WASHING MACHINE
SERVICE MANUAL

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

MODEL : WD-3243RHD
WD-3245RHD
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# 1. SPECIFICATION

<table>
<thead>
<tr>
<th>ITEM</th>
<th>WD-3243RHD/WD-3245RHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER SUPPLY</td>
<td>120-127V~ 60Hz</td>
</tr>
<tr>
<td>PRODUCT WEIGHT</td>
<td>156 1/2 lbs. (71 kg)</td>
</tr>
<tr>
<td>ELECTRICITY CONSUMPTION</td>
<td></td>
</tr>
<tr>
<td>WASHING</td>
<td>140W</td>
</tr>
<tr>
<td>SPIN</td>
<td>300W</td>
</tr>
<tr>
<td>FAN MOTOR</td>
<td>25W</td>
</tr>
<tr>
<td>DRAIN MOTOR</td>
<td>40W</td>
</tr>
<tr>
<td>WASH HEATER</td>
<td>1000W</td>
</tr>
<tr>
<td>DRY HEATER</td>
<td>1200W</td>
</tr>
<tr>
<td>REVOLUTION SPEED</td>
<td></td>
</tr>
<tr>
<td>WASH</td>
<td>45rpm</td>
</tr>
<tr>
<td>SPIN</td>
<td>No spin/400/600/800/1000/1200 rpm</td>
</tr>
<tr>
<td>OPERATION WATER PRESSURE</td>
<td>4.5 ~ 145 PSI (30 ~ 1000 KPa)</td>
</tr>
<tr>
<td>CONTROL TYPE</td>
<td>Electronic</td>
</tr>
<tr>
<td>WASH CAPACITY</td>
<td>14 1/2 lbs. [6.5 kg]</td>
</tr>
<tr>
<td>DRY CAPACITY</td>
<td>3.0kg [6 5/8 lbs.]</td>
</tr>
<tr>
<td>DIMENSION</td>
<td>600 x 600 x 850mm</td>
</tr>
<tr>
<td>WASH PROGRAM</td>
<td>Cotton, Permant Press, Quick, Delicate, Wool, Rinse+Spin</td>
</tr>
<tr>
<td>OPTION</td>
<td>Extra Wash, Rinse Plus</td>
</tr>
<tr>
<td>DOOR SWITCH TYPE</td>
<td>Automatic type by pressing Door Open botton</td>
</tr>
<tr>
<td>WATER LEVEL</td>
<td>8 steps (by sensor)</td>
</tr>
<tr>
<td>RESERVATION</td>
<td>From 3 hours to 19 hours</td>
</tr>
<tr>
<td>SENSING OF THE LAUNDRY AMOUNT</td>
<td>Adapted</td>
</tr>
<tr>
<td>FUZZY LOGIC</td>
<td>Adapted</td>
</tr>
<tr>
<td>DISPLAY OF THE REMAINING TIME</td>
<td>Adapted</td>
</tr>
<tr>
<td>ERROR DIAGNOSIS</td>
<td>10 items</td>
</tr>
<tr>
<td>POWER AUTO OFF</td>
<td>Adapted</td>
</tr>
<tr>
<td>CHILD LOCK</td>
<td>Adapted</td>
</tr>
<tr>
<td>AUTO RESTART</td>
<td>Adapted</td>
</tr>
<tr>
<td>RAPID</td>
<td>Adapted</td>
</tr>
</tbody>
</table>
2. FEATURES & TECHNICAL EXPLANATION

2-1. FEATURES

- **Automatic process from washing to drying.**
  Automatic process from washing to drying can be selected easily.
  Washing capacity: 14 1/2 lbs. [6.5 kg]
  Drying capacity: 6 5/8 lbs. [3.0 kg]

- **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, automatically 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 if the machine unplugged and is plugged in again.
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.

```
Fuzzy Logic
```

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. CONTROL OF DOOR OPEN

- The door can be opened by pressing DOOR OPEN button after finishing program.
- When the revolution of drum is stopped and in case water level is below level 2, door can be opened by pressing the DOOR OPEN button.
- If there is no power, the door can be opened by pulling the door strap.
  (If the water level is high, first drain the water by pulling out the hose cap)
3. PARTS IDENTIFICATION

- Power Plug
  - If the supply cord is damaged, it must be replaced by the manufacturer or its service agents or a similarly qualified person in order to avoid a hazard.

- Control Panel
- Door
- Lower Cover
- Adjustable Feet
- Emergency Door Release
- Drawer
  - (For detergent and fabric softener)
- Drain Hose
- Drum
- Drain Pump Filter
- Drain Plug

■ ACCESSORIES

- Inlet hose (1 each)
- Wrench
4. INSTALLATION

1. Before servicing ask the trouble what the trouble is.
2. Check the adjustment (power supply is 120-127V~ remove the transit bolts...)
3. Check the troubles referring to the troubleshooting.
4. Decide service steps referring to disassembly instructions.
5. Then, service and repair.
6. After servicing, operate the appliance to see whether it works O.K or NOT.

- **STANDARD INSTALLATION**
  - The appliance should be installed as follows.

<table>
<thead>
<tr>
<th>REMOVE THE TRANSIT BOLTS</th>
<th>INSTALL THE APPLIANCE ON FLAT AND FIRM SURFACE</th>
<th>ADJUST THE HORIZONTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Remove the transit bolts (3EA: ①) with supplied spanner.</td>
<td><img src="image" alt="Appliance installation diagram" /></td>
<td>· Turn the leveling feet to set the appliance horizontally.</td>
</tr>
<tr>
<td>· Keep the transit bolts and spanner for future use.</td>
<td><img src="image" alt="Appliance installation diagram" /></td>
<td>· The appliance goes up by rotating the feet clockwise.</td>
</tr>
<tr>
<td>· Insert the 3 caps provided into the hole</td>
<td><img src="image" alt="Appliance installation diagram" /></td>
<td>· The appliance come down by rotating the feet counterclockwise.</td>
</tr>
</tbody>
</table>
HOW TO CONNECT INLET HOSE

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

CONNECT DRAIN HOSE

- Make sure that the hose is not twisted.
- Avoid submerging the end of the hose.
※ The drain hose should be placed under 100cm from the floor.

CONNECT POWER PLUG

- Connect the power plug to the wall outlet.
- Avoid connecting several electric devices, It may be the cause of a fire.
TEST OPERATION

1 Preparation for washing.
   - Connect the power plug to the outlet.
   - Connect the inlet hose.

2 Press the POWER button.

3 Press the Start/Pause button.
   - In case of Cotton program.

4 Check the water supply.
   - Check if water is supplied through the detergent dispenser.

5 Check automatic reverse turn.
   - Check if the drum rotates clockwise and counterclockwise.

6 Check the water heating.
   - Press the Temp. button and the present temperature will be displayed.

7 Check drain and spin
   - Turn off Wash and Rinse after pressing the Start/Pause button and start the machine again.
   - Check drain and spin.

8 Power off and open the door
   - Power off and then Power on.
   - Check if the door can be opened by pressing Door open button.

9 Water removal
   - If SVC is needed during check, remove the remaining water by pulling out the hose cap.
5. OPERATION

Rinse Hold
- If you desire to leave fabrics in the machine without spinning after rinse to prevent wrinkling. You may select rinse hold by pressing the Rinse Hold Button.
To drain and spin, press Rinse Hold Button or Start/Pause button to turn off the Rinse Hold lamp.

LED display
- Display the remaining time (Hour : Minute) to finish.
- In case of abnormal operation, error indications are displayed. (PE, P, B, L, E, B, E, C, H, B)
- See trouble shooting guide.

Wash program selector
- 6 programs can be selected type of the laundry.
- By pressing the button, [COTTON → PERM PRESS → WOOL → DELICATE → ] can be selected.

For manual option and spin
- Use these buttons to change washing method, rinse times, spinning speed.
- When lamp is off, no selection has been made.
- Extra wash is available for Cotton and Perm press program.

Dry selector
- Dry programs can be selected by pressing the [DRY] button.
- By pressing the button, [Auto → No Heat → Time (30/60/90/120/150)] can be selected.

Water temperature selector
- Press the button to select water temperature.
- The water temperature is selected [Warm/Cold → Warm/Warm → Hot/Cold → Cold/Cold] during normal program.
- Hot/Cold is selected only for cotton program.
- By pressing the button during operating the washer, the present temperature is displayed.

Child lock
- Once Child-Lock is set, and canceled by pressing [Temp.] and [Time Delay] simultaneously once Child-Lock is set, all buttons are inoperative.
- The Child-Lock system can be set at any time even during Power-Off, on Pause and operation. It is automatically set when an operational error occurs.
- When power is off, the LED indicates [ ] on the display. During operation, or when the programme is paused, the LED will indicate [ ] and the remaining time.
Door open button
- Pressing the button opens the door.
- Only operates when the power plug is connected to AC 110V outlet.

Start/Pause button
- Use the button to start or pause wash cycle.
- The power turns off automatically in 4 minutes after the pause button is pressed.
- Press the button to change the program.

ON/OFF button
- Press the button to turn power on and off.

Delay finish
- Press the button when reservation washing is needed.
- When the button is pressed, [3:00] is displayed. A maximum delay of [15:00] hours can be set.
- Each press advances time delay by one hour.
- Use ON/OFF button to cancel [Time delay].

Error display
- The display blinks if there is an error.
- NO INLET : Trouble with water supply
- IMBALANCE : The laundry is tilted to one side.
- NO DRAIN : If the drain pump filter is clogged.
6. WIRING DIAGRAM / PROGRAM CHART

PROGRAM CHART (KGD-PJT)

* Water Supply : W•S / Intermittent Spin : I•S / Distangle : D•T

<table>
<thead>
<tr>
<th>CYCLE</th>
<th>Washing</th>
<th>Rinse</th>
<th>Spin</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>W•S</td>
<td>W•S</td>
<td>W•S</td>
<td>W•S</td>
</tr>
<tr>
<td>Main</td>
<td>W•S</td>
<td>W•S</td>
<td>W•S</td>
<td>W•S</td>
</tr>
<tr>
<td>Normal</td>
<td>W•S</td>
<td>W•S</td>
<td>W•S</td>
<td>W•S</td>
</tr>
<tr>
<td>Rinse+</td>
<td>W•S</td>
<td>W•S</td>
<td>W•S</td>
<td>W•S</td>
</tr>
<tr>
<td>Spin</td>
<td>W•S</td>
<td>W•S</td>
<td>W•S</td>
<td>W•S</td>
</tr>
</tbody>
</table>

* Basic time is minute in washing chart
* The actual program time can be varied with the load amount.

- Normal working Time
  - Cotton: About 3:55
  - Perm Press: About 3:35
  - Quick: About 36
  - Wool: About 56
  - Delicate: About 56
  - Rinse+Spin: About 32
  - Spin: About 12

* - Basic Cycle
* - Optional Cycle
* Pre-Setting Time : Water Supply - 120 sec.
  Drain - 60 sec.
7. TROUBLESHOOTING

7-1. BEFORE PERFORMING SERVICE

- Be careful of electric shock or disconnecting the parts while trouble shooting.
- Voltage of each terminal in 120-127V~ and DC while applying an electric current.

7-2. QC TEST MODE.

1. Pressing SPIN, and DRY button simultaneously.
2. Power supply ON with pressing upper two button. Then buzzer sound twice.
3. Press the START/PAUSE button as follows.
   [Press the START/PAUSE button more 4 times until stop spinning]

<table>
<thead>
<tr>
<th>Pressing number of [Start/Pause] button</th>
<th>Checking Point</th>
<th>Display Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>All lamps turn on</td>
<td>[B:86]</td>
</tr>
<tr>
<td>1 time</td>
<td>Clockwise spin (right)</td>
<td>Drum rpm (About 40–52)</td>
</tr>
<tr>
<td>2 times</td>
<td>Low speed Spin</td>
<td>Drum rpm (About 70–90)</td>
</tr>
<tr>
<td>3 times</td>
<td>High speed Spin</td>
<td>Drum rpm (About 90–110)</td>
</tr>
<tr>
<td>4 times</td>
<td>Inlet valve for pre-wash operation</td>
<td>Water level frequency (25–65)</td>
</tr>
<tr>
<td>5 times</td>
<td>Inlet valve for main-wash operation</td>
<td>Water level frequency (25–65)</td>
</tr>
<tr>
<td>6 times</td>
<td>Inlet valve for dry operation</td>
<td>Water level frequency (25–65)</td>
</tr>
<tr>
<td>7 times</td>
<td>Counterclockwise spin (left)</td>
<td>Drum rpm (About 40–52)</td>
</tr>
<tr>
<td>8 times</td>
<td>Heater is in operation for 3 sec.</td>
<td>Water temperature</td>
</tr>
<tr>
<td>9 times</td>
<td>Draining pump operation</td>
<td>Water level frequency</td>
</tr>
<tr>
<td>10 times</td>
<td>Dry operation for 6 minutes</td>
<td>Auto off operation after 6 minutes</td>
</tr>
</tbody>
</table>

7-3. HOW TO KNOW THE WATER LEVEL FREQUENCY
- Press the SPIN and DRY button simultaneously.

The digits means water level frequency \(10^{-1} \text{Hz}\)

\[\text{ex) 241 : Water level frequency } = 241 \times 10^{-1} \text{Hz} \\ = 24.1 \text{Hz}\]

7-4. HOW TO KNOW TO TEMPERATURE OF EACH THERMISTOR
AT OPERATING CONDITION.
- Thermistor in tub : Press the [WATER TEMP] button.
- Thermistor in dry duct : Press the [DRY] button.
- Thermistor in condensing duct : Press the [SPIN] and [DRY] button simultaneously.
7-5. ERROR DISPLAY.

- If you press the START/PAUSE button when an error is displayed, any error except \( \text{PE}_1 \) will disappear and the machine will change into pause status.
- In case of \( \text{PE}_1 \), \( \text{PE}_2 \), \( \text{dE} \) if the error is not resolved within 20 sec., 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 \( \text{FE}_1 \), power will not be turned off.

<table>
<thead>
<tr>
<th>ERROR</th>
<th>SYMPTOM</th>
<th>CAUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 WATER INLET ERROR</td>
<td>( \text{NO INLET} )</td>
<td>• Not reached to the water level (2 level) within 4 minutes after water supplied or not reached to the preset water level within 25 minutes.</td>
</tr>
<tr>
<td>2 DRAIN ERROR</td>
<td>( \text{OE} )</td>
<td>• Not fully drained within 5 minutes.</td>
</tr>
</tbody>
</table>
| 3 OVERFLOW ERROR | \( \text{FE} \) | • Water is over flowing (over 8 level).  
\* If \( \text{FE} \) is displayed, drain pump operates to drain water automatically. |
| 4 SENSOR PRESSURE S/W ERROR | \( \text{PE} \) | • The sensor pressure switch is out of order.                          |
| 5 DOOR OPEN ERROR | \( \text{dE} \) | • The door does not open in spite of pressing the [DOOR OPEN] button.  
• In case of operating the reservation function or the other function with door opened. Close the door, then the error display is resolved.  
• The door switch is out of order. |
| 6 IMBALANCE ERROR | \( \text{IMBALANCE} \) | • The appliance is tilted.  
• Laundry is gathered to one side. |
<p>| 7 HEATING ERROR  | ( \text{bE} ) | • The THERMISTOR is out of order.                                      |</p>
<table>
<thead>
<tr>
<th>ERROR</th>
<th>SYMPTOM</th>
<th>CAUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>CURRENT ERROR</td>
<td>• MAIN PWB ASSEMBLY is out of order</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace the MAIN PWB ASSEMBLY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Winding in the STATOR ASSEMBLY is short-circuited.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace the STATOR ASSEMBLY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CE is displayed during a high spin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace the LEAD WIRE ASSEMBLY (MOTOR)</td>
</tr>
<tr>
<td>9</td>
<td>MOTOR ERROR</td>
<td>• The connector in the LEAD WIRE ASSEMBLY is not connected to the connector of STATOR ASSEMBLY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reconnect or repair the connector</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The hall sensor is out of order/defective.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace the STATOR ASSEMBLY</td>
</tr>
<tr>
<td>10</td>
<td>DRY HEATER ERROR</td>
<td>• The Dry Heater is out of order</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace the Dry Heater</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The Connector of the Dry Heater is not connected properly to the connector in the Main PWB ASSEMBLY</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reconnect or repair the connector</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The Dry fan motor is out of order</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replace the fan Motor</td>
</tr>
</tbody>
</table>
## 8. ERROR DIAGNOSIS AND CHECK LIST

### 8-1. DIAGNOSIS AND ANSWER FOR ABNORMAL OPERATION

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>GUIDE FOR SERVICE CALL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NO POWER</strong></td>
<td>Is the power plug connected firmly to 120-127V~ outlet?</td>
</tr>
<tr>
<td></td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>Power failure? or Breaker opened?</td>
</tr>
<tr>
<td></td>
<td>Is the outlet controlled by a switch?</td>
</tr>
<tr>
<td></td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>Visit to check</td>
</tr>
</tbody>
</table>

### Water inlet trouble

<table>
<thead>
<tr>
<th>- NO INLET -</th>
<th>Is <strong>NO INLET</strong> displayed?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>Is the tap opened?</td>
</tr>
<tr>
<td></td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>Is the tap frozen?</td>
</tr>
<tr>
<td></td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>Is the water supply shut-off?</td>
</tr>
<tr>
<td></td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>Is filter in the inlet valve clogged with foreign material?</td>
</tr>
<tr>
<td></td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>Clean the filter of inlet valve</td>
</tr>
<tr>
<td></td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>Visit to check</td>
</tr>
</tbody>
</table>
### SYMPTOM
- Door does not open
- Error displayed on the program

<table>
<thead>
<tr>
<th>GUIDE FOR SERVICE CALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Started with door opened?</td>
</tr>
<tr>
<td>YES</td>
</tr>
<tr>
<td>NO</td>
</tr>
</tbody>
</table>

Didn’t you press the [DOOR OPEN] button with water remained in the tub?

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
</table>
| 1. Press the [START/PAUSE] button to stop the appliance. 
2. Drain water by selecting spin. 
3. Open door by pressing the [DOOR OPEN] button. | |

Isn’t door opened in spite of pressing the [DOOR OPEN] button?

<table>
<thead>
<tr>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit to check</td>
</tr>
</tbody>
</table>

Check if the door switch is O·K.

### DRAIN TROUBLE

<table>
<thead>
<tr>
<th>NO DRAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is (\text{\textdegree}E) displayed?</td>
</tr>
<tr>
<td>YES</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean up the filter.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit to check</td>
</tr>
</tbody>
</table>

Is the drain hose frozen with water, kinked, or crushed?

<table>
<thead>
<tr>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit to check</td>
</tr>
<tr>
<td>SYMPTOM</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| ° 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.  
* This appliance has the automatic suds sensing function which operates under much suds condition for good rinse and preventing overflow.  
* When much suds are sensed, the suds removing function such as drain, water input, pause will operate without 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 clogged?  
YES  
Explain how to use softener  
Clean the compartment for softener |
|                                                                        | Compartment for softener                                                                                                                                 |
|                                                                        | Visit to check                                                                                                                                          |
8-2. FAULT DIAGNOSIS AND TROUBLE SHOOTING

**CAUTION**

1. Be careful of electric shock or disconnecting the parts while trouble shooting.
2. First of all, check the connection of each part terminal with wiring diagram.
3. If you replace the MAIN PWB ASSEMBLY, Put in the connectors correctly.

---

**NO POWER**

1. **When measuring the voltage of the outlet, is the voltage AC 120-127V?**
   - **NO**
     - **Check the fuse?**
   - **YES**

2. **Is the led (1) on?**
   - **NO**
     - **Replace MAIN PWB ASSEMBLY**
   - **YES**

3. **Is connector (2) disconnected or disassembled?**
   - **YES**
     - **Reconnect the PWB ASSEMBLY**
   - **NO**

4. **Is wire of the PWB ASSEMBLY disconnected?**
   - **YES**
     - **Reconnect the PWB ASSEMBLY**
   - **NO**

   **Replace PWB ASSEMBLY**
NO WATER SUPPLY

Is water supply shut-off? NO

Is the tap opened? NO

When you press both RINSE button and SPIN button simultaneously, is the water level frequency below 240? YES

Is the inlet valve filter clogged with impurity? NO

Is resistance between each terminal of INLET VALVE ASSEMBLY is 2~8kΩ? NO

Check the voltage of the inlet valve connector 120-127V~. (Refer to 7-2 QC TEST MODE) NO

Replace the INLET VALVE ASSEMBLY. YES

Replace the MAIN PWB ASSEMBLY.

DETERGENT DOES NOT FLOW IN

Is water supplied? NO

Are replaceptacles correctly connected to the terminals of the INLET VALVE ASSEMBLY? NO

Is detergent put in the correct compartment of the drawer? NO

Is the detergent caked or hardened? YES

Check the wiring on the dispenser. Refer to 'NO WATER SUPPLY'

Put the detergent in the correct position. Check the drawer.

SOFTENER
MAIN WASH
LIQUID BLEACH

LIQUID BLEACH
MAIN WASH

: Detergent

Clean the drawer.
SOFTENER DOES NOT FLOW IN

- 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 of the drawer? **NO** → Put it in the correct compartment.
  **YES**
- Is the softener cap clogged? **YES** → Clean the Cap and Drawer.
  **NO**

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 OPTION and SPIN at the same time after draining, is the water level frequency 248 ~ 262 or more?
When pressing SPIN, DRY buttons at the same time while wash, is the water level frequency between 230 - 243 ?

- **NO**
  - Replace the S.PRESSURE SWITCH ASSEMBLY

- **YES**
  - Checking voltage between two pins as press the POWER button is the voltage 120-127V~?

  - **YES**
    - Replace the MAIN PWB ASSEMBLY

**DRAIN MALFUNCTIONING**

- 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**

- 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 80~150Ω)
  - **YES**
    - Repair the DRAIN PUMP ASSEMBLY.
  - **NO**

When checking voltage between connectors (1), (2) on spinning, is the voltage 120-127V~ as the figure?

- **NO**
  - Repair the MAIN PWB ASSEMBLY.
**WASH HEATER TROUBLE**

- When checking the voltage between connector during whites washing, is the voltage 120-127V?
  - **NO** → Replace the MAIN PWB ASSY
  - **YES**

- After power off, is the resistance of wire (RED-YELLOW) connectors between 10Ω~30Ω?
  - **YES** → Normal
  - **NO** → Replace the HEATER ASSEMBLY

**HEATING CONTINUOUSLY ABOVE THE SETTING WATER TEMPERATURE**

- When pressing WATER TEMP. during, is the displayed temperature is over 10°C higher than the selected temperature?
  - **NO** → Check if inlet hose is connected to a hot faucet; otherwise, replace PWB ASSEMBLY(Main)
  - **YES**

- Is the resistance between Thermistor Connectors 2.5kΩ~180kΩ?
  - **NO** → Replace Thermister
  - **YES**

- When checking THERMISTOR on the tub is the THERMISTOR loosened above 2mm from the rubber?
  - **NO**
  - **YES** → Push the THERMISTOR tightly to the rubber.
SPIN TROUBLE

Check on the spinning, is the frequency of the water level 248 or more. The frequency can be checked by pressing the OPTION and SPIN buttons at the same time on the program.

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.

When pressing OPTION, SPIN and POWER buttons at the same time after power off, press the START/PAUSE button 1 times, is the drum spinning at low speed?

Normal

Is it disconnected, or disassembled?

Correct the connector.

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

Replace the STATOR ASSEMBLY

Resistance of terminal:

Replace the MAIN PWB ASSEMBLY

Door does not open

Is 1DOOR LOCK 1 Display Led on?

After draining and 1DOOR LOCK 1 lid off, press Door open.

Is 1dE 1 Displayed?

Check switch Assembly, Door lock connector and Main PWB ASSEMBLY (Blue, 3pin)
Disassemble the cabinet cover and condensing bellows.

Is there any foreign object in condensing bellows.

Clean the bellows

CHECK FOR DRY HEATER TROUBLE

CHECK FOR DRY FAN MOTOR TROUBLE

Disassemble the cabinet cover and condensing bellows.
Is there any foreign object in condensing bellows.

Replace the thermistor.
(6322FR2046A)

Disassemble the dry fan assy and dry duct upper, and clean foreign object in duct and fan.

Yes

NO

NO

NO
DRY HEATER TROUBLE

After power off, is the resistance of dry heater 10 ~ 40Ω?

YES → Replace the dry heater.

NO → Is thermostat closed?

YES → Replace the thermostat.

NO → When checking voltage between connectors (1, 2) on drying, is the voltage AC 120-127V as the figure?
(Wire color: 1 - Red, 2 - Blue)

YES → Replace the PWB assy (Main)

NO → Replace the dry heater.
DRY FAN MOTOR TROUBLE

Is it disconnected, or disassembled? [(1) - Nature, 3pin (2) - Red 6pin]

YES                    NO
Reconnect or repair connector.

When checking voltage between connectors [(1)~ (2), (2) ~ (3)] on drying, is the voltage DC 9~15V as the figure?
[Wire color: (1) - White, (2) - Blue (3) - Black]

NO                    YES
Replace the PWB ASSEMBLY(Main)

Check the motor connector, is the resistance of terminal same as the figure?
Resistance of terminal: ① - ③ : 2~5Ω  ② - ③ : 2~5Ω

NO                    YES
Replace the DRY FAN ASSEMBLY.
LOT OF VAPOR IN DRAWER WHEN DRYING

Isn't the water supply shut-off?  

NO

Is tap opened?  

NO  

Open the tap.

YES

Isn't the inlet valve filter clogged with impurity?  

YES  

Clean the filter.

NO

Is resistance of the inlet valve terminal between 2 to 8 kΩ?  

NO  

Replace the inlet valve.  

(5220FR2075C)

YES

Check if the voltage of each terminal of Inlet Valve is AC 120-127V. (Refer to 7.TEST MODE)  

NO  

Replace PWB assy (Main)  

(6871EC1023H)
9. DISASSEMBLY INSTRUCTIONS

* Disassemble and repair the parts after pulling out power cord from the outlet.

**CONTROL PANEL**

1. Unscrew the screws on the top plate.
2. The PLATE ASSEMBLY (Top) is pulled back and then upward to arrow direction.
3. The cover (Inner) is disassembled.

1. The PWB ASSEMBLY (Display) connectors are disconnected.
2. Pull out drawer, three screws are unscrewed.
3. Press two upper hooks and pull the control panel forward.

1. The PWB assembly (Display) is disconnected.
2. When 8 screws are unscrewed on the PWB insulator and the PWB assembly (Display) is disassembled from the PWB insulator.
The back cover is removed.
Two screws are unscrewed.
Disconnect connector from the wiring.
Pull the PWB ASSEMBLY (Main) to arrow direction.

The PLATE ASSEMBLY (Top) and the cover (Inner) are disassembled.
Pull the drawer to arrow direction.
Two screws are unscrewed.

The hose clamps (6EA) and the hose are disassembled.
The ventilation bellows are disassembled on the tub.
1. Disconnect the wiring connector.
2. Remove the valve by two screws of the valve holder.

* When reconnecting the connector

<table>
<thead>
<tr>
<th>VALVE</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALVE ① (DRY)</td>
<td>YL/BK - BK</td>
</tr>
<tr>
<td>VALVE ② (LIQUID BLEACH)</td>
<td>GY/WH - BK</td>
</tr>
<tr>
<td>VALVE ③ (NORMAL-WASH)</td>
<td>WH/BK - BK</td>
</tr>
<tr>
<td>VALVE (HOT)</td>
<td>BL/RD - BK</td>
</tr>
</tbody>
</table>

1. Remove the lower cover to arrow direction after one screw is unscrewed.
When the power cord is plugged, the door can be opened by pressing the DOOR OPEN button.

1. Open the door completely.
2. Remove the two screws from the hinge.

**Door opening method in case of no electricity**

1. Pull the strap.

**Removing method of remained water**

1. Rotate the Cap(Remaining Hose) to arrow direction.
2. Pull it out from hose.

※ First, prepare a bucket to put in the remained water.
The cabinet gasket clamp is released.
Two screws are unscrewed from the cabinet cover.

One screw is unscrewed from the lower cover.
The lower cover is disassembled by pulling out.
Three screws are unscrewed from the cabinet.

The control panel is removed.
Screw is unscrewed from the cabinet cover.
1. Remove tub gasket clamp by loosening the screw.

2. Remove dry gasket clamp by loosening the screw.

3. When reassembling the gasket, put the drain hole of the gasket downward, then assemble.
1. Remove the back cover.
2. After loosening the bolt, Rotor, pull out the rotor.

1. Remove the 6 bolt from the stator.
2. Disconnect the 2 connectors.

1. Remove the bolts at the Tub.
2. The Hinge (Damper) at the base is pulled off pressing on the snaps at the sharp end.
3. The hinge at the base is pulled off. (To arrow direction)
① Remove pump outlet hose.
② Remove tub pump bellows.
③ Remove cap (Remaining Hose).
④ Disconnect the wiring.
⑤ Three screws are unscrewed from the cabinet.
⑥ Remove the pump to arrow direction.

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

**CAUTION**
When assembling the washing heater, insert the heater to heater clip on the bottom of tub.

① Pull it out by holding the thermistor bracket.
  • If holding the wire and pulling out it, it may be broken.
DOOR HINGE ASSEMBLY

1. Two screws are unscrewed on the door and the door is disassembled.
2. The cabinet cover clamp is removed and the gasket is released.
3. Two screws are unscrewed on the door hinge.
4. The door hinge is disassembled by pushing the door hinge arm inside the cabinet cover.

SWITCH ASSEMBLY, DOOR LOCK

1. The cabinet cover clamp is removed and the gasket is released.
2. Two screws are unscrewed.
3. The door lock S/W is disconnected from the wiring connector and the strap.

WHEN FOREIGN OBJECT STUCK BETWEEN DRUM AND TUB

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

1. Remove 5 screws and dry fan assembly.
2. Remove 6 screws and dry duct upper.

**CONDENSING DUCT**

1. Remove 1 screw and dry heater.
2. Remove thermostat.

1. Remove 2 screws from cabinet.

1. Remove clamp and condensing duct.
10. EXPLODED VIEW AND PART LIST

10–1. THE EXPLODED VIEW OF CABINET ASSEMBLY

HOT (RED)
COLD (BLUE)
THE EXPLODED VIEW OF CONTROL PANEL & DISPENSER ASSEMBLY
10-3 THE EXPLODED VIEW OF DRUM & TUB ASSEMBLY
10–4 THE EXPLODED VIEW OF DRYER