WASHING MACHINE SERVICE MANUAL

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

MODEL : WM3632HW
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# 1. SPECIFICATIONS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>WM3632HW</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER SUPPLY</td>
<td>120V ~ 60Hz</td>
</tr>
<tr>
<td>PRODUCT WEIGHT</td>
<td>198 lbs. (90 kg)</td>
</tr>
<tr>
<td>ELECTRIC POWER CONSUMPTION</td>
<td></td>
</tr>
<tr>
<td>WASHING</td>
<td>280W</td>
</tr>
<tr>
<td>DRAIN MOTOR</td>
<td>80W</td>
</tr>
<tr>
<td>FAN MOTOR</td>
<td>25W</td>
</tr>
<tr>
<td>DRY HEATER</td>
<td>1200W</td>
</tr>
<tr>
<td>WASH HEATER</td>
<td>1000W</td>
</tr>
<tr>
<td>REVOLUTION SPEED</td>
<td></td>
</tr>
<tr>
<td>WASH</td>
<td>42 rpm</td>
</tr>
<tr>
<td>SPIN</td>
<td>0-1200 rpm</td>
</tr>
<tr>
<td>CYCLES</td>
<td>9</td>
</tr>
<tr>
<td>WASH / RINSE TEMPERATURES</td>
<td>6</td>
</tr>
<tr>
<td>SPIN SPEEDS</td>
<td>6</td>
</tr>
<tr>
<td>OPTIONS</td>
<td>Prewash, Stain Cycle, Quick Cycle, Extra Rinse, Rinse+Spin, Delay Wash</td>
</tr>
<tr>
<td>WASH / DRY PROGRAM</td>
<td>Sanitary, Cotton / Towels, Normal, Perm Press, Speed Wash</td>
</tr>
<tr>
<td>CUSTOM PROGRAM</td>
<td>Incorporated</td>
</tr>
<tr>
<td>WATER CIRCULATION</td>
<td>Incorporated</td>
</tr>
<tr>
<td>OPERATIONAL 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>3.22 cu.ft (3.72 cu.ft.IEC)</td>
</tr>
<tr>
<td>DRY CAPACITY</td>
<td>Max. 11lbs (5kg)</td>
</tr>
<tr>
<td>DIMENSIONS</td>
<td>27”(W) X 29 – 1/2”(D) X 42 – 3/4”(H), 49 – 4/5”(D, door open)</td>
</tr>
<tr>
<td>DELAY WASH</td>
<td>up to 19 hours</td>
</tr>
<tr>
<td>DOOR SWITCH TYPE</td>
<td>PTC + Solenoid</td>
</tr>
<tr>
<td>WATER LEVEL</td>
<td>7 steps (by sensor)</td>
</tr>
<tr>
<td>LAUNDRY LOAD SENSING</td>
<td>Incorporated</td>
</tr>
<tr>
<td>ERROR DIAGNOSIS</td>
<td>Incorporated</td>
</tr>
<tr>
<td>AUTO POWER OFF</td>
<td>Incorporated</td>
</tr>
<tr>
<td>CHILD LOCK</td>
<td>Incorporated</td>
</tr>
</tbody>
</table>
2. FEATURES & TECHNICAL EXPLANATION

2-1. FEATURES

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

- **Tilted Drum and Extra Large Door Opening**
  The tilted drum and extra large door opening make it possible to load and unload easily.

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

- **RollerJets**
  The washing ball enhances wash performance and reduces damage to clothing. The jets spray and help tumble clothes to enhance washing performance while maintaining fabric care.

- **Built-in Heater**
  The internal heater automatically heats the water to the optimum temperature on selected cycles.

- **Child Lock**
  The Child lock feature prevents children from pressing any buttons to change the settings during operation.
2-2. FUZZY LOGIC WASHING TIME OPTIMIZATION

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

2-3. WATER LEVEL CONTROL

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

2-4. DOOR CONTROL

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

Accessories

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

![Diagram of washer parts]

- Control Panel
- Dispenser
- Drain Hose
- Door
- Drum
- Lower Cover Cap
- Drain Pump Filter
- Drain Plug
- Adjustable Feet
- Shipping Bolts
- Power Plug
- Air Vent for Safety
- Cold Water Inlet
- Hot Water Inlet

■ ACCESSORIES

- Hot/Cold (1 each) Hose
- Wrench
- Tie strap to secure drain hose to standpipe, inlet hose, or laundry tub
4. INSTALLATION

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

■ STANDARD INSTALLATION

   The appliance should be installed as follows:

<table>
<thead>
<tr>
<th>REMOVE THE TRANSIT BOLTS</th>
<th>INSTALL THE APPLIANCE ON A FLAT AND FIRM SURFACE</th>
<th>ADJUST THE LEVELING</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Remove the transit bolts (4 EA: ①) with the supplied wrench.</td>
<td><img src="image" alt="Appliance Installation Diagram" /></td>
<td>• Turn the leveling feet to adjust the appliance horizontally.</td>
</tr>
<tr>
<td>• Keep the transit bolts and spanner for future use.</td>
<td><img src="image" alt="Appliance Orientation Diagram" /></td>
<td>• The appliance goes up by rotating the feet clockwise.</td>
</tr>
<tr>
<td>• Insert the 4 caps (provided) into the hole.</td>
<td><img src="image" alt="Appliance Adjustment Diagram" /></td>
<td>• The appliance come down by rotating the feet counterclockwise.</td>
</tr>
</tbody>
</table>
HOW TO CONNECT THE INLET HOSE

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

CONNECT THE DRAIN HOSE

- Make sure that the hose is not twisted.
- Avoid submerging the end of the hose.

※ The end of the drain hose should be placed less than 96” from the floor.

CONNECT POWER PLUG

- Connect the power plug to the wall outlet.
- Avoid connecting several electric devices, as doing so may cause a fire.
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.
   - Listen for clicking sounds to determine if the door has locked.

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

5. Check the automatic reversing rotation of the drum.
   - Make sure that the drum rotates clockwise and counterclockwise.

6. Check the water heating function.
   - Press the WASH/RINSE button and the present temperature will be displayed.

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

8. Press the START/PAUSE button.
   - Listen for clicking sounds to determine if the door is unlocking.

9. Water removal
   - If SVC is required, remove the remaining water in the tub, by pulling out the drain plug.
5. OPERATION

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

• **DOOR LOCKED lamp**
  - Lights whenever the door is locked.
  - The door can be unlocked by pressing the Start / Pause button to stop the washer.

• **STATUS indicator**
  - These lights show each selected cycle.

• **OPTION button**
  - Allows you to store a customized wash cycle for future use.
  - To create a Custom Program:
    1) Select a cycle.
    2) Select the other desired Wash / Rinse Temp., Spin Speed, Soil Level.
    3) Select the desired Options.
    4) Press and hold the Custom Program button for 3 seconds (2 beep sounds).
    5) Press the Start / Pause button.
      The Custom Program is now stored for future use.
  - To reuse the program, select Custom Program and press Start / Pause.

• **WASH / RINSE temp.**
  - SPIN SPEED, SOIL LEVEL button
  - Select a water temperature based on the type of load you are washing.
  - To change the spin speed, select the Spin Speed button until the desired setting is displayed.
  - To change the soil level, select the Soil Level button until the desired setting is displayed.
- **Rotate the Cycle selector knob** to select the cycle designed for different types of fabric and soil levels.

- **Child lock**:
  - Use this option to prevent unwanted use of the washer. Press and hold Quick Cycle and Delay Wash button for 3 seconds to lock / unlock control.
  - When Child lock is set, “CL” blinks and all buttons are disabled but the Power button. You can thereby lock the washer while it is operating.

- **Custom Program** button:
  - **Prewash**: Use this option for loads that need pretreatment. It adds 16 minutes prewash and drain.
  - **Stain Cycle**: Adds time to the wash and rinse cycles for better stain removal. Automatically provides a rinse.
  - **Quick Cycle**: The Quick cycle offers a quick cycle time.
  - **Extra Rinse**: This option provides an additional rinse cycle.
  - **Rinse+Spin**: Use this option to rinse and then spin.
  - **Delay Wash**: Allows the start of any cycle to be delayed for 1~19(12, 9) hours.

- **Dry selector**:
  - Dry programs can be selected by pressing the [DRY] button.
  - By pressing the [DRY] button, [150 → 180 → 15 → 30 → 45 → 60 → 90 → 120] can be selected.

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

- **EST. TIME REMAINING**:
  - This display shows:
    a) the estimated time remaining in the cycle when operating.
    b) an error code when an error has been detected.

- **Child lock**:
  - Use this option to prevent unwanted use of the washer. Press and hold Quick Cycle and Delay Wash button for 3 seconds to lock / unlock control.

- **Custom Program** button:
  - **Prewash**: Use this option for loads that need pretreatment. It adds 16 minutes prewash and drain.
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  - **Delay Wash**: Allows the start of any cycle to be delayed for 1~19(12, 9) hours.
6. WIRING DIAGRAM / PROGRAM CHART
### PROGRAM CHART

<table>
<thead>
<tr>
<th></th>
<th>Washing</th>
<th>Staycooling</th>
<th>Normal</th>
<th>Extra or Stain</th>
<th>Extra &amp; Stain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>W-S</td>
<td>I-S</td>
<td>W-S</td>
<td>I-S</td>
<td>I-S</td>
</tr>
<tr>
<td>Main</td>
<td>W-S</td>
<td>I-S</td>
<td>W-S</td>
<td>I-S</td>
<td>I-S</td>
</tr>
<tr>
<td>Rinse</td>
<td>W-S</td>
<td>I-S</td>
<td>W-S</td>
<td>I-S</td>
<td>I-S</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Spin</th>
<th>DRY</th>
<th>END</th>
<th>Normal Working Time (Hour:Minute)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash</td>
<td></td>
<td></td>
<td></td>
<td>About 1:44</td>
</tr>
<tr>
<td>Rinse</td>
<td></td>
<td></td>
<td></td>
<td>About 57</td>
</tr>
<tr>
<td>Spin</td>
<td></td>
<td></td>
<td></td>
<td>About 56</td>
</tr>
<tr>
<td>Normal</td>
<td></td>
<td></td>
<td></td>
<td>About 53</td>
</tr>
<tr>
<td>Perm Press</td>
<td></td>
<td></td>
<td></td>
<td>About 34</td>
</tr>
<tr>
<td>Delicates</td>
<td></td>
<td></td>
<td></td>
<td>About 34</td>
</tr>
<tr>
<td>Wool/Silk</td>
<td></td>
<td></td>
<td></td>
<td>About 34</td>
</tr>
<tr>
<td>Hand Wash</td>
<td></td>
<td></td>
<td></td>
<td>About 29</td>
</tr>
<tr>
<td>Speed Wash</td>
<td></td>
<td></td>
<td></td>
<td>About 29</td>
</tr>
<tr>
<td>Drain+Spin</td>
<td></td>
<td></td>
<td></td>
<td>About 12</td>
</tr>
<tr>
<td>Wash + Rinse</td>
<td></td>
<td></td>
<td></td>
<td>About 45</td>
</tr>
<tr>
<td>Rinse + Spin</td>
<td></td>
<td></td>
<td></td>
<td>About 29</td>
</tr>
<tr>
<td>Rinse</td>
<td></td>
<td></td>
<td></td>
<td>About 18</td>
</tr>
</tbody>
</table>

* Basic Cycle
* = Optional Cycle
* Pre-Selling Time: Water Supply - 60 sec.
  Drain - 60 sec.

* Basic time is minute in washing chart.
* The actual program time can be varied with the load amount, water temperature or ambient temperature.
7. TROUBLESHOOTING

7-1. BEFORE PERFORMING SERVICE

■ Be careful of electric shock when disconnecting parts for while troubleshooting.
■ The voltage of each terminal is 120V AC and DC when the unit is plugged in.

7-2. QC TEST MODE.

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

① Press the SPIN SPEED and SOIL LEVEL buttons simultaneously.
② Press the Power button, while the above condition. Then buzzer sound twice.
③ In order to advance to the next step of test mode, press the START / PAUSE button once.

<table>
<thead>
<tr>
<th>Number of times the Start/Pause button is pressed</th>
<th>Check Point</th>
<th>Display Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Turns on all lamps and locks the door.</td>
<td>&quot;18:52&quot;</td>
</tr>
<tr>
<td>1 time</td>
<td>Tumble clockwise.</td>
<td>rpm (40~50)</td>
</tr>
<tr>
<td>2 times</td>
<td>Low speed Spin.</td>
<td>rpm</td>
</tr>
<tr>
<td>3 times</td>
<td>High speed Spin.</td>
<td>rpm</td>
</tr>
<tr>
<td>4 times</td>
<td>Inlet valve for prewash turns on.</td>
<td>Water level frequency (25~65)</td>
</tr>
<tr>
<td>5 times</td>
<td>Inlet valve for main wash turns on.</td>
<td>Water level frequency (25~65)</td>
</tr>
<tr>
<td>6 times</td>
<td>Inlet valve for hot water turns on.</td>
<td>Water level frequency (25~65)</td>
</tr>
<tr>
<td>7 times</td>
<td>Inlet valve for softener turns on.</td>
<td>Water level frequency (25~65)</td>
</tr>
<tr>
<td>8 times</td>
<td>Inlet valve for bleach turns on.</td>
<td>Water level frequency (25~65)</td>
</tr>
<tr>
<td>9 times</td>
<td>Tumble counterclockwise.</td>
<td>rpm (40~50)</td>
</tr>
<tr>
<td>10 times</td>
<td>Heater turns on for 3 sec.</td>
<td>Water temperature</td>
</tr>
<tr>
<td>11 times</td>
<td>Circulation pump turns on.</td>
<td>Water level frequency (25~65)</td>
</tr>
<tr>
<td>12 times</td>
<td>Drain pump turns on.</td>
<td>Water level frequency (25~65)</td>
</tr>
<tr>
<td>13 times</td>
<td>Power off and unlock the door.</td>
<td>Turn off all lamps.</td>
</tr>
</tbody>
</table>

7-3. HOW TO CHECK THE WATER LEVEL FREQUENCY

★ Press the SPIN SPEED and SOIL LEVEL button simultaneously.

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

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

= 24.1 kHz
**7-4. ERROR DISPLAY**

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

<table>
<thead>
<tr>
<th>ERROR</th>
<th>SYMPTOM</th>
<th>CAUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 WATER INLET ERROR</td>
<td>1E</td>
<td>• Correct water level (2 level) is not reached within 8 minutes after water is supplied or it does not reach the preset water level within 25 minutes.</td>
</tr>
</tbody>
</table>
| 2 IMBALANCE ERROR    | UE      | • The load is too small.  
                          • The appliance is tilted.  
                          • Laundry is gathered to one side.  
                          • Non distributable things are put into the drum. |
| 3 DRAIN ERROR       | DE      | • Not fully drained within 10 minutes.                      |
| 4 OVER FLOW ERROR   | FE      | • Water is overflowing (over 8 level).  
                          ※ If [\(FE\)] is displayed, the drain pump will operate to the drain water automatically. |
| 5 PRESSURE SENSOR ERROR | PE     | • The SENSOR SWITCH ASSEMBLY is out of order.          |
| 6 DOOR OPEN ERROR   | DE      | • Door not all the way closed.  
                          • Loose electrical connections at Door switch and PWB Assembly.  
                          • The DOOR SWITCH ASSEMBLY is out of order. |
<p>| 7 HEATING ERROR     | LE      | • The THERMISTOR is out order.                            |</p>
<table>
<thead>
<tr>
<th>ERROR</th>
<th>SYMPTOM</th>
<th>CAUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVER CURRENT ERROR</td>
<td>![CE]</td>
<td>• MAIN PWB ASSEMBLY is out of order.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Winding in the STATOR ASSEMBLY is short-circuited.</td>
</tr>
<tr>
<td>LOCKED MOTOR ERROR</td>
<td>![LE]</td>
<td>• The connector (3-pin, male, white) in the MOTOR HARNESS is not connected to the connector (3-pin, female, white) of STATOR ASSEMBLY.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The electric contact between the connectors (3-pin, male, white) in the MOTOR HARNESS and 4-pin, female, white connector in the MAIN PWB ASSEMBLY is bad or unstable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The MOTOR HARNESS between the STATOR ASSEMBLY and MAIN PWB ASSEMBLY is cut (open circuited).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The hall sensor is out of order/defective.</td>
</tr>
<tr>
<td>BALL SENSOR ERROR</td>
<td>![BE]</td>
<td>• Loose Ball Sensor Connector.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ball Sensor is out of order.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>※ Displayed only when the START / PAUSE button is first pressed in the QC Test Mode.</td>
</tr>
<tr>
<td>EEPROM ERROR</td>
<td>![EE]</td>
<td>• EEPROM is out of order.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>※ Displayed only when the START / PAUSE button is first pressed in the QC Test Mode.</td>
</tr>
<tr>
<td>POWER FAILURE</td>
<td>![PF]</td>
<td>• The washer experienced a power failure.</td>
</tr>
<tr>
<td>DRY HEATER ERROR</td>
<td>![DH]</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 SOLUTION FOR ABNORMAL OPERATION

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>GUIDE FOR SERVICE CALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>No power</td>
<td>Is the power plug connected firmly to 120V AC outlet?</td>
</tr>
<tr>
<td></td>
<td><strong>YES</strong></td>
</tr>
<tr>
<td></td>
<td>Power failure? or Breaker opened? Is the outlet controlled by a switch?</td>
</tr>
<tr>
<td></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td></td>
<td>Visit to service.</td>
</tr>
<tr>
<td>Water inlet trouble</td>
<td>Is [E] displayed?</td>
</tr>
<tr>
<td></td>
<td><strong>YES</strong></td>
</tr>
<tr>
<td></td>
<td>Is the tap opened?</td>
</tr>
<tr>
<td></td>
<td><strong>YES</strong></td>
</tr>
<tr>
<td></td>
<td>Is the tap frozen?</td>
</tr>
<tr>
<td></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td></td>
<td>Is the water supply shut-off?</td>
</tr>
<tr>
<td></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td></td>
<td>Is filter in the inlet valve clogged with foreign material?</td>
</tr>
<tr>
<td></td>
<td><strong>YES</strong></td>
</tr>
<tr>
<td></td>
<td>Clean the filter of inlet valve</td>
</tr>
<tr>
<td></td>
<td><strong>NO</strong></td>
</tr>
<tr>
<td></td>
<td>Visit to service.</td>
</tr>
<tr>
<td>SYMPTOM</td>
<td>GUIDE FOR SERVICE CALL</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Door error</td>
<td></td>
</tr>
</tbody>
</table>
| dE           | Started with door opened? Yes → dE
              | NO                                                                                                           |
|              | Was the load too large? Yes → Avoid overloading.  
              | NO                                                                                                           |
|              | Clicking sound is heard once or twice, when the START / PAUSE button is pressed to start the cycle?  
              | NO                                                                                                           |
|              | Visit to service.                                                                                             |
|              | Check if the door switch is OK.                                                                               |
| Drain trouble|                                                                                                              |
| dE           | Is dE displayed? Yes → Is the drain pump filter clogged with foreign material such as pins, coins, etc?  
              | YES                                                                                                           |
|              | Clean up the filter.                                                                                           |
|              | NO                                                                                                           |
|              | Is the drain hose frozen kinked, or crushed?  
<pre><code>          | NO                                                                                                           |
</code></pre>
<p>|              | Visit to service.                                                                                             |</p>
<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>GUIDE FOR SERVICE CALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suds overflow from the appliance.</td>
<td></td>
</tr>
<tr>
<td>(In this condition, wash and spin do not operate normally)</td>
<td></td>
</tr>
<tr>
<td>Is a low-sudsing detergent used?</td>
<td></td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td></td>
</tr>
<tr>
<td>Is the proper amount of detergent used as recommended?</td>
<td></td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td></td>
</tr>
<tr>
<td>Recommend to reduce the amount of detergent.</td>
<td></td>
</tr>
<tr>
<td>* This appliance has an automatic suds sensing function which prevents overflow.</td>
<td></td>
</tr>
<tr>
<td>* When excessive suds are sensed, the suds removing implementations such as drain, water input, pause will operate, without rotating the drum.</td>
<td></td>
</tr>
<tr>
<td>No softening effect</td>
<td></td>
</tr>
<tr>
<td>Is softener put in the correct compartment of the dispenser?</td>
<td></td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td></td>
</tr>
<tr>
<td>Is the softener cap clogged?</td>
<td></td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td></td>
</tr>
<tr>
<td>Explain proper use of softener.</td>
<td></td>
</tr>
<tr>
<td>Clean the softener compartment</td>
<td></td>
</tr>
<tr>
<td><img src="image.png" alt="Diagram" /></td>
<td></td>
</tr>
<tr>
<td><img src="image.png" alt="Diagram" /></td>
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<td></td>
</tr>
<tr>
<td>Visit to service.</td>
<td></td>
</tr>
</tbody>
</table>
8-2. FAULT DIAGNOSIS AND TROUBLESHOOTING

CAUTION

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

NO POWER

Is the supplied voltage 120V AC?

- NO: Check the fuse or reset the circuit breaker.
- YES: Is the voltage between the 2 FILTER ASSEMBLY connectors 120V AC?

- NO: Replace the FILTER ASSEMBLY (CIRC).
- YES: Is the LED(1) on?

- NO: Replace MAIN PWB ASSEMBLY.
- YES: Are the connectors(2) on the PWB loose?

- NO: Reconnect.
- YES: Is wire of the DISPLAY PWB ASSEMBLY broken?

- NO: Replace the MAIN PWB ASSEMBLY.
- YES: Replace DISPLAY PWB ASSEMBLY or repair wire.
NO WATER SUPPLY

Is water supply shut-off?

- NO

Is the tap opened?

- NO
  - Open the tap.

Is the tap opened?

- YES

When you press both SPIN SPEED button and SOIL LEVEL button simultaneously, is the water level frequency below 246?

- YES
  - Check the AIR CHAMBER and the tube (clogged).

- NO

Is the inlet valve filter clogged?

- NO
  - Replace the INLET VALVE ASSEMBLY.

- YES
  - Clean the filter.

Is resistance between each terminal of INLET VALVE ASSEMBLY 0.8-1.2kΩ?

- NO
  - Replace the INLET VALVE ASSEMBLY.

- YES
  - Check electrical connection. Replace the MAIN PWB ASSEMBLY.

Verify the voltage of the inlet valve connector is 120V AC.
(Refer to 7-2 QC TEST MODE)

- NO
  - Refer to "NO WATER SUPPLY".

DETERGENT 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.

- YES

Has detergent been put in the correct compartment of the dispenser?

- NO
  - Put the detergent in the correct place.

- YES
  - Clean the dispenser.

Is the detergent caked or hardened?
SOFTENER / BLEACH DOES NOT FLOW IN

Is water supplied?  NO → Refer to NO WATER SUPPLY

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

YES → Is softener / bleach put in the correct compartment of the drawer? NO → Put it in the correct compartment.

YES → Is the softener / bleach cap clogged? YES → Clean the Cap and Container.

ABNORMAL SOUND

Is the motor bolt loosened? YES → Secure the bolt.

NO → Is there friction noise coming from the motor? YES → Replace the STATOR ASSEMBLY or ROTOR ASSEMBLY.
**HEATING WITHOUT WATER**

When pressing SPIN SPEED and SOIL LEVEL at the same time after draining, is the water level frequency 255? **NO**

When pressing SPIN SPEED and SOIL LEVEL buttons at the same time while wash, is the water level frequency between 230 - 243? **NO**

---

When checking voltage between two pins while pressing the POWER button, is the voltage 120V AC? **YES**

---

**DRAIN MALFUNCTIONING**

Is the drain hose twisted or frozen? **YES**

Is the impeller of the drain pump clogged? **YES**

Is the connector disconnected, disassembled? **YES**

Is the coil of the drain pump too high or low? (resistance of coil is 10-20Ω) **YES**

When checking voltage between connectors during spin, is the voltage 120V AC as in the figure? **NO**

---

Replace the SENSOR SWITCH ASSEMBLY.

Replace the MAIN PWB ASSEMBLY.

Replace the MAIN PWB ASSEMBLY.

Repair the DRAIN HOSE ASSEMBLY.

Remove foreign material.

Reconnect or repair the connector.

Replace the DRAIN PUMP ASSEMBLY.

Replace the MAIN PWB ASSEMBLY.
**WASH HEATER TROUBLE**

When checking the voltage between connector during whites washing, is the voltage 120 V AC?

- **NO** Replace the MAIN PWB ASSEMBLY.

- **YES**
  - After power off, is the resistance of wire (RED-YELLOW) connectors between 10Ω - 30Ω?
    - **YES** Normal
    - **NO**
      - After power off and the heater terminal is disconnected, is the resistance 10-30Ω?
        - **YES** Replace the PWB HARNESS.
        - **NO**

**HEATING CONTINUOUSLY ABOVE THE SETTING WATER TEMPERATURE**

When pressing WASH / RINSE, is the displayed temperature over 10 °C higher than the selected temperature?

- Hot : 50 °C
- Warm : 40 °C
- Cold : 30 °C

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

- **YES**
  - Is the resistance between ② and ③ of Connector (1) 2.5kΩ - 180kΩ?
    - **NO** Check electrical connection. Replace THERMISTOR.
    - **YES**
      - When checking the THERMISTOR on the tub, is the THERMISTOR loose?
        - **YES** Push the THERMISTOR tightly to the rubber.
        - **NO**

WILL NOT CIRCULATE WATER

Is the impeller of the drain pump clogged?  

Yes: Remove foreign material.  
No:  

Are the Hose Connector and/or Hose clogged?  

Yes: Remove foreign material.  
No:  

Is the connector disconnected, disassembled?  

Yes: Reconnect or repair the connector.  
No:  

Is the coil of the right side of drain pump open or short circuited? (Coil R is 18-30Ω)  

Yes: Replace PUMP MOTOR ASSEMBLY.  
No:  

When checking voltage between the connectors during spin, is the voltage 120V AC, as the figure?  

No: Replace the MAIN PWB ASSEMBLY.
**SPIN TROUBLE**

1. Check during spin if the frequency of the water level is 248 or more.
   - **NO**
2. Press the START/PAUSE button 2 times in QC Test mode, is the drum spinning at low speed?
   - **YES**
     - Normal
   - **NO**
3. Is it disconnected, or disassembled? [Red:3pin (1), NA:4pin (2)]
   - **YES**
     - Correct the connection.
   - **NO**
4. Check the motor connector, Is the resistance of the terminal the same as the figure?
   - **NO**
     - Replace the STATOR ASSEMBLY
   - **YES**
     - Replace the MAIN PWB ASSEMBLY

**ERROR**

1. Does the spring of Latch Hook actuate?
   - **NO**
   - Replace Door Assembly.
   - **YES**
2. Is there clicking sound once or twice when the START/PAUSE button is pressed to start the cycle?
   - **NO**
     - Check the DOOR SWITCH ASSEMBLY Connector and MAIN PWB ASSEMBLY (Red 4 pin and white 4 pin connector (1)).
   - **YES**
     - Replace the DOOR SWITCH ASSEMBLY.
Disassemble the cabinet cover and condensing bellows.
Is there any foreign object in condensing bellows.

**CHECK FOR DRY FAN MOTOR TROUBLE**

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

**CHECK FOR DRY HEATER TROUBLE**

Is the resistance of thermistors on dry duct 2.5kΩ ~180kΩ (at 100°C ~0°C).

Replace the thermistor. 6322FR2046B : Dry Duct

Clean the bellows
**DRY HEATER TROUBLE**

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

- **NO** Replace the dry heater.
- **YES**
  
  Is thermostat closed?
  
  - **NO** Replace the thermostat.
  
  - **YES**
    
    When checking voltage between connectors (①, ②) on drying, is the voltage AC 110 V as the figure?
    
    (wire color: ① - Red, ② - Blue)

    - **NO** Replace the PWB ASSEMBLY(Main)
Is the resistance or disassembled? [(1) - Yellow, 3pin (2) - Red 6pin]

YES
Reconnect or repair connector.

NO

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
Replace the PWB ASSEMBLY(Main)

YES

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
Replace the DRY FAN ASSEMBLY.
9. DISASSEMBLY INSTRUCTIONS

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

**CONTROL PANEL ASSEMBLY**

1. Unscrew 7 screws on the Rear Frame.
2. Disassemble the Rear Frame.
3. Pull the Control panel forward.
4. Disconnect connectors.
5. Unscrew 5 screws.
6. Disassemble the controller assembly.

**TOP PLATE**

1. Open the Lid.
2. Unscrew 4 screws.
3. Disassemble the Lid Assembly.
4. Pull down the Dispenser by pushing hooks.
5. Put a hand into the dispenser hole and hold the top plate.
6. Push backward using an opener and lift the top plate.

* Do first left side (1).
1. Disassemble the 5 hose clamps.
2. Release the 5 hoses.
3. Unscrew the nut at the lower part of the dispenser.
4. Unscrew the 4 screws on the holder.
5. Disassemble the 5 connectors from the valves.

Wire color:
1. WH-BK
2. OR-BK
3. WH-BK
4. GY-BK
5. BL-BK
6. YL-BK

1. Unscrew the screw from the top plate.
2. Unplug the 2 connectors.
1. Unscrew the 2 screws from upper side of the cabinet cover.

2. Unscrew the screw from filter cover.

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

4. Unscrew the 2 screws from the lower side of the cabinet cover.
5. Open the door.
6. Disassemble the clamp assembly using a flat (–) screwdriver.
7. Separate the clamp assembly from cabinet cover.
8. Tilt the cabinet cover.
9. Disconnect the door switch connector.
10. Lift and separate the cabinet cover.
11. Disassemble the clamp assembly using a flat (–) screwdriver.
12. Disassemble the Gasket.
DOOR

1. Open the door.
2. Unscrew the 7 screws from the hinge cover.
3. Put a flat (−) screwdriver into the opening of the hinge, and pull out the hinge cover.
4. Unscrew the screws from the door.
5. Disassemble the door upward / downward.

※ Be careful! The door is heavy.

DOOR SWITCH ASSEMBLY

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

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

3. Disassemble the pump assembly in arrow direction.

**HEATER**

1. Disassemble the cabinet cover.

2. Separate 2 connectors from the heater.

3. Loosen the nut and pull out the heater.

**CAUTION**

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

**THERMISTOR**

1. Disassemble the cabinet cover.

2. Unplug the white connector from the thermistor.

3. Pull it out by holding the bracket of thermistor.
WHEN FOREIGN OBJECT IS STUCK BETWEEN DRUM AND TUB

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

SENSOR ASSEMBLY (BALL SENSOR)

1. Unscrew the 4 screws from the back cover.
2. Unscrew the single screw from the lower-right side of the cabinet.
3. Disconnect the connector from PWB Harness.
1. Disassemble the back cover.
2. Loosen the bolt.
3. Pull out the Rotor.
4. Unscrew the 2 screws from the tub bracket.
5. Loosen the 6 bolts on the stator.
6. Unplug the 2 connectors from the stator.

1. Disassemble the damper hinges from the tub and base.
2. Separate the dampers.
1. Remove 5 screws and dry fan assembly.
2. Remove 7 screws and dry duct upper.
3. Remove 2 screws and dry duct bracket.

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

1. Remove 2 screws from cabinet.

1. Remove clamp and condensing duct.
10-2. DRUM & TUB ASSEMBLY
10-3. DISPENSER ASSEMBLY

HOT (RED)
COLD (BLUE)
10-4. DRYER