

SERVICE MANUAL

EdgeStar Combo Washer Dryer

MODEL:

CWD1550W, CWD1550S, CWD1550BL

CAUTION: READ ALL SAFETY PRECAUTIONS IN THIS MANUAL BEFORE SERVICING THE UNIT

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SAFETY PRECAUTIONS

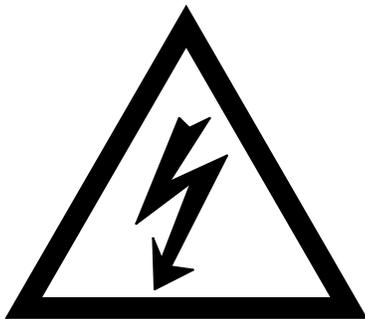
WARNING: This manual and the information contained herein is intended for use by certified technicians. The manufacturer or seller is not responsible for the interpretation or misuse of the information provided, nor does it assume any liability in connection with its use.

The safeguards and warnings indicated in this manual do not cover all possible conditions which may occur. Common sense, caution, and care must be exercised.

- To prevent electric shock, always unplug an appliance from the power supply before attempting any service.
- Disconnect the power cord by grasping the plug, not the cord.
- Do not bypass, cut, or remove the grounding plug.
- Prevent water from spilling onto electric elements or the machine parts.
- Always refer to the rating label on the appliance for rated current and voltage.
- Always check line voltage and amperage.
- Always use exact replacement parts.
- Any attempt to repair a major appliance may result in personal injury and property damage.

Electrical Safety

- Do not exceed the power outlet ratings.
- It is recommended that the Combo Washer / Dryer be connected on its own circuit.
- A standard electrical supply (115 V, 60Hz), that is properly grounded in accordance with the National Electrical Code and all state and local codes and ordinances is required.
- Do not use outlets that can be turned off by a switch or pull chain.
- Always turn the unit off and unplug it from the outlet when cleaning.
- Unplug the unit if it is not going to be used for an extended period of time.
- Do not operate the unit with a power plug missing the ground plug, a damaged cord, or a loose socket.
- Be sure the appliance is properly grounded.
- Do not bypass, cut, or remove the grounding plug.
- If the power cord is damaged, it must be replaced by the manufacturer or a qualified technician.
- Do not use extension cords or power strips with this unit. You may need to contact an electrician if it is necessary to use a longer cord or if you do not have a properly grounded outlet. Do not modify the power cord's length or share the outlet with other appliances.
- Do not start or stop the unit by switching the electrical circuit's power on and off.
- Immediately unplug the unit if it makes strange sounds, emits an odor or smoke and contact customer service.
- Do not remove any part of the casing unless instructed by an authorized technician.
- Before the appliance is removed from service or discarded, remove the door and cut off the power cord.



General Safety

- Do not wash articles that have been previously cleaned in, washed in, soaked in, or spotted with gasoline, dry-cleaning solvents, or other flammable or explosive substances, as they give off vapors that could ignite or explode.
- Do not add gasoline, dry-cleaning solvents, or other flammable or explosive substances to the wash water. These substances give off vapors that could ignite or explode.
- Under certain conditions, hydrogen gas may be produced in a hot-water system that has not been used for 2 weeks or more. HYDROGEN GAS IS EXPLOSIVE. If the hot-water system has not been used for such a period, before using this appliance, turn on all hot-water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. As the gas is flammable, do not smoke or use an open flame during this time.
- Always unplug an appliance from the power supply before attempting any service. Disconnect the power cord by grasping the plug, not the cord.
- To reduce the risk of fire: clothes, cleaning rags, mop heads and the like which have traces of any flammable substance, such as vegetable oil, cooking oil, petroleum based oils or distillates, waxes, fats, etc., must NOT be placed in this appliance. These items may contain flammable substances which, even after washing, may smoke or ignite in the dryer mode.
- Do not allow children to play on or in the appliance.
- Do not allow pets and children to climb into the machine. Check the machine and tub before every operation.
- Glass door or protector may be very hot during operation. Keep children and pets far away from the machine during the operation.
- This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the machine by a person responsible for their safety.
- Do not wash fiberglass materials in this unit (such as curtains and window coverings that use fiberglass materials). Small particles may remain in the unit and may stick to fabrics in subsequent wash loads causing skin irritation.
- Do not reach into the appliance if the tub or agitator is moving.
- Do not install or store this appliance where it will be exposed to the weather.
- Do not tamper with controls.
- Always allow the unit to complete the cool down cycle to prolong the life of the unit.
- Disconnect from the power socket before cleaning or maintenance.
- Make sure that all pockets are emptied. Remove all foreign objects from pockets of clothing. Sharp and rigid items such as coins, nails, screws, stones etc. may cause serious damage to this machine.
- If the plug (power cord) is damaged, it must be replaced by the manufacturer or an authorized service representative.
- This machine shall be repaired only by an authorized service representative. Only genuine replacement parts should be used.
- To reduce the risk of fire, do not dry articles containing foam rubber or similarly textured materials.
- If connected to a circuit protected by fuses, use time-delay fuses with this appliance.
- Do not climb up and sit on the top cover of the machine.
- Do not lean against the machine door.
- Please do not close the door with excessive force. If it is found difficult to close the door, please check for obstruction.
- Before washing clothes for the first time, this unit should be operated in cotton cycle with hot water to remove any contaminants.
- This appliance is for indoor use only.
- When you plan to dispose of this machine in the future, please comply with the local waste disposal regulations. Remove the door so that children and pets will not be trapped in the machine.

CLEANING AND MAINTENANCE

Exterior Cabinet:

Never use solvent based, abrasive cleaners, harsh chemicals, or steel wool to clean your unit as they can damage the finish. The cabinet and door may be cleaned with a mild, non-abrasive detergent and lukewarm water solution. Use a soft sponge and rinse with clean water. Wipe with a soft clean towel to prevent water spotting.

During daily use it is recommended to wipe up any spills with dry soft cloth.

Internal Drum:

Never use solvent based, abrasive cleaners, harsh chemicals, or steel wool to clean the internal drum. During daily use, use a soft cloth to wipe around the door, opening, and rubber seal to remove any excess moisture and to maintain a water tight seal.

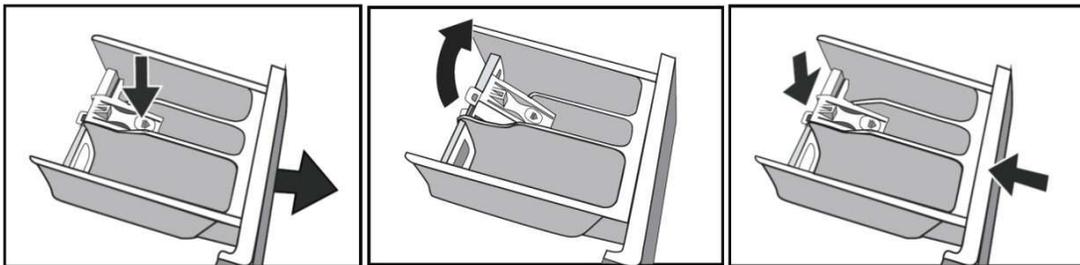
To clean the interior of the unit, all clothes must be removed from the drum. For liquid chlorine, add directly to the fabric softener section. For powder tub cleaner, add directly to the main detergent section. Use only cleaners labeled as safe for washing machines.

- Select the cycle “Self Clean” and press “Start” to initiate the Self Clean cycle.

NOTE: It is recommended that you run the Self Clean cycle regularly to help remove detergent buildup and other residue. Depending on how frequently the machine is used, you may need to run the Self Clean cycle every month.

Detergent Dispenser:

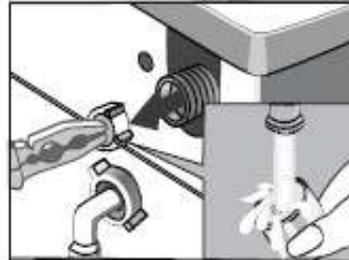
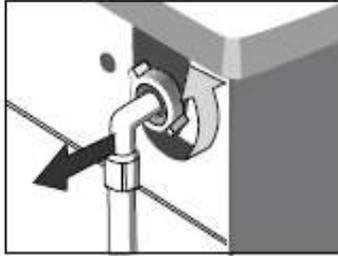
1. Never use solvent based, abrasive cleaners, harsh chemicals or steel wool.
2. Remove the detergent dispenser from the unit by pressing downward on the release tab (shown below) and gently sliding the dispenser drawer outward.
3. Once the dispenser drawer is removed, you can remove the fabric softener dispenser compartment by gently lifting upward.
4. Place drawer under warm tap water and dry with soft cloth.
5. Reinstall the fabric softener compartment and gently slide the dispenser drawer back into the unit.



Cleaning the inlet filter

If supply valve is fully opened and there is an insufficient amount of water coming through the hose you may need to clean the inlet filters. The inlet filters are wire mesh screens located immediately inside the hot and cold water line connections on the back of the unit. You will need a pair of needle nose pliers to remove the filters for cleaning.

1. Close the water valve(s) entirely.
2. Select any procedure on Control Knob and press the “Start/Pause” button and let run for about 40 seconds. This will draw existing water out of the supply lines and into the tub.
3. Unscrew the supply hose(s) from the backside of the unit.
4. Pull out the inlet filter(s) with needle nose pliers and wash under warm water to remove any debris.
5. Re-install inlet filter(s) and reconnect hose(s).
6. Open the water valve(s) and ensure there is no water leakage.



Drain Pump Filter:

- According to the soil level within the cycles and the frequency of the cycles, you have to inspect and clean the filter regularly.
- The pump should be inspected if the machine does not empty or no spin;
- The machine makes an unusual noise during draining due to objects such as safety pins, coins etc. blocking the pump.

Removing foreign objects from Lint Trap / Coin Trap:

The Coin Trap (Lint Trap) can collect small objects from the wash cycle. Clean out the coin trap regularly to ensure normal operation of washing machine. Please allow the unit to cool down sufficiently before opening the coin trap knob as hot water may be present. The Coin trap door is located on the front, bottom right hand side of the machine.



IMPORTANT: A small amount of water may be present in the coin trap and will be released when knob is opened. Please have a towel and/or small drain pan to catch any water.

WARNING: Hot water may be present if machine has not been allowed to cool down sufficiently. Please allow unit to cool down prior to removing coin trap knob.

Freeze Prevention and Help:

If your washing machine is located in the room where it can get frozen easily, please drain the remaining water inside drain pipe and inlet pipe thoroughly. Remove the remaining water in the inlet pipe and drain pump.

If unit experiences a freeze when water has not been preventatively drained, please follow the below instructions.

1. Disconnect the power supply for the washing machine.
2. Wash the supply valve / supply tap with warm water to loosen inlet pipe.
3. Remove supply lines / inlet pipes and immerse in warm water to thaw.
4. Pour warm water into washing drum and wait for 10 minutes.
5. Reconnect supply lines / inlet pipes to the supply valve and check whether inlet and outlet are working normally.

TROUBLESHOOTING

Test Mode

Note: Before entering the test mode, you should empty and drain the machine and ensure that there is no water left in the drum. You can run a spin cycle and/or open the Coin Trap from the front of the unit to get all water out. Please verify the coin trap knob is re-installed prior to proceeding.

To Enter Test Mode:

- Shut down the machine by pressing the “On/Off” button to power off the unit.
- Disconnect the plug from the power supply, wait 10 seconds and connect the power again.
- Press the buttons in sequence of **Temp – Soil – Temp – Soil** to enter Test Mode.
- “t01” will be displayed on the control panel.

Code	Function	Code	Function	Code	Function
t01	Model Setting	t06	Water Switch Test	t11	Factory Test Mode
t02	Error Code Review	t07	Water Heater Test	t12	Water Inlet Valve Test
t03	Software Version	t08	Drying Heater Test	t13	Factory Test Mode
t04	Display Test	t09	Wash Function Test	t14	Factory Test Mode
t05	Pump Test	t10	Spin Function Test	t15	Factory Test Mode

Test Mode Notes

- t01, t03, t11, t13, t14, t15 are not used for service.
- To activate the Test Mode, Press the “Start/Pause” button once.
- Press the “Start/Pause” button again to start the function test.
- When the Test Mode is operating, press the “On/Off” button will stop the test and exit to status for Test Mode selection.

Code	How to test
t02	When "t02" is displayed on LED, "Error code check" function can be activated by pressing the "Start/Pause" button. Then the latest error code will be displayed on LED. You can check the 10 most recent error codes by turning the knob to show each error code.
t03	When "t03" is displayed on LED, "Software Version check" function can be activated by pressing the "Start/Pause" button. the display will show "UL" and "001"; press the "Start/Pause" button again the display will show "cod" and software version "cod"; press the "Start/Pause" button the third time, "Inv" and inverter software version code will be showed on the display.
t04	When "t04" is displayed on LED, "Display check" function can be activated by pressing the "Start/Pause" button. All LED items will be displayed one by one in a pre-set sequence.
t05	When "t05" is displayed on LED, "Pump check" function can be activated by pressing the "Start/Pause" button and "P" will be displayed on LED and the pump will activate and drain water out of the drum until there is no water remaining
t06	When "t06" is displayed on LED, "Water Switch check" function can be activated by pressing the "Start/Pause" button. The water valve will be opened and water level reading will be showed on the display.
t07	When "t07" is displayed on LED, "Water Heater Check" function can be activated by pressing the "Start/Pause" button. The LED will display current temperature reading of sensor. Press the "Start/Pause" button to start test. The water valve will be opened until water reaches Level 01. The heater will then start and run for 5 minutes. The LED will then display the temperature value change during test period.
t08	When "t08" is displayed on LED, "Air Heater" function can be activated by pressing the "Start/Pause" button. The fan activate and LED will display "dry" when fan operating. The inlet and outlet air temperatures will be displayed when LED flashes "IN" and "OUT".
t09	When "t09" is displayed on LED, "Wash check" function can be activated by pressing the "Start/Pause" button. The LED will display "tt".The drum will run at 45rpm with sequence: spin in counter-clockwise 5 seconds, stop for 3 seconds, spin in clockwise 5 seconds, stop for 3 seconds and repeat that cycle for 8 minutes, then the unit will stop.
t10	When "t10" is displayed on LED, "Spin check" function can be activated by pressing the "Start/Pause" button. The display shows the rpm velocity. The unit will spin at 400 rpm. Press the "Start/Pause" button again to increase 1000 rpm. Press the "Start/Pause" button a third time to increase 1120 rpm for 30 seconds. When test complete, the unit will stop.
t12	When "t12" is displayed on LED the "Water Valve check" function is activated.. - Press "Start/Pause" and "U2" is displayed on LED – The Main wash valve opens for 5 seconds - Press "Start/Pause" button again and "U1" is displayed - The Pre-wash valve opens for 5 seconds. - Press "Start/Pause" button again and "U3" is displayed - The hot water valve opens for 5 seconds. - Press "Start/Pause" button again and "U4" is displayed - The condensing valve opens for 5 seconds. - Press "Start/Pause" button again and "U12" is displayed - The Pre-wash valve and main wash valve open for 5 seconds at same time.

ERROR CODES

Error Code	Error description	Unit Action	Possible Cause	Solution
E10	After 7 minutes, the water level doesn't change with valves open	Unit will close valve and stop with Error code display	Low Water Pressure from House Supply	If the washer fills very slowly, the water pressure from water supply may be too low. If the water inlet valve isn't leaking and there are no other symptoms this problem does not need to be corrected.
			Water inlet hose	Make sure that water faucet is turned on and that the screens on the hoses are not clogged / restricted.
			Water inlet valve (The voltage on the water inlet valve is normal)	If the water pressure is good, try cleaning the screens inside the water inlet valve hose connection ports. If clean and free from blockage, replace the water inlet valve.
			Water level sensor or control switch (No voltage on the water inlet valve)	A water level control switch controls how much water enters the washing machine by PCB. If the water level control switch is defective, or more commonly, if the small air pipe attached to the air bell restricted, The switch will not be able to close the electrical contacts to the washer fill valve. CHECK THE AIR PIPE CHECK THE WATER LEVER SENSOR CHECK THE PCB and the inner wire between PCB and the sensor
E11	There is significant water left in the unit when unit in standby or at end of cycle.	Unit will start pump with door locked, valve closed, motor stopped and Error code will be displayed	Water level sensor or control switch	The water level sensor can't detect water in the drum.
			Tub Drain Hose Assembly broken	If the air pipe connected to the water level sensor is broken, the sensor will be unable to detect the water level.

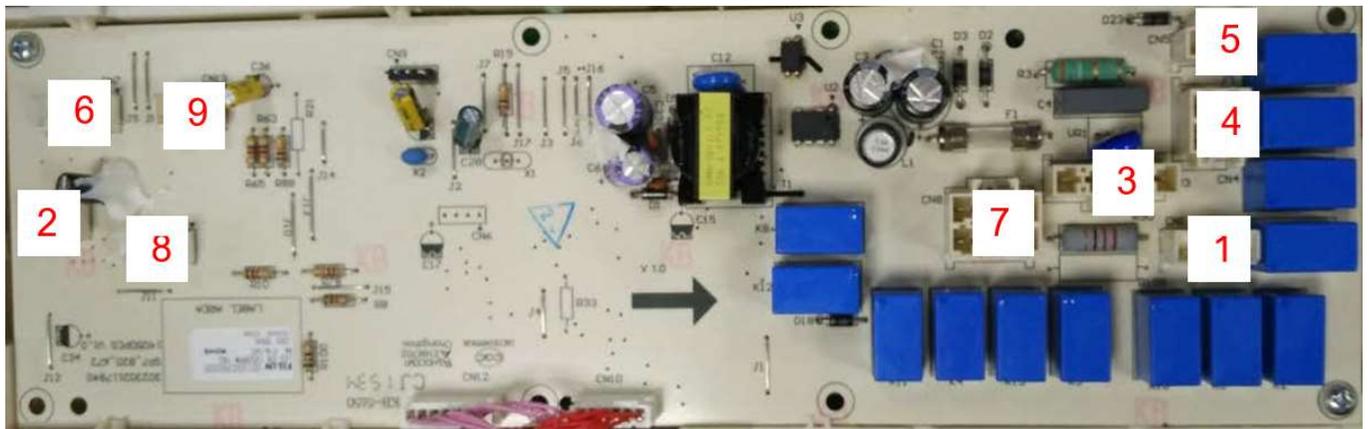
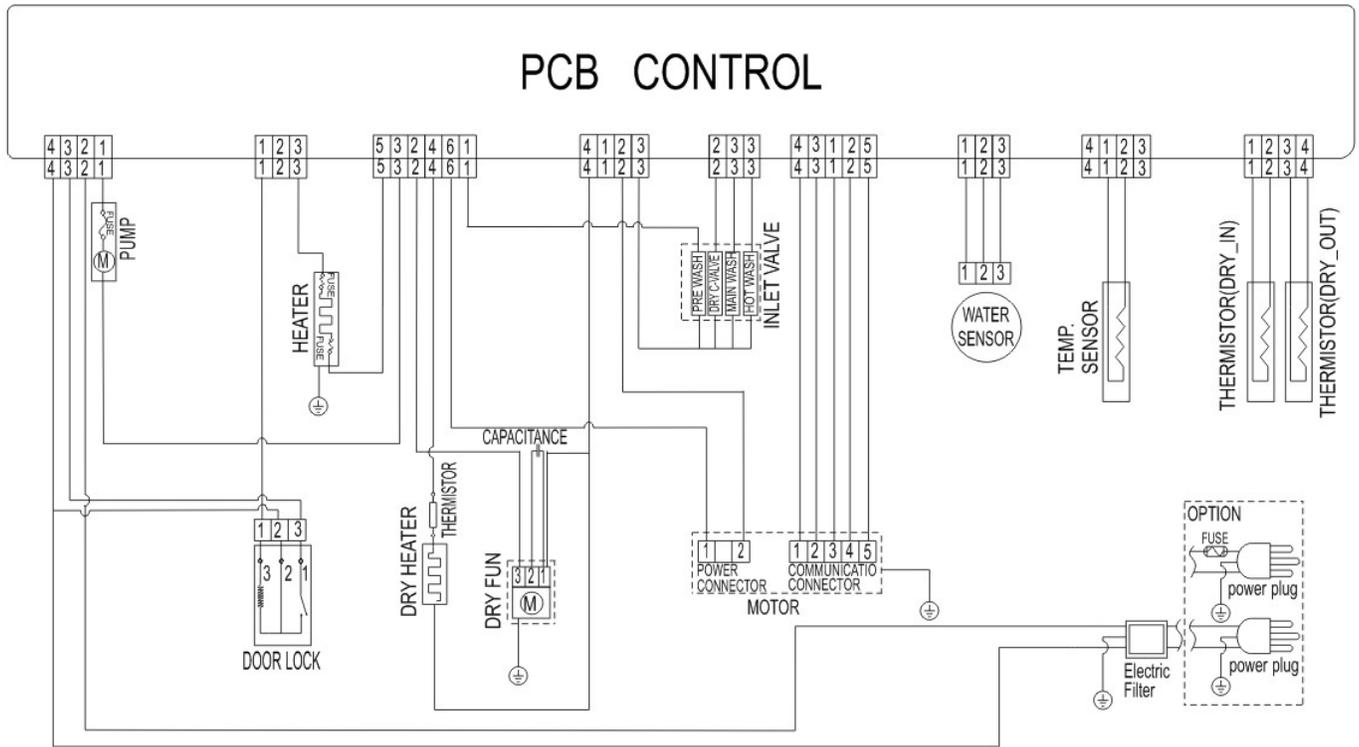
Error Code	Error description	Unit Action	Possible Cause	Solution
E12	The water level in drum exceeds appropriate level for alarm	Unit will start pump with door locked, valve closed, motor stopped and Error code will be displayed	Restart	Sometimes just restart the unit can solve the problem.
			Water inlet valve (The voltage on the water inlet valve is normal)	If the washer is overflowing, the water inlet valve has failed and it must be replaced.
			Water level sensor or control switch (No voltage on the water inlet valve)	A water lever control switch controls how much water enters the washing machine by PCB. If the water level control switch is defective, or more commonly, if the small air pipe attached to the air bell restricted, The switch will not be able to close the electrical contacts to the washer fill valve. CHECK THE AIR PIPE CHECK THE WATER LEVEL SENSOR CHECK THE PCB and the inner wire between PCB and the sensor
E20	The main PCB doesn't receive pump signal.	Unit will close valves, motor with door lock unlocked if water level is low enough.	Pump	Check the pump and / or the inner wiring of the pump
E21	After 3 minutes, the water level doesn't change with pump started	Unit will pause with pump stopped, door lock will unlock if water level is low enough.	Drain Hose	If the washer will not drain water, check the drain hose. Be sure the hose is not bent or restricted behind the washer. Also, remove the hose from the pump and check it for obstructions.
			Pump	If the washer won't drain water the drain pump might be defective. It's also common for a small items such as socks or other article of clothing to get caught in the drain pump or in the drain hose. Check both for an obstruction before replacing the pump.
			PCB	Check PCB

Error Code	Error description	Unit Action	Possible Cause	Solution
E30	Door will not locked after 3 attempts.	Unit will stop with Error code display	Door Lock	If the door will not latch, the door lock assembly might be defective. If the door won't latch, check the door to see if the door is closed before replace it.
			PCB	If the washer door will not unlock the problem might be the main control board. This is not common. Check the inner wire between the PCB and the door lock.
E31	Door will not unlock after 3 attempts.	Unit will stop with Error code display	Door Lock	If the door will not unlock, the door lock assembly might be defective. If the door will not latch, check the door to see if the door is closing properly before replacing door lock.
			PCB	If the washer door will not unlock, the problem might be the main control board. This is not common. Check the inner wire between the PCB and the door lock.
E33	The main PCB Is not receiving the Water Switch signal.	Unit will close valve, stop motor / pump and door is unlocked with Error code display	Water level sensor or control switch (No voltage on the water inlet valve)	E33 means the unit can't detect the Signal of Water level sensor. CHECK THE WATER LEVEL SENSOR CHECK THE PCB and the inner wire between PCB and the sensor
E34	Temp sensor on water heater open cycle	Unit will work normally	The temp sensor failed.	The temp sensor failed.
E35	Temp sensor on water heater short cycle	Unit will work normally	The temp sensor failed.	The temp sensor failed.

Error Code	Error description	Unit Action	Possible Cause	Solution
E36	Water heater will not work	Unit will work normally	The temp sensor failed.	If the temp sensor is failed, the heater will not work next time.
			The heater failed.	Check the heater.
			The harness or the PCBs failed	Check the wire connection and the PCBs.
E37	Drum drying outlet temp failed	Drying function will not work	Temperature sensor	Check the inner wire before replacing the temperature.
E38	Drum drying inlet temp failed	Drying function will not work	Temperature sensor	Check the inner wire before replacing the temperature.
E3A	Drying heater open circuit	Drying function will not work	Drying heater	Push the red part of the temperature sensor before checking. Check the inner wire on PCB, Fan motor heater, temperature sensor. Check the heater resistance
			Lint on fan wheel and condenser	Check and clean the lint on fan wheel. Check the lint in the air condenser.
E40	EEPROM failed	Unit stops operation	memory chip broken	Memory chip of the PCB broken - replace the PCB
E70	Button blocked	Unit can't work	Button is stuck	Re-assemble the control panel.

Error Code	Error description	Unit Action	Possible Cause	Solution
E80, E81	The main PCB can get signal from display PCB	Unit can't work	Inverter Module Error	Check the wire connect before replacing the Inverter Module
E50/E52	Inverter PCB over load	Unit can't work		
E50/E53	Inverter module temperature failure	Unit can't work		
E50/E55	Motor speed signal lost	Unit will stop operation		
E50/E56	Motor temp over protection	Unit will stop operation		
E50/E57	Inverter	Unit will stop operation		
E50/E58	Inverter module temperature failure	Unit will stop operation		
E50/E58	Inverter module failure	Unit will stop operation		
E50/E5A	Connection failure between Inverter module and Main Control PCB	Unit will stop operation		
E50/E5B	Inverter module failure	Unit will stop operation		
E50/E5C	Over voltage, inverter module	Unit will stop operation		
E50/E5D	Low voltage, inverter module	Unit will stop operation		
E50/E5E	Inverter module failure	Unit will stop operation		
E64	Signal between Main PCB and Inverter PCB abnormal	Unit will stop operation		

WIRING DIAGRAM AND TERMINALS



Port Definitions

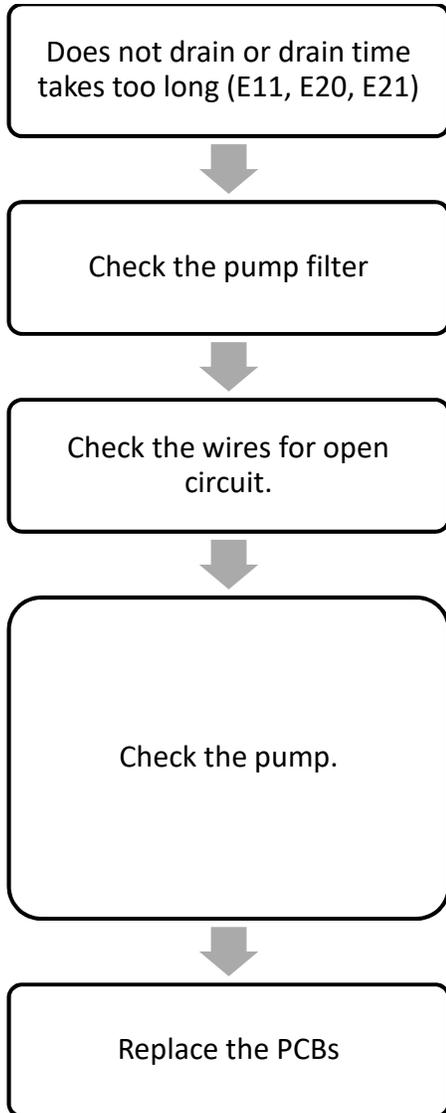
Port	Name on PCB	Definition
1	 CN1-1 CN1-2 CN1-3	CN1-1: DISPENSER MOTOR_L CN1-2: HOT_VALVE_L CN1-3: COLD_VALVE_1_L
2	 CN2-1 CN2-2 CN2-3	CN2-1: Water sensor 1 CN2-2: Water sensor GND CN2-3: Water sensor 2
3	 CN3-1 CN3-2 CN3-3 CN3-4	CN3-1: PUMP RTN CN3-2: NEUTRAL CN3-3: DOOR LOCK LINE CN3-4: STEAM RETURN
4	 CN4-1. CN4-2 CN4-3 CN4-4	CN4-1: COLD_VALVE_3 RTN CN4-2: MOTOR_N CN4-3: WATER VALVE RETURN CN4-4: STEAM RETURN
5	 CN5-1 CN5-2	CN5-1: DOOR LOCK OUT CN5-2: HTR_N
6	 CN7-1 CN7-2 CN7-3 CN7-4 CN7-5	CN7-1: Pwr_12V CN7-2: TXD CN7-3: RXD CN7-4: GND CN7-5: TACHO
7	 CN8-1 CN8-2 CN8-3 CN8-4 CN8-5 CN8-6	CN8-1: C_VALVE_3_L CN8-2: FAN_L CN8-3: DRAIN_L CN8-4: STEAM_L CN8-5: HTR_L CN8-6: MOTOR_L
8	 CN11-1 CN11-2 CN11-3 CN11-4	CN11-1: Thermistor 5V CN11-2: Thermistor_1 CN11-3: Thermistor 5V CN11-4: Thermistor_2
9	 CN13-1 CN13-2 CN13-3 CN13-4	CN13-1: Thermistor 5V CN13-2: Thermistor_3 CN13-3: DISPENSER_A CN13-4: DISPENSER_B

TROUBLESHOOTING CHART

Description	Solution
The washing machine does not work	Close the washing machine's door.
Water leakage	Correctly connect the inlet water pipe.
The spin speed of drum is abnormal	Reload and distribute the laundry evenly in the drum.
There is the peculiar smell in the washing machine	Run a Clean cycle without any clothes.
No water is visible in the drum	Working as designed, the water level is not visible in drum.
Detergent residue is left on the clothes	Always follow detergent manufacturer guidelines. Do not use excess detergent, this will reduce the capacity of the unit to properly rinse.
The washing machine does not fill	Verify supply lines are fully opened. Verify water pressure is sufficient. Verify door is closed and locked. To check it the inlet water pipe is bent or blocked.
The washing machine fills and empties at the same time.	Make sure the end of the drainage pipe is than 24" from bottom of washer. If drained to a floor drain, verify that a siphon break is properly installed and functioning.
No drainage of the washing machine	Check if the drainage pump is blocked. Check if the drainage pipe is bent or blocked. Check the height of the drainage nozzle, make sure it is between 24" and 40" from the bottom of the washing machine. If drained to a floor drain, verify that a siphon break is properly
Vibration of the washing machine	Level the washing machine. Fasten the footing. To check if the internal packing for the transportation have all been removed. VERIFY SHIPPING BOLTS HAVE BEEN REMOVED.
The bubble spills from the detergent	Verify detergent is usable in a front loading washing machine. Reduce the usage amount of the detergent used. Always follow detergent manufacturer guidelines.
The machine stops before the cycle has been finished	Check for power failure or water supply loss.

TROUBLESHOOTING FLOWS

Drain Error (E11, E20, E21)

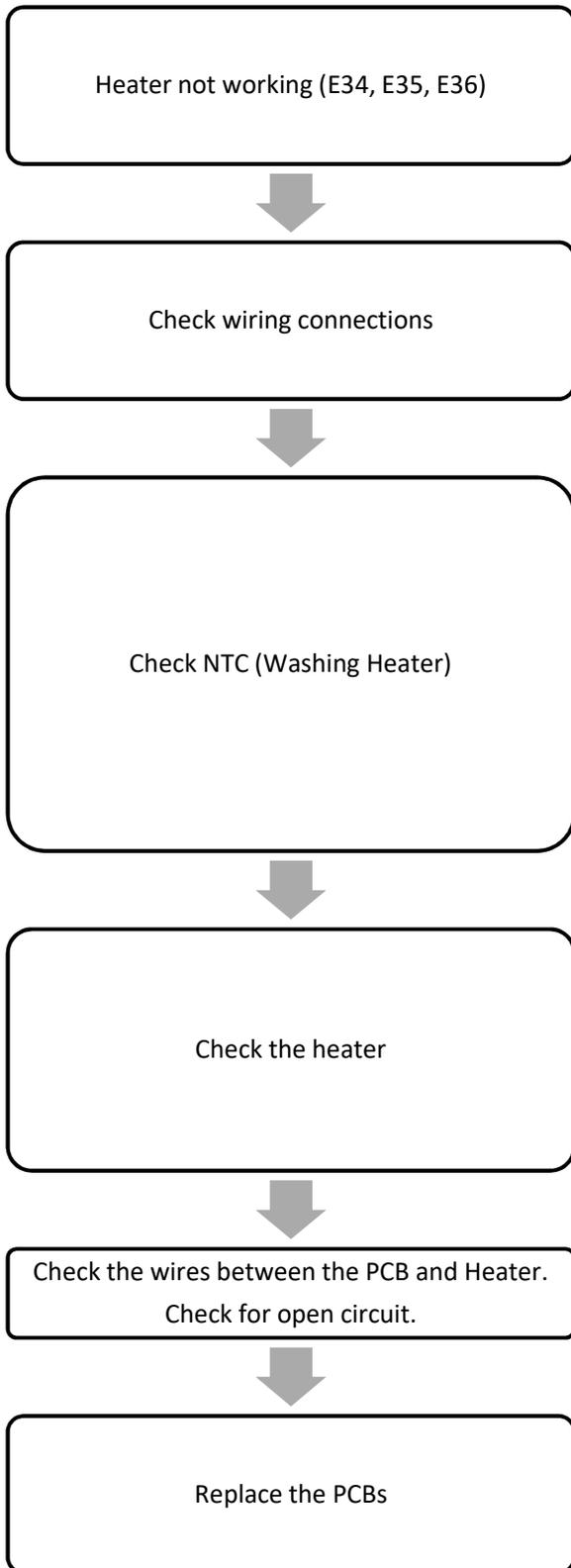


Replace the harness if open circuit detected.



The resistance of coil should be in range from 30 to 40 Ω .

Water Heating Error (E34, E35, E36)



Be sure to verify water exists in drum to allow for heating. If no water, heating will not occur.

NTC sensor thermistor measured values			
Temperature	Rated resistance	Maximum resistance	Minimum resistance
°C	Ω	Ω	Ω
25	4815	4960	4670
40	2573	2645	2500
60	1024	1228	1180
80	609.3	626	592.7



The resistance should be in range from 10 to 16 Ω.

Door Lock Error – Door Will Not Lock (E30)

Door will not lock (E30)



Is door closed correctly?



Check the wire connection.
Is the terminal connected correctly?
Check wires for open circuit.



Check the Door Lock



Replace Lock



Replace the PCBs

Step 1: Check the resistance between Pin 2 and Pin 3 with the Slipper Held right as figure below. It should be in range from 30 to 100Ω. Otherwise, the lock is failing.



Step 2: Hold the Locker Slip Left as figure above. Give a power pulse to the Lock between Pin 2 and Pin 3. Then release the Slipper. It should take the place without any movement. Otherwise, the lock is failing.

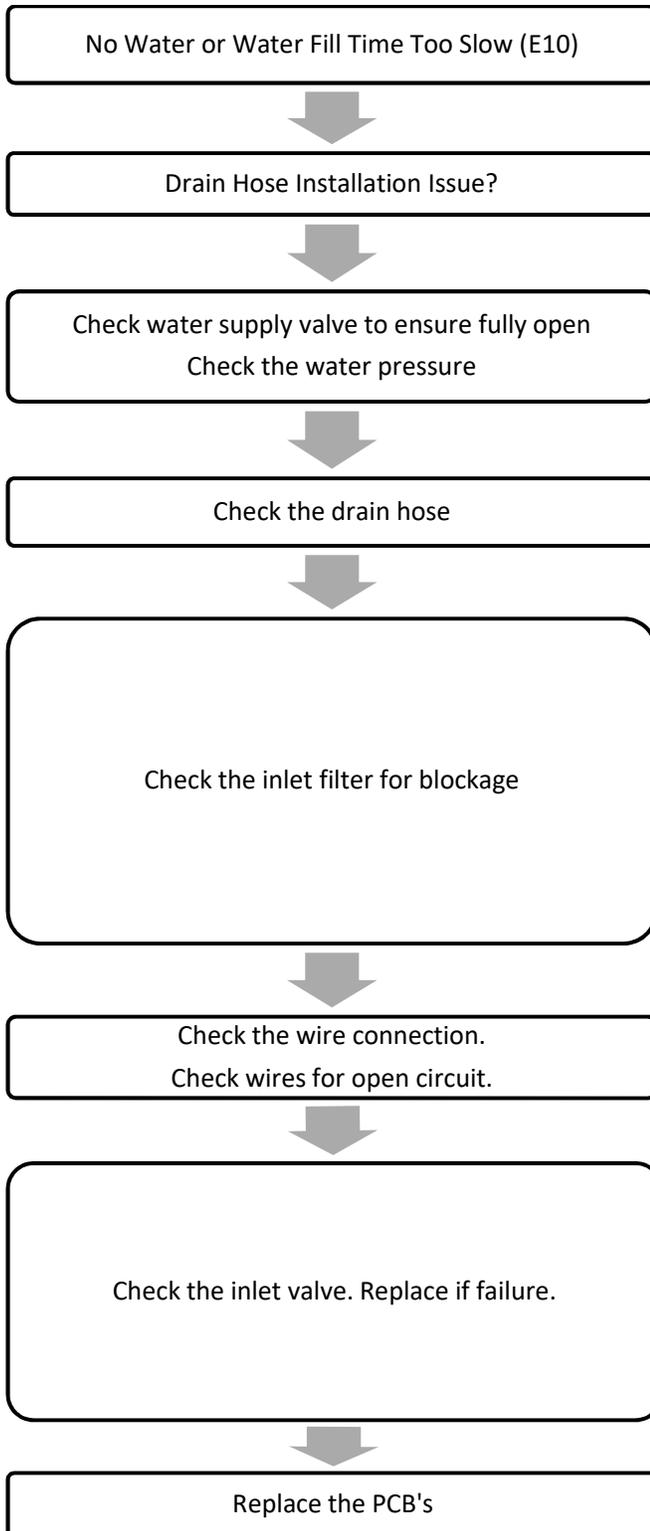
NOTE: The power pulse to the Lock should be less than ONE second. Otherwise, it will be damaged.



Step 3: Give a power pulse to the Lock between Pin 2 and Pin 3 again. The slipper should move back to its original place immediately. Otherwise, the lock is failing.



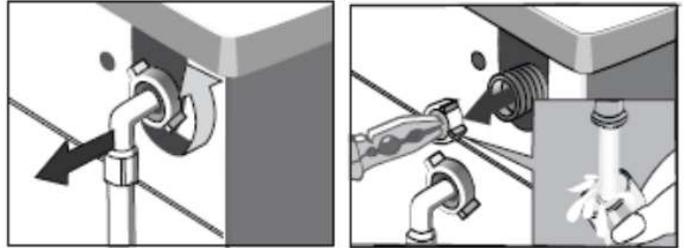
No Water or Water Fill Time Too Slow (E10)



Drain height should be between 24" and 40" from the bottom of the washing machine

The water pressure should measure between 0.05MPa to 1MPa (7.25 PSI to 145 PSI)

Pull out the inlet filter(s) with needle nose pliers and wash under warm water to remove any debris.

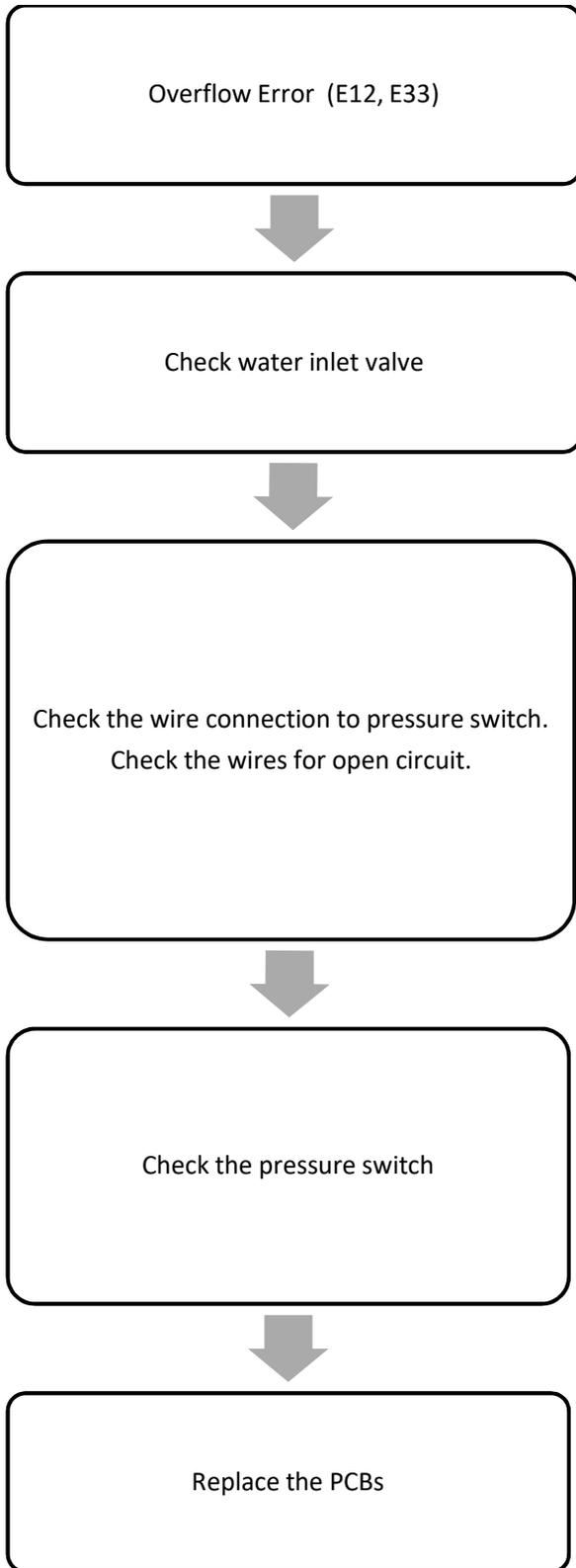


Replace the harness if open circuit detected.



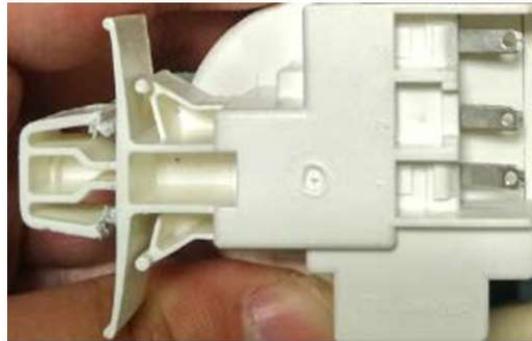
The resistance on coil should be between 4-5KΩ.

Overflow Malfunction Error (E12, E33)



The resistance on coil should be between 3-5KΩ.

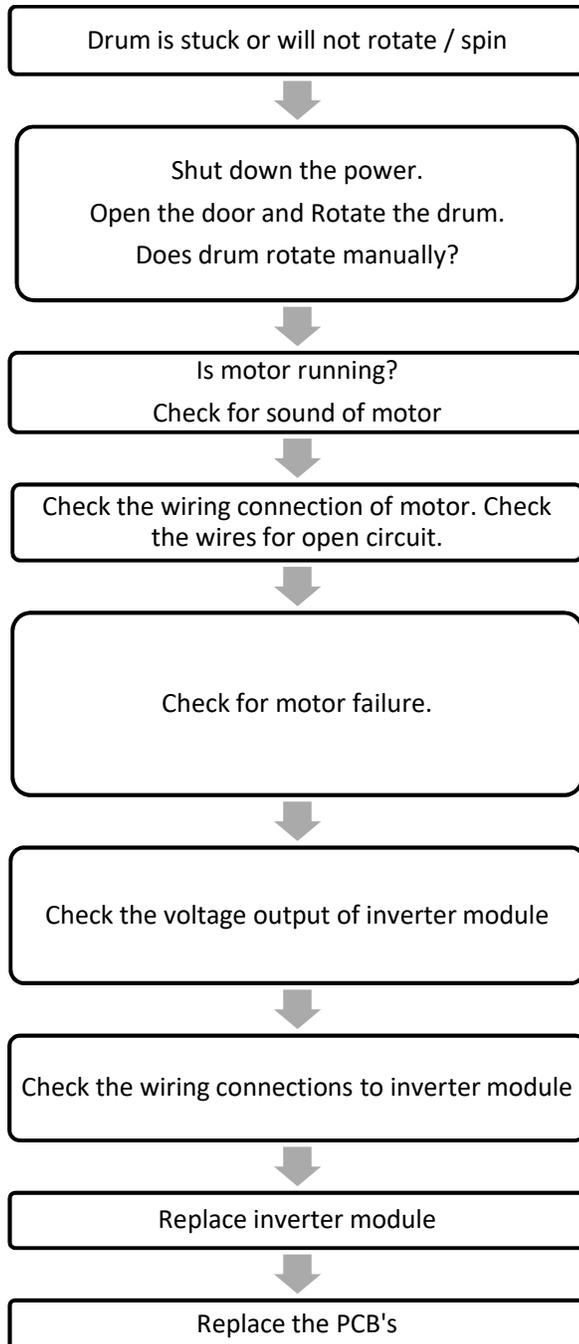
Replace the harness if open circuit detected.



Step 1: Check the resistance between terminal 1 and 3 with universal meter. The switch resistance will be ok if the resistance between 20 and 40 ohm.

Step 2: Check the capacitance between terminal 1 and 2, terminal 2 and 3. Capacitance should be between 40 and 50nf

Drum Will Not Rotate



If the drum can't rotate, check the drum for blockage or replace the drum system.

Check the drive belt. Replace if loose, damaged or broken.

Replace the harness if open circuit detected.



The resistance of coils should be around 5.5Ω.

If there is no output from the inverter module when the unit is in operation - the module has failed.

Unit will not Dry or Drying Insufficient (E37, E38, E3A)

Unit will not Dry or Drying Insufficient (E37, E38, E3A)

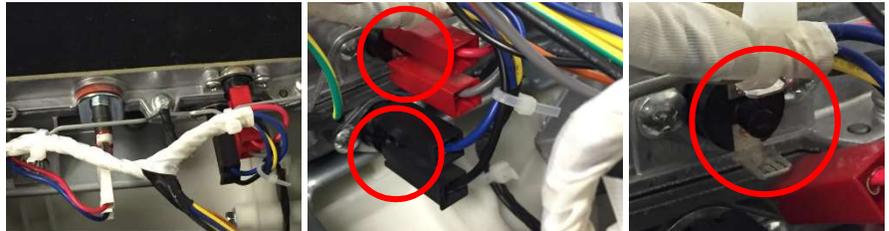
Is drum rotating?

If not, refer to 'Drum Will Not Rotate' section.

Check water inlet valve (E10)

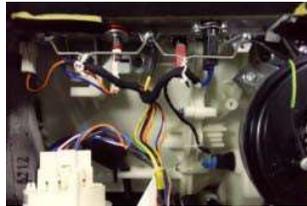
Check cold water valve and drying water inlet valve.

Check overload protectors attached to heater to see if tripped



- Manually reset overload protectors (2) if tripped.
(see images above: remove red / black connectors and press reset buttons if tripped)
- Check resistance: Normal resistance is less than $5m\Omega$
- Normal open circuit temperature: $165 \pm 5^\circ\text{C}$ ($329 \pm 9^\circ\text{F}$)

Check all wires connected properly to drying heater assembly.



Check wires to all temperature sensors, heaters, fan flange, and PCBs. Replace the harness if failure found.

Check the temperature sensor table on next page.

Check the dryer heater

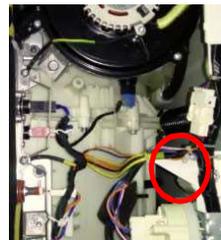


The resistance should be in range from 8 to 15Ω .

Check the Fan Flange and capacitor. Replace if failed.



The resistance of main coil (blue and black wires) should be in range from 80 to 110Ω . The resistance of vice coil (blue and brown wires) should be in range from 90 to 120Ω .



The capacitor should be in range $2.5\mu\text{f} \pm 5\%$.

Check the Condenser Assembly

Check the Condenser assembly for lint accumulation. Clean if there is lint blockage Condenser assembly.

Replace the PCB's

Temperature Sensor Table

Temperature – Resistance Chart

T [°C]	T [°F]	R_soll [Ohm]	R_min [Ohm]	R_max [Ohm]
0	32	15768	15031	16505
5	41	12259	11718	12800
10	50	9609	9209	10008
15	59	7584	7287	7881
20	68	6031	5809	6253
25	77	4828	4661	4995
30	86	3890	3764	4016
35	95	3154	3059	3249
40	104	2573	2500	2645
45	113	2111	2055	2166
50	122	1741	1699	1783
55	131	1444	1412	1476
60	140	1204	1180	1228
65	149	1008	985.9	1031
70	158	848.7	828.3	869
75	167	717.6	699.2	736
80	176	609.3	592.7	626
85	185	519.7	504.7	534.6
90	194	444.9	431.4	458.5
95	203	382.5	370.3	394.7
100	212	330	319	341

Abnormal Noise

Abnormal Noise



Noise during spin cycle?

Check that Shipping Bolts and Base Packing were removed.

Has all foam packaging been removed ?



Is drum / wash load leaning on ine side?

Items can clump together causing imbalance in the drum. Separate clothes to balance properly and re-run spin cycle.



Are items bundled or mixed in way causing issue?

Ensure that heavy items are washed separately. Overloading unit can cause imbalance during spin cycle.



Is machine properly leveled?



Check counterwiegth bocks and adjust or replace as needed.

Door Will Not Unlock / Door Stuck (E31)

Door Will Not Unlock / E31 Error



Is there water in drum?
Check pump filter / coin trap



Is temperature inside drum higher than
122°F (50°C)



Can door be manually unlocked?



Enter test mode for pump test and water
switch test



Replace the PCB's

Open coin trap service panel on bottom front right of unit.
Drain water manually.
Clean the coin trap filter if blocked.

Wait for temperature to drop.

Use lever to unlock door as noted below:

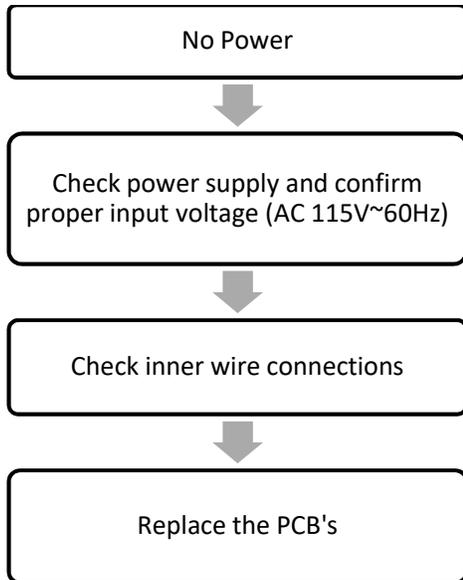


Push or slide the slider downwards to open the lock.

Check the door lock again, replace if still failing.

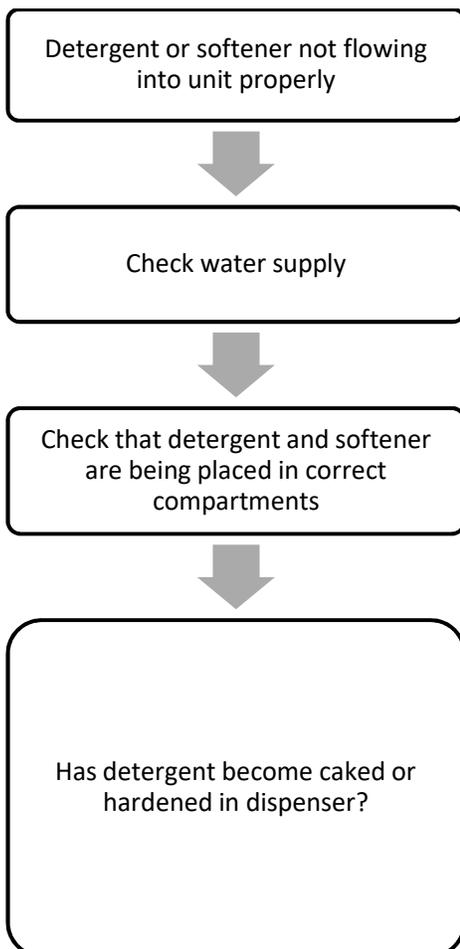
Check the pump wires and water switch wires. Replace
parts as needed.

No Power



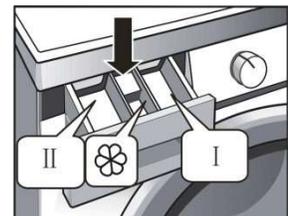
Replace the harness if failed.

Detergent or Softener Not Flowing Into Unit

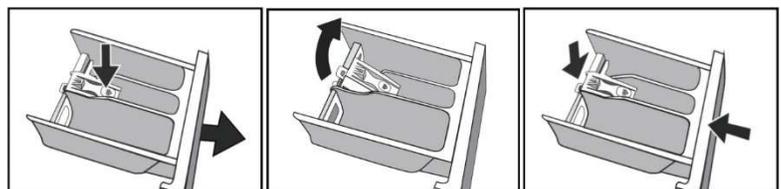


Refer to 'No Water or Water Fill Time Too Slow (E10)' Error Help

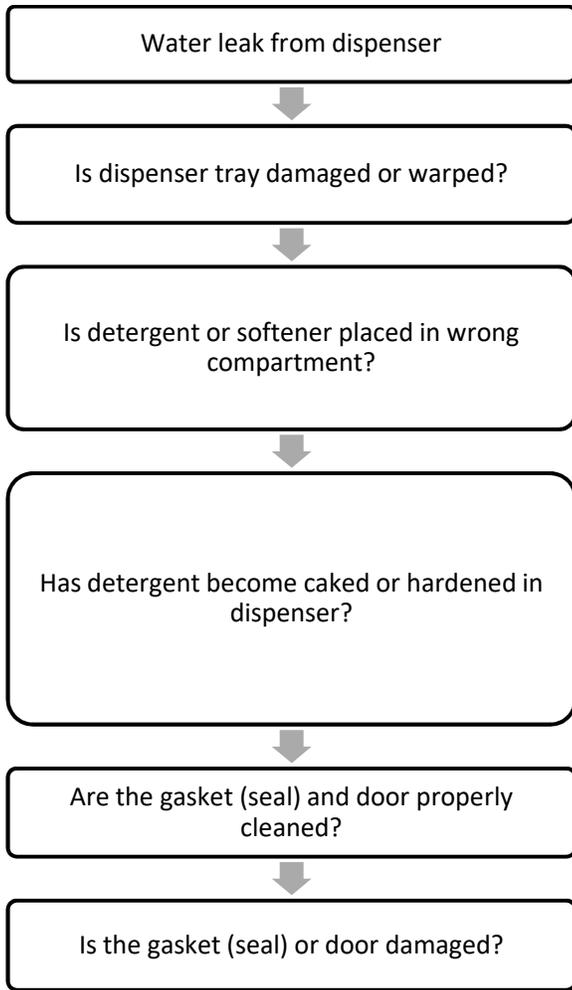
I: Pre-wash: detergent or powder.
II: main wash: detergent, bleach.
☼ : Additive: fabric softener



Clean the drawer and dispenser

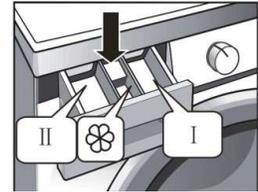


Water leak from dispenser

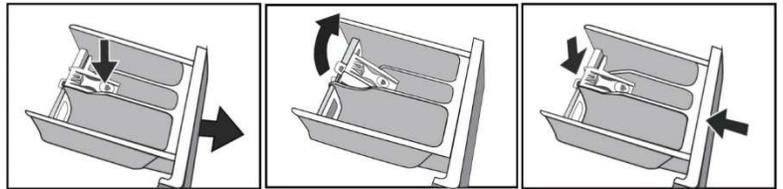


Replace the dispenser tray if broken.

I: Pre-wash: detergent or powder.
II: main wash: detergent, bleach.
☼ : Additive: fabric softener



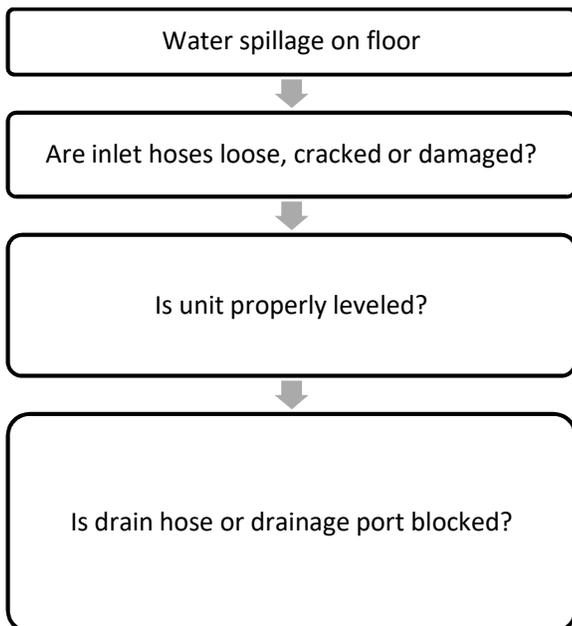
Clean the drawer and dispenser



Clean door and gasket (seal)

Replace damaged parts

Water leak from dispenser



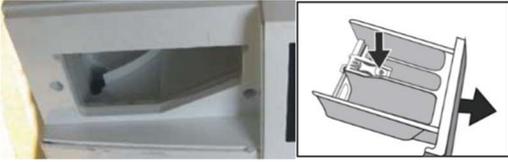
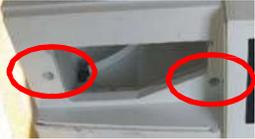
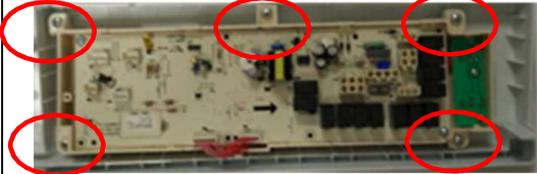
Replace damaged inlet hoses or gaskets

Adjust leveling legs accordingly

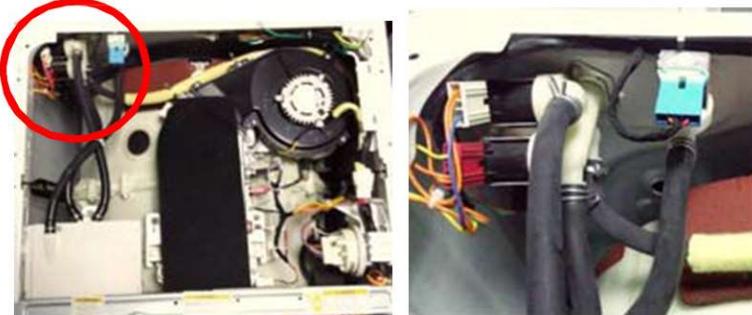
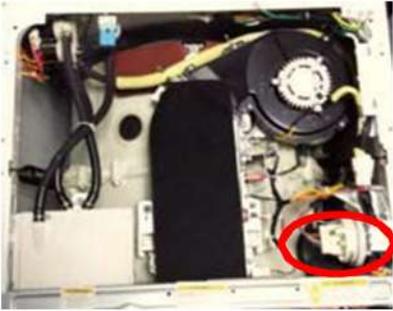
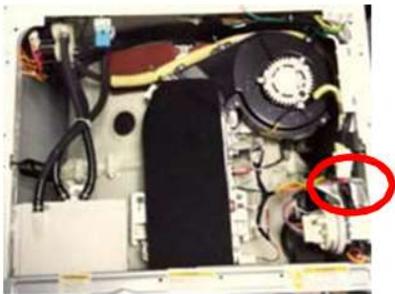
Verify proper installation and setup of drain hose and drainage port

SERVICE AND DISASSEMBLY STEPS

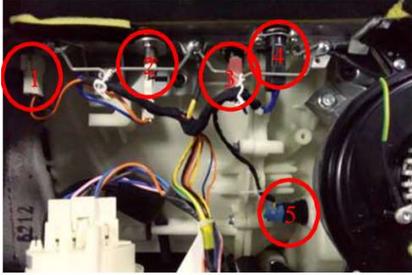
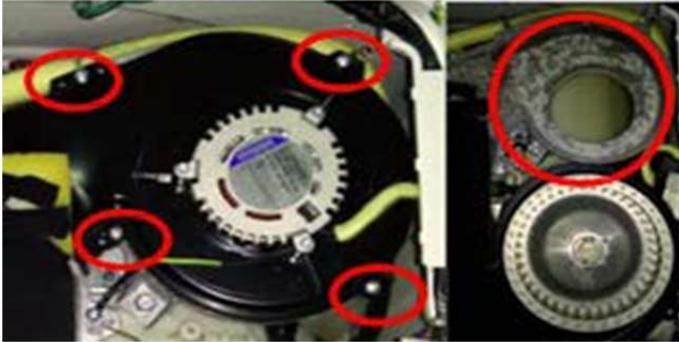
Check and Replace PCB's

	Description	Tools Needed
<p>Step 1:</p> <p>Remove the Top Cover Assembly</p>	 <p>Disassemble the two screws fixing the Top Cover Assembly on the back of the unit. Slide the Top Cover backwards to remove.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 2:</p> <p>Remove the soap drawer</p>		<p>No tools needed</p>
<p>Step 3:</p> <p>Disconnect drawer sub assembly</p>	 <p>Remove the two screws securing the drawer assembly.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 4:</p> <p>Disconnect and remove the Control Panel Subassembly</p>	 <p>Remove the 2 (two) screws securing the control panel subassembly.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 5:</p> <p>Disconnect the Control Panel Subassembly and the body</p>	 <p><i>Take note of tabs securing control panel subassembly in place</i></p>	<p>No tools needed</p>
<p>Step 6:</p> <p>Remove the PCB's from the control panel subassembly</p>	 <p>Remove the 5 (five) screws securing the PCB's</p>	<p>Phillips Head Screwdriver</p>

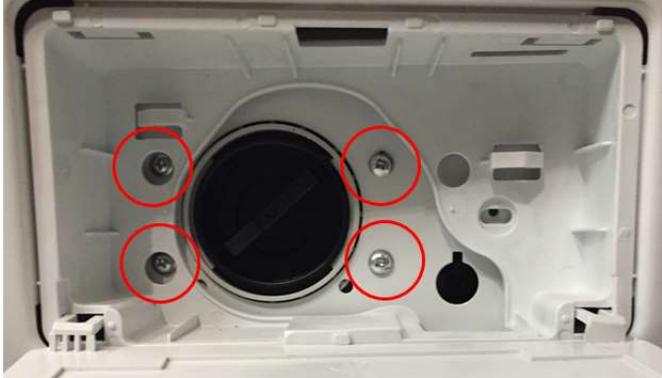
Service Water Inlet Valves / Water Level Switch / Capacitor / Electric Filter

	Description	Tools Needed
<p>Step 1:</p> <p>Remove the Top Cover Assembly</p>	 <p>Disassemble the two screws fixing the Top Cover Assembly on the back of the unit. Slide the Top Cover backwards to remove.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 2:</p> <p>Check valves</p>	 <p>Cold water valves are on the left, hot on the right.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 3:</p> <p>Check the Water Level Switch</p>	 <p>Water Level Switch</p>	<p>Phillips Head Screwdriver</p>
<p>Step 4:</p> <p>Check the Capacitor, and the Electric Filter</p>	 <p>Capacitor, and Electric Filter</p>	<p>Phillips Head Screwdriver</p>

Service Dryer Heater / Fan Motor / Temperature Sensors

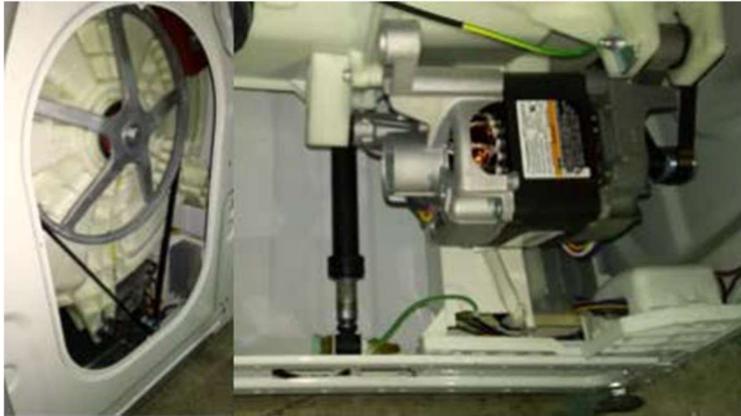
	Description	Tools Needed
<p>Step 1:</p> <p>Remove the Top Cover Assembly</p>	 <p>Disassemble the two screws fixing the Top Cover Assembly on the back of the unit. Slide the Top Cover backwards to remove.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 2:</p> <p>Check the temperature sensors</p>	 <p>1 – Temperature Sensor Drum-in 2 – Heater 3 & 4 – Manual Temperature Sensor 5 – Temperature Sensor, Drum-out</p>	<p>Phillips Head Screwdriver</p>
<p>Step 3:</p> <p>Check and replace the Fan Flange Assembly</p>	 <p>Remove the 5 (five) screws fixing the Fan Flange Assembly Clean / remove lint accumulation from duct / channel.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 4:</p> <p>Check and replace the heater and temperature sensors.</p>	 <p>Remove the 8 (eight) screws securing the cover.</p>	<p>Phillips Head Screwdriver</p>

Service the Pump / Inverter Motor / Inverter Module / Choke

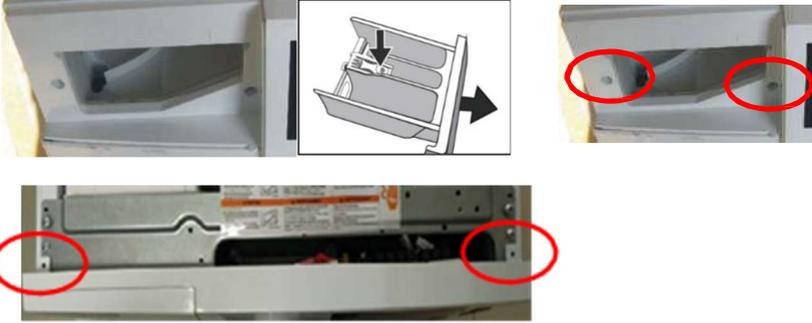
	Description	Tools Needed
<p>Step 1:</p> <p>Remove the back panel</p>	 <p>Remove the 4 (four) screws that secure the back panel in place.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 2:</p> <p>Lay the unit side down and remove the bottom cover.</p>	 <p>Remove the 2 (two) screws that secure the bottom panel to the rear of the unit.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 3:</p> <p>Open the Lint / Coin Trap Door Access Panel</p>		<p>Phillips Head Screwdriver</p>
<p>Step 4:</p> <p>Check and replace the Pump</p>	 <p>Detach the pump by removing the 4 (four) screws that secure the pump in place. Screws are accessible from within the Lint / Coin Trap Door Access Panel.</p>	<p>Phillips Head Screwdriver</p>

Continued on next page...

Service the Pump / Inverter Motor / Inverter Module / Choke - Continued

	Description	Tools Needed
<p>Step 5:</p> <p>Check and replace the Inverter Module</p>	 <p>Remove the 2 (two) screws that secure the Inverter module. Pay attention to the grounding wires.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 6:</p> <p>Check the Water level switch for damage</p>		<p>No tools needed</p>
<p>Step 7:</p> <p>Check and replace the Inverter Motor</p>	 <p>Remove the belt. Remove the screws that secure motor to mounts. Detach grounding wires</p>	<p>Wrench</p>

Service the Door Lock / Water Heater / NTC

	Description	Tools Needed
<p>Step 1:</p> <p>Disconnect the Front panel from the drum</p>	 <p>Find the Spring around the rubber Door Seal and pull it out from the slot.</p>	<p>No tools needed</p>
<p>Step 2:</p> <p>Check and replace the Door Lock</p>	 <p>Remove the 2 (two) screws that secure the Door Lock to front panel.</p>	<p>No tools needed</p>
<p>Step 3:</p> <p>Remove the Top Cover Assembly</p>		<p>Wrench</p>
<p>Step 4:</p> <p>Remove the soap drawer / and drawer sub assembly and Control Panel Subassembly</p> <p><i>Refer to "Check and Replace PCB" Steps 2-4)</i></p>		<p>Phillip screwdriver</p>

Continued on next page...

Service the Door Lock / Water Heater / NTC - Continued

	Description	Tools Needed
<p>Step 5:</p> <p>Open the Lint / Coin Trap Door Access Panel</p>	 <p>Remove the 4 screws that secure the access panel to the pump.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 6:</p> <p>Remove the Front panel</p>	 <p>Remove the 4 (four) screws that secure the front panel at top and bottom corners. Lift the panel up to release from the cabinet.</p>	<p>Phillips Head Screwdriver</p>
<p>Step 7:</p> <p>Check and replace the Heater / NTC</p>	 <p>From left to right:</p> <ul style="list-style-type: none"> • Terminal 1 for heater • NTC • Nut securing heater <i>(Remove the nut to detach the heater)</i> • Terminal 2 for heater 	<p>Wrench</p>

SPECIFICATIONS

Power supply	120V/60Hz
Capacity (Cuft)	2
IMEF (Cuft/kWh/cycle)	2.05
IWF (gallons/cycle/cuft)	3.79
Certification, safety	ETL
Motor drive	Inverter motor
Cycle selection	16
Water level selection	Auto
Temperature selection	5
Soil selection	3
Spin speed selection	5
Max. spin speed	1200rpm
Digital display	LED
Cycle status indicate	Yes
Remaining time display	Yes
Add a garment	Yes
delay start	Yes, up to 24 hours
Auto balancing	Yes
Internal heater	Yes
Detergent dispenser	Prewash, Main Wash, Softener
Stainless steel drum	Yes
Foam control technology	Yes
noise(dB)	
Washing	56dB
Spinning	71dB
Dimensions & loading	
W * D * H, body (inch)	23 7/16 * 23 1/16 * 33 7/16
W * D * H, package (inch)	26 3/4 * 26 * 34 3/4
Net / Gross (lbs)	174 / 183

DATE	REVISION NOTES:
10/20/2017	Initial Document