



Fast Track Trouble shooting

Model: DV56H9100



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.

Publication #

Production Date: 06/18/14

Support Information:

HELP: 1-888-751-4086 (Tech Sup. – ASC/SSD)

1-866-894-0637 (Tech Sup. - FE/ME)

GSPN: <http://gspn3.samsungcsportal.com/main.jsp>

PLUS ONE: <http://my.plus1solutions.net/clientPortals/samsung>

Bulletins:

SERVICE MODE

TO ENTER:

DRYER MUST BE ON

PRESS: MIXED LOAD BELL + TEMP HOLD FOR 3 SECONDS

Unit will beep and the **SENSOR BAR TOUCH DATA** will display. This is the initial 1st default check in **SERVICE MODE**.
To return to NORMAL MODE – repeat (Mixed Load Bell + Temp for 3 seconds)

CYCLE COUNT

PRESS: MIXED LOAD BELL WHILE IN SERVICE MODE

Displays the total number of cycles the dryer has performed

SOFTWARE VERSION

PRESS: TEMP UNTIL BEEPS - WHILE IN SERVICE MODE

Displays the software version. To return to SERVICE MODE press the **TEMP** key again

CONTINUOUS RUN

PRESS: MIXED LOAD BELL + DRY LEVEL HOLD FOR 7 SECONDS

The previous cycle will restart during Continuous Run Mode until the mode is deactivated

DATA DISPLAY MODE

PRESS: ADJUST UP + ADJUST DOWN HOLD FOR 7 SECONDS

To change the mode use the cycle selector dial

- Display Mode 1 : Main micom version
- Display Mode 2 : Display micom version
- Display Mode 3 : Touch module Version
- Display Mode 4 : Option value
- Display Mode 5 : Temperature data
- Display Mode 6 : Average Temperature data for 1minute.
- Display Mode 7 : Temperature data for detecting vent clog up
- Display Mode 8 : Average Touch Sensor data for 1 minute.
- Display Mode 9 : Cycle Count

ERROR ITEMS AND DIAGNOSTIC CODES

When an error occurs, the dryer will sound an error tone for 5 seconds and show one of the following Error Codes in its display continuously.

Error Display	Trigger	Action Taken
tE	The Thermistor resistance is very low or high.	Check for : - Clogged lint screen. - Restricted vent system. - Check Thermistor resistance.
HE	Invalid heating Temp in running the dryer.	Check for : - Restricted vent system. - Check Thermistor resistance.
dE	Dryer running with door open.	Check for : - Close the door, and run the dryer. - Loose or open wire terminals in Door Sense circuit.
dF	Invalid door condition.	Check for : - Loose or open wire terminals in Door Sense circuit.
bE2	Key on display panel in invalid state.	Check for : - Check if display PCB circuit has short.
FE	Invalid power source frequency.	Check for : - Not using regular power source frequency. - Invalid power frequency sense circuit.
AE	Electronic Control Problem. (Communication Error)	Check for : - Check PCB and Wire harness. - Replace PCB.
EEE	Invalid state of EEPROM communication.	Check for : - PCB with Eeprom circuit.
9E1	Electronic control problem. (Over Voltage Error)	Check for : - Check PCB and Wire harness. - Check Power supply. - Replace PCB.

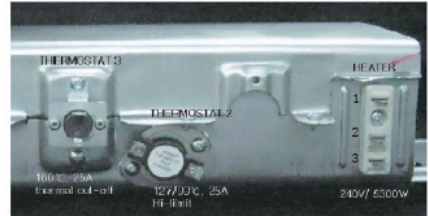
No	Problem	What to do
1	Will Not Start or Run	- All wires are hooked up to their corresponding terminals. - Is the dryer is plugged in. - Blown fuse or circuit breaker. - Is the Door switch functional...door closed. Check for error code 3 (See Table for code definition). - Start/Pause rotary selector dial functional. - Is the control Board operational. - Belt off or broken and Belt Cut-off Switch operates. - Is the motor functional. - Check motor winding resistance: 2.88ohms between pin #3 and 4, 3.5ohms between pin #4 and 5.
2	Motor runs/ tumbler will not turn	- Belt off or broken/damaged. - Idler tension spring too weak or stretched. - Idler pulley jammed or stuck.
3	Runs a few minutes and then stops	- Lint buildup around drive motor. - Low voltage present. - Blower impeller blocked in blower housing. - Check the actuator of motor.
4	Blows fuses or trips circuit breaker	- Is the belt connected well? - Is the winding of the motor continuous? (Rotor winding, stator winding, generator) - Is the motor protector normal? - If above points are not found, the PCB assembly is out of order. Replace it.
5	Blows fuses or trips circuit breaker (Gas Model)	- During ignition the dryer will draw 6 amps. With the burner ON, the dryer will draw 4.5 amps. If the dryer is drawing amperages above this, then the house wiring, fuse box or circuit breaker is suspected to be at fault. - Igniter harness loose and shorted to base. - Incorrect wiring or wire shorted to ground. - Drive motor winding shorting to ground.
6	Will not heat (motor runs)	Open heating element. - Hi-Limit trips easily or is open. - Regulating thermostat trips easily or is open. - Membrane switch open. - Check Thermistor.
7	Will Not Dry Gas Model Poor Gas Ignition	When the dryer is operated on a heat setting, the igniter should be energized and burner shall fire within 45 seconds at 120 VAC. The failure of a component in this system will usually be indicated by one of three symptoms (No.8, No.9, No.10)
8	The igniter does not glow	If the igniter does not heat up, remove power and using an ohmmeter, check the following: - Open flame sensor - Open igniter - Shorted booster coil - Open wiring - Bad motor switch (Neutral supply) - No power from control (L1 supply)
9	Igniter glows - No gas ignition	If the igniter heats up but the main burner flame is not ignited, remove power and using an ohmmeter, check the following: - Open secondary coil - Open holding coil - Open wire harness - Stuck flame sensor (Stuck closed)
10	The gas is ignited but the flame goes out	If a normal ignition takes place and after a short while the flame goes out, check for the following: - Radiant sensor contacts opening prematurely. - Weak gas valve coil may open when stressed by higher Temps. - Weak Hi-Limit - Poor venting - Bad drum seals
11	Improper drying clothes wrinkled Rough texture long dry time	- The lint filter is not clean. - Any restriction in the exhaust. - The outside exhaust hood damper door stuck closed. - Is the exhaust too long, too many elbows, flex ductwork installed. - Poor intake air available for the dryer. - Incorrect tumbler speed. Tumbler belt slipping. - Blower impeller bound; check for foreign material in blower area. - Customer overloading dryer. - Check clothing labels for fabric content and cycle selected. - Clothes too wet due to insufficient spin out by washer.
12	Noisy and/Or Vibration	"Thumping" Check for loose tumbler baffle, rear tumbler roller(s) worn or misaligned, out-of-round tumbler or high weld seam on tumbler. "Ticking" Check for loose wire harness or object caught in blower wheel area. - Scraping Check for front or rear bulkhead felt seal out of position or worn tumbler front bearings. "Roaring" Check for blower wheel rubbing on blower housing or bad motor bearings. - Popping or squealing sound. Check for a sticky or frayed belt.

TROUBLE SHOOTING COMPONENT TESTING

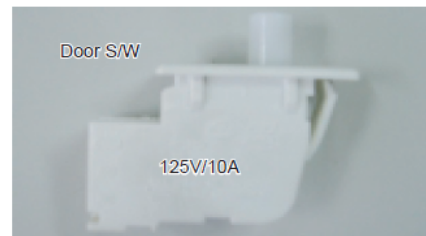
- Thermistor resistance 10K Ω at 25°C 77°F
- Thermostat 1 resistance < 1 Ω



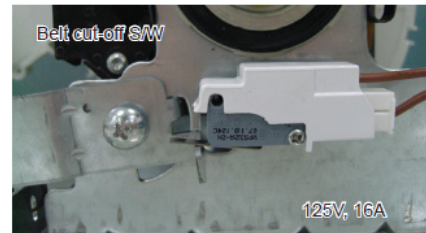
- Thermostat 3 resistance < 1 Ω
 - If resistance is infinity, replace thermostat 3.
- Thermostat 2 resistance < 1 Ω
 - If resistance is infinity, replace thermostat 2.
- Heater resistance 13 Ω (PIN 2-3)
Heater resistance 34 Ω (PIN 1-2)
 - If resistance is infinity, replace Heater.



- Measure resistance of the following terminal
 1. Door switch : Off
Terminal : "COM" - "NC" (1-3) < 1 Ω
Terminal : "COM" - "NO" (1-2) : $\infty \Omega$
 2. Door switch : On
Terminal : "COM" - "NC" (1-3) : $\infty \Omega$
Terminal : "COM" - "NO" (1-2) < 1 Ω



- Belt Cut-off S/W
 - Lever open: Resistance value < 1 Ω
 - Lever push: Resistance value $\infty \Omega$

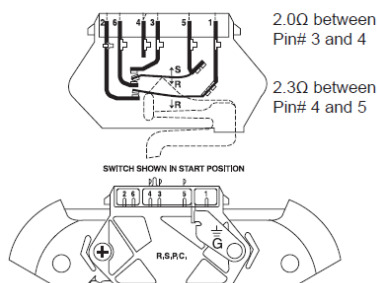


- Motor (Electronic & GAS)

Contacts (● : Contact closed)

Function	1M	2M	3M	5M	6M
Start			● — ●		
Run	● — ●			● — ●	

Centrifugal Switch (Motor)



Sensor Bars & temperature sensor check

Sensor Bars

Disconnect harness and test Pink wire Pin 4 to Orange wire Pin 5.

- Approx $\infty \Omega$ without laundry
- Approx 190 $\Omega \pm 10\%$ with wet clothes

Cycling thermistor 1

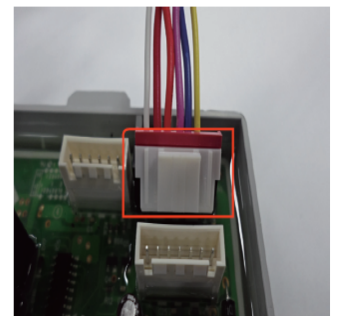
Disconnect harness and test Blue wire Pin 3 to Red wire Pin 6.

- Approx 10 K Ω at 25 °C/77 °F

Vent thermistor 2 (Vent sensor model only)

Disconnect harness and test Yellow wire Pin 2 to White wire Pin 7.

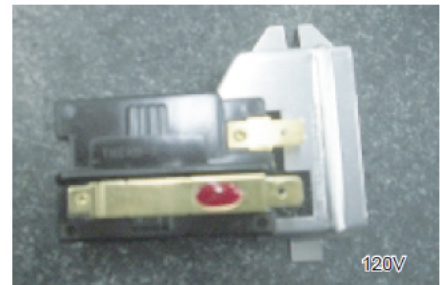
- Approx 238.23 K Ω at 25 °C/77 °F



• GAS MODEL

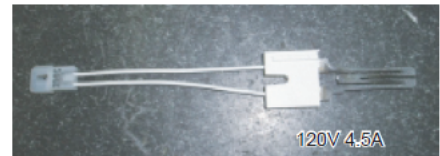
Radiant Sensor(10RS)

- Resistance value $< 1 \Omega$
- If resistance is infinite, replace Radiant sensor



Igniter(101D)

- Resistance value 40~400 Ω
- If resistance is infinite, replace Igniter



Gas Valve(25M01A)

- Valve 1-2 : Resistance value 1,365 Ω
- Valve 1-3 : Resistance value 560 Ω
- Valve 4-5 : Resistance value 1,325 Ω
- If resistance is infinity, replace Valve



Thermostat (60T21 Hi-Limit)230F-50F

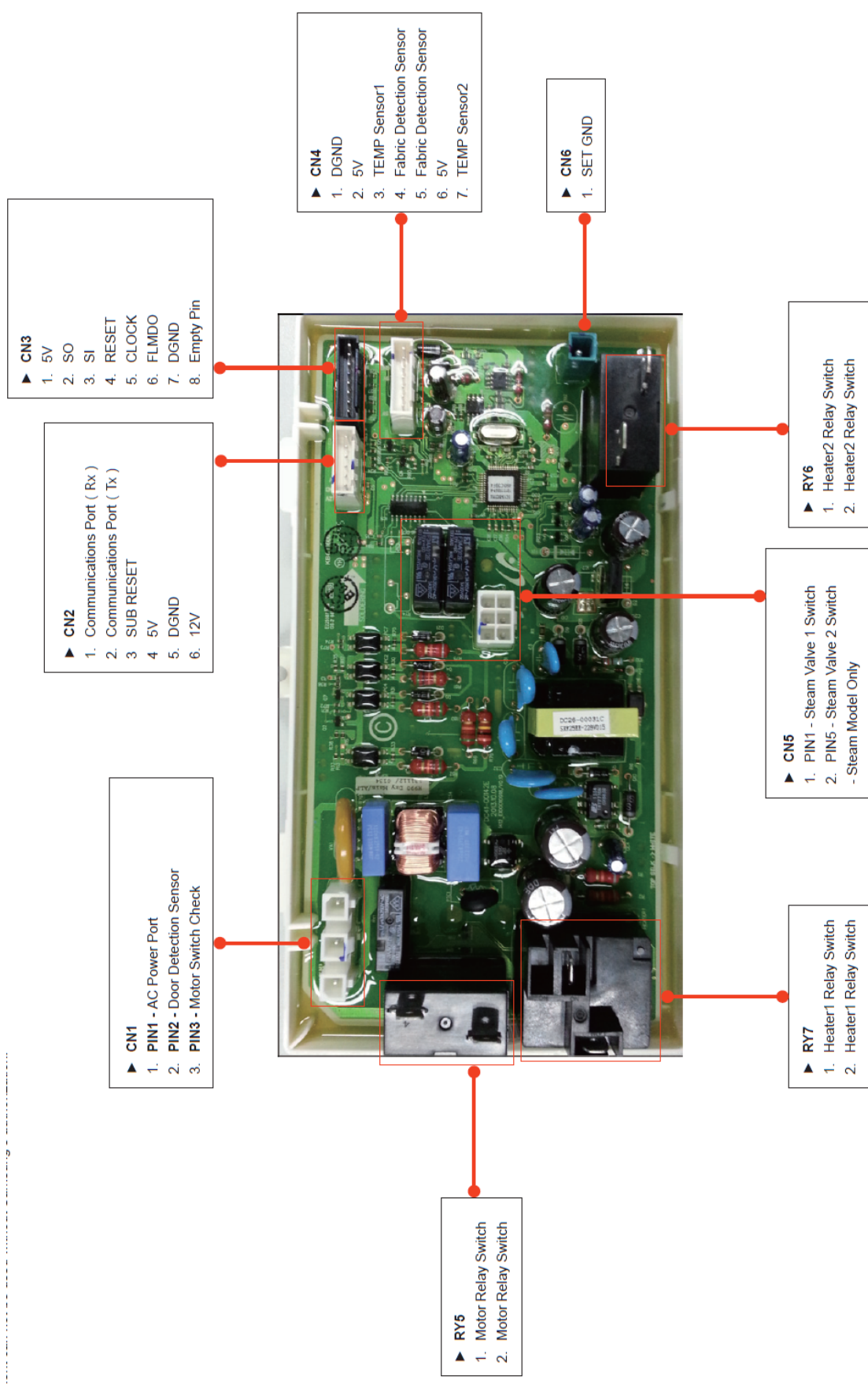
- Resistance value $< 1 \Omega$
- If resistance is infinity, replace Thermostat



TIP:

Converting $^{\circ}\text{C} \rightarrow ^{\circ}\text{F}$ $F = 9/5C + 32$

Celsius($^{\circ}\text{C}$)	-30	-10	10	30	50	70
Fahrenheit($^{\circ}\text{F}$)	-22	14	50	86	122	158



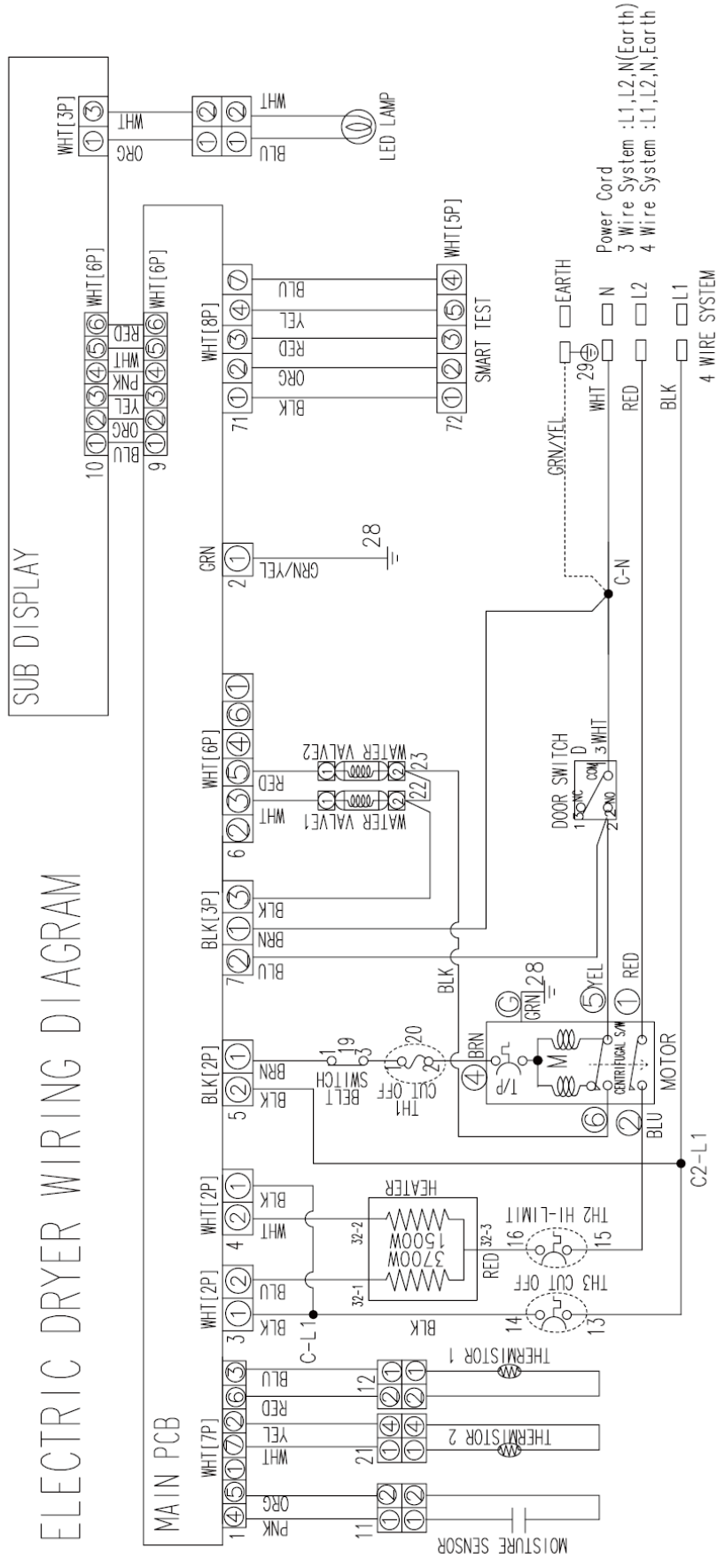
- **CN9**
1. Communications Port(Tx)
 2. Communications Port(Rt)
 3. Outputs the Reset Signal
 4. 5V
 5. GROUND
 6. 12V

- **CN8**
1. 12V
 2. Empty Pin
 3. TUB_LIGHT

- **CN10**
1. 12V
 2. GROUND
 3. SDA
 4. SCL
 5. EMPTY

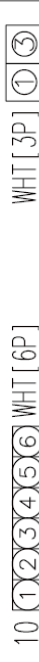


SUB DISPLAY



GAS DRYER WIRING DIAGRAM

SUB DISPLAY



MAIN PCB

