DISHWASHER
SERVICE MANUAL

NOTE

READ THIS MANUAL CAREFULLY BEFORE SERVICING THE PRODUCT. FOLLOW THE MANUAL’S INSTRUCTIONS WHEN SERVICING THE PRODUCT.

For Authorized Service Technicians

MODEL : LUDP8997SN / LDT7797ST / LDP6797ST /
LDP5676BD / LDT5665ST / LDF5545ST / LSDF9897**
LDT7808** / LSST9908**

Any reproduction or duplication (including by way of email, facsimile or other electronic means), publication, modification, copying or transmission of this Service Manual is STRICTLY PROHIBITED unless you have obtained the prior written consent of the LG Electronics entity from which you received this Service Manual. The material covered by prohibition includes, without limitation, any text, graphics or logos in this Service Manual.

Copyright © 2017 LG Electronics Inc. All rights reserved. Only for training and service purposes.
CONTENTS

1. IMPORTANT SAFETY NOTICE ......................................................................................................................... 4

2. SPECIFICATIONS .................................................................................................................................................. 5

3. FEATURES AND OPERATION ........................................................................................................................... 6

4. PARTS .................................................................................................................................................................... 17

5. PROGRAM CHART ............................................................................................................................................. 18

6. HOW TO DISASSEMBLE .................................................................................................................................... 30

7. TROUBLESHOOTING METHODS ....................................................................................................................... 47
   7-1. TROUBLESHOOTING ACCORDING TO DISPLAY ERROR MESSAGE ......................................................... 47
   7-2. TROUBLESHOOTING METHODS ................................................................................................................ 49
   7-3. DIAGNOSIS AND REPAIR BY SYMPTOM .............................................................................................. 60

8. INSTALLATION INSTRUCTIONS ....................................................................................................................... 63

9. EXPLODED VIEW ............................................................................................................................................... 72

10. WIRING DIAGRAMS ......................................................................................................................................... 100
    10-1. WIRING DIAGRAM .................................................................................................................................. 100
    10-2. MAIN PCB .............................................................................................................................................. 101
    10-3. DISPLAY PCB ........................................................................................................................................... 102
    10-4. MCU PCB ................................................................................................................................................. 103
**CAUTION**

- Disconnect power supply line before servicing
- Reconnect all grounding devices

**IMPORTANT SAFETY NOTICE**

This service information is intended for individuals possessing adequate backgrounds of electrical, electronic and mechanical experience. Any attempt to repair this appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.
# 2. SPECIFICATIONS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SPECIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Voltage / Frequency</td>
<td>AC 120V/60Hz</td>
</tr>
<tr>
<td>Installation</td>
<td>Built-In</td>
</tr>
<tr>
<td>Place Settings</td>
<td>15</td>
</tr>
<tr>
<td>Product Dimension (in.)</td>
<td>23 3/4 (W) x 24 7/8 (D) x 33 5/8 (H)</td>
</tr>
<tr>
<td>Product Weight (lb.)</td>
<td>72-82</td>
</tr>
<tr>
<td>Door Color</td>
<td>White, Black, Stainless Steel, Black STS, Matte Black</td>
</tr>
<tr>
<td>Tub Material</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>Control</td>
<td>Electronics</td>
</tr>
<tr>
<td>Rated Power(Watt)</td>
<td>1,350</td>
</tr>
<tr>
<td>Heater Power(Watt)</td>
<td>1,200</td>
</tr>
<tr>
<td>Programs</td>
<td>10 (XD4&amp;5 : 9)</td>
</tr>
<tr>
<td>Upper Rack Position</td>
<td>Adjustable</td>
</tr>
<tr>
<td>Lower Rack</td>
<td>Fold down</td>
</tr>
<tr>
<td>Water Consumption</td>
<td>9.4 ~ 20.5 (Normal)</td>
</tr>
<tr>
<td>Power Consumption (kWh/year)</td>
<td>258 (Nomal)</td>
</tr>
<tr>
<td></td>
<td>(LUDP8997** : 269 (Normal))</td>
</tr>
<tr>
<td>Operating Time (min)</td>
<td>110 ~ 150 (Normal)</td>
</tr>
<tr>
<td>Fan Dry System</td>
<td>Yes</td>
</tr>
<tr>
<td>Delay Start Function</td>
<td>Yes</td>
</tr>
<tr>
<td>Auto-Off Power Switch</td>
<td>Yes</td>
</tr>
<tr>
<td>Process Monitor</td>
<td>Yes</td>
</tr>
<tr>
<td>Wash Level</td>
<td>5</td>
</tr>
<tr>
<td>Racks</td>
<td>Nylon Coating</td>
</tr>
<tr>
<td>Operating Water Pressure (Bar)</td>
<td>20-120 (140-830kPa)</td>
</tr>
</tbody>
</table>
### 3. FEATURES AND OPERATION

## PRODUCT FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>QuadWash™ System</strong></td>
<td>Multi-motion lower spray arm shoots water in various directions and at optimized intensities to reach every area of the tub. This system provides more powerful and complete cleaning coverage.</td>
</tr>
<tr>
<td><strong>Inverter Direct Drive Motor</strong></td>
<td>LG’s experience in motor technology results in extraordinary functionality, with advanced features like the Dual Zone option, whisper-quiet operation, energy efficiency, and durability. The simple design and high build quality of the motor make it so reliable that it's covered for 10 years under the warranty.</td>
</tr>
<tr>
<td><strong>EasyRack Plus</strong></td>
<td>This easy-to-use system of adjustable tines and rack height provides more flexibility and versatility when loading dishes of various shapes and sizes.</td>
</tr>
<tr>
<td><strong>Hybrid Drying System</strong></td>
<td>This efficient drying system does not use a heating element during the drying process resulting in superior energy efficiency and gentle care for dishes.</td>
</tr>
<tr>
<td><strong>Smart ThinQ™</strong></td>
<td>Download the new LG smart phone app to set options, self-diagnose and troubleshoot problems with the appliance, and other useful features. Some of these functions use Wi-Fi or NFC (Near Field Communication) technology and require an NFC-equipped smart phone.</td>
</tr>
</tbody>
</table>
Control Panel
For Non-Steam Models (LDT779**, LDP679**, LDP567**, LDT566**)

1. **Power**
   - Press the Power button to turn power on and off.
   - After the cycle is complete, the power automatically turns off for purposes of safety and economy.
   - If there is a power surge, power outage, or disruption of any kind, power is automatically turned off for safety.
   - When power is connected again, it will turn on automatically and resume the cycle.

2. **Display**
   - **• Rinse Aid Icon**
     - This icon illuminates when the rinse aid level is low. The LED automatically shuts off when the rinse aid is refilled or the level is set to 0.
     - Refer to the Rinse Aid Dispenser Adjustment section.
   - **• Digital Display**
     - The digital display on the control panel shows the estimated cycle time. When the cycle and options are selected, the display shows the total estimated time to complete those selections. During operation, the display shows the remaining estimated operating time.

   **NOTE**
   - The estimated time shown on the display does not include delay times for heating water, etc.
   - If Delay Start is selected, the display shows the delay time in hours.
   - Cycle time may vary depending on the soil level of your load.

3. **Control Lock**
   - The Control Lock feature helps prevent settings from being changed during a cycle. Selecting this feature locks all of the buttons, except for the Power button, on the control panel. This feature does not lock the door.
   - While a cycle is running, press and hold Half Load and Energy Saver simultaneously for three seconds to activate or deactivate Control Lock.
   - To start a new cycle, deactivate Control Lock.

4. **Wi-Fi**
   - When the appliance is connected to the internet through a home Wi-Fi network, this icon illuminates.
   - Press and hold Delay Start for approximately three seconds to connect to the network.

5. **Cancel**
   - The drain pump activates and the cycle cancels. Once the dishwasher finishes draining, the power turns off.
   - Press and hold Start for three seconds to activate.

6. **Start**
   - To operate the machine, either press Start and close the door within four seconds or close the door and press Start.
   - If Start button is not pressed to start the cycle, an alert will sound.

7. **Chime On/Off**
   - To activate or deactivate the button sounds, press and hold Dual Zone and Energy Saver simultaneously for three seconds. The error alert sound cannot be turned off.
Control Panel
For Non-Steam Models (LDF554**) Before 705XX

1 Power
- Press the **Power** button to turn power on and off.
- After the cycle is complete, the power automatically turns off for purposes of safety and economy.
- If there is a power surge, power outage, or disruption of any kind, power is automatically turned off for safety.
- When power is connected again, it will turn on automatically and resume the cycle.

2 Display
- **Rinse Aid Icon**
  - This icon illuminates when the rinse aid level is low. The LED automatically shuts off when the rinse aid is refilled or the level is set to 0.
  - Refer to the Rinse Aid Dispenser Adjustment section.
- **Digital Display**
  - The digital display on the control panel shows the ESTIMATED cycle time. When the cycle and options are selected, the display shows the total estimated time to complete those selections. During operation, the display shows the remaining estimated operating time.

NOTE
- The estimated time shown on the display does not include delay times for heating water, etc.
- If **Delay Start** is selected, the display shows the delay time in hours.
- Cycle time may vary depending on the soil level of your load.

3 Cancel
- The drain pump activates and the cycle cancels. Once the dishwasher finishes draining, the power turns off.
- Press and hold **Start** for three seconds to activate.

4 Start
- To operate the machine, either press **Start** and close the door within four seconds or close the door and press **Start**.
- If **Start** button is not pressed to start the cycle, an alert will sound.

Chime On/Off
- To activate or deactivate the button sounds, press the **Half Load** button for three seconds. The error alert sound cannot be turned off.
Control Panel
For Non-Steam Models (LDF554#**) After 705XX

1 Power
- Press the Power button to turn power on and off.
- After the cycle is complete, the power automatically turns off for purposes of safety and economy.
- If there is a power surge, power outage, or disruption of any kind, power is automatically turned off for safety.
- When power is connected again, it will turn on automatically and resume the cycle.

2 Display
- Rinse Aid Icon: This icon illuminates when the rinse aid level is low. The LED automatically shuts off when the rinse aid is refilled or the level is set to 0.
- Refer to the Rinse Aid Dispenser Adjustment section.
- Digital Display: The digital display on the control panel shows the ESTIMATED cycle time. When the cycle and options are selected, the display shows the total estimated time to complete those selections. During operation, the display shows the remaining estimated operating time.

NOTE
- The estimated time shown on the display does not include delay times for heating water, etc.
- If Delay Start is selected, the display shows the delay time in hours.
- Cycle time may vary depending on the soil level of your load.

3 Cancel
- The drain pump activates and the cycle cancels. Once the dishwasher finishes draining, the power turns off.
- Press and hold Start for three seconds to activate.

4 Start
- To operate the machine, either press Start and close the door within four seconds or close the door and press Start.
- If Start button is not pressed to start the cycle, an alert will sound.

Chime On/Off
- To activate or deactivate the button sounds, press and hold Dual Zone and Energy Saver simultaneously for three seconds. The error alert sound cannot be turned off.
Cycles
Select your desired cycle.

Auto
This cycle senses the soil amount and soil toughness and is optimized to achieve the best cleaning.
- For steam models, this cycle has the added power of steam.

Heavy
This cycle is for heavily soiled dishes and dishes with hardened on soil. The Heavy cycle defaults to the strongest spray intensity and uses it to wash heavily soiled dishes.
- For steam models, this cycle has the added power of steam.

Delicate
Use this cycle to clean delicate items such as fine china and stemware.
- For steam models, this cycle has the added power of steam.

Refresh (Steam Models)
This cycle freshens up and warms dishes that have been unused for a long time.
- Do not use detergent when using this cycle.

Normal
This cycle is for moderately soiled, everyday loads. Select the Night Dry option if leaving dishes overnight. Press and hold Extra Dry for three seconds to activate Night Dry.

Turbo
This cycle will clean heavily soiled dishes in an hour using slightly more energy and water. Select the Extra Dry options for better drying.

Download Cycle
Use a dedicated cycle downloadable via Wi-Fi or NFC.

Machine Clean
This cycle is for cleaning the inside of the dishwasher. Use the cycle without dishes in the machine. It eliminates residual soils, odor, white spots, and other dirt. Add citric acid or another cleaning agent for more effective results.
- Press and hold Heavy for three seconds to activate.

NOTE
- The Machine Clean icon flashes every 30 cycles. To activate or deactivate the icon, press the Delicate button for three seconds.

Rinse
This cycle is a quick rinse for dishes that will not be washed immediately. The cycle rinses dishes that have excess soil to soften dried on residue. Rinsing the dishes helps prevent odors in the dishwasher. No detergent should be used.
- Press and hold Normal for three seconds to activate.

Express
This cycle will quickly clean lightly soiled dishes. (Time: 33 minutes) Select the Extra Dry option or another cycle for better drying.
- Press and hold Turbo for three seconds to activate.

NOTE
- Rinse, Turbo, and Express cycles do not have drying or have a shortened dry time. For better drying performance, open the door after these cycles or select a different cycle.
Options
Select the desired cycle button and then select the options for that cycle.

Dual Zone
This option automatically sets the spray intensity to soft for the upper spray arm and strong for the lower spray arm. Place heavily soiled dishes like plates and bowls in the lower rack and lightly soiled dishes like cups and small plates in the upper rack to get the best results.

Half Load
This option washes intensively by selecting the upper or lower racks. For small loads, use just the upper or lower rack to save energy and time. By pressing the Half Load button, the settings and the cancellation of the Half Load option are available.

Energy Saver
This option saves energy by reducing the wash and rinse temperatures. Wash time is increased to maintain wash performance. Do not use this cycle with heavily soiled dishes.

Pre-Steam (Steam Models)
This option adds steam at the start of the cycle to improve wash performance.

High Temp
Raises the main wash temperature to improve cleaning.

Extra Dry
Select the Extra Dry option for better drying performance. This option adds 20 minutes of extra drying time to the cycle and raises the heated rinse temperature.

Night Dry
Dishes are often left in the dishwasher overnight after the cycle ends. This can result in the steam inside the tub condensing on dishes, leaving them wet. The Night Dry option runs the ventilation fan periodically to help vent the steam from the tub.

Delay Start
The Delay Start feature delays the start of a selected cycle. Each time the Delay Start button is pressed, the delay time increases by an hour. The delay time can be set from 1 to 12 hours, in one-hour increments.
**Control Panel**
**For Steam Models (LSDF9897**, **LDT7808**, **LSDT9908**)**

1. **Power**
   - Press the **Power** button to turn power on and off.
   - After the cycle is complete, the power automatically turns off for purposes of safety and economy.
   - If there is a power surge, power outage, or disruption of any kind, power is automatically turned off for safety.
   - When power is connected again, it will turn on automatically and resume the cycle.

2. **Display**
   - **Digital Display**
     - The digital display on the control panel shows the ESTIMATED cycle time. When the cycle and options are selected, the display shows the total estimated time to complete those selections. During operation, the display shows the remaining estimated operating time.

   **NOTE**
   - The estimated time shown on the display does not include delay times for heating water, etc.
   - If **Delay Start** is selected, the display shows the delay time in hours.
   - Cycle time may vary depending on the soil level of your load.

- **Control Lock**
  - The Control Lock feature helps prevent settings from being changed during a cycle. Selecting this feature locks all of the buttons, except for the **Power** button, on the control panel. This feature does not lock the door.
  - While a cycle is running, press and hold **Half Load** and **Energy Saver** simultaneously for three seconds to activate or deactivate Control Lock.
  - To start a new cycle, deactivate Control Lock.

- **Rinse Aid Icon**
  - This icon illuminates when the rinse aid level is low. The LED automatically shuts off when the rinse aid is refilled or the level is set to 0.
  - Refer to the Rinse Aid Dispenser Adjustment section.

- **Machine Clean**
  - This cycle is for cleaning the inside of the dishwasher. Use the cycle without dishes in the machine. It eliminates residual soils, odor, white spots, and other dirt. Add citric acid or another cleaning agent for more effective results.
  - Press and hold **Heavy** for three seconds to activate.

   **NOTE**
   - The **Machine Clean** icon flashes every 30 cycles. To activate or deactivate the icon, press the **Delicate** button for three seconds.

- **Wi-Fi**
  - When the appliance is connected to the internet through a home Wi-Fi network, this icon illuminates.
  - Press and hold **Delay Start** for approximately three seconds to connect to the network.
3 Cancel
• The drain pump activates and the cycle cancels. Once the dishwasher finishes draining, the power turns off.
• Press and hold Start for three seconds to activate.

4 Start
• To operate the machine, either press Start and close the door within four seconds or close the door and press Start.
• If Start button is not pressed to start the cycle, an alert will sound.

Chime On/Off
• To activate or deactivate the button sounds, press and hold Dual Zone and Energy Saver simultaneously for three seconds. The error alert sound cannot be turned off.
Cycles
Select your desired cycle.

Auto
This cycle senses the soil amount and soil toughness and is optimized to achieve the best cleaning.

Heavy
This cycle is for heavily soiled dishes and dishes with hardened on soil. The Heavy cycle defaults to the strongest spray intensity and uses it to wash heavily soiled dishes.
- This cycle has the added power of steam.

Delicate
Use this cycle to clean delicate items such as fine china and stemware.
- This cycle has the added power of steam.

Refresh
This cycle freshens up and warms dishes that have been unused for a long time.
- Do not use detergent when using this cycle.

Normal
This cycle is for moderately soiled, everyday loads. Select the Night Dry option if leaving dishes overnight. Press and hold Extra Dry for three seconds to activate Night Dry.
- After the cycle ends, the fan runs for an hour to help vent the warm, moist air in the tub. You can stop the fan by opening the door after the cycle ends.

Turbo
This cycle will clean heavily soiled dishes in an hour using slightly more energy and water.
- This cycle does not have drying. Select the Extra Dry and Night Dry option or another cycle for better drying.

Download Cycle
Use a dedicated cycle downloadable via Wi-Fi or NFC.

NOTE
- Only the cycle code for the current Download cycle appears on the appliance. See the smartphone app for cycle codes, names, and more information about the available cycles.
- Default Cycle: P1. Pots & Pans

Rinse
This cycle is a quick rinse for dishes that will not be washed immediately. The cycle rinses dishes that have excess soil to soften dried on residue. Rinsing the dishes helps prevent odors in the dishwasher. No detergent should be used.
- This cycle does not have drying.
- Press and hold Normal for three seconds to activate.

Express
This cycle will quickly clean lightly soiled dishes. (Time: 33 minutes)
- This cycle does not have drying. Select the Extra Dry and Night Dry option or another cycle for better drying.
- Press and hold Turbo for three seconds to activate.
Options
Select the desired cycle button and then select the options for that cycle.

Dual Zone
This option automatically sets the spray intensity to soft for the upper spray arm and strong for the lower spray arm. Place heavily soiled dishes like plates and bowls in the lower rack and lightly soiled dishes like cups and small plates in the upper rack to get the best results.

Half Load
This option washes intensively by selecting the upper or lower racks. For small loads, use just the upper or lower rack to save energy and time. By pressing the **Half Load** button, the settings and the cancellation of the Half Load option are available.

Energy Saver
This option saves energy by reducing the wash and rinse temperatures. Wash time is increased to maintain wash performance. Do not use this cycle with heavily soiled dishes.

Steam
This option adds steam at the start of the cycle to improve wash performance.

High Temp
Raises the main wash temperature to improve cleaning.

Extra Dry
Select the **Extra Dry** option for better drying performance. This option adds extra drying time to the cycle and raises the heated rinse temperature.

Night Dry
Dishes are often left in the dishwasher overnight after the cycle ends. This can result in the steam inside the tub condensing on dishes, leaving them wet. The Night Dry option runs the ventilation fan periodically to help vent the steam from the tub.

Delay Start
The Delay Start feature delays the start of a selected cycle. Each time the **Delay Start** button is pressed, the delay time increases by an hour. The delay time can be set from 1 to 12 hours, in one-hour increments.
# 3-3. TEST MODE

**CHECK PROGRAM**

<table>
<thead>
<tr>
<th>BUTTON</th>
<th>Times button is pushed</th>
<th>Top Display</th>
<th>Load and Checking points</th>
<th>Door open/closed</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER +START</td>
<td>1 TIME</td>
<td>n35/U00/ D00 (Version)</td>
<td>All LEDs are lit</td>
<td>Either</td>
<td>&quot;nC&quot; will be displayed when NFC or Wifi Module fails.</td>
</tr>
<tr>
<td></td>
<td>1 TIME</td>
<td>Sump Temp(˚C)</td>
<td>Dispenser</td>
<td>Closed</td>
<td>&quot;EE&quot; will be displayed when EEPROM is fails.</td>
</tr>
<tr>
<td></td>
<td>2 TIME</td>
<td>N02</td>
<td>Drying Fan Motor Drying Actuator</td>
<td>Power Button is lit</td>
<td>Rinse aid Refill LED flashes (if rinse aid needs refilling) other LED are turned Off</td>
</tr>
<tr>
<td></td>
<td>3 TIME</td>
<td>Soil Level</td>
<td>Soil Sensor</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 TIME</td>
<td>Drain Motor RPM</td>
<td>Drain Motor</td>
<td>Either</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 TIME</td>
<td>Frequency</td>
<td>Inlet Valve</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 TIME</td>
<td>Washing Motor RPM</td>
<td>Washing Motor</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 TIME</td>
<td>Washing Position</td>
<td>Washing Heater Vario Valve</td>
<td>Closed</td>
<td>Un : Detecting Washing Position Lo : Detecting Complete &quot;nE&quot; will be displayed when Vario Valve fails.</td>
</tr>
<tr>
<td></td>
<td>8 TIME</td>
<td>-</td>
<td>Power Off</td>
<td>All LEDs are turned Off</td>
<td>Either</td>
</tr>
</tbody>
</table>
4. PARTS

Exterior Parts

1. Control Panel & Door Handle
2. Front Cover
3. Lower Cover
4. Shipping Brace
5. Safety Cover
6. SignalLight (some models)
7. Base
8. Leveling Feet

Interior Parts

1. Top Wash Impeller
2. Upper Spray Arm
3. Lower Spray Arm
4. Filtration System
5. Detergent and Rinse Aid Dispenser
6. Drying Vent Cover
7. Tub Light (some models)
8. Cutlery Rack (some models)
9. Upper Rack
10. Silverware Basket
11. Lower Rack (appearance may vary)
12. Steam nozzle (some models)
5. PROGRAM CHARTS (SCHEMATIC DIAGRAMS)
<table>
<thead>
<tr>
<th>Week</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For Authorized Service Technicians
<For Steam Models>

<table>
<thead>
<tr>
<th>Model</th>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>Specification 1</td>
<td>Description 1</td>
</tr>
<tr>
<td>Model 2</td>
<td>Specification 2</td>
<td>Description 2</td>
</tr>
<tr>
<td>Model 3</td>
<td>Specification 3</td>
<td>Description 3</td>
</tr>
<tr>
<td>Model 4</td>
<td>Specification 4</td>
<td>Description 4</td>
</tr>
<tr>
<td>Model 5</td>
<td>Specification 5</td>
<td>Description 5</td>
</tr>
</tbody>
</table>

For Authorized Service Technicians
6. HOW TO DISASSEMBLE

1. Lower Cover

1) Remove the front 2 screws.
2-1. Front Cover Assembly

For models:
- LUDP8997**
- LDP6797**
- LDP5676**
- LDF5545**

① Open the door.
② Remove the 6 screws around front cover assembly.

CAUTION

Take care when disassembling the front cover to avoid putting stress on the wire harness and dispenser actuator between the front cover and the dispenser. Doing so may disconnect the wire harness or dislodge or damage the dispenser actuator.

SOLUTION

Case 1: The wire harness becomes disconnected.
→ Reconnect the wire harness
Case 2: The dispenser actuator is rotated but not pulled out or damaged.
→ Reposition the dispenser actuator properly and continue service.
Case 3: The dispenser actuator is pulled out or damaged.
→ Replace the casing: asm (ABT73009401 / K110)

③ Remove the wire connection.
④ Remove the Indicator PCB.
2-2. Control Panel Assembly

※ For models:
LDP6797**
LDP5676**
LDF5545**

① Remove the 6 screws.
② Disconnect the wire connections.
③ Remove the handle.

※ For Model:
LUDP8997**
Remove front cover screws, then follow steps 1-3 above.

2) Removing Handle

① Pull the handle forward to separate from hook.
② Push the 2 hooks. (Left & Right)
③ Remove the Handle.

※ For models:
LDT7797**
LDT5665**
LSDF9897**
LDT7808**, LSDT9908**
① Pull out the Control Panel Assembly from the inside of Front Cover.
② Remove the 2 screws for sub controller
2-3. Door Liner Assembly

Blower Assembly

1. Remove the screw.
2. Remove the vent from Fan motor.
3. Disconnect the connector.
4. Open the Door.
5. Remove the Blower cover
   - Insert flat head screwdriver in hole (A).
   - Rotate flat head screwdriver slowly.

6. Remove the screws shown.

⚠️ CAUTION: Blower cover is easily damaged.

Dispenser Assembly

Using Dispenser Service Jig

1. Close the Door.
2. Disconnect Electrical wire connectors from dispenser.
3. Insert the two side pieces into the inside of the dispenser.
4. Insert the bottom piece.
5. After all three pieces have been inserted, open the door and pull the dispenser from the bottom up and pull out.

When pulling the dispenser out from the door, lift the bottom of the dispenser slightly from the inside, then remove the bottom jig piece.

⚠️ CAUTION: Watch pinch points to avoid hand injuries.
Assembling New Dispenser

① Verify the status of the flanges on the inner door.
② Place the support jig then insert the new dispenser.
③ Make sure that all flanges fit properly into the dispenser hooks.

※ Keep fingers and hands away from pinch points to avoid injury.
2-4. Door Spring

Replacing Door Spring
① Pull the Rope and Spring.
② Remove the Rope from the Roller.
③ Remove the Spring from the Base.

2-5. Door Liner

Replacing Door Liner
① Open the door.
② Press the Rope Holder.
③ Put Rope Holder into the Base.
④ Pull the Door Liner and remove it from the Hinge Supporter.
※ CAUTION: Door may drop.
3. Lower Frame

① Remove 2 screws.
② Press the holder hook as shown in figure.
③ Remove the Harness Holder.
④ Remove the Overflow Hose from the Lower Frame.

※ For LUDP8997** Model, remove the insulation sheet, then follow steps 1 through 3 above.

※ Take care not to lose or damage the overflow hose.
4. Tub Assembly

Removing Racks (2-Rack Models)

① Slide all racks forward to remove.

※ For This Model Only
   (LDT5665**, LDF5545**)  

Removing Racks (3-Rack Models)

① Remove all Racks.

※ For This Model Only
※ Removing Gliding Upper Rack

① Insert a tool to widen the space between the hooks at the front of the rack while pulling up on the rack to disengage it.

② Grab the Rack and push it back to remove rack from 2 rear hooks.

※ For This Model Only
(LUDP8997**, LDT7797**, LDP6797**, LSDF9897**, LDT7808**, LSDT9908**)
※ Reassembling Gliding Upper Rack

① Fully extend glide rails.
② Set rear of rack on rails and pull it forward.
③ Snap front of rack down into hooks.
④ Slide the Upper Rack backwards and forwards to check its ease of movement.

2) Removing Nozzle & Water Guides

① Remove the 2 screws on the Lower Nozzle.
② Pull up the Lower Nozzle and remove.
③ Remove the screw and clip on the Water Guide.
④ Remove the Water Guide from the Tub Bracket (Top).
⑤ Remove the Water Guide from the Tub Bracket (Center).

※ Caution:
Do not remove the lower water guide.
3-1) Removing Air Guide Assembly

① Turn the Air Guide Nut counterclockwise.

※ Take care not to lose the rubber packing around the air guide assembly.

② Disconnect the connector.
③ Remove the Clamp on the Inlet Hose.
④ Remove the Air Guide from Drain Hose.

※ Take care not to lose or twist the rubber packing around the drain hose.

3-2) Disassembling Hall sensor.

① Hold the sensor and use a screwdriver to release the hook.
② Remove the Hall sensor

4) Removing Inlet Valve

① Remove the 2 screws.
② Disconnect the connector.
③ Remove the Clamp on the Inlet valve.
④ Remove the Inlet Valve.

5) Removing Drain Motor

① Disconnect the connector.
② Turn the Drain Case clockwise and remove.
6) Removing Main PCB

① Press the hook and remove the PCB.
② Remove the screw and take the PCB Cover off.
③ Disconnect the connector.

※ Use care and move slowly when pulling out the main PCB.

※ Attaching the Fire Retardant Sheet

① Remove backing from double sided tape
② Put the hook through the slot and attach the sheet up to the red line
③ Fold the remaining part of the sheet
④ Assemble the Safety Cover

※ For This Model Only (LUDP8997**)
7) Casing Assembly, Pump

① Lay the product down on the floor.
※ Lay down towels first to protect floors from leakage.

② Remove the Base Cover.
③ Remove the wire on the Motor.
④ Disconnect the connector.
⑤ Remove the Hose Clamp.
⑥ Remove the Rubber Holder.
⑦ Remove the Pump Assembly.
⑧ Remove the Earth screw.

8-1) Removing Hinge Supporter & Rail Assembly

For models LDP5676**, LDT5665**, and LDF5545** only

① Remove the Hinge Supporter screw.
② Remove the Hinge supporter from Base hook.
③ Slide a screwdriver into the gap between the stopper roller and the rail roller and twist the screwdriver to release the rail assembly.

Insert the blade of a screwdriver into the gap between the two rollers and rotate the blade.
8-2) Removing Hinge Supporter

① Remove the Hinge Supporter screw.
② Remove the Hinge Supporter from Base Hook

8-3) Removing Rail Assembly
(all other models)

① Detach the Glide Rail from the Front Hook
② Push the Glide Rail slightly backwards
③ While pushing on the Rear Hook, hold the Glide Rail and slide rail backwards
For Authorized Service Technicians

※ Reassembling New Glide Rail

※ For This Model Only
   (LUDP8997**, LDT7797**, LDP6797**,
   LSDF9897**, LDT7808**, LSDT9908**)  

① Align the Glide Rail holes and the Hooks
② Pull on the Glide Rail to fully assemble it
③ Slide a flat-blade screwdriver into the gap between hook and tub and release the front and rear hooks.
④ Push the hook down.
⑤ Check point : Make sure that the Glide Rail is assembled tightly.
(If it is not assembled properly it may come apart.)

9) Removing Sump & Base

① Remove the 7 screws on the sump cover.
② Remove the 2 screws on the base.
③ Remove the Roller.
④ Remove the Hinge supporter from Base hook.
⑤ Pull the top of the tub to remove it.
⑥ Take care not to pull the water guide and cause damage to the water guide tub bracket joints.
5. Sump Assembly

1) Removing Vario Motor & Cam
   ① Remove 2 screws for Vario Motor
   ② Pull the Vario Motor/Cam and Micro switch.

2) Removing Soil Sensor
   ① Remove the wire connections.
   ② Pull up Soil sensor

3-1) Removing Thermistor
   ① Remove the screw.
   ② Pull the Thermistor and O-ring.
**<Steam Model>**

1. **Sump Assembly**

   1) Removing Steam ball valve
   
   ① Remove 2 screws.
   ② Remove the Clamp.
   ③ Pull the Steam ball valve.

   2) Removing Steam Nozzle Hose

   ① Remove the Front Cover.
   ② Remove the Duct.
   ③ Remove the Clamp of Steam Nozzle Hose and the Hose.
   ④ Remove the Lower Cover and Lower Frame.
   ⑤ Remove the Lower Nozzle and Sump Case.
   ⑥ Remove the Main PCB from the Base.
   ⑦ Pull out the Steam Nozzle Hose Between Tub and Sump.
   ⑧ Remove the Cover from bottom of the Base.
   ⑨ Remove the Clamp and Steam Nozzle Hose from the Motor.
   ⑩ Remove the Steam Nozzle Hose.

   ※ Take care not to dislodge the cap while removing the hose or the ball bearings may be lost.

   ※ Make sure the steam nozzle hose does not get caught between the tub and the harness clamp during reassembly.
1) Steam nozzle

① Remove the 4 Screws.
② Pull the Steam nozzle and Bracket.
# 7. TROUBLESHOOTING METHODS

## 7-1. TROUBLESHOOTING ACCORDING TO DISPLAYED ERROR MESSAGE

<table>
<thead>
<tr>
<th>ERROR MESSAGE</th>
<th>POSSIBLE CAUSE FOR ERROR OCCURRENCE</th>
<th>REMEDY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INLET ERROR</strong>&lt;br&gt;[<strong>IE</strong>]&lt;br&gt;displayed&lt;br&gt;Condition Doesn’t reach the normal water level</td>
<td>1) The Water Supply Tap is closed.&lt;br&gt;2) Wiring connection is OK?&lt;br&gt;3) The Inlet Hose is kinked.&lt;br&gt;4) The Water Pressure is very low (below 10 psi) or high (above 120 psi).&lt;br&gt;5) The filter of Inlet Valve is clogged by dirty water.&lt;br&gt;6) Inlet Valve is OK?&lt;br&gt;7) Wiring connection is OK?&lt;br&gt;8) The Impeller of Air breaker is stuck.&lt;br&gt;9) The Hall sensor is OK?&lt;br&gt;10) The Controller is damaged.</td>
<td>1) Open the water supply tap.&lt;br&gt;2) Check and reconnect the wire.&lt;br&gt;3) Repair the Inlet Hose.&lt;br&gt;4) Call plumber for service.&lt;br&gt;5) Clean the filter of Inlet Valve.&lt;br&gt;6) Check the electric resistance of Inlet Valve. (23 ~ 27Ω)&lt;br&gt;7) Check and reconnect the wire.&lt;br&gt;8) Replace the Air breaker.&lt;br&gt;9) Check the electric resistance of Hall Sensor.&lt;br&gt;10) Replace the Controller.</td>
</tr>
<tr>
<td><strong>DRAIN ERROR</strong>&lt;br&gt;[<strong>DE</strong>]&lt;br&gt;displayed&lt;br&gt;Condition Doesn’t reach the normal water level</td>
<td>1) The Filter assembly blocked.&lt;br&gt;2) The Drain Hose kinked or blocked.&lt;br&gt;3) The inner hole of drain case is blocked.&lt;br&gt;4) The Air gap is clogged.&lt;br&gt;5) The Knock out plug of garbage disposal not removed.&lt;br&gt;6) The Washing Motor locked or defective.&lt;br&gt;7) Wiring connection is OK?&lt;br&gt;8) The Impeller of Drain motor is stuck.&lt;br&gt;9) The Controller is damaged.</td>
<td>1) Clean the filter assembly.&lt;br&gt;2) Remove the cause of kink or block.&lt;br&gt;3) Repair or Replace the Drain Motor.&lt;br&gt;4) Clean the Air Gap&lt;br&gt;5) Remove knock out plug.&lt;br&gt;6) Replace the Pump casing assembly.&lt;br&gt;7) Check and reconnect the wire.&lt;br&gt;8) Clean the drain motor&lt;br&gt;9) Replace the Controller.</td>
</tr>
<tr>
<td><strong>LEAKAGE ERROR</strong>&lt;br&gt;[<strong>AE</strong>]&lt;br&gt;displayed&lt;br&gt;Condition Internal Leakage&lt;br&gt;Condition Internal Leakage</td>
<td>1) The Door gasket came loose or fell off.&lt;br&gt;2) The Float assembly is stuck.&lt;br&gt;3) The Controller is damaged.&lt;br&gt;4) The seal assembly is not connected properly to the sump.&lt;br&gt;5) The unit is not leveled.&lt;br&gt;6) Using wrong detergent.</td>
<td>1) Replace the door liner assembly.&lt;br&gt;2) Replace the floater assembly.&lt;br&gt;3) Replace the Controller.&lt;br&gt;4) Reassemble the seal on the sump.&lt;br&gt;5) Make a Level. Should install properly.&lt;br&gt;6) Use dishwasher detergent.&lt;br&gt;※ In case of AE, Should remove underneath of Floater switch(Safety switch)</td>
</tr>
<tr>
<td><strong>BUBBLE ERROR</strong>&lt;br&gt;[<strong>BE</strong>]&lt;br&gt;Displayed</td>
<td>1) Oversudsing caused by improper detergent.&lt;br&gt;2) Failure to level dishwasher</td>
<td>1) Only use detergents which are designed for use in dishwashers.&lt;br&gt;2) Make a level. Should install properly.</td>
</tr>
</tbody>
</table>
### EXCESS ERROR

**Display:**
![Error Symbol]

**Condition:**
Water fills above normal level (Automatically drainPump operated.)

**Error Code:**
1) The Inlet Valve is damaged.
2) The Controller is damaged.
3) After Replace the PCB, still same Error code is displaying.

**Solution:**
1) Replace the Inlet Valve.
2) Replace the Controller.
3) Replace the Hole Sensor.

### THERMAL ERROR

**Display:**
![Error Symbol]

**Condition:**
Thermistor resistance output abnormal

**Error Code:**
1) Wiring connection is OK?
2) The Thermistor is OK?

**Solution:**
1) Check and reconnect the wire.
2) Check the electric resistance of Thermistor.

### HEATER ERROR

**Display:**
![Error Symbol]

**Condition:**
The water is not heated or the temperature in the Tub is overheated to over 194°F

**Error Code:**
1) Wiring connection is OK?
2) The Inlet Water Temperature is very high.
3) The Thermistor is damaged.
4) Heater is OK?
5) The Controller is damaged.
6) The Relay Circuit is OK?

**Solution:**
1) Check and reconnect the wire.
2) Check the temperature.
   ① If the temperature is displayed, adjust the Inlet Water Temperature to 120°F.
3) Check the electric resistance of Thermistor.
4) Check the electric resistance of Heater. Replace the Pump casing assembly.
5) Replace the Controller.
6) Replace the Relay Circuit.

### MOTOR ERROR

**Display:**
![Error Symbol]

**Condition:**
The Motor is working abnormally

**Error Code:**
1) Wiring connection is OK?
   (Washing Motor and Controller)
2) The Impeller of Washing Pump is locked.
3) Is the Washing Motor is OK?
4) The Controller is damaged.

**Solution:**
1) Check and reconnect the wire.
2) Replace the Pump Casing assembly.
3) Check the electric resistance of Washing Motor.
4) Replace the Controller.

### VARIO ERROR

**Display:**
![Error Symbol]

**Condition:**
The position of vario cam is not properly

**Error Code:**
1) Wiring connection is OK?
2) Does the vario S/W assembled properly?
3) Is the vario motor operated properly?(range is 12-15)

**Solution:**
1) Check and reconnect the wire.
2) Reassemble vario S/W.
3) Replace the vario motor.
7-2. TROUBLESHOOTING METHODS

How to Check Water supply (LQC Mode)
- Press ‘Power + Start’
- Press ‘Start’ 5 times. (Check supplying sound)
- Press ‘Power’ (Turn off the dishwasher)

Is "" displayed?
- Yes

The water is supplied. Frequency is not increased.

Is the water supplied?
- Yes

Is the connector connected to main PCB assembly? (disconnected or disassembled?)
(NAB & WH-4)
- No

Check and reconnect the wire.

Is the connector connected to main PCB assembly? (disconnected or disassembled?) (WH-6)
- No

Check and reconnect the wire.

Is the water tap open?
- Yes

Open the water tap.

Is the water tap open?
- No

Check and reconnect the wire.

Is the water pressure very low or high? (20-80 psi, 140-550kPa)
- Yes

Install the pressure pump.

Is the water pressure very low or high? (20-80 psi, 140-550kPa)
- No

Is the filter of inlet valve clogged by impure water?
- Yes

1. Close the water tap.
2. Unscrew the inlet hose. (Inlet valve side)
3. Clean the filter of inlet valve.

Is the water supply hose Kinked?
- No

Replace the inlet hose.

Is the water supply hose Kinked?
- Yes

Repair the inlet hose.

Is the water supply hose Kinked?
- No

Is the hall sensor operate properly? (The resistance is 9KO ± 5%)
- No

Replace the hall sensor.

Is the hall sensor operate properly? (The resistance is 9KO ± 5%)
- Yes

Is the impeller of air breaker spinning properly?
- No

Replace the Air breaker.

Is the impeller of air breaker spinning properly?
- Yes

Is the connector connected to main PCB assembly? (disconnected or disassembled?) (NAB & WH-4)
- No

Check and reconnect the wire.

Is the connector connected to main PCB assembly? (disconnected or disassembled?)
(NAB & WH-4)
- Yes

Replace the main PCB assembly.

Is the voltage between connectors out of range? (WH-4 pin4→NAB pin1) (The voltage is 5V DC ± 15%)
- Yes

Replace the main PCB assembly.

Is the voltage between connectors out of range? (WH-4 pin4→NAB pin1) (The voltage is 5V DC ± 15%)
- No

Replace the main PCB assembly.
For Authorized Service Technicians

Is \(OE\) displayed?

Motor RPM is not increased.

Does the drain motor operate?

Motor RPM is increased.

Check and reconnect the wire.

Is the filter clogged?

No

Yes

Is the air gap blocked?

No

Yes

Is the knock out plug of garbage disposal not removed?

No

Yes

Is the outer drain hose kinked or blocked or frozen?

No

Yes

Is the inner hole of drain case blocked?

No

Yes

working properly?

No

Yes

Replace the main PCB assembly.

Replace the pump casing assembly.

Replace the Drain Motor.

Remove the cause of kink or block.

Remove the knock out plug.

Clean the air gap.

Clean the filter.

Replace the drain pump

Is the drain pump operating properly?

(The resistance is 4–5\(\Omega\))

① Check the drain pump resistance
② Check the connector resistance

Is the voltage between connectors out of range?(YL3 pin1–2–3)
(The voltage is 12V AC ± 15%)

Replace the main PCB assembly.
For Authorized Service Technicians

For Authorized Service Technicians

Is \( \text{AE} \) displayed?

Yes

Water is flooded in the base.

Water is not flooded in the base.

Is the water flooded in the base?

Tilt the machine and drain water in the base. Do you find cause of leakage?

Yes

Check the sealing part of drain hose, pump casing assembly and vario motor. If you find cause of leakage, reassemble the parts of replace it.

No

Did the door gasket come loose or fall off?

Yes

Replace the door liner assembly.

No

Replace the main PCB assembly.

Is the machine leveled properly?

Yes

Level the machine correctly.

No

Used proper (dishwasher) detergent?

Yes

Use dishwasher detergent only. Do not use dishwashing detergent.

No

Did the customer open the door during the cycle?

Yes

Replace the door liner assembly.

No

Is there too much water in the tub?

Yes

Replace the inlet valve or air guide.

No

Replace the main PCB assembly.

※ For AE errors, see the checklist below and provide more details on the repair report under Technical Remarks.

1) Check that unit is properly leveled. Use a digital level to check proper level.
2) Check that the mounting bracket is properly installed.
3) Determine what kind of detergent and rinse-aid are being used.
4) When did the AE error show up? How many cycles have been run since?
5) What is the most frequently used cycle?
6) Check the temperature of the water supply to the dishwasher.
7) Was the door opened during the cycle?
For Authorized Service Technicians

Is \( \text{FE} \) displayed?

- Yes
  - Does the inlet valve operate properly?
    (The resistance is 25Ω ± 5%)
    - No
      - Replace the inlet valve
    - Yes
      - Is the voltage between connectors out of range?
        (WH6 pin5–6)
        (The voltage is 8V DC ± 15%)
        - No
          - Replace the main PCB.
        - Yes
          - Does the hall sensor operate properly?
            (The resistance is 9KΩ ± 5%)
            - No
              - Replace the hall sensor
            - Yes
              - Is the voltage between connectors out of range?
                (WH4 pin4–NA8 pin1)
                (The voltage is 5V DC ± 15%)
                - No
                  - Replace the main PCB assembly
For Authorized Service Technicians

Is \( \text{ } \) displayed?

Yes

Is the connector connected to main PCB assembly? (disconnected or disassembled?) (RD6 ~ WH4)

No

Replace the thermistor

Yes

Does the thermistor operate properly? (The resistance is 8 ~ 44KΩ)

No

Replace the thermistor.

Yes

Is the voltage between connectors out of range? (RD6 pin3 ~ NA8 pin3) (The voltage is 1 ~ 3V DC)

No

Replace the main PCB assembly

Yes
For Authorized Service Technicians

Is \( H^E \) displayed?  

- **Yes**
  - Is the connector connected to main PCB assembly? (disconnected or disassembled?) (RL2 pin4 ~ RL3 pin4)
    - **Yes**
      - Check the temperature. (Test Mode)
        - If the temperature is displayed,
          1. Adjust the Inlet Water Temperature to 120°F.
          2. If the temperature is not displayed,
            1. Check the wiring connection.
            2. Check the electric resistance.
            3. Check the electric resistance of Thermistor.
    - **No**
      - Replace the heater assembly.
  - **No**
    - Replace the heater assembly.

- **No**
  - Replace the main PCB assembly.

Is the inlet water temperature very high (over 185°F)?  

- **Yes**
  - Does the heater operate properly? (The resistance is \( 11.54 \Omega \pm 10\% \))
    - **Yes**
      - Replace the heater assembly.
    - **No**
      - Replace the heater assembly.
  - **No**
    - Replace the main PCB assembly.

Is the voltage between connectors out of range? (RL2 pin4 ~ RL3 pin4) (The voltage is 120V AC \( \pm 15\% \))
For Authorized Service Technicians

- Is [L] displayed?
  - Yes
    - Is the connector connected to main PCB assembly? (disconnected or disassembled?) (RD3)
      - No
        - Check and reconnect the wire.
      - Yes
        - Is the impeller of washing motor locked?
          - No
            - Replace the pump casing assembly.
          - Yes
            - Does the washing motor operate properly? (The resistance is 22.5–24.9Ω, at 20°C)
              - No
                - Replace the pump casing assembly.
              - Yes
                - Is the resistance values short? (0–500) (After pull out the RD3 connector, check the housing connector (Pin1–Pin2, Pin2–Pin3, Pin3–Pin1) individually.
                  - Yes
                    - Replace the main PCB assembly.
For Authorized Service Technicians

Is \(\text{E} \) displayed?

- **Yes**
  - Wiring connection is OK?
    - **Yes**
      - Check and reconnect the wire.
    - **No**
      - Is the vario S/W assembled properly?
        - **Yes**
          - Does the vario motor operate properly? (The resistance is 4KΩ ± 5%)
            - **Yes**
              - Is the voltage between connectors out of range? (RL3 pin4~NA4 pin2) (The voltage is 120V AC ± 15%)
                - **Yes**
                  - Replace the main PCB assembly.
                - **No**
                  - Reassemble the vario S/W.
        - **No**
          - Replace the vario motor.
For Authorized Service Technicians

No Power

Is the supplied voltage 120V AC (+10%, -15%)? No

Check the fuse or reset the circuit breaker.

Is the connector connected to Main PCB Assembly disconnected or disassembled? No

Reconnect the connector or repair the harness.

Yes

Is the current rating of multi-outlet power strip enough? No

(Avoid connecting several electric devices)

Is the connector connected to PCB/Noise filter disconnected or disassembled? No

Alternate with explanation.

Is Chip LED on while the power is on? No

Replace the main PCB assembly.

Yes

Is the connector connected to Display PCB Assembly disconnected or disassembled? Yes

Reconnect the connector or repair the harness.

No

Is the connector connected to PCB/Noise filter disconnected or disassembled? No

Reconnect or repair the connector.
Washing result is not satisfactory.

1. After washing, are there white deposits on the dishes or inner tub? **Yes**
   - Using a wash booster will help remove spots, residue and hard water (white) film.
   - **No**

2. After washing, are there any streaks on the dishes or inner tub? **Yes**
   - Reduce the amount of Rinse aid.
   - **No**

3. After washing, are there small particles (food) on the dishes or inner tub? **Yes**
   - a) Wash filter assembly.
     - b) Check the rotation of spray arms.
       - (lower, upper, top nozzle)
   - **No**

4. Is the washing result of cups & glasses not satisfactory? (Upper basket) **Yes**
   - a) Does the upper nozzle fit properly to the water guide?
     → Reassemble or replace the upper nozzle or water guide
   - b) Does the water guide fit properly to the sump?
     → Reassemble or replace the water guide.
   - **No**

5. Is the washing result of utensils not satisfactory? (Top basket) **Yes**
   - a) Does the top nozzle fit properly on the water guide?
     → Reassemble or replace the top nozzle or water guide
   - b) Does the water guide fit properly on the sump?
     → Reassemble or replace the water guide.
   - **No**
Drying result is not satisfactory.

After washing, are there any streaks on the dishes or inner tub?
   Yes → Reduce the amount of Rinse aid.
   No

After washing, are there water drops on the dishes or inner tub?
   Yes → Increase the amount of Rinse aid.
   No

Is the drying result of cups & glasses not satisfactory? (Upper basket)
   Yes →
   a) Does the upper nozzle fit properly on the water guide?
      → Reassemble or replace the upper nozzle or water guide
   b) Does the water guide fit properly on the sump?
      → Reassemble or replace the water guide.
   No

Is the drying result of utensils not satisfactory? (Top basket)
   Yes →
   a) Does the top nozzle fit properly on the water guide?
      → Reassemble or replace the top nozzle or water guide
   b) Does the water guide fit properly on the sump?
      → Reassemble or replace the water guide.
7-3. TROUBLE DIAGNOSES AND REPAIR BY SYMPTOM

No Power on when the power button pressed.

The Power connection is correctly connected.

- NO
  - Re-connect the power connection.
  - Was there a power failure?

- YES

The Fuse or Circuit Breaker of house is O.K?

- NO
  - Replace the Fuse or Circuit Breaker of house.

- YES

The Power Switch or the Circuit is O.K?

- NO
  - Check the Power Switch or the circuit and repair it.

- YES

Check the Controller.(Power Circuit)
The Wash Pump/Motor does not run.

The Door is tightly closed?  

- NO  
  • close the Door tightly.  
  • Check the Door Switch in Latch Handle.

- YES

The Wiring connections are OK?  

- NO  
  • Re-connect the wiring connections related to the Washing Motor.

- YES

Replace the Washing Pump/Motor
Power Button not automatically off after operation.

- Make sure the button is not blocked by foreign materials.
- Check the Power Switch. (Replace it, if necessary.)
- Check the Controller. (Replace it, if necessary.)
8. INSTALLATION INSTRUCTIONS

Preparing Cabinet Opening

This dishwasher is designed to fit a standard dishwasher opening. An opening may be needed on both sides to route plumbing and electrical connections.

1. Select a location as close to the sink as possible for easy connections to water and drain lines.

2. To ensure proper drainage, install the dishwasher no more than 12 ft. (3.65 m) from the sink.

3. If installing the dishwasher in a corner, leave a minimum of 2” (50 mm) between the dishwasher and the adjacent wall.

4. To allow for proper clearance of plumbing and electrical, use the template included with the literature to determine the clearance on the side of the cabinet where the cabinet meets the back wall. Using a 2 ⅜” diameter hole saw, drill a hole in the target area as shown on the template.

WARNING

• Don’t use existing holes unless they are in the target area. Otherwise, the water supply and drain hose may be damaged by being crushed or kinked.

CAUTION

• Failure to properly locate the hole for the water and drain lines may prevent the dishwasher from installing flush with the cabinets and could result in kinked or damaged lines. Installation damage is not covered by the warranty, and leaks caused by improper installation may result in property damage.

For flush installations only, you may remove the cabinet brace inside the cabinet.
Preparing Electrical Wiring

1. Operate this appliance with the correct voltage as shown in this manual and on the rating plate. Connect it to a dedicated, properly grounded branch circuit which is protected by a time delay fuse. Connect the appliance using 3-wires, including a ground wire.

2. If an outlet and another power connector is used, it should be in an accessible location adjacent to and not behind the dishwasher and within 4 ft (1.2 m) of the dishwasher's side.

3. The wiring must be grounded properly. If in doubt, have it checked by a qualified electrician. Do not connect any other appliance to the same outlet.

4. Route the wiring.

5. Make sure the electrical cable is oriented in the right side channel.

**WARNING**

- For personal safety, remove house fuse or open circuit breaker before installation.
- Do not use an extension cable or adapter plug with this dishwasher.

**NOTE**

- If you find any damage to the dishwasher, contact your retailer or contractor.
- The included wire nut in 16AWG should be used.

Preparing Water Supply Connection

Make sure the house water supply is turned off before connecting the dishwasher water lines.

1. Connect the dishwasher to a hot water supply with a temperature range between 120 °F (49 °C) and 149 °F (65 °C). This temperature range provides the best washing results and shortest cycle time. To prevent damage to dishes, the temperature should not exceed 149 °F (65 °C).

2. When connecting the dishwasher water line, sealing tape or compound should be used on pipe threads to avoid leaks. Tape or compound should not be used on compression fittings.

3. The water supply tube must be located in the left side channel.

**NOTE**

- Use new hoses when connecting to the water supply. Do not reuse old hoses.
Preparing Dishwasher

Removing Rear Plastic Shipping Brace

NOTE
- Do not pull or lift the dishwasher using the handle; doing so can damage the door and hinges. Open the door and grab the body frame and the top front opening of the tub to move or lift the dishwasher.

Removing Lower Cover

1. Remove the two screws attaching the lower cover to the dishwasher.
2. Remove the lower cover from the base.
3. Remove the insulation pad from behind the access panel.

CAUTION
- If at any time the dishwasher is laid on its back, take care not to damage the drain hose.

NOTE
- Do not forget to replace the lower cover.

NOTE
- Do not push the door of the dishwasher with knees.
### Attaching Mounting Hardware

For countertops made of wood or other material that will not be damaged by drilling, use the metal installation brackets.

1. Insert the installation brackets into the slots in the upper frame.

2. Bend the brackets to secure them to the dishwasher tub.

**NOTE**
- Installation brackets and screws can be found in the silverware basket.

For countertops made of granite, marble, or other materials that could be damaged by drilling, use the wood screws to attach the dishwasher to the cabinet. See installation instructions in Securing Dishwasher to Countertop.

### Sliding Dishwasher into Cabinet

1. Slide the dishwasher carefully into the cabinet opening.

2. Make sure the drain hose inside the cabinet is not kinked or pinched.

3. Make sure the water supply line and electrical supply are routed through the channels under the dishwasher.

4. To avoid a kinked or pinched drain hose, be sure to pull on the drain hose while sliding the dishwasher into place. Do not allow any slack behind the dishwasher.

5. After leveling the dishwasher, do not leave the water supply line or power supply line under the base. This is a potential cause of water leaks. Place the water line and power supply line in the channel.
Leveling the Appliance

Check that dishwasher is level.

- Attach level on top front opening of tub from side to side.
- Attach level on front side of tub.

Make sure that the gap between the door and the tub is equal on both the left and right sides.

The water level should be checked after the initial fill on the Normal cycle. If the water level is not near the center of both tub lower indentations, the dishwasher may not be correctly leveled. The dishwasher may leak during operation if it is not correctly leveled.

Adjusting the Legs

Adjusting the Front Legs

- Use a flat-blade screwdriver or a pliers to turn the front legs and adjust the front of the tub.
- Turn the front legs clockwise to raise the front of the tub and counter-clockwise to lower it.
- The adjustments work identically for both front legs.

Adjusting the Rear Legs

- Use a Phillips screwdriver to adjust the back legs and the rear of the tub using the center screw at the base of the appliance in the front.
- Turn the center screw clockwise to raise the rear of the tub and counter-clockwise to lower it.

NOTE

- To avoid damaging the screw, do not use an electric screwdriver.
Securing Dishwasher to Countertop

For countertops made of wood or other material that will not be damaged by drilling, use Method 1.
For countertops made of granite, marble, or other materials that could be damaged by drilling, use Method 2.

**NOTE**
- Cover the filter hole with towels to prevent screws from falling down into the pump.
- Use a magnetic screwdriver.

**Method 1**
Using the provided screws, secure the dishwasher to the countertop through the holes in the bracket.

**NOTE**
- Installation brackets and screws can be found in the silverware basket. See Attaching Mounting Hardware section for more information on attaching installation brackets to dishwasher.

**Method 2**
1. Remove the plastic caps from the mounting bracket access holes.
2. Drive a wood screw through the mounting bracket and into the cabinet frame.
3. Reinstall the plastic caps.

Connecting Drain Hose

If the end of the drain hose does not fit the drain line, use a heat and detergent resistant adapter (not supplied). These may be obtained from a local plumbing supply store.

The two typical connections are shown. To prevent siphoning, one of the following connections should be used.

**Drain Requirements**
- Follow local codes and ordinances.
- Do not exceed 12 ft. (3.65 m) distance to drain.
- Do not connect drain lines from other devices to the dishwasher drain hose.
- If an extension drain hose is required, use 5/8” or 7/8” inside diameter, 2-3 ft. length hose and a coupler for connecting the two hose ends.

**NOTE**
- For drain hose installation, use the screw style clamp provided with this dishwasher in the silverware basket.
NOTE
• If the knockout plug has not been removed, the dishwasher will not be able to drain properly.

Connecting to Disposal with No Air Gap

1 Remove the knockout plug with a hammer and screwdriver.

2 Attach the drain hose to disposal with the hose clamp provided. Move into position and tighten the hose clamp.

Connecting Waste Tee with No Air Gap

1 Remove the knockout plug with a hammer and screwdriver.

2 Attach the drain hose to waste tee with the hose clamp provided. Move into position and tighten the hose clamp.

Connecting to Disposal or Waste Tee with Air Gap

1 Remove the knockout plug with a hammer and screwdriver.

2 Connect end of the drain hose to the air gap with hose clamp provided. This avoids water being siphoned from the tub.

3 Attach the rubber connector to disposal or waste tee with the hose clamp provided. Move into position and tighten the hose clamp.

Connecting without Air Gap

The height of the drain hose end must be at least 12" (305 mm) and within 40" (1016 mm) from the base of the appliance to avoid water being siphoned from the tub.
Connecting Water Supply

1. Before connecting, turn off the water supply.

2. Slide the flexible stainless-steel water line or copper tube into the elbow.

3. Tighten the compression nut and make sure that the line is not kinked or pinched.

NOTE
- During the final installation check of the dishwasher, an IE error code may appear on the display. Make sure the water line is not kinked and the water supply for the dishwasher has been turned on before calling for service.

Connecting Power

NOTE
- The best location for the electrical conduit is on the right side of the back wall. Re-route the power cable before installation if the electrical conduit pipe is longer than 3" (76 mm) and is centered on the back wall.

1. Before beginning, turn off electrical power to the unit at the circuit breaker.

2. Remove the junction box cover and then install the strain relief.

3. Twist the wire nuts tightly onto the wires; then wrap each connection with electrical tape.

4. Check again and make sure that all wires are connected correctly: black to black, white to white, green ground wire to green ground wire.

5. Replace the junction box cover.

WARNING
- Verify that the black wire is hot (120 V). If not, or if you are unsure of the power supply, have it checked by a licensed electrician.

CAUTION
- Do not leave stripped wire exposed. Trim stripped wire to fit completely inside wire nuts.
Final Check

1. Turn on electrical power.
2. Turn on house water supply.
3. Make sure the door opens and closes smoothly. If necessary, level the dishwasher again.
4. Run the dishwasher on a Turbo cycle to verify proper operation and check for leaks.

**CAUTION**

- Only install the lower cover provided with the machine. Do not install cabinet baseboard as it may cause noise and leakage.

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Possible Cause and Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>OE Error</td>
<td>Drain hose kinked or pinched.</td>
</tr>
<tr>
<td></td>
<td>Feed the drainage and supply hoses through the hole under the sink. Then gradually slide the dishwasher into the cabinet while pulling on the hoses under the sink to take up any slack. This helps avoid kinking the hoses or trapping them beneath the dishwasher.</td>
</tr>
<tr>
<td></td>
<td>Drain hose connected to disposal.</td>
</tr>
<tr>
<td></td>
<td>Remove knockout plug on disposal.</td>
</tr>
<tr>
<td>IE Error</td>
<td>Water supply line kinked under dishwasher.</td>
</tr>
<tr>
<td></td>
<td>Feed the drainage and supply hoses through the hole under the sink. Then gradually slide the dishwasher into the cabinet while pulling on the hoses under the sink to take up any slack. This helps avoid kinking the hoses or trapping them beneath the dishwasher.</td>
</tr>
<tr>
<td></td>
<td>House water supply not turned on.</td>
</tr>
<tr>
<td></td>
<td>Turn water on.</td>
</tr>
</tbody>
</table>
9. EXPLODED VIEW

Exploded View

- E010
- F101
- F001
- A040
- M050
- A130
- LDT5665**, LDF5545**
For Authorized Service Technicians

LDP6797**, LDP5676**

■ Exploded View
For Authorized Service Technicians

LUDP8997**, LDT7797**, LSDF9897**, LDT7808**, LSDT9908**

■ Exploded View
Tub Assembly
■ Tub Assembly
Tub Assembly

For Authorized Service Technicians

Base Assembly
■ Base Assembly
■ Upper Rack Assembly
Upper Rack Assembly
Upper Rack Assembly
Upper Rack Assembly
Water Guide Assembly
■ Water Guide Assembly
Lower Rack Assembly
Lower Rack Assembly
Lower Rack Assembly

- LUDP8997**, LDT7797**, LSDF9897**
Lower Rack Assembly
■ 3rd Rack Assembly
Panel Assembly
Panel Assembly
Panel Assembly
Front Cover Assembly
Front Cover Assembly
- Front Cover Assembly -
■ Door Liner Assembly
Door Liner Assembly
■ Sump Assembly
Sump Assembly

- Sump Assembly
10. WIRING DIAGRAM

10-1. WIRING DIAGRAM

LDP679***/LDP567***/LDT566***/LDF554** Series

[Diagram of Main PCB]

LUDP899***/LDT779** Series

[Diagram of Main PCB]

LSDF989***/LDT780***/LSDT990** Series

[Diagram of Main PCB]
10-3. DISPLAY PCB

CN1: NFC
1) VCC
2) NFC-MOSI
3) NFC-CLOCK
4) NFC-IRQ
5) NFC-MISO
6) GND

CN5: Main-Display
1) RX-Main
2) TX-Main
3) GND
4) DC16.5V
5) -
6) -
7) Display to Main Relay On Signal
8) DC5V
9) Base Float Sensing -Signal
10) -
11) Boot
10-4. MCU PCB

※ For This Model Only
(LDT7797*, LDT5665**)
- case 1

LSDF9897**, LDT7808**, LSDT9908**
- case 2
Sound Insulation Sheet Installation Guide

Install the sound insulation sheet to make the dishwasher quieter.

Connect the water and electrical lines before installing the sound insulation sheet.

⚠️ WARNING: Wear gloves and beware of sharp edges during installation.

1. Remove the lower cover and the insulation pad at the front of the dishwasher. Fold the sound insulation sheet along the dotted line.

2. Insert the sound insulation sheet at the base of the dishwasher. Pull the inlet valve and water supply line through the appropriate holes in the sheet.

※ Make sure the front edge of the sound insulation sheet is hidden by the lower front panel.

3. Place the insulation pad in front of the sound insulation sheet.

4. Attach the lower cover with screws.