

WASHING MACHINE SERVICE MANUAL

A CAUTION

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

MODEL: 796.488*2800



P/No.: MFL30599120

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1. SPECIFICATIONS

ITEM	1	F1141FD(0~9)					
POWER SI	JPPLY	120V ~ 60Hz					
PRODUCT V	VEIGHT	190 lbs. (86 kg)					
ELECTRIC	WASHING	280 W					
POWER	DRAIN MOTOR	80 W					
CONSUMTION	WASH HEATER	1000 W					
REVOLUTION	WASH	42 rpm					
SPEED	SPIN	1070 rpm					
CYCLE	S	9					
WASH / RINSE TEN	//PERATURES	5					
SPIN SPE	EDS	5					
OPTION	NS	Prewash, Stain Cycle, Quick Cycle, Easy Spin, Extra Rinse, My Cycle, Delay W					
CUSTOM PR	OGRAM	Incorporated					
WATER CIRC	ULATION	Incorporated					
OPERATIONAL WAT	ER PRESSURE	4.5-145 psi (30-1000 kPa)					
CONTROL	TYPE	Electronic					
WASH CAP	ACITY	3.16 cu.ft (3.60 cu.ft.IEC)					
DIMENSI	ONS	27" (W) X 29 -1/2" (D) X 42 -3/4" (H), 49 -4/5" (D, door open)					
DELAY W	ASH	up to 12 hours (796.4884*) and up to 13 hours (796.4885*)					
DOOR SWITC	CH TYPE	PTC + Solenoid					
WATER LI	EVEL	5 steps (by sensor)					
LAUNDRY LOAD	SENSING	Incorporated					
ERROR DIAC	SNOSIS	Incorporated					
AUTO POWE	ER OFF	Incorporated					
CHILD LO	OCK	Incorporated					
RLM ENA	BLE	-					
h							

2. FEATURES & TECHNICAL EXPLANATION

2-1. FEATURES

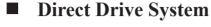












The advanced Brushless DC motor directly drives the drum without belt and pulley.

Tilted Drum and Large Door Opening

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

■ Time-Released Dispenser

Detergent, fabric softener and bleach are dispensed separately at the right time during wash cycle.

Automatic Wash Load Detection

Automatically detects the load and optimizes the washing time.

■ Built-in Heater

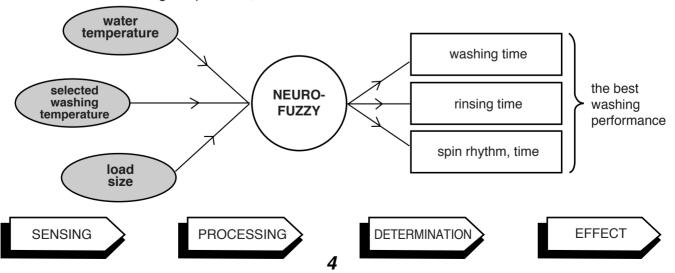
The internal heater automatically heats the water to the optimum temperature on selected cycles.

■ Child Lock

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

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.



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.

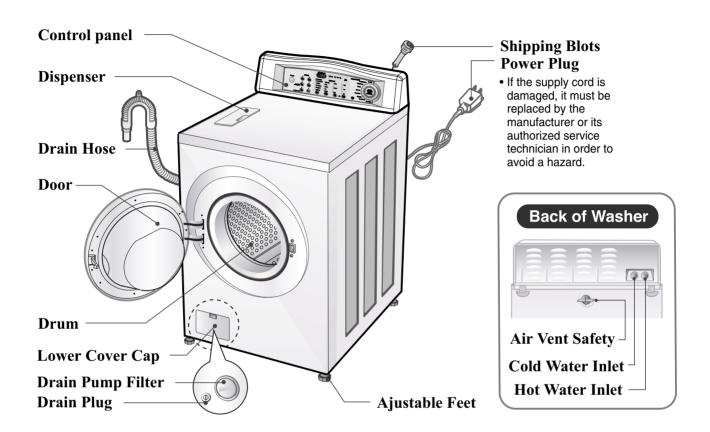
2-6. DOOR LOCKED LAMP LIGHTS

- 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)

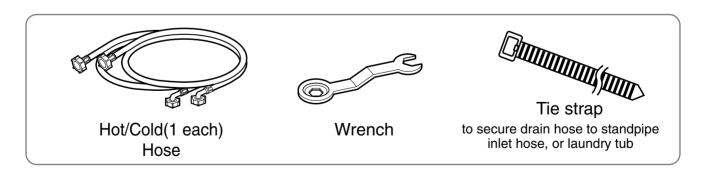
2-7. CHILD LOCK

- Use this option to prevent unwanted use of the washer. Press and hold OPTION button for 3 seconds to lock/unlock control.
- When Child lock is set, "[L" blinks and all buttons are disabled except the Power button. You can lock the washer while it is operating.

3. PARTS IDENTIFICATION



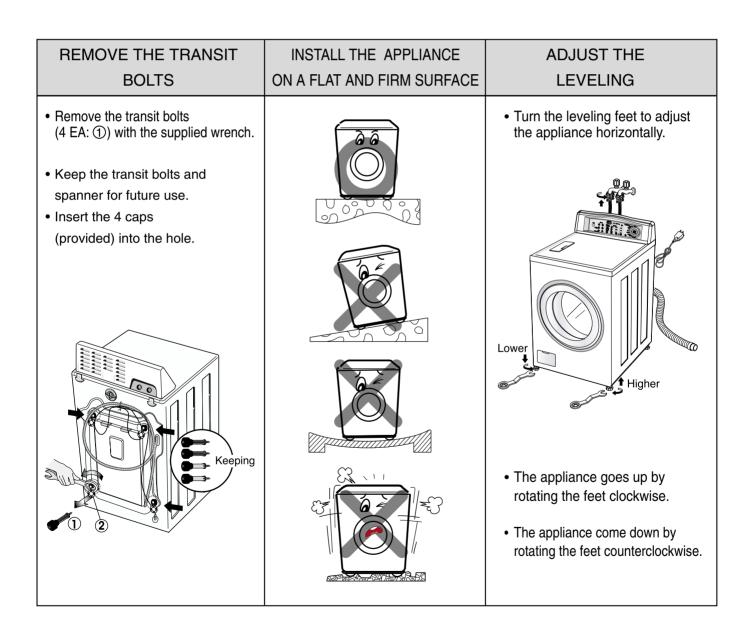
ACCESSORIES



4. INSTALLATION

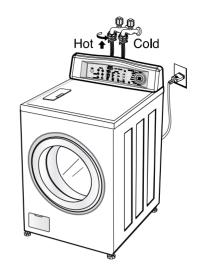
- 1 Before servicing, ask the customer what the trouble is.
- 2 Check the setup (power supply is 120V AC, remove the transit bolts....).
- 3 Check with the troubleshooting guide.
- 4 Plan your service method by referring to the disassembly instructions.
- [5] Service the unit.
- 6 After servicing, operate the appliance to see whether it functions correctly.
- STANDARD INSTALLATION

The appliance should be installed as follows:

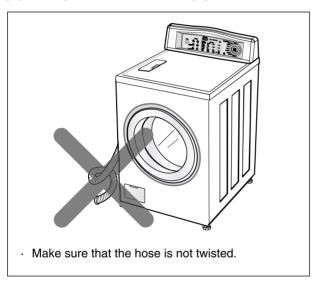


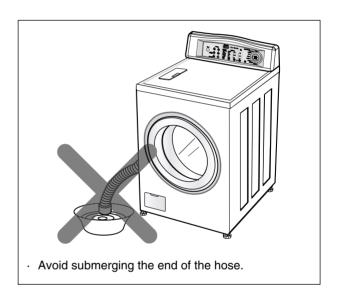
■ HOW TO CONNECT THE INLET HOSE

- Verify that the rubber washer is inside of the valve connector.
- Connect the inlet hose firmly to prevent leaks.



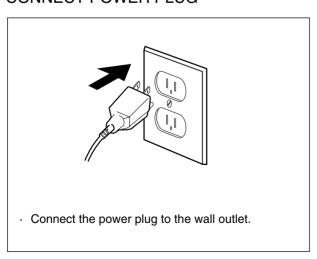
■ CONNECT THE DRAIN HOSE

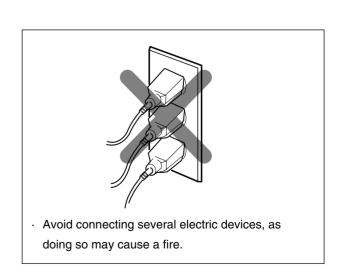




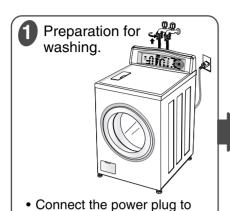
* The end of the drain hose should be placed less than 96"from the floor.

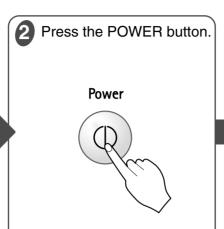
■ CONNECT POWER PLUG

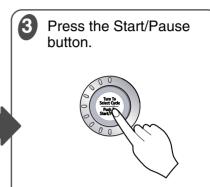




7 TEST OPERATION







Check the water heating

• Connect the inlet hose.

the outlet.



 Press the WASH / RINSE button and the present temperature will be displayed. 6 Check the automatic reversing rotation of the drum.



• Make sure that the drum rotates clockwise and counterclockwise.

A Check the water supply.

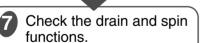
• Listen for clicking sounds to

determine if the door has

locked.



 Verify that if water is supplied through the detergent dispenser.



- Press the POWER button twice to restart.
- Press the SPIN SPEED button.
- Press the START / PAUSE button.
- Check the drain and spin functions.



Press the START / PAUSE button.



 Listen for clicking sounds to determine if the door is unlocking. 9 Water removal.



 If SVC is required, remove the remaining water in the tub, by pulling out the drain plug.

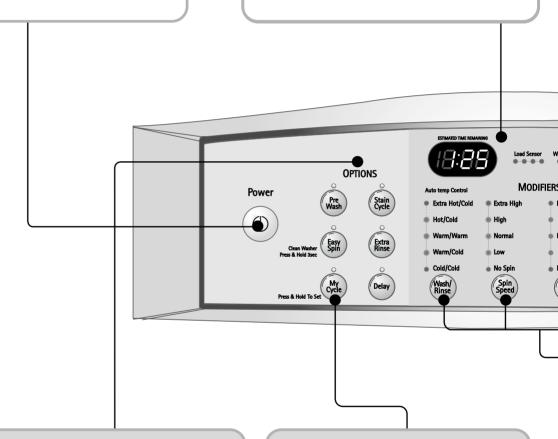
POWER ON/OFF BUTTON

Press to turn the washer ON. Press again to turn the washer OFF.

NOTE: Pressing the ON/OFF button during a cycle will cancel that cycle and any load settings will be lost.

TIME AND STATUS

The display shows the settings, estimated time remaining, options, and status messages for your washer.



OPTION BUTTONS

The option buttons allow you to select additional cycle options and will light when selected. Certain buttons also allow you to activate special functions by pressing and holding the button for 3 seconds.

Prewash: Use this option for loads that need pretreatment.

It adds 16 minutes prewash and drain.

• Stain Cycle: Adds time to the wash and rinse cycles for better stain removal. Automatically provides a rinse.

•` Easy Spin: Be used when there is a vibration problem, especially on wood floor installations.

• Extra Rinse: This option provides an additional rinse cycle.

• Delay Wash: Allows the start of any cycle to be delayed for 1~19(12, 9) hours.

• MY CYCLE BUTTON

Press the MY CYCLE button to save and recall a customized wash cycle for future use.

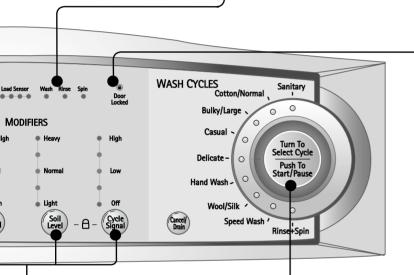
You can save the Cycle, Wash/Rinse Temperature, Spin Speed, and Soil Level settings, as well as other cycle options.

STATUS INDICATOR

 These lights show elapsed time of the selected cycle.

DOOR LOCKED lamp

- Lights whenever the door is locked.
- The door can be unlocked by pressing the Start / Pausebutton to stop the washer.



• CYCLE SELECTOR KNOB

Turn this knob to select the desired cycle. Once the desired cycle has been selected, the standard presets will be shown in the display. These settings can be adjusted using the cycle setting buttons anytime before starting the cycle.

Press this knob to START the selected cycle. If the washer is running, use this knob to PAUSE the cycle without losing the current settings.

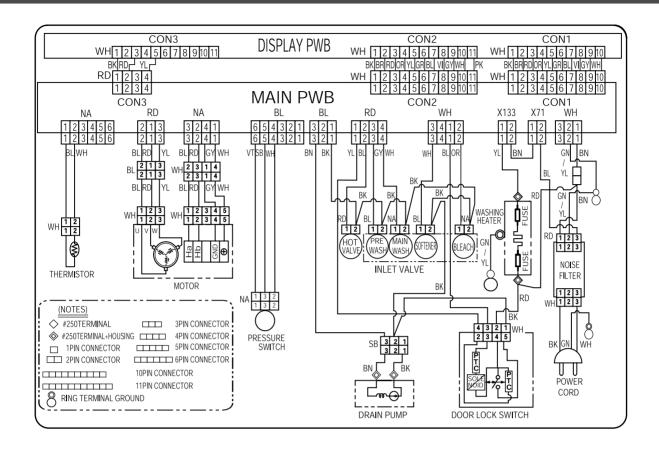
NOTE: If you do not press the cycle selector knob within 4 minutes of selecting a cycle, the washer automatically turns off.

CYCLE SETTING BUTTONS

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

- Select a water temperature based on the type of load you are washing.
- To change the spin speed, select the Spin Speed button until the desired setting is displayed.
- To change the soil level, select the Soil Level button until the desired setting is displayed.

6. WIRING DIAGRAM / PROGRAM CHART



PROGRA	M	Cŀ	IAI	RT									* W	/ate	r Sı	upp	ly:	W-S	3	*	Int	erm	itte	nt S	Spir	ı : I	·s		* D	iser	ntan	ngle : D·T						
//C				١	Nas	shin	ng			Rinse											Spin					Α												
\\\\Y		Р	re				M	ain						Nor	ma	1			Ext	ra o	r Sta	ain	Ex	tra 8	& Sta	ain	L '	Spii	_	E	U T							
///c	w			<		,,		, ≤		W	Was	shing	Sta	aycoo	ling			1			2				3	3			3	3					N	ö	Norma	al
C T E	s	Washing	Drain	I S	s S	Heating	Washing	W S	Rinsing	Drain	Drain	I S	W S	Rinsing	Drain	s	8 s	Rinsing	Drain	 S	∀ · ∽	Rinsing	Drain	- S	W S	Rinsing	Drain	Spin	D:Τ	D	O F F	Working						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	20	20	(11001111111	iato,					
U P R Time (SEC)	60	MIN	60	300	60		MIN	60	60	60	60	300	60	240	60	300	60	240	60	300	60	240	60	300	60	240	60	120 ~ 540	120	20	20							
Sanitary		8			-	┝	66		TIME	S	-							Н	*****								_		H			About 1	:57					
Cotton /Normal		8					19		><										****													About 1	:08					
Bulky /Large	****	8.		*****	_	┝	19		\sim	<	-	_	H						KKKKK	****			*****				_	H				About 1	:10					
Casual	CERRE	8					17		><	\leq									****	*****			*****									About 1	:05					
Delicates	****	8	*****				13		><	\leq						*****			****	****		****	/	>	<	\leq						About	44					
Wool/Silk	/ \	\geq	<	\leq			13		\sim	\leq		•••••							****	*****			$/\setminus$	\geq	<	\leq						About 1	:02					
Hand Wash		\geq	<	\leq			13		><	\leq									****	*****		*****		>	<	\leq						About	44					
Speed Wash		\geq	\leq	\leq			7		><	\leq		*****		120				120			*****	120	/ \	\geq	<	\leq						About	32					
Drain+Spin											_				_	_																About	16					
Wash + Rinse	EKKKK	8	*****	KKKKK			19		><	\leq									xxxx	****	****	***	*****	KKKKK	****	****			\geq	\leq		About	53					
Rinse + Spin				\leq	\geq	\leq	_	=	\leq										CHHHH	KKKKK	****			>	<	\leq						About	21					
Rinse				\geq	\geq	>	_	=	=										****	*****				\geq	\leq	\leq			\geq	\leq		About	6					

^{*} Basic Cycle

* SERVING OPTIONAL CYCLE

^{*} Pre-Setting Time : Water Supply - 60 sec.

Drain - 60 sec.

^{*} Basic time is minute in washing chart.

^{*} The actual program time can be varied with the load amount, water temperature or ambient temperature.

7. TROUBLESHOOTING

7-1. BEFORE PERFORMING SERVICE

- Be careful of electric shock when disconnecting parts for while troubleshooting.
- The voltage of each terminal is 120V 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.

- Press theSPIN SPEED and SOIL LEVEL buttons simultaneously.
- Press the Power button, while the above condition. Then buzzer sound twice.
- In order to advance to the next step of test mode, press the START / PAUSE button once.

Number of times the Start/Pausebutton is pressed	Check Point	Display Status						
None	Turns on all lamps and locks the door.	(5:55)						
1 time	Tumble clockwise.	rpm (40~50)						
2 times	Low speed Spin.	600 rpm						
3 times	High speed Spin.	1070 rpm						
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 softener turns on.	Water level frequency (25~65)						
8 times	Inlet valve for bleach turns on.	Water level frequency (25~65)						
9 times	Tumble counterclockwise.	rpm (40~50)						
10 times	Heater turns on for 3 sec.	Water temperature						
11 times	Drain pump turns on.	Water level frequency (25~65)						
12 times	Power off and unlock the door.	Turn off all lamps.						

7-3. HOW TO CHECK THE WATER LEVEL FREQUENCY

* Press the SPIN SPEED and SOIL LEVEL 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

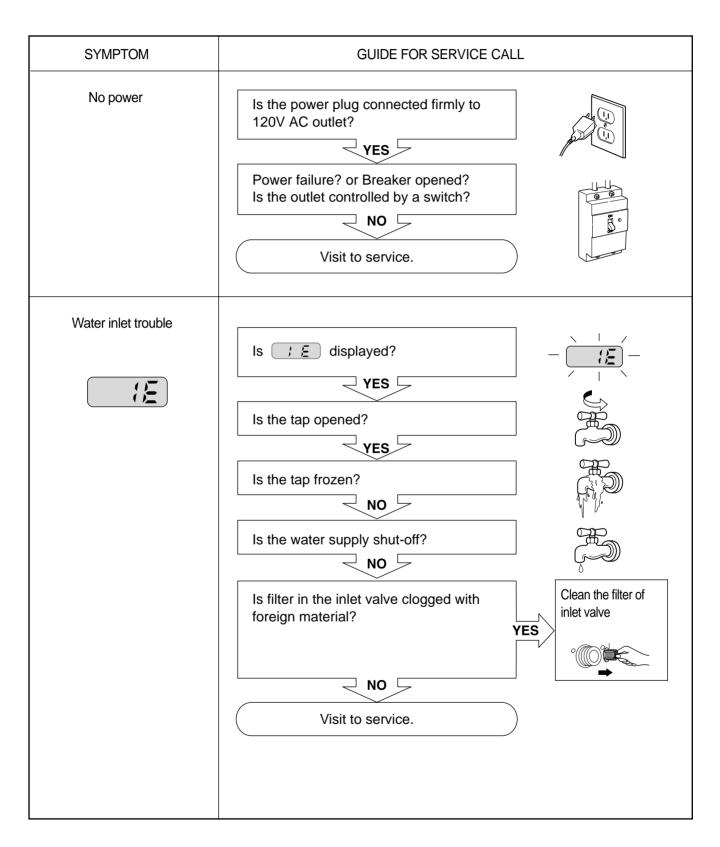
- If you press the START/PAUSE button when an error is displayed, any error except "PE will disappear and the machine will go into the pause status.
- In case of <code>FFE</code> , <code>FEE</code>, <code>FEE</code> if the error is not resolved within 20 sec., or the in case of other errors, if the error is not resolved within 4 min., power will be turned off automatically and the error code will blink. But in the case of <code>FE</code>, power will not be turned off.

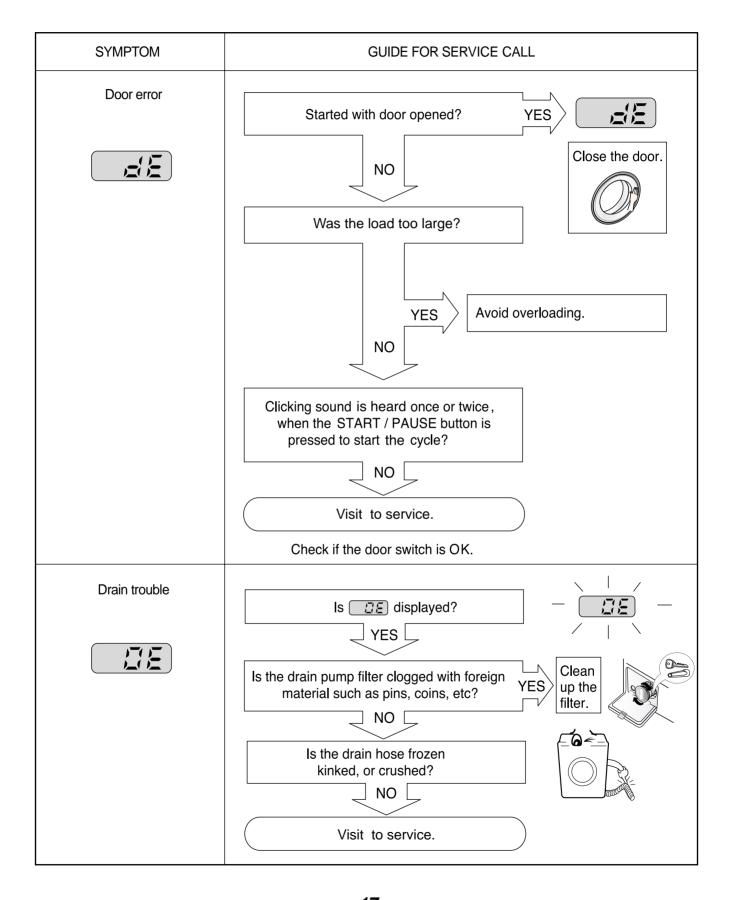
	ERROR	SYMPTOM	CAUSE
1	WATER INLET ERROR	;	Correct water level (2 level) is not reached within 8 minutes after water is supplied or it does not reach the preset water level within 25 minutes.
2	IMBALANCE ERROR		 The load is too small. The appliance is tilted. Laundry is gathered to one side. Non distributable things are put into the drum.
3	DRAIN ERROR		Not fully drained within 10 minutes.
4	OVER FLOW ERROR	FE	Water is overflowing (over 8 level). If FE is displayed, the drain pump will operate to the drain water automatically.
5	PRESSURE SENEOR ERROR	5,7	The SENSOR SWITCH ASSEMBLY is out of order.
6	DOOR OPEN ERROR	, <u>-</u> () <u>-</u>	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	E E	The THERMISTOR is out order.

	ERROR	SYMPTOM	CAUSE
8	OVER CURRENT ERROR		MAIN PWB ASSEMBLY is out of order. Winding in the STATOR ASSEMBLY is short-circuited.
9	LOCKED MOTOR ERROR	LE	 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.
10	EEPROM ERROR	EE	EEPROM is out of order. **Displayed only when the START / PAUSE button is first pressed in the QC Test Mode.
11	POWER FAILURE	51,5	The washer experienced a power failure.

8. ERROR DIAGNOSIS AND CHECK LIST

8-1.DIAGNOSIS AND SOLUTION FOR ABNORMAL OPERATION



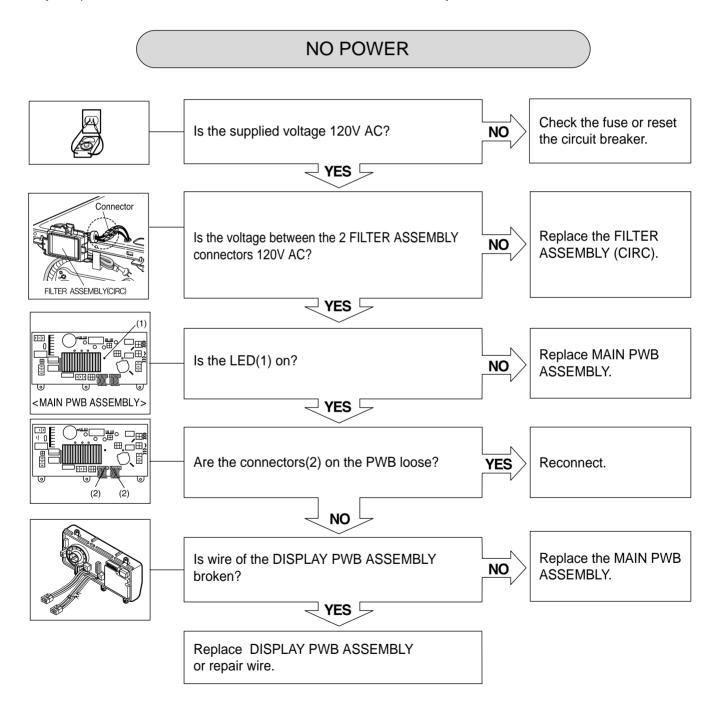


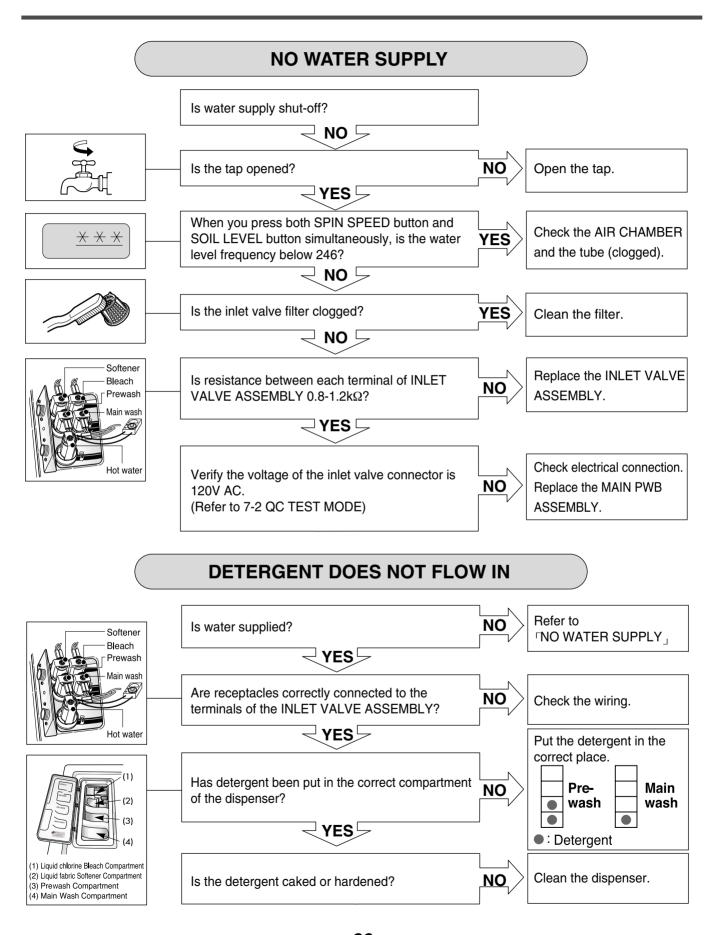
SYMPTOM	GUIDE FOR SERVICE CALL									
Suds overflow from the appliance. (In this condition, wash and spin do not operate normally)	Is a low-sudsing detergent used? YES Is the proper amount of detergent used as recommended? YES Recommend to reduce the amount of detergent.									
	 * This appliance 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. 									
No softening effect	Is softener put in the correct compartment of the dispenser? Compartment for softener Softener YES Explain proper use of softener. Clean the softener compartment									
FE FE EE LE	Visit to service.									

8-2. FAULT DIAGNOSIS AND TROUBLESHOOTING

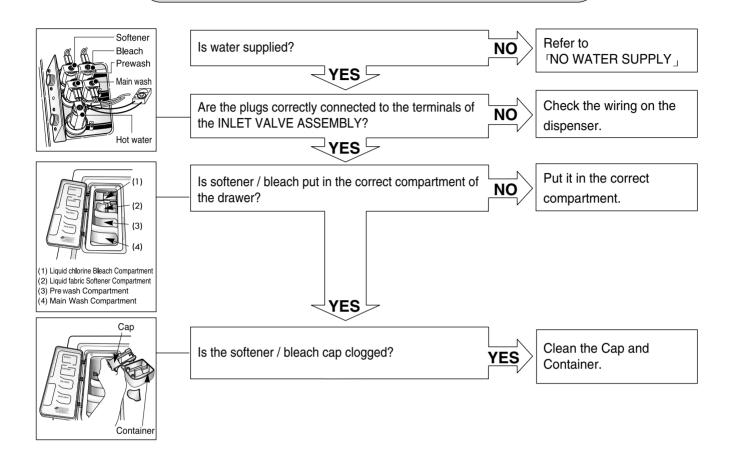
▲ CAUTION

- 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.

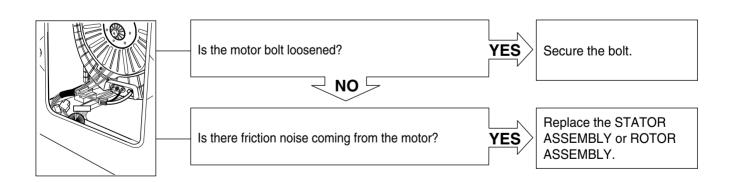




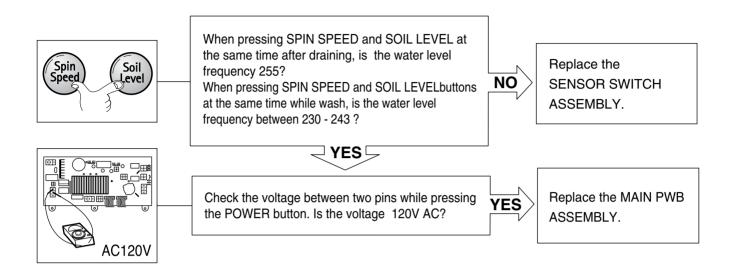
SOFTENER / BLEACH DOES NOT FLOW IN



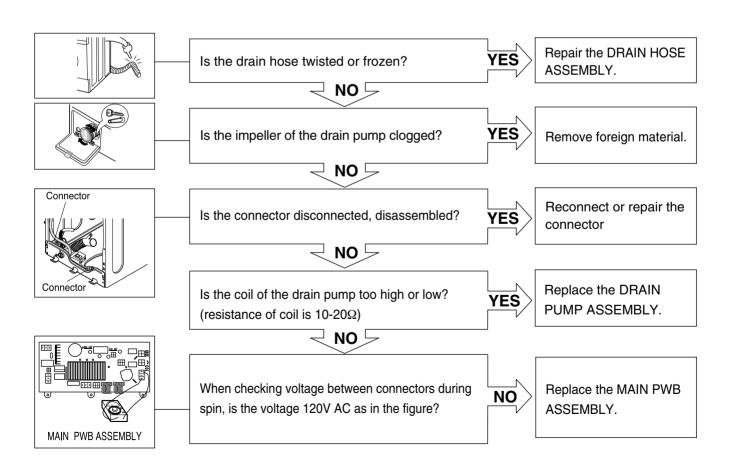
ABNORMAL SOUND



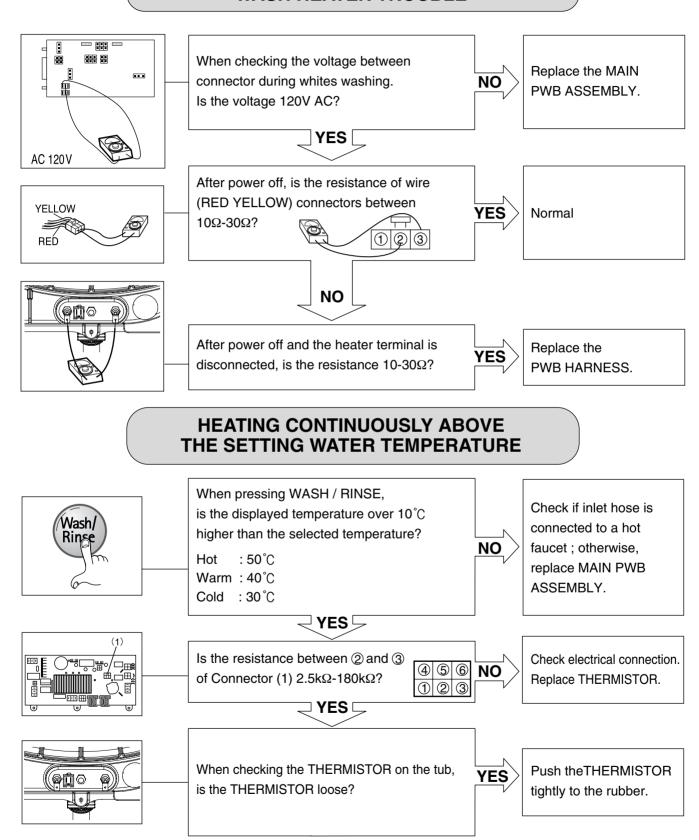
HEATING WITHOUT WATER



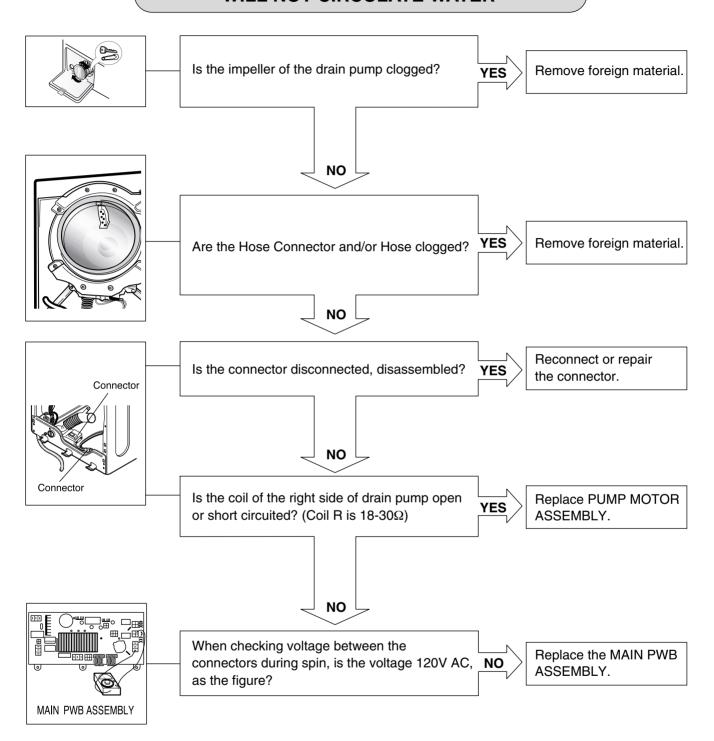
DRAIN MALFUNCTIONING

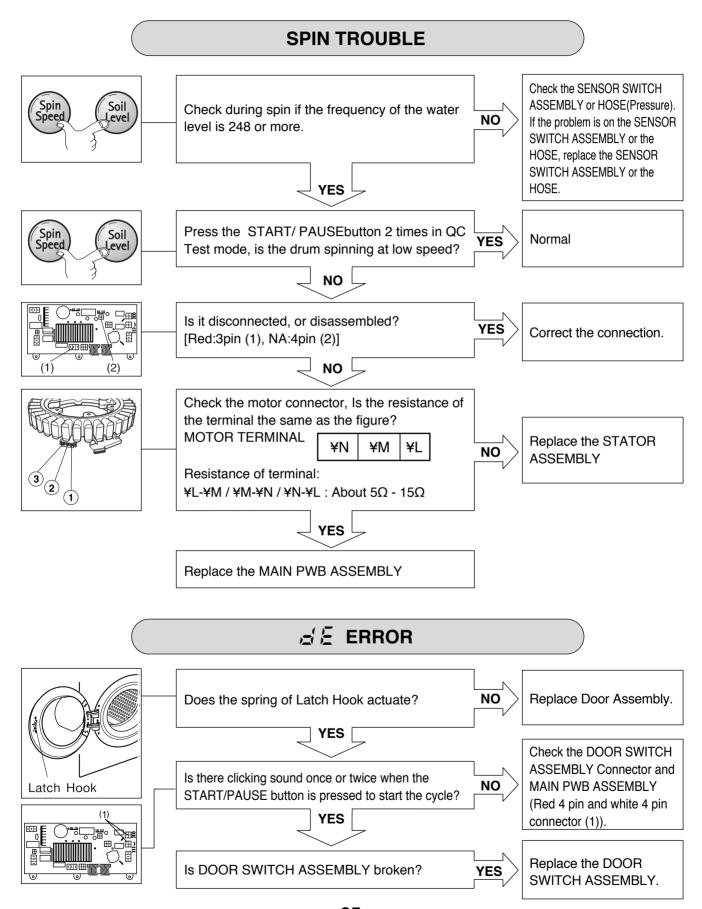


WASH HEATER TROUBLE



WILL NOT CIRCULATE WATER

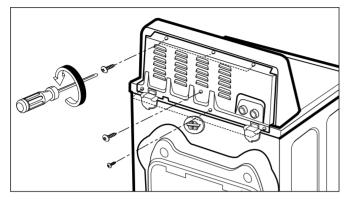




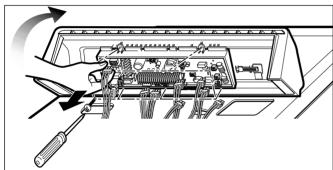
9. DISASSEMBLY INSTRUCTIONS

fR Disassemble and repair the unit only after pulling out power plug from the outlet.

CONTROL PANEL ASSEMBLY

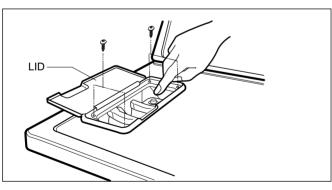


- 1. Unscrew 7 screws on the Rear Frame.
- 2. Disassemble the Rear Frame.

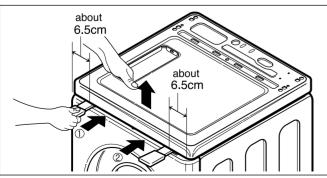


- 3. Pull the Control panel forward.
- 4. Disconnect connectors.
- 5. Unscrew 5 screws.
- 6. Disassemble the controller assembly.





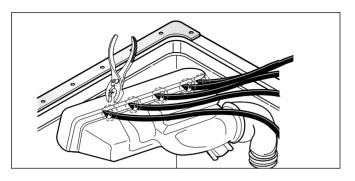
- 1. Open the Lid.
- 2. Unscrew 4 screws.
- 3. Disassemble the Lid Assembly.
- 4. Pull down the Dispenser by pushing hooks.



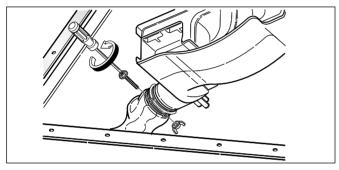
- **5.** Put a hand into the dispenser hole and hold the top plate.
- **6.** Push backward using an opener and lift the top plate.

¡ Do first left side (¥1).

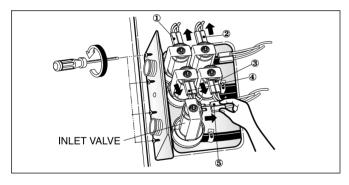
DISPENSER ASSEMBLY



- 1. Disassemble the 5 hose clamps.
- 2. Release the 5 hoses.



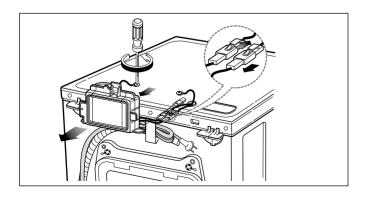
3. Unscrew the nut at the lower part of the dispenser.



- 4. Unscrew the 4 screws on the holder.
- **5.** Disassemble the 5 connectors from the valves.

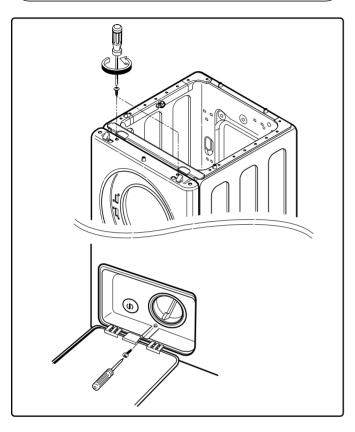
; Wire color : ¥L WH-BK ¥M OR-BK ¥N WH-BK ¥O GY-BK ¥P BL-BK

NOISE FILTER

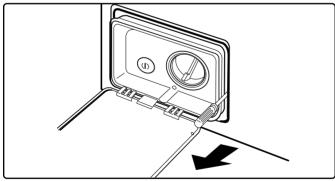


- 1. Unscrew the screw from the top plate.
- 2. Unplug the 2 connectors.

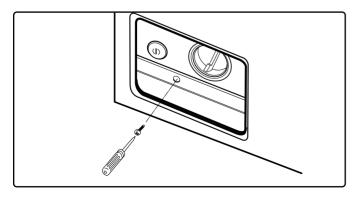
CABINET COVER



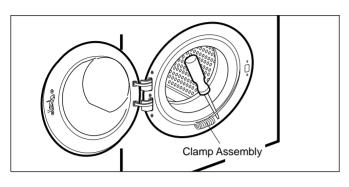
- **1.** Unscrew the 2 screws from upper side of the cabinet cover.
- 2. Unscrew the screw from filter cover.

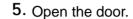


3. Put a flat (–) screwdriver into the both sides of the filter cover, and pull it out.

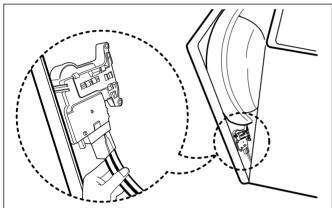


4. Unscrew the 1 screws from the lower side of the cabinet cover.

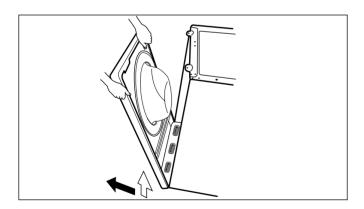




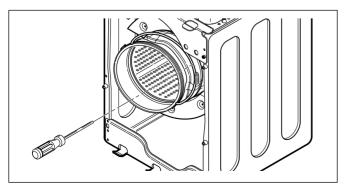
- **6.** Disassemble the clamp assembly using a flat (–) screwdriver.
- 7. Separate the clamp assembly from cabinet cover.



- 8. Tilt the cabinet cover.
- **9.** Disconnect the door switch connector.

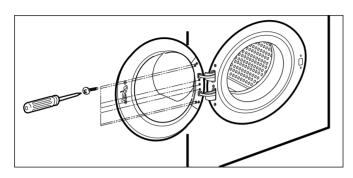


10. Lift and separate the cabinet cover.

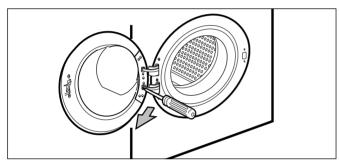


- **11.** Disassemble the clamp assembly using a flat (–) screwdriver.
- 12. Disasemble the Gasket.

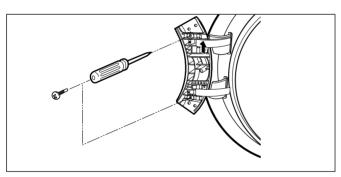
DOOR



- 1. Open the door.
- 2. Unscrew the 7 screws from the hinge cover.

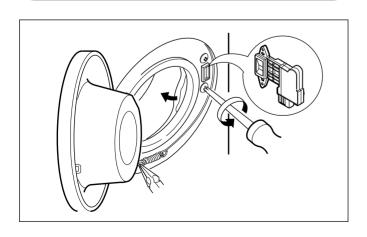


3. Put a flat (–) screwdriver into the opening of the hinge, and pull out the hinge cover.



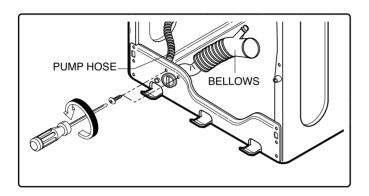
- 4. Unscrew the screws from the door.
- 5. Disassemble the door upward / downward.
 - ¡ Be careful! The door is heavy.

DOOR SWITCH ASSEMBLY



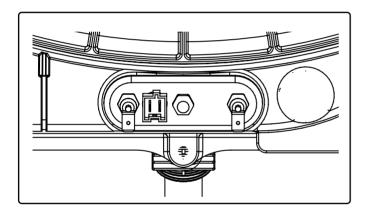
- 1. Open the door.
- 2. Disassemble the clamp assembly.
- 3. Unscrew the 2 screws from cabinet cover.

PUMP



- 1. Disassemble the cabinet cover.
- **2.** Separate the pump hose and the bellows from the pump assembly.
- **3.** Disassemble the pump assembly in arrow direction.

HEATER&THERMISTOR

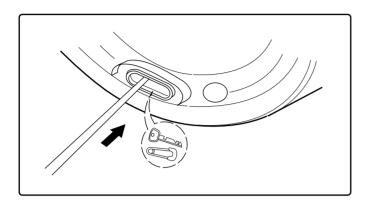


- 1. Disassemble the back cover.
- **2.** Separate 2 connectors from the heater.
- **3.** Loose the nut and pull out the heater.

A CAUTION

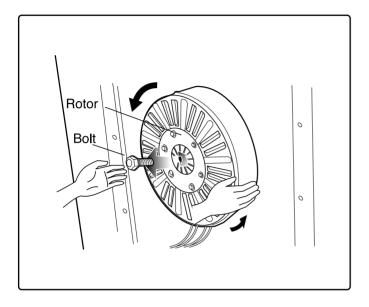
- When assembling the heater, insert the heater into heater clip on the bottom of the tub.
- Tighten the fastening nut so the heater is secure.

WHEN FOREIGN OBJECT IS STUCK BETWEEN DRUM AND TUB

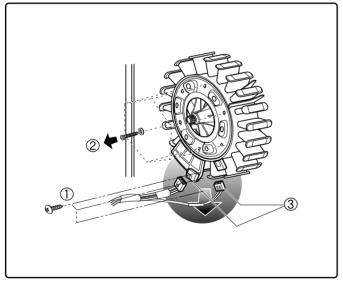


- **1.** Disassemble the back cover.
- **2.** Separate the heater from the tub.
- **3.** Remove any foreign objects (wire, coin, etc.) by inserting a long bar in the opening.

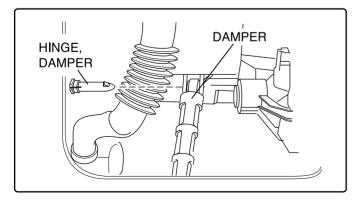
MOTOR / DAMPER



- 1. Disassemble the back cover.
- **2.** Loosen the bolt.
- 3. Pull out the Rotor.



- **4.** Unscrew the 2 screws from the tub bracket.
- **5.** Loosen the 6 bolts on the stator.
- **6.** Unplug the 2 connectors from the stator.



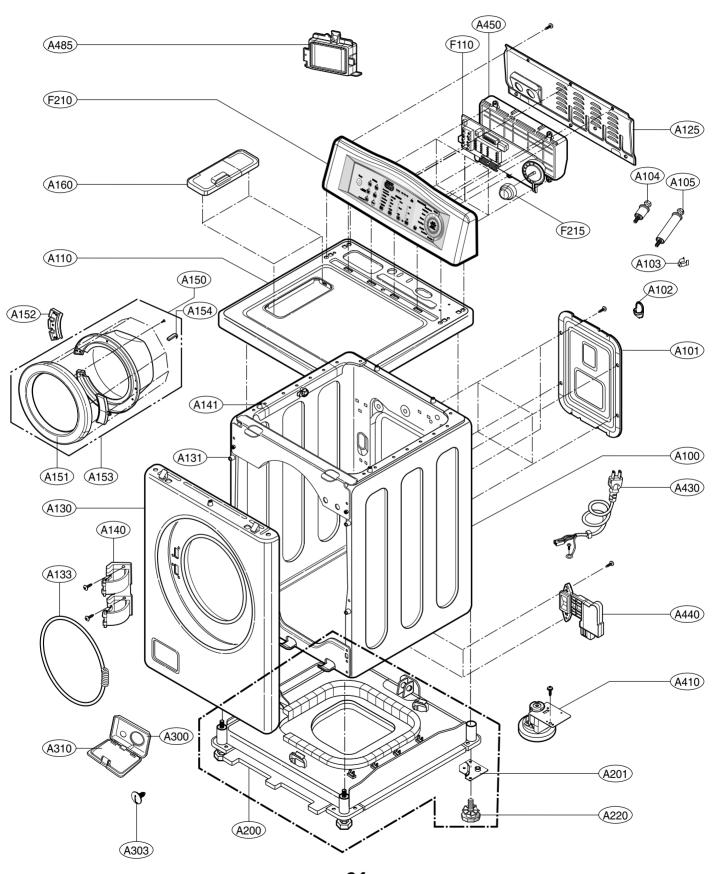
- **1.** Disassemble the damper hinges from the tub and base.
- **2.** Separate the dampers.

% NOTE

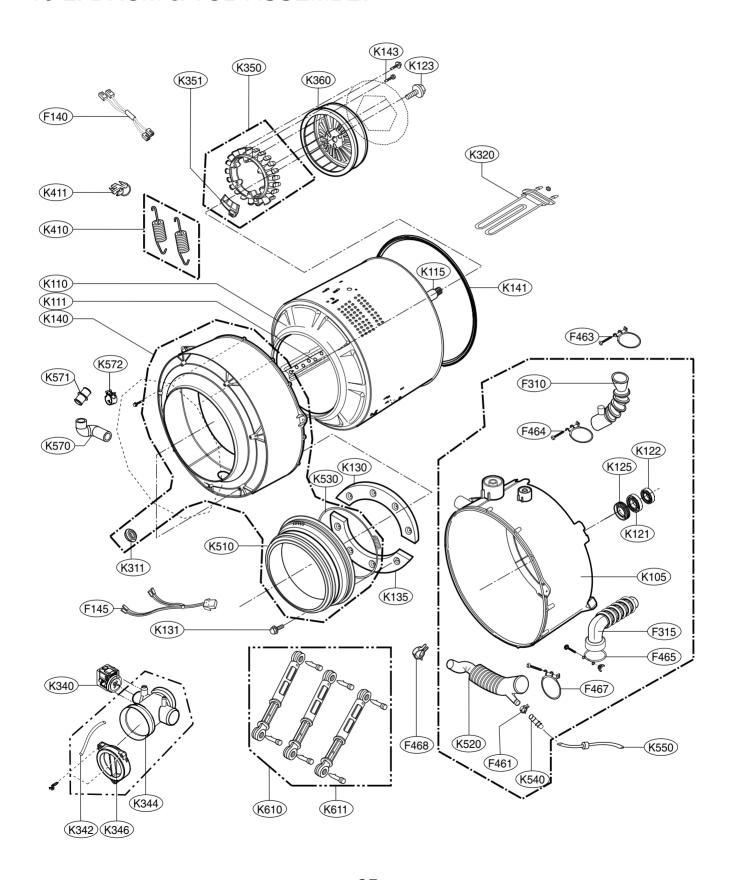
• Once removed, replace the damper pin with new one.

10. EXPLODED WIEW

10-1. CABINET & CONTROL PANEL ASSEMBLY



10-2. DRUM & TUB ASSEMBLY



10-3. DISPENSER ASSEMBLY

