LG

WASHING MACHINE
SERVICE MANUAL

⚠ CAUTION

READ THIS MANUAL CAREFULLY TO DIAGNOSE
PROBLEMS CORRECTLY BEFORE SERVICING THE UNIT.

## MODEL: WM2496H*M

LG Electronics Inc.

CONTENTS

1. SPECIFICATIONS

| ITEM		WM2496H*M
COLOR		W:BLUE WHITE, S: TITANIUM
POWER SUPPLY		AC 120 V, 60 Hz
PRODUCT WEIGHT		192 lbs (87kg)
ELECTRIC POWER CONSUMTION	WASHING	280 W
	DRAIN MOTOR	80 W
	WASH HEATER	1000 W
REVOLUTION SPEED	WASH	46 rpm
	SPIN	0-1200 rpm
CYCLES		9
WASH/RINSE TEMPERATURES		5
SPIN SPEEDS		5
OPTIONS		Prewash, Rinse+Spin, Extra Rinse, Water Plus, Stain Cycle
WATER CIRCULATION		Incorporated
OPERATIONAL WATER PRESSURE		14.5−116 psi (100-800 kPa)
CONTROL TYPE		Electronic
WASH CAPACITY [cu.ft]		3.47 (4.0 IEC)
DIMENSIONS		27" (W) X 29$^3/_4$" (D) X 38$^{11}/_{16}$" (H), 50$^{13}/_{16}$" (D, door open)
DELAY WASH		up to 19 hours
DOOR SWITCH TYPE		PTC + Solenoid
WATER LEVEL		10 steps (by sensor)
LAUNDRY LOAD SENSING		Incorporated
ERROR DIAGNOSIS		Incorporated
AUTO POWER OFF		Incorporated
CHILD LOCK		Incorporated
RLM ENABLE		Incorporated

2. FEATURES & TECHNICAL EXPLANATION

2-1. FEATURES
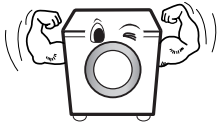
■ **Ultra Capacity**

The Larger drum enables not just higher head drop and stronger centrifugal force, but also less tangling and wrinkling of the laundry. Heavier loads, such as king size comforters, blankets, and curtains, can be washed.
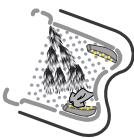
■ **Direct Drive System**

The advanced Brushless DC motor directly drives the drum without belt and pulley.
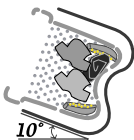
■ **Tilted Drum and Extra Large Door Opening**

Tilted drum and extra large opening make it possible to load and unload clothing more easily.

■ **Water Circulation**

Spray detergent solution and water onto the load repeatedly. Clothes are soaked more quickly and thoroughly during the wash cycle. Detergent suds are eliminated more easily by the water shower during rinse cycle. The water circulation system uses both water and detergent more efficiently.
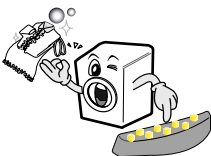
■ **RollerJets**

Washing ball enhances the wash performance and reduces damage to the clothing. The jets spray and help tumble clothes to enhance washing performance while maintaining fabric care.
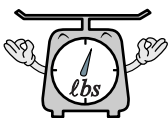
■ **Automatic Wash Load Detection**

Automatically detects the load and optimizes the washing time.

■ **Built-in Heater**

Internal heater helps to maintain water temperature at its optimum level for selected cycles.

■ **Child Lock**

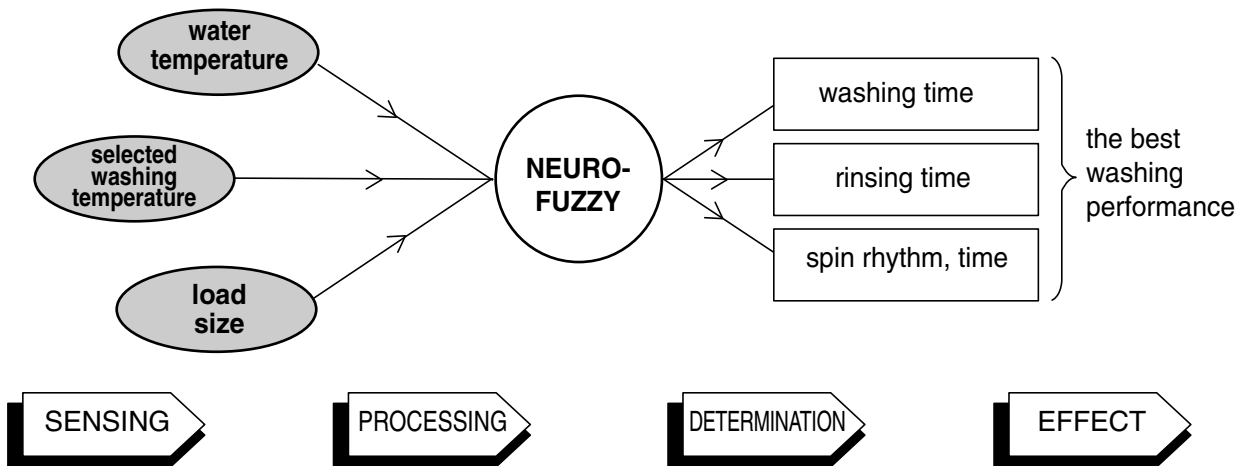The Child lock prevents children from pressing any button to change the settings during operation.

■ **Using the RLM (Remote Laundry Monitor)**

The RLM monitors status of your washer and/or dryer. You can plug the display unit

2-2. NEURO FUZZY WASHING TIME OPTIMIZATION

To get the best washing performance, optimal time is determined by the water temperature, the selected washing temperature, and the size of the load.

water temperature		washing time	
selected washing temperature	**NEURO-FUZZY**	rinsing time	the best washing performance
load size		spin rhythm, time	

SENSING   PROCESSING   DETERMINATION   EFFECT

2-3. WATER LEVEL CONTROL

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

2-4. DOOR CONTROL

● The door can be opened by pulling the door handle whenever washer is not in operation.
● When the cycle is completed, the DOOR LOCKED light will turn off.
● If a power failure has occurred while in operation, the door will unlock after 5 minutes.
● Clicking sounds can be heard when the door is locked/unlocked.

2-5. THE DOOR CAN NOT BE OPENED

● While program is operating

● When a power failed and power plug is taken out in operation

● While Door Lock lights turn on.

● White the motor is in the process of intertial rotating, through the operation is paused.

2-6. DOOR LOCKED LAMP LIGHTS

● When the frequency of water level is lower than 22.9 kHz

   (It can be canceled when the frequency is more than 23.8 kHz)

● When the temperature inside the tub is higher than 45 °C and water level is not 25.5 kHz

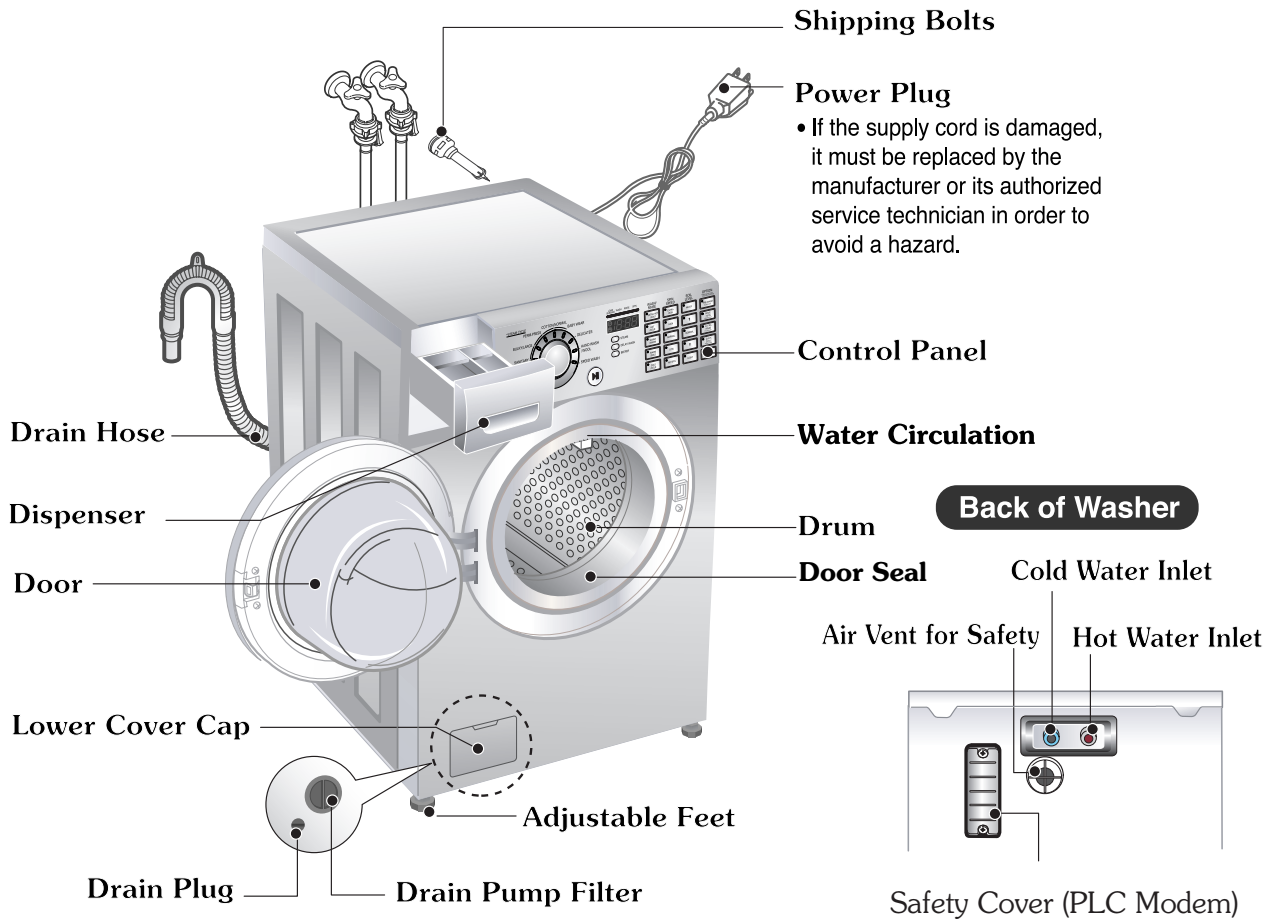   (It can be canceled when the water level is 25.5 kHz or the temperature inside the tub is lower than 40 °C)

2-7. CHILD LOCK

● Use this option to prevent unwanted use of the washer. Press and hold PRE WASH button for 3 seconds to lock/unlock control.

● When Child lock is set, CHILD LOCK lights and all buttons are disabled except the Power ⓞ button. You can lock the washer while it is operating.
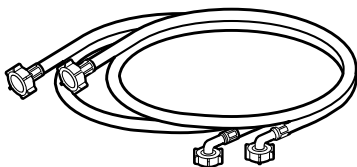
2-8. WATER CIRCULATION

● When Washing and Rinsing function of shower at the upper part of Gasket.

● When Washing, it continuously operates for 3 minutes and intermittently.

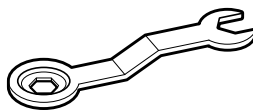● When Rinsing, it continuously operates after completion of water supply.

3. PARTS IDENTIFICATION

Shipping Bolts

Power Plug

• If the supply cord is damaged, it must be replaced by the manufacturer or its authorized service technician in order to avoid a hazard.

Control Panel

Drain Hose

Water Circulation

Dispenser

Back of Washer

Drum

Door

Door Seal

Cold Water Inlet

Air Vent for Safety

Hot Water Inlet

Lower Cover Cap

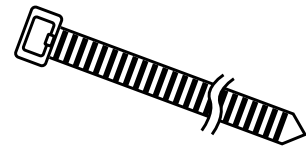Adjustable Feet

Drain Plug

Drain Pump Filter

Safety Cover (PLC Modem)

■ ACCESSORIES

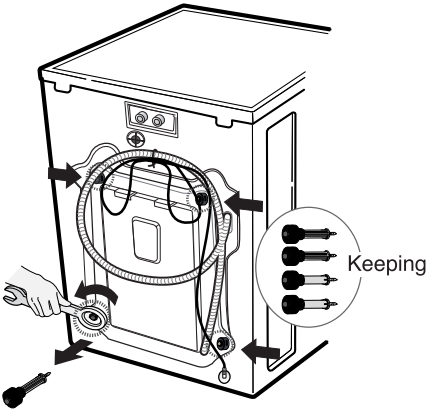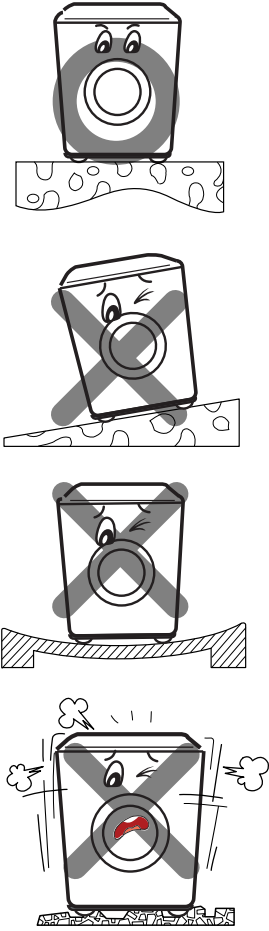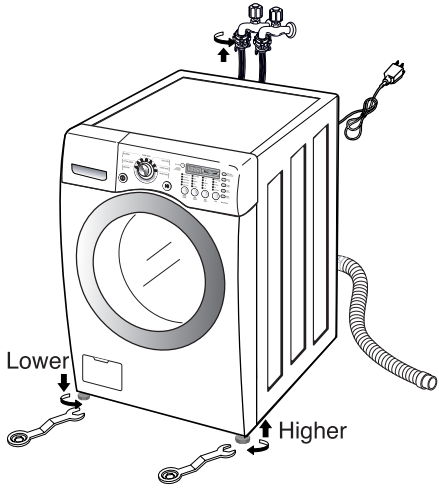Hot/Cold (1 each)
Hose

Wrench

Tie strap (Option)

to secure drain hose to standpipe, inlet hose, or laundry tub

4. INSTALLATION & TEST

⌷ Before servicing, ask the customer what the trouble is.

⌷ Check the setup (power supply is 120 V AC, remove the transit bolts....).

⌷ Check with the troubleshooting guide.

⌷ Plan your service method by referring to the disassembly instructions.

⌷ Service the unit.

⌷ After servicing, operate the appliance to see whether it functions correctly.

■ STANDARD INSTALLATION
   The appliance should be installed as follows:

| REMOVE THE SHIPPING BOLTS	INSTALL THE APPLIANCE ON A FLAT AND FIRM SURFACE	ADJUST THE LEVELING
• Remove the 4 shipping bolts with the supplied wrench. ※ Do first lower side to remove easily. • Keep the shipping bolts and spanner for future use. • Insert the 4 caps (provided) into the hole. Keeping		• Turn the leveling feet to adjust the appliance. Lower Higher • Turn clockwise to raise; counterclockwise to lower.

■ HOW TO CONNECT THE INLET HOSE

- Verify that the rubber washer is inside of the

  valve connector.

- Tighten the inlet hose securely to prevent leaks.
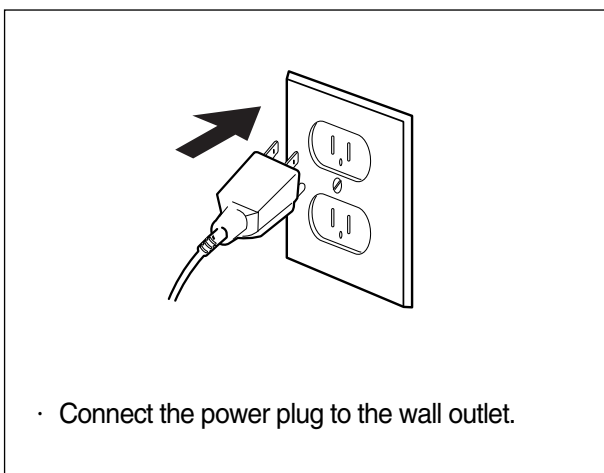
Hot   Cold
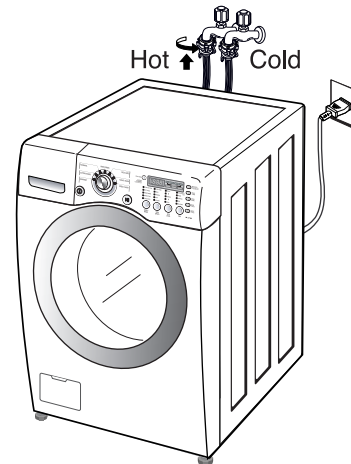
■ CONNECT THE DRAIN HOSE
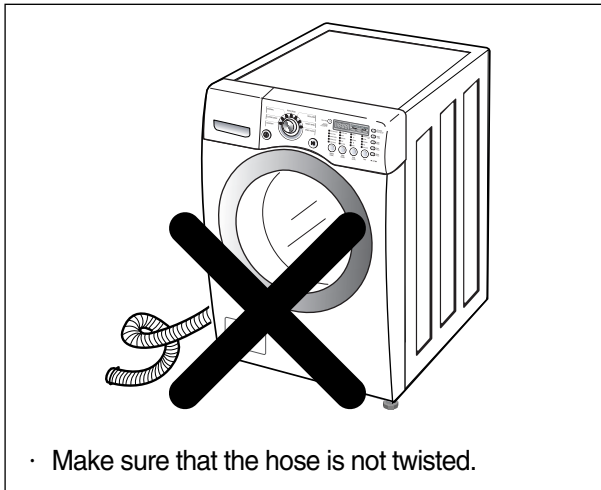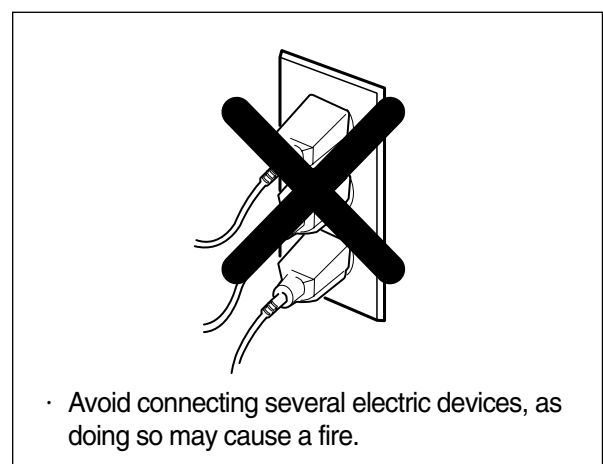
· Make sure that the hose is not twisted.
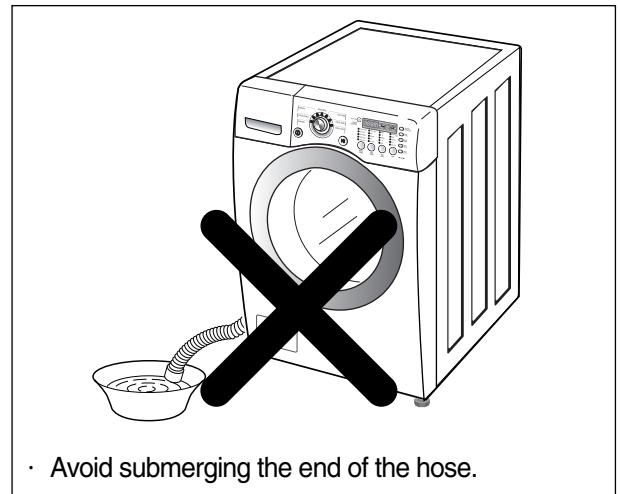
· Avoid submerging the end of the hose.

※ The end of the drain hose should be placed less than 96" from the floor.
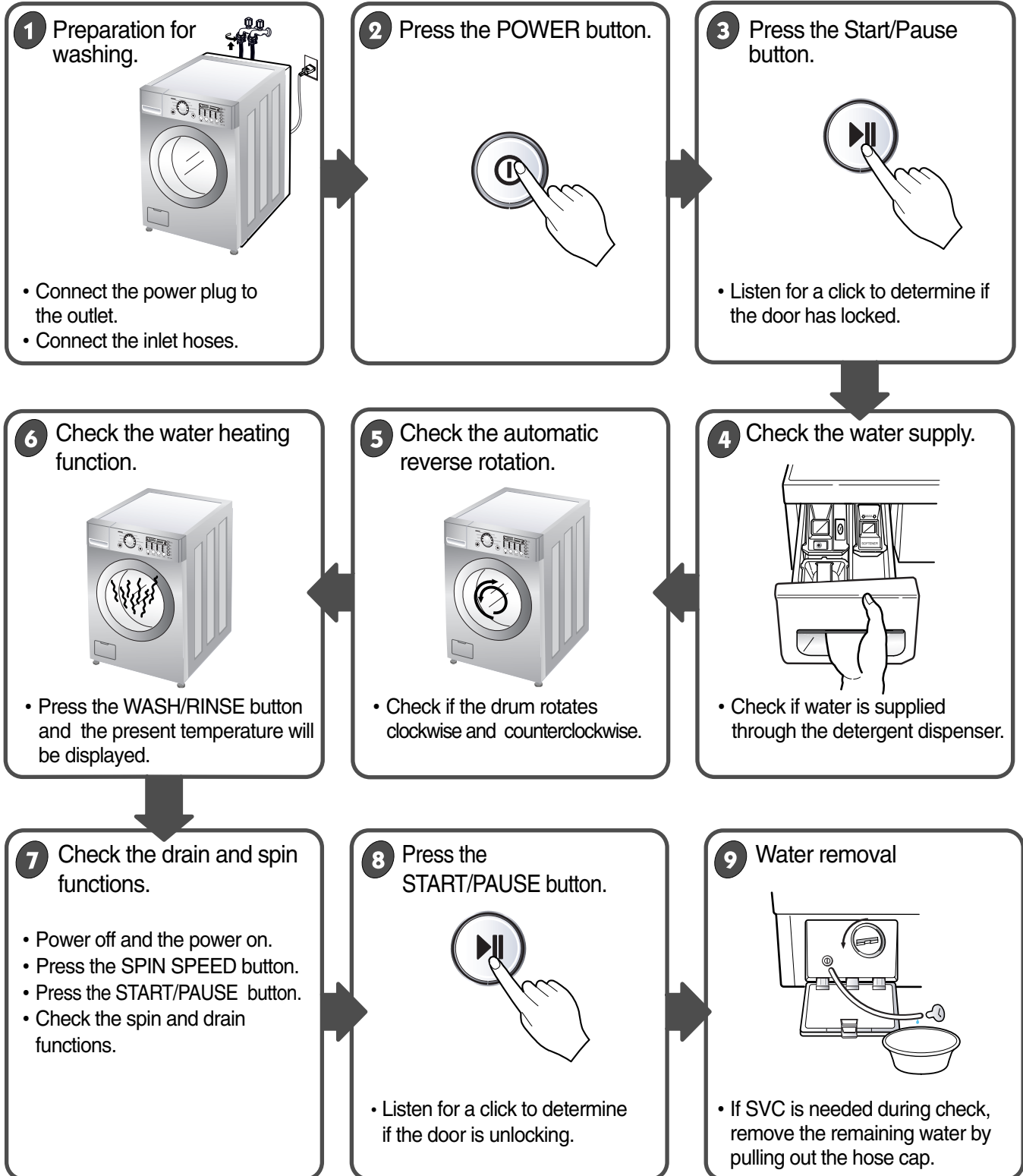
■ CONNECT POWER PLUG

· Connect the power plug to the wall outlet.

· Avoid connecting several electric devices, as doing so may cause a fire.
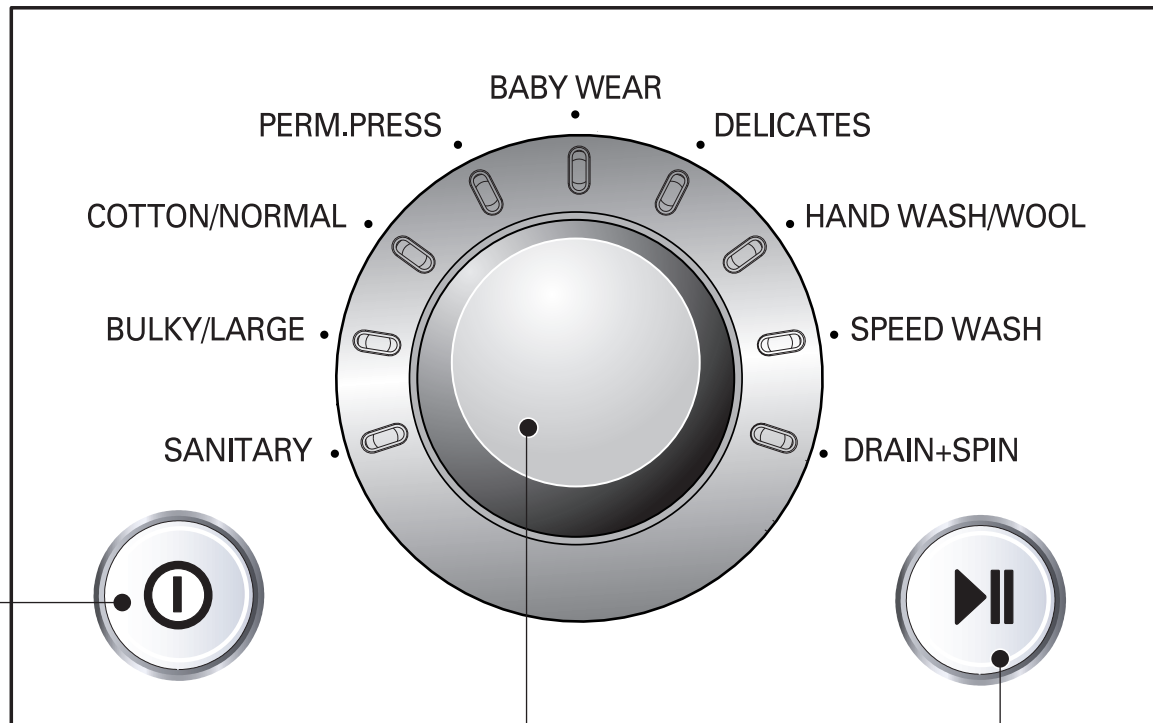
7 TEST OPERATION

1 Preparation for washing.

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

2 Press the POWER button.

3 Press the Start/Pause button.

- Listen for a click to determine if the door has locked.

6 Check the water heating function.

- Press the WASH/RINSE button and the present temperature will be displayed.

5 Check the automatic reverse rotation.

- 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.

- Power off and the power on.
- Press the SPIN SPEED button.
- Press the START/PAUSE button.
- Check the spin and drain functions.

8 Press the START/PAUSE button.

- 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.

10

5. OPERATION

■ WM2496H*M

BABY WEAR

PERM.PRESS   DELICATES

COTTON/NORMAL   HAND WASH/WOOL

BULKY/LARGE   SPEED WASH

SANITARY   DRAIN+SPIN

LOAD SENSING   WASH   RINSE   SPIN

18:88

CUSTOM PROGRAM

DELAY WASH

BEEPER

WASH/RINSE	SPIN SPEED	SOIL LEVEL	OPTION * PRESS & HOLD 3 SEC. FOR EXTRA FUNCTIONS
EXTRA HOT /COLD	EXTRA HIGH	HEAVY	PRE-WASH * CHILD LOCK
HOT /COLD	HIGH	▼	RINSE +SPIN
WARM /WARM	MEDIUM	NORMAL	EXTRA RINSE * TUB CLEAN
WARM /COLD	LOW	▼	STAIN CYCLE * SPIN SENSE™
COLD /COLD	NO SPIN	LIGHT	WATER PLUS

Power Button

- Use this button to turn the power **On/Off**.

Status Indicator

- It shows elapsed time of the cycle the washer is operating.

BABY WEAR

PERM.PRESS   DELICATES

COTTON/NORMAL   HAND WASH/WOOL

BULKY/LARGE   SPEED WASH

SANITARY   DRAIN+SPIN

Cycle Selector Knob

- Rotate the **Cycle selector knob** to select the cycle designed for different types of fabric and soil levels.

Start/Pause
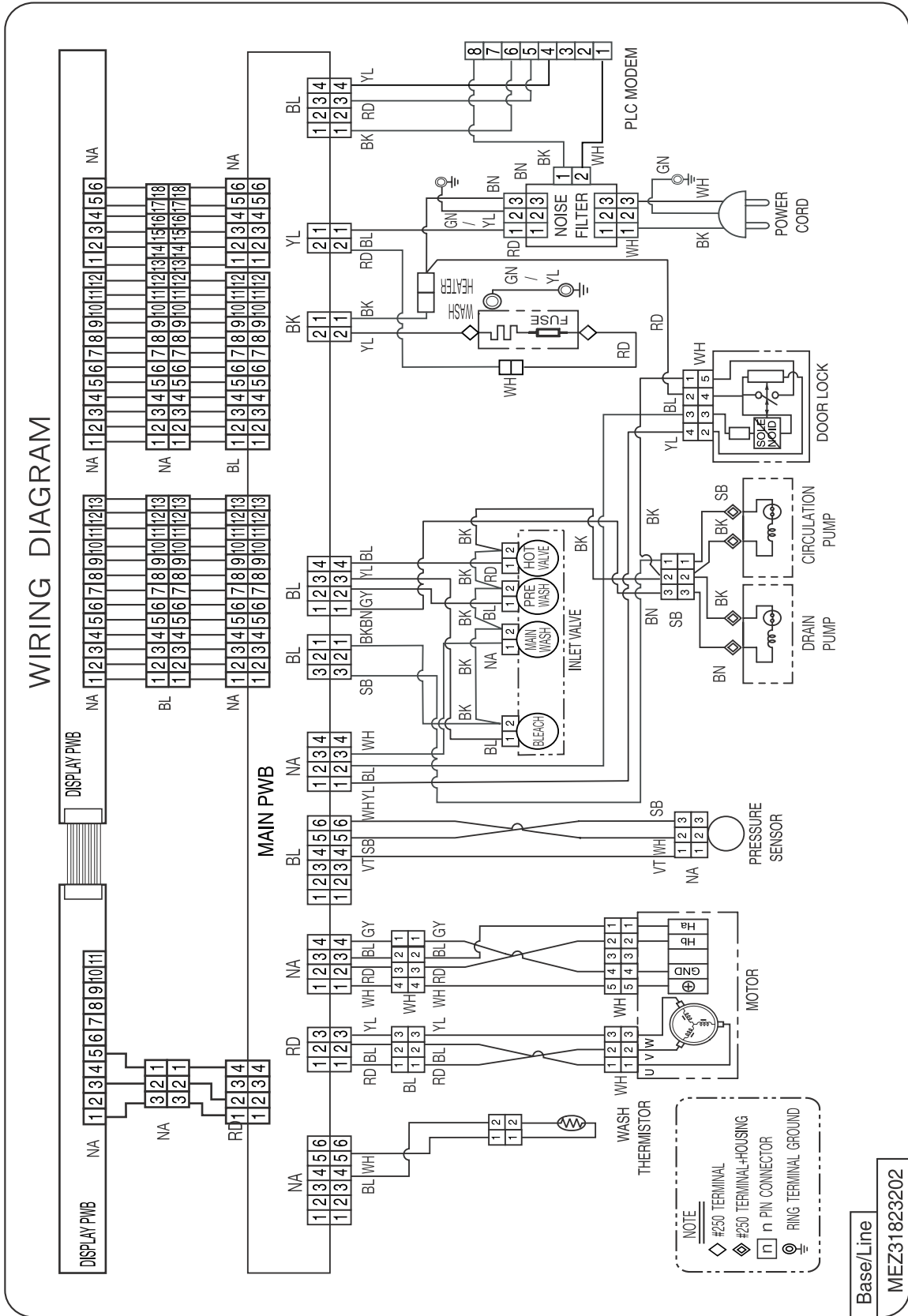
- Use this button to Start/Stop the washer.

Option Button

- **PREWASH**: Use this option for loads that need pretreatment. It adds 16 minutes prewash and a spin cycle.
- **RINSE+SPIN**: Use this option to rinse and then spin.
- **EXTRA RINSE**: This option provides an additional rinse.
- **STAIN CYCLE**: Adds time to the wash and rinse cycles for better stain removal. Automatically provides a rinse.
- **WATER PLUS**: Add extra water to the wash and rinse cycles for superior results.

LOAD SENSING	WASH	RINSE	SPIN

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18:88
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- CUSTOM PROGRAM
- DELAY WASH
- BEEPER

WASH/ RINSE	SPIN SPEED	SOIL LEVEL	OPTION *PRESS & HOLD 3 SEC. FOR EXTRA FUNCTIONS
EXTRA HOT /COLD	EXTRA HIGH	HEAVY	PRE-WASH * CHILD LOCK
HOT /COLD	HIGH	▼	RINSE +SPIN
WARM /WARM	MEDIUM	NORMAL	EXTRA RINSE * TUB CLEAN
WARM /COLD	LOW	▼	STAIN CYCLE * SPIN SENSE™
COLD /COLD	NO SPIN	LIGHT	WATER PLUS
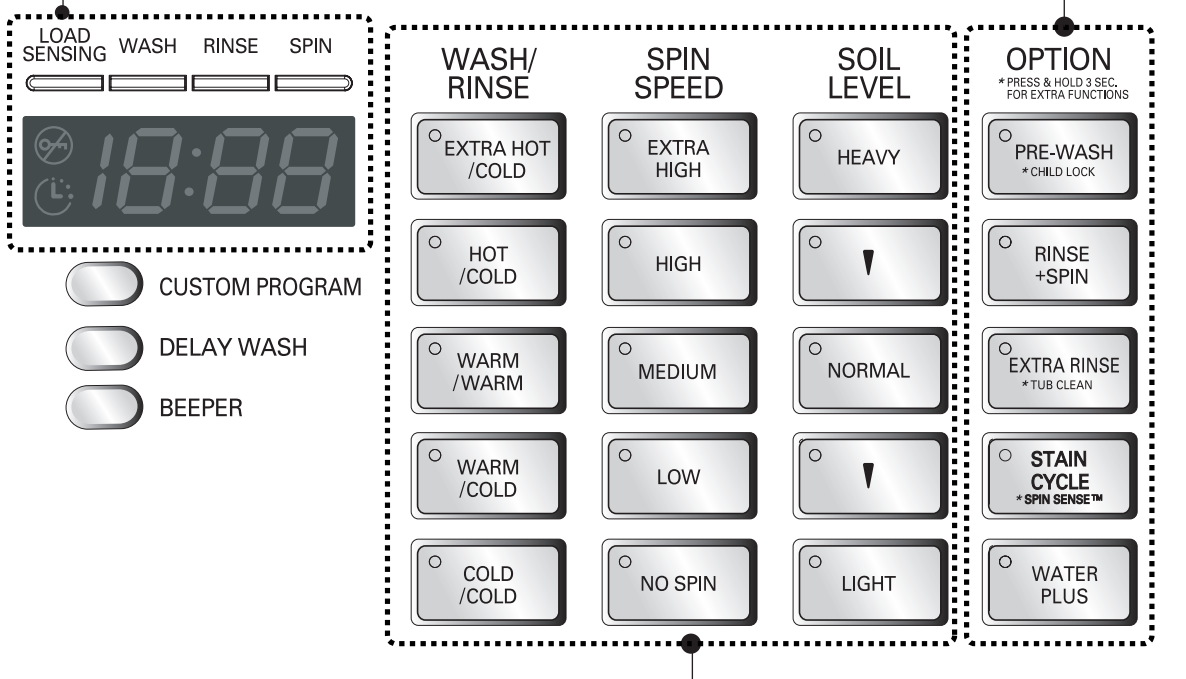
Wash/Rinse, Spin speed, Soil Level Button

- Select a water temperature based on the type of load you are washing.
- To change the spin speed, press the Spin Speed button repeatedly to cycle through available options.
- To change the soil level, press the Soil Level button repeatedly until the desired setting is on.

WIRING DIAGRAM

Base/Line

MEZ31823202

* Water Supply: W-S   * Intermittent Spin: I-S   * Disentangle: D-T

Column / Step header (Time in SEC)

Section	Step	Phase	Time (SEC)
Pre Wash	1	W-S	60
	2	Wash	*
	3	Drain	60
	4	S-I	300
Main Wash	5	W-S	60
	6	Heat	—
	7	Wash	*
	8	W-S (Cool-down)	60
	9	Rinse	60
	10	Drain	60
Rinse – Normal 1	11	Drain	60
	12	S-I	360
	13	W-S	60
	14	Rinse	240
Rinse – Normal 2	15	Drain	60
	16	S-I	360
	17	W-S	60
	18	Rinse	240
Rinse – Extra or Stain 3	19	Drain	60
	20	S-I	300
	21	W-S	60
	22	Rinse	240
Rinse – Extra & Stain 3	23	Drain	60
	24	S-I	300
	25	W-S	60
	26	Rinse	240
Spin	27	Drain	60
	28	Spin	360 ~ 660 / 180
	29	D-T	20

Per-Cycle summary

Cycle	Main Wash time (min)	Rinse count	Spin	** Approx. Working Time (Minutes)
Sanitary	67 (1 TIME)			105
Cotton /Normal	20 / 13			58
Bulky /Large	25			57
Perm Press	18			55
Delicates	14			34
Baby Wear	70		120	120
Hand Wash /Wool	14			34
Speed Wash	8	120		30
Drain+Spin	—			14
Wash + Rinse	19			45
Rinse + Spin	8			19

Legend

▬▬▬ Basic Cycle
═══ Optional Cycle
Pre-Setting Time : Water Supply - 60 sec.
Drain - 60 sec.

* Wash time is in minutes.
** The total working time will vary with the load size, water temperature and ambient temperature.

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7. TROUBLESHOOTING

7-1. BEFORE PERFORMING SERVICE

■ Be careful of electric shock when disconnecting parts while troubleshooting.

■ The voltage of each terminal is 120 V AC and DC when the unit is plugged in.

7-2. QC TEST MODE.

The washer must be empty and the controls must be in the off state.

1. Press the NO SPIN and LIGHT buttons simultaneously.

2. Press the Power ⊚ button, while the above condition. Then buzzer will sound twice.

3. Press the Start/Pause ⊮ button repeatedly to cycle through the test modes.

Number of times the Start/Pause button is pressed	Check Point	Display Status
None	Turns on all lamps and locks the door.	1F:00
1 time	Tumble clockwise.	rpm (42~50)
2 times	Low speed Spin.	rpm (55~65)
3 times	High speed Spin.	rpm (125~135)
4 times	Inlet valve for prewash turns on.	Water level frequency (25~65)
5 times	Inlet valve for main wash turns on.	Water level frequency (25~65)
6 times	Inlet valve for hot water turns on.	Water level frequency (25~65)
7 times	Inlet valve for bleach turns on.	Water level frequency (25~65)
8 times	Tumble counterclockwise.	rpm (42~50)
9 times	Heater turns on for 3 sec.	Water temperature
10 times	Circulation pump turns on.	Water level frequency (25~65)
11 times	Drain pump turns on.	Water level frequency (25~65)
12 times	Off	-

7-3. HOW TO CHECK THE WATER LEVEL FREQUENCY

∗ Press the WARM/COLD and LOW button simultaneously.

✳ ✳ ✳
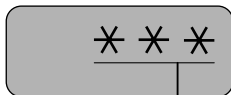
The digits indicate the water level frequency (x.1 kHz).

So, for example a display indicating 241: a Water level frequency of 241 x.1 kHz
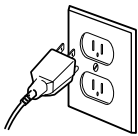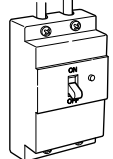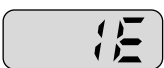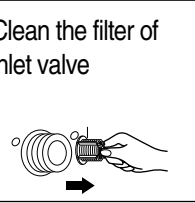= 24.1 kHz

7-4. ERROR DISPLAY
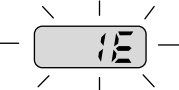
- If you press the START/PAUSE button when an error is displayed, any error except 『 PE 』 will disappear and the machine will go into the pause status.
- In case of 『 PE 』, 『 tE 』, 『 dE 』 if the error is not resolved within 20 sec., or the in case of other errors, if the error is not resolved within 4 min., power will be turned off automatically and the error code will blink. But in the case of 『 FE 』, power will not be turned off.
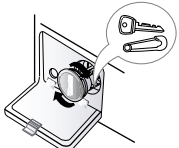
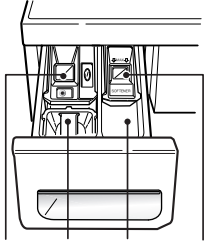|	ERROR	SYMPTOM	CAUSE
1	WATER INLET ERROR	$1E$	• Correct water level (246) is not reached within 8 minutes after water is supplied or it does not reach the preset water level within 25 minutes.
2	IMBALANCE ERROR	UE	• The load is too small. • The appliance is tilted. • Laundry is gathered to one side. • Non distributable things are put into the drum.
3	DRAIN ERROR	OE	• Not fully drained within 10 minutes.
4	OVER FLOW ERROR	FE	• Water is overflowing (water level frequency is over 213). 　※ If FE is displayed, the drain pump will operate to drain the water automatically.
5	PRESSURE SENSOR ERROR	PE	• The SENSOR SWITCH ASSEMBLY is out of order.
6	DOOR OPEN ERROR	dE	• Door not all the way closed. • Loose electrical connections at Door switch and PWB Assembly. • The DOOR SWITCH ASSEMBLY is out of order.
7	HEATING ERROR	tE	• The THERMISTOR is out order.

	ERROR	SYMPTOM	CAUSE
8	LOCKED MOTOR ERROR	L E	• The connector (3-pin, male, white) in the MOTOR HARNESS is not connected to the connector (3-pin, female, white) of STATOR ASSEMBLY. • The electric contact between the connectors (3-pin, male, white) in the MOTOR HARNESS and 4-pin, female, white connector in the MAIN PWB ASSEMBLY is bad or unstable. • The MOTOR HARNESS between the STATOR ASSEMBLY and MAIN PWB ASSEMBLY is cut (open circuited). • The hall sensor is out of order/defective.
9	EEPROM ERROR	E E	• EEPROM is out of order. ※ Displayed only when the START/PAUSE button is first pressed in the QC Test Mode.
10	POWER FAILURE	P F	• The washer experienced a power failure.

8. ERROR DIAGNOSIS AND CHECK LIST

8-1. DIAGNOSIS AND SOLUTION FOR ABNORMAL OPERATION

SYMPTOM	GUIDE FOR SERVICE CALL
No power	Is the power plug connected firmly to 120 V AC outlet? ↓ **YES** Power failure? or Breaker opened? Is the outlet controlled by a switch? ↓ **NO** Visit to service.
Water inlet trouble *IE*	Is *IE* displayed? ↓ **YES** Is the tap opened? ↓ **YES** Is the tap frozen? ↓ **NO** Is the water supply shut-off? ↓ **NO** Is filter in the inlet valve clogged with foreign material? — **YES** → Clean the filter of inlet valve ↓ **NO** Visit to service.

SYMPTOM	GUIDE FOR SERVICE CALL
Door error	

Door error

Started with door opened? → **YES** → dE

NO

Close the door.

Was the load too large?

YES → Avoid overloading.

NO

Clicking sound is heard once or twice, when the START/PAUSE button is pressed to start the cycle?

NO

Visit to service.

Check if the door switch is OK.

Drain trouble

Is OE displayed?

OE

YES

Is the drain pump filter clogged with foreign material such as pins, coins, etc?

YES → Clean up the filter.

NO

Is the drain hose frozen kinked, or crushed?
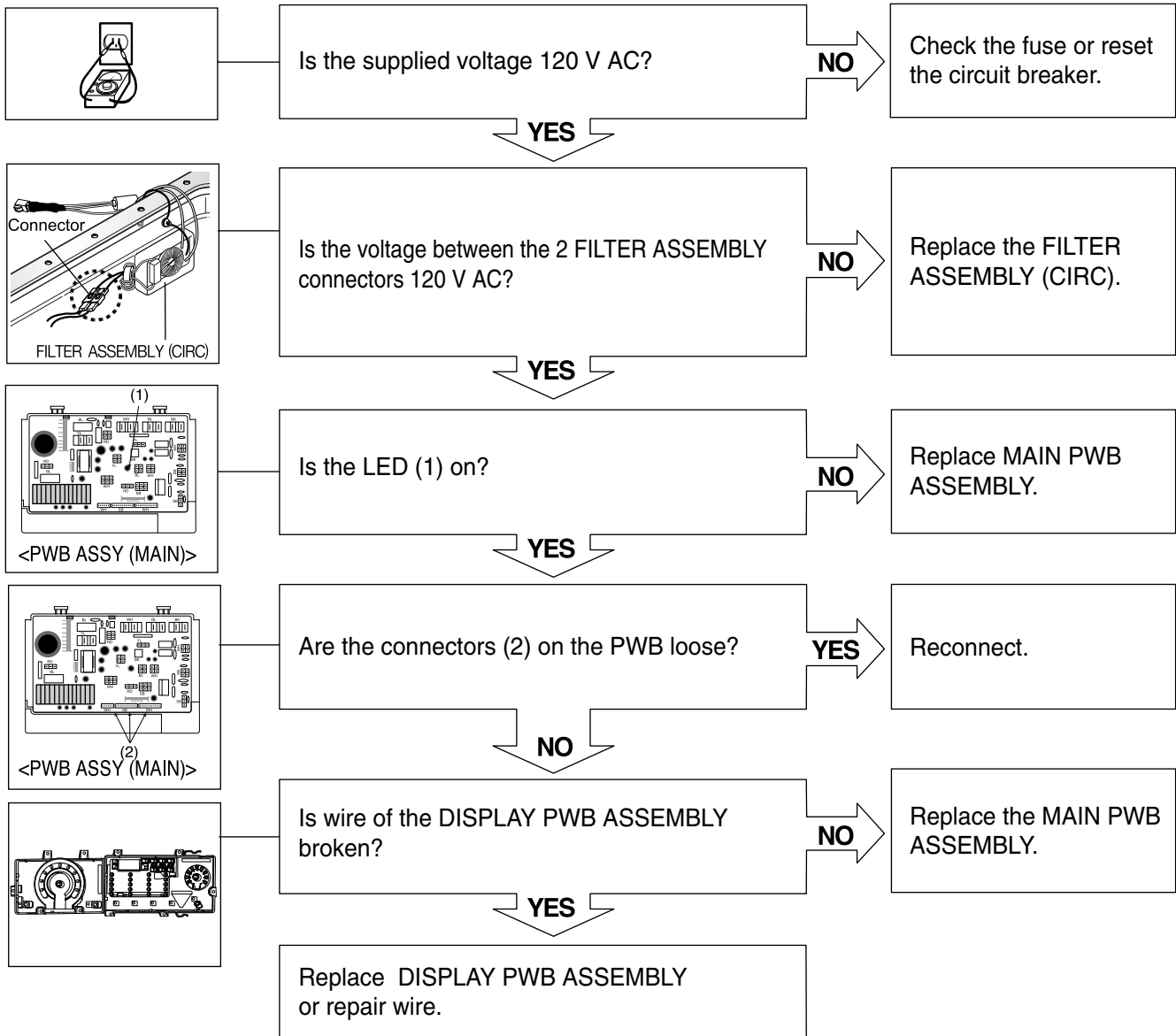
NO

Visit to service.

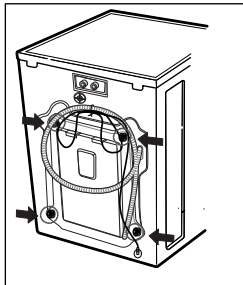| SYMPTOM	GUIDE FOR SERVICE CALL
Suds overflow from the appliance. (In this condition, wash and spin do not operate normally)	Is a HE (High Efficiency) detergent used? **YES** Is the proper amount of detergent used as recommended? **YES** Recommend to reduce the amount of detergent. ∗ This appliance has an automatic suds sensing function which prevents overflow. ∗ When excessive suds are sensed, the suds removing implementations such as drain, water input, pause will operate, without rotating the drum.
Liquid laundry products do not flow in.	Is liquid laundry product put in the correct compartment of the dispenser? **YES** Is the cap clogged? **YES** Explain proper use of liquid laundry products. **Clean the compartment.** (1) (4) (3) (2) (1) Liquid chlorine Bleach Compartment (2) Liquid fabric Softener Compartment (3) Prewash Compartment (4) Main Wash Compartment
PE FE ℉E LE	Visit to service.

8-2. FAULT DIAGNOSIS AND TROUBLESHOOTING

⚠ CAUTION

1. Be careful of electric shock if disconnecting parts while troubleshooting.
2. First of all, check the connection of each electrical terminal with the wiring diagram.
3. If you replace the MAIN PWB ASSEMBLY, reinsert the connectors correctly.

NO POWER

Is the supplied voltage 120 V AC?	**NO** →	Check the fuse or reset the circuit breaker.

YES

Is the voltage between the 2 FILTER ASSEMBLY connectors 120 V AC?	**NO** →	Replace the FILTER ASSEMBLY (CIRC).

Connector

FILTER ASSEMBLY (CIRC)

YES

Is the LED (1) on?	**NO** →	Replace MAIN PWB ASSEMBLY.

(1)

<PWB ASSY (MAIN)>

YES

Are the connectors (2) on the PWB loose?	**YES** →	Reconnect.

(2)

<PWB ASSY (MAIN)>

NO

Is wire of the DISPLAY PWB ASSEMBLY broken?	**NO** →	Replace the MAIN PWB ASSEMBLY.

YES

Replace DISPLAY PWB ASSEMBLY
or repair wire.

VIBRATION & NOISE IN SPIN

Have all the transit bolts and base packing been removed?

NO → Remove the transit bolts and Base packing.

YES ↓

Is the washer installed on a solidly constructed floor?
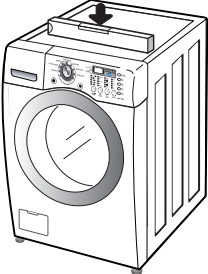
NO → Move the washer or reinforce the floor.

YES ↓

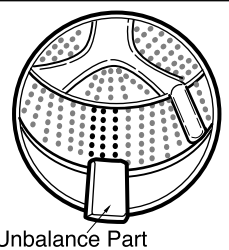Check if the washer is perfectly level as follows:

Base Packing

Level

Check the leveling of the washer with a Level and check that the washer is stable.

Put an unbalance part (rubber) inside of drum and start QC test mode and run in high spin (Refer to section 7-2).
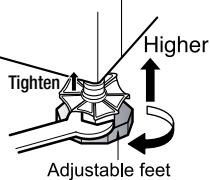When the machine is spinning in high speed, verify that it is stable.

If you do not have the unbalance part, put 4.5 to 6.5 lbs (2 to 3 kg) of clothing. Once loaded, press power, Rinse+Spin and the start/pause button in sequence.
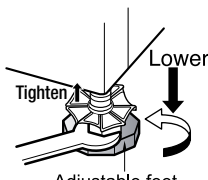When the machine is spinning in high speed, verify that it is stable.

Unbalance Part
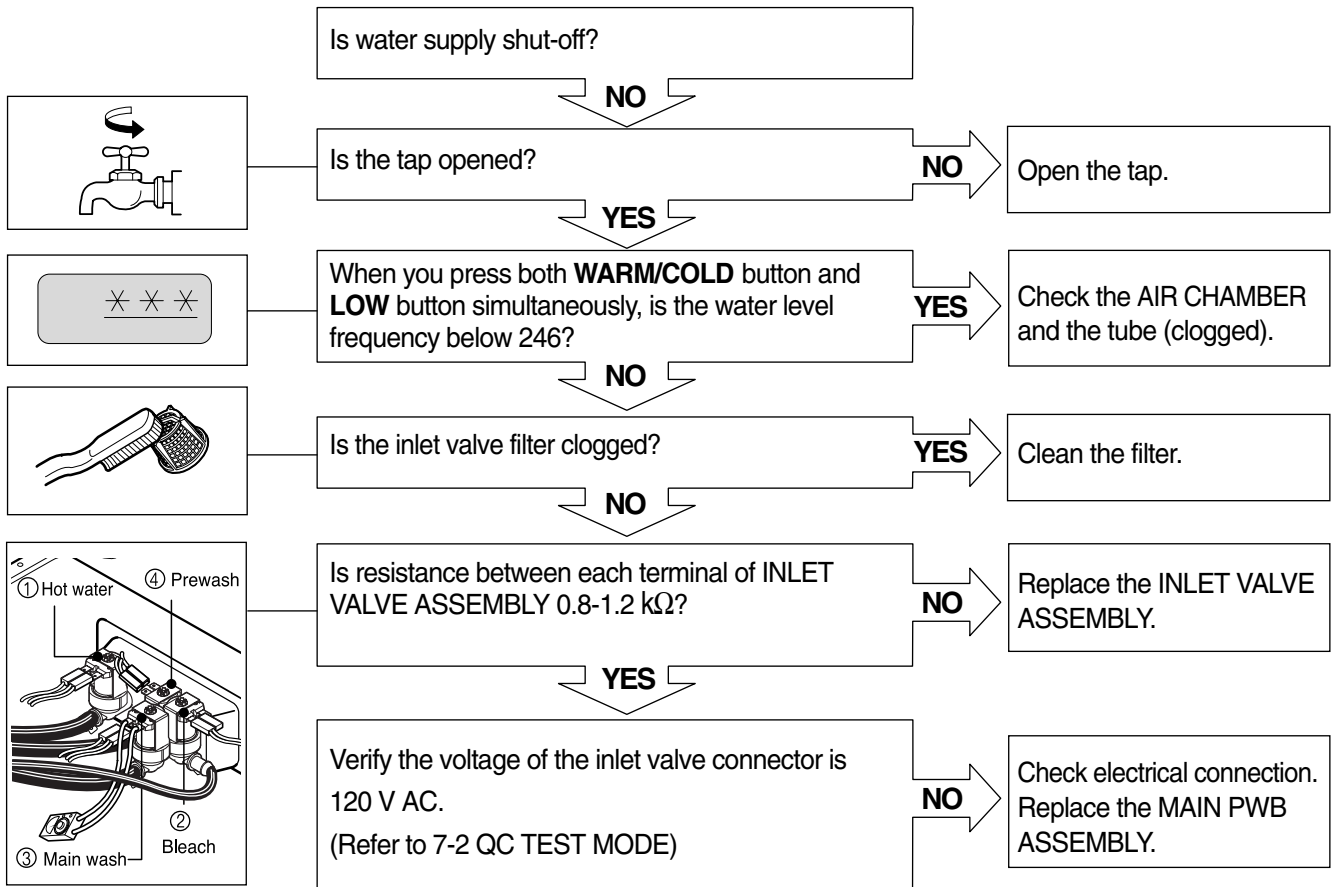
YES ↓

If it is not stable, adjust feet accordingly. After the washer is level, tighten the lock nuts up against of the base of the washer. All lock nuts must be tightened.
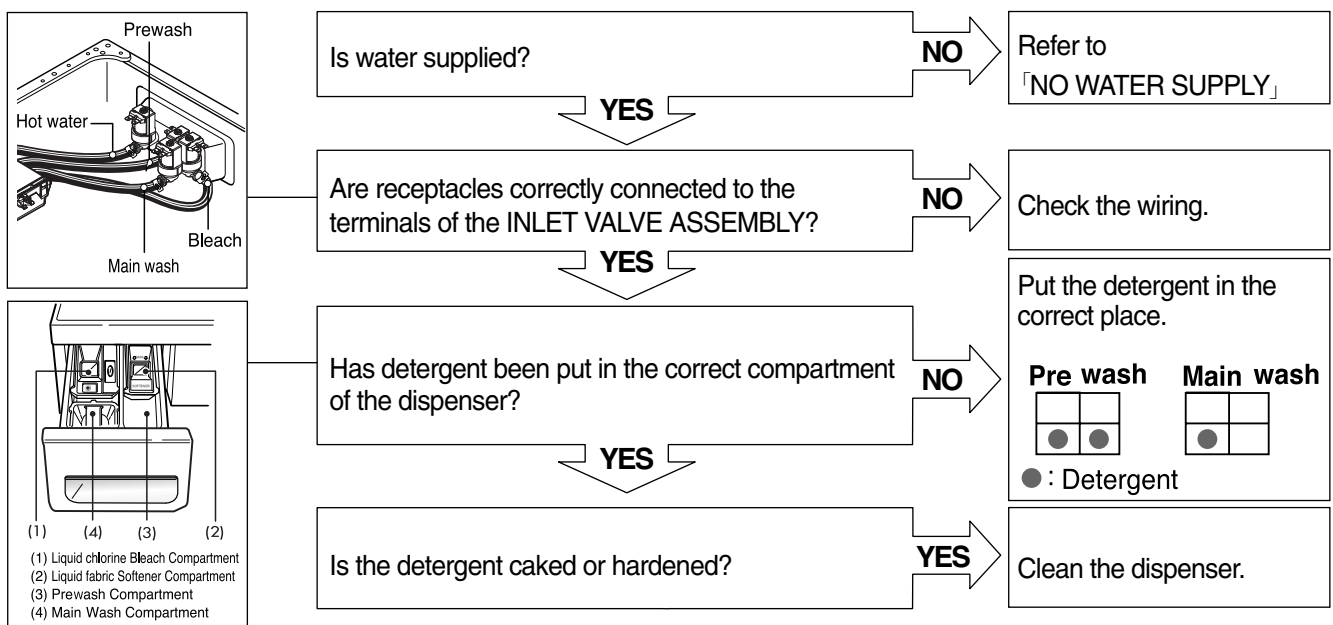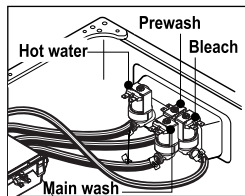
Higher
Tighten
Adjustable feet

Lower
Tighten
Adjustable feet

NO WATER SUPPLY

Is water supply shut-off?

NO

Is the tap opened? → **NO** → Open the tap.

YES

When you press both **WARM/COLD** button and **LOW** button simultaneously, is the water level frequency below 246? → **YES** → Check the AIR CHAMBER and the tube (clogged).

NO

Is the inlet valve filter clogged? → **YES** → Clean the filter.

NO

① Hot water　④ Prewash

③ Main wash　② Bleach

Is resistance between each terminal of INLET VALVE ASSEMBLY 0.8-1.2 kΩ? → **NO** → Replace the INLET VALVE ASSEMBLY.

YES

Verify the voltage of the inlet valve connector is 120 V AC. (Refer to 7-2 QC TEST MODE) → **NO** → Check electrical connection. Replace the MAIN PWB ASSEMBLY.

DETERGENT DOES NOT FLOW IN

Prewash

Hot water

Bleach

Main wash

Is water supplied? → **NO** → Refer to 「NO WATER SUPPLY」

YES

Are receptacles correctly connected to the terminals of the INLET VALVE ASSEMBLY? → **NO** → Check the wiring.

YES

(1)　(4)　(3)　(2)

(1) Liquid chlorine Bleach Compartment
(2) Liquid fabric Softener Compartment
(3) Prewash Compartment
(4) Main Wash Compartment

Has detergent been put in the correct compartment of the dispenser? → **NO** → Put the detergent in the correct place.

Pre wash　**Main wash**

● : Detergent

YES

Is the detergent caked or hardened? → **YES** → Clean the dispenser.

LIQUID DETERGENT/SOFTENER/BLEACH DOES NOT FLOW IN

Prewash
Hot water   **Bleach**
Main wash

(1)   (4)   (3)   (2)
(1) Liquid chlorine Bleach Compartment
(2) Liquid fabric Softener Compartment
(3) Prewash Compartment
(4) Main Wash Compartment

Bleach cap
SOFTENER
Softener cap
Liquid detergent cap

| Is water supplied? | **NO** → | Refer to 「NO WATER SUPPLY」 |

YES ↓

| Are the plugs correctly connected to the terminals of the INLET VALVE ASSEMBLY? | **NO** → | Check the wiring on the dispenser. |

YES ↓
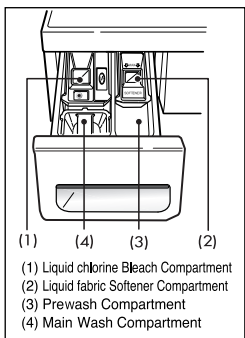
| Is liquid detergent/softener/bleach put in the correct compartment of the drawer? | **NO** → | Put it in the correct compartment. |

YES ↓
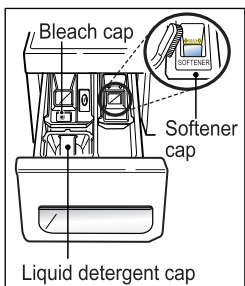
| Is the liquid detergent/softener/bleach cap clogged? | **YES** → | Clean the Cap and Container. |

ABNORMAL SOUND
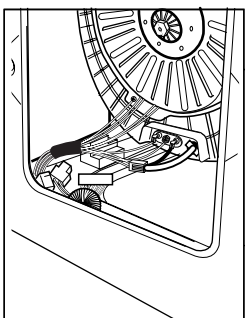
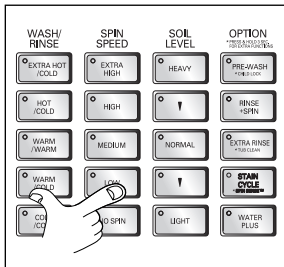| Is the motor bolt loosened? | **YES** → | Secure the bolt. |

NO ↓

| Is there friction noise coming from the motor? | **YES** → | Replace the STATOR ASSEMBLY or ROTOR ASSEMBLY. |

HEATING WITHOUT WATER

When pressing **WARM/COLD** and **LOW** at the same time after draining, is the water level frequency 255? When pressing **WARM/COLD** and **LOW** buttons at the same time while washing, is the water level frequency between 230 - 243 ?

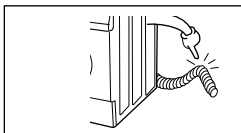**NO** → Replace the SENSOR SWITCH ASSEMBLY.

YES ↓

AC 120 V
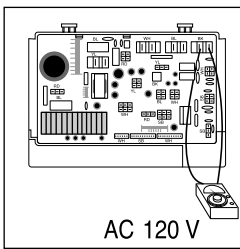
Check the voltage between two pins while pressing the POWER button. Is the voltage 120 V AC?
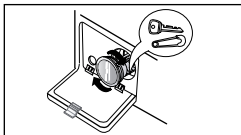
YES → Replace the MAIN PWB ASSEMBLY.

DRAIN MALFUNCTION

Is the drain hose twisted or frozen?
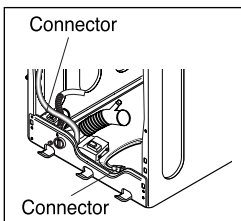
YES → Repair the DRAIN HOSE ASSEMBLY.

NO ↓

Is the impeller of the drain pump clogged?

YES → Remove foreign material.

NO ↓

Connector

Connector

Is the connector disconnected, disassembled?

YES → Reconnect or repair the connector

NO ↓
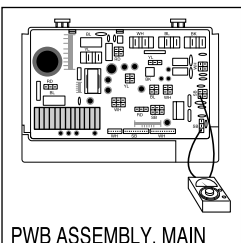
Is the coil of the drain pump too high or low? (resistance of the coil is 10-20 Ω)

YES → Replace the DRAIN PUMP ASSEMBLY.
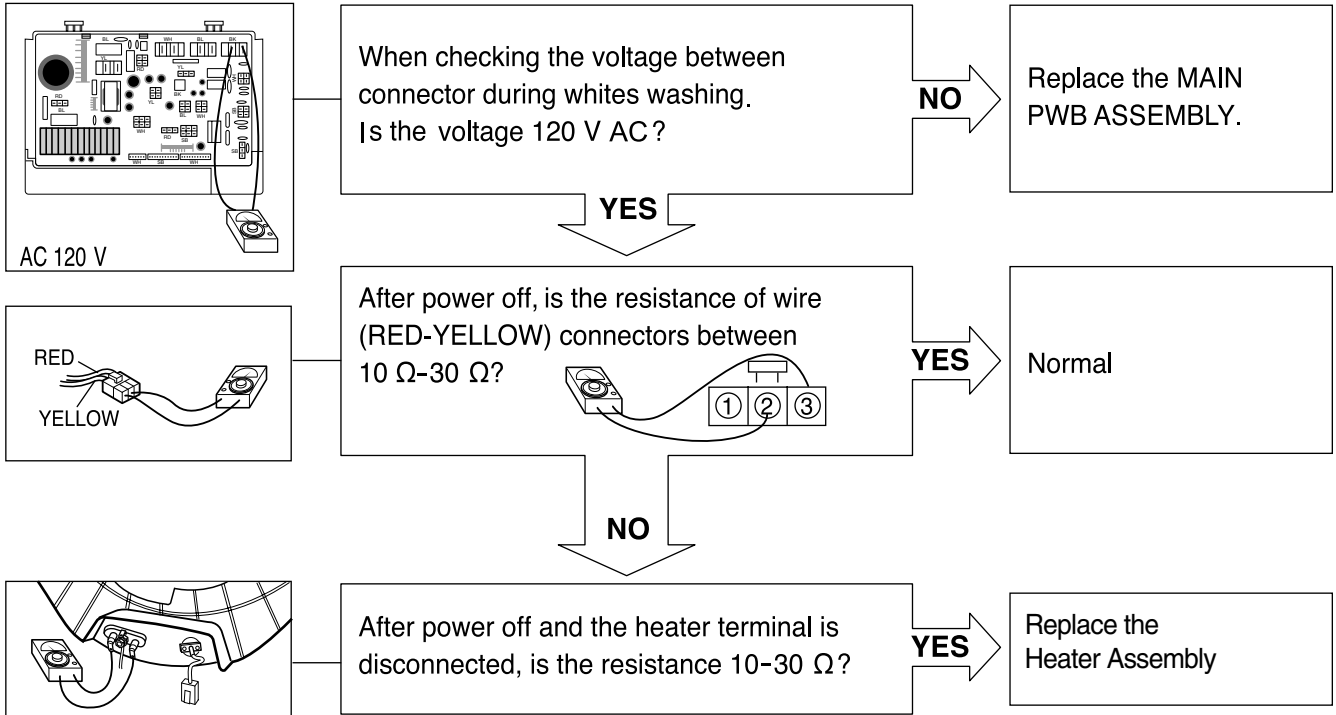
NO ↓

PWB ASSEMBLY, MAIN

When checking voltage between connectors during spin, is the voltage 120 V AC as in the figure?
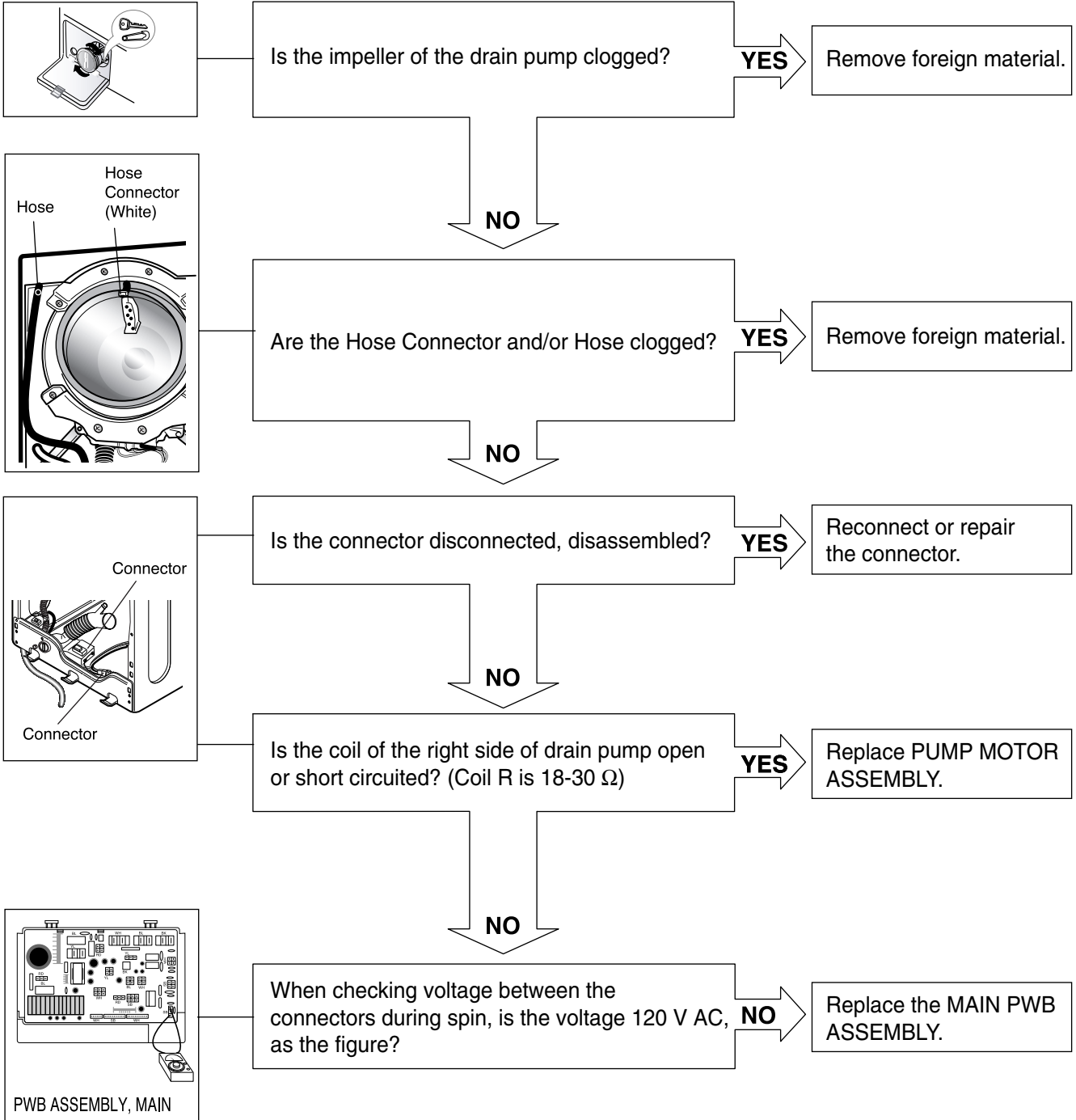
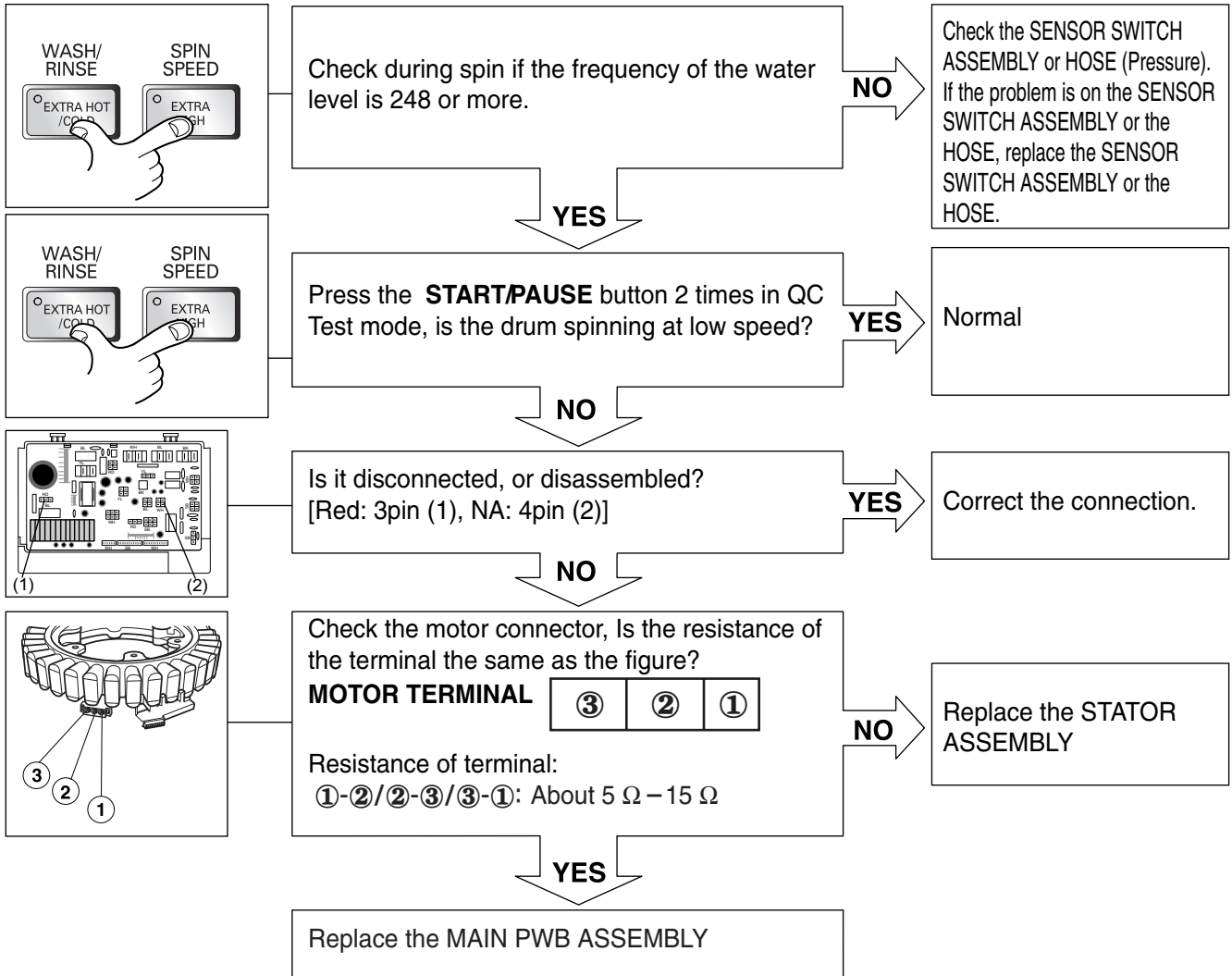**NO** → Replace the MAIN PWB ASSEMBLY.

WASH HEATER TROUBLE

AC 120 V

When checking the voltage between connector during whites washing.
Is the voltage 120 V AC ?

NO → Replace the MAIN PWB ASSEMBLY.

YES

RED

YELLOW

After power off, is the resistance of wire (RED-YELLOW) connectors between 10 Ω-30 Ω?

YES → Normal

NO

After power off and the heater terminal is disconnected, is the resistance 10-30 Ω?

YES → Replace the Heater Assembly

HEATING CONTINUOUSLY ABOVE THE SETTING WATER TEMPERATURE

WASH/RINSE   SPIN SPEED

When pressing WARM/WARM and MEDIUM at the same time,
is the displayed temperature over 10 °C higher than the selected temperature?
Extra Hot: 70 °C
Hot: 50 °C
Warm: 40 °C
Cold: 30 °C

✳ ✳ ✳

Water Temperature [°C]

NO → Check if inlet hose is connected to a hot faucet; otherwise, replace MAIN PWB ASSEMBLY.

YES

Is the resistance between ② and ③ of Connector (1) 2.5-180 kΩ ?

NO → Check electrical connection. Replace THERMISTOR.

YES

When checking the THERMISTOR on the tub, is the THERMISTOR loose?

YES → Push the THERMISTOR tightly to the rubber.

27

WILL NOT CIRCULATE WATER

Is the impeller of the drain pump clogged? **YES** → Remove foreign material.

NO

Are the Hose Connector and/or Hose clogged? **YES** → Remove foreign material.

Hose Connector (White)

Hose

NO

Is the connector disconnected, disassembled? **YES** → Reconnect or repair the connector.

Connector

Connector

NO

Is the coil of the right side of drain pump open or short circuited? (Coil R is 18-30 Ω) **YES** → Replace PUMP MOTOR ASSEMBLY.

NO

When checking voltage between the connectors during spin, is the voltage 120 V AC, as the figure? **NO** → Replace the MAIN PWB ASSEMBLY.

PWB ASSEMBLY, MAIN

SPIN TROUBLE

WASH/RINSE — EXTRA HOT/COLD	SPIN SPEED — EXTRA HIGH	Check during spin if the frequency of the water level is 248 or more.	**NO** → Check the SENSOR SWITCH ASSEMBLY or HOSE (Pressure). If the problem is on the SENSOR SWITCH ASSEMBLY or the HOSE, replace the SENSOR SWITCH ASSEMBLY or the HOSE.

YES ↓

WASH/RINSE — EXTRA HOT/COLD, SPIN SPEED — EXTRA HIGH	Press the **START/PAUSE** button 2 times in QC Test mode, is the drum spinning at low speed?	**YES** → Normal

NO ↓

[PCB image] (1) (2)	Is it disconnected, or disassembled? [Red: 3pin (1), NA: 4pin (2)]	**YES** → Correct the connection.

NO ↓

Check the motor connector, Is the resistance of the terminal the same as the figure?

MOTOR TERMINAL | ③ | ② | ① |

Resistance of terminal:
①-②/②-③/③-①: About 5 Ω – 15 Ω

NO → Replace the STATOR ASSEMBLY

YES ↓

Replace the MAIN PWB ASSEMBLY

⌂⌂ ERROR

[Door/Latch Hook image] Latch Hook	Does the spring of Latch Hook actuate?	**NO** → Replace Door Assembly.

YES ↓

[PCB image]	Is there clicking sound once or twice when the **START/PAUSE** button is pressed to start the cycle?	**NO** → Check the DOOR SWITCH ASSEMBLY Connector and MAIN PWB ASSEMBLY (Red 3 pin, Yellow 4 pin and white 3 pin connector (1)).

YES ↓

Is DOOR SWITCH ASSEMBLY broken?	**YES** → Replace the DOOR SWITCH ASSEMBLY.

9. DISASSEMBLY INSTRUCTIONS

＊ Be sure to unplug the machine out of the outlet before disassembling and repairing the parts.

CONTROL PANEL ASSEMBLY

TOP PLATE ASSEMBLY

① Unscrew 2 screws on the back of the top plate.

② Pull the top plate backward and upward as shown.

DRAWER

CONTROL PANEL ASSEMBLY
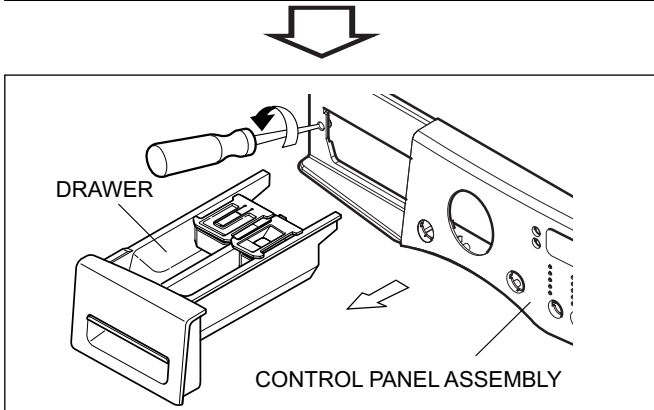
③ Disconnect the Display PWB Assembly connector from Trans cable.

④ Pull out the drawer and unscrew 2 screws.

CONTROL PANEL ASSEMBLY
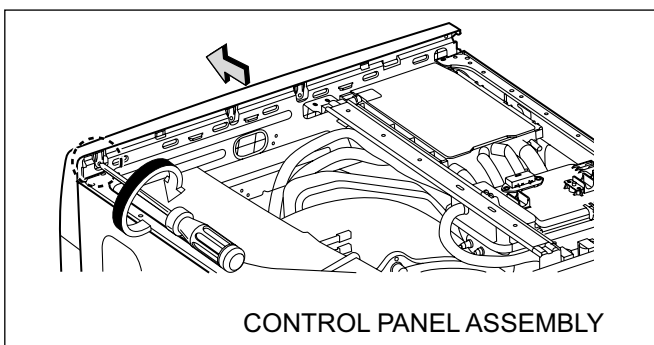
⑤ Taking out 1 screw.

⑥ Lift the side the Control Panel Assembly and pull it out

DISPLAY PWB ASSEMBLY
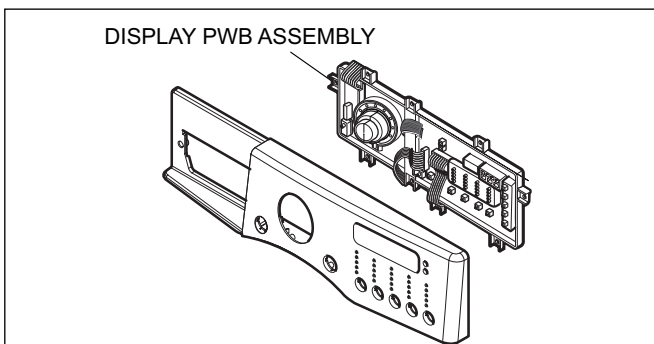
⑦ Unscrew the 8 screws from the Control Panel Assembly.

⑧ Disassemble the Display PWB Assembly.

MAIN PWB ASSEMBLY
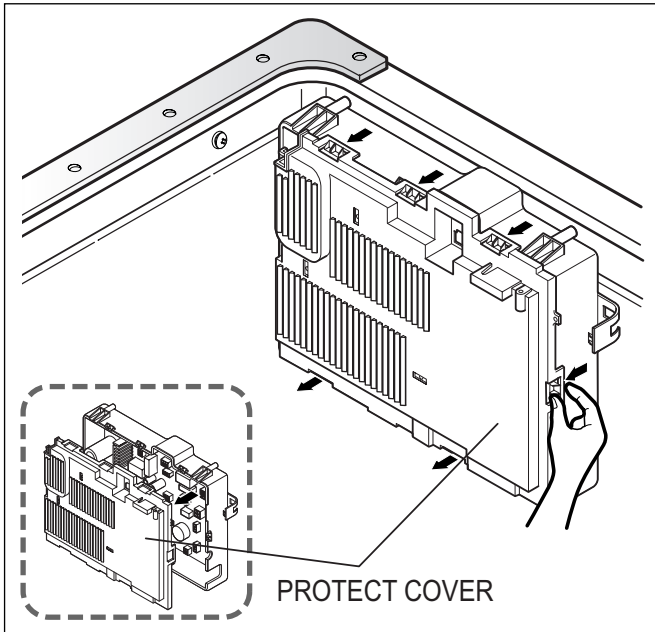
① Disconnect the POWER connector and SENSOR
  SWITCH ASSEMBLY.
② Remove the Protect Cover.

PROTECT COVER
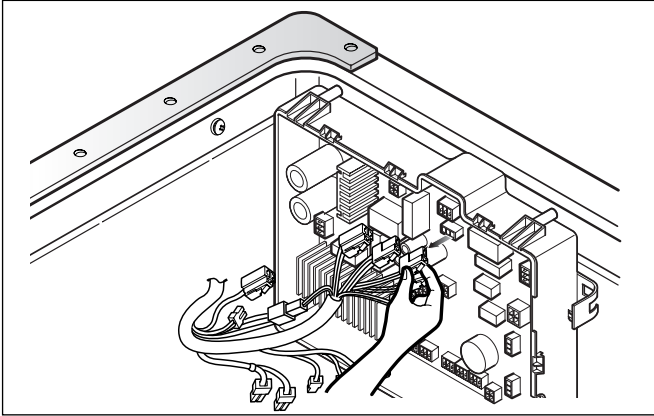
③ Disconnect the connectors.
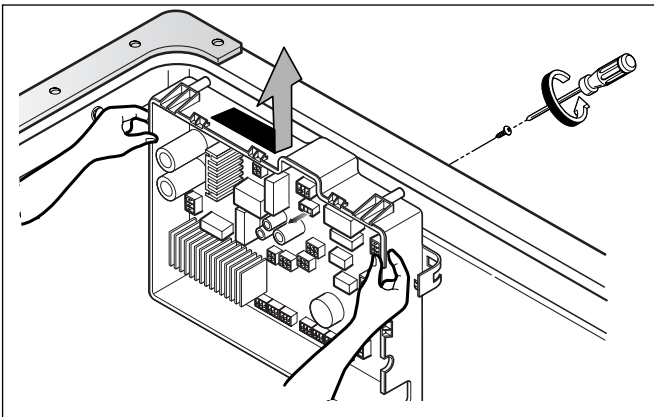
④ Unscrew 1 screw on the back.
⑤ Disassemble the Main PWB.

DISPENSER ASSEMBLY
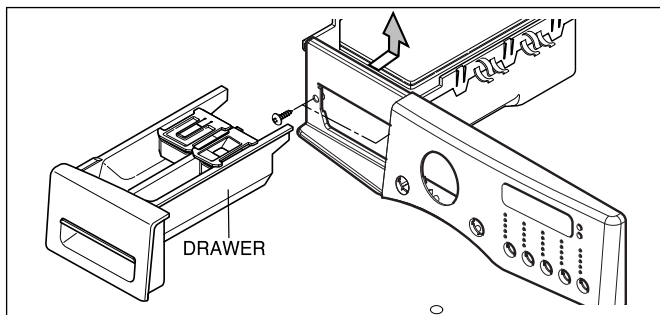
① Disassemble the top plate assembly.

② Pull out the drawer.

③ Push out the DISPENSER ASSEMBLY after unscrew 2 screws.
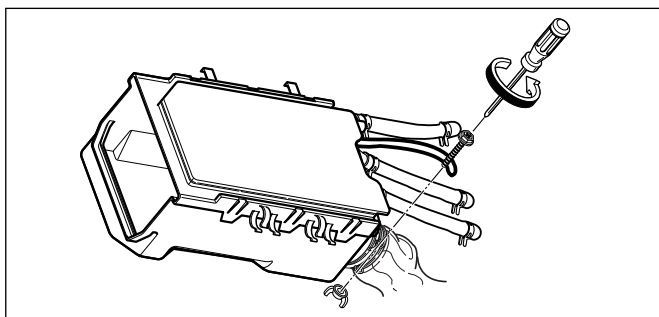
④ Unscrew the nut at the lower part of the dispenser.
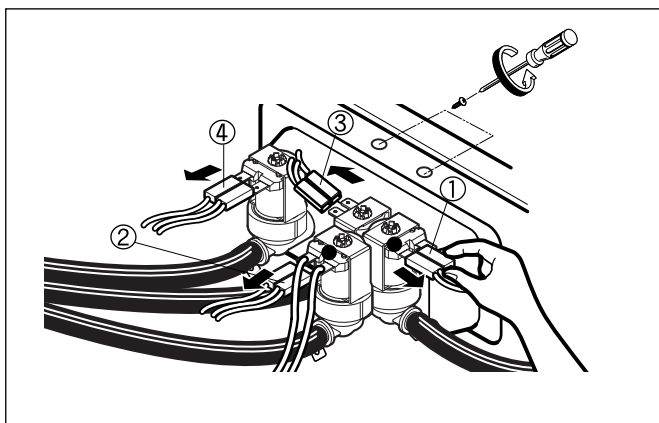
⑤ Disassemble the 4 connectors from the valves.

※ Wire Color
① Blue Housing (OR-BK)
② White Housing (WH-BK)
③ Blue Housing (GY-BK)
④ Red Housing (BL-BK)

⑥ Unscrew 2 screws from the back of the cabinet.

NOISE FILTER
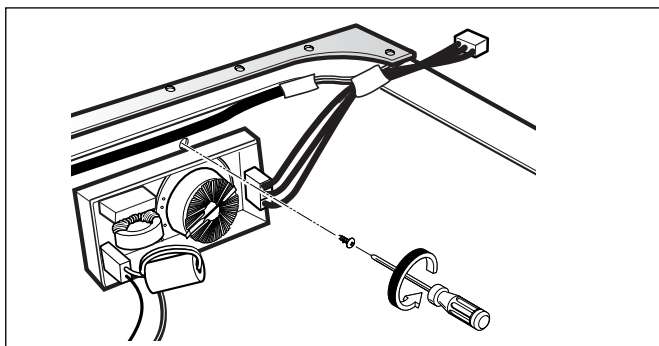
① Disassemble two (or three) connectors from the NOISE FILTER.

② Unscrew a screw from the TOP BRACKET.

CABINET COVER
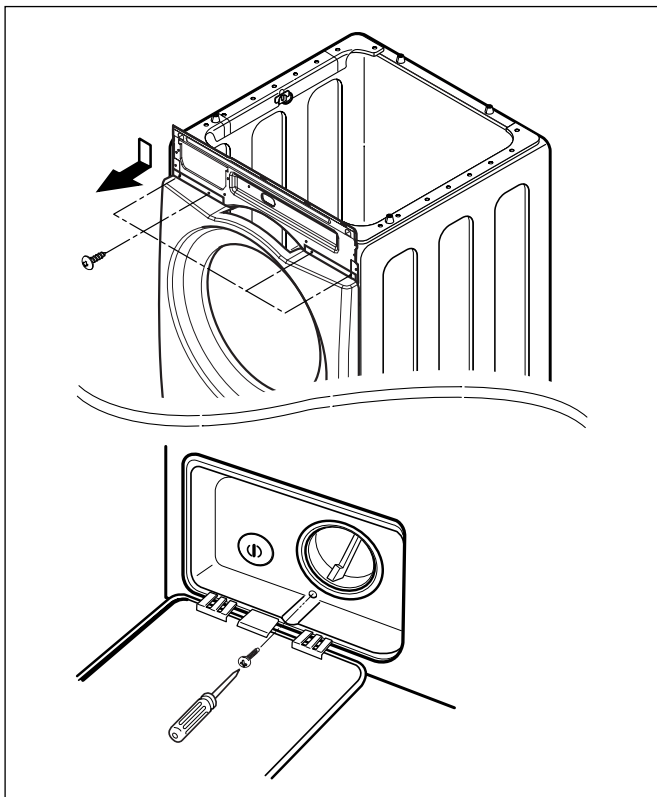
① Unscrew the 5 screws from upper of the canbinet cover.

② Unscrew the screw from filter cover.
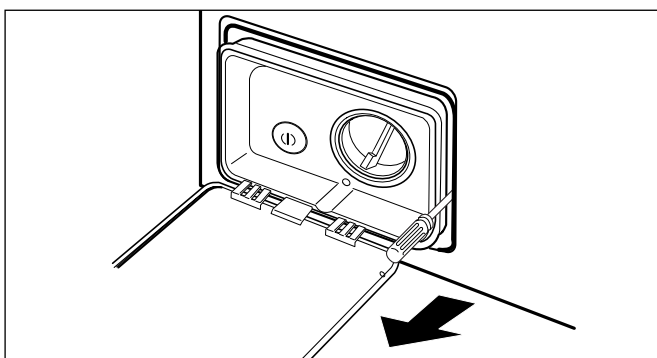
③ Put a flat (–) screwdriver or putty knife into the both sides of the filter cover, and pull it out.
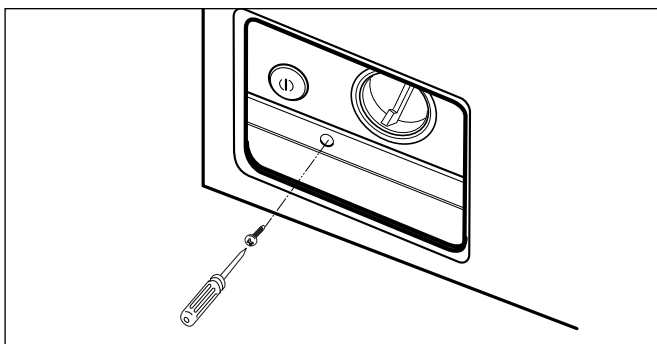
④ Unscrew the screw from the lower side of the cabinet cover.
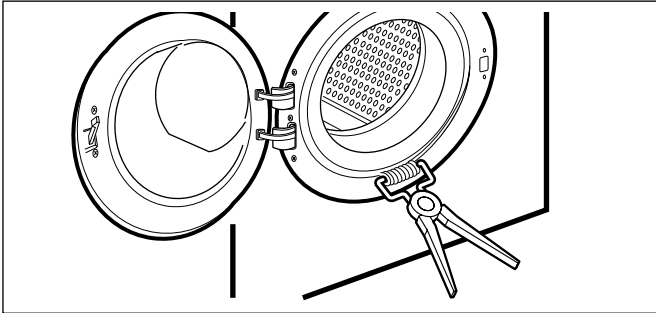
⑤ Open the door.

⑥ Disassemble the clamp assembly.
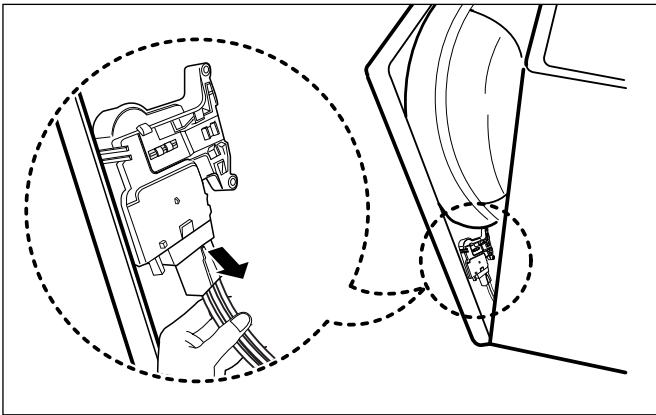
⑦ Tilt the cabinet cover.

⑧ Disconnect the door switch connector.

> ※ **NOTE**: When assembling the CABINET
> COVER, connect the connector.
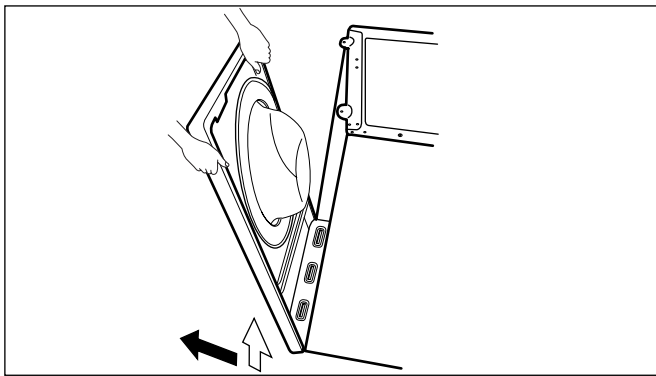
⑨ Lift and separate the cabinet cover.
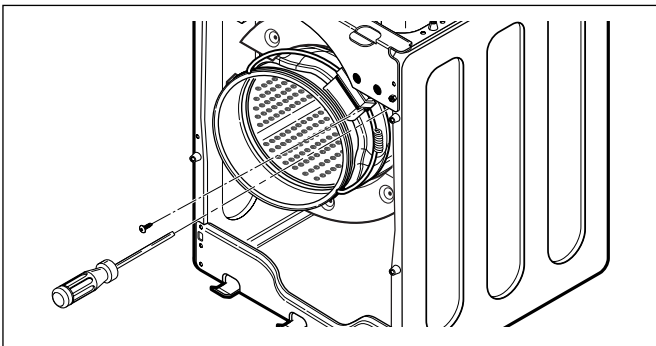
⑩ Disassemble the clamp assembly.

⑪ Disassemble the Gasket.

DOOR
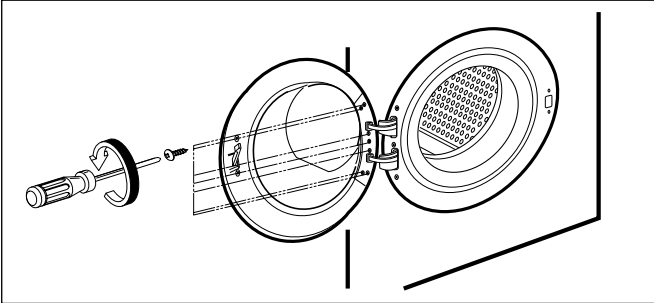
① Open the door.

② Unscrew the 7 screws from the HINGE COVER.
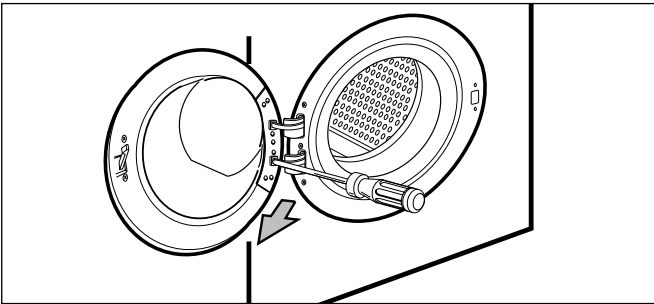
③ Put a flat (-) screwdriver into the openng of the hinge, and pull out the hinge cover.
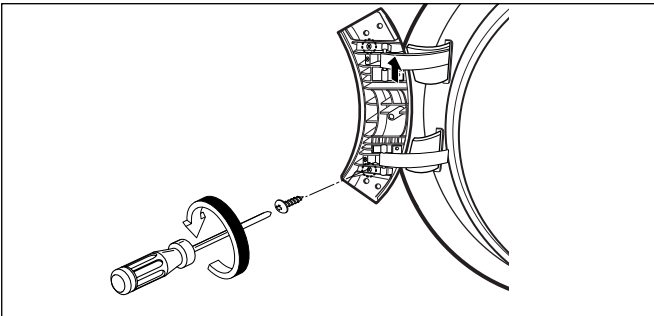
④ Unscrew a screw from the lower side of door.

⑤ Disassemble the door upward.

> ※ **Be careful!** The door is heavy.

DOOR LOCK SWITCH ASSEMBLY
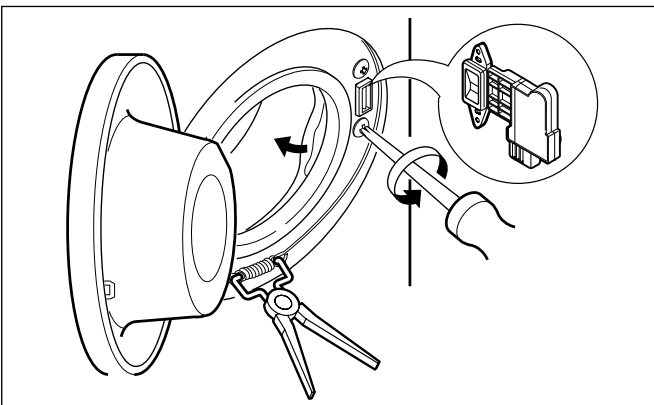
① Open the door and disassemble the CLAMP ASSEMBLY.
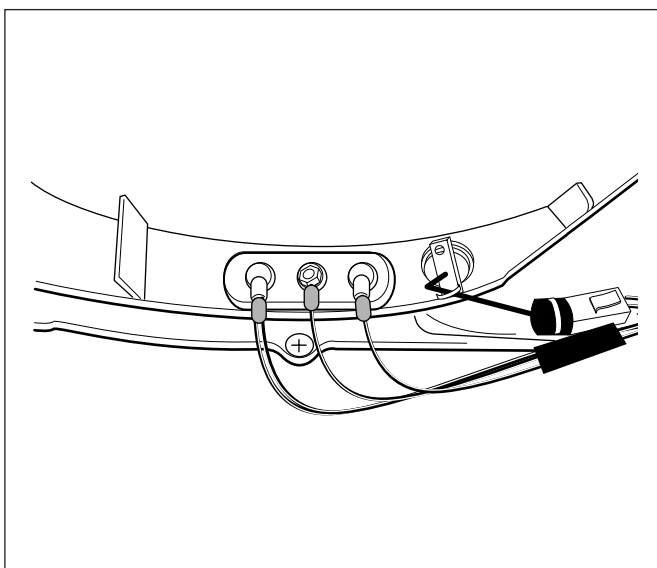
② Unscrew the 2 screws.

> ※ **NOTE**
> • Reconnect the connector after replacing the DOOR SWITCH ASSEMBLY.

PUMP

CIRCULATION HOSE
PUMP HOSE
BELLOWS
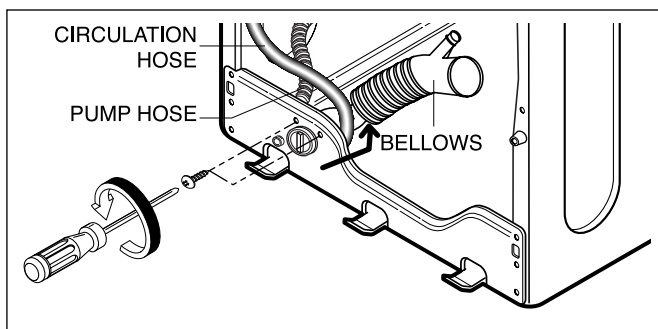
① Disassemble the cabinet cover.

② Separate the pump hose, the bellows and the circulation hose assembly from the pump assembly.

③ Disassemble the pump assembly in arrow direction.
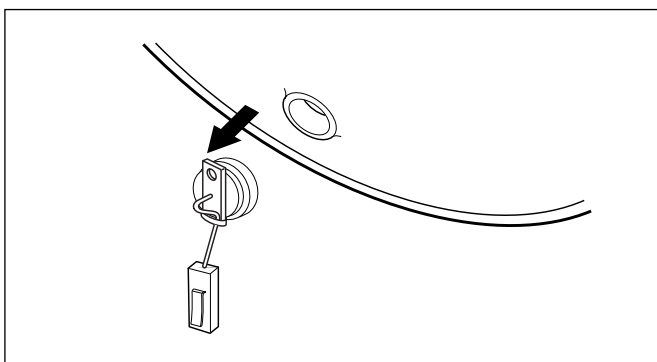
HEATER

① Disassemble the cabinet cover.

② Separate 2 connectors from the heater.

③ Loosen the nut and pull out the heater.

> ※ **CAUTION**
> • When assembling the heater, insert the heater into the heater clip on the bottom of the tub.
> • Tighten the fastening nut so the heater is secure.

THERMISTOR

① Disassemble the cabinet cover.

② Unplug the white connector from the thermistor.

③ Pull it out by holding the bracket of the thermistor.

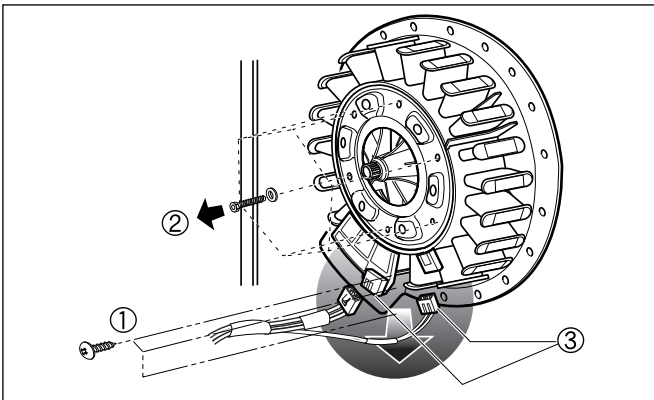## WHEN FOREIGN OBJECT IS STUCK BETWEEN DRUM AND TUB
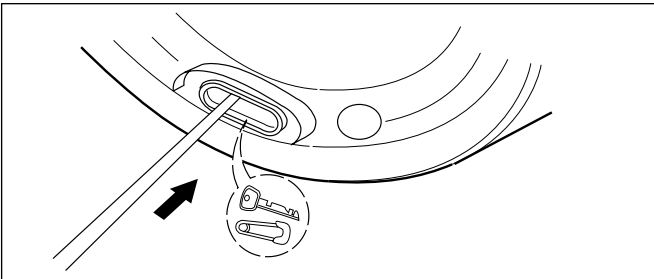
① Disassemble the cabinet cover.

② Separate the heater from the tub.

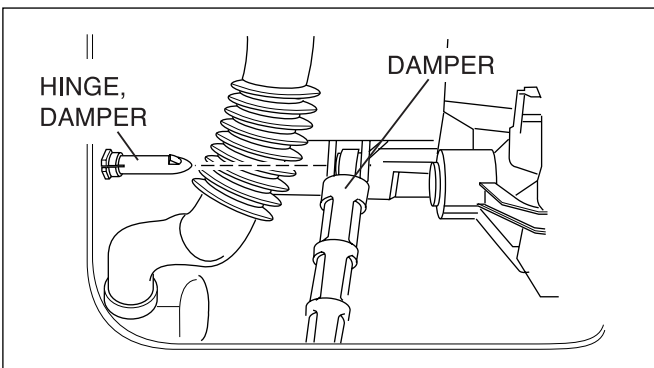③ Remove any foreign objects (wire, coin, etc.) by inserting a long bar in the opening.

MOTOR/DAMPER
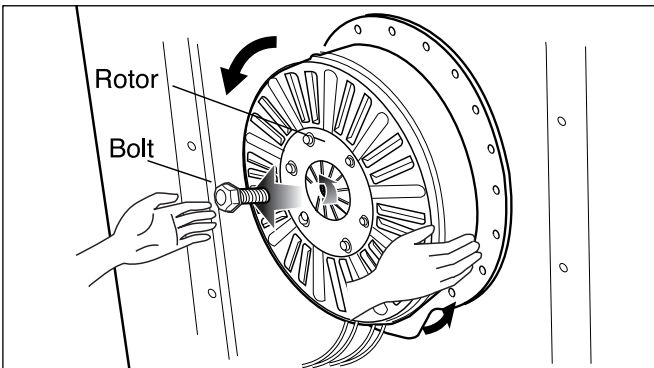
Rotor

Bolt

① Disassemble the back cover.

② Remove the bolt.

③ Pull out the Rotor.

① Unscrew the 2 screws from the tub bracket.

② Remove the 6 bolts on the stator.
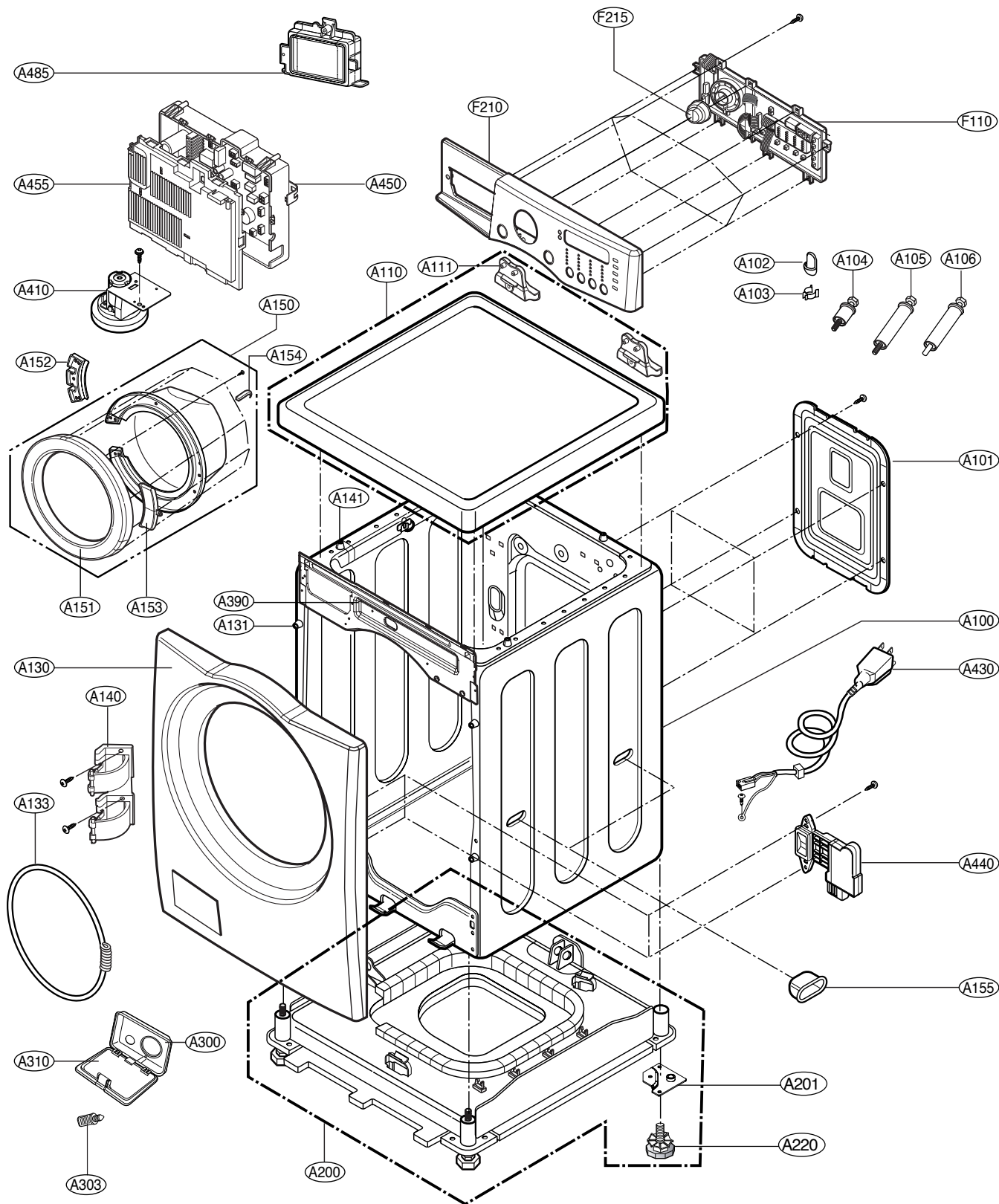
③ Unplug the 2 connectors from the stator.

HINGE, DAMPER

DAMPER

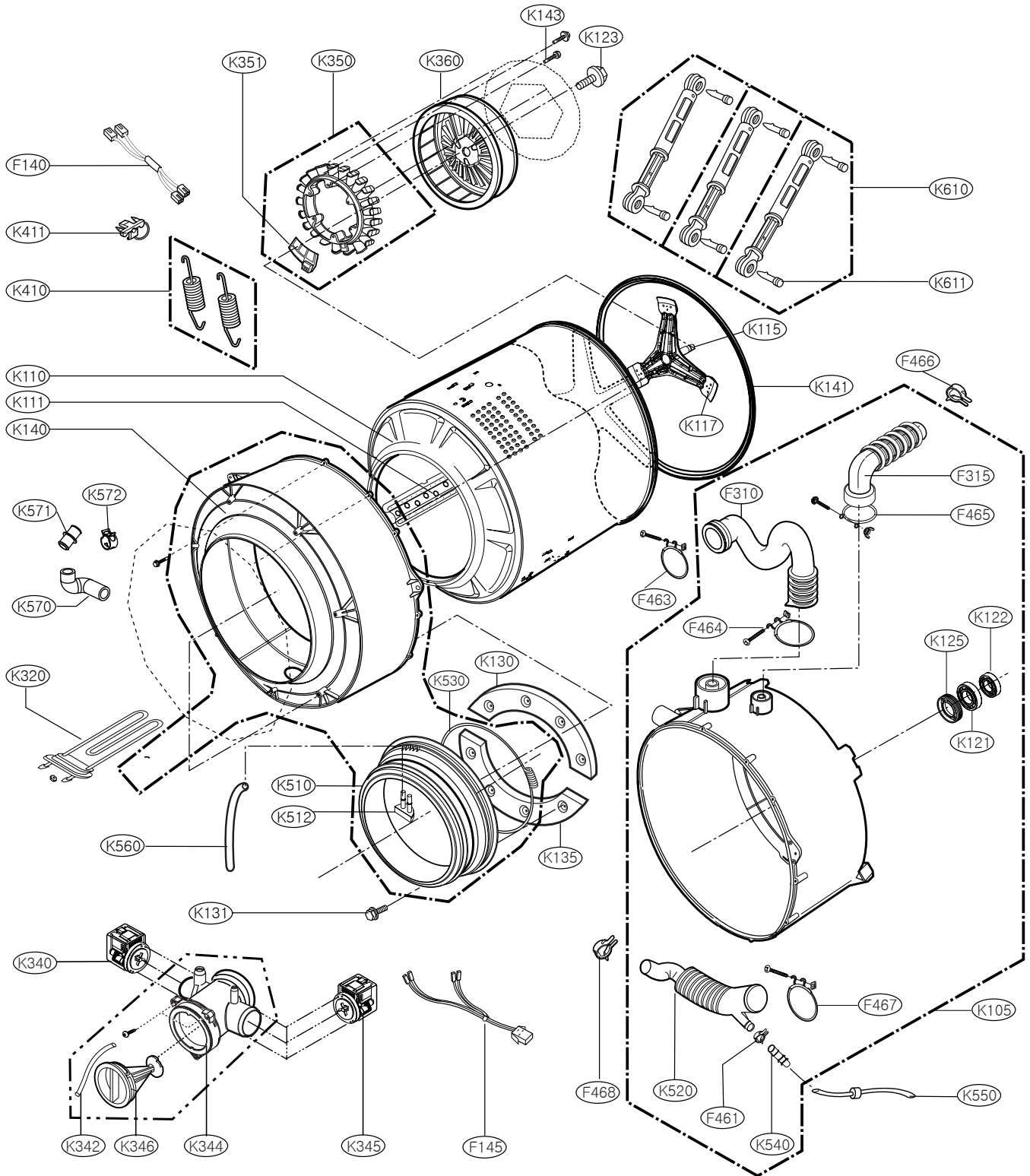① Disassemble the damper hinges from the tub and base.

② Separate the dampers.

※ **NOTE**
• Once removed, replace the damper with new one.

10. EXPLODED VIEW

10-1. CABINET & CONTROL PANEL ASSEMBLY

10-3.DISPENSER ASSEMBLY

HOT (RED)

COLD (BLUE)