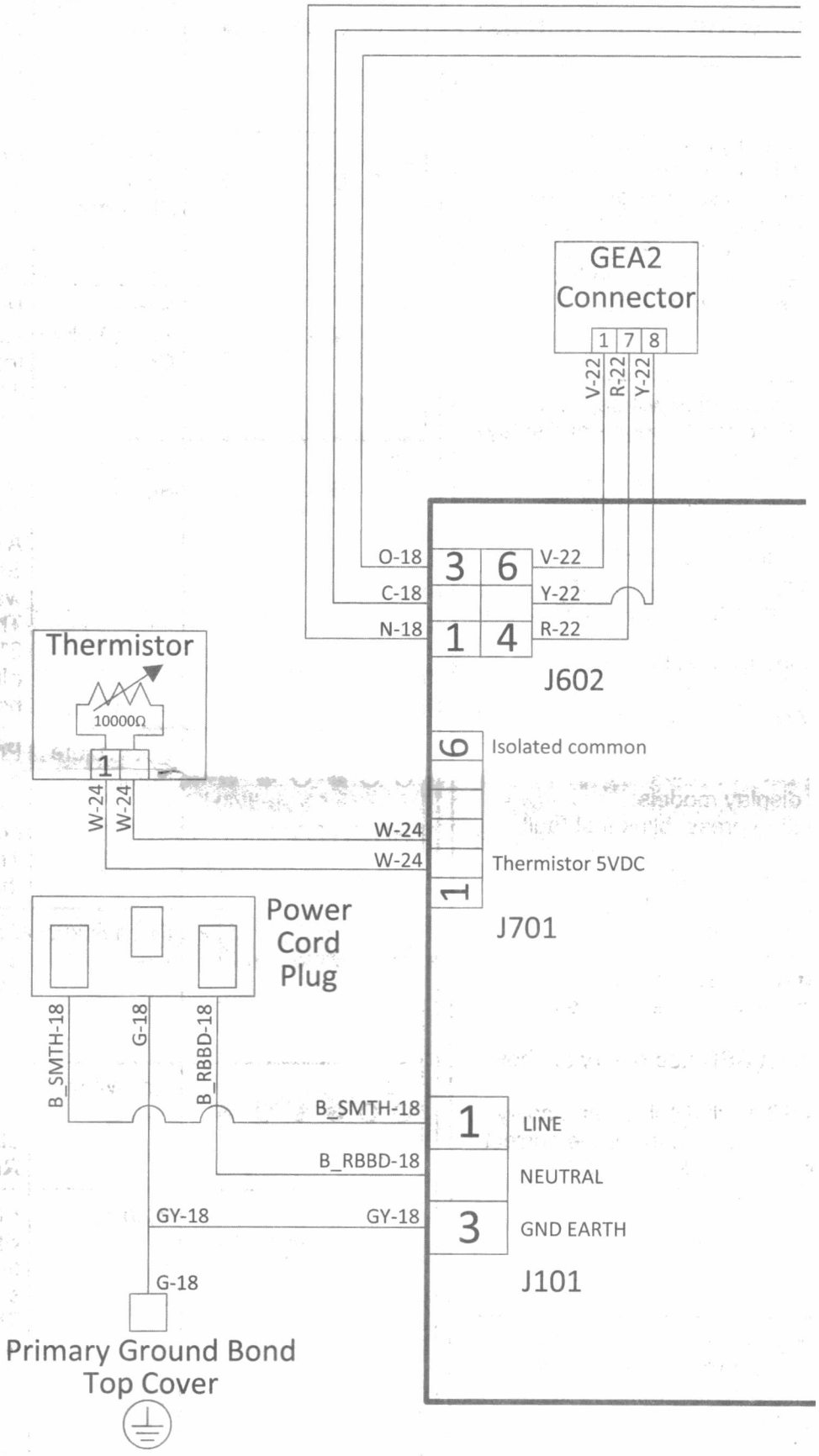
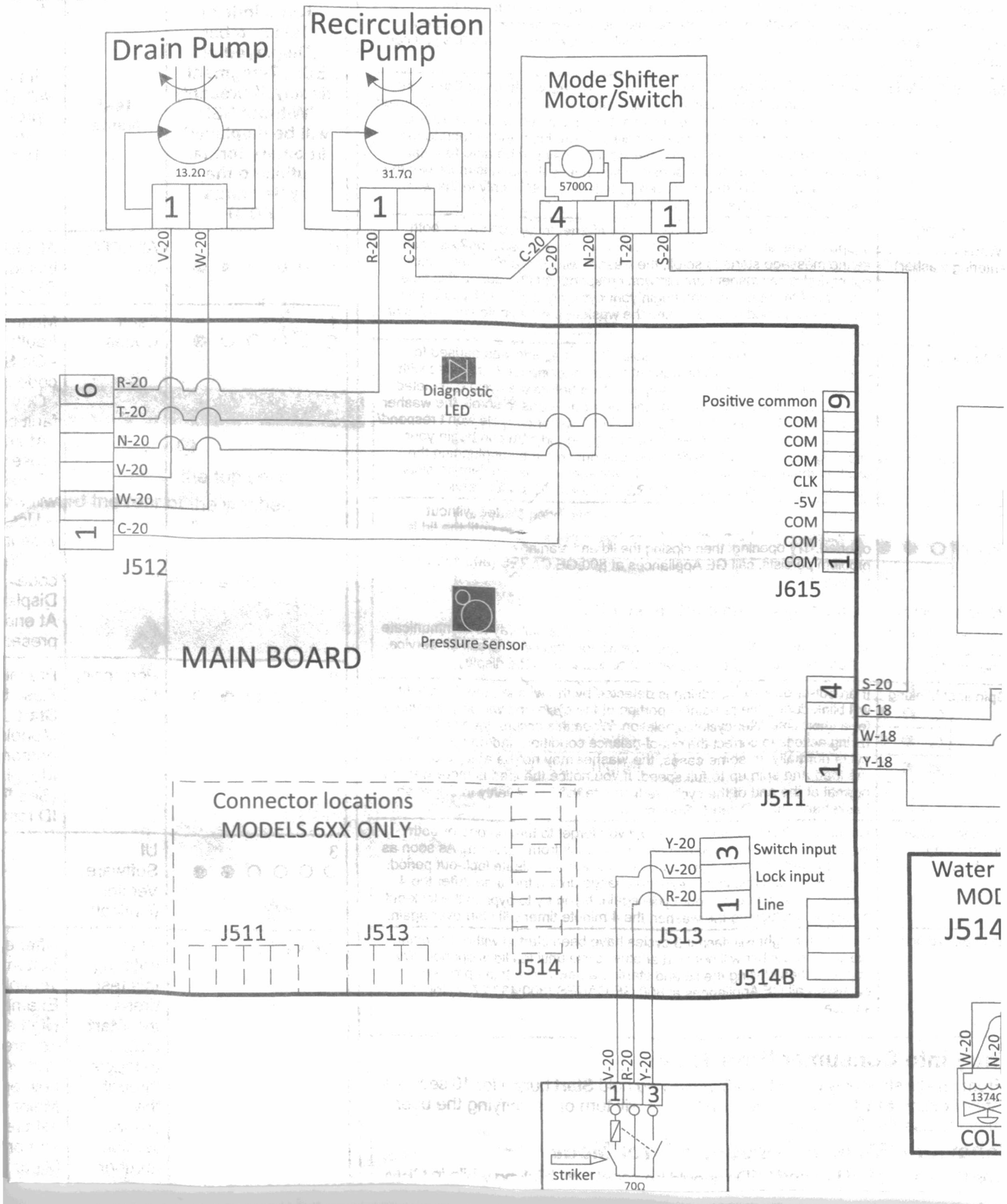
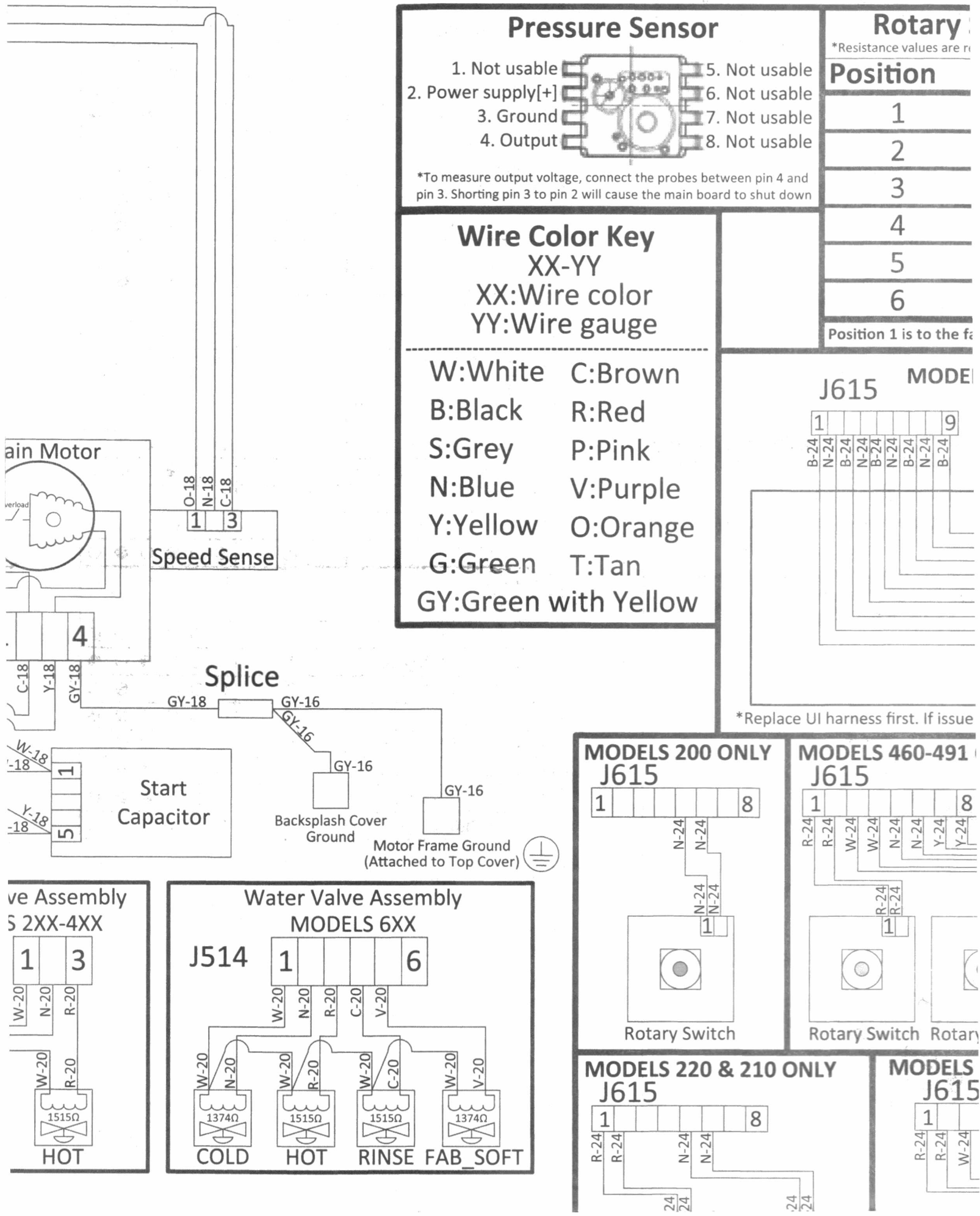
290D2158G005

Binary Display Fault Chart

Fault # displayed on 7-segment display	Fault # displayed in binary format using cycle status lights
	Filled circles indicate light on
0	● ● ● ● ● ●
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	● ○ ○ ○ ○ ○




Drain Pump
13.2Ω
1
V-20
W-20
Recirculation Pump
31.7Ω
1
R-20
C-20
Mode Shifter Motor/Switch
5700Ω
4
1
C-20
C-20
N-20
T-20
S-20
6
R-20
T-20
N-20
V-20
W-20
1
C-20
J512
Diagnostic LED
Positive common
COM
COM
COM
CLK
-5V
COM
COM
COM
9
1
J615
Pressure sensor
MAIN BOARD
4
S-20
C-18
W-18
1
Y-18
J511
Connector locations
MODELS 6XX ONLY
J511
J513
J514
Y-20
V-20
R-20
3
1
Switch input
Lock input
Line
J513
J514B
Water
MOI
J514
W-20
N-20
COL
V-20
R-20
Y-20
1
3
striker
70Ω


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
Rotary
*Resistance values are r
Position
1
2
3
4
5
6
Position 1 is to the fa
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
ain Motor
verload
O-18
N-18
C-18
1
3
Speed Sense
4
C-18
Y-18
GY-18
Splice
GY-18
GY-16
GY-16
GY-16
GY-16
W-18
-18
Y-18
-18
1
5
Start
Capacitor
Backsplash Cover
Ground
Motor Frame Ground
(Attached to Top Cover)
J615
MODE
1
9
B-24
N-24
B-24
N-24
B-24
N-24
B-24
N-24
B-24
*Replace UI harness first. If issue
MODELS 200 ONLY
J615
1
8
N-24
N-24
N-24
N-24
1
Rotary Switch
MODELS 460-491
J615
1
8
R-24
R-24
W-24
W-24
N-24
N-24
Y-24
Y-24
R-24
R-24
1
Rotary Switch
Rotary
ve Assembly
S 2XX-4XX
1
3
W-20
N-20
R-20
W-20
R-20
1515Ω
HOT
Water Valve Assembly
MODELS 6XX
J514
1
6
W-20
N-20
R-20
C-20
V-20
W-20
N-20
1374Ω
COLD
W-20
R-20
1515Ω
HOT
W-20
C-20
1515Ω
RINSE
W-20
V-20
1374Ω
FAB_SOFT
MODELS 220 & 210 ONLY
J615
1
8
R-24
R-24
N-24
N-24
24
24
24
24
MODELS
J615
1
R-24
R-24
W-24

4

itch Resistance Table

om the leads while disconnected from the control PCB

sistance(kΩ)	Voltage
0.8	0.7
1.9	1.5
3.7	2.2
6.7	2.9
13.5	3.7
40.5	4.5

t. 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

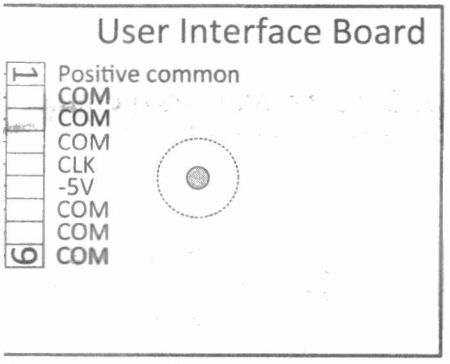
Tub Water Level Pressure Sensor

MODELS 200-491 ONLY		MODELS 680 ONLY	
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

Resistance Table

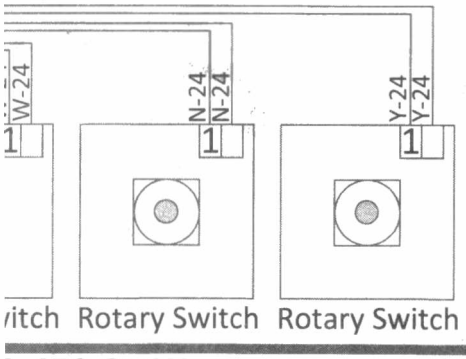
Component	Resistance(Ω)
Drain pump	13.2
Lid Lock	70
Mode Shifter	5700
Motor(1/2HP)	3.1
Motor(1/3HP)	3.8

5XX ONLY

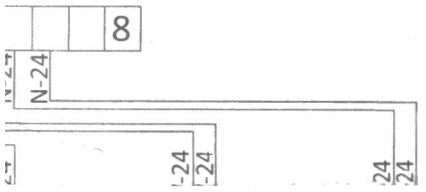


ill present, replace the whole assembly

LY



0-450 ONLY



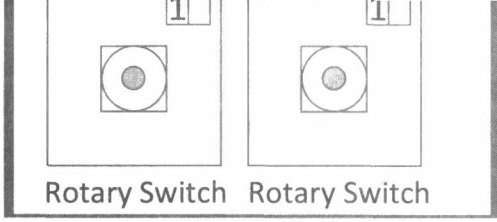
PUB NO. 31-16928

Fault Code (Dec)	Name	Description	Repair Action
1	Lock Monitor	Lid lock didn't occur or lid lock signal not seen by control due to lack of connection.	• Check the resistance of the lid lock assembly. • Check the harness for open wires and/or connec • If lock assembly and harness prove good at the
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 prever • Check harness and harness connectors from th • Verify hall sensor is connected to the main harne Test. If hall sensor is bad or disconnected, the ba after approximately 5 seconds. Ensure hall sens basket spins for approximately 15 seconds, the • TCO should reset in approximately 45 minute. If nothing is jamming it. Replace motor if it does no
4	Reset Monitor	Control is resetting the software by itself due to criteria it believes could resolve itself upon reset.	• Check for loose connections at the control. Reco • Check for recommended house line voltage to th
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.	• Check mode shifter coupler for damage and the • Using an ohm meter, check to ensure mode shif • Check resistance of mode shifter motor (approx • Check for 120VAC to the mode shifter motor at t • If voltage is present, replace the mode shifter.
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 t • Check pressure tube for trapped water. • Check water valve operation and for any leaking • Check the output voltage from the pressure sens according to the pressure sensor chart. • Ensure pressure chamber port is free from obstr through the inner wall.
7	Max Fill – Pressure. Pressure level exceeds 16.5" above pressure port.	Main micro received and extended period of pressure readings that is greater than maximum allowable fill volume. Pressure 16.5". 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. This could happen during normal operation.	• This can happen if a large wet load is placed in t • Check pressure tube for pinches where it goes t • Check pressure tube for trapped water. • Check for any leaking water valves. • Check the output voltage from the pressure sens according to the pressure sensor chart.
8	Pressure Sensor Loss	This determines if there has been a too great of a difference in the pressure sensor reading and the expected pressure sensor reading for the amount of water the control calculated it has put in. 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 • Check water valve operation. • Check pressure tube for pinches where it goes t • Check the output voltage from the pressure sens according to the pressure sensor chart. • Check pressure tube for trapped water. • Ensure pressure chamber port is free from obstr through the inner wall.
9	Lid Switch Redundancy	Start attempted for a 4th cycle when the previous 3 cycles have completed with backup micro seeing lid open. Could mean the switches didn't occur or backup processor didn't get the signal because of lack of connection. See Fault #2 as well.	• Open and close the lid to clear the error. • Check harness and connectors that go to 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 • Use ohm meter to ensure harness shows contin • Check resistance of mode shifter motor (approx • Check for 120VAC to the mode shifter motor at t • If voltage is present and no operation, replace th
11	Clock Monitor	1. AC power line frequency is not 60Hz. 2. Software failure.	1. Check the frequency of the AC power outlet. If 2. If house frequency is good, update software.
12	Redundant Flood Condition	Backup processor received an extended period of pressure readings that is nearing over-flow levels. Pressure 18.0" 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 trapped water. • Check each valves operation. (Replace water va • Check the output voltage from the pressure sens according to the pressure sensor chart. • Check pressure tube for pinches where it goes t • Ensure pressure chamber port is free from obstr through the inner wall.

Lid Lock Asm

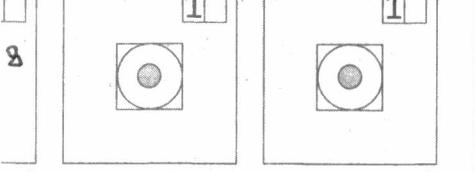
rom the board to the lock assembly. f service, replace the lid lock assembly.
notor movement. rol to the motor. ut washer in Service Mode and run TEST 13. Spin will start to spin normally and then stop spinning roperly connected and positioned on the motor. If nsor is most likely NOT the cause. is tripped, make sure motor moves freely and that
if any. sher.
to slide in and out freely. itch is in the open position. y 5.7K ohms). ntrol J512 connector.
n top cover grommet. valves. ensure it matches the water level in the basket using drill bit size 1/16" by hand so as not to drill
sher. n top cover grommet. ensure it matches the water level in the basket
rned on. n top cover grommet. ensure it matches the water level in the basket using drill bit size 1/16" by hand so as not to drill
n.
to slide in and out freely. the mode shifter from the control. y 5.7K ohms). ntrol J512 connector. le shifter.
ore than a few Hz off of 60Hz, notify utility company.
nd send back to GE Appliances.) ensure it matches the water level in the basket n top cover grommet using drill bit size 1/16" by hand so as not to drill

Fault Code (Dec)	Name	Description	Repair Acti
13	Redundant Lid Unlocked	In spin mode, the lid switch feedback has voltage (lid closed), for more than 5 seconds the motor speed feedback assumes the basket is spinning > 4-5RPM when the lid lock feedback has no voltage (Lid Unlocked). Lid Switch Feedback has no Voltage when the BRPM is > 4-5RPM.	• Check lid sw • Check conti • Check for pr • Check lid loc
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.	• Verify that th • Check lid sw • Check conti • Check for pr • Check lid loc • If lid lock ass
15	Water Temp Sensor Invalid	1. Thermistor disconnected/not present. 2. Failed thermistor.	• Check therm the table in • Check wiring • Replace the
16	Adaptive Drain/Slow Drain	The total number of times during machine life the actual amount of time the pressure sensor indicated the wash water had drained to empty exceeded the calculated time by the software.	• This fault is • If the adapt pump impe • If fault 16 is other in fau • Check wate • Check pres • Check the according t • Check pres • Ensure pres drill through
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.	1. Check for 2. Check the remove it.
18	Drain Pump Clearing algorithm failed	While draining the pressure sensor value for water level did not indicate the washer was empty before the Max Continuous Drain ON time was reached.	• This fault is blockage an pressure se • Check the d • Check Own • Check resist • If open circu • Check for 12 • If voltage is • Check wate • Check press • Check the o according to • Check press • Ensure pres through the
19	UI State Timeout	This will happen if a cycle is paused or canceled and water is left in the tub for more than 24 hours.	• This is norm • Check wate • Check press • Check the o according to • Check press • Ensure pres through the



h continuity at J513 on the control. ty of lid lock position. Opened or Closed. er operation of lid lock. 120VAC while activating viring harness from the control to lock assembly.
d lock is not blocked by any external debris. h continuity at J513 on the control. ty of lid lock position. Opened or Closed. er operation of lid lock. 120VAC while activating viring harness from the control to lock assembly. nbly and harness are OK, update the software.
or resistance from connector J701 on the control board. Validate the resistance matches i-manual. arness and connections. stor.
t when adaptive drain cycle occurs to try to remove the rest of the water in the tub. drain cycle times out, the control will run a drain pump clearing algorithm to free the of debris. Then it will finish draining. If drain clearing algorithm fails look for fault 18. 0 and fault 18 never occurs there is no problem. If fault 16 and fault 18 equal each then look for drain blockages including house standpipe. alve operation. e tube for pinches where it goes through top cover grommet. out voltage from the pressure sensor to ensure it matches the water level in the basket ne pressure sensor chart. e tube for trapped water. re chamber port is free from obstruction using drill bit size 1/16" by hand so as not to e inner wall.
er in the bottom of the tub. If so drain and try cycle again sket for excessive friction. Basket should spin freely. If not, find source of friction and
and will be seen with fault 16 when drain pump clearing algorithm failed to remove the ne rest of the water in the tub. Also this fault may occur due to possible issue with the r system. If drain pump system is working correctly, refer to the last four steps of fault 8. n pump for blockage. Manual & Installation Instructions for proper standpipe height. ce of the pump (13.5 ohms) from J512 connector on the control. check wiring harness to the pump and pump motor. VAC to the drain pump. sent and pump does not operate, replace pump. alve operation. e tube for pinches where it goes through top cover grommet. ut voltage from the pressure sensor to ensure it matches the water level in the basket e pressure sensor chart. e tube for trapped water. e chamber port is free from obstruction using drill bit size 1/16" by hand so as not to drill er wall.
operation. This will happen if the consumer and/or control switched cycle to a paused state. alve operation. e tube for pinches where it goes through top cover grommet. ut voltage from the pressure sensor to ensure it matches the water level in the basket e pressure sensor chart. e tube for trapped water. e chamber port is free from obstruction using drill bit size 1/16" by hand so as not to drill er wall.

Fault Code (Dec)	Name	Description
20	Critical Flood Level by Gallons	Water volume into the tub exce calculated by the control. 1. Pressure tube is momentaril it, partial blockage if Flood fa 2. Low water pressure/flow or system blockage if NO Floo
21	Max Fill – Gallons	Water volume into the tub exce calculated by the control. Stop 1. Pressure tube is momentaril in it, partial blockage if Flooc 2. Low water pressure/flow or system blockage if NO Floo
22	Out of Balance (OOB) during Dry Load Sense	Large wet/OOB load being wa condition is detected during dr Dry load sense will be abando will be started.
23	Critical Lid Lock Failure	1. Lock blockage 2. Lid Lock failure. Will not lock while lid is opened.
24	Lid Logic Failure	Lid switch failure. This fault is set if the system pe both OPEN and LOCKED for 5
25	Pressure Sensor Dropout	1. Disconnected pressure hose 2. Pressure tube is pinched or 3. Pressure sensor failure.
26	Out of Balance (OOB) Ended Final Spin	Washer could not redistribute l condition to achieve final targe
27	Water Accessibility	This will happen if water is l lid open for more than 15 m
28	Options Knobs Feedback Invalid	This fault is set if a cycle is knob position is detected.
29	Suds Lock Abatement Failure	Cycle has terminated due to
30	Stuck Button Fault	Buttons not operating when
31	Out of Balance (OOB) Fallback In Final Spin	This fault is set if machine is terminal speed during final s
32	Critical Lid Lock Failure: Can't Unlock Lid	This fault is set when the so multiple times to unlock the



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

	Repair Action
l 41 gallons as ched, has water in 2 occurs. anent pressure t 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.
l 36.3 gallons as g. ched or has water 6, 7, or 12 occurs. anent pressure t 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.
This is set if OOB l sense algorithm. nd wet load sense	• 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.
ılock or is locked	• 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.
es the lid to be secutive seconds	1. Check harness and connections from the control to the lid lock assembly for damage and continuity. 2. Run a spin cycle. Pull up on the lid during spin for more than 5 seconds and see if this fault occurs. Replace lid lock assemble.
vater in it.	• 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. • 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. • 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.
o eliminate OOB oin speed.	• Manually rebalance the load, check basket for damage, and run a **Drain & Spin** cycle. • If washer spins properly, talk with consumer about loading. • If the washer will not spin properly, check the balance ring, the rod and spring assemblies, the speed sensor, and the speed sensor harness for proper operation. • Check if the unit is stable and leveled.
the tub with the s.	• Check the output voltage from the pressure sensor to ensure it matches the water level in the basket according to the pressure sensor chart. • This is normal operation. This will happen if the consumer and/or control switched cycle to a paused state.
ng and an invalid	• Make sure knobs are in a valid position. • Ensure knob harness is fully seated and not routed under knob assembly.
many suds.	• Ensure basket is able to rotate freely. • Ensure consumer is using the proper amount of HE detergent. • Ensure speed sensor is plugged in and correctly seated to the motor.
sed.	• Check buttons and adjust. • Check button tree. • Check the clearance between the button and the backsplash hole.
ble to reach due to OOB.	• Manually rebalance the load, check basket for damage, and run a **Drain & Spin** cycle. • If washer spins properly, talk with consumer about loading. • If the washer will not spin properly, check the balance ring, the rod and spring assemblies, the speed sensor, and the speed sensor harness for proper operation. • Check if the unit is stable and leveled.
e has tried ithout success.	• Check to ensure lid lock harness is correctly seated on the lid lock and control board.

290D2158G005

⚠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.

⚠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.

⚠AVERTISSEMENT **Risque de choc électrique**

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

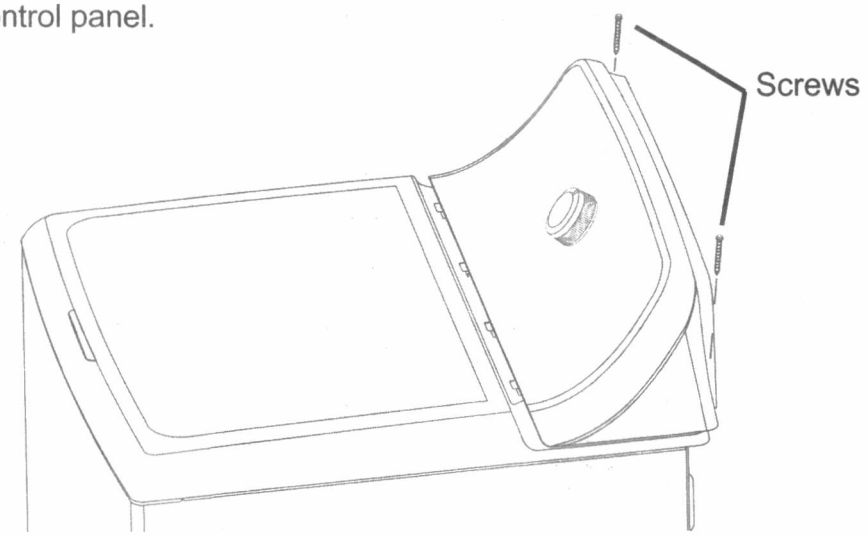
- Réparations seulement par un technicien qualifié.
- Débranchez l'alimentation électrique avant la réparation.
- Rebranchez tous les dispositifs de mise à la terre après la réparation.
- Remettez toutes les pièces et panneaux en place avant d'utiliser l'appareil.

WATER LEVEL SWITCH

BEFORE DISCONNECTING HOSE FROM WATER LEVEL SWITCH, 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 SWITCH.

① To Remove Control Panel:

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

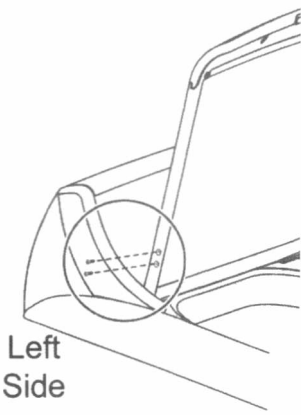


2. Grasp the control panel sides, push it back, and roll it toward the rear so the pressure sensor tube can be seen where it connects to the control board.

IMPORTANT:

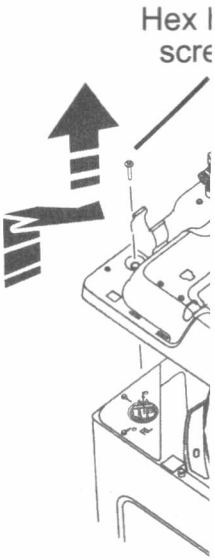
② To Remove Lid:

- Remove the two ¼" hex s
  cover and slide towards t
- Open the lid, remove the
  to remove.

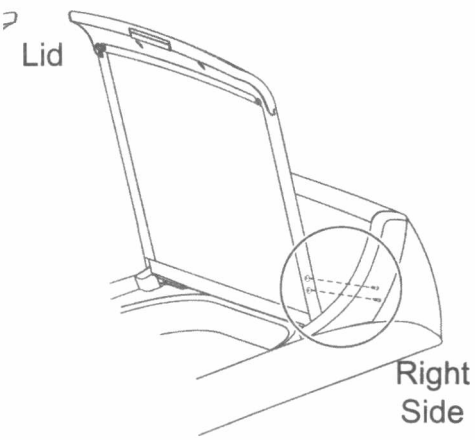


③ To Remove Top C

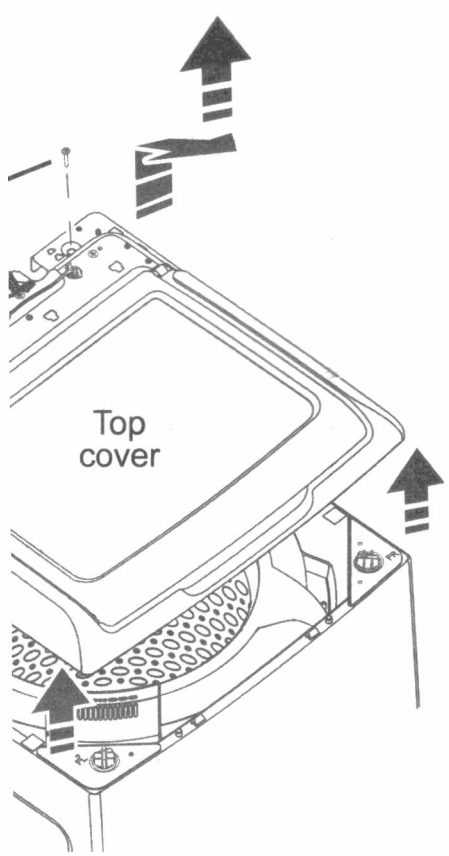
1. Complete previous com
2. Remove two 1/4" hex he
3. Slide the harness gromm
4. Disengage the power co
   front part of the cord an
5. Raise the rear of the top
   disengage the front clips



s that secure the backsplash to the top
r of washer.
crews (two each side) and lift the lid up



t removals ❶ and ❷.
ews at the rear of the top cover.
t toward the rear of the washer.
n the top cover by lifting up on the
slide forward to remove.
up and pull forward slightly to



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 [illegible]

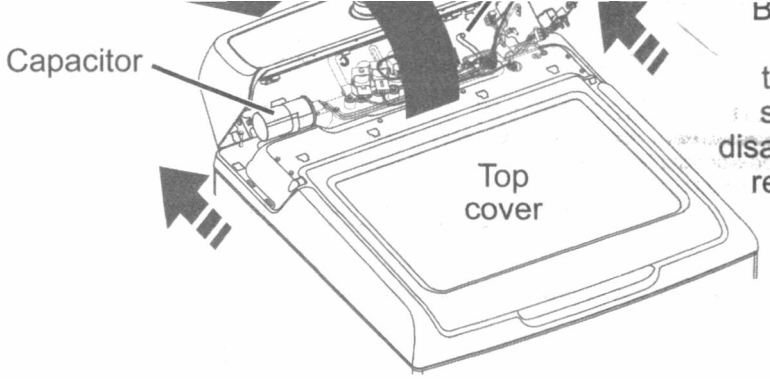
Once the washer is in Servi features are available via the

Knob Index / Test number (Displayed on SSD, 7-segment display, if present) (Without SSD will be displayed in binary format utilizing the cycle status LED's)	Test Name	W if
0 ● ● ● ● ● ●	All LED's on	All inc SS
1 ○ ○ ○ ○ ○ ●	Fault Codes	Mc Fa - C co - C fau - A pre - P will - L 7-s On coc Dis At pre
2 ○ ○ ○ ○ ● ○	Personality ID	Pre Flas **Sta** Mo per Mo (Se ID f
3 ○ ○ ○ ○ ● ●	UI Software Version (Critical)	
(Critical)	After entering this test, press the **Start** button to toggle through the software version number	Afte butt vers Exa High 1st p 2nd Low Majc 1st p 2nd Minc

lode, the following service le knob (on some models):

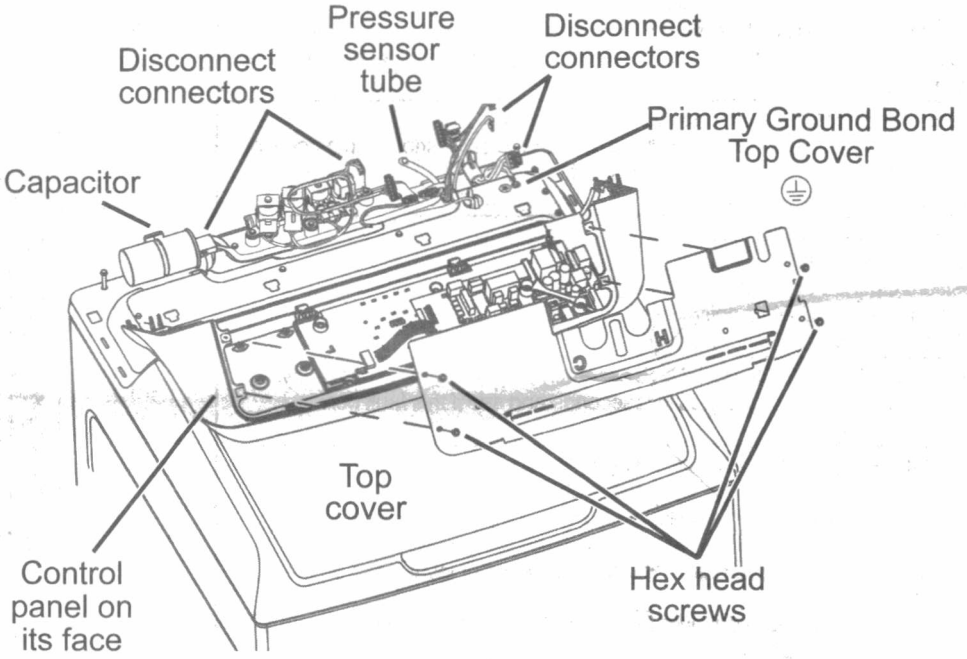
Description of test
ts call for numbers to be shown it isplay on SSD, 7-segment display, nt.) (Without SSD will be displayed inary format. See Binary Chart.) ng the cycle knob will index to the next or prior test.
s on the display will be blink ig "88" on the (7-segment display) a rate of 1Hz.
without 7-segment display: will be shown; art button press, blink first fault binary. (See Binary Chart) xt **Start** button press, blink next de. l of list OR if no fault codes are , blink all LEDs. ing **Start** at the end of the fault list p back around. he fault sequence. ent display models: rt button press, blink first fault fault code in SSD. of list OR if no fault codes are , washer will flash "- -".
g **Start** will start the test. e set personality after pressing without SSD use binary to show ality. vith SSD will display personality. ersonality ID Chart for the correct ie model being checked.)
tering this test, press the **Start** o toggle through the software number as follows: e: v01.23 d UI s - "01" on 7SD ss - "23" on 7SD d UI (See Version Diagram below) ersion (**Pause** LED ON) s - Display 0 in binary (all LEDs off) ss - Display 1 in binary ersion (**Lid Locked** LED ON) Display 2 in binary

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.
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 started, the mode shift to spin will occur if required and the lid will be locked. 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.

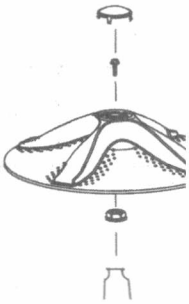


Be careful not to damage the pressure sensor when disassembling and reassembling.

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.



1. With a small screwdrive
   cap or cup from the agita
2. Remove the 7/16th hex b
3. Pull the impeller/agitato



NOTE: On two stage agita
an auger system, the auge
removed to access the 7/1
is done by twisting the bas
(clockwise) to unsnap it fr
A Phillips screwdriver can
auger by doing the followi
A. Insert the screwdriver i
the auger
B. Rotate the auger until t
into a recessed area of the
auger.
C. Once the screwdriver is
the wall of the recessed ar
screwdriver to assist with
the agitator base to acces

the cap off of the impeller or remove the

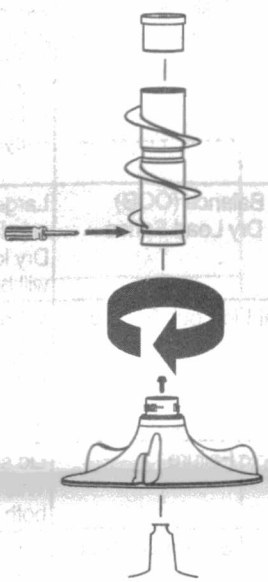
t secures the impeller/agitator to the shaft.
ne shaft.

odels with
needs to be
ex bolt. This
ne auger right
agitator base.
ed to remove the

existing hole in

ewdriver seats
portion of the

d, tap it through
is allows the
g the auger off of
ex bolt.



• 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

From an idle state only (all LEDs off), 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.
  - On 7-segment display models: (0) will be displayed for Test (0).
  - On models without a 7-segment display: All of the status LEDs above the cycle knob will be lit.
• 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 state.
• Once test number is selected, pressing **Start** will begin the selected test.

Exit Field Service Mode

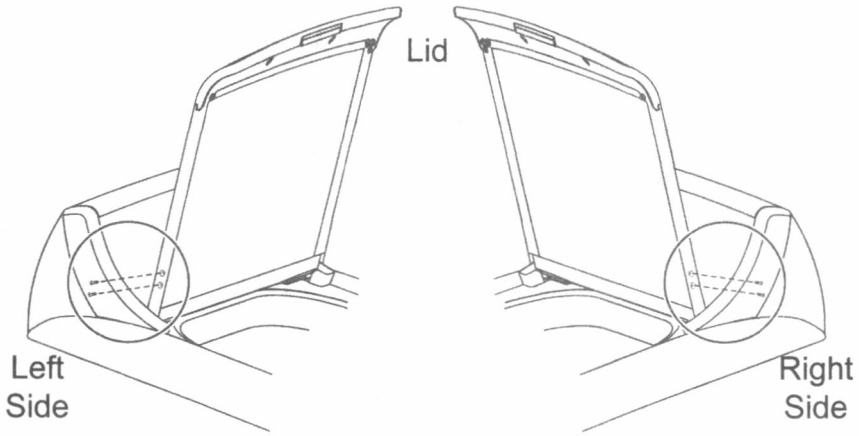
• Field service mode will time out after 30 minutes if there is no user activity.
• Models without 7-segment display: Press and hold the **Start** button for 3 seconds
• Models with a 7-segment display: Press **Power** button

		follows: 4th
4 ○ ○ ○ ● ○ ○	UI Software Version (Non-critical)	Afte butt vers Exa Higl 1st 2nd Low Maj 1st 2nd Min 3rd 4th
5 ○ ○ ○ ● ○ ●	XML Version (Non-critical)	Exa Higl 1st 2nd Low Maj 1st off) 2nd Min 3rd 4th NO vers XML appl the moc corr
6 ○ ○ ○ ● ● ○	Hot Water Valve	Pres valv for h The exite

		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. Press **Start** button again and the next valid personality should be displayed. Press and hold the **Start** button to select the correct personality.
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 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.

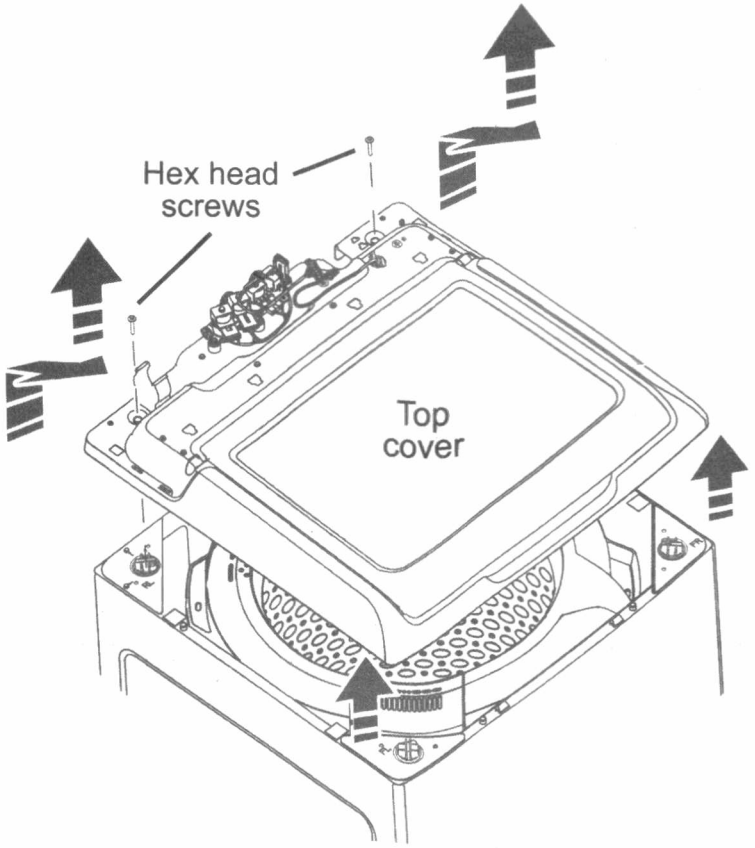
② To Remove Lid:

- 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.



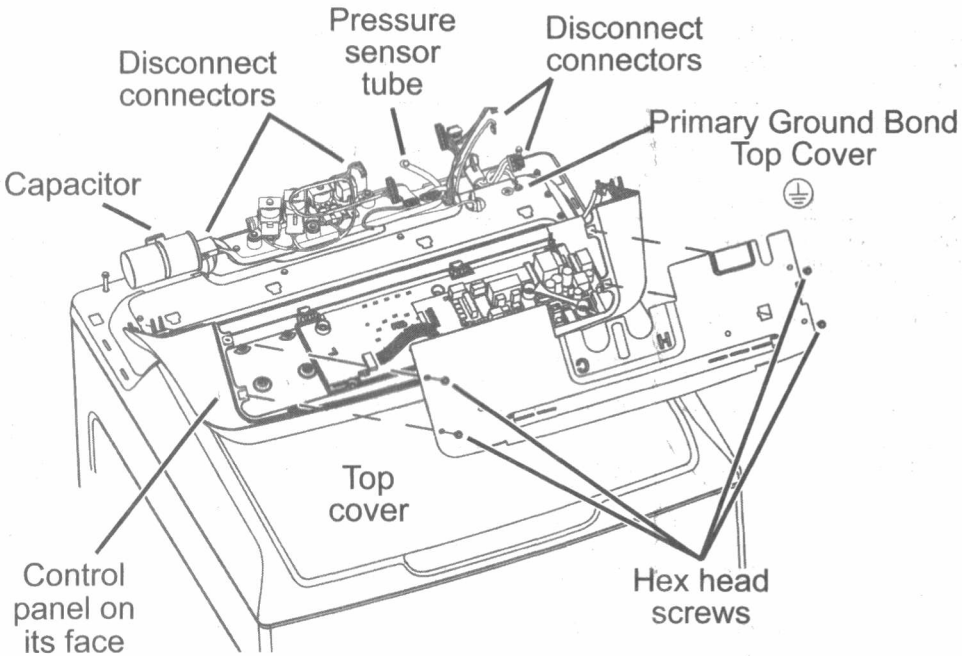
③ To Remove Top Cover:

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.

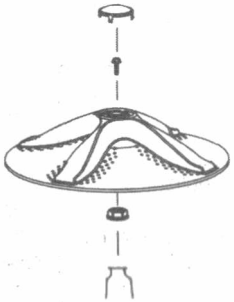


Model N
MTW200**K0
HTW200**K0
HTW200**K2
HTW200**K3
GTW220**K0,
GTW220**K3
GTW220**K4
HTW240**K0
HTW240**K2
HTW240**K3
GTW330**K0
GTW330**K2
GTW330**K3
GTW460**J0 &
GTW460**J3,
GTW460**J7
GTW460**J8 &
GTW485**J0 &
GTW485**J2 &
GTW485**J4 &
GTW490**J0 &
GTW490**J2 &
GTW680**J0,
GTW680**J3 &
GTW680**J5 &
GTW680**L0 &
GTW685**L0 &
GTW750**L0 &

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.



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.

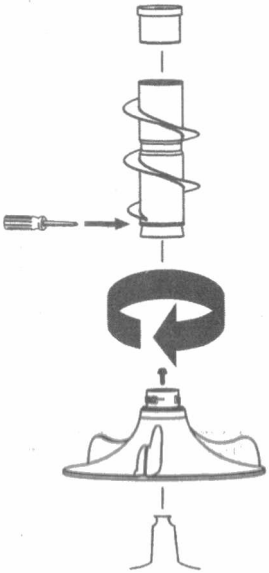


NOTE: On two stage agitator models with an auger system, the auger first needs to be removed to access the 7/16th hex bolt. This is done by twisting the base of the auger right (clockwise) to unsnap it from the agitator base. A Phillips screwdriver can be used to remove the auger by doing the following:

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.



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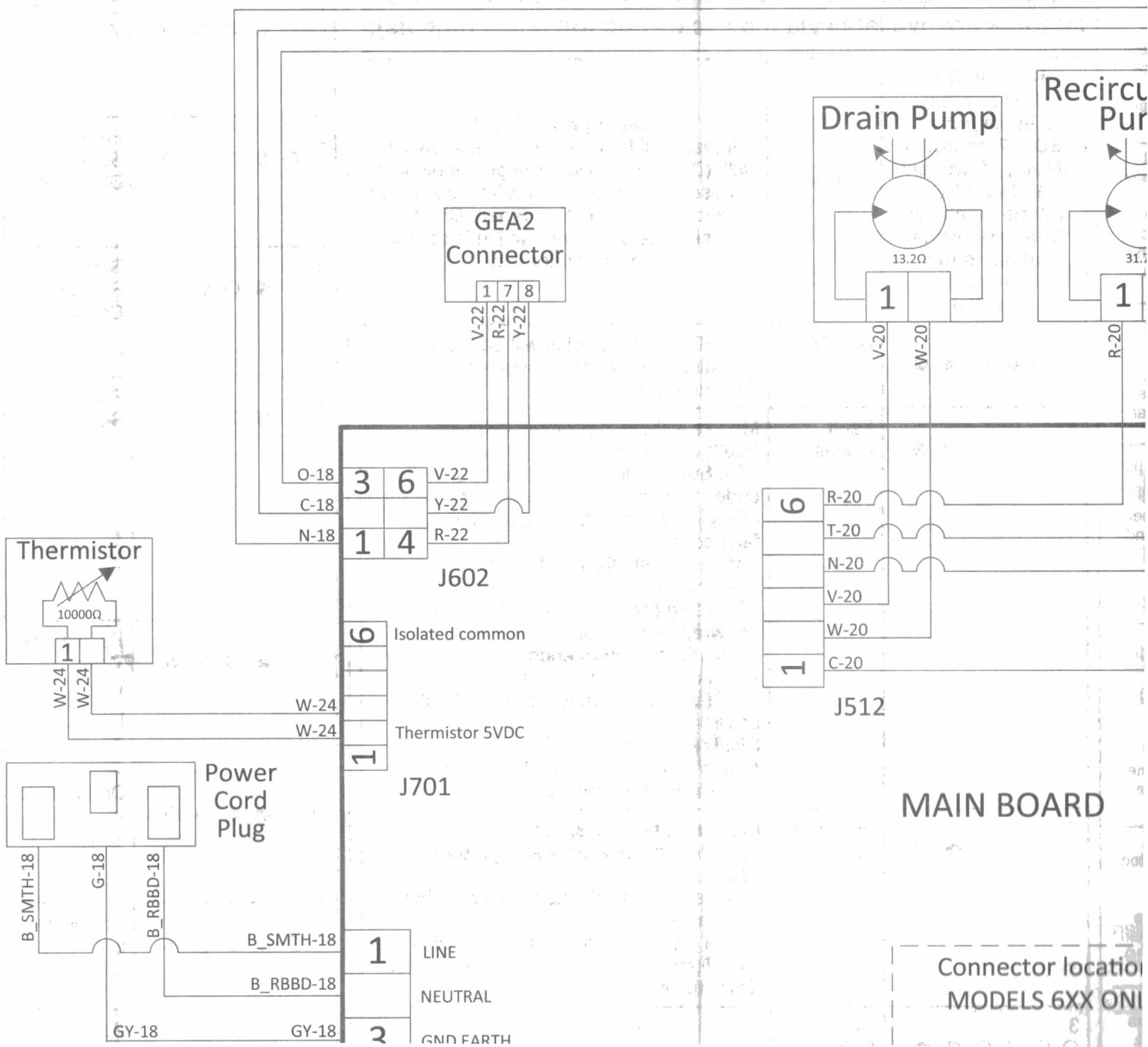
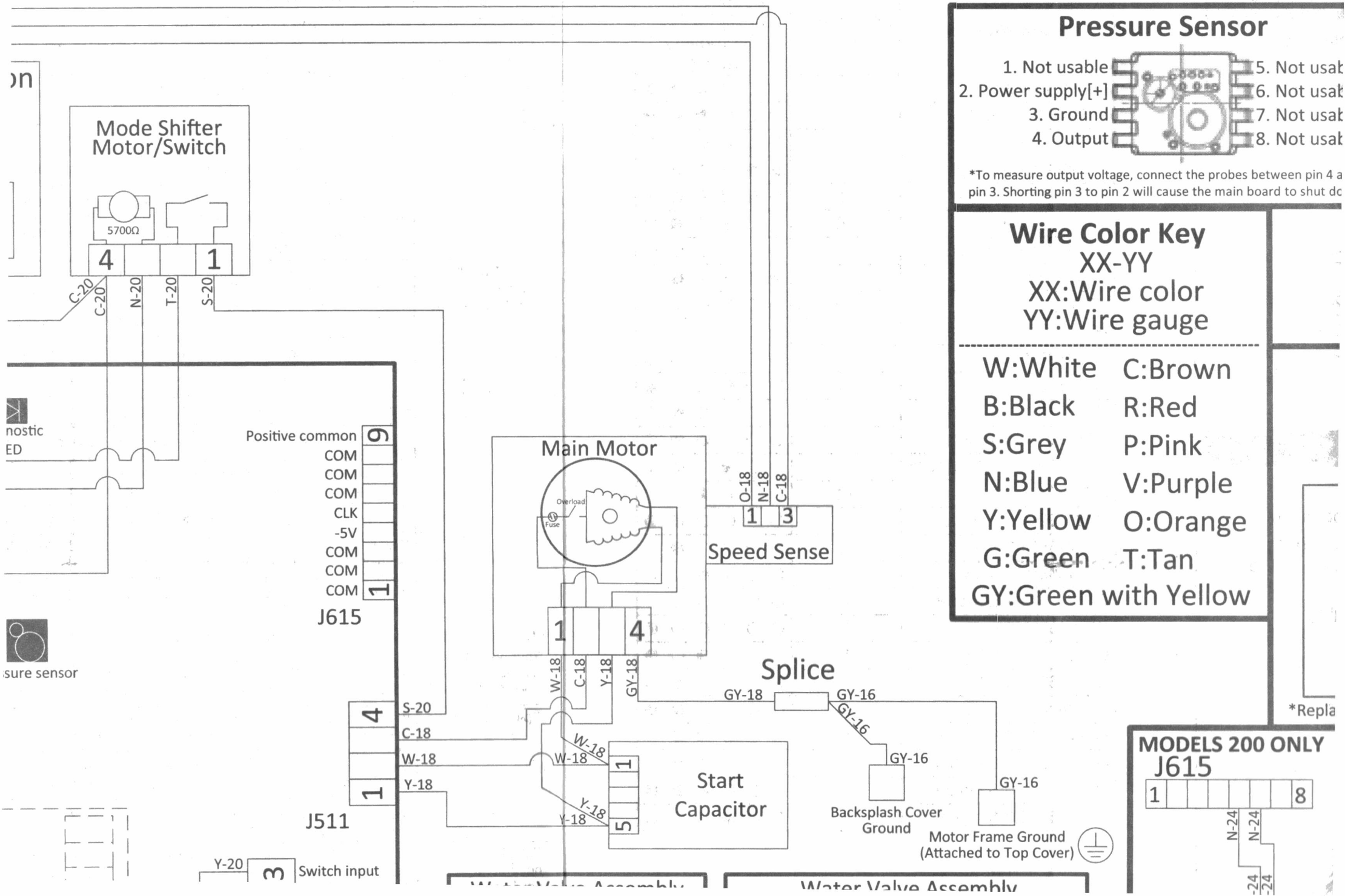
Binary Display Fault Chart	
Fault # displayed on 7-segment display	Fault # displayed in binary format using cycle status lights
	Filled circles indicate light on
0	● ● ● ● ● ●
1	○ ○ ○ ○ ○ ●
2	○ ○ ○ ○ ● ○
3	○ ○ ○ ○ ● ●
4	○ ○ ○ ● ○ ○
5	○ ○ ○ ● ○ ●
6	○ ○ ○ ● ● ○
7	○ ○ ○ ● ● ●
8	○ ○ ● ○ ○ ○
9	○ ○ ● ○ ○ ●
10	○ ○ ● ○ ● ○
11	○ ○ ● ○ ● ●
12	○ ○ ● ● ○ ○
13	○ ○ ● ● ○ ●
14	○ ○ ● ● ● ○
15	○ ○ ● ● ● ●
16	○ ● ○ ○ ○ ○
17	○ ● ○ ○ ○ ●
18	○ ● ○ ○ ● ○
19	○ ● ○ ○ ● ●
20	○ ● ○ ● ○ ○
21	○ ● ○ ● ○ ●
22	○ ● ○ ● ● ○
23	○ ● ○ ● ● ●
24	○ ● ● ○ ○ ○
25	○ ● ● ○ ○ ●
26	○ ● ● ○ ● ○




Pressure Sensor
1. Not usable
2. Power supply[+]
3. Ground
4. Output
5. Not usab
6. Not usab
7. Not usab
8. Not usab
*To measure output voltage, connect the probes between pin 4 a
pin 3. Shorting pin 3 to pin 2 will cause the main board to shut dc
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
Mode Shifter Motor/Switch
5700Ω
4
1
C-20
C-20
N-20
T-20
S-20
Positive common
COM
COM
COM
CLK
-5V
COM
COM
COM
9
1
J615
Main Motor
Overload
Fuse
1
4
O-18
N-18
C-18
1
3
Speed Sense
W-18
C-18
Y-18
GY-18
Splice
GY-18
GY-16
GY-16
GY-16
Backsplash Cover Ground
Motor Frame Ground (Attached to Top Cover)
S-20
C-18
W-18
Y-18
4
1
J511
W-18
W-18
Y-18
Y-18
1
5
Start Capacitor
Y-20
3
Switch input
MODELS 200 ONLY
J615
1
8
N-24
N-24
*Repla

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

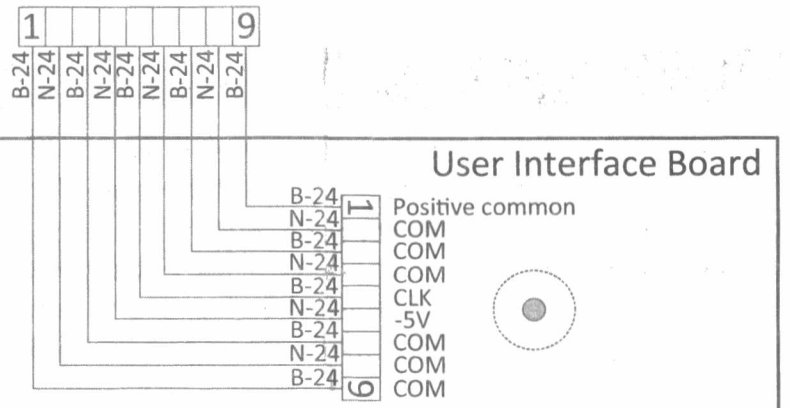
Position 1 is to the far left. Turn towards the right to advance position.

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 6XX ONLY

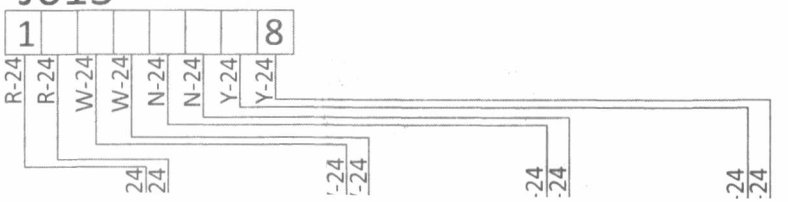
J615



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

MODELS 460-491 ONLY

J615



Tub Water Level Pressure Sensor

MODELS 200-491 ONLY		MODELS 680 ONLY	
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

JB NO. 31-16928

d
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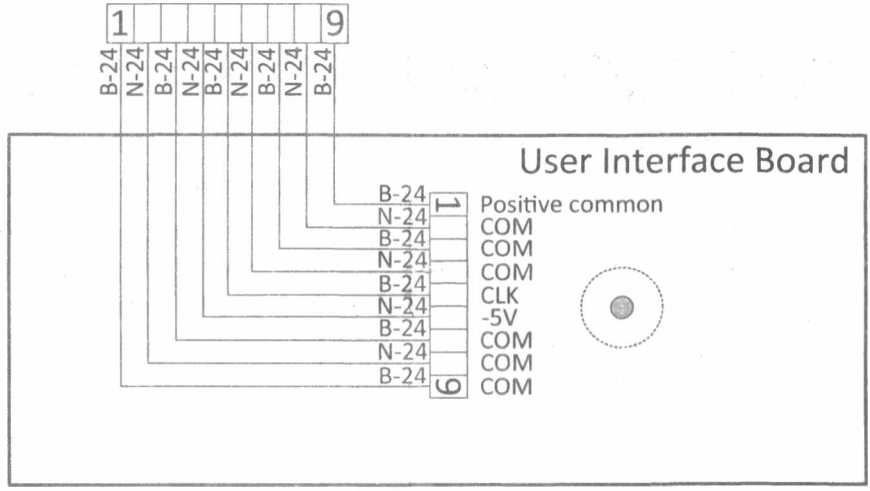
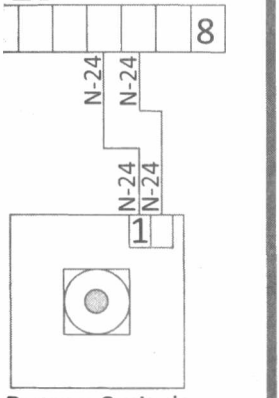
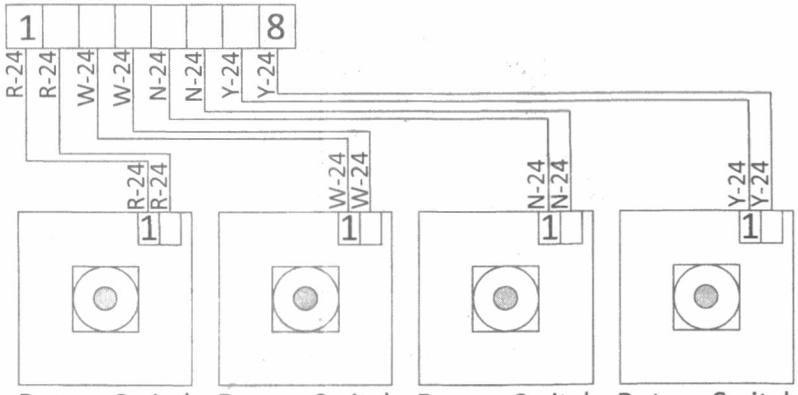


*Replace UI harness first. If issue is still present, replace the whole assembly

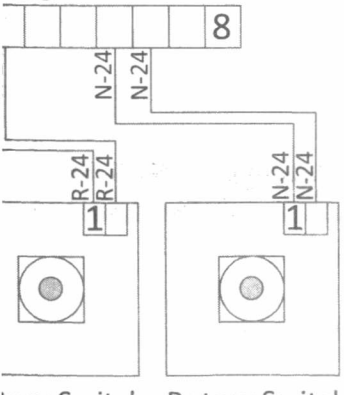
DELS 200 ONLY
J15



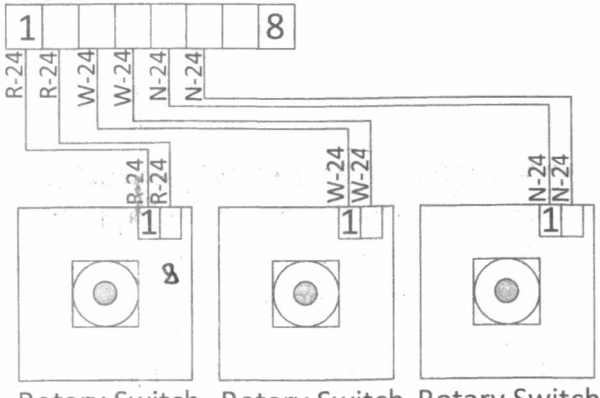
MODELS 460-491 ONLY
J615



DELS 220 & 210 ONLY
J15



MODELS 410-450 ONLY
J615



66	150	2016
76	169	1435

Tub Water Level Pressure Sensor

MODELS 200-491 ONLY		MODELS 680 ONLY	
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

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

PUB NO. 31-16928