



Fast Track Troubleshooting

Model: WF457ARG***
BOM Models:
WF457ARGSGR/AA
WF457ARGSWR/AA

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 # **APWF457ARG** Revision Date 6/5/12

Service Mode:

This mode allows more detailed operation tests and troubleshooting, to enter: Turn unit “ON”, wait one min. Then regardless of cycle, press & release the **Title Bar** (1.) and when the screen changes, press & hold “**Extras**” (2.) until Service Mode screen appears (3.)

In Service Mode the following tests can be performed.

NOTE: To Cancel or Exit any test, press the same button a 2nd time:

Quick Spin Test: Press “**Spin**”: This accelerates the drum motor from 0 to max. RPM over a few minutes. Once max RPM reached, speed drops immediately. **Note: Stay with the washer during this test, out of balance detection is bypassed.**

Press the “**Start/Pause**” button during the test to hold its spinning speed for 10 minutes before going back to Quick Spin Test Mode.

Cycle Count: Press “**2**” to see how many times the unit was used.

Soft Ware #: Press “**4**” to see the software version information.

Fast Time Down: Press the “**1**” button to advance to the next cycle.

Fault Codes: Press “**3**” then press “**↓**” to cycle through error codes. Push “**Start/Pause**” while the code is displayed to view the number of cycles since the error occurred.

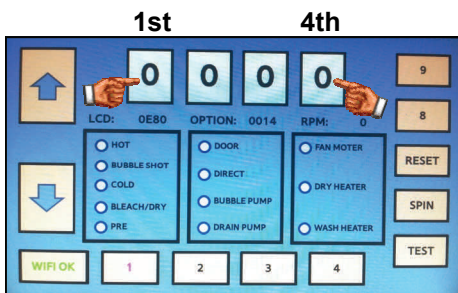
Peripheral (Main PCB) input Tests: Press “**Test**” in Service Mode and “**in**” will be displayed, then press “**↓**” to cycle through the following tests:

1. The *Water Temperature* will be displayed in Celsius.
 2. The *Water Temperature* will be displayed in Fahrenheit.
 3. The *Door Status* (“**OP**” if open, “**CL**” if closed).
 4. The *Door Lock Switch Status* (“**UL**” if unlocked, “**LO**” if locked).
 5. The *Water Level Frequency* (Base = 2539)
- Press “**Test**” again to exit the input test mode.

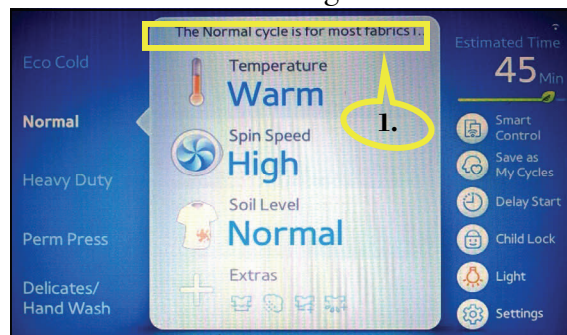
An alternate method to enter Service Mode:

Select any cycle and press start. On progress screen, tap the upper Left & Right corners in this combination: **Right-3x, Left-2x, Right-1x**

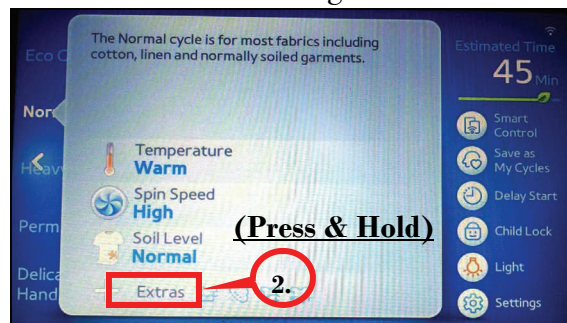
To Exit the Service Mode: Press 4th segment 3x, 1st segment 2x, 4th segment 1x. Normal display & cycle is resumed



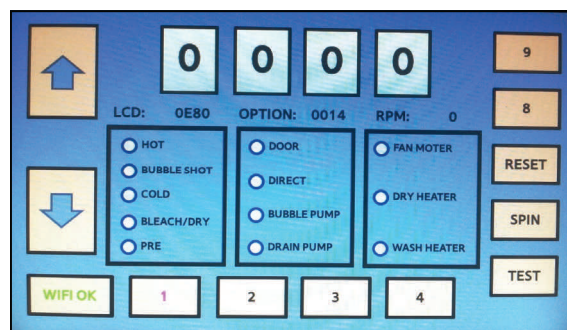
Main Page



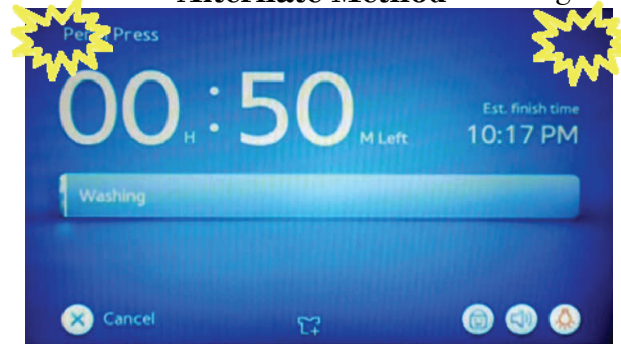
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Service Mode Screen



Left Alternate Method Right





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Quick Test Mode:

To enter: press & hold "Start/Pause" and press "Power" until unit powers up, then quickly release "Start/Pause". The test screen displays and the washer beeps as it enters the Quick Test Mode.

*****Note 1:** If these buttons are held down too long, the wrong screen will display and the quick test modes **WILL NOT** operate. See "Correct" and "Incorrect Screen" pictures.

*****Note 2:** Configure Wi-Fi AP before entering quick test mode.

Washer displays the software version in top four segments (Ex. "Y333" in "Correct" picture).

When the S/W version is displayed, press the following keys to test the various components:

Press "1" repeatedly to cycle through the Water Valves in this order (door must be locked): Pre-Wash, Bleach, Cold, Bubble Shot & Hot.

Press "2" repeatedly to cycle Door Lock/Unlock circuit.

Press "3" repeatedly to cycle the Drain Pump, Bubble Pump, and Direct Valve (Door must be locked).

Press "4" repeatedly test the Water Heater.

Press "Spin" and "Start/Pause" to test the motor (Lock Door First). "Spin" and "1200" flash alternately in the display (See pics.). RPM is displayed in LCD once 1200 rpm is reached, unit will hold speed for 10 min. To exit, press "Start/Pause" again.

Press "Test" and "Start/Pause" to begin a test the wash cycle (Lock Door First). Press "Start/Pause" to exit.

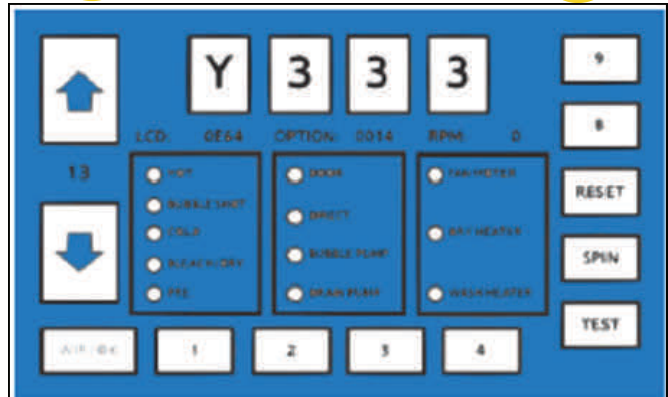
EEPROM Clear Check:

Enter Service Mode, go to S/W Version check mode and press "Reset" 3 times.

All memory will be cleared, including Fault Codes This should be done when a new Main PCB is installed



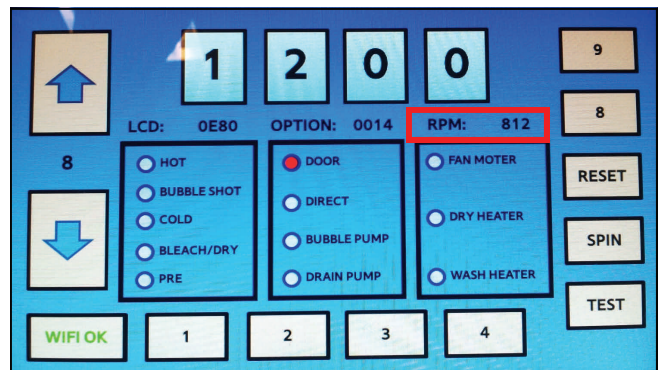
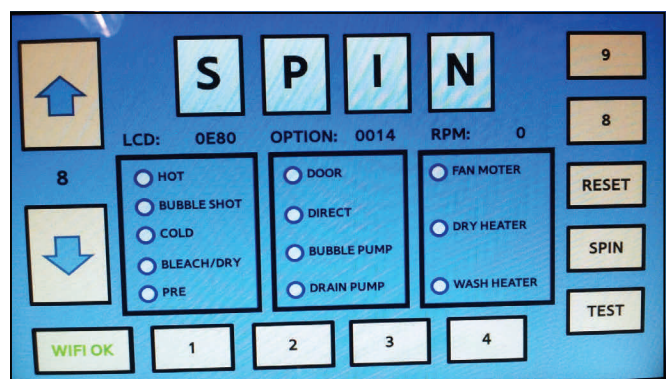
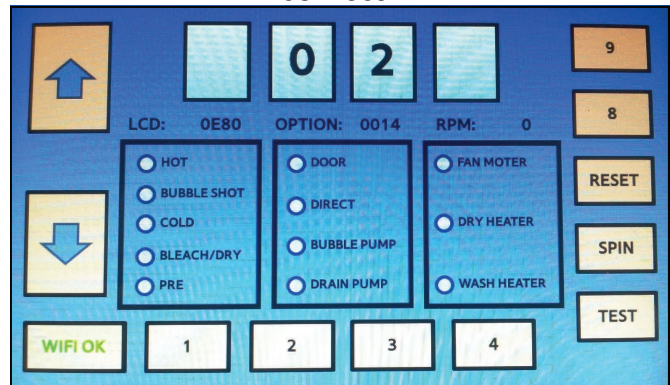
Correct



XX

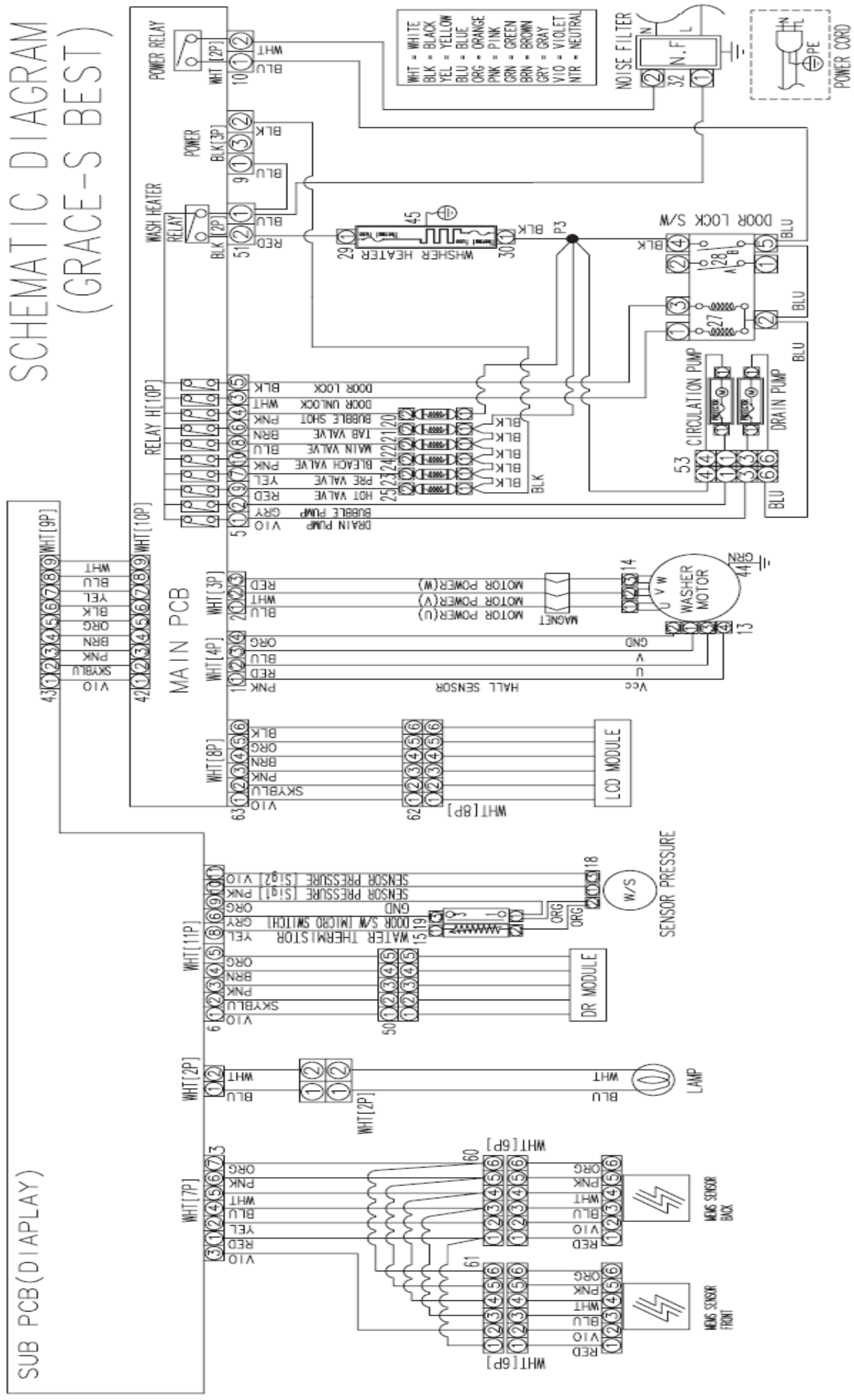
Incorrect

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SUB PCB(DIAPLAY)

SCHEMATIC DIAGRAM (GRACE-S BEST)





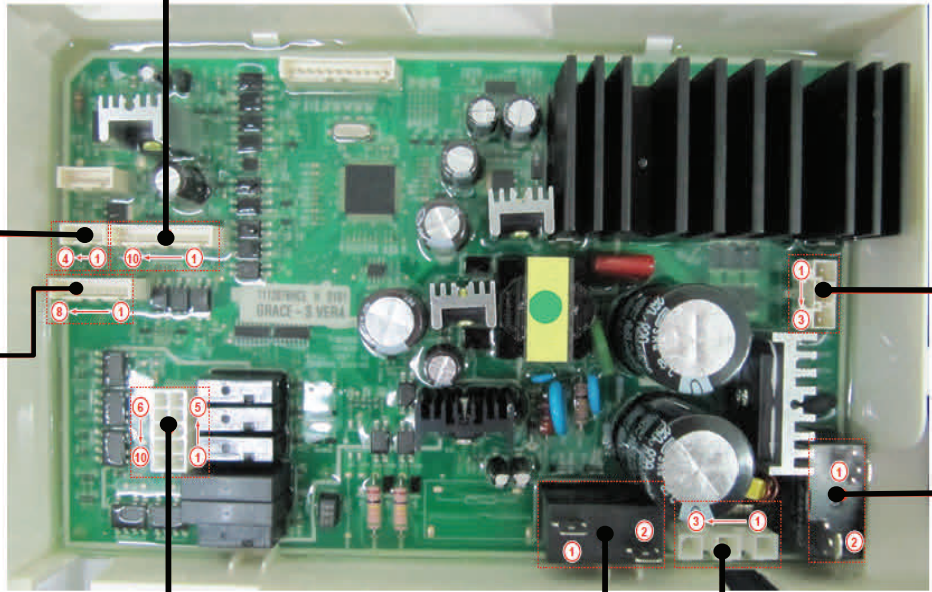
Fast Track Troubleshooting

WF457 Main Board

- | | |
|------------|----------------|
| CN7 | |
| 1. TX | 6. 15V |
| 2. RX | 7. 20V_ON |
| 3. Reset | 8. Water Level |
| 4. 3.3V | 9. Water Level |
| 5. GND | 10. N/C |

- | | |
|----------------|--|
| CN3 | |
| 1. 5V | |
| 2. Hall Sensor | |
| 3. Hall Sensor | |
| 4. GND | |

- | | |
|-------------------|--|
| CN1 | |
| 1. TX | |
| 2. RX | |
| 3. 15V | |
| 4. GND | |
| 5. 3.3V | |
| 6. Reset | |
| 7. Watchdog - LCD | |
| 8. N/C | |



- | | |
|--------------|--|
| CN11 | |
| 1. Motor (W) | |
| 2. Motor (V) | |
| 3. Motor (U) | |

- | | |
|----------------|--|
| RY5 | |
| 1. Power Relay | |
| 2. Power Relay | |

- | | |
|-----------------|------------------|
| CN6 | |
| 1. Door Lock | 6. Water Shot 1 |
| 2. Water Shot 2 | 7. Pre-Valve |
| 3. Door Unlock | 8. Cool-Valve |
| 4. Cir-Pump | 9. Hot-Valve |
| 5. Drain Pump | 10. Bleach-Valve |

- | | |
|-----------------|--|
| RY6 | |
| 1. Heater Relay | |
| 2. Heater Relay | |

- | | |
|-----------------------------|--|
| CN5 | |
| 1. AC Power | |
| 2. Door Lock/Unlock det.ect | |
| 3. Door open/close detect | |

Thermistor Check

Check Voltage at Pin #8 and #9 of CN7
 Tester Check = DC 1.6V
 If it ready 5V, check if its connector is engaged properly.

Hall Sensor Check

Check Voltage at Pin #4 and #2 of CN3
 Tester Check = DC 0V or 1.3V
 Check Voltage at Pin #4 and #3 of CN3
 Tester Check = DC 0V or 1.3V

Motor Check

Resistance at Pin #1 and #2 of CN11 = 12Ω
 Resistance at Pin #1 and #3 of CN11 = 12Ω
 Resistance at Pin #2 and #3 of CN11 = 12Ω

Door Lock Check

Check Voltage at Pin #1 of CN6 and Pin #2 of RY5
 When Door Lock = AC 120V

Drain Motor Check

Check Voltage at Pin #5 of CN6 and Pin #2 of RY5
 When Drain Motor operates = AC 120V

Water Sensor Check

Check Voltage and Frequency at Pin #10 and #9 of CN7
 Reset water level = DC1.6V, 26.0KHz
 Check Voltage and Frequency at Pin #11 and #9 of CN7
 Reset water level = DC1.6V, 26.0KHz

CIRCLE Motor Check

Check Voltage at Pin #4 of CN6 and Pin #2 of RY5
 When Circulation Motor operates = AC 120V

Water Valve Check

Check Voltage at Pin #2,6,7,8,9,10 of CN6 and Pin #2 of RY5
 When each valve operates = AC 120V

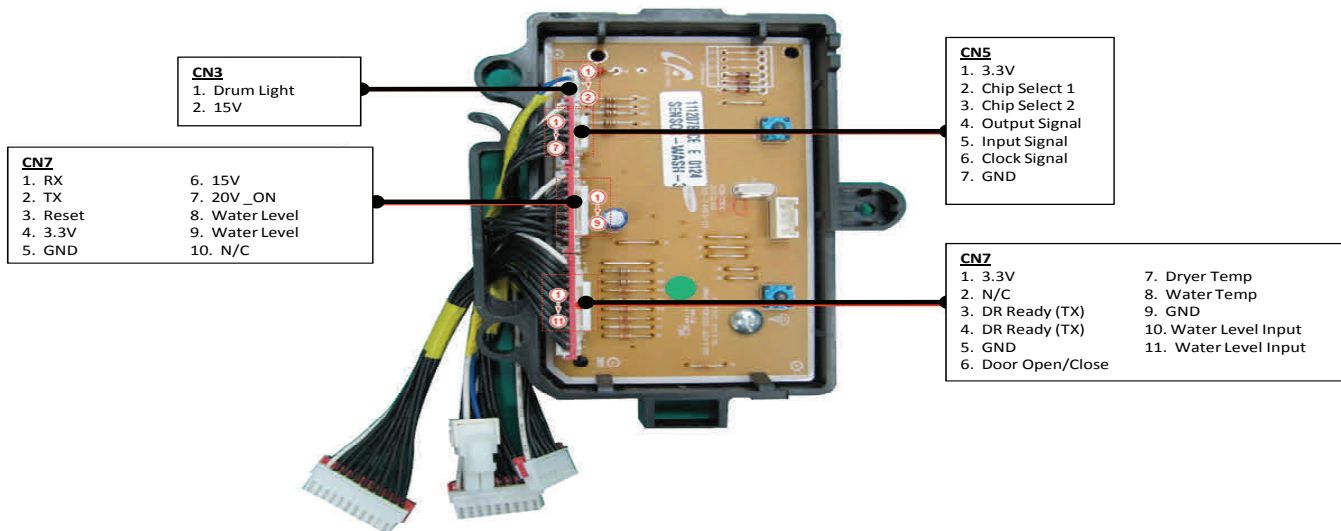
AC Power Check

Check Voltage at Pin #1 of CN5 and #2 of POWER RELAY
 Tester Check = AC 120V



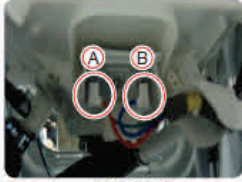




Wash Heater Relay Check

Check Voltage at Pin #2 of RY6 and PIN #2 of RY5
 When Heater Relay operates = AC 120V

WF457 Sub Board



Error Type	Error Mode	Causes	Corrective Actions	Description of Photo
Water Level Sensor	LE1	<ul style="list-style-type: none"> Water level sensor fault Incorrect connections of the water level sensor terminal The hose part for the water level sensor is folded. Main PCB fault 	<ul style="list-style-type: none"> Check the water level sensor terminal connections and contacts. An error occurs if an incorrect water level sensor is used. Make sure to check the material code. (Abnormal operation) If the water level sensor is faulty, replace it. If the error persists despite taking the action above, replace the PBA. 	<p>Check the water level sensor frequency.</p> <ul style="list-style-type: none"> Check it after the water level sensor and the connector are connected. ☑ Checking Part : White Color Wire Orange Color Wire. Frequency : Approx. 25.5 KHz with no load
Washing Motor Error and Hall Sensor Error	3E E3 bE	<ul style="list-style-type: none"> Washing motor fault Washing motor hall sensor fault Incorrect connections of the washing motor/hall sensor connector Washing motor rotor and stator fault Main PCB fault 	<ul style="list-style-type: none"> Check the motor connector terminal connections and contacts. 3E is displayed because overloading occurs due to too much laundry. If the hall sensor terminal is faulty, replace the hall sensor. Check whether the stator of the motor cover is damaged. Check for coil disconnections due to foreign material. If the PBA control circuit is faulty, replace the PBA. 	<p>▶ Check the motor Winding Coil Plug out the connector and read resistances at any two of the three terminals on Motor : Should be 6.0 Ω (at 25°C)</p> <p>▶ Check the motor Hall Sensor Check the resistance on the main PCB motor (Between pins 1 and 3, and 1 and 4 of the four (4) pins)</p> <ul style="list-style-type: none"> Resistance : Approx. 2 to 4 MΩ Check the voltage when the power is on.
Water Supply Error	nF	<ul style="list-style-type: none"> Water supply valve fault Main PCB fault Freezing in the winter season 	<ul style="list-style-type: none"> If the water supply valve has a wire disconnected, replace it. Check whether the water supply valve is clogged with foreign material and whether water is supplied continually. Check whether no water is supplied because of freezing in the winter season. If the PBA relay operates abnormally, replace the PBA. 	<ol style="list-style-type: none"> 1. Check the resistance for the water supply valve. <ul style="list-style-type: none"> Resistance: 113.5Ω ~ 16.5Ω between the terminals of the water supply valve. 2. Check whether there is foreign material in the water supply valve filter. 3. If the water supply valve filter is clogged, clean filter.

Error Type	Error Mode	Causes	Corrective Actions	Description of Photo
Drain Error	nd	<ul style="list-style-type: none"> Freezing in the winter season Foreign materials in the drain pump Poor physical connection Drain pump fault Main PCB fault 	<ul style="list-style-type: none"> If the drain pump revolutions are restrained due to freezing in the winter season, check the method to remove the freezing and remove as directed. Check whether the revolutions of the drain pump motor are restrained by foreign material, and remove as directed. Check the wire connectors on Main PCB and Drain Pump ASSY. The connector or wire may have poor physical connection. Check the drain pump resistance. 	 <p>Check the drain pump resistance. - Drain : Resistance : 13.5Ω ~ 16.5Ω - Bubble : Resistance : 18.75Ω ~ 22.75Ω</p>
Communication Error	AE	<ul style="list-style-type: none"> The signals between the sub and main PBAs are not sensed. Incorrect wire connections between the sub and main PBAs. 	<ul style="list-style-type: none"> Check the wire connections and terminal contacts between the sub and main PBAs. Check for disconnected wires. Check whether the sub PBA is short-circuited because of moisture. If the main PBA's communication circuit is faulty, replace it. 	
Door Error	dS dL LO	<ul style="list-style-type: none"> Door switch fault Main PCB fault 	<ul style="list-style-type: none"> If a dS error occurs, check whether it occurs during the Boil cycle. If it is detected that the door is open, close the door. The 120V is directly connected to the door. Check and repair the power wire connections and insulation state. Check the door switch. Replace if faulty. Check the main PBA door sensing circuit. Replace if faulty. 	 <p>► TYPE 1 Check the door switch Resistance. The resistance of 1 and 3 Pin Must be approximately 125Ω.</p>
Heater Error	Hr	<ul style="list-style-type: none"> Disconnection wire Heater fault Wash-thermistor fault 	<ul style="list-style-type: none"> Check for connection between wire and heater. If wash heater is faulty, replace it. <ul style="list-style-type: none"> Refer the TYPE 1 If it is not problem in heater, replace wash-thermistor <ul style="list-style-type: none"> Refer the TYPE 2 	 <p>[FRONT] ► TYPE 1 Check the resistance between A and B. It should be 16.05±0.65Ω.</p>  <p>[BACK] ► TYPE 2 If TYPE 1 is OK, Change a wash-thermistor at back of Tub.</p>
Water Leakage Error	LE	<ul style="list-style-type: none"> Check for any leakage. Foreign material in the DV case Fault of a hose or incorrect part engagement in the product 	<ul style="list-style-type: none"> Check for any leakage on the base, Hose, Valve and Tub connections and take any required action. During natural draining, this error occurs because the drain bellows are clogged with foreign material. Remove the foreign material. Check the drain motor operation. Replace if it does not operate normally. 	 <p>► DRAIN PUMP TYPE (Automatic Drainage) Check whether there is any foreign material in the bellows. <input checked="" type="checkbox"/> Check for any foreign material, such as underwear wires or coins.</p>  <p>► PUMP TYPE Check for any leakage on the base, Hose, Valve and Tub connections.</p>
Overflow Error	OE	<ul style="list-style-type: none"> Water level sensor fault Freezing in the winter season 	<ul style="list-style-type: none"> If the water level sensor has a functional error, replace it. Check the hose. This error occurs if it is torn or has a hole. This error occurs if water is frozen in the winter season. Use hair dryer to defrost hose. Consider relocating the unit to warmer location. 	 <p>Check the hose connected to the water level sensor. <input checked="" type="checkbox"/> Check whether the hose is folded, cut, or damaged.</p>



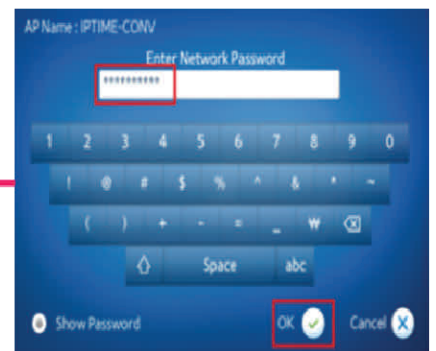
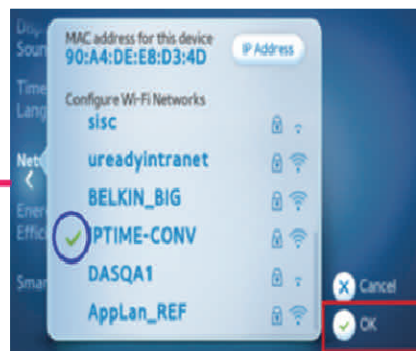
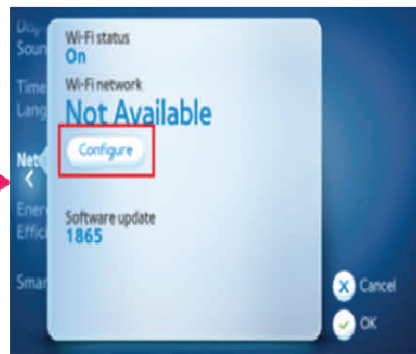
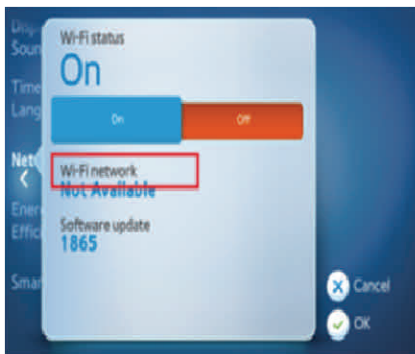
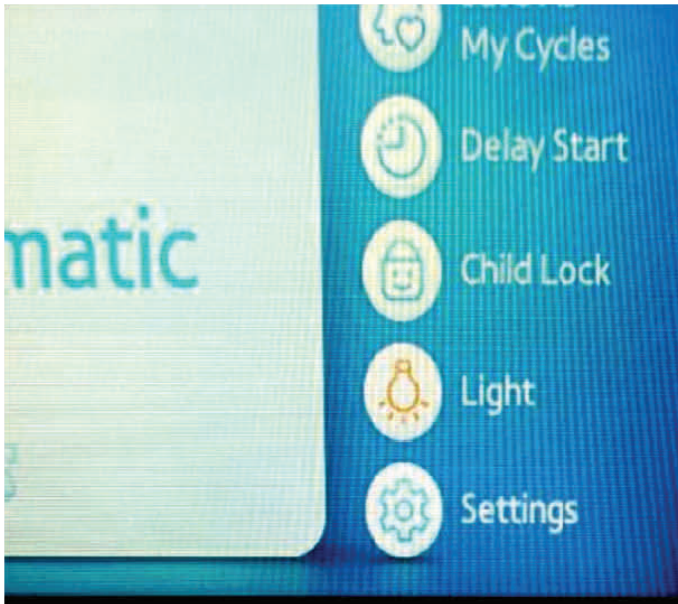
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Error Type	Error Mode	Causes	Corrective Actions	Description of Photo
Temperature Sensor Error	tE	<ul style="list-style-type: none"> Washing temperature sensor fault Dry temperature sensor fault Faulty and incorrect connections of the dry condensing sensor Main PCB fault Freezing in the winter season 	<ul style="list-style-type: none"> Check the connections for the washing heater temperature sensor connector. If the washing heater temperature sensor has a functional error, replace it. <ul style="list-style-type: none"> A tE error occurs. Check the connections for the dry heater temperature sensor connector. If the dry heater temperature sensor has a functional error, replace it. Check the connections for the duct condensing temperature sensor connector. If the duct condensing temperature sensor has a functional error, replace it. 	
Unbalance Error	dc	<ul style="list-style-type: none"> Motor hall sensor fault Caused by the laundry contents 	<ul style="list-style-type: none"> Check the type of laundry. Check whether they may cause an unbalanced situation. <ul style="list-style-type: none"> Educate the consumer in this case is to press pause reposition the load or remove a few items. Press start to continue and complete the wash cycle. 	



Fast Track Troubleshooting

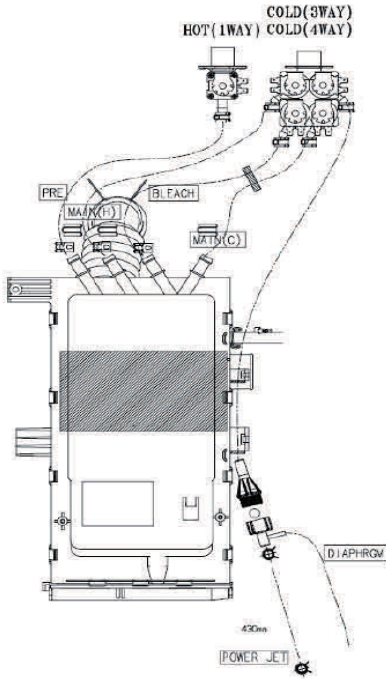
Wi-Fi - Connecting To A Network



NOTE: To use Smart Care/Control, you MUST have Smart Phone App installed on phone. Visit Google “Play Place” or “Android Market”

Water valve connections for the Detergent Drawer

Red	White	Yellow	Blue	Red
Hot	Pre-wash	Bleach - C	Main - C	Steam/Power Jet

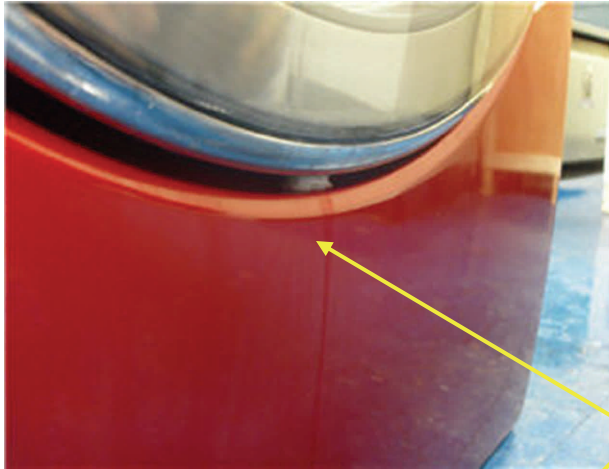


Items Packed With Washer

- BOLT-SPANER (10-13mm Wrench) DC60-40146A
- ASSY HOSE WATER DC97-15691A
- ASSY HOSE WATER DC97-15692A
- MANUAL-BOOK DC68-02535A
- CAP-FIXER DC67-00307A
- HOSE-HANGER DC62-10278A

Stacking Kit : (Model No : SK-5A/XAA)

Samsung washers and dryers can be stacked to maximize usable space. An optional stacking kit is available for purchase from your Samsung retailer



When using non-HE detergents, or using too much detergent for the water hardness and soil level of the clothing, over sudsing will occur. When this happens there will be leaks out of the detergent drawer and door. Please advise consumer of proper detergent usage.

It is normal for a small amount of water remaining in Detergent Drawer after it completes washing. Bleach is usually flushed out into the tub at the beginning of the washing. Also, its compartment is washed again during the following rinse cycle, removing any remnants.



Location considerations
Do not install your washer in areas where water may freeze, since your washer will always maintain some water in its water valve, pump, and hose areas. This can cause damage the belts, the pump, hoses and other components. **Operating temperature should be above 60°F/16°C.**

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

SUPPORT INFORMATION

Training — Plus One <http://my.plus1solutions.net/clientPortals/samsung/>
Help — GSPN <http://service.samsungportal.com/>

NOTICE

The unit sometimes will pause during Sanitize, or Pure Cycle, wash modes and appear not to be functional. The Sanitize and Pure Cycle wash cycles have target temperatures to assure washer performance. If the water temperature doesn't meet the target temperature during the wash cycle, the washer will automatically add extra time to allow the heater to bring the water up to the programmed, or target temperature. In this stage, the displayed time will pause and hold until the heating operation has been completed. It is at this point that the customer may feel that operation has stopped. (The maximum added programmed time is 30 minutes)