



Fast Track Troubleshooting

Models: DV338*** DV339***
 DV407*** DV409***
 DV410*** DV419***
 DV438*** DV448***

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.

**NOTICE: All Dryers Parts Change
 6/2010: Motor Pulley, page 5;
 Blower Housing, page 4**

Publication # tsDV407 Revision Date 06/27/2011

Samsung 'Dryer' Diagnostic Code Quick Guide

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

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

GAS DRYER WIRING DIAGRAM

SUB DISPLAY

10 1 2 3 4 5 6

3 1 2

MAIN PCB CONTROL

WHT [7P]

GRN

WHT

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

8

1 10 4 5 2 3 6 7

2 1

4 1 3 1

5 2 1

3 0 2 1

6 2 3 5 4 6 1

7 1 2 3

V I O

GRY

BRN

WHT

YEL

3 1 2

PNK ORG

BLU

RED

GRN

BLK

BLU

WHT

RED

WHT

YEL

WHT

BLU

3 1 2

11 10 2 1 2 1 2 1 2

12

TH2 HI-LIMIT

BLK

BLK

BLU

WHT

RED

WHT

YEL

WHT

BLU

3 1 2

MOISTURE SENSOR

GRN

WHT

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH1 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH2 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH1 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH2 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH1 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH2 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH1 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH2 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH1 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH2 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH1 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH2 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

YEL

WHT

BLU

3 1 2

TH1 HI-LIMIT

BLK

BLK

BLK

RED [2P]

WHT [6P]

BLK [3P]

WHT [3P]

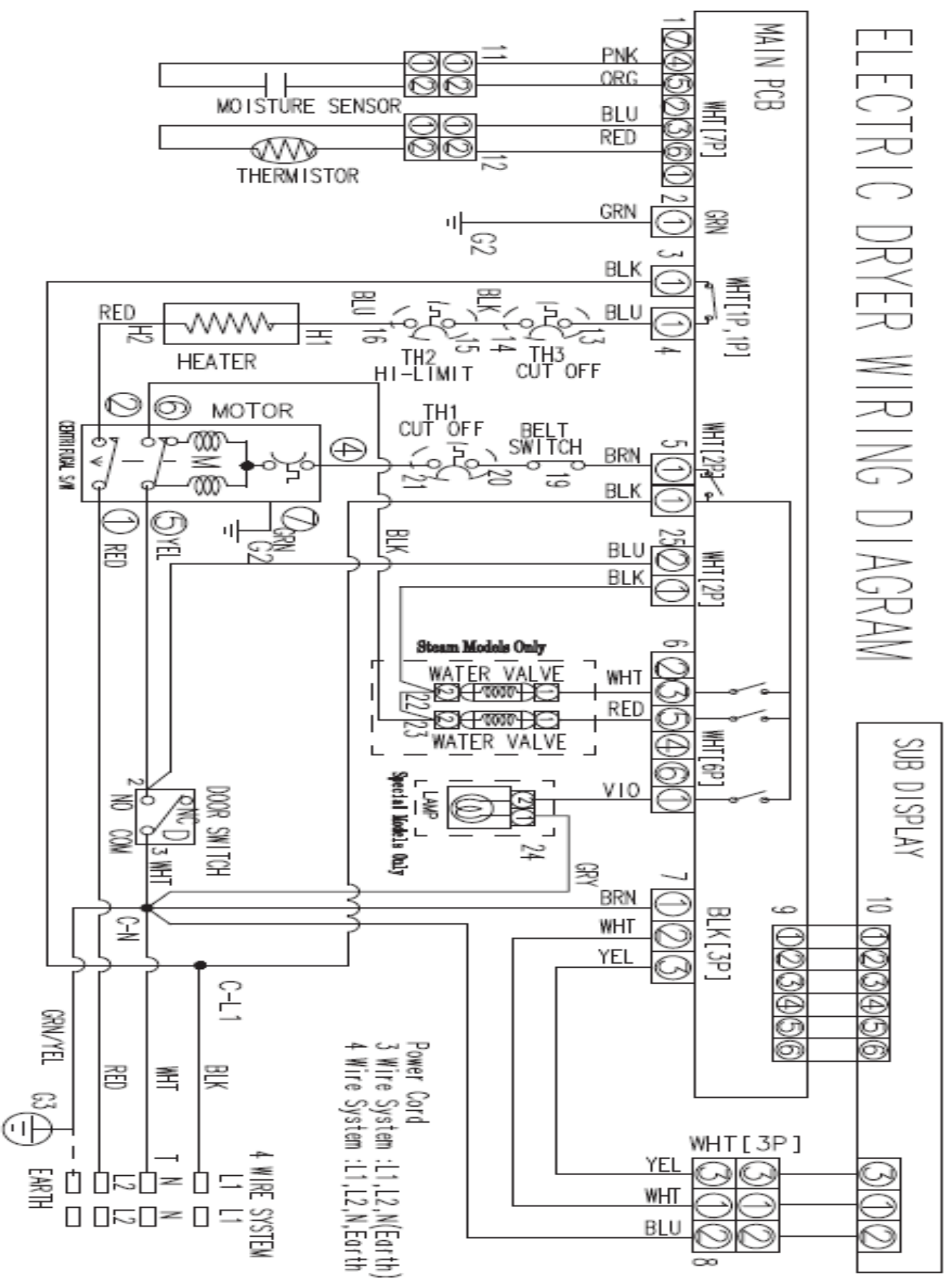
YEL

WHT

BLU

3 1 2

ELECTRIC DRYER WIRING DIAGRAM



CN1
1 120vac N (Brn)
2 Sub PCB (Wht)
3 Sub PCB (Yel)

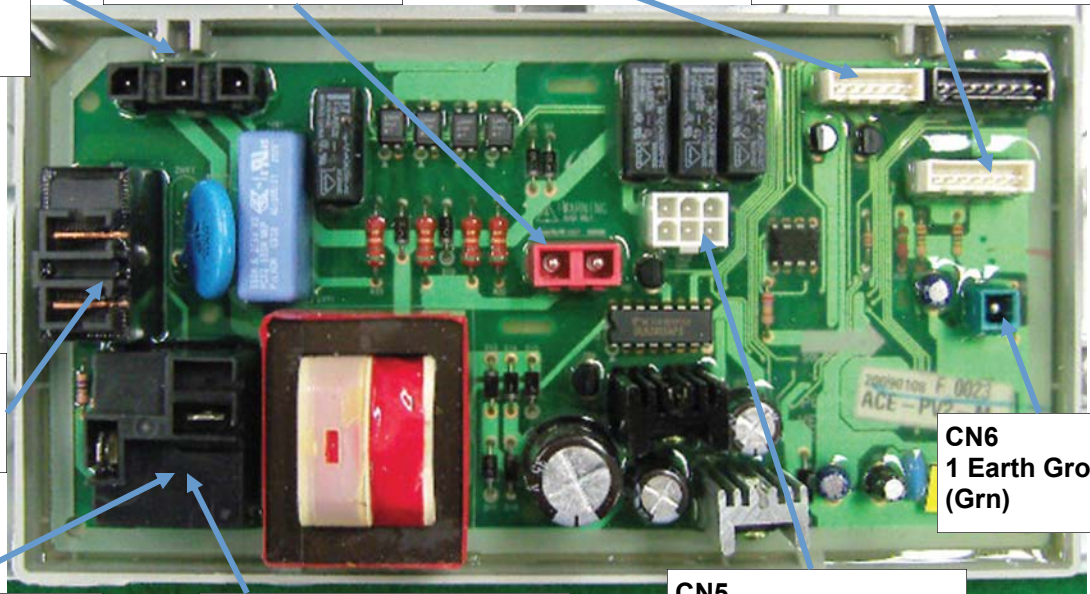
CN7
1 Water Valve (Blk)
2 Door Sw (Blu)

CN2 Sub PCB Display

CN2
3-6 Thermistor (Blu-Red)
4-5 Moisture Sensor (Pnk-Org)



Relay 1
1 Motor Belt Sw (Brn)
2 120vac L1 (Blk)



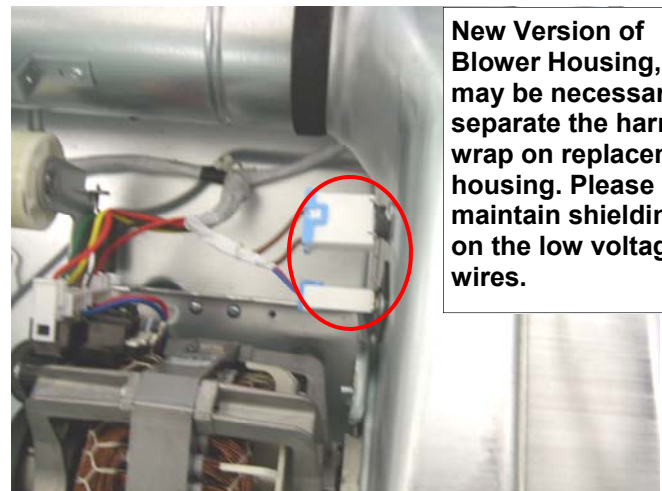
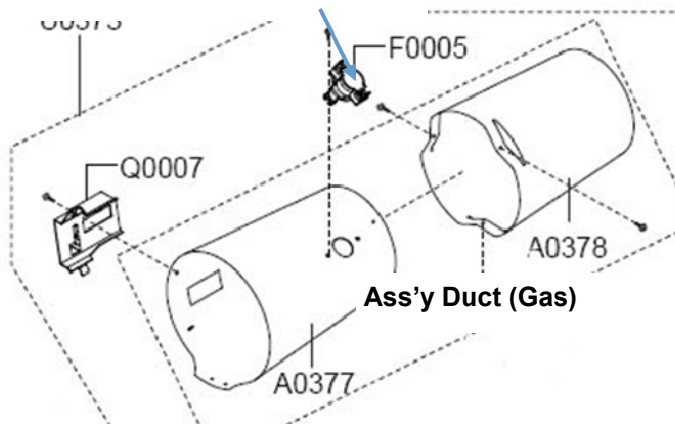
CN6
1 Earth Ground (Grn)

Relay 6
1 Gas Hi Limit T-Stat (Blu)
2 120vac L1 (Blk)

Relay 6
1 Heater Cut Off T-Stat (Blu)
2 120vac L1 (Blk)

CN5
1 Lamp (Vio)
3 Water Valve (Wht)
5 Water Valve (Red)

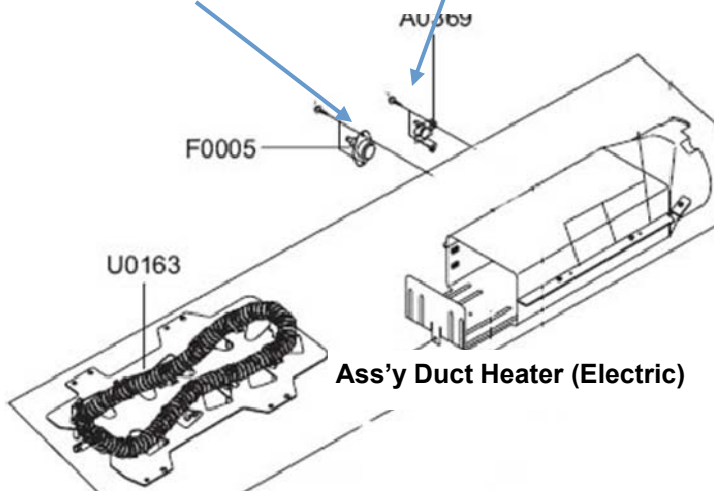
F0005 = DC47-00017A



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.

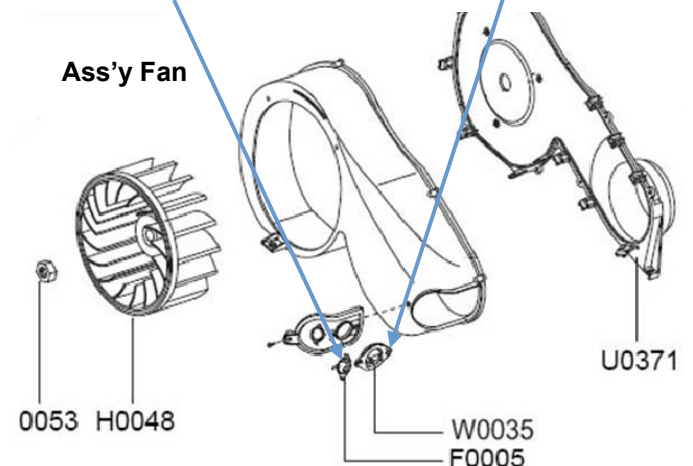
A0369 = DC47-00015A

F0005 = DC47-00018A



Thermistor W0035 = DC32-00007A

F0005 = DC47-00016A



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.

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.

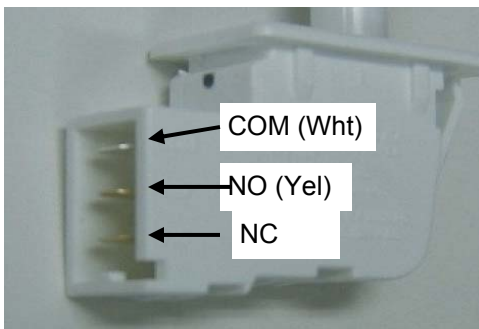
Electrical Dryers 240 VAC, 60 Hz, 30 Amps, 3-wire or 4-wire installations

Gas Dryers 120 VAC, 60 Hz, 15 Amps, 3-wire installations



New
DC81-00220A

Door Switch



Make sure the idler pulley & the motor pulley are in a straight line,



Special Test Mode:

While in Power Off, pressing the Dryness Level + Power keys simultaneously will put the dryer into the System Check mode "t2" will display. System Check Mode Progress t2 mode Function Performed Start/Pause Motor(CW) Relay On → Heater Relay On → Heater Relay Off → Motor(CW) Relay Off (Circulation) **Caution! Do not give it too much testing time. It will over-burden the Main PCB.**

Cycle Count Test Mode

How to Enter:

Press Signal + Wrinkle Prevent Keys for 3 sec during Power On State.

Press Signal key for 3 seconds (until beep)

Note: Test mode subject to change without notice

Sensor Bar Touch Data Mode

How to Enter:

Press Time + Temp + Power

Open the door and touch the sensor bars, it will toggle back and forth between 0 – 1

Test mode subject to change without notice

Software Version Test Mode

How to Enter:

Press Signal + Wrinkle Prevent Keys for 3 sec during Power On State.

Press Temp key for 3 seconds (until beep)

Note: Test mode subject to change without notice

Temperature Test Diagnostic Mode

How to Enter:

Press Signal + Wrinkle Prevent Keys for 3 sec during Power On State.

Press Time + Wrinkle Prevent Keys and 7-segment will display the temperature in Celsius.

Compare vent temp to drum temp to see air flow.

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.

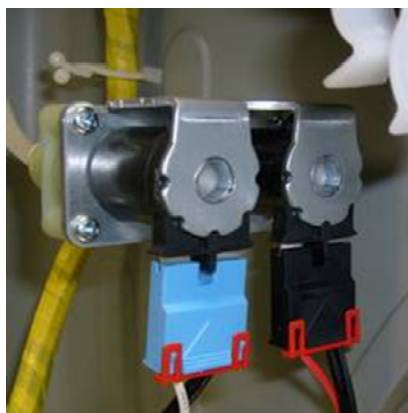
Location consideration In the USA:

- All Dryers Must be vented to the outside.
- Only rigid or flexible metal duct should be used for venting.

Testing Steam Cycle:

Select Wrinkle Care cycle for 4 minutes, check for heat and moisture. If both are present, the dryer is working properly

time	Time and Control Temp.															
	1st Heating Resign			1 Spray Resign			2nd Heating Resign			2nd Spray Resign			3rd Heating Resign			Cooling resign
	Time	Control Temp.		Time	Control Temp.		Time	Control Temp.		Time	Control Temp.		Time	Control Temp.		Time
		Heat er Off	Heat er On		Heat er Off	Heat er On		Heat er Off	Heat er On		Heat er Off	Heat er On		Heat er Off	Heat er On	
20 min	1min.	58°C	50°C	1min.	58°C	50°C	1min.	58°C	50°C	1min.	58°C	50°C	13min.	58°C	50°C	3min.



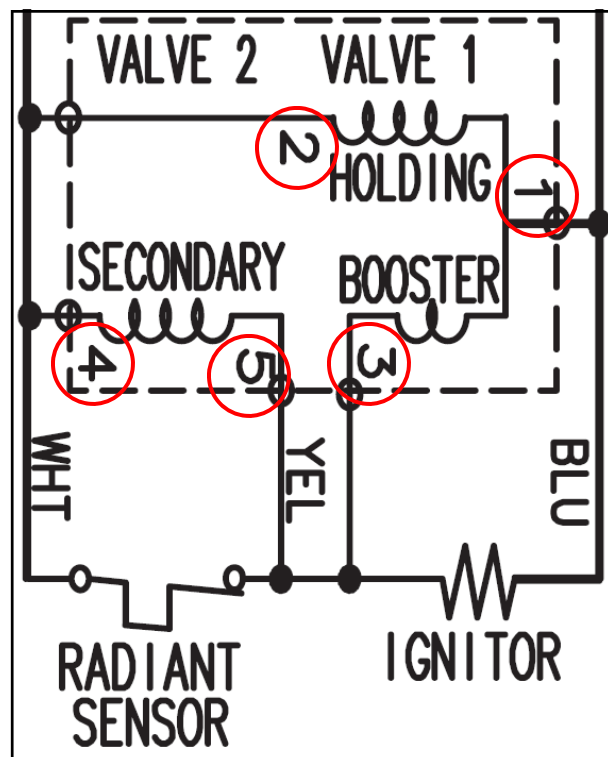
Major Dryer Spray Components



Gas Valve Testing

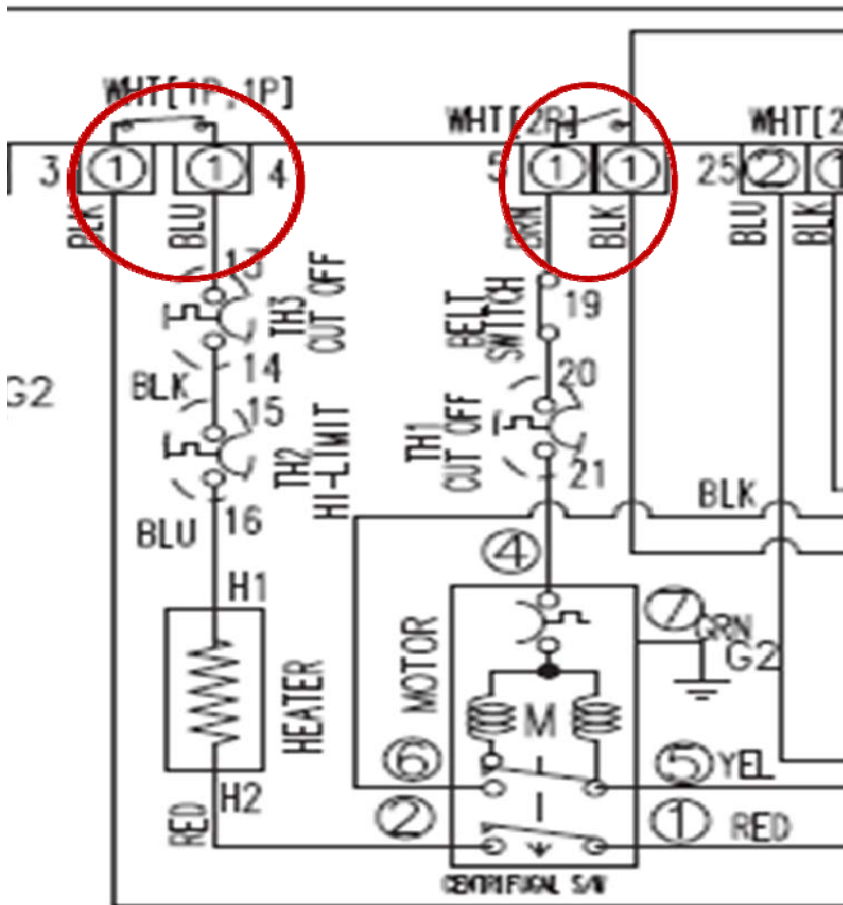
Unplug connectors and test valve terminals (its numbering is from the front terminal.)

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



Laundry Touch Up Paints

TOUCH UP PAINT, BLUE ONYX	DH81-11980A
TOUCH UP PAINT, IMPERIAL SILVER	DH81-11981A
TOUCH UP PAINT, NEAT WHITE	DH81-11982A
TOUCH UP PAINT, STRATUS GRAY	DH81-11983A
TOUCH UP PAINT, TANGO RED	DH81-11984A

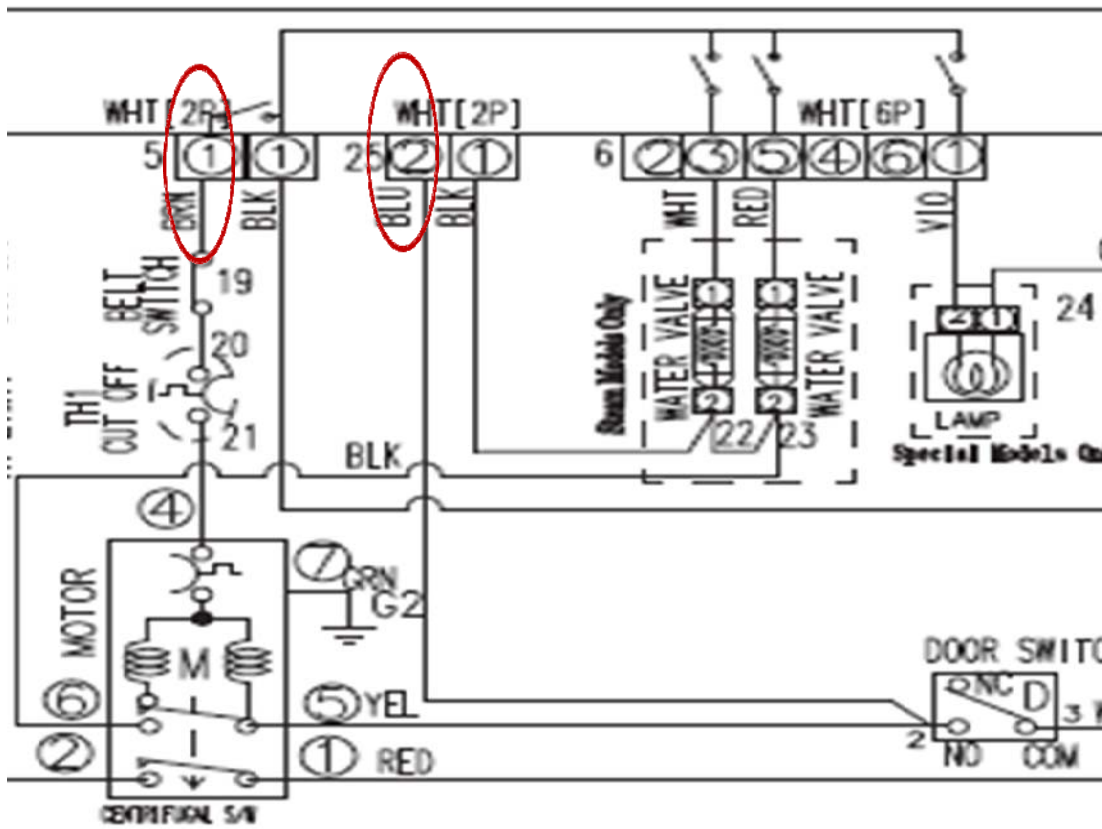


Testing Main PCB power output to Heating & Motor circuit.

With motor running in the heating mode, read AC voltage across RY6 and RY1.

Any voltage reading means Main PCB is defective.

See page 4 for Main PCB layout for testing.



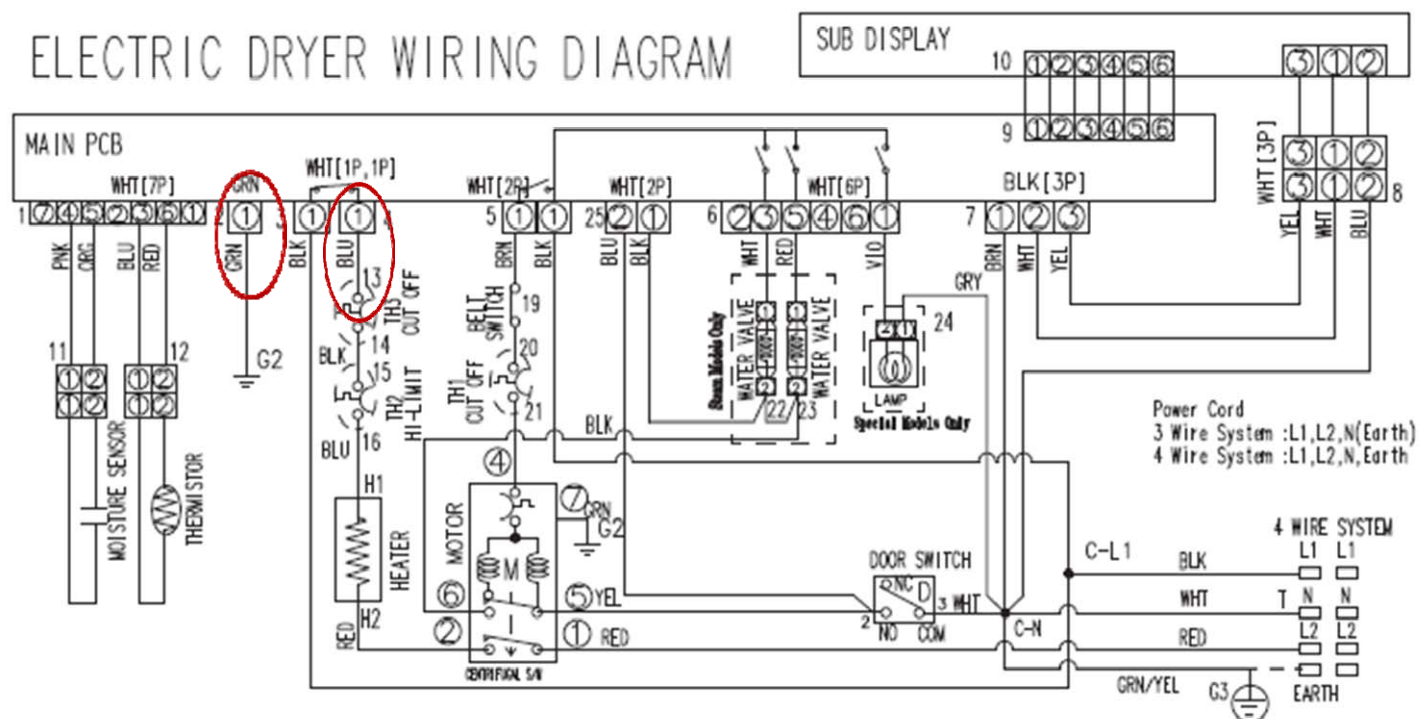
Testing Motor circuit.

With power off read resistance between RY1 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.

ELECTRIC DRYER WIRING DIAGRAM



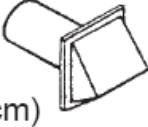
Testing Electric Heater circuit.

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.

ELECTRIC AND GAS DRYER				
Weather Hood Type				
Recommended			Use only for short-run installation	
 4" (10.16 cm)			 2.5" (6.35 cm)	
No. of 90° elbows	Rigid	Metallic Flexible*	Rigid	Metallic Flexible*
0	24.4 m (80 ft.)	12.4 m (41 ft.)	22.6 m (74 ft.)	10.1 m (33 ft.)
1	20.7 m (68 ft.)	11.2 m (37 ft.)	18.9 m (62 ft.)	8.8 m (29 ft.)
2	17.4 m (57 ft.)	10.1 m (33 ft.)	15.5 m (51 ft.)	7.6 m (25 ft.)
3	14.3 m (47 ft.)	9.0 m (29 ft.)	12.5 m (41 ft.)	6.5 m (21 ft.)

* Do not use non-metallic flexible duct.