LG

WASHING MACHINE
SERVICE MANUAL

CAUTION

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

MODEL : WD(M)-14101(6)FD
WD(M)-16101(6)FD
WD-16200FD
WD-16210FD

LG

CONTENTS

1. SPECIFICATION

| ITEM	WD(M)-14101(6)FD, WD(M)-16101(6)FD, WD-16200FD,WD-16210FD	
POWER SUPPLY	220-240V~, 50Hz	
PRODUCT WEIGHT	65kg	
ELECTRICITY CONSUMPTION	WASHING	230W
	SPIN (1400rpm)	440W
	DRAIN MOTOR	38W
	WASH HEATER	2000W
REVOLUTION SPEED	WASH	45rpm
	SPIN	1600 rpm : No spin/400/600/800/1000/1200/1400/1600 rpm
		1400 rpm : No spin/400/600/800/1000/1200/1400 rpm
OPERATION WATER PRESSURE	0.3-10kgf/㎠ (30-1000kPa)	
CONTROL TYPE	Electronic	
WASH CAPACITY	7kg	
	Synthetic (4kg), Wool (2kg), Hand Wash (2kg), Delicate (3kg), Quick 30(5kg)	
DIMENSION	600mm(W)×600mm(D)×850mm(H)	
WASH PROGRAM	Whites, Coloureds, Synthetic, Wool, Hand Wash, Delicate, Quick 30	
RINSE	Super, Normal, Rinse Hold	
DOOR SWITCH TYPE	Bi-Metal type	
WATER LEVEL	9 steps (by sensor)	
RESERVATION	From 3 hours to 19 hours	
SENSING OF THE LAUNDRY AMOUNT	Adapted	
FUZZY LOGIC	Adapted	
DISPLAY OF THE REMAINING TIME	Adapted	
ERROR DIAGNOSIS	9 items	
POWER AUTO OFF	Adapted	
CHILD LOCK	Adapted	
AUTO RESTART	Adapted	
RAPID	Adapted	

2. FEATURES & TECHNICAL EXPLANATION

2-1.FEATURES

■ **Jumbo drum**

LG's jumbo drum can wash about 40% more load than conventional washing machine. A bigger drum improves the wash performance.
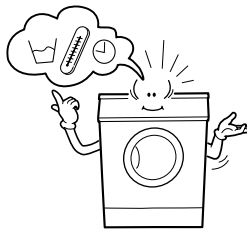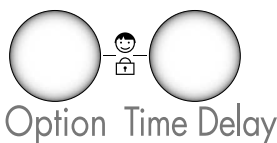
■ **More economical by Intelligent Wash System**

Intelligent Wash System detects the amount of load and water temperature, and then determines the optimum water level and washing time to minimize energy and water consumption.
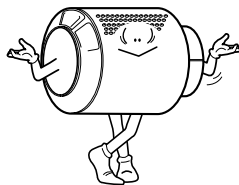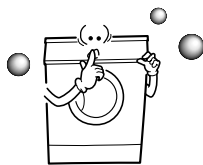
■ **Direct Drive system**

The advanced Brushless DC motor rotates the Drum directly without belt and pulley.
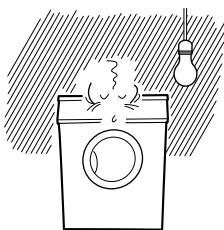
■ **Child-Lock**

The Child-Lock system has been developed to prevent children from pressing any button to change the program during operation.

■ **Low noise speed control system**

By sensing the amount of load and balance, automatical distributes load evenly to minimize the spinning noise level.

■ **Auto Restart**

Although the washing machine is turned off by a power failure, it restarts automatically where it stopped when power is supplied again. And it will be the same the machine is unplugged and is plugged in again.

■ Wide LCD

- Its Liquid Crystal Display (LCD) Panel gives you all information with animated pictures in detail to its User-Friendliness.
- It shows various text and graphical expressions.
- It is easy to glance and get detailed explanations about careful points before washing.
- Washer's manual can be downloaded easily by use of a big LCD panel.
- It shows all progress step by step through moving/animated graphical images. This lets you know what's going on in washing machine.
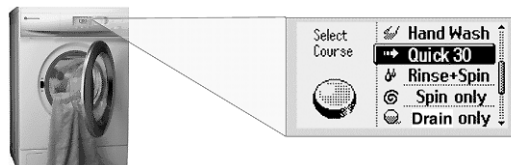
■ Digital Design

- New Millennium digital washer's Digital Design is so convenient of use, also you have images of the high class.
- Its user-friendliness facilitates with dial-type control button selection and ergonomics design.
- It is totally a digital washer with the highest shine and the best values.

2-2.DETERMINE WASHING TIME BY FUZZY LOGIC

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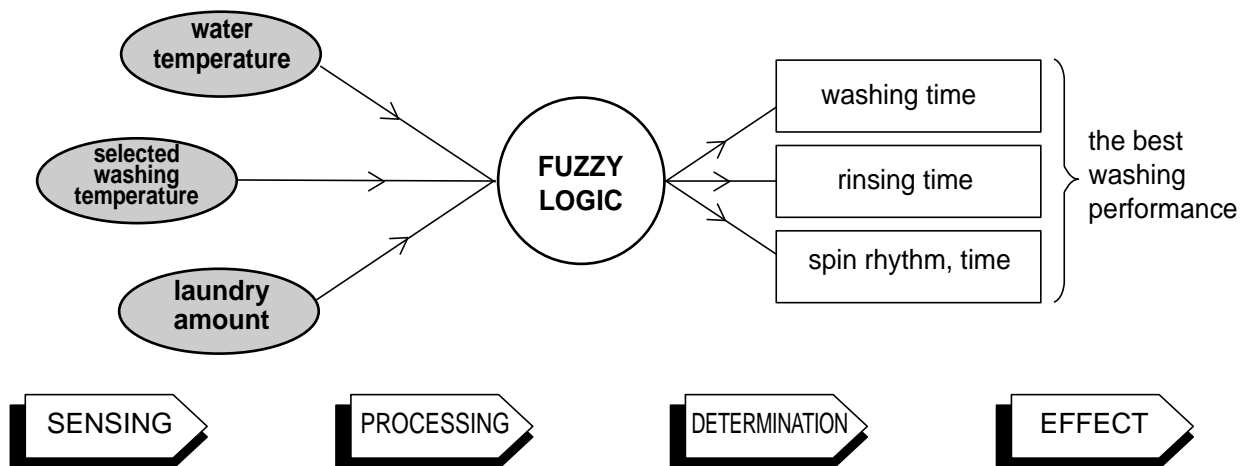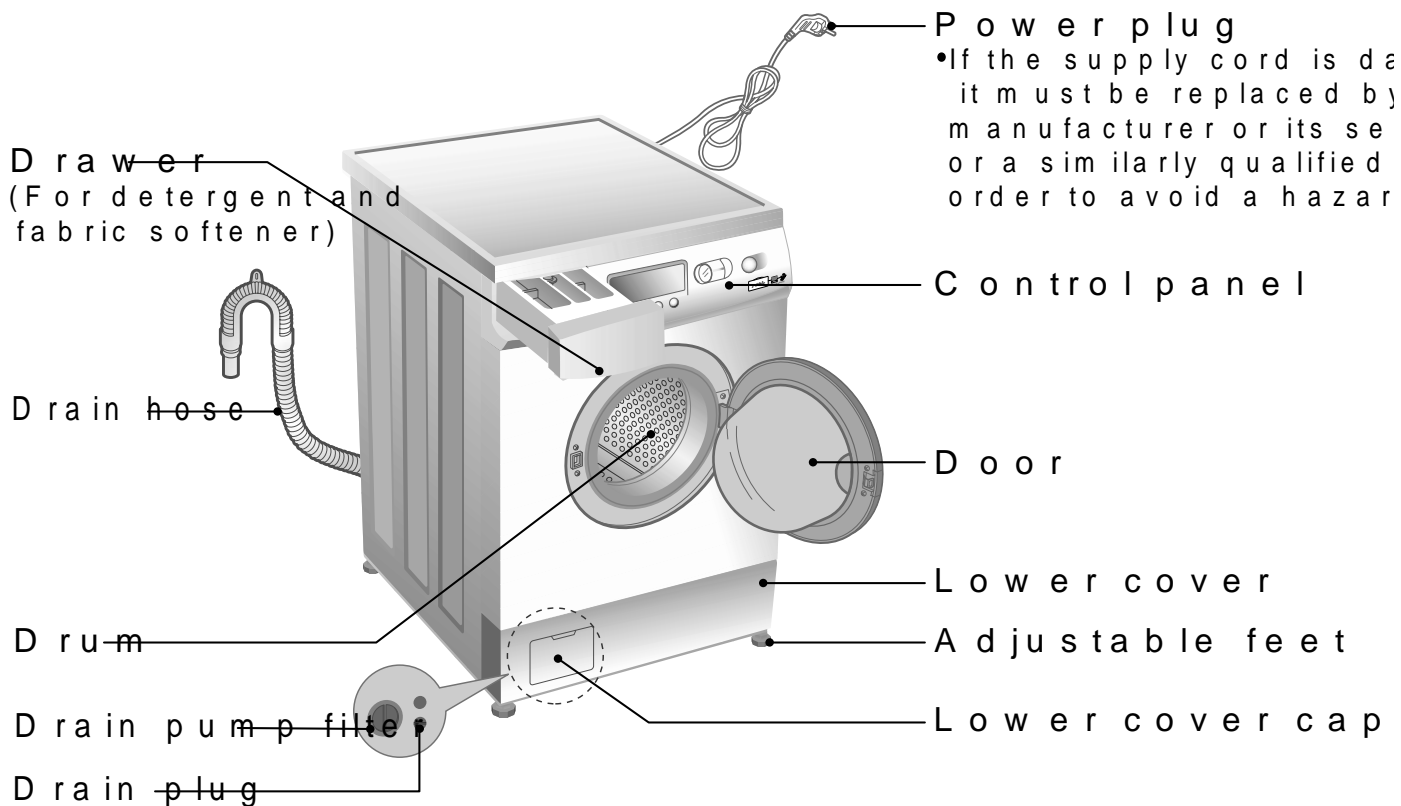

2-3.WATER LEVEL CONTROL

● This model adopts a pressure sensor which can sense the water level in the tub.

● Water supply is stopped when the water level to the preset level, then the washing program proceeds.

● Spinning does not proceed until the water in the tub reduces a certain level.
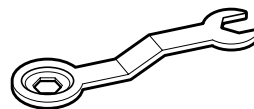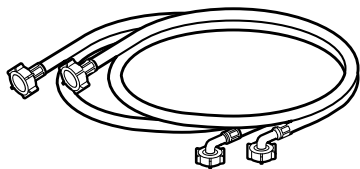
2-4.THE DOOR CAN NOT BE OPENED

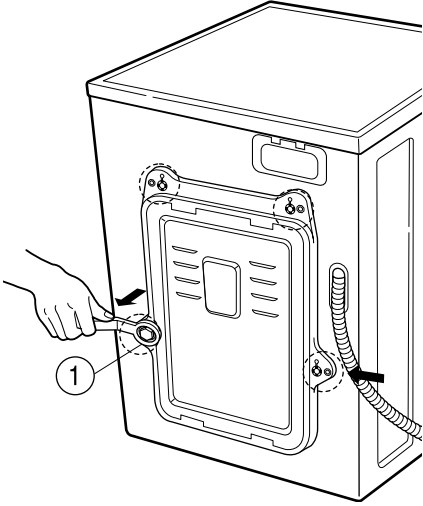● While program is operating.

3. PARTS IDENTIFICATION

P o w e r p l u g
•If the supply cord is da
it must be replaced by
manufacturer or its se
or a similarly qualified
order to avoid a hazar

D r a w e r
(For detergent and
fabric softener)

C o n t r o l p a n e l

D r a i n h o s e

D o o r

L o w e r c o v e r

D r u m

A d j u s t a b l e f e e t

D r a i n p u m p f i l t e r

L o w e r c o v e r c a p

D r a i n p l u g

■A C C E S S O RIE S
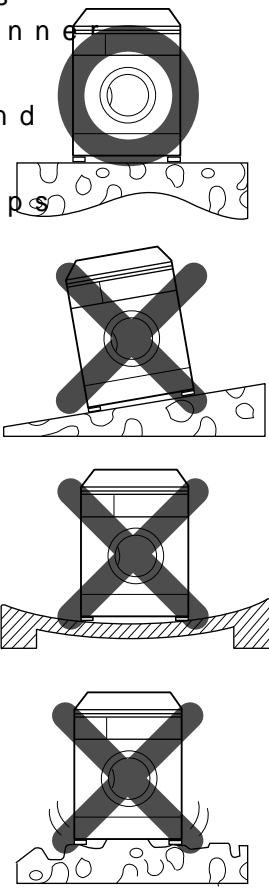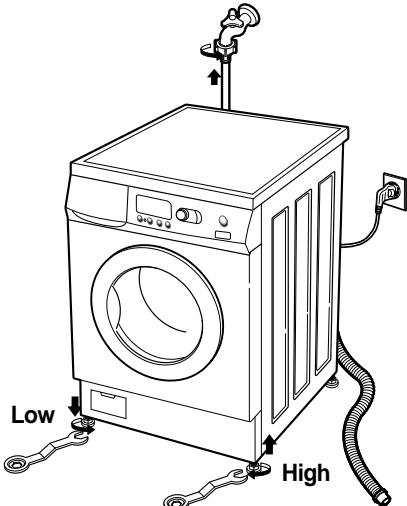
Inlet hose※OEAion : Hot/Cold (2EA)Wrench

4. INSTALLATION

1 Before servicing ask the customer what the trouble

2 Check the adjustment (how, remove the transit bolts 40W, refer to p. 2,10~2

3 Check the troubles referring to the troubleshooting.

4 Decide service steps referring to disassembly inst

5 Then, service and repair.

6 After servicing, operate the appliance to see wheth knock out.

■ STANDARD INSTALLATION
The appliance should be installed as follows.

| REMOVE THE TRANSIT BOLTS	INSTALL THE APPLIANCE ON FLAT AND FIRM SURFACE	A HORIZO
• Remove the transit bolts (4EA): with supplied spanner. • Keep the transit bolts and spanner for future use. • Insert the provided 4 caps into the hole		• Turn the leveling feet to set the app • The appliance goes up rotating the feet clockwi • The appliance comes d rotating the feet counte clockwise.

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■ HOW TO CONNECT INLET HOSE

• Check that the rubber washer is inside of the valve connector.

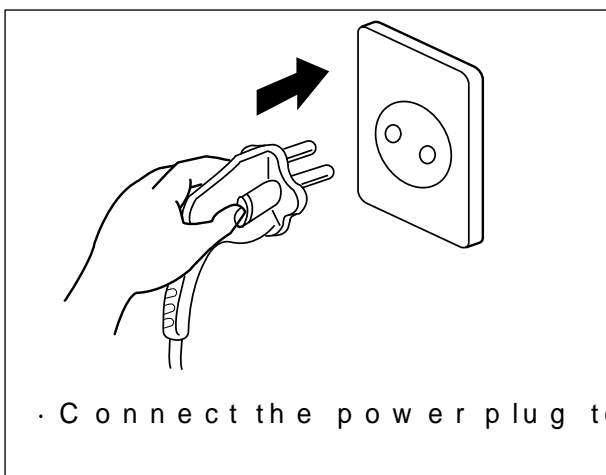• Connect the inlet hose firm ly to preve
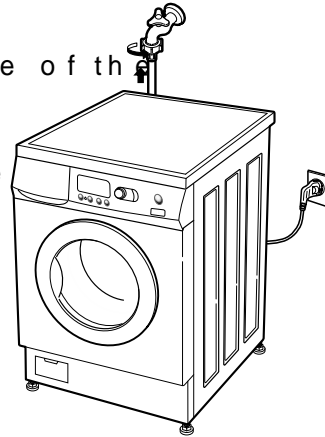
■ CONNECT DRAIN HOSE
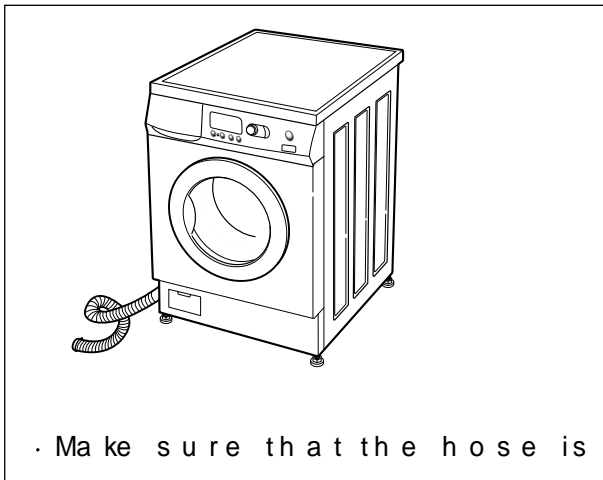
· Make sure that the hose is not twiste·d Avoid submerging the end of the
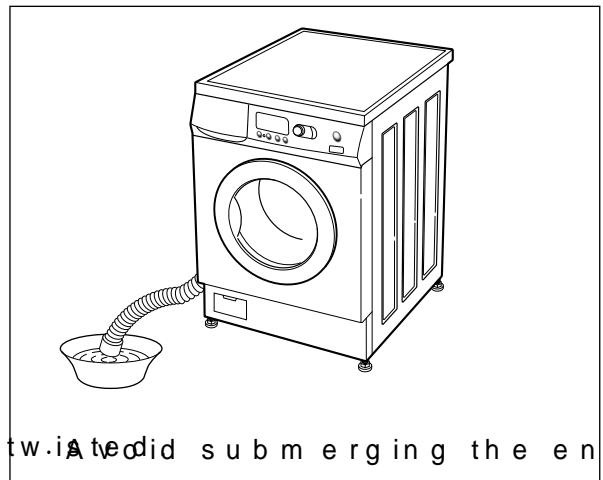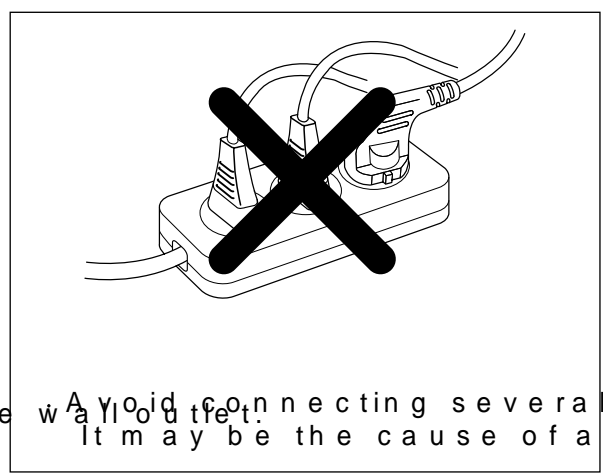
※ The drain hose should be placed under 100cm from the flo
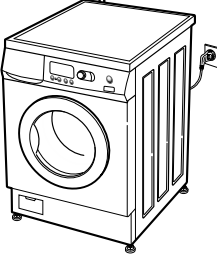
■ CONNECT POWER PLUG

· Connect the power plug to the wall outlet.

Avoid connecting several electric
It may be the cause of a fire.

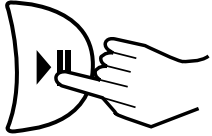# ⑦ TEST OPERATION

1 Preparation for washing.

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

2 Press the power button.

Power
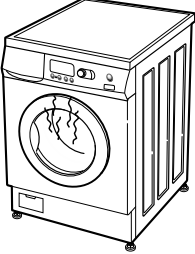
3 Press the Start/Pause button.
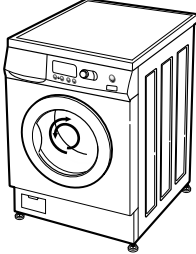
• In case of coloureds prog

4 Check automatic reverse turn.

• Check if the drum rotates clockwise and counterclockwise.

5 Check the water heating.

• Check if water is supplied through the do

6 Check the water level.
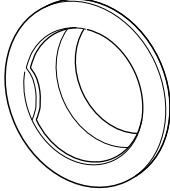
• Press **Temp** button and the present temperature can be displayed.

7 Check drain and spin.

• Turn **Wash** and **Rinse** after pressing **Start/Pause** button and start the machine again.
• Check drain and spin.

8 Power off and open door

Power

• Power off and then power on
• Check if the door can be opened after 3 minutes.

9 Water removal

• If power is needed during check, remove the remaining water by p out the hose cap.

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5. OPERATION

5-1. FUNCTION

■ Recommended program according to the laundry type

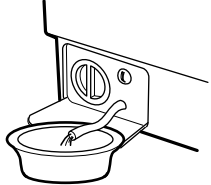| Program	Fabric Type	Proper Temp. (Option)	Washing (Option)	Load	Water in Liter	Energy in KWh	Time in Minutes
Whites	First check if laundry is machine washable (white cotton towels and sheets...)	95℃, 40℃, 60℃	Main +(Pre) +(Soak)	7.0kg	95	2.9	165
				5.0kg	88	2.4	165
				2.0kg	75	1.8	125
Coloureds	Color fast garments (shirts, night dresses, pajamas...) and lightly soiled white cotton (underwear	40℃ (Cold), 30℃, 50℃, 60℃	Main +(Pre) +(Soak)	7.0kg	75	0.72	122
				5.0kg	65	0.7	122
				2.0kg	52	0.6	112
Synthetic	Polyamide, Polyester.	40℃ (Cold), 30℃, 50℃, 60℃	Main +(Pre) +(Soak)	3.5kg	60	0.5	89
				2.0kg	48	0.4	
Delicate	Delicate laundry easily damaged (silk, curtains...)	30℃ (Cold), 40℃	Main	3.0kg	60	0.5	64
				1.0kg	48	0.3	
Wool	Machine washable woolens with pure new wool only.	30℃ (Cold), 40℃	Main	2.0kg	52	0.3	62
				1.0kg	48	0.2	
Hand Wash	"Hand washed" delicate and wool laundry.	Cold (30C°, 40°)	Main	2.0kg	52	0.03	56
				1.0kg	48	0.01	
Quick 30	Laundry type is the same in cotton and synthetic.	30℃ (Cold), 40℃	Main	5.0kg	48	0.3	30
				2.0kg	40	0.2	

＊Pre Wash : If the laundry is heavily soiled, "Pre Wash" is only recommended.
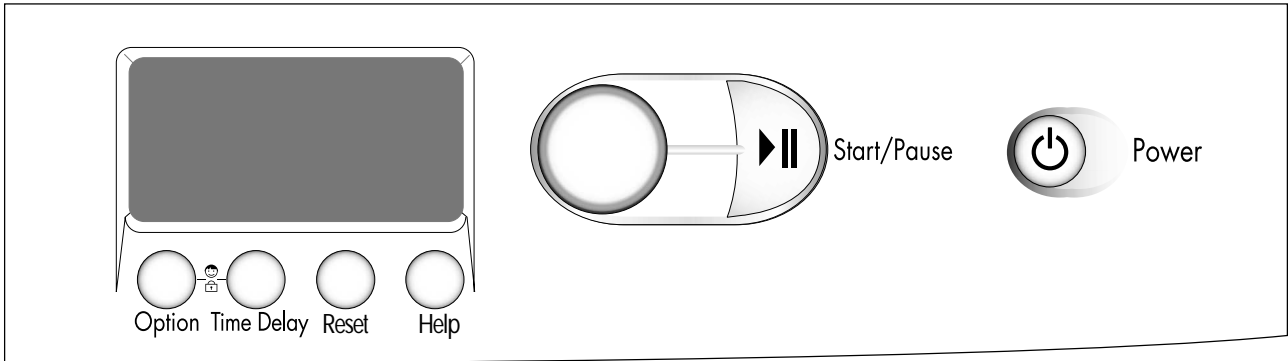　　　　　Pre Wash is available in Whites, Coloureds, Synthe
＊Water Temperature : Select the water temperature to the w
　　　　　manufacture label or instructions when launde
＊Eco : By selecting Eco function, the water temperature is r
　　　So you can economize in your consumption of heating
NB. You can select Eco function when temperature is higher t
　　Synthetic.

5-2. HOW TO USE WASHER

① **Coloureds automatically selected upon power on.**
- Press **Power**(⏻) button to start.
- Press **Start/Pause**(▶❙❙) button.
- Initial condition
  - *Wash : Main wash*
  - *Rinse : 3 times*
  - *Spin : 1600 rpm (1400 rpm)*
  - *Water temperature : 40℃*
 - *Program : Coloureds*

② **Manual Selecting**
- Press **Power**(⏻) button to start.
- Select the conditions which you want to wash by rotating a **Program Dial** button.
  For selecting the each conditions, please refer to the page13~page18
- Press **Start/Pause**(▶❙❙) button.

③ **Beep on/off**
- The beep on/off function can be set by pressing **Option** and **Help** button to and holding simultaneously more 5seconds.
- The beep on/off function can be set at any time and it is au
  failure occur.
  Also the beep on/off function works when power is off.

④ **Auto half load**
- Auto half load saves you time and money when washing s
  The washing machine is fitted with a self adjusting water le
- This system enables the machine to use the amount of water ne
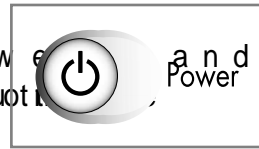 laundry in relation to the particular load.
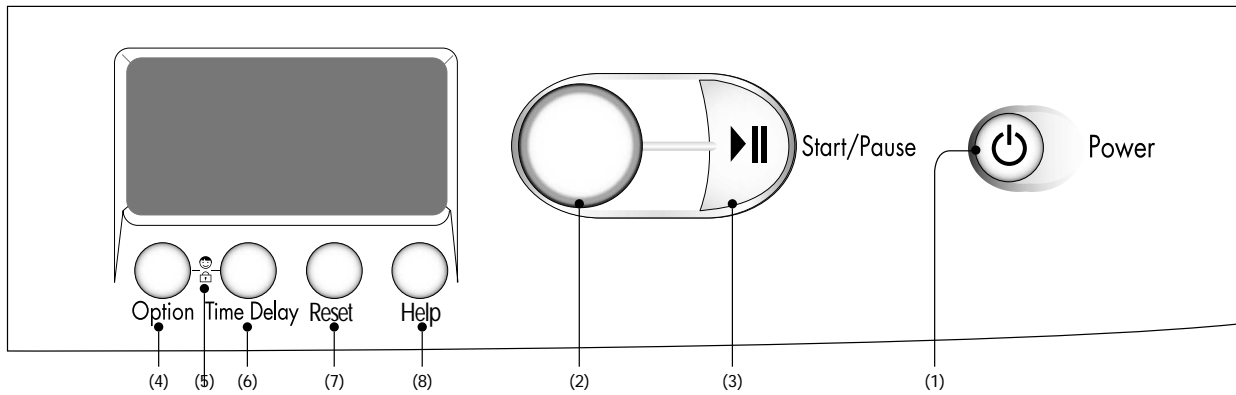
(1) Button : Power   (4) Button : Option   (7) Button : Reset
(2) Dial : Program   (5) Cheild lock   (8) Button : Help
(3) Button : Start/Pause   (6) Button : Time Delay

5-2-1. Power

① Power

- Press **Power**(⏻) button to turn power on and off.
- To cancel the Time Delay function, **Power**(⏻) button should be pressed.

② Initial Program

- When **Power**(⏻) button is pressed, the *Coloureds* program is ready for And the other initial conditions as follows.
- So, if you want to advance into the washing cycle program, just touch the drawing in the cycle program. **Start/Pause**(▶II) button and then the washer will help the end.

Initial program
- *[WD(M)-16101(6)FD, WD-16210FD, WD-16200FD]*
  -Coloureds Program / Main wash / Normal Rinse / 1600 rpm / 40˚C
- *[WD-14101(6)FD]*
  -Coloureds Program / Main Wash / Normal Rinse / 1400 rpm / 40˚C

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5-2-2. Programme

① Program selection

• When **Start/Pause(▶‖)** button is pressed, *Coloureds* program is automatically selec

• How to select program and course (option)

1. Press **Power(⏻)** button.
2. Rotate **Program Dial** button and select desired program. (Whites, C...)
3. Press **Program Dial** button.
4. Rotate **Program Dial** button and select desired course. (Wash, Rins...)
5. Press **Program Dial** button and select desired course option.
6. Press **Program Dial** button.
7. Press **Start/Pause(▶‖)** button

- By rotating **Program Dial** button, the program is selected in the order of Coloureds → Synthetic →
  Delicate → Wool → Hand Wash → Quick 30 → Rinse+Spin → Spin → Drain → Whites

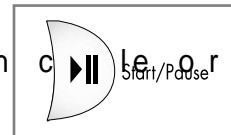*Regarding to the laundry type for each program Please refer to the page 11.*

② Course

  - Whites, Coloureds, Synthetics, Delicate, Wool, Hand Wash, Quick 30, Rinse+Spin, Spin only,
  Drain only.

5-2-3. Start/Pause

① Start

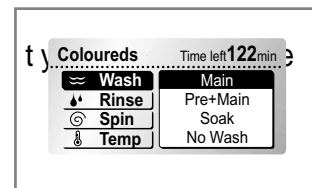 • This **Start/Pause(▶‖)** button is used to start the washer or
  wash cycle.

② Pause

  • If temporary stop of wash, press **Start/Pause(▶‖)** button.
  • When in pause, the power is turned off automatically after

5-2-4. Wash

• By rotating and pressing **Program Dial** button, the wash type is
  selected.
  - Main Wash, Pre Wash + Main, Soak, No Wash

① Main Wash

 • *Main Wash* course is available for lightly or normally soiled laun

② Pre Wash + Main Wash

  • If the laundry is heavily soiled, *"Pre Wash + Main Wash"* course is effective.
  • Pre Wash is *Whites, Coloureds* and *Synthetic* program.

③ Soak

  • Operations about 60 minutes before *"Main Wash"* course.
  • *"Main Wash"* course is followed *"Soak Wash"* course without drain.
  • *"Soak Wash"* is available *Whites, Coloureds* and *Synthetic* program.

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5-2 -5. Rinse

• By rotating and **pressing the Programs Dial** button, the rinse type is selected.

- *Normal, Super, Rinse Hold, No rinse*
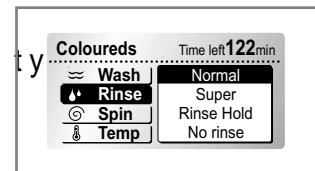
① Normal

- *Whites / Coloureds / Synthetic performs 3 Rinses*
- *Wool / Hand Wash /Delicate / Quick 30 performs 2 Rinses*

② Super

- Normal + 1 more rinse time.
- Use the *Super rinse* when additional rinsing is desired to remove excess soiled loads.

③ Rinse Hold

- Is selected by rotating the **Program Dial** button; selecting repeatedly this function leaves clothes in the washer; suspended in the water after the last spin.
- To proceed through to a drain and spin, press the **Start/Pause(Hold)** button.
- If you want to drain only, select "*No spin*", then the selection course.
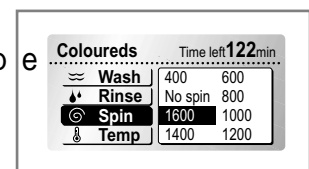
5-2 -6 Spin

• By rotating and **pressing the Programs Dial** button, the spin speed is selected.

[WD(M)-14101(6)FD]
- *No spin / 400 / 600 / 800 / 1000 / 1200 / 1400*

[WD(M)-16101(6)FD, WD-16200FD, WD-16210FD]
- *No spin / 400 / 600 / 800 / 1000 / 1200 / 1400 / 1600*

WD(M)-16101(6)FD, WD-16200FD, WD-16210FD

① Spin selection

• Spin speed is available according to the program as follows.

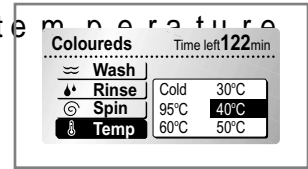|	
-Whites / Coloureds	[WD(M)-16101(6)FD, WD-16200FD, WD-16210FD]
	1600▶No Spin▶400▶600▶800▶1000▶1200▶1400
	[WD(M)-14101(6)FD]
	1400▶No Spin▶400▶600▶800▶1000▶1200▶1400
-Synthetic / Wool	1000▶No Spin▶400▶600▶800
-Delicate / Hand Wash	800▶No Spin▶400▶600
-Quick 30	[WD(M)-16101(6)FD, WD-16200FD, WD-16210FD]
	400▶600▶800▶1000▶1200▶1400▶1600▶No Spin
	[WD(M)-14101(6)FD]
	400▶600▶800▶1000▶1200▶1400▶No Spin

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5-2-7 Water Temp.

- By rotating and **Program Dial** button, the water temperature can be selected.
  - *- Cold / 30℃ / 40℃ / 50℃ / 60℃ / 95℃*

Coloureds		Time left **122**min
≈ **Wash**		
♠ **Rinse**	Cold	30℃
⟳ **Spin**	95℃	40℃
♨ **Temp**	60℃	50℃

① Water Temperature

- Water temperature can be selected as below according to t

-whites	95℃ ➜ 40℃ ➜ 50℃ ➜ 60℃
-Coloureds **&** Synthetic	40℃ ➜ 50℃ ➜ 60℃ ➜ Cold ➜ 30℃
-Wool **&** Delicate **&** Quick 30	30℃ ➜ 40℃ ➜ Cold
- Hand Wash	Cold ➜ 30℃ ➜ 40℃

For the more detailed information, please refer to the page11.

5-2-8 Option

- If you use to select (*Bio/Eco/Time Save/Crease care*) , you c washing more effectively.
- By pressing **Option** button, only one option functi... e selecte
1. Press **Power** (⏻) button.
2. Select the desired Program.
3. Press **Option** button.
4. Select the desired func... (...) and press the **Start/Pause**

Coloureds	Time left **122**min
≈ **Wash**	**Option**
♠ **Rinse**	No Option
⟳ **Spin**	Bio
♨ **Temp**	Eco
	⏱ Time save
	Crease care
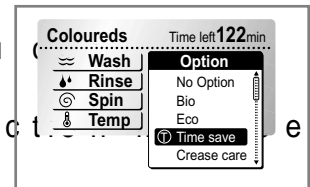
① Bio (Ⓑ)

- If you want to eliminate protein stains (um milk, blood ...) select **Bio** fun... and pressing the Program Dial button.
- **NB**. You can select Bio function when the ... in **Whites, Coloureds** is higher than **Synthetic**.

② Eco (Ⓔ)

- By selecting Eco function, the water temperature is reduced can economize in your consumption of energy.
- **NB**. You can select Eco function when ℃ in **Whites, Coloureds** is higher th... **Synthetic**.
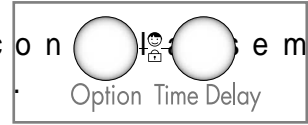
③ Time save (Ⓣ)

- This option can be used to reduce the time of a wash progra
- This function is no... applicable with *Quick 30*

④ Crease care (Ⓒ)

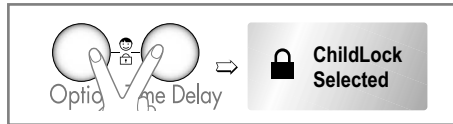- If you want to prevent crease, select this function with spin.

16

5-1-9 Child lock

If you choose to lock the buttons on the con〔 〕embly to p tampering, this function may be selected.
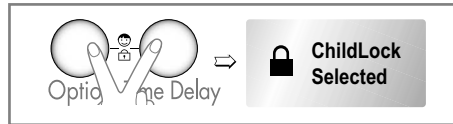

Option Time Delay

1) Child lock

• Child lock can be set by pressing **Option** and **Time Delay** button simultaneous

Option Time Delay ⇒ 🔒 **ChildLock Selected**

• *When child lock is set, all buttons are inoperable.*

• To deactivates Child lock, press and hold the Option and Time Delay bu again.

Option Time Delay ⇒ 🔒 **ChildLock Selected**

• To change to the desired program, whilst in child lock mode.
1. Press and hold **Option** and **Time Delay** button together once again.
2. Press **Start/Pause**(▶❙❙) button.
3. Select the desired program and press **Start/Pause**(▶❙❙) button once again.

Option Time Delay ⇒ ▶❙❙ Start/Pause ⇒ Change the desired program ⇒ ▶❙❙ Start/Pause
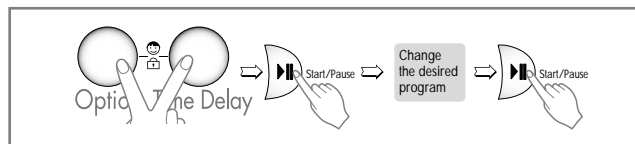
• The child lock can be set at any time and it is automatically o occur. Also child lock works when power is off.

5-2-10. Time Delay

① Time Delay

Preparing washing before starting "Time Delay."
- Turn on the water tap.
- Load laundry and close the door.
- Place the detergent and fabric softener in the drawer.

Coloureds	Time left **16**hrs
≋ **Wash**	**Option**
♦ **Rinse**	Finish after
⟳ **Spin**	↕**16** hours
♨ **Temp**	

Option Time Delay Reset Help
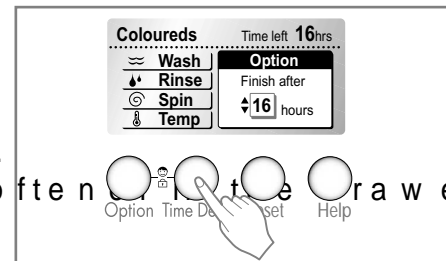
- **How to "Time Delay"**
  1. Press **Power**(⏻) button.
  2. Turn **Program dial** button to select the program or course (option).
  3. Press **Time Delay** button.
  4. Press **Time Delay** button or rotate **Program Dial** button to set the desired time.
  5. Press **Start/Pause**(▶Ⅱ) button (within 4 mins.).

- If **Time Delay** button is pressed, "3:00" is displayed. The maximum delayed time is 19:00 hours, the minimum time is 3:00 hours.
- Each press of **Time Delay** button advances time on delay by one hour.
- To cancel the time delay, press **Power**(⏻), or **Reset** button.
- Time delay "expires" is counted from the present to the completion of washing and dehydrating process (Wash, Rinse, Spin).
- *According to the condition of water supply and temperature, the delayed time and the actual washing time may vary.*

5-2-11. Display

① Washer process display
- Displayed washer process with words and animations.
- Each course, word background gets darker and current process shows animation.
- When touching the button, screen gets lighter and darker in some seconds.

② Special function display
- When Child lock is selected, "🔒" is displayed.
- When time delay is selected, it shows the remaining time section.

③ Self diagnose display
- If the washer encounters a fault during operation, it will be displayed the associated code.
  "𝟷E" : Water inlet trouble
  "OE" : Drainage trouble
  "UE" : Unbalanced load
  "dE" : Door is not closed
  "tE" : Water temperature trouble
  "FE" : Problem of overfilling water
  "PE" : Water pressure sencing error
  "CE" : Over load in motor
  "LE" : Over load in motor

If this error letters are displayed, please refer to the troubleshooting page44~45 and follow the guide.

④ Completion of washing

- When washing is completed,
 "word (Finished)" is displayed in a "Multi display".

Finished!

⑤ Time left

- During washing cycle, the remaining washing time is displa
- Default time of each program.

 - Whites : around 2 hours and 45 minutes
 - Coloureds : around 2 hours and 2 minutes
 - Synthetic : around 1 hours and 29 minutes
 - Wool : around 1 hour and 2 minutes
 - Hand Wash : around 56 minutes
 - Delicate : around 1 hour and 4 minutes
 - Quick 30 : around 30 minutes

- The washing time may vary by the amount of laundry, wate
  washing conditions.

- If an unbalanced load is detected or if the suds removing p
  extended. (Max. increasing time is 45minutes.)

5-2-12. Reset

- During Pause status, use this button to cancel what you s
  wash, rinse and spin etc.
- When a user press the **Reset** button, them a initial screen will occur back.
- Use this button also to go back to main screen after using H

Reset
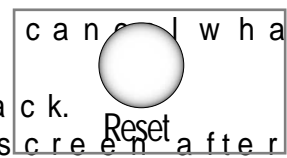
5-2-13. Help

- The Help function offers a variety of detailed information in
  Program explanation, Button explanation, Washing tips, Trou
  guide(before you call), view last message.
- This section of the user guide will demonstrate how to eas
  the main areas of the topics. From there, you will easily be
  your search for finding laundry information.

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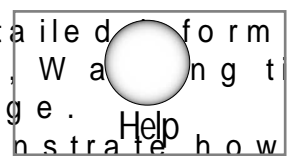
* Water Supply : W/S   * Intermittent Spin : I/S   * Disentangle : D/T

CYCLE STEP COURSE	Washing										Rinse																Spin			END	AUTO OFF	Normal Working Time (Hour:Minute)
	Pre			Main						Normal (Hold)														Extra (Hold)								
					Washing	Staycooling				1				2				3				4									
	W/ÆS	Washing	Drain	I/ÆS	W/ÆS	Heating	Washing	W/ÆS	Rinsing	Drain	Drain	I/ÆS	W/ÆS	Rinsing	Drain	I/ÆS	W/ÆS	Rinsing	Drain	I/ÆS	W/ÆS	Rinsing	Drain	I/ÆS	W/ÆS	Rinsing	Drain	Spin	D/Æ			
Time (SEC)	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	
	120	MIN	60	300	120		MIN	120	60	60	60	300	120	360	60	300	120	360	60	300	120	360	60	300	120	360	60	120~540	120	20	20	
Whites	8						1 40			3 TIMES																						About 2:45
Coloreds	8						23 56																									About 2:02
Synthetic	8						1 29																									About 1:29
Wool							1 17																									About 1:02
HandWash	8						16																									About 56
Delicate							1 20																									About 1:04
Quick30							1 10																									About 30
Washing	8						23 56																									About 1:10
Rinsing																																About 39
Rinsing Hold																																About 39
Spin																																About 15
Washing + Rinsing	8						23 56																									About 1:48
Washing +Spin	8						23 56																									About 1:17
Rinsing + Spin																																About 53

* ▬▬▬ Basic Cycle
* ══════ Optional Cycle
* Pre-Setting Time : Water Supply - 120 sec.
            Drain   - 60 sec.
* ~ Time for varies as the temperature or   the amount of laundry

* For Wool or Synthetic course only 650 rpm is operated
* Shower Rinsing : Rinsing time is 20 sec
* Basic time is minute in washing chart
* The actual program time can be varied with the load amount, water temperature or ambient temperature

DISPLAY PWB

MAIN PWB

D COLD WATER

D COLD AND HOT WATER

n : "n" PIN CONNECTOR
◇ : TERMINAL (#250)
◈ : TERMINAL + HOUSING (#250)
⏚ : EARTH TERMINAL

WIRE COLOR : BASE/LINE
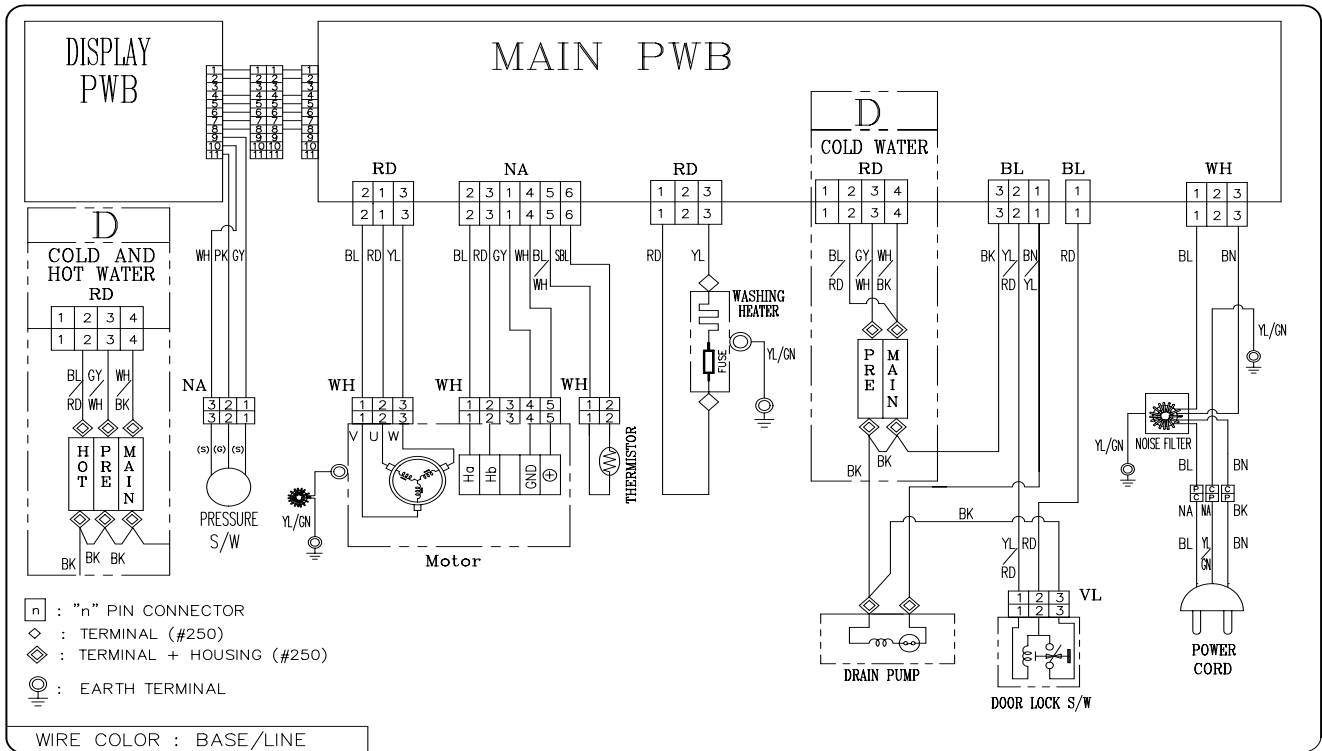
7. TROUBLESHOOTING

7-1. BEFORE PERFORMING SERVICE

■ Be careful of electric shock or disconnecting the parts while troublesh...

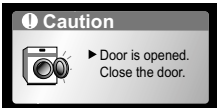■ Voltage of each terminal is DC 2~40V while applying an electric current.

7-2. QC TEST MODE.

① Press **Rinse**, and **Spin** button simultaneously.

② Power supply on with pressing upper two button. Then buzzer sound...

③ Press the Start/Pause button as follows.

[Press the Start/Pause button more 4 times until stop spinning

Pressing number of [Start/P] button	Checking Point	Display Status
None	All lamps turn on	`18:88`
1 time	Clockwise spin (right)	40~50) Drum rpm (Abo...
2 times	Low speed Spin	53~65) Drum rpm (About...
3 times	High speed Spin	400~1160) Drum rpm (About...
4 times	Inlet valve for prewash operation	5~65) Water lev...
5 times	Inlet valve for mainwash operation	Water level frequency (2
	Hot inlet valve in case of hot water fill	5~65)
6 times	Inlet valve for mainwash operation	5~65) Water lev...
7 times	Counterclockwise spin (left) 40~50)	Drum rpm (A...
8 times	Heater is in operation	Water temperature No & Preset
9 times	Draining pump operation	Water level fre...
10 times	Auto off operation	

7-3. HOW TO KNOW THE WATER LEVEL FRE...
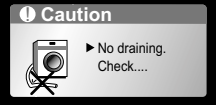
∗ Press **Rinse** and **Spin** button simultaneously.
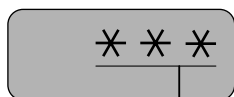
```
 ┌─────────┐
 │  ✳✳✳    │
 └────┬────┘
      │
      ● The digits means water level frequency (10
```

ex) 241 : Water level frequency = 241
= 24.1 kHz

7-4. ERROR DISPLAY.
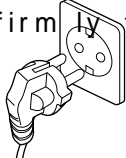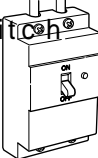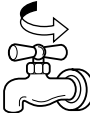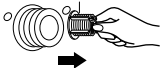
- If you press the Start/Pause button when *PE* is displayed, the machine will enter into pause status.
- In case of *IE*, *OE*, *dE*, if the error is not resolved within 20sec. In the case if the error is not resolved within 4 min after pause, the power will be automatically shut off and all lamp will be blinked. But in the case of *PE*, the power will not be turned off, only door off.
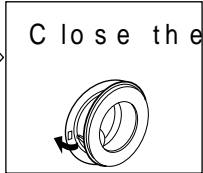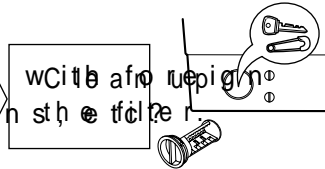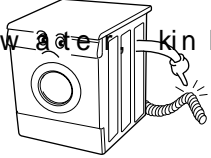
	ERROR	SYMPTOM	CAUSE
1	WATER INLET ERROR	*IE* **⚠ Caution** ▶ No feeding. Check....	○ Water has not reached to the pre-set level, even though inlet valve operated, or water has not reached pre-set level within 25min.
2	IMBALANCE ERROR	*UE*	○ Load is too small. ○ The appliance is tilted. ○ Laundry is gathered to one side. ○ Non-distributable things are put into the drum.
3	DRAIN ERROR	*OE* **⚠ Caution** ▶ No draining. Check....	○ Water has not drained enough within 10min.
4	OVERFLOW ERROR	*FE*	○ Water is automatically being pumped out when too much water is in the tub.
5	SENSOR PRESSURE S/W ERROR	*FE*	○ The sensor pressure switch is out of order.
6	DOOR OPEN ERROR	*dE* **⚠ Caution** ▶ Door is opened. Close the door.	○ The Start/Pause button is pressed with the door open. ○ The door switch is out of order.

22
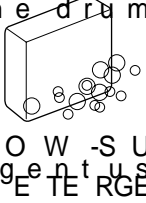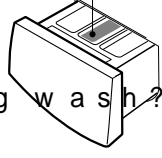
	ERROR	SYMPTOM	CAUSE
7	HEATING ERROR	`ŁE`	○ The THERMISTOR is out of order.
8	CURRENT ERROR	`CE`	• MAIN PWB ASSEMBLY is out of order ☞ Replace the MAIN PWB ASSEMBLY • Winding in the STATOR ASSEMBLY is short-c ☞ Replace the STATOR ASSEMBLY
9	LOCK ERROR	`LE`	• The connector (3-pin, male, wires) in the LE is not connected to the connector (3-pin, fe STATOR ASSEMBLY. ☞ Reconnect or repair the connector • The electric contact between the connector the LEAD WIRE ASSEMBLY and S45 female, natural in MAIN PWB ASSEMBLY is unstable. ☞ Reconnect or repair the contact in the con • The LEAD WIRE ASSEMBLY between the ST and MAIN PWB ASSEMBLY is open (circuited). ☞ Repair the damaged (open-circuited) the ASSEMBLY • The hall sensor is out of order/defective. ☞ Replace the STATOR ASSEMBLY

8. ERROR DIAGNOSIS AND CHECKL

8-1. DIAGNOSIS AND ANSWER FOR A BNORMA

SYMPTOM	GUIDE FOR SERVICE CALL
NO POWER	Is the power plug connected firmly to 220-240V~ outlet? **YES** Power failure? or Breaker opened? Is the outlet controlled by a switch? **NO** Visit to check
WATER INLET TROUBLE `¡ E` ⚠ **Caution** ▶ No feeding. Check....	Is `¡ E` 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 check `¡ E`

SYMPTOM	GUIDE FOR SERVICE CALL
◦ D O O R O P E N E R R O R ⌐ᴰᴱ **❗ Caution** ▶ Door is opened. Close the door.	Did you press **Start/Pause** button when the door is open? —**YES**→ Close the door **NO** Visit to check **Check if the door switch is O.K**
◦ D RA IN TRO UBL E ⌐ᴼᴱ **❗ Caution** ▶ No draining. Check....	Is ᴼᴱ displayed? ᴼᴱ **YES** Is the debris filter clogged with a foreign material such as pins, coins etc. in the filter —**YES**→ Clean the filter **NO** Is the drain hose frozen with water, kinked, or crushed? **NO** Visit to check

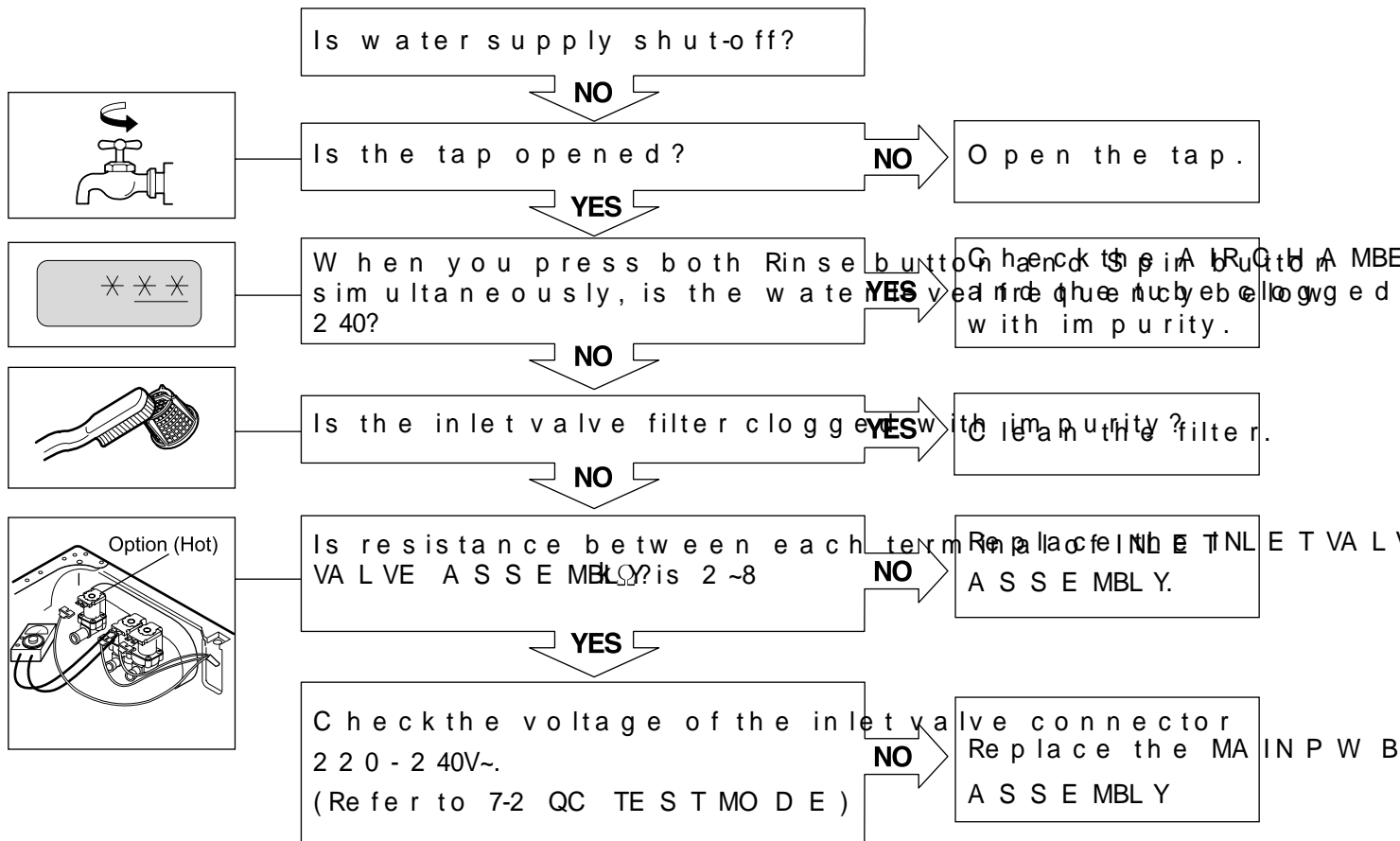| SYMPTOM	GUIDE FOR SERVICE CALL
◦ Suds overflow from the appliance. (In this condition, wash and spin do not operate normally)	Is low-sudsing detergent for the drum washing machine used? **YES** Is the proper amount of detergent used as recommended? **YES** Recommend to reduce the amount of detergent. LOW-SUDSING DETERGENT ∗ This appliance has the automatic suds sensing operates under much suds condition for good preventing overflow. ∗ When much suds are sensed, the suds remo as drain, water in pour, and pause with out rotating the drum.
◦ No effect of softener	Is softener put in the correct compartment of the drawer? **YES** Is the drawer closed during wash? **YES** Is the softener cap clogge **YES** Explain how to use s Compartment for softe **Clean the compartment for softener**
┌─┐ F E P E ㅂ E ┌─┐ C E L E	Visit to check

C A UTIO

1 . Be careful of electric shock or disconnecting the parts while trouble

2 . First of all, check the connection of each part terminal with wiring d

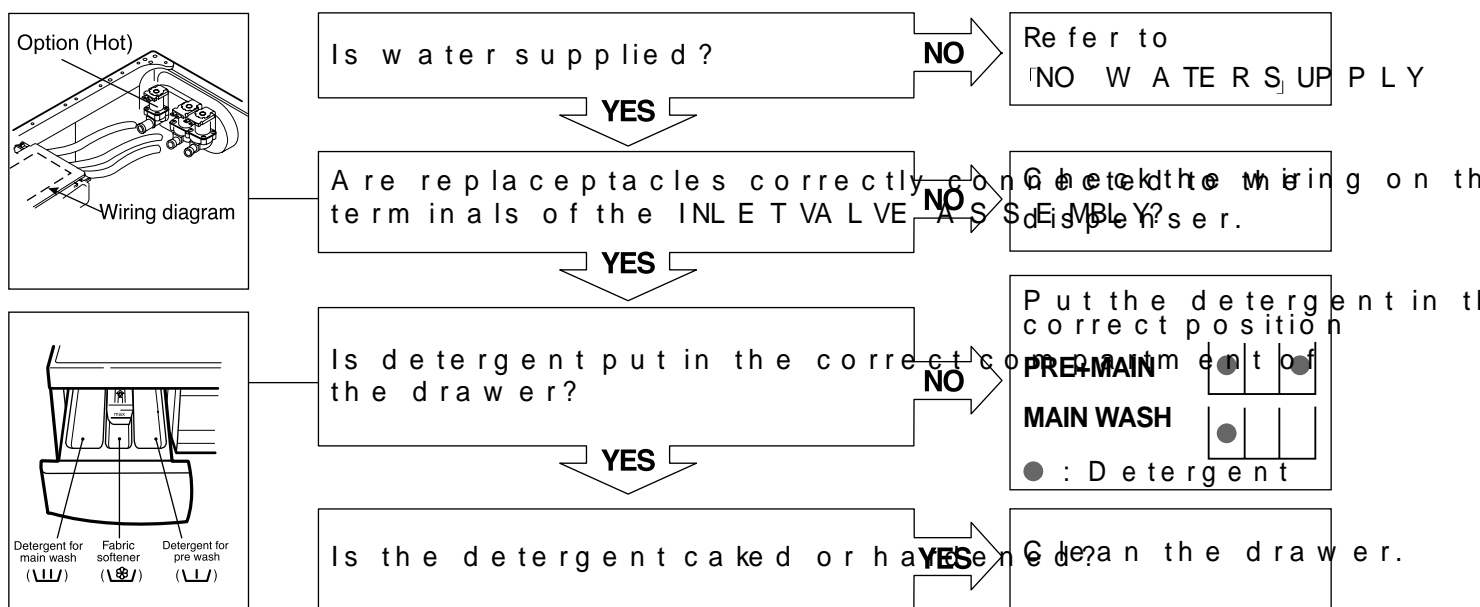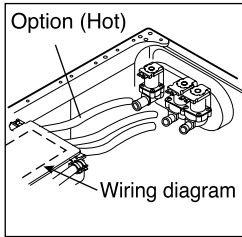3. If you replace the MA IN P W B oAnSsSEeMmBbLly, put in the c

NO POWER

When measuring the voltage of the outlet,
is the voltage 40VA C 2 2 0-2   **NO** →   C h e c k the fuse ?

YES

MAIN PWB ASSEMBLY

Is the led (1) on ?   **NO** →   Re p l a c e MA IN P W B
A S S E MBL Y

YES

MAIN PWB ASSEMBLY

Is connector (2) disconnected or
disassembled ?   **YES** →   Reconnect the P W B
A S S E MBL Y

NO

Is wire of the P W B A 6S Se ECmbMlByL d2is c   **YES** →   Reconnect the P W B
A S S E MBL Y

NO

Re p l a c e P W B A S S E MBL Y

NO WATER SUPPLY

Is water supply shut-off?

NO ↓

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

YES ↓

When you press both Rinse buttons simultaneously, is the water level more than 240? — **YES** → Check the AIR CHAMBER and the tube are clogged with impurity.

NO ↓

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

NO ↓

Is resistance between each terminal of INLET VALVE ASSEMBLY is 2~8 kΩ? — **NO** → Replace the INLET VALVE ASSEMBLY.

YES ↓

Check the voltage of the inlet valve connector 220-240V~.
(Refer to 7-2 QC TEST MODE) — **NO** → Replace the MAIN PWB ASSEMBLY

Option (Hot)

DETERGENT DOES NOT FLOW IN

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

YES ↓

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

YES ↓

Is detergent put in the correct compartment of the drawer? — **NO** → Put the detergent in the correct position

PRE+MAIN

MAIN WASH

● : Detergent

YES ↓

Is the detergent caked or have sediment? — **YES** → Clean the drawer.

Option (Hot)

Wiring diagram

Detergent for main wash

Fabric softener

Detergent for pre wash

SOFTENER DOES NOT FLOW IN

Option (Hot)

Wiring diagram

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 on the dispenser.

YES
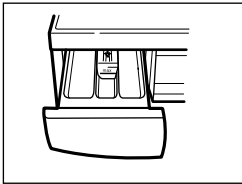
Is softener put in the correct compartment drawer? → **NO** → Put it in the correct compartment.

YES
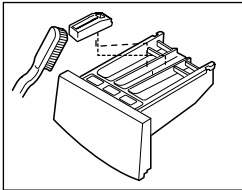
Is the softener cap clogged? → **YES** → Clean the cap and drawer.

ABNORMAL SOUND
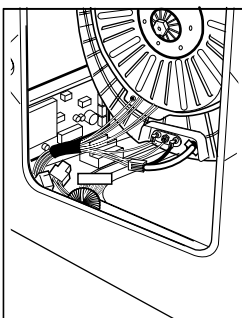
Is the motor bolt loosened? → **YES** → Fix the bolt tightly.

NO

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

HEATING WITHOUT WATER
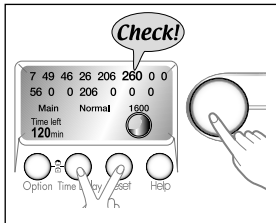
When pressing Time Delay, Reset and Program Dial buttons at the same time after draining, is the water level frequency 252 or more?

When pressing Time Delay, Reset and Program Dial buttons at the same time while wash, is the water level frequency between 230 - 243?

NO →

Replace the PRESSURE SWITCH ASSEMBLY

YES ↓
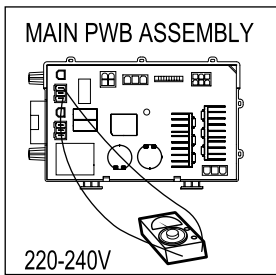
Checking voltage between two poles of the POWER button is the voltage 220V?

YES → Replace the MAIN PWB ASSEMBLY

MAIN PWB ASSEMBLY

220-240V

DRAIN MALFUNCTIONING
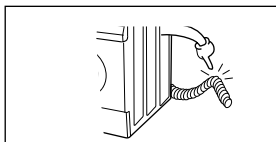
Is the drain hose twisted or frozen?

YES → Repair DRAIN HOSE ASSEMBLY.

NO ↓
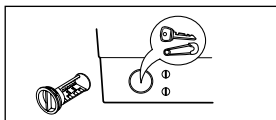
Is the impeller of the drain pump clogged?

YES → Remove foreign material

NO ↓
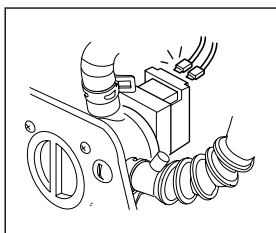
Is the connector disconnected, disassembled?

YES → Reconnect or repair the connector

NO ↓
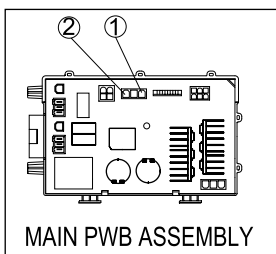
Is the coil of the drain pump cut-off? (resistance of coil is 90~200Ω)

YES → Repair DRAIN PUMP ASSEMBLY.

NO ↓

When checking voltage between (①, ②) on spinning, is the voltage 220V as the figure?

NO → Repair the MAIN PWB ASSEMBLY.

MAIN PWB ASSEMBLY

WASH HEATER TROUBLE

MAIN PWB ASSEMBLY

② ①
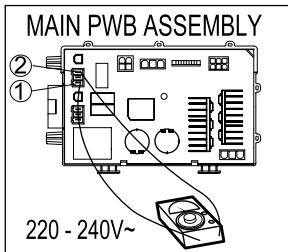
220 - 240V~

When checking the voltage between connectors (①, ②) during whites washing, Is the voltage 220 - 240V ~ ?

NO → Replace the MAIN PWB ASSEMBLY

YES

YELLOW

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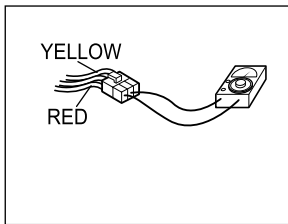
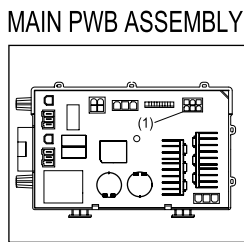After power off,is the resistance of wire (RED-YELLOW) connectors between 10Ω~30Ω?

① ② ③

YES → Normal

NO
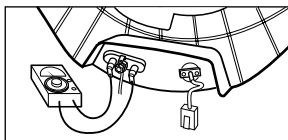
After power off and the heater terminal is disconnected, is the resistance 10~30Ω?

NO → Replace the HEATER ASSEMBLY

HEATING CONTINUOUSLY ABOVE THE SETTING WATER TEMPERATURE

MAIN PWB ASSEMBLY

(1)

When disconnect the connector (1) on the, MAIN PWB ASSEMBLY, is the resistance of the natural connect No.5 (Blue to/Vs 6 (Sky, blue) between 12.5kΩ to 2.5kΩ (10℃~0℃)?

③ ② ①
⑥ ⑤ ④

NO → Replace THERMISTOR (6322 F R2 046C)

YES
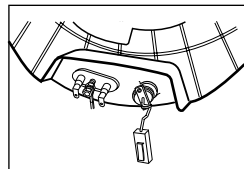
When checking THERMISTOR on the tub is the THERMISTOR loosened above 2mm from the rubber?

YES → Push the THERMISTOR tightly to the rubber.
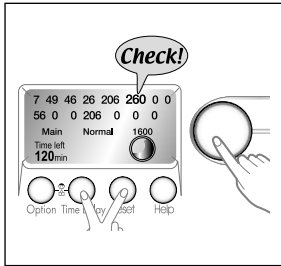
Check on the spinning, is the frequency of the water level 248 or more. The frequency can be checked by pressing the Time Delay and Program Dial buttons at the same time on the program.

NO → Check the S.PRESSURE SWITCH ASSEMBLY or HOSE (Pressure). If the problem is on the S.PRESSURE SWITCH ASSEMBLY or the HOSE, replace the S.PRESSURE SWITCH ASSEMBLY or the HOSE.

YES
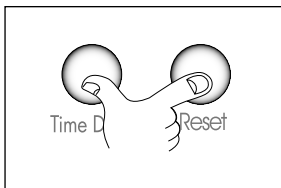
When pressing Time Delay, Reset and POWER buttons at the same time after power off, press the Start/Pause button 2 times, is the drum spinning at low speed?

YES → Normal.

NO
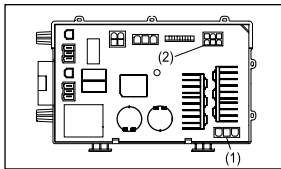
Is it disconnected, or disassembled?
[Red :3pin (1), NA :6pin (2)]

YES → Correct the connector

NO
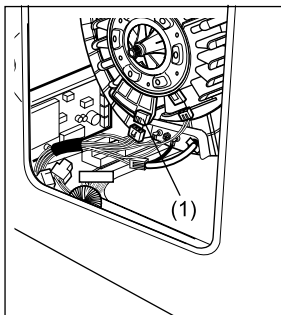
Check the motor connector, Is the resistance of the terminal same as the figure?

MOTOR TERMINAL (1)

①	②	③
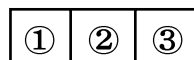
Resistance of terminal:

①~② / ②~③ / ③~① : About $15\Omega \pm 15\%$

NO → Replace the STATOR ASSEMBLY (4417F A 1994E)

YES

Replace the MAIN PWB ASSEMBLY

9. DISASSEMBLY INSTRUCTIONS

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

CONTROL PANEL ASSEMBLY
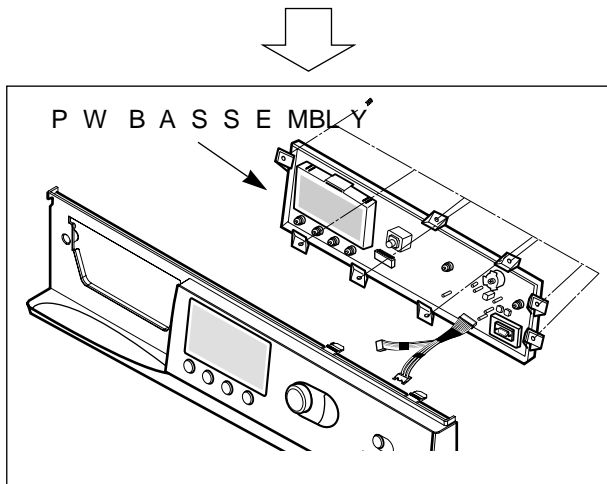

TOP PLATE ASSEMBLY
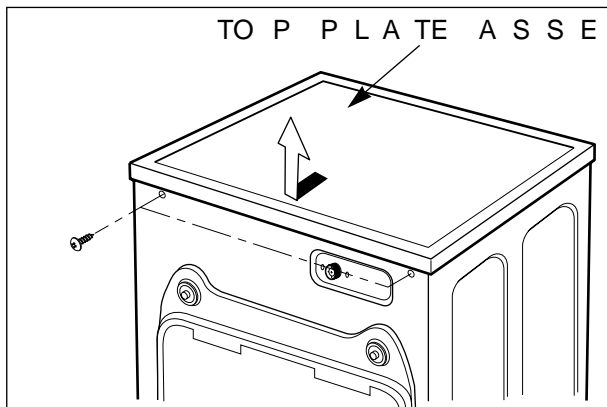
① Unscrew 2 screws on the back of the top plate.
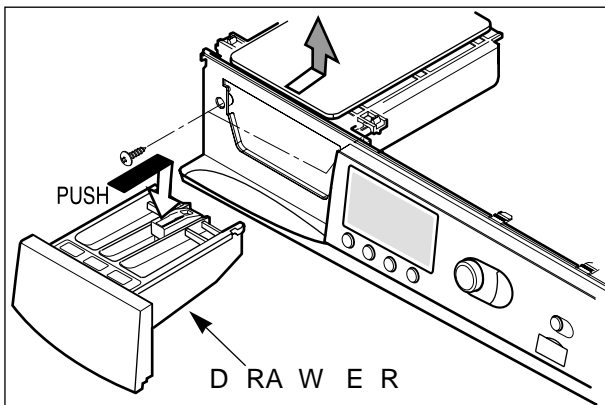② Pull the top plate backward and upward.

Hook

CONTROL PANEL ASSEMBLY
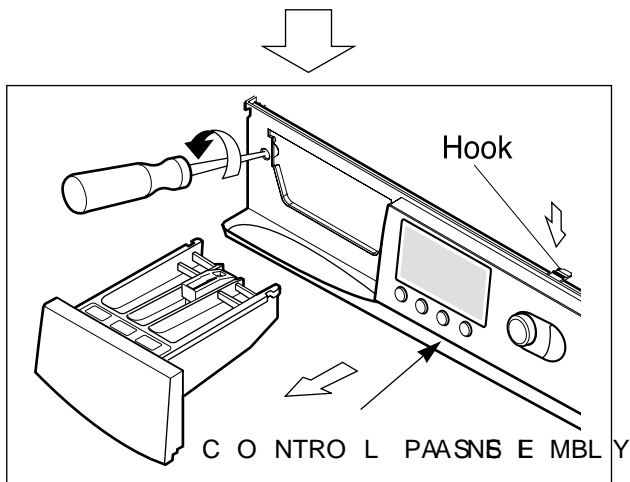
① Disconnect STEAM connector.
② Pull out the drawer and unscrew 2 screws.
③ Push 2 upper hooks down and pull the control panel.

PWB ASSEMBLY

① Disconnect PWB ASSEMBLY from the control panel by unscrewing 7 screws.

DISPENSER ASSEMBLY

① Disassemble the TOP PLATE ASSE
② Pull out the drawer slightly upward.
③ Unscrew 2 screws.

PUSH

DRAWER

Option

DISPENSER ASSEMBLY
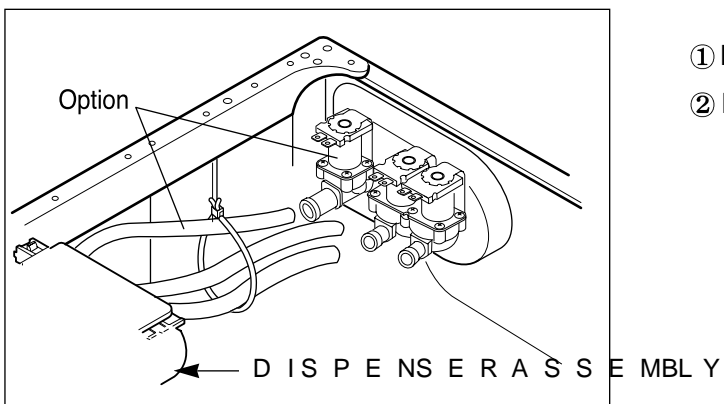
① Disassemble hose clamps and hos
② Disassemble the ventilation bellow
   bellows from the tub.

INLET VALVE ASSEMBLY
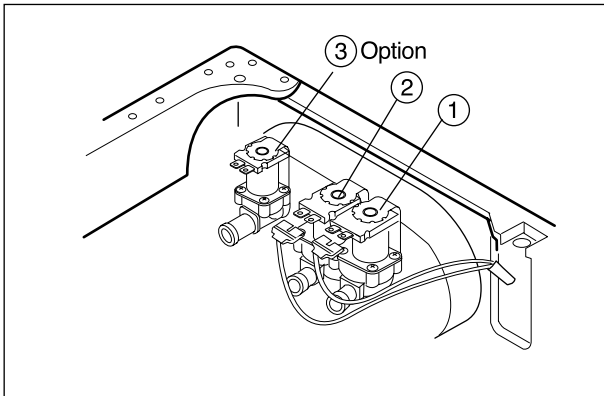
① D is c o n n e c t t h e w i r i n g c o n n e c t o r.
② U n s c r e w 2 s c r e w s f r o m t h e b a c k.

∗ W h e n r e c o n n e c t i n g t h e c o n n e c t o r

∗ C o l d o n l y m o d e l

VA L VE #1 (MA IN)	W h ite d /Bla c k-Black
VA L VE #2 (P RE)	Gra y / W hite - Blac

∗ C o l d a n d H o t m o d e l

VA L VE #1 (MA IN)	W h ite d /Bla c k-Blacl
VA L VE #2 (P RE)	Gra y / W hite - Blac
VA L VE #3 (H O T)	Blu e /Re d - Black

MAIN PWB ASSEMBLY
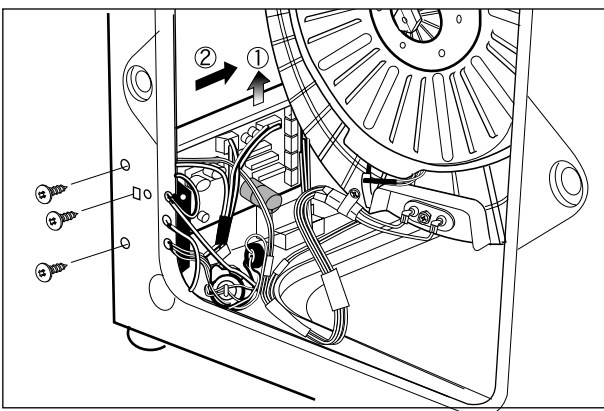
① Re m o v e t h e b a c k c o v e r.
② U n s c r e w 3 s c r e w s .
③ D is a s s e m b le th e F IL TE R A S S E MBL Y.
④ P ull t h e MA IN P W B A S S E MBL Y a s s h o w
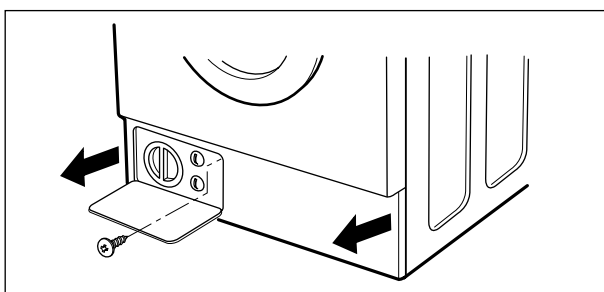
LOWER COVER

① O p e n th e lo w e r c o v e r C A P b y u s in g
   th e lo w e r c o v e r in th e a r ro w d ir e c tio
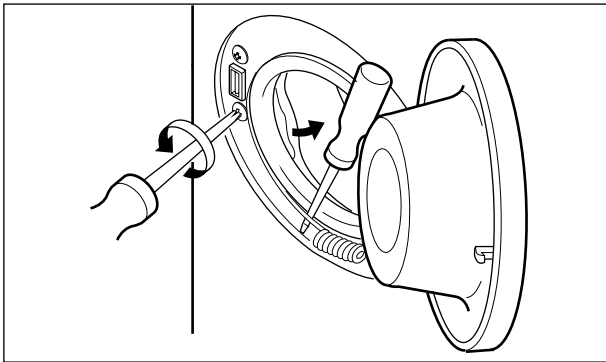   u n s c r e w e d .

DOOR ASSEMBLY
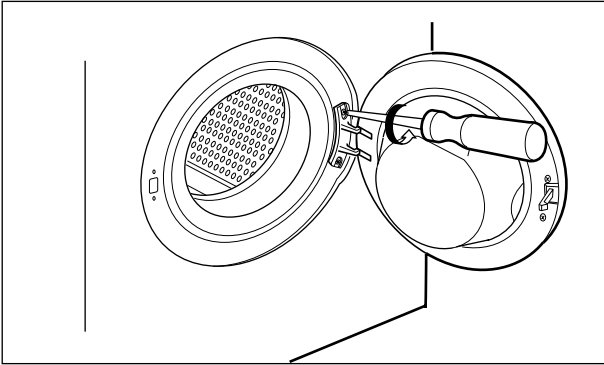
① O pen the door com ple te ly.
② Rem ove the two screws from the h

※ W hen rem ovin g the ASSE M BLY, it is
   necessary to hold the BRA C KE T that
   C A BINE T C O VE R.

GASKET

① Ta ke a p a rt the ASSE M BL Y (c a b in e t).
② Un s c re w 2 s c re w s fro m th e C A BINE
③ O pen the lo w er cover cap and uns
④ Ta ke a p a rt the LO W E R C O VE R.
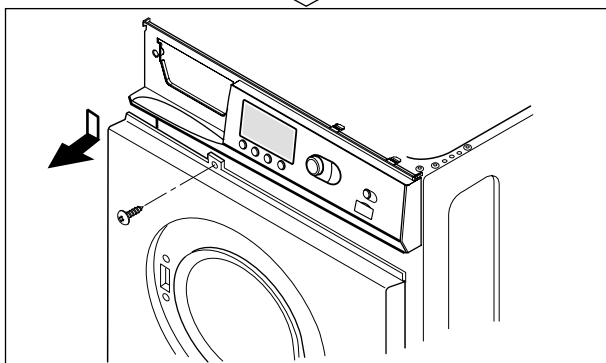
① D is a s s e m b le the C O NTR O L PA NE L
   (Re fe r to p a ge 55)
② Un s c re w a ll the s c re w s on the u p p e
   the C A BINE T C O VE R.
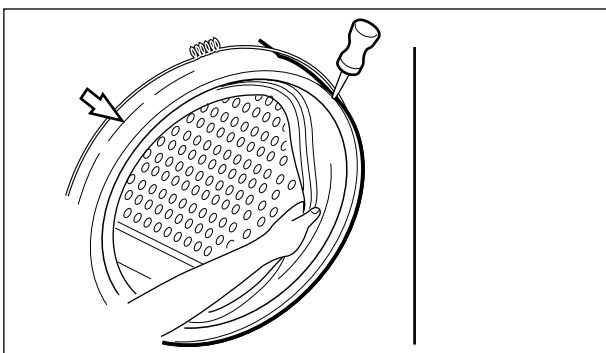
① Ta ke a p a rt the ASSE M BLY P
② Ma ke s u re th a t the d ra in h o le o f th e
   b e ne a th w h e n re a s s e m b lin g th e GA
※ Re fe r to the a rro w m a rk o n the TUB C
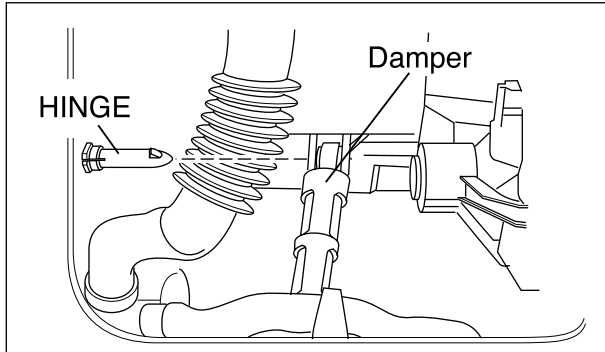
ROTOR ASSEMBLY, STATOR ASSEMBLY, FRICTION DAMPER ASSEMBLY
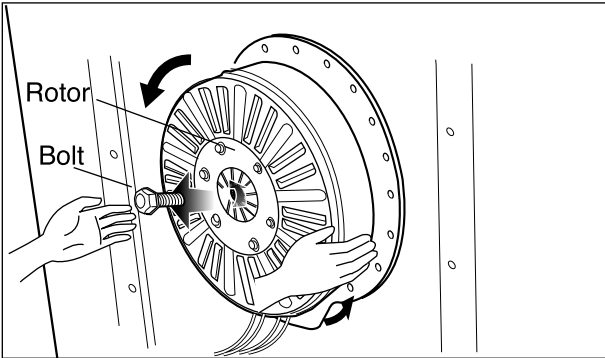
① Remove the BACKCOVER.
② Unscrew the bolt to pull out the RO TO
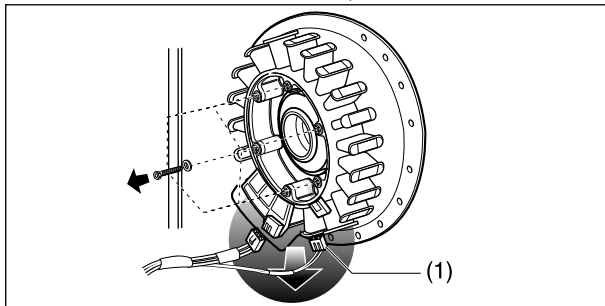
(ROTOR ASSEMBLY)

① Disconnect the wiring connector.
② Unscrew 6 bolts from the STATOR.
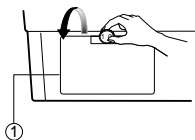③ Remove the BODY FRAME.
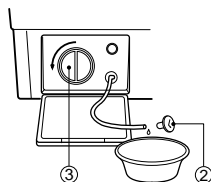 (Only 1400 or plus m

∗ Note : Hook of connector (1) is on the

(STATOR ASSEMBLY)

① Pull out the HINGE, pressing its snap
② Do not use the pulled out HINGE aga
  It may be taken off during operation

(FRICTION DAMPER ASSEMBLY)
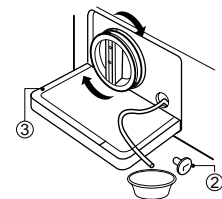
■ Clean the drain pump filter

Open the lower cover
by using a coin.

① Unclamp the drain plug. When
the water flows out, from the pump filter (
At this time use a vessel cleaning, turn the pump filt
to prevent water flowing on to ccw, the and insert the
floor. When water does not flow drain plug(the original
any more, turn the pump place and close the lower cov
open to the left.

DRAIN PUMP ASSEMBLY
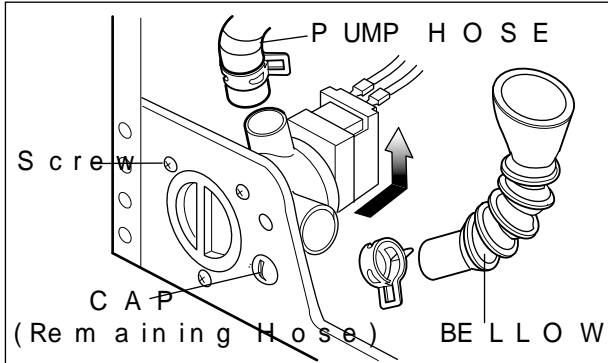
① Remove PUMP HOSE.
② Remove BELLOWS..
③ Remove CAP (Remaining Hose.)
④ Disconnect the wiring.
⑤ Unscrew 3 screws
⑥ Remove the DRAIN PUMP ASSEMBLY.

HEATER ASSEMBLY
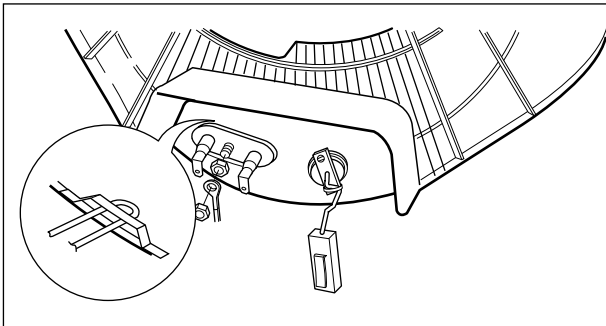
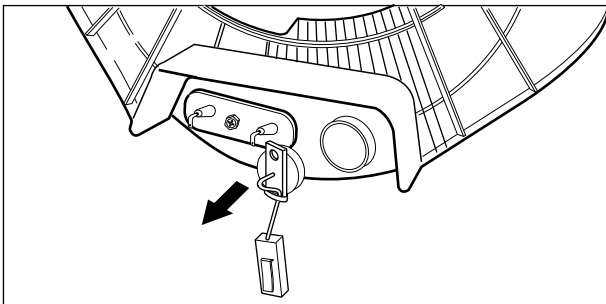① Loosen the M6 heater nuts to pull out
ASSEMBLY.

CAUTION

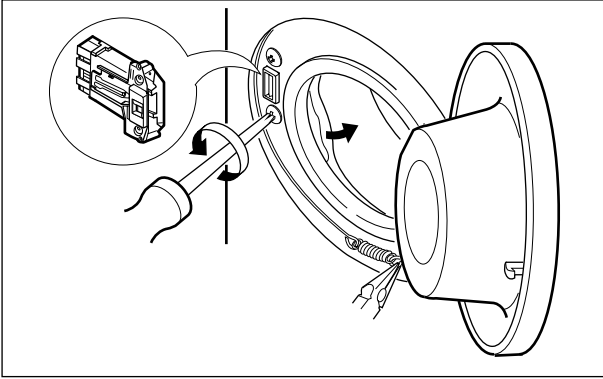When mounting ASSEMBLY, be sure to
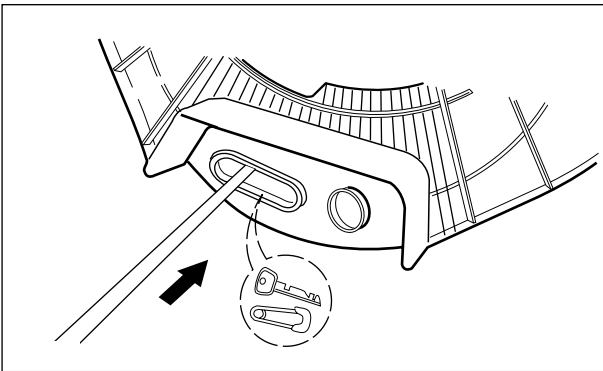insert the HEATER ASSEMBLY into the
the bottom of the tub.

THERMISTOR

① Pull it out by holding the THERMISTOR
* If it is pulled by the wire, it may be b
② When mounting the THERMISTOR again,
that it is got back tight to the bushing

SWITCH ASSEMBLY, DOOR LOCK

① Take apart the ASSEMBLY (cabinet) and release the GASKET.

② Unscrew 2 screws holding the DOOR ASSEMBLY.

③ Disconnect the door lock from the w
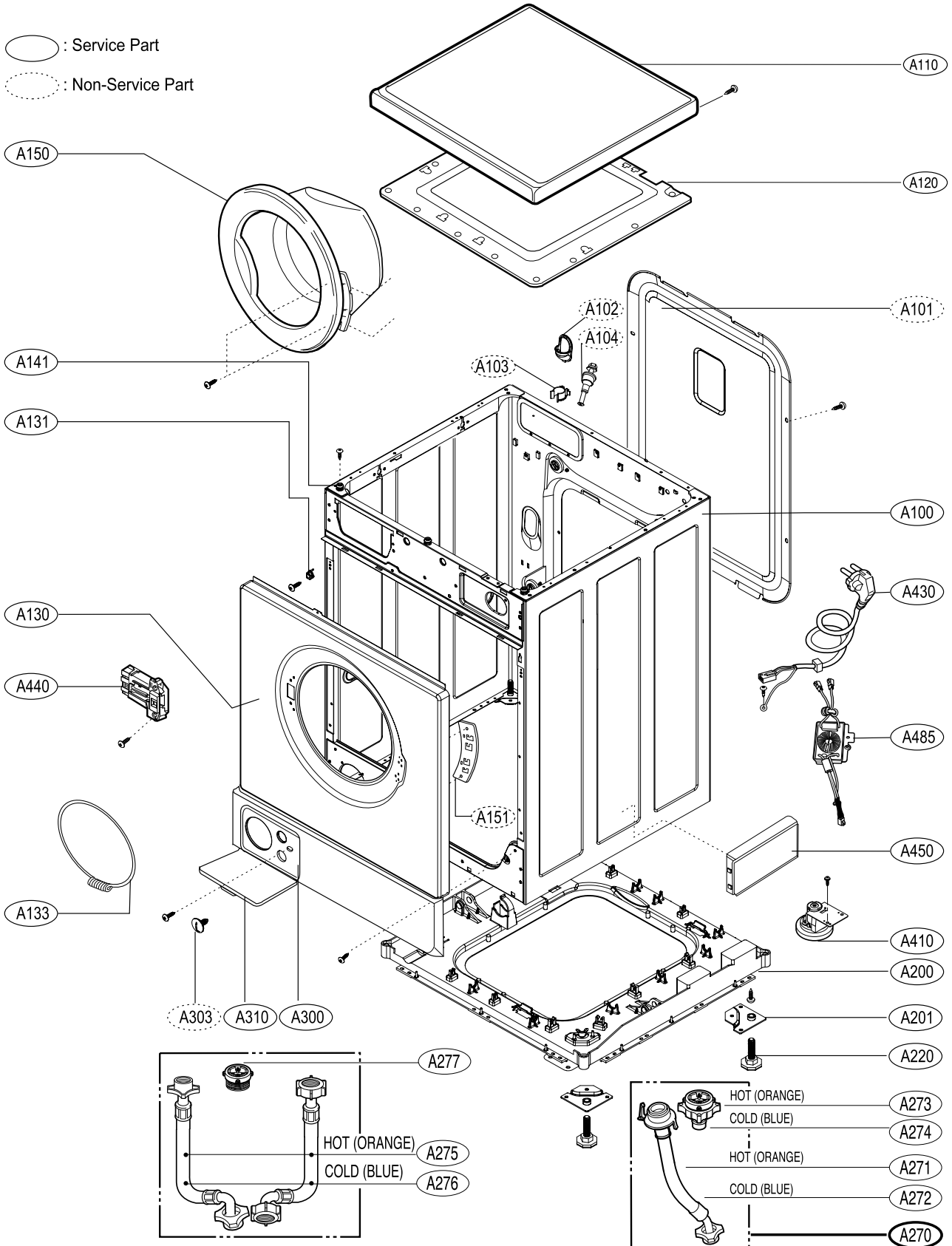
WHEN FOREIGN MATERIAL IS STUCK BETWEEN DRUM AND TUB

① Remove the HEATER ASSEMBLY.

② Remove the foreign material (wire, c inserting a long bar through the hol

39

◯ : Service Part

⬭ : Non-Service Part

A150
A141
A131
A130
A440
A133
A303 A310 A300
A277
HOT (ORANGE) A275
COLD (BLUE) A276

A110
A120
A102
A104
A101
A103
A100
A430
A485
A151
A450
A410
A200
A201
A220
HOT (ORANGE) A273
COLD (BLUE) A274
HOT (ORANGE) A271
COLD (BLUE) A272
A270

10-2 THE EXPLODED VIEW OF CONTROL PANEL SPC ASSEMBLY

◯ : Service Part

◌ : Non-Service Part

F170

F160

F300

F432

F220

F 430

F120

F310

F110

F210

: Service Part

: Non-Service Part