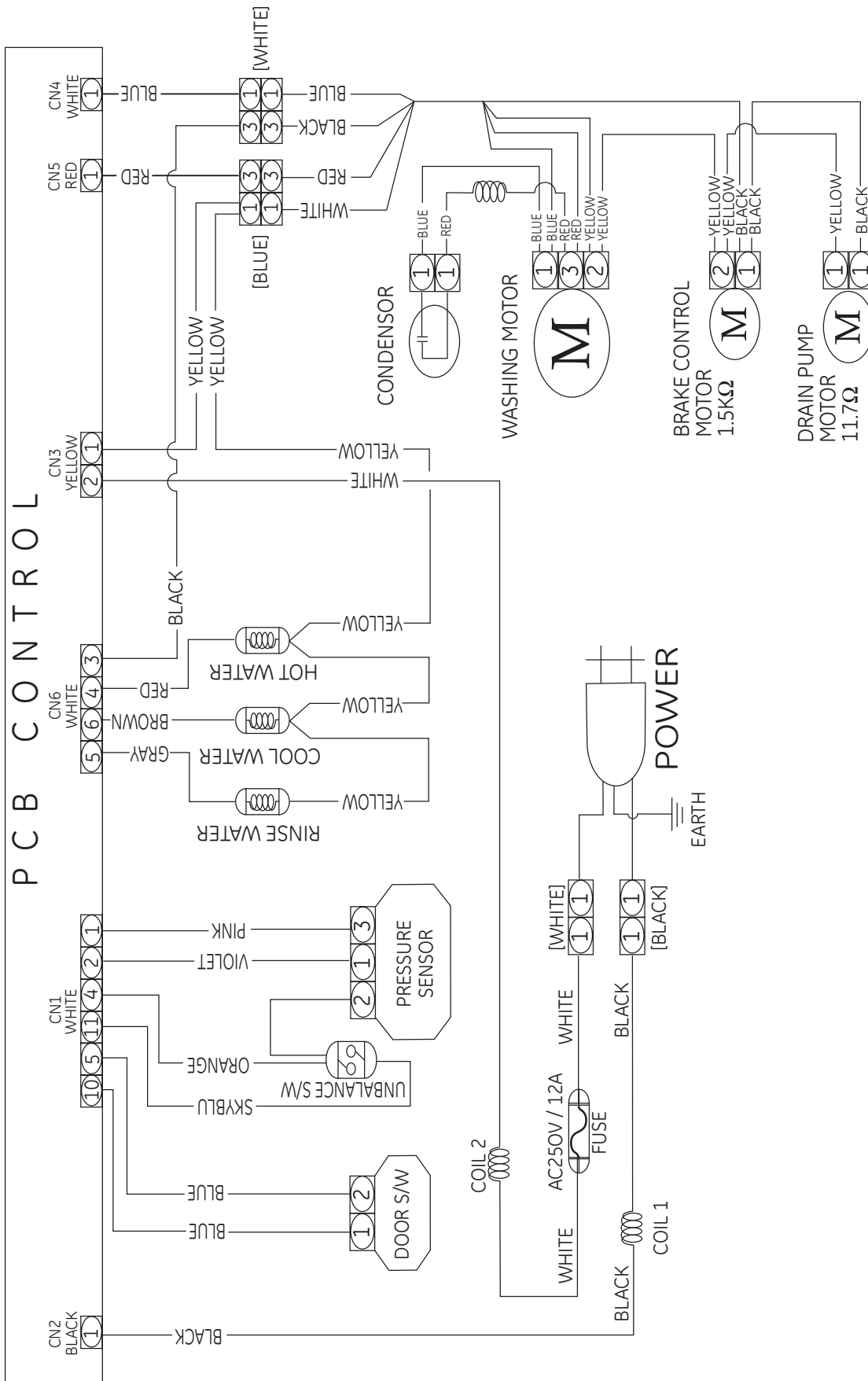
With no clothing in the tub, when placed in the HA test, the following occurs:

1. Weight sensing begins.
2. Weight sensing ends, only the appropriate load light stays lit, and the display shows corresponding weight sensing data.

The load light will indicate load size. Adding additional dry clothing, (not water) will decrease the data number as weight is increased. Data readouts are approximate: Extra Small = 97, Small = 89-96, Medium = 82-88, Large = 76-81, and Extra Large = 75 or lower.

If the Soak light remains lit, 100 will be added to the display number.

Schematic



Warranty

GE Washer Warranty. (For customers in the U.S.A.)



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.

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