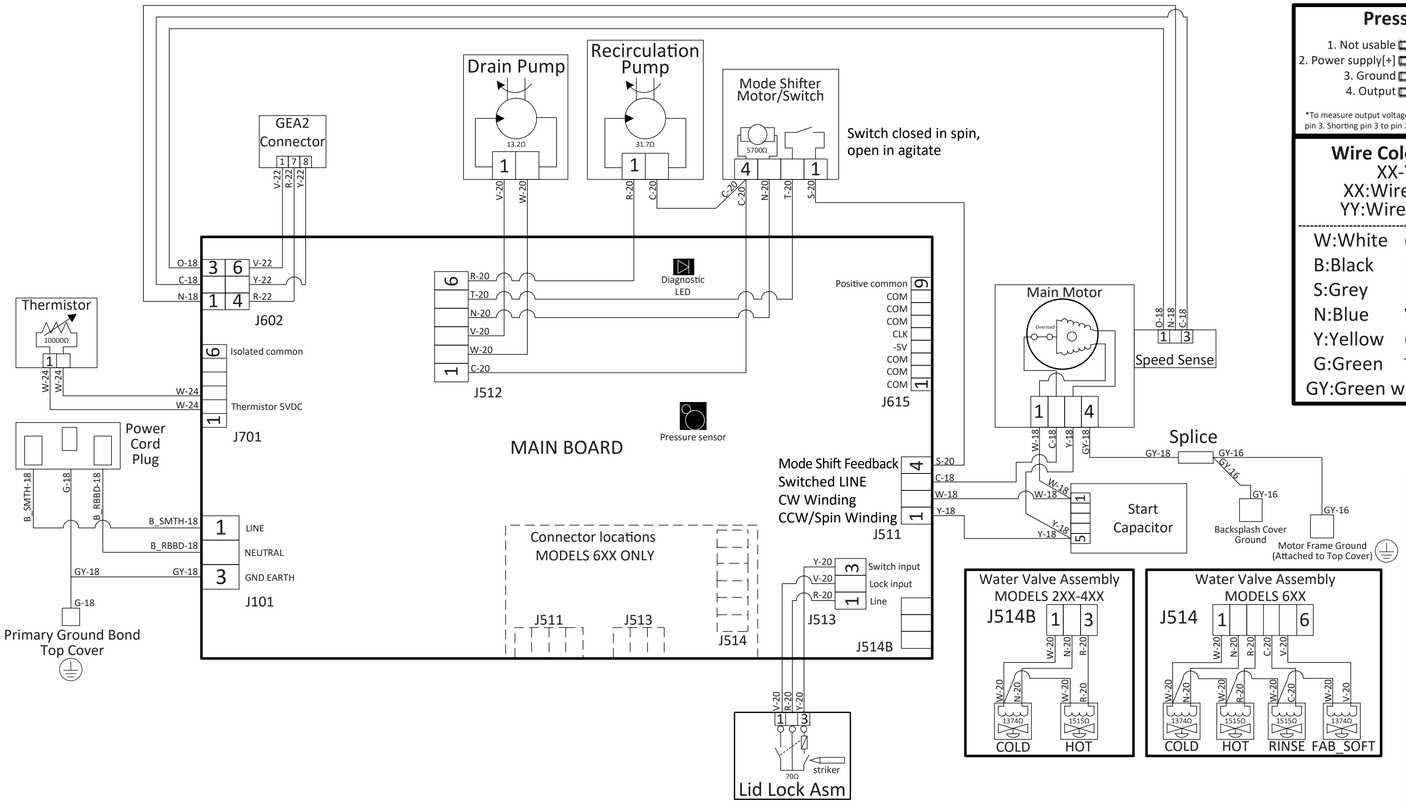
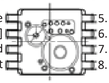
290D2158G004

Binary Display Fault Chart

Fault # displayed on 7-segment display	Fault # displayed in binary format using cycle status lights Filled circles indicate light on
1	○ ○ ○ ○ ○ ●
2	○ ○ ○ ○ ● ○
3	○ ○ ○ ○ ● ●
4	○ ○ ○ ● ○ ○
5	○ ○ ○ ● ○ ●
6	○ ○ ○ ● ● ○
7	○ ○ ○ ● ● ●
8	○ ○ ● ○ ○ ○
9	○ ○ ● ○ ○ ●
10	○ ○ ● ○ ● ○
11	○ ○ ● ○ ● ●
12	○ ○ ● ● ○ ○
13	○ ○ ● ● ○ ●
14	○ ○ ● ● ● ○
15	○ ○ ● ● ● ●
16	○ ● ○ ○ ○ ○
17	○ ● ○ ○ ○ ●
18	○ ● ○ ○ ● ○
19	○ ● ○ ○ ● ●
20	○ ● ○ ● ○ ○
21	○ ● ○ ● ○ ●
22	○ ● ○ ● ● ○
23	○ ● ○ ● ● ●
24	○ ● ● ○ ○ ○
25	○ ● ● ○ ○ ●
26	○ ● ● ○ ● ○
27	○ ● ● ○ ● ●
28	○ ● ● ● ○ ○
29	○ ● ● ● ○ ●
30	○ ● ● ● ● ○
31	○ ● ● ● ● ●
32	● ○ ○ ○ ○ ○



Pressure Sensor



1. Not usable
2. Power supply[+]
3. Ground
4. Output
5. Not usable
6. Not usable
7. Not usable
8. Not usable

*To measure output voltage, connect the probes between pin 4 and pin 3. Shorting pin 3 to pin 2 will cause the main board to shut down

Wire Color Key

XX-YY
XX:Wire color
YY:Wire gauge

W:White	C:Brown
B:Black	R:Red
S:Grey	P:Pink
N:Blue	V:Purple
Y:Yellow	O:Orange
G:Green	T:Tan
GY:Green with Yellow	

Rotary Switch Resistance Table

*Resistance values are read from the leads while disconnected from the control PCB

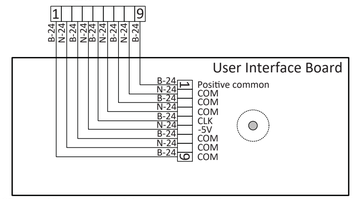
Position	Resistance(kΩ)	Voltage
1	0.8	0.7
2	1.9	1.5
3	3.7	2.2
4	6.7	2.9
5	13.5	3.7
6	40.5	4.5

Position 1 is to the far left. Turn towards the right to advance position.

Thermistor Resistance Table

Temp(C)	Temp(F)	Resistance(Ω)
10	50	19901
15	59	15713
20	68	12493
28	82.4	8833
32	90	7446
38	100	5807
44	111	4558
50	122	3601
54	130	3108
66	150	2016
76	169	1435

MODELS 680 AND UP

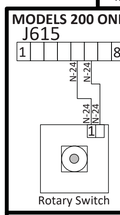


*Replace UI harness first. If issue is still present, replace the whole assembly

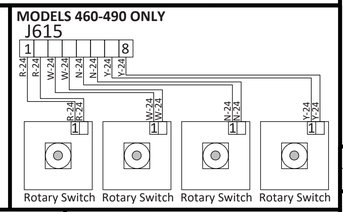
Tub Water Level Pressure Sensor

MODELS 200-490 ONLY		MODELS 680 AND UP	
Inches of Water	Voltage	Inches of Water	Voltage
Empty	0.4	Empty	0.4
1"	0.7	1"	0.8
2"	1.0	2"	1.0
3"	1.4	3"	1.2
4"	1.6	4"	1.4
5"	1.8	5"	1.6
6"	2.0	6"	1.8
7"	2.2	7"	2.0
8"	2.4	8"	2.2
9"	2.6	9"	2.4
10"	2.8	10"	2.6
11"	3.0	11"	2.8
12"	3.2	12"	3.0

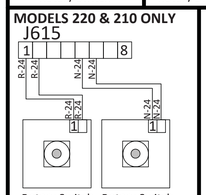
MODELS 200 ONLY



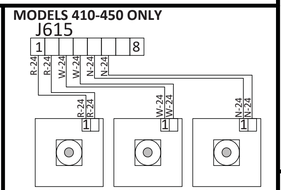
MODELS 460-490 ONLY



MODELS 220 & 210 ONLY



MODELS 410-450 ONLY



Resistance Table

Component	Resistance(Ω)
Drain pump	13.2
Lid Lock	70
Mode Shifter	5700
Motor(1/2HP)	3.1
Motor(1/3HP)	3.8
Recirculation pump	31.7
Water Valves(Cold,Fab_Soft)	1374
Water Valves(Hot, Rinse)	1515

*These values are read from the leads while disconnected from the control PCB
**The values are approximate
***Measure lid lock resistance between pins 2 and 3 and pins 1 and 3 while lid is closed

Fault Code (Dec)	Name	Description	Repair Action
1	Lock Monitor	This fault is set if the motor shaft speed exceeds 45 RPM for 5 seconds while in spin mode and unlocked. This fault can also occur if the basket is manually spun by hand.	• Check the lid lock using service mode spin test 14. • Check lid lock harness connectors both at the main board and at the lid lock assembly. • Measure resistance at motor between the white and green/yellow, and yellow and green/yellow. Ensure that it is an open circuit.
2	Lid Monitor	Control did not get lid closed signal from switch while motor was moving. Could mean the switch didn't close or control didn't get the signal because of lack of connection.	• Replace lid lock if this happens frequently.
3	Locked Rotor Monitor	For 5 straight seconds control not seeing signal changes indicating the motor is turning while trying to spin. Could mean the motor isn't rotating or control didn't get the signal because of lack of connection.	• Physically check the washer for anything preventing motor movement. • Measure resistance on the motor between the Brown and White wires and the Brown and Yellow wires. Make sure resistances match the values in the Resistance Table. • Verify hall sensor is connected to the main harness. Put washer in service mode and run test 14 (Spin). If hall sensor is bad or disconnected, the basket will start to spin normally and then stop spinning after approximately 5 seconds. Ensure hall sensor is properly connected and positioned on the motor. If basket spins for approximately 15 seconds, the hall sensor is most likely NOT the cause. • TCO should reset in approximately 45 minutes. If TCO is tripped, make sure motor moves freely and that nothing is jamming it. Replace motor if it does not.
4	Reset Monitor	Control is resetting the software by itself due to criteria it believes could resolve itself upon reset.	• This Fault can be set any time the unit is powered on including exiting service mode. • No repair necessary.
5	Mode Shifter	Control didn't see the transition from Agitate to Spin or vice-versa in the time required. Could mean the shift didn't occur or control didn't get the signal because of lack of connection.	• If lid does not lock use service mode test 13 to confirm lid switch is functional. • Use service mode test 14 to put the unit into spin mode • Using an ohm meter measure the mode shifter motor between the brown and blue wires (pins 1 and 4) on connector J512 for a resistance of 5.7K ohms. • Check continuity between brown and grey wires at connector J512 and J511. • Check mode shifter coupler for damage and the ability to slide in and out freely. • Check for 120 VAC to the mode shifter motor at the control J512 connector.
6	Critical Flood Level by pressure. Pressure level exceeds 17.5" above pressure port.	Control received an extended period of pressure readings that is nearing over-flow levels. Pressure 17.5". Voltage Output must be present. Could mean water did get that high due to briefly stuck water valve. Voltage output of sensor too high for actual water level because of sensor or water in pressure tube increasing pressure.	• Check pressure tube for pinches where it goes through top cover grommet. • Check pressure tube for trapped water. • Check water valve operation and for any leaking water valves • Use pressure sensor test 10 to ensure correct pressure sensor operation. • Ensure pressure chamber port is free from obstruction using drill bit size 1/16" by hand so as not to drill through the inner wall.
7	Max Fill -- Pressure. Pressure level exceeds 16.5" above pressure port.	Fill has stopped due to maximum fill level/pressure being reached.	• Check pressure tube for pinches where it goes through top cover grommet. • Check pressure tube for trapped water. • Check for any leaking water valves. • Use pressure sensor test 10 to ensure correct pressure sensor operation. • This can happen if a large wet load is placed in the washer.
8	Pressure Sensor Loss	Determines if appropriate pressure changes are seen during fill. It assumes there is a pressure leak, a clog in the pressure hose/system delaying the increase in pressure, or a significant amount water leaking out.	• Check to make sure house water supply valves are turned on. • Check water valve operation. • Check pressure tube for pinches where it goes through top cover grommet. • Use pressure sensor test 10 to ensure correct pressure sensor operation. • Check pressure tube for trapped water. • Ensure pressure chamber port is free from obstruction using drill bit size 1/16" by hand so as not to drill through the inner wall.
9	Lid Switch Redundancy	3 cycles have been completed without any lid opening.	• Open and close the lid to clear the error. • Check harness and connectors that go to the lid switch. • Use test 13 to ensure system can detect the correct lid state with the Spin and Rinse LEDs. • Consumer education that 4 cycles cannot be run back-to-back without opening and closing the lid. • If the error will not clear, replace the lid switch.
10	Mode Shift Feedback Monitor	Signal feedback state from the mode shifter (agitate or spin) and the state requested by the control are not the same and the basket or agitator is rotating faster than 3-4 RPM. Agitate mode feedback signal is no voltage.	• Check mode shifter coupler for damage and the ability to slide in and out freely. • Use test 14 to put the mode shifter into spin and check continuity between brown and grey wires at connector J512 and J511. • Use ohm meter to ensure harness shows continuity to the mode shifter from the control. • Check resistance of mode shifter motor (approximately 5.7K ohms). • Check for 120VAC to the mode shifter motor at the control J512 connector.
11	Clock Monitor	AC power line frequency is not 60Hz.	• Check the frequency of the AC power outlet. If it is more than a few Hz off of 60Hz, notify utility company.
12	Redundant Flood Condition	Detected pressure above 18.0".	• Check pressure tube for trapped water. • Check each valves operation. (Replace water valve and send back to GE Appliances.) • Use pressure sensor test 10 to ensure correct pressure sensor operation. • Check pressure tube for pinches where it goes through top cover grommet • Ensure pressure chamber port is free from obstruction using drill bit size 1/16" by hand so as not to drill through the inner wall.
13	Redundant Lid Unlocked	System detected washer in spin state with the lid closed, unlocked, and basket speed greater than 26 RPM.	• Check the lid lock using service mode spin test 14. • Check lid lock harness connectors both at the main board and at the lid lock assembly. • Measure resistance at motor between the white and green/yellow, and yellow and green/yellow. Ensure that it is an open circuit.
14	Lid Lock Failure	Signal received by control is indicating the lock will not lock or unlock when requested or the lid switch is indicating open when the signal received indicated locked.	• Check the lid lock using service mode spin test 14. • Check lid lock harness connectors both at the main board and at the lid lock assembly. • Check continuity by placing the first probe on the harness side of connector J513 on the main board and the second probe on the matching color wire at the lid lock assembly.
15	Water Temp Sensor Invalid	The thermistor is disconnected, not present, or has failed.	• Check thermistor resistance from connector J701 on the control board. Validate the resistance matches the table in mini-manual. • Check wiring harness and connections. • Replace thermistor.
16	Adaptive Drain/Slow Drain	This fault is set when the drain cycle takes longer than expected.	• Fill tub using service mode test 7 and check drain pump operation using service mode test 12. • Check drain hose for blockages. • Confirm standpipe height is within recommended guidelines. • If pump does not operate, check that the resistance of the pump matches resistance table and verify 120VAC while pump is operating at J512 between the purple and white wires. • Check pressure tube for pinches where it goes through top cover grommet. • Use pressure sensor test 10 to ensure correct pressure sensor operation. • Check pressure tube for trapped water. • Ensure pressure chamber port is free from obstruction using drill bit size 1/16" by hand so as not to drill through the inner wall.
17	Dry Load Sense Timeout	Dry load sense times out and moves to the next part of the cycle selected. This occurs when the washer is not reaching the target speed within a defined time limit for the load type selected.	• Check for water in the bottom of the tub. If so drain and try cycle again. • Check the basket for excessive friction. Basket should spin freely. If not, find source of friction and remove it. • This can also happen if a cycle is started with wet clothes.
18	Drain Pump Clearing algorithm failed	Pressure sensor indicates water in the tub after attempting to drain.	• Fill tub using service mode test 7 and check drain pump operation using service mode test 12. • Check drain hose for blockages. • Confirm standpipe height is within recommended guidelines. • If pump does not operate, check that the resistance of the pump matches resistance table and verify 120VAC while pump is operating at J512 between the purple and white wires. • Check pressure tube for pinches where it goes through top cover grommet. • Use pressure sensor test 10 to ensure correct pressure sensor operation. • Check pressure tube for trapped water. • Ensure pressure chamber port is free from obstruction using drill bit size 1/16" by hand so as not to drill through the inner wall.
19	UI State Timeout	This will happen if a cycle is paused for greater than 24 hours or if the pressure sensor reads greater than 0.5" while the machine is off for greater than 24 hours.	• Check for leaking water valves. • Use pressure sensor test 10 to ensure correct pressure sensor operation. • Consumer education on leaving sopping wet items in basket for more than 24 hours. • Pausing the machine for greater than 24 hours can cause this • Can be caused by out-of-balance • Can be caused by starting a cycle with the "no spin" option selected • Check the output voltage from the pressure sensor to ensure it matches the water level in the basket according to the pressure sensor chart. • Check pressure tube for trapped water. • Ensure pressure chamber port is free from obstruction using drill bit size 1/16" by hand so as not to drill through the inner wall.
20	Critical Flood Level by Gallons	Water volume into the tub exceeded 41 gallons as calculated by the control. 1. Pressure tube is momentarily pinched, has water in it, partial blockage if Flood fault 12 occurs. 2. Low water pressure/flow or permanent pressure system blockage if NO Flood fault 12 occurs.	• Check pressure tube for pinches where it goes through top cover grommet. • Check pressure tube for trapped water. • Check for any leaking water valves. • Check home water pressure. • Check the output voltage from the pressure sensor to ensure it matches the water level in the basket according to the pressure sensor chart.
21	Max Fill -- Gallons	Water volume into the tub exceeded 36.3 gallons as calculated by the control. Stops filling. 1. Pressure tube is momentarily pinched or has water in it, partial blockage if Flood fault 6, 7, or 12 occurs. 2. Low water pressure/flow or permanent pressure system blockage if NO Flood fault 6, 7, or 12 occurs.	• Check pressure tube for pinches where it goes through top cover grommet. • Check pressure tube for trapped water. • Check for any leaking water valves. • Check home water pressure. • Check the output voltage from the pressure sensor to ensure it matches the water level in the basket according to the pressure sensor chart. If it does not, the control will need to be replaced as the pressure sensor is mounted directly to the control.
22	Out of Balance (OOB) during Dry Load Sense	Large wet/OOB load being washed. This is set if OOB condition is detected during dry load sense algorithm. Dry load sense will be abandoned and wet load sense will be started.	• Check for excessively OOB load. Customer Education on how to distribute load. • Check the basket for excessive friction or for being excessively out of round. Basket should spin freely and without wobble. If friction is found, remove it. If basket is bad, replace it. • Check speed sensor for loose connection to the motor.
23	Critical Lid Lock Failure	Cycle cancelled due to inability to reach desired lid lock state.	• Replace lid lock and lid lock harness then run below actions. • Check the lid lock using service mode spin test 14 to ensure lid lock operation. • Verify that the lid lock is not blocked by any external debris. • Check lid switch continuity at J513 on the control. • Check continuity of lid lock position. Opened or Closed. • Check for proper operation of lid lock. 120VAC while activating. • Check lid lock wiring harness from the control to lock assembly.
24	Lid Logic Failure	Lid switch failure. This fault is set if the system perceives the lid to be both OPEN and LOCKED for 5 consecutive seconds	• Replace lid lock and lid lock harness then run below actions. • Check the lid lock using service mode spin test 14 to ensure lid lock operation. • Check harness and connections from the control to the lid lock assembly for damage and continuity. • Run a spin cycle. Pull up on the lid during spin for more than 5 seconds and see if this fault occurs.
25	Pressure Sensor Dropout	This fault is set when the pressure is above 6" then later drops to less than 1" for 5 seconds without draining.	• Check to make sure house water supply valves are turned on. • Check water valve operation. • Check for proper drain pipe and stand pipe height. • Check pressure tube for pinches where it goes through top cover grommet. • Use pressure sensor test 10 to ensure correct pressure sensor operation. • Check pressure tube for trapped water. • Ensure pressure chamber port is free from obstruction using drill bit size 1/16" by hand so as not to drill through the inner wall.
26	Out of Balance (OOB) Ended Final Spin	Washer detected an out of balance load and was unable to reach final target spin speed.	• Run **Drain & Spin** cycle to ensure basket reaches final spin speed and the Spin LED does not blink (A blinking Spin LED indicates that an out of balance was detected during final spin.) • Check for balance ring damage, tub damage, basket damage, rods and springs are properly seated, speed sensor is firmly mounted to the motor and doesn't have excess play. • Check to make sure unit is firmly seated on all four legs, doesn't rock, and is leveled. • If washer spins properly, educate consumer on how to properly load and distribute their clothes in the washer basket to prevent an OOB.
27	Water Accessibility	This will happen during a cycle if water is left in the tub with the lid open for more than 15 minutes.	• Check for leaking water valves • Use pressure sensor test 10 to ensure correct pressure sensor operation. • Consumer education on leaving lid open for more than 15 mins during a cycle. • Consumer education on leaving sopping wet items in basket for more than 15 mins • Can be caused by starting a cycle with the "no spin" option selected.
28	Options Knobs Feedback Invalid	This fault is set if a cycle is running and an invalid knob position is detected.	• Make sure knobs are in a valid position. • Ensure connector J615 is fully seated and not routed under the knob assembly.
29	Suds Lock Abatement Failure	Cycle has terminated due to excessive motor current during spin.	• Ensure basket is able to rotate freely. Check the inner tub sidewalls for anything can obstruct the basket movement. • Consumer education on correct detergent usage. • Ensure consumer is using the proper amount of HE detergent.
30	Stuck Button Fault	A button is detected as being pressed for more than 60 seconds.	• Check for proper tactile feedback on each button and check to make sure control responds correctly up each button activation. • Check for proper alignment in installation of the control board and backsplash. • Check the clearance between the button and the backsplash hole.
31	Out of Balance (OOB) Failback In Final Spin	This fault is set if machine is unable to reach terminal speed and the cycle was completed at a lower spin speed during final spin due to OOB.	• Run **Drain & Spin** cycle to ensure basket reaches final spin speed and the Spin LED does not blink (A blinking Spin LED indicates that an out of balance was detected during final spin.) • Check for balance ring damage, tub damage, basket damage, rods and springs are properly seated, speed sensor is firmly mounted to the motor and doesn't have excess play. • Check to make sure unit is firmly seated on all four legs, doesn't rock, and is leveled. • If washer spins properly, educate consumer on how to properly load and distribute their clothes in the washer basket to prevent an OOB.
32	Critical Lid Lock Failure: Can't Unlock Lid	Cycle cancelled due to inability to unlock lid.	• Replace lid lock and lid lock harness then run below actions. • Check the lid lock using service mode spin test 14 to ensure lid lock operation. • Verify that the lid lock is not blocked by any external debris. • Check lid switch continuity at J513 on the control. • Check continuity of lid lock position. Opened or Closed. • Check for proper operation of lid lock. 120VAC while activating. • Check lid lock wiring harness from the control to lock assembly.

290D2158G004

PUB NO. 31-16912-1

⚠WARNING **Electrical Shock Hazard**

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

- Service by a qualified service technician only.
- Disconnect power before servicing this product.
- Reconnect all grounding devices after service.
- Replace all parts and panels before operating.

⚠WARNING **Electrical Shock Hazard**

Certain internal parts are intentionally not grounded and may present a risk of electric shock only during servicing.

Service personnel – DO NOT contact the following parts while the appliance is energized: Drive Motor, Lid Lock, Water Valves, Drain Pump and Recirculation Pump.

- This machine must be electrically grounded through the grounding lead in the 3-prong power cord. The cord must be plugged into a properly installed and grounded appliance outlet. If local codes require an additional ground connection, use an 18-gauge or larger wire to connect the washer cabinet to an established ground. In all case the grounding method must comply with all local codes and ordinances.

⚠ADVERTENCIA **Riesgo de Descarga Eléctrica**

Usted puede morir o sufrir lesiones graves si no siguen estas instrucciones.

- El servicio técnico sólo debe ser realizado por un técnico calificado.
- Desconecte el suministro de corriente antes de realizar el servicio técnico.
- Luego del servicio técnico, vuelva a conectar todos los dispositivos de conexión a tierra.
- Reemplace todas las piezas y paneles antes de utilizar.

⚠ADVERTENCIA **Riesgo de Descarga Eléctrica**

Ciertas piezas internas no tienen conexión a tierra en forma intencional y pueden presentar un riesgo de descarga eléctrica sólo durante la reparación.

Personal de reparación – NO toque las siguientes piezas cuando el aparato esté recibiendo energía: Motor de mando, bloqueo de la tapa, válvulas de agua, bomba de drenaje y bomba de recirculación.

- Cette machine doit être mise à la terre par la broche de mise à la terre du cordon d'alimentation à 3 broches. Le cordon doit être branché dans une prise d'alimentation pour un appareil électroménager correctement installée et mise à la terre. Si les codes locaux demandent une connexion de mise à la terre supplémentaire, utilisez un fil de calibre 18 ou supérieur pour connecter le cabinet de la laveuse à une mise à la terre établie. Dans tous les cas, la méthode de mise à la terre doit être conforme à tous les codes et ordonnances locaux.

⚠AVERTISSEMENT **Risque de choc électrique**

Vous pouvez être tué ou gravement blessé si vous ne suivez pas ces instructions.

- Réparations seulement par un technicien qualifié.
- Débranchez l'alimentation électrique avant la réparation.
- Rebranchez tous les dispositifs de mise à la terre après la réparation.
- Remettez toutes les pièces et panneaux en place avant d'utiliser l'appareil.

⚠AVERTISSEMENT **Risque de choc électrique**

Certaines pièces internes sont intentionnellement non mises à la terre et peuvent présenter un risque de choc électrique lors d'un entretien.

Personnel de réparateur - NE PAS toucher aux composants suivants lorsque l'appareil est sous tension : moteur d'entrainement, verrouillage du couvercle, les valves d'eau, pompe de vidange et pompe de recirculation.

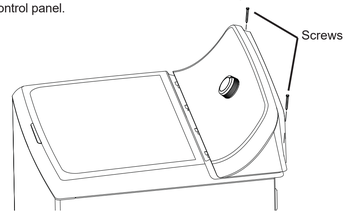
- Esta máquina debe estar conectada a tierra a través de una clavija de conexión a tierra del cable de alimentación de 3 clavijas. El cable debe estar enchufado en un tomacorriente para un aparato electrodoméstico correctamente instalado y conectado a tierra. Si los códigos locales requieren una conexión a tierra adicional, utilice un cable de calibre 18 o mayor para conectar el gabinete de la lavadora a una conexión a tierra establecida. En todos los casos, el método de puesta a tierra debe cumplir con todos los códigos y ordenanzas locales.

PRESSURE SENSOR

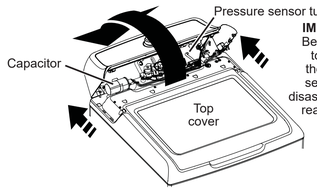
BEFORE DISCONNECTING HOSE FROM PRESSURE SENSOR, BE SURE WATER LEVEL IN MACHINE IS BELOW BOTTOM OF WASH BASKET. AFTER RECONNECTING HOSE, PUT MACHINE IN SPIN FOR AT LEAST ONE MINUTE BEFORE CHECKING OPERATION OF SENSOR.

① To Remove Control Panel:

1. Remove the two hex head screws from the top rear corners of the control panel.

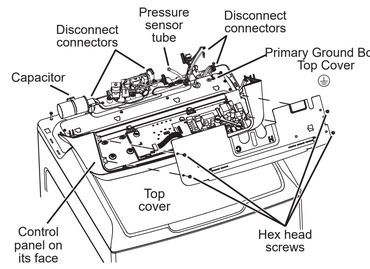


2. Grasp the control panel sides, push it back, and roll it toward the rear so the pressure sensor tube can be seen where it connects to the control board.



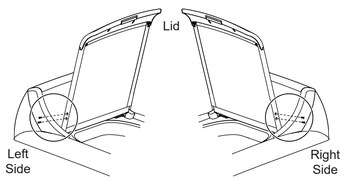
IMPORTANT: Be careful not to damage the pressure sensor when disassembling and reassembling.

3. Disconnect the pressure sensor tube from the control board.
4. Roll the control panel toward the front and carefully lay it on its face on the top cover.
5. Remove four 1/4" hex head screws that mount the rear backsplash panel to the control assembly.
6. Disconnect all harness connectors from the control board.



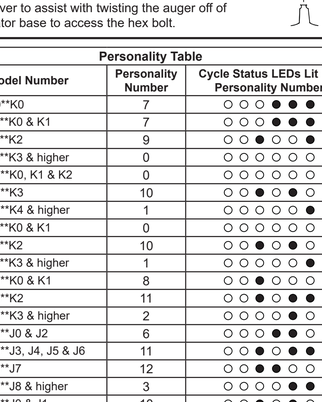
② To Remove Lid:

- Remove the two ¼" hex screws that secure the backsplash to the top cover and slide towards the rear of washer.
- Open the lid, remove the four screws (two each side) and lift the lid up to remove.



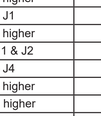
③ To Remove Top Cover:

1. Complete previous component removals ❶ and ❷.
2. Remove two 1/4" hex head screws at the rear of the top cover.
3. Slide the harness grommet out toward the rear of the washer.
4. Disengage the power cord from the top cover by lifting up on the front part of the cord and then slide forward to remove.
5. Raise the rear of the top cover up and pull forward slightly to disengage the front clips.



④ To Remove Impeller or Agitator (Depending on Model):

1. With a small screwdriver, pry the cap off of the impeller or remove the cap or cup from the agitator.
2. Remove the 7/16th hex bolt that secures the impeller/agitator to the shaft.
3. Pull the impeller/agitator off the shaft.



NOTE: On two stage agitator models with an auger system, the auger first needs to be removed to access the 7/16th hex bolt. This is done by twisting the base of the auger right (clockwise) to unsnap it from the agitator base. A Phillips screwdriver can be used to remove the auger by doing the following:
A. Insert the screwdriver into the existing hole in the auger
B. Rotate the auger until the screwdriver seats into a recessed area of the inner portion of the auger.
C. Once the screwdriver is seated, tap it through the wall of the recessed area. This allows the screwdriver to assist with twisting the auger off of the agitator base to access the hex bolt.

Personality Table

Model Number	Personality Number	Cycle Status LEDs Lit For Personality Number
MTW200**K0	7	○ ○ ○ ● ● ●
HTW200**K0 & K1	7	○ ○ ○ ● ● ●
HTW200**K2	9	○ ○ ● ○ ○ ●
HTW200**K3 & higher	0	○ ○ ○ ○ ○ ○
GTW220**K0, K1 & K2	0	○ ○ ○ ○ ○ ○
GTW220**K3	10	○ ○ ● ○ ● ○
GTW220**K4 & higher	1	○ ○ ○ ○ ○ ●
HTW240**K0 & K1	0	○ ○ ○ ○ ○ ○
HTW240**K2	10	○ ○ ● ○ ● ○
HTW240**K3 & higher	1	○ ○ ○ ○ ○ ●
GTW330**K0 & K1	8	○ ○ ● ○ ○ ○
GTW330**K2	11	○ ○ ● ○ ● ●
GTW330**K3 & higher	2	○ ○ ○ ○ ● ○
GTW460**J0 & J2	6	○ ○ ○ ● ● ○
GTW460**J3, J4, J5 & J6	11	○ ○ ● ○ ● ●
GTW460**J7	12	○ ○ ● ● ○ ○
GTW460**J8 & higher	3	○ ○ ○ ○ ● ●
GTW485**J0 & J1	10	○ ○ ● ○ ● ○
GTW485**J2 & J3	14	○ ○ ● ● ● ○
GTW485**J4 & higher	4	○ ○ ○ ● ○ ○
GTW490**J0 & J1	1	○ ○ ○ ○ ○ ●
GTW490**J2 & higher	5	○ ○ ○ ● ○ ●
GTW680**J0, J1 & J2	2	○ ○ ○ ○ ● ○
GTW680**J3 & J4	3	○ ○ ○ ○ ● ●
GTW680**J5 & higher	6	○ ○ ○ ● ● ○
GTW680**L0 & higher	6	○ ○ ○ ● ● ○
GTW685**L0 & higher	7	○ ○ ○ ● ● ●
GTW750**L0 & higher	8	○ ○ ● ○ ○ ○

Consumer Help Indicators

• Models with a display on the control panel

Your washer is equipped with Consumer Help Indicator (CHI). CHI is our way to communicate a simple remedy for some situations that you can perform without the need to call for service. The chart below describes the helpful messages you may notice scrolling on your display when you return to start another load. These messages will provide simple remedies you can quickly perform.

Spin light blinking	If an out-of-balance condition is detected by the washer, the **Spin** light will blink during the remaining portion of the cycle and will stay illuminated for a short time after cycle completion. When this occurs, the washer is taking actions to correct the out-of-balance condition and complete the cycle normally. In some cases, the washer may not be able to balance the load and spin up to full speed. If you notice the load is more wet than normal at the end of the cycle, redistribute the load evenly in the wash basket and run a **Drain & Spin** cycle.
"**H2O SUPPLY**" (Water not entering washer)	Check your house water supply. Did you forget to turn on one or both supply valves after installation or coming back from vacation? As soon as the message starts to scroll, the washer will initiate a 4 minute lock-out period. The washer controls won't respond/change during this time. After the 4 minutes, you can begin your cycle again. If you try to bypass the lock-out period by unplugging the washer, the 4 minute timer will start over again.
"**CAnCELEd**"	"CAnCELEd" may scroll on the display if the machine was paused for longer than 24 hours, water was left in the machine for 15 minutes with lid open or if the machine has stopped itself before the cycle completed due to certain errors. As soon as the message starts to scroll, the washer will initiate a 4 minute lock-out period. The washer controls won't respond/change during this time. After the 4 minute period, you can begin your cycle again. If you try to bypass the lock-out period by unplugging the washer, the 4 minute timer will start over again. If the problem persists, call GE Appliances at 800.GE.CARES (800.432.2737) for service.
"**Lid**"	"Lid" will be shown on display if 3 cycles have been started without opening the lid. The washer will not start another cycle until the lid is opened. Try opening, then closing the lid and starting a new cycle. If the problem persists, call GE Appliances at 800. GE.CARES (800.432.2737) for service.

• Models without a display on the control panel

Your washer is equipped with Consumer Help Indicator (CHI). CHI is our way to communicate a simple remedy for some situations that you can perform without the need to call for service. The chart below describes the helpful lights you may notice flashing on the display.

Spin light blinking	If an out-of-balance condition is detected by the washer, the **Spin** light will blink during the remaining portion of the cycle and will stay illuminated for a short time after cycle completion. When this occurs, the washer is taking actions to correct the out-of-balance condition and complete the cycle normally. In some cases, the washer may not be able to balance the load and spin up to full speed. If you notice the load is more wet than normal at the end of the cycle, redistribute the load evenly in the wash basket and run a **Drain & Spin** cycle.
Fill light (Water not entering washer)	Check your house water supply. Did you forget to turn on one or both supply valves after installation or coming back from vacation? As soon as the light starts to flash, the washer will initiate a 4 minute lock-out period. The washer controls won't respond/change during this time. After the 4 minutes, you can begin your cycle again. If you try to bypass the lock-out period by unplugging the washer, the 4 minute timer will start over again.
Lid Locked light	**Lid Locked** light will flash if 3 cycles have been started without opening the lid. The washer will not start another cycle until the lid is opened. Try opening, then closing the lid and starting a new cycle. If the problem persists, call GE Appliances at 800. GE.CARES (800.432.2737) for service.

Entry into Consumer Error Mode

- From an idle state only (all LEDs off), press and hold **Start** button for 10 seconds.
- After holding **Start** for 10 seconds, all LEDs will turn on, signifying the user may release the **Start** button.

Behaviors While In Consumer Error Mode

- The **Pause** and **Lid Locked** LEDs should be constantly blinking while in CEM.
- The first fault, if present, will show on the display.
- Pressing **Start** will display the next fault code.
  - Models without 7-segment display: Fault code will blink in binary - the consumer will report which LEDs are blinking and which are not. See **Binary Display Fault Chart**.
  - Models with 7-segment display: Fault code will blink on the 7-segment display.
- At the end of the fault list or if no faults present:
  - Models without 7-segment display: All status LEDs will blink.
  - Models with 7-segment display: 7-segment display will blink "—".

Exiting Consumer Error Mode

- Pressing any button (other than **Start**) or turning any knob will exit Consumer Error Mode.
- Consumer Error Mode will time out after 10 minutes

Field Service Mode Entry

Press and hold **Start** button while rotating the cycle selection knob 180 degrees (7 clicks) and then release the **Start** button.

- Once service mode is entered all LEDs will be flashing.
- The cycle selection Knob is now used to control the test selection menu.
  - Rotating the knob clockwise will increment the test numbers in the display.
  - Rotating the knob counter clockwise will decrement the test number in the display.
  - Models without 7-segment display: Will display tests using the status lights above the cycle knob in a binary format. (See Binary Chart).
  - Turning the knob to go to a different test will terminate any current active test.
- Once test number is selected, pressing **Start** will begin the selected test.

Exit Field Service Mode

- Field service mode will time out after 30 minutes if there is no user activity.
- Models without 7-segment display: Press and hold the **Start** button for 3 seconds.
- Models with a 7-segment display: Press **Power** button.

Once the washer is in Service Mode, the following service features are available via the cycle knob (on some models):

Knob Index / Test number (Displayed on 7-segment display, if present.)(Without 7-segment will be displayed in binary format utilizing the cycle status LEDs)	Test Name	Description of test If tests call for numbers to be shown it will: (Display on 7-segment display, if present.) (Without 7-segment will be displayed in binary format. See Binary Chart.) Turning the cycle knob will index to the next or prior test.
0 ● ● ● ● ● ● Blinking	All LEDs blink	All LEDs on the display will blink.
1 ○ ○ ○ ○ ○ ●	Fault Codes	Use the **Start** button to cycle through active faults on the unit. On models below GTW680: - Fault codes will be displayed in binary (see Binary Display Fault Chart). - When no faults are remaining to be displayed (or if none are present) all LEDs will blink. - Pressing the **Start** button while all LEDs are blinking will display the first fault again. On models GTW680 and higher: - Fault codes will be displayed on the 7-segment display - When no faults are remaining to be displayed (or if none are present) the display will blink "- -". - Pressing the **Start** button while blinking "- -" will display the first fault again.
2 ○ ○ ○ ○ ● ○	Personality ID	Pressing **Start** will start the test. The set personality will be flashing. Models without 7-segment display use binary to show personality. Models with 7-segment display will display personality. (See Personality ID Chart for the correct ID for the model being checked.)
3 ○ ○ ○ ○ ● ●	UI Software Version (Critical)	After entering this test, press the **Start** button to toggle through the software version number as follows: Example: v01.23 High end UI 1st press - "01" on 7SD 2nd press - "23" on 7SD Low end UI (See Version Diagram below) Major version (**Pause** LED ON) 1st press - Display 0 in binary (all LEDs off) 2nd press - Display 1 in binary Minor version (**Lid Locked** LED ON) 3rd press - Display 2 in binary 4th press - Display 3 in binary
4 ○ ○ ○ ● ○ ○	UI Software Version (Non-critical)	After entering this test, press the **Start** button to toggle through the software version number as follows: Example: v01.23 High end UI 1st press - "01" on 7SD 2nd press - "23" on 7SD Low end UI (See Version Diagram below) Major version (**Pause** LED ON) 1st press - Display 0 in binary (all LEDs off) 2nd press - Display 1 in binary Minor version (**Lid Locked** LED ON) 3rd press - Display 2 in binary 4th press - Display 3 in binary
5 ○ ○ ○ ● ○ ●	XML Version (Non-critical)	After entering this test, press the **Start** button to toggle through the software version number as follows: Example: v01.23 High end UI 1st press - "01" on 7SD 2nd press - "23" on 7SD Low end UI (See Version Diagram below) Major version (**Pause** LED ON) 1st press - Display 0 in binary (all LEDs off) 2nd press - Display 1 in binary Minor version (**Lid Locked** LED ON) 3rd press - Display 2 in binary 4th press - Display 3 in binary
6 ○ ○ ○ ● ● ○	Hot Water Valve	Pressing **Start** will toggle the hot water valve on and off. Test will have a timeout for how long valve will be on (1 minute). The valve will turn off when the test is exited.
7 ○ ○ ○ ● ● ●	Cold Water Valve	Pressing **Start** will toggle the cold water valve on and off. Test will have a timeout for how long valve will be on (1 minute). The valve will turn off when the test is exited.
8 ○ ○ ● ○ ○ ○	Fabric Softener Dispenser	Pressing **Start** will toggle the fabric softener valve on and off. Test will have a timeout for how long valve will be on (1 minute). The valve will turn off when the test is exited.
9 ○ ○ ● ○ ○ ●	Spray Rinse Valve Check	Pressing **Start** will toggle the spray rinse valve on and off. Test will have a timeout for how long valve will be on (1 minute). The valve will turn off when the test is exited.

Knob Index / Test number (Displayed on 7-segment display, if present.)(Without 7-segment will be displayed in binary format utilizing the cycle status LEDs)	Test Name	Description of test If tests call for numbers to be shown it will: (Display on 7-segment display, if present.) (Without 7-segment will be displayed in binary format. See Binary Chart.) Turning the cycle knob will index to the next or prior test.
10 ○ ○ ● ○ ● ○	Pressure Sensor	Pressing **Start** will start the test. Pressure sensor test will have a timeout. All valves will turn on. All LEDs will blink at start of test. Stop blinking LEDs as approximate water levels are crossed. The levels are: 2", 3", 4", 5", 6" and 7" Water valves shut off at this level. **NOTE:** 2" pressure level not supported on GTW750 model.
11 ○ ○ ● ○ ● ●	Recirculate Pump	Pressing **Start** will toggle the recirculation pump on and off. Test will have a (1 minute) timeout for how long recirculation pump will be on. The recirculation pump will turn off when the test is exited.
12 ○ ○ ● ● ○ ○	Drain Pump	Pressing **Start** will toggle the drain pump on and off. Test will have a (4 minute) timeout for how long drain pump will be on. The drain pump will turn off when the test is exited.
13 ○ ○ ● ● ○ ●	Lid Switch	Pressing **Start** will start the test. When the lid is open, the **Spin** status LED will blink. When the lid is closed, the **Rinse** status LED will blink.
14 ○ ○ ● ● ● ○	Spin	Pressing **Start** will start the test. Spin test will perform child safety algorithm before it starts to spin. (Two (2) sprays of water before locking the lid.) The lid must be closed to start the test. If lid is open the **Locked** LED will blink. When mode shift is complete, the washer will ramp up to max spin speed after first dwelling at 140 RPM then 450 RPM. When mode shift is complete, the washer will begin spinning to max spin speed for the model being tested. Spin test will have a (4 minute) timeout. Be sure to only run this test with an empty basket as there is no OOB detection during this test. The spin will stop when the test is exited. The lid will unlock once the speed reaches 0 after the test is exited.
15 ○ ○ ● ● ● ●	Agitate	Pressing **Start** will start the test. Agitate test will perform child safety algorithm before it starts to agitate. The lid must be closed to start the test. If lid is open, the **Locked** LED will blink. When started, the mode shift to agitate will occur if required. When mode shift is complete, the washer will begin agitating. The test will pause if the lid is opened after starting. The test will resume on lid close if it was running when opened. The test will stop when the test is exited.
16 ○ ● ○ ○ ○ ○	Clear all Fault Codes	Pressing **Start** will clear all fault codes.
17 ○ ● ○ ○ ○ ●	Change Personality	• Pressing **Start** will start the test and display the first valid personality. • Each additional **Start** button press will display the next valid personality from the personality chart in the middle of this page. Continue to press **Start** button until desired personality is displayed which corresponds to the model number. • When desired personality is flashing, press and hold **Start** button for 3 seconds to set the personality. • Control will exit service mode. **NOTE:** If the selected personality is already set nothing will happen. On models below GTW680: - Personality will be displayed in binary (see Personality Table). **NOTE:** Personality 0 will be the first personality selected and all LEDs will be off. On models GTW680 and higher: - Personality will be displayed on 7-Segment Display.
18 ○ ● ○ ○ ● ○	Analog Knob	Pressing **Start** will start the test. Each options knob is represented by a specific corresponding status LED. (Far left options knob to the far left status LED) When knob position changes, the LED for the specific knob blinks. With each click to the right, the LED for the specific knob blinks faster. With each click to the left, the LED for the specific knob blinks slower.
19 ○ ● ○ ○ ● ●	Bulk Detergent Dispense Valve	Pressing **Start** will toggle the bulk valve (if equipped with a bulk detergent tank) on and off. Test will have a timeout for how long valve will be on (1 minute). The valve will turn off when the test is exited.