



website : <http://biz.lgservice.com>
e-mail : <http://LGEservice.com/techsup.html>

WASHING MACHINE SERVICE MANUAL

CAUTION

READ THIS MANUAL CAREFULLY TO DIAGNOSE PROBLEMS
CORRECTLY BEFORE OFFERING SERVICE.

BEFORE SERVICING THE WASHING MACHINE, UNPLUG THE POWER
CORD TO AVOID THE RISK OF AN ELECTRIC SHOCK.

WHEN SERVICING INTEGRAL PARTS, USE ONLY
PARTS SUPPLIED FROM LG.

AFTER SERVICING THE ELECTRIC WIRE, INSURE THAT INSULATION
TAPE IS APPLIED TO PREVENT AN ELECTRICAL SHORT.

MODEL :

F4V7VYP1WE.ABWQPF

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1. SPECIFICATION

ITEM	Refer to 1 page
POWER SUPPLY	220 V - 240 V ~,50Hz/60Hz
PRODUCT WEIGHT	70kg
ELECTRICITY CONSUMPTION	WASHING 155 W
	SPIN 490 W
	DRAIN MOTOR 20 W
	WASH HEATER 2200 W
REVOLUTION SPEED	WASH 46 rpm
	SPIN F4V7VYP1WE : No Spin / 400 / 800 / 1000 / 1200 / 1400
OPERATION WATER PRESSURE	0.1 ~ 1.0 MPa (1.0 kgf / cm ² ~ 10.0 kgf / cm ²)
CONTROL TYPE	Electronic
WASH CAPACITY	Refer to the Rating Label
DIMENSION	600mm x 560mm x 850mm
WASH PROGRAM	Cotton , Eco40-60, Turbo Wash 39, Mix 40, Easy Care, Silent Wash, Allergy Care, Delicate, Hand/Wool, Sports wear, Speed 14, Duvet, Tub Clean, Download Cycle
RINSE	Rinse ⁺
DOOR SWITCH TYPE	PTC+Solenoid
WATER LEVEL	by Pressure Sensor S/W
RESERVATION	From 3 hours to 19 hours
SENSING LAUNDRY AMOUNT	Adapted
FUZZY LOGIC	Adapted
DISPLAY REMAINING TIME	Adapted
ERROR DIAGNOSIS	13 items
POWER AUTO OFF	Adapted
CHILD LOCK	Adapted
AUTO RESTART	Adapted
TIME SAVE	Adapted
SMART	Wi-fi (Smart ThinQ 3.0)

⚠ WARNING

- To reduce the risk of personal injury, adhere to all industry recommended safety procedures including the use of long sleeved gloves and safety glasses. Failure to follow all of the safety warnings in this manual could result in property damage, personal injury or death.

2. FEATURES & TECHNICAL EXPLANATION

2-1. Product Features



- **Inverter Direct Drive system**
The advanced Brushless DC motor directly drives the drum without belt and pulley.



- **6 Motion**
Washer is able to perform various drum actions or a combination of different actions depending on the wash program selected. Combined with a controlled spin speed and the ability of the drum to rotate both left and right, the wash performance of the machine is greatly improved, giving you perfect results every time.



- **Turbo Wash**
Wash the laundries in 1 hour with energy and water saving.



- **Smart ThinQ (Wi-Fi feature)**
This feature lets you use various functions of the product, e.g., remote control, smart alert, mode download, and smart self-diagnosis via the smartphone app.



- **More economical with Intelligent Wash system**
Intelligent Wash System detects the size of load and water temperature, and then determines the optimum water level and washing time to minimize energy and water consumption.



- **Child Lock**
The Child Lock prevents children from pressing any button to change the settings during operation.



- **Low noise speed control system**
By sensing the amount of load and balance, it evenly distributes load to minimize the spinning noise level.



- **Auto Restart**
Auto Restart allows the program to restart all by itself in case of power failure. It does from the stage where it stopped.

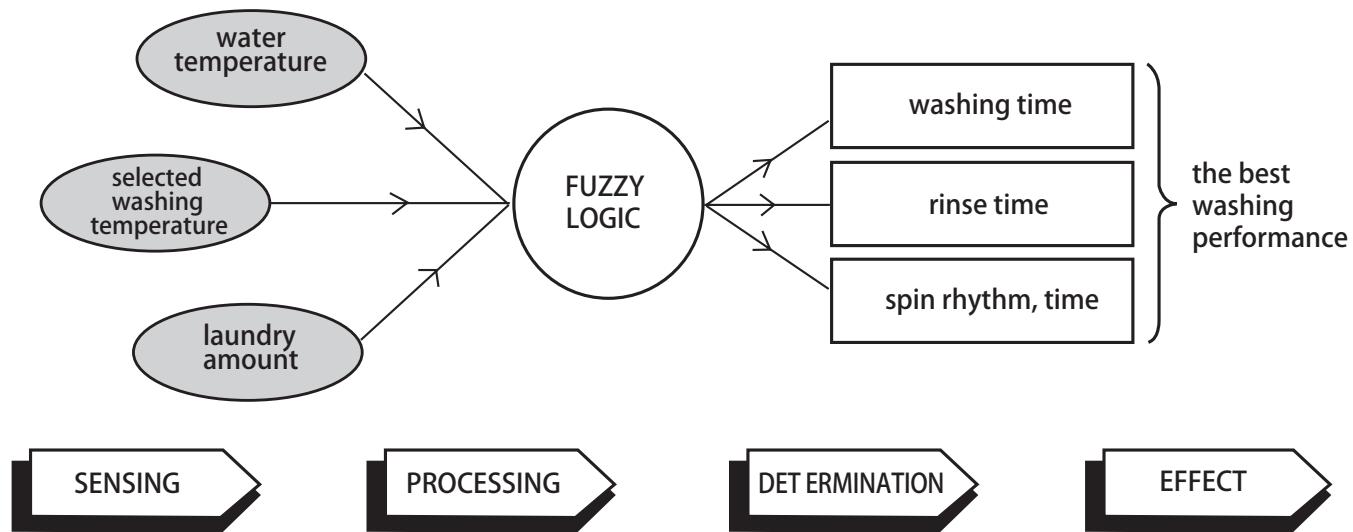


Smart
Diagnosis™

- **SmartDiagnosis™**
Should you experience any technical difficulty with your washing machine, it has the capability of transmitting data by phone to the Customer Information Center. The call center agent records the data transmitted from your machine and uses it to analyze the issue, providing a fast and effective diagnosis.

2-2. DETERMINE WASHING TIME BY FUZZY LOGIC

To get the best washing performance optimal time is determined by sensing the water temperature, selected washing temperature and laundry amount.



2-3. WATER LEVEL CONTROL

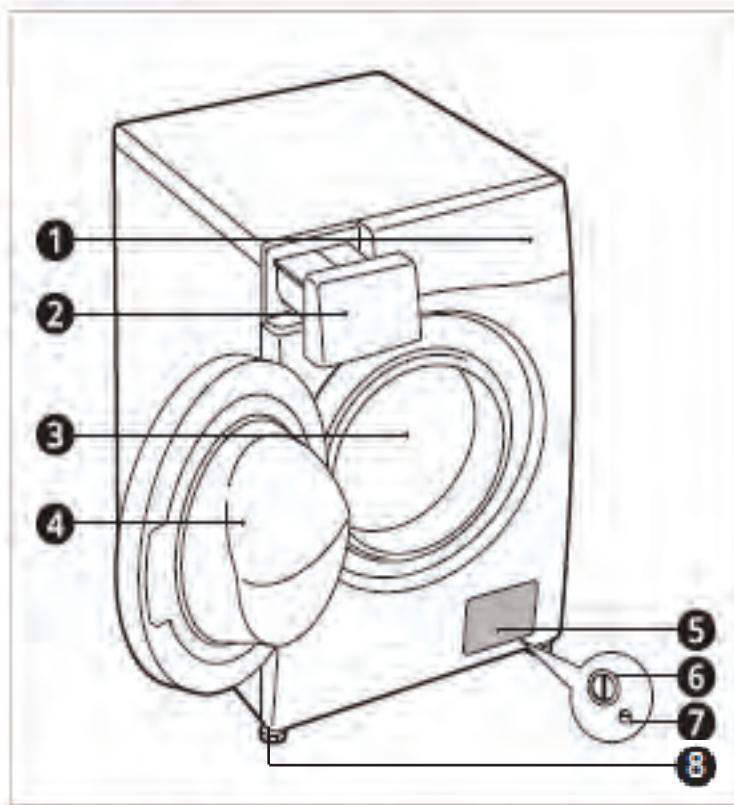
- This model adopts a pressure sensor which can sense the water level in the tub.
- Water supply is stopped when the water level reaches the preset level, then washing program proceeds.
- Spinning does not proceed until the water in the tub reduces to a certain level.

2-4. THE DOOR CAN NOT BE OPENED

- While program is operating.
- While Door Lock light is on.

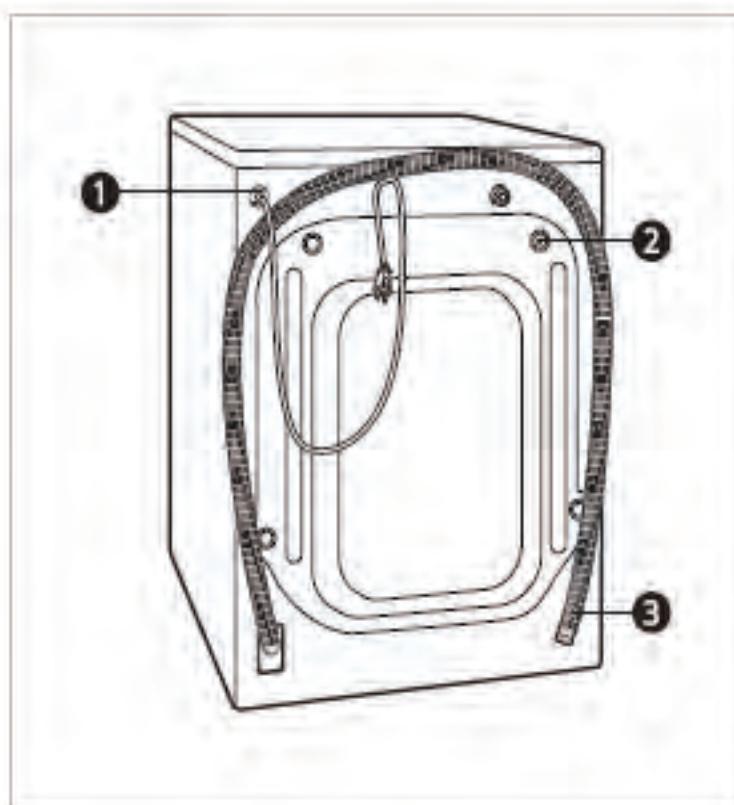
3. PARTS IDENTIFICATION

Front View



- ① Control panel
- ② Detergent dispenser drawer
- ③ Drum
- ④ Door
- ⑤ Cover cap
(Location may vary depending on products)
- ⑥ Drain pump filter
- ⑦ Drain plug
- ⑧ Adjustable feet

Rear View

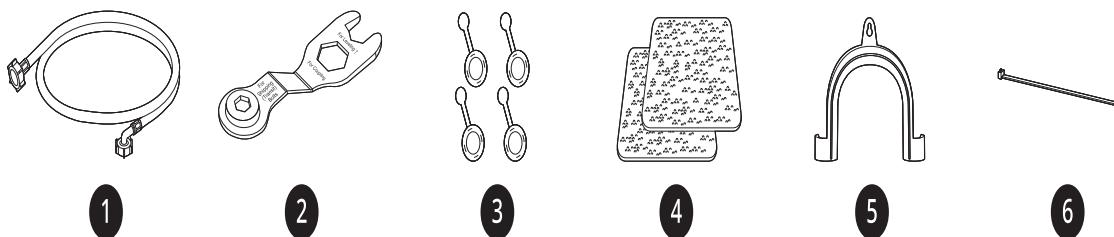


- ① Power plug
- ② Transit bolts
- ③ Drain hose

3. PARTS IDENTIFICATION

Accessoires

*1: Cette fonctionnalité est disponible sur certains modèles seulement.



a	Tuyau d'approvisionnement en eau*1	d	Patins antidérapants*1
b	Clé	e	Support coulé pour fixer le tuyau de vidange*1
c	Capuchons pour couvrir les trous des boulons de transport*1	f	Lien d'attache*1

Caractéristiques

Modèle	F14V71WHST / F94V71WHST
Alimentation électrique	220 - 240 V~, 50 Hz
Dimensions (Largeur X Profondeur X Hauteur)	600 mm X 560 mm X 850 mm
Poids de l'appareil	70 kg

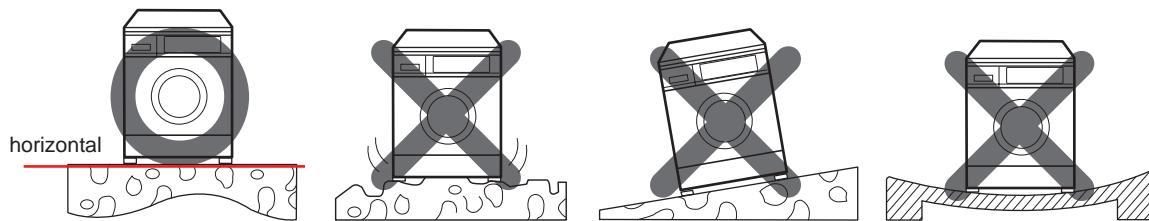
4. INSTALLATION

■ INSTALLATION

The appliance should be installed as follows.

1 Check the conditions of installation area.

1. Check level ground.



On raised foundations or upper level homes, the **vibrations** can be caused by the type of flooring. It may be **necessary to move** the **machine** to a different area in the home or have the floor reinforced to properly support the operation of the unit.

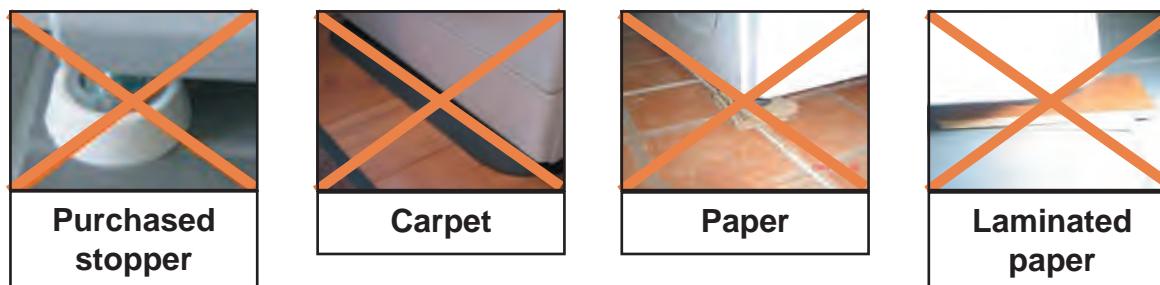
2. Check for humidity or any foreign objects under the feet.

Clean the floor, there should be no foreign objects under the feet.

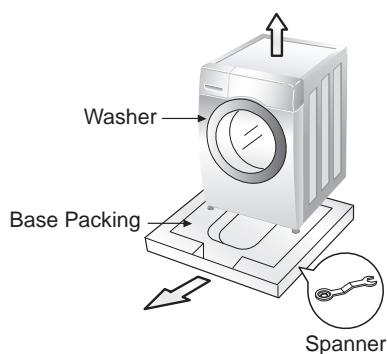
If the unit has foreign objects underneath the feet, this will prevent the unit from being leveled properly and will cause **vibrations** and **slipping**.

Remove any foreign objects, if any from underneath the machine and level unit properly.

See below for examples of foreign objects.



2 Open the box and check appliance condition.



This leveling (or spanner) wrench must be used to remove the shipping bolts and level the unit. This should be kept for future use.

3 Use spanner to remove transit bolts.



Transit bolts

※ Without removal of transit bolts
► **Spin noise** and **shaking**.

4 Confirm the distance between the appliance and the wall.

More than 2cm



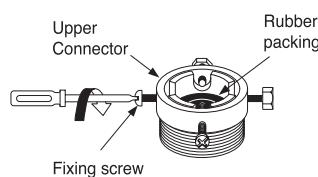
※ If the distance is less than 2cm,
the water supply hose will
kink or **fold**.



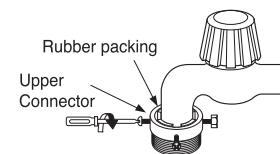
5 The tap connection and hose connection must be parallel.

1. Normal Tap without thread & **screw** type inlet hose.

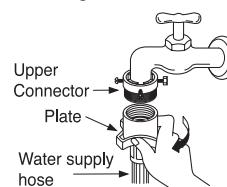
1. Unscrew the fixing screw to attach the tap.



2. Push the connector up till the rubber packing is in tight contact with the tap. Then tighten the 4 screws.

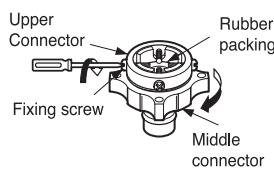


3. Push the water supply hose vertically upwards so that the rubber packing within in the hose can adhere completely to the tap and then tighten it by screwing it to the right.



2. Normal Tap without thread & **one touch** type inlet hose (Single inlet models)

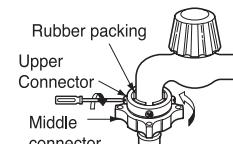
1. Untighten the upper connector screw.



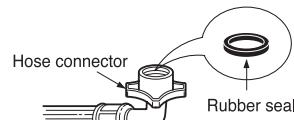
ī In case the diameter of the tap is large remove the guide plate.



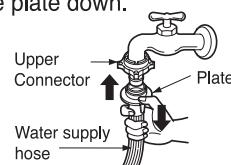
2. Push the upper connector up till the rubber packing is in tight contact with the tap. Then tighten the 4 screws.



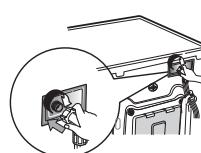
- ī Turn the middle connector not to have water leaked.
- ī Make sure that the rubber seal is inside the hose connector.



3. Connect the water supply hose to the middle connector, pushing the plate down.



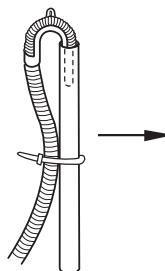
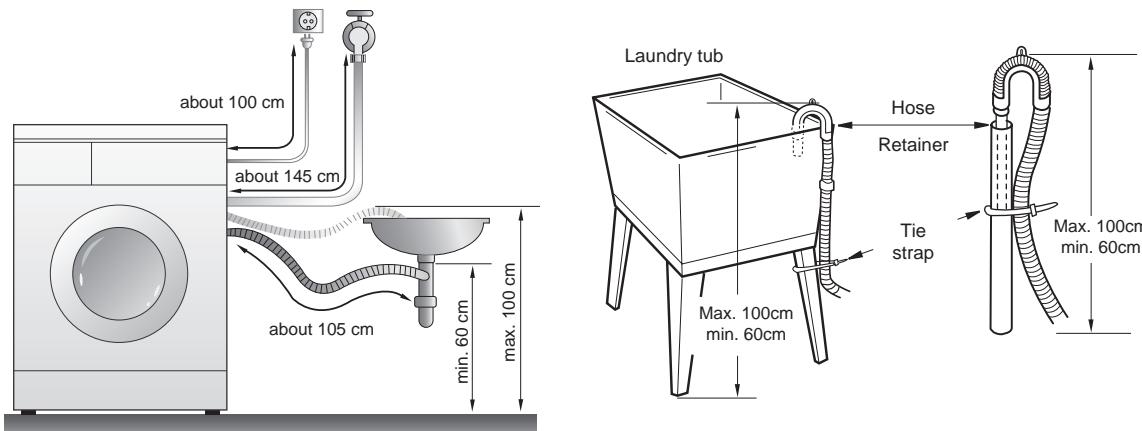
ī To separate the water supply hose from the middle connector shut off the tap. Then pull the inlet hose down, pushing the plate down.



ī Make sure that there are no kinks in the hose and that it is not crushed.

6 Connect Drain Hose.

If the drain hose is not installed properly, the unit will not drain properly. This allows water to back flow into the unit which can cause odors. Refer to Owner Manual for proper drain hose installation. The odor could also be coming from the home's drain to which the drain hose is attached.

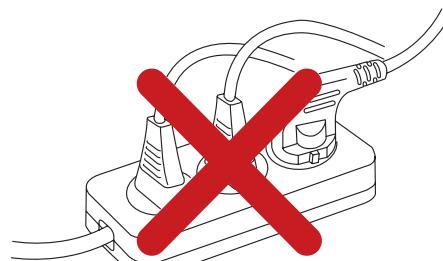
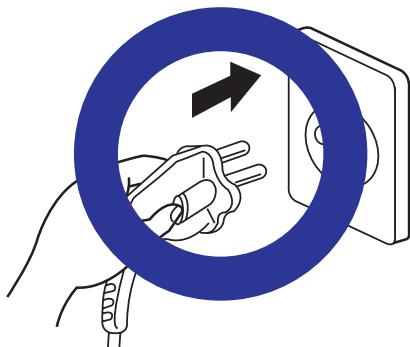


In this type of drain hose installation, the odor could be coming from the standpipe. This odor can come up the drain hose and into the unit. Pour a cup or two of bleach or vinegar down the home drain and let it sit for 24 hours before running another cycle. This will help eliminate odor from the home drain. If a cycle is started too soon after doing this, it will not help the issue.

7 Connect power plug.

Connect the power plug to the wall outlet.

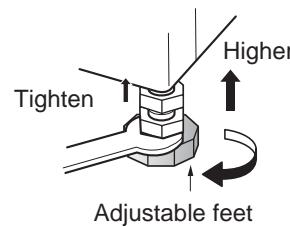
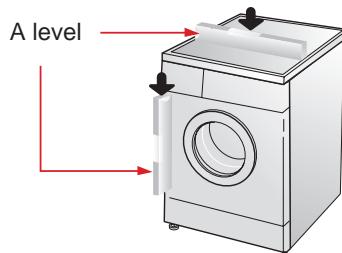
Avoid connecting several electric devices, it may be the cause of a fire.



8 Check the horizontality with a level (Gage).

Step 1

If washing machine legs are loose or not Screwed in, then **tighten** with the spanner wrench. Using the level, level the washing machine from front to back and side to side.



Step 2

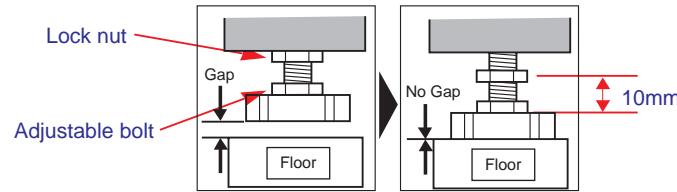
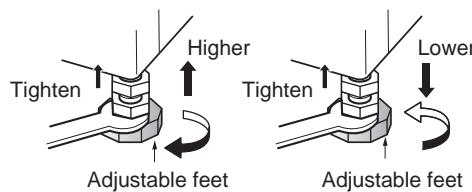
Use the spanner wrench to adjust Legs until level and try the **Diagonal test**.

Diagonal test



※ How to perform a diagonal test:

Place your right hand on the back, right corner and your left hand on the front, left corner of the unit, then attempt to rock the unit from corner to corner. Then, move your right hand to the front, right side and your left hand to the back, left corner and attempt to rock the unit from corner to corner. If the unit is level, it will not rock. However, if the unit is not level, it will rock. If the unit rocks, it will be necessary to adjust the leveling feet of the unit. Adjust the foot under the hand that is on the front of the machine.



Lower the foot until there is no gap between floor and foot.

And only use **adjustment rubber** when difference at the leg adjustment is more than **10mm**.



Step 3

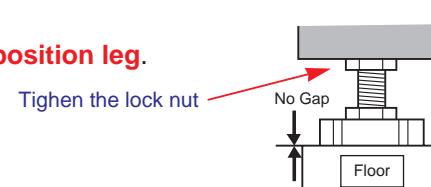
Perform a Rinse and Spin with some clothing in the machine.

To do this, put 2~3kg of clothing in the unit, turn on the unit, Select the Rinse+Spin and then start. When the unit reaches the spin cycle, watch for vibrations.

If the unit is vibrating, make small adjustments to the leg until they subside. (Repeat step 2)

Step 4

Tighten the lock nut against the base of the machine to **lock** the **position leg**.



9 Test operation

1 Preparation for washing.



- Connect the power plug to the outlet.
- Connect the inlet hose.

2 Press the power button.



3 Press the START/PAUSE button.



- In case of Coloreds program.

6 Check the water heating.



- Touch the Temp and Medic Rinse button simultaneously and the present temperature will be displayed.  Page 20

5 Check automatic reverse turn.



- Check if the drum rotates clockwise and counterclockwise.

4 Check the water supply.



- Check if water is supplied through the detergent dispenser.

7 Check the drain and spin functions.

- Turn power off and then power on.
- Select the spin rpm
- Press the START PAUSE button.
- Check the spin and drain functions.

8 Turn power off and open the door.



- Turn power off and then power on.
- Listen for a click to determine if the door is unlocking.

9 Water removal.

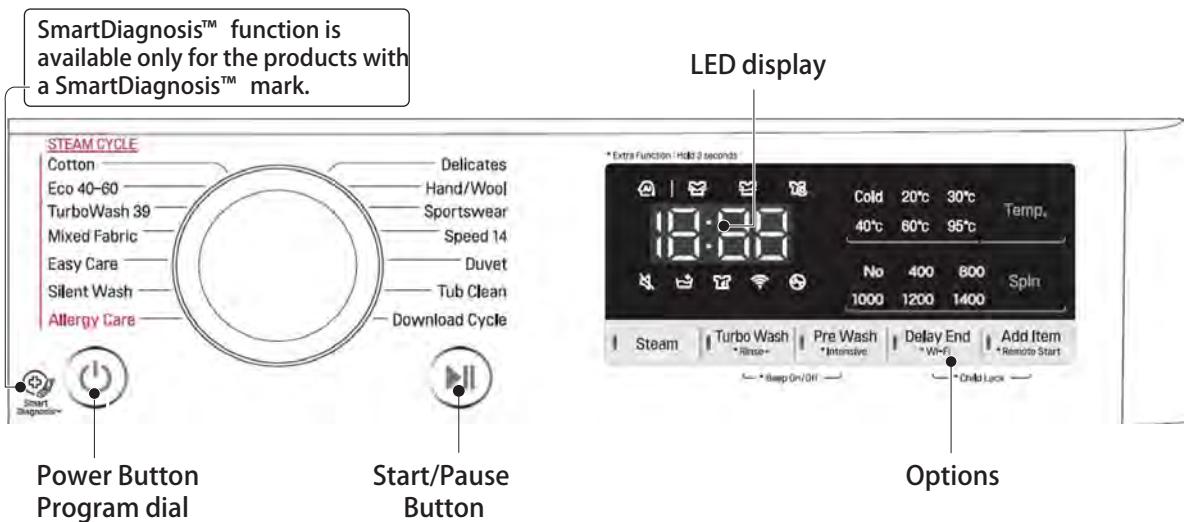


- If SVC is needed during check, remove the remaining water by pulling out the hose cap.

5. OPERATION

How to use washer

■ Control panel



Power

Press the Power button to turn power on and off.

To cancel the Time Delay function, the power button should be pressed.

Start/Pause

This Start/Pause button is used to start wash cycle or pause the wash cycle.

If temporary stop of wash cycle is needed, touch the Start/Pause button.

When in Pause, the power is turned off automatically after 4 minutes.

Program Dial

Programs are available according to the laundry type.

Lamp will light up to indicate selected program.

LED display

The display shows the settings, estimated time remaining, options, and status messages for your washer. The display will remain on through the cycle.

Options

This allows you to select an additional cycle and will light when selected.

Use these buttons to select the desired cycle options for the selected cycle.

How to use washer

■ Options

- Intensive (): If the laundry is normal and heavily soiled, "Intensive" option is effective.
- Rinse + (): Add rinse once.
- Dealy End :

You can set a time delay so that the washing machine will start automatically and finish after a specified time interval.

NOTE

- The delay time is the time to the end of the programme, not the start. The actual running time may vary due to water temperature, wash load and other factors.
- To cancel the function, the power button should be pressed.
- Avoid using liquid detergent for this option.

1. Touch the Power button.
2. Select a washing programme.
3. Touch the Time Delay button and set time required.
4. Touch the Start/Pause button.

How to use washer

Temp.

By touching the Temp. button the water temperature can be selected.

- Cold
- 20° C, 30° C, 40° C, 60° C, 95° C

Water temperature can be selected according to the program.

Pre Wash

If the laundry is heavily soiled, "Pre Wash" course is effective.

1. Touch the Power button.
2. Select a cycle.
3. Touch the Pre Wash button.
4. Touch the Start/Pause button.

Spin (■)

Spin Speed level can be selected by touching 'Spin' button repeatedly.

Spin Only

1. Touch the Power button.
2. Touch the Spin button to select RPM.
3. Touch the Start/Pause.

● NOTE

When you select ■, it will still rotate for a short time to drain quickly.

How to use washer

■ Child Lock

Select this function to lock the buttons on the control assembly to prevent tampering. "Child Lock" can be set only during the washing cycle.



Locking the control panel

1. Touch and hold the Child Lock button for 3 seconds.
2. A beeper will sound, and 'CL' will appear on the LED display. When the child lock is set, all buttons are locked except the Power button.

! NOTE

Turning off the power will not reset the child lock function. You must deactivate child lock before you can access any other functions.



Unlocking the control panel

1. Touch and hold the Child Lock button for 3 seconds.
2. A beeper will sound and the remaining time for the current programme will reappear on the LED display.

■ Beep On / Off

The Beep on/off function can be set only during the washing cycle.



1. Touch the Power button.

2. Touch the Start/Pause button.

3. Touch and hold the Turbo Wash and Pre Wash button simultaneously for three seconds to set Beep on/off function.

Once the Beep on/off function is set, the setting is memorized even after the power is turned off.

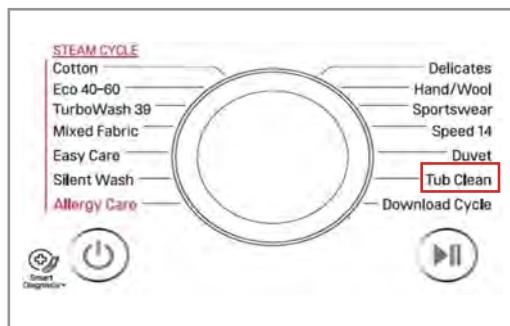
! NOTE

If you want to turn the Beeper off, simply repeat this process.

How to use washer

■ Tub Clean

Tub Clean is a special cycle to clean the inside of the washing machine. A higher water level is used in this cycle at higher spin speed . Perform this cycle regularly.



1. Remove any clothing or items from the washer and close the door.
2. Open the dispenser drawer and add Anti limescale(e.g. Calgon) to the main wash compartment.
3. Close the dispenser drawer slowly.
4. Power On and select the Tub Clean .Then *TcL* will be displayed on the display.
5. Touch the Start/Pause button to start.
6. After the cycle is complete, leave the door open to allow the washer door opening, flexible gasket and door glass to dry.

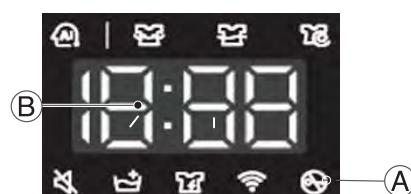
● NOTE

Do not add any detergent to the detergent compartments.
Excessive suds may generate and leak from the washer.

⚠ CAUTION

If there is a child, be careful not to leave the door open for too long.

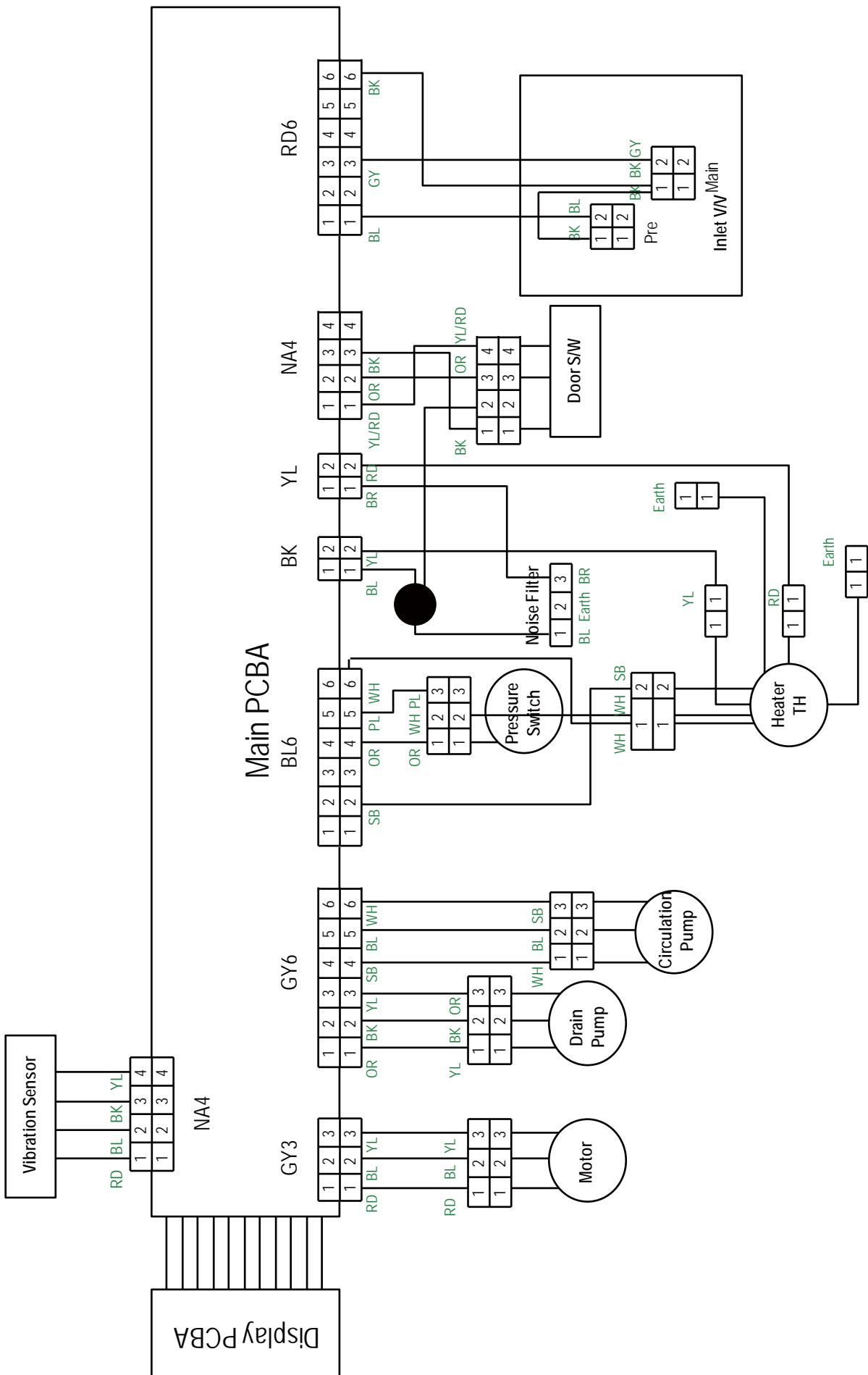
■ Door Lock & Detecting



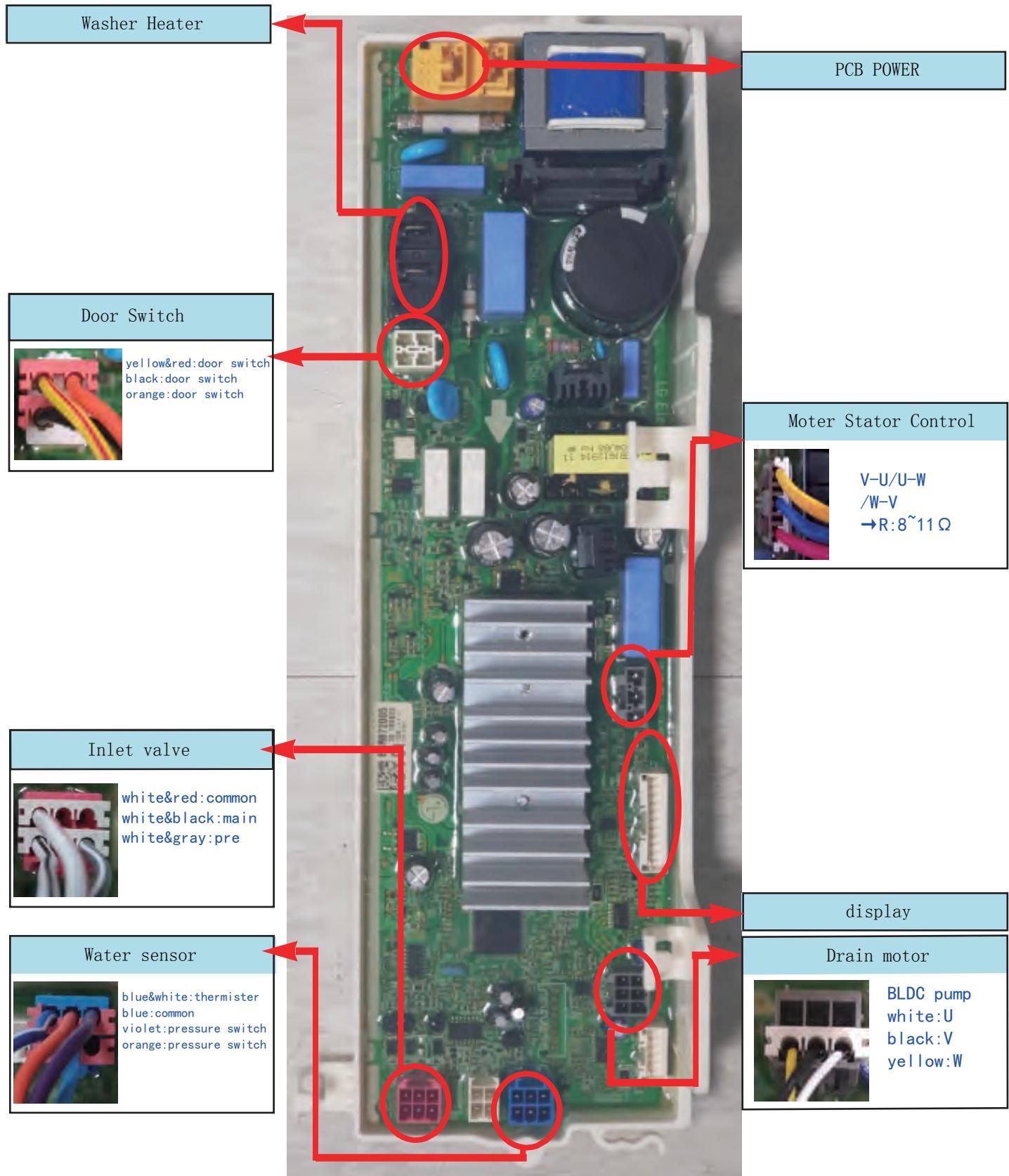
Ⓐ "Door Lock" - For safety reasons, the door will lock while machine is in use and the "Door Lock" icon will light up. You can safely open the door after the "Door Lock" icon turns off.

Ⓑ While "Detecting" is shown on the display the washing machine rotates slowly and detects how much laundry is loaded in the drum.
It will take a short time.

6. WIRING DIAGRAM/PCB LAYOUT



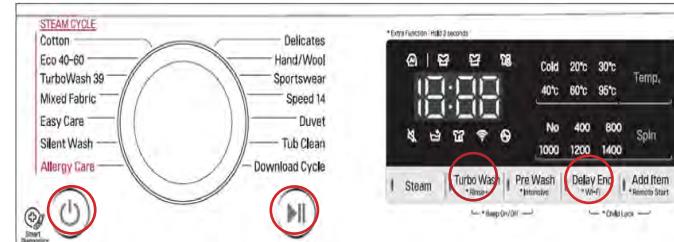
■ PCB Layout (Main)



7. TROUBLESHOOTING

7-1. CHECK BEFORE SERVICE

- ① Before servicing ask the customer what the trouble is.
- ② Check the adjustments. (Power supply :220-240V~, Removal of transit bolts etc..)
- ③ Check the troubles referring to the troubleshooting.
- ④ Decide service steps referring to disassembly instructions.
- ⑤ Then, service and repair.
- ⑥ After servicing, operate the appliance to see whether it works OK or NOT.



7-2. LOAD TEST MODE

- ① Turn on, and touch 'Turbo Wash' and 'Delay End' at the same time in 1 second.
- ② The washer must be empty and the controls must be in the off state.
- ③ Press Power with above two buttons pressed and then buzzer will sound.
- ④ Press the Start/Pause button repeatedly to cycle through the test modes

Numbers	Check Point	Display Status	Remark
0	Turns on all light and locks the door.	PGM Version Information	
1	Tumble clockwise	rpm(42~50)	
2	Low speed spin	rpm (60)	
3	High speed spin	rpm (130~140)	
4	Inlet valve for prewash turns on.	Water level frequency	
5	Inlet valve for main wash turns on.	Water level frequency	
6	Inlet valve for hot water turns on.	Water level frequency	For Hot&Cold Model
7	Inlet valve for atomizing turn on.	Water level frequency	
8	Tumble counterclockwise	rpm	
9	Heater turns on for 3 sec.	Water temperature	
10	Drain pump turns on.	Water level frequency	
11	Off	-	

7-3. HOW TO CHECK THE WATER LEVEL FREQUENCY

Touch the **Spin** and **Turbo Wash** button simultaneously.

Keeping touch, the digits indicate the water level frequency.



7-4. ERROR DISPLAY

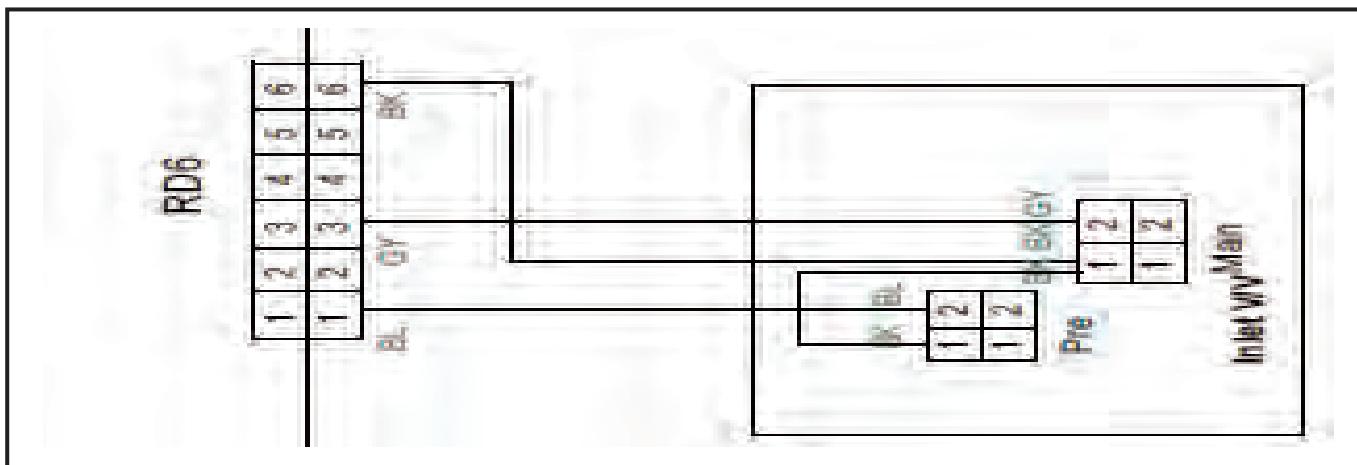
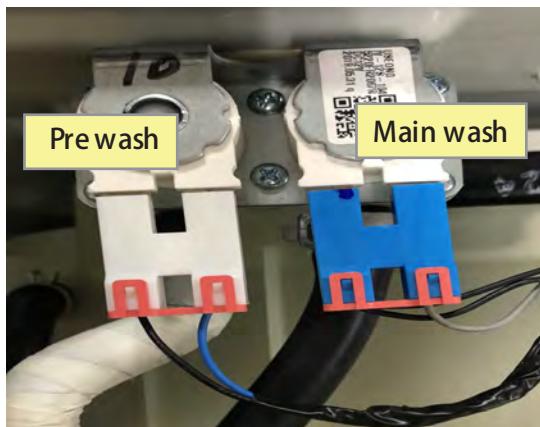
- If you press the Start/Pause button in error condition, any error except 『PE』 will disappear and the machine will change into the pause status.
- In case of 『PE』, 『EE』, if the error is not resolved within 20 sec., and in case of all other errors, if the error is not resolved within 4 min., the power will turn off automatically and the error only will blink. But in the case of 『FE』, the power will not turn off.

	ERROR	SYMPTOM	CAUSE
1	WATER INLET ERROR		☒ Not reached the water level(248) within 10 minutes after water supplied or not reached to the preset water level within 25 minutes. ☞ Page 24
2	WATER OUTLET ERROR		☒ Not fully drained within 10 minutes. ☞ Page 26
3	OVERFLOW ERROR		☒ Water is overflowing (under 21.3kHz). ※ If " " is displayed, the drain pump operates to drain the water automatically. ☞ Page 28
4	PRESSURE SENSOR S/W ERROR		☒ The pressure sensor switch is out of order. ☞ Page 29
5	DOOR OPEN ERROR	 	☒ In case of operating the reservation function or the other function with door opened. Close the door, then the error display is resolved. ☒ The door switch is out of order. ☞ Page 31
6	UNBALANCE ERROR		☒ The appliance is tilted. ☒ Laundry is gathered to one side. ☞ Page 25
7	THERMISTOR(HEATING) ERROR		☒ The THERMISTOR is out of order. ☞ Page 33

	ERROR	SYMPTOM	CAUSE
8	MOTOR LOCKED ERROR		<p>☒ The connector in the LEAD WIRE ASSEMBLY is not connected to the connector of STATOR ASSEMBLY.</p> <p>☞ Reconnect or repair the connector.</p> <p style="text-align: right;">☞ Page 36</p>
9	POWER FAILURE		<p>☒ The washer experienced a power failure</p> <p>☞ Press the start/pause button</p>
10	FROZEN FAILURE		Supply warm water into the drum and unfreeze drain hose and drain pump. Wet a towel in warm and apply to supply hose.
11	VIBRATION SENSOR ERROR		☒ Malfunction of vibration sensor

7-5. TROUBLESHOOTING WITH ERROR

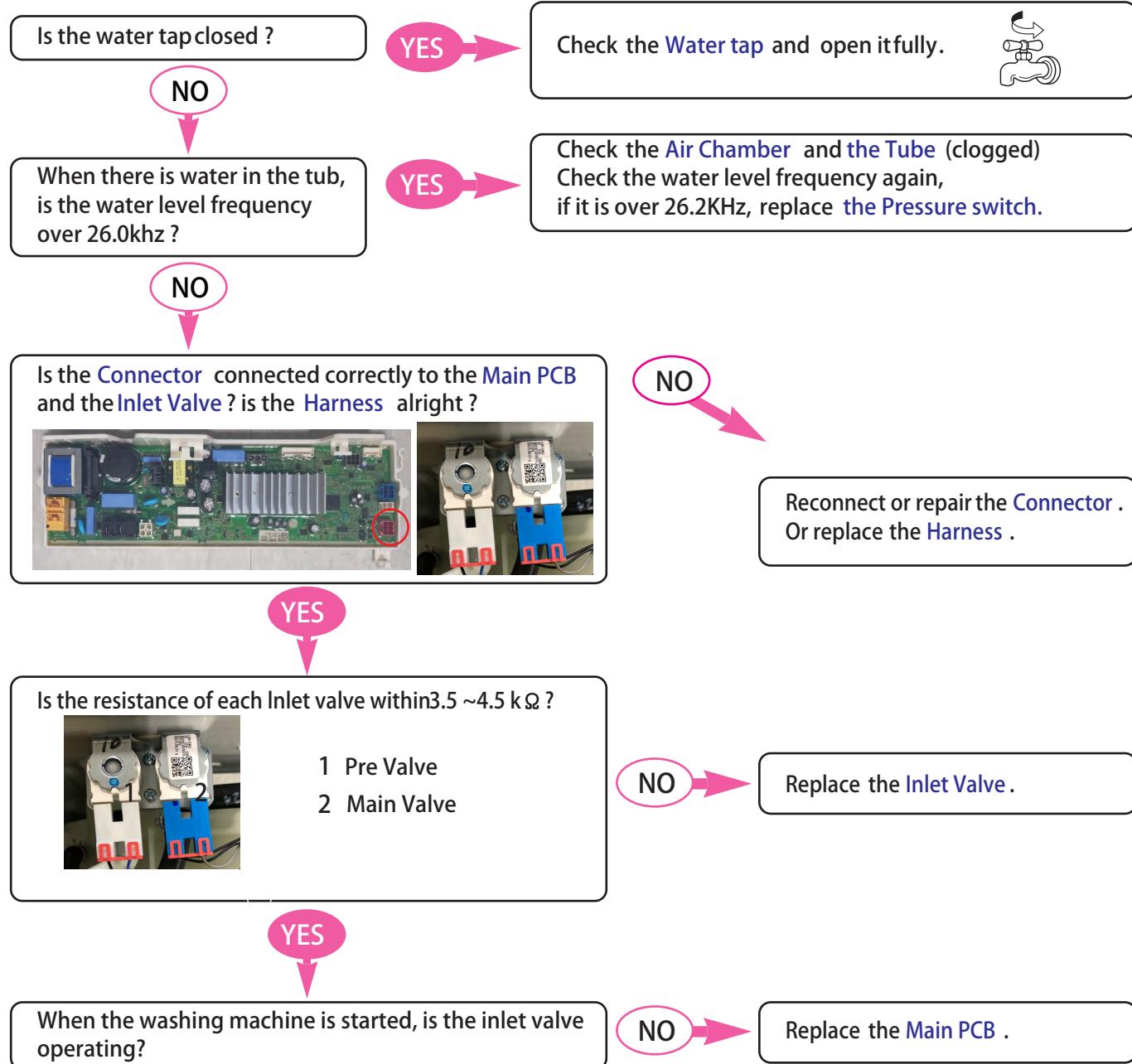
Symptom	Check Point
1.INLET VALVE ERROR	<p>1.Check Electric Wiring.</p> <p>2.Check Inlet valve' s Resistance.</p> <p>3.Check Inlet valve clogged.</p> <p>4.Voltage of the inlet valve' s connector.</p> <ul style="list-style-type: none"> - LQC mode : Valve running with $13.6V \pm 10\%$ - In normal cycle : Valve running with $7V \pm 10\%$ <p>Need to check 2s later from valve start to running</p>



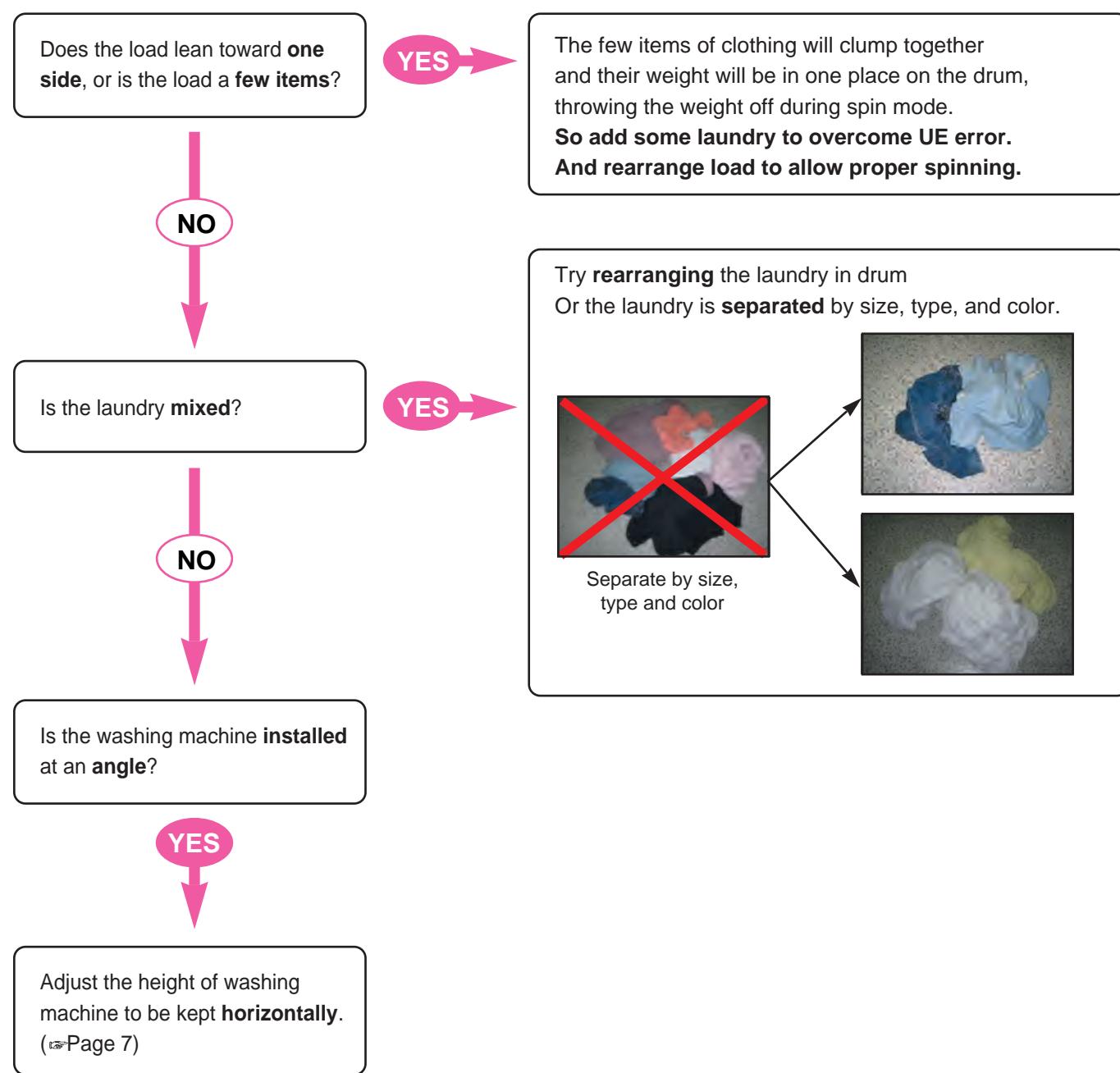
Water Inlet Error (IE)

[Note] Environmental safety check list

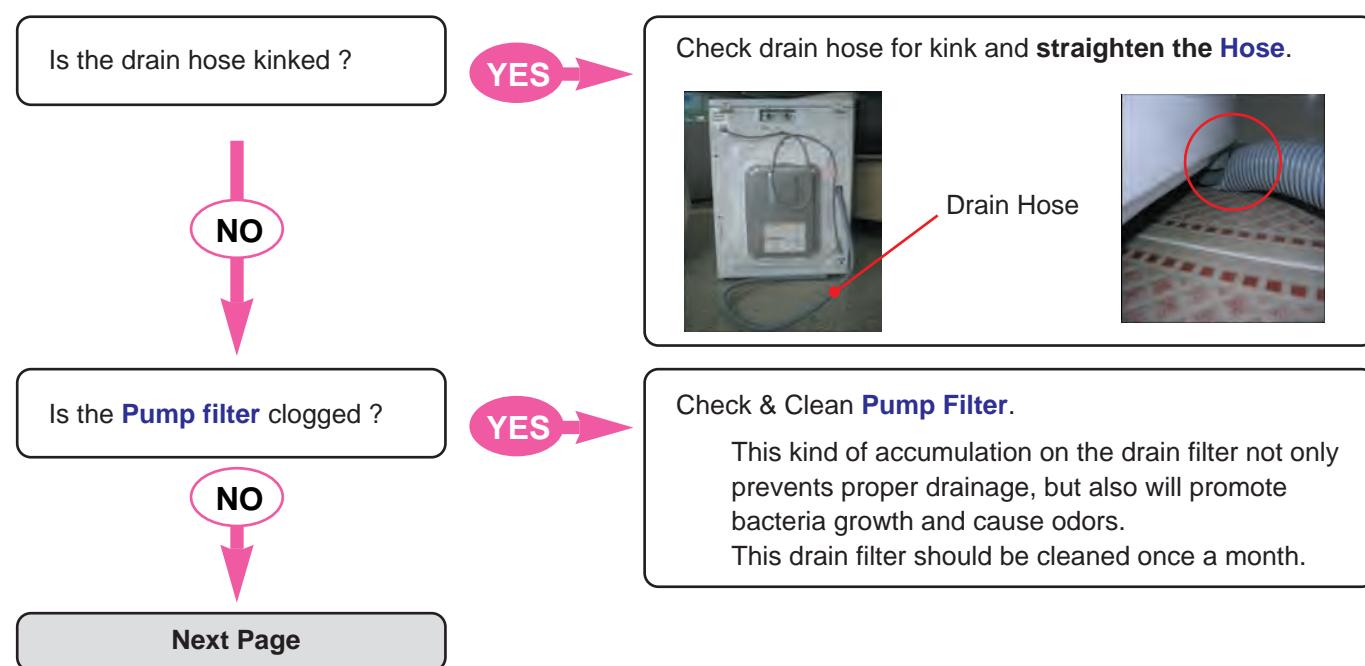
- 1. No water tap leakage or freeze
- 2. No water shortage.
- 3. The inlet filter is not cloggeed.
- 4. No entanglement of water supply hose.
- 5. No water supply hose leakage



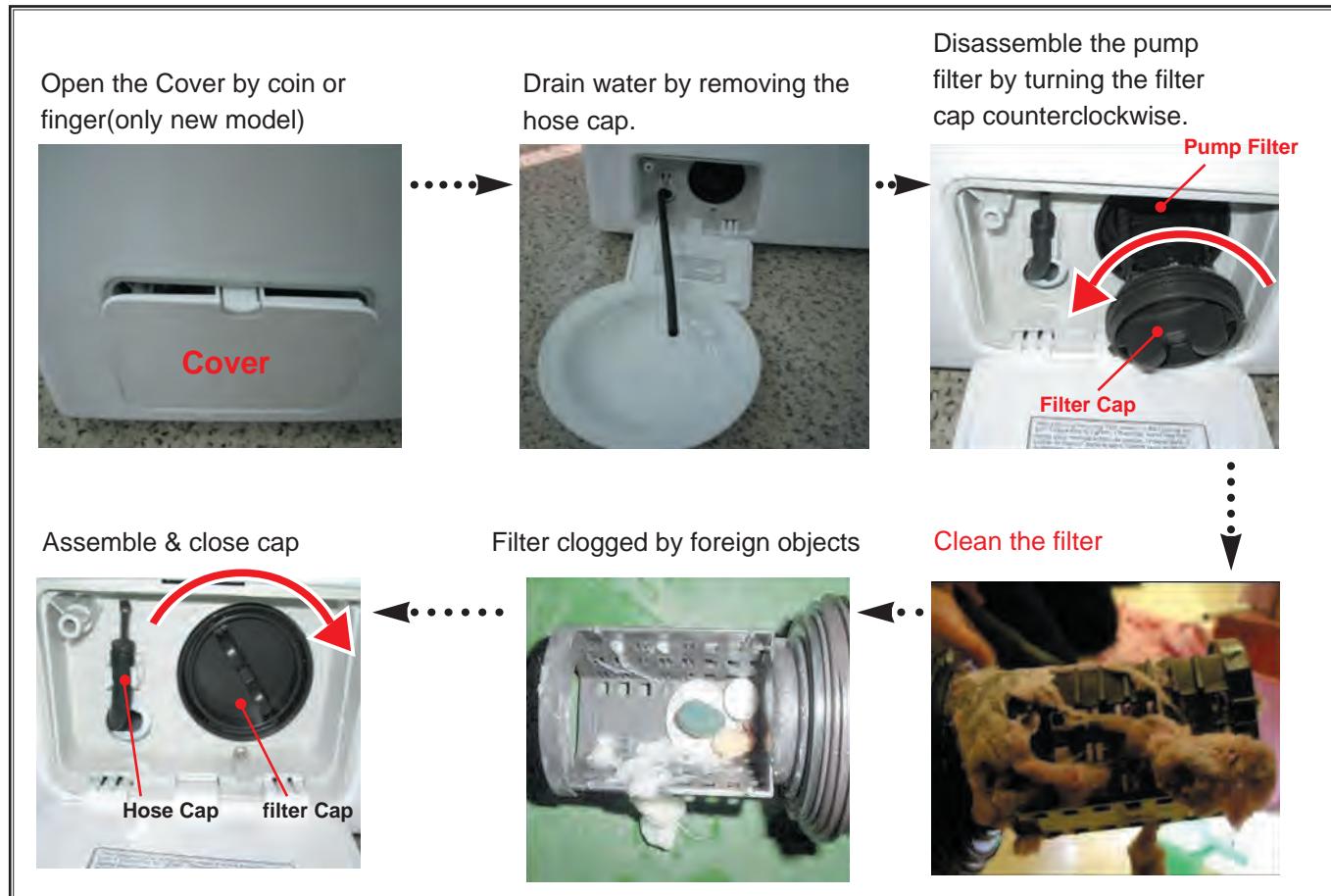
Unbalanced Error (UE)

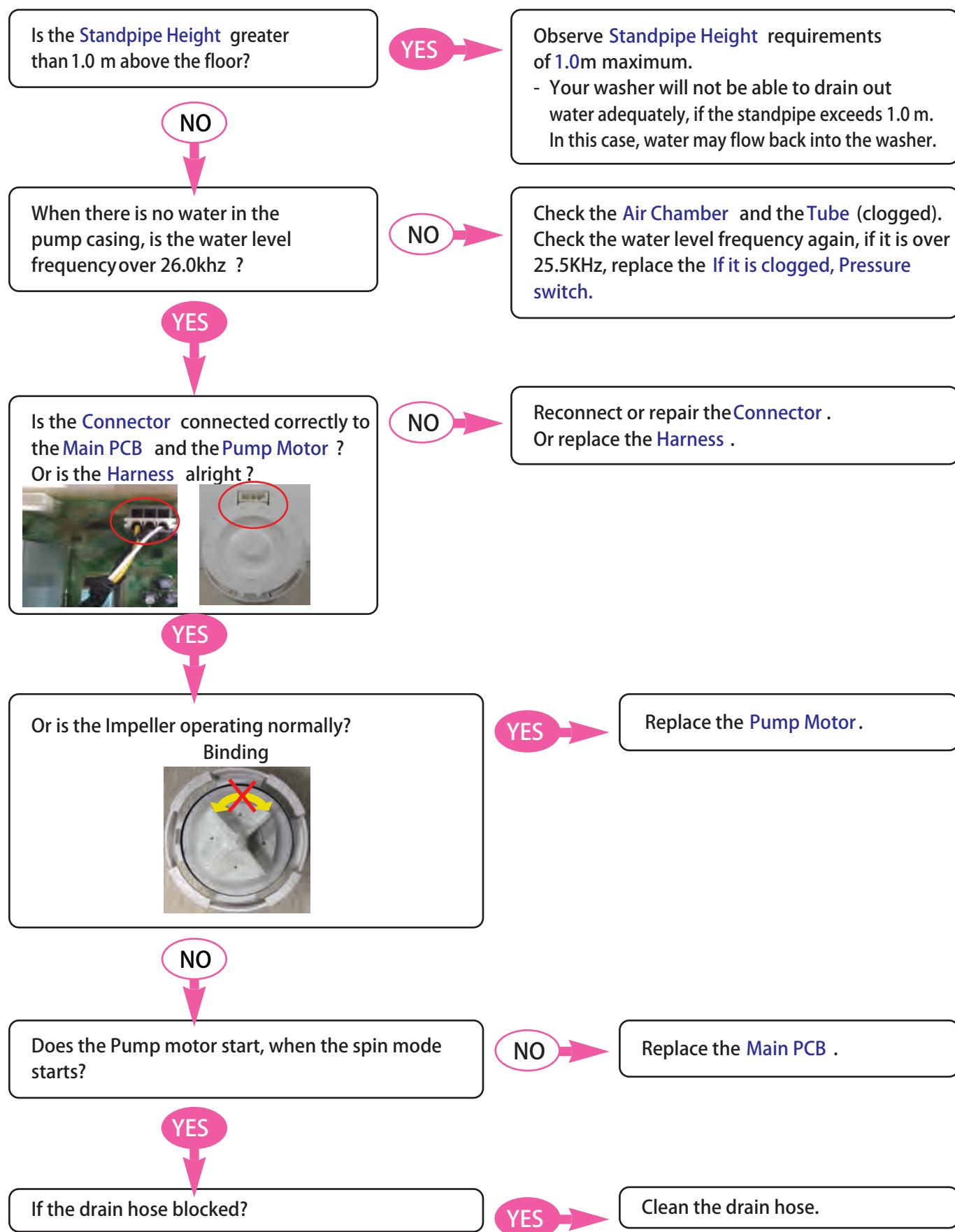


Water Outlet Error (OE)



* How to disassemble and clean pump filter





FE (Overflow Error)

Power off for 10sec. Then power on.

Is the water level over reference line and is the water level frequency under 21.3kHz?



* Water level frequency

- Touch and Hold 'Spin' & 'Turbo Wash' simultaneously.

NO

Is water continuously coming into the drawer?



YES

Drain out the water and then check the **Air Chamber** and the **Tube** (clogged).

YES

If FE is displayed again, then replace the **Pressure Switch**.

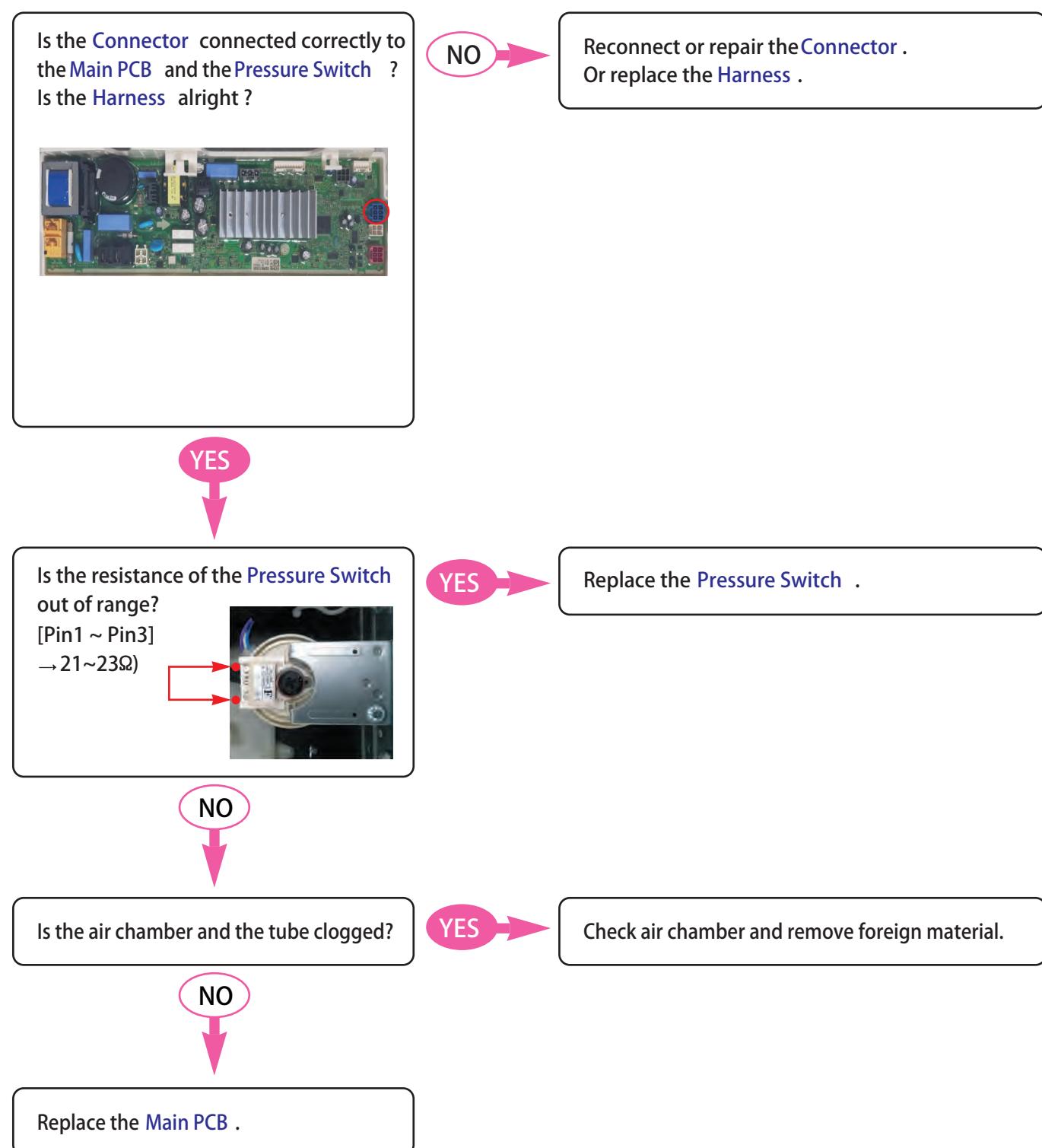
NO

Replace the **Main PCB**.

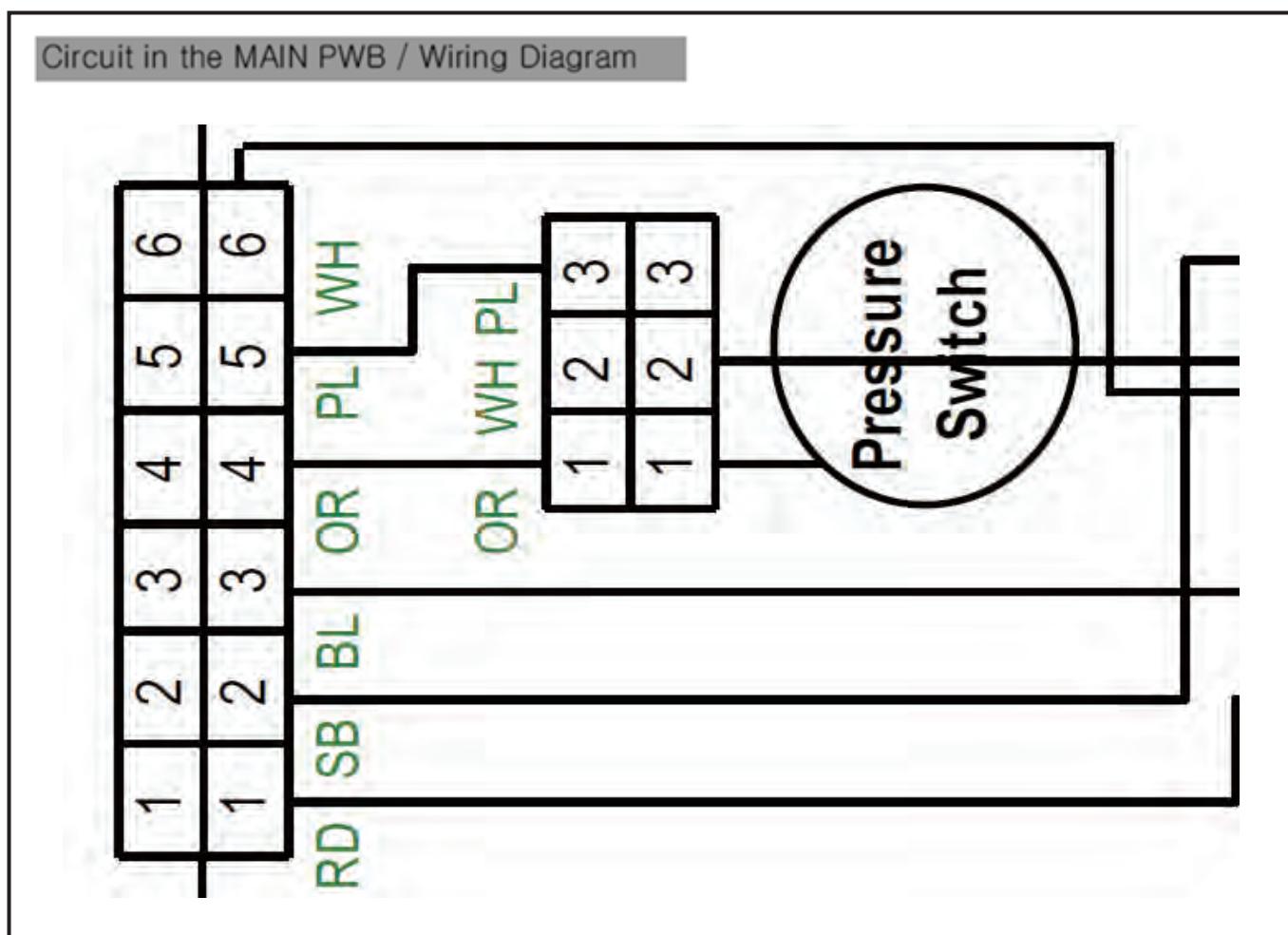
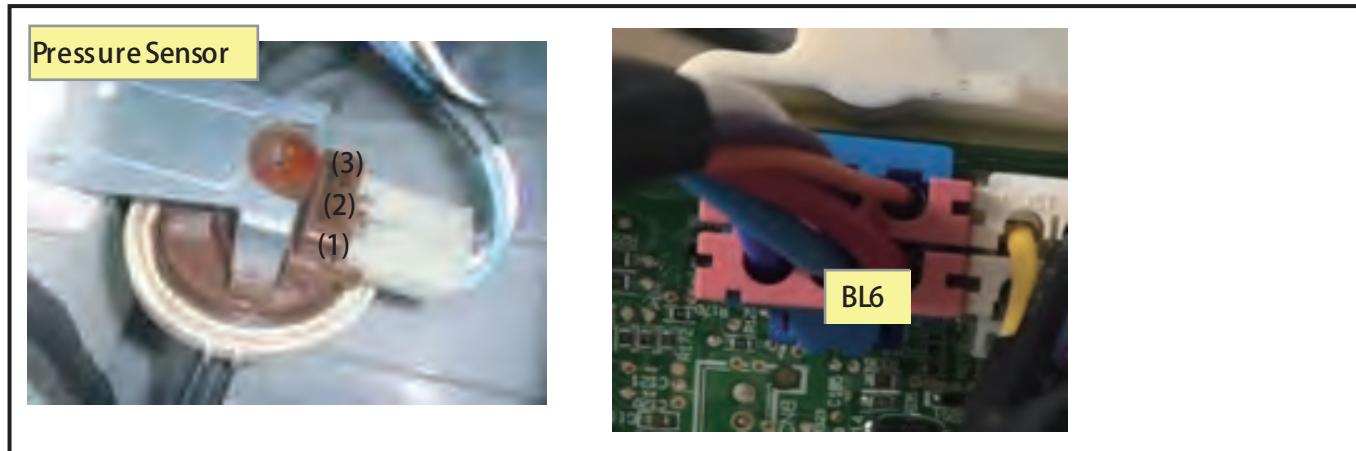
If FE is displayed again, then replace the **Main PCB**.

Replace the **Inlet Valve** assembly.

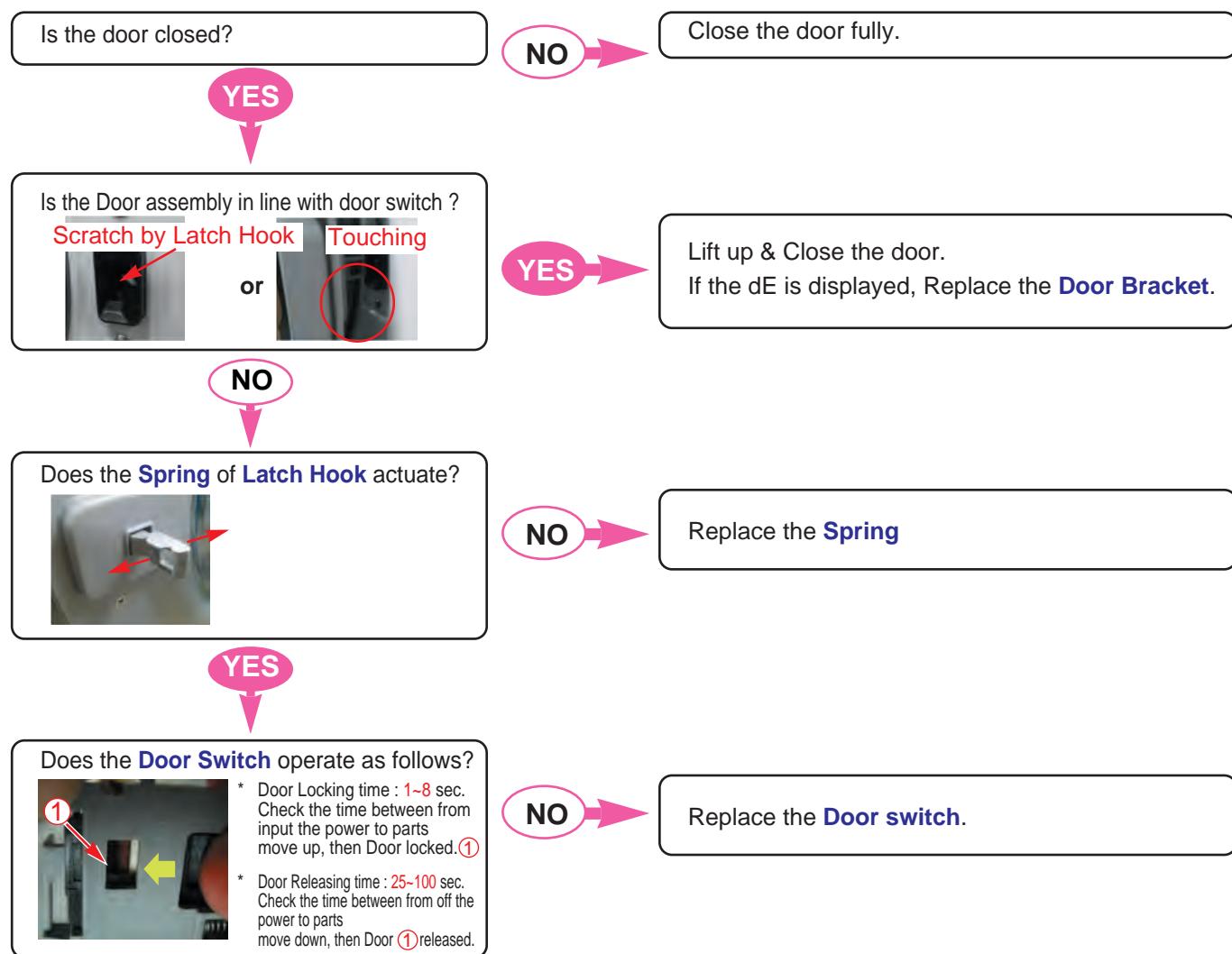
Pressure Sensor S/W Error (PE)



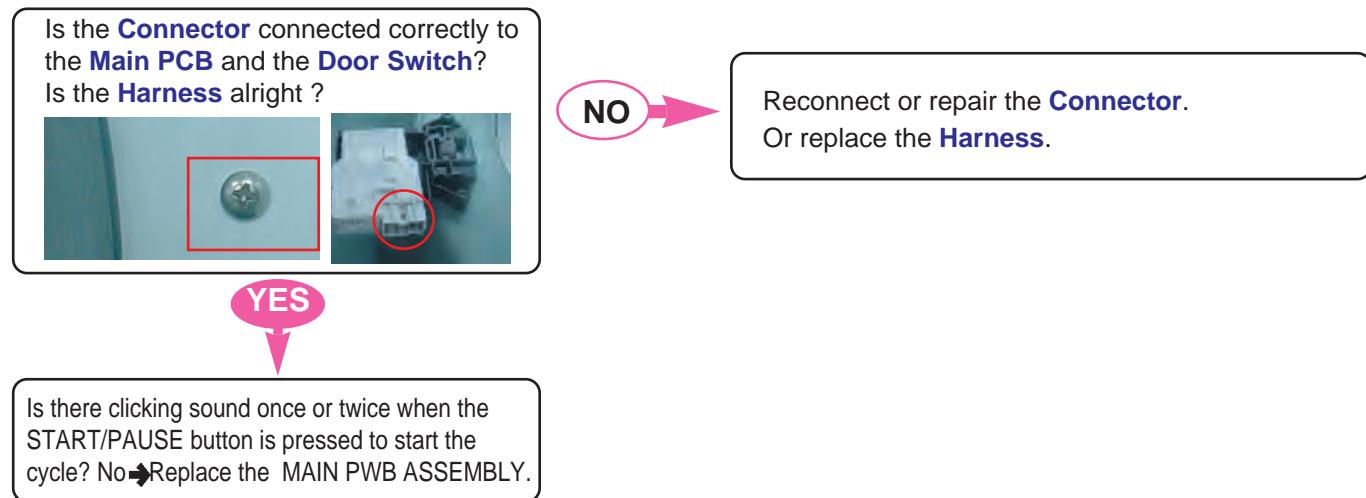
Symptom	Check Point
1.PRESSURE SENSORERROR(PE)	1.Check Electric Wiring. 2.Check Pressure sensor' s Resistance. 3.Check Air Chamber and Tubeclogged.



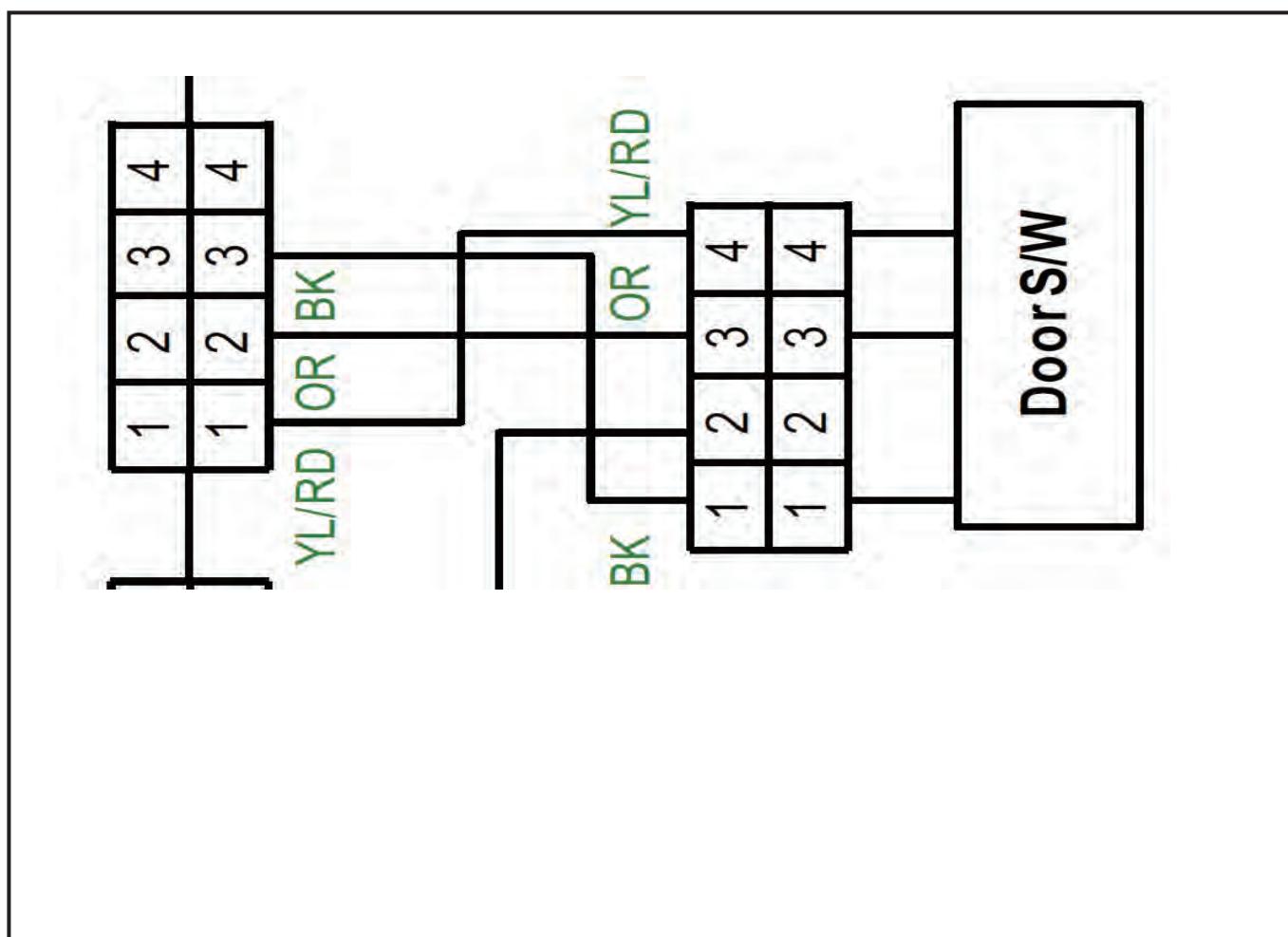
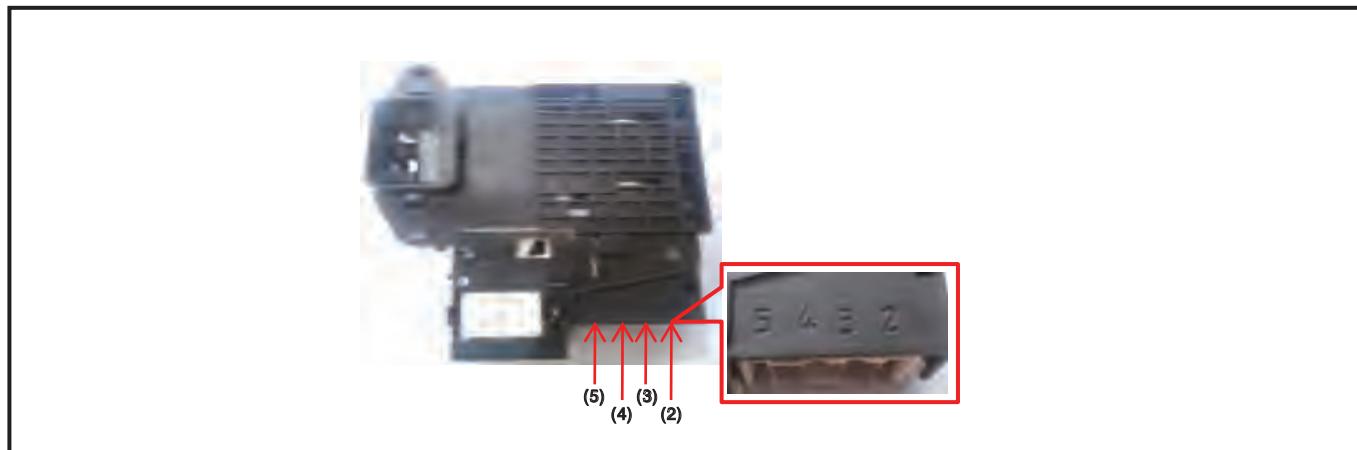
Door Open Error (dE2)



Door Switch Error (dE1)



Symptom	Check Point
1.DOOR OPEN ERROR(dE)	<ol style="list-style-type: none"> 1.Check Electric Wiring. 2.Check latch hook spring.(Cracked) 3.Check Door switch' s Resistance. 4.Check Voltage of Door switch' s connector.



Thermistor (Heating) Error (tE)

Is the **Connector** connected correctly to the **Main PCB** and the **Thermistor** and the **Heater**?
Is the **Harness** alright ?



Heater for Washing

YES

Reconnect or repair the **Connector**.
Or replace the **Harness**.

NO

Is the resistance of the **Thermistor** out of range 44 ~ 53 K at 25 ° C (Page 17)

YES

Replace the **Thermistor**.

NO

Is the resistance of the **Heater** out of range 24.5 ~ 28.5 (for Washing) ? (Page 19)

YES

Replace the **Heater**.

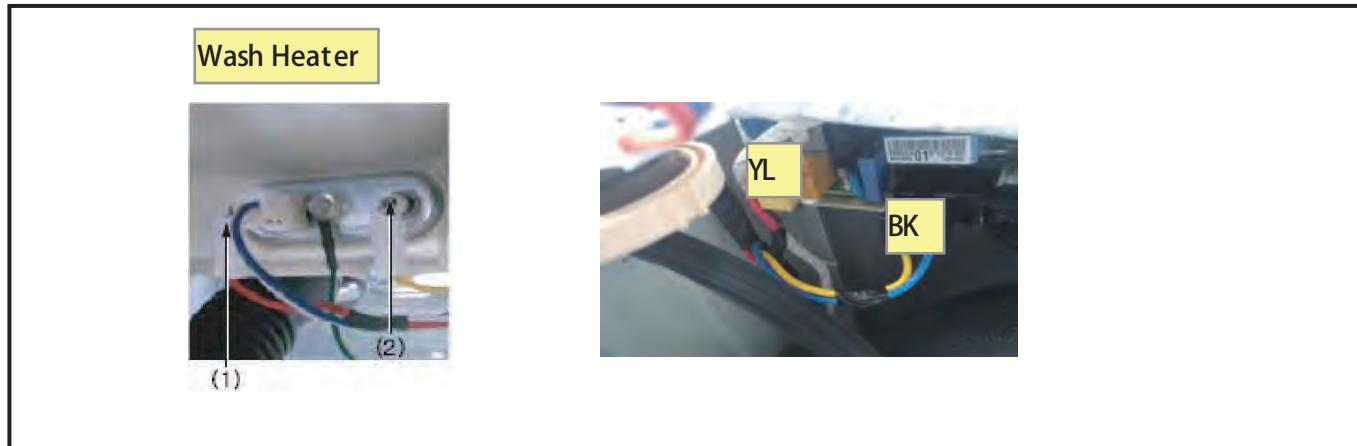
NO

Replace the **Main PCB**.

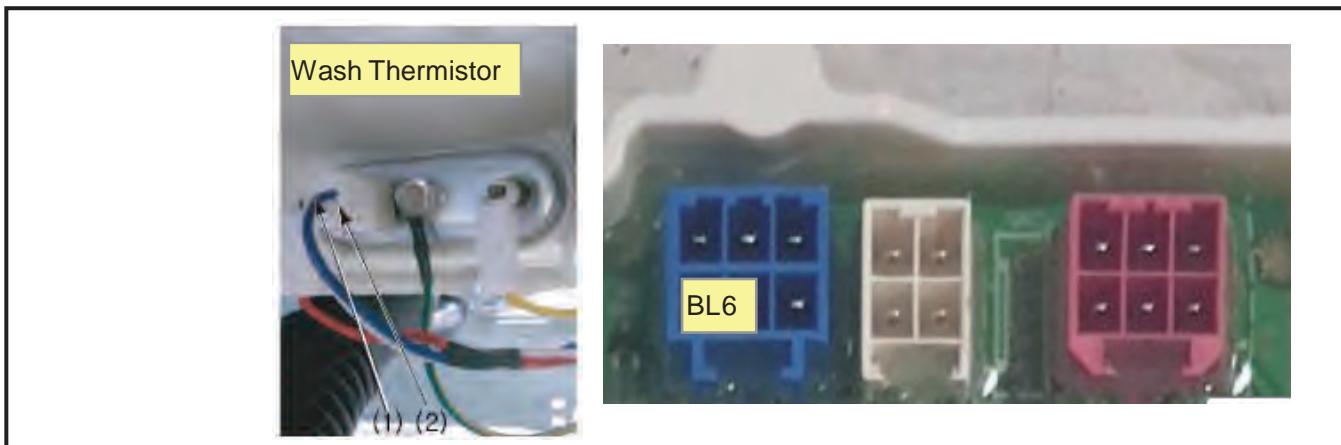
[Note] Thermistor Spec

S P	Temp	Resistance (k Ω)		
		MIN	STD	MAX
E	30 ° C	36.35	39.45	42.72
C	40 ° C	24.20	26.05	27.97
	60 ° C	11.43	12.12	12.82
	70 ° C	8.088	8.514	8.940
	95 ° C	3.544	3.791	4.045
	105 ° C	2.617	2.816	3.023

Symptom	Check Point
1.HEA TING ERROR(tE)	1.Check Electric Wiring. 2.Check Heater' s Resistance. 3.Check Thermistor' s Resistance. 4.Water Leaked into the Thermistor' s Connector.



Heater	Main PWB	Resistance [Ω]
Wash Heater (1) ~ (2)	BK 3 th ~ YL 3 th	12 ~ 18



Thermistor	Main PWB	Resistance [kΩ]	Remarks °F (°C)
Wash Thermistor (1) ~ (2)	NA3 4 th ~ NA3 5 th	39.5	86(30)
		26.1	104(40)
		12.1	140(60)
		8.5	158(70)
		3.8	203(95)
		2.8	221(105)

Motor Locked Error (LE)

[Pre Check]

- Gentle wash cycles, such as Perm Press, Delicates, Hand Wash, and Wool/Silk should only be used for smaller loads. Because these cycles are more gentle in tumbling and spinning, putting too much in the drum can register an issue with the motor. Remove items, reset unit and test with a Rinse/Spin cycle.

Press the **Power** button &**Start / Pause** button.

Does the **Drum** stop when the start/pause button is pressed to start the cycle ?

Or Sometimes does the **Drum** rotate weakly (under 15rpm)?

YES

Is the **Connector** connected correctly to the **Main PCB** and the **Motor**?
Is the **Harness** alright ?



NO

Reconnect or repair the **Connector**.
Or replace the **Harness**.

YES

Disassemble the **Rotor**.
Is the **Magnet** of rotor cracked or broken?



YES

Replace the **Rotor**.

NO

Is the resistance the same between **Stator** points?
※ V~U / U~W / W~V : 8~11Ω



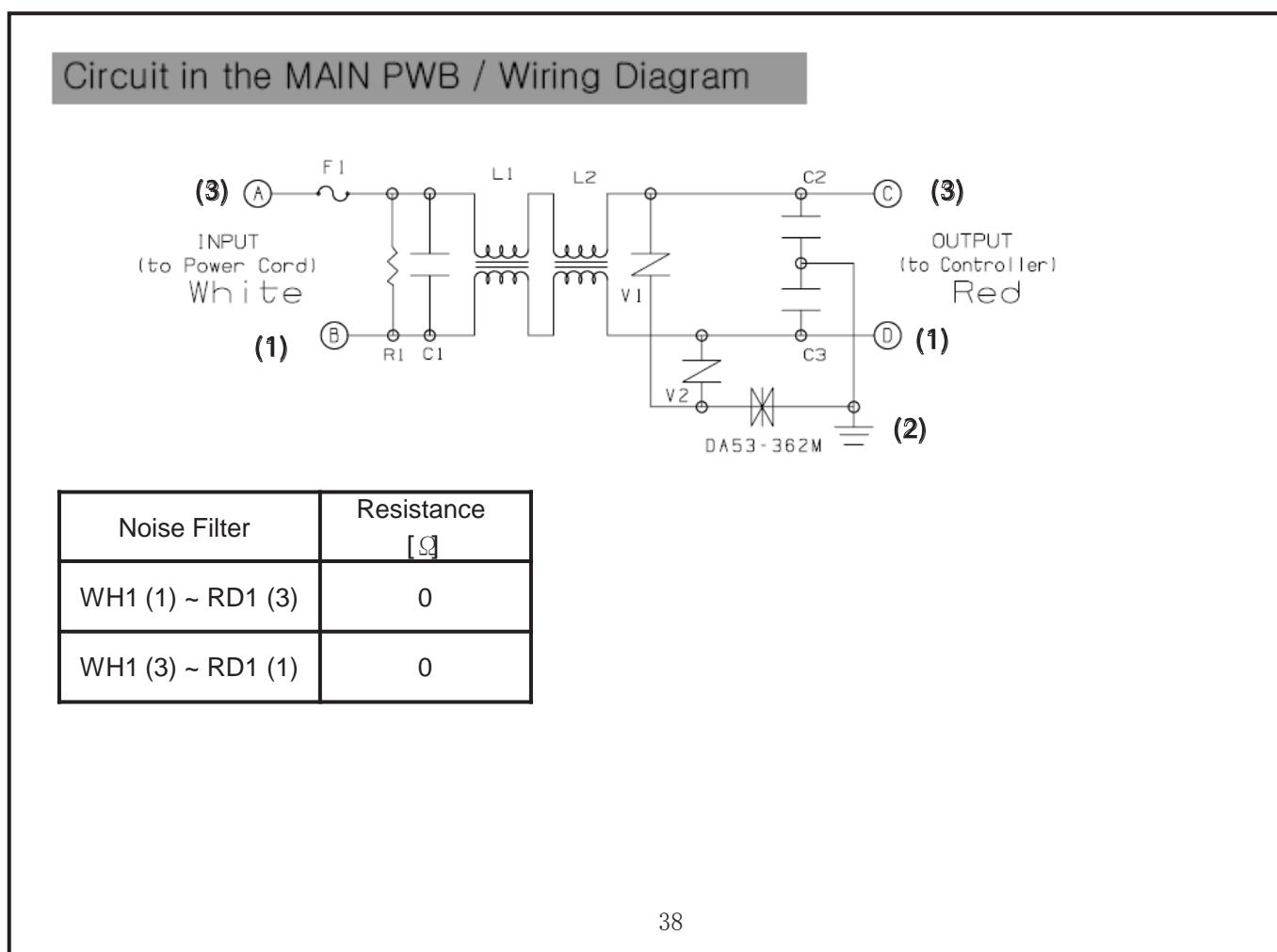
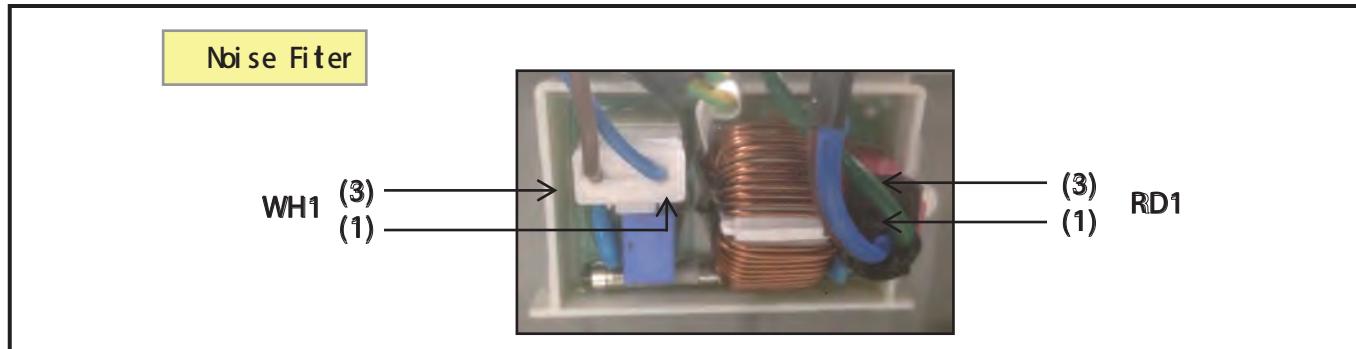
NO

Replace the **Stator**.

YES

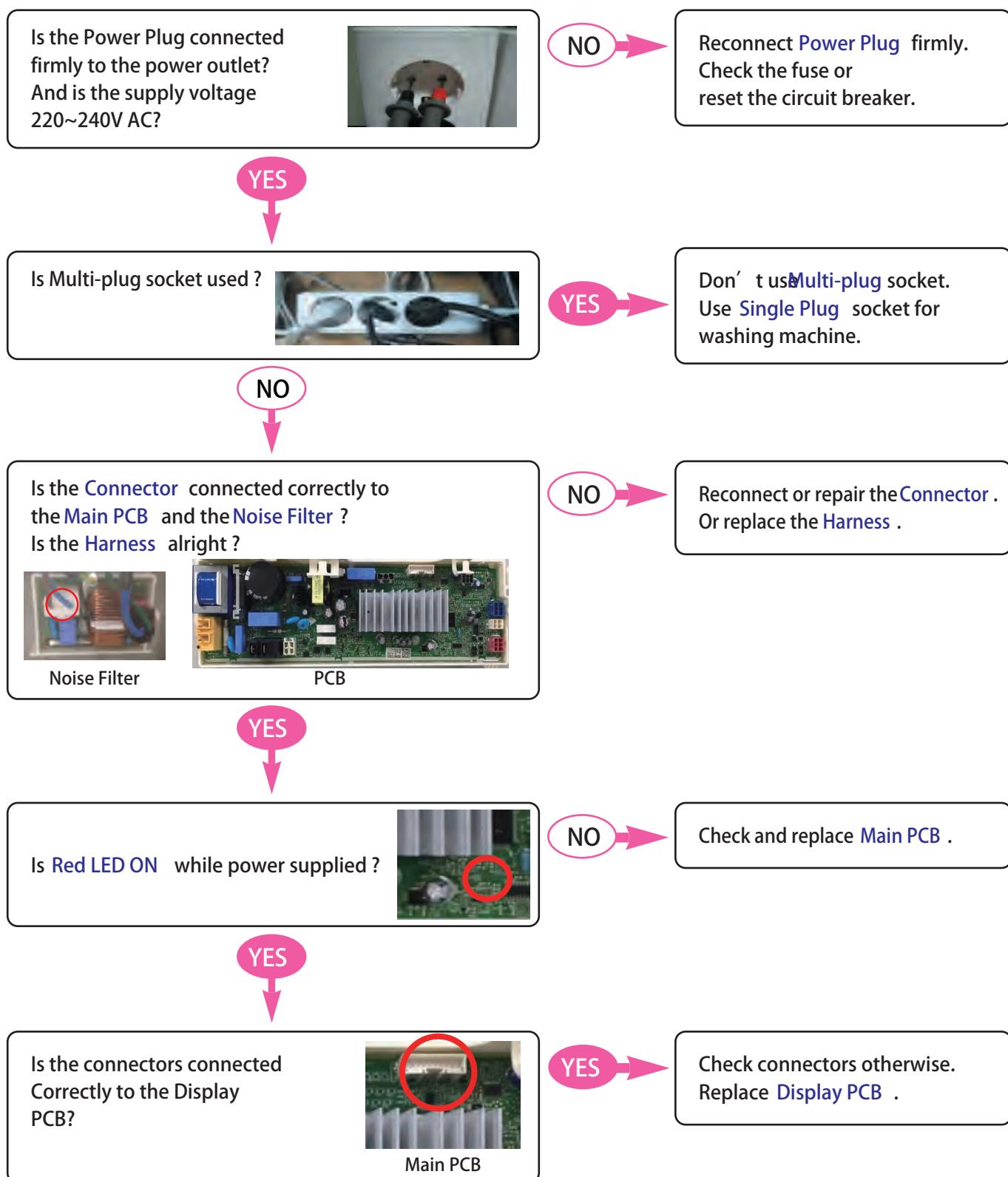
Replace the **Main PCB**.

Symptom	Check Point
1. NO POWER	1. Check Electric Wiring. 2. Check the Customer's outlet. 3. Check Noise Filter. 4. Check LED on in Main PWB



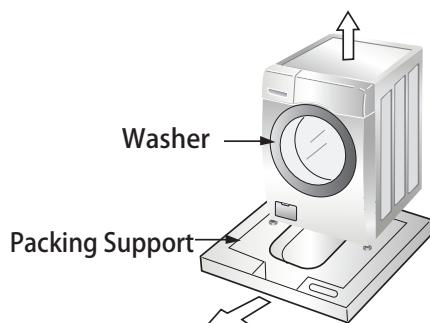
8. TROUBLESHOOTING WITHOUT ERROR CODES

PF (Power Failure or no power)



Vibration & Noise During Spin

Have all the Transit Bolts been removed?



NO

Remove the Transit Bolts



YES

Refer to INSTALLATION . (Page 7)

Detergent & Softener does not flow in

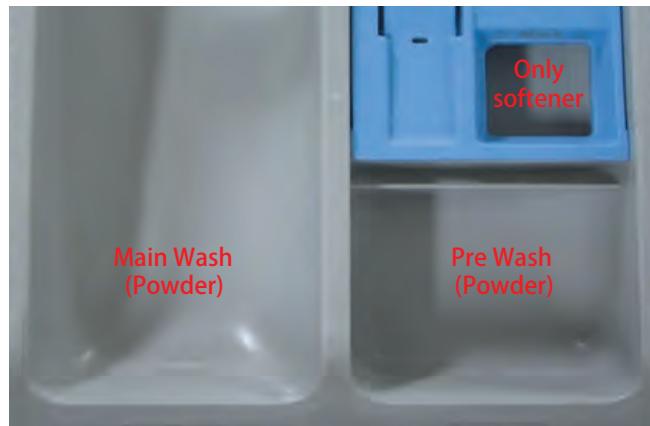
Is water supplied?

NO

Refer to [Water Inlet Error (IE)]
☞ (page 23)

YES

Is detergent & softener put in the correct compartment of the drawer?



NO

Put it in the **Correct Position** .

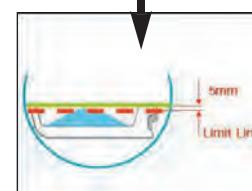
Is the **Detergent** caked or hardened?

YES

Detergent



NO!!



OK!!

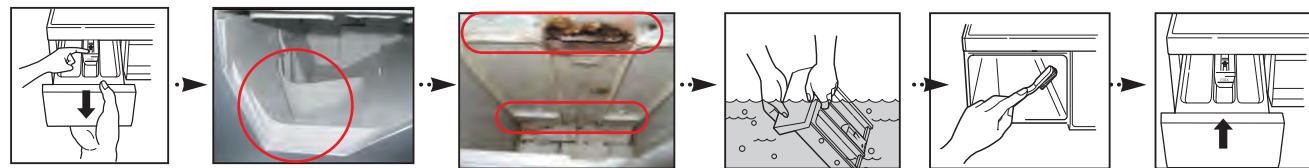
Softener



OK!!

Clean the drawer and dispenser.

※ Check point



Water Leak

1. Water Leak from Dispenser

Is the Dispenser Tray Damaged or warped?

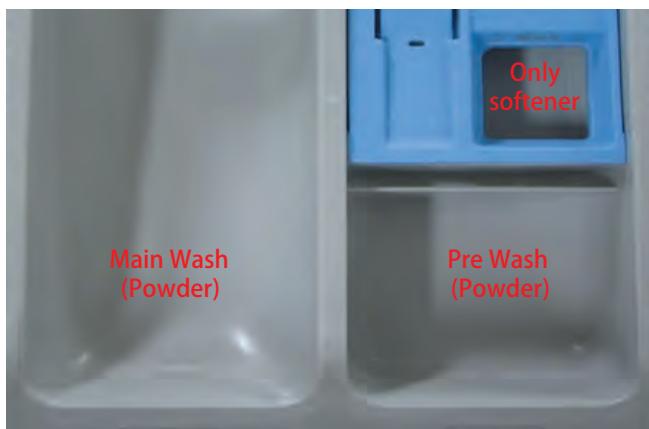


YES

Replace the Dispenser Tray .

NO

Is detergent & softener put in the correct compartment of the drawer?



NO

Put it in the Correct Position .

Is the Detergent caked or hardened?

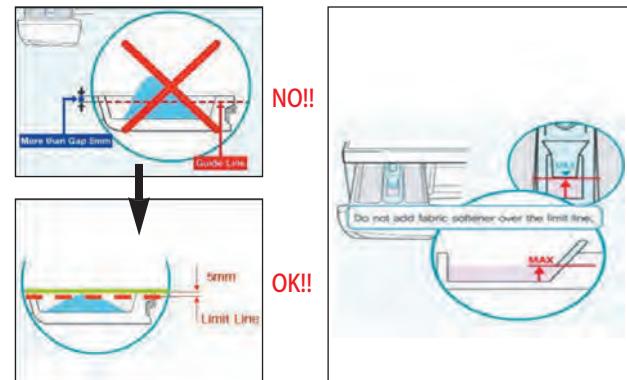
YES

※ Reference (Amount of Detergent & Softener)

Detergent



Softener

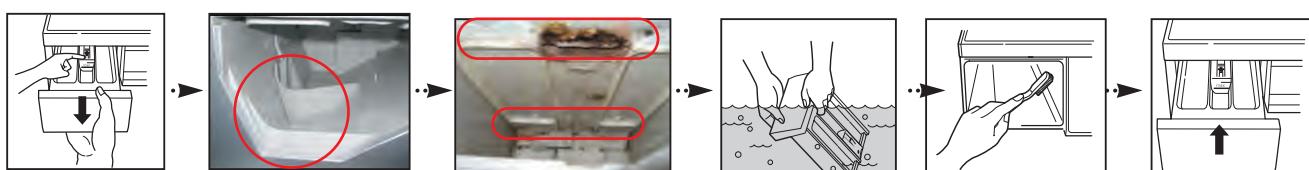


NO!!

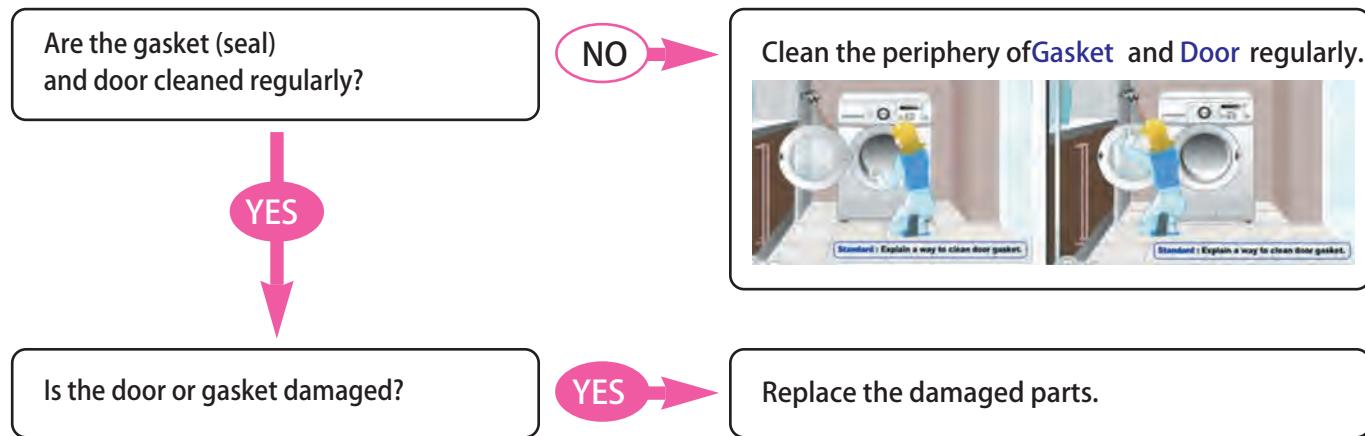
OK!!

Clean the drawer and dispenser.

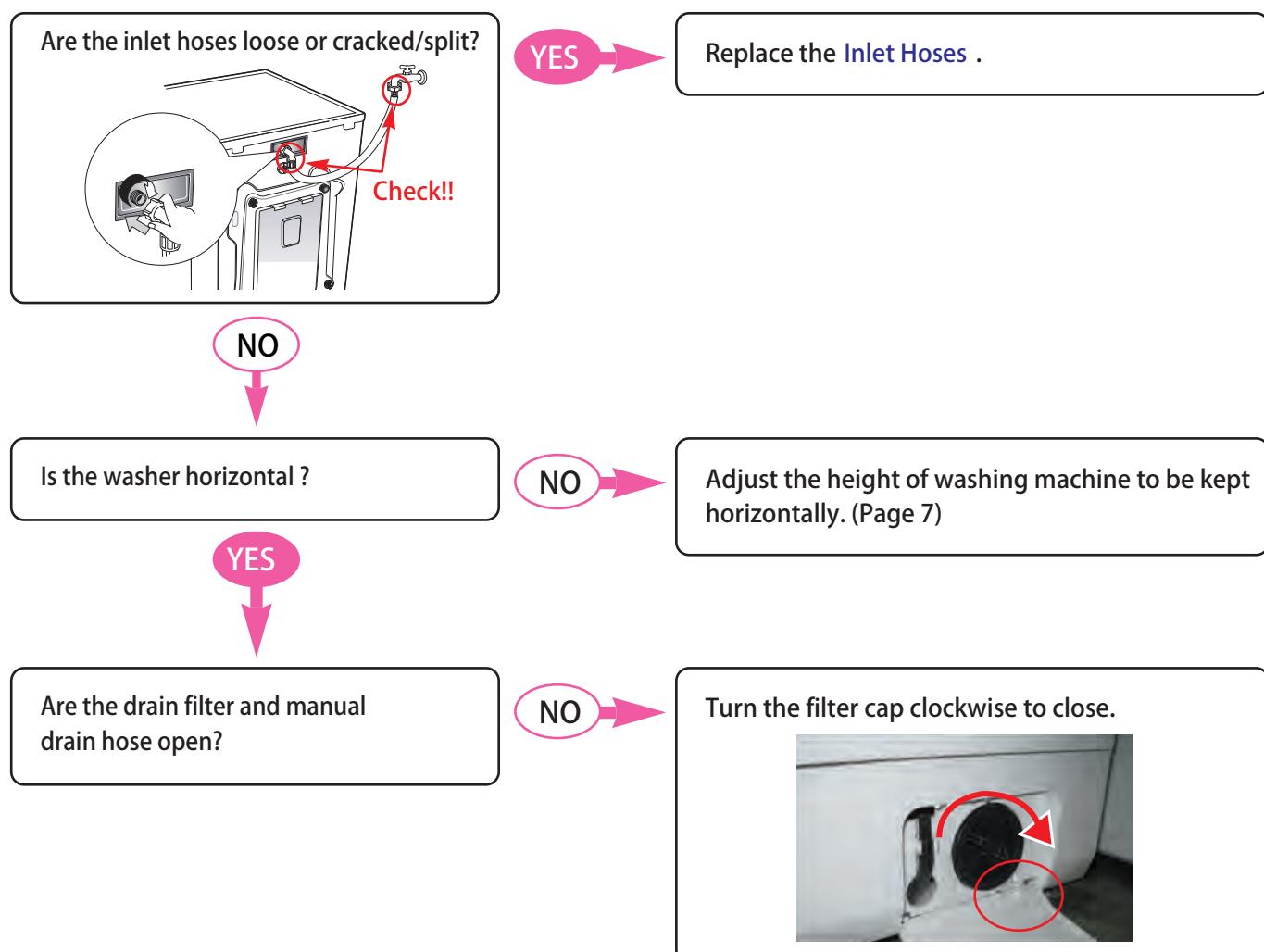
※ Check point



2. Water Leak from Dispenser



3. Unknown – Water on Floor



SMART FUNCTIONS

LG ThinQ Application

The **LG ThinQ** application allows you to communicate with the appliance using a smartphone.

LG ThinQ Application Features

Communicate with the appliance from a smartphone using the convenient smart features.

Remote Start

It allows you to control the appliance remotely from the **LG ThinQ** application.

Download Cycle

You can download new and special cycles that are not included in the basic cycles on the appliance.

A variety of specialty cycles specific to the appliance can be downloaded to the successfully registered appliances.

Once cycle download is completed in the appliance, the appliance keeps the downloaded cycle until a new cycle is downloaded.

NOTE

- Only one downloaded cycle can be stored on the appliance at a time.

Tub Clean Coach

This function shows how many cycles remain before it is time to run the **Tub Clean** function.

Energy Monitoring

This function checks the energy consumption of the recently used cycles and monthly average.

Smart Diagnosis

This function provides useful information for diagnosing and solving issues with the appliance based on the pattern of use.

Settings

Allows you to set various options on the appliance and in the application.

Push Alert

When the cycle is complete or the appliance has problems, you have the option of receiving push

notifications on a smartphone. The notifications are triggered even if the **LG ThinQ** application is off.

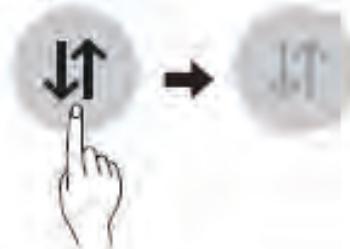
NOTE

- If you change your wireless router, Internet service provider, or password, delete the registered appliance from the **LG ThinQ** application and register it again.
- The application is subject to change for appliance improvement purposes without notice to users.
- Functions may vary by model.

Before Using LG ThinQ Application

- Check the distance between the appliance and the wireless router (Wi-Fi network).
 - If the distance between the appliance and the wireless router is too far, the signal strength becomes weak. It may take a long time to register or installation may fail.

- Turn off the **Mobile data** or **Cellular Data** on your smartphone.



- Connect your smartphone to the wireless router.



Wireless LAN Module Specifications

Model	LCW-004
Frequency Range	2412 to 2472 MHz
Output Power (Max.)	IEEE 802.11b: 17.82 dBm
	IEEE 802.11g: 17.72 dBm
	IEEE 802.11n: 16.61 dBm

Wireless function S/W version: V 1.0

For consideration of the user, this device should be installed and operated with a minimum distance of 20 cm between the device and the body.

Open Source Software Notice Information

To obtain the source code under GPL, LGPL, MPL, and other open source licenses, that is contained in this product, please visit <http://opensource.lge.com>.

In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are available for download.

LG Electronics will also provide open source code to you on CD-ROM for a charge covering the cost of performing such distribution (such as the cost of media, shipping, and handling) upon email request to opensource@lge.com. This offer is valid for a period of three years after our last shipment of this product. This offer is valid to anyone in receipt of this information.

Declaration of Conformity



Hereby, LG Electronics declares that the radio equipment type Washing Machine is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:

<http://www.lg.com/global/support/cedoc/cedoc#LG%20Electronics%20European%20Shared%20Service%20Centre%20B.V.%20Krijgsman%201,%201186%20DM%20Amstelveen,%20The%20Netherlands>

Standby Power Consumption

Standby power consumption	0.5 W
Network standby power consumption	2.0 W
The period of time after which the power management function, or a similar function, switches the equipment automatically into standby and/or off mode and/or the condition providing networked standby	20 minutes

Smart Diagnosis

This feature is only available on models with the or logo.

Use this feature to help you diagnose and solve problems with your appliance.

NOTE

- For reasons not attributable to LGE's negligence, the service may not operate due to external factors such as, but not limited to, Wi-Fi unavailability, Wi-Fi disconnection, local app store policy, or app unavailability.
- The feature may be subject to change without prior notice and may have a different form depending on where you are located.

Using LG ThinQ to Diagnose Issues

If you experience a problem with your Wi-Fi equipped appliance, it can transmit troubleshooting data to a smartphone using the **LG ThinQ** application.

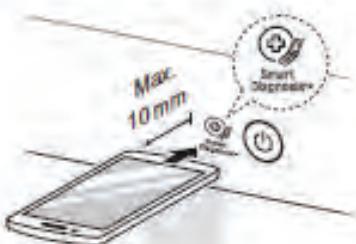
- Launch the **LG ThinQ** application and select the **Smart Diagnosis** feature in the menu. Follow the instructions provided in the **LG ThinQ** application.

Using Audible Diagnosis to Diagnose Issues

Follow the instructions below to use the audible diagnosis method.

- Launch the **LG ThinQ** application and select the **Smart Diagnosis** feature in the menu. Follow the instructions for audible diagnosis provided in the **LG ThinQ** application.

- 1 Press the **Power** button to turn on the appliance.
 - Do not press any other buttons.
- 2 Place the mouthpiece of your smartphone close to the  or  logo.



- 3 Press and hold the **Temp.** button for 3 seconds or longer while holding the smartphone mouthpiece to the logo until the data transfer is complete.
 - Keep the smartphone in place until the data transfer has finished. Time remaining for data transfer is displayed.
- 4 After the data transfer is complete, the diagnosis will be displayed in the application.

NOTE

- For best results, do not move the smartphone while the tones are being transmitted.

MAINTENANCE

⚠ WARNING

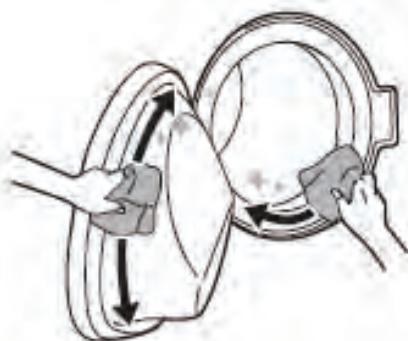
- Unplug the appliance before cleaning to avoid the risk of electric shock. Failure to follow this warning may result in serious injury, fire, electric shock, or death.
- Never use harsh chemicals, abrasive cleaners, or solvents to clean the appliance. They may damage the finish.

Cleaning After Every Wash

What to Clean

Always remove items from the washing machine as soon as the cycle is complete. Leaving damp items in the washing machine can cause wrinkling, colour transfer, and odour.

- After the wash cycle is finished, wipe the door and door seal to remove any moisture.
- Leave the door slightly open to dry the drum.
- Wipe the appliance with a dry cloth to remove any moisture.



Cleaning the Exterior

Proper care of your appliance can extend the service life.

Exterior

- Immediately wipe off any spills.
- Wipe with a damp cloth and then again with a dry cloth ensuring there is no moisture in cabinet joints or crevices.
- Do not press on the surface or the display with sharp objects.

Door

- Wash with a damp cloth on the outside and inside and then dry with a soft cloth.

⚠ WARNING

- Do not attempt to separate any panels or disassemble the appliance. Do not apply any sharp objects to the control panel in order to operate the appliance.

⚠ WARNING

- Leave the door open to dry inside of the appliance only if the children are supervised at home.

9. Part inspection

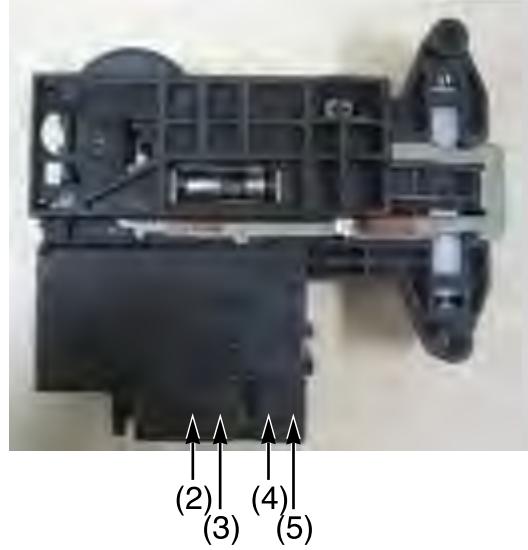
⚠ WARNING When Resistance (Ohm) checking the Component, be sure to turn the power off, and do voltage discharge sufficiently.

9-1. FILTER ASSEMBLY (LINE FILTER)

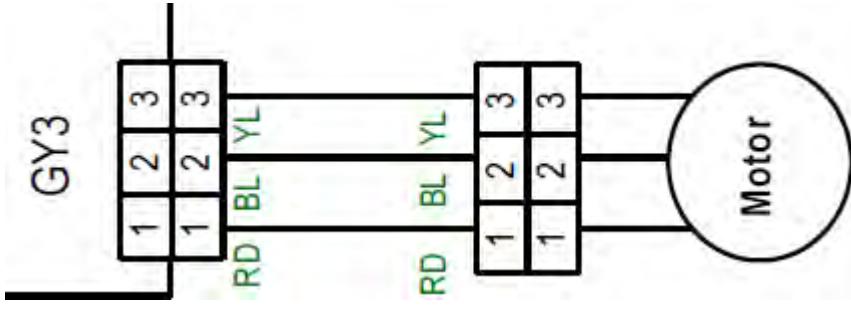
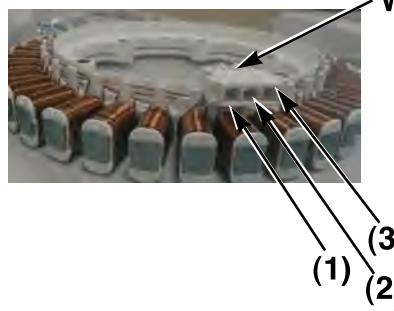
Wiring diagram	Circuit in the MAIN PWB / Wiring Diagram 						
Test points and Result Result	 <table border="1"><thead><tr><th>Test Points</th><th>Result</th></tr></thead><tbody><tr><td>WH (1) to RD (3)</td><td>0 Ω</td></tr><tr><td>WH (3) to RD (1)</td><td>0 Ω</td></tr></tbody></table>	Test Points	Result	WH (1) to RD (3)	0 Ω	WH (3) to RD (1)	0 Ω
Test Points	Result						
WH (1) to RD (3)	0 Ω						
WH (3) to RD (1)	0 Ω						

9-2. DOOR LOCK SWITCH ASSEMBLY

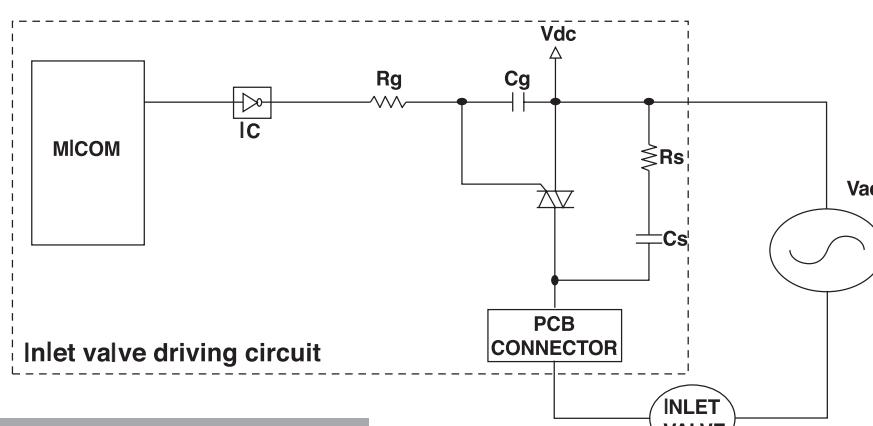
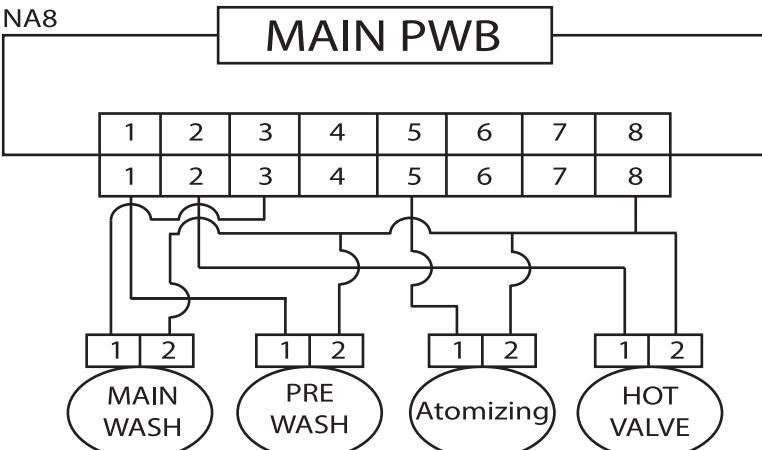
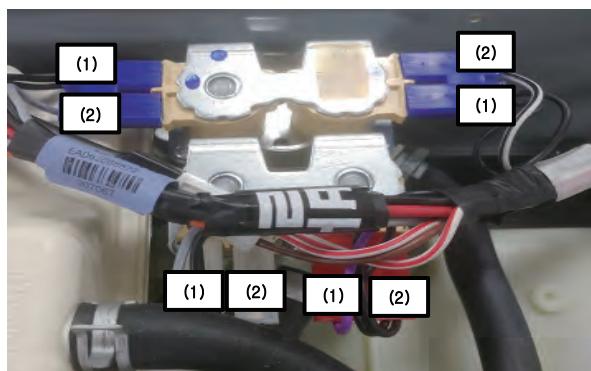
Wiring diagram	Circuit in the MAIN PWB / Wiring Diagram
<p>Function</p> <p>The Door Lock Switch Assembly consists of a Heating PTC, a Bimetal, a Protection PTC, and a Solenoid. It locks the door during a wash cycle.</p> <p>1. Operation for door closing</p> <ul style="list-style-type: none"> - After the system turns on, PTC heating starts up through terminal 2~4's authorizing the power on. - After PTC heating starts up and before solenoid operation is driven, force the system to the off position through CAM. <p>⇒ Door close</p> <ul style="list-style-type: none"> - Authorizing one impulse through terminal 3~4 (PTC & solenoid) will make the door lock. - Door lock is detected when switches in terminal 4~5 are set closed. <p>⇒ CAM rotation will forcibly clear off the connection.</p> <p>The maximum, allowable number of impulse authorizations is 2.</p> <ul style="list-style-type: none"> - Upon the third authorization of the impulse, the position of CAM goes back to the door-open position. - Authorizing the impulse occurs in 4.5 seconds upon input for max performance and two authorization processes are allowed at most. <p>⇒ Normal operation period of PTC heating: 1.5 – 5 seconds. (Defects from the development process.)</p> <p>2. Operation for door opening</p> <ul style="list-style-type: none"> - With a temporary stop, door automatically opens by CAM rotations after authorizing the impulse from the terminal 3 ~ 4 and the power turns off – maximum of 3 times of the authorizing period. - Upon the fourth authorization of the impulse, the position of CAM goes back to the door-close position. 	

Test points																
Result	<table border="1" data-bbox="510 1175 1281 1432"> <thead> <tr> <th>Test Points</th><th>Result</th><th>Remarks</th></tr> </thead> <tbody> <tr> <td>(2) to (4)</td><td>700-1500 Ω</td><td>At 77°F (25°C)</td></tr> <tr> <td>(3) to (4)</td><td>60-90 Ω</td><td>At 77°F (25°C)</td></tr> <tr> <td>(4) to (5)</td><td>Infinity</td><td></td></tr> <tr> <td>(2) to (4)</td><td>120 Vac</td><td>Voltage Input</td></tr> </tbody> </table>	Test Points	Result	Remarks	(2) to (4)	700-1500 Ω	At 77°F (25°C)	(3) to (4)	60-90 Ω	At 77°F (25°C)	(4) to (5)	Infinity		(2) to (4)	120 Vac	Voltage Input
Test Points	Result	Remarks														
(2) to (4)	700-1500 Ω	At 77°F (25°C)														
(3) to (4)	60-90 Ω	At 77°F (25°C)														
(4) to (5)	Infinity															
(2) to (4)	120 Vac	Voltage Input														

9-3. STATOR ASSEMBLY

Wiring diagram	Circuit in the MAIN PWB / Wiring Diagram 								
Function	<p>The DD motor can be driven from stopped to maximum speed in infinite steps in either direction.</p> <p>There are 36 poles on the stator; 12 permanent magnets spaced around the rotor. There are no brushes to wear out. Unlike a more traditional brushless motor, the rotor surrounds the stator rather than being attached to it.</p>								
Test points (Windings)									
Result (Windings)	<table border="1" data-bbox="453 1815 921 2007"> <thead> <tr> <th data-bbox="453 1815 748 1863">Test Points</th><th data-bbox="748 1815 921 1863">Result</th></tr> </thead> <tbody> <tr> <td data-bbox="453 1863 748 1911">(1) to (2)</td><td data-bbox="748 1863 921 1911">5-15 Ω</td></tr> <tr> <td data-bbox="453 1911 748 1959">(2) to (3)</td><td data-bbox="748 1911 921 1959">5-15 Ω</td></tr> <tr> <td data-bbox="453 1959 748 2007">(3) to (1)</td><td data-bbox="748 1959 921 2007">5-15 Ω</td></tr> </tbody> </table>	Test Points	Result	(1) to (2)	5-15 Ω	(2) to (3)	5-15 Ω	(3) to (1)	5-15 Ω
Test Points	Result								
(1) to (2)	5-15 Ω								
(2) to (3)	5-15 Ω								
(3) to (1)	5-15 Ω								

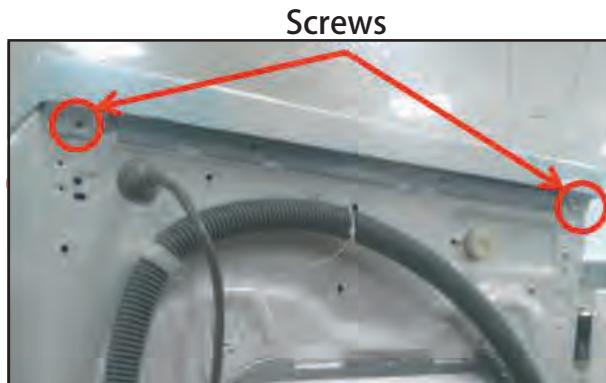
9-5. INLET VALVE ASSEMBLY

Wiring diagram	<p>Circuit in the MAIN PWB</p>  <p>Wiring Diagram</p>  <p>* All load circuits in wiring diagram are all the same.</p>				
Function	<p>Depending on the cycle and water temperature, the controller will energize the hot or cold water valve solenoids to meet the selected water temperature.</p>				
Test points and Result	<p>After pull out the connector of defective valve, check the resistance.</p>  <table border="1" data-bbox="1079 1751 1453 1875"> <tr> <td>Test points</td><td>(1)-(2)</td></tr> <tr> <td>Result</td><td>0.8-1.2 k</td></tr> </table>	Test points	(1)-(2)	Result	0.8-1.2 k
Test points	(1)-(2)				
Result	0.8-1.2 k				

10. DISASSEMBLY INSTRUCTIONS

* Remove the power cord from the outlet before disassembling or repairing the unit.

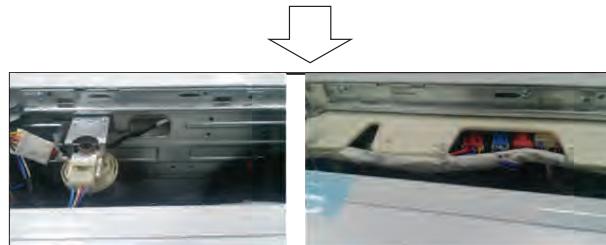
CONTROL PANEL ASSEMBLY



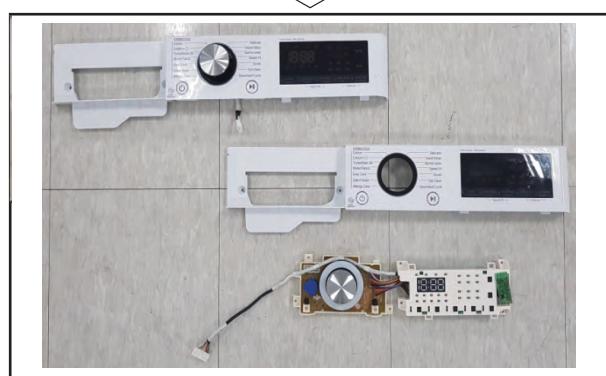
- ① Unfasten the screws from the parts displayed in the fig.
- ② Disassemble the top plate assembly by sliding it back and then lifting it up.



- ③ Pull the drawer panel assembly out.
- ④ Unfasten the screws from the parts displayed in the fig.



- ⑤ Unfasten the screws from the parts displayed in the fig.
- ⑥ Disconnect the wiring connectors between the multi harness and the control panel assembly.



- ⑦ Disassemble the control panel assembly.
- ⑧ Disassemble the display PCB assembly from the control panel assembly by unfastening the screws.

*When re-assemble should fasten by screw (4EA)



- ⑨
- ⑩ Disconnect the wiring connector between the Display PCB assembly and the NFC PCB assembly.

PWB ASSEMBLY(MAIN)



① Unscrew two screw of the PWB



② First Disassembly atomizing hose from the PWB and Pull the PWB assembly in direction of red arrow



③ Disassembly PWB like the picture

DISPENSER ASSEMBLY



① The plate assembly(Top) are disassembled.

② Pull the drawer to arrow direction.

③ Two screws are unscrewed.

④ Clamp

⑤ Cutting cable ties and the ventilation hose are disassembly on the dispenser

INLET VALVE



- ① Disconnect the wiring connector.
- ② Remove the valve by two screws of the valve holder.

* When reconnecting the connector

VALVE ① (Main Wash)	Gray/Black
VALVE②(Pre Wash)	Blue/Black

- Rating : 12V
- Resistant : 3.5~4.5kΩ

DOOR



- ① Open the door completely.
- ② Remove the three screws from the hinge.

* When removing the Door Assembly, it is necessary to hold the Bracket that is inner of the Cabinet Cover.

Removing method of remained water

Pull it out from hose.

* First, prepare a bucket to put in the remained water.



CAP(REMAING HOSE)

CABINET COVER



- ① The plate assembly(Top) is disassembled.
- ② Pull out the drawer and unscrew 2 screws.
- ③ Lift the side the Control Panel Assembly and pull it out



- ① Two screws are unscrewed.
- ② Push out PANEL ASSEMBLY, CONTROL after Push the hook(①, ②) below.
- ③ Unscrew the screws from the lower cover.



- ② Disassembly cap cover and pump case.



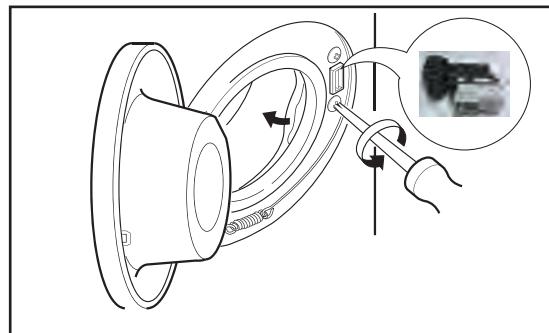
- ③ Unscrew the screw from the CABINET COVER.
- ④ Remove gasket clamp and release gasket from cabinet cover.



④ Lift and separate the cabinet cover.

* NOTE : When assembling the CABINET COVER, connect the Door S/W connector.

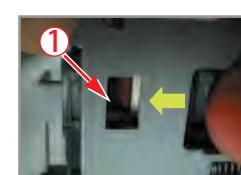
SWITCH ASSY, DOOR LOCK



- ① Two screws are unscrewed and disassembly cabinet cover.
- ② The Door Lock S/W is disconnected form the wiring connector and the strap.

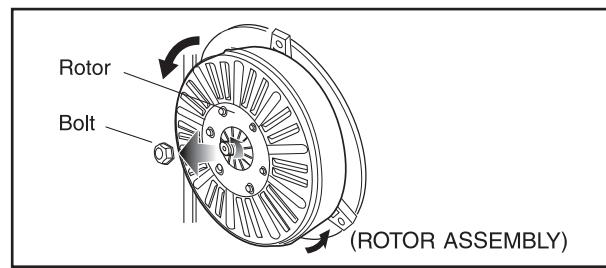


- Just check cut-off.
- Check the operating time.

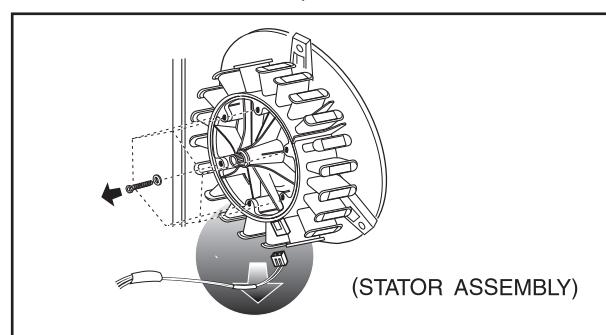


- * Door Locking time : 1~8 sec.
Check the time between from input the power to part ① move up, then Door locked.
- * Door Releasing time : 25~100 sec.
Check the time between from off the power to parts ① move down, then Door released.

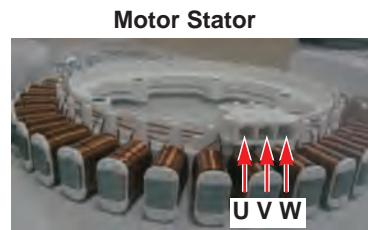
ROTOR ASSEMBLY, STATOR ASSEMBLY, FRICTION DAMPER



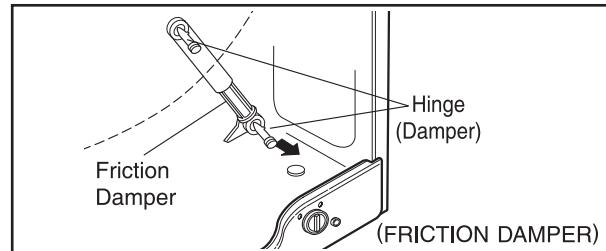
- ① Remove the back cover.
- ② After loosening the bolt, Rotor, pull out the rotor.



- ① Remove the 6 bolts from the stator.
- ② Disconnect the 2 connectors.



V ~ U (8~11)
U ~ W (8~11)
W ~ V (8~11)

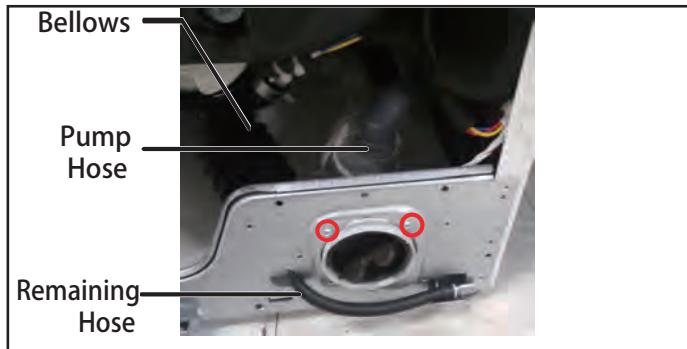


- ① Remove the hinges (Damper) at the Tub.
- ② The Hinge(Damper) at the base is pulled off by pressing on the snaps at the sharp end.
- ③ The hinge at the base is pulled off.
(In directions of the arrow)

PUMP

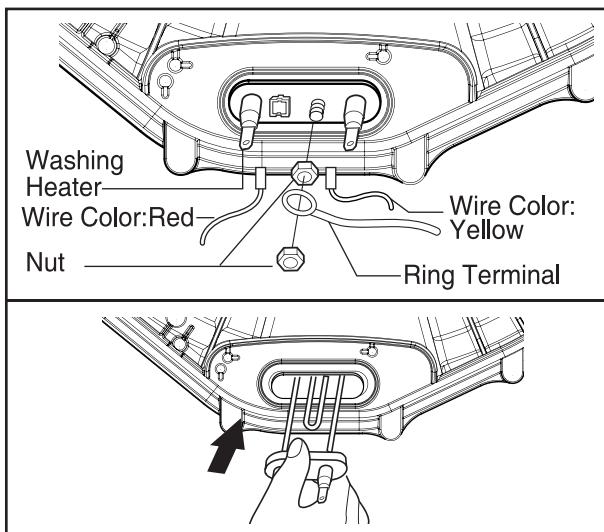


- ① Disassembly Top Plate, Control Panel, Drawer Panel Assembly, Cabinet Cover Assembly, Lower Cover Assembly



- ④ Remove pump outlet hose.
- ⑤ Remove tub pump bellows.
- ⑥ Remove cap(Remaining Hose).
- ⑦ Disconnect the wiring.
- ⑧ Three screws are unscrewed from the cabinet.
- ⑨ Remove the pump to arrow direction.
 - Rating : 26V
 - Resistant : 3.46~3.98 Ω

HEATER



- ① Loosen the nut.
- ② Remove washing heater by pulling out.

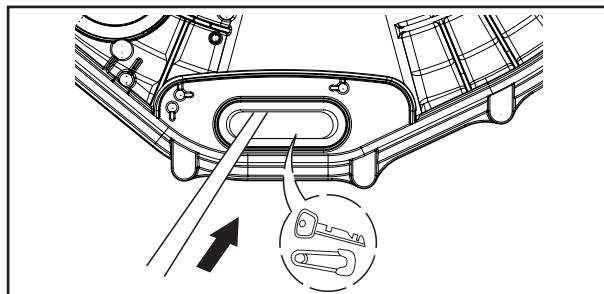
< Heater for Washing>

- Rating : 230V 2000W
- Resistant : 24.5~28.5 Ω

CAUTION

When assembling the washing heater, insert the heater to heater clip on the bottom of tub and check the position of wire color.

WHEN FOREIGN OBJECT STUCK BETWEEN DRUM AND TUB



- ① Remove washing heater.
- ② Remove the foreign object(wire,coin,etc) by inserting long bar in the hole.

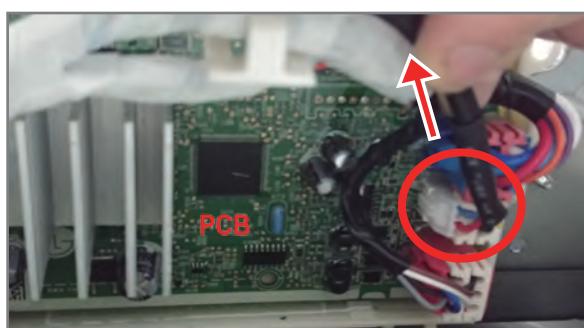
How to disassemble Vibration sensor (Only for Vivace 550 model)



① Open the top plate by removing 2ea screws.



② Cut cable ties from coating guide and tub cover.



③ Remove the vibration sensor housing from the PCB.



④ Remove the vibration sensor from tub cover.

How to disassemble 3D multi (Vivace 550 & Slim model)



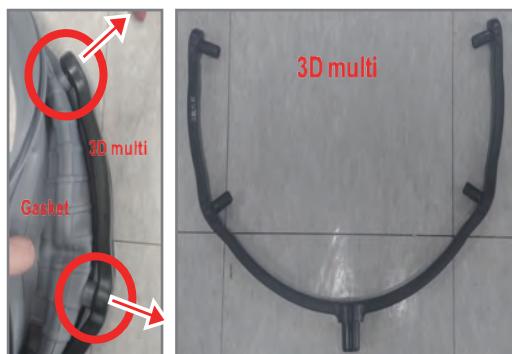
① Open the top plate and disassemble control panel and cap cover&pump case.



② Remove cabinet cover after disassemble gasket clamp and door S/W harness.



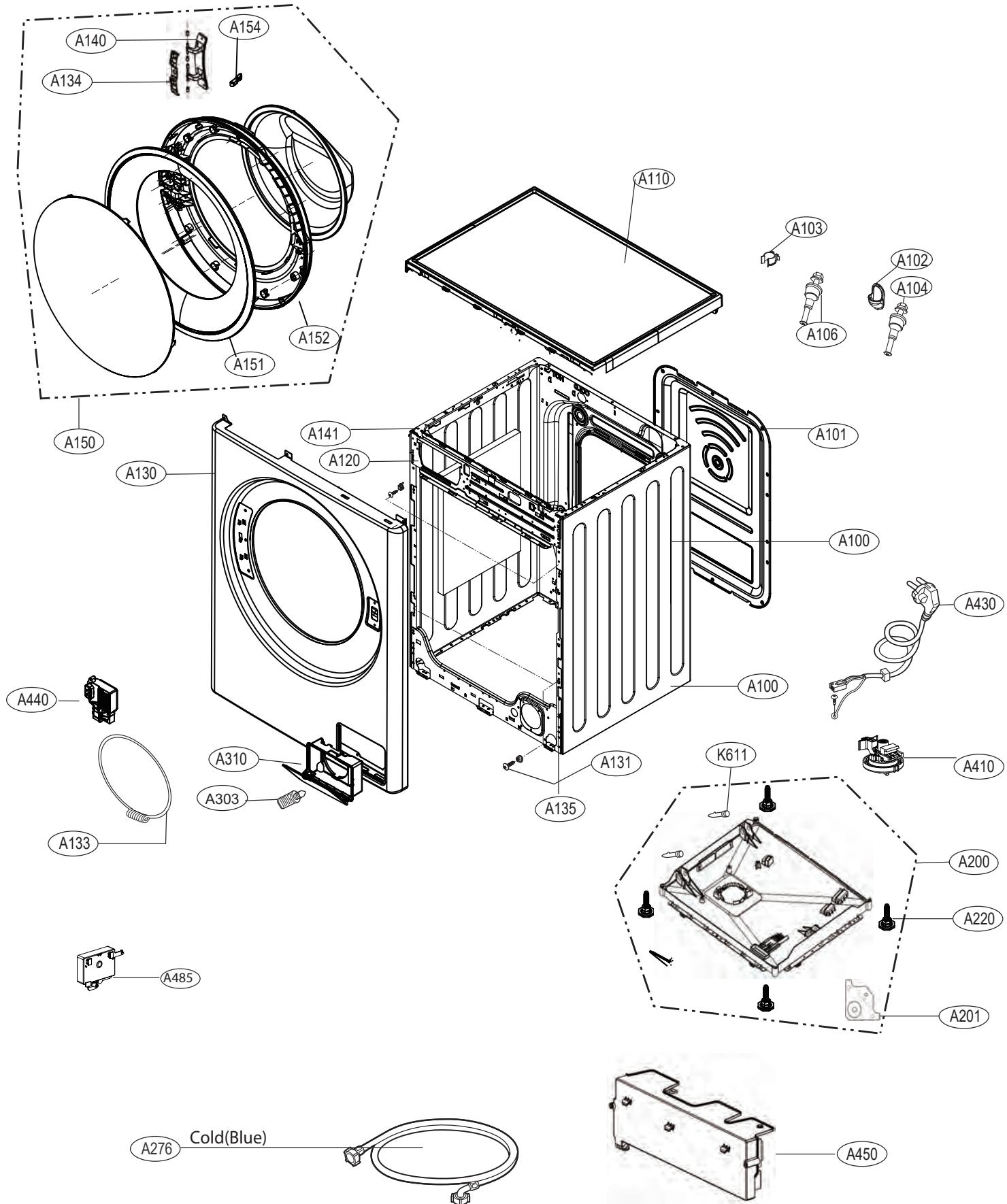
③ Remove connector and gasket & 3D nozzle clamp. And then disassemble gasket from tub cover.



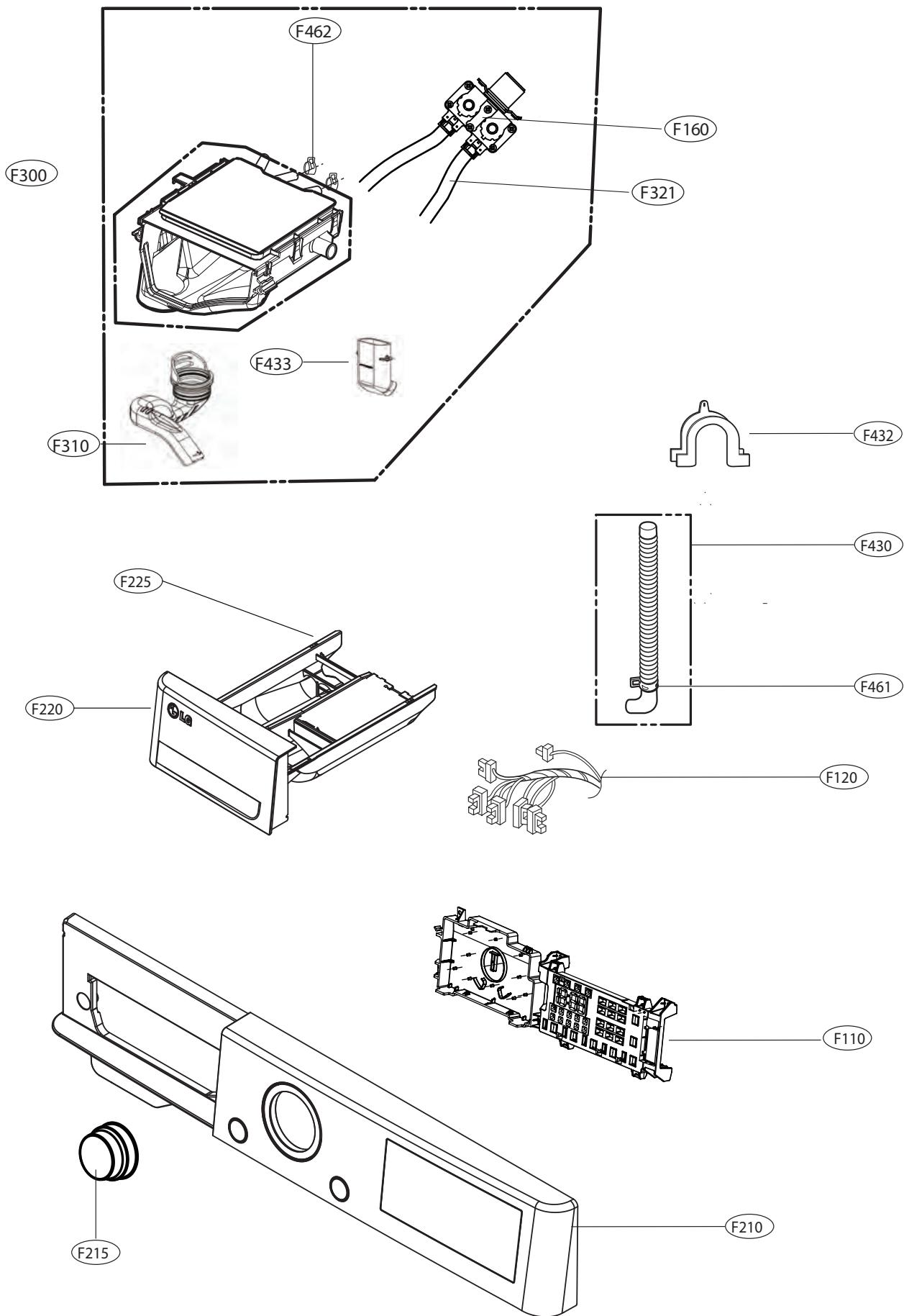
④ Remove 3D multi from gasket.

EXPLODED VIEW AND PART LIST

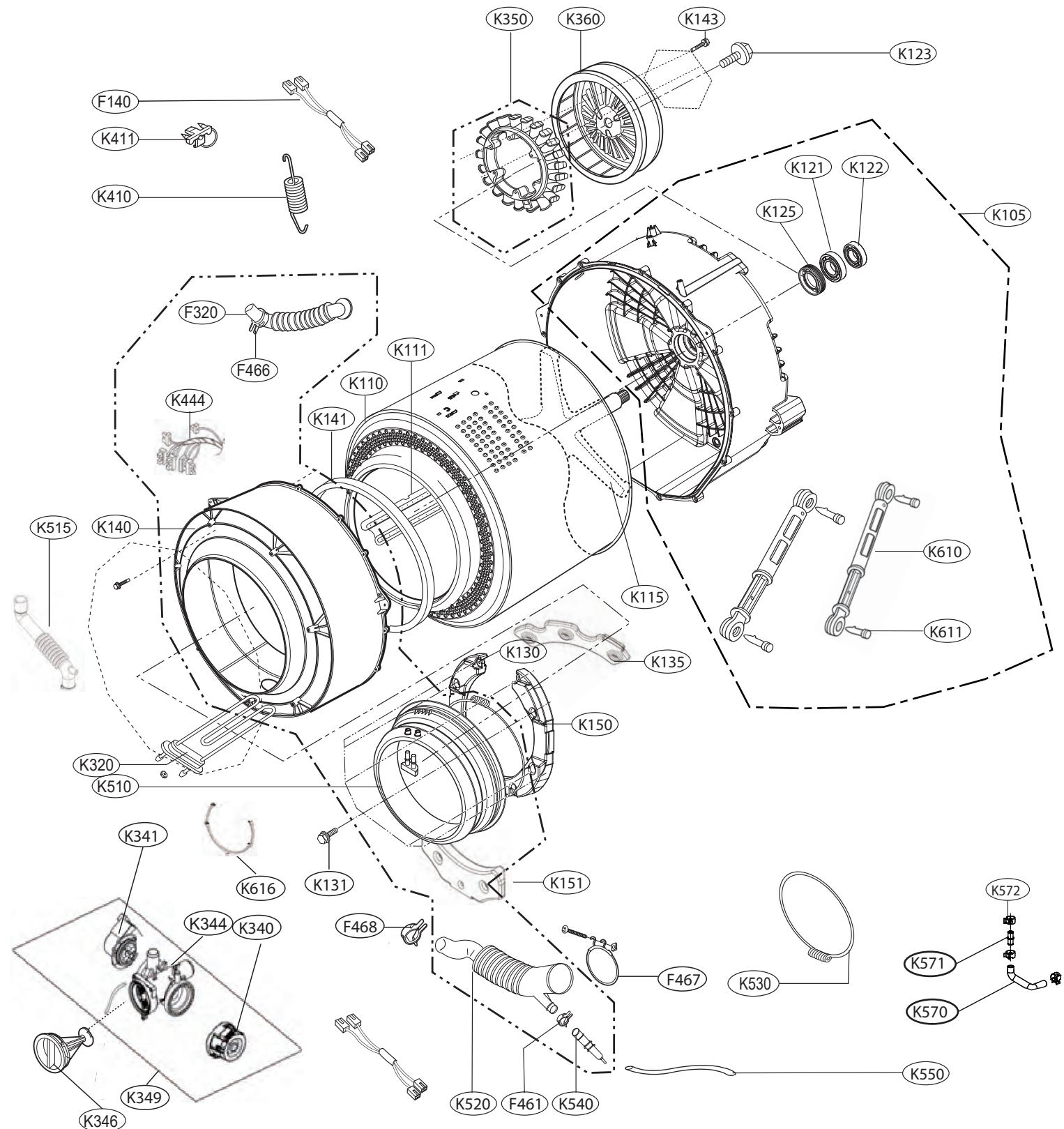
THE PART LIST OF CABINET ASSEMBLY



THE EXPLODED VIEW OF CONTROLANEL & DISPENSER ASSEMBLY



THE EXPLODED VIEW OF DRUM & TUB ASSEMBLY





P/No.: MFL69882965