## IMPORTANT SAFETY NOTICE – “For Technicians Only”

This service data sheet is intended for use by persons having electrical, electronic, and mechanical experience and knowledge at a level generally considered acceptable in the appliance repair trade. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible, nor assume any liability for injury or damage of any kind arising from the use of this data sheet.

### Models:
- DV5451AE
- Dv5451AG

### Location consideration In the USA:
- All Dryers Must be vented to the outside.
- Only rigid or flexible metal duct should be used for venting.

### Samsung ‘Dryer’ Diagnostic Code Quick Guide

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
<th>Trigger</th>
<th>Action Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>Dryer Thermistor Short Sensed</td>
<td>The Thermistor resistance is very low.</td>
<td>Check for: Clogged lint screen, Restricted vent system, Thermistor resistance.</td>
</tr>
<tr>
<td>60</td>
<td>Dryer Thermistor Open Sensed</td>
<td>The Thermistor resistance is very high.</td>
<td>Check for: Clogged lint screen, Restricted vent system, Thermistor resistance.</td>
</tr>
<tr>
<td>dO dE</td>
<td>Door Open</td>
<td>Running the dryer with door open</td>
<td>Check for: Loose or open wire terminals in Door Sense circuit.</td>
</tr>
<tr>
<td>FE</td>
<td>Power source frequency Error</td>
<td>Invalid power source Frequency</td>
<td>Check for: Non Utility power supply</td>
</tr>
<tr>
<td>dF</td>
<td>Door Circuit Failure</td>
<td>Invalid state for more than 256 milliseconds</td>
<td>Check for: Loose or open wire terminals in Door Sense circuit.</td>
</tr>
<tr>
<td>hE or HE</td>
<td>Heater Error</td>
<td>Invalid heating Temp in running the dryer</td>
<td>Check for: Restricted vent system, Thermistor resistance.</td>
</tr>
<tr>
<td>bE</td>
<td>Button Error</td>
<td>PCB key closed for 75 sec.</td>
<td>Check Display PCB for stuck button</td>
</tr>
<tr>
<td>od</td>
<td>Over Dry</td>
<td>Invaled Dry Time Excessive Dry Time</td>
<td>Inspect seensor bars</td>
</tr>
<tr>
<td>EL</td>
<td>EEprom Fail</td>
<td>Invalid state of Eeprom communication</td>
<td>Replace Main PCB</td>
</tr>
</tbody>
</table>

### SUPPORT INFORMATION
- Training — Plus One
  - http://my.plus1solutions.net/clientPortals/samsung/
- Help — GSPN  http://service.samsungportal.com/
- Samsung Product Support TV  http://support-us.samsung.com/spstv/howto.jsp
- Customer information videos and chat programs
- Programs for Fridges, Laundry, Ranges & D/W

### Electrical Dryers
- 240 VAC, 60 Hz, 30 Amps, 3 -wire or 4-wire installations

### Gas Dryers
- 120 VAC, 60 Hz, 15 Amps, 3-wire installations
New Version of Blower Housing, it may be necessary to separate the harness wrap on replacement housing. Please maintain shielding on the low voltage wires.
**Gas Valve Testing**

Unplug connectors and test valve terminals (its numbering is from the front terminal.)

- Check across terminals #1 and #3 (Booster Coil). 550 Ω
- Check across terminals #1 and #2 (Holding Coil). 1350 Ω
- Check across terminals #2 and #3 (Both coils in series). 1900 Ω
- Check across terminals #4 and #5 (Secondary Coil). 1300 Ω

**Special Test Mode:**

- Press power button & Dry level buttons simultaneously will put you in System Check Mode.
- Display will show t2
- Press Start/Pause to toggle through the following operations
- Motor (CW) relay on— Heater Relay on—- Heater Relay Off—-Motor (CW) Relay Off

**Sensor Bar Touch TEST**

How to Enter:
With the power on, pressing Wrinkle Prevent and Temp Keys for 3 seconds. This action will put the dryer into sensor bar touch data mode. This mode is default mode of entering service mode.

**Temperature Test Diagnostic Mode**

How to Enter:
- Press Adjust Time Up + Down Keys for 7 sec during Power On State.
- Press Adjust Time Up and it will display the temperature in Celsius.
- Compare vent temp to drum temp to see air flow.

**Software Version Test Mode**

How to Enter:
- To enter Special Test Mode press Temp Button until the control beep. (same for all Frontier models.) ex) In case of "U105", U0 means major version "v1" 05 means minor version "05"

**Do not use dryer to dry clothes which have traces of any flammable substance, such as vegetable oil, cooking oil, machine oil, flammable chemicals, thinner, etc., or anything containing wax or chemicals, such as mops and cleaning cloths. Flammable substances may cause fabric to catch fire by itself.**

**Subject:** Dryer belt slides off the pulley when manually rotated counter-clockwise (ccw)

**Symptom:** The dryer drum will not turn. On occasions, the customer will rotate the drum counter clockwise (CCW) to check for any remaining clothes left in the dryer drum. By rotating the drum CCW, the idler arm may shift causing the belt to slide off the pulley.

**Solution:** To prevent the dryer belt from sliding off the pulley, the pulley has been redesigned. The Outside Diameter has been changed from 22mm to 27mm.

**New**
DC81-00220A

Make sure the idler pulley and the motor pulley are straight in line with each other, bend to correct

**Dryer continues to run after cycle completed**

Wrinkle Prevent option provides approximately 90 minutes (20 continuous and 70 intermittent) of tumbling in unheated air at the end of the cycle to reduce wrinkling. Press the Wrinkle Prevent button to activate or deactivate this feature. The indicator light above the pad will illuminate when Wrinkle Prevent is selected. Chasing lights appear in the display when the Wrinkle Prevent option is selected. The load is dry, and can be removed at any time during the Wrinkle Prevent cycle.
ELECTRIC AND GAS DRYER

Weather Hood Type

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Use only for short-run installation</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /> 4” (10.16 cm)</td>
<td><img src="image2.png" alt="Image" /> 2.5” (6.35 cm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of 90° elbows</th>
<th>Rigid</th>
<th>Metallic Flexible*</th>
<th>Rigid</th>
<th>Metallic Flexible*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>24.4 m (80 ft.)</td>
<td>12.4 m (41 ft.)</td>
<td>22.6 m (74 ft.)</td>
<td>10.1 m (33 ft.)</td>
</tr>
<tr>
<td>1</td>
<td>20.7 m (68 ft.)</td>
<td>11.2 m (37 ft.)</td>
<td>18.9 m (62 ft.)</td>
<td>8.8 m (29 ft.)</td>
</tr>
<tr>
<td>2</td>
<td>17.4 m (57 ft.)</td>
<td>10.1 m (33 ft.)</td>
<td>15.5 m (51 ft.)</td>
<td>7.6 m (25 ft.)</td>
</tr>
<tr>
<td>3</td>
<td>14.3m (47 ft.)</td>
<td>9.0 m (29 ft.)</td>
<td>12.5 m(41 ft.)</td>
<td>6.5 m (21 ft.)</td>
</tr>
</tbody>
</table>

* Do not use non-metallic flexible duct.

**Testing Electric Heater circuit.**

Disconnect Blue wire from RY6, turn power on, start dryer read voltage between RY6 Blue wire and CN6 Green wire.

Reading of 120VAC means a proper operating heater circuit. 0VAC means open in circuit.

To test thermostats use ohm meter on lowest scale, any resistance replace component

See page 4 for Main PCB layout for testing.
Testing Main PCB power output to Heating & Motor circuit.

With motor running in the heating mode, read AC voltage across RY6 and RY5.

Any voltage reading means Main PCB is defective.

See page 4 for Main PCB layout for testing.

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Testing Motor circuit.

With power off read resistance between RY5 Brown and CN7 Blue.

Resistance reading of good motor circuit is about 1.9Ω. To test thermostat and switch use ohm meter on lowest scale, any resistance replace component.

See page 4 for Main PCB layout for testing.